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E/H MIL-PRF-55342-Qualified Thin Film SMD Resistor Chips With “T” Reliability Level

Product Benefits:

- Feature “T” reliability level for space applications
- Offered in 0505, 1005, 1505, 0705, 1206, and 1010 case sizes
- All-sputtered wraparound terminations ensure excellent adhesion and dimensional uniformity
- Feature a passivated Nichrome resistive element
- High-purity alumina substrate allows for high power ratings to 500 mW
- Very low noise of less than – 25 dB
- Low voltage coefficient of < 0.1 ppm/V
- Absolute TCR down to ± 25 ppm/°C
- Tolerances down to 0.1 %
- Offer a resistance range from 10 Ω to 1.69 M Ω , depending on case size and characteristics
- Provide a shelf-life stability of ± 0.01 %
- Operate over a temperature range of - 55 °C to + 125 °C



Market Applications:

- High-reliability military and aerospace applications with stringent performance requirements

The News:

Vishay’s MIL-PRF-55342-Qualified Thin Film SMD Resistor Chips Now Offer “T” Reliability Level for Space Applications

Vishay Intertechnology, Inc. (NYSE: VSH) has extended its E/H MIL-PRF-55342-qualified Thin Film surface-mount resistor chips in the 0505, 1005, 1505, 0705, 1206, and 1010 case sizes to offer a “T” reliability level for space applications.

- Established reliability is assured through 100 % screening and extensive environmental testing
 - 100 % group A, power conditioning, and Group B lot testing
- Verified in qualification to the American Society for Testing and Materials (ASTM E-595):
 - Standard test method for total mass loss (TML)
 - Collected volatile condensable materials (CVCM) from outgassing in a vacuum environment for space level requirements
- Undergo a burn-in period prior to shipment
- “T” level qualification on larger case sizes is pending
- Offered in waffle pack or tape-and-reel packaging



New Product Info



Product Group: Vishay Resistors, Thin Film / October 2010

Key Specifications:

Part	Case size	Power rating	Working voltage	Resistance range
M55342/02	0505	125 mW	40 V	20 Ω to 301 k Ω
M55342/03	1005	200 mW	75 V	10 Ω to 649 k Ω
M55342/04	1505	150 mW	125 V	10 Ω to 1.69 M Ω
M55342/06	0705	150 mW	150 V	10 Ω to 475 k Ω
D55342/07	1206	250 mW	100 V	10 Ω to 1.5 M Ω
M55342/10	1010	500 mW	75 V	49.9 Ω to 1 M Ω

The Perspective:

For high-reliability military and aerospace applications, the established reliability of Vishay's E/H MIL-PRF-55342-qualified Thin Film surface-mount resistor chips in the 0505, 1005, 1505, 0705, 1206, and 1010 case sizes is assured through 100 % screening and extensive environmental testing. This includes 100 % group A, power conditioning, and Group B lot testing, through which the devices have been rated and approved for a "T" reliability level for space applications. The Mil-PRF-55342 Thin Film resistors are verified in qualification to the American Society for Testing and Materials (ASTM E-595) standard test method for total mass loss (TML) and collected volatile condensable materials (CVCM) from outgassing in a vacuum environment for space level requirements. In addition, the resistors undergo a burn-in period prior to shipment.

Availability: Production quantities of the new devices are available now, with lead times of 16 to 20 weeks

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