

AP821 20W TO-220 High Power Resistors



- 20 watts at 25°C case temperature heat sink mounted
- TO-220 style power package
- Moulded case for protection
- Electrically isolated case
- Non-Inductive design
- RoHS compliant

Characteristics

Value Range	TCR (PPM/°C)			
	±0.5%	±1%	±5%	±10%
R05 - R1			Not specified	Not specified
R1 - 1R			Not specified	Not specified
1R - 3R		±300	±300	±300
3R - 10R		±100 ±200	±100 ±200	±100 ±200
10R - 10K	±50 ±100 ±200	±50 ±100 ±200	±50 ±100 ±200	±50 ±100 ±200

Operating voltage 350V Max.
Dielectric strength: 1800VAC
Insulation resistance: 10GW min
Working temperature range:-65°C to +150°C
Resistance value < 1R available

Lead material: Tinned copper

Without a heat sink

When in free air at 25°C, the AP821 is rated for 3W

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

Item	Requirement	Test Method
Temperature Coefficient of Resistance (T.C.R.)	As Spec.	Referenced to 25°C, ΔR taken at +105°C
Load Life	ΔR±1.0%	Rated power, 2,000 hours
Solderability	90% min. coverage	245±5°C for 3 seconds ±0.5s
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
Humidity (steady state)	ΔR±0.5%	40±2°C 90-95% RH, 1.5 hours on and 0.5 hours off, total 1000 - 1048 hours
Thermal Shock	ΔR±0.3%	-65°C - 150°C, 100 cycles
Terminal Strength	ΔR±0.2%	(Pull Test) 2.4N
Vibration, High Frequency	ΔR±0.2%	MIL-STD-202F, Method 204, Cond. D

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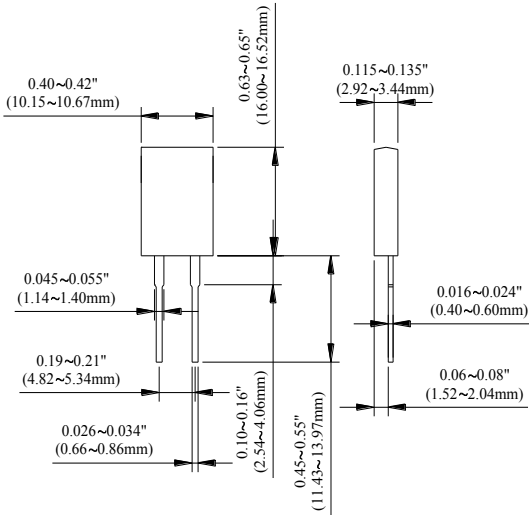
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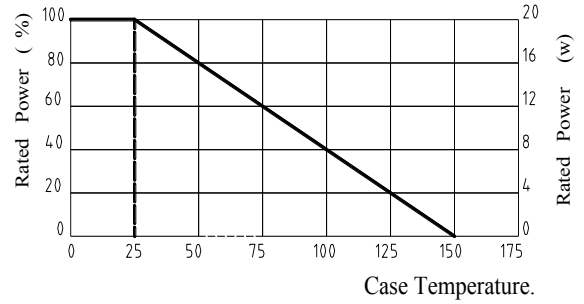
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Dimensions



Derating Curve



Ordering Procedure

Standard resistor: Series, Resistance, Tolerance Code, TCR
 eg: AP821 10R J 200ppm

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