



广东容硕半导体有限公司
Guangdong Roso Semiconductor Co.,Ltd

系列规格书

系列类型：标准品 **CS**

产品名称：贴片铝电解电容器

APPROVAL		
APPROVAL	CHECK	PREPARE
<div>技术部</div> <div>陈小英</div>	<div>副 总</div> <div>黄 杰</div>	<div>总 经 理</div> <div>徐永康</div>

公司电话：0752-6633993

公司网址：WWW.GDRSDR.COM

公司邮箱：SALES-1@GDRSDR.COM

公司地址：广东省惠州市博罗县泰美镇泰良路8号

貼片鋁電解電容器代碼標志
Code Sign SMD(V-Chip) Aluminum Electrolytic Capacitor



(1, 2)		(3, 4)		(5~7)		(8)		(10)			(12)		(13, 14)	
Series 系列	Voltage (W.V.) 電壓	Code 代碼	Capacitance (μF) 靜電容量	Code 代碼	Cap. Tolerance (%) 容量允差	Code 代碼	Type 類型	Code 代碼		Diameter (∅) 直徑	Code 代碼	Length (mm) 高度	Code 代碼	
VT	4	0G	0.1	0R1	+10	K	Chip 貼片	C		3	S	5.4	54	
CS	6.3	0J	0.22	R22	-10		(11)							
CK	10	1A	0.33	R33	+15	L	Type 類型	Lead Configuration 引線結構	Code 代碼	4	C	6.2	62	
VE	16	1C	0.47	R47	-15		Chip 貼片	Taping & Reel 編帶與卷盤	R	5	D	7.7	77	
LZ	25	1E	2.2	2R2	+20	M				6.3	E	10.5	10	
VD	35	1V	3.3	3R3	-20					8	F	11 (11.5)	11	
FZ	40	1G	4.7	4R7	-10	V				10	G	12.5	12	
	50	1H	6.8	6R8						12.5	I	13.5	13	
	63	1J	10	100							16 (16.5)	16		
	75	1T	15	150							21	21		
	80	1K	22	220										
	85	1R	33	330										
	100	2A	47	470										
	125	2B	68	680										
	160	2C	100	101										
	180	2Z	150	151										
	200	2D	220	221										
	220	2N	330	331										
	250	2E	470	471										
	315	2F	680	681										
	330	2U	1000	102										
	350	2V	1200	122										
	360	2X	1500	152										
	400	2G	1800	182										
	420	2M	2200	222										
	450	2W	2700	272										
			3300	332										
			4700	472										
			5600	562										
			6800	682										

STANDARD

标准品

- Operating with general temperature range -40 ~ +105°C
適用於 -40 ~ +105°C 的常規溫度範圍
- Load life of 1000 hours
負荷壽命 1000 小時
- Comply with the RoHS directive
符合 RoHS 指令



SPECIFICATIONS 特性表

Items 項目

Operation Temperature Range 使用溫度範圍

Voltage Range 額定工作電壓範圍

Capacitance Range 靜電容量範圍

Capacitance Tolerance 靜電容量允許偏差

Leakage Current 漏電流

Dissipation Factor (tan δ) 損耗角正切

Stability at Low Temperature 低溫特性

Load Life 高溫負荷特性

Shelf Life 高溫貯存特性

Resistance to Soldering Heat 耐焊接熱特性

Marking

Characteristics 主要特性

-40 ~ +105°C

4 ~ 100V

0.1 ~ 6800μF

±20% at 120Hz, 20°C

Leakage current (∅4~∅10) ≤ 0.01CV or 3μA, whichever is greater (after 2 minutes application of rated voltage)
Leakage current (∅12.5~∅16) ≤ 0.03CV or 4μA, whichever is greater (after 1 minute application of rated voltage)
漏電流 (∅4~∅10) ≤ 0.01CV 或 3μA, 取較大值 (施加額定工作電壓 2 分鐘後)
漏電流 (∅12.5~∅16) ≤ 0.03CV 或 4μA, 取較大值 (施加額定工作電壓 1 分鐘後)

Measurement frequency 測試頻率: 120Hz, Temperature 溫度: 20°C

Rated Voltage (V) 額定工作電壓	4	6.3	10	16	25	35	50	63	100
tan δ (max.) ∅4~∅10	0.35	0.30	0.24	0.20	0.16	0.14	0.14	0.12	0.10
最大損耗角正切 ∅12.5~∅16	0.42	0.38	0.34	0.30	0.26	0.22	0.18	0.14	0.10

Measurement frequency 測試頻率: 120Hz

Rated Voltage (V) 額定工作電壓		4	6.3	10	16	25	35	50~100
Impedance Ratio 阻抗比 ZT/Z20 (max.)	∅4~∅10	Z(-25°C) / Z(20°C)	7	4	3	2	2	2
		Z(-40°C) / Z(20°C)	15	8	6	4	3	3
	∅12.5~∅16	Z(-25°C) / Z(20°C)	7	5	4	3	2	2
		Z(-40°C) / Z(20°C)	17	12	10	8	5	4

After 1000 hrs. application of the rated voltage at 105°C, they meet the characteristics listed below. 在 105°C 環境中施加額定工作電壓 1000 小時 (後, 電容器的特性符合下表的要求。

Capacitance Change 靜電容量變化率	Within ±20% of initial value (Within ±30% of initial value for 4V) 初始值的±20%以內 (4V 為±30%以內)
Dissipation Factor 損耗角正切	200% or less of initial specified value 不大於規範值的 200%
Leakage Current 漏電流	initial specified value or less 不大於規範值

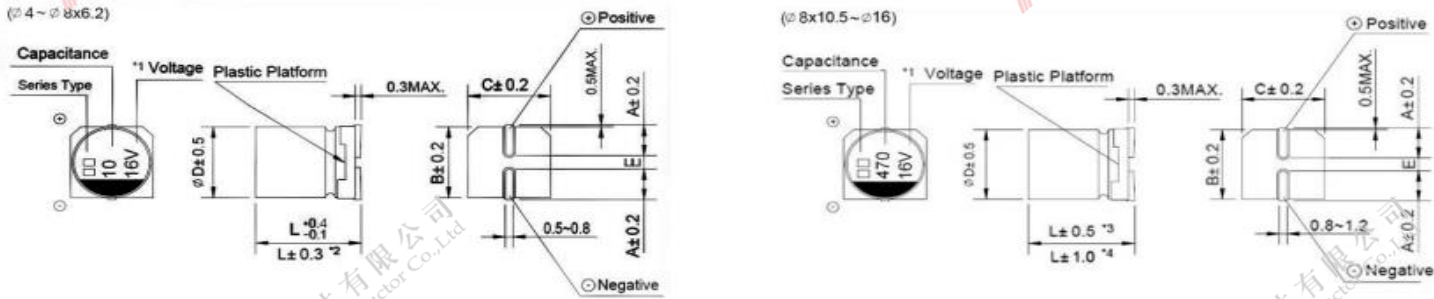
After leaving capacitors under no load at 105°C for 1000 hours, they meet the specified value for load life characteristics listed above. 在 105°C 環境中無負荷放置 1000 小時後, 電容器的特性符合高溫負荷特性中所列的規定值。

After reflow soldering and restored at room temperature, they meet the characteristics listed below.
經過回流焊並冷卻至室溫後, 電容器的特性符合下表的要求。

Capacitance Change 靜電容量變化率	Within ±10% of initial value 初始值的±10%以內
Dissipation Factor 損耗角正切	initial specified value or less 不大於規範值
Leakage Current 漏電流	initial specified value or less 不大於規範值

Black print on the case top. 鋁殼頂部黑字印刷。

DRAWING (Unit: mm) 外形圖



- *1. Voltage mark for 6.3V is [6V] 6.3V 的產品標識為 [6V]
- *2. Applicable to ∅6.3x7.7 適用於 ∅6.3x7.7
- *3. Applicable to ∅8x10.5~∅10 適用於 ∅8x10.5~∅10
- *4. Applicable to ∅12.5~∅16 適用於 ∅12.5~∅16

DIMENSIONS (Unit: mm) 尺寸表

∅D x L	4 x 5.4	5 x 5.4	6.3 x 5.4	6.3 x 7.7	8 x 6.2	8 x 10.5	10 x 10.5	10 x 12.5	12.5 x 13.5	12.5 x 16	16 x 16.5
A	1.9	2.2	2.6	2.6	3.3	3.2	3.2	3.2	4.7	4.7	5.5
B	4.3	5.3	6.6	6.6	8.3	8.3	10.3	10.3	13.0	13.0	17.0
C	4.3	5.3	6.6	6.6	8.3	8.3	10.3	10.3	13.0	13.0	17.0
E ± 0.2	1.0	1.3	2.2	2.2	2.2	3.1	4.4	4.4	4.4	4.4	6.7
L	5.4	5.4	5.4	7.7	6.2	10.5	10.5	13.5	13.5	16.0	16.5

DIMENSIONS & MAXIMUM PERMISSIBLE RIPPLE CURRENT
 規格尺寸及最大允許紋波電流

WV Code 代碼		4		6.3		10		16		25	
μF		0G		0J		1A		1C		1E	
4.7	4R7									4 × 5.4	13
10	100			4 × 5.4	18			4 × 5.4	18	5 × 5.4 (4 × 5.4)	20 (14)
22	220			4 × 5.4	22	5 × 5.4 (4 × 5.4)	25 (20)	5 × 5.4 (4 × 5.4)	27 (20)	6.3 × 5.4 (5 × 5.4)	36 (25)
33	330	5 × 5.4 (4 × 5.4)	30 (18)	5 × 5.4 (4 × 5.4)	27 (22)	5 × 5.4 (4 × 5.4)	30 (22)	6.3 × 5.4 (5 × 5.4)	40 (28)	6.3 × 5.4 (5 × 5.4)	44 (29)
47	470	5 × 5.4 (4 × 5.4)	36 (24)	5 × 5.4 (4 × 5.4)	33 (25)	6.3 × 5.4 (5 × 5.4) (4 × 5.4)	41 (30) (25)	6.3 × 5.4 (5 × 5.4)	48 (31)	5 × 5.4 6.3 × 5.4	35 48
100	101	6.3 × 5.4 (5 × 5.4)	60 (43)	6.3 × 5.4 (5 × 5.4)	50 (39)	5 × 5.4 6.3 × 5.4	39 (53)	6.3 × 5.4 (8 × 6.2)	60 (120)	6.3 × 7.7 (8 × 6.2)	85 91
150	151	6.3 × 5.4	52	6.3 × 5.4	55	6.3 × 5.4	62	6.3 × 7.7	95	8 × 10.5 (6.3 × 7.7)	140 (100)
220	221	6.3 × 5.4	57	6.3 × 7.7 (6.3 × 5.4)	105 (67)	6.3 × 5.4 6.3 × 7.7 (8 × 6.2)	67 105 (105)	8 × 10.5 (6.3 × 7.7) (8 × 6.2)	150 (105) (85)	6.3 × 7.7 8 × 10.5	120 175
330	331	6.3 × 7.7	100	6.3 × 7.7 8 × 6.2	105 105	6.3 × 7.7 8 × 10.5	105 196	8 × 10.5	195	10 × 10.5 (8 × 10.5)	240 (220)
470	471	6.3 × 7.7	105	8 × 10.5 (6.3 × 7.7)	210 (120)	6.3 × 7.7 10 × 10.5 (8 × 10.5)	120 260 (210)	10 × 10.5 (8 × 10.5)	295 (230)	10 × 10.5 8 × 10.5	310 240
680	681	8 × 10.5	210	8 × 10.5	210	10 × 10.5	270	10 × 10.5	315	10 × 10.5 10 × 12.5	350 400
1000	102	8 × 10.5	230	10 × 10.5 (8 × 10.5)	300 (230)	10 × 10.5 (8 × 10.5)	315 (230)	12.5 × 13.5 (10 × 12.5) (10 × 10.5)	500 (390) (340)	12.5 × 13.5	580
1500	152	10 × 10.5	315	10 × 12.5 (10 × 10.5)	450 (315)	10 × 12.5	460	12.5 × 13.5	550	12.5 × 16	850
2200	222	10 × 12.5 (10 × 10.5)	440 (340)	12.5 × 13.5 (10 × 12.5)	620 (500)	12.5 × 13.5	680	16 × 16.5 (12.5 × 16)	950 (750)	16 × 16.5	1050
3300	332	10 × 12.5	490	12.5 × 16 (12.5 × 13.5)	700 (660)	16 × 16.5	1000	16 × 16.5	1000		
4700	472	12.5 × 13.5	600	16 × 16.5	1000					Case size 尺寸	Ripple current 紋波電流
6800	682	16 × 16.5 (12.5 × 16)	950 (650)								
WV Code 代碼		35 1V		50 1H		63 1J		100 2A			
0.1	0R1			4 × 5.4	0.7	4 × 5.4	0.7				
0.22	R22			4 × 5.4	1.6	4 × 5.4	1.6				
0.33	R33			4 × 5.4	2.5	4 × 5.4	2.5				
0.47	R47			4 × 5.4	3.5	4 × 5.4	3.5				
1	010			4 × 5.4	7	4 × 5.4	7	4 × 5.4	7		
2.2	2R2			4 × 5.4	11	4 × 5.4	11	6.3 × 5.4	14		
3.3	3R3	4 × 5.4	13	4 × 5.4	13	5 × 5.4	13	6.3 × 7.7 (6.3 × 5.4) (8 × 6.2)	32 (20) (30)		
4.7	4R7	4 × 5.4	14	5 × 5.4 (4 × 5.4)	16 (13)	5 × 5.4	16	5 × 5.4 6.3 × 7.7 (6.3 × 5.4)	18 35 (21)		
10	100	5 × 5.4 5 × 5.4 (4 × 5.4)	18 21 (14)	5 × 5.4 6.3 × 5.4	21 24	6.3 × 7.7 (6.3 × 5.4) (8 × 6.2)	39 (24) (25)	6.3 × 7.7 (6.3 × 5.4) 8 × 6.2 8 × 10.5	35 (35) 35 77		
22	220	5 × 5.4 6.3 × 5.4	30 38	6.3 × 7.7 (6.3 × 5.4) (8 × 6.2)	51 (42) (70)	8 × 10.5 (6.3 × 7.7)	98 (49)	10 × 10.5 (8 × 10.5)	126 (84)		
33	330	6.3 × 5.4 (8 × 6.2)	42 (84)	6.3 × 7.7 8 × 6.2	60 84	8 × 10.5	112	10 × 10.5	133		
								Case size 尺寸		Ripple current 紋波電流	
WV Code 代碼		35 1V		50 1H		63 1J		100 2A			
47	470	6.3 × 7.7 (6.3 × 5.4)	70 (50)	8 × 6.2 8 × 10.5 (6.3 × 7.7)	95 120 (63)	10 × 10.5 (8 × 10.5)	160 (119)	12.5 × 13.5 (10 × 12.5) (10 × 10.5)	250 (160) (140)		
68	680	6.3 × 5.4 6.3 × 7.7	75 75			10 × 10.5	175	12.5 × 13.5 (10 × 12.5)	300 (180)		
100	101	8 × 6.2 8 × 10.5 6.3 × 5.4 (6.3 × 7.7)	110 120 75 (84)	10 × 10.5 (8 × 10.5) 6.3 × 7.7	170 (140) 105	12.5 × 13.5 (10 × 12.5) (10 × 10.5)	270 (210) (196)	16 × 16.5 (12.5 × 13.5)	450 (380)		
150	151	8 × 10.5	155	10 × 10.5	170	10 × 12.5	225				
220	221	10 × 10.5 (8 × 10.5)	220 (190)	10 × 12.5 (10 × 10.5)	280 (220)	16 × 16.5 (12.5 × 13.5)	560 (470) (235)	16 × 16.5	550		
330	331	10 × 10.5	245	16 × 16.5 (12.5 × 13.5) (10 × 12.5) 10 × 10.5	600 (420) (295) 285	16 × 16.5 (12.5 × 16) 12.5 × 13.5	700 (510) 460				
470	471	12.5 × 13.5 10 × 10.5 (10 × 12.5)	520 305 (375)	12.5 × 13.5 16 × 16.5 (12.5 × 16)	240 700 (520)	16 × 16.5	750				
680	681	12.5 × 13.5 (10 × 12.5)	530 (395)	16 × 16.5	750			Case size 尺寸		Ripple current 紋波電流	
1000	102	16 × 16.5 (12.5 × 16)	750 (600)	16 × 16.5	800						
WV Code 代碼		160 2C		200 2D							
1	101	6.3 × 7.7	45								
47	470			16 × 16.5	320					Case size 尺寸	Ripple current 紋波電流

•Case size ØD×L(mm), ripple current (mA rms) at 105°C 120Hz
 •尺寸ØD×L(mm), 紋波電流(mA rms)於 105°C 120Hz

FREQUENCY COEFFICIENT OF ALLOWABLE RIPPLE CURRENT
 紋波電流頻率補償系數

Frequency 頻率		50Hz	120Hz	300Hz	1KHz	10KHz~
Coefficient 系數	Ø4 ~ Ø10	0.1 ~ 68μF	0.70	1.00	1.17	1.50
		100 ~ 3300μF	0.85	1.00	1.08	1.30
	Ø12.5 ~ Ø16	~ 68μF	0.75	1.00	1.35	2.00
		100 ~ 680μF	0.80	1.00	1.23	1.50
		1000 ~ 6800μF	0.85	1.00	1.10	1.15