



Solid State Devices, Inc.

14701 Firestone Blvd. * La Mirada, Ca 90638
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SED10HB45, SED10HE45 and SED10HF45

Designer's Data Sheet

Part Number / Ordering Information ^{1/}

SED10 _ 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

**10 AMP
45 VOLTS
SCHOTTKY RECTIFIER**

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/}

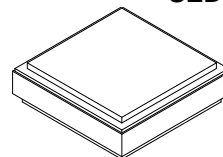
MAXIMUM RATINGS		Symbol	Value	Unit
Peak Repetitive Reverse Voltage and DC Blocking Voltage		V_{RRM} V_{RWM} V_R	45	V
Average Rectified Forward Current (Resistive Load, 60 Hz, Sine Wave, $T_A = 100^\circ\text{C}$)		I_O	10	A
Peak Surge Current (8.3 ms Pulse, Half Sine Wave, 1 pulse, $T_A = 25^\circ\text{C}$)		I_{FSM}	250	A
Operating and Storage Temperature		$T_{OP} \& T_{stg}$	-55 to +175	$^\circ\text{C}$
Maximum Thermal Resistance Junction to Case	SED10HB45	$R_{\theta JC}$	1.25	$^\circ\text{C/W}$
	SED10HE45		1.25	
	SED10HF45		3.00	

Notes: *Pulsed per MIL-STD-750.

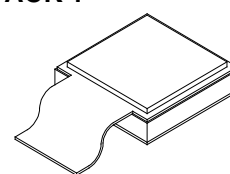
^{1/} For ordering information, price, operating curves, and availability – contact factory.

^{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.

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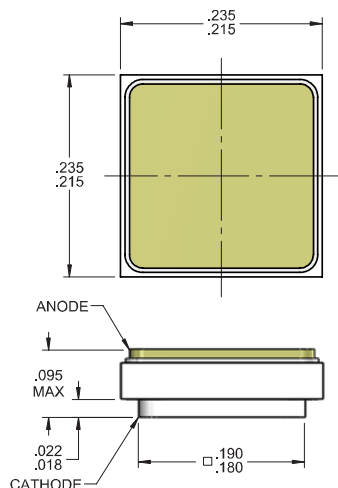
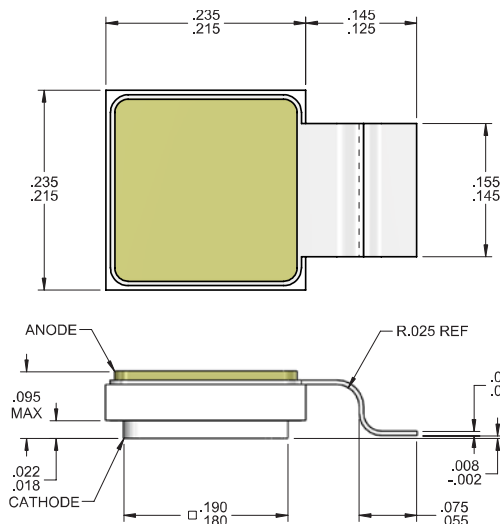
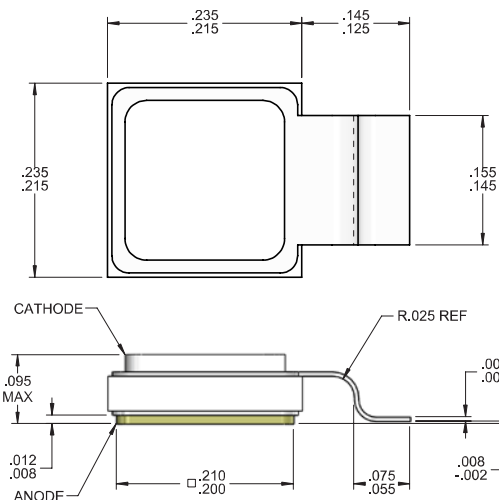
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**SED10HB45, SED10HE45
and SED10HF45**

ELECTRICAL CHARACTERISTICS		Symbol	Maximum	Typical	Unit
Instantaneous Forward Voltage Drop ($I_F = 5 A_{DC}$, pulsed)	$T_A = -55^\circ C$	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 ($I_F = 10 A_{DC}$, pulsed)	$T_A = -55^\circ C$	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 ($I_F = 20 A_{DC}$, pulsed)	$T_A = -55^\circ C$	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 , pulsed)	$T_A = 25^\circ C$	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 ($T_A = 25^\circ C$, $f = 1 MHz$)	$V_R = 5 V$	C_{J1}	900	780	pF
	$V_R = 10 V$	C_{J2}	-	580	

**CASE OUTLINE:
SED10HB45****CASE OUTLINE:
SED10HE45****CASE OUTLINE:
SED10HF45**

Notes: *Pulsed per MIL-STD-750.

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

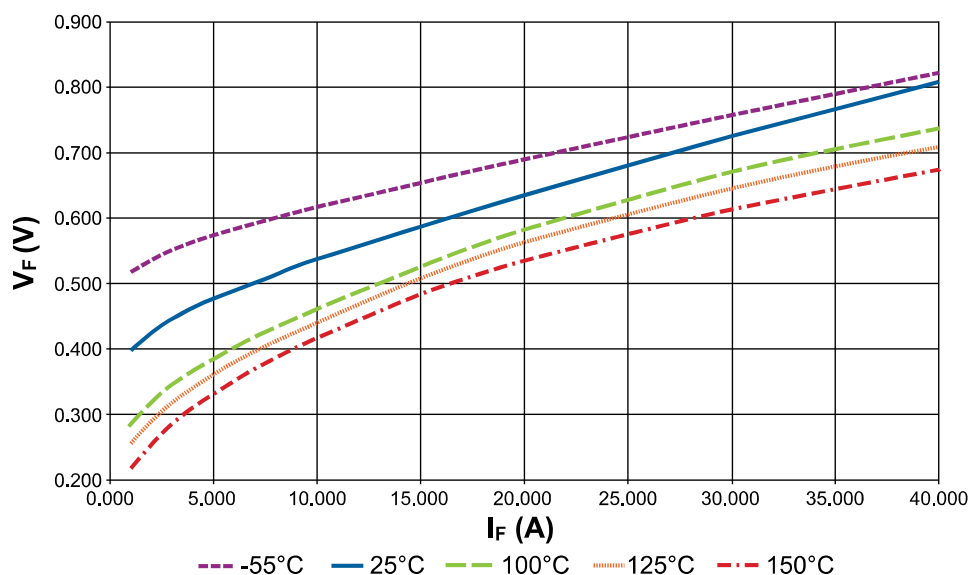


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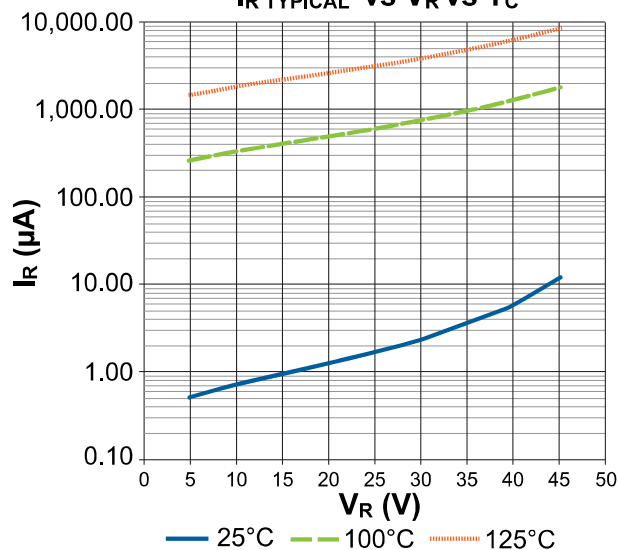
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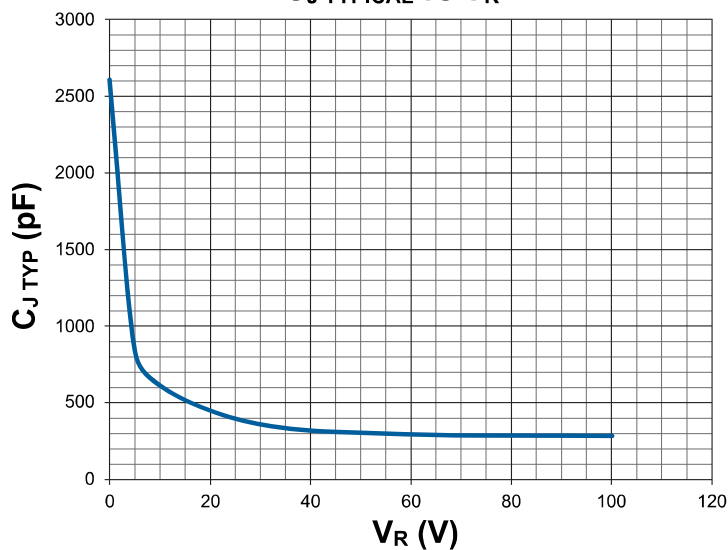
SED10HE45
 $V_{F\text{ AVG}}$ vs I_F vs T_C



SED10HE45
 I_R TYPICAL vs V_R vs T_C



SED10HE45
 C_J TYPICAL vs V_R



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