

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 (std.) ±200ppm/°C |
| 10R2 - 10K | D (±0.5%) F (±1%) J (±5%) K (±10%) | ±50ppm/°C ±100ppm/°C (std.) ±200ppm/°C |

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

Derating Curve



For more information and ordering, please consult
www.arcolresistors.com

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Dimensions (mm)



Standard part numbers

| | | | |
|-----------|-----------|------------|------------|
| AP8511RF | AP8514R7J | AP85125RJ | AP851330RJ |
| AP8511RJ | AP85110RF | AP85147RJ | AP851470RJ |
| AP8512RJ | AP85110RJ | AP851100RF | AP8511KJ |
| AP8513R3J | AP85115RJ | AP851100RJ | AP85110KJ |
| AP8513R9J | AP85125RF | AP851220RJ | |

Ordering Information

A P 8 5 1 1 0 0 R F N

| Series | Resistance | Tolerance | TCR |
|--------|------------|-----------|------------------|
| | | F = 1% | N = 50ppm |
| | | J = 5% | L = 200ppm |
| | | K = 10% | Blank = standard |

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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.