

## 1A, 50V - 1000V Surface Mount Rectifier

### FEATURES

- Glass passivated junction chip
- Ideal for automated placement
- Low-Profile Package
- 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



### Sub SMA

### MECHANICAL DATA

**Case:** Sub SMA

Molding compound, UL flammability classification rating 94V-0

Part No. with suffix "H" means AEC-Q101 qualified

Packing code with suffix "G" means green compound (halogen-free)

**Terminal:** Matte tin plated leads, solderable per JESD22-B102

Meet JESD 201 class 2 whisker test

**Polarity:** Indicated by cathode band

**Weight:** 0.019 g (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T <sub>A</sub> =25°C unless otherwise noted)									
PARAMETER	SYMBOL	S1AL	S1BL	S1DL	S1GL	S1JL	S1KL	S1ML	UNIT
Marking code		1AL	1BL	1DL	1GL	1JL	1KL	1ML	
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	V
Maximum average forward rectified current	I <sub>F(AV)</sub>	1							A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	30							A
Maximum instantaneous forward voltage (Note 1) @ 1 A	V <sub>F</sub>	1.1							V
Maximum reverse current @ rated V <sub>R</sub> T <sub>J</sub> =25°C T <sub>J</sub> =125°C	I <sub>R</sub>	5 50							μA
Typical junction capacitance (Note 2)	C <sub>J</sub>	9							pF
Typical reverse recovery time (Note 3)	t <sub>rr</sub>	1.8							μs
Typical thermal resistance	R <sub>θJL</sub> R <sub>θJA</sub>	25 85					30 85		°C/W
Operating junction temperature range	T <sub>J</sub>	- 55 to +175							°C
Storage temperature range	T <sub>STG</sub>	- 55 to +175							°C

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

Note 2: Measured at 1 MHz and Applied VR=4.0 Volts.

Note 3: Reverse Recovery Test Conditions: I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, I<sub>RR</sub>=0.25A

ORDERING INFORMATION					
PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX	PACKAGE	PACKING
S1xL (Note 1)	H	RU	G	Sub SMA	1,800 / 7" Plastic reel (8mm tape)
		RV		Sub SMA	3,000 / 7" Plastic reel (8mm tape)
		RT		Sub SMA	7,500 / 13" Paper reel (8mm tape)
		MT		Sub SMA	7,500 / 13" Plastic reel (8mm tape)
		RQ		Sub SMA	10,000 / 13" Paper reel (8mm tape)
		MQ		Sub SMA	10,000 / 13" Plastic reel (8mm tape)
		R3		Sub SMA	1,800 / 7" Plastic reel (12mm tape)
		RF		Sub SMA	3,000 / 7" Plastic reel (12mm tape)
		R2		Sub SMA	7,500 / 13" Paper reel (12mm tape)
		M2		Sub SMA	7,500 / 13" Plastic reel (12mm tape)
		RH		Sub SMA	10,000 / 13" Paper reel (12mm tape)
		MH		Sub SMA	10,000 / 13" Plastic reel (12mm tape)

Note 1: "x" defines voltage from 50V (S1AL) to 1000V (S1ML)

EXAMPLE					
PREFERRED PART NO.	PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
S1MLHRUG	S1ML	H	RU	G	AEC-Q101 qualified Green compound

RATINGS AND CHARACTERISTICS CURVES ( $T_A=25^{\circ}\text{C}$  unless otherwise noted)

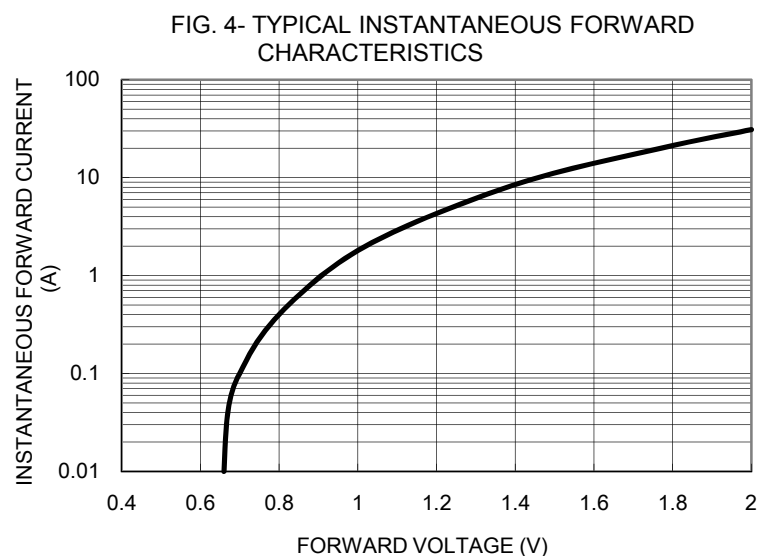
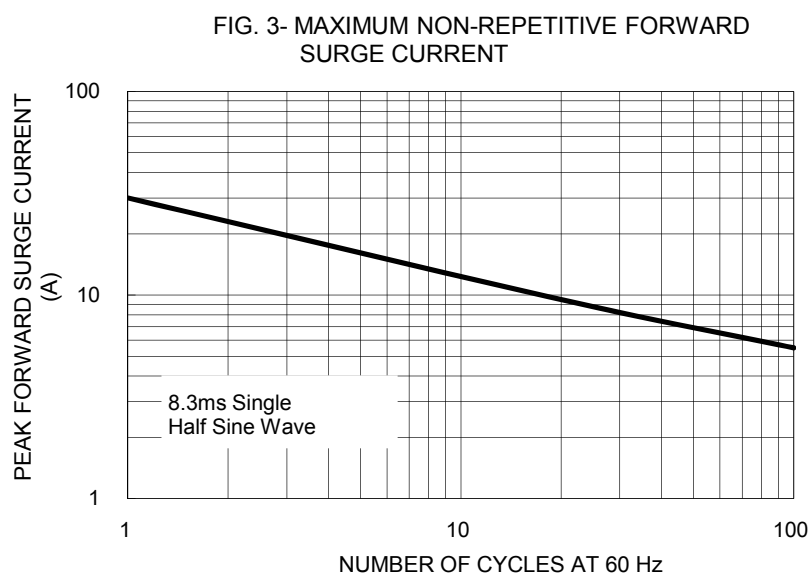
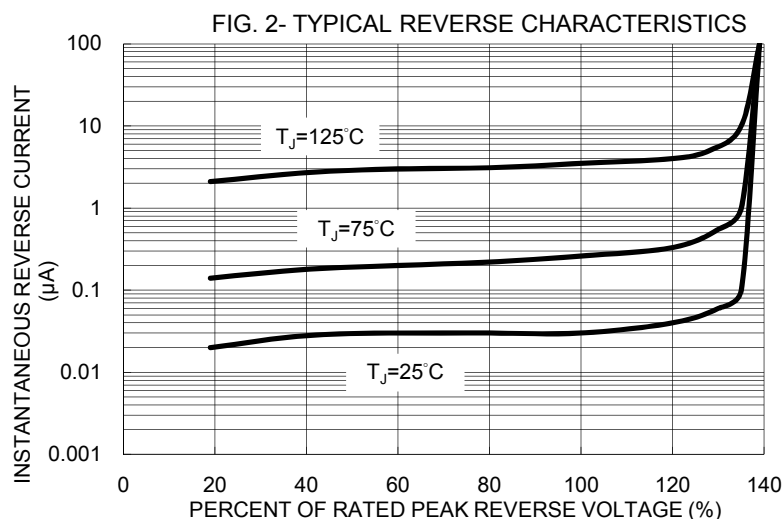
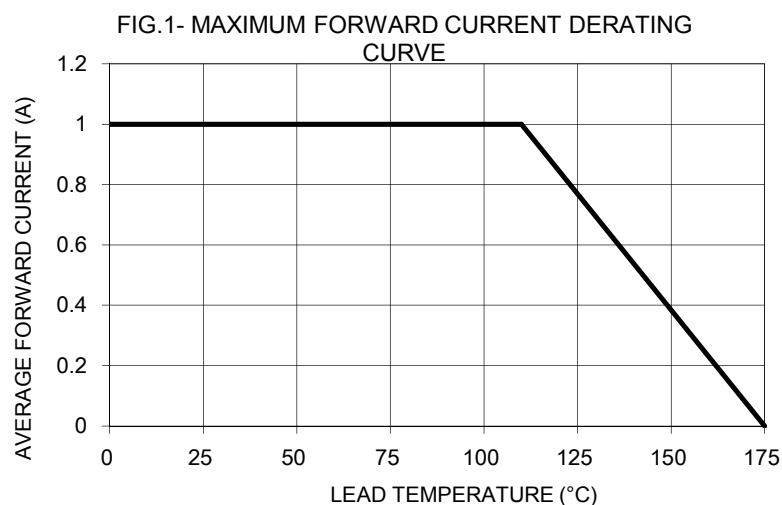
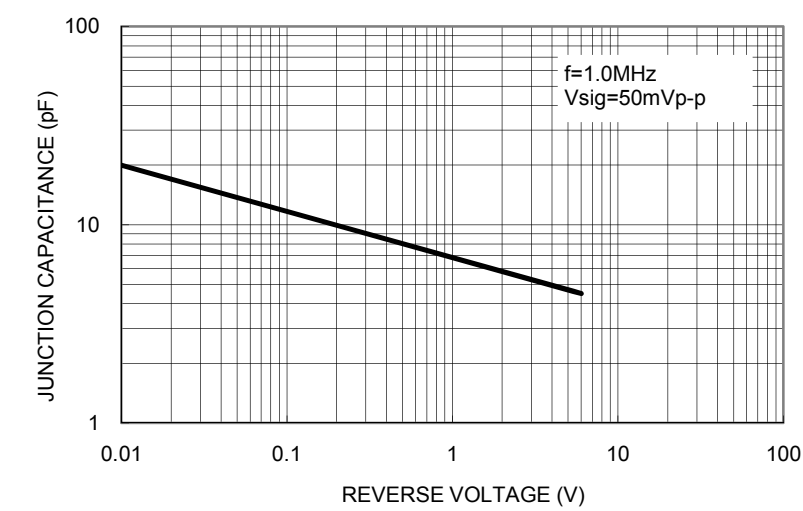
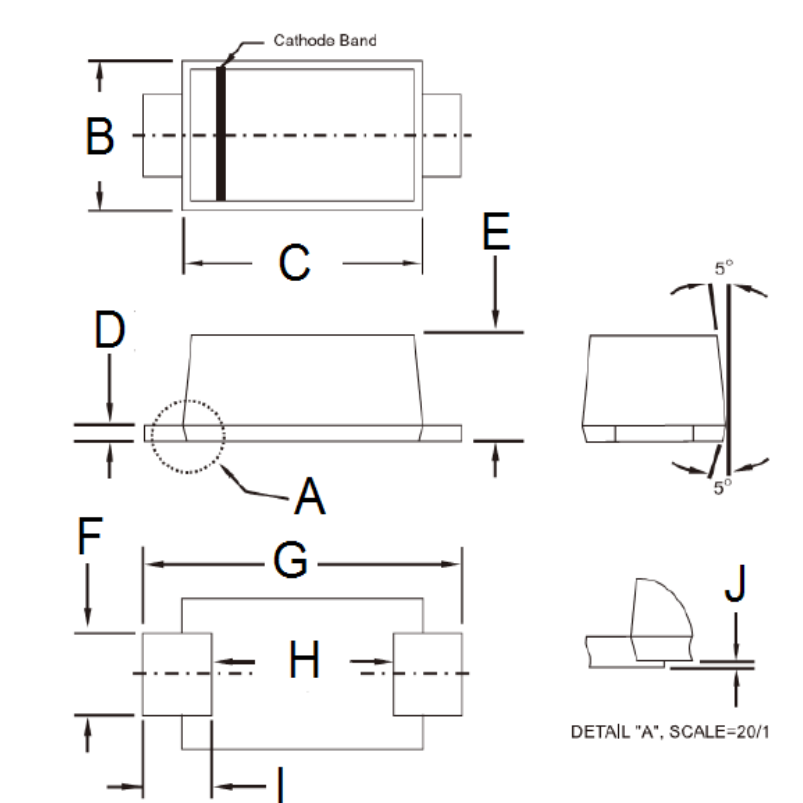


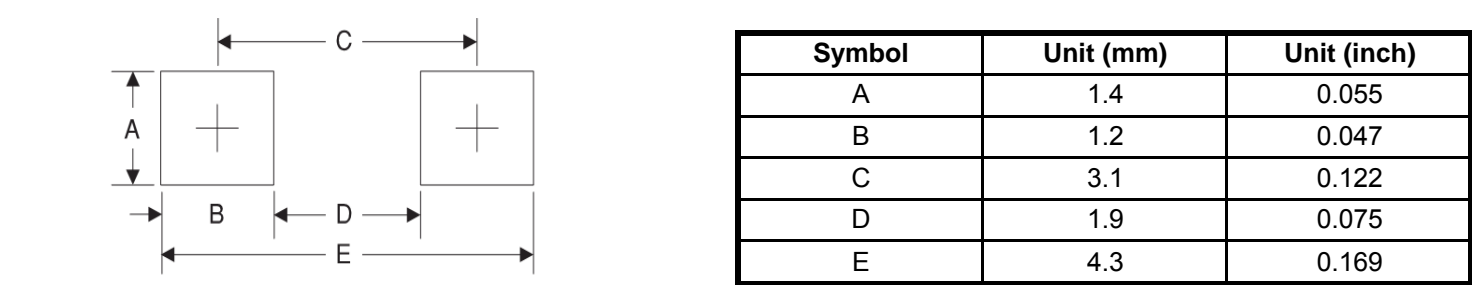
FIG. 5- TYPICAL JUNCTION CAPACITANCE



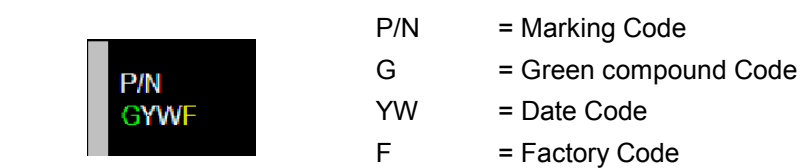
PACKAGE OUTLINE DIMENSIONS  
Sub SMA



SUGGESTED PAD LAYOUT



MARKING DIAGRAM



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