VISHAY

The DNA of tech.

Dual-Diode and Single Phase Bridge SiC Schottky Modules

650 V and 1200 V Modules Designed to Deliver High Speed and Increase Efficiency in High Frequency Applications

ADVANTAGE

Offer forward current from 40 A to 240 A, low forward voltage drop down to 1.36 V, and Q_C down to 56 nC in SOT-227 packages

KEY PRODUCT FEATURES

- ✓ Configurations and forward current:
  - Two separate diodes, parallel pin-out: 40 A to 240 A
  - Single phase bridge: 50 A and 90 A
- ✓ Built on state of the art thin wafer technology
- ✓ Positive temperature coefficient for easy parallelling
- ✓ Large creepage distance between terminals
- ✓ Simplified mechanical design for rapid assembly

MARKETS AND APPLICATIONS

CONNECTIVITY
- Telecom mobile infrastructure

ENERGY SECTOR
- Generation and exploration
- Distribution and management

INDUSTRIAL
- Drives and tools
- Infrastructure

RESOURCES

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ADDITIONAL BENEFITS

- The diodes' low forward voltage drop dramatically reduces conduction losses for increased efficiency
- Further increasing efficiency, the devices offer better reverse recovery parameters than Si-based diodes and have virtually no recovery tail
- The diodes' low Q_C allows for high speed switching
- With their industry-standard package, the devices offer drop-in replacements for competing solutions

Key Specifications

Part Number	V_R (V)	$I_{F(AV)}$ (A)	V_F at I_F (V)	I_{FSM} (A)	Q_C (nC)	T_J (°C)	Configuration
VS-SC40FA65	650	20 (1)	1.36	105	56 (2)	175	Two separate diodes, parallel pin-out
VS-SC80FA65		40 (1)	1.36	225	110 (2)	175	Two separate diodes, parallel pin-out
VS-SC120FA65		60 (1)	1.39	340	164 (2)	175	Two separate diodes, parallel pin-out
VS-SC160FA65		80 (1)	1.38	450	220 (2)	175	Two separate diodes, parallel pin-out
VS-SC200FA65		100 (1)	1.39	555	275 (2)	175	Two separate diodes, parallel pin-out
VS-SC240FA65		120 (1)	1.40	675	328 (2)	175	Two separate diodes, parallel pin-out
VS-SC50BA65		50	1.50	267	110 (2)	175	Single phase bridge
VS-SC90BA65		90	1.61	340	164 (2)	175	Single phase bridge
VS-SC40FA120	1200	20 (1)	1.39	130	112 (3)	175	Two separate diodes, parallel pin-out
VS-SC80FA120		40 (1)	1.4	260	224 (3)	175	Two separate diodes, parallel pin-out
VS-SC120FA120		60 (1)	1.42	385	333 (3)	175	Two separate diodes, parallel pin-out
VS-SC160FA120		80 (1)	1.44	500	444 (3)	175	Two separate diodes, parallel pin-out
VS-SC200FA120		100 (1)	1.45	620	553 (3)	175	Two separate diodes, parallel pin-out
VS-SC240FA120		120 (1)	1.45	690	651 (3)	175	Two separate diodes, parallel pin-out
VS-SC50BA120		50	1.5	328	223 (3)	175	Single phase bridge
VS-SC90BA120		90	1.9	500	332 (3)	175	Single phase bridge

Notes

(1) Per diode

(2) V_R = 400 V

(3) V_R = 800 V