

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



SOD-123HE



TYPICAL APPLICATIONS

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

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

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"	SOD-123HE	3,000 / 7" Reel
		RQ		SOD-123HE	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.1- MAXIMUM FORWARD CURRENT DERATING CURVE

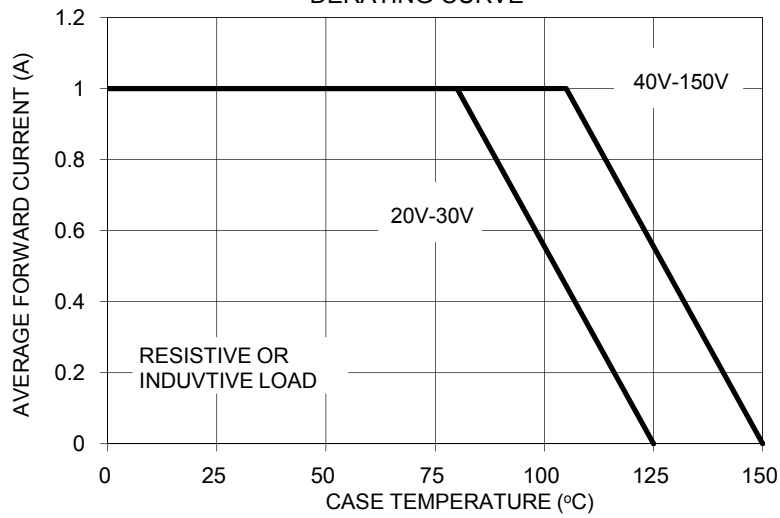


FIG. 2- TYPICAL REVERSE CHARACTERISTICS

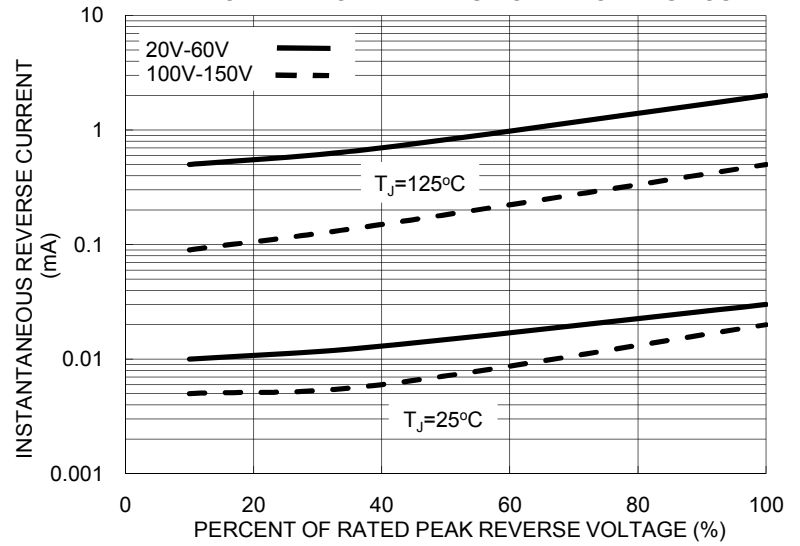


FIG. 3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

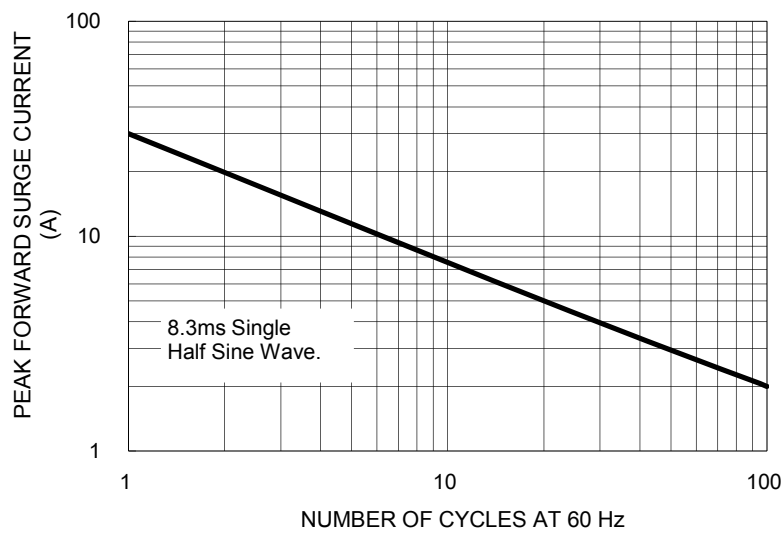


FIG. 4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

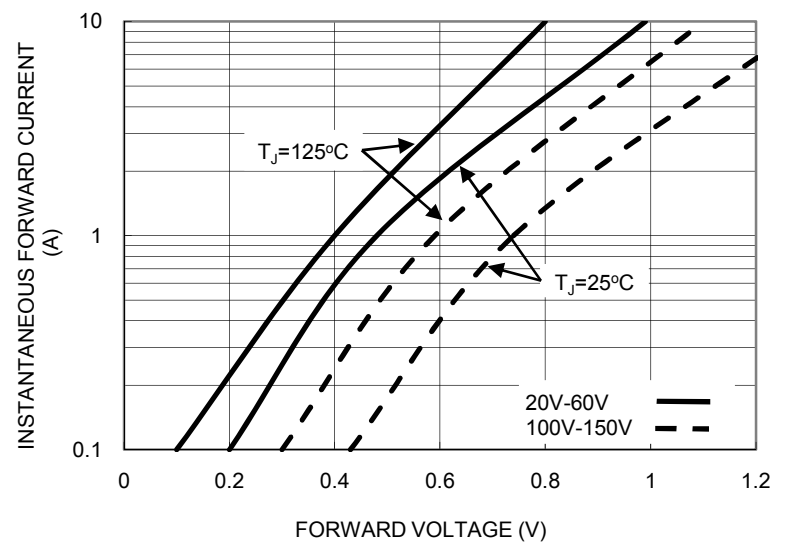
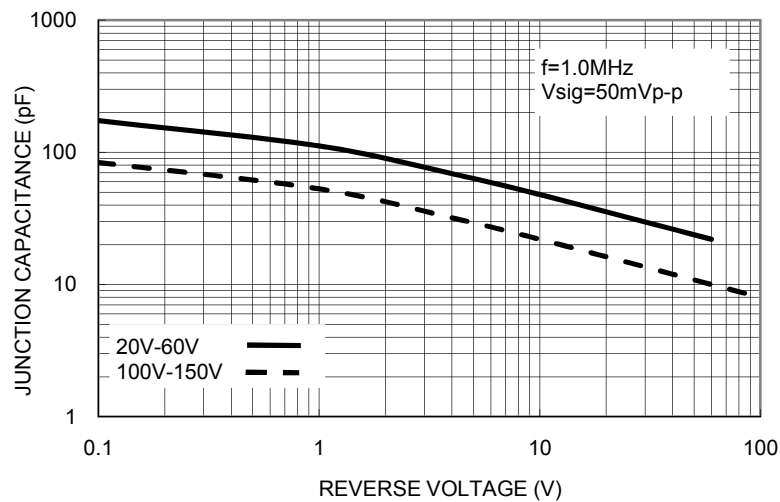
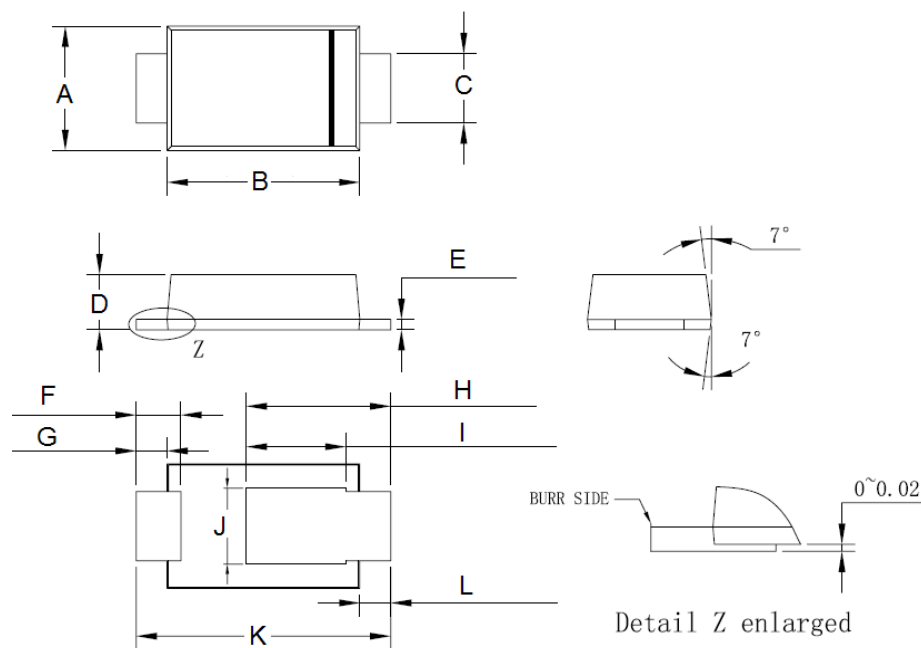


FIG. 5- TYPICAL JUNCTION CAPACITANCE



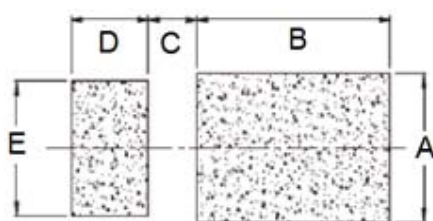
PACKAGE OUTLINE DIMENSIONS

SOD-123HE



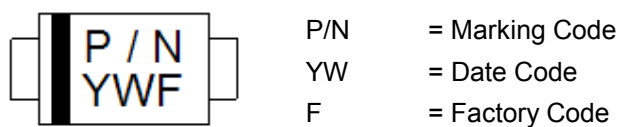
DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	1.65	1.95	0.065	0.077
B	2.60	3.00	0.102	0.118
C	0.85	1.15	0.033	0.045
D	0.75	0.85	0.030	0.033
E	0.10	0.20	0.004	0.008
F	0.55	0.75	0.022	0.030
G	0.35	0.55	0.014	0.022
H	1.90	2.30	0.075	0.091
I	1.35	1.55	0.053	0.061
J	0.95	1.25	0.037	0.049
K	3.50	3.90	0.138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



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