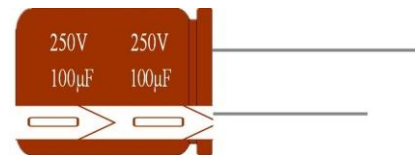


SHELCON SHF 引线型铝电解电容器

- Wide operating temperature range of -40 ~ +105°C
- 105°C, High Frequency, Low Impedance. Long Life
- Voltage range of 6.3 ~ 400V
- Load life of 5000-10000 hours at 105°C

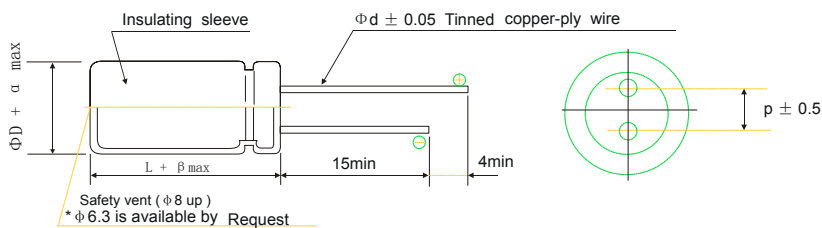
工作温度范围: -40 ~ +105°C
 105°C 高纹波, 低阻抗及长寿命
 工作电压: 6.3V-400V
 使用寿命: 105°C 5000-10000小时



■ SPECIFICATIONS 技术参数

Item (项目)	Characteristics (特征)																											
Operating Temperature Range (使用温度范围)	-40 ~ +105°C																											
Voltage Range (额定电压)	6.3 ~ 400 V.DC																											
Nominal Cap. Range (容量范围)	2.2~ 15000 µF																											
Capacitance Tolerance	-20% ~ +20% (at 20°C, 120Hz)																											
	<table border="1"> <tr> <td>WV</td> <td>6.3 V ~ 100 V</td> <td>160 V ~ 400 V</td> </tr> <tr> <td rowspan="3">L.C.</td> <td>I = 0.01CV or 3(µA) whichever is greater(after 2min)</td> <td rowspan="3">I = 0.02CV + 25(µA) (after 5 min.)</td> </tr> <tr> <td>施加额定电压2分钟测试</td> </tr> <tr> <td>I = 0.03CV or 4(µA) whichever is greater(after 1min)</td> </tr> <tr> <td></td> <td>施加额定电压1分钟测试</td> <td>施加额定电压5分钟测试</td> </tr> </table>	WV	6.3 V ~ 100 V	160 V ~ 400 V	L.C.	I = 0.01CV or 3(µA) whichever is greater(after 2min)	I = 0.02CV + 25(µA) (after 5 min.)	施加额定电压2分钟测试	I = 0.03CV or 4(µA) whichever is greater(after 1min)		施加额定电压1分钟测试	施加额定电压5分钟测试																
	WV	6.3 V ~ 100 V	160 V ~ 400 V																									
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I = 0.03CV or 4(µA) whichever is greater(after 1min)																												
	施加额定电压1分钟测试	施加额定电压5分钟测试																										
where, I: Max Leakage Current (µA); C: Nominal Capacitance (µF), V: Rated Voltage(V) (at 20°C) 注解 I: 漏电流µA C: 容量(µF), V: 额定电压(V) (在 20°C)																												
Dissipation Factor (tanδ) (at 120Hz, +20°C) (损失角正切)	<table border="1"> <tr> <td>WV</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> <td>100</td> <td>160-250</td> <td>400</td> </tr> <tr> <td>tanδ</td> <td>0.22</td> <td>0.19</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> <td>0.09</td> <td>0.09</td> <td>0.20</td> <td>0.24</td> </tr> </table>	WV	6.3	10	16	25	35	50	63	100	160-250	400	tanδ	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.09	0.20	0.24					
	WV	6.3	10	16	25	35	50	63	100	160-250	400																	
tanδ	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.09	0.20	0.24																		
Add 0.02 per 1,000 µF for more than 1,000µF items. 容量超过1000 µF; 每超过1000 µF, 损失角增加0.02																												
	<table border="1"> <tr> <td>W. V.</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25-35</td> <td>50-100</td> <td>160</td> <td>200-350</td> <td>400</td> </tr> <tr> <td>Z-25°C/Z+20°C</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>3</td> <td>4</td> <td>6</td> </tr> <tr> <td>Z-40°C/Z+20°C</td> <td>8</td> <td>6</td> <td>4</td> <td>4</td> <td>3</td> <td>4</td> <td>8</td> <td>-</td> </tr> </table>	W. V.	6.3	10	16	25-35	50-100	160	200-350	400	Z-25°C/Z+20°C	4	3	2	2	2	3	4	6	Z-40°C/Z+20°C	8	6	4	4	3	4	8	-
	W. V.	6.3	10	16	25-35	50-100	160	200-350	400																			
	Z-25°C/Z+20°C	4	3	2	2	2	3	4	6																			
Z-40°C/Z+20°C	8	6	4	4	3	4	8	-																				
WV6.3V-100V: 5000 hrs; WV160V-400V: 10000 hrs, After 5000 -10000hours, application of DC rated working voltage at +105°C, the capacitor shall meet the following limits. 105°C 施加额定电压5000-10000小时后满足下列条件 Capacitance change ≤ ±20% of the initial measured value 容量在 ±20% 范围内 Tanδ ≤ 200% of the initial specified value 损失角在初始规定值200% DC leakage current ≤ the initial specified value 漏电流小于或等于规格值																												
High Temp. Non-Load Test (高温无负荷特性)	After storage for 1000 hours at 105°C with no voltage applied, voltage treatment of JIS-C-5102 article 4-4 is to be given and then measurement shall be made, at which time requirements specified in the table "High Temperature Loading" can be met.																											
	在105°C的条件下不加电压放置1000个小时, 按照JIS-C-5102中4-4的标准进行处理, 特性满足高温负荷特性																											

● DIMENSIONS(mm) 尺寸 capacitor shall meet the following limits.



Unit:(mm)

φD	5	6.3	8	10	13	16	18
P	2.0	2.5	3.5	5.0	5.0	7.5	7.5
φd	0.5		0.6		0.8		
β	1.0			2.0			
α	0.5						

▼ MULTIPLIER FOR RIPPLE CURRENT 纹波电流修正系数

(1) Frequency coefficient 频率系数

Cap(µF)	Freq.(Hz)	60(50)	120	300	1K	10K
		0.40	0.50	0.70	0.85	1.00
		0.60	0.65	0.80	0.90	1.00
		0.65	0.70	0.90	0.95	1.00

(2) Temperature coefficient 温度系数

Ambient	40	60	70	85	105
Temperature(°C)					
Coefficient	2.40	2.10	1.78	1.65	1.00

SHELCON

引线型铝电解电容器

SHF SERIES

SHF系列

■ STANDARD SIZE

标准品一览表

WV (VDC)	Cap (μ F)/120Hz	Case size	Ripple (mArms 105°C/100KHz)	Impedance (Ω)100KHZ 阻抗值		WV (VDC)	Case size	Cap (μ F)/120Hz	Ripple (mArms 105°C/100KHz)	Impedance (Ω)100KHZ 阻抗值		
				20°C	-10°C					20°C	-10°C	
额定电压	静电容量	尺寸DxL	纹波电流	20°C	-10°C	额定电压	静电容量	尺寸DxL	纹波电流	20°C	-10°C	
6.3	100	5X11	150	0.900	3.600	35	33	5X11	150	0.900	3.600	
	220	6.3X11	250	0.400	1.600		47	6.3X11	250	0.400	1.600	
	330	6.3X11	250	0.400	1.600		100	8X11.5	400	0.250	1.000	
	470	8X11.5	400	0.250	1.000		220	10X12.5	580	0.160	0.650	
	1000	10X12.5	580	0.160	0.650		330	10X16	700	0.120	0.460	
	2200	13X20	1300	0.062	0.210		470	10X20	1050	0.078	0.300	
	3300	13X20	1300	0.062	0.210		560	10X20	1150	0.075	0.280	
	4700	16X25	1850	0.034	0.096		680	10x25	1200	0.073	0.220	
	6800	16X25	1850	0.034	0.096		820	10x25	1320	0.068	0.210	
	10000	16X31.5	2000	0.029	0.087		1000	13x25	1650	0.048	0.160	
	15000	18X35.5	2200	0.025	0.058		1500	16x25	1800	0.042	0.140	
								2200	16X31.5	2000	0.029	0.087
10	100	5X11	150	0.900	3.600	50	3300	18X35.5	2,200	0.025	0.058	
	220	6.3X11	250	0.400	1.600		10	5X11	100	1.500	4.000	
	330	8X11.5	400	0.250	1.000		22	5X11	150	0.900	3.600	
	470	10X12.5	400	0.250	1.000		33	6.3X11	250	0.400	1.600	
	1000	10X16	700	0.120	0.460		47	6.3X11	250	0.400	1.600	
	2200	13X20	1300	0.062	0.210		100	8X11.5	400	0.250	1.000	
	3300	13X25	1650	0.048	0.160		220	10X16	700	0.120	0.460	
	4700	16X25	1850	0.034	0.096		330	10X20	1050	0.078	0.300	
	6800	16X31.5	2000	0.029	0.087		470	13X25	1300	0.062	0.210	
	10000	18X35.5	2200	0.025	0.058		680	13x25	1420	0.060	0.200	
16	47	5x11	150	0.900	3.600	63	820	13x25	1550	0.037	0.180	
	100	6.3X11	250	0.400	1.600		1000	16X25	1850	0.034	0.096	
	220	8X11.5	400	0.250	1.000		2200	18X35.5	2200	0.025	0.058	
	330	10X12.5	400	0.250	1.000		10	5X11	87	2.300	9.300	
	470	10X16	580	0.160	0.800		22	6.3X11	140	1.300	5.200	
	560	10X16	650	0.150	0.700		33	6.3X11	140	1.200	5.000	
	680	10X16	750	0.140	0.600		47	8X11.5	210	0.630	2.800	
	820	10X16	900	0.130	0.550		100	10X12.5	300	0.430	1.800	
	1000	10x20	1050	0.078	0.300		220	10X20	520	0.210	0.840	
	1500	10x20	1320	0.070	0.210		330	13X20	660	0.140	0.640	
	2200	13X25	1650	0.048	0.160		470	13X25	750	0.120	0.450	
	3300	16X25	1850	0.034	0.096		680	16x20	1550	0.055	0.330	
4700	16X31.5	2000	0.029	0.087	820	16X25	1600	0.052	0.290			
6800	18X35.5	2200	0.025	0.058	1000	16X31.5	1650	0.054	0.200			
25	33	5X11	150.0	0.900	3.600	100	10	6.3X11	140	1.200	5.000	
	47	6.3X11	150.0	0.400	1.600		22	6.3X11	160	0.630	2.800	
	100	8X11.5	250.0	0.250	1.000		33	8X11.5	230	0.430	1.800	
	220	10X12.5	400.0	0.250	1.000		47	10X16	290	0.310	1.500	
	330	10X16	580.0	0.160	0.800		100	10X20	430	0.160	0.640	
	470	10X20	770.0	0.120	0.460		220	13X21	900	0.073	0.027	
	560	10X20	850.0	0.100	0.380		330	16x21	900	0.073	0.027	
	680	10X20	1150.0	0.085	0.350		470	18x25	1790	0.060	0.210	
	820	10x25	1200.0	0.075	0.340		680	16*32	1850	0.057	0.190	
	1000	10x25	1300.0	0.062	0.210		820	18*32	2000	0.048	0.170	
	1500	10x25	1810.0	0.048	0.140		1000	18*36	2100	0.048	0.170	
	2200	13X25	1850.0	0.034	0.096							
	3300	16X25	2000.0	0.029	0.087							
	4700	16X32	2200.0	0.025	0.058							

SHELCON Radial Lead Aluminum Electrolytic Capacitors

SHELCON

引线型铝电解电容器

SHF SERIES

SHF系列

■STANDARD SIZE

标准品一览表

WV (VDC)	Cap (μ F)/120Hz	Case size	Ripple (mArms 105°C 100KHz)	Impedance (Ω)100KHz 阻抗值		WV (VDC)	Case size	Cap (μ F)/120Hz	Ripple (mArms 105°C 100KHz)	Impedance (Ω)100KHz 阻抗值		
				20°C	-10°C					20°C	-10°C	
额定电压	静电容量	尺寸DxL	纹波电流	20°C	-10°C	额定电压	静电容量	尺寸DxL	纹波电流	20°C	-10°C	
160	2.2	6.3*11	55	5.5	7.5	250	4.7	8*12	76	4.30	6.90	
	3.3	6.3*11	60	5.1	7.3		5.6	8*12	82	4.20	6.70	
	4.7	6.3*11	65	4.8	7.2		6.8	8*12	110	4.10	6.40	
	5.6	6.3*11	70	4.50	7.0		8.2	10*13	140	3.90	6.60	
	6.8	8*12	76	4.30	6.9		10	10*16	165	3.80	6.40	
	8.2	8*12	82	4.20	6.70		15	10*20	220	3.60	6.20	
	10	8*12	110	4.10	6.40		22	10*20	280	3.40	5.90	
	15	10*13	140	3.9	6.6		33	13*21	350	3.20	5.70	
	22	10*16	165	3.8	6.4		47	13*25	450	3.10	5.50	
	33	10*20	220	3.60	6.2		68	16*21	600	3.00	5.20	
	47	10*20	280	3.40	5.9		82	16*25	705	2.80	5.00	
	68	13*21	350	3.20	5.70		100	18x25	840	2.55	4.60	
	82	13*25	450	3.10	5.50		400	4.7	8*12	82	4.20	6.70
	100	16*21	600	3.00	5.20			5.6	8*12	110	4.10	6.40
200	2.2	6.3*11	60	5.1	7.3	6.8		10*13	140	3.90	6.60	
	3.3	6.3*11	65	4.80	7.20	8.2		10*16	165	3.80	6.40	
	4.7	6.3*11	70	4.50	7.00	10		10*20	220	3.60	6.20	
	5.6	8*12	76	4.30	6.90	15		10*20	280	3.40	5.90	
	6.8	8*12	82	4.20	6.70	22		13*21	350	3.20	5.70	
	8.2	8*12	110	4.10	6.40	33		13*25	450	3.10	5.50	
	10	10*13	140	3.90	6.60	47		16*21	600	3.00	5.20	
	15	10*16	165	3.80	6.40	68		16*25	705	2.80	5.00	
	22	10*20	220	3.60	6.20	82		18x25	840	2.55	4.60	
	33	10*20	280	3.40	5.90	100		18*32	920	2.5	4.5	
	47	13*21	350	3.20	5.70							
	68	13*25	450	3.10	5.50							
	82	16*21	600	3.00	5.20							
	100	16*25	705	2.80	5.00							