

Three Phase Rectifier Bridge

V_{RRM} 800 to 1600V
I_D 35 Amp

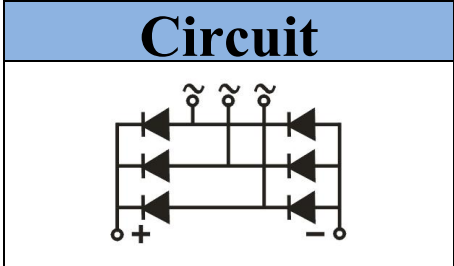


Features

- 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}
MT3508G	800V	900V
MT3510G	1000V	1100V
MT3512G	1200V	1300V
MT3516G	1600V	1700V

Maximum Ratings

Symbol	Item	Conditions	Values	Unit
I _D	Output Current	Three Phase, Full Wave T _c = 85°C	35	A
I _{FSM}	Surge Forward Current	T _j = 25°C, t = 50Hz(10ms), V _R = 0V	400	A
I ² t	Circuit Fusing Consideration	t = 10ms T _j =25°C	800	A ² s
V _{ISO}	Isolation Breakdown Voltage	AC 50Hz/60Hz; R.M.S; 1min	2500	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)	0.85	°C/W
		Junction to Case(Per Diode)	5.1	°C/W

Electrical Characteristics

Symbol	Item	Conditions	Values			Unit
			Min.	Typ.	Max.	
V _{FM}	Forward Voltage Drop, Max	T _j = 25°C I _F = 17.5A	—	—	1.18	V
I _{RRM}	Repetitive Peak Reverse Current, Max	T _j = 25°C V _R = V _{RRM}	—	—	5	uA
		T _j = 150°C V _R = V _{RRM}	—	—	3	mA
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	10			mΩ

Performance Curves

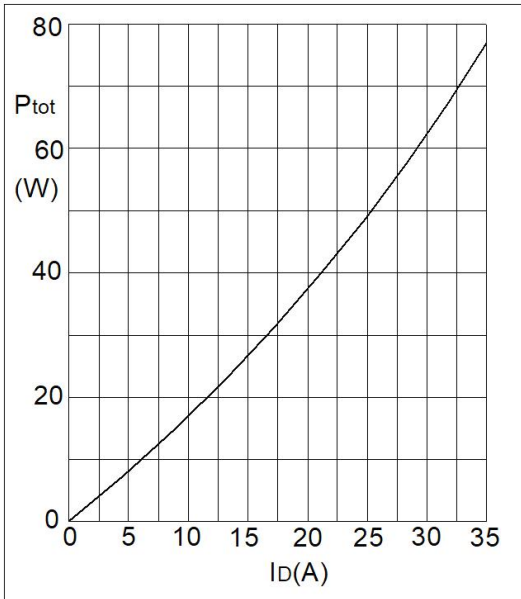


Fig1. Power Dissipation

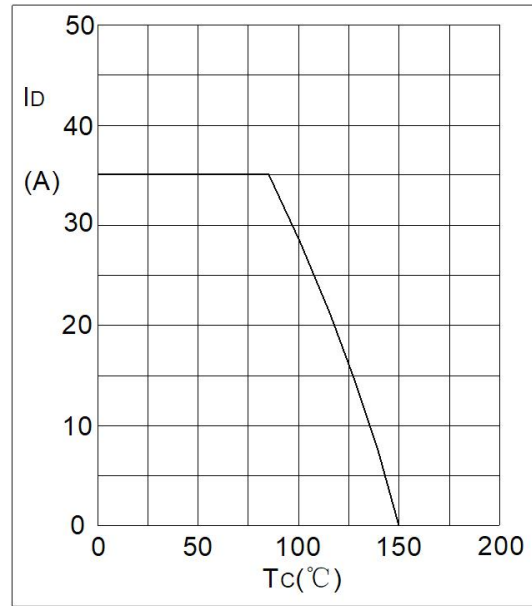


Fig2. Forward Current Derating Curve

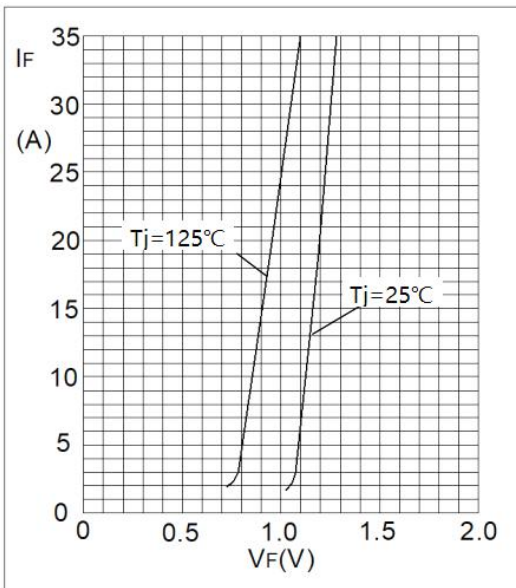


Fig3. Forward Characteristics

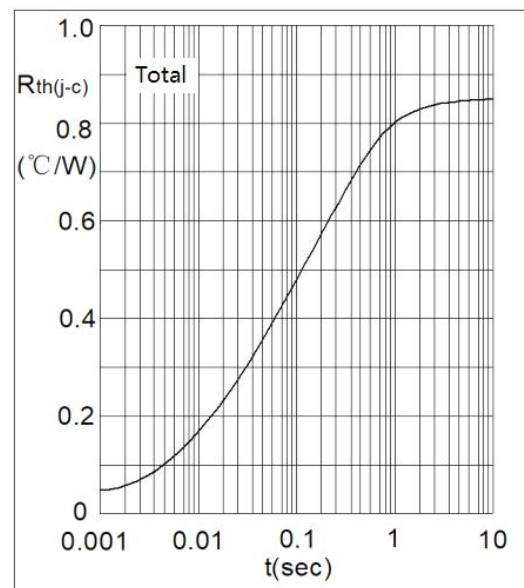


Fig4. Transient Thermal impedance

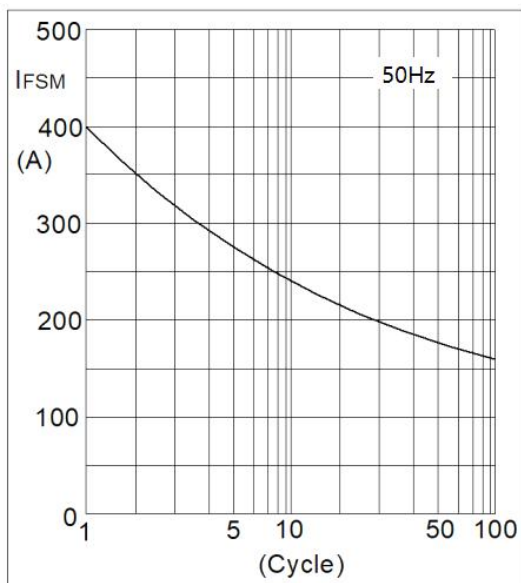
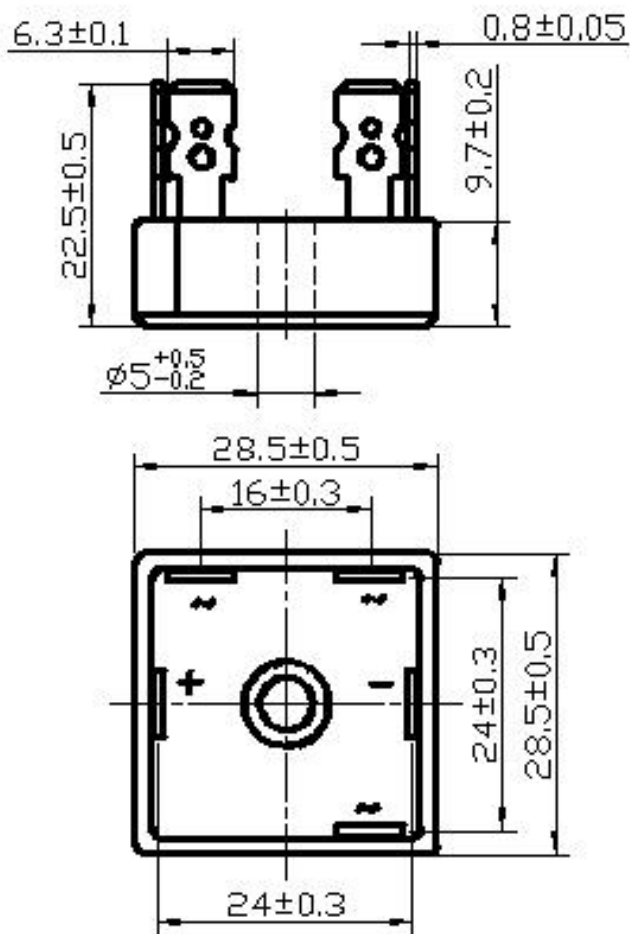


Fig5. Max Non-Repetitive Forward Surge Current

Package Outline Information

CASE: MT-G



Dimensions in mm

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