



**THE DATASHEET OF  
AP101 1K J**



# 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

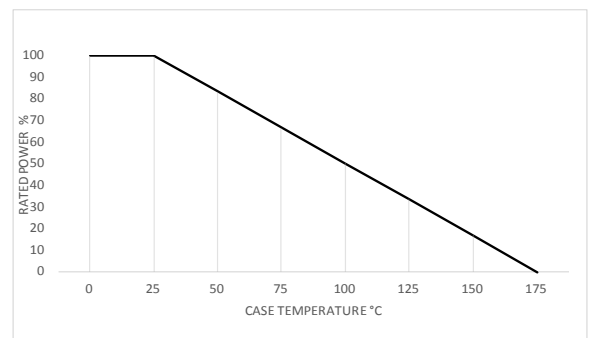
## Ordering Procedure

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

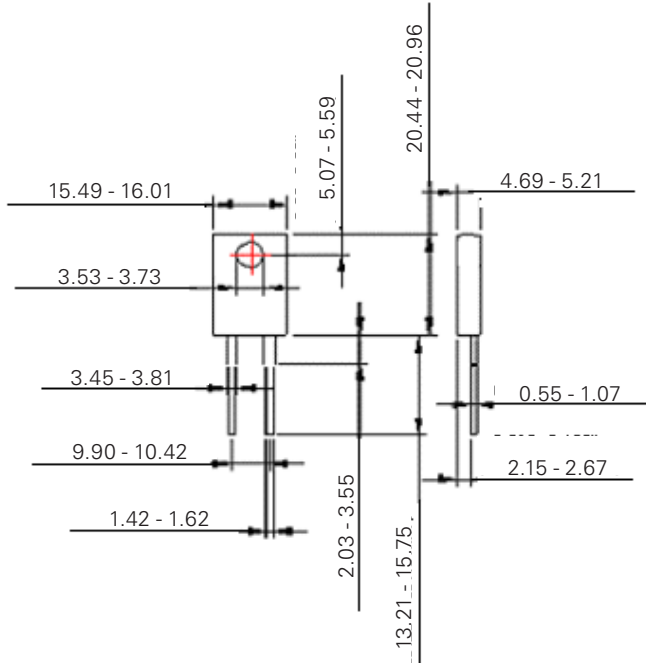
ARCOL UK Limited,  
 Threemilestone Ind. Estate,  
 Truro, Cornwall, TR4 9LG, UK.  
 T +44 (0) 1872 277431  
 F +44 (0) 1872 222002  
 E sales@arcolresistors.com

[www.arcolresistors.com](http://www.arcolresistors.com)

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)



ARCOL UK Limited,  
Threemilestone Ind. Estate,  
Truro, Cornwall, TR4 9LG, UK.  
T +44 (0) 1872 277431  
F +44 (0) 1872 222002  
E [sales@arcolresistors.com](mailto:sales@arcolresistors.com)



[www.arcolresistors.com](http://www.arcolresistors.com)

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.

## Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

-  [View AP101 1K J on WIN SOURCE](#)
-  [Ohmite Information](#)

## Optimize Your Supply Chain with WIN SOURCE Solutions

-  Global Sourcing Solution
-  Obsolete Management
-  Cost Control Management
-  Shortage Management
-  Alternative Solution
-  Excess Inventory Management