

# AP821 20 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.

- 20 Watts at 25°C case temperature on 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:	350V max
Dielectric strength:	1800Vac
Insulation resistance:	10GΩ min
Working temperature range:	-65°C to +150°C
Temperature coefficient:	As specified, referenced to 25°C, ΔR taken at +105°C
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
R05 - 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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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)



## Ordering Procedure

Standard Resistor: Series, Resistance Value, Tolerance Code, TCR

eg: AP821 10K J  $\pm$  50ppm/ $^{\circ}$ C

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