NIPS FAST TURN-OFF THYRISTOR **FH3300TF＊＊＊**

Features

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

Typical Applications

- Inductive heating
- Electronic welders
- Self-commutated inverters

$I_{T(AV)}$	**3300A**
V_{DRM}/V_{RRM}	**4500~5500V**
t_q	**50~150μs**
I_{TSM}	**30 kA**
I^2t	**4500 10^3A^2S**

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	T_j(℃)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Double side cooled, T_C=55℃	125			3300	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	tp=10ms	125	4500		5500	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 V_R=0.6V_{RRM}	125			30	kA
I^2t	I^2t for fusing coordination					4500	A^2s*10^3
V_{TO}	Threshold voltage		125			1.58	V
r_T	On-state slope resistance					0.17	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=2200A, F=70kN	125			3.20	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=0.67V_{DRM}	125			500	V/μs
di/dt	Critical rate of rise of on-state current	V_{DM}= 67%V_{DRM} ,to 4000A 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=-60A/μs, V_R=50V	125		5000		μC
tq	Circuit commutated turn-off time	I_{TM}=2000A, tp=4000μs, V_R =50V dv/dt=30V/μs ,di/dt=-60A/μs	125	50		150	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
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125	0.25			V
$R_{th(j-c)}$	Thermal resistance Junction to case	At 180° sine, double side cooled Clamping force 70kN				0.007	℃/W
$R_{th(c-h)}$	Thermal resistance case to heat sink					0.002	
F_m	Mounting force			63		84	kN
T_{stg}	Stored temperature			-40		140	℃
W_t	Weight				2620		g
Outline							

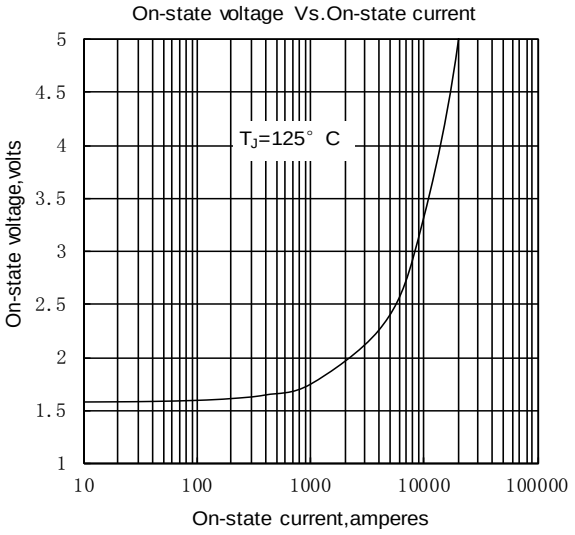


Fig. 1

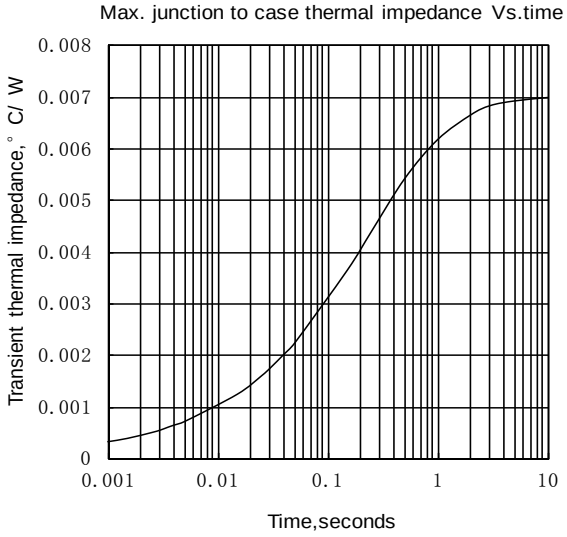


Fig. 2

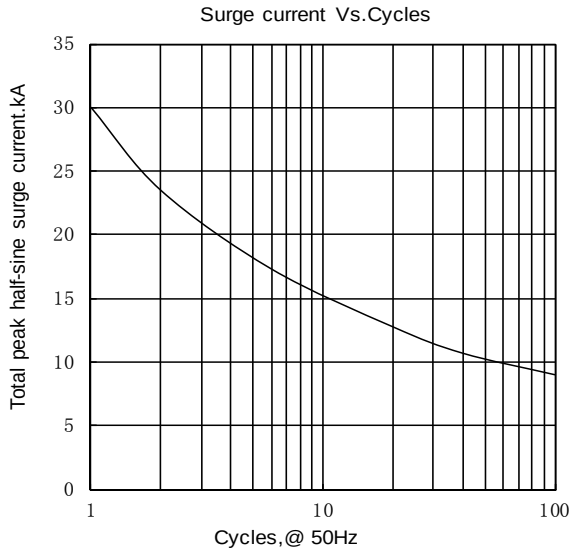


Fig. 3

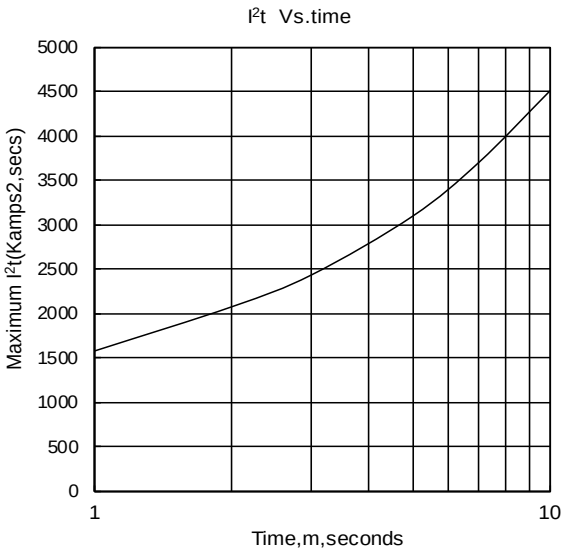


Fig. 4

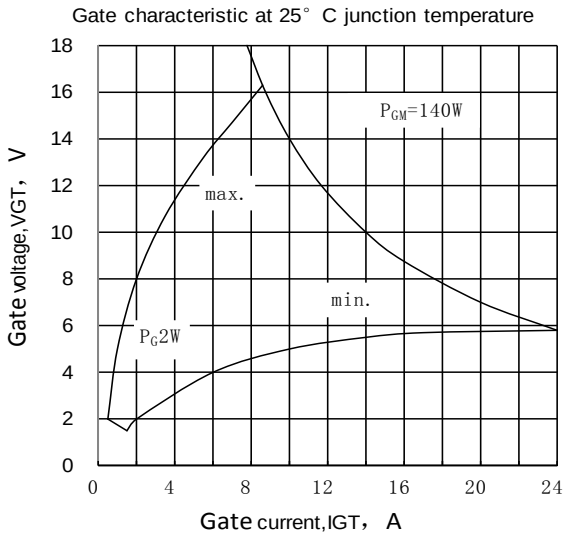


Fig. 5

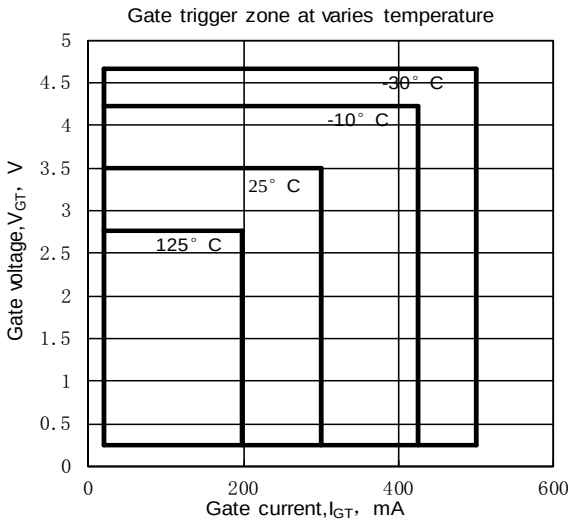
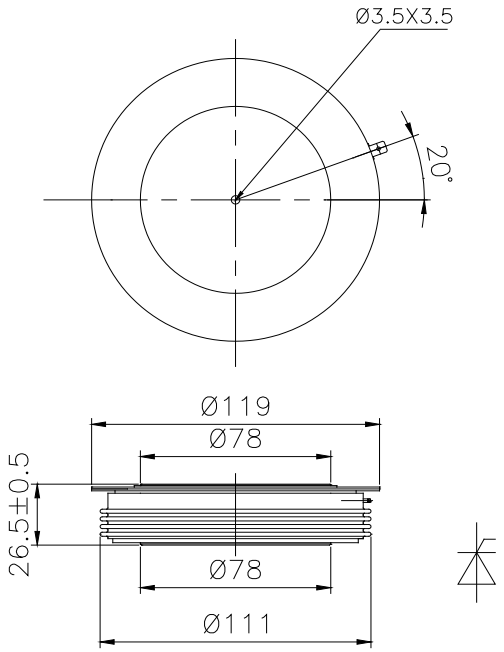


Fig. 6

Outline: