SBL3030PT - SBL3060PT

30A SCHOTTKY BARRIER RECTIFIER

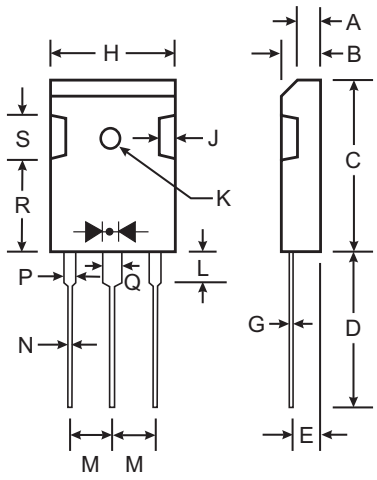
SPICE MODELS: SBL3030PT SBL3035PT SBL3040PT SBL3045PT SBL3050PT SBL3060PT

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-3P
- 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: As Marked on Body
- Ordering Information: See Last Page
- Marking: Type Number
- Weight: 5.6 grams (approximate)



TO-3P		
Dim	**Min**	**Max**
A	1.88	2.08
B	4.87	5.13
C	21.25	21.75
D	19.60	20.10
E	2.10	2.40
G	0.51	0.76
H	15.75	16.25
J	1.93	2.18
K	2.90∅	3.20∅
L	3.78	4.38
M	5.20	5.70
N	1.12	1.22
P	1.90	2.16
Q	2.93	3.22
R	11.70	12.80
S	4.40 Typical	
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 3030PT	SBL 3035PT	SBL 3040PT	SBL 3045PT	SBL 3050PT	SBL 3060PT	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 @ T_C = 95°C (Note 1)	I_O	30						A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	275						A
Forward Voltage Drop @ I_F = 15A, 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}	1.0 75						mA
Typical Total Capacitance (Note 2)	C_T	1100						pF
Typical Thermal Resistance Junction to Case (Note 1)	$R_{\theta Jc}$	2.0						°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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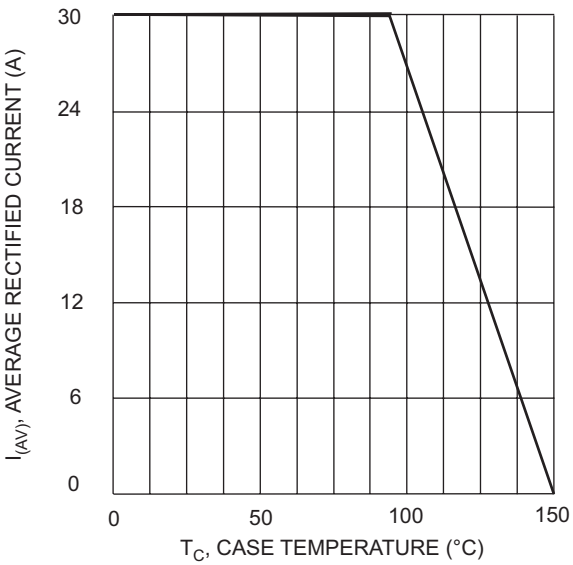


Fig. 1 Forward Derating Curve

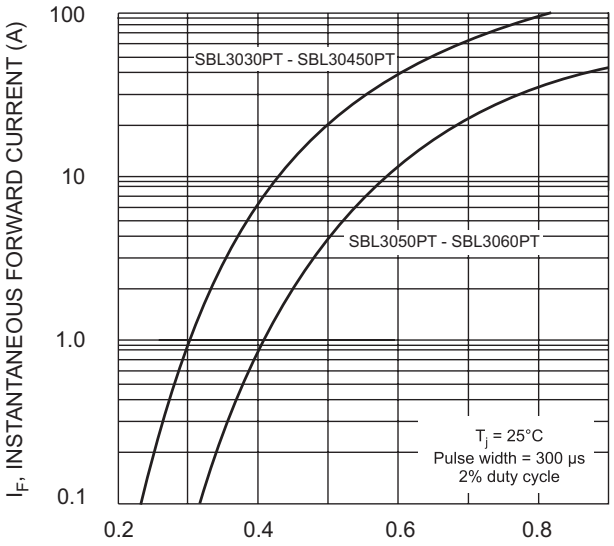


Fig. 2 Typical Fwd Characteristics per Element

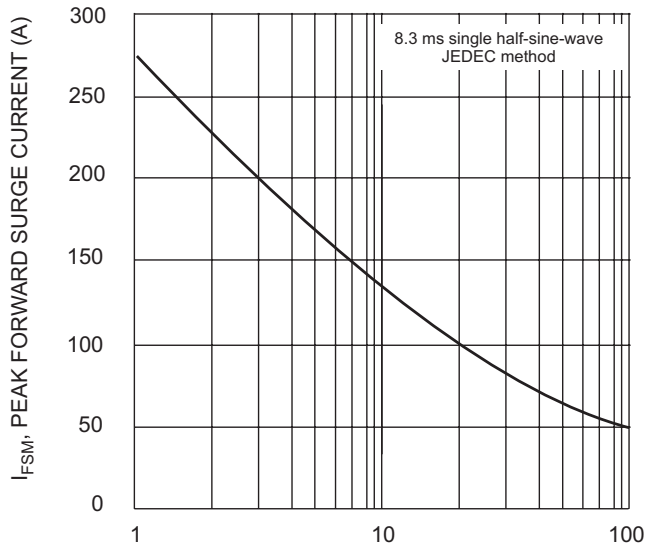


Fig. 3 Max Non-Repetitive Forward Surge Current

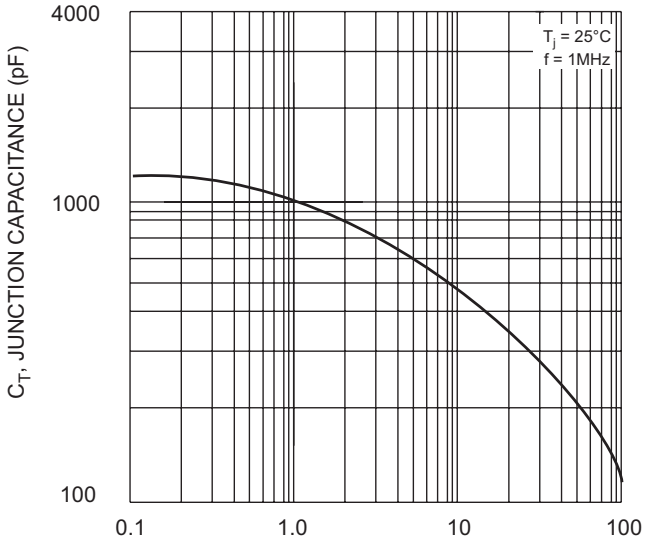


Fig. 4 Typical Capacitance per Element

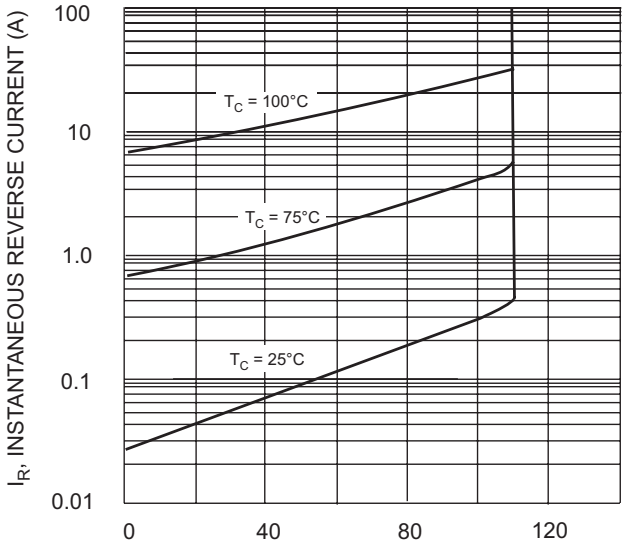


Fig. 5 Typical Reverse Characteristics per Element

Ordering Information (Note 4)

Device	Packaging	Shipping
SBL3030PT	TO-3P	30/Tube
SBL3035PT	TO-3P	30/Tube
SBL3040PT	TO-3P	30/Tube
SBL3045PT	TO-3P	30/Tube
SBL3050PT	TO-3P	30/Tube
SBL3060PT	TO-3P	30/Tube

Notes: 4. For packaging details, visit our website at http://www.diodes.com/datasheets/ap2008.pdf