

Features

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

Typical Applications

- Inductive heating
- Electronic welders
- Self-commutated inverters

$I_{T(AV)}$	2200A
V_{DRM}/V_{RRM}	4500 ~ 5200V
t_q	50~150μs
I_{TSM}	30 kA
I^2t	4500 10³A²S

SYMBOL	CHARACTERISTIC	TEST CONDITIONS		T _i (°C)	VALUE			UNIT
					Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Double side cooled,	$T_c=70^\circ\text{C}$	125			2200	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	$t_p=10\text{ms}$		125	4500		5200	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}		125			250	mA
I_{TSM}	Surge on-state current	10ms half sine wave $V_R=0.6V_{RRM}$		125			30	kA
I^2t	I^2t for fusing coordination						4500	A ² s*10 ³
V_{TO}	Threshold voltage			125			1.67	V
r_T	On-state slope resistance						0.33	mΩ
V_{TM}	Peak on-state voltage	$I_{TM}=2200\text{A}, F=70\text{kN}$		25			3.20	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 4000A Gate pulse $t_r \leq 0.5\mu\text{s}$ $I_{GM}=1.5\text{A}$		125			300	A/μs
Q_{rr}	Recovery charge	$I_{TM}=2000\text{A}, t_p=4000\mu\text{s}$, $di/dt=-20\text{A}/\mu\text{s}, V_R=50\text{V}$		125		5000		μC
t_q	Circuit commutated turn-off time	$I_{TM}=2000\text{A}, t_p=4000\mu\text{s}, V_R=50\text{V}$ $dv/dt=30\text{V}/\mu\text{s}, di/dt=-20\text{A}/\mu\text{s}$		125	50		150	μs
I_{GT}	Gate trigger current	$V_A=12\text{V}, I_A=1\text{A}$		25	50		250	mA
V_{GT}	Gate trigger voltage				0.9		2.5	V
I_H	Holding current				40		1000	mA
V_{GD}	Non-trigger gate voltage	$V_{DM}=67\%V_{DRM}$		125	0.25			V
$R_{th(j-c)}$	Thermal resistance Junction to case	D.C. double side cooled Clamping force 70kN					0.007	°C/W
$R_{th(c-h)}$	Thermal resistance case to heat sink						0.002	
F_m	Mounting force				63		84	kN
T_{vj}	Junction temperature				-40		125	°C
T_{slg}	Stored temperature				-40		140	°C
W_t	Weight					1390		g
Outline	P19							

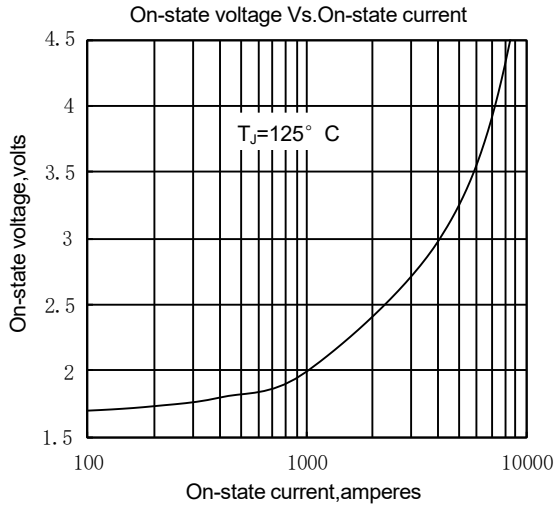


Fig.1

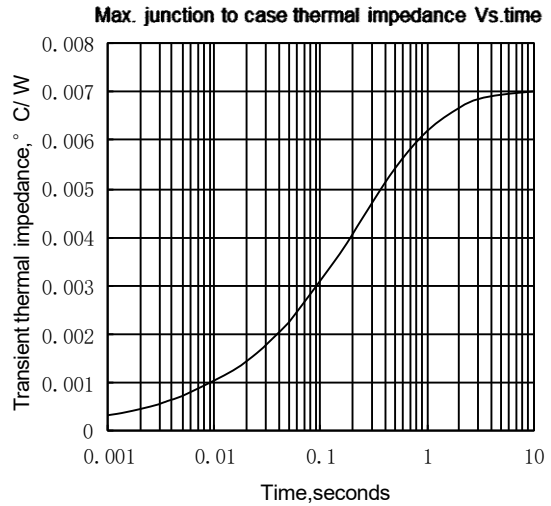


Fig.2

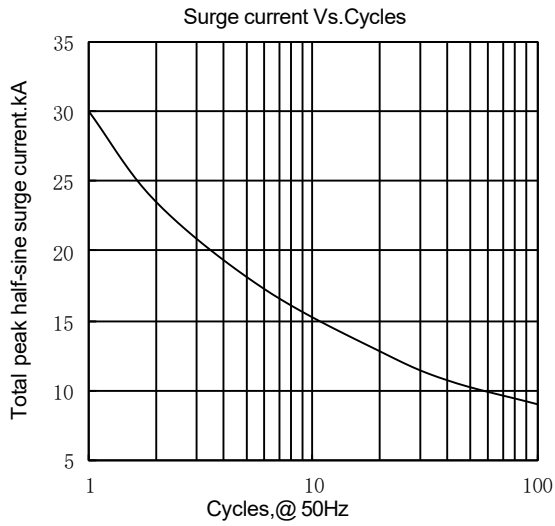


Fig.3

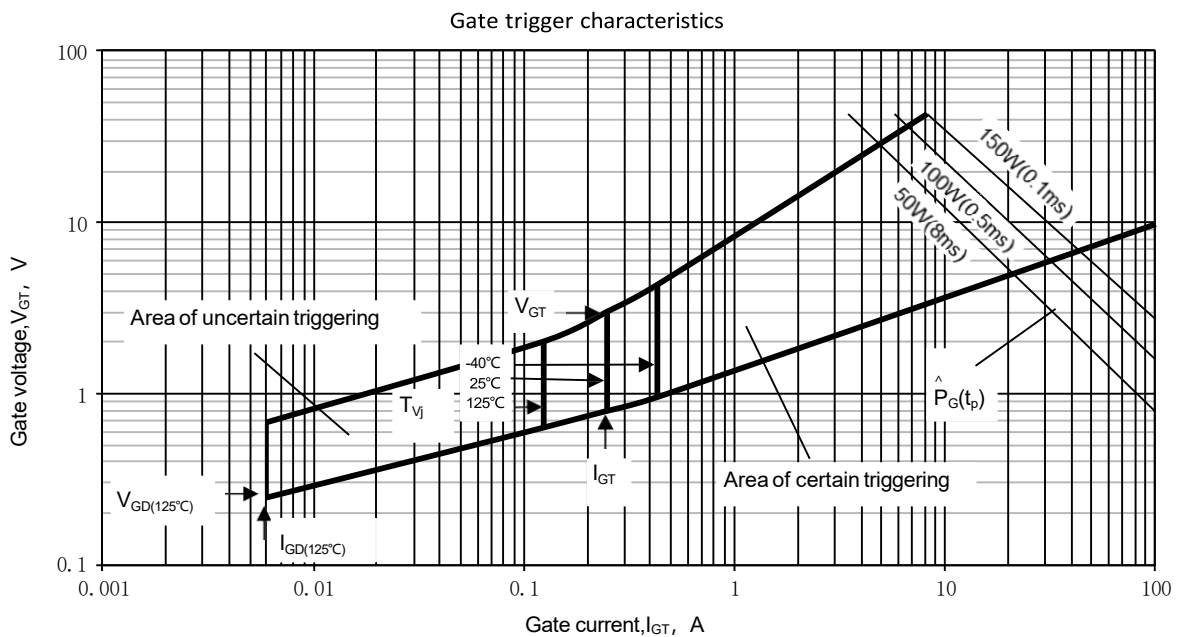
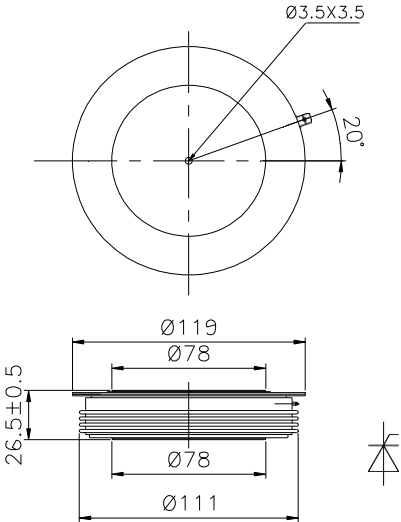


Fig.4

Outline:



Nips reserves the right to change specifications without notice.