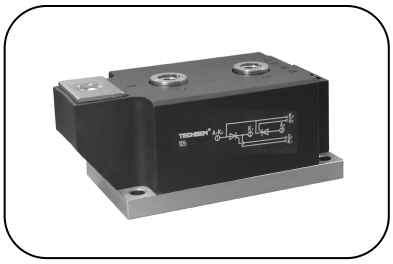
TECHSEM

MTC300 MTA300 MTK300
Thyristor Modules



Features：

- Isolated mounting base 4000V~
- 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
2700V	2600V	MTx300-26-415F3
2900V	2800V	MTx300-28-415F3
3100V	3000V	MTx300-30-415F3
3300V	3200V	MTx300-32-415F3
3500V	3400V	MTx300-34-415F3
3700V	3600V	MTx300-36-415F3

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			300	A
$I_{T(RMS)}$	RMS on-state current					471	A
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			55	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			7.2	kA
I^2t	I^2t for fusing coordination					259	A^2s*10^3
V_{TO}	Threshold voltage		125			0.93	V
r_T	On-state slope resistance					1.00	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=900A	25			2.45	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			1.0		2.5	V
I_H	Holding current			20		200	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				0.08	°C /W
$R_{th(c-h)}$	Thermal resistance case to heat sink	Single side cooled per chip				0.04	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		4000			V
F_m	Terminal connection torque (M10)				12.0		N·m
	Mounting torque (M6)				6.0		N·m
T_{vj}	Junction temperature			-40		125	°C
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				1275		g
Outline	415F3						

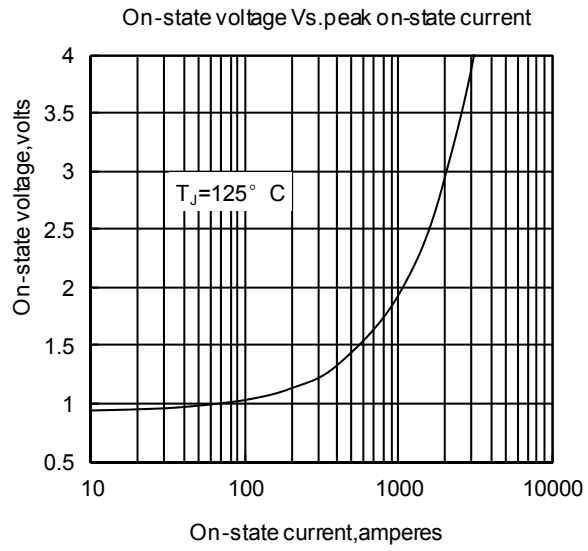


Fig. 1

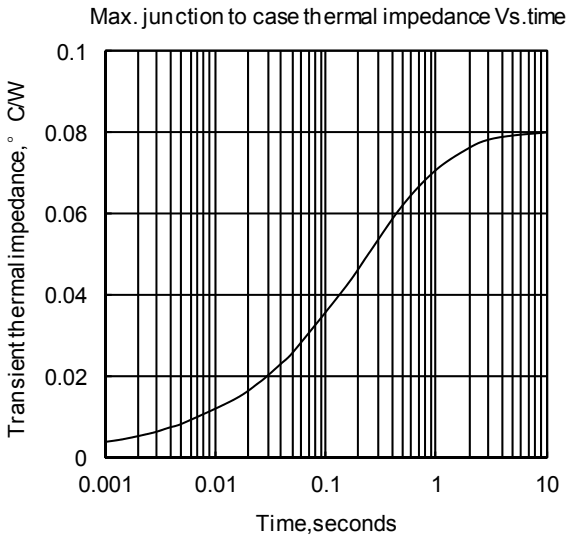


Fig. 2

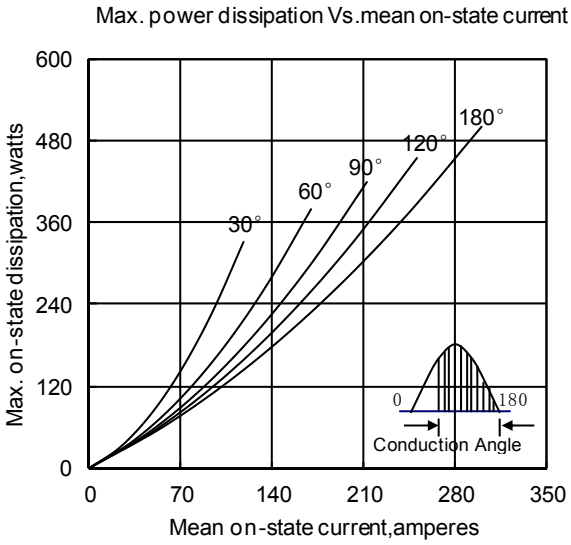


Fig. 3

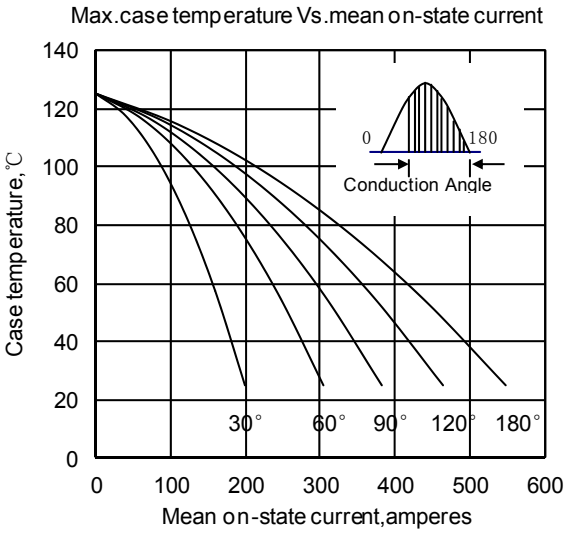


Fig. 4

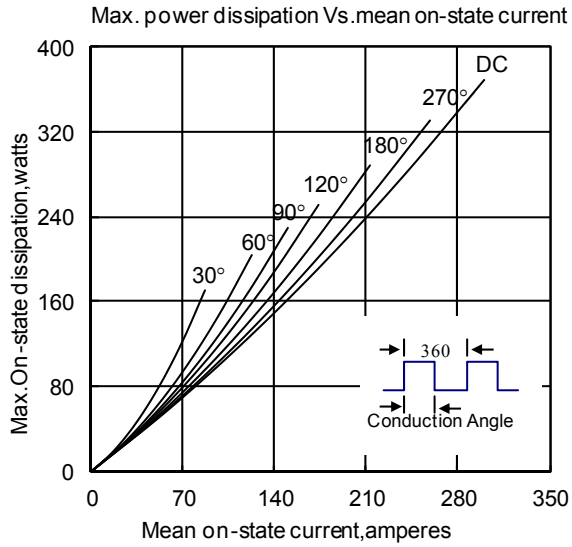


Fig. 5

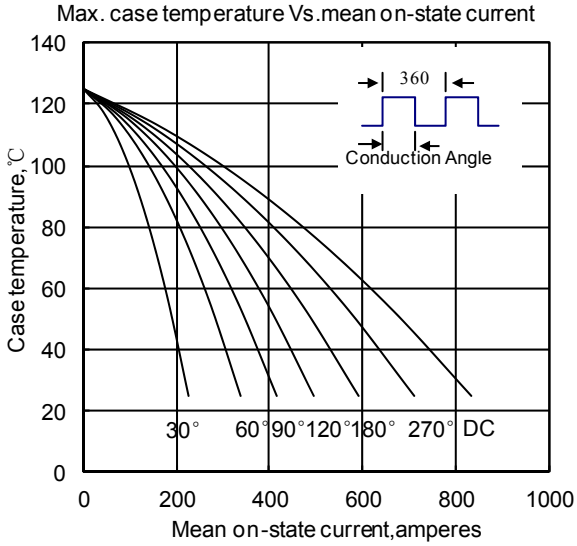


Fig. 6

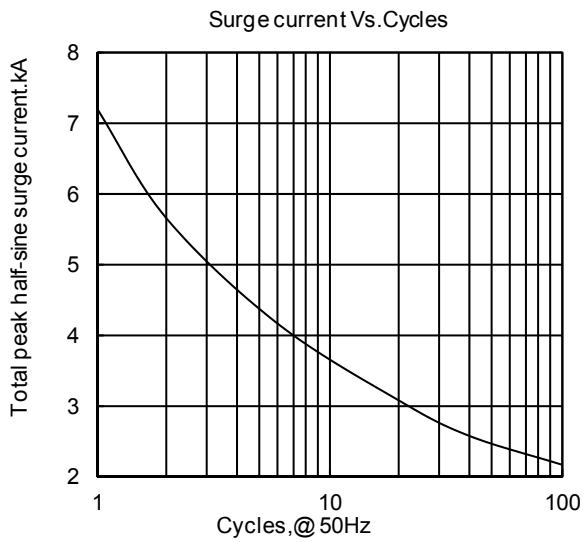


Fig. 7

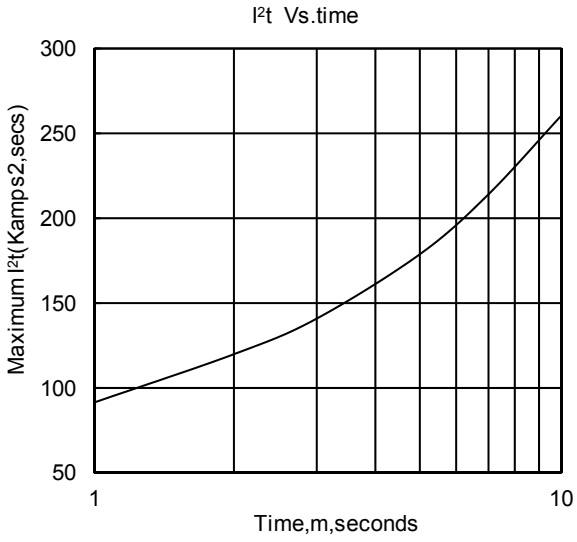


Fig. 8

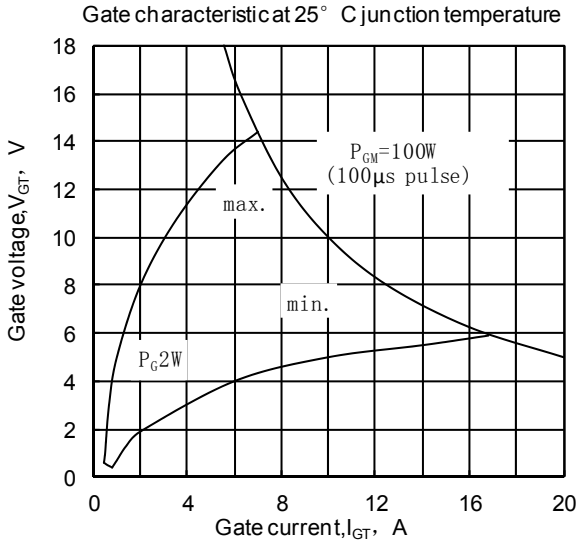


Fig. 9

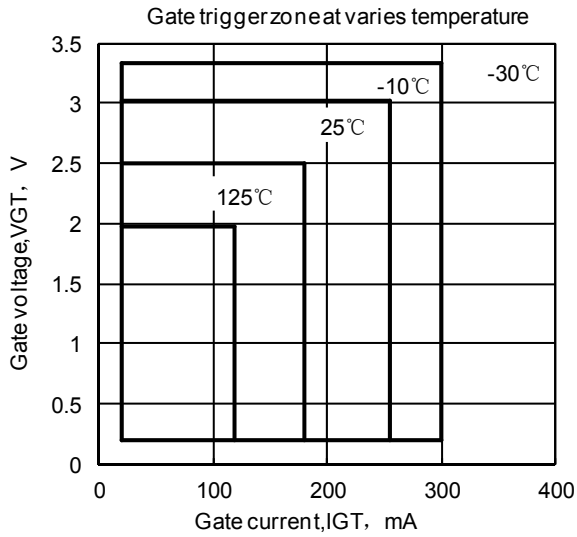
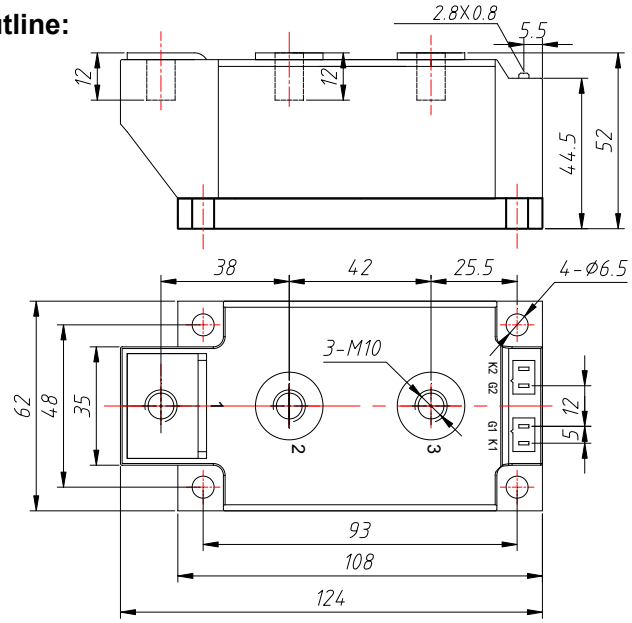
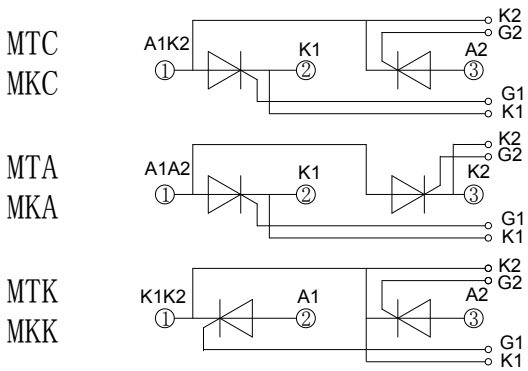


Fig. 10

Outline: