TECHSEM

MFG200 MFY200
Thyristor/Diode Modules(Non-isolated Type)

Features:

- Non-Isolated.Mounting base as common
- Pressure contact technology with Incrtased power cycling capability
- Low on-state voltage drop

Typical Applications

- Welding Power Supply
- Various DC Power supplies
- DC supply for PWM inverter

$I_{T(AV)}$	200 A
V_{DRM}/V_{RRM}	800~1800 V
I_{TSM}	$5.2A\times10^3$
I^2t	135 A^2S*10^3

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=90°C	125			200	A
$I_{T(RMS)}$	RMS on-state current		125			314	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 respectively	125	800		1800	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			20	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			5.2	KA
I^2t	I^2T for fusing coordination					135	A^2s*10^3
V_{TO}	Threshold voltage		125			0.80	V
r_T	On-state slop resistance					1.15	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=600A	25			1.62	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	Gate source 1.5A t_r ≤0.5μs Repetitive	125			100	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		150	mA
V_{GT}	Gate trigger voltage			0.8		2.5	V
I_H	Holding current			20		100	mA
V_{GD}	Non-trigger gate voltage	At 67%V_{DRM}	125	0.2			V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.130	°C /W
$R_{th(c-h)}$	Thermal resistance case to heatsink	Single side cooled				0.1	°C /W
F_m	Thermal connection torque(M6)				6.0		N·m
	Mounting torque(M6)				6.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				380		g
Outline	213F4/210F2						

Peak on-state Voltage Vs.Peak on-state Current

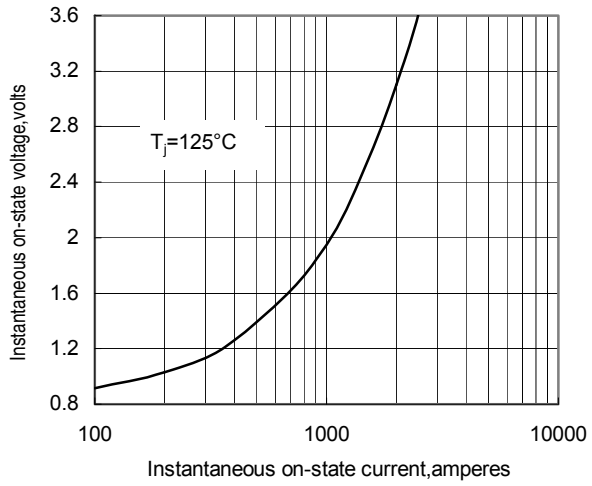


Fig.1

Max. junction To case Thermai Impedance Vs.Time

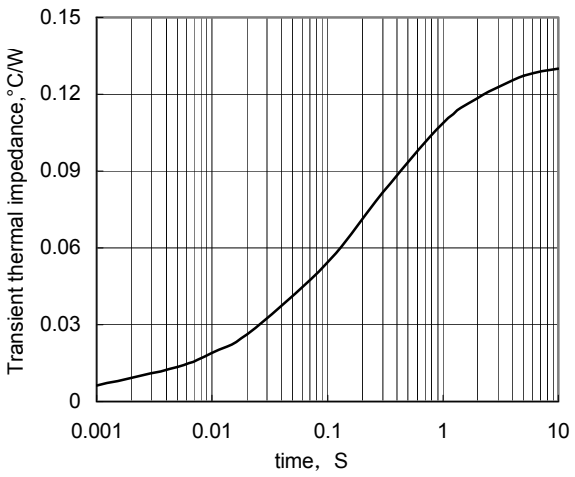


Fig.2

Max. Power Dissipation Vs.Mean on-state Current

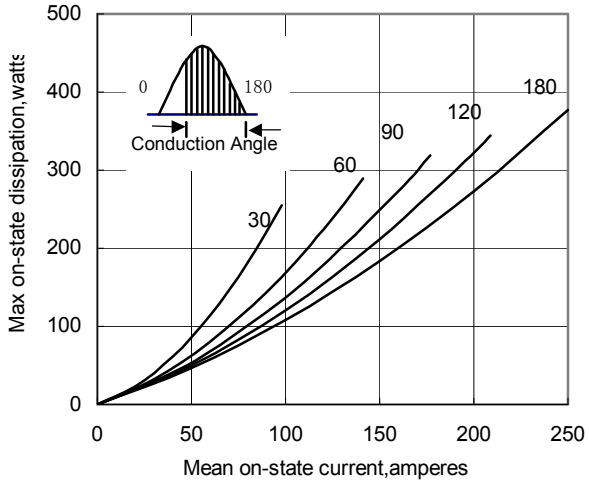


Fig.3

Max. case Temperature Vs.Mean on-state Current

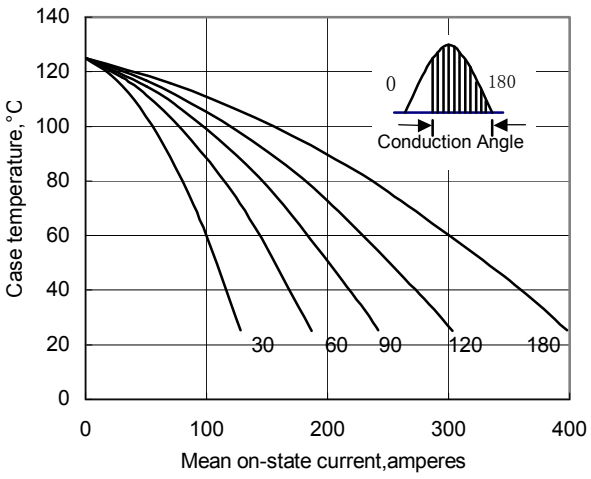


Fig.4

Max. Power Dissipation Vs.Mean on-state Current

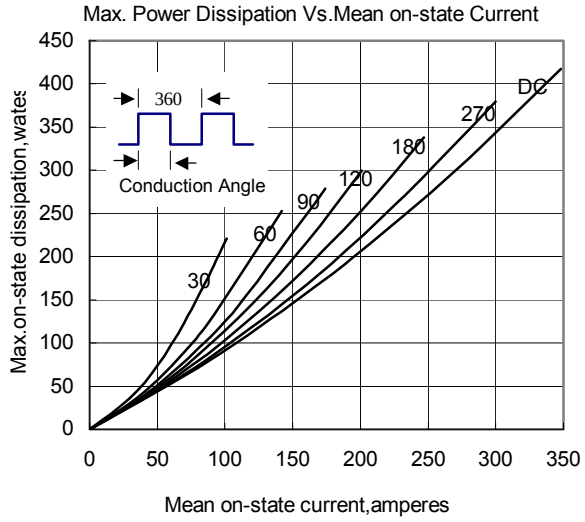


Fig.5

Max. case Temperature Vs.Mean on-state Current

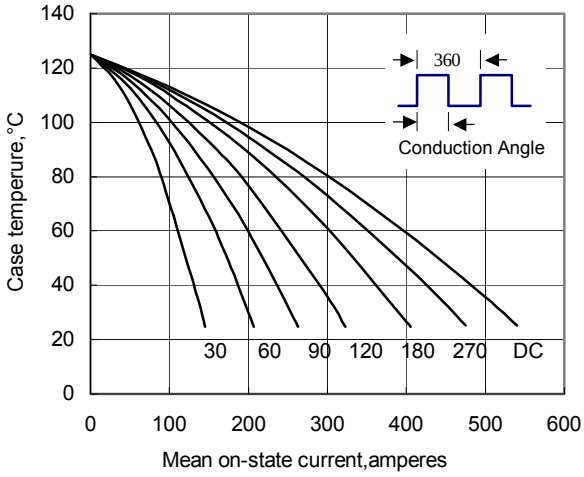


Fig.6

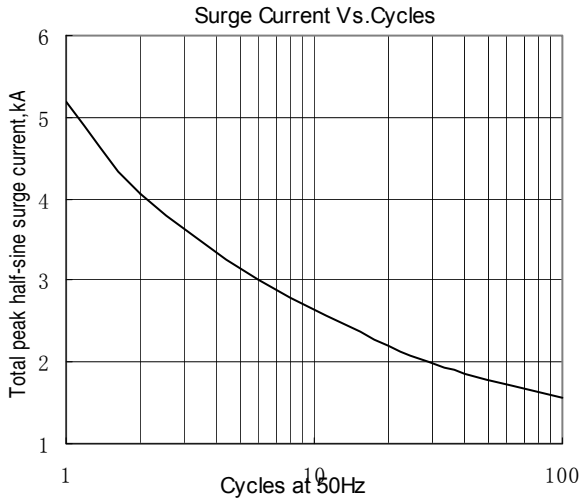


Fig.7

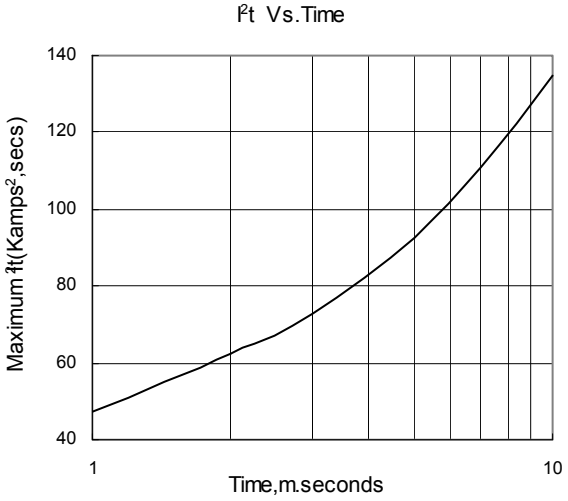


Fig.8

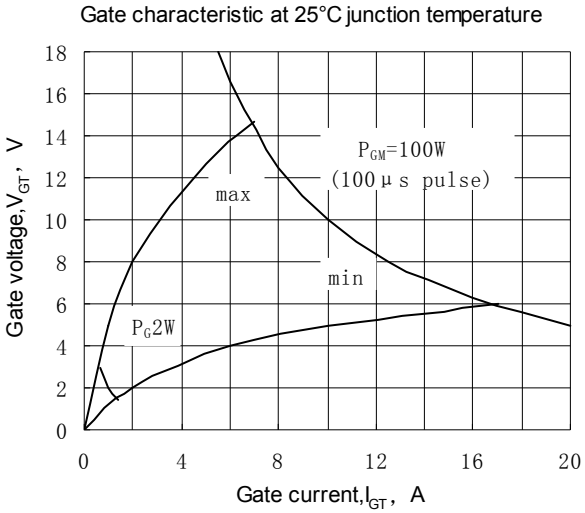


Fig.9

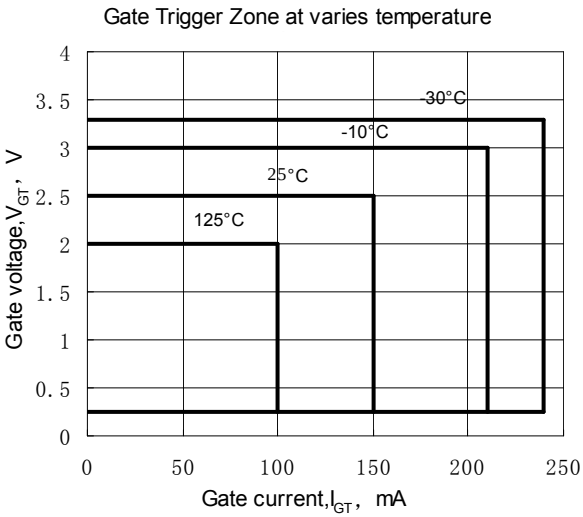
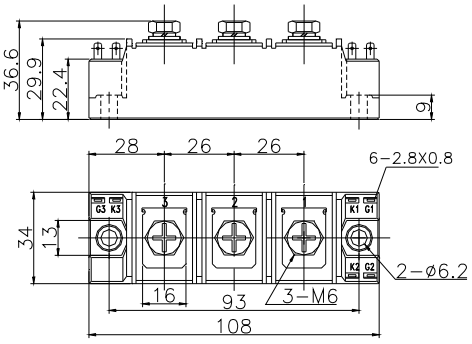


Fig.10

Outline:



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