

**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

$V_{DSM}, V_{RSM}$	$V_{DRM}, V_{RRM}$	Type
900V	800V	Mx300T80N*
1100V	1000V	Mx300T100N*
1300V	1200V	Mx300T120N*
1500V	1400V	Mx300T140N*
1700V	1600V	Mx300T160N*
1900V	1800V	Mx300T180N*

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	$T_j(^{\circ}\text{C})$	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz	125			300	A
$I_{T(RMS)}$	RMS on-state current	Single side cooled, $T_c=90^{\circ}\text{C}$	125			471	A
$I_{DRM}$ $I_{RRM}$	Repetitive peak current	at $V_{DRM}$ at $V_{RRM}$	125			15	mA
$I_{TSM}$	Surge on-state current	10ms half sine wave	125			8.3	KA
$I^2t$	$I^2t$ for fusing coordination	$V_R=60\%V_{RRM}$				344	$\text{A}^2\text{s} \cdot 10^3$
$V_{TO}$	Threshold voltage		125			0.80	V
$r_T$	On-state slope resistance					0.72	$\text{m}\Omega$
$V_{TM}$	Peak on-state voltage	$I_{TM}=900\text{A}$	25			1.58	V
dv/dt	Critical rate of rise of off-state voltage	$V_{DM}=67\%V_{DRM}$	125			800	$\text{V}/\mu\text{s}$
di/dt	Critical rate of rise of on-state current	Gate source 1.5A $t_r \leq 0.5\mu\text{s}$ Repetitive	125			100	$\text{A}/\mu\text{s}$
$I_{GT}$	Gate trigger current	$V_A=12\text{V}, I_A=1\text{A}$	25	30		150	mA
$V_{GT}$	Gate trigger voltage			0.7		2.5	V
$I_H$	Holding current			10		120	mA
$V_{GD}$	Non-trigger gate voltage	At $67\%V_{DRM}$	125	0.2			V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled per chip				0.08	$^{\circ}\text{C}/\text{W}$
$R_{th(c-h)}$	Thermal resistance case to heatsink	Single side cooled per chip				0.04	$^{\circ}\text{C}/\text{W}$
$F_m$	Thermal connection torque(M8)				12.0		N·m
	Mounting torque(M6)				6.0		N·m
$T_{stg}$	Stored temperature			-40		125	$^{\circ}\text{C}$
$W_t$	Weight				590		g
Outline	M11						

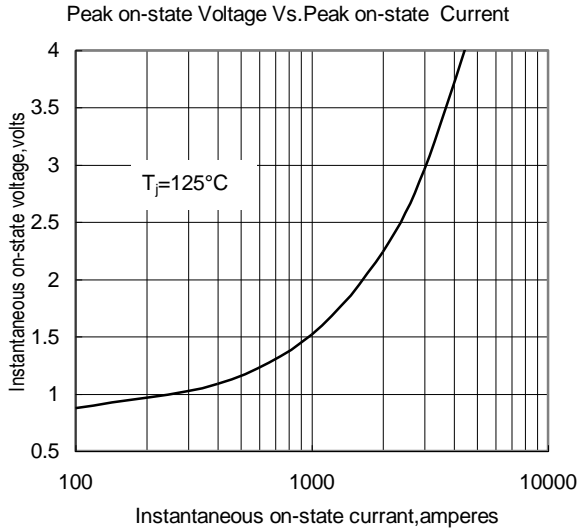


Fig.1

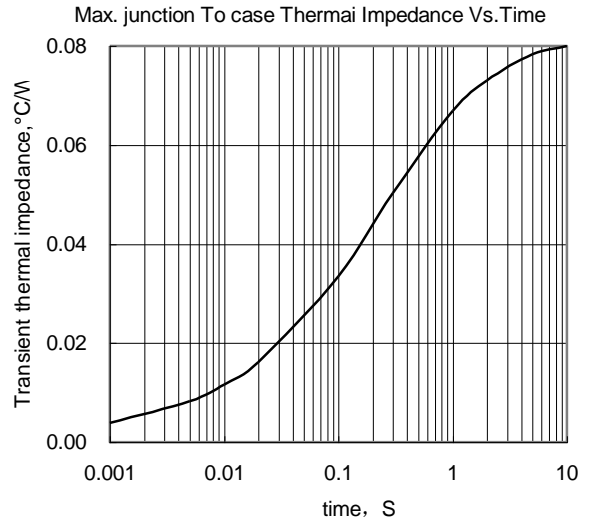


Fig.2

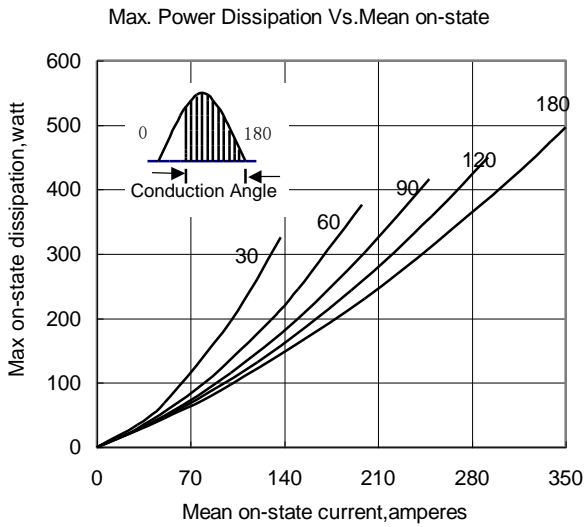


Fig.3

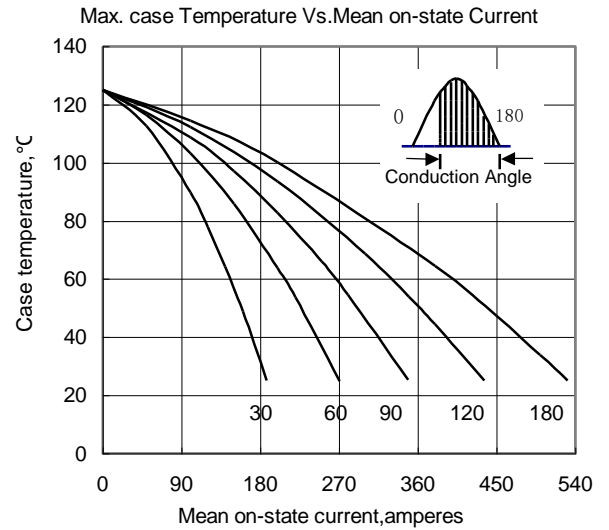


Fig.4

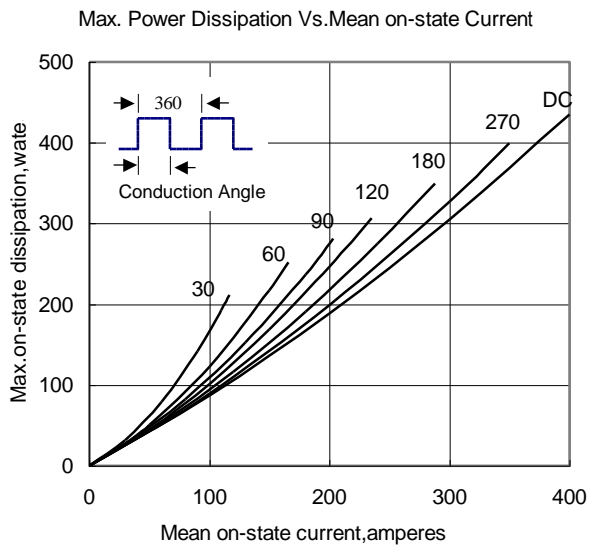


Fig.5

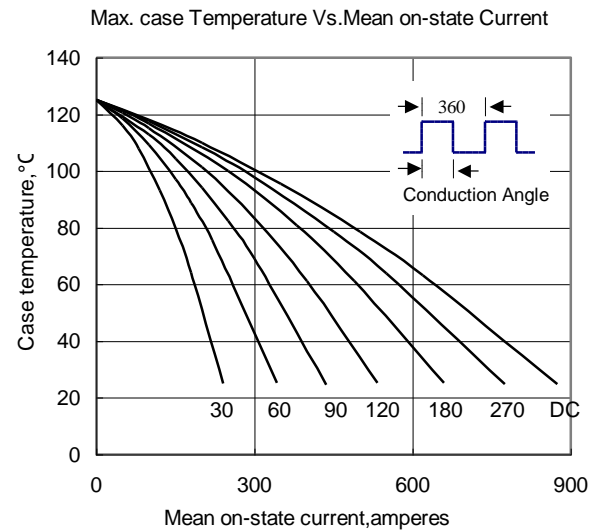


Fig.6

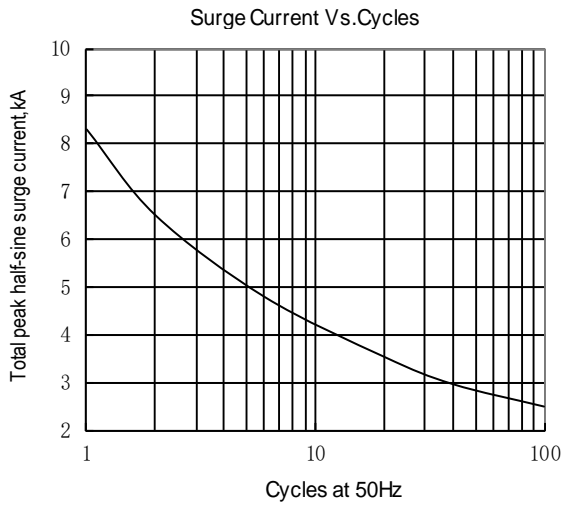


Fig.7

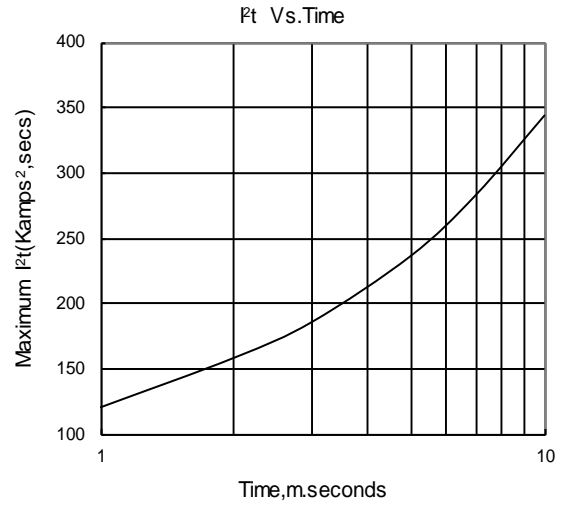


Fig.8

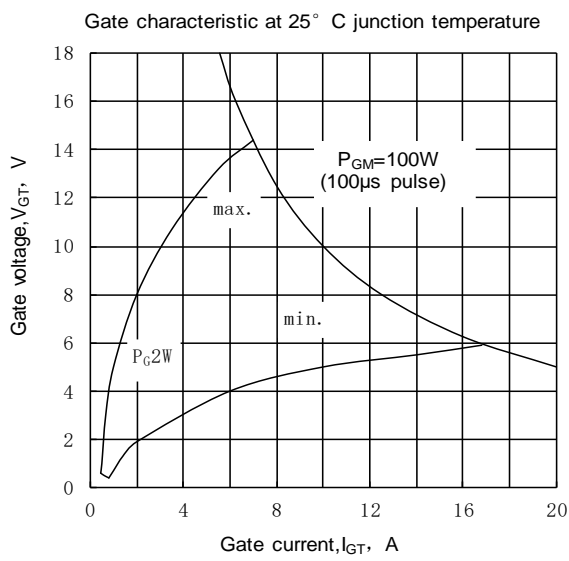


Fig.9

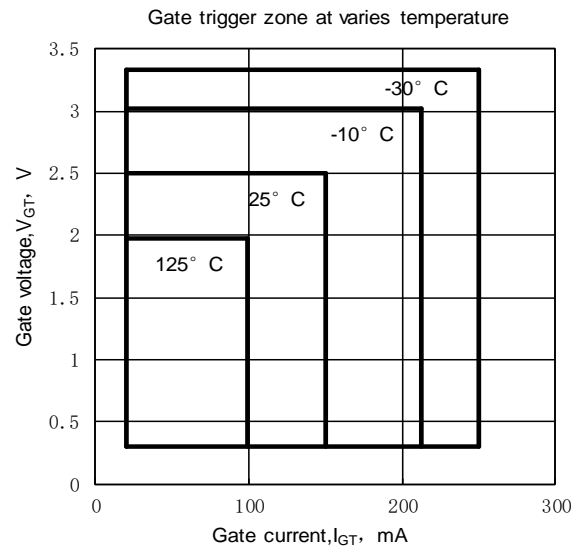
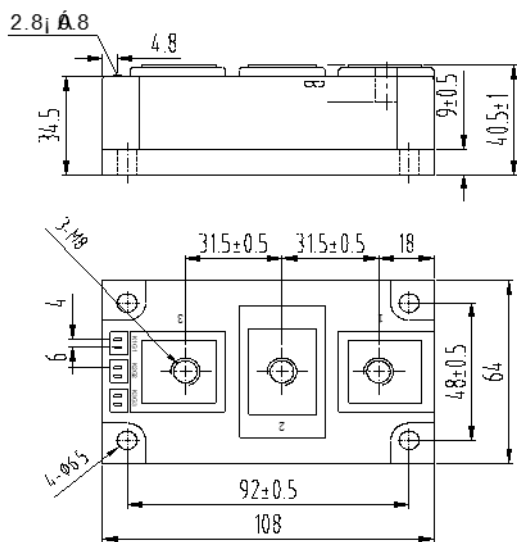
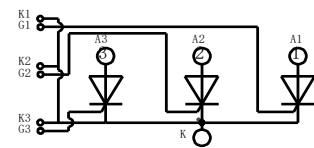


Fig.10

Outline:



ME300T\*NK



MF300T\*NA

