

SHB Series

RF & Microwave Capacitors, NP0, RoHS

DESCRIPTION

Lowest ESR in class
 Highest working voltage in class - 500V
 Laser Marked (optional)
 High Self Resonance Frequencies



APPLICATIONS

- Cellular Base Station Equipment
- Broadband Wireless Service
- Point to Point/Multipoint Radios
- RF Generators (NMR...)

CIRCUIT APPLICATIONS

- Filter Networks
- Matching Networks
- Tuning, Coupling and DC Blocking

I. ELECTRICAL SPECIFICATIONS

Parameter	Value
Capacitance	0.4 to 1'00 pF
Tolerances	A, B, C, D below 10 pF F, G, J, K above 10 pF
Working Voltage (WVDC)	see Capacitance Value chart
Temperature Coefficient	0 +/-30ppm/°C, -55°C to +125°C
Insulation Resistance	10 ⁵ MΩ min
Dielectric Withstanding	2.5 x WVDC for 5 seconds
Aging	none
Piezo Effects	none

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	SHB
Standard (tin-plated nickel)	S	AVAILABLE
Non-magnetic (tin-plated copper)	C	AVAILABLE ⁽¹⁾

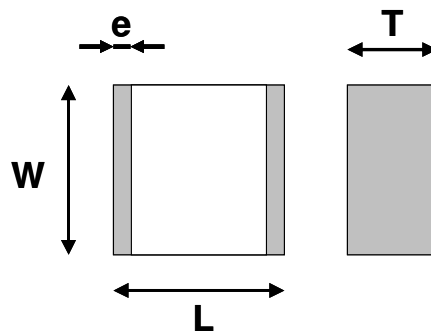
(1): range up to 330pF only. For higher capacitance values, please consult factory.

III. ENVIRONMENTAL SPECIFICATIONS

Parameter	Value
Life Test	1'000 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	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

501	SH	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			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 501=500V						leave blank if no mechanical requested			

NB:

- for capacitance values lower than 10pF, tolerances 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.

	SHB
Parts per Reel	1'000

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VII. CAPACITANCE VALUES

Value (pF)	Cap. Code	B (1111)	Value (pF)	Cap. Code	B (1111)
0.4	0R4	500V	22	220	500V
0.5	0R5		24	240	
0.6	0R6		27	270	
0.7	0R7		30	300	
0.8	0R8		33	330	
0.9	0R9		36	360	
1.0	1R0		39	390	
1.1	1R1		43	430	
1.2	1R2		47	470	
1.3	1R3		51	510	
1.4	1R4		56	560	
1.5	1R5		62	620	
1.6	1R6		68	680	
1.7	1R7		75	750	
1.8	1R8		82	820	
1.9	1R9		91	910	
2.0	2R0		100	101	
2.1	2R1		110	111	
2.2	2R2		120	121	
2.4	2R4		130	131	
2.7	2R7	150	151		
3.0	3R0	160	161		
3.3	3R3	180	181		
3.6	3R6	200	201		
3.9	3R9	220	221		
4.3	4R3	240	241		
4.7	4R7	270	271		
5.1	5R1	300	301		
5.6	5R6	330	331		
6.2	6R2	360	361		
6.8	6R8	390	391		
7.5	7R5	430	431		
8.2	8R2	470	471		
9.1	9R1	510	511		
10	100	560	561		
11	110	620	621		
12	120	680	681		
15	150	750	751		
16	160	820	821		
18	180	910	911		
20	200	1 000	102		

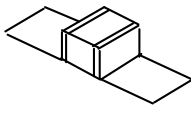
NB: special values, tolerances, higher WVDC and matching available, please consult factory.

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VIII. MECHANICAL CONFIGURATIONS

VIII.1. Lead/Ribbon and Wire Types

Termination Type	Code	Description
	1	Micro-strip Ribbon

NB: when coding ribbons or wires, for the designation of the part, the termination has to be mentioned for MR_{certified} types to make sure only non-magnetic materials are used.

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

VIII.2. Lead/Ribbon and Wire Matrix

Termination Type	Code	SHB
Micro-strip Ribbon	1	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.

Termination Type	Code	SHB
Micro-strip Ribbon	1	8.00 2.40

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

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IX. TYPICAL PERFORMANCE DATA

