

**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 _R RM	Type & Outline	
600V	MTx120-06-223F3	MTx120-06-223F3B
800V	MTx120-08-223F3	MTx120-08-223F3B
1000V	MTx120-10-223F3	MTx120-10-223F3B
1200V	MTx120-12-223F3	MTx120-12-223F3B
1400V	MTx120-14-223F3	MTx120-14-223F3B
1600V	MTx120-16-223F3	MTx120-16-223F3B

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 =85°C	130			120	A
I _{T(RMS)}	RMS on-state current					188	A
I _{DRM} I _{RRM}	Repetitive peak current	at V _{DRM} at V _R RM	130			12	mA
I _{TSM}	Surge on-state current	10ms half sine wave	130			2.30	kA
I ² t	I ² t for fusing coordination	V _R =60%V _{RRM}				26.45	10 ³ A ² s
V _{TO}	Threshold voltage		130			0.8	V
r _T	On-state slope resistance					2.0	mΩ
V _{TM}	Peak on-state voltage	I _{TM} =330A	25			1.69	V
dv/dt	Critical rate of rise of off-state voltage	V _{DM} =67%V _{DRM}	130			1000	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A t _r ≤0.5μs Repetitive	130			150	A/μs
I _{GT}	Gate trigger current	V _A =12V, I _A =1A	25	30		100	mA
V _{GT}	Gate trigger voltage			0.8		2.5	V
I _H	Holding current			10		120	mA
I _L	Latching current					600	mA
t _{gd}	gate controlled delay time	Gate source 1.5A t _r ≤0.5μs	25			1	μs
t _q	circuit commutated turn-off time	V _{RM} = 100 V, V _{DM} =0,67V _{DRM} dv /dt = 30 V/μs, -di /dt = 20 A/μs	130		200		μs
V _{GD}	Non-trigger gate voltage	V _{DM} =67%V _{DRM}	130			0.2	V
R _{th(j-c)}	Thermal resistance Junction to case	Single side cooled per chip θ= 180° sin				0.25	°C/W
		Single side cooled per chip DC				0.24	
R _{th(c-h)}	Thermal resistance case to heatsink	Single side cooled per chip θ= 180° sin				0.15	
		Single side cooled per chip DC				0.14	
V _{iso}	Isolation voltage	50Hz, R.M.S, t=1min, I _{iso} :1mA(MAX)		3000			V
F _m	Terminal connection torque(M5)			2.5		4.0	N·m
	Mounting torque(M6)			4.5		6.0	N·m
T _{vj}	Junction temperature			-40		130	°C
T _{stg}	Stored temperature			-40		125	°C
W _t	Weight				175		g
Outline	223F3; 223F3B						

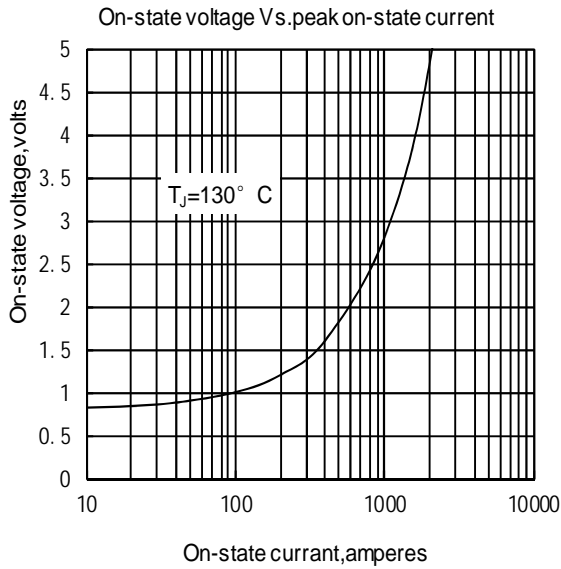


Fig1

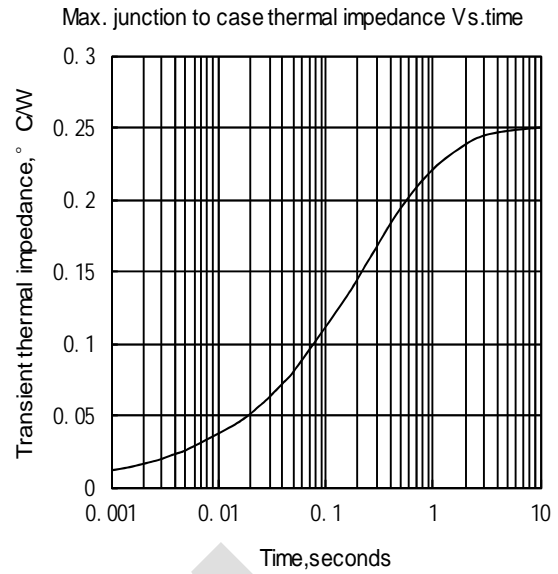


Fig2

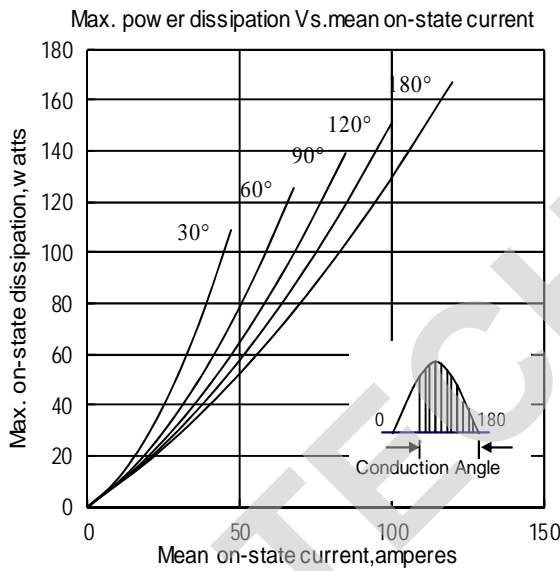


Fig3

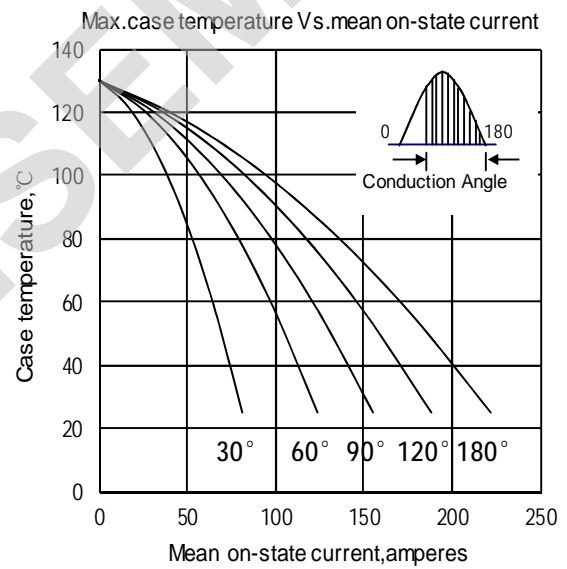


Fig4

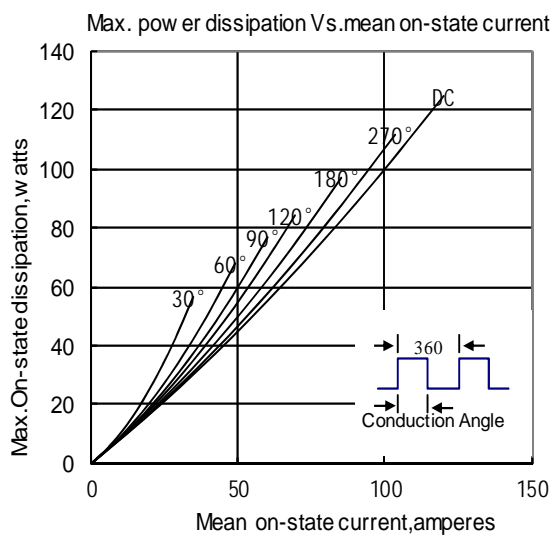


Fig5

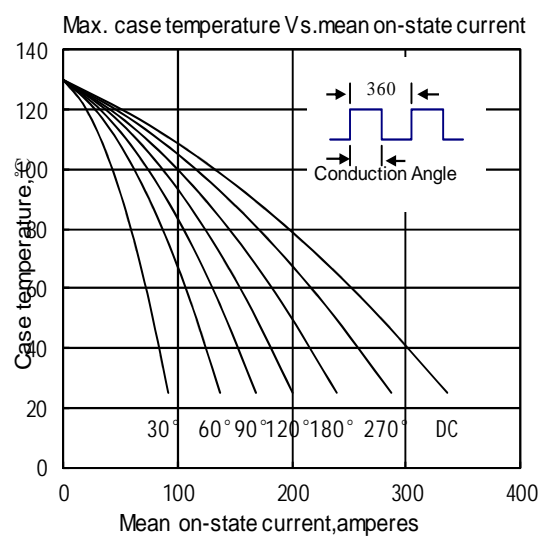


Fig6

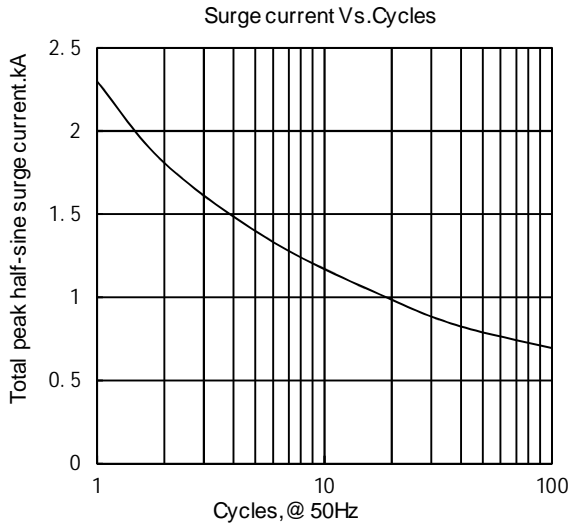


Fig 7

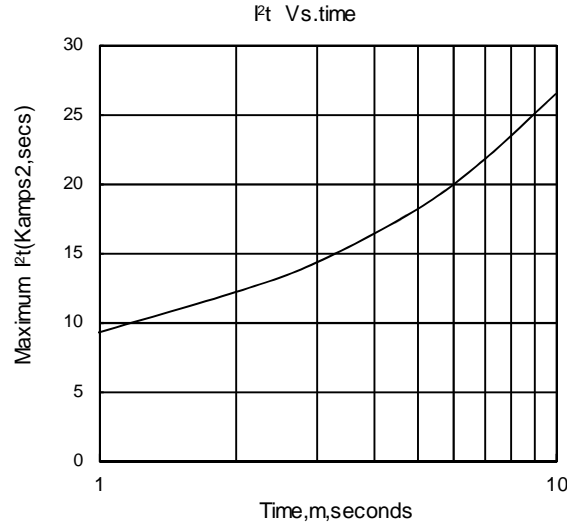


Fig 8

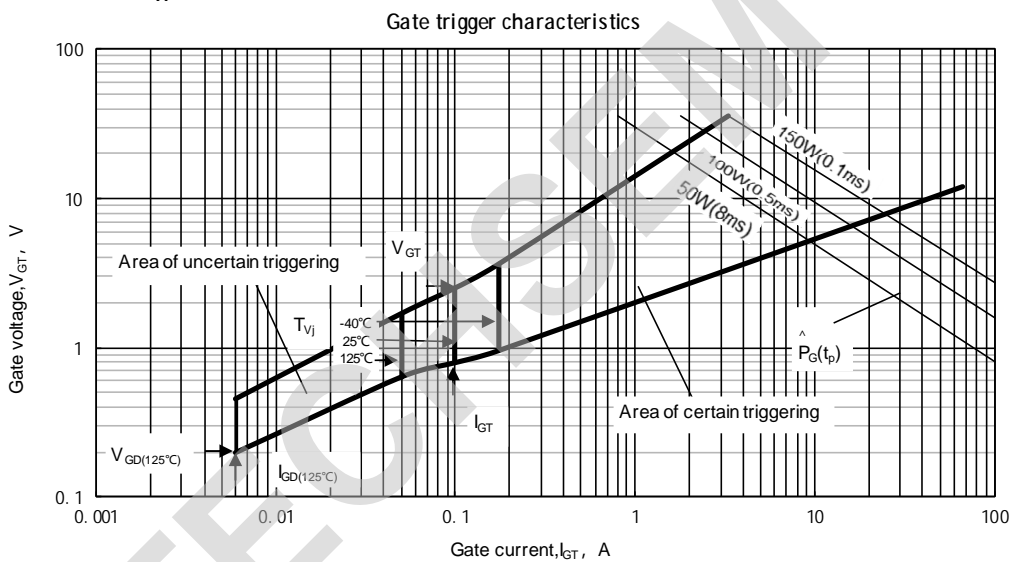
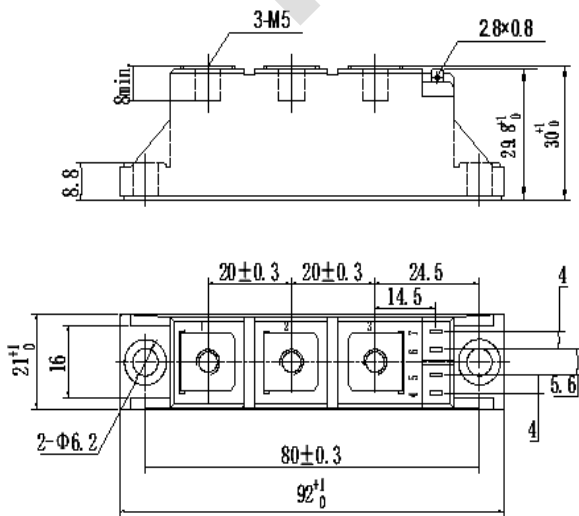
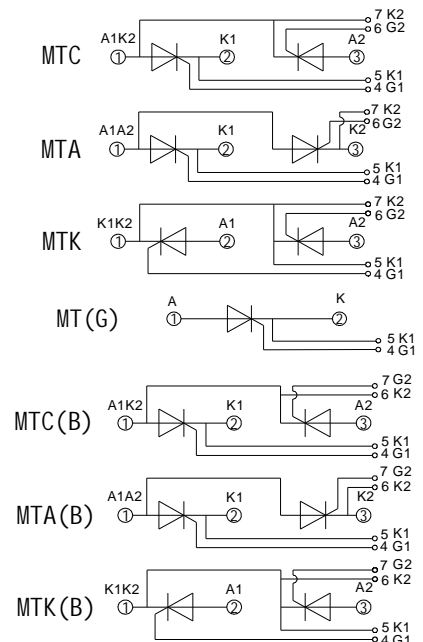


Fig.9

Outline:



Unmarked dimensional tolerance: ±0.5mm



TECHSEM reserves the right to change specifications without notice.