

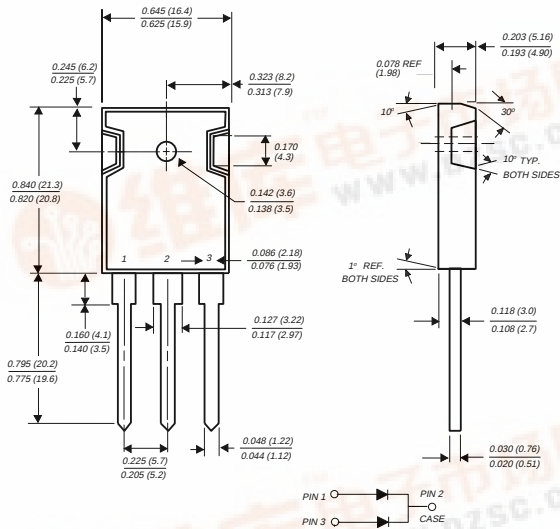
SBL4030PT THRU SBL4040PT

SCHOTTKY RECTIFIER

Reverse Voltage - 30 to 40 Volts

Forward Current - 40.0 Amperes

TO-247AD



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_{RRM}	30	40	Volts
Maximum working peak reverse voltage	V_{RMS}	21	28	Volts
Maximum DC blocking voltage	V_{DC}	30	40	Volts
Maximum average forward rectified current at $T_C=100^\circ\text{C}$	$I_{(AV)}$	40.0		Amps
Peak repetitive forward current per leg at $T_C=95^\circ\text{C}$ (rated V_R square wave, 20 KHz)	I_{FRM}	40.0		Amps
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	400.0		Amps
Peak repetitive reverse surge current (NOTE1)	I_{RRM}	2.0		Amps
Maximum instantaneous forward voltage per leg at $I_F=20\text{A}$, $T_C=25^\circ\text{C}$ (NOTE 2) $I_F=20\text{A}$, $T_C=100^\circ\text{C}$	V_F	0.58 0.50		Volts
Maximum instantaneous reverse current at $T_C=25^\circ\text{C}$ rated DC blocking voltage per leg (NOTE 2) $T_C=100^\circ\text{C}$	I_R	10.0 100.0		mA
Typical thermal resistance per leg (NOTE 3)	$R_{\theta JC}$	1.2		$^\circ\text{C/W}$
Voltage rate of change (rated V_R)	dv/dt	1,000		$\text{V}/\mu\text{s}$
Operating junction storage temperature range	T_{JTSTG}	-40 to +125		$^\circ\text{C}$

NOTES:

- (1) 2.0μs pulse width, $f=1.0\text{ KHz}$
- (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

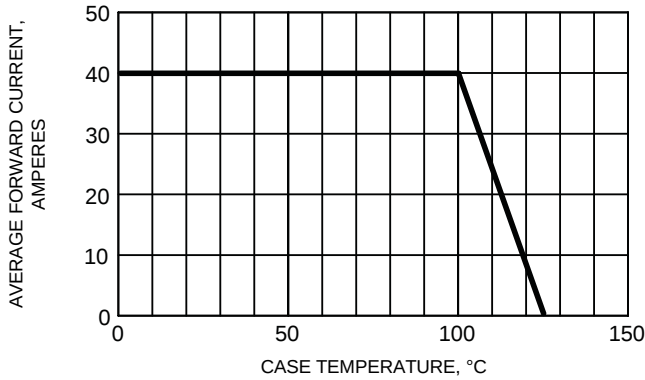


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

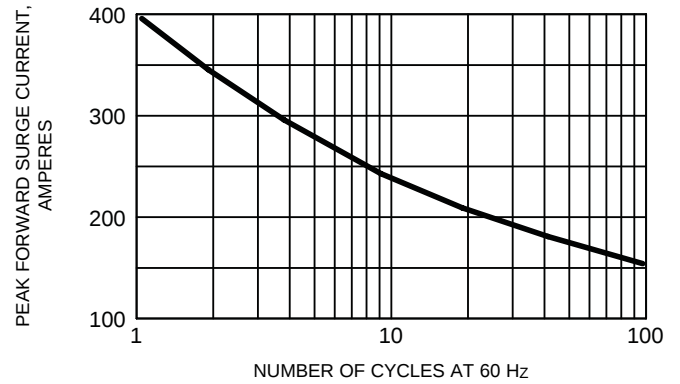


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS PER LEG

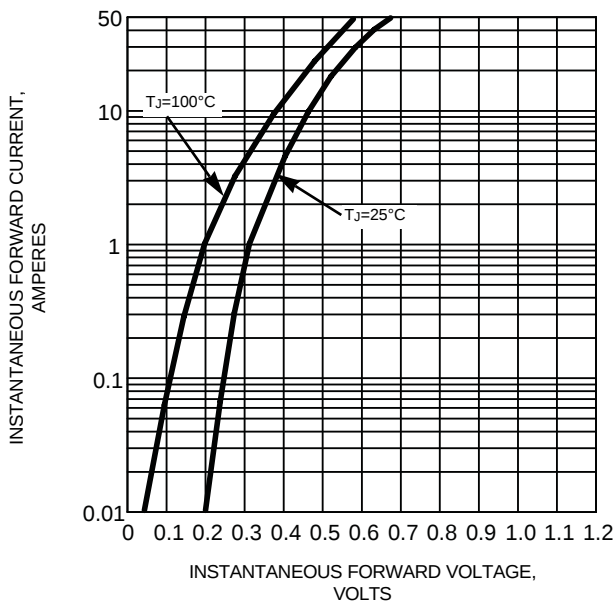


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS PER LEG

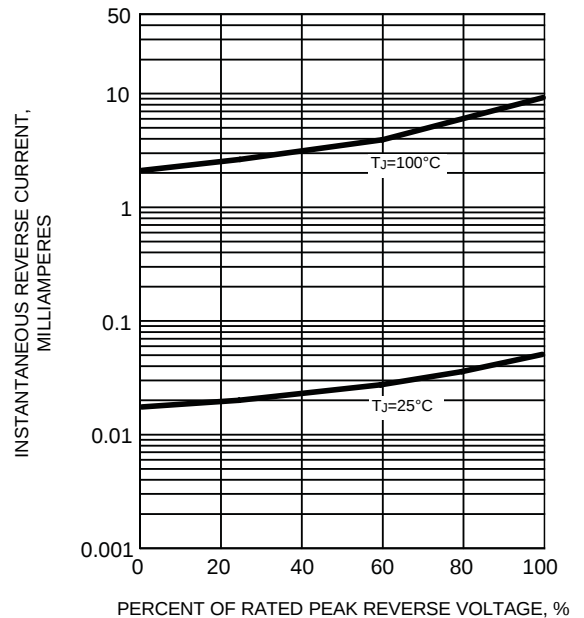


FIG. 5 - TYPICAL JUNCTION CAPACITANCE PER LEG

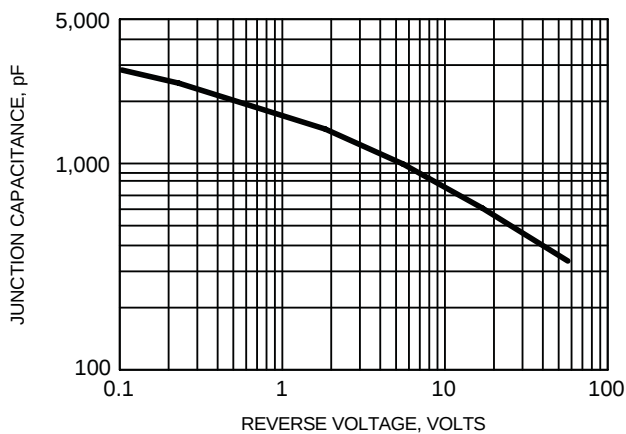


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

