Solid State Devices, Inc.
14701 Firestone Blvd. * La Mirada, Ca 90638
Phone: (562) 404-4474 * Fax: (562) 404-1773
ssdi@ssdi-power.com * www.ssdi-power.com

SED45HB25, SED45HE25
SED45HB35, and SED45HE35

Designer's Data Sheet

Part Number / Ordering Information [1/]

SED45__ 25 __

- **Screening**[2/]
  - ___ = None
  - TX = TX Level
  - TXV = TXV Level
  - S = S Level
- **Voltage**
  - 25 = 25 volts
  - 35 = 35 volts
- **Configuration**
  - HB = without lead
  - HE = with lead

45 AMP
SUPER SCHOTTKY RECTIFIER
25 - 35 VOLTS

FEATURES:

Optimized for 2.1V and 3.3V output power supplies. The SUPER SCHOTTKY series has been designed to provide ultra low forward voltage drops at low operating temperatures of 75°C.

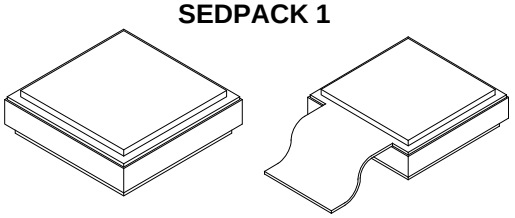
- Low V_F, typically 380mV at 75°C
- Low reverse leakage
- Surface mountable
- Guard ring for overvoltage protection and ruggedness
- 100°C operating temperature
- Hermetic package
- TX, TXV, and Space Level Screening Available[2/]

Typical applications include parallel switching power supplies, converters, battery protection circuits, and redundant power subsystems.

MAXIMUM RATINGS		Symbol	Value	Units
Peak Repetitive Reverse Voltage and DC Blocking Voltage	**SED45__25** **SED45__35**	V_{RRM} V_{RWM} V_R	25 35	**Volts**
Average Rectified Forward Current (Resistive load, 60 Hz, sine wave, T_C= 75°C)		I_O	45	**Amps**
Peak Surge Current (8.3 ms pulse, half sine wave superimposed on I_O, allow junction to reach equilibrium between pulses, T_A = 25°C)		I_{FSM}	350	**Amps**
Operating Temperature		T_{OP}	-55 to +125	**°C**
Storage Temperature		T_{STG}	-55 to +200	**°C**
Maximum Thermal Resistance Junction to Case		$R_{\theta JC}$	1.25	**°C/W**

Notes:
1/ For ordering information, price, operating curves, and availability – contact factory.
2/ Screening based on MIL-PRF-19500. Screening flows available on request.

SEDPACK 1



HB Series **HE Series**

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ELECTRICAL CHARACTERISTICS		Symbol	Typical	Maximum	Unit
Instantaneous Forward Voltage Drop (T_J = 25°C, 300-500 μsec pulse)	I_F = 10 A_{DC} I_F = 20 A_{DC} I_F = 35 A_{DC} I_F = 45 A_{DC}	V_{F1a} V_{F1b} V_{F1c} V_{F1d}	0.43 0.48 0.54 0.57	0.45 0.52 - 0.70	V_{DC}
Instantaneous Forward Voltage Drop (T_J = 75°C, 300-500 μsec pulse)	I_F = 10 A_{DC} I_F = 20 A_{DC} I_F = 35 A_{DC} I_F = 45 A_{DC}	V_{F2a} V_{F2b} V_{F2c} V_{F2d}	0.38 0.43 0.50 0.55	0.42 - - -	V_{DC}
Instantaneous Forward Voltage Drop (T_J = 100°C, 300-500 μsec pulse)	I_F = 10 A_{DC} I_F = 20 A_{DC} I_F = 35 A_{DC} I_F = 45 A_{DC}	V_{F3a} V_{F3b} V_{F3c} V_{F3d}	0.35 0.41 0.49 0.53	- - - -	V_{DC}
Instantaneous Forward Voltage Drop (T_J = 125°C, 300-500 μsec pulse)	I_F = 10 A_{DC} I_F = 20 A_{DC} I_F = 35 A_{DC} I_F = 45 A_{DC}	V_{F4a} V_{F4b} V_{F4c} V_{F4d}	0.32 0.39 0.47 0.52	- 0.45 - 0.65	V_{DC}
Instantaneous Forward Voltage Drop (T_J = -55°C, 300-500 μsec pulse)	I_F = 10 A_{DC} I_F = 20 A_{DC} I_F = 35 A_{DC} I_F = 45 A_{DC}	V_{F6a} V_{F6b} V_{F6c} V_{F6d}	0.51 0.55 0.60 0.63	- - - -	V_{DC}
Reverse Leakage Current (T_J = 25°C, 300 μsec pulse minimum)	V_R = 3.3V_{DC} V_R = 25V_{DC} V_R = 35V_{DC}	I_{R1a} I_{R1b} I_{R1c}	6.5 15 25	25 100 100	**μA**
Reverse Leakage Current (T_J = 75°C, 300 μsec pulse minimum)	V_R = 3.3V_{DC} V_R = 25V_{DC} V_R = 35V_{DC}	I_{R2a} I_{R2b} I_{R2c}	0.3 0.55 0.9	1 5 5	**mA**
Reverse Leakage Current (T_J = 100°C, 300 μsec pulse minimum)	V_R = 3.3V_{DC} V_R = 25V_{DC} V_R = 35V_{DC}	I_{R3a} I_{R3b} I_{R3c}	1.5 2.5 4.0	- - -	**mA**
Reverse Leakage Current (T_J = 125°C, 300 μsec pulse minimum)	V_R = 3.3V_{DC} V_R = 25V_{DC} V_R = 35V_{DC}	I_{R4a} I_{R4b} I_{R4c}	6.5 10 15	20 100 100	**mA**
Junction Capacitance (T_J = 25°C, f = 1 MHz)	V_R = 5V_{DC} V_R = 10V_{DC}	C_{J1} C_{J2}	3000 1450	3750 -	**pF**

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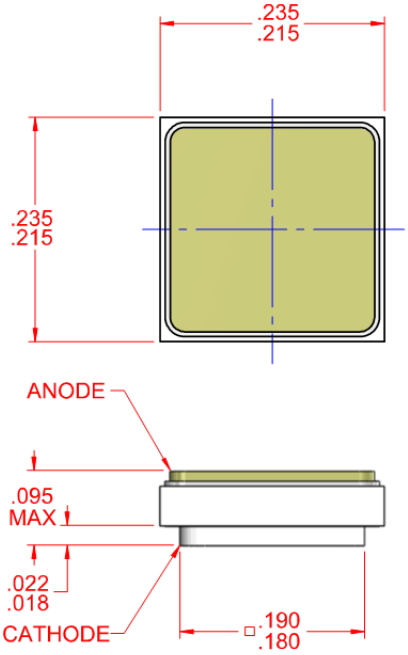
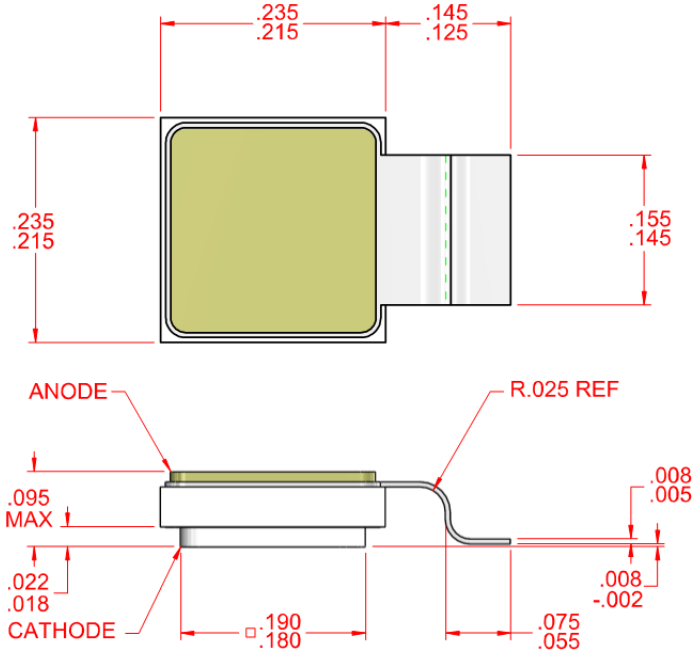
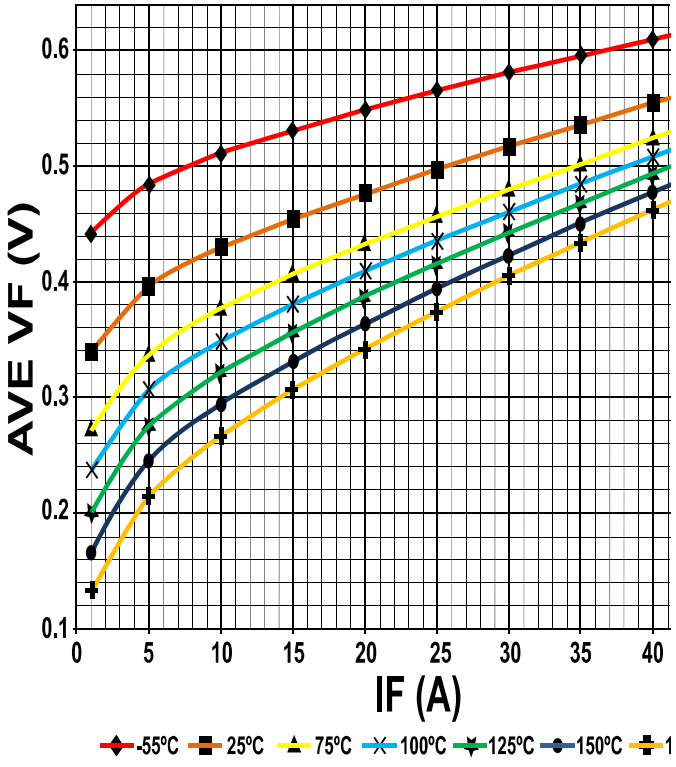
SED45HB25, SED45HE25
SED45HB35, and SED45HE35

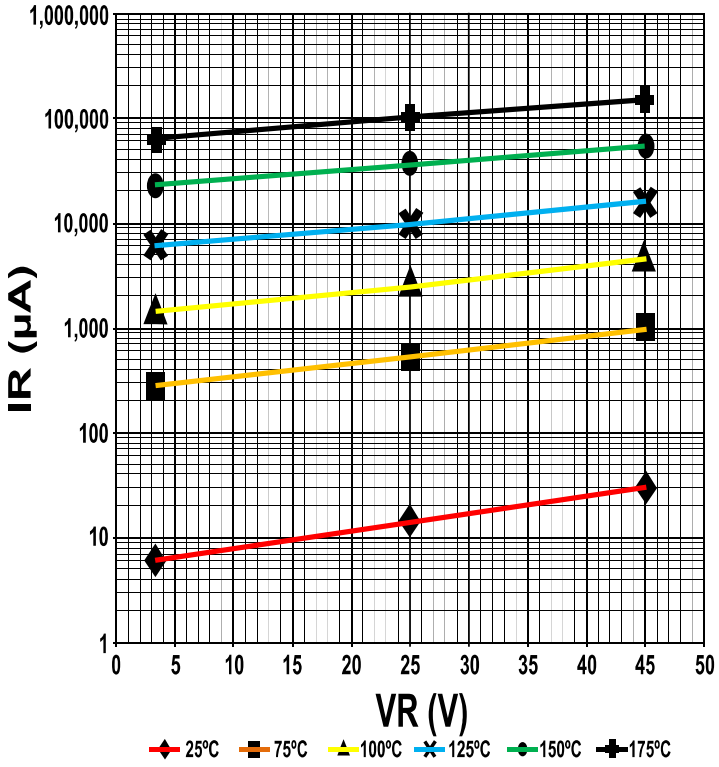
CASE OUTLINE: SED45HB25
SED45HB35



CASE OUTLINE: SED45HE25
SED45HE35







NOTE: All specifications are subject to change without notification. SCD's for these devices should be reviewed by SSDI prior to release.	**DATA SHEET #: SH0011G**	**DOC**