**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

## Designer's Data Sheet

**Part Number / Ordering Information** [1/]

**SGB __ UF SMS __**

- **Screening**[2/] = None, TX = TX Level, TXV = TXV Level, S = S Level
- **Package**: SMS = Surface Mount Square Tab
- **Recovery Time**: UF = Ultra Fast
- **Voltage**: 10 = 1000 V, 15 = 1500 V, 20 = 2000 V, 25 = 2500 V, 30 = 3000 V, 35 = 3500 V

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

**FEATURES:**

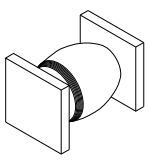
- **Ultra Fast Recovery: 60 nsec Maximum**
- **PIV to 3500 Volts**
- **Hermetically Sealed**
- **Void-Free Construction**
- **Metallurgically Bonded**
- **175°C Maximum Operating Temperature**
- **Micro Miniature Package**
- **TX, TXV, and Space Level Screening Available**[2/]

## ELECTRICAL CHARACTERISTICS

| Part Number | Peak Inverse Voltage | Average Rectified Current | | Maximum Reverse Current | | Maximum Forward Voltage | Maximum Surge Current (1 Cycle)[9/] | Maximum Reverse Recovery Time | Maximum Junction Capacitance | Typical Thermal Impedance |
|---|---|---|---|---|---|---|---|---|---|---|
| **Symbol** | **PIV** | $I_0$ | | IR@PIV | | $V_F$[4/] | $I_{FSM}$ | $t_{RR}$[7/] | $C_J$ | $\theta_{JE}$ |
| **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** | **$V_R$ = 100V $f_T$ = 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/ $I_F = I_O$; 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/ $t_p$ = 1 ms, square wave.

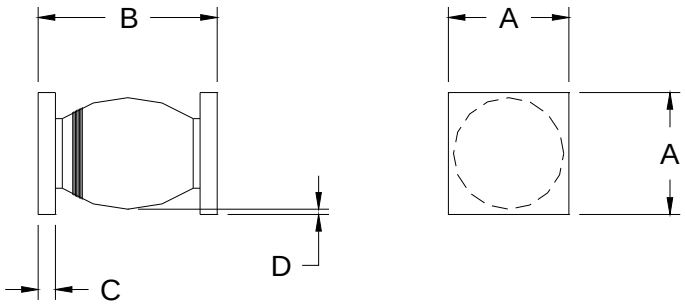
**Surface Mount Square Tab**



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# SGB10UFSMS thru SGB35UFSMS

**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” | — |