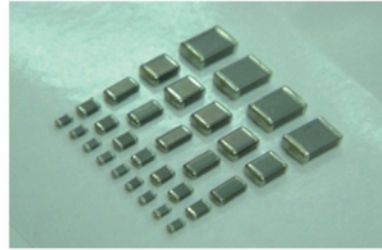


## Multilayer Ceramic Chip Capacitors

[ High Cap. NP0 ]

### HCN Series



#### Replacement for Film Capacitor

##### ◆ Features

- Small size & high Capacitance
- Suitable for wave and reflow soldering
- Excellent characteristics and tight tolerances
- Excellent Bias, high temperature stability & low Tan  $\delta$
- Replace Film Capacitors
- RoHS compliant

##### ◆ Applications

- Suitable for ADSL filter circuits, cable Modem and coupling circuits, general Telecommunication use, power (Inverter for oscillation circuit), wireless charger and audio circuit

##### ◆ Summary of Specifications

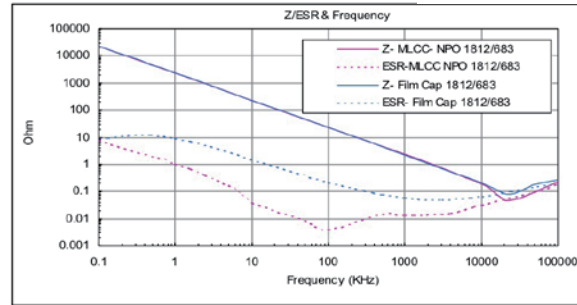
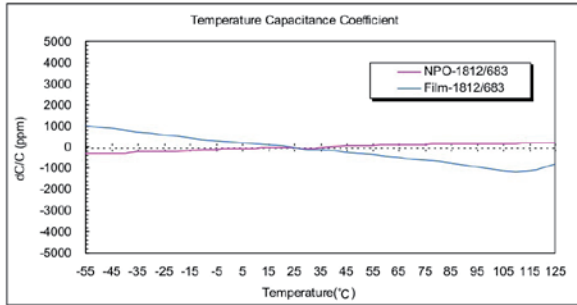
Operation Temperature	-55 °C ~ +125 °C
Rated Voltage	16Vdc ~ 50Vdc
Temperature Coefficient	NP0 : $\pm 30$ ppm/ °C , -55 °C ~ +125 °C (EIA Class I)
Capacitance Range	1nF ~ 120nF
Dissipation Factor	Q $\geq$ 1000 at 1KHz 20 °C
Insulation Resistance	10G $\Omega$ or 500/C $\Omega$ , whichever is smaller (C in Farad)
Dielectric Strength	250% Rated Voltage for 1~ 5 seconds @ 50mA max. current
Aging	0% per decade hr.

##### ◆ How To Order

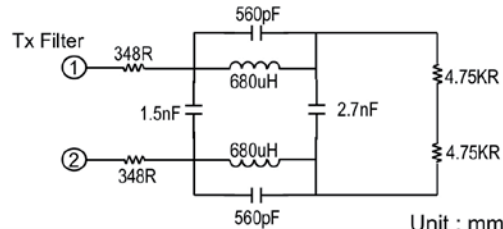
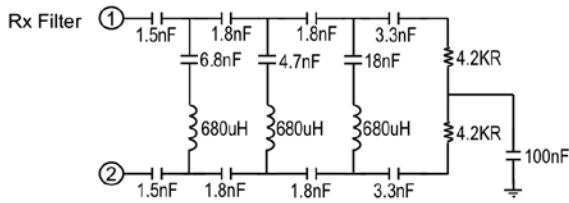
C	1206	N	103	J	025	T	F	Y
<b>Product Code</b>	<b>Chip Size</b>	<b>Dielectric</b>	<b>Capacitance Unit : pF</b>	<b>Tolerance</b>	<b>Rated Voltage</b>	<b>Packaging</b>	<b>Thickness (mm) (Optional)</b>	<b>Suffix Code</b>
C: MLCC (Multilayer Ceramic Capacitor)	Ex.: 0603 0805 1206 1210 1812	N: NP0	Ex.: 10 $\times$ 10 <sup>2</sup> 103 : 10 $\times$ 10 <sup>3</sup> 124 : 12 $\times$ 10 <sup>4</sup>	Ex.: F : +/- 1% G : +/- 2% J : +/- 5%	Ex.: 016:16Vdc 025:25Vdc 050:50Vdc	T: T&R 7" R: T&R 13" B: Bulk	Ex: E:1.6 $\pm$ 0.20 F:2.0 $\pm$ 0.20	Y



◆ Characteristics

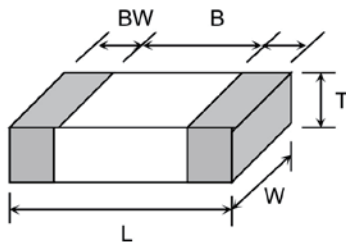


◆ Application Example Circuits



Unit : mm [inches]

◆ Dimensions



TYPE	L	W	T (max)	B (min)	BW (min)
0603	1.60±0.10 [.063±.004]	0.80±0.10 [.031±.004]	1.00 [.039]	0.40 [.016]	0.15 [.006]
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]	1.25±0.20 [.098±.012]	2.60 [.102]	1.60 [.059]	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]	3.00 [.118]	2.50 [.098]	0.30 [.012]
2220	5.70±0.40 [.220±.016]	5.00±0.40 [.197±.016]	3.00 [.118]	3.50 [.137]	0.30 [.012]
2225	5.70±0.40 [.220±.016]	6.35±0.40 [.250±.016]	3.00 [.118]	3.50 [.137]	0.30 [.012]

◆ Capacitance Range

Dielectric Characteristic	Size	Voltage	Capacitance Range																													
			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	224		
NPO	0603	16V																														
		25V																														
		50V																														
	0805	16V	B	B	B	B	C	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D					
		25V	B	B	B	B	C	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D					
		50V	B	B	B	B	C	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D					
	1206	16V	B	B	B	B	B	B	B	B	B	B	B	B	C	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	
		25V	B	B	B	B	B	B	B	B	B	B	B	B	C	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	
		50V	B	B	B	B	B	B	B	B	B	B	B	B	C	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	
	1210	16V	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	D	D	D	D	D	D	D	D	D	D	
		25V	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	D	D	D	D	D	D	D	D	D	D	
		50V	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	D	D	D	D	D	D	D	D	D	D	
	1812	16V	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	D	
		25V	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	D	
		50V	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	D	
	2220	16V	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	D	
		25V	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	D	
50V		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	D		
1825	16V	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	D		
	25V	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	D		
	50V	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	D		
2225	16V	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	D		
	25V	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	D		
	50V	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	D		

■ Specifications & Test Conditions please see P53~P56

■ Other dimensions, capacitance values and voltages ratings are available on request. Please contact Holy Stone.

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

