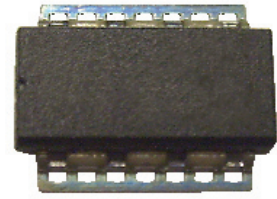


# ASP10 10W High Power Non-Inductive SMD Resistors **ARCOL**

A non-inductive surface mount resistor pack capable of dissipating 10 watts with the use of a suitable thermal pcb pad. With low thermal resistance in each axis, this is a unique SOIC resistor package



- Power Dissipation 10 watts
  - Value Range R1 to 100K
  - Tolerance Options  $\pm 1\%$  or  $\pm 5\%$
  - TCR Options  $\pm 100\text{ppm}/^\circ\text{C} \geq 10\text{R}$
  - Maximum Voltage 500Vdc or  $\sqrt{(P \cdot R)}$
  - Dielectric Strength 4000 Vdc
  - Special Features Non inductive, suited to inrush current protection
- RoHS Compliant

## Characteristics

Items	Specification	Test Conditions
Power Rating	10 Watts	25°C ambient. (Note 1)
Short time overload	50W for 5 seconds	25°C ambient. (Note 1)
Resistance Range	R1 to 100K	
TCR (ppm/°C), (see note 2.)	100ppm/°C 10Ω and above	-55°C to +155°C
Tolerance	$\pm 1\%$ and $\pm 5\%$	
Operating Temp. Range	-55°C to +155°C	
Max. Operating Voltage	500Vdc or $\sqrt{(P \cdot R)}$	
Dielectric Withstanding Voltage	4000 Vdc	60 seconds
Load Life	$\Delta R \pm(1\% + 0.05\Omega)$	25°C, 90 min On, 30 min Off, 1000 Hours
Humidity	$\Delta R \pm(1\% + 0.05\Omega)$	40°C, 90-95% RH, dc 0.1W, 1000 Hours
Temp. Cycle	$\Delta R \pm(0.25\% + 0.05\Omega)$	-55°C, 30 min, +155°C, 30 min, 5 cycles
Soldering Heat (Max.)	$\Delta R \pm(0.25\% + 0.05\Omega)$	$\pm 250^\circ\text{C}$ , 3 seconds
Solderability	Min. 95% coverage	$\pm 230^\circ\text{C}$ , 3 seconds
Insulation Resistance	Over 1,000 MΩ	Between terminals and tab.
Vibration	$\Delta R \pm(0.25\% + 0.05\Omega)$	

### Notes:

1. Tested in accordance with JD51 mounting instructions, in 5W application, 10W available.
2. Contact sales office for custom products, non-standard values and tolerances.

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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.

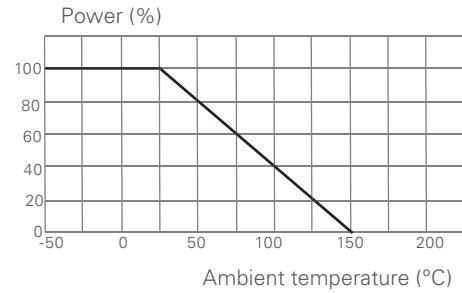
# ASP10 10W High Power Non-Inductive SMD Resistors



## Ordering Procedure

Standard Resistor: Series, Resistance and Tolerance Code.  
E.g. ASP10 R01 F

## Derating Curve



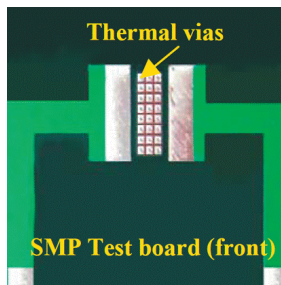
## Mounting Guidelines

### Introduction

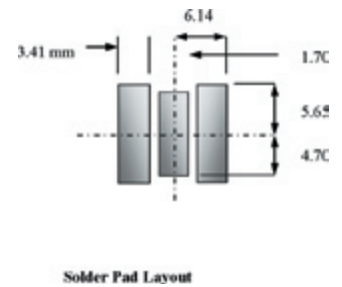
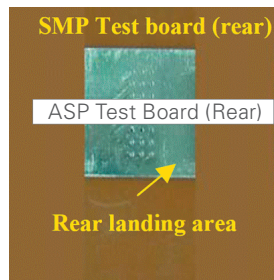
The power resistor has extremely low thermal resistances in each axis for maximum conducted, radiated and convection heat dissipation. Using the JEDEC standard JD-51 as a guideline, coupled with your thermal design experience in power semiconductors, you can maximise the potential of this unique SOIC style power resistor.

### 5W PCB Example

A small 40mm x 40mm, 5W, 4layer test board configuration is illustrated to demonstrate the superior high performance of the ASP power resistor using minimum real estate.

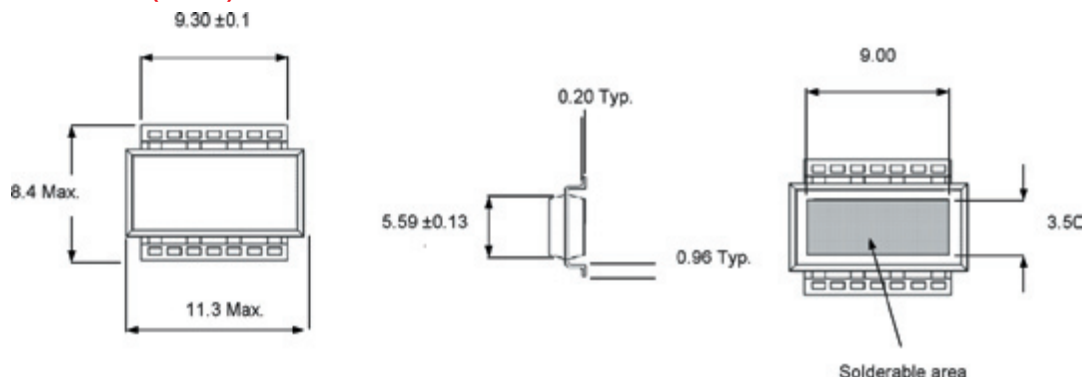


ASP Test Board (Front)



Solder Pad Layout

## Dimensions (mm)



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