



S1AL - S1ML

1.0AMP Surface Mount Rectifiers

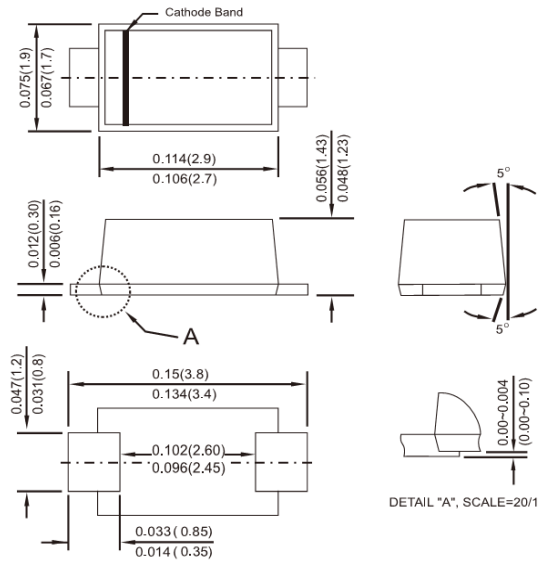
Sub SMA

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



- 1XL = Specific Device Code
- G = Green Compound
- Y = Year
- M = Work Month

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 @ $T_L=110^\circ\text{C}$ @ $T_p=75^\circ\text{C}$ 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 (Note 1) @ 1 A	V_F	1.1							V
Maximum DC Reverse Current at @ $T_A=25^\circ\text{C}$ Rated DC Blocking Voltage @ $T_A=125^\circ\text{C}$	I_R	5 50							uA uA
Typical Junction Capacitance (Note 2)	C_j	9							pF
Typical Reverse Recovery Time (Note 3)	T_{rr}	1.8							uS
Typical Thermal Resistance (Note 4)	$R_{\theta JL}$ $R_{\theta JA}$	25 85							$^\circ\text{C/W}$ $^\circ\text{C/W}$
Operating Temperature Range	T_J	- 55 to + 175							$^\circ\text{C}$
Storage Temperature Range	T_{STG}	- 55 to + 175							$^\circ\text{C}$

Note 1: Pulse Test with PW=300 usec, 1% Duty Cycle

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

Note 3: Reverse Recovery Test Conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$

Note 4: Measured on P.C. Board with 0.2" x 0.2" (5.0mm x 5.0mm) Copper Pad Areas.

RATINGS AND CHARACTERISTIC CURVES (S1AL THRU S1ML)

FIG. 1- MAXIMUM FORWARD CURRENT DERATING CURVE

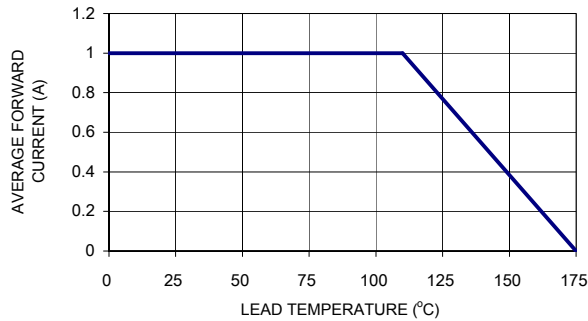


FIG. 2- TYPICAL REVERSE CHARACTERISTICS

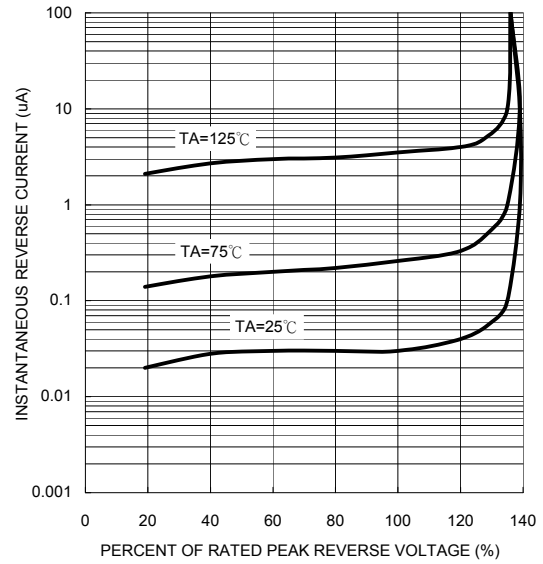


FIG. 3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

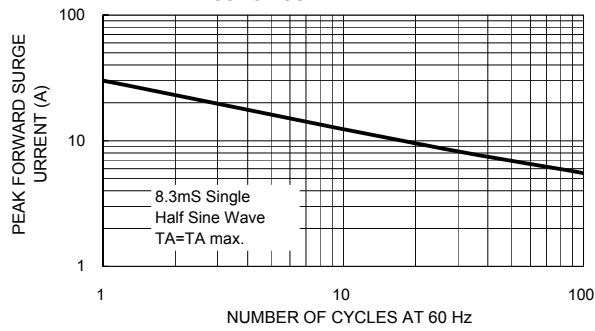


FIG. 5- TYPICAL INSTANTANEOUS FORWARD CHARACTERISRICS PER LEG

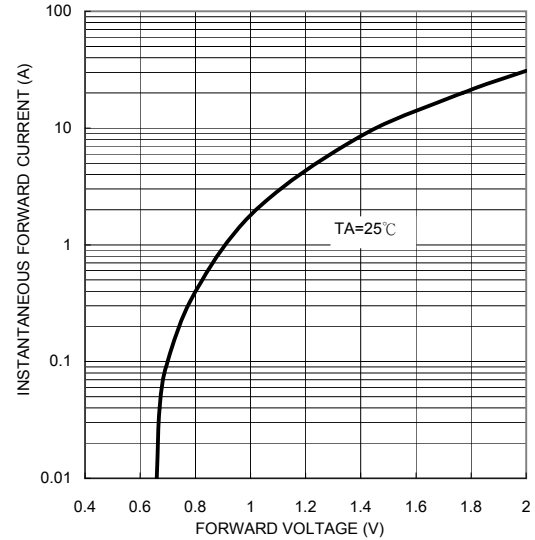


FIG. 4- TYPICAL JUNCTION CAPACITANCE

