TECHSEM

MTC40 MTA40 MTK40 MTX40 MT40
Thyristor Modules

Features：

- Isolated mounting base3000V~
- 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	MTx40-08-223F3B
1100V	1000V	MTx40-10-223F3B
1300V	1200V	MTx40-12-223F3B
1500V	1400V	MTx40-14-223F3B
1700V	1600V	MTx40-16-223F3B
1900V	1800V	MTx40-18-223F3B

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			40	A
$I_{T(RMS)}$	RMS on-state current		125			63	A
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			8	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			0.9	KA
I^2t	I^2T for fusing coordination					4.05	A^2s*10^3
V_{TO}	Threshold voltage		125			0.85	V
r_T	On-state slop resistance					5.57	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=120A	25			1.60	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		100	mA
V_{GT}	Gate trigger voltage			0.8		2.5	V
I_H	Holding current			20		120	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				0.650	°C /W
$R_{th(c-h)}$	Thermal resistance case to heatsink	Single side cooled per chip				0.2	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		3000			V
F_m	Thermal connection torque(M5)				4.0		N·m
	Mounting torque(M6)				6.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				160		g
Outline	223F3B						

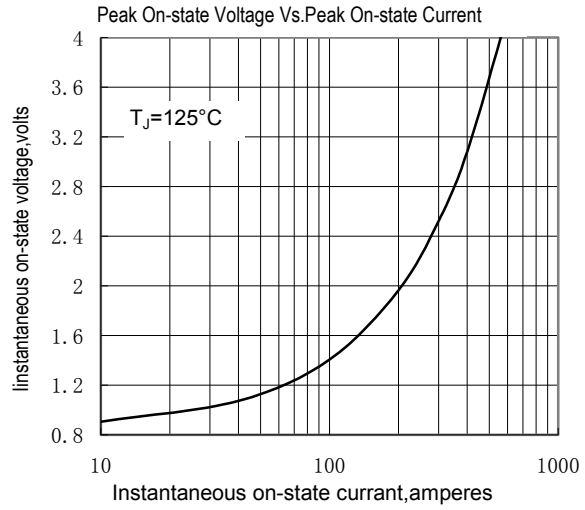


Fig.1

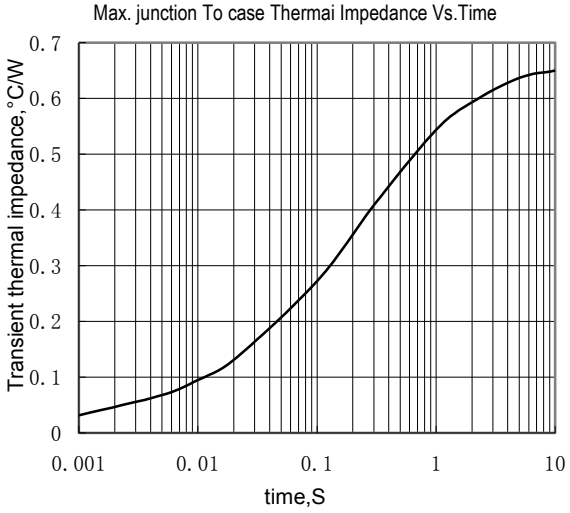


Fig.2

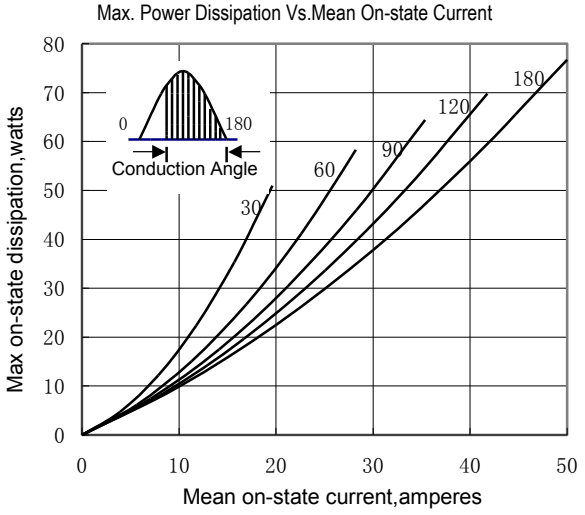


Fig.3

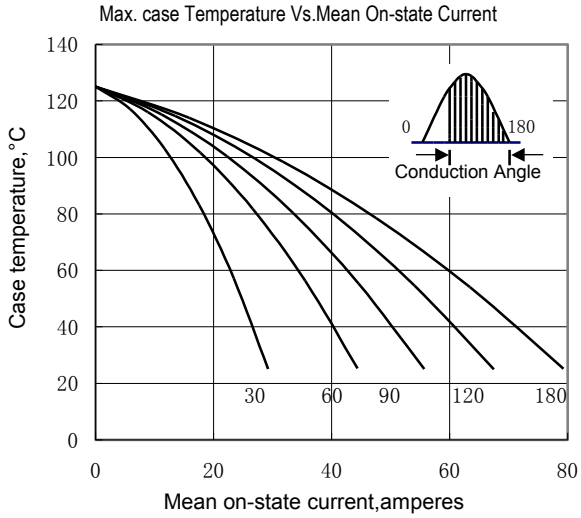


Fig.4

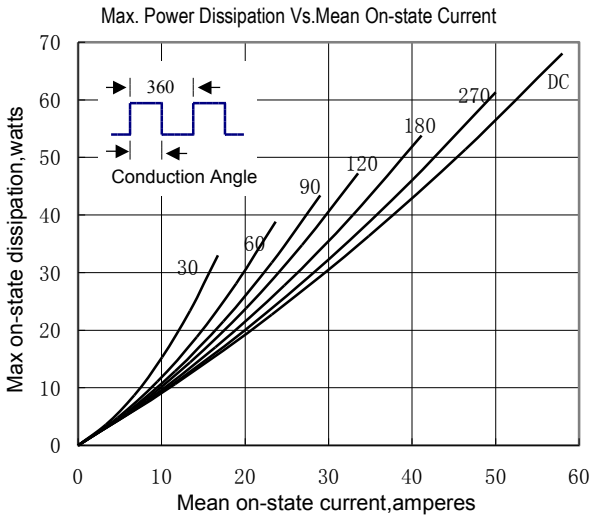


Fig.5

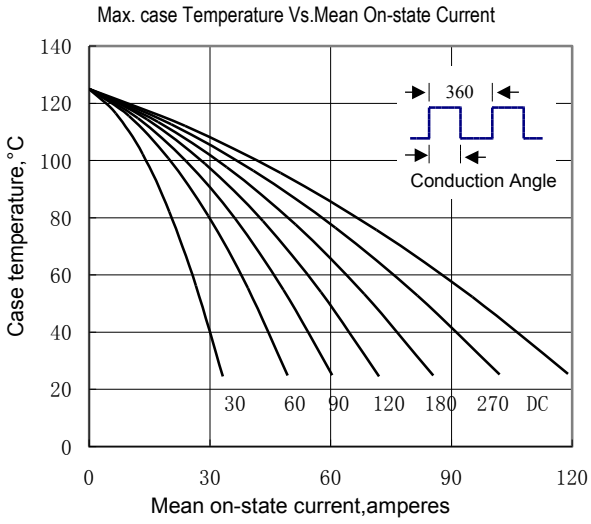


Fig.6

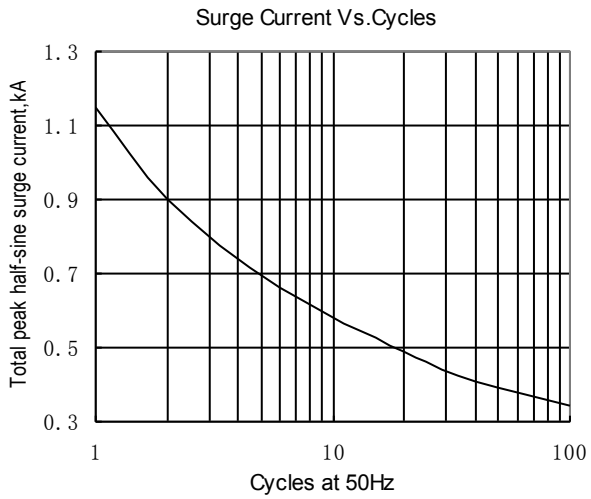


Fig.7

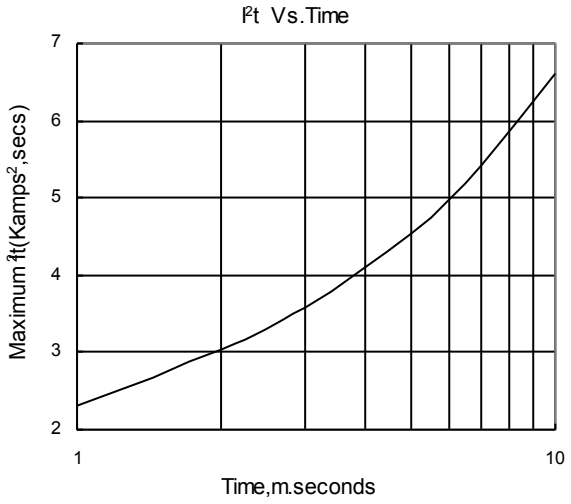


Fig.8

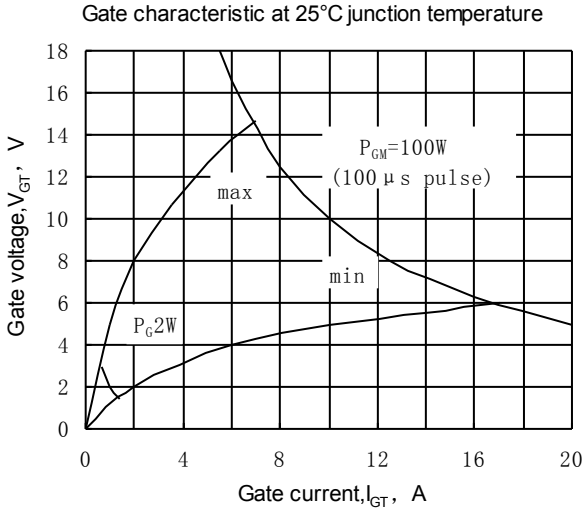


Fig.9

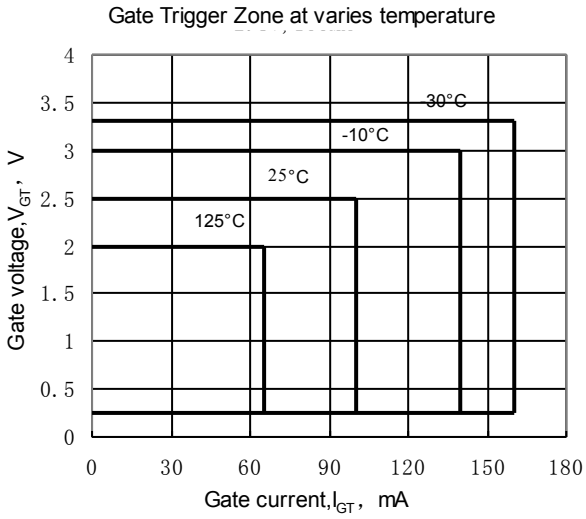
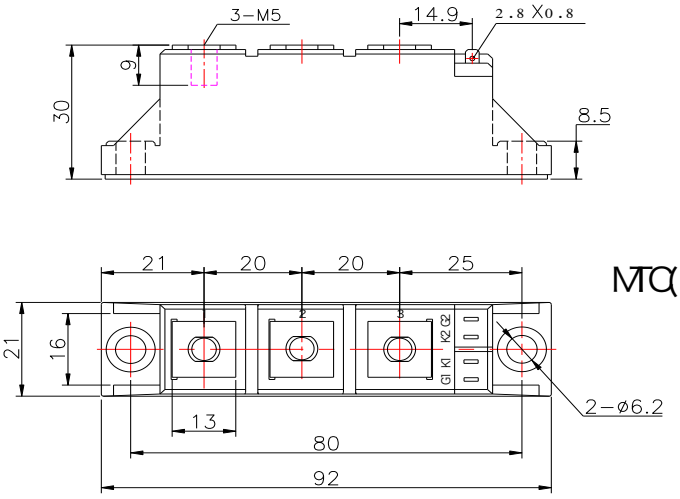


Fig.10

Outline:



MTC(B)