

# SL12 - SL13

**PRV : 20 - 30 Volts**  
**I<sub>o</sub> : 1.5 Amperes**

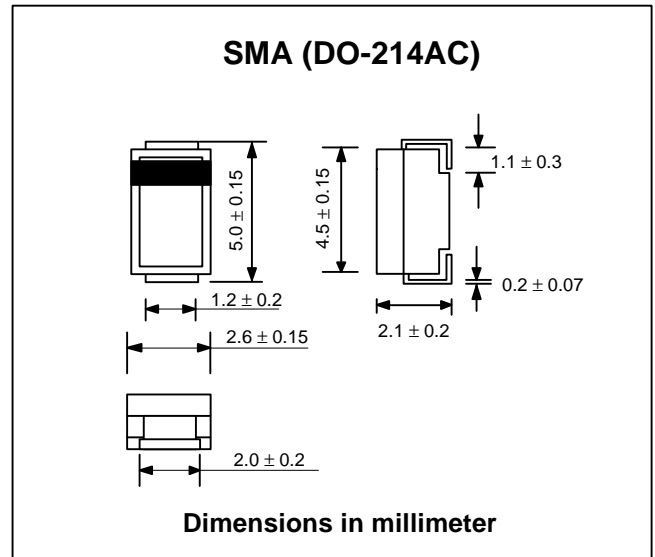
## FEATURES :

- \* High current capability
- \* High surge current capability
- \* High reliability
- \* High efficiency
- \* Low power loss
- \* Low cost
- \* Low forward voltage drop
- \* Pb / RoHS Free

## MECHANICAL DATA :

- \* Case : SMA (DO-214AC) Molded plastic
- \* Epoxy : UL94V-O rate flame retardant
- \* Lead : Lead Formed for Surface Mount
- \* Polarity : Color band denotes cathode end
- \* Mounting position : Any
- \* Weight : 0.067 gram

# LOW V<sub>F</sub> SURFACE MOUNT SCHOTTKY RECTIFIERS



## 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%.

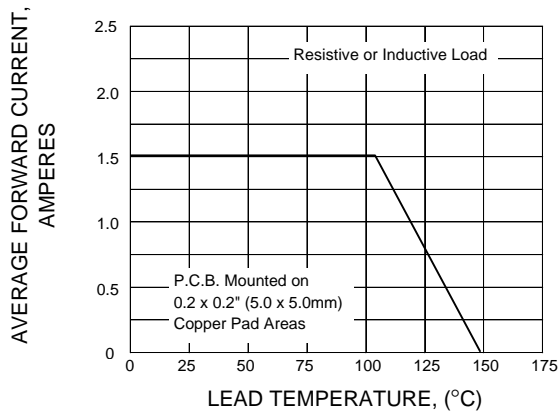
| RATING  | SYMBOL             | SL12                               | SL13  | UNIT |
|---|--------------------|------------------------------------|-------|------|
| Maximum Repetitive Peak Reverse Voltage   | V <sub>RRM</sub>   | 20                                 | 30    | V    |
| Maximum RMS Voltage   | V <sub>RMS</sub>   | 14                                 | 21    | V    |
| Maximum DC Blocking Voltage   | V <sub>DC</sub>    | 20                                 | 30    | V    |
| Maximum Average Forward Current<br>at T <sub>L</sub> = 105 °C   | I <sub>F(AV)</sub> | 1.5                                |       | A    |
| Maximum Peak Forward Surge Current,<br>8.3ms single half sine wave superimposed<br>on rated load (JEDEC Method) | I <sub>FSM</sub>   | 50                                 |       | A    |
| Maximum Instantaneous<br>Forward Voltage at (1)   | V <sub>F</sub>     | I <sub>F</sub> = 0.1A , Ta = 125°C | 0.230 | V    |
|   |                    | I <sub>F</sub> = 0.1A , Ta = 25°C  | 0.360 |      |
|   |                    | I <sub>F</sub> = 1.0A , Ta = 125°C | 0.340 |      |
|   |                    | I <sub>F</sub> = 1.0A , Ta = 25°C  | 0.445 |      |
| Maximum Reverse Current at<br>Rated DC Blocking Voltage (1)   | I <sub>R</sub>     | Ta = 25 °C                         | 0.2   | mA   |
|   |                    | Ta = 100 °C                        | 6.0   |      |
| Maximum Thermal Resistance (2)  | RθJA               | 88                                 |       | °C/W |
|   | RθJL               | 28                                 |       | °C/W |
| Operating Junction Temperature Range  | T <sub>J</sub>     | - 55 to + 125                      |       | °C   |
| Storage Temperature Range   | T <sub>STG</sub>   | - 55 to + 150                      |       | °C   |

**Notes:** (1) Pulse Test : Pulse Width = 300 μs, Duty Cycle = 1%.

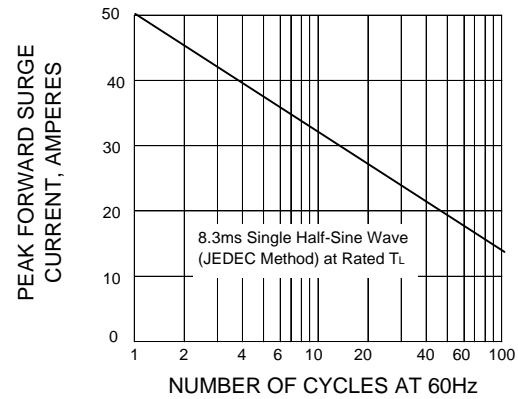
(2) P.C.B. Mounted on 0.2 x 0.2" (5.0 x 5.0mm) Copper Pad Areas

## RATING AND CHARACTERISTIC CURVES ( SL12 - SL13 )

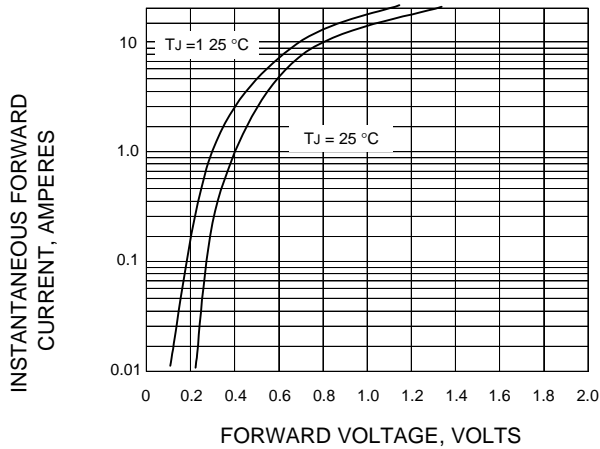
**FIG.1 - FORWARD CURRENT DERATING CURVE**



**FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



**FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG.4 - TYPICAL REVERSE CHARACTERISTICS**

