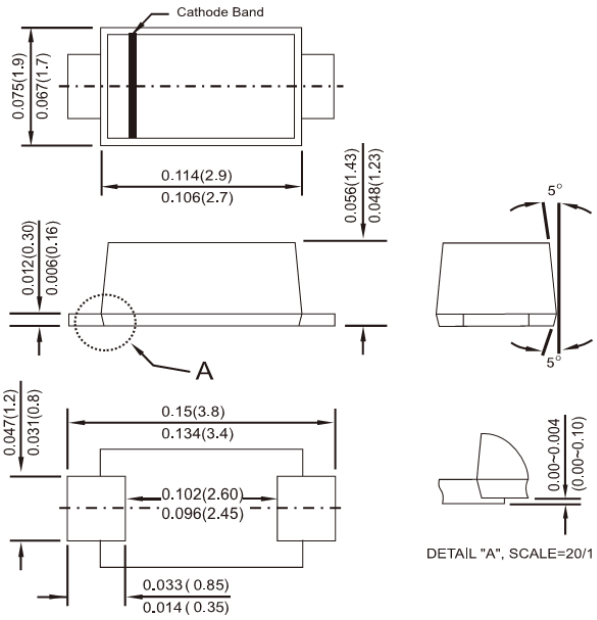
TAIWAN SEMICONDUCTOR

SS12L - SS115L

1.0AMP Surface Mount Schottky Barrier Rectifier

Sub SMA



Dimensions in inches and (millimeters)

Features

- For surface mounted application
- Low-Profile Package
- Ideal for automated pick & place
- Low power loss, high efficiency
- High current capability, low VF
- High surge current capability
- Plastic material used carriers Underwriters Laboratory Classigication 94V-0
- Epitaxial construction
- High temperature soldering guaranteed: 260℃ /10s at terminals
- Green compound with suffix "G" on packing code & prefix "G" on datecode

Mechanical Data

- Case: Sub SMA plastic case
- Terminal: Pure tin plated, lead free
- Polarity: Color band denotes cathode end
- Packaging: 12mm tape per EIA Std RS-481
- Weight: 19.6 mg

Marking Diagram

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

Maximum Ratings and Electrical Characteristics

Rating at 25 ℃ 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	SS 12L	SS 13L	SS 14L	SS 15L	SS 16L	SS 19L	SS 110L	SS 115L	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	20	30	40	50	60	90	100	150	V
Maximum RMS Voltage	V_{RMS}	14	21	28	35	42	63	70	105	V
Maximum DC Blocking Voltage	V_{DC}	20	30	40	50	60	90	100	150	V
Marking Code		12LYM	13LYM	14LYM	15LYM	16LYM	19LYM	10LYM	A5LYM	
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) @ 0.5A @ 1.0A	V_F	 0.385 0.45	 0.43 0.50	 0.51 0.55	 0.58 0.70		 0.70 0.80		 0.75 0.90	V
Maximum Reverse Current @ Rated VR T_A=25 ℃	I_R	0.4					0.05			mA
T_A=100 ℃		8.0	6.0				-			
T_A=125 ℃		-					0.5			
Typical Thermal Resistance (Note 2)	$R_{\theta jA}$ $R_{\theta jL}$	100 45								^{O}C/W
Operating Temperature Range	T_J	- 55 to + 150								^{O}C
Storage Temperature Range	T_{STG}	- 55 to + 150								^{O}C

Note 1: Pulse Test with PW=300u sec, 1% Duty Cycle
Note 2: Mount on Cu-Pad Size 5mm × 5mm on P.C.B.

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RATINGS AND CHARACTERISTIC CURVES (SS12L THRU SS115L)

FIG.1 FORWARD CURRENT DERATING CURVE

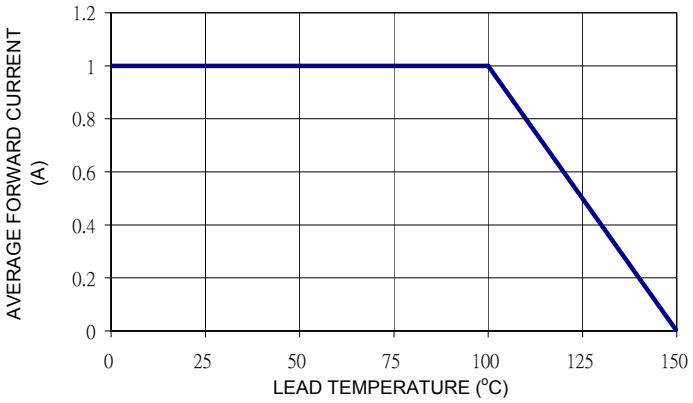

FIG. 2 MAXUMUM FORWARD SURGE CURRENT

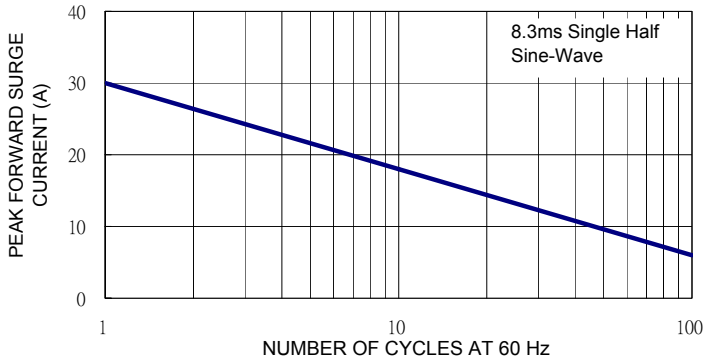

FIG. 3 TYPICAL FORWARD CHARACTERISTICS

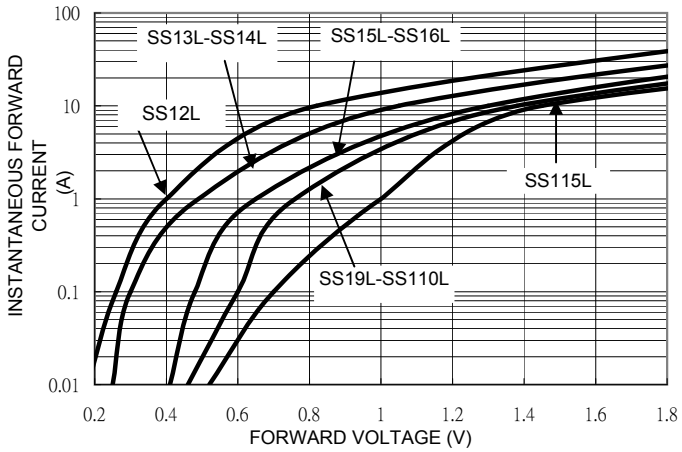

FIG. 4 TYPICAL REVERSE CHARACTERISTICS

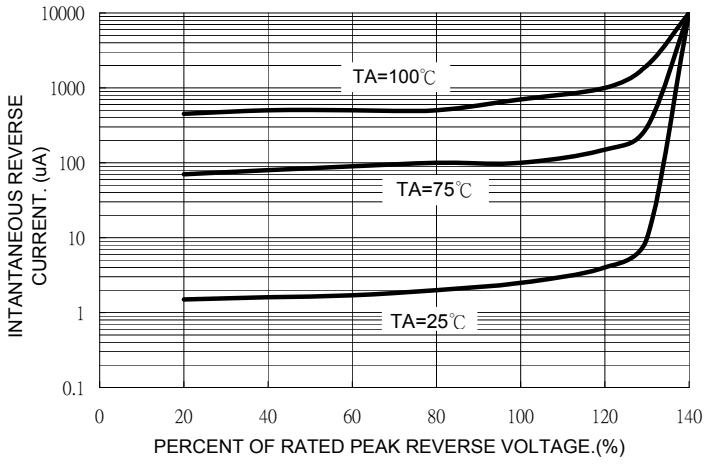

FIG. 5 TYPICAL JUNCTION CAPACITANCE

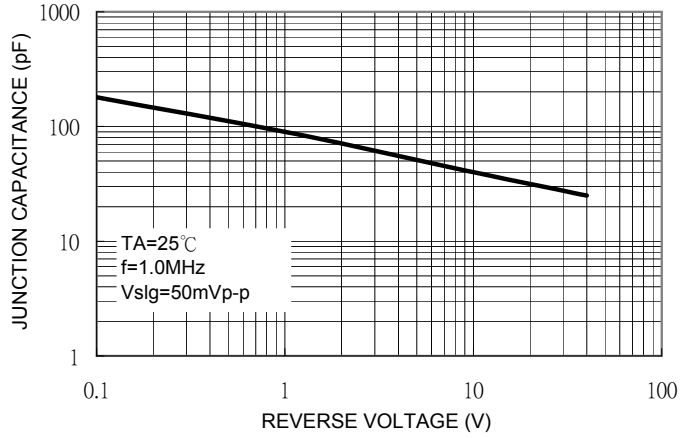

FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE