



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China





Micro Commercial Components



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

**MT60C08T1**  
**MT60C12T1**  
**MT60C16T1**  
**MT60C18T1**

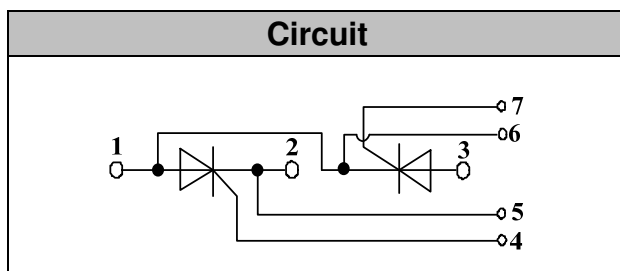
**60 Amp**  
**THYRISTOR MODULE**  
**800~1800 Volts**

## Features

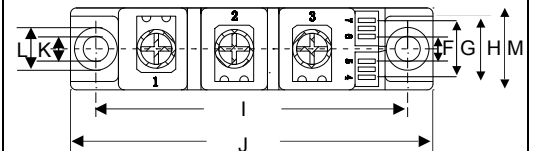
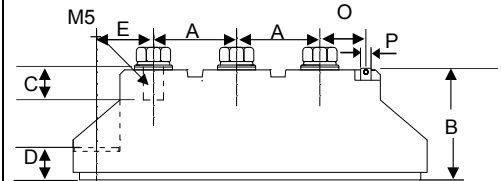
- Lead Free Finish/RoHS Compliant (NOTE 1) ("P" Suffix designates RoHS Compliant. See ordering information)
- International standard package
- Heat transfer through aluminum oxide DBC ceramic isolated metal baseplate
- Glass passivated chip
- Simple Mounting

## Applications

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



T1



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.776	.799	19.70	20.30	
B	1.169	1.193	29.70	30.30	
C	.343	.366	8.70	9.30	
D	.323	.346	8.20	8.80	
E	.602	.622	15.30	15.80	
F	.224	.248	5.70	6.30	
G	.539	.563	13.70	14.30	
H	.657	.681	16.70	17.30	
I	3.138	3.161	79.70	80.30	
J	3.650	3.673	92.70	93.30	
K		.256		6.50	∅
L	.421	.445	10.70	11.30	
M	.815	.839	20.70	21.30	
O	.579	.602	14.70	15.30	
P	0.11X0.032		2.8X0.8		

## Module Type

TYPE	VRRM	VRSM
MT60C08T1	800V	900V
MT60C12T1	1200V	1300V
MT60C16T1	1600V	1700V
MT60C18T1	1800V	1900V

## Maximum Ratings

Symbol	Conditions	Values	Units
$I_{TAV}$	Sine 180°; $T_c=85^\circ\text{C}$	60	A
$I_{TSM}$	$T_{VJ}=45^\circ\text{C}$ $t=10\text{ms}$ , sine	1500	A
	$T_{VJ}=125^\circ\text{C}$ $t=10\text{ms}$ , sine	1250	
$i^2t$	$T_{VJ}=45^\circ\text{C}$ $t=10\text{ms}$ , sine	11000	$\text{A}^2\text{s}$
	$T_{VJ}=125^\circ\text{C}$ $t=10\text{ms}$ , sine	8000	
Visol	a.c.50HZ;r.m.s.;1min	3000	V
$T_{vj}$		-40 to 125	$^\circ\text{C}$
$T_{stg}$		-40 to 125	$^\circ\text{C}$
Mt	To terminals(M5)	$3 \pm 15\%$	Nm
Ms	To heatsink(M6)	$5 \pm 15\%$	Nm
di/dt	$T_{VJ}=T_{VJM}$ , $2/3V_{DRM}$ , $I_G=500\text{mA}$ $Tr<0.5\mu\text{s}$ , $tp>6\mu\text{s}$	150	A/ $\mu\text{s}$
dv/dt	$T_J=T_{VJM}$ , $2/3V_{DRM}$ , linear voltage rise	1000	V/ $\mu\text{s}$
a	Maximum allowable acceleration	50	$\text{m/s}^2$
Weight	Module(Approximately)	100	g

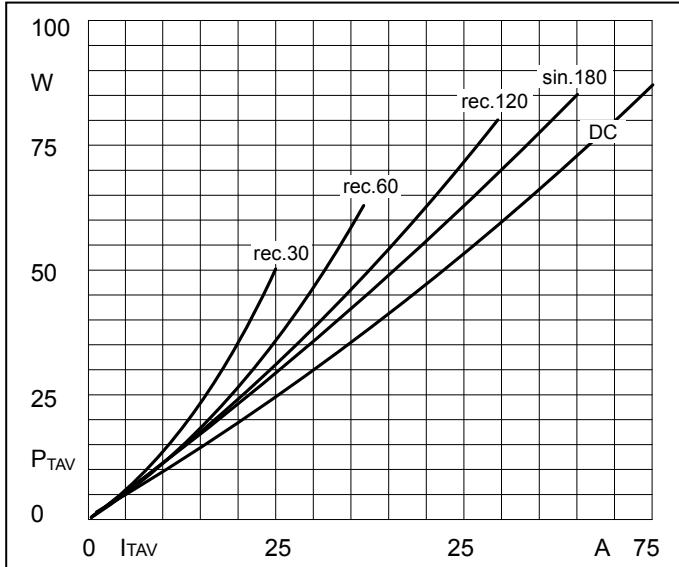
## Thermal Characteristics

Symbol	Conditions	Values	Units
$R_{th(j-c)}$	Cont.;per thyristor / per module	0.57/0.29	$^\circ\text{C/W}$
$R_{th(c-s)}$	per thyristor / per module	0.2/0.1	$^\circ\text{C/W}$

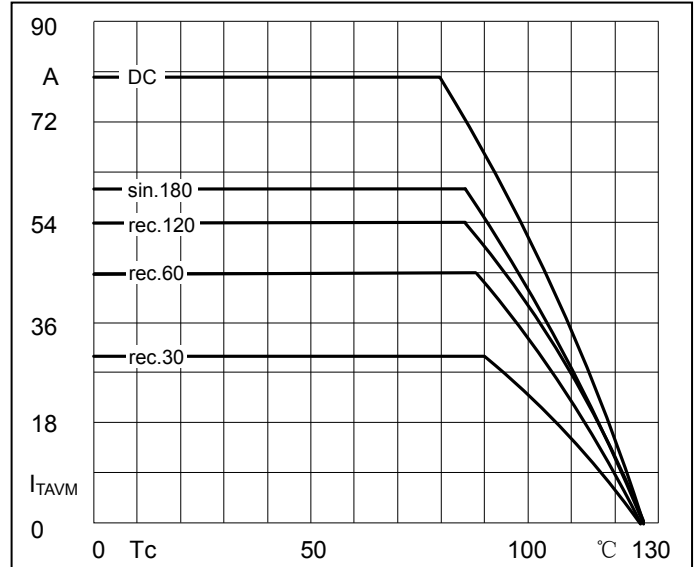
## Electrical Characteristics

Symbol	Conditions	Values		Units
$V_{TM}$	$T=25^\circ\text{C}$ $I_{TM}=200\text{A}$		1.65	V
$I_{RRM}/I_{DRM}$	$T_{VJ}=T_{VJM}$ , $V_R=V_{RRM}$ , $V_D=V_{DRM}$		15	mA
$V_{TO}$	For power-loss calculations only ( $T_{VJ}=125^\circ\text{C}$ )		0.9	V
$r_T$	$T_{VJ}=T_{VJM}$		3.5	$\text{m}\Omega$
$V_{GT}$	$T_{VJ}=25^\circ\text{C}$ , $V_D=6\text{V}$		3.0	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
$I_{GD}$	$T_{VJ}=125^\circ\text{C}$ , $V_D=2/3V_{DRM}$		6	mA
$I_L$	$T_{VJ}=25^\circ\text{C}$ , $R_G=33\ \Omega$	300	600	mA
$I_H$	$T_{VJ}=25^\circ\text{C}$ , $V_D=6\text{V}$	150	250	mA
tgD	$T_{VJ}=25^\circ\text{C}$ , $I_G=1\text{A}$ , $di_G/dt=1\text{A}/\mu\text{s}$	1		$\mu\text{s}$
tq	$v_J=T_{VJM}$	80		$\mu\text{s}$

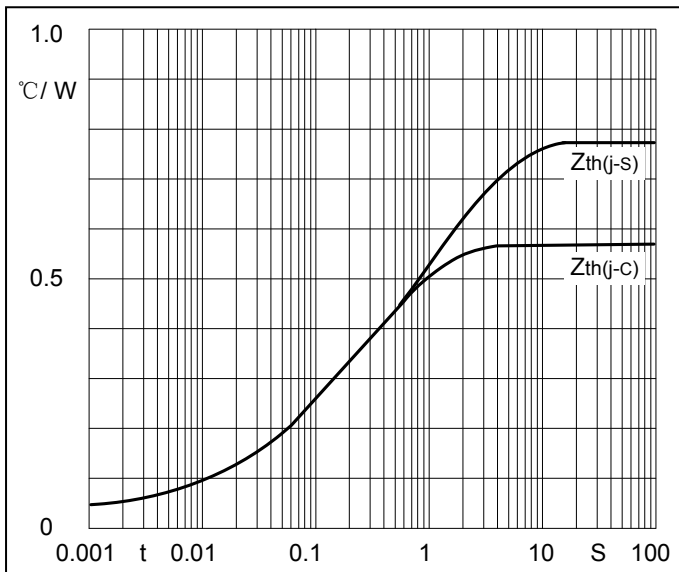
**Performance Curves**



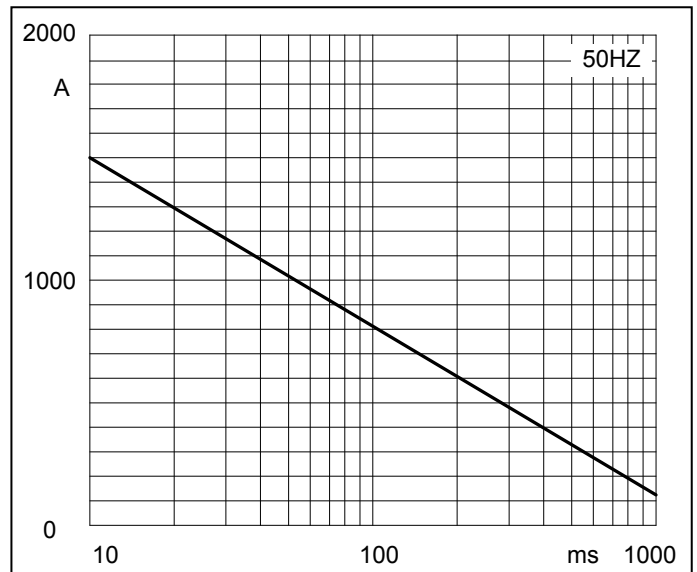
**Fig1. Power dissipation**



**Fig2. Forward Current Derating Curve**



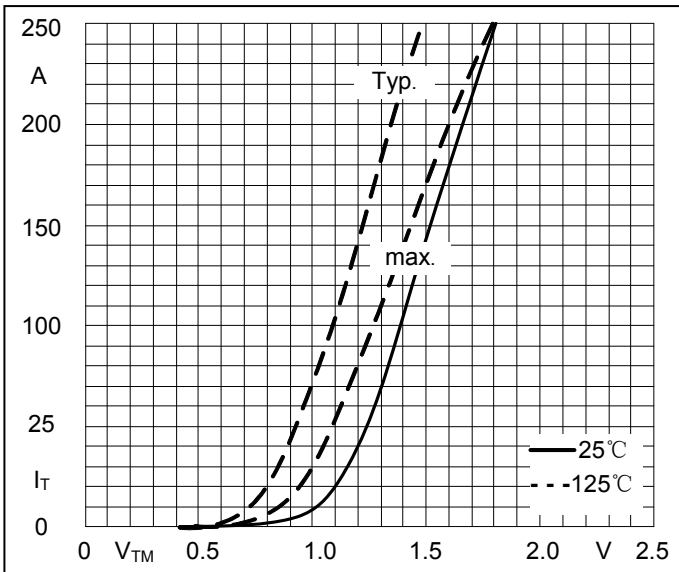
**Fig3. Transient thermal impedance**



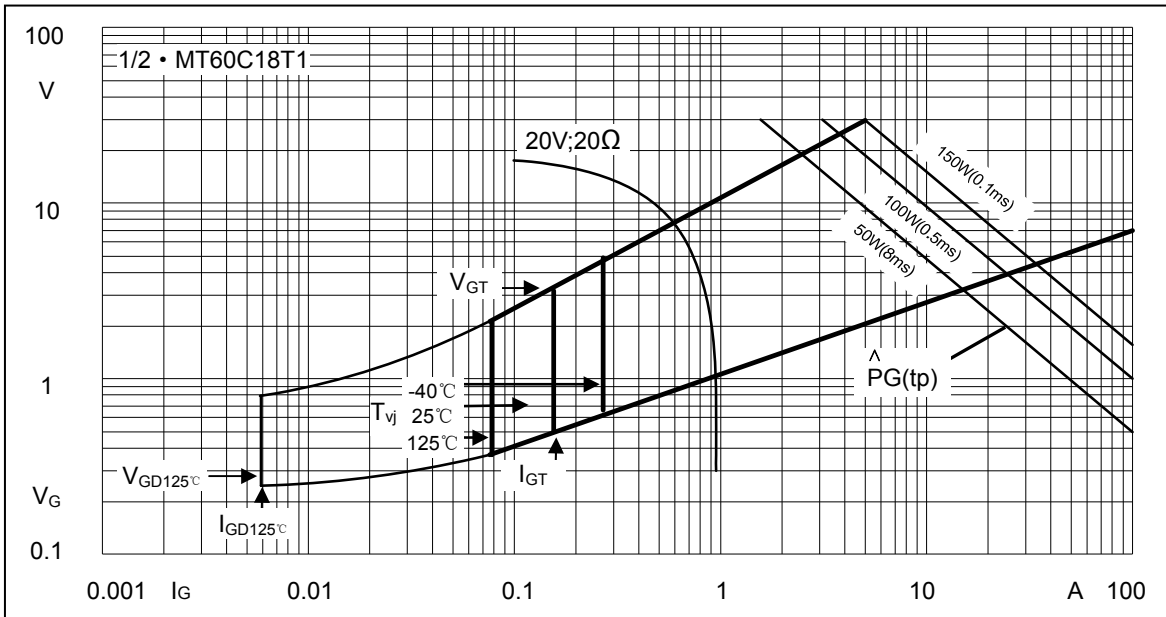
**Fig4. Max Non-Repetitive Forward Surge Current**



**Performance Curves**



**Fig5. Forward Characteristics**



**Fig6. Gate trigger Characteristics**



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## Ordering Information :

Device	Packing
Part Number-BP	Bulk: 10PCS/BOX ;100PCS/CTN

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