

300V N-Channel MOSFET

◆ Features:

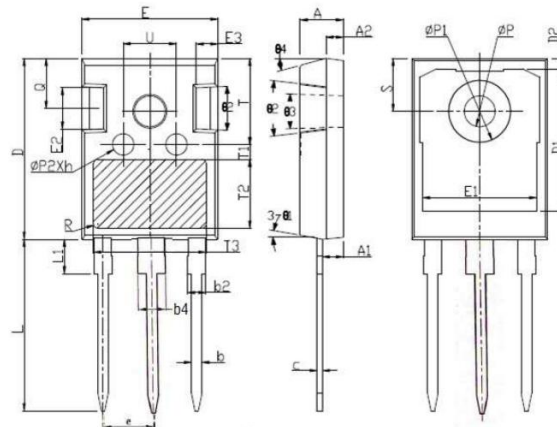
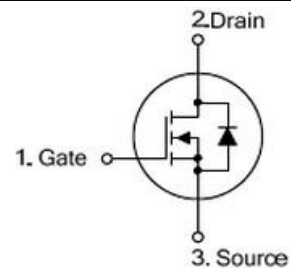
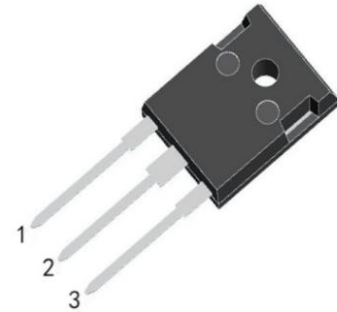
- ✧ Fast switching speed
开关速度快
- ✧ High input impedance and low level drive
高输入阻抗和低电平驱动
- ✧ Avalanche energy tested
雪崩能量测试
- ✧ Improved dv/dt capability, high ruggedness
提高 dv/dt 能力, 高耐用性

◆ 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-247G



Symbol	Min	Nom	Max	Symbol	Min	Nom	Max
A	4.9	5.0	5.1	e		5.44BSC	
A1	2.3	2.4	2.5	h	0.05	0.10	0.15
A2	1.9	2.0	2.1	L	19.6	19.9	20.2
b	1.10	1.20	1.25	L1			4.3
b2	1.90	2.00	2.25	Φ p	3.5	3.6	3.75
b4	2.90	3.00	3.25	Φ p1			7.3
c	0.50	0.60	0.70	Φ p2	2.4	2.5	2.6
D	20.8	21.0	21.2	Q	5.3		5.9
D1	16.25	16.55	16.85	S		6.15BSC	
D2	1.05	1.20	1.35	T	9.8		10.2
E	15.6	15.8	16.0	T1		1.65REF	
E1	13.1	13.3	13.5	T2		8.0REF	
E2	4.9	5.0	5.1	T3		12.8REF	
E3	2.4	2.5	2.6	U	6.0		6.4
单位 mm				型号 TO-247G			

◆ Absolute Maximum Ratings (Tc=25°C)

Symbol	Parameters	Ratings	Unit
V _{DSS}	Drain-Source Voltage 漏源电压	300	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	69	A
I _{DM}	Drain Current-Single Plused (Note 1) 漏极单次脉冲电流	200	A
P _D	Power Dissipation (Note 2) 功率损耗	500	W
T _j	Max.Operating junction temperature 最大结温	150	°C

◆ 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	300	--	--	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	--	--	49	mΩ	V _{GS} =10V, I _D =40A
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} =300V, V _{GS} =0
g _{fs}	Forward Trans conductance 正向跨导	--	53	--	S	V _{DS} =10V, I _D =34.5A

**IXFH69N30P-OSEN****300V N-Channel MOSFET**

Switching Characteristics						
T _{d (on)}	Turn-On Delay Time 开启延迟时间	--	27	--	ns	V _{DS} =150V, I _D =69A, R _G =4Ω
T _r	Rise Time 上升时间	--	28	--	ns	
T _{d (off)}	Turn-Off Delay Time 关闭延迟时间	--	87	--	ns	
T _f	Fall Time 下降时间	--	31	--	ns	
Q _g	Total Gate Charge 栅极总电荷	--	185	--	nC	V _{DS} =150V, V _{GS} =10V, I _D =34.5A
Q _{gs}	Gate-Source Charge 栅源极电荷	--	42	--	nC	
Q _{gd}	Gate-Drain Charge 栅漏极电荷	--	86	--	nC	
Dynamic Characteristics						
C _{iss}	Input Capacitance 输入电容	--	6800	--	pF	V _{DS} =25V, V _{GS} =0, f=1MHz
C _{oss}	Output Capacitance 输出电容	--	780	--	pF	
C _{rss}	Reverse Transfer Capacitance 反向传输电容	--	215	--	pF	
I _S	Continuous Drain-Source Diode Forward Current (Note 2) 二极管导通正向持续电流	--	--	69	A	
V _{SD}	Diode Forward On-Voltage 二极管正向导通电压	--	--	1.3	V	I _S =30A, V _{GS} =0
R _{th(j-c)}	Thermal Resistance, Junction to Case 结到外壳的热阻	--	--	0.25	°C/W	

Note 1: Repetitive Rating : Pulse width limited by maximum junction temperature

Note 2: Pulse test: PW ≤ 300us , duty cycle ≤ 2%.