## IHHEC

#### Multilayer Ceramic Capacitors

### [Normal Chip Capacitors – less than 1uF] NCC Series

Standard Multilayer Ceramic Capacitors are available in a full range of sizes and temperature coefficients, with voltage ratings from 6.3V to 50V.

#### Features

- Surface mount suitable for wave and reflow soldering
- Small size and high reliability
- Excellent in high frequency characteristics
- RoHS compliant
- Summary of Specifications

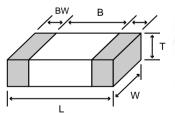
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#### Applications

Suitable for general electronics circuit, telecommunication, personal computers and peripheral, power circuit, mobile application, etc.

Operation Temperature	NP0/X7R/X7S : -55 °C to +125 °C , X6R : -55 °C to +105 °C, X5R : -55 °C to +85 °C				
Rated Voltage	6.3Vdc to 50Vdc				
	NP0 : ≤ ± 30ppm/ °C , -55 °C to +125 °C (EIA Class I)				
	X7R : ≤ ± 15% , -55 °C to +125 °C (EIA Class Ⅱ)				
Temperature Coefficient	X7S : ≤ ± 22% , -55 °C to +125 °C (EIA Class Ⅱ)				
	X6S : ≤ ± 22% , -55 °C to +105 °C (EIA Class Ⅱ)				
	X5R : ≤ ± 15% , -55 °C to +85 °C (EIA Class Ⅱ)				
Dissipation Factor	NP0 : More than 30pF : Q ≧1000 30pF & below : Q≧400+20C (C : Capacitance , pF)				
	X7R/X7S/X6S/X5R : 10% max				
Insulation Resistance	10,000mΩ or 500/CΩ, whichever is smaller for rated voltage>10V and greater than 100/CΩ for rated voltage≤10V.				
Aging	NP0 : 0% , X7R/X7S/X6S/X5R: typically 1.0%				
Dielectric Strength	250% Rated Voltage				

#### Dimension



				Unit	: mm [inches	
SIZE	L L	W T (max		B (min)	BW (min)	
0201	0.60±0.09 [.024±.003]	0.30±0.09 [.011 ±.003]	0.39 [.015]	0.20 [.008]	0.10 [.004]	
0402	1.00±0.05 [.039±.002]	0.50±0.05 [.020 ±.002]	0.55 [.022]	0.30	0.15	
0603	1.60±0.10 [.063±.004]	0.80±0.10 [.031 ±.004]	1.00	0.40	0.15	
0805	2.00±0.20 [.079±.012]	1.25±0.20 [.049 ±.008]	1.45	0.70	0.20	
1206	3.20±0.30 [.126±.012]	1.60±0.20 [.063±.008]	1.80	1.50 [.059]	0.30	

#### How To Order

Product Code	Chip Size	Dielectric	Capacitance Unit : pF	Tolerance	Rated Voltage	Packaging	Thickness (mm) (Optional)	Suffix Code
C: MLCC	Ex.:	Ex.:	Ex.:	Ex.:	Ex.:	Ex.:	Ex:	Y
(Multilayer	0201	N:NP0	102 : 10x10 <sup>2</sup>	F: +/- 1%	004 : 4Vdc	T: T&R 7"	E:1.6±0.20	
Ceramic	0402	X : X7R	103 : 10x10 <sup>3</sup>	G : +/- 2%	007 :6.3Vdc	R: T&R 13"	F:2.0±0.20	
Capacitor)	0603	R:X7S	1	J : +/- 5%	010 :10Vdc	B: Bulk	S:0.3±0.03	
	0805	S:X6S		K : +/- 10%	016 :16Vdc			
	1206	B : X5R		M : +/- 20%	025 :25Vdc			
					035 :35Vdc 050 :50Vdc			



#### Capacitance Range

Dielectric Characteristic	Size	Rated Voltage	Capacitance Range
			0R5 11/100 11/10
	0201	16V	<u>\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$</u>
		25V	<u>\$\$\$\$\$\$\$\$\$</u> \$\$\$\$\$\$\$\$\$\$\$
NPO	0402	50V	000000000000000000000000000000000000000
	0603	50V	<u></u>
3	0805	50V	BBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBB

Dielectric	2	Rated	Capacitance Range	
Characteristic	Size	Voltage		684 824
100		6.3V	a si da si	
		16V		Î
	0201	25V	SSSSSSSS SSS	
		50V	<b>SSSSSSSSSSSSSSSSS</b>	
		10V	- 2702 - 2202 - 2202 - 2202 - 2202 - 2202 - 2002 - 1	
	0.400	16V		
	0402	25V		
		50V	000000000000000000000000000000000000000	
	0603	10V		в
X7R		16V	888888888888888888888888888888888888888	
		25V	<u> </u>	
		50V	<b>B B B B B B B B B B B B B B B B B B B </b>	
	0805	16V	B B B B B B B B B B B B B B B B B B B	-
		25V		_
		35V		-
		50V		_
		16V	ВВВВ	_
	1206	25V	B B B C D	_
		50V	B B B C D	_

Dielectric Characteristic	Size	Rated Voltage	Capacitance Range	Dielectric Characteristic	Size	Rated Voltage	Capacitanc 3333 853 853 858 853 858 853 858 858 85	
X7S	1.00	6.3V	<mark>S 52</mark>	1		6.3V		S S
	0201	10V	s and s and s			10V		s s
		16V	s and s and s		0201	16V		S S
						25V		S S
Dielectric Characteristic	Size	Deted	Capacitance Range		0402	6.3V		
		Rated	the state of the local sectors in a local sector in the state of the s	X5R		10V		0 0
and a state of		Voltage		ADR		16V	0000000	0
X6S	0201	6.3V	S <u>S2S2</u>		1	25V	0000000	0
		10V	S S2S2				0000000	•
		16V	S			6.3V		
		25V	s		0603	10V		BBB
		200				16V		вве

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

Specifications & Test Conditions please see P51~P55

25V

Symbol Code	S	S2	0	Т	A	В	С	D	E
Thickness(mm)	0.3±0.03	0.3±0.09	0.5±0.05	0.5±0.1	0.6±0.1	0.85±0.15	1.0+0.1/-0.05	1.25±0.20	1.6±0.2

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BB

BBBBB