# 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 proctection and easy to mount
- Non-inductive design
- Electrically isolated case
- RoHS Compliant

#### **Characteristics**

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	84	7
2		
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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, $\Delta R$ taken at +105°C
Short time overload:	$\Delta R$ ±0.3%, 2 times rated power with applied voltage not to exceed 1.5 times maximum continuous
	operating voltage for 5 seconds
Load life:	∆R ±1.0%, 2000 hours at rated power
Damp heat with load:	$\Delta R$ ±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:	∆R ±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%) ,	±300ppm/°C		
3R01 - 10R	K (±10%)	±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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#### 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	Ν
Series		Re	sistar	ice	I	olera	Ince	I TCR
					F	= 19	6	N = 50ppm

istance	l olerance	ICR		
	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.

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