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SBL1645

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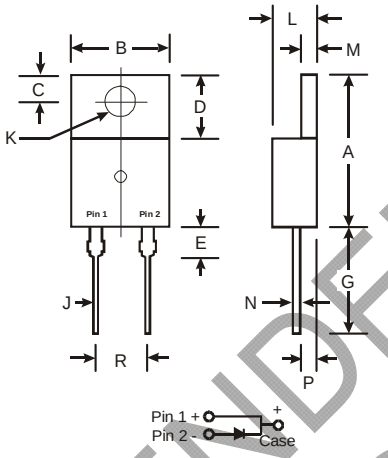
NOT RECOMMENDED FOR NEW DESIGN

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)**



TO-220AC		
Dim	**Min**	**Max**
A	14.48	15.75
B	10.00	10.40
C	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
P	2.04	2.79
R	4.83	5.33
All Dimensions in mm		

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 – Tin. Solderable per MIL-STD-202, Method 208 e3
- Mounting Position: Any
- Marking: Type Number
- Weight: 2.24 grams (approximate)

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) @ T_C = 95°C	I_O	16						A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	275						A
Forward Voltage Drop @ I_F =16A, T_C = 25°C	V_{FM}	0.57				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.
3. RoHS revision 13.2.2003. Glass and high temperature solder exemptions applied, see *EU Directive Annex Notes 5 and 7*.

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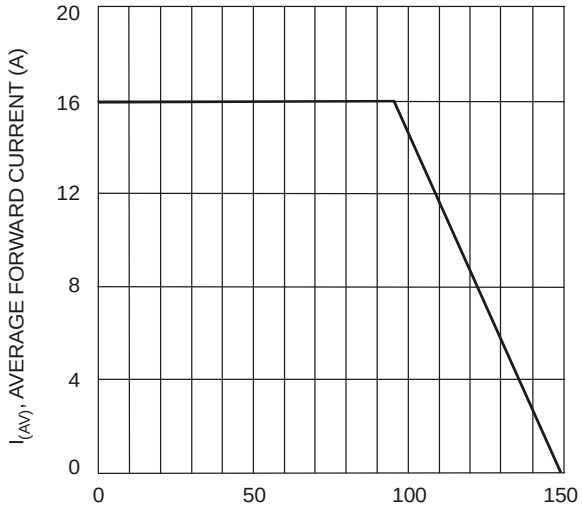

Fig. 1 Forward Current Derating Curve

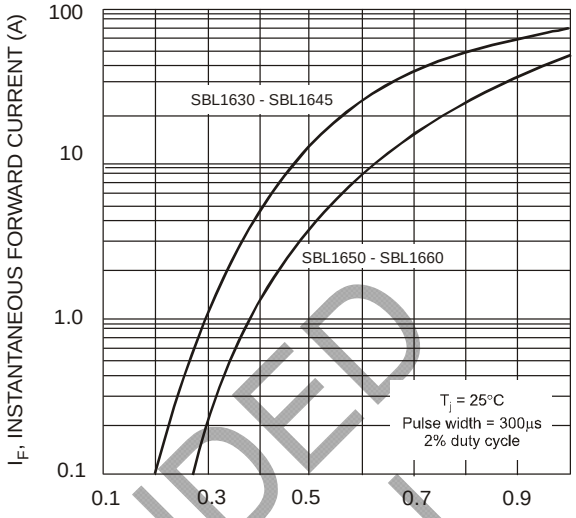

Fig. 2 Typical Forward Characteristics

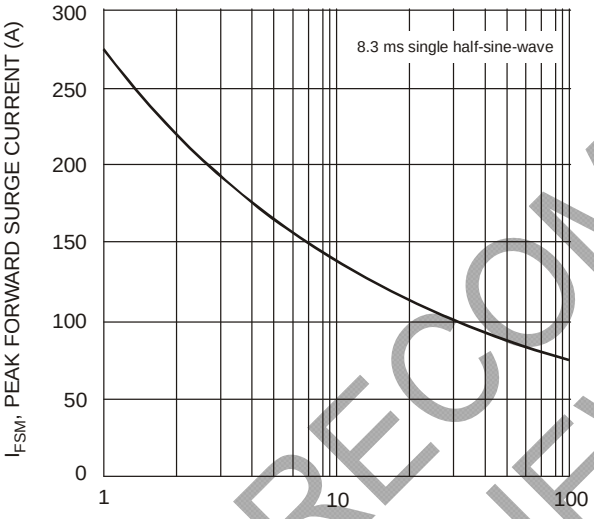

Fig. 3 Max Non-Repetitive Surge Current

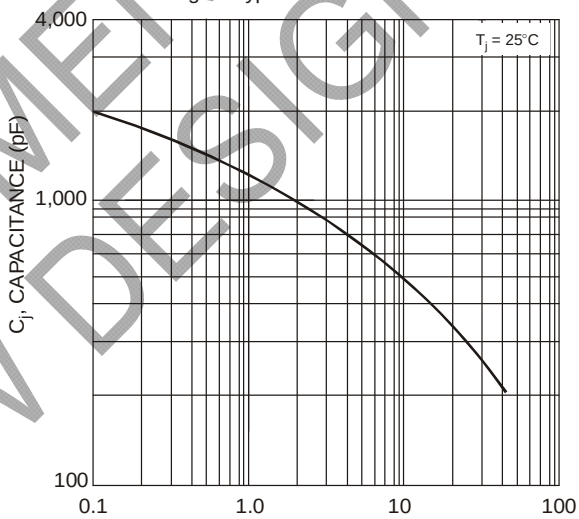

Fig. 4 Typical Junction Capacitance

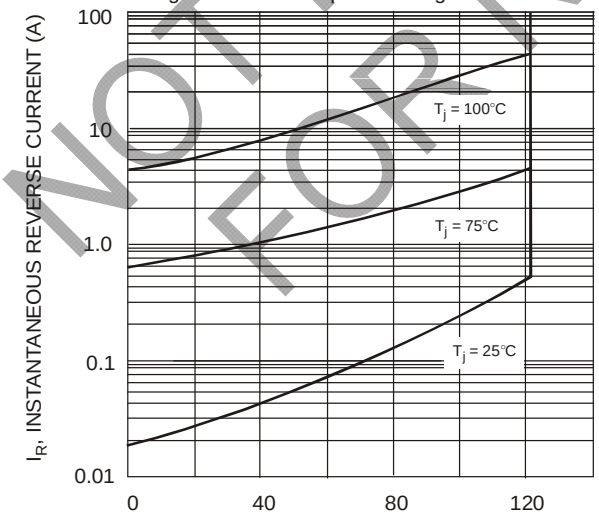

Fig. 5 Typical Reverse Characteristics

DIODES INCORPORATED

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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.