

CHB Series

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 (test voltage applied for 5 seconds)	2.5 x WVDC for WVDC ≤ 500V 1.5 x WVDC for 500V < WVDC
Aging	none
Piezo Effects	none

NB: the temperature range for the CHB up to 100pF is upgraded from +125°C to +175°C.

II. MECHANICAL SPECIFICATIONS

Parameter	Value	Comment
Case Size	B	1111

NB:

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

MR certified®

ITAR Free®

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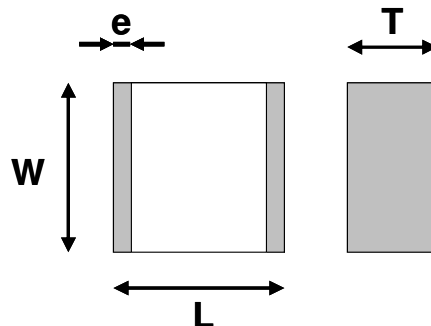
Termination Type	Code	CHB
Standard (tin-plated nickel)	S	AVAILABLE
Non-magnetic (tin-plated copper)	C	AVAILABLE

III. ENVIRONMENTAL SPECIFICATIONS

Parameter	Value
Life Test	2'000 hours, +125°C at 2.0 x WVDC (standard WVDC range)
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

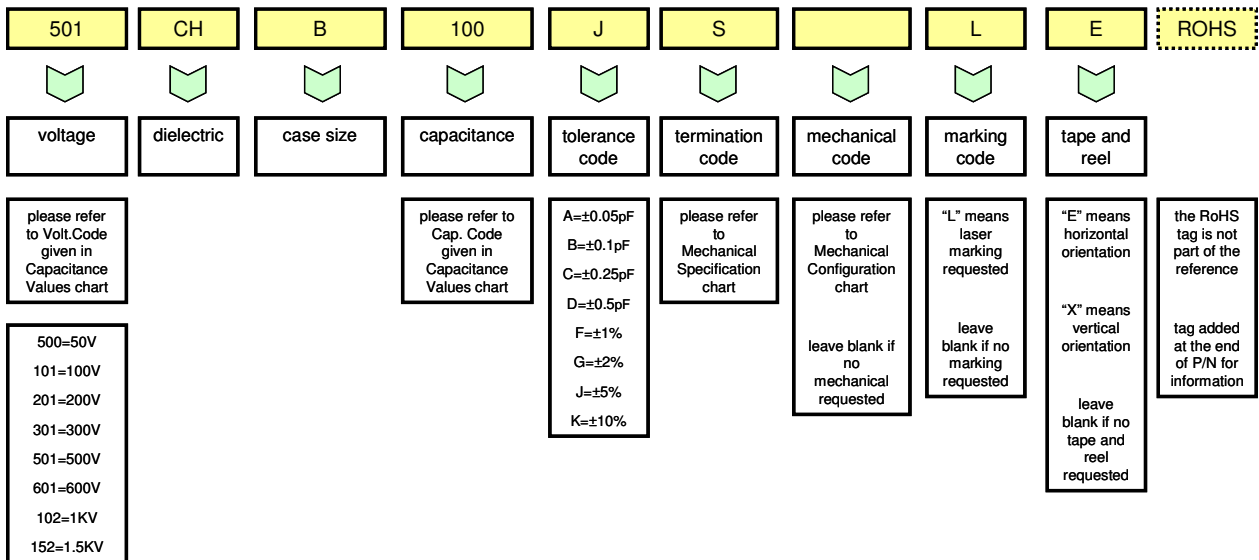
Parameter	B (1111)
Length (L)	2.80 ±0.40mm
Width (W)	2.80 ±0.40mm
Thickness (T)	2.60 mm (max.)
End-Band (e)	0.40 ±0.25mm



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V. HOW TO ORDER



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;

VI. TAPE AND REEL

The following chart gives the number of components per reel.

	CHB
Parts per Reel	1'000

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VII. CAPACITANCE VALUES

Value (pF)	Cap. Code	B (1111)		Value (pF)	Cap. Code	B (1111)	
		Standard	Extended			Standard	Extended
0.1	0R1	500V	1500V	18	180	500V	1500V
0.2	0R2						
0.3	0R3						
0.4	0R4						
0.5	0R5						
0.6	0R6						
0.7	0R7						
0.8	0R8						
0.9	0R9						
1.0	1R0						
1.1	1R1						
1.2	1R2						
1.3	1R3						
1.4	1R4						
1.5	1R5						
1.6	1R6						
1.7	1R7						
1.8	1R8						
1.9	1R9						
2.0	2R0	500V	1500V	110	111	300V	1000V
2.1	2R1						
2.2	2R2						
2.4	2R4						
2.7	2R7						
3.0	3R0						
3.3	3R3						
3.6	3R6						
3.9	3R9						
4.3	4R3						
4.7	4R7						
5.1	5R1	200V	600V	330	331	200V	600V
5.6	5R6						
6.2	6R2						
6.8	6R8						
7.5	7R5						
8.2	8R2						
9.1	9R1	100V	300V	560	561	100V	300V
10	100						
11	110	50V	300V	620	621	50V	300V
12	120						
13	130						
15	150						
16	160						

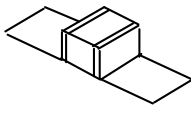
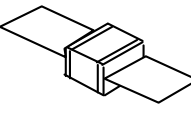
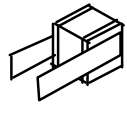
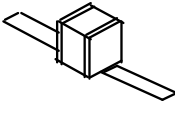
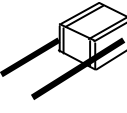
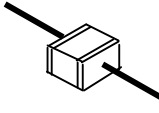
NB: special values, tolerances, higher WVDC and matching available, please consult factory. Dielectric withstanding test is done at 1.8 x WVDC for Extended Range values $\geq 820\text{pF}$.

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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 MR_{certified} types to ensure that only non-magnetic materials are used.

Examples : 501 CHB 470 J1L any termination material could be used
 501 CHB 470 JC1L only non-magnetic termination materials could be used

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VIII.2. Lead/Ribbon and Wire Matrix

<i>Termination Type</i>	<i>Code</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>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

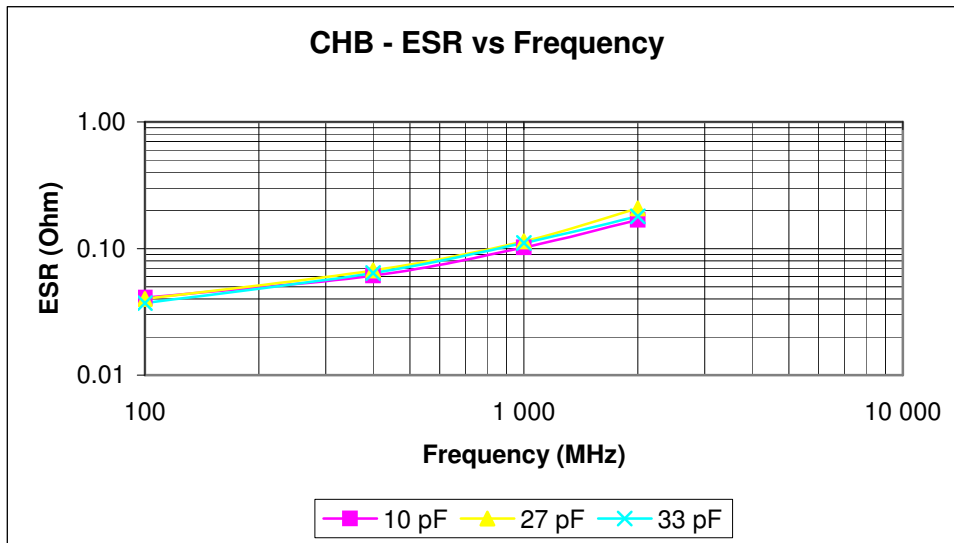
NB: dimensions are in mm, length is the minimum value.

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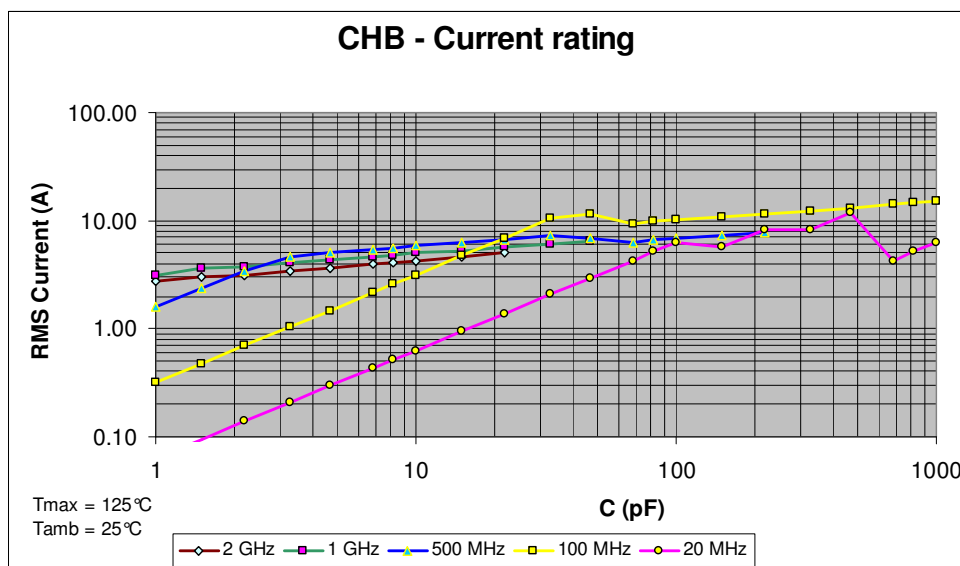
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IX. PERFORMANCE DATA

IX.1. ESR



IX.2. Current Rating

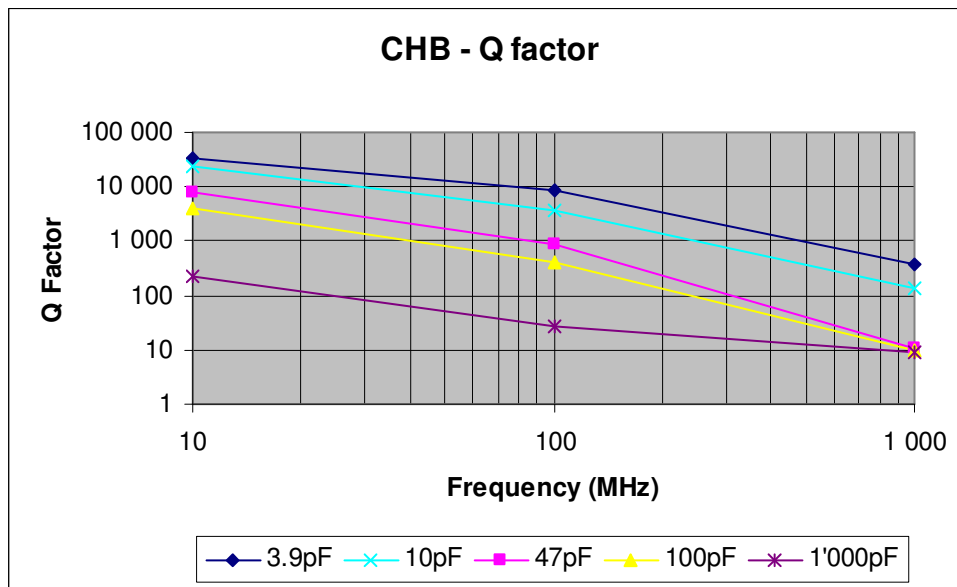


TEMEX CERAMICS reserves the right to modify herein specifications and information at any time when necessary to provide optimum performance and cost.

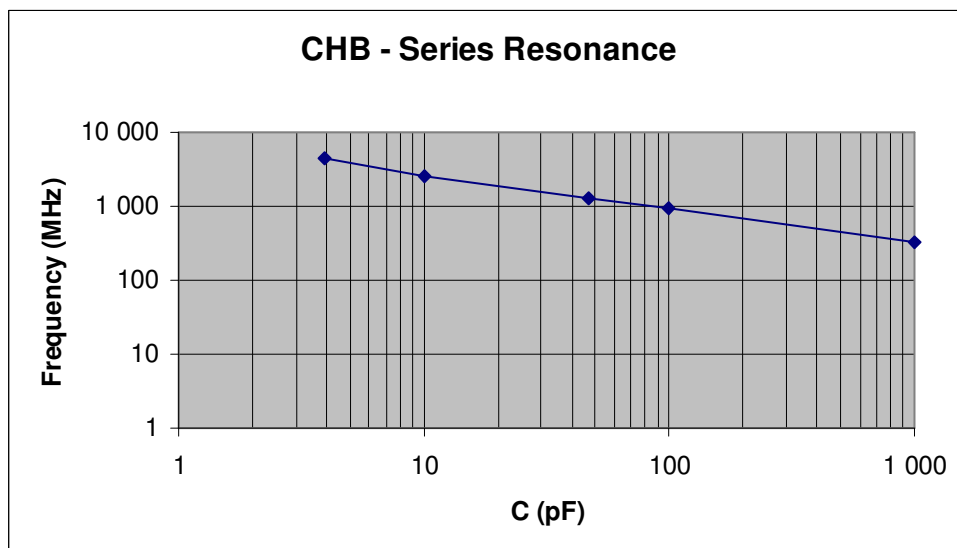
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IX.3. Q Factor



IX.4. Series Resonance Frequency



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