



Vishay Intertechnology's Thin Film High Frequency Chip Resistors Deliver More Power in Less Space, Without Need for a Heatsink

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CHEP Series Devices Offer Power Ratings Up to 2.8 W, High Frequency Operation to 50 GHz, and Low Parasitics in Compact 0402 and 0603 Case Sizes

MALVERN, Pa., Sept. 03, 2026 (GLOBE NEWSWIRE) -- Vishay Intertechnology, Inc. (NYSE: VSH) today introduced a new series of thin film chip resistors in compact 0402 and 0603 case sizes. Built on an advanced aluminum nitride (AlN) substrate, the Vishay Sfernice [CHEP](#) series combines exceptional power handling and high frequency performance in standard surface-mount footprints, allowing designers to achieve higher power density without sacrificing RF performance or increasing board space.

The CHEP series sets a new benchmark for power handling in its class. While competing solutions are often rated below 1 W, the devices released today deliver standard power ratings of 1.2 W in the 0402 case size and 1.8 W in the 0603 case size. When mounted per datasheet guidelines, power ratings increase by 50 % to 1.8 W and 2.8 W, respectively, enabling higher power density in smaller footprints.

The resistors operate across a wide frequency range and are available with flip-chip or wraparound terminals. When mounted as flip-chip devices, resistors in the 0402 case size achieve frequencies to 50 GHz, while wraparound active face-up mounting supports operation to 20 GHz. Devices in the 0603 case size support frequencies up to 40 GHz.

Designed to minimize internal reactance, the CHEP series features LC values as low as 1×10^{-24} . The resulting low parasitics reduce phase shift, maintain consistent impedance, and minimize noise to improve RF performance, while standard 0402 and 0603 case sizes enable easy integration into widely accepted land patterns, simplifying design and layout.

The devices are ideal for telecom and connectivity applications, including LEO satellites, base station terminals, 5G and 6G networks, and RF infrastructure such as remote radio units (RRUs) and antennas. Additional applications include aerospace and defense systems such as drones, satellite payloads, guidance and telemetry systems, data links, and phased array radar systems.

The resistors offer a resistance range from 20 Ω to 120 Ω with tolerances down to $\pm 1\%$ and a temperature coefficient of ± 100 ppm/ $^{\circ}\text{C}$, with ± 50 ppm/ $^{\circ}\text{C}$ available on request. RoHS-compliant, halogen-free, and Vishay Green, the devices operate over a temperature range from -55°C to $+155^{\circ}\text{C}$.

Samples and production quantities of the CHEP series are available now, with lead times of 16 weeks.

Vishay manufactures one of the world's largest portfolios of discrete semiconductors and passive electronic components that are essential to innovative designs in the automotive, industrial, computing, consumer, telecommunications, military, aerospace, and medical markets. Serving customers worldwide, Vishay is **The DNA of tech.**[®] Vishay Intertechnology, Inc. is a Fortune 1000 Company listed on the NYSE (VSH). More on Vishay at www.Vishay.com.

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Links to product datasheets:

<http://www.vishay.com/ppg253090> (CHEP)

Link to product photo:

<https://www.flickr.com/photos/vishay/albums/72177720335333919>

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