

Features

- Center amplifying gate
- Metal case with ceramic insulator
- Low on-state and switching losses

$I_{T(AV)}$ **4000A**
 V_{DRM}/V_{RRM} **1600 ~ 2200V**

Typical Applications

- AC controllers
- DC and AC motor control
- Controlled rectifiers

I_{TSM} **64.5 kA**
 I^2t **20800 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 =70°C	125			4000	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	tp=10ms		125	1600		2200	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}		125			400	mA
I_{TSM}	Surge on-state current	10ms half sine wave $V_R=0.6V_{RRM}$		125			64.5	kA
I^2t	I^2t for fusing coordination						20800	A ² s*10 ³
V_{TO}	Threshold voltage			125			0.88	V
r_r	On-state slope resistance						0.09	mΩ
V_{TM}	Peak on-state voltage	$I_{TM}=3000A, F=70kN$		25			1.28	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	$V_{DM}=67\%V_{DRM}$ to 3000A, Gate pulse tr ≤0.5μs I _{GM} =1.5A		125			250	A/μs
Q _{rr}	Recovery charge	$I_{TM}=2000A, tp=4000μs, di/dt=-20A/μs,$ $V_R=100V$		125		3000		μC
I_{GT}	Gate trigger current				40		300	mA
V_{GT}	Gate trigger voltage	$V_A=12V, I_A=1A$		25	0.8		3.0	V
I_H	Holding current				25		200	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					0.007	°C/W
$R_{th(c-hs)}$	Thermal resistance case to heatsink	Clamping force 70.0kN					0.002	°C/W
F_m	Mounting force				63	70	84	kN
T _{vj}	Junction temperature				-40		125	°C
T _{stg}	Stored temperature				-40		140	°C
W _t	Weight					1390		g
Outline	P19							

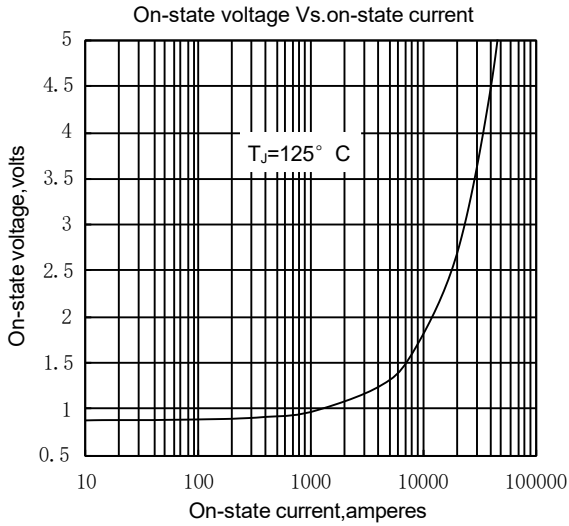


Fig.1

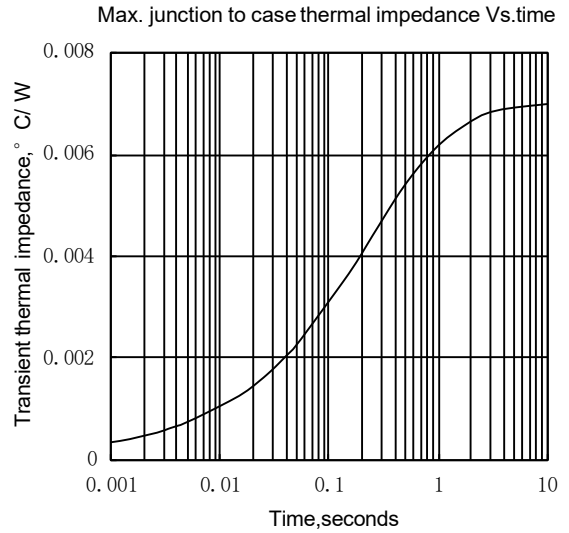


Fig.2

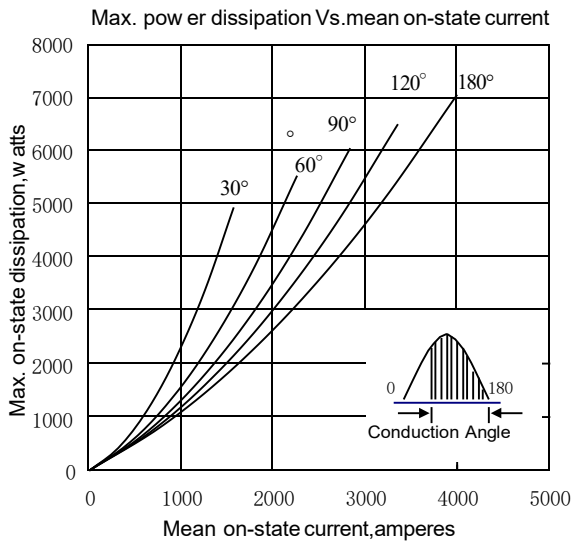


Fig.3

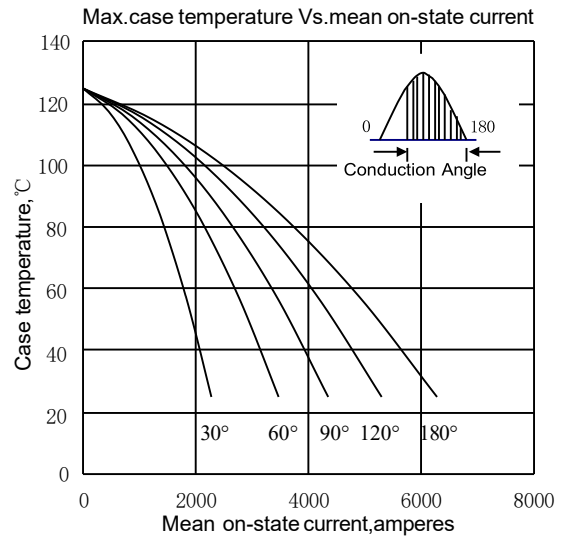


Fig.4

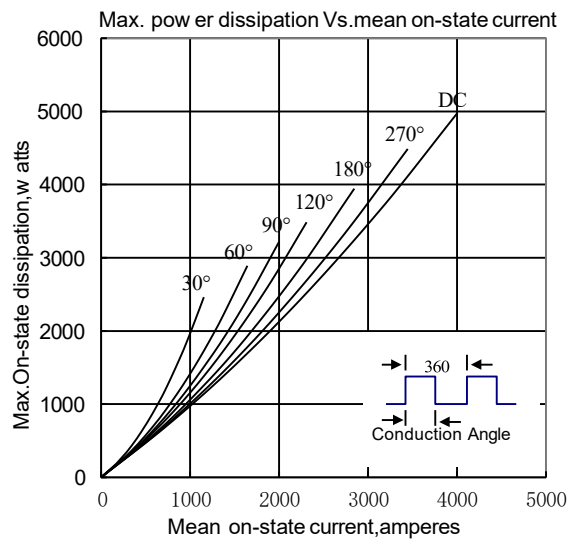


Fig.5

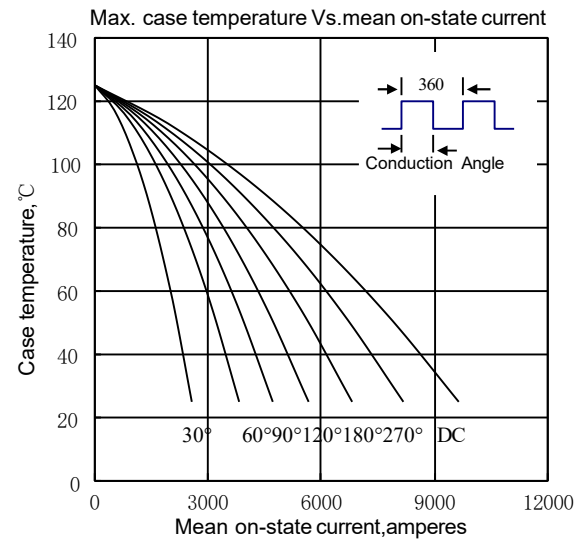


Fig.6

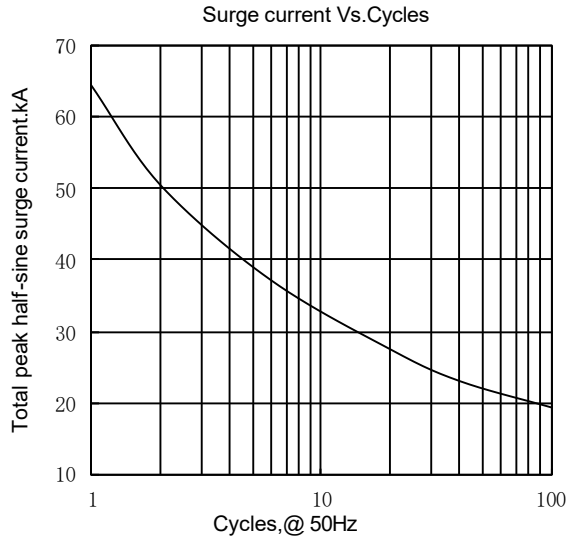


Fig.7

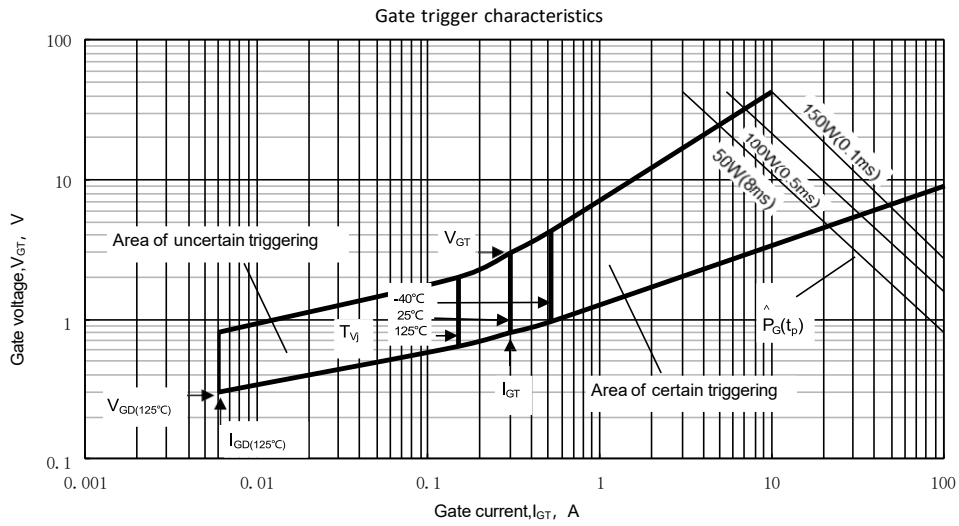
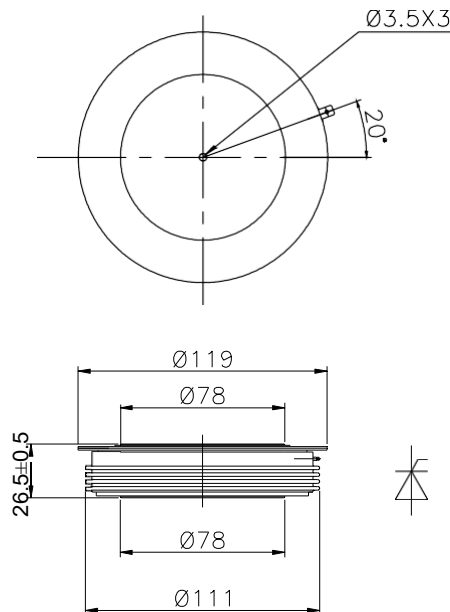


Fig.8

Outline:



Nlps reserves the right to change specifications without notice.