

# 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                                                                      |

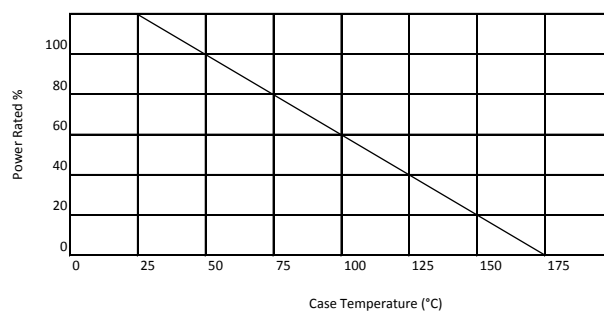
## Ordering Procedure

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

## Electrical Specifications

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

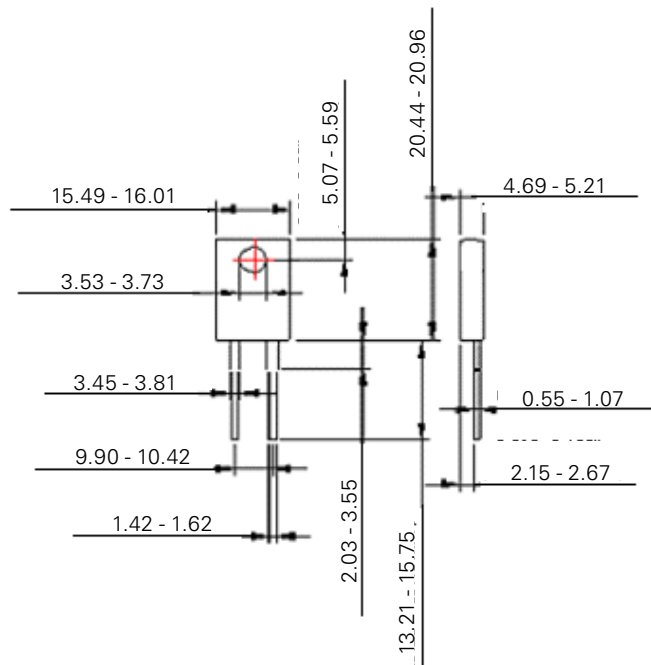
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The information contained herein does not form part of a contract and is subject to change without notice. Arcol operate a policy of continual product development, therefore, specifications may change.

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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# Mouser Electronics

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## Ohmite:

[AP101 82R J 100PPM](#) [AP101 5K J 100PPM](#) [AP101 56R F 50PPM](#) [AP101 3R9 J 100PPM](#) [AP101 68R J 100PPM](#)  
[AP101 2K2 F 50PPM](#) [AP101 150R J 100PPM](#) [AP101 8R2 J 100PPM](#) [AP101 390R F 50PPM](#) [AP101 680R F 50PPM](#)  
[AP101 1K J 100PPM](#) [AP101 3K3 F 50PPM](#) [AP101 100R F 50PPM](#) [AP101 2K7 F 50PPM](#) [AP101 33R F 50PPM](#)  
[AP101 470R F 50PPM](#) [AP101 220R F 50PPM](#) [AP101 390R J 100PPM](#) [AP101 27R J 100PPM](#) [AP101 100R J](#)  
[100PPM](#) [AP101 25R F 50PPM](#) [AP101 2R7 F](#) [AP101 R07 J](#) [AP101 820R F 50PPM](#) [AP101 10R J 100PPM](#) [AP101](#)  
[3R3 J 100PPM](#) [AP101 560R J 100PPM](#) [AP101 33R J 100PPM](#) [AP101 15R J 100PPM](#) [AP101 560R F 50PPM](#)  
[AP101 1K5 F 50PPM](#) [AP101 8K2 F 50PPM](#) [AP101 8R2 F 50PPM](#) [AP101 1R2 F](#) [AP101 5R J 100PPM](#) [AP101 68R F](#)  
[50PPM](#) [AP101 39R F 50PPM](#) [AP101 R08 J](#) [AP101 270R F 50PPM](#) [AP101 680R J 100PPM](#) [AP101 1K2 J 100PPM](#)  
[AP101 180R F 50PPM](#) [AP101 4R7 F 100PPM](#) [AP101 6R8 F 50PPM](#) [AP101 56R J 100PPM](#) [AP101 27R F 50PPM](#)  
[AP101 1K F 50PPM](#) [AP101 330R F 50PPM](#) [AP101 4R7 J 100PPM](#) [AP101 5K F 50PPM](#) [AP101 R3 J](#) [AP101 2R5 J](#)  
[AP101 10R F 50PPM](#) [AP101 12R F 50PPM](#) [AP101 270R J 100PPM](#) [AP101 4K7 F 50PPM](#) [AP101 47R J 100PPM](#)  
[AP101 39R J 100PPM](#) [AP101 470R J 100PPM](#) [AP101 5R F 50PPM](#) [AP101 R8 J](#) [AP101 50R J 100PPM](#) [AP101 5R6](#)  
[J 100PPM](#) [AP101 12R J 100PPM](#) [AP101 120R F 50PPM](#) [AP101 10K J 100PPM](#) [AP101 5R6 F 50PPM](#) [AP101 5K6 J](#)  
[100PPM](#) [AP101 180R J 100PPM](#) [AP101 1K2 F 50PPM](#) [AP101 50R F 50PPM](#) [AP101 22R F 50PPM](#) [AP101 47R F](#)  
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[AP101 3K9 F 50PPM](#) [AP101 1R8 F](#) [AP101 82R F 50PPM](#) [AP101 2R5 F](#) [AP101 R4 J](#) [AP101 820R J 100PPM](#)  
[AP101 R6 J](#) [AP101 R06 J](#) [AP101 2K7 J 100PPM](#) [AP101 2K2 J 100PPM](#) [AP101 2K5 J 100PPM](#) [AP101 25R J](#)  
[100PPM](#) [AP101 220R J 100PPM](#) [AP101 10K F 50PPM](#) [AP101 22R J 100PPM](#) [AP101 3K3 J 100PPM](#) [AP101 1K5 J](#)  
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[100PPM](#)