

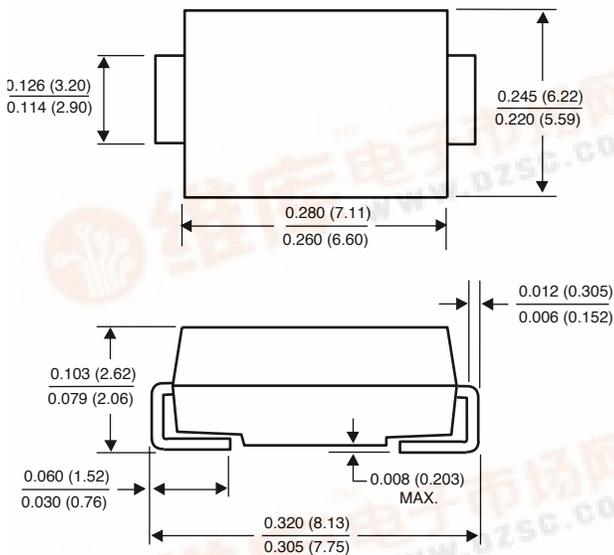
## SL42 THRU SL44

LOW V<sub>F</sub> 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 <sub>RRM</sub>	20	30	40	Volts
Maximum RMS voltage	V <sub>RMS</sub>	14	21	28	Volts
Maximum DC blocking voltage	V <sub>DC</sub>	20	30	40	Volts
Maximum average forward rectified current (NOTE 2) at T <sub>L</sub> (SEE FIG. 1)	I <sub>(AV)</sub>		4.0 8.0		Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>		150		Amps
Maximum instantaneous forward voltage at: (NOTE 1) I <sub>F</sub> =4.0A, T <sub>A</sub> =125°C I <sub>F</sub> =4.0A, T <sub>A</sub> =25°C I <sub>F</sub> =8.0A, T <sub>A</sub> =125°C I <sub>F</sub> =8.0A, T <sub>A</sub> =25°C	V <sub>F</sub>		0.31 0.42 0.37 0.47	0.35 0.44 0.41 0.50	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>		0.5 35.0		mA
Typical thermal resistance (NOTE 2)	R <sub>θJA</sub> R <sub>θJL</sub>		50 14		°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 0.55 x 0.55" (14 x 14mm) copper pad areas, T<sub>L</sub>=90°C
- (3) Mounted on Al plate, T<sub>L</sub>=60°C, R<sub>θJL</sub>=6°C/W

# RATINGS AND CHARACTERISTIC CURVES SL42 THRU SL44

FIG. 1 - FORWARD CURRENT DERATING CURVE

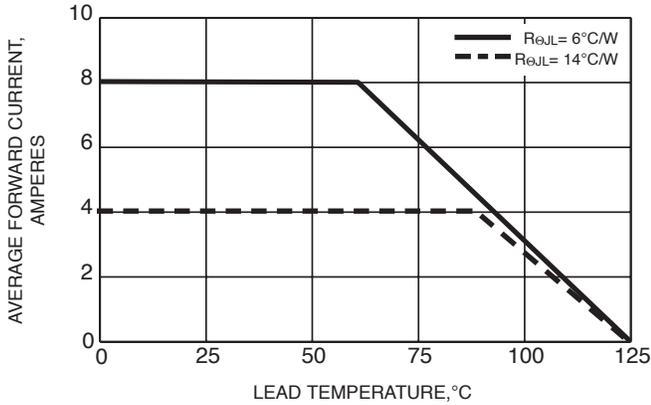


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

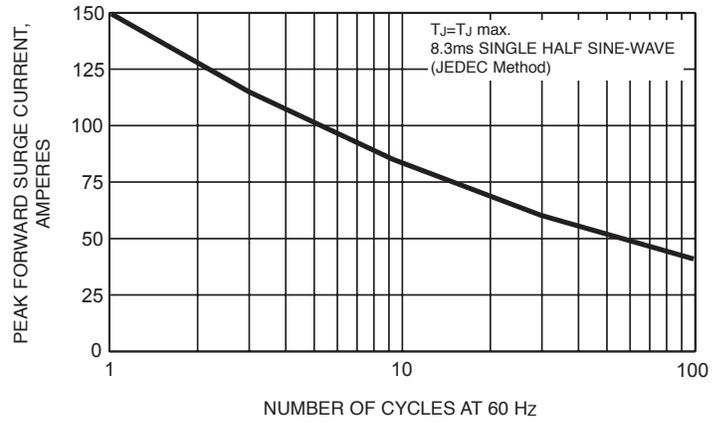


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

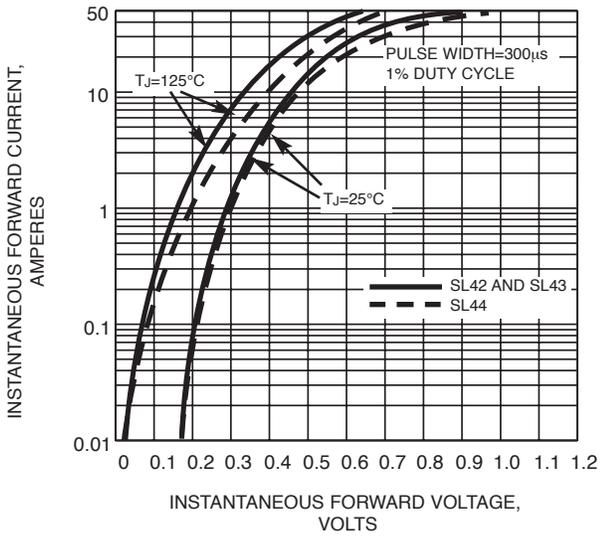


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

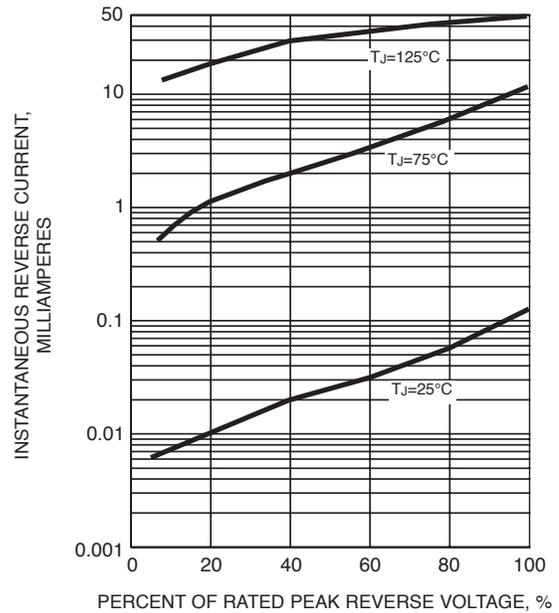


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

