

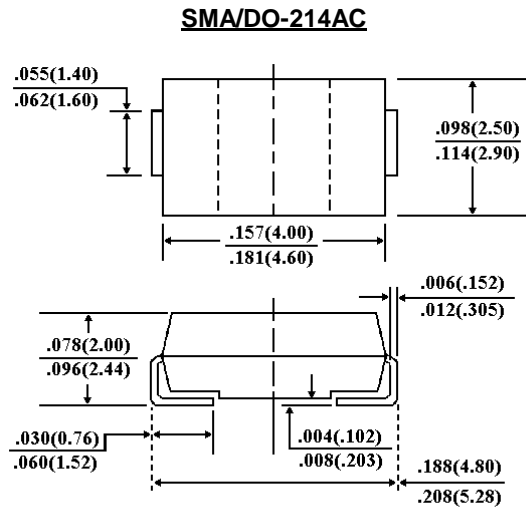
# SL12 THRU SL14

## LOW VF SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

### VOLTAGE - 20 to 40 Volts    CURRENT - 1.0 Ampere

#### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- For surface mounted applications
- Low profile package
- Built-in strain relief
- Metal to silicon rectifier majority carrier conduction
- Low power loss, High efficiency
- High current capability, low  $V_F$
- High surge capacity
- For use in low voltage high frequency inverters, free wheeling, and polarity protection applications
- High temperature soldering guaranteed: 260  $^{\circ}$ C/10 seconds at terminals



Dimensions in inches and (millimeters)

#### MECHANICAL DATA

Case: JEDEC DO-214AC molded plastic

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

Polarity: Color band denotes cathode

Standard packaging: 12mm tape (EIA-481)

Weight: 0.002 ounce, 0.064 gram

#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25  $^{\circ}$ C ambient temperature unless otherwise specified.

Resistive or inductive load.

	SYMBOLS	SL12	SL13	SL14	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	20	30	40	Volts
Maximum RMS Voltage	$V_{RMS}$	14	21	28	Volts
Maximum DC Blocking Voltage	$V_{DC}$	20	30	40	Volts
Maximum Average Forward Rectified Current at $T_A$ (See Figure 1)	$I_{(AV)}$	1.0			Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load(JEDEC method)	$I_{FSM}$	30.0			Amps
Maximum Instantaneous Forward Voltage at 1.0A (Note 1)	$V_F$	0.38	0.38	0.40	Volts
Maximum DC Reverse Current $T_A=25^{\circ}$ C (Note 1)	$I_R$	0.5			mA
At Rated DC Blocking Voltage $T_A=100^{\circ}$ C		20.0			
Maximum Thermal Resistance (Note 2)	$R_{\theta KJL}$	28			$^{\circ}$ C/W
	$R_{\theta KJA}$	88			
Operating Junction Temperature Range	$T_J$	-50 to +125			$^{\circ}$ C
Storage Temperature Range	$T_{STG}$	-50 to +150			$^{\circ}$ C

#### NOTES:

1. Pulse Test with PW=300  $\mu$ g sec, 1% Duty Cycle.
2. Mounted on P.C.Board with 5.0mm<sup>2</sup> (.013mm thick) copper pad areas.

# RATING AND CHARACTERISTIC CURVES

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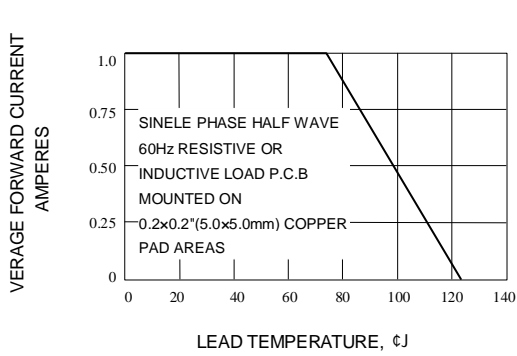


Fig. 1-FORWARD CURRENT DERATING CURVE

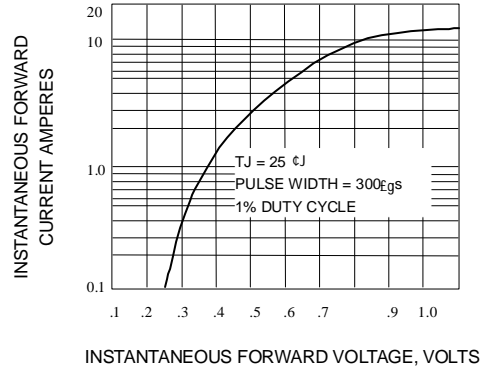


Fig. 2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

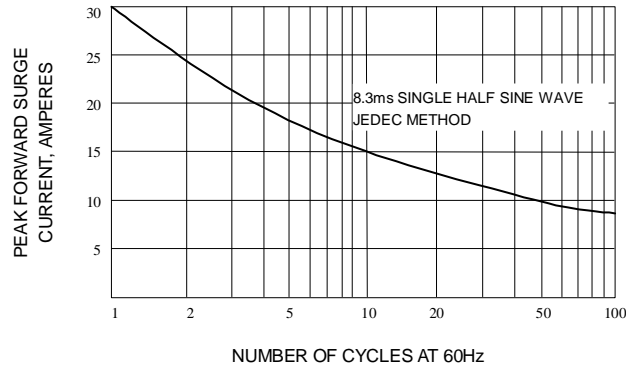


Fig. 3-MAXIMUM NON-REPETITIVE SURGE CURRENT

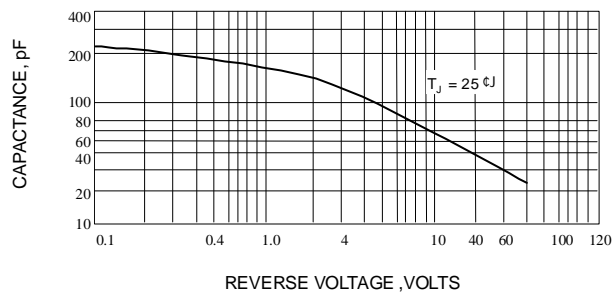


Fig. 4-TYPICAL JUNCTION CAPACITANCE