

## 1A, 40V - 200V Surface Mount Schottky Barrier Rectifiers

### FEATURES

- Low power loss, high efficiency
- Ideal for automated placement
- High surge current capability
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21



SOD-123W



HALOGEN  
**FREE**

### MECHANICAL DATA

**Case:** SOD-123W

Molding compound: UL flammability classification rating 94V-0

Moisture sensitivity level: level 1, per J-STD-020

Part no. with suffix "H" means AEC-Q101 qualified

Packing code with suffix "G" means green compound (halogen-free)

**Terminal:** Matte tin plated leads, solderable per J-STD-002

Meet JESD 201 class 2 whisker test

**Polarity:** Indicated by cathode band

**Weight:** 16 mg (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T <sub>A</sub> =25°C unless otherwise noted)								
PARAMETER	SYMBOL	SS1H4LW	SS1H6LW	SS1H10LW	SS1H15LW	SS1H20LW	UNIT	
Marking Code		1H4LW	1H6LW	1H10LW	1H15LW	1H20LW		
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	40	60	100	150	200	V	
Maximum RMS voltage	V <sub>RMS</sub>	28	42	70	105	140	V	
Maximum DC blocking voltage	V <sub>DC</sub>	40	60	100	150	200	V	
Maximum average forward rectified current	I <sub>F(AV)</sub>	1						A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	30						A
Maximum instantaneous forward voltage (Note 1) @ 1 A	V <sub>F</sub>	0.65	0.70	0.80	0.85		V	
Maximum reverse current @ rated V <sub>R</sub>	I <sub>R</sub>	0.5						μA
		0.3		0.2		0.1		mA
Typical thermal resistance	R <sub>θJL</sub>	25						°C/W
	R <sub>θJA</sub>	80						
Operating junction temperature range	T <sub>J</sub>	- 55 to +175						°C
Storage temperature range	T <sub>STG</sub>	- 55 to +175						°C

Note 1: Pulse test with PW=300μs, 1% duty cycle

**ORDERING INFORMATION**

PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX	PACKAGE	PACKING
SS1HxLW (Note 1, 2)	H	RV	G	SOD-123W	3,000 / 7" Plastic reel
		RQ			10,000 / 13" Paper reel

Note 1: "x" defines voltage from 40V (SS1H4LW) to 200V (SS1H20LW)

Note 2: Whole series with green compound (halogen-free)

**EXAMPLE**

EXAMPLE P/N	PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
SS1H4LWHRVG	SS1H4LW	H	RV	G	AEC-Q101 qualified Green compound

**RATINGS AND CHARACTERISTICS CURVES (T<sub>A</sub>=25°C unless otherwise noted)**

FIG. 1 FORWARD CURRENT DERATING CURVE

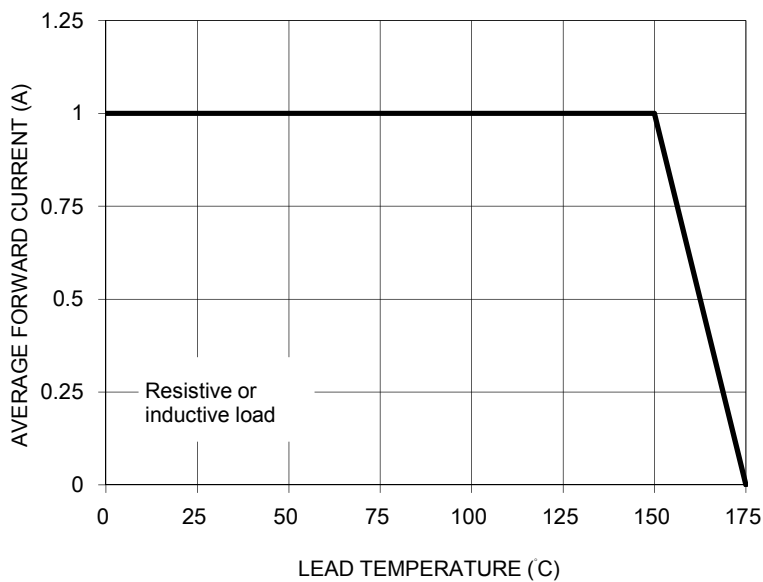


FIG. 2 TYPICAL FORWARD CHARACTERISTICS

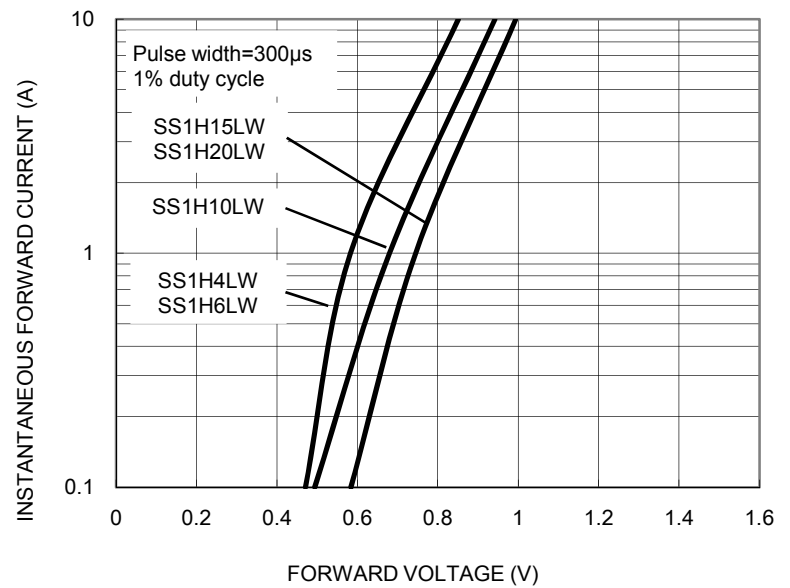


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT



FIG. 4 TYPICAL REVERSE CHARACTERISTICS

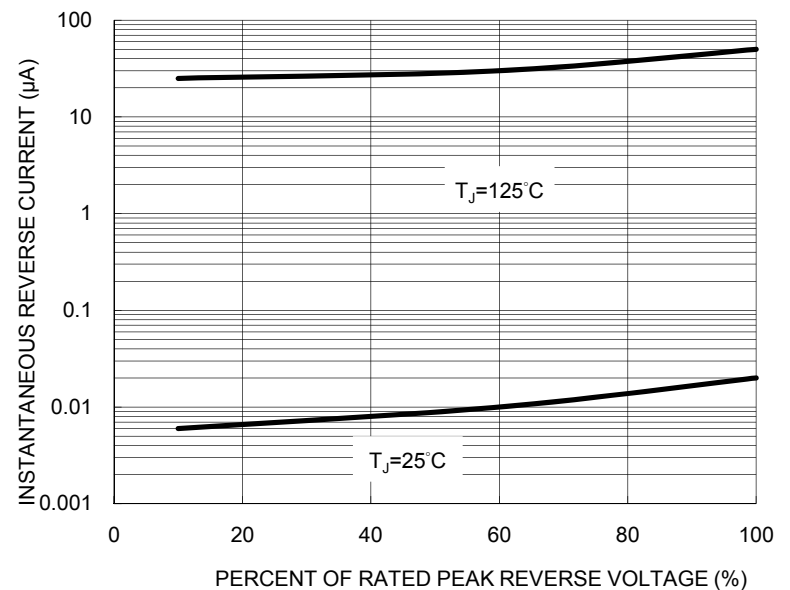
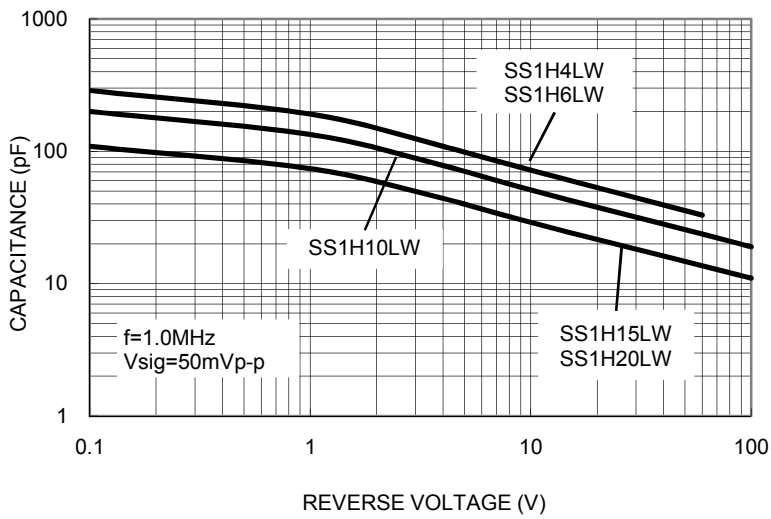
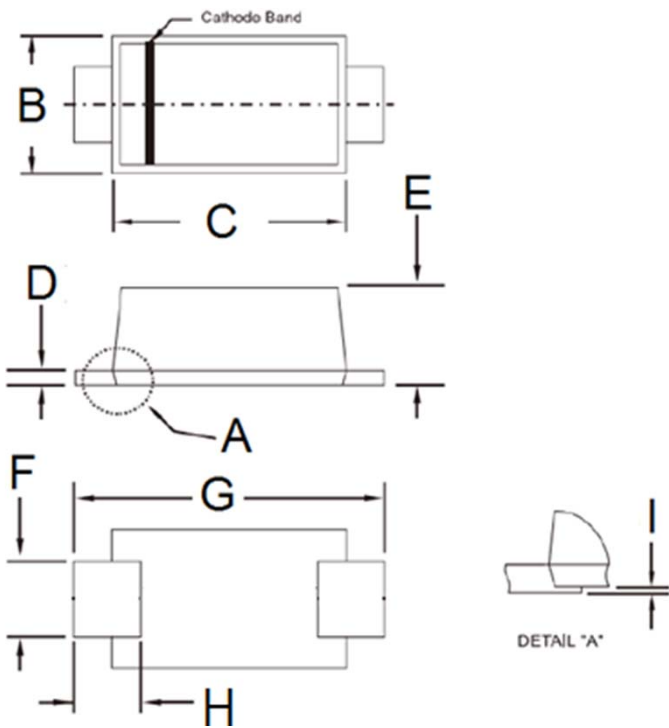


FIG. 5 TYPICAL JUNCTION CAPACITANCE



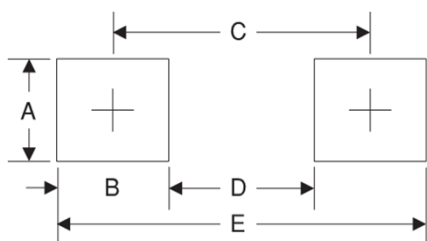
PACKAGE OUTLINE DIMENSIONS

**SOD-123W**



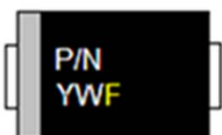
DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
B	1.70	1.90	0.067	0.075
C	2.60	2.90	0.102	0.114
D	0.10	0.22	0.004	0.009
E	0.90	1.02	0.035	0.040
F	0.90	1.05	0.035	0.041
G	3.60	3.80	0.142	0.150
H	0.50	0.85	0.020	0.033
I	0.00	0.10	0.000	0.004

SUGGESTED PAD LAYOUT



Symbol	Unit (mm)	Unit (inch)
A	1.4	0.055
B	1.2	0.047
C	3.1	0.122
D	1.9	0.075
E	4.3	0.169

MARKING DIAGRAM



P/N = Marking Code  
YWF = Date Code  
F = Factory Code

## Notice

Specifications of the products displayed herein are subject to change without notice. TSC or anyone on its behalf, assumes no responsibility or liability for any errors or inaccuracies.

Information contained herein is intended to provide a product description only. No license, express or implied, to any intellectual property rights is granted by this document. Except as provided in TSC's terms and conditions of sale for such products, TSC assumes no liability whatsoever, and disclaims any express or implied warranty, relating to sale and/or use of TSC products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright, or other intellectual property right.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify TSC for any damages resulting from such improper use or sale.