

**描述 / Descriptions**

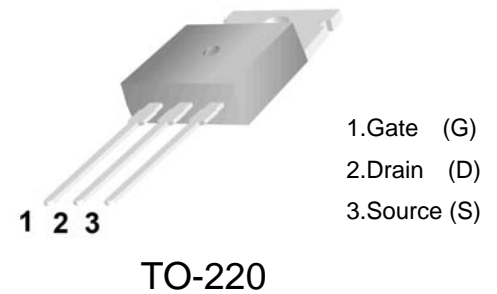
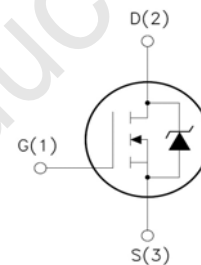
TO-220 封装 P 沟道 MOS 场效应管。  
 P-CHANNEL MOSFET in a TO-220 Plastic Package.

**特征 / Features**

$V_{DS} = -60V, I_D = -26A, R_{DS(ON)} < 40m\Omega$   
 $@ V_{GS} = -10V, R_{DS(ON)} < 55m\Omega @ V_{GS} = -4.5V$   
 高功率和电流转移能力, 无铅产品, 表面贴装封装。  
 High Power and current handing capability, Lead free product is acquired, Surface Mount Package.

**用途 / Applications**

用于 PWM, 负载开关, 电源管理。  
 PWM applications, Load switch, Power management.

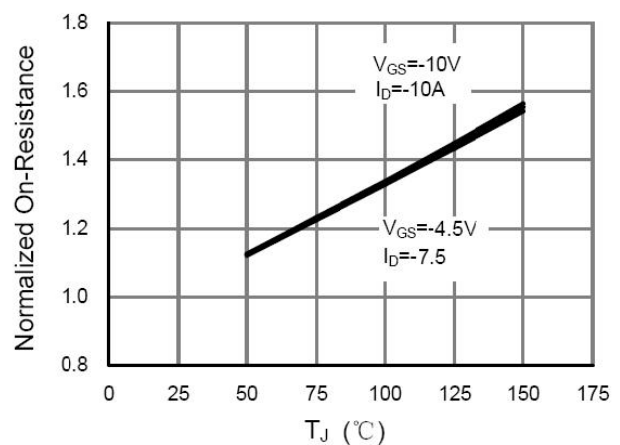
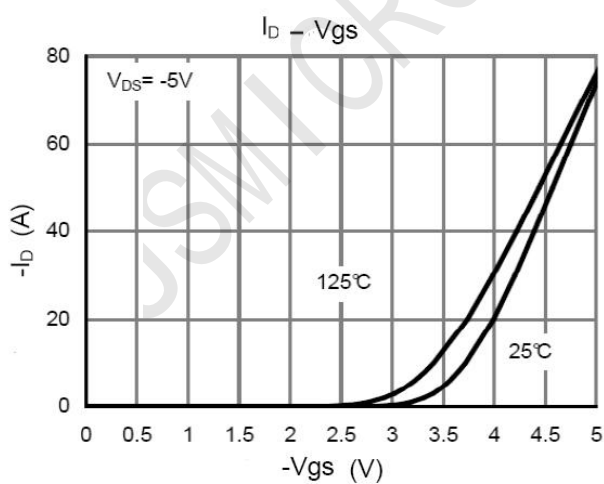
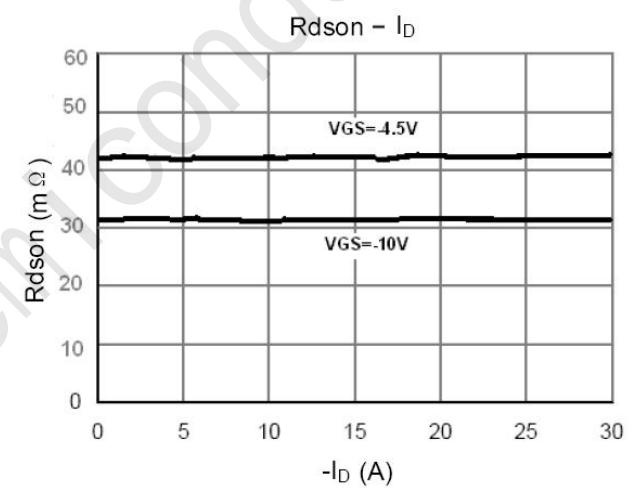
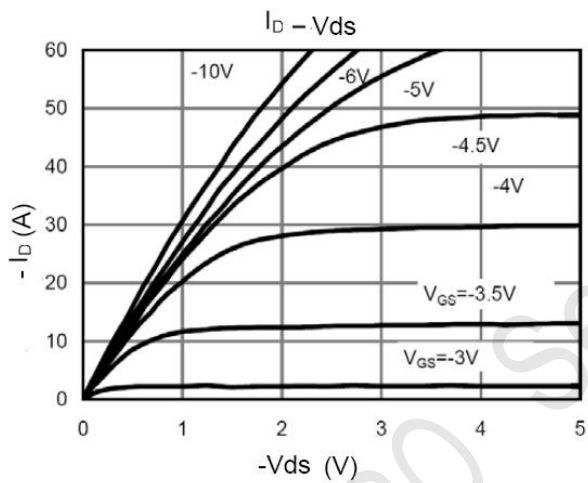
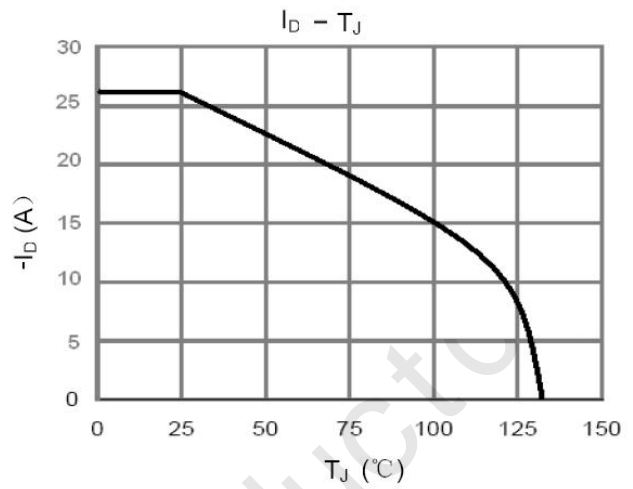
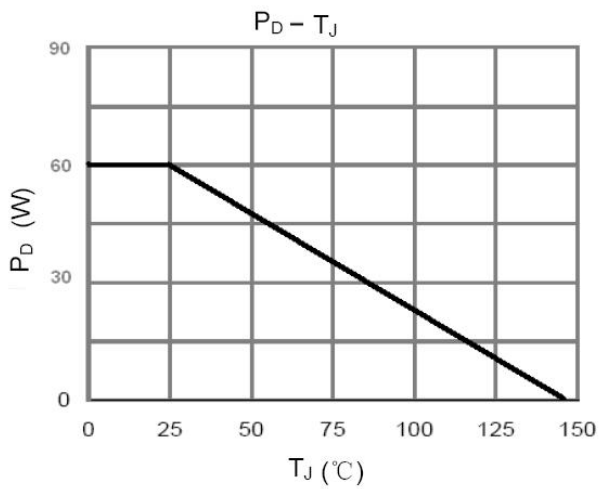
**引脚排列 / Pinning**

**内部等效电路 / Equivalent Circuit**

**极限参数 / Absolute Maximum Ratings(Ta=25°C)**

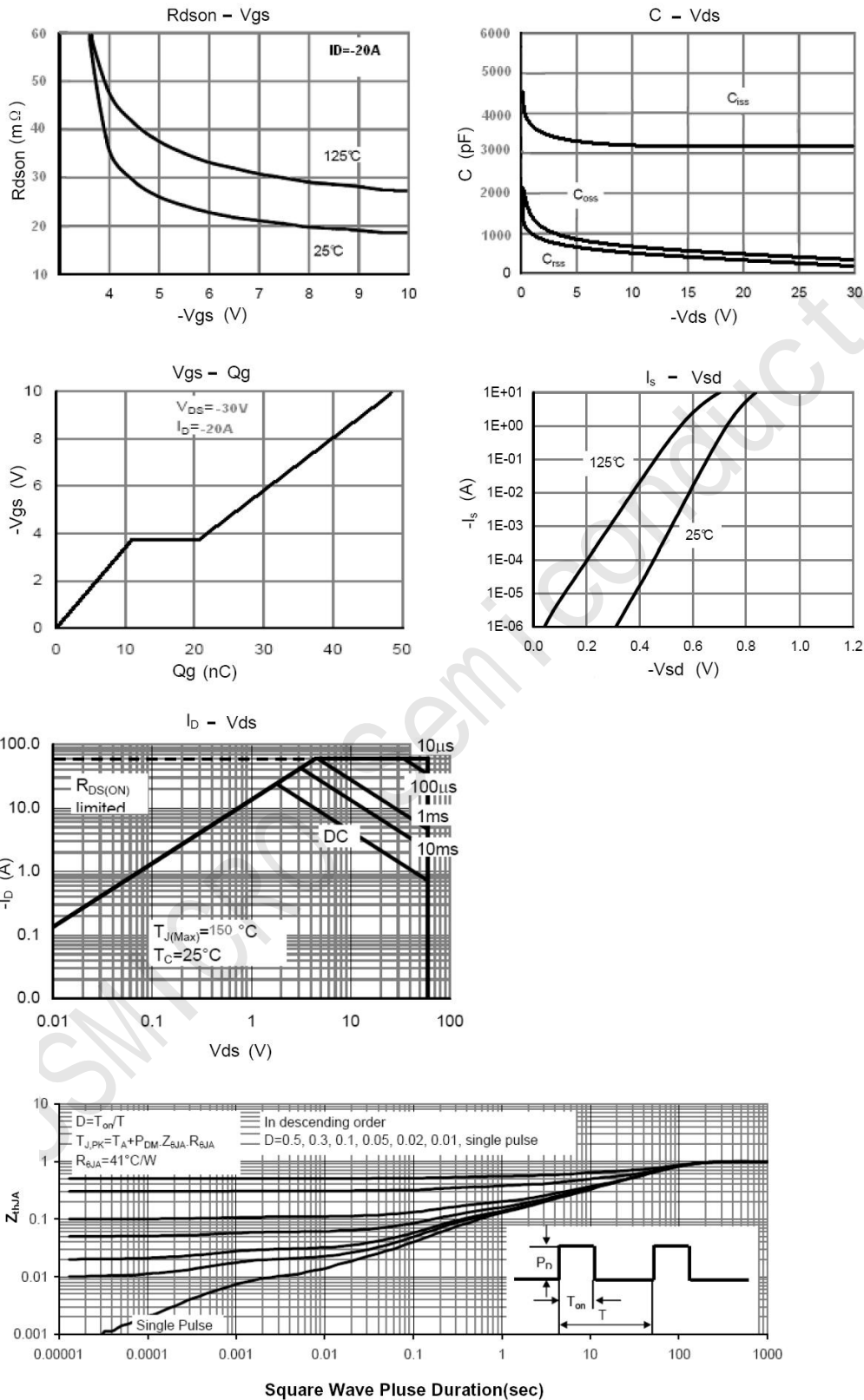
参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Drain-Source Voltage	$V_{DS}$	-60	V
Drain Current	$I_D(T_C=25^\circ C)$	-30	A
Drain Current	$I_D(T_C=70^\circ C)$	-20	A
Drain Current - Pulsed	$I_{DM}$	-60	A
Gate-Source Voltage	$V_{GS}$	$\pm 20$	V
Power Dissipation	$P_D(T_C=25^\circ C)$	60	W
Junction and Storage Temperature Range	$T_J, T_{STG}$	-55 to 175	°C
Thermal Resistance, Junction-to-Ambient	$R_{\theta JA}$	25	°C/W

**电性能参数 / Electrical Characteristics(Ta=25°C)**

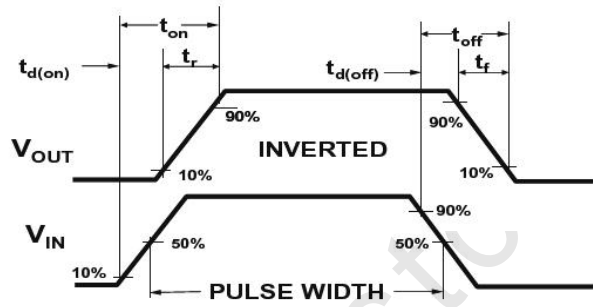
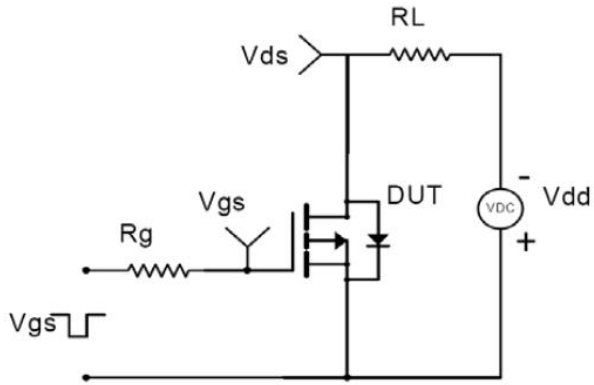
参数 Parameter	符号 Symbol	测试条件 Test Conditions		最小值 Min	典型值 Typ	最大值 Max	单位 Unit
Drain-Source Breakdown Voltage	$BV_{DSS}$	$V_{GS}=0V$	$I_D=-250\mu A$	-60			V
Zero Gate Voltage Drain Current	$I_{DSS}$	$V_{DS}=-48V$	$V_{GS}=0V$			-1.0	$\mu A$
Gate-Body Leakage Current Forward	$I_{GSS}$	$V_{GS}=\pm 20V$	$V_{DS}=0V$			$\pm 100$	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$	$I_D=-250\mu A$	-1.0	-1.8	-2.5	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=-10V$	$I_D=-20A$		31	40	m $\Omega$
		$V_{GS}=-4.5V$	$I_D=-20A$		42	55	m $\Omega$
Forward Transconductance	$g_{FS}$	$V_{DS}=-5V$	$I_D=-20A$		5		S
Drain-Source Diode Forward Voltage	$V_{SD}$	$V_{GS}=0V$	$I_S=-1A$		-0.72	-1	V
Input Capacitance	$C_{iss}$	$V_{DS}=-30V$ $f=1.0MHz$	$V_{GS}=0V$		3060		pF
Output Capacitance	$C_{oss}$				300		pF
Reverse Transfer Capacitance	$C_{rss}$				205		pF
Turn-On Delay Time	$t_{d(on)}$	$V=-30V$ $R_{GEN}=3\Omega$	$V=-10V$ $I_D=1A$		14		ns
Turn-On Rise Time	$t_r$				20		ns
Turn-Off Delay Time	$t_{d(off)}$				49		ns
Turn-Off Fall Time	$t_f$				19		ns
Total Gate Charge	$Q_g$						48
Gate-Source Charge	$Q_{gs}$	$V_{DD}=-30V$ $V_{GS}=-10V$	$I_D=-20A$		11		nC
Gate-Drain Charge	$Q_{gd}$				10		nC
Reverse Recovery Time	$T_{rr}$	$I_F=-20A$ $dI/dt=100A/\mu s$			40		nS
Reverse Recovery Charge	$Q_{rr}$				56		nC

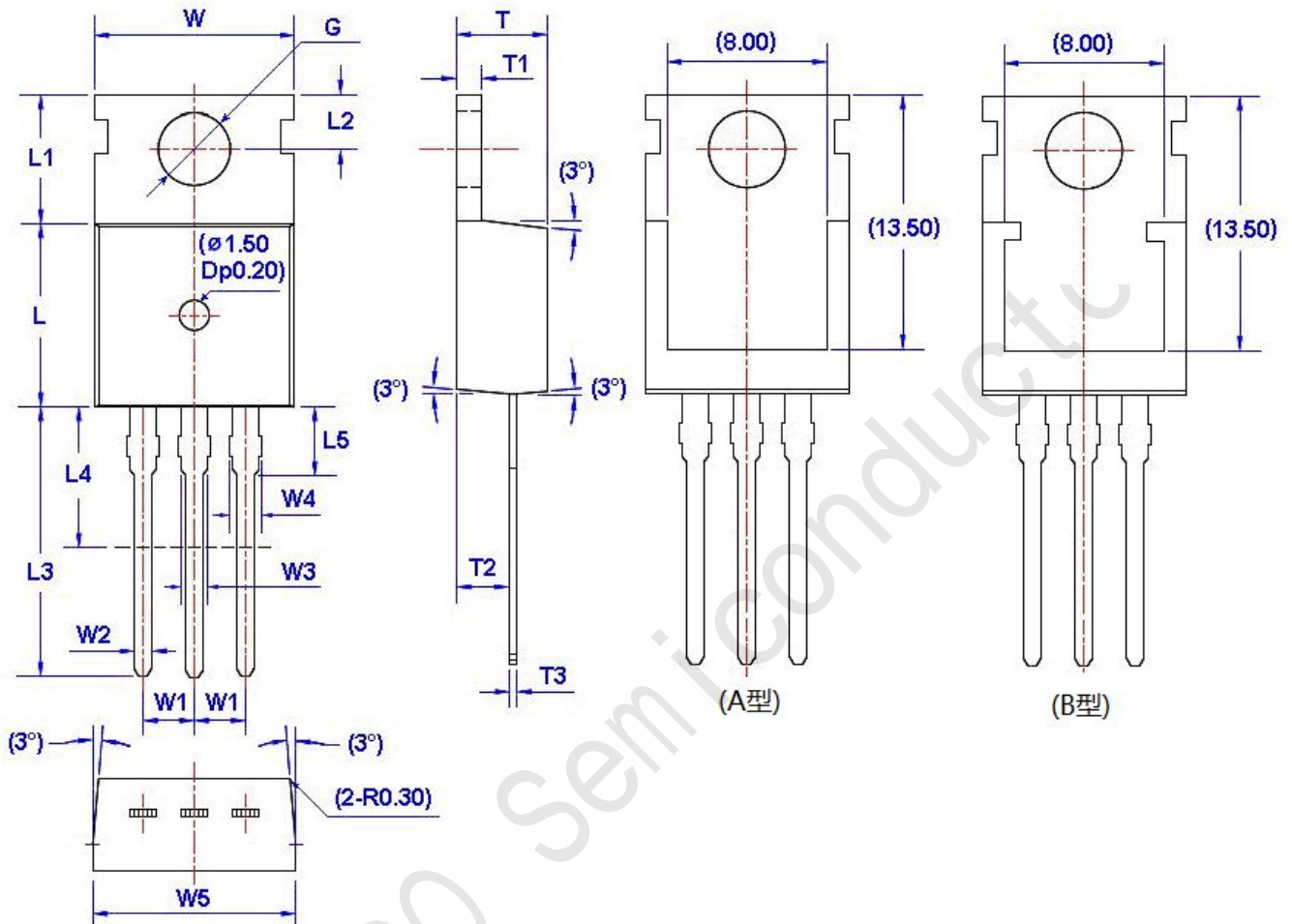
电参数曲线图 / Electrical Characteristic Curve



**电参数曲线图 / Electrical Characteristic Curve**


典型电性和热特性 / Typical electrical and thermal properties



**外形尺寸图 / Package Dimensions**


Unit: mm

Symbol	Size		Symbol	Size		Symbol	Size		Symbol	Size	
	Min	Max		Min	Max		Min	Max		Min	Max
W	9.66	10.28	W5	9.80	10.20	L4**	6.20	6.60	T3	0.45	0.60
W1	2.54 (TYP)		L	9.00	9.40	L5	2.79	3.30	G( $\Phi$ )	3.50	3.70
W2	0.70	0.95	L1	6.40	6.80	T	4.30	4.70			
W3	1.17	1.37	L2	2.70	2.90	T1	1.15	1.40			
W4*	1.32	1.72	L3	12.70	14.27	T2	2.20	2.60			