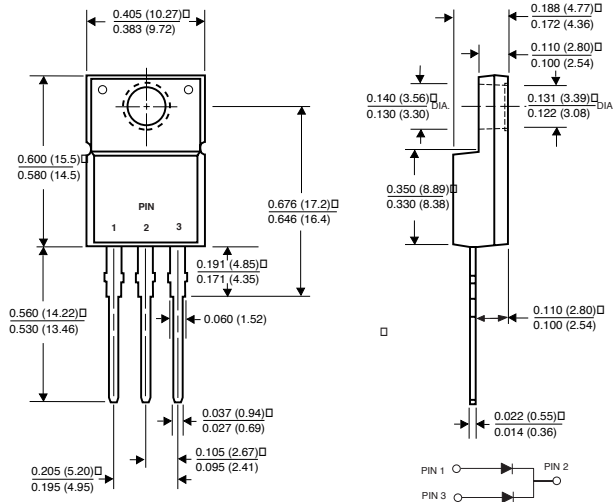


# SBLF2030CT AND SBLF2040CT

## SCHOTTKY ISOLATED PLASTIC RECTIFIER

Reverse Voltage - 30 and 40 Volts      Forward Current - 20.0 Amperes

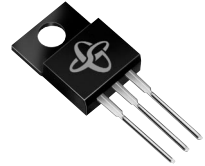
### ITO-220AB



Dimensions in inches and (millimeters)

### FEATURES

- ◆ Isolated plastic package has Underwriters Laboratory Flammability Classifications 94V-0
- ◆ Metal silicon junction, 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
- ◆ Dual rectifier construction, positive center-tap
- ◆ Guardring for overvoltage protection
- ◆ High temperature soldering guaranteed: 250°C/10 seconds, 0.16" (4.04mm) 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:** 5 in. - lbs.max.

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified

	SYMBOLS	SBLF2030CT	SBLF2040CT	UNITS
Maximum repetitive peak reverse voltage	$V_{RRM}$	30	40	Volts
Maximum RMS voltage	$V_{RMS}$	21	28	Volts
Maximum DC blocking voltage	$V_{DC}$	30	40	Volts
Maximum average forward rectified current at $T_C=105^\circ\text{C}$	$I_{(AV)}$	20.0		Amps
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	175.0		Amps
Peak repetitive reverse surge current (NOTE 3)	$I_{RRM}$	1.0		Amp
Maximum instantaneous forward voltage per leg at 10.0A (NOTE 1)	$V_F$	0.55		Volts
Maximum instantaneous current at $T_C=25^\circ\text{C}$ rated DC blocking voltage per leg (NOTE 1) $T_C=100^\circ\text{C}$	$I_R$	1.0	50.0	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 4) 3500 (NOTE 5) 1500 (NOTE 6)		Volts

#### NOTES:

- (1) Pulse test: 300 $\mu\text{s}$  pulse width, 1% duty cycle
- (2) Thermal resistance from junction to case per leg
- (3) 2.0 $\mu\text{s}$  pulse width,  $f=1.0$  KHz
- (4) Clip mounting (on case), where lead does not overlap heatsink with 0.110" offset.
- (5) Clip mounting (on case), where leads do overlap heatsink.
- (6) Screw mounting with 4-40 screw, where washer diameter is  $\leq 4.9$  mm (0.19").

# RATINGS AND CHARACTERISTIC CURVES SBLF2030CT AND SBLF2040CT

FIG. 1 - FORWARD CURRENT DERATING CURVE

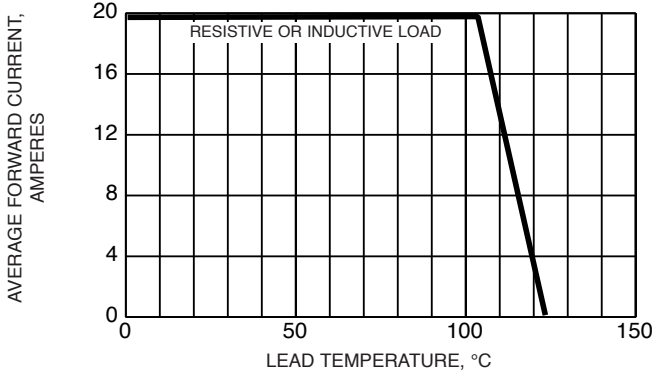


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

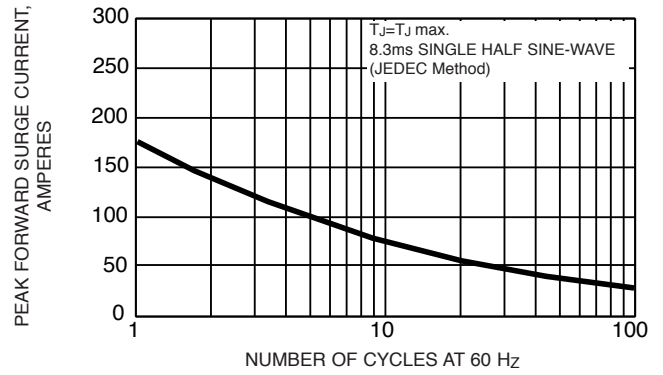


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

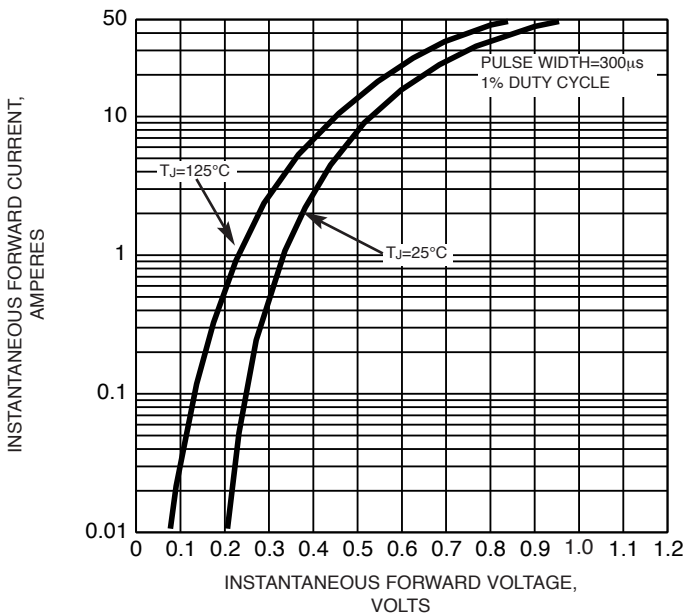


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS PER LEG

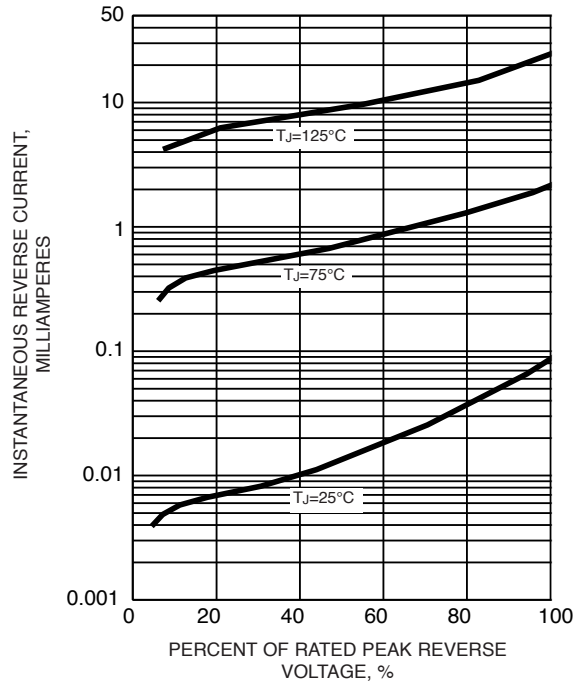


FIG. 5 - TYPICAL JUNCTION CAPACITANCE PER LEG

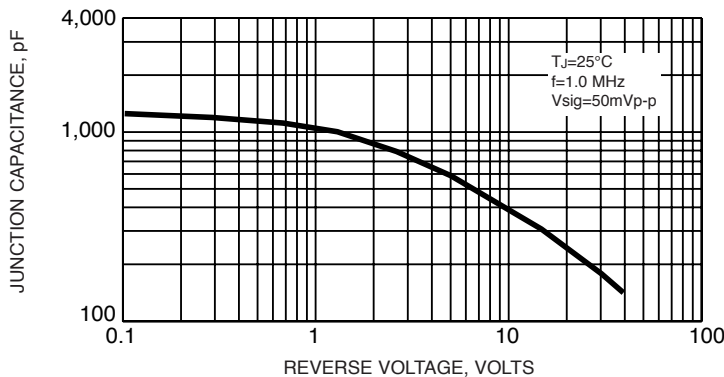
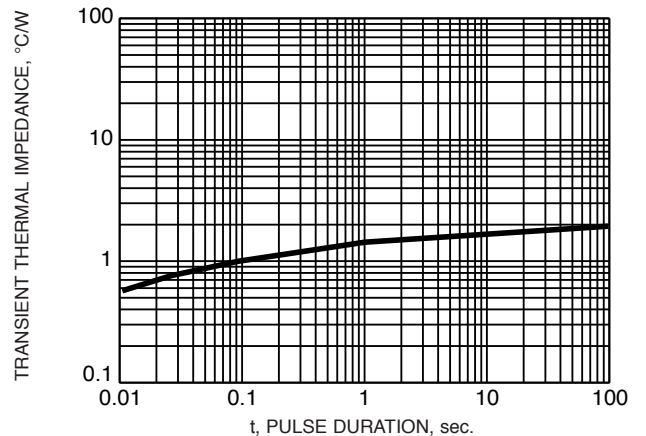


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG



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