# SBL1030 - SBL1060

10A SCHOTTKY BARRIER RECTIFIER

Features

- Schottky Barrier Chip
- Guard Ring Die Construction for Transient Protection
- Low Power Loss, High Efficiency
- High Surge Capability
- High Current Capability and Low Forward Voltage Drop
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Applications
- Plastic Material: UL Flammability Classification Rating 94V-0

Mechanical Data

- Case: Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Weight: 2.24 grams (approx.)
- Mounting Position: Any
- Marking: Type Number
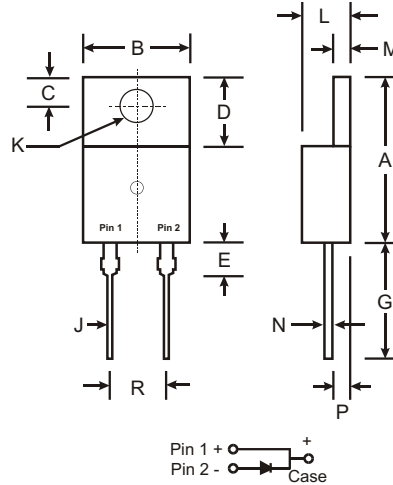
TO-220AC		
Dim	Min	Max
A	14.22	15.88
B	9.65	10.67
C	2.54	3.43
D	5.84	6.86
E	—	6.35
G	12.70	14.73
J	0.51	1.14
K	3.53$\varnothing$	4.09$\varnothing$
L	3.56	4.83
M	1.14	1.40
N	0.30	0.64
P	2.03	2.92
R	4.83	5.33
All Dimensions in mm		

Pin 1 +
Pin 2 -
Case

Maximum Ratings and Electrical Characteristics @ T_A = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

Characteristic	Symbol	SBL 1030	SBL 1035	SBL 1040	SBL 1045	SBL 1050	SBL 1060	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	30	35	40	45	50	60	V
RMS Reverse Voltage	$V_{R(RMS)}$	21	24.5	28	31.5	35	42	V
Average Rectified Output Current @ T_C = 95°C (Note 1)	I_O	10						A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	250						A
Forward Voltage Drop @ I_F = 10A, T_C = 25°C	V_{FM}	0.60				0.75		V
Peak Reverse Current @ T_C = 25°C at Rated DC Blocking Voltage @ T_C = 100°C	I_{RM}	1.0 50						mA
Typical Junction Capacitance (Note 2)	C_j	700						pF
Thermal Resistance Junction to Case (Note 1)	$R_{\theta Jc}$	3.5						°C/W
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to +150						°C

Notes: 1. Thermal resistance junction to case mounted on heatsink.
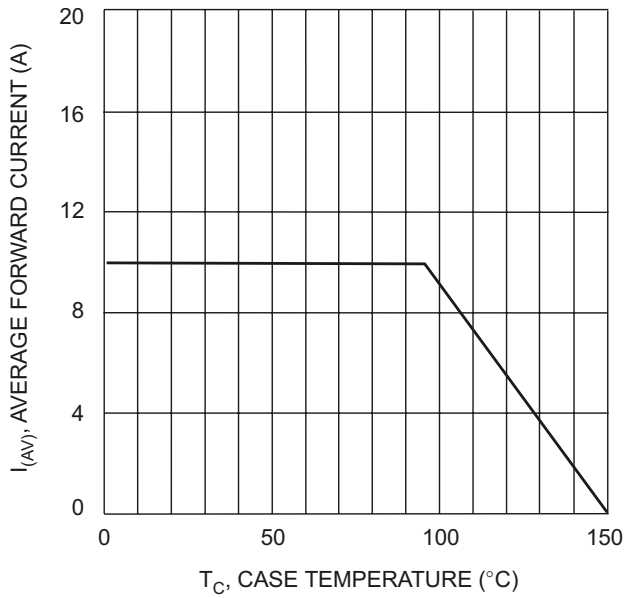   2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

Fig. 1 Forward Current Derating Curve
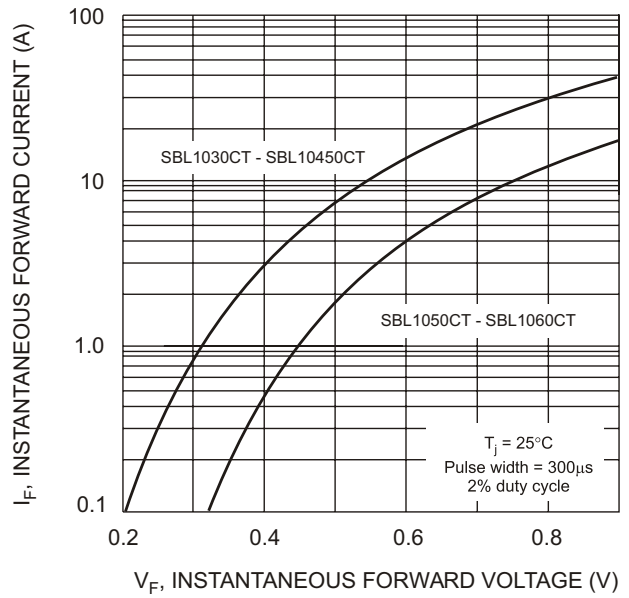

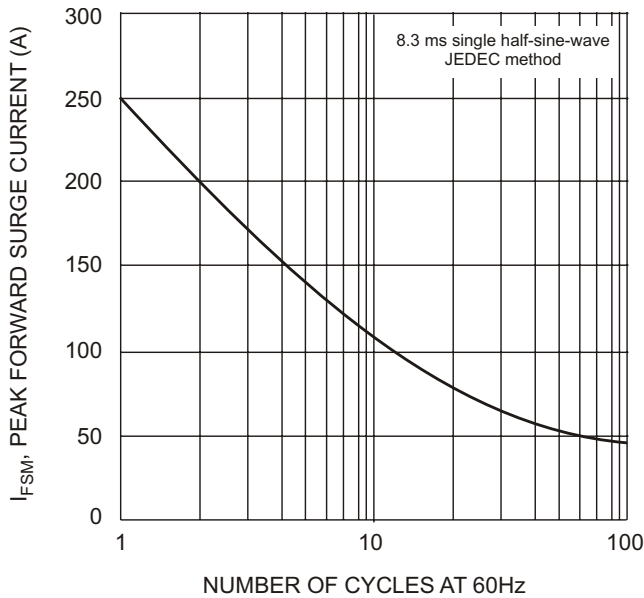Fig. 2 Typical Forward Characteristics
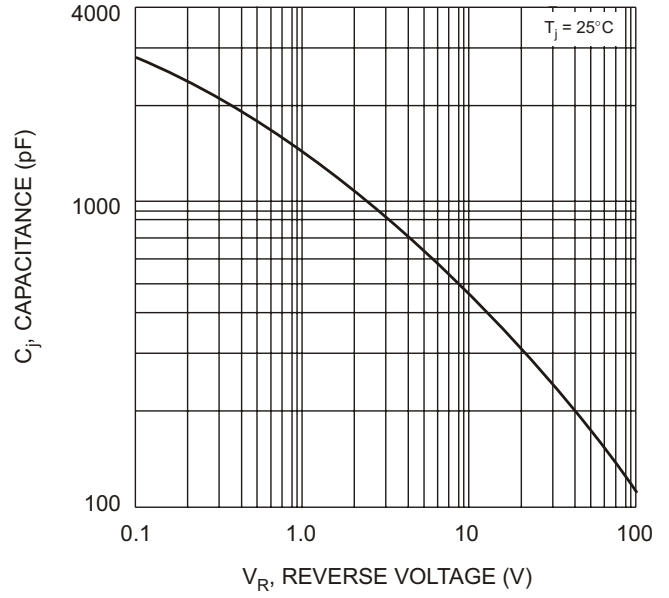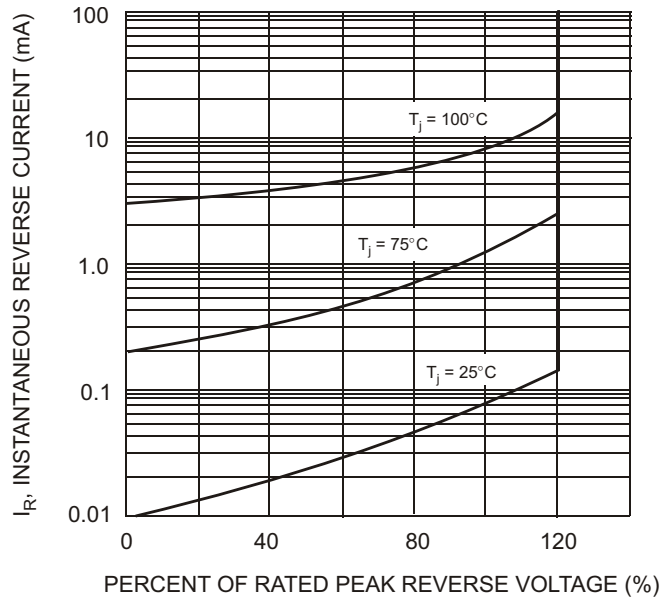

Fig. 3 Max Non-Repetitive Surge Current

Fig. 4 Typical Junction Capacitance per Element

Fig. 5 Typical Reverse Characteristics

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