

Features

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

Typical Applications

- Inductive heating
- Electronic welders
- Self-commutated inverters

品名 : FH1600TN**	
I_{T(AV)}	1600A
V_{DRM}	1200V~2000V
V_{RRM}	1000V~1800V
t_q	20~50μs

SYMBOL	CHARACTERISTIC	TEST CONDITIONS		T _j (°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			1600	A
V _{DRM}	Repetitive peak off-state voltage	tp=10ms		125	1200		2000	V
V _{RRM}	Repetitive peak reverse voltage				1000		1800	V
I _{DRM} I _{RRM}	Repetitive peak current	at V _{DRM} at V _{RRM}		125			120	mA
I _{TSM}	Surge on-state current	10ms half sine wave		125			18	kA
I ² t	I ² t for fusing coordination	V _R =0.6V _{RRM}					1620	10 ³ A ² s
V _{TO}	Threshold voltage			125			1.27	V
r _T	On-state slope resistance						0.22	mΩ
V _{TM}	Peak on-state voltage	I _{TM} =3000A, F=28kN	20≤t _q ≤28	25			2.20	V
			29≤t _q ≤50				2.00	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} , Gate pulse t _r ≤0.5μs I _{GM} =1.5A		125			1500	A/μs
Q _{rr}	Recovery charge	I _{TM} =1000A, tp=4000μs, di/dt=-20A/μs, V _R =100V		125		750		μC
t _q	Circuit commutated turn-off time	I _{TM} =1000A ,tp=4000μs, V _R =100V dv/dt=30V/μs ,di/dt=-20A/μs		125	20		50	μs
I _{GT}	Gate trigger current	V _A =12V, I _A =1A		25	40		250	mA
V _{GT}	Gate trigger voltage				0.9		2.5	V
I _H	Holding current				20		500	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 32kN					0.016	°C /W
R _{th(c-h)}	Thermal resistance case to heatsink						0.004	
F _m	Mounting force				27		34	kN
T _{vj}	Junction temperature				-40		125	°C
T _{slg}	Stored temperature				-40		140	°C
W _t	Weight					640		g
Outline	P12							

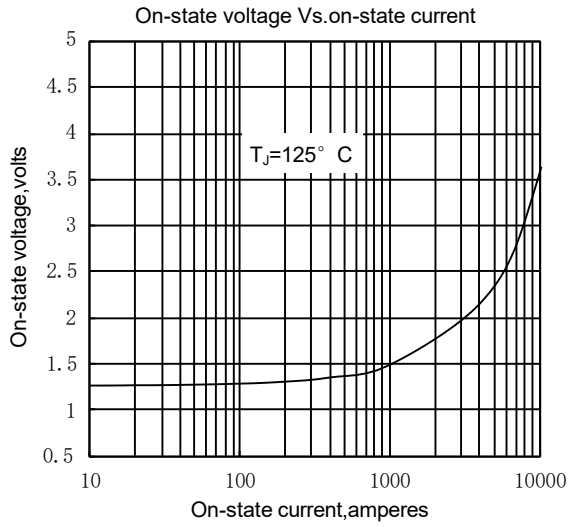


Fig.1

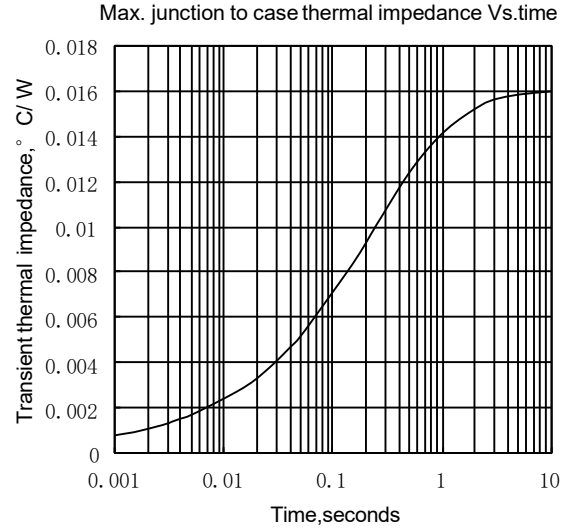


Fig.2

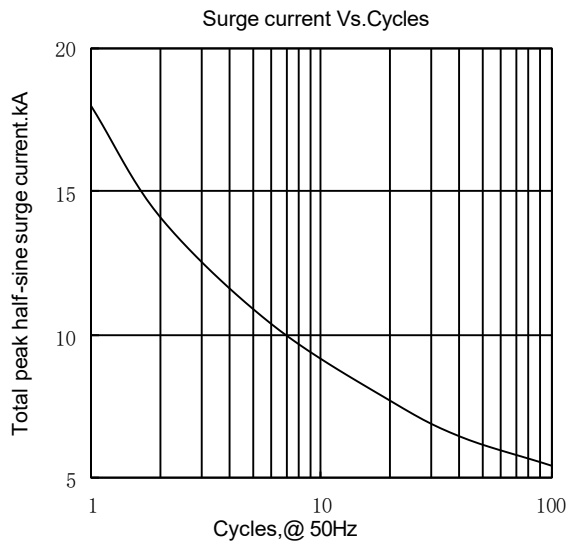


Fig.3

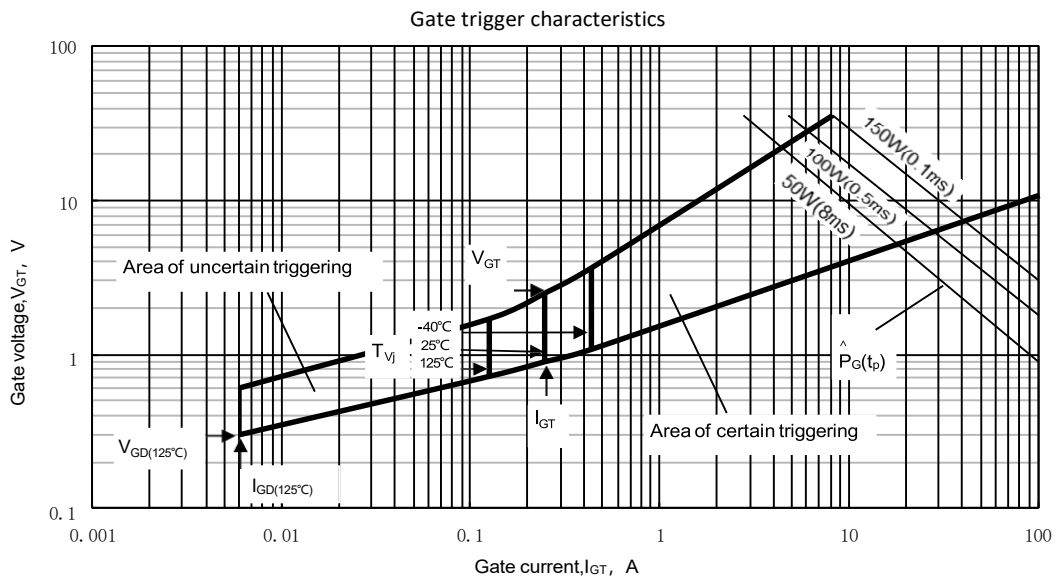
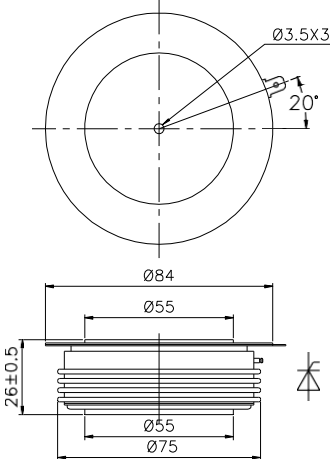


Fig.4

Outline:



Nlps reserves the right to change specifications without notice.