TECHSEM

MTC250
Thyristor Modules

Features：

- Isolated mounting base 3000V~
- Pressure contact technology with Incrtased 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
1300 V	1200 V	MTC250-12-413F3
1500 V	1400 V	MTC250-14-413F3
1700 V	1600 V	MTC250-16-413F3
1900 V	1800 V	MTC250-18-413F3

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			250	A
$I_{T(RMS)}$	RMS on-state current		125			390	A
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			25	mA
I_{TSM}	Surge on-state current	10ms half sine wave	125			9.0	KA
I^2t	I^2T for fusing coordination	V_R=60%V_{RRM}				405	A^2s*10^3
V_{TO}	Threshold voltage		125			0.80	V
r_T	On-state slop resistance					0.85	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=750A	25			1.57	V
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	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		180	mA
V_{GT}	Gate trigger voltage			0.7		2.5	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	1000	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				0.120	C /W
$R_{th(c-h)}$	Thermal resistance case to heatsink	Single side cooled				0.04	C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		2500			V
F_m	Thermal connection torque(M8)				12		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				806		g
Outline	413F3						

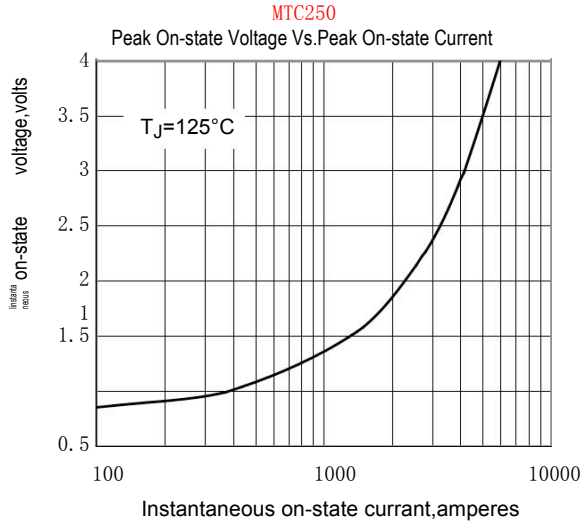

Fig.1

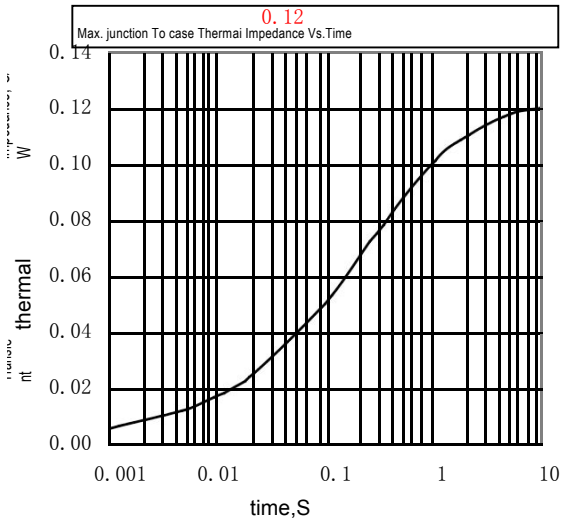

Fig.2

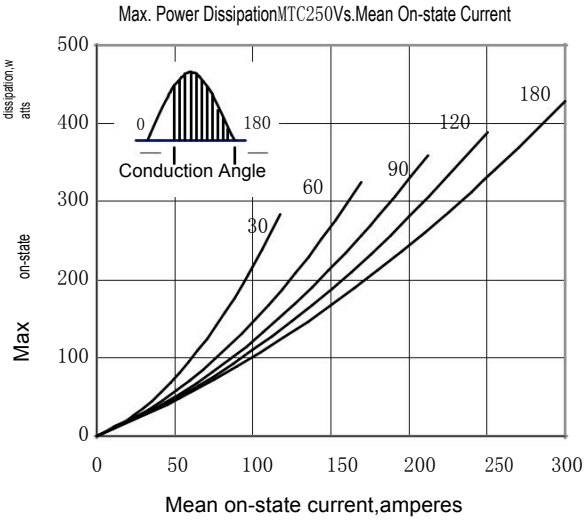

Fig.3

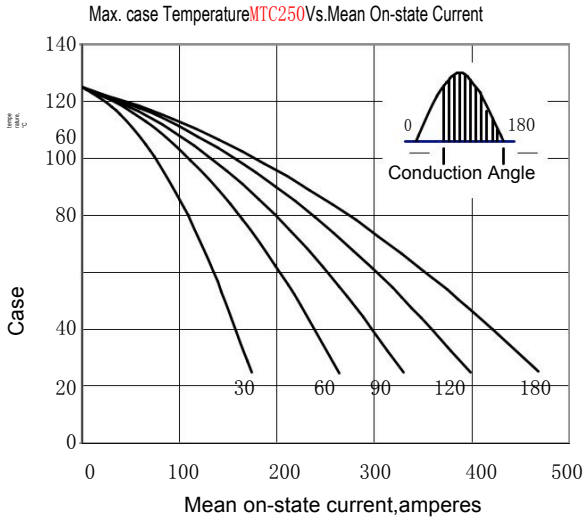

Fig.4

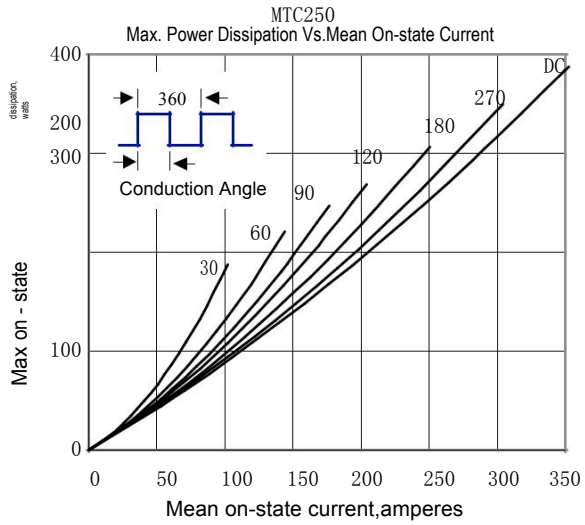

Fig.5

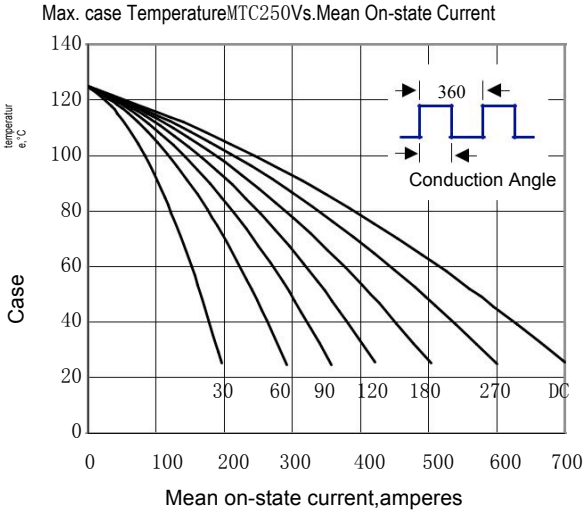

Fig.6

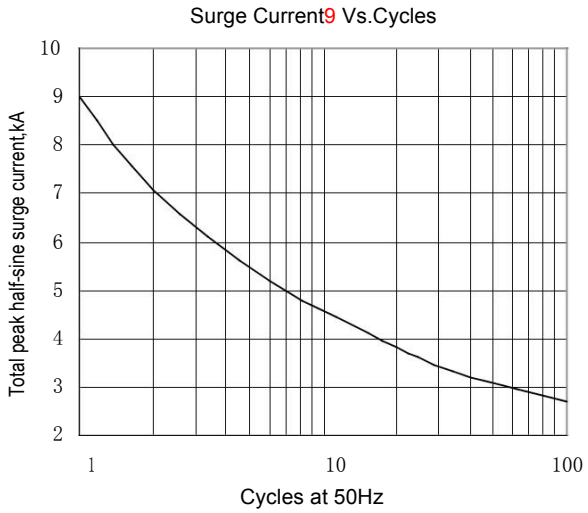

Fig.7

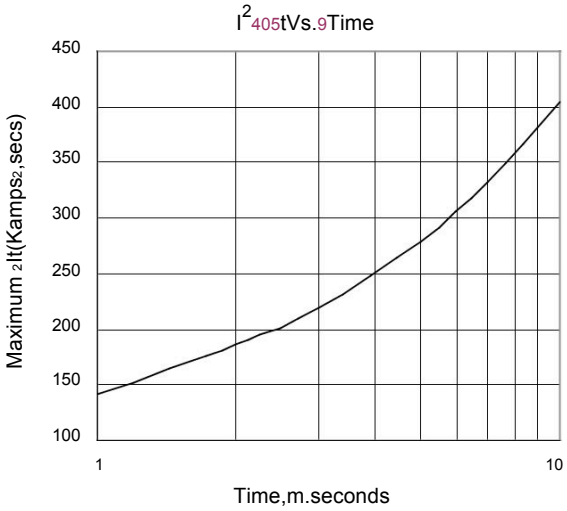

Fig.8

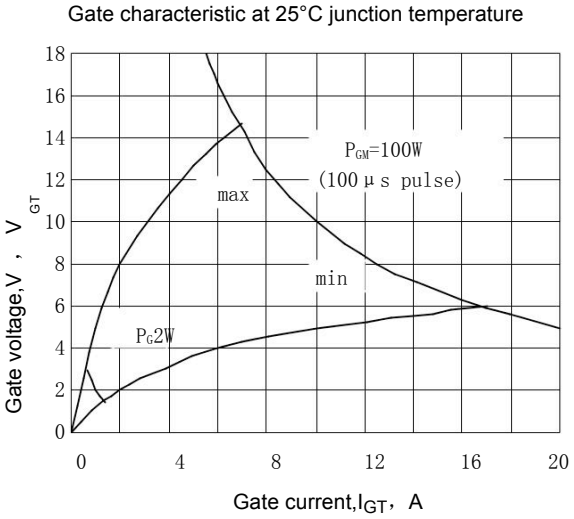

Fig.9

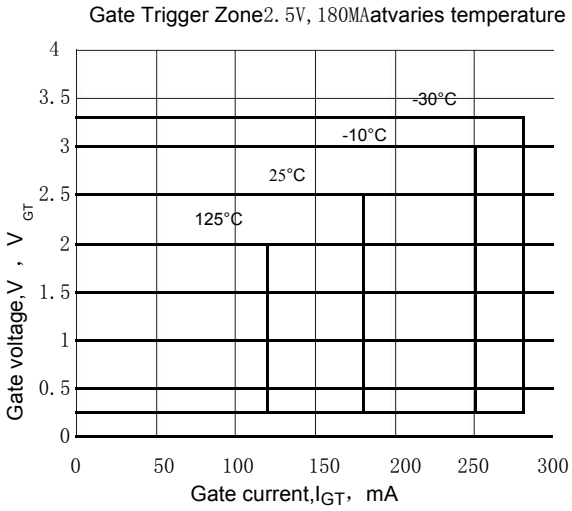

Fig.10

Outline: