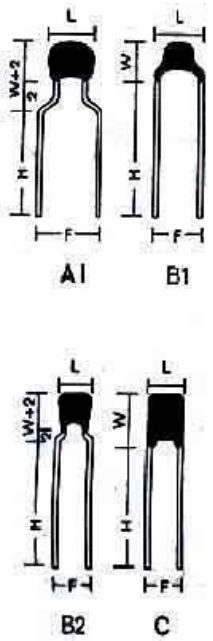
ETHER COMPONENTS

RADIAL LEADS MULTILAYER CERAMIC CAPACITORS

Features

Wide capacitance, temperature, voltage and tolerance range; Industry sizes; Tape and Reel available for auto placement; a lot of leads type available;

Radial Type Size, Capacitance and Voltage



Size	Type	Dimensions (mm)						Voltage	Capacitance (pF)		
		F	Hmin	Lmax	Wmax	Tmax	D		COG (NPO)	X7R	Y5V (Z5U)
0805	A1	5.0	5.0	4.2	3.8	3.8	0.5	25V	0R5~332	221~105	103~105
	B1	5.0						50V	0R5~222	221~105	103~684
	C1	2.5						100V	0R5~102	221~683	
1206	B2	5.0	5.0	5.0	4.5	3.8	0.5	25V	0R5~682	102~105	103~105
	C2	4.0						50V	0R5~472	102~105	103~105
								100V	0R5~392	102~683	
1210	C3	5.0	5.0	7.6	5.5	3.8	0.5	25V	561~103	102~334	104~105
	C2	4.0						50V	561~682	102~205	104~105
								100V	561~472	102~104	
1812	C3	5.0	5.0	8.5	8.5	3.8	0.5	25V	102~153	103~474	154~335
								50V	102~103	103~334	154~225
								100V	102~682	103~224	
2225	C4	7.5	5.0	10.5	9.5	4.2	0.5	25V	102~223	103~105	684~475
								50V	102~223	103~105	684~335
								100V	102~103	103~474	
3035	C4	7.5	5.0	12.5	10.5	4.2	0.5	25V	102~104	103~225	105~106
								50V	102~473	103~225	105~685
								100V	102~333	103~105	

How To Order

MC 0805 Y 104 Z 500 A1 T

0805	Y	104	Z	500	A1	T
Size code	**Dielectric**	**Cap. (pF)**	**Cap. Tolerance**	**Voltage**	**Leads Type**	**Packaging**
(mm) LxW	N=NPO	104=100000(pF)	B=±0.01pF	500=50V	A1	T=Reeled
0805=2.0x1.25	B=X7R	Two significant	C=±0.25pF	101=100V	B1, B2	No code
1206=3.2x1.6	Y=Y5V	Digits followed by	D=±0.50pF		C1, C2, C3, C4	Is bulk
1210=3.2x2.5	(Z5U)	No. Of zeros	F=±1.0%			Package
1812=4.5-3.2			G=±2.0%			
2225=5.7-6.4			J=±5.0%			
3035=7.6-9.0			K=±10%			
			M=±20%			
			S=+50%/-20%			
			Z=+80%/-20%			

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General Specifications

		NPO (COG)	X7R	Y5V (Z5U)
Capacitance Range		0.5pF~104	221~225	103~106
Capacitance Tolerance		B=±0.1pF C=±0.25pF D=±0.5pF F=±1% G=±2% J=±5% K=±10% M=±20% B,C,D for C<10pF	K=±10% M=±20% S=+50%~-20%	M=±20% S=+50%~-20% Z=+80%-20% P=+100%~0
Rated Voltage		16,25, 50, 63, 100,200,500, 1000,2000 VDC		16, 25, 50, 100 VDC
Dissipation Factor (DF)		0.15%Max (20, 1MHZ, 1VDC)	2.5%Max (20, 1KHZ, 1VDC)	5.0%Max (20, 1KHZ, 0.3VDC)
Insulation Resistance		C 10nF I_R 10000M C 10nF I_R >500 .F	C 25nF I_R 4000M C 25nF CxR >100 F	
Dielectric With Standing Voltage		There shall be no evidence of damage or flash over during the test.		
Termination adhesion strength		There shall be no evidence of damage a flash over during the test.		
Bending Strength		There shall be no evidence of damage or flash over during the test; capacitance tolerance shall be not more than 10%.		
Solderability	**Time:**	2±1s		
	Temp:	235±5		
	Cover:	95%		
Resistance to Soldering Heat	**Time:**	5±1s		
	Temp:	265±5		
	Cover:	95%		
	C/C:	0.5% or 0.5pF	-5%~+10%	-10%~+20%
Temperature cycling	**C/C:**	1%	± 10%	±30%
	Outlook:	There shall be no evidence of damage or flash over during the test.		
Humidity Moisture Resistance	**C/C:**	2%	10%	20%
	DF	0.003	0.05	0.07
	IR	RxC >25s		
	Outlook:	There shall be no evidence of damage or flash over during the test.		
T.C. Characteristics (C/C)		±30ppm/	±15%	Z5U (E) +22~-56%
				Y5V (F) +22~-82%
Vibration	**Outlook:**	There shall be no evidence of damage or flash over during the test.		
Bump	**C/C:**	2%		
	Outlook:	There shall be no evidence of damage or flash over during the test.		
Life test (1000 hours)	**C/C:**	2%	±12.5%	±30.0%
	DF	0.003		0.05
	IR	RxC >25s		RxC 25s
	Outlook:	There shall be no evidence of damage or flash over during the test.		

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Capacitors Selection

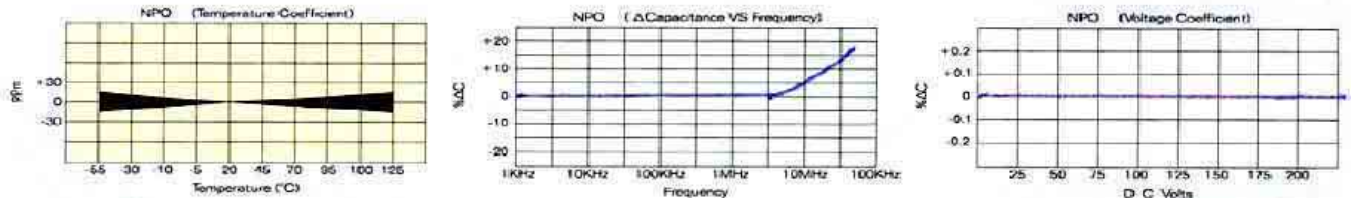
The choice of dielectric is largely determined by the temperature stability required:

1. NPO (COG) Ultra stable Class I dielectric, with negligible dependence of electrical properties on temperature, voltage, frequency and time, Used in circuits requiring stable performance.
2. X7R Stable Class II dielectric, with predictable change of properties with temperature, voltage, frequency and time. Used 5U as blocking, coupling, bypassing and frequency discriminating elements. This dielectric is ferroelectrics and offers higher capacitance ranges than Class I.
3. Y5V (Z5U) General purpose Class II 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.

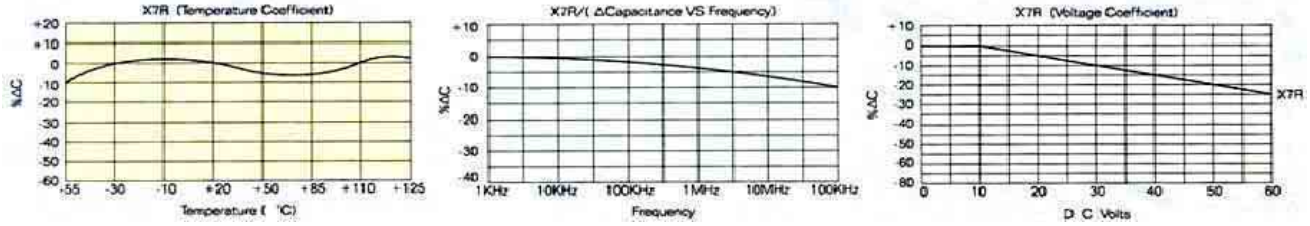
Technical Parameter

Dielectric Classification

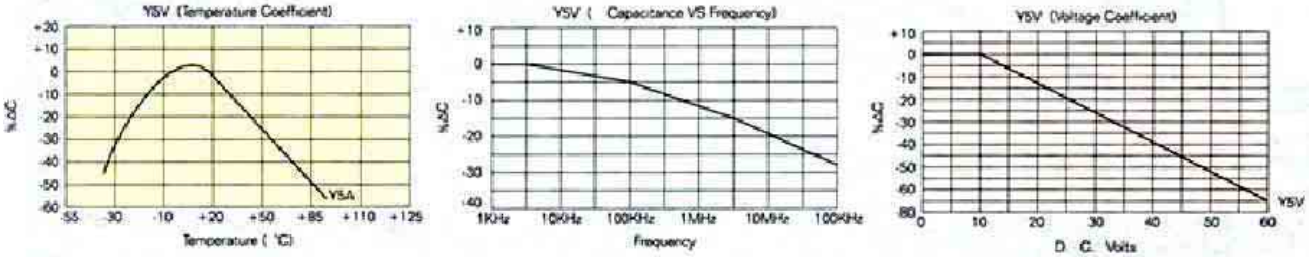
NPO Class I dielectric, ultra stable, suitable for circuits required stable performance.



X7R Class II dielectric, ultra stable, suitable for circuits required general stable capacitance.



Y5V Class II dielectric, with higher dielectric constant, but stability is less than X7R.



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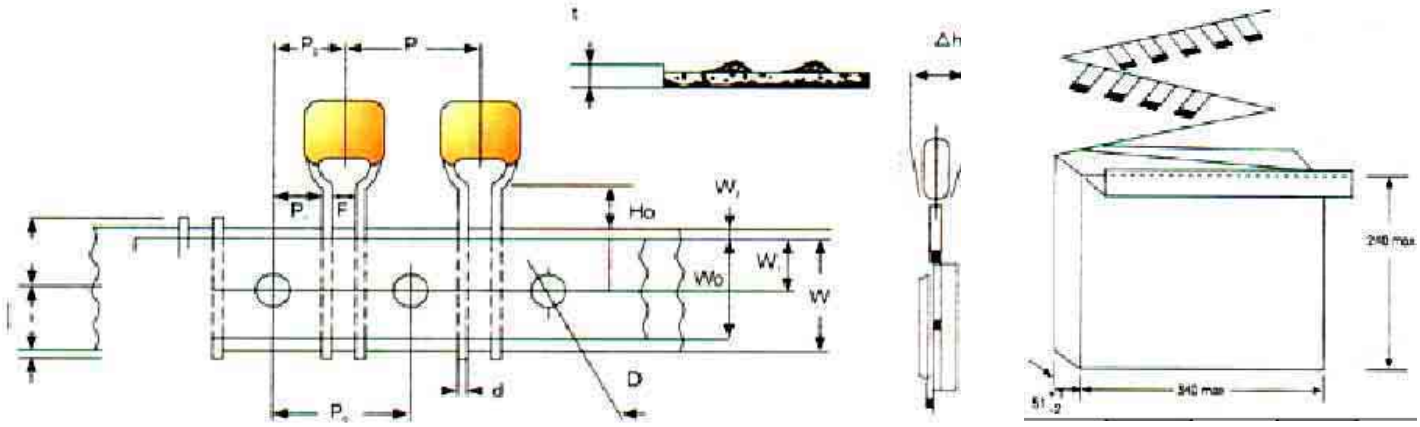
Packing style

Ammo Package



Code	P	P_0	W	W_0	H_2	W_2	H_1	D	T	h	H	S	P_1	P_2	P
Dimension	12.7	12.7	18	5	9	0	32.5	4	0.5	0	16-18	5	3.85	6.35	1.3
Tolerance	±1	±0.3	+1 -0.5	min	±0.5	1	Max	±0.2	±0.2	±0.2	±0.5	±0.5	±0.7	±0.4	Max

Rell Package

A	B(Max)	C	D(Max)	E(Max)	F
355-365	50.8	38.10-46.02	102.01	86.36	25.40-30.48

(mm)

Packaging Q'ty(pcs)

Reel Package	Ammo Package	Bulk Package
2500	4000	1000

Dimension of box (mm)