



Micro Commercial Components



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MT25C08T1
MT25C12T1
MT25C16T1
MT25C18T1

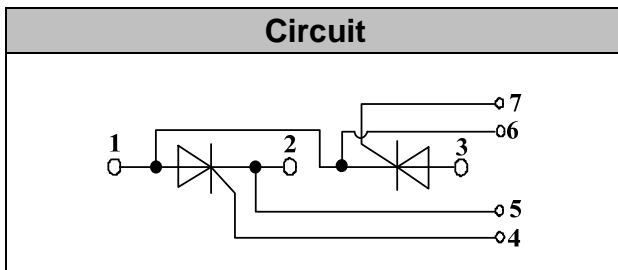
25 Amp
THYRISTOR MODULE
800~1800 Volts

Features

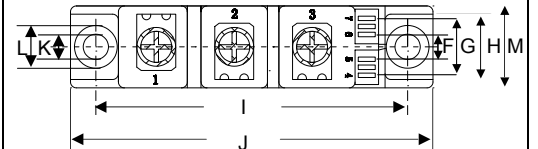
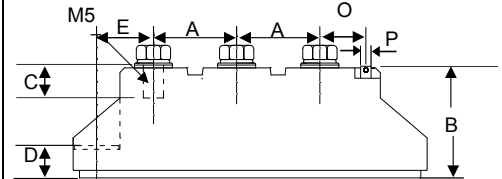
- Lead Free Finish/RoHS Compliant (NOTE 1) ("P" Suffix designates RoHS Compliant. See ordering information)
- International standard package
- Heat transfer through aluminum oxide DBC ceramic isolated metal baseplate
- Glass passivated chip
- Simple Mounting

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
MT25C08T1	800V	900V
MT25C12T1	1200V	1300V
MT25C16T1	1600V	1700V
MT25C18T1	1800V	1900V

Maximum Ratings

Symbol	Conditions	Values	Units
I_{TAV}	Sine 180°;Tc=85°C	25	A
I_{TSM}	T _{VJ} =45°C t=10ms, sine	550	A
	T _{VJ} =125°C t=10ms, sine	480	
i^2t	T _{VJ} =45°C t=10ms, sine	1500	A2s
	T _{VJ} =125°C t=10ms, sine	1150	
Visol	a.c.50HZ;r.m.s.;1min	3000	V
Tvj		-40 to 125	°C
Tstg		-40 to 125	°C
Mt	To terminals(M5)	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	150	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)	100	g

Thermal Characteristics

Symbol	Conditions	Values	Units
Rth(j-c)	Cont.;per thyristor / per module	0.9/0.45	°C/W
Rth(c-s)	per thyristor / per module	0.2/0.1	°C/W

Electrical Characteristics

Symbol	Conditions	Values			Units
V _{TM}	T=25°C I _{TM} =75A			1.8	V
I _{RRM} /I _{DRM}	T _{VJ} =T _{VJM} ,V _R =V _{RRM} ,V _D =V _{DRM}			10	mA
V _{TO}	For power-loss calculations only (T _{VJ} =125°C)			0.9	V
r _T	T _{VJ} =T _{VJM}			12	mΩ
V _{GT}	T _{VJ} =25°C , V _D =6V			2.5	V
I _{GT}	T _{VJ} =25°C , V _D =6V			150	mA
V _{GD}	T _{VJ} =125°C , V _D =2/3V _{DRM}			0.25	V
I _{GD}	T _{VJ} =125°C , V _D =2/3V _{DRM}			5	mA
I _L	T _{VJ} =25°C , R _G = 33 Ω	250	400		mA
I _H	T _{VJ} =25°C , V _D =6V	100	200		mA
tgd	T _{VJ} =25°C, I _G =1A, di _G /dt=1A/us	1			us
tq	T _{VJ} =T _{VJM}	80			us

Performance Curves

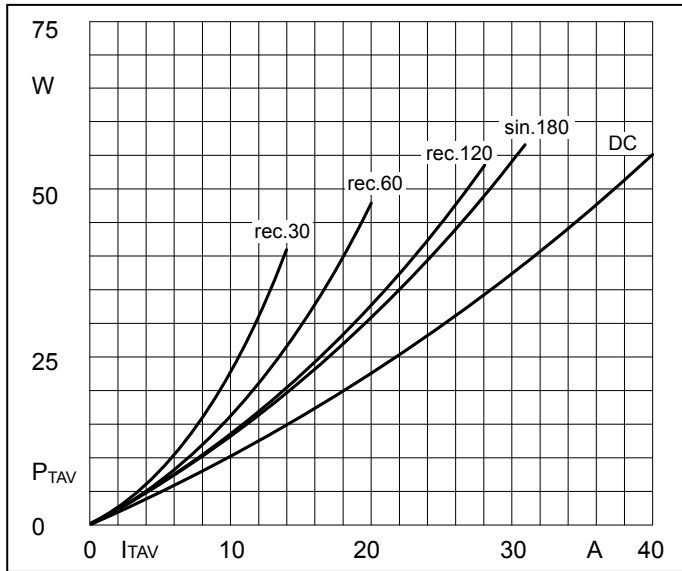


Fig1. Power dissipation

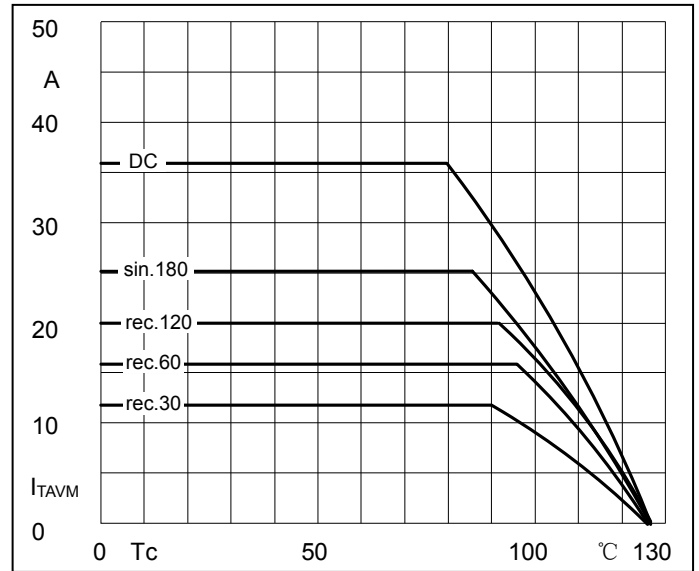


Fig2. Forward Current Derating Curve

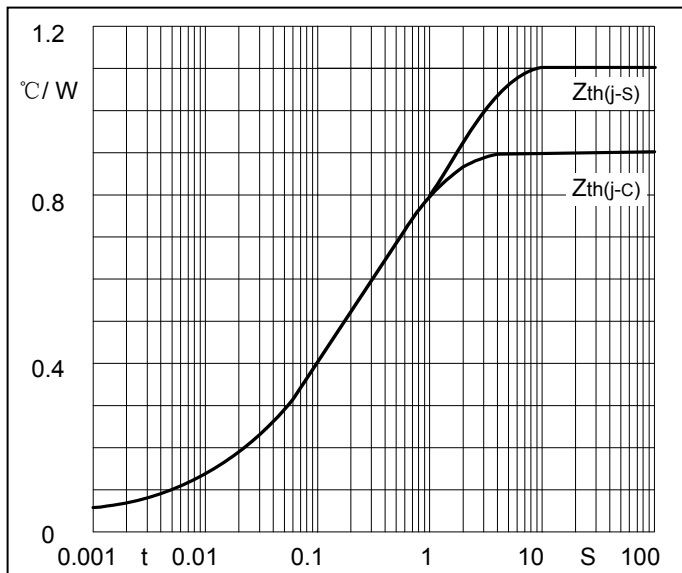


Fig3. Transient thermal impedance

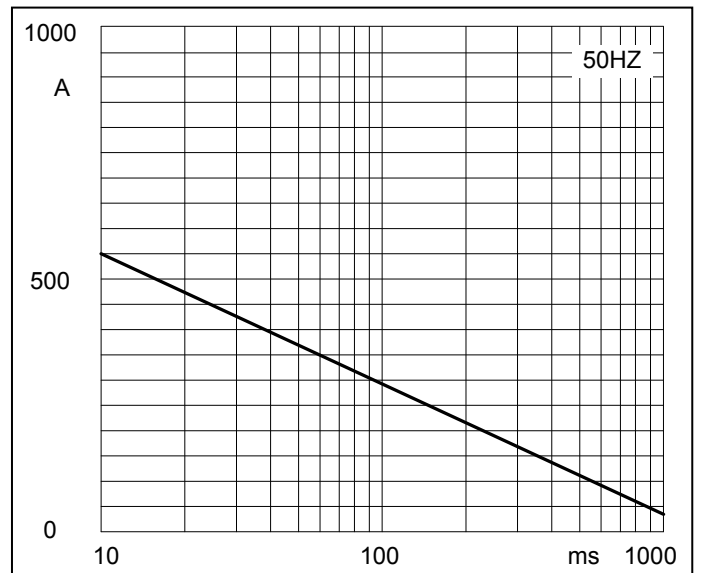


Fig4. Max Non-Repetitive Forward Surge Current

Performance Curves

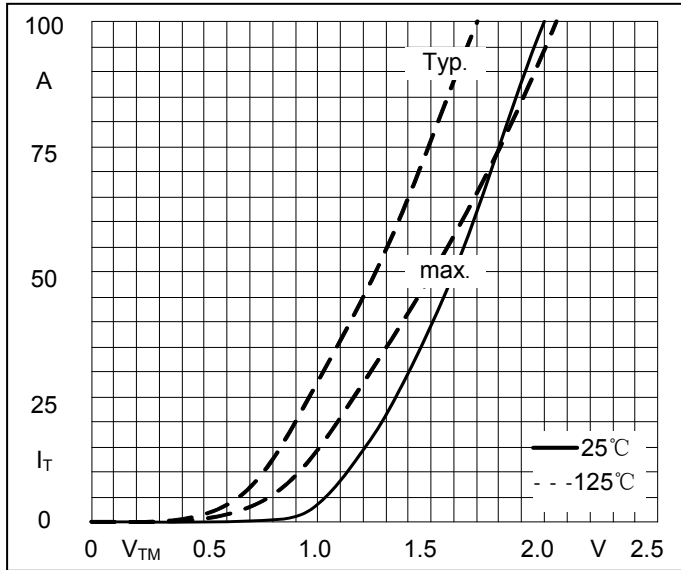


Fig5. Forward Characteristics

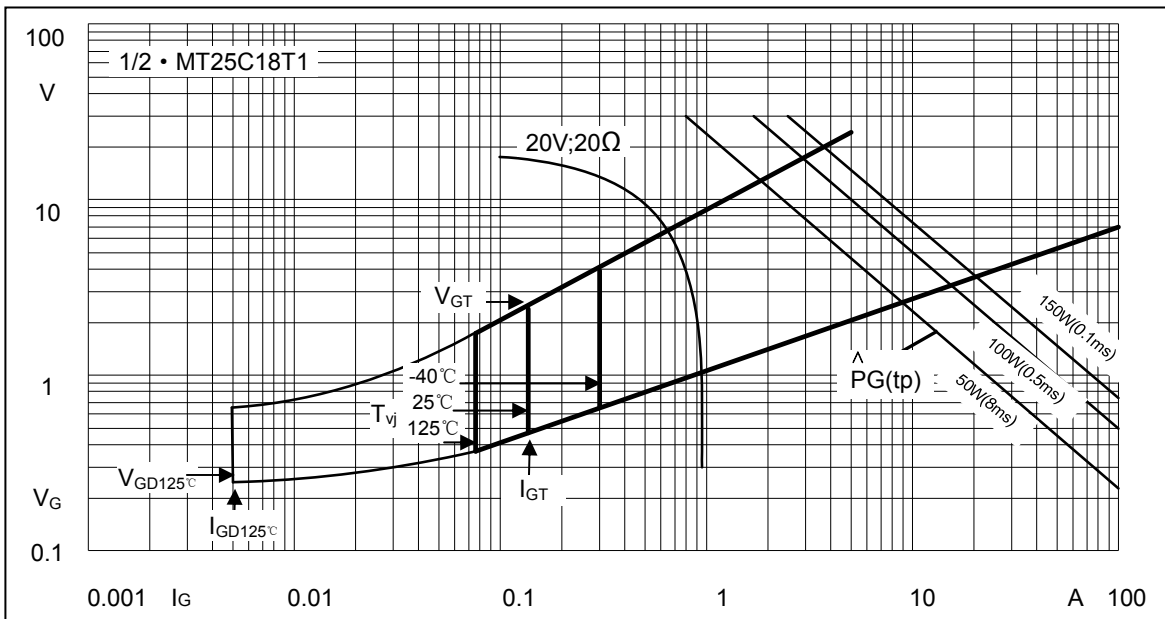


Fig6. Gate trigger Characteristics



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Ordering Information :

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

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