Features

- Center amplifying gate
- Metal case with ceramic insulator
- Low on-state and switching losses

Typical Applications

- AC controllers
- DC and AC motor control
- Controlled rectifiers

$I_{T(AV)}$	**5290A**
V_{DRM}/V_{RRM}	**2200 ～ 3000V**
I_{TSM}	**80 kA**
I^2t	**32000 10^3A^2S**

SYMBOL	CHARACTERISTIC	TEST CONDITIONS		T_j(°C)	VALUE			UNIT
					Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Double side cooled,	T_C=70°C	125			5290	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	tp=10ms		125	2200		3000	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}		125			400	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=0.6V_{RRM}		125			80	kA
I^2t	I^2t for fusing coordination						32000	10^3 A^2s
V_{TO}	Threshold voltage			125			0.83	V
r_T	On-state slope resistance						0.076	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=3000A, F=90kN		25			1.15	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=0.67V_{DRM}		125			2000	V/μs
di/dt	Critical rate of rise of on-state current	V_{DM}=67%V_{DRM} Gate pulse tr ≤0.5μs I_{GM}=1.5A		125			200	A/μs
Q_{rr}	Recovery charge	I_{TM}=2000A, tp=4000μs, di/dt=-5A/μs, V_R=100V		125		4000		μC
I_{GT}	Gate trigger current	V_A=12V, I_A=1A		25	40		300	mA
V_{GT}	Gate trigger voltage				0.8		3.0	V
I_H	Holding current				25		200	mA
I_L	Latching current						1000	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}		125			0.3	V
$R_{th(j-C)}$	Thermal resistance Junction to case	D.C. double side cooled Clamping force 90.0kN					0.0057	°C /W
$R_{th(c-hs)}$	Thermal resistance case to heatsink						0.0015	°C /W
F_m	Mounting force				81		108	kN
T_{vj}	Junction temperature				-40		125	°C
T_{stg}	Stored temperature				-40		140	°C
W_t	Weight					1880		g
Outline	P21a							

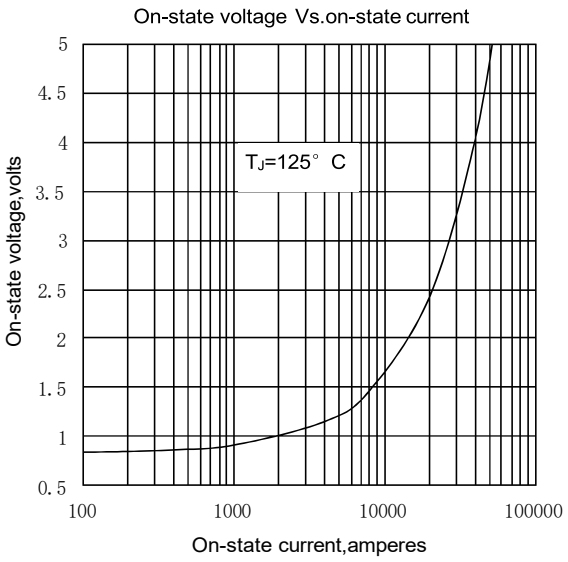


Fig.1

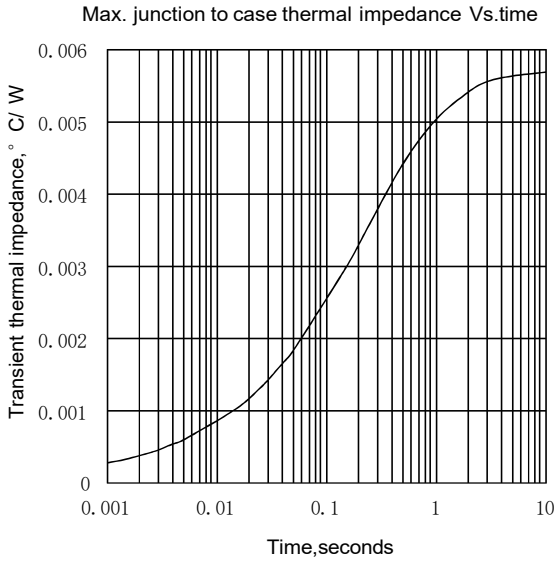


Fig.2

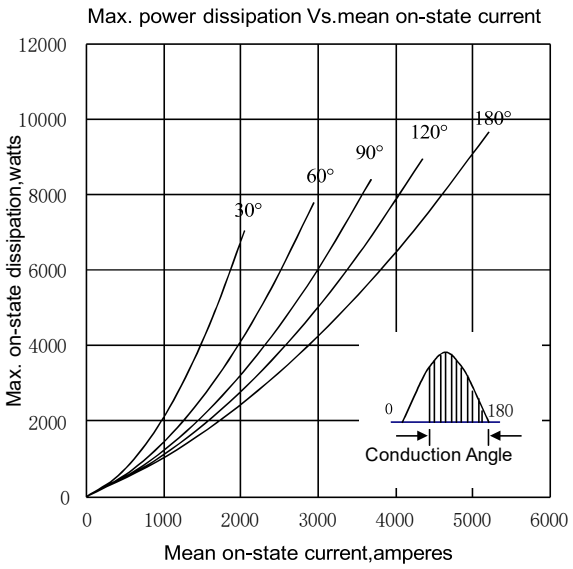


Fig.3

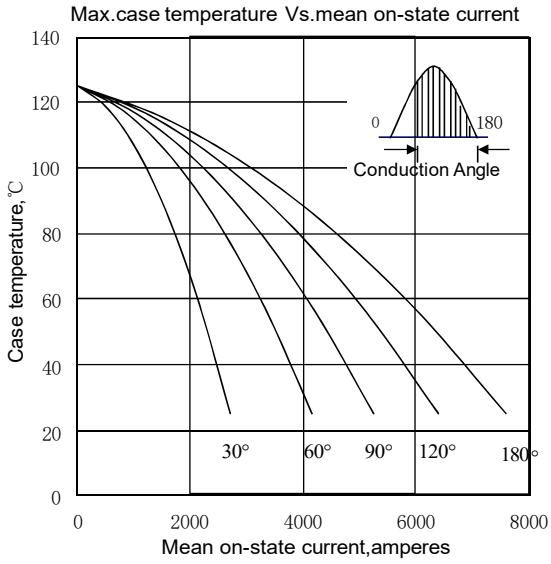


Fig.4

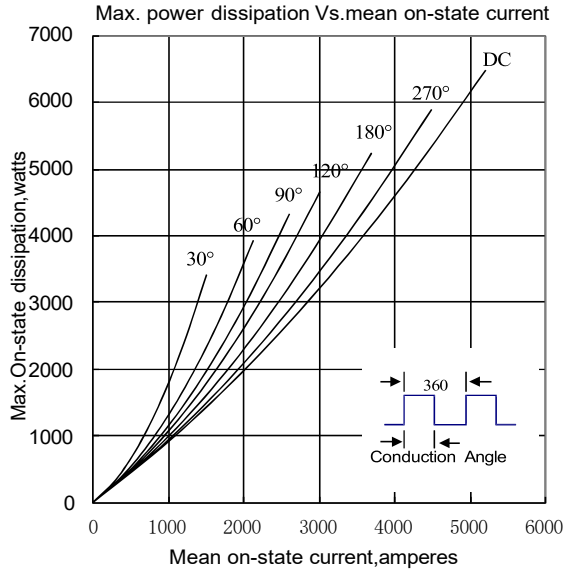


Fig.5

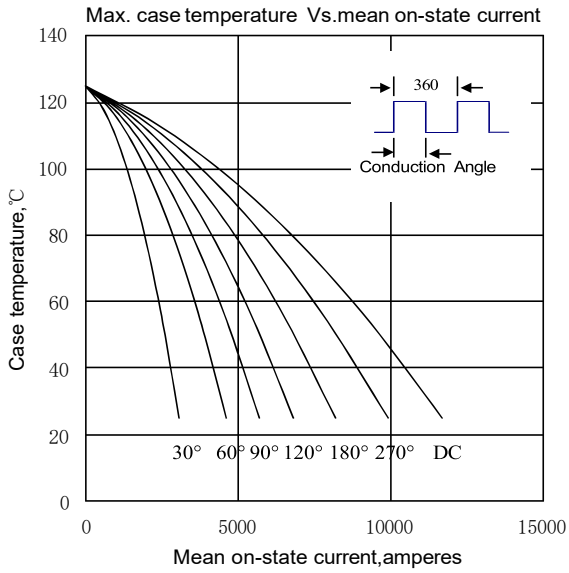


Fig.6

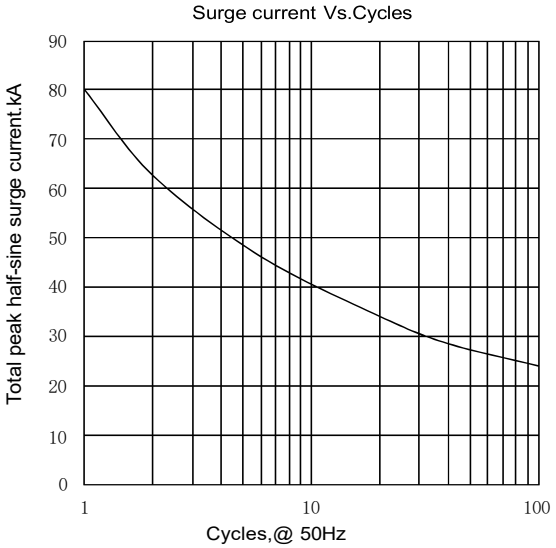


Fig.7

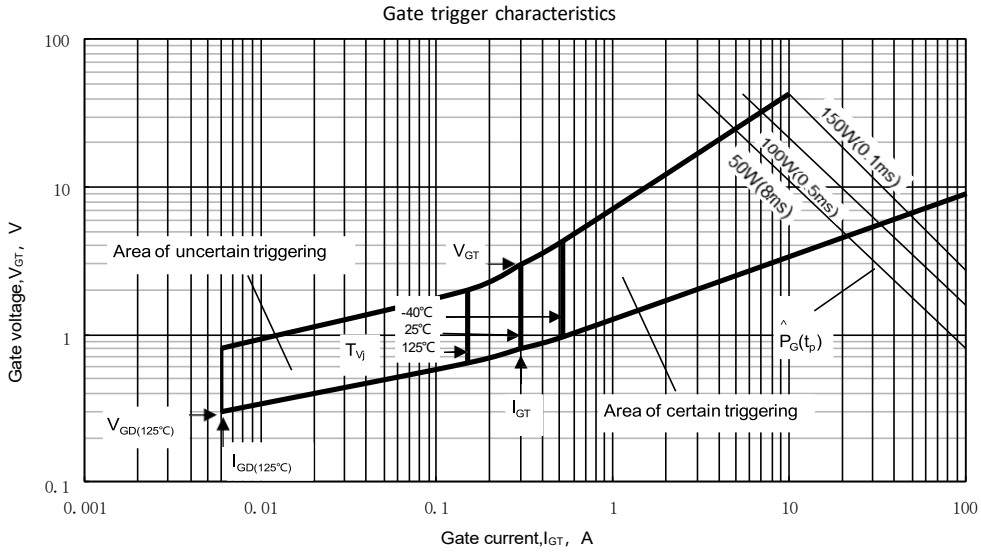
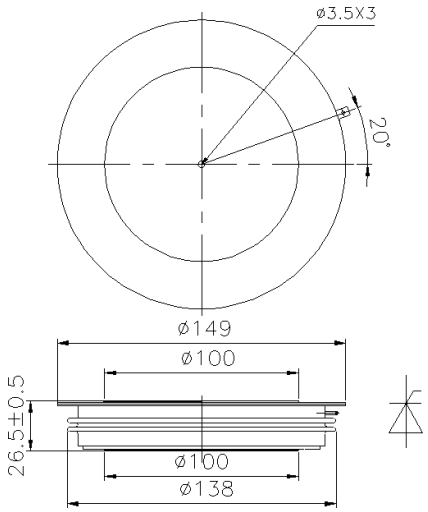


Fig.8

Outline:



NIps reserves the right to change specifications without notice.