

Multilayer Ceramic Chip Capacitors [High Quality Value Capacitors]

HQC Series

◆ Features

- High Q value & Low ESR at high frequency
- Ultra stable C0G performance
- High self-Resonance Frequency
- Porcelain Capacitance
- RoHS Compliant

◆ Application

- Cellular Base Station Amplifiers
- Industrial
- Scientific
- Matching Networks
- Coupling Circuit

◆ Summary of Specification

Operation Temperature	-55~+125 °C
Rated Voltage	50V to 500Vdc
Temperature Coefficient	≤ ± 30ppm at -55~+125 °C
Capacitance Range	0.1pF ~ 1000pF
Dissipation Factor :	0.1% max. at 1MHz 25°C
Insulation Resistance	10GΩ
Dielectric Withstanding	2.5 × WVDC for 5 sec
Capacitance Tolerance	A, B, C, D, below 10 pF F, G, J, K, M above 10pF
Aging	None
Piezo Effects	None

◆ How To Order

HQC

0505

N

100

J

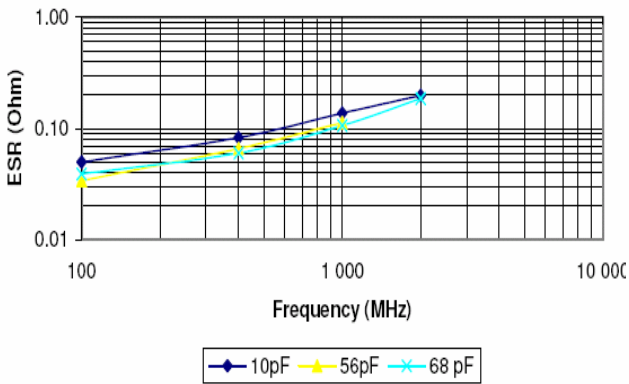
101

T

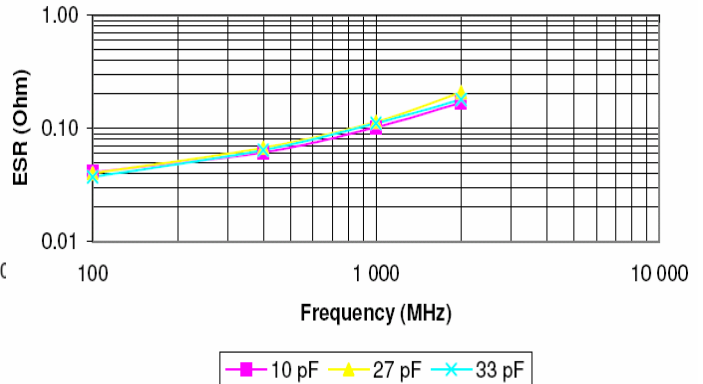
Product Code	Chip Size	Dielectric	Capacitance Unit : pF	Tolerance	Rated Voltage	Packaging
HQC:High Q Value Capacitors	Ex.: 0505 : 1.4 × 1.4 mm 1111 : 2.8 × 2.8 mm	N: NPO(C0G)	Ex.: 3R3:3.3 100:10×10 ⁰ 102:10×10 ²	Ex.: A: +/-0.075 B: +/-0.1 C: +/-0.25 J: +/- 5%	Ex.: 050:50Vdc 101:100Vdc	T: Taping & Reel B: Bulk

◆ Characteristic

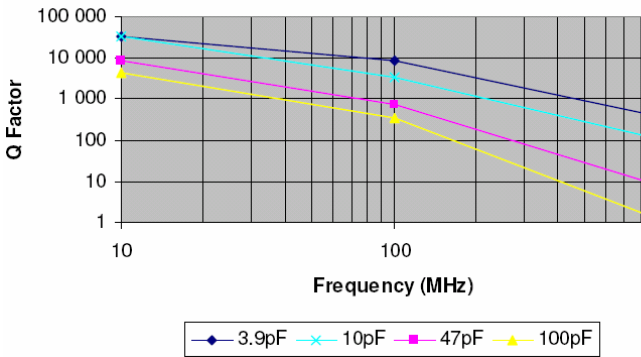
0505-ESR vs Frequency



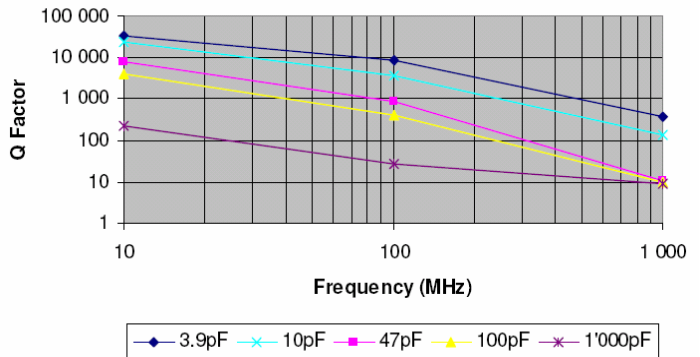
1111-ESR vs Frequency



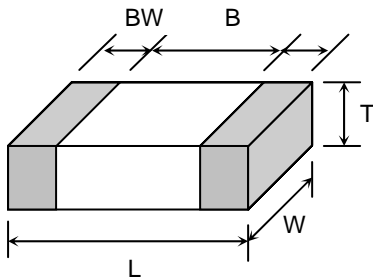
0505-Q Factor vs Frequency



1111-Q Factor vs Frequency



◆ Dimension



Unit : mm [inches]

TYPE	L	W	T (max)	B (min)	BW (min)
0603	1.60±0.1 [.063±.004]	0.80±0.1 [.031 ±.004]	0.90 [.035]	0.40 [.016]	0.15 [.006]
0505	1.40±0.25 [.055±.010]	1.40±0.25 [.055±.010]	1.40 [.055]	0.35 [.014]	0.20 [.008]
0805	2.00±0.2 [.079±.012]	1.25±0.2 [.049 ±.008]	1.45 [.057]	0.70 [.028]	0.20 [.008]
1111	2.80±0.4 [.110±.016]	2.80±0.4 [.110±.016]	2.60 [.102]	1.40 [.055]	0.30 [.012]

◆ Capacitance Range

Size		0603	0505	0805	1111				
Code	WVDC	250V	150V	250V	50V	100V	200V	300V	500V
0R1	0.1								
0R2	0.2								
0R3	0.3								
0R4	0.4								
0R5	0.5								
0R6	0.6								
0R7	0.7								
0R8	0.8								
0R9	0.9								
1R0	1.0								
1R1	1.1								
1R2	1.2								
1R3	1.3								
1R5	1.5								
1R8	1.8								
2R0	2.0								
2R2	2.2								
2R4	2.4								
2R7	2.7								
3R0	3.0								
3R3	3.3								
3R6	3.6								
3R9	3.9								
4R3	4.3								
4R7	4.7								
5R1	5.1								
5R6	5.6								
6R2	6.2								
6R8	6.8								
7R5	7.5								
8R2	8.2								
9R1	9.1								
100	10								
110	11								
120	12								
130	13								
150	15								
160	16								
180	18								
200	20								
220	22								
220	24								
270	27								
300	30								
330	33								
360	36								
390	39								
430	43								
470	47								
560	56								
680	68								
820	82								
101	100								
121	120								
151	150								
181	180								
221	220								
271	270								
331	330								
391	390								
471	470								
510	510								
561	560								
621	620								
681	680								
821	820								
102	1000								

■ Other dimensions, capacitance values and voltages rating are available. Please contact HEC.