



S1AL - S1ML

1.0 AMP. Surface Mount Rectifiers

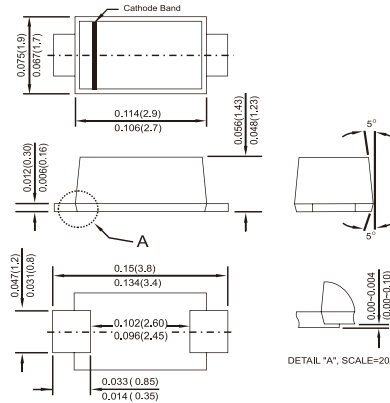
Sub SMA

Features

- ✧ UL Recognized File # E-326243
- ✧ For surface mounted application
- ✧ Glass passivated junction chip.
- ✧ Low-Profile Package
- ✧ Ideal for automated placement
- ✧ Low power loss, high efficiency
- ✧ High temperature soldering:
260°C / 10 seconds at terminals
- ✧ Green compound with suffix "G" on packing code & prefix "G" on datecode.
- ✧ Qualified as per AEC-Q101

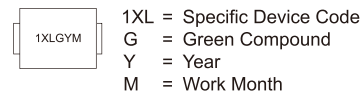
Mechanical Data

- ✧ Case: Sub SMA plastic case
- ✧ Terminal : Pure tin plated, lead free.
- ✧ Polarity: Color band denotes cathode
- ✧ Packaging: 8mm / 12mm tape per EIA STD RS-481
- ✧ Weight: 0.0196 grams
- ✧ Marking code refer to below specified



Dimensions in inches and (millimeters)

Marking Diagram



Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%

Type Number	Symbol	S1AL	S1BL	S1DL	S1GL	S1JL	S1KL	S1ML	Units
Maximum Recurrent 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 @ $T_L = 110^\circ\text{C}$ @ $T_{tp} = 75^\circ\text{C}$ 20ms Square pulse	$I_{F(AV)}$	1.0 1.5							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	30							A
Maximum Instantaneous Forward Voltage @ 1.0A	V_F	1.1							V
Maximum DC Reverse Current at @ $T_A = 25^\circ\text{C}$ Rated DC Blocking Voltage (Note 1) @ $T_A = 125^\circ\text{C}$	I_R	5 50							μA μA
Typical Junction Capacitance (Note 4)	C_j	9							pF
Typical Reverse Recovery Time(Note 2)	T_{RR}	1.8							μS
Typical Thermal Resistance (Note 3)	$R_{\theta JL}$ $R_{\theta JA}$	25 85							$^\circ\text{C} / \text{W}$ $^\circ\text{C} / \text{W}$
Operating Temperature Range	T_J	-55 to +175							$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to +175							$^\circ\text{C}$

- Notes: 1. Pulse Test with PW=300 usec, 1% Duty Cycle
 2. Reverse Recovery Time Condition: $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $IRR = 0.25\text{A}$
 3. Measured on P.C. Board with 0.2" x 0.2" (5.0mm x 5.0mm) Copper Pad Areas.
 4. Measured at 1 MHz and Applied $V_R = 4.0$ Volts.

RATINGS AND CHARACTERISTIC CURVES (S1A1 THRU S1ML)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

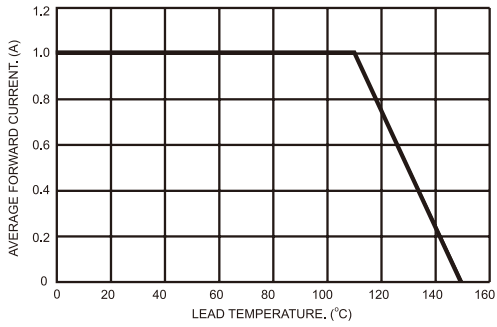


FIG.2- TYPICAL REVERSE CHARACTERISTICS

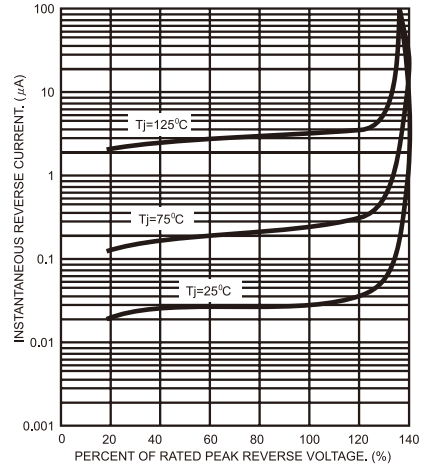


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

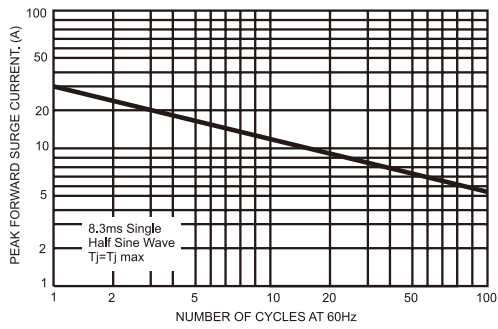


FIG.4- TYPICAL JUNCTION CAPACITANCE

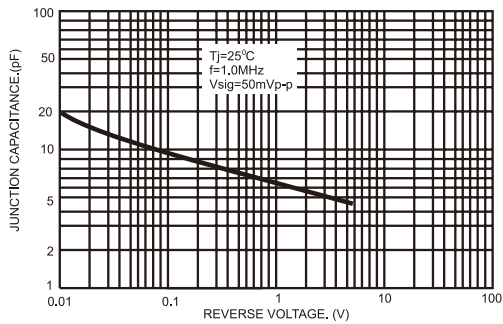


FIG.5- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

