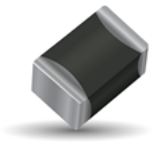
# NC20N00823MBA

(1206, 82 kOhm ±20%, 4080K, AgPdPt)

## NTC SMD Thermistor with AgPdPt termination

for Automotive, Industrial and General applications

To view data online visit:
**SpiCAT**



KYOCERA AVX Chip NTC Thermistors are high quality devices developed especially for surface mounting applications. They are widely used for temperature compensation, but can also achieve temperature control of printed circuits in a wide range of applications, including automotive, industrial and general purpose. AgPdPt termination termination for conductive adhesive assembly (not suitable for lead free soldering - use NB series).

## Characteristics

| Case Size | 1206 |
|---|---|
| **Operating temperature** | -55°C to +150°C |
| **Resistance** | 82 kOhm |
| **Tolerance on Resistance (25°C)** | ±20% |
| **B 25/85** | 4080K±3% |
| **Maximum dissipation at 25°C** | 0.24 W |
| **Thermal dissipation factor** | 4 mW/°C |
| **Thermal time constant** | 7 s |
| **Termination** | AgPdPt (for conductive adhesive) |

RoHS COMPLIANT

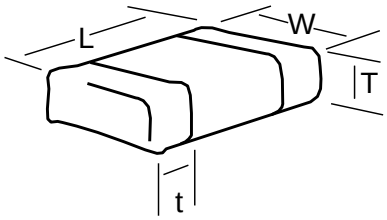
MSL 1

AEC-Q200 based qualification

## Dimensions

**mm (inches)**

| Size (EIA) | Length (L) | Width (W) | Thickness (T) | Terminal (t) |
|---|---|---|---|---|
| 1206 | 3.2±0.4 | 1.6±0.25 | 1.5 max | 0.2 min |
| | (0.126±0.016) | (0.063±0.01) | (0.059) max | (0.008) min |




## How to Order (Packaging options)

| NC | 20 | N0 | 0823 | M | BA |
|---|---|---|---|---|---|
| **Type** | **Size** | **Material Code** | **Resistance (Ohm)** | **Tolerance** | **Suffix: Packaging** |
| NC = AgPdPt for conductive adhesive | 20 = 1206 | See Datasheet | 2 Sig. Digits + Number of Zeros | H = ±3%*<br>J = ±5%<br>K = ±10%<br>M = ±20%<br><br>* For selected PNs | BA = Plastic tape (180mm reel, 3,000 pcs/reel)<br>BE = Plastic tape (180mm reel, 1,500 pcs/reel)<br>BC = Plastic tape (330mm reel, 10,000 pcs/reel)<br>-- = Bulk (5000 pcs/bag) |

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.

# Material Table

## N0 (B25/85 = 4080K±3%)

| B25/50 | B25/75 | B25/85 | B25/100 | B Tol |
|---|---|---|---|---|
| 4049 K | 4072 K | 4080 K | 4090 K | ±3% |

| T (°C) | R(T) / R25 | TF (%) | α (%/°C) | R Min (Ω) | R Nom (Ω) | R Max (Ω) |
|---|---|---|---|---|---|---|
| -55 | 110.1 | 24.01 | -7.50 | 5,055,078 | 9,027,982 | 13,000,886 |
| -50 | 75.89 | 20.74 | -7.25 | 3,687,665 | 6,222,928 | 8,758,191 |
| -45 | 52.97 | 17.83 | -7.01 | 2,700,378 | 4,343,741 | 5,987,104 |
| -40 | 37.42 | 15.25 | -6.78 | 1,987,133 | 3,068,771 | 4,150,408 |
| -35 | 26.75 | 12.95 | -6.56 | 1,470,540 | 2,193,181 | 2,915,823 |
| -30 | 19.33 | 10.91 | -6.35 | 1,094,919 | 1,584,834 | 2,074,749 |
| -25 | 14.11 | 9.11 | -6.14 | 820,489 | 1,157,424 | 1,494,358 |
| -20 | 10.41 | 7.52 | -5.95 | 618,904 | 853,905 | 1,088,907 |
| -15 | 7.758 | 6.12 | -5.76 | 469,966 | 636,143 | 802,320 |
| -10 | 5.834 | 4.90 | -5.58 | 359,259 | 478,361 | 597,462 |
| -5 | 4.426 | 3.83 | -5.41 | 276,458 | 362,950 | 449,442 |
| 0 | 3.387 | 2.91 | -5.24 | 214,140 | 277,762 | 341,383 |
| 5 | 2.614 | 2.11 | -5.08 | 166,943 | 214,330 | 261,717 |
| 10 | 2.033 | 1.43 | -4.93 | 130,974 | 166,700 | 202,426 |
| 15 | 1.593 | 0.86 | -4.78 | 103,393 | 130,645 | 157,898 |
| 20 | 1.258 | 0.39 | -4.64 | 82,114 | 103,140 | 124,166 |
| 25 | 1.000 | 0.00 | -4.51 | 65,600 | 82,000 | 98,400 |
| 30 | 0.8004 | 0.37 | -4.37 | 52,264 | 65,635 | 79,006 |
| 35 | 0.6449 | 0.80 | -4.25 | 41,882 | 52,878 | 63,874 |
| 40 | 0.5228 | 1.26 | -4.13 | 33,752 | 42,867 | 51,983 |
| 45 | 0.4264 | 1.77 | -4.01 | 27,348 | 34,961 | 42,574 |
| 50 | 0.3497 | 2.32 | -3.90 | 22,277 | 28,678 | 35,080 |
| 55 | 0.2885 | 2.90 | -3.79 | 18,239 | 23,656 | 29,073 |
| 60 | 0.2392 | 3.51 | -3.68 | 15,006 | 19,618 | 24,230 |
| 65 | 0.1994 | 4.14 | -3.58 | 12,405 | 16,353 | 20,301 |
| 70 | 0.1671 | 4.80 | -3.49 | 10,302 | 13,699 | 17,097 |
| 75 | 0.1406 | 5.48 | -3.39 | 8,593.7 | 11,531 | 14,469 |
| 80 | 0.1189 | 6.17 | -3.30 | 7,199.5 | 9,751.3 | 12,303 |
| 85 | 0.1010 | 6.88 | -3.22 | 6,056.5 | 8,282.7 | 10,509 |
| 90 | 0.0862 | 7.60 | -3.13 | 5,115.4 | 7,065.5 | 9,015.6 |
| 95 | 0.0738 | 8.33 | -3.05 | 4,337.4 | 6,052.1 | 7,766.9 |
| 100 | 0.0635 | 9.08 | -2.97 | 3,691.4 | 5,204.7 | 6,718.1 |
| 105 | 0.0548 | 9.83 | -2.90 | 3,153.1 | 4,493.3 | 5,833.5 |
| 110 | 0.0475 | 10.58 | -2.83 | 2,702.7 | 3,893.4 | 5,084.2 |
| 115 | 0.0413 | 11.35 | -2.76 | 2,324.4 | 3,385.8 | 4,447.2 |
| 120 | 0.0360 | 12.11 | -2.69 | 2,005.7 | 2,954.5 | 3,903.4 |
| 125 | 0.0315 | 12.89 | -2.62 | 1,736.1 | 2,586.8 | 3,437.5 |
| 130 | 0.0277 | 13.66 | -2.56 | 1,507.4 | 2,272.2 | 3,037.0 |
| 135 | 0.0244 | 14.43 | -2.50 | 1,312.7 | 2,002.1 | 2,691.5 |
| 140 | 0.0216 | 15.21 | -2.44 | 1,146.4 | 1,769.4 | 2,392.4 |
| 145 | 0.0191 | 15.98 | -2.38 | 1,004.0 | 1,568.3 | 2,132.6 |
| 150 | 0.0170 | 16.76 | -2.33 | 881.6 | 1,394.0 | 1,906.4 |