

WIDE TEMPERATURE

寬溫品

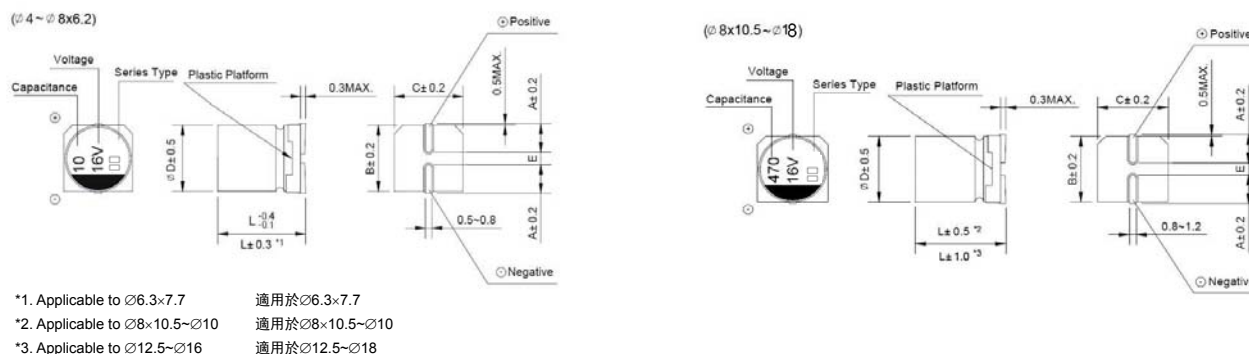
- Operating with wide temperature range -55 ~ +105°C
適用於 -55 ~ +105°C 的寬溫範圍
- Load life of 2000 hours
負荷壽命 2000 小時
- Comply with the RoHS directive
符合 RoHS 指令



□ SPECIFICATIONS 特性表

Items 項目	Characteristics 主要特性
Operation Temperature Range 使用溫度範圍	-55 ~ +105°C
Voltage Range 額定工作電壓範圍	4 ~ 450V
Capacitance Range 靜電容量範圍	0.1 ~ 8200μF
Capacitance Tolerance 靜電容量允許偏差	±20% at 120Hz, 20°C
Leakage Current 漏電流	Rated Voltage 額定工作電壓
	6.3~100V
	160~450V
	Case size 尺寸
Time 時間	after 2 min.(application of rated voltage) 2 分鐘後 (施加額定工作電壓)
	after 1 min.(application of rated voltage) 1 分鐘後 (施加額定工作電壓)
	after 5 min.(application of rated voltage) 5 分鐘後 (施加額定工作電壓)
	Leakage Current 漏電流
Dissipation Factor (tan δ) 損耗角正切	Measurement frequency 測試頻率: 120Hz, Temperature 溫度: 20°C
	Rated Voltage (V) 額定工作電壓
	tan δ (max.)
	最大損耗角正切
Stability at Low Temperature 低溫特性	Measurement frequency 測試頻率: 120Hz
	Rated Voltage (V) 額定工作電壓
	Impedance Ratio 阻抗比
	ZT/Z20 (max.)
Load Life 高溫負荷特性	After 2000 hrs. (1000 hrs. for Ø4~Ø6.3x5.4) 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 2000 小時 (Ø4~Ø6.3x5.4 為 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
	Dissipation Factor 損耗角正切
	Leakage Current 漏電流
Shelf Life 高溫貯存特性	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。
	Resistance to Soldering Heat 耐焊接熱特性
	Capacitance Change 靜電容量變化率
	Dissipation Factor 損耗角正切
	Leakage Current 漏電流
Marking 標示	Black print on the case top. 鋁殼頂部黑字印刷。

□ DRAWING (Unit: mm) 外形圖



NOTE: All designs and specifications are for reference only and are subject to change without prior notice. If any doubt about safety for your application, please contact us immediately for technical assistance before purchase.

注: 以上所提供的設計及特性參數僅供參考作用, 任何修改不作預先通知。如果在使用上有疑問, 請在採購前與我們聯絡, 以便提供技術上的協助。



VT Series

□ DIMENSIONS (Unit: mm) 尺寸表

ØD x L	4 x 5.4	5 x 5.4	6.3 x 5.4/7.7	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	18 x 16.5/18.5
A	2.0	2.2	2.6	3.3	3.0	3.2	3.2	4.7	4.7	5.8	6.2
B	4.3	5.3	6.6	8.3	8.3	10.3	10.3	12.8	12.8	17.0	19.0
C	4.3	5.3	6.6	8.3	8.3	10.3	10.3	12.8	12.8	17.0	19.0
E ± 0.2	1.0	1.5	2.1	2.2	3.1	4.6	4.6	4.6	4.6	6.4	6.4
L	5.4	5.4	5.4/7.7	6.2	10.5	10.5	13.5	13.5	16.0	16.5	16.5/18.5

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

µF	WV Code 代碼	4		6.3		10		16		25	
		0G		0J		1A		1C		1E	
4.7	4R7					4 x 5.4	13	4 x 5.4	13	4 x 5.4	13
0.33	R33							4 x 5.4	13		
10	100					4 x 5.4	18	4 x 5.4	18	5 x 5.4 (4 x 5.4)	20 (14)
22	220			4 x 5.4	22	5 x 5.4 (4 x 5.4)	25 (20)	5 x 5.4 (4 x 5.4)	27 (20)	6.3 x 5.4 (5 x 5.4)	36 (25)
33	330	5 x 5.4 (4 x 5.4)	30 (18)	5 x 5.4 (4 x 5.4)	27 (22)	5 x 5.4 (4 x 5.4)	30 (22)	6.3 x 5.4 (5 x 5.4)	40 (28)	6.3 x 5.4 (5 x 5.4)	44 (29)
47	470	5 x 5.4 (4 x 5.4)	36 (24)	5 x 5.4 (4 x 5.4)	33 (25)	6.3 x 5.4 (5 x 5.4)	41 (30)	6.3 x 5.4 (5 x 5.4)	48 (31)	6.3 x 5.4	48
100	101	6.3 x 5.4 (5 x 5.4)	60 (43)	6.3 x 5.4 (5 x 5.4)	50 (39)	5 x 5.4 6.3 x 5.4	39 (53)	6.3 x 5.4 (8 x 6.2)	60 (120)	6.3 x 7.7 (8 x 6.2)	85 91
150	151	6.3 x 5.4	52	6.3 x 5.4	55	6.3 x 5.4	62	6.3 x 7.7	95	8 x 10.5 (6.3 x 7.7)	140 (100)
220	221	6.3 x 5.4	57	6.3 x 7.7 (6.3 x 5.4)	105 (67)	6.3 x 5.4 6.3 x 7.7 (8 x 6.2)	85 105 (105)	8 x 10.5 (6.3 x 7.7) (8 x 6.2)	150 (105) (85)	8 x 10.5	175
330	331	6.3 x 7.7	100	6.3 x 7.7	105	6.3 x 7.7 8x10.5	105 196	8 x 10.5	195	10 x 10.5 (8 x 10.5)	240 (220)
470	471	6.3 x 7.7	105	8 x 10.5 (6.3 x 7.7)	210 (120)	10 x 10.5 (8 x 10.5)	260 (210)	10 x 10.5 (8 x 10.5)	295 (230)	10 x 10.5	280
560	561									10 x 10.5	320
680	681	8 x 10.5	210	8 x 10.5	210	10 x 10.5	270	10 x 10.5	315	10 x 12.5	400
1000	102	8 x 10.5	230	10 x 10.5 (8 x 10.5)	300 (230)	10 x 10.5	315	12.5 x 13.5 (10 x 12.5) (10 x 10.5)	500 (390) (340)	12.5 x 13.5	580
1500	152	10 x 10.5	315	10 x 12.5 (10 x 10.5)	450 (315)	10 x 12.5	460	12.5 x 13.5	550	12.5 x 16	850
2200	222	10 x 12.5 (10 x 10.5)	440 (340)	12.5 x 13.5 (10 x 12.5)	620 (500)	12.5 x 13.5	680	16 x 16.5 (12.5 x 16)	950 (750)	16 x 16.5	1050
3300	332	10 x 12.5	490	12.5 x 16 (12.5 x 13.5)	700 (660)	16 x 16.5	1000	16 x 16.5	1000	18 x 16.5	1150
4700	472	12.5 x 13.5	600	16 x 16.5	1000	16 x 16.5	1000	18 x 16.5	1225	18x 18.5	1300
6800	682	16 x 16.5 (12.5 x 16)	950 (650)	18 x 16.5	1290	18 x 16.5	1290			Case size 尺寸	Ripple current 紋波電流
8200	822			18x 18.5	1450	18x 18.5	1450				

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

NOTE: All designs and specifications are for reference only and are subject to change without prior notice. If any doubt about safety for your application, please contact us immediately for technical assistance before purchase.

注：以上所提供的設計及特性參數僅供參考，任何修改不作預先通知。如果在使用上有疑問，請在採購前與我們聯繫，以便提供技術上的協助。

VT Series

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

WV Code 代碼 μF		35		50		63		100	
		1V		1H		1J		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	6.3 × 7.7 (6.3 × 5.4)	35 (21)
10	100	5 × 5.4 (4 × 5.4)	21 (14)	6.3 × 5.4	24	6.3 × 7.7 (6.3 × 5.4) (8 × 6.2)	39 (24) (25)	8 × 10.5 (6.3 × 7.7)	77 (35)
22	220	6.3 × 5.4	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 (70)	6.3 × 7.7	60	8 × 10.5	112	10 × 10.5	133
47	470	6.3 × 7.7 (6.3 × 5.4)	70 (50)	8 × 10.5 (6.3 × 7.7)	120 (63)	10 × 10.5 (8 × 10.5)	160 (119)	12.5 × 13.5 (10 × 12.5) (10 × 10.5)	250 (160) (140)
56	470					10 × 10.5 (8 × 10.5)	165 (120)		
68	680	4 × 5.4	13					12.5 × 13.5 (10 × 12.5)	300 (180)
100	101	8 × 10.5 (6.3 × 7.7)	120 (84)	10 × 10.5 (8 × 10.5)	170 (140)	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)	600 (420) (295)	16 × 16.5 (12.5 × 16)	700 (510)	18 × 16.5	590
470	471	12.5 × 13.5 (10 × 12.5) (10 × 10.5)	520 (375) (280)	16 × 16.5 (12.5 × 16)	700 (420)	16 × 16.5	750	18 × 18.5	980
680	681	12.5 × 13.5 (10 × 12.5)	530 (395)	16 × 16.5	750	18 × 16.5	790		
1000	102	16 × 16.5 (12.5 × 16)	750 (600)	18 × 16.5	990				
1500	152	16 × 16.5	750					Case size 尺寸	Ripple current 紋波電流
2200	222	18 × 16.5	1050						

WV Code 代碼 μF		160		200		250		350	
		2C		2D		2E		2V	
4.7	4R7					10 × 13.5	65	10 × 13.5	45
10	100			10 × 13.5	75	10 × 13.5	70	12.5 × 13.5	50
22	220	10 × 13.5	50	12.5 × 13.5	105	12.5 × 13.5	105	16 × 16.5	85
33	330	12.5 × 13.5	95	12.5 × 13.5	120	16 × 16.5	180	18 × 16.5	100
47	470	12.5 × 13.5 (16 × 16.5)	205 (240)	16 × 16.5	220	16 × 16.5	220	Case size 尺寸	Ripple current 紋波電流
100	101	16 × 16.5	250	18 × 16.5	280	18 × 16.5	260		

•Case size $\varnothing D \times L$ (mm), ripple current (mA rms) at 105°C 120Hz •尺寸 $\varnothing D \times L$ (mm), 紋波電流(mA rms)於 105°C 120Hz

NOTE: All designs and specifications are for reference only and are subject to change without prior notice. If any doubt about safety for your application, please contact us immediately for technical assistance before purchase.

注：以上所提供的設計及特性參數僅供參考，任何修改不作預先通知。如果在使用上有疑問，請在採購前與我們聯繫，以便提供技術上的協助。



VT Series

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

μF	WV Code 代碼	400		450					
		2G		2W					
3.3	3R3	10 × 13.5 (8 × 10.5)	40 (35)	10 × 13.5 (8 × 12.5)	40 (38)				
4.7	4R7	10 × 13.5 (12.5 × 13.5)	45 (48)	10 × 13.5 (12.5 × 13.5)	42 (45)				
10	100	12.5 × 13.5	50	12.5 × 13.5	70				
22	220	16 × 16.5	85	16 × 16.5	85			Case size 尺寸	Ripple current 紋波電流
33	330	18 × 16.5	100	18 × 16.5	100				

• 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	0.80	1.00	1.17	1.36	1.50
		100 ~ 3300μF	0.85	1.00	1.08	1.20	1.30
	Ø12.5 ~ Ø16	~ 68μF	0.80	1.00	1.35	1.57	2.00
		100 ~ 680μF	0.80	1.00	1.23	1.34	1.50
		1000 ~ 8200μF	0.85	1.00	1.10	1.13	1.15

NOTE: All designs and specifications are for reference only and are subject to change without prior notice. If any doubt about safety for your application, please contact us immediately for technical assistance before purchase.

注: 以上所提供的設計及特性參數僅供參考, 任何修改不作預先通知。如果在使用上有疑問, 請在採購前與我們聯繫, 以便提供技術上的協助。