

Glass Passivated Three Phase Bridge Rectifiers

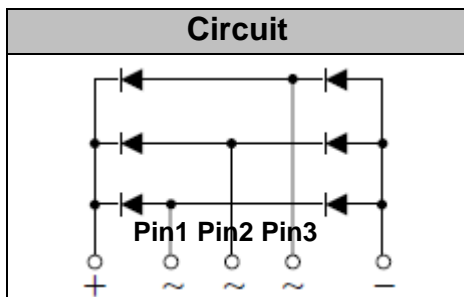
VRRM 800 to 1600V
ID 35Amp

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	A^2s
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 Torque 0.5N.m	0.8 max.	N.m

Thermal Characteristics

Symbol	Item	Conditions	Values	Units
$R_{th(j-c)}$	Thermal Impedance, max.	Junction to case per one bridge	0.7	$^\circ\text{C/W}$

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

Symbol	Item	Conditions	Values			Units
			Min.	Typ.	Max.	
VFM	Forward Voltage Drop, max.	$T=25^\circ\text{C } I_F=17.5\text{A}$			1.2	V
IRRM	Repetitive Peak Reverse Current, max.	$T_{vj}=25^\circ\text{C } VRD=VRRM$ $T_{vj}=150^\circ\text{C } VRD=VRRM$			10 5	μA mA

Performance Curves

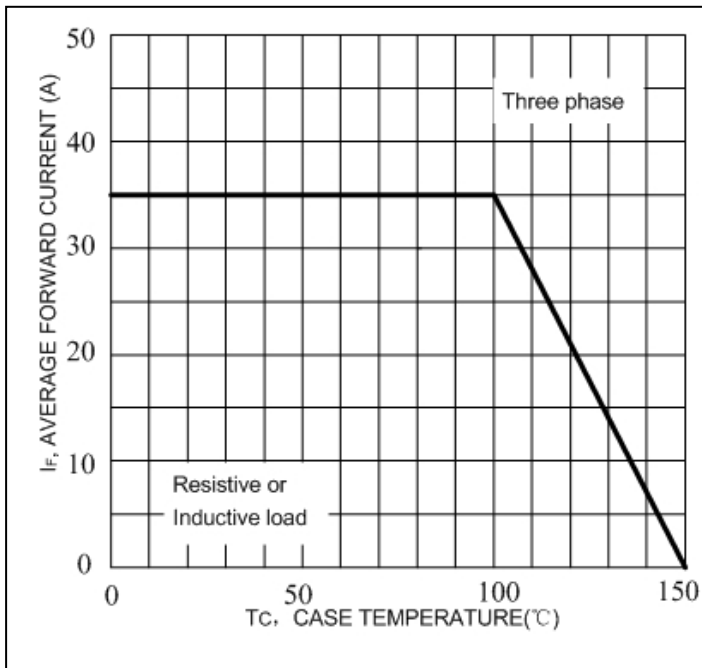


Fig1. Output Current vs. Allowable Case Temperature

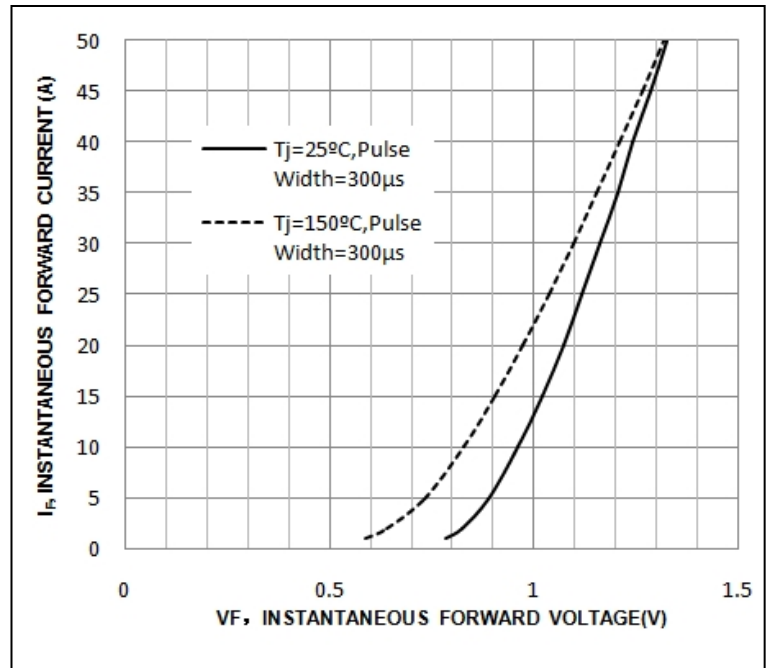


Fig2. Forward Voltage Characteristics

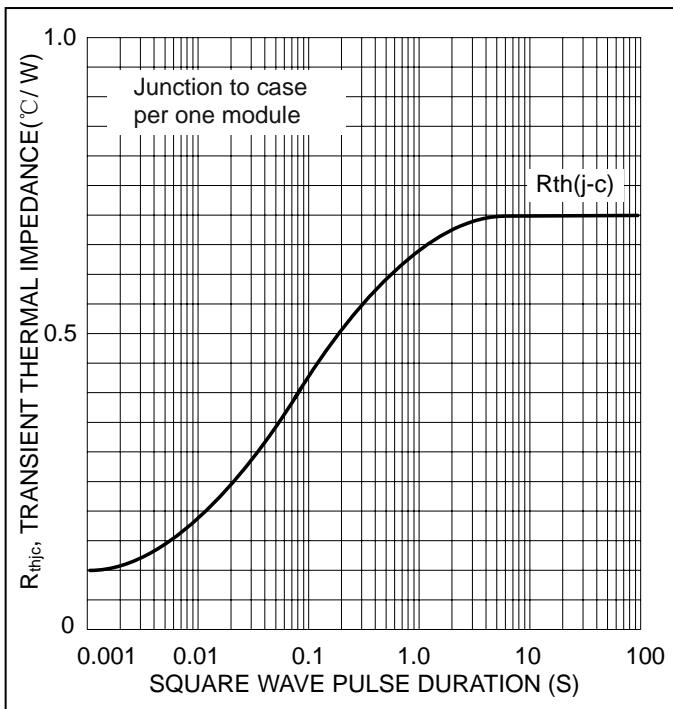


Fig3. Transient thermal impedance

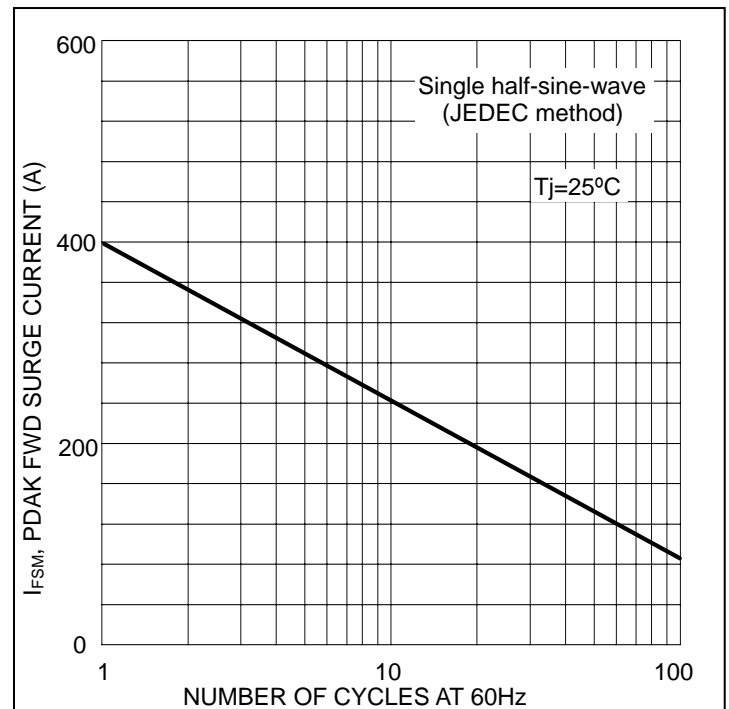
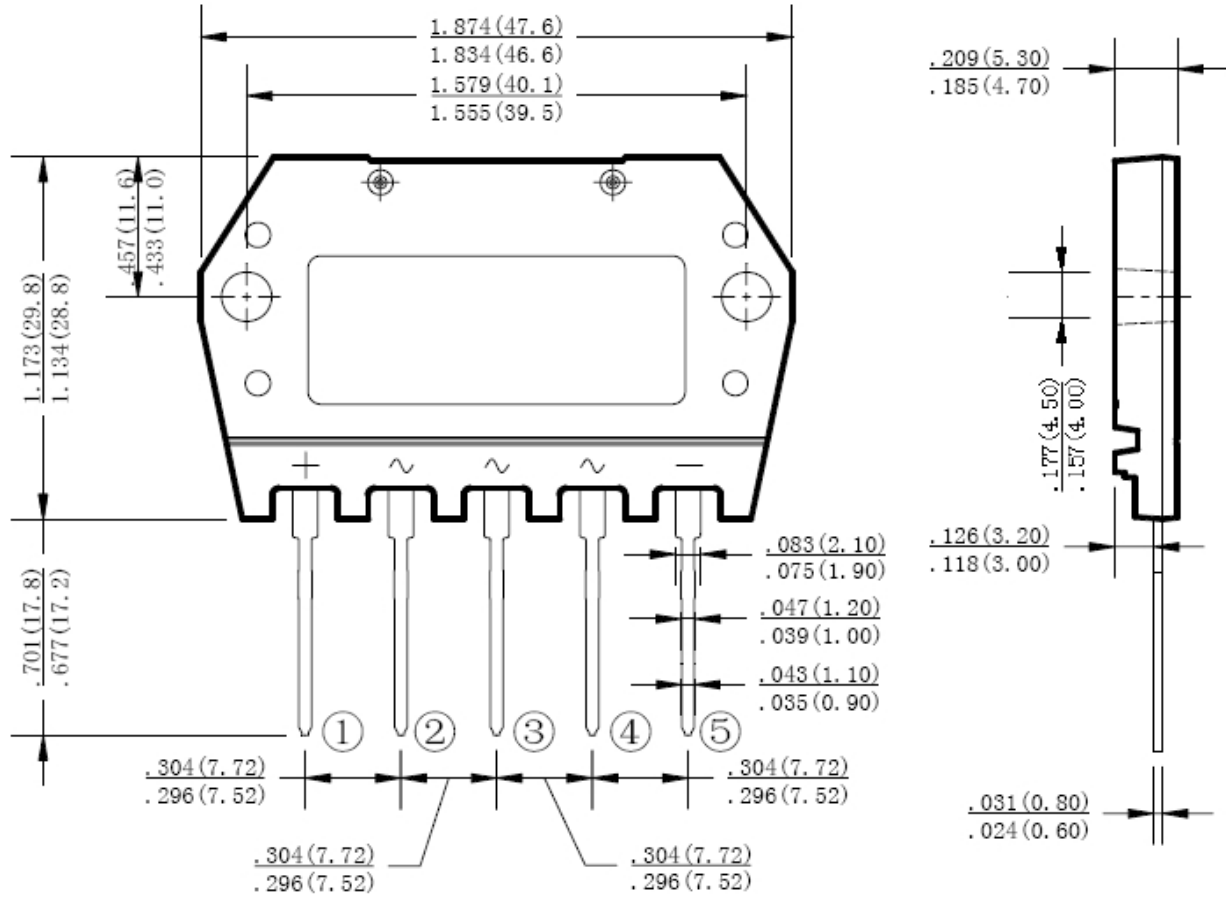


Fig4. Max Non-Repetitive Forward Surge Current

Package Outline Information

CASE: 3GBJ35



Dimensions in inches (mm)