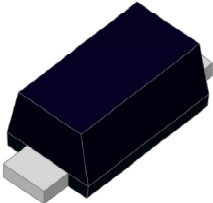





1.0 Amp. Surface Mount Schottky Barrier Rectifier

SOD123W 	Voltage 20 V	Current 1.0 A	
	FEATURE <ul style="list-style-type: none"> • 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 2002/96/EC • Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C • Low leakage current 		   RoHS COMPLIANT
	MECHANICAL DATA <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. 		
	TYPICAL APPLICATIONS Used in low voltage high frequency inverters, freewheeling, dc-to-dc converters, and polarity protection applications.		

Maximum Ratings and Electrical Characteristics at 25 °C

		FSS12W	FSS13W	FSS14W	FSS15W	FSS16W	FSS19W	FSS110W	FSS115W	FSS120W
Marking Code		1W	2W	3W	4W	5W	6W	7W	8W	9W
V_{RRM}	Maximum Recurrent Peak Reverse Voltage (V)	20	30	40	50	60	90	100	150	200
V_{RMS}	Maximum RMS Voltage (V)	14	21	28	35	42	63	70	105	140
V_{DC}	Maximum DC Blocking Voltage (V)	20	30	40	50	60	90	100	150	200
$I_{F(VA)}$	Forward Current at T_L (See graphic)	1.0 A								
I_{FSM}	8,3 ms. Peak Forward Surge Current (Jedec Method)	30 A								
T_j	Operating Temperature Range	- 65 to + 150 °C								
T_{stg}	Storage Temperature Range	- 65 to + 150 °C								

Electrical Characteristics at Tamb = 25 °C

V_F	Maximum Instantaneous Forward Voltage $I_F = 1\text{ A}$ @ 25°C (Note 1) @ 100°C	0.5 V	0.65 V	0.80 V	0.95 V
		0.4 V	0.55 V	0.70 V	0.85 V
I_R	Maximum DC Reverse Current $T_j = 25^\circ\text{C}$ (Note 3) $T_j = 100^\circ\text{C}$ at Rated DC Blocking Voltage $T_j = 125^\circ\text{C}$	0.05 mA			
		0.5 mA			
		10 mA	5.0 mA	2.0 mA	
C_j	Typical Junction Capacitance	110 pF	90 pF	70 pF	
$R_{th(j-a)}$ $R_{th(j-l)}$	Maximum Thermal Resistance (Note 2)	28 °C/W 88 °C/W			

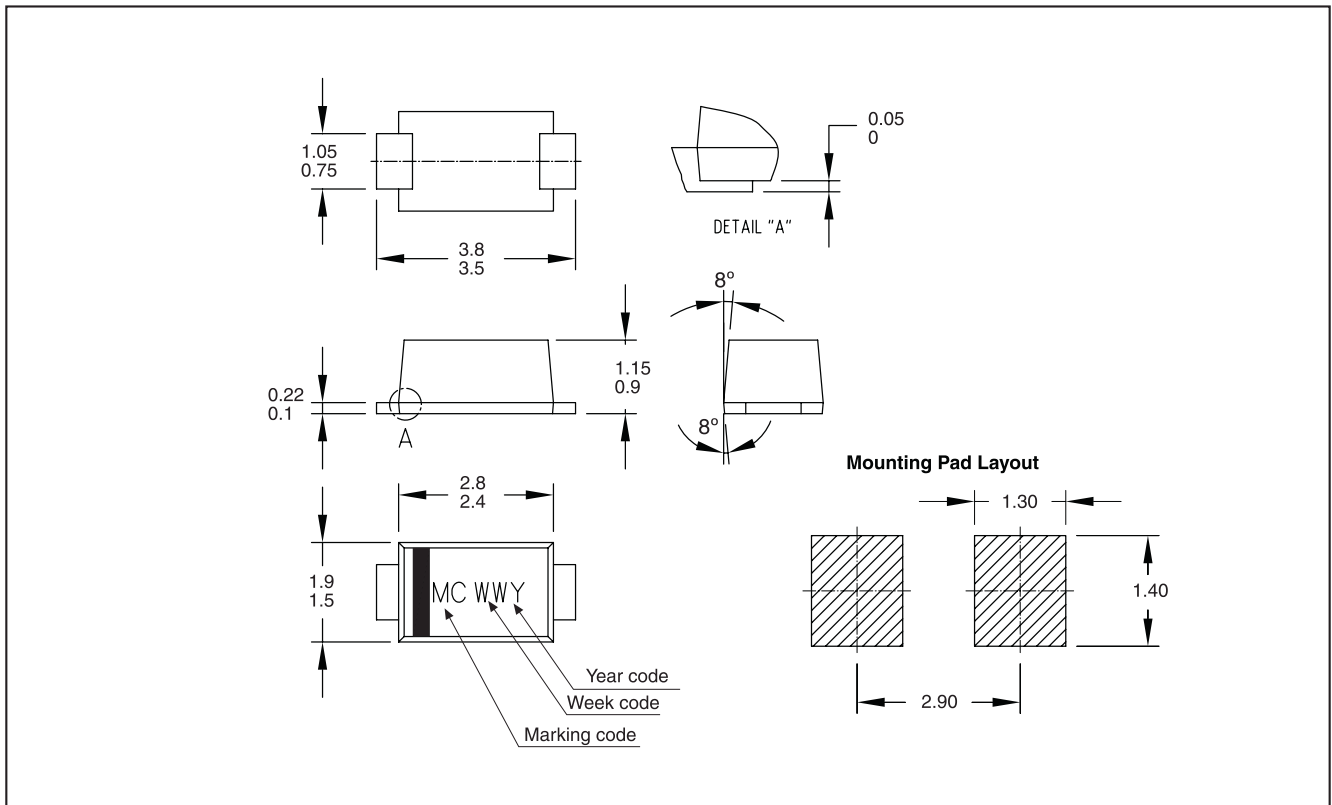
Notes:
 1. Pulse Test: 300µ Pulse Width, 1% Duty Cycle
 2. Thermal Resistance from Junction to Case per diode
 3. Pulse Test: Pulse width ≤ 40ms

1.0 Amp. Surface Mount Schottky Barrier Rectifier

Ordering information

PREFERRED P/N	PACKAGE CODE	DELIVERY MODE	BASE QUANTITY	UNIT WEIGHT (g)
FSS14W TRTB	TRTB	13" diameter tape and reel	10,000	0.0165
FSS14W HE3 TRTB	TRTB	13" diameter tape and reel	10,000	0.0165

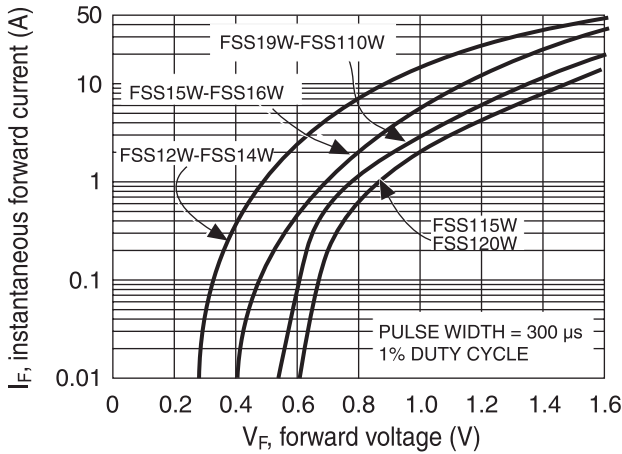
Package Outline Dimensions: (mm) SOD123W



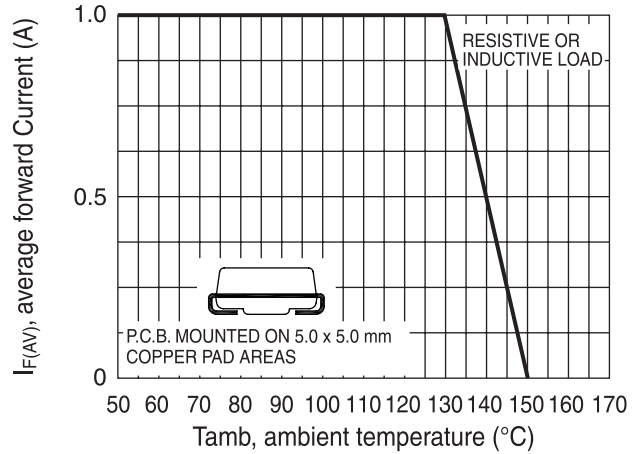
1.0 Amp. Surface Mount Schottky Barrier Rectifier

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

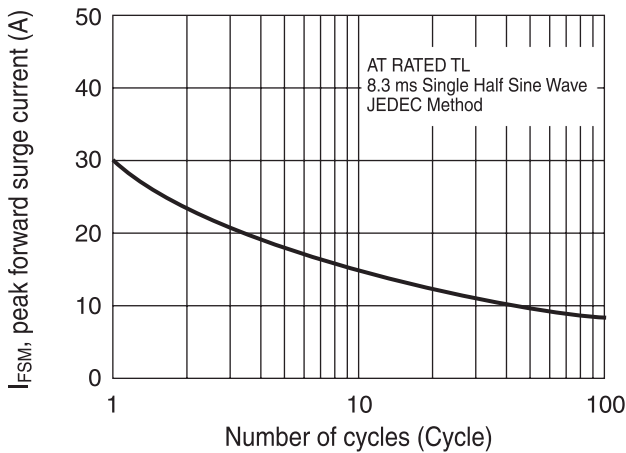
TYPICAL FORWARD CHARACTERISTIC



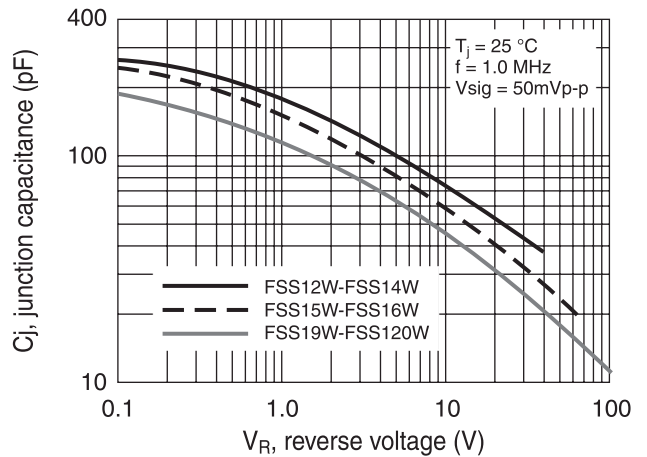
MAXIMUM FORWARD CURRENT DERATING CURVE



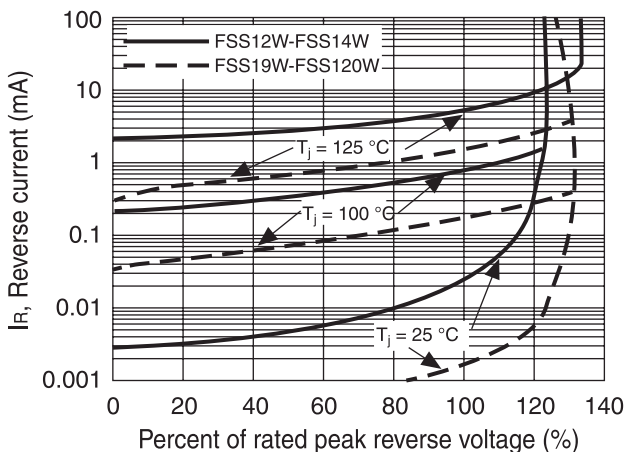
MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT



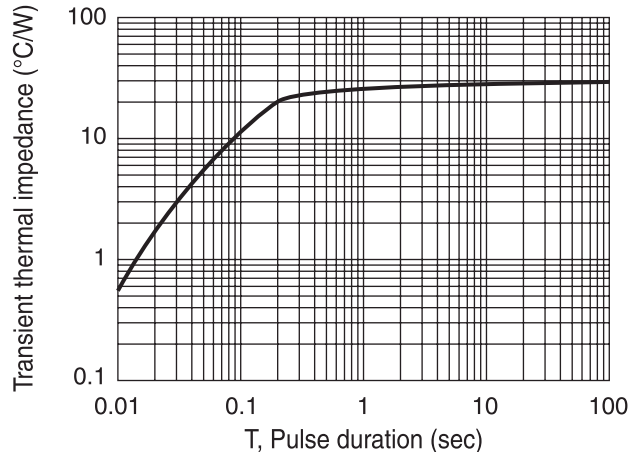
TYPICAL JUNCTION CAPACITANCE



TYPICAL REVERSE CHARACTERISTIC



TYPICAL TRANSIENT THERMAL IMPEDANCE



1.0 Amp. Surface Mount Schottky Barrier Rectifier**Revision History**

DATE	REVISION	DESCRIPTION OF CHANGES
14-Feb-2013	0	Original Data Sheet
30-May-2014	1	Update IR specifications at temperature
28-Aug-2014	2	Correct Junction Temperature Specification
20-Dec-2018	3	Update V_F and I_r parameters

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