# NB12J00502HBF

(0805, 5000 Ohm ±3%, 3480 K, Sn Term)

*NTC Chip Thermistor Datasheet*

## BASIC SPECIFICATION

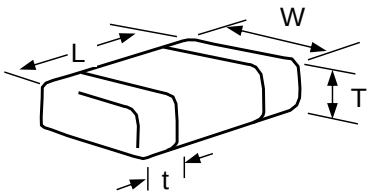
| | |
|---|---|
| **Case Size** [EIA] | 0805 |
| **Operating Temperature** | -55 to +150°C |
| **Grade** | Automotive & General |
| **Qualification** | AEC-Q200 based |
| **Termination** | Sn |
| **Assembly** | Pb Free Reflow |
| **RoHS** | Yes |
| **MSL Level** | 1 |
| **Packaging** | T&R 7in (180mm) |
| **Packaging Qty** | 2000 |

**AEC-Q200 based Qual** | **RoHS Compliant** | **Click for Online Data**

## ELECTRICAL CHARACTERISTICS

| | |
|---|---|
| **Resistance** [25°C] | 5000 Ohm |
| **Resistance Tolerance** [25°C] | ±3% |
| **B Value (25/85)** | 3480 K |
| **B Value Tolerance** | ±3% |
| **B Value (25/50)** | 3443 K |
| **B Value (25/100)** | 3492 K |
| **Maximum Dissipation** [25°C] | 0.12 W |
| **Thermal Dissipation Factor** | 2 mW/°C |
| **Thermal Time Constant** | 5 s |

## DIMENSIONS




| | mm | inches |
|---|---|---|
| **L** | 2.0±0.3 | 0.079±0.012 |
| **W** | 1.25±0.2 | 0.049±0.008 |
| **T** | 1.3 max | 0.051 max |
| **t** | 0.2 min | 0.008 min |

## HOW TO ORDER

| NB | 12 | J0 | 0502 | H | BF |
|---|---|---|---|---|---|
| Type | Case Size | Material Code | Resistance | Tolerance | Packaging |
| NB = Sn Term | 12 = 0805 | J0 = 3480 K | 0502 = 5000 Ohm | H = ±3% | BB = Cardboard tape (180mm reel, 4000 pcs/reel)<br>BF = Cardboard tape (180mm reel, 2000 pcs/reel)<br>BD = Cardboard tape (330mm reel, 10000 pcs/reel)<br>-- = Bulk (5000 pcs/bag) |


© KYOCERA AVX

# NB12J00502HBF

(0805, 5000 Ohm ±3%, 3480 K, Sn Term)

*NTC Chip Thermistor Datasheet*

## MATERIAL TABLE

| T (°C) | R(T) / R25 | TF (%) | α (%/°C) |
|---|---|---|---|
| **-55** | 51.75 | 20.47 | -6.23 |
| **-50** | 37.98 | 17.69 | -6.03 |
| **-45** | 28.15 | 15.21 | -5.84 |
| **-40** | 21.07 | 13.00 | -5.65 |
| **-35** | 15.91 | 11.04 | -5.48 |
| **-30** | 12.13 | 9.31 | -5.31 |
| **-25** | 9.321 | 7.77 | -5.15 |
| **-20** | 7.222 | 6.41 | -4.99 |
| **-15** | 5.640 | 5.22 | -4.84 |
| **-10** | 4.438 | 4.18 | -4.69 |
| **-5** | 3.517 | 3.27 | -4.55 |
| **0** | 2.807 | 2.48 | -4.42 |
| **5** | 2.255 | 1.80 | -4.29 |
| **10** | 1.824 | 1.22 | -4.17 |
| **15** | 1.484 | 0.73 | -4.05 |
| **20** | 1.215 | 0.33 | -3.93 |
| **25** | 1.000 | 0.00 | -3.82 |
| **30** | 0.8278 | 0.32 | -3.71 |
| **35** | 0.6889 | 0.68 | -3.61 |
| **40** | 0.5763 | 1.08 | -3.51 |
| **45** | 0.4845 | 1.51 | -3.41 |
| **50** | 0.4092 | 1.98 | -3.32 |
| **55** | 0.3472 | 2.47 | -3.23 |
| **60** | 0.2960 | 2.99 | -3.15 |
| **65** | 0.2533 | 3.53 | -3.06 |
| **70** | 0.2177 | 4.09 | -2.98 |
| **75** | 0.1879 | 4.67 | -2.90 |
| **80** | 0.1628 | 5.26 | -2.83 |
| **85** | 0.1415 | 5.87 | -2.76 |
| **90** | 0.1235 | 6.48 | -2.69 |
| **95** | 0.1081 | 7.11 | -2.62 |
| **100** | 0.0950 | 7.74 | -2.55 |
| **105** | 0.0837 | 8.38 | -2.49 |
| **110** | 0.0740 | 9.03 | -2.43 |
| **115** | 0.0656 | 9.68 | -2.37 |
| **120** | 0.0584 | 10.33 | -2.31 |
| **125** | 0.0521 | 10.99 | -2.26 |
| **130** | 0.0466 | 11.65 | -2.21 |
| **135** | 0.0417 | 12.31 | -2.15 |
| **140** | 0.0375 | 12.97 | -2.10 |
| **145** | 0.0338 | 13.63 | -2.06 |
| **150** | 0.0305 | 14.29 | -2.01 |

## RESISTANCE/TEMPERATURE

| T (°C) | R Min (Ω) | R Nom (Ω) | R Max (Ω) |
|---|---|---|---|
| **-55** | 198,013 | 258,756 | 319,499 |
| **-50** | 150,604 | 189,891 | 229,179 |
| **-45** | 115,127 | 140,758 | 166,390 |
| **-40** | 88,487 | 105,346 | 122,205 |
| **-35** | 68,397 | 79,573 | 90,748 |
| **-30** | 53,176 | 60,639 | 68,102 |
| **-25** | 41,585 | 46,604 | 51,624 |
| **-20** | 32,712 | 36,111 | 39,511 |
| **-15** | 25,882 | 28,201 | 30,520 |
| **-10** | 20,597 | 22,190 | 23,782 |
| **-5** | 16,485 | 17,587 | 18,689 |
| **0** | 13,267 | 14,036 | 14,805 |
| **5** | 10,736 | 11,277 | 11,818 |
| **10** | 8,734.3 | 9,119.2 | 9,504.1 |
| **15** | 7,143.0 | 7,420.0 | 7,697.0 |
| **20** | 5,871.3 | 6,073.5 | 6,275.7 |
| **25** | 4,850.0 | 5,000.0 | 5,150.0 |
| **30** | 4,001.8 | 4,139.1 | 4,276.4 |
| **35** | 3,318.0 | 3,444.7 | 3,571.4 |
| **40** | 2,764.0 | 2,881.5 | 2,999.0 |
| **45** | 2,313.0 | 2,422.3 | 2,531.7 |
| **50** | 1,944.2 | 2,046.1 | 2,148.0 |
| **55** | 1,641.2 | 1,736.2 | 1,831.3 |
| **60** | 1,391.2 | 1,479.8 | 1,568.5 |
| **65** | 1,183.9 | 1,266.7 | 1,349.5 |
| **70** | 1,011.5 | 1,088.7 | 1,166.0 |
| **75** | 867.5 | 939.5 | 1,011.6 |
| **80** | 746.6 | 813.9 | 881.1 |
| **85** | 644.9 | 707.6 | 770.4 |
| **90** | 558.9 | 617.4 | 676.0 |
| **95** | 486.0 | 540.6 | 595.3 |
| **100** | 423.9 | 475.0 | 526.0 |
| **105** | 371.0 | 418.6 | 466.3 |
| **110** | 325.6 | 370.1 | 414.6 |
| **115** | 286.6 | 328.2 | 369.8 |
| **120** | 253.0 | 291.9 | 330.8 |
| **125** | 223.9 | 260.3 | 296.7 |
| **130** | 198.7 | 232.8 | 266.9 |
| **135** | 176.8 | 208.7 | 240.7 |
| **140** | 157.7 | 187.6 | 217.6 |
| **145** | 141.0 | 169.1 | 197.2 |
| **150** | 126.3 | 152.7 | 179.2 |

NOTICE: Specifications are subject to change without notice. All statements, information and data given herein are beleived to be accurate and reliable, but are presented without guarantee or responsibility of any kind, expressed or implied. Specifications are typical and may not apply to all applications.