

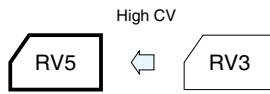
## Chip Type 85°C High CV Capacitors

GREEN CAP

SMD

Anti-cleaning solvent

- Compatible with surface mounting.
- Supplied with carrier taping.
- Guarantees 2000 hours at 85°C.



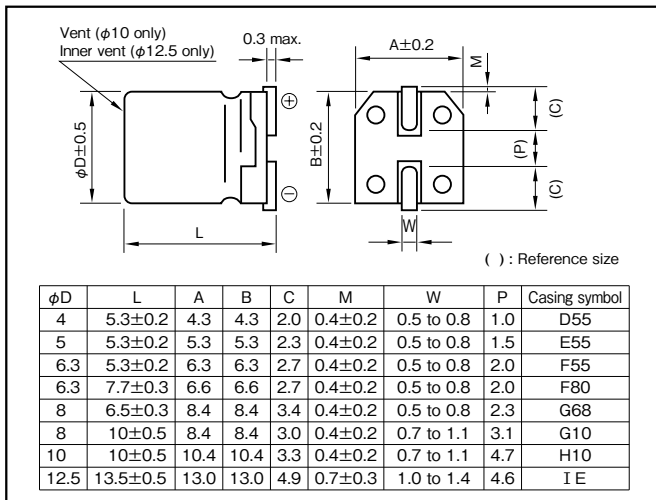
Marking color : Black print ( $\phi 4$  —  $\phi 8$ ,  $\phi 12.5$ )  
White print on a brown sleeve ( $\phi 10$ )

### Specifications

Item	Performance											
Category temperature range (°C)	-40 to +85											
Tolerance at rated capacitance (%)	$\pm 20$ (20°C, 120Hz)											
Leakage current ( $\mu A$ )	Less than 0.01CV or 3 whichever is larger (after 2 minutes) C : Rated capacitance ( $\mu F$ ) ; V : Rated voltage (V) (20°C)											
Tangent of loss angle (tan $\delta$ )	Rated voltage (V)	4	6.3	10	16	25	35	50	63	100		
	tan $\delta$ (max.)	Refer to following page. (20°C, 120Hz)										
Characteristics at high and low temperature	Impedance ratio (max.)	Rated voltage (V)		4	6.3	10	16	25	35	50	63	100
		Z-25°C/Z+20°C	7	4	3	2	2	2	2	2	2	2
		Z-40°C/Z+20°C	17	10	8	6	4	3	3	3	3	2
Endurance (85°C) (Applied ripple current)	Test time	2000 hours										
	Leakage current	The initial specified value or less										
	Percentage of capacitance change	Within $\pm 30\%$ of initial value										
	Tangent of the loss angle	200% or less of the initial specified value										
Shelf life (85°C)	Test time : 1000hours ; other items are same as the endurance. Voltage application treatment : According to JIS C5101-4											
Applicable standards	JIS C5101-1 1998, -18 1999 (IEC 60384-1 1992, -18 1993)											

### Outline Drawing

Unit : mm



- Soldering conditions are described on page 15.
- Land pattern size are described on page 13.
- The taping specifications are described on page 16.

### Coefficient of Frequency for Rated Ripple Current

Rated voltage (V)	Frequency (Hz)			
	50 · 60	120	1k	10k · 100k
4 to 16	0.80	1	1.15	1.25
25 to 35	0.80	1	1.25	1.40
50 to 63	0.80	1	1.35	1.50
100	0.70	1	1.35	1.50

### Part numbering system

$\phi 10$  or less (example : 16V470 $\mu F$ )

RV5	—	16	V	471	M	G10	U	—	
Series code		Rated voltage symbol		Rated capacitance symbol	Capacitance tolerance symbol	Casing symbol			Taping symbol

$\phi 12.5$  (example : 10V1500 $\mu F$ )

RV5	—	10	V	152	M	IE	T	—	R5
Series code		Rated voltage symbol		Rated capacitance symbol	Capacitance tolerance symbol	Casing symbol			Taping symbol

Standard Ratings

Rated voltage(V) Rated capacitance(μF)	4				6.3				10				16				25			
	Case φD×L (mm)	Casing symbol	tan δ	Rated ripple current (mAmps)	Case φD×L (mm)	Casing symbol	tan δ	Rated ripple current (mAmps)	Case φD×L (mm)	Casing symbol	tan δ	Rated ripple current (mAmps)	Case φD×L (mm)	Casing symbol	tan δ	Rated ripple current (mAmps)	Case φD×L (mm)	Casing symbol	tan δ	Rated ripple current (mAmps)
10	-	-	-	-	-	-	-	-	4×5.3	D55	0.24	23	4×5.3	D55	0.20	26	4×5.3	D55	0.18	23
22	-	-	-	-	4×5.3	D55	0.28	31	4×5.3	D55	0.24	26	4×5.3	D55	0.28	30	4×5.3	D55	0.18	24
33	4×5.3	D55	0.42	31	5×5.3	E55	0.28	44	5×5.3	E55	0.24	48	5×5.3	E55	0.20	44	5×5.3	E55	0.18	43
47	4×5.3	D55	0.42	37	4×5.3	D55	0.35	34	4×5.3	D55	0.32	33	4×5.3	D55	0.28	32	5×5.3	E55	0.18	54
100	5×5.3	E55	0.42	63	5×5.3	E55	0.28	52	5×5.3	E55	0.32	54	5×5.3	E55	0.28	44	6.3×5.3	F55	0.14	67
150	-	-	-	-	6.3×5.3	F55	0.35	58	6.3×5.3	F55	0.32	54	6.3×5.3	F55	0.20	70	6.3×5.3	F55	0.18	75
220	6.3×5.3	F55	0.42	110	6.3×5.3	F55	0.28	89	6.3×5.3	F55	0.24	98	6.3×5.3	F55	0.20	70	6.3×7.7	F80	0.18	124
330	-	-	-	-	6.3×5.3	F55	0.35	83	6.3×5.3	F55	0.32	79	6.3×7.7	F80	0.28	109	8×6.5	G68	0.18	118
470	-	-	-	-	6.3×7.7	F80	0.35	113	6.3×7.7	F80	0.32	173	8×10	G10	0.20	220	-	-	-	-
680	-	-	-	-	8×6.5	G68	0.35	190	8×10	G10	0.24	230	8×10	G10	0.20	260	8×10	G10	0.14	252
820	-	-	-	-	8×10	G10	0.28	262	8×10	G10	0.32	310	8×10	G10	0.28	307	8×10	G10	0.18	300
1000	-	-	-	-	8×10	G10	0.35	320	8×10	G10	0.32	310	10×10	H10	0.20	458	10×10	H10	0.14	458
1500	-	-	-	-	10×10	H10	0.28	458	10×10	H10	0.24	454	10×10	H10	0.20	458	10×10	H10	0.14	458
2200	-	-	-	-	10×10	H10	0.35	489	12.5×13.5	IE	0.24	560	10×10	H10	0.28	380	-	-	-	-
					12.5×13.5	IE	0.30	651	-	-	-	-	-	-	-	-	12.5×13.5	IE	0.14	552

Rated voltage(V) Rated capacitance(μF)	35				50				63				100			
	Case φD×L (mm)	Casing symbol	tan δ	Rated ripple current (mAmps)	Case φD×L (mm)	Casing symbol	tan δ	Rated ripple current (mAmps)	Case φD×L (mm)	Casing symbol	tan δ	Rated ripple current (mAmps)	Case φD×L (mm)	Casing symbol	tan δ	Rated ripple current (mAmps)
0.22	-	-	-	-	4×5.3	D55	0.10	5	-	-	-	-	-	-	-	
0.33	-	-	-	-	4×5.3	D55	0.10	6	-	-	-	-	-	-	-	
0.47	-	-	-	-	4×5.3	D55	0.10	7	-	-	-	-	-	-	-	
1	-	-	-	-	4×5.3	D55	0.10	10	-	-	-	-	-	-	-	
2.2	-	-	-	-	4×5.3	D55	0.10	15	-	-	-	-	-	-	-	
3.3	-	-	-	-	4×5.3	D55	0.10	19	4×5.3	D55	0.12	12	-	-	-	
4.7	4×5.3	D55	0.12	20	4×5.3	D55	0.12	20	5×5.3	E55	0.12	20	-	-	-	
10	4×5.3	D55	0.14	27	5×5.3	E55	0.10	26	-	-	-	-	-	-	-	
22	5×5.3	E55	0.12	34	6.3×5.3	F55	0.12	34	6.3×5.3	F55	0.12	32	8×10	G10	0.10	94
33	6.3×5.3	F55	0.12	47	6.3×5.3	F55	0.12	44	6.3×7.7	F80	0.12	60	8×10	G10	0.12	94
47	6.3×5.3	F55	0.14	59	6.3×7.7	F80	0.12	82	8×6.5	G68	0.12	62	10×10	H10	0.10	189
100	6.3×7.7	F80	0.14	120	8×6.5	G68	0.12	83	8×10	G10	0.10	139	10×10	H10	0.12	189
220	8×10	G10	0.14	260	6.3×7.7	F80	0.12	85	8×10	G10	0.10	139	10×10	H10	0.12	189
330	10×10	H10	0.14	360	8×10	G10	0.10	252	10×10	H10	0.12	226	12.5×13.5	IE	0.10	242
470	12.5×13.5	IE	0.12	451	8×10	G10	0.12	252	10×10	H10	0.10	226	-	-	-	
					10×10	H10	0.10	458	12.5×13.5	IE	0.10	343	-	-	-	

(Note) Rated ripple current : 85° C, 120Hz