

Single Phase Rectifier Bridge

V_{RRM} 600 to 1200V
I_D 25 Amp

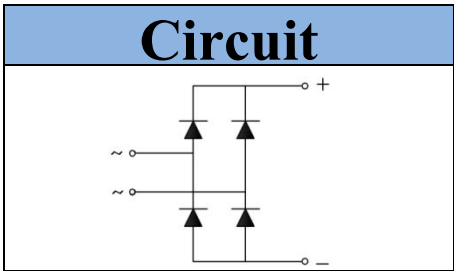


Features

- Very low forward voltage drop
- High surge current capability
- Low thermal resistance
- High thermal conductivity

Applications

- Single phase rectifiers for power supplies
- Rectifiers for DC motor field supplies
- Industrial automation equipment
- Input rectifiers for inverter
- Electric welder



Module Type

Type	V _{RRM}	V _{RSM}
BR2506	600V	700V
BR2508	800V	900V
BR2510	1000V	1100V
BR2512	1200V	1300V

Maximum Ratings

Symbol	Item	Conditions	Values	Unit
I _D	Output Current	Single Phase, Sin Full Wave T _c = 75°C	25	A
I _{FSM}	Surge Forward Current	T _j = 25°C, t = 50Hz(10ms), V _R = 0V	300	A
I ² t	Circuit Fusing Consideration	t = 10ms T _j = 25°C	450	A ² s
V _{ISO}	Isolation Breakdown Voltage	AC 50Hz/60Hz; R.M.S; 1min	2000	V
T _j	Operating Junction Temperature		-40 to +150	°C
T _{stg}	Storage Temperature		-40 to +125	°C
M _s	Mounting Torque	To Heatsink(M5)	2.5~3	N·m
Weight	Module (Approximately)		20	g

Thermal Characteristics

Symbol	Item	Conditions	Values	Unit
R _{th(j-c)}	Thermal Impedance, Max	Junction to Case(Per Total)	1.6	°C/W
		Junction to Case(Per Diode)	6.4	°C/W

Electrical Characteristics

Symbol	Item	Conditions	Values			Unit
			Min.	Typ.	Max.	
V _{FM}	Forward Voltage Drop, Max	T _j = 25°C I _F = 12.5A	—	—	1.1	V
I _{RRM}	Repetitive Peak Reverse Current, Max	T _j = 25°C V _R = V _{RRM}	—	—	0.1	mA
		T _j = 150°C V _R = V _{RRM}	—	—	3	
V _{T0}	Threshold Voltage, for power loss calculation only	T _j = 125°C	0.75			V
r _T	Slope Resistance, for power loss calculation only	T _j = 125°C	5.1			mΩ

Performance Curves

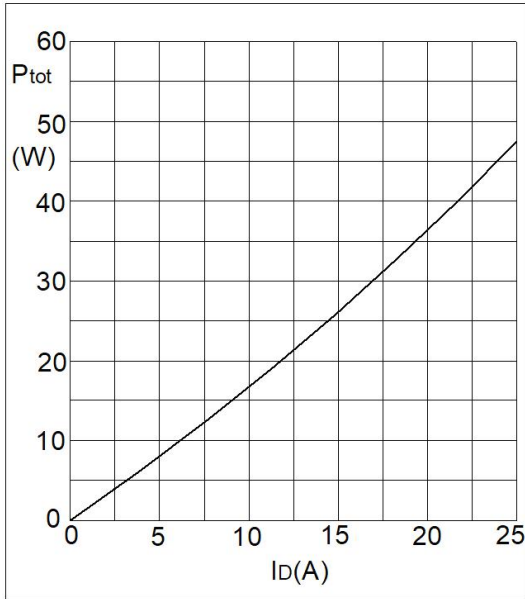


Fig1. Power Dissipation

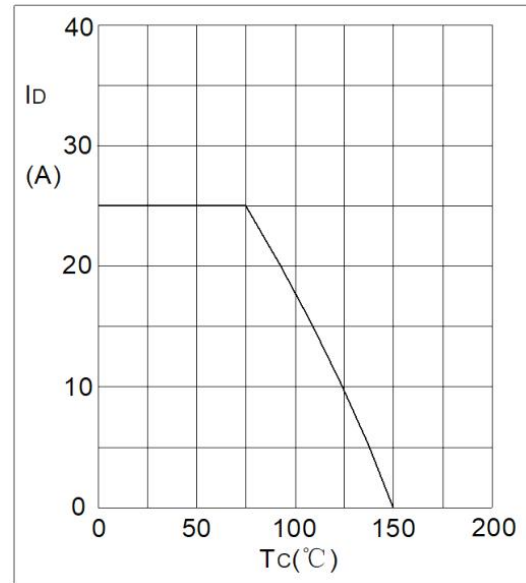


Fig2. Forward Current Derating Curve

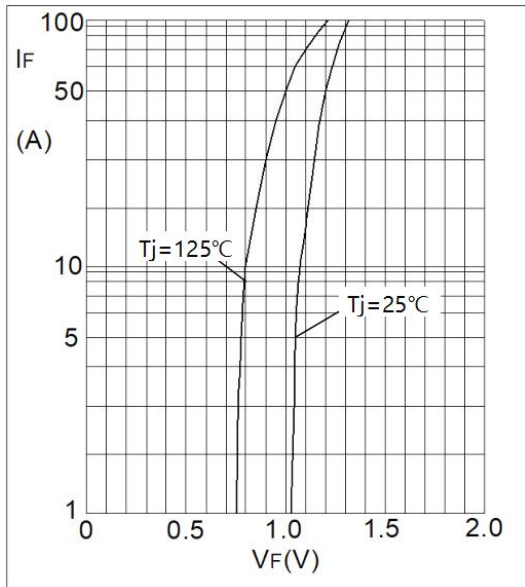


Fig3. Forward Characteristics

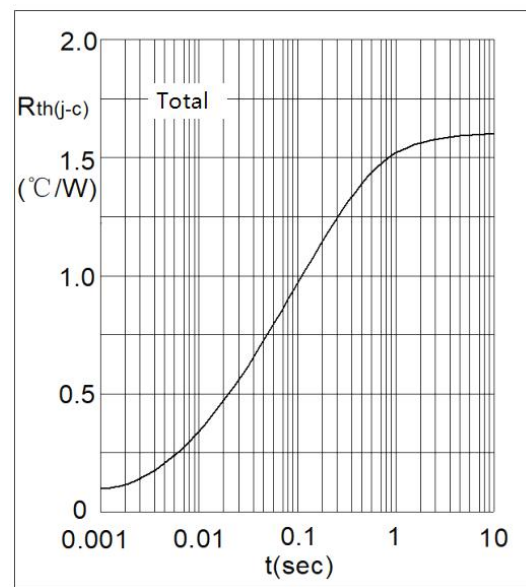


Fig4. Transient Thermal impedance

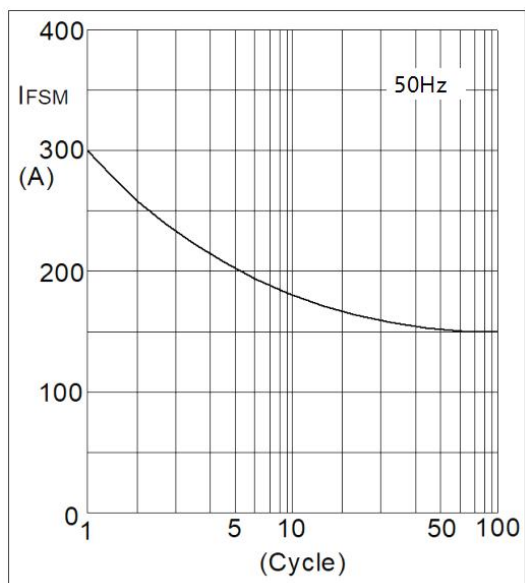
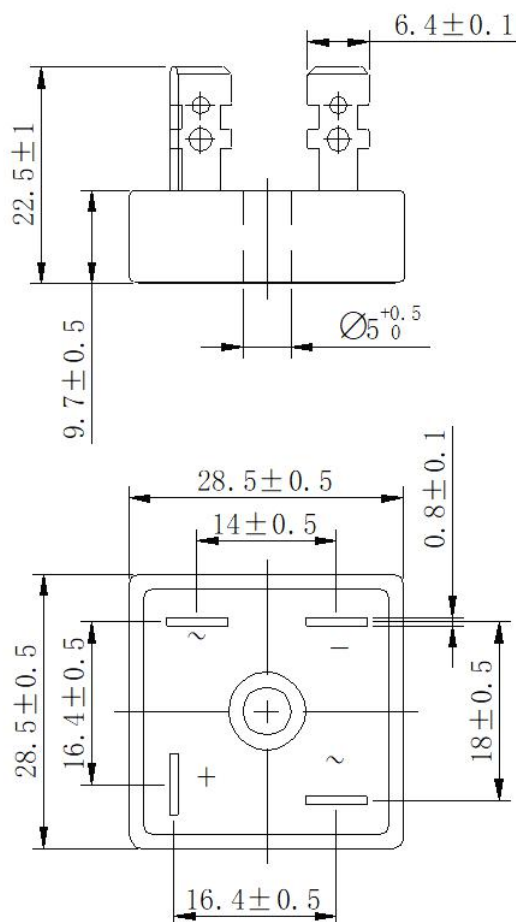


Fig5. Max Non-Repetitive Forward Surge Current

Package Outline Information

CASE: BR



Dimensions in mm

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