

**Features :**

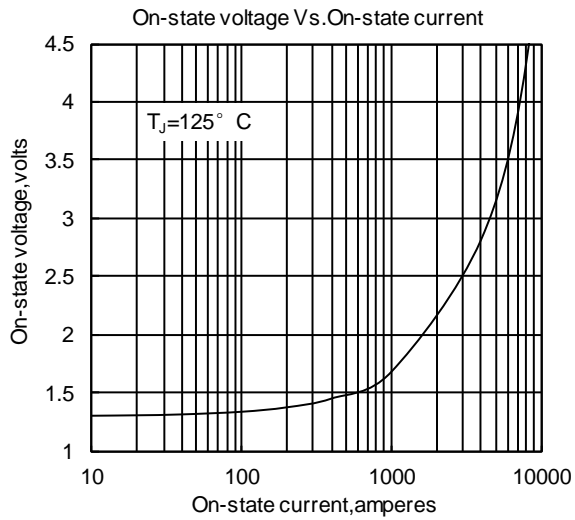
- Isolated mounting base 2500V~
- Pressure contact technology with Increased power cycling capability
- Space and weight saving

**Typical Applications**

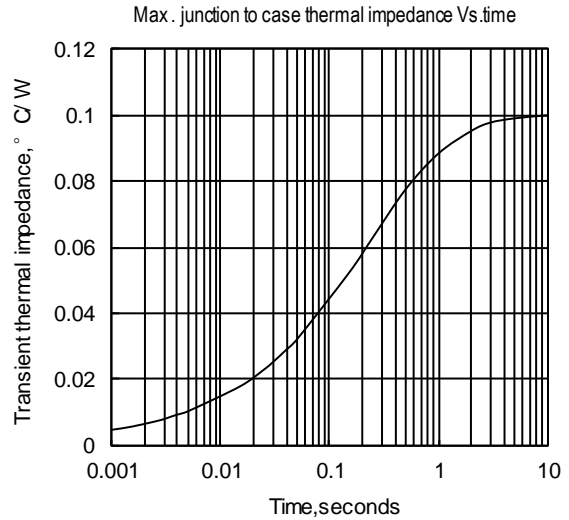
- Inverter
- Inductive heating
- Chopper

V <sub>DSM</sub> ,V <sub>RSM</sub>	V <sub>DRM</sub> ,V <sub>RRM</sub>	Type
900V	800V	Mx250THF80
1100V	1000V	Mx250THF100
1250V	1200V	Mx250THF120
1500V	1400V	Mx250THF140
1700V	1600V	Mx250THF160
1900V	1800V	Mx250THF180

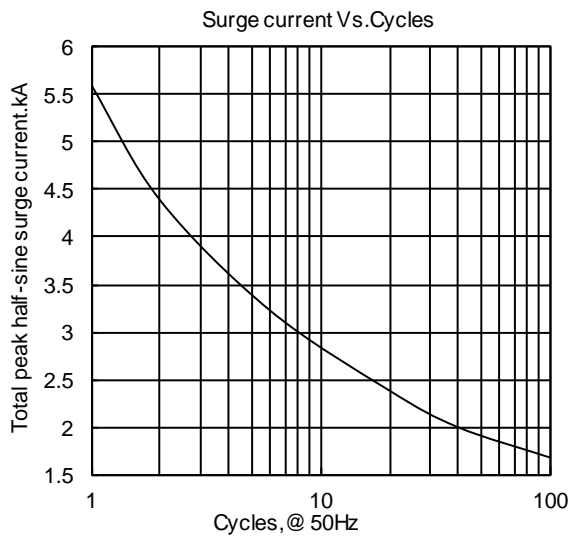
SYMBOL	CHARACTERISTIC	TEST CONDITIONS	T <sub>j</sub> (°C)	VALUE			UNIT
				Min	Type	Max	
I <sub>T(AV)</sub>	Mean on-state current	180° half sine wave 50Hz Single side cooled,T <sub>c</sub> =85°C	125			250	A
I <sub>T(RMS)</sub>	RMS on-state current					392	A
I <sub>DRM</sub> I <sub>RRM</sub>	Repetitive peak current	at V <sub>DRM</sub> at V <sub>RRM</sub>	125			80	mA
I <sub>TSM</sub>	Surge on-state current	10ms half sine wave	125			5.60	kA
I <sup>2</sup> t	I <sup>2</sup> t for fusing coordination	V <sub>R</sub> =60%V <sub>RRM</sub>				157	A <sup>2</sup> s*10 <sup>3</sup>
V <sub>TO</sub>	Threshold voltage		125			1.30	V
r <sub>T</sub>	On-state slope resistance					0.38	mΩ
V <sub>TM</sub>	Peak on-state voltage	I <sub>TM</sub> =900A	25			2.23	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,tp=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,tp=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	Single side cooled per chip				0.100	°C /W
R <sub>th(c-h)</sub>	Thermal resistance case to heatsink	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(M10)				12.0		N·m
	Mounting torque(M6)				6.0		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				1275		g
Outline	M05						



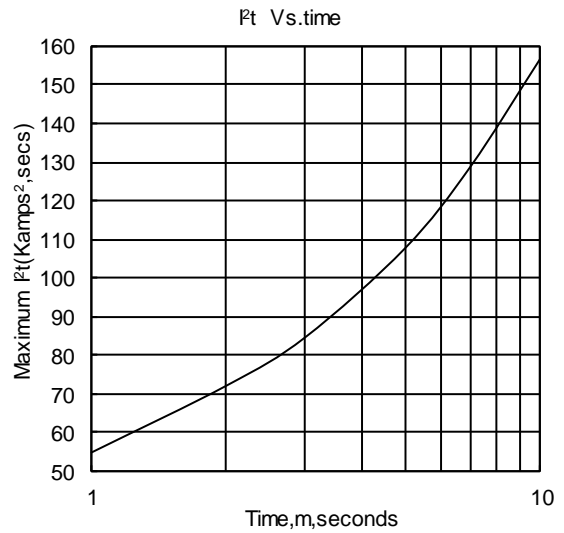
**Fig.1**



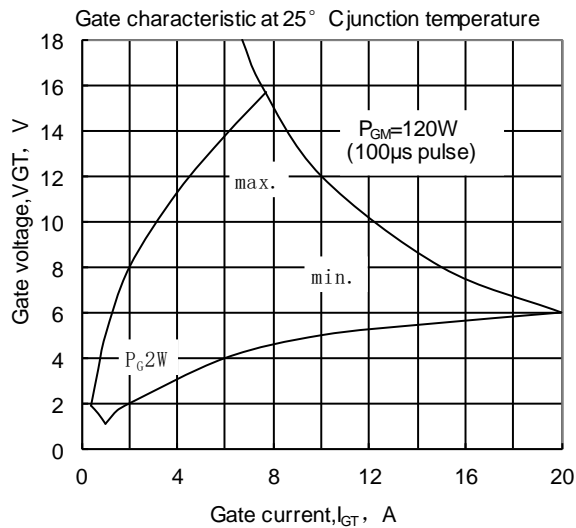
**Fig.2**



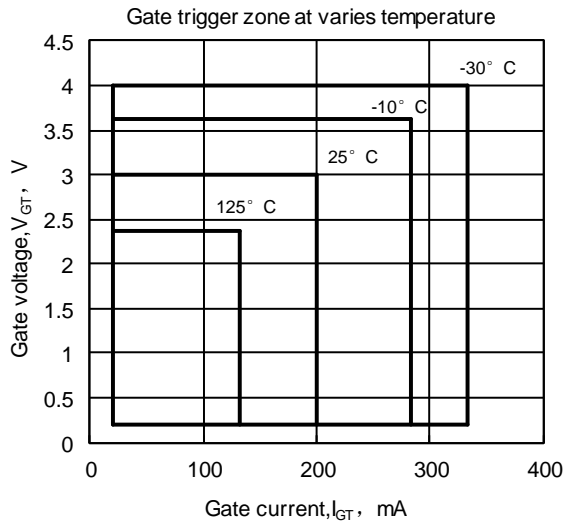
**Fig.3**



**Fig.4**

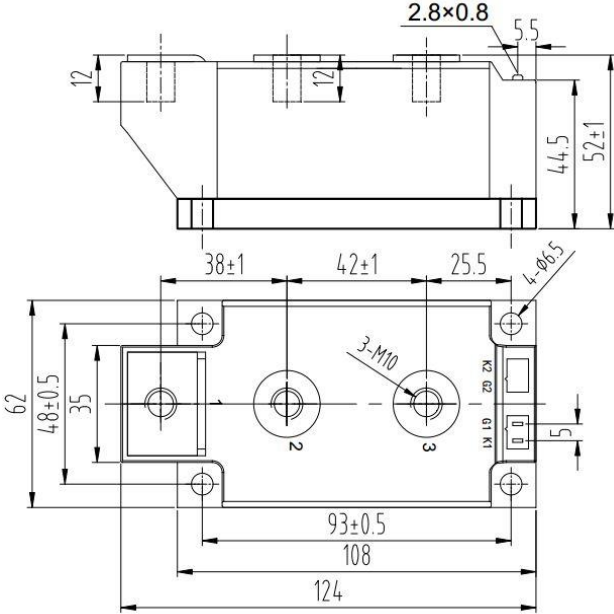


**Fig.5**

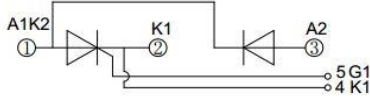


**Fig.6**

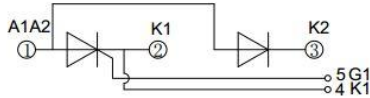
**Outline:**



MD250THF



MR250THF



MC250THF

