

## 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


**HALOGEN  
FREE**

### 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 ( $T_A=25^\circ\text{C}$ 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 $T_J=25^\circ\text{C}$ $T_J=125^\circ\text{C}$	$I_R$	0.4				0.05		mA
		-				0.5		
Typical junction capacitance (Note 2)	$C_J$	80						pF
Typical thermal resistance	$R_{\theta JC}$ $R_{\theta JA}$	25 70						°C/W
Operating junction temperature range	$T_J$	- 55 to +125		- 55 to +150				
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)

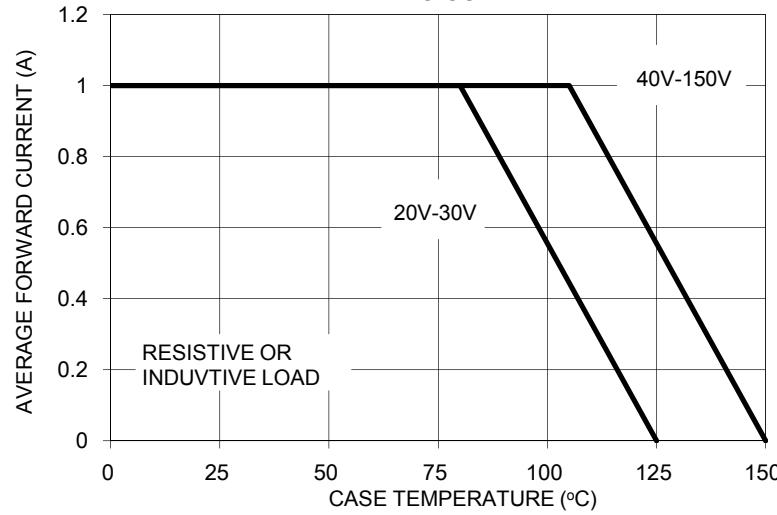
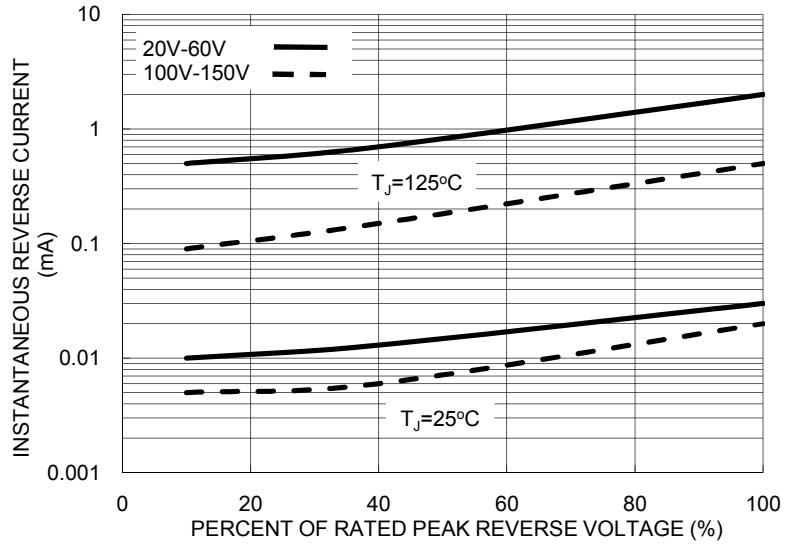
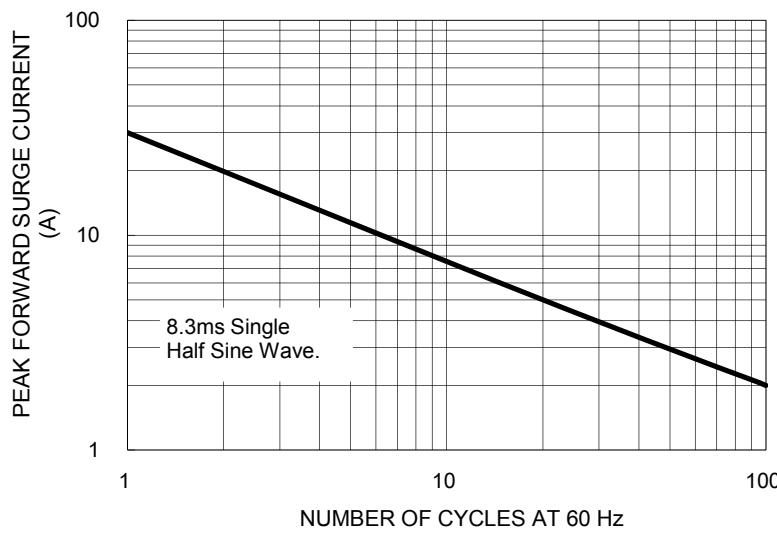
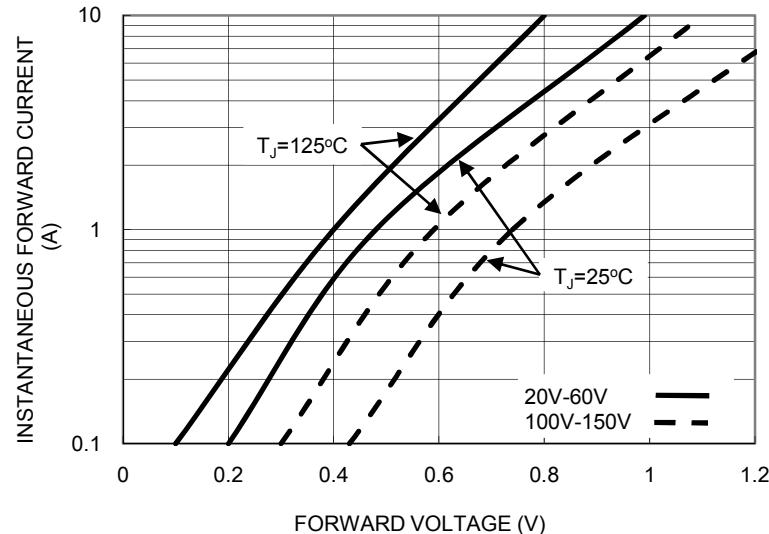
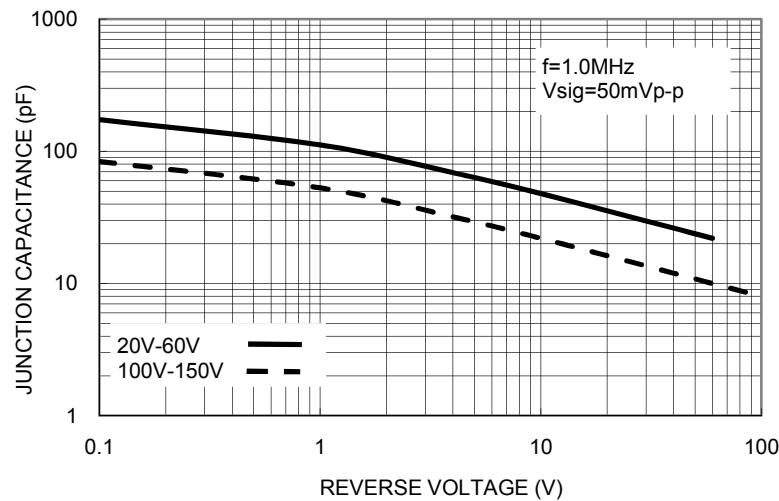
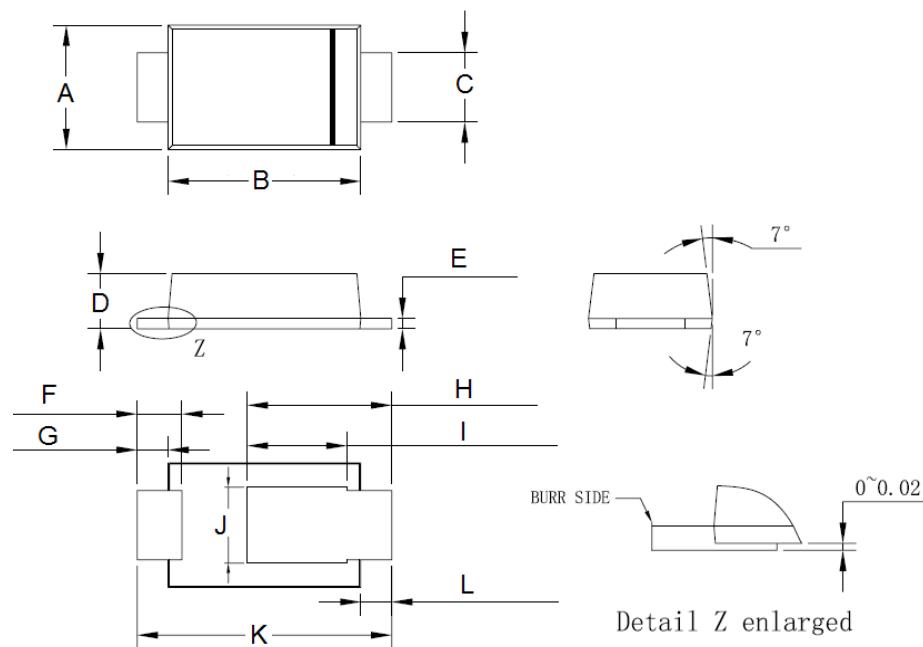
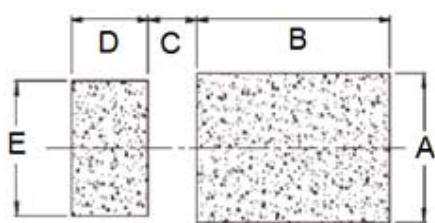
**FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE**

**FIG. 2- TYPICAL REVERSE CHARACTERISTICS**

**FIG. 3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**

**FIG. 4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**


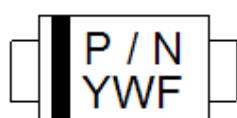
FIG. 5- TYPICAL JUNCTION CAPACITANCE


**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**


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

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