



Micro Commercial Components



Micro Commercial Components
 20736 Marilla Street Chatsworth
 CA 91311
 Phone: (818) 701-4933
 Fax: (818) 701-4939

MT200C08T2
MT200C12T2
MT200C16T2
MT200C18T2

Features

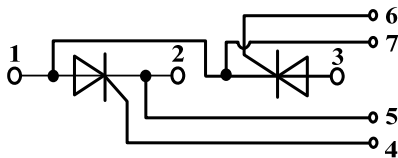
- Lead Free Finish/RoHS Compliant (NOTE 1) ("P" Suffix designates RoHS Compliant. See ordering information)
- International standard package
- Heat transfer through aluminum oxide DBC ceramic isolated metal baseplate
- Glass passivated chip
- Simple Mounting

Applications

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



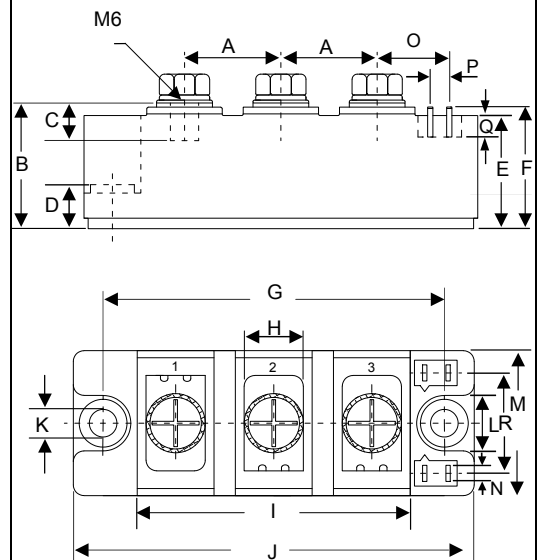
Circuit



200 Amp
THYRISTOR MODULE

800~1800 Volts

T2



DIMENSIONS

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.894	0.917	22.50	23.50	
B	1.169	1.193	29.50	30.50	
C	0.343	0.366	8.50	9.50	
D	0.323	0.343	8.00	8.90	
E	1.051	1.075	26.50	27.50	
F	1.130	1.154	28.50	29.50	
G	0.120	0.130	79.50	80.50	
H	0.500	0.524	12.50	13.50	
I	2.501	2.531	63.50	64.50	
J	3.689	3.713	93.50	94.50	
K	0.256		6.50		∅
L	0.500	0.524	12.50	13.50	
M	1.327	1.350	33.50	34.50	
N	0.032X0.11		0.8X2.8		
O	0.677	0.700	17.00	18.00	
P	0.185	0.209	4.50	5.50	
Q	0.185	0.209	4.50	5.50	
R	0.902	0.925	22.70	23.70	

Module Type

TYPE	VRRM	VRSM
MT200C08T2	800V	900V
MT200C12T2	1200V	1300V
MT200C16T2	1600V	1700V
MT200C18T2	1800V	1900V

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

Thermal Characteristics

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

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	$\text{m}\Omega$
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
tg d	$T_{VJ}=25^\circ\text{C}$, $I_G=1\text{A}$, $di_G/dt=1\text{A}/\mu\text{s}$	1		μs
tq	$V_J=T_{VJM}$	100		μs

Performance Curves

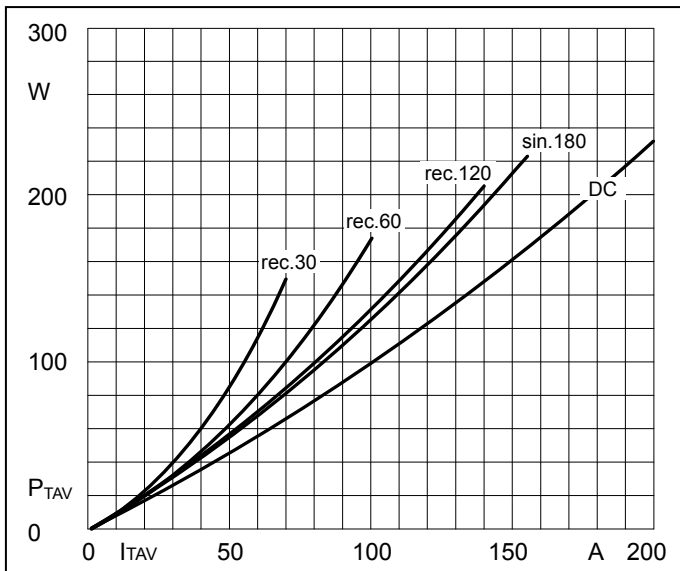


Fig1. Power dissipation

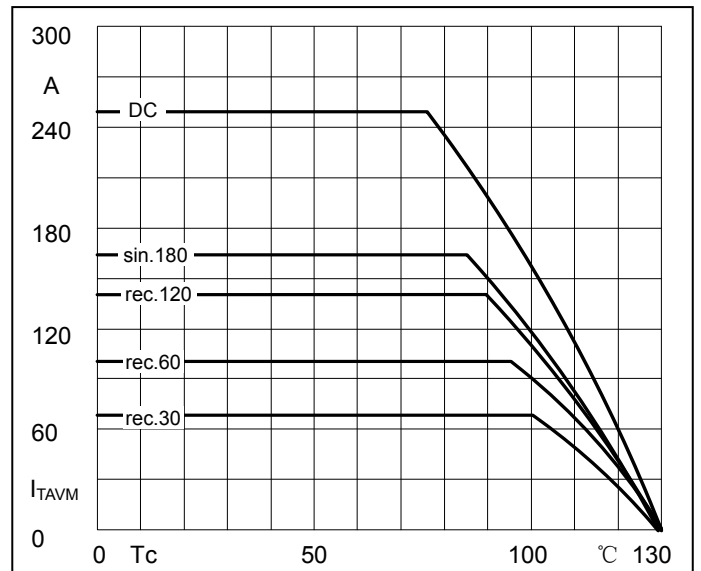


Fig2. Forward Current Derating Curve

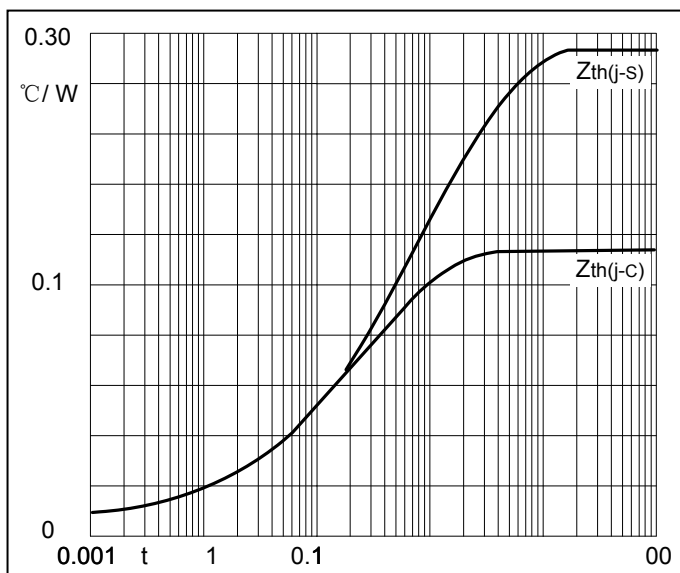


Fig3. Transient thermal impedance

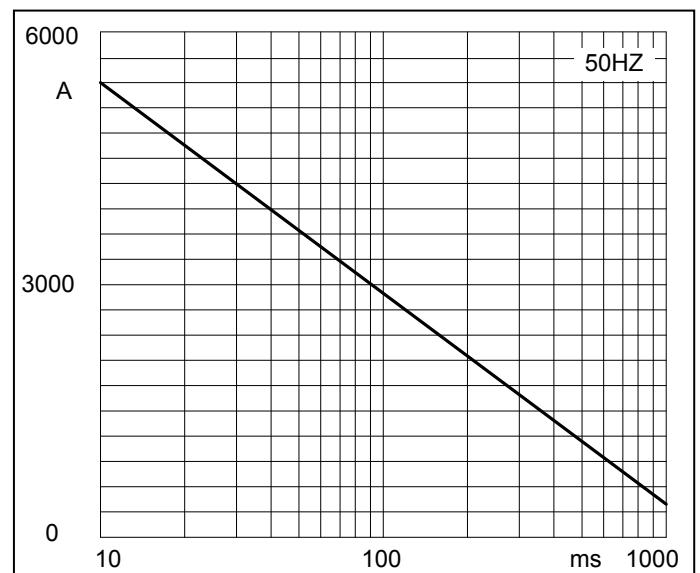


Fig4. Max Non-Repetitive Forward Surge Current

Performance Curves

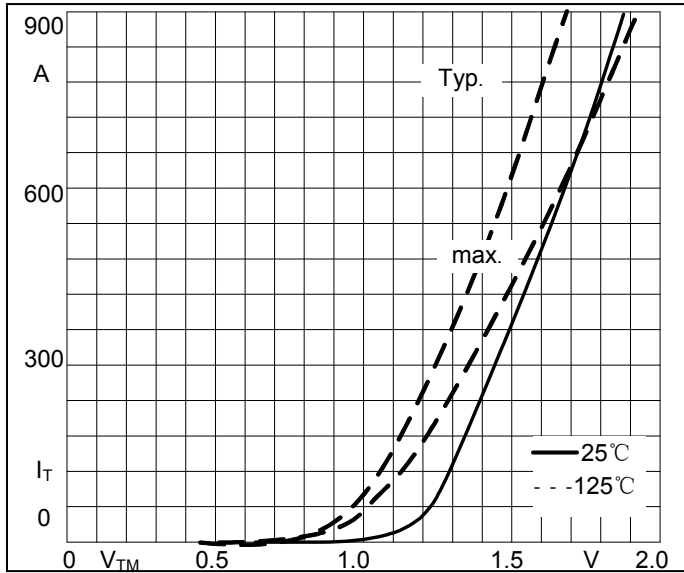


Fig5. Forward Characteristics

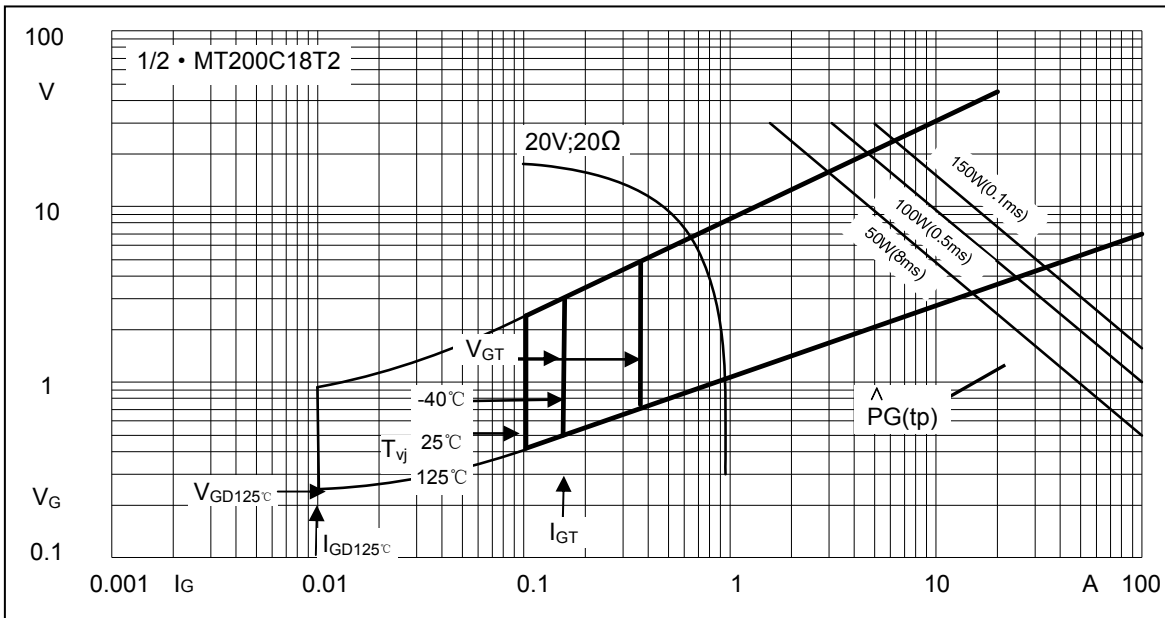


Fig6. Gate trigger Characteristics



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Ordering Information :

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

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