

LOW Voltage P-Channel MOSFET

◆ Features:

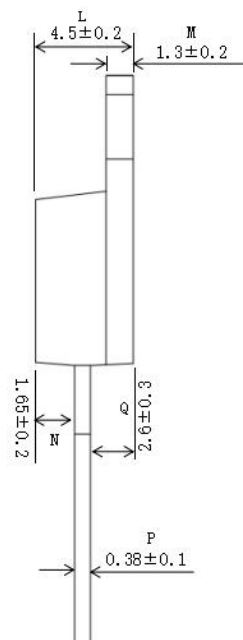
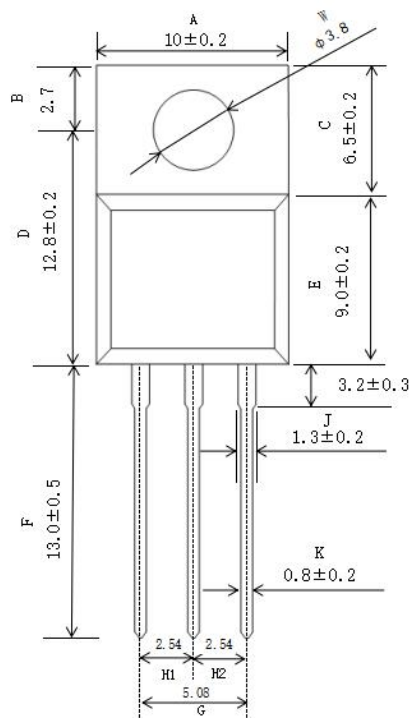
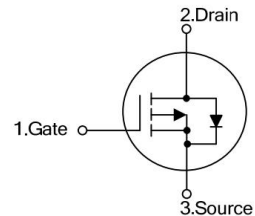
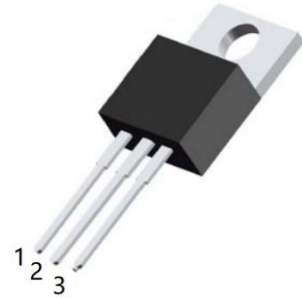
- ✧ Fast switching speed
开关速度快
- ✧ Low gate charge
低门充电
- ✧ High power and current handling capability
高功率和电流处理能力
- ✧ ROHS compliant
符合 ROHS 标准

◆ Applications

- ✧ DC to DC converters
直流到直流转换
- ✧ Synchronous Rectification
同步整流



TO-220AB



注:
1. 单位: mm
2. 未注公差: ± 0.2 mm
(除非另有说明)

◆ Absolute Maximum Ratings (Tc=25°C)

Symbol	Parameters	Ratings	Unit
V _{DSS}	Drain-Source Voltage 漏源电压	-30	V
V _{GS}	Gate-Source Voltage-Continuous 栅源电压	±20	V
I _D	Drain Current-Continuous (Note 2) 漏极持续电流	-50	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	95	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	-30	--	--	V	I _D =-250μA, V _{GS} =0V, T _J =25°C
V _{GS(th)}	Gate Threshold Voltage 栅极开启电压	-1.0	--	-2.5	V	V _{DS} =V _{GS} , I _D =-250μA
R _{DS(on)}	Drain-Source On-Resistance 漏源导通电阻	--	9.5	11	mΩ	V _{GS} =-10V, I _D =-10A
I _{GSS}	Gate-Body Leakage Current 栅极漏电流	--	--	-100	nA	V _{GS} =±20V, V _{DS} =0
I _{DSS}	Zero Gate Voltage Drain Current 零栅极电压漏极电流	--	--	-1	μA	V _{DS} =-30V, V _{GS} =0
g _{fs}	Forward Trans conductance 正向跨导	--	20	--	S	V _{DS} =-10V, I _D =-15A

**OSP50P03T****LOW Voltage P-Channel MOSFET**

Switching Characteristics						
T _{d (on)}	Turn-On Delay Time 开启延迟时间	--	14	--	ns	V _{DS} =-15V , I _D =-30A, R _G =3Ω（Note 2）
T _r	Rise Time 上升时间	--	13	--	ns	
T _{d (off)}	Turn-Off Delay Time 关闭延迟时间	--	55	--	ns	
T _f	Fall Time 下降时间	--	40	--	ns	
Q _g	Total Gate Charge 栅极总电荷	--	27	--	nC	V _{DS} =-15V , V _{GS} =-10V, I _D =-20A（Note 2）
Q _{gs}	Gate-Source Charge 栅源极电荷	--	6	--	nC	
Q _{gd}	Gate-Drain Charge 栅漏极电荷	--	11	--	nC	
Dynamic Characteristics						
C _{iss}	Input Capacitance 输入电容	--	2900	--	pF	V _{DS} =-25V, V _{GS} =0, f=1MHz
C _{oss}	Output Capacitance 输出电容	--	280	--	pF	
C _{rss}	Reverse Transfer Capacitance 反向传输电容	--	100	--	pF	
I _S	Continuous Drain-Source Diode Forward Current（Note 2） 二极管导通正向持续电流	--	--	-50	A	
V _{SD}	Diode Forward On-Voltage 二极管正向导通电压	--	--	-1.4	V	I _S =-50A, V _{GS} =0
R _{th(j-c)}	Thermal Resistance, Junction to Case 结到外壳的热阻	--	--	1.32	°C/W	

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

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