TECHSEM

MTC160 MTA160 MTK160 MTX160 MT160
Thyristor Modules

Features:

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

Typical Applications

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

V_{DSM},V_{RSM}	V_{DRM},V_{RRM}	Type & Outline
900V	800V	MTx160-08-216F3
1100V	1000V	MTx160-10-216F3
1300V	1200V	MTx160-12-216F3
1500V	1400V	MTx160-14-216F3
1700V	1600V	MTx160-16-216F3
1900V	1800V	MTx160-18-216F3

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			160	A
$I_{T(RMS)}$	RMS on-state current		125			251	A
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			15	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			5.2	KA
I^2t	I^2T for fusing coordination					135.2	A^2s*10^3
V_{TO}	Threshold voltage		125			0.8	V
r_T	On-state slop resistance					1.69	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=550A	25			1.70	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			1000	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A t_r ≤0.5μs Repetitive	125			200	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		150	mA
V_{GT}	Gate trigger voltage			1.0		2.5	V
I_H	Holding current			20		150	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125	0.2			V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled per chip				0.170	°C /W
$R_{th(c-h)}$	Thermal resistance case to heatsink	Single side cooled per chip				0.08	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		3000			V
F_m	Thermal connection torque(M6)				6.0		N·m
	Mounting torque(M6)				6.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				285		g
Outline	216F3						

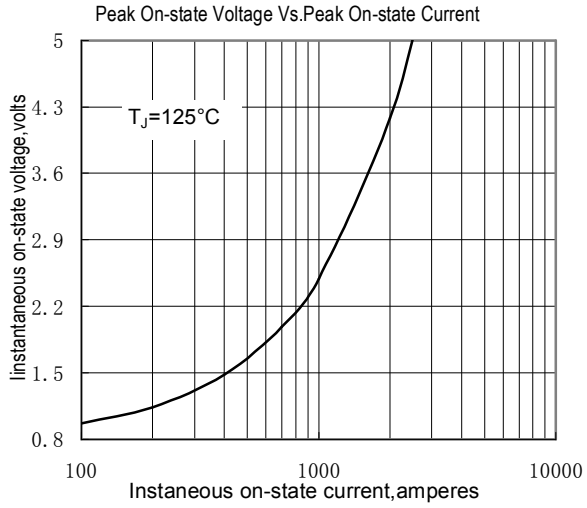

Fig.1

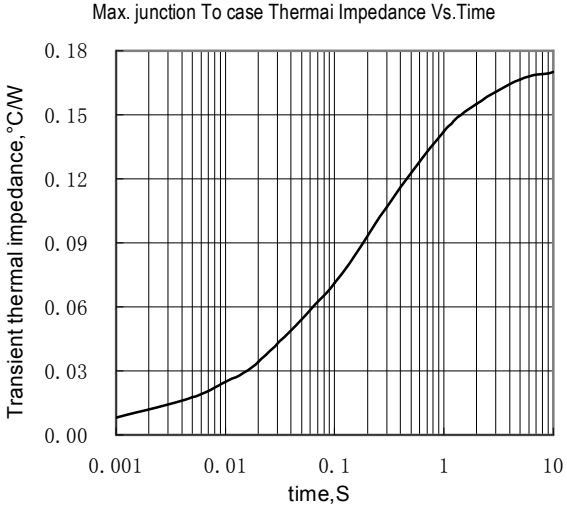

Fig.2

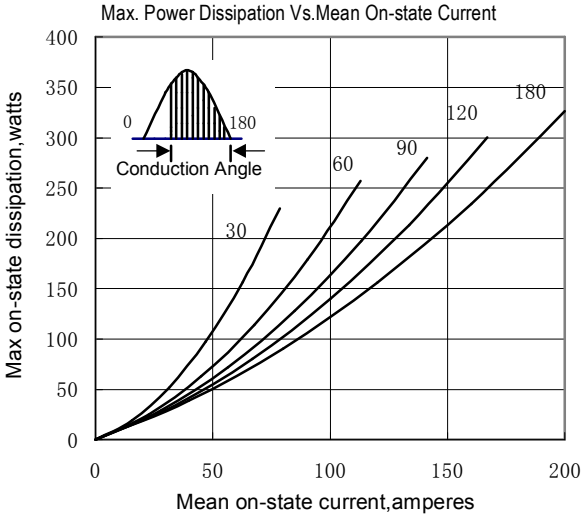

Fig.3

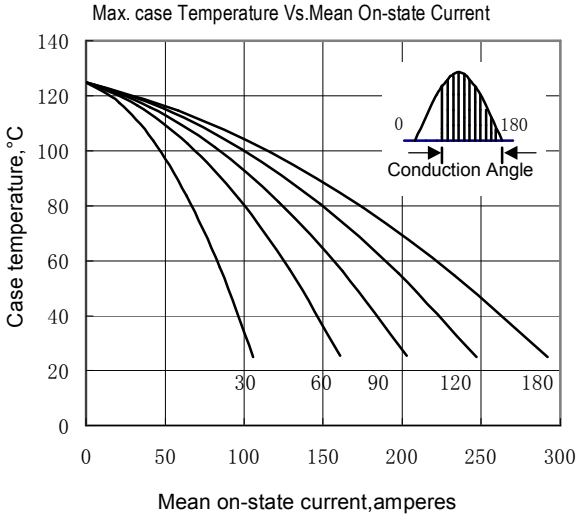

Fig.4

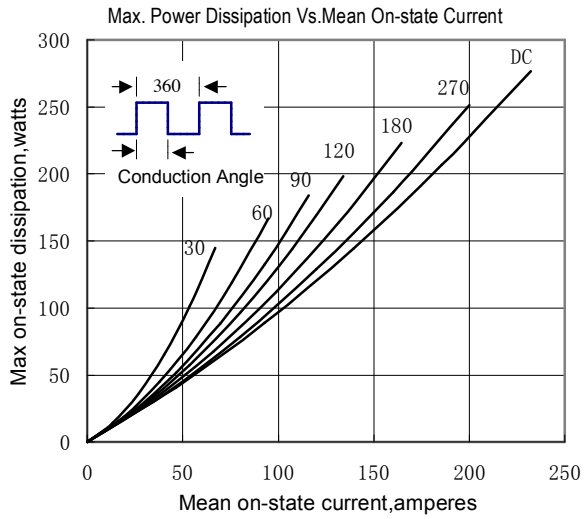

Fig.5

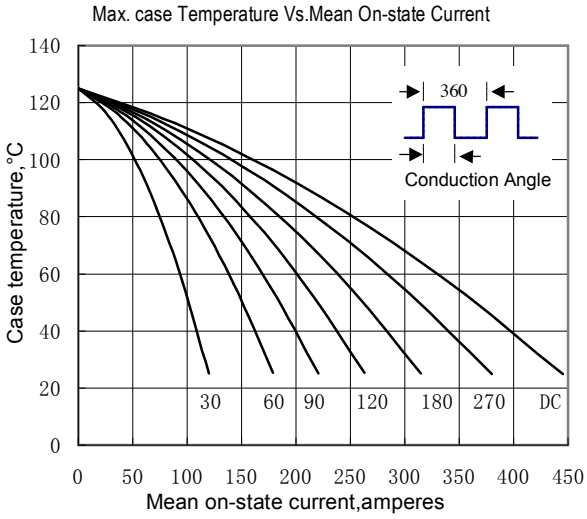

Fig.6

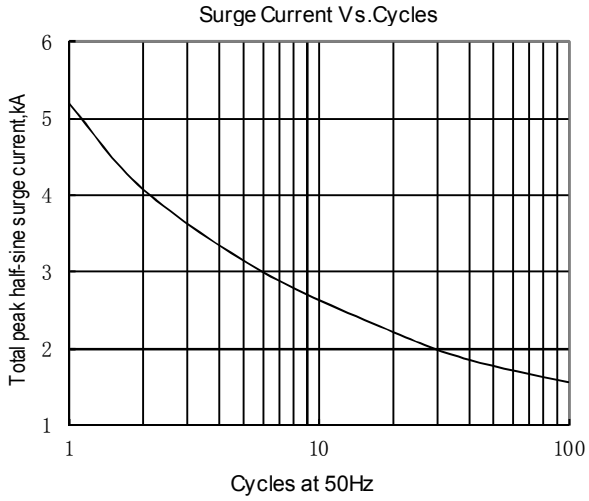

Fig.7

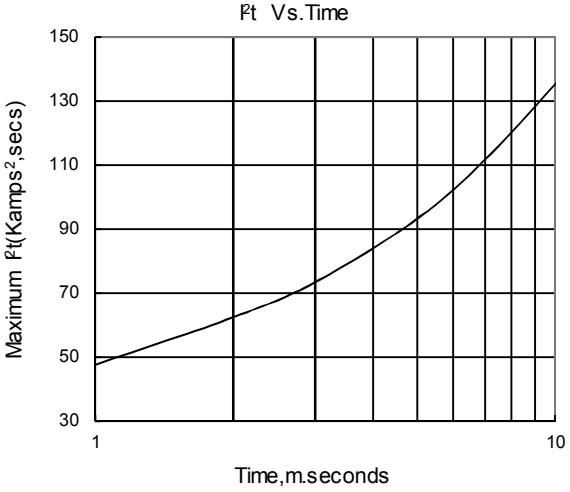

Fig.8

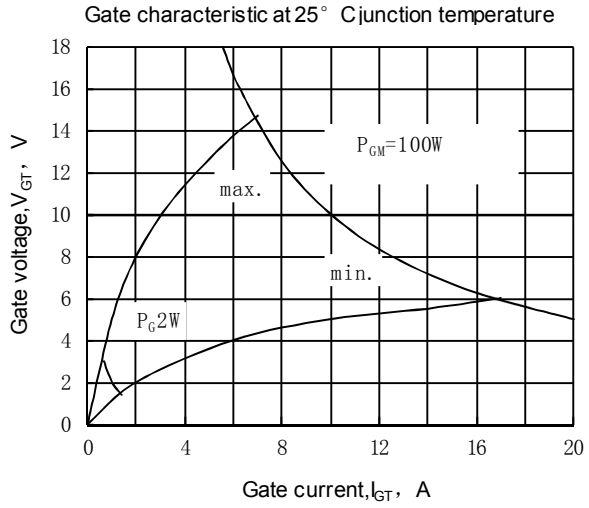

Fig.9

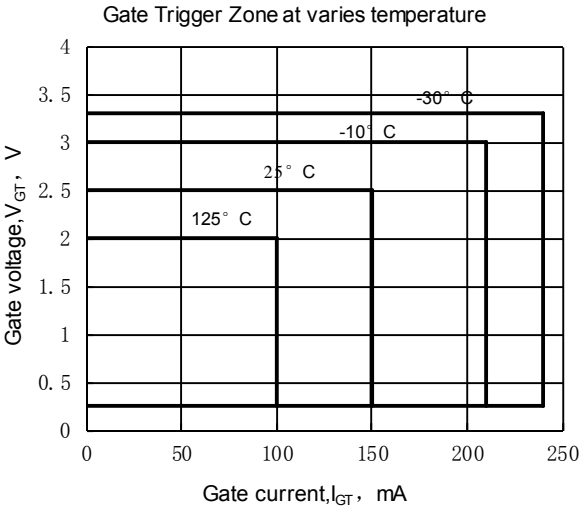

Fig.10

Outline: