Features

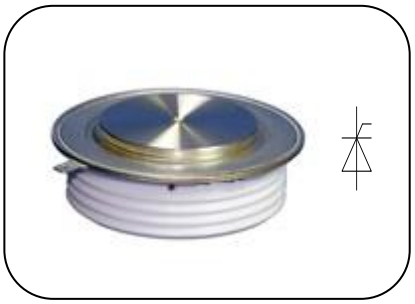
- Excellent dynamic characteristics
- Fast turn-on and high di/dt
- Low switching losses

Typical Applications

- Design for inverter supply application

品名：FH4500TN

$I_{T(AV)}$	**4500A**
V_{DRM}	**4000V~4500V**
V_{RRM}	**1000V~3000V**
t_q	**60~200μs**



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			4500	A
			T_C=70°C	125			3800	A
V_{DRM}	Repetitive peak off-state voltage	tp=10ms		125	4000		4500	V
V_{RRM}	Repetitive peak reverse voltage			125	1000		3000	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}		125			500	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=0.6V_{RRM}		125			50	kA
I^2t	I^2t for fusing coordination						12500	10^3A^2s
V_{TO}	Threshold voltage			125			1.58	V
r_T	On-state slope resistance						0.15	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=5000A, F=70kN。	60<tq≤100μs	25			2.60	V
			101<tq≤200μs	25			2.00	
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	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=-5A/μs, V_R=100V		125		2500	4000	μC
tq	Circuit commutated turn-off time	I_{TM}=2000A, tp=4000μs, V_R=100V dv/dt=30V/μs, di/dt=-5A/μs		125	60	100	200	μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A		25	50		300	mA
V_{GT}	Gate trigger voltage				0.8		3.5	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			0.25	V
$R_{th(j-c)}$	Thermal resistance junction to case	DC double side cooled Clamping force 40kN					0.005	°C/W
$R_{th(c-h)}$	Thermal resistance case to heat sink						0.0015	
F_m	Mounting force				81		108	kN
T_{vj}	Junction temperature				-40		125	°C
T_{stg}	Stored temperature				-40		140	°C
W_t	Weight					1880		g
Outline	P67							

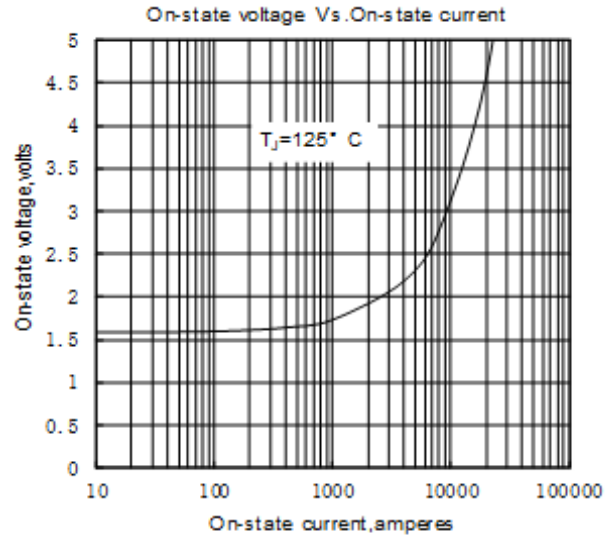


Fig.1

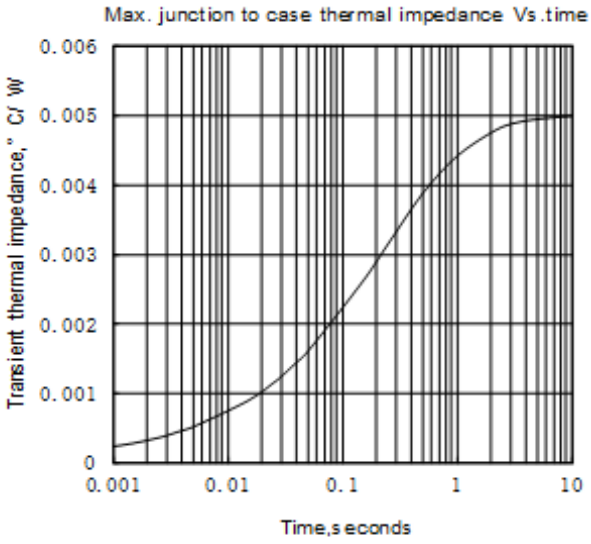


Fig.2

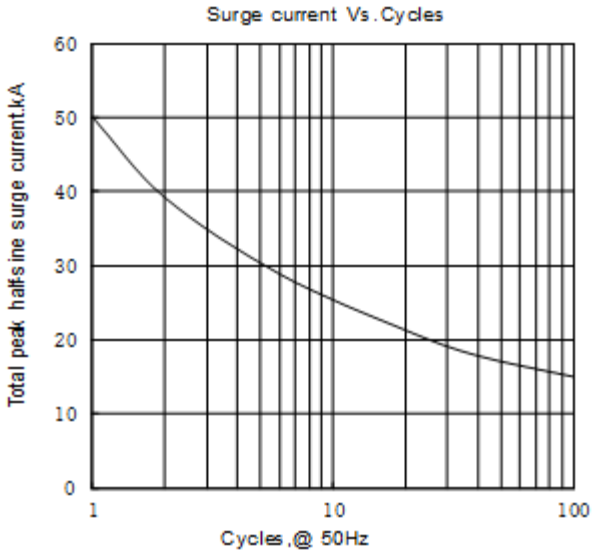


Fig.3

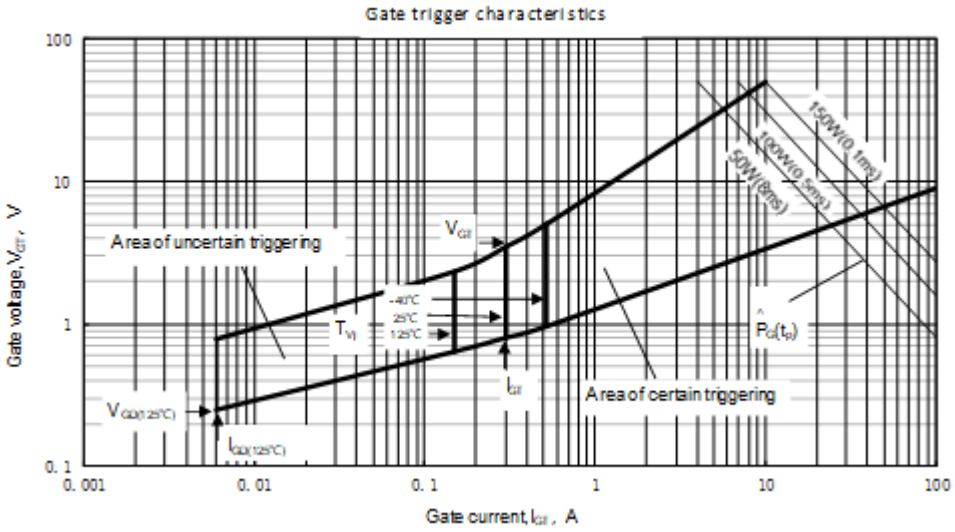
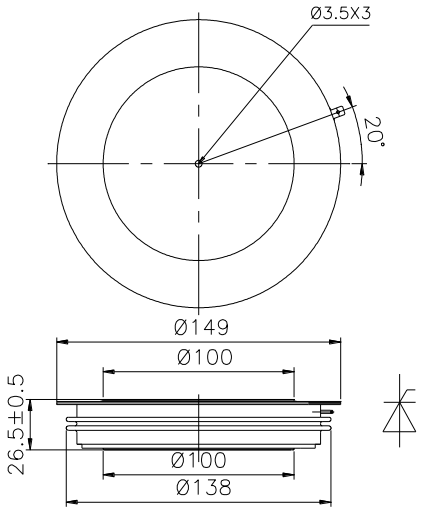


Fig.4



NIps reserves the right to change specifications without notice.