

# CTV series

- Chip type with 8Ø~16Ø, 125°C, 5,000 hours, long life product.
- Designed For automobile modules and other high temperature applications.
- Peak acceleration: 30G
- RoHS Compliance.
- 8Ø~16ØV-Chip型，125°C，5000小時長壽命產品。
- 專為汽車模組和其它高溫應用設計。
- 峰值加速度：30G。



## SPECIFICATIONS

Items 項目	Characteristics 特性				
Capacitance Tolerance 靜電容量誤差	± 20%(120Hz,20°C)				
Operating Temperature Range 適用溫度範圍	-40 ~ +125°C				
Rated Voltage Range 額定電壓範圍	16~50VDC				
Capacitance Range 靜電容量範圍	33~2200µF				
Leakage Current 洩漏電流	$I \leq 0.01CV$ or $3(\mu A)$ , which is greater. ( After 2 minutes application of DC rated voltage, at 20°C)				
Dissipation Factor 散逸因素( $\tan \delta$ )	Measurement Frequency: 120Hz. Temperature: 20°C				
	Rated Voltage(V)	16	25	35	50
	$\tan \delta$ (Max)	0.20	0.20	0.14	0.14
Low Temperature Stability 低溫特性 Impedance Ratio(Max) 阻抗比率(最大值)	Measurement Frequency: 120Hz.				
	Rated Voltage(V)	16	25	35	50
	$Z(-25^\circ C)/Z(20^\circ C)$	5	2	2	2
	$Z(-40^\circ C)/Z(20^\circ C)$	8	4	3	3
Load Life 負荷壽命	$\Phi 8\sim\Phi 10$ :2000hours; $\Phi 12.5$ :3000hours ; $\Phi 16$ : 5000hours with application of rated voltage at 125°C				
	Capacitance Change	Within ±30% of Initial Value			
	$\tan \delta$	300% or less of Initial Specified Value			
	Leakage Current	Initial Specified Value or less			
Shelf Life 放置壽命	The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1000 hours 125°C without voltage applied. Before the measurement, the capacitor shall be preconditioned by applying voltage according to them 4.1 of JIS C5101-4.				
	Capacitance Change	Within ±300% of Initial Value			
	$\tan \delta$	300% or less of Initial Specified Value			
	Leakage Current	Initial Specified Value or less			
Resistance to Soldering Heat 焊錫耐熱性	The capacitors shall be kept on the hot plate maintained at 250°C for 30 seconds. After removing from the hot plate and restored at room temperature they meet the characteristics requirements listed at right.	Capacitance Change	Within ± 10% of Initial Value		
		$\tan \delta$	Initial Specified Value		
		Leakage Current	Initial Specified Value or less		
Standards 參照標準	Black print on the case top				

## Frequency Coefficient of Permissible Ripple Current

Frequency (Hz)	100 ≤ F < 1K	1K ≤ F < 10K	10K ≤ F < 100K	100K ≤ F
Capacitance (µF)				
全系列	0.60	0.85	0.93	1.00

The endurance of capacitors is reduced with internal heating produced by ripple current at the rate of halving the lifetime with every 5°C rise. When long life performance is required in actual use, the rms ripple current has to be reduced.

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## DIMENSIONS(mm)

### ■ Chip Type

Fig.1  $\varnothing D=8\sim 10\text{mm}$

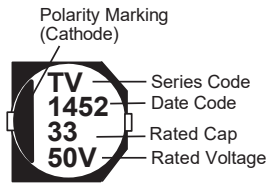
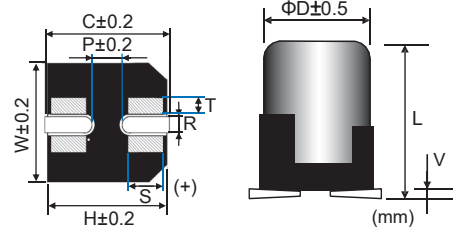
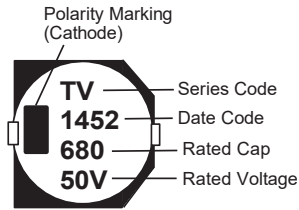


Fig.2  $\varnothing D \geq 12.5\text{mm}$



Size	$\varnothing D$	L	W	H	C	R	P	S	T	Vmax
8×10.5	8.0	10.5±0.5	8.3	8.3	9.0	0.7~1.1	3.2	0.7	1.6	0.3
10×10.5	10.0	10.5±0.5	10.3	10.3	11.0	1.0~1.4	4.5	0.7	1.6	0.3
12.5×13.5	12.5	13.5±1	13.5	13.5	14.2	1.0~1.4	4.5	2.2	2.4	0.4
16×16.5	16.0	16.5±1	17.0	17.0	18.0	1.8~2.1	6.4	3.0	2.0	0.4

## STANDARD RATINGS

D×L(mm) ; R.C.(mA rms) at 125°C 100KHz, IMP( $\Omega$  max) at 20°C 100KHz.

Cap ( $\mu\text{F}$ )	V Item	16.0			25			35			50		
		D x L	R.C.	IMP	D x L	R.C.	IMP	D x L	R.C.	IMP	D x L	R.C.	IMP
47											8x10.5	250	0.5
100								8x10.5	300	0.18	10x10.5	350	0.30
160								8x10.5	300	0.18			
220					8x10.5	300	0.18	10x10.5	500	0.11	12.5x13.5	700	0.15
270					8x10.5	300	0.18						
300								10x10.5	500	0.11			
330	8x10.5	300	0.18	10x10.5	500	0.11	12.5x13.5	1200	0.08				
390	8x10.5	300	0.18										
470	10x10.5	500	0.11	10x10.5	500	0.11	12.5x13.5	1200	0.08	16x16.5	1000	0.09	
620							12.5x13.5	1200	0.08				
680	10x10.5	500	0.11	12.5x13.5	1200	0.08	16x16.5	1800	0.05				
910				12.5x13.5	1200	0.08							
1000	12.5x13.5	1200	0.08	16x16.5	1800	0.05							
1500	12.5x13.5	1200	0.08	16x16.5	1800	0.05							
2200	16x16.5	1800	0.05										

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