

Features

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

Typical Applications

- Inductive heating
- Self-commutated inverters

品名：FH3800TN**	
I_{T(AV)}	3800A
V_{DRM}	2000~3000V
V_{RRM}	1000~2500V
t_q	30-100 μs

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 =55°C	125			3800	A
V _{DRM}	Repetitive peak off-state voltage	tp=10ms		125	2000		3000	V
V _{RRM}	Repetitive peak reverse voltage			125	1000		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			46	kA
I ² t	I ² t for fusing coordination	V _R =0.6V _{RRM}					10580	A ² s*10 ³
V _{TO}	Threshold voltage			125			1.32	V
r _T	On-state slope resistance						0.14	mΩ
V _{TM}	Peak on-state voltage	I _{TM} =5000A, F=70kN	30μs ≤ tq ≤ 45μs	25			2.60	V
			46μs ≤ tq ≤ 70μs				2.00	V
			71μs ≤ tq ≤ 100μs				1.80	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 (Non-repetitive)	V _{DM} = 67%V _{DRM} , to4000A Gate pulse t _r ≤ 0.5μs I _{GM} =1.5A		125			1200	A/μs
Q _{rr}	Recovery charge	I _{TM} =2000A, tp=4000μs, di/dt=-20A/μs, V _R =100V		125		2100		μC
t _q	Circuit commutated turn-off time	I _{TM} =2000A, tp=4000μs, V _R =100V dv/dt=30V/μs, di/dt=-20A/μs		125	30		100	μs
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						1500	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	°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 _{stg}	Stored temperature				-40		140	°C
W _t	Weight					1390		g
Outline	P20							

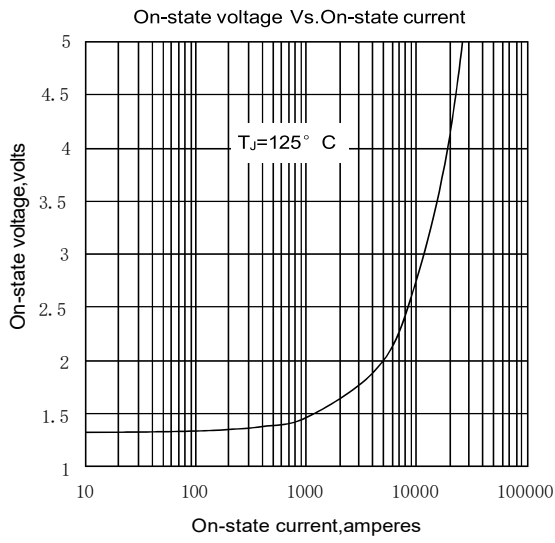


Fig. 1

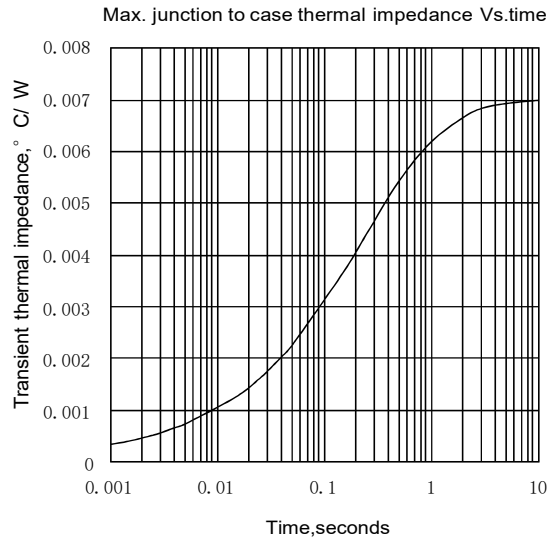


Fig. 2

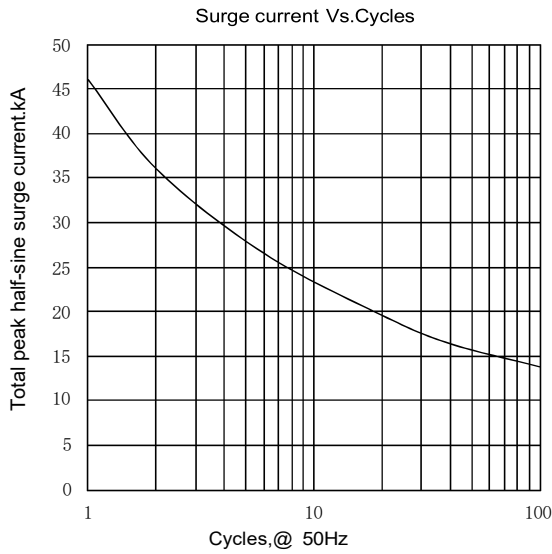


Fig. 3

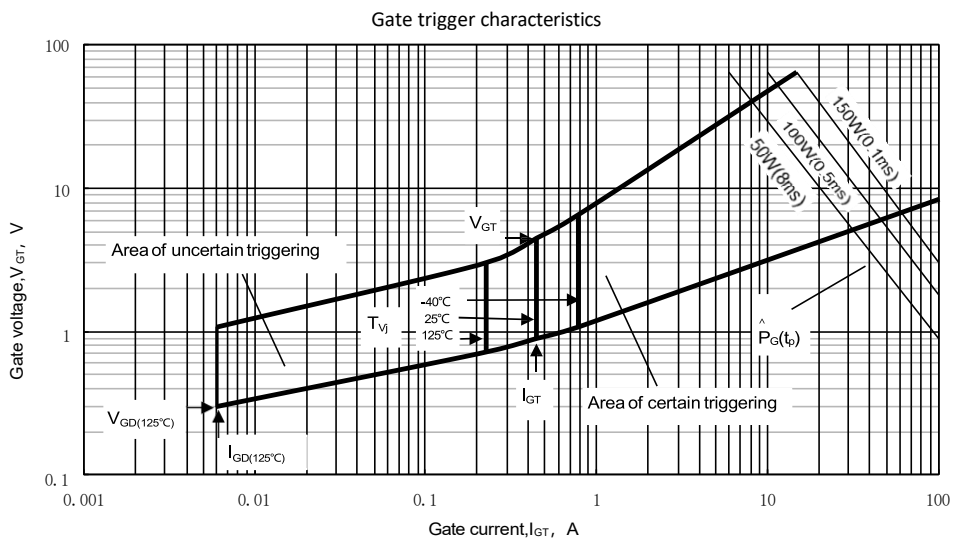
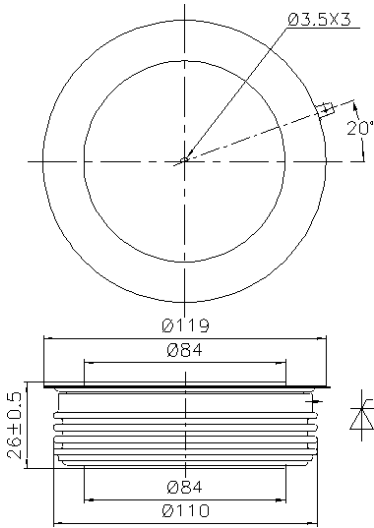


Fig. 4

Outline:



Nlps reserves the right to change specifications without notice.