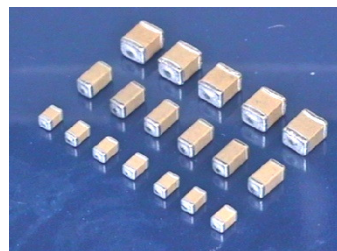


HTC Series- High Temperature Capacitors

Multilayer Ceramic Chip Capacitors High Temperature MLCC Series

X8R Series



◆ Features

- Rated voltages from 25V to 250V
- Stable Temperature Coefficient of 15% at high temperature (up to 150 °C)
- Fully RoHS Compliant
- Available with flexible termination (Superterm) to minimize mechanical/thermal stress effects

◆ Applications

- Suitable for automotive, oil exploration and other demanding high temperature environments and applications
- Instrumentation and other equipment circuit operating at high temperatures

◆ Summary of Specification

Operation Temperature	-55~+150 °C
Rated Voltage	25V ~ 250Vdc
Temperature Coefficient	X8R : $\leq \pm 15\%$, -55~+150 °C (EIA Class II)
Capacitance Range	1.5nF ~ 470nF
Dissipation Factor :	2.5 % max. at 1KHz 25°C
Insulation Resistance	100G Ω or 1000/C Ω whichever is smaller at 25°C
Dielectric Strength	< 200V : 250% Rated Voltage for 5 second @ 50mA max. current 201~500V : 150% Rated Voltage for 5 second @ 50mA max. current
Capacitance Tolerance	$\pm 5\%$, $\pm 10\%$
Aging	2.0% per decade hr , Typical

◆ How To Order

HTC

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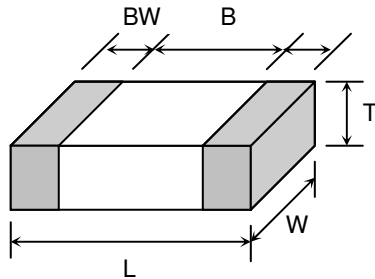
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Product Code	Chip Size	Dielectric	Capacitance Unit : pF	Tolerance	Rated Voltage	Packaging
MHC: Middle High Temperature Capacitor	Ex.: 1206 : 3.2x1.6 mm 1210 : 3.2x2.5 mm	H: X8R	Ex.: 102:10x10 ² 224:22x10 ⁴	Ex.: J : +/- 5% K: +/- 10% M: +/- 20%	Ex.: 025:25Vdc 050:50Vdc	T: Taping & Reel B: Bulk

◆ Dimension



Unit : mm [inches]

TYPE	L	W	T (max)	B (min)	BW (min)
3530	8.90±0.50 [.35±.020]	7.60±0.50 [.30±.020]	5.00 [.200]	5.50 [.217]	0.30 [.012]
3640	9.20±0.50 [.36±.020]	10.2±0.50 [.40±.020]	5.00 [.200]	6.00 [.236]	0.30 [.012]
4540	11.5±0.50 [.45±.020]	10.2±0.50 [.40±.020]	5.00 [.200]	7.50 [.295]	0.30 [.012]
5550	14.0±0.50 [.55±.020]	12.7±0.50 [.50±.020]	5.00 [.200]	9.00 [.354]	0.30 [.012]
6560	16.5±0.50 [.65±.020]	15.3±0.50 [.60±.020]	5.00 [.200]	11.50 [.453]	0.30 [.012]
7565	19.0±0.50 [.750±.020]	16.5±0.50 [.65±.020]	5.00 [.200]	14.00 [.551]	0.30 [.012]

◆ Capacitance Range – Maximum Capacitance

	50V	100V	200V	500V	1KV	2KV	3KV	5KV
3530	355	275	165	374	873	203	972	202
3640	505	405	225	554	114	273	123	302
4540	655	515	305	684	164	383	183	472
5550	855	675	415	105	224	523	253	702
6560	116	985	625	145	354	823	383	103
7565	156	126	795	195	454	983	483	133

- All value are capacitance EIA codes.
- Other dimensions, capacitance values and voltages rating are available. Please contact HEC.

*Soldering And Handling Precautions:

Large ceramic capacitors are more prone to thermal and mechanical cracks. To minimize mechanical cracks, capacitors have to be handled carefully in the original waffle pack container, carrier tape or other suitable container. Care must be taken that ceramic chips not to be in contact with each other to cause chip out, cracks or other mechanical damage.

The recommended method for soldering large chips, is reflow soldering. Wave soldering and manual soldering with Iron is not recommended. Ceramic capacitors must be preheated with less than 2°C/sec rate to about 50°C below the reflow temperature. Sudden increase, or decrease in temperature more than the recommended rate, during soldering, may cause internal thermal cracks.

Available Options:

- HEC offers polymer termination (Superterm) for very large chips to minimize mechanical cracks due to board flexing.
- To minimize the potential for surface arcing in higher voltage applications, HEC offers the option of a proprietary surface coating.
- Pure Tin terminated/ROHS compliant products are offered as a standard, however, lead (Pb) content plated termination may be provided if required.
- Pd/Ag termination is also offered as an option for Hybrid circuits and other applications.