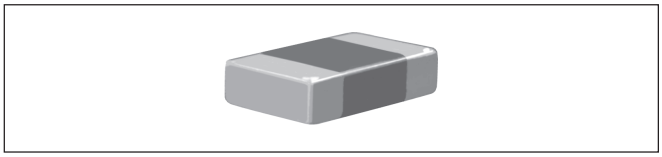
Multilayer Ceramic Chip Capacitors



FEATURES

- High operating temperature dielectric, up to + 150°C.
- Ideal for extreme environments.

GENERAL SPECIFICATIONS

NOTE: Electrical characteristics @ + 25°C unless otherwise specified.

Capacitance Range: 470pF to 2.2µF.

Temperature Coefficient of Capacitance (TCC):
± 15% from - 55°C to + 150°C.

Dissipation Factor (DF):
25V ratings: 3.5% maximum @ 1.0 Vrms and 1kHz.
50V ratings: 2.5% maximum @ 1.0 Vrms and 1kHz.

Insulation Resistance (IR):
@ + 25°C and rated voltage 100,000 Megohms minimum or 1000 ohm-farads, whichever is less.

@ + 125°C and rated voltage 10,000 Megohms minimum or 100 ohm-farads, whichever is less.

Dielectric Withstanding Voltage (DWV):
250% of rated voltage for 5 ± 1 seconds, 50 milliamps current maximum.

Aging Rate: 1% maximum per decade.

ORDERING INFORMATION

VJ	0805	H	102	K	X	A	A	T
PRODUCT SERIES	CASE SIZE	DIELECTRIC	CAPACITANCE NOMINAL CODE	CAPACITANCE TOLERANCE	TERMINATION	DC VOLTAGE RATING	MARKING	PACKAGING
VJ = MLCC	0603 0805 1206 1210 1812 2225	H = X8R	Expressed in picofarads (pF). The first two digits are significant, the third is a multiplier. **Example:** 102 = 1000pF.	J = ± 5% K = ± 10% M= ± 20%	X = Nickel barrier with 100% tin plated finish F = Palladium silver	X = 25V A = 50V	A = Unmarked	T = 7" Reel, plastic tape C = 7" Reel, paper tape R = 11 1/4" Reel, plastic tape P = 11 1/4" Reel, paper tape B = Bulk **NOTE:** 0402 and 0603 available in paper tape only

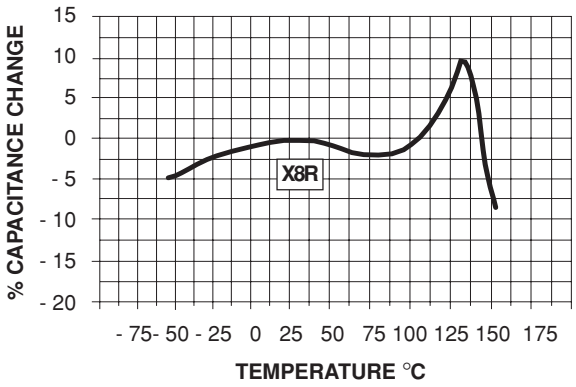
X8R DIELECTRIC

STYLE		VJ0603		VJ0805		VJ1206		VJ1210		VJ1812*		VJ2225*	
E.I.A. TYPE		0603		0805		1206		1210		1812		2225	
VOLTAGE (Vdc)		25	50	25	50	25	50	25	50	25	50	25	50
Cap. Code	Capacitance												
101	100pF												
121	120pF												
151	150pF												
181	180pF												
221	220pF												
271	270pF												
331	330pF												
391	390pF												
471	470pF												
561	560pF												
681	680pF												
821	820pF												
102	1000pF												
122	1200pF												
152	1500pF												
182	1800pF												
222	2200pF												
272	2700pF												
332	3300pF												
392	3900pF												
472	4700pF												
562	5600pF												
682	6800pF												
822	8200pF												
103	.010µF												
123	.012µF												
153	.015µF												
183	.018µF												
223	.022µF												
273	.027µF												
333	.033µF												
393	.039µF												
473	.047µF												
563	.056µF												
683	.068µF												
823	.082µF												
104	.10µF												
124	.12µF												
154	.15µF												
184	.18µF												
224	.22µF												
274	.27µF												
334	.33µF												
394	.39µF												
474	.47µF												
564	.56µF												
684	.68µF												
824	.82µF												
105	1.0µF												
125	1.2µF												
155	1.5µF												
185	1.8µF												
225	2.2µF												

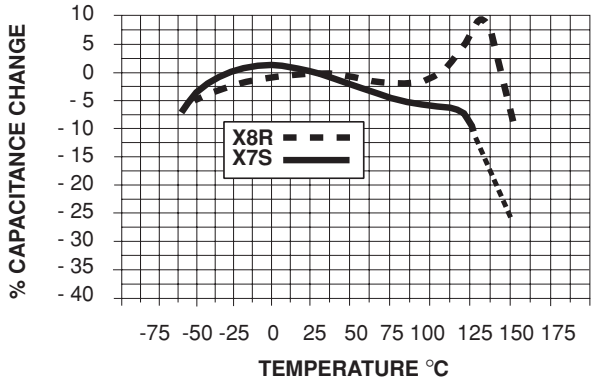
*See page 61 for soldering recommendations.

X8R DIELECTRIC - TYPICAL PARAMETERS

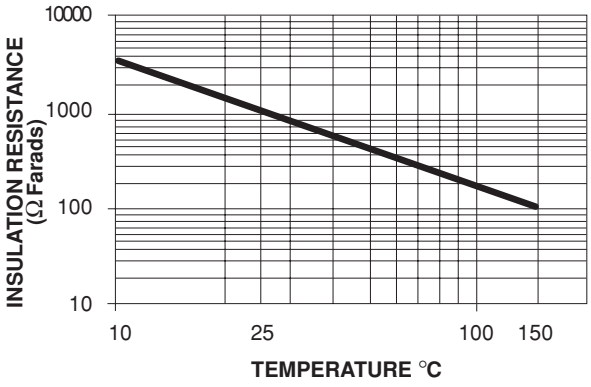
TEMPERATURE COEFFICIENT OF CAPACITANCE



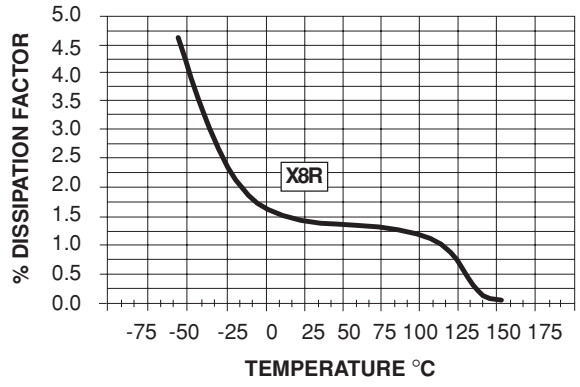
TEMPERATURE COEFFICIENT OF CAPACITANCE X8R vs X7S



MINIMUM INSULATION RESISTANCE vs TEMPERATURE



DISSIPATION FACTOR vs TEMPERATURE



AGING RATE