

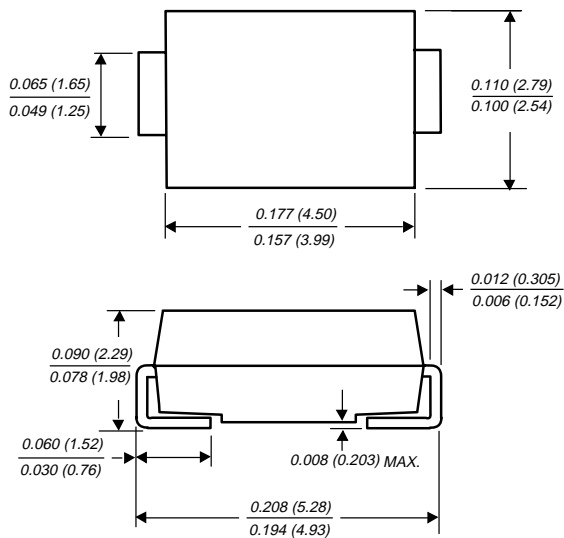
# SL12 AND SL13

## LOW $V_F$ 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	$V_{RRM}$	20	30	Volts
Maximum RMS voltage	$V_{RMS}$	14	21	Volts
Maximum DC blocking voltage	$V_{DC}$	20	30	Volts
Maximum average forward rectified current (NOTE 2) at $T_L$ (SEE FIG. 1)	$I_{(AV)}$	1.0		Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	50		Amps
Maximum instantaneous forward voltage at: (NOTE 1) $I_F=0.1A, T_A=125^\circ C$ $I_F=0.1A, T_A=25^\circ C$ $I_F=1.0A, T_A=125^\circ C$ $I_F=1.0A, T_A=25^\circ C$	$V_F$	0.230 0.360 0.340 0.445		Volts
Maximum DC reverse current (NOTE 1) $T_A=25^\circ C$ at rated DC blocking voltage $T_A=100^\circ C$	$I_R$	0.2 6.0		mA
Typical thermal resistance (NOTE 2)	$R_{\theta JA}$ $R_{\theta JL}$	88 28		$^\circ C/W$
Operating junction temperature range	$T_J$	-55 to +125		$^\circ C$
Storage temperature range	$T_{STG}$	-55 to +150		$^\circ C$

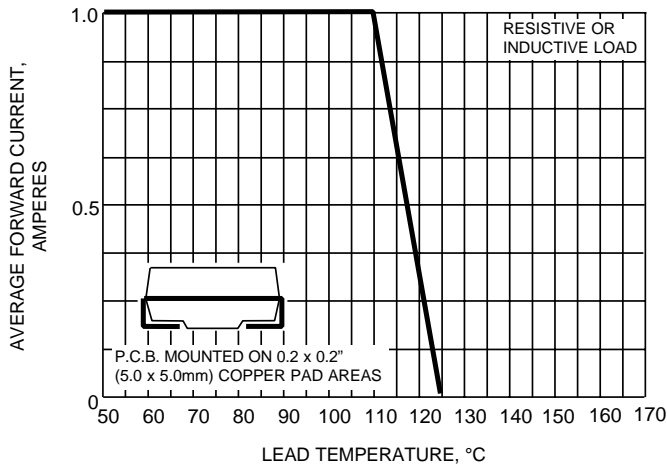
#### NOTES:

(1) Pulse test: 300 $\mu$ s pulse width, 1% duty cycle

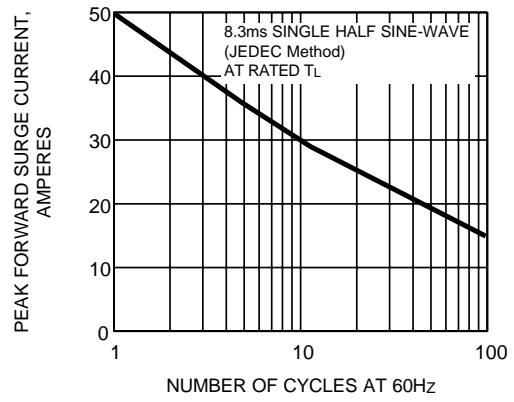
(2) P.C.B. mounted with 0.2 x 0.2" (5.0 x 5.0mm) copper pad areas

# RATINGS AND CHARACTERISTIC CURVES SL12 AND SL13

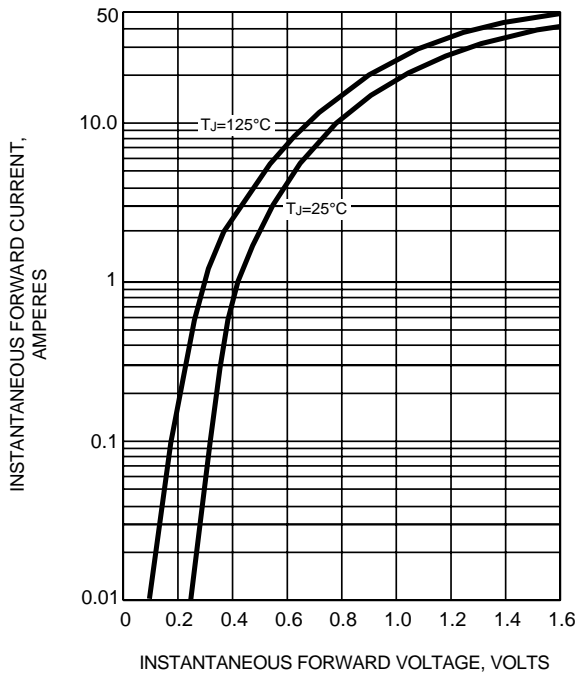
**FIG. 1 - FORWARD CURRENT DERATING CURVE**



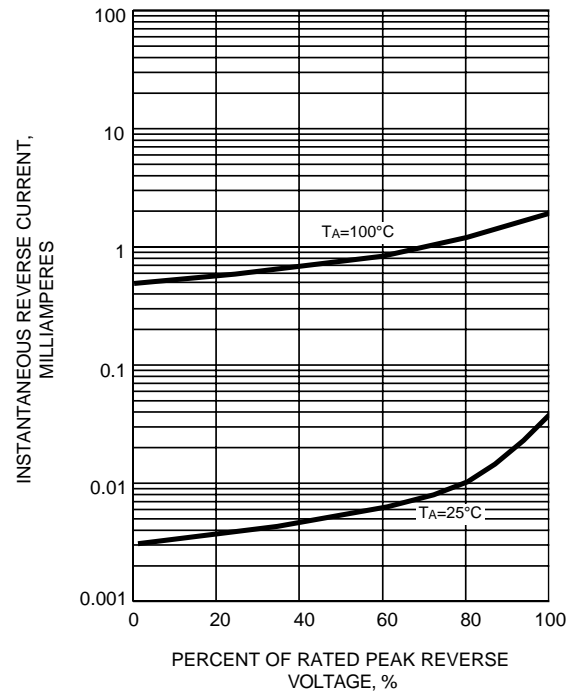
**FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



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



**FIG. 4 - TYPICAL REVERSE CHARACTERISTICS**



**FIG. 5 - TYPICAL JUNCTION CAPACITANCE**

