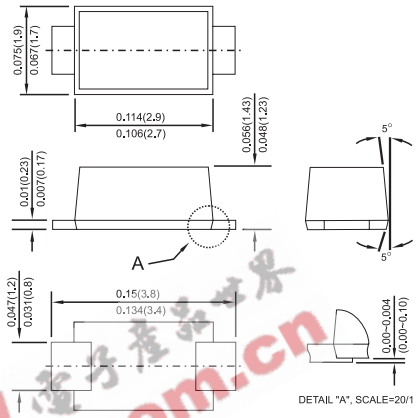
TAIWAN SEMICONDUCTOR

RoHS COMPLIANCE

# SS22L - SS215L

2.0 AMPS. Surface Mount Schottky Barrier Rectifiers

**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 Classification 94V-0
- ✧ Epitaxial construction
- ✧ High temperature soldering: 260°C / 10 seconds at terminals

## Mechanical Data

- ✧ Cases: 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 approx. 15mg

## 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, de-rate current by 20%

| Type Number | Symbol | SS 22L | SS 23L | SS 24L | SS 25L | SS 26L | SS 29L | SS 210L | SS 215L | Units |
|---|---|---|---|---|---|---|---|---|---|---|
| Maximum Recurrent 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 (Note 4) | | 22LYM | 23LYM | 24LYM | 25LYM | 26LYM | 29LYM | 20LYM | 2ALYM | |
| Maximum Average Forward Rectified Current at $T_L$(See Fig. 1) | $I_{(AV)}$ | 2.0 | | | | | | | | A |
| Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method ) | $I_{FSM}$ | 50 | | | | | | | | A |
| Maximum Instantaneous Forward Voltage (Note 1) @ 2.0A | $V_F$ | 0.5 | | | 0.70 | | 0.85 | | 0.95 | V |
| Maximum DC Reverse Current @ $T_A$ =25°C at | $I_R$ | 0.4 | | | | | 0.1 | | | mA |
| Rated DC Blocking Voltage @ $T_A$=125°C | | 15 | | | 10 | | 5 | | | mA |
| Typical Junction Capacitance (Note 3) | Cj | 130 | | | | | | | | pF |
| Typical Thermal Resistance ( Note 2 ) | $R_{\theta JL}$<br>$R_{\theta JA}$ | 17<br>75 | | | | | | | | °C/W |
| Operating Temperature Range | $T_J$ | -65 to +125 | | | -65 to +150 | | | | | °C |
| Storage Temperature Range | $T_{STG}$ | -65 to +150 | | | | | | | | °C |

Notes:
1. Pulse Test with PW=300 usec, 1% Duty Cycle
2. Measured on P.C.Board with 0.27" x 0.27"(7.0mm x 7.0mm) Copper Pad Areas.
3. Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.
4. 22LYM: 2=2A, 2-20V, L-Low Profile, Y-Year Code, M-Month Code.

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# RATINGSAND CHARACTERISTIC CURVES (SS22L THRU SS215L)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

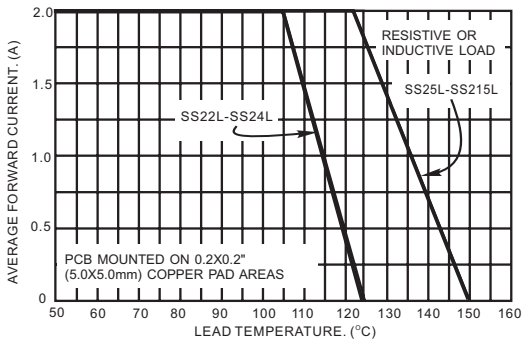


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

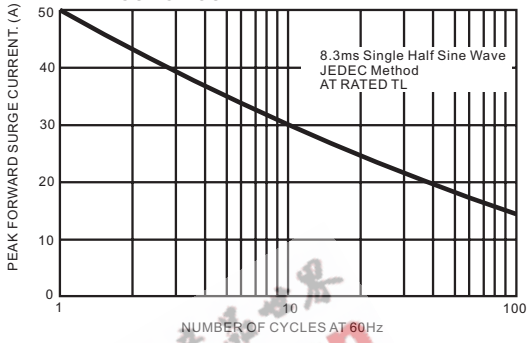


FIG.3- TYPICAL FORWARD CHARACTERISTICS

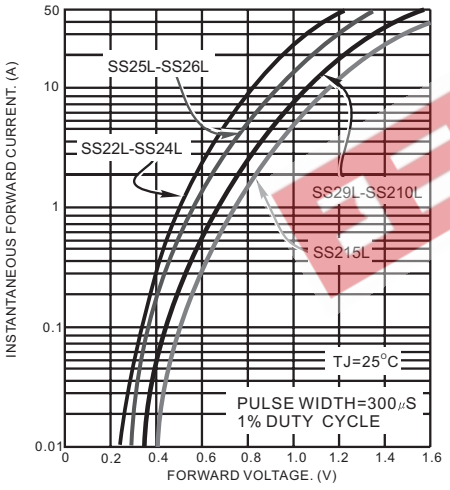


FIG.4-TYPICAL REVERSE CHARACTERISTICS

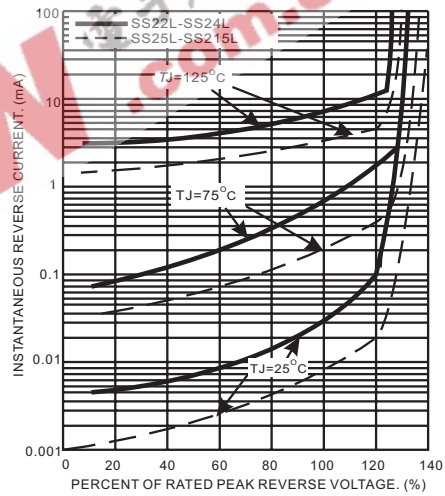


FIG.5-TYPICAL JUNCTION CAPACITANCE

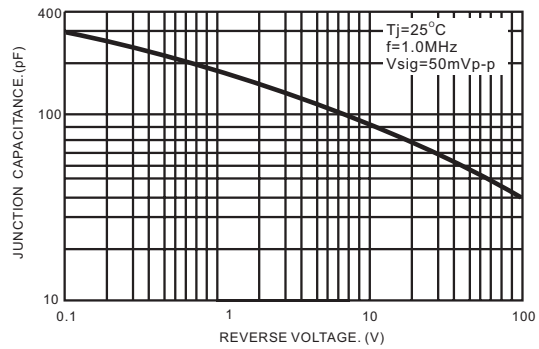


FIG.6- TYPICAL TRANSIENT THERMAL CHARACTERISTICS