

# HIGH VOLTAGE MULTILAYER CERAMIC CHIP CAPACITOR



## FEATURES

Capacitance: 10pF ~1.5μF

Voltage: 250V~3KV

Operating temperature :-55°C~+125°C

Lead-free terminations, RoHS and REACH Compliant

## »» APPLICATIONS

Typical applications include DC/DC, high voltage coupling/DC blocking, Back-lighting inverters, LAN/WLAN interface, power supplies.

## »» ORDERING INFORMATION

Series	Case size	Dielectric	Rated voltage	Capacitance	Capacitance tolerance	Termination finish
CC48-class I	0603 0805 1206 1210 1808 1812 1812	CG	250V 500V 630V 1KV 2KV 3KV	Refer to Capacitance	<10pF C=±0.25pF D=±0.50pF ≥10pF J=±5%	N=100%Sn
CT48-class II	2220 2225	2X1			K=±10% M=±20%	

Note: 2X1=X7R

## »» DIMENSIONS

Appearance	Case Size	0603	0805	1206	1210	1808	1812	2220	2225
	L	1.60 ± 0.20	2.00 ± 0.30	3.20 ± 0.30	3.20 ± 0.40	4.50 ± 0.40	4.50 ± 0.40	5.70 ± 0.50	5.70 ± 0.50
	W	0.80 ± 0.20	1.25 ± 0.20	1.60 ± 0.30	2.50 ± 0.30	2.00 ± 0.30	3.20 ± 0.30	5.00 ± 0.50	6.50 ± 0.60
	Tmax	1.00	1.45	1.90	2.80	2.30	3.50	4.20	4.20
	t	0.35 ± 0.25	0.50 ± 0.25	0.50 ± 0.35	0.60 ± 0.30	0.64 ± 0.38	0.90 ± 0.60	0.90 ± 0.60	0.90 ± 0.60

Unit:mm

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## » ELECTRICAL CHARACTERISTICS

NO.	Item	Specification Limits	Measuring Conditions
1	Capacitance	Within specified tolerance	
2	Dissipation Factor	$C_R \leq 30\text{pF}$ $\text{tg } \delta \leq \frac{1}{(400+20C_R)}$ $C_R > 30\text{pF}$ $\text{tg } \delta \leq 10 \times 10^{-4}$	CG: $C_R \leq 1000\text{pF}$ $1\text{MHz} \pm 10\%$ $0.5\text{V} \sim 5\text{V}$ $C_R > 1000\text{pF}$ $1\text{kHz} \pm 10\%$ $1\text{V} \pm 0.2\text{V}$ 2X1: $C_R \leq 10\mu\text{F}$ $1\text{kHz} \pm 10\%$ $1\text{V} \pm 0.2\text{V}$ $C_R > 10\mu\text{F}$ $120\text{Hz} \pm 10\%$ $0.5\text{V} \pm 0.2\text{V}$
		2X1	$\text{tg } \delta \leq 2.5\%$
3	Insulation Resistance	$C_R \leq 0.01\mu\text{F}$ $IR \geq 10^4 \text{M}\Omega$	$C_R > 0.01\mu\text{F}$ $IR \geq \frac{100}{C_R} \text{M}\Omega$
4	Dielectric Strength	No breakdown or visual defects	Voltage shall be applied with follow conditions for 5 seconds: $200\text{V} < U_R \leq 500\text{V}$ $1.3U_R + 100\text{V}$ $U_R > 500\text{V}$ $1.3U_R$ Charging and discharging current shall be 50mA or less.

## » CAPACITANCE AND RATED VOLTAGE RANGE

CC48

Case Size	0603			0805			1206					1210					1808					1812					2220					2225										
Rated Voltage(V)	250	500		250	500	630	1k	250	500	630	1k	2k	3k	250	500	630	1k	2k	3k	500	630	1k	2k	3k	250	500	630	1k	2k	3k	250	500	630	1k	2k	3k	250	500	630	1k	2k	3k
cap (pF)																																										
10																																										
12																																										
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470																																										
560																																										
680																																										
820																																										
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8200																																										
cap ( $\mu\text{F}$ )																																										
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.012																																										
.015																																										
.018																																										
.022																																										
.027																																										
.033																																										
.039																																										
.047																																										
.056																																										
.068																																										
.082																																										
.10																																										

CG

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## »» CAPACITANCE AND RATED VOLTAGE RANGE

CT48

Case Size	0603					0805					1206					1210					1808					1812					2220					2225														
	250	500	250	500	630	1k	250	500	630	1k	2k	250	500	630	1k	2k	250	500	630	1k	2k	3k	250	500	630	1k	2k	3k	250	500	630	1k	2k	3k	250	500	630	1k	2k	3k										
cap (pF)	100	120	150	180	220	270	330	390	470	560	680	820	1000	1200	1500	1800	2200	2700	3300	3900	4700	5600	6800	8200	.010	.012	.015	.018	.022	.027	.033	.039	.047	.056	.068	.082	.10	.12	.15	.18	.22	.27	.33	.39	.47	.56	.68	.82	1.0	1.5

2X1