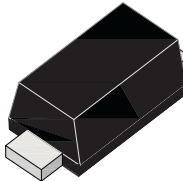





1.0 Amp. Surface Mount Top Glass Passivated Rectifier

| | | | |
|---|--|---------------------------------|--|
| <p>SOD123W</p>  | <p>Voltage 400 V to 1000 V</p> | <p>Current 1.0 A</p> | |
| | <p>FEATURES</p> <ul style="list-style-type: none"> • Top-Glass Technology • Low profile package • Ideal for automated placement • Low power losses, high efficiency • High surge current capability • Cavity-free glass-passivated junction • Low forward voltage drop • Solder dip 260°C, 10s • AEC-Q101 qualified • Component in accordance to RoHS 2011/65/EU and WEEE 2002/96/EC • Meets MSL level 1, per J-STD-020, LF maximum peak of 260° C | |    RoHS COMPLIANT |
| | <p>MECHANICAL DATA</p> <ul style="list-style-type: none"> • Case: SOD123W. Epoxy meets UL 94V-0 flammability rating. • Polarity: Color band denotes cathode end. • Terminals: Matte tin plated leads, solderable per MIL-STD-750 Method 2026, J-STD-002 and JESD22-B102. Consumer grade, meets JESD 201 class 1A whisker test. • HE3 suffix for high reliability grade, meets JESD 201 class 2 whisker test. | | |
| | <p>TYPICAL APPLICATIONS</p> <p>Used in general purpose rectification of power supplies, inverters, converters and freewheeling diodes application.</p> | | |

Maximum Ratings and Electrical Characteristics at 25 °C

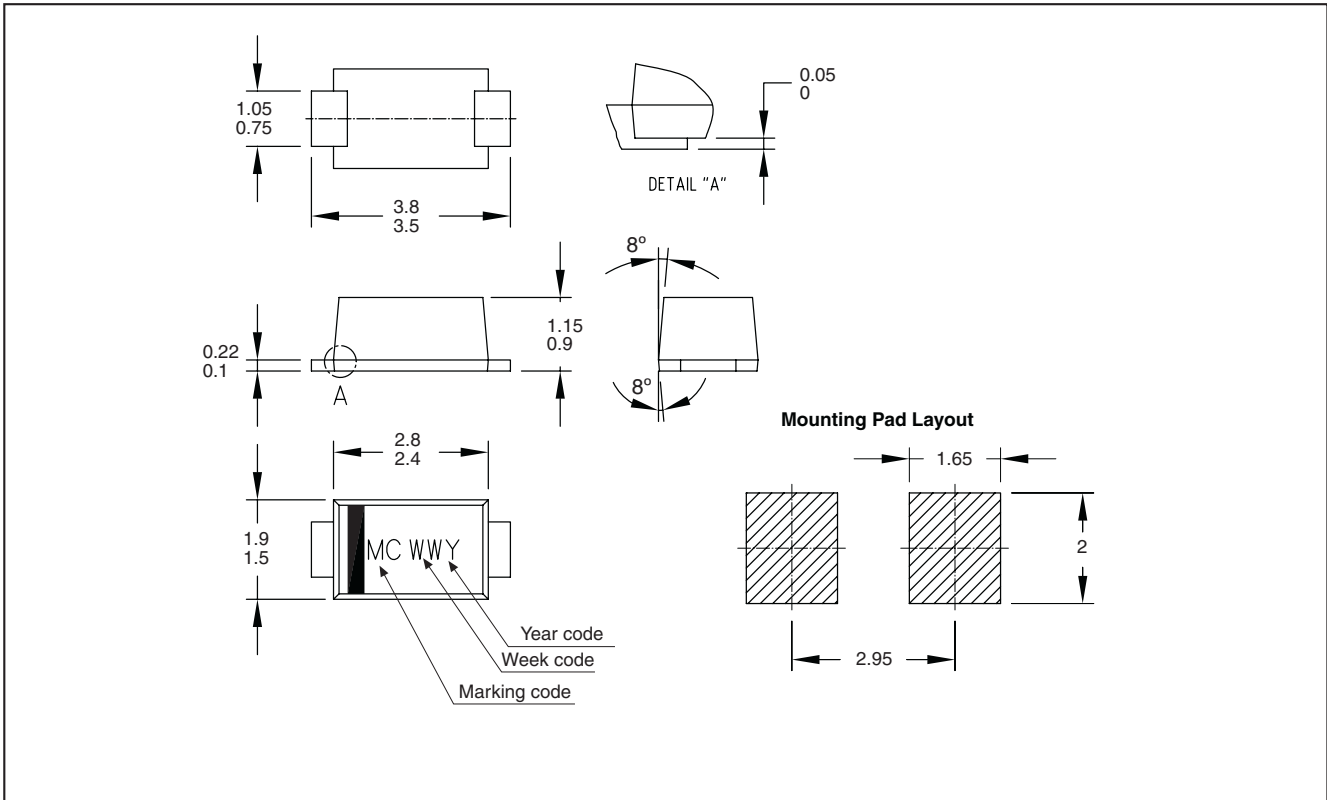
| | | FS1GW TG | FS1JW TG | FS1KW TG | FS1MW TG |
|-----------------|--|-------------------------|----------|----------|----------|
| Marking Code | | DB | DC | 1V | 1Z |
| V_{RRM} | Maximum Recurrent Peak Reverse Voltage (V) | 400 | 600 | 800 | 1000 |
| V_{RMS} | Maximum RMS Voltage (V) | 280 | 420 | 560 | 700 |
| V_{DC} | Maximum DC Blocking Voltage (V) | 400 | 600 | 800 | 1000 |
| $I_{F(AV)}$ | Maximum Average Forward Rectified Current @ $T_C = 110\text{ °C}$ @ $T_C = 75\text{ °C}$ 20ms Square pulse | 1.0 A 1.5 A | | | |
| I_{FSM} | Peak Forward Surge Current, 8.3 ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method) | 30 A | | | |
| V_F | Maximum Instantaneous Forward Voltage @ 1.0A | 1.1 V | | | |
| I_R | Maximum DC Reverse Current @ $T_c = 25\text{ °C}$ at Rated DC Blocking Voltage @ $T_c = 125\text{ °C}$ | 1 μ A 50 μ A | | | |
| T_{rr} | Typical Reverse Recovery Time (0.5/1/0.25A) | 1.8 μ s | | | |
| C_j | Typical Junction Capacitance (1MHz; -4V) | 9 pF | | | |
| $R_{th(j-c)}$ | Maximum Thermal Resistance | 25 °C/W | | | |
| $R_{th(j-a)}$ | (5x5 mm ² x 130 μ Copper Area) | 85 °C/W | | | |
| $T_j - T_{stg}$ | Operating Junction and Storage Temperature Range | -55 to + 150 °C | | | |

1.0 Amp. Surface Mount Top Glass Passivated Rectifier

Ordering information

| PREFERRED P/N | PACKAGE CODE | DELIVERY MODE | BASE QUANTITY | UNIT WEIGHT (g) |
|-------------------|--------------|----------------------------|---------------|-----------------|
| FS1JW TG TRTB | TRTB | 13" diameter tape and reel | 10,000 | 0.0165 |
| FS1JW TG HE3 TRTB | TRTB | 13" diameter tape and reel | 10,000 | 0.0165 |

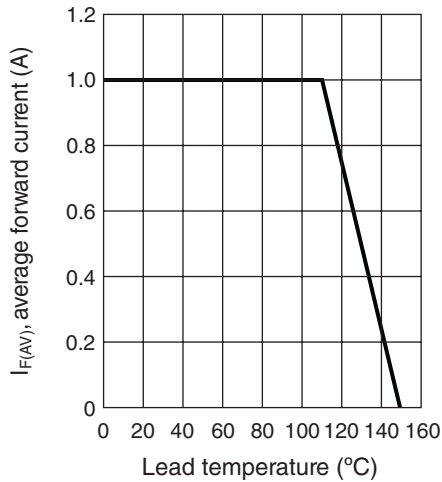
Package Outline Dimensions: (mm) SOD123W



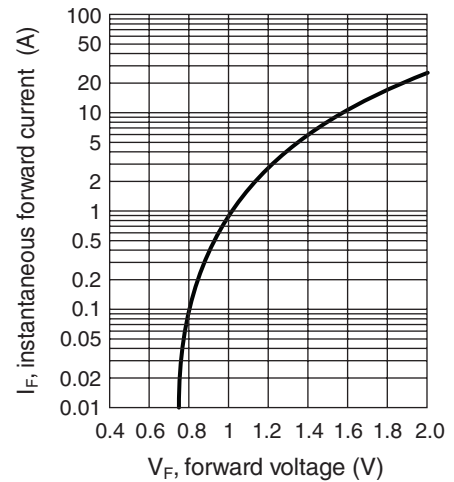
1.0 Amp. Surface Mount Top Glass Passivated Rectifier

Ratings and Characteristics (Ta 25 °C unless otherwise noted)

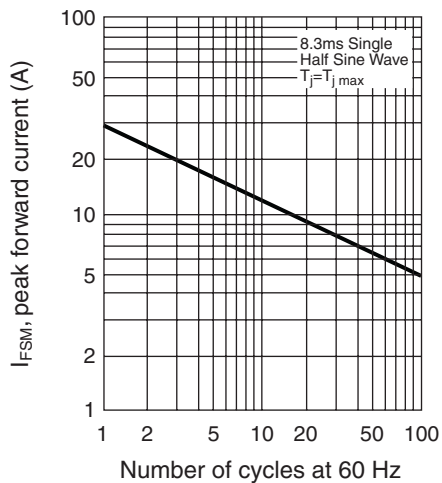
MAXIMUM FORWARD CURRENT DERATING CURVE



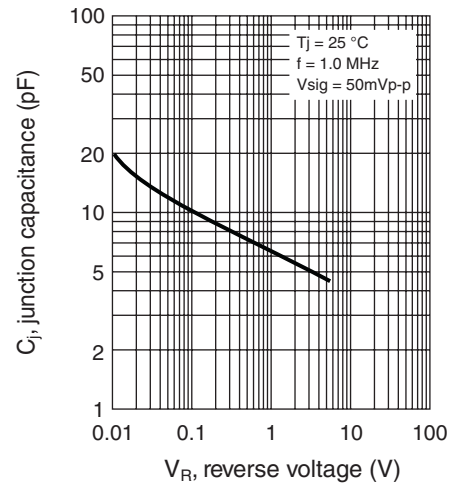
TYPICAL FORWARD CHARACTERISTICS



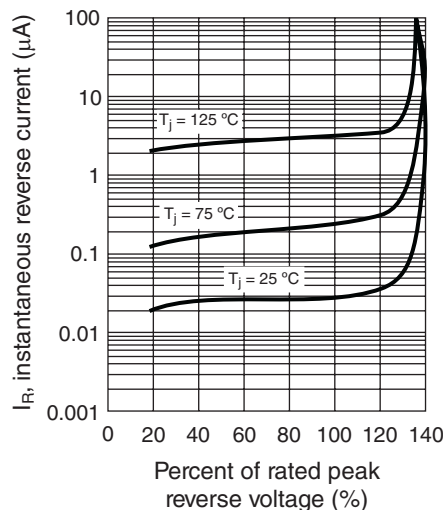
MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT



TYPICAL JUNCTION CAPACITANCE



TYPICAL REVERSE CHARACTERISTICS



1.0 Amp. Surface Mount Top Glass Passivated Rectifier**Revision History**

| Date | Revision | Description of Changes |
|-------------|-----------------|-------------------------------|
| 14-Feb-2013 | 0 | Original Data Sheet |
| 3-Jun-2013 | 1 | 800V and 1000V included |

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