Features

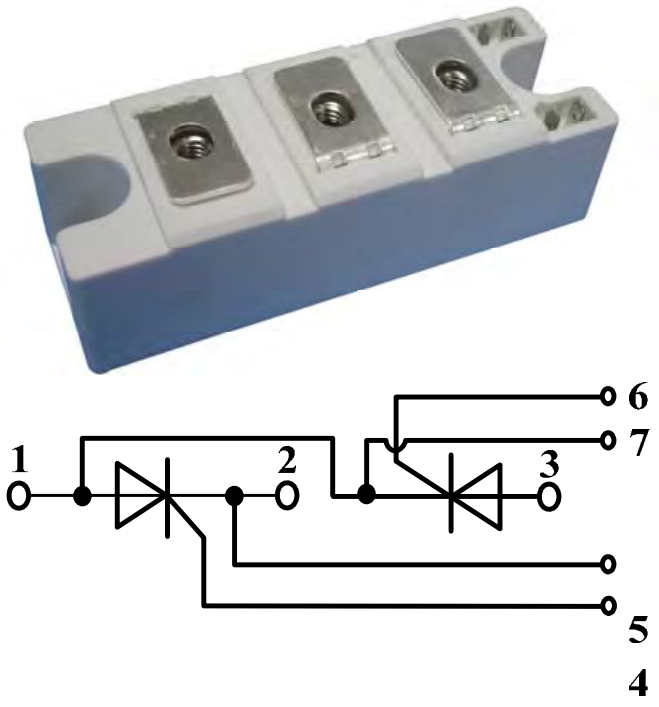
- Lead Free Finish/RoHS Compliant (NOTE 1)("P" Suffix designates RoHS Compliant. See ordering information)
- International standard package
- Heat transfer through aluminum oxide DBC ceramic isolated metal baseplate
- Glass passivated chip
- Simple Mounting

130 Amp THYRISTOR MODULE 1600 Volts

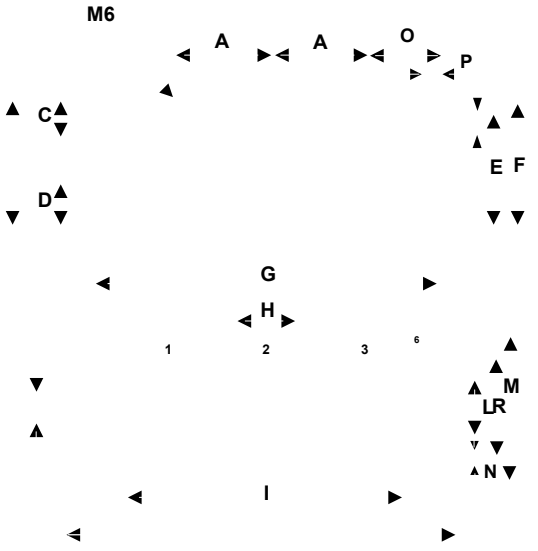
Applications

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

MCC Part Number	V_{RRM}	V_{RSM}
MT130C16T2	1600V	1700V



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



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MA	MIN	MA	
A	0.8	0. 1	22. 0	23. 0	
	1.16	1.1 3	2 . 0	30. 0	
C	0.3 3	0.366	8. 0	. 0	
D	0.323	0.3 3	8.00	8. 0	
E	1.0 1	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	
	0.2 6		6. 0		
L	0. 00	0. 2	12. 0	13. 0	
M	1.32	1.3 0	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°;Tc=85℃	130	A
I_{TSM}	T_{VJ}=45℃ t=10ms, sine T_{VJ}=125℃ t=10ms, sine	4700 4000	A
i^2t	T_{VJ}=45℃ t=10ms, sine T_{VJ}=125℃ t=10ms, sine	110000 80000	A2s
Visol	a.c.50HZ;r.m.s.;1min	3000	V
Tvj		-40 to 130	℃
Tstg		-40 to 125	℃
Mt	To terminals(M6)	3±15%	Nm
Ms	To heatsink(M6)	5±15%	Nm
di/dt	T_{VJ}= T_{VJM} , 2/3V_{DRM} ,I_G =500mA Tr<0.5us,tp>6us	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^2
Weight	Module(Approximately)	165	g

Thermal Characteristics

Symbol	Conditions	Values	Units
Rth(j-c)	Cont.;per thyristor / per module	0.18/0.09	℃/W
Rth(c-s)	per thyristor / per module	0.1/0.05	℃/W

Electrical Characteristics

Symbol	Conditions	Values			Units
V_{TM}	T=25℃ I_{TM} =500A			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℃)			1	V
r_T	T_{VJ} =T_{VJM}			1.6	mΩ
V_{GT}	T_{VJ} =25℃ , V_D =6V			3	V
I_{GT}	T_{VJ} =25℃ , V_D =6V			150	mA
V_{GD}	T_{VJ} =125℃ , V_D =2/3V_{DRM}			0.25	V
I_{GD}	T_{VJ} =125℃ , V_D =2/3V_{DRM}			10	mA
I_L	T_{VJ} =25℃ , R_G = 33 Ω		300	1000	mA
I_H	T_{VJ} =25℃ , V_D =6V		150	400	mA
tgd	T_{VJ} =25℃, I_G=1A, di_G/dt=1A/us		1		us
tq	$_{VJ}$ =T_{VJM}		100		us

Performance Curves

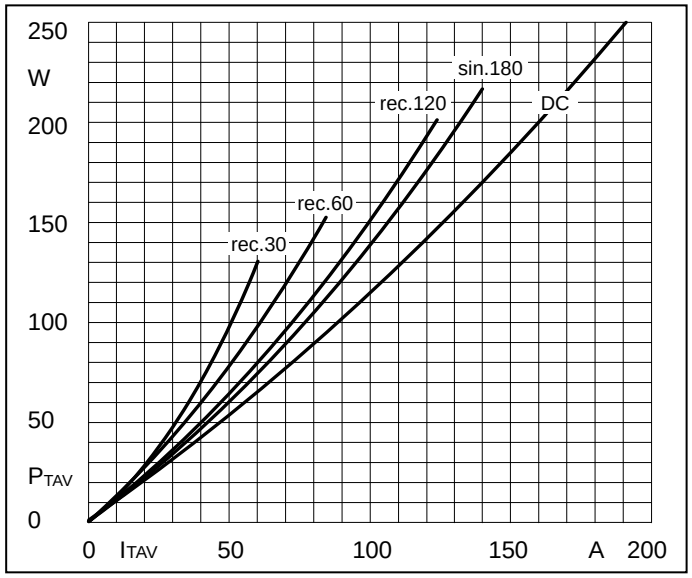


Fig1. Power dissipation

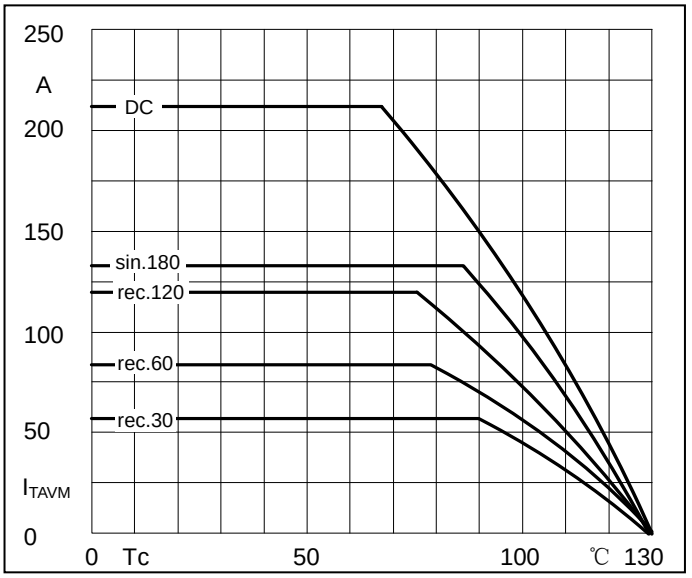


Fig2.Forward Current Derating Curve

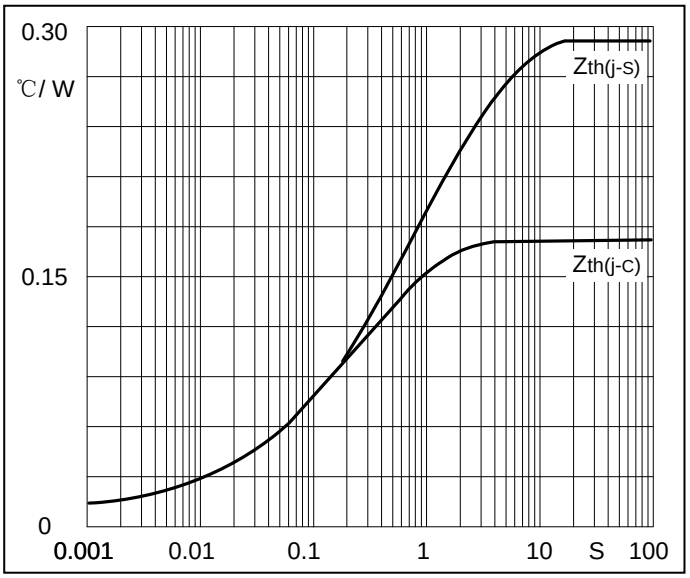


Fig3. Transient thermal impedance

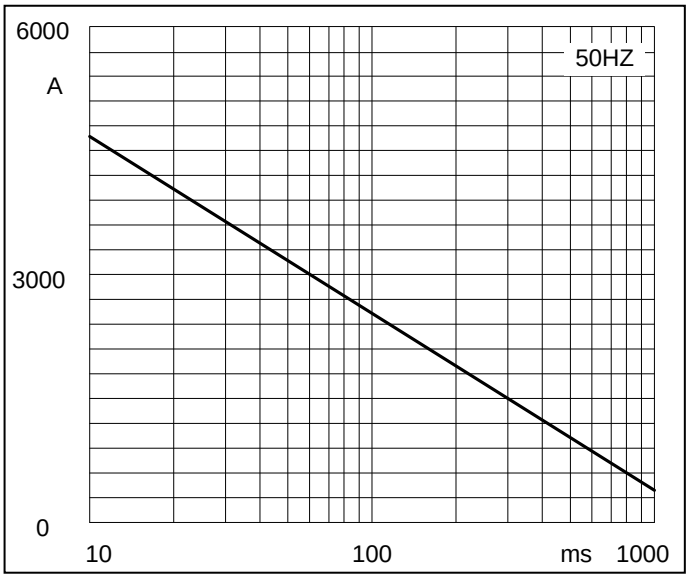


Fig4. Max Non-Repetitive Forward Surge Current

Performance Curves

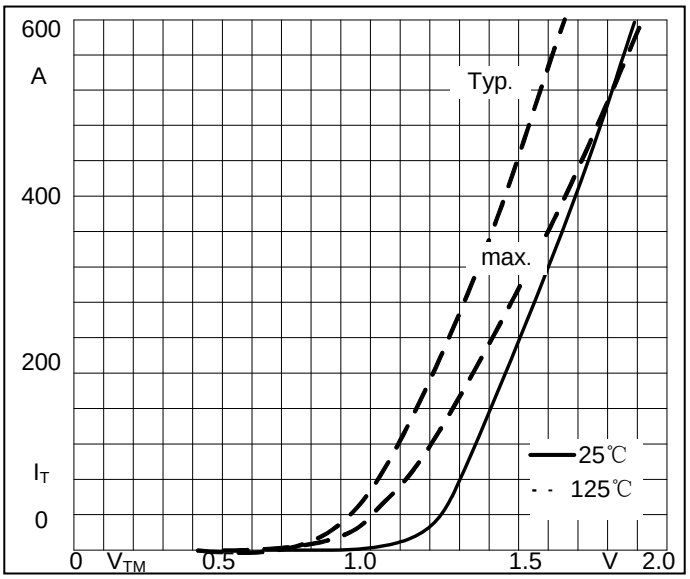


Fig5. Forward Characteristics

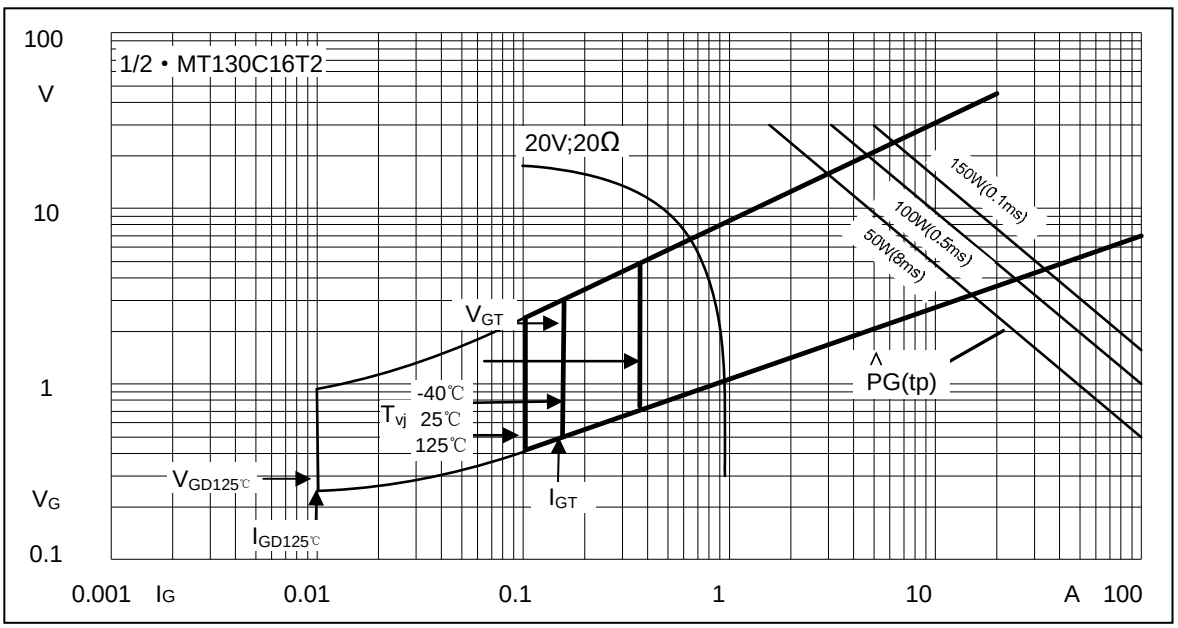


Fig6. Gate trigger Characteristics

Ordering Information

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