



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

**SED20HB25, SED20HE25
 SED20HB35, and SED20HE35**

Designer's Data Sheet

Part Number / Ordering Information ^{1/}

SED20

L Screening^{2/}

___ = None
 TX = TX Level
 TXV = TXV Level
 S = S Level

L Voltage

25 = 25 volts
 35 = 35 volts

L Configuration

HB = without lead
 HE = with lead

**20 AMP
 SUPER SCHOTTKY RECTIFIER
 25 - 35 VOLTS**

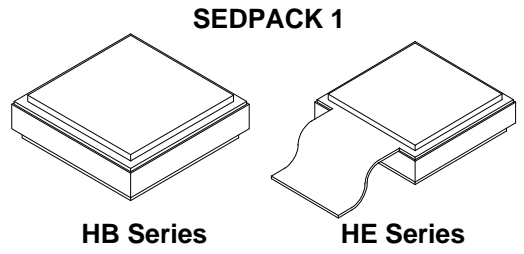
FEATURES:
 Optimized for 2.1V and 3.3V output power supplies. The SUPER SCHOTTKY series has been designed to provide ultra low forward voltage drops at low operating temperatures of 75°C.

- 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	SED20__25	V_{RRM}	25	Volts
	SED20__35	V_{RWM}	35	
		V_R		
Average Rectified Forward Current (Resistive load, 60 Hz, sine wave, $T_J = 75^\circ\text{C}$)		I_O	20	Amps
Peak Surge Current (8.3 ms pulse, half sine wave superimposed on I_O , allow junction to reach equilibrium between pulses, $T_J = 25^\circ\text{C}$)		I_{FSM}	350	Amps
Operating and Storage Temperature		$T_{OP} \ \& \ T_{stg}$	-55 to +125	°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.





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ELECTRICAL CHARACTERISTICS		Symbol	Typical	Maximum	Unit
Instantaneous Forward Voltage Drop ($T_J = 25^\circ\text{C}$, 300-500 μsec pulse)	$I_F = 10 A_{DC}$	V_{F1a}	0.43	0.45	V_{DC}
	$I_F = 20 A_{DC}$	V_{F1b}	0.48	0.52	
Instantaneous Forward Voltage Drop ($T_J = 75^\circ\text{C}$, 300-500 μsec pulse)	$I_F = 10 A_{DC}$	V_{F2a}	0.38	0.42	V_{DC}
	$I_F = 20 A_{DC}$	V_{F2b}	0.43	-	
Instantaneous Forward Voltage Drop ($T_J = 100^\circ\text{C}$, 300-500 μsec pulse)	$I_F = 10 A_{DC}$	V_{F3a}	0.35	-	V_{DC}
	$I_F = 20 A_{DC}$	V_{F3b}	0.41	-	
Instantaneous Forward Voltage Drop ($T_J = 125^\circ\text{C}$, 300-500 μsec pulse)	$I_F = 10 A_{DC}$	V_{F4a}	0.32	-	V_{DC}
	$I_F = 20 A_{DC}$	V_{F4b}	0.39	0.45	
Instantaneous Forward Voltage Drop ($T_J = -55^\circ\text{C}$, 300-500 μsec pulse)	$I_F = 10 A_{DC}$	V_{F6a}	0.51	-	V_{DC}
	$I_F = 20 A_{DC}$	V_{F6b}	0.55	-	
Reverse Leakage Current ($T_J = 25^\circ\text{C}$, 300 μsec pulse minimum)	$V_R = 3.3V_{DC}$	I_{R1a}	6.5	25	μA
	$V_R = 25V_{DC}$	I_{R1b}	15	100	
Reverse Leakage Current ($T_J = 75^\circ\text{C}$, 300 μsec pulse minimum)	$V_R = 3.3V_{DC}$	I_{R2a}	0.3	1	mA
	$V_R = 25V_{DC}$	I_{R2b}	0.55	5	
Reverse Leakage Current ($T_J = 100^\circ\text{C}$, 300 μsec pulse minimum)	$V_R = 3.3V_{DC}$	I_{R3a}	1.5	-	mA
	$V_R = 25V_{DC}$	I_{R3b}	2.5	-	
Reverse Leakage Current ($T_J = 125^\circ\text{C}$, 300 μsec pulse minimum)	$V_R = 3.3V_{DC}$	I_{R4a}	6.5	20	mA
	$V_R = 25V_{DC}$	I_{R4b}	10	100	
Junction Capacitance ($T_J = 25^\circ\text{C}$, $f = 1 \text{ MHz}$)	$V_R = 5V_{DC}$	C_{J1}	3000	3750	pF
	$V_R = 10V_{DC}$	C_{J2}	1450	-	

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

DATA SHEET #: SH0085B

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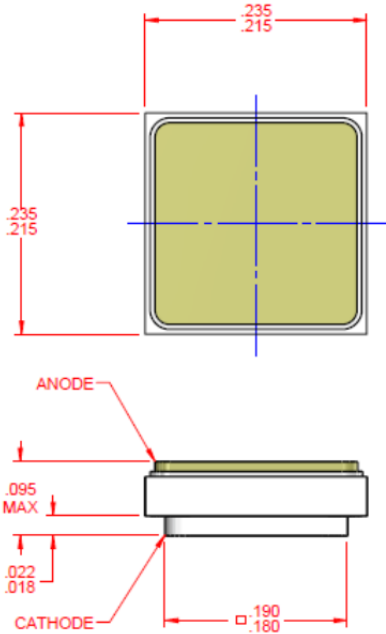


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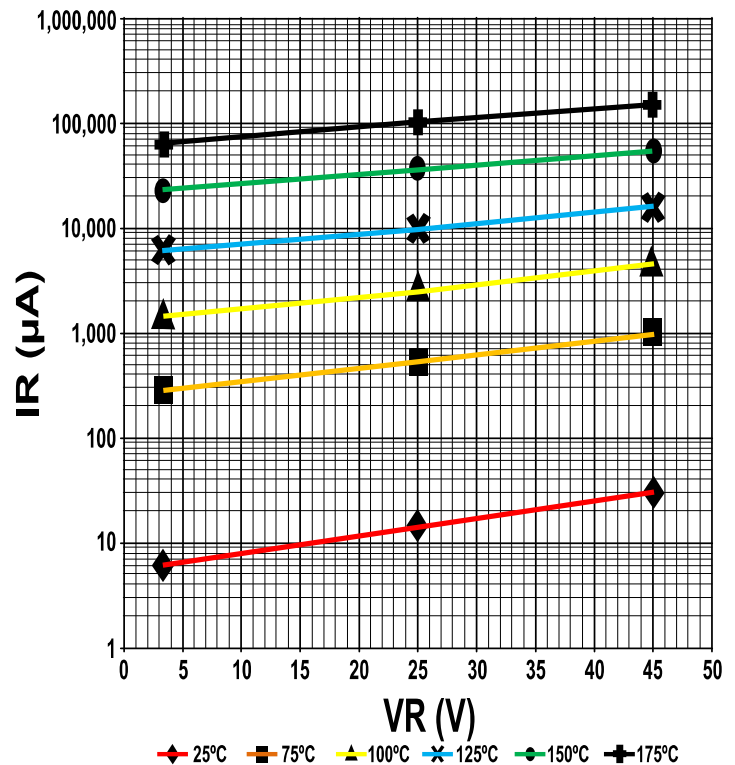
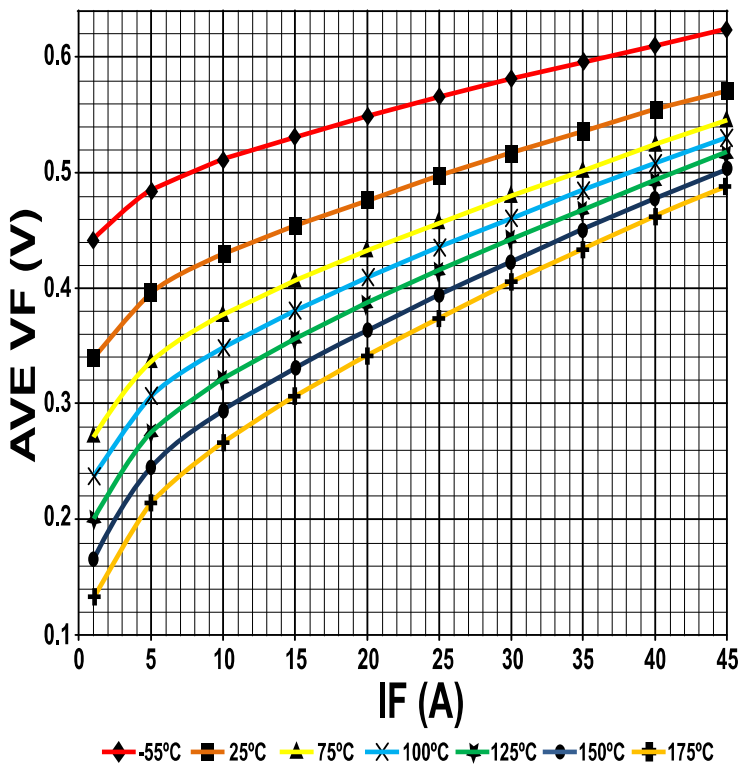
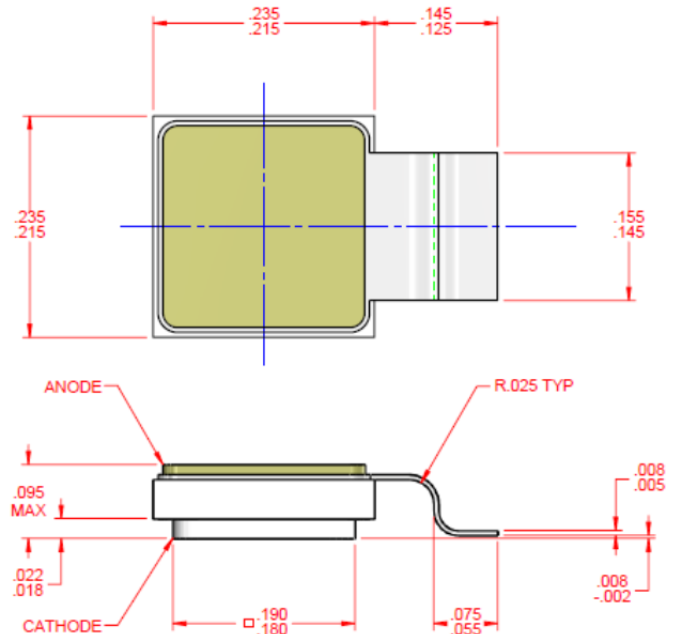
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**CASE OUTLINE: SED45HB25
 SED45HB35**



**CASE OUTLINE: SED45HE25
 SED45HE35**



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