

### Features

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

### Typical Applications

- Inductive heating
- Electronic welders
- Self-commutated inverters

$I_{T(AV)}$	<b>3800A</b>
$V_{DRM}/V_{RRM}$	<b>1900 ~ 2500V</b>
$t_q$	<b>40~120<math>\mu</math>s</b>
$I_{TSM}$	<b>44 kA</b>
$I^2t$	<b>9680 10<sup>3</sup>A<sup>2</sup>S</b>

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	$T_j(^{\circ}C)$	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Double side cooled, $T_C=55^{\circ}C$	125			3800	A
$V_{DRM}$ $V_{RRM}$	Repetitive peak off-state voltage Repetitive peak reverse voltage	$t_p=10ms$	125	1900		2500	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	125			44	kA
$I^2t$	$I^2t$ for fusing coordination	$V_R=0.6V_{RRM}$				9680	A <sup>2</sup> s*10 <sup>3</sup>
$V_{TO}$	Threshold voltage		125			1.32	V
$r_T$	On-state slope resistance					0.13	m $\Omega$
$V_{TM}$	Peak on-state voltage	$I_{TM}=5000A, F=70kN$	25			3.15	V
dv/dt	Critical rate of rise of off-state voltage	$V_{DM}=0.67V_{DRM}$	125			1000	V/ $\mu$ s
di/dt	Critical rate of rise of on-state current	$V_{DM}=67\%V_{DRM}$ , to4000A Gate pulse $t_r \leq 0.5\mu s$ $I_{GM}=1.5A$ Single pulse	125			1200	A/ $\mu$ s
$Q_{rr}$	Recovery charge	$I_{TM}=2000A, t_p=4000\mu s,$ $di/dt=-20A/\mu s, V_R=100V$	125		2100		$\mu C$
$t_q$	Circuit commutated turn-off time	$I_{TM}=2000A, t_p=4000\mu s, V_R=100V$ $dv/dt=30V/\mu s, di/dt=-20A/\mu s$	125	40		120	$\mu s$
$I_{GT}$	Gate trigger current	$V_A=12V, I_A=1A$	25	40		450	mA
$V_{GT}$	Gate trigger voltage			0.9		4.5	V
$I_H$	Holding current			20		1000	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 70 kN				0.007	$^{\circ}C/W$
$R_{th(c-h)}$	Thermal resistance case to heat sink					0.002	
$F_m$	Mounting force			63		84	kN
$T_{vj}$	Junction temperature			-40		125	$^{\circ}C$
$T_{stg}$	Stored temperature			-40		140	$^{\circ}C$
$W_t$	Weight				1390		g
Outline	P20						

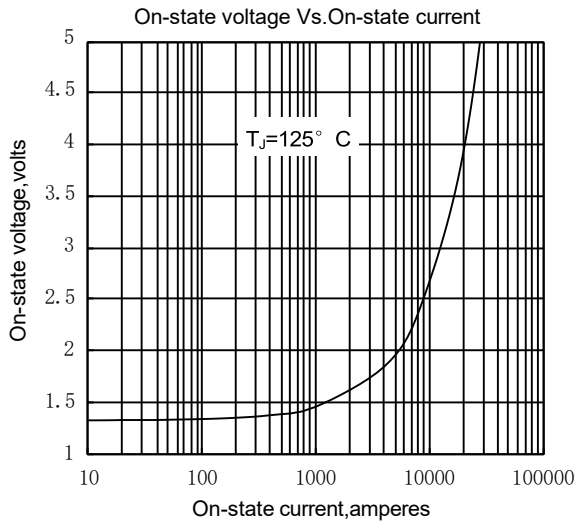


Fig.1

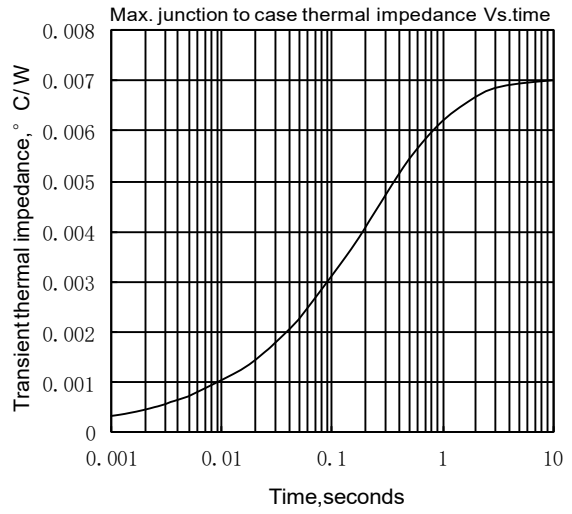


Fig.2

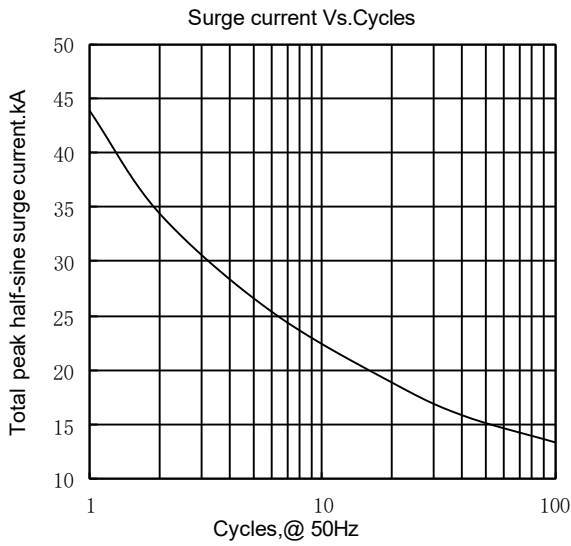


Fig.3

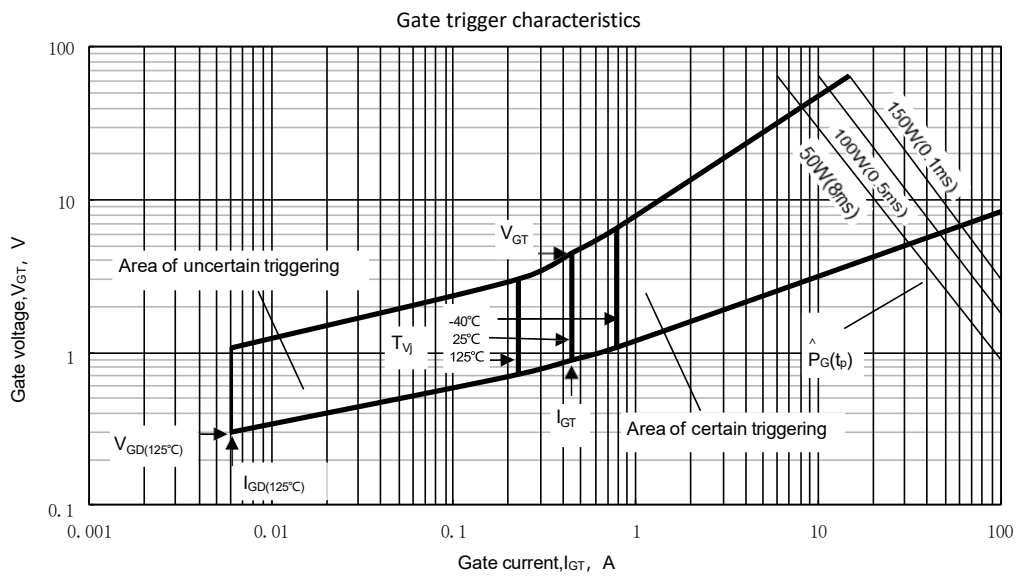
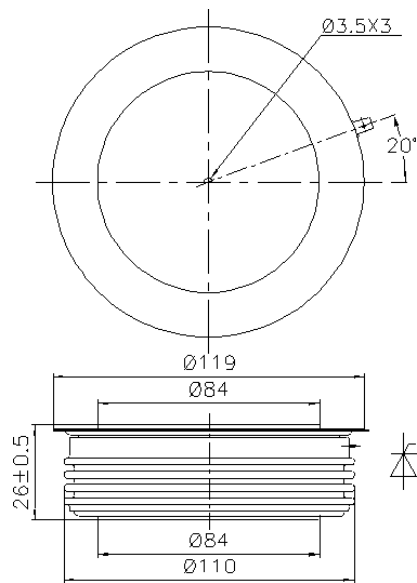


Fig.4

**Outline:**

Nlps reserves the right to change specifications without notice.