



# SGBJ5008 THRU SGBJ5016

Glass Passivated Three Phase Bridge Rectifier

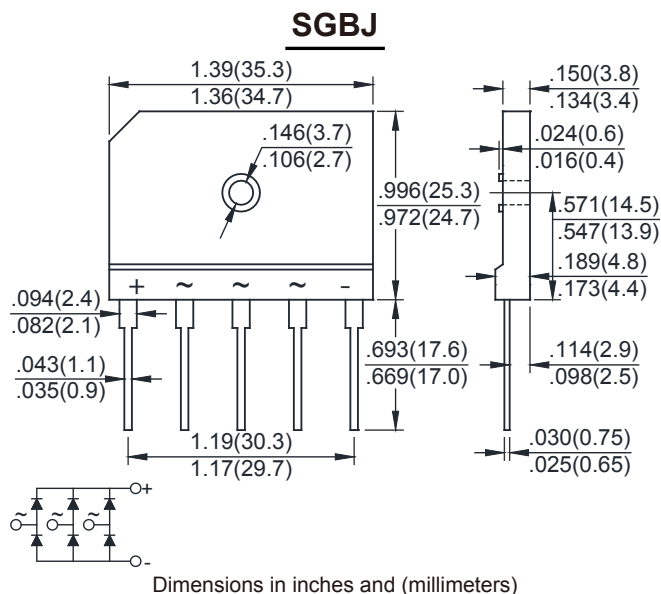
## Features

- ★ Low forward voltage drop
- ★ High current capability
- ★ High reliability

## Mechanical Data

- ★ Case: Epoxy case with heat sink, SGBJ
- ★ Epoxy: UL 94V-0 rate flame retardant
- ★ Terminals: Solderable per MIL-STD-202, method 208
- ★ Polarity: Symbol marked on body

**Voltage Range 800 to 1600 V**  
**Current 50 Ampere**



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

PARAMETER	SYMBOL	SGBJ5008	SGBJ5010	SGBJ5012	SGBJ5016	UNIT
Maximum repetitive peak reverse voltage	$V_{RRM}$	800	1000	1200	1600	V
Maximum RMS voltage	$V_{RMS}$	560	700	840	1120	V
Maximum DC blocking voltage	$V_{DC}$	800	1000	1200	1600	V
Maximum average forward rectified current @ $T_C=110^\circ\text{C}$	$I_{F(AV)}$	50				A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	$I_{FSM}$	450				A
$I^2t$ rating for fusing ( $t < 8.3\text{ms}$ )	$I^2t$	840				$\text{A}^2\text{s}$
Maximum instantaneous forward drop per diode @ $I_F=25\text{A}$	$V_F$	1.1				V
Maximum DC reverse current at @ $T_J=25^\circ\text{C}$ rated DC blocking voltage per diode @ $T_J=150^\circ\text{C}$	$I_R$	5 3000				$\mu\text{A}$
Typical thermal resistance junction to case	$R_{\theta JC}$	0.8				$^\circ\text{C}/\text{W}$
Operating junction temperature range	$T_J$	-55 to +150				$^\circ\text{C}$
Storage temperature range	$T_{STG}$	-55 to +125				$^\circ\text{C}$

# RATINGS AND CHARACTERISTICS CURVES SGBJ5008 THRU SGBJ5016

Fig.1 - Forward Current Derating Curve

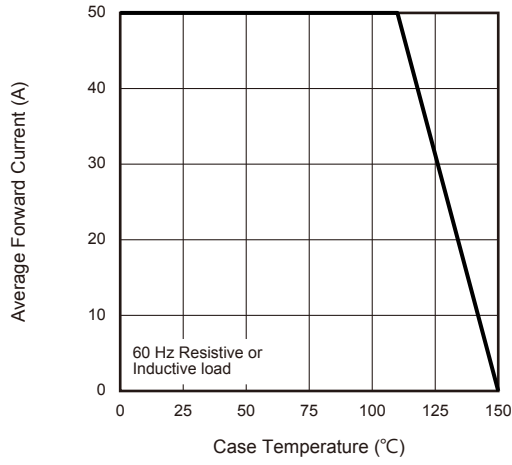


Fig.2 - Maximum Non-Repetitive Peak Forward Surge Current

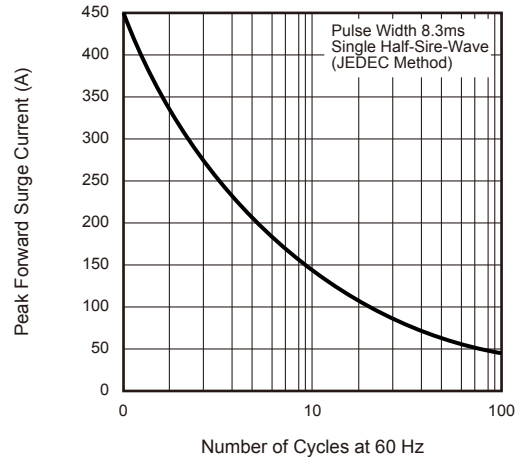


Fig.3 - Typical Instantaneous Forward Characteristics

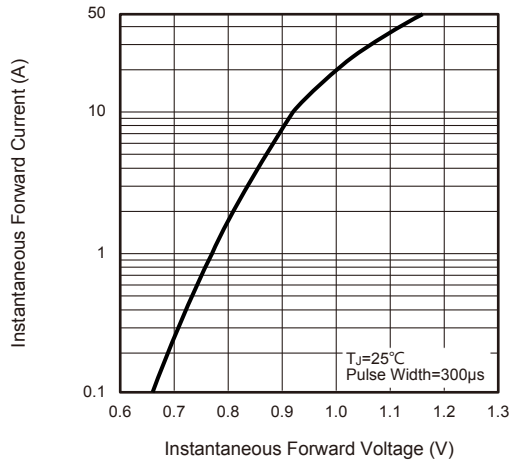


Fig.4 - Typical Reverse Leakage Characteristics

