

# SHELCON

# Radial Lead Aluminum Electrolytic Capacitors

SHELCON SHG

引线型铝电解电容器

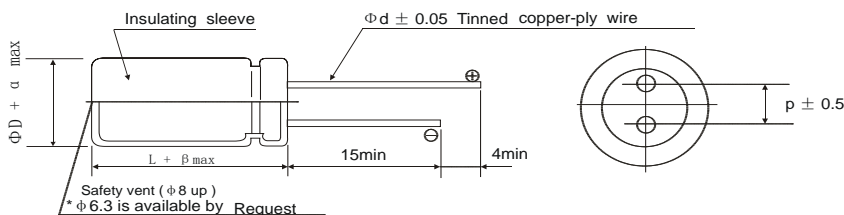
- 105°C High Frequency, High Ripple, Low Impedance. 105°C 高频率, 高纹波电流, 低阻抗品
- LED special selection LED专用选择
- 10000 hours guaranteed 寿命保证 10000小时
- 500V capacitor 5000 hours lifetime 500V电容器5000小时寿命



## SPECIFICATIONS 技术参数

Item (项目)	Characteristics (特征)										
Operating Temperature Range	- 40 ~ +105°C	- 25 ~ + 105°C									
Voltage Range (额定电压)	160 ~ 350 V.DC	400 ~ 500 V.DC									
Nominal Cap. Range (容量范围)	1.0 ~ 4700μF										
Capacitance Tolerance	- 20% ~ + 20% (at 20°C, 120Hz)										
Leakage Current 漏电流	WV	6.3 V ~ 100 V									
	L.C.	I = 0.02CV or 3(μA) whichever is greater(after 5min) 施加额定电压5分钟测试									
		I = 0.03CV or 4(μA) whichever is greater(after 2min) 施加额定电压2分钟测试									
		I = 0.02CV + 15(μA) (after 5 min.) 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)	WV	16	25	35	50	63	100	160	250	350	400-450
	tanδ	0.16	0.14	0.12	0.10	0.10	0.08	0.20	0.20	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											
Low Temp. Impedance Stability at 120Hz (温度特性)	W. V.	16	25-35	50-100	160	200-350	400	450			
	Z-25°C/Z+20°C	3	2	2	3	4	6	10			
	Z-40°C/Z+20°C	4	3	3	4	8	-	-			
High Temp. Load Test (高温负荷特性)	After 10000 hours, application of DC rated working voltage at + 105°C, the capacitor shall meet the following limits. 105°C施加额定电压10000小时后满足下列条件										
	500V capacitor 5000 hours lifetime 500V电容器5000小时寿命 Capacitance change ≤ ±20% of the initial measured value 容量在±20%范围内 Tan δ ≤ 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



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 纹波电流系数

(1) Frequency coefficient 频率系数

Cap(μF)	Freq.(Hz)				
	60(50)	120	1K	10K	100K
0.1~ 47	0.75	0.80	0.85	0.90	1.00
68 ~ 680	0.80	0.85	0.90	0.95	1.00
1000 ~ 22000	0.85	0.87	0.89	0.92	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

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WV (VDC)	Cap ( $\mu$ F)/120Hz	Case size	Ripple (mArms 105°C 100KHz)	Impedance ( $\Omega$ )100KHZ 阻抗值		WV (VDC)	Case size	Cap ( $\mu$ F)/120Hz	Ripple (mArms 105°C 100KHz)	Impedance ( $\Omega$ )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
16	22	5x11	80	1.500	4.500	35	10	5x11	85	1.500	4.500
	33	5x11	85	1.500	4.500		15	5x11	95	1.300	3.900
	47	5x11	95	1.300	3.900		22	5x11	110	1.300	3.900
	68	5x11	110	1.300	3.900		33	5x11	120	1.100	3.300
	100	6.3x11	120	1.100	3.300		47	6.3x11	135	1.000	3.000
	150	6.3x11	135	1.000	3.000		68	6.3x11	150	0.900	2.700
	220	8x11.5	150	0.900	2.700		100	8x11.5	200	0.800	2.400
	330	8x11.5	200	0.800	2.400		150	8x11.5	220	0.800	2.400
	470	10x12.5	220	0.800	2.400		220	10x12.5	300	0.700	2.100
	560	10x16	300	0.700	2.100		330	10x16	350	0.650	1.950
	680	10x16	350	0.650	1.950		470	10x16	450	0.550	1.650
	820	10x20	450	0.550	1.650		560	10x20	550	0.450	1.350
	1000	10x20	550	0.450	1.350		680	10x20	650	0.400	1.200
	1500	10x25	650	0.400	1.200		820	10x25	1100	0.350	1.050
	2200	13x20	1100	0.350	1.050		1000	13x20	1350	0.300	0.900
	3300	13x25	1350	0.300	0.900		1500	13x25	1600	0.250	0.750
4700	16x25	1600	0.250	0.750	2200	16x25	2000	0.200	0.600		
					3300	16x31.5	2150	0.200	0.600		
					4700	18x32	2400	0.150	0.450		
25	10	5x11	80	1.500	4.500	50	10	5x11	95	1.300	3.900
	15	5x11	85	1.500	4.500		15	5x11	110	1.300	3.900
	22	5x11	95	1.300	3.900		22	5x11	120	1.100	3.300
	33	5x11	110	1.300	3.900		33	6.3x11	135	1.000	3.000
	47	5x11	120	1.100	3.300		47	6.3x11	150	0.900	2.700
	68	6.3x11	135	1.000	3.000		68	8x11.5	200	0.800	2.400
	100	6.3x11	150	0.900	2.700		100	8x11.5	220	0.800	2.400
	150	8x11.5	200	0.800	2.400		150	10x12.5	300	0.700	2.100
	220	8x11.5	220	0.800	2.400		220	10x16	350	0.650	1.950
	330	10x12.5	300	0.700	2.100		330	10x16	450	0.550	1.650
	470	10x16	350	0.650	1.950		470	10x20	550	0.450	1.350
	560	10x16	450	0.550	1.650		560	10x20	650	0.400	1.200
	680	10x20	550	0.450	1.350		680	10x25	1100	0.350	1.050
	820	10x20	650	0.400	1.200		820	13x20	1350	0.300	0.900
	1000	10x25	1100	0.350	1.050		1000	13x25	1600	0.250	0.750
	1500	13x20	1350	0.300	0.900		1500	16x25	2000	0.200	0.600
2200	13x25	1600	0.250	0.750	2200	16x31.5	2150	0.200	0.600		
3300	16x25	2000	0.200	0.600	3300	18x32	2400	0.150	0.450		
4700	16x31.5	2150	0.200	0.600	4700	18x40	2800	0.100	0.300		

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WV (VDC)	Cap ( $\mu$ F)/120Hz	Case size	Ripple (mArms 105°C 100KHz)	Impedance ( $\Omega$ )100KHZ 阻抗值		WV (VDC)	Case size	Cap ( $\mu$ F)/120Hz	Ripple (mArms 105°C 100KHz)	Impedance ( $\Omega$ )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	
63	10	5x11	110	1.300	3.900	250	4.7	8x11.5	160	2.50	7.50	
	15	5x11	120	1.100	3.300		6.8	8x11.5	250	2.00	6.00	
	22	6.3x11	135	1.000	3.000		10	10X16	320	1.80	5.40	
	33	6.3x11	150	0.900	2.700		15	10X20	340	1.60	4.80	
	47	8x11.5	200	0.800	2.400		22	10X20	500	1.50	4.50	
	68	8x11.5	220	0.800	2.400		33	13X20	650	1.30	3.90	
	100	10x12.5	300	0.700	2.100		47	13X25	800	1.20	3.60	
	150	10x16	350	0.650	1.950		68	16X21	1250	1.00	3.00	
	220	10x20	450	0.550	1.650		100	18X25	1300	0.80	2.40	
	330	10x20	550	0.450	1.350		150	18X36	1420	0.80	2.40	
	470	10x20	650	0.400	1.200		350	4.7	8X12	150	3.00	9.00
	560	10x25	1100	0.350	1.050			6.8	10X13	280	2.50	7.50
	680	13x20	1350	0.300	0.900			10	10X16	350	2.00	6.00
	820	13x25	1600	0.250	0.750			15	10X20	500	1.80	5.40
	1000	16x25	2000	0.200	0.600			22	13X20	650	1.60	4.80
	1500	16x31.5	2150	0.200	0.600			33	13X25	900	1.50	4.50
	2200	18x32	2400	0.150	0.450			47	16X20	1080	1.30	3.90
	3300	18x40	2800	0.100	0.300			68	18X25	1470	1.20	3.60
100	10	6.3x11	150	0.900	2.700	100		18X30	1530	1.00	3.00	
	15	8x11.5	200	0.800	2.400	400		1	6.3X11	60	4.00	16.00
	22	8x11.5	220	0.800	2.400		2.2	6.3X11	90	3.50	16.00	
	33	10x12.5	300	0.700	2.100		3.3	6.3X11	95	3.20	9.00	
	47	10x16	350	0.650	1.950		4.7	8X12	150	3.00	9.00	
	68	10x16	450	0.550	1.650		6.8	10X13	220	3.00	9.00	
	100	10x20	550	0.450	1.350		10	10X16	280	2.50	7.50	
	150	10x20	650	0.400	1.200		15	10X20	350	2.00	6.00	
	220	10x25	1100	0.350	1.050		22	13X20	550	1.80	5.40	
	330	13x20	1350	0.300	0.900		33	13X25	760	1.60	4.80	
	470	13x25	1600	0.250	0.750		47	16X20	900	1.50	4.50	
	560	16x25	2000	0.200	0.600		68	18X25	1180	1.30	3.90	
	680	16x31.5	2150	0.200	0.600		82	18X30	1470	1.20	3.60	
	820	18x35	2400	0.150	0.450		100	18*32	1550	1.20	3.30	
	1000	18x40	2800	0.100	0.300		450	2.2	8X12	150	3.00	9.00
10	8X12	320	2.500	7.500	3.3			10X13	220	3.00	9.00	
15	10X13	340	2.500	7.500	4.7	10X16		280	2.50	7.50		
22	10X16	500	2.000	6.000	6.8	10X20		350	2.00	6.00		
33	10X20	650	1.800	5.400	10	13X20		550	1.80	5.40		
47	10X20	750	1.600	4.800	15	13X25		760	1.60	4.80		
68	13X21	1180	1.500	4.500	22	16X20		900	1.50	4.50		
100	16X21	1420	1.300	3.900	33	18X25		1180	1.30	3.90		
150	16X25	1890	1.200	3.600	47	18X30		1470	1.20	3.60		
220	18X25	2370	1.000	3.000	500	2.2		8*12	45	6.00	9.00	
10	10X13	320	2.500	7.500		3.3	10*13	70	5.50	9.00		
15	10X16	340	2.000	6.000		4.7	10*16	110	5.20	8.50		
22	10X20	500	1.800	5.400		6.8	10*20	135	5.00	8.00		
33	10X20	650	1.600	4.800		8.2	10*20	155	4.80	7.80		
47	13X21	980	1.500	4.500		10	13*20	175	4.60	7.60		
68	13X25	1300	1.300	3.900		15	13*25	185	4.40	7.40		
100	16X25	1420	1.200	3.600		15	16*20	185	4.20	7.20		
150	16X31.5	1890	1.000	3.000		22	16*25	225	4.00	7.00		
220	18X36	2370	0.800	2.400		22	18*20	225	3.80	6.80		
200	10	10X13	320	2.500	7.500	33	18*25	275	3.60	6.60		
	15	10X16	340	2.000	6.000	47	18*32	310	3.40	6.40		
	22	10X20	500	1.800	5.400	68	18*36	390	3.20	6.20		
	33	10X20	650	1.600	4.800							
	47	13X21	980	1.500	4.500							
	68	13X25	1300	1.300	3.900							