

**Features:**

- Non-isolated. Mounting base as anode or cathode terminal
- Pressure contact technology with increased power cycling capability
- Low on-state voltage drop

Typical Applications:

- Welding Power Supply
- Various DC Power supplies
- DC supply for PWM inverter

V _{DRM} , V _{RRM}	Type & Outline	
800V	MT300-08-407F2NA	MT300-08-407F2NK
1000V	MT300-10-407F2NA	MT300-10-407F2NK
1200V	MT300-12-407F2NA	MT300-12-407F2NK
1400V	MT300-14-407F2NA	MT300-14-407F2NK
1600V	MT300-16-407F2NA	MT300-16-407F2NK
1800V	MT300-18-407F2NA	MT300-18-407F2NK

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	T _j (°C)	VALUE			UNIT
				Min	Type	Max	
I _{T(AV)}	Mean on-state current	180° half sine wave 50Hz	125			300	A
I _{T(RMS)}	RMS on-state current	Single side cooled, T _c =90°C	125			471	A
I _{DRM} I _{RRM}	Repetitive peak current	at V _{DRM} at V _{RRM}	125			15	mA
I _{TSM}	Surge on-state current	10ms half sine wave	125			8.3	kA
I ² t	I ² t for fusing coordination	V _R =60%V _{RRM}				344	A ² s*10 ³
V _{TO}	Threshold voltage		125			0.80	V
r _T	On-state slope resistance					0.72	mΩ
V _{TM}	Peak on-state voltage	I _{TM} =900A	25			1.58	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		150	mA
V _{GT}	Gate trigger voltage			0.8		2.5	V
I _H	Holding current			20		120	mA
I _L	Latching current					1000	mA
V _{GD}	Non-trigger gate voltage	At 67%V _{DRM}	125			0.2	V
R _{th(j-c)}	Thermal resistance Junction to case	Single side cooled				0.08	°C/W
R _{th(c-h)}	Thermal resistance case to heatsink	Single side cooled				0.04	°C/W
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				330		g
Outline	407F2						

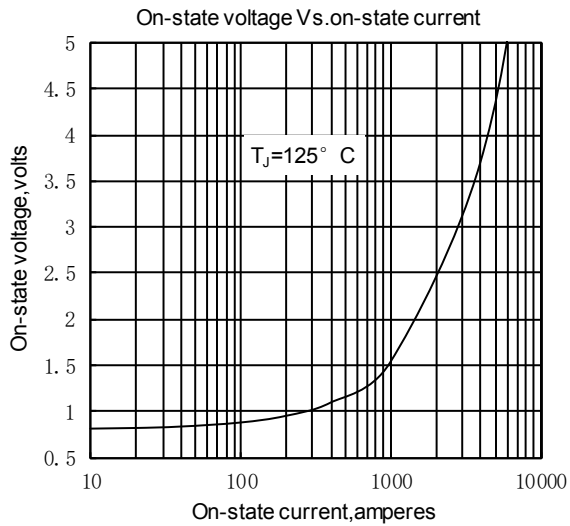


Fig.1

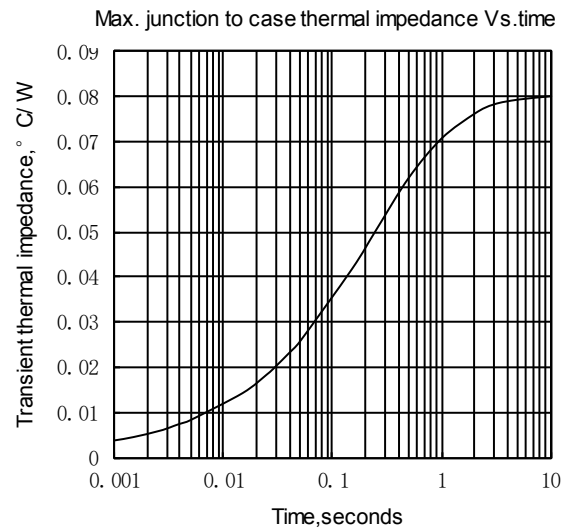


Fig.2

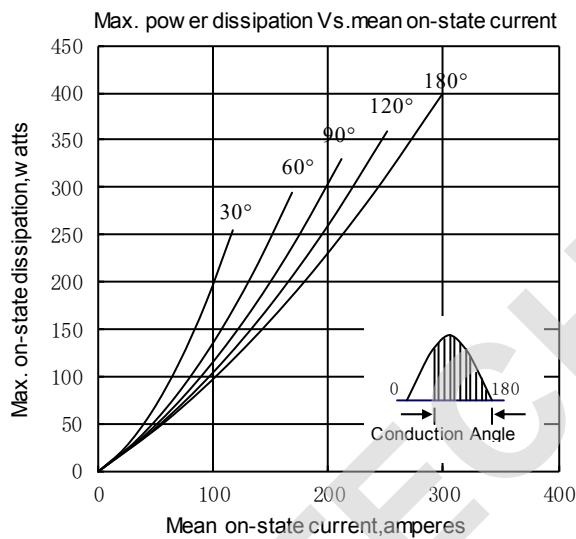


Fig.3

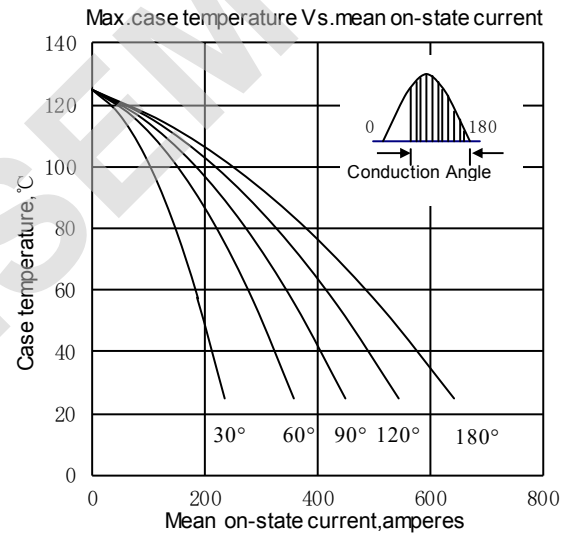


Fig.4

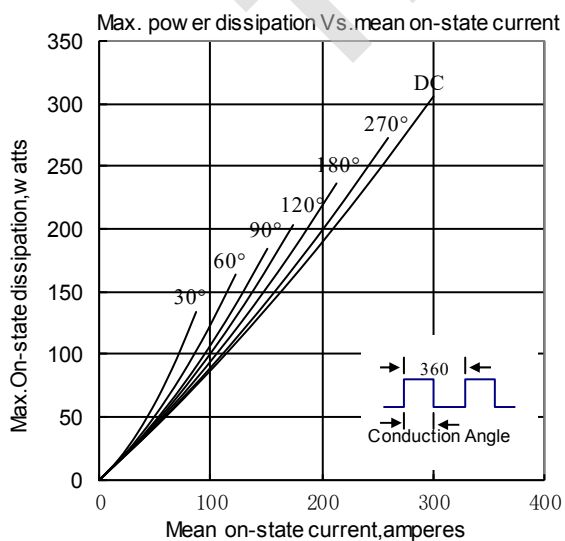


Fig.5

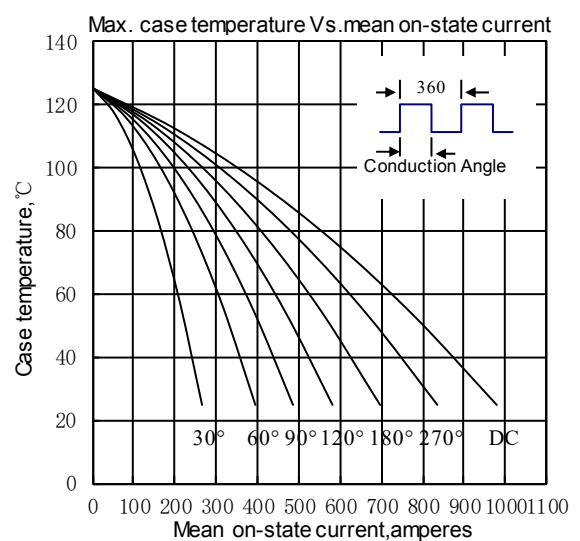


Fig.6

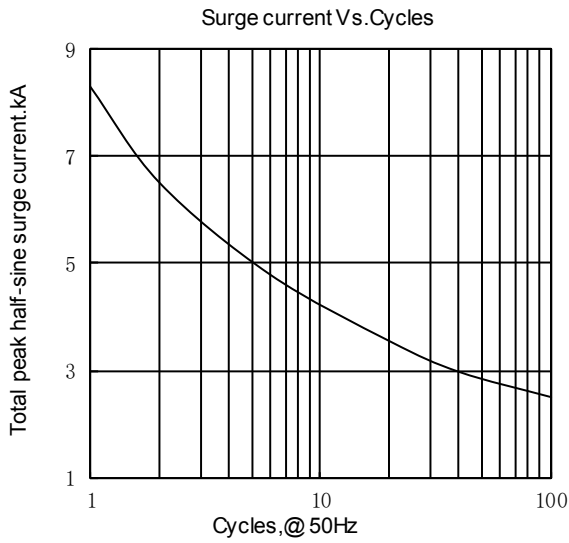


Fig.7

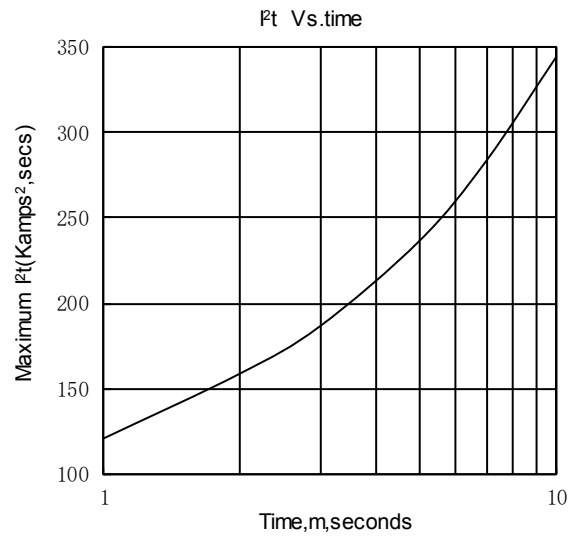


Fig.8

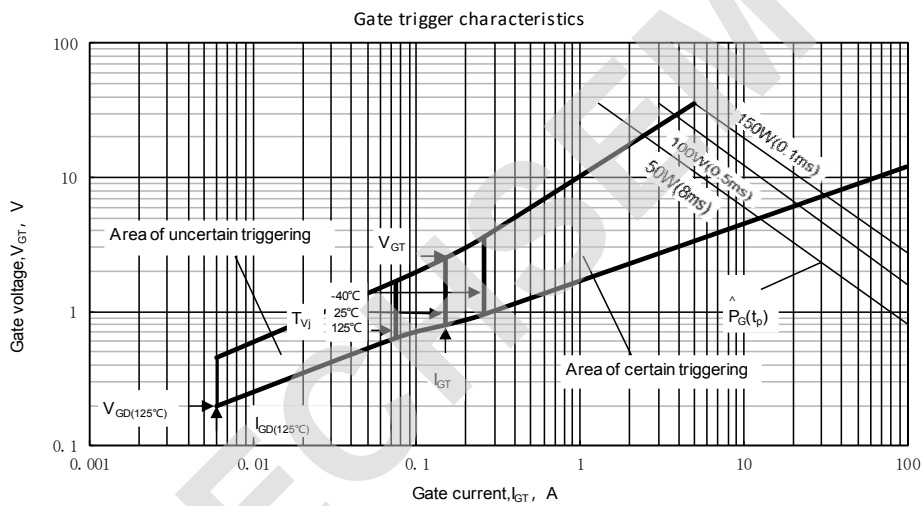
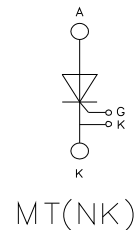
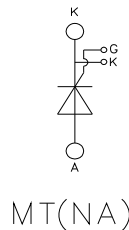
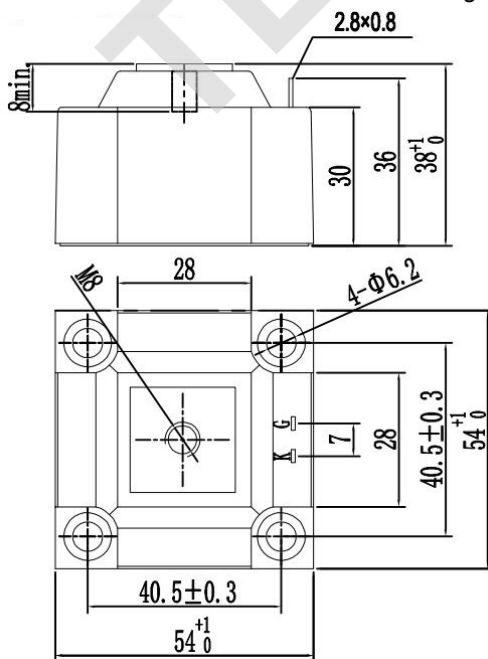


Fig.9

Outline:



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

TECHSEM reserves the right to change specifications without notice.