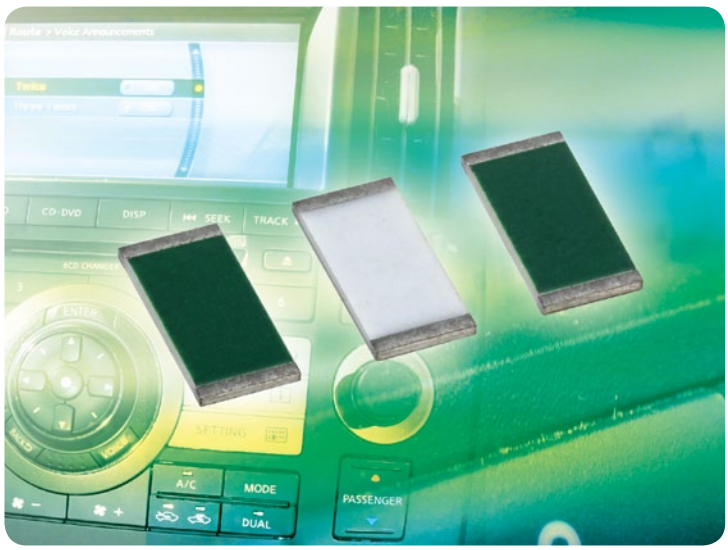
Resistors - AEC-Q200 Qualified Precision TF Chip

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



KEY BENEFITS

- Resistance range: 10 Ω to 3 MΩ
- Compliant to RoHS directive 2002/95/EC
- AEC-Q200 compliant
- AEC-Q200 ESD-rated Class 1C (2 kV)
- Moisture-resistant tantalum nitride resistor film on high-purity alumina substrate
- TCR of ± 25 ppm/°C
- Tolerances to ± 0.1 %
- Stable film and performance characteristics: < 0.05 % at 2000 hours at 70 °C
- Power rating to 1 W

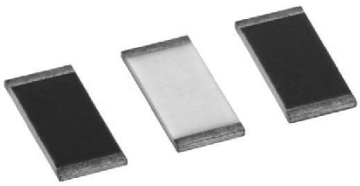
APPLICATIONS

- Automotive equipment
- Telecommunications
- Industrial equipment
- Test and measurement equipment

RESOURCES

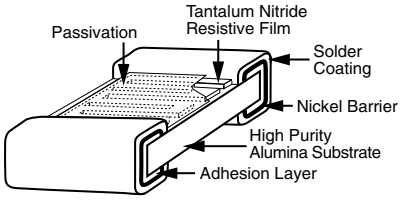
- Datasheet: PAT Series - http://www.vishay.com/doc?60024
- For technical questions contact thinfilm@vishay.com

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

Pb-free

RoHS COMPLIANT

GREEN (5-2008)**

- Resistance range: 10 Ω to 3 MΩ
- 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)
- Sulfur resistant (per ASTM B809-95 humid vapor test)
- Compliant to RoHS Directive 2002/95/EC

Note

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

TYPICAL PERFORMANCE

	ABSOLUTE
TCR	25
TOL.	0.1

STANDARD ELECTRICAL SPECIFICATIONS

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

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