

SBLF25L20CT THRU SBLF25L30CT

LOW V_F SCHOTTKY ISOLATED PLASTIC RECTIFIER

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

ITO-220AB

FEATURES

- ◆ Isolated 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, 0.16" (4.06mm) from case



MECHANICAL DATA

Case: JEDEC ITO-220AB fully overmolded plastic body

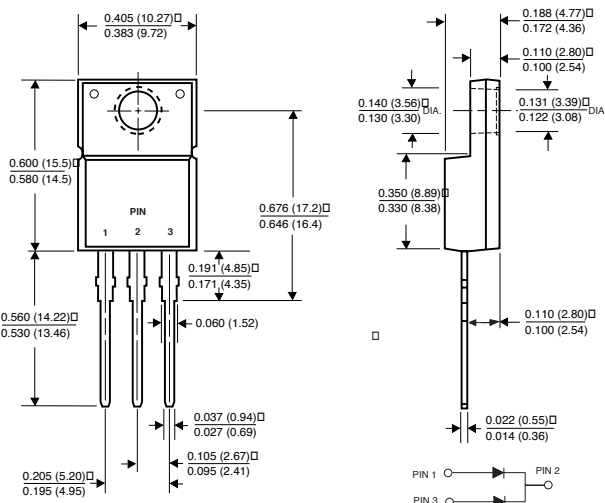
Terminals: Leads solderable per MIL-STD-750, Method 2026

Polarity: As marked

Mounting Position: Any

Weight: 0.08 ounce, 2.24 grams

Mounting Torque: 5in.-lbs. max.



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	SBLF25L20CT	SBLF25L25CT	SBLF25L30CT	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)	$R_{\theta JC}$	4.0			$^\circ\text{C/W}$
Operating junction and storage temperature range	T_J, T_{STG}	-40 to +125			$^\circ\text{C}$
RMS Isolation voltage from terminals to heatsink with $RH \leq 30\%$	V_{ISOL}	4500 (NOTE 3) 3500 (NOTE 4) 1500 (NOTE 5)			Volts

NOTES:

- (1) Pulse test: 300 μs pulse width, 1% duty cycle
- (2) Thermal resistance from junction to case per leg
- (3) Clip mounting (on case), where lead does not overlap heatsink with 0.110" offset.
- (4) Clip mounting (on case), where leads do overlap heatsink.
- (5) Screw mounting with 4-40 screw, where washer diameter is ≤ 4.9 mm (0.19").

RATINGS AND CHARACTERISTIC CURVES SBLF25L20CT THRU SBLF25L30CT

FIG. 1 - FORWARD CURRENT DERATING CURVE

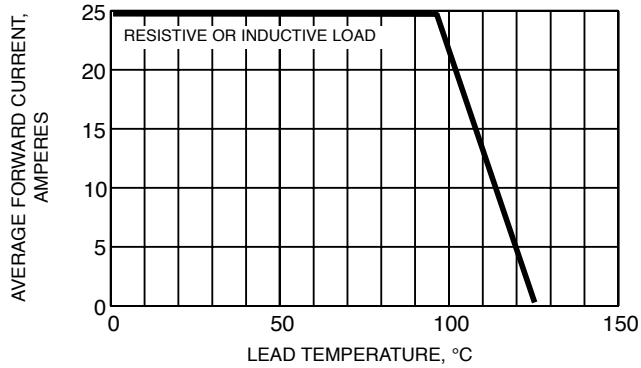


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

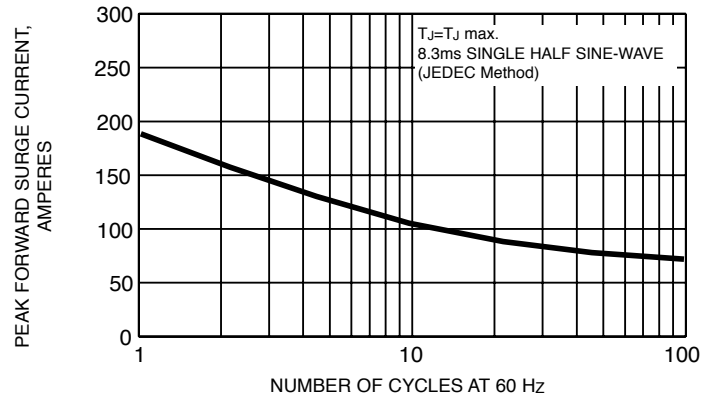


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

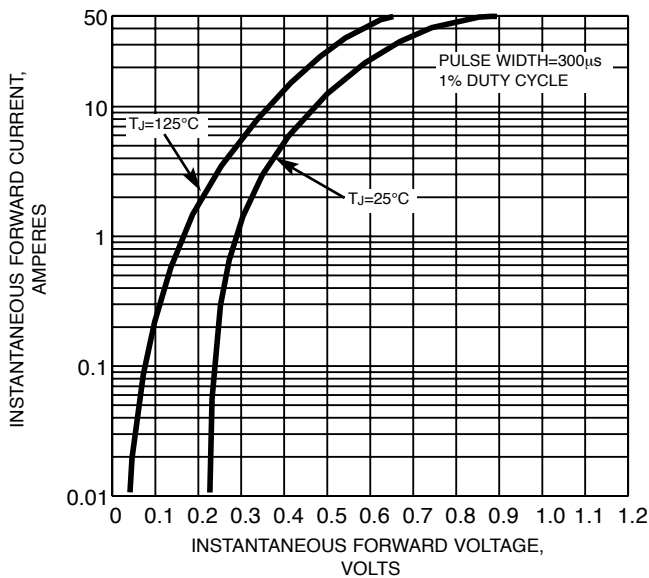


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS PER LEG

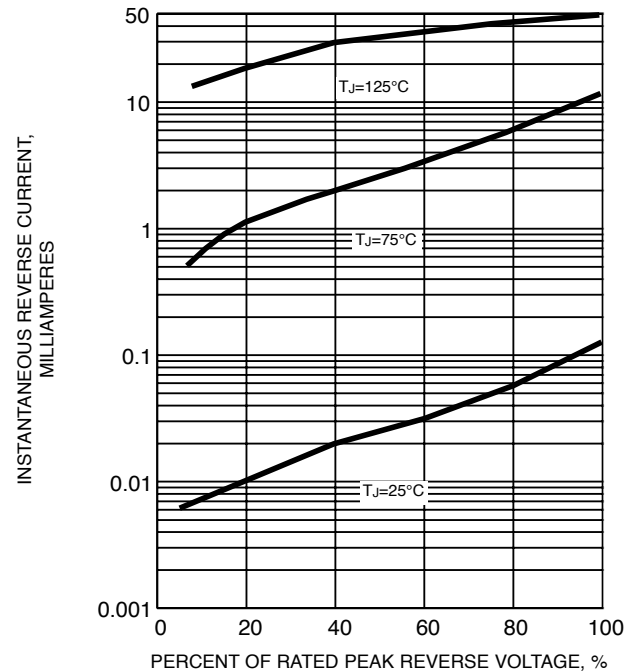


FIG. 5 - TYPICAL JUNCTION CAPACITANCE PER LEG

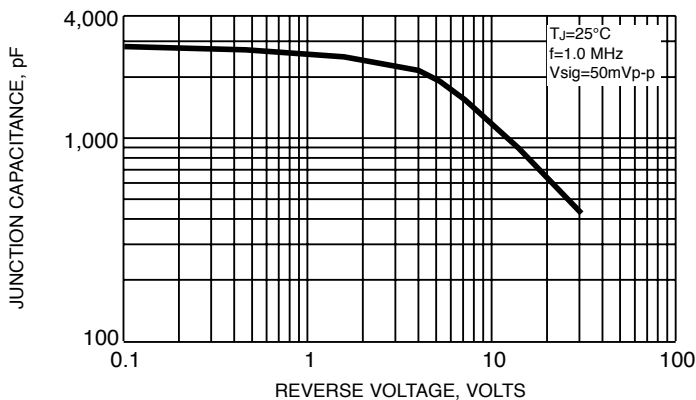


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

