SBL530 - SBL560

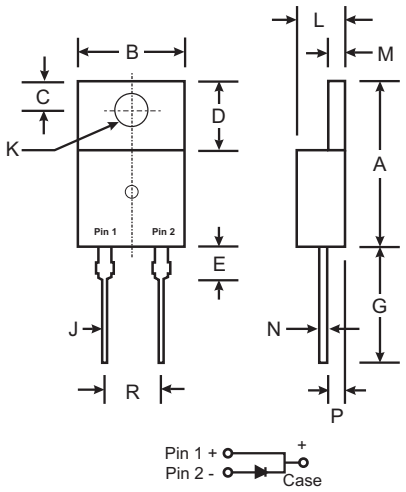
5.0A SCHOTTKY BARRIER RECTIFIER

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 Application
- **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
- Terminals: Finish – Bright Tin. Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Marking: Type Number
- Weight: 2.3 grams (approx.)



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		

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 530	SBL 535	SBL 540	SBL 545	SBL 550	SBL 560	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	5.0						A
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	175						A
Forward Voltage Drop @ I_F = 5.0A, T_C = 25°C	V_{FM}	0.55				0.70		V
Peak Reverse Current @ T_C = 25°C at Rated DC Blocking Voltage @ T_C = 100°C	I_{RM}	0.5 33						mA
Typical Junction Capacitance (Note 2)	C_j	500						pF
Typical Thermal Resistance Junction to Case (Note 1)	$R_{\theta JC}$	3						°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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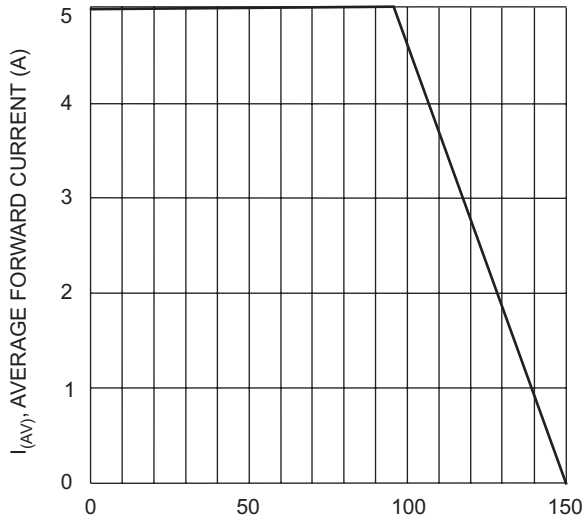


Fig. 1 Forward Current Derating Curve

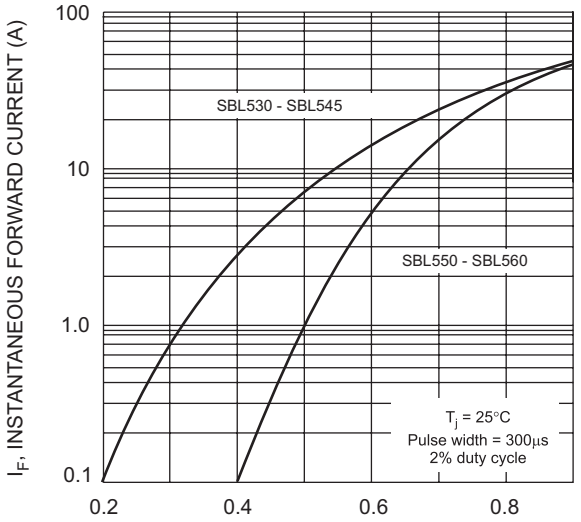


Fig. 2 Typical Forward Characteristics per Element

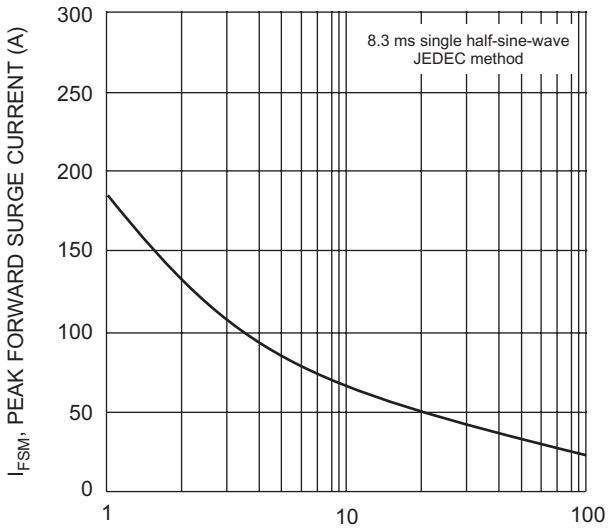


Fig. 3 Max Non-Repetitive Surge Current

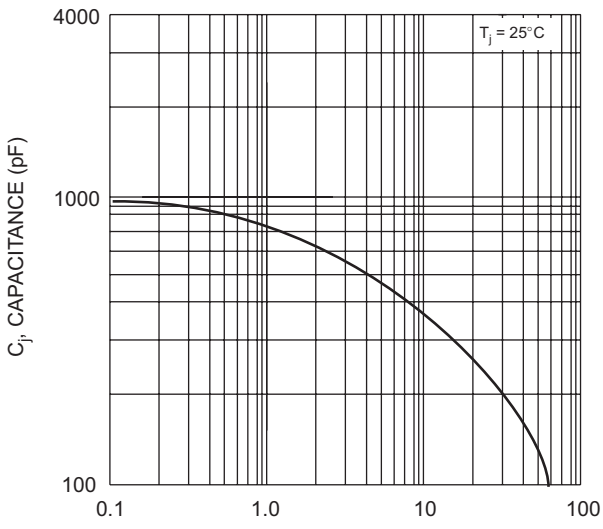


Fig. 4 Typical Junction Capacitance per element

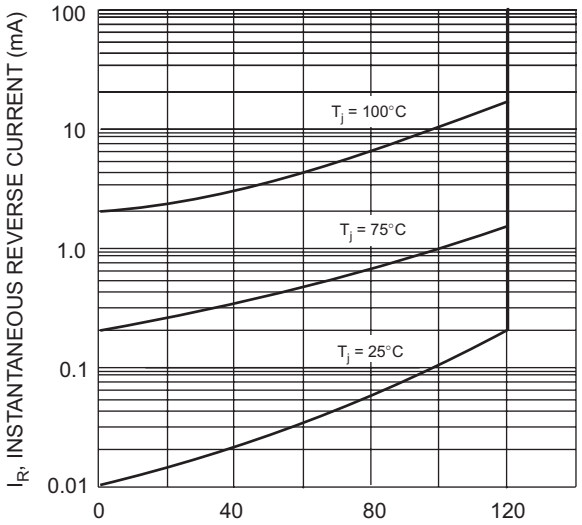


Fig. 5 Typical Reverse Characteristics

Ordering Information (Note 4)

Device	Packaging	Shipping
SBL5xx*	TO-220AC	50/Tube

* xx = Device type, e.g. SBL545

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