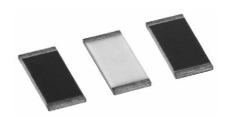
<u>GREEN</u> (5-2008)**



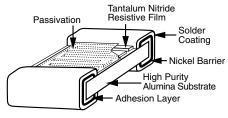


Precision Automotive Thin Film Chip Resistors, AEC-Q200 Qualified, 2 kV ESD Rating



These chip resistors are available in wraparound terminations styles in 8 case sizes. They incorporate self passivated enhanced tantalum nitride resistor film to give superior performance on moisture resistance, electrostatic discharge, voltage coefficient, power handling and resistance stability. The terminations consist of an adhesion layer, a leach resistant nickel barrier, and solder coating (lead (Pb)-free). This product will out-perform all requirements of AEC-Q200.

CONSTRUCTION



FEATURES

- Resistance range: 10 Ω to 3 M Ω
- AEC-Q200 qualified
- AEC-Q200 ESD rated class 1C (2 kV)
- · Laser trimmed to any value
- Moisture resistant to MIL-STD-202, method 202
- Tantalum nitride resistor film on high purity alumina substrate
- 100 % visual inspected per MIL-PRF-55342
- Laser-trimmed tolerances to ± 0.1 %
- Load life stability < 0.05 % at 1000 h at 70 °C
- Very low noise and voltage coefficient (< - 30 dB, < 0.1 ppm/V)
- Compliant to RoHS directive 2002/95/EC

TYPICAL PERFORMANCE

	ABSOLUTE
TCR	25
TOL.	0.1

TEST	SPECIFICATIONS	CONDITIONS
Material	Tantalum nitride	-
Resistance Range	10 Ω to 3 MΩ	-
TCR: Absolute	± 25 ppm/°C to ± 100 ppm/°C	- 55 °C to + 125 °C
Tolerance: Absolute	± 0.1 % to ± 1.0 %	+ 25 °C
Stability: Absolute	± 0.05 %	2000 h at 70 °C rated power
Stability: Ratio	Not applicable	-
Voltage Coefficient	Less than 0.1 ppm/V	-
Working Voltage	75 V to 200 V	-
Operating Temperature Range	- 55 °C to + 150 °C	-
Storage Temperature Range	- 55 °C to + 150 °C	-
Noise	< - 30 dB	-
Shelf Life Stability: Absolute	100 ppm	1 year at 25 °C

COMPONENT RATINGS						
CASE SIZE	POWER RATING (mW)	WORKING VOLTAGE (V)	RESISTANCE RANGE (Ω)			
0402	50	75	20 to 35K			
0603	150	75	10 to 80K			
0805	200	100	10 to 301K			
1206	400	200	10 to 1M			
1505	400	150	10 to 1M			
2208	750	150	10 to 1.75M			
2010	800	200	10 to 2M			
2512	1000	200	10 to 3M			

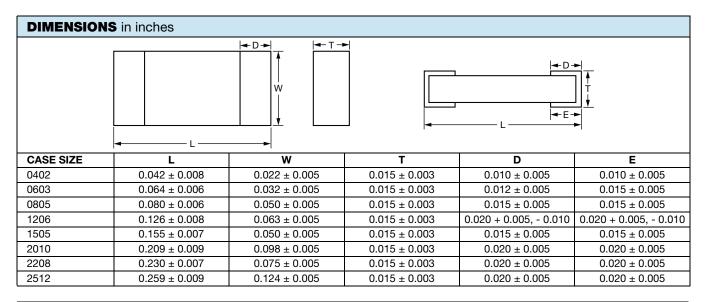
^{**} Please see document "Vishay Material Category Policy": www.vishay.com/doc?99902

Document Number: 60024 Revision: 25-Aug-10

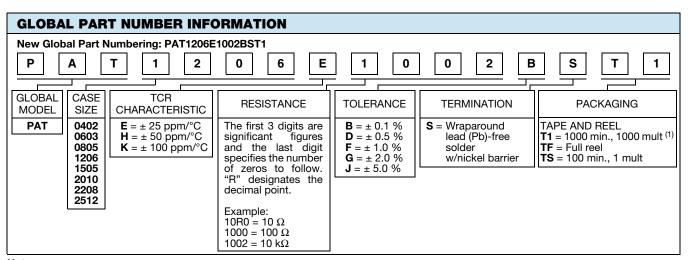
Vishay Thin Film

Precision Automotive Thin Film Chip Resistors, AEC-Q200 Qualified, 2 kV ESD Rating





ENVIRONMENTAL TESTS (Vishay Performance vs. AEC-Q200 Requirements)						
ENVIRONMENTAL TEST		CONDITIONS	LIMITS PER AEC-Q200	TYPICAL VISHAY PERFORMANCE		
Resistance Temperature Characteristic		- 55 °C to + 125 °C	± 50 ppm/°C	± 35 ppm/°C		
Max. Ambient Temp. at Rated Wattage			+ 70 °C	+ 70 °C		
Max. Ambient Temp. at Power Derating			+ 150 °C	+ 150 °C		
High Temperature Storage	ΔR	MIL-STD-202, 108, 1000 h at 125 °C	± 0.1 %	+ 0.016 %		
Temperature Cycling	ΔR	JESD22, JA-104, 1000 cycles, - 55 °C to + 125 °C	± 0.15 %	+ 0.013 %		
Moisture Resistance	ΔR	MIL-STD-202, 106	± 0.20 %	+ 0.0010 %		
Biased Humidity	ΔR	MIL-STD-202, 103, 1000 h at 85 °C, 85 % RH, 10 % P	± 0.10 %	+ 0.0297 %		
Life	ΔR	MIL-STD-202, 108 at 125 °C, 1000 h	± 0.1 %	+ 0.0220 %		
Mechanical Shock	ΔR	MIL-STD-202, method 213, condition C	± 0.1 %	+ 0.0130 %		
Vibration	ΔR	MIL-STD-202 method 204, 10 Hz to 2 kHz	± 0.1 %	+ 0.0030 %		
Resistance to Soldering Heat	ΔR	MIL-STD-202, 204, condition B	± 0.10 %	+ 0.0150 %		
Electrostatic Discharge	ΔR	AEC-Q200-002 at 2 kV, human body	± 0.10 %	- 0.032 %		
Solderability	Visual	J-STD-002, method B and B1	95 %	Acceptable		
Terminal Strength	ΔR	AEC-Q200-006 at 1 kg for 60 s	± 0.10 %	+ 0.012 %		
Flame Retardance	Visual	AEC-Q200-001 para 4.0		Acceptable		



Note

(1) Preferred packaging code



Vishay

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