

WSBE Power Metal Strip® Shunt Resistors Combine Low TCR Down to ± 10 ppm/°C, Resistance Down to $15 \mu\Omega$, and Power Ratings to 50 W in 8518 and 8536 Case Sizes to Save Space, Simplify Designs, and Increase Accuracy

Product Benefits:

- Low TCR down to ± 10 ppm/°C
 - Results from a combination of the devices' solid metal nickel-chrome alloy resistive element, which features a unique design, and the cut-outs around their pins
- A proprietary processing technique produces extremely low resistance values down to $15 \mu\Omega$
- High power ratings to 50 W
- Offered in the 8518 and 8536 case sizes
- AEC-Q200 qualified
- Feature an all-welded construction
- Low inductance values of < 5 nH
- Low thermal EMF down to $< 1.25 \mu\text{V}/^\circ\text{C}$
- Operating temperature range of -65°C to $+170^\circ\text{C}$
- RoHS-compliant, halogen-free, and [Vishay Green](#)



Market Applications:

- Current measurement in battery management systems (BMS) and chargers for electric (EV) and hybrid electric (HEV) vehicles; e-bikes, golf carts, and motorcycles; energy monitoring and metering systems; large battery systems; inverters for industrial motor drives and tools; and satellites.

The News:

Vishay Intertechnology introduces a new series of AEC-Q200 qualified Power Metal Strip® shunt resistors with industry-low TCR down to ± 10 ppm/°C. For automotive, energy, industrial, and space applications, Vishay Dale WSBE series devices offer extremely low resistance values down to $15 \mu\Omega$ and high power ratings to 50 W.

- The devices' unique design results in a mitigated TCR, while eliminating the need for temperature compensation and simplifying the calibration needed to a two-point process. It also simplifies the compensation software needed and reduces the number of components required to account for temperature shifts, which saves space and simplifies designs and product development to reduce costs and increase accuracy
- Combined with their high power ratings and lifetime stability, the resistors' low resistance values enable high current devices that can handle up to 1825 A with no noticeable resistance shift

The Key Specifications:

Part number	WSBE8518	WSBE8536
Size	8518	8536



NEW PRODUCT INFORMATION



Product Group: Vishay Dale, Resistors / March 2025

Power rating $P_{70\text{ }^{\circ}\text{C}}$	36 W	50 W
Tolerance	$\pm 5\%$	
Resistance range	30 $\mu\Omega$ to 100 $\mu\Omega$	15 $\mu\Omega$ to 50 $\mu\Omega$
TCR	$\pm 10\text{ ppm}/^{\circ}\text{C}$	
Temperature range	$-65\text{ }^{\circ}\text{C}$ to $+170\text{ }^{\circ}\text{C}$	
Thermal EMF	$< 1.25\text{ }\mu\text{V}/^{\circ}\text{C}$	

Availability:

Samples and production quantities of the WSBE series are available now, with a lead time of 30 weeks.

To access the product datasheet on the Vishay Website, go to
<http://www.vishay.com/ppg?30424> (WSBE)

Contact Information:

THE AMERICAS

Randy Pinkelman
randy.pinkelman@vishay.com

EUROPE

Andreas Hülsmann
andreas.huelsmann@vishay.com

ASIA/PACIFIC

Victor Goh
victor.goh@vishay.com