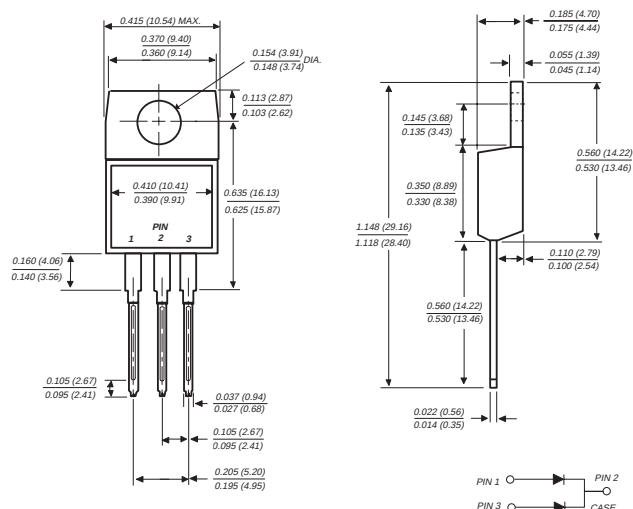


SBL25L20CT THRU SBL25L30CT

LOW V_F SCHOTTKY RECTIFIER

Reverse Voltage - 20 and 25 Volts Forward Current - 25.0 Amperes

TO-220AB



Dimensions in inches and (millimeters)

FEATURES

- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ Metal silicon junction, majority carrier conduction
- ◆ Low power loss, high efficiency
- ◆ High current capability
- ◆ Very low forward voltage drop
- ◆ High surge capability
- ◆ Guardring for overvoltage protection
- ◆ For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- ◆ High temperature soldering guaranteed: 250°C/10 seconds, 0.25" (6.35mm) from case



MECHANICAL DATA

Case: JEDEC TO-220AB molded plastic body

Terminals: Leads solderable per MIL-STD-750, Method 2026

Polarity: As marked

Mounting Position: Any

Mounting Torque: 5in.-lbs. max.

Weight: 0.08 ounce, 2.24 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	SBL25L20CT	SBL25L25CT	SBL25L30CT	UNITS
Maximum repetitive peak reverse voltage	V_{RRM}	20	25	30	Volts
Maximum RMS voltage	V_{RMS}	14	17	21	Volts
Maximum DC blocking voltage	V_{DC}	20	25	30	Volts
Maximum average forward rectified current at $T_C=95^\circ\text{C}$	$I_{F(AV)}$	25.0			Amps
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	180.0			Amps
Maximum instantaneous forward voltage per leg at 12.5A (NOTE 1) $T_C=125^\circ\text{C}$ $T_C=25^\circ\text{C}$	V_F	0.39 0.49			Volts
Maximum instantaneous reverse current at rated DC blocking voltage per leg (NOTE 1) $T_C=25^\circ\text{C}$ $T_C=100^\circ\text{C}$ $T_C=125^\circ\text{C}$	I_R	1.0 50.0 100.0			mA
Typical thermal resistance per leg (NOTE 2)	$R_{\theta JC}$	1.5			$^\circ\text{C/W}$
Operating junction and storage temperature range	T_J, T_{STG}	-40 to +125			$^\circ\text{C}$

NOTES:

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

(2) Thermal resistance from junction to case per leg

RATINGS AND CHARACTERISTIC CURVES SBL25L20CT THRU SBL25L30CT

FIG. 1 - FORWARD CURRENT DERATING CURVE

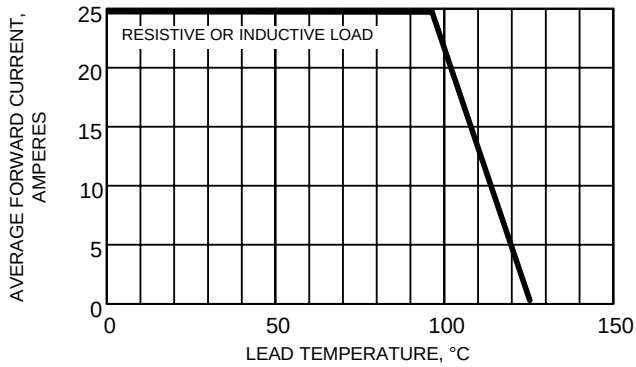


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

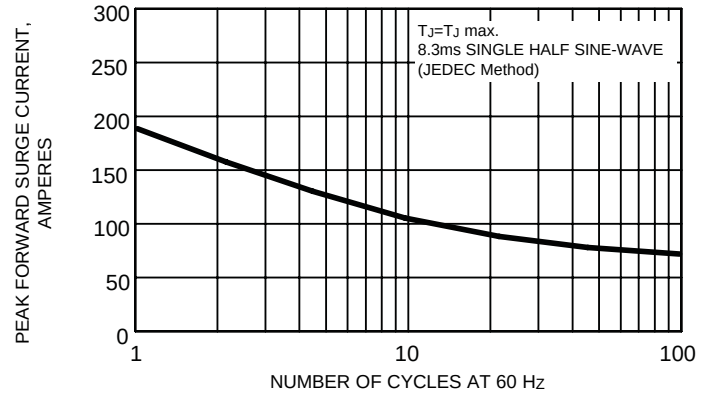


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

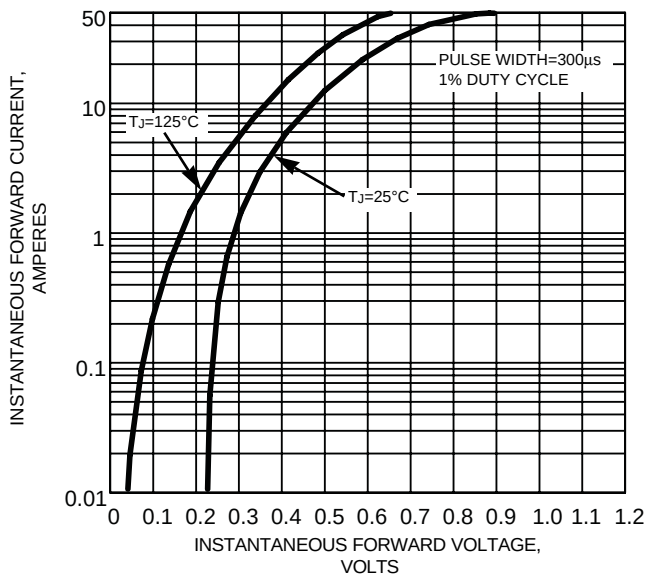


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS PER LEG

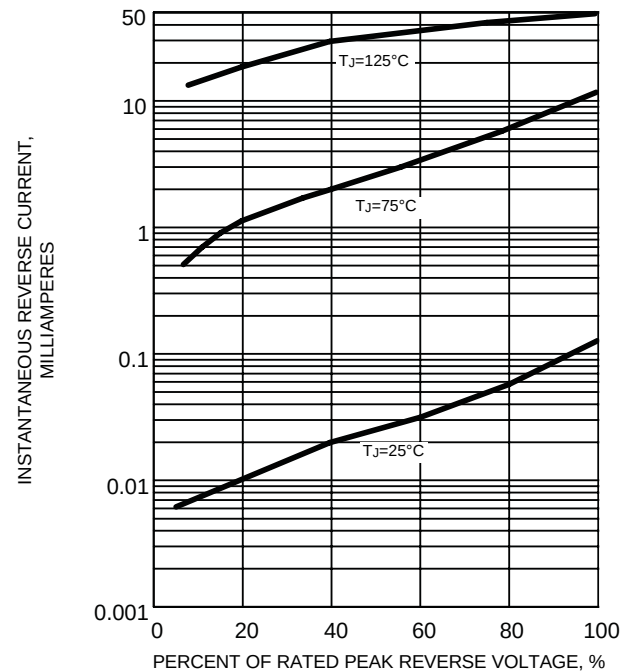


FIG. 5 - TYPICAL JUNCTION CAPACITANCE PER LEG

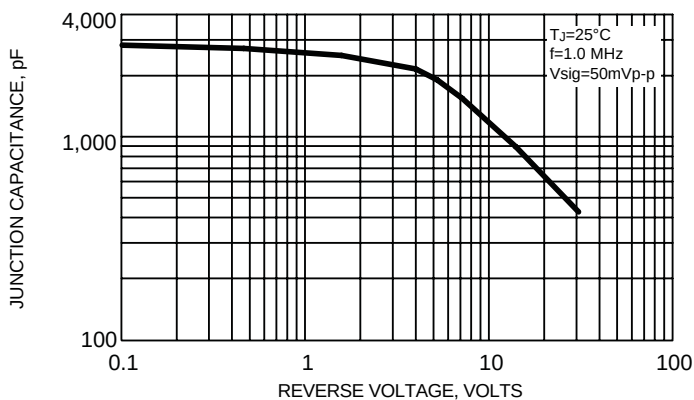


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

