



## **NTC thermistors for temperature measurement**

Leaded NTCs,  
lead spacing 5 mm

**Series/Type:**      **B57875**  
**Date:**              March 2006

## Applications

- Temperature measurement

## Features

- High measuring accuracy
- Cost-effective
- Rugged design, epoxy resin encapsulation
- Tinned copper leads
- Lead spacing 5 mm

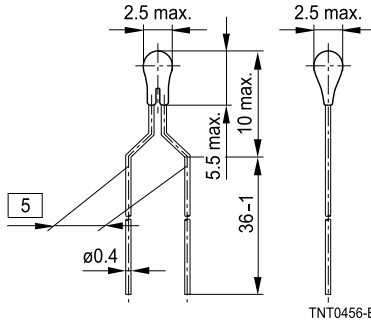
## Options

Flexible coating of head and wires available on request

## Delivery mode

Bulk (standard),  
cardboard tape, reeled or in Ammo pack

## Dimensional drawing



Dimensions in mm

Approx. weight 120 mg

## General technical data

|                               |               |                  |                       |      |
|-------------------------------|---------------|------------------|-----------------------|------|
| Climatic category             | (IEC 60068-1) | $P_{25}$         | 55/155/56             |      |
| Max. power                    | (at 25 °C)    | $\Delta R_R/R_R$ | 60                    | mW   |
| Resistance tolerance          |               | $T_R$            | $\pm 1, \pm 3, \pm 5$ | %    |
| Rated temperature             |               | $\delta_{th}$    | 25                    | °C   |
| Dissipation factor            | (in air)      | $\tau_c$         | approx. 3.8           | mW/K |
| Thermal cooling time constant | (in air)      | $C_{th}$         | approx. 7.5           | s    |
| Heat capacity                 |               |                  | approx. 28.5          | mJ/K |

## Electrical specification and ordering codes

| $R_{25}$<br>Ω | No. of R/T<br>characteristic | $B_{25/100}$<br>K | Ordering code   |
|---------------|------------------------------|-------------------|-----------------|
| 2.1 k         | 1008                         | $3560 \pm 1\%$    | B57875S0212+000 |
| 10 k          | 8016                         | $3988 \pm 1\%$    | B57875S0103+001 |
| 10 k          | 2908                         | $3460 \pm 1\%$    | B57875S0103+002 |
| 12 k          | 2901                         | $3760 \pm 1\%$    | B57875S0123+000 |
| 30 k          | 8018                         | $3964 \pm 1\%$    | B57875S0303+000 |

+ = Resistance tolerance

F =  $\pm 1\%$

H =  $\pm 3\%$

J =  $\pm 5\%$

**Reliability data**

| Test                                  | Standard       | Test conditions                                                                           | $\Delta R_{25}/R_{25}$<br>(typical) | Remarks           |
|---------------------------------------|----------------|-------------------------------------------------------------------------------------------|-------------------------------------|-------------------|
| Storage in dry heat                   | IEC 60068-2-2  | Storage at upper category temperature<br>T: 155 °C<br>t: 1000 h                           | < 2%                                | No visible damage |
| Storage in damp heat, steady state    | IEC 60068-2-78 | Temperature of air: 40 °C<br>Relative humidity of air: 93%<br>Duration: 56 days           | < 1%                                | No visible damage |
| Rapid temperature cycling             | IEC 60068-2-14 | Lower test temperature: –55 °C<br>Upper test temperature: 155 °C<br>Number of cycles: 100 | < 2%                                | No visible damage |
| Endurance                             |                | $P_{\max}$ : 60 mW<br>t: 1000 h                                                           | < 3%                                | No visible damage |
| Long-term stability (empirical value) |                | Temperature: 70 °C<br>t: 10000 h                                                          | < 3%                                | No visible damage |

## R/T characteristics

|             | B57875S0212F000                                                                                                        |                       |                       |                                      |            |            |
|-------------|------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|--------------------------------------|------------|------------|
| R/T No.     | 1008                                                                                                                   |                       |                       |                                      |            |            |
| T (°C)      | B <sub>25/100</sub> = 3560 K, R <sub>25</sub> = 2100 Ω, T <sub>R</sub> = 25 °C, ΔR <sub>R</sub> /R <sub>R</sub> = ± 1% |                       |                       |                                      |            |            |
|             | R <sub>noml</sub> [Ω]                                                                                                  | R <sub>minl</sub> [Ω] | R <sub>maxl</sub> [Ω] | ΔR <sub>R</sub> /R <sub>R</sub> [±%] | ΔT[±°C]    | α (%/K)    |
| -55.0       | 111520                                                                                                                 | 105460                | 117570                | 5.4                                  | 0.9        | 6.1        |
| -50.0       | 82567                                                                                                                  | 78386                 | 86747                 | 5.1                                  | 0.8        | 6.0        |
| -45.0       | 61583                                                                                                                  | 58680                 | 64486                 | 4.7                                  | 0.8        | 5.8        |
| -40.0       | 46263                                                                                                                  | 44237                 | 48289                 | 4.4                                  | 0.8        | 5.7        |
| -35.0       | 34999                                                                                                                  | 33579                 | 36420                 | 4.1                                  | 0.7        | 5.5        |
| -30.0       | 26661                                                                                                                  | 25661                 | 27661                 | 3.8                                  | 0.7        | 5.4        |
| -25.0       | 20423                                                                                                                  | 19717                 | 21128                 | 3.5                                  | 0.7        | 5.2        |
| -20.0       | 15786                                                                                                                  | 15285                 | 16287                 | 3.2                                  | 0.6        | 5.1        |
| -15.0       | 12254                                                                                                                  | 11899                 | 12609                 | 2.9                                  | 0.6        | 4.9        |
| -10.0       | 9594                                                                                                                   | 9341                  | 9847                  | 2.6                                  | 0.5        | 4.8        |
| -5.0        | 7570                                                                                                                   | 7390                  | 7751                  | 2.4                                  | 0.5        | 4.7        |
| 0.0         | 6020                                                                                                                   | 5891                  | 6149                  | 2.1                                  | 0.5        | 4.5        |
| 5.0         | 4811                                                                                                                   | 4719                  | 4902                  | 1.9                                  | 0.4        | 4.4        |
| 10.0        | 3872                                                                                                                   | 3807                  | 3937                  | 1.7                                  | 0.4        | 4.3        |
| 15.0        | 3133                                                                                                                   | 3087                  | 3179                  | 1.5                                  | 0.4        | 4.1        |
| 20.0        | 2552                                                                                                                   | 2520                  | 2584                  | 1.3                                  | 0.3        | 4.0        |
| <b>25.0</b> | <b>2100</b>                                                                                                            | <b>2079</b>           | <b>2121</b>           | <b>1.0</b>                           | <b>0.3</b> | <b>3.9</b> |
| 30.0        | 1742                                                                                                                   | 1721                  | 1764                  | 1.2                                  | 0.3        | 3.8        |
| 35.0        | 1441                                                                                                                   | 1421                  | 1462                  | 1.4                                  | 0.4        | 3.7        |
| 40.0        | 1199                                                                                                                   | 1180                  | 1219                  | 1.6                                  | 0.5        | 3.6        |
| 45.0        | 1008                                                                                                                   | 990.2                 | 1026                  | 1.8                                  | 0.5        | 3.5        |
| 50.0        | 851.4                                                                                                                  | 834.6                 | 868.2                 | 2.0                                  | 0.6        | 3.4        |
| 55.0        | 717.6                                                                                                                  | 702.2                 | 732.9                 | 2.1                                  | 0.6        | 3.3        |
| 60.0        | 608.0                                                                                                                  | 594.0                 | 622.0                 | 2.3                                  | 0.7        | 3.2        |
| 65.0        | 519.0                                                                                                                  | 506.2                 | 531.8                 | 2.5                                  | 0.8        | 3.1        |
| 70.0        | 444.8                                                                                                                  | 433.2                 | 456.5                 | 2.6                                  | 0.9        | 3.1        |
| 75.0        | 382.1                                                                                                                  | 371.5                 | 392.6                 | 2.8                                  | 0.9        | 3.0        |
| 80.0        | 329.3                                                                                                                  | 319.7                 | 338.9                 | 2.9                                  | 1.0        | 2.9        |
| 85.0        | 285.4                                                                                                                  | 276.7                 | 294.1                 | 3.1                                  | 1.1        | 2.8        |
| 90.0        | 248.3                                                                                                                  | 240.4                 | 256.2                 | 3.2                                  | 1.2        | 2.8        |
| 95.0        | 217.1                                                                                                                  | 209.9                 | 224.3                 | 3.3                                  | 1.2        | 2.7        |
| 100.0       | 190.6                                                                                                                  | 184.0                 | 197.1                 | 3.4                                  | 1.3        | 2.6        |
| 105.0       | 167.2                                                                                                                  | 161.3                 | 173.2                 | 3.6                                  | 1.4        | 2.6        |
| 110.0       | 147.2                                                                                                                  | 141.8                 | 152.7                 | 3.7                                  | 1.5        | 2.5        |
| 115.0       | 130.0                                                                                                                  | 125.0                 | 134.9                 | 3.8                                  | 1.6        | 2.4        |
| 120.0       | 115.0                                                                                                                  | 110.5                 | 119.6                 | 3.9                                  | 1.6        | 2.4        |
| 125.0       | 102.3                                                                                                                  | 98.14                 | 106.4                 | 4.0                                  | 1.7        | 2.3        |
| 130.0       | 91.17                                                                                                                  | 87.38                 | 94.96                 | 4.2                                  | 1.8        | 2.3        |
| 135.0       | 81.32                                                                                                                  | 77.85                 | 84.79                 | 4.3                                  | 1.9        | 2.2        |

**Temperature measurement**
**B57875**
**Leaded NTCs, lead spacing 5 mm**
**S875**

| <b>B57875S0212F000</b> |                                                                                                                                   |                          |                          |                         |                               |                          |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------|-------------------------|-------------------------------|--------------------------|
| R/T No.                | 1008                                                                                                                              |                          |                          |                         |                               |                          |
| T (°C)                 | $B_{25/100} = 3560 \text{ K}$ , $R_{25} = 2100 \text{ } \Omega$ , $T_R = 25 \text{ } ^\circ\text{C}$ , $\Delta R_R/R_R = \pm 1\%$ |                          |                          |                         |                               |                          |
|                        | $R_{\text{nom}}[\Omega]$                                                                                                          | $R_{\text{min}}[\Omega]$ | $R_{\text{max}}[\Omega]$ | $\Delta R_R/R_R[\pm\%]$ | $\Delta T[\pm^\circ\text{C}]$ | $\alpha \text{ } (\%/K)$ |
| 140.0                  | 72.69                                                                                                                             | 69.51                    | 75.87                    | 4.4                     | 2.0                           | 2.2                      |
| 145.0                  | 65.20                                                                                                                             | 62.28                    | 68.12                    | 4.5                     | 2.1                           | 2.1                      |
| 150.0                  | 58.61                                                                                                                             | 55.93                    | 61.29                    | 4.6                     | 2.2                           | 2.1                      |
| 155.0                  | 52.91                                                                                                                             | 50.43                    | 55.38                    | 4.7                     | 2.3                           | 2.0                      |

| <b>B57875S0212H000</b> |                                                                                                                                   |                          |                          |                         |                               |                          |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------|-------------------------|-------------------------------|--------------------------|
| R/T No.                | 1008                                                                                                                              |                          |                          |                         |                               |                          |
| T (°C)                 | $B_{25/100} = 3560 \text{ K}$ , $R_{25} = 2100 \text{ } \Omega$ , $T_R = 25 \text{ } ^\circ\text{C}$ , $\Delta R_R/R_R = \pm 3\%$ |                          |                          |                         |                               |                          |
|                        | $R_{\text{nom}}[\Omega]$                                                                                                          | $R_{\text{min}}[\Omega]$ | $R_{\text{max}}[\Omega]$ | $\Delta R_R/R_R[\pm\%]$ | $\Delta T[\pm^\circ\text{C}]$ | $\alpha \text{ } (\%/K)$ |
| −55.0                  | 111520                                                                                                                            | 103230                   | 119800                   | 7.4                     | 1.2                           | 6.1                      |
| −50.0                  | 82567                                                                                                                             | 76735                    | 88399                    | 7.1                     | 1.2                           | 6.0                      |
| −45.0                  | 61583                                                                                                                             | 57449                    | 65717                    | 6.7                     | 1.2                           | 5.8                      |
| −40.0                  | 46263                                                                                                                             | 43312                    | 49214                    | 6.4                     | 1.1                           | 5.7                      |
| −35.0                  | 34999                                                                                                                             | 32879                    | 37120                    | 6.1                     | 1.1                           | 5.5                      |
| −30.0                  | 26661                                                                                                                             | 25128                    | 28194                    | 5.8                     | 1.1                           | 5.4                      |
| −25.0                  | 20423                                                                                                                             | 19308                    | 21537                    | 5.5                     | 1.0                           | 5.2                      |
| −20.0                  | 15786                                                                                                                             | 14969                    | 16602                    | 5.2                     | 1.0                           | 5.1                      |
| −15.0                  | 12254                                                                                                                             | 11654                    | 12854                    | 4.9                     | 1.0                           | 4.9                      |
| −10.0                  | 9594                                                                                                                              | 9149                     | 10039                    | 4.6                     | 1.0                           | 4.8                      |
| −5.0                   | 7570                                                                                                                              | 7238                     | 7903                     | 4.4                     | 0.9                           | 4.7                      |
| 0.0                    | 6020                                                                                                                              | 5770                     | 6269                     | 4.1                     | 0.9                           | 4.5                      |
| 5.0                    | 4811                                                                                                                              | 4622                     | 4999                     | 3.9                     | 0.9                           | 4.4                      |
| 10.0                   | 3872                                                                                                                              | 3729                     | 4014                     | 3.7                     | 0.9                           | 4.3                      |
| 15.0                   | 3133                                                                                                                              | 3025                     | 3242                     | 3.5                     | 0.8                           | 4.1                      |
| 20.0                   | 2552                                                                                                                              | 2469                     | 2635                     | 3.3                     | 0.8                           | 4.0                      |
| <b>25.0</b>            | <b>2100</b>                                                                                                                       | <b>2037</b>              | <b>2163</b>              | <b>3.0</b>              | <b>0.8</b>                    | <b>3.9</b>               |
| 30.0                   | 1742                                                                                                                              | 1686                     | 1799                     | 3.2                     | 0.9                           | 3.8                      |
| 35.0                   | 1441                                                                                                                              | 1392                     | 1491                     | 3.4                     | 0.9                           | 3.7                      |
| 40.0                   | 1199                                                                                                                              | 1156                     | 1243                     | 3.6                     | 1.0                           | 3.6                      |
| 45.0                   | 1008                                                                                                                              | 970.0                    | 1047                     | 3.8                     | 1.1                           | 3.5                      |
| 50.0                   | 851.4                                                                                                                             | 817.6                    | 885.3                    | 4.0                     | 1.2                           | 3.4                      |
| 55.0                   | 717.6                                                                                                                             | 687.9                    | 747.3                    | 4.1                     | 1.2                           | 3.3                      |
| 60.0                   | 608.0                                                                                                                             | 581.8                    | 634.2                    | 4.3                     | 1.3                           | 3.2                      |
| 65.0                   | 519.0                                                                                                                             | 495.8                    | 542.2                    | 4.5                     | 1.4                           | 3.1                      |
| 70.0                   | 444.8                                                                                                                             | 424.3                    | 465.4                    | 4.6                     | 1.5                           | 3.1                      |
| 75.0                   | 382.1                                                                                                                             | 363.9                    | 400.3                    | 4.8                     | 1.6                           | 3.0                      |
| 80.0                   | 329.3                                                                                                                             | 313.1                    | 345.5                    | 4.9                     | 1.7                           | 2.9                      |
| 85.0                   | 285.4                                                                                                                             | 271.0                    | 299.8                    | 5.1                     | 1.8                           | 2.8                      |
| 90.0                   | 248.3                                                                                                                             | 235.4                    | 261.1                    | 5.2                     | 1.9                           | 2.8                      |

## Temperature measurement

B57875

## Leaded NTCs, lead spacing 5 mm

S875

| B57875S0212H000 |                                                                                                                        |                       |                       |                                      |         |         |
|-----------------|------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|--------------------------------------|---------|---------|
| R/T No.         | 1008                                                                                                                   |                       |                       |                                      |         |         |
| T (°C)          | B <sub>25/100</sub> = 3560 K, R <sub>25</sub> = 2100 Ω, T <sub>R</sub> = 25 °C, ΔR <sub>R</sub> /R <sub>R</sub> = ± 3% |                       |                       |                                      |         |         |
|                 | R <sub>nomL</sub> [Ω]                                                                                                  | R <sub>minL</sub> [Ω] | R <sub>maxL</sub> [Ω] | ΔR <sub>R</sub> /R <sub>R</sub> [±%] | ΔT[±°C] | α (%/K) |
| 95.0            | 217.1                                                                                                                  | 205.6                 | 228.7                 | 5.3                                  | 2.0     | 2.7     |
| 100.0           | 190.6                                                                                                                  | 180.2                 | 200.9                 | 5.4                                  | 2.1     | 2.6     |
| 105.0           | 167.2                                                                                                                  | 157.9                 | 176.6                 | 5.6                                  | 2.2     | 2.6     |
| 110.0           | 147.2                                                                                                                  | 138.8                 | 155.6                 | 5.7                                  | 2.3     | 2.5     |
| 115.0           | 130.0                                                                                                                  | 122.4                 | 137.5                 | 5.8                                  | 2.4     | 2.4     |
| 120.0           | 115.0                                                                                                                  | 108.2                 | 121.9                 | 5.9                                  | 2.5     | 2.4     |
| 125.0           | 102.3                                                                                                                  | 96.10                 | 108.5                 | 6.0                                  | 2.6     | 2.3     |
| 130.0           | 91.17                                                                                                                  | 85.56                 | 96.79                 | 6.2                                  | 2.7     | 2.3     |
| 135.0           | 81.32                                                                                                                  | 76.22                 | 86.41                 | 6.3                                  | 2.8     | 2.2     |
| 140.0           | 72.69                                                                                                                  | 68.06                 | 77.33                 | 6.4                                  | 2.9     | 2.2     |
| 145.0           | 65.20                                                                                                                  | 60.98                 | 69.42                 | 6.5                                  | 3.0     | 2.1     |
| 150.0           | 58.61                                                                                                                  | 54.76                 | 62.47                 | 6.6                                  | 3.2     | 2.1     |
| 155.0           | 52.91                                                                                                                  | 49.37                 | 56.44                 | 6.7                                  | 3.3     | 2.0     |

| B57875S0212J000 |                                                                                                                        |                       |                       |                                      |            |            |
|-----------------|------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|--------------------------------------|------------|------------|
| R/T No.         | 1008                                                                                                                   |                       |                       |                                      |            |            |
| T (°C)          | B <sub>25/100</sub> = 3560 K, R <sub>25</sub> = 2100 Ω, T <sub>R</sub> = 25 °C, ΔR <sub>R</sub> /R <sub>R</sub> = ± 5% |                       |                       |                                      |            |            |
|                 | R <sub>nomL</sub> [Ω]                                                                                                  | R <sub>minL</sub> [Ω] | R <sub>maxL</sub> [Ω] | ΔR <sub>R</sub> /R <sub>R</sub> [±%] | ΔT[±°C]    | α (%/K)    |
| -55.0           | 111520                                                                                                                 | 101000                | 122030                | 9.4                                  | 1.5        | 6.1        |
| -50.0           | 82567                                                                                                                  | 75084                 | 90050                 | 9.1                                  | 1.5        | 6.0        |
| -45.0           | 61583                                                                                                                  | 56217                 | 66949                 | 8.7                                  | 1.5        | 5.8        |
| -40.0           | 46263                                                                                                                  | 42387                 | 50139                 | 8.4                                  | 1.5        | 5.7        |
| -35.0           | 34999                                                                                                                  | 32179                 | 37820                 | 8.1                                  | 1.5        | 5.5        |
| -30.0           | 26661                                                                                                                  | 24595                 | 28728                 | 7.8                                  | 1.4        | 5.4        |
| -25.0           | 20423                                                                                                                  | 18900                 | 21945                 | 7.5                                  | 1.4        | 5.2        |
| -20.0           | 15786                                                                                                                  | 14654                 | 16918                 | 7.2                                  | 1.4        | 5.1        |
| -15.0           | 12254                                                                                                                  | 11408                 | 13100                 | 6.9                                  | 1.4        | 4.9        |
| -10.0           | 9594                                                                                                                   | 8957                  | 10231                 | 6.6                                  | 1.4        | 4.8        |
| -5.0            | 7570                                                                                                                   | 7087                  | 8054                  | 6.4                                  | 1.4        | 4.7        |
| 0.0             | 6020                                                                                                                   | 5650                  | 6389                  | 6.1                                  | 1.4        | 4.5        |
| 5.0             | 4811                                                                                                                   | 4526                  | 5095                  | 5.9                                  | 1.3        | 4.4        |
| 10.0            | 3872                                                                                                                   | 3652                  | 4092                  | 5.7                                  | 1.3        | 4.3        |
| 15.0            | 3133                                                                                                                   | 2962                  | 3304                  | 5.5                                  | 1.3        | 4.1        |
| 20.0            | 2552                                                                                                                   | 2418                  | 2687                  | 5.3                                  | 1.3        | 4.0        |
| <b>25.0</b>     | <b>2100</b>                                                                                                            | <b>1995</b>           | <b>2205</b>           | <b>5.0</b>                           | <b>1.3</b> | <b>3.9</b> |
| 30.0            | 1742                                                                                                                   | 1651                  | 1834                  | 5.2                                  | 1.4        | 3.8        |
| 35.0            | 1441                                                                                                                   | 1363                  | 1520                  | 5.4                                  | 1.5        | 3.7        |
| 40.0            | 1199                                                                                                                   | 1132                  | 1267                  | 5.6                                  | 1.6        | 3.6        |
| 45.0            | 1008                                                                                                                   | 949.8                 | 1067                  | 5.8                                  | 1.7        | 3.5        |

**Temperature measurement**
**B57875**
**Leaded NTCs, lead spacing 5 mm**
**S875**

| <b>B57875S0212J000</b> |                                                                                                                        |                      |                      |                                      |         |         |
|------------------------|------------------------------------------------------------------------------------------------------------------------|----------------------|----------------------|--------------------------------------|---------|---------|
| R/T No.                | 1008                                                                                                                   |                      |                      |                                      |         |         |
| T (°C)                 | B <sub>25/100</sub> = 3560 K, R <sub>25</sub> = 2100 Ω, T <sub>R</sub> = 25 °C, ΔR <sub>R</sub> /R <sub>R</sub> = ± 5% |                      |                      |                                      |         |         |
|                        | R <sub>nom</sub> [Ω]                                                                                                   | R <sub>min</sub> [Ω] | R <sub>max</sub> [Ω] | ΔR <sub>R</sub> /R <sub>R</sub> [±%] | ΔT[±°C] | α (%/K) |
| 50.0                   | 851.4                                                                                                                  | 800.6                | 902.3                | 6.0                                  | 1.8     | 3.4     |
| 55.0                   | 717.6                                                                                                                  | 673.5                | 761.6                | 6.1                                  | 1.9     | 3.3     |
| 60.0                   | 608.0                                                                                                                  | 569.7                | 646.3                | 6.3                                  | 2.0     | 3.2     |
| 65.0                   | 519.0                                                                                                                  | 485.5                | 552.5                | 6.5                                  | 2.1     | 3.1     |
| 70.0                   | 444.8                                                                                                                  | 415.4                | 474.3                | 6.6                                  | 2.2     | 3.1     |
| 75.0                   | 382.1                                                                                                                  | 356.2                | 407.9                | 6.8                                  | 2.3     | 3.0     |
| 80.0                   | 329.3                                                                                                                  | 306.5                | 352.0                | 6.9                                  | 2.4     | 2.9     |
| 85.0                   | 285.4                                                                                                                  | 265.3                | 305.5                | 7.1                                  | 2.5     | 2.8     |
| 90.0                   | 248.3                                                                                                                  | 230.4                | 266.1                | 7.2                                  | 2.6     | 2.8     |
| 95.0                   | 217.1                                                                                                                  | 201.2                | 233.0                | 7.3                                  | 2.7     | 2.7     |
| 100.0                  | 190.6                                                                                                                  | 176.4                | 204.8                | 7.4                                  | 2.8     | 2.6     |
| 105.0                  | 167.2                                                                                                                  | 154.6                | 179.9                | 7.6                                  | 3.0     | 2.6     |
| 110.0                  | 147.2                                                                                                                  | 135.9                | 158.5                | 7.7                                  | 3.1     | 2.5     |
| 115.0                  | 130.0                                                                                                                  | 119.8                | 140.1                | 7.8                                  | 3.2     | 2.4     |
| 120.0                  | 115.0                                                                                                                  | 105.9                | 124.2                | 7.9                                  | 3.3     | 2.4     |
| 125.0                  | 102.3                                                                                                                  | 94.05                | 110.5                | 8.0                                  | 3.4     | 2.3     |
| 130.0                  | 91.17                                                                                                                  | 83.73                | 98.61                | 8.2                                  | 3.6     | 2.3     |
| 135.0                  | 81.32                                                                                                                  | 74.59                | 88.04                | 8.3                                  | 3.7     | 2.2     |
| 140.0                  | 72.69                                                                                                                  | 66.61                | 78.78                | 8.4                                  | 3.8     | 2.2     |
| 145.0                  | 65.20                                                                                                                  | 59.67                | 70.73                | 8.5                                  | 4.0     | 2.1     |
| 150.0                  | 58.61                                                                                                                  | 53.58                | 63.64                | 8.6                                  | 4.1     | 2.1     |
| 155.0                  | 52.91                                                                                                                  | 48.32                | 57.50                | 8.7                                  | 4.3     | 2.0     |

| <b>B57875S0103F001</b> |                                                                                                                         |                      |                      |                                      |         |         |
|------------------------|-------------------------------------------------------------------------------------------------------------------------|----------------------|----------------------|--------------------------------------|---------|---------|
| R/T No.                | 8016                                                                                                                    |                      |                      |                                      |         |         |
| T (°C)                 | B <sub>25/100</sub> = 3988 K, R <sub>25</sub> = 10000 Ω, T <sub>R</sub> = 25 °C, ΔR <sub>R</sub> /R <sub>R</sub> = ± 1% |                      |                      |                                      |         |         |
|                        | R <sub>nom</sub> [Ω]                                                                                                    | R <sub>min</sub> [Ω] | R <sub>max</sub> [Ω] | ΔR <sub>R</sub> /R <sub>R</sub> [±%] | ΔT[±°C] | α (%/K) |
| -55.0                  | 963050                                                                                                                  | 905700               | 1020400              | 6.0                                  | 0.8     | 7.4     |
| -50.0                  | 670100                                                                                                                  | 632940               | 707260               | 5.5                                  | 0.8     | 7.1     |
| -45.0                  | 471690                                                                                                                  | 447380               | 496000               | 5.2                                  | 0.7     | 6.9     |
| -40.0                  | 336500                                                                                                                  | 320420               | 352580               | 4.8                                  | 0.7     | 6.7     |
| -35.0                  | 242590                                                                                                                  | 231870               | 253310               | 4.4                                  | 0.7     | 6.4     |
| -30.0                  | 177000                                                                                                                  | 169790               | 184210               | 4.1                                  | 0.7     | 6.2     |
| -25.0                  | 130370                                                                                                                  | 125490               | 135250               | 3.7                                  | 0.6     | 6.0     |
| -20.0                  | 97070                                                                                                                   | 93743                | 100400               | 3.4                                  | 0.6     | 5.8     |
| -15.0                  | 72929                                                                                                                   | 70652                | 75206                | 3.1                                  | 0.6     | 5.6     |
| -10.0                  | 55330                                                                                                                   | 53765                | 56895                | 2.8                                  | 0.5     | 5.4     |
| -5.0                   | 42315                                                                                                                   | 41237                | 43393                | 2.5                                  | 0.5     | 5.3     |
| 0.0                    | 32650                                                                                                                   | 31907                | 33393                | 2.3                                  | 0.4     | 5.1     |

**Temperature measurement**
**B57875**
**Leaded NTCs, lead spacing 5 mm**
**S875**

| <b>B57875S0103F001</b> |                                                                                                              |                           |                           |                         |                          |                                |
|------------------------|--------------------------------------------------------------------------------------------------------------|---------------------------|---------------------------|-------------------------|--------------------------|--------------------------------|
| R/T No.                | 8016                                                                                                         |                           |                           |                         |                          |                                |
| T (°C)                 | $B_{25/100} = 3988 \text{ K}$ , $R_{25} = 10000 \Omega$ , $T_R = 25 \text{ °C}$ , $\Delta R_R/R_R = \pm 1\%$ |                           |                           |                         |                          |                                |
|                        | $R_{\text{nomL}}[\Omega]$                                                                                    | $R_{\text{minL}}[\Omega]$ | $R_{\text{maxL}}[\Omega]$ | $\Delta R_R/R_R[\pm\%]$ | $\Delta T[\pm\text{°C}]$ | $\alpha \text{ (}\%/\text{K)}$ |
| 5.0                    | 25388                                                                                                        | 24877                     | 25898                     | 2.0                     | 0.4                      | 5.0                            |
| 10.0                   | 19900                                                                                                        | 19550                     | 20250                     | 1.8                     | 0.4                      | 4.8                            |
| 15.0                   | 15708                                                                                                        | 15470                     | 15946                     | 1.5                     | 0.3                      | 4.7                            |
| 20.0                   | 12490                                                                                                        | 12330                     | 12650                     | 1.3                     | 0.3                      | 4.5                            |
| <b>25.0</b>            | <b>10000</b>                                                                                                 | <b>9900</b>               | <b>10100</b>              | <b>1.0</b>              | <b>0.2</b>               | <b>4.4</b>                     |
| 30.0                   | 8057                                                                                                         | 7955                      | 8159                      | 1.3                     | 0.3                      | 4.3                            |
| 35.0                   | 6531                                                                                                         | 6434                      | 6628                      | 1.5                     | 0.4                      | 4.1                            |
| 40.0                   | 5327                                                                                                         | 5237                      | 5417                      | 1.7                     | 0.4                      | 4.0                            |
| 45.0                   | 4369                                                                                                         | 4286                      | 4451                      | 1.9                     | 0.5                      | 3.9                            |
| 50.0                   | 3603                                                                                                         | 3528                      | 3678                      | 2.1                     | 0.5                      | 3.8                            |
| 55.0                   | 2986                                                                                                         | 2918                      | 3054                      | 2.3                     | 0.6                      | 3.7                            |
| 60.0                   | 2488                                                                                                         | 2427                      | 2549                      | 2.5                     | 0.7                      | 3.6                            |
| 65.0                   | 2083                                                                                                         | 2028                      | 2138                      | 2.6                     | 0.8                      | 3.5                            |
| 70.0                   | 1752                                                                                                         | 1703                      | 1801                      | 2.8                     | 0.8                      | 3.4                            |
| 75.0                   | 1481                                                                                                         | 1437                      | 1525                      | 3.0                     | 0.9                      | 3.3                            |
| 80.0                   | 1258                                                                                                         | 1219                      | 1297                      | 3.1                     | 1.0                      | 3.2                            |
| 85.0                   | 1072                                                                                                         | 1037                      | 1108                      | 3.3                     | 1.0                      | 3.2                            |
| 90.0                   | 917.7                                                                                                        | 886.1                     | 949.3                     | 3.4                     | 1.1                      | 3.1                            |
| 95.0                   | 788.5                                                                                                        | 760.2                     | 816.9                     | 3.6                     | 1.2                      | 3.0                            |
| 100.0                  | 680.0                                                                                                        | 654.6                     | 705.4                     | 3.7                     | 1.3                      | 2.9                            |
| 105.0                  | 588.6                                                                                                        | 565.8                     | 611.4                     | 3.9                     | 1.4                      | 2.9                            |
| 110.0                  | 511.2                                                                                                        | 490.7                     | 531.7                     | 4.0                     | 1.4                      | 2.8                            |
| 115.0                  | 445.4                                                                                                        | 426.9                     | 463.9                     | 4.2                     | 1.5                      | 2.7                            |
| 120.0                  | 389.3                                                                                                        | 372.6                     | 406.0                     | 4.3                     | 1.6                      | 2.7                            |
| 125.0                  | 341.7                                                                                                        | 326.6                     | 356.8                     | 4.4                     | 1.7                      | 2.6                            |
| 130.0                  | 300.9                                                                                                        | 287.3                     | 314.5                     | 4.5                     | 1.8                      | 2.5                            |
| 135.0                  | 265.4                                                                                                        | 253.1                     | 277.8                     | 4.7                     | 1.9                      | 2.5                            |
| 140.0                  | 234.8                                                                                                        | 223.6                     | 246.0                     | 4.8                     | 2.0                      | 2.4                            |
| 145.0                  | 208.3                                                                                                        | 198.1                     | 218.5                     | 4.9                     | 2.1                      | 2.4                            |
| 150.0                  | 185.3                                                                                                        | 176.0                     | 194.6                     | 5.0                     | 2.2                      | 2.3                            |
| 155.0                  | 165.3                                                                                                        | 156.9                     | 173.8                     | 5.1                     | 2.3                      | 2.3                            |

| <b>B57875S0103H001</b> |                                                                                                              |                           |                           |                         |                          |                                |
|------------------------|--------------------------------------------------------------------------------------------------------------|---------------------------|---------------------------|-------------------------|--------------------------|--------------------------------|
| R/T No.                | 8016                                                                                                         |                           |                           |                         |                          |                                |
| T (°C)                 | $B_{25/100} = 3988 \text{ K}$ , $R_{25} = 10000 \Omega$ , $T_R = 25 \text{ °C}$ , $\Delta R_R/R_R = \pm 3\%$ |                           |                           |                         |                          |                                |
|                        | $R_{\text{nomL}}[\Omega]$                                                                                    | $R_{\text{minL}}[\Omega]$ | $R_{\text{maxL}}[\Omega]$ | $\Delta R_R/R_R[\pm\%]$ | $\Delta T[\pm\text{°C}]$ | $\alpha \text{ (}\%/\text{K)}$ |
| -55.0                  | 963050                                                                                                       | 886440                    | 1039700                   | 8.0                     | 1.1                      | 7.4                            |
| -50.0                  | 670100                                                                                                       | 619540                    | 720660                    | 7.5                     | 1.1                      | 7.1                            |
| -45.0                  | 471690                                                                                                       | 437940                    | 505430                    | 7.2                     | 1.0                      | 6.9                            |



|             | <b>B57875S0103H001</b>                                                                                                  |                      |                      |                                      |            |            |
|-------------|-------------------------------------------------------------------------------------------------------------------------|----------------------|----------------------|--------------------------------------|------------|------------|
| R/T No.     | 8016                                                                                                                    |                      |                      |                                      |            |            |
| T (°C)      | B <sub>25/100</sub> = 3988 K, R <sub>25</sub> = 10000 Ω, T <sub>R</sub> = 25 °C, ΔR <sub>R</sub> /R <sub>R</sub> = ± 3% |                      |                      |                                      |            |            |
|             | R <sub>nom</sub> [Ω]                                                                                                    | R <sub>min</sub> [Ω] | R <sub>max</sub> [Ω] | ΔR <sub>R</sub> /R <sub>R</sub> [±%] | ΔT[±°C]    | α (%/K)    |
| -40.0       | 336500                                                                                                                  | 313690               | 359310               | 6.8                                  | 1.0        | 6.7        |
| -35.0       | 242590                                                                                                                  | 227020               | 258160               | 6.4                                  | 1.0        | 6.4        |
| -30.0       | 177000                                                                                                                  | 166250               | 187750               | 6.1                                  | 1.0        | 6.2        |
| -25.0       | 130370                                                                                                                  | 122880               | 137860               | 5.7                                  | 1.0        | 6.0        |
| -20.0       | 97070                                                                                                                   | 91801                | 102340               | 5.4                                  | 0.9        | 5.8        |
| -15.0       | 72929                                                                                                                   | 69193                | 76665                | 5.1                                  | 0.9        | 5.6        |
| -10.0       | 55330                                                                                                                   | 52658                | 58002                | 4.8                                  | 0.9        | 5.4        |
| -5.0        | 42315                                                                                                                   | 40391                | 44239                | 4.5                                  | 0.9        | 5.3        |
| 0.0         | 32650                                                                                                                   | 31254                | 34046                | 4.3                                  | 0.8        | 5.1        |
| 5.0         | 25388                                                                                                                   | 24369                | 26406                | 4.0                                  | 0.8        | 5.0        |
| 10.0        | 19900                                                                                                                   | 19152                | 20648                | 3.8                                  | 0.8        | 4.8        |
| 15.0        | 15708                                                                                                                   | 15156                | 16260                | 3.5                                  | 0.8        | 4.7        |
| 20.0        | 12490                                                                                                                   | 12081                | 12899                | 3.3                                  | 0.7        | 4.5        |
| <b>25.0</b> | <b>10000</b>                                                                                                            | <b>9700</b>          | <b>10300</b>         | <b>3.0</b>                           | <b>0.7</b> | <b>4.4</b> |
| 30.0        | 8057                                                                                                                    | 7793                 | 8321                 | 3.3                                  | 0.8        | 4.3        |
| 35.0        | 6531                                                                                                                    | 6304                 | 6759                 | 3.5                                  | 0.8        | 4.1        |
| 40.0        | 5327                                                                                                                    | 5130                 | 5524                 | 3.7                                  | 0.9        | 4.0        |
| 45.0        | 4369                                                                                                                    | 4199                 | 4539                 | 3.9                                  | 1.0        | 3.9        |
| 50.0        | 3603                                                                                                                    | 3456                 | 3750                 | 4.1                                  | 1.1        | 3.8        |
| 55.0        | 2986                                                                                                                    | 2859                 | 3114                 | 4.3                                  | 1.2        | 3.7        |
| 60.0        | 2488                                                                                                                    | 2377                 | 2599                 | 4.5                                  | 1.2        | 3.6        |
| 65.0        | 2083                                                                                                                    | 1987                 | 2180                 | 4.6                                  | 1.3        | 3.5        |
| 70.0        | 1752                                                                                                                    | 1668                 | 1836                 | 4.8                                  | 1.4        | 3.4        |
| 75.0        | 1481                                                                                                                    | 1408                 | 1555                 | 5.0                                  | 1.5        | 3.3        |
| 80.0        | 1258                                                                                                                    | 1193                 | 1323                 | 5.1                                  | 1.6        | 3.2        |
| 85.0        | 1072                                                                                                                    | 1016                 | 1129                 | 5.3                                  | 1.7        | 3.2        |
| 90.0        | 917.7                                                                                                                   | 867.7                | 967.7                | 5.4                                  | 1.8        | 3.1        |
| 95.0        | 788.5                                                                                                                   | 744.4                | 832.6                | 5.6                                  | 1.9        | 3.0        |
| 100.0       | 680.0                                                                                                                   | 641.0                | 719.0                | 5.7                                  | 2.0        | 2.9        |
| 105.0       | 588.6                                                                                                                   | 554.0                | 623.2                | 5.9                                  | 2.1        | 2.9        |
| 110.0       | 511.2                                                                                                                   | 480.4                | 542.0                | 6.0                                  | 2.2        | 2.8        |
| 115.0       | 445.4                                                                                                                   | 418.0                | 472.8                | 6.2                                  | 2.3        | 2.7        |
| 120.0       | 389.3                                                                                                                   | 364.8                | 413.8                | 6.3                                  | 2.4        | 2.7        |
| 125.0       | 341.7                                                                                                                   | 319.8                | 363.6                | 6.4                                  | 2.5        | 2.6        |
| 130.0       | 300.9                                                                                                                   | 281.2                | 320.6                | 6.5                                  | 2.6        | 2.5        |
| 135.0       | 265.4                                                                                                                   | 247.8                | 283.1                | 6.7                                  | 2.7        | 2.5        |
| 140.0       | 234.8                                                                                                                   | 218.9                | 250.7                | 6.8                                  | 2.8        | 2.4        |
| 145.0       | 208.3                                                                                                                   | 194.0                | 222.7                | 6.9                                  | 2.9        | 2.4        |
| 150.0       | 185.3                                                                                                                   | 172.3                | 198.3                | 7.0                                  | 3.0        | 2.3        |
| 155.0       | 165.3                                                                                                                   | 153.6                | 177.1                | 7.1                                  | 3.1        | 2.3        |

| B57875S0103J001 |                                                                                                                         |                      |                      |                                      |            |            |
|-----------------|-------------------------------------------------------------------------------------------------------------------------|----------------------|----------------------|--------------------------------------|------------|------------|
| R/T No.         | 8016                                                                                                                    |                      |                      |                                      |            |            |
| T (°C)          | B <sub>25/100</sub> = 3988 K, R <sub>25</sub> = 10000 Ω, T <sub>R</sub> = 25 °C, ΔR <sub>R</sub> /R <sub>R</sub> = ± 5% |                      |                      |                                      |            |            |
|                 | R <sub>nom</sub> [Ω]                                                                                                    | R <sub>min</sub> [Ω] | R <sub>max</sub> [Ω] | ΔR <sub>R</sub> /R <sub>R</sub> [±%] | ΔT[±°C]    | α (%/K)    |
| -55.0           | 963050                                                                                                                  | 867180               | 1058900              | 10.0                                 | 1.3        | 7.4        |
| -50.0           | 670100                                                                                                                  | 606140               | 734070               | 9.5                                  | 1.3        | 7.1        |
| -45.0           | 471690                                                                                                                  | 428510               | 514870               | 9.2                                  | 1.3        | 6.9        |
| -40.0           | 336500                                                                                                                  | 306960               | 366040               | 8.8                                  | 1.3        | 6.7        |
| -35.0           | 242590                                                                                                                  | 222160               | 263020               | 8.4                                  | 1.3        | 6.4        |
| -30.0           | 177000                                                                                                                  | 162710               | 191290               | 8.1                                  | 1.3        | 6.2        |
| -25.0           | 130370                                                                                                                  | 120270               | 140470               | 7.7                                  | 1.3        | 6.0        |
| -20.0           | 97070                                                                                                                   | 89860                | 104280               | 7.4                                  | 1.3        | 5.8        |
| -15.0           | 72929                                                                                                                   | 67735                | 78124                | 7.1                                  | 1.3        | 5.6        |
| -10.0           | 55330                                                                                                                   | 51551                | 59108                | 6.8                                  | 1.3        | 5.4        |
| -5.0            | 42315                                                                                                                   | 39545                | 45085                | 6.5                                  | 1.2        | 5.3        |
| 0.0             | 32650                                                                                                                   | 30601                | 34699                | 6.3                                  | 1.2        | 5.1        |
| 5.0             | 25388                                                                                                                   | 23861                | 26914                | 6.0                                  | 1.2        | 5.0        |
| 10.0            | 19900                                                                                                                   | 18754                | 21046                | 5.8                                  | 1.2        | 4.8        |
| 15.0            | 15708                                                                                                                   | 14842                | 16574                | 5.5                                  | 1.2        | 4.7        |
| 20.0            | 12490                                                                                                                   | 11831                | 13149                | 5.3                                  | 1.2        | 4.5        |
| 25.0            | <b>10000</b>                                                                                                            | <b>9500</b>          | <b>10500</b>         | <b>5.0</b>                           | <b>1.1</b> | <b>4.4</b> |
| 30.0            | 8057                                                                                                                    | 7632                 | 8482                 | 5.3                                  | 1.2        | 4.3        |
| 35.0            | 6531                                                                                                                    | 6173                 | 6889                 | 5.5                                  | 1.3        | 4.1        |
| 40.0            | 5327                                                                                                                    | 5024                 | 5630                 | 5.7                                  | 1.4        | 4.0        |
| 45.0            | 4369                                                                                                                    | 4111                 | 4626                 | 5.9                                  | 1.5        | 3.9        |
| 50.0            | 3603                                                                                                                    | 3384                 | 3822                 | 6.1                                  | 1.6        | 3.8        |
| 55.0            | 2986                                                                                                                    | 2799                 | 3174                 | 6.3                                  | 1.7        | 3.7        |
| 60.0            | 2488                                                                                                                    | 2327                 | 2649                 | 6.5                                  | 1.8        | 3.6        |
| 65.0            | 2083                                                                                                                    | 1945                 | 2221                 | 6.6                                  | 1.9        | 3.5        |
| 70.0            | 1752                                                                                                                    | 1633                 | 1871                 | 6.8                                  | 2.0        | 3.4        |
| 75.0            | 1481                                                                                                                    | 1378                 | 1585                 | 7.0                                  | 2.1        | 3.3        |
| 80.0            | 1258                                                                                                                    | 1168                 | 1348                 | 7.1                                  | 2.2        | 3.2        |
| 85.0            | 1072                                                                                                                    | 994.2                | 1151                 | 7.3                                  | 2.3        | 3.2        |
| 90.0            | 917.7                                                                                                                   | 849.4                | 986.0                | 7.4                                  | 2.4        | 3.1        |
| 95.0            | 788.5                                                                                                                   | 728.6                | 848.4                | 7.6                                  | 2.5        | 3.0        |
| 100.0           | 680.0                                                                                                                   | 627.4                | 732.6                | 7.7                                  | 2.6        | 2.9        |
| 105.0           | 588.6                                                                                                                   | 542.2                | 635.0                | 7.9                                  | 2.8        | 2.9        |
| 110.0           | 511.2                                                                                                                   | 470.2                | 552.2                | 8.0                                  | 2.9        | 2.8        |
| 115.0           | 445.4                                                                                                                   | 409.1                | 481.7                | 8.2                                  | 3.0        | 2.7        |
| 120.0           | 389.3                                                                                                                   | 357.1                | 421.5                | 8.3                                  | 3.1        | 2.7        |
| 125.0           | 341.7                                                                                                                   | 313.0                | 370.4                | 8.4                                  | 3.2        | 2.6        |
| 130.0           | 300.9                                                                                                                   | 275.2                | 326.6                | 8.5                                  | 3.4        | 2.5        |
| 135.0           | 265.4                                                                                                                   | 242.5                | 288.4                | 8.7                                  | 3.5        | 2.5        |

**Temperature measurement**
**B57875**
**Leaded NTCs, lead spacing 5 mm**
**S875**

| <b>B57875S0103J001</b> |                                                                                                                         |                      |                      |                                      |         |         |
|------------------------|-------------------------------------------------------------------------------------------------------------------------|----------------------|----------------------|--------------------------------------|---------|---------|
| R/T No.                | 8016                                                                                                                    |                      |                      |                                      |         |         |
| T (°C)                 | B <sub>25/100</sub> = 3988 K, R <sub>25</sub> = 10000 Ω, T <sub>R</sub> = 25 °C, ΔR <sub>R</sub> /R <sub>R</sub> = ± 5% |                      |                      |                                      |         |         |
|                        | R <sub>nom</sub> [Ω]                                                                                                    | R <sub>min</sub> [Ω] | R <sub>max</sub> [Ω] | ΔR <sub>R</sub> /R <sub>R</sub> [±%] | ΔT[±°C] | α (%/K) |
| 140.0                  | 234.8                                                                                                                   | 214.2                | 255.4                | 8.8                                  | 3.6     | 2.4     |
| 145.0                  | 208.3                                                                                                                   | 189.8                | 226.8                | 8.9                                  | 3.8     | 2.4     |
| 150.0                  | 185.3                                                                                                                   | 168.6                | 202.0                | 9.0                                  | 3.9     | 2.3     |
| 155.0                  | 165.3                                                                                                                   | 150.3                | 180.4                | 9.1                                  | 4.0     | 2.3     |

| <b>B57875S0103F002</b> |                                                                                                                         |                      |                      |                                      |            |            |
|------------------------|-------------------------------------------------------------------------------------------------------------------------|----------------------|----------------------|--------------------------------------|------------|------------|
| R/T No.                | 2908                                                                                                                    |                      |                      |                                      |            |            |
| T (°C)                 | B <sub>25/100</sub> = 3460 K, R <sub>25</sub> = 10000 Ω, T <sub>R</sub> = 25 °C, ΔR <sub>R</sub> /R <sub>R</sub> = ± 1% |                      |                      |                                      |            |            |
|                        | R <sub>nom</sub> [Ω]                                                                                                    | R <sub>min</sub> [Ω] | R <sub>max</sub> [Ω] | ΔR <sub>R</sub> /R <sub>R</sub> [±%] | ΔT[±°C]    | α (%/K)    |
| -55.0                  | 453130                                                                                                                  | 429090               | 477170               | 5.3                                  | 0.9        | 6.0        |
| -50.0                  | 337290                                                                                                                  | 320600               | 353990               | 5.0                                  | 0.9        | 5.8        |
| -45.0                  | 253330                                                                                                                  | 241650               | 265010               | 4.6                                  | 0.8        | 5.6        |
| -40.0                  | 191910                                                                                                                  | 183680               | 200130               | 4.3                                  | 0.8        | 5.5        |
| -35.0                  | 146590                                                                                                                  | 140770               | 152420               | 4.0                                  | 0.7        | 5.3        |
| -30.0                  | 112880                                                                                                                  | 108730               | 117030               | 3.7                                  | 0.7        | 5.1        |
| -25.0                  | 87588                                                                                                                   | 84620                | 90556                | 3.4                                  | 0.7        | 5.0        |
| -20.0                  | 68471                                                                                                                   | 66339                | 70602                | 3.1                                  | 0.6        | 4.9        |
| -15.0                  | 53910                                                                                                                   | 52375                | 55446                | 2.8                                  | 0.6        | 4.7        |
| -10.0                  | 42739                                                                                                                   | 41631                | 43848                | 2.6                                  | 0.6        | 4.6        |
| -5.0                   | 34109                                                                                                                   | 33308                | 34910                | 2.3                                  | 0.5        | 4.4        |
| 0.0                    | 27396                                                                                                                   | 26817                | 27974                | 2.1                                  | 0.5        | 4.3        |
| 5.0                    | 22140                                                                                                                   | 21722                | 22557                | 1.9                                  | 0.4        | 4.2        |
| 10.0                   | 17999                                                                                                                   | 17699                | 18298                | 1.7                                  | 0.4        | 4.1        |
| 15.0                   | 14716                                                                                                                   | 14502                | 14930                | 1.5                                  | 0.4        | 4.0        |
| 20.0                   | 12099                                                                                                                   | 11948                | 12250                | 1.2                                  | 0.3        | 3.9        |
| <b>25.0</b>            | <b>10000</b>                                                                                                            | <b>9900</b>          | <b>10100</b>         | <b>1.0</b>                           | <b>0.3</b> | <b>3.8</b> |
| 30.0                   | 8308                                                                                                                    | 8205                 | 8411                 | 1.2                                  | 0.3        | 3.7        |
| 35.0                   | 6936                                                                                                                    | 6837                 | 7035                 | 1.4                                  | 0.4        | 3.6        |
| 40.0                   | 5819                                                                                                                    | 5725                 | 5912                 | 1.6                                  | 0.5        | 3.5        |
| 45.0                   | 4904                                                                                                                    | 4816                 | 4991                 | 1.8                                  | 0.5        | 3.4        |
| 50.0                   | 4151                                                                                                                    | 4070                 | 4232                 | 1.9                                  | 0.6        | 3.3        |
| 55.0                   | 3529                                                                                                                    | 3454                 | 3603                 | 2.1                                  | 0.7        | 3.2        |
| 60.0                   | 3012                                                                                                                    | 2944                 | 3081                 | 2.3                                  | 0.7        | 3.1        |
| 65.0                   | 2582                                                                                                                    | 2519                 | 2644                 | 2.4                                  | 0.8        | 3.0        |
| 70.0                   | 2221                                                                                                                    | 2164                 | 2278                 | 2.6                                  | 0.9        | 3.0        |
| 75.0                   | 1918                                                                                                                    | 1866                 | 1970                 | 2.7                                  | 0.9        | 2.9        |
| 80.0                   | 1663                                                                                                                    | 1615                 | 1710                 | 2.9                                  | 1.0        | 2.8        |
| 85.0                   | 1446                                                                                                                    | 1403                 | 1489                 | 3.0                                  | 1.1        | 2.8        |
| 90.0                   | 1262                                                                                                                    | 1222                 | 1301                 | 3.1                                  | 1.2        | 2.7        |

**Temperature measurement**
**B57875**
**Leaded NTCs, lead spacing 5 mm**
**S875**

| <b>B57875S0103F002</b> |                                                                                                                                    |                          |                          |                         |                               |                          |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------|-------------------------|-------------------------------|--------------------------|
| R/T No.                | 2908                                                                                                                               |                          |                          |                         |                               |                          |
| T (°C)                 | $B_{25/100} = 3460 \text{ K}$ , $R_{25} = 10000 \text{ } \Omega$ , $T_R = 25 \text{ } ^\circ\text{C}$ , $\Delta R_R/R_R = \pm 1\%$ |                          |                          |                         |                               |                          |
|                        | $R_{\text{nom}}[\Omega]$                                                                                                           | $R_{\text{min}}[\Omega]$ | $R_{\text{max}}[\Omega]$ | $\Delta R_R/R_R[\pm\%]$ | $\Delta T[\pm^\circ\text{C}]$ | $\alpha \text{ } (\%/K)$ |
| 95.0                   | 1105                                                                                                                               | 1069                     | 1141                     | 3.3                     | 1.2                           | 2.6                      |
| 100.0                  | 970.2                                                                                                                              | 937.4                    | 1003                     | 3.4                     | 1.3                           | 2.6                      |
| 105.0                  | 854.6                                                                                                                              | 824.7                    | 884.6                    | 3.5                     | 1.4                           | 2.5                      |
| 110.0                  | 755.1                                                                                                                              | 727.7                    | 782.4                    | 3.6                     | 1.5                           | 2.4                      |
| 115.0                  | 669.0                                                                                                                              | 644.0                    | 694.0                    | 3.7                     | 1.6                           | 2.4                      |
| 120.0                  | 594.4                                                                                                                              | 571.5                    | 617.3                    | 3.9                     | 1.6                           | 2.3                      |
| 125.0                  | 529.5                                                                                                                              | 508.5                    | 550.5                    | 4.0                     | 1.7                           | 2.3                      |
| 130.0                  | 472.9                                                                                                                              | 453.6                    | 492.2                    | 4.1                     | 1.8                           | 2.2                      |
| 135.0                  | 423.4                                                                                                                              | 405.7                    | 441.1                    | 4.2                     | 1.9                           | 2.2                      |
| 140.0                  | 380.0                                                                                                                              | 363.8                    | 396.3                    | 4.3                     | 2.0                           | 2.1                      |
| 145.0                  | 341.9                                                                                                                              | 326.9                    | 356.9                    | 4.4                     | 2.1                           | 2.1                      |
| 150.0                  | 308.3                                                                                                                              | 294.5                    | 322.1                    | 4.5                     | 2.2                           | 2.0                      |
| 155.0                  | 278.6                                                                                                                              | 265.8                    | 291.3                    | 4.6                     | 2.3                           | 2.0                      |

| <b>B57875S0103H002</b> |                                                                                                                                    |                          |                          |                         |                               |                          |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------|-------------------------|-------------------------------|--------------------------|
| R/T No.                | 2908                                                                                                                               |                          |                          |                         |                               |                          |
| T (°C)                 | $B_{25/100} = 3460 \text{ K}$ , $R_{25} = 10000 \text{ } \Omega$ , $T_R = 25 \text{ } ^\circ\text{C}$ , $\Delta R_R/R_R = \pm 3\%$ |                          |                          |                         |                               |                          |
|                        | $R_{\text{nom}}[\Omega]$                                                                                                           | $R_{\text{min}}[\Omega]$ | $R_{\text{max}}[\Omega]$ | $\Delta R_R/R_R[\pm\%]$ | $\Delta T[\pm^\circ\text{C}]$ | $\alpha \text{ } (\%/K)$ |
| -55.0                  | 453130                                                                                                                             | 420030                   | 486230                   | 7.3                     | 1.2                           | 6.0                      |
| -50.0                  | 337290                                                                                                                             | 313850                   | 360740                   | 7.0                     | 1.2                           | 5.8                      |
| -45.0                  | 253330                                                                                                                             | 236580                   | 270070                   | 6.6                     | 1.2                           | 5.6                      |
| -40.0                  | 191910                                                                                                                             | 179850                   | 203970                   | 6.3                     | 1.1                           | 5.5                      |
| -35.0                  | 146590                                                                                                                             | 137840                   | 155350                   | 6.0                     | 1.1                           | 5.3                      |
| -30.0                  | 112880                                                                                                                             | 106470                   | 119280                   | 5.7                     | 1.1                           | 5.1                      |
| -25.0                  | 87588                                                                                                                              | 82868                    | 92307                    | 5.4                     | 1.1                           | 5.0                      |
| -20.0                  | 68471                                                                                                                              | 64970                    | 71971                    | 5.1                     | 1.1                           | 4.9                      |
| -15.0                  | 53910                                                                                                                              | 51296                    | 56524                    | 4.8                     | 1.0                           | 4.7                      |
| -10.0                  | 42739                                                                                                                              | 40776                    | 44702                    | 4.6                     | 1.0                           | 4.6                      |
| -5.0                   | 34109                                                                                                                              | 32626                    | 35592                    | 4.3                     | 1.0                           | 4.4                      |
| 0.0                    | 27396                                                                                                                              | 26269                    | 28522                    | 4.1                     | 1.0                           | 4.3                      |
| 5.0                    | 22140                                                                                                                              | 21280                    | 23000                    | 3.9                     | 0.9                           | 4.2                      |
| 10.0                   | 17999                                                                                                                              | 17339                    | 18658                    | 3.7                     | 0.9                           | 4.1                      |
| 15.0                   | 14716                                                                                                                              | 14208                    | 15224                    | 3.5                     | 0.9                           | 4.0                      |
| 20.0                   | 12099                                                                                                                              | 11706                    | 12492                    | 3.2                     | 0.8                           | 3.9                      |
| <b>25.0</b>            | <b>10000</b>                                                                                                                       | <b>9700</b>              | <b>10300</b>             | <b>3.0</b>              | <b>0.8</b>                    | <b>3.8</b>               |
| 30.0                   | 8308                                                                                                                               | 8038                     | 8577                     | 3.2                     | 0.9                           | 3.7                      |
| 35.0                   | 6936                                                                                                                               | 6698                     | 7174                     | 3.4                     | 1.0                           | 3.6                      |
| 40.0                   | 5819                                                                                                                               | 5609                     | 6028                     | 3.6                     | 1.0                           | 3.5                      |
| 45.0                   | 4904                                                                                                                               | 4718                     | 5089                     | 3.8                     | 1.1                           | 3.4                      |

| B57875S0103H002 |                                                                                                              |                          |                          |                         |                               |                                |
|-----------------|--------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------|-------------------------|-------------------------------|--------------------------------|
| R/T No.         | 2908                                                                                                         |                          |                          |                         |                               |                                |
| T (°C)          | $B_{25/100} = 3460 \text{ K}$ , $R_{25} = 10000 \Omega$ , $T_R = 25 \text{ °C}$ , $\Delta R_R/R_R = \pm 3\%$ |                          |                          |                         |                               |                                |
|                 | $R_{\text{nom}}[\Omega]$                                                                                     | $R_{\text{min}}[\Omega]$ | $R_{\text{max}}[\Omega]$ | $\Delta R_R/R_R[\pm\%]$ | $\Delta T[\pm^\circ\text{C}]$ | $\alpha \text{ (}\%/\text{K)}$ |
| 50.0            | 4151                                                                                                         | 3987                     | 4315                     | 3.9                     | 1.2                           | 3.3                            |
| 55.0            | 3529                                                                                                         | 3384                     | 3674                     | 4.1                     | 1.3                           | 3.2                            |
| 60.0            | 3012                                                                                                         | 2884                     | 3141                     | 4.3                     | 1.4                           | 3.1                            |
| 65.0            | 2582                                                                                                         | 2468                     | 2696                     | 4.4                     | 1.5                           | 3.0                            |
| 70.0            | 2221                                                                                                         | 2120                     | 2323                     | 4.6                     | 1.5                           | 3.0                            |
| 75.0            | 1918                                                                                                         | 1828                     | 2009                     | 4.7                     | 1.6                           | 2.9                            |
| 80.0            | 1663                                                                                                         | 1582                     | 1743                     | 4.9                     | 1.7                           | 2.8                            |
| 85.0            | 1446                                                                                                         | 1374                     | 1518                     | 5.0                     | 1.8                           | 2.8                            |
| 90.0            | 1262                                                                                                         | 1197                     | 1327                     | 5.1                     | 1.9                           | 2.7                            |
| 95.0            | 1105                                                                                                         | 1047                     | 1163                     | 5.3                     | 2.0                           | 2.6                            |
| 100.0           | 970.2                                                                                                        | 918.0                    | 1022                     | 5.4                     | 2.1                           | 2.6                            |
| 105.0           | 854.6                                                                                                        | 807.6                    | 901.7                    | 5.5                     | 2.2                           | 2.5                            |
| 110.0           | 755.1                                                                                                        | 712.6                    | 797.5                    | 5.6                     | 2.3                           | 2.4                            |
| 115.0           | 669.0                                                                                                        | 630.6                    | 707.4                    | 5.7                     | 2.4                           | 2.4                            |
| 120.0           | 594.4                                                                                                        | 559.6                    | 629.2                    | 5.9                     | 2.5                           | 2.3                            |
| 125.0           | 529.5                                                                                                        | 497.9                    | 561.1                    | 6.0                     | 2.6                           | 2.3                            |
| 130.0           | 472.9                                                                                                        | 444.2                    | 501.6                    | 6.1                     | 2.7                           | 2.2                            |
| 135.0           | 423.4                                                                                                        | 397.3                    | 449.6                    | 6.2                     | 2.8                           | 2.2                            |
| 140.0           | 380.0                                                                                                        | 356.2                    | 403.9                    | 6.3                     | 2.9                           | 2.1                            |
| 145.0           | 341.9                                                                                                        | 320.1                    | 363.7                    | 6.4                     | 3.0                           | 2.1                            |
| 150.0           | 308.3                                                                                                        | 288.3                    | 328.3                    | 6.5                     | 3.2                           | 2.0                            |
| 155.0           | 278.6                                                                                                        | 260.3                    | 296.9                    | 6.6                     | 3.3                           | 2.0                            |

| B57875S0103J002 |                                                                                                              |                          |                          |                         |                               |                                |
|-----------------|--------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------|-------------------------|-------------------------------|--------------------------------|
| R/T No.         | 2908                                                                                                         |                          |                          |                         |                               |                                |
| T (°C)          | $B_{25/100} = 3460 \text{ K}$ , $R_{25} = 10000 \Omega$ , $T_R = 25 \text{ °C}$ , $\Delta R_R/R_R = \pm 5\%$ |                          |                          |                         |                               |                                |
|                 | $R_{\text{nom}}[\Omega]$                                                                                     | $R_{\text{min}}[\Omega]$ | $R_{\text{max}}[\Omega]$ | $\Delta R_R/R_R[\pm\%]$ | $\Delta T[\pm^\circ\text{C}]$ | $\alpha \text{ (}\%/\text{K)}$ |
| −55.0           | 453130                                                                                                       | 410960                   | 495300                   | 9.3                     | 1.6                           | 6.0                            |
| −50.0           | 337290                                                                                                       | 307100                   | 367480                   | 9.0                     | 1.5                           | 5.8                            |
| −45.0           | 253330                                                                                                       | 231510                   | 275140                   | 8.6                     | 1.5                           | 5.6                            |
| −40.0           | 191910                                                                                                       | 176010                   | 207810                   | 8.3                     | 1.5                           | 5.5                            |
| −35.0           | 146590                                                                                                       | 134900                   | 158280                   | 8.0                     | 1.5                           | 5.3                            |
| −30.0           | 112880                                                                                                       | 104210                   | 121540                   | 7.7                     | 1.5                           | 5.1                            |
| −25.0           | 87588                                                                                                        | 81117                    | 94059                    | 7.4                     | 1.5                           | 5.0                            |
| −20.0           | 68471                                                                                                        | 63600                    | 73341                    | 7.1                     | 1.5                           | 4.9                            |
| −15.0           | 53910                                                                                                        | 50218                    | 57602                    | 6.8                     | 1.5                           | 4.7                            |
| −10.0           | 42739                                                                                                        | 39921                    | 45557                    | 6.6                     | 1.4                           | 4.6                            |
| −5.0            | 34109                                                                                                        | 31943                    | 36274                    | 6.3                     | 1.4                           | 4.4                            |
| 0.0             | 27396                                                                                                        | 25721                    | 29070                    | 6.1                     | 1.4                           | 4.3                            |

**Temperature measurement**
**B57875**
**Leaded NTCs, lead spacing 5 mm**
**S875**

| <b>B57875S0103J002</b> |                                                                                                                                    |                           |                           |                         |                               |                          |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------|---------------------------|---------------------------|-------------------------|-------------------------------|--------------------------|
| R/T No.                | 2908                                                                                                                               |                           |                           |                         |                               |                          |
| T (°C)                 | $B_{25/100} = 3460 \text{ K}$ , $R_{25} = 10000 \text{ } \Omega$ , $T_R = 25 \text{ } ^\circ\text{C}$ , $\Delta R_R/R_R = \pm 5\%$ |                           |                           |                         |                               |                          |
|                        | $R_{\text{nomL}}[\Omega]$                                                                                                          | $R_{\text{minL}}[\Omega]$ | $R_{\text{maxL}}[\Omega]$ | $\Delta R_R/R_R[\pm\%]$ | $\Delta T[\pm^\circ\text{C}]$ | $\alpha \text{ } (\%/K)$ |
| 5.0                    | 22140                                                                                                                              | 20837                     | 23442                     | 5.9                     | 1.4                           | 4.2                      |
| 10.0                   | 17999                                                                                                                              | 16979                     | 19018                     | 5.7                     | 1.4                           | 4.1                      |
| 15.0                   | 14716                                                                                                                              | 13914                     | 15519                     | 5.5                     | 1.4                           | 4.0                      |
| 20.0                   | 12099                                                                                                                              | 11464                     | 12734                     | 5.2                     | 1.4                           | 3.9                      |
| <b>25.0</b>            | <b>10000</b>                                                                                                                       | <b>9500</b>               | <b>10500</b>              | <b>5.0</b>              | <b>1.3</b>                    | <b>3.8</b>               |
| 30.0                   | 8308                                                                                                                               | 7872                      | 8743                      | 5.2                     | 1.4                           | 3.7                      |
| 35.0                   | 6936                                                                                                                               | 6560                      | 7312                      | 5.4                     | 1.5                           | 3.6                      |
| 40.0                   | 5819                                                                                                                               | 5492                      | 6145                      | 5.6                     | 1.6                           | 3.5                      |
| 45.0                   | 4904                                                                                                                               | 4620                      | 5187                      | 5.8                     | 1.7                           | 3.4                      |
| 50.0                   | 4151                                                                                                                               | 3904                      | 4398                      | 5.9                     | 1.8                           | 3.3                      |
| 55.0                   | 3529                                                                                                                               | 3313                      | 3744                      | 6.1                     | 1.9                           | 3.2                      |
| 60.0                   | 3012                                                                                                                               | 2824                      | 3201                      | 6.3                     | 2.0                           | 3.1                      |
| 65.0                   | 2582                                                                                                                               | 2416                      | 2748                      | 6.4                     | 2.1                           | 3.0                      |
| 70.0                   | 2221                                                                                                                               | 2075                      | 2367                      | 6.6                     | 2.2                           | 3.0                      |
| 75.0                   | 1918                                                                                                                               | 1789                      | 2047                      | 6.7                     | 2.3                           | 2.9                      |
| 80.0                   | 1663                                                                                                                               | 1549                      | 1777                      | 6.9                     | 2.4                           | 2.8                      |
| 85.0                   | 1446                                                                                                                               | 1345                      | 1547                      | 7.0                     | 2.5                           | 2.8                      |
| 90.0                   | 1262                                                                                                                               | 1172                      | 1352                      | 7.1                     | 2.6                           | 2.7                      |
| 95.0                   | 1105                                                                                                                               | 1025                      | 1185                      | 7.3                     | 2.8                           | 2.6                      |
| 100.0                  | 970.2                                                                                                                              | 898.5                     | 1042                      | 7.4                     | 2.9                           | 2.6                      |
| 105.0                  | 854.6                                                                                                                              | 790.5                     | 918.8                     | 7.5                     | 3.0                           | 2.5                      |
| 110.0                  | 755.1                                                                                                                              | 697.5                     | 812.6                     | 7.6                     | 3.1                           | 2.4                      |
| 115.0                  | 669.0                                                                                                                              | 617.2                     | 720.8                     | 7.7                     | 3.2                           | 2.4                      |
| 120.0                  | 594.4                                                                                                                              | 547.7                     | 641.1                     | 7.9                     | 3.4                           | 2.3                      |
| 125.0                  | 529.5                                                                                                                              | 487.3                     | 571.6                     | 8.0                     | 3.5                           | 2.3                      |
| 130.0                  | 472.9                                                                                                                              | 434.7                     | 511.1                     | 8.1                     | 3.6                           | 2.2                      |
| 135.0                  | 423.4                                                                                                                              | 388.8                     | 458.0                     | 8.2                     | 3.7                           | 2.2                      |
| 140.0                  | 380.0                                                                                                                              | 348.6                     | 411.5                     | 8.3                     | 3.9                           | 2.1                      |
| 145.0                  | 341.9                                                                                                                              | 313.2                     | 370.5                     | 8.4                     | 4.0                           | 2.1                      |
| 150.0                  | 308.3                                                                                                                              | 282.1                     | 334.4                     | 8.5                     | 4.1                           | 2.0                      |
| 155.0                  | 278.6                                                                                                                              | 254.7                     | 302.5                     | 8.6                     | 4.3                           | 2.0                      |

| <b>B57875S0123F000</b> |                                                                                                                                    |                           |                           |                         |                               |                          |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------|---------------------------|---------------------------|-------------------------|-------------------------------|--------------------------|
| R/T No.                | 2901                                                                                                                               |                           |                           |                         |                               |                          |
| T (°C)                 | $B_{25/100} = 3760 \text{ K}$ , $R_{25} = 12000 \text{ } \Omega$ , $T_R = 25 \text{ } ^\circ\text{C}$ , $\Delta R_R/R_R = \pm 1\%$ |                           |                           |                         |                               |                          |
|                        | $R_{\text{nomL}}[\Omega]$                                                                                                          | $R_{\text{minL}}[\Omega]$ | $R_{\text{maxL}}[\Omega]$ | $\Delta R_R/R_R[\pm\%]$ | $\Delta T[\pm^\circ\text{C}]$ | $\alpha \text{ } (\%/K)$ |
| -55.0                  | 767630                                                                                                                             | 724060                    | 811190                    | 5.7                     | 0.9                           | 6.4                      |
| -50.0                  | 554140                                                                                                                             | 524840                    | 583450                    | 5.3                     | 0.8                           | 6.3                      |
| -45.0                  | 404850                                                                                                                             | 384940                    | 424770                    | 4.9                     | 0.8                           | 6.1                      |

|             | <b>B57875S0123F000</b>                                                                                                   |                      |                      |                                       |            |            |
|-------------|--------------------------------------------------------------------------------------------------------------------------|----------------------|----------------------|---------------------------------------|------------|------------|
| R/T No.     | 2901                                                                                                                     |                      |                      |                                       |            |            |
| T (°C)      | B <sub>25/100</sub> = 3760 K, R <sub>25</sub> = 12000 Ω, T <sub>R</sub> = 25 °C, ΔR <sub>R</sub> /R <sub>R</sub> = ± 1 % |                      |                      |                                       |            |            |
|             | R <sub>nom</sub> [Ω]                                                                                                     | R <sub>min</sub> [Ω] | R <sub>max</sub> [Ω] | ΔR <sub>R</sub> /R <sub>R</sub> [± %] | ΔT[± °C]   | α (%/K)    |
| -40.0       | 299120                                                                                                                   | 285460               | 312780               | 4.6                                   | 0.8        | 6.0        |
| -35.0       | 223330                                                                                                                   | 213890               | 232770               | 4.2                                   | 0.7        | 5.8        |
| -30.0       | 168400                                                                                                                   | 161830               | 174970               | 3.9                                   | 0.7        | 5.6        |
| -25.0       | 128150                                                                                                                   | 123550               | 132750               | 3.6                                   | 0.7        | 5.5        |
| -20.0       | 98376                                                                                                                    | 95138                | 101610               | 3.3                                   | 0.6        | 5.3        |
| -15.0       | 75748                                                                                                                    | 73472                | 78023                | 3.0                                   | 0.6        | 5.1        |
| -10.0       | 58816                                                                                                                    | 57212                | 60421                | 2.7                                   | 0.5        | 5.0        |
| -5.0        | 45852                                                                                                                    | 44724                | 46980                | 2.5                                   | 0.5        | 4.9        |
| 0.0         | 36033                                                                                                                    | 35238                | 36827                | 2.2                                   | 0.5        | 4.7        |
| 5.0         | 28562                                                                                                                    | 28003                | 29121                | 2.0                                   | 0.4        | 4.6        |
| 10.0        | 22799                                                                                                                    | 22408                | 23191                | 1.7                                   | 0.4        | 4.5        |
| 15.0        | 18308                                                                                                                    | 18036                | 18580                | 1.5                                   | 0.3        | 4.3        |
| 20.0        | 14796                                                                                                                    | 14609                | 14983                | 1.3                                   | 0.3        | 4.2        |
| <b>25.0</b> | <b>12000</b>                                                                                                             | <b>11880</b>         | <b>12120</b>         | <b>1.0</b>                            | <b>0.2</b> | <b>4.1</b> |
| 30.0        | 9801                                                                                                                     | 9678                 | 9925                 | 1.3                                   | 0.3        | 4.0        |
| 35.0        | 8060                                                                                                                     | 7942                 | 8178                 | 1.5                                   | 0.4        | 3.9        |
| 40.0        | 6663                                                                                                                     | 6553                 | 6773                 | 1.7                                   | 0.4        | 3.8        |
| 45.0        | 5531                                                                                                                     | 5430                 | 5633                 | 1.8                                   | 0.5        | 3.7        |
| 50.0        | 4615                                                                                                                     | 4522                 | 4709                 | 2.0                                   | 0.6        | 3.6        |
| 55.0        | 3862                                                                                                                     | 3777                 | 3947                 | 2.2                                   | 0.6        | 3.5        |
| 60.0        | 3248                                                                                                                     | 3171                 | 3325                 | 2.4                                   | 0.7        | 3.4        |
| 65.0        | 2749                                                                                                                     | 2679                 | 2819                 | 2.5                                   | 0.8        | 3.3        |
| 70.0        | 2336                                                                                                                     | 2273                 | 2399                 | 2.7                                   | 0.8        | 3.2        |
| 75.0        | 1993                                                                                                                     | 1936                 | 2050                 | 2.9                                   | 0.9        | 3.2        |
| 80.0        | 1707                                                                                                                     | 1655                 | 1758                 | 3.0                                   | 1.0        | 3.1        |
| 85.0        | 1466                                                                                                                     | 1420                 | 1512                 | 3.2                                   | 1.1        | 3.0        |
| 90.0        | 1264                                                                                                                     | 1222                 | 1306                 | 3.3                                   | 1.1        | 2.9        |
| 95.0        | 1095                                                                                                                     | 1057                 | 1133                 | 3.4                                   | 1.2        | 2.9        |
| 100.0       | 951.4                                                                                                                    | 917.3                | 985.5                | 3.6                                   | 1.3        | 2.8        |
| 105.0       | 828.7                                                                                                                    | 797.9                | 859.6                | 3.7                                   | 1.4        | 2.7        |
| 110.0       | 724.1                                                                                                                    | 696.2                | 751.9                | 3.8                                   | 1.4        | 2.7        |
| 115.0       | 634.6                                                                                                                    | 609.4                | 659.8                | 4.0                                   | 1.5        | 2.6        |
| 120.0       | 557.8                                                                                                                    | 534.9                | 580.6                | 4.1                                   | 1.6        | 2.6        |
| 125.0       | 491.8                                                                                                                    | 471.1                | 512.6                | 4.2                                   | 1.7        | 2.5        |
| 130.0       | 434.8                                                                                                                    | 416.0                | 453.6                | 4.3                                   | 1.8        | 2.4        |
| 135.0       | 385.2                                                                                                                    | 368.1                | 402.4                | 4.4                                   | 1.9        | 2.4        |
| 140.0       | 342.1                                                                                                                    | 326.5                | 357.7                | 4.6                                   | 1.9        | 2.3        |
| 145.0       | 304.5                                                                                                                    | 290.3                | 318.7                | 4.7                                   | 2.0        | 2.3        |
| 150.0       | 271.6                                                                                                                    | 258.6                | 284.6                | 4.8                                   | 2.1        | 2.3        |
| 155.0       | 242.8                                                                                                                    | 230.9                | 254.6                | 4.9                                   | 2.2        | 2.2        |

| B57875S0123H000 |                                                                                                                         |                      |                      |                                      |            |            |
|-----------------|-------------------------------------------------------------------------------------------------------------------------|----------------------|----------------------|--------------------------------------|------------|------------|
| R/T No.         | 2901                                                                                                                    |                      |                      |                                      |            |            |
| T (°C)          | B <sub>25/100</sub> = 3760 K, R <sub>25</sub> = 12000 Ω, T <sub>R</sub> = 25 °C, ΔR <sub>R</sub> /R <sub>R</sub> = ± 3% |                      |                      |                                      |            |            |
|                 | R <sub>nom</sub> [Ω]                                                                                                    | R <sub>min</sub> [Ω] | R <sub>max</sub> [Ω] | ΔR <sub>R</sub> /R <sub>R</sub> [±%] | ΔT[±°C]    | α (%/K)    |
| -55.0           | 767630                                                                                                                  | 708710               | 826540               | 7.7                                  | 1.2        | 6.4        |
| -50.0           | 554140                                                                                                                  | 513760               | 594530               | 7.3                                  | 1.2        | 6.3        |
| -45.0           | 404850                                                                                                                  | 376840               | 432870               | 6.9                                  | 1.1        | 6.1        |
| -40.0           | 299120                                                                                                                  | 279480               | 318760               | 6.6                                  | 1.1        | 6.0        |
| -35.0           | 223330                                                                                                                  | 209420               | 237240               | 6.2                                  | 1.1        | 5.8        |
| -30.0           | 168400                                                                                                                  | 158460               | 178340               | 5.9                                  | 1.1        | 5.6        |
| -25.0           | 128150                                                                                                                  | 120990               | 135320               | 5.6                                  | 1.0        | 5.5        |
| -20.0           | 98376                                                                                                                   | 93170                | 103580               | 5.3                                  | 1.0        | 5.3        |
| -15.0           | 75748                                                                                                                   | 71957                | 79538                | 5.0                                  | 1.0        | 5.1        |
| -10.0           | 58816                                                                                                                   | 56036                | 61597                | 4.7                                  | 0.9        | 5.0        |
| -5.0            | 45852                                                                                                                   | 43807                | 47897                | 4.5                                  | 0.9        | 4.9        |
| 0.0             | 36033                                                                                                                   | 34518                | 37548                | 4.2                                  | 0.9        | 4.7        |
| 5.0             | 28562                                                                                                                   | 27432                | 29692                | 4.0                                  | 0.9        | 4.6        |
| 10.0            | 22799                                                                                                                   | 21952                | 23647                | 3.7                                  | 0.8        | 4.5        |
| 15.0            | 18308                                                                                                                   | 17670                | 18947                | 3.5                                  | 0.8        | 4.3        |
| 20.0            | 14796                                                                                                                   | 14313                | 15279                | 3.3                                  | 0.8        | 4.2        |
| 25.0            | <b>12000</b>                                                                                                            | <b>11640</b>         | <b>12360</b>         | <b>3.0</b>                           | <b>0.7</b> | <b>4.1</b> |
| 30.0            | 9801                                                                                                                    | 9482                 | 10121                | 3.3                                  | 0.8        | 4.0        |
| 35.0            | 8060                                                                                                                    | 7781                 | 8339                 | 3.5                                  | 0.9        | 3.9        |
| 40.0            | 6663                                                                                                                    | 6420                 | 6907                 | 3.7                                  | 1.0        | 3.8        |
| 45.0            | 5531                                                                                                                    | 5319                 | 5744                 | 3.8                                  | 1.0        | 3.7        |
| 50.0            | 4615                                                                                                                    | 4429                 | 4801                 | 4.0                                  | 1.1        | 3.6        |
| 55.0            | 3862                                                                                                                    | 3700                 | 4024                 | 4.2                                  | 1.2        | 3.5        |
| 60.0            | 3248                                                                                                                    | 3106                 | 3390                 | 4.4                                  | 1.3        | 3.4        |
| 65.0            | 2749                                                                                                                    | 2624                 | 2874                 | 4.5                                  | 1.4        | 3.3        |
| 70.0            | 2336                                                                                                                    | 2226                 | 2446                 | 4.7                                  | 1.5        | 3.2        |
| 75.0            | 1993                                                                                                                    | 1896                 | 2090                 | 4.9                                  | 1.5        | 3.2        |
| 80.0            | 1707                                                                                                                    | 1621                 | 1792                 | 5.0                                  | 1.6        | 3.1        |
| 85.0            | 1466                                                                                                                    | 1390                 | 1542                 | 5.2                                  | 1.7        | 3.0        |
| 90.0            | 1264                                                                                                                    | 1197                 | 1331                 | 5.3                                  | 1.8        | 2.9        |
| 95.0            | 1095                                                                                                                    | 1035                 | 1154                 | 5.4                                  | 1.9        | 2.9        |
| 100.0           | 951.4                                                                                                                   | 898.3                | 1005                 | 5.6                                  | 2.0        | 2.8        |
| 105.0           | 828.7                                                                                                                   | 781.4                | 876.1                | 5.7                                  | 2.1        | 2.7        |
| 110.0           | 724.1                                                                                                                   | 681.7                | 766.4                | 5.8                                  | 2.2        | 2.7        |
| 115.0           | 634.6                                                                                                                   | 596.7                | 672.5                | 6.0                                  | 2.3        | 2.6        |
| 120.0           | 557.8                                                                                                                   | 523.8                | 591.8                | 6.1                                  | 2.4        | 2.6        |
| 125.0           | 491.8                                                                                                                   | 461.2                | 522.4                | 6.2                                  | 2.5        | 2.5        |
| 130.0           | 434.8                                                                                                                   | 407.3                | 462.3                | 6.3                                  | 2.6        | 2.4        |
| 135.0           | 385.2                                                                                                                   | 360.4                | 410.1                | 6.4                                  | 2.7        | 2.4        |



**Temperature measurement**
**B57875**
**Leaded NTCs, lead spacing 5 mm**
**S875**

|         | <b>B57875S0123H000</b>                                                                                                             |                          |                          |                         |                               |                          |
|---------|------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------|-------------------------|-------------------------------|--------------------------|
| R/T No. | 2901                                                                                                                               |                          |                          |                         |                               |                          |
| T (°C)  | $B_{25/100} = 3760 \text{ K}$ , $R_{25} = 12000 \text{ } \Omega$ , $T_R = 25 \text{ } ^\circ\text{C}$ , $\Delta R_R/R_R = \pm 3\%$ |                          |                          |                         |                               |                          |
|         | $R_{\text{nom}}[\Omega]$                                                                                                           | $R_{\text{min}}[\Omega]$ | $R_{\text{max}}[\Omega]$ | $\Delta R_R/R_R[\pm\%]$ | $\Delta T[\pm^\circ\text{C}]$ | $\alpha \text{ } (\%/K)$ |
| 140.0   | 342.1                                                                                                                              | 319.7                    | 364.6                    | 6.6                     | 2.8                           | 2.3                      |
| 145.0   | 304.5                                                                                                                              | 284.2                    | 324.8                    | 6.7                     | 2.9                           | 2.3                      |
| 150.0   | 271.6                                                                                                                              | 253.2                    | 290.0                    | 6.8                     | 3.0                           | 2.3                      |
| 155.0   | 242.8                                                                                                                              | 226.1                    | 259.5                    | 6.9                     | 3.1                           | 2.2                      |

|             | <b>B57875S0123J000</b>                                                                                                             |                          |                          |                         |                               |                          |
|-------------|------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------|-------------------------|-------------------------------|--------------------------|
| R/T No.     | 2901                                                                                                                               |                          |                          |                         |                               |                          |
| T (°C)      | $B_{25/100} = 3760 \text{ K}$ , $R_{25} = 12000 \text{ } \Omega$ , $T_R = 25 \text{ } ^\circ\text{C}$ , $\Delta R_R/R_R = \pm 5\%$ |                          |                          |                         |                               |                          |
|             | $R_{\text{nom}}[\Omega]$                                                                                                           | $R_{\text{min}}[\Omega]$ | $R_{\text{max}}[\Omega]$ | $\Delta R_R/R_R[\pm\%]$ | $\Delta T[\pm^\circ\text{C}]$ | $\alpha \text{ } (\%/K)$ |
| −55.0       | 767630                                                                                                                             | 693360                   | 841890                   | 9.7                     | 1.5                           | 6.4                      |
| −50.0       | 554140                                                                                                                             | 502670                   | 605620                   | 9.3                     | 1.5                           | 6.3                      |
| −45.0       | 404850                                                                                                                             | 368740                   | 440960                   | 8.9                     | 1.5                           | 6.1                      |
| −40.0       | 299120                                                                                                                             | 273500                   | 324740                   | 8.6                     | 1.4                           | 6.0                      |
| −35.0       | 223330                                                                                                                             | 204960                   | 241710                   | 8.2                     | 1.4                           | 5.8                      |
| −30.0       | 168400                                                                                                                             | 155090                   | 181710                   | 7.9                     | 1.4                           | 5.6                      |
| −25.0       | 128150                                                                                                                             | 118420                   | 137880                   | 7.6                     | 1.4                           | 5.5                      |
| −20.0       | 98376                                                                                                                              | 91203                    | 105550                   | 7.3                     | 1.4                           | 5.3                      |
| −15.0       | 75748                                                                                                                              | 70442                    | 81053                    | 7.0                     | 1.4                           | 5.1                      |
| −10.0       | 58816                                                                                                                              | 54860                    | 62773                    | 6.7                     | 1.3                           | 5.0                      |
| −5.0        | 45852                                                                                                                              | 42890                    | 48815                    | 6.5                     | 1.3                           | 4.9                      |
| 0.0         | 36033                                                                                                                              | 33797                    | 38268                    | 6.2                     | 1.3                           | 4.7                      |
| 5.0         | 28562                                                                                                                              | 26860                    | 30263                    | 6.0                     | 1.3                           | 4.6                      |
| 10.0        | 22799                                                                                                                              | 21496                    | 24103                    | 5.7                     | 1.3                           | 4.5                      |
| 15.0        | 18308                                                                                                                              | 17303                    | 19313                    | 5.5                     | 1.3                           | 4.3                      |
| 20.0        | 14796                                                                                                                              | 14017                    | 15575                    | 5.3                     | 1.3                           | 4.2                      |
| <b>25.0</b> | <b>12000</b>                                                                                                                       | <b>11400</b>             | <b>12600</b>             | <b>5.0</b>              | <b>1.2</b>                    | <b>4.1</b>               |
| 30.0        | 9801                                                                                                                               | 9286                     | 10317                    | 5.3                     | 1.3                           | 4.0                      |
| 35.0        | 8060                                                                                                                               | 7620                     | 8500                     | 5.5                     | 1.4                           | 3.9                      |
| 40.0        | 6663                                                                                                                               | 6287                     | 7040                     | 5.7                     | 1.5                           | 3.8                      |
| 45.0        | 5531                                                                                                                               | 5208                     | 5855                     | 5.8                     | 1.6                           | 3.7                      |
| 50.0        | 4615                                                                                                                               | 4337                     | 4893                     | 6.0                     | 1.7                           | 3.6                      |
| 55.0        | 3862                                                                                                                               | 3622                     | 4102                     | 6.2                     | 1.8                           | 3.5                      |
| 60.0        | 3248                                                                                                                               | 3041                     | 3455                     | 6.4                     | 1.9                           | 3.4                      |
| 65.0        | 2749                                                                                                                               | 2569                     | 2929                     | 6.5                     | 2.0                           | 3.3                      |
| 70.0        | 2336                                                                                                                               | 2180                     | 2493                     | 6.7                     | 2.1                           | 3.2                      |
| 75.0        | 1993                                                                                                                               | 1856                     | 2130                     | 6.9                     | 2.2                           | 3.2                      |
| 80.0        | 1707                                                                                                                               | 1587                     | 1826                     | 7.0                     | 2.3                           | 3.1                      |
| 85.0        | 1466                                                                                                                               | 1361                     | 1571                     | 7.2                     | 2.4                           | 3.0                      |
| 90.0        | 1264                                                                                                                               | 1172                     | 1356                     | 7.3                     | 2.5                           | 2.9                      |

# Temperature measurement

B57875

Leaded NTCs, lead spacing 5 mm

S875

| B57875S0123J000 |                                                                                                                                    |                          |                          |                         |                               |                          |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------|-------------------------|-------------------------------|--------------------------|
| R/T No.         | 2901                                                                                                                               |                          |                          |                         |                               |                          |
| T (°C)          | $B_{25/100} = 3760 \text{ K}$ , $R_{25} = 12000 \text{ } \Omega$ , $T_R = 25 \text{ } ^\circ\text{C}$ , $\Delta R_R/R_R = \pm 5\%$ |                          |                          |                         |                               |                          |
|                 | $R_{\text{nom}}[\Omega]$                                                                                                           | $R_{\text{min}}[\Omega]$ | $R_{\text{max}}[\Omega]$ | $\Delta R_R/R_R[\pm\%]$ | $\Delta T[\pm^\circ\text{C}]$ | $\alpha \text{ } (\%/K)$ |
| 95.0            | 1095                                                                                                                               | 1013                     | 1176                     | 7.4                     | 2.6                           | 2.9                      |
| 100.0           | 951.4                                                                                                                              | 879.2                    | 1024                     | 7.6                     | 2.7                           | 2.8                      |
| 105.0           | 828.7                                                                                                                              | 764.8                    | 892.7                    | 7.7                     | 2.8                           | 2.7                      |
| 110.0           | 724.1                                                                                                                              | 667.3                    | 780.9                    | 7.8                     | 2.9                           | 2.7                      |
| 115.0           | 634.6                                                                                                                              | 584.0                    | 685.2                    | 8.0                     | 3.0                           | 2.6                      |
| 120.0           | 557.8                                                                                                                              | 512.6                    | 603.0                    | 8.1                     | 3.2                           | 2.6                      |
| 125.0           | 491.8                                                                                                                              | 451.4                    | 532.2                    | 8.2                     | 3.3                           | 2.5                      |
| 130.0           | 434.8                                                                                                                              | 398.6                    | 471.0                    | 8.3                     | 3.4                           | 2.4                      |
| 135.0           | 385.2                                                                                                                              | 352.7                    | 417.8                    | 8.4                     | 3.5                           | 2.4                      |
| 140.0           | 342.1                                                                                                                              | 312.8                    | 371.4                    | 8.6                     | 3.6                           | 2.3                      |
| 145.0           | 304.5                                                                                                                              | 278.1                    | 330.9                    | 8.7                     | 3.8                           | 2.3                      |
| 150.0           | 271.6                                                                                                                              | 247.8                    | 295.4                    | 8.8                     | 3.9                           | 2.3                      |
| 155.0           | 242.8                                                                                                                              | 221.2                    | 264.3                    | 8.9                     | 4.0                           | 2.2                      |

| B57875S0303F000 |                                                                                                                                    |                          |                          |                         |                               |                          |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------|-------------------------|-------------------------------|--------------------------|
| R/T No.         | 8018                                                                                                                               |                          |                          |                         |                               |                          |
| T (°C)          | $B_{25/100} = 3964 \text{ K}$ , $R_{25} = 30000 \text{ } \Omega$ , $T_R = 25 \text{ } ^\circ\text{C}$ , $\Delta R_R/R_R = \pm 1\%$ |                          |                          |                         |                               |                          |
|                 | $R_{\text{nom}}[\Omega]$                                                                                                           | $R_{\text{min}}[\Omega]$ | $R_{\text{max}}[\Omega]$ | $\Delta R_R/R_R[\pm\%]$ | $\Delta T[\pm^\circ\text{C}]$ | $\alpha \text{ } (\%/K)$ |
| -55.0           | 2472200                                                                                                                            | 2325700                  | 2618700                  | 5.9                     | 0.8                           | 7.0                      |
| -50.0           | 1750300                                                                                                                            | 1653700                  | 1846900                  | 5.5                     | 0.8                           | 6.8                      |
| -45.0           | 1253200                                                                                                                            | 1189000                  | 1317500                  | 5.1                     | 0.8                           | 6.6                      |
| -40.0           | 907060                                                                                                                             | 863910                   | 950200                   | 4.8                     | 0.7                           | 6.4                      |
| -35.0           | 663280                                                                                                                             | 634100                   | 692460                   | 4.4                     | 0.7                           | 6.2                      |
| -30.0           | 489810                                                                                                                             | 469940                   | 509680                   | 4.1                     | 0.7                           | 6.0                      |
| -25.0           | 365130                                                                                                                             | 351510                   | 378740                   | 3.7                     | 0.6                           | 5.8                      |
| -20.0           | 274640                                                                                                                             | 265270                   | 284020                   | 3.4                     | 0.6                           | 5.6                      |
| -15.0           | 208370                                                                                                                             | 201890                   | 214850                   | 3.1                     | 0.6                           | 5.4                      |
| -10.0           | 159410                                                                                                                             | 154910                   | 163900                   | 2.8                     | 0.5                           | 5.3                      |
| -5.0            | 122920                                                                                                                             | 119800                   | 126030                   | 2.5                     | 0.5                           | 5.1                      |
| 0.0             | 95501                                                                                                                              | 93336                    | 97666                    | 2.3                     | 0.5                           | 5.0                      |
| 5.0             | 74745                                                                                                                              | 73245                    | 76244                    | 2.0                     | 0.4                           | 4.8                      |
| 10.0            | 58911                                                                                                                              | 57877                    | 59944                    | 1.8                     | 0.4                           | 4.7                      |
| 15.0            | 46745                                                                                                                              | 46038                    | 47451                    | 1.5                     | 0.3                           | 4.6                      |
| 20.0            | 37332                                                                                                                              | 36855                    | 37808                    | 1.3                     | 0.3                           | 4.4                      |
| <b>25.0</b>     | <b>30000</b>                                                                                                                       | <b>29700</b>             | <b>30300</b>             | <b>1.0</b>              | <b>0.2</b>                    | <b>4.3</b>               |
| 30.0            | 24253                                                                                                                              | 23945                    | 24561                    | 1.3                     | 0.3                           | 4.2                      |
| 35.0            | 19720                                                                                                                              | 19428                    | 20012                    | 1.5                     | 0.4                           | 4.1                      |
| 40.0            | 16123                                                                                                                              | 15851                    | 16395                    | 1.7                     | 0.4                           | 4.0                      |
| 45.0            | 13252                                                                                                                              | 13002                    | 13502                    | 1.9                     | 0.5                           | 3.9                      |

**Temperature measurement**
**B57875**
**Leaded NTCs, lead spacing 5 mm**
**S875**

| <b>B57875S0303F000</b> |                                                                                                                         |                      |                      |                                      |         |         |
|------------------------|-------------------------------------------------------------------------------------------------------------------------|----------------------|----------------------|--------------------------------------|---------|---------|
| R/T No.                | 8018                                                                                                                    |                      |                      |                                      |         |         |
| T (°C)                 | B <sub>25/100</sub> = 3964 K, R <sub>25</sub> = 30000 Ω, T <sub>R</sub> = 25 °C, ΔR <sub>R</sub> /R <sub>R</sub> = ± 1% |                      |                      |                                      |         |         |
|                        | R <sub>nom</sub> [Ω]                                                                                                    | R <sub>min</sub> [Ω] | R <sub>max</sub> [Ω] | ΔR <sub>R</sub> /R <sub>R</sub> [±%] | ΔT[±°C] | α (%/K) |
| 50.0                   | 10949                                                                                                                   | 10721                | 11177                | 2.1                                  | 0.6     | 3.8     |
| 55.0                   | 9091                                                                                                                    | 8885                 | 9297                 | 2.3                                  | 0.6     | 3.7     |
| 60.0                   | 7584                                                                                                                    | 7399                 | 7770                 | 2.4                                  | 0.7     | 3.6     |
| 65.0                   | 6356                                                                                                                    | 6189                 | 6523                 | 2.6                                  | 0.8     | 3.5     |
| 70.0                   | 5351                                                                                                                    | 5201                 | 5500                 | 2.8                                  | 0.8     | 3.4     |
| 75.0                   | 4524                                                                                                                    | 4390                 | 4657                 | 3.0                                  | 0.9     | 3.3     |
| 80.0                   | 3840                                                                                                                    | 3720                 | 3960                 | 3.1                                  | 1.0     | 3.2     |
| 85.0                   | 3273                                                                                                                    | 3166                 | 3380                 | 3.3                                  | 1.0     | 3.2     |
| 90.0                   | 2800                                                                                                                    | 2704                 | 2896                 | 3.4                                  | 1.1     | 3.1     |
| 95.0                   | 2405                                                                                                                    | 2319                 | 2491                 | 3.6                                  | 1.2     | 3.0     |
| 100.0                  | 2073                                                                                                                    | 1995                 | 2150                 | 3.7                                  | 1.3     | 2.9     |
| 105.0                  | 1792                                                                                                                    | 1723                 | 1862                 | 3.9                                  | 1.3     | 2.9     |
| 110.0                  | 1555                                                                                                                    | 1493                 | 1618                 | 4.0                                  | 1.4     | 2.8     |
| 115.0                  | 1354                                                                                                                    | 1298                 | 1410                 | 4.1                                  | 1.5     | 2.7     |
| 120.0                  | 1182                                                                                                                    | 1132                 | 1233                 | 4.3                                  | 1.6     | 2.7     |
| 125.0                  | 1036                                                                                                                    | 990.3                | 1081                 | 4.4                                  | 1.7     | 2.6     |
| 130.0                  | 910.0                                                                                                                   | 868.9                | 951.0                | 4.5                                  | 1.8     | 2.6     |
| 135.0                  | 801.7                                                                                                                   | 764.6                | 838.9                | 4.6                                  | 1.8     | 2.5     |
| 140.0                  | 708.3                                                                                                                   | 674.6                | 741.9                | 4.8                                  | 1.9     | 2.5     |
| 145.0                  | 627.4                                                                                                                   | 596.9                | 658.0                | 4.9                                  | 2.0     | 2.4     |
| 150.0                  | 557.2                                                                                                                   | 529.5                | 585.0                | 5.0                                  | 2.1     | 2.3     |
| 155.0                  | 496.1                                                                                                                   | 470.9                | 521.4                | 5.1                                  | 2.2     | 2.3     |

| <b>B57875S0303H000</b> |                                                                                                                         |                      |                      |                                      |         |         |
|------------------------|-------------------------------------------------------------------------------------------------------------------------|----------------------|----------------------|--------------------------------------|---------|---------|
| R/T No.                | 8018                                                                                                                    |                      |                      |                                      |         |         |
| T (°C)                 | B <sub>25/100</sub> = 3964 K, R <sub>25</sub> = 30000 Ω, T <sub>R</sub> = 25 °C, ΔR <sub>R</sub> /R <sub>R</sub> = ± 3% |                      |                      |                                      |         |         |
|                        | R <sub>nom</sub> [Ω]                                                                                                    | R <sub>min</sub> [Ω] | R <sub>max</sub> [Ω] | ΔR <sub>R</sub> /R <sub>R</sub> [±%] | ΔT[±°C] | α (%/K) |
| -55.0                  | 2472200                                                                                                                 | 2276300              | 2668200              | 7.9                                  | 1.1     | 7.0     |
| -50.0                  | 1750300                                                                                                                 | 1618700              | 1881900              | 7.5                                  | 1.1     | 6.8     |
| -45.0                  | 1253200                                                                                                                 | 1163900              | 1342600              | 7.1                                  | 1.1     | 6.6     |
| -40.0                  | 907060                                                                                                                  | 845770               | 968340               | 6.8                                  | 1.1     | 6.4     |
| -35.0                  | 663280                                                                                                                  | 620830               | 705730               | 6.4                                  | 1.0     | 6.2     |
| -30.0                  | 489810                                                                                                                  | 460140               | 519480               | 6.1                                  | 1.0     | 6.0     |
| -25.0                  | 365130                                                                                                                  | 344210               | 386040               | 5.7                                  | 1.0     | 5.8     |
| -20.0                  | 274640                                                                                                                  | 259780               | 289510               | 5.4                                  | 1.0     | 5.6     |
| -15.0                  | 208370                                                                                                                  | 197730               | 219020               | 5.1                                  | 0.9     | 5.4     |
| -10.0                  | 159410                                                                                                                  | 151720               | 167090               | 4.8                                  | 0.9     | 5.3     |
| -5.0                   | 122920                                                                                                                  | 117340               | 128490               | 4.5                                  | 0.9     | 5.1     |
| 0.0                    | 95501                                                                                                                   | 91426                | 99576                | 4.3                                  | 0.9     | 5.0     |

**Temperature measurement**
**B57875**
**Leaded NTCs, lead spacing 5 mm**
**S875**

| <b>B57875S0303H000</b> |                                                                                                                                    |                           |                           |                         |                               |                          |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------|---------------------------|---------------------------|-------------------------|-------------------------------|--------------------------|
| R/T No.                | 8018                                                                                                                               |                           |                           |                         |                               |                          |
| T (°C)                 | $B_{25/100} = 3964 \text{ K}$ , $R_{25} = 30000 \text{ } \Omega$ , $T_R = 25 \text{ } ^\circ\text{C}$ , $\Delta R_R/R_R = \pm 3\%$ |                           |                           |                         |                               |                          |
|                        | $R_{\text{nomL}}[\Omega]$                                                                                                          | $R_{\text{minL}}[\Omega]$ | $R_{\text{maxL}}[\Omega]$ | $\Delta R_R/R_R[\pm\%]$ | $\Delta T[\pm^\circ\text{C}]$ | $\alpha \text{ } (\%/K)$ |
| 5.0                    | 74745                                                                                                                              | 71750                     | 77739                     | 4.0                     | 0.8                           | 4.8                      |
| 10.0                   | 58911                                                                                                                              | 56699                     | 61122                     | 3.8                     | 0.8                           | 4.7                      |
| 15.0                   | 46745                                                                                                                              | 45103                     | 48386                     | 3.5                     | 0.8                           | 4.6                      |
| 20.0                   | 37332                                                                                                                              | 36108                     | 38555                     | 3.3                     | 0.7                           | 4.4                      |
| <b>25.0</b>            | <b>30000</b>                                                                                                                       | <b>29100</b>              | <b>30900</b>              | <b>3.0</b>              | <b>0.7</b>                    | <b>4.3</b>               |
| 30.0                   | 24253                                                                                                                              | 23460                     | 25046                     | 3.3                     | 0.8                           | 4.2                      |
| 35.0                   | 19720                                                                                                                              | 19033                     | 20406                     | 3.5                     | 0.9                           | 4.1                      |
| 40.0                   | 16123                                                                                                                              | 15528                     | 16717                     | 3.7                     | 0.9                           | 4.0                      |
| 45.0                   | 13252                                                                                                                              | 12737                     | 13767                     | 3.9                     | 1.0                           | 3.9                      |
| 50.0                   | 10949                                                                                                                              | 10503                     | 11396                     | 4.1                     | 1.1                           | 3.8                      |
| 55.0                   | 9091                                                                                                                               | 8703                      | 9479                      | 4.3                     | 1.2                           | 3.7                      |
| 60.0                   | 7584                                                                                                                               | 7247                      | 7921                      | 4.4                     | 1.2                           | 3.6                      |
| 65.0                   | 6356                                                                                                                               | 6062                      | 6650                      | 4.6                     | 1.3                           | 3.5                      |
| 70.0                   | 5351                                                                                                                               | 5094                      | 5607                      | 4.8                     | 1.4                           | 3.4                      |
| 75.0                   | 4524                                                                                                                               | 4299                      | 4748                      | 5.0                     | 1.5                           | 3.3                      |
| 80.0                   | 3840                                                                                                                               | 3643                      | 4037                      | 5.1                     | 1.6                           | 3.2                      |
| 85.0                   | 3273                                                                                                                               | 3100                      | 3446                      | 5.3                     | 1.7                           | 3.2                      |
| 90.0                   | 2800                                                                                                                               | 2648                      | 2952                      | 5.4                     | 1.8                           | 3.1                      |
| 95.0                   | 2405                                                                                                                               | 2271                      | 2539                      | 5.6                     | 1.9                           | 3.0                      |
| 100.0                  | 2073                                                                                                                               | 1954                      | 2191                      | 5.7                     | 1.9                           | 2.9                      |
| 105.0                  | 1792                                                                                                                               | 1687                      | 1897                      | 5.9                     | 2.0                           | 2.9                      |
| 110.0                  | 1555                                                                                                                               | 1462                      | 1649                      | 6.0                     | 2.1                           | 2.8                      |
| 115.0                  | 1354                                                                                                                               | 1271                      | 1437                      | 6.1                     | 2.2                           | 2.7                      |
| 120.0                  | 1182                                                                                                                               | 1108                      | 1257                      | 6.3                     | 2.3                           | 2.7                      |
| 125.0                  | 1036                                                                                                                               | 969.6                     | 1102                      | 6.4                     | 2.4                           | 2.6                      |
| 130.0                  | 910.0                                                                                                                              | 850.7                     | 969.2                     | 6.5                     | 2.5                           | 2.6                      |
| 135.0                  | 801.7                                                                                                                              | 748.5                     | 854.9                     | 6.6                     | 2.6                           | 2.5                      |
| 140.0                  | 708.3                                                                                                                              | 660.5                     | 756.1                     | 6.8                     | 2.8                           | 2.5                      |
| 145.0                  | 627.4                                                                                                                              | 584.4                     | 670.5                     | 6.9                     | 2.9                           | 2.4                      |
| 150.0                  | 557.2                                                                                                                              | 518.4                     | 596.1                     | 7.0                     | 3.0                           | 2.3                      |
| 155.0                  | 496.1                                                                                                                              | 461.0                     | 531.3                     | 7.1                     | 3.1                           | 2.3                      |

| <b>B57875S0303J000</b> |                                                                                                                                    |                           |                           |                         |                               |                          |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------|---------------------------|---------------------------|-------------------------|-------------------------------|--------------------------|
| R/T No.                | 8018                                                                                                                               |                           |                           |                         |                               |                          |
| T (°C)                 | $B_{25/100} = 3964 \text{ K}$ , $R_{25} = 30000 \text{ } \Omega$ , $T_R = 25 \text{ } ^\circ\text{C}$ , $\Delta R_R/R_R = \pm 5\%$ |                           |                           |                         |                               |                          |
|                        | $R_{\text{nomL}}[\Omega]$                                                                                                          | $R_{\text{minL}}[\Omega]$ | $R_{\text{maxL}}[\Omega]$ | $\Delta R_R/R_R[\pm\%]$ | $\Delta T[\pm^\circ\text{C}]$ | $\alpha \text{ } (\%/K)$ |
| -55.0                  | 2472200                                                                                                                            | 2226900                   | 2717600                   | 9.9                     | 1.4                           | 7.0                      |
| -50.0                  | 1750300                                                                                                                            | 1583700                   | 1916900                   | 9.5                     | 1.4                           | 6.8                      |
| -45.0                  | 1253200                                                                                                                            | 1138800                   | 1367700                   | 9.1                     | 1.4                           | 6.6                      |

|             | <b>B57875S0303J000</b>                                                                                                  |                      |                      |                                      |            |            |
|-------------|-------------------------------------------------------------------------------------------------------------------------|----------------------|----------------------|--------------------------------------|------------|------------|
| R/T No.     | 8018                                                                                                                    |                      |                      |                                      |            |            |
| T (°C)      | B <sub>25/100</sub> = 3964 K, R <sub>25</sub> = 30000 Ω, T <sub>R</sub> = 25 °C, ΔR <sub>R</sub> /R <sub>R</sub> = ± 5% |                      |                      |                                      |            |            |
|             | R <sub>nom</sub> [Ω]                                                                                                    | R <sub>min</sub> [Ω] | R <sub>max</sub> [Ω] | ΔR <sub>R</sub> /R <sub>R</sub> [±%] | ΔT[±°C]    | α (%/K)    |
| -40.0       | 907060                                                                                                                  | 827630               | 986480               | 8.8                                  | 1.4        | 6.4        |
| -35.0       | 663280                                                                                                                  | 607570               | 718990               | 8.4                                  | 1.4        | 6.2        |
| -30.0       | 489810                                                                                                                  | 450340               | 529280               | 8.1                                  | 1.4        | 6.0        |
| -25.0       | 365130                                                                                                                  | 336910               | 393350               | 7.7                                  | 1.3        | 5.8        |
| -20.0       | 274640                                                                                                                  | 254280               | 295000               | 7.4                                  | 1.3        | 5.6        |
| -15.0       | 208370                                                                                                                  | 193560               | 223190               | 7.1                                  | 1.3        | 5.4        |
| -10.0       | 159410                                                                                                                  | 148540               | 170270               | 6.8                                  | 1.3        | 5.3        |
| -5.0        | 122920                                                                                                                  | 114880               | 130950               | 6.5                                  | 1.3        | 5.1        |
| 0.0         | 95501                                                                                                                   | 89516                | 101490               | 6.3                                  | 1.3        | 5.0        |
| 5.0         | 74745                                                                                                                   | 70255                | 79234                | 6.0                                  | 1.2        | 4.8        |
| 10.0        | 58911                                                                                                                   | 55521                | 62301                | 5.8                                  | 1.2        | 4.7        |
| 15.0        | 46745                                                                                                                   | 44168                | 49321                | 5.5                                  | 1.2        | 4.6        |
| 20.0        | 37332                                                                                                                   | 35362                | 39302                | 5.3                                  | 1.2        | 4.4        |
| <b>25.0</b> | <b>30000</b>                                                                                                            | <b>28500</b>         | <b>31500</b>         | <b>5.0</b>                           | <b>1.2</b> | <b>4.3</b> |
| 30.0        | 24253                                                                                                                   | 22975                | 25531                | 5.3                                  | 1.3        | 4.2        |
| 35.0        | 19720                                                                                                                   | 18639                | 20801                | 5.5                                  | 1.3        | 4.1        |
| 40.0        | 16123                                                                                                                   | 15206                | 17040                | 5.7                                  | 1.4        | 4.0        |
| 45.0        | 13252                                                                                                                   | 12472                | 14032                | 5.9                                  | 1.5        | 3.9        |
| 50.0        | 10949                                                                                                                   | 10284                | 11615                | 6.1                                  | 1.6        | 3.8        |
| 55.0        | 9091                                                                                                                    | 8521                 | 9660                 | 6.3                                  | 1.7        | 3.7        |
| 60.0        | 7584                                                                                                                    | 7095                 | 8073                 | 6.4                                  | 1.8        | 3.6        |
| 65.0        | 6356                                                                                                                    | 5935                 | 6777                 | 6.6                                  | 1.9        | 3.5        |
| 70.0        | 5351                                                                                                                    | 4987                 | 5714                 | 6.8                                  | 2.0        | 3.4        |
| 75.0        | 4524                                                                                                                    | 4209                 | 4838                 | 7.0                                  | 2.1        | 3.3        |
| 80.0        | 3840                                                                                                                    | 3567                 | 4114                 | 7.1                                  | 2.2        | 3.2        |
| 85.0        | 3273                                                                                                                    | 3035                 | 3511                 | 7.3                                  | 2.3        | 3.2        |
| 90.0        | 2800                                                                                                                    | 2592                 | 3008                 | 7.4                                  | 2.4        | 3.1        |
| 95.0        | 2405                                                                                                                    | 2223                 | 2587                 | 7.6                                  | 2.5        | 3.0        |
| 100.0       | 2073                                                                                                                    | 1912                 | 2233                 | 7.7                                  | 2.6        | 2.9        |
| 105.0       | 1792                                                                                                                    | 1651                 | 1933                 | 7.9                                  | 2.7        | 2.9        |
| 110.0       | 1555                                                                                                                    | 1431                 | 1680                 | 8.0                                  | 2.9        | 2.8        |
| 115.0       | 1354                                                                                                                    | 1244                 | 1464                 | 8.1                                  | 3.0        | 2.7        |
| 120.0       | 1182                                                                                                                    | 1085                 | 1280                 | 8.3                                  | 3.1        | 2.7        |
| 125.0       | 1036                                                                                                                    | 948.9                | 1123                 | 8.4                                  | 3.2        | 2.6        |
| 130.0       | 910.0                                                                                                                   | 832.5                | 987.4                | 8.5                                  | 3.3        | 2.6        |
| 135.0       | 801.7                                                                                                                   | 732.5                | 870.9                | 8.6                                  | 3.4        | 2.5        |
| 140.0       | 708.3                                                                                                                   | 646.3                | 770.3                | 8.8                                  | 3.6        | 2.5        |
| 145.0       | 627.4                                                                                                                   | 571.8                | 683.1                | 8.9                                  | 3.7        | 2.4        |
| 150.0       | 557.2                                                                                                                   | 507.2                | 607.3                | 9.0                                  | 3.8        | 2.3        |
| 155.0       | 496.1                                                                                                                   | 451.1                | 541.2                | 9.1                                  | 4.0        | 2.3        |



## **Cautions and warnings**

### **General**

See "Important notes" at the end of this document.

### **Storage**

- Store thermistors only in original packaging. Do not open the package before storage.
- Storage conditions in original packaging: storage temperature  $-25\text{ }^{\circ}\text{C} \dots +45\text{ }^{\circ}\text{C}$ , relative humidity  $\leq 75\%$  annual mean, maximum 95%, dew precipitation is inadmissible.
- Do not store SMDs where they are exposed to heat or direct sunlight. Otherwise, the packing material may be deformed or SMDs may stick together, causing problems during mounting.
- Avoid contamination of thermistors surface during storage, handling and processing.
- Avoid storage of thermistor in harmful environments like corrosive gases (SO<sub>x</sub>, Cl etc).
- After opening the factory seals, such as polyvinyl-sealed packages, use the SMDs as soon as possible.
- Solder thermistors after shipment from EPCOS within the time specified:  
SMDs: 12 months  
Leaded components: 24 months

### **Handling**

- NTC thermistors must not be dropped. Chip-offs must not be caused during handling of NTCs.
- Components must not be touched with bare hands. Gloves are recommended.
- Avoid contamination of thermistor surface during handling.

### **Soldering**

- Use resin-type flux or non-activated flux.
- Insufficient preheating may cause ceramic cracks.
- Rapid cooling by dipping in solvent is not recommended.
- Complete removal of flux is recommended.

### **Mounting**

- When NTC thermistors are encapsulated with sealing material or overmolded with plastic material, the precautions given in chapter "Mounting instructions", "Sealing, potting and overmolding" must be observed.
- Electrode must not be scratched before/during/after the mounting process.
- Contacts and housings used for assembly with thermistor have to be clean before mounting.
- During operation, the thermistor's surface temperature can be very high (ICL). Ensure that adjacent components are placed at a sufficient distance from the thermistor to allow for proper cooling of the thermistors.
- Ensure that adjacent materials are designed for operation at temperatures comparable to the surface temperature of the thermistor. Be sure that surrounding parts and materials can withstand this temperature.
- Make sure that thermistors (ICLs) are adequately ventilated to avoid overheating.
- Avoid contamination of thermistor surface during processing.

## Operation

- Use thermistors only within the specified operating temperature range.
- Use thermistors only within the specified voltage and current ranges (ICLs).
- Environmental conditions must not harm the thermistors. Use thermistors only in normal atmospheric conditions.
- Contact of NTC thermistors with any liquids and solvents should be prevented. It must be ensured that no water enters the NTC thermistor (e.g. through plug terminals). For measurement purposes (checking the specified resistance vs. temperature), the component must not be immersed in water but in suitable liquids (e.g. Galden).
- Avoid dewing and condensation.
- Be sure to provide an appropriate fail-safe function to prevent secondary product damage caused by malfunction (e.g. use VDR for limitation of overvoltage condition).



## Important notes

The following applies to all products named in this publication:

1. Some parts of this publication contain **statements about the suitability of our products for certain areas of application**. These statements are based on our knowledge of typical requirements that are often placed on our products in the areas of application concerned. We nevertheless expressly point out **that such statements cannot be regarded as binding statements about the suitability of our products for a particular customer application**. As a rule, EPCOS is either unfamiliar with individual customer applications or less familiar with them than the customers themselves. For these reasons, it is always ultimately incumbent on the customer to check and decide whether an EPCOS product with the properties described in the product specification is suitable for use in a particular customer application.
2. We also point out that **in individual cases, a malfunction of passive electronic components or failure before the end of their usual service life cannot be completely ruled out in the current state of the art, even if they are operated as specified**. In customer applications requiring a very high level of operational safety and especially in customer applications in which the malfunction or failure of a passive electronic component could endanger human life or health (e.g. in accident prevention or life-saving systems), it must therefore be ensured by means of suitable design of the customer application or other action taken by the customer (e.g. installation of protective circuitry or redundancy) that no injury or damage is sustained by third parties in the event of malfunction or failure of a passive electronic component.
3. **The warnings, cautions and product-specific notes must be observed.**
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