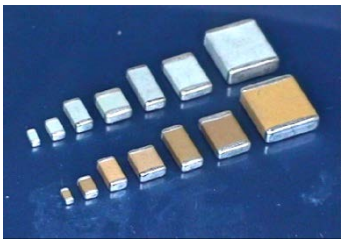
Multilayer Ceramic Chip Capacitors



HVC Series – High Voltage NP0 and X7R Capacitors [General Purpose – 1KVdc to 5KVdc]

Holy Stone high voltage products are designed and manufactured to meet the general requirements of international standards. The product offering is well suited for commercial and industrial applications and includes NP0 (C0G) and X7R characteristics in sizes 0805 to 2225 and with working voltages from 1KV up to 5KV.

◆ Features

- ❑ Special internal electrode design offers the highest voltage rating
- ❑ Surface mount suitable for wave and reflow soldering
- ❑ High reliability
- ❑ RoHS compliant

◆ Applications

- ❑ Suitable for LAN/WLAN interface, Back-Lighting Inverter, DC-DC Converters, Ballast, Modems and Power Supplies.

◆ Summary of Specifications

Operation Temperature	-55 ℃ ~ +125 ℃
Rated Voltage	1KVdc to 5KVdc
Temperature Coefficient	NP0 : ≤ ± 30ppm/ ℃ , -55 ℃ ~ +125 ℃ (EIA Class Ⅰ)
	X7R : ≤ ± 15% , -55 ℃ ~ +125 ℃ (EIA Class Ⅱ)
Dissipation Factor	NP0: Q≧1000 , X7R : D.F.≦2.5%
Insulation Resistance	10GΩ or 500/CΩ whichever is smaller
Aging	NP0: 0% , X7R : Typically 1.0% per decade of time
Dielectric Strength	1000V≦ V : 120% Rated Voltage

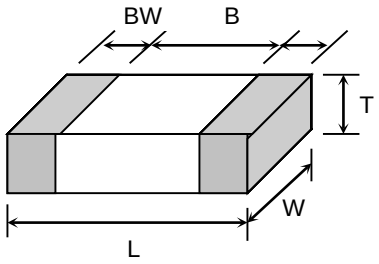
◆ How To Order

C	1206	X	102	K	202	T	E	X	Y
Product Code C: MLCC (Multilayer Ceramic Capacitor)	**Chip Size** Ex.: 0805 1206 1210 1808 1812 1825 2220 2225	**Dielectric** Ex.: N: NP0 X: X7R	**Capacitance Unit : pF** Ex.: 2R0:2.0pF 100:10x10^0 471:47x10^1 102:10x10^2	**Tolerance** Ex.: C:+/-0.25pF D:+/-0.50pF J :+/- 5% K :+/-10% M:+/-20%	**Rated Voltage** Ex.: 102: 1000Vdc 202: 2000Vdc 302: 3000Vdc 402: 4000Vdc 502: 5000Vdc	**Packaging** Ex. T: T/R 7” R: T/R 13” B: Bulk	**Thickness (mm) (Optional)** Ex: E:1.60±0.20 F:2.0±0.20	**Special Requirement (Optional)** Ex.: O: Arc Prevention Coating X: Polymer Termination (Super Term) Z: Arc Prevention and Polymer Termination	**Suffix Code** Y

HVC Series - High Voltage Capacitors (1KVdc to 5KVdc)

Holy Stone

◆ Dimensions



Unit : mm [inches]

TYPE	L	W	T (max)	B (min)	BW (min)
0805	2.00±0.20 [.079±.012]	1.25±0.20 [.049±.012]	1.45 [.057]	0.70 [.028]	0.20 [.008]
1206	3.20±0.30 [.126±.012]	1.60±0.20 [.063±.012]	1.80 [.071]	1.50 [.059]	0.30 [.012]
1210	3.20±0.30 [.126±.012]	2.50±0.20 [.098±.012]	2.60 [.102]	1.60 [.059]	0.30 [.012]
1808	4.60±0.30 [.181±.012]	2.00±0.20 [.079±.008]	2.20 [.087]	2.50 [.098]	0.30 [.012]
1812	4.60±0.30 [.181±.012]	3.20±0.30 [.126±.012]	3.00 [.118]	2.50 [.098]	0.30 [.012]
1825	4.60±0.30 [.181±.012]	6.35±0.40 [.250±.016]	3.40 [.118]	2.50 [.098]	0.30 [.012]
2220	5.70±0.40 [.220±.016]	5.00±0.40 [.197±.016]	3.40 [.118]	3.50 [.137]	0.30 [.012]
2225	5.70±0.40 [.220±.016]	6.35±0.40 [.250±.016]	3.40 [.118]	3.50 [.137]	0.30 [.012]

◆ Capacitance Range – NP0 / 1KVdc to 2KVdc

| Temperature Characteristic | Size | Rated Voltage | Capacitance Range | | |

◆ Capacitance Range – X7R / 1KVdc

Temperature Characteristic	Size	Rated Voltage	Capacitance Range																																																		
			101	151	181	221	271	331	391	471	561	681	821	102	122	152	182	222	272	332	392	472	562	682	822	103	123	153	183	223	273	333	393	473	563	683	823	104	124	154	184	224	274	334	394	474	564	684	824	105	225	335	475	685	825	106
X7R	0805	1KV				B	B	B	B	B	B	B	B	C	C	C	C	C																																						
	1206	1KV	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	C	C	D	E	E	E																										
	1210	1KV																				C	C	C	D	D	D	D	D	D	E	F	F	G																						
	1808	1KV												D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E																									
	1812	1KV				D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	F	F	G	G																		
	2220	1KV												D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	F	F	F														
	1825	1KV																		D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E																		
	2225	1KV																D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D																		

◆ Capacitance Range – X7R / 1.5KV to 2.5KV

Temperature Characteristic	Size	Rated Voltage	Capacitance Range																																	
			151	181	221	271	331	391	471	561	681	821	102	122	152	182	222	272	332	392	472	562	682	822	103	123	153	183	223	273	333	393	473	563	683	823	104
X7R	1206	1.5KV			B	B	B	B	B	B	B	B	B	C	C	C	C	D	D	D	D	D	D	E	E												
		2KV			B	B	B	B	B	B	B	B	B	C	C	C	C	D	D	E	E	E															
		2.5KV											B	C	C	C	C	D	D	E	E	E															
	1210	2KV			C	C	C	C	C	C	C	C	C	C	C	C	D	D	E	E	E	E	F	F	G												
	1808	2KV	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	F												
	1812	2KV			D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	F	F	G	H						
	1825	2KV																	D	D	D	D	D	D	D	E	E	E	E	F	F	G	G	H			
	2220	2KV											D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	F	F	G	G			
	2225	2KV											D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	F	F	G	H	I

◆ Capacitance Range – X7R / 3KVdc to 4KVdc

Temperature Characteristic	Size	Rated Voltage	Capacitance Range																																	
			151	181	221	271	331	391	471	561	681	821	102	122	152	182	222	272	332	392	472	562	682	822	103	123	153	183	223	273	333	393	473	563	683	823	104
X7R	1206	3KV	B	B	B	B	B	C	C	C	D	D	D	E																							
	1808	3KV	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	F	F															
		4KV	D	D	D	D	D	E	E	E	F	F	F																								
	1812	3KV			D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	F	F												
	1825	3KV									D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	F	G									
	1825	4KV																																			
	2220	3KV									D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	F	G									
	2220	4KV																																			
	2225	3KV															D	D	D	D	D	D	D	D	D	D	E	E	E	F	G						
	2225	4KV																																			

◆ Thickness Specification

Symbol Code	O	A	B	C	D	E	F	G	H	I
Thickness(mm)	0.5±0.05	0.6±0.1	0.85±0.15	1.0+0.1/-0.05	1.25±0.20	1.6±0.2	2.0±0.2	2.4±0.2	2.8±0.2	3.2±0.2

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