IXFQ20N50P3-OSEN

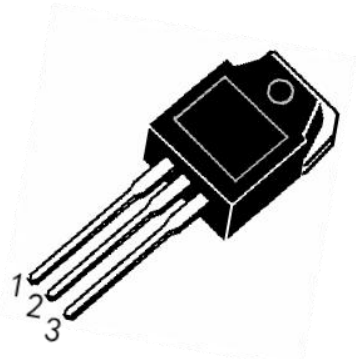
500V N-Channel MOSFET

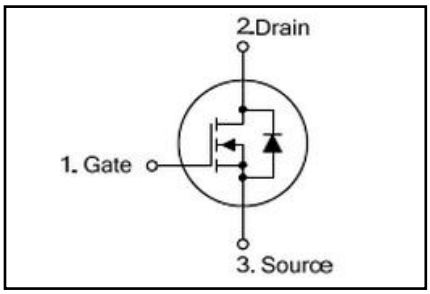
◆ Features：

- ✧ Fast switching speed
  开关速度快
- ✧ High input impedance and low level drive
  高输入阻抗和低电平驱动
- ✧ Avalanche energy tested
  雪崩能量测试
- ✧ Improved dv/dt capability，high ruggedness
  提高 dv/dt 能力，高耐用性

RoHS COMPLIANT

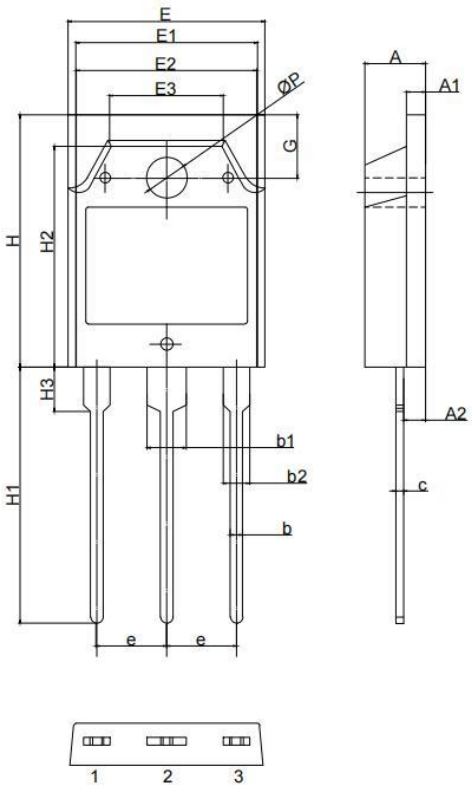
TO-3PNB





◆ Applications

- ✧ High efficiency switch mode power supplies
  高效率开关电源
- ✧ Power factor correction
  功率因数校正
- ✧ Electronic lamp ballast
  电子整流器



TO-3PNB尺寸表/mm			
Symbol	Min	Nom	Max
A	4.60	4.80	5.00
A1	1.30	1.50	1.60
A2	1.40	1.50	1.60
b	0.80	1.00	1.20
b1	2.90	3.10	3.30
b2	1.90	2.10	2.30
c	0.50	0.60	0.70
e	5.25	5.45	5.65
E	15.20	15.60	16.00
E1	13.20	13.40	13.60
E2	13.10	13.50	13.50
E3	9.10	9.30	9.50
H	19.80	20.00	20.20
H1	20.10	20.30	20.50
H2	18.50	18.70	18.90
H3	3.20	3.50	3.80
G	4.80	5.00	5.20
ØP	3.00	3.20	3.40

◆ Absolute Maximum Ratings (Tc=25°C)

Symbol	Parameters	Ratings	Unit
V_{DSS}	Drain-Source Voltage 漏源电压	**500**	V
V_{GS}	Gate-Source Voltage-Continuous 栅源电压	**±30**	V
I_D	Drain Current-Continuous（Note 2） 漏极持续电流	**20**	A
I_{DM}	Drain Current-Single Plused（Note 1） 漏极单次脉冲电流	**40**	A
P_D	Power Dissipation （Note 2） 功率损耗	**380**	W
T_j	Max.Operating junction temperature 最大结温	**150**	℃

◆ Electrical characteristics (Tc=25°C unless otherwise noted)

Symbol	Parameters	Min	Typ	Max	Units	Conditions
Static Characteristics						
B_{VDSS}	Drain-Source Breakdown Voltage Current （Note 1） 漏极击穿电压	**500**	--	--	V	I_D=250μA，V_{GS}=0V
$V_{GS(th)}$	Gate Threshold Voltage 栅极开启电压	**2.0**	--	**4.0**	V	V_{DS}=V_{GS}，I_D=250μA
$R_{DS(on)}$	Drain-Source On-Resistance 漏源导通电阻	--	--	**300**	mΩ	V_{GS}=10V，I_D=20A
I_{GSS}	Gate-Body Leakage Current 栅极漏电流	--	--	**±100**	nA	V_{GS}=±30V，V_{DS}=0
I_{DSS}	Zero Gate Voltage Drain Current 零栅极电压漏极电流	--	--	**1**	μA	V_{DS}=500V，V_{GS}=0
gfs	Forward Trans conductance 正向跨导	--	**18**	--	S	V_{DS}=20V，I_D=10A

Switching Characteristics						
$T_{d(on)}$	Turn-On Delay Time 开启延迟时间	--	**12**	--	ns	V_{DS}=250V, I_D=10A， R_G=5Ω
T_r	Rise Time 上升时间	--	**5.5**	--	ns	
$T_{d(off)}$	Turn-Off Delay Time 关闭延迟时间	--	**47**	--	ns	
T_f	Fall Time 下降时间	--	**9**	--	ns	
Q_g	Total Gate Charge 栅极总电荷	--	**39**	--	nC	V_{DS}=250V， V_{GS}=10V， I_D=10A
Q_{gs}	Gate-Source Charge 栅源极电荷	--	**8.1**	--	nC	
Q_{gd}	Gate-Drain Charge 栅漏极电荷	--	**15**	--	nC	
Dynamic Characteristics						
C_{iss}	Input Capacitance 输入电容	--	**3800**	--	pF	V_{DS}=25V，V_{GS}=0， f=1MHz
C_{oss}	Output Capacitance 输出电容	--	**400**	--	pF	
C_{rss}	Reverse Transfer Capacitance 反向传输电容	--	**77**	--	pF	
I_S	Continuous Drain-Source Diode Forward Current（Note 2） 二极管导通正向持续电流	--	--	**20**	A	
V_{SD}	Diode Forward On-Voltage 二极管正向导通电压	--	--	**1.3**	V	I_S=20A，V_{GS}=0
$R_{th(j-c)}$	Thermal Resistance, Junction to Case 结到外壳的热阻	--	--	**0.33**	°C/W	

Note 1: Repetitive Rating : Pulse width limited by maximum junction temperature
Note 2: Pulse test: PW <= 300us , duty cycle <= 2%.

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