

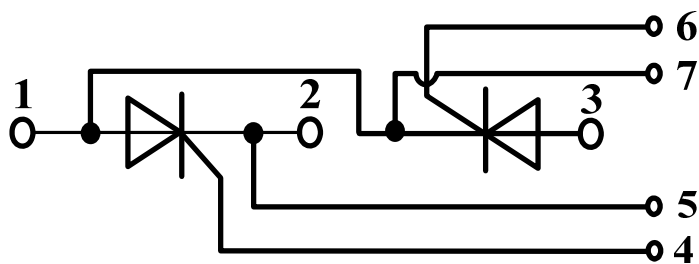
### Features

- Lead Free Finish/RoHS Compliant (NOTE 1)("P" Suffix designates RoHS Compliant. See ordering information)
- International standard package
- Heat transfer through aluminum oxide DBC ceramic isolated metal baseplate
- Glass passivated chip
- Simple Mounting

### Applications

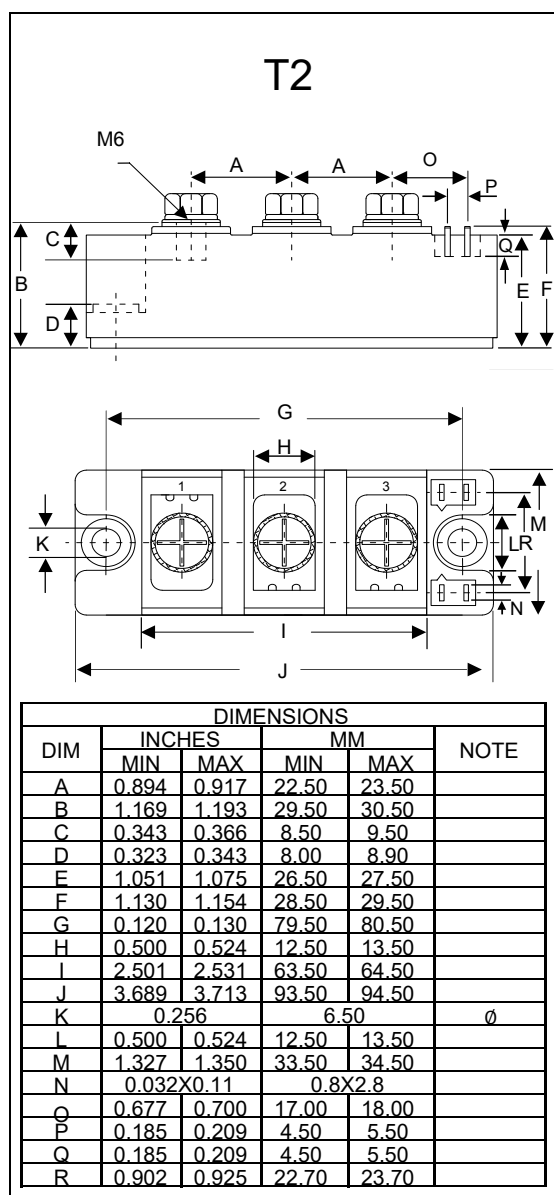
- Power Converters
- Lighting Control
- DC Motor Control and Drives
- Heat and temperature control

MCC Part Number	V <sub>RRM</sub>	V <sub>RSM</sub>
MT200C08T2	800V	900V
MT200C12T2	1200V	1300V
MT200C16T2	1600V	1700V
MT200C18T2	1800V	1900V



Note:1. High Temperature Solder Exemptions Applied, See EU Directive Annex 7a.

## 200 Amp THYRISTOR MODULE 800~1800 Volts



### Maximum Ratings

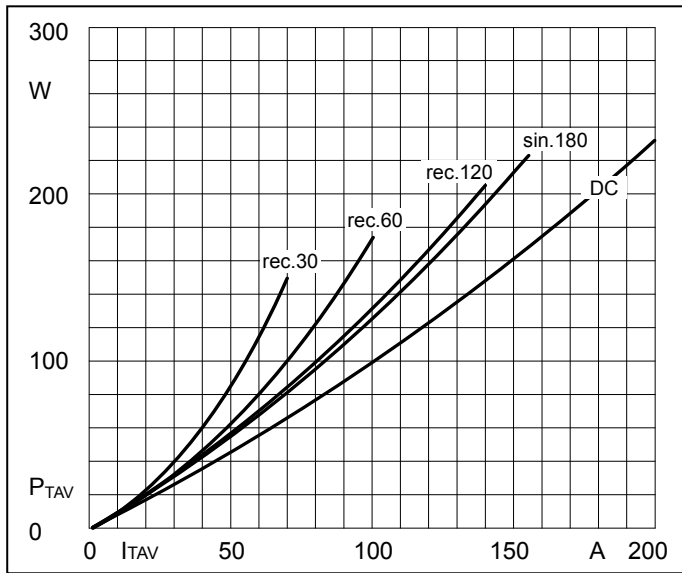
Symbol	Conditions	Values	Units
$I_{TAV}$	Sine 180°; $T_c=85^\circ\text{C}$	200	A
$I_{TSM}$	$T_{VJ}=45^\circ\text{C}$ $t=10\text{ms}$ , sine $T_{VJ}=125^\circ\text{C}$ $t=10\text{ms}$ , sine	5500 5000	A
$i^2t$	$T_{VJ}=45^\circ\text{C}$ $t=10\text{ms}$ , sine $T_{VJ}=125^\circ\text{C}$ $t=10\text{ms}$ , sine	151000 125000	A <sup>2</sup> s
Visol	a.c.50HZ;r.m.s.;1min	3000	V
$T_{vj}$		-40 to 130	°C
$T_{stg}$		-40 to 125	°C
$M_t$	To terminals(M6)	$3 \pm 15\%$	Nm
$M_s$	To heatsink(M6)	$5 \pm 15\%$	Nm
$di/dt$	$T_{VJ}=T_{VJM}$ , $2/3V_{DRM}$ , $I_G=500\text{mA}$ $Tr<0.5\mu\text{s}$ , $tp>6\mu\text{s}$	200	A/us
$dv/dt$	$T_J=T_{VJM}$ , $2/3V_{DRM}$ , linear voltage rise	1000	V/us
a	Maximum allowable acceleration	50	m/s <sup>2</sup>
Weight	Module(Approximately)	165	g

### Thermal Characteristics

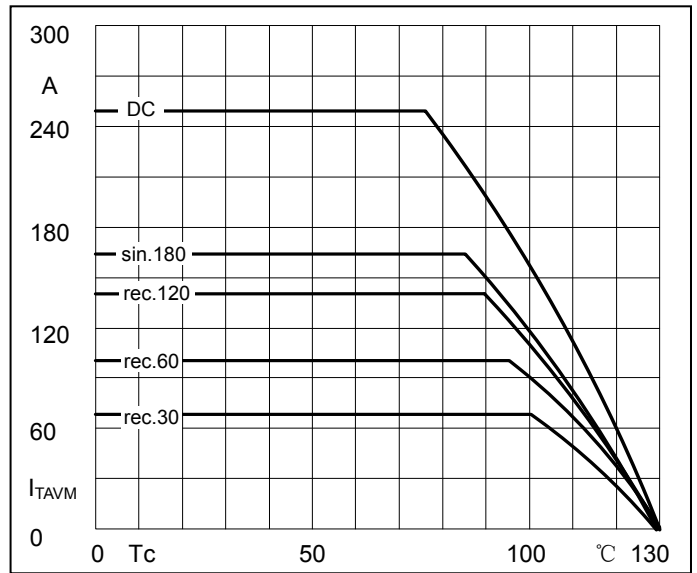
Symbol	Conditions	Values	Units
$R_{th(j-c)}$	Cont.; thyristor / per module	0.16/0.08	°C/W
$R_{th(c-s)}$	per thyristor / per module	0.1/0.05	°C/W

Symbol	Conditions	Values			Units
$V_{TM}$	$T=25^\circ\text{C}$ $I_{TM}=620\text{A}$			1.7	V
$I_{RRM}/I_{DRM}$	$T_{VJ}=T_{VJM}$ , $V_R=V_{RRM}$ , $V_D=V_{DRM}$			40	mA
$V_{TO}$	For power-loss calculations only ( $T_{VJ}=125^\circ\text{C}$ )			0.85	V
$r_T$	$T_{VJ}=T_{VJM}$			1.5	mΩ
$V_{GT}$	$T_{VJ}=25^\circ\text{C}$ , $V_D=6\text{V}$			3	V
$I_{GT}$	$T_{VJ}=25^\circ\text{C}$ , $V_D=6\text{V}$			200	mA
$V_{GD}$	$T_{VJ}=125^\circ\text{C}$ , $V_D=2/3V_{DRM}$			0.25	V
$I_{GD}$	$T_{VJ}=125^\circ\text{C}$ , $V_D=2/3V_{DRM}$			10	mA
$I_L$	$T_{VJ}=25^\circ\text{C}$ , $R_G=33\ \Omega$		300	1000	mA
$I_H$	$T_{VJ}=25^\circ\text{C}$ , $V_D=6\text{V}$		150	400	mA
tgd	$T_{VJ}=25^\circ\text{C}$ , $I_G=1\text{A}$ , $di_G/dt=1\text{A/us}$		1		us
tq	$v_J=T_{VJM}$		100		us

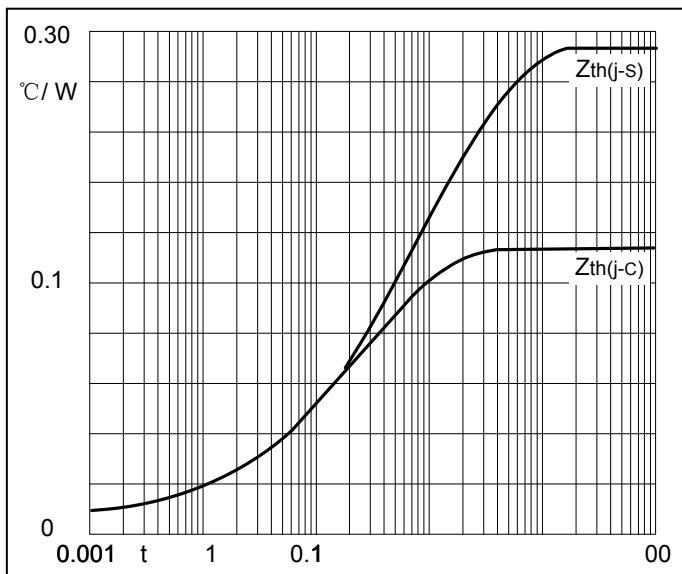
**Performance Curves**



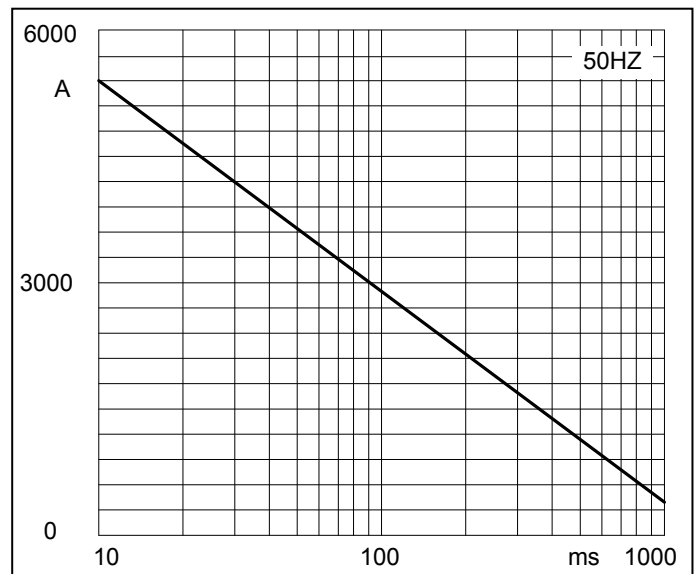
**Fig1. Power dissipation**



**Fig2. Forward Current Derating Curve**

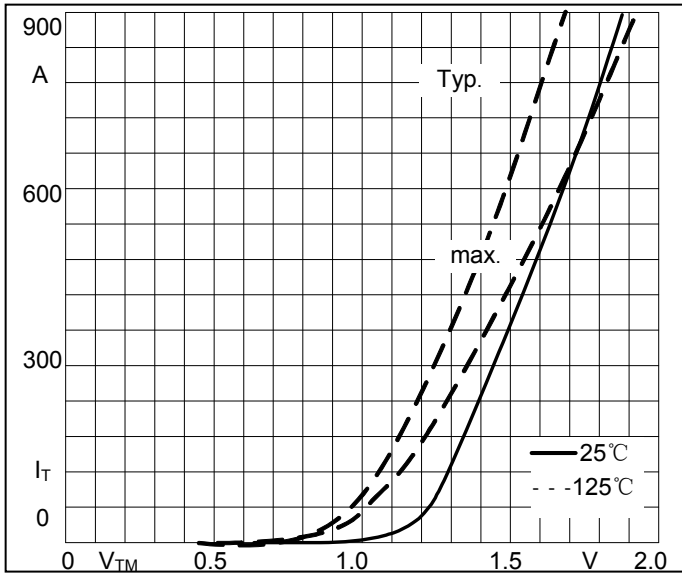


**Fig3. Transient thermal impedance**

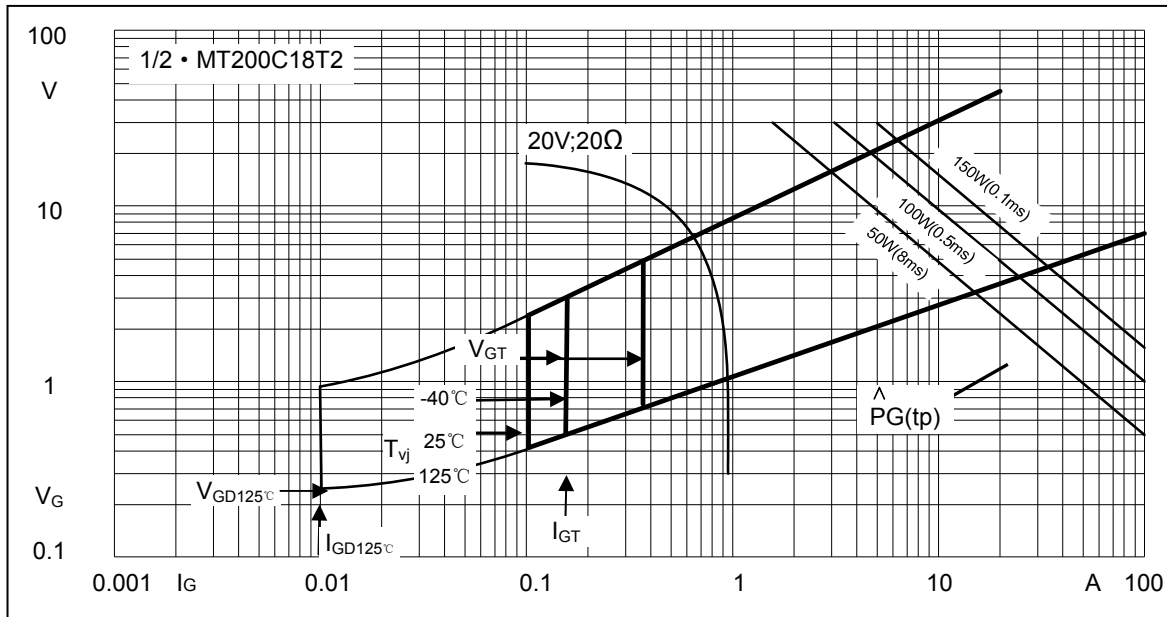


**Fig4. Max Non-Repetitive Forward Surge Current**

**Performance Curves**



**Fig5. Forward Characteristics**



**Fig6. Gate trigger Characteristics**

## Ordering Information

Device	Packing
Part Number-BP	Bulk: 8PCS/BOX ;80PCS/CTN

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