

Features

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

Typical Applications

- Inductive heating
- Electronic welders
- Self-commutated inverters

$I_{T(AV)}$	1220A
V_{DRM}/V_{RRM}	800~1800V
t_q	18~50μs
I_{TSM}	12 kA
I^2t	720 10³A²S



SYMBOL	CHARACTERISTIC	TEST CONDITIONS		$T_j(^{\circ}\text{C})$	VALUE			UNIT
					Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Double side cooled,	$T_C=55^{\circ}\text{C}$	125			1220	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			60	mA
I_{TSM}	Surge on-state current	10ms half sine wave		125			12	kA
I^2t	I^2t for fusing coordination	$V_R=0.6V_{RRM}$					720	A ² s*10 ³
V_{TO}	Threshold voltage			125			1.32	V
r_T	On-state slope resistance						0.36	m Ω
V_{TM}	Peak on-state voltage	$I_{TM}=2400\text{A}$, $F=21\text{kN}$		125			2.18	V
dv/dt	Critical rate of rise of off-state voltage	$V_{DM}=0.67V_{DRM}$		125			500	V/ μ s
di/dt	Critical rate of rise of on-state current	$V_{DM}=67\%V_{DRM}$ to 1600A, Gate pulse $t_r \leq 0.5\mu\text{s}$ $I_{GM}=1.5\text{A}$		125			1200	A/ μ s
Q_{rr}	Recovery charge	$I_{TM}=1000\text{A}$, $t_p=2000\mu\text{s}$, $di/dt=-60\text{A}/\mu\text{s}$, $V_R=50\text{V}$		125		650		μC
tq	Circuit commutated turn-off time	$I_{TM}=1000\text{A}$, $t_p=2000\mu\text{s}$, $V_R=50\text{V}$ $dv/dt=30\text{V}/\mu\text{s}$, $di/dt=-60\text{A}/\mu\text{s}$		125	18		50	μs
I_{GT}	Gate trigger current	$V_A=12\text{V}$, $I_A=1\text{A}$		25	40		300	mA
V_{GT}	Gate trigger voltage				0.9		3.0	V
I_H	Holding current				20		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	DC double side cooled Clamping force 21kN					0.024	$^{\circ}\text{C}/\text{W}$
$R_{th(c-h)}$	Thermal resistance case to heat sink						0.006	
F_m	Mounting force				18		25	kN
T_{stg}	Stored temperature				-40		140	$^{\circ}\text{C}$
W_t	Weight					380		g
Outline	P10							

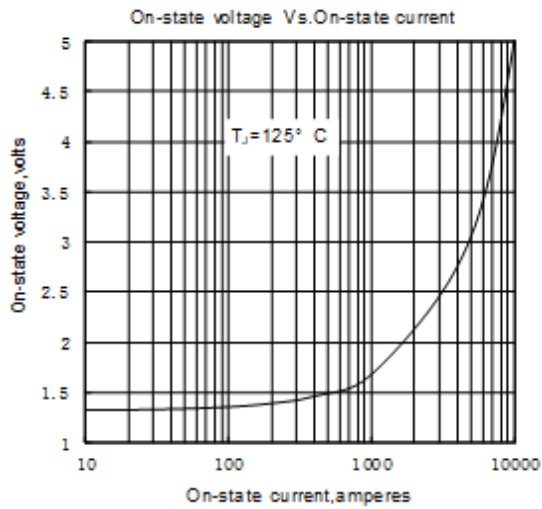


Fig. 1

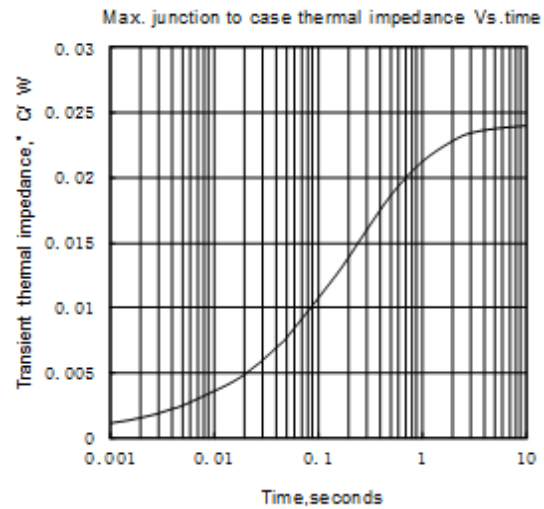


Fig. 2

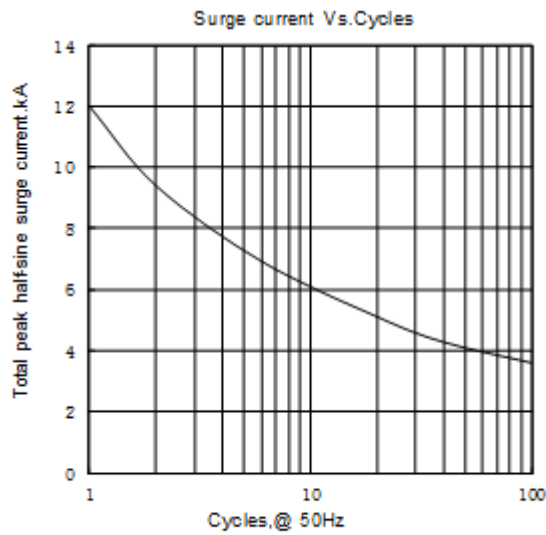


Fig. 3

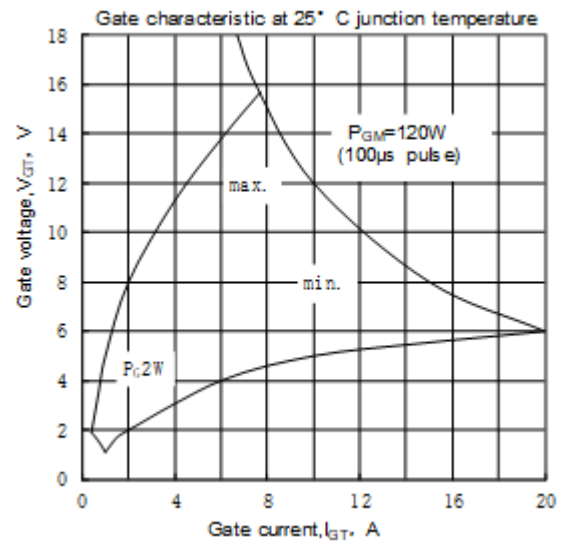


Fig. 4

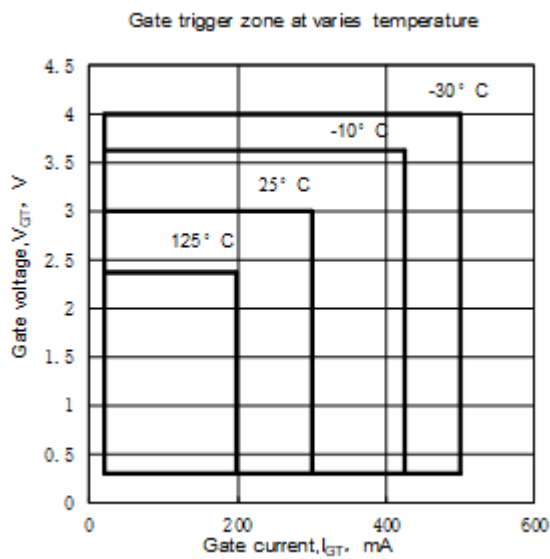
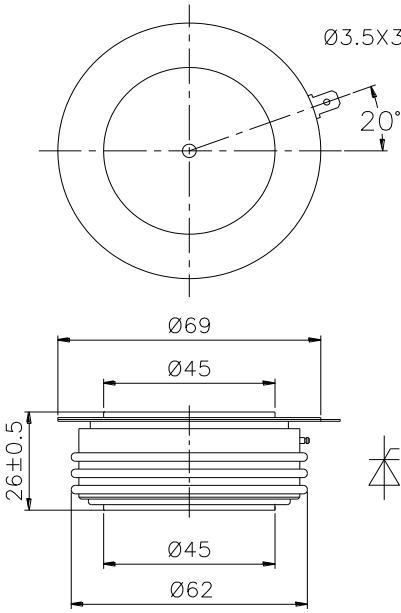


Fig. 5



Nlps reserves the right to change specifications without notice.