

**Features :**

- Isolated mounting base 3000V~
- Pressure contact technology with Increased power cycling capability
- Space and weight saving

**Typical Applications**

- AC/DC Motor drives
- Various rectifiers
- DC supply for PWM inverter

$V_{DSM}, V_{RSM}$	$V_{DRM}, V_{RRM}$	Type & Outline
2100V	2000V	Mx1000T200
2300V	2200V	Mx1000T220
2600V	2500V	Mx1000T250

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	$T_j$ (°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled, $T_c=85^\circ\text{C}$	125			1000	A
$I_{T(RMS)}$	RMS on-state current					1570	A
$I_{DRM}$ $I_{RRM}$	Repetitive peak current	at $V_{DRM}$ at $V_{RRM}$	125			60	mA
$I_{TSM}$	Surge on-state current	10ms half sine wave	125			28	kA
$I^2t$	$I^2t$ for fusing coordination	$V_R=60\%V_{RRM}$				3920	$\text{A}^2\text{s}\cdot 10^3$
$V_{TO}$	Threshold voltage		125			0.85	V
$r_T$	On-state slope resistance					0.14	$\text{m}\Omega$
$V_{TM}$	Peak on-state voltage	$I_{TM}=3000\text{A}$	25			2.10	V
$dv/dt$	Critical rate of rise of off-state voltage	$V_{DM}=67\%V_{DRM}$	125			1000	$\text{V}/\mu\text{s}$
$di/dt$	Critical rate of rise of on-state current	Gate source 1.5A $t_r \leq 0.5\mu\text{s}$ Repetitive	125			200	$\text{A}/\mu\text{s}$
$I_{GT}$	Gate trigger current	$V_A=12\text{V}, I_A=1\text{A}$	25	30		200	mA
$V_{GT}$	Gate trigger voltage			1.0		3.0	V
$I_H$	Holding current			20		200	mA
$V_{GD}$	Non-trigger gate voltage	$V_{DM}=67\%V_{DRM}$	125	0.2			V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled per chip				0.034	$^\circ\text{C}/\text{W}$
$R_{th(c-h)}$	Thermal resistance case to heat sink	Single side cooled per chip				0.030	$^\circ\text{C}/\text{W}$
$V_{iso}$	Isolation voltage	50Hz, R.M.S, $t=1\text{min}, I_{iso}: 1\text{mA}(\text{MAX})$		3000			V
$F_m$	Terminal connection torque (M12)				14.0		N-m
	Mounting torque (M8)				12.0		N-m
$T_{vj}$	Junction temperature			-40		125	$^\circ\text{C}$
$T_{stg}$	Stored temperature			-40		125	$^\circ\text{C}$
$W_t$	Weight				3660		g
<b>Outline</b>	<b>M08</b>						

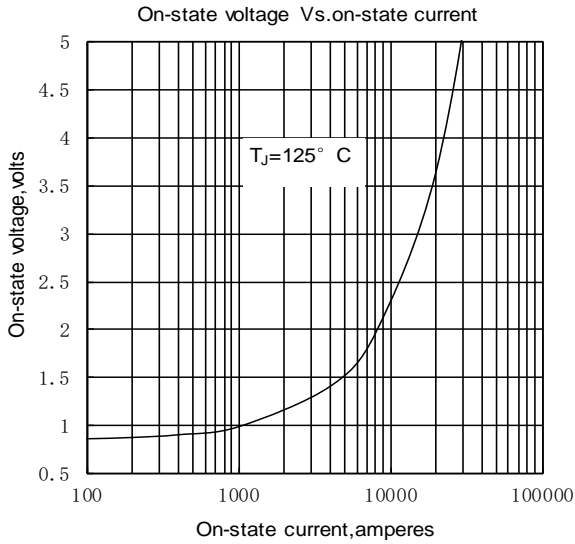


Fig.1

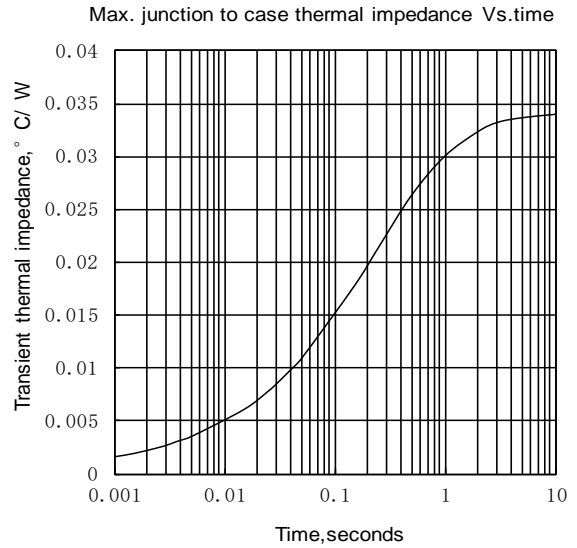


Fig.2

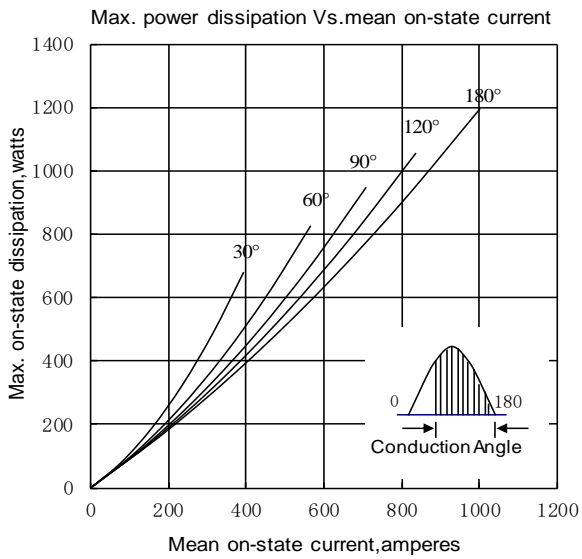


Fig.3

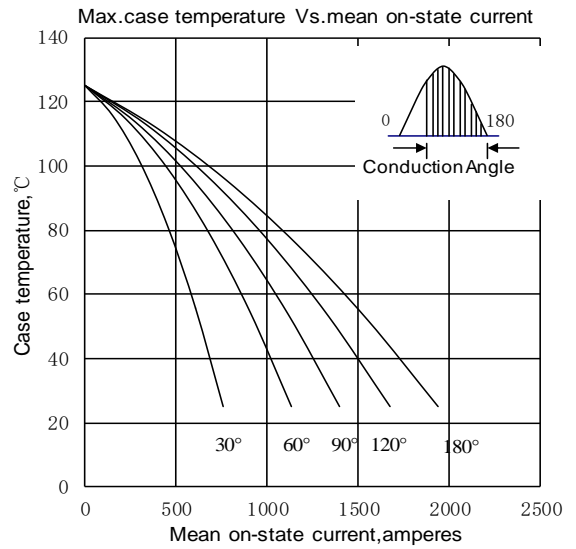


Fig.4

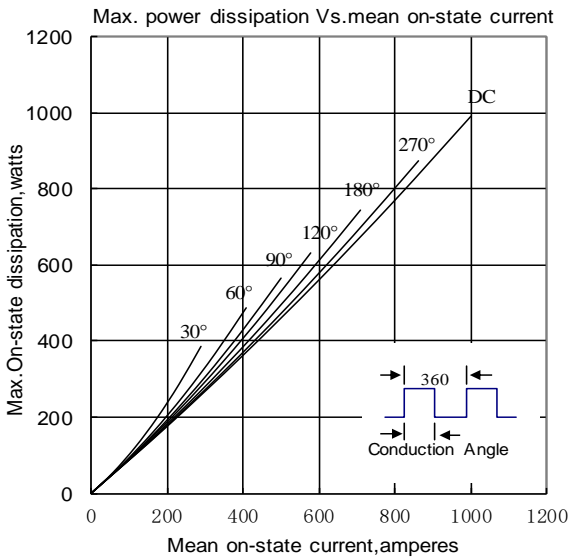


Fig.5

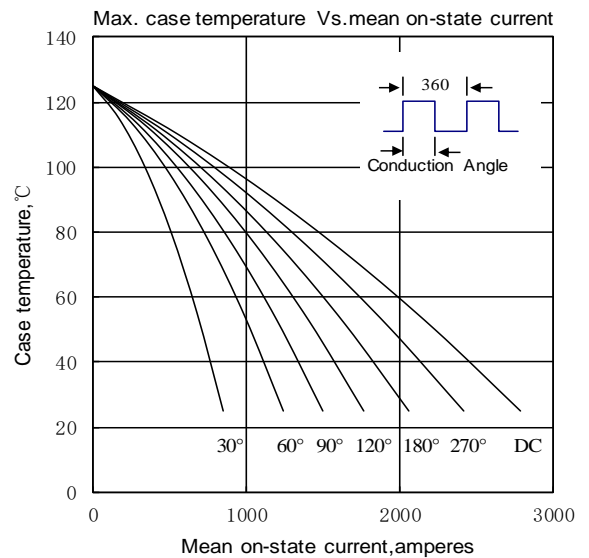


Fig.6

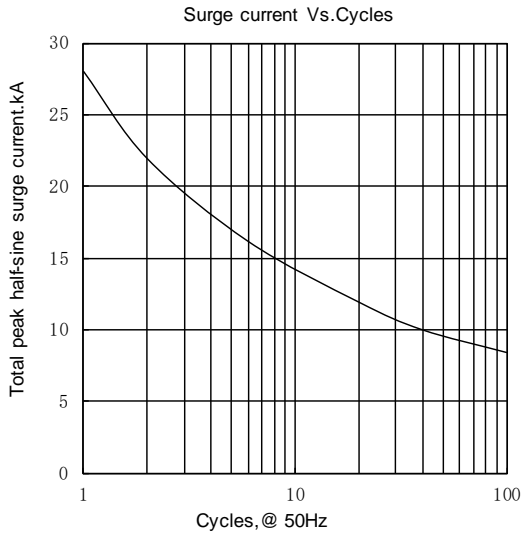


Fig.7

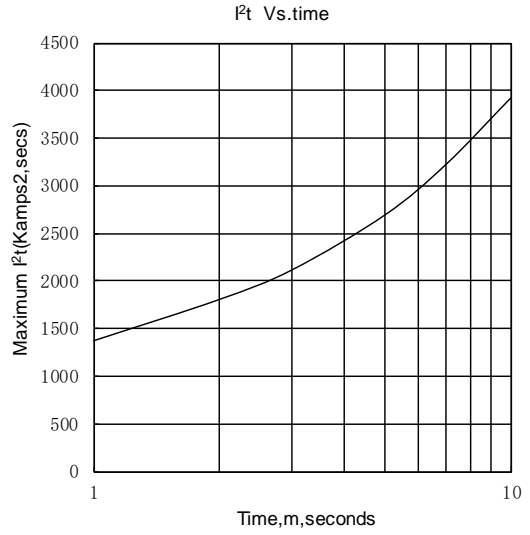


Fig.8

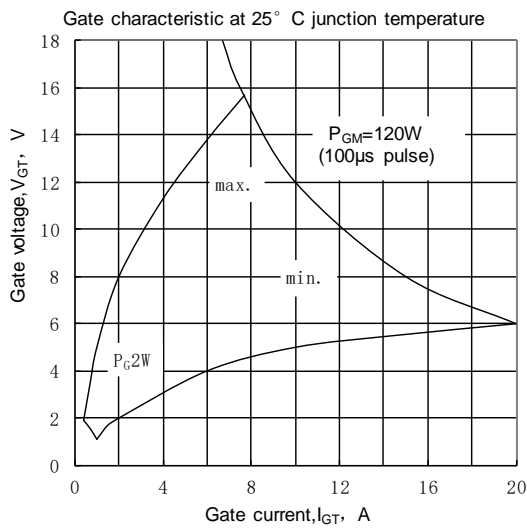


Fig.9

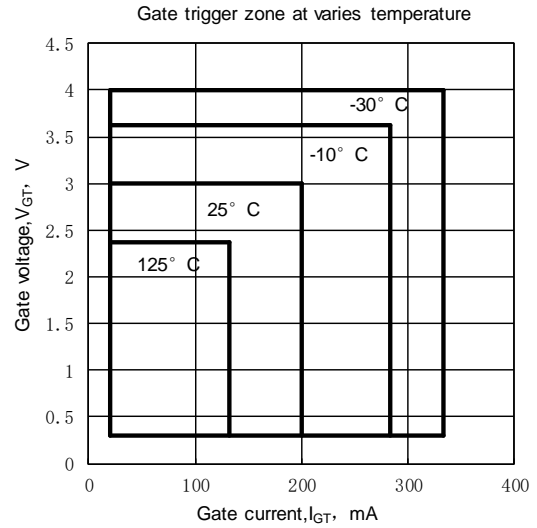
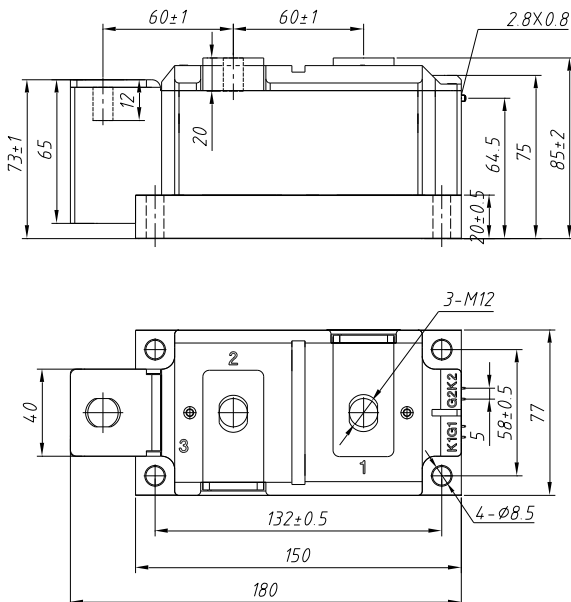
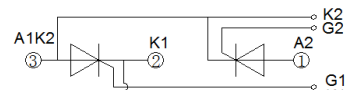


Fig.10

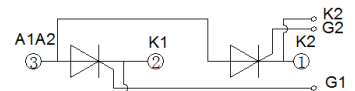
Outline:



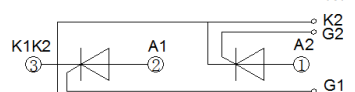
MD1000T



MR1000T



MC1000T



MH1000T

