

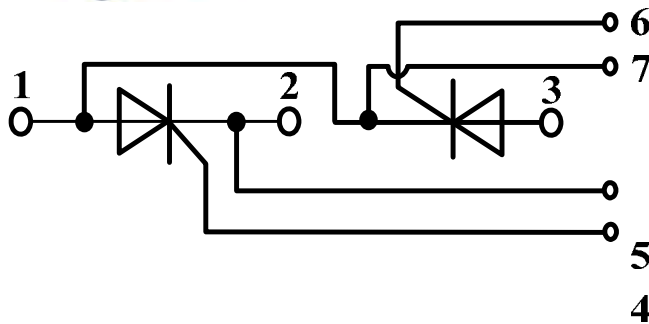
**Features**

- 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**

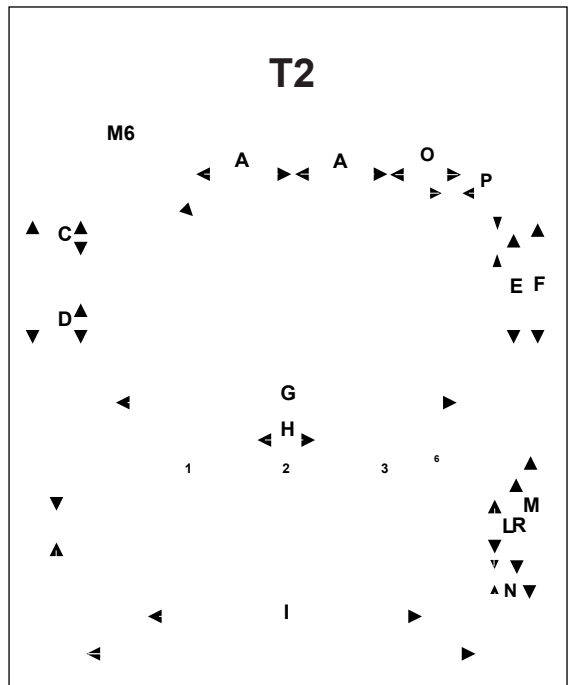
- Power Converters
- Lighting Control
- DC Motor Control and Drives
- Heat and temperature control

MCC Part Number	V <sub>RRM</sub>	V <sub>RSM</sub>
MT130C16T2	1600V	1700V



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

**130 Amp  
THYRISTOR  
MODULE  
1600 Volts**



DIM	INCHES		MM		NOTE
	MIN	MA	MIN	MA	
A	0.8	0.1	22.0	23.0	
	1.16	1.13	29.0	30.0	
C	0.33	0.366	8.0	.0	
D	0.323	0.33	8.00	8.0	
E	1.01	1.0	26.0	2.0	
F	1.130	1.1	28.0	2.0	
G	0.120	0.130	.0	80.0	
H	0.00	0.2	12.0	13.0	
I	2.01	2.31	63.0	6.0	
	3.68	3.13	3.0	.0	
	0.26		6.0		
L	0.00	0.2	12.0	13.0	
M	1.32	1.30	33.0	3.0	
N	0.032	0.11	0.8	2.8	
O	0.6	0.00	1.00	18.00	
P	0.18	0.20	.0	.0	
	0.18	0.20	.0	.0	
R	0.02	0.2	22.0	23.0	

### Maximum Ratings

Symbol	Conditions	Values	Units
$I_{TAV}$	Sine 180°; $T_c=85^\circ\text{C}$	130	A
$I_{TSM}$	$T_{VJ}=45^\circ\text{C}$ t=10ms, sine	4700	A
	$T_{VJ}=125^\circ\text{C}$ t=10ms, sine	4000	
$i^2t$	$T_{VJ}=45^\circ\text{C}$ t=10ms, sine	110000	A2s
	$T_{VJ}=125^\circ\text{C}$ t=10ms, sine	80000	
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/us
dv/dt	$T_J = T_{VJM}$ , $2/3V_{DRM}$ , linear voltage rise	1000	V/us
a	Maximum allowable acceleration	50	$\text{m/s}^2$
Weight	Module(Approximately)	165	g

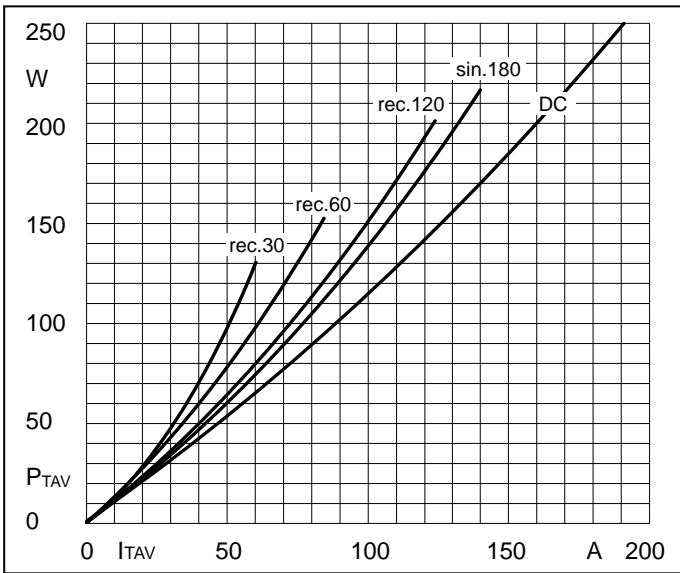
### Thermal Characteristics

Symbol	Conditions	Values	Units
$R_{th(j-c)}$	Cont.;per thyristor / per module	0.18/0.09	$^\circ\text{C/W}$
$R_{th(c-s)}$	per thyristor / per module	0.1/0.05	$^\circ\text{C/W}$

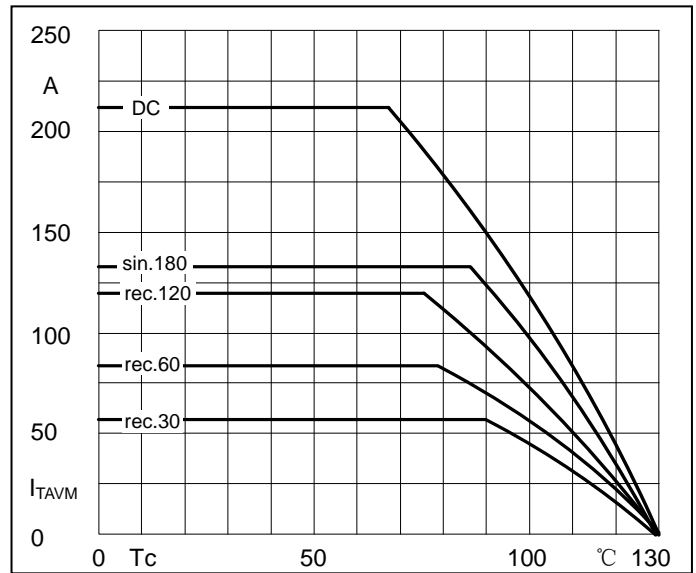
### Electrical Characteristics

Symbol	Conditions	Values			Units
$V_{TM}$	$T=25^\circ\text{C}$ $I_{TM}=500\text{A}$			1.8	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 ( $T_{VJ}=125^\circ\text{C}$ )			1	V
$r_T$	$T_{VJ}=T_{VJM}$			1.6	m $\Omega$
$V_{GT}$	$T_{VJ}=25^\circ\text{C}$ , $V_D=6\text{V}$			3	V
$I_{GT}$	$T_{VJ}=25^\circ\text{C}$ , $V_D=6\text{V}$			150	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

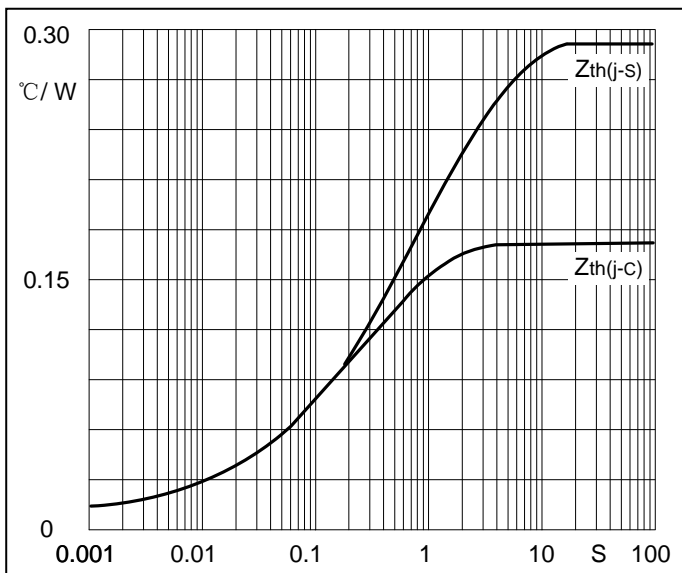
**Performance Curves**



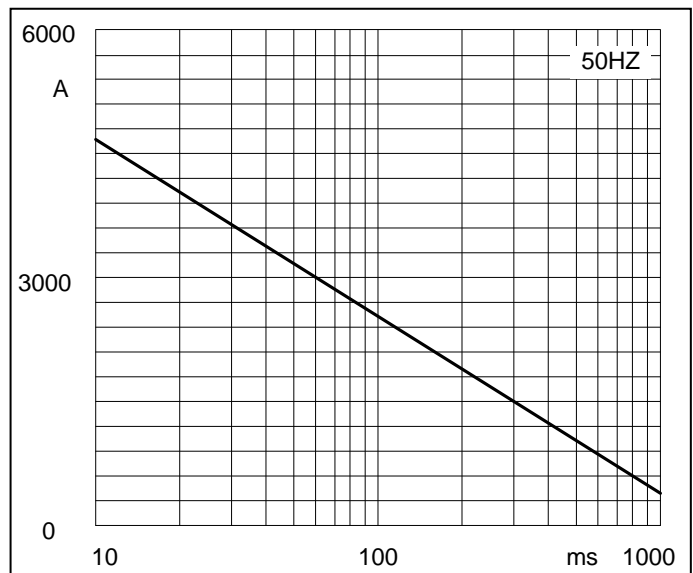
**Fig1. Power dissipation**



**Fig2. Forward Current Derating Curve**

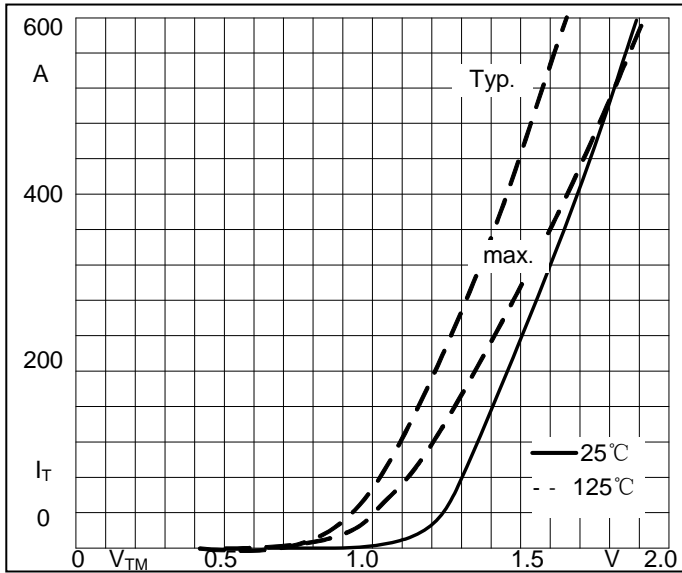


**Fig3. Transient thermal impedance**

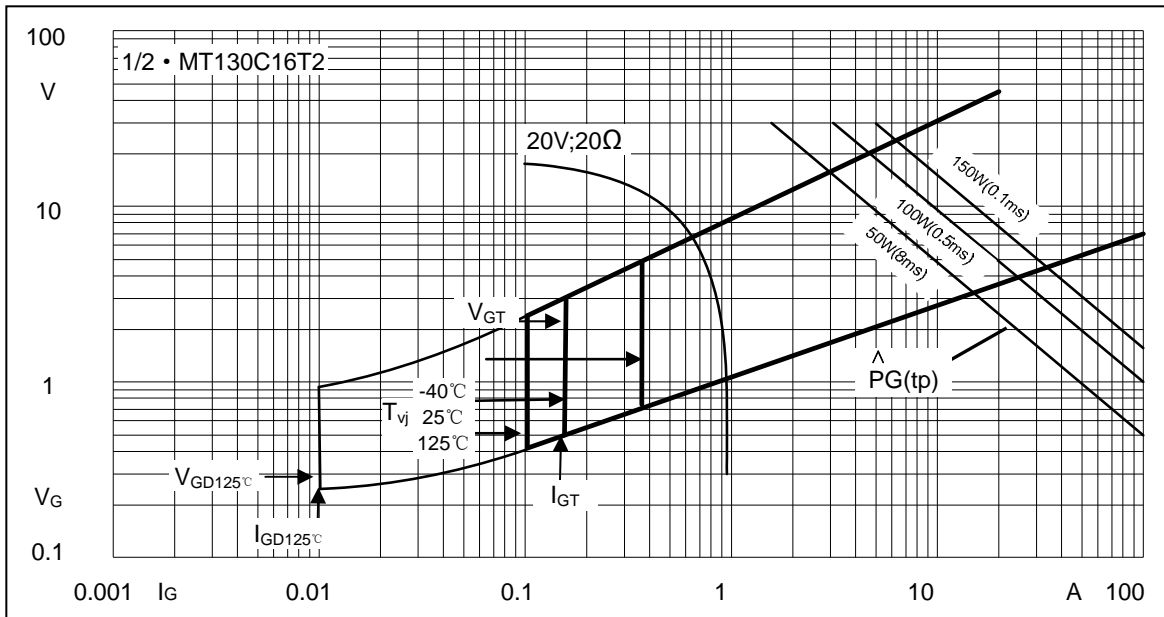


**Fig4. Max Non-Repetitive Forward Surge Current**

**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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