

Multilayer Ceramic Chip Capacitor Array

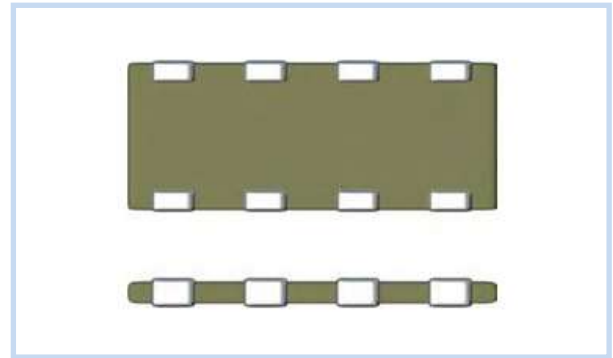


CI Series

MERITEK

FEATURES

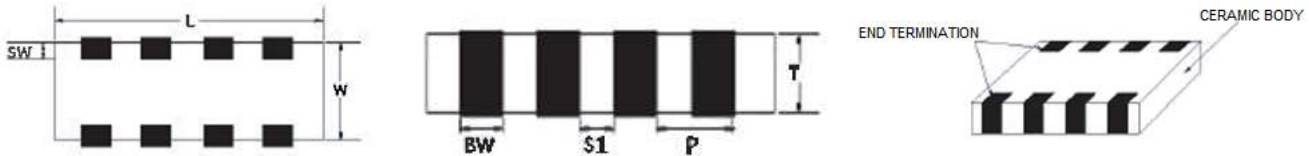
- Reduction in required real estate (more than 50%)
- Reduced cost, space and time for placement on PCB
- Reduction in number of solder joints
- Easier PCB design
- Reduced waste from tape and reel packaging process
- Protect EMI bypassing digital signal line noise



APPLICATION

- For use as bypass for digital and analog signal line noise
- Computer motherboards and peripherals
- The other common electronic circuits

STRUCTURE AND DIMENSION



Type	Element	L (mm)	W (mm)	T (mm)	BW(mm)	SW(mm)	S1 (mm)	P (mm)	
0805 (2012)	4	2.00±0.15	1.25±0.15	0.85±0.10	T	0.25±0.10	0.20±0.10	0.25±0.10	0.50±0.10
1206 (3216)	4	3.20±0.15	1.60±0.15	0.80±0.10	B	0.40±0.15	0.30±0.20	0.40±0.20	0.80±0.15

PART NUMBERING SYSTEM

Meritek Series, C-array

CI 1206 XR 101 K 500

Size

Dielectric

CODE	CG	XR	YV
	COG (NP0)	X7R	Y5V

Capacitance

CODE	8R2	101	104	223
pF	8.2	100	--	--
nF	--	--	100	22
µF	--	--	0.1	0.022

Tolerance

CODE	Tolerance	Code	Tolerance	Code	Tolerance
B	±10pF	G	±2%	M	±20%
C	±25pF	J	±5%	Z	+80/-20%
D	±50pF	K	±10%	P	+1000/0%

For values less than 10 pF use C or D

Rated Voltage

2 significant digits + number of zeros

CODE	100	160	250	500	101
R.V.	10V	16V	25V	50V	100V

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ELECTRICAL SPECIFICATIONS

Dielectric	NPO		X7R		Y5V
Size Inch (mm)	0805 (2012)	1206 (3216)	0805 (2012)	1206 (3216)	1206 (3216)
Capacitance*	10pF to 270pF	10pF to 470pF	1000pF to 100nF	180pF to 100nF	10nF to 100nF
Capacitance tolerance**	J (±5%), K (±10%)		K (±10%), M (±20%)		Z(-20/+80%)
Rated voltage (WVDC)	25V,50V, 100V		10V, 16V, 25V, 50V	16V, 25V, 50V	16V, 50V
Tan δ*	Cap<30pF, Q≥400+20C Cap≥30pF, Q≥1000		Ur=50V, ≤2.5% Ur = 25V&16V, ≤3.5% Ur=10V, ≤5.0%		Ur=50V, ≤5% Ur=16V, ≤7%
Insulation resistance at Ur	≥10GΩ		≥10GΩ or RxC≥500ΩxF whichever is less		
Operating temperature	-55 to +125°C				-25 to +85°C
Capacitance characteristic	±30ppm		±15%		+30/-80%
Termination	Ni/Sn (lead-free termination)				

* Measured at 30~70% related humidity.

NPO: Apply 1.0±0.2Vrms, 1.0MHz±10% at the conditions of 25°C ambient temperature.

X7R: Apply 1.0±0.2Vrms, 1.0kHz±10% at the conditions of 25°C ambient temperature.

Y5V: Apply 1.0±0.2Vrms, 1.0kHz±10% at the conditions of 20°C ambient temperature.

** Preconditioning for Class II MLCC: Perform a heat treatment at 150±10°C for 1hour, then leave in ambient condition for 24±2 hours before measurement.

CAPACITANCE RANGE

DIELECTRIC		0508 (1220)							0612 (1632)							
SIZE		NPO			X7R				NPO			X7R			Y5V	
RATED VOLTAGE (VDC)		25	50	100	10	16	25	50	25	50	100	16	25	50	16	50
Capacitance	10 pF (100)	T	T	T					B	B	B					
	15 pF (150)	T	T	T					B	B	B					
	22 pF (220)	T	T	T					B	B	B					
	33 pF (330)	T	T	T					B	B	B					
	47 pF (470)	T	T	T					B	B	B					
	68 pF (680)	T	T	T					B	B	B					
	100 pF (101)	T	T	T					B	B	B					
	150 pF (151)	T	T	T					B	B	B					
	180 pF (181)	T	T	T					B	B	B		B	B		
	220 pF (221)	T	T	T					B	B	B		B	B		
	270 pF (271)	T	T	T					B	B	B		B	B		
	330 pF (331)								B	B	B		B	B		
	470 pF (471)								B	B	B		B	B		
	680 pF (681)												B	B		
	1000 pF (102)				T	T	T	T					B	B		
	1500 pF (152)				T	T	T	T					B	B		
	2200 pF (222)				T	T	T	T					B	B		
	3300 pF (332)				T	T	T	T					B	B		
	4700 pF (472)				T	T	T	T					B	B		
	6800 pF (682)				T	T	T	T					B	B		
0.010 μF (103)				T	T	T						B	B		B	
0.015 μF (153)				T	T	T					B	B	B		B	
0.022 μF (223)				T	T	T					B	B	B		B	
0.03 μF (333)				T	T	T					B				B	
0.047 μF (473)				T	T	T					B				B	
0.068 μF (683)				T	T	T					B				B	
0.10 μF (104)				T	T	T					B			B	B	

Note: The letter in cell is expressed the symbol of product thickness. T is 0.85±0.10mm, and B is 0.80±0.10mm.