

SBL1630 - SBL1660

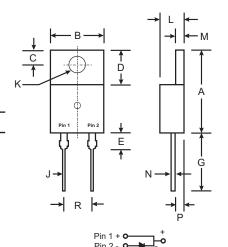
16A SCHOTTKY BARRIER RECTIFIER

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
- Lead Free Finish, RoHS Compliant (Note 3)

Mechanical Data

- Case: TO-220AC
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Polarity: See Diagram
- Terminals: Finish Bright Tin. Solderable per MIL-STD-202, Method 208
- Mounting Position: AnyMarking: Type Number
- Weight: 2.24 grams (approx.)



TO-220AC						
Dim	Min	Max				
Α	14.48	15.75				
В	10.00	10.40				
С	2.54	3.43				
D	5.90	6.40				
E	2.80	3.93				
G	12.70	14.27				
J	0.69	0.93				
K	3.54	3.78				
L	4.07	4.82				
M	1.15	1.39				
N	0.30	0.50				
Р	2.04	2.79				
R	4.83	5.33				
All Dimensions in mm						

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

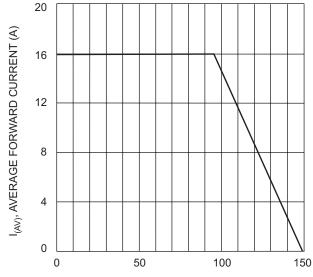
Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Characteristic	Symbol	SBL 1630	SBL 1635	SBL 1640	SBL 1645	SBL 1650	SBL 1660	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 (Note 1)	lo	16			А			
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)		275					А	
Forward Voltage Drop @ I _F =16A, T _C = 25°C	V _{FM}	0.57 0.75				V		
Peak Reverse Current $@T_C = 25^{\circ}C$ at Rated DC Blocking Voltage $@T_C = 100^{\circ}C$		1.0 50					mA	
Typical Junction Capacitance (Note 2)		700					pF	
Thermal Resistance Junction to Case (Note 1)		3.5					°C/W	
Operating and Storage Temperature Range		-65 to +150				°C		

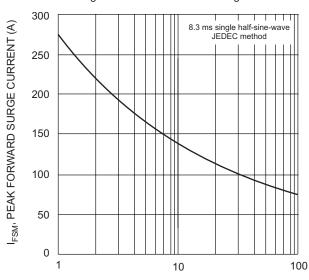
Notes:

- 1. Thermal resistance junction to case mounted on heatsink.
- 2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
- 3. RoHS revision 13.2.2003. Glass and High Temperature Solder Exemptions Applied, see EU Directive Annex Notes 5 and 7.

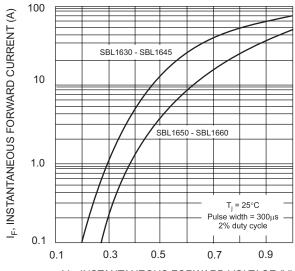




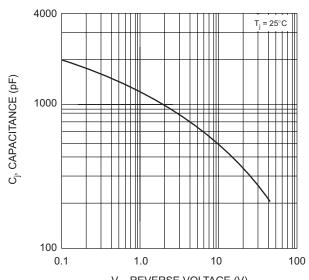
T_C, CASE TEMPERATURE (°C) Fig. 1 Forward Current Derating Curve



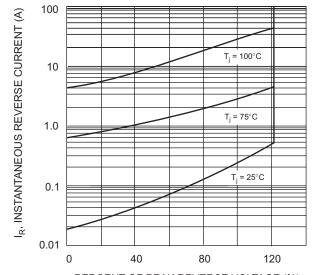
NUMBER OF CYCLES AT 60Hz Fig. 3 Max Non-Repetitive Surge Current



V_F, INSTANTANEOUS FORWARD VOLTAGE (V) Fig. 2 Typical Forward Characteristics



 V_R , REVERSE VOLTAGE (V) Fig. 4 Typical Junction Capacitance



PERCENT OF PEAK REVERSE VOLTAGE (%) Fig. 5 Typical Reverse Characteristics



Ordering Information (Note 4)

Device	Packaging	Shipping
SBL16xx*	TO-220AC	50/Tube

^{*} xx = Device type, e.g. SBL1645

Notes: 4. For packaging details, visit our website at http://www.diodes.com/datasheets/ap02008.pdf.