



E502650

## Features

- Halogen Free. "Green" Device (Note 1)
- Glass Passivated Chip Junction
- High Surge Forward Current Capability
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant (Note 2)("P" Suffix Designates RoHS Compliant. See Ordering Information)

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

Parameter	Symbol	Value		Unit
		SGBJ3510	SGBJ3512	
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	1000	1200	V
Working Peak Reverse Voltage	V <sub>RWM</sub>			
DC Blocking Voltage	V <sub>R</sub>			
RMS Reverse Voltage	V <sub>RMS</sub>	700	840	V
Average Rectified Forward Current @ T <sub>C</sub> =115°C (With Heatsink)	I <sub>F(AV)</sub>	35		A
Non-Repetitive Peak Surge Current @ 8.3ms Half Sine Wave	I <sub>FSM</sub>	450		A
Non-Repetitive Peak Surge Current @ 1ms Square Wave		900		
I <sup>2</sup> t Rating for Fusing @1ms≤t≤8.3ms	I <sup>2</sup> t	840		A <sup>2</sup> s
Dielectric strength @Terminals to Case, AC 1 Minute	V <sub>dis</sub>	2.5		KV

## Marking Code

Part Number	Marking Code
SGBJ3510	SGBJ3510
SGBJ3512	SGBJ3512

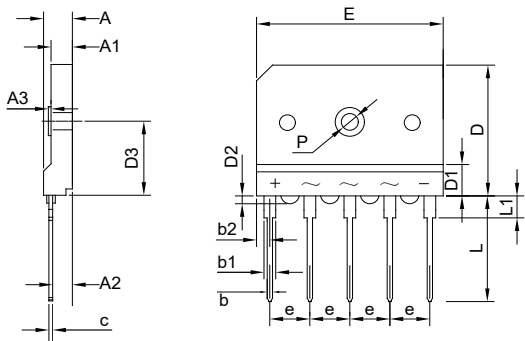
Marking Diagram	Internal Structure
<p>Marking Code: XXXXXXX</p>	

Note:

1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
2. High temperature solder exemption applied, see EU directive annex 7a.

# 35 Amp Bridge Rectifier 1000 to 1200 Volts

SGBJ



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.205	0.220	5.20	5.60	
A1	0.150	0.165	3.80	4.20	
A2	0.138	0.154	3.50	3.90	
A3	0.016	0.024	0.40	0.60	
b	0.035	0.043	0.90	1.10	
b1	0.083	0.091	2.10	2.30	
b2	0.087	0.102	2.20	2.60	
c	0.024	0.031	0.60	0.80	
D	0.972	0.996	24.70	25.30	
D1	0.201	0.220	5.10	5.60	
D2	0.051	0.075	1.30	1.90	
D3	0.547	0.571	13.90	14.50	
E	1.366	1.390	34.70	35.30	
e	0.283	0.307	7.20	7.80	
L	0.768	0.791	19.50	20.10	
L1	0.154	0.177	3.90	4.50	
P	0.106	0.146	2.70	3.70	Ø

### 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

Mounting Torque: 5 kg·cm(Recommended); 8 kg·cm(Max.)

### 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> =17.5A;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		185		pF

## Curve Characteristics

Fig. 1 - Forward Current Derating Curve

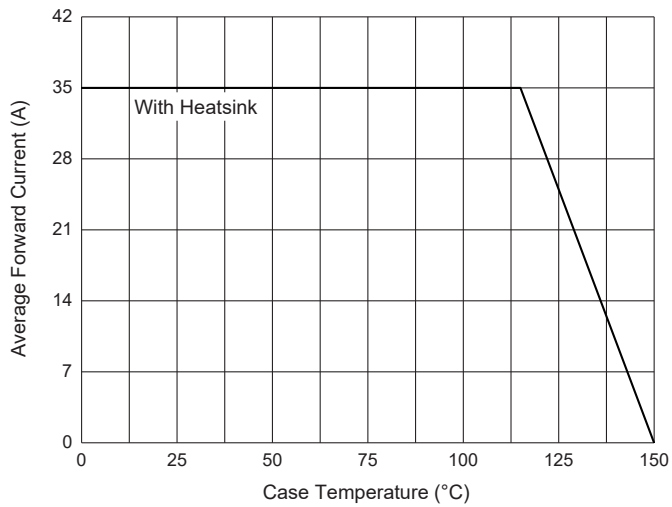


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current (Per Diode)

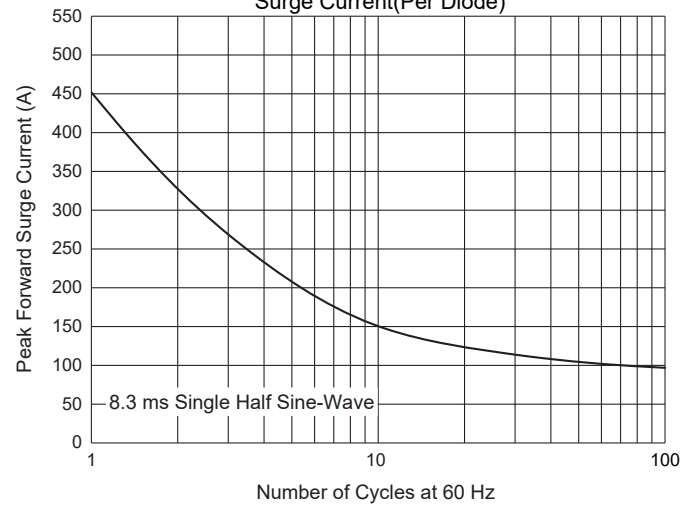


Fig. 3 - Typical Forward Characteristics (Per Diode)

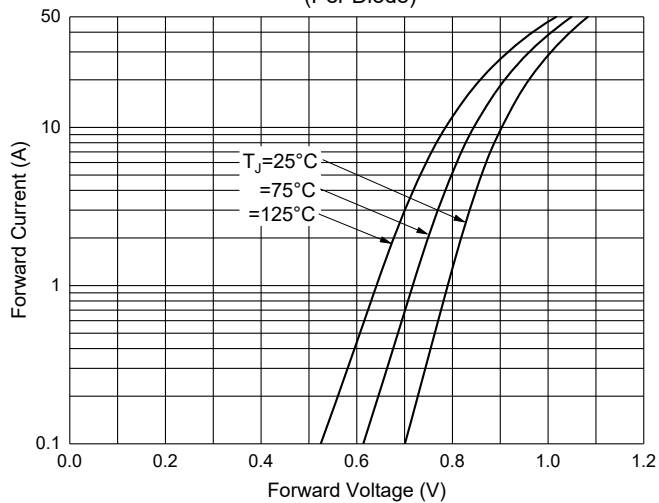


Fig. 4 - Typical Reverse Leakage Characteristics (Per Diode)

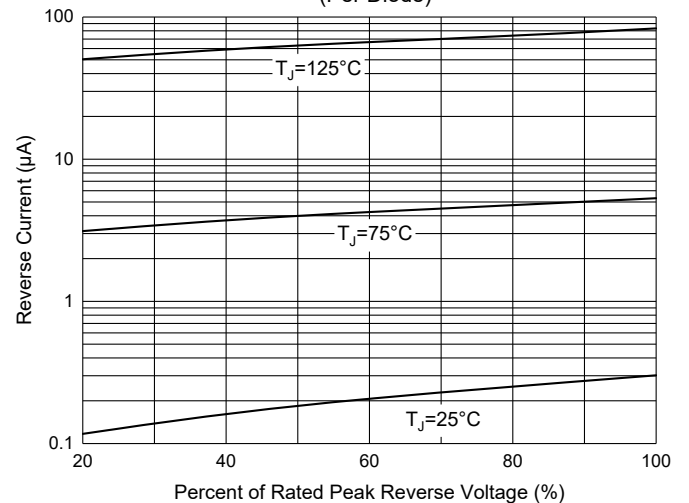
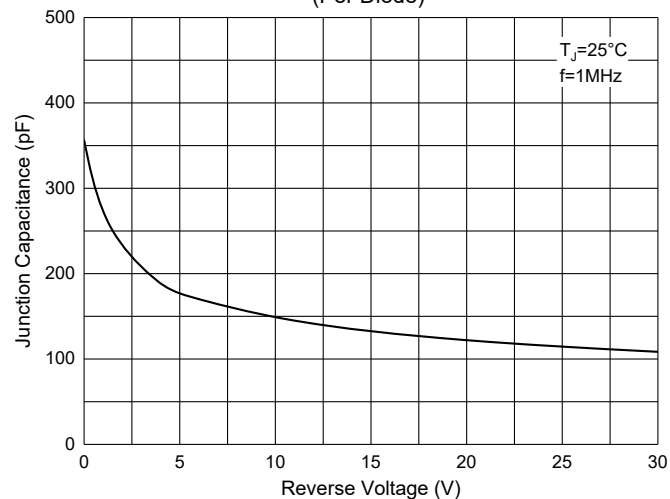


Fig. 5 - Typical Capacitance Characteristics (Per Diode)



## Ordering Information

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

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