

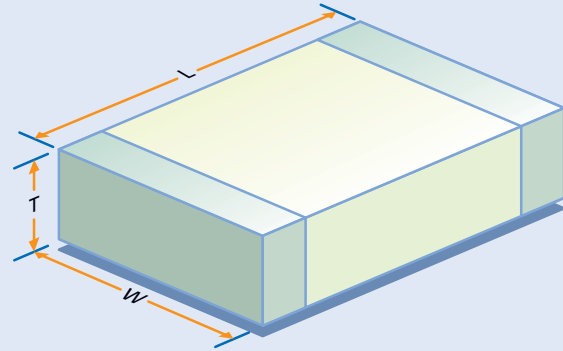
Surface Mount Chip Capacitors

High Temperature Chip

X8R

Description

The X8R dielectric will operate from -55°C to +150°C, with a maximum capacitance change $\pm 15\%$ (without applied voltage). The devices are available in sizes 0805 to 2225, with voltage ranges from 25V to 200V and capacitance values from 1nF to 1.8 μ F. The capacitors have been developed by Syfer to meet demand from various applications in the automotive and industrial markets and in other electronic equipment exposed to high temperatures. The increased use of electronics in automotive "under the hood" applications has created demand for this product range. The X8R range incorporates a specially formulated termination with a nickel barrier finish that has been designed to enhance the mechanical performance of these SMD chip capacitors in harsh environments typically present in automotive applications.



Capacitance Range

1.0nF to 1.8 μ F

Temperature Coefficient of Capacitance (TCC)

$\pm 15\%$ from -55°C to +150°C

Dissipation Factor (DF)

≤ 0.025

Insulation Resistance (IR)

100G Ω or 1000secs (whichever is the less).

Dielectric Withstand Voltage (DWV)

2.5 x rated voltage for 5 ± 1 seconds,
50 mAmps charging current maximum.

Ageing Rate

1% per decade (typical)

Size mm (inches)	0805	1206	1210	1812	2220	2225
Length (L)	2.0 ± 0.3 (0.08 ± 0.012)	3.2 ± 0.3 (0.126 ± 0.012)	3.2 ± 0.3 (0.126 ± 0.012)	4.5 ± 0.35 (0.18 ± 0.014)	5.7 ± 0.4 (0.225 ± 0.016)	5.7 ± 0.4 (0.225 ± 0.016)
Width (W)	1.25 ± 0.2 (0.05 ± 0.008)	1.6 ± 0.2 (0.063 ± 0.008)	2.5 ± 0.3 (0.1 ± 0.012)	3.2 ± 0.3 (0.126 ± 0.012)	5.0 ± 0.4 (0.197 ± 0.016)	6.3 ± 0.4 (0.25 ± 0.016)
Thickness (H) max	1.3 (0.051)	1.6 (0.063)	1.8 (0.07)	1.8 (0.07)	1.8 (0.07)	1.8 (0.07)
Min. Cap. Value	1.0nF	2.2nF	4.7nF	6.8nF	10nF	10nF
Max. Cap. Value according to the rated d.c. voltage	25V	56nF	180nF	330nF	680nF	1.5 μ F
	50V	33nF	120nF	220nF	470nF	680nF
	100V	15nF	56nF	120nF	220nF	470nF
	200V	10nF	33nF	68nF	120nF	220nF
Reeled Quantity	178mm (7" reel)	3000	2500	2000	1000	1000
	330mm (13" reel)	12000	10000	8000	4000	4000

Available in E12 values: 10, 12, 15, 18, 22, 27, 33, 39, 47, 56, 68, 82

Ordering Information

1206

Chip Size
0805
1206
1210
1812
2220
2225

Y

Termination
Y = Nickel Barrier
with polymeric
silver termination

100

Voltage dc
025 = 25V
050 = 50V
100 = 100V
200 = 200V

0473

Capacitance
Expressed in picofarads (pF).
First digit is 0.
Second and third digits are significant figures of capacitance code.
The fourth digit is number of zeros following.
eg: 0473=47000pF =47nF.

K

Tolerance
J = $\pm 5\%$
K = $\pm 10\%$
M = $\pm 20\%$

N

Dielectric
N = X8R

T

Packaging
T = 178mm (7" reel)
R = 330mm (13" reel)
B = Bulk