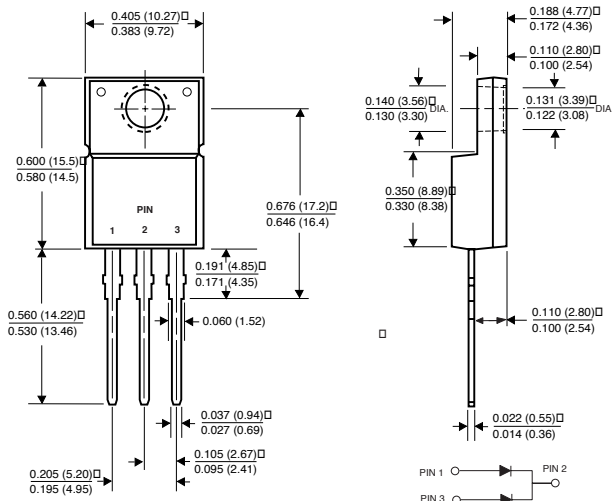


# SBLF25L20CT THRU SBLF25L30CT

**LOW  $V_F$  SCHOTTKY ISOLATED PLASTIC RECTIFIER**  
**Reverse Voltage - 20 and 25 Volts    Forward Current - 25.0 Amperes**

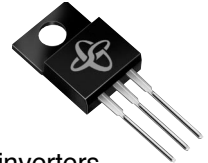
## ITO-220AB



Dimensions in inches and (millimeters)

## 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.

## 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			$^\circ\text{C}/\text{W}$
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 $\mu\text{s}$  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  $\leq 4.9$  mm (0.19").

# RATINGS AND CHARACTERISTIC CURVES SBLF25L20CT THRU SBLF25L30CT

FIG. 1 - FORWARD CURRENT DERATING CURVE

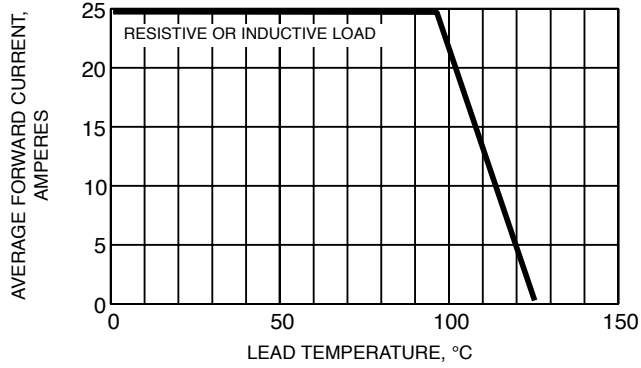


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

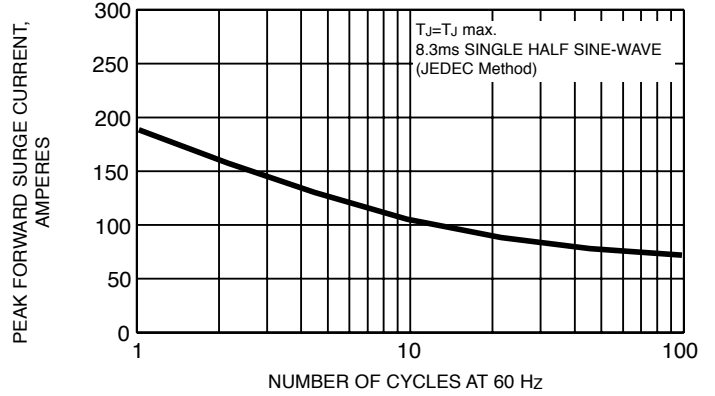


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

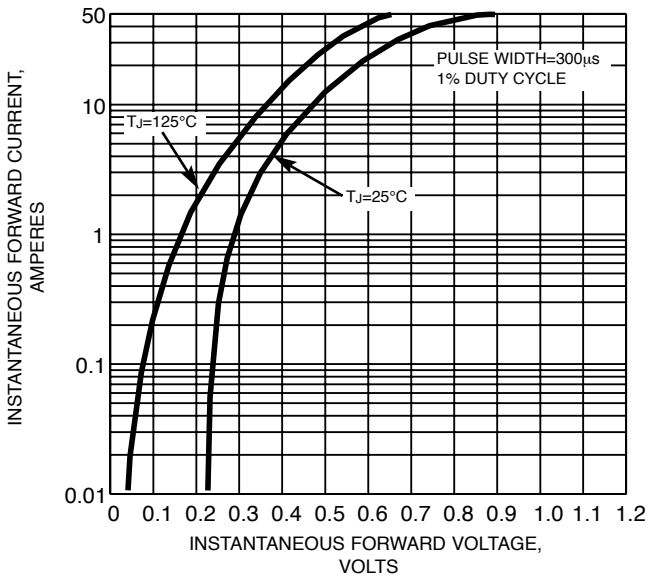


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS PER LEG

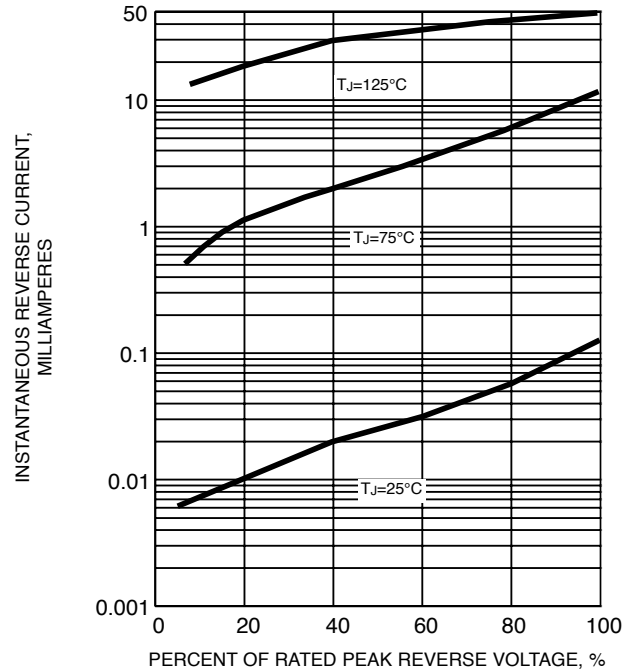


FIG. 5 - TYPICAL JUNCTION CAPACITANCE PER LEG

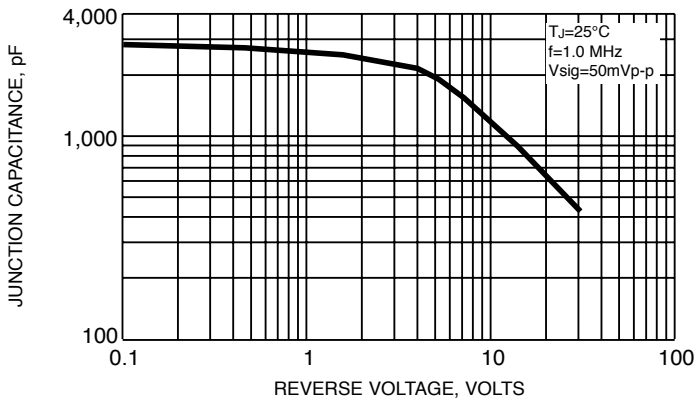


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

