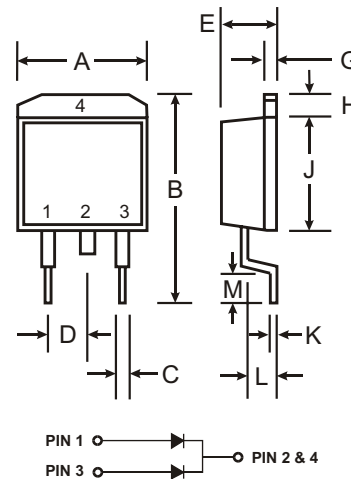


### Features

- 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
- Surge Overload Rating to 250A Peak
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Applications
- Plastic Material: UL Flammability Classification Rating 94V-0

### Mechanical Data

- Case: D<sup>2</sup>PAK Molded Plastic
- Terminals: Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Marking: Type Number
- Weight: 1.7 grams (approx.)
- Mounting Position: Any



D <sup>2</sup> PAK		
Dim	Min	Max
A	9.65	10.69
B	14.60	15.88
C	0.51	1.14
D	2.29	2.79
E	4.37	4.83
G	1.14	1.40
H	1.14	1.40
J	8.25	9.25
K	0.30	0.64
L	2.03	2.92
M	2.29	2.79
All Dimensions in mm		

### Maximum Ratings and Electrical Characteristics @ T<sub>A</sub> = 25°C unless otherwise specified

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

Characteristic	Symbol	SBG 3030CT	SBG 3040CT	SBG 3045CT	SBG 3050CT	SBG 3060CT	Unit	
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	30	40	45	50	60	V	
Working Peak Reverse Voltage	V <sub>RWM</sub>							
DC Blocking Voltage	V <sub>R</sub>							
RMS Reverse Voltage	V <sub>R(RMS)</sub>	21	28	32	35	42	V	
Average Rectified Output Current @ T <sub>C</sub> = 100°C	I <sub>O</sub>	30						A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	250						A
Forward Voltage, per Element @ I <sub>F</sub> = 15A, T <sub>C</sub> = 25°C	V <sub>FM</sub>	0.55			0.70		V	
Peak Reverse Current @ T <sub>C</sub> = 25°C at Rated DC Blocking Voltage @ T <sub>C</sub> = 100°C	I <sub>RM</sub>				1.0 75		mA	
Typical Junction Capacitance (Note 2)	C <sub>j</sub>	420					pF	
Typical Thermal Resistance Junction to Case (Note 1)	R <sub>θJC</sub>	1.5					K/W	
Operating and Storage Temperature Range	T <sub>j</sub> , T <sub>STG</sub>	-65 to +150					°C	

Notes: 1. Thermal resistance: junction to case mounted on heat sink.  
2. Measured at 1.0MHz and Applied Reverse Voltage of 4.0V DC.

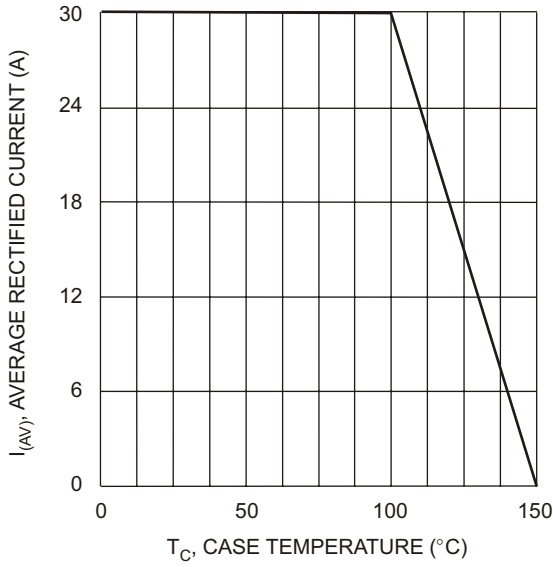


Fig. 1 Forward Derating Curve

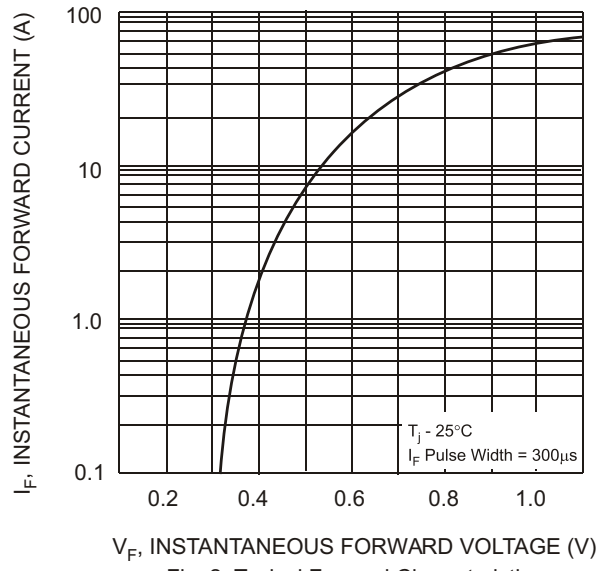


Fig. 2 Typical Forward Characteristics

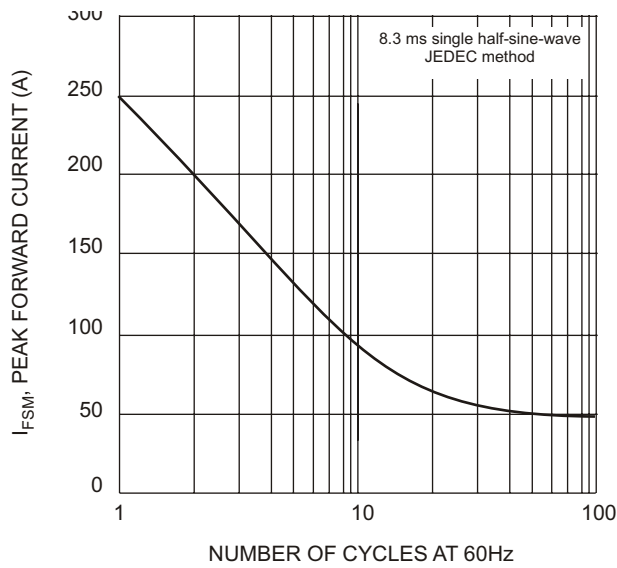


Fig. 3 Maximum Non-Repetitive Surge Current

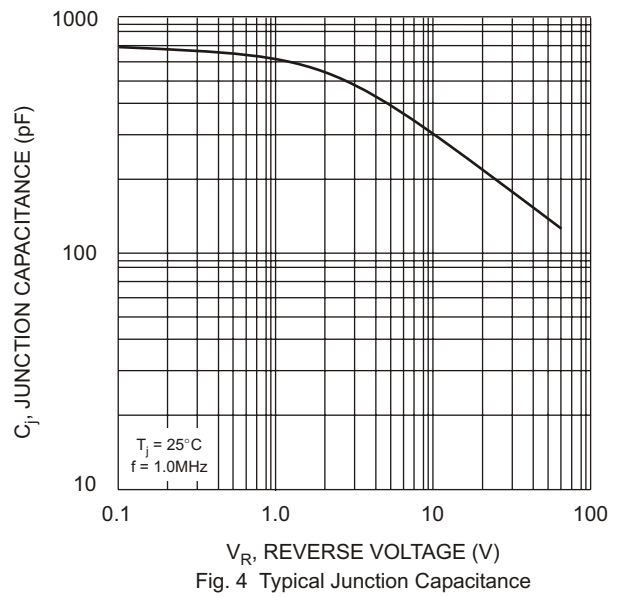


Fig. 4 Typical Junction Capacitance