

CC41 CT41 Chip Multilayer Ceramic Capacitors



Features

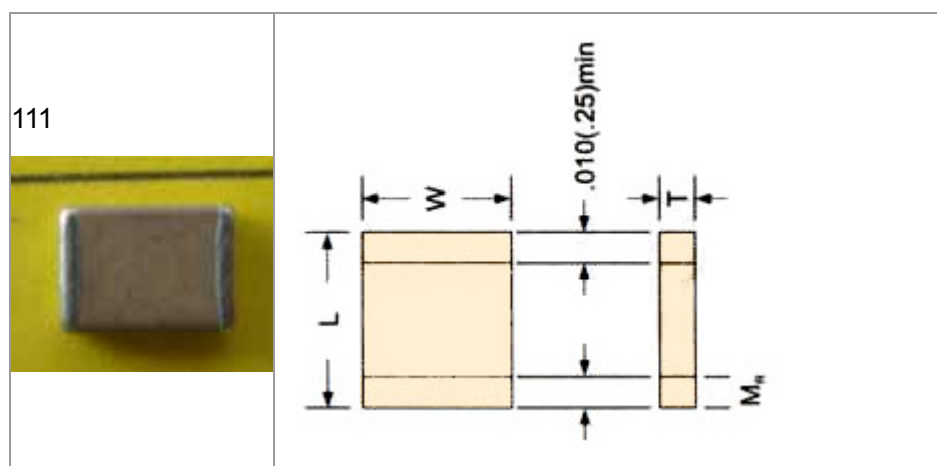
The choice of dielectric is largely determined by the temperature stability required:

NPO (COG) Ultra stable Class dielectric, with negligible dependence of electrical properties on temperature, voltage, frequency and time, Used in circuits requiring stable performance.

X7R Stable Class dielectric, with predictable change of properties with temperature, voltage, frequency and time. Used as blocking, coupling, by-passing and frequency discriminating elements. This dielectric is ferroelectric and offers higher capacitance ranges than Class .

Y5V(Z5U) General purpose Class dielectric with highest dielectric constant and greater variation of properties with temperature and test conditions. Very high capacitance per unit volume and suited for application as well as filtering, transient suppression blocking, and charge storage application.

Size Code Capacitance and Voltage



		Size code								
		0603	0805	1206	1210	1808	1812	2225	3012	3035
Dimensions (mm)	L	1.6±0.1	2.00±0.20	3.20±0.30	3.20±0.30	5.70±0.20	4.50±0.40	5.70±0.50	7.06±0.50	7.06±0.50
	W	0.8±0.1	1.25±0.20	1.6±0.20	2.00±0.20	4.50±0.20	3.20±0.10	6.4±0.50	3.20±0.10	9.00±0.50
	Tmax	0.8±0.1	1.25±0.15	1.25(0,-0.2)	1.6(+0.05,-0.10)	2.5	2.5	2.5	2.5	3.0
	M _h	0.3±0.10	0.5±0.25	0.5±0.25	0.75±0.25	0.75±0.25	0.75±0.25	1.00±0.25	1.00±0.25	1.00±0.25

Material	Specification capacitance PF									
	Rated voltage	0603	0805	1206	1210	1808	1812	2225	3012	3035
COG (NPO)	25V	OR5~102	OR5~332	OR5~472	561~103	561~103	102~103	102~473	102~473	102~104
	50V	OR5~102	OR5~222	OR5~392	561~562	561~562	102~103	102~223	100~183	102~473
	100V	OR5~821	OR5~102	OR5~302	100~472	100~472	100~103	100~273	100~183	102~333
	200V	OR5~331	OR5~821	OR5~202	100~332	100~272	100~562	100~123	100~822	100~103
	500V		OR5~561	OR5~102	100~202	100~182	100~392	100~682	100~472	100~822
	1000V			OR5~681	100~821	100~821	100~122	100~222	100~162	100~472
	2000V			OR5~101	100~471	100~221	100~391	100~102	100~681	100~222
	3000V					100~151	100~271	100~681	100~471	100~681
	4000V					100~101	100~221	100~561	100~331	100~471
X7R	25V	101~473	221~105	102~105	102~334	561~335	103~474	103~105	102~155	103~225
	50V	101~273	221~105	102~105	102~224	561~205	103~334	103~105	151~105	103~225
	100V	101~103	151~333	102~683	151~224	151~224	103~224	151~105	151~684	103~105
	200V	101~682	151~223	151~473	151~104	151~104	151~154	151~474	151~394	100~105
	500V		151~103	151~223	151~333	151~393	151~104	151~334	151~274	100~684
	1000V			151~562	151~103	151~103	151~273	151~563	151~393	100~474
	2000V			151~152	151~682	151~682	151~103	151~273	151~223	102~104
	3000V					151~152	151~222	151~392	151~332	151~103
	4000V					151~102	151~152	151~332	151~272	151~822
Y5V (Z5U)	25V	222~334	103~105	103~125	104~155	104~155	154~225	684~475	684~335	105~106
	50V	222~104	103~684	103~105	104~155	104~155	154~225	684~335	684~155	105~685
	100V	222~683	103~104	103~334	104~824	103~824	104~155	103~205	103~155	103~335
	200V		103~563	103~154	104~391	103~394	103~474	103~684	103~564	103~824
	250V		103~563	103~154	103~391	103~394	103~474	103~684	103~564	103~684

General Specifications

	CC41 (NPO)	CT41 (X7R)	CT41 (Y5V, Z5U)
Capacitance Range	OR5 to 104	331 to 104	103 to 106
Temperature Coefficient	0±30PPm/ 0±60PPm/	(-55 to +125) ±15% (-55 to 125)	+30%~80% (-25 to 85) +22%~56% (+10 to 85)
Insulation Resistance	C ≤10nF R ≥ 10000MΩ	C ≤25nF R ≥ 4000MΩ	
	C > 10nF C. R ≥ 100S	C > 25nF C. R ≥ 100S	
With Standing Voltage	2.5 × W V D C		
Dissipation factor	0.15%max (20 , 1MHZ, 1VDC)	2.5%max (20 , 1kHz, 1VDC)	5.0%max (20 , 1kHz, 0.3VDC)
Rated Voltage	25, 50, 63, 100VDC		25, 50, 63VDC
Capacitance Tolerance	B=±0.1PF	C=±0.1PF	C≤25nF
	D=±1PF	F=±1PF	K=±10%
	G=±2%	J=±5%	M=±20%
	K=±10%	M=±20%	
Life Test (1000hours)	200% Rated Voltage at +125 1000h		150% Rated Voltage at +85 1000h
Soderability	SJ/10211-91 4.11	SJ/10211-91 4.11	
Resistance to Soldering Heat	SJ/T10211-91 4.10	SJ/T10211-91 4.10	
Mechanical Test	SJ/T10211-91 4.9	SJ/T10211-91 4.9	
Temperature Cycling	SJ/T10211-91 4.12	SJ/T10211-91 4.12	
Moisture Resistance	SJ/T10211-91 4.14	SJ/T10211-91 4.14	
Termination adhesion strength	SJ/T10211-91 4.9	SJ/T10211-91 4.9	
Environment Testing	SJ/T10211-91 4.13	SJ/T10211-91 4.13	

How to order

CT41 0805 Y 104 Z 500 T

CT41	0805	Y	104	Z	500	T
Type	Size code	Dielectric	Cap.(pF)	Cap. Tolerance	Voltage	Packaging
CC41 class dielectric	(mm) L×W	N=NPO	104=100000(pF)	C=±0.25pF	500=50V	T=Reeled
for chip type	0805=2.0×1.25	B=X7R	Two significant	D=±0.50pF	101=100V	No code
CT41 class dielectric	1206=3.2×1.6	Y=Y5V	digits followed by	J=±5.0%		is bulk
for chip type	1210=3.2×2.5	(Z5U)	no. of zeros	K=±10%		Package
	1812=4.5×3.2			M=±20%		
	2225=5.7×6.4			S=+50%/-20%		
	3035=7.6×9.0			Z=+80%/-20%		