

**Features :**

- Non-Isolated.Mounting base as anode or cathode terminal
- Pressure contact technology with Increased power cycling capability
- Low on-state voltage drop

**Typical Applications**

- Welding Power Supply
- Various DC Power supplies
- DC supply for PWM inverter

V <sub>DSM</sub> ,V <sub>RSM</sub>	V <sub>DRM</sub> ,V <sub>RRM</sub>	Type
900V	800V	Mx300TH80N*
1100V	1000V	Mx300TH100N*
1300V	1200V	Mx300TH120N*
1500V	1400V	Mx300TH140N*
1700V	1600V	Mx300TH160N*
1900V	1800V	Mx300TH180N*

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> =90°C	125			300	A
I <sub>T(RMS)</sub>	RMS on-state current					471	A
I <sub>DRM</sub> I <sub>RRM</sub>	Repetitive peak current	at V <sub>DRM</sub> at V <sub>RRM</sub>	125			15	mA
I <sub>TSM</sub>	Surge on-state current	10ms half sine wave	125			8.3	kA
I <sup>2</sup> t	I <sup>2</sup> t for fusing coordination	V <sub>R</sub> =60%V <sub>RRM</sub>				344	A <sup>2</sup> s*10 <sup>3</sup>
V <sub>TO</sub>	Threshold voltage		125			0.80	V
r <sub>T</sub>	On-state slope resistance					0.72	mΩ
V <sub>TM</sub>	Peak on-state voltage	I <sub>TM</sub> =900A	25			1.58	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			100	A/μs
I <sub>GT</sub>	Gate trigger current	V <sub>A</sub> =12V, I <sub>A</sub> =1A	25	30		150	mA
V <sub>GT</sub>	Gate trigger voltage			0.7		2.5	V
I <sub>H</sub>	Holding current			10		120	mA
V <sub>GD</sub>	Non-trigger gate voltage	At 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				0.080	°C/W
R <sub>th(c-h)</sub>	Thermal resistance case to heatsink	Single side cooled per chip				0.04	°C/W
F <sub>m</sub>	Terminal connection torque(M8)				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				590		g
Outline	M11						

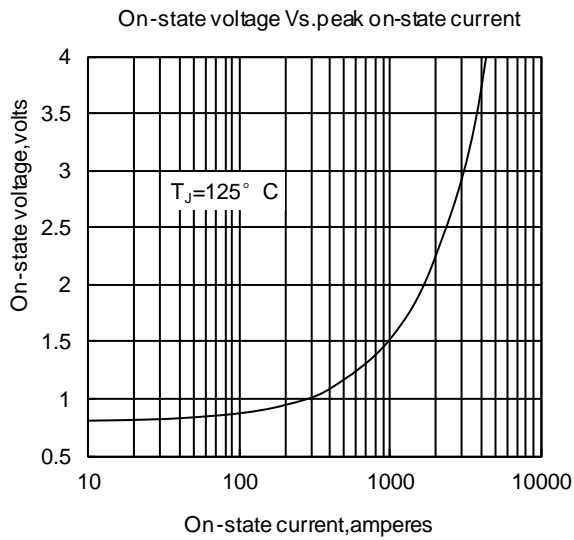


Fig1

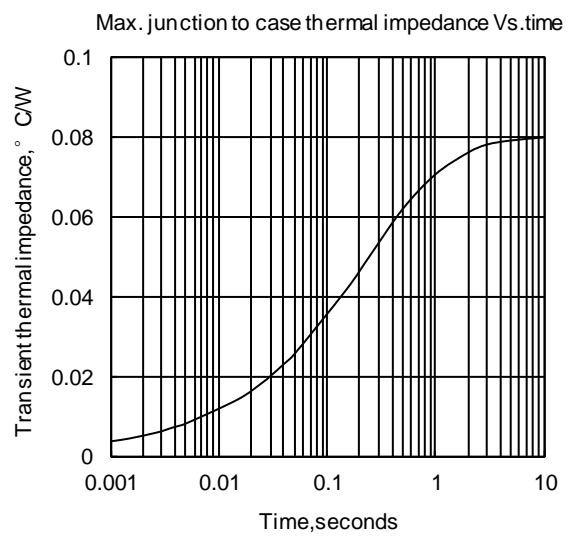


Fig2

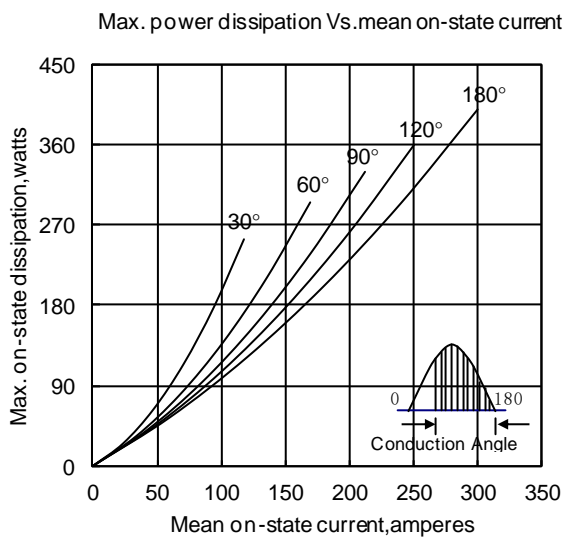


Fig3

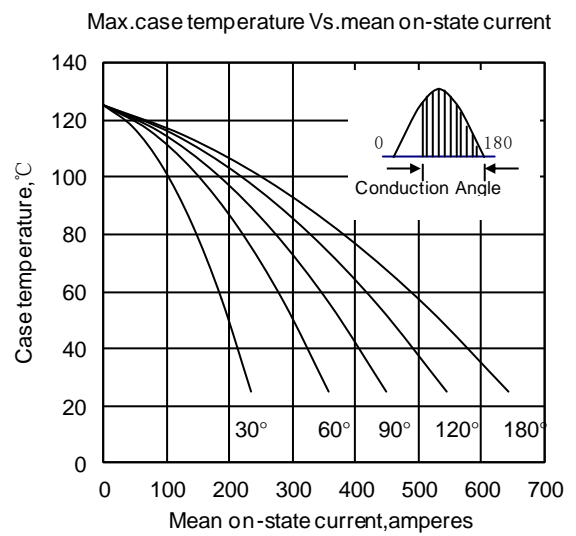


Fig4

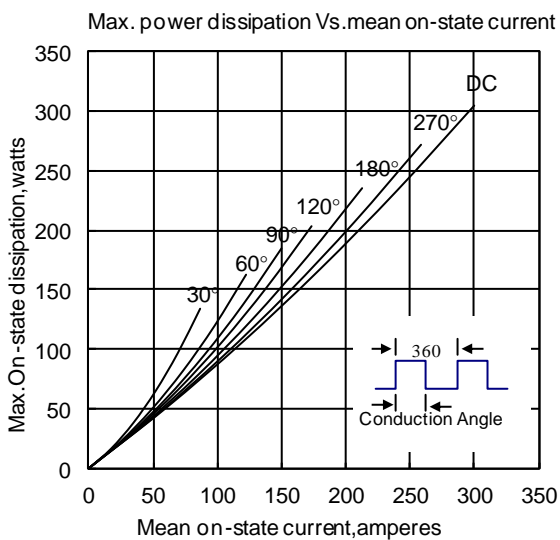


Fig5

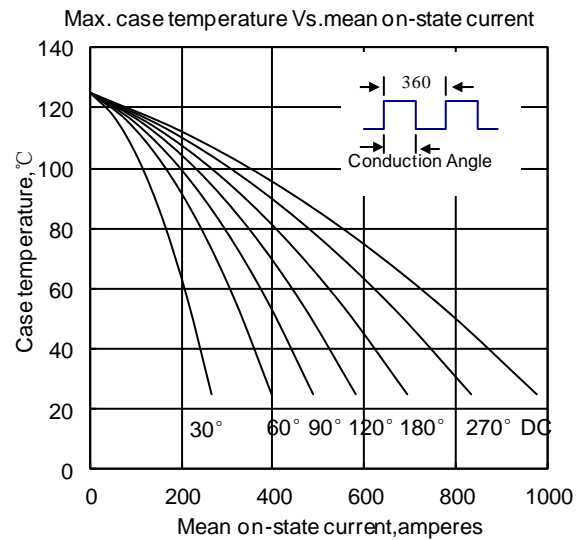


Fig6

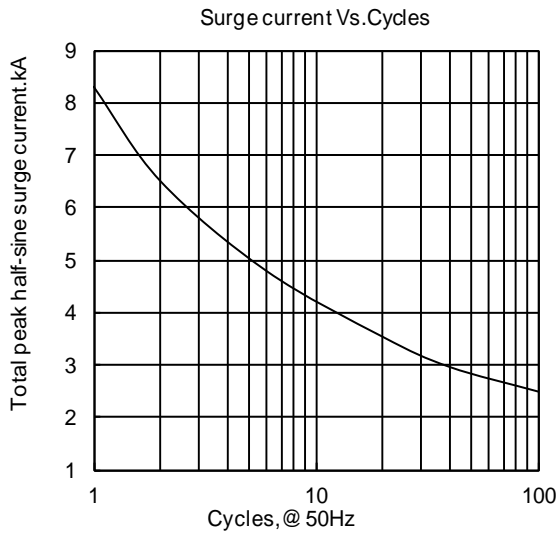


Fig7

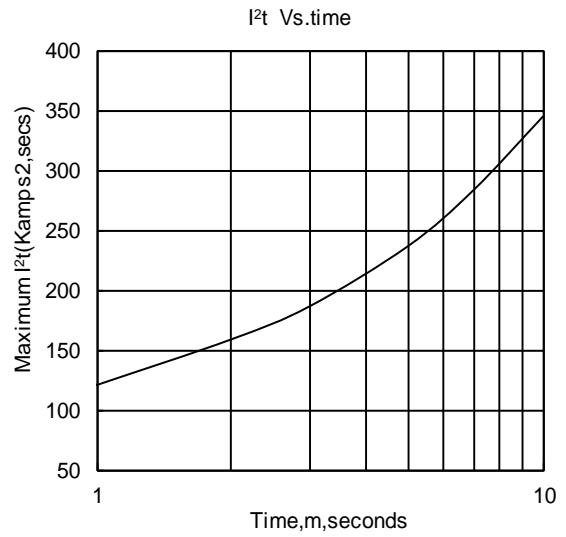


Fig8

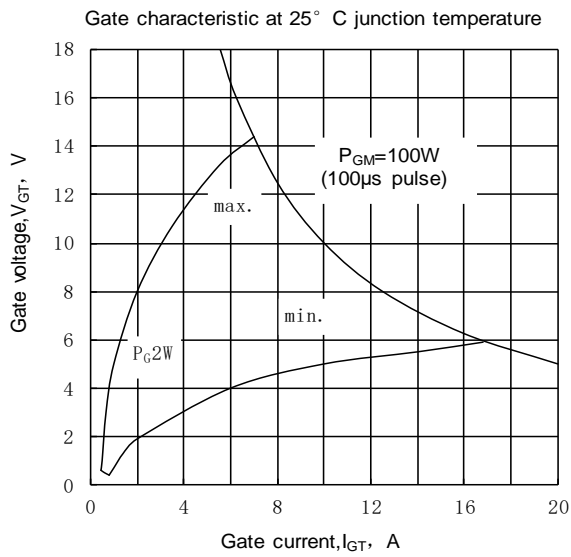


Fig.9

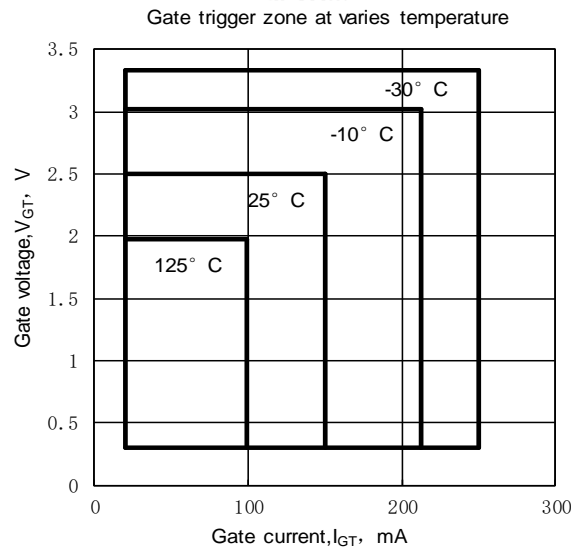
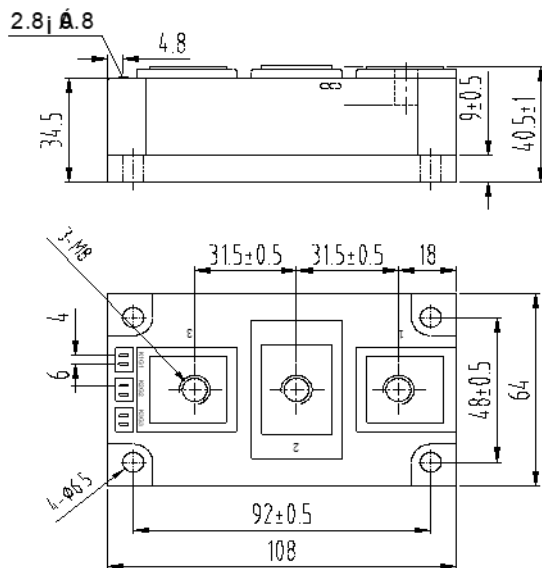
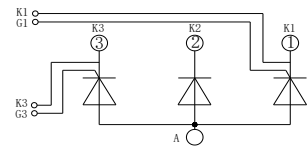


Fig.10

Outline:



ME300TH\*NK



MF300TH\*NA

