PRELIMINARY

SOLID STATE DEVICES, INC.
14005 Stage Road * Santa Fe Springs, Ca 90670
Phone: (562) 404-4474 * Fax: (562) 404-1773

SED20HB25
SED20HE25

Designer's Data Sheet

20 AMP
25 VOLTS
SUPER SCHOTTKY
RECTIFIER

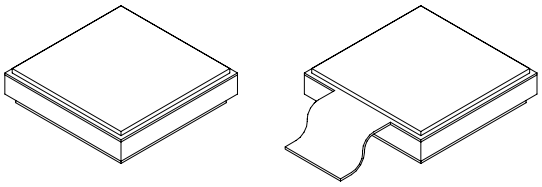
FEATURES:

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, less than 300mV 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**

Typical applications include parallel switching power supplies, converters, battery protection circuits, and redundant power sub-systems.

SEDPACK 1



Maximum Ratings	SYMBOL	VALUE	UNITS
Peak Repetitive Reverse and DC Blocking Voltage	V_{RRM} V_{RWM} V_R	**25**	**Volts**
Average Rectified Forward Current (Resistive Load, 60Hz, Sine Wave, T_J = 75 °C	**Io**	**20**	**Amps**
Peak Surge Current (8.3 ms Pulse, Half Sine Wave Superimposed on Io, allow junction to reach equilibrium between pulses, T_J = 25°C)	I_{FSM}	**150**	**Amps**
Operating and Storage Temperature	**Top & Tstg**	**-55 TO +100**	**°C**
Maximum Thermal Resistance Junction to Case	$R_{\theta JC}$	**2.0**	**°C/W**

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

DATA SHEET #: SH0011A

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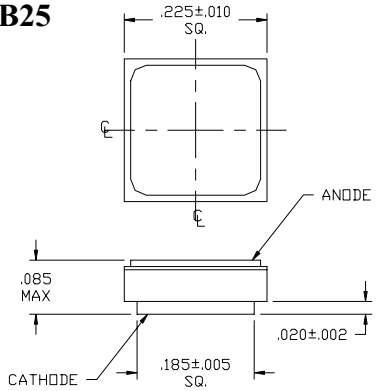
Electrical Characteristics	SYMBOL	VALUE	UNITS
Instantaneous Forward Voltage Drop (I_F = 10A_{DC}, T_J = 25 °C, 300µs Pulse) (I_F = 20A_{DC}, T_J = 25 °C, 300µs Pulse)	**V_{F1}** **V_{F2}**	**0.375** **0.400**	**V_{DC}**
Instantaneous Forward Voltage Drop (I_F = 10A_{DC}, T_J = 75 °C, 300µs Pulse)	**V_{F3}**	**0.300**	**V_{DC}**
Reverse Leakage Current T_J = 25 °C, 300µsec pulse minimum V_R = 3.3V V_R = 25V	 **I_{R1}** **I_{R2}**	 **3.0** **15**	 **mA** **mA**
Reverse Leakage Current T_J = 75 °C, 300µsec pulse minimum V_R = 3.3V V_R = 25V	 **I_{R3}** **I_{R4}**	 **45** **125**	 **mA** **mA**
Reverse Leakage Current T_J = 100°C, 300µsec pulse minimum V_R = 3.3V V_R = 15V	 **I_{R5}** **I_{R6}**	 **100** **215**	 **mA** **mA**
Junction Capacitance (V_R = 5V_{DC}, T_J = 25°C, f = 1MHz)	**C_J**	**1500**	**pF**

CASE OUTLINE:
P/N SED60KB25



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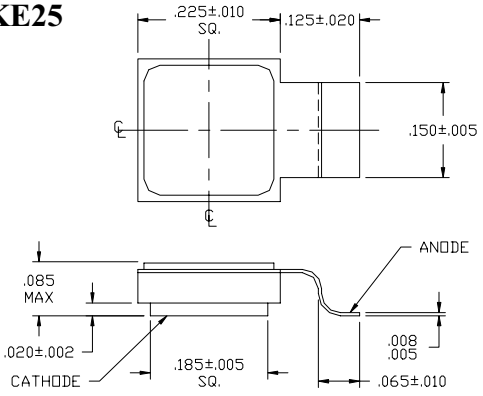
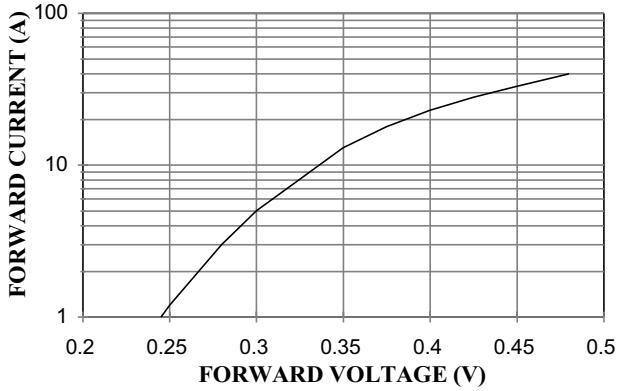


FORWARD VOLTAGE @T_J = 25°C



FORWARD VOLTAGE @T_J = 75°C