

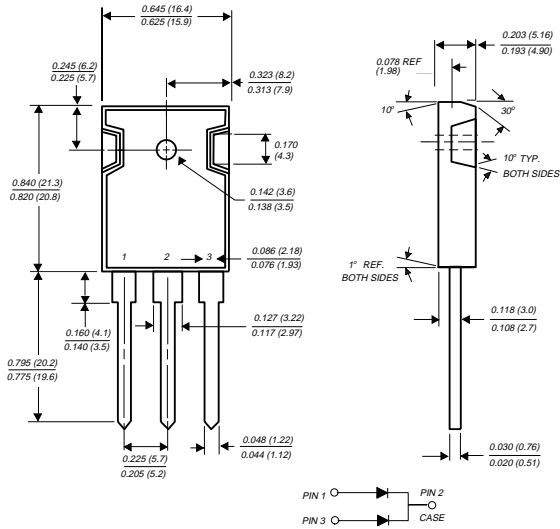
# SBL4030PT THRU SBL4040PT

## SCHOTTKY RECTIFIER

Reverse Voltage - 30 to 40 Volts

Forward Current - 40.0 Amperes

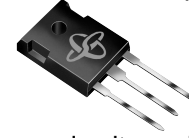
### TO-247AD



Dimensions in inches and (millimeters)

### FEATURES

- ◆ Plastic package has Underwriters Laboratory Flammability Classifications 94V-0
- ◆ Dual rectifier construction, positive center-tap
- ◆ Metal silicon rectifier, 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, 0.17" (4.3mm) from case



### MECHANICAL DATA

**Case:** JEDEC TO-247AD molded plastic body

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

**Polarity:** As marked

**Mounting Position:** Any

**Mounting Torque:** 10 in. - lbs. max.

**Weight:** 0.2 ounce, 5.6 grams

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	SBL4030PT	SBL4040PT	UNITS
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	30	40	Volts
Maximum working peak reverse voltage	V <sub>RMS</sub>	21	28	Volts
Maximum DC blocking voltage	V <sub>DC</sub>	30	40	Volts
Maximum average forward rectified current at T <sub>C</sub> =100°C	I <sub>(AV)</sub>	40.0		Amps
Peak repetitive forward current per leg at T <sub>C</sub> =95°C (rated V <sub>R</sub> square wave, 20 KHz)	I <sub>FRM</sub>	40.0		Amps
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	400.0		Amps
Peak repetitive reverse surge current (NOTE 1)	I <sub>RSM</sub>	2.0		Amps
Maximum instantaneous forward voltage per leg at I <sub>F</sub> =20A, T <sub>C</sub> =25°C (NOTE 2) I <sub>F</sub> =20A, T <sub>C</sub> =100°C	V <sub>F</sub>	0.58 0.50		Volts
Maximum instantaneous reverse current at T <sub>C</sub> =25°C rated DC blocking voltage per leg (NOTE 2) T <sub>C</sub> =100°C	I <sub>R</sub>	10.0 100.0		mA
Typical thermal resistance per leg (NOTE 3)	R <sub>θJC</sub>	1.2		°C/W
Voltage rate of change (rated V <sub>R</sub> )	dv/dt	1,000		V/μs
Operating junction storage temperature range	T <sub>JTSTG</sub>	-40 to +125		°C

#### NOTES:

(1) 2.0μs pulse width, f=1.0 KHz

(2) Pulse test: 300μs pulse width, 1% duty cycle

(3) Thermal resistance from junction to case per leg

# RATINGS AND CHARACTERISTIC CURVES SBL4030PT THRU SBL4040PT

FIG. 1 - FORWARD CURRENT DERATING CURVE

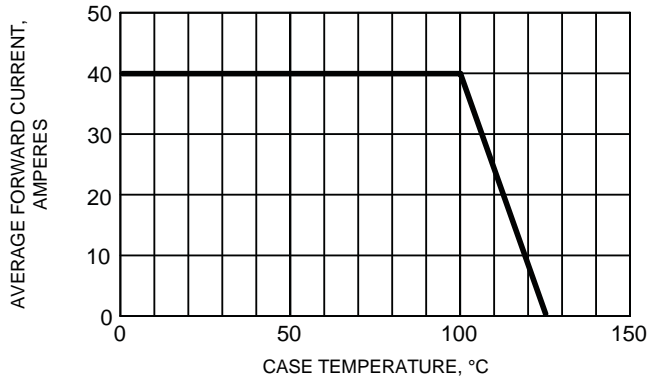


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

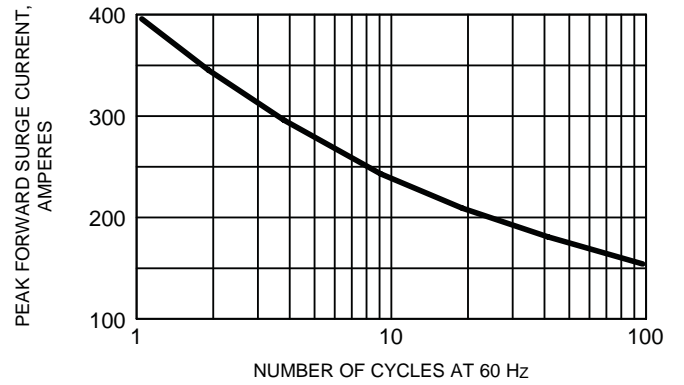


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS PER LEG

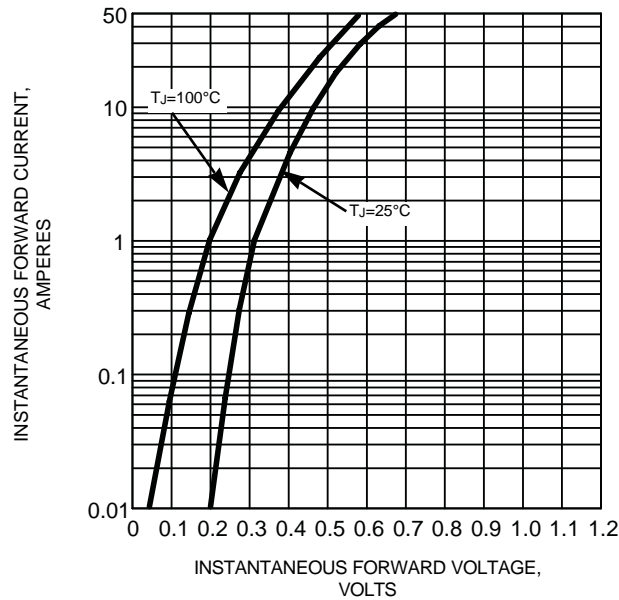


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS PER LEG

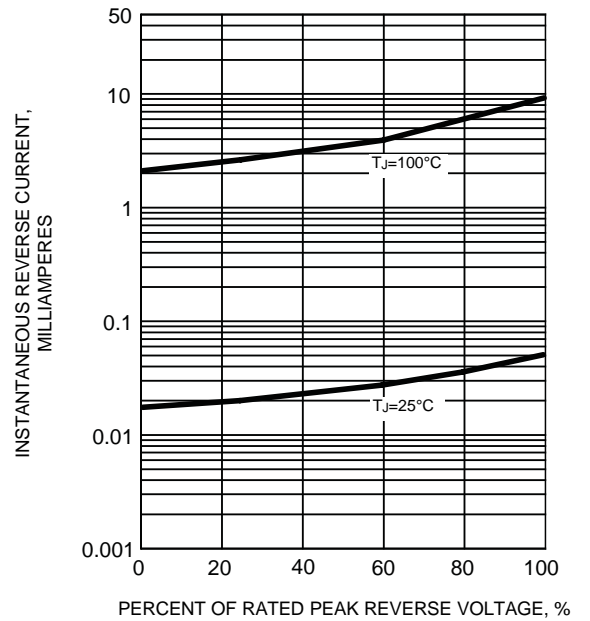


FIG. 5 - TYPICAL JUNCTION CAPACITANCE PER LEG

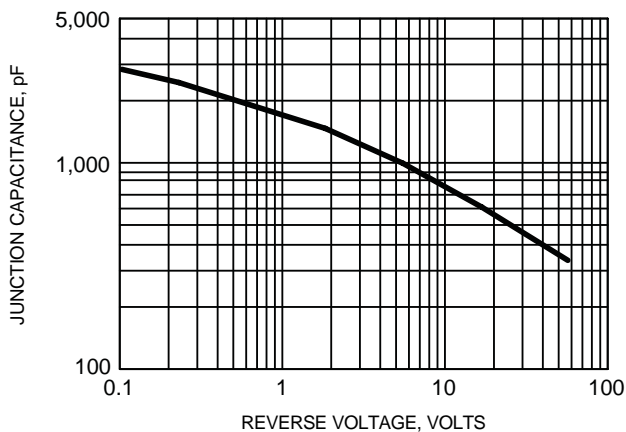


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

