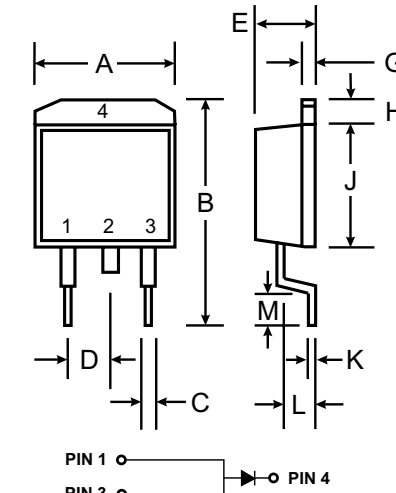


## Features

- Guard Ring Die Construction for Transient Protection
- Low Power Loss, High Efficiency
- High Surge Capability
- High Current Capability and Very Low Forward Voltage Drop
- Surge Overload Rating to 75A Peak
- Plastic Material: UL Flammability Classification Rating 94V-0

## Mechanical Data

- Case: DPAK Molded Plastic
- Terminals: Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Marking: Type Number
- Weight: 0.4 grams (approx.)



DPAK		
Dim	Min	Max
A	6.4	6.8
B	—	10
C	0.4	0.8
D	2.3 Nominal	
E	2.35	2.75
G	0.4	0.6
H	1.5 Nominal	
J	5.3	5.7
K	0.5 Nominal	
L	0.9	1.3
M	0.3	0.7
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	SBG11100	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	35	V
RMS Reverse Voltage	$V_{R(RMS)}$	25	V
Average Rectified Output Current @ $T_C = 88^\circ\text{C}$	$I_O$	8	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave Superimposed on Rated Load (JEDEC Method)	$I_{FSM}$	75	A
Forward Voltage (Note 2) @ $I_F = 8\text{A}$ , $T_j = 25^\circ\text{C}$ @ $I_F = 8\text{A}$ , $T_j = 125^\circ\text{C}$	$V_{FM}$	0.51 0.41	V
Voltage Rate of Change	$dv/dt$	10,000	V/ $\mu\text{s}$
Peak Reverse Current at Rated DC Blocking Voltage @ $T_C = 25^\circ\text{C}$ @ $T_C = 100^\circ\text{C}$	$I_{RM}$	1.4 35	mA
Junction Capacitance (Note 3)	$C_J$	TBD	pF
Typical Thermal Resistance Junction to Case (Note 1)	$R_{\theta JC}$	6	K/W
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}$	80	K/W
Operating Temperature Range	$T_j$	-65 to +125	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-65 to +150	$^\circ\text{C}$

- Notes:
1. Thermal resistance: junction to case, unit mounted on PC board with 5.0 mm<sup>2</sup> (0.013 mm thick) copper pad as heat sink.
  2. 300 $\mu\text{s}$  pulse width, 2% duty cycle.
  3.  $F = 1\text{ MHz}$ ,  $V_R = 5\text{V}$ .

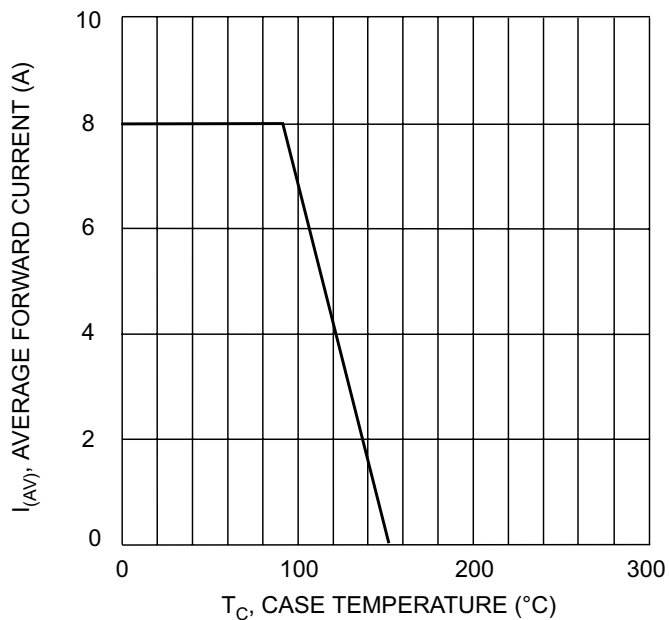


Fig. 1 Forward Current Derating Curve

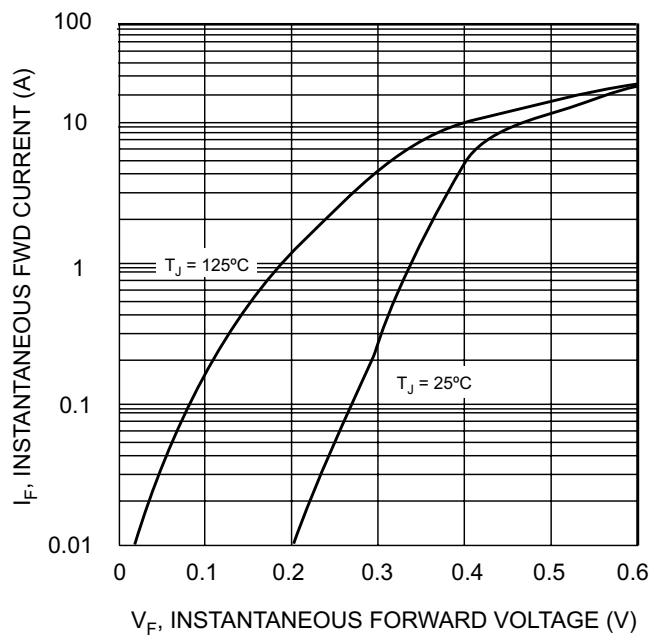


Fig. 2 Typical Fwd Characteristics per Element

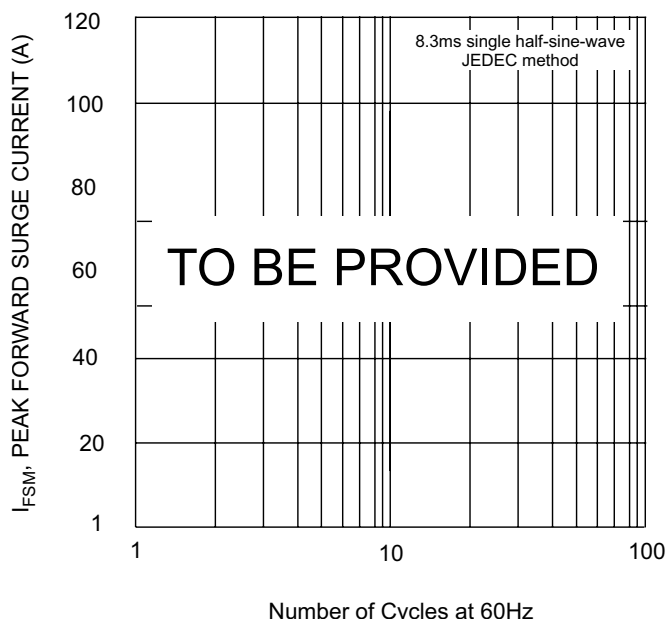


Fig. 3 Max Non-Repetitive Surge Current

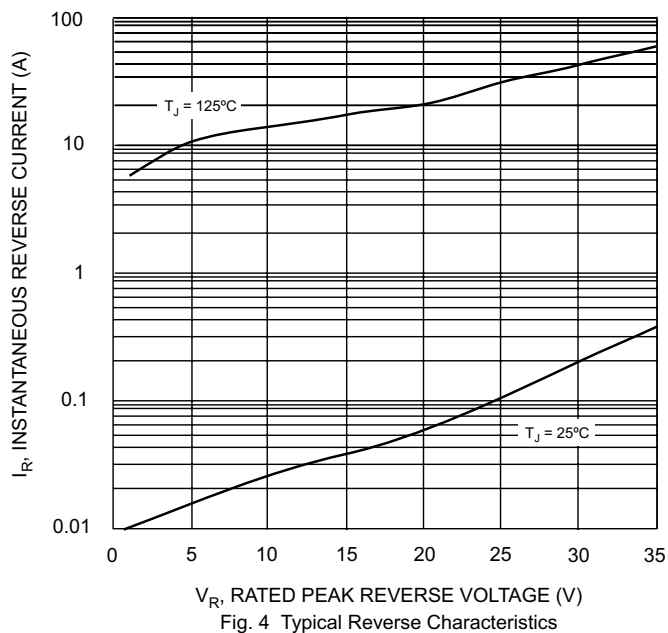


Fig. 4 Typical Reverse Characteristics