



# SSL12 - SSL14

## 1.0 AMP. Surface Mount

### Low $V_f$ Schottky Barrier Rectifiers

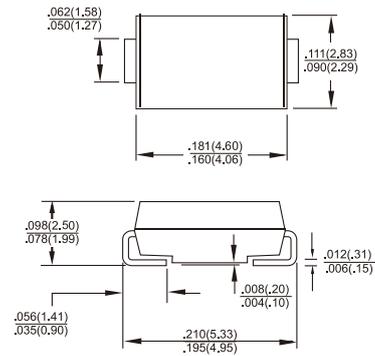
#### SMA/DO-214AC

### Features

- ✧ UL Recognized File # E-326243
- ✧ For surface mounted application
- ✧ Metal silicon junction, majority carrier conduction
- ✧ Low forward voltage drop
- ✧ Easy pick and place
- ✧ High surge current capability
- ✧ Plastic material used carries Underwriters Laboratory Classification 94V-0
- ✧ Epitaxial construction
- ✧ High temperature soldering:  
260°C / 10 seconds at terminals
- ✧ Green compound with suffix "G" on packing code & prefix "G" on datecode.

### Mechanical Data

- ✧ Cases: Molded plastic
- ✧ Terminals: Matte tin plating
- ✧ Polarity: Indicated by cathode band
- ✧ Packaging: 12mm tape per EIA STD RS-481
- ✧ Weight: 0.064 grams



Dimensions in inches and (millimeters)  
Marking Diagram



- SL1X = 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                             | SSL12        | SSL13 | SSL14 | Units              |
|---|------------------------------------|--------------|-------|-------|--------------------|
| Maximum Recurrent Peak Reverse Voltage  | $V_{RRM}$                          | 20           | 30    | 40    | V                  |
| Maximum RMS Voltage   | $V_{RMS}$                          | 14           | 21    | 28    | V                  |
| Maximum DC Blocking Voltage   | $V_{DC}$                           | 20           | 30    | 40    | V                  |
| Maximum Average Forward Rectified Current<br>See Fig. 1   | $I_{F(AV)}$                        | 1.0          |       |       | A                  |
| Peak Forward Surge Current, 8.3 ms Single<br>Half Sine-wave Superimposed on Rated<br>Load (JEDEC method)                  | $I_{FSM}$                          | 50           |       |       | A                  |
| Maximum Instantaneous Forward Voltage<br>(Note 1) @ 1.0A  | $V_F$                              | 0.39         |       |       | V                  |
| Maximum DC Reverse Current @ $T_A=25^\circ\text{C}$<br>at Rated DC Blocking Voltage @ $T_A=100^\circ\text{C}$<br>(Note 1) | $I_R$                              | 0.2          |       |       | mA                 |
|   |                                    | 50           |       |       | mA                 |
| Maximum Thermal Resistance (Note 2)   | $R_{\theta JL}$<br>$R_{\theta JA}$ | 28           |       |       | $^\circ\text{C}/W$ |
|   |                                    | 88           |       |       |                    |
| Marking Code  |                                    | SL12         | SL13  | SL14  |                    |
| Operating Temperature Range   | $T_J$                              | -55 to +125  |       |       | $^\circ\text{C}$   |
| Storage Temperature Range   | $T_{STG}$                          | -55 to + 150 |       |       | $^\circ\text{C}$   |

- Notes: 1. Pulse Test with PW=300 usec, 1% Duty Cycle.  
2. Measured on P.C. Board with 0.2 x 0.2" (5.0 x 5.0mm) Copper Pad Areas.

### RATINGS AND CHARACTERISTIC CURVES (SSL12 THRU SSL14)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

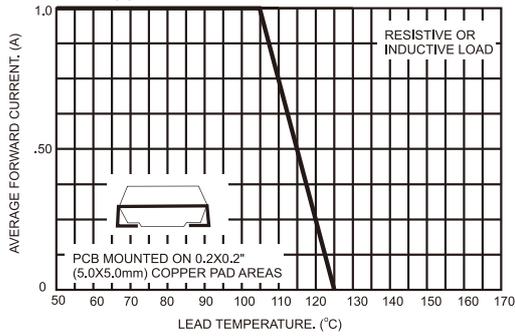


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

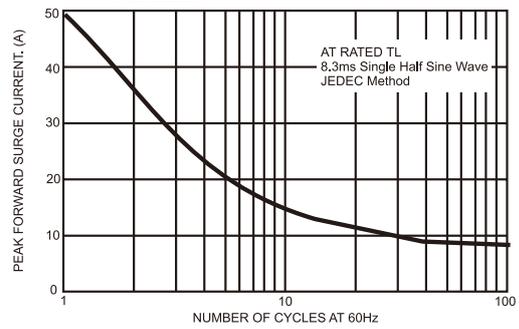


FIG.3- TYPICAL FORWARD CHARACTERISTICS

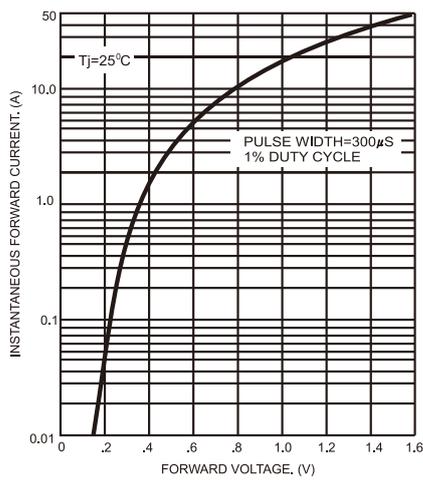


FIG.4- TYPICAL REVERSE CHARACTERISTICS

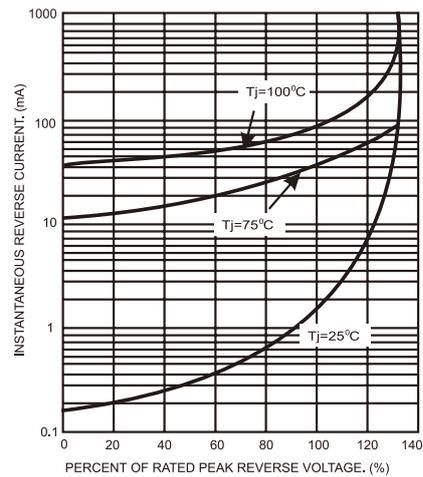


FIG.5- TYPICAL JUNCTION CAPACITANCE

