Open Mode and Tandem Capacitors - X7R



Open Mode capacitors have been designed specifically for use in applications where mechanical cracking is a severe problem and short circuits due to cracking are unacceptable.

Open Mode capacitors use inset electrode margins, which prevent any mechanical cracks which may form during board assembly from connecting to the internal electrodes.

When combined with FlexiCap[™] termination, Open Mode capacitors provide a robust component with the assurance that if a part becomes cracked, the crack will be unlikely to result in short circuit failure.

Open Mode max capacitance (X7R only) = AEC-Q200 qualified

	0603	0805		1206		1210		1808	1812	2220	2225	
16V	39nF	56nF 1	.50nF	100nF	100nF	470nF	680nF	680nF	1.5µF	3.3µF	4.7	7μF
25V	33nF	56nF 12	.20nF	220nF	330nF	470nF	560nF	560nF	1.2µF	2.2µF	3.9	θμF
50/63V	22nF	100nF		220nF		470nF		470nF	1.0µF	1.5µF	2.7µF	
100V	6.8nF	27nF		100nF		220)nF	220nF	680nF	1.0µF	1.5µF	1.8µF
200/250V	2.7nF	15nF		68nF		100)nF	100nF	330nF	680nF	1.()μF
500V	-	5.6nF		39nF		68nF		68nF	180nF	330nF	390nF	
630V	-	-		22nF		33	nF	27nF	100nF	180nF	22	OnF
1kV	-	-		6.8nF		15	nF	15nF	47nF	82nF	10	0nF



Qualification included cracking the components by severe bend tests. Following the bend tests cracked components were subjected to endurance / humidity tests, with no failures evident due to short circuits.

Note: Depending on the severity of the crack, capacitance loss was between 0% and 70%.

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Note: Depending on the severity of the crack, capacitance loss was between 0% and 50%.

circuits.

Tandem Capacitors have been designed as a fail safe range using a series section internal design, for use in any application where short circuits would be unacceptable.

When combined with FlexiCapTM termination, Tandem capacitors provide an ultra robust and reliable component, for use in the most demanding applications.

Non-standard voltages are available. For more information please consult the Sales Office.

Tandem capacitor

Open Mode capacitor

Tandem max capacitance (X7R only) = AEC-Q200 qualified

	0603	0805	1206	1210	1812	2220	2225
16V	12nF	47nF	150nF	270nF	560nF	1.2µF	1.5µF
25V	10nF	39nF	120nF	220nF	470nF	1.0µF	1.2µF
50/63V	6.8nF	33nF	100nF	180nF	390nF	680nF	1.0µF
100V	2.2nF	10nF	47nF	82nF	220nF	470nF	680nF
200/250V	1.0nF	4.7nF	22nF	47nF	100nF	220nF	330nF

Ordering information - Open Mode and Tandem Capacitors

1206	Y	050	0224	K	Х	Т	
Chip size	Termination	Voltage	Capacitance in picofarads (pF)	Capacitance tolerance	Dielectric codes	Packaging	Suffix code
0603 0805 1206 1210 1808 1812 2220 2225	Y = FlexiCap [™] termination base with nickel barrier (100% matte tin plating). RoHS compliant.	016 = 16V 025 = 25V 050 = 50V 063 = 63V 100 = 100V 200 = 200V 250 = 250V 500 = 500V 630 = 630V 1K0 = 1kV	First digit is 0. Second and third digits are significant figures of capacitance code. The fourth digit is number of zeros following. Example: 0224 = 220000pF	$J = \pm 5\%$ $K = \pm 10\%$ $M = \pm 20\%$	X = X7R S = X7R BME (AEC-Q200) E = X7R (AEC-Q200 product)	T = 178mm (7") reel R = 330mm (13") reel B = Bulk pack - tubs or trays	M01 = Open Mode capacitor T01 = Tandem capacitor