

Features:

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

Typical Applications

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

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	T _j (°C)	VALUE			UNIT
				Min	Type	Max	
I _{T(AV)}	Mean on-state current	180° half sine wave 50Hz	130			250	A
I _{T(RMS)}	RMS on-state current	Single side cooled, T _c =85°C	130			393	A
V _{DSM} V _{RSM}	Non-repetitive peak off-state voltage Non-repetitive peak reverse voltage		25			1700	V
V _{DRM} V _{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage		25			1600	V
I _{DRM} I _{RRM}	Repetitive peak current	at V _{DRM} at V _{RRM}	130			35	mA
I _{TSM}	Surge on-state current	10ms half sine wave, V _R =0V	45			8.3	kA
I _{TSM}	Surge on-state current	10ms half sine wave, V _R =0V	130			7	kA
I ² t	I ² t for fusing coordination					245	10 ³ A ² s
V _{TO}	Threshold voltage		130			0.83	V
r _T	On-state slope resistance					1.00	mΩ
V _{TM}	Peak on-state voltage	I _{TM} =400A	25			1.33	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			100	A/μs
t _q	Circuit commutated turn-off time	I _{TM} =250A, t _p =2000μs, V _R =50V dv/dt=30V/μs, di/dt=-20A/μs	130		150		μs
I _{GT}	Gate trigger current			30		180	mA
V _{GT}	Gate trigger voltage	V _A =12V, I _A =1A	25	0.8		2.5	V
I _H	Holding current			20		180	mA
I _L	Latching current	I _A =1A, I _G =1A, di _g /dt=1A/μs, t _g =30us	25			500	mA
t _{gd}	Gate controlled delay time	I _G =1A, di _g /dt=1A/μs	25			2	μs
I _{GD}	Non-trigger gate current		130			10	mA
V _{GD}	Non-trigger gate voltage	V _{DM} =67%V _{DRM}	130			0.2	V
P _d	Total power dissipation	T _C =25°C	130			875	W
C _j	Junction capacitance	V _R =400V, 1MHz	25		350		pF
R _{th(j-c)}	Thermal resistance Junction to case	Single side cooled per chip				0.12	°C/W
R _{th(c-h)}	Thermal resistance case to heatsink	Single side cooled per chip				0.035	°C/W
V _{iso}	Isolation voltage	50Hz, R.M.S, t=1min, I _{iso} :1mA(MAX)		3000			V
F _m	Terminal connection torque(M6)			4.5		6.0	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				350		g
Outline	216F3E						

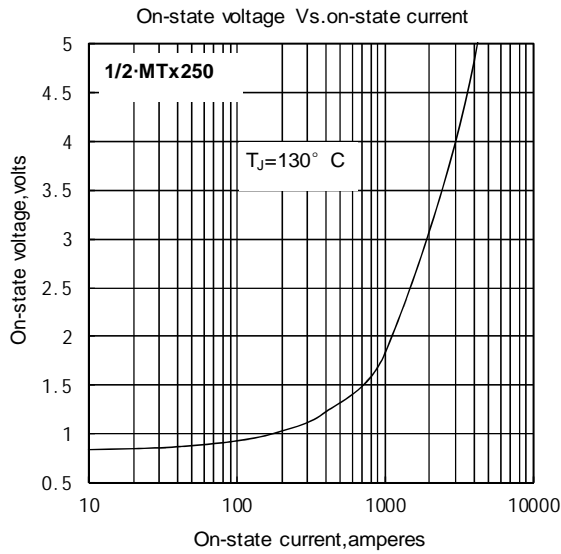


Fig.1

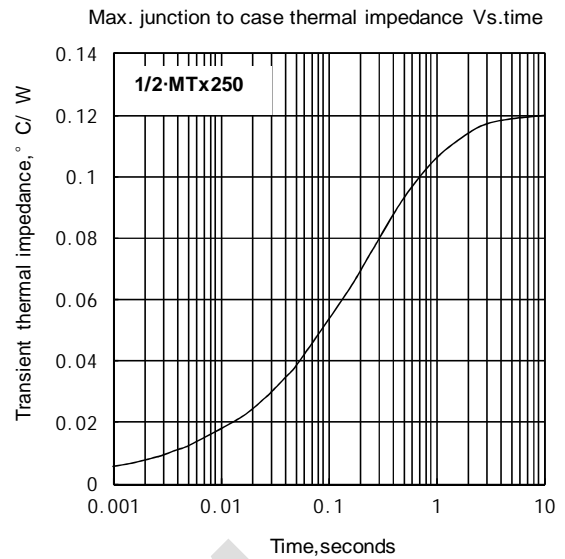


Fig.2

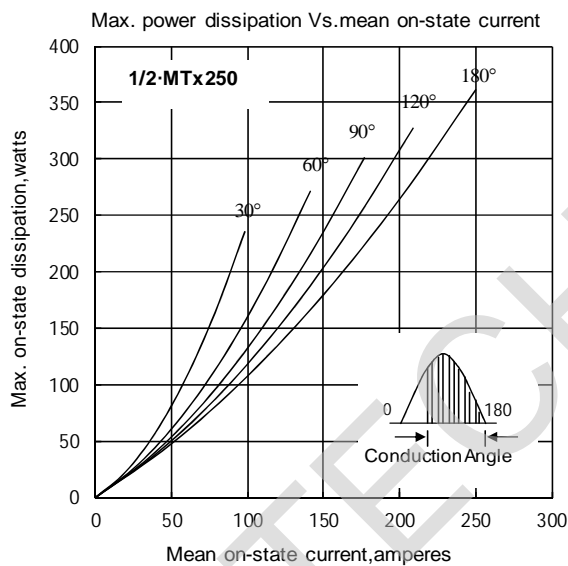


Fig.3

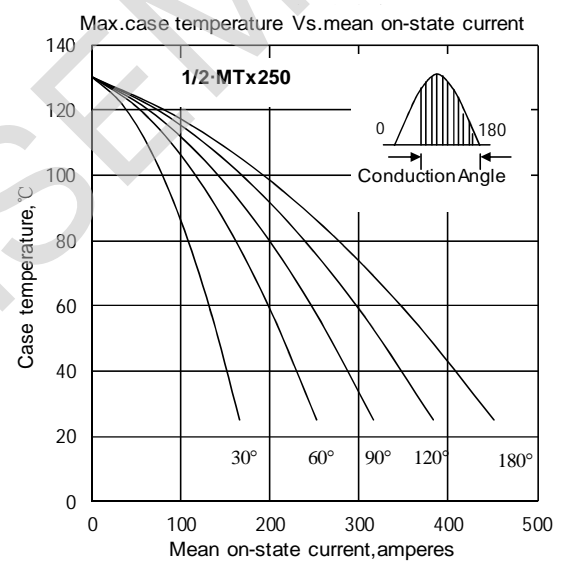


Fig.4

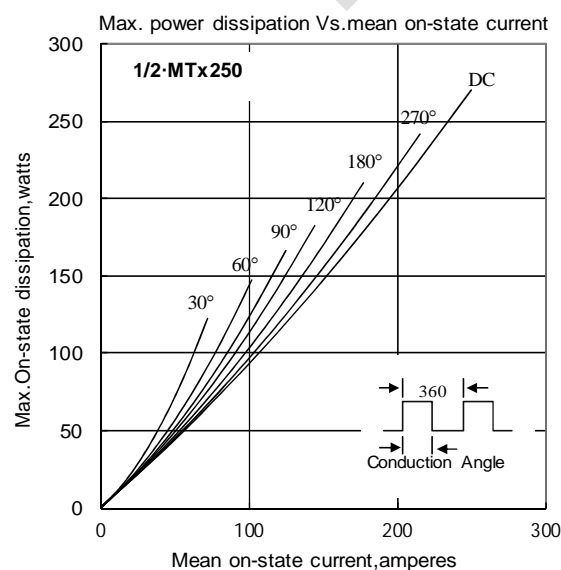


Fig.5

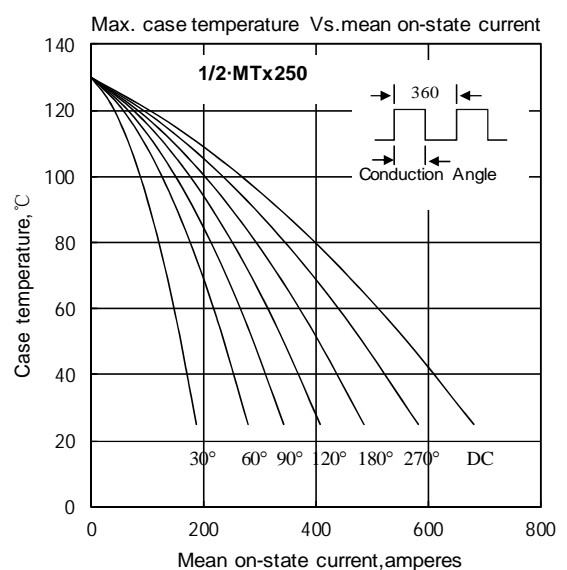


Fig.6

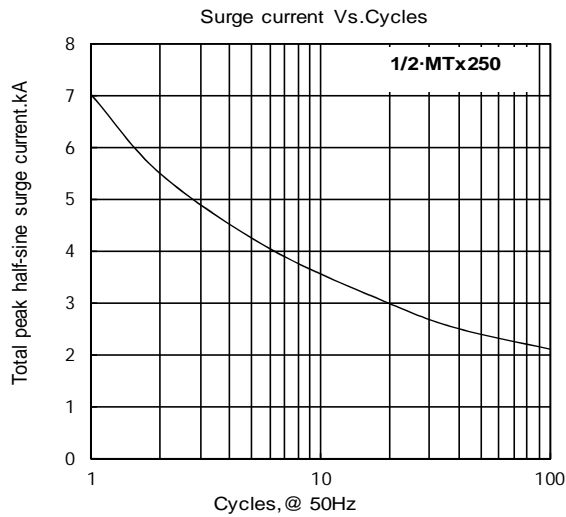


Fig.7

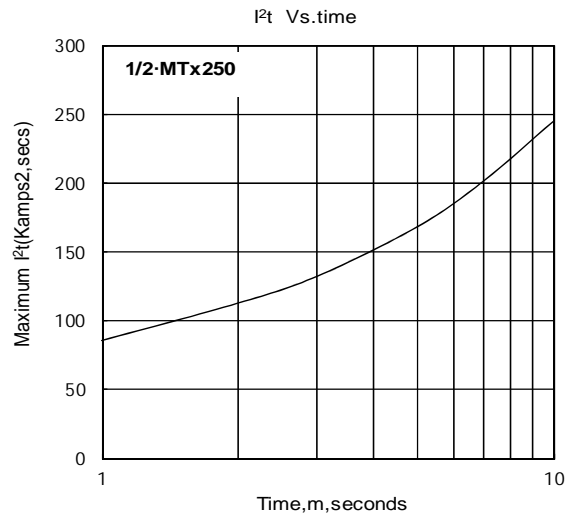


Fig.8

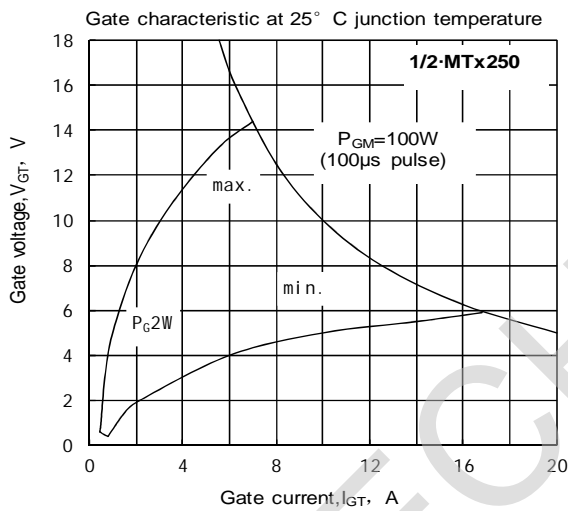


Fig.9

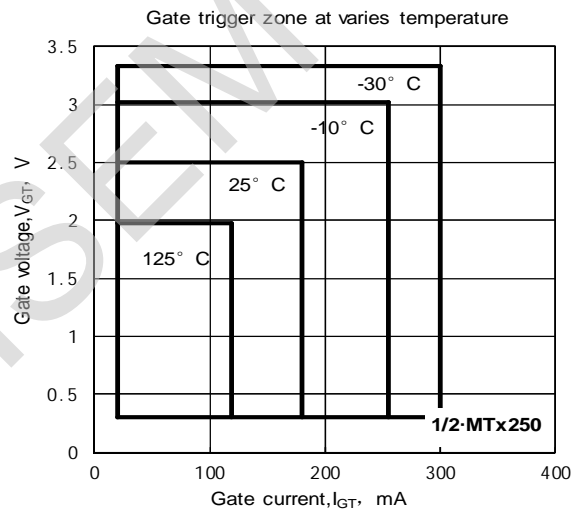
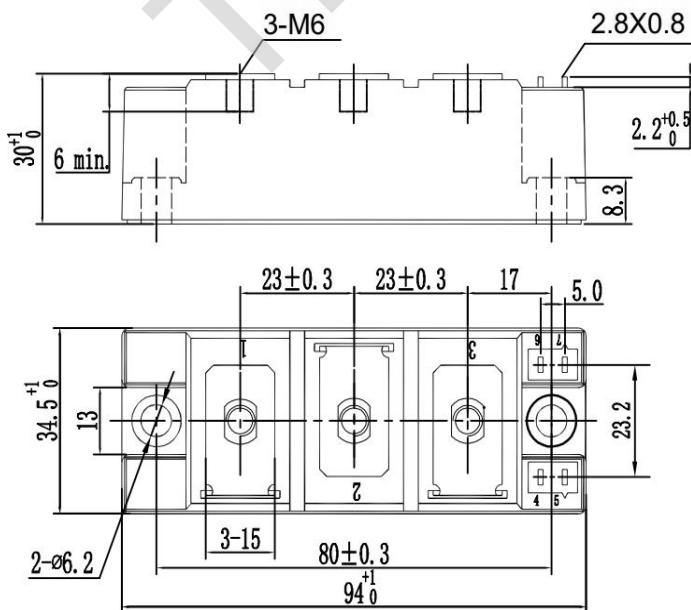
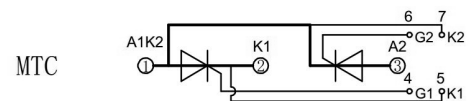


Fig.10

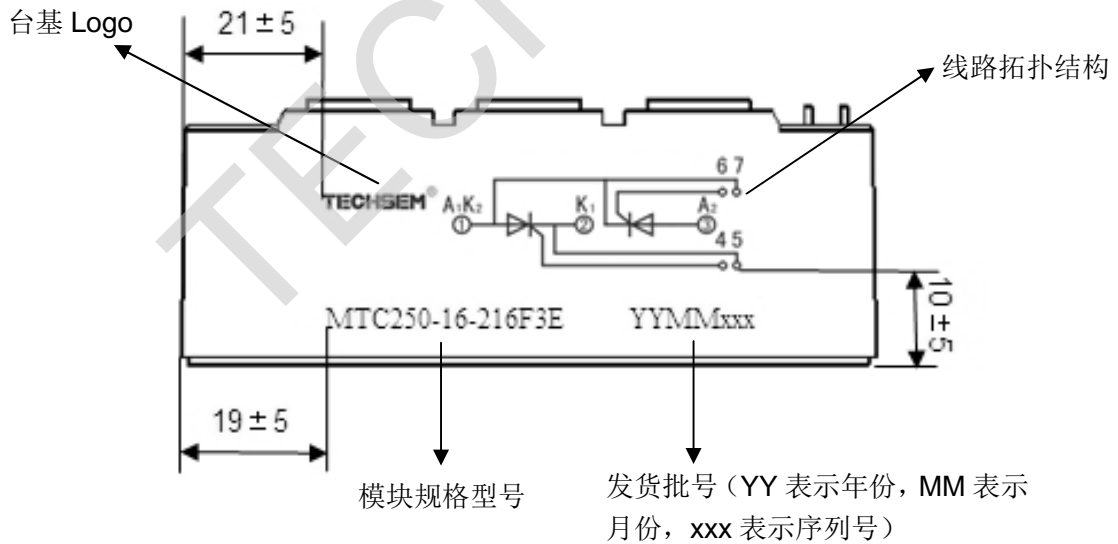
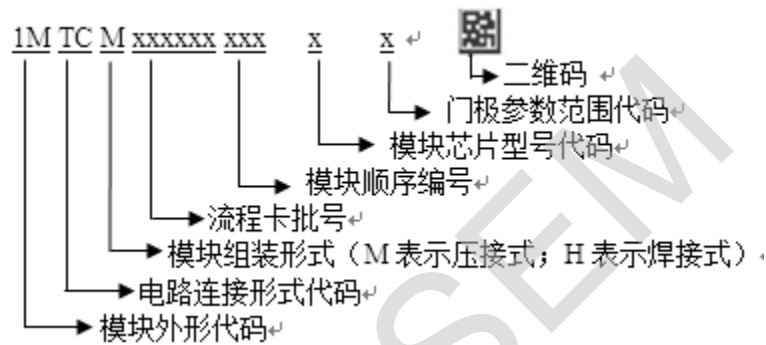
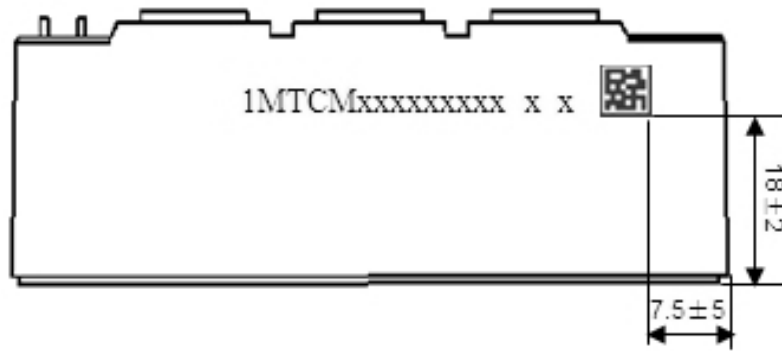
Outline:



Unmarked dimensional tolerance: ±0.5mm



Code Designation: MTC250-16-216F3E



注：二维码内容 1MTCMxxxxxxxxx

Product Description

Type	$I_{T(AV)}$	V_{DRM}, V_{RRM}	I_{TSM}	T_{jmax}	Marking	Outline
MTC250A1600V-216F3E	250A($T_C=85^\circ C$)	1600V	7kA($130^\circ C$)	130°C	MTC250-16-216F3E	216F3E