

HS Series

HS series Standard Products

HS系列标准产品

- 在高频范围内的低ESR Low ESR at high frequency range
- 允许大纹波电流 Large permissible ripple current

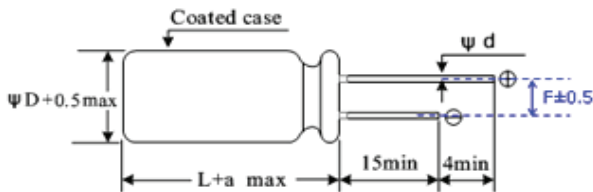
■ 主要技术性能 Specifications

项目 item	性能、特点 Performance Characteristics	
使用工作范围 Operating Temperature Range	-55~+105℃	
额定电压范围 Rated Voltage Range	2.5~25vdc	
容量公差 Capacitance Tolerance	±20%(120Hz,+20℃)	
漏电流 Leakage Current(+20℃,max)	充电2分钟后漏电≤0.2cv ≤0.2CV(uA,after 2 minutes)	
损耗系数 Dissipation Factor (tanδ,at 20℃,120Hz)	不超过指定值 Not to exceed the value specified	
ESR(100KHz)	不超过指定值 Not to exceed the value specified	
耐久性 Endurance 105℃, 2000h, 不超过额定电压 105℃,2000h,at rated voltage	Capacitance Change	测试前的值的±20%以内 Within ±20% of the value before test
	Leakage Current	不超过指定值 Not to exceed the value specified
	ESR	不超过指定值的150% Not to exceed 150% of the value specified
	Dissipation Factor	不超过指定值的150% Not to exceed 150% of the value specified
耐湿性 Moisture Resistance 存放在60℃, RH90~95%, 2000h Stored at 60℃,RH90~95%,2000h	Capacitance Change	测试前的值的±20%以内 Within ±20% of the value before test
	Leakage Current	不超过指定值 Not to exceed the value specified
	ESR	不超过指定值的150% Not to exceed 150% of the value specified
	Dissipation Factor	不超过指定值的150% Not to exceed 150% of the value specified

■ 纹波电流的频率系数 Frequency Coefficient for Ripple Current

Frequency	120Hz≤freq.<1KHz	1KHz≤freq.<10KHz	10KHz≤freq.<100KHz	100KHz≤freq.<300KHz
Coefficient	0.05	0.3	0.7	1

■ 外形图及尺寸图 Case size table



ΦDXL	ΦD+0.5max	a	F±0.5	Φd±0.05
5X8	5.0	1.0	2.0	0.45
6.3X7/8	6.3	1.0	2.5	0.45/0.6
6.3X11	6.3	1.0	2.5	0.6
8X8	8.0	1.0	3.5	0.6
8X11.5	8.0	1.5	3.5	0.6
10X12.5	10	1.5	5.0	0.6

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■ 尺寸清单 Size List

Cap(uF) \ WV (sv)	2.5 (2.8)	4 (4.6)	6.3 (7.2)	10 (11.5)	16 (18.4)	20 (23)	25 (27.5)
10							6.3X7/6.3X8
15							6.3×7
22						6.3×7	5X8/6.3X7 6.3×8
33						5X8/6.3X7 6.3×8	5X8/6.3X7 6.3×8
39						5X8/6.3X7/6.3X8 8X8 / 8X11.5	6.3X7/6.3X8/ 8X8 / 8X11.5
47					6.3X7/6.3X8	5X8/6.3X7/6.3X8 8X8 / 8X11.5	6.3×8 8X8 / 8X11.5
68					5X8/6.3X7 6.3×8	6.3×11 8X8 / 8X11.5	6.3×11 8X8 / 8X11.5
82					5X8/6.3X7 6.3×8	6.3×11 8X8 / 8X11.5	6.3×11 8X8 / 8X11.5
100					5X8/6.3X7/6.3X8 6.3×11/8X11.5	6.3X11/8X8/ 8X11.5/10X12.5	6.3X11/8X8/ 8X11.5/10X12.5
150				5X8/6.3X7	6.3X7/6.3X8/ 6.3×11/8X8	8X8 / 8X11.5	8X11.5 / 10X12.5
180			5X8/6.3X7/ 8X8 / 8X11.5	5X8/6.3X7/ 8X8 / 8X11.5	6.3×8/6.3X11 8X8 / 8X11.5	8X11.5 / 10X12.5	10X12.5
220		5X8/6.3X7	5X8/6.3X7/ 8X8 / 8X11.5	5X8/6.3X7/6.3X8 8X8/8X11.5	6.3X11 8X8 / 8X11.5	8X11.5 / 10X12.5	10X12.5
270	6.3×7	5X8/6.3X7	5X8/6.3X7/6.3X8 8X8/8X11.5	6.3X7/6.3X8 8X8/8X11.5	6.3X11/8X8/ 8X11.5/10X12.5	10X12.5	10X12.5
330	5X8/6.3X7	5X8/6.3X7	5X8/6.3X7/6.3X8 8X8/8X11.5	6.3X8/8X8/ 8X11.5	8X8 / 8X11.5 / 10X12.5	10X12.5	10X12.5
390	5X8/6.3X7	5X8/6.3X7	6.3X7/6.3X8 8X8/8X11.5	8X8 / 8X11.5	8X11.5 / 10X12.5		
470	5X8/6.3X7	6.3×7	6.3X8/8X8/ 8X11.5	6.3X11/8X8/ 8X11.5	8X11.5 / 10X12.5		
560	5×8/6.3X7/6.3X8 8X8/8X11.5	6.3X8/8X8 8X11.5	6.3X8/8X8 8X11.5	8X8 / 8X11.5	10X12.5		
680	6.3X8/8X8 8X11.5	8X8 / 8X11.5	6.3X8/8X8/ 8X11.5/10X12.5	8X8/8X11.5 10X12.5	10X12.5		
820	6.3X8/8X8 8X11.5	8X8 / 8X11.5 10X12.5	6.3X11/8X8/ 8X11.5/10X12.5	8X8/8X11.5 10X12.5	10X12.5		
1000	8X8 / 8X11.5	8X11.5/10X12.5	8X8/8X11.5 10X12.5	8X11.5 / 10X12.5			
1200	8X8 / 8X11.5	8X11.5/10X12.5	8X11.5 / 10X12.5	10X12.5			
1500	8X8 / 8X11.5	10X12.5	8X11.5 / 10X12.5	10X12.5			
2000	8X11.5 / 10X12.5	8X11.5/10X12.5	10X12.5				
2500	10X12.5	10X12.5					
2700	10X12.5	10X12.5					
3000	10X12.5						
3300	10X12.5						
3500	10X12.5						

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■ 尺寸及特性 Dimensions & Characteristics

W.V (V)	Capacitance (μ F)	LC. (μ A,2min)	tg δ (120Hz,20 $^{\circ}$ C)	ESR (m Ω ,100KHz)	Maximum Permissible Current(mA,rms)	Size Φ DXL(mm)
2.5	270	135	0.08	18	2690	6.3X7
	330	165	0.08	18	2690	5X8 / 6.3X7
	390	195	0.08	18	2690	5X8 / 6.3X7
	470	235	0.08	18	2690	5X8 / 6.3X7
	560	280	0.08	18	2690	5X8 / 6.3X7
				16	4100	6.3X8
				14	4500	8X8 / 8X11.5
	680	340	0.08	16	4100	6.3X8
				14	4500	8X8 / 8X11.5
	820	410	0.08	16	4100	6.3X8
				14	4500	8X8 / 8X11.5
	1000	500	0.08	14	4500	8X8 / 8X11.5
	1200	600	0.08	14	4500	8X8 / 8X11.5
	1500	750	0.08	14	4500	8X8 / 8X11.5
	2000	1000	0.08	14	4500 / 4900	8X11.5 / 10X12.5
	2500	1250	0.08	14	4900	10X12.5
2700	1350	0.08	14	4900	10X12.5	
3000	1500	0.08	14	4900	10X12.5	
3300	1650	0.08	14	4900	10X12.5	
3500	1750	0.10	14	4900	10X12.5	
4	220	176	0.08	16	2690	5X8 / 6.3X7
	270	216	0.08	16	2690	5X8 / 6.3X7
	330	264	0.08	16	2690	5X8 / 6.3X7
	390	312	0.08	16	2690	5X8 / 6.3X7
	470	376	0.08	16	2690	6.3X7
	560	448	0.08	16	4100	6.3X8
				14	4500	8X8 / 8X11.5
	680	176	0.08	14	4500	8X8 / 8X11.5
	820	656	0.08	14	4500	8X8 / 8X11.5
					4900	10X12.5
	1000	800	0.10	14	4500 / 4900	8X11.5 / 10X12.5
	1200	960	0.10	14	4500 / 4900	8X11.5 / 10X12.5
	1500	1200	0.10	14	4500 / 4900	8X11.5 / 10X12.5
	2000	1600	0.10	14	4900	10X12.5
	2500	2000	0.10	14	4900	10X12.5
2700	2160	0.10	14	4900	10X12.5	

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w.v (V)	Capacitance (μ F)	LC. (μ A,2min)	tg δ (120Hz,20 $^{\circ}$ C)	ESR (m Ω ,100KHz)	Maximum Permissible Current(mA,rms)	Size Φ D \times L(mm)
6.3	180	227	0.08	21	2690	5X8 / 6.3X7
					4500	8X8 / 8X11.5
	220	227	0.08	21	2690	5X8 / 6.3X7
					4500	8X8 / 8X11.5
	270	340	0.08	21	2690	5X8 / 6.3X7
					4100	6.3X8
					4500	8X8 / 8X11.5
	330	416	0.08	16	2690	5X8 / 6.3X7
				14	4100	6.3X8
					4500	8X8 / 8X11.5
	390	491	0.08	16	2690	6.3X7
				14	4100	6.3X8
					4500	8X8 / 8X11.5
	470	592	0.08	16	4100	6.3X8
				14	4500	8X8 / 8X11.5
	560	706	0.08	14	4100	6.3X8
					4500	8X8 / 8X11.5
	680	857	0.08	14	4500	6.3X8
					4500 / 4900	8X11.5 / 10X12.5
	820	1033	0.10	16	4500	6.3X11
14				4500	8X8 / 8X11.5	
				4900	10X12.5	
1000	1260	0.10	14	4500	8X8 / 8X11.5	
				4900	10X12.5	
1200	1512	0.10	14	4500 / 4900	8X11.5 / 10X12.5	
1500	1890	0.10	14	4500 / 4900	8X11.5 / 10X12.5	
2000	2520	0.10	14	4900	10X12.5	

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w.v (V)	Capacitance (μ F)	LC. (μ A,2min)	tg δ (120Hz,20 $^{\circ}$ C)	ESR (m Ω ,100KHz)	Maximum Permissible Current(mA,rms)	Size Φ DXL(mm)
6.3	180	227	0.08	21	2690	5X8 / 6.3X7
					4500	8X8 / 8X11.5
	220	227	0.08	21	2690	5X8 / 6.3X7
					4500	8X8 / 8X11.5
	270	340	0.08	21	2690	5X8 / 6.3X7
					4100	6.3X8
					4500	8X8 / 8X11.5
	330	416	0.08	16	2690	5X8 / 6.3X7
					4100	6.3X8
					4500	8X8 / 8X11.5
	390	491	0.08	16	2690	6.3X7
				14	4100	6.3X8
				14	4500	8X8 / 8X11.5
	470	592	0.08	16	4100	6.3X8
				14	4500	8X8 / 8X11.5
	560	706	0.08	16	4100	6.3X8
				14	4500	8X8 / 8X11.5
	680	857	0.08	14	4500	6.3X8
					4500 / 4900	8X11.5 / 10X12.5
	820	1033	0.10	16	4500	6.3X11
14				4500	8X8 / 8X11.5	
				4900	10X12.5	
1000	1260	0.10	14	4500	8X8 / 8X11.5	
				4900	10X12.5	
1200	1512	0.10	14	4500 / 4900	8X11.5 / 10X12.5	
1500	1890	0.10	14	4500 / 4900	8X11.5 / 10X12.5	
2000	2520	0.10	14	4900	10X12.5	

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w.v (V)	Capacitance (μ F)	LC. (μ A,2min)	tg δ (120Hz,20 $^{\circ}$ C)	ESR (m Ω ,100KHz)	Maximum Permissible Current(mA,rms)	Size Φ DXL(mm)
16	47	150	0.10	25	2690	6.3X7
				18	2900	6.3X8
	68	218	0.10	20	2690	5X8 / 6.3X7
				18	2900	6.3X8
	82	262	0.10	20	2690	5X8 / 6.3X7
				18	2900	6.3X8
	100	320	0.10	20	2690	5X8 / 6.3X7
				18	2900	6.3X8
				15	3500	6.3X1.1
				13	4500	8X11.5
	150	480	0.10	20	2690	6.3X7
				18	2900	6.3X8
				15	3500	6.3X11
				13	4100	8X8
	180	576	0.10	18	2900	6.3X8
				15	3500	6.3X11
				13	4100/4500	8X8 / 8X11.5
	220	704	0.12	15	3500	6.3X11
				13	4100/4500	8X8 / 8X11.5
	270	864	0.12	15	3500	6.3X11
13				4100/4500	8X8 / 8X11.5	
13				4900	10X12.5	
330	1056	0.12	13	4100 / 4500	8X8 / 10X11.5	
			12	4900	10X12.5	
390	1248	0.12	12	4500 / 4900	8X11.5 / 10X12.5	
470	1504	0.12	12	4500 / 4900	8X11.5 / 10X12.5	
560	1792	0.12	12	4900	10X12.5	
680	2176	0.12	12	4900	10X12.5	
-	820	2624	0.12	12	4900	10X12.5

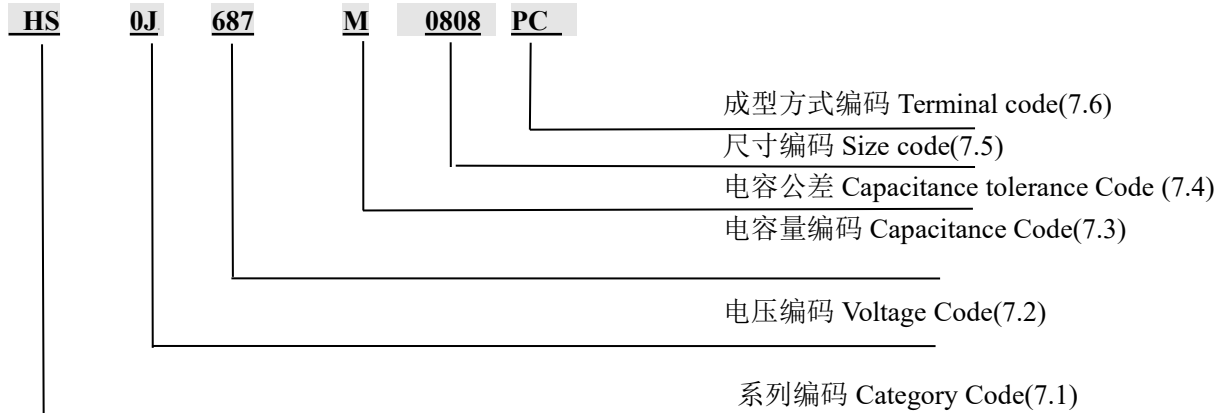
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■ 尺寸及特性 Dimensions & Characteristics

w.v (V)	Capacitance (μ F)	LC. (μ A,2min)	tg δ (120Hz,20 $^{\circ}$ C)	ESR (m Ω ,100KHz)	Maximum Permissible Current(mA,rms)	Size Φ DXL(mm)
20	22	88	0.10	25	1950	6.3X7
	33	132	0.10	25	1950	5X8 / 6.3X7
					2100	6.3X8
	39	156	0.10	25	1950	5X8 / 6.3X7
					2100	6.3X8
					3500 / 4100	8X8 / 8X11.5
	47	188	0.10	25	1950	5X8 / 6.3X7
				20	2100	6.3X8
	68	272	0.10	20	3500 / 4100	8X8 / 8X11.5
				18	2900	6.3X11
	82	328	0.12	20	3500 / 4100	8X8 / 8X11.5
				18	2900	6.3X11
	100	400	0.12	20	4900	10X12.5
				18	3500 / 4100	8X8 / 8X11.5
				18	4100	8X8
150	600	0.12	18	4100	8X11.5	
			15	4100 / 4900	8X11.5 / 10X12.5	
220	880	0.12	15	4100 / 4900	8X11.5 / 10X12.5	
270	1080	0.12	15	4900	10X12.5	
330	1320	0.12	15	4900	10X12.5	
25	10	50	0.12	25	1950 / 2100	6.3X7 / 6.3X8
	15	75	0.12	25	1950	6.3X7
	22	110	0.12	25	1950	5X8 / 6.3X7
					2100	6.3X8
	33	165	0.12	25	1950	5X8 / 6.3X7
					2100	6.3X8
	39	195	0.12	25	1950 / 2100	6.3X7 / 6.3X8
					3500 / 4100	8X8 / 8X11.5
	47	235	0.12	20	2100	6.3X8
					3500 / 4100	8X8 / 8X11.5
	68	340	0.12	20	2900	6.3X11
					3500 / 4100	8X8 / 8X11.5
	82	410	0.12	20	2900	6.3X11
					3500 / 4100	8X8 / 8X11.5
	100	500	0.12	20	2900 / 3500	6.3X11 / 8X8
4100 / 4900					8X11.5 / 10X12.5	
150	750	0.12	15	4100 / 4900	8X11.5 / 10X12.5	
180	900	0.12	15	4900	10X12.5	
220	1100	0.12	15	4900	10X12.5	
270	1350	0.12	15	4900	10X12.5	
330	1650	0.12	15	4900	10X12.5	

物料编码表

1.物料编码 PART No. SYSTEM



1.1 系列编码 Series Code

编码 Code	HS
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1.2 电压编码 Voltage Code

编码 Code	0E	0G	0J	0Q	1A	1C	1E	1V	1H
电压编码 VoltageCode(W.V)	2.5	4	6.3	7.5	10	16	25	35	50

1.3 电容公差 Capacitance tolerance

“M”代表-20%~+20% “M” stands for -20%~+20%

1.4 电容量编码 Capacitance Code

编码 Code	476	107	277	337	477	567	687	827	108
电容量 Capacitance (uF)	47	100	270	330	470	560	680	820	1000

1.5 尺寸编码 Size Code

编码 Code	0508	0509	0608	0609	0611	0809	0811	1010	1012
直径 D (Φ)	5	5	6.3	6.3	6.3	8	8	10	10
高度 H (mm)	8	9	8	9	11.5	9	11.5	10	12.5

1.6 成型方式编码 Terminal Code

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=2.5mm	座板 Right lying Bending2.0±0.5mm