



Solid State Devices, Inc.

14701 Firestone Blvd. * La Mirada, Ca 90638
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SED60KB25 SED60KE25

60 AMP, 25 VOLTS SUPER SCHOTTKY RECTIFIER Low V_F (350 mV typ @ 100°C)

Designer's Data Sheet

Part Number / Ordering Information ^{1/}

SED60 __ 25 __

L Screening^{2/}

- __ = Not Screened
- TX = TX Level
- TXV = TXV Level
- S = S Level

L Configuration

- KB = without lead
- KE = with lead

FEATURES:

Optimized for 2.1 V and 3.3 V output power supplies. The SUPER SCHOTTKY series has been designed to provide ultra low forward voltage drops at low operating temperatures of 100°C.

- Low Forward Voltage Drop
- 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	Unit
Peak Repetitive Reverse and DC Blocking Voltage	V_{RRM} V_{RWM} V_R	25	V
Average Rectified Forward Current (Resistive load, 60 Hz, sine wave, $T_J = 75^\circ\text{C}$)	I_o	60	A
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}	500	A
Operating and Storage Temperature ^{3/}	T_{OP} & T_{STG}	-55 to +150	°C
Maximum Thermal Resistance Junction to Case	$R_{\theta JC}$	0.80	°C/W

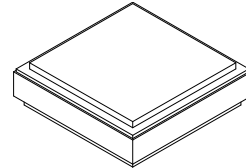
Notes: *Pulsed per MIL-STD-750.

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

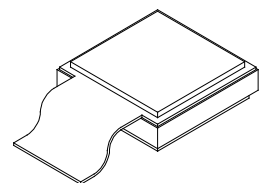
^{2/} Screening based on MIL-PRF-19500. Screening flows available on request.

^{3/} With proper heatsinking.

SEDPACK 2



KB Series



KE 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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ELECTRICAL CHARACTERISTICS		Symbol	Min	Typ	Max	Unit
Breakdown Voltage	$I_R = 5 \text{ mA}$	B_{VR}	25	39	-	V
Instantaneous Forward Voltage Drop ($T_A = 25^\circ\text{C}$, pulsed)	$I_F = 5 \text{ A}_{DC}$	V_{F1}	-	360	-	mV_{DC}
	$I_F = 15 \text{ A}_{DC}$	V_{F2}	-	400	440	
	$I_F = 30 \text{ A}_{DC}$	V_{F3}	-	425	-	
	$I_F = 50 \text{ A}_{DC}$	V_{F4}	-	460	510	
	$I_F = 80 \text{ A}_{DC}$	V_{F5}	-	505	-	
Instantaneous Forward Voltage Drop ($T_A = 100^\circ\text{C}$, pulsed)	$I_F = 5 \text{ A}_{DC}$	V_{F6}	-	260	-	mV_{DC}
	$I_F = 15 \text{ A}_{DC}$	V_{F7}	-	310	350	
	$I_F = 30 \text{ A}_{DC}$	V_{F8}	-	350	-	
	$I_F = 50 \text{ A}_{DC}$	V_{F9}	-	395	460	
	$I_F = 80 \text{ A}_{DC}$	V_{F10}	-	450	-	
Instantaneous Forward Voltage Drop ($T_A = 125^\circ\text{C}$, pulsed)	$I_F = 5 \text{ A}_{DC}$	V_{F11}	-	225	-	mV_{DC}
	$I_F = 15 \text{ A}_{DC}$	V_{F12}	-	285	330	
	$I_F = 30 \text{ A}_{DC}$	V_{F13}	-	325	-	
	$I_F = 50 \text{ A}_{DC}$	V_{F14}	-	370	430	
	$I_F = 80 \text{ A}_{DC}$	V_{F15}	-	435	-	
Instantaneous Forward Voltage Drop ($T_A = -55^\circ\text{C}$, pulsed)	$I_F = 5 \text{ A}_{DC}$	V_{F16}	-	460	-	mV_{DC}
	$I_F = 15 \text{ A}_{DC}$	V_{F17}	-	490	525	
	$I_F = 30 \text{ A}_{DC}$	V_{F18}	-	505	-	
	$I_F = 50 \text{ A}_{DC}$	V_{F19}	-	535	590	
	$I_F = 80 \text{ A}_{DC}$	V_{F20}	-	565	-	
Reverse Leakage Current ($V_R = 5 \text{ V}$, pulsed)	$T_A = 25^\circ\text{C}$	I_{R1}	-	0.02	0.1	mA
	$T_A = 100^\circ\text{C}$	I_{R2}	-	6	10	
	$T_A = 125^\circ\text{C}$	I_{R3}	-	12	-	
	$T_A = 150^\circ\text{C}$	I_{R4}	-	110	-	
Reverse Leakage Current ($V_R = 10 \text{ V}$, pulsed)	$T_A = 25^\circ\text{C}$	I_{R5}	-	0.03	-	mA
	$T_A = 100^\circ\text{C}$	I_{R6}	-	8.5	-	
	$T_A = 125^\circ\text{C}$	I_{R7}	-	40	-	
	$T_A = 150^\circ\text{C}$	I_{R8}	-	220	-	
Reverse Leakage Current ($V_R = 25 \text{ V}$, pulsed)	$T_A = 25^\circ\text{C}$	I_{R9}	-	0.125	0.2	mA
	$T_A = 100^\circ\text{C}$	I_{R10}	-	26	40	
Junction Capacitance ($T_A = 25^\circ\text{C}$, $f = 1 \text{ MHz}$)	$V_R = 5 \text{ V}_{DC}$	C_J	-	8100	9000	pF
	$V_R = 10 \text{ V}_{DC}$		-	4200	-	

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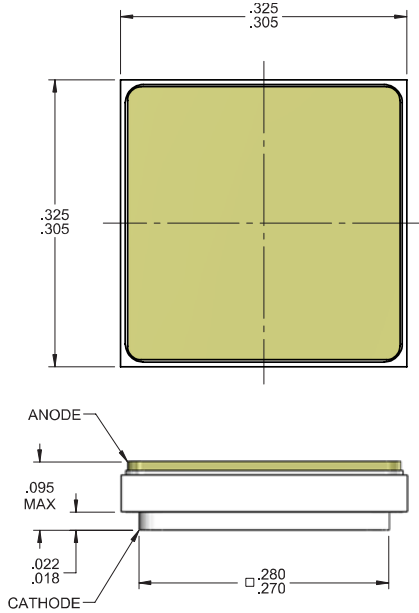


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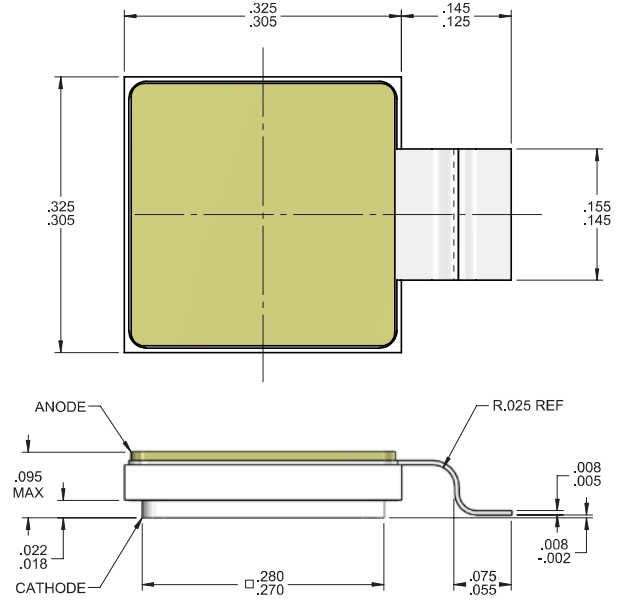
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CASE OUTLINE: SED60KB25



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