

TECHSEM

MFC1200 MFA1200 MFK1200 MFX1200

Thyristor/Diode Modules

Features:

- Isolated mounting base 2500V~
- 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

$I_{T(AV)}$	1200A
V_{DRM}/V_{RRM}	600~1800V
I_{TSM}	34 KA
I^2t	5780 $10^3 A^2S$



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			1200	A
$I_{T(RMS)}$	RMS on-state current		125			1884	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	$V_{DRM}&V_{RRM}$ tp=10ms $V_{DSM}&V_{RSM}=V_{DRM}&V_{RRM}+100V$	125	600		1800	V
I_{DRM} I_{RRM}	Repetitive peak current	$V_{DM}=V_{DRM}$ $V_{RM}=V_{RRM}$	125			55	mA
I_{TSM}	Surge on-state current	10ms half sine wave , $V_R=0.6V_{RRM}$	125			34.0	KA
I^2t	I^2T for fusing coordination					5480	$A^2s \times 10^3$
V_{TO}	Threshold voltage		125			0.80	V
r_T	On-state slop resistance					0.09	$m\Omega$
V_{TM}	Peak on-state voltage	$I_{TM}=3000A$	25			1.76	V
dv/dt	Critical rate of rise of off-state voltage	$V_{DM}=67\%V_{DRM}$	125			800	$V/\mu s$
di/dt	Critical rate of rise of on-state current	$I_{TM}=2400A$, Gate source 1.5A $t_r \leq 0.5\mu s$ Repetitive	125			100	$A/\mu s$
I_{GT}	Gate trigger current			30		200	mA
V_{GT}	Gate trigger voltage	$V_A=12V$, $I_A=1A$	25	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				0.031	$^{\circ}C / W$
$R_{th(c-h)}$	Thermal resistance case to heatsink	Single side cooled				0.020	$^{\circ}C / W$
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min, $I_{iso}:1mA(MAX)$	2500				V
F_m	Thermal connection torque(M12)				12		$N \cdot m$
	Mounting torque(M8)				12		$N \cdot m$
T_{stg}	Stored temperature		-40			125	$^{\circ}C$
W_t	Weight				3800		g
Outline	412F3						

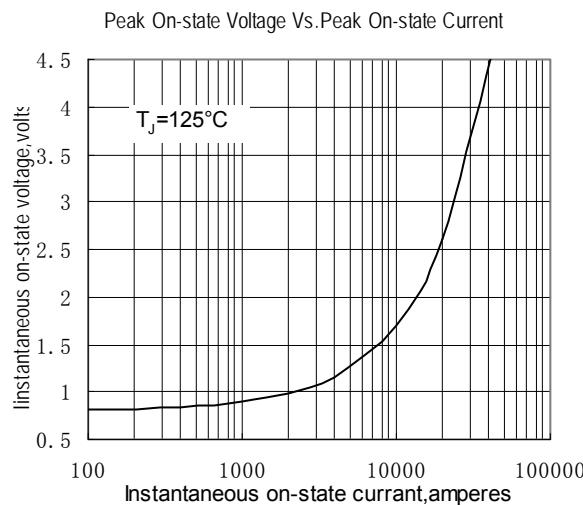


Fig.1

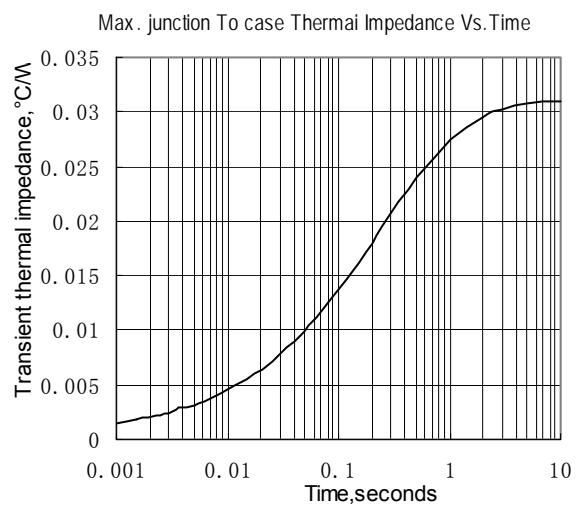


Fig.2

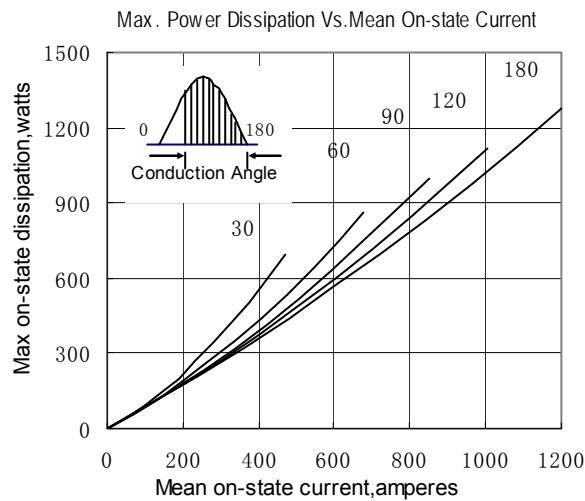


Fig.3

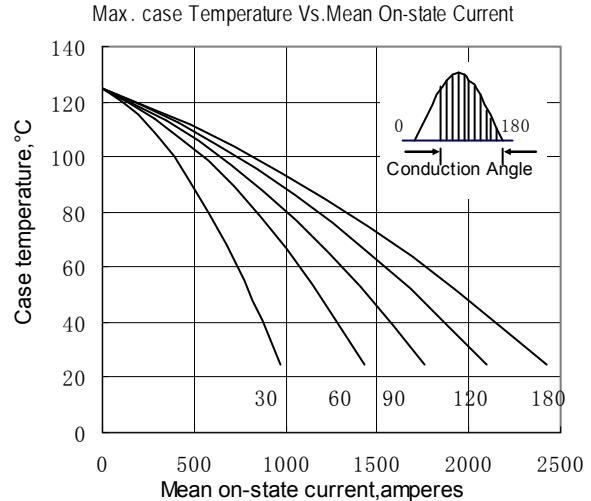


Fig.4

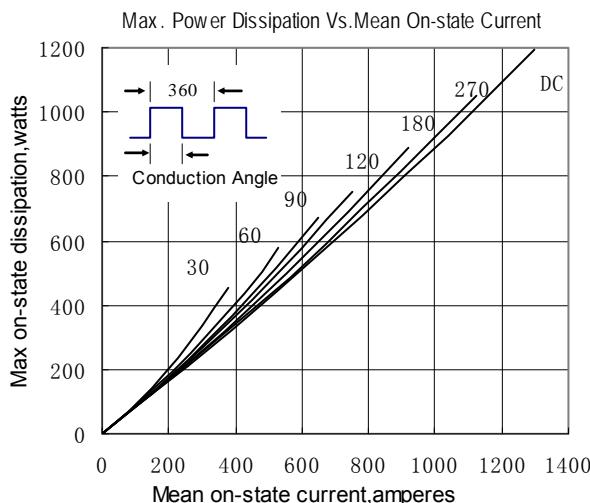


Fig.5

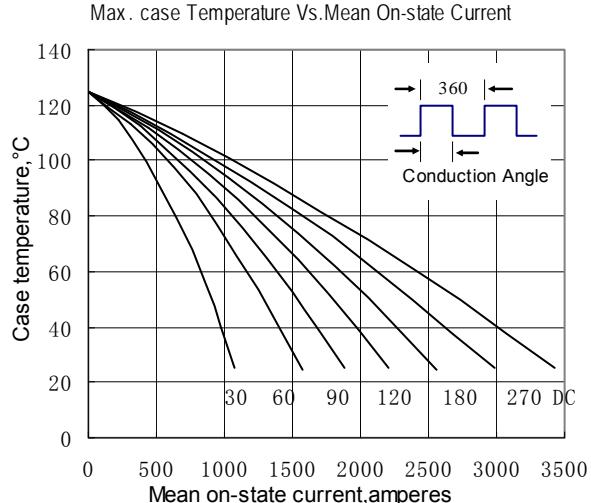


Fig.6

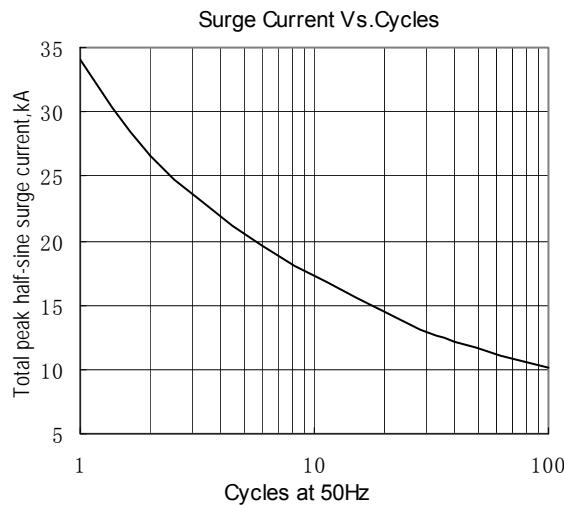


Fig.7

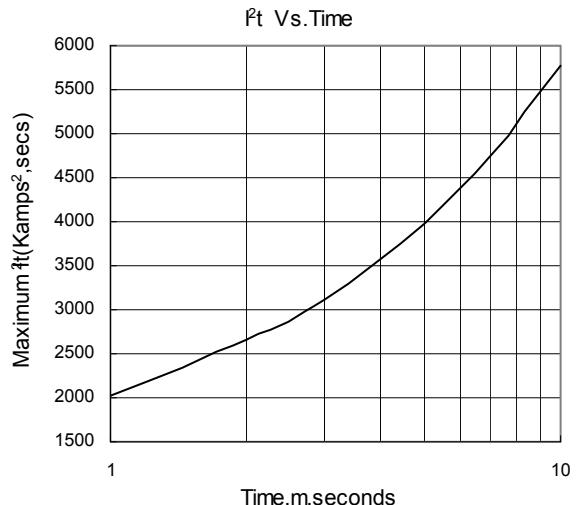


Fig.8

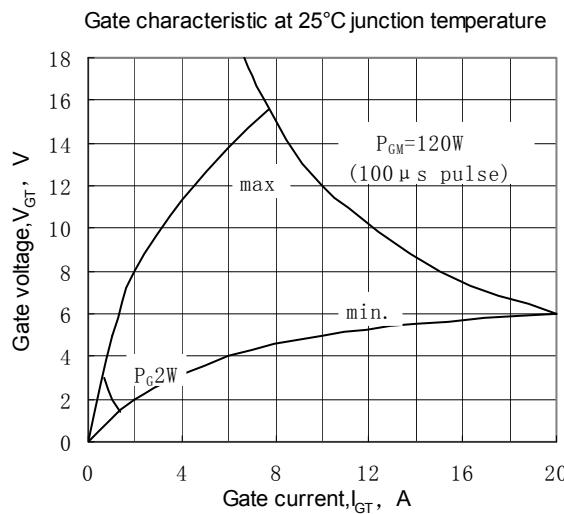


Fig.9

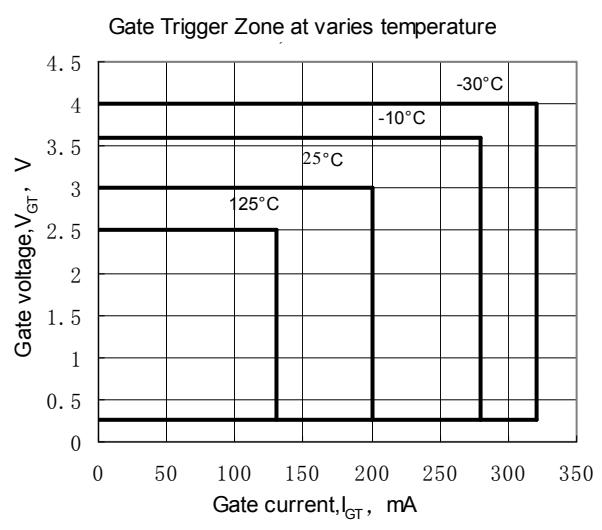
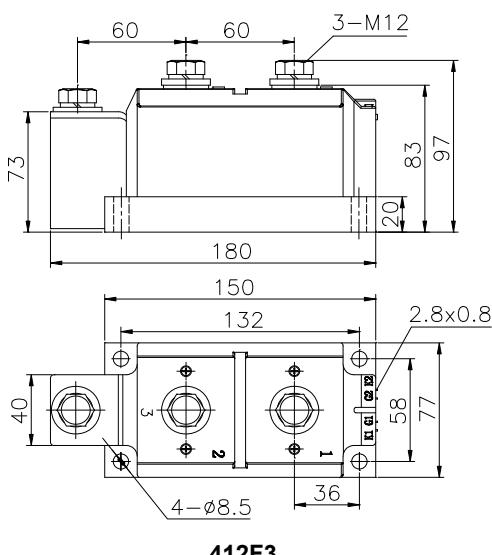


Fig.10

Outline:



412F3

