



### FEATURES

Extruded aluminium housing provides superior heat conduction. Housing deep finned for maximum heat dissipation at natural or forced air convection.  
 Gold anodized finish for maximum resistance to environmental conditions.  
 Special thermosetting compound with high thermal conductivity  
 Winding designed to give maximum core coverage and uniformity for even heat dissipation.  
 Core centerless ground for maximum winding uniformity.  
 Marking at top surface for easy identification after mounting.  
 Complete welded construction terminal to terminal.

### SPECIFICATION

These resistors meet or exceed the requirements of MIL-R-18546 E specification.

### ELECTRICAL

For **Power ratings** and **Resistance values**: see table.

**Tolerance**

the following tolerances are available: 1%, 3%, 5%

**Temperature coefficient**

- 30 ppm R > 20 Ohm
- 50 ppm 1 Ohm < R < 20 Ohm
- 100 ppm 0.1 Ohm < R < 1 Ohm.

**Dielectric strength**

- 1.500 Vac for RB5 / RB10
- 2.500 Vac for RB25 / RB50
- 3.500 Vac for RB75 / RB101 / RB150
- 4.500 Vac for RB100 / RB 250.

**Insulation resistance**

- 10.000 MOhms minimum
- 1.000 MOhms after moisture test.

**Overload**

5 sec. at 5 times rated power.

**Non inductive**

Models of equivalent physical and electrical specifications are available with non inductive Ayrton-Perry winding.

### MECHANICAL

**Terminal strength**

10 lb. pull test.

**Solderability**

Satisfactory when tested in accordance with method 208 of MIL-STD-202  
 The use of high temperature solder is recommended when resistors are operated near the maximum specified ratings.

### MATERIAL

**Core**

Ceramic steatite or alumina centerless ground.

**Element**

Copper-nickel alloy or nickel-chrome alloy of determined temperature coefficient.

**End caps**

Stainless steel.

**Encapsulant**

High temperature thermosetting compound.

**Housing**

Aluminium with hard anodic coating

**Standard terminals**

- Copperweld RB5 to RB150.
- Stainless steel for RB100 and RB250.

### DERATING

ATE RB resistors have an operative temperature range of -55 °C to +250 °C. Derating is required for reduced chassis area and for high ambient temperature.

| ATE type     | Type MIL-R-18546E | Nominal power (W) | Max power no heatsink (W) | Res. range (Ohm) | V limit (V) | Temp. rise with heatsink (°C/W) | Weight (Gr) | Heatsink dim. (cm <sup>2</sup> x mm) |
|--------------|-------------------|-------------------|---------------------------|------------------|-------------|---------------------------------|-------------|--------------------------------------|
| <b>RB5</b>   | RE 60             | 7.5               | 4                         | 0.01/6K8         | 160         | 4,5                             | 3.5         | 415x1                                |
| <b>RB10</b>  | RE 65             | 12                | 6                         | 0.01/10K         | 265         | 5,1                             | 6           | 415x1                                |
| <b>RB25</b>  | RE 70             | 25                | 12,5                      | 0.01/18K         | 550         | 3                               | 14          | 535x1                                |
| <b>RB50</b>  | RE 75             | 50                | 20                        | 0.01/68K         | 1250        | 1,9                             | 35          | 930x1.5                              |
| <b>RB75</b>  | -                 | 75                | 35                        | 0.1/50K          | 1400        | 1,1                             | 85          | 995x3                                |
| <b>RB101</b> | -                 | 100               | 40                        | 0.1/70K          | 1900        | 1                               | 115         | 995x3                                |
| <b>RB150</b> | -                 | 150               | 55                        | 0.1/100K         | 2500        | 1                               | 165         | 995x3                                |
| <b>RB100</b> | RE 77             | 150               | 75                        | 0.1/100K         | 1900        | 0,84                            | 500         | 930x3                                |
| <b>RB250</b> | RE 80             | 250               | 100                       | 0.1/120K         | 2300        | 0,66                            | 900         | 930x3                                |

| ATE type     | DIMENSIONS (mm) |      |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------|-----------------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|              | A               | B    | C    | D    | E    | F    | G    | H    | J    | K    | L    | M    | N    | Ø    |
| <b>RB5</b>   | 16.5            | 28.6 | 8.2  | 8.5  | 15.3 | 11.3 | 12.4 | 4    | 2    | 1.6  | 2.4  | -    | 1.5  | 1.3  |
| <b>RB10</b>  | 20.4            | 35   | 10   | 11   | 19   | 14.3 | 15.9 | 5    | 2.4  | 2    | 2.4  | -    | 2    | 2.2  |
| <b>RB25</b>  | 27.2            | 49   | 14   | 14   | 27   | 18.3 | 19.8 | 6.5  | 4.4  | 2    | 3.2  | -    | 2    | 2.2  |
| <b>RB50</b>  | 29.2            | 71   | 16   | 16   | 50   | 39.7 | 21.5 | 7    | 5.2  | 2    | 3.2  | -    | 2    | 2.2  |
| <b>RB75</b>  | 47.5            | 73   | 24   | 27   | 48   | 29   | 37   | 11.5 | 9.5  | 3.5  | 4.4  | -    | 3    | 3.2  |
| <b>RB101</b> | 47.5            | 89   | 24   | 27   | 64   | 35   | 37   | 11.5 | 14.5 | 3.5  | 4.4  | -    | 3    | 3.2  |
| <b>RB150</b> | 47.5            | 122  | 24   | 27   | 97   | 58   | 37   | 11.5 | 19.5 | 3.5  | 4.4  | -    | 3    | 3.2  |
| <b>RB100</b> | 71.5            | 139  | 44.5 | 46   | 89   | -    | 57.1 | 20   | 9.6  | 5    | 4.8  | 69.8 | M5   | -    |
| <b>RB250</b> | 76              | 178  | 55.6 | 54   | 114  | 98.4 | 63.5 | 25.5 | 7.8  | 6.3  | 4.8  | 98.4 | M6   | -    |
| <b>Tol.</b>  | ±0.2            | ±1   | ±0.2 | ±0.2 | ±0.5 | ±0.2 | ±0.2 | ±0.2 | ±0.5 | ±0.2 | ±0.2 | ±0.2 | ±0.2 | ±0.2 |

