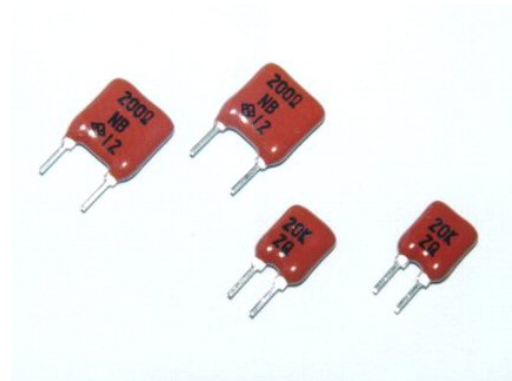


1/4W  
**PRECISION THIN FILM RESISTORS**

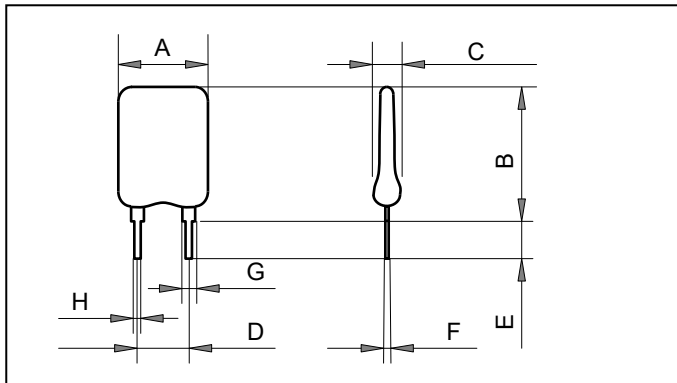
RP-480, RP-460



**Features and Applications**

Super precision thin film resistors, typically 1ppm/C TCR provide by Ni-Cr spatter process on alumina substrate, also 2ppm/°C and 0.02% is in standard.  
 Wide operation temperature range covered from -55 to 125 °C and absolutely linear (not bent) proportional dR vs. dT characteristics in the temperature range.  
 Silicone-epoxy coating presents sufficient long term stability  
 Sufficient rating power, low current noise, low voltage coefficient and low thermal EMF are supplied.  
 Easy to install on precision electronics by leaded style, shorter delivery than another precision resistors, free from matching and tracking calculation and economical.  
 Fit for discrete voltage divider and common analog circuit of electronic scale, load cell measurement, DVM, control, medical electronics, ATE, aerospace, military applications.

**Dimension (mm)**



| Type | RP480       | RP460       |
|------|-------------|-------------|
| A    | 5.6max      | 8.0max      |
| B    | 8.2max      | 9.0max      |
| C    | 3.0max      | 3.0max      |
| D    | 2.54+/-0.25 | 5.08+/-0.25 |
| E    | 3.3+/-0.5   | 3.3+/-0.5   |
| F    | 0.25        | 0.25        |
| G    | 1.2         | 1.2         |
| H    | 0.5+/-0.05  | 0.5+/-0.05  |

**Ordering Information**

| Type   | TCR          | Resistance | Tolerance | Packaging  | Note |
|--------|--------------|------------|-----------|------------|------|
| RP-480 | W(2.5ppm/°C) | 5K62       | T         | Z00        | ---- |
| RP-480 | Z (5ppm/°C)  | E96 / E24+ | A (0.05%) | Z00 (bulk) | ---- |
| RP-460 | W(2.5ppm/°C) | E96 / E24+ | T (0.01%) |            |      |

**1/4W PRECISION THIN FILM RESISTORS**

**RP-480, RP-460**

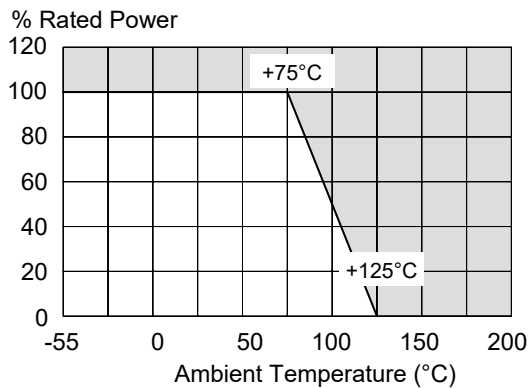
**Specifications**

| Items                     | Specifications                   |            |                                  |            | Conditions     |
|---------------------------|----------------------------------|------------|----------------------------------|------------|----------------|
|                           | RP-480                           |            | RP-460                           |            |                |
| Type                      |                                  |            |                                  |            |                |
| Resistance Range (ohm)    | 100-50 k                         | 100-100k   | 100-50 k                         | 100-100k   |                |
| Absolute TCR (ppm/°C)     | +/-2.5 (W)                       | +/-5.0 (Z) | +/-2.5 (W)                       | +/-5.0 (Z) | -55 to +125°C  |
| Absolute Tolerance (+/-%) | 0.01(X)                          | 0.05(A)    | 0.01(X)                          | 0.05(A)    | -55 to +125°C  |
| Standard Resistance       | E96 and E24, include 2.5 and 5.0 |            | E96 and E24, include 2.5 and 5.0 |            |                |
| Rating Power              | 1/4 W                            |            | 1/4 W                            |            | -55°C to +70°C |
| Max Working Voltages      | 100V                             |            | 150V.                            |            | Under rating.  |

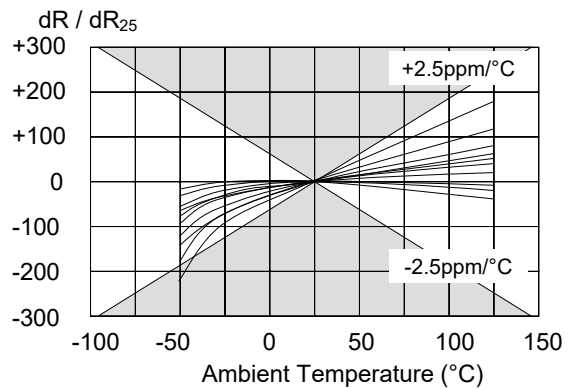
**Performances**

| Items                | Specifications | Typical       | Conditions                           |
|----------------------|----------------|---------------|--------------------------------------|
| Temperature Cycle    | +/-0.05%       | +/-0.01%      | -55°C 30min, +120°C 30min, 20cycles. |
| Short Time Over Load | +/-0.05%       | +/-0.0025%    | Rating Power×2.5, 5seconds           |
| Solder ability       | Covered 95%    | Covered 95%   | 235°C, 2seconds                      |
| Solvent              | No damage      | No damage     | IPA                                  |
| Terminal Strength    | +/-0.05%       | +/-0.0025%    |                                      |
| Withstanding Voltage | +/-0.03%       | +/-0.0025%    |                                      |
| Soldering            | +/-0.03%       | +/-0.0025%    | 350°C, 3seconds.                     |
| Vibration            | Not specified  | Not specified |                                      |
| Load Life            | +/-0.05%       | +/-0.05%      | 1000 hours                           |
| Humidity             | +/-0.05%       | +/-0.05%      | 1000 hours                           |
| Operating Temp.      | -55 to +125°C  | -55 to +125°C |                                      |
| Storage Temp. Range  | -55 to +75°C   | -55 to +75°C  |                                      |

**Derating**



**Temperature Characteristics, Typical**



**Resistance Value, E24+**

|     |     |       |     |       |     |     |
|-----|-----|-------|-----|-------|-----|-----|
| 1.0 | 1.5 | 2.2   | 3.0 | 4.3   | 5.6 | 8.2 |
| 1.1 | 1.6 | 2.4   | 3.3 | 4.7   | 6.2 | 9.1 |
| 1.2 | 1.8 | (2.5) | 3.6 | (5.0) | 6.8 |     |
| 1.3 | 2.0 | 2.7   | 3.9 | 5.1   | 7.5 |     |

**TCR and Tolerance Identifications**

| TCR and Symbols |             | Tolerance and Symbols |          |
|-----------------|-------------|-----------------------|----------|
| W               | +/-2.5ppm/C | T                     | +/-0.01% |
| Z               | +/-5.0ppm/C | A                     | +/-0.05% |

**Resistance Value, E96**

|      |      |      |      |      |      |      |      |      |      |      |      |
|------|------|------|------|------|------|------|------|------|------|------|------|
| 1.00 | 1.21 | 1.47 | 1.78 | 2.15 | 2.61 | 3.16 | 3.83 | 4.64 | 5.62 | 6.81 | 8.25 |
| 1.02 | 1.24 | 1.50 | 1.82 | 2.21 | 2.67 | 3.24 | 3.92 | 4.75 | 5.76 | 6.98 | 8.45 |
| 1.05 | 1.27 | 1.54 | 1.87 | 2.26 | 2.74 | 3.32 | 4.02 | 4.87 | 5.90 | 7.15 | 8.66 |
| 1.07 | 1.30 | 1.58 | 1.91 | 2.32 | 2.80 | 3.40 | 4.12 | 4.99 | 6.04 | 7.32 | 8.87 |
| 1.10 | 1.33 | 1.62 | 1.96 | 2.37 | 2.87 | 3.48 | 4.22 | 5.11 | 6.19 | 7.50 | 9.09 |
| 1.13 | 1.37 | 1.65 | 2.00 | 2.43 | 2.94 | 3.57 | 4.32 | 5.23 | 6.34 | 7.68 | 9.31 |
| 1.15 | 1.40 | 1.69 | 2.05 | 2.49 | 3.01 | 3.65 | 4.42 | 5.36 | 6.49 | 7.87 | 9.53 |
| 1.18 | 1.43 | 1.74 | 2.10 | 2.55 | 3.09 | 3.74 | 4.53 | 5.49 | 6.65 | 8.06 | 9.76 |

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