



# Solid State Devices, Inc.

14701 Firestone Blvd \* La Mirada, Ca 90638  
Phone: (562) 404-4474 \* Fax: (562) 404-1773  
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# SED30KB45 SED30KE45

## Designer's Data Sheet

**30 AMPS  
45 VOLTS  
POWER SCHOTTKY DIODE**

**Part Number / Ordering Information**<sup>1/</sup>  
SED30

**Screening**<sup>2/</sup>  
 — = Not Screened  
 TX = TX Level  
 TXV = TXV Level  
 S = S Level

**Voltage**  
45 = 45 V

**Package**  
 KB = Sedpack 2  
 KE = Sedpack 2 with Lead

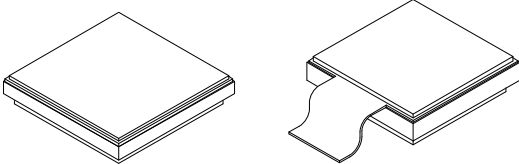
- FEATURES:**
- Low Reverse Leakage
  - Low Forward Voltage Drop
  - Hermetically Sealed Surface Mount Package
  - Guard Ring for Overvoltage Protection
  - Eutectic Die Attach
  - TX, TXV, and Space Level Screening Available. Contact Factory.

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, $T_A = 100^\circ\text{C}$ )	$I_O$	30	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 +150	$^\circ\text{C}$
Maximum Thermal Resistance Junction to Case	$R_{\theta JC}$	0.80	$^\circ\text{C/W}$

**NOTES:**

- 1/ For Ordering Information, Price, and Availability Contact Factory.
- 2/ Screened to MIL-PRF-19500.
- 3/ Unless Otherwise Specified, All Electrical Characteristics @25°C.

**SEDPACK 2**





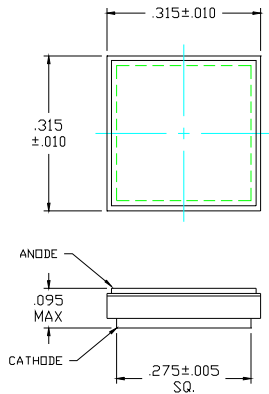
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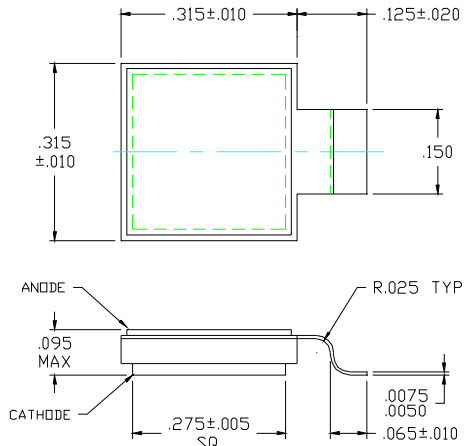
**SED30KB45**  
**SED30KE45**

ELECTRICAL CHARACTERISTICS		Symbol	-55	25	100	125	150	Unit
Instantaneous Forward Voltage Drop ( $I_F = 5$ Amps, 300 $\mu$ sec Pulse)	typical	$V_F$	455	350	250	210	180	mVolts
	maximum		<b>520</b>	<b>400</b>	-	<b>275</b>	-	
Instantaneous Forward Voltage Drop ( $I_F = 15$ Amps, 300 $\mu$ sec Pulse)	typical	$V_F$	490	400	320	290	265	mVolts
	maximum		<b>580</b>	<b>475</b>	-	<b>375</b>	-	
Instantaneous Forward Voltage Drop ( $I_F = 30$ Amps, 300 $\mu$ sec Pulse)	typical	$V_F$	525	455	395	370	355	mVolts
	maximum		<b>620</b>	<b>530</b>	-	<b>450</b>	-	
Reverse Leakage Current (Rated $V_R$ , 300 $\mu$ sec pulse minimum)	typical	$I_R$	0.015	0.31	50	175	485	mA
	maximum		-	<b>5</b>	-	<b>300</b>	-	
Junction Capacitance ( $V_R = 10$ V <sub>DC</sub> , $T_A = 25^\circ$ C, $f = 1$ MHz)	typical	$C_J$	-	2200	-	-	-	pF
	maximum		-	<b>2600</b>	-	-	-	

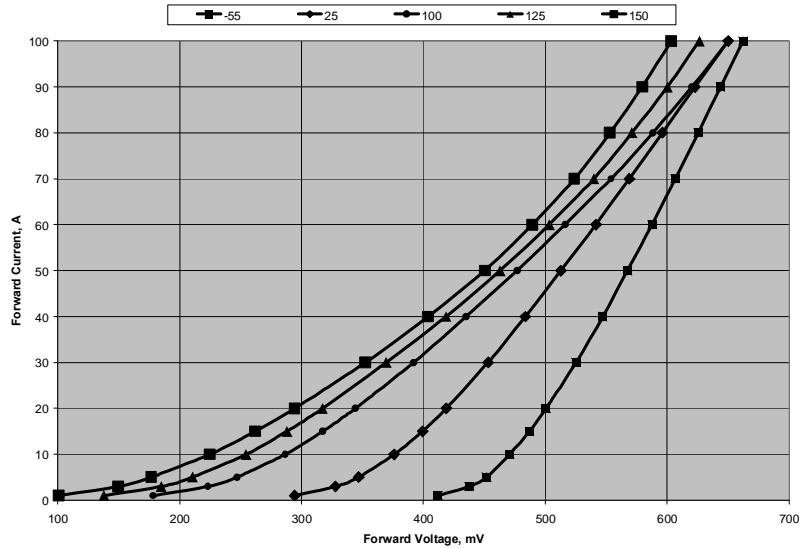
CASE OUTLINE: SED30KB45



CASE OUTLINE: SED30KE45



Typical Forward Voltage Curves



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

**DATA SHEET #: SH0032B**

**DOC**