

# AP851 50 Watts TO-220 High Power Resistors



A high power TO-220 style resistor package designed for high frequency emitter circuits in switching power supplies. Also used in voltage regulation and low energy pulse loading.

- 50 Watts at 25°C case temperature on heat sink
- Single screw mounting to heat sink
- Moulded case for protection and easy to mount
- Non-inductive design
- Electrically isolated case
- RoHS Compliant



## Characteristics

Power rating:	2.25 Watts in free air
Operating voltage:	420V max
Dielectric strength:	1800Vac
Insulation resistance:	10GΩ min
Temperature coefficient:	As specified, referenced to 25°C, ΔR taken at +105°C
Short time overload:	ΔR ±0.3%, 2 times rated power with applied voltage not to exceed 1.5 times maximum continuous operating voltage for 5 seconds
Load life:	ΔR ±1.0%, 2000 hours at rated power
Damp heat with load:	ΔR ±0.5%, 40 ±2°C, 90 - 95% R.H max working voltage for 1000 hours with 1.5 hours "ON" and 0.5 hours "OFF"
Solderability:	90% min coverage, 245 ±5°C for 3 seconds
Thermal shock:	ΔR ±0.3%, -65°C - 150°C, 100 cycles
Terminal strength:	ΔR ±0.2%, 2.4 N
Vibration and high frequency:	ΔR ±0.2%, 20g peak

## Electrical Specifications

Resistance Value Range	Available Tolerance & Pref. Value Ranges	Available TCR
R1 - 1R	J (±5%) K (±10%)	Not specified
1R02 - 3R	F (±1%) , J (±5%) , K (±10%)	±300ppm/°C
3R01 - 10R		±100ppm/°C ±200ppm/°C
10R2 - 10K	D (±0.5%) F (±1%) J (±5%) K (±10%)	±50ppm/°C ±100ppm/°C ±200ppm/°C

Preferred value ranges:  
F (±1%) - E96 , J (±5%) - E24, K (±10%) - E12

## Derating Curve



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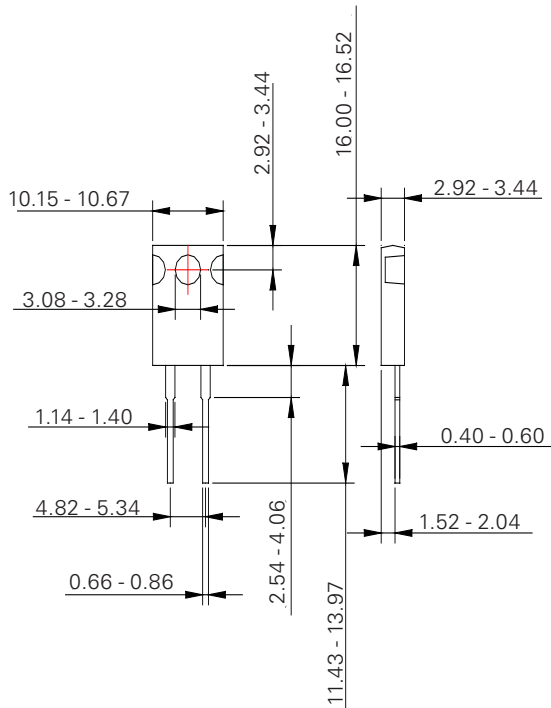
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It is the responsibility of the customer to ensure that the component selected from our range is suitable for the intended application. If in doubt please ask ARCOL.

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## Dimensions (mm)



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# Mouser Electronics

Authorized Distributor

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## Ohmite:

[AP851 1K F 50PPM](#) [AP851 5K J 100PPM](#) [AP851 39R F 50PPM](#) [AP851 2K7 F 50PPM](#) [AP851 1K5 J 100PPM](#)  
[AP851 180R F 50PPM](#) [AP851 R2 J](#) [AP851 R3 J](#) [AP851 1R8 J](#) [AP851 470R F 50PPM](#) [AP851 39R J 100PPM](#)  
[AP851 2K2 J 100PPM](#) [AP851 3K9 J 100PPM](#) [AP851 100R J 100PPM](#) [AP851 68R J 100PPM](#) [AP851 5R F 100PPM](#)  
[AP851 2R2 F](#) [AP851 25R J 100PPM](#) [AP851 18R F 50PPM](#) [AP851 10R J 100PPM](#) [AP851 8K2 F 50PPM](#) [AP851](#)  
[220R J 100PPM](#) [AP851 120R J 100PPM](#) [AP851 4K7 F 50PPM](#) [AP851 27R F 50PPM](#) [AP851 82R J 100PPM](#) [AP851](#)  
[2R7 J](#) [AP851 27R J 100PPM](#) [AP851 R5 J](#) [AP851 3K9 F 50PPM](#) [AP851 1R8 F](#) [AP851 R4 J](#) [AP851 2K5 J 100PPM](#)  
[AP851 5K F 50PPM](#) [AP851 10R F 100PPM](#) [AP851 680R J 100PPM](#) [AP851 R7 J](#) [AP851 R8 J](#) [AP851 330R F 50PPM](#)  
[AP851 22R J 100PPM](#) [AP851 4K7 J 100PPM](#) [AP851 560R F 50PPM](#) [AP851 5K6 J 100PPM](#) [AP851 150R J 100PPM](#)  
[AP851 100R F 50PPM](#) [AP851 R6 J](#) [AP851 6R8 F 100PPM](#) [AP851 5R6 J 100PPM](#) [AP851 5K6 F 50PPM](#) [AP851](#)  
[2K7 J 100PPM](#) [AP851 1K8 F 50PPM](#) [AP851 50R J 100PPM](#) [AP851 1K5 F 50PPM](#) [AP851 270R F 50PPM](#) [AP851](#)  
[8R2 J 100PPM](#) [AP851 470R J 100PPM](#) [AP851 6K8 J 100PPM](#) [AP851 10K F 50PPM](#) [AP851 680R F 50PPM](#) [AP851](#)  
[1R5 F](#) [AP851 120R F 50PPM](#) [AP851 5R6 F 100PPM](#) [AP851 2R5 J](#) [AP851 15R J 100PPM](#) [AP851 47R J 100PPM](#)  
[AP851 12R J 100PPM](#) [AP851 18R J 100PPM](#) [AP851 22R F 50PPM](#) [AP851 1K8 J 100PPM](#) [AP851 3K3 J 100PPM](#)  
[AP851 8R2 F 100PPM](#) [AP851 270R J 100PPM](#) [AP851 2R2 J](#) [AP851 6K8 F 50PPM](#) [AP851 390R F 50PPM](#) [AP851](#)  
[150R F 50PPM](#) [AP851 820R J 100PPM](#) [AP851 1K2 F 50PPM](#) [AP851 820R F 50PPM](#) [AP851 330R J 100PPM](#)  
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[100PPM](#) [AP851 R1 J](#) [AP851 1K2 J 100PPM](#) [AP851 3K3 F 50PPM](#) [AP851 56R J 100PPM](#) [AP851 6R8 J 100PPM](#)  
[AP851 33R J 100PPM](#) [AP851 220R F 50PPM](#) [AP851 560R J 100PPM](#) [AP851 R9 J](#)