

Multilayer Ceramic Capacitors

[High Voltage Capacitors - NPO, X7R 1KVdc to 5KVdc]

HVC Series



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.
- □SiC & GaN systems, Snubber, Resonant Circuit (LLC, Wireless Charging, etc.)

Summary of Specifications

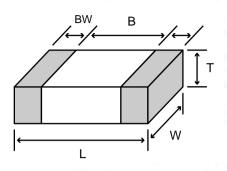
Operation Temperature	-55 °C to +125 °C
Rated Voltage	1KVdc to 5KVdc
T	NP0 : ≤ ± 30ppm/ °C , -55 °C to +125 °C (EIA Class I)
Temperature Coefficient	X7R : ≤ ± 15% , -55 °C to +125 °C (EIA Class Ⅱ)
Dissipation Factor	NP0 : More than 30pF : Q ≧1000 30pF & below : Q≧400+20C (C : Capacitance , pF) X7R : D.F.≦ 2.5%
Insulation Resistance	10GΩ or 500/CΩ, whichever is smaller
Aging	NP0: 0% , X7R : Typically 1.0% per decade of time
	100V ≦ V < 500V : 200% Rated Voltage
Dielectric Strength	500V ≦ V < 1000V : 150% Rated Voltage
	1000V≦ V : 120% Rated Voltage

How To Order

Product Code	Chip Size	Dielectric	Capacitance Unit : pF	Tolerance	Rated Voltage	Packaging	Thickness (mm) (Optional)	Special Requirement (Optional)	Suffin
C: MLCC (Multilayer Ceramic Capacitor)	Ex.: 0805 1206 1210 1808 1812 1825 2220 2225	Ex.: N: NP0 X: X7R	Ex.: 2R0:2.0pF 100:10x10 ⁰ 471:47x10 ¹ 102:10x10 ²	Ex.: C: +/-0.25pF D: +/-0.50pF J: +/- 5% K: +/-10% M: +/-20%	Ex.: 102: 1000Vdc 202: 2000Vdc 302: 3000Vdc 402: 4000Vdc 502: 5000Vdc	Ex.: T: T&R 7" R: T&R 13" B: Bulk	Ex: E:1.60±0.20 F:2.0±0.20 I:3.2±0.20	Ex.: O: Arc Prevention Coating X: Polymer Termination (Super Term) Z: Coating & Polymer Termination	Y



Dimensions



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

◆ Capacitance Range - NP0 / 1KVdc to 2KVdc

Temperature	(Sept.	Rated	Capacitance Range
Characteristic	Size	Voltage	22222222222222222222222222222222222222
	0805	1KV	B B B B B B B B C C C C C C C C C C C C
	1206	1KV	CCCBBBBBBBBBBBBBBBBBBBBBBCDDDDDEEBBBCDDD
	1200	2KV	D D D D D D D D D D D D D D D D D D D
	4040	1KV	D'D'D'D'D'D'D'D'D'D'D'D'D'D'D'D'D'D'D'
	1210	2KV	
	1808	1KV	D'D'D'D'D'D'D'D'D'D'D'D'D'D'D'D'D'D'D'
NP0	1808	2KV	D'D'D'D'D'D'D'D'D'D'D'D'D'D'D'D'D'D'D'
	4040	1KV	DDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD
	1812	2KV	D D D D D D D D D D D D D D D D D D D
	2220	1KV	D'D'D'D'D'D'D'D'D'D'D'D'D'D'D'D'D'D'D'
	2220	2KV	
	2225	1KV	FFF RESERVED
	2225	2KV	D'D'D'D'D'D'D'D'D'D'D'E'E'E'G'G'H I

◆ Capacitance Range – NP0 / 3KVdc to 5KVdc

Tomporatura	-	Rated	Capacitance Range
Temperature Characteristic	Size	Voltage	25
	1206	3KV	DDDDDDDDDEEEE
	1808	3KV	DDDDDDDDDDDDDDDDEEFFFFFFFFFF
	1000	5KV	FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF
	1812	3KV	D'D'D'D'D'D'D'D'D'D'D'D'D'DEEEEEEEEEFFGH
NP0	1012	4KV	DDDDDDDDDDEEE FG
INFO	2208	3KV	FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF
	2211	3KV	FFFFFFFFFFFFFFF
	2220	3KV	D'D'D'D'D'D'D'D'D'D'D'E'E'E'E'E'E'E'E'E
	2220	5KV	DDDDDDDDDDDDEEEEEEE
	2225	5KV	

- The yellow indication denotes values that are under development. Please contact Holy Stone office for further details
- Other dimensions, capacitance values and voltages ratings are available on request. Please contact Holy Stone.

Thickness Specification

Symbol Code	В	C	D	E	F	G	H	
Thickness(mm)	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

HVC Series – High Voltage Capacitors



♦ Capacitance Range - X7R / 1KVdc

Temperature		Rated	Capacitance Range
Characteristic	Size	Voltage	888 4 38 37 27 38 38 37 37 38 38 37 37 38 38 37 37 38 38 37 37 38 38 37 37 38 38 37 37 38 38 37 37 38 38 37 37 38 38 37 37 38 38 37 37 38 38 37 37 38 38 37 37 38 38 37 37 38 38 37 37 38 38 37 38 38 37 38 38 37 38 38 38 38 38 38 38 38 38 38 38 38 38
	0805	1KV	BBBBBBBBBBBBBB
	1206	1KV	B B B B B B B B B B B B B B B B B B B
	1210	1KV	CCCDDDDDDEFFG
X7R	1808	1KV	DDDDDDDDDDDDDDD
AIK	1812	1KV	DDDDDDDDDDDDDDDDDDDDDDDDDEFFGG
	2220	1KV	DDDDDDDDDDDDDDDDDDDDDDEEFFF
	1825	1KV	DDDDDDDDDDDDEEEEGG
	2225	1KV	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		Rated		١.				1				ř.,				. (Cap	oac	ita	nc	e R	an	ge			E				. n			-	7		Π
Characteristic	Size	Voltage	151	181	221	271	331	391	471	561	189	821	102	122	152	182	222	717	332	392	472	299	682	822	103	123	153	183	223	273	303	473	563	683	823	104
	200	1.5KV	В	В	В	В	В	В	В	В	В	В	В	С	C	C	C	C	С	С	D									-1			E			
	1206	2KV	В	В	в	D	D	D	D	D	D,	D	в	С	D.	D	D	D.	D.	E.	Ε						П			T			Т	Г		
		2.5KV	В	В	в	В	в	В	В	В	в	В	В	С	c	c	D,	D,	E	E	Ε										T	I		Е		
1.5	1210	2KV		1	c	c	c	c	С	С	c	С	c	C	c'	c	D	D,	E	E	E	E	F	F	G						1					
X7R	1808	2KV	D	Ď	ď	ď	D	ď	D	D	D,	D	D	D	D.	D	D	D,	D	D	D	D	D	Ε	Ε						4					
777	1812	2KV			D	D	D	ď	D	D	ď	D	D	D,	D,	D	D	D,	D	D.	D	ם	D	D	Ε	E	E	F	F	G	1					
	1825	2KV				П							Т	_	Ξ,	_	_	_	D	D	D,	D	D	D	D	E	E	Ε	E	F)	F (3 (3	Г		
	2220	2KV											D,	D	D,	D	D	D,	D	D	D	D	D	D	D	o,	D	E	Ε	E'	F F	= (
	2225	2KV											D	D	D.	D	D	D,	D	D	D	D	D	D	D	'D	D	D	D	E'	E E	Ē		I	П	

♦ Capacitance Range – X7R / 3KVdc to 5KVdc

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Temperature Characteristic	Size	Rated Voltage	151	181	221	271	331	391	471	561	681	821	102	122	152	701	777	717	302	47	562	682	822	103	123	153	183	223	333	393	473	563	3 6
	1206	3KV	E	В	В	В	В	С	С	C	D	D	D	Ш		1	1	1	Ī	T		1							1	T			J
	4000	3KV	C	ם	'D	ď	D	D	D	D.	D,	D	D	D	D	D'	ם	E'	E I	Ė	F	Г	П			П				Ī			
	1808	4KV	C	ם	' р	D	D	E	E	E.	F	F	F								Т												
	1812	3KV	Т	1	۵,	D	D	D	D,	D.	D,	D	D	D	D	D.	D.	D.	D I	ו כ	Ē	E	F	F	Т		П			T	1.		
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X7R	2220	3KV	T	r			_		_		D	D	D	D	D.	o'	D.	ו ס	ו ס	ו כ	o'c	ם	Ė	Ε	Т						П		
	2220	4KV		٠	_	_	_		_		_		D	D	D	D.	E.	E I	E I	Ξ'1	F	F	Ġ	Н	Т								
	2220	5KV	0	ם	'D	D	D	D	D	D.	D	D	D	D	D.	E.	E.	E 1	F F	ď,	Т				Г	П				Т			Т
	2225	3KV	T	r				_	_	_					_	1	ם'	י ס	ם ם	ו כ	0 0	D	D	D	D	Ε	E	E		T			
	2225	4KV		۲	•	_		_	_	т,					•	٠,	D [*]	0	E E	ľ	Г									T			

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