

# NRG

## Epoxy sealed radial lead NTC thermistor



### Product features

- Epoxy sealed radial NTC thermistor
- Temperature sensing, quick response time
- Bead with ring lug
- Wide resistance range 1 kΩ to 470 kΩ
- Non-linear change in resistance vs temperature

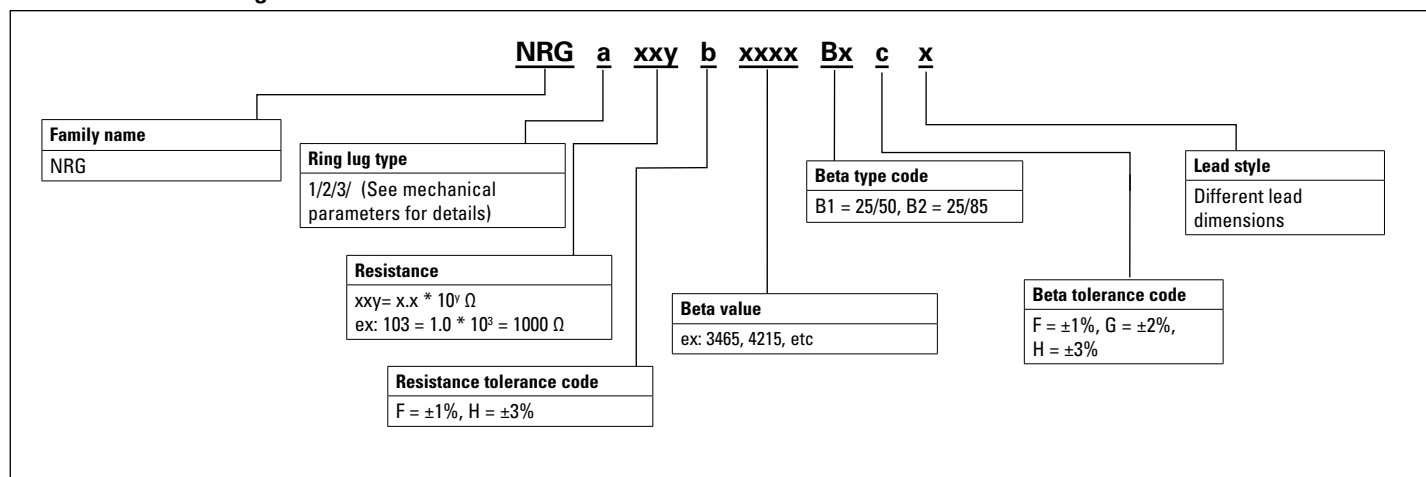
### Packaging information

- Bulk, Type 3: 250 parts per poly bag
- Bulk, Others: 500 parts per poly bag

### Applications

- Industrial Process Control
- Commercial appliances
- Battery, supercapacitor and energy storage systems
- Uninterruptible power supplies
- Consumer appliances
- Medical devices
- Heating, ventilation and air conditioning, Refrigeration (HVACR)
- Food service equipment
- IoT
- White goods/household appliances
- Computer and peripheral products

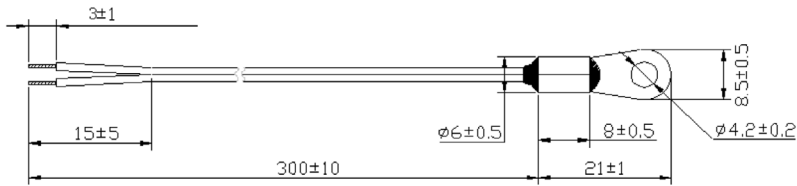
### Environmental compliance and general specifications

**Table 1. Part numbering**

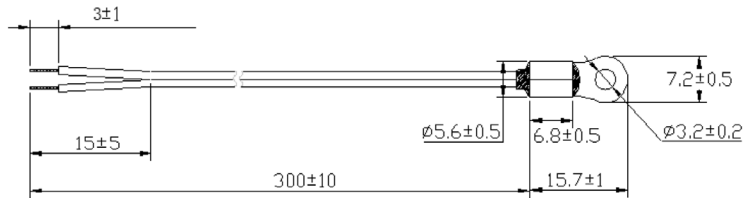
See electrical specification table for option details

# Mechanical parameters- mm

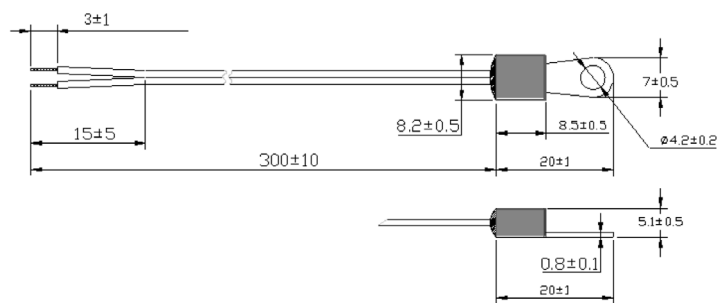
## Lug type 1



## Lug type 2



## Lug type 3



- 26AWG black Insulated lead wire with terminals tinned

Electrical specifications

| Part number     | Zero power resistance<br>@ 25°C<br>R <sub>25</sub> (kΩ) | Ring lug type<br>(Part number code) | R <sub>25</sub><br>Tolerance<br>(Part number code) | Beta type<br>(Part number code) | Beta value<br>(K) | Beta tolerance<br>(Part number code) | Maximum power<br>@ +25°C<br>P <sub>max</sub> (mW) | Dissipation factor<br>(mW/°C)   | Thermal time constant<br>T (second) | Operation temperature<br>TL~TU(°C) |
|-----------------|---------------------------------------------------------|-------------------------------------|----------------------------------------------------|---------------------------------|-------------------|--------------------------------------|---------------------------------------------------|---------------------------------|-------------------------------------|------------------------------------|
| NRGa103bxxxxBxc | 1                                                       | (1), (2), (3)                       | ±1% (F), ±3% (H)                                   | 25/85 (B2)                      | 3435              | ±2% (G), ±3% (H)                     | 50                                                | ≥ 2.5 (type3)<br>≥ 3.0 (others) | ≤ 10 (type3)<br>≤ 9 (others)        | -30 to +105                        |
| NRGa683bxxxxBxc | 6.8                                                     | (1), (2), (3)                       | ±1% (F), ±3% (H)                                   | 25/85 (B2)                      | 3470              | ±2% (G), ±3% (H)                     | 50                                                | ≥ 2.5 (type3)<br>≥ 3.0 (others) | ≤ 10 (type3)<br>≤ 9 (others)        | -30 to +105                        |
| NRGa683bxxxxBxc | 6.8                                                     | (1), (2), (3)                       | ±1% (F), ±3% (H)                                   | 25/85 (B2)                      | 3975              | ±2% (G), ±3% (H)                     | 50                                                | ≥ 2.5 (type3)<br>≥ 3.0 (others) | ≤ 10 (type3)<br>≤ 9 (others)        | -30 to +105                        |
| NRGa104bxxxxBxc | 10                                                      | (1), (2), (3)                       | ±1% (F), ±3% (H)                                   | 25/85 (B2)                      | 3435              | ±1% (F), ±3% (H)                     | 50                                                | ≥ 2.5 (type3)<br>≥ 3.0 (others) | ≤ 10 (type3)<br>≤ 9 (others)        | -30 to +105                        |
| NRGa104bxxxxBxc | 10                                                      | (1), (2), (3)                       | ±1% (F), ±3% (H)                                   | 25/85 (B2)                      | 3975              | ±1% (F), ±3% (H)                     | 50                                                | ≥ 2.5 (type3)<br>≥ 3.0 (others) | ≤ 10 (type3)<br>≤ 9 (others)        | -30 to +105                        |
| NRGa203bxxxxBxc | 2                                                       | (1), (2), (3)                       | ±1% (F), ±3% (H)                                   | 25/85 (B2)                      | 3435              | ±1% (F), ±3% (H)                     | 50                                                | ≥ 2.5 (type3)<br>≥ 3.0 (others) | ≤ 10 (type3)<br>≤ 9 (others)        | -30 to +105                        |
| NRGa224bxxxxBxc | 22                                                      | (1), (2), (3)                       | ±1% (F), ±3% (H)                                   | 25/85 (B2)                      | 3740              | ±1% (F), ±3% (H)                     | 50                                                | ≥ 2.5 (type3)<br>≥ 3.0 (others) | ≤ 10 (type3)<br>≤ 9 (others)        | -30 to +105                        |
| NRGa334bxxxxBxc | 33                                                      | (1), (2), (3)                       | ±1% (F), ±3% (H)                                   | 25/85 (B2)                      | 3975              | ±1% (F), ±3% (H)                     | 50                                                | ≥ 2.5 (type3)<br>≥ 3.0 (others) | ≤ 10 (type3)<br>≤ 9 (others)        | -30 to +105                        |
| NRGa474bxxxxBxc | 47                                                      | (1), (2), (3)                       | ±1% (F), ±3% (H)                                   | 25/85 (B2)                      | 4090              | ±1% (F), ±3% (H)                     | 50                                                | ≥ 2.5 (type3)<br>≥ 3.0 (others) | ≤ 10 (type3)<br>≤ 9 (others)        | -30 to +105                        |
| NRGa504bxxxxBxc | 50                                                      | (1), (2), (3)                       | ±1% (F), ±3% (H)                                   | 25/85 (B2)                      | 3950              | ±1% (F), ±3% (H)                     | 50                                                | ≥ 2.5 (type3)<br>≥ 3.0 (others) | ≤ 10 (type3)<br>≤ 9 (others)        | -30 to +105                        |
| NRGa504bxxxxBxc | 50                                                      | (1), (2), (3)                       | ±1% (F), ±3% (H)                                   | 25/85 (B2)                      | 4050              | ±1% (F), ±3% (H)                     | 50                                                | ≥ 2.5 (type3)<br>≥ 3.0 (others) | ≤ 10 (type3)<br>≤ 9 (others)        | -30 to +105                        |
| NRGa105bxxxxBxc | 100                                                     | (1), (2), (3)                       | ±1% (F), ±3% (H)                                   | 25/85 (B2)                      | 4000              | ±1% (F), ±3% (H)                     | 50                                                | ≥ 2.5 (type3)<br>≥ 3.0 (others) | ≤ 10 (type3)<br>≤ 9 (others)        | -30 to +105                        |
| NRGa105bxxxxBxc | 100                                                     | (1), (2), (3)                       | ±1% (F), ±3% (H)                                   | 25/85 (B2)                      | 4190              | ±2% (G), ±3% (H)                     | 50                                                | ≥ 2.5 (type3)<br>≥ 3.0 (others) | ≤ 10 (type3)<br>≤ 9 (others)        | -30 to +105                        |
| NRGa105bxxxxBxc | 100                                                     | (1), (2), (3)                       | ±1% (F), ±3% (H)                                   | 25/85 (B2)                      | 4360              | ±2% (G), ±3% (H)                     | 50                                                | ≥ 2.5 (type3)<br>≥ 3.0 (others) | ≤ 10 (type3)<br>≤ 9 (others)        | -30 to +105                        |
| NRGa475bxxxxBxc | 470                                                     | (1), (2), (3)                       | ±1% (F), ±3% (H)                                   | 25/85 (B2)                      | 4570              | ±2% (G), ±3% (H)                     | 50                                                | ≥ 2.5 (type3)<br>≥ 3.0 (others) | ≤ 10 (type3)<br>≤ 9 (others)        | -30 to +105                        |
| NRGa203bxxxxBxc | 2                                                       | (1), (2), (3)                       | ±1% (F), ±3% (H)                                   | 25/50 (B1)                      | 3380              | ±2% (G), ±3% (H)                     | 50                                                | ≥ 2.5 (type3)<br>≥ 3.0 (others) | ≤ 10 (type3)<br>≤ 9 (others)        | -30 to +105                        |
| NRGa503bxxxxBxc | 5                                                       | (1), (2), (3)                       | ±1% (F), ±3% (H)                                   | 25/50 (B1)                      | 3420              | ±2% (G), ±3% (H)                     | 50                                                | ≥ 2.5 (type3)<br>≥ 3.0 (others) | ≤ 10 (type3)<br>≤ 9 (others)        | -30 to +105                        |
| NRGa503bxxxxBxc | 5                                                       | (1), (2), (3)                       | ±1% (F), ±3% (H)                                   | 25/50 (B1)                      | 3900              | ±2% (G), ±3% (H)                     | 50                                                | ≥ 2.5 (type3)<br>≥ 3.0 (others) | ≤ 10 (type3)<br>≤ 9 (others)        | -30 to +105                        |
| NRGa104bxxxxBxc | 10                                                      | (1), (2), (3)                       | ±1% (F), ±3% (H)                                   | 25/50 (B1)                      | 3380              | ±1% (F), ±3% (H)                     | 50                                                | ≥ 2.5 (type3)<br>≥ 3.0 (others) | ≤ 10 (type3)<br>≤ 9 (others)        | -30 to +105                        |
| NRGa104bxxxxBxc | 10                                                      | (1), (2), (3)                       | ±1% (F), ±3% (H)                                   | 25/50 (B1)                      | 4000              | ±1% (F), ±3% (H)                     | 50                                                | ≥ 2.5 (type3)<br>≥ 3.0 (others) | ≤ 10 (type3)<br>≤ 9 (others)        | -30 to +105                        |
| NRGa104bxxxxBxc | 10                                                      | (1), (2), (3)                       | ±1% (F), ±3% (H)                                   | 25/50 (B1)                      | 3950              | ±1% (F), ±3% (H)                     | 50                                                | ≥ 2.5 (type3)<br>≥ 3.0 (others) | ≤ 10 (type3)<br>≤ 9 (others)        | -30 to +105                        |
| NRGa684bxxxxBxc | 68                                                      | (1), (2), (3)                       | ±1% (F), ±3% (H)                                   | 25/50 (B1)                      | 3950              | ±1% (F), ±3% (H)                     | 50                                                | ≥ 2.5 (type3)<br>≥ 3.0 (others) | ≤ 10 (type3)<br>≤ 9 (others)        | -30 to +105                        |
| NRGa224bxxxxBxc | 22                                                      | (1), (2), (3)                       | ±1% (F), ±3% (H)                                   | 25/50 (B1)                      | 3700              | ±1% (F), ±3% (H)                     | 50                                                | ≥ 2.5 (type3)<br>≥ 3.0 (others) | ≤ 10 (type3)<br>≤ 9 (others)        | -30 to +105                        |
| NRGa474bxxxxBxc | 47                                                      | (1), (2), (3)                       | ±1% (F), ±3% (H)                                   | 25/50 (B1)                      | 3950              | ±1% (F), ±3% (H)                     | 50                                                | ≥ 2.5 (type3)<br>≥ 3.0 (others) | ≤ 10 (type3)<br>≤ 9 (others)        | -30 to +105                        |
| NRGa474bxxxxBxc | 47                                                      | (1), (2), (3)                       | ±1% (F), ±3% (H)                                   | 25/50 (B1)                      | 4020              | ±1% (F), ±3% (H)                     | 50                                                | ≥ 2.5 (type3)<br>≥ 3.0 (others) | ≤ 10 (type3)<br>≤ 9 (others)        | -30 to +105                        |
| NRGa105bxxxxBxc | 100                                                     | (1), (2), (3)                       | ±1% (F), ±3% (H)                                   | 25/50 (B1)                      | 3950              | ±1% (F), ±3% (H)                     | 50                                                | ≥ 2.5 (type3)<br>≥ 3.0 (others) | ≤ 10 (type3)<br>≤ 9 (others)        | -30 to +105                        |
| NRGa105bxxxxBxc | 100                                                     | (1), (2), (3)                       | ±1% (F), ±3% (H)                                   | 25/50 (B1)                      | 4120              | ±2% (G), ±3% (H)                     | 50                                                | ≥ 2.5 (type3)<br>≥ 3.0 (others) | ≤ 10 (type3)<br>≤ 9 (others)        | -30 to +105                        |
| NRGa225bxxxxBxc | 220                                                     | (1), (2), (3)                       | ±1% (F), ±3% (H)                                   | 25/50 (B1)                      | 4370              | ±2% (G), ±3% (H)                     | 50                                                | ≥ 2.5 (type3)<br>≥ 3.0 (others) | ≤ 10 (type3)<br>≤ 9 (others)        | -30 to +105                        |

a= Enter ring lug type from table above (1, 2, 3) See Mechanical parameters for lug type details

b= Enter resistance tolerance code from table above (F = ±1%, H = ±3%)

Bx= Enter Beta type code from table above (B1 = 25/50, B2 = 25/85)

c= Enter Beta tolerance code from table above (F = ±1%, G = ±2%, H = ±3%)

### Temperature characteristics

| Part number         | NRG103<br>3435     | NRG203<br>3435     | NRG104<br>3435     | NRG104<br>3975     | NRG224<br>3740     | NRG334<br>3975     |
|---------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| B type              | B25/85             | B25/85             | B25/85             | B25/85             | B25/85             | B25/85             |
| Temperature<br>(°C) | Resistance<br>(kΩ) | Resistance<br>(kΩ) | Resistance<br>(kΩ) | Resistance<br>(kΩ) | Resistance<br>(kΩ) | Resistance<br>(kΩ) |
| -40                 | 20.08              | 95                 | 325                | 39.5               | 575                | 1116.42            |
| -39                 | 19.14              | 91.71              | 304.83             | 37.47              | 541.35             | 1045.23            |
| -38                 | 18.24              | 88.53              | 286.01             | 35.55              | 509.86             | 978.99             |
| -37                 | 17.38              | 85.46              | 268.45             | 33.74              | 480.37             | 917.34             |
| -36                 | 16.56              | 82.51              | 252.06             | 32.03              | 452.75             | 859.93             |
| -35                 | 15.78              | 79.66              | 236.76             | 30.41              | 426.86             | 806.46             |
| -34                 | 15.04              | 76.9               | 222.47             | 28.88              | 402.6              | 756.62             |
| -33                 | 14.33              | 74.25              | 209.11             | 27.43              | 379.85             | 710.15             |
| -32                 | 13.66              | 71.69              | 196.63             | 26.05              | 358.5              | 666.81             |
| -31                 | 13.01              | 69.22              | 184.95             | 24.76              | 338.48             | 626.37             |
| -30                 | 12.4               | 66.84              | 174.03             | 23.53              | 319.68             | 588.62             |
| -29                 | 11.82              | 64.54              | 163.82             | 22.36              | 302.02             | 553.36             |
| -28                 | 11.26              | 62.32              | 154.25             | 21.26              | 285.44             | 520.42             |
| -27                 | 10.73              | 60.18              | 145.3              | 20.22              | 269.86             | 489.64             |
| -26                 | 10.23              | 58.11              | 136.91             | 19.23              | 255.21             | 460.85             |
| -25                 | 9.75               | 56.12              | 129.05             | 18.3               | 241.44             | 433.93             |
| -24                 | 9.29               | 54.19              | 121.68             | 17.41              | 228.49             | 408.73             |
| -23                 | 8.85               | 52.34              | 114.78             | 16.57              | 216.3              | 385.14             |
| -22                 | 8.44               | 50.54              | 108.3              | 15.77              | 204.83             | 363.06             |
| -21                 | 8.04               | 48.81              | 102.22             | 15.02              | 194.03             | 342.36             |
| -20                 | 7.67               | 47.14              | 96.51              | 14.3               | 183.86             | 322.97             |
| -19                 | 7.31               | 45.53              | 91.15              | 13.62              | 174.28             | 304.79             |
| -18                 | 6.96               | 43.97              | 86.12              | 12.98              | 165.24             | 287.74             |
| -17                 | 6.64               | 42.47              | 81.4               | 12.37              | 156.73             | 271.74             |
| -16                 | 6.33               | 41.02              | 76.95              | 11.79              | 148.7              | 256.72             |
| -15                 | 6.03               | 39.62              | 72.78              | 11.24              | 141.13             | 242.62             |
| -14                 | 5.75               | 38.27              | 68.85              | 10.72              | 133.98             | 229.37             |
| -13                 | 5.49               | 36.96              | 65.16              | 10.22              | 127.23             | 216.93             |
| -12                 | 5.23               | 35.7               | 61.68              | 9.75               | 120.86             | 205.23             |
| -11                 | 4.99               | 34.49              | 58.41              | 9.31               | 114.85             | 194.23             |
| -10                 | 4.76               | 33.31              | 55.33              | 8.88               | 109.16             | 183.88             |
| -9                  | 4.54               | 32.18              | 52.42              | 8.48               | 103.79             | 174.15             |
| -8                  | 4.33               | 31.08              | 49.69              | 8.1                | 98.71              | 164.98             |
| -7                  | 4.13               | 30.03              | 47.11              | 7.73               | 93.91              | 156.35             |
| -6                  | 3.94               | 29                 | 44.68              | 7.39               | 89.37              | 148.22             |
| -5                  | 3.76               | 28.02              | 42.39              | 7.06               | 85.07              | 140.56             |
| -4                  | 3.59               | 27.07              | 40.23              | 6.74               | 81                 | 133.34             |
| -3                  | 3.42               | 26.15              | 38.19              | 6.45               | 77.15              | 126.54             |
| -2                  | 3.27               | 25.26              | 36.27              | 6.16               | 73.5               | 120.12             |
| -1                  | 3.12               | 24.4               | 34.45              | 5.89               | 70.05              | 114.06             |
| 0                   | 2.98               | 23.57              | 32.73              | 5.64               | 66.78              | 108.34             |
| 1                   | 2.85               | 22.77              | 31.11              | 5.39               | 63.67              | 102.94             |
| 2                   | 2.72               | 22                 | 29.58              | 5.16               | 60.73              | 97.84              |
| 3                   | 2.6                | 21.26              | 28.13              | 4.94               | 57.94              | 93.02              |
| 4                   | 2.48               | 20.54              | 26.76              | 4.73               | 55.29              | 88.47              |
| 5                   | 2.37               | 19.84              | 25.46              | 4.53               | 52.78              | 84.17              |
| 6                   | 2.27               | 19.17              | 24.23              | 4.34               | 50.4               | 80.1               |
| 7                   | 2.17               | 18.52              | 23.07              | 4.16               | 48.14              | 76.25              |
| 8                   | 2.07               | 17.89              | 21.97              | 3.98               | 45.99              | 72.6               |
| 9                   | 1.98               | 17.29              | 20.93              | 3.82               | 43.94              | 69.15              |
| 10                  | 1.89               | 16.71              | 19.95              | 3.66               | 42                 | 65.89              |
| 11                  | 1.81               | 16.14              | 19.01              | 3.51               | 40.16              | 62.8               |
| 12                  | 1.73               | 15.6               | 18.13              | 3.37               | 38.41              | 59.87              |
| 13                  | 1.66               | 15.07              | 17.29              | 3.23               | 36.74              | 57.09              |
| 14                  | 1.59               | 14.56              | 16.49              | 3.1                | 35.16              | 54.46              |
| 15                  | 1.52               | 14.07              | 15.74              | 2.98               | 33.65              | 51.96              |
| 16                  | 1.46               | 13.6               | 15.02              | 2.86               | 32.21              | 49.59              |
| 17                  | 1.4                | 13.14              | 14.34              | 2.74               | 30.85              | 47.35              |
| 18                  | 1.34               | 12.7               | 13.7               | 2.64               | 29.54              | 45.21              |

Temperature characteristics, cont.

| Part number         | NRG103<br>3435     | NRG203<br>3435     | NRG104<br>3435     | NRG104<br>3975     | NRG224<br>3740     | NRG334<br>3975     |
|---------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| B type              | B25/85             | B25/85             | B25/85             | B25/85             | B25/85             | B25/85             |
| Temperature<br>(°C) | Resistance<br>(kΩ) | Resistance<br>(kΩ) | Resistance<br>(kΩ) | Resistance<br>(kΩ) | Resistance<br>(kΩ) | Resistance<br>(kΩ) |
| 19                  | 1.28               | 12.27              | 13.09              | 2.53               | 28.3               | 43.19              |
| 20                  | 1.23               | 11.86              | 12.5               | 2.43               | 27.12              | 41.27              |
| 21                  | 1.18               | 11.46              | 11.95              | 2.34               | 26                 | 39.44              |
| 22                  | 1.13               | 11.08              | 11.43              | 2.25               | 24.93              | 37.71              |
| 23                  | 1.09               | 10.7               | 10.93              | 2.16               | 23.9               | 36.06              |
| 24                  | 1.04               | 10.35              | 10.45              | 2.08               | 22.93              | 34.49              |
| 25                  | 1                  | 10                 | 10                 | 2                  | 22                 | 33                 |
| 26                  | 0.9603             | 9.67               | 9.57               | 1.92               | 21.11              | 31.58              |
| 27                  | 0.9224             | 9.34               | 9.16               | 1.85               | 20.27              | 30.23              |
| 28                  | 0.8862             | 9.03               | 8.77               | 1.78               | 19.46              | 28.95              |
| 29                  | 0.8517             | 8.73               | 8.4                | 1.72               | 18.69              | 27.73              |
| 30                  | 0.8188             | 8.44               | 8.05               | 1.65               | 17.95              | 26.56              |
| 31                  | 0.7873             | 8.16               | 7.71               | 1.59               | 17.25              | 25.45              |
| 32                  | 0.7573             | 7.89               | 7.39               | 1.54               | 16.57              | 24.4               |
| 33                  | 0.7287             | 7.62               | 7.09               | 1.48               | 15.93              | 23.39              |
| 34                  | 0.7013             | 7.37               | 6.8                | 1.43               | 15.32              | 22.43              |
| 35                  | 0.6752             | 7.13               | 6.52               | 1.38               | 14.73              | 21.52              |
| 36                  | 0.6502             | 6.89               | 6.25               | 1.33               | 14.17              | 20.64              |
| 37                  | 0.6263             | 6.66               | 6                  | 1.28               | 13.63              | 19.81              |
| 38                  | 0.6035             | 6.44               | 5.76               | 1.23               | 13.12              | 19.02              |
| 39                  | 0.5817             | 6.23               | 5.53               | 1.19               | 12.63              | 18.26              |
| 40                  | 0.5608             | 6.03               | 5.31               | 1.15               | 12.15              | 17.54              |
| 41                  | 0.5409             | 5.83               | 5.1                | 1.11               | 11.7               | 16.84              |
| 42                  | 0.5218             | 5.64               | 4.9                | 1.07               | 11.27              | 16.18              |
| 43                  | 0.5036             | 5.45               | 4.71               | 1.04               | 10.86              | 15.55              |
| 44                  | 0.4861             | 5.27               | 4.53               | 1                  | 10.46              | 14.95              |
| 45                  | 0.4693             | 5.1                | 4.35               | 0.9668             | 10.08              | 14.37              |
| 46                  | 0.4533             | 4.94               | 4.19               | 0.9345             | 9.72               | 13.82              |
| 47                  | 0.438              | 4.78               | 4.03               | 0.9034             | 9.37               | 13.3               |
| 48                  | 0.4233             | 4.62               | 3.87               | 0.8736             | 9.04               | 12.79              |
| 49                  | 0.4092             | 4.47               | 3.73               | 0.8449             | 8.72               | 12.31              |
| 50                  | 0.3957             | 4.33               | 3.59               | 0.8173             | 8.41               | 11.85              |
| 51                  | 0.3827             | 4.19               | 3.45               | 0.7908             | 8.11               | 11.41              |
| 52                  | 0.3703             | 4.05               | 3.33               | 0.7653             | 7.83               | 10.99              |
| 53                  | 0.3584             | 3.92               | 3.2                | 0.7408             | 7.56               | 10.58              |
| 54                  | 0.347              | 3.8                | 3.09               | 0.7173             | 7.3                | 10.19              |
| 55                  | 0.336              | 3.67               | 2.97               | 0.6946             | 7.05               | 9.82               |
| 56                  | 0.3255             | 3.56               | 2.87               | 0.6728             | 6.81               | 9.47               |
| 57                  | 0.3154             | 3.44               | 2.76               | 0.6518             | 6.58               | 9.13               |
| 58                  | 0.3057             | 3.34               | 2.66               | 0.6315             | 6.35               | 8.8                |
| 59                  | 0.2963             | 3.23               | 2.57               | 0.6121             | 6.14               | 8.49               |
| 60                  | 0.2874             | 3.13               | 2.48               | 0.5933             | 5.94               | 8.19               |
| 61                  | 0.2788             | 3.03               | 2.39               | 0.5753             | 5.74               | 7.9                |
| 62                  | 0.2705             | 2.93               | 2.31               | 0.5579             | 5.55               | 7.62               |
| 63                  | 0.2625             | 2.84               | 2.23               | 0.5411             | 5.37               | 7.36               |
| 64                  | 0.2549             | 2.75               | 2.15               | 0.525              | 5.19               | 7.1                |
| 65                  | 0.2475             | 2.67               | 2.08               | 0.5094             | 5.02               | 6.86               |
| 66                  | 0.2404             | 2.59               | 2                  | 0.4944             | 4.86               | 6.62               |
| 67                  | 0.2336             | 2.51               | 1.94               | 0.4799             | 4.7                | 6.4                |
| 68                  | 0.227              | 2.43               | 1.87               | 0.4659             | 4.55               | 6.18               |
| 69                  | 0.2207             | 2.35               | 1.81               | 0.4525             | 4.41               | 5.97               |
| 70                  | 0.2146             | 2.28               | 1.75               | 0.4395             | 4.27               | 5.77               |
| 71                  | 0.2087             | 2.21               | 1.69               | 0.4269             | 4.13               | 5.58               |
| 72                  | 0.203              | 2.14               | 1.63               | 0.4148             | 4.01               | 5.39               |
| 73                  | 0.1976             | 2.08               | 1.58               | 0.4031             | 3.88               | 5.21               |
| 74                  | 0.1923             | 2.02               | 1.53               | 0.3919             | 3.76               | 5.04               |
| 75                  | 0.1872             | 1.96               | 1.48               | 0.381              | 3.64               | 4.88               |
| 76                  | 0.1823             | 1.9                | 1.43               | 0.3704             | 3.53               | 4.72               |
| 77                  | 0.1776             | 1.84               | 1.38               | 0.3603             | 3.43               | 4.57               |

Temperature characteristics, cont.

| Part number         | NRG103<br>3435     | NRG203<br>3435     | NRG104<br>3435     | NRG104<br>3975     | NRG224<br>3740     | NRG334<br>3975     |
|---------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| B type              | B25/85             | B25/85             | B25/85             | B25/85             | B25/85             | B25/85             |
| Temperature<br>(°C) | Resistance<br>(kΩ) | Resistance<br>(kΩ) | Resistance<br>(kΩ) | Resistance<br>(kΩ) | Resistance<br>(kΩ) | Resistance<br>(kΩ) |
| 78                  | 0.173              | 1.79               | 1.34               | 0.3504             | 3.32               | 4.42               |
| 79                  | 0.1686             | 1.73               | 1.3                | 0.3409             | 3.22               | 4.28               |
| 80                  | 0.1643             | 1.68               | 1.26               | 0.3318             | 3.12               | 4.14               |
| 81                  | 0.1602             | 1.63               | 1.22               | 0.3229             | 3.03               | 4.01               |
| 82                  | 0.1562             | 1.59               | 1.18               | 0.3143             | 2.94               | 3.89               |
| 83                  | 0.1524             | 1.54               | 1.14               | 0.306              | 2.85               | 3.77               |
| 84                  | 0.1487             | 1.49               | 1.11               | 0.298              | 2.77               | 3.65               |
| 85                  | 0.1451             | 1.45               | 1.07               | 0.2902             | 2.69               | 3.54               |
| 86                  | 0.1416             | 1.41               | 1.04               | 0.2827             | 2.61               | 3.43               |
| 87                  | 0.1383             | 1.37               | 1.01               | 0.2754             | 2.54               | 3.32               |
| 88                  | 0.135              | 1.33               | 0.9764             | 0.2684             | 2.46               | 3.22               |
| 89                  | 0.1319             | 1.29               | 0.947              | 0.2615             | 2.39               | 3.12               |
| 90                  | 0.1288             | 1.26               | 0.9185             | 0.2549             | 2.32               | 3.03               |
| 91                  | 0.1259             | 1.22               | 0.8911             | 0.2486             | 2.26               | 2.94               |
| 92                  | 0.123              | 1.19               | 0.8647             | 0.2424             | 2.2                | 2.85               |
| 93                  | 0.1202             | 1.15               | 0.8391             | 0.2364             | 2.13               | 2.77               |
| 94                  | 0.1176             | 1.12               | 0.8145             | 0.2305             | 2.07               | 2.68               |
| 95                  | 0.115              | 1.09               | 0.7907             | 0.2249             | 2.02               | 2.61               |
| 96                  | 0.1124             | 1.06               | 0.7678             | 0.2194             | 1.96               | 2.53               |
| 97                  | 0.11               | 1.03               | 0.7456             | 0.2141             | 1.91               | 2.46               |
| 98                  | 0.1076             | 1                  | 0.7242             | 0.209              | 1.86               | 2.39               |
| 99                  | 0.1053             | 0.9775             | 0.7035             | 0.204              | 1.81               | 2.32               |
| 100                 | 0.1031             | 0.9513             | 0.6835             | 0.1992             | 1.76               | 2.25               |
| 101                 | 0.1009             | 0.926              | 0.6641             | 0.1945             | 1.71               | 2.19               |
| 102                 | 0.0988             | 0.9014             | 0.6455             | 0.19               | 1.66               | 2.12               |
| 103                 | 0.0968             | 0.8777             | 0.6274             | 0.1856             | 1.62               | 2.07               |
| 104                 | 0.0948             | 0.8547             | 0.61               | 0.1813             | 1.58               | 2.01               |
| 105                 | 0.0929             | 0.8324             | 0.5931             | 0.1771             | 1.54               | 1.95               |

# Temperature characteristics

| Part number         | NRG105<br>4000     | NRG105<br>4190     | NRG105<br>4360     | NRG203<br>3380     | NRG104<br>3380     | NRG104<br>4000     |
|---------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| B type              | B25/85             | B25/85             | B25/85             | B25/50             | B25/50             | B25/50             |
| Temperature<br>(°C) | Resistance<br>(kΩ) | Resistance<br>(kΩ) | Resistance<br>(kΩ) | Resistance<br>(kΩ) | Resistance<br>(kΩ) | Resistance<br>(kΩ) |
| -40                 | 3100               | 3300               | 3600               | 39.8               | 195                | 325                |
| -39                 | 2910.56            | 3098.57            | 3377.19            | 37.69              | 184.63             | 305.06             |
| -38                 | 2733.69            | 2910.37            | 3169.14            | 35.71              | 174.87             | 286.45             |
| -37                 | 2568.5             | 2734.47            | 2974.79            | 33.84              | 165.67             | 269.05             |
| -36                 | 2414.17            | 2570.02            | 2793.19            | 32.07              | 157.01             | 252.8              |
| -35                 | 2269.93            | 2416.23            | 2623.47            | 30.41              | 148.84             | 237.61             |
| -34                 | 2135.07            | 2272.35            | 2464.78            | 28.84              | 141.14             | 223.4              |
| -33                 | 2008.93            | 2137.7             | 2316.37            | 27.36              | 133.89             | 210.11             |
| -32                 | 1890.9             | 2011.65            | 2177.54            | 25.96              | 127.04             | 197.67             |
| -31                 | 1780.43            | 1893.63            | 2047.63            | 24.64              | 120.58             | 186.03             |
| -30                 | 1677               | 1783.07            | 1926.02            | 23.39              | 114.48             | 175.13             |
| -29                 | 1580.12            | 1679.48            | 1812.16            | 22.21              | 108.73             | 164.93             |
| -28                 | 1489.35            | 1582.39            | 1705.51            | 21.1               | 103.29             | 155.36             |
| -27                 | 1404.26            | 1491.36            | 1605.61            | 20.05              | 98.15              | 146.4              |
| -26                 | 1324.49            | 1405.99            | 1511.98            | 19.05              | 93.3               | 138                |
| -25                 | 1249.66            | 1325.9             | 1424.22            | 18.11              | 88.71              | 130.12             |
| -24                 | 1179.46            | 1250.74            | 1341.93            | 17.22              | 84.38              | 122.73             |
| -23                 | 1113.57            | 1180.2             | 1264.74            | 16.38              | 80.28              | 115.8              |
| -22                 | 1051.7             | 1113.95            | 1192.33            | 15.58              | 76.39              | 109.29             |
| -21                 | 993.6              | 1051.74            | 1124.38            | 14.83              | 72.72              | 103.18             |
| -20                 | 939.01             | 993.29             | 1060.59            | 14.11              | 69.25              | 97.44              |
| -19                 | 887.7              | 938.35             | 1000.7             | 13.44              | 65.96              | 92.04              |
| -18                 | 839.47             | 886.71             | 944.44             | 12.8               | 62.84              | 86.98              |
| -17                 | 794.11             | 838.15             | 891.6              | 12.19              | 59.88              | 82.21              |
| -16                 | 751.44             | 792.48             | 841.93             | 11.62              | 57.09              | 77.74              |
| -15                 | 711.28             | 749.5              | 795.25             | 11.07              | 54.43              | 73.52              |
| -14                 | 673.48             | 709.06             | 751.36             | 10.56              | 51.92              | 69.56              |
| -13                 | 637.88             | 670.98             | 710.08             | 10.07              | 49.53              | 65.83              |
| -12                 | 604.36             | 635.13             | 671.25             | 9.6                | 47.27              | 62.32              |
| -11                 | 572.77             | 601.36             | 634.7              | 9.16               | 45.12              | 59.01              |
| -10                 | 542.99             | 569.54             | 600.31             | 8.74               | 43.08              | 55.9               |
| -9                  | 514.92             | 539.56             | 567.93             | 8.35               | 41.15              | 52.96              |
| -8                  | 488.45             | 511.29             | 537.44             | 7.97               | 39.31              | 50.2               |
| -7                  | 463.47             | 484.63             | 508.71             | 7.61               | 37.56              | 47.59              |
| -6                  | 439.9              | 459.49             | 481.65             | 7.27               | 35.9               | 45.13              |
| -5                  | 417.65             | 435.77             | 456.14             | 6.95               | 34.33              | 42.81              |
| -4                  | 396.65             | 413.38             | 432.1              | 6.64               | 32.83              | 40.62              |
| -3                  | 376.81             | 392.25             | 409.42             | 6.35               | 31.4               | 38.56              |
| -2                  | 358.06             | 372.29             | 388.04             | 6.07               | 30.05              | 36.61              |
| -1                  | 340.35             | 353.45             | 367.87             | 5.81               | 28.76              | 34.77              |
| 0                   | 323.6              | 335.65             | 348.83             | 5.56               | 27.53              | 33.03              |
| 1                   | 307.76             | 318.82             | 330.86             | 5.32               | 26.36              | 31.38              |
| 2                   | 292.78             | 302.92             | 313.9              | 5.09               | 25.25              | 29.83              |
| 3                   | 278.61             | 287.88             | 297.88             | 4.88               | 24.19              | 28.36              |
| 4                   | 265.2              | 273.67             | 282.74             | 4.67               | 23.18              | 26.97              |
| 5                   | 252.5              | 260.22             | 268.45             | 4.48               | 22.22              | 25.66              |
| 6                   | 240.48             | 247.49             | 254.93             | 4.29               | 21.3               | 24.42              |
| 7                   | 229.09             | 235.44             | 242.16             | 4.11               | 20.43              | 23.24              |
| 8                   | 218.3              | 224.04             | 230.09             | 3.94               | 19.59              | 22.13              |
| 9                   | 208.07             | 213.25             | 218.66             | 3.78               | 18.8               | 21.07              |
| 10                  | 198.37             | 203.02             | 207.86             | 3.63               | 18.04              | 20.07              |
| 11                  | 189.18             | 193.33             | 197.64             | 3.48               | 17.32              | 19.13              |
| 12                  | 180.46             | 184.15             | 187.96             | 3.34               | 16.63              | 18.23              |
| 13                  | 172.19             | 175.45             | 178.81             | 3.21               | 15.97              | 17.38              |
| 14                  | 164.33             | 167.2              | 170.13             | 3.08               | 15.34              | 16.57              |
| 15                  | 156.88             | 159.38             | 161.92             | 2.96               | 14.73              | 15.81              |
| 16                  | 149.81             | 151.96             | 154.14             | 2.84               | 14.16              | 15.08              |
| 17                  | 143.08             | 144.92             | 146.77             | 2.73               | 13.61              | 14.4               |
| 18                  | 136.7              | 138.24             | 139.78             | 2.62               | 13.09              | 13.74              |

Temperature characteristics, cont.

| Part number         | NRG105<br>4000     | NRG105<br>4190     | NRG105<br>4360     | NRG203<br>3380     | NRG104<br>3380     | NRG104<br>4000     |
|---------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| B type              | B25/85             | B25/85             | B25/85             | B25/50             | B25/50             | B25/50             |
| Temperature<br>(°C) | Resistance<br>(kΩ) | Resistance<br>(kΩ) | Resistance<br>(kΩ) | Resistance<br>(kΩ) | Resistance<br>(kΩ) | Resistance<br>(kΩ) |
| 19                  | 130.63             | 131.9              | 133.16             | 2.52               | 12.58              | 13.12              |
| 20                  | 124.87             | 125.87             | 126.88             | 2.42               | 12.1               | 12.53              |
| 21                  | 119.38             | 120.16             | 120.93             | 2.33               | 11.65              | 11.97              |
| 22                  | 114.17             | 114.73             | 115.28             | 2.24               | 11.21              | 11.44              |
| 23                  | 109.21             | 109.57             | 109.92             | 2.16               | 10.79              | 10.94              |
| 24                  | 104.49             | 104.66             | 104.83             | 2.08               | 10.38              | 10.46              |
| 25                  | 100                | 100                | 100                | 2                  | 10                 | 10                 |
| 26                  | 95.73              | 95.57              | 95.41              | 1.93               | 9.63               | 9.57               |
| 27                  | 91.66              | 91.35              | 91.06              | 1.85               | 9.28               | 9.15               |
| 28                  | 87.78              | 87.34              | 86.92              | 1.79               | 8.94               | 8.76               |
| 29                  | 84.09              | 83.53              | 82.99              | 1.72               | 8.62               | 8.39               |
| 30                  | 80.57              | 79.9               | 79.26              | 1.66               | 8.31               | 8.03               |
| 31                  | 77.21              | 76.45              | 75.71              | 1.6                | 8.01               | 7.69               |
| 32                  | 74.02              | 73.16              | 72.34              | 1.54               | 7.72               | 7.37               |
| 33                  | 70.97              | 70.02              | 69.13              | 1.49               | 7.45               | 7.06               |
| 34                  | 68.06              | 67.04              | 66.07              | 1.44               | 7.19               | 6.77               |
| 35                  | 65.29              | 64.2               | 63.17              | 1.39               | 6.94               | 6.49               |
| 36                  | 62.64              | 61.49              | 60.41              | 1.34               | 6.69               | 6.22               |
| 37                  | 60.12              | 58.91              | 57.78              | 1.29               | 6.46               | 5.97               |
| 38                  | 57.71              | 56.45              | 55.27              | 1.25               | 6.24               | 5.72               |
| 39                  | 55.41              | 54.1               | 52.89              | 1.2                | 6.03               | 5.49               |
| 40                  | 53.21              | 51.86              | 50.62              | 1.16               | 5.82               | 5.27               |
| 41                  | 51.11              | 49.73              | 48.46              | 1.12               | 5.62               | 5.06               |
| 42                  | 49.1               | 47.69              | 46.4               | 1.09               | 5.43               | 4.86               |
| 43                  | 47.18              | 45.75              | 44.43              | 1.05               | 5.25               | 4.67               |
| 44                  | 45.35              | 43.89              | 42.56              | 1.01               | 5.08               | 4.48               |
| 45                  | 43.6               | 42.12              | 40.78              | 0.9809             | 4.91               | 4.31               |
| 46                  | 41.92              | 40.43              | 39.08              | 0.9487             | 4.75               | 4.14               |
| 47                  | 40.32              | 38.81              | 37.45              | 0.9178             | 4.59               | 3.98               |
| 48                  | 38.78              | 37.27              | 35.91              | 0.8881             | 4.44               | 3.83               |
| 49                  | 37.32              | 35.79              | 34.43              | 0.8595             | 4.3                | 3.68               |
| 50                  | 35.91              | 34.38              | 33.02              | 0.832              | 4.16               | 3.54               |
| 51                  | 34.57              | 33.04              | 31.68              | 0.8056             | 4.03               | 3.41               |
| 52                  | 33.28              | 31.75              | 30.39              | 0.7801             | 3.9                | 3.28               |
| 53                  | 32.05              | 30.52              | 29.16              | 0.7556             | 3.78               | 3.16               |
| 54                  | 30.86              | 29.34              | 27.99              | 0.7321             | 3.66               | 3.04               |
| 55                  | 29.73              | 28.21              | 26.87              | 0.7094             | 3.54               | 2.93               |
| 56                  | 28.65              | 27.13              | 25.81              | 0.6875             | 3.43               | 2.82               |
| 57                  | 27.61              | 26.1               | 24.78              | 0.6665             | 3.33               | 2.72               |
| 58                  | 26.61              | 25.11              | 23.81              | 0.6462             | 3.22               | 2.62               |
| 59                  | 25.65              | 24.17              | 22.87              | 0.6266             | 3.12               | 2.52               |
| 60                  | 24.74              | 23.26              | 21.98              | 0.6078             | 3.03               | 2.43               |
| 61                  | 23.86              | 22.39              | 21.13              | 0.5896             | 2.94               | 2.35               |
| 62                  | 23.01              | 21.56              | 20.31              | 0.5721             | 2.85               | 2.26               |
| 63                  | 22.2               | 20.76              | 19.53              | 0.5553             | 2.76               | 2.18               |
| 64                  | 21.43              | 20                 | 18.78              | 0.539              | 2.68               | 2.11               |
| 65                  | 20.68              | 19.27              | 18.06              | 0.5233             | 2.6                | 2.03               |
| 66                  | 19.96              | 18.57              | 17.38              | 0.5081             | 2.52               | 1.96               |
| 67                  | 19.28              | 17.9               | 16.72              | 0.4935             | 2.45               | 1.89               |
| 68                  | 18.61              | 17.25              | 16.1               | 0.4794             | 2.38               | 1.83               |
| 69                  | 17.98              | 16.63              | 15.49              | 0.4658             | 2.31               | 1.77               |
| 70                  | 17.37              | 16.04              | 14.92              | 0.4526             | 2.24               | 1.71               |
| 71                  | 16.78              | 15.47              | 14.36              | 0.4399             | 2.18               | 1.65               |
| 72                  | 16.22              | 14.92              | 13.84              | 0.4277             | 2.12               | 1.59               |
| 73                  | 15.68              | 14.4               | 13.33              | 0.4158             | 2.06               | 1.54               |
| 74                  | 15.16              | 13.89              | 12.84              | 0.4044             | 2                  | 1.49               |
| 75                  | 14.65              | 13.41              | 12.37              | 0.3933             | 1.94               | 1.44               |
| 76                  | 14.17              | 12.94              | 11.93              | 0.3826             | 1.89               | 1.39               |
| 77                  | 13.71              | 12.5               | 11.5               | 0.3722             | 1.84               | 1.35               |



Temperature characteristics, cont.

| Part number         | NRG105<br>4000     | NRG105<br>4190     | NRG105<br>4360     | NRG203<br>3380     | NRG104<br>3380     | NRG104<br>4000     |
|---------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| B type              | B25/85             | B25/85             | B25/85             | B25/50             | B25/50             | B25/50             |
| Temperature<br>(°C) | Resistance<br>(kΩ) | Resistance<br>(kΩ) | Resistance<br>(kΩ) | Resistance<br>(kΩ) | Resistance<br>(kΩ) | Resistance<br>(kΩ) |
| 78                  | 13.26              | 12.07              | 11.09              | 0.3622             | 1.79               | 1.3                |
| 79                  | 12.83              | 11.66              | 10.69              | 0.3526             | 1.74               | 1.26               |
| 80                  | 12.42              | 11.26              | 10.31              | 0.3432             | 1.69               | 1.22               |
| 81                  | 12.02              | 10.88              | 9.95               | 0.3342             | 1.64               | 1.18               |
| 82                  | 11.63              | 10.51              | 9.6                | 0.3254             | 1.6                | 1.14               |
| 83                  | 11.26              | 10.16              | 9.26               | 0.3169             | 1.56               | 1.11               |
| 84                  | 10.91              | 9.82               | 8.94               | 0.3087             | 1.51               | 1.07               |
| 85                  | 10.57              | 9.5                | 8.63               | 0.3008             | 1.47               | 1.04               |
| 86                  | 10.23              | 9.18               | 8.33               | 0.2931             | 1.44               | 1.01               |
| 87                  | 9.92               | 8.88               | 8.05               | 0.2856             | 1.4                | 0.9746             |
| 88                  | 9.61               | 8.59               | 7.77               | 0.2784             | 1.36               | 0.9445             |
| 89                  | 9.31               | 8.31               | 7.51               | 0.2714             | 1.33               | 0.9156             |
| 90                  | 9.03               | 8.04               | 7.25               | 0.2646             | 1.29               | 0.8877             |
| 91                  | 8.75               | 7.78               | 7.01               | 0.2581             | 1.26               | 0.8608             |
| 92                  | 8.48               | 7.53               | 6.78               | 0.2517             | 1.23               | 0.8349             |
| 93                  | 8.23               | 7.29               | 6.55               | 0.2455             | 1.19               | 0.8098             |
| 94                  | 7.98               | 7.06               | 6.33               | 0.2396             | 1.16               | 0.7857             |
| 95                  | 7.74               | 6.84               | 6.12               | 0.2338             | 1.14               | 0.7624             |
| 96                  | 7.51               | 6.62               | 5.92               | 0.2281             | 1.11               | 0.7399             |
| 97                  | 7.29               | 6.42               | 5.73               | 0.2227             | 1.08               | 0.7182             |
| 98                  | 7.07               | 6.22               | 5.54               | 0.2174             | 1.05               | 0.6972             |
| 99                  | 6.87               | 6.02               | 5.36               | 0.2123             | 1.03               | 0.677              |
| 100                 | 6.67               | 5.84               | 5.19               | 0.2073             | 1                  | 0.6575             |
| 101                 | 6.47               | 5.66               | 5.02               | 0.2024             | 0.977              | 0.6386             |
| 102                 | 6.29               | 5.48               | 4.86               | 0.1977             | 0.9533             | 0.6204             |
| 103                 | 6.1                | 5.32               | 4.71               | 0.1932             | 0.9303             | 0.6027             |
| 104                 | 5.93               | 5.16               | 4.56               | 0.1887             | 0.9079             | 0.5857             |
| 105                 | 5.76               | 5                  | 4.42               | 0.1844             | 0.8863             | 0.5693             |

## Temperature characteristics

| Part number         | NRG104<br>3950     | NRG224<br>3700     | NRG105<br>3950     | NRG105<br>4120     | NRG225<br>4370     |
|---------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| B type              | B25/50             | B25/50             | B25/50             | B25/50             | B25/50             |
| Temperature<br>(°C) | Resistance<br>(kΩ) | Resistance<br>(kΩ) | Resistance<br>(kΩ) | Resistance<br>(kΩ) | Resistance<br>(kΩ) |
| -40                 | 325                | 2056.32            | 3000               | 3250               | 8728.94            |
| -39                 | 304.83             | 1932.46            | 2819.84            | 3053.32            | 8171.87            |
| -38                 | 286.01             | 1816.68            | 2651.4             | 2869.42            | 7652.85            |
| -37                 | 268.46             | 1708.42            | 2493.87            | 2697.43            | 7169.11            |
| -36                 | 252.07             | 1607.15            | 2346.48            | 2536.52            | 6718.12            |
| -35                 | 236.77             | 1512.4             | 2208.54            | 2385.94            | 6297.51            |
| -34                 | 222.48             | 1423.7             | 2079.41            | 2244.97            | 5905.11            |
| -33                 | 209.12             | 1340.65            | 1958.46            | 2112.96            | 5538.92            |
| -32                 | 196.64             | 1262.86            | 1845.16            | 1989.31            | 5197.08            |
| -31                 | 184.96             | 1189.97            | 1738.98            | 1873.45            | 4877.85            |
| -30                 | 174.04             | 1121.66            | 1639.44            | 1764.86            | 4579.66            |
| -29                 | 163.83             | 1057.61            | 1546.09            | 1663.05            | 4301.03            |
| -28                 | 154.26             | 997.53             | 1458.53            | 1567.57            | 4040.59            |
| -27                 | 145.31             | 941.17             | 1376.36            | 1478               | 3797.08            |
| -26                 | 136.92             | 888.28             | 1299.23            | 1393.95            | 3569.34            |
| -25                 | 129.06             | 838.62             | 1226.81            | 1315.06            | 3356.26            |
| -24                 | 121.69             | 791.99             | 1158.78            | 1240.99            | 3156.86            |
| -23                 | 114.78             | 748.18             | 1094.87            | 1171.43            | 2970.19            |
| -22                 | 108.3              | 707.02             | 1034.8             | 1106.07            | 2795.39            |
| -21                 | 102.22             | 668.32             | 978.32             | 1044.66            | 2631.66            |
| -20                 | 96.52              | 631.94             | 925.21             | 986.93             | 2478.25            |
| -19                 | 91.16              | 597.72             | 875.25             | 932.66             | 2334.46            |
| -18                 | 86.13              | 565.53             | 828.23             | 881.61             | 2199.66            |
| -17                 | 81.4               | 535.23             | 783.97             | 833.58             | 2073.24            |
| -16                 | 76.96              | 506.7              | 742.3              | 788.39             | 1954.64            |
| -15                 | 72.78              | 479.84             | 703.05             | 745.85             | 1843.36            |
| -14                 | 68.86              | 454.53             | 666.07             | 705.8              | 1738.91            |
| -13                 | 65.16              | 430.69             | 631.22             | 668.08             | 1640.85            |
| -12                 | 61.69              | 408.22             | 598.37             | 632.55             | 1548.75            |
| -11                 | 58.41              | 387.03             | 567.39             | 599.06             | 1462.23            |
| -10                 | 55.33              | 367.05             | 538.17             | 567.5              | 1380.93            |
| -9                  | 52.43              | 348.19             | 510.59             | 537.75             | 1304.51            |
| -8                  | 49.69              | 330.41             | 484.57             | 509.69             | 1232.66            |
| -7                  | 47.12              | 313.62             | 460                | 483.22             | 1165.09            |
| -6                  | 44.69              | 297.76             | 436.81             | 458.24             | 1101.53            |
| -5                  | 42.4               | 282.79             | 414.89             | 434.67             | 1041.71            |
| -4                  | 40.23              | 268.64             | 394.19             | 412.42             | 985.41             |
| -3                  | 38.19              | 255.28             | 374.62             | 391.4              | 932.4              |
| -2                  | 36.27              | 242.64             | 356.11             | 371.56             | 882.49             |
| -1                  | 34.45              | 230.7              | 338.62             | 352.81             | 835.46             |
| 0                   | 32.73              | 219.4              | 322.07             | 335.09             | 791.15             |
| 1                   | 31.11              | 208.71             | 306.41             | 318.34             | 749.39             |
| 2                   | 29.58              | 198.59             | 291.59             | 302.5              | 710.02             |
| 3                   | 28.13              | 189.02             | 277.56             | 287.53             | 672.9              |
| 4                   | 26.76              | 179.96             | 264.28             | 273.36             | 637.88             |
| 5                   | 25.46              | 171.37             | 251.69             | 259.96             | 604.84             |
| 6                   | 24.23              | 163.24             | 239.77             | 247.27             | 573.66             |
| 7                   | 23.07              | 155.53             | 228.48             | 235.26             | 544.22             |
| 8                   | 21.98              | 148.23             | 217.77             | 223.89             | 516.43             |
| 9                   | 20.93              | 141.31             | 207.61             | 213.12             | 490.18             |
| 10                  | 19.95              | 134.74             | 197.98             | 202.92             | 465.38             |
| 11                  | 19.02              | 128.51             | 188.84             | 193.25             | 441.95             |
| 12                  | 18.13              | 122.6              | 180.18             | 184.08             | 419.81             |
| 13                  | 17.29              | 117                | 171.95             | 175.4              | 398.87             |
| 14                  | 16.5               | 111.67             | 164.13             | 167.16             | 379.07             |
| 15                  | 15.74              | 106.62             | 156.72             | 159.35             | 360.34             |
| 16                  | 15.02              | 101.82             | 149.67             | 151.94             | 342.62             |
| 17                  | 14.34              | 97.26              | 142.97             | 144.9              | 325.85             |
| 18                  | 13.7               | 92.93              | 136.61             | 138.23             | 309.98             |

Temperature characteristics, cont.

| Part number         | NRG104<br>3950     | NRG224<br>3700     | NRG105<br>3950     | NRG105<br>4120     | NRG225<br>4370     |
|---------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| B type              | B25/50             | B25/50             | B25/50             | B25/50             | B25/50             |
| Temperature<br>(°C) | Resistance<br>(kΩ) | Resistance<br>(kΩ) | Resistance<br>(kΩ) | Resistance<br>(kΩ) | Resistance<br>(kΩ) |
| 19                  | 13.09              | 88.81              | 130.56             | 131.89             | 294.95             |
| 20                  | 12.5               | 84.89              | 124.81             | 125.87             | 280.72             |
| 21                  | 11.95              | 81.17              | 119.35             | 120.16             | 267.24             |
| 22                  | 11.43              | 77.63              | 114.14             | 114.73             | 254.46             |
| 23                  | 10.93              | 74.26              | 109.19             | 109.57             | 242.36             |
| 24                  | 10.45              | 71.05              | 104.48             | 104.66             | 230.88             |
| 25                  | 10                 | 68                 | 100                | 100                | 220                |
| 26                  | 9.57               | 65.09              | 95.73              | 95.57              | 209.68             |
| 27                  | 9.16               | 62.33              | 91.66              | 91.35              | 199.89             |
| 28                  | 8.77               | 59.69              | 87.79              | 87.34              | 190.6              |
| 29                  | 8.4                | 57.18              | 84.1               | 83.52              | 181.79             |
| 30                  | 8.05               | 54.79              | 80.58              | 79.89              | 173.42             |
| 31                  | 7.71               | 52.51              | 77.23              | 76.44              | 165.48             |
| 32                  | 7.39               | 50.33              | 74.03              | 73.14              | 157.93             |
| 33                  | 7.09               | 48.26              | 70.98              | 70.01              | 150.77             |
| 34                  | 6.8                | 46.28              | 68.08              | 67.02              | 143.96             |
| 35                  | 6.52               | 44.4               | 65.3               | 64.18              | 137.49             |
| 36                  | 6.25               | 42.6               | 62.65              | 61.47              | 131.34             |
| 37                  | 6                  | 40.88              | 60.13              | 58.88              | 125.49             |
| 38                  | 5.76               | 39.24              | 57.71              | 56.42              | 119.93             |
| 39                  | 5.53               | 37.67              | 55.41              | 54.07              | 114.64             |
| 40                  | 5.31               | 36.17              | 53.21              | 51.83              | 109.61             |
| 41                  | 5.1                | 34.74              | 51.1               | 49.69              | 104.82             |
| 42                  | 4.9                | 33.38              | 49.09              | 47.65              | 100.26             |
| 43                  | 4.71               | 32.07              | 47.17              | 45.71              | 95.92              |
| 44                  | 4.53               | 30.82              | 45.34              | 43.85              | 91.79              |
| 45                  | 4.35               | 29.63              | 43.58              | 42.08              | 87.85              |
| 46                  | 4.19               | 28.49              | 41.9               | 40.38              | 84.1               |
| 47                  | 4.03               | 27.4               | 40.3               | 38.77              | 80.53              |
| 48                  | 3.87               | 26.35              | 38.76              | 37.22              | 77.13              |
| 49                  | 3.73               | 25.36              | 37.29              | 35.74              | 73.88              |
| 50                  | 3.59               | 24.4               | 35.88              | 34.33              | 70.79              |
| 51                  | 3.45               | 23.48              | 34.53              | 32.98              | 67.84              |
| 52                  | 3.33               | 22.61              | 33.24              | 31.69              | 65.03              |
| 53                  | 3.2                | 21.77              | 32.01              | 30.46              | 62.34              |
| 54                  | 3.09               | 20.96              | 30.82              | 29.28              | 59.78              |
| 55                  | 2.97               | 20.19              | 29.69              | 28.15              | 57.33              |
| 56                  | 2.87               | 19.45              | 28.6               | 27.07              | 55                 |
| 57                  | 2.76               | 18.75              | 27.56              | 26.04              | 52.77              |
| 58                  | 2.66               | 18.07              | 26.56              | 25.05              | 50.65              |
| 59                  | 2.57               | 17.42              | 25.6               | 24.1               | 48.61              |
| 60                  | 2.48               | 16.79              | 24.68              | 23.2               | 46.67              |
| 61                  | 2.39               | 16.19              | 23.8               | 22.33              | 44.82              |
| 62                  | 2.31               | 15.62              | 22.96              | 21.5               | 43.04              |
| 63                  | 2.23               | 15.07              | 22.15              | 20.7               | 41.35              |
| 64                  | 2.15               | 14.54              | 21.37              | 19.94              | 39.73              |
| 65                  | 2.08               | 14.03              | 20.62              | 19.21              | 38.18              |
| 66                  | 2                  | 13.54              | 19.9               | 18.5               | 36.7               |
| 67                  | 1.94               | 13.08              | 19.21              | 17.83              | 35.28              |
| 68                  | 1.87               | 12.63              | 18.55              | 17.19              | 33.92              |
| 69                  | 1.81               | 12.19              | 17.91              | 16.57              | 32.62              |
| 70                  | 1.75               | 11.78              | 17.3               | 15.97              | 31.38              |
| 71                  | 1.69               | 11.38              | 16.71              | 15.4               | 30.19              |
| 72                  | 1.63               | 11                 | 16.15              | 14.86              | 29.05              |
| 73                  | 1.58               | 10.63              | 15.61              | 14.33              | 27.96              |
| 74                  | 1.53               | 10.27              | 15.09              | 13.83              | 26.91              |
| 75                  | 1.48               | 9.93               | 14.58              | 13.34              | 25.91              |
| 76                  | 1.43               | 9.6                | 14.1               | 12.88              | 24.95              |
| 77                  | 1.38               | 9.29               | 13.64              | 12.43              | 24.03              |

## Temperature characteristics, cont.

| Part number         | NRG104<br>3950     | NRG224<br>3700     | NRG105<br>3950     | NRG105<br>4120     | NRG225<br>4370     |
|---------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| B type              | B25/50             | B25/50             | B25/50             | B25/50             | B25/50             |
| Temperature<br>(°C) | Resistance<br>(kΩ) | Resistance<br>(kΩ) | Resistance<br>(kΩ) | Resistance<br>(kΩ) | Resistance<br>(kΩ) |
| 78                  | 1.34               | 8.98               | 13.19              | 12                 | 23.15              |
| 79                  | 1.3                | 8.69               | 12.76              | 11.59              | 22.31              |
| 80                  | 1.26               | 8.41               | 12.34              | 11.2               | 21.5               |
| 81                  | 1.22               | 8.14               | 11.95              | 10.82              | 20.72              |
| 82                  | 1.18               | 7.88               | 11.56              | 10.45              | 19.97              |
| 83                  | 1.14               | 7.63               | 11.19              | 10.1               | 19.26              |
| 84                  | 1.11               | 7.39               | 10.84              | 9.76               | 18.57              |
| 85                  | 1.07               | 7.15               | 10.49              | 9.43               | 17.91              |
| 86                  | 1.04               | 6.93               | 10.16              | 9.12               | 17.28              |
| 87                  | 1.01               | 6.71               | 9.84               | 8.82               | 16.67              |
| 88                  | 0.9762             | 6.5                | 9.54               | 8.53               | 16.09              |
| 89                  | 0.9467             | 6.3                | 9.24               | 8.25               | 15.53              |
| 90                  | 0.9183             | 6.11               | 8.95               | 7.98               | 14.99              |
| 91                  | 0.8909             | 5.92               | 8.68               | 7.72               | 14.47              |
| 92                  | 0.8644             | 5.74               | 8.41               | 7.48               | 13.97              |
| 93                  | 0.8389             | 5.57               | 8.16               | 7.24               | 13.49              |
| 94                  | 0.8143             | 5.4                | 7.91               | 7                  | 13.04              |
| 95                  | 0.7905             | 5.24               | 7.67               | 6.78               | 12.59              |
| 96                  | 0.7675             | 5.08               | 7.44               | 6.57               | 12.17              |
| 97                  | 0.7454             | 4.93               | 7.22               | 6.36               | 11.76              |
| 98                  | 0.724              | 4.78               | 7                  | 6.16               | 11.37              |
| 99                  | 0.7033             | 4.64               | 6.8                | 5.97               | 10.99              |
| 100                 | 0.6833             | 4.51               | 6.6                | 5.78               | 10.63              |
| 101                 | 0.6639             | 4.37               | 6.4                | 5.61               | 10.28              |
| 102                 | 0.6453             | 4.25               | 6.22               | 5.43               | 9.94               |
| 103                 | 0.6272             | 4.13               | 6.04               | 5.27               | 9.61               |
| 104                 | 0.6098             | 4.01               | 5.86               | 5.11               | 9.3                |
| 105                 | 0.5929             | 3.89               | 5.69               | 4.95               | 9                  |

## Manual solder

+360 °C, 2.5 seconds maximum by soldering iron, distance between soldering position and coating 10 mm minimum.

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