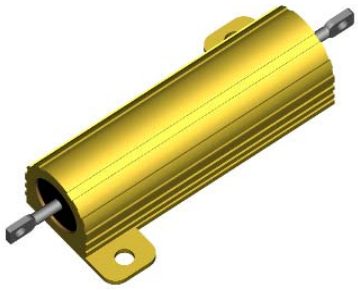
# TMC

## ALUMINUM HOUSED CHASSIS MOUNT RESISTORS

### 5 WATT THRU 50 WATT

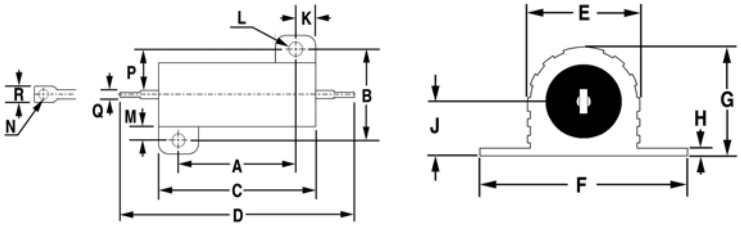


Huntington Electric's high power aluminum housed resistors use centerless ground ceramic cores for uniform heat distribution. Molded in a special high temperature material and mounted in an extruded aluminum finned housing, these designs provide maximum power dissipation and reliability. They have tinned copperweld leads for solderability, and meet or exceed MIL-R-18546, including "N" characteristic, and MIL-R-39009.

| STANDARD TYPE | MIL-R-39009/ MIL-R-18546 | POWER (W) HEI | POWER (W) MIL | R MIN | R MAX | RATED VOLTAGE |
|---|---|---|---|---|---|---|
| TMC -5 | RER-60/RE-60 | 7.5 | 5 | 0.01 | 22K | 160 |
| TMC-10 | RER-65/RE-65 | 12.5 | 10 | 0.01 | 47K | 265 |
| TMC-25 | RER-70/RE-70 | 25 | 20 | 0.01 | 90K | 550 |
| TMC-50 | RER-75/RE-75 | 50 | 30 | 0.01 | 250K | 1250 |

Other power ratings are available to 250 Watts. Please consult factory for detail specifications.

POWER RATING is based on
a) full power at 25 °C
b) MAX hotspot of 275 °C
c) 1% MAX ΔR over 1000 hours operation
d) mounting on proper heatsink.




## ENVIRONMENTAL SPECIFICATIONS

| TEST | MIL-R-18546 |
|---|---|
| Load Life | ±(1% + .05Ω)>ΔR |
| Moisture Resistance | ±(1%+.05Ω)>ΔR |
| Resistor Temperature Characteristic | ±50 PPM/°C up to 2000Ω<br>±30 PPM/°C over 2000Ω |
| Thermal Shock | ±(.5% + .05Ω) >R |
| Short Time Overload | ±(.5% + .05Ω) >R |
| Dielectric | ±(.2% + .05Ω) >R |
| High Temp. Storage | ±(.5% + .05Ω) >R |
| Shock | ±(.2% + .05Ω) >R |
| Vibration | ±(.2% + .05Ω) >R |
| Terminal Strength | ±(.2% + .05Ω) >R |

## DIMENSION INFORMATION

| TYPE | A ±.005 (0.1) | B ±.005 (0.1) | C ±.031 (0.8) | D ±.062 (1.6) | E ±.015 (0.4) | F ±.015 (0.4) | G ±.015 (0.4) | H ±.010 (0.2) | J ±.010 (0.2) | K ±.010 (0.2) | L ±.005 (0.1) | M ±.015 (0.4) | N ±.005 (0.1) | O ±.062 (1.6) | P ±.031 (0.8) | Q AWG | R ±.032 (0.8) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TMC-5 | .444 (10.8) | .490 (12.4) | .600 (15.2) | 1.125 (28.6) | .334 (8.5) | .646 (16.4) | .320 (8.1) | .065 (1.7) | .140 (3.6) | .078 (2.0) | .093 (2.4) | .078 (2.0) | .050 (1.3) | .266 (6.8) | .245 (6.3) | 16 | .085 (2.2) |
| TMC-10 | .562 (14.3) | .625 (15.9) | .750 (19.1) | 1.375 (34.9) | .430 (10.9) | .800 (20.3) | .400 (10.2) | .075 (1.9) | .190 (4.8) | .093 (2.4) | .093 (2.4) | .102 (2.6) | .086 (2.2) | .312 (7.9) | .312 (7.9) | 12 | .140 (3.6) |
| TMC-25 | .719 (18.3) | .781 (19.8) | 1.062 (27.0) | 1.938 (49.2) | .530 (13.5) | 1.080 (27.4) | .560 (14.2) | .085 (2.2) | .260 (6.6) | .172 (4.4) | .125 (3.2) | .125 (3.2) | .086 (2.2) | .438 (11.1) | .438 (11.1) | 12 | .140 (3.6) |
| TMC-50 | 1.563 (39.7) | .844 (21.4) | 1.968 (50.0) | 2.781 (70.6) | .615 (15.6) | 1.140 (29.0) | .615 (15.6) | .085 (2.2) | .300 (7.6) | .196 (5.0) | .125 (3.2) | .125 (3.2) | .086 (2.2) | .438 (11.1) | .438 (11.1) | 12 | .140 (3.6) |
| TMC-50L | Specifications and dimensions same as TMC-50 except 12 AWG flexible leads and 1000V working voltage. | | | | | | | | | | | | | | | | |

## ENGINEERING DATA AND ORDER OPTIONS

**Temperature Coefficient of Resistance:** 1 to 10Ω ±50ppm/°C, > 10Ω ±20 ppm/°C (Call Factory for < 1 Ω)

**Dielectric Strength:** Greater than 1000 VAC for 5W
2500 VAC for 10, 25, 50 W

**Operating Temp Range:** -55C to 275 °C. Derating is required for reduced chassis mounting area and for high ambient temperatures (see chart.)

**Heat Sink Requirements:** 4" x 6" x .040" aluminum chassis for 5, 10W
5" x 7" x .040" aluminum chassis for 25, 50W

**WATTAGE DERATING CHART FOR HIGHER AMBIENT TEMPERATURES**