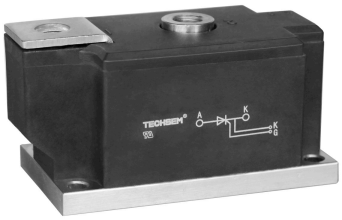
TECHSEM

MT400
Thyristor Modules



Features：

- Isolated mounting base 3000V~
- Pressure contact technology with Increased power cycling capability
- Space and weight savings

Typical Applications

- AC/DC Motor drives
- Various rectifiers
- DC supply for PWM inverter

$V_{DSM}V_{RSM}$	V_{DRM},V_{RRM}	Type & Outline
2100 V 2300 V 2600 V	2000 V 2200 V 2500 V	MT400-20-417F2 MT400-22-417F2 MT400-25-417F2

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	T_j(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled, T_c=85°C	125			400	A
$I_{T(RMS)}$	RMS on-state current		125			628	A
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			45	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			12.5	KA
I^2t	I^2T for fusing coordination					781	A^2s*10^3
V_{TO}	Threshold voltage		125			0.83	V
r_T	On-state slop resistance					0.42	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=1200A	25			1.94	V
t_{gr}	Gate control delay time	V_D=0.67V_{DRM}	25		2		μs
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	**I_{TM} =800A,**Gate source 1.5A t_r ≤0.5μs Repetitive	125			100	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		200	mA
V_{GT}	Gate trigger voltage			0.7		3.0	V
I_H	Holding current			10		150	mA
I_L	Latching current	V_A=12V,Gate source 1.5A t_r ≤0.5μs,50H_Z	25		300	1500	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=V_{DRM}	125			0.25	V
I_{GD}	Non-trigger gate current					10	mA
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.080	°C /W
$R_{th(c-h)}$	Thermal resistance case to heat sink	Single side cooled				0.04	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		3000			V
F_m	Thermal connection torque (M10)				12.0		N·m
	Mounting torque (M6)				6.0		N·m
Tvj	junction temperature			-40		125	°C
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				764		g
Outline	417F2						

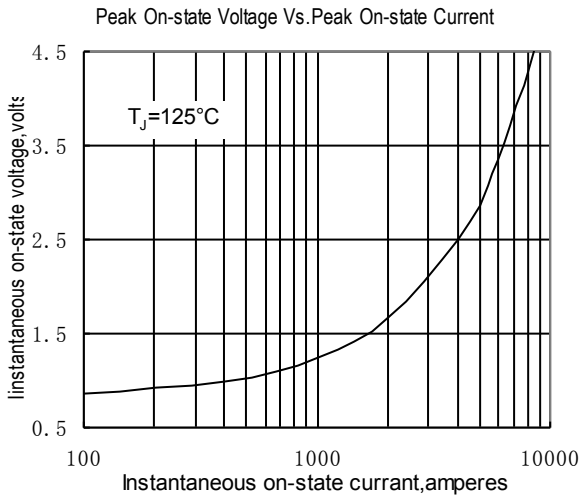


Fig.1

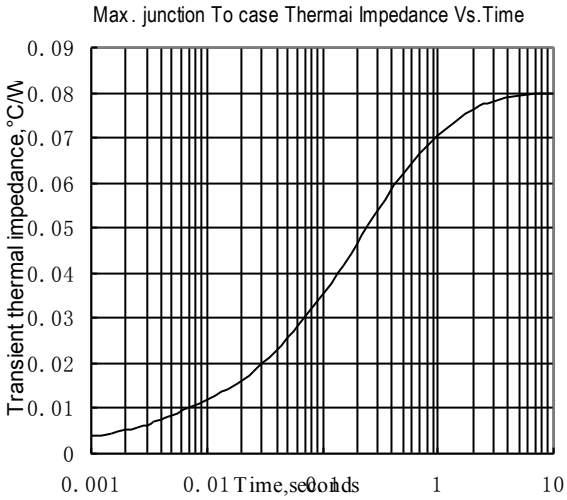


Fig.2

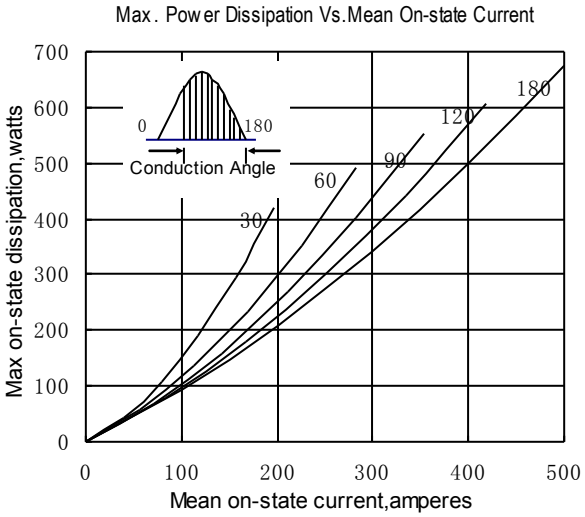


Fig.3

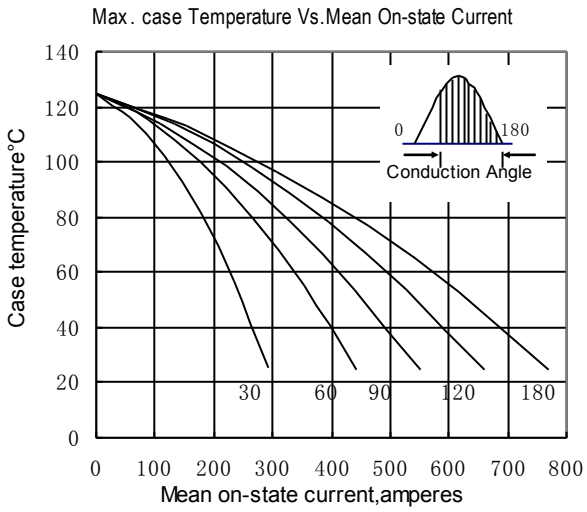


Fig.4

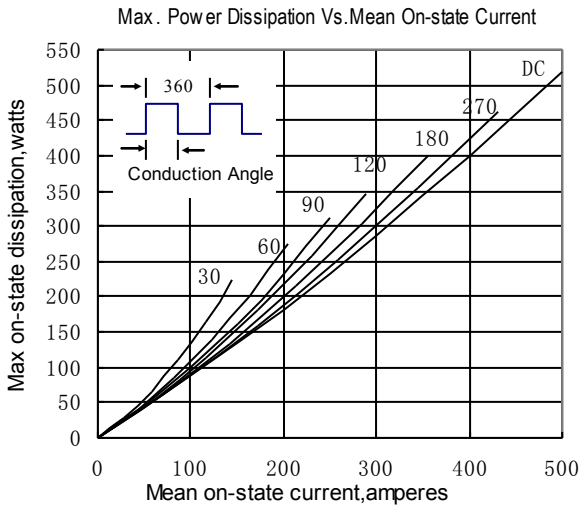


Fig.5

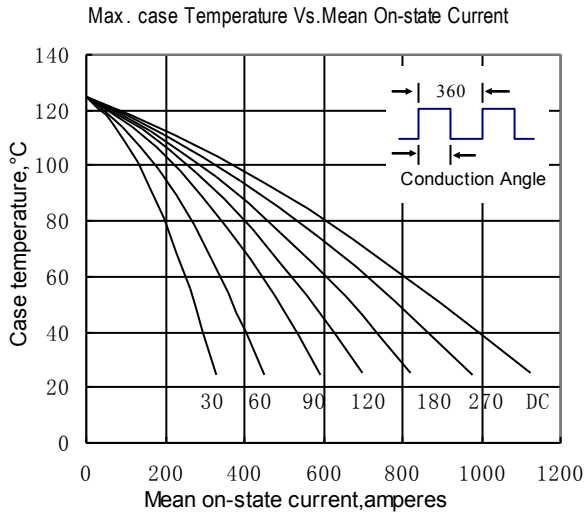


Fig.6

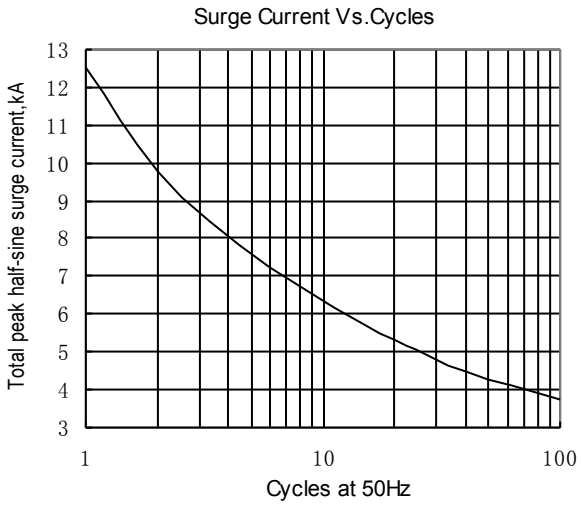


Fig.7

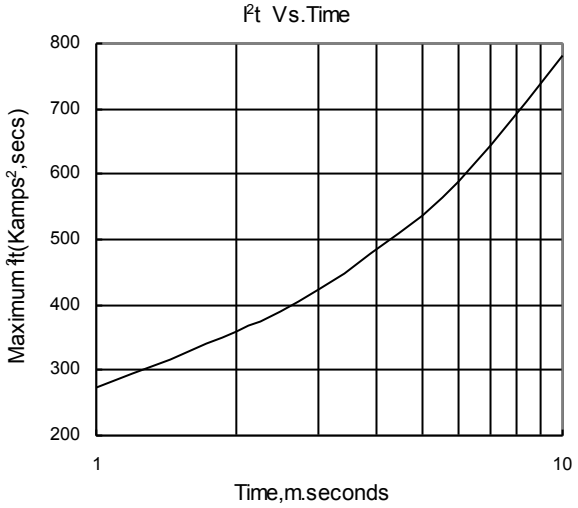


Fig.8

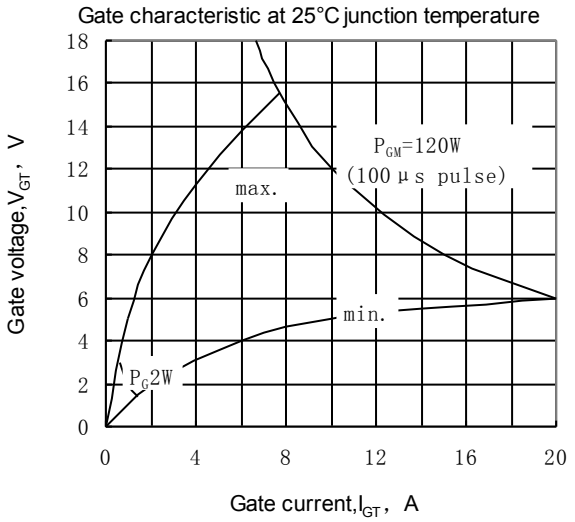


Fig.9

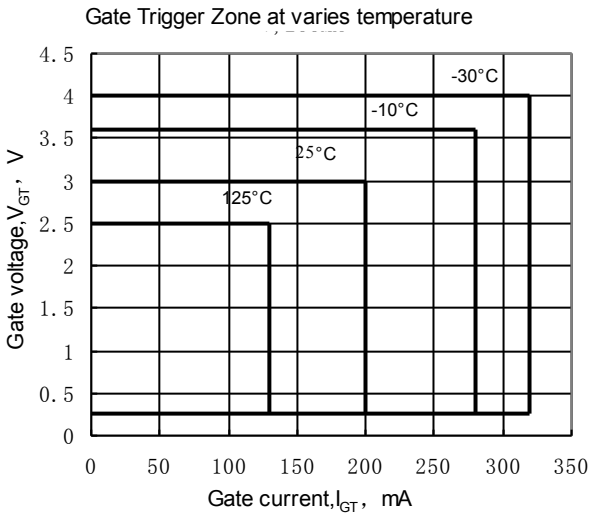


Fig.10

Outline: