Hongfarad

Film Capacitors for PCB

2021~2022

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ISO9001:2015;ISO14001:2015 认证企业

COMPANY Introduction
企業簡介

东莞市弘源电子有限公司，是一家专业从事薄膜电容器制造与研发的企业，经过10多年地不断研发、改善，在金属膜电容器制造业界颇负盛名。 公司拥有实力雄厚的研发中心和经验丰富的技术服务团队，以贴近市场的技术研发、一流的品质和服务、快速灵活的反应速度等竞争优势获得了全球客户的认可，为各类客户如照明、通讯、家电、电源、工业控制、汽车电子、绿色新能源等提供薄膜电容器“一站式”解决方案，产品行销全球，成为各个领域龙头企业的主力供应商。

Dongguan HongFarad Electronic Co,. Ltd is specialized in manufacturing and developing film capacitors. After more than 10 years of continuous research and development, we win a good reputation in manufacturing metalized film capacitors. Besides, Dongguan HongFarad Electronic Co,. Ltd has a strong research center as well as an experienced technical service team and gains a recognition from global customers through its technical research closer to the market requirements, first-rate quality and services, flexible reaction speed, etc. We provide an one-stop solution for all kinds of customers such as illuminating industry, household appliances, power supply, industrial control, automotive electronics, green energy resources and so on. Our products are sold worldwide and become the main supplier for all kinds of leading enterprises.

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研發與生產實力 (R&D & Manufacture Capacity)

可靠性試驗設備 (Reliability test Equipment)

Flame resistance tester

YASELINE

Constant temperament aging and drying oven

Thermal shock

Salt spraying

生產車間 (Workshop)

Automatic winding production workshop

Automatic spray gold production workshop

檢驗儀器 (inspection equipments)

Sheet Resistance tester

Automatic welding feet packing workshop

Automatic electrical test workshop

Capacitance measuring tester

系列 Series Hongfarad		特 性 Features	规 格 specification	同行的相应系列 Counterpart's Corresponding Series						
				VISHAY	ARO	日精	松下	红宝石	EPCOS	法拉
聚酯薄膜电容器	CL11 PEI	聚酯膜/箔式,浸渍型	0.0001μF--0.47μF 63/100/250/400V	/	/	AMZ	ECQV	F2D	/	C11
	CL21 MEF	金属化聚酯薄膜，浸渍型	0.047μF--10.0μF 50/63/100/250/400/630V	MKT365	R60	MMX	ECQE	MMB	B32591 B32594	C21
	CL21B MEB	金属化聚酯薄膜，盒式封装	0.01μF--47.0μF 63/100/250/400/630V	MKT1818 MKT1822	R66	MMY	/	/	B32520 B32529	C23
	CL23 MEK	金属化聚酯薄膜，盒式封装，小型	0.001μF--2.2μF 63/100/250/400/630V	MKT1817 MKT370	R82	MMT	/	/	B32559C	C24
	CL20 MEA	金属化聚酯薄膜，轴向，圆型	0.01μF--20.0μF 50/63/100/250/400/630V	MKT1813	A50	/	/	/	B32232	C20
	CL20T MET	金属化聚酯薄膜，轴向，扁平	0.01μF--18.0μF 50/63/100/250/400/630V	MKT367	/	/	/	/	B32231	C20
聚丙烯薄膜电容器	CBB21 MPP	金属化聚丙烯薄膜，浸渍型	0.001μF--3.3μF 100/250/400/630V	MKP479	/	MPE	ECWF	MPH	B32612 B32614	C31
	CBB22 SPP	金属化聚丙烯薄膜，浸渍型	0.022μF--18μF 450/520/630V	/	/	/	/	/	B32651 B32656	C37
	CBB21B MPB	金属化聚丙烯薄膜，塑壳封装	0.00056μF--15μF 160/250/400/630/1000V	MKP385	R71	/	/	/	B32651 B32656	C32
	CBB81 PPS	聚丙烯膜/箔式串联结构，浸渍型	0.001μF--0.1μF 630V ~ 2500V	KP1836 KP375	/	MPS	ECWH(A)	MPS	B32632 B32634	C14
	CBB82 MPS	双面聚丙烯膜/箔式串联结构，塑壳封装	0.001μF--0.12μF 630V ~ 2500V	KP/MMKP 376	R76	MHP	ECWH(V)	/	B32682 B32686	C82
	CBB84 MPD	双面聚丙烯膜/箔式串联结构，塑壳封装	0.001μF--0.10μF 630V ~ 2500V	KP/MMKP 376	R76	MHP	ECWH(V)	/	B32682 B32686	C84
	CBB13 PPN	无感聚丙烯箔式，浸渍型	0.001μF--0.1μF 100/160/250/400/630V	KP1830	R73	APC	ECWF(A)	MPB	B32692 B32694	C13
	CBB20 MPA	金属化聚丙烯薄膜，轴向，圆型	0.01μF--15.0μF 100V ~1250V	MKP1839	A70	/	/	/	B32669	C30
	CBB20T MPT	金属化聚丙烯薄膜，轴向，扁平	0.01μF--15.0μF 100V ~1250V	MKP1839 HQ	A72	/	/	/	/	C30

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薄膜电容系列对应表

系列 Series Hongfarad		特　性 Features	规　格 specification	同行的相应系列 Counterpart's Corresponding Series						
				VISHAY	ARO	日精	松下	红宝石	EPCOS	法拉
安规电容器	CBB62 HMKP	金属化聚丙烯薄膜，塑壳封装，X2类	0.001μF--10.0μF 250VAC~310VAC	F1772 X2	R46	MP1	ECQUA	MPKA	B32921 B32926	C42
	CBB62B HMKP-B	金属化聚丙烯薄膜，塑壳封装，X2类 阻容降压	0.001μF--10.0μF 250VAC~310VAC	/	/	/	ECQUL	/	B32932 B32936	C49
	MKP62D HMKP-D	金属化聚丙烯薄膜，塑壳封装，X2类 防潮系列	0.001μF--10.0μF 250VAC~310VAC	/	/	/	/	/	B32924 B32928	C4B
	MKP67 MKP-Y1	金属化聚丙烯薄膜，塑壳封装，方型 Y1类	0.001μF--0.1μF 440VAC/500VAC		/	/	/	/	B81123	C47
	MKP63 MKP-Y2	金属化聚丙烯薄膜，塑壳封装，方型 Y2类	0.001μF--0.1μF 300VAC/1500VDC		/	/	/	/	B32021 B32026	C43
	MKP64 MKP-X1	金属化聚丙烯薄膜，塑壳封装，方型 X1/Y2类	0.001μF--10μF 275VAC~480VAC		/	/	/	/	B32911 B32918	C44 C45
	CBB61 M61	金属化聚丙烯薄膜，塑壳封装，方型	0.1μF--15μF 250VAC~600VAC	/	R75	/	/	/	B32321 B32323	C61
电力电子	APB	金属化聚丙烯薄膜，塑壳封装,方型,端片型 IGBT 吸收	0.047μF--9μF 630V ~ 3000V	MKP386	/	DLC	EZPE	MPC	B32686S	C38
	APD	金属化聚丙烯薄膜，塑壳封装,方型,导针型 IGBT 吸收	0.047μF--9μF 630V~ 3000V	/	/	/	/	/	B32686A	C3H
	APA	金属化聚丙烯薄膜，轴向圆型 IGBT 吸收	0.0068μF--10μF 630V~3000V	/	/	/	/	/	/	C16
	APT	高压、高脉冲电流吸收电容器（轴向）	0.5μF--10μF 700V ~ 9000V	/	/	/	/	/	/	C3K
	APK	金属化聚丙烯薄膜，塑壳封装,交流滤波	0.33μF--70μF 180/275/350/480VAC	MKP1847 MKP1848	/	/	/	MPVA	B25832	C6A
	APQ	金属化聚丙烯薄膜，铝壳,圆型,三相交流滤波	8μF--330μF 230VAC ~ 850VAC	/	/	/	/	MPVA	B25832	C67
	APM	金属化聚丙烯薄膜，铝壳,圆型,交流滤波	20μF--200μF 250VAC ~ 680VAC	/	/	/	/	MPVA	B3236*	C69
	DPA	塑料外壳干式直流滤波电容器	47μF--600μF 450V ~ 900V	/	/	/	/	/	B25631*	C3A
	DPB	金属化聚丙烯薄膜，塑壳封装,方型,直流滤波	1μF--150μF 450V ~ 1200V	/	/	/	/	/	B32656G B32658G	C3D
	DAT	金属化聚丙烯薄膜，铝壳,圆型,直流滤波	25μF--5600μF 600V ~ 4000V	/	/	/	/	/	B2562*	C3B
	DAL	金属化聚丙烯薄膜，塑壳,圆型,直流滤波	4.6μF--260μF 500V ~ 1500V	/	/	/	/	/	B25690	C3L
	DPV	干式直流滤波电容器（塑料外壳电动车&混动车）	4.6μF--260μF 500V ~ 1500V	/	/	/	/	/	/	C3L

抑制电源电磁干扰及电容降压专用产品 Interference suppression,A.C.capacitor for capacitive divider capacitors		
CBB62 MKP	金属化聚丙烯膜抗干扰电容器 Metallized Polypropylene Film Capacitor Class X2	49~50
CBB62B MKP-B	电容降压专用金属化聚丙烯交流电容器 Metallized Polypropylene Film A.C.Capacitor for capacitive divider	51~52
MKP62 MKP-D	金属化聚丙烯薄膜，塑壳封装，X2类 防潮系列 Metallized Polypropylene Film interference suppression capacitor for capacitive divider(Class X2,Temperature Humidity Bias series)	53~54
MKP63 MKP-Y2	金属化聚丙烯薄膜，塑壳封装，Y2类 Metallized Polypropylene Film Capacitor Class Y2	55~56
MKP67 MKP-Y1	金属化聚丙烯薄膜，塑壳封装，Y1类 Metallized Polypropylene Film Capacitor Class Y1	57~58
MKP64 MKP-X1	金属化聚丙烯薄膜，塑壳封装，X1类 Metallized Polypropylene Film Capacitor Class X1	59~60

交流电容器 AC capacitors		
CBB61 M61	金属化聚丙烯膜交流电动机电容器(方形盒装型) Metazllized Polypropylene Film AC Motor Capacitor (Squareness,Box-Type)	61~62

电力电子电容器 Power electronic Capacitors		
APB	金属化聚丙烯薄膜，塑壳封装,方型,端片型 IGBT 吸收 Snubber Capacitor for IGBT (Lug terminals)	64~65
APD	金属化聚丙烯薄膜，塑壳封装,方型,导针型 IGBT 吸收 Snubber Capacitor for IGBT (PCB)	66~67
APA	金属化聚丙烯薄膜，轴向圆型 IGBT 吸收 Snubber Capacitor for IGBT (Axial-type)	68~69
APT	高压、高脉冲电流吸收电容器（轴向） Snubber Capacitor for high voltage,high current pulses (Axial-type)	70~71
APK	金属化聚丙烯薄膜，塑壳封装,交流滤波 AC output filter capacitor for PCB	72~73
APQ	金属化聚丙烯薄膜，铝壳,圆型,三相交流滤波 Three phase AC filter capacitor	74~75
APM	干式铝壳交流滤波电容 AC filter capacitor(Dry type, Aluminum case)	76~77
DPA	塑料外壳圆型，干式直流滤波电容 DC-Link Capacitor(Dry-Type,plastic case)	78~79
DPB	DC-Link 电容器（PCB用） DC-Link Capacitor for PCB	80~86
DAT	DC-Link 电容器（PCB用） DC-Link Capacitor(Dry-Type,Aluminum case)	87~89
DAL	DC-Link 电容器（PCB用） DC-Link Capacitor for PCB	90~91
DPV	干式直流滤波电容器（塑料外壳电动车&混动车） DC-Link Capacitor （Plastic Case, For EV/HEV）	92~102

一、电子设备用薄膜电容器的标准体系

电子设备用固定电容器的标准体系是由基础标准，总规范，分规范，空白详细规范，以及详细规范(即企业标准)组成。或者说，企业标准是按总规范和分规范的基本要求，填写空白详细规范而成。

总规范规定了分规范和详细规范中使用的标准术语、检验程序和试验方法。分规范是按电容器的介质和结构分类的，它是对该类电容器规定优先额定值和特性，并从总规范中选择适当的质量评定程序、试验和测量方法，以及给出一般性能要求。空白详细规范是分规范的一种补充文件，它规定了详细规范的格式、编排和最基本的要求。

薄膜电容器的标准体系，举例如下:

一、The standard system of fixed plastic film capacitor for use in electronic equipment

The standard system of fixed plastic film capacitor for use in electronic equipment includes the foundational standard, generic specification, sectional specification, blank detail specification and detail specification, or manufacturer specification. That is, a manufacturer specification is derived from blank detail specification according to the basic requirements of generic and sectional specifications.

Generic specification specifies the terminology, inspection procedures and test methods applied in sectional and detail specifications. Sectional specification is classified according to the specific dielectric material and construction of capacitor, it prescribes preferred rating and characteristics and to select from generic specification the appropriate quality assessment procedures, tests and measuring methods and to give general performance requirements for this type of capacitor. Blank detail specification is a supplementary document to the sectional specification and contains requirements for style, layout and minimum contents of detail specifications.

Following please find the corresponding specification lists for plastic film capacitors.

标准号 (No.)	标准 (Standards)
GB/T 2693 (IEC 60384-1)	第1部分：总规范 Part 1: Generic specification
GB/T 7332 (IEC 60384-2)	第2部分：分规范：金属化聚酯膜介质直流固定电容器 Part 2:Sectional specification: Fixed metallized polyester film D.C.capacitor
GB/T 7333 (IEC 60384-2-1)	第2部分：空白详细规范：金属化聚酯膜介质直流固定电容器 Part 2:Blank detail specification: Fixed metallized polyester film D.C. capacitor
	详细规范：Detail specification for MEF、MEB、MEK、MEA、MET
GB/T 6346 (IEC 60384-11)	第11部分：分规范：金属箔式聚酯膜介质直流固定电容器 Part 11:Sectional specification: Fixed polyester film metal foil D.C. capacitor
GB/T 6347 (IEC 60384-11-1)	第11部分：空白详细规范：金属箔式聚酯膜介质直流固定电容器 Part 11:Blank detail specification: Fixed polyester film metal foil D.C. capacitor
	详细规范：Detail specification for PEI
GB/T 10188 (IEC 60384-13)	第13部分：分规范：金属箔式聚丙烯膜介质直流固定电容器 Part 13: Sectional specification: Fixed polypropylene film metal foil D.C. capacitor
GB/T 10189 (IEC 60384-13-1)	第13部分：空白详细规范：金属箔式聚丙烯膜介质直流固定电容器 Part 13:Blank detail specification: Fixed polypropylene film metal foil D.C. capacitor
	详细规范：Detail specification for PPN
GB/T 6346 (IEC 60384-14)	第14部分：分规范：抑制电源电磁干扰用固定电容器 Part 14: Sectional specification: Fixed capacitors for electromagnetic interference suppression and connection to the supply mains
GB/T 6346 (IEC 60384-14-1)	第14部分：空白详细规范：抑制电源电磁干扰用固定电容器 Part 14:Blank detail specification: Fixed capacitors for electromagnetic interference suppression and connection to the supply mains

GB/T 10190 (IEC 60384-16)	第16部分：分规范：金属化聚丙烯膜介质直流固定电容器 Part 16: Sectional specification: Fixed metallized polypropylene film D.C. capacitor
GB/T 10191 (IEC 60384-16-1)	第16部分：空白详细规范：金属化聚丙烯膜介质直流固定电容器 Part 16:Blank detail specification: Fixed metallized polypropylene film D.C. capacitor
	详细规范：Detail specification for MPP、MPB、MPA、MPT
GB/T 14579 (IEC 60384-17)	第17部分：分规范：金属化聚丙烯膜介质交流和脉冲固定电容器 Part 17: Sectional specification: Fixed metallized polypropylene film A.C. and pulse capacitor
GB/T 14580 (IEC 60384-17-1)	第17部分：空白详细规范：金属化聚丙烯膜介质交流和脉冲固定电容器 Part 17:Blank detail specification: Fixed metallized polypropylene film A.C. and pulse capacitor
	详细规范：Detail specification for PPS、MPS、APB
IEC 60384-20	第20部分：分规范：金属化聚苯硫醚膜介质表面安装直流固定电容器 Part 20: Sectional specification: Fixed metallized polyhenylene sulfide film dieletric chip D.C.capacitor
IEC 60384-20-1	第20部分：空白详细规范：金属化聚苯硫醚膜介质表面安装直流固定电容器 Part 20: Blank detail specification: Fixed metallized polyhenylene sulfide film dieletric chip D.C.capacitor
	详细规范：Detail specification
IEC 60384-23	第23部分：分规范：金属化聚萘乙酯膜介质表面安装直流固定电容器 Part 23: Sectional specification: Fixed metallized polyethylene naphtalate film dielectric surface mounted D.C. capacitor
	详细规范：Detail specification
GB 18489 (IEC 61048)	管形荧光灯和其他放电灯线路用电容器 一般要求和安全要求 Capacitor especially used for circuit of Tube-shape fluorescent and other lamps: General&safety requirements
GB/T 18504 (IEC 61049)	管形荧光灯和其他放电灯线路用电容器 性能要求 Capacitor especially used for circuit of Tube-shape fluorescent and other lamps: Performances requirements
	详细规范：Detail specification
GB/T 3667.1 (IEC 60252-1)	第1部分：交流电动机电容器 Part 1: AC motor capacitor
	详细规范：Detail specification for M61、M65
GB/T 17702 (IEC 61071)	第1部分：电力电子电容器 Part 1: Power electronic capacitors
	详细规范：Detail specification for APM、DAT、DPA
GB/T 12747-1 (IEC 60831-1)	标称电压1KV及以下交流电力系统用自愈式并联电容器 Shunt power capacitors of the self-healing type for a.c. systems having a rated valtage up to and including 1 000V
	第1部分: 总则 Part 1: General
GB/T 12747-2 (IEC 60831-2)	标称电压1KV及以下交流电力系统用自愈式并联电容器 Shunt power capacitors of the self-healing type for a.c. systems having a rated valtage up to and including 1 000V
	第2部分: 老化试验、自愈性试验和破坏试验 Part 1: Ageing test, self-healing test and destruction test

二、一些常用的标准术语

1、上限类别温度

电容器设计所确定的能连续工作的最高环境温度。

2、下限类别温度

电容器设计所确定的能连续工作的最低环境温度。

3、额定温度

可以连续施加额定电压的最高环境温度。

4、额定电压(U_R)

在下限类别温度和额定温度之间的任一温度下，可以连续施加在电容器上的最大直流电压或脉冲电压的峰值。

5、类别电压(U_C)

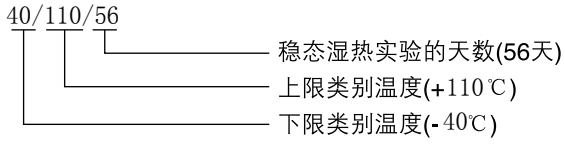
电容器在上限类别温度下可以连续施加在电容器上的最高电压。

6、温度降额电压

温度降额电压是在额定温度和上限类别温度之间的任一温度下，可以连续施加在电容器上的最高电压。

7、气侯类别

电容器所属的气侯类别用斜线分隔的三个数来表示(IEC 60068-1：如:40/110/56)。



8、损耗角正切(tg δ)

在规定频率的正弦波电压作用下，电容器的损耗功率除以电容器的无功功率。

二、Terminologies

1. Upper Category Temperature

The highest environmental temperature determined by capacitors design and in which capacitor may continuously work.

2. Lower Category Temperature

The lowest environmental temperature determined by capacitors design and in which capacitor may continuously work.

3. Rated Temperature

The highest environmental temperature in which capacitor applied continuously with the rated voltage.

4. Rate Voltage (U_R)

The maximum D.C. voltage or peak value of pulse voltage that can be applied continuously to capacitor at any temperature between lower category temperature and rated temperature.

5. Category Voltage (Uc)

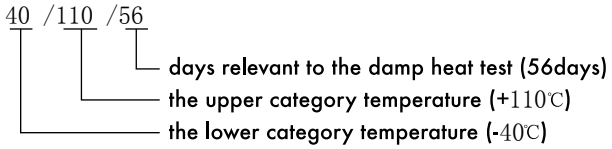
The maximum voltage that can be applied continuously to capacitor at upper category temperature.

6. Temperature Derated Voltage

The maximum voltage that can be applied continuously to capacitor at any temperature between rated temperature and upper category temperature.

7. Climatic category

The climatic category which the capacitor belongs to is expressed in three numbers separated by slashes,(IEC 60068-1:example 40/110/56).



8. Dissipation factor (tg δ)

The dissipation factor is ratio between reactive power of the impedance of the capacitor and effective power when capacitor is submitted to a sinusoidal voltage of specified frequency.

9、容量温度系数(a)

电容器在规定的温度范围内容量随温度的变化率。通常以20℃时电容量为参考，用百万分之一每摄氏度（10^{-6}/℃）表示(10^{-6}/℃=1ppm/℃)。

$$a_i = \frac{C_i - C_o}{C_o(T_i - T_o)}$$

C_i：电容器在温度T_i时容量

C_o：电容器在T_o(20 ± 2)℃时的容量

9. Temperature coefficient of capacitance(a)

The change rate of capacitance with temperature measured over a specified range of temperature. It is normally expressed in parts per million per Celsius degree (10^{-6}/℃)and referred to 20℃.

$$a_i = \frac{C_i - C_o}{C_o(T_i - T_o)}$$

C_i: Capacitance at temperature T_i.

C_o: Capacitance at temperature T_o(20 ± 2)℃.

10、绝缘电阻(I.R.)/时间常数(t)

绝缘电阻为电容器充电一分钟后所加的直流电压和流经电容器的漏电流值的比值，单位为MΩ。时间常数为绝缘电阻和电容量的乘积，通常以秒表示，公式如下:

t[s]=I.R.[MΩ] x C[μF]

一般情况下，绝缘电阻用于描述小容量电容器的绝缘特性，时间常数用于描述大容量(如：C_R>0.33μF)电容器的绝缘特性。

10. Insulation resistance(I.R.) / Time Constant (t)

The insulation resistance is the ratio between an applied D.C. voltage and the resulting leakage current after a minute of charge. It is expressed in MΩ. The time constant is expressed in seconds with the following formula:

t[s]=I.R.[MΩ] x C[μF]

In general, Insulation resistance is used for describing smaller capacitance capacitors' insulation character, Time Constant for describing larger ones' (example: C_R>0.33 μF)

11、自愈性(仅对金属化膜电容器)

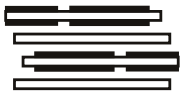
金属化膜的金属镀层是通过真空蒸发的方法将金属沉积在薄膜上，厚度只有几十个纳米，当介质上存在弱点、杂质时，局部电击穿就可能发生，电击穿处的电弧放电所产生的能量足以使电击穿点邻近处的金属镀层蒸发，使击穿点与周围极板隔开，电容器电气性能即可恢复正常。

11. Self-healing(Only to metallized film capacitor)

The metal coatings of the metallized film, which are vacuum-deposited directly onto the plastic film, have a thickness of only several tens nm. At weak points or impurities in the dielectric, a dielectric breakdown wou nergy released by the arc discharge in the breakdown channel is sufficient to totally evaporate the thin metal coating in the vicinity of the channel. The insulated region thus resulting around the former faulty area will cause the capacitor to regain its full operation ability.

三、薄膜电容器的基本结构 (Film capacitor basic construction):

电容器结构示意图 (Different capacitor constructions)

				
MEF MEB MEA MET MPP MPB SPP MKP MPA MPT APK	PEI	PPS MPS	PPN	PPS MPS APA
				
	PPS MPS	DPA DPB APK	MPD APB APD MPS DAL	MPD APT APA APQ DAT


金属化薄膜
Metallized film

金属箔
Metal foil

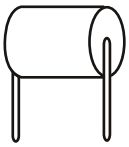
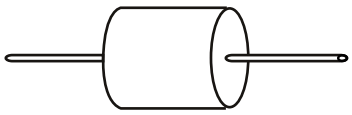
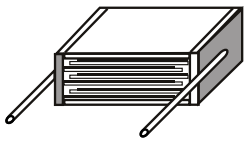
薄膜 Film


中留边金属化薄膜

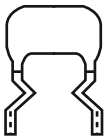
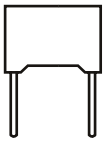
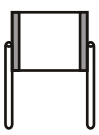
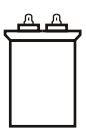
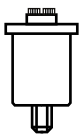

双留边金属化薄膜


双面金属化膜
Double sided metallized film

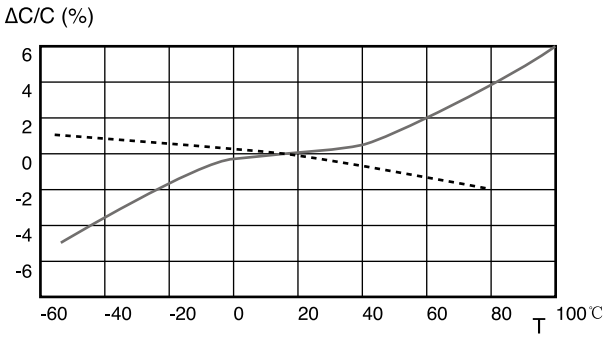
卷绕结构 (Winding construction)

卷绕式径向产品 (Wound capacitor,radial leads)	卷绕式轴向产品 (Wound capacitor, axial leads)	叠片式产品 (Stacked version capacitor)
		

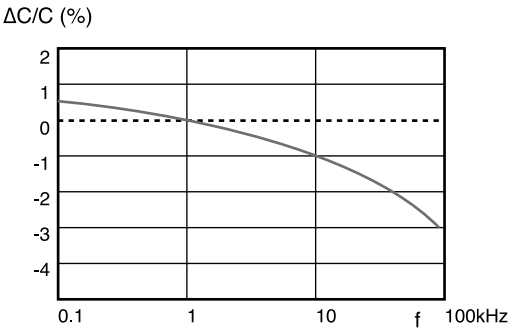
封装方式 (Different seals)

浸渍型包封 Dipped by epoxy resin	盒式封装 Sealed in box	轴向 Axial leads	无包封 Uncoated	表面安装 SMD	铝壳封装 Aluminum case	塑壳封装 Plastic case
						

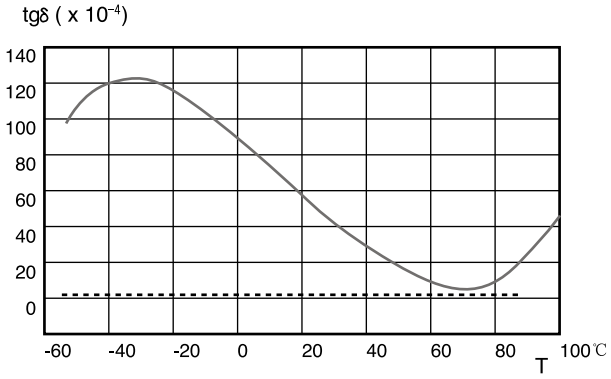
四、典型的电容器特性曲线 **Typical graphs**



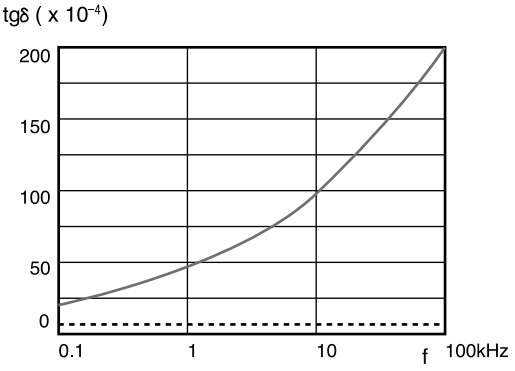
Capacitance vs. temperature at 1kHz



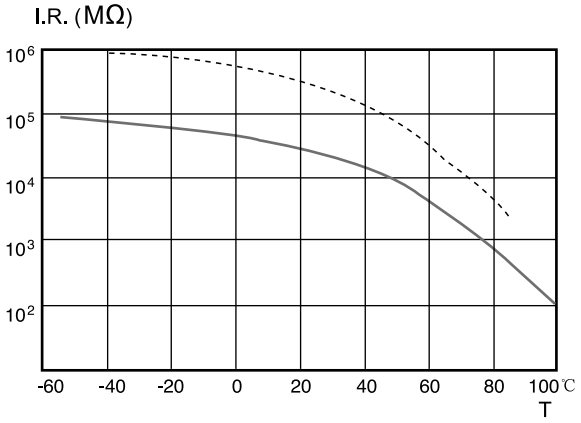
Capacitance vs. frequency (Room temperature)



Dissipation factor vs. temperature at 1kHz

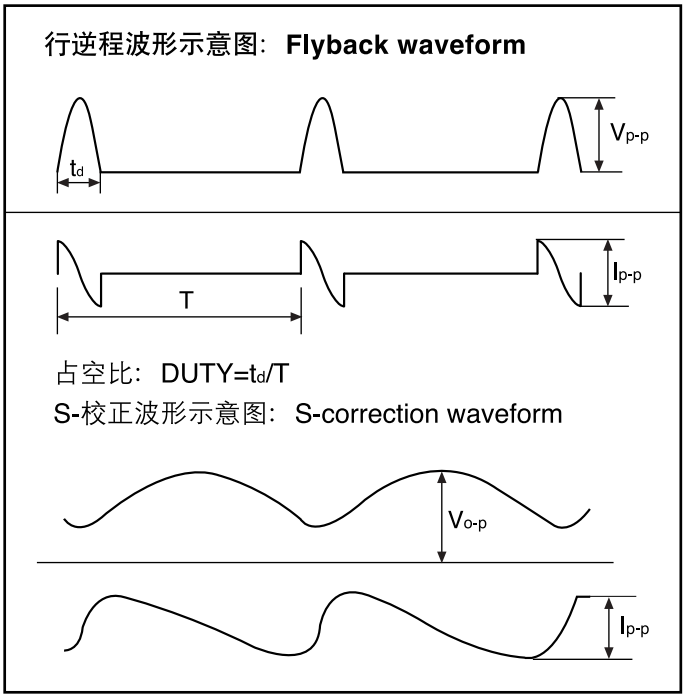


Dissipation factor vs. frequency (Room temperature)



I.R. vs. temperature

- - - - - - 聚丙烯薄膜 (Polypropylene Film)
——— 聚酯薄膜 (Polyester Film)



五、使用薄膜电容器的注意事项:

1、工作电压

薄膜电容器的选用取决于施加的最高电压，并受施加的电压波形、电流波形、频率、环境温度(电容器表面温度)、电容量等因素的影响。使用前请先检查电容器两端的电压波形、电流波形和频率(在高频场合，允许电压随着电容器类型的不同而改变，详细资料请参阅说明书)是否在额定值内。

2、工作电流

通过电容器的脉冲(或交流)电流等于电容量C与电压上升速率的乘积，即I=C x dV/dt。

由于电容器存在损耗，在高频或高脉冲条件下使用时，通过电容器的脉冲(或交流)电流会使电容器自身发热而有温升，将会有热击穿(冒烟、起火)的危险。因此，电容器安全使用条件不仅受额定电压(或类别电压)的限制，而且受额定电流的限制。

额定电流被认为是由击穿模式决定的脉冲电流(峰值电流，即由dV/dt指标所限制的)和连续电流(以峰峰值或有效值表示)组成，当使用时，需确认这两个电流都在允许范围之内。

在高频或高脉冲条件下使用的电容器，我们推荐聚丙烯膜电容器。

PPS/MPS系列聚丙烯膜高压电容器给出了占空比(DUTY)为15%时的额定峰峰值电流。MPP/MPB系列S校正电容器给出了额定峰峰值电流。在一般情况下都不允许超过额定峰峰值电流使用。

当实际工作电流波形与给出的波形不同时，一般情况下聚酯膜电容器在自身温升为10℃或更小的情况下使用，聚丙烯膜在自身温升为5℃或更小的情况下使用，电容器表面温度不许超过额定上限温度。

3、各种波形的有效值换算关系

不同的波形有效值按下面的公式计算。

五、Caution items in using plastic film capacitors

1. Operating voltage

The plastic film capacitor varies in the maximum applicable voltage depending on the applied voltage waveform, current waveform ,frequency, ambient temperature (capacitor surface temperature), capacitance value, etc. Be sure to use capacitors within the specified values by checking the voltage waveform, current waveform, and frequency applied to them (In the application of high frequency, the permissible voltage varies with the type of the capacitor. For detail see the specification).

2. Operating Current

The pulse (or AC) current flowing through the capacitor is expressed as: I=C x dv/dt.

Due to the fact that dissipation factor of the capacitor will generate the internal heat under the application of high frequency or high pulse current, temperature rise in it will occur and may cause deterioration of with standing voltage, even lead to break down (smoking or firing).Therefore, the safety use of capacitor must be within the rated voltage(or category voltage)and the permissible current.

The rated current must be considered by dividing into pulse current (peak current)and continuous current (rms current) depending on the break down mode, and when using, should make sure the both currents are within the permissible values.

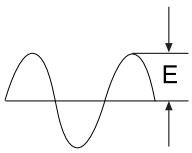
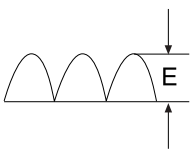
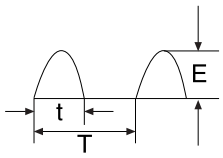
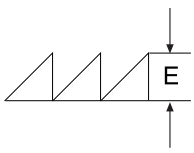
Under the application of high frequency or high pulse ,we recommend to use the polypropylene film capacitor.

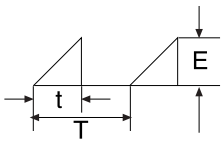
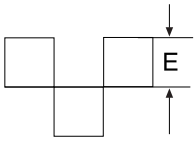
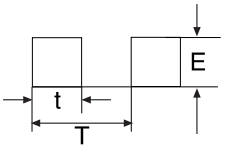
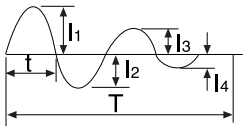
For PPS/MPS series high voltage polypropylene film capacitor, the catalogue gives the permissible I_{p-p} value with duty load 15%. For MPP/MPB series S correction capacitor, the permissible I_{p-p} value is also listed. In general application, operating current will not be allowed to over the permissible I_{p-p} current value.

When the actual operating current waveform differs from the given waveform in the catalogue, In general, the polyester film capacitor will be used within inherent temperature rise of 10℃ or less, the polypropylene film capacitor will be used within inherent temperature rise of 5℃ or less, and the capacitor surface temperature will not exceed the rated upper rated temperature.

3. Calculation of rms in various waveforms

In each waveform, calculate the rms value in the following formula.

种类(type)	1	2	3	4
波形 (waveform)				
有效值(rms)	$E/\sqrt{2}$	$E/\sqrt{2}$	$E\sqrt{t/(2T)}$	$E/\sqrt{3}$

种类(type)	5	6	7	8
波形 (waveform)				
有效值(rms)	$E\sqrt{t/(3T)}$	E	$E\sqrt{t/T}$	$\sqrt{\frac{t}{2T}(I_1^2+I_2^2+I_3^2+I_4^2)}$

4、抑制电源电磁干扰用电容器

4.1 当在电源跨线电路中使用电容器来消除噪音时，不仅仅只有正常电压，还会有异常脉冲电压(如闪电)发生，这可能会导致电容器冒烟或者起火。所以，跨线电容器其安全标准在不同国家有严格规定。请使用经过安全认证型电容器。

不允许将直流电容器用作跨线电容器。

4.2 X类抑制电源电磁干扰用电容器

适用于在电容器失效时不会导致电击危险的场合，分为X1、X2、X3三个类别(参见下表)。

4.3 Y类抑制电源电磁干扰用电容器

适用于在电容器失效时会导致电击危险的场合，分为Y1、Y2、Y3、Y4等四个类别(参见下表)。

4. Capacitor for electromagnetic interference suppression of AC power supply

4.1 When using a capacitor across-the-line as means for prevention of noise, not only the supply voltage is always applied, but also abnormal surge such as lighting is applied, which may lead to smoking or firing. Therefore, the across-the-line capacitor is strictly regulated in safety standard in each country. Please use those approved products , which conform to corresponding safety standards of different countries. The DC capacitor will not be used in across-in-line circuit.

4.2 Capacitor for electromagnetic interference suppression of AC power supply (Class X)
It is suitable for being used in situation where failure of the capacitor could not lead to danger of electric shock, classified as class X1,X2 and X3(refer to the table below).

4.3 Capacitor for electromagnetic interference suppression of AC power supply (Class Y)
It is suitable for being used in situation where failure of the capacitor could lead to danger of electric shock, classified as class Y1,Y2,Y3 and Y4(refer to the table below).

类别 (Class)	使用时的峰值脉冲电压 kV Peak pulse voltage in service(kV)	应用 Application	耐久性实验前施加的峰值脉冲电压 U_P(kV) Peak impulse voltage Up before endurance test(kV)
X1	＞2.5, ≤4.0	高脉冲应用 High pulse Application	$C_R \leq 1.0\mu F$, 4.0 $C_R > 1.0\mu F$, $4/\sqrt{C_R}$
X2	≤2.5	一般用途 General purpose	$C_R \leq 1.0\mu F$, 2.5 $C_R > 1.0\mu F$, $2.5/\sqrt{C_R}$
X3	≤1.2	一般用途 General purpose	— — —

类别 (Class)	额定电压 (Vac) Rated Voltage(Vac)	耐久性实验前施加的峰值脉冲电压 U_P(kV) Peak impulse voltage Up before endurance test(kV)
Y1	≤500	8.0
Y2	≥150, ≤300	5.0
Y3	≥150, ≤250	----
Y4	＜150	2.5

5、电容器充放电

由于电容器充放电电流取决于电容量和电压上升速率的乘积，即使是低电压充放电，也可能产生大的瞬间充放电电流，这可能会导致电容器性能的损害，比如说短路或开路。当进行充放电时，请串联一个20Ω/V~1000Ω/V或更高的限流电阻，将充放电电流限制在规定的范围内。

当多个薄膜电容器并联进行耐电压测试或寿命测试时，请为每个电容器串联一个20Ω/V~1000Ω/V或更高的限流电阻。详见电容器标准。

5. Charging and discharging

Because the charging and discharging current of capacitor is obtained by the product of voltage rise rate(dv/dt)and capacitance, low voltage charging and discharging may also cause deterioration of capacitor such as shorting and open due to sudden charging and discharging current. When charging and discharging, pass though a resistance of 20Ω/V to 1000Ω/V or more to limit current.

When connecting multiple film capacitors in parallel in withstand voltage test or life test, connect a resistance of 20Ω/V to 1000Ω/V or more in series to each capacitor.(For detail see the specification)

6、阻燃性

尽管在薄膜电容器外封装中使用了耐火性阻燃材料—阻燃环氧树脂或塑壳，但外部的持续高温或火焰仍可使电容器芯子变形而产生外封装破裂，导致电容器芯子熔化或燃烧。

6. Flame retardation

Although flame retardation epoxy resin or plastic case is used in the coating or encapsulating of plastic film capacitor, continuous outer high temperature or firing will break the coating layer or plastic case of the capacitor ,and may lead to melting and firing of the capacitor element.

7、表面温升(ΔT)

7.1 当电容器用于交流及脉冲场合时，流经电容器的电流使其发热，如果发热量过大，会导致电容器短路甚至燃烧。所以流经电容器的电流不能超过产品目录所规定的最大数值及电容器在加载时监测温升就显得尤为必要。

7.2 测量电容器表面温升的方法如图1，被测试电容器必须施加工作交流、脉冲电压及工作频率。

7. Surface overtemperature (ΔT)

7.1 When capacitor is used in A.C. or pulse applications the current that flows through the capacitor makes it heat up. If the capacitor heats up too much it might deteriorate causing a short circuit or fire. It is essential that the limits described in the catalogue are not exceeded and that a temperature check on the capacitor is made whenever it is under load.

7.2 Method for determining the surface overtemperature of the capacitor is showed in fig.1. The capacitor being tested must be supplied by the working AC or pulse voltage and frequency.

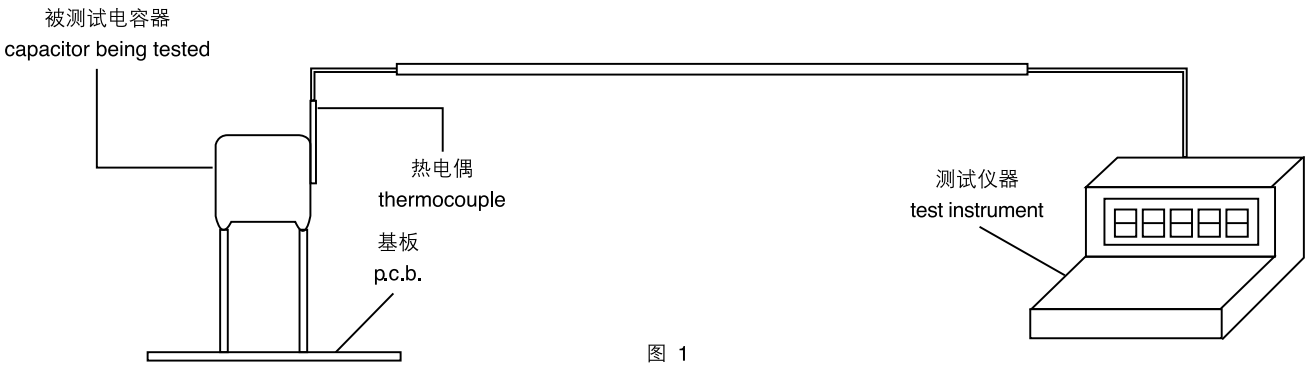


图 1
Fig.1

8、因薄膜振动产生的嗡鸣声

电容器的嗡鸣声是由于电容器薄膜受到两相反电极库仑力的作用，产生的振动而发出的声音，通过电容器的电压波形和频率畸变越严重，所产生的嗡鸣声越大。但这种嗡鸣声对电容器不会产生任何破坏作用。

9、贮存条件

1、由于大气中存在氢氯化物、氢硫化物、硫酸物质等，所以产品储存在大气中，必须注意引出端的可焊性会变差。

2、产品不能暴露在高温和高湿状态，必须保存在以下环境中：（在不拆开原包装的基础上）

温度：不超过35℃

湿度：不超过80% RH

引线式产品储存时间(从产品包装或产品

本体上的日期算起)：

对于散装产品，不超过24个月。

对于径编产品，不超过12个月。

焊片产品储存时间，不超过6个月(从发货日算起)。

3、SMD 产品的贮存要求

当未打开1级MBB(Moisture Barrier Bag)，储存在温度小于35℃，湿度小于80%RH的情况下，能够保证有12月的储存期。

当打开MBB后，储存在温度小于30℃，湿度小于60%RH的情况下，可以保证168小时。

如果拆开包装的未使用的剩下产品，我们建议再利用同样的MBB包装，或者控制储存环境的湿度和温度。

■ ROHS符合性

在此产品目录中的，弘源电子的产品均符合ROHS指令的环保要求和《电子信息产品污染控制管理办法》。

8. Buzzing noise caused by the vibratlon of film

Any buzzing noise produced by capacitor is caused by the vibration of the film due to the coulomb force that is generated between the electrodes with opposite poles. If the wave-form with a high distortion voltage or frequency is applied accorss the capacitor, the buzzing noise will become louder.But the buzzing noise is of no damage to capacitor.

9. Storage conditions:

1. It must be noted that the solderability of the terminals may be deteriorated when stored in an atmosphere filled with moisture, dust, or a reactive oxidizing gas.(hydrogen chloride, hydrogen sulfide, sulfuric acid,etc.)

2. It shouldn't be located in particularly high temperature and high humidity, it must submit to the following conditions(under the unchanging primal package):

Temperature: not exceeding 35°C

Humidity: not exceeding 80% RH

Storage time for tinned lead wire: (from the date marked on the capacitor's body or the label glued to the package):

Bulk: ≤24 months

Taping: ≤12 months

Storage time for welding tabs:

form the date of consignment ≤6 months

3.SMD storage conditions:

When unchanging a MBB (Moisture Barrier Bag) Class 1,stored in a temperature lower than 35°C and relative humidity lower than 80%,the storage is 12 months.

After the opening of the MBB, stored in a temperature lower than 30°C and relative humidity lower than 60%, the storage is 168 hours.

If the reel is partially used,We recommends the recycle of the same MBB or a storage in areas with controlled temperature and humidity.

■ ROHS Compliance

Hongfarad products in the catalogue are ROHS Compliant.

六、在订购或索要样品之前，请尽可能多地提供以下信息：

1. 额定工作电压：DC，AC；
2. 电容量及电容量允许偏差：J、K、M等；
3. 最终产品种类：彩色电视机、显示器、开关电源，电子节能灯、振流器、变频器、ADSL、UPS等等；
4. 用途或电路图：直流回路、交流脉冲回路(S校正电路、行逆程电路、尖峰吸收回路)，电源跨线噪音抑制电路、高稳定性电路、DC-link、DC-filter、降压、PFC等等；
5. 使用条件：脉冲峰值，频率，波形，电流等等；
6. 使用温度；
7. 外形尺寸：电容器本体尺寸，引出线尺寸等等；
8. 形状：包封形式(浸渍型、盒式等)，引出线(直脚、成型、编带等等)；
9. 安全性：当电容器短路或开路时对其他部件的影响，当其它部件或电路工作异常时对电容器的影响；
10. 焊接条件：SMD、引线式；
11. 安装方式：PCB板、螺栓式、绝缘引线等；

六、When placing an order or inquiring sample, please specify the following, as much as you can.

1. Rated voltage: DC, AC.
2. Capacitance value and capacitance tolerance: J, K, M etc.
3. Finished product: Color TV, Monitor, Switching power, light, ballast, transducer, ADSL, UPS etc.
4. Application or circuit diagram: DC circuit, AC pulse circuit (S-shape correction, horizontal resonance circuit, peak absorption circuit), interface noise suppression circuit, high stability circuit DC-link, DC-filter, PFC etc.
5. Condition of operation: pulse peak, frequency, waveform, current etc.
6. Operating temperature.
7. Dimensions: body, lead space, etc.
8. Shape: enclosure(dip, case, etc), lead wire(straight, crimped, taping etc).
9. Safety: Influence to the other component, when the capacitor gets short-circuited or open. Influence to the capacitor, when the other component or the circuit works irregularly.
10. Welding condition: SMD or tinned-lead-wire type.
11. Fixed style: PCB, bolt, insulated lead wire etc.

七、引线式产品的包装方式 Packing for tinned-wire capacitors

1. 塑料外壳电容器径向编带说明 Taping specification for box-type capacitor

■ 外形图 Outline Drawing

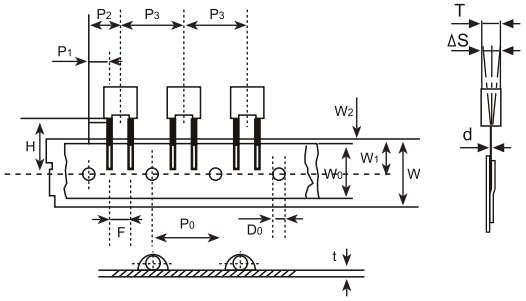


图1 Fig.1 引出线间距P=5.0、7.5mm

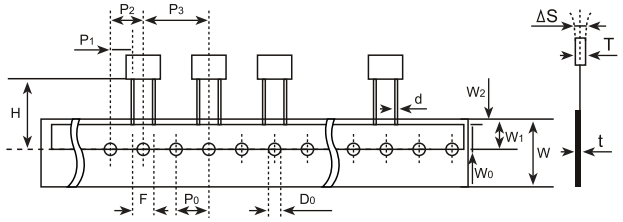


图2 Fig.2 引出线间距P=10.0、15.0mm

■ 编带尺寸表 Taping Dimensions(mm)

技术指标名称	代号	尺寸				
		P=5.0	P=7.5	P=10.0	P=15.0	误差
编带类型		图1 Fig 1	图1 Fig 1	图2 Fig 2	图2 Fig 2	
Part number Digit12-15	Ammo -pack	A201	A301	A405	A605	
电容器间距	P_3	12.7	15.0	30.0	30.0	±1.0
送带孔距	P_0	12.7	15.0	15.0	15.0	±0.2
引出线位置	P_1	3.85	4.9	10.0	7.5	±0.7
电容器本体位置	P_2	6.35	7.5	15.0	15.0	±1.3
引出线间距	F**	5.0	7.5	10.0	15.0	+0.6 -0.1
电容器侧面倾斜	△s	0	0	0	0	±2.0
电容器底部至带孔中心距离	H***	18.5	18.5	18.5	18.5	±0.5
纸带宽度	W	18.0	18.0	18.0	18.0	+1.0 -0.5
胶带纸宽度	W_0	6min	12min	12min	12min	
送带孔位置	W_1	9.0	9.0	9.0	9.0	±0.5
胶带纸位置	W_2	1.5max	1.5max	1.5max	1.5max	
送带孔直径	D_0	4.0	4.0	4.0	4.0	±0.2
编带总厚度	t	0.7	0.7	0.7	0.9	±0.2

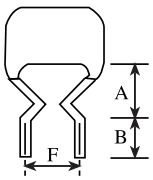
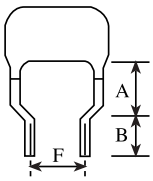
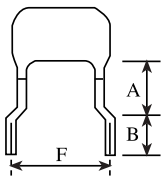
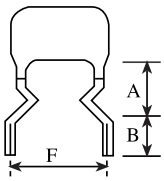
Note: * P_0=15.0mm is also available; * P_0=15.0mm是可行的;
** F can be other lead space; ** F可以是其他间距;
*** H=16.5mm is available; *** H=16.5mm是可行的;

■ 包装数量 Packaging Quantity

Pitch (mm)	Box thinkness T(mm)	Ammo-Pack (pcs/Box)	
		Domestic	Export
5.0	3.5	1 700	1 500
	4.5	1 400	1 300
	5.0	1 200	1 000
	6.0	1 000	800
7.5	3.5	1 700	1 500
	4.0	1 500	1 300
	5.0	1 200	1 000
	6.0	1 000	800
10.0/ 15.0	4.0	750	650
	5.0	600	500
	6.0	500	450
15.0	7.5	400	350
	8.5	350	300
	10.0	300	250
	11.0	250	200

2. 浸渍型电容器包装说明 Packing for dipped-type capacitor

2.1 浸渍型电容器引出线成型形状 Lead kinked for dipped-type capacitor

代号(Code)	Ⅰ	Ⅱ	Ⅲ	Ⅳ
成型形状 Forming shape				
适用范围 Applicable range	P≥F		P<F	
	0mm≤P-F≤3mm	3mm<P-F≤8mm	3mm<F-P≤5mm	0mm<F-P≤3mm
尺寸标准 Dimension standard	A≤5.0mm; B=4.5±0.5mm; F允许偏差为±1.0mm (The permissible tolerance of 'F' is ±1.0mm)			

2.2 浸渍型电容器径向编带说明 Taping for dipped-type capacitor

■ 外形图 Outline Drawing

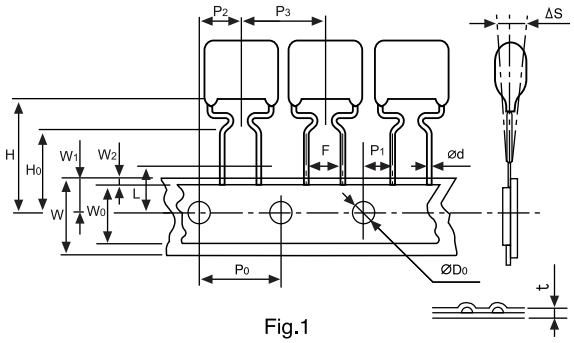


Fig.1

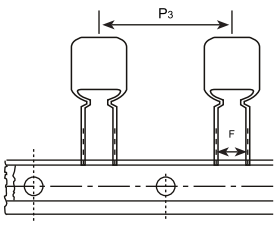


Fig.2

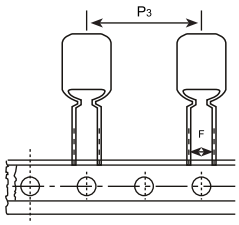


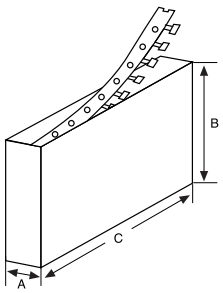
Fig.3

■ 编带尺寸表 Taping Dimensions(mm)

技术指标名称	代号	尺 寸(mm)				
		P=5.0	P=7.5	P=10.0	P=15.0	误差
编带类型		Fig 1	Fig 1	Fig 2	Fig 3	
Part number Digit12-15	Ammo -pack	A21A	A31A	A41B	A61E	
电容器间距	P_3	12.7	12.7	12.7	25.4	±1.0
送带孔距	P_0	12.7	12.7	12.7	12.7	±0.3
引出线位置	P_1	3.85	2.60	5.0	5.2	±0.7
电容器本体位置	P_2	6.35	6.35	---	12.7	±1.3
成形间距	F**	5.0	7.5	10.0	15.0	+0.8 -0.2
电容器侧面倾斜	△s	0	0	0	0	±2.0
电容器高度	H	20.0	20.0	20.0	20.0	±1.0
弯脚高度	H_0	16.0	16.0	16.0	16.0	±0.5
纸带宽度	W	18.0	18.0	18.0	18.0	+1.0 -0.5
胶带纸宽度	W_0	13	13	13	13	±0.5
送带孔位置	W_1	9.0	9.0	9.0	9.0	+0.75 -0.5
胶带纸位置	W_2	≤3	≤3	≤3	≤3	
送带孔直径	D_0	4.0	4.0	4.0	4.0	±0.3
编带总厚度	t	0.7	0.7	0.7	0.7	±0.2

Note: * P_0=15.0mm is also available;
* P_0=15.0mm是可行的;
** F can be other lead space;
** F可以是其他间距;

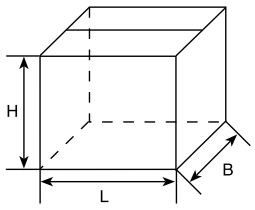
3.3 径向编带包装箱尺寸 (Box size for Ammo-pack)



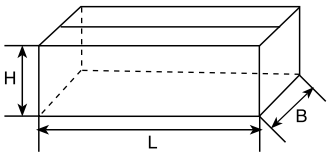
A=48 ± 3, B=260 ± 3, C=330 ± 3

3. 包装箱尺寸 Packing in bulk

3.1 散装外包装箱尺寸 (Out packaging box for bulk)



3.2 内包装箱尺寸 (Inner packaging box for bulk)



16 位产品代码如下:

The 16 digits part number is formed as follow:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
H	M	6	0	2	A	5	A	1	2	J	Z	G	1	B	0	

H:LOGO

1. **1~3 TYPE OF CAPACITOR:**
   电容器系列

TYPE	PEI	MEF	MEB	MEK	MEA	MET	MPP	MPD	MPB	PPS	MPS	MPA	MPT	M60
CODE	PEI	MEF	MEB	MEK	MEA	MET	MPP	MPD	MPB	PPS	MPS	MPA	MPT	M60
TYPE	MKP	M61	APB	APD	APA	APT	APK	APQ	APM	DPA	DPB	DAT	DAL	
CODE	MKP	M61	APB	APD	APA	APT	APK	APQ	APM	DPA	DPB	DAT	DAL	

2. **4~6 RATED VOLTAGE:**
   额定电压

063: 63VDC/JIS 1J. **400: 400VDC/JIS 2G.** **1K6: 1,600VDC/JIS 3C.**
100: 100VDC/JIS 2A. **630: 630VDC/JIS 2J.** **1N0: 10,000VDC/JIS 4A.**
250: 250VDC/JIS2E. **1K0: 1,000VDC/JIS 3A.** **2A7: 275VAC 3A1:310VAC.**

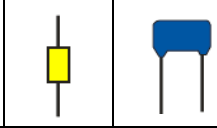
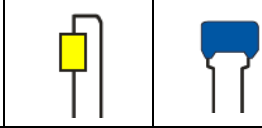
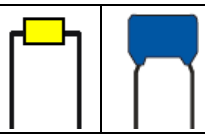
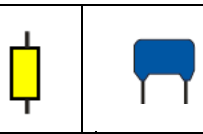
3. **7~9 Symbols of capacitance in uF:**
   电容器容量代码

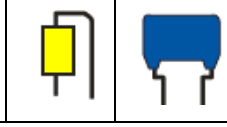
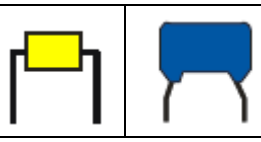
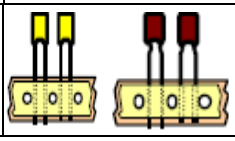
A: Indicates tens. EX: 12uF=A12, 10uF=A10. 117=110uF 207=200uF
W(Word): Indicates unit. EX: 1.5uF=W15
P(Point): Digits following the decimal point. EX: 0.22uF=P22
S(Single Zero): Digits following the decimal point followed by one zero. EX: 0.015uF=S15
D(Double Zeroes): Digits following the decimal point followed by two zeroes. EX: 0.0047uF=D47
T(Triple Zeroes): Digits following the decimal point followed by three zeroes. EX: 0.00068uF=T68

4. **10 Symbols of capacitance Tolerance:**
   容量公差代码

TOLERANCE	±1%	±2%	±3%	±5%	±10%	±20%	+80%-20%	+100%-0%
CODE	F	G	H	J	K	M	Z	P

5. **11 Lead Style Code:**
   引脚方式

CODE	0(不加工)	1（内弯）	2（外弯）	3(内外弯)	4(切脚)
LEAD TYPE					

CODE	5(内弯切脚)	6（外弯切脚	7（内外弯切脚）	A(直编) B(弯编)	T(螺栓)	Z(软导线)
LEAD TYPE						

6. **12 Lead Space (mm)**
   引线脚距

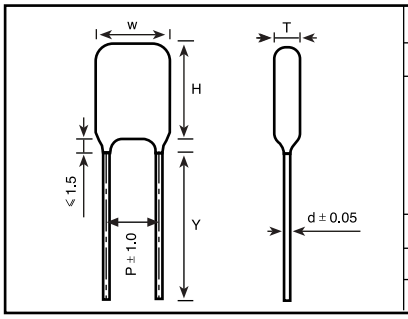
SPACE	3.5	4.0	5.0	6.0	7.5	10.0	12.5	15.0	20.0	22.5	27.5	30.0	31.5	32.0	37.5	42.5	
CODE	A	B	C	E	D	F	V	I	M	N	R	U	S	T	Q	W	O
SPACE	47.5	52.5	17.5	25	50	软导线	50										
CODE	P	Y	K	H	V	G	X										

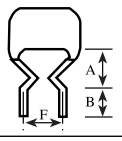
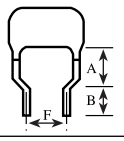
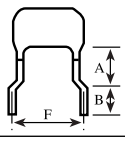
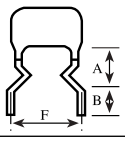
7. **13~14** 引线脚长 Lead Length 3A=3.5 4A=4.5 05=5mm 5A=5.5 20=20mm 1B=150mm
8. **15** 特征码 Feature Codes 所有产品符合ROHS/REACH:0 无卤：A；阻容降压：B; 防潮：D;低噪音：Y
9. **16** 内部码 Internal Codes

Hongfarad

有感箔式聚酯膜电容器
Polyester film metal foil capacitor (Inductive)

■ 外形图 Outline Drawing



Forming Lead Shapes			
I	II	III	IV
			
P≥F		P<F	
0mm≤P-F≤3mm	3mm<P-F≤8mm	3mm<F-P≤5mm	0mm<F-P≤3mm
F±1.0mm; A≤5.0mm; B=4.5±0.5mm			

■ 特点

- 聚酯膜/铝箔，有感卷绕结构
- 引线直接点焊于电极，损耗小
- 环氧料真空包封

■ Features

- polyester film/foil, inductive wound construction
- Dissipation factor is small because the leads are
- epoxy resin vacuum-dipped

■ 主要用途

- 广泛应用于电视机、收录机及各种电子仪器的直流、脉动电路中

■ Typical Applications

- Widely used in DC and pulsating circuits of radio, TV sets and various electronic equipments

■ 技术要求 Specifications

引用标准 Reference Standard	GB/T 6346 (IEC 60384-11)
气候类别 Climatic Category	55/105/21
额定温度 Rated Temperature	85℃
工作温度范围 Operating Temperature Range	-55℃~105℃ (+85℃ to +105℃: decreasing factor 1.25% per ℃ for V_R(dc))
额定电压 Rated Voltage	50V、63V/100V、250V、400V
电容量范围 Capacitance Range	0.0001μF~0.47μF
电容量偏差 Capacitance Tolerance	±5%(J), ±10%(K), ±20%(M)
耐电压 Voltage Proof	2.0U_R(5s)
损耗角正切 Dissipation Factor	≤1.0% (20℃,1kHz)
绝缘电阻 Insulation Resistance	≥30 000MΩ, CR≤0.1μF ≥10 000MΩ, CR>0.1μF (20℃, 1min)

POLYESTER FILM CAPACITOR

尺寸 Dimensions(mm)

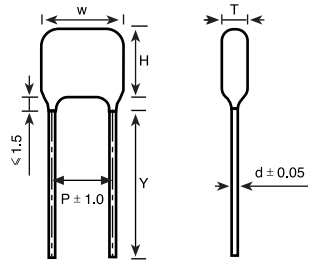
Rated Cap.uF	50/63/100VDC					Rated Cap.	250VDC					Rated Cap.	400VDC				
	W	H	T	P	d		W	H	T	P	d		W	H	T	P	d
	max	max	max	±1.0	±0.05		max	max	max	±1.0	±0.05		max	max	max	±1.0	±0.05
100pF	7.5	7.5	3.5	5.0	0.5	100pF	7.5	7.5	3.5	5.0	0.5	100pF	7.5	7.5	3.5	5.0	0.5
220pF	7.5	7.5	3.5	5.0	0.5	220pF	7.5	7.5	3.5	5.0	0.5	220pF	7.5	7.5	3.5	5.0	0.5
330pF	7.5	7.5	3.5	5.0	0.5	330pF	7.5	7.5	3.5	5.0	0.5	330pF	7.5	7.5	3.5	5.0	0.5
470pF	7.5	7.5	3.5	5.0	0.5	470pF	7.5	7.5	3.5	5.0	0.5	470pF	7.5	7.5	3.5	5.0	0.5
560pF	7.5	7.5	3.5	5.0	0.5	560pF	7.5	7.5	3.5	5.0	0.5	560pF	7.5	7.5	3.5	5.0	0.5
680pF	7.5	7.5	3.5	5.0	0.5	680pF	7.5	7.5	3.5	5.0	0.5	680pF	7.5	7.5	3.5	5.0	0.5
820pF	7.5	7.5	3.5	5.0	0.5	820pF	7.5	7.5	3.5	5.0	0.5	820pF	7.5	7.5	3.5	5.0	0.5
1000pF	7.5	7.5	3.5	5.0	0.5	1000pF	7.5	7.5	3.5	5.0	0.5	1000pF	7.5	7.5	3.5	5.0	0.5
1200pF	8.0	7.5	4.0	5.0	0.5	1200pF	8.0	7.5	4.0	5.0	0.5	1200pF	7.5	7.5	4.0	5.0	0.5
1500pF	8.0	7.5	4.0	5.0	0.5	1500pF	8.0	7.5	4.0	5.0	0.5	1500pF	8.0	7.5	4.0	5.0	0.5
1800pF	8.0	7.5	4.0	5.0	0.5	1800pF	8.0	7.5	4.0	5.0	0.5	1800pF	8.0	7.5	4.0	5.0	0.5
2200pF	8.0	7.5	4.0	5.0	0.5	2200pF	8.0	7.5	4.0	5.0	0.5	2200pF	8.0	8.0	4.0	5.0	0.5
3300pF	8.0	7.5	4.0	5.0	0.5	3300pF	8.0	7.5	4.0	5.0	0.5	3300pF	8.0	8.5	4.0	5.0	0.5
3900pF	8.0	7.5	4.0	5.0	0.5	3900pF	8.0	7.5	4.0	5.0	0.5	3900pF	8.0	8.5	4.0	5.0	0.5
4700pF	8.0	7.5	4.0	5.0	0.5	4700pF	8.0	7.5	4.0	5.0	0.5	4700pF	8.0	8.5	4.0	5.0	0.5
5600pF	8.0	7.5	4.0	5.0	0.5	5600pF	8.0	7.5	4.0	5.0	0.5	5600pF	8.0	8.5	4.5	5.0	0.5
6800pF	8.0	7.5	4.0	5.0	0.5	6800pF	8.0	7.5	4.0	5.0	0.5	6800pF	8.0	8.5	4.5	5.0	0.5
8200pF	8.0	7.5	4.0	5.0	0.5	8200pF	8.0	7.5	4.0	5.0	0.5	8200pF	8.0	8.5	4.5	5.0	0.5
0.010uF	8.0	7.5	4.0	5.0	0.5	0.010uF	8.5	8.5	4.0	5.0	0.5	0.010uF	8.5	9.0	5.0	5.0	0.5
0.012uF	8.0	7.5	4.5	5.0	0.5	0.012uF	8.5	8.5	4.5	5.0	0.5	0.012uF	8.5	9.5	5.0	5.0	0.5
0.015uF	8.0	8.0	4.5	5.0	0.5	0.015uF	9.0	8.5	4.5	5.0	0.5	0.015uF	9.5	9.5	5.5	5.0	0.5
0.018uF	8.0	7.5	4.5	5.0	0.5	0.018uF	9.5	9.0	5.5	5.0	0.5						
0.022uF	8.0	8.0	4.5	5.0	0.5												
0.033uF	8.0	8.5	4.5	5.0	0.5												
0.039uF	8.0	8.5	5.0	5.0	0.5												
0.047uF	9.0	9.5	5.5	5.0	0.5												
0.056uF	9.0	9.5	5.5	5.0	0.5												
0.068uF	9.0	9.5	5.5	5.0	0.5												
0.082uF	9.0	9.5	6.0	5.0	0.5												
0.10uF	9.5	9.5	6.5	5.0	0.5												
0.22uF	10.0	12.5	8.0	7.5	0.6												
0.47uF	12.0	16.5	8.5	7.5	0.6												

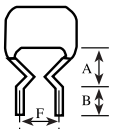
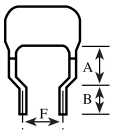
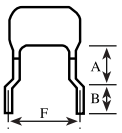
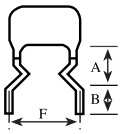
◎ For inquiry of items out of above range or with special dimensions, please do not hesitate to contact with us for availability.
◎超出上述范围之需求，请先与我司联系，确认可否承制。
◎ For inquiry of items out of above range or with special dimensions, please do not hesitate to contact with us for availability.
◎上述规格仅供参考，实际规格以规格承认书为准。

Hongfarad

金属化聚酯膜电容器(浸渍型)
Metallized polyester film capacitor(Dipped)

■ 外形图 Outline Drawing



Forming Lead Shapes			
I	II	III	IV
			
P ⩾ F		P < F	
0mm ⩽ P-F ⩽ 3mm	3mm < P-F ⩽ 8mm	3mm < F-P ⩽ 5mm	0mm < F-P ⩽ 3mm
F ± 1.0mm; A ⩽ 5.0mm; B=4.5 ± 0.5mm			

■ 特点

- 金属化聚酯膜,无感卷绕结构
- 容量范围宽，体积小，重量轻
- 自愈性好，寿命长
- 阻燃性环氧粉末包封

■ Features

- Metallized polyester film, non-inductive wound construction
- Wide capacitance range, small size, and light weight
- Long life due to self-healing effect
- Flame retardation epoxy resin coating

■ 主要用途

- 适用于直流和VHF级信号的隔直流、旁路和耦合
- 广泛用于滤波、低脉冲电路

■ Typical Applications

- Suitable for blocking, by-pass and coupling of DC and signals to VHF range
- Widely used in filter and low pulse circuits

■ 技术要求 Specifications

引用标准 Reference Standard	GB/T 7332（IEC 60384-2）					
气候类别 Climatic Category	55/105/56					
额定温度 Rated Temperature	85℃					
工作温度范围 Operating Temperature Range	-55℃~105℃ (+85℃ to +105℃: decreasing factor 1.25% per ℃ for U_R)					
额定电压 Rated Voltage	50/63V、100V、250V、400V、630V					
电容量范围 Capacitance Range	0.010μF ~ 10.0μF					
电容量偏差 Capacitance Tolerance	±5%(J)、±10%(K)					
耐电压 Voltage Proof	1.6U_R（5s）					
损耗角正切 Dissipation Factor	⩽ 1.0%（20℃,1kHz）					
绝缘电阻 Insulation Resistance	U_R⩽100V	⩾ 3 750MΩ, C_N ⩽ 0.33μF ⩾ 1 250s, C_N > 0.33μF	(20℃,10V, 1min)			
	U_R>100V	⩾ 30 000MΩ, C_N ⩽ 0.33μF ⩾ 5 000s, C_N > 0.33μF	(20℃, 100V,1min)			
最大脉冲爬升速率 Maximum Pulse Rise Time(dV/dt): 若实际工作电压 U 比额定电压 U_R 低，电容器可工作在更高的 dV/dt 场合，这样 dv/dt 允许值应为右表值乘以 U_R/U。 If the working voltage(U) is lower than the rated voltage(U_R),the capacitor can be worked at a higher dV/dt. In this case, the maximum allowed dV/dt is obtain by multiplying the right value with U_R/U.	U_R(V)	dV/dt (V/μs) for Pattern III				
		P=7.5	P=10.0	P=15.0	P=22.5	P=27.5
	50/63	7.5	6	3	2	--
	100	15	9	5	3	--
	250	30	20	12	8	5
	400	40	30	20	10	7
	630	--	40	25	12	10
	1 000	70	60	30	15	12
	1 250	80	70	40	18	14

METALLIZED POLYESTER FILM CAPACITOR

尺寸 Dimensions(mm)

Rated Cap.	50/63/100VDC					Rated Cap.	250VDC					Rated Cap.	400VDC				
	W	H	T	P	d		W	H	T	P	d		W	H	T	P	d
	max	max	max	±1.0	±0.05		max	max	max	±1.0	±0.05		max	max	max	±1.0	±0.05
0.047uF	10.0	8.0	4.5	7.5	0.6	0.022uF	10.0	7.0	4.0	7.5	0.6	0.01uF	10.0	7.0	4.0	7.5	0.6
0.056uF	10.0	8.0	4.5	7.5	0.6	0.027uF	10.0	7.5	4.5	7.5	0.6	0.012uF	10.0	7.0	4.0	7.5	0.6
0.068uF	10.0	8.0	4.5	7.5	0.6	0.033uF	10.0	8.0	4.5	7.5	0.6	0.015uF	10.0	7.0	4.0	7.5	0.6
0.082uF	10.0	8.0	4.5	7.5	0.6	0.039uF	10.0	8.0	4.5	7.5	0.6	0.018uF	10.0	7.0	4.0	7.5	0.6
0.1uF	10.0	8.0	4.5	7.5	0.6	0.047uF	10.0	8.0	4.5	7.5	0.6	0.022uF	10.0	7.0	4.0	7.5	0.6
0.12uF	10.0	8.0	4.5	7.5	0.6	0.056uF	10.0	8.0	4.5	7.5	0.6	0.027uF	10.0	7.5	4.5	7.5	0.6
0.15uF	10.0	8.0	4.5	7.5	0.6	0.068uF	10.0	8.0	4.5	7.5	0.6	0.033uF	10.0	7.5	4.5	7.5	0.6
0.18uF	10.0	8.0	4.5	7.5	0.6	0.082uF	10.0	8.0	4.5	7.5	0.6	0.039uF	10.0	7.5	5.0	7.5	0.6
0.22uF	10.0	8.0	4.5	7.5	0.6	0.1uF	10.0	8.0	4.5	7.5	0.6	0.047uF	10.0	8.5	4.5	7.5	0.6
0.27uF	10.0	8.0	4.5	7.5	0.6	0.12uF	10.0	8.0	4.5	7.5	0.6	0.056uF	10.0	8.5	4.5	7.5	0.6
0.33uF	10.0	8.0	4.5	7.5	0.6	0.15uF	10.0	8.5	5.0	7.5	0.6	0.068uF	12.0	8.5	5.0	10.0	0.6
0.39uF	10.0	8.0	4.5	7.5	0.6	0.18uF	10.0	9.0	5.0	7.5	0.6	0.082uF	12.0	8.5	5.0	10.0	0.6
0.47uF	10.0	9.0	4.5	7.5	0.6	0.22uF	12.0	9.0	5.0	10.0	0.6	0.1uF	12.0	9.5	5.0	10.0	0.6
0.56uF	10.0	9.0	5.0	7.5	0.6	0.27uF	12.0	9.0	5.5	10.0	0.6	0.12uF	12.0	10.0	5.5	10.0	0.6
0.68uF	10.0	9.0	6.0	7.5	0.6	0.33uF	12.0	10.0	5.5	10.0	0.6	0.15uF	18.0	10.0	5.5	15.0	0.8
0.82uF	12.0	9.0	5.0	10.0	0.6	0.39uF	18.0	10.0	5.5	15.0	0.8	0.18uF	18.0	10.0	6.0	15.0	0.8
1uF	12.0	9.5	5.5	10.0	0.6	0.47uF	18.0	10.0	5.5	15.0	0.8	0.22uF	18.0	10.5	6.0	15.0	0.8
1.2uF	12.0	9.5	6.0	10.0	0.6	0.56uF	18.0	11.0	6.0	15.0	0.8	0.27uF	18.0	11.0	6.5	15.0	0.8
1.5uF	12.0	10.5	6.5	10.0	0.6	0.68uF	18.0	11.5	6.5	15.0	0.8	0.33uF	18.0	12.0	7.0	15.0	0.8
1.8uF	18.0	11.5	6.0	15.0	0.8	0.82uF	18.0	12.5	7.0	15.0	0.8	0.39uF	18.0	13.0	7.5	15.0	0.8
2.2uF	18.0	12.0	6.5	15.0	0.8	1uF	18.0	13.0	7.5	15.0	0.8	0.47uF	18.0	13.5	8.5	15.0	0.8
2.7uF	18.0	12.5	7.0	15.0	0.8	1.2uF	18.0	13.5	8.0	15.0	0.8	0.56uF	18.0	14.5	9.0	15.0	0.8
3.3uF	18.0	14.0	7.0	15.0	0.8	1.5uF	18.0	15.5	9.0	15.0	0.8	0.68uF	18.0	15.0	10.0	15.0	0.8
3.9uF	18.0	15.0	7.5	15.0	0.8	1.8uF	18.0	16.0	9.5	15.0	0.8	0.82uF	18.0	16.0	10.5	15.0	0.8
4.7uF	25.0	14.0	7.0	22.5	0.8	2.2uF	25.0	15.5	8.5	22.5	0.8	1uF	25.0	17.0	8.5	22.5	0.8
5.6uF	25.0	14.5	7.5	22.5	0.8	2.7uF	25.0	15.5	9.0	22.5	0.8	1.2uF	25.0	17.5	9.0	22.5	0.8
6.8uF	25.0	15.5	8.5	22.5	0.8	3.3uF	25.0	17.0	10.5	22.5	0.8	1.5uF	25.0	18.5	10.0	22.5	0.8
8.2uF	25.0	17.0	8.5	22.5	0.8	4.7uF	25.0	20.0	11.5	22.5	0.8	1.8uF	31.0	18.5	10.0	27.5	0.8
10uF	25.0	18.0	10.0	22.5	0.8	5.6uF	31.0	20.0	11.5	27.5	0.8	2.2uF	31.0	20.0	10.5	27.5	0.8

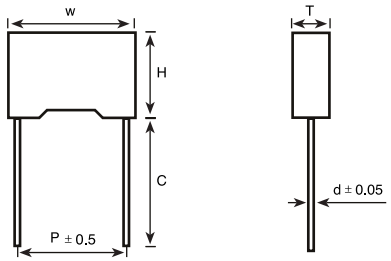
Rated Cap.	630VDC					Rated Cap.	630VDC					Rated Cap.	630VDC				
	W	H	T	P	d		W	H	T	P	d		W	H	T	P	d
	max	max	max	±1.0	±0.05		max	max	max	±1.0	±0.05		max	max	max	±1.0	±0.05
0.01uF	10.0	7.0	4.0	7.5	0.6	0.068uF	12.0	10.0	6.5	10.0	0.6	0.39uF	18.0	16.0	11.0	15.0	0.8
0.012uF	10.0	7.5	4.0	7.5	0.6	0.082uF	12.0	10.5	7.0	10.0	0.6	0.47uF	25.0	16.0	9.0	22.5	0.8
0.015uF	10.0	8.0	4.5	7.5	0.6	0.1uF	18.0	11.0	6.0	15.0	0.8	0.56uF	25.0	17.0	10.0	22.5	0.8
0.018uF	10.0	8.0	4.5	7.5	0.6	0.12uF	18.0	11.5	6.5	15.0	0.8	0.68uF	25.0	17.5	10.5	22.5	0.8
0.022uF	10.0	8.5	5.0	7.5	0.6	0.15uF	18.0	12.0	7.0	15.0	0.8	0.82uF	25.0	18.5	11.5	22.5	0.8
0.027uF	10.0	9.0	5.0	7.5	0.6	0.18uF	18.0	13.0	7.5	15.0	0.8	1.0uF	31.0	19.0	10.5	27.5	0.8
0.033uF	12.0	8.5	5.0	10.0	0.6	0.22uF	18.0	13.5	8.5	15.0	0.8	1.2uF	31.0	20.0	11.5	27.5	0.8
0.047uF	12.0	9.0	5.5	10.0	0.6	0.27uF	18.0	14.5	9.0	15.0	0.8	1.5uF	31.0	21.5	13.0	27.5	0.8
0.056uF	12.0	9.5	6.0	10.0	0.6	0.33uF	18.0	15.5	10.0	15.0	0.8	1.8uF	31.0	22.5	14.0	27.5	0.8

◎ For inquiry of items out of above range or with special dimensions, please do not hesitate to contact with us for availability.
◎超出上述范围之需求，请先与我司联系，确认可否承制。
◎ For inquiry of items out of above range or with special dimensions, please do not hesitate to contact with us for availability.
◎上述规格仅供参考，实际规格以规格承认书为准。

Hongfarad

塑料外壳金属化聚酯膜电容器
Metallized polyester film capacitor(Box-type)

■ 外形图 Outline Drawing



W ± 0.5, H ± 0.5, T ± 0.5

■ 特点

- 可靠性高
- 金属化聚酯膜，无感卷绕结构
- 塑料外壳(UL94 V-0)，阻燃环氧填充

■ Features

- High reliability
- Metallized polyester film, non-inductive wound construction
- Plastic case(UL94 V-0), Epoxy resin sealing

■ 主要用途

- 旁路，隔直，耦合，退耦
- 脉冲，逻辑，定时，振荡电路

■ Typical Applications

- By-passing,blocking,coupling,decoupling,
- Pulse,logic,timing,oscillator circuits.

■ 技术要求 Specifications

引用标准 Reference Standard	GB/T 7332 (IEC 60384-2)					
气候类别 Climatic Category	55/105/56					
额定温度 Rated Temperature	85℃					
工作温度范围 Operating Temperature Range	-55℃~105℃ (+85℃ to +105℃: decreasing factor 1.25% per ℃ for U_R)					
额定电压 Rated Voltage	63V、100V、160V、250V、400V、630V、1000V					
电容量范围 Capacitance Range	0.001μF~47.0μF					
电容量偏差 Capacitance Tolerance	± 5%(J), ± 10%(K), ± 20%(M)					
耐电压 Voltage Proof	1.6U_R (5s)					
损耗角正切 Dissipation Factor	测试频率 Frequency	$C_R \leq 0.1\mu F$	$C_R > 0.1\mu F$			
	1kHz	≤ 1.0%	≤ 1.0%			
	10kHz	≤ 1.5%	≤ 1.5%			
	100kHz	≤ 3.0%				
绝缘电阻 Insulation Resistance	$U_R > 100V$	≥9 000MΩ, $C_R \leq 0.33\mu F$ ≥3 000s, $C_R > 0.33\mu F$	(20℃,100V, 1min)			
	$U_R \leq 100V$	≥3 750MΩ, $C_R \leq 0.33\mu F$ ≥1 250s, $C_R > 0.33\mu F$	(20℃,10V, 1min)			
最大脉冲爬升速率Maximum Pulse Rise Time (dV/dt): 若实际工作电压U比额定电压U_R低，电容器可工作在更高的dV/dt场合。这样dV/dt允许值应为右表值乘以U_R/U。 If the working voltage (U) is lower than the rated voltage (U_R),the capacitor can be worked at a higher dV/dt.In this case, the maximum allowed dV/dt is obtain by multiplying the right value with U_R/U.	U_R(V)	dV/dt(V/μs)				
		P=7.5	P=10.0	P=15.0	P=22.5	P=27.5
	63	7.5	6	3	2	1
	100	15	9	5	3	2
	250	30	20	12	8	5
	400	40	30	20	10	7
	630	50	40	25	12	-

METALLIZED POLYESTER FILM CAPACITOR

尺寸 Dimensions(mm)

Rated Cap.	63/100VDC					Rated Cap.	250VDC					Rated Cap.	400VDC				
	W	H	T	P	d		W	H	T	P	d		W	H	T	P	d
	±0.5	±0.5	±0.5	±1.0	±0.05		±0.5	±0.5	±0.5	±1.0	±0.05		±0.5	±0.5	±0.5	±1.0	±0.05
0.01uF	10.0	9.0	4.0	7.5	0.6	0.01uF	10.0	9.0	4.0	7.5	0.6	0.01uF	10.0	9.0	4.0	7.5	0.6
0.015uF	10.0	9.0	4.0	7.5	0.6	0.015uF	10.0	9.0	4.0	7.5	0.6	0.01uF	13.0	9.0	4.0	10.0	0.6
0.022uF	10.0	9.0	4.0	7.5	0.6	0.022uF	10.0	9.0	4.0	7.5	0.6	0.015uF	10.0	9.0	4.0	7.5	0.6
0.027uF	10.0	9.0	4.0	7.5	0.6	0.027uF	10.0	9.0	4.0	7.5	0.6	0.015uF	13.0	9.0	4.0	10.0	0.6
0.033uF	10.0	9.0	4.0	7.5	0.6	0.033uF	10.0	9.0	4.0	7.5	0.6	0.022uF	10	9.0	4.0	7.5	0.6
0.047uF	10.0	9.0	4.0	7.5	0.6	0.047uF	10.0	9.0	4.0	7.5	0.6	0.022uF	13.0	9.0	4.0	10.0	0.6
0.056uF	10.0	9.0	4.0	7.5	0.6	0.068uF	10.0	9.0	4.0	7.5	0.6	0.033uF	10.0	9.0	4.0	7.5	0.6
0.068uF	10.0	9.0	4.0	7.5	0.6	0.068uF	13.0	9.0	4.0	10.0	0.6	0.033uF	12.0	11.0	5.0	10.0	0.6
0.082uF	10.0	9.0	4.0	7.5	0.6	0.10uF	10.0	9.0	4.0	7.5	0.6	0.047uF	10.0	9.0	4.0	7.5	0.6
0.1uF	13.0	9.0	4.0	10.0	0.6	0.10uF	13.0	9.0	4.0	10.0	0.6	0.047uF	12.0	11.0	5.0	10.0	0.6
0.15uF	13.0	9.0	4.0	10.0	0.6	0.15uF	10.0	11.0	5.0	7.5	0.6	0.056uF	10.0	11.0	5.0	7.5	0.6
0.18uF	12.0	11.0	5.0	10.0	0.6	0.15uF	12.0	11.0	5.0	10.0	0.6	0.056uF	13.0	12.0	6.0	10.0	0.6
0.22uF	12.0	11.0	5.0	10.0	0.6	0.15uF	18.0	11.0	5.0	15.0	0.6	0.068uF	10.0	11.0	5.0	7.5	0.6
0.27uF	12.0	11.0	5.0	10.0	0.6	0.22uF	10.0	11.0	5.0	7.5	0.6	0.068uF	13.0	12.0	6.0	10.0	0.6
0.33uF	12.0	11.0	5.0	10.0	0.6	0.22uF	13.0	12.0	6.0	10.0	0.6	0.068uF	18.0	11.0	5.0	15.0	0.6
0.47uF	18.0	11.0	5.0	15.0	0.6	0.22uF	18.0	11.0	5.0	15.0	0.6	0.10uF	10.0	12.0	6.0	7.5	0.6
0.56uF	18.0	11.0	5.0	15.0	0.6	0.33uF	10.0	12.0	6.0	7.5	0.6	0.10uF	13.0	12.0	6.0	10.0	0.6
0.68uF	18.0	12.0	6.0	15.0	0.8	0.33uF	13.0	12.0	6.0	10.0	0.6	0.10uF	18.0	11.0	5.0	15.0	0.6
0.82uF	18.0	13.5	7.5	15.0	0.8	0.33uF	18.0	11.0	5.0	15.0	0.6	0.15uF	10.0	12.0	6.0	7.5	0.6
1.0uF	18.0	13.5	7.5	15.0	0.8	0.47uF	18.0	12.0	6.0	15.0	0.8	0.15uF	13.0	13.0	7.0	10.0	0.6
1.2uF	18.0	13.5	7.5	15.0	0.8	0.47uF	26.5	15.0	6.0	22.5	0.8	0.15uF	18.0	11.0	5.0	15.0	0.6
1.5uf	18.0	13.5	7.5	15.0	0.8	0.68uF	18.0	14.5	8.5	15.0	0.8	0.22uF	18.0	12.0	6.0	15.0	0.8
1.8uF	18.0	14.5	8.5	15.0	0.8	0.68uF	26.5	15.0	6.0	22.5	0.8	0.22uF	26.5	15.0	6.0	22.5	0.8
2.2uF	26.5	16.5	7.0	22.5	0.8	1.0uF	18.0	16.0	10.0	15.0	0.8	0.33uF	18.0	13.5	7.5	15.0	0.8
2.7uF	26.5	17.0	8.5	22.5	0.8	1.0uF	26.5	16.5	7.0	22.5	0.8	0.47uF	18.0	14.5	8.5	15.0	0.8
3.3uF	26.5	19.0	10.0	22.5	0.8	1.5uF	26.5	17.0	8.5	22.5	0.8	0.68uF	26.5	20.0	11.0	22.5	0.8
10uF	26.5	20.0	11.0	22.5	0.8	2.2uF	32.0	20.0	11.0	27.5	0.8	1.0uF	31.5	19.5	10.8	27.5	0.8
22uF	32.0	22.0	13.0	27.5	0.8	3.3uF	32.0	20.0	11.0	27.5	0.8	2.2uF	31.5	22.0	13.0	27.5	0.8
47uF	31.0	33.0	18.0	27.5	0.8	4.7uF	31.0	25.0	14.0	27.5	0.8	3.3uF	31.0	25.0	14.0	27.5	0.8
Rated Cap.	630VDC					Rated Cap.	630VDC					Rated Cap.	630VDC				
	W	H	T	P	d		W	H	T	P	d		W	H	T	P	d
	±0.5	±0.5	±0.5	±1.0	±0.05		±0.5	±0.5	±0.5	±1.0	±0.05		±0.5	±0.5	±0.5	±1.0	±0.05
4700pF	13.0	9.0	4.0	10.0	0.6	0.047uF	18.0	11.0	5.0	15.0	0.6	0.27uF	18.0	16.0	10.0	15.0	0.8
5600pF	13.0	9.0	4.0	10.0	0.6	0.056uF	18.0	12.0	6.0	15.0	0.8	0.27uF	26.5	17.0	8.5	22.5	22.5
6800pF	13.0	9.0	4.0	10.0	0.6	0.068uF	18.0	12.0	6.0	15.0	0.8	0.33uF	18.0	19.0	10.8	15.0	0.8
8200pF	13.0	9.0	4.0	10.0	0.6	0.10uF	18.0	13.5	7.5	15.0	0.8	0.33uF	26.5	19.0	10.0	22.5	0.8
0.01uF	13.0	9.0	4.0	10.0	0.6	0.12uF	18.0	13.5	7.5	15.0	0.8	0.47uf	18.0	19.0	10.8	15.0	0.8
0.015uF	12.0	11.0	5.0	10.0	0.6	0.15uF	18.0	14.5	8.5	15.0	0.8	0.47uF	26.5	20.0	11.0	22.5	0.8
0.022uF	12.0	11.0	5.0	10.0	0.6	0.15uF	26.5	15.0	6.0	22.5	0.8	0.56uF	31.5	19.5	10.8	27.5	0.8
0.027uF	13.0	12.0	6.0	10.0	0.6	0.22uF	18.0	14.5	8.5	15.0	0.8	0.68uF	32.0	22.0	13.0	27.5	0.8
0.033uF	13.0	13.0	7.0	10.0	0.6	0.22uF	26.5	16.5	7.0	22.5	0.8	1.0uF	32.0	25.0	14.0	27.5	0.8

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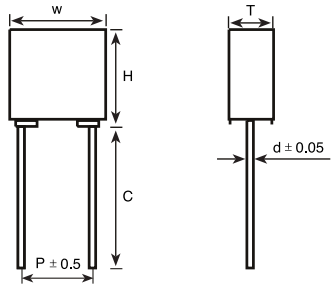
◎ For inquiry of items out of above range or with special dimensions, please do not hesitate to contact with us for availability.
◎上述规格仅供参考，实际规格以规格承认书为准。

塑料外壳金属化聚酯膜电容器(P=5.0)
Box-type metallized polyester film capacitor

■ 外形图 Outline Drawing



■ 特点

- 金属化聚酯膜，叠片式结构/无感卷绕结构
- 塑料外壳(UL94 V-0)，阻燃环氧填充
- 抗脉冲能力强

■ Features

- Metallized polyester film, stacked non-inductive wound construction
- Plastic case(UL94 V-0), Epoxy resin sealing
- High dv/dt ability

■ 主要用途:

- 旁路，隔直，耦合，退耦
- 脉冲，逻辑，定时，电路振荡器
- LCD监视器整流，汽车直流马达抑制干扰

■ Typical Applications:

- By-passing,blocking,coupling,decoupling,
- Pulse logic,timing,oscillator circuits.
- Invert for LCD monitors,automotive DC motor suppression

■ 技术要求 Specifications

引用标准 Reference Standard	GB/T 7332 (IEC 60384-2)		
气候类别 Climatic Category	55/105/56		
额定温度 Rated Temperature	85℃		
工作温度范围 Operating Temperature Range	-55℃~105℃ (+85℃ to +105℃: decreasing factor 1.25% per ℃ for U_R)		
额定电压 Rated Voltage	50/63V、100V、250V、400V、630V		
电容量范围 Capacitance Range	0.0010μF~2.2μF		
电容量偏差 Capacitance Tolerance	± 5%(J), ± 10%(K), ± 20%(M)		
耐电压 Voltage Proof	1.6U_R (5s)		
损耗角正切 Dissipation Factor	测试频率 Frequency	$C_R \leq 0.1\mu F$	$C_R > 0.1\mu F$
	1kHz	≤ 1.0%	≤ 1.0%
	10kHz	≤ 1.5%	≤ 1.5%
	100kHz	≤ 3.0%	
绝缘电阻 Insulation Resistance	U_R>100V	⩾9 000MΩ, C_R ⩽0.33μF ⩾3 000s, C_R>0.33μF	(20℃ ,100V, 1min)
	U_R⩽100V	⩾3 750MΩ, C_R⩽0.33μF ⩾1 250s, C_R>0.33μF	(20℃ ,10V, 1min)
最大脉冲爬升速率Maximum Pulse Rise Time (dV/dt): 若实际工作电压U比额定电压U_R低，电容器可工作在更高的dV/dt场合。这样dV/dt允许值应为右表值乘以U_R/U。 If the working voltage (U) is lower than the rated voltage (U_R),the capacitor can be worked at a higher dV/dt.In this case, the maximum allowed dV/dt is obtain by multiplying the right value with U_R/U.	U_R(V)	dV/dt(V/μs)	
		pattern Ⅰ	pattern Ⅱ
	50/63	250	75
	100	300	85
	250	400	100
	400	600	150
	500	700	200
	630	800	
	700	-	250

METALLIZED POLYESTER FILM CAPACITOR

尺寸 Dimensions(mm)

Rated Cap.	63VDC W ±0.5	H ±0.5	T ±0.5	P ±1.0	d ±0.05
1000pF	7.2	6.5	2.5	5.0	0.5
1200pF	7.2	6.5	2.5	5.0	0.5
1500pF	7.2	6.5	2.5	5.0	0.5
1800pF	7.2	6.5	2.5	5.0	0.5
2200pF	7.2	6.5	2.5	5.0	0.5
2700pF	7.2	6.5	2.5	5.0	0.5
3300pF	7.2	6.5	2.5	5.0	0.5
3900pF	7.2	6.5	2.5	5.0	0.5
4700pF	7.2	6.5	2.5	5.0	0.5
5600pF	7.2	6.5	2.5	5.0	0.5
6800pF	7.2	6.5	2.5	5.0	0.5
8200pF	7.5	6.5	2.5	5.0	0.5
0.01uF	7.5	6.5	2.5	5.0	0.5
0.012uF	7.5	6.5	2.5	5.0	0.5
0.015uF	7.5	6.5	2.5	5.0	0.5
0.018uF	7.5	6.5	2.5	5.0	0.5
0.022uF	7.5	6.5	2.5	5.0	0.5
0.027uF	7.5	6.5	2.5	5.0	0.5
0.033uF	7.5	6.5	2.5	5.0	0.5
0.039uF	7.5	6.5	2.5	5.0	0.5
0.047uF	7.5	6.5	2.5	5.0	0.5
0.056uF	7.5	6.5	2.5	5.0	0.5
0.068uF	7.5	6.5	2.5	5.0	0.5
0.082uF	7.5	6.5	2.5	5.0	0.5
0.1uF	7.5	6.5	2.5	5.0	0.5
0.12uF	7.2	6.5	2.5	5.0	0.5
0.15uF	7.2	6.5	2.5	5.0	0.5
0.18uF	7.2	6.5	2.5	5.0	0.5
0.22uF	7.2	6.5	2.5	5.0	0.5
0.27uF	7.2	6.5	2.5	5.0	0.6
0.33uF	7.2	7.5	3.5	5.0	0.6
0.39uF	7.2	7.5	3.5	5.0	0.6
0.47uF	7.2	9.5	4.5	5.0	0.6
0.56uF	7.2	9.5	4.5	5.0	0.6
0.68uF	7.2	9.5	4.5	5.0	0.6
1.0uF	7.2	10.0	5.0	5.0	0.6
2.2uF	7.2	11.0	6.0	5.0	0.6

Dimensions(mm)

Dimensions Tolerance:
W, H, T ±0.5

Lead picth: P±0.5

Lead Wire Dia: d±0.05

Rated Cap.	100VDC W ±0.5	H ±0.5	T ±0.5	P ±1.0	d ±0.05
1000pF	7.2	6.5	2.5	5.0	0.5
1200pF	7.2	6.5	2.5	5.0	0.5
1500pF	7.2	6.5	2.5	5.0	0.5
1800pF	7.2	6.5	2.5	5.0	0.5
2200pF	7.2	6.5	2.5	5.0	0.5
2700pF	7.2	6.5	2.5	5.0	0.5
3300pF	7.2	6.5	2.5	5.0	0.5
3900pF	7.2	6.5	2.5	5.0	0.5
4700pF	7.2	6.5	2.5	5.0	0.5
5600pF	7.2	6.5	2.5	5.0	0.5
6800pF	7.2	6.5	2.5	5.0	0.5
8200pF	7.2	6.5	2.5	5.0	0.5
0.01uF	7.2	6.5	2.5	5.0	0.5
0.012uF	7.2	6.5	2.5	5.0	0.5
0.015uF	7.2	6.5	2.5	5.0	0.5
0.018uF	7.2	6.5	2.5	5.0	0.5
0.022uF	7.2	6.5	2.5	5.0	0.5
0.027uF	7.2	6.5	2.5	5.0	0.5
0.033uF	7.2	6.5	2.5	5.0	0.5
0.039uF	7.2	7.5	3.5	5.0	0.5
0.047uF	7.2	7.5	3.5	5.0	0.5
0.056uF	7.2	7.5	3.5	5.0	0.5
0.068uF	7.2	7.5	3.5	5.0	0.5
0.082uF	7.2	9.5	4.5	5.0	0.5
0.1uF	7.2	9.5	4.5	5.0	0.5
0.12uF	7.2	9.5	4.5	5.0	0.6
0.15uF	7.2	10.0	5.0	5.0	0.6
0.18uF	7.2	11.0	6.0	5.0	0.6
0.22uF	7.2	11.0	6.0	5.0	0.6

Rated Cap.	400VDC W ±0.5	H ±0.5	T ±0.5	P ±1.0	d ±0.05
0.012uF	7.2	9.5	4.5	5.0	0.6
0.015uF	7.2	9.5	4.5	5.0	0.6
0.018uF	7.2	9.5	4.5	5.0	0.6
0.022uF	7.2	10.0	5.0	5.0	0.6
0.027uF	7.2	11.0	6.0	5.0	0.6
0.033uF	7.2	11.0	6.0	5.0	0.6

Rated Cap.	250VDC W ±0.5	H ±0.5	T ±0.5	P ±1.0	d ±0.05
1000pF	7.2	6.5	2.5	5.0	0.5
1200pF	7.2	6.5	2.5	5.0	0.5
1500pF	7.2	6.5	2.5	5.0	0.5
1800pF	7.2	6.5	2.5	5.0	0.5
2200pF	7.2	6.5	2.5	5.0	0.5
2700pF	7.2	6.5	2.5	5.0	0.5
3300pF	7.2	6.5	2.5	5.0	0.5
3900pF	7.2	6.5	2.5	5.0	0.5
4700pF	7.2	6.5	2.5	5.0	0.5
5600pF	7.2	6.5	2.5	5.0	0.5
6800pF	7.2	6.5	2.5	5.0	0.5
8200pF	7.2	6.5	2.5	5.0	0.5
0.01uF	7.2	6.5	2.5	5.0	0.5
0.012uF	7.2	6.5	2.5	5.0	0.5
0.015uF	7.2	6.5	2.5	5.0	0.5
0.018uF	7.2	6.5	2.5	5.0	0.5
0.022uF	7.2	7.5	3.5	5.0	0.5
0.027uF	7.2	7.5	3.5	5.0	0.5
0.033uF	7.2	7.5	3.5	5.0	0.5
0.039uF	7.2	7.5	3.5	5.0	0.5
0.047uF	7.2	9.5	4.5	5.0	0.6
0.056uF	7.2	9.5	4.5	5.0	0.6
0.068uF	7.2	9.5	4.5	5.0	0.6
0.082uF	7.2	10.0	5.0	5.0	0.6
0.1uF	7.2	11.0	5.0	5.0	0.6

Rated Cap.	400VDC W ±0.5	H ±0.5	T ±0.5	P ±1.0	d ±0.05
0.001uF	7.2	6.5	2.5	5.0	0.5
0.0012uF	7.2	6.5	2.5	5.0	0.5
0.0015uF	7.2	6.5	2.5	5.0	0.5
0.0018uF	7.2	6.5	2.5	5.0	0.5
0.0022uF	7.2	6.5	2.5	5.0	0.5
0.0027uF	7.2	6.5	2.5	5.0	0.5
0.0033uF	7.2	6.5	2.5	5.0	0.5
0.0039uF	7.2	6.5	2.5	5.0	0.5
0.0047uF	7.2	6.5	2.5	5.0	0.5
0.0056uF	7.2	7.5	3.5	5.0	0.5
0.0068uF	7.2	7.5	3.5	5.0	0.5
0.0082uF	7.2	7.5	3.5	5.0	0.5
0.01uF	7.2	7.5	3.5	5.0	0.5

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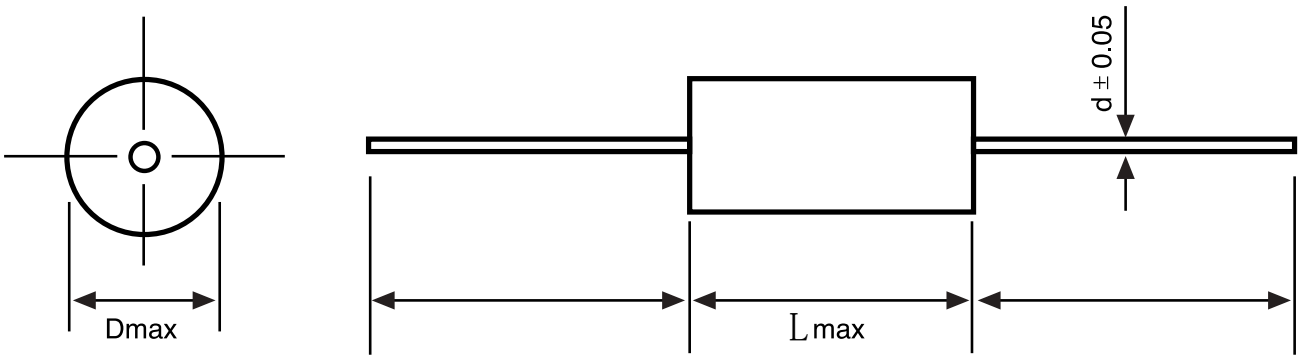
轴向金属化聚酯膜电容器
Metallized polyester film capacitor(Axial-type)

■ 外形图 Outline Drawing



■ 特点

- 金属化聚酯膜,卷绕结构
- 体积小，重量轻，自愈性能优异
- 外包装聚酯胶带纸，两端灌注环氧树脂

■ 主要用途

- 隔直，旁路和耦合(去耦)

■ Features

- Metallized polyester film, non-inductive wound construction
- Small size, light weight, excellent self-healing property
- Wrapped with polyester adhesive tape and ends filled with Flame retardant epoxy resin

■ Typical Applications

- Suitable for blocking, by-pass ,coupling, and decoupling

■ 技术要求 Specifications

引用标准 Reference Standard	GB/T 7332（IEC 60384-2）					
气候类别 Climatic Category	55/105/21					
额定温度 Rated Temperature	85℃					
工作温度范围 Operating Temperature Range	-55℃~105℃ (+85℃ to +105℃: decreasing factor 1.25% per ℃ for U_R)					
额定电压 Rated Voltage	50/63V、100V、250V、400V、630V、1000V					
电容量范围 Capacitance Range	0.0010μF ~20.0μF					
电容量偏差 Capacitance Tolerance	±5%(J)、±10%(K)、±20%(M)					
耐电压 Voltage Proof	1.6U_R（5s）					
损耗角正切 Dissipation Factor	≤ 1.0%（20℃,1kHz）					
绝缘电阻 Insulation Resistance	U_R ≤100V	≥ 3 750MΩ, C_N ≤ 0.33μF ≥ 1 250s, C_N > 0.33μF	(20℃,10V, 1min)			
	U_R > 100V	≥ 30 000MΩ, C_N ≤ 0.33μF ≥ 10 000s, C_N > 0.33μF	(20℃, 100V,1min)			
最大脉冲爬升速率 Maximum Pulse Rise Time(dV/dt): 若实际工作电压 U 比额定电压 U_R 低，电容器可工作在更高的 dV/dt 场合，这样 dv/dt 允许值应为右表值乘以 U_R/U。 If the working voltage(U) is lower than the rated voltage(U_R),the capacitor can be worked at a higher dV/dt. In this case, the maximum allowed dV/dt is obtain by multiplying the right value with U_R/U.	U_R(V)	dV/dt (V/μs)				
		L=12.0	L=14.5	L=20.0	L=27.5	L=33.0
	50/63	6	6	2	1.5	1
	100	9	9	3	2	1
	250	20	20	8	5	2.5
	400	30	30	10	7	4
	630	40	40	15	10	6
	1 000	50	50	25	12	8

METALLIZED POLYESTER FILM CAPACITOR

尺寸 Dimensions(mm)

Rated Cap.	50/63/100VDC		Rated Cap.	250VDC		Rated Cap.	400VDC		Rated Cap.	630VDC	
	OD	L		OD	L		OD	L		OD	L
	max	max		max	max		max	max		max	max
0.010uF	5.5	14.0	0.010uF	5.5	14.0	0.010uF	6.0	14.0	0.001uF	6.0	14.0
0.015uF	5.5	14.0	0.015uF	5.5	14.0	0.015uF	6.0	14.0	0.015uF	7.0	14.0
0.022uF	6.0	14.0	0.022uF	6.0	14.0	0.022uF	6.5	14.0	0.022uF	7.5	14.0
0.027uF	6.0	14.0	0.027uF	6.0	14.0	0.027uF	6.5	14.0	0.027uF	7.0	20.0
0.033uF	6.0	14.0	0.033uF	6.0	14.0	0.033uF	7.0	14.0	0.033uF	8.0	20.0
0.047uF	6.5	14.0	0.047uF	6.5	14.0	0.047uF	7.5	14.0	0.047uF	9.0	20.0
0.068uF	6.5	14.0	0.068uF	6.5	14.0	0.068uF	7.5	20.0	0.068uF	10.0	20.0
0.082uF	6.5	14.0	0.082uF	6.5	14.0	0.082uF	8.0	20.0	0.082uF	10.5	20.0
0.10uF	6.5	14.0	0.10uF	7.0	14.0	0.10uF	8.5	20.0	0.10uF	9.5	26.0
0.15uF	7.5	14.0	0.15uF	7.5	14.0	0.15uF	9.5	20.0	0.15uF	11.5	26.0
0.18uF	7.5	14.0	0.18uF	8.0	14.0	0.18uF	10.5	20.0	0.18uF	12.5	26.0
0.22uF	7.5	20.0	0.22uF	7.5	20.0	0.22uF	9.5	26.0	0.22uF	13.5	26.0
0.27uF	7.5	20.0	0.27uF	8.0	20.0	0.27uF	10.5	26.0	0.27uF	11.5	32.0
0.33uF	8.0	20.0	0.33uF	8.5	20.0	0.33uF	11.5	26.0	0.33uF	13.5	32.0
0.47uF	8.5	20.0	0.47uF	10.0	20.0	0.47uF	13.0	26.0	0.47uF	16.0	32.0
0.68uF	9.0	20.0	0.68uF	10.0	26.0	0.68uF	13.0	32.0	0.68uF	18.5	32.0
0.82uF	9.5	20.0	0.82uF	10.5	26.0	0.82uF	14.0	32.0	0.82uF	20.0	32.0
1.0uF	9.5	26.0	1.0uF	11.5	26.0	1.0uF	15.0	32.0	1.0uF	20.0	36.0
1.2uF	10.0	26.0	1.2uF	12.0	26.0	1.2uF	16.5	32.0	1.2uF	22.0	36.0
1.5uF	11.0	26.0	1.5uF	13.0	26.0	1.5uF	18.0	32.0	1.5uF	22.5	46.0
2.2uF	11.0	32.0	2.2uF	13.0	32.0	2.2uF	20.0	36.0	2.2uF	25.5	46.0
2.5uF	11.5	32.0	2.5uF	14.0	32.0	2.5uF	21.0	36.0			
2.7uF	12.5	32.0	2.7uF	14.5	32.0	2.7uF	22.0	36.0			
3.0uF	13.0	32.0	3.0uF	15.0	32.0	3.0uF	22.5	36.0			
3.3uF	14.0	32.0	3.3uF	16.0	32.0	3.3uF	23.5	36.0			
4.7uF	15.0	32.0	4.7uF	18.0	32.0	4.7uF	28.0	36.0			
6.8uF	16.0	37.0	6.8uF	21.5	36.0						
8.2uF	17.5	37.0	8.2uF	23.0	36.0						
10.0uF	19.0	37.0	10.0uF	21.0	46.0						
12.0uF	20.0	37.0	12.0	24.0	46.0						
15.0uF	23.0	37.0	15.0uF	26.0	46.0						
18.0uF	22.0	46.0	18.0uF	28.0	46.0						
20.0uF	23.0	46.0	20.0uF	29.0	46.0						

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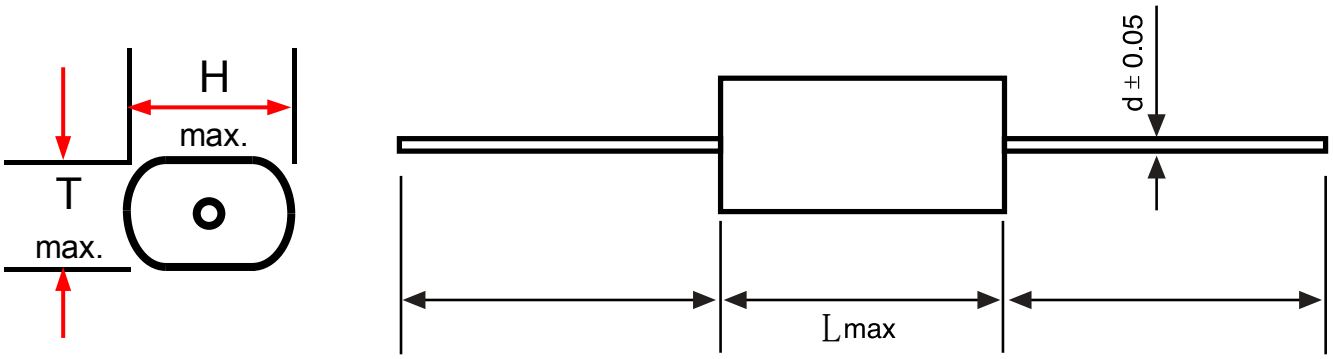
轴向金属化聚酯膜电容器
Metallized polyester film capacitor(Axial-type)

■ 外形图 Outline Drawing



■ 特点

- 金属化聚酯膜,卷绕结构
- 体积小，重量轻，自愈性能优异
- 外包装聚酯胶带纸，两端灌注环氧树脂

■ 主要用途

- 隔直，旁路和耦合(去耦)

■ Features

- Metallized polyester film, non-inductive wound construction
- Small size, light weight, excellent self-healing property
- Wrapped with polyester adhesive tape and ends filled with Flame retardant epoxy resin

■ Typical Applications

- Suitable for blocking, by-pass ,coupling, and decoupling

■ 技术要求 Specifications

引用标准 Reference Standard	GB/T 7332（IEC 60384-2）					
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工作温度范围 Operating Temperature Range	-55℃~105℃ (+85℃ to +105℃: decreasing factor 1.25% per ℃ for U_R)					
额定电压 Rated Voltage	50/63V、100V、250V、400V、630V					
电容量范围 Capacitance Range	0.0010μF ~18.0μF					
电容量偏差 Capacitance Tolerance	±5%(J)、±10%(K)、±20%(M)					
耐电压 Voltage Proof	1.6U_R（5s）					
损耗角正切 Dissipation Factor	≤ 1.0%（20℃,1kHz）					
绝缘电阻 Insulation Resistance	U_R ≤100V	≥ 3 750MΩ, C_N ≤ 0.33μF ≥ 1 250s, C_N > 0.33μF	(20℃,10V, 1min)			
	U_R > 100V	≥ 30 000MΩ, C_N ≤ 0.33μF ≥ 10 000s, C_N > 0.33μF	(20℃, 100V,1min)			
最大脉冲爬升速率 Maximum Pulse Rise Time(dV/dt): 若实际工作电压 U 比额定电压 U_R 低，电容器可工作在更高的 dV/dt 场合，这样 dv/dt 允许值应为右表值乘以 U_R/U。 If the working voltage(U) is lower than the rated voltage(U_R),the capacitor can be worked at a higher dV/dt. In this case, the maximum allowed dV/dt is obtain by multiplying the right value with U_R/U.	U_R(V)	dV/dt (V/μs)				
		L=12.0	L=14.5	L=20.0	L=27.5	L=33.0
	50/63	6	6	2	1.5	1
	100	9	9	3	2	1
	250	20	20	8	5	2.5
	400	30	30	10	7	4
	630	40	40	15	10	6
	1 000	50	50	25	12	8

METALLIZED POLYESTER FILM CAPACITOR

尺寸 Dimensions(mm)

Rated Cap	100VDC				250VDC				400VDC				630VDC			
	L	H	T	d	L	H	T	d	L	H	T	d	L	H	T	d
	max	max	max	±0.05	max	max	max	±0.05	max	max	max	±0.05	max	max	max	±0.05
0.010uF	14.0	8.0	4.5	0.6	14.0	8.0	4.5	0.6	14.0	8.0	4.5	0.6	14.0	8.0	4.5	0.6
0.015uF	14.0	8.0	4.5	0.6	14.0	8.0	4.5	0.6	14.0	8.0	4.5	0.6	14.0	8.5	4.5	0.6
0.022uF	14.0	8.0	4.5	0.6	14.0	8.0	4.5	0.6	14.0	8.0	4.5	0.6	14.0	9.5	5.5	0.6
0.027uF	14.0	8.0	4.5	0.6	14.0	8.0	4.5	0.6	14.0	8.0	4.5	0.6	14.0	10.5	5.5	0.6
0.033uF	14.0	8.0	4.5	0.6	14.0	8.0	4.5	0.6	14.0	8.5	4.5	0.6	20.0	8.5	5.0	0.6
0.047uF	14.0	8.0	4.5	0.6	14.0	8.0	4.5	0.6	14.0	9.0	5.0	0.6	20.0	10.0	5.5	0.6
0.068uF	14.0	8.0	4.5	0.6	14.0	8.5	4.5	0.6	19.0	8.5	5.0	0.6	20.0	11.5	6.5	0.8
0.082uF	14.0	8.0	4.5	0.6	14.0	8.5	4.5	0.6	19.0	9.0	5.0	0.6	20.0	12.0	7.0	0.8
0.10uF	14.0	8.0	4.5	0.6	14.0	8.5	4.5	0.6	19.0	10.0	5.0	0.6	20.0	13.5	7.5	0.8
0.15uF	14.0	8.0	4.5	0.6	14.0	9.0	5.0	0.6	19.0	11.5	6.5	0.6	26.0	13.5	7.5	0.8
0.18uF	14.0	8.0	5.0	0.6	14.0	10.5	5.5	0.6	19.0	12.0	7.0	0.6	26.0	14.5	8.0	0.8
0.22uF	14.0	9.0	5.0	0.6	20.0	9.0	5.0	0.6	26.0	11.5	6.5	0.8	26.0	15.5	9.0	0.8
0.27uF	14.0	9.5	5.5	0.6	20.0	9.5	5.0	0.6	26.0	13.0	6.5	0.8	26.0	16.5	10.0	0.8
0.33uF	20.0	8.0	4.5	0.6	20.0	10.0	5.0	0.6	26.0	14.0	7.5	0.8	32.0	15.5	9.5	0.8
0.47uF	20.0	9.0	5.0	0.6	26.0	11.0	5.5	0.8	26.0	15.5	9.0	0.8	32.0	18.5	10.5	0.8
0.68uF	20.0	10.5	5.5	0.6	26.0	11.5	6.5	0.8	32.0	15.5	9.0	0.8	32.0	21.5	13.0	0.8
0.82uF	20.0	11.5	6.5	0.6	26.0	12.5	6.5	0.8	32.0	16.0	10.0	0.8	37.0	21.5	14.0	0.8
1.0uF	20.0	12.0	7.0	0.6	26.0	13.5	7.0	0.8	32.0	18.5	10.5	0.8	37.0	23.5	15.0	0.8
1.2uF	26.0	11.0	7.0	0.8	32.0	12.5	6.5	0.8	37.0	17.0	11.0	0.8	37.0	25.5	16.0	0.8
1.5uF	26.0	12.0	7.0	0.8	32.0	13.5	7.5	0.8	37.0	19.0	12.5	0.8	46.0	24.0	16.0	1.0
2.2uF	26.0	14.5	8.5	0.8	32.0	16.0	8.5	0.8	37.0	23.0	15.0	0.8	46.0	28.0	19.0	1.0
2.5uF	26.0	15.0	8.5	0.8	32.0	17.0	9.0	0.8	46.0	21.5	13.0	1.0	46.0	29.5	20.0	1.0
2.7uF	26.0	15.5	9.0	0.8	32.0	17.5	9.5	0.8	46.0	22.0	14.0	1.0				
3.0uF	26.0	16.0	9.5	0.8	37.0	16.0	9.5	0.8	46.0	23.5	14.5	1.0				
3.3uF	26.0	16.5	10.0	0.8	37.0	17.5	9.5	0.8	46.0	24.0	15.0	1.0				
4.7uF	32.0	16.5	10.5	0.8	37.0	19.5	12.0	0.8	46.0	28.0	18.0	1.0				
6.8uF	32.0	20.0	11.5	0.8	37.0	23.0	15.0	0.8								
8.2uF	37.0	20.0	12.0	0.8	46.0	22.0	14.0	1.0								
10.0uF	37.0	22.0	13.0	0.8	46.0	24.5	15.5	1.0								
15.0uF	37.0	24.0	14.5	0.8	46.0	26.0	16.5	1.0								
18.0uF	46.0	23.0	13.5	1.0	46.0	29.0	18.0	1.0								

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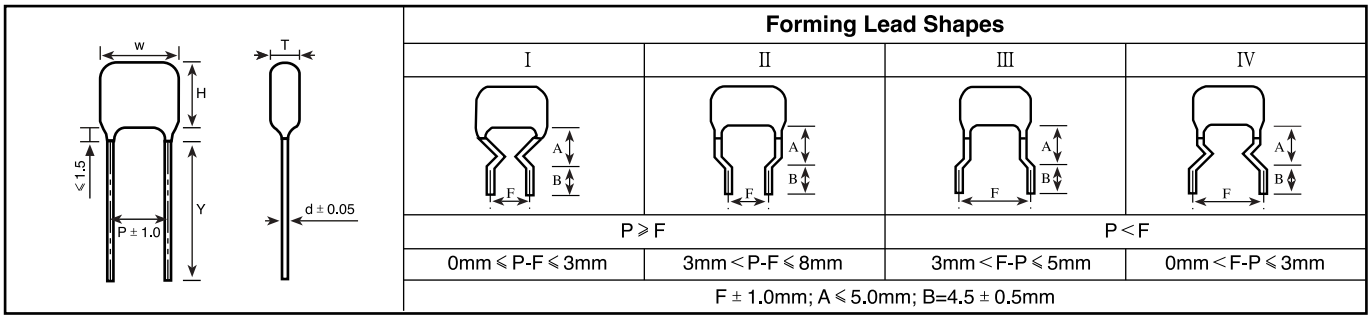
金属化聚丙烯膜电容器(浸渍型)
Metallized polypropylene film capacitor(dipped)

■ 外形图 Outline Drawing



■ 特点

- 金属化聚丙烯
- 高频损耗小
- 内部温升小
- 阻燃环氧粉末包封(UL94 V-0)

■ Features

- Metallized polypropylene structure
- Low loss at high frequency
- Small inherent temperature rise
- Flame retardant epoxy resin powder coating (UL94 V-0)

■ 主要用途

- 广泛应用于高频、直流、交流和脉冲电路中
- 适用于要求体积小，性能优异的彩电S校正电路
- 专为大屏幕显视器及彩电的S校正电路设计
- 适用于各种高频、大电流场合

■ Typical Applications

- Widely used in high frequency, DC,AC and pulse circuits
- Providing optimum performance with small size in S-correction circuits for colour TV set
- Specially designed for S-correction circuits of large screen monitor and colour TV
- Suitable for the situation where applies high frequency and high current pulse

■ 技术要求 Specifications

引用标准 Reference Standard	GB/T 14579(IEC 60384-17)				
气候类别 Climatic Category	40/105/21				
额定温度 Rated Temperature	85℃				
工作温度 Operating Temperature Range	-40℃ ~105℃ (+85℃ to +105℃：decreasing factor 1.25% per ℃ for U_R)				
额定电压 Rated Voltage	100V、250V、400V、630V、1 000V、1 250V				
电容量范围 Capacitance Range	0.0010μF ~ 3.3μF				
电容量偏差 Capacitance Tolerance	±5%(J)、±10%(K)、±20%(M)				
耐电压 Voltage Proof	1.6U_R (5s)				
损耗角正切 Dissipation Factor	⩽ 10×10^{-4}(1kHz，20℃)				
绝缘电阻 Insulation Resistance	⩾ 100 000MΩ， C_N ⩽ 0.33μF ⩾ 30 000s， C_N > 0.33μF (20℃ ,100V, 1min)				
最大脉冲爬升速率 Maximum Pulse Rise Time(dV/dt): 若实际工作电压 U 比额定电压 U_R 低，电容器可工作在更高的 dV/dt 场合，这样 dv/dt 允许值应为右表值乘以 U_R/U。 If the working voltage(U) is lower than the rated voltage(U_R),the capacitor can be worked at a higher dV/dt. In this case, the maximum allowed dV/dt is obtain by multiplying the right value with U_R/U.	Pattern II				
	U_R(V)	dV/dt (V/μs)			
		P=7.5	P=10.0	P=15.0	P=22.5
	100/250	660	560	310	130
	400	900	780	600	300
	630	1 500	1 200	900	400
	1 000/1 250	2 500	2 200	--	--

METALLIZED POLYPROPYLENE FILM CAPACITOR

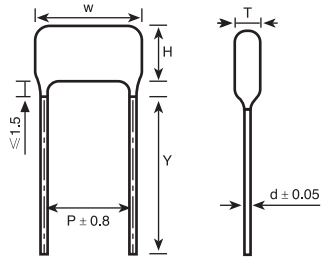
尺寸 Dimensions(mm)

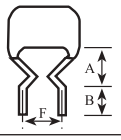
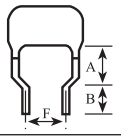
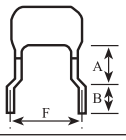
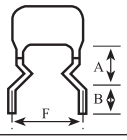
Rated Cap.uF	100VDC					200/250VDC					400VDC					630VDC				
	W	H	T	P	d	W	H	T	P	d	W	H	T	P	d	W	H	T	P	d
	max	max	max	±1.0	±0.05	max	max	max	±1.0	±0.05	max	max	max	±1.0	±0.05	max	max	max	±1.0	±0.05
4700pF																12.0	7.0	4.5	10.0	0.6
5600pF																12.0	7.0	4.5	10.0	0.6
6800pF																12.0	8.0	4.5	10.0	0.6
8200pF																12.0	8.0	4.5	10.0	0.6
0.010uF						10.0	7.0	4.0	7.5	0.6	10.0	7.0	4.0	7.5	0.6	12.0	8.0	4.5	10.0	0.6
0.012uF						10.0	7.0	4.0	7.5	0.6	10.0	7.0	4.0	7.5	0.6	12.0	9.0	5.0	10.0	0.6
0.015uF						10.0	7.5	4.0	7.5	0.6	10.0	7.5	4.0	7.5	0.6	12.0	8.0	4.0	10.0	0.6
0.018uF						10.0	7.5	4.5	7.5	0.6	10.0	7.5	4.5	7.5	0.6	12.0	8.0	4.5	10.0	0.6
0.022uF	10.0	8.5	5.5	7.5	0.6	10.0	8.0	5.0	7.5	0.6	10.0	8.0	5.0	7.5	0.6	12.0	8.0	4.5	10.0	0.6
0.027uF	10.0	8.5	5.5	7.5	0.6	10.0	7.5	4.0	7.5	0.6	12.0	7.5	4.0	10.0	0.6	12.0	9.0	5.0	10.0	0.6
0.033uF	10.0	9.0	5.5	7.5	0.6	10.0	7.5	4.5	7.5	0.6	12.0	7.5	4.5	10.0	0.6	12.0	9.5	5.0	15.0	0.6
0.039uF	10.0	9.5	5.5	7.5	0.6	10.0	8.0	4.5	7.5	0.6	12.0	8.0	4.5	10.0	0.6	18.0	10.5	6.0	15.0	0.6
0.047uF	10.0	9.5	5.5	7.5	0.6	10.0	8.5	5.0	7.5	0.6	12.0	8.5	5.0	10.0	0.6	18.0	11.0	6.0	15.0	0.8
0.056uF	10.0	10.0	6.0	7.5	0.6	12.0	7.5	4.0	10.0	0.6	12.0	7.5	4.0	10.0	0.6	18.0	12.5	6.0	15.0	0.8
0.068uF	10.0	10.0	6.5	7.5	0.6	12.0	8.0	4.5	10.0	0.6	12.0	8.0	4.5	10.0	0.6	18.0	12.5	8.5	15.0	0.8
0.082uF	10.0	11.0	6.5	7.5	0.6	12.0	7.0	4.5	10.0	0.6	12.0	7.0	4.5	10.0	0.6	18.0	15.0	8.0	15.0	0.8
0.10uF	10.0	12	7.5	7.5	0.6	12.0	8.5	4.0	10.0	0.6	12.0	8.5	4.0	10.0	0.8	18.0	11.0	6.0	15.0	0.8
0.12uF	10.0	12.5	7.5	7.5	0.6	12.0	9.0	4.5	10.0	0.6	12.0	9.0	4.5	10.0	0.8	18.0	14.5	9.5	15.0	0.8
0.15uF	12.0	9.0	5.0	10.0	0.6	18.0	8.5	5.5	15.0	0.6	18.0	8.5	5.5	15.0	0.8	18.0	11.0	5.5	15.0	0.8
0.18uF	12.0	9.0	5.5	10.0	0.6	18.0	9.0	5.5	15.0	0.6	18.0	9.0	5.5	15.0	0.8	18.0	11.5	6.0	15.0	0.8
0.22uF	12.0	9.0	5.5	10.0	0.6	18.0	10.5	6.0	15.0	0.8	18.0	10.5	6.0	15.0	0.8	18.0	12.5	7.5	15.0	0.8
0.27uF	12.0	10.5	5.5	10.0	0.6	18.0	10.5	5.0	15.0	0.8	18.0	11.0	6.5	15.0	0.8	18.0	13.0	7.5	15.0	0.8
0.33uF	18.0	10.5	5.0	15.0	0.8	18.0	9.0	5.5	15.0	0.8	18.0	11.5	6.5	15.0	0.8	18.0	13.5	8.0	15.0	0.8
0.39uF	18.0	9.5	5.5	15.0	0.8	18.0	10.5	6.5	15.0	0.8	18.0	12.0	8.0	15.0	0.8	18.0	14.0	8.5	15.0	0.8
0.47uF	18.0	10.5	6.5	15.0	0.8	18.0	11.0	6.0	15.0	0.8	18.0	14.5	7.5	15.0	0.8	18.0	15.5	9.0	15.0	0.8
0.56uF	18.0	12.0	7.0	15.0	0.8	18.0	12.0	7.0	15.0	0.8	18.0	14.5	8.0	15.0	0.8					
0.68uF	18.0	13.5	7.5	15.0	0.8	18.0	12.0	7.5	15.0	0.8	23.0	14.0	7.5	20.0	0.8					
0.82uF	18.0	13.5	8.5	15.0	0.8	23.0	10.5	7.0	20.0	0.8	23.0	14.5	8.5	20.0	0.8					
1.0uF	23.0	14.0	7.0	20.0	0.8	23.0	14.0	7.0	20.0	0.8	25.0	15.0	8.5	22.5	0.8					
1.2uF	23.0	14.0	7.5	20.0	0.8	23.0	14.0	7.5	20.0	0.8										
1.5uF	23.0	16.5	8.5	20.0	0.8	23.0	16.5	8.5	20.0	0.8										
1.8uF	23.0	17.0	9.0	20.0	0.8	23.0	15.0	9.5	20.0	0.8										
2.2uF	23.0	18.0	9.5	20.0	0.8	23.0	19.0	10.0	20.0	0.8										
2.7uF	31	16.5	9.5	27.5	0.8	23.0	19.5	11.5	20.0	0.8										
3.3uF	31	17.5	12.5	27.5	0.8	28.0	18.5	10.5	25.5	0.8										

◎ For inquiry of items out of above range or with special dimensions, please do not hesitate to contact with us for availability.
◎超出上述范围之需求，请先与我司联系，确认可否承制。
◎ For inquiry of items out of above range or with special dimensions, please do not hesitate to contact with us for availability.
◎上述规格仅供参考，实际规格以规格承认书为准。

金属化聚丙烯膜电容器
Metallized polypropylene film capacitor(Dipped)

■ 外形图 Outline Drawing



Forming Lead Shapes			
I	II	III	IV
			
P ⩾ F		P < F	
0mm ⩽ P-F ⩽ 3mm	3mm < P-F ⩽ 8mm	3mm < F-P ⩽ 5mm	0mm < F-P ⩽ 3mm
F ± 0.8mm; A ⩽ 5.0mm; B=4.5 ± 0.5mm			

■ 特点

- 金属化聚丙烯膜
- 良好的电性能
- 阻燃环氧粉末包封（UL94/V-0）

■ Features

- Metallized polypropylene film
- Excellent electric property.
- Flame retardant epoxy resin powder coating（UL94/V-0）

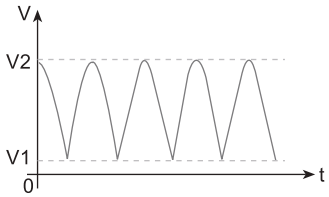
■ 主要用途

- 用于开关电源、电子镇流器和变频器等中间电路直流滤波（如：DC-Link、PFC等）

■ Typical Application

- As intermediate circuit capacitors for SMPS、Electronic Ballast、inverter (i.e. DC-link , DC-filter and P.F.C).

a : The series product is only recommended to use in DC-filter or DC-blocking circuits. It means the voltage applied to the capacitors must be unidirectional ripple voltage. The typical voltage curve is as follows reference. If you have any questions for this note, please feel free to contact with our technical engineer.



Here: $V_1 \geqslant 0$, $V_2 \leqslant U_R$, $Vrms=(V_2-V_1) \div \sqrt{2}$, $Irms=2\pi f \times C \times (V_2-V_1) \div \sqrt{2}$

U_R is the rated voltage of the capacitor

■ 技术要求 Specifications

引用标准 Reference Standard	GB 10190(IEC 60384-16)								
气候类别 Climatic Category	40/105/21								
额定温度 Rated Temperature	85℃								
工作温度范围 Operating Temperature Range	-40℃~105℃ (+85℃ to +105℃：decreasing factor 1.25% per ℃ for U_R)								
额定电压 Rated Voltage	450Vdc、630Vdc								
电容量范围 Capacitance Range	0.022μF ~ 18.0μF								
电容量偏差 Capacitance Tolerance	±5%(J)，±10%(K)，±20% (M)								
耐电压 Voltage Proof	1.6U_R（5s）								
损耗角正切 Dissipation Factor	⩽ 10×10^{-4} (1kHz，20℃)								
绝缘电阻 Insulation Resistance	⩾ 100 000MΩ，$C_N \leqslant 0.33\mu F$ ⩾ 30 000s，$C_N > 0.33\mu F$ (20℃,100V, 1min)								
最大脉冲爬升速率 Maximum Pulse Rise Time(dV/dt): 若实际工作电压 U 比额定电压 U_R 低，电容器可工作在更高的 dV/dt 场合，这样 dv/dt 允许值应为右表值乘以 U_R/U。 If the working voltage(U) is lower than the rated voltage(U_R),the capacitor can be worked at a higher dV/dt. In this case, the maximum allowed dV/dt is obtain by multiplying the right value with U_R/U.	U_R(V)	dV/dt(V/μs) ——Miniature version				dV/dt(V/μs)			
		P=10.0	P=15.0	P=22.5	P=27.5	P=10.0	P=15.0	P=22.5	P=27.5
	450	100	65	35	20	300	200	100	80
	520	120	80	60	40	350	220	150	100
	630	200	160	70	50	400	300	180	120

METALLIZED POLYPROPYLENE FILM CAPACITOR

尺寸 Dimensions(mm)

Rated Cap.uF	450VDC					630VDC				
	W	H	T	P	d	W	H	T	P	d
	max	max	max	±1mm	±0.05	max	max	max	±1mm	±0.05
0.022uF						12.0	8.0	4.0	10.0	0.6
0.027uF						12.0	8.0	4.0	10.0	0.6
0.033uF						12.0	8.0	4.5	10.0	0.6
0.039uF						12.0	9.0	4.5	10.0	0.6
0.047uF	12.0	8.0	4.0	10.0	0.6	12.0	9.0	5.0	10.0	0.6
0.068uF	12.0	9.0	4.5	10.0	0.6	12.0	10.5	5.5	10.0	0.6
0.082uF	12.0	9.5	5.0	10.0	0.6	12.0	11.0	6.0	10.0	0.6
0.10uF	12.0	10.0	5.0	10.0	0.6	12.0	12.0	6.0	10.0	0.6
0.15uF	12.0	11.0	6.0	10.0	0.6	12.0	13.0	8.0	10.0	0.6
0.22uF	18.0	11.0	6.0	15.0	0.8	18.0	14.0	7.0	15.0	0.8
0.27uF	18.0	11.5	6.5	15.0	0.8	18.0	15.0	7.5	15.0	0.8
0.33uF	18.0	12.0	7.0	15.0	0.8	18.0	15.5	8.0	15.0	0.8
0.39uF	18.0	12.5	7.0	15.0	0.8	18.0	16.0	9.0	15.0	0.8
0.47uF	18.0	14.5	7.5	15.0	0.8	18.0	17.0	10.0	15.0	0.8
0.68uF	18.0	16.0	8.5	15.0	0.8	18.0	19.0	11.0	15.0	0.8
0.82uF	18.0	17.0	10.0	15.0	0.8	18.0	21.0	12.0	15.0	0.8
1.0uF	18.0	18.0	11.0	15.0	0.8	18.0	22.0	13.5	15.0	0.8
1.2uF	25.0	17.5	8.5	22.5	0.8	25.0	20.0	11.5	22.5	0.8
1.5uF	25.0	18.0	10.0	22.5	0.8	25.0	22.5	12.5	22.5	0.8
1.8uF	25.0	19.0	11.0	22.5	0.8	25.0	24.0	13.5	22.5	0.8
2.2uF	25.0	20.0	12.0	22.5	0.8	25.0	25.0	15.0	22.5	0.8
2.5uF	25.0	21.0	12.5	22.5	0.8	31.0	25.5	12.0	27.5	0.8
2.7uF	25.0	21.5	13.0	22.5	0.8	31.0	27.0	13.5	27.5	0.8
3.3uF	31.0	24.0	11.0	27.5	0.8	31.0	28.5	15.0	27.5	0.8
3.6uF	31.0	25.0	11.5	27.5	0.8	31.0	29.0	16.0	27.5	0.8
3.9uF	31.0	25.5	12.0	27.5	0.8	31.0	30.0	16.5	27.5	0.8
4.7uF	31.0	26.5	13.5	27.5	0.8	31.0	32.0	18.5	27.5	0.8
6.8uF	31.0	28.0	15.0	27.5	0.8	31.0	33.5	20.5	27.5	0.8
10.0uF	31.0	30.0	17.0	27.5	0.8					
15.0uF	31.0	31.0	18.5	27.5	0.8					
18.0uF	36.0	33.0	22.0	31.5	0.8					

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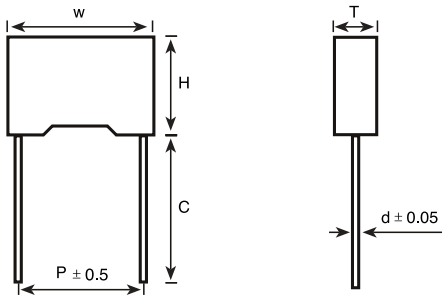
◎ For inquiry of items out of above range or with special dimensions, please do not hesitate to contact with us for availability.
◎上述规格仅供参考，实际规格以规格承认书为准。

金属化聚丙烯膜电容器
Metallized polypropylene film capacitor(Box-type)

■ 外形图 Outline Drawing



W ± 0.5, H ± 0.5, T ± 0.5

■ 特点

- 金属化聚丙烯
- 高频损耗小
- 内部温升小
- 塑料外壳(UL94 V-0)，阻燃环氧填充

■ Features

- Metallized polypropylene structure
- Low loss at high frequency
- Small inherent temperature rise
- Plastic case (UL94 V-0), Epoxy resin sealing

■ 主要用途

- 广泛应用于高频、直流、交流和脉冲电路中
- 电视机、显示器S校正电路

■ Typical Applications

- Widely used in high frequency, DC,AC and pulse circuits
- S-correction circuits for TV sets and monitors

■ 技术要求 Specifications

引用标准 Reference Standard	GB/T 14579 (IEC 60384–17)						
气候类别 Climatic Category	55/105/56						
额定温度 Rated Temperature	85℃						
工作温度 Operating Temperature Range	–55℃ ~ 105℃ (+85℃ to +105℃：decreasing factor 1.25% per ℃ for U_R)						
额定电压 Rated Voltage	250Vdc(160Vac); 400Vdc(220Vac); 630Vdc(250Vac) 1000Vdc(400Vac)						
电容量范围 Capacitance Range	0.00056μF ~ 15.0μF						
电容量偏差 Capacitance Tolerance	±5%(J)，±10%(K)，±20% (M)						
耐电压 Voltage Proof	1.6U_R (5s)						
损耗角正切 Dissipation Factor	≤ 10×10^{-4}(1kHz，20℃)						
绝缘电阻 Insulation Resistance	≥ 100 000MΩ， C_N ≤ 0.33μF ≥ 30 000s， C_N > 0.33μF (20℃ ,100V, 1min)						
最大脉冲爬升速率 Maximum Pulse Rise Time(dV/dt): 若实际工作电压 U 比额定电压 U_R 低，电容器可工作在更高的 dV/dt 场合，这样 dv/dt 允许值应为右表值乘以 U_R/U。 If the working voltage(U) is lower than the rated voltage(U_R),the capacitor can be worked at a higher dV/dt. In this case, the maximum allowed dV/dt is obtain by multiplying the right value with U_R/U.	U_R(V)	dV/dt (V/μs)					
		P=5.0	P=7.5	P=10.0	P=15.0	P=22.5	P=27.5
	160	110	310	190	110	65	55
	250	270	660	560	310	130	110
	400	440	900	780	600	300	130
	630	550	1 500	1 200	900	400	200
	1 000	--	--	2 200	2 000	800	--
	1 600	--	--	--	4 500	1 800	--
	2 000	--	--	--	9 500	4 500	--

METALLIZED POLYPROPYLENE FILM CAPACITOR

尺寸 Dimensions(mm)

Rated Cap.	250VDC/160vAC					Rated Cap.	400VDC/220VAC					Rated Cap.	630VDC/250VAC				
	W	H	T	P	d		W	H	T	P	d		W	H	T	P	d
	±0.5	±0.5	±0.5	±1.0	±0.05		±0.5	±0.5	±0.5	±1.0	±0.05		±0.5	±0.5	±0.5	±1.0	±0.05
4700pF	13.0	9.0	4.0	10.0	0.6	4700pF	13.0	9.0	4.0	10.0	0.6	4700pF	13.0	9.0	4.0	10.0	0.6
5600pF	13.0	9.0	4.0	10.0	0.6	5600pF	13.0	9.0	4.0	10.0	0.6	5600pF	13.0	9.0	4.0	10.0	0.6
6800pF	13.0	9.0	4.0	10.0	0.6	6800pF	13.0	9.0	4.0	10.0	0.6	6800pF	13.0	9.0	4.0	10.0	0.6
8200pF	12.0	11.0	5.0	10.0	0.6	8200pF	12.0	11.0	5.0	10.0	0.6	8200pF	12.0	11.0	5.0	10.0	0.6
0.010uF	12.0	11.0	5.0	10.0	0.6	0.010uF	12.0	11.0	5.0	10.0	0.6	0.010uF	12.0	11.0	5.0	10.0	0.6
0.012uF	12.0	11.0	5.0	10.0	0.6	0.015uF	12.0	11.0	5.0	10.0	0.6	0.012uF	12.0	11.0	5.0	10.0	0.6
0.015uF	12.0	11.0	5.0	10.0	0.6	0.022uF	12.0	11.0	5.0	10.0	0.6	0.015uF	12.0	11.0	5.0	10.0	0.6
0.018uF	12.0	11.0	5.0	10.0	0.6	0.027uF	12.0	11.0	5.0	10.0	0.6	0.022uF	13.0	12.0	6.0	10.0	0.6
0.022uF	12.0	11.0	5.0	10.0	0.6	0.033uF	12.0	11.0	5.0	10.0	0.6	0.022uF	18.0	11.0	5.0	15.0	0.6
0.027uF	12.0	11.0	5.0	10.0	0.6	0.047uF	13.0	12.0	6.0	10.0	0.6	0.027uF	13.0	13.0	7.0	10.0	0.6
0.033uF	12.0	11.0	5.0	10.0	0.6	0.068uF	18.0	11.0	5.0	15.0	0.6	0.027uF	18.0	11.0	5.0	15.0	0.6
0.039uF	12.0	11.0	5.0	10.0	0.6	0.082uF	18.0	12.0	6.0	15.0	0.8	0.033uF	13.0	13.0	7.0	10.0	0.6
0.047uF	12.0	11.0	5.0	10.0	0.6	0.10uF	18.0	12.0	6.0	15.0	0.8	0.033uF	13.0	12.0	6.0	15.0	0.8
0.056uF	12.0	11.0	5.0	10.0	0.6	0.15uF	18.0	14.5	8.5	15.0	0.8	0.047uF	18.0	13.5	7.5	15.0	0.8
0.068uF	13.0	12.0	6.0	10.0	0.6	0.22uF	26.5	16.5	7.0	22.5	0.8	0.068uF	18.0	14.5	8.5	15.0	0.8
0.082uF	13.0	12.0	6.0	10.0	0.6	0.27uF	26.5	16.5	7.0	22.5	0.8	0.082uF	18.0	15.5	9.5	15.0	0.8
0.10uF	13.0	12.0	6.0	10.0	0.6	0.33uF	26.5	17.0	8.5	22.5	0.8	0.10uF	18.0	16.0	10.0	15.0	0.8
0.12uF	13.0	12.0	6.0	10.0	0.6	0.47uF	26.5	19.0	10.0	22.5	0.8	0.15uF	26.5	16.5	7.0	22.5	0.8
0.15uF	13.0	12.0	6.0	10.0	0.6	0.56uF	26.5	20.0	11.5	22.5	0.8	0.18uF	26.5	17.0	8.5	22.5	0.8
0.15uF	18.0	11.0	5.0	15.0	0.6	0.68uF	26.5	20.0	11.5	22.5	0.8	0.22uF	26.5	19.0	10.0	22.5	0.8
0.18uF	13.0	13.0	7.0	10.0	0.6	0.82uF	31.5	19.5	10.8	27.5	0.8	0.27uF	26.5	20.0	11.5	22.5	0.8
0.18uF	18.0	11.0	5.0	15.0	0.6	1.0uF	32.0	22.0	13.0	27.5	0.8	0.33uF	31.5	19.5	10.8	27.5	0.8
0.22uF	18.0	12.0	6.0	15.0	0.8	1.5uF	32.0	30.0	15.0	27.5	0.8	0.39uF	32.0	22.0	13.0	27.5	0.8
0.22uF	26.5	15.0	6.0	22.5	0.8	2.2uF	32.0	28.0	18.0	27.5	0.8	0.47uF	31.0	25.0	14.0	27.5	0.8
0.27uF	18.0	13.0	6.3	15.0	0.8	Rated Cap.	1000VDC/500VAC					Rated Cap.	1000VDC/500VAC				
0.27uF	26.5	15.0	6.0	22.5	0.8		W	H	T	P	d		W	H	T	P	d
0.33uF	18.0	13.5	7.5	15.0	0.8		±0.5	±0.5	±0.5	±1.0	±0.05		±0.5	±0.5	±0.5	±1.0	±0.05
0.33uF	26.5	16.5	7.0	22.5	0.8	1000pF	13.0	9.0	4.0	10.0	0.6	5600pF	12.0	11.0	5.0	10.0	0.6
0.39uF	18.0	14.5	8.5	15.0	0.8	1200pF	13.0	9.0	4.0	10.0	0.6	5600pF	18.0	11.0	5.0	15.0	0.6
0.39uF	26.5	16.5	7.0	22.5	0.8	1500pF	13.0	9.0	4.0	10.0	0.6	6800pF	12.0	11.0	5.0	10.0	0.6
0.47uF	18.0	16.5	8.5	15.0	0.8	1800pF	13.0	9.0	4.0	10.0	0.6	6800pF	18.0	12.0	6.0	15.0	0.8
0.47uF	26.5	17.0	8.5	22.5	0.8	2200pF	13.0	9.0	4.0	10.0	0.6	8200pF	13.0	12.0	6.0	10.0	0.6
0.56uF	26.5	17.0	8.5	22.5	0.8	2200pF	18.0	11.0	5.0	15.0	0.6	8200pF	18.0	12.0	6.0	15.0	0.8
0.68uF	26.5	19.0	10.0	22.5	0.8	2700pF	13.0	9.0	4.0	10.0	0.6	0.010uF	13.0	13.0	7.0	10.0	0.6
0.82uF	26.5	19.0	10.0	22.5	0.8	2700pF	18.0	11.0	5.0	15.0	0.6	0.010uF	18.0	12.0	6.0	15.0	0.8
1.0uF	26.5	19.0	10.0	22.5	0.8	3300pF	13.0	9.0	4.0	10.0	0.6	0.012uF	18.0	13.5	7.5	15.0	0.8
1.0uF	31.5	19.5	10.8	27.5	0.8	3300pF	18.0	11.0	5.0	15.0	0.6	0.015uF	18.0	13.5	7.5	15.0	0.8
1.5uF	31.5	19.5	10.8	27.5	0.8	3900pF	13.0	9.0	4.0	10.0	0.6	0.018uF	18.0	14.5	8.5	15.0	0.8
2.2uF	32.0	22.0	13.0	27.5	0.8	3900pF	18.0	11.0	5.0	15.0	0.6	0.022uF	18.0	16.0	10.0	15.0	0.8
10.0uF	41.5	24.0	18.0	37.5	1.0	4700pF	12.0	11.0	5.0	10.0	0.6	0.027uF	18.0	16.0	10.0	15.0	0.8
15.0uF	41.5	32.0	16.0	37.5	1.0	4700pF	18.0	11.0	5.0	15.0	0.6	0.033uF	18.0	19.0	10.8	15.0	0.8

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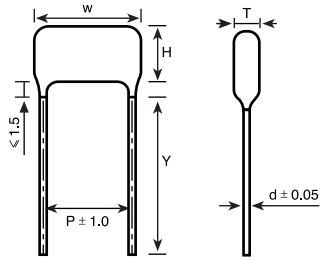
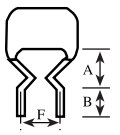
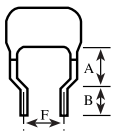
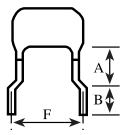
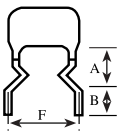
◎ For inquiry of items out of above range or with special dimensions, please do not hesitate to contact with us for availability.
◎上述规格仅供参考，实际规格以规格承认书为准。

高压金属化聚丙烯膜/箔式电容器
High-voltage metallized polypropylene film/foil capacitor

■ 外形图 Outline Drawing



Forming Lead Shapes			
I	II	III	IV
			
P ⩾ F		P < F	
0mm ⩽ P-F ⩽ 3mm	3mm < P-F ⩽ 8mm	3mm < F-P ⩽ 5mm	0mm < F-P ⩽ 3mm
F ± 1.0mm; A ⩽ 5.0mm; B=4.5 ± 0.5mm			

■ 特点

- 金属化聚丙烯膜箔式，卷绕结构
- 损耗小，内部温升小
- 负电容量温度系数
- 阻燃环氧粉末包封(UL94/V-0)

■ Features

- Metallized polypropylene film/foil,wound construction
- Low loss and small inherent temperature rise
- Negative temperature coefficient of capacitance
- Flame retardant epoxy resin powder coating (UL94/V-0)

■ 主要用途

- 大屏幕显视器及彩电行逆程电路
- 适用于高脉冲,大电流电路
- 适用于电子镇流器

■ Typical Applications

- Horizontal resonance circuits of large screen monitor and colour TV
- Suitable for high pulse and high current loading circuit
- Suitable for electronic ballast

■ 技术要求 Specifications

引用标准 Reference Standard	GB/T 14579（IEC 60384–17）	
气候类别 Climatic Category	40/105/21	
额定温度 Rated Temperature	85℃	
工作温度 Operating Temperature Range	–40℃ ~105℃ (+85℃ to +105℃：decreasing factor 1.25% per ℃ for U_R)	
额定电压 Rated Voltage	630V，800V，1 000V/1 250V，1 600V，2 000V，2 500V	
电容量范围 Capacitance Range	0.0010μF ~ 0.1μF	
电容量偏差 Capacitance Tolerance	±3%(H)、±5%(J)、±10%(K)	
耐电压 Voltage Proof	1.75U_R（5s）	
损耗角正切 Dissipation Factor	⩽ 10×10^{-4}(1kHz，20℃) ⩽ 20×10^{-4}(10kHz，20℃)	
绝缘电阻 Insulation Resistance	⩾ 100 000MΩ (20℃ ,100V, 1min)	
最大脉冲爬升速率 Maximum Pulse Rise Time(dV/dt): 若实际工作电压 U 比额定电压 U_R 低，电容器可工作在更高的 dV/dt 场合，这样 dv/dt 允许值应为右表值乘以 U_R/U。 If the working voltage(U) is lower than the rated voltage(U_R),the capacitor can be worked at a higher dV/dt. In this case, the maximum allowed dV/dt is obtain by multiplying the right value with U_R/U.	Pattern II	
	U_R(V)	dV/dt (V/μs)
		P=15.0
	630/800	11 000
	1 000/1 250	28 000
	1 600	32 000
	2 000	35 000
	2 500	40 000

METALLIZED POLYPROPYLENE FILM CAPACITOR

尺寸 Dimensions(mm)

Rated Cap.uF	1000VDC/1200VDC					Rated Cap.uF	1600VDC					Rated Cap.uF	2000VDC				
	W	H	T	P	d		W	H	T	P	d		W	H	T	P	d
	±0.5	±0.5	±0.5	±1.0	±0.05		±0.5	±0.5	±0.5	±1.0	±0.05		±0.5	±0.5	±0.5	±1.0	±0.05
1000pF	18.0	11.0	5.0	15.0	0.8	1000pF	18.0	11.0	5.0	15.0	0.8	1000pF	18.0	12.0	6.0	15.0	0.8
1200pF	18.0	11.0	5.0	15.0	0.8	1200pF	18.0	11.0	5.0	15.0	0.8	1200pF	18.0	12.0	6.0	15.0	0.8
1500pF	18.0	11.0	5.0	15.0	0.8	1500pF	18.0	11.0	5.0	15.0	0.8	1500pF	18.0	12.0	6.0	15.0	0.8
1800pF	18.0	11.0	5.0	15.0	0.8	1800pF	18.0	12.0	6.0	15.0	0.8	1800pF	18.0	13.5	7.5	15.0	0.8
2200pF	18.0	11.0	5.0	15.0	0.8	2200pF	18.0	12.0	6.0	15.0	0.8	2200pF	18.0	13.5	7.5	15.0	0.8
2700pF	18.0	12.0	6.0	15.0	0.8	2700pF	18.0	12.0	6.0	15.0	0.8	2700pF	18.0	14.5	8.5	15.0	0.8
3300pF	18.0	12.0	6.0	15.0	0.8	3300pF	18.0	13.5	7.5	15.0	0.8	3300pF	18.0	16.0	10.0	15.0	0.8
3600pF	18.0	13.0	6.3	15.0	0.8	3600pF	18.0	13.5	7.5	15.0	0.8	3600pF	26.5	15.0	6.0	22.5	0.8
3900pF	18.0	13.0	6.3	15.0	0.8	3900pF	18.0	13.5	7.5	15.0	0.8	3900pF	26.5	15.0	6.0	22.5	0.8
4300pF	18.0	13.5	7.5	15.0	0.8	4300pF	18.0	14.5	8.5	15.0	0.8	4300pF	26.5	15.0	6.0	22.5	0.8
4700pF	18.0	13.5	7.5	15.0	0.8	4700pF	18.0	14.5	8.5	15.0	0.8	4700pF	26.5	15.0	6.0	22.5	0.8
5100pF	18.0	13.5	7.5	15.0	0.8	5100pF	18.0	16.0	10.0	15.0	0.8	5100pF	26.5	16.5	7.0	22.5	0.8
5600pF	18.0	13.5	7.5	15.0	0.8	5600pF	18.0	16.0	10.0	15.0	0.8	5600pF	26.5	16.5	7.0	22.5	0.8
6000pF	18.0	13.5	7.5	15.0	0.8	6000pF	18.0	16.0	10.0	15.0	0.8	6000pF	26.5	16.5	7.0	22.5	0.8
6200pF	18.0	13.5	7.5	15.0	0.8	6200pF	18.0	16.0	10.0	15.0	0.8	6200pF	26.5	16.5	7.0	22.5	0.8
6800pF	18.0	13.5	7.5	15.0	0.8	6800pF	18.0	16.0	10.0	15.0	0.8	6800pF	26.5	16.5	7.0	22.5	0.8
7500pF	18.0	14.5	8.5	15.0	0.8	7500pF	26.5	15.0	6.0	22.5	0.8	7500pF	26.5	17.0	8.5	22.5	0.8
8200pF	18.0	14.5	8.5	15.0	0.8	8200pF	26.5	15.0	6.0	22.5	0.8	8200pF	26.5	17.0	8.5	22.5	0.8
9100pF	18.0	14.5	8.5	15.0	0.8	9100pF	26.5	16.5	7.0	22.5	0.8	9100pF	26.5	19.0	10.0	22.5	0.8
0.010uF	18.0	14.5	8.5	15.0	0.8	0.010uF	26.5	16.5	7.0	22.5	0.8	0.010uF	26.5	19.0	10.0	22.5	0.8
0.012uF	18.0	14.5	8.5	15.0	0.8	0.012uF	26.5	17.0	8.5	22.5	0.8	0.012uF	26.5	19.0	10.0	22.5	0.8
0.015uF	18.0	16.0	10.0	15.0	0.8	0.015uF	26.5	19.0	10.0	22.5	0.8	0.015uF	26.5	20.0	11.0	22.5	0.8
0.018uF	26.5	16.5	7.0	22.5	0.8	0.018uF	26.5	19.0	10.0	22.5	0.8	0.018uF	26.5	22.0	12.5	22.5	0.8
0.022uF	26.5	17.0	8.5	22.5	0.8	0.022uF	26.5	20.0	11.0	22.5	0.8						
0.027uF	26.5	19.0	10.0	22.5	0.8												
0.033uF	26.5	19.0	10.0	22.5	0.8												
0.036uF	26.5	20.0	11.0	22.5	0.8												
0.039uF	26.5	20.0	11.0	22.5	0.8												
0.047uF	32.0	20.0	11.0	27.5	0.8												
0.056uF	32.0	20.0	11.0	27.5	0.8												
0.068uF	32.0	22.0	13.0	27.5	0.8												
0.082uF	32.0	22.0	13.0	27.5	0.8												
0.10uF	32.0	25.0	14.0	27.5	0.8												

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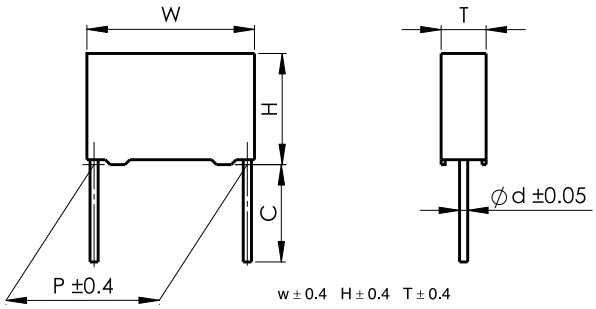
塑料外壳双面金属化聚丙烯膜电容器
Double sided metallized polypropylene film capacitor (Box-type)

■ 外形图 Outline Drawing



■ 特点

- 双面金属化聚丙烯膜
- 损耗小，内部温升小
- 负电容量温度系数
- 优异的阻燃性能

■ Features

- Doublesided metallized polypropylene film
- Low loss and small inherent temperature rise
- Negative temperature coefficient of capacitance
- Excellent active and passive flame resistant abilities

■ 主要用途

- 广泛应用于高压高频脉冲电路中
- 电子镇流器和节能灯中
- 吸收和SCR整流电路

■ Typical Applications

- Widely used in high voltage, high frequency and pulse circuit
- Electronic ballasts and compact lamps
- SNUBBER and SCR commutating circuits

■ 技术要求 Specifications

引用标准 Reference Standard	GB/T 10190(IEC 60384–16)					
气候类别 Climatic Category	40/105/56					
额定温度 Rated Temperature	85℃ for U_R (dc); 75℃ for U_R (ac)					
工作温度 Operating Temperature Range	–40℃ ~105℃ (+85℃ to +105℃：decreasing factor 1.25% per ℃ for U_R (dc)) (+75℃ to +105℃：decreasing factor 1.35% per ℃ for U_R (ac))					
额定电压 Rated Voltage	250V, 400V, 630V, 1 000V, 1 600V, 2 000V					
电容量范围 Capacitance Range	0.00022μF ~ 3.9μF					
电容量偏差 Capacitance Tolerance	±2%(G), ±3% (H), ±5%(J), ±10%(K), ±20% (M)					
耐电压 Voltage Proof	1.6U_R (5s)					
损耗角正切 Dissipation Factor	≤ 10×10^{-4} (1kHz，20℃)					
绝缘电阻 Insulation Resistance	R ≥ 100 000MΩ， C_N ≤ 0.33μF RC_N ≥ 30 000， C_N > 0.33μF (20℃ ,100V, 1min)					
最大脉冲爬升速率 Maximum Pulse Rise Time(dV/dt): 若实际工作电压 U 比额定电压 U_R 低，电容器可工作在更高的 dV/dt 场合，这样 dv/dt 允许值应为右表值乘以 U_R/U。 If the working voltage(U) is lower than the rated voltage(U_R), the capacitor can be worked at a higher dV/dt. In this case, the maximum allowed dV/dt is obtain by multiplying the right value with U_R/U.	U_R(V)	dV/dt (V/μs)				
		P=7.5	P=10.0	P=15.0	P=22.5	P=27.5
	250	1 200	1 000	550	250	200
	400	1 800	1 500	900	500	300
	630	3 200	3 200	2 500	1 500	900
	1 000	6 000	6 000	3 300	2 100	1 000
	1 600	––	––	6 000	3 000	2 000
	2 000	––	––	10 000	5 000	2 200

METALLIZED POLYPROPYLENE FILM CAPACITOR

尺寸 Dimensions(mm)

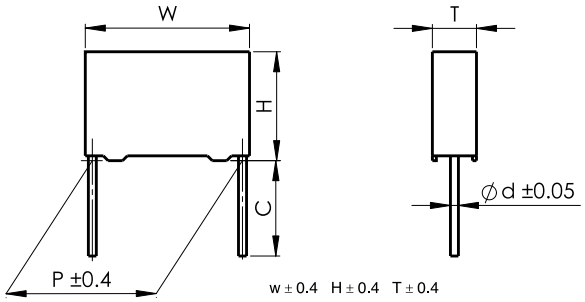
Rated Cap.uF	250VDC(180VAC)					400VDC(250VAC)					630VDC(400VAC)					1000VDC(600VAC)				
	W	H	T	P	d	W	H	T	P	d	W	H	T	P	d	W	H	T	P	d
	±0.5	±0.5	±0.5	±1.0	±0.05	±0.5	±0.5	±0.5	±1.0	±0.05	±0.5	±0.5	±0.5	±1.0	±0.05	±0.5	±0.5	±0.5	±1.0	±0.05
6800pF	10.0	9.0	4.0	7.5	0.6	10.0	9.0	4.0	7.5	0.6	10.0	11.0	5.0	7.5	0.6	13.0	12.0	6.0	10.0	0.6
8200pF	10.0	9.0	4.0	7.5	0.6	10.0	9.0	4.0	7.5	0.6	10.0	11.0	5.0	7.5	0.6	18.0	11.0	5.0	15.0	0.8
0.010uF	10.0	9.0	4.0	7.5	0.6	13.0	9.0	4.0	10.0	0.6	10.0	12.0	6.0	7.5	0.6	18.0	11.0	5.0	15.0	0.8
0.012uF	10.0	9.0	4.0	7.5	0.6	13.0	9.0	4.0	10.0	0.6	12.0	11.0	5.0	10.0	0.6	18.0	12.0	6.0	15.0	0.8
0.015uF	10.0	9.0	4.0	7.5	0.6	13.0	9.0	4.0	10.0	0.6	13.0	12.0	6.0	10.0	0.6	18.0	13.5	6.0	15.0	0.8
0.018uF	10.0	9.0	4.0	7.5	0.6	13.0	9.0	4.0	10.0	0.6	13.0	12.0	6.0	10.0	0.6	18.0	13.5	7.5	15.0	0.8
0.022uF	10.0	9.0	4.0	7.5	0.6	13.0	9.0	4.0	10.0	0.6	18.0	11.0	5.0	15.0	0.8	18.0	13.5	7.5	15.0	0.8
0.027uF	10.0	11.0	5.0	7.5	0.6	10.0	12.0	6.0	7.5	0.6	18.0	12.0	6.0	15.0	0.8	18.0	14.5	8.5	15.0	0.8
0.027uF	13.0	9.0	4.0	10.0	0.6	12.0	11.0	5.0	10.0	0.6						26.5	15.0	6.0	22.5	0.8
0.033uF	10.0	11.0	5.0	7.5	0.6	12.0	11.0	5.0	10.0	0.6	18.0	12.0	6.0	15.0	0.8	18.0	16.0	10.0	15.0	0.8
0.033uF	13.0	9.0	4.0	10.0	0.6	18.0	11.0	5.0	15.0	0.8						26.5	15.0	6.0	22.5	0.8
0.039uF	10.0	12.0	6.0	7.5	0.6	13.0	12.0	6.0	10.0	0.6	18.0	13.5	7.5	15.0	0.8	18.0	16.0	10.0	15.0	0.8
0.039uF	13.0	9.0	4.0	10.0	0.6	18.0	11.0	5.0	15.0	0.8						26.5	15.0	6.0	22.5	0.8
0.047uF	10.0	12.0	6.0	7.5	0.6	13.0	12.0	6.0	10.0	0.6	18.0	13.5	7.5	15.0	0.8	18.0	19.0	11.0	15.0	0.8
0.047uF	12.0	11.0	5.0	10.0	0.6	18.0	11.0	5.0	15.0	0.8	26.5	15.0	6.0	22.5	0.8	26.5	16.0	7.0	22.5	0.8
0.056uF	12.0	11.0	5.0	10.0	0.6	18.0	11.0	5.0	15.0	0.8	26.5	15.0	6.0	22.5	0.8	26.5	17.0	8.5	22.5	0.8
0.068uF	13.0	12.0	6.0	10.0	0.6	18.0	12.0	6.0	15.0	0.8	18.0	16.0	10.0	15.0	0.8	26.5	19.0	10.0	22.5	0.8
0.068uF	18.0	11.0	5.0	15.0	0.8						26.5	15.0	6.0	22.5	0.8					
0.082uF	13.0	12.0	6.0	10.0	0.6	18.0	12.0	6.0	15.0	0.8	18.0	14.5	8.5	15.0	0.8	26.5	19.0	10.0	22.5	0.8
0.082uF	18.0	11.0	5.0	15.0	0.8						26.5	16.5	7.0	22.5	0.8					
0.10uF	18.0	11.0	5.0	15.0	0.8	18.0	13.5	7.5	15.0	0.8	26.5	17.0	8.5	22.5	0.8	26.5	20.0	11.0	22.5	0.8
0.12uF	18.0	12.0	6.0	15.0	0.8	18.0	13.5	7.5	15.0	0.8	26.5	17.0	8.5	22.5	0.8	26.5	22.0	12.0	22.5	0.8
0.15uF	18.0	12.0	6.0	15.0	0.8	26.5	15.0	6.0	22.5	0.8	26.5	19.0	10.0	22.5	0.8	26.0	23.0	13.0	22.5	0.8
0.18uF	18.0	13.5	7.5	15.0	0.8	26.5	15.0	6.0	22.5	0.8	26.5	20.0	11.0	22.5	0.8	32.0	22.0	13.0	27.5	0.8
0.22uF	18.0	13.5	7.5	15.0	0.8	18.0	16.0	10.0	15.0	0.8	26.5	22.0	12.5	22.5	0.8	31.0	25.0	14.0	27.5	0.8
0.22uF	26.5	15.0	6.0	22.5	0.8	26.5	16.5	7.0	22.5	0.8	32.0	18.0	9.0	27.5	0.8					
0.27uF	18.0	14.5	8.5	15.0	0.8	18.0	19.0	11.0	15.0	0.8	26.5	23.0	13.0	22.5	0.8	32.0	28.0	14.0	27.5	0.8
0.27uF	26.5	15.0	6.0	22.5	0.8	26.5	17.0	8.5	22.5	0.8	32.0	18.0	9.0	27.5	0.8					
0.33uF	18.0	16.0	10.0	15.0	0.8	26.5	17.0	8.5	22.5	0.8	26.5	25.0	15.0	22.5	0.8	32.0	30.0	15.0	27.5	0.8
0.33uF	26.5	15.0	6.0	22.5	0.8						32.0	22.0	13.0	27.5	0.8					
0.39uF	18.0	16.0	10.0	15.0	0.8	26.5	19.0	10.0	22.5	0.8	26.5	25.0	15.0	22.5	0.8	32.0	33.0	18.0	27.5	0.8
0.39uF	26.5	16.5	7.0	22.5	0.8	31.0	18.0	9.0	27.5	0.8	32.0	22.0	13.0	27.5	0.8					
0.47uF	26.5	16.5	7.0	22.5	0.8	31.0	18.0	9.0	27.5	0.8	31.0	25.0	14.0	27.5	0.8	32.0	33.0	18.0	27.5	0.8
0.56uF	26.5	17.0	8.5	22.5	0.8	32.0	20.0	11.0	27.5	0.8	32.0	28.0	14.0	27.5	0.8					
0.68uF	26.5	17.0	8.5	22.5	0.8	32.0	20.0	11.0	27.5	0.8	32.0	30.0	15.0	27.5	0.8					
0.82uF	26.5	17.0	8.5	22.5	0.8	32.0	22.0	13.0	27.5	0.8	31.0	33.0	18.0	27.5	0.8					
0.82uF	31.0	18.0	9.0	27.5	0.8															
1uF	26.5	22.0	12.5	22.5	0.8	31.0	25.0	14.0	27.5	0.8	32.0	37.0	22.0	27.5	0.8					
1uF	32.0	20.0	11.0	27.5	0.8															
1.2uF	32.0	20.0	11.0	27.5	0.8	31.0	25.0	14.0	27.5	0.8	32.0	37.0	22.0	27.5	0.8					
1.5uF	32.0	22.0	13.0	27.5	0.8	31.0	33.0	18.0	27.5	0.8										
1.8uF	31.0	25.0	14.0	27.5	0.8	31.0	33.0	18.0	27.5	0.8										
2.2uF	31.0	25.0	14.0	27.5	0.8															
2.7uF	31.0	33.0	18.0	27.5	0.8															
3.3uF	31.0	33.0	18.0	27.5	0.8															
3.9uF	31.0	33.0	18.0	27.5	0.8															

◎ For inquiry of items out of above range or with special dimensions, please do not hesitate to contact with us for availability.
◎超出上述范围之需求，请先与我司联系，确认可否承制。
◎ For inquiry of items out of above range or with special dimensions, please do not hesitate to contact with us for availability.
◎上述规格仅供参考，实际规格以规格承认书为准。

Hongfarad

塑料外壳双面金属化聚丙烯膜电容器
Double sided metallized polypropylene film capacitor (Box-type)

■ 外形图 Outline Drawing



■ 特点

- 双面金属化聚丙烯膜
- 损耗小，内部温升小
- 负电容量温度系数
- 优异的阻燃性能

■ Features

- Doublesided metallized polypropylene film
- Low loss and small inherent temperature rise
- Negative temperature coefficient of capacitance
- Excellent active and passive flame resistant abilities

■ 主要用途

- 高压高频脉冲电路中
- 电子照明（汽车头灯、镇流器）

■ Typical Applications

- Pulse applications with high. AC. voltage and HIGH current
- Electronic lighting(i.e. car headlamp and lighting ballast)

■ 技术要求 Specifications

引用标准 Reference Standard	GB/T 14579(IEC 60384–17)				
气候类别 Climatic Category	40/105/56				
额定温度 Rated Temperature	85℃				
工作温度 Operating Temperature Range	–40℃ ~105℃ (+85℃ to +105℃：decreasing factor 1.25% per ℃ for U_R (dc)) (+75℃ to +105℃：decreasing factor 1.35% per ℃ for U_R (ac))				
额定电压 Rated Voltage	250Vac (630Vdc) , 300Vac (800Vdc) 400Vac (1 000Vdc) , 500Vac (1 600Vdc) 700Vac (2 000Vdc) , 900Vac (2 500Vdc)				
电容量范围 Capacitance Range	0.0010μF ~ 0.10μF				
电容量偏差 Capacitance Tolerance	±5% (J), ±10%(K), ±20% (M)				
耐电压 Voltage Proof	1.6U_R（5s）				
损耗角正切 Dissipation Factor	≤ 10×10^{-4} (1kHz，20℃)				
绝缘电阻 Insulation Resistance	≥ 100 000MΩ (20℃ ,100V, 1min)				
最大脉冲爬升速率 Maximum Pulse Rise Time(dV/dt): 若实际工作电压 U 比额定电压 U_R 低，电容器可工作在更高的 dV/dt 场合，这样 dv/dt 允许值应为右表值乘以 U_R/U。 If the working voltage(U) is lower than the rated voltage(U_R), the capacitor can be worked at a higher dV/dt. In this case, the maximum allowed dV/dt is obtain by multiplying the right value with U_R/U.	U_R(V)	dV/dt (V/μs)			
		P=10.0	P=15.0	P=22.5	P=27.5
	250(630Vdc)	3 000	1 100	––	––
	300(800Vdc)	––	2 500	1 500	––
	400(1 000Vdc)	––	3 500	2 100	––
	500(1 600Vdc)	––	5 000	3 000	2 000
	700(2 000Vdc)	––	8 000	5 000	2 200
	900(2 500Vdc)	––	––	7 000	––

METALLIZED POLYPROPYLENE FILM CAPACITOR

尺寸 Dimensions(mm)

Rated Cap.uF	250VAC					300VAC					400VAC				
	W	H	T	P	d	W	H	T	P	d	W	H	T	P	d
	±0.5	±0.5	±0.5	±1.0	±0.05	±0.5	±0.5	±0.5	±1.0	±0.05	±0.5	±0.5	±0.5	±1.0	±0.05
0.010uF	13.0	9.0	4.0	10.0	0.6	18.0	11.0	5.0	15.0	0.8	18.0	12.0	6.0	15.0	0.8
0.012uF	13.0	9.0	4.0	10.0	0.6	18.0	11.0	5.0	15.0	0.8	18.0	12.0	6.0	15.0	0.8
0.015uF	12.0	11.0	5.0	10.0	0.6	18.0	11.0	5.0	15.0	0.8	18.0	13.5	7.5	15.0	0.8
0.018uF	13.0	12.0	6.0	10.0	0.6	18.0	11.0	5.0	15.0	0.8	18.0	13.5	7.5	15.0	0.8
0.022uF	13.0	12.0	6.0	10.0	0.6	18.0	12.0	6.0	15.0	0.8	18.0	14.5	8.5	15.0	0.8
0.027uF	18.0	12.0	6.0	15.0	0.8	18.0	12.0	6.0	15.0	0.8	18.0	16.0	10.0	15.0	0.8
0.033uF	18.0	12.0	6.0	15.0	0.8	18.0	13.5	7.5	15.0	0.8	18.0	16.0	10.0	15.0	0.8
0.039uF	18.0	12.0	6.0	15.0	0.8	18.0	13.5	7.5	15.0	0.8	26.5	16.0	7.0	22.5	0.8
0.047uF	18.0	13.5	7.5	15.0	0.8	18.0	14.5	8.5	15.0	0.8	26.5	17.0	8.5	22.5	0.8
0.056uF	18.0	13.5	7.5	15.0	0.8	18.0	16.0	10.0	15.0	0.8	26.5	17.0	8.5	22.5	0.8
0.068uF	18.0	14.5	8.5	15.0	0.8	18.0	16.0	10.0	15.0	0.8	26.5	19.0	10.0	22.5	0.8
0.082uF	18.0	16.0	10.0	15.0	0.8	26.5	17.0	8.5	22.5	0.8	26.5	19.0	10.0	22.5	0.8
0.10uF	18.0	16.0	10.0	15.0	0.8	26.5	17.0	8.5	22.5	0.8	26.5	22.0	12.0	22.5	0.8
Rated Cap.uF	4500VAC					500VAC					700VAC				
	W	H	T	P	d	W	H	T	P	d	W	H	T	P	d
	±0.5	±0.5	±0.5	±1.0	±0.05	±0.5	±0.5	±0.5	±1.0	±0.05	±0.5	±0.5	±0.5	±1.0	±0.05
1000pF						18.0	11.0	5.0	15.0	0.8	**18.0**	**11.0**	**5.0**	**15.0**	**0.8**
1200pF						18.0	11.0	5.0	15.0	0.8	**18.0**	**11.0**	**5.0**	**15.0**	**0.8**
1500pF						18.0	11.0	5.0	15.0	0.8	**18.0**	**11.0**	**5.0**	**15.0**	**0.8**
1800pF						18.0	11.0	5.0	15.0	0.8	**18.0**	**11.0**	**5.0**	**15.0**	**0.8**
2200pF						18.0	11.0	5.0	15.0	0.8	**18.0**	**12.0**	**6.0**	**15.0**	**0.8**
2700pF						18.0	11.0	5.0	15.0	0.8	**18.0**	**13.5**	**6.0**	**15.0**	**0.8**
3300pF						18.0	11.0	5.0	15.0	0.8	**18.0**	**13.5**	**6.0**	**15.0**	**0.8**
3900pF						18.0	11.0	5.0	15.0	0.8	**18.0**	**13.5**	**7.5**	**15.0**	**0.8**
4700pF						18.0	11.0	5.0	15.0	0.8	**18.0**	**14.5**	**8.5**	**15.0**	**0.8**
5600pF	18.0	11.0	5.0	15.0	0.8	18.0	11.0	5.0	15.0	0.8	**18.0**	**16.0**	**10.0**	**15.0**	**0.8**
6800pF	18.0	11.0	5.0	15.0	0.8	18.0	12.0	6.0	15.0	0.8	**18.0**	**16.0**	**10.0**	**15.0**	**0.8**
8200pF	18.0	11.0	5.0	15.0	0.8	18.0	12.0	6.0	15.0	0.8	**18.0**	**19.0**	**10.8**	**15.0**	**0.8**
0.010uF	18.0	12.0	6.0	15.0	0.8	18.0	13.5	7.5	15.0	0.8	**26.5**	**15.0**	**6.0**	**22.5**	**0.8**
0.012uF	18.0	12.0	6.0	15.0	0.8	18.0	13.5	7.5	15.0	0.8	**26.5**	**16.5**	**7.0**	**22.5**	**0.8**
0.015uF	18.0	13.5	7.5	15.0	0.8	18.0	14.5	8.5	15.0	0.8	**26.5**	**17.0**	**8.5**	**22.5**	**0.8**
0.018uF	18.0	13.5	7.5	15.0	0.8	18.0	16.0	10.0	15.0	0.8	**26.5**	**19.0**	**10.0**	**22.5**	**0.8**
0.018uF	18.0	14.5	8.5	15.0	0.8	26.5	15.0	6.0	22.5	0.8	**32.0**	**20.0**	**11.0**	**27.5**	**0.8**
0.022uF	18.0	16.0	10.0	15.0	0.8	18.0	16.0	10.0	15.0	0.8	**26.5**	**19.0**	**10.0**	**22.5**	**0.8**
0.022uF	26.5	15.0	6.0	22.5	0.8	26.5	16.0	7.0	22.5	0.8	**32.0**	**20.0**	**11.0**	**27.5**	**0.8**
0.027uF	18.0	16.0	10.0	15.0	0.8	26.5	16.5	7.0	22.5	0.8	**26.5**	**23.0**	**13.0**	**22.5**	**0.8**
0.033uF	26.5	16.0	7.0	22.5	0.8	26.5	17.0	8.5	22.5	0.8	**26.5**	**25.0**	**15.0**	**22.5**	**0.8**
0.039uF	26.5	17.0	8.5	22.5	0.8	26.5	19.0	10.0	22.5	0.8	**32.0**	**22.0**	**13.0**	**27.5**	**0.8**
0.047uF						26.5	19.0	10.0	22.5	0.8	**32.0**	**25.0**	**14.0**	**27.5**	**0.8**
0.056uF	26.5	19.0	10.0	22.5	0.8	26.5	22.0	12.0	22.5	0.8	**32.0**	**25.0**	**14.0**	**27.5**	**0.8**
0.068uF						32.0	20.0	11.0	27.5	0.8	**32.0**	**28.0**	**14.0**	**27.5**	**0.8**
0.082uF	26.5	19.0	10.0	22.5	0.8	32.0	20.0	11.0	27.5	0.8	**32.0**	**30.0**	**15.0**	**27.5**	**0.8**
0.10uF	26.5	22.0	12.0	22.5	0.8	32.0	22.0	13.0	27.5	0.8	**32.0**	**33.0**	**18.0**	**27.5**	**0.8**

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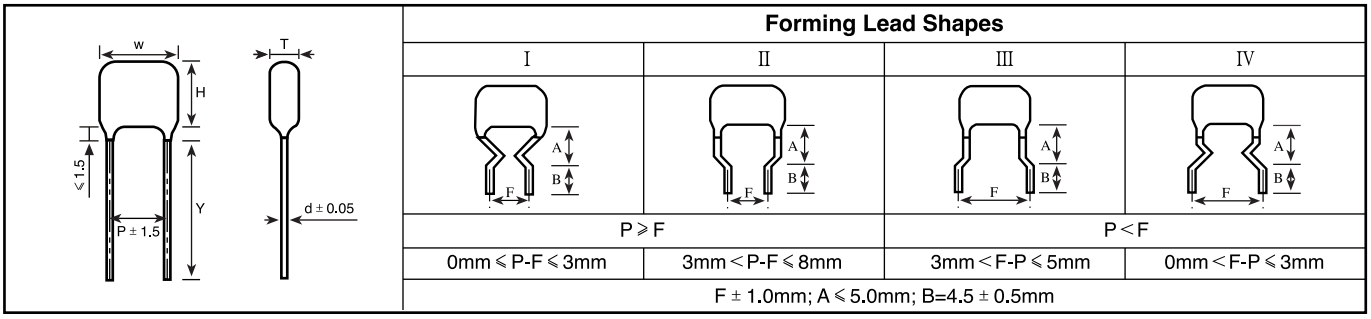
无感箔式聚丙烯膜电容器
Polypropylene film/foil capacitor (Non-inductive)

■ 外形图 Outline Drawing



■ 特点

- 膜箔式电容器，无感卷绕结构，浸渍型
- 优异的频率和温度特性
- 即使在高频下，损耗也极小
- 阻燃环氧粉末包封(UL94/V-0)

■ Features

- film/foil, non-inductive wound type, dipped
- Excellent frequency and temperature characteristics
- Very small loss even at high frequency
- Flame retardant epoxy resin powder coating (UL94/V-0)

■ 主要用途

- 广泛用于高频、直流和脉冲电路中

■ Typical Applications

- Widely used in high frequency, DC and pulse circuits

■ 技术要求 Specifications

引用标准 Reference Standard	GB/T 10188 (IEC 60384-13)
气候类别 Climatic Category	40/105/21
额定温度 Rated Temperature	85℃
工作温度范围 Operating Temperature Range	-40℃~105℃ (+85℃ to +105℃: decreasing factor 1.5% per ℃ for U_R)
额定电压 Rated Voltage	63V,100V, 200V, 250V, 400V, 630V,
电容量范围 Capacitance Range	0.0010μF~0.10μF
电容量偏差 Capacitance Tolerance	± 2%(G), ± 5%(J), ± 10%(K)
耐电压 Voltage Proof	2.0U_R (5s)
损耗角正切 Dissipation Factor	≤10 × 10^{-4} (1kHz, 20℃)
绝缘电阻 Insulation Resistance	≥50 000MΩ, C_R≤0.1μF ≥5 000s, C_R>0.1μF (20℃, 100V, 1min)

METALLIZED POLYPROPYLENE FILM CAPACITOR

尺寸 Dimensions(mm)

Rated Cap.uF	50/63/100VDC					200/250VDC					400VDC					630VDC				
	W	H	T	P	d	W	H	T	P	d	W	H	T	P	d	W	H	T	P	d
	max	max	max	±1.0	±0.05	max	max	max	±1.0	±0.05	max	max	max	±1.0	±0.05	max	max	max	±1.0	±0.05
1000pF	10.0	8.0	5.0	7.5	0.6	10.0	8.0	5.0	7.5	0.6	10.0	8.5	5.0	7.5	0.6	10.0	8.5	5.0	7.5	0.6
1200pF	10.0	8.5	5.0	7.5	0.6	10.0	8.5	5.0	7.5	0.6	10.0	9.0	5.0	7.5	0.6	10.0	9.5	5.5	7.5	0.6
1500pF	10.0	8.5	5.0	7.5	0.6	10.0	8.5	5.0	7.5	0.6	10.0	9.0	5.0	7.5	0.6	10.0	9.5	5.5	7.5	0.6
1800pF	10.0	8.5	5.0	7.5	0.6	10.0	8.5	5.0	7.5	0.6	10.0	9.0	5.0	7.5	0.6	10.0	10.0	5.5	7.5	0.6
2200pF	10.0	8.5	5.0	7.5	0.6	10.0	8.5	5.0	7.5	0.6	10.0	9.5	5.5	7.5	0.6	10.0	10.5	6.0	7.5	0.6
2700pF	10.0	8.5	5.0	7.5	0.6	10.0	8.5	5.0	7.5	0.6	10.0	9.5	5.5	7.5	0.6	10.0	11.0	6.0	7.5	0.6
3300pF	10.0	8.5	5.0	7.5	0.6	10.0	8.5	5.0	7.5	0.6	10.0	9.5	5.5	7.5	0.6	12.0	9.0	5.0	10.0	0.6
3900pF	10.0	8.5	5.0	7.5	0.6	10.0	9.0	5.0	7.5	0.6	10.0	10.0	5.5	7.5	0.6	12.0	9.5	5.5	10.0	0.6
4700pF	10.0	8.5	5.0	7.5	0.6	10.0	9.0	5.0	7.5	0.6	10.0	10.0	5.5	7.5	0.6	12.0	10.0	6.0	10.0	0.6
5600pF	10.0	8.5	5.0	7.5	0.6	10.0	9.0	5.0	7.5	0.6	10.0	10.5	6.0	7.5	0.6	12.0	11.0	6.5	10.0	0.6
6800pF	10.0	9.0	5.5	7.5	0.6	10.0	9.5	5.5	7.5	0.6	12.0	9.5	5.0	10.0	0.6	12.0	11.5	6.5	10.0	0.6
8200pF	10.0	10.0	6.0	7.5	0.6	10.0	10.0	6.0	7.5	0.6	12.0	10.0	5.5	10.0	0.6	12.0	12.0	7.5	10.0	0.6
0.010uF	10.0	10.5	6.5	7.5	0.6	10.0	10.5	6.0	7.5	0.6	12.0	10.5	6.0	10.0	0.6	12.0	12.5	7.5	10.0	0.6
0.012uF	10.0	11.0	6.5	7.5	0.6	12.0	10.0	6.0	10.0	0.6	12.0	11.0	7.0	10.0	0.6	12.0	13.0	8.0	10.0	0.6
0.015uF	10.0	11.5	7.0	7.5	0.6	12.0	10.0	6.0	10.0	0.6	12.0	12.5	8.0	10.0	0.6	18.0	10.5	6.5	15.0	0.8
0.018uF	10.0	12.0	7.0	7.5	0.6	12.0	10.5	7.0	10.0	0.6	12.0	13.5	9.0	10.0	0.6	18.0	11.0	6.5	15.0	0.8
0.022uF	12.0	12.0	6.5	10.0	0.6	12.0	12.0	7.5	10.0	0.6	18.0	12.0	7.0	15.0	0.8	18.0	12.5	7.0	15.0	0.8
0.027uF	12.0	12.5	7.0	10.0	0.6	12.0	13.0	8.0	10.0	0.6	18.0	13.0	8.0	15.0	0.8	18.0	13.0	8.5	15.0	0.8
0.033uF	12.0	13.0	7.5	10.0	0.6	12.0	14.0	9.0	10.0	0.6	18.0	14.0	9.0	15.0	0.8	18.0	14.5	9.0	15.0	0.8
0.039uF	12.0	10.5	6.0	10.0	0.6	18.0	12.0	7.0	15.0	0.8	18.0	14.5	9.5	15.0	0.8					
0.047uF	12.0	11.0	6.5	10.0	0.6	18.0	13.0	8.0	15.0	0.8										
0.056uF	12.0	12.0	7.0	10.0	0.6	18.0	13.5	8.5	15.0	0.8										
0.068uF	12.0	12.5	7.5	10.0	0.6	18.0	14.0	9.0	15.0	0.8										
0.082uF	12.0	13.0	8.0	10.0	0.6															
0.10uF	12.0	14.0	9.0	10.0	0.6															

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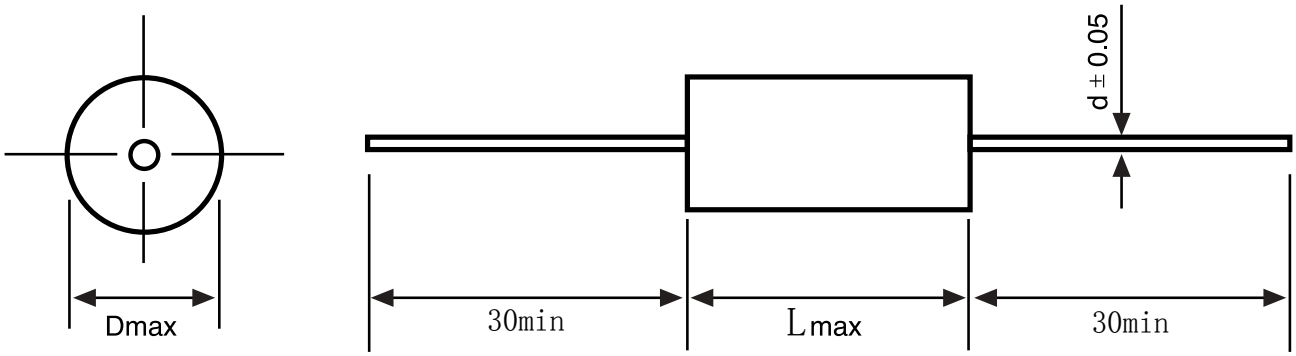
轴向金属化聚丙烯膜电容器
Metallized polypropylene film capacitor(Axial-type)

■ 外形图 Outline Drawing



■ 特点

- 金属化聚丙烯，无感卷绕结构，轴向
- 自愈性能优异
- 外包聚酯胶带纸，两端灌注阻燃性环氧树脂

■ Features

- Metallized Polypropylene film, non-inductive type, axial
- Excellent self-healing property
- Wrapped with polyester adhesive tape and ends filled with Flame retardant epoxy resin

■ 主要用途

- 温度补偿电路
- 定时、振荡电路
- 功率因素校正、开关电源耦合用

■ Typical Applications

- Temperature compensation circuits
- Timing, oscillator circuits
- Power factor correction and coupling capacitor in SMPS applications

■ 技术要求 Specifications

引用标准 Reference Standard	GB 10190(IEC 60384–16)							
气候类别 Climatic Category	40/085/21							
额定温度 Rated Temperature	85℃							
额定电压 Rated Voltage	100V、250V、400V、630V、1250V							
电容量范围 Capacitance Range	0.0010μF ~ 15μF							
电容量偏差 Capacitance Tolerance	±5%(J)，±10%(K)，±20% (M)							
耐电压 Voltage Proof	1.6U_R (5s)							
损耗角正切 Dissipation Factor	≤ 10×10^{-4} (1kHz，20℃)							
绝缘电阻 Insulation Resistance	≥ 100 000MΩ，C_N ≤ 0.33μF ≥ 30 000s，C_N > 0.33μF (20℃ ,100V, 1min)							
最大脉冲爬升速率 Maximum Pulse Rise Time(dV/dt): 若实际工作电压 U 比额定电压 U_R 低，电容器可工作在更高的 dV/dt 场合，这样 dv/dt 允许值应为右表值乘以 U_R/U。 If the working voltage(U) is lower than the rated voltage(U_R),the capacitor can be worked at a higher dV/dt. In this case, the maximum allowed dV/dt is obtain by multiplying the right value with U_R/U.	U_R(V)	dV/dt (V/μs)						
		L=12.0	L=14.5	L=20.0	L=27.5	L=33.0	L=41.5	L=56.5
	100/160	150	110	80	60	50	35	20
	250	300	220	150	110	90	60	30
	400	460	330	250	180	120	80	45
	630	600	440	300	220	150	100	60
	1 000	800	550	400	300	200	150	80
	1 250	1 000	750	580	400	300	200	100

METALLIZED POLYPROPYLENE FILM CAPACITOR

尺寸 Dimensions(mm)

Rated Cap.	100/250VDC		Rated Cap.	400VDC		Rated Cap.	630VDC		Rated Cap.	1250VDC	
	OD	L		OD	L		OD	L		OD	L
	max	max		max	max		max	max		max	max
0.010uF	5.5	14.0	0.010uF	5.5	14.0	0.010uF	5.5	14.0	0.010uF	6.5	14.0
0.015uF	5.5	14.0	0.015uF	6.0	14.0	0.015uF	6.0	14.0	0.015uF	7.0	14.0
0.022uF	6.0	14.0	0.022uF	7.0	14.0	0.022uF	7.0	14.0	0.022uF	8.0	14.0
0.027uF	6.0	14.0	0.027uF	7.0	14.0	0.027uF	7.0	14.0	0.027uF	8.5	14.0
0.033uF	6.0	14.0	0.033uF	7.0	14.0	0.033uF	7.5	14.0	0.033uF	8.0	20.0
0.039uF	6.0	14.0	0.039uF	7.0	14.0	0.039uF	7.5	14.0	0.039uF	8.5	20.0
0.047uF	6.0	14.0	0.047uF	7.0	14.0	0.047uF	8.0	14.0	0.047uF	9.0	20.0
0.068uF	6.5	14.0	0.068uF	7.5	14.0	0.068uF	8.0	20.0	0.068uF	10.5	20.0
0.082uF	6.5	14.0	0.082uF	8.0	14.0	0.082uF	8.5	20.0	0.082uF	11.0	20.0
0.10uF	7.0	14.0	0.10uF	8.0	14.0	0.10uF	9.0	20.0	0.10uF	10.0	26.0
0.15uF	8.0	14.0	0.15uF	8.0	20.0	0.15uF	10.0	20.0	0.15uF	12.0	26.0
0.22uF	7.5	20.0	0.22uF	8.5	20.0	0.22uF	10.0	26.0	0.22uF	14.0	26.0
0.27uF	8.0	20.0	0.27uF	9.0	20.0	0.27uF	11.0	26.0	0.27uF	13.5	32.0
0.33uF	8.5	20.0	0.33uF	10.0	20.0	0.33uF	11.5	26.0	0.33uF	14.5	32.0
0.39uF	8.0	26.0	0.39uF	10.5	20.0	0.39uF	12.5	26.0	0.39uF	15.5	32.0
0.47uF	8.5	26.0	0.47uF	10.5	26.0	0.47uF	13.5	26.0	0.47uF	17.0	32.0
0.68uF	9.5	26.0	0.68uF	12.5	26.0	0.68uF	14.0	32.0	0.68uF	20.0	32.0
0.82uF	10.0	26.0	0.82uF	13.0	26.0	0.82uF	15.0	32.0	0.82uF	20.0	37.0
1.0uF	9.5	32.0	1.0uF	13.5	26.0	1.0uF	16.5	32.0	1.0uF	22.0	37.0
1.2uF	10.0	32.0	1.2uF	14.0	26.0	1.2uF	18.0	32.0	1.2uF	24.0	37.0
1.5uF	11.0	32.0	1.5uF	15.0	32.0	1.5uF	20.0	32.0	1.5uF	21.0	46.0
1.8uF	12.0	32.0	1.8uF	16.0	32.0	1.8uF	21.5	32.0	1.8uF	25.0	46.0
2.2uF	13.0	32.0	2.2uF	17.0	32.0	2.2uF	21.5	37.0	2.2uF	27.5	46.0
2.5uF	13.5	32.0	2.5uF	17.5	32.0	2.5uF	23.0	37.0			
2.7uF	14.0	32.0	2.7uF	18.0	32.0	2.7uF	24.0	37.0			
3.3uF	15.0	32.0	3.3uF	19.0	32.0	3.3uF	22.5	46.0			
3.6uF	15.0	36.0	3.6uF	20.0	32.0	3.6uF	23.5	46.0			
3.9uF	15.5	36.0	3.9uF	19.0	37.0	3.9uF	24.5	46.0			
4.7uF	17.0	36.0	4.7uF	20.5	37.0	4.7uF	26.5	46.0			
6.8uF	18.0	36.0	5.6uF	22.5	37.0						
8.2uF	17.0	46.0	6.8uF	23.0	37.0						
10.0uF	18.5	46.0	8.2uF	23.0	46.0						
15.0uF	20.5	46.0	10.0uF	25.0	46.0						

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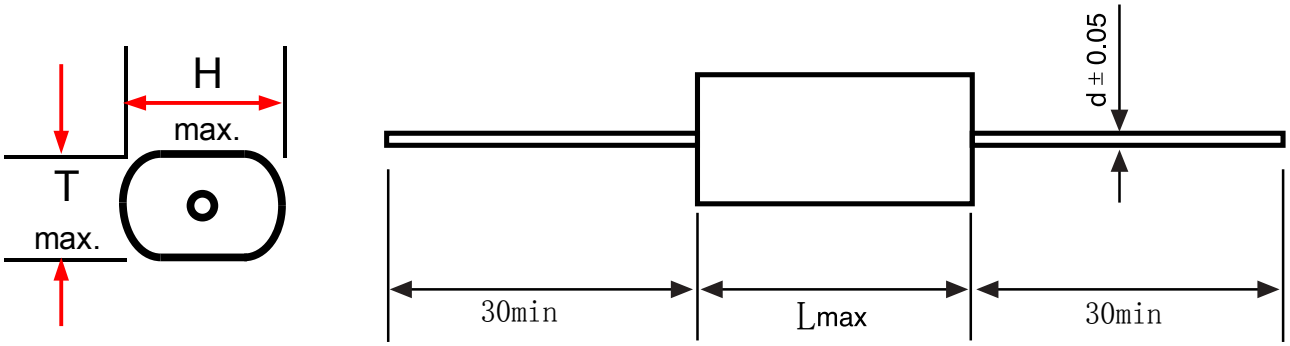
轴向金属化聚丙烯膜电容器
Metallized polypropylene film capacitor(Axial-type)

■ 外形图 Outline Drawing



■ 特点

- 金属化聚丙烯，无感卷绕结构，轴向
- 自愈性能优异
- 外包聚酯胶带纸，两端灌注阻燃性环氧树脂

■ Features

- Metalized Polypropylene film, non-inductive type, axial
- Excellent self-healing property
- Wrapped with polyester adhesive tape and ends filled with Flame retardant epoxy resin

■ 主要用途

- 温度补偿电路
- 定时、振荡电路
- 功率因素校正、开关电源耦合用

■ Typical Applications

- Temperature compensation circuits
- Timing, oscillator circuits
- Power factor correction and coupling capacitor in SMPS applications

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电容量偏差 Capacitance Tolerance	±5%(J)，±10%(K)，±20% (M)						
耐电压 Voltage Proof	1.6U_R (5s)						
损耗角正切 Dissipation Factor	≤ 10×10^{-4} (1kHz，20℃)						
绝缘电阻 Insulation Resistance	≥ 100 000MΩ， C_N ≤ 0.33μF ≥ 30 000s， C_N > 0.33μF (20℃ ,100V, 1min)						
最大脉冲爬升速率 Maximum Pulse Rise Time(dV/dt): 若实际工作电压 U 比额定电压 U_R 低，电容器可工作在更高的 dV/dt 场合，这样 dv/dt 允许值应为右表值乘以 U_R/U。 If the working voltage(U) is lower than the rated voltage(U_R),the capacitor can be worked at a higher dV/dt. In this case, the maximum allowed dV/dt is obtain by multiplying the right value with U_R/U.	U_R(V)	dV/dt (V/μs)						
		L=12.0	L=14.5	L=20.0	L=27.5	L=33.0	L=41.5	L=56.5
	100/160	150	110	80	60	50	35	20
	250	300	220	150	110	90	60	30
	400	460	330	250	180	120	80	45
	630	600	440	300	220	150	100	60
	1 000	800	550	400	300	200	150	80
	1 250	1 000	750	580	400	300	200	100

METALLIZED POLYPROPYLENE FILM CAPACITOR

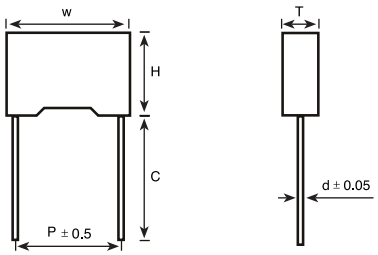
尺寸 Dimensions(mm)

Rated Cap.	100/250VDC				400VDC				630VDC				1250VDC			
	L	H	T	d	L	H	T	d	L	H	T	d	L	H	T	d
	max	max	max	±0.05	max	max	max	±0.05	max	max	max	±0.05	max	max	max	±0.05
0.010uF	14.0	8.0	4.5	0.6	14.0	8.0	4.5	0.6	14.0	8.0	4.5	0.6	14.0	9.0	5.5	0.6
0.015uF	14.0	8.0	4.5	0.6	14.0	8.0	4.5	0.6	14.0	8.0	4.5	0.6	14.0	10.0	6.0	0.6
0.022uF	14.0	9.0	5.0	0.6	14.0	9.0	5.0	0.6	14.0	9.0	5.0	0.6	14.0	10.0	6.0	0.6
0.027uF	14.0	9.5	5.5	0.6	14.0	9.5	5.5	0.6	14.0	9.5	5.5	0.6	14.0	11.0	6.5	0.6
0.033uF	14.0	10.0	6.0	0.6	14.0	10.0	6.0	0.6	14.0	10.0	6.0	0.6	20.0	11.5	6.5	0.6
0.039uF	14.0	10.5	6.0	0.6	14.0	10.5	6.0	0.6	14.0	10.5	6.0	0.6	20.0	12.0	7.0	0.6
0.047uF	14.0	11.0	6.0	0.6	14.0	11.0	6.0	0.6	14.0	11.0	6.0	0.6	20.0	13.0	7.5	0.6
0.068uF	14.0	11.0	6.0	0.6	14.0	11.0	6.0	0.6	20.0	11.0	6.5	0.6	20.0	13.5	8.5	0.8
0.082uF	14.0	11.0	6.0	0.6	14.0	11.0	6.0	0.6	20.0	11.0	6.5	0.6	20.0	14.0	9.0	0.8
0.10uF	14.0	11.0	6.0	0.6	14.0	11.0	6.0	0.6	20.0	11.5	7.5	0.6	26.0	13.0	8.0	0.8
0.15uF	14.0	11.5	6.5	0.6	14.0	11.5	6.5	0.6	20.0	12.0	8.0	0.6	26.0	16.0	9.0	0.8
0.22uF	20.0	10.0	6.0	0.6	20.0	10.5	7.0	0.6	26.0	12.0	7.5	0.8	32.0	17.0	10.5	0.8
0.27uF	20.0	11.0	6.0	0.6	20.0	12.5	7.5	0.6	26.0	13.0	8.0	0.8	32.0	18.0	11.5	0.8
0.33uF	20.0	11.0	6.0	0.6	20.0	13.0	8.5	0.6	26.0	14.0	8.5	0.8	32.0	20.0	12.5	0.8
0.39uF	20.0	11.0	6.5	0.6	26.0	12.0	7.5	0.8	26.0	15.5	9.5	0.8	32.0	21.0	13.5	0.8
0.47uF	20.0	11.0	6.5	0.6	26.0	13.5	8.0	0.8	26.0	16.5	10.5	0.8	32.0	22.0	14.5	0.8
0.68uF	20.0	12.5	8.0	0.6	26.0	15.5	9.0	0.8	32.0	16.5	10.5	0.8	32.0	23.0	16.0	0.8
0.82uF	26.0	13.0	6.5	0.8	26.0	16.5	10.0	0.8	32.0	18.0	11.5	0.8	36.0	22.5	16.0	0.8
1.0uF	26.0	13.5	7.5	0.8	32.0	15.5	9.5	0.8	32.0	19.0	12.5	0.8	36.0	25.0	17.0	0.8
1.2uF	26.0	14.5	8.0	0.8	32.0	16.5	10.0	0.8	32.0	21.5	13.5	0.8	46.0	23.0	17.0	1.0
1.5uF	26.0	15.5	9.0	0.8	32.0	17.5	11.5	0.8	32.0	23.0	15.5	0.8	46.0	26.0	18.5	1.0
1.8uF	32.0	14.5	8.0	0.8	32.0	19.0	13.0	0.8	36.0	22.5	16.0	08	46.0	28.0	21.0	1.0
2.2uF	32.0	15.5	9.0	0.8	32.0	20.0	13.5	0.8	36.0	26.0	16.5	0.8	46.0	31.5	22.5	1.0
2.5uF	32.0	16.0	10.0	0.8	32.0	22.0	14.0	0.8	46.0	24.5	16.5	1.0	46.0	33.0	23.5	1.0
2.7uF	36.0	15.5	9.5	0.8	36.0	18.5	12.0	0.8	46.0	25.0	17.5	1.0				
3.3uF	36.0	16.5	10.5	0.8	36.0	19.5	13.5	0.8	46.0	28.0	18.5	1.0				
3.6uF	36.0	17.0	11.0	0.8	36.0	21.0	13.5	0.8								
3.9uF	36.0	19.0	11.0	0.8	36.0	22.5	14.0	0.8								
4.7uF	46.0	16.0	10.5	1.0	36.0	23.5	15.5	0.8								
6.8uF	46.0	18.0	11.5	1.0	36.0	25.0	17.0	0.8								
8.2uF	46.0	20.5	12.5	1.0	46.0	24.0	16.0	1.0								
10.0uF	46.0	21.5	14.0	1.0	46.0	25.5	18.0	1.0								
15.0uF	46.0	23.0	15.5	1.0	46.0	28.5	19.0	1.0								

◎ For inquiry of items out of above range or with special dimensions, please do not hesitate to contact with us for availability.
◎超出上述范围之需求，请先与我司联系，确认可否承制。
◎ For inquiry of items out of above range or with special dimensions, please do not hesitate to contact with us for availability.
◎上述规格仅供参考，实际规格以规格承认书为准。

金属化聚丙烯膜抗干扰电容器(X2类, 275Vac/310Vac)
Metallized polypropylene film interference suppression capacitor(Class X2, 275Vac/310Vac)

■ 外形图 Outline Drawing



W ± 0.5, H ± 0.5, T ± 0.5

■ 特点

- 金属化聚丙烯
- 能承受过压冲击
- 优异的阻燃性能
- 广泛用于电源跨线路等抗干扰场合

■ Features

- Metallized polypropylene structure
- Withstanding overvoltage stressing
- Excellent active and passive flame resistant abilities
- Widely used in across-the-line, interference suppression circuit.

■ 安全认证 Safety Approvals

●	CQC	CQC (中国)	IEC60384-14:2013, 250/275/305/310VAC,0.0010μF~10.0μF 证书号(Certificate No.): CQC16001146957
●	10 DVE	ENEC-VDE (欧盟)	EN 60384-14:2013(VDE 0565-1-1:2014), 250/275/305/310VAC,0.0010μF~10.0μF 证书号(Certificate No.): 40044173
●	c US	UL/CUL (美国/加拿大)	UL 60384-14:2015, 250/275/305/310VAC,0.0010μF~10.0μF 证书号(Certificate No.): E484578
			UL 60384-14:2015, 250/275/305/310VAC,0.0010μF~10.0μF 证书号(Certificate No.): E484578
●	CB TEST CERTIFICATE		IEC60384-14:2013, 250/275/305/310VAC,0.0010μF~10.0μF 40/110/56/B 证书号(Certificate No.): DE1-57127
●	KC	KC (韩国)	KC 60384-14:2015-09 310VAC, 0.0010μF~1.0μF 证书号(Certificate No.): SU03124-20001/20002/20003

■ 技术要求 Specifications

气候类别/阻燃等级 Climatic Category/Passive Flammability Class	40/110/56/B		
工作温度范围 Operating Temperature Range	-40℃ ~+110℃		
电容器类别 Class	X2类		
额定电压 Rated Voltage	250/275/305/310VAC,50/60Hz		
电容量范围 Capacitance Range	0.0010μF~10.0μF		
电容量偏差 Capacitance Tolerance	±10%(K)、±20%(M)		
耐电压 Voltage Proof	引线之间 Between Terminals:	2 000Vdc(2s) $C_R \leqslant 1.0\mu F$	
		1 800Vdc(2s) $C_R > 1.0\mu F$	
	极壳之间 Between Terminals To Case:	2 120Vac(1min)	
绝缘电阻 Insulation Resistance	≥15 000MΩ, $C_R \leqslant 0.33\mu F$ ≥5 000s, $C_R > 0.33\mu F$	(20℃, 100V, 1min)	
损耗角正切 Dissipation Factor	0.0010μF≤C_R≤0.47μF	≤10 x 10^{-4} (1kHz, 20℃)	≤20 x 10^{-4} (10kHz, 20℃)
	0.47μF<C_R≤1.0μF	≤20 x 10^{-4} (1kHz, 20℃)	≤40 x 10^{-4} (10kHz, 20℃)
	C_R>1.0μF	≤30 x 10^{-4} (1kHz, 20℃)	----------

Metallized Polypropylene Film Capacitor (Interference Suppressors Class - X2

尺寸 Dimensions(mm)

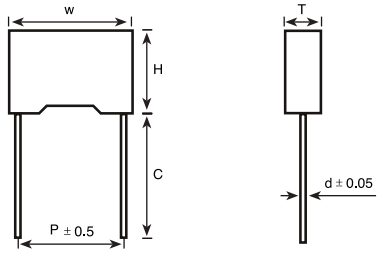
Rated Cap.uF	310VAC					Rated Cap.uF	310VAC					Rated Cap.uF	310VAC				
	W	H	T	P	d		W	H	T	P	d		W	H	T	P	d
	max	max	max	±1.0	±0.05		max	max	max	±1.0	±0.05		max	max	max	±1.0	±0.05
0.001	10	9	4	7.5	0.6	0.01	18	11	5	15	0.8	0.47	31	18	9	27.5	0.8
0.001	10	9	4	7.5	0.6	0.01	18	11	5	15	0.8	0.68	31	19	11	27.5	0.8
0.0022	10	9	4	7.5	0.6	0.022	18	11	5	15	0.8	0.82	31	19	11	27.5	0.8
0.0022	10	9	4	7.5	0.6	0.022	18	11	5	15	0.8	1	31	19	11	27.5	0.8
0.0033	10	9	4	7.5	0.6	0.033	18	11	5	15	0.8	1.2	31	22	13	27.5	0.8
0.0033	10	9	4	7.5	0.6	0.033	18	11	5	15	0.8	1.5	31	22	13	27.5	0.8
0.0047	10	9	4	7.5	0.6	0.047	18	11	5	15	0.8	1.8	31	24.5	14	27.5	0.8
0.0047	10	9	4	7.5	0.6	0.068	18	11	5	15	0.8	2	31	28	14	27.5	0.8
0.0068	10	9	4	7.5	0.6	0.082	18	11	5	15	0.8	2.2	31	28	14	27.5	0.8
0.0082	10	9	4	7.5	0.6	0.1	18	11	5	15	0.8	2.5	31	28	17	27.5	0.8
0.01	10	9	4	7.5	0.6	0.1	18	12	6	15	0.8	2.7	31	33	18	27.5	0.8
0.022	10	9	4	7.5	0.6	0.15	18	12	6	15	0.8	3	31	33	18	27.5	0.8
0.033	10	11	5	7.5	0.6	0.18	18	13	7	15	0.8	3.3	31	33	18	27.5	0.8
0.047	10	12	6	7.5	0.6	0.22	18	14.5	8.5	15	0.8	4.7	31	37	22	27.5	0.8
0.068	10	13.5	8.5	7.5	0.6	0.27	18	14.5	8.5	15	0.8	1.5	41	26	14.5	37.5	1.0
0.1	10	13.5	8.5	7.5	0.6	0.33	18	14.5	8.5	15	0.8	1.8	41	26	14.5	37.5	1.0
0.0022	13	9	4	10	0.6	0.39	18	16	10	15	0.8	2	41	26	14.5	37.5	1.0
0.0022	13	9	4	10	0.6	0.47	18	16	10	15	0.8	2.2	41.5	26	14.5	37.5	1.0
0.0047	13	9	4	10	0.6	0.47	18	18	9	15	0.8	2.5	41.5	26	14.5	37.5	1.0
0.0047	13	9	4	10	0.6	0.56	18	18	10	15	0.8	2.7	41.5	26	14.5	37.5	1.0
0.0068	13	9	4	10	0.6	0.68	18	19	11	15	0.8	3	41.5	30	17	37.5	1.0
0.0068	13	9	4	10	0.6	0.68	18	21	12	15	0.8	3.3	41.5	30	17	37.5	1.0
0.0082	13	9	4	10	0.6	0.15	26.5	15	6	22.5	0.8	3.9	41.5	30	17	37.5	1.0
0.0082	13	9	4	10	0.6	0.18	26.5	15	6	22.5	0.8	4.7	41.5	35	19	37.5	1.0
0.01	13	9	4	10	0.6	0.22	26.5	15	6	22.5	0.8	5.6	41.5	35.5	22.5	37.5	1.0
0.01	13	9	4	10	0.6	0.27	26.5	15	6	22.5	0.8	6.8	41.5	35.5	22.5	37.5	1.0
0.022	13	9	4	10	0.6	0.33	26.5	16.5	7	22.5	0.8	8.2	41.5	41	27.5	37.5	1.0
0.033	13	9	4	10	0.6	0.39	26.5	16.5	7	22.5	0.8	10	41.5	41	27.5	37.5	1.0
0.047	13	11	5	10	0.6	0.47	26.5	17	8.5	22.5	0.8						
0.056	13	11	5	10	0.6	0.56	26.5	19	10	22.5	0.8						
0.068	13	12	6	10	0.6	0.68	26.5	19	10	22.5	0.8						
0.082	13	12	6	10	0.6	0.82	26.5	19	10	22.5	0.8						
0.1	13	12	6	10	0.6	1	26.5	20	11	22.5	0.8						
0.15	13	14	8	10	0.6	1.2	26.5	22	12	22.5	0.8						
0.18	13	16	8	10	0.6	1.5	26.5	23	13	22.5	0.8						
0.22	13	16	8	10	0.6	1.8	26.5	24	14	22.5	0.8						
						2	26.5	25	15	22.5	0.8						
						2.2	26.5	25	15	22.5	0.8						

◎ For inquiry of items out of above range or with special dimensions, please do not hesitate to contact with us for availability.
◎超出上述范围之需求，请先与我司联系，确认可否承制。
◎ For inquiry of items out of above range or with special dimensions, please do not hesitate to contact with us for availability.
◎上述规格仅供参考，实际规格以规格承认书为准。

Hongfarad

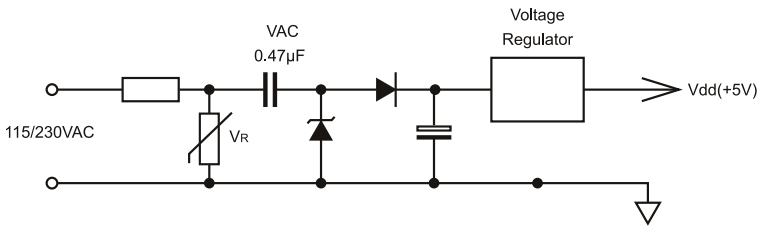
电容降压专用金属化聚丙烯膜交流电容器
Metallized polypropylene film A.C. capacitor for capacitive divider

■ 外形图 Outline Drawing



W± 0.5, H± 0.5, T ± 0.5

■ 典型应用电路 Typical circuit



■ 特点

- 专门设计用于与100~240Vac电源串联的电容降压电路场合，如电表、LED模块等。
- 金属化聚丙烯
- 自愈性能优异，能承受浪涌电压冲击
- 长期负载下优异的电容量稳定性
- 优异的防潮性能
- 优异的阻燃性能

■ Features

- This is specifically designed for applications in serial with the 100~240Vac main, i.e.: capacitive divider, for example, energy meter, LED driver etc.
- Metallized polypropylene structure
- Good self-healing properties,withstanding surge voltage stressing
- Long stability of capacitance
- Good properties in damp environment
- Excellent active and passive flame resistant abilities

■ 安全认证 Safety Approvals

●	CQC	CQC (中国)	IEC60384-14:2013, 250/275/305/310VAC,0.0010μF~10.0μF 证书号(Certificate No.): CQC16001146957
●	10 DVE	ENEC-VDE (欧盟)	EN 60384-14:2013(VDE 0565-1-1:2014), 250/275/305/310VAC,0.0010μF~10.0μF 证书号(Certificate No.): 40044173
●	c UL us	UL/CUL (美国/加拿大)	UL 60384-14:2015, 250/275/305/310VAC,0.0010μF~10.0μF 证书号(Certificate No.): E484578
			UL 60384-14:2015, 250/275/305/310VAC,0.0010μF~10.0μF 证书号(Certificate No.): E484578
●	CB TEST CERTIFICATE		IEC60384-14:2013, 250/275/305/310VAC,0.0010μF~10.0μF 40/110/56/B 证书号(Certificate No.): DE1-57127
●	KC	KC (韩国)	KC 60384-14:2015-09 310VAC, 0.0010μF~1.0μF 证书号(Certificate No.): SU03124-20001/20002/20003

■ 技术要求 Specifications

引用标准 Reference Standard	GB/T 14472 (IEC60384-14)	
安全认证 Safety Approvals	CQC ENEC-VDE UL-CUL	
电容器类别 Class	X2类	
气候类别 Climatic Category	40/110/56/B	
工作温度范围 Operating Temperature Range	-40℃ ~+110℃	
额定电压 Rated Voltage	250/275/305/310VAC, 50/60Hz	
电容量范围 Capacitance Range	0.001μF~10.0μF (可按要求制作其它电容量)(available on request)	
电容量偏差 Capacitance Tolerance	±10%(K)、±20%(M) (Other tolerance available on request)	
耐电压 Voltage Proof	引线之间 Between Terminals:	1 800(Vdc) (2s) $C_R \leqslant 1.0\mu F$
	极壳之间 Between Terminals To Case:	2 050(Vac) (60s)
承受的脉冲电压 Endure impulse voltage	2 000V	
绝缘电阻 Insulation Resistance	⩾15 000MΩ, $C_R \leqslant 0.33\mu F$ ⩾5 000s, $C_R > 0.33\mu F$	(20℃, 100V, 1min)
损耗角正切 Dissipation Factor	$\leqslant 10 \times 10^{-4}$ (1kHz, 20℃) 典型值 Typical value 3×10^{-4}	
	$\leqslant 20 \times 10^{-4}$ (10kHz, 20℃) 典型值 Typical value 8×10^{-4}	

Metallized Polypropylene Film A.C. Capacitor For Capacitive Divider

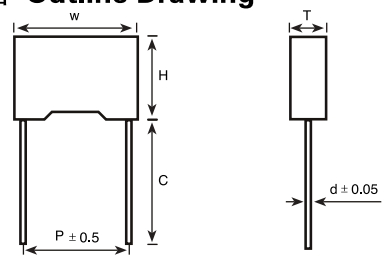
尺寸 Dimensions(mm)

Rated Cap.uF	310VAC					Rated Cap.uF	310VAC					Rated Cap.uF	310VAC				
	W	H	T	P	d		W	H	T	P	d		W	H	T	P	d
	max	max	max	±1.0	±0.05		max	max	max	±1.0	±0.05		max	max	max	±1.0	±0.05
0.001	10	9	4	7.5	0.6	0.01	18	11	5	15	0.8	0.47	31	18	9	27.5	0.8
0.001	10	9	4	7.5	0.6	0.01	18	11	5	15	0.8	0.68	31	19	11	27.5	0.8
0.0022	10	9	4	7.5	0.6	0.022	18	11	5	15	0.8	0.82	31	19	11	27.5	0.8
0.0022	10	9	4	7.5	0.6	0.022	18	11	5	15	0.8	1	31	19	11	27.5	0.8
0.0033	10	9	4	7.5	0.6	0.033	18	11	5	15	0.8	1.2	31	22	13	27.5	0.8
0.0033	10	9	4	7.5	0.6	0.033	18	11	5	15	0.8	1.5	31	22	13	27.5	0.8
0.0047	10	9	4	7.5	0.6	0.047	18	11	5	15	0.8	1.8	31	24.5	14	27.5	0.8
0.0047	10	9	4	7.5	0.6	0.068	18	11	5	15	0.8	2	31	28	14	27.5	0.8
0.0068	10	9	4	7.5	0.6	0.082	18	11	5	15	0.8	2.2	31	28	14	27.5	0.8
0.0082	10	9	4	7.5	0.6	0.1	18	11	5	15	0.8	2.5	31	28	17	27.5	0.8
0.01	10	9	4	7.5	0.6	0.1	18	12	6	15	0.8	2.7	31	33	18	27.5	0.8
0.022	10	9	4	7.5	0.6	0.15	18	12	6	15	0.8	3	31	33	18	27.5	0.8
0.033	10	11	5	7.5	0.6	0.18	18	13	7	15	0.8	3.3	31	33	18	27.5	0.8
0.047	10	12	6	7.5	0.6	0.22	18	14.5	8.5	15	0.8	4.7	31	37	22	27.5	0.8
0.068	10	13.5	8.5	7.5	0.6	0.27	18	14.5	8.5	15	0.8	1.5	41	26	14.5	37.5	1.0
0.1	10	13.5	8.5	7.5	0.6	0.33	18	14.5	8.5	15	0.8	1.8	41	26	14.5	37.5	1.0
0.0022	13	9	4	10	0.6	0.39	18	16	10	15	0.8	2	41	26	14.5	37.5	1.0
0.0022	13	9	4	10	0.6	0.47	18	16	10	15	0.8	2.2	41.5	26	14.5	37.5	1.0
0.0047	13	9	4	10	0.6	0.47	18	18	9	15	0.8	2.5	41.5	26	14.5	37.5	1.0
0.0047	13	9	4	10	0.6	0.56	18	18	10	15	0.8	2.7	41.5	26	14.5	37.5	1.0
0.0068	13	9	4	10	0.6	0.68	18	19	11	15	0.8	3	41.5	30	17	37.5	1.0
0.0068	13	9	4	10	0.6	0.68	18	21	12	15	0.8	3.3	41.5	30	17	37.5	1.0
0.0082	13	9	4	10	0.6	0.15	26.5	15	6	22.5	0.8	3.9	41.5	30	17	37.5	1.0
0.0082	13	9	4	10	0.6	0.18	26.5	15	6	22.5	0.8	4.7	41.5	35	19	37.5	1.0
0.01	13	9	4	10	0.6	0.22	26.5	15	6	22.5	0.8	5.6	41.5	35.5	22.5	37.5	1.0
0.01	13	9	4	10	0.6	0.27	26.5	15	6	22.5	0.8	6.8	41.5	35.5	22.5	37.5	1.0
0.022	13	9	4	10	0.6	0.33	26.5	16.5	7	22.5	0.8	8.2	41.5	41	27.5	37.5	1.0
0.033	13	9	4	10	0.6	0.39	26.5	16.5	7	22.5	0.8	10	41.5	41	27.5	37.5	1.0
0.047	13	11	5	10	0.6	0.47	26.5	17	8.5	22.5	0.8						
0.056	13	11	5	10	0.6	0.56	26.5	19	10	22.5	0.8						
0.068	13	12	6	10	0.6	0.68	26.5	19	10	22.5	0.8						
0.082	13	12	6	10	0.6	0.82	26.5	19	10	22.5	0.8						
0.1	13	12	6	10	0.6	1	26.5	20	11	22.5	0.8						
0.15	13	14	8	10	0.6	1.2	26.5	22	12	22.5	0.8						
0.18	13	16	8	10	0.6	1.5	26.5	23	13	22.5	0.8						
0.22	13	16	8	10	0.6	1.8	26.5	24	14	22.5	0.8						
						2	26.5	25	15	22.5	0.8						
						2.2	26.5	25	15	22.5	0.8						

◎ For inquiry of items out of above range or with special dimensions, please do not hesitate to contact with us for availability.
◎超出上述范围之需求，请先与我司联系，确认可否承制。
◎ For inquiry of items out of above range or with special dimensions, please do not hesitate to contact with us for availability.
◎上述规格仅供参考，实际规格以规格承认书为准。

金属化聚丙烯膜抗干扰电容器（X2类，THB防潮系列）
Metallized polypropylene film interference suppression capacitor (Class X2, Temperature Humidity Bias (THB) series)

■ 外形图 Outline Drawing



W ± 0.5, H ± 0.5, T ± 0.5

■ 特点

- 在严苛的环境下(如高温高湿)长期应用容量稳定性优异
- 自愈性能优异，能承受浪涌电压冲击
- 优异的阻燃性能

■ 应用

- 电源串联连接用
- 阻容降压应用
- 例如：电表，LED供电模块及其他苛刻应用环境

■ Features

- High stability of capacitance under severe ambient condition, such as high temperature and high humidity
- Good self-healing properties,withstanding surge voltage stressing
- Excellent active and passive flame resistant abilities

■ Applications

- For connection in series with the mains
- For capacitive divider power supply
- Such as power meter, LED driver, and other severe ambient condition applications

■ 安全认证 Safety Approvals

●	CQC	CQC (中国)	IEC60384-14:2013, 250/275/305/310VAC,0.0010μF~10.0μF 证书号(Certificate No.): CQC16001146957
●	ENEC DVE	ENEC-VDE (欧盟)	EN 60384-14:2013(VDE 0565-1-1:2014), 250/275/305/310VAC,0.0010μF~10.0μF 证书号(Certificate No.): 40044173
●	cULus	UL/CUL (美国/加拿大)	UL 60384-14:2015, 250/275/305/310VAC,0.0010μF~10.0μF 证书号(Certificate No.): E484578
			UL 60384-14:2015, 250/275/305/310VAC,0.0010μF~10.0μF 证书号(Certificate No.): E484578
●	CB TEST CERTIFICATE		IEC60384-14:2013, 250/275/305/310VAC,0.0010μF~10.0μF 40/110/56/B 证书号(Certificate No.): DE1-57127
●	KC	KC (韩国)	KC 60384-14:2015-09 310VAC, 0.0010μF~1.0μF 证书号(Certificate No.): SU03124-20001/20002/20003

■ 技术要求 Specifications

引用标准 Reference Standard	GB/T 6346.14 (IEC60384-14)		
电容器类别 Class	X2 类		
气候类别 / 阻燃等级 Climatic Category/Passive Flammability Category	40/110/56/B		
工作温度范围 Operating Temperature Range	–40℃ ~ +110℃		
额定电压 Rated Voltage (U_R)	305Vac/275Vac, 50/60Hz		
电容量范围 Capacitance Range	0.010μF ~ 15μF		
电容量偏差 Capacitance Tolerance	±10%（K），±20%（M） (Other tolerance available on request)		
耐电压 Voltage Proof	引线之间 Between Terminals:	4.3U_R(dc), 2s	
	极壳之间 Between Terminals To Case:	2 120Vac, 1min	
绝缘电阻 Insulation Resistance	R ≥ 15 000MΩ， C_N ≤ 0.33μF RC_N ≥ 5 000s， C_N > 0.33μF (20℃ ,100V, 1min)		
损耗角正切 Dissipation Factor (tan δ)	C_N ≤ 1.0μF	≤ 10 x 10^{-4}(1kHz,20℃)	≤ 20 x 10^{-4}(10kHz,20℃)
	C_N > 1.0μF	≤ 20 x 10^{-4}(1kHz,20℃)	≤ 40 x 10^{-4}(10kHz,20℃)
耐湿负荷测试 THB test (Damp heat test with loading)	Tempetature: 85℃ ±2℃； Humidity: 85% ±2% Voltage: 240Vac 50Hz； Duration: 1 000 h Capacitance change (△C/C): ≤ 10% Dissipation factor change (△tanδ): ≤ 0.5% (1kHz) Insulation resistance: ≥ 50% of the rated value		

Metallized Polypropylene Film Class X2 Temperature Humidity Bias series

尺寸 Dimensions(mm)

Rated Cap.uF	310VAC					Rated Cap.uF	310VAC					Rated Cap.uF	310VAC				
	W	H	T	P	d		W	H	T	P	d		W	H	T	P	d
	max	max	max	±1.0	±0.05		max	max	max	±1.0	±0.05		max	max	max	±1.0	±0.05
0.001	10	9	4	7.5	0.6	0.01	18	11	5	15	0.8	0.47	31	18	9	27.5	0.8
0.001	10	9	4	7.5	0.6	0.01	18	11	5	15	0.8	0.68	31	19	11	27.5	0.8
0.0022	10	9	4	7.5	0.6	0.022	18	11	5	15	0.8	0.82	31	19	11	27.5	0.8
0.0022	10	9	4	7.5	0.6	0.022	18	11	5	15	0.8	1	31	19	11	27.5	0.8
0.0033	10	9	4	7.5	0.6	0.033	18	11	5	15	0.8	1.2	31	22	13	27.5	0.8
0.0033	10	9	4	7.5	0.6	0.033	18	11	5	15	0.8	1.5	31	22	13	27.5	0.8
0.0047	10	9	4	7.5	0.6	0.047	18	11	5	15	0.8	1.8	31	24.5	14	27.5	0.8
0.0047	10	9	4	7.5	0.6	0.068	18	11	5	15	0.8	2	31	28	14	27.5	0.8
0.0068	10	9	4	7.5	0.6	0.082	18	11	5	15	0.8	2.2	31	28	14	27.5	0.8
0.0082	10	9	4	7.5	0.6	0.1	18	11	5	15	0.8	2.5	31	28	17	27.5	0.8
0.01	10	9	4	7.5	0.6	0.1	18	12	6	15	0.8	2.7	31	33	18	27.5	0.8
0.022	10	9	4	7.5	0.6	0.15	18	12	6	15	0.8	3	31	33	18	27.5	0.8
0.033	10	11	5	7.5	0.6	0.18	18	13	7	15	0.8	3.3	31	33	18	27.5	0.8
0.047	10	12	6	7.5	0.6	0.22	18	14.5	8.5	15	0.8	4.7	31	37	22	27.5	0.8
0.068	10	13.5	8.5	7.5	0.6	0.27	18	14.5	8.5	15	0.8	1.5	41	26	14.5	37.5	1.0
0.1	10	13.5	8.5	7.5	0.6	0.33	18	14.5	8.5	15	0.8	1.8	41	26	14.5	37.5	1.0
0.0022	13	9	4	10	0.6	0.39	18	16	10	15	0.8	2	41	26	14.5	37.5	1.0
0.0022	13	9	4	10	0.6	0.47	18	16	10	15	0.8	2.2	41.5	26	14.5	37.5	1.0
0.0047	13	9	4	10	0.6	0.47	18	18	9	15	0.8	2.5	41.5	26	14.5	37.5	1.0
0.0047	13	9	4	10	0.6	0.56	18	18	10	15	0.8	2.7	41.5	26	14.5	37.5	1.0
0.0068	13	9	4	10	0.6	0.68	18	19	11	15	0.8	3	41.5	30	17	37.5	1.0
0.0068	13	9	4	10	0.6	0.68	18	21	12	15	0.8	3.3	41.5	30	17	37.5	1.0
0.0082	13	9	4	10	0.6	0.15	26.5	15	6	22.5	0.8	3.9	41.5	30	17	37.5	1.0
0.0082	13	9	4	10	0.6	0.18	26.5	15	6	22.5	0.8	4.7	41.5	35	19	37.5	1.0
0.01	13	9	4	10	0.6	0.22	26.5	15	6	22.5	0.8	5.6	41.5	35.5	22.5	37.5	1.0
0.01	13	9	4	10	0.6	0.27	26.5	15	6	22.5	0.8	6.8	41.5	35.5	22.5	37.5	1.0
0.022	13	9	4	10	0.6	0.33	26.5	16.5	7	22.5	0.8	8.2	41.5	41	27.5	37.5	1.0
0.033	13	9	4	10	0.6	0.39	26.5	16.5	7	22.5	0.8	10	41.5	41	27.5	37.5	1.0
0.047	13	11	5	10	0.6	0.47	26.5	17	8.5	22.5	0.8						
0.056	13	11	5	10	0.6	0.56	26.5	19	10	22.5	0.8						
0.068	13	12	6	10	0.6	0.68	26.5	19	10	22.5	0.8						
0.082	13	12	6	10	0.6	0.82	26.5	19	10	22.5	0.8						
0.1	13	12	6	10	0.6	1	26.5	20	11	22.5	0.8						
0.15	13	14	8	10	0.6	1.2	26.5	22	12	22.5	0.8						
0.18	13	16	8	10	0.6	1.5	26.5	23	13	22.5	0.8						
0.22	13	16	8	10	0.6	1.8	26.5	24	14	22.5	0.8						
						2	26.5	25	15	22.5	0.8						
						2.2	26.5	25	15	22.5	0.8						

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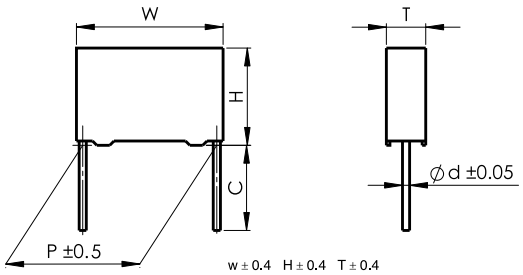
◎上述规格仅供参考，实际规格以规格承认书为准。

金属化聚丙烯膜抗干扰电容器（Y2类, 300Vac）
Metallized polypropylene film Interference Suppression capacitor（Class Y2,300Vac）

■ 外形图 Outline Drawing



w±0.4 H±0.4 T±0.4

方底（Square-bottom）

■ 特点

- 金属化聚丙烯
- 能承受过压冲击
- 优异的阻燃性能
- 广泛用于电源接地、旁路、天线耦合等抗干扰场合

■ Features

- Metallized polypropylene structure
- Withstanding overvoltage stressing
- Excellent active and passive flame resistant abilities
- Widely used in line to ground, line-by-pass, antenna coupling interference suppression circuit, etc.

■ 安全认证 Safety Approvals

●	cqc	CQC （中国）	IEC60384-14:2013, 250/275/300/310/330/350/400/440/480/500VAC, 0.00047μF~4.7μF 证书号(Certificate No.): CQC13001099626
●	14 S	ENEC-SEMKO （欧盟）	EN 60384-14:2013+A1:2016, 250/275/300VAC,1500VDC 0.0010μF~0.1μF 证书号(Certificate No.): SE/12059-1B
●	c US	UL/CUL （美国/加拿大）	UL 60384-14:2014，CSA E60384-14:09, Y2, 300Vac, 0.001 μF ~ 0.1μF, 40/110/56/B 证书号(File No.): E209251, CCN: FOWX2/8

■ 技术要求 Specifications

电容器类别 Class	Y2 类		
气候类别 / 阻燃等级 Climatic Category/Passive Flammability Category	40/110/56/B		
工作温度范围 Operating Temperature Range	-40℃ ~ +110℃		
额定电压 Rated Voltage (U_R)	300Vac, 50/60Hz		
最大连续直流电压 Maximum continuous DC voltage	1 500Vdc		
电容量范围 Capacitance Range	0.0010μF ~ 0.1 μF		
电容量偏差 Capacitance Tolerance	±10%(K), ±20%(M)		
耐电压 Voltage Proof	引线之间 Between Terminals:	2 000Vac(2s) or	4 000Vdc(2s) $C_N \leqslant 0.33\mu F$
			3 700Vdc(2s) $C_N > 0.33\mu F$
	极壳之间 Between Terminals To Case:	2 500Vac(1min)	
绝缘电阻 Insulation Resistance	$R \geqslant 15\,000M\Omega$, $C_N \leqslant 0.33\mu F$ $RC_N \geqslant 5\,000s$, $C_N > 0.33\mu F$ (20℃ ,100V, 1min)		
损耗角正切 Dissipation Factor (tan δ)	$\leqslant 30 \times 10^{-4}$(1kHz,20℃)	$\leqslant 40 \times 10^{-4}$(10kHz,20℃)	

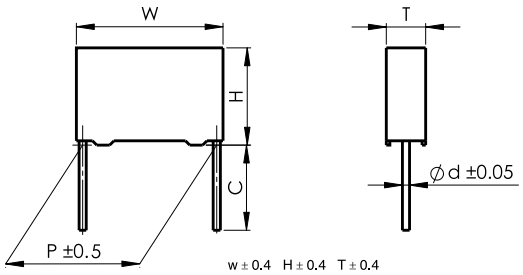
Metallized Polypropylene Film Class Y2

Rated Cap.uF	300VAC					Rated Cap.uF	300VAC					Rated Cap.uF	300VAC				
	W	H	T	P	d		W	H	T	P	d		W	H	T	P	d
	max	max	max	±1.0	±0.05		max	max	max	±1.0	±0.05		max	max	max	±1.0	±0.05
0.001	10	9	4	7.5	0.6	0.001	13	11	5	10	0.6	0.001	18	11	5	15	0.6/0.8
0.0015	10	9	4	7.5	0.6	0.0015	13	11	5	10	0.6	0.0015	18	11	5	15	0.6/0.8
0.0022	10	11	5	7.5	0.6	0.0022	13	11	5	10	0.6	0.0022	18	11	5	15	0.6/0.8
0.0027	10	11	5	7.5	0.6	0.0027	13	11	5	10	0.6	0.0027	18	11	5	15	0.6/0.8
0.0033	10	11	5	7.5	0.6	0.0033	13	11	5	10	0.6	0.0033	18	11	5	15	0.6/0.8
0.0039	10	11	5	7.5	0.6	0.0039	13	11	5	10	0.6	0.0039	18	11	5	15	0.6/0.8
0.0047	10	11	5	7.5	0.6	0.0047	13	11	5	10	0.6	0.0047	18	11	5	15	0.6/0.8
0.0056	10	11	5	7.5	0.6	0.0056	13	11	5	10	0.6	0.0056	18	11	5	15	0.6/0.8
						0.0068	13	12	6	10	0.6	0.0068	18	11	5	15	0.6/0.8
						0.0082	13	12	6	10	0.6	0.0082	18	11	5	15	0.6/0.8
						0.01	13	12	6	10	0.6	0.01	18	11	5	15	0.6/0.8
						0.012	13	12	6	10	0.6	0.012	18	11	5	15	0.6/0.8
						0.015	13	11	5	10	0.6	0.015	18	11	5	15	0.6/0.8
						0.018	13	12	6	10	0.6	0.018	18	11	5	15	0.6/0.8
												0.022	17	11	5.5	15	0.6/0.8
												0.025	18	12	6	15	0.6/0.8
												0.027	17	11	5.5	15	0.6/0.8
												0.027	18	12	6	15	0.6/0.8
												0.033	18	12	6	15	0.6/0.8
												0.047	18	13.5	6	15	0.6/0.8
												0.047	25	14.5	6	22.5	0.6/0.8
												0.056	17	15.5	7.5	15	0.6/0.8
												0.068	17	15.5	7.5	15	0.6/0.8
												0.082	17	16.5	9.5	15	0.6/0.8
												0.1	17	16.5	9.5	15	0.6/0.8
												0.1	26.5	16.5	7	22.5	0.8
												0.1	31.5	16.5	7.5	27.5	0.8

◎ For inquiry of items out of above range or with special dimensions, please do not hesitate to contact with us for availability.
◎超出上述范围之需求，请先与我司联系，确认可否承制。
◎ For inquiry of items out of above range or with special dimensions, please do not hesitate to contact with us for availability.
◎上述规格仅供参考，实际规格以规格承认书为准。

金属化聚丙烯膜抗干扰电容器（Y1类, 440Vac/500Vac）
Metallized polypropylene film Interference Suppression capacitor（Class Y1,440Vac/500Vac）

■ 外形图 Outline Drawing



w±0.4 H±0.4 T±0.4

方底（Square-bottom）

■ 特点

- 金属化聚丙烯
- 能承受过压冲击
- 优异的阻燃性能
- 广泛用于电源接地、旁路、天线耦合等抗干扰场合

■ Features

- Metallized polypropylene structure
- Withstanding overvoltage stressing
- Excellent active and passive flame resistant abilities
- Widely used in line to ground, line-by-pass, antenna coupling interference suppression circuit, etc.

■ 安全认证 Safety Approvals

●	cqc	CQC (中国)	IEC60384-14:2013, 250/275/300/310/330/350/400/440/480/500VAC, 0.00047μF~0.1μF 证书号(Certificate No.): CQC20001262120
●	14 S	ENEC-SEMKO (欧盟)	
●	c US	UL/CUL (美国/加拿大)	UL 60384-14:2015, 300/350/400/440/480/500VAC,0.00047μF~0.1μF 证书号(Certificate No.): E209251

■ 技术要求 Specifications

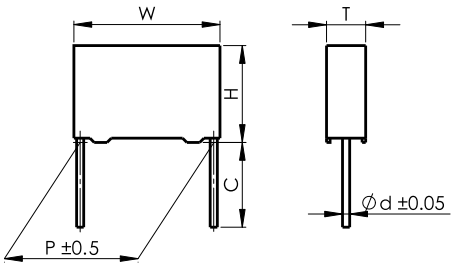
电容器类别 Class	Y1 类	
气候类别 / 阻燃等级 Climatic Category/Passive Flammability Category	40/110/ 6/B	
工作温度范围 Operating Temperature Range	–40℃ ~ +110℃	
额定电压 Rated Voltage (U_R)	440Vac/500Vac, 50/60Hz	
最大连续直流电压 Maximum continuous DC voltage	3 000Vdc	
电容量范围 Capacitance Range	0.00047μF ~ 0.10μF	
电容量偏差 Capacitance Tolerance	±10%(K), ±20%(M)	
耐电压 Voltage Proof	引线之间 Between Terminals:	4 000Vac (2s)
	极壳之间 Between Terminals To Case:	4 000Vac (1min)
绝缘电阻 Insulation Resistance	R ≥ 1 000MΩ (20℃ ,100V, 1min)	
损耗角正切 Dissipation Factor (tan δ)	≤ 10 x 10^{-4}(1kHz,20℃)	≤ 20 x 10^{-4}(10kHz,20℃)

Metallized Polypropylene Film Class Y1

Cat.or Type No. Marked on Capacitor	容值CAP	標志 Symbol	誤差值 Tol.	電壓 V	寬W	高H	厚T	腳距P	線徑d	公差代碼	
	μF				MAX	MAX	MAX	±1	±0.05		
Y1	0.00047	471	±10	500	18	11	5	15	0.6/0.8	K	
Y1	0.00056	561	±10	500	18	11	5	15	0.6/0.8	K	
Y1	0.00068	681	±10	500	18	11	5	15	0.6/0.8	K	
Y1	0.00082	821	±10	500	18	11	5	15	0.6/0.8	K	
Y1	0.001	102	±10	500	18	11	5	15	0.6/0.8	K	
Y1	0.0012	122	±10	500	18	11	5	15	0.6/0.8	K	
Y1	0.0015	152	±10	500	18	11	5	15	0.6/0.8	K	
Y1	0.0018	182	±10	500	18	12	6	15	0.6/0.8	K	
Y1	0.002	202	±10	500	18	12	6	15	0.6/0.8	K	
Y1	0.0022	222	±10	500	18	12	6	15	0.6/0.8	K	
Y1	0.0025	252	±10	500	18	12	6	15	0.6/0.8	K	
Y1	0.0027	272	±10	500	18	13.5	7.5	15	0.6/0.8	K	
Y1	0.0028	282	±10	500	18	13.5	7.5	15	0.6/0.8	K	
Y1	0.0033	332	±10	500	18	13.5	7.5	15	0.6/0.8	K	
Y1	0.0039	392	±10	500	18	13.5	7.5	15	0.6/0.8	K	
Y1	0.004	402	±10	500	18	13.5	7.5	15	0.6/0.8	K	
Y1	0.0047	472	±10	500	18	13.5	7.5	15	0.6/0.8	K	
Y1	0.005	502	±10	500	18	14.5	8.5	15	0.6/0.8	K	
Y1	0.0056	562	±10	500	18	14.5	8.5	15	0.6/0.8	K	
Y1	0.0068	682	±10	500	18	16	10	15	0.6/0.8	K	
Y1	0.0082	822	±10	500	18	19	11	15	0.6/0.8	K	
Y1	0.01	103	±10	500	18	19	11	15	0.6/0.8	K	
Y1	0.0056	562	±10	500	25	14.5	6	22.5	0.8	K	
Y1	0.0068	682	±10	500	26.5	16.5	7	22.5	0.8	K	
Y1	0.0082	822	±10	500	26.5	17	8.5	22.5	0.8	K	
Y1	0.01	103	±10	500	26.5	17	8.5	22.5	0.8	K	
Y1	0.012	123	±10	500	26	18.5	10	22.5	0.8	K	
Y1	0.015	153	±10	500	26	18.5	10	22.5	0.8	K	
Y1	0.018	183	±10	500	26.5	20	11	22.5	0.8	K	
Y1	0.022	223	±10	500	26	22	12	22.5	0.8	K	
Y1	0.022	223	±10	500	31.5	20	11	27.5	0.8	K	
Y1	0.027	273	±10	500	31.5	22.5	13	27.5	0.8	K	
Y1	0.033	333	±10	500	31.5	22.5	13	27.5	0.8	K	
Y1	0.047	473	±10	500	32	28	14	27.5	0.8	K	
Y1	0.056	563	±10	500	32	28	14	27.5	0.8	K	
Y1	0.068	683	±10	500	31.5	28	18	27.5	0.8	K	
Y1	0.082	823	±10	500	31	31	22	27.5	0.8	K	
Y1	0.1(M)	104	±20	500	31	31	22	27.5	0.8	M	
Y1	0.1	104	±10	500	31	34.5	21	27.5	0.8	K	
Y1	0.1	104	±10	500	32	37	22	27.5	0.8	K	

金属化聚丙烯膜抗干扰电容器（X1类, 330Vac）
Metallized polypropylene film Interference Suppression capacitor （Class X1, 330Vac）

■ 外形图 Outline Drawing



■ 特点

- 金属化聚丙烯
- 能承受过压冲击
- 优异的阻燃性能
- 用于电源跨线路等抗干扰场合（不用于与电源串联的场合）

■ Features

- Metallized polypropylene structure
- Withstanding overvoltage stressing
- Excellent active and passive flame resistant abilities
- Used in across-the-line, interference supprression circuit (Not for use in series with the mains)

■ 安全认证 Safety Approvals

●	CQC	CQC (中国)	IEC60384-14:2013, 250/275/300/310/330/350/400/440/480/500VAC, 0.00047μF~4.7μF 证书号(Certificate No.): CQC13001099626
●	EN 10 DVE	ENEC-VDE (欧盟)	EN 60384-14:2013+A1:2016, 250/275/300VAC,1500VDC 0.0010μF~0.1μF 证书号(Certificate No.): SE/12059-1B
●	c UL us	UL/CUL (美国/加拿大)	UL 60384-14:2014，CSA E60384-14:09,X1, 300Vac,480Vac, 0.001 μF ~ 10 μF, 40/110/56/B 证书号(File No.): E209251, CCN: FOWX2/8

■ 技术要求 Specifications

电容器类别 Class	X1 类		
气候类别 / 阻燃等级 Climatic Category/Passive Flammability Category	40/110/56/B		
工作温度范围 Operating Temperature Range	–40℃ ~ +110℃		
额定电压 Rated Voltage (U_R)	330Vac ~ 480Vac, 50/60Hz		
最大连续直流电压 Maximum continuous DC voltage	1500 Vdc		
电容量范围 Capacitance Range	0.010μF ~ 10.0μF		
电容量偏差 Capacitance Tolerance	±10%(K), ±20%(M)		
耐电压 Voltage Proof	引线之间 Between Terminals:	4.3U_R(dc), 2s	
	极壳之间 Between Termianls To Case:	2 160 (Vac) , 1min	
绝缘电阻 Insulation Resistance	R ≥ 15 000MΩ, C_N ≤ 0.33μF RC_N ≥ 5 000s, C_N > 0.33μF	(20℃ ,100V, 1min)	
损耗角正切 Dissipation Factor (tan δ)	0.001μF < C_N ≤ 0.47μF	≤ 15 x 10^{-4}(1kHz,20℃)	≤ 30 x 10^{-4}(10kHz,20℃)
	0.47μF < C_N ≤ 1.0μF	≤ 20 x 10^{-4}(1kHz,20℃)	≤ 40 x 10^{-4}(10kHz,20℃)
	1.0μF < C_N ≤ 15.0μF	≤ 30 x 10^{-4}(1kHz,20℃)	----------

Metallized Polypropylene Film Class X1

尺寸 Dimensions(mm)

Rated Cap.uF	330/480VAC					Rated Cap.uF	330/480VAC					Rated Cap.uF	330/480VAC				
	W	H	T	P	d		W	H	T	P	d		W	H	T	P	d
	max	max	max	±1.0	±0.05		max	max	max	±1.0	±0.05		max	max	max	±1.0	±0.05
0.001	10	9	4	7.5	0.6	0.001	18	11	5	15	0.8	0.15	31.5	16.5	7.5	27.5	0.8
0.0015	10	9	4	7.5	0.6	0.0015	18	11	5	15	0.8	0.22	32	18	9	27.5	0.8
0.0022	10	9	4	7.5	0.6	0.0022	18	11	5	15	0.8	0.33	31.5	20	11	27.5	0.8
0.0027	10	9	4	7.5	0.6	0.0027	18	11	5	15	0.8	0.47	31.5	20	11	27.5	0.8
0.0033	10	9	4	7.5	0.6	0.0033	18	11	5	15	0.8	0.68	31.5	25	14	27.5	0.8
0.0039	10	9	4	7.5	0.6	0.0039	18	11	5	15	0.8	1.0	31.5	28	18	27.5	1.0
0.0047	10	9	4	7.5	0.6	0.0047	18	11	5	15	0.8	1.5	31.5	31	22	27.5	1.0
0.0056	10	9	4	7.5	0.6	0.0056	18	11	5	15	0.8	1.8	32	37	22	27.5	1.0
0.0068	10	9	4	7.5	0.6	0.0068	18	11	5	15	0.8	2.2	32	37	22	27.5	1.0
0.0082	10	11	5	7.5	0.6	0.0082	18	11	5	15	0.8	0.47	37	24	13.5	32.5	1.0
0.01	10	11	5	7.5	0.6	0.01	18	11	5	15	0.8	0.68	37	24	13.5	32.5	1.0
0.012	10	12	6	7.5	0.6	0.012	18	11	5	15	0.8	0.82	37	24	13.5	32.5	1.0
0.015	10	12	6	7.5	0.6	0.015	18	11	5	15	0.8	1.0	37	28	18	32.5	1.0
0.001	13	11	5	10	0.6	0.022	18	11	5	15	0.8	1.5	37	34	22	32.5	1.0
0.0015	13	11	5	10	0.6	0.033	18	12	6	15	0.8	2.2	37	34	22	32.5	1.0
0.0022	13	11	5	10	0.6	0.047	18	12	6	15	0.8	0.47	41	22	11	37.5	1.0
0.0027	13	11	5	10	0.6	0.056	18	12	6	15	0.8	0.56	41	22	11	37.5	1.0
0.0033	13	11	5	10	0.6	0.068	17	15.5	7.5	15	0.8	0.68	41	22	11	37.5	1.0
0.0039	13	11	5	10	0.6	0.082	17	15.5	7.5	15	0.8	1.0	41	26	12	37.5	1.0
0.0047	13	11	5	10	0.6	0.1	18	14.5	6	15	0.8	1.5	41	30	16	37.5	1.0
0.0056	13	11	5	10	0.6	0.12	17	16.5	9.5	15	0.8	2.2	41	32	17	37.5	1.0
0.0068	13	11	5	10	0.6	0.15	17	16.5	9.5	15	0.8	3.3	41	41	27.5	37.5	1.0
0.0082	13	11	5	10	0.6	0.18	17	19	11	15	0.8	4.4	41	43	28	37.5	1.0
0.01	13	11	5	10	0.6	0.18	17	19	11	15	0.8	4.7	41	45	30	37.5	1.0
0.012	13	11	5	10	0.6	0.039	25	14.5	6	22.5	0.8	4.4	51	43.5	29	47.5	1.0
0.015	13	11	5	10	0.6	0.047	25	14.5	6	22.5	0.8	4.7	51	43.5	29	47.5	1.0
0.022	13	11	5	10	0.6	0.068	25	14.5	6	22.5	0.8	6.8	51	49.5	35	47.5	1.0
0.033	13	12	6	10	0.6	0.082	25	14.5	6	22.5	0.8	4.4	57	38	24	52.5	1.2
0.047	13	13	7	10	0.6	0.1	25	14.5	6	22.5	0.8	4.7	57	38	24	52.5	1.2
						0.12	25	14.5	6	22.5	0.8	5.6(M)	57	38	24	52.5	1.2
						0.15	25	16.5	7.5	22.5	0.8	5.6	57	45	30	52.5	1.2
						0.22	26.5	17.5	8.5	22.5	0.8	6.8(M)	57	45	30	52.5	1.2
						0.33	26	20	11	22.5	0.8	6.8	57	50	35	52.5	1.2
						0.39	26	20	11	22.5	0.8	8.2	57	50	35	52.5	1.2
						0.47	26	25	15	22.5	0.8	10(M)	57	50	35	52.5	1.2
						0.68	26	25	15	22.5	0.8	10	57	55	45	52.5	1.2

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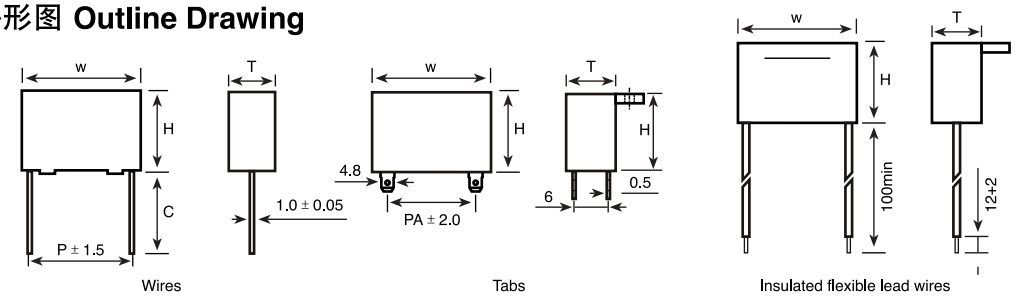
◎超出上述范围之需求，请先与我司联系，确认可否承制。
◎ For inquiry of items out of above range or with special dimensions, please do not hesitate to contact with us for availability.
◎上述规格仅供参考，实际规格以规格承认书为准。

Hongfarad

金属化聚丙烯膜交流电动机电容器(塑料外壳)
Metallized polypropylene film AC motor capacitor(Box-type)

■ 外形图 Outline Drawing



Wires Tabs Insulated flexible lead wires

■ 特点

- 适用于频率为50Hz/60Hz交流电源供电的单相电动机起动和运转
- 有自愈特性
- 性能稳定,可靠性高

■ Features

- Widely applied to starting and running of AC single-phase motors at 50Hz/60Hz frequency power
- Self-healing property
- Extremely stable performance and reliability

■ 安全认证 Safety Approvals

●	VDE	VDE (德国)	
●	CQC	CQC (中国)	
●	cULus	UL/CUL (美国/加拿大)	
●	**CB TEST CERTIFICATE**		

■ 技术要求 Specifications

引用标准 Reference Standard		GB/T 3667.1 (IEC 60252-1)			
额定电压 Rated Voltage		600VAC, 50/60HZ	450VAC, 50/60HZ	300VAC, 50/60HZ	250VAC, 50/60HZ
电容量范围 Capacitance Range		0.5μF~ 12μF	0.5μF~ 15μF	0.5μF~ 15μF	0.5μF~ 15μF
运行等级 Class of operation		Class C (3 000h)			
安全防护等级 Class of safety protection		P0 or P2			
气候类别 Climatic Category		40/70/21 or 40/85/21			
电容量偏差 Capacitance Tolerance		± 5%, ± 10%, ± 15%			
耐电压 Voltage Proof	引线之间 Between Terminals:	900VAC(2s)	700VAC(2s)	600VAC(2s)	500VAC(2s)
	极壳之间 Between Terminals And Case:	2 000VAC(60s)			
绝缘电阻 Insulation Resistance		⩾3 000s (20℃,100V, 1min)			
损耗角正切 Dissipation Factor		⩽0.0020 (1kHz, 20℃)			

Metallized Polypropylene Film A.C. motor Capacitor (Box-type)

尺寸 Dimensions(mm)

Rated Cap.	250VAC				Rated Cap.	300VAC				Rated Cap.	450VAC			
	w	H	T	P		w	H	T	P		w	H	T	P
	±0.5	±0.5	±0.5	±1.0		±0.5	±0.5	±0.5	±1.0		±0.5	±0.5	±0.5	±1.0
0.5uF	31.0	20.0	11.0	**27.5**	0.5uF	31	20.0	11.0	27.5	0.5uF	31	20.0	11.0	27.5
1.0uF	31.0	20.0	11.0	**27.5**	1.0uF	31	20.0	11.0	27.5	1.0uF	36	22.0	12.0	31.0
1.2uF	31.0	22.0	13.0	**27.5**	1.2uF	31	22.0	13.0	27.5	1.2uF	36	23.0	14.0	31.0
1.5uF	31.0	30.0	15.0	**27.5**	1.5uF	36	23.0	14.0	31.0	1.5uF	36	28.0	14.0	31.0
1.7uF	31.0	30.0	15.0	**27.5**	1.7uF	36	25.0	15.0	31.0	1.7uF	36	28.0	18.0	31.0
2.0uF	31.0	30.0	15.0	**27.5**	2.0uF	36	26.0	16.0	31.0	2.0uF	36	28.0	18.0	31.0
2.2uF	31.0	30.0	15.0	**27.5**	2.2uF	36	26.0	16.0	31.0	2.2uF	36	28.0	18.0	31.0
2.5uF	36.0	23.0	14.0	**31.0**	2.5uF	36	28.0	18.0	31.0	2.5uF	36	30.0	20.0	31.0
2.7uF	36.0	26.0	16.0	**31.0**	2.7uF	36	28.0	18.0	31.0	2.7uF	36	30.0	20.0	31.0
3.0uF	36.0	26.0	16.0	**31.0**	3.0uF	36	30.0	19.0	31.0	3.0uF	48.0	30.0	20.0	41.0
3.3uF	36.0	26.0	16.0	**31.0**	3.3uF	36	30.0	20.0	31.0	3.3uF	48.0	30.0	20.0	41.0
3.5uF	36.0	28.0	18.0	**31.0**	3.5uF	36	30.0	20.0	31.0	3.5uF	48.0	30.0	20.0	41.0
3.7uF	36.0	28.0	18.0	**31.0**	3.7uF	48.0	30.0	20.0	41.0	3.7uF	48.0	37.0	25.0	41.0
4.0uF	36.0	28.0	18.0	**31.0**	4.0uF	48.0	30.0	20.0	41.0	4.0uF	48.0	37.0	25.0	41.0
4.2uF	36.0	28.0	18.0	**31.0**	4.2uF	48.0	30.0	20.0	41.0	4.2uF	48.0	37.0	25.0	41.0
4.5uF	36.0	28.0	18.0	**31.0**	4.5uF	48.0	30.0	20.0	41.0	4.5uF	48.0	37.0	25.0	41.0
4.7uF	36.0	30.0	20.0	**31.0**	4.7uF	48.0	37.0	25.0	41.0	4.7uF	48.0	37.0	25.0	41.0
5.0uF	36.0	30.0	20.0	**31.0**	5.0uF	48.0	37.0	25.0	41.0	5.0uF	48.0	37.0	25.0	41.0
5.6uF	36.0	30.0	20.0	**31.0**	5.6uF	48.0	37.0	25.0	41.0	5.6uF	48.0	37.0	25.0	41.0
6.0uF	36.0	30.0	20.0	**31.0**	6.0uF	48.0	37.0	25.0	41.0	6.0uF	58.0	33.0	24.0	51.0
7.0uF	36.0	30.0	20.0	**31.0**	7.0uF	48.0	37.0	25.0	41.0	7.0uF	58.0	38.0	26.0	51.0
8.0uF	36.0	30.0	20.0	**31.0**	8.0uF	58.0	33.0	24.0	51.0	8.0uF	58.0	38.0	26.0	51.0
9.0uF	48.0	37.0	25.0	**41.0**	9.0uF	58.0	38.0	26.0	51.0	9.0uF	60.0	40.0	30.0	51.0
10.0uF	48.0	37.0	25.0	**41.0**	10.0uF	60.0	40.0	30.0	51.0	10.0uF	60.0	40.0	30.0	51.0
12.0uF	48.0	37.0	25.0	**41.0**	12.0uF	60.0	40.0	30.0	51.0	12.0uF	68.0	45.0	30.0	61.0
14.0uF	48.0	37.0	26.0	**41.0**	14.0uF	68.0	45.0	30.0	61.0					
15.0uF	58.0	38.0	26.0	**51.0**	15.0uF	68.0	45.0	30.0	61.0					

Rated Cap.	600VAC			
	L	H	T	P
	±0.5	±0.5	±0.5	±1.0
1.0uF	36	22.0	12.0	31.0
2.0uF	36	32.0	20.0	31.0
2.5uF	48.0	28.0	19.0	41.0
3.0uF	48.0	31.0	20.0	41.0
4.0uF	48.0	37.0	25.0	41.0
4.7uF	48.0	37.0	25.0	41.0
5.6uF	48.0	38.0	26.0	41.0
7.0uF	58.0	38.0	26.0	51.0
10.0uF	68.0	52.0	38.0	61.0
12.0uF	68.0	52.0	38.0	61.0

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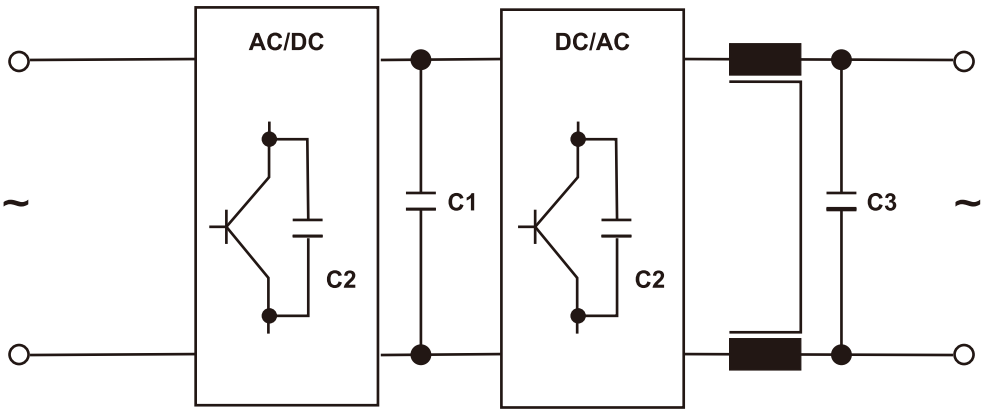
◎上述规格仅供参考，实际规格以规格承认书为准。

电力电子电容器
Capacitors for power electronics

一、电容器选用指南 Guide for capacitors choosing



序号 No.	功能 Function	PCB 安装系列 For PCB mounting series	螺纹式、焊片式引出系列 Screw, lug terminals series
C1	直流滤波 DC Link	DPB DAL	DPA DAT
C2	IGBT 吸收 IGBT Snubber	APA APD	APB APT
C3	交流滤波 AC filter	APK	APM（单相 Single phase） APQ（三相 Three phases）

IGBT吸收电容器
Snubber capacitor for IGBT

■ 外形图 Outline Drawing

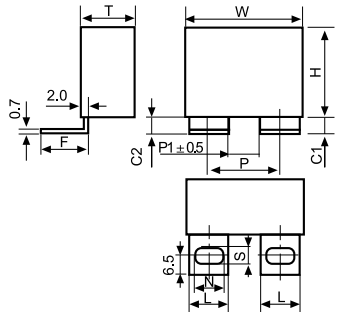


图1 (Style 1)

L x F x N x S=14.0 x 16.0 x 10.2 x 6.2

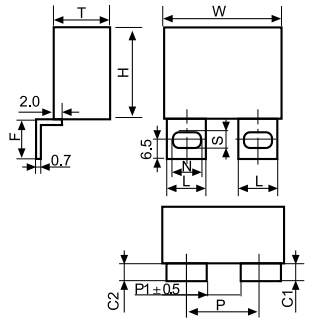
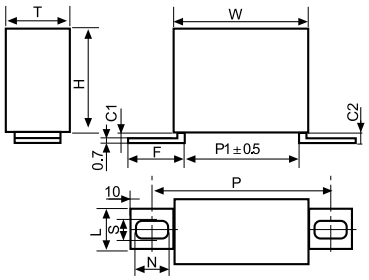


图2 (Style 2)



L x F x N x S=14.0 x 22.0 x 11.2 x 6.2
or
L x F x N x S=12.0 x 22.0 x 11.2 x 6.2

图3 (Style 3)

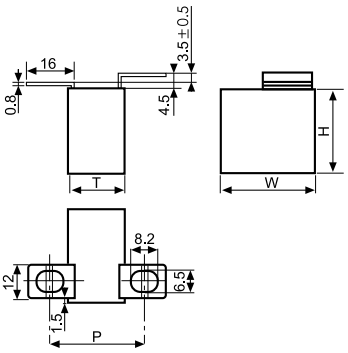


图4 (Style 4)

■ 特点

- 广泛应用于高压高频脉冲电路中
- 损耗小，内部温升小
- 优异的阻燃性能
- 适合作为IGBT的吸收电容

■ Features

- Widely used in high voltage, high frequency circuit
- Low loss and small inherent temperature rise
- Excellent active and passive flame resistant circuit
- Especially designed as snubber capacitor for IGBT

■ 技术要求 Specifications

引用标准 Reference Standard	GB/T 17702（IEC 61071）	
气候类别 Climatic Category	40/85/56	
工作温度范围（外壳最高温度点）Operating temperature range (Max. temperature of case surface)	–40℃ ~ 85℃	
额定电压 Rated Voltage	700Vdc ~ 2000Vdc	
电容量范围 Capacitance Range	0.1 μF ~ 5.0μF	
电容量偏差 Capacitance Tolerance	J(±5%), K(±10%)	
耐电压 Voltage Proof	1.6U_N（10s）	
损耗角正切 Dissipation Factor	≤ 0.0005 (1kHz, 20℃)	
绝缘电阻 Insulation Resistance	≥ 100 000MΩ, C_N ≤ 0.33μF	(20℃, 100Vdc,1min)
	≥ 30 000s C_N > 0.33μF	
预期寿命 Expected lifetime	≥ 100 000hrs @ U_N, Θ_{hs}=70℃	

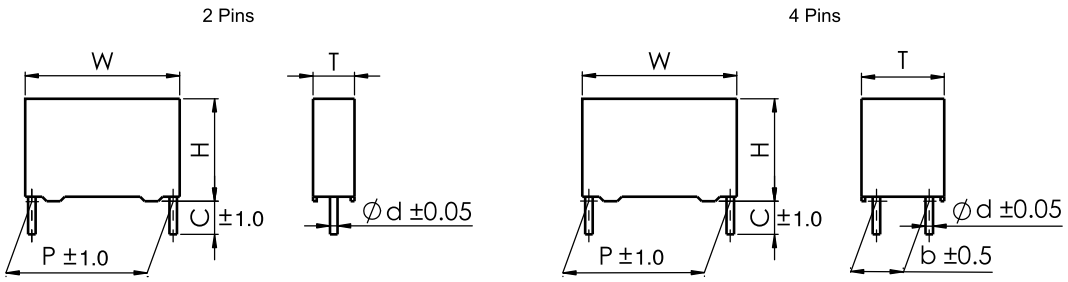
Snubber capacitor for IGBT

尺寸 Dimensions(mm)

vdc	Cap	Dimensions			Irms	Peak	ESR Typical	ESL	dv/dt	Pkg	Part Number
	Value	W	H	T	100KHz	Current	100KHz			Qty	
	uF	mm	mm	mm	A @70°C	A	mΩ @70°C	nH	V/us	pcs	
700/850	0.47	42.5	40	20	14	357	9.4	40	760	65	
700/850	0.68	42.5	40	20	17	517	6.6	40	760	65	
700/850	1	42.5	40	20	20	760	4.6	40	760	65	
700/850	1.5	42.5	37	28	27	1140	3.1	36	760	45	
700/850	1.5	42.5	35.5	33.5	28	1140	3	36	760	28	
700/850	2	42.5	45	30	34	1520	2.4	43	760	40	
700/850	2.2	42.5	45	30	35	1672	2.2	43	760	40	
700/850	2.5	57.5	45	30	37	1175	2	45	470	20	
700/850	3	57.5	45	30	30	1410	3.5	45	470	20	
700/850	3.3	57.5	45	30	31	1551	3.2	45	470	20	
700/850	4	57.5	50	35	34	1880	2.6	48	470	15	
700/850	5	57.5	50	35	40	2350	2.2	48	470	15	
1100	0.47	42.5	40	20	14	400	8.7	40	850	65	
1100	0.68	42.5	40	20	18	578	6.1	40	850	65	
1100	1	42.5	40	20	20	850	4.3	40	850	65	
1100	1.5	42.5	37	28	28	1275	2.9	36	850	45	
1100	1.5	42.5	35.5	33.5	29	1275	2.8	36	850	28	
1100	2	42.5	45	30	35	1700	2.3	43	850	40	
1100	2.2	57.5	45	30	28	1166	4.4	45	530	20	
1100	2.5	57.5	45	30	29	1325	3.8	45	530	20	
1100	3	57.5	45	30	31	1590	3.2	45	530	20	
1100	3.3	57.5	45	30	32	1749	3	45	530	20	
1100	4	57.5	50	35	38	2120	2.5	48	530	15	
1200	0.33	42.5	40	20	13	330	10.9	40	1000	65	
1200	0.47	42.5	40	20	16	470	7.7	40	1000	65	
1200	0.68	42.5	40	20	19	680	5.4	40	1000	65	
1200	1	42.5	37	28	25	1000	3.8	36	1000	45	
1200	1.2	42.5	37	28	27	1200	3.2	36	1000	45	
1200	1.2	42.5	35.5	33.5	28	1200	3	36	1000	28	
1200	1.5	42.5	45	30	32	1500	2.6	43	1000	40	
1200	2	57.5	45	30	27	1200	4.1	45	600	20	
1200	2.2	57.5	45	30	28	1320	3.8	45	600	20	
1200	2.5	57.5	45	30	30	1500	3.3	45	600	20	
1200	3	57.5	50	35	35	1800	2.9	48	600	15	
1200	3.3	57.5	50	35	38	1980	2.6	48	600	15	
2000	0.1	42.5	40	20	8	140	26.8	40	1400	65	
2000	0.15	42.5	40	20	10	210	17.9	40	1400	65	
2000	0.22	42.5	40	20	12	308	12.3	40	1400	65	
2000	0.33	42.5	40	20	16	462	8.3	40	1400	65	
2000	0.47	42.5	40	20	19	658	5.9	40	1400	65	
2000	0.68	42.5	44	24	24	952	4.1	43	1400	50	
2000	0.68	42.5	35.5	33.5	25	952	4	43	1400	28	
2000	0.82	42.5	45	30	28	1148	3.5	43	1400	40	
2000	1	57.5	45	30	23	900	5.9	45	900	40	
2000	1.2	57.5	45	30	25	1080	4.9	45	900	20	
2000	1.5	57.5	50	35	30	1350	4	48	900	15	

IGBT吸收电容器(PCB)
Snubber capacitor for IGBT（PCB）

■ 外形图 Outline Drawing



■ 特点

- 广泛应用于高压高频脉冲电路中
- 损耗小，内部温升小
- 优异的阻燃性能
- 适合作为IGBT的吸收电容

■ Features

- Widely used in high voltage, high frequency circuit
- Low loss and small inherent temperature rise
- Excellent active and Passive flame resistant circuit
- Especially designed as snubber capacitor for IGBT

■ 技术要求 Specifications

引用标准 Reference Standard	GB/T 17702（IEC 61071）	
气候类别 Climatic Category	40/105/56	
工作温度范围（外壳） Operating Temperature Range (case)	–40℃ ~ 105℃	
额定电压 Rated Voltage	630Vdc ~ 3 000Vdc	
电容量范围 Capacitance Range	0.047μF ~ 9.0μF	
电容量偏差 Capacitance Tolerance	J(±5%), K(±10%)	
耐电压 Test Voltage	1.5U_N（10s）	
损耗角正切 Dissipation Factor	≤ 0.0005 (1kHz, 20℃)	
绝缘电阻 Insulation Resistance	≥ 100 000MΩ, C_N ≤ 0.33μF	(20℃, 100Vdc,1min)
	≥ 30 000s C_N > 0.33μF	
预期寿命 Expected lifetime	≥ 100 000hrs @ U_N, Θ_{hs}=70℃	

Snubber capacitor for IGBT

尺寸 Dimensions(mm)

630Vdc/700Vdc#				1000 Vdc				1 600Vdc			
容量 (μF)	W ± 1	H ± 1	T ± 1	容量 (μF)	W ± 1	H ± 1	T ± 1	容量 (μF)	W ± 1	H ± 1	T ± 1
0.68	37.0	25.0	15.0	0.47	37.0	25.0	15.0	0.22	37.0	25.0	15.0
1.0	37.0	30.0	16.0	0.68	37.0	30.0	16.0	0.33	37.0	30.0	16.0
1.2	37.0	30.0	16.0	1.0	37.0	34.0	20.0	0.39	37.0	33.0	18.0
1.5	37.0	34.0	20.0	1.2	37.0	34.0	20.0	0.47	37.0	34.0	20.0
1.8	37.0	34.0	20.0	1.5	37.0	34.0	20.0	0.68	42.0	39.5	20.0
2.0	42.0	39.5	20.0	1.5	42.0	39.5	20.0	0.82	42.0	44.0	24.0
2.2	42.0	39.5	20.0	2.0	42.0	39.5	20.0	1.0	42.0	45.0	30.0
2.5	42.0	39.5	20.0	2.2	42.0	39.5	20.0	1.2	42.0	45.0	30.0
3.0	42.0	44.0	24.0	2.5	42.0	44.0	24.0	1.5	42.0	42.0	42.0
3.3	42.0	44.0	24.0	3.0	42.0	44.0	24.0	1.5	57.0	45.0	30.0
4.0	42.0	44.0	24.0	3.3	42.0	45.0	30.0	2.0	57.0	50.0	35.0
4.7	42.0	45.0	30.0	4.0	42.0	42.0	42.0				
5.0	42.0	45.0	30.0	4.0	57.0	45.0	30.0				
6.0	42.0	42.0	42.0	4.7	57.0	45.0	30.0				
6.5	42.0	42.0	42.0	5.0	57.0	45.0	30.0				
6.5	57.0	45.0	30.0	6.0	57.0	50.0	35.0				
7.0	57.0	45.0	30.0	6.5	57.0	50.0	35.0				
8.0	57.0	50.0	35.0								
9.0	57.0	50.0	35.0								

2000 Vdc				2500 Vdc				3000 Vdc			
容量 (μF)	W ± 1	H ± 1	T ± 1	容量 (μF)	W ± 1	H ± 1	T ± 1	容量 (μF)	W ± 1	H ± 1	T ± 1
0.47	37.0	25.0	15.0	0.33	37.0	25.0	15.0	0.068	37.0	25.0	15.0
0.68	37.0	30.0	16.0	0.47	37.0	30.0	16.0	0.10	37.0	25.0	15.0
0.82	37.0	30.0	16.0	0.68	37.0	34.0	20.0	0.15	37.0	25.0	15.0
1.0	37.0	34.0	20.0	0.75	37.0	34.0	20.0	0.18	37.0	30.0	16.0
1.2	37.0	34.0	20.0	0.82	42.0	39.5	20.0	0.22	37.0	30.0	16.0
1.2	42.0	39.5	20.0	1.0	42.0	39.5	20.0	0.33	37.0	34.0	20.0
1.5	42.0	39.5	20.0	1.2	42.0	44.0	24.0	0.47	42.0	40.0	20.0
2	42.0	44.0	24.0	1.5	42.0	44.0	24.0	0.56	42.0	44.0	24.0
2.2	42.0	44.0	24.0	2.0	42.0	45.0	30.0	0.82	42.0	45.0	30.0
2.5	42.0	45.0	30.0	2.2	42.0	42.0	42.0	1.0	42.0	43.0	42.0
3.0	42.0	45.0	30.0	2.5	42.0	42.0	42.0	1.0	57.0	45.0	30.0
3.3	42.0	42.0	42.0	2.2	57.0	45.0	30.0	1.2	57.0	45.0	30.0
3.3	57.0	45.0	30.0	2.5	57.0	45.0	30.0	1.5	57.0	50.0	35.0
4.0	57.0	45.0	30.0	3.0	57.0	45.0	30.0				
4.7	57.0	50.0	35.0	3.3	57.0	50.0	35.0				
5.0	57.0	50.0	35.0	4.0	57.0	50.0	35.0				

◎ For inquiry of items out of above range or with special dimensions, please do not hesitate to contact with us for availability.
◎超出上述范围之需求，请先与我司联系，确认可否承制。
◎ For inquiry of items out of above range or with special dimensions, please do not hesitate to contact with us for availability.
◎上述规格仅供参考，实际规格以规格承认书为准。

IGBT吸收电容器（轴向）
Snubber capacitor for IGBT (Axial-type)

外形图 Outline Drawing

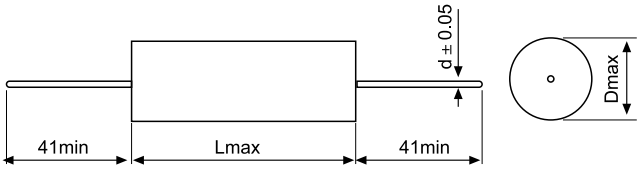


图1(Style 1)

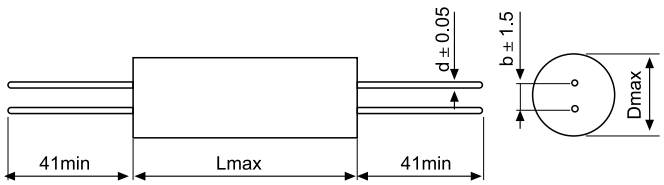


图2(Style 2)

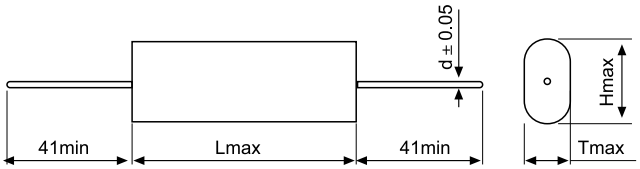


图3(Style 3)

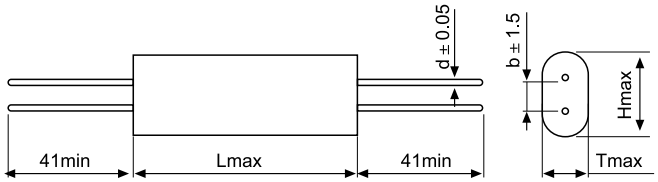


图4(Style 4)

■ 特点

- 金属化聚丙烯膜，轴向
- 自愈性能优异
- 损耗小，内部温升小
- 外包聚酯胶带纸，两端灌注阻燃性环氧树脂（UL94 V-0）
- 广泛应用于各种高压、高频、高电流场合

■ Features

- Metallized polypropylene film, Axial-type
- Excellent self-healing property,
- Low loss and small inherent temperature rise
- Wrapped with polyester adhesive tape and ends filled with flame retardant epoxy resin(UL94 V-0)
- Widely used in high voltage, high frequency circuit

■ 技术要求 Specifications

引用标准 Reference Standard	GB/T 17702（IEC 61071）	
气候类别 Climatic Category	40/105/56	
工作温度范围（外壳） Operating temperature range（case）	–40℃ ~ 105℃ (+85℃ to +105℃ : decreasing factor 2.5% per ℃ for U_N)	
额定电压 Rated Voltage	630Vdc ~ 3 000Vdc	
电容量范围 Capacitance Range	0.0068μF ~ 10.0μF	
电容量偏差 Capacitance Tolerance	J(±5%), K(±10%)	
耐电压 Test Voltage	1.5U_N（10s）	
损耗角正切 Dissipation Factor	≤ 0.0005 (1kHz, 20℃)	
绝缘电阻 Insulation Resistance	≥ 100 000MΩ, C_N ≤ 0.33μF	(20℃, 100Vdc,1min)
	≥ 30 000s C_N > 0.33μF	
预期寿命 Expected lifetime	≥ 100 000hrs @ U_N, Θ_{hs}=70℃	

Snubber capacitor for IGBT (Axial-type)

尺寸 Dimensions(mm)

Rated Cap.	630Vdc/700Vdc					Rated Cap.	850Vdc/1000Vdc					Rated Cap.	1200Vdc				
	Axial		Axial flat				Axial		Axial flat				Axial		Axial flat		
	D	L	w	H	T		D	L	w	H	T		D	L	w	H	T
	±1mm	±1mm	±1mm	±1mm	±1mm		±1mm	±1mm	±1mm	±1mm	±1mm		±1mm	±1mm	±1mm	±1mm	±1mm
0.15uF	10.5	29.0	29.0	14.0	8.0	0.068uF	10.0	29.0	29.0	12.0	6.0	0.047uF	10.0	29.0	29.0	13.0	7.0
0.22uF	12.0	29.0	29.0	16.0	9.5	0.1uF	11.0	29.0	29.0	13.0	7.0	0.068uF	11.0	29.0	29.0	15.0	8.5
0.33uF	14.0	29.0	29.0	18.0	12.0	0.15uF	12.5	29.0	29.0	15.0	9.0	0.1uF	13.0	29.0	29.0	16.5	10.0
0.47uF	16.0	29.0	29.0	20.5	14.0	0.22uF	15.0	29.0	29.0	17.0	10.0	0.15uF	15.0	29.0	29.0	19.0	15.0
0.68uF	17.0	34.0	34.0	21.0	15.0	0.33uF	15.5	34.0	34.0	18.0	11.0	0.22uF	15.0	34.0	34.0	20.0	15.0
1.0uF	20.0	34.0	34.0	25.5	17.5	0.33uF	15.0	39.0	39.0	16.0	10.5	0.47uF	21.5	34.0	34.0	27.0	19.0
1.5uF	24.0	34.0	34.0	30.0	22.0	0.47uF	17.0	39.0	39.0	20.0	12.0	0.68uF	22.0	39.0	39.0	27.0	20.0
2.0uF	25.0	39.0	39.0	30.0	22.0	0.68uF	20.0	39.0	39.0	15.0	22.0	1.0uF	26.0	39.0	39.0	33.0	23.0
2.5uF	27.0	39.0	39.0	33.0	25.0	1.0uF	23.0	39.0	39.0	26.0	18.0	1.2uF	28.5	39.0	39.0	36.5	25.0
3.0uF	29.0	39.0	39.0	36.0	27.0	1.5uF	25.0	44.0	44.0	29.0	20.0	1.5uF	29.0	44.0	44.0	37.0	26.0
3.3uF	31.0	39.0	39.0	38.0	28.0	2.0uF	29.0	44.0	44.0	33.0	23.0	2.0uF	30.0	54.0	54.0	38.0	27.0
4.0uF	32.0	44.0	44.0	39.0	29.0	2.5uF	29.0	54.0	54.0	32.0	23.0	2.2uF	31.0	54.0	54.0	39.0	28.0
4.7uF	31.0	54.0	54.0	37.0	28.0	3.0uF	31.0	54.0	54.0	35.0	25.0	2.5uF	33.0	54.0	54.0	42.0	29.0
6.8uF	36.0	54.0	54.0	44.0	33.0	3.3uF	31.0	58.0	58.0	37.0	26.0	3.0uF	36.0	54.0	54.0	46.0	32.0
8.2uF	40.0	54.0	54.0	48.0	37.0	4.0uF	34.0	58.0	58.0	40.0	29.0	3.3uF	35.0	58.0	58.0	44.0	31.0
10.0uF	41.0	58.0	58.0	49.0	38.0	4.7uF	37.0	58.0	58.0	41.0	30.0	4.0uF	38.0	58.0	58.0	48.0	35.0

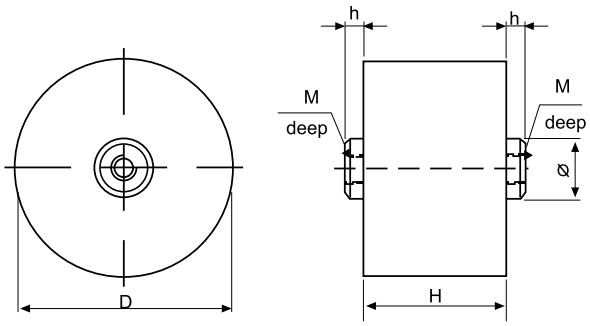
Rated Cap.	1600Vdc					Rated Cap.	2000Vdc					Rated Cap.	3000Vdc				
	Axial		Axial flat				Axial		Axial flat				Axial		Axial flat		
	D	L	w	H	T		D	L	w	H	T		D	L	w	H	T
	±1mm	±1mm	±1mm	±1mm	±1mm		±1mm	±1mm	±1mm	±1mm	±1mm		±1mm	±1mm	±1mm	±1mm	±1mm
0.033uF	11.0	29.0	29.0	13.0	7.0	0.022uF	10.0	29.0	29.0	12.5	6.5	0.0068uF	10.5	29.0	29.0	12.0	6.0
0.047uF	12.5	29.0	29.0	15.0	8.5	0.033uF	11.5	29.0	29.0	14.5	8.0	0.001uF	11.0	29.0	29.0	13.0	7.0
0.068uF	15.0	29.0	29.0	16.5	10.0	0.047uF	12.0	34.0	34.0	15.0	8.5	0.022uF	13.0	34.0	34.0	15.0	9.0
0.1uF	17.0	29.0	29.0	20.0	12.0	0.068uF	13.5	34.0	34.0	16.5	10.0	0.033uF	15.5	34.0	34.0	17.5	11.0
0.22uF	21.0	34.0	34.0	24.0	16.0	0.1uF	16.0	34.0	34.0	20.0	12.0	0.047uF	17.0	34.0	34.0	20.0	13.0
0.33uF	22.5	39.0	39.0	25.5	18.0	0.22uF	22.0	34.0	34.0	26.5	18.0	0.068uF	20.0	34.0	34.0	23.5	15.5
0.47uF	26.0	39.0	39.0	30.0	21.0	0.33uF	24.0	39.0	39.0	28.0	21.0	0.1uF	22.0	39.0	34.0	25.0	17.0
0.68uF	31.0	39.0	39.0	35.0	25.0	0.47uF	28.0	39.0	39.0	33.0	24.0	0.22uF	31.0	39.0	39.0	35.0	25.0
1.0uF	34.5	44.0	44.0	43.0	24.0	0.68uF	31.0	44.0	44.0	38.0	25.0	0.33uF	30.0	54.0	54.0	28.0	20.0
1.5uF	42.0	44.0	44.0	49.0	31.0	1.0uF	31.0	54.0	54.0	38.0	27.0	0.47uF	33.0	58.0	58.0	37.0	26.0
2.0uF	41.0	54.0	54.0	47.0	33.0	1.2uF	34.0	54.0	54.0	43.0	29.0	0.56uF	36.0	58.0	58.0	41.0	28.0
2.2uF	43.0	54.0	54.0	48.0	34.0	1.3uF	36.0	54.0	54.0	43.0	30.0						
2.5uF	43.0	58.0	58.0	51.0	33.0	1.5uF	38.0	58.0	58.0	45.0	30.0						

◎ For inquiry of items out of above range or with special dimensions, please do not hesitate to contact with us for availability.
◎超出上述范围之需求，请先与我司联系，确认可否承制。
◎ For inquiry of items out of above range or with special dimensions, please do not hesitate to contact with us for availability.
◎上述规格仅供参考，实际规格以规格承认书为准。

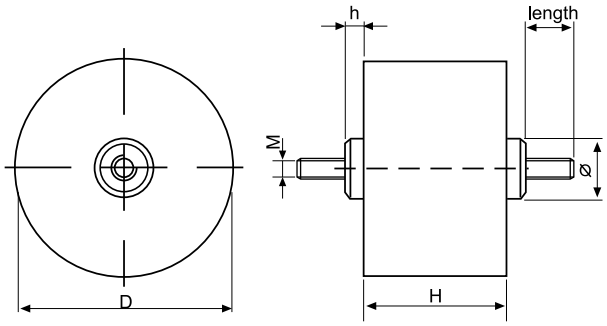
高压、高脉冲电流吸收电容器(轴向)
Snubber capacitor for high voltage, high current pulses (Dry type, Axial type)

■ 外形图 Outline Drawing

螺孔式Thread hole type



螺栓式Bolt type



■ 特点

- 损耗小，内部温升小
- 等效串联电阻小，自感小，能承受较大的纹波电流
- 有自愈特性
- 阻燃塑料外壳封装，树脂填充

■ 应用

- GTO中突波的吸收
- 高纹波电流直流滤波应用
- 高压脉冲，高频应用

■ Features

- Low loss and small inherent temperature rise
- Low ESR,Low ESL,can withstanding high r.m.s current
- Self-healing property
- Flam retardation plastic case, filled with resin

■ Applications

- Damping of voltage spikes on GTO-Thyristors
- High ripple current D.C. filtering
- For high pulse and high frequency application

■ 技术要求 Specifications

引用标准 Reference Standard	GB/T 17702, IEC 61071	
气候类别 Climatic Category	40/85/56	
工作温度范围（外壳） Operating temperature range（case）	–40℃ ~ 85℃	
电容量偏差 Capacitance Tolerance	J(±5%), K(±10%)	
耐电压（两极间） Test voltage between terminals(U_{T-T})	1.5U_N（10s）	
耐电压（极壳间） Test voltage between case and terminal(U_{T-C})	U_N < 1500Vdc, 3000Vac(60s，50Hz, 20℃ ±5℃) U_N ≥ 1500Vdc, ($\sqrt{2}$ U_N+1000)Vac(60s，50Hz, 20℃ ±5℃)	
损耗角正切 Dissipation Factor	≤ 0.0005 (1kHz, 20℃)	
绝缘电阻 Insulation Resistance（IR×C_N）	≥ 10 000s(20℃, 100Vdc,1min)	
最大电极扭矩 Max. Torque of terminals	M6: 5Nm	M8: 6Nm
安装位置 Installation	任意方向 Any position	
工作寿命 Operation life time	≥ 100 000 hours at U_N, Θ_{hs}=70℃	

Snubber capacitor for high voltage, high current pulses (Dry type, Axial type)

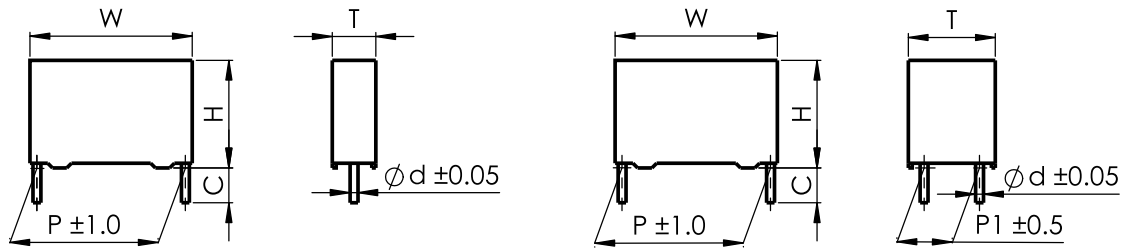
尺寸 Dimensions(mm)

C_N (μF)	U_N (Vdc)	U_{rms} (Vac)	dV/dt (V/μs)	$\hat{I}$ (A)	$\hat{I}_S$ (A)	I_{max} 100kHz@70℃ (A)	ESR @100kHz (mΩ)	L_S (nH)	D ± 1.0	H ± 1.0	h ± 1.0
10	700	500	360	3 600	10 800	38	1.5	25	50	57	5
4.0	1 300	700	500	2 000	6 000	70	1.5	20	90	52	5
0.5	1 700	650	750	375	1 125	14	3.2	18	40	45	3
1.0	1 700	650	750	750	2 250	23	1.6	18	50	45	3
2.0	1 700	650	750	1 500	4 500	36	1.0	18	70	45	3
3.0	1 700	650	750	2 250	6 750	48	0.7	18	80	48	3
2.0	3 000	280	300	600	1 800	35	1.8	50	90	67	6
0.01	4 000	800	8 000	80	240	3	39	25	30	37	7.5
5.0	4 500	500	200	1 000	3 500	36	2.7	100	90	216	5
0.5	4 500	1 500	500	250	750	42	1.2	50	90	56	3
0.015	7 000	3 550	2 000	30	90	6	30	100	30	98	5
0.55	7 000	2 500	400	270	710	41	1.8	50	90	116	7
0.25	7 000	4 000	1 000	250	750	31	2.9	100	90	180	5
0.35	7 000	4 000	1 000	350	1 050	38	2.1	100	90	180	5
0.5	7 000	4 000	500	250	750	45	1.9	100	90	180	5
0.5	7 000	3 000	200	100	300	19	5.6	100	60	115	5
0.01	7 500	2 500	2 000	20	60	4	50	100	30	98	3
0.33	8 000	5 000	1 000	330	990	39	2.0	50	90	129	6.5
0.1	9 000	4 500	1 500	150	450	26	5.0	100	90	149	6.5

◎ For inquiry of items out of above range or with special dimensions, please do not hesitate to contact with us for availability.
◎超出上述范围之需求，请先与我司联系，确认可否承制。
◎ For inquiry of items out of above range or with special dimensions, please do not hesitate to contact with us for availability.
◎上述规格仅供参考，实际规格以规格承认书为准。

交流输出滤波电容器（PCB）
A.C.output filter capacitors for PCB

■ 外形图 Outline Drawing



■ 特点

- 自愈
- 金属化聚丙烯膜结构
- 适用于小功率交流输出滤波电路，如UPS、太阳能光伏DC/AC逆变器中的LCL滤波。

■ Features

- Self-healing
- Metallized polypropylene film structure
- Suitable for small power AC output filter, i.e. UPS, Solar Photovoltaic DC/AC inverter with LCL filter.

■ 技术要求 Specifications

引用标准 Reference Standard	GB/T 17702（IEC 61071）			
气候类别 Climatic Category	40/85/21			
最高工作温度（外壳温度） Max operating temperature range（Case）	–40℃ ~ +105℃ 70℃（+70℃ to +105℃：decreasing factor 1.5% per ℃ for U_{rms}）			
额定均方根电压 Rated RMS Voltage (U_{rms})	160Vac	250Vac	300Vac	350Vac
额定交流电压 Rated a.c. Voltage (U_N)	250Vac	350Vac	425Vac	450Vac
最大连续直流电压 Maximum continuous DC voltage	300Vdc	475Vdc	560Vdc	600Vdc
电容量范围 Capacitance Range	4.0μF ~ 70.0μF	1.0μF ~ 40.0μF	1.0μF ~ 28.0μF	0.33μF ~ 27.0μF
电容量偏差 Capacitance Tolerance	±5%（J），±10%（K）			
耐电压 Voltage Proof	引线之间 Between Terminals:		1.5U_N(Vac) (10s)	
	极壳之间 Between Terminals To Case:		3 000Vac(60s)	
绝缘电阻 Insulation Resistance（IR × C_N）	≥ 3 000s (20℃, 100Vdc, 1min)			
损耗角正切 Dissipation Factor	≤ 20×10^{-4}(1kHz,20℃)（Typical value, 15×10^{-4}）			

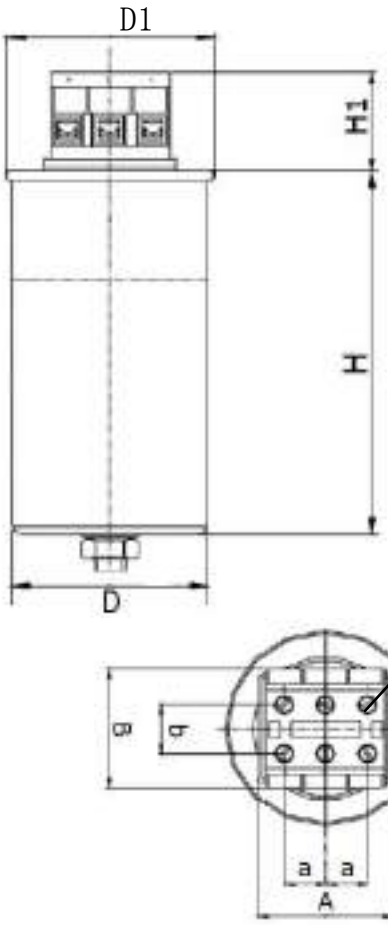
A.C.output filter capacitors for PCB

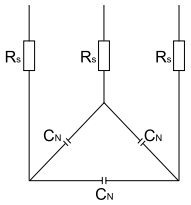
尺寸 Dimensions(mm)

Vac	Cap	Dimensions					Irms	Peak	ESR_{10K}	ESL	Thermal	dv/dt	Lead	Part Number
	Value	W	H	T	P	P1	10KHz	Current	Typical		Res		Wire	
	uF	mm	mm	mm	mm	mm	70℃ A	A	mΩ	nH	°C/W	V/us	mm	
160	1	32	18	09	27.5	\	5	32	30.3	24	19.8	32	0.8	
160	2.2	32	20	11	27.5	\	7	70.4	15.3	24	20.0	32	0.8	
160	3.3	32	22	13	27.5	\	7	105.6	11.3	24	27.1	32	0.8	
160	5	32	28	14	27.5	\	7	160	8.8	26	34.8	32	0.8	
160	10	32	33	18	27.5	\	7	320	6.8	26	45.0	32	0.8	
160	10	42.5	33	22	37.5	10.2	12	220	7.2	30	14.5	22	1.2	
160	20	42.5	37	28	37.5	10.2	12	440	6.9	30	15.1	22	1.2	
160	30	42.5	45	30	37.5	20.3	12	660	7.4	30	14.1	22	1.2	
160	40	57.5	45	30	52.5	20.3	12	640	7.6	35	13.7	16	1.2	
160	50	57.5	50	35	52.5	20.3	12	800	7.5	35	13.9	16	1.2	
250	1	32	18	09	27.5	\	8	40	14.0	24	16.7	40	0.8	
250	1.5	32	20	11	27.5	\	8	60	10.0	24	23.4	40	0.8	
250	2	32	22	13	27.5	\	9	80	8.2	24	22.6	40	0.8	
250	3.3	32	28	14	27.5	\	9	132	6.2	26	29.9	40	0.8	
250	4	32	33	18	27.5	\	9	160	5.9	26	31.4	40	0.8	
250	5	32	33	18	27.5	\	9	200	5.2	26	35.6	40	0.8	
250	6.8	32	37	22	27.5	\	9	272	4.9	28	15.6	40	1.2	
250	10	42.5	40	20	37.5	10.2	14	300	5.6	30	13.7	30	1.2	
250	15	42.5	37	28	37.5	10.2	14	450	5.2	30	14.7	30	1.2	
250	20	42.5	45	30	37.5	20.3	14	600	4.8	30	15.9	30	1.2	
250	25	57.5	45	30	52.5	20.3	14	625	5.7	35	13.4	25	1.2	
250	30	57.5	45	30	52.5	20.3	14	750	5.3	35	14.4	25	1.2	
250	35	57.5	50	35	52.5	20.3	14	875	5.5	35	13.9	25	1.2	
250	40	57.5	50	35	52.5	20.3	14	1000	5.2	35	14.7	25	1.2	
275	1	32	20	11	27.5	\	8	40	13.0	24	18.0	40	0.8	
275	3.3	32	33	18	27.5	\	9	132	6.2	26	29.9	40	0.8	
275	6.8	32	37	22	27.5	\	9	272	4.7	28	39.4	40	0.8	
275	10	42.5	40	20	37.5	10.2	14	300	5.9	30	13.0	30	1.2	
275	15	42.5	45	30	37.5	20.3	14	450	5.1	30	15.0	30	1.2	
275	20	57.5	45	30	52.5	20.3	14	500	6.0	35	12.8	25	1.2	
275	30	57.5	50	35	52.5	20.3	14	750	5.3	35	14.4	25	1.2	
350	0.68	32	20	11	27.5	\	8	30.6	15.0	24	15.6	45	0.8	
350	1	32	22	13	27.5	\	9	45	10.9	24	17	45	0.8	
350	2	32	33	18	27.5	\	9	90	7.3	26	25.4	45	0.8	
350	2.2	32	33	18	27.5	\	9	99	6.9	26	26.8	45	0.8	
350	3.3	32	37	22	27.5	\	9	148.5	5.7	28	32.5	45	0.8	
350	4.7	42.5	40	20	37.5	10.2	14	159.8	6.9	30	11.1	34	1.2	
350	5	42.5	40	20	37.5	10.2	14	170	6.8	30	11.3	34	1.2	
350	6.8	42.5	37	28	37.5	10.2	14	231.2	6.2	30	12.3	34	1.2	
350	10	42.5	45	30	37.5	20.3	14	340	5.3	30	14.4	34	1.2	
350	12	57.5	45	30	52.5	20.3	14	336	6.8	35	11.3	28	1.2	
350	20	57.5	50	35	52.5	20.3	14	560	5.9	35	13.0	28	1.2	
400	0.47	32	20	11	27.5	\	7	23.5	18.6	24	16.5	50	0.8	
400	1	32	28	14	27.5	\	9	50	10.3	26	18	50	0.8	
400	1.5	32	20	15	27.5	\	9	75	8.1	26	22.9	50	0.8	
400	2.2	32	33	18	27.5	\	9	110	6.4	26	28.9	50	0.8	
400	3	32	37	22	27.5	\	9	150	5.7	28	32.5	50	0.8	
400	5	42.5	37	28	37.5	10.2	14	200	6.2	30	12.3	40	1.2	
400	10	57.5	45	30	52.5	20.3	14	350	6.9	35	11.1	35	1.2	
400	15	57.5	50	35	52.5	20.3	14	525	6.1	35	12.5	35	1.2	
450	0.22	32	18	09	27.5	\	5	12.1	30.9	24	19.4	55	0.8	
450	0.47	32	22	13	27.5	\	8	25.85	15.7	24	14.9	55	0.8	
450	1	32	33	18	27.5	\	8	55	9.2	26	25.5	55	0.8	
450	1.5	32	37	22	27.5	\	8	82.5	7.3	28	32.1	55	0.8	
450	3.3	42.5	37	28	37.5	10.2	14	148.5	7.4	30	10.3	45	1.2	
450	4.7	42.5	45	30	37.5	20.3	14	211.5	6.2	30	12.3	45	1.2	
450	6.8	57.5	45	30	52.5	20.3	14	258.4	7.5	35	10.2	38	1.2	
450	10	57.5	55	40	52.5	20.3	14	380	6.6	35	11.6	38	1.2	

三相交流滤波电容器(一体)
Three-phase AC-filter capacitors （single case）

■ 外形图 Outline Drawing





Circuit diagram

D ± 1	a ± 0.5	b ± 0.5	A ± 1	B ± 1	H1 ± 2	MT
76~116	15	19.4	43.5	44.5	35	M5
136	16.5	25.0	49	54.5	45	M6

■ 特点

- 自愈
- 金属化聚丙烯膜结构
- 防爆设计，过压力保护更安全
- 适用于三相功率因数校正、LCL滤波

■ Features

- Self-healing
- Metallized polypropylene film structure
- Anti-explosion design, overpressure tear-off fuse more safety
- Suitable for power factor correction and LCL filter

■ 技术要求 Specifications

引用标准 Reference Standard	GB/T 17702 (IEC 61071) Optional：GB/T 12747 (IEC 60831)
过电压 Over voltages	1.1U_{rms}，8 小时 / 天 up to 8h daily; 1.15U_{rms}，30 分钟 / 天 up to 30min daily; 1.2U_{rms} 5 分钟或者 1.3U_{rms} 1 分钟在寿命期内允许出现 200 次 1.2U_{rms} for 5 min or 1.3U_{rms} for 1min during life 200 times
工作温度范围（热点温度） Operating temperature range（Hotspot）	–40℃~70℃
额定均方根电压 Rated RMS Voltage (U_{rms})	230Vac~850Vac
额定频率 Rated Frequency	50/60Hz
额定容量 Capacitance C_N	8μF~330μF
容量偏差 Capacitance Tolerance	±5%,–5%~+10%
电容内部连接方式 Capacitance internal connection	Connect triangle（△）

Three-phase AC-filter capacitors （single case）

尺寸 Dimensions(mm)

Urms=230Vac

C_N (μF)	D±1.0 (mm)	$D1_{max}$ (mm)	H±3.0 (mm)	R_s (mΩ)	L_s (nH)	R_{th} (℃/W)	I_{max} (A)	$\hat{I}$ (kA)	$\hat{I}_s$ (kA)	M (kg)	Part number
3×84	76	79	200	3×0.9	100	4.2	3×43	1.6	4.8	1.1	
3×105	76	79	230	3×1.1	120	3.6	3×42	1.5	4.5	1.2	
3×160	86	90	230	3×0.7	120	3.2	3×54	2.3	6.9	1.6	
3×250	116	121	200	3×0.4	110	3.1	3×56	3.0	9.0	2.4	
3×330	116	121	230	3×0.5	130	2.6	3×56	4.8	14.3	2.8	

Urms=440Vac

C_N (μF)	D±1.0 (mm)	$D1_{max}$ (mm)	H±3.0 (mm)	R_s (mΩ)	L_s (nH)	R_{th} (℃/W)	I_{max} (A)	$\hat{I}$ (kA)	$\hat{I}_s$ (kA)	M (kg)	Part number
3×13	76	79	140	3×1.6	100	7.0	3×26	0.8	2.5	0.9	
3×16.5	76	79	140	3×1.3	100	6.4	3×30	1.1	3.2	0.9	
3×26.5	76	79	200	3×2.7	100	4.7	3×24	0.8	2.3	1.2	
3×33	76	79	200	3×2.2	100	4.3	3×28	1.0	2.9	1.2	
3×50	86	90	200	3×1.5	110	3.8	3×37	1.5	4.4	1.4	
3×66	86	90	230	3×1.7	120	3.2	3×37	1.4	4.3	1.7	
3×83	116	121	200	3×0.9	110	3.5	3×48	2.4	7.2	2.4	
3×100	116	121	200	3×0.8	110	3.0	3×56	2.9	8.7	2.4	
3×133	136	142	200	3×0.6	120	2.9	3×56	3.9	11.6	3.3	
3×154	136	142	200	3×0.6	120	2.6	3×56	4.0	12.0	3.3	
3×170	136	142	230	3×0.7	130	2.4	3×56	4.5	13.4	3.8	

Urms=540Vac

C_N (μF)	D±1.0 (mm)	$D1_{max}$ (mm)	H±3.0 (mm)	R_s (mΩ)	L_s (nH)	R_{th} (℃/W)	I_{max} (A)	$\hat{I}$ (kA)	$\hat{I}_s$ (kA)	M (kg)	Part number
3×19	76	79	170	3×1.1	110	4.9	3×33	1.0	2.9	1.0	
3×23	76	79	170	3×1.0	110	4.5	3×36	1.2	3.6	1.0	
3×39	86	90	200	3×1.1	110	3.7	3×39	1.4	4.3	1.4	
3×48	86	90	230	3×1.3	120	3.2	3×38	1.3	4.0	1.7	
3×96	136	142	230	3×1.1	130	2.5	3×50	2.6	7.9	3.8	

Urms=690Vac

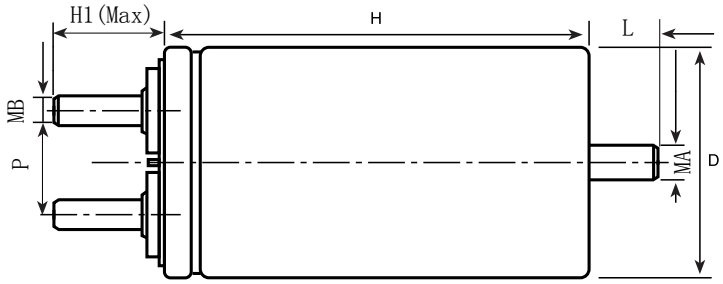
C_N (μF)	D±1.0 (mm)	$D1_{max}$ (mm)	H±3.0 (mm)	R_s (mΩ)	L_s (nH)	R_{th} (℃/W)	I_{max} (A)	$\hat{I}$ (kA)	$\hat{I}_s$ (kA)	M (kg)	Part number
3×33.5	116	121	170	3×1.1	110	3.2	3×46	1.6	4.9	2.2	
3×38	116	121	200	3×1.3	110	3.2	3×43	1.3	3.9	2.4	

Urms=760/850Vac

C_N (μF)	D±1.0 (mm)	$D1_{max}$ (mm)	H±3.0 (mm)	R_s (mΩ)	L_s (nH)	R_{th} (℃/W)	I_{max} (A)	$\hat{I}$ (kA)	$\hat{I}_s$ (kA)	M (kg)	Part number
3×8	76	79	170	3×1.4	110	4.7	3×34	0.6	1.7	1.0	
3×10	86	90	170	3×1.2	110	4.6	3×36	0.7	2.0	1.0	
3×12	86	90	170	3×1.1	110	4.1	3×40	0.9	2.6	1.0	
3×17	106	110	170	3×1.0	110	3.7	3×45	1.1	3.4	1.7	
3×23	86	90	230	3×1.6	120	2.9	3×39	0.9	2.7	1.6	
3×28	106	110	230	3×1.5	130	2.9	3×41	1.0	3.0	2.2	
3×33	106	110	230	3×1.4	130	2.6	3×45	1.2	3.5	2.3	
3×38	116	121	230	3×1.3	130	2.6	3×47	1.4	4.1	2.8	
3×49	136	142	230	3×1.2	130	2.5	3×49	1.9	5.7	3.7	
3×55.8	136	142	230	3×1.2	130	2.3	3×53	2.2	6.5	3.8	

干式交流滤波电容器
AC filter capacitor（Dry-type）

■ 外形图 Outline Drawing



D	P ± 1.0	H1(Max)	MA	L ± 1.0
50	22.5	25	M8	10
55	22.5	25	M10	12
76	34	35	M12	16
86	34	35	M12	16

■ 特点

- 适用于电力电子设备、UPS电源中的交流滤波电路，能承受较高的纹波电流及峰值电流、电压
- 具有优良的自愈特性
- 高稳定性，可靠性
- 干式设计，安装方式更灵活

■ Features

- The capacitors particularly suit for AC filter circuit in power electric equipment and UPS power unit. They have ability to withstand high r.m.s current and high peak voltage.
- Self-healing property
- Excellent stable performance and reliability
- Dry type design, installation is more flexible

■ 技术要求 Specifications

引用标准 Reference standards	GB/T 17702（IEC 61071）
额定均方根电压 Rated RMS Voltage (U_{rms})	300Vac，500Vac
额定频率 Rated frequency（f_N）	50/60Hz
电容偏差值 Capacitance tolerance	±5%，±10%
冲击电流 Inrush current ($\hat{I}_s$)	100
极间耐压 Test voltage between Terminals，（U_{T-T}）	2.15U_{rms} 或 1.5U_N，10s
极壳耐压 Test voltage between terminals to case，（U_{T-C}）	3 000Vac,10s
损耗角正切值 Dissipation factor (tg δ) @50Hz	≤ 0.0010
气候类别 Climatic category	40/70/21
可运行温度范围 Operating temperature(θ_{hs})	-25℃ ~ 70℃
贮存温度范围 Storage Temperature	-40℃ ~ 85℃
防护等级 Degree of protection	P0
预期寿命 Life Expectancy	After 60 000 hours at U_{rms} 、50℃ I△C/CI ≤ 5%
安装位置 Mounting position	任意方向 Any position
冷切方式 Cooling	自然空气或强制制冷 Naturally air-cooled or force cooled
最大电极扭矩 Max Torque of terminals	M6：3Nm；M8；5Nm；M10：8Nm
最大安装扭矩 Max. Torque of installation	M8：5Nm；M10：7Nm；M12：10Nm
最高海拔 Max Altitude	2 000m

AC filter capacitor

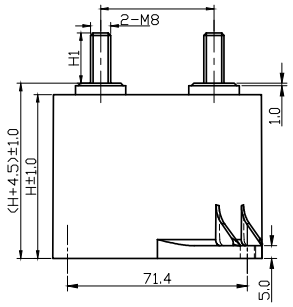
尺寸 Dimensions(mm)

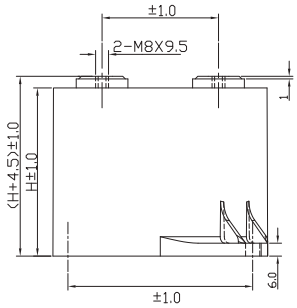
U_N = 420Vac U_{rms} = 300Vac										
C_N (μF)	D ± 1.0 (mm)	H ± 3.0 (mm)	MB	R_s (mΩ)	R_{thhc} (℃ /W)	I_{max} (A)	$\hat{I}$ (kA)	$\hat{I}_s$ (kA)	M (kg)	Part number
20	50	85	M6	22.0	14.2	8	0.1	0.2	0.2	
40	50	100	M6	17.3	10.4	11	0.2	0.4	0.2	
50	55	100	M6	13.8	9.6	11	0.2	0.5	0.3	
60	55	135	M6	24.8	8.3	11	0.3	0.6	0.3	
100	76	140	M10	9.7	6.2	14	1.0	3	0.9	
200	76	140	M6	4.8	6.3	28	2.0	6	0.9	
200	76	140	M10	4.8	6.3	28	2.0	6	0.9	
200	76	235	M10	4.9	3.7	42	6.0	18	1.4	

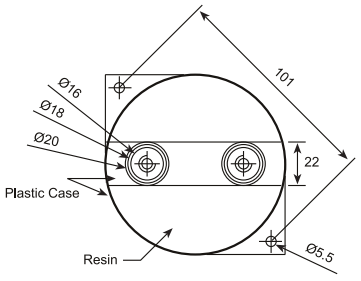
U_N = 700Vac U_{rms} = 500Vac										
C_N (μF)	D ± 1.0 (mm)	H ± 3.0 (mm)	MB	R_s (mΩ)	R_{thhc} (℃ /W)	I_{max} (A)	$\hat{I}$ (kA)	$\hat{I}_s$ (kA)	M (kg)	Part number
10	50	85	M6	16.0	14.0	9	0.2	0.5	0.2	
20	50	100	M6	13.0	10.2	12	0.3	0.7	0.2	
30	55	135	M6	16.0	7.4	13	0.5	0.7	0.4	
50	76	130	M10	9.6	6.7	18	0.8	1.2	0.8	
80	76	185	M10	3.4	4.5	37	1.3	3.8	1.1	
100	76	235	M10	9.5	3.7	35	4.0	12	1.4	
133	86	235	M10	7.2	3.4	47	5.3	15.9	1.8	
150	86	235	M10	6.4	3.2	53	6.0	18	1.7	

塑料外壳干式直流滤波电容器
DC-Link Capacitor (Dry-Type,Plastic case)

■ 外形图 Outline Drawing







■ 特点

- 应用于直流滤波电路中，可替代电解电容器
- 等效串联电阻小，能承受较大的纹波电流
- 自感小
- 有自愈性
- 寿命长
- 塑料外壳，树酯灌封

■ 应用场合

- 风能发电、太阳能发电用变频器上
- 交通工具，如：电动车和混合动力车
- 焊接设备，电梯，电机驱动

■ Features

- Used in DC-Link circuits, can replace electrolytic capacitor
- Low ESR, high ripple current handling capabilities
- Low L_S
- Self-healing property
- Long lifetime
- Plastic case，filled with resin

■ Applications

- Used in inverters of wind power and solar power
- Transportation: EV or HEV
- Welders,Elevators,Motor Driver systems

■ 技术要求 Specifications

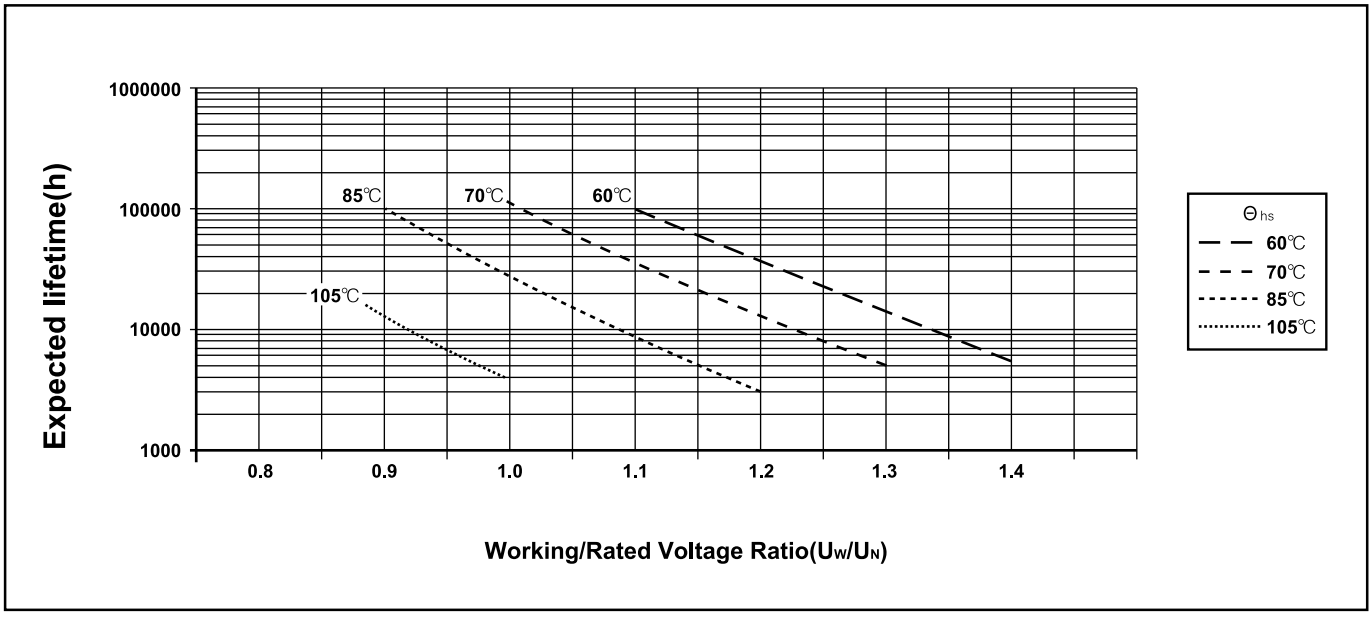
引用标准 Reference Standard	GB/T 17702（IEC 61071）、AEC–Q200D–2010	
气候类别 Climatic Category	40/105/56	
工作温度范围 Operating Temperature Range	–40℃ ~ 105℃（Θ_{hs} ≤ 105℃） Θ_{hs} = 85℃ ~ 105℃：decreasing factor 1.5% per℃ for U_N	
贮存温度范围 Storage Temperature Range	–40℃ ~ 105℃	
电压范围 Voltage Range	450Vdc ~ 900Vdc	
容量范围 Capacitance Range	47μF ~ 600μF	
电容量允许偏差 Capacitance Tolerance	±5%(J)； ±10%(K)	
耐电压 Voltage Proof	极间 Between Terminals:	1.5U_N (10s, 20℃ ±5℃)
	极壳之间 Between Terminals And Case:	3 000Vac(60s，50Hz, 20℃ ±5℃)
介质损耗角正切 $tg\delta_d$	0.0002	
IR × C_N	≥ 5 000s (20℃ ,100Vdc,1min)	
过电压 Over Voltage	1.1U_N (30% of on–load–dur.)	
	1.15U_N (30min/day)	
	1.2U_N (5min/day)	
	1.3U_N (1min/day)	
	1.5U_N (30ms every time, 1 000 times during the life of the capacitor)	
最高使用海拔 Max. Altitude	2 000m	
最大电极扭矩 Max. Torque of terminals	M5: 2.5Nm	M8:6.0Nm
最大安装扭矩 Max. Torque of Installation	3.0Nm	
安装 Installation	任意方向 Any Position	
预期寿命 Expected lifetime	参考预期寿命曲线 Refer to Expected lifetime curve	
失效率 Failure rate	50FIT	

Snubber capacitor for IGBT

尺寸 Dimensions(mm)

U_N (Vdc)	C_N (μF)	ESR @10kHz (mΩ)	L_s (nH)	R_{th} (K/W)	Î (A)	I_{max} (A)		Dimension		Weight (kg)	Part number	Expected lifetime
						60℃	85℃	ΦD	H			
450	170	0.7	25	6.8	2 141	92	65	84.5	41	≈ 0.35		Lifetime curve
	260	0.9	32	5.3	2 240	97	65	84.5	50	≈ 0.40		
	380	1.0	40	5.0	2 195	95	63	84.5	65	≈ 0.48		
	380	1.0	40	5.2	2 195	93	62	83.2	65	≈ 0.47		
	600	1.0	40	3.4	3 955	100	76	115.0	64	≈ 0.90		
600	100	0.8	25	6.8	2 164	88	58	84.5	41	≈ 0.35		
	150	1.0	32	5.3	2 244	89	59	84.5	50	≈ 0.40		
	220	1.1	40	5.0	2 169	89	59	84.5	65	≈ 0.48		
	220	1.1	40	5.2	2 169	87	58	83.2	65	≈ 0.47		
	350	1.0	40	3.4	3 879	100	76	115.0	64	≈ 0.90		
800	66	0.8	25	6.8	1 907	91	61	84.5	41	≈ 0.35		
	100	1.1	32	5.3	1 998	88	59	84.5	50	≈ 0.40		
	140	1.3	40	5.0	1 843	83	55	84.5	65	≈ 0.48		
	140	1.3	40	5.2	1 843	82	54	83.2	65	≈ 0.47		
	230	1.1	40	3.4	3 404	100	73	115.0	64	≈ 0.90		
900	47	1.0	25	6.8	1 620	78	52	84.5	41	≈ 0.35		
	70	1.2	32	5.3	1 688	84	56	84.5	50	≈ 0.40		
	100	1.3	40	5.0	1 570	83	55	84.5	65	≈ 0.48		
	100	1.3	40	5.2	1 570	81	54	83.2	65	≈ 0.47		
	160	1.2	40	3.4	2 824	99	70	115.0	64	≈ 0.90		

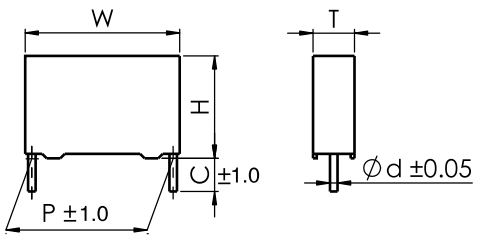
■ 预期寿命曲线 **Expected lifetime curve**



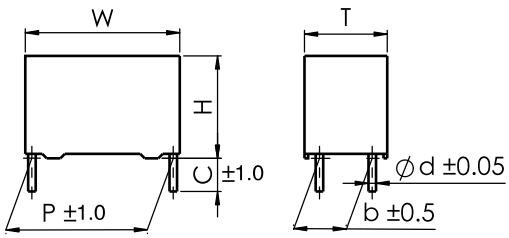
PCB用DC-Link电容器
DC-Link Capacitor for PCB

■ 外形图 Outline Drawing

2 Pins



4 Pins



■ 特点

- 金属化聚丙烯膜结构
- 良好的电气性能
- 塑料外壳封装(UL94 V-0)，树脂填充
- 高性能直流滤波应用场合
  (如：变频器、工业和高端电源、太阳能逆变器等)

■ Features

- Metallized polypropylene film structure
- Excellent electric property
- Plastic case (UL94 V-0), filled with resin
- High performance DC filtering applications
  (i.e. Frequency converters, Industrial and high-end power supplies and Solar inverters)

■ 技术要求 Specifications

引用标准	GB/T 17702（IEC 61071）
气候类别 Climatic Category	40/105/56
工作温度（外壳） Operating temperature（case）	–40℃ ~105℃ (+85℃ to +105℃ : decreasing factor 1.5% per ℃ for $U_{N,85℃}$)
额定电压 $U_{N,85℃}$	500Vdc,600Vdc,800Vdc,900Vdc,1 000Vdc,1 100Vdc,1 200Vdc
容量偏差 Capacitance Tolerance	J（±5%），K（±10%）
耐电压 Voltage Proof	1.5U_N (10s)
绝缘电阻 Insulation Resistance（IR × C_N）	⩾ 10 000s　(20℃ ,100Vdc,1min)
自感 (L_s) Self Inductance(L_s)	< 1nH per mm of lead spacing
最大峰值电流 Î (A) Maximum peak current Î (A)	Î =C • dV/dt
预期寿命 Expected lifetime	100 000hrs @ U_N，Θ_{hs}=70℃

DC-Link Capacitor for PCB

尺寸 Dimensions(mm)

Cap	Rated Voltage	Dimensions						dv/dt	Peak Current	Irms	ESR 10KHz
		W ± 0.5(0.02)	H ± 0.5(0.02)	T ± 0.5(0.02)	P1 ± 1.0(0.04)	P2 ± 1.0(0.04)	d ± 0.05(0.002)				
uF	V	mm	mm	mm	mm	mm	mm	V/us	A	A	mΩ
Voltage Vndc 450V							Voltage Code I				
1.0	450	32.0	18.0	9.0	27.5		0.8	60	60	2.5	45.0
2.0	450	32.0	18.0	9.0	27.5		0.8	60	120	3.0	30.0
3.0	450	32.0	20.0	11.0	27.5		0.8	60	180	4.0	20.0
4.0	450	32.0	20.0	11.0	27.5		0.8	60	240	4.0	18.0
5.0	450	32.0	20.0	11.0	27.5		0.8	60	300	5.0	12.0
5.0	450	32.0	22.0	13.0	27.5		0.8	60	300	5.5	11.0
10.0	450	32.0	28.0	14.0	27.5		0.8	60	600	7.5	8.5
10.0	450	32.0	28.0	18.0	27.5		0.8	60	600	9.0	8.0
12.0	450	32.0	33.0	18.0	27.5		0.8	60	720	10.0	7.0
15.0	450	32.0	37.0	22.0	27.5		0.8	60	900	11.5	6.0
15.0	450	42.5	18.0	24.0	37.5		1.0	30	450	9.5	8.5
18.0	450	32.0	37.0	22.0	27.5		0.8	60	1080	10.0	6.0
20.0	450	32.0	37.0	22.0	27.5		0.8	60	1200	11.0	5.0
22.0	450	32.0	37.0	22.0	27.5		0.8	60	1320	12.5	5.0
25.0	450	42.5	37.0	22.0	37.5	10.2	1.2	35	875	12.5	5.5
30.0	450	42.5	40.0	20.0	37.5	10.2	1.2	35	1050	12.0	6.0
40.0	450	42.5	37.0	28.0	37.5	10.2	1.2	35	1400	14.0	5.5
40.0	450	42.5	44.0	24.0	37.5	10.2	1.2	35	1400	15.0	5.2
40.0	450	57.5	22.0	43.0	52.5	20.3	1.2	35	1400	12.0	8.0
50.0	450	42.5	45.0	30.0	37.5	20.3	1.2	35	1750	15.0	4.0
50.0	450	57.5	22.0	43.0	52.5	20.3	1.2	35	1750	14.0	6.5
55.0	450	57.5	45.0	30.0	52.5	20.3	1.2	35	1925	15.5	5.0
60.0	450	57.5	45.0	30.0	52.5	20.3	1.2	35	2100	16.5	4.5
60.0	450	42.5	45.0	30.0	37.5	20.3	1.2	35	2100	16.5	4.0
80.0	450	57.5	45.0	30.0	52.5	20.3	1.2	20	1600	16.0	4.0
100.0	450	57.5	50.0	35.0	52.5	20.3	1.2	20	2000	18.0	3.8
130.0	450	57.5	60.0	35.0	52.5	20.3	1.2	20	2600	22.0	3.5
140.0	450	57.5	65.0	35.0	52.5	20.3	1.2	20	2800	24.0	3.4
150.0	450	57.5	70.0	35.0	52.5	20.3	1.2	20	3000	26.0	3.2
160.0	450	57.5	80.0	35.0	52.5	20.3	1.2	20	3200	28.0	3.1
170.0	450	57.5	80.0	35.0	52.5	20.3	1.2	20	3400	30.0	3.0
Voltage Vndc 550V							Voltage Code J				
3.0	550	32.0	20.0	11.0	27.5		0.8	60	180	4.0	28.0
5.0	550	32.0	22.0	13.0	27.5		0.8	60	300	6.0	14.0
8.0	550	32.0	28.0	14.0	27.5		0.8	60	480	8.5	12.5
10.0	550	32.0	33.0	18.0	27.5		0.8	60	600	10.0	8.0
15.0	550	32.0	37.0	22.0	27.5		0.8	60	900	12.0	6.5
15.0	550	32.0	37.0	22.0	27.5	10.2	1.2	60	900	13.0	5.5
15.0	550	42.5	18.0	24.0	37.5		1.0	60	900	10.5	6.5
20.0	550	42.5	40.0	20.0	37.5	10.2	1.2	35	700	12.5	6.5
22.0	550	42.5	40.0	20.0	37.5	10.2	1.2	35	770	13.5	6.5
25.0	550	42.5	40.0	20.0	37.5	10.2	1.2	35	875	14.5	6.5
30.0	550	42.5	44.0	24.0	37.5	10.2	1.2	35	1050	16.0	6.0

DC-Link Capacitor for PCB

尺寸 Dimensions(mm)

Cap	Rated Voltage	Dimensions						dv/dt	Peak Current	Irms	ESR 10KHz
		W ± 0.5(0.02)	H ± 0.5(0.02)	T ± 0.5(0.02)	P1 ± 1.0(0.04)	P2 ± 1.0(0.04)	d ± 0.05(0.002)				
uF	V	mm	mm	mm	mm	mm	mm	V/us	A	A	mΩ
35.0	550	42.5	45.0	30.0	37.5	20.3	1.2	35	1225	18.0	6.0
40.0	550	42.5	45.0	30.0	37.5	20.3	1.2	35	1400	18.0	5.5
40.0	550	57.5	22.0	43.0	52.5	20.3	1.2	35	1400	16.0	5.8
50.0	550	42.5	50.0	35.0	37.5	20.3	1.2	35	1750	20.0	5.0
60.0	550	57.5	45.0	30.0	37.5	20.3	1.2	20	1200	18.0	4.8
75.0	550	57.5	50.0	35.0	52.5	20.3	1.2	20	1500	20.0	5.0
100.0	550	57.5	55.0	45.0	52.5	20.3	1.2	20	2000	24.0	4.5
110.0	550	57.5	55.0	45.0	52.5	20.3	1.2	20	2200	26.0	4.0
130.0	550	57.5	60.0	35.0	52.5	20.3	1.2	20	2600	23.0	3.4
140.0	550	57.5	65.0	35.0	52.5	20.3	1.2	20	2800	25.0	3.3
150.0	550	57.5	70.0	35.0	52.5	20.3	1.2	20	3000	27.0	3.1
160.0	550	57.5	80.0	35.0	52.5	20.3	1.2	20	3200	29.0	3.0
170.0	550	57.5	80.0	35.0	52.5	20.3	1.2	20	3400	32.0	2.8
Voltage Vndc 600V							Voltage Code Q				
3.0	600	32.0	20.0	11.0	27.5		0.8	60	180	4.0	28.0
4.0	600	32.0	20.0	11.0	27.5		0.8	60	240	5.0	26.0
5.0	600	32.0	28.0	14.0	27.5		0.8	60	300	6.0	14.5
8.0	600	32.0	28.0	14.0	27.5		0.8	60	480	7.5	12.0
10.0	600	32.0	33.0	18.0	27.5		0.8	60	600	8.5	7.5
12.0	600	32.0	33.0	18.0	27.5		0.8	60	720	9.5	7.5
12.0	600	42.5	18.0	24.0	37.5		1.0	35	420	8.0	9.5
15.0	600	32.0	37.0	22.0	27.5		0.8	60	900	10.5	7.5
15.0	600	42.5	18.0	24.0	37.5		1.0	35	525	12.0	6.0
20.0	600	42.5	40.0	20.0	37.5	10.2	1.2	35	700	11.0	6.0
30.0	600	42.5	37.0	28.0	37.5	10.2	1.2	35	1050	13.0	5.5
35.0	600	42.5	44.0	24.0	37.5	10.2	1.2	35	1225	16.5	5.0
35.0	600	57.5	22.0	43.0	52.5	20.3	1.2	20	700	13.5	5.5
40.0	600	42.5	45.0	30.0	37.5	20.3	1.2	35	1400	18.0	4.0
50.0	600	57.5	50.0	35.0	52.5	20.3	1.2	20	1000	14.0	6.5
60.0	600	57.5	50.0	35.0	52.5	20.3	1.2	20	1200	16.0	5.0
70.0	600	57.5	50.0	35.0	52.5	20.3	1.2	20	1400	18.0	5.0
80.0	600	57.5	55.0	45.0	52.5	20.3	1.2	20	1600	20.0	4.0
90.0	600	57.5	55.0	45.0	52.5	20.3	1.2	20	1800	24.0	4.0
100.0	600	57.5	53.0	50.0	52.5	20.3	1.2	20	2000	26.0	4.0
110.0	600	57.5	53.0	50.0	52.5	20.3	1.2	20	2200	28.0	3.5
120.0	600	57.5	60.0	35.0	52.5	20.3	1.2	20	2400	30.0	3.4
130.0	600	57.5	65.0	35.0	52.5	20.3	1.2	20	2600	32.0	3.3
140.0	600	57.5	70.0	35.0	52.5	20.3	1.2	20	2800	34.0	3.2
140.0	600	57.5	65.0	45.0	52.5	20.3	1.2	20	2800	34.0	3.2
150.0	600	57.5	80.0	35.0	52.5	20.3	1.2	20	3000	36.0	3.0
Voltage Vndc 700V							Voltage Code A				
1.0	700	32.0	18.0	9.0	27.5		0.8	60	60	2.5	54.0
2.0	700	32.0	18.0	9.0	27.5		0.8	60	120	3.0	35.0
3.0	700	32.0	20.0	11.0	27.5		0.8	60	180	4.5	28.0

DC-Link Capacitor for PCB

尺寸 Dimensions(mm)

Cap	Rated Voltage	Dimensions						dv/dt	Peak Current	Irms	ESR 10KHz
		W ± 0.5(0.02)	H ± 0.5(0.02)	T ± 0.5(0.02)	P1 ± 1.0(0.04)	P2 ± 1.0(0.04)	d ± 0.05(0.002)				
uF	V	mm	mm	mm	mm	mm	mm	V/us	A	A	mΩ
3.3	700	32.0	28.0	14.0	27.5		0.8	60	198	5.5	26.0
5.0	700	32.0	28.0	14.0	27.5		0.8	60	300	6.0	14.0
6.0	700	32.0	28.0	18.0	27.5		0.8	60	360	6.0	14.0
8.0	700	32.0	33.0	18.0	27.5		0.8	60	480	9.0	10.0
10.0	700	32.0	33.0	18.0	27.5		0.8	60	600	10.0	7.0
10.0	700	32.0	37.0	22.0	27.5		0.8	60	600	12.0	6.5
10.0	700	42.5	18.0	24.0	37.5		1.0	35	350	11.5	7.5
12.0	700	32.0	37.0	22.0	27.5		0.8	60	720	12.5	6.0
12.0	700	42.5	18.0	24.0	37.5		1.0	35	420	12.0	7.0
15.0	700	42.5	33.5	22.0	37.5		1.0	35	525	9.0	9.0
15.0	700	42.5	33.5	22.0	37.5	10.2	1.2	35	525	10.0	8.0
15.0	700	42.5	40.0	20.0	37.5	10.2	1.2	35	525	10.0	8.0
20.0	700	42.5	37.0	28.0	37.5	10.2	1.2	35	700	12.0	7.5
22.0	700	42.5	44.0	24.0	37.5	10.2	1.2	35	770	14.0	6.5
25.0	700	42.5	44.0	24.0	37.5	10.2	1.2	35	875	16.0	6.0
30.0	700	42.5	45.0	30.0	37.5	20.3	1.2	35	1050	16.0	5.8
30.0	700	57.5	22.0	43.0	52.5	20.3	1.2	20	600	12.0	8.5
35.0	700	42.5	50.0	35.0	37.5	20.3	1.2	35	1225	20.0	5.5
40.0	700	57.5	45.0	30.0	52.5	20.3	1.2	20	800	14.0	5.0
45.0	700	57.5	45.0	30.0	52.5	20.3	1.2	20	900	15.5	5.0
50.0	700	57.5	50.0	35.0	52.5	20.3	1.2	20	1000	15.0	4.8
55.0	700	57.5	50.0	35.0	52.5	20.3	1.2	20	1100	16.0	4.5
60.0	700	57.5	50.0	35.0	52.5	20.3	1.2	20	1200	18.0	4.0
65.0	700	57.5	55.0	45.0	52.5	20.3	1.2	20	1300	20.0	4.0
70.0	700	57.5	55.0	45.0	52.5	20.3	1.2	20	1400	20.0	3.8
75.0	700	57.5	55.0	45.0	52.5	20.3	1.2	20	1500	20.0	3.8
80.0	700	57.5	55.0	45.0	52.5	20.3	1.2	20	1600	22.0	3.5
80.0	700	57.5	60.0	35.0	52.5	20.3	1.2	20	1600	23.0	3.4
90.0	700	57.5	55.0	45.0	52.5	20.3	1.2	20.0	1800	24.0	3.5
90.0	700	57.5	60.0	35.0	52.5	20.3	1.2	20	1800	24.0	3.5
100.0	700	57.5	65.0	35.0	52.5	20.3	1.2	20	2000	26.0	3.5
110.0	700	57.5	70.0	35.0	52.5	20.3	1.2	20	2200	28.0	3.4
120.0	700	57.5	80.0	35.0	52.5	20.3	1.2	20	2400	30.0	3.0
130.0	700	57.5	65.0	45.0	52.5	20.3	1.2	20	2600	32.0	2.8
Voltage Vndc 800V							Voltage Code B				
1.0	800	32.0	18.0	9.0	27.5		0.8	60	60	2.0	62.0
2.0	800	32.0	20.0	11.0	27.5		0.8	60	120	3.5	31.0
3.0	800	32.0	22.0	13.0	27.5		0.8	60	180	4.5	21.0
3.3	800	32.0	28.0	14.0	27.5		0.8	60	198	4.0	25.0
5.0	800	32.0	28.0	14.0	27.5		0.8	60	300	6.0	12.0
6.0	800	32.0	28.0	18.0	27.5		0.8	60	360	7.5	10.5
8.0	800	32.0	33.0	18.0	27.5		0.8	60	480	9.5	9.5
9.0	800	32.0	33.0	18.0	27.5		0.8	60	540	10.0	8.5
10.0	800	32.0	37.0	22.0	27.5		0.8	60	600	11.5	9.5

DC-Link Capacitor for PCB

尺寸 Dimensions(mm)

Cap	Rated Voltage	Dimensions						dv/dt	Peak Current	Irms	ESR 10KHz
		W ± 0.5(0.02)	H ± 0.5(0.02)	T ± 0.5(0.02)	P1 ± 1.0(0.04)	P2 ± 1.0(0.04)	d ± 0.05(0.002)				
uF	V	mm	mm	mm	mm	mm	mm	V/us	A	A	mΩ
10.0	800	42.5	32.0	19.0	37.5		1.0	35	350	8.0	12.5
15.0	800	42.5	40.0	20.0	37.5	10.2	1.2	35	525	10.0	8.0
20.0	800	42.5	37.0	28.0	37.5	10.2	1.2	35	700	12.0	7.0
20.0	800	42.5	44.0	24.0	37.5	10.2	1.2	35	700	13.5	6.5
22.0	800	42.5	44.0	24.0	37.5	10.2	1.2	35	770	14.0	6.0
25.0	800	42.5	45.0	30.0	37.5	20.3	1.2	35	875	14.0	5.5
30.0	800	42.5	45.0	30.0	37.5	20.3	1.2	35	1050	16.0	4.5
35.0	800	57.5	45.0	30.0	52.5	20.3	1.2	20	700	14.2	6.5
40.0	800	57.5	45.0	30.0	52.5	20.3	1.2	20	800	14.0	6.0
45.0	800	57.5	45.0	30.0	52.5	20.3	1.2	20	900	15.5	5.5
47.0	800	57.5	50.0	35.0	52.5	20.3	1.2	20	940	17.5	5.0
50.0	800	57.5	50.0	35.0	52.5	20.3	1.2	20	1000	16.0	5.0
55.0	800	57.5	50.0	35.0	52.5	20.3	1.2	20	1100	17.0	4.6
65.0	800	57.5	60.0	35.0	52.5	20.3	1.2	20	1300	19.0	4.0
65.0	800	57.5	55.0	45.0	52.5	20.3	1.2	20	1300	20.0	4.0
70.0	800	57.5	55.0	45.0	52.5	20.3	1.2	20	1400	20.0	3.8
70.0	800	57.5	60.0	35.0	52.5	20.3	1.2	20	1400	20.0	3.8
75.0	800	57.5	55.0	45.0	52.5	20.3	1.2	20	1500	22.0	3.8
75.0	800	57.5	65.0	35.0	52.5	20.3	1.2	20	1500	22.0	3.8
80.0	800	57.5	65.0	45.0	52.5	20.3	1.2	20	1600	23.0	3.5
80.0	800	57.5	70.0	35.0	52.5	20.3	1.2	20	1600	23.0	3.5
90.0	800	57.5	65.0	45.0	52.5	20.3	1.2	20	1800	25.0	3.3
90.0	800	57.5	80.0	35.0	52.5	20.3	1.2	20	1800	25.0	3.3
100.0	800	57.5	65.0	45.0	52.5	20.3	1.2	20	2000	28.0	3.2
Voltage Vndc 900V							Voltage Code C				
1.0	900	32.0	18.0	9.0	27.5		0.8	60	60	2.0	63.0
2.0	900	32.0	20.0	11.0	27.5		0.8	60	120	3.0	25.0
3.0	900	32.0	22.0	13.0	27.5		0.8	60	180	5.0	18.5
3.3	900	32.0	24.5	15.0	27.5		0.8	60	198	5.0	18.5
5.0	900	32.0	28.0	18.0	27.5		0.8	60	300	7.0	12.5
6.0	900	32.0	33.0	18.0	27.5		0.8	60	360	8.0	11.0
8.0	900	32.0	37.0	22.0	27.5		0.8	60	480	10.5	10.0
10.0	900	32.0	37.0	22.0	27.5		0.8	60	600	12.0	10.0
10.0	900	42.5	40.0	20.0	37.5		1.0	35	350	8.5	12.0
10.0	900	42.5	40.0	20.0	37.5	10.2	1.2	35	350	9.5	11.5
15.0	900	42.5	44.0	24.0	37.5		1.0	35	525	10.5	8.0
15.0	900	42.5	44.0	24.0	37.5	10.2	1.2	35	525	12.0	7.5
18.0	900	42.5	44.0	24.0	37.5		1.0	35	630	10.5	8.0
18.0	900	42.5	44.0	24.0	37.5	10.2	1.2	35	630	12.0	7.5
20.0	900	42.5	45.0	30.0	37.5		1.0	35	700	14.0	6.0
20.0	900	42.5	45.0	30.0	37.5	20.3	1.2	35	700	15.0	5.5
20.0	900	57.5	22.0	43.0	52.5	20.3	1.2	20	400	12.0	8.6
25.0	900	42.5	45.0	30.0	37.5	20.3	1.2	35	875	17.0	5.5
30.0	900	42.5	50.0	35.0	37.5	20.3	1.2	35	1050	19.0	5.0

DC-Link Capacitor for PCB

尺寸 Dimensions(mm)

Cap	Rated Voltage	Dimensions						dv/dt	Peak Current	Irms	ESR 10KHz
		W ± 0.5(0.02)	H ± 0.5(0.02)	T ± 0.5(0.02)	P1 ± 1.0(0.04)	P2 ± 1.0(0.04)	d ± 0.05(0.002)				
uF	V	mm	mm	mm	mm	mm	mm	V/us	A	A	mΩ
30.0	900	57.5	45.0	30.0	52.5	20.3	1.2	20	600	15.0	5.5
35.0	900	57.5	50.0	35.0	52.5	20.3	1.2	20	700	15.5	5.5
40.0	900	57.5	50.0	35.0	52.5	20.3	1.2	20	800	16.0	6.5
50.0	900	57.5	50.0	35.0	52.5	20.3	1.2	20	1000	18.0	3.6
55.0	900	57.5	60.0	35.0	52.5	20.3	1.2	20	1100	19.0	3.5
55.0	900	57.5	55.0	45.0	52.5	20.3	1.2	20	1100	20.0	3.4
60.0	900	57.5	55.0	45.0	52.5	20.3	1.2	20	1200	20.0	3.4
65.0	900	57.5	70.0	35.0	52.5	20.3	1.2	20	1300	22.0	3.3
70.0	900	57.5	55.0	45.0	52.5	20.3	1.2	20	1400	24.0	3.2
70.0	900	57.5	80.0	35.0	52.5	20.3	1.2	20	1400	24.0	3.2
80.0	900	57.5	65.0	45.0	52.5	20.3	1.2	20	1600	25.0	3.2
Voltage Vndc 1000V							Voltage Code K				
1.0	1000	32.0	20.0	11.0	27.5		0.8	80	80	2.5	45.0
2.0	1000	32.0	22.0	13.0	27.5		0.8	80	160	3.5	30.0
3.0	1000	32.0	24.5	15.0	27.5		0.8	80	240	5.0	25.0
5.0	1000	32.0	33.0	18.0	27.5		0.8	80	400	8.0	14.0
8.0	1000	32.0	37.0	22.0	27.5		0.8	80	640	10.0	12.0
10.0	1000	42.5	40.0	20.0	37.5		1.0	40	400	8.5	12.0
10.0	1000	42.5	40.0	20.0	37.5	10.2	1.2	40	400	9.5	11.5
12.0	1000	42.5	44.0	24.0	37.5	10.2	1.2	40	480	10.5	9.0
15.0	1000	42.5	44.0	24.0	37.5		1.0	40	600	10.5	8.0
15.0	1000	42.5	44.0	24.0	37.5	10.2	1.2	40	600	12.0	7.5
15.0	1000	42.5	45.0	30.0	37.5	20.3	1.2	40	600	14.0	7.5
15.0	1000	57.5	22.0	43.0	52.5	20.3	1.2	40	600	12.0	8.5
20.0	1000	42.5	45.0	30.0	37.5	20.3	1.2	40	800	15.0	6.5
25.0	1000	42.5	50.0	35.0	37.5	20.3	1.2	40	1000	18.0	5.5
30.0	1000	57.5	45.0	30.0	52.5	20.3	1.2	25	750	15.0	5.5
35.0	1000	57.5	50.0	35.0	52.5	20.3	1.2	25	875	16.0	5.5
40.0	1000	57.5	50.0	35.0	52.5	20.3	1.2	25	1000	16.0	5.0
40.0	1000	57.5	55.0	45.0	52.5	20.3	1.2	25	1000	17.0	5.0
50.0	1000	57.5	55.0	45.0	52.5	20.3	1.2	25	1250	19.0	4.5
50.0	1000	57.5	65.0	35.0	52.5	20.3	1.2	25	1250	19.0	4.5
55.0	1000	57.5	70.0	35.0	52.5	20.3	1.2	25	1375	20.0	4.4
60	1000	57.5	80.0	35.0	52.5	20.3	1.2	25	1500	22.0	4.0
60	1000	57.5	65.0	45.0	52.5	20.3	1.2	25	1500	22.0	4.0
Voltage Vndc 1100V							Voltage Code L				
1	1100	32.0	20.0	11.0	27.5		0.8	80	80	2.5	45.0
1.5	1100	32.0	22.0	13.0	27.5		0.8	80	120	3.5	30.0
2.0	1100	32.0	24.5	15.0	27.5		0.8	80	160	4.0	25.0
2.2	1100	32.0	28.0	14.0	27.5		0.8	80	176	5.0	16.5
3.3	1100	32.0	28.0	18.0	27.5		0.8	80	264	6.5	11.5
4.0	1100	32.0	33.0	18.0	27.5		0.8	80	320	8.0	10.5
5.0	1100	32.0	37.0	22.0	27.5		0.8	80	400	8.5	9.5
6.8	1100	42.5	33.5	22.0	37.5	10.2	1.2	40	272	12.0	13.5

DC-Link Capacitor for PCB

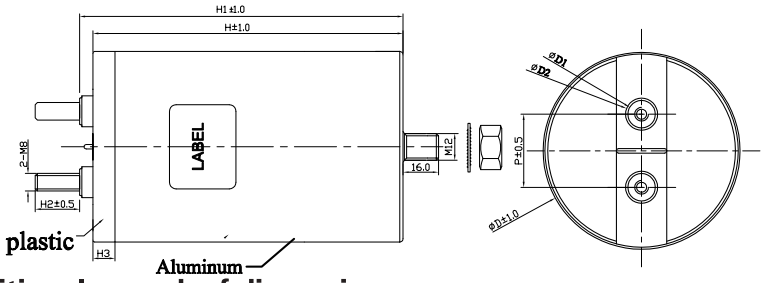
尺寸 Dimensions(mm)

Cap	Rated Voltage	Dimensions						dv/dt	Peak Current	Irms	ESR 10KHz
		W ± 0.5(0.02)	H ± 0.5(0.02)	T ± 0.5(0.02)	P1 ± 1.0(0.04)	P2 ± 1.0(0.04)	d ± 0.05(0.002)				
uF	V	mm	mm	mm	mm	mm	mm	V/us	A	A	mΩ
8.0	1100	42.5	40.0	20.0	37.5		1.0	40	320	10.5	14.0
8.0	1100	42.5	40.0	20.0	37.5	10.2	1.2	40	320	12.5	12.5
8.0	1100	42.5	37.0	22.0	37.5	10.2	1.2	40	320	12.5	12.5
9.0	1100	42.5	37.0	22.0	37.5	10.2	1.2	40	360	12.8	12.2
10.0	1100	42.5	44.0	24.0	37.5		1.0	40	400	14.0	9.0
10.0	1100	42.5	44.0	24.0	37.5	10.2	1.2	40	400	15.0	8.5
12.0	1100	42.5	45.0	30.0	37.5	20.3	1.2	40	480	15.5	7.5
15.0	1100	42.5	45.0	30.0	37.5	20.3	1.2	40	600	16.0	7.0
18.0	1100	42.5	50.0	35.0	37.5	20.3	1.2	40	720	15.5	7.5
20.0	1100	42.5	50.0	35.0	37.5	20.3	1.2	40	800	16.5	7.2
20.0	1100	57.5	45.0	30.0	52.5	20.3	1.2	25	500	12.0	8.5
25.0	1100	57.5	50.0	35.0	52.5	20.3	1.2	25	625	13.0	8.2
30.0	1100	57.5	50.0	35.0	52.5	20.3	1.2	25	750	15.0	5.0
35.0	1100	57.5	60.0	35.0	52.5	20.3	1.2	25	875	16.0	4.9
40.0	1100	57.5	65.0	35.0	52.5	20.3	1.2	25	1000	17.0	5.5
40.0	1100	57.5	55.0	45.0	52.5	20.3	1.2	25	1000	17.0	5.5
45.0	1100	57.5	70.0	35.0	52.5	20.3	1.2	25	1125	18.0	5.4
50.0	1100	57.5	65.0	45.0	52.5	20.3	1.2	25	1250	19.5	5.2
Voltage Vndc 1200V							Voltage Code P				
1.0	1200	32.0	20.0	11.0	27.5		0.8	90	90	4.5	32.5
2.0	1200	32.0	24.5	15.0	27.5		0.8	90	180	5.0	32.5
2.2	1200	32.0	28.0	18.0	27.5		0.8	90	198	5.5	17.0
3.0	1200	32.0	28.0	18.0	27.5		0.8	90	270	7.0	16.0
3.3	1200	32.0	33.0	18.0	27.5		0.8	90	297	8.0	13.5
5.0	1200	32.0	37.0	22.0	27.5		0.8	90	450	10.0	12.0
5.0	1200	42.5	33.5	22.0	37.5		1.0	45	225	7.5	15.5
6.0	1200	42.5	40.0	20.0	37.5		1.0	45	270	7.5	15.5
7.0	1200	42.5	37.0	22.0	37.5	10.2	1.2	45	315	8.0	15.2
8.0	1200	42.5	44.0	24.0	37.5	10.2	1.2	45	360	9.0	12.5
10.0	1200	42.5	44.0	24.0	37.5	10.2	1.2	45	450	10.0	10.5
10.0	1200	42.5	45.0	30.0	37.5	20.3	1.2	45	450	12.0	8.0
15.0	1200	42.5	50.0	35.0	37.5	20.3	1.2	45	675	15.0	6.5
20.0	1200	57.5	45.0	30.0	52.5	20.3	1.2	30	600	13.0	8.5
25.0	1200	57.5	50.0	35.0	52.5	20.3	1.2	30	750	15.0	6.5
30.0	1200	57.5	55.0	45.0	52.5	20.3	1.2	30	900	17.0	5.5
30.0	1200	57.5	60.0	35.0	52.5	20.3	1.2	30	900	17.0	5.5
35.0	1200	57.5	55.0	45.0	52.5	20.3	1.2	30	1050	18.0	5.0
35.0	1200	57.5	70.0	35.0	52.5	20.3	1.2	30	1050	18.0	5.0
40.0	1200	57.5	65.0	45.0	52.5	20.3	1.2	30	1200	20.0	4.5
45.0	1200	57.5	65.0	45.0	52.5	20.3	1.2	30	1350	22.0	4.3

Hongfarad

铝壳干式直流滤波电容器
DC-Link Capacitor （Dry-Type, Aluminum case）

■ 外形图 Outline Drawing



尺寸附加说明 Additional remark of dimensions

D=76mm	P=32mm; D1=12mm; D2=14mm; H3=10mm		
D=86mm	P=32mm; D1=12mm; D2=14mm; H3=10mm or 45mm		
	P=45mm;	Female terminals: D1=14mm; D2=16mm; H3=10mm or 45mm	
		Male terminals: D1=16mm; D2=20mm; H3=10mm or 45mm	
D=100mm	P=50mm; D1=14mm; D2=16mm;		H ≤ 100mm, H3=10mm
			H > 100mm, H3=45mm
D=116mm	P=50mm; D1=14mm; D2=16mm;		H ≤ 100mm, H3=10mm
			H > 100mm, H3=45mm
D=136mm	P=50mm; D1=14mm; D2=16mm; H3=45mm		
H3 can be changed in pursuance of customer's request. (H3=45mm when rated voltage > 1500Vdc)			

■ 特点

- 应用于直流滤波电路中，可替代电解电容
- 等效串联电阻小，能承受较大的纹波电流
- 自感小
- 有自愈性
- 寿命长
- 铝壳，树酯灌封

■ Features

- Used in DC-Link circuits,Can replace electrolytic capacitor
- Low ESR, high ripple current handling capabilities
- Low Ls
- Self-healing property
- Long lifetime
- Aluminum case, Filled with resin

■ 应用场合

- 风能发电、太阳能发电用变频器上
- 交通工具，如：电动车和混合动力车
- 焊接设备，电梯，电机驱动

■ Applications

- Used in inverters of wind power and solar power
- Transportation: EV or HEV
- Welders,Elevators,Motor Driver systems

■ 技术要求 Specifications

引用标准 Reference Standard	GB/T 17702（IEC 6107）	
气候类别 Climatic Category	D ≤ 116mm：40/85/56 D = 136mm：40/80/56	
工作温度范围 Operating Temperature Range	D ≤ 116mm：–40℃ ~ 85℃（Θ_{hs} ≤ 85℃） D = 136mm：–40℃ ~ 80℃（Θ_{hs} ≤ 80℃）	
贮存温度范围 Storage temperature range	–40℃ ~ 85℃	
电压范围 Voltage Range	600Vdc ~ 4 000Vdc	
容量范围 Capacitance Range	24μF ~ 5 600μF	
电容量允许偏差 Capacitance Tolerance	±5%(J)； ±10%(K)	
耐电压（两极之间）Test Voltage Between Terminals	1.5U_N (10s, 20℃ ±5℃)	
耐电压（极壳之间） Test Voltage Between Terminals And Case	U_N < 1 500Vdc, 3 000Vac(10s，50Hz, 20℃ ±5℃) U_N ≥ 1 500Vdc, ($\sqrt{2}U_N$+1 000)Vac(10s，50Hz, 20℃ ±5℃)	
介质损耗角正切 tg δ_d	0.0002	
IR × C_N	≥ 5 000s (20℃ ,500Vdc,1min)	
过电压 Over Voltage	1.1U_N (30% of on–load–dur.)	
	1.15U_N (30min/day)	
	1.2U_N (5min/day)	
	1.3U_N (1min/day)	
	1.5U_N (30ms every time, 1 000times during the life of the capacitor)	
最高使用海拔 Max. Altitude	2 000m	
最大电极扭矩 Max. Torque of terminals	M6: 5Nm	M8:6Nm
最大安装扭矩 Max. Torque of Installation	10Nm	
安装 Installation	任意方向 Any Position	
预期寿命 Expected lifetime	100 000hrs @ U_N, Θ_{hs}=70℃	
失效率 Failure rate	50FIT	

DC-Link Capacitor （Dry-Type, Aluminum case）

尺寸 Dimensions(mm)

U_N (Vdc)	C_N (μF)	ESR @1kHz (mΩ)	L_s (nH)	R_{th} (K/W)	Î (A)	I_{max} (A)			Dimension		
						40℃	50℃	60℃	ΦD	H	H1
600	480	1.5	45	5.6	1 560	70	65	55	76	95	101
	650	1.9	50	4.7	1 560	70	63	53	76	120	126
	780	2.2	55	4.6	1 550	67	59	50	76	140	146
	820	1.5	40	4.3	3 060	70	70	62	76	155	161
	950	1.5	45	4.2	3 090	70	70	63	76	174	180
	650	1.2	45	5.1	2 120	70	70	64	86	95	101
	880	1.5	50	4.7	2 110	70	70	60	86	120	126
	1000	1.8	55	4.6	2 070	70	65	55	86	136	142
	1100	1.7	55	4.6	2 180	70	67	57	86	140	146
	1100	1.4	40	4.4	4 110	70	70	64	86	155	161
	1300	1.4	45	4.3	4 230	70	70	64	86	174	180
	2000	1.1	55	3.0	6 510	70	70	70	86	252	258
	900	1.3	45	4.7	2 900	70	70	58	100	95	100
	1 200	1.4	50	4.1	2 850	70	70	58	100	120	125
	1 400	1.5	55	3.9	2 870	70	70	58	100	136	141
	1 500	1.6	55	3.8	2 740	70	70	58	100	140	145
	1 600	1.0	40	3.5	5 920	70	70	70	100	155	160
	1 800	1.0	45	3.2	5 800	70	70	70	100	174	179
	1 200	0.7	45	5.4	3 900	80	80	80	116	95	100
	1 600	1.0	50	5.0	3 830	80	80	70	116	120	125
	2 000	1.1	55	4.9	3 960	80	80	67	116	140	145
	2 100	0.8	40	3.6	7 840	100	100	92	116	158	163
	2 400	0.9	45	3.4	7 810	100	100	90	116	174	179
	3 000	0.8	50	2.7	11 200	100	100	100	116	230	235
	5 600	0.8	60	2.0	15 940	100	100	100	136	295	300
900	290	2.0	45	5.6	1 530	63	56	47	76	95	101
	400	2.6	50	4.7	1 560	61	54	45	76	120	126
	480	2.9	55	4.6	1 540	58	51	43	76	140	146
	480	1.7	40	4.3	2 910	70	69	58	76	155	161
	560	1.8	45	4.2	2 960	70	68	58	76	174	180
	380	1.6	45	5.1	2 010	70	65	55	86	95	101
	520	2.1	50	4.7	2 020	68	60	50	86	120	126
	580	2.2	55	4.6	1 950	67	59	50	86	136	142
	630	2.4	55	4.6	2 030	64	56	48	86	140	146
	650	1.5	40	4.4	3 940	70	70	62	86	155	161
	750	1.6	45	4.3	3 960	70	70	60	86	174	180
	1 100	1.3	55	3.0	5 810	70	70	70	86	252	258
	500	1.4	45	4.7	2 620	70	67	55	100	95	100
	700	1.6	50	4.1	2 700	70	67	55	100	120	125
	800	1.8	55	3.9	2 660	70	66	54	100	136	141
	850	1.8	55	3.8	2 700	70	66	54	100	140	145
	900	1.1	40	3.5	5 400	70	70	70	100	155	160
	1 000	1.1	45	3.2	5 230	70	70	70	100	174	179
	720	0.9	45	5.4	3 800	80	80	71	116	95	100
	980	1.2	50	5.0	3 810	80	76	64	116	120	125
	1 200	1.4	55	4.9	3 860	80	71	60	116	140	145
	1 200	0.9	40	3.6	7 280	100	100	87	116	158	163
	1 500	1.1	45	3.4	7 920	100	96	81	116	174	179
	1 800	0.8	50	2.7	10 910	100	100	100	116	230	235
	3 200	0.8	60	2.0	14 780	100	100	100	136	295	300

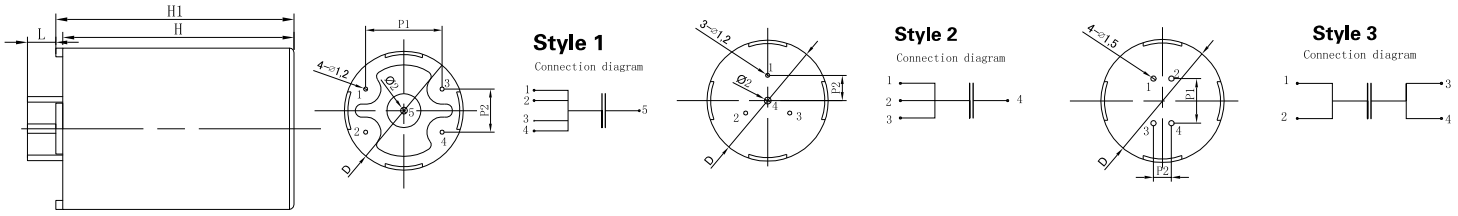
DC-Link Capacitor （Dry-Type, Aluminum case）

尺寸 Dimensions(mm)

U_N (Vdc)	C_N (μF)	ESR @1kHz (mΩ)	L_s (nH)	R_{th} (K/W)	Î (A)	I_{max} (A)			Dimension		
						40℃	50℃	60℃	ΦD	H	H1
1 100	180	2.3	45	5.6	1 400	59	52	44	76	95	101
	250	3.0	50	4.7	1 430	56	50	42	76	120	126
	300	3.5	55	4.6	1 420	53	47	39	76	140	146
	310	1.9	40	4.3	2 770	70	65	55	76	155	161
	360	2.0	45	4.2	2 800	70	65	55	76	174	180
	240	1.9	45	5.1	1 870	68	60	51	86	95	101
	330	2.4	50	4.7	1 890	63	56	47	86	120	126
	420	2.3	55	4.6	2 080	65	58	49	86	136	142
	420	1.7	40	4.4	3 750	70	63	52	86	155	161
	500	1.8	45	4.3	3 730	70	67	57	86	174	180
	750	1.3	55	3.0	5 840	70	70	70	86	252	258
	350	1.5	45	4.7	2 640	70	65	53	100	95	100
	450	1.8	50	4.1	2 500	70	63	51	100	120	125
	520	2.0	55	3.9	2 500	70	62	50	100	136	141
	550	2.1	55	3.8	2 520	70	62	51	100	140	145
	580	1.1	40	3.5	5 020	70	70	70	100	155	160
	650	1.2	45	3.2	4 900	70	70	70	100	174	179
	450	1.0	45	5.4	3 500	80	80	68	116	95	100
	620	1.4	50	5.0	3 550	80	70	59	116	120	125
	750	1.6	55	4.9	3 550	75	66	56	116	140	145
	780	0.9	40	3.6	6 960	100	100	85	116	158	163
	920	1.1	45	3.4	7 150	100	96	81	116	174	179
	1 200	0.9	50	2.7	10 710	100	100	100	116	230	235
	2 200	0.9	60	2.0	14 960	100	100	100	136	295	300
1 500	90	3.3	45	5.6	1 220	49	44	37	76	95	101
	120	4.4	50	4.7	1 200	47	41	35	76	120	126
	150	4.9	55	4.6	1 230	45	39	33	76	140	146
	150	2.4	40	4.3	2 340	66	58	49	76	155	161
	170	2.5	45	4.2	2 310	65	58	49	76	174	180
	120	2.6	45	5.1	1 630	58	51	43	86	95	101
	170	3.3	50	4.7	1 690	54	48	40	86	120	126
	200	3.0	55	4.6	1 720	57	50	43	86	136	142
	210	2.0	40	4.4	3 280	70	63	53	86	155	161
	240	2.1	45	4.3	3 260	70	62	53	86	174	180
	380	1.5	55	3.0	5 080	70	70	70	86	252	258
	160	1.9	45	4.7	2 150	67	58	47	100	95	100
	210	2.3	50	4.1	2 080	65	56	46	100	120	125
	250	2.5	55	3.9	2 140	64	55	45	100	136	141
	280	1.3	40	3.5	4 320	70	70	67	100	155	160
	320	1.3	45	3.2	4 300	70	70	68	100	174	179
	230	1.4	45	5.4	3 120	77	68	57	116	95	100
	320	1.9	50	5.0	3 180	68	60	51	116	120	125
	390	2.1	55	4.9	3 200	66	58	49	116	140	145
	420	1.1	40	3.6	6 550	100	94	79	116	158	163
	470	1.3	45	3.4	6 280	89	79	66	116	174	179
	600	1.0	50	2.7	9 200	100	89	75	116	230	235
	1 100	1.1	60	2.0	12 850	100	100	95	136	295	300

PCB用DC-Link电容器
DC-Link Capacitor for PCB

■ 外形图 Outline Drawing



■ 特点

- 塑料外壳，干式封装
- 等效串联电阻小，能承受较大的纹波电流
- 自感小
- 寿命长

■ 应用场合

- 用于DC-Link电路替代电解电容
- 用于中小功率大阳能逆变器
- 用于焊接设备，中央空调，商用空调变频器，电梯设备，工业电机驱动器

■ Features

- Plastic case, dry construction
- Low ESR, high ripple current ability
- Low L_S
- Long life

■ Applications

- Used to replace electrolytic capacitor in DC-Link circuits
- Used in small and medium power solar inverter
- Used in welding instruments, central air-conditioning inverter, commercial air conditioning inverter, elevator driver, industrial motor driver

■ 技术要求 Specifications

引用标准 Reference Standard	GB/T 17702（IEC 61071）
气候类别 Climatic Category	40/85/56
工作温度范围 Operating Temperature Range	–40℃ ~ 85℃（Θ_{hs} ≤ 85℃）
贮存温度范围 Storage Temperature Range	–40℃ ~ 85℃
电压范围 Voltage Range	500Vdc ~ 1 500Vdc
容量范围 Capacitance Range	4.7μF ~ 260μF
电容量允许偏差 Capacitance Tolerance	±5%(J)； ±10%(K)
耐电压（两极之间） Test Voltage Between Terminals	1.5U_N (10s, 20℃ ±5℃)
耐电压（极壳之间） Test Voltage Between Terminals And Case	U_N < 1 500Vdc, 3 000Vac(10s，50Hz, 20℃ ±5℃) U_N ≥ 1 500Vdc, ($\sqrt{2}$ U_N+1 000)Vac(10s，50Hz, 20℃ ±5℃)
介质损耗角正切 tg δ_d	0.0002
IR × C_N	≥ 5 000s (20℃ ,500Vdc,1min)
过电压 Over Voltage	1.1U_N (30% of on–load–dur.)
	1.15U_N (30min/day)
	1.2U_N (5min/day)
	1.3U_N (1min/day)
	1.5U_N (30ms every time, 1 000 times during the life of the capacitor)
最高使用海拔 Max. Altitude	2 000m
安装 Installation	任意方向 Any Position
预期寿命 Expected lifetime	100 000hrs @ U_N, Θ_{hs}=70℃
失效率 Failure rate	50FIT

DC-Link Capacitor for PCB

尺寸 Dimensions(mm)

U_N (Vdc)	C_N (μF)	ESR @1kHz (mΩ)	L_s (nH)	R_{th} (K/W)	Î (A)	I_{max} (A)			Dimension		
						40℃	50℃	60℃	ΦD	H	H1
500	35	4.6	40	19.0	1 050	20	17	13	35	50.5	52
	44	4.5	40	18.0	1 100	22	19	16	35	–	57
	55	5.3	45	15.5	1 100	22	19	16	35	–	67
	85	2.7	35	10.9	2 125	34	29	23	50	55.5	57
	100	3	45	10.0	2 000	34	29	22	50	61.5	63
	200	3.6	50	7.4	2 000	35	31	24	50	93.5	95
	260	4.7	65	6.1	1 300	35	30	23	50	118.5	120
600	30	4.6	40	19.0	900	20	17	13	35	50.5	52
	38	4.5	40	18.0	950	22	19	16	35	–	57
	50	5.0	45	15.5	1 000	23	20	16	35	–	67
	80	3.2	45	10.0	1 600	33	28	22	50	61.5	63
700	28	6.0	40	18.0	700	19	17	14	35	–	57
	36	6.8	45	15.5	720	19	17	14	35	–	67
	58	2.7	35	10.9	1 450	34	29	23	50	55.5	57
	150	3.1	50	7.4	1 400	35	35	30	50	–	95
	190	4.6	60	6.1	950	35	30	23	50	118.5	120
900	14	6.7	40	19.0	420	17	14	11	35	50.5	52
	35	4.7	45	10.0	875	27	23	18	50	61.5	63
	36	3.4	35	10.9	900	31	26	20	50	55.5	57
	45	2.8	35	10.9	1 125	34	29	22	50	55.5	57
	48	2.7	35	10.9	960	34	29	23	50	55.5	57
	110	3.9	50	7.4	1 100	35	29	23	50	93.5	95
	150	4.9	60	6.1	300	34	29	22	50	118.5	120
1000	10	7.3	40	19.0	300	16	13	10	35	50.5	52
	25	5.6	45	10.0	500	25	21	16	50	61.5	63
1100	30	3.1	35	10.9	750	32	27	21	50	55.5	57
	73	4.3	50	7.4	730	33	28	22	50	93.5	95
	100	5.6	60	6.1	500	32	27	21	50	118.5	120
1200	7.5	7.4	40	19.0	225	16	13	10	35	50.5	52
	20	5.4	45	10.0	400	25	22	17	50	61.5	63
1300	12	5.5	40	10.9	300	24	20	16	50	55.5	57
	17	4	35	10.9	425	28	24	19	50	55.5	57
	41	5.8	50	7.4	410	29	24	19	50	93.5	95
	50	7.8	60	6.1	250	27	23	18	50	118.5	120
1500	4.7	8.2	40	19.0	141	15	13	10	35	50.5	52
	13	5.9	45	10.0	260	24	21	16	50	61.5	63

DPV series

Overview

The DPV series is constructed of metallized polypropylene film with plastic casing filled with epoxy resin with terminals. The capacitors are suitable for EV/HEV circuits, can replace electrolytic capacitor completely.

Applications

- Transportation: EV/HEV DC-Link circuits.

Features

- Low ESR, low ESL
- Self-healing property
- Long lifetime
- High ripple current

IGBT voltage	*FDE capacitor*	
	Rated voltage	*Maximum voltage*
650 -705	*450*	*500*
750	*500*	*550*
1200	*900*	*950*

Rated voltage is the continuous operating voltage taking into account for the calculation of the expected lifetime.
Rated voltage will be depended on IGBT and battery voltage

Specifications

Items	Characteristics
Reference Standard	IEC 61071 AEC-Q200
Climatic Category	40/105/21 - IEC 60068-1
Rated Voltage	450Vdc~900Vdc
Capacitance Range	300μF~1000μF
Capacitance Tolerance	±5%(J) ±10%(K) at 25°C
Dissipation Factor	0.0010 @100Hz
Test Voltage Between Terminals	1.5Un 10s
Test Voltage Between Terminals to Case	3000 Vac 50Hz 10s
Life Expectancy	Refer to expected lifetime curves
Max Hot-spot Temperature	≤ 105°C (above 85°C, voltage will be derated by 1.35%/°C)
Storage Temperature	-40°C ~ 105°C
Operating Temperature Range:	-40°C ~ 105°C
RoHS Compliant	Compliant with requirements of Directive 2011/65/EU
Storage Conditions	Storage time: ≤ 24 months from the date marked on the label package Temperature and relative humidity should be -10°C ~ +40°C and not more than 75%RH RH ≤ 85% for 30 days randomly distributed throughout the year
Humidity Test	Test conditions & performance:
	Temperature: +40°C ±2°C Relative humidity(RH) :93% ±2%
	Test duration : 21 days
	Capacitance change : ≤±5% DF change (△tgδ):≤50 X 10^{-4} at 100Hz
	Insulation resistance: ≥50% of initial limit
Endurance Test	Test conditions & performance:
	Temperature: +85°C±2°C Voltage applied:1.3 X V_R (d.c.)
	Test duration : 1000 hours
	Capacitance change : ≤±5% DF change (△tgδ):≤50 X 10^{-4} at 100Hz
	Insulation resistance: ≥50% of initial limit
THB Test (Damp heat test with loading)	Test conditions & performance:
	Temperature: +85°C±2°C Relative humidity (RH) :85% ±2%
	Loading Voltage: Rated voltage (DC)
	Test duration : 1000 hours
	Capacitance change : ≤±5%

DPV series

Terminal Configuration

Fig.1a - for Infineon HybridPACK™1 IGBT

Fig.1b - for Infineon HybridPACK™1 IGBT
With side mounting brackets

HybridPACK™1 platform 650V - FS***R07A1**

Ordering Code	Cn μF	Vndc V	Imax A	Lself n H	Rs mΩ	Ipk kA	Is kA	DF max 100Hz	Dimension LxHxW mm	Weight kg	Fig.
	300	450	120	30	0.8	0.9	2.7	$10*10^{-4}$	140*72*50	0.8	1a
	460	450	150	25	0.6	1.5	5.0	$10*10^{-4}$	140*72*50	0.8	1a
	560	450	150	25	0.6	1.8	5.6	$10*10^{-4}$	140*72*50	0.8	1a
	400	450	120	25	0.8	1.4	4.4	$10*10^{-4}$	140*72*50	0.8	1a
	500	450	120	25	0.8	1.6	5.0	$10*10^{-4}$	140*72*50	0.8	1a
	460	450	150	25	0.6	1.5	5.0	$10*10^{-4}$	140*72*50	0.8	1b
	560	450	150	25	0.6	1.8	5.6	$10*10^{-4}$	140*72*50	0.8	1b
	400	450	120	25	0.8	1.4	4.4	$10*10^{-4}$	140*72*50	0.8	1b
	500	450	120	25	0.8	1.6	5.0	$10*10^{-4}$	140*72*50	0.8	1b

Notes:

1) I max: considering maximum hot spot temperature at 105 and cooling efficiency to be validated

2) Further mechanical configurations and capacitor values on request.

3) Dimension and drawing, please refer to datasheet.

* Customized products are available by request, contact us for more details.
* Specification are subject to change, please refer to approved data sheets.

DPV series

Terminal Configuration

Fig.2a - for Infineon HybridPACK™2 IGBT

Fig.2b - for Infineon HybridPACK™2 IGBT

HybridPACK™2 platform 680V - FS***R07A2**

Ordering Code	Cn μF	Vndc V	Imax A	Lself nH	Rs mΩ	Ipk kA	Is kA	DF max 100Hz	Dimension LxHxW mm	Weight kg	Fig.
	500	450	120	15	1.0	1.5	4.5	$10*10^{-4}$	237*72*50	1.2	2a
	700	450	190	15	0.5	2.5	7.5	$10*10^{-4}$	237*72*50	1.2	2a
	900	450	190	15	0.5	3.0	9.0	$10*10^{-4}$	237*72*50	1.2	2a
	1000	450	190	15	0.5	3.2	10.0	$10*10^{-4}$	237*72*50	1.2	2a
	500	450	170	15	0.7	1.8	5.5	$10*10^{-4}$	237*72*50	1.2	2b
	700	450	170	15	0.7	2.8	8.4	$10*10^{-4}$	237*72*50	1.2	2a
	700	450	170	15	0.7	2.8	8.4	$10*10^{-4}$	237*72*50	1.2	2b
	850	450	170	15	0.7	3.1	9.3	$10*10^{-4}$	237*72*50	1.2	2a
	850	450	170	15	0.7	3.1	9.3	$10*10^{-4}$	237*72*50	1.2	2b
	900	450	170	15	0.7	3.3	9.9	$10*10^{-4}$	237*72*50	1.2	2a
	900	450	170	15	0.7	3.3	9.9	$10*10^{-4}$	237*72*50	1.2	2b

Notes:

1) I max: considering maximum hot spot temperature at 105 and cooling efficiency to be validated

2) Further mechanical configurations and capacitor values on request.

3) Dimension and drawing, please refer to datasheet.

* Customized products are available by request, contact us for more details.
* Specification are subject to change, please refer to approved data sheets.

DPV series

Terminal Configuration

Fig.3a - for Infineon HybridPACK™2 IGBT with DC connectors and side mounting brackets

Fig.3b - for Infineon HybridPACK™2 IGBT with side mounting brackets

HybridPACK™2 platform 680V - FS***R07A2**

Ordering Code	Cn µF	Vndc V	Imax A	Lself nH	Rs mΩ	Ipk kA	Is kA	DF max 100Hz	Dimension LxHxW mm	Weight kg	Fig.
	700	450	190	15	0.5	2.5	7.5	$10*10^{-4}$	237*72*50	1.2	3a
	900	450	190	15	0.5	3.0	9.0	$10*10^{-4}$	237*72*50	1.2	3a
	1000	450	190	15	0.5	3.2	10.0	$10*10^{-4}$	237*72*50	1.2	3a
	500	450	170	15	0.7	1.8	5.5	$10*10^{-4}$	237*72*50	1.2	3a
	500	450	170	15	0.7	1.8	5.5	$10*10^{-4}$	237*72*50	1.2	3b
	700	450	170	15	0.7	2.8	8.4	$10*10^{-4}$	237*72*50	1.2	3b
	850	450	170	15	0.7	3.1	9.3	$10*10^{-4}$	237*72*50	1.2	3a
	850	450	170	15	0.7	3.1	9.3	$10*10^{-4}$	237*72*50	1.2	3b
	900	450	170	15	0.7	3.3	9.9	$10*10^{-4}$	237*72*50	1.2	3a
	900	450	170	15	0.7	3.3	9.9	$10*10^{-4}$	237*72*50	1.2	3b

Notes:

1) I max: considering maximum hot spot temperature at 105 and cooling efficiency to be validated

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DPV series

Terminal Configuration

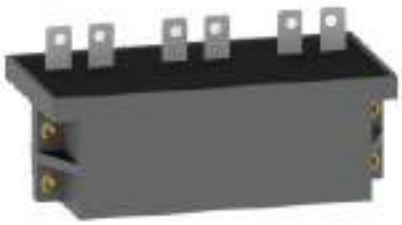

Fig.4a - for others IGBT

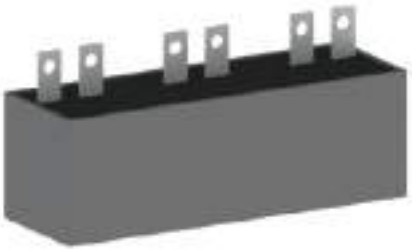

Fig.5a - for others IGBT

Fig.6a - for others IGBT

Fig.7a - for others IGBT

Ordering Code	Cn μF	Vndc V	Imax A	Lself nH	Rs mΩ	Ipk kA	Is kA	DF max 100Hz	Dimension LxHxW mm	Weight kg	Fig.
	800	500	230	30	0.7	4	12	$10*10^{-4}$	194.5*69.5*100	1.5	Fig.4a
	500	800	160	30	0.7	4	12	$10*10^{-4}$	194.5*69.5*100	1.5	Fig.4a
	600	450	200	20	0.6	3	9	$10*10^{-4}$	180*60*60	1.0	Fig.5a
	450	600	160	20	0.7	3	9	$10*10^{-4}$	180*60*60	1.0	Fig.5a
	600	450	110	25	0.5	2	6	$10*10^{-4}$	170*72*65	1.0	Fig.6a
	1000	500	150	30	0.4	4.5	13.5	$10*10^{-4}$	324*130*128	1.7	Fig.7a

Notes:

1) I max: considering maximum hot spot temperature at 105 and cooling efficiency to be validated

2) Further mechanical configurations and capacitor values on request.

3) Dimension and drawing, please refer to datasheet.

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* Specification are subject to change, please refer to approved data sheets.

DPV series

Terminal Configuration

Fig.1a

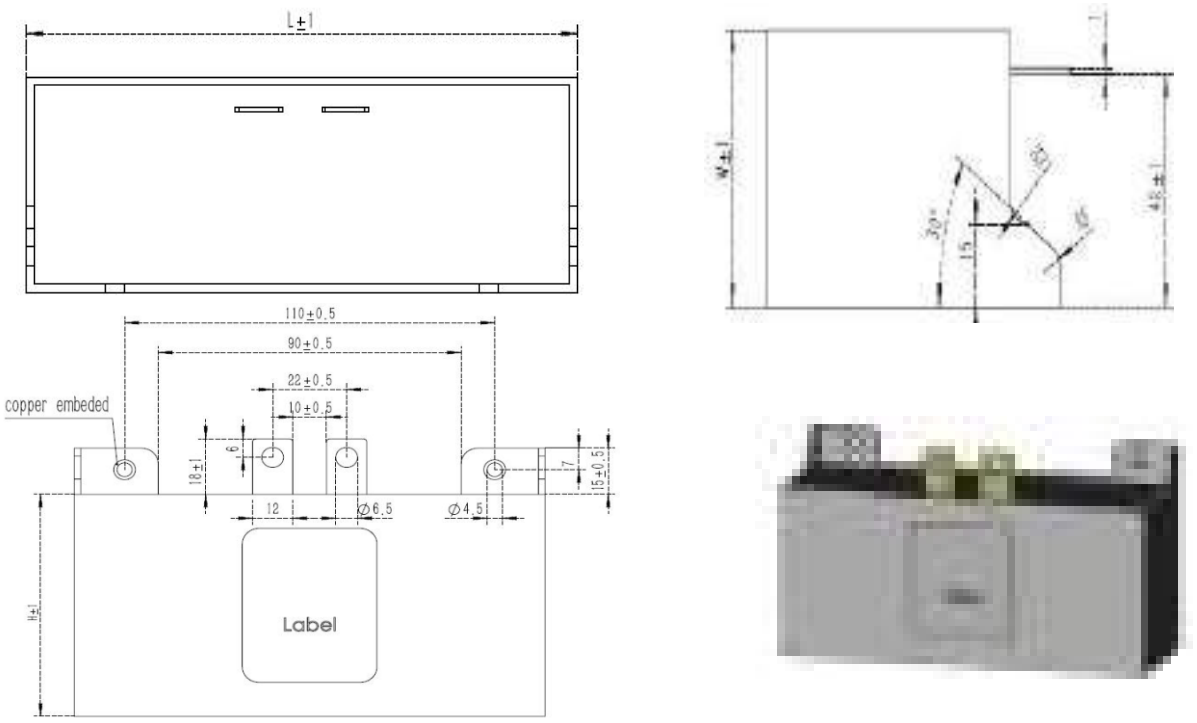
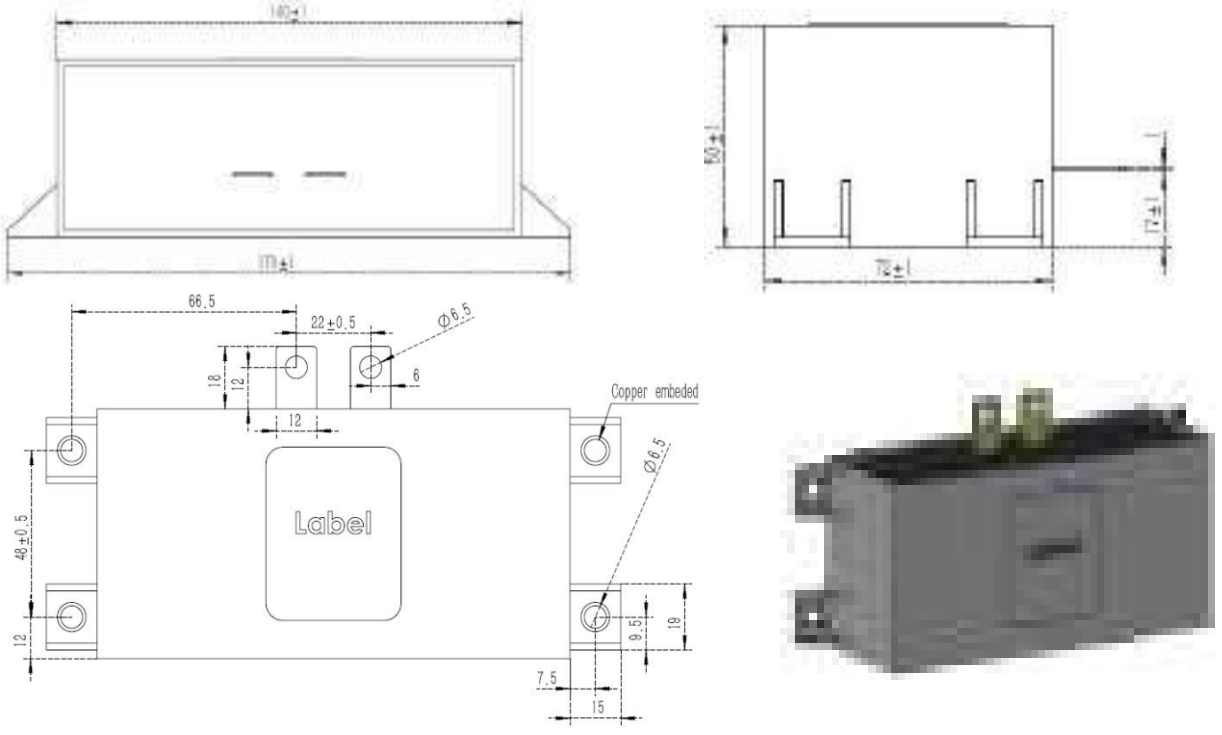


Fig.1b



DPV series

Terminal Configuration

Fig.2a

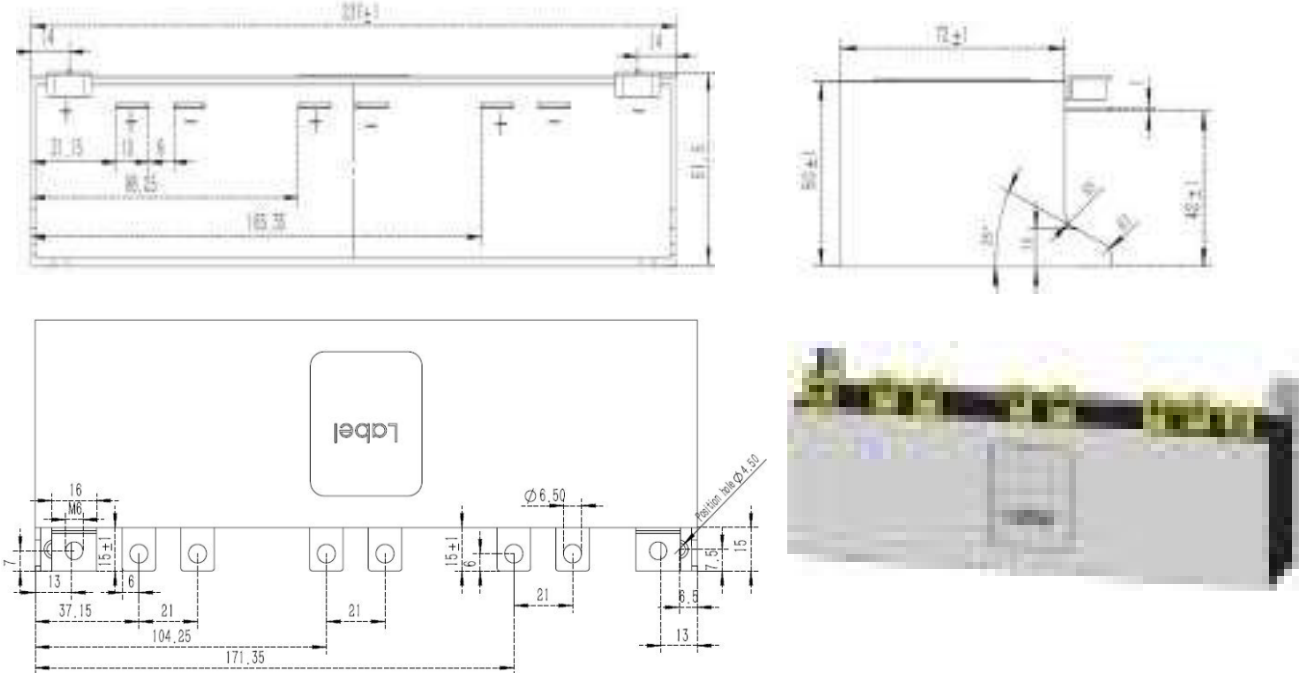
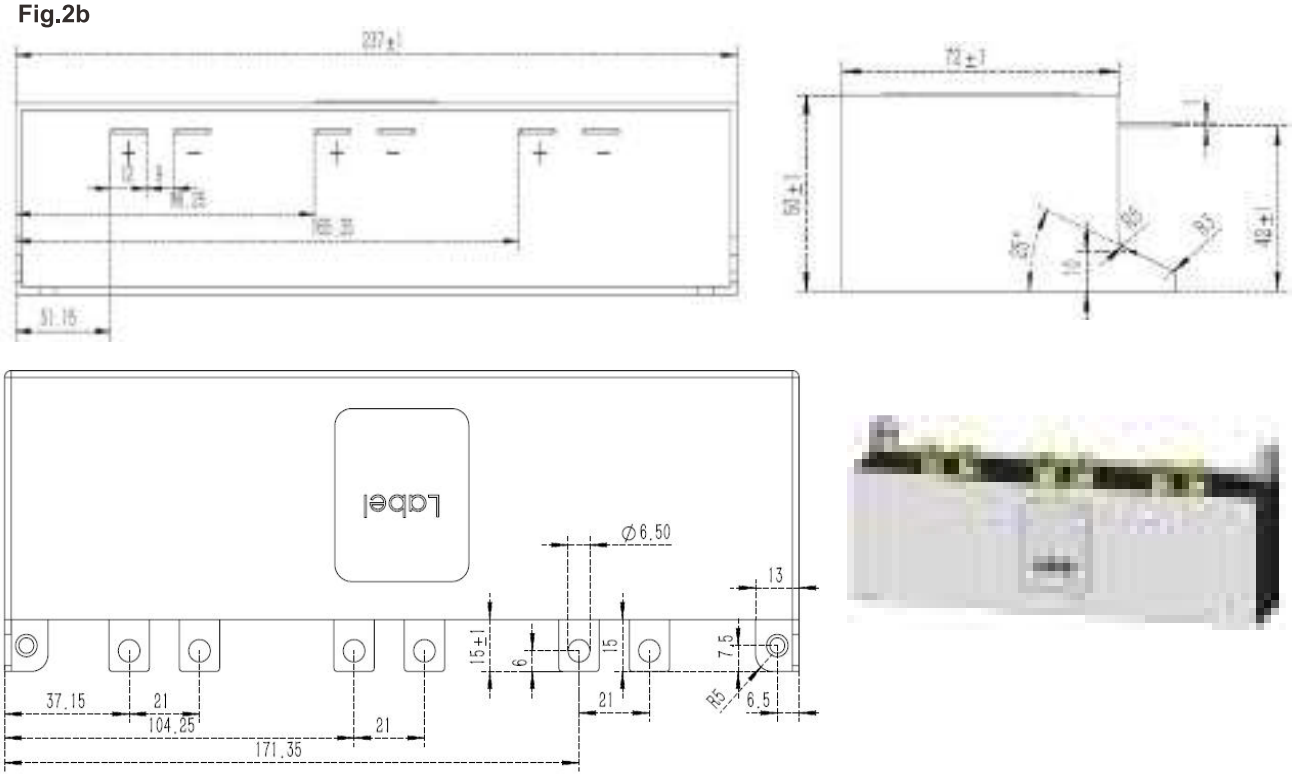


Fig.2b



DPV series

Terminal Configuration

Fig.3a

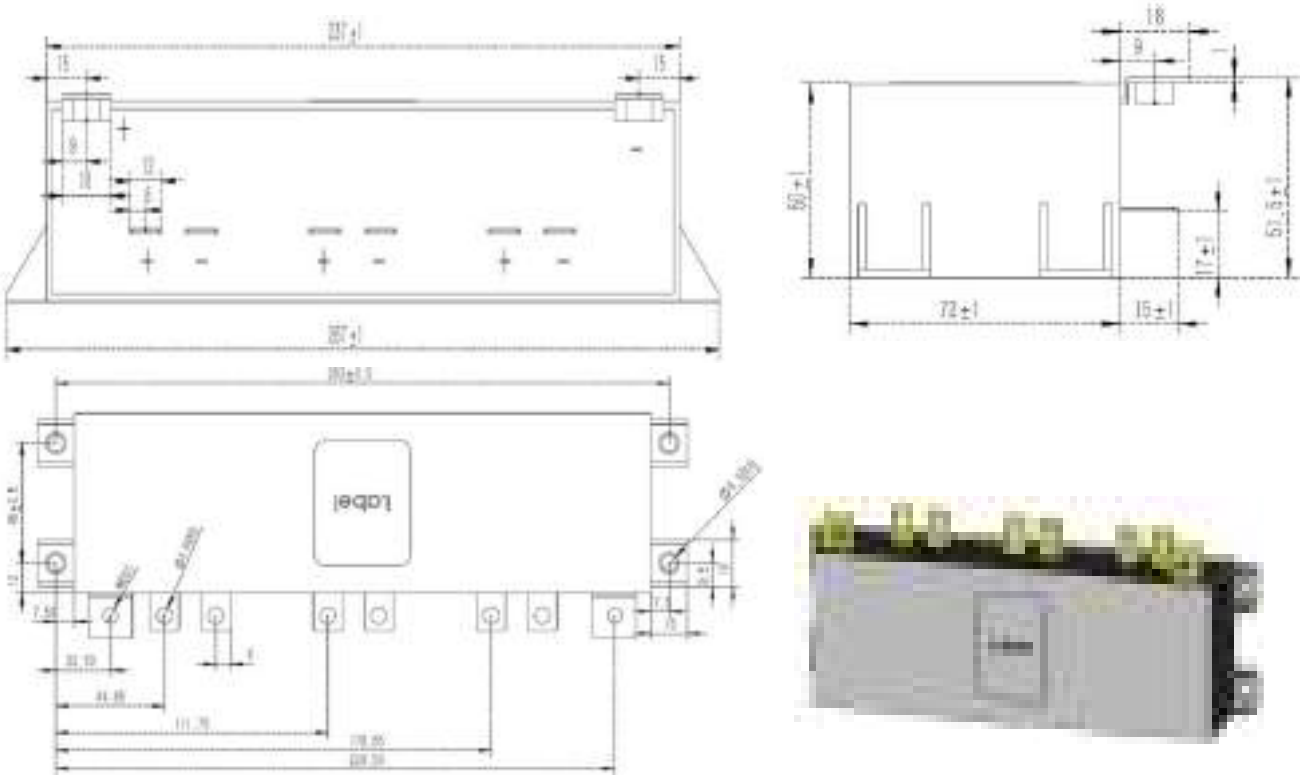
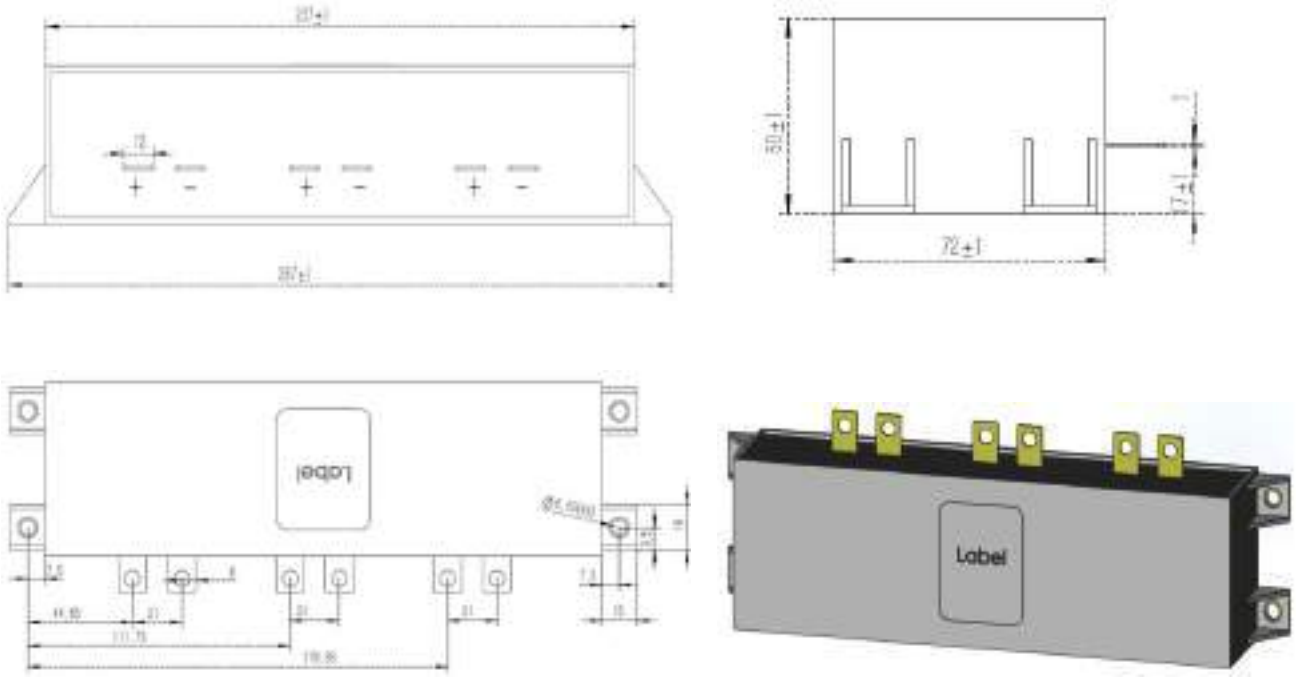


Fig.3b



DPV series

Terminal Configuration

Fig.4a

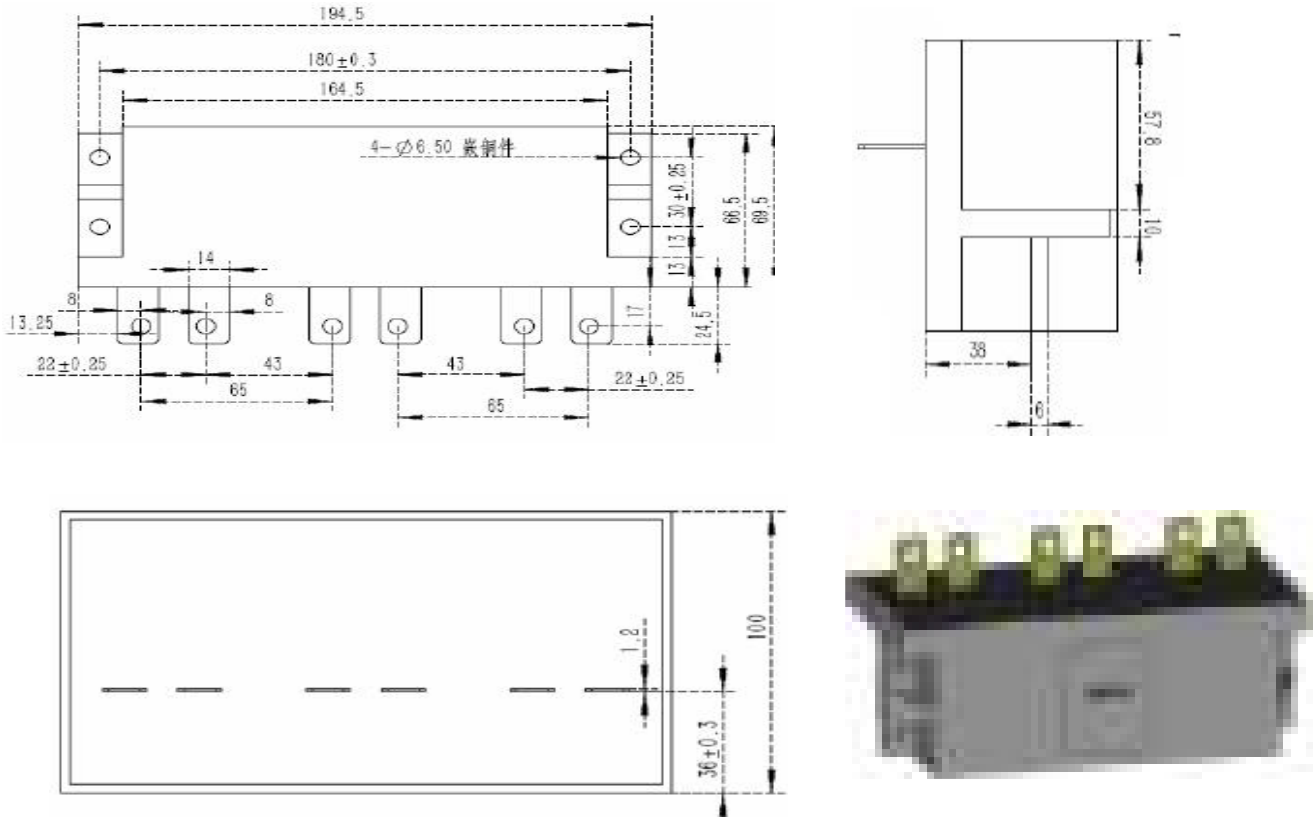
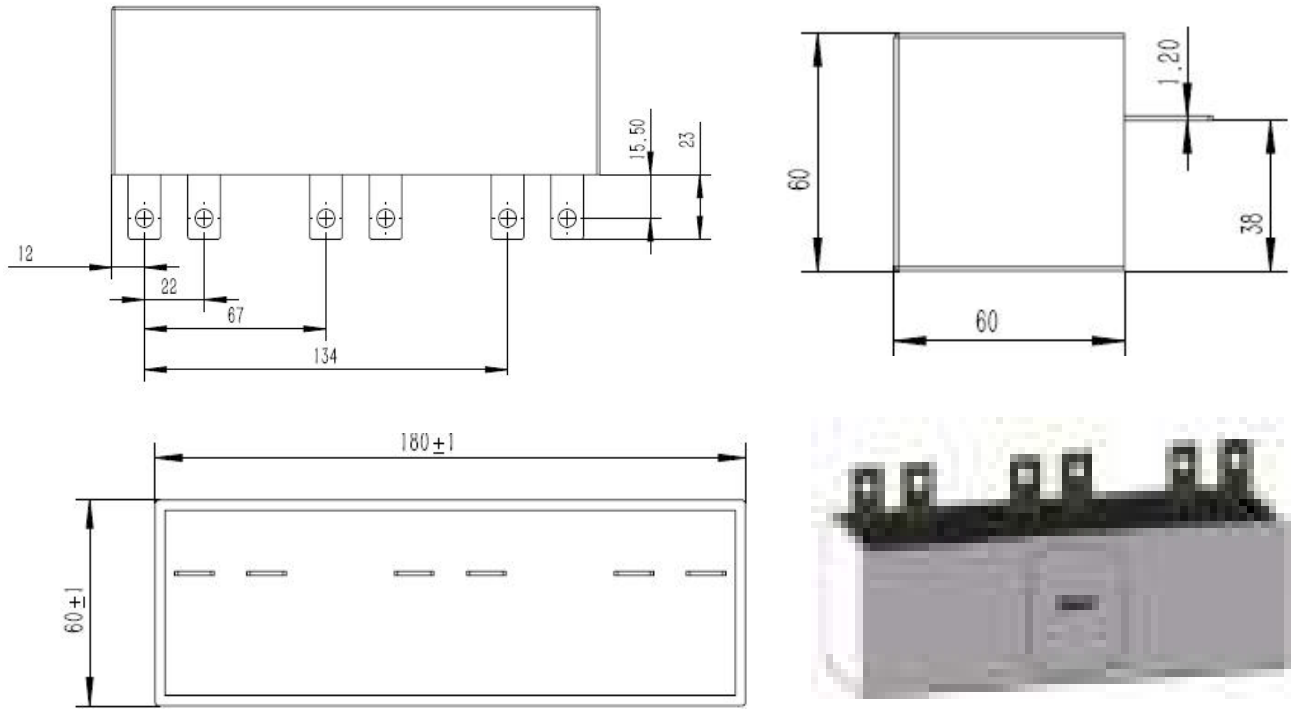


Fig.5a



DPV series

Terminal Configuration

Fig.6a

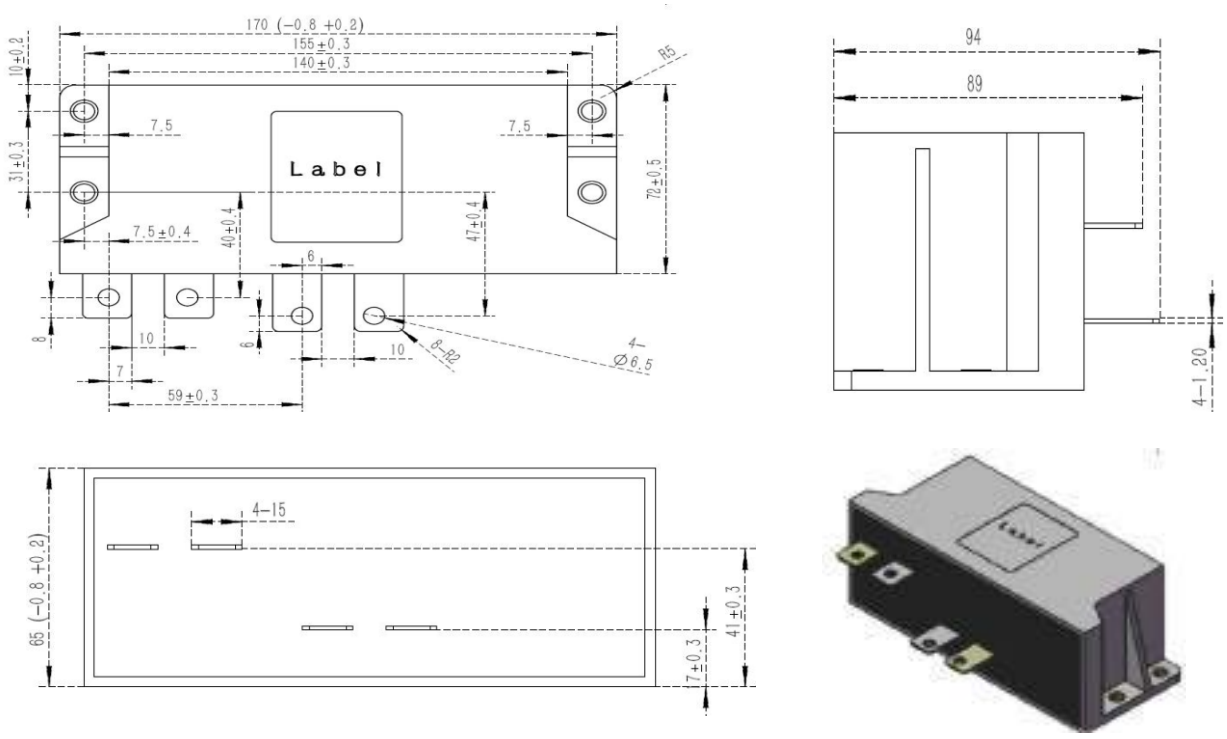
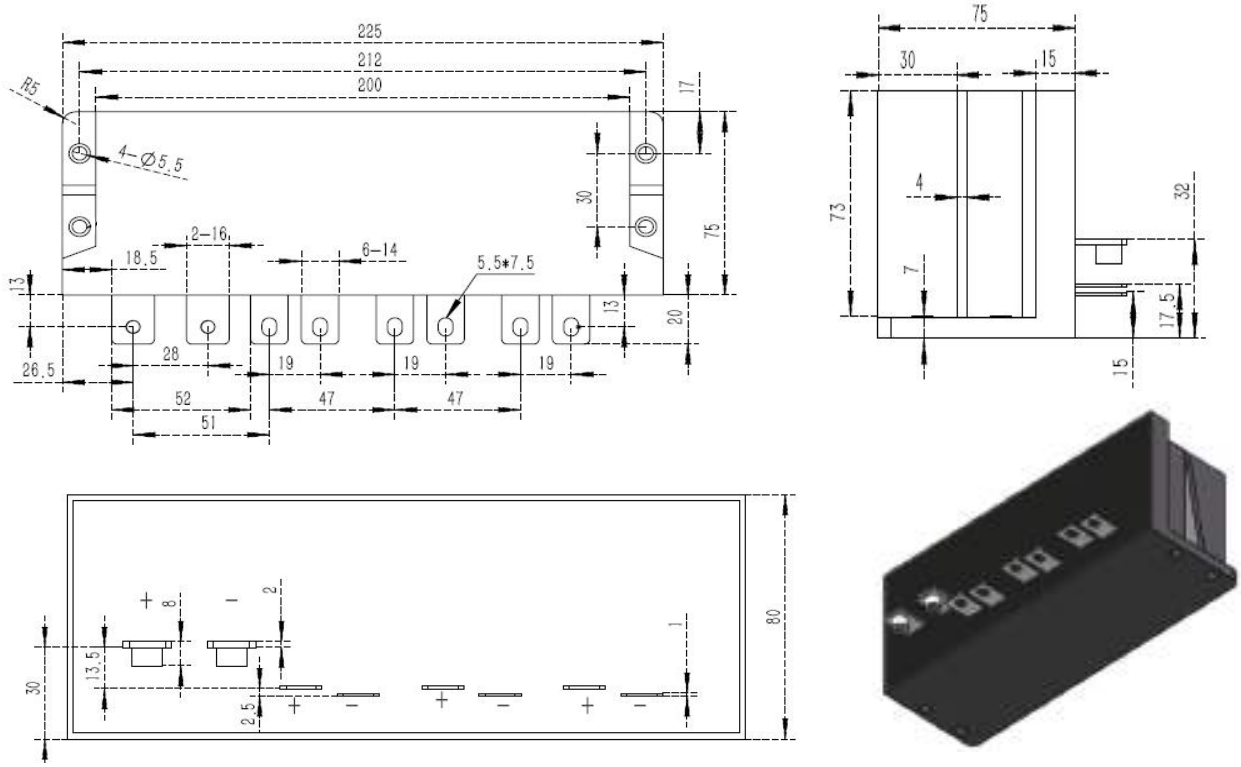
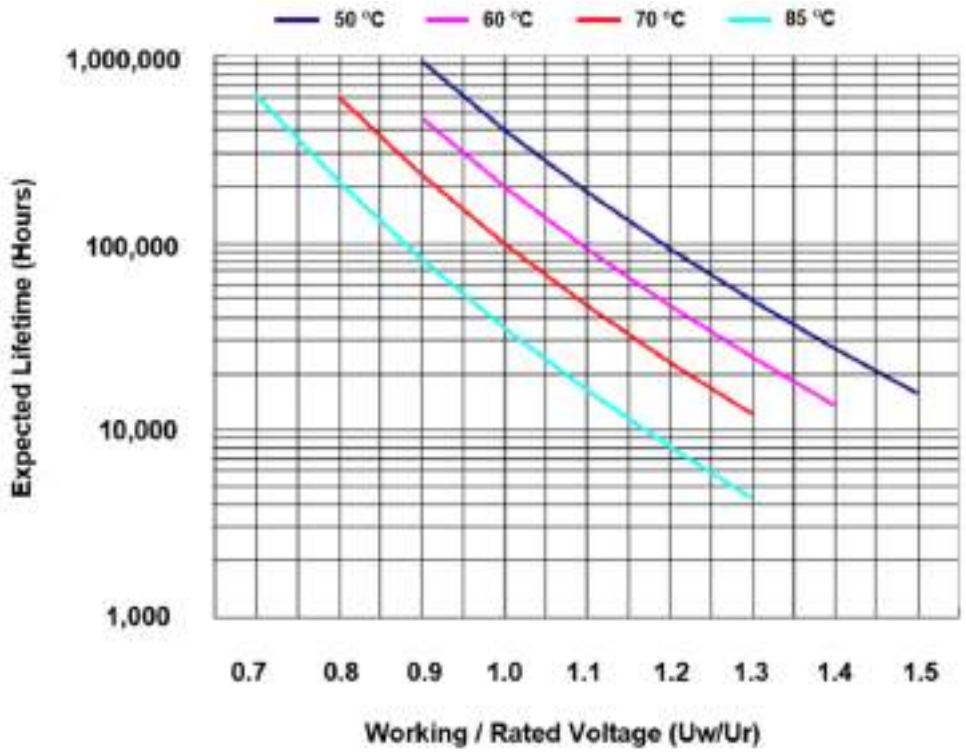


Fig.7a



DPV series

Curve 1 Expected lifetime curves



Curve 2. Maximum ambient temperature curve

Taking FDE2HK757X25RNQN for example, others will be available on request.