

**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 <sub>DRM</sub> , V <sub>RRM</sub>	Type & Outline
800V	MFC200-08-216F3E
1000V	MFC200-10-216F3E
1200V	MFC200-12-216F3E
1400V	MFC200-14-216F3E
1600V	MFC200-16-216F3E
1800V	MFC200-18-216F3E

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	T <sub>j</sub> (°C)	VALUE			UNIT
				Min	Type	Max	
I <sub>T(AV)</sub>	Mean on-state current	180° half sine wave 50Hz Single side cooled, T <sub>c</sub> =85°C	125			200	A
I <sub>T(RMS)</sub>	RMS on-state current		125			314	A
I <sub>DRM</sub> I <sub>RRM</sub>	Repetitive peak current	at V <sub>DRM</sub> at V <sub>RRM</sub>	125			20	mA
I <sub>TSM</sub>	Surge on-state current	10ms half sine wave V <sub>R</sub> =60%V <sub>RRM</sub>	125			7.0	kA
I <sup>2</sup> t	I <sup>2</sup> t for fusing coordination						245
V <sub>TO</sub>	Threshold voltage		125			0.80	V
r <sub>T</sub>	On-state slope resistance						1.30
V <sub>TM</sub>	Peak on-state voltage	I <sub>TM</sub> =600A	25			1.65	V
dv/dt	Critical rate of rise of off-state voltage	V <sub>DM</sub> =67%V <sub>DRM</sub>	125			1000	V/μs
di/dt	Critical rate of rise of on-state current	I <sub>TM</sub> =400A, Gate source 1.5A t <sub>r</sub> ≤ 0.5μs Repetitive	125			200	A/μs
I <sub>GT</sub>	Gate trigger current	V <sub>A</sub> =12V, I <sub>A</sub> =1A	25	30		180	mA
V <sub>GT</sub>	Gate trigger voltage			0.7		2.5	V
I <sub>H</sub>	Holding current			10		180	mA
V <sub>GD</sub>	Non-trigger gate voltage	V <sub>DM</sub> =67%V <sub>DRM</sub>	125			0.2	V
R <sub>th(j-c)</sub>	Thermal resistance Junction to case	Single side cooled per chip				0.140	°C/W
R <sub>th(c-h)</sub>	Thermal resistance case to heat sink	Single side cooled per chip				0.080	°C/W
V <sub>iso</sub>	Isolation voltage	50Hz, R.M.S, t=1min, I <sub>iso</sub> : 1mA(MAX)		3000			V
F <sub>m</sub>	Terminal connection torque (M6)			4.5		6.0	N·m
	Mounting torque (M6)			4.5		6.0	N·m
T <sub>j</sub>	Junction temperature			-40		125	°C
T <sub>stg</sub>	Stored temperature			-40		125	°C
W <sub>t</sub>	Weight				350		g
Outline	216F3E						

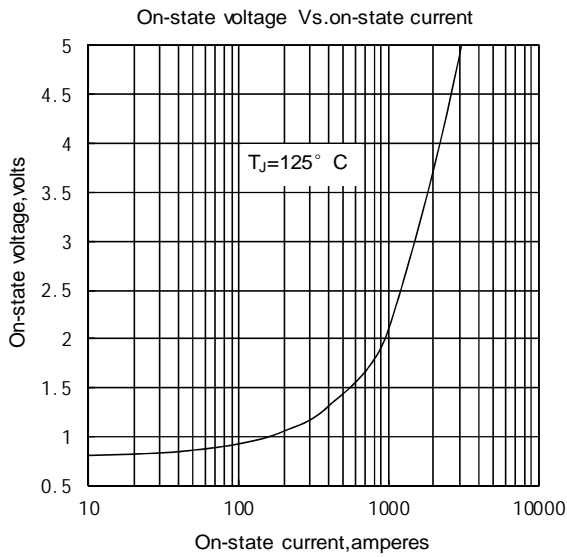


Fig.1

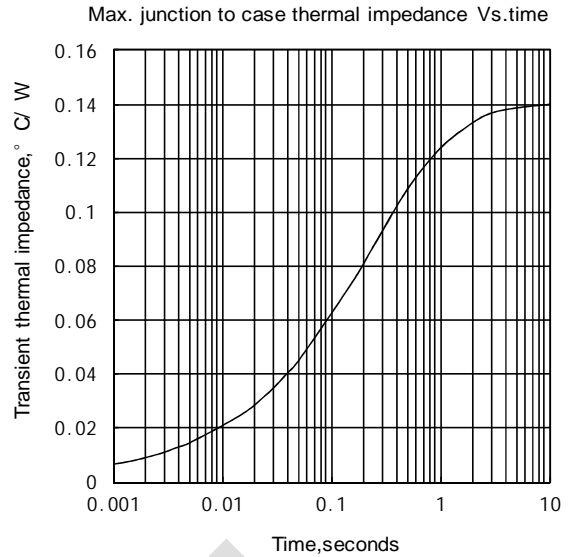


Fig.2

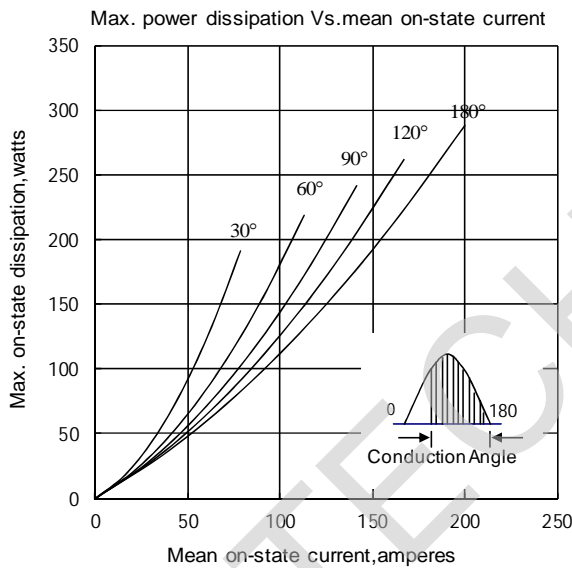


Fig.3

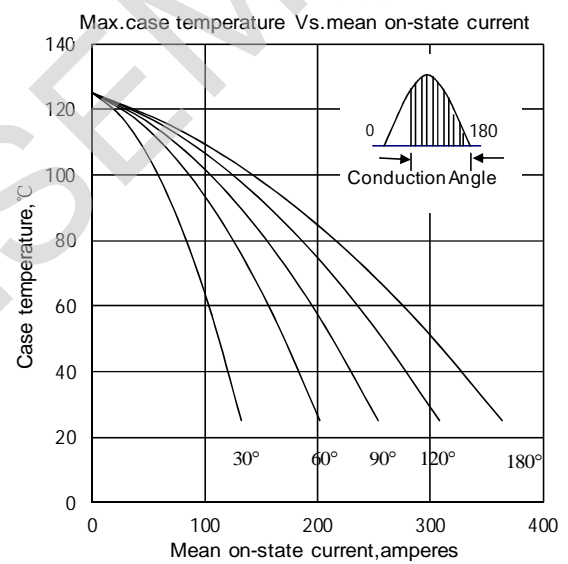


Fig.4

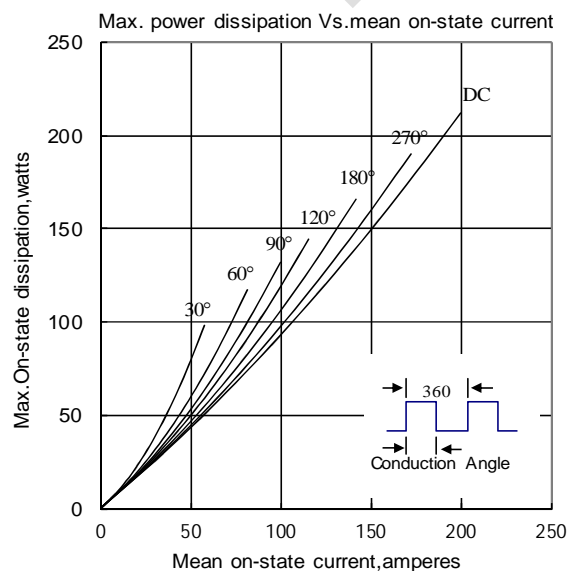


Fig.5

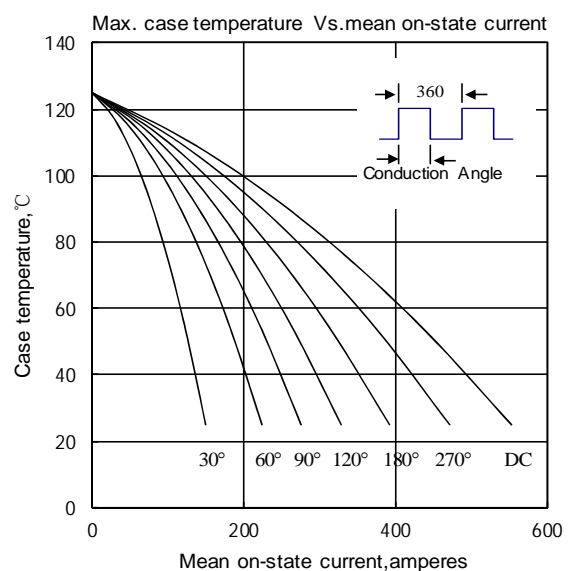


Fig.6

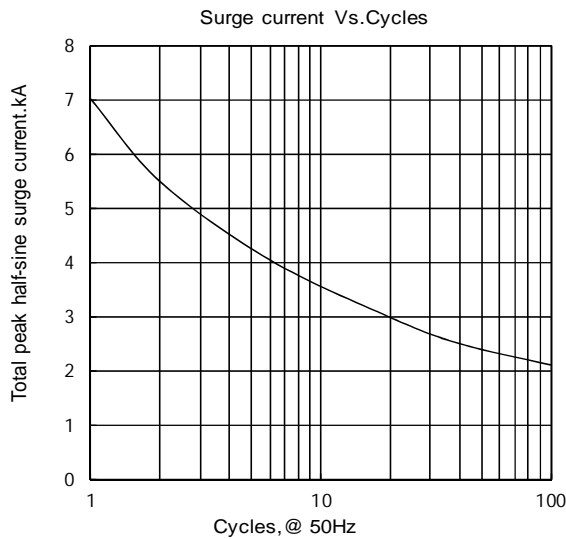


Fig.7

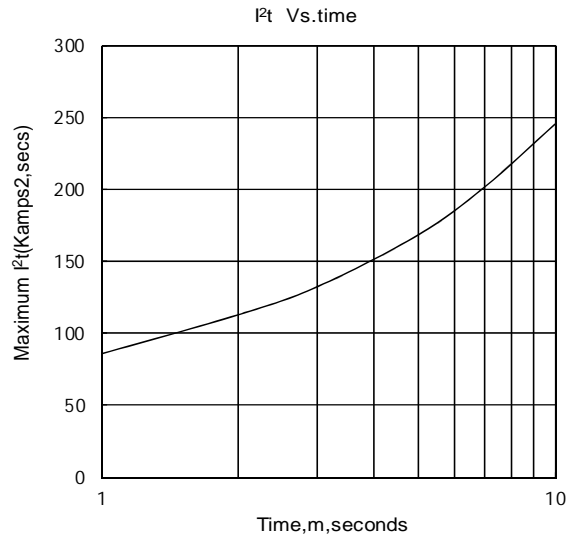


Fig.8

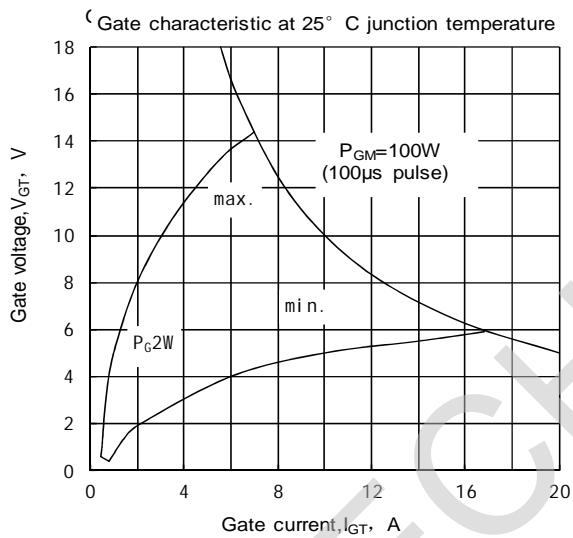


Fig.9

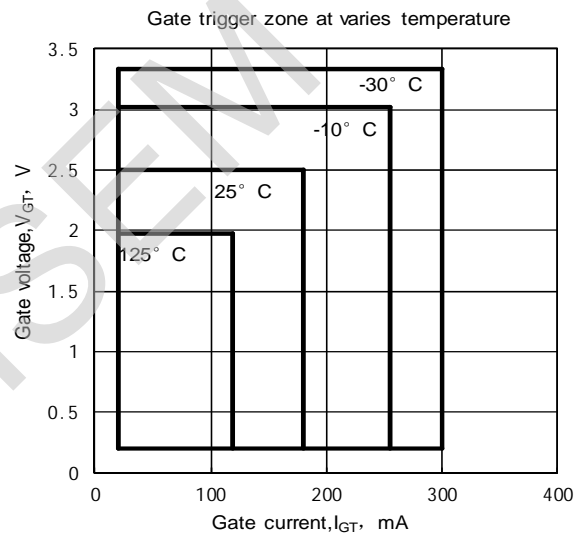
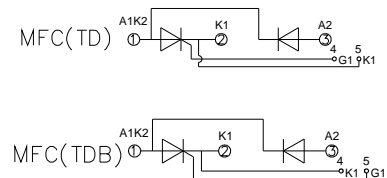
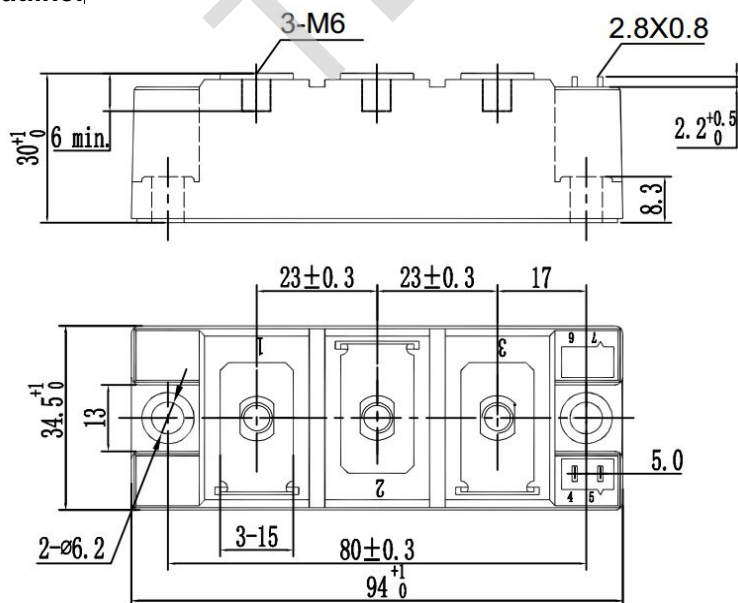


Fig.10

Outline:



Unmarked dimensional tolerance : ±0.5mm