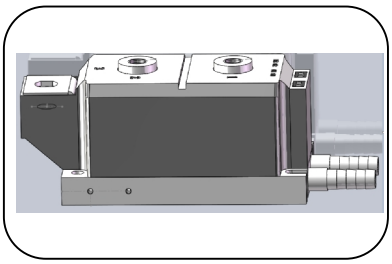


Features：

- **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_{DRM} V_{RRM},	Type & Outline	
800V	MTx800-08-414S3	MFx800-08-414S3
1000V	MTx800-10-414S3	MFx800-10-414S3
1200V	MTx800-12-414S3	MFx800-12-414S3
1400V	MTx800-14-414S3	MFx800-14-414S3
1600V	MTx800-16-414S3	MFx800-16-414S3
1800V	MTx800-18-414S3	MFx800-18-414S3
1800V	MT800-18-414S3G	

MTx stands for any type of **MTC, MTA, MTK**
MFx stands for any type of **MFC, MFA, MFK**

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	T_j(℃)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled, T_c=55℃	125			800	A
$I_{T(RMS)}$	RMS on-state current	180° half sine wave 50Hz				1256	A
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			120	mA
I_{TSM}	Surge on-state current	10ms half sine wave, V_R=0V	125			16	kA
I^2t	I^2t for fusing coordination					1280	A^2s*10^3
V_{TO}	Threshold voltage		135			0.80	V
r_T	On-state slope resistance					0.26	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=1500A	25			1.45	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
t_{gd}	Gate controlled delay time	I_G=1A di_g/dt=1A/μs	25			4	μs
tq	Circuit commutated turn-off time	I_{TM}=800A, tp=2000μs, V_R =50V dv/dt=20V/μs ,di/dt=-10A/μs	125		250		μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		250	mA
V_{GT}	Gate trigger voltage			0.8		3.0	V
I_H	Holding current			10		300	mA
I_L	Latching current	I_A=1A I_G=1A di_g/dt=1A/μs tg=30us	25			1500	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125			0.25	V
I_{GD}	Non-trigger gate current	V_{DM}=67%V_{DRM}	125			5	mA
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled per chip				0.065	℃/W
$R_{th(c-h)}$	Thermal resistance case to heatsink	Single side cooled per chip				0.020	℃/W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		3000			V
F_m	Terminal connection torque(M10)			10.0		12.0	N·m
	Mounting torque(M6)			4.5		6.0	N·m
T_{vj}	Junction temperature			-40		125	℃
T_{stg}	Stored temperature			-40		125	℃
W_t	Weight				2100		g
Outline	414S3						

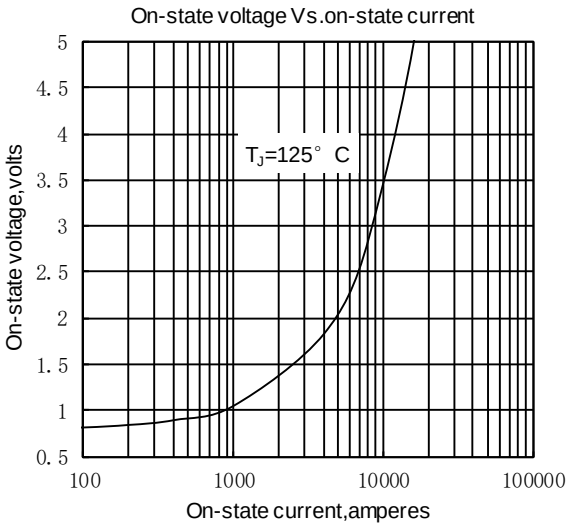


Fig.1

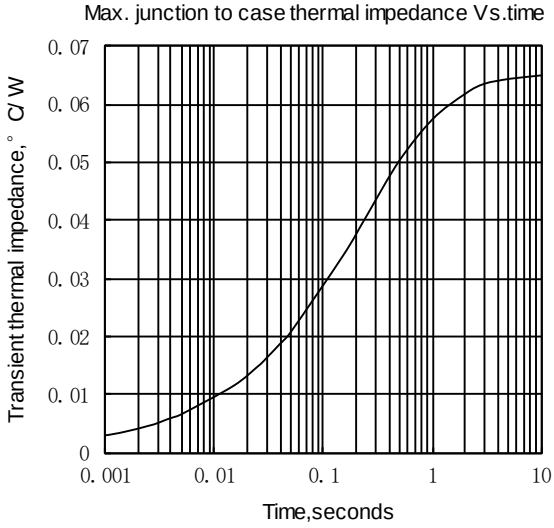


Fig.2

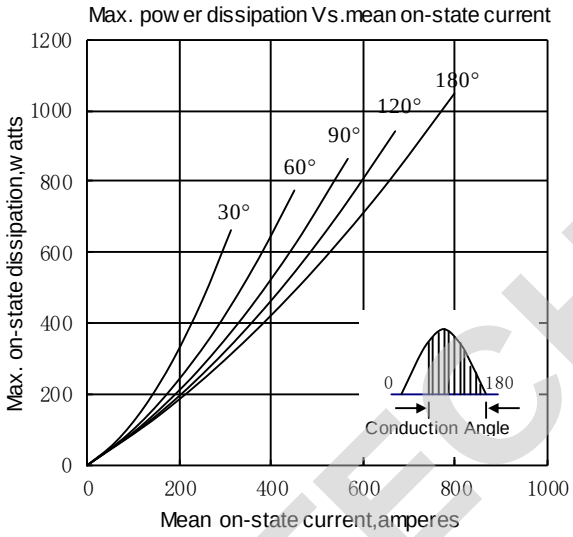


Fig.3

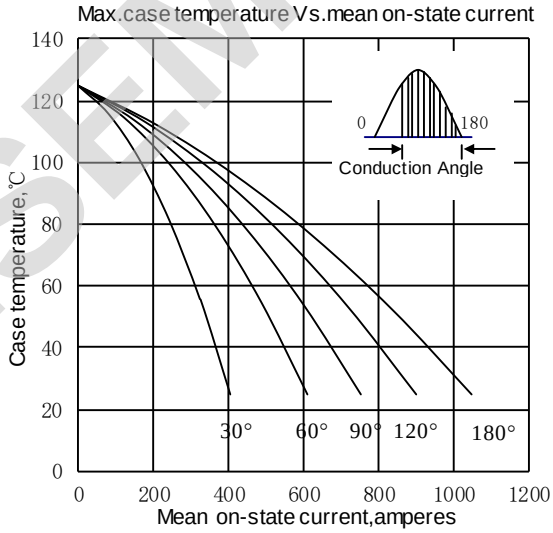


Fig.4

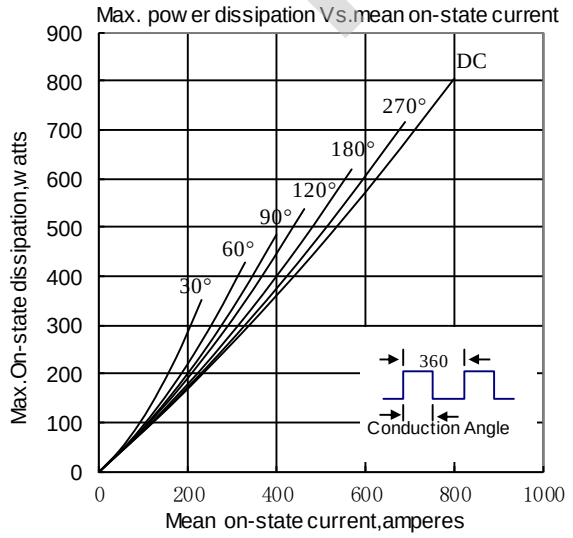


Fig.5

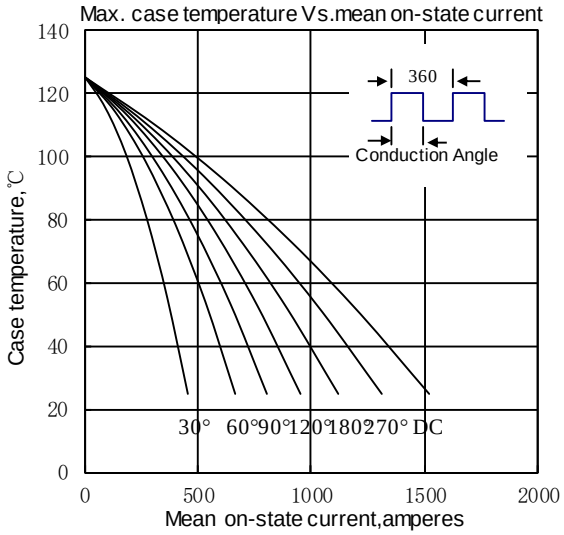


Fig.6

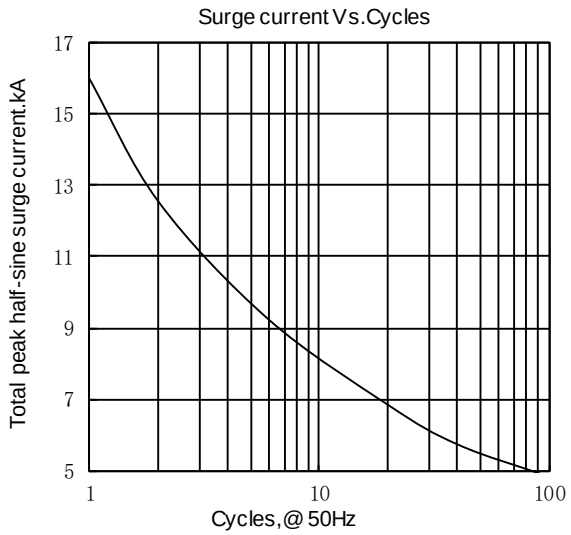


Fig.7

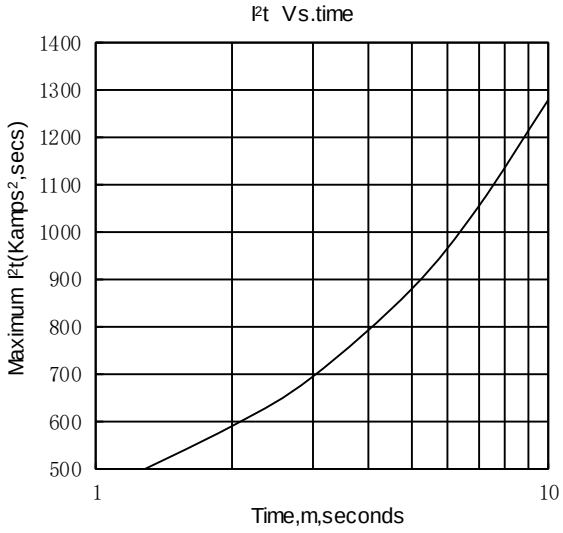


Fig.8

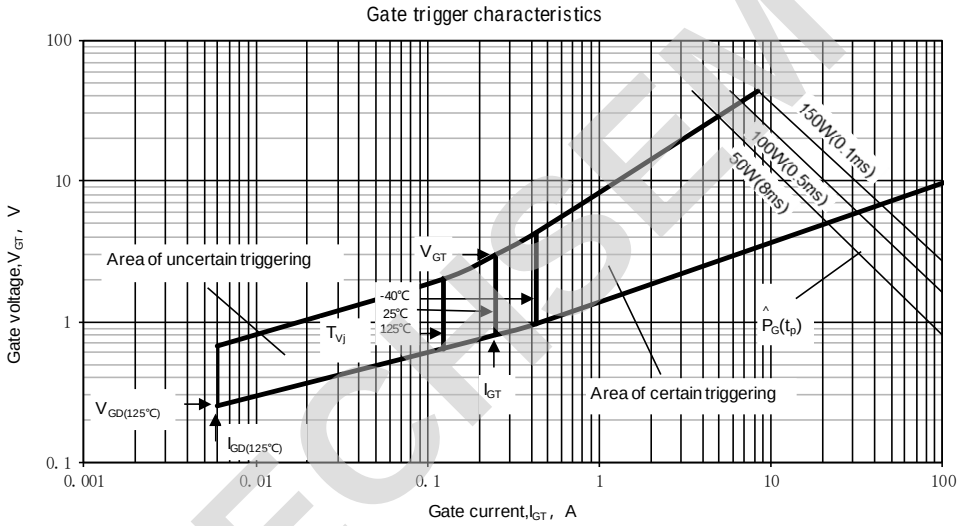
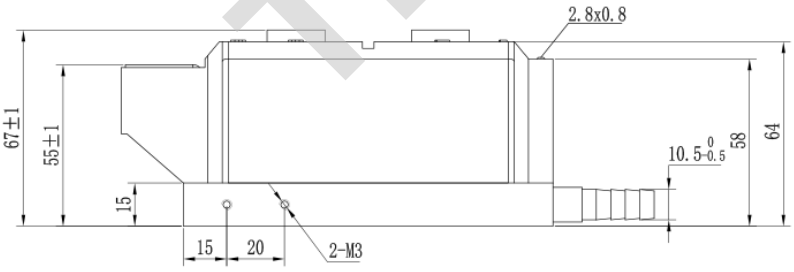
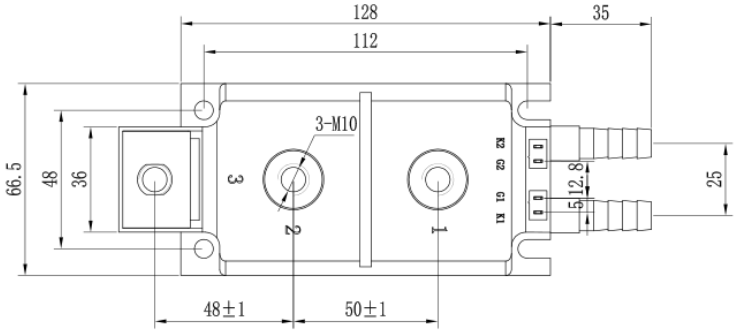
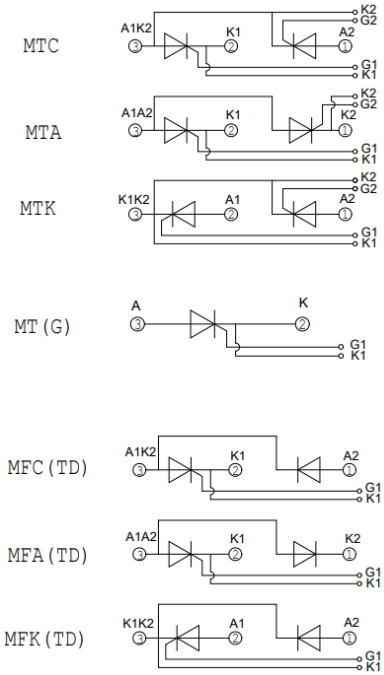


Fig.9

Outline:







Unmarked dimensional tolerance: ±0.5mm

TECHSEM reserves the right to change specifications without notice.