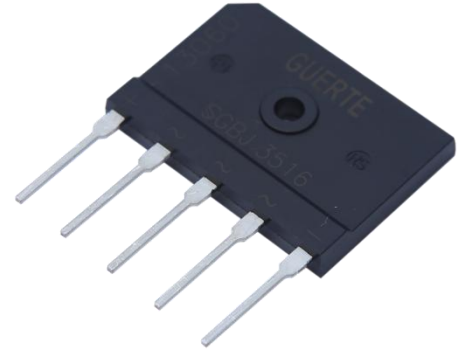


## Three Phase Rectifier Bridge

$V_{RRM}$  800 to 1600V  
 $I_D$  35 Amp

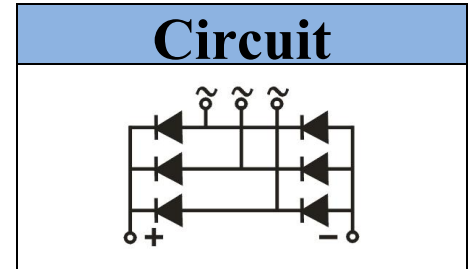


### Features

- Glass passivated chip
- Ideal for printed circuit boards
- High surge current capability
- High temperature soldering guaranteed: 265°C/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



### Module Type

Type	$V_{RRM}$	$V_{RSM}$
SGBJ3508	800V	900V
SGBJ3510	1000V	1100V
SGBJ3512	1200V	1300V
SGBJ3516	1600V	1700V

### Maximum Ratings

Symbol	Item	Conditions	Values	Unit
$I_D$	Output Current	Three Phase, Full Wave $T_c = 100^\circ\text{C}$	35	A
$I_{FSM}$	Surge Forward Current	$T_j = 25^\circ\text{C}$ , $t = 50\text{Hz}(10\text{ms})$ , $V_R = 0\text{V}$	400	A
$I^2t$	Circuit Fusing Consideration	$t = 10\text{ms}$ $T_j = 25^\circ\text{C}$	800	$\text{A}^2\text{s}$
$V_{ISO}$	Isolation Breakdown Voltage	AC 50Hz/60Hz; R.M.S; 1min	2500	V
$T_j$	Operating Junction Temperature		-40 to +150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature		-40 to +125	$^\circ\text{C}$
$M_s$	Mounting Torque	(Recommended torque: 0.65 N·m)	0.8	N·m
Weight	Module (Approximately)		10	g

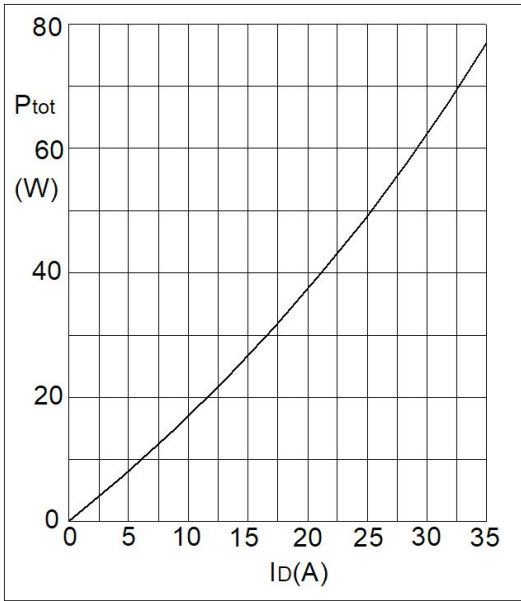
### Thermal Characteristics

Symbol	Item	Conditions	Values	Unit
$R_{th(j-c)}$	Thermal Impedance, Max	Junction to Case(Per Total)	0.65	$^\circ\text{C}/\text{W}$
		Junction to Case(Per Diode)	3.9	$^\circ\text{C}/\text{W}$

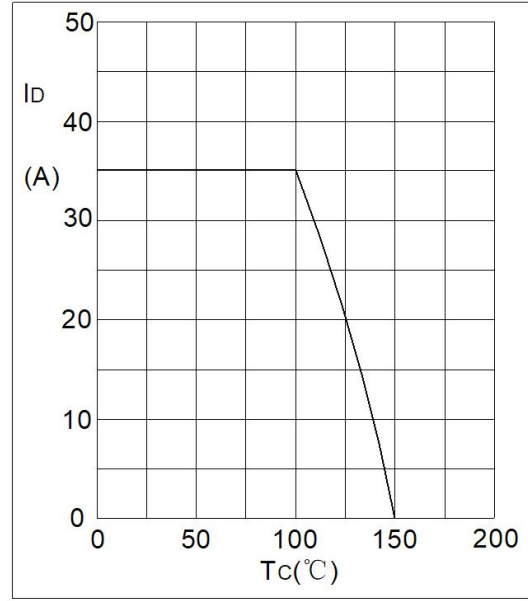
### Electrical Characteristics

Symbol	Item	Conditions	Values			Unit
			Min.	Typ.	Max.	
$V_{FM}$	Forward Voltage Drop, Max	$T_j = 25^\circ\text{C}$ $I_F = 17.5\text{A}$	—	—	1.18	V
$I_{RRM}$	Repetitive Peak Reverse Current, Max	$T_j = 25^\circ\text{C}$ $V_R = V_{RRM}$	—	—	5	$\mu\text{A}$
		$T_j = 150^\circ\text{C}$ $V_R = V_{RRM}$	—	—	3	mA
$V_{T0}$	Threshold Voltage, for power loss calculation only	$T_j = 125^\circ\text{C}$	0.75			V
$r_T$	Slope Resistance, for power loss calculation only	$T_j = 125^\circ\text{C}$	10			m $\Omega$

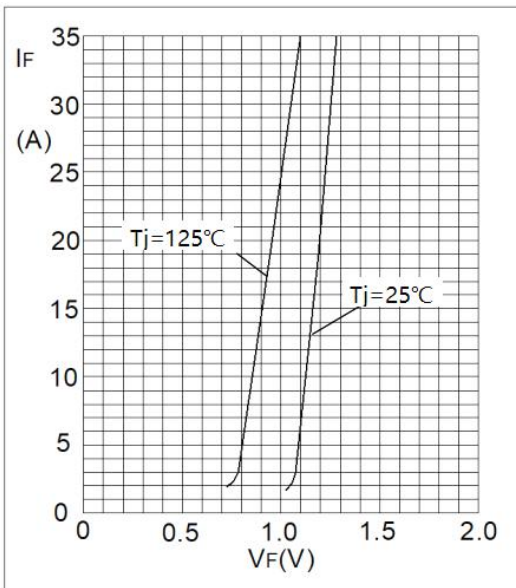
**Performance Curves**



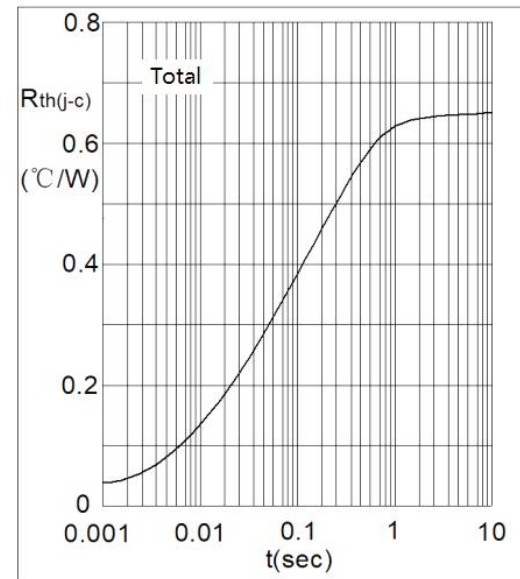
**Fig1. Power Dissipation**



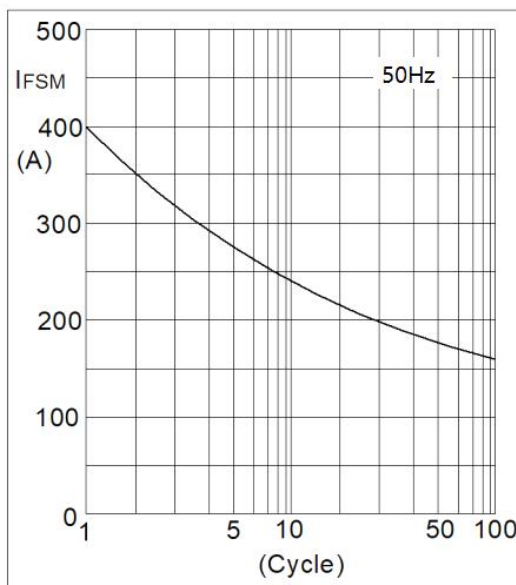
**Fig2. Forward Current Derating Curve**



**Fig3. Forward Characteristics**



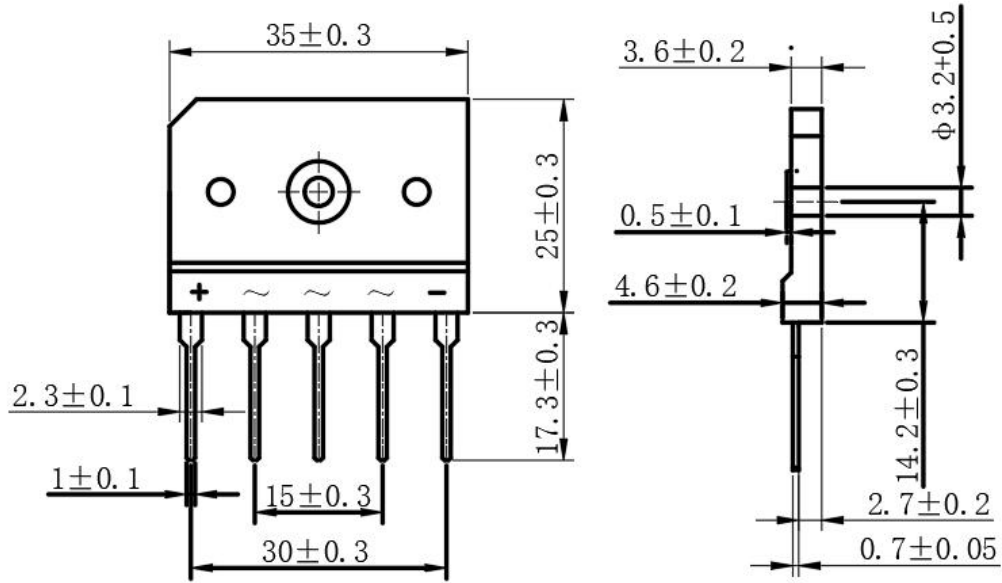
**Fig4. Transient Thermal impedance**



**Fig5. Max Non-Repetitive Forward Surge Current**

Package Outline Information

**CASE: SGBJ**



**Dimensions in mm**

**\*IMPORTANT INFORMATION AND WARNINGS**

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