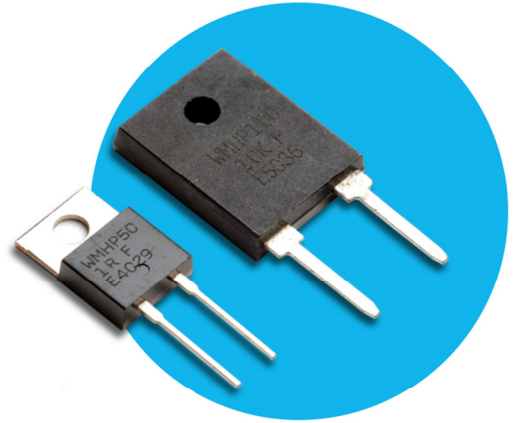


Heatsink Mount High Power Resistors

WMHP Series

- TO-220 & TO-247 standard power packages
- Very low thermal resistance
- Non-inductive thick film technology
- 20 to 100 watt high power resistors
- Single screw mounting to heatsink
- Suitable for high frequency / fast pulse use

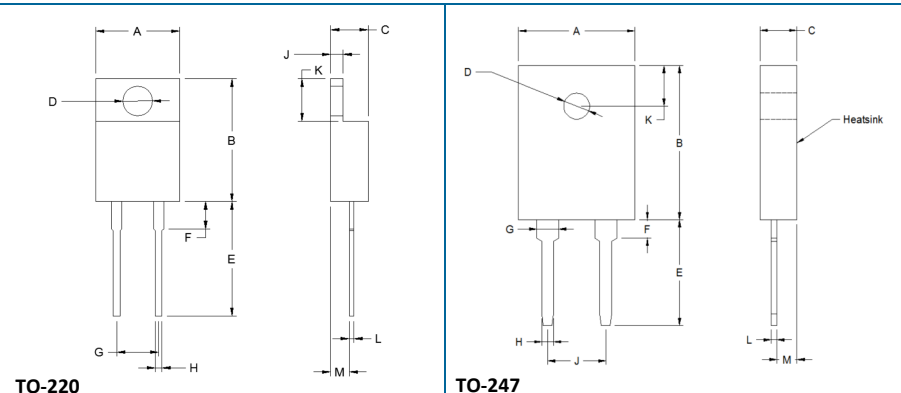


All parts are Pb-free and comply with EU Directive 2011/65/EU (RoHS2)

Electrical Data

| | WMHP20 | WMHP35 | WMHP50 | WMHP100 | Conditions | |
|---------------------------|--------|---------------|----------------|----------------|------------|---------------------------------------|
| Package style | TO-220 | | | TO-247 | | |
| Power rating | watts | 20 | 35 | 50 | 100 | Heatsink with 25°C flange temperature |
| Power rating | watts | 1.5 | 2.5 | 3 | 3.5 | Without heatsink, in free air 25°C |
| Limiting element voltage | volts | 350 | | | 700 | dc or ac rms |
| Resistance range | ohms | R05 – 10K | | | | |
| Dielectric strength | volts | 1800 | | | | ac rms for 60s |
| Working temperature range | °C | -65 to 150 | | -65 to 175 | | |
| Insulation resistance | ohms | >10G | | | | Between terminals and tab |
| Tolerances | % | ≤1R0: ±5 | | >1R0: ±1, ±5 | | |
| TCR | ppm/°C | ≤R20: ±1000 | >R20–R30: ±300 | >R30–10R: ±100 | >10R: ±50 | 25 to 105°C |
| Standard values | | E24 preferred | | | | |

Physical Data

| Dimensions (mm) & Weight (g) | | | | |
|------------------------------|-------------|-------------|--|--|
| | TO-220 | TO-247 | | |
| A | 10.16 ±0.25 | 15.75 ±0.26 |  | |
| B | 14.75 ±0.25 | 20.7 ±0.26 | | |
| C | 4.44 ±0.38 | 4.95 ±0.26 | | |
| D | 3.75 ±0.2 | 3.63 ±0.1 | | |
| E | 13.7 ±1 | 14.48 ±1.27 | | |
| F | 4 max. | 2.79 ±0.76 | | |
| G | 5.08 ±0.25 | 3.63 ±0.18 | | |
| H | 0.78 ±0.08 | 1.52 ±0.1 | | |
| J | 1.3 ±0.1 | 10.16 ±0.26 | | |
| K | 6.1 ±0.25 | 5.33 ±0.26 | | |
| L | 0.55 ±0.15 | 0.81 ±0.26 | | |
| M | 2.3 ±0.25 | 2.41 ±0.26 | | |
| Wt | 2.0 nom. | 3.7 nom. | | |

Performance Data

| Test | Performance |
|---|-------------|
| Load at Rated Power: 2000hrs at rated power | ±ΔR% 1 |
| Short Term Overload: 2 x rated power with applied voltage not to exceed 1.5 x maximum continuous operating voltage for 5 seconds | ±ΔR% 0.5 |
| Damp Heat with Load: 40 ±2°C, 90 – 95% RH, maximum working voltage 1.5 hours on, 0.5 hours off, 1000 hours | ±ΔR% 1 |
| Thermal Shock: -65°C/150°C, 100cycles | ±ΔR% 0.3 |
| Terminal Strength: 2.4N pull test | ±ΔR% 0.2 |

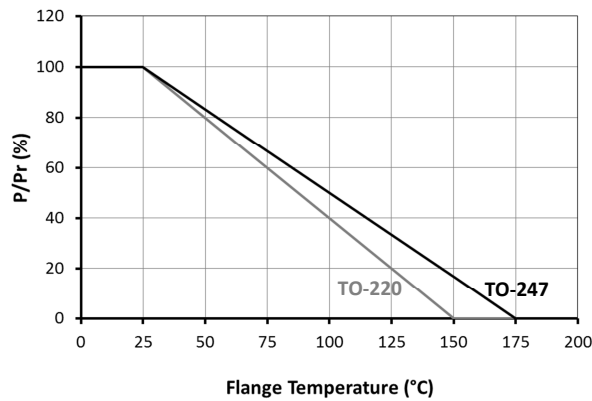
General Note

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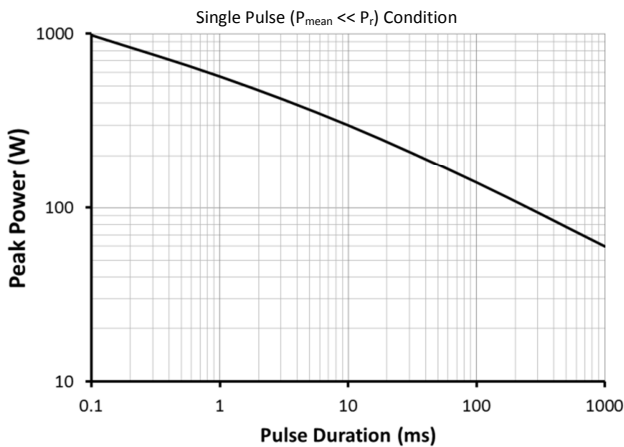
Heatsink Mount High Power Resistors

WMHP Series

Temperature Derating

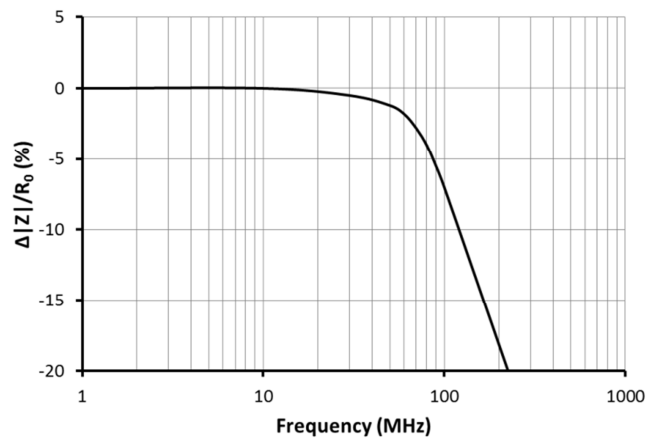


Pulse Performance



Pulse performance for durations ≥1s is dependent on mounting conditions. The short term overload power limit is 2 x power rating for 5s.

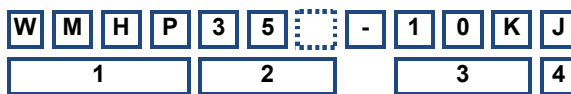
Typical High Frequency Performance



Typical high frequency characteristics for WMHP35-220R. Self resonant frequency is 1GHz.

Ordering Procedure

Example: WMHP35-10KJ (WMHP35 at 10 kilohms ±5%, Pb-free)



| 1 Type | 2 Rating | 3 Value | 4 Tolerance | Packing |
|-----------|-------------|------------------|----------------|---|
| WMHP | 20 | 3 / 4 characters | F = ±1% | Plastic tubes TO-220: 50/tube TO-247: 30/tube |
| | 35 | R = ohms | J = ±5% | |
| | 50 | K = kilohms | | |
| | 100 | | | |

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