



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

**SED70KB45
 SED70KE45
 SED70KF45**

Designer's Data Sheet

Part Number / Ordering Information ^{1/}

SED70 45

 L Screening^{2/}
 = Not Screened
 TX = TX Level
 TXV = TXV Level
 S = S Level

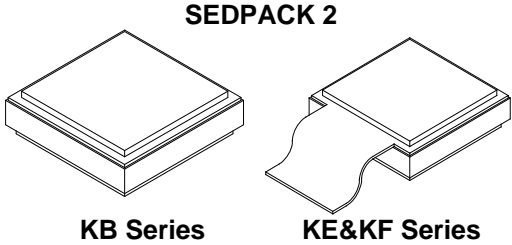
 L Configuration
 KB = without lead
 KE = with lead
 KF = with lead reverse

**70 AMP
 LOW LEAKAGE
 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	70	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}	400	Amps
Operating and Storage Temperature		T_{OP} & T_{stg}	-55 to +175	$^\circ\text{C}$
Maximum Thermal Resistance Junction to Case	SED75KB45 & SED75KE45 SED75KF45	$R_{\theta JC}$	0.80 3.80	$^\circ\text{C/W}$

Notes:
 1/ For Ordering Information, Price, Operating Curves, and Availability – Contact Factory.
 2/ Screening based on MIL-PRF-19500. Screening flows available on request.





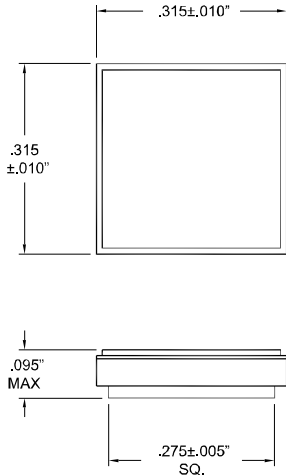
Solid State Devices, Inc.

14701 Firestone Blvd. * La Mirada, Ca 90638
 Phone: (562) 404-4474 * Fax: (562) 404-1773
 ssdi@ssdi-power.com * www.ssdi-power.com

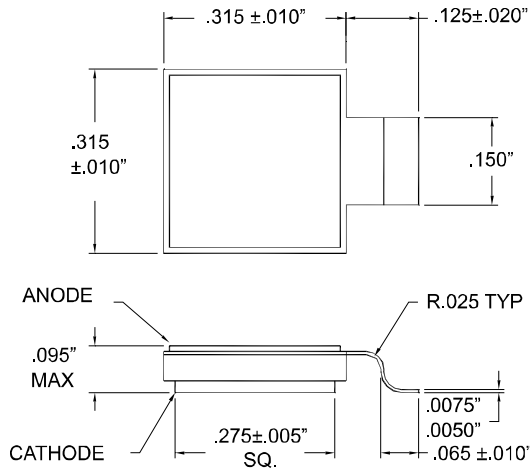
**SED70KB45
 SED70KE45
 SED70KF45**

ELECTRICAL CHARACTERISTICS		Symbol	Typ	Max	Unit
Instantaneous Forward Voltage Drop ($T_A = 25^\circ\text{C}$, 300-500 μsec pulse)	$I_F = 10A_{DC}$	V_{F1}	0.490	--	V_{DC}
	$I_F = 20A_{DC}$	V_{F2}	0.520	--	
	$I_F = 50A_{DC}$	V_{F3}	0.620	0.750	
	$I_F = 70A_{DC}$	V_{F4}	0.680	0.800	
Instantaneous Forward Voltage Drop ($T_A = +100^\circ\text{C}$, 300-500 μsec Pulse)	$I_F = 10A_{DC}$	V_{F5}	0.405	--	V_{DC}
	$I_F = 20A_{DC}$	V_{F6}	0.450	--	
	$I_F = 50A_{DC}$	V_{F7}	0.560	--	
	$I_F = 70A_{DC}$	V_{F8}	0.600	--	
Instantaneous Forward Voltage Drop ($T_A = +125^\circ\text{C}$, 300-500 μsec Pulse)	$I_F = 10A_{DC}$	V_{F9}	0.375	--	V_{DC}
	$I_F = 20A_{DC}$	V_{F10}	0.425	--	
	$I_F = 50A_{DC}$	V_{F11}	0.530	0.650	
	$I_F = 70A_{DC}$	V_{F12}	0.570	--	
Instantaneous Forward Voltage Drop ($T_A = +150^\circ\text{C}$, 300-500 μsec Pulse)	$I_F = 10A_{DC}$	V_{F13}	0.345	--	V_{DC}
	$I_F = 20A_{DC}$	V_{F14}	0.400	--	
	$I_F = 50A_{DC}$	V_{F15}	0.500	--	
	$I_F = 70A_{DC}$	V_{F16}	0.540	--	
Reverse Leakage Current (Rated V_R , 300 μsec pulse minimum)	$T_A = 25^\circ\text{C}$	I_{R1}	0.02	0.5	mA
	$T_A = 125^\circ\text{C}$	I_{R2}	6	25	
	$T_A = 150^\circ\text{C}$	I_{R3}	25	--	
Junction Capacitance ($T_A = 25^\circ\text{C}$, $f = 1$ MHz)	$V_R = 5V_{DC}$	C_{J1}	2170	2500	pF
	$V_R = 10V_{DC}$	C_{J2}	1520	--	

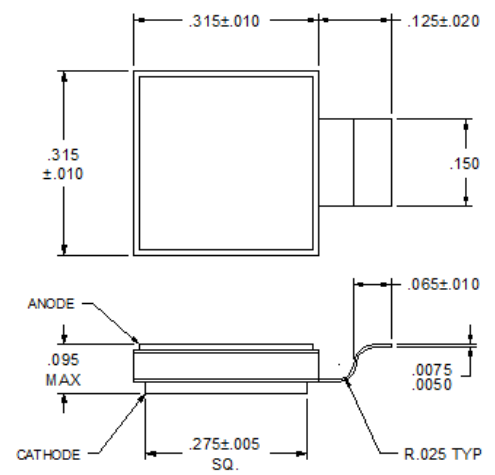
CASE OUTLINE: SED70KB45



CASE OUTLINE: SED70KE45



CASE OUTLINE: SED70KF45



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

DATA SHEET #: SH0083B

DOC