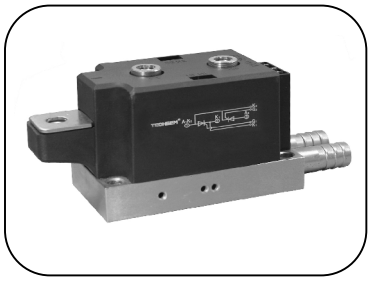


Features：

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

Typical Applications：

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

V_{RRM},V_{DRM}	Type & Outline	
2000V	MTx400-20-405F3	MFx400-20-405F3
2200V	MTx400-22-405F3	MFx400-22-405F3
2500V	MTx400-25-405F3	MFx400-25-405F3
2500V	MT400-25-405F3G	

MTx stands for any type of **MTC, MTA, MTK**

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=55°C	125			400	A
$I_{T(RMS)}$	RMS on-state current					628	A
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			45	mA
I_{TSM}	Surge on-state current	V_R=60%V_{RRM},t=10ms half sine,	125			11	kA
I^2t	I^2t for fusing coordination		125			605	10^3A^2s
V_{TO}	Threshold voltage		125			0.82	V
r_T	On-state slope resistance					0.79	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=1200A	25			2.18	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		200	mA
V_{GT}	Gate trigger voltage			0.8		3.0	V
I_H	Holding current			10		200	mA
I_L	Latching current					1000	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125			0.20	V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled per chip				0.11	°C/W
$R_{th(c-h)}$	Thermal resistance case to heatsink	Single side cooled per chip				0.04	°C/W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		3000			V
F_m	Terminal connection torque(M12)			12		14	N·m
	Mounting torque(M6)			4.5		6	N·m
T_{vj}	Junction temperature			-40		125	°C
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				1060		g
Outline	405F3						

On-state voltage Vs.peak on-state current

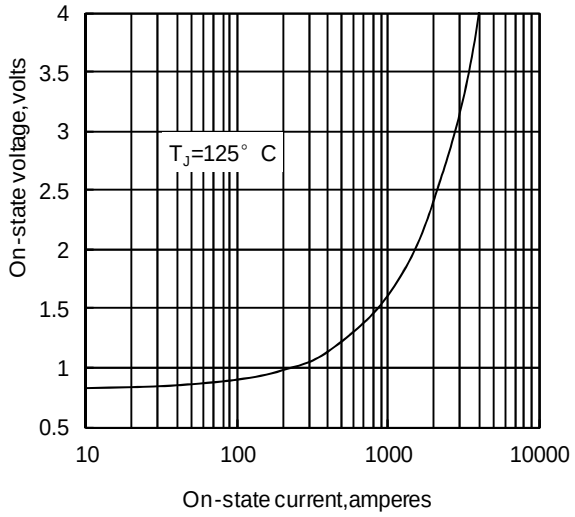


Fig1

Max. junction to case thermal impedance Vs.time

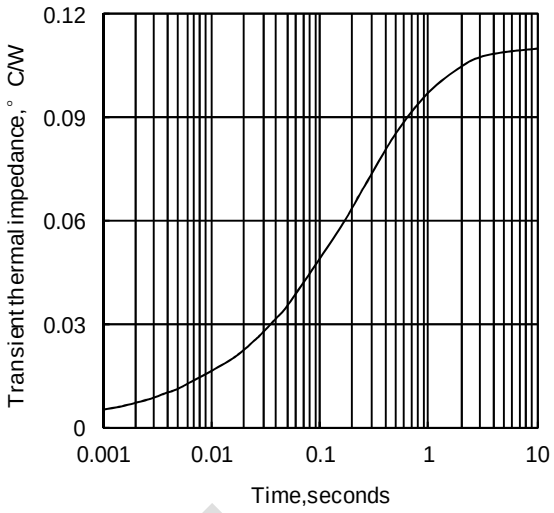


Fig2

Max. power dissipation Vs.mean on-state current

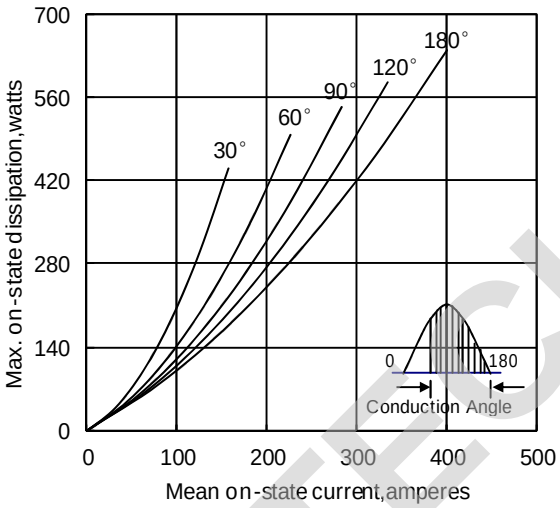


Fig3

Max.case temperature Vs.mean on-state current

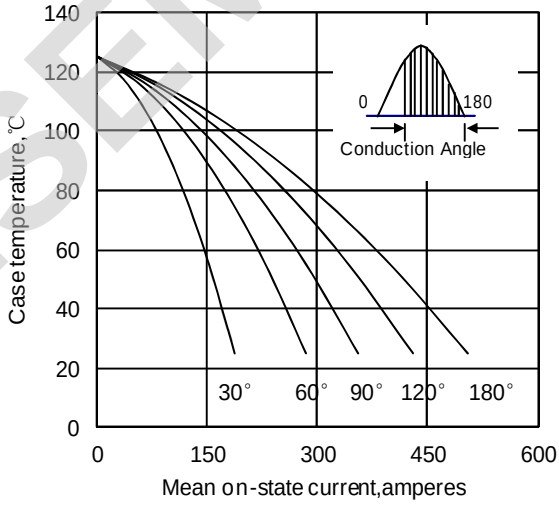


Fig4

Max. power dissipation Vs.mean on-state current

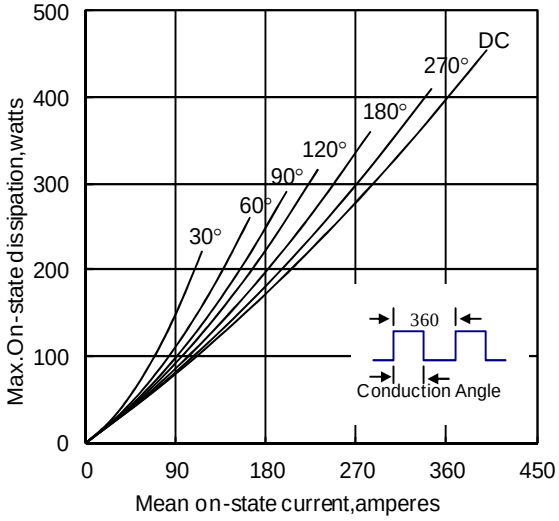


Fig5

Max. case temperature Vs.mean on-state current

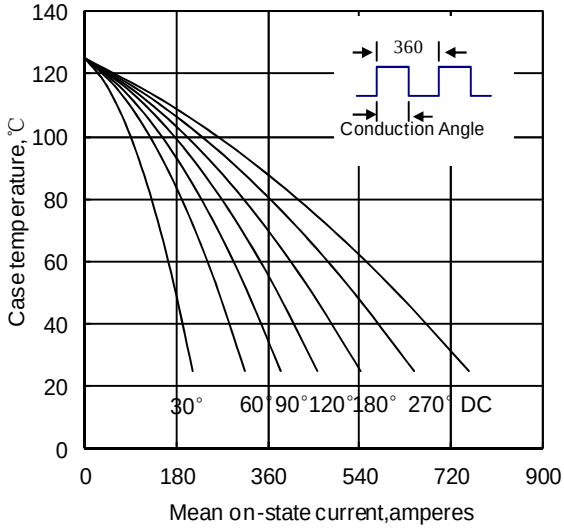


Fig6

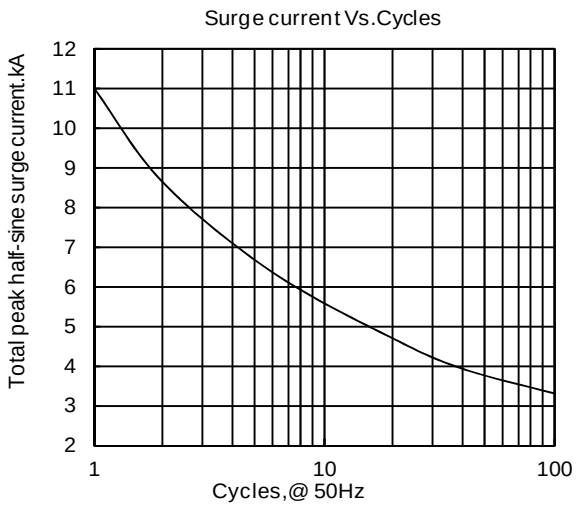


Fig7

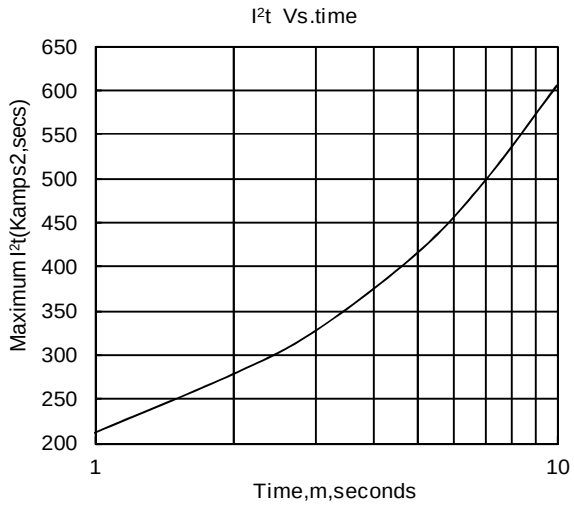


Fig8

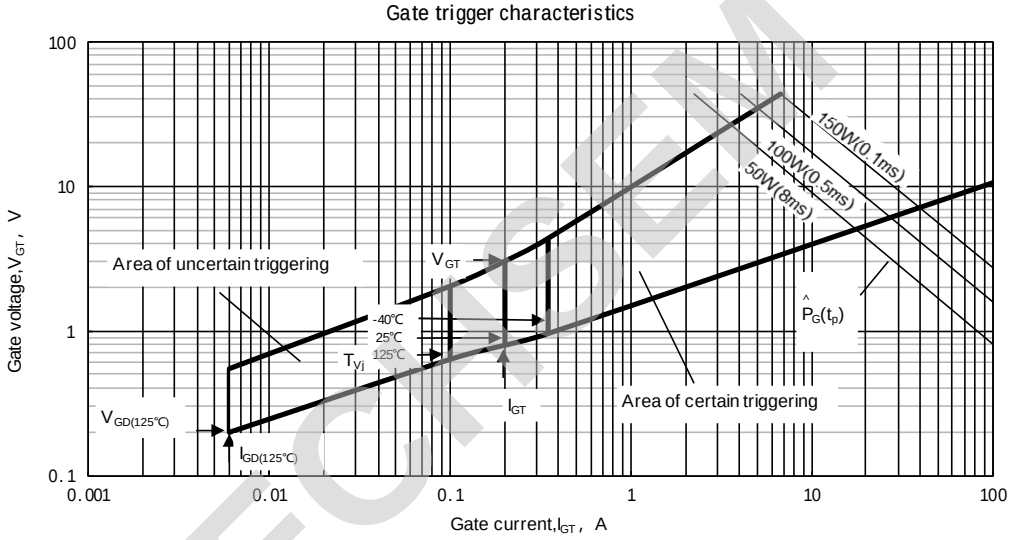
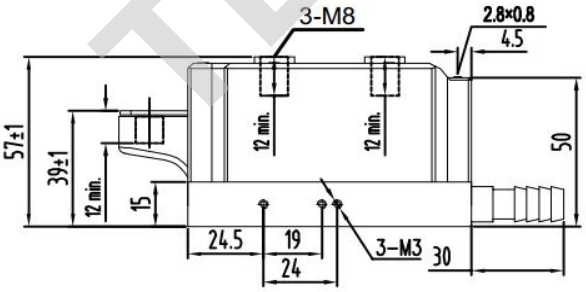
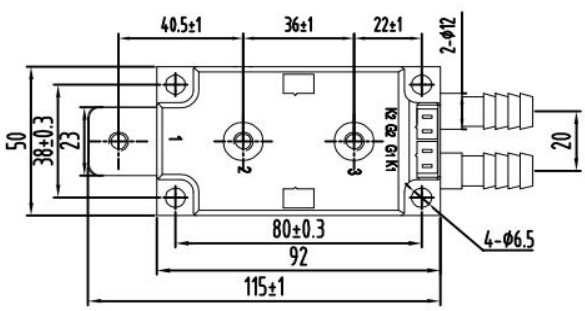
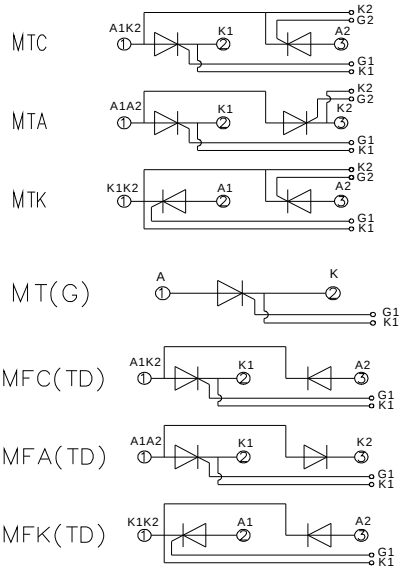


Fig.9

Outline:







Unmarked dimensional tolerance：±0.5mm

TECHSEM reserves the right to change specifications without notice.