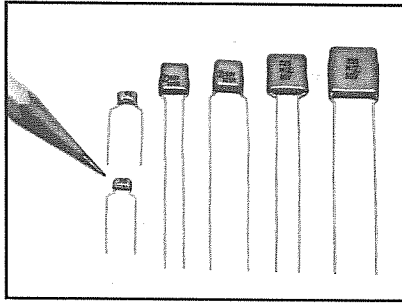


TYPE 1C, 2C, 3C, and 5C MONOLYTHIC[®] CERAMIC CAPACITORS



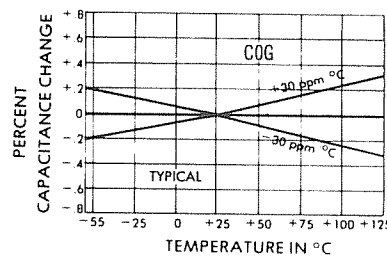
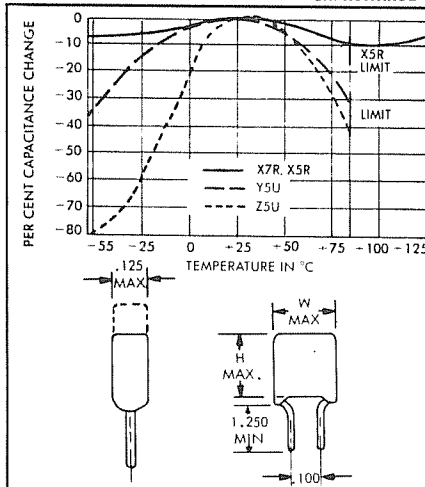
- Proven reliable in wide usage over many years of exacting service.
- For applications ranging from high frequency to 1000 MHz.
- Over 100 combinations of dielectric formulations, case sizes, and lead spacing.
- Multi-layer construction provides very high capacitance/volume ratio with minimum self-inductance.
- Made by depositing alternate layers of ceramic dielectric material and metallic electrodes, then firing into a single, all but indestructible homogeneous block.
- General-Application Type Z5U, for by-pass and filtering applications, have highest possible capacitance per case size.
- Temperature-Stable Type X7R and X5R are intended for bypass

and decoupling in radio and television receivers, computers, servo systems, audio tone and coupling, etc., where moderate capacitance variations are permissible and dissipation factor is not critical.

- Temperature-Compensating Type COG have little or no change in capacitance with variations in temperature. Hence, they are used in radio-frequency oscillators, precision timing circuits, ultra-stable amplifiers, etc.
- Leads on Types 1C, 2C, and 3C are No. 24 AWG (0.020 dia.); Type 5C leads are No. 22 AWG (0.025 dia.).
- For complete technical data, refer to latest issue of Engineering Bulletin 6201.

PERFORMANCE CHARACTERISTICS

CAPACITANCE vs. TEMPERATURE



- Operating Temperature Range:** Z5U and X5R, -55°C to +85°C; X7R and COG, -55°C to +125°C.
- Capacitance Change With Temperature:** Z5U ... -56, +22% from +10°C to +85°C; X5R ... ±15% from -55°C to +85°C; X7R, ±15% and COG, ±30 ppm/°C from -55°C to +125°C.
- Dissipation Factor:** Max. for Z5U, 4%; X5R and X7R, 2.5%; COG, 0.1%.
- Dielectric Strength:** Shall withstand 250% of rated voltage for 1 to 5 seconds at +25°C.
- Insulation Resistance:** Min. for COG, 100,000 megohms. Min. product of insulation resistance and capacitance for Z5U, X5R, and X7R, 1000 megohm-microfarads.
- Life Test:** Z5U units shall withstand 1000 hours at 150% of rated voltage @ +85°C; X5R ... 200% @ +85°C; X7R and COG ... 200% @ +125°C.

Z5U GENERAL APPLICATION

50 WVDC @ +85°C — ±20% CAP. TOL.*

μF	LEAD SPACING*					
	.100"§	.200"	.250"	.300"	.375"	.400"
	Catalog Number	Catalog Number	Catalog Number	Catalog Number	Catalog Number	Catalog Number
TYPE 1C (.200" High, .250" Wide, .125" Thick)*						
0.01	1C10Z5U103M050B	1C20Z5U103M050B	1C25Z5U103M050B	1C30Z5U103M050B	—	—
0.015	1C10Z5U153M050B	1C20Z5U153M050B	1C25Z5U153M050B	1C30Z5U153M050B	—	—
0.022	1C10Z5U223M050B	1C20Z5U223M050B	1C25Z5U223M050B	1C30Z5U223M050B	—	—
0.033	1C10Z5U333M050B	1C20Z5U333M050B	1C25Z5U333M050B	1C30Z5U333M050B	—	—
0.047	1C10Z5U473M050B	1C20Z5U473M050B	1C25Z5U473M050B	1C30Z5U473M050B	—	—
0.068	1C10Z5U683M050B	1C20Z5U683M050B	1C25Z5U683M050B	1C30Z5U683M050B	—	—
0.1	1C10Z5U104M050B	1C20Z5U104M050B	1C25Z5U104M050B	1C30Z5U104M050B	2C37Z5U104M050B	2C40Z5U104M050B
0.15	1C10Z5U154M050B	1C20Z5U154M050B	1C25Z5U154M050B	1C30Z5U154M050B	2C37Z5U154M050B	2C40Z5U154M050B
0.22	1C10Z5U224M050B	1C20Z5U224M050B	1C25Z5U224M050B	1C30Z5U224M050B	2C37Z5U224M050B	2C40Z5U224M050B
0.33	1C10Z5U334M050B	1C20Z5U334M050B	1C25Z5U334M050B	1C30Z5U334M050B	2C37Z5U334M050B	2C40Z5U334M050B
0.47	1C10Z5U474M050B	1C20Z5U474M050B	1C25Z5U474M050B	1C30Z5U474M050B	2C37Z5U474M050B	2C40Z5U474M050B
TYPE 2C (.300" High, .300" Wide, .125" Thick)*						
0.68	—	2C20Z5U684M050B	2C25Z5U684M050B	2C30Z5U684M050B	2C37Z5U684M050B	2C40Z5U684M050B
1.0	—	2C20Z5U105M050B	2C25Z5U105M050B	2C30Z5U105M050B	2C37Z5U105M050B	2C40Z5U105M050B
1.5	—	2C20Z5U155M050B	2C25Z5U155M050B	2C30Z5U155M050B	2C37Z5U155M050B	2C40Z5U155M050B
TYPE 3C (.400" High, .400" Wide, .125" Thick)*						
2.2	—	3C20Z5U225M050B	3C25Z5U225M050B	3C30Z5U225M050B	3C37Z5U225M050B	3C40Z5U225M050B
3.3	—	3C20Z5U335M050B	3C25Z5U335M050B	3C30Z5U335M050B	3C37Z5U335M050B	3C40Z5U335M050B
TYPE 5C (.500" High, .500" Wide, .125" Thick)*						
4.7	—	—	—	—	5C37Z5U475M050B	5C40Z5U475M050B

*Also available with cap. tol. of +80, -20%; change "M" in catalog number to "Z".
§Units with .100" lead spacing have smaller body width of .200".