



# NTC THERMISTORS: TYPE NB

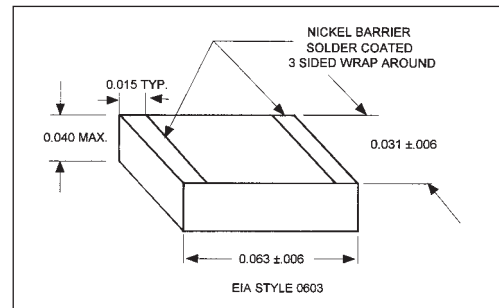
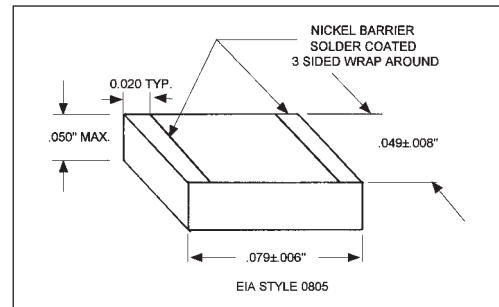
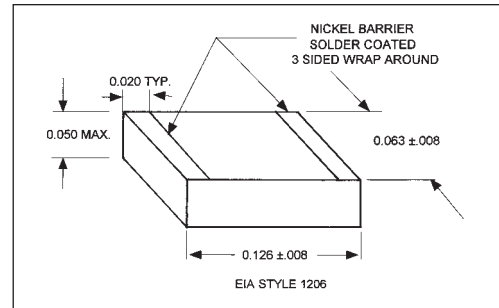
## NICKEL BARRIER SMD CHIP THERMISTOR 1206/0805 & 0603 SIZE

### DESCRIPTION:

1206, 0805 & 0603 negative temperature coefficient (NTC) Ceramic chip thermistors are intended for surface mounting applications. The terminations are solder plated with nickel barrier. Type NB's are manufactured using Thermometrics exclusive "State of the Art" materials and processing techniques. These techniques result in a low cost, rugged and stable component.

### FEATURES:

- Cost effective thermistor for automatic placement
- Solder plated Nickel Barrier Terminations
- Standard resistance tolerances down to  $\pm 3\%$
- High sensitivity to changes in temperature
- Suitable for temperature measurement, control and compensation
- Suitable for wave and reflow soldering
- Wide operating temperature range  $-40^{\circ}\text{C}$  to  $125^{\circ}\text{C}$
- Rugged construction
- Available pocket taped (8mm) to EIA RS-481



| TYPE NUMBER<br>(BULK PACK) | R@25°C<br>(Ohms) | MATERIAL<br>SYSTEM | tc @ 25°C<br>(%/°C) | BETA (K)<br>25/85 |
|----------------------------|------------------|--------------------|---------------------|-------------------|
| NB1206SA103JB              | 10K              | 2                  | -3.89               | 3540              |
| NB1206SA503JB              | 50K              | 5                  | -4.13               | 3740              |
| NB1206SB104JB              | 100K             | 1                  | -4.39               | 3977              |
| NB0805SA103JB              | 10K              | 2                  | -3.89               | 3540              |
| NB0805SD223JB              | 22K              | 2A                 | -3.99               | 3627              |
| NB0805SC303JB              | 30K              | 5A                 | -4.11               | 3730              |
| NB0805SE503JB              | 50K              | 5                  | -4.13               | 3740              |
| NB0805SB104JB              | 100K             | 1                  | -4.39               | 3977              |
| NB0603SA103JB              | 10K              | 2                  | -3.89               | 3540              |
| NB0603SE503JB              | 50K              | 5                  | -4.13               | 3740              |
| NB0603SB104JB              | 100K             | 1                  | -4.39               | 3977              |



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## RESISTANCE v TEMPERATURE DATA

| TEMP °C | RATIO Rt/R25 Nominal<br>MATERIAL SYSTEM |         |         |         |         |
|---------|-----------------------------------------|---------|---------|---------|---------|
|         | 1                                       | 2       | 2A      | 5       | 5A      |
| -55     | 94.57                                   | 56.63   | 61.82   | 73.35   | 70.47   |
| -45     | 46.67                                   | 30.22   | 32.64   | 37.53   | 36.35   |
| -35     | 24.11                                   | 16.81   | 17.96   | 20.08   | 19.59   |
| -25     | 12.99                                   | 9.72    | 10.26   | 11.20   | 10.99   |
| -15     | 7.281                                   | 5.816   | 6.069   | 6.485   | 6.398   |
| -5      | 4.229                                   | 3.593   | 3.708   | 3.886   | 3.851   |
| 5       | 2.539                                   | 2.286   | 2.333   | 2.403   | 2.390   |
| 15      | 1.571                                   | 1.493   | 1.508   | 1.530   | 1.526   |
| 25      | 1.0000                                  | 1.0000  | 1.0000  | 1.0000  | 1.0000  |
| 35      | 0.6530                                  | 0.6849  | 0.6785  | 0.6698  | 0.6710  |
| 45      | 0.4367                                  | 0.4789  | 0.4702  | 0.4587  | 0.4603  |
| 55      | 0.2985                                  | 0.3414  | 0.3324  | 0.3208  | 0.3222  |
| 65      | 0.2082                                  | 0.2477  | 0.2393  | 0.2286  | 0.2298  |
| 75      | 0.1480                                  | 0.1827  | 0.1752  | 0.1658  | 0.1667  |
| 85      | 0.10700                                 | 0.13682 | 0.13029 | 0.12228 | 0.12297 |
| 95      | 0.07864                                 | 0.10392 | 0.09832 | 0.09154 | 0.09204 |
| 105     | 0.05868                                 | 0.07998 | 0.07521 | 0.06950 | 0.06986 |
| 115     | 0.04439                                 | 0.06231 | 0.05826 | 0.05346 | 0.05371 |
| 125     | 0.03403                                 | 0.04911 | 0.04567 | 0.04163 | 0.04180 |

## DATA:

Resistance Tolerance @ 25°C.....±5% (J)  
Tolerance on "Beta".....±1%  
Time constant .....10 sec Typ.  
Dissipation factor.....8 mW/°C Typ.  
Operating Range.....-40°C to 125°C  
Soldering & cleaning ...Information available upon request.

## OPTIONS:

- For reel taping replace suffix "B" with "R" in Type Number
- Other resistance values in the range 2KΩ - 200KΩ available
- Other tolerances (K) ±10% and (H) ±3% available
- Tolerances at temperatures other than 25°C available.

ISSUE 5 – DEC 99

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