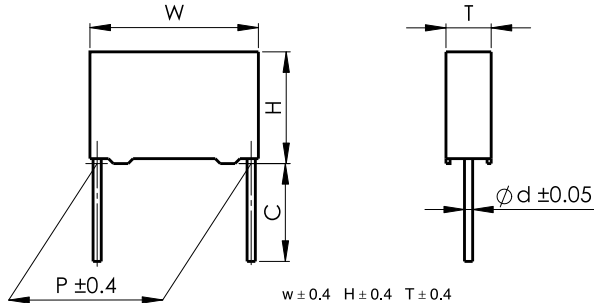




塑料外壳金属化聚酯膜电容器 Metallized polyester film capacitor(Box-type)

■ 外形图 Outline Drawing



■ 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

■ 主要用途

- 旁路，隔直，耦合，退耦
- 脉冲，逻辑，定时，振荡电路

■ Features

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

■ 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°C					
工作温度 Operating Temperature Range	-55°C ~ 105°C (+85°C to +105°C: decreasing factor 1.25% per °C for U _R)					
额定电压 Rated Voltage	63V, 100V, 160V, 250V, 400V, 630V, 1 000V					
电容量范围 Capacitance Range	0.0010μF ~ 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 _N ≤ 0.1μF		C _N > 0.1μF		
	1kHz	≤ 1.0%		≤ 1.0%		
	10kHz	≤ 1.5%		≤ 1.5%		
	100kHz	≤ 3.0%		-		
绝缘电阻 Insulation Resistance	U _R ≤ 100V	R ≥ 3 750MΩ, C _N ≤ 0.33μF RC _N ≥ 1 250s, C _N > 0.33μF (20°C, 10V, 1min)				
	U _R > 100V	R ≥ 30 000MΩ, C _N ≤ 0.33μF RC _N ≥ 10 000s, C _N > 0.33μF (20°C, 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
	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	10
1 000	70	60	30	15	12	

产品编码说明 Part number system

■ 18位产品代码如下：

The 18 digits part number is formed as follow:
C23 Pattern II (Reduced size)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
C	2	3								S							

第1~3位	型号代码 C23= CL23	Digit 1 to 3	Series code C23= CL23
第4~5位	直流额定电压 1J=63V 2A=100V 2C=160V 2E=250V 2G=400V 2J=630V 3A=1 000V	Digit 4 to 5	DC rated voltage 1J=63V 2A=100V 2C=160V 2E=250V 2G=400V 2J=630V 3A=1 000V
第6~8位	标称容量 举例：103=10 × 10 ³ pF=0.01μF	Digit 6 to 8	Rated capacitance value For example: 103=10 × 10 ³ pf=0.01μF
第9位	容量偏差 J= ± 5% K= ± 10% M= ± 20%	Digit 9	Capacitance tolerance J= ± 5%,K= ± 10%,M= ± 20%
第10位	引线脚距P 3=7.5mm 4=10.0mm 6=15.0mm 9=22.5mm B=27.5mm	Digit 10	Lead pitch 3=7.5mm 4=10.0mm 6=15.0mm 9=22.5mm B=27.5mm
第11位	内部特征码	Digit 11	Internal use
第12~15位	引线加工和包装代码	Digit 12 to 15	Lead form and packaging code
第16~18位	内部特征码	Digit 16 to 18	Internal use

■ Table 1 引线加工和包装代码 lead form and packaging code

第 12 位 Digit 12		第 13 位 Digit 13		第 14 位 Digit 14		第 15 位 Digit 15	
代码 Code	说明 explanation	代码 Code	说明 explanation	代码 Code	说明 explanation	代码 Code	说明 explanation
A	弹带包装 ammo-pack	3	F=7.5mm	0	表示直脚 straight	1	产品在连续的两个载带孔之间 each cap. among two consecutive holes P3=12.7mm,H=18.5mm (For pitch=7.5mm)
		4 6	F=10.0mm F=15.0mm			5	P3=25.4mm;H=18.5mm (For pitch=10/15mm) (Detail parameter refer to pag 17)
C	直脚 straight lead “C” in the figure above	代码 Code	说明 explanation	0		0	引线长度偏差 ± 0.5mm 或标准长度 Length tolerance ± 0.5mm Or standard length
		00	标准的引线长度 (18mm~26mm) standard lead length				
		45	引线长度 4.5mm lead length 4.5mm				



C23
CL23 series

■ 外形尺寸 Dimensions (mm)
Pattern II (Reduced sizes)

63Vdc (40Vac)							100Vdc (63Vac)							250Vdc(160Vac)						
C _N (μF)	W	H	T	P	d	Part number	C _N (μF)	W	H	T	P	d	Part number	C _N (μF)	W	H	T	P	d	Part number
0.47	10.5	8.5	3.5	7.5	0.5	C231J474-3S****+	0.22	10.5	8.5	3.5	7.5	0.5	C232A224-3S****+	0.068	10.5	8.5	3.5	7.5	0.5	C232E683-3S****+
0.68	10.5	9.0	4.0	7.5	0.6	C231J684-3S****+	0.33	10.5	9.0	4.0	7.5	0.6	C232A334-3S****+	0.10	10.5	8.5	3.5	7.5	0.5	C232E104-3S****+
1.0	10.5	11.0	5.0	7.5	0.6	C231J105-3S****+	0.39	10.5	9.0	4.0	7.5	0.6	C232A394-3S****+	0.15	10.5	9.0	4.0	7.5	0.6	C232E154-3S****+
1.5	10.5	12.0	6.0	7.5	0.6	C231J155-3S****+	0.47	10.5	9.0	4.0	7.5	0.6	C232A474-3S****+	0.18	10.5	11.0	5.0	7.5	0.6	C232E184-3S****+
1.8	10.5	12.0	6.0	7.5	0.6	C231J185-3S****+	0.68	10.5	11.0	5.0	7.5	0.6	C232A684-3S****+	0.22	10.5	11.0	5.0	7.5	0.6	C232E224-3S****+
0.10	13.0	9.0	4.0	10.0	0.6	C231J104-4S****+	1.0	10.5	12.0	6.0	7.5	0.6	C232A105-3S****+	0.27	10.5	12.0	6.0	7.5	0.6	C232E274-3S****+
0.15	13.0	9.0	4.0	10.0	0.6	C231J154-4S****+	0.10	13.0	9.0	4.0	10.0	0.6	C232A104-4S****+	0.33	10.5	12.0	6.0	7.5	0.6	C232E334-3S****+
0.22	13.0	9.0	4.0	10.0	0.6	C231J224-4S****+	0.15	13.0	9.0	4.0	10.0	0.6	C232A154-4S****+	0.033	13.0	9.0	4.0	10.0	0.6	C232E333-4S****+
0.33	13.0	9.0	4.0	10.0	0.6	C231J334-4S****+	0.22	13.0	9.0	4.0	10.0	0.6	C232A224-4S****+	0.047	13.0	9.0	4.0	10.0	0.6	C232E473-4S****+
0.47	13.0	9.0	4.0	10.0	0.6	C231J474-4S****+	0.33	13.0	9.0	4.0	10.0	0.6	C232A334-4S****+	0.068	13.0	9.0	4.0	10.0	0.6	C232E683-4S****+
0.68	13.0	9.0	4.0	10.0	0.6	C231J684-4S****+	0.47	13.0	9.0	4.0	10.0	0.6	C232A474-4S****+	0.10	13.0	9.0	4.0	10.0	0.6	C232E104-4S****+
1.0	13.0	9.0	4.0	10.0	0.6	C231J105-4S****+	0.68	13.0	9.0	4.0	10.0	0.6	C232A684-4S****+	0.15	13.0	9.0	4.0	10.0	0.6	C232E154-4S****+
1.5	13.0	11.0	5.0	10.0	0.6	C231J155-4S****+	1.0	13.0	11.0	5.0	10.0	0.6	C232A105-4S****+	0.22	13.0	11.0	5.0	10.0	0.6	C232E224-4S****+
1.8	13.0	12.0	6.0	10.0	0.6	C231J185-4S****+	1.5	13.0	12.0	6.0	10.0	0.6	C232A155-4S****+	0.33	13.0	11.0	5.0	10.0	0.6	C232E334-4S****+
2.2	13.0	12.0	6.0	10.0	0.6	C231J225-4S****+	0.33	17.5	11.0	5.0	15.0	0.8	C232A334-6S****+	0.39	13.0	12.0	6.0	10.0	0.6	C232E394-4S****+
0.68	17.5	11.0	5.0	15.0	0.8	C231J684-6S****+	0.47	17.5	11.0	5.0	15.0	0.8	C232A474-6S****+	0.47	13.0	12.0	6.0	10.0	0.6	C232E474-4S****+
1.0	17.5	11.0	5.0	15.0	0.8	C231J105-6S****+	0.68	17.5	11.0	5.0	15.0	0.8	C232A684-6S****+	0.10	17.5	11.0	5.0	15.0	0.8	C232E104-6S****+
1.5	17.5	11.0	5.0	15.0	0.8	C231J155-6S****+	1.0	17.5	11.0	5.0	15.0	0.8	C232A105-6S****+	0.15	17.5	11.0	5.0	15.0	0.8	C232E154-6S****+
1.8	17.5	11.0	5.0	15.0	0.8	C231J185-6S****+	1.5	17.5	12.0	6.0	15.0	0.8	C232A155-6S****+	0.22	17.5	11.0	5.0	15.0	0.8	C232E224-6S****+
2.2	17.5	11.0	5.0	15.0	0.8	C231J225-6S****+	1.8	17.5	12.0	6.0	15.0	0.8	C232A185-6S****+	0.33	17.5	11.0	5.0	15.0	0.8	C232E334-6S****+
3.3	17.5	12.0	6.0	15.0	0.8	C231J335-6S****+	2.2	17.5	12.0	6.0	15.0	0.8	C232A225-6S****+	0.47	17.5	11.0	5.0	15.0	0.8	C232E474-6S****+
4.7	17.5	13.5	7.5	15.0	0.8	C231J475-6S****+	3.3	17.5	13.5	7.5	15.0	0.8	C232A335-6S****+	0.68	17.5	12.0	6.0	15.0	0.8	C232E684-6S****+
6.8	17.5	14.5	8.5	15.0	0.8	C231J685-6S****+	4.7	17.5	14.5	8.5	15.0	0.8	C232A475-6S****+	1.0	17.5	13.5	7.5	15.0	0.8	C232E105-6S****+
10.0	17.5	19.0	11.0	15.0	0.8	C231J106-6S****+	1.5	26.5	15.0	6.0	22.5	0.8	C232A155-9S****+	1.5	17.5	14.5	8.5	15.0	0.8	C232E155-6S****+
3.3	26.5	16.0	7.0	22.5	0.8	C231J335-9S****+	1.8	26.5	15.0	6.0	22.5	0.8	C232A185-9S****+	0.22	26.5	15.0	6.0	22.5	0.8	C232E224-9S****+
4.7	26.5	16.0	7.0	22.5	0.8	C231J475-9S****+	2.2	26.5	15.0	6.0	22.5	0.8	C232A225-9S****+	0.47	26.5	15.0	6.0	22.5	0.8	C232E474-9S****+
6.8	26.5	16.0	7.0	22.5	0.8	C231J685-9S****+	3.3	26.5	15.0	6.0	22.5	0.8	C232A335-9S****+	0.68	26.5	15.0	6.0	22.5	0.8	C232E684-9S****+
10.0	26.5	17.0	8.5	22.5	0.8	C231J106-9S****+	4.7	26.5	16.0	7.0	22.5	0.8	C232A475-9S****+	1.0	26.5	15.0	6.0	22.5	0.8	C232E105-9S****+
15.0	26.5	20.0	11.0	22.5	0.8	C231J156-9S****+	6.8	26.5	18.5	10.0	22.5	0.8	C232A685-9S****+	1.5	26.5	16.0	7.0	22.5	0.8	C232E155-9S****+
4.7	32.0	18.0	9.0	27.5	0.8	C231J475-BS****+	10.0	26.5	22.0	12.0	22.5	0.8	C232A106-9S****+	1.8	26.5	16.0	7.0	22.5	0.8	C232E185-9S****+
6.8	32.0	18.0	9.0	27.5	0.8	C231J685-BS****+	4.7	32.0	18.0	9.0	27.5	0.8	C232A475-BS****+	2.2	26.5	17.0	8.5	22.5	0.8	C232E225-9S****+
10.0	32.0	18.0	9.0	27.5	0.8	C231J106-BS****+	6.8	32.0	18.0	9.0	27.5	0.8	C232A685-BS****+	3.3	26.5	20.0	11.0	22.5	0.8	C232E335-9S****+
15.0	32.0	18.0	9.0	27.5	0.8	C231J156-BS****+	10.0	32.0	20.0	11.0	27.5	0.8	C232A106-BS****+	1.5	32.0	18.0	9.0	27.5	0.8	C232E155-BS****+
22.0	32.0	22.0	13.0	27.5	0.8	C231J226-BS****+	15.0	32.0	20.0	11.0	27.5	0.8	C232A156-BS****+	1.8	32.0	18.0	9.0	27.5	0.8	C232E185-BS****+
33.0	32.0	24.5	15.0	27.5	0.8	C231J336-BS****+	22.0	32.0	25.0	13.0	27.5	0.8	C232A226-BS****+	2.2	32.0	18.0	9.0	27.5	0.8	C232E225-BS****+
47.0	32.0	30.0	16.0	27.5	0.8	C231J476-BS****+	33.0	32.0	30.0	16.0	27.5	0.8	C232A336-BS****+	3.3	32.0	18.0	9.0	27.5	0.8	C232E335-BS****+
														4.7	32.0	20.0	11.0	27.5	0.8	C232E475-BS****+
														6.8	32.0	22.0	13.0	27.5	0.8	C232E685-BS****+
														10.0	32.0	24.5	15.0	27.5	0.8	C232E106-BS****+

备注: 1. “-”表示容量偏差。 “-”=capacitance tolerance code, M=±20%,K=±10%,J=±5%
2. “****”表示引线加工和包装代码(见table 1)。“****”=lead form and packing code(refer to table 1)

■ 外形尺寸 Dimensions (mm)
Pattern II (Reduced sizes)

400Vdc (200Vac)							630Vdc (220Vac) [®]							1000Vdc(300Vac)						
C _N (μF)	W	H	T	P	d	Part number	C _N (μF)	W	H	T	P	d	Part number	C _N (μF)	W	H	T	P	d	Part number
0.022	10.5	8.5	3.5	7.5	0.5	C232G223-3S****+	0.0022	10.5	8.5	3.5	7.5	0.5	C232J222-3S****+	0.0010	10.5	8.5	3.5	7.5	0.5	C233A102-3S****+
0.033	10.5	8.5	3.5	7.5	0.5	C232G333-3S****+	0.0047	10.5	8.5	3.5	7.5	0.5	C232J472-3S****+	0.0015	10.5	8.5	3.5	7.5	0.5	C233A152-3S****+
0.047	10.5	9.0	4.0	7.5	0.6	C232G473-3S****+	0.0068	10.5	8.5	3.5	7.5	0.5	C232J682-3S****+	0.0022	10.5	8.5	3.5	7.5	0.5	C233A222-3S****+
0.068	10.5	11.0	5.0	7.5	0.6	C232G683-3S****+	0.010	10.5	8.5	3.5	7.5	0.5	C232J103-3S****+	0.0033	10.5	8.5	3.5	7.5	0.5	C233A332-3S****+
0.082	10.5	12.0	6.0	7.5	0.6	C232G823-3S****+	0.015	10.5	9.0	4.0	7.5	0.6	C232J153-3S****+	0.0047	10.5	8.5	3.5	7.5	0.5	C233A472-3S****+
0.10	10.5	12.0	6.0	7.5	0.6	C232G104-3S****+	0.022	10.5	11.0	5.0	7.5	0.6	C232J223-3S****+	0.0068	10.5	9.0	4.0	7.5	0.6	C233A682-3S****+
0.010	13.0	9.0	4.0	10.0	0.6	C232G103-4S****+	0.033	10.5	12.0	6.0	7.5	0.6	C232J333-3S****+	0.010	10.5	11.0	5.0	7.5	0.6	C233A103-3S****+
0.015	13.0	9.0	4.0	10.0	0.6	C232G153-4S****+	0.047	10.5	12.0	6.0	7.5	0.6	C232J473-3S****+	0.015	10.5	12.0	6.0	7.5	0.6	C233A153-3S****+
0.022	13.0	9.0	4.0	10.0	0.6	C232G223-4S****+	0.0047	13.0	9.0	4.0	10.0	0.6	C232J472-4S****+	0.0010	13.0	9.0	4.0	10.0	0.6	C233A102-4S****+
0.033	13.0	9.0	4.0	10.0	0.6	C232G333-4S****+	0.0068	13.0	9.0	4.0	10.0	0.6	C232J682-4S****+	0.0015	13.0	9.0	4.0	10.0	0.6	C233A152-4S****+
0.047	13.0	9.0	4.0	10.0	0.6	C232G473-4S****+	0.010	13.0	9.0	4.0	10.0	0.6	C232J103-4S****+	0.0022	13.0	9.0	4.0	10.0	0.6	C233A222-4S****+
0.056	13.0	9.0	4.0	10.0	0.6	C232G563-4S****+	0.015	13.0	9.0	4.0	10.0	0.6	C232J153-4S****+	0.0033	13.0	9.0	4.0	10.0	0.6	C233A332-4S****+
0.068	13.0	11.0	5.0	10.0	0.6	C232G683-4S****+	0.022	13.0	9.0	4.0	10.0	0.6	C232J223-4S****+	0.0047	13.0	9.0	4.0	10.0	0.6	C233A472-4S****+
0.10	13.0	11.0	5.0	10.0	0.6	C232G104-4S****+	0.033	13.0	11.0	5.0	10.0	0.6	C232J333-4S****+	0.0056	13.0	9.0	4.0	10.0	0.6	C233A562-4S****+
0.15	13.0	12.0	6.0	10.0	0.6	C232G154-4S****+	0.047	13.0	11.0	5.0	10.0	0.6	C232J473-4S****+	0.0068	13.0	9.0	4.0	10.0	0.6	C233A682-4S****+
0.047	17.5	11.0	5.0	15.0	0.8	C232G473-6S****+	0.068	13.0	12.0	6.0	10.0	0.6	C232J683-4S****+	0.010	13.0	9.0	4.0	10.0	0.6	C233A103-4S****+
0.068	17.5	11.0	5.0	15.0	0.8	C232G683-6S****+	0.033	17.5	11.0	5.0	15.0	0.8	C232J333-6S****+	0.015	13.0	11.0	5.0	10.0	0.6	C233A153-4S****+
0.10	17.5	11.0	5.0	15.0	0.8	C232G104-6S****+	0.047	17.5	11.0	5.0	15.0	0.8	C232J473-6S****+	0.022	13.0	11.0	5.0	10.0	0.6	C233A223-4S****+
0.15	17.5	11.0	5.0	15.0	0.8	C232G154-6S****+	0.068	17.5	11.0	5.0	15.0	0.8	C232J683-6S****+	0.010	17.5	11.0	5.0	15.0	0.8	C233A103-6S****+
0.22	17.5	12.0	6.0	15.0	0.8	C232G224-6S****+	0.10	17.5	12.0	6.0	15.0	0.8	C232J104-6S****+	0.015	17.5	11.0	5.0	15.0	0.8	C233A153-6S****+
0.33	17.5	13.5	7.5	15.0	0.8	C232G334-6S****+	0.15	17.5	13.5	7.5	15.0	0.8	C232J154-6S****+	0.022	17.5	11.0	5.0	15.0	0.8	C233A223-6S****+
0.47	17.5	14.5	8.5	15.0	0.8	C232G474-6S****+	0.22	17.5	16.0	10.0	15.0	0.8	C232J224-6S****+	0.033	17.5	12.0	6.0	15.0	0.8	C233A333-6S****+
0.56	17.5	16.0	10.0	15.0	0.8	C232G564-6S****+	0.33	17.5	19.0	11.0	15.0	0.8	C232J334-6S****+	0.047	17.5	12.0	6.0	15.0	0.8	C233A473-6S****+
0.68	17.5	16.0	10.0	15.0	0.8	C232G684-6S****+	0.10	26.5	15.0	6.0	22.5	0.8	C232J104-9S****+	0.068	17.5	13.5	7.5	15.0	0.8	C233A683-6S****+
0.22	26.5	15.0	6.0	22.5	0.8	C232G224-9S****+	0.15	26.5	15.0	6.0	22.5	0.8	C232J154-9S****+	0.10	17.5	14.5	8.5	15.0	0.8	C233A104-6S****+
0.33	26.5	15.0	6.0	22.5	0.8	C232G334-9S****+	0.22	26.5	16.0	7.0	22.5	0.8	C232J224-9S****+	0.033	26.5	15.0	6.0	22.5	0.8	C233A333-9S****+
0.47	26.5	15.0	6.0	22.5	0.8	C232G474-9S****+	0.33	26.5	16.0	7.0	22.5	0.8	C232J334-9S****+	0.047	26.5	15.0	6.0	22.5	0.8	C233A473-9S****+
0.68	26.5	16.0	7.0	22.5	0.8	C232G684-9S****+	0.47	26.5	17.0	8.5	22.5	0.8	C232J474-9S****+	0.068	26.5	15.0	6.0	22.5	0.8	C233A683-9S****+
1.0	26.5	18.5	10.0	22.5	0.8	C232G105-9S****+	0.68	26.5	22.0	12.0	22.5	0.8	C232J684-9S****+	0.10	26.5	15.0	6.0	22.5	0.8	C233A104-9S****+
1.5	26.5	22.0	12.0	22.5	0.8	C232G155-9S****+	0.33	32.0	18.0	9.0	27.5	0.8	C232J334-BS****+	0.15	26.5	16.0	7.0	22.5	0.8	C233A154-9S****+
0.68	32.0	18.0	9.0	27.5	0.8	C232G684-BS****+	0.47	32.0	18.0	9.0	27.5	0.8	C232J474-BS****+	0.22	26.5	17.0	8.5	22.5	0.8	C233A224-9S****+
1.0	32.0	18.0	9.0	27.5	0.8	C232G105-BS****+	0.68	32.0	20.0	11.0	27.5	0.8	C232J684-BS****+	0.33	26.5	20.0	11.0	22.5	0.8	C233A334-9S****+
1.5	32.0	20.0	11.0	27.5	0.8	C232G155-BS****+	1.0	32.0	20.0	11.0	27.5	0.8	C232J105-BS****+	0.15	32.0	18.0	9.0	27.5	0.8	C233A154-BS****+
1.8	32.0	20.0	11.0	27.5	0.8	C232G185-BS****+								0.22	32.0	18.0	9.0	27.5	0.8	C233A224-BS****+
2.2	32.0	22.0	13.0	27.5	0.8	C232G225-BS****+								0.33	32.0	20.0	11.0	27.5	0.8	C233A334-BS****+
3.3	32.0	24.5	15.0	27.5	0.8	C232G335-BS****+								0.47	32.0	20.0	11.0	27.5	0.8	C233A474-BS****+
4.7	32.0	30.0	16.0	27.5	0.8	C232G475-BS****+								0.68	32.0	28.0	14.0	27.5	0.8	C233A684-BS****+
6.8	32.0	33.0	18.0	27.5	0.8	C232G685-BS****+								1.0	32.0	30.0	16.0	27.5	0.8	C233A105-BS****+
														1.5	32.0	37.0	22.0	27.5	0.8	C233A155-BS****+

备注: 1. “-”表示容量偏差。 “-”=capacitance tolerance code, M=±20%,K=±10%,J=±5%
 2. “****”表示引线加工和包装代码(见table 1)。“****”=lead form and packing code (refer to table 1)
 3. “@”不用作跨线,请参见抗干扰电容器(Pag.109)
 “@” Not suitable for across-the-line applications. Pls refer to the Interference Suppression Capacitors(Pag.109)