



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

SED20HB45LV, SED20HE45LV and SED20HF45LV

Designer's Data Sheet

Part Number / Ordering Information ^{1/}

SED20__45LV__

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

**20 AMP
45 VOLTS
LOW VF SCHOTTKY RECTIFIER**

FEATURES:

- Low Reverse Leakage
- Very 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/}

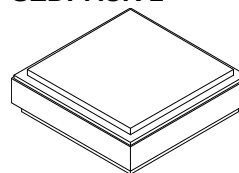
MAXIMUM RATINGS		Symbol	Value	Units
Peak Repetitive Reverse Voltage and DC Blocking Voltage		V_{RRM} V_{RWM} V_R	45	Volts
Average Rectified Forward Current (Resistive Load, 60 Hz, Sine Wave, $T_A = 100^\circ\text{C}$)		I_o	20	Amps
Peak Surge Current (8.3 ms Pulse, Half Sine Wave, 1 pulse, $T_A = 25^\circ\text{C}$)		I_{FSM}	250	Amps
Operating and Storage Temperature		$T_{OP} \& T_{stg}$	-55 to +175	°C
Maximum Thermal Resistance Junction to Case	SED20HB45LV SED20HE45LV SED20HF45LV	$R_{\theta JC}$	1.25 1.25 3.00	°C/W

Notes:

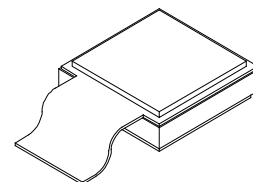
^{1/} For Ordering Information, Price, Operating Curves, and Availability –
Contact Factory.

^{2/} Screening based on MIL-PRF-19500. Screening flows available on request.

SEDPACK 1



HB Series



HE / HF Series

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

DATA SHEET #: SH0054A

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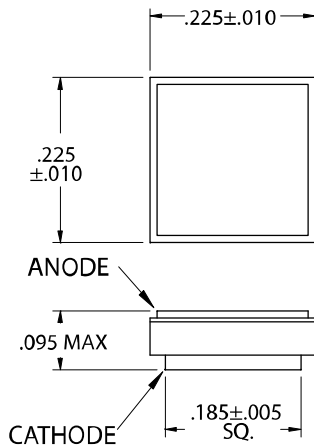
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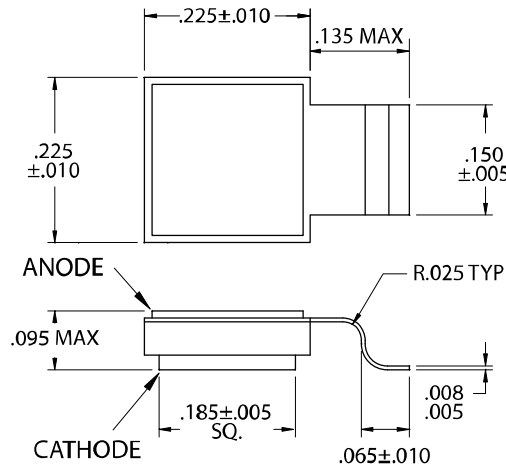
SED20HB45LV, SED20HE45LV and SED20HF45LV

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}	-	0.45	V_{DC}
	$T_A = 25^\circ C$	V_{F2}	0.425	0.40	
	$T_A = 125^\circ C$	V_{F3}	-	0.30	
Instantaneous Forward Voltage Drop ($I_F = 10 A_{DC}$, 300-500 μ sec Pulse)	$T_A = -55^\circ C$	V_{F4}	-	0.54	V_{DC}
	$T_A = 25^\circ C$	V_{F5}	0.48	0.45	
	$T_A = 125^\circ C$	V_{F6}	0.43	0.38	
Instantaneous Forward Voltage Drop ($I_F = 20 A_{DC}$, 300-500 μ sec Pulse)	$T_A = -55^\circ C$	V_{F7}	-	0.60	V_{DC}
	$T_A = 25^\circ C$	V_{F8}	0.59	0.55	
	$T_A = 125^\circ C$	V_{F9}	-	0.52	
Reverse Leakage Current (Rated V_R , 300 μ sec pulse minimum)	$T_A = 25^\circ C$	I_{R1}	1	0.125	mA
	$T_A = 100^\circ C$	I_{R2}	-	20	
	$T_A = 125^\circ C$	I_{R3}	50	25	
Junction Capacitance ($T_A = 25^\circ C$, $f = 1$ MHz)	$V_R = 5V$	C_{J1}	900	720	pF
	$V_R = 10V$	C_{J2}	-	540	

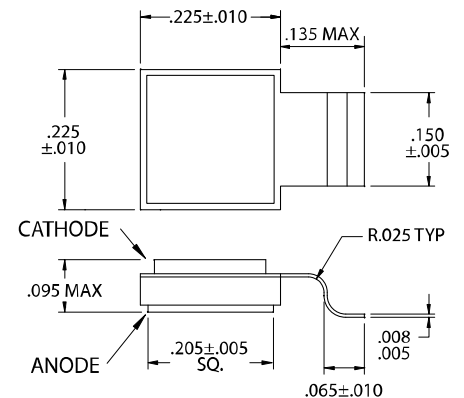
CASE OUTLINE: SED20HB45LV



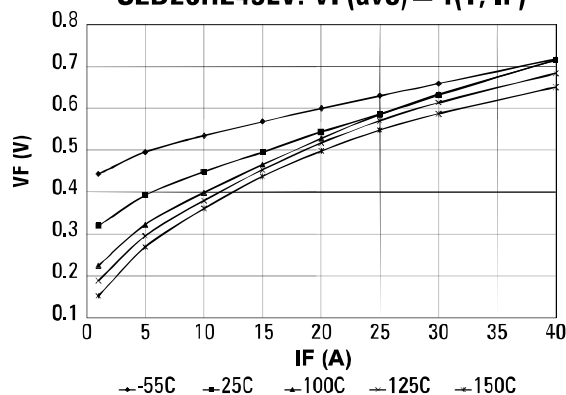
CASE OUTLINE: SED20HE45LV



CASE OUTLINE: SED20HF45LV



SED20HE45LV: $V_F(ave) = f(T, I_F)$



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