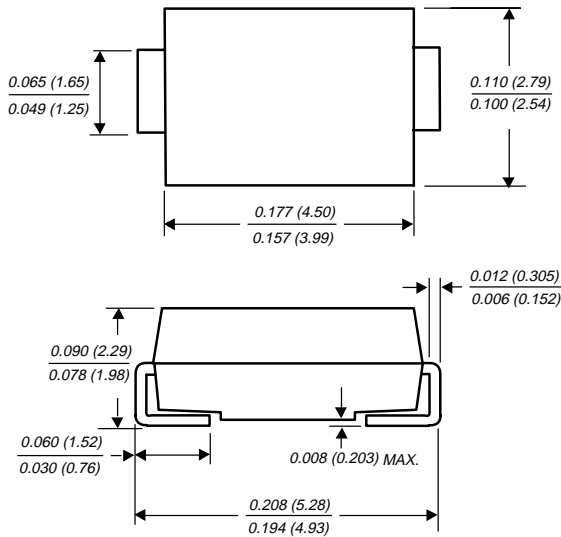


# SL12 AND SL13

**LOW V<sub>F</sub> SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER**  
*Reverse Voltage - 20 to 30 Volts      Forward Current - 1.0 Ampere*

## DO-214AC



Dimensions in inches and (millimeters)

## FEATURES

- ◆ Plastic package has Underwriters Laboratory Flammability classification 94V-0
- ◆ For surface mount applications
- ◆ Low profile package
- ◆ Built-in strain relief
- ◆ Metal silicon junction, majority carrier conduction
- ◆ Low power loss, high efficiency
- ◆ High current capability, low forward voltage drop
- ◆ High surge capability
- ◆ For use in low voltage high frequency inverters, free wheeling, and polarity protection applications
- ◆ Guardring for overvoltage protection
- ◆ High temperature soldering guaranteed: 250°C/10 seconds on terminals



## MECHANICAL DATA

**Case:** JEDEC DO-214AC molded plastic body

**Terminals:** Solder plated, solderable per MIL-STD-750, Method 2026

**Polarity:** Color band denotes cathode end

**Weight:** 0.002 ounce 0.064 gram

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	SL12	SL13	UNITS
Device marking code		L2	L3	
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	20	30	Volts
Maximum RMS voltage	V <sub>RMS</sub>	14	21	Volts
Maximum DC blocking voltage	V <sub>DC</sub>	20	30	Volts
Maximum average forward rectified current (NOTE 2) at T <sub>L</sub> (SEE FIG. 1)	I <sub>(AV)</sub>	1.0		Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	50		Amps
Maximum instantaneous forward voltage at: (NOTE 1) I <sub>F</sub> =0.1A, T <sub>A</sub> =125°C I <sub>F</sub> =0.1A, T <sub>A</sub> =25°C I <sub>F</sub> =1.0A, T <sub>A</sub> =125°C I <sub>F</sub> =1.0A, T <sub>A</sub> =25°C	V <sub>F</sub>	0.230 0.360 0.340 0.445		Volts
Maximum DC reverse current (NOTE 1) T <sub>A</sub> =25°C at rated DC blocking voltage T <sub>A</sub> =100°C	I <sub>R</sub>	0.2 6.0		mA
Typical thermal resistance (NOTE 2)	R <sub>θJA</sub> R <sub>θJL</sub>	88 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: 300μs pulse width, 1% duty cycle

(2) P.C.B. mounted with 0.2 x 0.2" (5.0 x 5.0mm) copper pad areas

# RATINGS AND CHARACTERISTIC CURVES SL12 AND SL13

FIG. 1 - FORWARD CURRENT DERATING CURVE

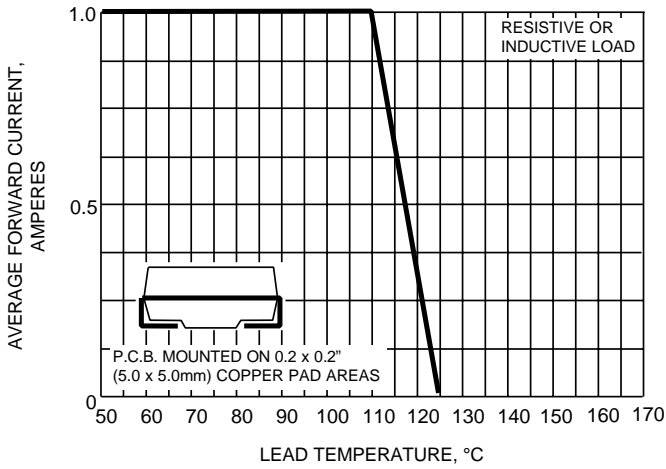


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

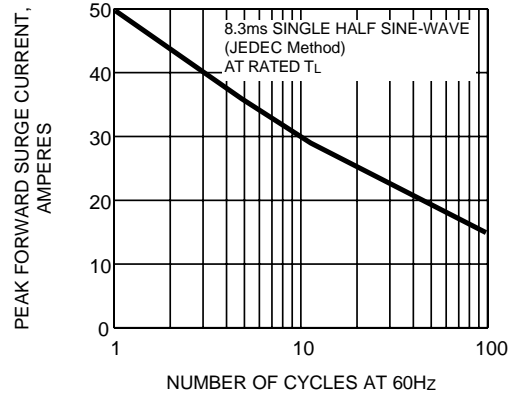


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

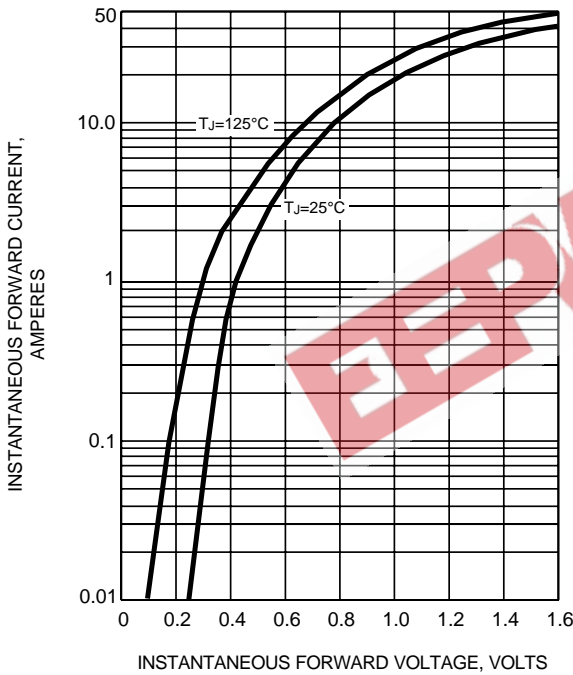


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

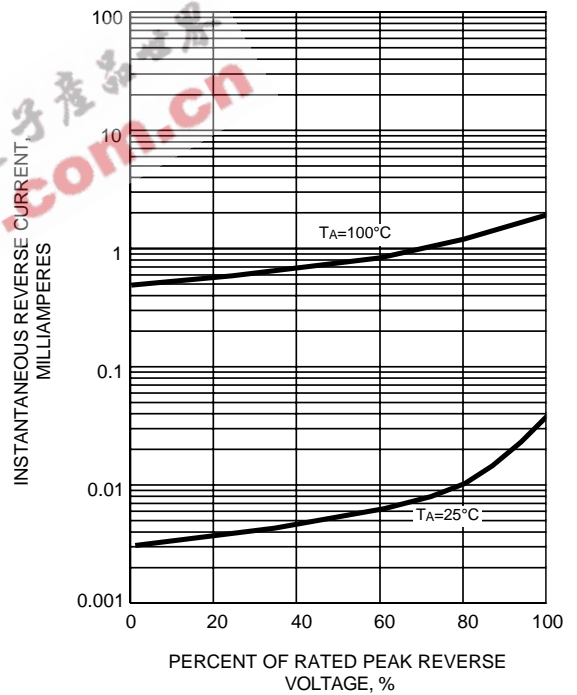


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

