

# SL12 - SL13

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

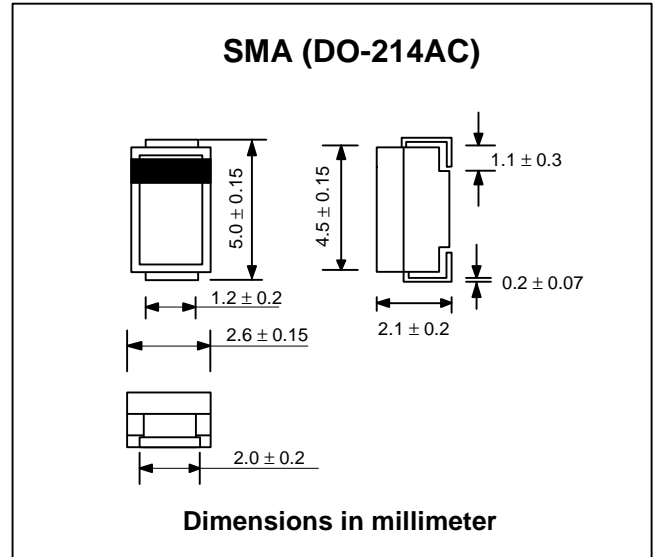
### FEATURES :

- \* 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 at T <sub>L</sub> = 105 °C	I <sub>F(AV)</sub>	1.5		A
Maximum Peak Forward Surge Current, 8.3ms single half sine wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	50		A
Maximum Instantaneous Forward Voltage at (1)	V <sub>F</sub>	I <sub>F</sub> = 0.1A , T <sub>a</sub> = 125°C	0.230	V
		I <sub>F</sub> = 0.1A , T <sub>a</sub> = 25°C	0.360	
		I <sub>F</sub> = 1.0A , T <sub>a</sub> = 125°C	0.340	
		I <sub>F</sub> = 1.0A , T <sub>a</sub> = 25°C	0.445	
Maximum Reverse Current at Rated DC Blocking Voltage (1)	I <sub>R</sub>	T <sub>a</sub> = 25 °C	0.2	mA
		T <sub>a</sub> = 100 °C	6.0	
Maximum Thermal Resistance (2)	R <sub>θJA</sub>	88		°C/W
	R <sub>θJL</sub>	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

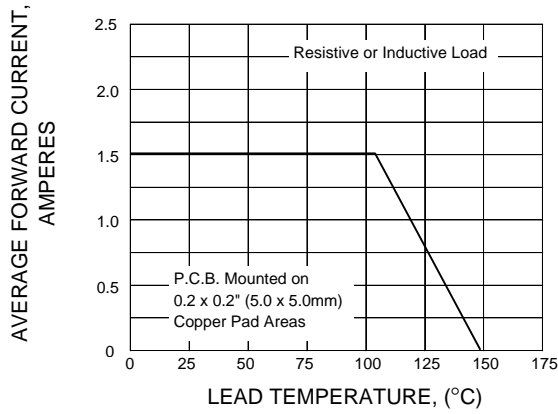


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

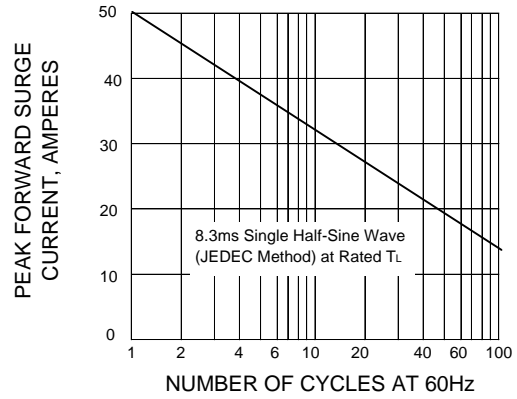


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

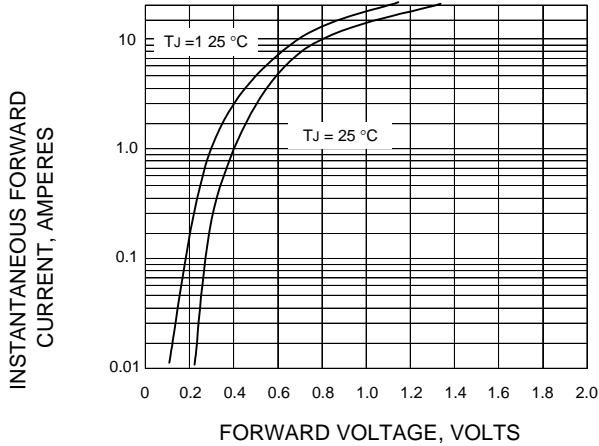


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

