

## SOD123W



### Voltage 20 V to 200V

## Current 2.0 A

AUTOMOTIVE GRADE

**RoHS**COMPLIANT

#### **FEATURES**

- Low profile package
- Ideal for automated placement
- Guardring for overvoltage protection
- Low power losses, high efficiency
- Low forward voltage drop
- High forward surge current capability
- Solder dip 260°C, 10s
- AEC-Q101 qualified
- Component in accordance to RoHS 2011/65/EU
  and WEEE 2002/06/EC
- and WEEE 2002/96/EC

   Meets MSL level 1, per J-STD-020, LF maximum peak of 260° C
- Low leakage current

#### **MECHANICAL DATA**

- 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.

### **TYPICAL APPLICATIONS**

Used in low voltage high frequency inverters, freewheeling, dc-to-dc converters, and polarity protection applications.

Maximun Ratings and Electrical Characteristics at 25°C

		FSS22W	FSS23W	FSS24W	FSS26W	FSS210W	FSS215W	FSS220W
Marking code		2D	2E	2F	2G	2H	21	2J
$V_{RRM}$	Maximum Recurrent Peak Reverse Voltage (V)	20	30	40	60	100	150	200
V <sub>RMS</sub>	Maximum RMS Voltage (V)	14	21	28	42	70	105	140
V <sub>DC</sub>	Maximum DC Blocking Voltage (V)	20	30	40	60	100	150	200
I <sub>F(AV)</sub>	Forward Current at Tc (See graphic)	2.0 A						
I <sub>FSM</sub>	8.3 ms.Peak Forward Surge Current (Jedec Method)	50 A						
Tj	Operating Temperature Range	-65°C to +125°C -65°C to +150°C						
T <sub>stg</sub>	Storage Temperature Range	-65°C to +150°C						

### Electrical Characteristics at Tamb = 25 °C

V <sub>F</sub>	Maximum Instantaneous Forward Voltage $I_F = 2.0 \text{ A}$ (Note 1)	0.5 V	0.70 V	0.85 V	0.95 V
$I_{R}$	Maximum DC Reverse Current Tj = 25 °C at	0.4 mA	0.1 mA		
l'n	Rated DC Blocking Voltage Tj =125°C (Note 3)	15 mA	10 mA 5 mA		5 mA
C <sub>j</sub>	Typical Junction Capacitance	130 pF			
R <sub>th (j-c)</sub> R <sub>th (j-a)</sub>	Typical Thermal Resistance (Note 2)	17 °C/W 75 °C/W			

Notes: 1. Pulse Test: 300µ Pulse Width, 1% Duty Cycle

2. Thermal Resistance from Junction to Case per diode

3. Pulse test: Pulse width ≤ 40ms

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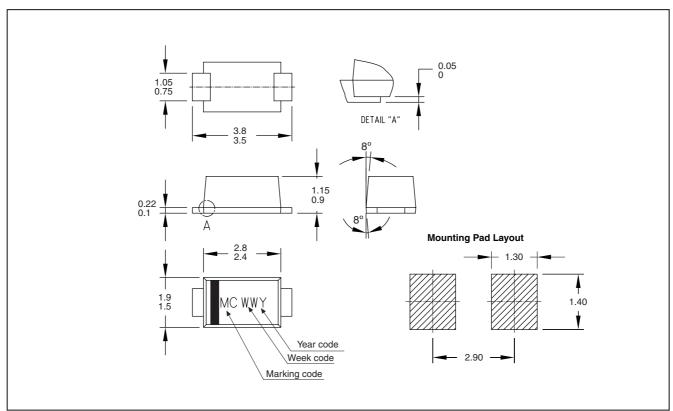
Version: Feb - 13 Page Number: 1/4



# **Ordering information**

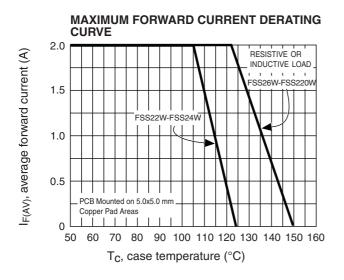
PREFERRED P/N	PACKAGE CODE	DELIVERY MODE	BASE QUANTITY	UNIT WEIGHT (g)
FSS24W TRTB	TRTB	13" diameter tape and reel	10,000	0.0165
FSS24W HE3 TRTB	TRTB	13" diameter tape and reel	10,000	0.0165

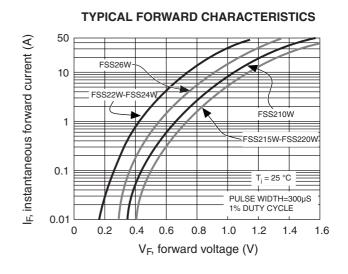
# Package Outline Dimensions: (mm) SOD123W

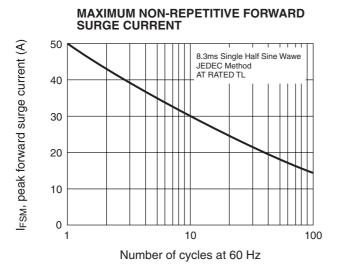


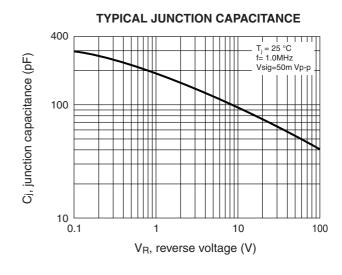


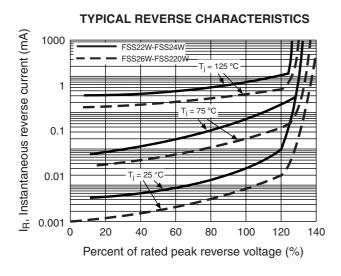
# Ratings and Characteristics (Ta 25 °C unless otherwise noted)

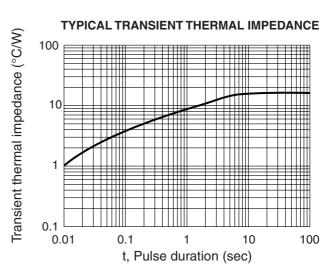












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Version: Feb - 13 Page Number: 3/4



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