

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







SOD-123HE

HALOGEN

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)

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			Α	
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I _{FSM}	50			А	
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)	trr	300			ns	
Typical thermal resistance	$R_{_{ extsf{ heta}JC}}$ $R_{_{ hetaJA}}$	26 80		°C/W		
Operating junction temperature range	TJ	- 55 to +150		OC		
Storage temperature range	T _{STG}	- 55 to +150 C			°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



RS1JLS - RS1MLS

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

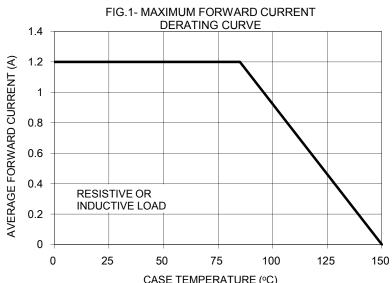
Note 1: "x" defines voltage from 600V (RS1JLS) to 1000V (RS1MLS)

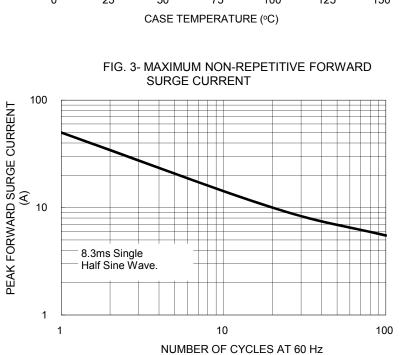
Note 2: Whole series with green compound (halogen-free)

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

RATINGS AND CHARACTERISTICS CURVES

(TA=25°C unless otherwise noted)





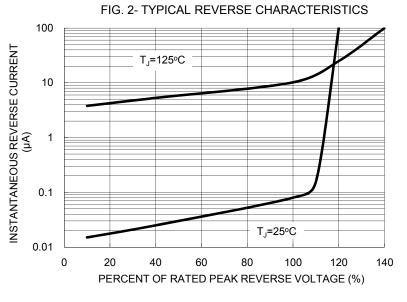
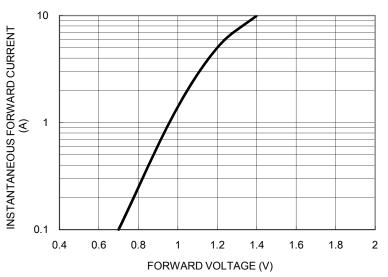


FIG. 4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

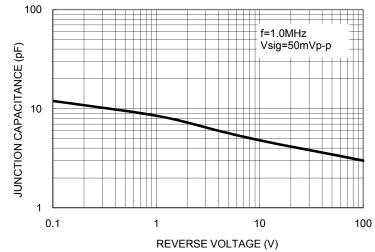


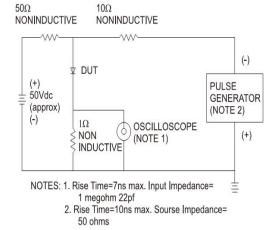


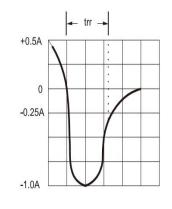
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FIG. 5- TYPICAL JUNCTION CAPACITANCE

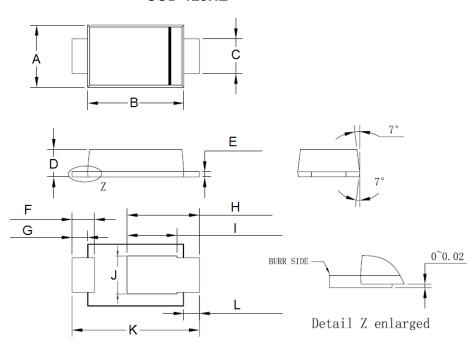
FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM





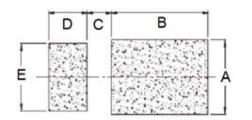


PACKAGE OUTLINE DIMENSIONS SOD-123HE

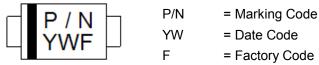


DIM.	Unit (mm)		Unit (inch)		
	Min	Max	Min	Max	
А	1.65	1.95	0.065	0.077	
В	2.60	3.00	0.102	0.118	
С	0.85	1.15	0.033	0.045	
D	0.75	0.85	0.030	0.033	
E	0.10	0.20	0.004	0.008	
F	0.55	0.75	0.022	0.030	
G	0.35	0.55	0.014	0.022	
Н	1.90	2.30	0.075	0.091	
I	1.35	1.55	0.053	0.061	
J	0.95	1.25	0.037	0.049	
К	3.50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

SUGGESTED PAD LAYOUT



MARKING DIAGRAM



Unit (mm) Unit (inch) Symbol 0.055 A 1.40 В 2.40 0.094 С 0.70 0.028 D 0.90 0.035 Е 1.40 0.055

= Factory Code

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