

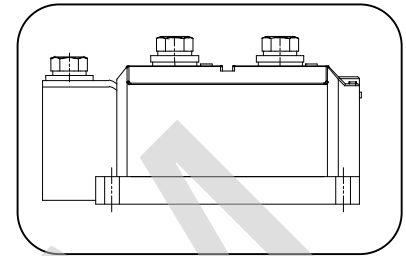
Features:

- n Isolated mounting base 2500V~
- n Pressure contact technology with Increased power cycling capability
- n Space and weight savings

Typical Applications:

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

$I_{T(AV)}$ **1000A**
 V_{DRM}/V_{RRM} **600~1800V**
 I_{TSM} **20 KA**
 I^2t **2000 10³A²S**



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			1000	A
$I_{T(RMS)}$	RMS on-state current		125			1570	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	$V_{DRM} & V_{RRM} \text{ tp}=10\text{ms}$ $V_{DSM} & V_{RSM} = V_{DRM} & V_{RRM} + 200\text{V}$	125	600		1800	V
I_{DRM} I_{RRM}	Repetitive peak current	$V_{DM} = V_{DRM}$ $V_{RM} = V_{RRM}$	125			60	mA
I_{TSM}	Surge on-state current	10ms half sine wave, $V_R = 0.6V_{RRM}$	125			20.0	KA
I^2t	I ² T for fusing coordination					2000	A ² s*10 ³
V_{TO}	Threshold voltage		125			0.80	V
r_T	On-state slop resistance					0.34	mW
V_{TM}	Peak on-state voltage	$I_{TM}=3000\text{A}$	25			1.96	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 $t_r \leq 0.5\mu\text{s}$ Repetitive	125			100	A/μs
I_{GT}	Gate trigger current			30		200	mA
V_{GT}	Gate trigger voltage	$V_A=12\text{V}, I_A=1\text{A}$	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				0.053	°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·m
	Mounting torque (M8)				12		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				3800		g
Outline	412F3						

Peak On-state Voltage Vs. Peak On-state Current

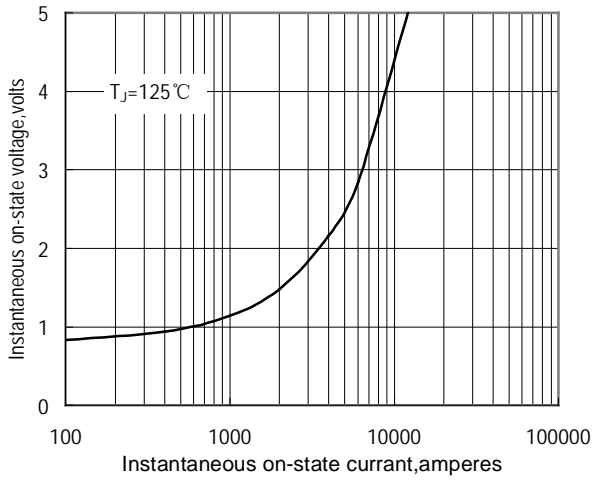


Fig.1

Max. junction To case Thermal Impedance Vs. Time

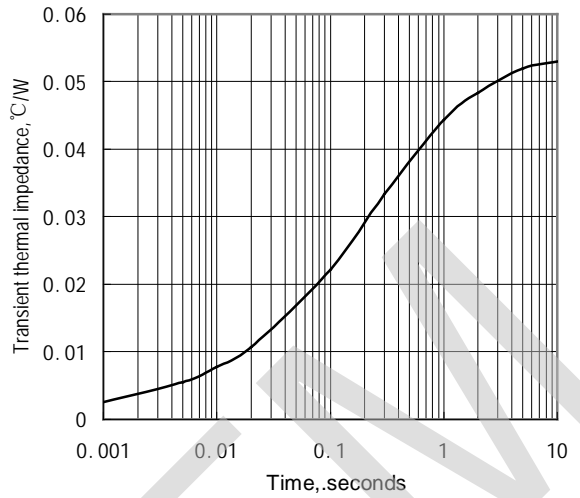


Fig.2

Max. Power Dissipation Vs. Mean On-state Current

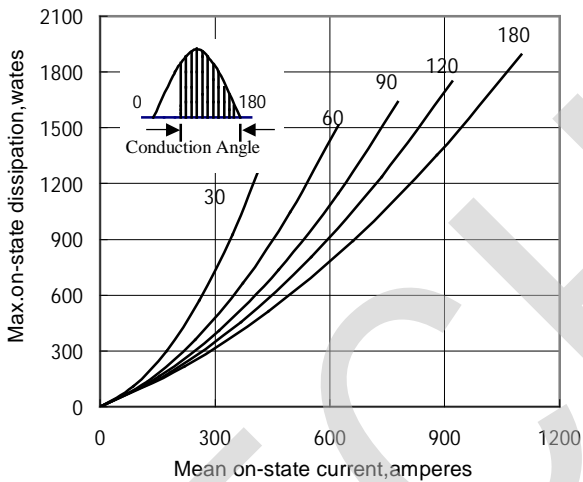


Fig.3

Max. case Temperature Vs. Mean On-state Current

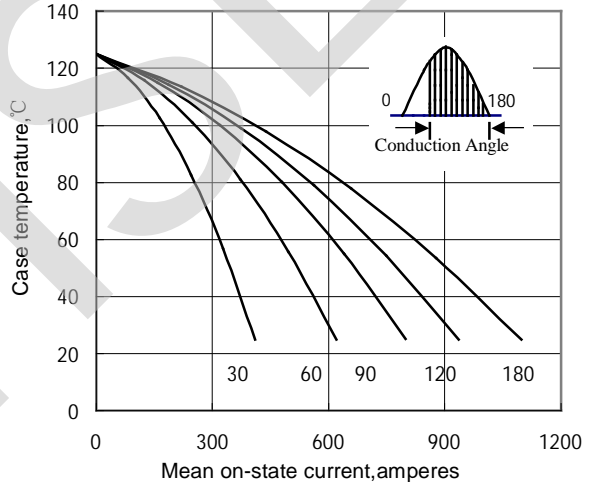


Fig.4

Max. Power Dissipation Vs. Mean On-state

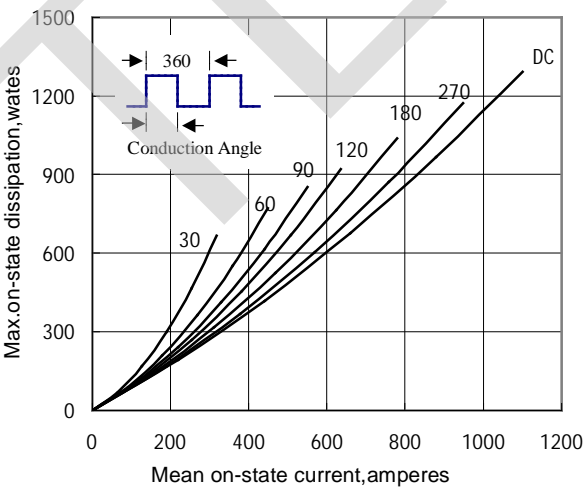


Fig.5

Max. case Temperature Vs. Mean On-state

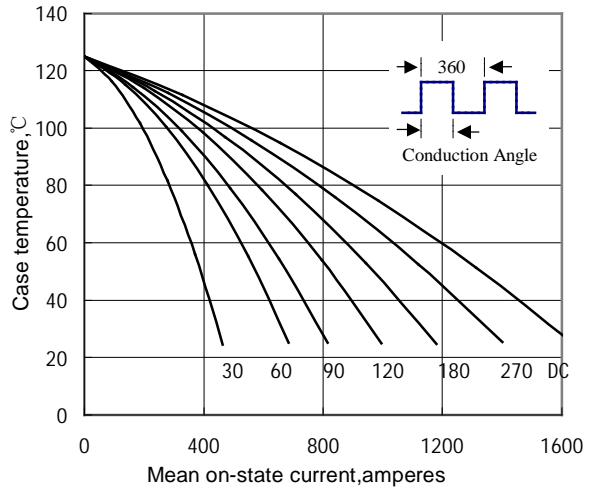


Fig.6

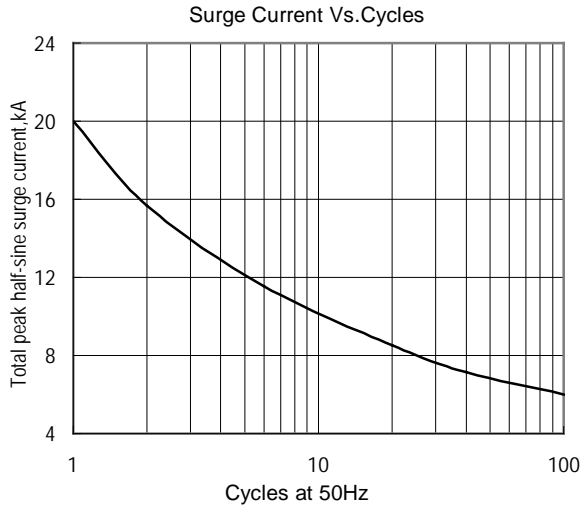


Fig.7

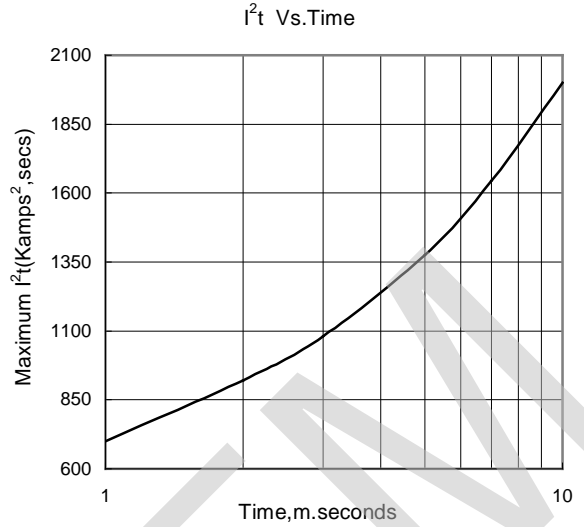


Fig.8

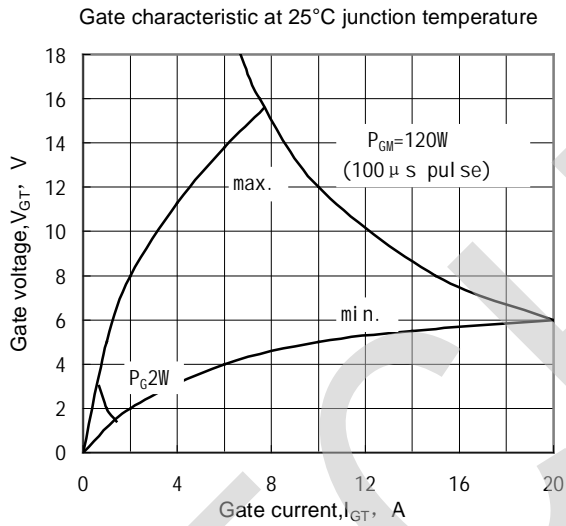


Fig.9

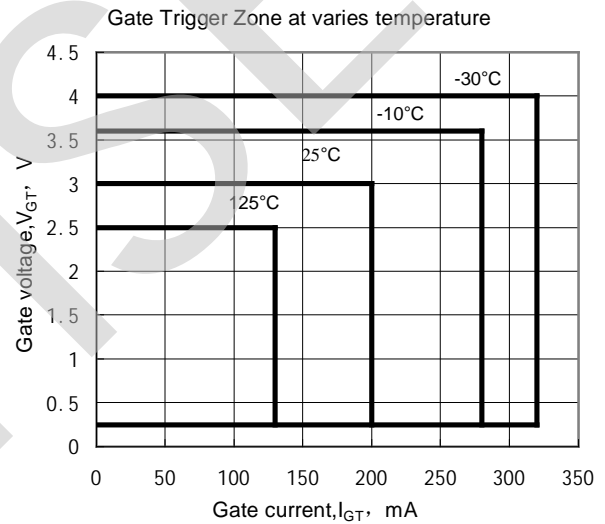


Fig.10

Outline:

