

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 _A =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 _{RRM}	50	100	200	400	600	800	1000	V	
Maximum RMS voltage	V _{RMS}	35	70	140	280	420	560	700	V	
Maximum DC blocking voltage	V _{DC}	50	100	200	400	600	800	1000	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 (Note 1) @ 1 A	V _F	1.1							V	
Maximum reverse current @ rated V _R	I _R	T _J =25°C							5	μA
		T _J =125°C							50	
Typical junction capacitance (Note 2)	C _J	9							pF	
Typical reverse recovery time (Note 3)	t _{rr}	1.8							μs	
Typical thermal resistance	R _{θJL}	25					30		°C/W	
	R _{θJA}	85					85			
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: Measured at 1 MHz and Applied VR=4.0 Volts.

Note 3: Reverse Recovery Test Conditions: I_F=0.5A, I_R=1.0A, I_{RR}=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)

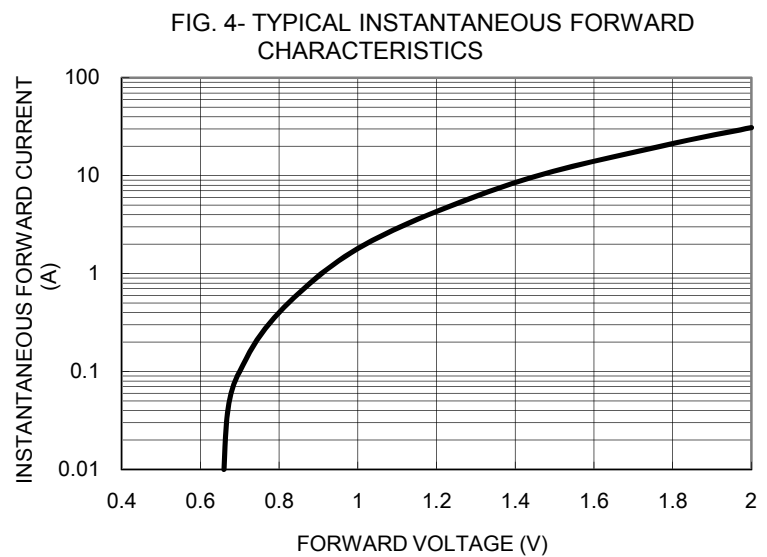
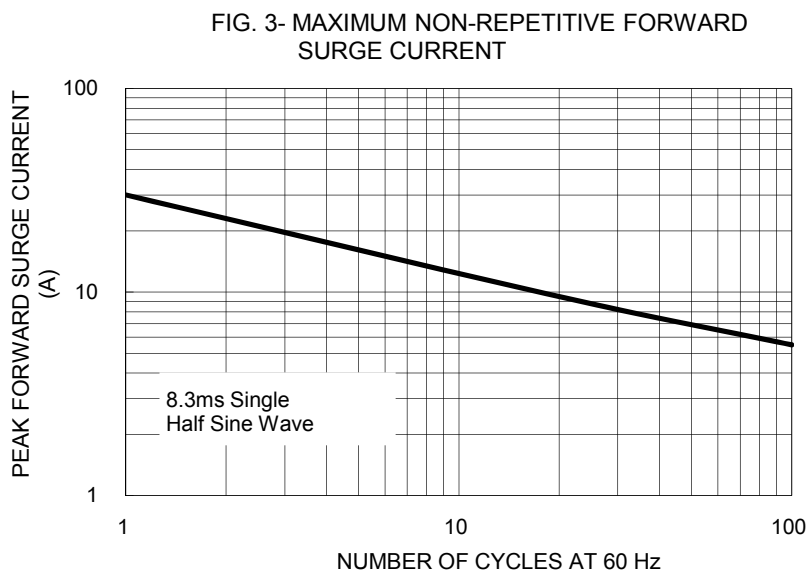
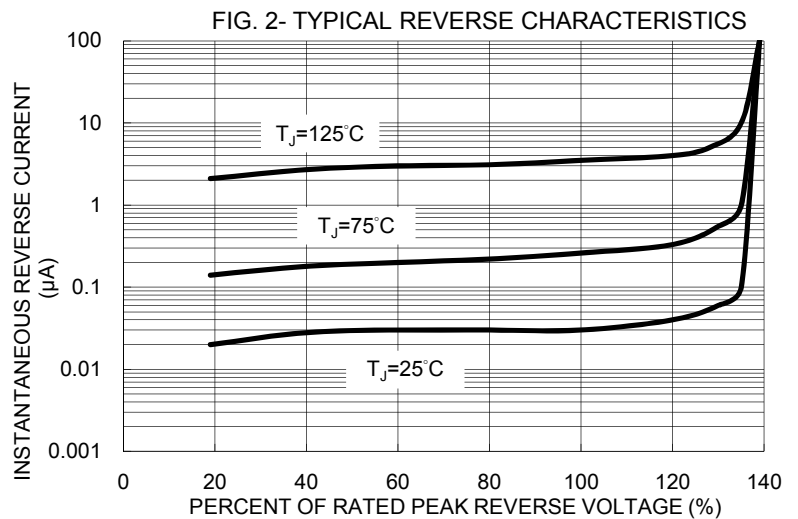
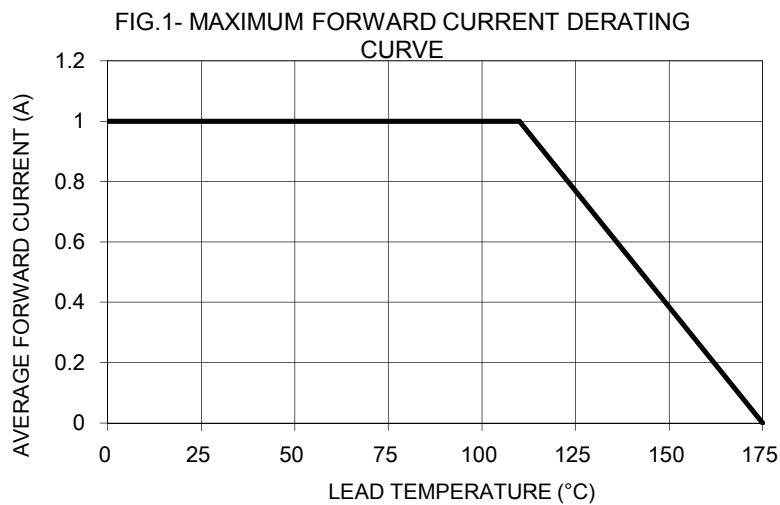
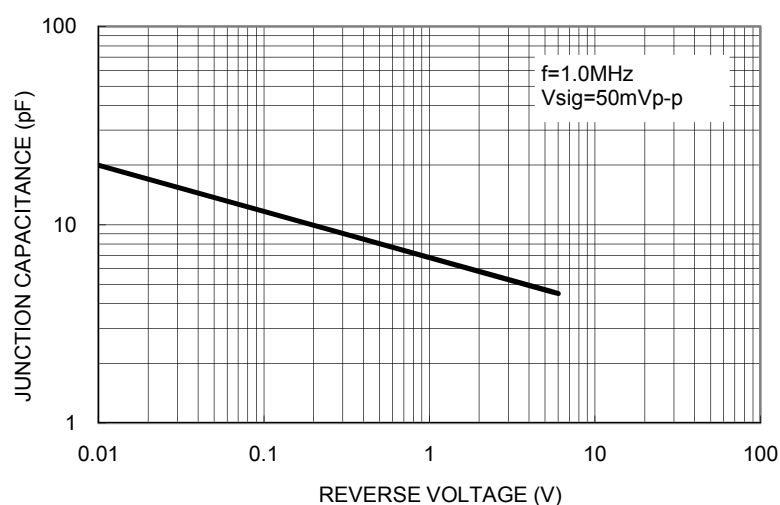
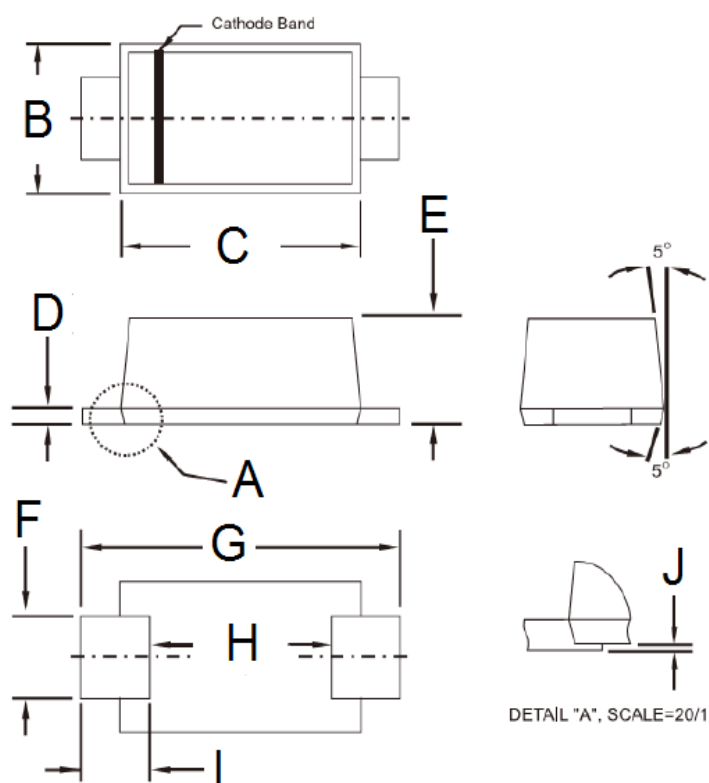


FIG. 5- TYPICAL JUNCTION CAPACITANCE



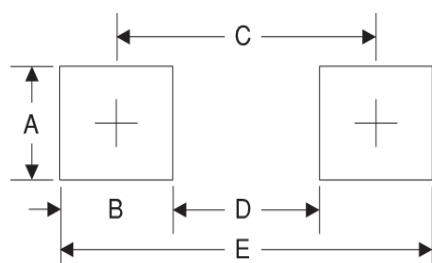
PACKAGE OUTLINE DIMENSIONS

Sub SMA



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
B	1.70	1.90	0.067	0.075
C	2.70	2.90	0.106	0.114
D	0.16	0.30	0.006	0.012
E	1.23	1.43	0.048	0.056
F	0.80	1.20	0.031	0.047
G	3.40	3.80	0.134	0.150
H	2.45	2.60	0.096	0.102
I	0.35	0.85	0.014	0.033
J	0.00	0.10	0.000	0.004

SUGGESTED PAD LAYOUT



Symbol	Unit (mm)	Unit (inch)
A	1.4	0.055
B	1.2	0.047
C	3.1	0.122
D	1.9	0.075
E	4.3	0.169

MARKING DIAGRAM



- P/N = Marking Code
- G = Green compound Code
- YW = Date Code
- F = Factory Code

Notice

Specifications of the products displayed herein are subject to change without notice. TSC or anyone on its behalf, assumes no responsibility or liability for any errors or inaccuracies.

Information contained herein is intended to provide a product description only. No license, express or implied, to any intellectual property rights is granted by this document. Except as provided in TSC's terms and conditions of sale for such products, TSC assumes no liability whatsoever, and disclaims any express or implied warranty, relating to sale and/or use of TSC products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright, or other intellectual property right.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify TSC for any damages resulting from such improper use or sale.

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [Diodes - General Purpose, Power, Switching category:](#)

Click to view products by [Taiwan Semiconductor manufacturer:](#)

Other Similar products are found below :

[053684A](#) [057245E](#) [10A06-TP](#) [10A10](#) [10A10](#) [10A10](#) [10A10G](#) [10A2](#) [10A4](#) [150K20A](#) [150K60A](#) [150K80A](#) [150KR80A](#) [1A1](#) [1A2](#) [1A3](#) [1A4](#)
[1A4](#) [1A5](#) [1A6](#) [1A7](#) [1A7](#) [1A7](#) [1A7](#) [1A7A](#) [1G7](#) [1N3064TR](#) [1N3070](#) [1N3070TR](#) [1N3295A](#) [1N3295AR](#) [1N3296A](#) [1N3493R-SGS](#) [1N3595](#)
[1N3595TR](#) [1N3595US](#) [1N3600](#) [1N3600 TR](#) [1N4001](#) [1N4001](#) [1N4001](#) [1N4001](#) [1N4001](#) [1N4001](#) [1N4001](#) [1N4001](#) [1N4001A](#) [1N4001G](#) [1N4001G](#)
[1N4001-T](#) [1N4001W](#)