

**Features :**

- Isolated mounting base 2500V~
- Pressure contact technology with Increased power cycling capability
- Space and weight saving

**Typical Applications**

- Inverter
- Inductive heating
- Chopper

V <sub>DSM</sub> , V <sub>RSM</sub>	V <sub>DRM</sub> , V <sub>RRM</sub>	品名
900V	800V	Mx400TF80
1100V	1000V	Mx400TF100
1300V	1200V	Mx400TF120
1500V	1400V	Mx400TF140
1700V	1600V	Mx400TF160

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	T <sub>j</sub> (°C)	VALUE			UNIT
				Min.	Typ.	Max.	
I <sub>T(AV)</sub>	Mean on-state current	180° half sine wave 50Hz Single side cooled, T <sub>c</sub> =55°C	125			400	A
I <sub>T(RMS)</sub>	RMS on-state current					628	A
I <sub>DRM</sub> I <sub>RRM</sub>	Repetitive peak current	at V <sub>DRM</sub> at V <sub>RRM</sub>	125			100	mA
I <sub>TSM</sub>	Surge on-state current	10ms half sine wave V <sub>R</sub> =60%V <sub>RRM</sub>	125			7.8	kA
I <sup>2</sup> t	I <sup>2</sup> t for fusing coordination					310	A <sup>2</sup> s*10 <sup>3</sup>
V <sub>TO</sub>	Threshold voltage		125			1.20	V
r <sub>T</sub>	On-state slope resistance					0.47	mΩ
V <sub>TM</sub>	Peak on-state voltage	I <sub>TM</sub> =1200A	25			2.40	V
dv/dt	Critical rate of rise of off-state voltage	V <sub>DM</sub> =67%V <sub>DRM</sub>	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A t <sub>r</sub> ≤0.5μs Repetitive	125			200	A/μs
t <sub>q</sub>	Circuit commutated turn-off time	I <sub>TM</sub> = 300A, t <sub>p</sub> =2000μs, V <sub>R</sub> =50V dv/dt=30V/μs, di/dt=-20A/μs	125	20		40	μs
t <sub>rr</sub>	Reverse recovery time	I <sub>TM</sub> =300A, t <sub>p</sub> =2000μs, -di/dt=20A/μs, V <sub>R</sub> =50V	125		5		μs
I <sub>GT</sub>	Gate trigger current	V <sub>A</sub> =12V, I <sub>A</sub> =1A	25	30		200	mA
V <sub>GT</sub>	Gate trigger voltage			1.0		3.0	V
I <sub>H</sub>	Holding current			20		200	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	D.C. Single side cooled per chip				0.060	°C /W
R <sub>th(c-h)</sub>	Thermal resistance case to heatsink	D.C. Single side cooled per chip				0.040	°C /W
V <sub>iso</sub>	Isolation voltage	50Hz, R.M.S, t=1min, I <sub>iso</sub> :1mA(MAX)		2500			V
F <sub>m</sub>	Terminal connection torque(M12)				14.0		N·m
	Mounting torque(M8)				12.0		N·m
T <sub>vj</sub>	Junction temperature			-40		125	°C
T <sub>stg</sub>	Stored temperature			-40		125	°C
W <sub>t</sub>	Weight				3660		g
Outline	M07						

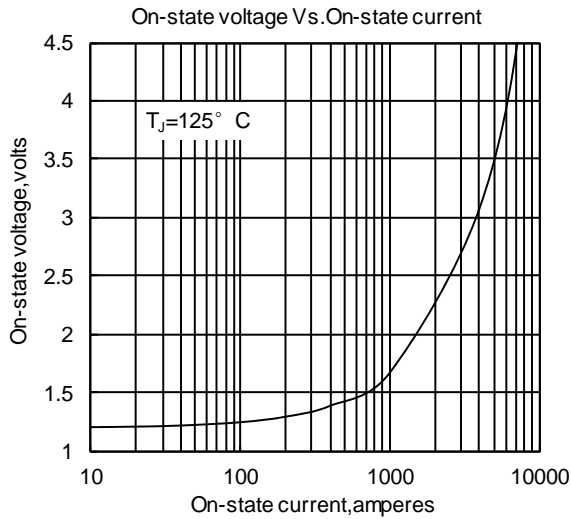


Fig.1

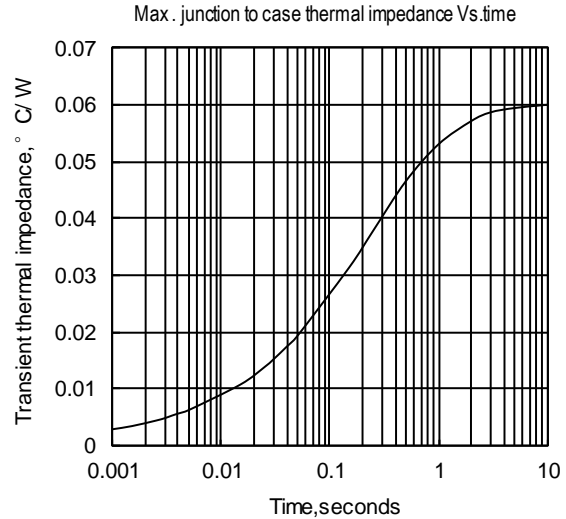


Fig.2

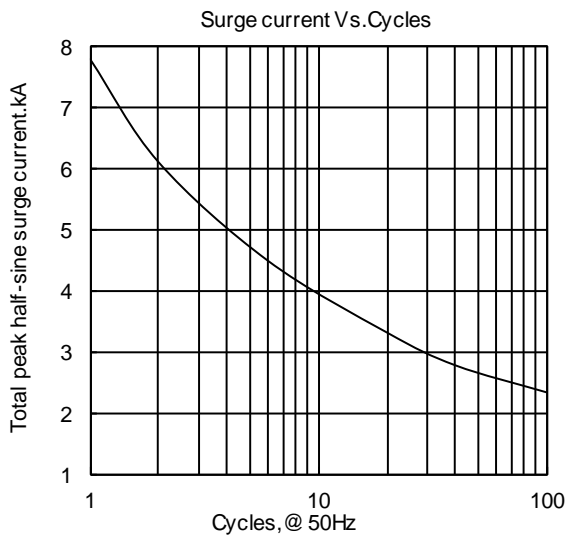


Fig.3

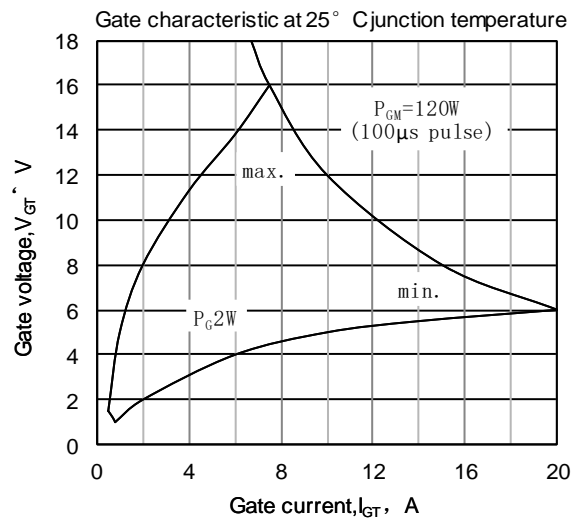


Fig.4

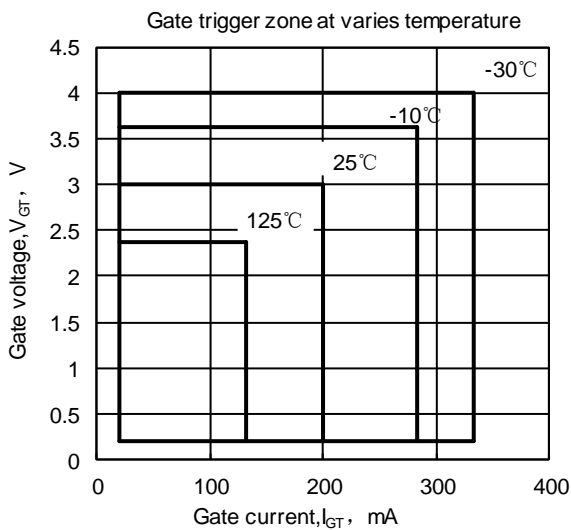
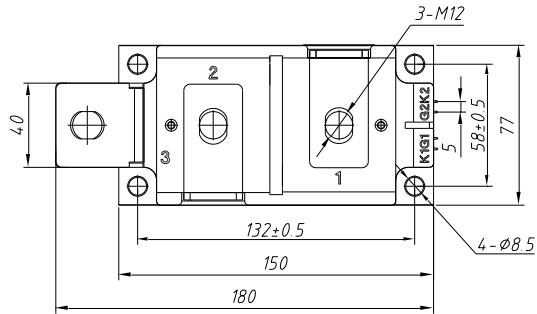
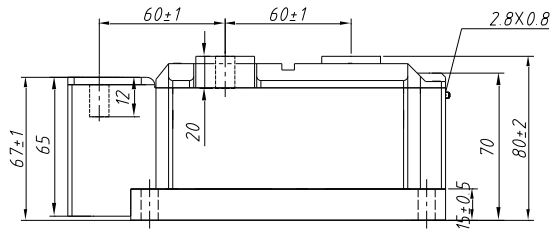


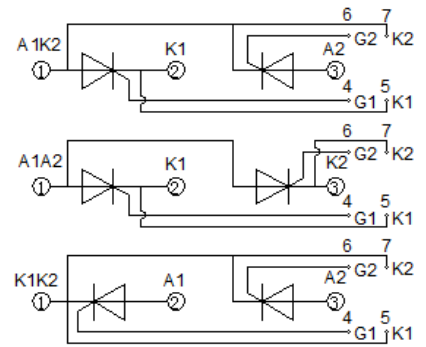
Fig.5



MD400TF\*\*

MR400TF\*\*

MC400TF\*\*



Unmarked dimensional tolerance : ±0.5mm