

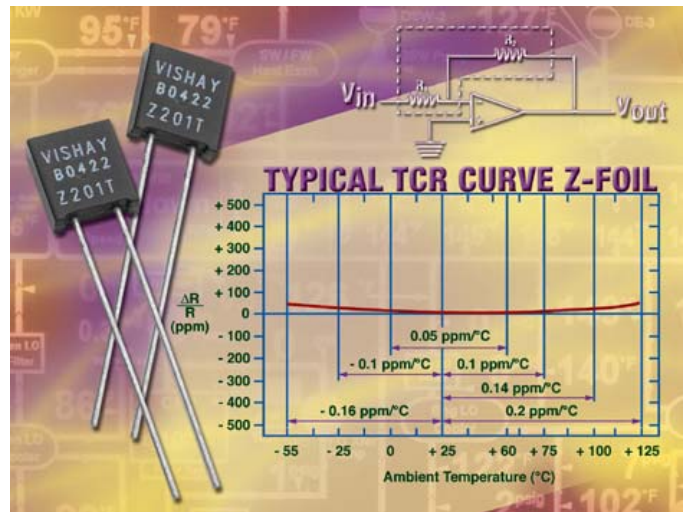


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## New Z201 Ultra-High-Precision Z-Foil Resistor

### The Key Benefits:

- Industry's first device to combine a very low TCR of  $\pm 0.05$  ppm/ $^{\circ}\text{C}$  from  $0^{\circ}\text{C}$  to  $+60^{\circ}\text{C}$  and  $\pm 0.2$  ppm/ $^{\circ}\text{C}$  from  $-55^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$ , an excellent PCR of  $\pm 5$  ppm at rated power, tight tolerances of  $\pm 0.005\%$ , and a load life stability of  $\pm 0.005\%$
- More than an order of magnitude better stability than any other resistor technology
- Features a non-inductive, non-capacitive design
- Functions as a drop-in replacement for the earlier S102C/K series of resistors
- Provides ESD protections above 25000 V, exceeding requirements for highest ESD standard classifications
- Reduces solution costs and need for end product testing



### The Key Applications:

- Precision amplifiers; high-precision instrumentation; medical and automatic test equipment; high-end stereo equipment; electron beam scanning and recording equipment; and military, aerospace, and down-hole equipment and instrumentation

### The News:

**Vishay's New Z201 Ultra-High-Precision Z-Foil Resistor is First to Combine Very Low Typical TCR of  $\pm 0.05$  ppm/ $^{\circ}\text{C}$  ( $0^{\circ}\text{C}$  to  $+60^{\circ}\text{C}$ ), Low PCR of  $\pm 5$  ppm at Rated Power, Tight Tolerances of  $\pm 0.005\%$  (50 ppm), and Electrostatic Discharge (ESD) Protection above 25,000 V**

Vishay Intertechnology, Inc. (NYSE: VSH) announces the improved Z201 ultra-high-precision Z-Foil resistor, the industry's first device to provide a very low TCR of  $\pm 0.05$  ppm/ $^{\circ}\text{C}$  from  $0^{\circ}\text{C}$  to  $+60^{\circ}\text{C}$  and  $\pm 0.2$  ppm/ $^{\circ}\text{C}$  from  $-55^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$ , an excellent PCR ("ΔR due to self heating") of  $\pm 5$  ppm at rated power, tight tolerances of  $\pm 0.005\%$ , and a load life stability of  $\pm 0.005\%$ .

- Revolutionary "Z-based" foil technology provides a significant reduction of the resistive component's sensitivity to ambient temperature variations (TCR) and applied power changes (PCR)
- Breakthrough level of stability, more than an order of magnitude better than any other resistor technology, allows designers to guarantee a high degree of accuracy in fixed-resistor applications
- ESD protection above 25000 V, well beyond the top requirements of all three of the highest ESD standard classifications, makes the Z201 exceptionally insensitive to ESD
- Specifications allow designers to rely on consistent resistor performance to overcome the limitations of other components and to reduce the need for end product testing



## Key Device Specifications:

- TCR of  $\pm 0.05$  ppm/ $^{\circ}\text{C}$  from  $0^{\circ}\text{C}$  to  $+60^{\circ}\text{C}$  and  $\pm 0.2$  ppm/ $^{\circ}\text{C}$  from  $-55^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$
- PCR of  $\pm 5$  ppm at rated power (0.6 W at  $70^{\circ}\text{C}$ , 0.3 W at  $125^{\circ}\text{C}$ )
- Tolerances of  $\pm 0.005\%$  (50 ppm)
- Load life stability of  $\pm 0.005\%$  for 2000 hours at  $70^{\circ}\text{C}$
- Resistance range of  $10\ \Omega$  to  $100\ \text{k}\Omega$
- ESD protection above 25000 V
- Current noise  $< -40$  dB
- Thermal EMF of  $0.1\ \mu\text{V}/^{\circ}\text{C}$  max (0.05 typical)
- Rise time of 1.0 ns without ringing

**The Perspective:** Vishay's new Z201 ultra-high-precision Z-Foil resistor is the industry's first device to combine a very low TCR of  $\pm 0.05$  ppm/ $^{\circ}\text{C}$  from  $0^{\circ}\text{C}$  to  $+60^{\circ}\text{C}$  and  $\pm 0.2$  ppm/ $^{\circ}\text{C}$  from  $-55^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$ , an excellent PCR of  $\pm 5$  ppm at rated power, tight tolerances of  $\pm 0.005\%$ , and a load life stability of  $\pm 0.005\%$ . The resistor's ESD of over 25000 V exceeds the requirements of all three of the highest ESD standard classifications, while its breakthrough level of stability allows designers to guarantee a high degree of accuracy in fixed-resistor applications.

**Availability:** Samples and production quantities of the improved Z201 Z-Foil resistor are available now, with lead times of four to six weeks for larger orders.

## Contact Information:

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