

SH series general purpose 105⁰C 高溫度標準品

- 寬溫度產品，105⁰C，3000-5000 小時壽命，體積小，容量大
Wide temperature range, 105⁰C, Load life: 3000-5000 hours, small size, large capacity
- 適用於 VCD、DVD、背投彩電、空調等線路中
Used in VCD、DVD、color-TV、air conditioning circuits etc.

Specifications

No	Item	Performance																																		
1	使用溫度範圍 Operating Temperature Range	-40 to + 105 ⁰ C	-25 to +105 ⁰ C																																	
2	定格電壓範圍 Rated Working Voltage Range	6.3-63V.DC	100-450V.DC																																	
3	靜電容量範圍 Capacitance Tolerance	0.1-22000μF	0.1-1000μF																																	
4	靜電容量容許差 Capacitance Tolerance	±20% (at +20 ⁰ C, 120Hz)																																		
5	洩漏電流 Leakage Current	I ≤ 0.01CV or 3 (μA) min	I ≤ 0.03CV or 20 (μA) min																																	
		L: Leakage Current (μA) C: Rated Capacitance (μF) V: Working Voltage (V) Whichever is greater after 3 minutes.																																		
6	損失角 Dissipation Factor (tan δ) (120Hz/+20 ⁰ C)	<table border="1"> <thead> <tr> <th>Working Voltage (V)</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>100</th> <th>160, 250</th> <th>350-450</th> </tr> </thead> <tbody> <tr> <td>tan δ max.</td> <td>0.22</td> <td>0.20</td> <td>0.17</td> <td>0.15</td> <td>0.12</td> <td>0.10</td> <td>0.09</td> <td>0.08</td> <td>0.20</td> <td>0.24</td> </tr> </tbody> </table>				Working Voltage (V)	6.3	10	16	25	35	50	63	100	160, 250	350-450	tan δ max.	0.22	0.20	0.17	0.15	0.12	0.10	0.09	0.08	0.20	0.24									
		Working Voltage (V)	6.3	10	16	25	35	50	63	100	160, 250	350-450																								
tan δ max.	0.22	0.20	0.17	0.15	0.12	0.10	0.09	0.08	0.20	0.24																										
For capacitance value > 1000μF, add 0.02 per another 1000μF																																				
7	溫度特性 (at 120 Hz) Characteristics at low temperature (Impedance ratio at 120Hz)	<table border="1"> <thead> <tr> <th>Working Voltage (V)</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25~100</th> <th>160~250</th> <th>350</th> <th>400</th> <th>450</th> </tr> </thead> <tbody> <tr> <td>Z-25⁰C/+20⁰C</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td>3</td> <td>6</td> <td>6</td> <td>15</td> </tr> <tr> <td>Z-40⁰C/+20⁰C</td> <td>8</td> <td>6</td> <td>4</td> <td>3</td> <td colspan="4">-</td> </tr> </tbody> </table>								Working Voltage (V)	6.3	10	16	25~100	160~250	350	400	450	Z-25 ⁰ C/+20 ⁰ C	4	3	2	2	3	6	6	15	Z-40 ⁰ C/+20 ⁰ C	8	6	4	3	-			
		Working Voltage (V)	6.3	10	16	25~100	160~250	350	400	450																										
		Z-25 ⁰ C/+20 ⁰ C	4	3	2	2	3	6	6	15																										
Z-40 ⁰ C/+20 ⁰ C	8	6	4	3	-																															
For capacitance value > 1000μF, Add 0.5 per another 1000μF for -25 ⁰ C/+20 ⁰ C. Add 1.0 per another 1000μF for -40 ⁰ C/+20 ⁰ C																																				
8	高溫負荷特性 High Temperature Loading	Application of DC rated working voltage at +105 ⁰ C, The capacitor shall meet the following limits:		<table border="1"> <thead> <tr> <th>D₀</th> <th>≤ 80</th> <th>≥ 100</th> </tr> </thead> <tbody> <tr> <td>Life hours</td> <td>3000</td> <td>5000</td> </tr> </tbody> </table>		D ₀	≤ 80	≥ 100	Life hours	3000	5000																									
		D ₀	≤ 80	≥ 100																																
		Life hours	3000	5000																																
Post test requirements at +20 ⁰ C		<table border="1"> <tbody> <tr> <td>Leakage current</td> <td>≤ the Initial specified value</td> </tr> <tr> <td>Capacitance change</td> <td>≤ ±25% of initial measured value</td> </tr> <tr> <td>Dissipation Factor (tan δ)</td> <td>≤ 200% of initial specified value</td> </tr> </tbody> </table>		Leakage current	≤ the Initial specified value	Capacitance change	≤ ±25% of initial measured value	Dissipation Factor (tan δ)	≤ 200% of initial specified value																											
Leakage current	≤ the Initial specified value																																			
Capacitance change	≤ ±25% of initial measured value																																			
Dissipation Factor (tan δ)	≤ 200% of initial specified value																																			
9	高溫無負荷特性 Shelf Life	After 1000hrs. Application of DC no rated working voltage at +105 ⁰ C, The capacitor shall meet the following limits: Post test requirements at +20 ⁰ C																																		
		<table border="1"> <tbody> <tr> <td>Leakage current</td> <td>≤ 200% of initial specified value</td> </tr> <tr> <td>Capacitance change</td> <td>≤ ±20% of initial measured value</td> </tr> <tr> <td>Dissipation Factor (tan δ)</td> <td>≤ 200% of initial specified value</td> </tr> </tbody> </table>		Leakage current	≤ 200% of initial specified value	Capacitance change	≤ ±20% of initial measured value	Dissipation Factor (tan δ)	≤ 200% of initial specified value																											
		Leakage current	≤ 200% of initial specified value																																	
Capacitance change	≤ ±20% of initial measured value																																			
Dissipation Factor (tan δ)	≤ 200% of initial specified value																																			

Multiplier for ripple current 紋波電流補正係數

Frequency Coefficient 周波數係數

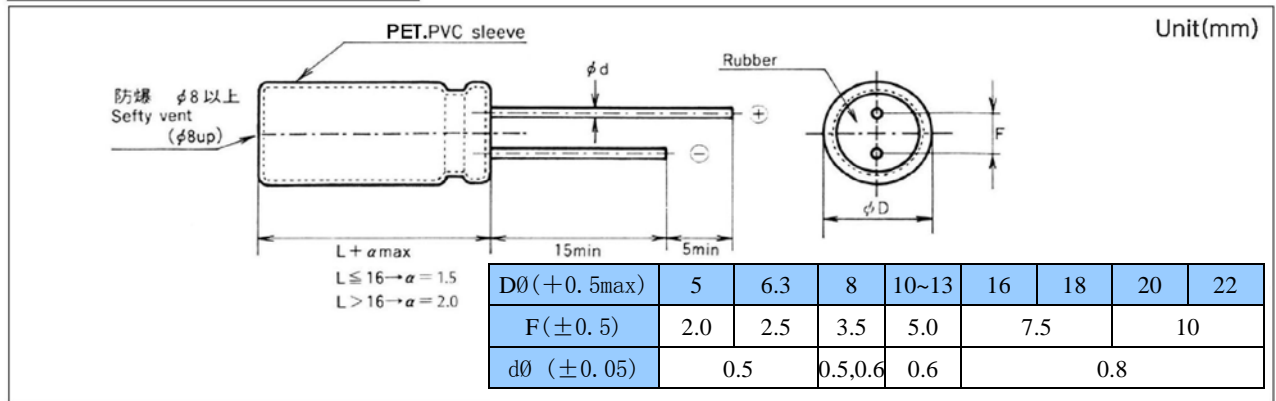
Frequency μF	60 (50) Hz	120 Hz	400Hz	1K Hz	≥ 10K Hz
0.1~47	0.80	1.00	1.20	1.30	1.50
68~680	0.80	1.00	1.10	1.15	1.20
1000~22000	0.80	1.00	1.05	1.10	1.15

Temperature Coefficient 周圍溫度係數

Coefficient	temperature (°C)	105	85	≤ 65
coefficient		1.0	1.7	2.1

SH series

Diagram of Dimension



DIMENSIONS & MAXIMUM PERMISSIBLE RIPPLE CURRENT 规格尺寸及最大允许纹波电流

W.V. (SV) μ F	6.3 (8)		10 (13)		16 (20)		25 (32)		35 (44)		50 (63)		63 (79)	
	SIZE	R.C.	SIZE	R.C.	SIZE	R.C.	SIZE	R.C.	SIZE	R.C.	SIZE	R.C.	SIZE	R.C.
0.1											5x11	1.3	5x11	1.3
0.22											5x11	2.9	5x11	2.9
0.33											5x11	4	5x11	4
0.47											5x11	8	5x11	9
0.68											5x11	9	5x11	9
1.0											5x11	13	5x11	18
2.2											5x11	20	5x11	20
3.3											5x11	25	5x11	28
4.7											5x11	30	5x11	34
6.8											5x11	37	5x11	40
10							5x11	45	5x11	47	5x11	46	5x11	50
22					5x11	55	5x11	60	5x11	66	6.3x11	68	6.3x11	82
33			5x11	60	5x11	72	5x11	79	5x11	90	6.3x11	90	8x11	100
47			5x11	71	5x11	86	5x11	94	6.3x11	100	6.3x11 8x9	125 130	8x11	135
56			5x11	80	5x11	104	6.3x11	108	6.3x11	148	6.3x11 8x11	130 156	8x11 10x13	146 197
68			5x11	83	5x11	110	6.3x11	114	6.3x11	150	8x11	162	10x13	200
100	5x11	102	5x11	115	5x11 6.3x11	120 135	6.3x11	148	8x11	210	8x11 10x13	230 250	10x13	263
220	6.3x11	185	6.3x11	190	6.3x11 8x11	220 242	8x11	255	8x14 10x13	288 320	10x16	360	10x20	400
330	6.3x11	210	6.3x11	235	8x11	300	8x14 10x13	335 367	8x14 10x16	400 460	10x21	470	13x21	540
470	6.3x11	275	8x11	340	8x11 10x13	375 400	8x14 10x13	375 440	10x16 10x21	525 589	13x21	600	13x25	700
560	8x12	310	8x12	330	10x13	410	10x16	460	10x21	590	16x21	630	16x26	750
680	8x12	314	10x13	390	10x13	480	10x21	520	10x21	650	16x21	730	16x26	860
820	8x12	390	10x13	480	10x16	550	10x21	640	13x21	740	13x25	850	16x26	920
1000	10x13	460	10x13 10x16	520 580	10x16	640	10x21 13x16	740 784	13x21	865	16x26	1060	16x31	1200
2200	10x21	775	10x21	860	13x21	1050	13x26	1230	16x26	1379	18x36	1600		
3300	13x21	985	13x21	1100	13x25	1300	16x26	1500	16x36	1680	18x36	1780		
4700	13x21	1150	13x25	1350	16x26	1650	16x36	1932	18x36	2177				
5600	13x25	1300	16x26	1490	16x32	1720	16x36	1950	18x36	2190				
6800	16x26	1480	16x26	1700	16x32	1900	18x36	2050						
8200	16x26	1520	16x32	1840	16x36	1950	18x36	2090						
10000	16x26	1700	16x36	1950	18x36	2090								
12000	16x32	1750	16x36	2050	18x36	2150								
15000	18x36	2090	16x36	2180										
18000	18x36	2150	18x36	2205										
22000	18x41	2300												

Case size \emptyset D \times L (mm); Ripple current (mA rms) at 105°C, 120Hz

SH series

DIMENSIONS & MAXIMUM PERMISSIBLE RIPPLE CURRENT 规格尺寸及最大允许纹波电流

W.V.(SV) μF	100 (125)		160 (200)		200 (250)		250 (300)		350 (400)		400 (450)		450 (500)	
	SIZE	R.C.	SIZE	R.C.	SIZE	R.C.	SIZE	R.C.	SIZE	R.C.	SIZE	R.C.	SIZE	R.C.
0.1	5×11	1.9												
0.22	5×11	3.4												
0.33	5×11	5												
0.47	5×11	10	5×11	11	5×11	12	5×11	12	6.3×12	13	6.3×12	13	6.3×12	13
0.68	5×11	12	5×11	14	6.3×12	13	6.3×12	13	6.3×12	13	6.3×12	13	8×12	13
1.0	5×11	15	6.3×12	17	6.3×12	17	6.3×12	16	6.3×12	16	8×12	20	8×12	20
2.2	5×11	21	6.3×12	25	6.3×12	25	8×12	25	8×12	31	8×12	36	10×13	35
3.3	5×11	30	6.3×12	32	8×12	35	8×12	38	8×12	38	8×12 10×13	40 47	10×13 10×16	31 40
4.7	5×11	35	6.3×12	43	8×12	45	8×12	48	10×13	50	8×12 8×12 10×13 10×16	40 50 60 70	10×21	80
6.8	6.3×11	47	8×12	50	10×13	56	10×13	65	10×13	66	8×12 10×16	56 79	10×21	87
10	6.3×12	56	10×13	68	8×12 10×13 10×16	70 80 92	10×16	92	10×20	95	10×14 10×16 10×20	62 76 85	13×21	90
22	8×12	96	10×16	133	10×16 10×21	125 130	13×21	160	13×21	175	13×26	178	13×26	178
33	8×12	140	10×21	184	13×21	200	13×21	200	13×26	220	16×26	252	16×26	255
47	10×13	200	13×21	210	13×21	220	13×21	240	16×26	260	16×26	300	16×32	319
68	10×16	240	13×21	280	13×26	300	16×26	355	16×32	320	16×36 18×36	480 500	18×36	470
82					16×26	360	16×26	370	18×32	410	18×32	520	18×36	480
100	13×21	288	13×26	310	16×26	345	16×32	395	18×36	390	18×36	550	18×41	560
120	13×21	295	16×26	350	16×32	360	16×36	370	18×36	400	18×36 18×41	580 620	22×41	650
150	13×21	360	16×26	470	16×32	480	16×36	460	18×41	420	18×41	650		
180	13×21	480	16×26	550	16×36	520	18×36	470	18×41	430	18×45	700		
220	13×21	520	16×32	580	16×32 18×36	550 650	18×36 18×41	650 700	22×41	500				
330	16×26	690	18×36	705	18×41 22×41	670 790	22×41	780						
470	16×26 16×32 18×32	820 860 880	18×41	860										
560	16×36	880												
680	16×36 18×32	920 950												
820	18×36	970												
1000	18×41 22×25	1200 1500												

Case size ØD×L (mm); Ripple current (mA rms) at 105°C, 120Hz