

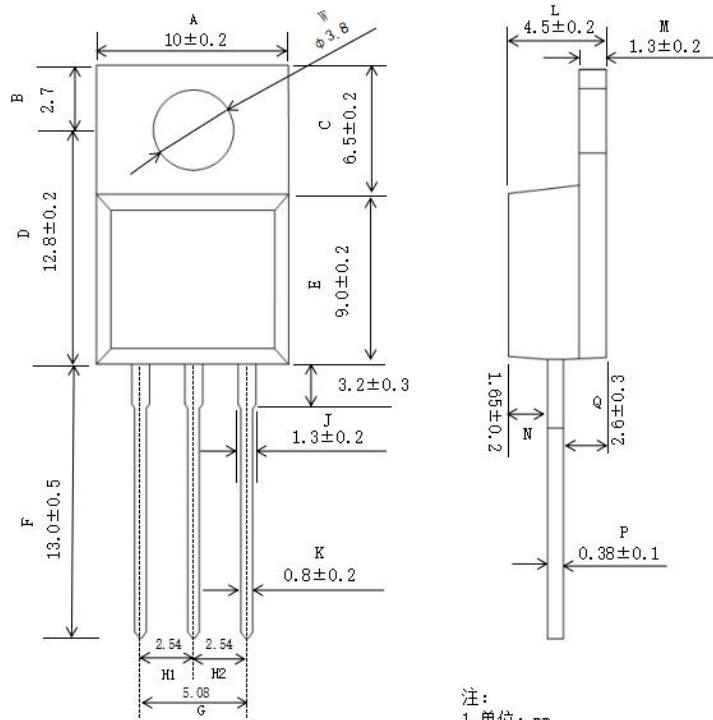
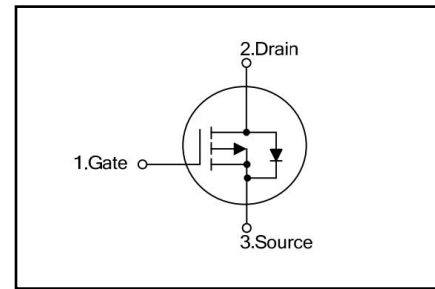
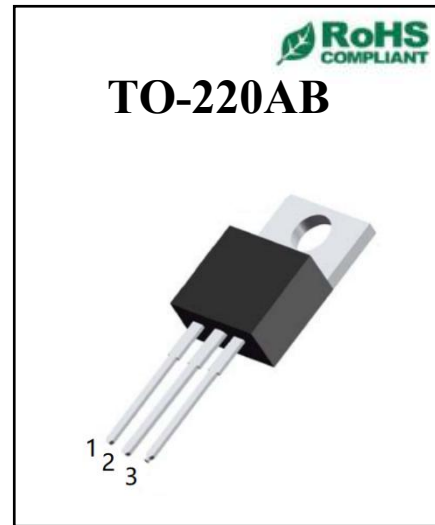
LOW Voltage P-Channel MOSFET

◆ 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



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

**LOW Voltage P-Channel MOSFET**
**◆ Absolute Maximum Ratings (Tc=25°C)**

Symbol	Parameters	Ratings	Unit
V <sub>DSS</sub>	Drain-Source Voltage 漏源电压	-30	V
V <sub>GS</sub>	Gate-Source Voltage-Continuous 栅源电压	±20	V
I <sub>D</sub>	Drain Current-Continuous (Note 2) 漏极持续电流	-20	A
I <sub>DM</sub>	Drain Current-Single Plused (Note 1) 漏极单次脉冲电流	-80	A
P <sub>D</sub>	Power Dissipation (Note 2) 功率损耗	45	W
T <sub>j</sub>	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
<b>Static Characteristics</b>						
B <sub>V</sub> DSS	Drain-Source Breakdown Voltage Current (Note 1) 漏极击穿电压	-30	--	--	V	I <sub>D</sub> =-250μA, V <sub>GS</sub> =0V, T <sub>J</sub> =25°C
V <sub>GS(th)</sub>	Gate Threshold Voltage 栅极开启电压	-1.0	--	-2.5	V	V <sub>DS</sub> =V <sub>GS</sub> , I <sub>D</sub> =-250μA
R <sub>DS(on)</sub>	Drain-Source On-Resistance 漏源导通电阻	--	15	17.2	mΩ	V <sub>GS</sub> =-10V, I <sub>D</sub> =-3.5A
I <sub>GSS</sub>	Gate-Body Leakage Current 栅极漏电流	--	--	±100	nA	V <sub>GS</sub> =±20V, V <sub>DS</sub> =0
I <sub>DSS</sub>	Zero Gate Voltage Drain Current 零栅极电压漏极电流	--	--	1	μA	V <sub>DS</sub> =-30V, V <sub>GS</sub> =0
gfs	Forward Trans conductance 正向跨导	--	13	--	S	V <sub>DS</sub> =-8V, I <sub>D</sub> =-9.5A

**LOW Voltage P-Channel MOSFET**

Switching Characteristics						
$T_{d(on)}$	Turn-On Delay Time 开启延迟时间	--	<b>12</b>	--	ns	$V_{DS}=-10V$ , $I_D=-10A$ , $R_G=2.5\Omega$ (Note 2)
$T_r$	Rise Time 上升时间	--	<b>15</b>	--	ns	
$T_{d(off)}$	Turn-Off Delay Time 关闭延迟时间	--	<b>65</b>	--	ns	
$T_f$	Fall Time 下降时间	--	<b>40</b>	--	ns	
$Q_g$	Total Gate Charge 栅极总电荷	--	<b>23.5</b>	--	nC	$V_{DS}=-15V$ , $V_{GS}=-10V$ , $I_D=-10A$ (Note 2)
$Q_{gs}$	Gate-Source Charge 栅源极电荷	--	<b>3.5</b>	--	nC	
$Q_{gd}$	Gate-Drain Charge 栅漏极电荷	--	<b>5.5</b>	--	nC	
Dynamic Characteristics						
$C_{iss}$	Input Capacitance 输入电容	--	<b>1350</b>	--	pF	$V_{DS}=-15V$ , $V_{GS}=0$ , $f=1MHz$
$C_{oss}$	Output Capacitance 输出电容	--	<b>250</b>	--	pF	
$C_{rss}$	Reverse Transfer Capacitance 反向传输电容	--	<b>180</b>	--	pF	
$I_S$	Continuous Drain-Source Diode Forward Current (Note 2) 二极管导通正向持续电流	--	--	<b>-20</b>	A	
$V_{SD}$	Diode Forward On-Voltage 二极管正向导通电压	--	--	<b>-1.4</b>	V	$I_S=-10A$ , $V_{GS}=0$
$R_{th(j-c)}$	Thermal Resistance, Junction to Case 结到外壳的热阻	--	--	<b>2.78</b>	$^{\circ}C/W$	

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

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