

ISSUE: [July 2025](#)

Current Sensing Resistor Handles 5 W In 2512 Chip Size

[Stackpole's](#) CSSU2512 metal alloy current sensing resistor stands out with an exceptional 5-W power rating in a standard 2512 chip size—a performance rarely seen in this footprint, according to the vendor (see the figure). This breakthrough is made possible by its robust all-metal construction, which not only enables higher power handling but also significantly reduces thermal resistance.

Through special thermally conductive materials and design, the CSSU2512 minimizes thermal stress on surrounding components and the PCB, ensuring superior long-term stability and reliability compared to similar shunt resistors of this size, says the vendor. The CSSU2512 is available in resistance values from 1 to 10 mΩ, in tolerances as low as 1% and 50 ppm TCR. For designs pushing the limits of power density, the CSSU2512 offers a unique solution, says the vendor.

In addition to its power handling, the AEC-compliant CSSU2512 is engineered for long-term reliability. The robust metal body structure eliminates concerns over mechanical, or solder joint stress caused by board flex or temperature gradients, making it well suited for demanding power management and control applications where durability and performance are paramount.

Pricing for the CSSU2512 depends on resistance value and volume and ranges from \$0.22 to \$0.30 each in full package quantities. Contact Stackpole or one of its franchised distribution partners for specific pricing. Or for more information, see the [datasheet](#) or email the [company](#).



Figure. The CSSU2512 metal alloy current sensing resistor.