

Surface Mount Fast Recovery Rectifiers

FEATURES

- Ideal for automated placement
- Compact package size
- High surge current capability
- Low power loss, high efficiency
- 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



MECHANICAL DATA

Case: SOD-123HE

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

Meet JESD 201 class 1A whisker test

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

Polarity: Indicated by cathode band

Weight: 0.022g (approximately)

SOD-123HE

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T _A =25°C unless otherwise noted)					
PARAMETER	SYMBOL	RS1JLS	RS1KLS	RS1MLS	UNIT
Marking code		RJLS	RKLS	RMLS	
Maximum repetitive peak reverse voltage	V _{RRM}	600	800	1000	V
Maximum RMS voltage	V _{RMS}	420	560	700	V
Maximum DC blocking voltage	V _{DC}	600	800	1000	V
Maximum average forward rectified current	I _{F(AV)}	1.2			A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I _{FSM}	50			A
Maximum instantaneous forward voltage (Note 1) @ 1.2 A	V _F	1.3			V
Maximum reverse current @ rated VR T _J =25 °C T _J =125 °C	I _R	5 150			μA
Maximum reverse recovery time (Note 2)	t _{rr}	300			ns
Typical thermal resistance	R _{θJC} R _{θJA}	26 80			°C/W
Operating junction temperature range	T _J	- 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: Reverse recovery test condition: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A

ORDERING INFORMATION					
PART NO.	AEC-Q101 QUALIFIED	PACKING CODE	GREEN COMPOUND CODE	PACKAGE	PACKING
RS1xLS (Note 1, 2)	Prefix "H"	RV	Suffix "G"	SOD-123HE	3,000 / 7" Reel
		RQ		SOD-123HE	10,000 / 13" Reel

Note 1: "x" defines voltage from 600V (RS1JLS) to 1000V (RS1MLS)

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

EXAMPLE					
PREFERRED P/N	PART NO.	AEC-Q101 QUALIFIED	PACKING CODE	GREEN COMPOUND CODE	DESCRIPTION
RS1MLSHRVG	RS1MLS	H	RV	G	AEC-Q101 qualified Green compound

RATINGS AND CHARACTERISTICS CURVES

(TA=25°C unless otherwise noted)

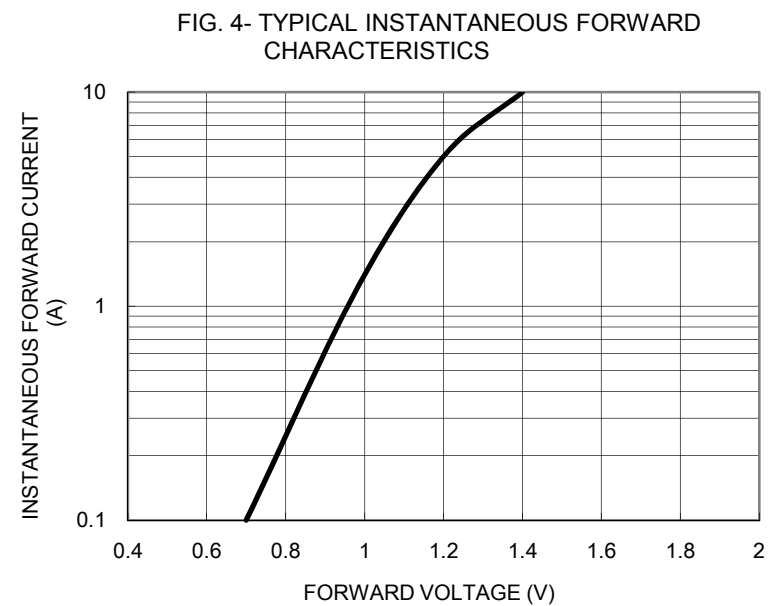
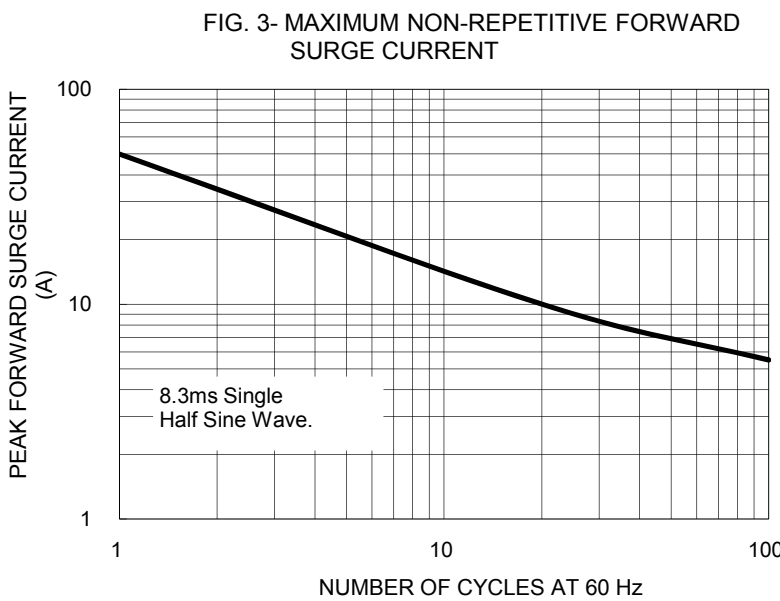
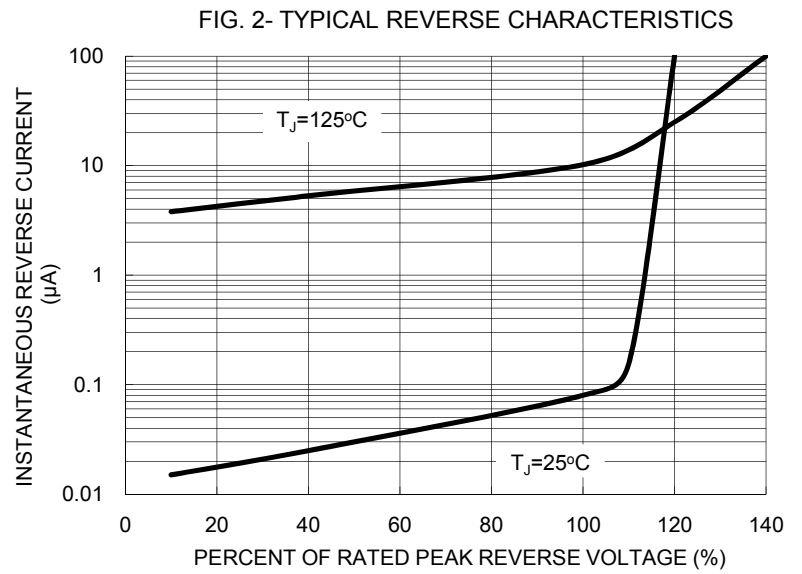
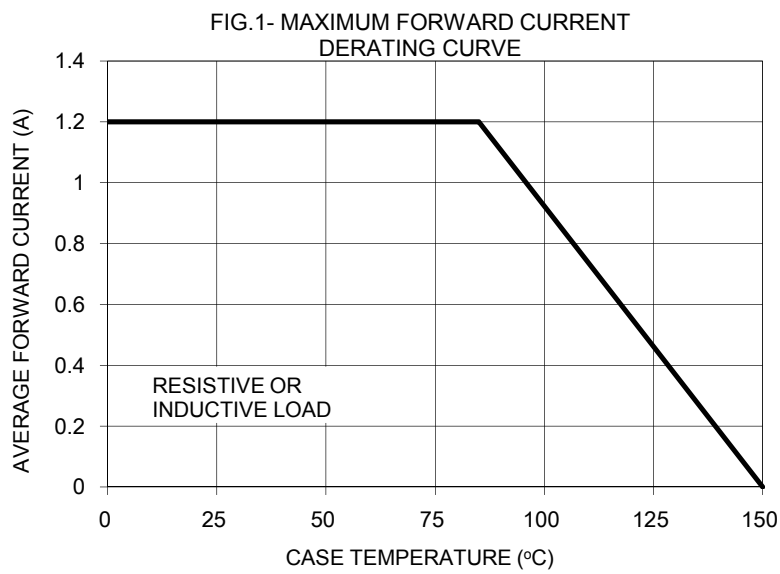


FIG. 5- TYPICAL JUNCTION CAPACITANCE

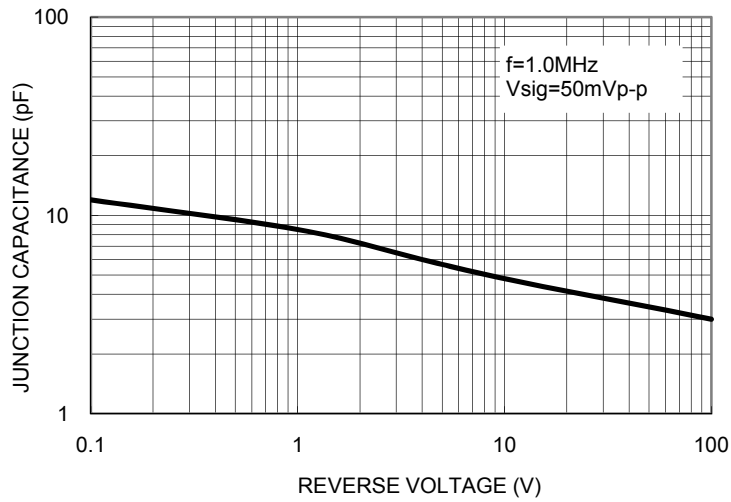
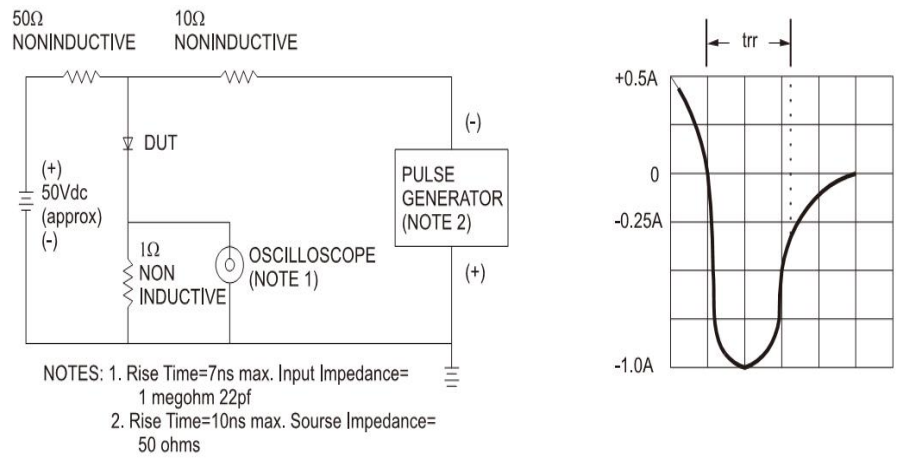
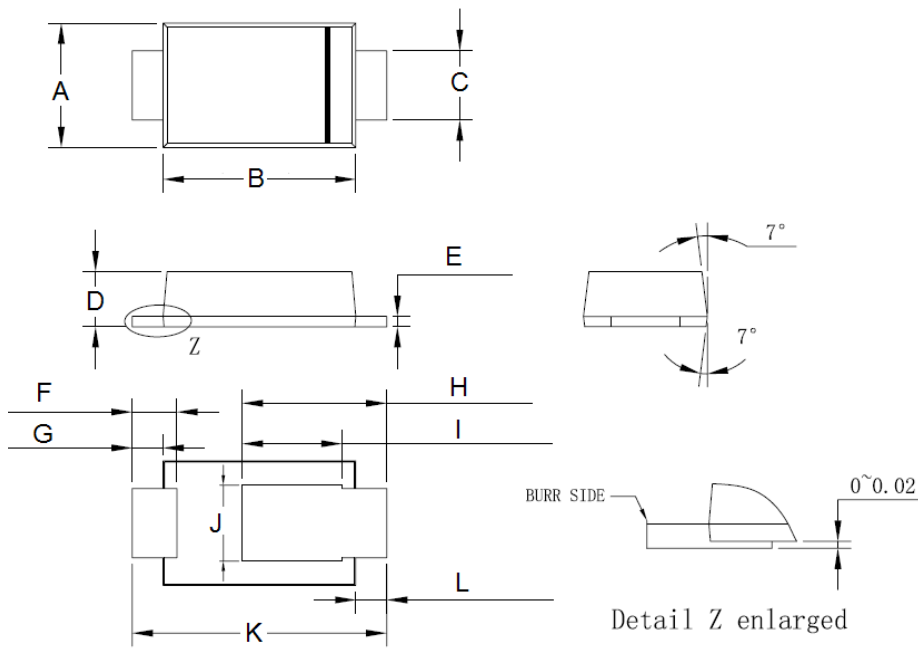


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



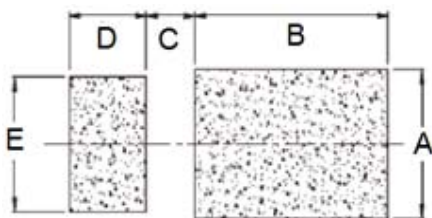
PACKAGE OUTLINE DIMENSIONS

SOD-123HE



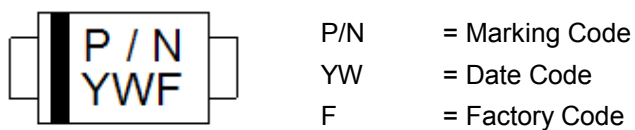
DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	1.65	1.95	0.065	0.077
B	2.60	3.00	0.102	0.118
C	0.85	1.15	0.033	0.045
D	0.75	0.85	0.030	0.033
E	0.10	0.20	0.004	0.008
F	0.55	0.75	0.022	0.030
G	0.35	0.55	0.014	0.022
H	1.90	2.30	0.075	0.091
I	1.35	1.55	0.053	0.061
J	0.95	1.25	0.037	0.049
K	3.50	3.90	0.138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



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.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Taiwan Semiconductor:

[RS1JLS RQG](#) [RS1JLS RQ](#) [RS1KLS RV](#) [RS1JLS RVG](#) [RS1KLS RQG](#) [RS1KLS RQ](#) [RS1JLS RV](#) [RS1KLS RVG](#)
[RS1MLS RVG](#) [RS1MLS RV](#) [RS1MLS RQG](#) [RS1MLS RQ](#) [RS1KLSHRVG](#) [RS1MLSHRQG](#) [RS1MLSHRVG](#)
[RS1JLSHRQG](#) [RS1KLSHRQG](#) [RS1JLSHRVG](#)