



Solid State Devices, Inc.

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SED75KB45 SED75KE45

Designer's Data Sheet

Part Number / Ordering Information ^{1/}

SED75 _ 45 _

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

L Configuration

KB = without lead
 KE = with lead

75 AMP SCHOTTKY RECTIFIER 45 VOLTS

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/}

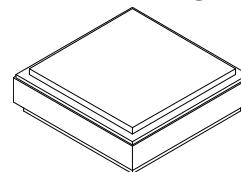
MAXIMUM RATINGS	Symbol	Value	Units
Peak Repetitive Reverse and DC Blocking Voltage	V_{RRM} V_{RWM} V_R	45	Volts
Average Rectified Forward Current (Resistive load, 60 Hz, sine wave, $T_C = 100^\circ\text{C}$)	I_O	75	Amps
Peak Surge Current (8.3 ms pulse, half sine wave superimposed on I_O , allow junction to reach equilibrium between pulses, $T_A = 25^\circ\text{C}$)	I_{FSM}	500	Amps
Operating and Storage Temperature	T_{OP} & T_{stg}	-55 to +175	$^\circ\text{C}$
Maximum Thermal Resistance Junction to Case	$R_{\theta JC}$	0.80	$^\circ\text{C/W}$

Notes:

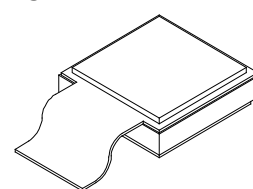
^{1/} For Ordering Information, Price, Operating Curves, and Availability – Contact Factory.

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

SEDPACK 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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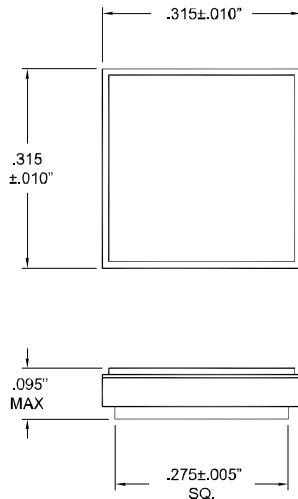
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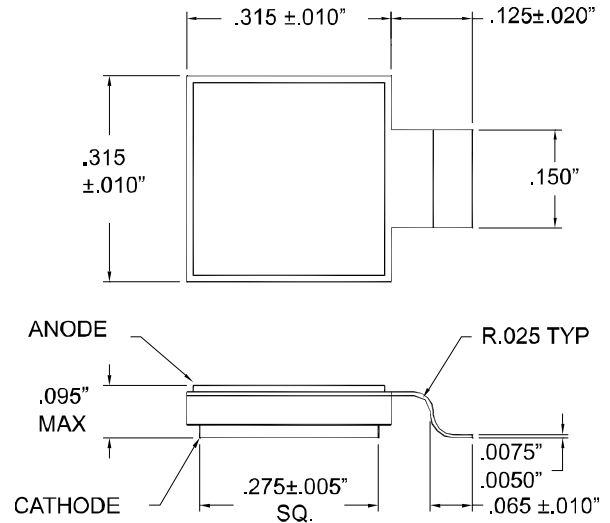
SED75KB45 SED75KE45

ELECTRICAL CHARACTERISTICS		Symbol	Typ	Max	Unit
Instantaneous Forward Voltage Drop ($T_A = 25^\circ\text{C}$, 300 μsec pulse)	$I_F = 10A_{DC}$	V_{F1}	0.385	--	V_{DC}
	$I_F = 20A_{DC}$	V_{F2}	0.425	--	
	$I_F = 50A_{DC}$	V_{F3}	0.525	0.630	
	$I_F = 75A_{DC}$	V_{F4}	0.600	0.650	
Instantaneous Forward Voltage Drop ($I_F = 50 A_{DC}$, $T_A = +125^\circ\text{C}$, 300 μsec Pulse)	$I_F = 10A_{DC}$	V_{F5}	0.260	--	V_{DC}
	$I_F = 20A_{DC}$	V_{F6}	0.330	--	
	$I_F = 50A_{DC}$	V_{F7}	0.480	0.600	
	$I_F = 75A_{DC}$	V_{F8}	0.580	--	
Reverse Leakage Current (Rated V_R , 300 μsec pulse minimum)	$T_A = 25^\circ\text{C}$	I_{R1}	0.300	5	mA
	$T_A = 125^\circ\text{C}$	I_{R2}	200	300	
Junction Capacitance ($V_R = 5V_{DC}$, $T_A = 25^\circ\text{C}$, $f = 1 \text{ MHz}$)		C_J	--	2600	pF

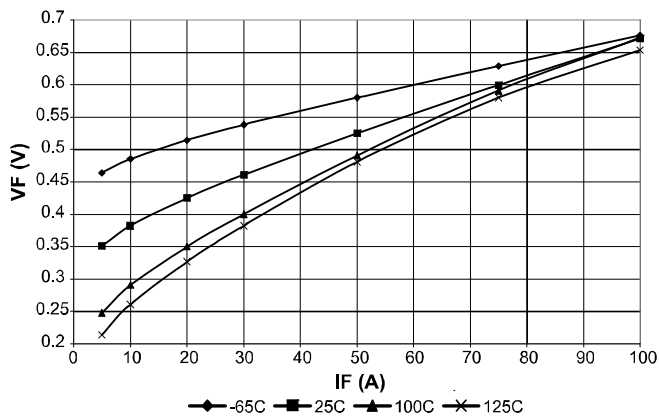
CASE OUTLINE: SED75KB45



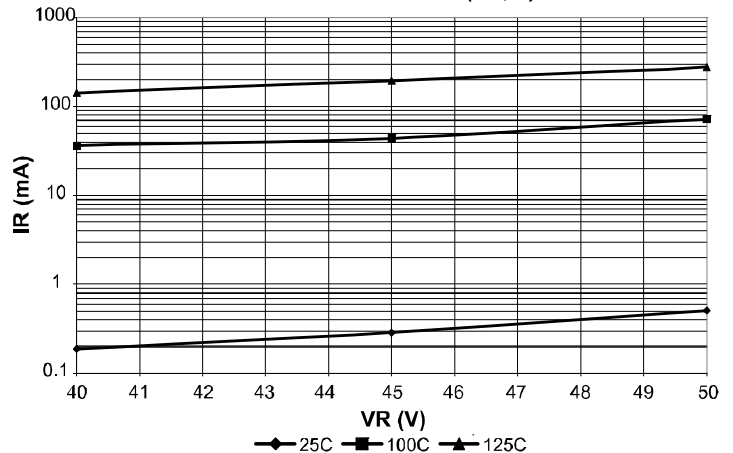
CASE OUTLINE: SED75KE45



SED75KE45: $V_{Fave} = f(T, I_F)$



SED75KE45: $I_{Rave} = f(V_R, T)$



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