



**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

**SED10HB45, SED10HE45  
and SED10HF45**

**10 AMP  
45 VOLTS  
SCHOTTKY RECTIFIER**

**Designer's Data Sheet**

**Part Number / Ordering Information** <sup>1/</sup>

**SED10**     **45**    

    L **Screening**<sup>2/</sup> = None  
                     TX = TX Level  
                     TXV = TXV Level  
                     S = S Level

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

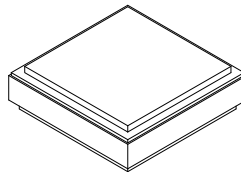
- FEATURES:**
- Low Reverse Leakage
  - Low Forward Voltage Drop
  - Hermetically Sealed Power Surface Mount Package
  - Guard Ring for Overvoltage Protection
  - Eutectic Die Attach
  - 175°C Operating Temperature
  - TX, TXV, and Space Level Screening Available<sup>2/</sup>

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, $T_A = 100^\circ\text{C}$ )		$I_O$	10	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	SED10HB45 SED10HE45 SED10HF45	$R_{\theta JC}$	1.25 1.25 3.00	°C/W

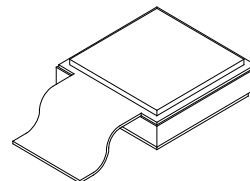
Notes:

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**



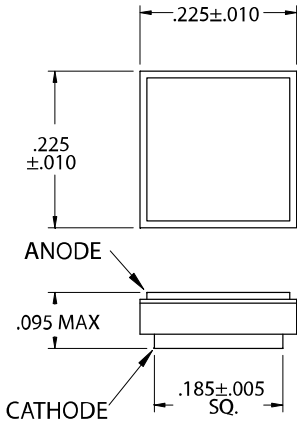
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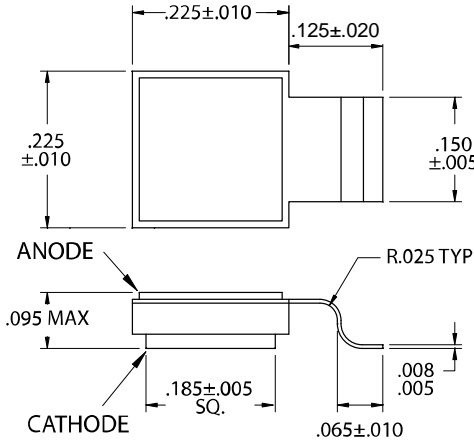
**SED10HB45, SED10HE45  
and SED10HF45**

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

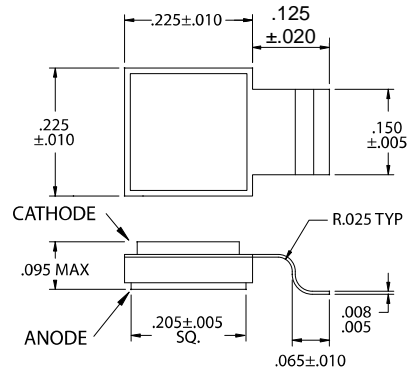
CASE OUTLINE: SED10HB45



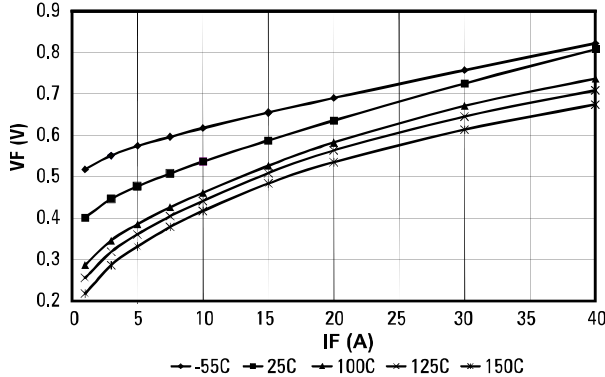
CASE OUTLINE: SED10HE45



CASE OUTLINE: SED10HF45



SED10HE45:  $V_F(ave) = f(T, I_F)$



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

**DATA SHEET #: RS0002H**

**DOC**