

Surface Mount Schottky Barrier Rectifier

FEATURES

- Ideal for automated placement
- Compact package size, profile <0.85mm
- High surge current capability
- Low power loss, high efficiency
- AEC-Q101 qualified and Halogen free only
- Moisture sensitivity level: level 1, per J-STD-020
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition



TYPICAL APPLICATIONS

The devices are designed for high frequency miniature switched mode power supplies such as adapters, lighting and on-board DC/DC converters.

SOD123HE

MECHANICAL DATA

Case: SOD123HE

Molding compound, UL flammability classification rating 94V-0

Base P/N with suffix "G" on packing code - green compound (halogen-free)

Base P/N with prefix "H" on packing code - AEC-Q101 qualified

Terminal: Matte tin plated leads, solderable per JESD22-B102

with prefix "H" on packing code meet JESD 201 class 2 whisker test

Polarity: Indicated by cathode band

Weight: 21mg (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T _A =25°C unless otherwise noted)								
PARAMETER	SYMBOL	SS12 LS	SS13 LS	SS14 LS	SS16 LS	SS110 LS	SS115 LS	UNIT
Marking code		12LS	13LS	14LS	16LS	10LS	A5LS	
Maximum repetitive peak reverse voltage	V _{RRM}	20	30	40	60	100	150	V
Maximum RMS voltage	V _{RMS}	14	21	28	42	70	105	V
Maximum DC blocking voltage	V _{DC}	20	30	40	60	100	150	V
Maximum average forward rectified current	I _{F(AV)}	1						A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I _{FSM}	30						A
Maximum instantaneous forward voltage @ 0.5 A (Note 1) @ 1.0 A	V _F	-	-	0.51	0.58	0.70	0.75	V
		0.45	0.50	0.55	0.70	0.80	0.90	
Maximum reverse current @ rated VR T _J =25 °C T _J =125 °C	I _R	0.4				0.05		mA
		-				0.5		
Typical junction capacitance (Note 2)	C _J	80						pF
Typical thermal resistance	R _{θJC}	25						°C/W
	R _{θJA}	70						
Operating junction temperature range	T _J	- 55 to +125		- 55 to +150				°C
Storage temperature range	T _{STG}	- 55 to +150						°C

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

Note 2: Measured at 1 MHz and Applied Reverse Voltage of 4.0V DC

ORDERING INFORMATION					
PART NO.	AEC-Q101 QUALIFIED	PACKING CODE	GREEN COMPOUND CODE	PACKAGE	PACKING
SS1xxLS (Note 1, 2)	Prefix "H"	RV	Suffix "G"	SOD123HE	3,000 / 7" Reel
		RQ		SOD123HE	10,000 / 13" Reel

Note 1: "xx" defines voltage from 20V (SS12LS) to 150V (SS115LS)

Note 2: Whole series with AEC-Q101 qualified and green compound (halogen-free)

EXAMPLE					
PREFERRED P/N	PART NO.	AEC-Q101 QUALIFIED	PACKING CODE	GREEN COMPOUND CODE	DESCRIPTION
SS115LSHRVG	SS115LS	H	RV	G	AEC-Q101 qualified Green compound

RATINGS AND CHARACTERISTICS CURVES

(TA=25°C unless otherwise noted)

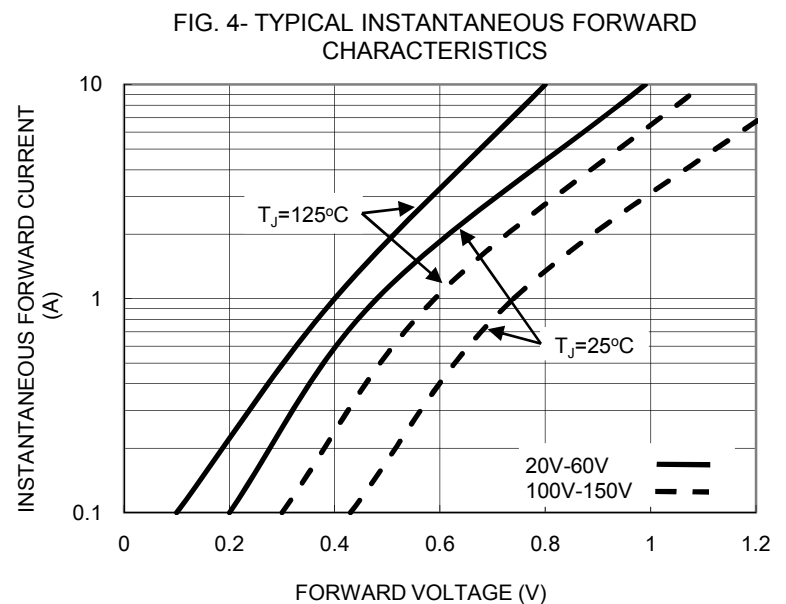
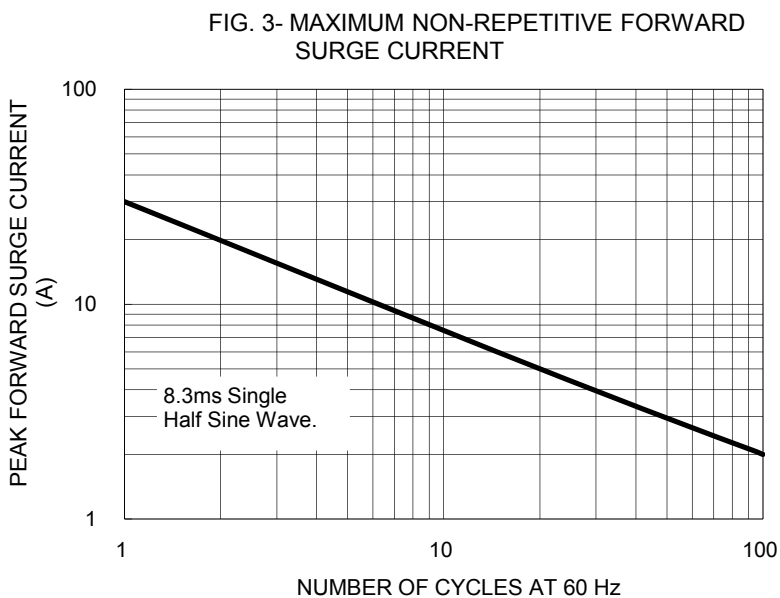
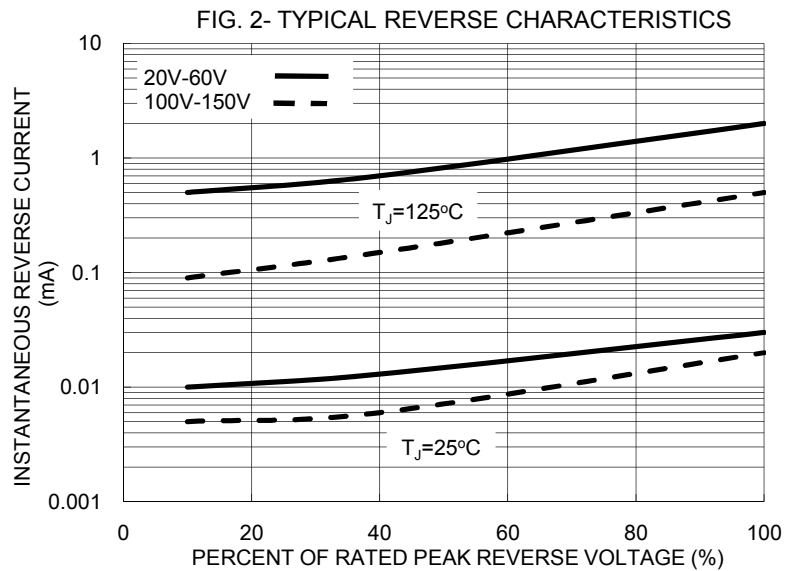
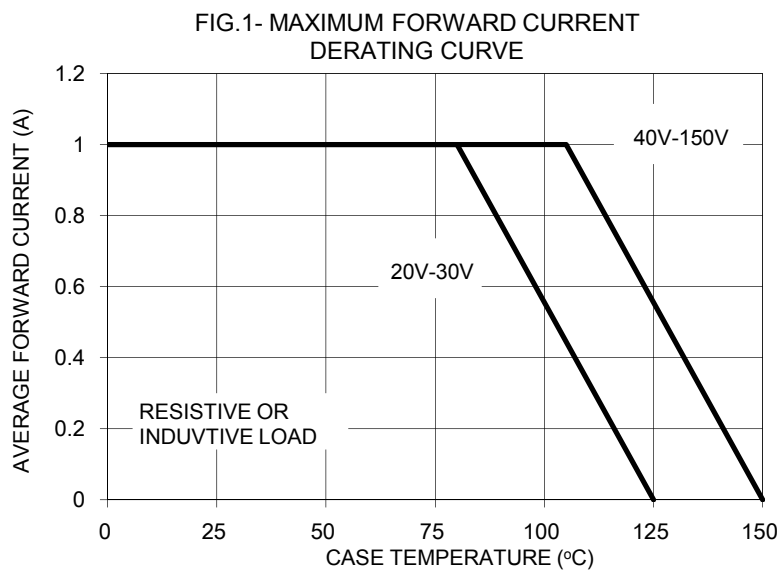
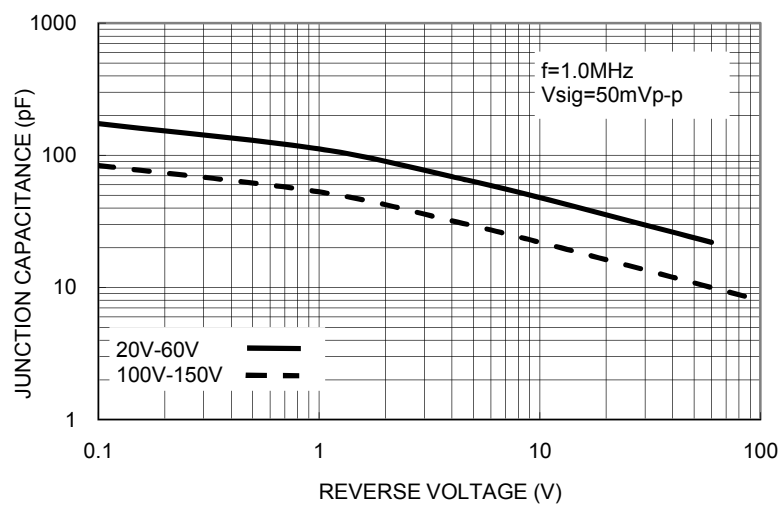
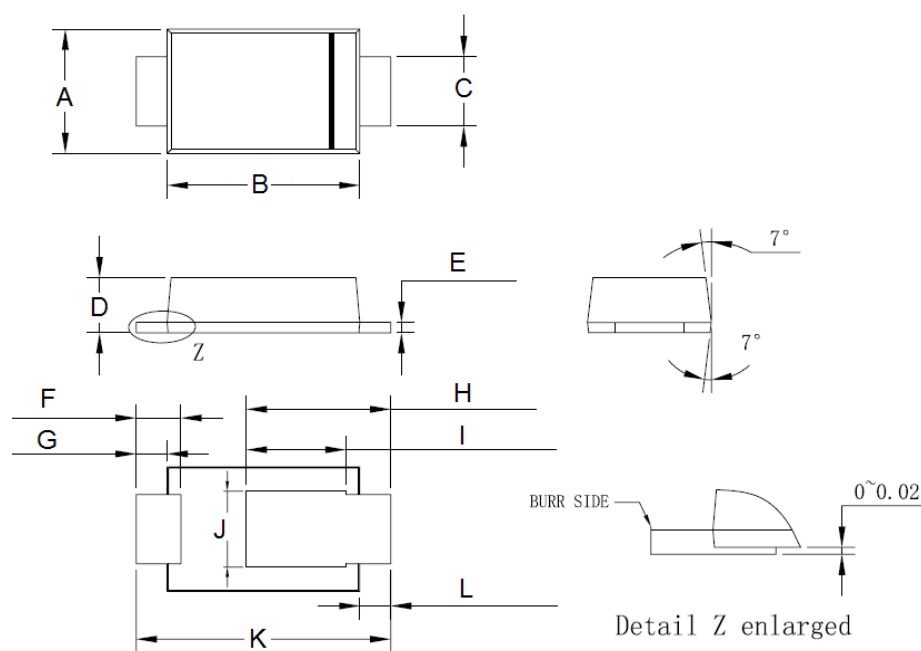


FIG. 5- TYPICAL JUNCTION CAPACITANCE



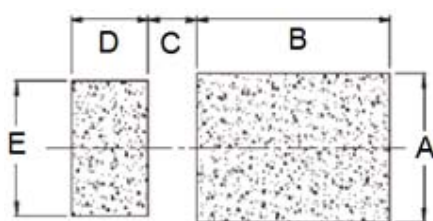
PACKAGE OUTLINE DIMENSIONS

SOD123HE



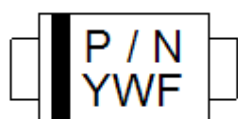
DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	1.65	1.95	0.065	0.077
B	2.60	3.00	0.102	0.118
C	0.85	1.15	0.033	0.045
D	0.75	0.85	0.030	0.033
E	0.10	0.20	0.004	0.008
F	0.55	0.75	0.022	0.030
G	0.35	0.55	0.014	0.022
H	1.90	2.30	0.075	0.091
I	1.35	1.55	0.053	0.061
J	0.95	1.25	0.037	0.049
K	3.50	3.90	0.138	0.154
L	0.35	0.55	0.014	0.022

SUGGESTED PAD LAYOUT



Symbol	Unit (mm)	Unit (inch)
A	1.40	0.055
B	2.40	0.094
C	0.70	0.028
D	0.90	0.035
E	1.40	0.055

MARKING DIAGRAM



P/N = Marking Code
YW = 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.