



E502650

## Features

- Glass Passivated Chip Junction
- High Surge Forward Current Capability
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant (Note 1)("P" Suffix Designates RoHS Compliant. See Ordering Information)

## Maximum Ratings @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Value		Unit
		SGBJ2510	SGBJ2512	
Peak Repetitive Reverse Voltage	$V_{RRM}$	1000	1200	V
Working Peak Reverse Voltage	$V_{RWM}$			
DC Blocking Voltage	$V_R$			
RMS Reverse Voltage	$V_{RMS}$	700	840	V
Average Rectified Forward Current @ $T_C=125^{\circ}\text{C}$ (With Heatsink)	$I_{F(AV)}$	25		A
Non-Repetitive Peak Surge Current @ 8.3ms Half Sine Wave	$I_{FSM}$	400		A
Non-Repetitive Peak Surge Current @ 1ms Square Wave		800		
$I^2t$ Rating for Fusing @ $1\text{ms}\leq t\leq 8.3\text{ms}$	$I^2t$	664		$\text{A}^2\text{s}$
Dielectric strength @Terminals to Case, AC 1 Minute	$V_{dis}$	2.5		KV

## Marking Code

Part Number	Marking Code
SGBJ2510	SGBJ2510
SGBJ2512	SGBJ2512

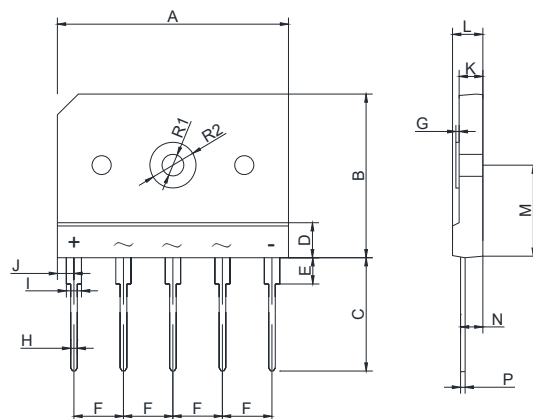
## Internal Structure

Simplified Outline	Graphic Symbol
<p>XXXXXXX: Marking Code</p>	

Note: 1. High Temperature Solder Exemption Applied, see EU Directive Annex 7a.

# 25 Amp Bridge Rectifier 1000 to 1200 Volts

SGBJ



## DIMENSIONS

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	1.366	1.390	34.70	35.30	
B	0.972	0.996	24.70	25.30	
C	0.669	0.693	17.00	17.60	
D	0.220	0.244	5.60	6.20	
E	0.150	0.173	3.80	4.40	
F	0.283	0.307	7.20	7.80	
G	0.016	0.024	0.40	0.60	
H	0.035	0.043	0.90	1.10	
I	0.087	0.094	2.20	2.40	
J	0.087	0.102	2.20	2.60	
K	0.134	0.150	3.40	3.80	
L	0.173	0.189	4.40	4.80	
M	0.547	0.571	13.90	14.50	
N	0.124	0.144	3.15	3.65	
P	0.026	0.030	0.65	0.75	
R1	0.106	0.146	2.70	3.70	
R2	0.264	0.287	6.70	7.30	

### Thermal characteristics

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
T <sub>J</sub>	Operating Junction Temperature Range		-55		150	°C
T <sub>stg</sub>	Storage Temperature Range		-55		150	°C
Rth(J-C)	Thermal Resistance from Junction to Case	Note 1		0.5		°C/W
Rth(J-A)	Thermal Resistance from Junction to Ambient	Without Heatsink		18		°C/W

Note:  
1.Device mounted on 75mm x 45mm x 5.5mm Aluminum Plate Heatsink.

### Mechanical Data

Recommended Mounting Torque: 5kg·cm

### Electrical Characteristics @ 25°C Unless Otherwise Specified(Per Diode)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> =12.5A;T <sub>J</sub> =25°C			1.05	V
Reverse Current	I <sub>R</sub>	at Rated V <sub>R</sub> ;T <sub>J</sub> =25°C at Rated V <sub>R</sub> ;T <sub>J</sub> =125°C			5 500	μA
Junction Capacitance	C <sub>J</sub>	V <sub>R</sub> =4V;f=1MHz;T <sub>J</sub> =25°C		140		pF

## Curve Characteristics

Fig. 1 - Forward Current Derating Curve

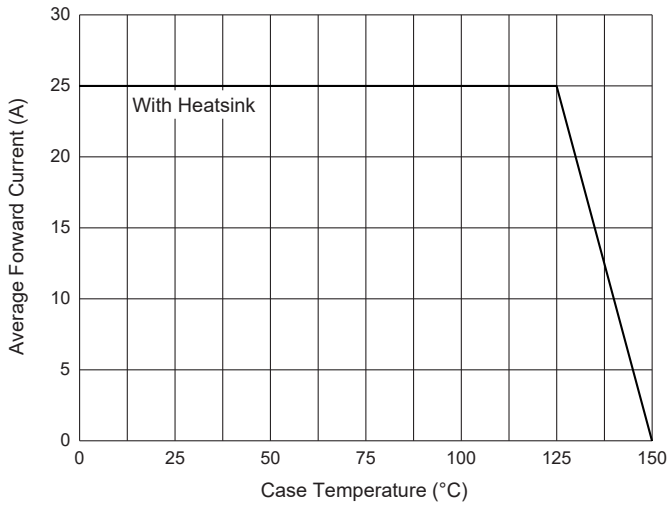


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current (Per Diode)

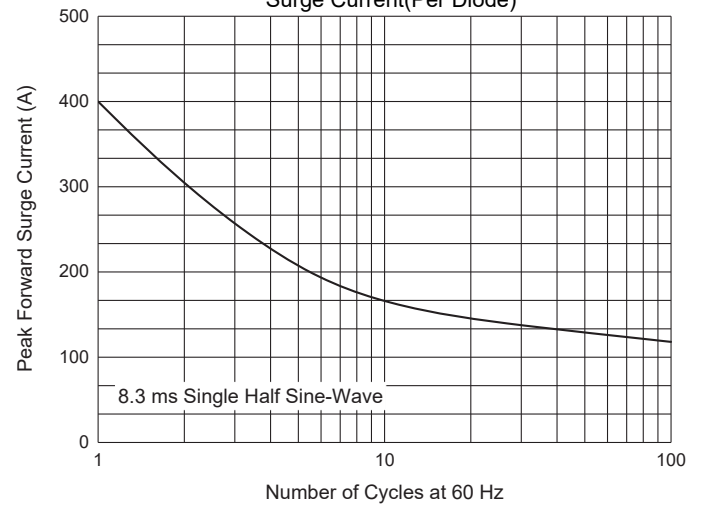


Fig. 3 - Typical Forward Characteristics (Per Diode)

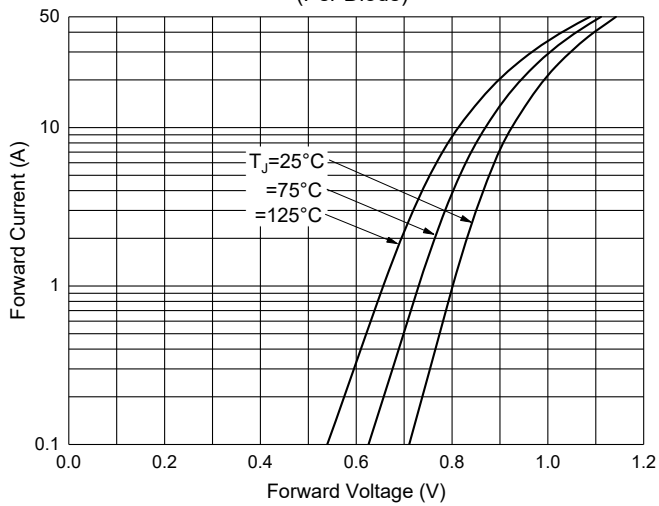


Fig. 4 - Typical Reverse Leakage Characteristics (Per Diode)

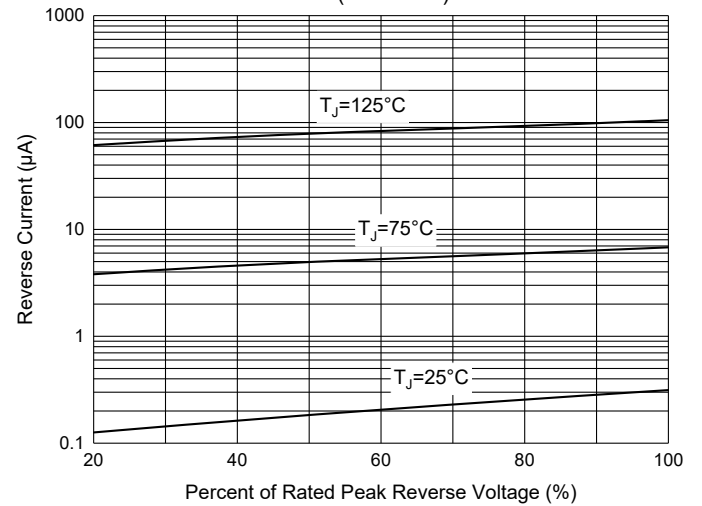
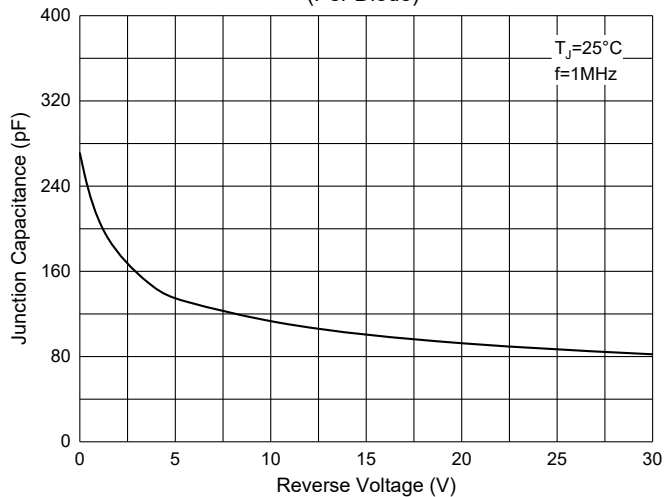


Fig. 5 - Typical Capacitance Characteristics (Per Diode)



## Ordering Information

Device	Packing
Part Number-BP	Bulk:10pcs/Tube,1000pcs/Carton

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