

Features

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

Typical Applications

- Inductive heating
- Electronic welders
- Self-commutated inverters

$I_{T(AV)}$	4450A
V_{DRM}/V_{RRM}	1900~3000V
t_q	40~120μs
I_{TSM}	62 kA
I^2t	19220 10³A²S



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			4450	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	tp=10ms	125	1900		3000	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			62	kA
I^2t	I ² t for fusing coordination					19220	A ² s*10 ³
V_{TO}	Threshold voltage		125			1.50	V
r_T	On-state slope resistance					0.15	mΩ
V_{TM}	Peak on-state voltage	I _{TM} =5000A, F=90kN	125			2.25	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} to4000A Gate pulse t _r ≤0.5μs I _{GM} =1.5A	125			1200	A/μs
Q _{rr}	Recovery charge	I _{TM} =2000A, tp=2000μs, di/dt=-60A/μs, V _R =50V	125		2400		μC
t _q	Circuit commutated turn-off time	I _{TM} =2000A, tp=2000μs, V _R =50V dv/dt=30V/μs, di/dt=-60A/μs	125	40		120	μs
I _{GT}	Gate trigger current			40		450	mA
V _{GT}	Gate trigger voltage	V _A =12V, I _A =1A	25	0.9		4.5	V
I _H	Holding current			20		1000	mA
V _{GD}	Non-trigger gate voltage	V _{DM} =67%V _{DRM}	125	0.3			V
R _{th(j-c)}	Thermal resistance Junction to case	DC: double side cooled				0.0050	°C/W
R _{th(c-h)}	Thermal resistance case to heat sink	Clamping force 90kN				0.0015	
F _m	Mounting force			81		108	kN
T _{stg}	Stored temperature			-40		140	°C
W _t	Weight				2000		g
Outline	P21						

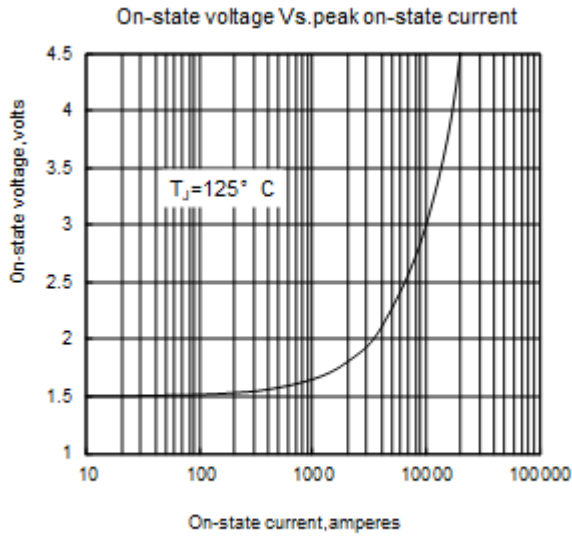


Fig1

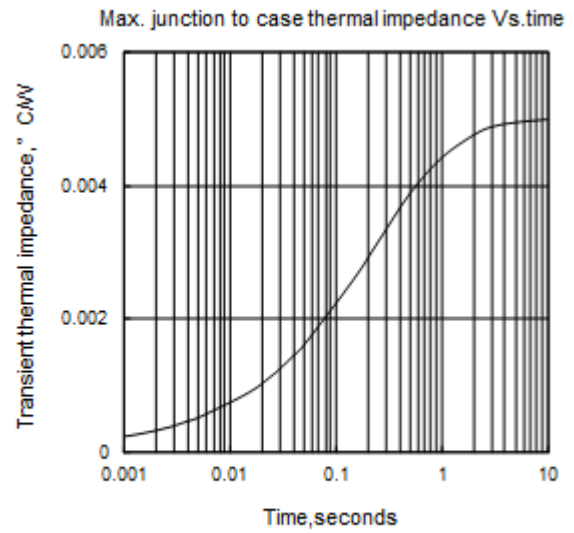


Fig2

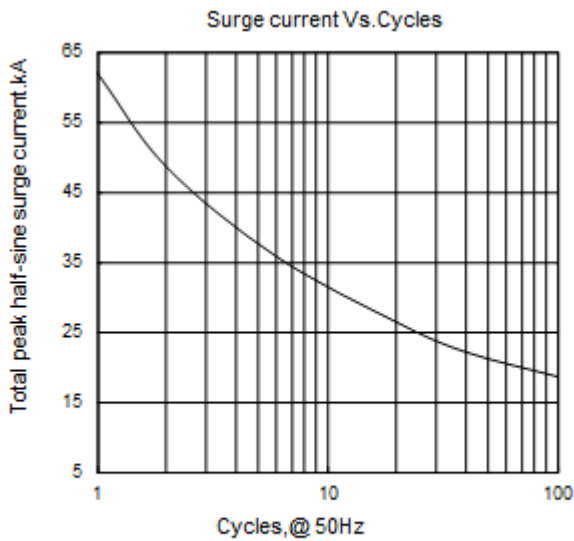


Fig3

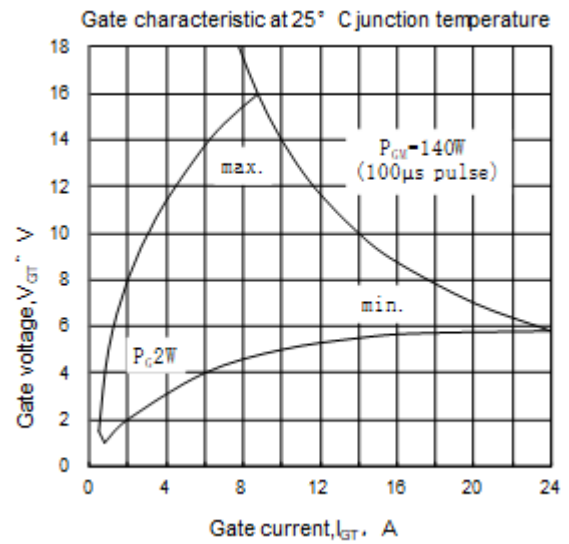


Fig4

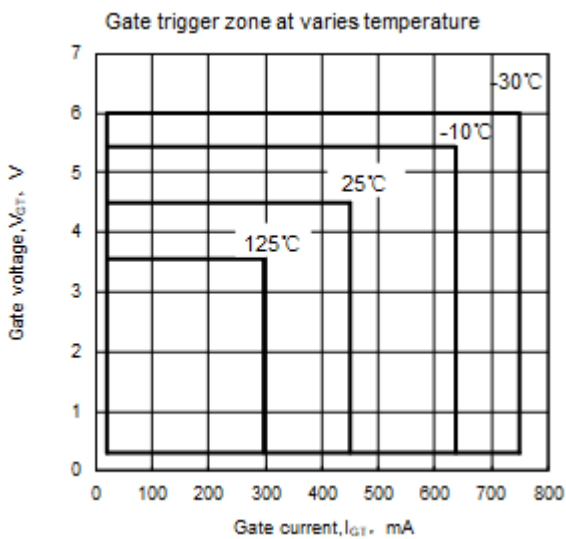
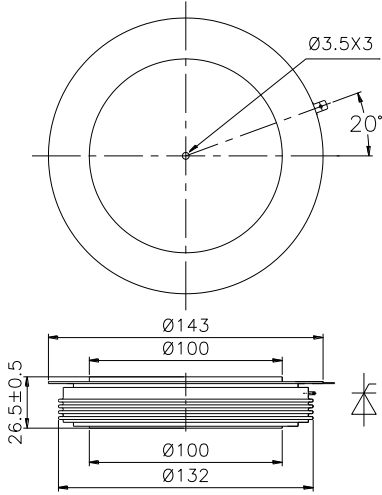


Fig5



Nlps reserves the right to change specifications without notice.