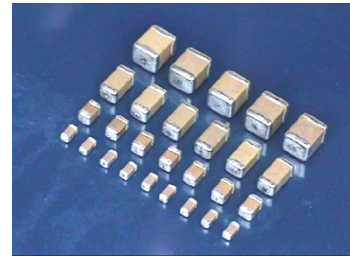


Multilayer Ceramic Chip Capacitors [High Capacitance MLCC – 1.0uF and above] HCC Series



◆ Features

- ❑ Surface mount suitable for wave and reflow soldering
- ❑ High reliability
- ❑ Small size and high capacitance value
- ❑ Excellent high frequency characteristics
- ❑ RoHS compliant

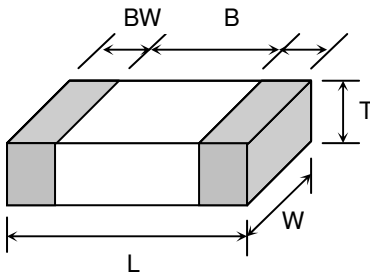
◆ Applications

- ❑ Ideal for smoothing and decoupling circuits
- ❑ Suitable for DC-DC converter, personal computer and peripherals, telecommunication and general electronic equipment

◆ Summary of Specifications

Operation Temperature	NP0 & X7R : -55 °C ~ +125 °C , X6S : -55 °C ~ +105 °C ; X5R : -55 °C ~ +85 °C , Y5V : -30 °C ~ +85 °C
Rated Voltage	4.0Vdc to 50Vdc
Temperature Coefficient	X7R : ≤ ± 15% , -55 °C ~ +125 °C (EIA Class II) X6S : ≤ ± 22% , -55 °C ~ +105 °C (EIA Class II) X5R : ≤ ± 15% , -55 °C ~ +85 °C (EIA Class II) Y5V : +22%/-82% , -30 °C ~ +85 °C (EIA Class II)
Dissipation Factor	X7R, X5R and Y5V : Please see HEC specification data sheet
Insulation Resistance	10GΩ or 500/CΩ whichever is smaller (C in Farads)
Aging	X7R/X6S/X5R : typically 1.0% and Y5V ≤ 7% per decade of time
Dielectric Strength	250% Rated Voltage

◆ Dimensions



TYPE	L	W	T (max)	B (min)	BW (min)
0402	1.00±0.05 [.039±.002]	0.50±0.05 [.020±.002]	0.55 [.022]	0.30 [.012]	0.15 [.006]
0603	1.60±0.10 [.063±.004]	0.80±0.10 [.031±.004]	0.95 [.037]	0.40 [.016]	0.15 [.006]
0805	2.00±0.20 [.079±.012]	1.25±0.20 [.049±.008]	1.45 [.057]	0.70 [.028]	0.20 [.008]
1206	3.20±0.30 [.126±.012]	1.60±0.20 [.126±.012]	1.80 [.071]	1.50 [.059]	0.30 [.012]
1210	3.20±0.30 [.126±.012]	2.50±0.20 [.098±.008]	2.70 [.105]	1.60 [.063]	0.30 [.012]
1812	4.60±0.3 [.181±.012]	3.20±0.3 [.126±.012]	3.00 [.118]	2.50 [.098]	0.30 [.012]
2220	5.7±0.40 [.220±.016]	5.00±0.40 [.197±.016]	3.00 [.118]	3.50 [.137]	0.30 [.012]

◆ How To Order



Product Code	Chip Size	Dielectric	Capacitance Unit : pF	Tolerance	Rated Voltage	Packaging
C: MLCC (Multilayer Ceramic Chip of Capacitor)	Ex. 0402 0603 0805 1206 1210 1812 2220	Ex.: X:X7R S:X6S B:X5R Y:Y5V	Ex.: 105:10×10 ⁵ 106:10×10 ⁶ 226:22×10 ⁶	Ex.: J : +/- 5% K : +/- 10% M : +/- 20% Z : +80/-20%	Ex.: 004: 4Vdc 007: 6.3Vdc 010: 10Vdc 016: 16Vdc 025: 25Vdc 035: 35Vdc 050: 50Vdc	T: T&R 7" R: T&R 13" B: Bulk

◆ Capacitance Range

X7R (X) Series																								
Size	0603				0805					1206					1210					1812	2220			
Code	6.3V	10V	16V	25V	6.3V	10V	16V	25V	35V	50V	6.3V	10V	16V	25V	35V	50V	10V	16V	25V	35V	50V	25V	50V	50V
105	B	B	B	B	D	D	D	D	D	D	D	D	D/E	D/E	D/E	D/E	D	D	D	D	E	F	F	F
155																								
225	B	B			D	D	D	D	D	D	E	E	E	E	E	E	F	F	F	F	F	F	F	F
335					D	D																		
475					D	D	D	D			E	E	E	E	E	E	F	F	F	F	F	F	F	F
106					D	D	D				E	E	E	E			F	F	F	F	F	F	G	G
226											E	E					G	G	G					

X6S (S) Series																					
Size	0402	0603				0805				1206					1210						
Code	6.3V	6.3V	10V	16V	25V	6.3V	10V	16V	25V	6.3V	10V	16V	25V	35V	50V	10V	16V	25V	35V	50V	
105	O	B	B	B	B			D	D					E	E					E	
225		B	B					D	D	D				E	E	E			F	F	F
475		B				D	D	D	D		E	E	E	E	E	F	F	F	F	F	
106						D	D	D		E	E	E	E			F	F	F	F	F	
226						D				E	E					G	G	G			

X5R (B) Series																								
Size	0402				0603					0805					1206					1210				
Code	6.3V	10V	16V	25V	6.3V	10V	16V	25V	50V	6.3V	10V	16V	25V	50V	6.3V	10V	16V	25V	50V	6.3V	10V	16V	25V	50V
105	O	O	O	O	B	B	B	B	B			D	D	D			D/E	D/E	D/E	F	F	F	F	F
225	O	O			B	B	B	B		D	D	D	D	D		E	E	E	E	F	F	F	F	F
335										D	D	D												
475	O	O			B	B	B			D	D	D	D		E	E	E	E	E	F	F	F	F	F
106	O				B	B				D	D	D	D		E	E	E	E	E	F	F	F	F	G
226					B					D	D	D	D		E	E	E	E		G	G	G	G	
476										D					E	E				G	G	G		
107															E					G				

Y5V (Y) Series																		
Size	0402	0603				0805					1206			1210				
Code	6.3V	10V	6.3	10V	16V	25V	6.3V	10V	16V	25V	50V	10V	16V	25V	10V	16V	25V	35V
105	O	O			B	B	B	B	B	B	D							
225			B	B	B			D	D	D								
475			B	B			D	D	D									
106							D	D	D			D	D/E	E	F	F	F	F
226							D	D				D/E	D/E		F	F		

■ Other dimensions, capacitance values and voltages rating are available. Please contact Holy Stone.

Symbol Code	S	O	A	B	C	D	E	F	G
Thickness(mm)	0.3±0.03	0.5±0.05	0.6±0.1	0.85±0.1	1.0±0.1	1.25±0.20	1.6±0.2	2.0±0.2	2.5±0.2