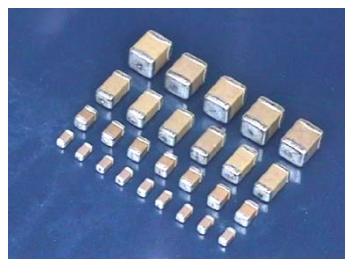


HCC Series

High Capacitance MLCC - 1uF and above



◆ Features

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

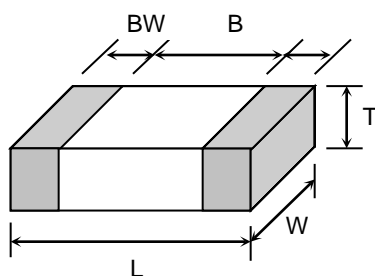
◆ Application

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

◆ Summary of Specifications

Operating Temperature	-55°C~+125 °C for X7R: -55°C ~+85°C for X5R: -30°C~+85°C for Y5V
Rated Voltage	6.3Vdc to 50Vdc
Temperature Coefficient	X7R : ≤ ± 15% , -55°C~+125 °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 table 1 on page 39 for details
Insulation Resistance	10GΩ or 500/C Ω whichever is smaller
Ageing	X7R/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]	0.90 [.035]	0.40 [.016]	0.15 [.006]
0805	2.00±0.20 [.079±.008]	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 [.063±.0108]	1.80 [.071]	1.50 [.059]	0.30 [.012]
1210	3.20±0.30 [.126±.012]	2.50±0.20 [.098±.008]	2.60 [.102]	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 Capacitor	Ex. : 0402 0603 0805 1206 1210 1812 2220	Ex. : X : X7R 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. : 007 : 6.3Vdc 010 : 10Vdc 016 : 16Vdc 025 : 25Vdc 035 : 35Vdc 050 : 50Vdc	T : Tape & Reel B : Bulk

◆ Capacitance Range

X7R (X) Series																						
Size		0603				0805				1206					1210				1812	2220		
Code	VDC	6.3V	10V	16V	25V	6.3V	10V	16V	25V	10V	16V	25V	35V	50V	16V	25V	35V	50V	35V	35V		
105	1uF	B	B	B	B			D	D	D			D	D	E	E	D	D	D	D	F	F
225	2.2uF	B	B	B				D	D	D			E	E	E				F		F	F
475	4.7uF							D	D				E	E					F	F		F
106	10uF												E						F	F		G

X5R (B) Series																								
Size		0402		0603				0805				1206					1210							
Code	VDC	6.3V	10V	6.3V	10V	16V	25V	6.3V	10V	16V	25V	6.3V	10V	16V	25V	35V	50V	6.3V	10V	16V	25V	35V	50V	
105	1uF	O	O	B	B	B	B			D	D	D			D	D	E	E						
225	2.2uF	O		B	B	B				D	D	D	D		E	E	E				E	E/F	F	D
475	4.7uF			B	B					D	D	D	D		E	E	E				F	F	F	F
106	10uF			B						D	D	D			E	E	E				F	F	F	F
226	22uF									D	D				E	E	E				G	G	G	
476	47uF														E	E								
107	100uF																				G			

Y5V (Y) Series																								
Size		0402		0603				0805				1206					1210							
Code	VDC	6.3V	10V	6.3	10V	16V	25V	6.3V	10V	16V	25V	50V	10V	16V	25V	35V	50V	6.3V	10V	16V	25V	35V	50V	
105	1uF	O	O		B	B	B			B	B	D												
225	2.2uF			B	B	B				D	D	D												
475	4.7uF			B	B					D	D	D			D	D								
106	10uF									D	D	D			D	E	E				E	E	E	
226	22uF									D					D	E					F	F		

Symbol Code	S	O	A	B	C	D	E	F	G	H
Thickness(mm)	0.3±0.03	0.5±0.05	0.6±0.1	0.85±0.1	1.0±0.1	1.25±0.15	1.6±0.2	2.0±0.2	2.4±0.2	2.8±0.2

■ Other dimensions, capacitance values and voltage ratings are available. Please contact HEC.