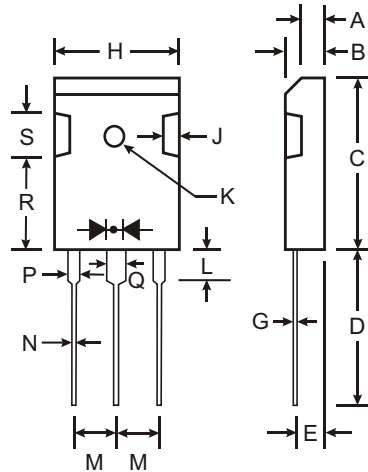


### Features

- 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

### Mechanical Data

- Case: Molded Plastic
- Plastic Material: UL Flammability Classification Rating 94V-0
- Moisture sensitivity: Level 1 per J-STD-020A
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: As Marked on Body
- Marking: Type Number
- Weight: 5.6 grams (approx.)



TO-3P		
Dim	Min	Max
A	1.88	2.08
B	4.68	5.36
C	20.63	22.38
D	18.5	21.5
E	2.1	2.4
G	0.51	0.76
H	15.38	16.25
J	1.90	2.70
K	2.9 $\varnothing$	3.65 $\varnothing$
L	3.78	4.50
M	5.2	5.7
N	0.89	1.53
P	1.82	2.46
Q	2.92	3.23
R	11.70	12.84
S	—	6.10
All Dimensions in mm		

### Maximum Ratings and Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

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

Characteristic	Symbol	SBL 4030PT	SBL 4035PT	SBL 4040PT	SBL 4045PT	SBL 4050PT	SBL 4060PT	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 @ $T_C = 100^\circ\text{C}$ (Note 1)	$I_O$	40						A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	375						A
Forward Voltage Drop @ $I_F = 20\text{A}$ , $T_C = 25^\circ\text{C}$	$V_{FM}$	0.58				0.70		V
Peak Reverse Current at Rated DC Blocking Voltage @ $T_C = 25^\circ\text{C}$ @ $T_C = 100^\circ\text{C}$	$I_{RM}$	1.0			100			mA
Typical Total Capacitance (Note 2)	$C_T$	800						pF
Typical Thermal Resistance Junction to Case (Note 1)	$R_{\theta JC}$	1.4						$^\circ\text{C}/\text{W}$
Operating Temperature Range	$T_j$	-55 to +125						$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to +150						$^\circ\text{C}$

- Notes: 1. Thermal resistance junction to case mounted on heatsink.  
2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

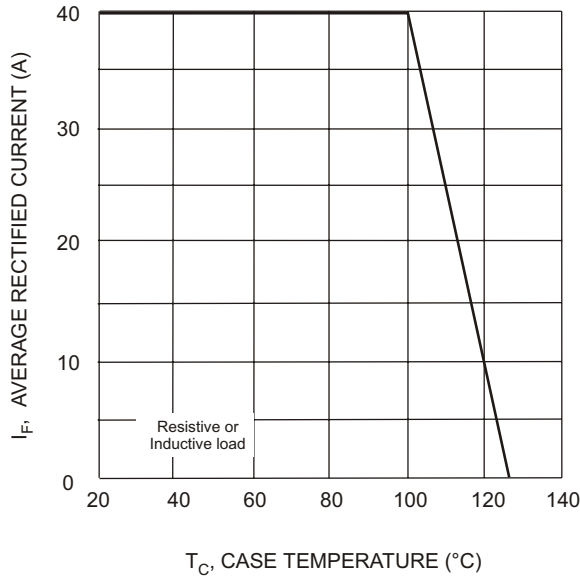


Fig. 1 Forward Current Derating Curve

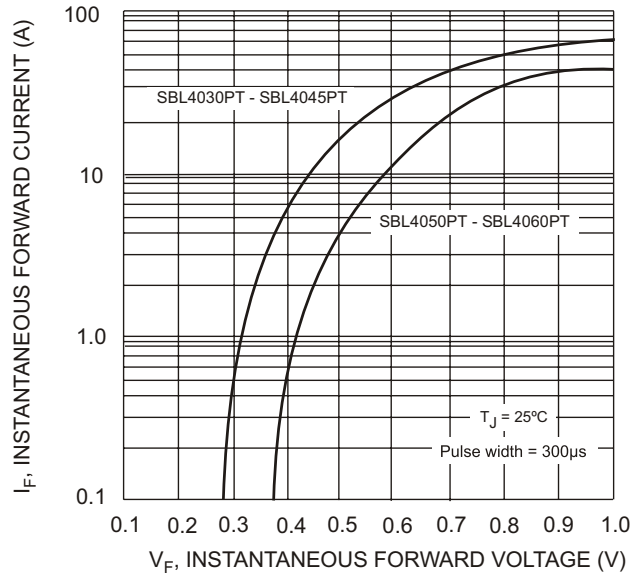


Fig. 2 Typical Forward Characteristics

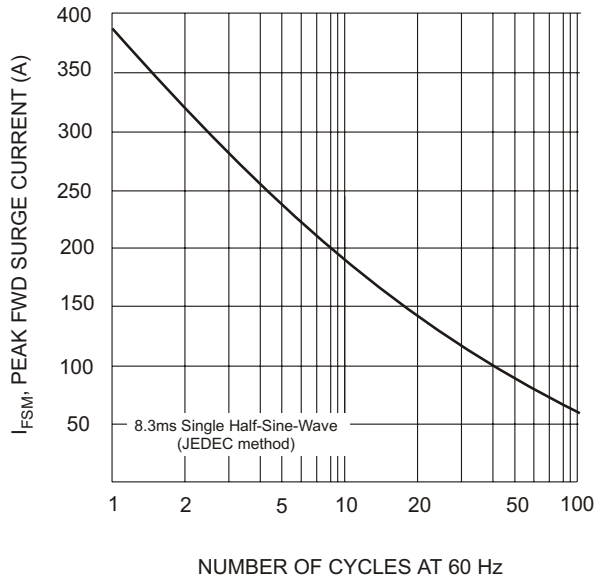


Fig. 3 Max Non-Repetitive Surge Current

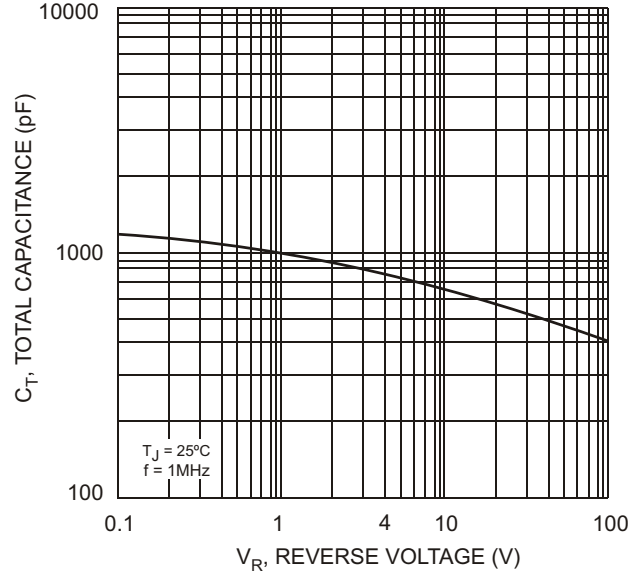


Fig. 4 Typical Total Capacitance per Element

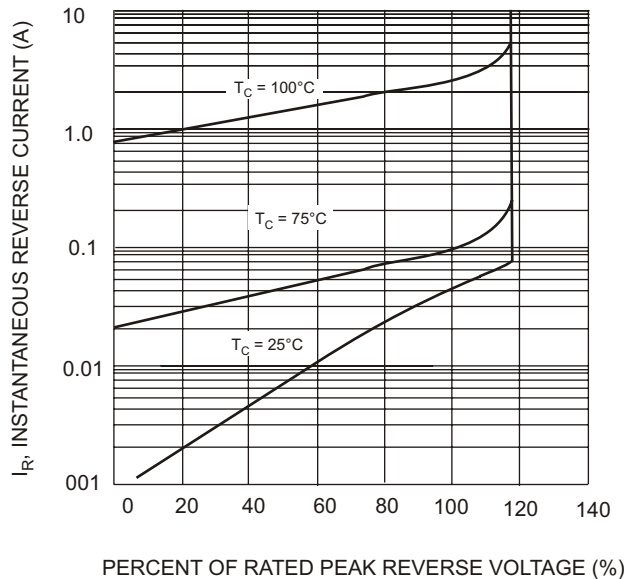


Fig. 5 Typical Reverse Characteristics