

50A Glass Passivated Single-Phase Bridge Rectifier

Reverse Voltage - 1000 to 1600 V

Forward Current - 50A

FEATURES

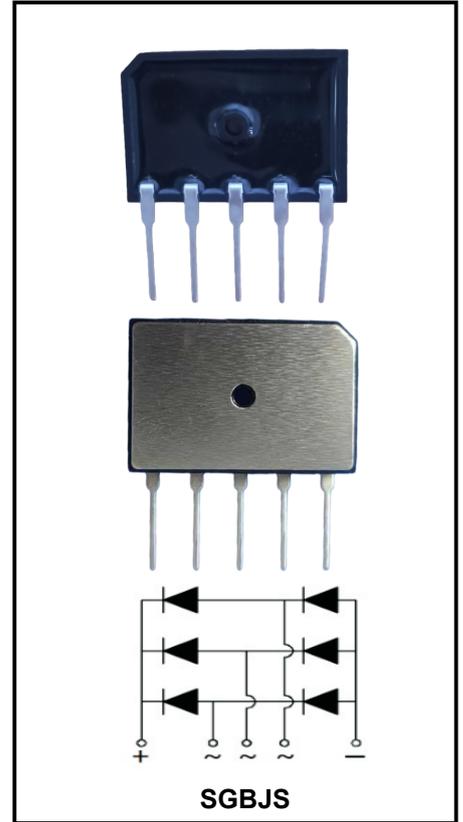
- ◆ Glass passivated chip
- ◆ Low Reverse Leakage Current
- ◆ High surge current capability

APPLICATIONS

- ◆ Household electric appliances
- ◆ Industrial power supply
- ◆ Frequency converter

MECHANICAL DATA

- ◆ Case: SGBJS
- ◆ Polarity: Polarity symbols being marked on body
- ◆ Mounting torque: 12.0 kgf.cm max
- ◆ Weight : About 12.8 grams



Maximum Ratings @ Ta = 25°C unless otherwise noted

Parameter	Symbol	SGBJ5010S	SGBJ5012S	SGBJ5014S	SGBJ5016S	Unit
Maxmum Recurrent Peak Reverse Voltage	V_{RRM}	1000	1200	1400	1600	V
Average Forward Output Rectified Current with heatsink, $T_c=85^\circ\text{C}$	$I_{F(AV)}$	50				A
Peak Forward Voltage @ $I_F = 25\text{A}$	V_F	1.1				V
Peak Forward Surge Current 8.3ms Single Half Sine-wave superimposed on rated load	I_{FSM}	500				A
Peak Reverse Current $V_R=V_{RRM}$, Pulse measurement Rating of per diode	I_R	5 500				UA
Rating for fusing $1\text{ms} < t < 8.3\text{ms}$ $T_j=25^\circ\text{C}$, Rating of per diode	I^2t	1037				A ² S
Dielectric strength terminals to case AC 1 minute	V_{dis}	2.5				KV
Junction to ambient thermal resistance, without heatsink	$R_{\theta JA}$	18				°C/W
Junction to case thermal resistance, with heatsink	$R_{\theta JC}$	1.2				°C/W
Operating Junction and storage temperature range	T_j, T_{stg}	-55~150				°C

Characteristic Curve

FIG1. Derating Curve For Output Rectified Current

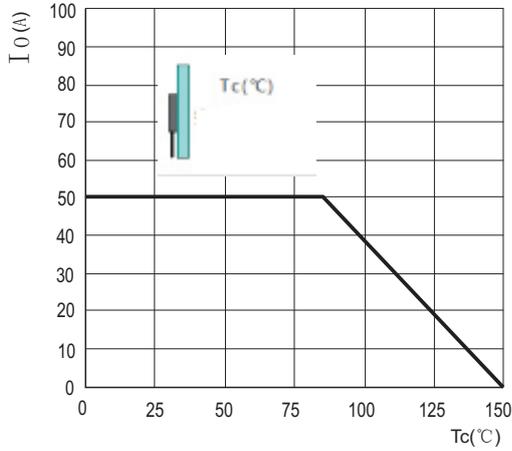


FIG2. Maximum NonRepetitive Peak Forward Surge Current Per Bridge Element

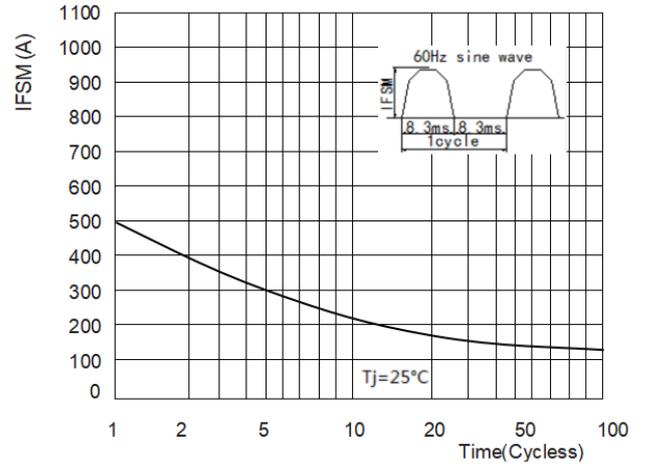


FIG3. Typical Reverse Characteristics Per Bridge Element

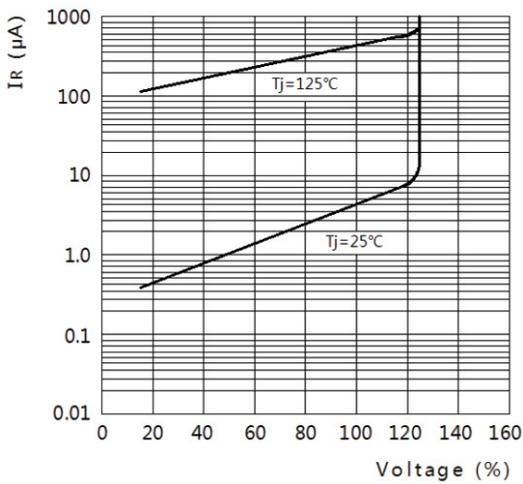
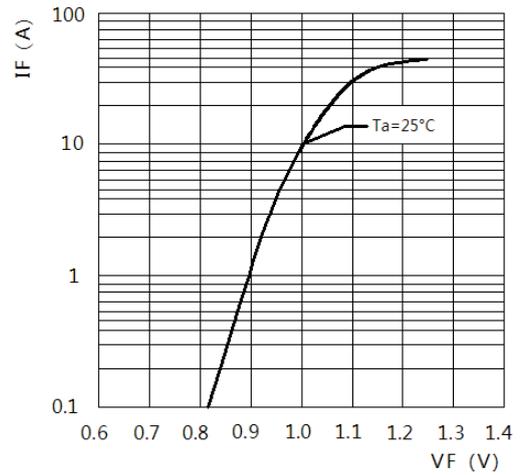
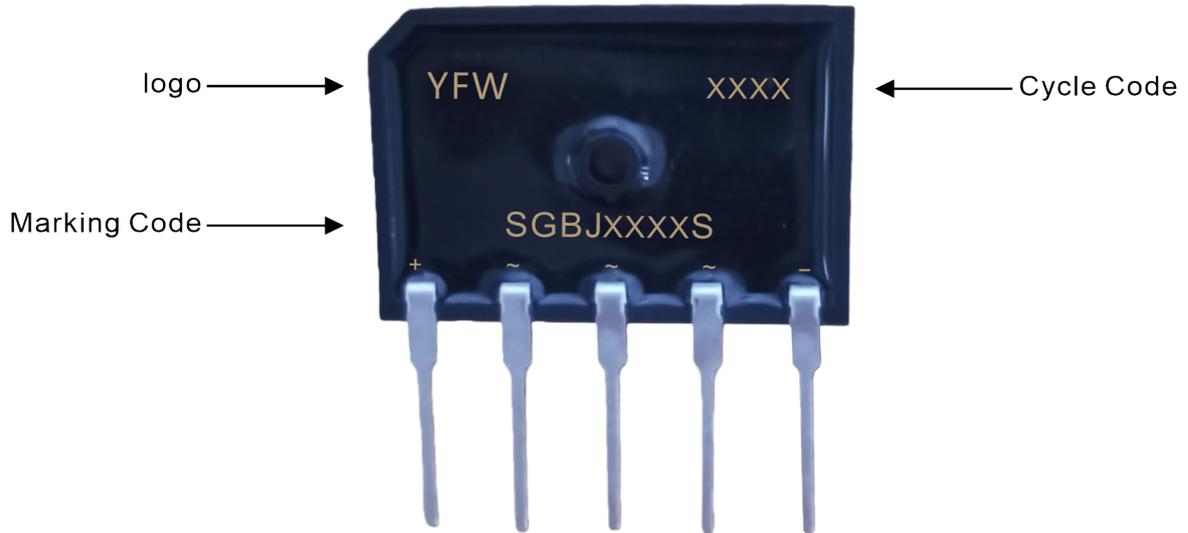


FIG4. Typical Forward Characteristics Per Bridge Element



Marking Diagram



Ordering information

Package	Packing Description	Packing Quantity
SGBJS	bulk	100PCS/Box 1000PCS/Carton

Package Dimensions

SGBJS

Dim.	Millimeter(mm)		DimensionsinInch	
	Min.	Max.	Min.	Max.
A	37.00	38.00	1.457	1.496
B	25.00	26.00	0.984	1.024
C	2.80	3.30	0.110	0.130
D	17.50	18.50	0.689	0.728
E	3.00	4.00	0.118	0.157
F	3.30	4.30	0.130	0.169
G	2.00	2.60	0.079	0.102
H	0.90	1.20	0.035	0.047
I	6.80	7.80	0.268	0.307
J	5.60	6.20	0.220	0.244
K	5.00	5.60	0.197	0.220
L	0.60	0.90	0.024	0.035
M	12.60	13.20	0.496	0.520
N	5.00	5.60	0.197	0.220

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