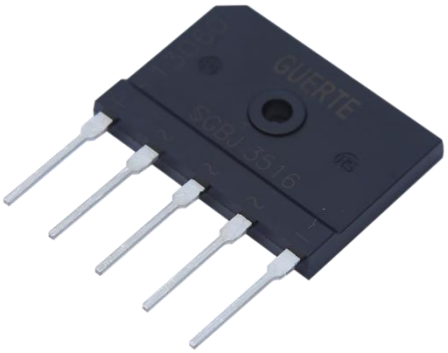
SGBJ5008-16

Three Phase Rectifier Bridge



V_{RRM} 800 to 1600V

I_D 50 Amp

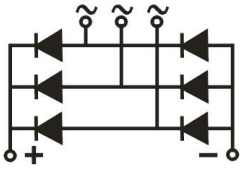
Features

- Glass passivated chip
- Ideal for printed circuit boards
- High surge current capability
- High temperature soldering guaranteed:265℃/10 seconds

Applications

- Inverter for AC or DC motor control
- Current stabilized power supply
- Input rectifiers for variable frequency drives
- Input rectifiers for PWM inverter

Circuit



Module Type

Type	V_{RRM}	V_{RSM}
SGBJ5008	800V	900V
SGBJ5010	1000V	1100V
SGBJ5012	1200V	1300V
SGBJ5016	1600V	1700V

■ Maximum Ratings

Symbol	Item	Conditions	Values	Unit
I_D	Output Current	Three Phase, Full Wave T_c = 95℃	50	A
I_{FSM}	Surge Forward Current	T_j = 25℃, t = 50Hz(10ms), V_R = 0V	500	A
I^2t	Circuit Fusing Consideration	t = 10ms T_j =25℃	1250	A^2s
V_{ISO}	Isolation Breakdown Voltage	AC 50Hz/60Hz; R.M.S; 1min	2500	V
T_j	Operating Junction Temperature		-40 to +150	℃
T_{stg}	Storage Temperature		-40 to +125	℃
M_s	Mounting Torque	(Recommended torque:0.65 N·m)	0.8	N·m
Weight	Module (Approximately)		10	g

■ Thermal Characteristics

Symbol	Item	Conditions	Values	Unit
$R_{th(j-c)}$	Thermal Impedance, Max	Junction to Case(Per Total)	0.5	℃/W
		Junction to Case(Per Diode)	3	℃/W

■ Electrical Characteristics

Symbol	Item	Conditions	Values			Unit
			Min.	Typ.	Max.	
V_{FM}	Forward Voltage Drop, Max	T_j = 25℃ I_F = 25A	—	—	1.18	V
I_{RRM}	Repetitive Peak Reverse Current, Max	T_j = 25℃ $V_R = V_{RRM}$	—	—	5	uA
		T_j = 150℃ $V_R = V_{RRM}$	—	—	3	mA
V_{T0}	Threshold Voltage, for power loss calculation only	T_j = 125℃	0.75			V
r_T	Slope Resistance, for power loss calculation only	T_j = 125℃	7			mΩ

Performance Curves

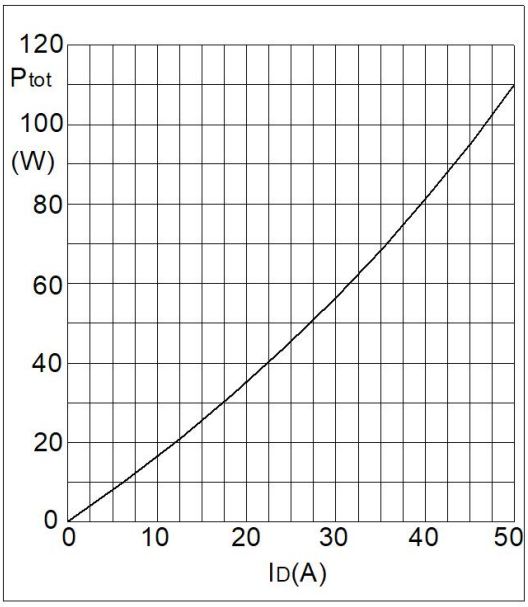


Fig1. Power Dissipation

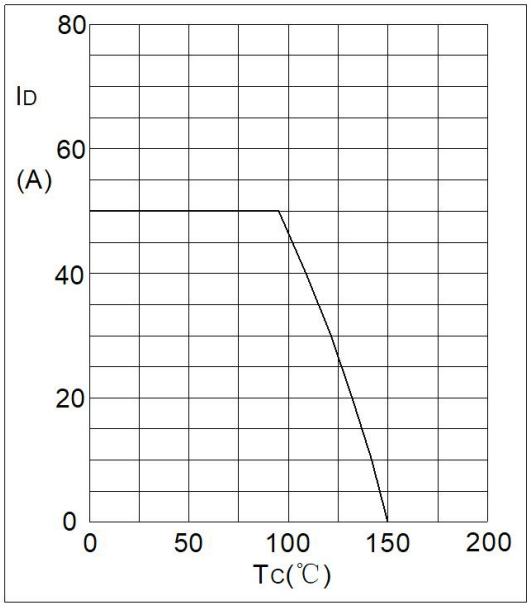


Fig2. Forward Current Derating Curve

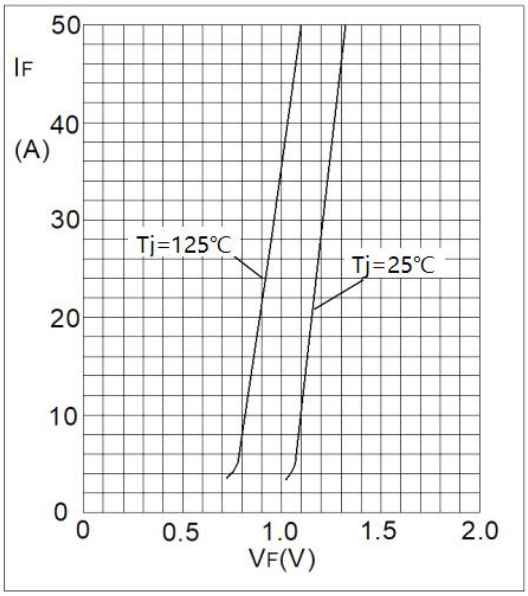


Fig3. Forward Characteristics

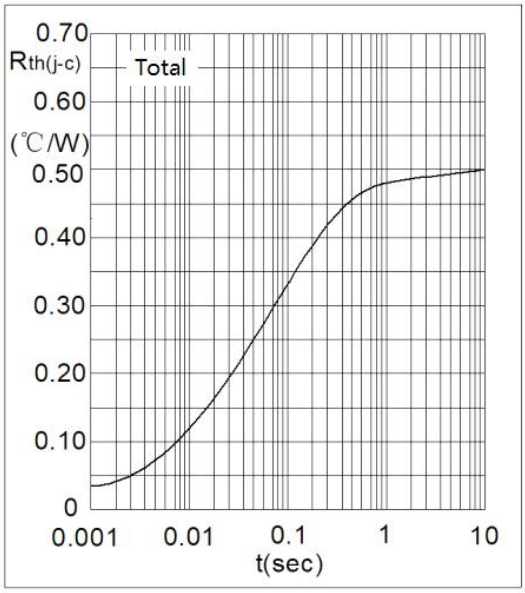


Fig4. Transient Thermal impedance

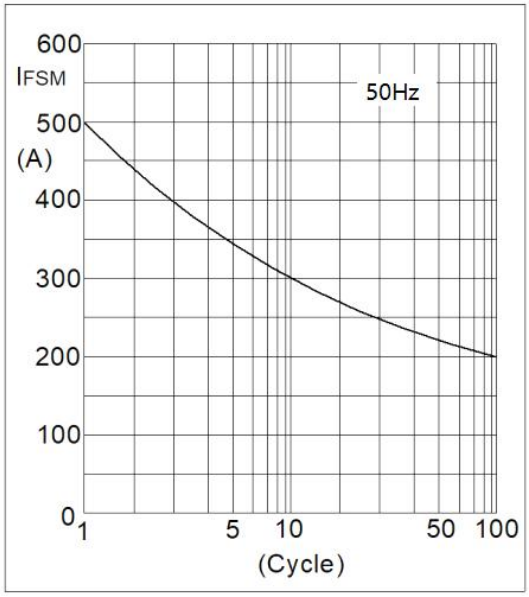
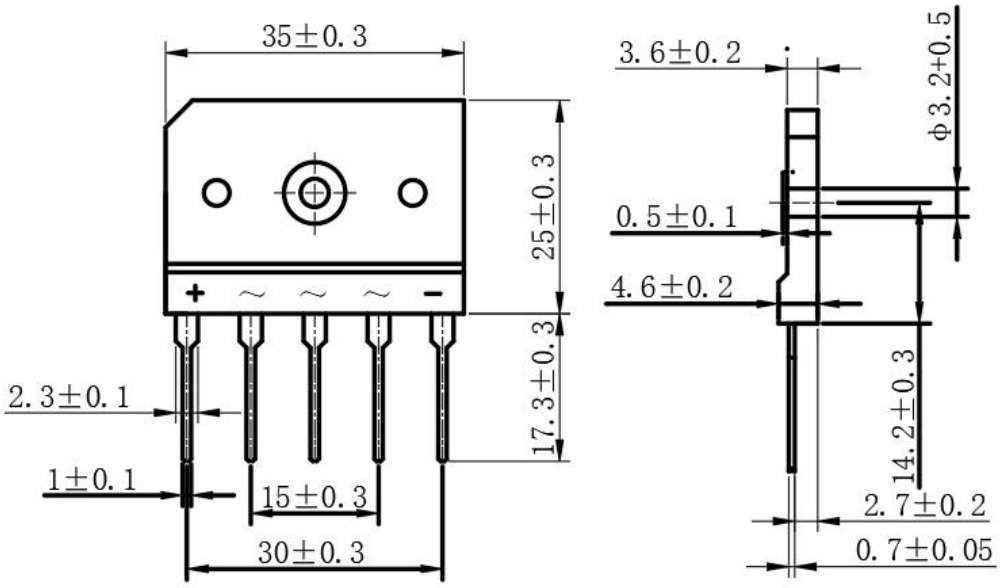


Fig5. Max Non-Repetitive Forward Surge Current

Package Outline Information

CASE: SGBJ



Dimensions in mm

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