Features

- Interdigitated amplifying gates
- Fast turn-on and high di/dt
- Low switching losses

Typical Applications

- Inductive heating
- Electronic welders
- Self-commutated inverters

$I_{T(AV)}$	**1080A**
V_{DRM}/V_{RRM}	**800 ～ 1800V**
t_q	**18~50μs**
I_{TSM}	**10 kA**
I^2t	**500 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=55°C	125			1080	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	tp=10ms		125	800		1800	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}		125			50	mA
I_{TSM}	Surge on-state current	10ms half sine wave		125			10	kA
I^2t	I^2t for fusing coordination						500	A^2s*10^3
V_{TO}	Threshold voltage			125			1.30	V
r_T	On-state slope resistance						0.38	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=1800A, F=18kN		25			3.15	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=0.67V_{DRM}		125			1000	V/μs
di/dt	Critical rate of rise of on-state current	V_{DM}= 67%V_{DRM} to 1600A, Gate pulse t_r≤0.5μs I_{GM}=1.5A Single pulse		125			1200	A/μs
Q_{rr}	Recovery charge	I_{TM}=1000A, tp=4000μs, di/dt=-20A/μs, V_R=100V		125		550		μC
tq	Circuit commutated turn-off time	I_{TM}=1000A, tp=4000μs, V_R=100V dv/dt=30V/μs , di/dt=-20A/μs		125	18		50	μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A		25	40		300	mA
V_{GT}	Gate trigger voltage				0.9		3.0	V
I_H	Holding current				20		400	mA
I_L	Latching current						500	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 18kN					0.028	°C /W
$R_{th(c-h)}$	Thermal resistance case to heat sink						0.0075	
F_m	Mounting force				15		20	kN
T_{vj}	Junction temperature				-40		125	°C
T_{stg}	Stored temperature				-40		140	°C
W_t	Weight					320		g
Outline	P09							

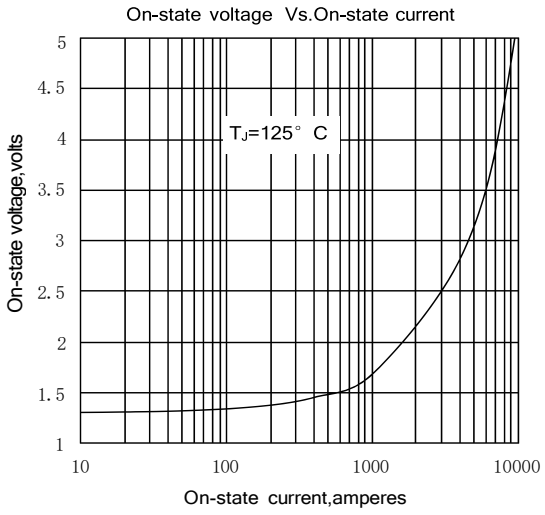


Fig. 1

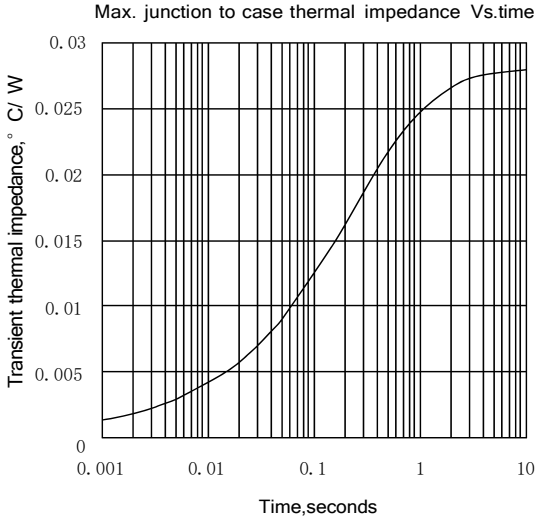


Fig. 2

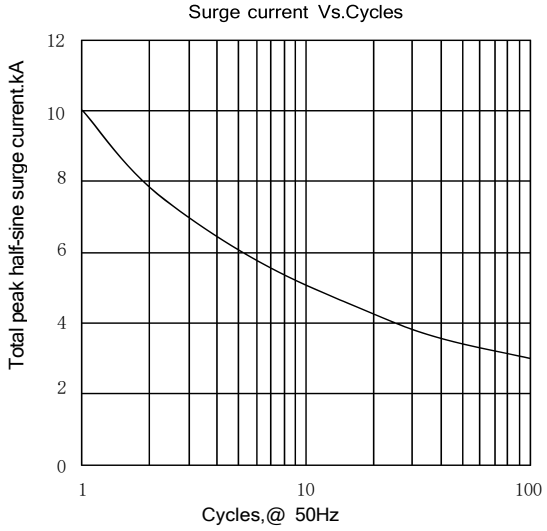


Fig. 3

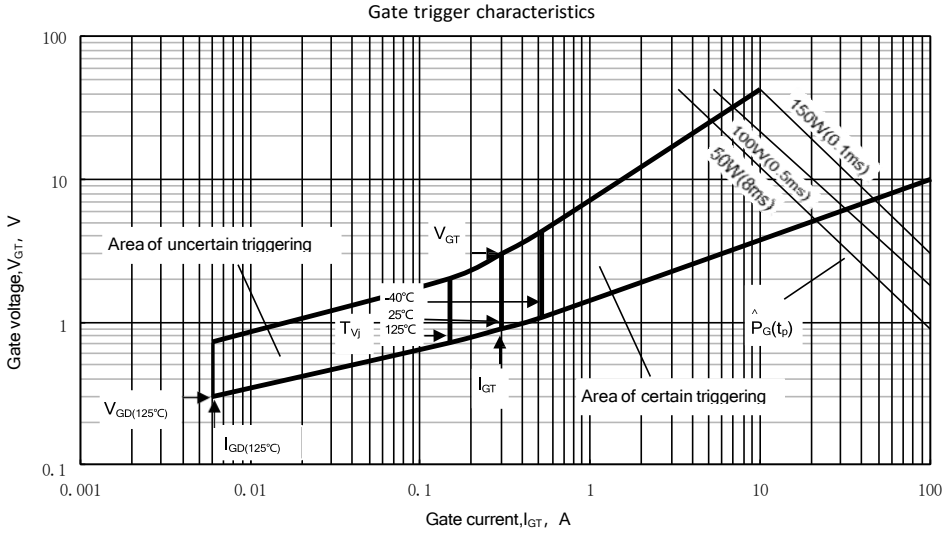
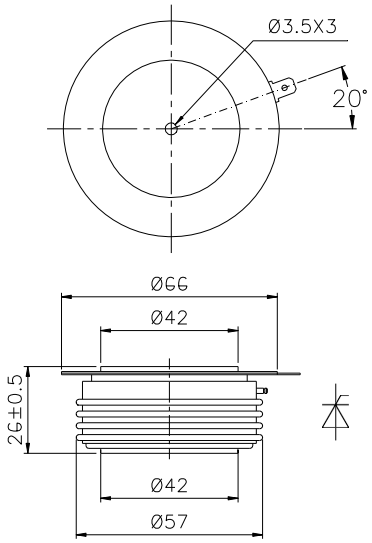


Fig. 4

Outline:



NIps reserves the right to change specifications without notice.