SBL1025L, SBL1030L

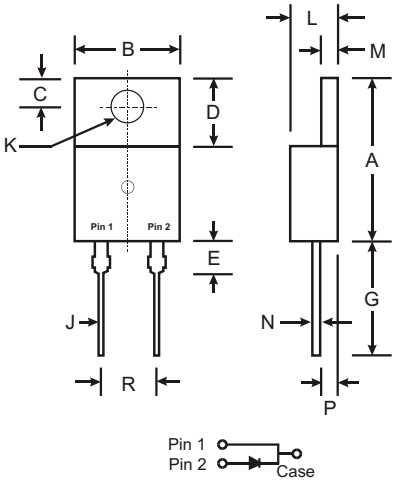
10A SCHOTTKY BARRIER RECTIFIER

NEW PRODUCT

UNDER DEVELOPMENT

Features

- Guard Ring Die Construction for Transient Protection
- Low Power Loss, High Efficiency
- High Surge Capability
- Very 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



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∅	4.09∅
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		

Mechanical Data

- Case: TO-220AC Molded Plastic
- Terminals: Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Marking: Type Number
- Weight: 2.24 grams (approx.)

Maximum Ratings @ 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	SBL1025L	SBL1030L	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	25	30	V
RMS Reverse Voltage	$V_{R(RMS)}$	18	21	V
Average Rectified Output Current @ T_C = 120°C	I_O	10		A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	200		A
Typical Thermal Resistance Junction to Case (Note 1)	$R_{\theta JC}$	3.0		°C/W
Operating and Storage Temperature Range	T_j, T_{STG}	-55 to +150		°C

Electrical Characteristics @ T_A = 25°C unless otherwise specified

Characteristic		Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage	SBL1025L SBL1030L	$V_{(BR)R}$	25 30	— —	— —	V V	I_R = 1mA
Forward Voltage		V_{FM}	— — — —	— 0.34 — 0.48	0.45 0.35 0.55 0.50	V	@ I_F = 10A, T_C = 25°C @ I_F = 10A, T_C = 125°C @ I_F = 20A, T_C = 25°C @ I_F = 20A, T_C = 125°C
Peak Reverse Current at Rated DC Blocking Voltage		I_{RM}	— —	— 150	1.0 260	mA	@ T_C = 25°C @ T_C = 125°C
Typical Junction Capacitance		C_j	—	350	—	pF	f = 1.0MHz, V_R = 4.0V DC

Notes: 1. Thermal resistance: junction to case mounted on heat sink.

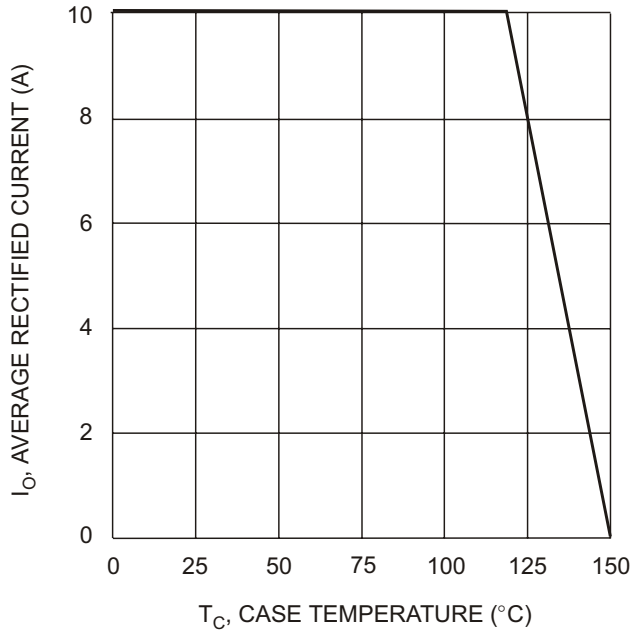


Fig. 1 Forward Derating Curve

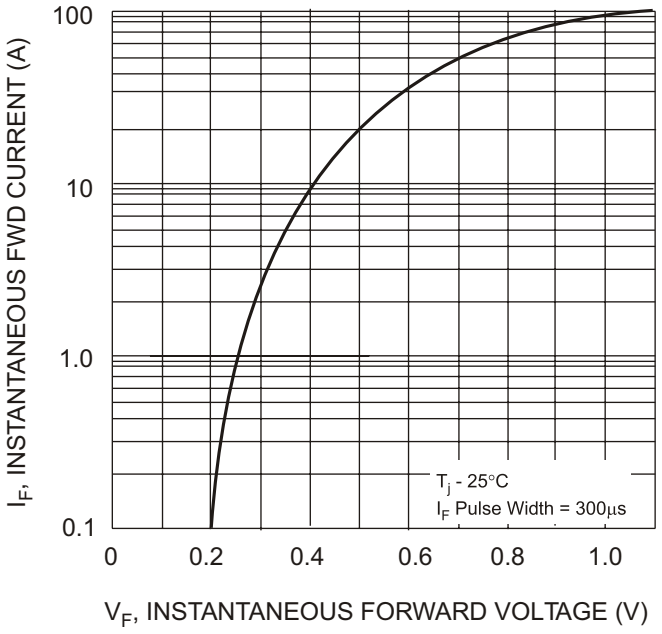


Fig. 2 Typical Forward Characteristics

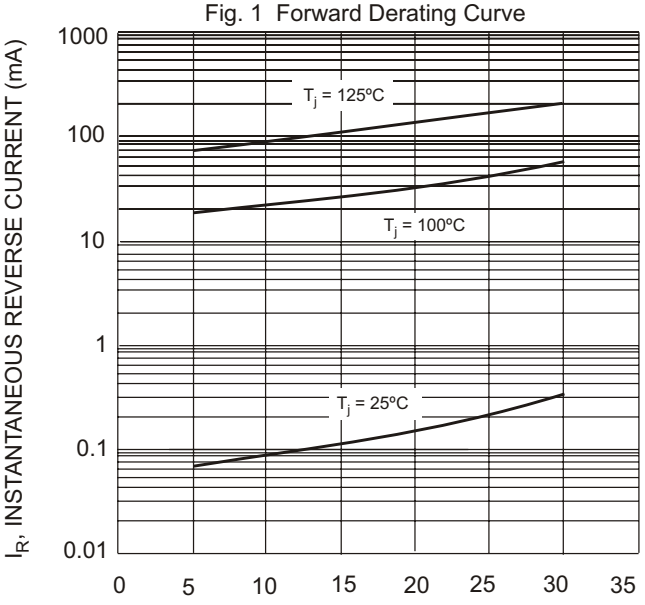


Fig. 3 Typical Reverse Characteristics

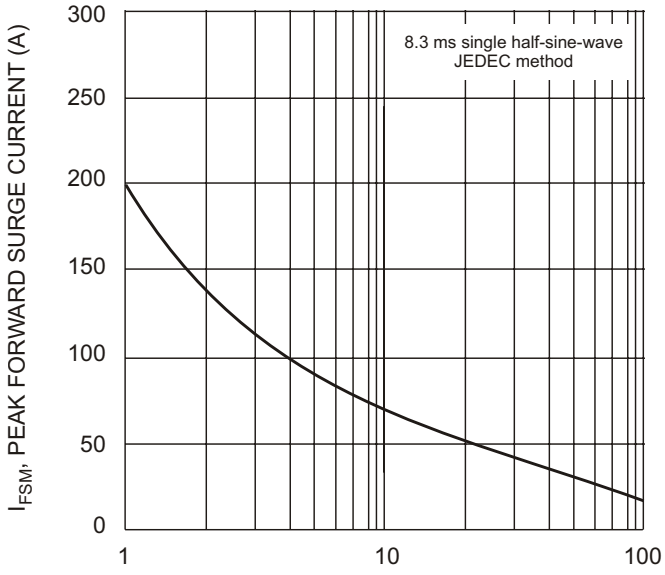


Fig. 4 Maximum Non-Repetitive Surge Current

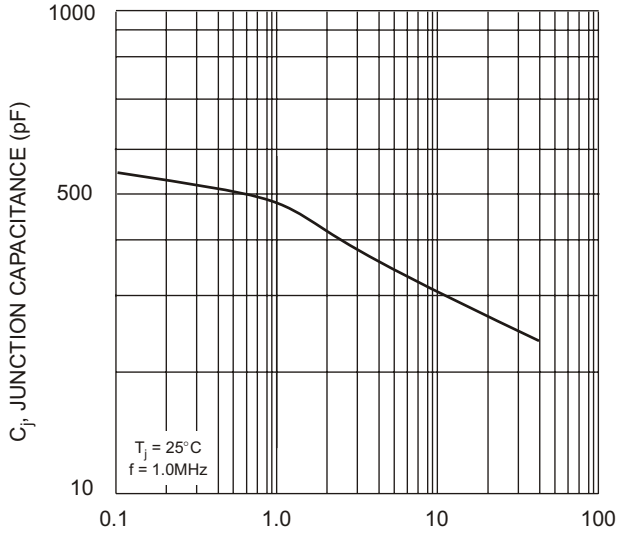


Fig. 5 Typical Junction Capacitance

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