

R-T CONVERSION TABLE  
R25: 47KΩ ( Tolerance 5%)  
R25/50: 3950K ( Tolerance 3%)

| T(°C) | Rmin.(kΩ) | Rnom.(kΩ) | Rmax.(kΩ) | T(°C) | Rmin.(kΩ) | Rnom.(kΩ) | Rmax.(kΩ) |
|-------|-----------|-----------|-----------|-------|-----------|-----------|-----------|
| -40   | 01606     | 01889     | 02216     | 0     | 144.8     | 158.0     | 172.1     |
| -39   | 01497     | 01757     | 02056     | 1     | 137.5     | 149.9     | 163.0     |
| -38   | 01397     | 01635     | 01910     | 2     | 130.7     | 142.3     | 154.4     |
| -37   | 01303     | 01523     | 01775     | 3     | 124.3     | 135.0     | 146.4     |
| -36   | 01217     | 01419     | 01651     | 4     | 118.2     | 128.3     | 138.8     |
| -35   | 01137     | 01323     | 01536     | 5     | 112.5     | 121.8     | 131.6     |
| -34   | 01063     | 01235     | 01430     | 6     | 107.1     | 115.8     | 124.9     |
| -33   | 994.8     | 01153     | 01332     | 7     | 102.0     | 110.1     | 118.6     |
| -32   | 931.1     | 01077     | 01242     | 8     | 97.12     | 104.7     | 112.6     |
| -31   | 872.0     | 01006     | 01158     | 9     | 92.54     | 99.63     | 107.0     |
| -30   | 817.1     | 941.0     | 01081     | 10    | 88.20     | 94.82     | 101.7     |
| -29   | 766.0     | 880.4     | 01009     | 11    | 84.10     | 90.28     | 96.67     |
| -28   | 718.5     | 824.2     | 943.0     | 12    | 80.22     | 85.98     | 91.93     |
| -27   | 674.3     | 771.9     | 881.5     | 13    | 76.54     | 81.92     | 87.46     |
| -26   | 633.1     | 723.4     | 824.5     | 14    | 73.05     | 78.07     | 83.24     |
| -25   | 594.8     | 678.3     | 771.6     | 15    | 69.74     | 74.43     | 79.24     |
| -24   | 559.0     | 636.3     | 722.4     | 16    | 66.61     | 70.99     | 75.47     |
| -23   | 525.7     | 597.2     | 676.8     | 17    | 63.64     | 67.72     | 71.89     |
| -22   | 494.6     | 560.8     | 634.4     | 18    | 60.81     | 64.63     | 68.51     |
| -21   | 465.6     | 526.9     | 594.9     | 19    | 58.14     | 61.70     | 65.31     |
| -20   | 438.4     | 495.3     | 558.1     | 20    | 55.59     | 58.92     | 62.28     |
| -19   | 413.1     | 465.8     | 523.9     | 21    | 53.18     | 56.28     | 59.41     |
| -18   | 389.4     | 438.3     | 492.1     | 22    | 50.88     | 53.77     | 56.69     |
| -17   | 367.2     | 412.6     | 462.4     | 23    | 48.70     | 51.40     | 54.11     |
| -16   | 346.5     | 388.6     | 434.7     | 24    | 46.62     | 49.14     | 51.67     |
| -15   | 327.0     | 366.1     | 408.8     | 25    | 44.65     | 47.00     | 49.35     |
| -14   | 308.8     | 345.1     | 384.7     | 26    | 42.66     | 44.96     | 47.27     |
| -13   | 291.8     | 325.5     | 362.2     | 27    | 40.77     | 43.03     | 45.30     |
| -12   | 275.8     | 307.1     | 341.1     | 28    | 38.97     | 41.19     | 43.42     |
| -11   | 260.8     | 289.9     | 321.5     | 29    | 37.27     | 39.44     | 41.63     |
| -10   | 246.7     | 273.8     | 303.0     | 30    | 35.65     | 37.77     | 39.92     |
| -9    | 233.4     | 258.6     | 285.8     | 31    | 34.11     | 36.19     | 38.30     |
| -8    | 221.0     | 244.4     | 269.7     | 32    | 32.65     | 34.68     | 36.75     |
| -7    | 209.3     | 231.1     | 254.6     | 33    | 31.26     | 33.25     | 35.27     |
| -6    | 198.4     | 218.7     | 240.4     | 34    | 29.93     | 31.88     | 33.87     |
| -5    | 188.0     | 206.9     | 227.1     | 35    | 28.67     | 30.58     | 32.52     |
| -4    | 178.3     | 195.9     | 214.7     | 36    | 27.48     | 29.33     | 31.24     |
| -3    | 169.2     | 185.5     | 203.0     | 37    | 26.33     | 28.15     | 30.02     |
| -2    | 160.5     | 175.8     | 192.0     | 38    | 25.25     | 27.02     | 28.85     |
| -1    | 152.4     | 166.6     | 181.7     | 39    | 24.21     | 25.94     | 27.73     |

| T (°C) | Rmin. (k $\Omega$ ) | Rnom. (k $\Omega$ ) | Rmax. (k $\Omega$ ) | T (°C) | Rmin. (k $\Omega$ ) | Rnom. (k $\Omega$ ) | Rmax. (k $\Omega$ ) |
|--------|---------------------|---------------------|---------------------|--------|---------------------|---------------------|---------------------|
| 40     | 23.22               | 24.92               | 26.67               | 83     | 4.838               | 5.434               | 6.087               |
| 41     | 22.28               | 23.94               | 25.65               | 84     | 4.686               | 5.268               | 5.906               |
| 42     | 21.39               | 23.00               | 24.67               | 85     | 4.539               | 5.107               | 5.732               |
| 43     | 20.53               | 22.11               | 23.74               | 86     | 4.398               | 4.953               | 5.564               |
| 44     | 19.71               | 21.25               | 22.85               | 87     | 4.262               | 4.804               | 5.401               |
| 45     | 18.94               | 20.44               | 22.00               | 88     | 4.131               | 4.660               | 5.245               |
| 46     | 18.19               | 19.66               | 21.19               | 89     | 4.004               | 4.522               | 5.093               |
| 47     | 17.48               | 18.91               | 20.41               | 90     | 3.882               | 4.388               | 4.947               |
| 48     | 16.80               | 18.20               | 19.66               | 91     | 3.765               | 4.259               | 4.806               |
| 49     | 16.16               | 17.52               | 18.95               | 92     | 3.651               | 4.134               | 4.669               |
| 50     | 15.54               | 16.86               | 18.26               | 93     | 3.542               | 4.014               | 4.537               |
| 51     | 14.94               | 16.24               | 17.60               | 94     | 3.436               | 3.897               | 4.410               |
| 52     | 14.38               | 15.64               | 16.98               | 95     | 3.334               | 3.785               | 4.286               |
| 53     | 13.84               | 15.07               | 16.37               | 96     | 3.236               | 3.677               | 4.167               |
| 54     | 13.32               | 14.52               | 15.80               | 97     | 3.141               | 3.572               | 4.052               |
| 55     | 12.82               | 14.00               | 15.24               | 98     | 3.049               | 3.471               | 3.941               |
| 56     | 12.35               | 13.50               | 14.71               | 99     | 2.961               | 3.373               | 3.833               |
| 57     | 11.90               | 13.01               | 14.20               | 100    | 2.875               | 3.278               | 3.729               |
| 58     | 11.46               | 12.55               | 13.71               | 101    | 2.793               | 3.187               | 3.628               |
| 59     | 11.05               | 12.11               | 13.24               | 102    | 2.713               | 3.098               | 3.530               |
| 60     | 10.65               | 11.68               | 12.79               | 103    | 2.636               | 3.013               | 3.435               |
| 61     | 10.26               | 11.28               | 12.36               | 104    | 2.561               | 2.930               | 3.344               |
| 62     | 9.898               | 10.89               | 11.94               | 105    | 2.489               | 2.850               | 3.255               |
| 63     | 9.547               | 10.51               | 11.54               | 106    | 2.420               | 2.773               | 3.169               |
| 64     | 9.211               | 10.15               | 11.16               | 107    | 2.352               | 2.698               | 3.086               |
| 65     | 8.888               | 9.806               | 10.79               | 108    | 2.287               | 2.625               | 3.006               |
| 66     | 8.578               | 9.474               | 10.44               | 109    | 2.224               | 2.555               | 2.928               |
| 67     | 8.281               | 9.155               | 10.10               | 110    | 2.163               | 2.487               | 2.852               |
| 68     | 7.995               | 8.849               | 9.768               | 111    | 2.104               | 2.421               | 2.779               |
| 69     | 7.722               | 8.554               | 9.453               | 112    | 2.047               | 2.357               | 2.708               |
| 70     | 7.459               | 8.271               | 9.149               | 113    | 1.992               | 2.296               | 2.639               |
| 71     | 7.206               | 7.999               | 8.857               | 114    | 1.938               | 2.236               | 2.572               |
| 72     | 6.963               | 7.738               | 8.576               | 115    | 1.887               | 2.178               | 2.507               |
| 73     | 6.730               | 7.486               | 8.306               | 116    | 1.837               | 2.121               | 2.445               |
| 74     | 6.506               | 7.244               | 8.045               | 117    | 1.788               | 2.067               | 2.384               |
| 75     | 6.291               | 7.011               | 7.794               | 118    | 1.741               | 2.014               | 2.324               |
| 76     | 6.084               | 6.787               | 7.552               | 119    | 1.695               | 1.963               | 2.267               |
| 77     | 5.885               | 6.571               | 7.319               | 120    | 1.651               | 1.913               | 2.211               |
| 78     | 5.693               | 6.363               | 7.094               | 121    | 1.608               | 1.865               | 2.157               |
| 79     | 5.509               | 6.163               | 6.878               | 122    | 1.567               | 1.818               | 2.105               |
| 80     | 5.332               | 5.971               | 6.669               | 123    | 1.527               | 1.773               | 2.054               |
| 81     | 5.161               | 5.785               | 6.468               | 124    | 1.488               | 1.729               | 2.005               |
| 82     | 4.997               | 5.606               | 6.274               | 125    | 1.450               | 1.687               | 1.957               |

R-T CONVERSION TABLE  
R25: 68K $\Omega$  ( Tolerance 5%)  
R25/50: 4150K ( Tolerance 3%)

| T(°C) | Rmin. (k $\Omega$ ) | Rnom. (k $\Omega$ ) | Rmax. (k $\Omega$ ) | T(°C) | Rmin. (k $\Omega$ ) | Rnom. (k $\Omega$ ) | Rmax. (k $\Omega$ ) |
|-------|---------------------|---------------------|---------------------|-------|---------------------|---------------------|---------------------|
| -40   | 02786               | 03295               | 03886               | 0     | 222. 3              | 243. 1              | 265. 2              |
| -39   | 02588               | 03053               | 03594               | 1     | 210. 6              | 230. 0              | 250. 5              |
| -38   | 02405               | 02832               | 03325               | 2     | 199. 7              | 217. 7              | 236. 7              |
| -37   | 02237               | 02628               | 03079               | 3     | 189. 4              | 206. 1              | 223. 7              |
| -36   | 02082               | 02440               | 02853               | 4     | 179. 7              | 195. 2              | 211. 6              |
| -35   | 01939               | 02267               | 02645               | 5     | 170. 5              | 185. 0              | 200. 2              |
| -34   | 01807               | 02108               | 02454               | 6     | 161. 9              | 175. 4              | 189. 4              |
| -33   | 01684               | 01961               | 02278               | 7     | 153. 8              | 166. 3              | 179. 4              |
| -32   | 01571               | 01825               | 02115               | 8     | 146. 1              | 157. 8              | 169. 9              |
| -31   | 01466               | 01700               | 01966               | 9     | 138. 9              | 149. 7              | 161. 0              |
| -30   | 01370               | 01584               | 01828               | 10    | 132. 1              | 142. 1              | 152. 6              |
| -29   | 01280               | 01477               | 01701               | 11    | 125. 6              | 135. 0              | 144. 7              |
| -28   | 01197               | 01378               | 01584               | 12    | 119. 6              | 128. 3              | 137. 3              |
| -27   | 01119               | 01287               | 01476               | 13    | 113. 8              | 121. 9              | 130. 3              |
| -26   | 01048               | 01202               | 01376               | 14    | 108. 4              | 115. 9              | 123. 7              |
| -25   | 981. 1              | 01123               | 01283               | 15    | 103. 2              | 110. 2              | 117. 4              |
| -24   | 919. 2              | 01050               | 01197               | 16    | 98. 34              | 104. 9              | 111. 6              |
| -23   | 861. 8              | 982. 8              | 01118               | 17    | 93. 74              | 99. 81              | 106. 0              |
| -22   | 808. 3              | 920. 0              | 01044               | 18    | 89. 37              | 95. 03              | 100. 8              |
| -21   | 758. 5              | 861. 6              | 976. 3              | 19    | 85. 24              | 90. 50              | 95. 85              |
| -20   | 712. 1              | 807. 4              | 913. 1              | 20    | 81. 33              | 86. 22              | 91. 18              |
| -19   | 668. 9              | 756. 9              | 854. 4              | 21    | 77. 62              | 82. 17              | 86. 77              |
| -18   | 628. 7              | 710. 0              | 799. 9              | 22    | 74. 10              | 78. 33              | 82. 60              |
| -17   | 591. 1              | 666. 3              | 749. 2              | 23    | 70. 77              | 74. 70              | 78. 66              |
| -16   | 556. 1              | 625. 6              | 702. 2              | 24    | 67. 60              | 71. 26              | 74. 93              |
| -15   | 523. 4              | 587. 7              | 658. 4              | 25    | 64. 60              | 68. 00              | 71. 40              |
| -14   | 492. 8              | 552. 4              | 617. 6              | 26    | 61. 58              | 64. 91              | 68. 25              |
| -13   | 464. 2              | 519. 4              | 579. 7              | 27    | 58. 71              | 61. 98              | 65. 26              |
| -12   | 437. 5              | 488. 6              | 544. 3              | 28    | 56. 00              | 59. 20              | 62. 41              |
| -11   | 412. 5              | 459. 9              | 511. 4              | 29    | 53. 43              | 56. 56              | 59. 71              |
| -10   | 389. 2              | 433. 0              | 480. 7              | 30    | 51. 00              | 54. 05              | 57. 15              |
| -9    | 367. 3              | 407. 9              | 452. 0              | 31    | 48. 69              | 51. 67              | 54. 70              |
| -8    | 346. 7              | 384. 5              | 425. 2              | 32    | 46. 49              | 49. 41              | 52. 38              |
| -7    | 327. 5              | 362. 5              | 400. 2              | 33    | 44. 42              | 47. 27              | 50. 17              |
| -6    | 309. 5              | 342. 0              | 376. 9              | 34    | 42. 44              | 45. 23              | 48. 07              |
| -5    | 292. 6              | 322. 7              | 355. 1              | 35    | 40. 57              | 43. 29              | 46. 07              |
| -4    | 276. 7              | 304. 7              | 334. 6              | 36    | 38. 79              | 41. 44              | 44. 16              |
| -3    | 261. 8              | 287. 8              | 315. 5              | 37    | 37. 10              | 39. 68              | 42. 35              |
| -2    | 247. 8              | 271. 9              | 297. 6              | 38    | 35. 49              | 38. 01              | 40. 62              |
| -1    | 234. 7              | 257. 1              | 280. 9              | 39    | 33. 96              | 36. 42              | 38. 97              |

| T (°C) | Rmin. (k $\Omega$ ) | Rnom. (k $\Omega$ ) | Rmax. (k $\Omega$ ) | T (°C) | Rmin. (k $\Omega$ ) | Rnom. (k $\Omega$ ) | Rmax. (k $\Omega$ ) |
|--------|---------------------|---------------------|---------------------|--------|---------------------|---------------------|---------------------|
| 40     | 32.51               | 34.91               | 37.40               | 83     | 6.255               | 7.048               | 7.921               |
| 41     | 31.13               | 33.47               | 35.90               | 84     | 6.049               | 6.822               | 7.674               |
| 42     | 29.81               | 32.09               | 34.47               | 85     | 5.850               | 6.604               | 7.437               |
| 43     | 28.56               | 30.78               | 33.10               | 86     | 5.659               | 6.394               | 7.207               |
| 44     | 27.37               | 29.54               | 31.80               | 87     | 5.475               | 6.192               | 6.987               |
| 45     | 26.23               | 28.35               | 30.56               | 88     | 5.298               | 5.998               | 6.774               |
| 46     | 25.15               | 27.21               | 29.37               | 89     | 5.127               | 5.811               | 6.568               |
| 47     | 24.12               | 26.13               | 28.23               | 90     | 4.963               | 5.630               | 6.370               |
| 48     | 23.14               | 25.09               | 27.15               | 91     | 4.806               | 5.456               | 6.179               |
| 49     | 22.20               | 24.11               | 26.11               | 92     | 4.653               | 5.288               | 5.995               |
| 50     | 21.31               | 23.17               | 25.12               | 93     | 4.507               | 5.127               | 5.817               |
| 51     | 20.46               | 22.27               | 24.18               | 94     | 4.366               | 4.971               | 5.646               |
| 52     | 19.64               | 21.41               | 23.27               | 95     | 4.230               | 4.821               | 5.480               |
| 53     | 18.87               | 20.58               | 22.40               | 96     | 4.099               | 4.676               | 5.320               |
| 54     | 18.13               | 19.80               | 21.57               | 97     | 3.973               | 4.536               | 5.166               |
| 55     | 17.42               | 19.05               | 20.78               | 98     | 3.851               | 4.401               | 5.016               |
| 56     | 16.74               | 18.33               | 20.02               | 99     | 3.734               | 4.271               | 4.872               |
| 57     | 16.10               | 17.64               | 19.29               | 100    | 3.621               | 4.145               | 4.733               |
| 58     | 15.48               | 16.99               | 18.59               | 101    | 3.511               | 4.023               | 4.599               |
| 59     | 14.89               | 16.36               | 17.93               | 102    | 3.406               | 3.906               | 4.469               |
| 60     | 14.33               | 15.76               | 17.29               | 103    | 3.305               | 3.793               | 4.343               |
| 61     | 13.79               | 15.18               | 16.67               | 104    | 3.206               | 3.684               | 4.221               |
| 62     | 13.27               | 14.63               | 16.08               | 105    | 3.112               | 3.578               | 4.104               |
| 63     | 12.78               | 14.10               | 15.52               | 106    | 3.020               | 3.476               | 3.990               |
| 64     | 12.30               | 13.59               | 14.98               | 107    | 2.932               | 3.377               | 3.880               |
| 65     | 11.85               | 13.11               | 14.46               | 108    | 2.847               | 3.282               | 3.774               |
| 66     | 11.42               | 12.64               | 13.96               | 109    | 2.765               | 3.190               | 3.671               |
| 67     | 11.00               | 12.19               | 13.48               | 110    | 2.685               | 3.101               | 3.572               |
| 68     | 10.60               | 11.76               | 13.02               | 111    | 2.608               | 3.014               | 3.475               |
| 69     | 10.22               | 11.35               | 12.58               | 112    | 2.534               | 2.931               | 3.382               |
| 70     | 9.856               | 10.96               | 12.15               | 113    | 2.462               | 2.850               | 3.292               |
| 71     | 9.506               | 10.58               | 11.75               | 114    | 2.393               | 2.772               | 3.204               |
| 72     | 9.170               | 10.22               | 11.36               | 115    | 2.326               | 2.697               | 3.120               |
| 73     | 8.848               | 9.869               | 10.98               | 116    | 2.261               | 2.624               | 3.038               |
| 74     | 8.539               | 9.534               | 10.62               | 117    | 2.198               | 2.553               | 2.958               |
| 75     | 8.242               | 9.212               | 10.27               | 118    | 2.137               | 2.485               | 2.881               |
| 76     | 7.957               | 8.903               | 9.936               | 119    | 2.078               | 2.418               | 2.806               |
| 77     | 7.684               | 8.606               | 9.614               | 120    | 2.022               | 2.354               | 2.734               |
| 78     | 7.421               | 8.320               | 9.304               | 121    | 1.967               | 2.292               | 2.664               |
| 79     | 7.169               | 8.045               | 9.006               | 122    | 1.913               | 2.232               | 2.596               |
| 80     | 6.927               | 7.781               | 8.719               | 123    | 1.862               | 2.173               | 2.530               |
| 81     | 6.694               | 7.527               | 8.443               | 124    | 1.812               | 2.117               | 2.466               |
| 82     | 6.470               | 7.283               | 8.177               | 125    | 1.764               | 2.062               | 2.404               |

R-T CONVERSION TABLE  
R25: 100K $\Omega$  ( Tolerance 5%)  
R25/50:4150K ( Tolerance 3%)

| T (°C) | Rmin. (k $\Omega$ ) | Rnom. (k $\Omega$ ) | Rmax. (k $\Omega$ ) | T (°C) | Rmin. (k $\Omega$ ) | Rnom. (k $\Omega$ ) | Rmax. (k $\Omega$ ) |
|--------|---------------------|---------------------|---------------------|--------|---------------------|---------------------|---------------------|
| -40    | 04097               | 04845               | 05715               | 0      | 326.9               | 357.5               | 390.0               |
| -39    | 03806               | 04490               | 05285               | 1      | 309.8               | 338.2               | 368.4               |
| -38    | 03537               | 04164               | 04890               | 2      | 293.7               | 320.1               | 348.1               |
| -37    | 03290               | 03864               | 04528               | 3      | 278.5               | 303.1               | 329.0               |
| -36    | 03062               | 03588               | 04195               | 4      | 264.3               | 287.1               | 311.1               |
| -35    | 02851               | 03334               | 03889               | 5      | 250.8               | 272.1               | 294.4               |
| -34    | 02657               | 03100               | 03608               | 6      | 238.1               | 257.9               | 278.6               |
| -33    | 02477               | 02884               | 03349               | 7      | 226.2               | 244.6               | 263.8               |
| -32    | 02310               | 02684               | 03111               | 8      | 214.9               | 232.0               | 249.8               |
| -31    | 02157               | 02500               | 02891               | 9      | 204.3               | 220.2               | 236.7               |
| -30    | 02014               | 02330               | 02689               | 10     | 194.2               | 209.0               | 224.4               |
| -29    | 01882               | 02173               | 02502               | 11     | 184.8               | 198.5               | 212.8               |
| -28    | 01760               | 02027               | 02330               | 12     | 175.8               | 188.6               | 201.9               |
| -27    | 01646               | 01892               | 02170               | 13     | 167.3               | 179.3               | 191.6               |
| -26    | 01541               | 01768               | 02023               | 14     | 159.3               | 170.4               | 181.8               |
| -25    | 01443               | 01652               | 01887               | 15     | 151.8               | 162.1               | 172.7               |
| -24    | 01352               | 01545               | 01761               | 16     | 144.6               | 154.2               | 164.1               |
| -23    | 01267               | 01445               | 01644               | 17     | 137.8               | 146.8               | 155.9               |
| -22    | 01189               | 01353               | 01536               | 18     | 131.4               | 139.7               | 148.2               |
| -21    | 01115               | 01267               | 01436               | 19     | 125.4               | 133.1               | 140.9               |
| -20    | 01047               | 01187               | 01343               | 20     | 119.6               | 126.8               | 134.1               |
| -19    | 983.7               | 01113               | 01256               | 21     | 114.1               | 120.8               | 127.6               |
| -18    | 924.5               | 01044               | 01176               | 22     | 109.0               | 115.2               | 121.5               |
| -17    | 869.3               | 979.9               | 01102               | 23     | 104.1               | 109.9               | 115.7               |
| -16    | 817.8               | 920.1               | 01033               | 24     | 99.42               | 104.8               | 110.2               |
| -15    | 769.6               | 864.3               | 968.2               | 25     | 95.00               | 100.0               | 105.0               |
| -14    | 724.7               | 812.3               | 908.3               | 26     | 90.55               | 95.45               | 100.4               |
| -13    | 682.7               | 763.8               | 852.5               | 27     | 86.34               | 91.14               | 95.97               |
| -12    | 643.4               | 718.6               | 800.5               | 28     | 82.36               | 87.05               | 91.79               |
| -11    | 606.7               | 676.3               | 752.0               | 29     | 78.58               | 83.17               | 87.81               |
| -10    | 572.3               | 636.8               | 706.8               | 30     | 74.99               | 79.49               | 84.04               |
| -9     | 540.1               | 599.9               | 664.7               | 31     | 71.60               | 75.99               | 80.45               |
| -8     | 509.9               | 565.4               | 625.3               | 32     | 68.37               | 72.67               | 77.03               |
| -7     | 481.6               | 533.1               | 588.6               | 33     | 65.32               | 69.51               | 73.78               |
| -6     | 455.1               | 502.9               | 554.2               | 34     | 62.41               | 66.51               | 70.69               |
| -5     | 430.3               | 474.6               | 522.1               | 35     | 59.66               | 63.65               | 67.75               |
| -4     | 406.9               | 448.1               | 492.1               | 36     | 57.04               | 60.94               | 64.95               |
| -3     | 385.0               | 423.2               | 464.0               | 37     | 54.55               | 58.36               | 62.28               |
| -2     | 364.4               | 399.9               | 437.7               | 38     | 52.19               | 55.90               | 59.73               |
| -1     | 345.1               | 378.0               | 413.1               | 39     | 49.94               | 53.56               | 57.31               |

| T (°C) | Rmin. (k $\Omega$ ) | Rnom. (k $\Omega$ ) | Rmax. (k $\Omega$ ) | T (°C) | Rmin. (k $\Omega$ ) | Rnom. (k $\Omega$ ) | Rmax. (k $\Omega$ ) |
|--------|---------------------|---------------------|---------------------|--------|---------------------|---------------------|---------------------|
| 40     | 47.81               | 51.34               | 54.99               | 83     | 9.199               | 10.36               | 11.65               |
| 41     | 45.77               | 49.22               | 52.79               | 84     | 8.895               | 10.03               | 11.29               |
| 42     | 43.84               | 47.20               | 50.69               | 85     | 8.603               | 9.712               | 10.94               |
| 43     | 42.00               | 45.27               | 48.68               | 86     | 8.322               | 9.403               | 10.60               |
| 44     | 40.24               | 43.44               | 46.76               | 87     | 8.051               | 9.106               | 10.27               |
| 45     | 38.58               | 41.69               | 44.93               | 88     | 7.791               | 8.820               | 9.961               |
| 46     | 36.99               | 40.02               | 43.19               | 89     | 7.540               | 8.545               | 9.659               |
| 47     | 35.47               | 38.42               | 41.52               | 90     | 7.299               | 8.280               | 9.368               |
| 48     | 34.03               | 36.90               | 39.93               | 91     | 7.067               | 8.024               | 9.087               |
| 49     | 32.65               | 35.45               | 38.40               | 92     | 6.843               | 7.777               | 8.816               |
| 50     | 31.34               | 34.07               | 36.95               | 93     | 6.628               | 7.539               | 8.555               |
| 51     | 30.08               | 32.74               | 35.55               | 94     | 6.421               | 7.310               | 8.302               |
| 52     | 28.89               | 31.48               | 34.22               | 95     | 6.221               | 7.089               | 8.059               |
| 53     | 27.75               | 30.27               | 32.95               | 96     | 6.028               | 6.876               | 7.824               |
| 54     | 26.66               | 29.12               | 31.73               | 97     | 5.842               | 6.670               | 7.597               |
| 55     | 25.62               | 28.01               | 30.56               | 98     | 5.663               | 6.472               | 7.377               |
| 56     | 24.62               | 26.96               | 29.44               | 99     | 5.491               | 6.280               | 7.165               |
| 57     | 23.67               | 25.95               | 28.37               | 100    | 5.324               | 6.095               | 6.961               |
| 58     | 22.76               | 24.98               | 27.34               | 101    | 5.164               | 5.917               | 6.763               |
| 59     | 21.90               | 24.06               | 26.36               | 102    | 5.009               | 5.745               | 6.571               |
| 60     | 21.07               | 23.17               | 25.42               | 103    | 4.860               | 5.578               | 6.387               |
| 61     | 20.27               | 22.32               | 24.52               | 104    | 4.715               | 5.417               | 6.208               |
| 62     | 19.51               | 21.51               | 23.65               | 105    | 4.576               | 5.262               | 6.035               |
| 63     | 18.79               | 20.73               | 22.82               | 106    | 4.442               | 5.112               | 5.868               |
| 64     | 18.09               | 19.99               | 22.02               | 107    | 4.312               | 4.967               | 5.707               |
| 65     | 17.43               | 19.27               | 21.26               | 108    | 4.187               | 4.826               | 5.550               |
| 66     | 16.79               | 18.59               | 20.53               | 109    | 4.065               | 4.691               | 5.399               |
| 67     | 16.18               | 17.93               | 19.82               | 110    | 3.949               | 4.560               | 5.252               |
| 68     | 15.59               | 17.30               | 19.15               | 111    | 3.835               | 4.433               | 5.111               |
| 69     | 15.03               | 16.70               | 18.50               | 112    | 3.726               | 4.310               | 4.974               |
| 70     | 14.49               | 16.12               | 17.87               | 113    | 3.621               | 4.192               | 4.841               |
| 71     | 13.98               | 15.56               | 17.28               | 114    | 3.519               | 4.077               | 4.712               |
| 72     | 13.49               | 15.03               | 16.70               | 115    | 3.420               | 3.966               | 4.588               |
| 73     | 13.01               | 14.51               | 16.15               | 116    | 3.325               | 3.858               | 4.467               |
| 74     | 12.56               | 14.02               | 15.61               | 117    | 3.232               | 3.754               | 4.350               |
| 75     | 12.12               | 13.55               | 15.10               | 118    | 3.143               | 3.654               | 4.237               |
| 76     | 11.70               | 13.09               | 14.61               | 119    | 3.057               | 3.556               | 4.127               |
| 77     | 11.30               | 12.66               | 14.14               | 120    | 2.973               | 3.462               | 4.021               |
| 78     | 10.91               | 12.24               | 13.68               | 121    | 2.892               | 3.370               | 3.918               |
| 79     | 10.54               | 11.83               | 13.24               | 122    | 2.814               | 3.282               | 3.818               |
| 80     | 10.19               | 11.44               | 12.82               | 123    | 2.738               | 3.196               | 3.721               |
| 81     | 9.844               | 11.07               | 12.42               | 124    | 2.665               | 3.113               | 3.627               |
| 82     | 9.515               | 10.71               | 12.03               | 125    | 2.594               | 3.032               | 3.536               |

| KSE-NTC0805 2.2 kΩ   |       |       |       |                 |       |       |       |
|----------------------|-------|-------|-------|-----------------|-------|-------|-------|
| R—T CONVERSION TABLE |       |       |       |                 |       |       |       |
| R25=2.2k Ω ±5%       |       |       |       | B25/50= 3450±3% |       |       |       |
| T/℃                  | Rmin  | Rcen  | Rmax  | T/℃             | Rmin  | Rcen  | Rmax  |
| -40                  | 047.8 | 055.4 | 064.1 | 0               | 05.84 | 06.34 | 06.88 |
| -39                  | 044.9 | 052.0 | 060.0 | 1               | 05.58 | 06.06 | 06.56 |
| -38                  | 042.3 | 048.8 | 056.3 | 2               | 05.34 | 05.79 | 06.26 |
| -37                  | 039.8 | 045.9 | 052.8 | 3               | 05.11 | 05.53 | 05.97 |
| -36                  | 037.5 | 043.2 | 049.5 | 4               | 04.89 | 05.29 | 05.70 |
| -35                  | 035.3 | 040.6 | 046.5 | 5               | 04.68 | 05.06 | 05.44 |
| -34                  | 033.3 | 038.2 | 043.7 | 6               | 04.49 | 04.84 | 05.20 |
| -33                  | 031.4 | 036.0 | 041.1 | 7               | 04.30 | 04.63 | 04.97 |
| -32                  | 029.7 | 033.9 | 038.6 | 8               | 04.12 | 04.43 | 04.75 |
| -31                  | 028.0 | 032.0 | 036.4 | 9               | 03.95 | 04.24 | 04.54 |
| -30                  | 026.5 | 030.1 | 034.2 | 10              | 03.79 | 04.06 | 04.34 |
| -29                  | 025.0 | 028.4 | 032.2 | 11              | 03.63 | 03.89 | 04.16 |
| -28                  | 023.7 | 026.8 | 030.4 | 12              | 03.49 | 03.73 | 03.98 |
| -27                  | 022.4 | 025.4 | 028.6 | 13              | 03.35 | 03.57 | 03.81 |
| -26                  | 021.2 | 024.0 | 027.0 | 14              | 03.21 | 03.43 | 03.65 |
| -25                  | 020.1 | 022.6 | 025.5 | 15              | 03.09 | 03.29 | 03.49 |
| -24                  | 019.0 | 021.4 | 024.1 | 16              | 02.96 | 03.15 | 03.35 |
| -23                  | 018.0 | 020.3 | 022.7 | 17              | 02.85 | 03.03 | 03.21 |
| -22                  | 017.1 | 019.2 | 021.5 | 18              | 02.74 | 02.91 | 03.08 |
| -21                  | 016.2 | 018.2 | 020.3 | 19              | 02.63 | 02.79 | 02.95 |
| -20                  | 15.37 | 17.21 | 19.22 | 20              | 02.53 | 02.68 | 02.83 |
| -19                  | 14.59 | 16.31 | 18.19 | 21              | 02.43 | 02.57 | 02.72 |
| -18                  | 13.86 | 15.46 | 17.22 | 22              | 02.34 | 02.47 | 02.61 |
| -17                  | 13.16 | 14.67 | 16.31 | 23              | 02.25 | 02.38 | 02.50 |
| -16                  | 12.51 | 13.92 | 15.45 | 24              | 02.17 | 02.29 | 02.40 |
| -15                  | 11.90 | 13.22 | 14.64 | 25              | 2.090 | 2.200 | 2.310 |
| -14                  | 11.32 | 12.55 | 13.89 | 26              | 2.008 | 2.117 | 2.225 |
| -13                  | 10.77 | 11.93 | 13.17 | 27              | 1.930 | 2.037 | 2.144 |
| -12                  | 10.25 | 11.34 | 12.50 | 28              | 1.856 | 1.960 | 2.066 |
| -11                  | 09.76 | 10.78 | 11.87 | 29              | 1.785 | 1.888 | 1.991 |
| -10                  | 09.30 | 10.25 | 11.27 | 30              | 1.717 | 1.818 | 1.920 |
| -9                   | 08.86 | 09.76 | 10.71 | 31              | 1.652 | 1.751 | 1.851 |
| -8                   | 08.45 | 09.29 | 10.18 | 32              | 1.590 | 1.687 | 1.786 |
| -7                   | 08.06 | 08.84 | 09.68 | 33              | 1.531 | 1.626 | 1.723 |
| -6                   | 07.69 | 08.42 | 09.21 | 34              | 1.474 | 1.567 | 1.663 |
| -5                   | 07.34 | 08.03 | 08.76 | 35              | 1.420 | 1.511 | 1.605 |
| -4                   | 07.00 | 07.65 | 08.34 | 36              | 1.368 | 1.458 | 1.549 |
| -3                   | 06.69 | 07.30 | 07.95 | 37              | 1.318 | 1.406 | 1.496 |
| -2                   | 06.39 | 06.96 | 07.57 | 38              | 1.270 | 1.357 | 1.445 |
| -1                   | 06.11 | 06.65 | 07.21 | 39              | 1.225 | 1.309 | 1.396 |

| R—T CONVERSION TABLE       |       |       |       |                       |        |        |        |
|----------------------------|-------|-------|-------|-----------------------|--------|--------|--------|
| R25=2.2k $\Omega$ $\pm$ 5% |       |       |       | B25/50= 3450 $\pm$ 3% |        |        |        |
| T/°C                       | Rmin  | Rcen  | Rmax  | T/°C                  | Rmin   | Rcen   | Rmax   |
| 40                         | 1.181 | 1.264 | 1.349 | 83                    | 0.300  | 0.334  | 0.371  |
| 41                         | 1.139 | 1.220 | 1.304 | 84                    | 0.292  | 0.325  | 0.362  |
| 42                         | 1.099 | 1.179 | 1.261 | 85                    | 0.284  | 0.317  | 0.352  |
| 43                         | 1.060 | 1.138 | 1.219 | 86                    | 0.2761 | 0.3082 | 0.3433 |
| 44                         | 1.023 | 1.100 | 1.179 | 87                    | 0.2686 | 0.3001 | 0.3345 |
| 45                         | 0.988 | 1.063 | 1.141 | 88                    | 0.2613 | 0.2923 | 0.3260 |
| 46                         | 0.954 | 1.027 | 1.104 | 89                    | 0.2543 | 0.2847 | 0.3178 |
| 47                         | 0.921 | 0.993 | 1.068 | 90                    | 0.2476 | 0.2773 | 0.3098 |
| 48                         | 0.890 | 0.961 | 1.034 | 91                    | 0.2410 | 0.2701 | 0.3021 |
| 49                         | 0.860 | 0.929 | 1.001 | 92                    | 0.2346 | 0.2632 | 0.2946 |
| 50                         | 0.831 | 0.899 | 0.969 | 93                    | 0.2285 | 0.2565 | 0.2873 |
| 51                         | 0.803 | 0.870 | 0.939 | 94                    | 0.2225 | 0.2500 | 0.2802 |
| 52                         | 0.777 | 0.842 | 0.910 | 95                    | 0.2167 | 0.2437 | 0.2734 |
| 53                         | 0.751 | 0.815 | 0.881 | 96                    | 0.2112 | 0.2376 | 0.2667 |
| 54                         | 0.727 | 0.789 | 0.854 | 97                    | 0.2057 | 0.2317 | 0.2603 |
| 55                         | 0.703 | 0.764 | 0.828 | 98                    | 0.2005 | 0.2259 | 0.2540 |
| 56                         | 0.680 | 0.740 | 0.803 | 99                    | 0.1954 | 0.2204 | 0.2479 |
| 57                         | 0.658 | 0.717 | 0.778 | 100                   | 0.1905 | 0.2150 | 0.2420 |
| 58                         | 0.637 | 0.694 | 0.755 | 101                   | 0.1857 | 0.2097 | 0.2363 |
| 59                         | 0.617 | 0.673 | 0.732 | 102                   | 0.1810 | 0.2046 | 0.2307 |
| 60                         | 0.598 | 0.652 | 0.710 | 103                   | 0.1765 | 0.1997 | 0.2253 |
| 61                         | 0.579 | 0.632 | 0.689 | 104                   | 0.1722 | 0.1949 | 0.2201 |
| 62                         | 0.561 | 0.613 | 0.669 | 105                   | 0.1679 | 0.1902 | 0.2150 |
| 63                         | 0.543 | 0.595 | 0.649 | 106                   | 0.1638 | 0.1857 | 0.2100 |
| 64                         | 0.526 | 0.577 | 0.631 | 107                   | 0.1598 | 0.1813 | 0.2052 |
| 65                         | 0.510 | 0.560 | 0.612 | 108                   | 0.1559 | 0.1770 | 0.2005 |
| 66                         | 0.495 | 0.543 | 0.595 | 109                   | 0.1522 | 0.1729 | 0.1959 |
| 67                         | 0.480 | 0.527 | 0.578 | 110                   | 0.1485 | 0.1689 | 0.1915 |
| 68                         | 0.465 | 0.512 | 0.561 | 111                   | 0.1450 | 0.1650 | 0.1872 |
| 69                         | 0.451 | 0.497 | 0.545 | 112                   | 0.1416 | 0.1612 | 0.1830 |
| 70                         | 0.438 | 0.482 | 0.530 | 113                   | 0.1382 | 0.1575 | 0.1790 |
| 71                         | 0.425 | 0.469 | 0.515 | 114                   | 0.1350 | 0.1539 | 0.1750 |
| 72                         | 0.412 | 0.455 | 0.501 | 115                   | 0.1318 | 0.1504 | 0.1711 |
| 73                         | 0.400 | 0.442 | 0.487 | 116                   | 0.1287 | 0.1470 | 0.1674 |
| 74                         | 0.389 | 0.430 | 0.474 | 117                   | 0.1258 | 0.1437 | 0.1637 |
| 75                         | 0.377 | 0.418 | 0.461 | 118                   | 0.1229 | 0.1405 | 0.1602 |
| 76                         | 0.366 | 0.406 | 0.448 | 119                   | 0.1201 | 0.1373 | 0.1567 |
| 77                         | 0.356 | 0.395 | 0.436 | 120                   | 0.1173 | 0.1343 | 0.1534 |
| 78                         | 0.346 | 0.384 | 0.424 | 121                   | 0.1147 | 0.1314 | 0.1501 |
| 79                         | 0.336 | 0.373 | 0.413 | 122                   | 0.1121 | 0.1285 | 0.1469 |
| 80                         | 0.327 | 0.363 | 0.402 | 123                   | 0.1096 | 0.1257 | 0.1438 |
| 81                         | 0.317 | 0.353 | 0.392 | 124                   | 0.1071 | 0.1229 | 0.1408 |
| 82                         | 0.309 | 0.343 | 0.381 | 125                   | 0.1047 | 0.1203 | 0.1378 |

R-T CONVERSION TABLE  
R25: 4.7K $\Omega$  ( Tolerance 5%)  
R25/50:3500K ( Tolerance 3%)

| T(°C) | Rmin.(k $\Omega$ ) | Rnom.(k $\Omega$ ) | Rmax.(k $\Omega$ ) | T(°C) | Rmin.(k $\Omega$ ) | Rnom.(k $\Omega$ ) | Rmax.(k $\Omega$ ) |
|-------|--------------------|--------------------|--------------------|-------|--------------------|--------------------|--------------------|
| -40   | 106.8              | 124.0              | 143.6              | 0     | 12.66              | 13.76              | 14.92              |
| -39   | 100.3              | 116.3              | 134.5              | 1     | 12.10              | 13.13              | 14.22              |
| -38   | 94.35              | 109.1              | 125.9              | 2     | 11.57              | 12.54              | 13.56              |
| -37   | 88.75              | 102.5              | 118.0              | 3     | 11.06              | 11.97              | 12.93              |
| -36   | 83.53              | 96.26              | 110.7              | 4     | 10.58              | 11.44              | 12.34              |
| -35   | 78.66              | 90.48              | 103.8              | 5     | 10.13              | 10.93              | 11.77              |
| -34   | 74.11              | 85.09              | 97.45              | 6     | 9.692              | 10.45              | 11.24              |
| -33   | 69.85              | 80.06              | 91.52              | 7     | 9.280              | 9.992              | 10.73              |
| -32   | 65.87              | 75.36              | 86.00              | 8     | 8.889              | 9.558              | 10.25              |
| -31   | 62.15              | 70.98              | 80.85              | 9     | 8.516              | 9.145              | 9.796              |
| -30   | 58.67              | 66.88              | 76.05              | 10    | 8.162              | 8.753              | 9.364              |
| -29   | 55.41              | 63.05              | 71.57              | 11    | 7.825              | 8.381              | 8.954              |
| -28   | 52.36              | 59.47              | 67.38              | 12    | 7.504              | 8.026              | 8.564              |
| -27   | 49.49              | 56.12              | 63.48              | 13    | 7.198              | 7.689              | 8.194              |
| -26   | 46.80              | 52.98              | 59.82              | 14    | 6.907              | 7.369              | 7.842              |
| -25   | 44.28              | 50.04              | 56.41              | 15    | 6.629              | 7.064              | 7.508              |
| -24   | 41.92              | 47.29              | 53.21              | 16    | 6.364              | 6.773              | 7.190              |
| -23   | 39.70              | 44.71              | 50.22              | 17    | 6.112              | 6.496              | 6.888              |
| -22   | 37.61              | 42.28              | 47.42              | 18    | 5.871              | 6.233              | 6.600              |
| -21   | 35.64              | 40.01              | 44.80              | 19    | 5.641              | 5.981              | 6.326              |
| -20   | 33.80              | 37.88              | 42.34              | 20    | 5.422              | 5.742              | 6.065              |
| -19   | 32.06              | 35.87              | 40.03              | 21    | 5.213              | 5.513              | 5.817              |
| -18   | 30.43              | 33.99              | 37.87              | 22    | 5.013              | 5.296              | 5.580              |
| -17   | 28.89              | 32.21              | 35.83              | 23    | 4.822              | 5.088              | 5.355              |
| -16   | 27.43              | 30.55              | 33.93              | 24    | 4.639              | 4.889              | 5.140              |
| -15   | 26.07              | 28.98              | 32.13              | 25    | 4.465              | 4.700              | 4.935              |
| -14   | 24.78              | 27.50              | 30.45              | 26    | 4.293              | 4.525              | 4.756              |
| -13   | 23.56              | 26.11              | 28.86              | 27    | 4.129              | 4.356              | 4.585              |
| -12   | 22.41              | 24.80              | 27.37              | 28    | 3.972              | 4.195              | 4.420              |
| -11   | 21.33              | 23.56              | 25.97              | 29    | 3.821              | 4.040              | 4.262              |
| -10   | 20.30              | 22.40              | 24.64              | 30    | 3.676              | 3.892              | 4.109              |
| -9    | 19.34              | 21.30              | 23.40              | 31    | 3.538              | 3.749              | 3.963              |
| -8    | 18.42              | 20.26              | 22.22              | 32    | 3.405              | 3.612              | 3.823              |
| -7    | 17.56              | 19.28              | 21.12              | 33    | 3.277              | 3.481              | 3.688              |
| -6    | 16.74              | 18.35              | 20.07              | 34    | 3.155              | 3.355              | 3.559              |
| -5    | 15.96              | 17.48              | 19.09              | 35    | 3.038              | 3.234              | 3.434              |
| -4    | 15.23              | 16.65              | 18.16              | 36    | 2.926              | 3.118              | 3.314              |
| -3    | 14.53              | 15.87              | 17.28              | 37    | 2.818              | 3.006              | 3.199              |
| -2    | 13.88              | 15.13              | 16.45              | 38    | 2.714              | 2.899              | 3.088              |
| -1    | 13.25              | 14.43              | 15.67              | 39    | 2.615              | 2.796              | 2.982              |

| T (°C) | Rmin. (k $\Omega$ ) | Rnom. (k $\Omega$ ) | Rmax. (k $\Omega$ ) | T (°C) | Rmin. (k $\Omega$ ) | Rnom. (k $\Omega$ ) | Rmax. (k $\Omega$ ) |
|--------|---------------------|---------------------|---------------------|--------|---------------------|---------------------|---------------------|
| 40     | 2.520               | 2.697               | 2.879               | 83     | 0.5355              | 0.5996              | 0.6697              |
| 41     | 2.428               | 2.602               | 2.781               | 84     | 0.5205              | 0.5833              | 0.6520              |
| 42     | 2.341               | 2.511               | 2.686               | 85     | 0.5061              | 0.5677              | 0.6351              |
| 43     | 2.256               | 2.423               | 2.595               | 86     | 0.4974              | 0.5582              | 0.6248              |
| 44     | 2.175               | 2.338               | 2.507               | 87     | 0.4889              | 0.5489              | 0.6147              |
| 45     | 2.098               | 2.257               | 2.423               | 88     | 0.4806              | 0.5398              | 0.6048              |
| 46     | 2.023               | 2.179               | 2.341               | 89     | 0.4724              | 0.5309              | 0.5951              |
| 47     | 1.951               | 2.104               | 2.263               | 90     | 0.4644              | 0.5222              | 0.5856              |
| 48     | 1.882               | 2.032               | 2.188               | 91     | 0.4566              | 0.5136              | 0.5763              |
| 49     | 1.816               | 1.962               | 2.115               | 92     | 0.4489              | 0.5052              | 0.5672              |
| 50     | 1.752               | 1.895               | 2.045               | 93     | 0.4414              | 0.4970              | 0.5583              |
| 51     | 1.676               | 1.816               | 1.962               | 94     | 0.4340              | 0.4890              | 0.5495              |
| 52     | 1.605               | 1.741               | 1.883               | 95     | 0.4268              | 0.4811              | 0.5409              |
| 53     | 1.538               | 1.670               | 1.808               | 96     | 0.4198              | 0.4734              | 0.5325              |
| 54     | 1.474               | 1.602               | 1.738               | 97     | 0.4129              | 0.4658              | 0.5242              |
| 55     | 1.414               | 1.539               | 1.671               | 98     | 0.4061              | 0.4584              | 0.5161              |
| 56     | 1.357               | 1.479               | 1.607               | 99     | 0.3995              | 0.4511              | 0.5082              |
| 57     | 1.303               | 1.421               | 1.547               | 100    | 0.3930              | 0.4440              | 0.5004              |
| 58     | 1.252               | 1.367               | 1.490               | 101    | 0.3851              | 0.4354              | 0.4910              |
| 59     | 1.203               | 1.316               | 1.435               | 102    | 0.3772              | 0.4267              | 0.4815              |
| 60     | 1.157               | 1.267               | 1.384               | 103    | 0.3694              | 0.4181              | 0.4721              |
| 61     | 1.113               | 1.220               | 1.334               | 104    | 0.3616              | 0.4095              | 0.4626              |
| 62     | 1.072               | 1.176               | 1.288               | 105    | 0.3538              | 0.4010              | 0.4533              |
| 63     | 1.033               | 1.134               | 1.243               | 106    | 0.3461              | 0.3924              | 0.4439              |
| 64     | 0.9950              | 1.094               | 1.200               | 107    | 0.3384              | 0.3840              | 0.4346              |
| 65     | 0.9593              | 1.056               | 1.160               | 108    | 0.3307              | 0.3756              | 0.4254              |
| 66     | 0.9253              | 1.020               | 1.121               | 109    | 0.3232              | 0.3672              | 0.4162              |
| 67     | 0.8929              | 0.9851              | 1.084               | 110    | 0.3157              | 0.3590              | 0.4071              |
| 68     | 0.8621              | 0.9520              | 1.049               | 111    | 0.3083              | 0.3508              | 0.3981              |
| 69     | 0.8327              | 0.9204              | 1.015               | 112    | 0.3009              | 0.3427              | 0.3892              |
| 70     | 0.8046              | 0.8903              | 0.9827              | 113    | 0.2937              | 0.3346              | 0.3803              |
| 71     | 0.7778              | 0.8615              | 0.9518              | 114    | 0.2865              | 0.3267              | 0.3716              |
| 72     | 0.7523              | 0.8340              | 0.9223              | 115    | 0.2794              | 0.3188              | 0.3629              |
| 73     | 0.7279              | 0.8077              | 0.8941              | 116    | 0.2724              | 0.3111              | 0.3544              |
| 74     | 0.7045              | 0.7826              | 0.8671              | 117    | 0.2655              | 0.3035              | 0.3459              |
| 75     | 0.6823              | 0.7586              | 0.8413              | 118    | 0.2588              | 0.2959              | 0.3376              |
| 76     | 0.6610              | 0.7356              | 0.8165              | 119    | 0.2521              | 0.2885              | 0.3294              |
| 77     | 0.6406              | 0.7135              | 0.7928              | 120    | 0.2455              | 0.2812              | 0.3213              |
| 78     | 0.6211              | 0.6925              | 0.7701              | 121    | 0.2390              | 0.2740              | 0.3133              |
| 79     | 0.6025              | 0.6723              | 0.7483              | 122    | 0.2327              | 0.2669              | 0.3055              |
| 80     | 0.5846              | 0.6529              | 0.7274              | 123    | 0.2264              | 0.2600              | 0.2977              |
| 81     | 0.5675              | 0.6344              | 0.7074              | 124    | 0.2203              | 0.2531              | 0.2901              |
| 82     | 0.5512              | 0.6167              | 0.6882              | 125    | 0.2143              | 0.2464              | 0.2826              |

R-T CONVERSION TABLE  
R25: 6.8K $\Omega$  ( Tolerance 5%)  
R25/50:3650K ( Tolerance 3%)

| T (°C) | Rmin. (k $\Omega$ ) | Rnom. (k $\Omega$ ) | Rmax. (k $\Omega$ ) | T (°C) | Rmin. (k $\Omega$ ) | Rnom. (k $\Omega$ ) | Rmax. (k $\Omega$ ) |
|--------|---------------------|---------------------|---------------------|--------|---------------------|---------------------|---------------------|
| -40    | 177.0               | 206.4               | 240.1               | 0      | 19.15               | 20.85               | 22.64               |
| -39    | 165.9               | 193.1               | 224.1               | 1      | 18.27               | 19.86               | 21.53               |
| -38    | 155.6               | 180.7               | 209.3               | 2      | 17.43               | 18.92               | 20.49               |
| -37    | 146.0               | 169.2               | 195.6               | 3      | 16.64               | 18.03               | 19.50               |
| -36    | 137.0               | 158.5               | 182.9               | 4      | 15.89               | 17.19               | 18.56               |
| -35    | 128.7               | 148.6               | 171.2               | 5      | 15.17               | 16.40               | 17.68               |
| -34    | 120.9               | 139.4               | 160.2               | 6      | 14.50               | 15.65               | 16.84               |
| -33    | 113.7               | 130.8               | 150.1               | 7      | 13.85               | 14.93               | 16.05               |
| -32    | 107.0               | 122.8               | 140.6               | 8      | 13.25               | 14.26               | 15.30               |
| -31    | 100.7               | 115.4               | 131.9               | 9      | 12.67               | 13.61               | 14.60               |
| -30    | 94.79               | 108.4               | 123.7               | 10     | 12.12               | 13.01               | 13.93               |
| -29    | 89.31               | 102.0               | 116.1               | 11     | 11.60               | 12.43               | 13.29               |
| -28    | 84.18               | 95.93               | 109.0               | 12     | 11.10               | 11.88               | 12.69               |
| -27    | 79.38               | 90.30               | 102.5               | 13     | 10.63               | 11.36               | 12.12               |
| -26    | 74.89               | 85.04               | 96.32               | 14     | 10.18               | 10.87               | 11.57               |
| -25    | 70.69               | 80.13               | 90.59               | 15     | 9.755               | 10.40               | 11.06               |
| -24    | 66.76               | 75.53               | 85.25               | 16     | 9.349               | 9.954               | 10.57               |
| -23    | 63.07               | 71.24               | 80.26               | 17     | 8.962               | 9.530               | 10.11               |
| -22    | 59.61               | 67.22               | 75.60               | 18     | 8.595               | 9.127               | 9.669               |
| -21    | 56.37               | 63.45               | 71.24               | 19     | 8.244               | 8.744               | 9.250               |
| -20    | 53.33               | 59.92               | 67.17               | 20     | 7.910               | 8.379               | 8.853               |
| -19    | 50.48               | 56.62               | 63.35               | 21     | 7.592               | 8.032               | 8.476               |
| -18    | 47.79               | 53.52               | 59.79               | 22     | 7.289               | 7.701               | 8.116               |
| -17    | 45.27               | 50.61               | 56.44               | 23     | 6.999               | 7.386               | 7.775               |
| -16    | 42.90               | 47.89               | 53.31               | 24     | 6.723               | 7.086               | 7.450               |
| -15    | 40.68               | 45.32               | 50.38               | 25     | 6.460               | 6.800               | 7.140               |
| -14    | 38.58               | 42.92               | 47.62               | 26     | 6.193               | 6.527               | 6.862               |
| -13    | 36.61               | 40.66               | 45.04               | 27     | 5.939               | 6.267               | 6.597               |
| -12    | 34.75               | 38.53               | 42.62               | 28     | 5.697               | 6.019               | 6.343               |
| -11    | 33.00               | 36.53               | 40.34               | 29     | 5.467               | 5.783               | 6.101               |
| -10    | 31.34               | 34.65               | 38.20               | 30     | 5.247               | 5.557               | 5.870               |
| -9     | 29.79               | 32.87               | 36.19               | 31     | 5.037               | 5.341               | 5.649               |
| -8     | 28.32               | 31.20               | 34.30               | 32     | 4.837               | 5.135               | 5.437               |
| -7     | 26.93               | 29.63               | 32.52               | 33     | 4.647               | 4.938               | 5.235               |
| -6     | 25.63               | 28.15               | 30.84               | 34     | 4.464               | 4.750               | 5.042               |
| -5     | 24.39               | 26.75               | 29.27               | 35     | 4.291               | 4.571               | 4.857               |
| -4     | 23.22               | 25.43               | 27.78               | 36     | 4.125               | 4.399               | 4.679               |
| -3     | 22.12               | 24.19               | 26.38               | 37     | 3.966               | 4.234               | 4.510               |
| -2     | 21.07               | 23.01               | 25.06               | 38     | 3.814               | 4.077               | 4.347               |
| -1     | 20.09               | 21.90               | 23.82               | 39     | 3.670               | 3.927               | 4.192               |

| T (°C) | Rmin. (k $\Omega$ ) | Rnom. (k $\Omega$ ) | Rmax. (k $\Omega$ ) | T (°C) | Rmin. (k $\Omega$ ) | Rnom. (k $\Omega$ ) | Rmax. (k $\Omega$ ) |
|--------|---------------------|---------------------|---------------------|--------|---------------------|---------------------|---------------------|
| 40     | 3.531               | 3.783               | 4.043               | 83     | 0.8287              | 0.9261              | 1.032               |
| 41     | 3.399               | 3.645               | 3.900               | 84     | 0.8046              | 0.8999              | 1.004               |
| 42     | 3.272               | 3.513               | 3.763               | 85     | 0.7813              | 0.8746              | 0.9766              |
| 43     | 3.151               | 3.387               | 3.631               | 86     | 0.7588              | 0.8501              | 0.9501              |
| 44     | 3.035               | 3.266               | 3.505               | 87     | 0.7371              | 0.8265              | 0.9244              |
| 45     | 2.924               | 3.150               | 3.385               | 88     | 0.7161              | 0.8036              | 0.8996              |
| 46     | 2.818               | 3.039               | 3.269               | 89     | 0.6958              | 0.7815              | 0.8756              |
| 47     | 2.716               | 2.932               | 3.157               | 90     | 0.6762              | 0.7601              | 0.8523              |
| 48     | 2.618               | 2.830               | 3.050               | 91     | 0.6572              | 0.7394              | 0.8298              |
| 49     | 2.525               | 2.732               | 2.948               | 92     | 0.6389              | 0.7194              | 0.8080              |
| 50     | 2.435               | 2.637               | 2.849               | 93     | 0.6212              | 0.7000              | 0.7869              |
| 51     | 2.350               | 2.547               | 2.754               | 94     | 0.6040              | 0.6813              | 0.7665              |
| 52     | 2.267               | 2.460               | 2.663               | 95     | 0.5875              | 0.6631              | 0.7466              |
| 53     | 2.188               | 2.377               | 2.576               | 96     | 0.5714              | 0.6455              | 0.7274              |
| 54     | 2.113               | 2.297               | 2.492               | 97     | 0.5559              | 0.6285              | 0.7088              |
| 55     | 2.040               | 2.220               | 2.411               | 98     | 0.5409              | 0.6121              | 0.6908              |
| 56     | 1.970               | 2.147               | 2.333               | 99     | 0.5264              | 0.5961              | 0.6733              |
| 57     | 1.903               | 2.076               | 2.259               | 100    | 0.5123              | 0.5806              | 0.6564              |
| 58     | 1.839               | 2.008               | 2.187               | 101    | 0.4987              | 0.5656              | 0.6399              |
| 59     | 1.777               | 1.942               | 2.117               | 102    | 0.4856              | 0.5511              | 0.6240              |
| 60     | 1.718               | 1.879               | 2.051               | 103    | 0.4728              | 0.5371              | 0.6085              |
| 61     | 1.661               | 1.818               | 1.986               | 104    | 0.4604              | 0.5234              | 0.5935              |
| 62     | 1.606               | 1.760               | 1.925               | 105    | 0.4484              | 0.5102              | 0.5790              |
| 63     | 1.553               | 1.704               | 1.865               | 106    | 0.4368              | 0.4974              | 0.5649              |
| 64     | 1.502               | 1.650               | 1.808               | 107    | 0.4256              | 0.4849              | 0.5511              |
| 65     | 1.454               | 1.598               | 1.752               | 108    | 0.4147              | 0.4729              | 0.5378              |
| 66     | 1.407               | 1.548               | 1.699               | 109    | 0.4041              | 0.4612              | 0.5249              |
| 67     | 1.362               | 1.500               | 1.648               | 110    | 0.3939              | 0.4498              | 0.5124              |
| 68     | 1.318               | 1.453               | 1.598               | 111    | 0.3839              | 0.4388              | 0.5002              |
| 69     | 1.276               | 1.409               | 1.551               | 112    | 0.3743              | 0.4281              | 0.4884              |
| 70     | 1.236               | 1.365               | 1.505               | 113    | 0.3650              | 0.4177              | 0.4769              |
| 71     | 1.197               | 1.324               | 1.460               | 114    | 0.3559              | 0.4076              | 0.4657              |
| 72     | 1.160               | 1.284               | 1.417               | 115    | 0.3471              | 0.3979              | 0.4549              |
| 73     | 1.124               | 1.245               | 1.376               | 116    | 0.3386              | 0.3884              | 0.4443              |
| 74     | 1.090               | 1.208               | 1.336               | 117    | 0.3303              | 0.3791              | 0.4341              |
| 75     | 1.056               | 1.172               | 1.297               | 118    | 0.3223              | 0.3702              | 0.4242              |
| 76     | 1.024               | 1.137               | 1.260               | 119    | 0.3145              | 0.3615              | 0.4145              |
| 77     | 0.9931              | 1.104               | 1.224               | 120    | 0.3069              | 0.3530              | 0.4051              |
| 78     | 0.9632              | 1.072               | 1.189               | 121    | 0.2995              | 0.3448              | 0.3959              |
| 79     | 0.9343              | 1.040               | 1.156               | 122    | 0.2924              | 0.3368              | 0.3870              |
| 80     | 0.9065              | 1.010               | 1.123               | 123    | 0.2854              | 0.3290              | 0.3784              |
| 81     | 0.8796              | 0.9813              | 1.092               | 124    | 0.2787              | 0.3215              | 0.3699              |
| 82     | 0.8537              | 0.9532              | 1.062               | 125    | 0.2722              | 0.3142              | 0.3617              |

| KSE-NTC0805 15 k $\Omega$ |        |        |        |                       |        |        |        |
|---------------------------|--------|--------|--------|-----------------------|--------|--------|--------|
| R—T CONVERSION TABLE      |        |        |        |                       |        |        |        |
| R25=15k $\Omega$ $\pm$ 5% |        |        |        | B25/50= 3950 $\pm$ 3% |        |        |        |
| T/ $^{\circ}$ C           | Rmin   | Rcen   | Rmax   | T/ $^{\circ}$ C       | Rmin   | Rcen   | Rmax   |
| -40                       | 512.6  | 602.8  | 707.1  | 0                     | 46.20  | 50.43  | 54.91  |
| -39                       | 477.8  | 560.7  | 656.3  | 1                     | 43.89  | 47.84  | 52.01  |
| -38                       | 445.7  | 521.9  | 609.6  | 2                     | 41.72  | 45.40  | 49.28  |
| -37                       | 416.0  | 486.1  | 566.5  | 3                     | 39.67  | 43.10  | 46.71  |
| -36                       | 388.5  | 453.0  | 526.8  | 4                     | 37.73  | 40.93  | 44.29  |
| -35                       | 363.0  | 422.4  | 490.2  | 5                     | 35.90  | 38.89  | 42.01  |
| -34                       | 339.4  | 394.1  | 456.4  | 6                     | 34.17  | 36.96  | 39.87  |
| -33                       | 317.5  | 367.9  | 425.2  | 7                     | 32.54  | 35.14  | 37.85  |
| -32                       | 297.2  | 343.6  | 396.3  | 8                     | 30.99  | 33.42  | 35.94  |
| -31                       | 278.3  | 321.1  | 369.7  | 9                     | 29.53  | 31.80  | 34.15  |
| -30                       | 260.8  | 300.3  | 345.0  | 10                    | 28.15  | 30.26  | 32.45  |
| -29                       | 244.5  | 281.0  | 322.1  | 11                    | 26.84  | 28.81  | 30.85  |
| -28                       | 229.3  | 263.0  | 301.0  | 12                    | 25.60  | 27.44  | 29.34  |
| -27                       | 215.2  | 246.4  | 281.3  | 13                    | 24.43  | 26.14  | 27.91  |
| -26                       | 202.1  | 230.9  | 263.1  | 14                    | 23.31  | 24.92  | 26.56  |
| -25                       | 189.8  | 216.5  | 246.3  | 15                    | 22.26  | 23.76  | 25.29  |
| -24                       | 178.4  | 203.1  | 230.6  | 16                    | 21.26  | 22.66  | 24.08  |
| -23                       | 167.8  | 190.6  | 216.0  | 17                    | 20.31  | 21.61  | 22.94  |
| -22                       | 157.9  | 179.0  | 202.5  | 18                    | 19.41  | 20.63  | 21.87  |
| -21                       | 148.6  | 168.2  | 189.9  | 19                    | 18.55  | 19.69  | 20.84  |
| -20                       | 139.93 | 158.08 | 178.13 | 20                    | 17.74  | 18.80  | 19.88  |
| -19                       | 131.84 | 148.66 | 167.22 | 21                    | 16.97  | 17.96  | 18.96  |
| -18                       | 124.28 | 139.88 | 157.05 | 22                    | 16.24  | 17.16  | 18.09  |
| -17                       | 117.20 | 131.68 | 147.57 | 23                    | 15.54  | 16.40  | 17.27  |
| -16                       | 110.58 | 124.01 | 138.73 | 24                    | 14.88  | 15.68  | 16.49  |
| -15                       | 104.37 | 116.85 | 130.48 | 25                    | 14.250 | 15.000 | 15.750 |
| -14                       | 98.57  | 110.15 | 122.78 | 26                    | 13.615 | 14.350 | 15.088 |
| -13                       | 93.12  | 103.88 | 115.59 | 27                    | 13.011 | 13.733 | 14.457 |
| -12                       | 88.01  | 98.01  | 108.87 | 28                    | 12.439 | 13.145 | 13.857 |
| -11                       | 83.22  | 92.52  | 102.59 | 29                    | 11.895 | 12.587 | 13.286 |
| -10                       | 78.73  | 87.37  | 96.72  | 30                    | 11.378 | 12.056 | 12.742 |
| -9                        | 74.50  | 82.54  | 91.22  | 31                    | 10.887 | 11.550 | 12.223 |
| -8                        | 70.54  | 78.02  | 86.07  | 32                    | 10.420 | 11.069 | 11.729 |
| -7                        | 66.81  | 73.77  | 81.25  | 33                    | 9.976  | 10.611 | 11.257 |
| -6                        | 63.31  | 69.78  | 76.73  | 34                    | 9.554  | 10.174 | 10.808 |
| -5                        | 60.01  | 66.04  | 72.49  | 35                    | 9.152  | 9.758  | 10.379 |
| -4                        | 56.91  | 62.52  | 68.52  | 36                    | 8.769  | 9.362  | 9.970  |
| -3                        | 53.98  | 59.22  | 64.79  | 37                    | 8.405  | 8.984  | 9.580  |
| -2                        | 51.23  | 56.11  | 61.29  | 38                    | 8.058  | 8.624  | 9.207  |
| -1                        | 48.64  | 53.18  | 58.00  | 39                    | 7.727  | 8.280  | 8.850  |

| R—T CONVERSION TABLE |       |       |       |                   |        |        |        |
|----------------------|-------|-------|-------|-------------------|--------|--------|--------|
| R25=15k Ω ± 5%       |       |       |       | B25/50= 3950 ± 3% |        |        |        |
| T/℃                  | Rmin  | Rcen  | Rmax  | T/℃               | Rmin   | Rcen   | Rmax   |
| 40                   | 7.412 | 7.952 | 8.510 | 83                | 1.544  | 1.734  | 1.943  |
| 41                   | 7.112 | 7.639 | 8.185 | 84                | 1.496  | 1.681  | 1.885  |
| 42                   | 6.826 | 7.340 | 7.874 | 85                | 1.449  | 1.630  | 1.829  |
| 43                   | 6.552 | 7.055 | 7.577 | 86                | 1.4037 | 1.5807 | 1.7757 |
| 44                   | 6.292 | 6.783 | 7.293 | 87                | 1.3602 | 1.5332 | 1.7238 |
| 45                   | 6.043 | 6.522 | 7.022 | 88                | 1.3183 | 1.4873 | 1.6738 |
| 46                   | 5.806 | 6.273 | 6.762 | 89                | 1.2779 | 1.4431 | 1.6255 |
| 47                   | 5.579 | 6.035 | 6.513 | 90                | 1.2390 | 1.4004 | 1.5788 |
| 48                   | 5.363 | 5.808 | 6.274 | 91                | 1.2015 | 1.3592 | 1.5337 |
| 49                   | 5.156 | 5.590 | 6.046 | 92                | 1.1653 | 1.3194 | 1.4901 |
| 50                   | 4.958 | 5.382 | 5.828 | 93                | 1.1303 | 1.2810 | 1.4480 |
| 51                   | 4.769 | 5.183 | 5.619 | 94                | 1.0966 | 1.2439 | 1.4074 |
| 52                   | 4.589 | 4.992 | 5.418 | 95                | 1.0641 | 1.2081 | 1.3680 |
| 53                   | 4.416 | 4.810 | 5.226 | 96                | 1.0327 | 1.1734 | 1.3300 |
| 54                   | 4.251 | 4.635 | 5.041 | 97                | 1.0024 | 1.1400 | 1.2932 |
| 55                   | 4.093 | 4.468 | 4.865 | 98                | 0.9732 | 1.1077 | 1.2577 |
| 56                   | 3.942 | 4.307 | 4.695 | 99                | 0.9449 | 1.0765 | 1.2232 |
| 57                   | 3.797 | 4.153 | 4.532 | 100               | 0.9177 | 1.0463 | 1.1900 |
| 58                   | 3.658 | 4.006 | 4.376 | 101               | 0.8913 | 1.0171 | 1.1577 |
| 59                   | 3.525 | 3.865 | 4.227 | 102               | 0.8658 | 0.9889 | 1.1266 |
| 60                   | 3.398 | 3.729 | 4.083 | 103               | 0.8412 | 0.9616 | 1.0964 |
| 61                   | 3.276 | 3.599 | 3.945 | 104               | 0.8174 | 0.9352 | 1.0672 |
| 62                   | 3.159 | 3.475 | 3.812 | 105               | 0.7945 | 0.9096 | 1.0389 |
| 63                   | 3.047 | 3.355 | 3.684 | 106               | 0.7722 | 0.8849 | 1.0115 |
| 64                   | 2.940 | 3.240 | 3.562 | 107               | 0.7507 | 0.8610 | 0.9850 |
| 65                   | 2.837 | 3.130 | 3.444 | 108               | 0.7299 | 0.8378 | 0.9593 |
| 66                   | 2.738 | 3.024 | 3.331 | 109               | 0.7098 | 0.8154 | 0.9343 |
| 67                   | 2.643 | 2.922 | 3.222 | 110               | 0.6904 | 0.7937 | 0.9102 |
| 68                   | 2.552 | 2.824 | 3.118 | 111               | 0.6716 | 0.7727 | 0.8868 |
| 69                   | 2.464 | 2.730 | 3.017 | 112               | 0.6534 | 0.7523 | 0.8642 |
| 70                   | 2.380 | 2.640 | 2.920 | 113               | 0.6357 | 0.7326 | 0.8422 |
| 71                   | 2.300 | 2.553 | 2.827 | 114               | 0.6187 | 0.7135 | 0.8209 |
| 72                   | 2.222 | 2.469 | 2.737 | 115               | 0.6021 | 0.6950 | 0.8002 |
| 73                   | 2.148 | 2.389 | 2.651 | 116               | 0.5861 | 0.6771 | 0.7802 |
| 74                   | 2.076 | 2.312 | 2.568 | 117               | 0.5706 | 0.6597 | 0.7607 |
| 75                   | 2.008 | 2.238 | 2.487 | 118               | 0.5556 | 0.6428 | 0.7419 |
| 76                   | 1.942 | 2.166 | 2.410 | 119               | 0.5411 | 0.6265 | 0.7236 |
| 77                   | 1.878 | 2.097 | 2.336 | 120               | 0.5270 | 0.6106 | 0.7058 |
| 78                   | 1.817 | 2.031 | 2.264 | 121               | 0.5133 | 0.5953 | 0.6886 |
| 79                   | 1.758 | 1.967 | 2.195 | 122               | 0.5001 | 0.5804 | 0.6718 |
| 80                   | 1.702 | 1.905 | 2.129 | 123               | 0.4873 | 0.5659 | 0.6556 |
| 81                   | 1.647 | 1.846 | 2.064 | 124               | 0.4748 | 0.5519 | 0.6398 |
| 82                   | 1.595 | 1.789 | 2.002 | 125               | 0.4628 | 0.5383 | 0.6245 |

R-T CONVERSION TABLE  
R25: 22k $\Omega$  ( Tolerance 5%)  
R25/50: 3950K ( Tolerance 3%)

| T (°C) | Rmin. (k $\Omega$ ) | Rnom. (k $\Omega$ ) | Rmax. (k $\Omega$ ) | T (°C) | Rmin. (k $\Omega$ ) | Rnom. (k $\Omega$ ) | Rmax. (k $\Omega$ ) |
|--------|---------------------|---------------------|---------------------|--------|---------------------|---------------------|---------------------|
| -40    | 751.8               | 884.1               | 01037               | 0      | 67.76               | 73.97               | 80.54               |
| -39    | 700.8               | 822.4               | 962.6               | 1      | 64.38               | 70.16               | 76.28               |
| -38    | 653.7               | 765.5               | 894.0               | 2      | 61.19               | 66.59               | 72.28               |
| -37    | 610.1               | 712.9               | 830.9               | 3      | 58.18               | 63.21               | 68.51               |
| -36    | 569.8               | 664.3               | 772.6               | 4      | 55.34               | 60.03               | 64.96               |
| -35    | 532.4               | 619.5               | 718.9               | 5      | 52.66               | 57.03               | 61.62               |
| -34    | 497.8               | 578.0               | 669.4               | 6      | 50.12               | 54.21               | 58.48               |
| -33    | 465.7               | 539.5               | 623.6               | 7      | 47.72               | 51.54               | 55.51               |
| -32    | 435.8               | 504.0               | 581.3               | 8      | 45.46               | 49.01               | 52.72               |
| -31    | 408.2               | 471.0               | 542.2               | 9      | 43.31               | 46.63               | 50.08               |
| -30    | 382.4               | 440.4               | 506.0               | 10     | 41.29               | 44.38               | 47.59               |
| -29    | 358.5               | 412.1               | 472.5               | 11     | 39.37               | 42.26               | 45.25               |
| -28    | 336.3               | 385.8               | 441.4               | 12     | 37.55               | 40.25               | 43.03               |
| -27    | 315.6               | 361.3               | 412.6               | 13     | 35.83               | 38.35               | 40.94               |
| -26    | 296.4               | 338.6               | 385.9               | 14     | 34.19               | 36.55               | 38.96               |
| -25    | 278.4               | 317.5               | 361.2               | 15     | 32.65               | 34.84               | 37.09               |
| -24    | 261.7               | 297.8               | 338.2               | 16     | 31.18               | 33.23               | 35.32               |
| -23    | 246.1               | 279.6               | 316.8               | 17     | 29.79               | 31.70               | 33.65               |
| -22    | 231.5               | 262.5               | 296.9               | 18     | 28.47               | 30.25               | 32.07               |
| -21    | 217.9               | 246.6               | 278.5               | 19     | 27.21               | 28.88               | 30.57               |
| -20    | 205.2               | 231.8               | 261.3               | 20     | 26.02               | 27.58               | 29.15               |
| -19    | 193.4               | 218.0               | 245.3               | 21     | 24.89               | 26.34               | 27.81               |
| -18    | 182.3               | 205.2               | 230.3               | 22     | 23.82               | 25.17               | 26.54               |
| -17    | 171.9               | 193.1               | 216.4               | 23     | 22.79               | 24.06               | 25.33               |
| -16    | 162.2               | 181.9               | 203.5               | 24     | 21.82               | 23.00               | 24.19               |
| -15    | 153.1               | 171.4               | 191.4               | 25     | 20.90               | 22.00               | 23.10               |
| -14    | 144.6               | 161.6               | 180.1               | 26     | 19.97               | 21.05               | 22.13               |
| -13    | 136.6               | 152.4               | 169.5               | 27     | 19.08               | 20.14               | 21.20               |
| -12    | 129.1               | 143.8               | 159.7               | 28     | 18.24               | 19.28               | 20.32               |
| -11    | 122.1               | 135.7               | 150.5               | 29     | 17.45               | 18.46               | 19.49               |
| -10    | 115.5               | 128.1               | 141.9               | 30     | 16.69               | 17.68               | 18.69               |
| -9     | 109.3               | 121.1               | 133.8               | 31     | 15.97               | 16.94               | 17.93               |
| -8     | 103.5               | 114.4               | 126.2               | 32     | 15.28               | 16.23               | 17.20               |
| -7     | 97.99               | 108.2               | 119.2               | 33     | 14.63               | 15.56               | 16.51               |
| -6     | 92.85               | 102.3               | 112.5               | 34     | 14.01               | 14.92               | 15.85               |
| -5     | 88.01               | 96.86               | 106.3               | 35     | 13.42               | 14.31               | 15.22               |
| -4     | 83.46               | 91.70               | 100.5               | 36     | 12.86               | 13.73               | 14.62               |
| -3     | 79.18               | 86.85               | 95.03               | 37     | 12.33               | 13.18               | 14.05               |
| -2     | 75.14               | 82.29               | 89.89               | 38     | 11.82               | 12.65               | 13.50               |
| -1     | 71.34               | 78.00               | 85.07               | 39     | 11.33               | 12.14               | 12.98               |

| T (°C) | Rmin. (k $\Omega$ ) | Rnom. (k $\Omega$ ) | Rmax. (k $\Omega$ ) | T (°C) | Rmin. (k $\Omega$ ) | Rnom. (k $\Omega$ ) | Rmax. (k $\Omega$ ) |
|--------|---------------------|---------------------|---------------------|--------|---------------------|---------------------|---------------------|
| 40     | 10.87               | 11.66               | 12.48               | 83     | 2.265               | 2.543               | 2.849               |
| 41     | 10.43               | 11.20               | 12.00               | 84     | 2.194               | 2.466               | 2.765               |
| 42     | 10.01               | 10.77               | 11.55               | 85     | 2.125               | 2.391               | 2.683               |
| 43     | 9.610               | 10.35               | 11.11               | 86     | 2.059               | 2.318               | 2.604               |
| 44     | 9.228               | 9.948               | 10.70               | 87     | 1.995               | 2.249               | 2.528               |
| 45     | 8.863               | 9.566               | 10.30               | 88     | 1.934               | 2.181               | 2.455               |
| 46     | 8.515               | 9.201               | 9.917               | 89     | 1.874               | 2.116               | 2.384               |
| 47     | 8.183               | 8.852               | 9.552               | 90     | 1.817               | 2.054               | 2.316               |
| 48     | 7.865               | 8.518               | 9.203               | 91     | 1.762               | 1.993               | 2.249               |
| 49     | 7.562               | 8.199               | 8.868               | 92     | 1.709               | 1.935               | 2.186               |
| 50     | 7.272               | 7.894               | 8.548               | 93     | 1.658               | 1.879               | 2.124               |
| 51     | 6.995               | 7.602               | 8.241               | 94     | 1.608               | 1.824               | 2.064               |
| 52     | 6.730               | 7.322               | 7.946               | 95     | 1.561               | 1.772               | 2.006               |
| 53     | 6.477               | 7.055               | 7.664               | 96     | 1.515               | 1.721               | 1.951               |
| 54     | 6.235               | 6.798               | 7.394               | 97     | 1.470               | 1.672               | 1.897               |
| 55     | 6.003               | 6.553               | 7.135               | 98     | 1.427               | 1.625               | 1.845               |
| 56     | 5.781               | 6.317               | 6.886               | 99     | 1.386               | 1.579               | 1.794               |
| 57     | 5.568               | 6.092               | 6.648               | 100    | 1.346               | 1.535               | 1.745               |
| 58     | 5.365               | 5.876               | 6.419               | 101    | 1.307               | 1.492               | 1.698               |
| 59     | 5.170               | 5.668               | 6.199               | 102    | 1.270               | 1.450               | 1.652               |
| 60     | 4.984               | 5.470               | 5.988               | 103    | 1.234               | 1.410               | 1.608               |
| 61     | 4.805               | 5.279               | 5.785               | 104    | 1.199               | 1.372               | 1.565               |
| 62     | 4.633               | 5.096               | 5.591               | 105    | 1.165               | 1.334               | 1.524               |
| 63     | 4.469               | 4.920               | 5.404               | 106    | 1.133               | 1.298               | 1.484               |
| 64     | 4.311               | 4.752               | 5.224               | 107    | 1.101               | 1.263               | 1.445               |
| 65     | 4.160               | 4.590               | 5.052               | 108    | 1.071               | 1.229               | 1.407               |
| 66     | 4.015               | 4.435               | 4.886               | 109    | 1.041               | 1.196               | 1.370               |
| 67     | 3.876               | 4.285               | 4.726               | 110    | 1.013               | 1.164               | 1.335               |
| 68     | 3.743               | 4.142               | 4.572               | 111    | 0.9850              | 1.133               | 1.301               |
| 69     | 3.614               | 4.004               | 4.425               | 112    | 0.9582              | 1.103               | 1.267               |
| 70     | 3.491               | 3.872               | 4.283               | 113    | 0.9324              | 1.075               | 1.235               |
| 71     | 3.373               | 3.744               | 4.146               | 114    | 0.9074              | 1.046               | 1.204               |
| 72     | 3.259               | 3.622               | 4.014               | 115    | 0.8831              | 1.019               | 1.174               |
| 73     | 3.150               | 3.504               | 3.888               | 116    | 0.8597              | 0.9930              | 1.144               |
| 74     | 3.045               | 3.391               | 3.766               | 117    | 0.8369              | 0.9675              | 1.116               |
| 75     | 2.945               | 3.282               | 3.648               | 118    | 0.8149              | 0.9428              | 1.088               |
| 76     | 2.848               | 3.177               | 3.535               | 119    | 0.7936              | 0.9188              | 1.061               |
| 77     | 2.755               | 3.076               | 3.426               | 120    | 0.7729              | 0.8956              | 1.035               |
| 78     | 2.665               | 2.979               | 3.321               | 121    | 0.7529              | 0.8731              | 1.010               |
| 79     | 2.579               | 2.885               | 3.219               | 122    | 0.7335              | 0.8512              | 0.9853              |
| 80     | 2.496               | 2.795               | 3.122               | 123    | 0.7146              | 0.8300              | 0.9615              |
| 81     | 2.416               | 2.708               | 3.028               | 124    | 0.6964              | 0.8094              | 0.9384              |
| 82     | 2.339               | 2.624               | 2.937               | 125    | 0.6787              | 0.7894              | 0.9159              |

| KSE-NTC0805 33 k $\Omega$ |        |        |        |                       |        |        |        |
|---------------------------|--------|--------|--------|-----------------------|--------|--------|--------|
| R—T CONVERSION TABLE      |        |        |        |                       |        |        |        |
| R25=33k $\Omega$ $\pm$ 5% |        |        |        | B25/50= 4000 $\pm$ 3% |        |        |        |
| T/°C                      | Rmin   | Rcen   | Rmax   | T/°C                  | Rmin   | Rcen   | Rmax   |
| -40                       | 1180.0 | 1389.6 | 1632.4 | 0                     | 103.16 | 112.66 | 122.74 |
| -39                       | 1099.1 | 1291.4 | 1513.7 | 1                     | 97.95  | 106.80 | 116.17 |
| -38                       | 1024.3 | 1200.9 | 1404.6 | 2                     | 93.04  | 101.29 | 109.99 |
| -37                       | 955.1  | 1117.5 | 1304.1 | 3                     | 88.41  | 96.09  | 104.19 |
| -36                       | 891.2  | 1040.4 | 1211.6 | 4                     | 84.04  | 91.20  | 98.73  |
| -35                       | 832.0  | 969.3  | 1126.4 | 5                     | 79.91  | 86.59  | 93.59  |
| -34                       | 777.2  | 903.6  | 1047.8 | 6                     | 76.02  | 82.24  | 88.75  |
| -33                       | 726.5  | 842.8  | 975.3  | 7                     | 72.34  | 78.14  | 84.20  |
| -32                       | 679.4  | 786.5  | 908.3  | 8                     | 68.86  | 74.27  | 79.91  |
| -31                       | 635.7  | 734.5  | 846.4  | 9                     | 65.57  | 70.62  | 75.86  |
| -30                       | 595.2  | 686.2  | 789.2  | 10                    | 62.47  | 67.17  | 72.05  |
| -29                       | 557.5  | 641.5  | 736.3  | 11                    | 59.52  | 63.91  | 68.45  |
| -28                       | 522.5  | 600.0  | 687.3  | 12                    | 56.74  | 60.83  | 65.06  |
| -27                       | 490.0  | 561.5  | 642.0  | 13                    | 54.11  | 57.92  | 61.86  |
| -26                       | 459.7  | 525.8  | 599.9  | 14                    | 51.61  | 55.17  | 58.83  |
| -25                       | 431.5  | 492.6  | 560.9  | 15                    | 49.25  | 52.57  | 55.97  |
| -24                       | 405.3  | 461.8  | 524.8  | 16                    | 47.01  | 50.10  | 53.27  |
| -23                       | 380.8  | 433.0  | 491.2  | 17                    | 44.88  | 47.77  | 50.72  |
| -22                       | 358.0  | 406.3  | 460.0  | 18                    | 42.87  | 45.56  | 48.30  |
| -21                       | 336.7  | 381.5  | 431.1  | 19                    | 40.96  | 43.47  | 46.02  |
| -20                       | 316.88 | 358.29 | 404.11 | 20                    | 39.14  | 41.49  | 43.86  |
| -19                       | 298.33 | 336.70 | 379.04 | 21                    | 37.42  | 39.60  | 41.81  |
| -18                       | 281.00 | 316.55 | 355.71 | 22                    | 35.78  | 37.82  | 39.88  |
| -17                       | 264.81 | 297.76 | 333.98 | 23                    | 34.23  | 36.13  | 38.04  |
| -16                       | 249.66 | 280.22 | 313.73 | 24                    | 32.75  | 34.52  | 36.30  |
| -15                       | 235.49 | 263.83 | 294.85 | 25                    | 31.350 | 33.000 | 34.650 |
| -14                       | 222.22 | 248.52 | 277.24 | 26                    | 29.935 | 31.553 | 33.175 |
| -13                       | 209.79 | 234.20 | 260.80 | 27                    | 28.592 | 30.178 | 31.772 |
| -12                       | 198.14 | 220.81 | 245.46 | 28                    | 27.318 | 28.872 | 30.437 |
| -11                       | 187.23 | 208.28 | 231.12 | 29                    | 26.109 | 27.630 | 29.166 |
| -10                       | 176.99 | 196.55 | 217.72 | 30                    | 24.961 | 26.449 | 27.957 |
| -9                        | 167.38 | 185.56 | 205.19 | 31                    | 23.870 | 25.326 | 26.805 |
| -8                        | 158.36 | 175.26 | 193.47 | 32                    | 22.833 | 24.258 | 25.707 |
| -7                        | 149.89 | 165.60 | 182.50 | 33                    | 21.848 | 23.241 | 24.661 |
| -6                        | 141.93 | 156.54 | 172.22 | 34                    | 20.912 | 22.273 | 23.665 |
| -5                        | 134.44 | 148.04 | 162.60 | 35                    | 20.021 | 21.352 | 22.714 |
| -4                        | 127.41 | 140.06 | 153.58 | 36                    | 19.174 | 20.474 | 21.808 |
| -3                        | 120.79 | 132.56 | 145.12 | 37                    | 18.367 | 19.637 | 20.943 |
| -2                        | 114.55 | 125.51 | 137.18 | 38                    | 17.599 | 18.840 | 20.117 |
| -1                        | 108.69 | 118.89 | 129.73 | 39                    | 16.869 | 18.080 | 19.330 |

| R—T CONVERSION TABLE |        |        |        |                 |        |        |        |
|----------------------|--------|--------|--------|-----------------|--------|--------|--------|
| R25=33k Ω ±5%        |        |        |        | B25/50= 4000±3% |        |        |        |
| T/℃                  | Rmin   | Rcen   | Rmax   | T/℃             | Rmin   | Rcen   | Rmax   |
| 40                   | 16.172 | 17.355 | 18.577 | 83              | 3.303  | 3.712  | 4.162  |
| 41                   | 15.509 | 16.663 | 17.859 | 84              | 3.198  | 3.597  | 4.037  |
| 42                   | 14.877 | 16.004 | 17.173 | 85              | 3.096  | 3.487  | 3.916  |
| 43                   | 14.274 | 15.374 | 16.517 | 86              | 2.9988 | 3.3799 | 3.8000 |
| 44                   | 13.700 | 14.773 | 15.890 | 87              | 2.9047 | 3.2770 | 3.6877 |
| 45                   | 13.151 | 14.198 | 15.290 | 88              | 2.8142 | 3.1777 | 3.5793 |
| 46                   | 12.629 | 13.650 | 14.717 | 89              | 2.7269 | 3.0820 | 3.4747 |
| 47                   | 12.129 | 13.126 | 14.169 | 90              | 2.6428 | 2.9897 | 3.3737 |
| 48                   | 11.653 | 12.625 | 13.644 | 91              | 2.5617 | 2.9006 | 3.2761 |
| 49                   | 11.198 | 12.146 | 13.142 | 92              | 2.4836 | 2.8147 | 3.1819 |
| 50                   | 10.764 | 11.688 | 12.661 | 93              | 2.4082 | 2.7317 | 3.0909 |
| 51                   | 10.348 | 11.250 | 12.201 | 94              | 2.3355 | 2.6516 | 3.0030 |
| 52                   | 9.952  | 10.831 | 11.760 | 95              | 2.2654 | 2.5743 | 2.9180 |
| 53                   | 9.572  | 10.431 | 11.337 | 96              | 2.1978 | 2.4996 | 2.8359 |
| 54                   | 9.210  | 10.047 | 10.932 | 97              | 2.1325 | 2.4275 | 2.7565 |
| 55                   | 8.863  | 9.679  | 10.544 | 98              | 2.0695 | 2.3579 | 2.6797 |
| 56                   | 8.531  | 9.327  | 10.172 | 99              | 2.0087 | 2.2906 | 2.6055 |
| 57                   | 8.214  | 8.990  | 9.815  | 100             | 1.9499 | 2.2255 | 2.5337 |
| 58                   | 7.910  | 8.667  | 9.473  | 101             | 1.8932 | 2.1627 | 2.4642 |
| 59                   | 7.619  | 8.358  | 9.145  | 102             | 1.8385 | 2.1019 | 2.3971 |
| 60                   | 7.341  | 8.061  | 8.830  | 103             | 1.7856 | 2.0432 | 2.3321 |
| 61                   | 7.074  | 7.777  | 8.527  | 104             | 1.7345 | 1.9864 | 2.2691 |
| 62                   | 6.819  | 7.504  | 8.237  | 105             | 1.6851 | 1.9314 | 2.2082 |
| 63                   | 6.574  | 7.242  | 7.958  | 106             | 1.6373 | 1.8783 | 2.1493 |
| 64                   | 6.339  | 6.991  | 7.690  | 107             | 1.5912 | 1.8269 | 2.0922 |
| 65                   | 6.114  | 6.750  | 7.433  | 108             | 1.5466 | 1.7771 | 2.0369 |
| 66                   | 5.898  | 6.518  | 7.186  | 109             | 1.5035 | 1.7290 | 1.9834 |
| 67                   | 5.691  | 6.296  | 6.948  | 110             | 1.4618 | 1.6824 | 1.9315 |
| 68                   | 5.493  | 6.083  | 6.719  | 111             | 1.4214 | 1.6373 | 1.8812 |
| 69                   | 5.302  | 5.878  | 6.500  | 112             | 1.3824 | 1.5936 | 1.8326 |
| 70                   | 5.120  | 5.681  | 6.288  | 113             | 1.3446 | 1.5513 | 1.7854 |
| 71                   | 4.944  | 5.492  | 6.085  | 114             | 1.3080 | 1.5104 | 1.7396 |
| 72                   | 4.776  | 5.310  | 5.890  | 115             | 1.2727 | 1.4707 | 1.6953 |
| 73                   | 4.614  | 5.135  | 5.701  | 116             | 1.2384 | 1.4323 | 1.6523 |
| 74                   | 4.458  | 4.967  | 5.520  | 117             | 1.2053 | 1.3950 | 1.6106 |
| 75                   | 4.309  | 4.805  | 5.346  | 118             | 1.1732 | 1.3589 | 1.5702 |
| 76                   | 4.165  | 4.650  | 5.178  | 119             | 1.1421 | 1.3240 | 1.5309 |
| 77                   | 4.027  | 4.500  | 5.016  | 120             | 1.1120 | 1.2900 | 1.4929 |
| 78                   | 3.894  | 4.356  | 4.860  | 121             | 1.0828 | 1.2572 | 1.4560 |
| 79                   | 3.767  | 4.217  | 4.710  | 122             | 1.0545 | 1.2253 | 1.4202 |
| 80                   | 3.644  | 4.084  | 4.566  | 123             | 1.0271 | 1.1944 | 1.3854 |
| 81                   | 3.526  | 3.955  | 4.426  | 124             | 1.0006 | 1.1644 | 1.3516 |
| 82                   | 3.412  | 3.832  | 4.292  | 125             | 0.9748 | 1.1353 | 1.3189 |

R-T CONVERSION TABLE  
R25: 100K $\Omega$  ( Tolerance 5%)  
R25/50:4050K ( Tolerance 3%)

| T(°C) | Rmin. (k $\Omega$ ) | Rnom. (k $\Omega$ ) | Rmax. (k $\Omega$ ) | T(°C) | Rmin. (k $\Omega$ ) | Rnom. (k $\Omega$ ) | Rmax. (k $\Omega$ ) |
|-------|---------------------|---------------------|---------------------|-------|---------------------|---------------------|---------------------|
| -40   | 03742               | 04412               | 05191               | 0     | 317.3               | 346.7               | 377.9               |
| -39   | 03482               | 04097               | 04809               | 1     | 301.1               | 328.4               | 357.4               |
| -38   | 03242               | 03806               | 04458               | 2     | 285.8               | 311.3               | 338.2               |
| -37   | 03021               | 03539               | 04135               | 3     | 271.4               | 295.1               | 320.1               |
| -36   | 02816               | 03292               | 03838               | 4     | 257.8               | 279.9               | 303.1               |
| -35   | 02627               | 03064               | 03565               | 5     | 245.0               | 265.6               | 287.1               |
| -34   | 02452               | 02854               | 03313               | 6     | 232.9               | 252.1               | 272.1               |
| -33   | 02290               | 02659               | 03081               | 7     | 221.5               | 239.4               | 258.0               |
| -32   | 02139               | 02480               | 02867               | 8     | 210.7               | 227.4               | 244.7               |
| -31   | 02000               | 02314               | 02669               | 9     | 200.6               | 216.0               | 232.1               |
| -30   | 01871               | 02160               | 02487               | 10    | 190.9               | 205.4               | 220.3               |
| -29   | 01751               | 02017               | 02318               | 11    | 181.8               | 195.3               | 209.2               |
| -28   | 01640               | 01885               | 02162               | 12    | 173.2               | 185.8               | 198.7               |
| -27   | 01537               | 01763               | 02018               | 13    | 165.1               | 176.8               | 188.8               |
| -26   | 01441               | 01649               | 01884               | 14    | 157.4               | 168.3               | 179.5               |
| -25   | 01351               | 01544               | 01760               | 15    | 150.1               | 160.2               | 170.6               |
| -24   | 01268               | 01446               | 01645               | 16    | 143.2               | 152.6               | 162.3               |
| -23   | 01191               | 01355               | 01539               | 17    | 136.6               | 145.4               | 154.4               |
| -22   | 01118               | 01271               | 01440               | 18    | 130.4               | 138.6               | 147.0               |
| -21   | 01051               | 01192               | 01348               | 19    | 124.5               | 132.2               | 140.0               |
| -20   | 988.4               | 01119               | 01263               | 20    | 118.9               | 126.1               | 133.3               |
| -19   | 929.9               | 01050               | 01183               | 21    | 113.6               | 120.3               | 127.0               |
| -18   | 875.2               | 986.8               | 01110               | 22    | 108.6               | 114.8               | 121.0               |
| -17   | 824.1               | 927.5               | 01041               | 23    | 103.8               | 109.6               | 115.4               |
| -16   | 776.4               | 872.2               | 977.2               | 24    | 99.31               | 104.7               | 110.1               |
| -15   | 731.8               | 820.5               | 917.7               | 25    | 95.00               | 100.00              | 105.0               |
| -14   | 690.1               | 772.3               | 862.2               | 26    | 90.66               | 95.56               | 100.5               |
| -13   | 651.0               | 727.3               | 810.5               | 27    | 86.54               | 91.35               | 96.17               |
| -12   | 614.4               | 685.2               | 762.2               | 28    | 82.64               | 87.34               | 92.08               |
| -11   | 580.2               | 645.9               | 717.2               | 29    | 78.94               | 83.54               | 88.19               |
| -10   | 548.1               | 609.0               | 675.1               | 30    | 75.42               | 79.93               | 84.49               |
| -9    | 517.9               | 574.6               | 635.8               | 31    | 72.09               | 76.49               | 80.97               |
| -8    | 489.7               | 542.3               | 599.0               | 32    | 68.92               | 73.23               | 77.61               |
| -7    | 463.2               | 512.0               | 564.6               | 33    | 65.91               | 70.12               | 74.41               |
| -6    | 438.3               | 483.7               | 532.5               | 34    | 63.05               | 67.16               | 71.37               |
| -5    | 414.9               | 457.1               | 502.3               | 35    | 60.33               | 64.35               | 68.47               |
| -4    | 392.9               | 432.2               | 474.1               | 36    | 57.75               | 61.67               | 65.70               |
| -3    | 372.2               | 408.7               | 447.7               | 37    | 55.29               | 59.12               | 63.06               |
| -2    | 352.8               | 386.8               | 422.9               | 38    | 52.95               | 56.69               | 60.55               |
| -1    | 334.5               | 366.1               | 399.7               | 39    | 50.72               | 54.38               | 58.15               |

| T (°C) | Rmin. (k $\Omega$ ) | Rnom. (k $\Omega$ ) | Rmax. (k $\Omega$ ) | T (°C) | Rmin. (k $\Omega$ ) | Rnom. (k $\Omega$ ) | Rmax. (k $\Omega$ ) |
|--------|---------------------|---------------------|---------------------|--------|---------------------|---------------------|---------------------|
| 40     | 48.60               | 52.17               | 55.86               | 83     | 9.731               | 10.95               | 12.28               |
| 41     | 46.59               | 50.07               | 53.67               | 84     | 9.417               | 10.60               | 11.91               |
| 42     | 44.66               | 48.06               | 51.58               | 85     | 9.115               | 10.27               | 11.55               |
| 43     | 42.83               | 46.14               | 49.59               | 86     | 8.824               | 9.955               | 11.20               |
| 44     | 41.09               | 44.32               | 47.68               | 87     | 8.544               | 9.648               | 10.87               |
| 45     | 39.42               | 42.57               | 45.86               | 88     | 8.275               | 9.352               | 10.54               |
| 46     | 37.84               | 40.91               | 44.12               | 89     | 8.015               | 9.067               | 10.23               |
| 47     | 36.32               | 39.32               | 42.46               | 90     | 7.765               | 8.792               | 9.930               |
| 48     | 34.88               | 37.80               | 40.87               | 91     | 7.524               | 8.527               | 9.639               |
| 49     | 33.50               | 36.35               | 39.34               | 92     | 7.291               | 8.271               | 9.359               |
| 50     | 32.18               | 34.96               | 37.89               | 93     | 7.067               | 8.024               | 9.088               |
| 51     | 30.93               | 33.64               | 36.49               | 94     | 6.851               | 7.786               | 8.826               |
| 52     | 29.73               | 32.37               | 35.16               | 95     | 6.643               | 7.556               | 8.573               |
| 53     | 28.58               | 31.16               | 33.88               | 96     | 6.442               | 7.334               | 8.329               |
| 54     | 27.48               | 30.00               | 32.65               | 97     | 6.249               | 7.120               | 8.093               |
| 55     | 26.44               | 28.88               | 31.48               | 98     | 6.062               | 6.913               | 7.865               |
| 56     | 25.44               | 27.82               | 30.36               | 99     | 5.881               | 6.713               | 7.644               |
| 57     | 24.48               | 26.80               | 29.28               | 100    | 5.707               | 6.520               | 7.431               |
| 58     | 23.56               | 25.83               | 28.24               | 101    | 5.539               | 6.334               | 7.225               |
| 59     | 22.68               | 24.90               | 27.25               | 102    | 5.377               | 6.154               | 7.025               |
| 60     | 21.85               | 24.00               | 26.30               | 103    | 5.220               | 5.980               | 6.832               |
| 61     | 21.04               | 23.14               | 25.39               | 104    | 5.069               | 5.811               | 6.646               |
| 62     | 20.27               | 22.32               | 24.52               | 105    | 4.923               | 5.649               | 6.465               |
| 63     | 19.54               | 21.53               | 23.68               | 106    | 4.782               | 5.491               | 6.291               |
| 64     | 18.83               | 20.78               | 22.87               | 107    | 4.645               | 5.339               | 6.121               |
| 65     | 18.15               | 20.05               | 22.09               | 108    | 4.514               | 5.192               | 5.958               |
| 66     | 17.50               | 19.36               | 21.35               | 109    | 4.386               | 5.050               | 5.799               |
| 67     | 16.88               | 18.69               | 20.64               | 110    | 4.263               | 4.912               | 5.646               |
| 68     | 16.29               | 18.05               | 19.95               | 111    | 4.144               | 4.779               | 5.497               |
| 69     | 15.72               | 17.43               | 19.29               | 112    | 4.029               | 4.650               | 5.353               |
| 70     | 15.17               | 16.84               | 18.65               | 113    | 3.917               | 4.525               | 5.213               |
| 71     | 14.64               | 16.27               | 18.04               | 114    | 3.809               | 4.404               | 5.078               |
| 72     | 14.13               | 15.73               | 17.46               | 115    | 3.705               | 4.287               | 4.947               |
| 73     | 13.65               | 15.20               | 16.89               | 116    | 3.604               | 4.173               | 4.820               |
| 74     | 13.18               | 14.70               | 16.35               | 117    | 3.507               | 4.063               | 4.697               |
| 75     | 12.74               | 14.22               | 15.83               | 118    | 3.412               | 3.957               | 4.578               |
| 76     | 12.31               | 13.75               | 15.32               | 119    | 3.320               | 3.854               | 4.462               |
| 77     | 11.89               | 13.30               | 14.84               | 120    | 3.232               | 3.754               | 4.350               |
| 78     | 11.50               | 12.87               | 14.37               | 121    | 3.146               | 3.657               | 4.241               |
| 79     | 11.12               | 12.46               | 13.92               | 122    | 3.063               | 3.563               | 4.135               |
| 80     | 10.75               | 12.06               | 13.49               | 123    | 2.982               | 3.472               | 4.033               |
| 81     | 10.40               | 11.67               | 13.07               | 124    | 2.904               | 3.384               | 3.933               |
| 82     | 10.06               | 11.30               | 12.67               | 125    | 2.829               | 3.298               | 3.837               |

R-T CONVERSION TABLE  
R25: 47KΩ ( Tolerance 5%)  
R25/50: 3950K ( Tolerance 3%)

| T(°C) | Rmin.(kΩ) | Rnom.(kΩ) | Rmax.(kΩ) | T(°C) | Rmin.(kΩ) | Rnom.(kΩ) | Rmax.(kΩ) |
|-------|-----------|-----------|-----------|-------|-----------|-----------|-----------|
| -40   | 01606     | 01889     | 02216     | 0     | 144.8     | 158.0     | 172.1     |
| -39   | 01497     | 01757     | 02056     | 1     | 137.5     | 149.9     | 163.0     |
| -38   | 01397     | 01635     | 01910     | 2     | 130.7     | 142.3     | 154.4     |
| -37   | 01303     | 01523     | 01775     | 3     | 124.3     | 135.0     | 146.4     |
| -36   | 01217     | 01419     | 01651     | 4     | 118.2     | 128.3     | 138.8     |
| -35   | 01137     | 01323     | 01536     | 5     | 112.5     | 121.8     | 131.6     |
| -34   | 01063     | 01235     | 01430     | 6     | 107.1     | 115.8     | 124.9     |
| -33   | 994.8     | 01153     | 01332     | 7     | 102.0     | 110.1     | 118.6     |
| -32   | 931.1     | 01077     | 01242     | 8     | 97.12     | 104.7     | 112.6     |
| -31   | 872.0     | 01006     | 01158     | 9     | 92.54     | 99.63     | 107.0     |
| -30   | 817.1     | 941.0     | 01081     | 10    | 88.20     | 94.82     | 101.7     |
| -29   | 766.0     | 880.4     | 01009     | 11    | 84.10     | 90.28     | 96.67     |
| -28   | 718.5     | 824.2     | 943.0     | 12    | 80.22     | 85.98     | 91.93     |
| -27   | 674.3     | 771.9     | 881.5     | 13    | 76.54     | 81.92     | 87.46     |
| -26   | 633.1     | 723.4     | 824.5     | 14    | 73.05     | 78.07     | 83.24     |
| -25   | 594.8     | 678.3     | 771.6     | 15    | 69.74     | 74.43     | 79.24     |
| -24   | 559.0     | 636.3     | 722.4     | 16    | 66.61     | 70.99     | 75.47     |
| -23   | 525.7     | 597.2     | 676.8     | 17    | 63.64     | 67.72     | 71.89     |
| -22   | 494.6     | 560.8     | 634.4     | 18    | 60.81     | 64.63     | 68.51     |
| -21   | 465.6     | 526.9     | 594.9     | 19    | 58.14     | 61.70     | 65.31     |
| -20   | 438.4     | 495.3     | 558.1     | 20    | 55.59     | 58.92     | 62.28     |
| -19   | 413.1     | 465.8     | 523.9     | 21    | 53.18     | 56.28     | 59.41     |
| -18   | 389.4     | 438.3     | 492.1     | 22    | 50.88     | 53.77     | 56.69     |
| -17   | 367.2     | 412.6     | 462.4     | 23    | 48.70     | 51.40     | 54.11     |
| -16   | 346.5     | 388.6     | 434.7     | 24    | 46.62     | 49.14     | 51.67     |
| -15   | 327.0     | 366.1     | 408.8     | 25    | 44.65     | 47.00     | 49.35     |
| -14   | 308.8     | 345.1     | 384.7     | 26    | 42.66     | 44.96     | 47.27     |
| -13   | 291.8     | 325.5     | 362.2     | 27    | 40.77     | 43.03     | 45.30     |
| -12   | 275.8     | 307.1     | 341.1     | 28    | 38.97     | 41.19     | 43.42     |
| -11   | 260.8     | 289.9     | 321.5     | 29    | 37.27     | 39.44     | 41.63     |
| -10   | 246.7     | 273.8     | 303.0     | 30    | 35.65     | 37.77     | 39.92     |
| -9    | 233.4     | 258.6     | 285.8     | 31    | 34.11     | 36.19     | 38.30     |
| -8    | 221.0     | 244.4     | 269.7     | 32    | 32.65     | 34.68     | 36.75     |
| -7    | 209.3     | 231.1     | 254.6     | 33    | 31.26     | 33.25     | 35.27     |
| -6    | 198.4     | 218.7     | 240.4     | 34    | 29.93     | 31.88     | 33.87     |
| -5    | 188.0     | 206.9     | 227.1     | 35    | 28.67     | 30.58     | 32.52     |
| -4    | 178.3     | 195.9     | 214.7     | 36    | 27.48     | 29.33     | 31.24     |
| -3    | 169.2     | 185.5     | 203.0     | 37    | 26.33     | 28.15     | 30.02     |
| -2    | 160.5     | 175.8     | 192.0     | 38    | 25.25     | 27.02     | 28.85     |
| -1    | 152.4     | 166.6     | 181.7     | 39    | 24.21     | 25.94     | 27.73     |

| T (°C) | Rmin. (k $\Omega$ ) | Rnom. (k $\Omega$ ) | Rmax. (k $\Omega$ ) | T (°C) | Rmin. (k $\Omega$ ) | Rnom. (k $\Omega$ ) | Rmax. (k $\Omega$ ) |
|--------|---------------------|---------------------|---------------------|--------|---------------------|---------------------|---------------------|
| 40     | 23.22               | 24.92               | 26.67               | 83     | 4.838               | 5.434               | 6.087               |
| 41     | 22.28               | 23.94               | 25.65               | 84     | 4.686               | 5.268               | 5.906               |
| 42     | 21.39               | 23.00               | 24.67               | 85     | 4.539               | 5.107               | 5.732               |
| 43     | 20.53               | 22.11               | 23.74               | 86     | 4.398               | 4.953               | 5.564               |
| 44     | 19.71               | 21.25               | 22.85               | 87     | 4.262               | 4.804               | 5.401               |
| 45     | 18.94               | 20.44               | 22.00               | 88     | 4.131               | 4.660               | 5.245               |
| 46     | 18.19               | 19.66               | 21.19               | 89     | 4.004               | 4.522               | 5.093               |
| 47     | 17.48               | 18.91               | 20.41               | 90     | 3.882               | 4.388               | 4.947               |
| 48     | 16.80               | 18.20               | 19.66               | 91     | 3.765               | 4.259               | 4.806               |
| 49     | 16.16               | 17.52               | 18.95               | 92     | 3.651               | 4.134               | 4.669               |
| 50     | 15.54               | 16.86               | 18.26               | 93     | 3.542               | 4.014               | 4.537               |
| 51     | 14.94               | 16.24               | 17.60               | 94     | 3.436               | 3.897               | 4.410               |
| 52     | 14.38               | 15.64               | 16.98               | 95     | 3.334               | 3.785               | 4.286               |
| 53     | 13.84               | 15.07               | 16.37               | 96     | 3.236               | 3.677               | 4.167               |
| 54     | 13.32               | 14.52               | 15.80               | 97     | 3.141               | 3.572               | 4.052               |
| 55     | 12.82               | 14.00               | 15.24               | 98     | 3.049               | 3.471               | 3.941               |
| 56     | 12.35               | 13.50               | 14.71               | 99     | 2.961               | 3.373               | 3.833               |
| 57     | 11.90               | 13.01               | 14.20               | 100    | 2.875               | 3.278               | 3.729               |
| 58     | 11.46               | 12.55               | 13.71               | 101    | 2.793               | 3.187               | 3.628               |
| 59     | 11.05               | 12.11               | 13.24               | 102    | 2.713               | 3.098               | 3.530               |
| 60     | 10.65               | 11.68               | 12.79               | 103    | 2.636               | 3.013               | 3.435               |
| 61     | 10.26               | 11.28               | 12.36               | 104    | 2.561               | 2.930               | 3.344               |
| 62     | 9.898               | 10.89               | 11.94               | 105    | 2.489               | 2.850               | 3.255               |
| 63     | 9.547               | 10.51               | 11.54               | 106    | 2.420               | 2.773               | 3.169               |
| 64     | 9.211               | 10.15               | 11.16               | 107    | 2.352               | 2.698               | 3.086               |
| 65     | 8.888               | 9.806               | 10.79               | 108    | 2.287               | 2.625               | 3.006               |
| 66     | 8.578               | 9.474               | 10.44               | 109    | 2.224               | 2.555               | 2.928               |
| 67     | 8.281               | 9.155               | 10.10               | 110    | 2.163               | 2.487               | 2.852               |
| 68     | 7.995               | 8.849               | 9.768               | 111    | 2.104               | 2.421               | 2.779               |
| 69     | 7.722               | 8.554               | 9.453               | 112    | 2.047               | 2.357               | 2.708               |
| 70     | 7.459               | 8.271               | 9.149               | 113    | 1.992               | 2.296               | 2.639               |
| 71     | 7.206               | 7.999               | 8.857               | 114    | 1.938               | 2.236               | 2.572               |
| 72     | 6.963               | 7.738               | 8.576               | 115    | 1.887               | 2.178               | 2.507               |
| 73     | 6.730               | 7.486               | 8.306               | 116    | 1.837               | 2.121               | 2.445               |
| 74     | 6.506               | 7.244               | 8.045               | 117    | 1.788               | 2.067               | 2.384               |
| 75     | 6.291               | 7.011               | 7.794               | 118    | 1.741               | 2.014               | 2.324               |
| 76     | 6.084               | 6.787               | 7.552               | 119    | 1.695               | 1.963               | 2.267               |
| 77     | 5.885               | 6.571               | 7.319               | 120    | 1.651               | 1.913               | 2.211               |
| 78     | 5.693               | 6.363               | 7.094               | 121    | 1.608               | 1.865               | 2.157               |
| 79     | 5.509               | 6.163               | 6.878               | 122    | 1.567               | 1.818               | 2.105               |
| 80     | 5.332               | 5.971               | 6.669               | 123    | 1.527               | 1.773               | 2.054               |
| 81     | 5.161               | 5.785               | 6.468               | 124    | 1.488               | 1.729               | 2.005               |
| 82     | 4.997               | 5.606               | 6.274               | 125    | 1.450               | 1.687               | 1.957               |

R-T CONVERSION TABLE  
R25: 100K $\Omega$  ( Tolerance 5%)  
R25/50:3950K ( Tolerance 3%)

| T(°C) | Rmin.(k $\Omega$ ) | Rnom.(k $\Omega$ ) | Rmax.(k $\Omega$ ) | T(°C) | Rmin.(k $\Omega$ ) | Rnom.(k $\Omega$ ) | Rmax.(k $\Omega$ ) |
|-------|--------------------|--------------------|--------------------|-------|--------------------|--------------------|--------------------|
| -40   | 03417              | 04019              | 04714              | 0     | 308.0              | 336.2              | 366.1              |
| -39   | 03186              | 03738              | 04375              | 1     | 292.6              | 318.9              | 346.7              |
| -38   | 02971              | 03479              | 04064              | 2     | 278.1              | 302.7              | 328.5              |
| -37   | 02773              | 03240              | 03777              | 3     | 264.5              | 287.3              | 311.4              |
| -36   | 02590              | 03020              | 03512              | 4     | 251.5              | 272.9              | 295.3              |
| -35   | 02420              | 02816              | 03268              | 5     | 239.3              | 259.2              | 280.1              |
| -34   | 02263              | 02627              | 03043              | 6     | 227.8              | 246.4              | 265.8              |
| -33   | 02117              | 02452              | 02835              | 7     | 216.9              | 234.3              | 252.3              |
| -32   | 01981              | 02291              | 02642              | 8     | 206.6              | 222.8              | 239.6              |
| -31   | 01855              | 02141              | 02464              | 9     | 196.9              | 212.0              | 227.6              |
| -30   | 01738              | 02002              | 02300              | 10    | 187.7              | 201.7              | 216.3              |
| -29   | 01630              | 01873              | 02148              | 11    | 178.9              | 192.1              | 205.7              |
| -28   | 01529              | 01754              | 02006              | 12    | 170.7              | 182.9              | 195.6              |
| -27   | 01435              | 01642              | 01876              | 13    | 162.8              | 174.3              | 186.1              |
| -26   | 01347              | 01539              | 01754              | 14    | 155.4              | 166.1              | 177.1              |
| -25   | 01265              | 01443              | 01642              | 15    | 148.4              | 158.4              | 168.6              |
| -24   | 01189              | 01354              | 01537              | 16    | 141.7              | 151.0              | 160.6              |
| -23   | 01119              | 01271              | 01440              | 17    | 135.4              | 144.1              | 153.0              |
| -22   | 01052              | 01193              | 01350              | 18    | 129.4              | 137.5              | 145.8              |
| -21   | 990.6              | 01121              | 01266              | 19    | 123.7              | 131.3              | 139.0              |
| -20   | 932.9              | 01054              | 01188              | 20    | 118.3              | 125.4              | 132.5              |
| -19   | 878.9              | 991.1              | 01115              | 21    | 113.1              | 119.7              | 126.4              |
| -18   | 828.5              | 932.5              | 01047              | 22    | 108.3              | 114.4              | 120.6              |
| -17   | 781.3              | 877.8              | 983.8              | 23    | 103.6              | 109.4              | 115.1              |
| -16   | 737.2              | 826.7              | 924.9              | 24    | 99.20              | 104.6              | 109.9              |
| -15   | 695.8              | 779.0              | 869.9              | 25    | 95.00              | 100.0              | 105.0              |
| -14   | 657.1              | 734.3              | 818.6              | 26    | 90.76              | 95.67              | 100.6              |
| -13   | 620.8              | 692.5              | 770.6              | 27    | 86.74              | 91.55              | 96.38              |
| -12   | 586.8              | 653.4              | 725.8              | 28    | 82.93              | 87.64              | 92.38              |
| -11   | 554.8              | 616.8              | 684.0              | 29    | 79.30              | 83.91              | 88.57              |
| -10   | 524.8              | 582.5              | 644.8              | 30    | 75.85              | 80.37              | 84.95              |
| -9    | 496.7              | 550.3              | 608.1              | 31    | 72.58              | 77.00              | 81.49              |
| -8    | 470.3              | 520.1              | 573.8              | 32    | 69.47              | 73.79              | 78.19              |
| -7    | 445.4              | 491.8              | 541.7              | 33    | 66.51              | 70.74              | 75.05              |
| -6    | 422.0              | 465.2              | 511.5              | 34    | 63.69              | 67.83              | 72.05              |
| -5    | 400.1              | 440.3              | 483.3              | 35    | 61.01              | 65.06              | 69.19              |
| -4    | 379.4              | 416.8              | 456.8              | 36    | 58.46              | 62.41              | 66.47              |
| -3    | 359.9              | 394.8              | 431.9              | 37    | 56.03              | 59.89              | 63.86              |
| -2    | 341.6              | 374.0              | 408.6              | 38    | 53.72              | 57.49              | 61.38              |
| -1    | 324.3              | 354.6              | 386.7              | 39    | 51.51              | 55.20              | 59.00              |

| T (°C) | Rmin. (k $\Omega$ ) | Rnom. (k $\Omega$ ) | Rmax. (k $\Omega$ ) | T (°C) | Rmin. (k $\Omega$ ) | Rnom. (k $\Omega$ ) | Rmax. (k $\Omega$ ) |
|--------|---------------------|---------------------|---------------------|--------|---------------------|---------------------|---------------------|
| 40     | 49.41               | 53.01               | 56.74               | 83     | 10.29               | 11.56               | 12.95               |
| 41     | 47.41               | 50.93               | 54.57               | 84     | 9.971               | 11.21               | 12.57               |
| 42     | 45.50               | 48.94               | 52.50               | 85     | 9.658               | 10.87               | 12.20               |
| 43     | 43.68               | 47.03               | 50.52               | 86     | 9.358               | 10.54               | 11.84               |
| 44     | 41.95               | 45.22               | 48.62               | 87     | 9.068               | 10.22               | 11.49               |
| 45     | 40.29               | 43.48               | 46.81               | 88     | 8.789               | 9.915               | 11.16               |
| 46     | 38.71               | 41.82               | 45.08               | 89     | 8.519               | 9.620               | 10.84               |
| 47     | 37.19               | 40.24               | 43.42               | 90     | 8.260               | 9.336               | 10.53               |
| 48     | 35.75               | 38.72               | 41.83               | 91     | 8.010               | 9.061               | 10.22               |
| 49     | 34.37               | 37.27               | 40.31               | 92     | 7.768               | 8.796               | 9.934               |
| 50     | 33.06               | 35.88               | 38.85               | 93     | 7.536               | 8.540               | 9.654               |
| 51     | 31.80               | 34.55               | 37.46               | 94     | 7.311               | 8.292               | 9.382               |
| 52     | 30.59               | 33.28               | 36.12               | 95     | 7.094               | 8.054               | 9.120               |
| 53     | 29.44               | 32.07               | 34.84               | 96     | 6.885               | 7.823               | 8.867               |
| 54     | 28.34               | 30.90               | 33.61               | 97     | 6.683               | 7.600               | 8.621               |
| 55     | 27.29               | 29.78               | 32.43               | 98     | 6.488               | 7.385               | 8.384               |
| 56     | 26.28               | 28.71               | 31.30               | 99     | 6.300               | 7.176               | 8.155               |
| 57     | 25.31               | 27.69               | 30.22               | 100    | 6.118               | 6.975               | 7.933               |
| 58     | 24.39               | 26.71               | 29.18               | 101    | 5.942               | 6.781               | 7.718               |
| 59     | 23.50               | 25.77               | 28.18               | 102    | 5.772               | 6.592               | 7.510               |
| 60     | 22.65               | 24.86               | 27.22               | 103    | 5.608               | 6.410               | 7.309               |
| 61     | 21.84               | 23.99               | 26.30               | 104    | 5.450               | 6.234               | 7.114               |
| 62     | 21.06               | 23.16               | 25.41               | 105    | 5.296               | 6.064               | 6.926               |
| 63     | 20.31               | 22.37               | 24.56               | 106    | 5.148               | 5.899               | 6.743               |
| 64     | 19.60               | 21.60               | 23.75               | 107    | 5.005               | 5.740               | 6.566               |
| 65     | 18.91               | 20.86               | 22.96               | 108    | 4.866               | 5.586               | 6.395               |
| 66     | 18.25               | 20.16               | 22.21               | 109    | 4.732               | 5.436               | 6.229               |
| 67     | 17.62               | 19.48               | 21.48               | 110    | 4.603               | 5.291               | 6.068               |
| 68     | 17.01               | 18.83               | 20.78               | 111    | 4.477               | 5.151               | 5.912               |
| 69     | 16.43               | 18.20               | 20.11               | 112    | 4.356               | 5.016               | 5.761               |
| 70     | 15.87               | 17.60               | 19.47               | 113    | 4.238               | 4.884               | 5.615               |
| 71     | 15.33               | 17.02               | 18.85               | 114    | 4.124               | 4.757               | 5.472               |
| 72     | 14.82               | 16.46               | 18.25               | 115    | 4.014               | 4.633               | 5.335               |
| 73     | 14.32               | 15.93               | 17.67               | 116    | 3.908               | 4.514               | 5.201               |
| 74     | 13.84               | 15.41               | 17.12               | 117    | 3.804               | 4.398               | 5.071               |
| 75     | 13.38               | 14.92               | 16.58               | 118    | 3.704               | 4.285               | 4.946               |
| 76     | 12.94               | 14.44               | 16.07               | 119    | 3.607               | 4.177               | 4.824               |
| 77     | 12.52               | 13.98               | 15.57               | 120    | 3.513               | 4.071               | 4.705               |
| 78     | 12.11               | 13.54               | 15.09               | 121    | 3.422               | 3.968               | 4.590               |
| 79     | 11.72               | 13.11               | 14.63               | 122    | 3.334               | 3.869               | 4.479               |
| 80     | 11.34               | 12.70               | 14.19               | 123    | 3.248               | 3.773               | 4.371               |
| 81     | 10.98               | 12.31               | 13.76               | 124    | 3.165               | 3.679               | 4.265               |
| 82     | 10.63               | 11.93               | 13.35               | 125    | 3.085               | 3.588               | 4.163               |