

**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>3330A</b>
$V_{DRM}/V_{RRM}$	<b>1900~2500V</b>
$t_q$	<b>40~110<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 <sub>i</sub> (°C)	VALUE			UNIT
					Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Double side cooled,	T <sub>c</sub> =55°C	125			3330	A
$V_{DRM}$ $V_{RRM}$	Repetitive peak off-state voltage Repetitive peak reverse voltage	tp=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			1.29	V
$r_T$	On-state slope resistance						0.21	mΩ
$V_{TM}$	Peak on-state voltage	$I_{TM}=5000A, F=70kN$		125			2.34	V
dv/dt	Critical rate of rise of off-state voltage	$V_{DM}=0.67V_{DRM}$		125			500	V/ $\mu$ s
di/dt	Critical rate of rise of on-state current	$V_{DM}=67\%V_{DRM}, I_{GM}=1.5A$ Gate pulse $t_r \leq 0.5\mu s$		125			1200	A/ $\mu$ s
$Q_{rr}$	Recovery charge	$I_{TM}=2000A, t_p=2000\mu s,$ $di/dt=-60A/\mu s, V_R=50V$		125		2100		$\mu C$
t <sub>q</sub>	Circuit commutated turn-off time	$I_{TM}=2000A, t_p=2000\mu s, V_R=50V$ $dv/dt=30V/\mu s, di/dt=-60A/\mu s$		125	40		110	$\mu s$
$I_{GT}$	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
$V_{GD}$	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 70 kN					0.007	°C/W
$R_{th(c-h)}$	Thermal resistance case to heat sink						0.002	
$F_m$	Mounting force				63		84	kN
T <sub>stg</sub>	Stored temperature				-40		140	°C
W <sub>t</sub>	Weight					1390		g
Outline	P20							

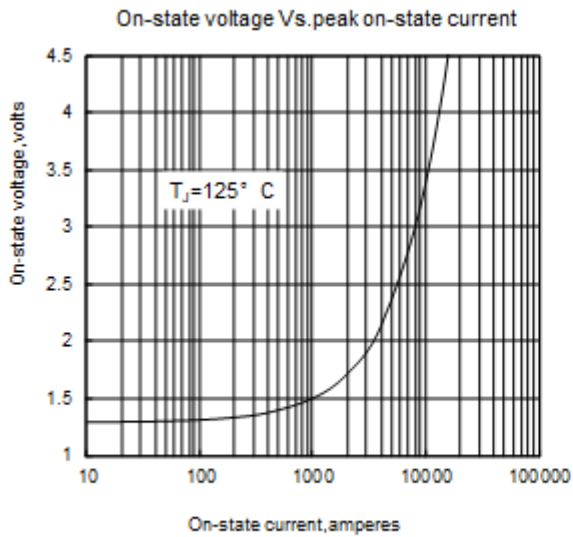


Fig1

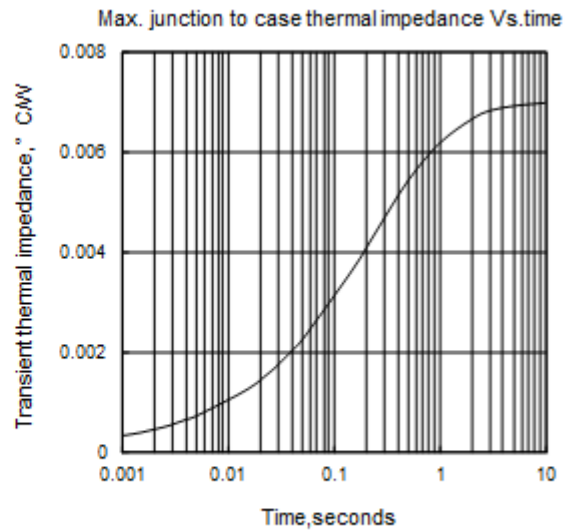


Fig2

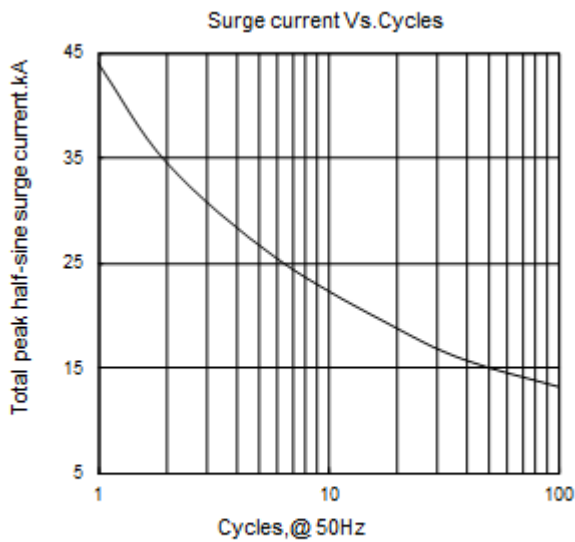


Fig3

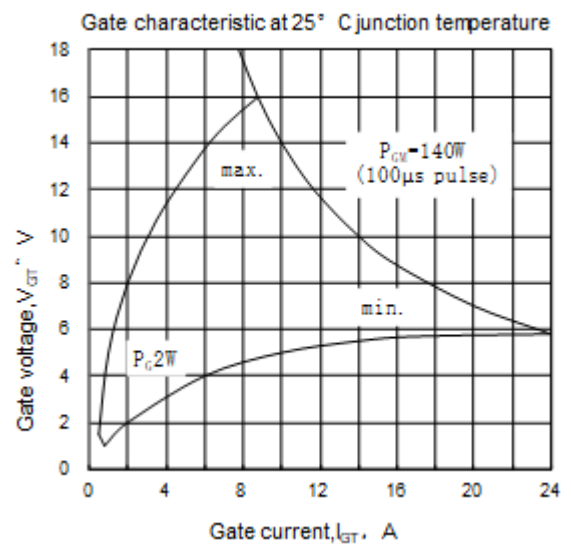


Fig4

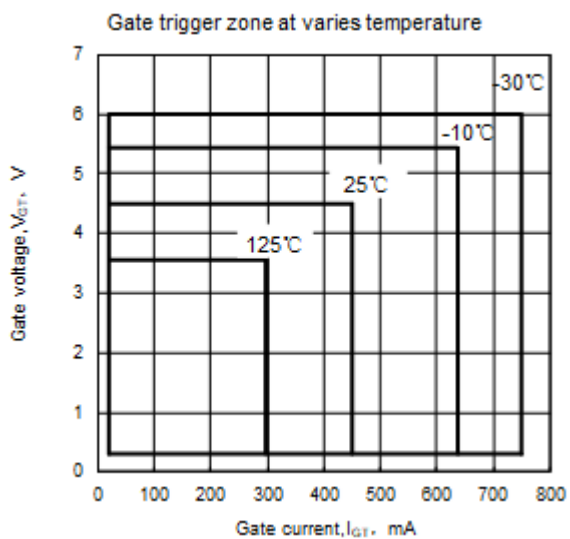
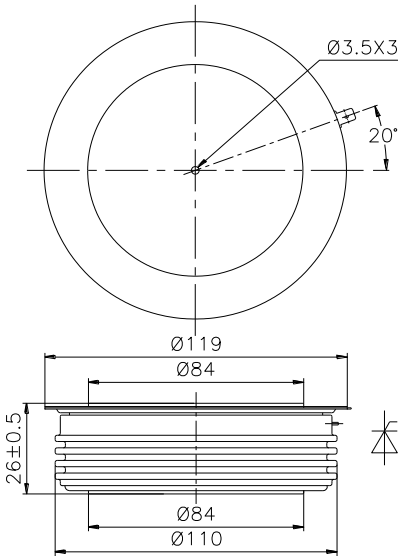


Fig5



Nlps reserves the right to change specifications without notice.