

Surface Mount Rectifier

FEATURES

- Ideal for automated placement
- Low forward voltage drop
- Glass passivated chip junction
- 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



Micro SMA



MECHANICAL DATA

Case: Micro SMA

Molding compound, UL flammability classification rating 94V-0
Base P/N with suffix "G" on packing code - 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: 0.006 g (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T _A =25°C unless otherwise noted)				
PARAMETER	SYMBOL	S1GM	S1JM	UNIT
Marking code		A5	A7	
Maximum repetitive peak reverse voltage	V _{RRM}	400	600	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}	20		A
Maximum instantaneous forward voltage (Note 1) @ 1 A	V _F	1.1		V
Maximum reverse current @ Rated VR	I _R	T _J =25 °C	1	uA
		T _J =125 °C	50	
Typical reverse recovery time (Note 2)	T _{rr}	780		ns
Typical junction capacitance (Note 3)	C _j	5		pF
Typical Thermal Resistance	R _{θjL}	30		°C/W
	R _{θjA}	110		
Operating junction temperature range	T _J	-55 to +175		°C
Storage temperature range	T _{STG}	-55 to +175		°C

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

Note 2: Reverse Recovery Test Conditions: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A

Note 3: Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.

ORDERING INFORMATION

PART NO.	AEC-Q101 QUALIFIED	PACKING CODE	GREEN COMPOUND CODE	PACKAGE	PACKING
S1xM (Note 1)	Prefix "H"	RS	Suffix "G"	Micro SMA	1,800 / 7" Plastic reel

Note 1: "x" defines voltage from 400V (S1GM) to 600V (S1JM)

Note 2: For Micro SMA: Packing code (Whole series with green compound)

EXAMPLE

PREFERRED P/N	PART NO.	AEC-Q101 QUALIFIED	PACKING CODE	GREEN COMPOUND CODE	DESCRIPTION
S1GM RSG	S1GM		RS	G	Green compound
S1GMHRSG	S1GM	H	RS	G	Green compound AEC-Q101 qualified

RATINGS AND CHARACTERISTICS CURVES

(TA=25°C unless otherwise noted)

FIG. 1 FORWARD CURRENT DERATING CURVE

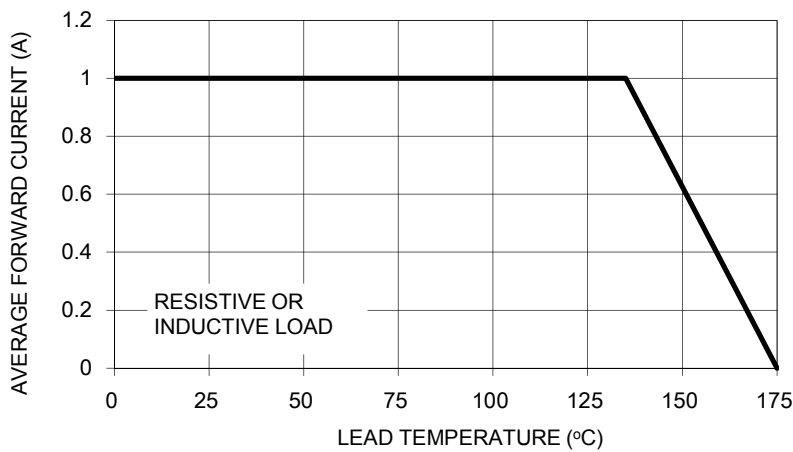


FIG. 2 TYPICAL REVERSE CHARACTERISTICS

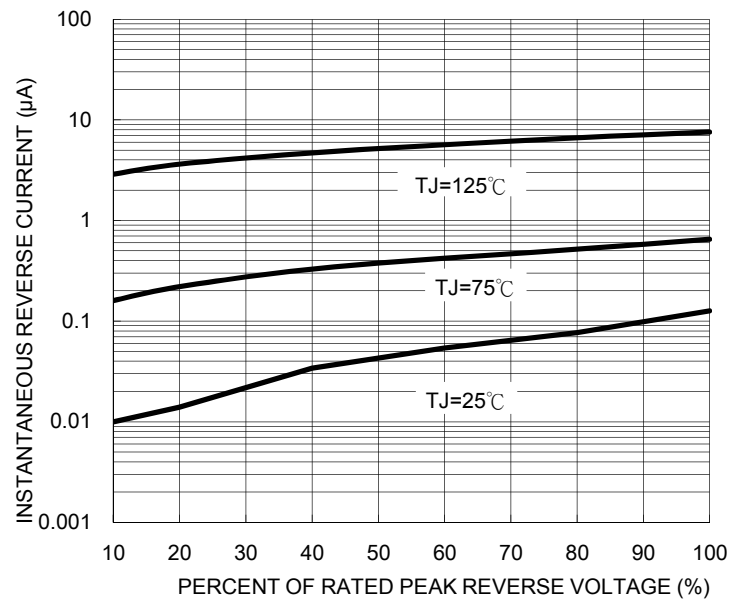


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

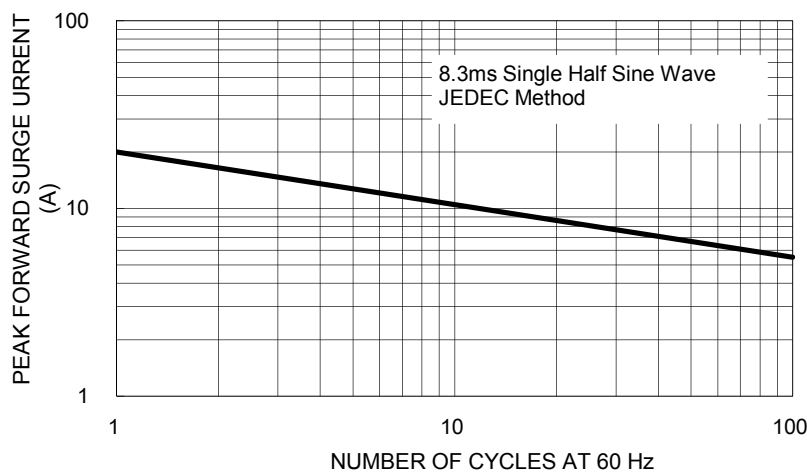


FIG. 5 TYPICAL FORWARD CHARACTERISTICS

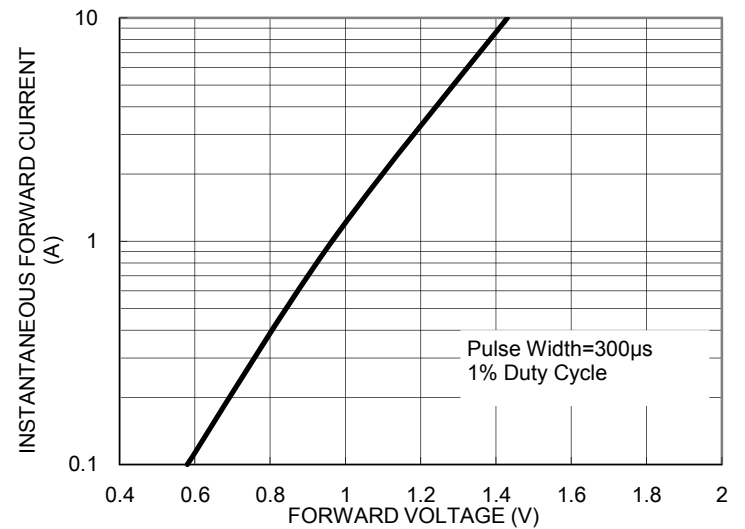


FIG. 5 TYPICAL JUNCTION CAPACITANCE

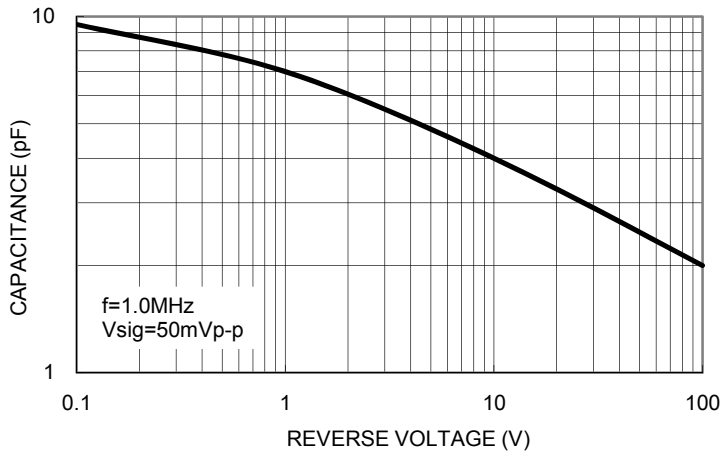
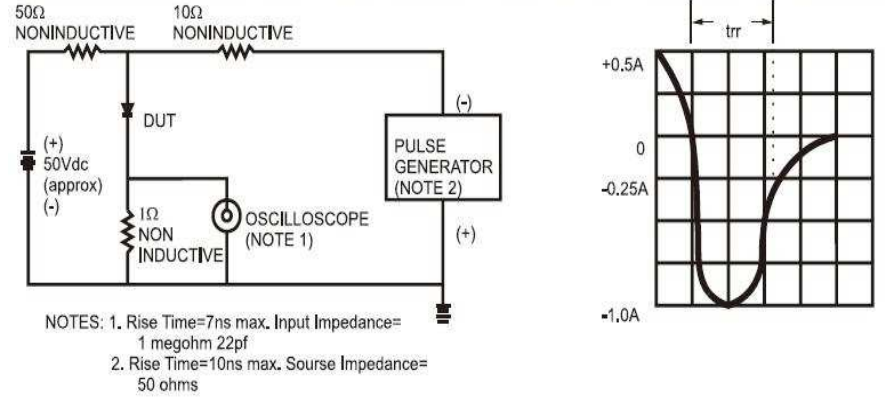
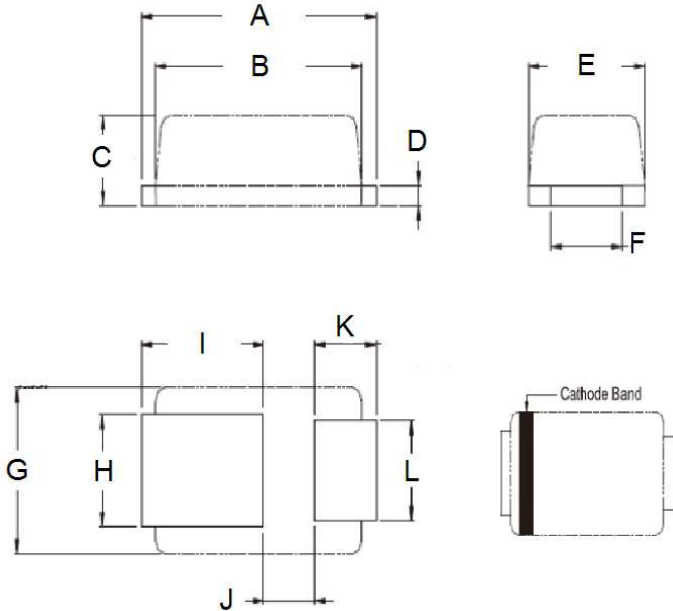


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

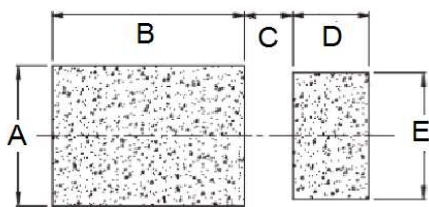


PACKAGE OUTLINE DIMENSIONS



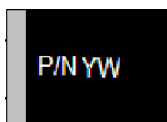
DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	2.30	2.70	0.091	0.106
B	2.10	2.30	0.083	0.091
C	0.63	0.73	0.025	0.029
D	0.10	0.20	0.004	0.008
E	1.15	1.35	0.045	0.053
F	0.65	0.85	0.026	0.034
G	1.15	1.35	0.045	0.053
H	0.75	0.95	0.030	0.037
I	1.10	1.50	0.043	0.059
J	0.55	0.75	0.022	0.030
K	0.55	0.75	0.022	0.030
L	0.65	0.85	0.026	0.034

SUGGESTED PAD LAYOUT



Symbol	Unit (mm)	Unit (inch)
A	1.1	0.043
B	2.0	0.079
C	0.5	0.020
D	0.8	0.031
E	1.0	0.039

MARKING DIAGRAM



P/N = Marking code
YW = Date Code