

## Glass Passivated Three Phase Bridge Rectifiers

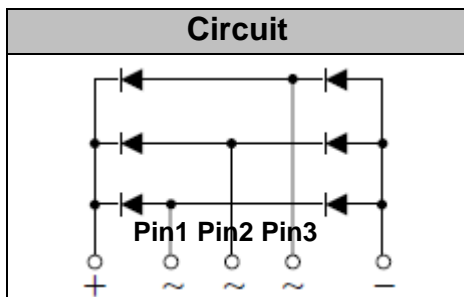
**VRRM** 800 to 1600V  
**ID** 35Amp

### Features

- Glass Passivated Chips
- SIP (Single In-line Package) Module
- High Surge Capability
- Low Forward Voltage Drop
- 2500V Isolation ratings

### Applications

- Welding and Plasma Cutting Machines
- Battery Chargers
- Power Supplies
- Motor Controls
- Home Appliance



### Module Type

TYPE	VRRM	VRSM
3GBJ3508	800V	900V
3GBJ3512	1200V	1300V
3GBJ3516	1600V	1700V

### Maximum Ratings and Thermal Characteristics (TA = 25°C unless otherwise noted)

Symbol	Item	Conditions	Values	Units
$I_D$	Average forward current	$T_c=100^\circ\text{C}$	35	A
$I_{FSM}$	Forward surge current, max.	$t=8.3\text{mS } T_{vj}=45^\circ\text{C}$	400	A
$i^2t$	Value for fusing		660	$\text{A}^2\text{s}$
Visol	Isolation Breakdown Voltage(R.M.S)	a.c.50HZ;r.m.s.;1min	2500	V
$T_{vj}$	Operating Junction Temperature		-40 to +150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature		-40 to +150	$^\circ\text{C}$
Weight	Approximate Weight		15	g
	Mounting Torque	Recommended Torque0.5N	0.8	$\text{N}\cdot\text{m}$ ( $\text{kgf}\cdot\text{cm}$ )

### Thermal Characteristics

Symbol	Item	Conditions	Values	Units
$R_{th(j-c)}$	Thermal Impedance, max.	Junction to case per one module	0.70	$^\circ\text{C}/\text{W}$

### Electrical Characteristics (TA = 25°C unless otherwise noted)

Symbol	Item	Conditions	Values			Units
			Min.	Typ.	Max.	
VFM	Forward Voltage Drop, max.	$T=25^\circ\text{C } I_F=17.5\text{A}$			1.30	V
I <sub>RRM</sub>	Repetitive Peak Reverse Current, max.	$T_{vj}=25^\circ\text{C } V_{RD}=V_{RRM}$ $T_{vj}=150^\circ\text{C } V_{RD}=V_{RRM}$			0.1 5	$\text{mA}$ $\text{mA}$

## Performance Curves

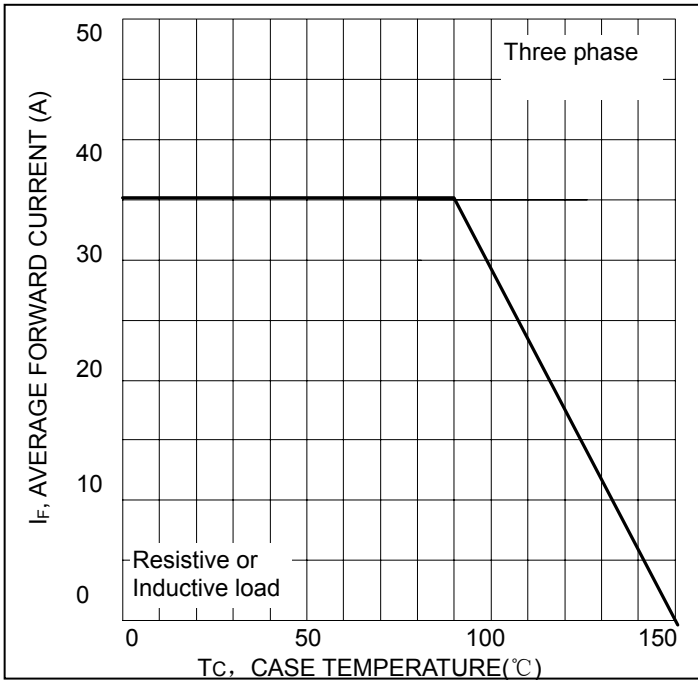


Fig1. Output Current vs. Allowable Case Temperature

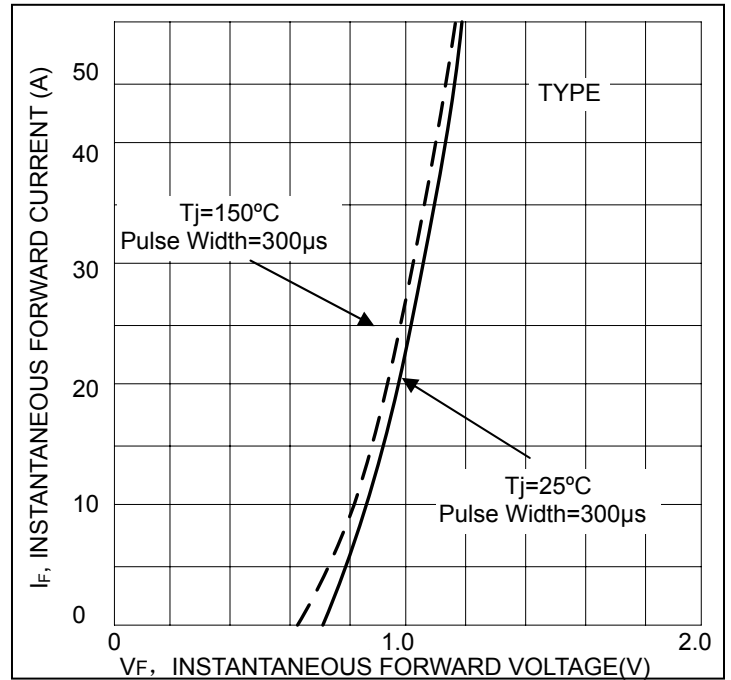


Fig2. Forward Voltage Characteristics

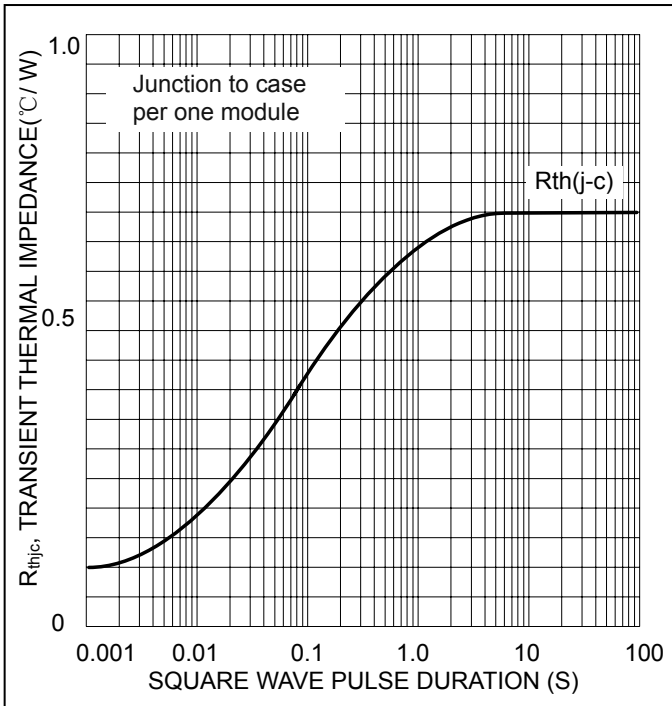


Fig3. Transient thermal impedance

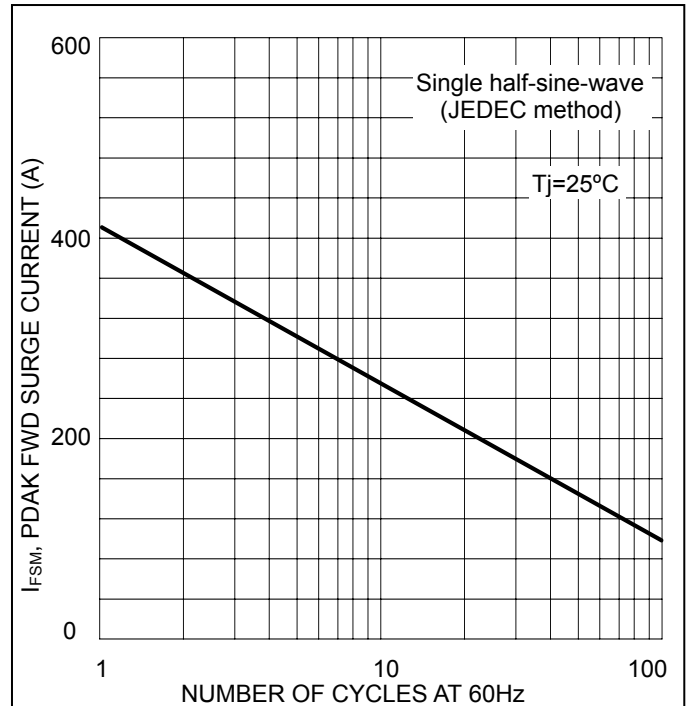


Fig4. Max Non-Repetitive Forward Surge Current

## Package Outline Information

CASE: 3GBJ

