

**Features :**

- Isolated mounting base 2500V~
- 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
900V	800V	MFx1000-08-412F3
1100V	1000V	MFx1000-10-412F3
1300V	1200V	MFx1000-12-412F3
1500V	1400V	MFx1000-14-412F3
1700V	1600V	MFx1000-16-412F3
1900V	1800V	MFx1000-18-412F3

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 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			55	mA
I_{TSM}	Surge on-state current	10ms half sine wave,	125			26.0	kA
I^2t	I^2t for fusing coordination	$V_R=0.6V_{RRM}$				3380	$\text{A}^2\text{s}\cdot 10^3$
V_{TO}	Threshold voltage		125			0.80	V
r_T	On-state slope resistance					0.15	m Ω
V_{TM}	Peak on-state voltage	$I_{TM}=3000\text{A}$	25			2.05	V
dv/dt	Critical rate of rise of off-state voltage	$V_{DM}=67\%V_{DRM}$	125			800	V/ μs
di/dt	Critical rate of rise of on-state current	$I_{TM}=2000\text{A}$, Gate source 1.5A $t_i \leq 0.5\mu\text{s}$ Repetitive	125			100	A/ μs
I_{GT}	Gate trigger current	$V_A=12\text{V}$, $I_A=1\text{A}$	25	30		200	mA
V_{GT}	Gate trigger voltage			0.8		3.0	V
I_H	Holding current			10		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 heatsink	Single side cooled per chip				0.020	$^{\circ}\text{C}/\text{W}$
V_{iso}	Isolation voltage	50Hz, R.M.S, $t=1\text{min}$, $I_{iso}: 1\text{mA}(\text{MAX})$		2500			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
Outline	412F3						

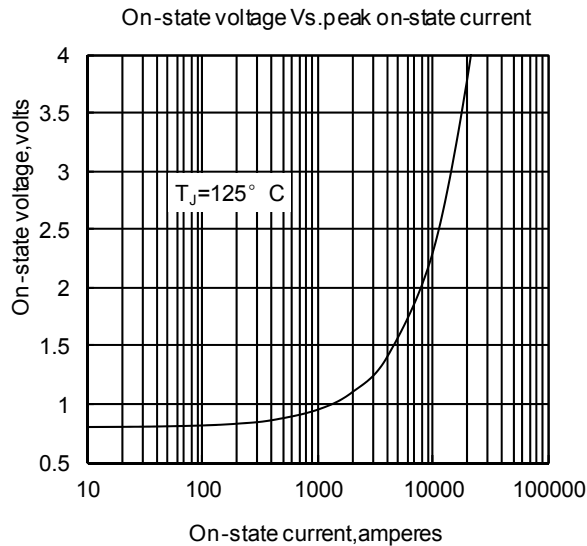


Fig1

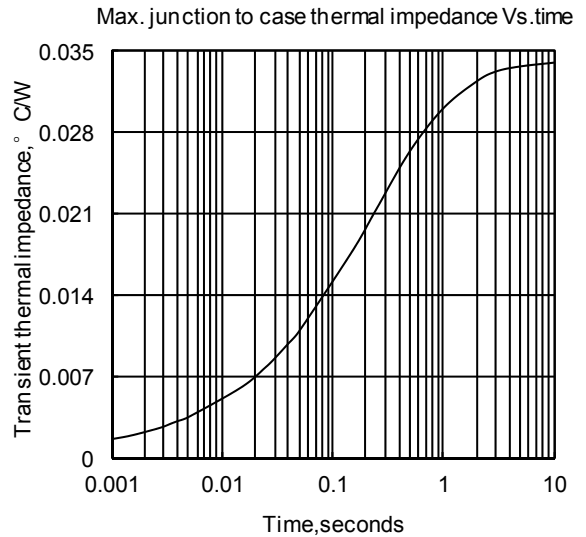


Fig2

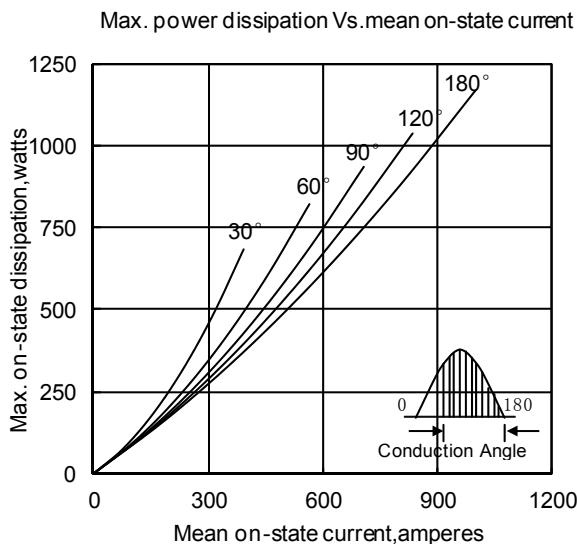


Fig3

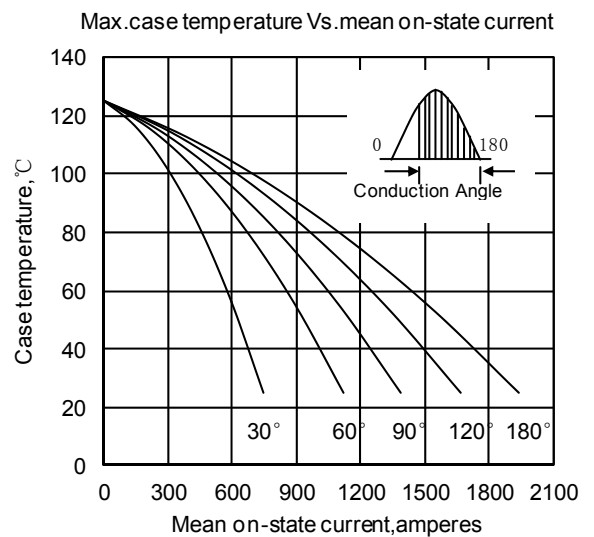


Fig4

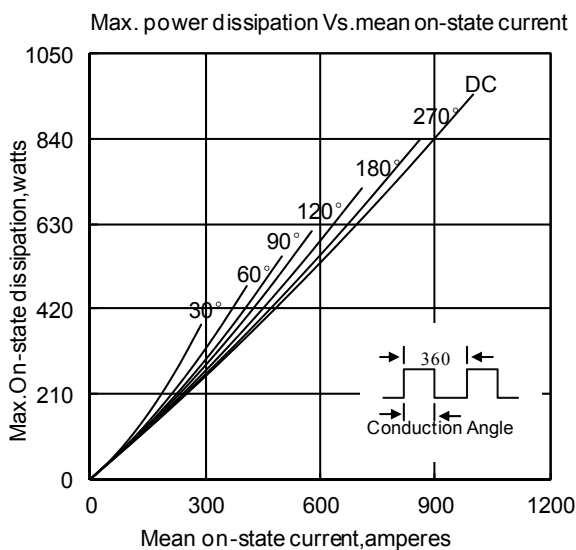


Fig5

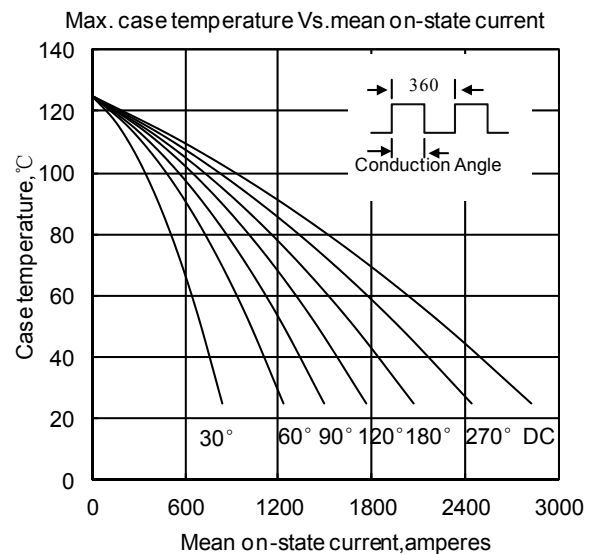


Fig6

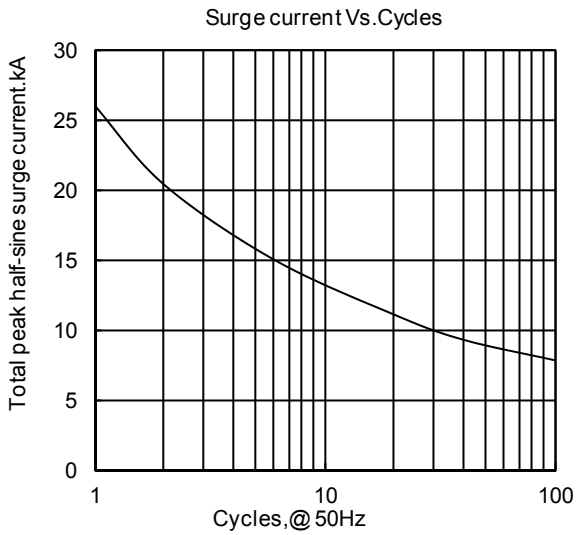


Fig7

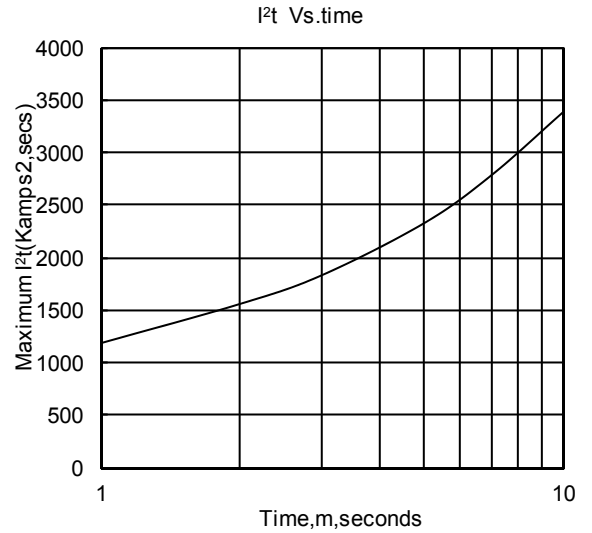


Fig8

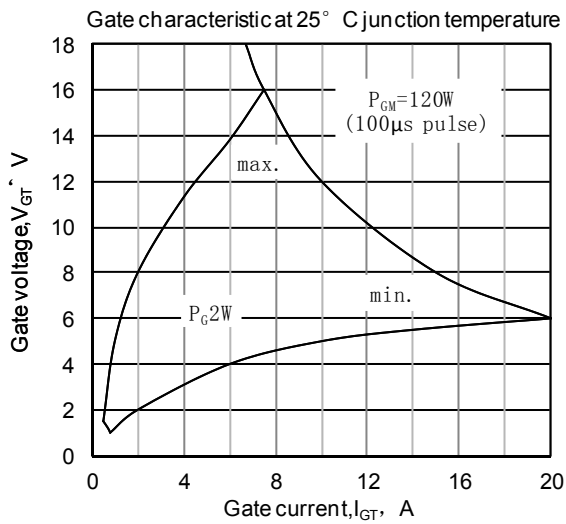


Fig9

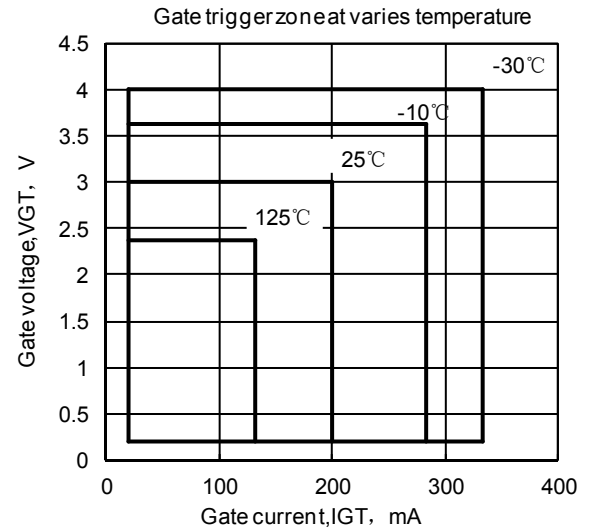


Fig10

Outline:

