

# NHB Series

High Self Resonant Frequency



## FEATURES

- High RF power MLCC
- Very high self resonant frequencies, lowest ESR in class, RF & Microwave capacitors
- Working voltage: 500V
- Size: 1111
- Capacitance range: 0.3pF - 100pF
- NPO, RoHS compliant
- Operating temperature up to 175°C
- Laser Marked (optional)

## APPLICATIONS

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

## CIRCUIT APPLICATIONS

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

## PHYSICAL CHARACTERISTICS

Chip capacitors for surface mounting with Nickel barrier and tinning.

## ELECTRICAL AND ENVIRONMENTAL SPECIFICATIONS

Electrical specifications	
Parameter	Value
Capacitance	0.3pF - 100pF
Tolerances	A, B, C, D below 10pF F, G, J, K above 10pF
Working voltage (WVDC)	500V
Temperature coefficient	NPO: (0 ± 30) ppm/°C, -55°C to +175°C
Insulation Resistance	10 <sup>5</sup> MΩ min.
Dielectric Withstanding (test voltage applied for 5 seconds)	1,250V
Aging	none
Piezo Effect	none

Environmental specifications	
Parameter	Value
Life Test	1,000 hours, +175°C @ 500V 2,000 hours, +125°C @ 1,000V
Moisture Resistance Test 1	240 hours, 85% relative humidity @ 85°C (ESA/SCC n°3009)
Moisture Resistance Test 2	56 days, 93% relative humidity @ 40°C 0V, 5V, WVDC

## HOW TO ORDER

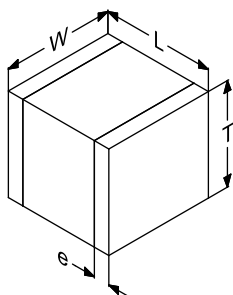
501	NH	B	100	J	S	L	E	-RoHS
Voltage code	Dielectric	Size code	Capacitance code	Tolerance code	Termination code	Marking code	Tape and reel	
501 = 500V	NH = NPO: (0 ± 30) ppm/°C	B = 1111	Please refer to Cap. Code given in capacitance range chart	A = ± 0.05pF B = ± 0.1pF C = ± 0.25pF D = ± 0.5pF F = ± 1% G = ± 2% J = ± 5% K = ± 10% See note	S = Standard: tin-plated nickel  All terminations are backward compatible and lead-free	-: no marking  L = laser marking	-: no tape and reel  E = Tape and reel packaging Number of components per reel: 1,000.	The RoHS tag is not part of the reference  Tag added at the end of P/N for information

Note: For capacitance values less than 3.3pF, tolerances A, B, C and D are available. For capacitance values less than 10pF, tolerances B, C and D are available. For capacitance values of 10pF or higher, tolerances F, G, J and K are available. Please consult us for specific requirements.

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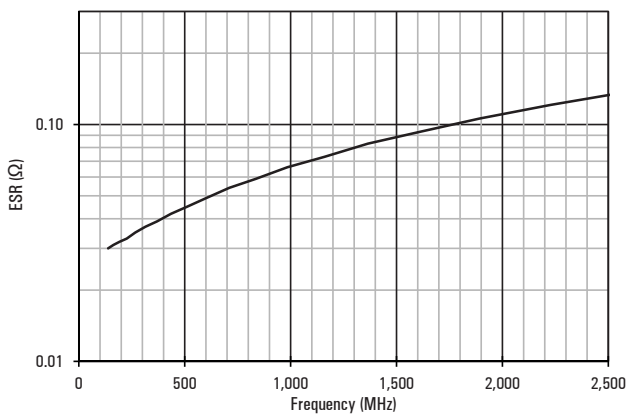
# NHB Series

## DIMENSIONS in inches (mm)



### TYPICAL ESR VERSUS FREQUENCY

Capacitance value = 33pF



## STANDARD RATINGS

Size		1111
Size code		B
Dimensions inches (mm)	L	0.11 ± 0.016 (2.8 ± 0.4)
	W	0.11 ± 0.016 (2.8 ± 0.4)
	T	0.103 max (2.6 max)
	e	0.016 ± 0.01 (0.4 ± 0.25)
Value (pF)	Cap. Code	Standard
0.3	OR3	500V
0.4	OR4	
0.5	OR5	
0.6	OR6	
0.7	OR7	
0.8	OR8	
0.9	OR9	
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	
51	510	
56	560	
62	620	
68	680	
75	750	
82	820	
91	910	
100	101	

Special values, tolerances, higher WVDC and matching available, please consult factory.