

**Feature**

- Chips are electrically insulated from plate
- Package in compliance with international standard. Pressure type, excellent temperature characteristics and power cycling capability
- 350A below modules are forced air cooling, 400A above modules can be selected by air cooling or water cooling

$I_{T(AV)}$	1000A
$V_{DRM}/V_{RRM}$	100-6500V
$I_{TSM}$	20 KA
$I^2t$	2000 $10^3 a^2s$

**Typical application**

- AC, DC motor control, Different kind of rectifying power supply
- Industrial heating and control, Light adjustment, Non-contact switch
- Motor softstarter, Static reactive power compensation
- Welding equipment, Frequency transformer, UPS, Battery charging and discharging

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	$T_J$ (°C)	VALUE		UNIT
				Min	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave, 50HZ Double side cooled, $T_C=98^\circ C$	125		1000	A
$I_{T(RMS)}$	RMS current		125		1570	A
$V_{DRM}$ $V_{RRM}$	Repetitive peak off-state voltage Repetitive peak reverse voltage	$V_{DRM} \& V_{RRM} \text{ tp}=10\text{ms}$ $V_{DSM} \& V_{RSM} = V_{DRM} \& V_{RRM} + 200V$	125	500	2500	V
$I_{DRM}$ $I_{RRM}$	Repetitive peak current	$V_{DM} = V_{DRM}$ $V_{RM} = V_{RRM}$	125		50	mA
$I_{TSM}$	Surge on-state current	10ms half sine wave	125		20.0	KA
$I^2t$	$I^2t$ for fusing coordination	$V_R = 0.6V_{RRM}$			2000	$A^{2S} * 10$
$V_{TO}$	Threshold voltage		125		0.80	V
$r_T$	On-state slope resistance				0.33	mΩ
$V_{TM}$	Peak on-state voltage	$I_{TM} = 3000A$	25		1.20	V
dv/dt	Critical rate of rise of off-state voltage	$V_{DM} = 0.67V_{DRM}$	125		800	V/us
di/dt	Critical rate of rise of on-state current	$V_{DM} = 67\% V_{DRM}$ TO 1000A, Gate pulse $t_r \leq 0.5\mu s$ $I_{GM} = 1.5A$	125		100	A/us
$I_{GT}$	Gate trigger current	$V_A = 12V, I_A = 1A$	25	30	200	mA
$V_{GT}$	Gate trigger voltage			0.8	3	V
$I_H$	Holding current			20	200	mA
$V_{GD}$	Npn-trigger gate voltage	$V_{DM} = 0.67V_{DRM}$	125		0.2	V
$R_{th(j-c)}$	Thermal impedance node to the shell	180° sine wave, single heat sink			0.052	°C/W
$R_{th(c-h)}$	Thermal impedance (shell to powder)	180° sine wave, single heat sink			0.024	°C/W
$V_{iso}$	Insulation voltage				2500	V
$F_M$	Mounting force (M5)				12	N-m
	Mounting force (M6)				6	N-m
$T_{stq}$	Stored temperature			-40	125	°C
$W_t$	Weight					g
Outline						

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

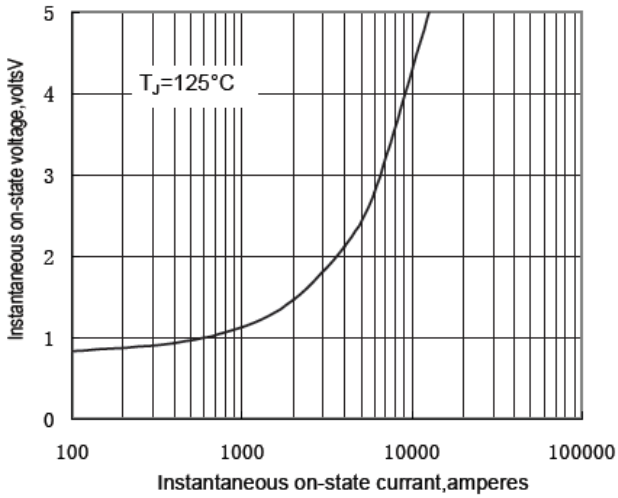


Fig.1

Max. junction To case Thermal Impedance Vs. Time

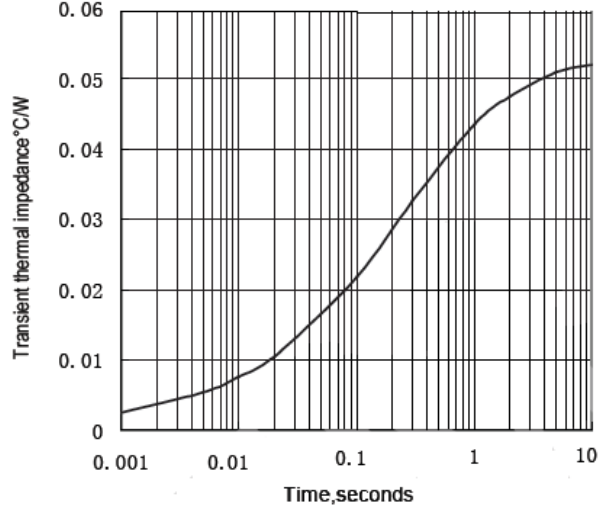


Fig.2

Max. Power Dissipation Vs. Mean On-state Current

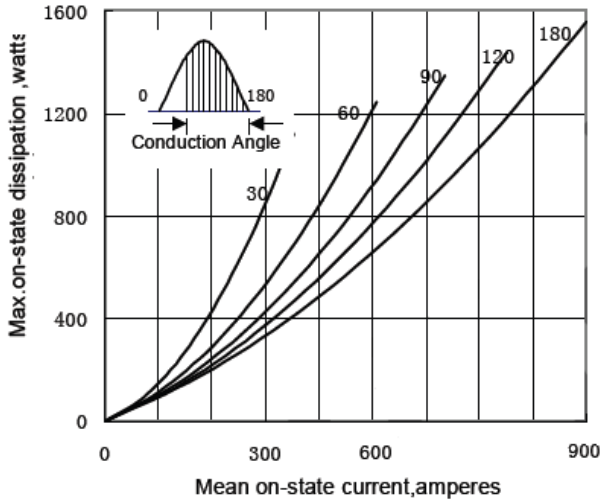


Fig.5

Max. heatsink Temperature Vs. Mean On-state Current

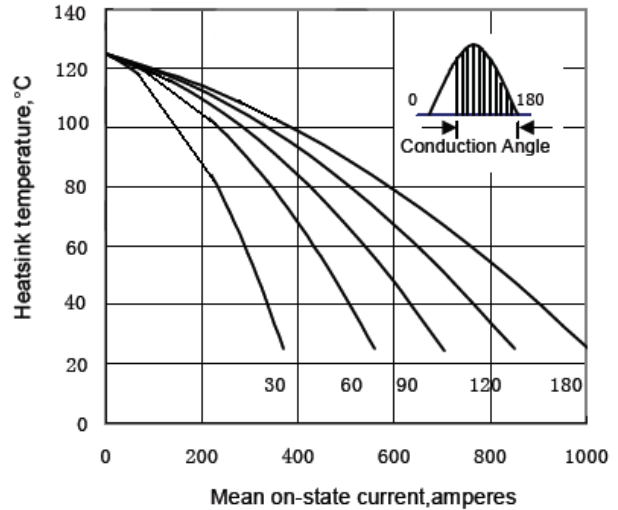


Fig.6

Max. Power Dissipation Vs. Mean On-state Current

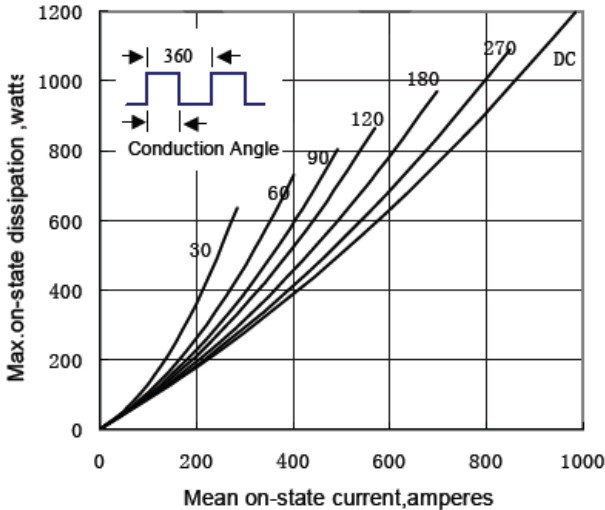


Fig.5

Max. case Temperature Vs. Mean On-state Current

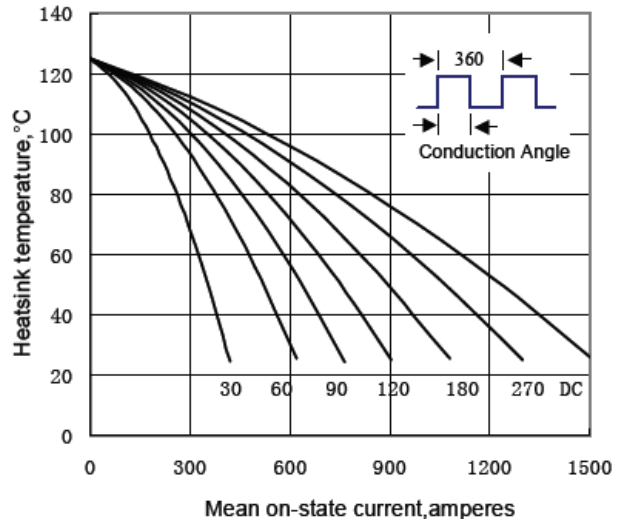


Fig.6

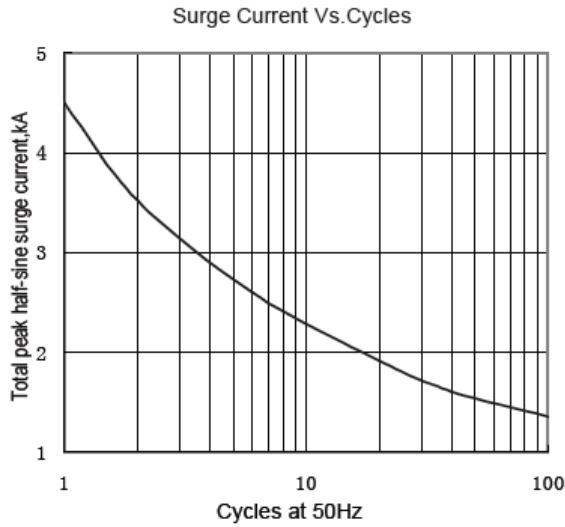


Fig.7

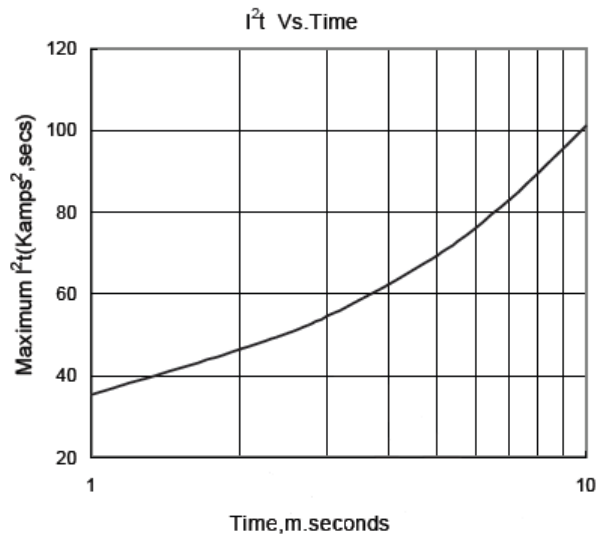


Fig.8

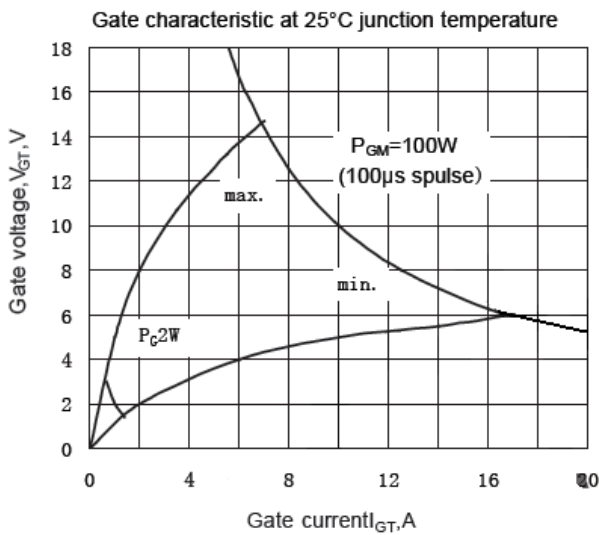


Fig.9

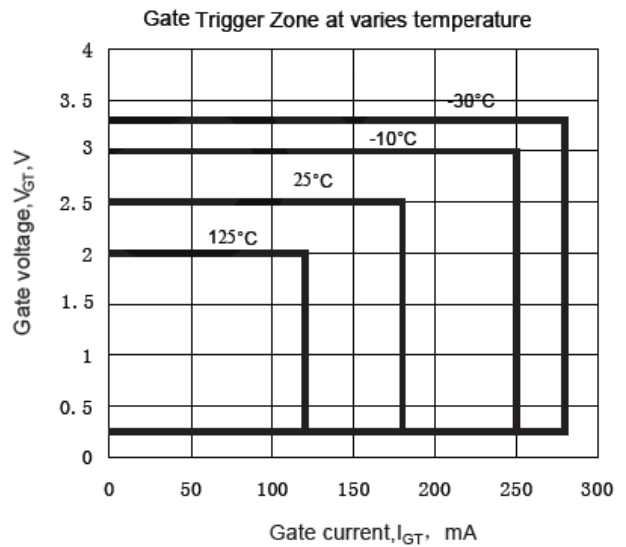
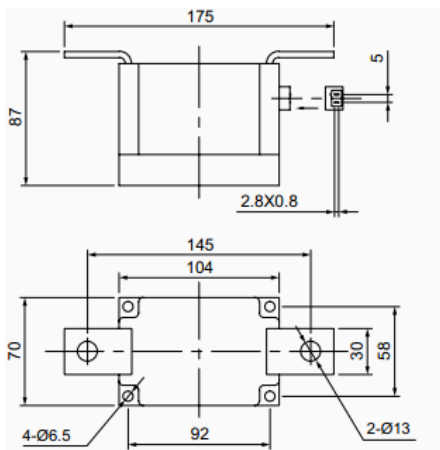


Fig.10

Outline:



1

Circuit Drawing:

