



**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

**SGB10UFSMS  
 thru  
 SGB35UFSMS**

**60 mAMP  
 1000-3500 VOLTS  
 60 nsec  
 HIGH VOLTAGE  
 RECTIFIER**

- FEATURES:**
- Ultra Fast Recovery: 60 nsec Maximum
  - PIV to 3500 Volts
  - Hermetically Sealed
  - Void-Free Construction
  - Metallurgically Bonded
  - 175°C Maximum Operating Temperature
  - Micro Miniature Package
  - TX, TXV, and Space Level Screening Available<sup>2/</sup>

**Designer's Data Sheet**

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

SGB \_ UF SMS \_

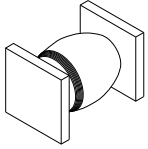
L Screening<sup>2/</sup> = None  
           TX = TX Level  
           TXV = TXV Level  
           S = S Level  
  
 L Package  
           SMS = Surface Mount Square Tab  
  
 L Recovery Time  
           UF = Ultra Fast  
  
 L Voltage  
           10 = 1000 V  
           15 = 1500 V  
           20 = 2000 V  
           25 = 2500 V  
           30 = 3000 V  
           35 = 3500 V

**ELECTRICAL CHARACTERISTICS**

Part Number	Peak Inverse Voltage	Average Rectified Current		Maximum Reverse Current		Maximum Forward Voltage	Maximum Surge Current (1 Cycle) <sup>9/</sup>	Maximum Reverse Recovery Time	Maximum Junction Capacitance	Typical Thermal Impedance
		mA		µA						
Symbol	PIV	I <sub>0</sub>		IR@PIV		V <sub>F</sub> <sup>4/</sup>	I <sub>FSM</sub>	t <sub>RR</sub> <sup>2/</sup>	C <sub>J</sub>	θ <sub>JE</sub>
Units	Volts	mA		µA		Volts	Amps	nsec	pF	°C/W
Conditions		25°C	100°C	25°C	100°C	25°C	25°C	25°C	VR = 100V fT = 1MHZ	
SGB10UFSMS	1000	60	50	0.1	10	9.5	5	60	1.0	165
SGB15UFSMS	1500	60	50	0.1	10	9.5	5	60	1.0	165
SGB20UFSMS	2000	60	50	0.1	10	9.5	5	60	1.0	165
SGB25UFSMS	2500	60	50	0.1	10	9.5	5	60	1.0	165
SGB30UFSMS	3000	60	50	0.1	10	9.5	5	60	1.0	165
SGB35UFSMS	3500	60	50	0.1	10	9.5	5	60	1.0	165

1/ For Ordering Information, Price, and Availability – Contact Factory.  
 2/ Screening based on MIL-PRF-19500. Screening flows available on request.  
 3/ Operating and testing over 10,000 V/inch may require encapsulation or immersion in a suitable dielectric material.  
 4/ I<sub>F</sub> = I<sub>O</sub>; Max. forward voltage measured with instantaneous forward pulse of 300µsec minimum.  
 5/ Max. lead temperature for soldering is 250°C, 3/8" from case for 5 sec maximum.  
 6/ Operating and storage temperature: -65°C to +175°C.  
 7/ Reverse Recovery Test Conditions: IF=50mA, IR=100mA, IRR=25mA, TA=25°C.  
 8/ Consult manufacturing for operating curves.  
 9/ t<sub>p</sub> = 1 ms, square wave.

**Surface Mount Square Tab**



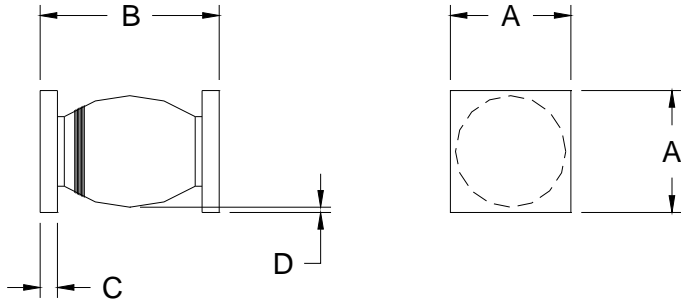


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**PACKAGE OUTLINE: Surface Mount Square Tab**



Dimensions are prior to soldering.

DIMENSIONS		
DIM	MIN	MAX
A	0.090"	0.100"
B	0.150"	0.210"
C	0.022"	0.028"
D	0.002"	—

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

**DATA SHEET #: RV0005F**

**DOC**