



S1AL - S1ML

1.0 AMP. Surface Mount Rectifiers

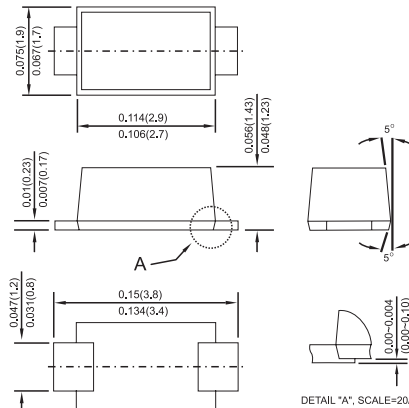
Sub SMA

Features

- ✧ 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

Mechanical Data

- ✧ Case: Sub SMA plastic case
- ✧ Terminal : Pure tin plated, lead free.
- ✧ Polarity: Color band denotes cathode
- ✧ Packaging: 12mm tape per EIA STD RS-481
- ✧ Weight: approx. 15mg
- ✧ Marking code refer to Note 3.



Dimensions in inches and (millimeters)

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
Marking Code (Note 3)		1ALYM	1BLYM	1DLYM	1GLYM	1JLYM	1KLYM	1MLYM	
Maximum Average Forward Rectified Current @ T _L =110 °C @ Ttp =75 °C 20ms Square pulse	I _(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 @ T _A =25 °C at Rated DC Blocking Voltage @ T _A =125 °C	I _R	5 50							uA uA
Typical ERSM @ L=120mH, Ta=150°C	E _{RSM}	7							mJ
Typical Junction Capacitance (Note 1)	C _j	9							pF
Maximum Reverse Recovery Time(Note 4)	T _{rr}	1.8							uS
Typical Thermal Resistance (Note 2)	R _{θJL} R _{θJA}	25 85					30 85		°C /W
Operating Temperature Range	T _J	-55 to +150							°C
Storage Temperature Range	T _{STG}	-55 to +150							°C

- Notes:
1. Measured at 1 MHz and Applied $V_R=4.0$ Volts.
 2. Measured on P.C. Board with 0.2" x 0.2" (5.0mm x 5.0mm) Copper Pad Areas.
 3. 1ALYM: 1=1A, A=50V, L=Low Profile, Y-Year Code, M-Month Code
 4. Reverse Recovery Time Condition: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $IRR=0.25\text{A}$.

RATINGS AND CHARACTERISTIC CURVES (S1AL THRU S1ML)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

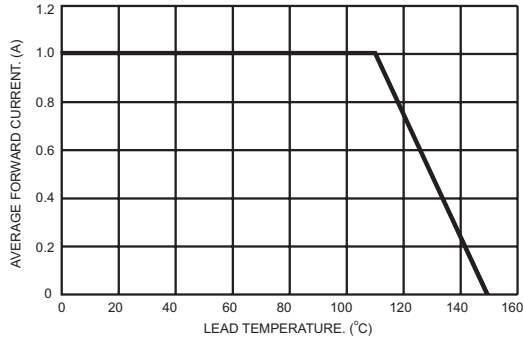


FIG.2- TYPICAL REVERSE CHARACTERISTICS

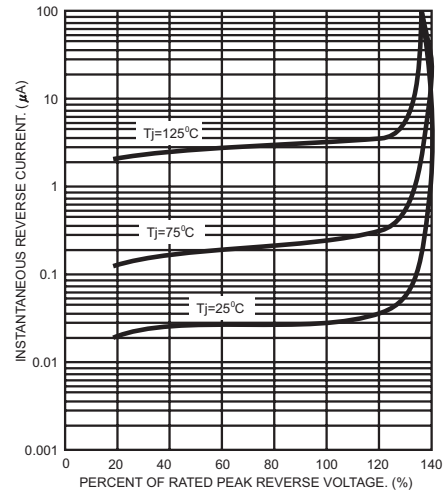


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

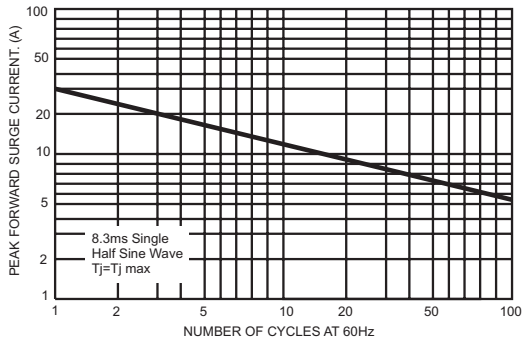


FIG.5- TYPICAL FORWARD CHARACTERISTICS

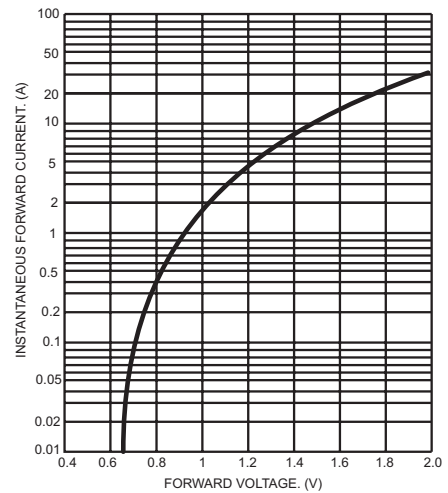


FIG.4- TYPICAL JUNCTION CAPACITANCE

