

Features

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

Typical Applications

- Design for inverter supply application

品名：FH4500TN**a	
I_{T(AV)}	4500A
V_{DRM}	4000V~4500V
V_{R RM}	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 _{R RM}	Repetitive peak reverse voltage		125	1000		3000	V	
I _{DRM} I _{R RM}	Repetitive peak current	at V _{DRM} at V _{R RM}	125			500	mA	
I _{TSM}	Surge on-state current	10ms half sine wave V _R =0.6V _{R RM}	125			50	kA	
I ² t	I ² t for fusing coordination					12500	10 ³ A ² s	
V _{TO}	Threshold voltage		125			1.58	V	
r _T	On-state slope resistance		125			0.15	mΩ	
V _{TM}	Peak on-state voltage	I _{TM} =5000A, F=81kN	60<t _q ≤100 μ s	25		2.60	V	
			101<t _q ≤200 μ s	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 _r	Recovery charge	I _{TM} =2000A, tp=4000μs, di/dt=-5A/μs, V _R =100V	125		2500	4000	μC	
t _q	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	D.C. double side cooled Clamping force 81kN				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	P21a							

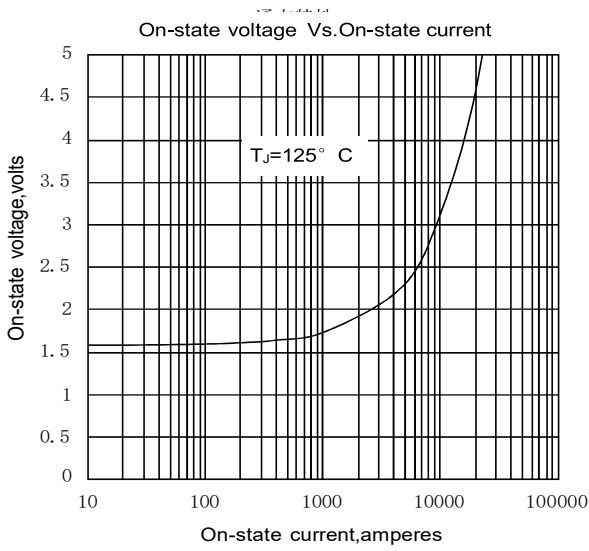


Fig. 1

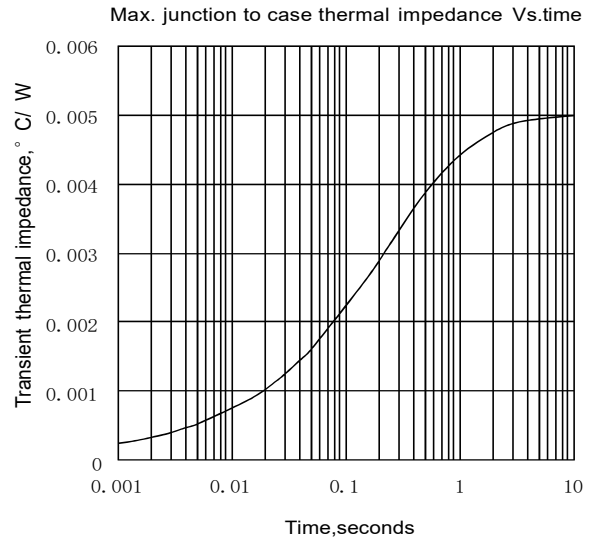


Fig. 2

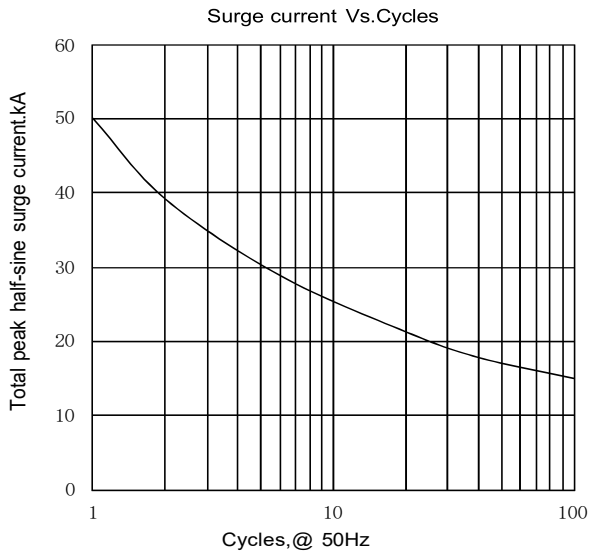


Fig. 3

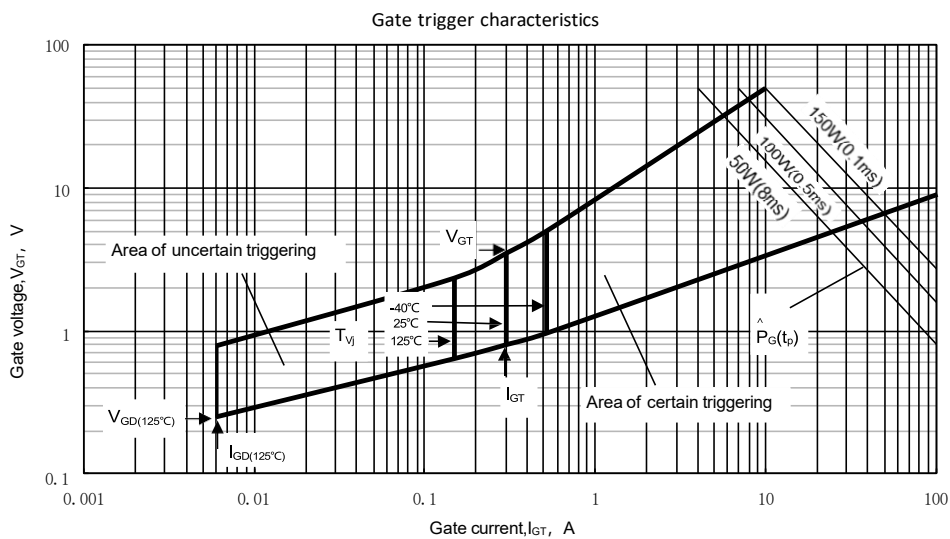
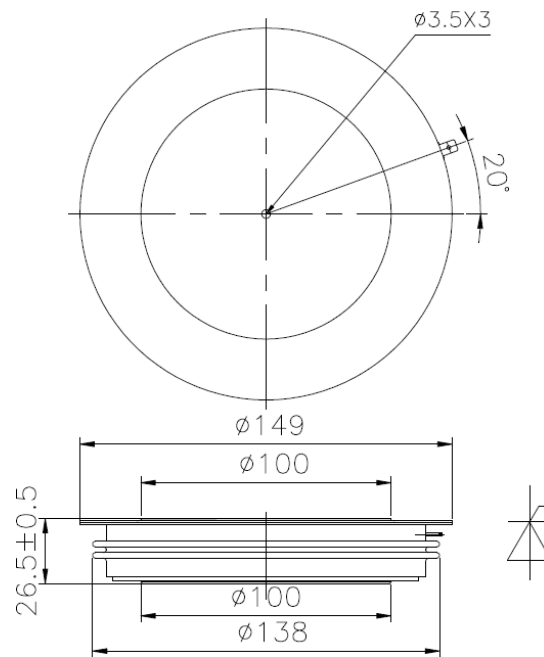


Fig. 4

Outline:



Nlps reserves the right to change specifications without notice.