



# SBL1630 - SBL1660

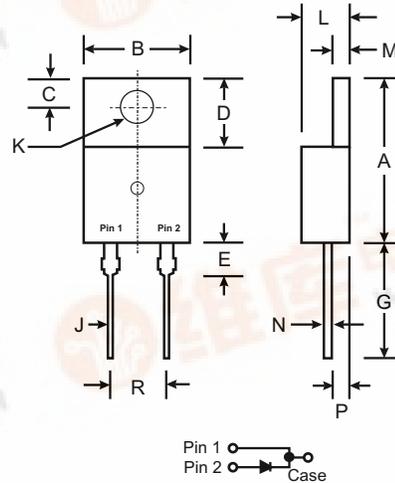
## 16A SCHOTTKY BARRIER RECTIFIER

### 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		

### Maximum Ratings and Electrical Characteristics @ T<sub>A</sub> = 25°C unless otherwise specified

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

Characteristic	Symbol	SBL 1630	SBL 1635	SBL 1640	SBL 1645	SBL 1650	SBL 1660	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	30	35	40	45	50	60	V
RMS Reverse Voltage	V <sub>R(RMS)</sub>	21	24.5	28	31.5	35	42	V
Average Rectified Output Current (Note 1) @ T <sub>C</sub> = 95°C	I <sub>O</sub>	16						A
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	275						A
Forward Voltage Drop @ I <sub>F</sub> = 16A, T <sub>C</sub> = 25°C	V <sub>FM</sub>	0.57				0.75		V
Peak Reverse Current at Rated DC Blocking Voltage @ T <sub>C</sub> = 25°C @ T <sub>C</sub> = 100°C	I <sub>RM</sub>				1.0 50			mA
Typical Junction Capacitance (Note 2)	C <sub>j</sub>	700						pF
Thermal Resistance Junction to Case (Note 1)	R <sub>θJc</sub>	3.5						°C/W
Operating and Storage Temperature Range	T <sub>j</sub> , T <sub>STG</sub>	-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.



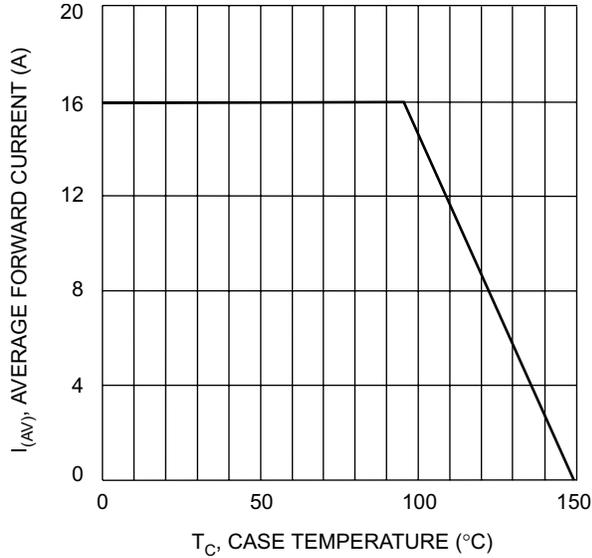


Fig. 1 Forward Current Derating Curve

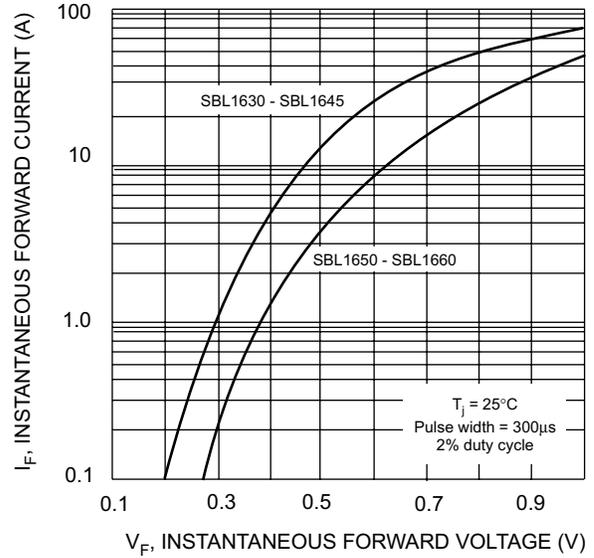


Fig. 2 Typical Forward Characteristics

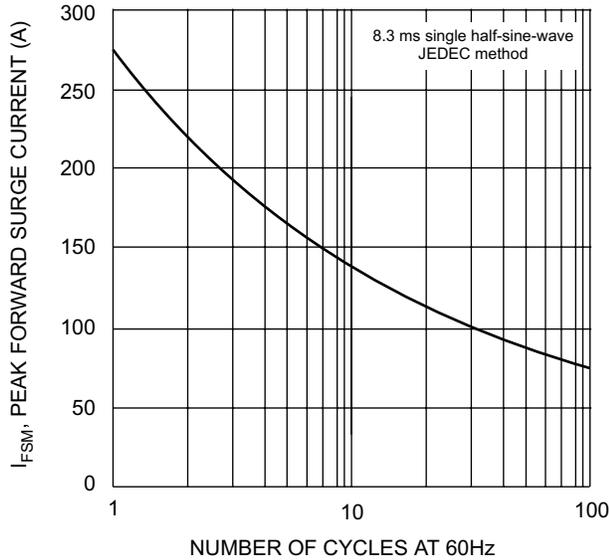


Fig. 3 Max Non-Repetitive Surge Current

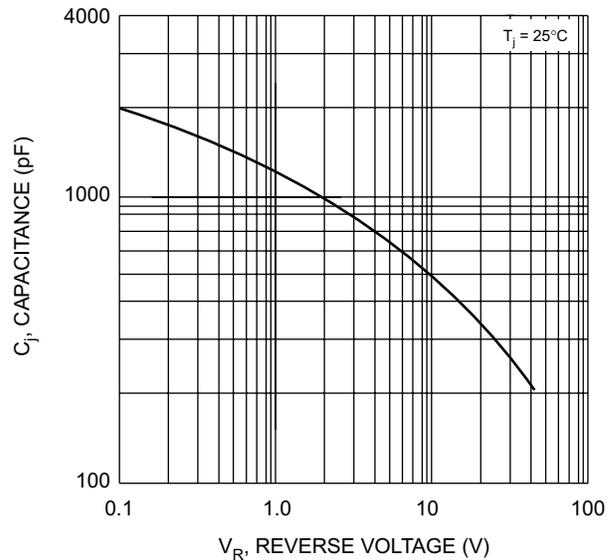


Fig. 4 Typical Junction Capacitance

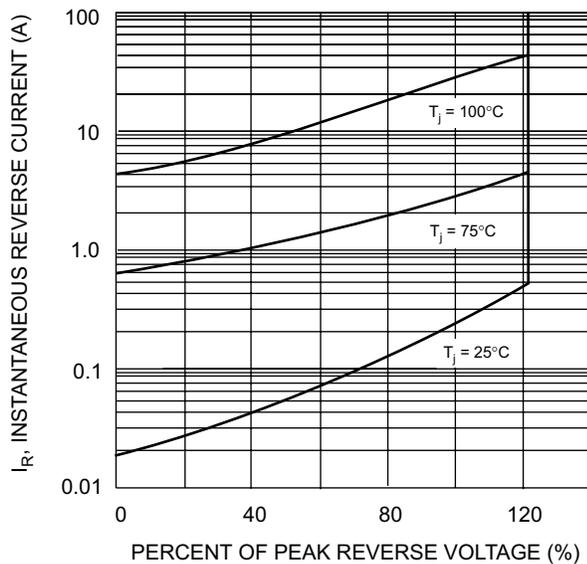


Fig. 5 Typical Reverse Characteristics