

**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	Mx1200T200
2300V	2200V	Mx1200T220
2600V	2500V	Mx1200T250

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, $T_c=85°C$	125			1200	A
$I_{T(RMS)}$	RMS on-state current					1884	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			34	kA
$I^2t$	$I^2t$ for fusing coordination	$V_R=60\%V_{RRM}$				5780	$A^2s \cdot 10^3$
$V_{TO}$	Threshold voltage		125			0.85	V
$r_T$	On-state slope resistance					0.077	mΩ
$V_{TM}$	Peak on-state voltage	$I_{TM}=3000A$	25			2.00	V
$dv/dt$	Critical rate of rise of off-state voltage	$V_{DM}=67\%V_{DRM}$	125			1000	V/μs
$di/dt$	Critical rate of rise of on-state current	Gate source 1.5A $t_r \leq 0.5\mu s$ Repetitive	125			200	A/μs
$I_{GT}$	Gate trigger current	$V_A=12V, I_A=1A$	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				0.031	°C/W
$R_{th(c-h)}$	Thermal resistance case to heat sink	Single side cooled per chip				0.030	°C/W
$V_{iso}$	Isolation voltage	50Hz, R.M.S, $t=1min, I_{iso}:1mA(MAX)$		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	°C
$T_{stg}$	Stored temperature			-40		125	°C
$W_t$	Weight				3660		g
Outline	M08						

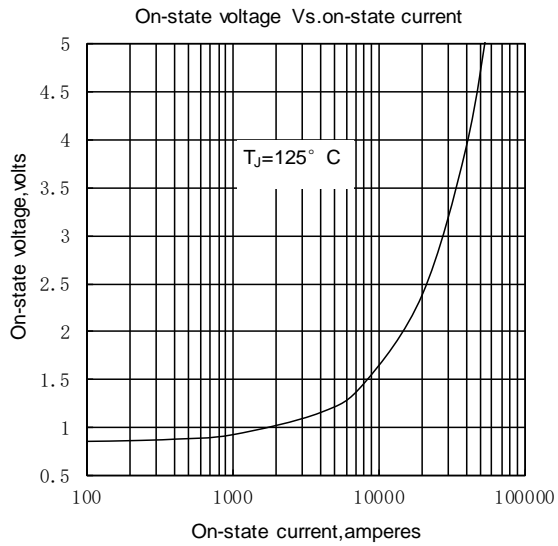


Fig.1

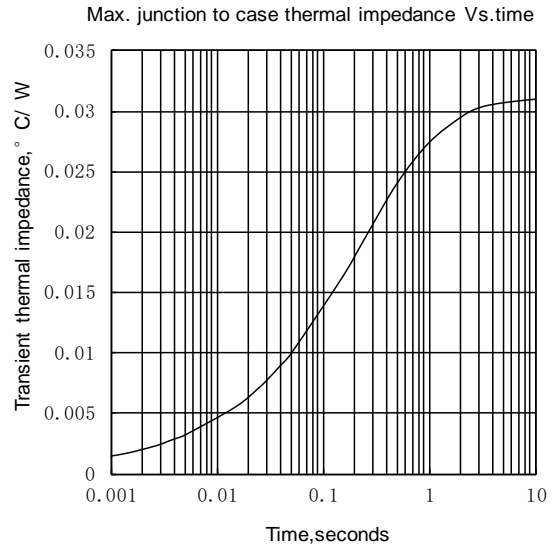


Fig.2

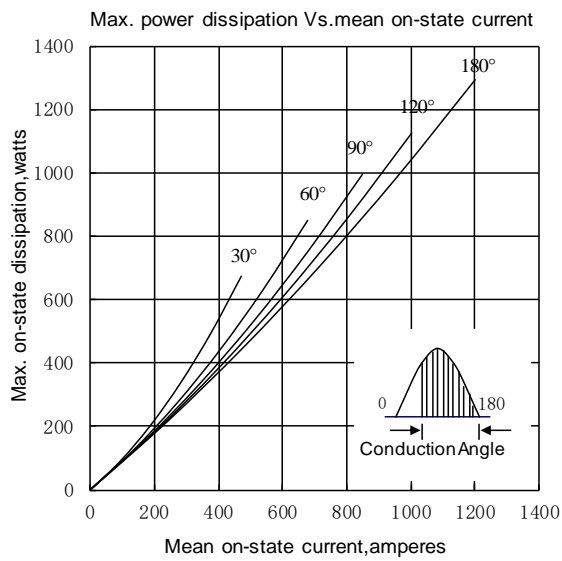


Fig.3

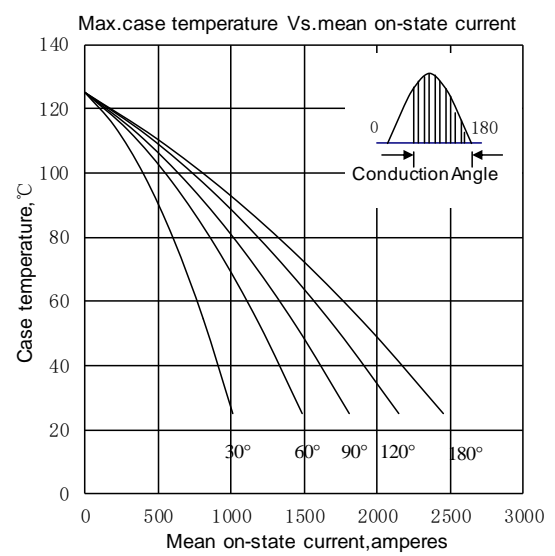


Fig.4

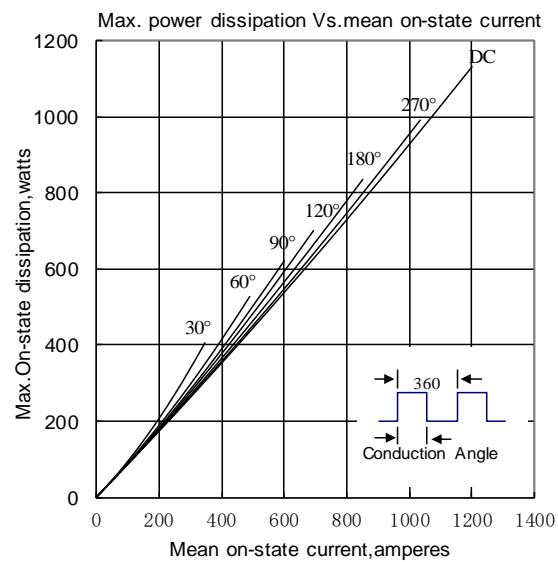


Fig.5

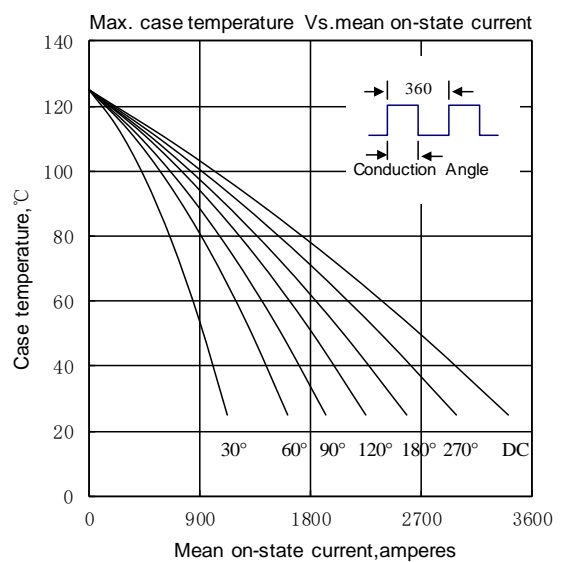


Fig.6

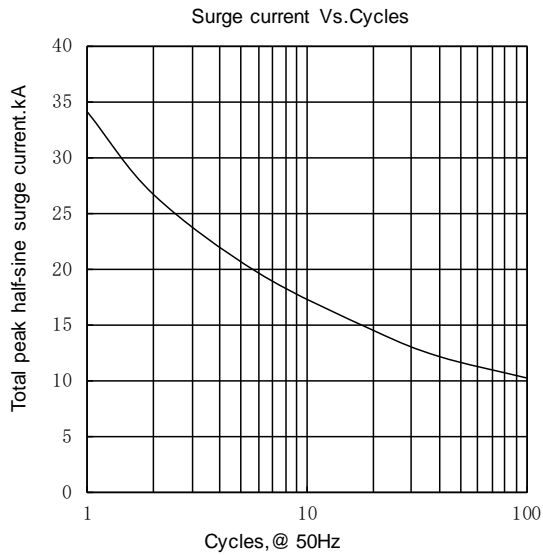


Fig.7

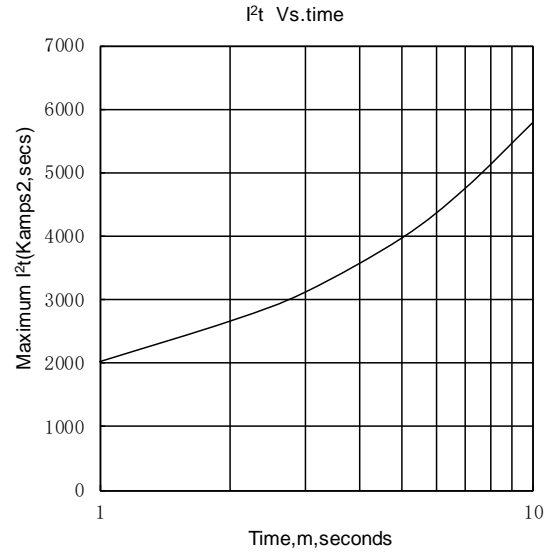


Fig.8

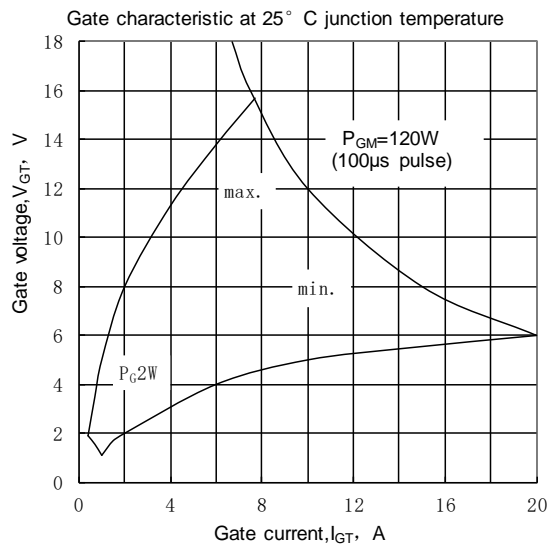


Fig.9

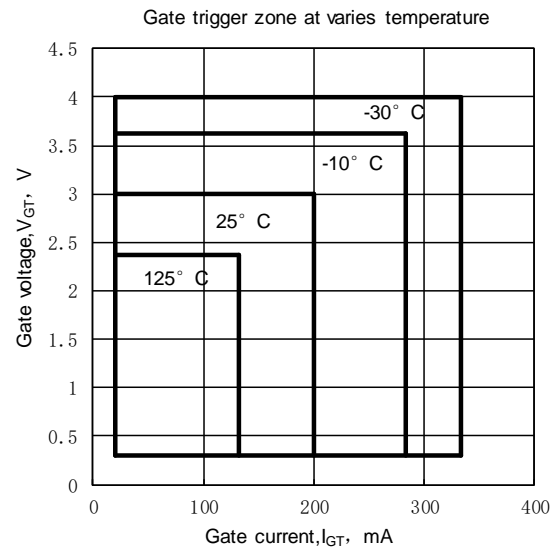
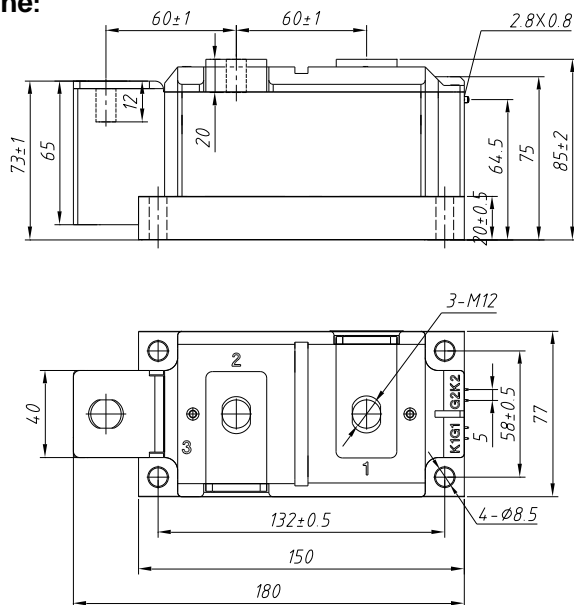
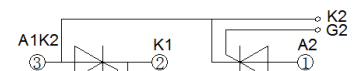


Fig.10

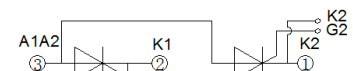
Outline:



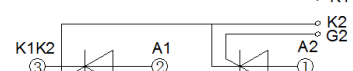
MD1200T



MR1200T



MC1200T



MH1200T

