

AEC-Q101 Qualified High Voltage Thyristors and Diodes Provide Wide Voltage and Current Ranges in Three Package Options for Onboard Battery Chargers



KEY BENEFITS

- AEC-Q101 qualified
- Repetitive voltages from 600 V to 1600 V
- Wide current range:
 - Thyristors: continuous RMS on-state current from 12 A to 79 A
 - Diodes: forward current from 8 A to 65 A
- Available in surface-mount DPAK (TO-252AA) and D²PAK (TO-263AB) packages, and through-hole TO-247AD package
- 1000 V / μ s immunity

APPLICATIONS

- 50 Hz / 60 Hz AC line rectification stage for onboard battery chargers in electric vehicles (EV) and hybrid electric vehicles (HEV)

RESOURCES

- Datasheets: please see next page for the list of products
- For technical questions, contact: DiodesAmericas@vishay.com, DiodesEurope@vishay.com, DiodesAsia@vishay.com
- Material categorization: for definitions of compliance, please see <http://www.vishay.com/doc?99912>



DIODES

High Voltage Thyristors and Diodes

Vishay's high voltage thyristors and diodes for automotive applications are qualified to AEC-Q101, and offer repetitive voltages from 600 V to 1600 V and wide current ranges in three package options.

- Supply a full range of charging power from 3 kW to over 30 kW
- For inrush current limiting, the thyristors enable soft start functionality without the use of resistors and bulky mechanical relays

	Vishay P/N	Package	I _{RMS} (A)	V _{RRM} / V _{DRM} (V)	Configuration
THYRISTORS	VS-12TTS08SLHM3	D ² PAK (TO-263AB)	12	800	Single
	VS-25TTS12SLHM3		25	1200	
	VS-25TTS16SLHM3		25	1600	
	VS-30TPS12LHM3	TO-247AD	30	1200	
	VS-30TPS16LHM3		30	1600	
	VS-40TPS12LHM3		55	1200	
	VS-40TPS12ALHM3		55	1200	
	VS-40TPS16LHM3		55	1600	
	VS-50TPS12LHM3		79	1200	
DIODES	VS-8EWS12SLHM3	DPAK (TO-252AA)	8	1200	Single, standard recovery
	VS-8EWS16SLHM3		8	1600	Single, fast recovery
	VS-8EWF06SLHM3		8	600	
	VS-8EWF12SLHM3		8	1200	
	VS-10ETS12SLHM3	D ² PAK (TO-263AB)	10	1200	Single
	VS-25ETS12SLHM3		25	1200	
	VS-10ETF06SLHM3		10	600	Single, fast recovery
	VS-10ETF12SLHM3		10	1200	
	VS-20ETF06SLHM3		20	600	
	VS-20ETF12SLHM3		20	1200	
	VS-45APS12LHM3	TO-247AD	45	1200	Single
	VS-45APS16LHM3		45	1600	
	VS-65APS12LHM3		65	1200	
	VS-65APS16LHM3		65	1600	
	VS-35APF06LHM3		35	600	Single, fast recovery
	VS-35APF12LHM3		35	1200	
	VS-65APF06LHM3		65	600	
	VS-65APF12LHM3		65	1200	
	VS-45EPS12LHM3		45	1200	Single
	VS-45EPS16LHM3		45	1600	
	VS-65EPS12LHM3		65	1200	
	VS-65EPS16LHM3		65	1600	
	VS-35EPF06LHM3		35	600	Single, fast recovery
	VS-35EPF12LHM3		35	1200	
	VS-45EPF06LHM3		45	600	
	VS-45EPF12LHM3		45	1200	
	VS-65EPF06LHM3		65	600	
	VS-65EPF12LHM3		65	1200	