

# NHB - High Self Resonant Frequency

## Ultra Low ESR, High RF Power

### RF & Microwave Capacitors, RoHS Compliant

#### DESCRIPTION

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



#### APPLICATIONS

- Cellular Base Station Equipment
- Broadband Wireless Service
- Point to Point/Multipoint Radios
- Broadcasting Equipment

#### CIRCUIT APPLICATIONS

- Impedance Matching
- Bypass, Feedback
- Tuning, Coupling and DC Blocking

### I. ELECTRICAL SPECIFICATIONS

Parameter	Value
Capacitance	0.3 to 100 pF
Tolerances	B, C, D below 10 pF F, G, J, K, M above 10 pF
Working Voltage (WVDC)	See Capacitance Value chart
Temperature Coefficient	0 +/-30ppm/°C, -55°C to +125°C
Insulation Resistance	10 <sup>5</sup> MΩ min
Dielectric Withstanding (test voltage applied for 5 seconds)	2.5 x WVDC for WVDC ≤ 500V
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.

Termination Type	Code	NHB
Standard (tin-plated nickel)	S	AVAILABLE

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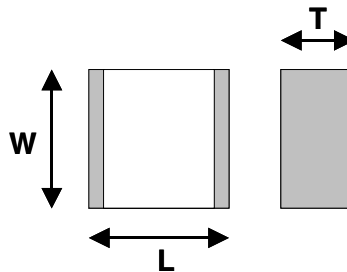
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#### III. ENVIRONMENTAL SPECIFICATIONS

<i>Parameter</i>	<i>Value</i>
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

<i>Parameter</i>	<i>B (1111)</i>
Length (L)	2.80 ±0.40mm
Width (W)	2.80 ±0.40mm
Thickness (T)	2.60 mm (max.)



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#### V. HOW TO ORDER

501	NH	B	100	J	S	L	E	ROHS
voltage	dielectric	case size	capacitance	tolerance code	termination 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% M=±20%		"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								

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, K and M apply.

#### VI. TAPE AND REEL

The following chart gives the number of components per reel.

	<b>NHB</b>
Parts per Reel	1'000

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#### VII. CAPACITANCE VALUES

Value (pF)	Cap. Code	B (1111)
0.3	0R3	500V
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	
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	
5.6	5R6	
6.2	6R2	
6.8	6R8	
7.5	7R5	
8.2	8R2	
9.1	9R1	
10	100	
11	110	
12	120	
15	150	
16	160	
18	180	
20	200	
22	220	
24	240	
27	270	
30	300	
33	330	
36	360	
39	390	
43	430	
47	470	
56	560	
68	680	
82	820	
100	101	

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

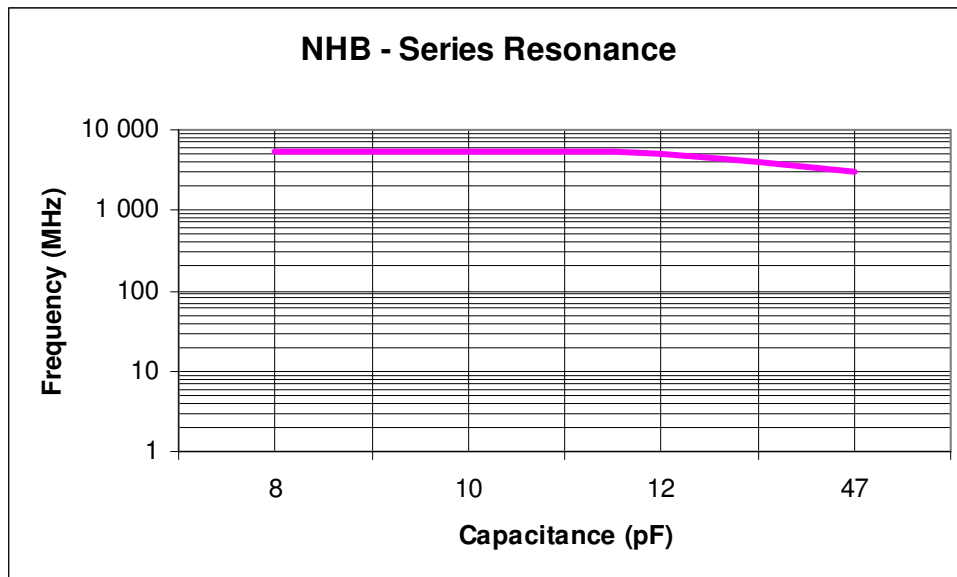
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#### VIII. TYPICAL PERFORMANCE DATA

##### VIII.1. CAPACITANCE IN B SIZE (1111): SERIES RESONANCE FREQUENCY



##### VIII.2. CAPACITANCE IN B SIZE (1111): EQUIVALENT SERIES RESISTANCE

