

HS 系列

特长 / 用途

- 105℃、2,000 小时寿命保证
- 极低等效串联电阻(ESR)并可承受大纹波电流
- 符合 ROHS 和 REACH 指令

◆规格表

项 目	性 能																				
工作温度范围	-55~+105℃																				
额定静电容量容许误差值	±20% (20℃、120Hz)																				
漏电流 (LC)	≤标准品一览表的值 (20℃、2 分值) <span style="float:right">注: 计算方法 LC≤0.2CV 或 300μA, 取较大者</span>																				
损失角正切值 (tanδ)	参阅标准品一览表 (20℃、120Hz)																				
等效串联电阻 (ESR)	参阅标准品一览表 (20℃、100KHz)																				
耐久性	在 105℃环境中, 连续加载额定电压 20,00 小时后、待温度恢复到 20℃进行测量时, 应满足以下要求。																				
	<table border="1" style="width:100%; text-align:center;"> <tr> <td>外观</td> <td>无明显变化</td> </tr> <tr> <td>静电容量变化率</td> <td>≤初始值的± 20%</td> </tr> <tr> <td>损失角正切值</td> <td>≤初始规格值的 150%</td> </tr> <tr> <td>等效串联电阻(ESR)</td> <td>≤初始规格值的 150%</td> </tr> <tr> <td>漏电流</td> <td>≤初始规格值</td> </tr> </table>	外观	无明显变化	静电容量变化率	≤初始值的± 20%	损失角正切值	≤初始规格值的 150%	等效串联电阻(ESR)	≤初始规格值的 150%	漏电流	≤初始规格值										
	外观	无明显变化																			
	静电容量变化率	≤初始值的± 20%																			
	损失角正切值	≤初始规格值的 150%																			
等效串联电阻(ESR)	≤初始规格值的 150%																				
漏电流	≤初始规格值																				
耐湿负荷特性	在 60℃90~95%RH 环境中, 连续加载额定电压 1,000 小时后, 待温度恢复到 20℃进行测量时, 应满足以下要求。																				
浪涌电压特性	在 105℃环境中, 按照充电 30 秒、放电 5 分 30 秒连续加载浪涌电压 1,000 次 (Rc=1kΩ) 后, 待温度恢复到 20℃进行测量时, 应满足以下要求。																				
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	额定电压 (RV)	2.5	4	6.3	7.5	10	12	16	20	25											
	浪涌电压 (SV)	2.9	4.6	7.2	8.6	11.5	13.8	18.4	23	28.8											
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静电容量变化率	≤初始值的± 20%																				
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等效串联电阻 RI(ESR)	≤初始规格值的 150%																				
漏电流	≤初始规格值																				

◆尺寸图 [mm]



Π	5.0	5.5	6.3	8.0	10.0
F	2.0	2.5	2.5	3.5	5.0
ψ d	0.5	0.5	0.5/0.6	0.6	0.6
ψ D	ψ D+0.5max				
L	L+1.0max				

HS 系列

◆标准品一览表

WV	Cap ( $\mu$ F)	尺寸 $\Phi$ DxL (mm)	损失角正切值 ( $\tan\delta$ ) (20 $^{\circ}$ C, 120Hz)	漏电流 ( $\mu$ A) (max)	等效串联电阻 (ESR) (m $\Omega$ max./20 $^{\circ}$ C, 100kHz)	额定纹波电流 (mA <sub>rms</sub> /105 $^{\circ}$ C, 100kHz)	产品代码
2.5V	470	6.3X7	0.08	300	18	2690	HS0E477M0607PC
	560	6.3X7	0.08	300	18	2690	HS0E567M0607PC
		6.3X8	0.08	300	16	4100	HS0E567M0608PC
	680	6.3X8	0.08	340	16	4100	HS0E687M0608PC
		6.3X9	0.08	340	14	4500	HS0E687M0609PC
	820	6.3X8	0.08	410	16	4100	HS0E827M0608PC
		6.3X9	0.08	410	14	4500	HS0E827M0609PC
	1000	6.3X9	0.08	500	14	4500	HS0E108M0609PC
		8X8	0.08	500	14	4500	HS0E108M0808PC
	1500	8X8	0.08	750	14	4500	HS0E158M0808PC
		8X11.5	0.08	750	14	4750	HS0E158M0811PC
	2200	8X11.5	0.08	1100	14	4900	HS0E228M0811PC
		10X12	0.08	1100	14	4900	HS0E228M1012PC
	3300	10X12	0.08	1650	14	4900	HS0E338M1012PC
4700	10X13.5	0.08	2350	14	4900	HS0E478M1013PC	
5600	10X16	0.08	2800	14	4900	HS0E568M1016PC	
6800	10X16	0.08	3400	14	4900	HS0E688M1016PC	
4V	220	5X7	0.08	300	18	2350	HS0G227M0507PC
	270	5X7	0.08	300	18	2690	HS0G277M0507PC
		5X8	0.08	300	18	2750	HS0G277M0508PC
	330	5X7	0.08	300	18	2690	HS0G337M0507PC
		5X8	0.08	300	16	2750	HS0G337M0508PC
	390	5X8	0.08	312	16	2750	HS0G397M0508PC
	470	5X8	0.08	376	16	2750	HS0G477M0508PC
	560	6.3X7	0.08	448	16	3200	HS0G567M0607PC
	680	6.3X7	0.08	544	16	3350	HS0G687M0607PC
	820	6.3X8	0.08	656	16	3600	HS0G827M0608PC
		6.3X9	0.08	656	16	3950	HS0G827M0609PC
	1000	6.3X9	0.10	800	14	4100	HS0G108M0609PC
		8X8	0.10	800	14	4350	HS0G108M0808PC
	1500	8X11.5	0.10	1200	14	4500	HS0G158M0811PC
	2200	8X16	0.10	1760	14	4900	HS0G228M0816PC
		10X12	0.10	1760	14	4900	HS0G228M1012PC
3300	8X16	0.10	2640	14	4900	HS0G338M0816PC	
	10X12	0.10	2640	14	4900	HS0G338M1012PC	
4700	10X13.5	0.10	3760	14	4900	HS0G478M1013PC	
5600	10X16	0.10	4480	14	4900	HS0G568M1016PC	

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WV	Cap ( $\mu$ F)	尺寸 $\Phi$ DxL(mm)	损失角正切值(tan $\delta$ ) (20 $^{\circ}$ C, 120Hz)	漏电流 ( $\mu$ A)(max)	等效串联电阻(ESR) (m $\Omega$ max./20 $^{\circ}$ C, 100kHz)	额定纹波电流 (mArms/105 $^{\circ}$ C, 100kHz)	产品代码
6.3V	180	5X7	0.08	300	21	1800	HS0J187M0507PC
	220	5X7	0.08	300	18	2690	HS0J227M0507PC
		6.3*5.5	0.08	300	25	2690	HS0J227M0605PC
	270	5X7	0.08	340	21	2690	HS0J277M0507PC
		6.3*5.5	0.08	340	22	2690	HS0J277M0605PC
	330	5X8	0.08	416	16	2690	HS0J337M0508PC
		6.3X5.5	0.08	416	22	2690	HS0J337M0605PC
	390	5X9	0.08	491	16	2690	HS0J397M0509PC
	470	5X9	0.08	592	16	2690	HS0J477M0509PC
		6.3X7	0.08	592	16	4100	HS0J477M0607PC
	500	5.5X7	0.08	630	16	3650	HS0J507M5507PC
	560	5X11.5	0.08	706	16	3500	HS0J567M0511PC
		5.5X9	0.08	706	16	4100	HS0J567M5509PC
		6.3X7	0.08	706	16	3950	HS0J567M0607PC
		6.3X8	0.08	706	16	4100	HS0J567M0608PC
	680	5.5X9	0.08	857	14	4150	HS0J687M5509PC
		6.3X8	0.08	857	16	4500	HS0J687M0608PC
		8X8	0.08	857	14	4500	HS0J687M0808PC
	820	5.5X11.5	0.10	1033	16	4250	HS0J827M5511PC
		6.3X8	0.10	1033	16	4300	HS0J827M0608PC
		6.3X9	0.10	1033	16	4500	HS0J827M0609PC
		8X8	0.10	1033	14	4500	HS0J827M0808PC
	1000	6.3X10.5	0.10	1260	14	4500	HS0J108M0610PC
		6.3X11.5	0.10	1260	14	4650	HS0J108M0611PC
		8X8	0.10	1260	14	4500	HS0J108M0808PC
		8X11.5	0.10	1260	14	4700	HS0J108M0811PC
	1500	6.3X11.5	0.10	1890	14	4650	HS0J158M0611PC
		8X11.5	0.10	1890	14	4800	HS0J158M0811PC
		10X12	0.10	1890	14	4900	HS0J158M1012PC
	1800	8X16	0.10	2268	14	4900	HS0J188M0816PC
2200	8X16	0.10	2772	14	4900	HS0J228M0816PC	
	10X12	0.10	2772	14	4900	HS0J228M1012PC	
3300	8X16	0.10	4158	14	5100	HS0J338M0816PC	
	10X12	0.10	2640	14	5100	HS0J338M1012PC	
4700	10X16	0.10	3760	14	5350	HS0J478M1016PC	
5600	10X16	0.10	4480	14	5500	HS0J568M1016PC	

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WV	Cap ( $\mu$ F)	尺寸 $\Phi$ DxL (mm)	损失角正切值 ( $\tan\delta$ ) (20 $^{\circ}$ C, 120Hz)	漏电流 ( $\mu$ A) (max)	等效串联电阻 (ESR) (m $\Omega$ max./20 $^{\circ}$ C, 100kHz)	额定纹波电流 (mArms/105 $^{\circ}$ C, 100kHz)	产品代码	
7.5V	220	6.3X5.5	0.08	330	28	2690	HS0Q227M0605PC	
	330	5X11.5	0.08	495	18	3100	HS0Q337M0511PC	
	470	6.3X7	0.08	705	16	3350	HS0Q477M0607PC	
	500	500	5X11.5	0.08	750	14	3500	HS0Q507M0511PC
			5.5X9	0.08	750	14	3500	HS0Q507M5509PC
			6.3X8	0.08	750	14	3650	HS0Q507M0608PC
	560	560	6.3X8	0.08	840	14	3800	HS0Q567M0608PC
			8X8	0.08	840	14	4100	HS0Q567M0808PC
	680	680	6.3X9	0.10	1020	14	4350	HS0Q687M0609PC
			8X8	0.10	1020	14	4350	HS0Q687M0808PC
	820	820	6.3X11.5	0.10	1230	14	4500	HS0Q827M0611PC
			8X8	0.10	1230	14	4500	HS0Q827M0808PC
	1000	1000	6.3X11.5	0.10	1500	14	4500	HS0Q108M0611PC
			8X11.5	0.10	1500	14	4650	HS0Q108M0811PC
	1200	8X11.5	0.10	1800	14	4700	HS0Q128M0811PC	
	1500	1500	6.3X15	0.10	2250	14	4750	HS0Q158M0615PC
			8X11.5	0.10	2250	14	4900	HS0Q158M0811PC
	2200	2200	8X16	0.10	3300	14	5100	HS0Q228M0816PC
10X12			0.10	3300	14	5100	HS0Q228M1013PC	
3300	3300	10X13.5	0.10	4950	14	5250	HS0Q338M1013PC	
		10X16	0.10	4950	14	5400	HS0Q338M1016PC	
4700	10X16	0.10	7050	14	5500	HS0Q478M1016PC		
10V	100	5X7	0.08	300	28	2350	HS1A107M0507PC	
		6.3X5.5	0.08	300	38	2250	HS1A107M0605PC	
	220	220	5X8	0.08	440	16	2690	HS1A227M0508PC
			6.3X7	0.08	440	16	2950	HS1A227M0607PC
			6.3X8	0.08	440	16	3100	HS1A227M0608PC
	330	6.3X8	0.08	660	16	3300	HS1A337M0608PC	
	470	470	5X11.5	0.08	940	16	3400	HS1A477M0511PC
			6.3X8	0.08	940	14	3500	HS1A477M0608PC
			8X8	0.08	940	14	3650	HS1A477M0808PC
	560	560	6.3X9	0.08	1120	14	3700	HS1A567M0609PC
			8X8	0.08	1120	14	4100	HS1A567M0808PC
	680	680	6.3X11.5	0.10	1360	14	4200	HS1A687M0611PC
			8X11.5	0.10	1360	14	4500	HS1A687M0811PC
	820	820	6.3X11.5	0.10	1640	14	4650	HS1A827M0611PC
			8X11.5	0.10	1640	14	4700	HS1A827M0811PC
	1000	8X11.5	0.10	2000	14	4850	HS1A108M0811PC	
	1500	10X12	0.10	3000	14	4900	HS1A158M1012PC	
	2200	10X12	0.10	4400	10	5300	HS1A228M1012PC	
3300	10X16	0.10	6600	10	5650	HS1A338M1016PC		

HS 系列

◆标准品一览表

WV	Cap ( $\mu$ F)	尺寸 $\Phi$ DxL (mm)	损失角正切值 ( $\tan\delta$ ) (20°C, 120Hz)	漏电流 ( $\mu$ A) (max)	等效串联电阻 (ESR) ( $m\Omega$ max./20°C, 100kHz)	额定纹波电流 (mA <sub>rms</sub> /105°C, 100kHz)	产品代码
12V	330	5X9	0.10	792	18	2900	HS1B337M0509PC
	330	5.5X9	0.10	792	16	3500	HS1B337M5509PC
	470	6.3X8	0.10	1128	16	3650	HS1B477M0608PC
	560	6.3X11.5	0.10	1344	14	3800	HS1B567M0611PC
	680	6.3X11.5	0.10	1632	14	3900	HS1B687M0611PC
	820	8X11.5	0.10	1968	14	4000	HS1B827M0811PC
	1000	8X11.5	0.10	2400	14	4200	HS1B108M0811PC
	1500	8X16	0.10	3600	12	4500	HS1B158M0816PC
	2200	10X13.5	0.10	5280	12	4900	HS1B228M1013PC
	3300	10X16	0.10	7920	12	5400	HS1B338M1016PC
16V	22	5X7	0.12	300	45	1650	HS1C226M0507PC
	47	5X7	0.12	300	38	1950	HS1C476M0507PC
	100	5X7	0.12	320	25	2250	HS1C107M0507PC
		6.3X5.5	0.12	320	38	1950	HS1C107M0605PC
		6.3X7	0.12	320	22	2350	HS1C107M0607PC
	180	6.3X8	0.12	320	22	2600	HS1C107M0608PC
		5X8	0.12	576	20	2690	HS1C187M0508PC
		6.3X7	0.12	576	20	2800	HS1C187M0607PC
	220	5X9	0.12	704	20	2850	HS1C227M0509PC
		6.3X7	0.12	704	18	2900	HS1C227M0607PC
		6.3X8	0.12	704	16	3000	HS1C227M0608PC
	270	5X11.5	0.12	864	16	3100	HS1C277M0511PC
		6.3X8	0.12	864	16	3200	HS1C227M0608PC
	330	5X11.5	0.12	1056	16	3200	HS1C337M0511PC
		5.5X11.5	0.12	1056	18	3100	HS1C337M5511PC
		6.3X7	0.12	1056	18	3100	HS1C337M0607PC
		6.3X9	0.12	1056	16	3300	HS1C337M0609PC
		8X8	0.12	1056	14	3700	HS1C337M0808PC
		8X11.5	0.12	1056	14	3900	HS1C337M0811PC
	470	5.5X11.5	0.12	1504	16	3500	HS1C477M5511PC
		6.3X9	0.12	1504	16	3500	HS1C477M0609PC
		6.3X10.5	0.12	1504	16	3500	HS1C477M0610PC
		6.3X11.5	0.12	1504	14	3650	HS1C477M0611PC
		8X8	0.12	1504	14	3800	HS1C477M0808PC
		8X11.5	0.12	1504	14	4100	HS1C477M0811PC
		10X12	0.12	1504	14	4500	HS1C477M1012PC
	560	5.5X11.5	0.12	1792	16	3600	HS1C567M5511PC
		6.3X11.5	0.12	1792	14	3800	HS1C567M0611PC
		8X8	0.12	1792	14	3950	HS1C567M0808PC
		8X11.5	0.12	1792	14	4200	HS1C567M0811PC
10X12		0.12	1792	10	4600	HS1C567M1012PC	
680	6.3X11.5	0.12	2176	16	4150	HS1C687M0611PC	
	6.3X15	0.12	2176	14	4500	HS1C687M0615PC	
	8X11.5	0.12	2176	12	4500	HS1C687M0811PC	

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◆标准品一览表

WV	Cap ( $\mu$ F)	尺寸 $\Phi$ DxL (mm)	损失角正切值(tan $\delta$ ) (20°C, 120Hz)	漏电流 ( $\mu$ A) (max)	等效串联电阻 (ESR) (m $\Omega$ max./20°C, 100kHz)	额定纹波电流 (mArms/105°C, 100kHz)	产品代码
16V	680	10X12	0.12	2176	12	4900	HS1C687M1012PC
	820	6.3X11.5	0.12	2624	14	4500	HS1C827M0611PC
		6.3X15	0.12	2624	14	4700	HS1C827M0615PC
		8X11.5	0.12	2624	12	4750	HS1C827M0811PC
		10X12	0.12	2624	12	4900	HS1C827M1012PC
		8X11.5	0.12	3200	14	4800	HS1C108M0811PC
	1000	8X13.5	0.12	3200	14	4900	HS1C108M0813PC
		8X16	0.12	3200	12	5100	HS1C108M0816PC
		10X12	0.12	3200	12	5100	HS1C108M1012PC
		8X16	0.12	3840	12	5250	HS1C128M0816PC
	1200	10X12	0.12	3840	12	5250	HS1C128M1012PC
		8X16	0.12	4800	12	5300	HS1C158M0816PC
	1500	10X12	0.12	4800	12	5300	HS1C158M1012PC
		10X16	0.12	4800	12	5500	HS1C158M1016PC
		10X16	0.12	7040	12	5800	HS1C158M0816PC
2200	10X16	0.12	7040	12	5800	HS1C158M0816PC	
3300	10X16	0.12	10560	18	6100	HS1C338M1016PC	
20V	100	5X7	0.12	400	28	2450	HS1D107M0507PC
	220	6.3X8	0.12	880	25	2800	HS1D227M0608PC
	330	6.3X9	0.12	1320	25	3100	HS1D337M0609PC
	470	6.3X11.5	0.12	1880	25	3250	HS1D477M0611PC
	560	6.3X15	0.12	2240	22	3500	HS1D567M0615PC
		8X11.5	0.12	2240	20	3500	HS1D567M0811PC
	680	6.3X15	0.12	2720	22	3650	HS1D687M0615PC
		8X11.5	0.12	2720	20	3650	HS1D687M0811PC
	820	8X13.5	0.12	3280	20	3900	HS1D827M0813PC
		10X12	0.12	3280	20	3900	HS1D827M1012PC
	1000	8X16	0.12	4000	20	4200	HS1D108M0816PC
		10X12	0.12	4000	20	4200	HS1D108M1012PC
	1500	10X13.5	0.12	6000	20	4500	HS1D158M1013PC
		10X16	0.12	6000	20	4700	HS1D158M1016PC
	2200	10X16	0.10	8800	20	4900	HS1D228M1016PC

HS 系列

◆标准品一览表

WV	Cap ( $\mu$ F)	尺寸 $\Phi$ DxL (mm)	损失角正切值 ( $\tan\delta$ ) (20 $^{\circ}$ C, 120Hz)	漏电流 ( $\mu$ A) (max)	等效串联电阻 (ESR) (m $\Omega$ max./20 $^{\circ}$ C, 100kHz)	额定纹波电流 (mA rms/105 $^{\circ}$ C, 100kHz)	产品代码
25V	10	5X8	0.12	300	85	1950	HS1E106M0508PC
	22	5X7	0.12	300	68	2000	HS1E226M0507PC
	33	6.3X5.5	0.12	300	58	2100	HS1E336M0605PC
	47	5X8	0.12	300	45	2250	HS1E476M0508PC
		6.3X5.5	0.12	300	48	2200	HS1E476M0605PC
		6.3X7	0.12	300	45	2350	HS1E476M0607PC
	56	5X8	0.12	300	45	2350	HS1E566M0508PC
	82	6.3X7	0.12	410	45	2550	HS1E826M0607PC
	100	5X7	0.12	500	48	2150	HS1E107M0507PC
		5X8	0.12	500	38	2450	HS1E107M0508PC
		5X9	0.12	500	38	2700	HS1E107M0509PC
		5X11.5	0.12	500	38	2900	HS1E107M0511PC
		6.3X5.5	0.12	500	48	2450	HS1E107M0605PC
		6.3X7	0.12	500	45	2750	HS1E107M0607PC
		6.3X8	0.12	500	32	2900	HS1E107M0608PC
		8X8	0.12	500	20	3500	HS1E107M0808PC
	120	8X11.5	0.12	500	20	3750	HS1E107M0811PC
		5X9	0.12	600	38	2850	HS1E127M0509PC
	150	6.3X8	0.12	600	32	3050	HS1E127M0608PC
		5X9	0.12	780	35	2950	HS1E157M0509PC
	180	5.5X9	0.12	780	35	3250	HS1E157M5509PC
		6.3X7	0.12	780	32	3200	HS1E157M0607PC
		5X9	0.12	900	35	3100	HS1E187M0509PC
	220	6.3X7	0.12	900	32	3300	HS1E187M0607PC
		8X8	0.12	900	20	3900	HS1E187M0808PC
		5X11.5	0.12	1100	35	3100	HS1E227M0511PC
	270	5.5X9	0.12	1100	35	3200	HS1E227M5509PC
		5.5X11.5	0.12	1100	35	3550	HS1E227M5511PC
		6.3X7	0.12	1100	35	3350	HS1E227M0607PC
		6.3X8	0.12	1100	35	3500	HS1E227M0608PC
		6.3X9	0.12	1100	32	3700	HS1E227M0609PC
		8X10.5	0.12	1100	20	4100	HS1E227M0810PC
		8X11.5	0.12	1100	20	4300	HS1E227M0811PC
	330	5X11.5	0.12	1350	35	3250	HS1E277M0511PC
		5.5X9	0.12	1350	35	3250	HS1E277M5509PC
		6.3X9	0.12	1350	32	3800	HS1E227M0609PC
	330	5X15	0.12	1650	35	3350	HS1E337M0515PC
		5.5X11.5	0.12	1650	35	3650	HS1E337M5511PC
		6.3X9	0.12	1650	35	3750	HS1E337M0609PC
		6.3X11.5	0.12	1650	35	3800	HS1E337M0611PC
		8X8	0.12	1650	28	4250	HS1E337M0808PC

HS 系列

◆标准品一览表

WV	Cap ( $\mu$ F)	尺寸 $\Phi$ DxL(mm)	损失角正切值(tan $\delta$ ) (20 $^{\circ}$ C, 120Hz)	漏电流 ( $\mu$ A)(max)	等效串联电阻(ESR) (m $\Omega$ max./20 $^{\circ}$ C, 100kHz)	额定纹波电流 (mArms/105 $^{\circ}$ C, 100kHz)	产品代码
25V	330	8X11.5	0.12	1650	28	4500	HS1E337M0811PC
		10X12	0.12	1650	20	4900	HS1E337M1012PC
	470	5.5X15	0.12	2350	35	3750	HS1E477M5515PC
		6.3X11.5	0.12	2350	35	3900	HS1E477M0611PC
		6.3X15	0.12	2350	35	4100	HS1E477M0615PC
		8X8	0.12	2350	28	4250	HS1E477M0808PC
		8X11.5	0.12	2350	28	4750	HS1E477M0811PC
		8X16	0.12	2350	20	4900	HS1E477M0816PC
		10X12	0.12	2350	20	4900	HS1E477M1012PC
	560	5.5X15	0.12	2800	35	3850	HS1E567M5515PC
		6.3X15	0.12	2800	35	4300	HS1E567M0615PC
		8X11.5	0.12	2800	28	5100	HS1E567M0811PC
	680	6.3X15	0.12	3400	35	4500	HS1E687M0615PC
		8X11.5	0.12	3400	28	5100	HS1E687M0811PC
		8X16	0.12	3400	20	5250	HS1E687M0816PC
		10X12	0.12	3400	20	5250	HS1E687M1012PC
	820	6.3X15	0.12	4100	35	4700	HS1E827M0615PC
		8X13.5	0.12	4100	28	5400	HS1E827M0813PC
		8X16	0.12	4100	20	5500	HS1E827M0816PC
		10X12	0.12	4100	20	5500	HS1E827M1012PC
	1000	8X16	0.12	5000	20	5650	HS1E108M0816PC
		10X12	0.12	5000	20	5650	HS1E108M1012PC
		10X16	0.12	5000	20	5700	HS1E108M1016PC
	1200	10X16	0.12	6000	20	5800	HS1E128M1016PC
1500	10X16	0.12	7500	20	5900	HS1E158M1016PC	
2200	10X16	0.12	11000	20	6100	HS1E228M1016PC	

◆高低温阻抗

阻抗比	性能
$Z(-55^{\circ}\text{C}) / Z(+20^{\circ}\text{C})$	0.75 to 1.25
$Z(105^{\circ}\text{C}) / Z(+20^{\circ}\text{C})$	0.75 to 1.25

◆纹波电流频率系数

频率 Frequency	120Hz $\cong$ f < 1 kHz	1 kHz $\cong$ f < 10 kHz	10 kHz $\cong$ f < 100 kHz	100 kHz $\cong$ f < 300 kHz
系数 Coefficient	0.05	0.3	0.7	1.00



◆物料编码



1.1 系列编码

编码 Code	HS
系列编码 Series Code	HS

1.2 电压编码

编码 Code	0E	0G	0J	0C	0Q	1A	1B	1L	1C	1D	1E	1V	1H	1J	1K	2A
电压编码 VoltageCode(W.V)	2.5	4	6.3	6.8	7.5	10	12	14	16	20	25	35	50	63	80	100

1.3 电容公差

“M”代表-20%~+20%

1.4 容量编码

编码 Code	476	107	157	337	477	567	687	827	108
容量 Capacitance (uF)	47	100	150	330	470	560	680	820	1000

1.5 尺寸编码

编码 Code	0509	0607	0608	0609	0611	0808	0811	1010	1012
直径 D (Φ)	5	6.3	6.3	6.3	6.3	8	8	10	10
高度 H (mm)	9	7	8	9	11.5	8	11.5	10	12

1.6 成型方式编码

编码 Code	PC	PJ	PB	PZ
其他 Other	平豆散装 Platform rubber& In bulk	平豆剪脚 Platform rubber &Lead Cut3.5±0.3mm	平豆编带 Platform rubber& Taping Pitch=2.0mm	座板 Right lying Bending2.0±0.5mm

◆结构



导线:固体镀锡铜包钢线

Lead wires : Solid tinned copper weld steel wire

导线端子: 高纯铝 Al-boss : High pure aluminum

电解纸: 马尼拉麻 Paper : Manila hemp

铝箔 (正极): 高纯铝 Al-foil (Anode) : High pure minium

铝箔 (负极): 碳箔、高纯铝

Al-foil (Cathode) : Carbon foil、High purity aluminum

铝壳: 高纯铝 (尼龙碾压) Al-case : Aluminum (nylon inate)

胶粒: 聚酯 Tape : Polyester

导线和圆柱端子通过焊接连接在一起

The lead wire and the Al-boss are welded together.

导线扁平端子与铝箔通过按压连接在一起

The Al-tab and the Al-foil are stitched to join together.

卷绕的素子外部以阴极箔包裹

The outer most Al-foil spiral of the element is cathode.

导电高分子用作电解质

Conductive polymer is used as the electrolyte.

◆奈印

除非另有说明, 奈印应该清晰地印在电容上



◆包装

包装标签标示 Packing Label Marked

(下面的项目应该标志在标签上 the following items shall be marked on the label)

(盒内或包内 Inside box or bag)

1)系列 series 2)料号 P/N 3)额定电容 Rated capacitance 4)额定电压 Rated Voltage

5)数量 quantity 6)尺寸 size

7)批号 LOT Number :

1 - 2 3 4 5 6 7 8 9  
 成品 Product      年 year      月 month      号码 number

分类	标准品			剪脚品		
	袋	内盒	外箱	袋	内盒	外箱
尺寸 D*L(mm)	(pcs)	267x260x135 (mm)	546x279x160 (mm)	(pcs)	267x260x135 (mm)	546x279x160 (mm)
φ 5	1000	10000	20000	1000	12000	24000
φ 6	1000	10000	20000	1000	12000	24000
φ 8	500	5000	10000	1000	6000	12000
φ 10	500	5000	10000	500	6000	12000

## ◆操作注意事项Operating Precautions

### 8.1 极性Polarity

CAP是具有正负极的固态铝电解电容，使用中不可反接，若接反，则电容会因为漏电流不断增大或短路而造成寿命缩短。

CAP is a solid aluminum electrolytic capacitor with positive and negative electrodes. Do not reverse the polarity when using. If it is used with the polarities reversed, its life may shorten because of increasing leakage current or short circuit.

### 8.2禁止电路 Prohibited circuits

因为焊接及其它动作可造成电容的漏电流增加，CAP不可使用在下列电路中：

Since problems can be expected due to leakage current increasing during soldering and other processes, CAP cannot be used in the following circuits

- 1)高阻抗电路1) High impedance circuits;
- 2)耦合电路2) Coupling circuits;
- 3)时限恒量电路3) Time constant circuits;
- 4)为提高耐电压而串联两个或多个电容于电路中
- 4) Connection of two or more capacitors in series for higher withstand voltage;
- 5)电路因漏电流过大而有坏的影响5)Circuits to get bad influence by big leakage current

\* 除漏电流的波动上升外，电容的使用条件如在承认书中规定的高温和低温，温热和耐受性条件都会影响电容量。若电容作为时限恒量电容使用，因其对电容量的变动的敏感性，电容量的改变会造成影响。不要将其作为时限恒量电容使用，同时若因电压原因要串联多个CAP电容，请联系东莞荣誉电子有限责任公司。

\* In addition to the leakage current fluctuation above, the operational conditions such as characteristics at high and low temperature, damp heat and endurance stipulated in the specifications will affect the capacitance. The fluctuation of the capacitance may cause problem if it is used as a time constant capacitor, which is extremely sensitive to the fluctuation of the capacitance. Do not use it as a time constant capacitor. Additionally please contact DONGGUAN HONOR Electronics Co., Ltd. for usage of two or more CAP in series for voltage proof.

### 8.3 电压Over voltage

电压若超过额定电压，即便只是一瞬间也可能造成短路

Over voltage exceeding the rated voltage may not be applied even for an instant as it may cause a short circuit.

### 8.4突然充放电Sudden charge and discharge

突然的充放电是不可取的（为了维持高的可靠性）。为防止突然的充放电造成电容短路或漏电流增大，电路中应加上一个保护电路用以分流过大的电流。若瞬间电流超过10A或超过10倍允许纹波电流，要使用保护电路。在测试漏电流时请加上一个1kΩ的电阻用以充放电。

Sudden charge and discharge restricted (for maintenance of high-proof reliability). A protection circuit is recommended for when a sudden charge or discharge causes excessive rush current because this is a main cause of short circuits and large leakage current. Use protection circuits if the rush current exceeds 10A. The rush current exceeds 10×the maximum allowable ripple current of CAP. Be sure to insert a protection resistor of about 1kΩ for charge and discharge when measuring the leakage current.

### 8.5焊接注意事项Considerations when soldering

焊接条件要在承认书的规定范围内。若没有遵守承认书的条件，则电容漏电流可能急剧增加，容量衰减。

The soldering conditions are to be within the range prescribed in specifications. If the specifications are not followed, there is a possibility of the cosmetic deflection, the intensive increase of leakage current, and the capacitance reduction.

使用需知Things to be noted before mounting

- (a) 已安装过的或加过电压的CAP请勿再使用。经历了周期性电性能测试的CAP不可再用。  
 (a) Do not reuse CAP that have been assembled in a set and energized. Excluding CAP that have been removed for measuring electrical characteristics during a periodic inspection, CAP cannot be reused.
- (b) CAP贮藏一年时间后，漏电流可能会增大，使用前，请在105℃，额定电压及接有1 kΩ电阻的条件下充电2小时。  
 (b) Leakage current may increase when CAP are stored for one year. In this case, apply rated voltage for 2 hour at 105℃ with load of 1 kΩ resistor.
- (c) Reflow soldering 流体焊接  
 Do not apply radial lead type capacitors to reflow soldering. 不可用于SMD系列
- (d) Handling after soldering 焊接后处理  
 在这之后，不要倾斜，弯曲或扭曲CAP Do not tilt, bend or twist the CAP after it  
 不可通过抓捏CAP来移动印刷电路板 Do not move the PCB with catching CAP itself.  
 堆叠印刷电路板时确保CAP没有碰触到其它电路板或部件  
 When stacking PCB make sure that the CAP does not touch other PCB or components.  
 不可将CAP与其它物品堆放 Do not dump the CAP with objects.

#### 8.6 使用CAP于工业设备 Use of CAP for industrial equipments

为确保CAP在工业设备上的可靠性，设计必须与之相符。

To ensure reliability when the CAP is used in industrial equipments, design must allow for its

#### 8.7 使用CAP于生命保障系统 Use of CAP for human life equipments

若使用于与人类生命有关的设备上（如空间设备、航空设备、原子设备等），请与东莞荣誉电子有限责任公司详细咨询，不要使用没有东莞荣誉电子有限责任公司承认文件的CAP。

In case of using in equipments regarding human life (e.g. Space equipment, aeronautic equipment and atomic equipment etc.), be sure to talk over the matter with DONGGUAN HONOR Electronics Co., Ltd. Don't use without recognition document of DONGGUAN HONOR Electronics Co., Ltd.

#### 8.8 贮存 Storage

1) 请将CAP贮存于温度在-40 to 85℃之间，相对湿度在75%以下的没有阳光直射的环境中，如果可能可贮存于包裹中。(如果在35到85℃，他应该少于三个月)

Store CAP with the temperature range between -40 to 85℃ (If between 35 to 85℃, it should be less than three months), and the relative humidity of 75% without direct sunshine and store CAP in the package states if possible.

2) CAP请在使用前再打开包装袋并且快速用完。

CAP are recommended that you shall open the bag just before use and CAP shall be used up.

3) 不要在有水、盐水、油及凝结状况的地方贮存CAP

Never store CAP in which it is directly exposed to water, brine, oil or in condensation status.

4) 禁止在含有毒气体的区域放置CAP（如：硫化氢、亚硫酸、亚硝酸、氯气、氨水等）

Never store CAP in any area filled with poisonous gases (including hydrogen sulfide, sulfurous acid, nitrous acid, chlorine and ammonia).

5) 禁止在有紫外线或放射性辐射的区域放置CAP。

Never store CAP in any area to which ultraviolet and/or radial rays are radiated.

※ (导针式 Radial lead type)

开启前：出货后一年内 Before unseal : within 1 year after delivery

封口后：打开后7天内 After seal : within 7 days from opening

#### 8.9 清洗 Cleaning

关于HCFC，可用高浓酒精，石油，匝烯，水和表面活性剂以及别的溶剂（单独或混合使用）浸泡，用超声波，煮沸，蒸发等方法按制作者的建议清洗。更多详情请联系。

Concerning about HCFC, higher alcohol system, petroleum system, terpene system, water system with surface active agent and other solvents the washing way (separateness or combinations) by soak, ultrasonic wave, boil, vapor etc. is confirmed under the maker's recommendation. Please contact us if you require further details.

#### 8.10为CAP设计电路的说明Notes on circuit designs for CAP

##### 8.10.1 执行Performance

在承认书中指定的额定性能范围内使用CAP。

Use CAP within the rating and performance ranges defined in this specifications.

##### 8.10.2使用温度和纹波电流Operating temperature and ripple current

如果CAP的使用温度超过了上限温度（105℃）或是有过载纹波电流通过，则有较大可能使寿命缩短，或漏电流增大，造成CAP失效。

If CAP is used at a temperature higher than the upper category temperature(105℃), or excess ripple current flows through CAP, there are high possibilities of life cycle reduction or leakage current increasing to cause CAP defective.

##### 8.10.3漏电流Leakage current

漏电流会因焊接条件而有些微的上升，加载直流电压可使电容自我修复，漏电流逐渐减小。

The leakage current of CAP may increase slightly by soldering conditions. The application of DC voltage enables the capacitors to be repaired by itself and this leads the leakage current to be smaller gradually.

##### 8.10.4使用电压Applied voltage

为了保证CAP的可靠性，加载到CAP上的电压最好小于其额定电压的80%。直流加交流电压的峰值应小于额定电压。

For the reliability of CAP, it is recommended that the voltage applied to CAP should be less than 80% of the rated voltage. Peak value of the the dc and ac voltage should not exceed its rated voltage.

##### 8.10.5失效模式Failure mode

CAP含有导电聚合物，其寿命的终止大部分是由于偶然失效模式，主要是短路。如果短路，CAP将会因持续电流流过而过热，然后铝壳会因内部压力的增加而脱离电容。

CAP contains a conductive polymer. The life ends mostly due to random failure mode, mainly short circuit. In case of short circuit, CAP can be overheated by continuous current flow, then case of CAP would be removed by internal pressure increasing.