

**Features:**

- Isolated mounting base 3000V~
- 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 _{DRM} , V _{RRM}	Type & Outline
2000V	MT500-20-417F2
2200V	MT500-22-417F2
2500V	MT500-25-417F2

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			500	A
I _{T(RMS)}	RMS on-state current					785	A
I _{DRM} I _{RRM}	Repetitive peak current	at V _{DRM} at V _{RRM}	125			40	mA
I _{TSM}	Surge on-state current	10ms half sine wave	125			13	kA
I ² t	I ² t for fusing coordination	V _R =60%V _{RRM}				845	10 ³ A ² s
V _{TO}	Threshold voltage		125			0.85	V
r _T	On-state slope resistance					0.32	mΩ
V _{TM}	Peak on-state voltage	I _{TM} =1500A	25			1.92	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			0.2	V
R _{th(j-c)}	Thermal resistance Junction to case	Single side cooled				0.065	°C/W
R _{th(c-h)}	Thermal resistance case to heat sink	Single side cooled				0.024	°C/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	°C
T _{stg}	Stored temperature			-40		125	°C
W _t	Weight					770	g
Outline	417F2						

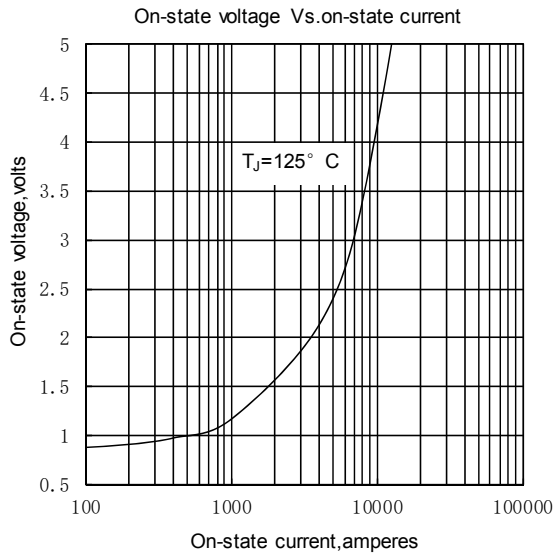


Fig.1

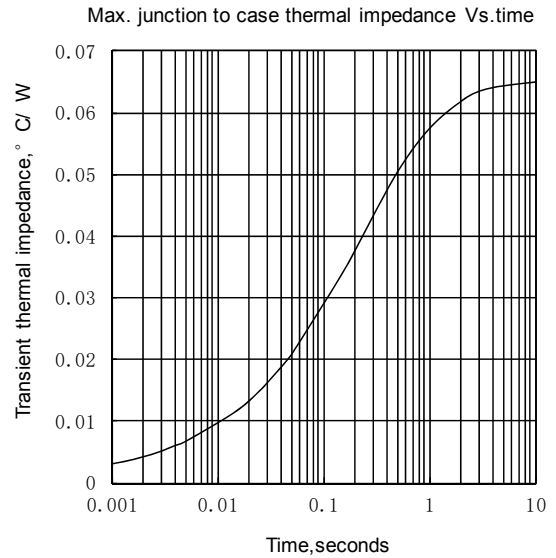


Fig.2

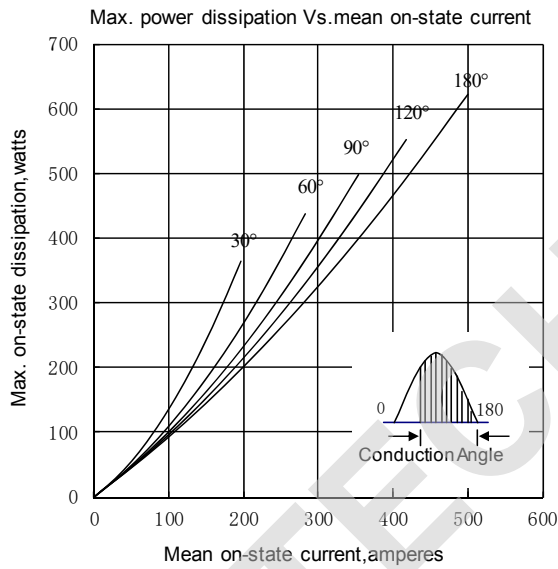


Fig.3

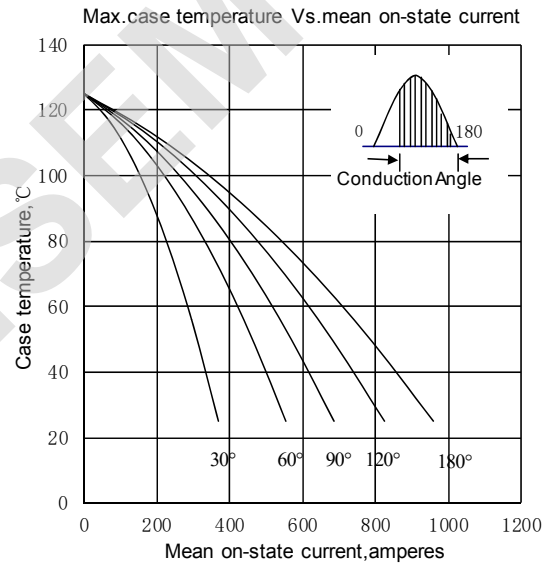


Fig.4

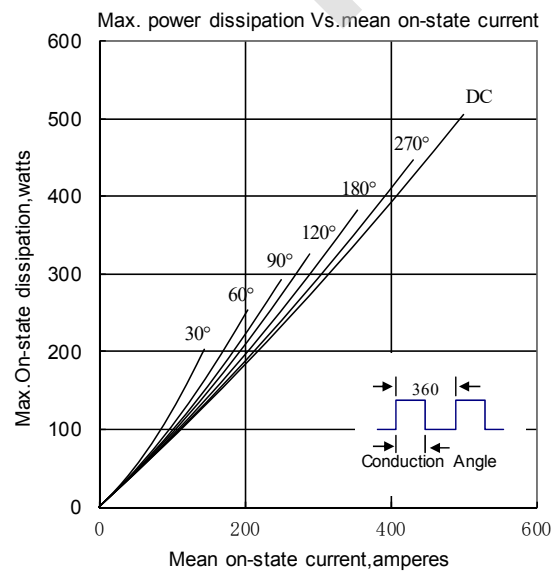


Fig.5

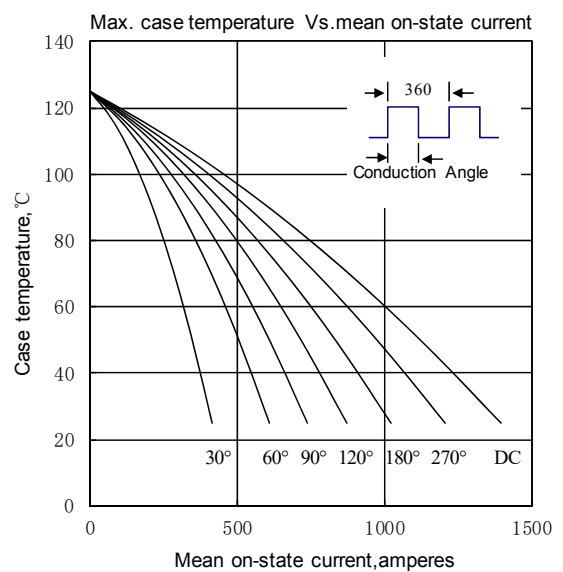


Fig.6

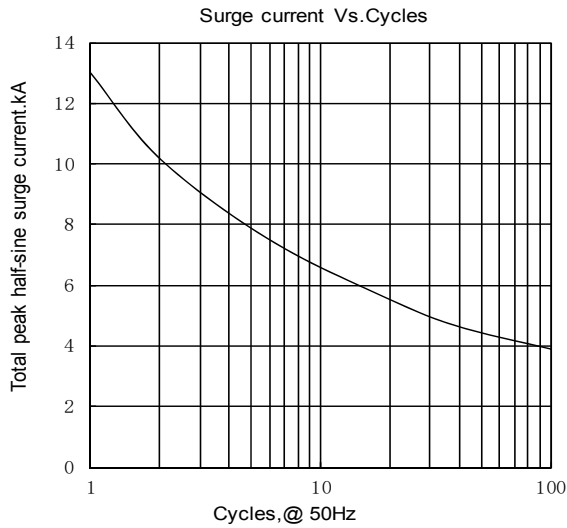


Fig.7

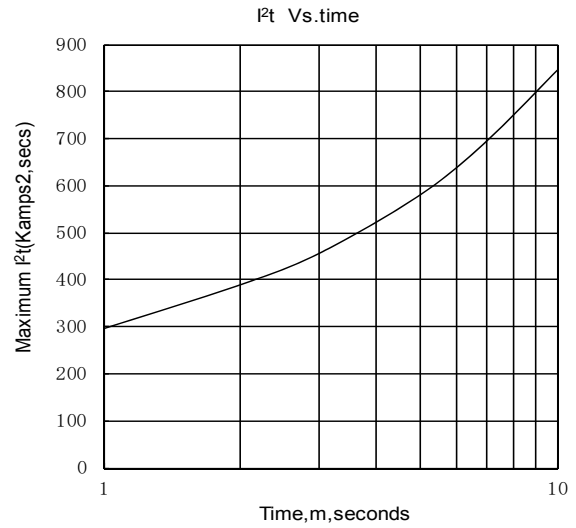


Fig.8

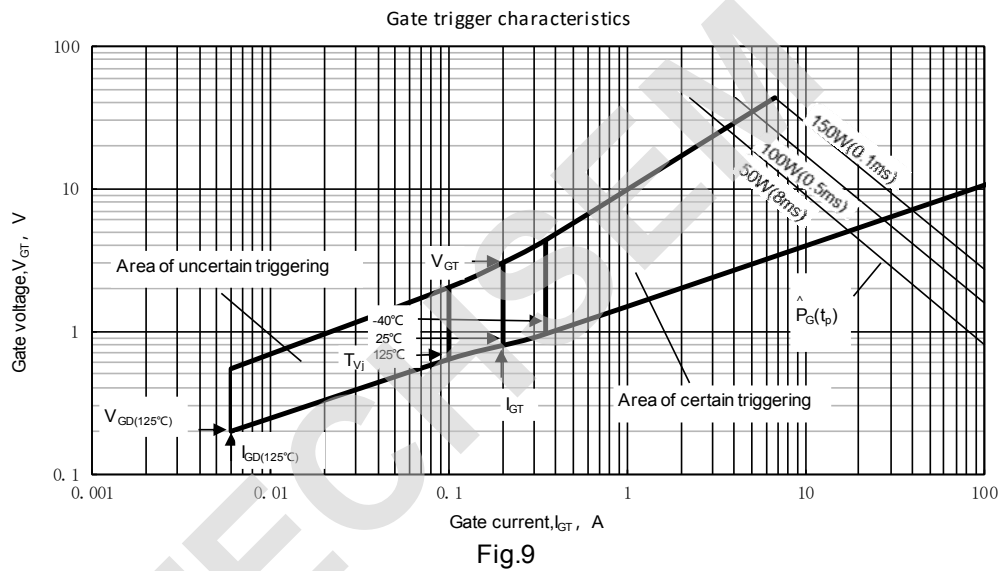
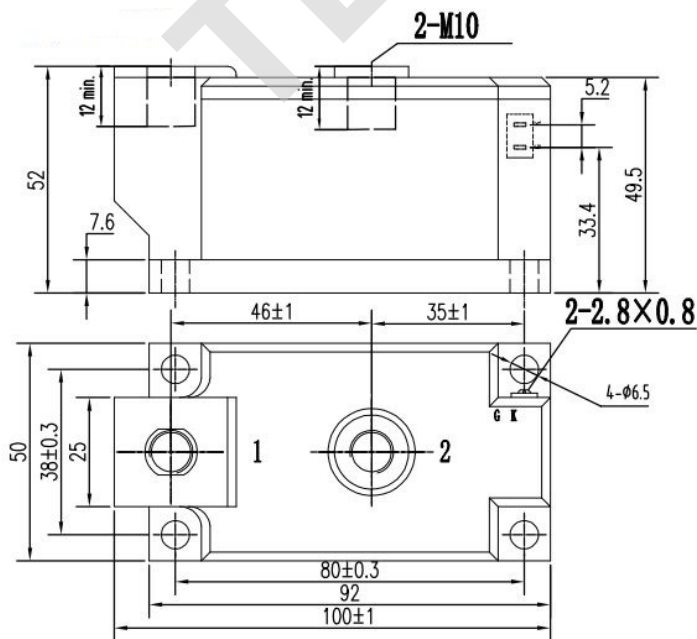


Fig.9

Outline:



Unmarked dimensional tolerance: $\pm 0.5\text{mm}$

TECHSEM reserves the right to change specifications without notice.