

Silicon Carbide (SiC) MOSFET

High Voltage and High Power Converters, Inverters, and Circuit Protection

VISHAY

The DNA of tech.

▶ WHERE TO HUNT

Target Customers: NVIDIA, Tesla, Rivian, Lucid, Redwood Materials, BorgWarner, Heron Power, GM, Ford, John Deere, Eaton, Emerson, Carrier, Advanced Energy, Lincoln Electric, Pika Energy, WEG, Form Energy, Honeywell, Boston Scientific, BAE, SpaceX, Amazon LEO, Astronics, SynQor, Generac

Door Opener Questions:

- Which power switch technology are you using today in your converter or inverter application, and what drove that choice?
- What voltage class and $R_{DS(on)}$ range are you targeting for this power stage, and what factors are most critical when selecting those values (thermal, efficiency, size)?
- Which package type are you considering for your design (TO-247, TO-263, Kelvin source, top-side cooled)?
- What switching frequency range are you targeting, and how much flexibility do you have regarding gate charge and gate drive performance?

Automotive: inverters, on-board / offboard chargers, power modules, high voltage compressors, high voltage BMS

AI / industrial: datacenters, instrumentation, energy storage, robotics, solar

Consumer / AMS / medical: appliances, HVAC, satellites, implants

▶ HOW TO SELL: Differentiate with Performance Data

“Vishay delivers high performance, differentiated SiC solutions by combining advanced process innovation with industry-leading packaging technologies.”

- Offering one of the broadest ranges of $R_{DS(on)}$ options to fit any power design
- Three voltage classes: 750 V, 1200 V, and 1700 V
- Top-side cooled packages for higher power density and thermal efficiency
- Higher short-circuit withstand capability

▶ HOW TO CLOSE: Technical Value-Selling

“Vishay brings a system-level perspective to high voltage power design, providing guidance on power semiconductor and passive components that work together to optimize performance, efficiency, and reliability.”

- Pull in support early: division market development & regional FAE
- Enable the customer: provide models, power topology analysis, and reference designs
- Reinforce with resources: infographics, white papers, application notes, toolkits, videos, tailored follow-ups