



The DNA of tech.®

Automotive Power Modules

EMIPAK 1B PressFit Power Modules in a Compact Design With Low Stray Inductance



ADVANTAGE

Modular and compact off the shelf solution for on-board chargers. Each module can also be used in different stages for industrial applications.

KEY PRODUCT FEATURES

- ✓ Several circuit configurations in a modular "ready to go" solution implementing proven automotive technology for on-board chargers
- ✓ Compliancy with the AQC-324 automotive guideline
- ✓ Compact module with a complex circuit configuration



MARKETS AND APPLICATIONS



MOBILITY

- HEV / EV, low speed electrical vehicles, on-board chargers
- DC/DC power conversion
- Battery charging, DC/DC conversion (including power train)



INDUSTRIAL

- Welding (PFC + primary stage), plasma cutting (output stage)
- UPS, rail power supply



ENERGY SECTOR

- Solar inverters, wind turbines (pitch control / aux power), fuel-cell DC/DC power conversion
- Smart grid management / active filters
- Large battery systems, electrolytic and electrostatic storage, hydrogen storage



CONNECTIVITY

- PSU

RESOURCES



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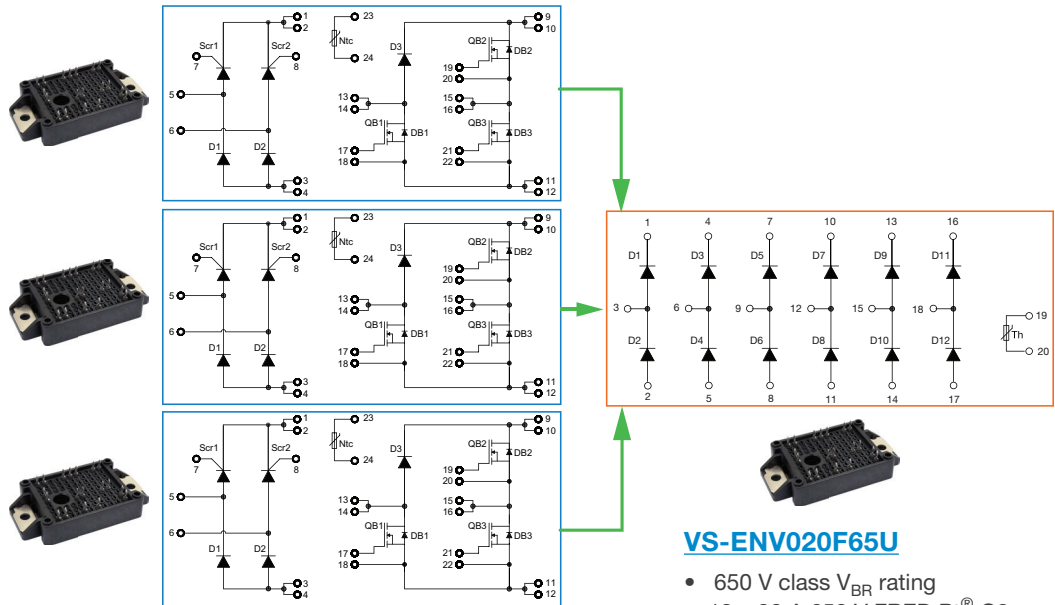


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11 kW NOMINAL POWER: RUGGED PFC

3 x VS-ENM040M60P

- 600 V class V_{BR} rating
- 40 A input bridge + 33 m Ω MOSFETs for improved efficiency + 30 A SiC boost diode



VS-ENV020F65U

- 650 V class V_{BR} rating
- 12 x 20 A 650 V FRED Pt[®] G2 U-type (G5 H-type option)

Automotive

Package	Device	Circuit Configuration	Main Features
 EMIPAK 1B (isolated)	VS-ENM040M60P	Half controlled input bridge plus MOSFET boost PFC leg and MOSFET half bridge inverter	• 650 V class V_{BR} rating • 40 A input bridge • 33 mΩ MOSFETs for improved efficiency • 30 A SiC boost diode
	VS-ENV020F65U	6 x independent ultrafast rectifier legs for output rectification	• 650 V class V_{BR} rating • 12 x 20 A 650 V FRED Pt[®] G2 U-type (G5 H-type option)
	VS-ENV020M120M	6 x independent diode legs for AC line input rectification	• 1200 V class V_{BR} rating • 12 x 20 A, 1200 V MOAT input rectifiers
	VS-ENW30S120T	SiC diodes full-bridge	• 1200 V class V_{BR} rating • 4 x 30 A SiC diodes
	VS-ENY050C60	MOSFET full-bridge inverter	• 600 V class V_{BR} rating • 4 x 37 mΩ MOSFETs feat. fast body diodes