



Features:

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

Typical Applications

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

V_{DSM}, V_{RSM}	V_{DRM}, V_{RRM}	Type & Outline
2100 V	2000 V	MFC200-20-413F3
2300 V	2200 V	MFC200-22-413F3
2600 V	2500 V	MFC200-25-413F3

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	$T_j(^{\circ}C)$	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled, $T_c=85^{\circ}C$	125			200	A
$I_{T(RMS)}$	RMS on-state current		125			314	A
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			35	mA
I_{TSM}	Surge on-state current	10ms half sine wave	125			8.00	KA
I^2t	I^2t for fusing coordination	$V_R=60\%V_{RRM}$				320	$A^2s \cdot 10^3$
V_{TO}	Threshold voltage		125			0.85	V
r_T	On-state slop resistance					1.14	mΩ
V_{TM}	Peak on-state voltage	$I_{TM}=600A$	25			1.90	V
t_{gr}	Gate control delay time	$V_D=0.67V_{DRM}$	25		2		μs
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	$I_{TM}=400A$, Gate source 1.5A $t_r \leq 0.5\mu s$ Repetitive	125			100	A/μs
I_{GT}	Gate trigger current		25	30		180	mA
V_{GT}	Gate trigger voltage	$V_A=12V, I_A=1A$		0.7		2.5	V
I_H	Holding current			10		150	mA
I_L	Latching current	$V_A=12V$, Gate source 1.5A $t_r \leq 0.5\mu s, 50Hz$	25		300	1000	mA
V_{GD}	Non-trigger gate voltage	$V_{DM}=V_{DRM}$	125			0.25	V
I_{GD}	Non-trigger gate current					10	mA
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.140	$^{\circ}C/W$
$R_{th(c-h)}$	Thermal resistance case to heat sink	Single side cooled				0.04	$^{\circ}C/W$
V_{iso}	Isolation voltage	50Hz, R.M.S, $t=1min, I_{iso}:1mA(MAX)$		3000			V
F_m	Thermal connection torque (M8)				12.0		N-m
	Mounting torque (M6)				6.0		N-m
T_{vj}	junction temperature			-40		125	$^{\circ}C$
T_{stg}	Stored temperature			-40		125	$^{\circ}C$
W_t	Weight				806		g
Outline	413F3						

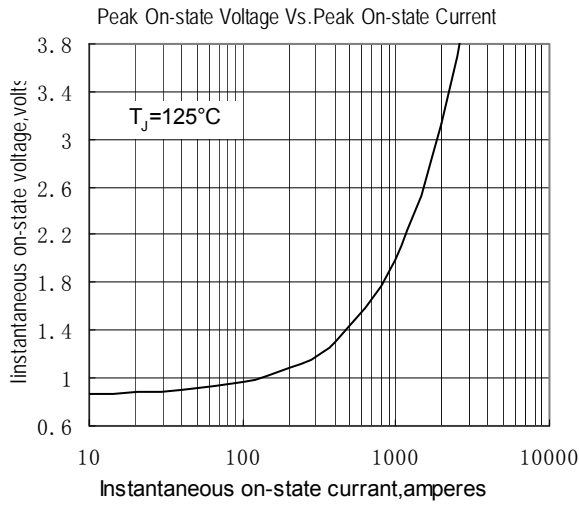


Fig.1

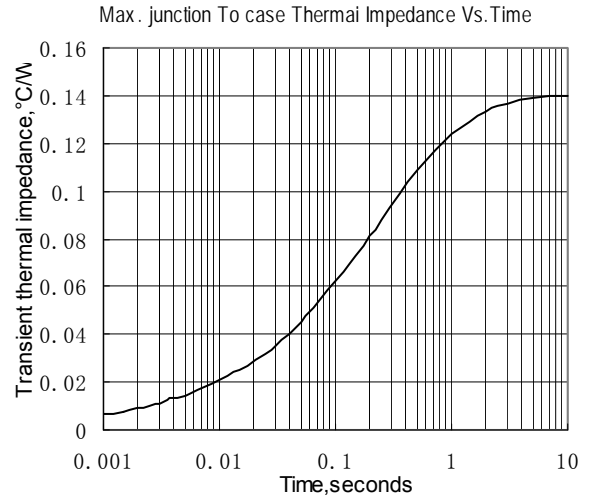


Fig.2

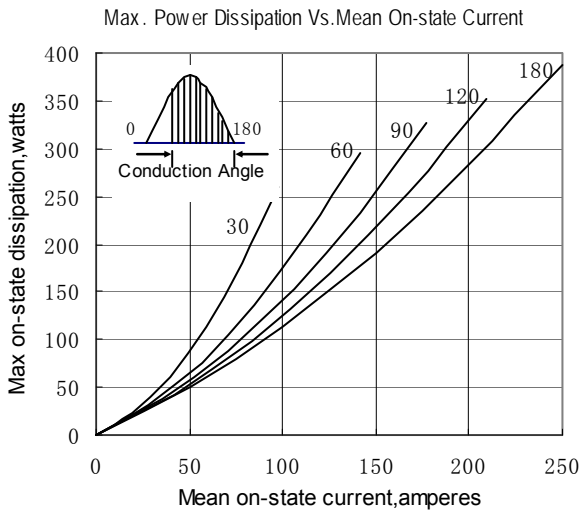


Fig.3

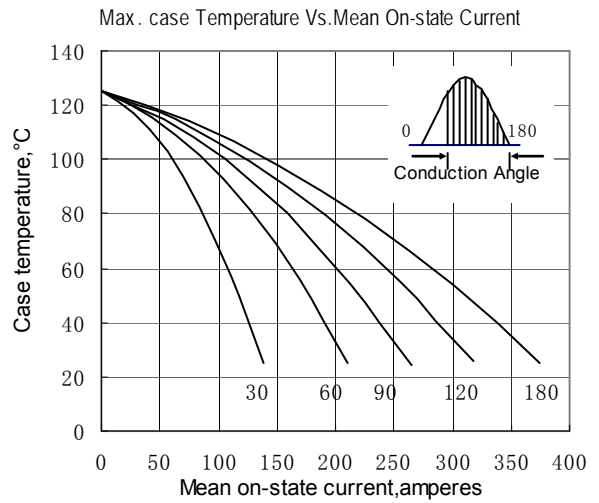


Fig.4

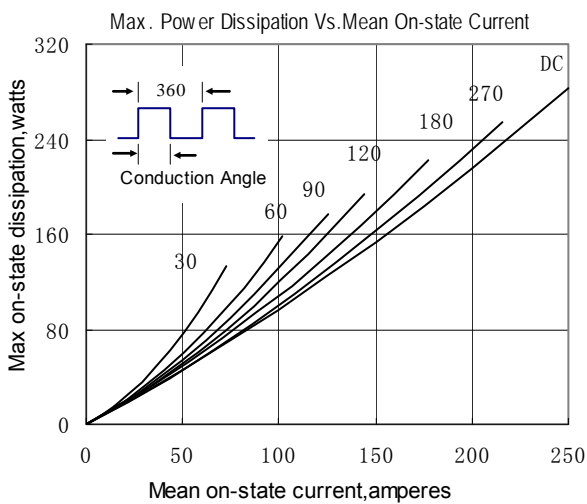


Fig.5

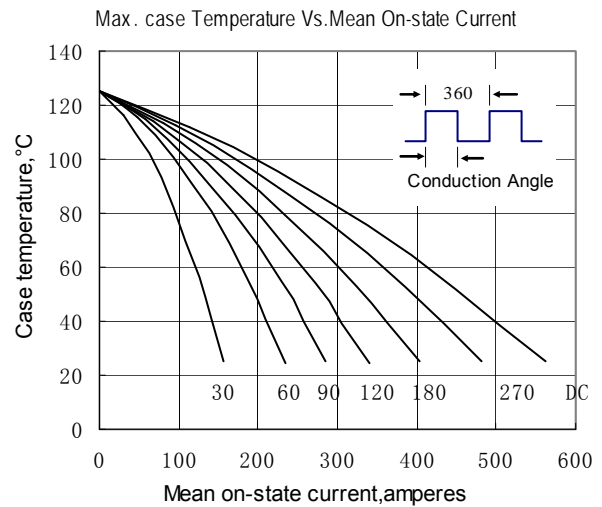


Fig.6

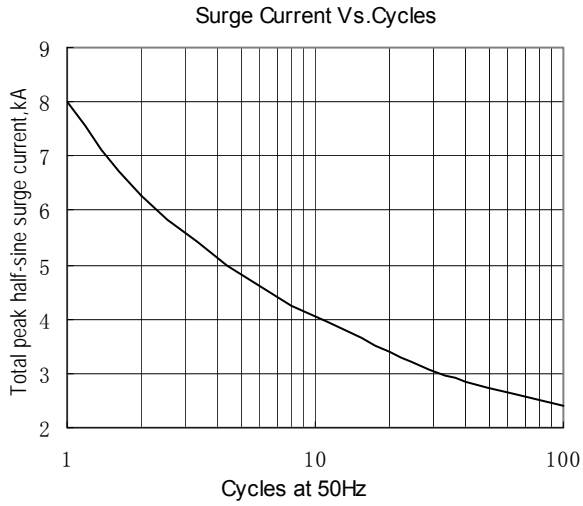


Fig.7

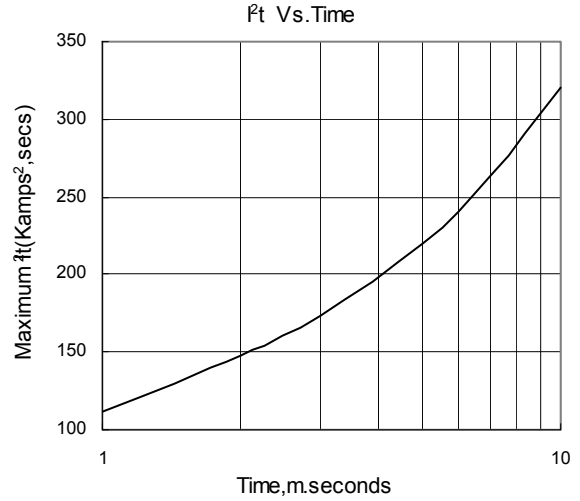


Fig.8

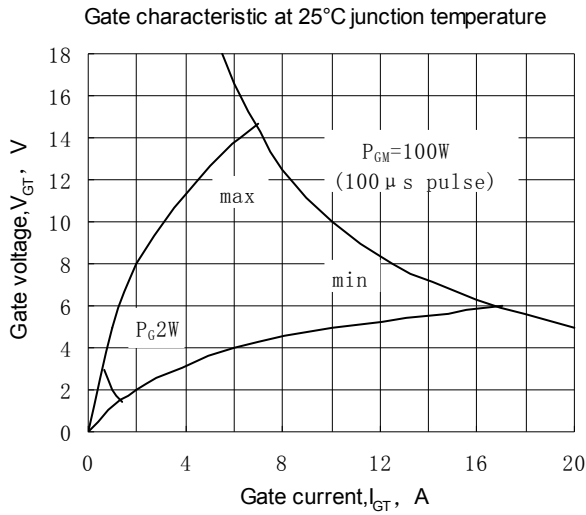


Fig.9

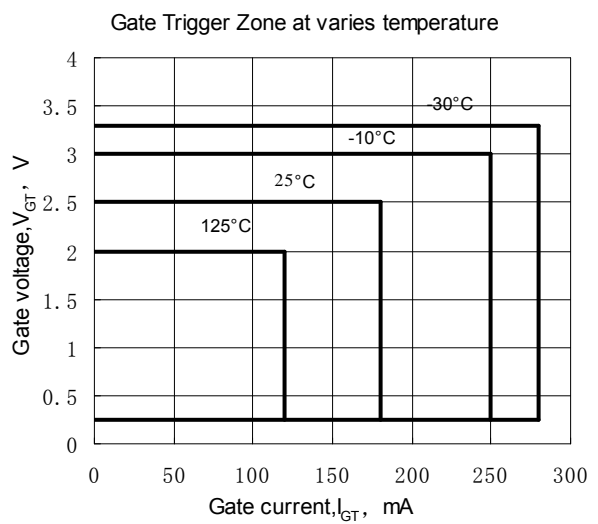


Fig.10

Outline:

