



**THE DATASHEET OF
AP101 1R F**



AP101 100W TO-247 High Power Resistors **ARCOL**

- 100 watts at 25°C case temperature heat sink mounted
- TO-247 style power package
- Single screw mounting to heat sink
- Moulded case for protection
- Electrically isolated case
- Non-Inductive design
- RoHS Compliant



Characteristics

| | |
|---------------------------|--|
| Tolerance (Code): | ± 1% (F), ± 5% (J), ± 10% (K) |
| Operating temperature: | -65°C to +175°C |
| Temperature coefficient: | ± 50ppm/°C to ± 300ppm/°C (re to ohmic values), referenced to 25°C, ΔR taken at +105°C |
| Operating voltage: | 700V max |
| Dielectric strength: | 1800Vac 60 seconds, ΔR±0.15% |
| Insulation resistance: | 10G min |
| Maximum torque: | 0.9 Nm |
| Free air: | 25°C, rated at 3.5W |
| Load Life | ΔR±1.0%, Rated power, 2,000 hours |
| Solderability | 90% min. coverage, 245±5°C for 3 seconds |
| Momentary Overload | ΔR±0.5%, 1.5 times rated power and V (dc) ≤ 1.5VMax. for 5 seconds |
| Moisture resistance | ΔR±0.5%, -10°C - +65°C, RH>90%, cycle 240 hours |
| Thermal Shock | ΔR±0.5%, -65°C - 150°C, 100 cycles |
| Terminal Strength | ΔR±0.2%, (Pull Test) 2.4N |
| Vibration, High Frequency | ΔR±0.4%, 20g peak |

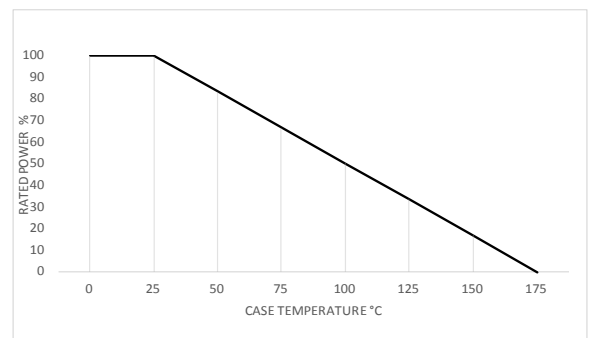
Ordering Procedure

Standard Resistor: Series, Resistance Value, Tolerance Code, TCR
 eg: AP101 10K J 50ppm

Electrical Specifications

| Value Range | Tolerance Pref. Value Range | TCR (ppm/°C) |
|--------------|-----------------------------|---|
| R05 - 1R | ± 1% (F) | Not specified |
| > 1R - 3R | E12, E24, E96 | ± 300ppm/°C |
| > 3R - 10R | ± 5% (J) E12, E24 | ± 100ppm/°C, ± 200ppm/°C |
| > 10R - 100K | ± 10% (K) E12 | ± 50ppm/°C, ± 100ppm/°C, ± 200ppm/°C |

Derating Curve



The case temperature is to be used for the definition of the applied power limit
 The case temperature measurement must be made with a thermocouple contacting the centre of the component mounted on the designed heat sink
 Thermal grease should be applied properly

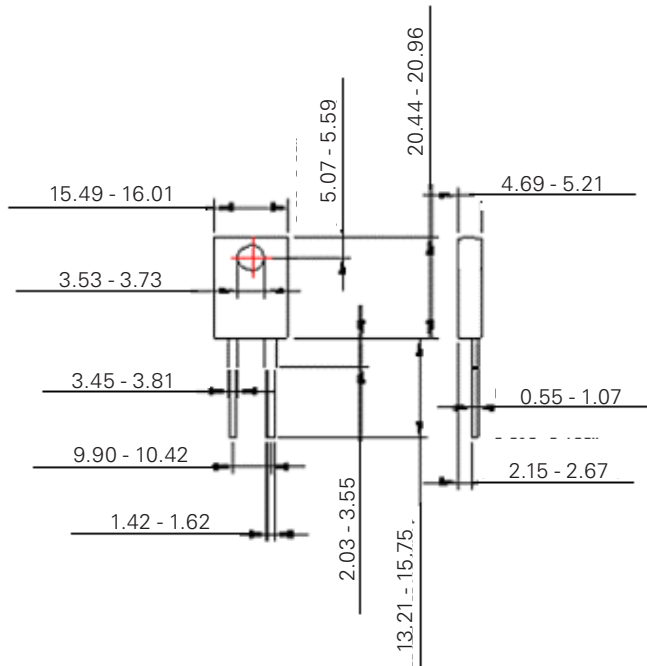
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The information contained herein does not form part of a contract and is subject to change without notice. Arcol operate a policy of continual product development, therefore, specifications may change.

It is the responsibility of the customer to ensure that the component selected from our range is suitable for the intended application. If in doubt please ask Arcol.

Dimensions (mm)



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