

## Three Phase Bridge Rectifier

### Features

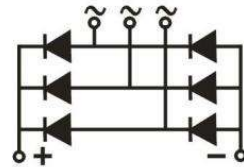
- Aluminum oxide DBC
- Glass passivated chip
- Very low forward voltage drop
- Low thermal resistance
- High thermal conductivity
- Reverse Voltage : 1200 to 2000V
- Forward Current : 60A



**MT**

### 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	VRRM	VRSM
MT6012	1200V	1300V
MT6016	1600V	1700V
MT6018	1800V	1900V
MT6020	2000V	2100V

### Maximum Ratings

Item	Conditions	Symbol	Values	Unit
Output Current	Three Phase, Full Wave $T_c=100^\circ\text{C}$	$I_D$	60	A
Surge Forward Current	$T_j=25^\circ\text{C}$ , $t=50\text{Hz}(10\text{ms})$ , $V_R=0\text{V}$	$I_{FSM}$	540	A
Circuit Fusing Consideration	$t=10\text{ms}$ $T_j=25^\circ\text{C}$	$I^2t$	1450	$\text{A}^2\text{s}$
Isolation Breakdown Voltage	AC 50Hz/60Hz; R.M.S; 1min	$V_{ISO}$	2500	V
Operating Junction Temperature		$T_j$	-40 to +150	$^\circ\text{C}$
Storage Temperature		$T_{stg}$	-40 to +125	$^\circ\text{C}$
Mounting Torque	To Heatsink(M5)	$M_s$	$2\pm 15\%$	N·m
Module (Approximately)		Weight	25	g

### Thermal Characteristics

Item	Conditions	Symbol	Values	Unit
Thermal Impedance, Max	Junction to Case(Per Total)	$R_{th(j-c)}$	0.3	$^{\circ}C/W$
	Junction to Case(Per Diode)		1.8	$^{\circ}C/W$

### Electrical Characteristics

Item	Conditions	Symbol	Values			Unit
			Min	Typ	Max	
Forward Voltage Drop, Max	$T_j = 25^{\circ}C, I_F = 30A$	$V_{FM}$	-	-	1.18	V
Repetitive Peak Reverse Current, Max	$T_j = 25^{\circ}C, V_R = V_{RRM}$	$I_{RRM}$	-	-	0.1	mA
	$T_j = 150^{\circ}C, V_R = V_{RRM}$		-	-	5	
Threshold Voltage, for power loss calculation only	$T_j = 125^{\circ}C$	$V_{T0}$	0.8			V
Slope Resistance, for power loss calculation only	$T_j = 125^{\circ}C$	$r_T$	10			m $\Omega$

**Ratings and Characteristic Curves ( $T_A=25^{\circ}\text{C}$  unless otherwise noted)**

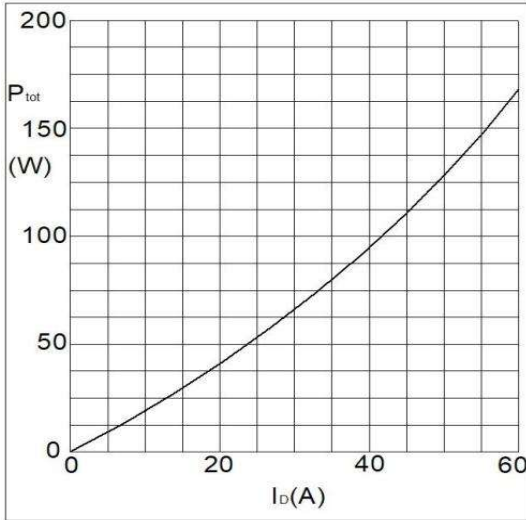


Fig1. Power Dissipation

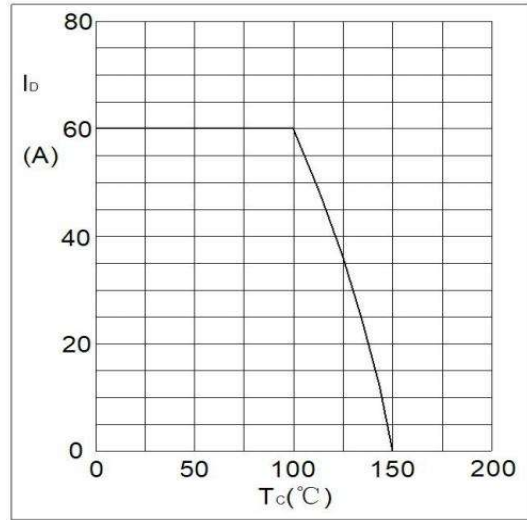


Fig2. Forward Current Derating Curve

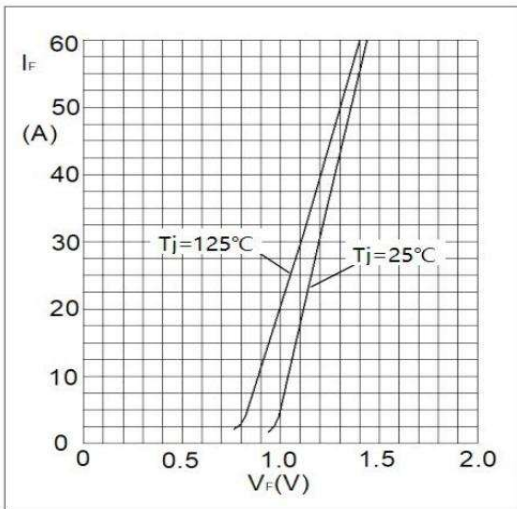


Fig3. Forward Characteristics

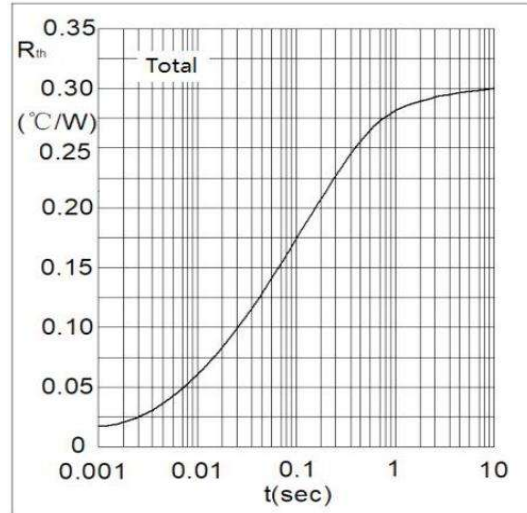


Fig4. Transient Thermal Impedance

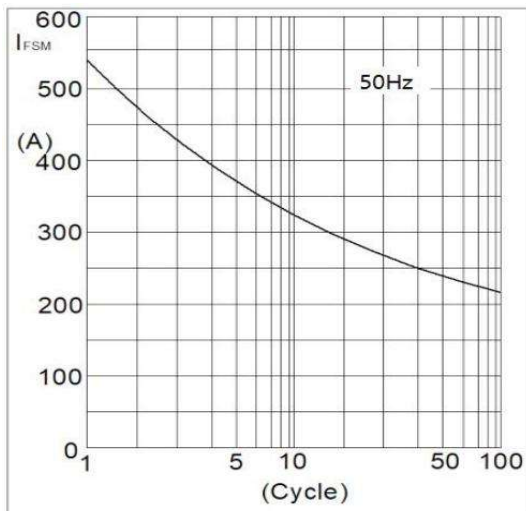
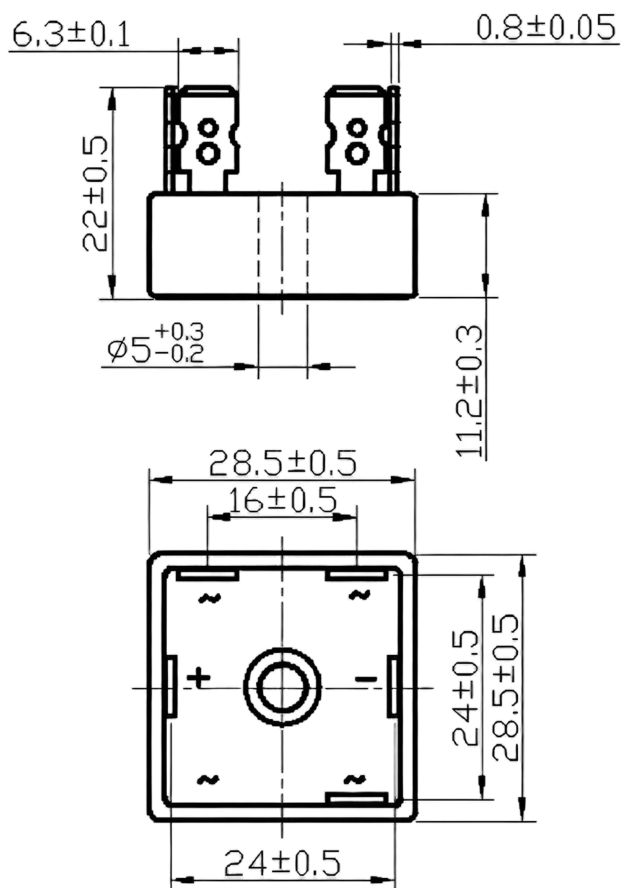


Fig5. Max Non-Repetitive Forward Surge Current

### Package Outlines (Dimensions in mm)

Plastic surface mounted package(MT)



**\*Important Usage Information and Disclaimer**

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