

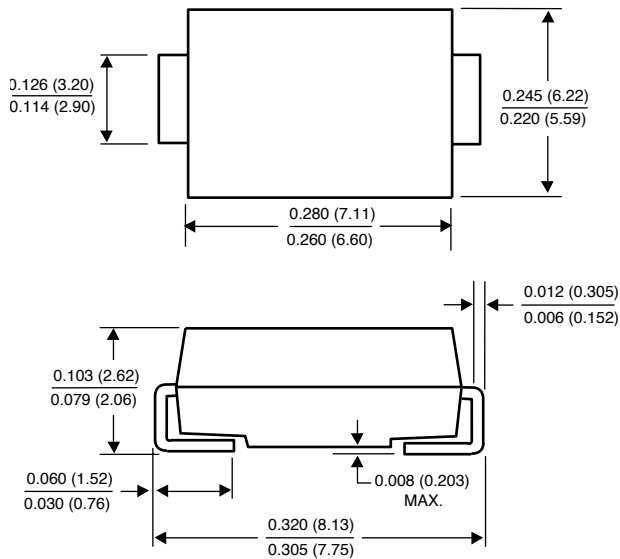
# SL42 THRU SL44

## LOW $V_F$ SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 20 to 40 Volts

Forward Current - 4.0 Amperes

### DO-214AB



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, ideal for automated placement
- ◆ Easy pick and place
- ◆ Metal silicon junction, majority carrier conduction
- ◆ Low power loss, high efficiency
- ◆ High current capability, low forward voltage drop
- ◆ For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- ◆ High temperature soldering: 250°C/10 seconds at terminals



### MECHANICAL DATA

**Case:** JEDEC DO-214AB molded plastic body**Terminals:** Solder plated, solderable per MIL-STD-750, Method 2026**Polarity:** Color band denotes cathode end**Weight:** 0.007 ounce 0.25 gram

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

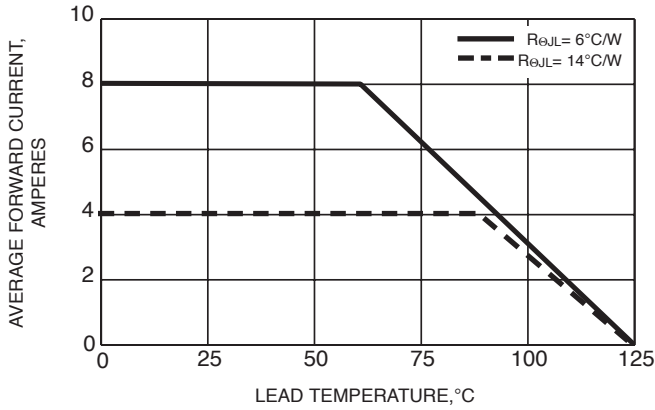
	SYMBOLS	SL42	SL43	SL44	UNITS
Device marking code		SL2	SL3	SL4	
Maximum repetitive peak reverse voltage	$V_{RRM}$	20	30	40	Volts
Maximum RMS voltage	$V_{RMS}$	14	21	28	Volts
Maximum DC blocking voltage	$V_{DC}$	20	30	40	Volts
Maximum average forward rectified current (NOTE 2) at $T_L$ (SEE FIG. 1)	$I_{(AV)}$		4.0 8.0		Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$		150		Amps
Maximum instantaneous forward voltage at: (NOTE 1) $I_F=4.0A, T_A=125^\circ C$ $I_F=4.0A, T_A=25^\circ C$ $I_F=8.0A, T_A=125^\circ C$ $I_F=8.0A, T_A=25^\circ C$	$V_F$		0.31 0.42 0.37 0.47	0.35 0.44 0.41 0.50	Volts
Maximum DC reverse current (NOTE 1) $T_A=25^\circ C$ at rated DC blocking voltage $T_A=100^\circ C$	$I_R$		0.5 35.0		mA
Typical thermal resistance (NOTE 2)	$R_{\theta JA}$ $R_{\theta JL}$		50 14		$^\circ C/W$
Operating junction temperature range	$T_J$		-55 to +125		$^\circ C$
Storage temperature range	$T_{STG}$		-55 to +150		$^\circ C$

#### NOTES:

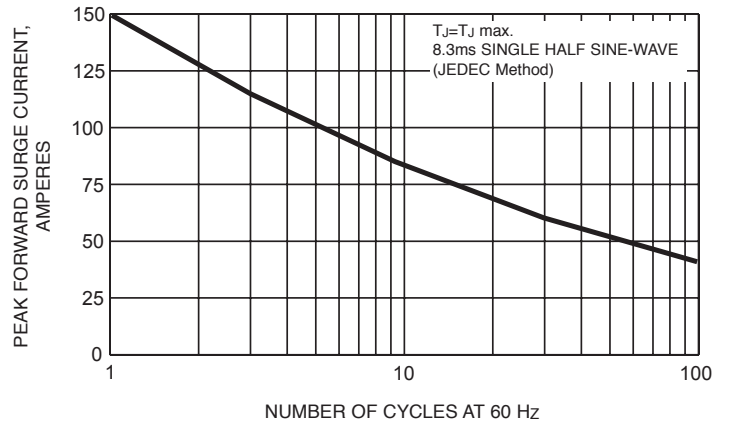
- (1) Pulse test: 300 $\mu s$  pulse width, 1% duty cycle,
- (2) P.C.B. mounted 0.55 x 0.55" (14 x 14mm) copper pad areas,  $T_L=90^\circ C$
- (3) Mounted on Al plate,  $T_L=60^\circ C$ ,  $R_{\theta JL}=6^\circ C/W$

# RATINGS AND CHARACTERISTIC CURVES SL42 THRU SL44

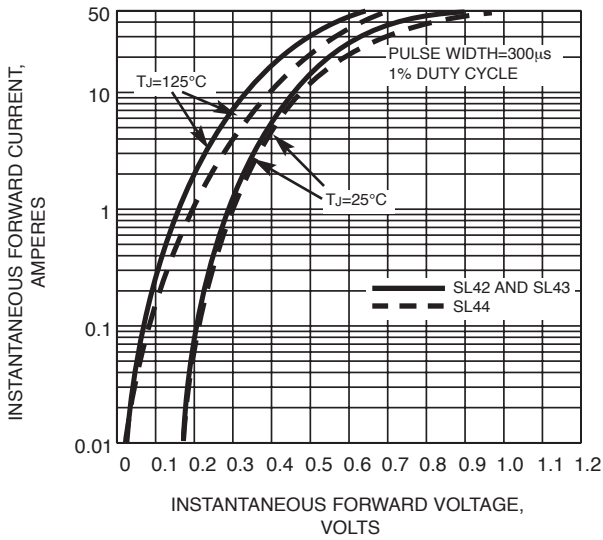
**FIG. 1 - FORWARD CURRENT DERATING CURVE**



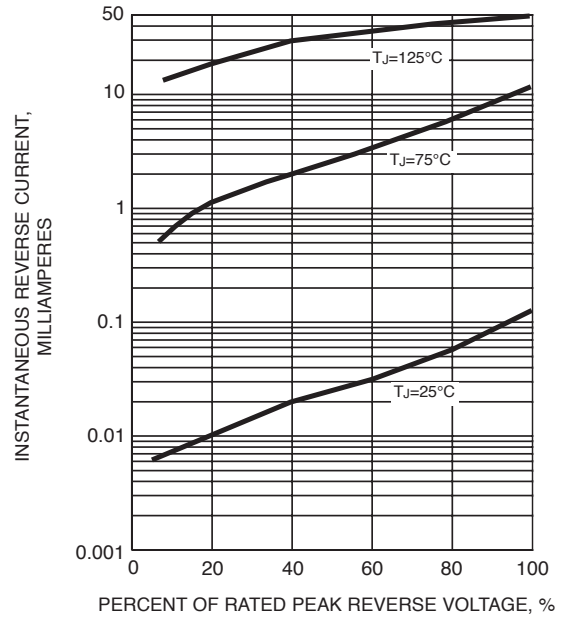
**FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



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



**FIG. 4 - TYPICAL REVERSE CHARACTERISTICS**



**FIG. 5 - TYPICAL JUNCTION CAPACITANCE**

