

Classic-HiQ Series, Low ESR

RF & Microwave Capacitors, RoHS Compliant

DESCRIPTION

Low ESR, Ultra High-Q
 Highest working voltage in class - 1'500V
 Porcelain Capacitors
 Laser Marked (optional)
 High Self-Resonance Frequencies



APPLICATIONS

- Cellular Base Station Amplifiers
- Industrial
- Medical (MRI)
- Scientific

CIRCUIT APPLICATIONS

- DC to RF Conversion
- Matching Networks
- Tuning, Coupling and DC Blocking

I. ELECTRICAL SPECIFICATIONS

Parameter	Value
Capacitance	0.1 to 1'000 pF
Tolerances	A, B, C, D below 10 pF F, G, J, K, M above 10 pF
Working Voltage (WVDC)	see Capacitance Value chart
Temperature Coefficient	100 +/-30ppm/°C, -55°C to +125°C
Insulation Resistance	10 ⁶ MΩ min
Dielectric Withstanding	2.5 x WVDC for 5 seconds
Aging	none
Piezo Effects	none

NB: the temperature range for the CHB below 10pF is upgraded from +125°C to +175°C.

II. MECHANICAL SPECIFICATIONS

Parameter	Value	Comment
Case Size	A	0505
	B	1111

For each case size, the recommended terminations are listed below.

NB:

- all the terminations are backward compatible and lead-free.
- the non-magnetic terminations are all Magnetism-free Rated.



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Termination Type	Code	CHA	CHB
Standard (tin-plated nickel)	S	AVAILABLE	AVAILABLE
Non-magnetic (silver-palladium)	A	AVAILABLE	
Non-magnetic (tin-plated copper)	C		AVAILABLE

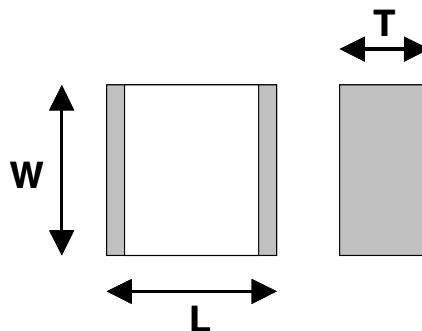
NB: P terminations are still available on request. Please consult us.

III. ENVIRONMENTAL SPECIFICATIONS

Parameter	Value
Life Test	2'000 hours, +125 °C at 2.0 x WVDC
Moisture Resistance Test 1	240 hours, 85% relative humidity at +85 °C (ESA/SCC n°3009)
Moisture Resistance Test 2	56 days, 93% relative humidity at +40 °C 0V, 5V, WVDC

IV. OUTLINE DIMENSIONS

Parameter	A (0505)	B (1111)
Length (L)	1.40 ±0.25mm	2.80 ±0.40mm
Width (W)	1.40 ±0.25mm	2.80 ±0.40mm
Thickness (T)	1.40 mm (max.)	2.60 mm (max.)



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V. HOW TO ORDER

501	CH	B	100	J	S		L	E	ROHS
voltage	dielectric	case size	capacitance	tolerance code	termination code	mechanical code	marking code	tape and reel	
please refer to Volt. Code given in Capacitance Values chart		A B	please refer to Cap. Code given in Capacitance Values chart	A=±0.05pF B=±0.1pF C=±0.25pF D=±0.5pF F=±1% G=±2% J=±5% K=±10%	please refer to Mechanical Termination chart	please refer to Mechanical Configuration chart	"L" means laser marking required leave blank if no marking requested	"E" means tape and reel required leave blank if no tape and reel requested	the RoHS tag is not part of the reference tag added at the end of P/N for information
500=50V 101=100V 201=200V 301=300V 501=500V 601=600V 102=1KV 152=1.5KV						leave blank if no mechanical requested			

NB:

- for capacitance values lower than 10pF, tolerances A, B, C and D apply. For capacitance values equal to or higher than 10pF, tolerances F, G, J and K apply.
- the ROHS tag is for information only and does not belong to the reference itself. This tag is added on our stickers so that our customers can ensure that they use RoHS compliant parts on their process line.
- to specify parts with the Extended Voltage Range, TK055 must be added at the end of the designation and this information is fully part of the reference itself.

VI. TAPE AND REEL

The following chart gives the number of components per reel.

Parts per Reel	CHA	CHB
MPQ	3'000	1'000

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VII. CAPACITANCE VALUES

Value (pF)	Cap. Code	A (0505)	B (1111)	
			Standard	Extended
0.1	0R1	200V	500V	1500V
0.5	0R5			
1.0	1R0			
1.2	1R2			
1.5	1R5			
1.8	1R8			
2.2	2R2			
2.7	2R7			
3.3	3R3			
3.9	3R9			
4.7	4R7			
5.6	5R6			
6.8	6R8			
8.2	8R2			
10	100			
12	120			
15	150			
18	180			
22	220			
27	270			
33	330			
39	390			
47	470			
56	560			
68	680			
82	820			
100	101			
110	111			
120	121			
150	151			
180	181			
220	221			
270	271			
330	331			
390	391			
470	471			
510	511			
560	561			
620	621			
680	681			
820	821			
1 000	102			
			300V	1000V
			200V	600V
			100V	300V
			50V	

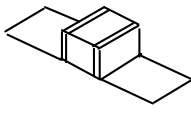
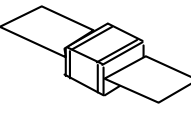
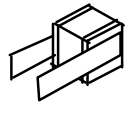
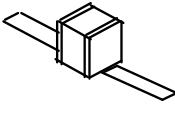
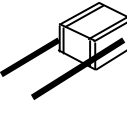
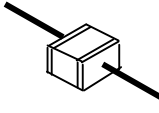
NB intermediate values are available within the indicated range.

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VIII. MECHANICAL CONFIGURATIONS

VIII.1. Lead/Ribbon and Wire Types

Configuration Type	Code	Description
	1	Micro-strip Ribbon
	2	Axial Ribbon
	3	Radial Ribbon
	5	Narrow Micro-strip Ribbon
	6	Radial Wire
	7	Axial Wire

NB: when coding ribbons or wires for the description of the part, the termination has to be mentioned for A and C types to ensure that only non-magnetic materials are used.

Examples : 201 CHA 470 JA1L is valid
 501 CHB 470 JC1L is valid
 501 CHB 470 JS1L is replaced by 501 CHB 470 J1L

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VIII.2. Lead/Ribbon and Wire Matrix

<i>Termination Type</i>	<i>Code</i>	<i>CHA</i>	<i>CHB</i>
Micro-strip Ribbon	1		AVAILABLE
Axial Ribbon	2		AVAILABLE
Radial Ribbon	3		AVAILABLE
Narrow Micro-strip Ribbon	5		AVAILABLE
Radial Wire	6		AVAILABLE
Axial Wire	7		AVAILABLE

VIII.3. Lead/Ribbon and Wire Dimensions

Within each cell, first the length and then the width/diameter of any single ribbon or wire are given.

<i>Termination Type</i>	<i>Code</i>	<i>CHA</i>	<i>CHB</i>
Micro-strip Ribbon	1		8.00 2.40
Axial Ribbon	2		8.00 2.40
Radial Ribbon	3		8.00 2.40
Narrow Micro-strip Ribbon	5		8.00 1.27
Radial Wire	6		20.00 0.60
Axial Wire	7		20.00 0.60

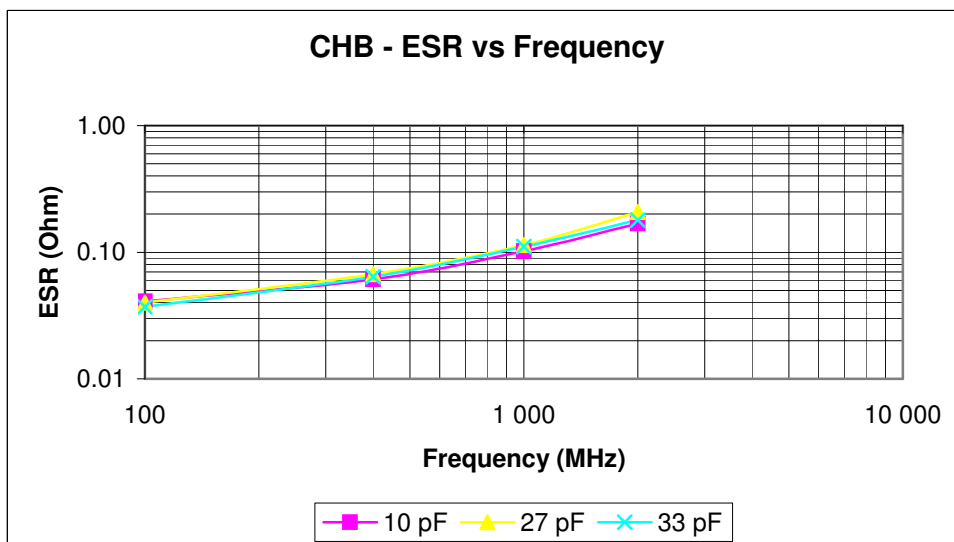
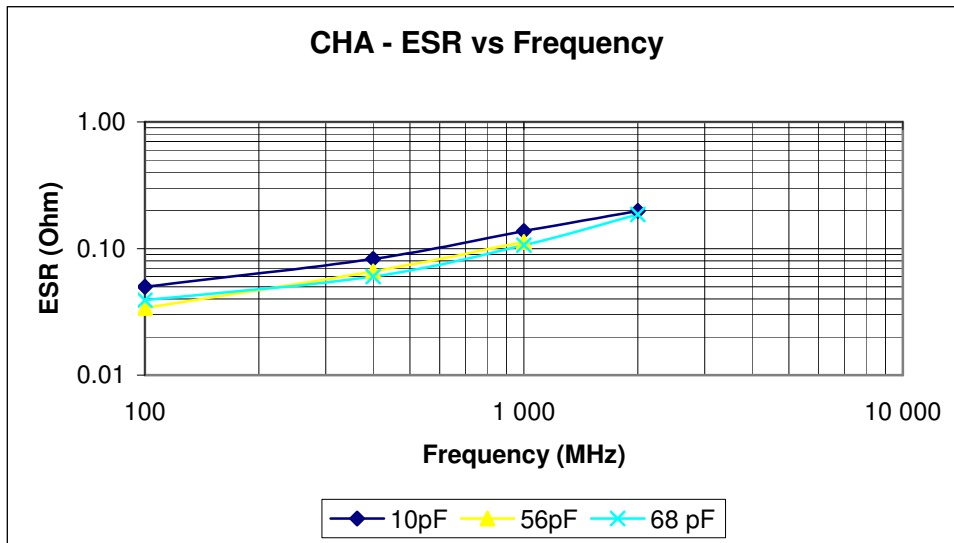
NB: dimensions are in mm, length is the minimum value.

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IX. PERFORMANCE DATA

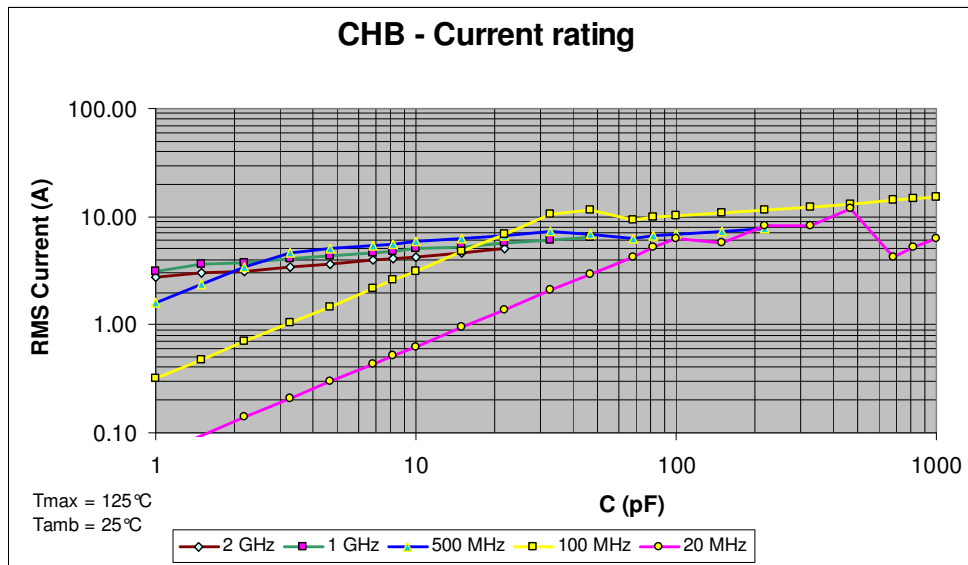
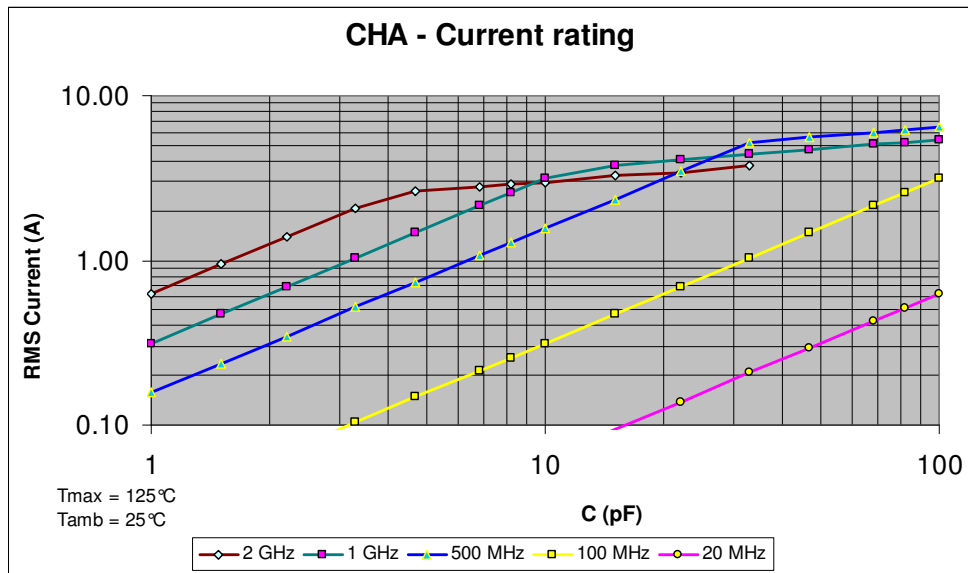
IX.1. ESR



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IX.2. Current Rating

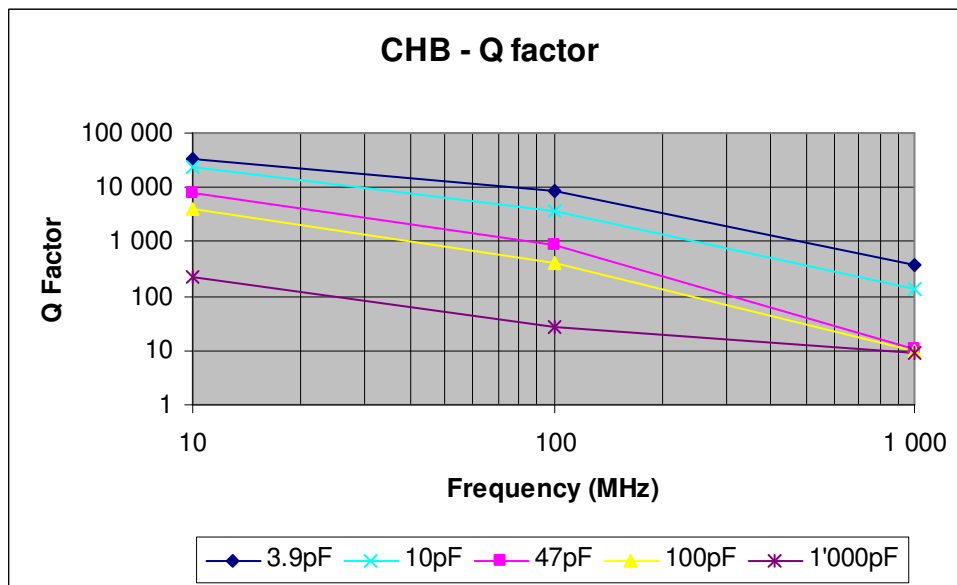
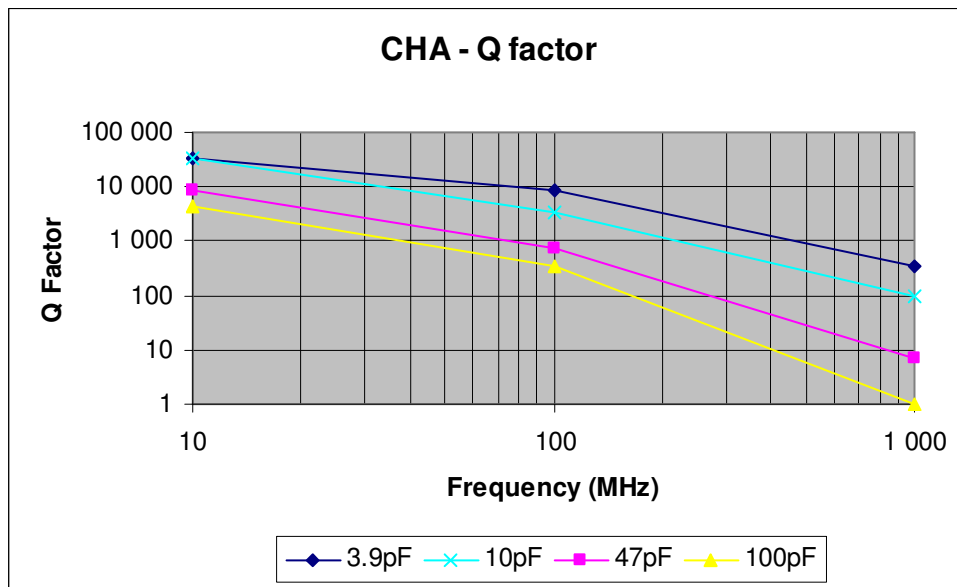


TEMEX CERAMICS reserves the right to modify herein specifications and information at any time when necessary to provide optimum performance and cost.

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IX.3. Q Factor



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IX.4. Series Resonance Frequency

