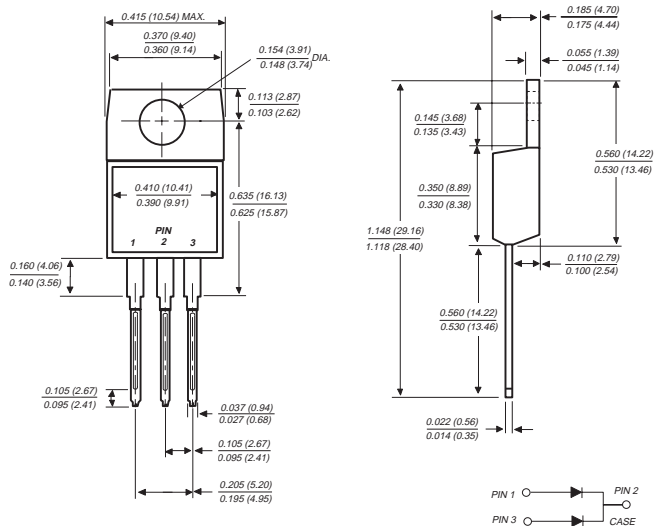


SBL1630CT AND SBL1640CT

SCHOTTKY RECTIFIER

Reverse Voltage - 30 and 40 Volts Forward Current - 16.0 Amperes

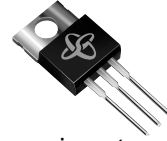
TO-220AB



Dimensions in inches and (millimeters)

FEATURES

- ◆ 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, 0.25" (6.35mm) from case



MECHANICAL DATA

Case: JEDEC TO-220AB molded plastic body
Terminals: Lead solderable per MIL-STD-750, Method 2026
Polarity: As marked
Mounting Position: Any
Mounting Torque: 5 in. - lbs. max.
Weight: 0.08 ounce, 2.24 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

| | SYMBOLS | SBL1630CT | SBL1640CT | 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 $T_C=95^\circ\text{C}$ | $I_{(AV)}$ | 16.0 | | Amps |
| Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I_{FSM} | 250.0 | | Amps |
| Maximum instantaneous forward voltage per leg at 8.0A (NOTE 1) | V_F | 0.55 | | Volts |
| Maximum instantaneous reverse current at rated DC blocking voltage per leg (NOTE 1) | I_R | $T_C=25^\circ\text{C}$ $T_C=100^\circ\text{C}$ | 0.5 50.0 | mA |
| Typical thermal resistance per leg (NOTE 2) | $R_{\theta JC}$ | 2.0 | | $^\circ\text{C}/\text{W}$ |
| Operating junction and storage temperature range | T_J, T_{STG} | -40 to +125 | | $^\circ\text{C}$ |

NOTES:

- (1) Pulse test: 300µs pulse width, 1% duty cycle
- (2) Thermal resistance from junction to case per leg

RATINGS AND CHARACTERISTIC CURVES SBL1630CT AND SBL1640CT

FIG. 1 - FORWARD CURRENT DERATING CURVE

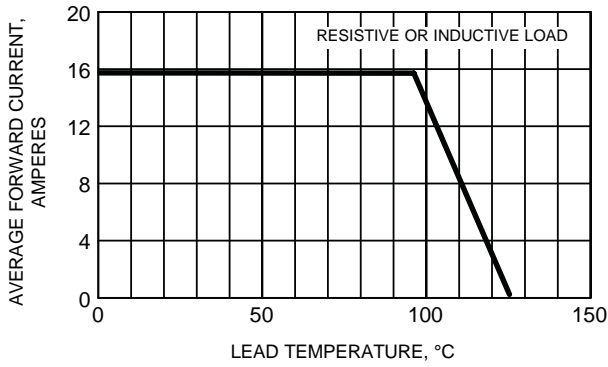


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

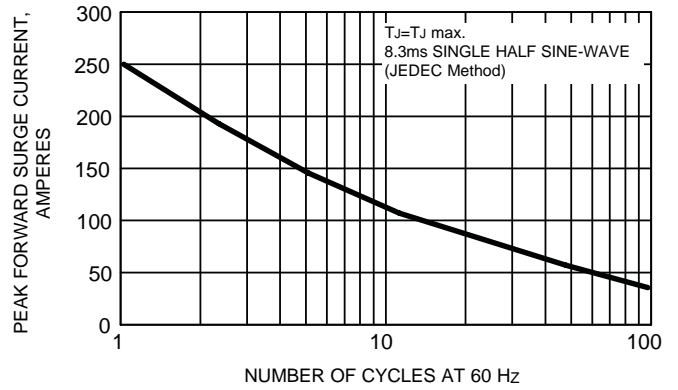


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

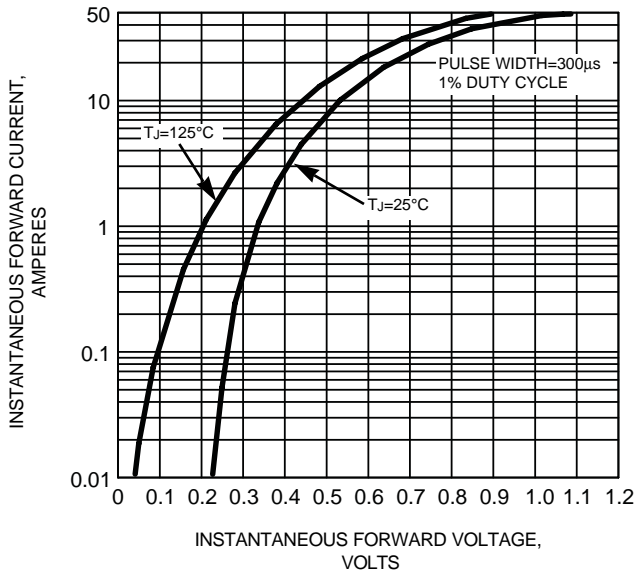


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS PER LEG

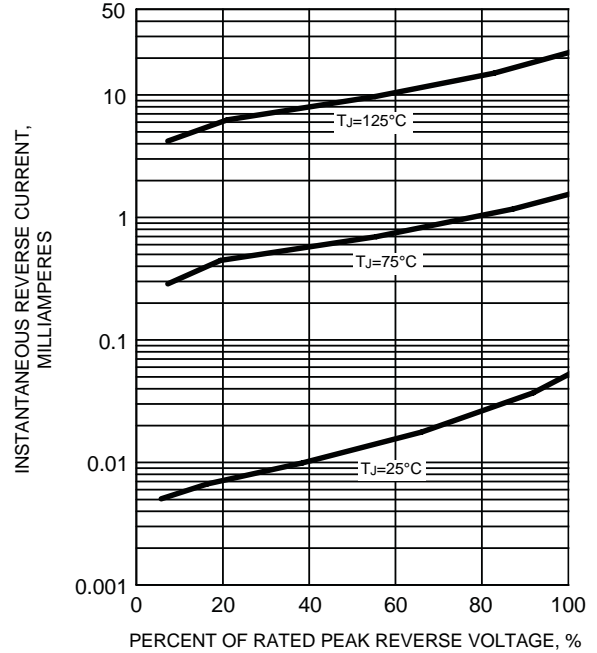


FIG. 5 - TYPICAL JUNCTION CAPACITANCE PER LEG

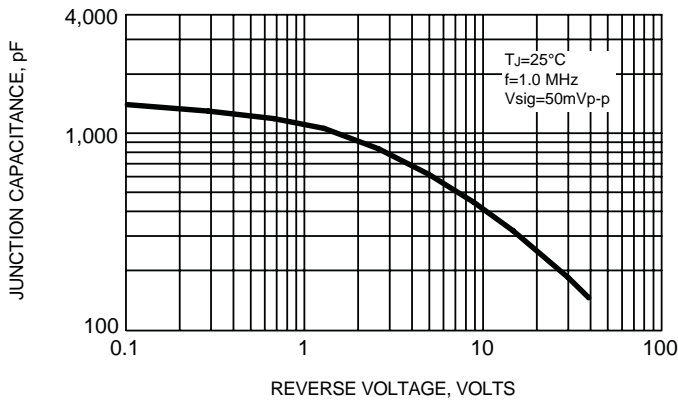


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

