



Solid State Devices, Inc.

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**SED20HB45, SED20HE45
and SED20HF45**

**20 AMP
45 VOLTS
SCHOTTKY RECTIFIER**

Designer's Data Sheet

Part Number / Ordering Information ^{1/}

SED20 **45**

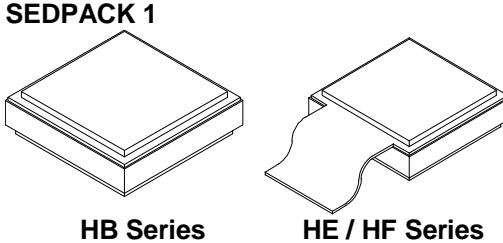
 L **Screening**^{2/} = None
 TX = TX Level
 TXV = TXV Level
 S = S Level

 L **Configuration**
 HB = without lead
 HE = with lead
 HF = with lead, reverse polarity

- FEATURES:**
- Low Reverse Leakage
 - Low Forward Voltage Drop
 - Hermetically Sealed Power Surface Mount Package
 - Guard Ring for Overvoltage Protection
 - Eutectic Die Attach
 - 175°C Operating Temperature
 - TX, TXV, and Space Level Screening Available^{2/}

MAXIMUM RATINGS		Symbol	Value	Units
Peak Repetitive Reverse Voltage and DC Blocking Voltage		V_{RRM} V_{RWM} V_R	45	Volts
Average Rectified Forward Current (Resistive Load, 60 Hz, Sine Wave, $T_A = 100^\circ\text{C}$)		I_O	20	Amps
Peak Surge Current (8.3 ms Pulse, Half Sine Wave, 1 pulse, $T_A = 25^\circ\text{C}$)		I_{FSM}	250	Amps
Operating and Storage Temperature		$T_{OP} \ \& \ T_{stg}$	-55 to +175	°C
Maximum Thermal Resistance Junction to Case	SED20HB45 SED20HE45 SED20HF45	$R_{\theta JC}$	1.25 1.25 3.00	°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.





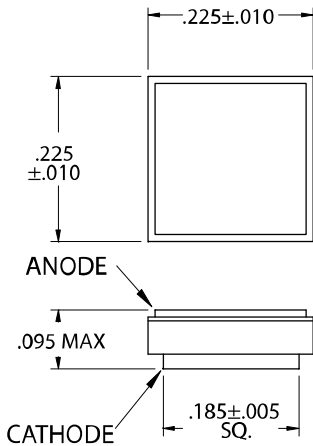
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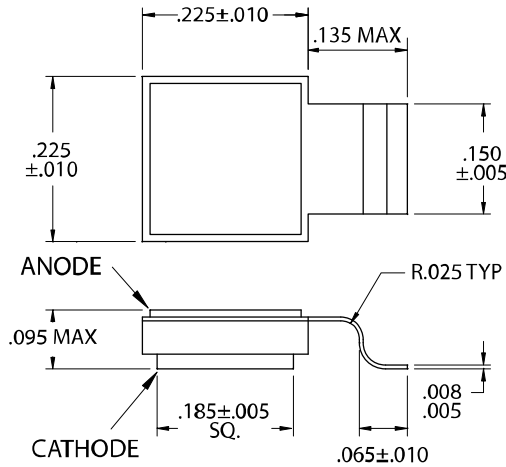
**SED20HB45, SED20HE45
and SED20HF45**

ELECTRICAL CHARACTERISTICS		Symbol	Maximum	Typical	Unit
Instantaneous Forward Voltage Drop ($I_F = 5 A_{DC}$, 300-500 μ sec Pulse)	$T_A = -55^\circ C$	V_{F1}	-	0.58	V_{DC}
	$T_A = 25^\circ C$	V_{F2}	0.52	0.48	
	$T_A = 125^\circ C$	V_{F3}	-	0.36	
Instantaneous Forward Voltage Drop ($I_F = 10 A_{DC}$, 300-500 μ sec Pulse)	$T_A = -55^\circ C$	V_{F4}	-	0.62	V_{DC}
	$T_A = 25^\circ C$	V_{F5}	0.56	0.54	
	$T_A = 125^\circ C$	V_{F6}	0.49	0.44	
Instantaneous Forward Voltage Drop ($I_F = 20 A_{DC}$, 300-500 μ sec Pulse)	$T_A = -55^\circ C$	V_{F7}	-	0.69	V_{DC}
	$T_A = 25^\circ C$	V_{F8}	0.69	0.64	
	$T_A = 125^\circ C$	V_{F9}	-	0.57	
Reverse Leakage Current (Rated V_R , 300 μ sec pulse minimum)	$T_A = 25^\circ C$	I_{R1}	0.25	0.02	mA
	$T_A = 100^\circ C$	I_{R2}	-	3	
	$T_A = 125^\circ C$	I_{R3}	25	18	
Junction Capacitance ($T_A = 25^\circ C$, $f = 1$ MHz)	$V_R = 5V$	C_{J1}	900	780	pF
	$V_R = 10V$	C_{J2}	-	580	

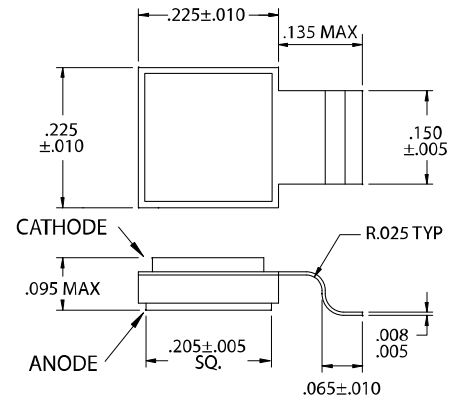
CASE OUTLINE: SED20HB45



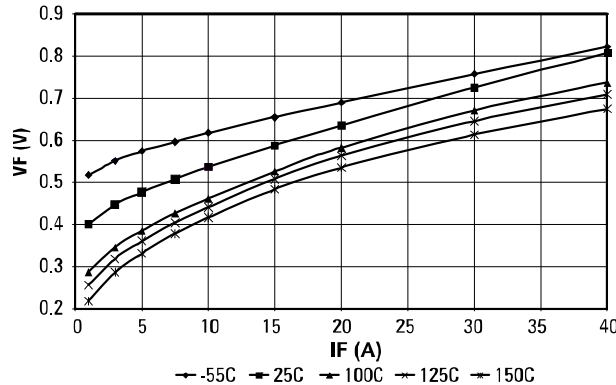
CASE OUTLINE: SED20HE45



CASE OUTLINE: SED20HF45



SED20HE45: $V_F(ave) = f(T, I_F)$



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

DATA SHEET #: RSED49B

DOC