Schottky Diode

SBL1030

30V / 10A

DATASHEET

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OEM – General Semiconductor

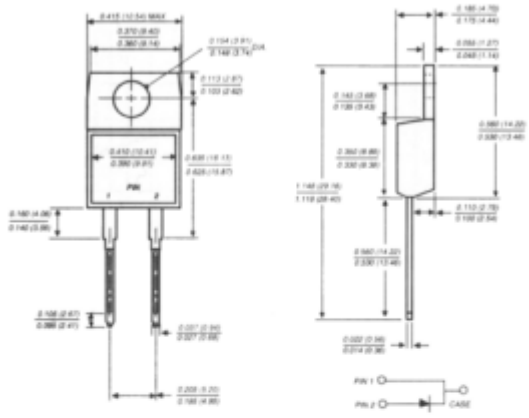
Source: General Semiconductor Databook 1998

SBL1030 AND SBL1040

SCHOTTKY RECTIFIER

***Reverse Voltage** - 30 and 40 Volts **Forward Current** - 10.0 Amperes*

TO-220AC



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
- Guardring for overvoltage protection
- High temperature soldering guaranteed: 250°C/10 seconds, 0.25" (6.35mm) from case

MECHANICAL DATA

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

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	SBL1030	SBL1040	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=110°C	$I_{(AV)}$	10.0		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 at 10A (NOTE 1)	V_F	0.55		Volts
Maximum instantaneous reverse current at rated DC blocking voltage (NOTE 1) T_C=25°C / T_C=100°C	I_R	1.0 50.0		mA
Typical thermal resistance (NOTE 2)	$R_{\theta JC}$	2.0		°C/W
Operating and storage temperature range	T_J,T_{STG}	-40 to +125		°C

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

RATINGS AND CHARACTERISTIC CURVES SBL1030 AND SBL1040

FIG. 1 - FORWARD CURRENT DERATING CURVE

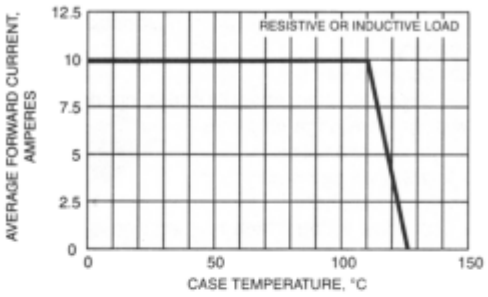


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

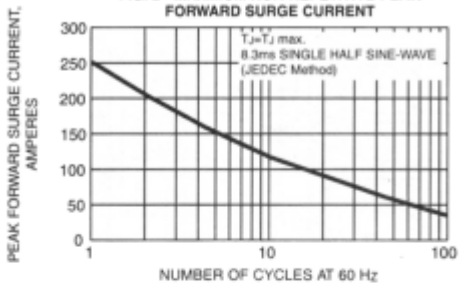


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

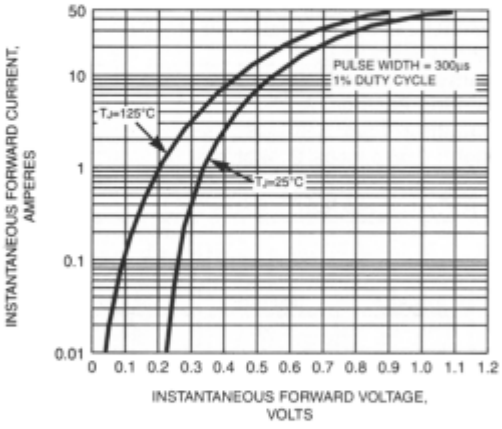


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

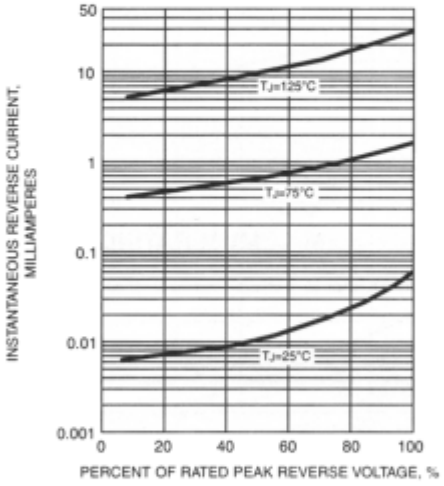


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

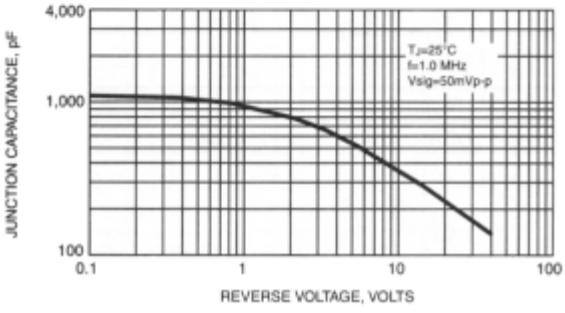


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE