

**YGMOS Technology Crop.**

30V N-Channel Enhancement-Mode Mosfet

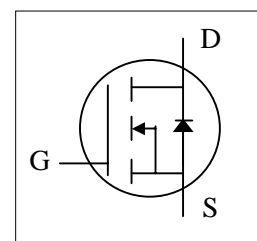
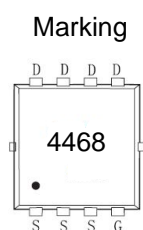
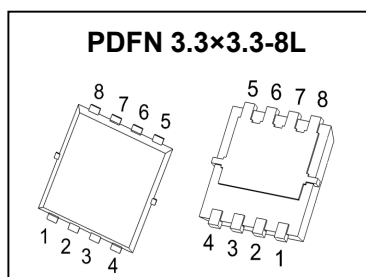
30V N 沟道增强型 MOS 管

**VDS= 30V**
**RDS(ON), Vgs@10.0V, Ids@8.0A = 14.0mΩ**
**RDS(ON), Vgs@4.5V, Ids@6.0 A = 21.0mΩ**
**Features 特性**

Advanced trench process technology 高级的加工技术

High Density Cell Design For Ultra Low On-Resistance 极低的导通电阻高密度的单元设计

High Power and Current handling capability 大功率高电流


**Maximum Ratings and Thermal Characteristics (TA = 25 °C unless otherwise noted) 25 °C 极限参数和热特性**

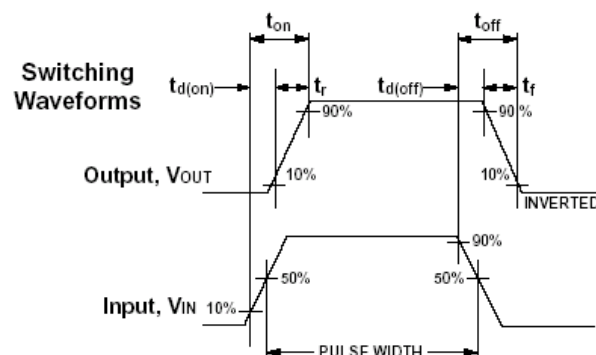
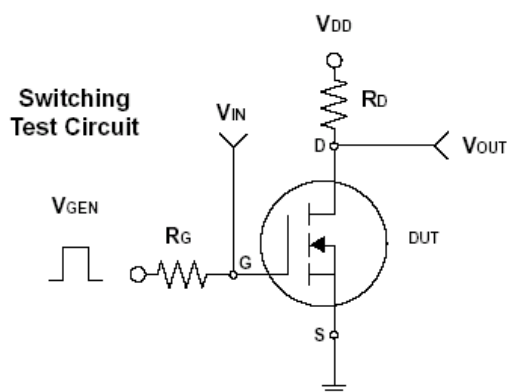
Parameter 极限参数	Symbol 符号	Limit 范围	Unit 单位	
Drain-Source Voltage 漏源电压	V <sub>DS</sub>	30	V	
Gate-Source Voltage 栅源电压	V <sub>GS</sub>	± 20		
Continuous Drain Current 连续漏极电流	I <sub>D</sub>	25	A	
Pulsed Drain Current 脉冲漏极电流	I <sub>DM</sub>	80		
Maximum Power Dissipation 最大耗散功率	P <sub>D</sub>	TA = 25°C	1.5	W
		TA = 75°C	1.2	
Operating Junction and Storage Temperature Range 使用及储存温度	T <sub>J</sub> , T <sub>stg</sub>	-55 to 150	°C	
Junction-to-Ambient Thermal Resistance (PCB mounted) 结环热阻	R <sub>θJA</sub>	83.5	°C/W	

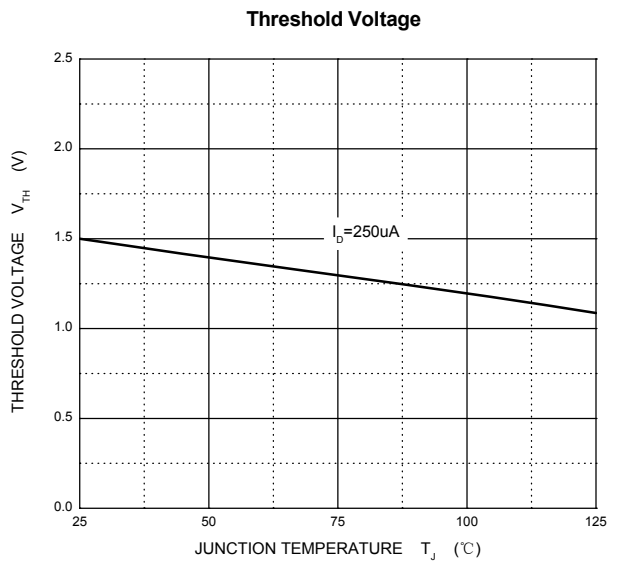
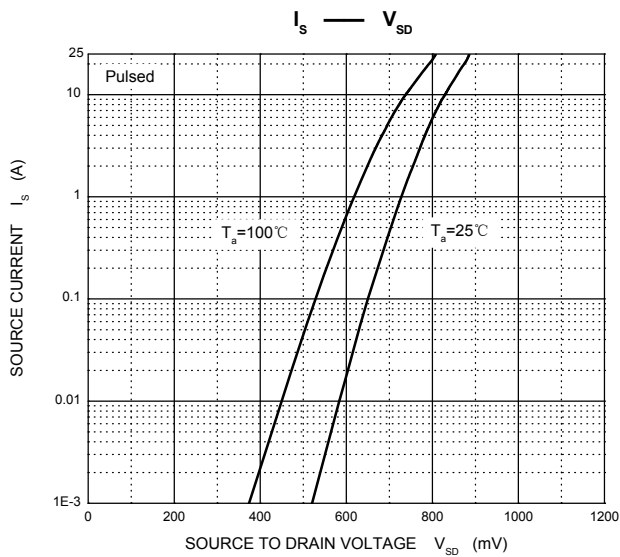
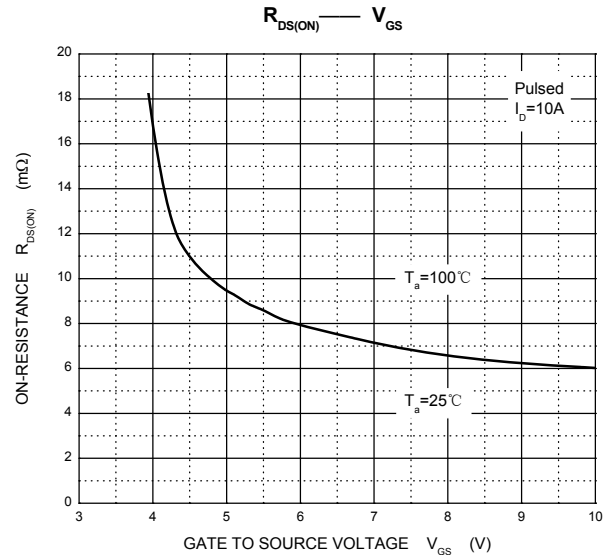
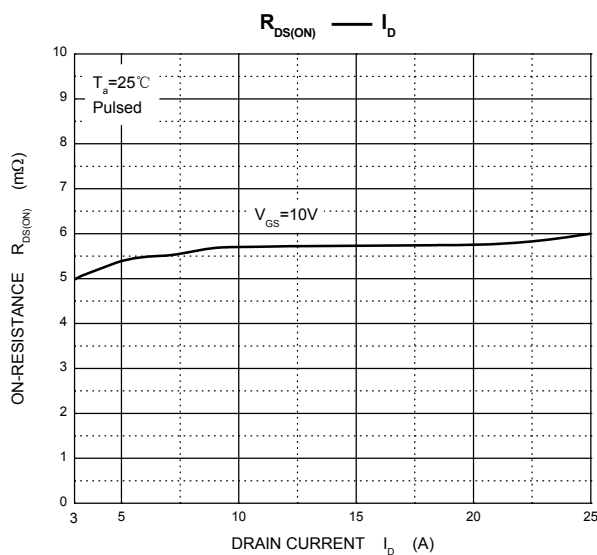
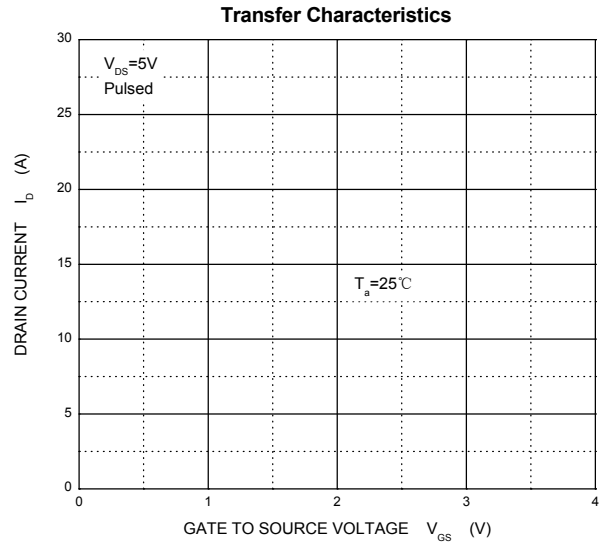
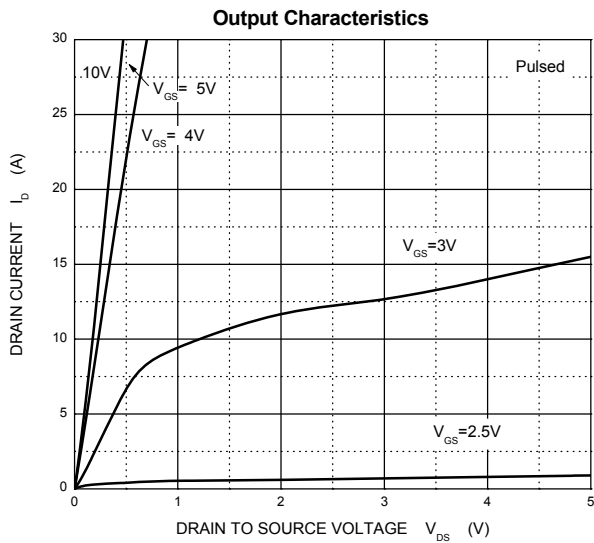
 Device mounted on an FR4 PCB, single-sided copper, tin-plated and mounting pad for drain 6 cm<sup>2</sup>, t ≤ 5 s.

**YGMOS Technology Crop.**
**ELECTRICAL CHARACTERISTICS** 一般电气特性

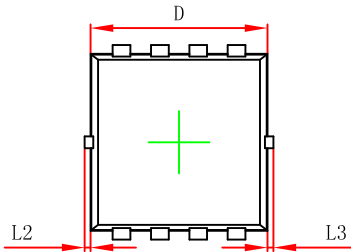
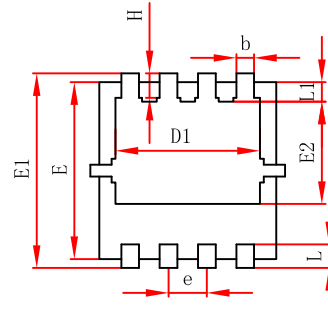
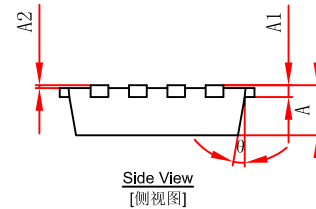
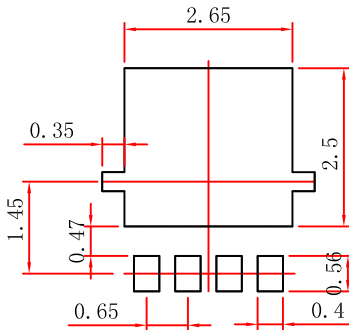
Parameter 参数	符号	Test Condition 测试条件	最小值	典型值	最大值	单位
<b>Static 静态参数</b>						
Drain-Source Breakdown Voltage 漏源击穿电压	$BV_{DSS}$	$V_{GS} = 0V, I_D = 250\mu A$	30			V
Drain-Source On-State Resistance 漏源导通电阻	$R_{DS(on)}$	$V_{GS} = 10.0V, I_D = 8.0A$		10.0	14.0	mΩ
Drain-Source On-State Resistance 漏源导通电阻	$R_{DS(on)}$	$V_{GS} = 4.5V, I_D = 6.0A$		15.0	21.0	
Gate Threshold Voltage 开启电压	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250\mu A$	1.0	1.8	3.0	V
Zero Gate Voltage Drain Current 零栅压漏极电流	$I_{DSS}$	$V_{DS} = 24V, V_{GS} = 0V$			1	μA
Gate Body Leakage 漏极短路时截止栅电流	$I_{GSS}$	$V_{GS} = \pm 20V, V_{DS} = 0V$			±100	nA
Forward Transconductance 正向跨导	$g_{fs}$	$V_{DS} = 5.0V, I_D = 8.0A$		10		S
<b>Dynamic 动态参数</b>						
Total Gate Charge 栅极总电荷	$Q_g$	$V_{DS} = 15V, I_D = 8.0A$ $V_{GS} = 4.5V$		8.2		nC
Gate-Source Charge 栅-源极电荷	$Q_{gs}$			2.0		
Gate-Drain Charge 栅-漏极电荷	$Q_{gd}$			3.2		
Turn-On Delay Time 导通延迟时间	$t_{d(on)}$	$V_{DD} = 15V, R_G = 6\Omega$ $I_D = 8.0A, V_{GS} = 4.5V$		12.7		ns
Turn-On Rise Time 导通上升时间	$t_r$			11.6		
Turn-Off Delay Time 关断延迟时间	$t_{d(off)}$			41.4		
Turn-Off Fall Time 关断下降时间	$t_f$			10.3		
Input Capacitance 输入电容	$C_{iss}$	$V_{DS} = 15V, V_{GS} = 0V$ $f = 1.0MHz$		900		pF
Output Capacitance 输出电容	$C_{oss}$			128		
Reverse Transfer Capacitance 反向传输电容	$C_{rss}$			75		
<b>Source-Drain Diode 源漏二极管参数</b>						
Max. Diode Forward Current 最大正向电流	$I_S$				10	A
Diode Forward Voltage 正向电压	$V_{SD}$	$I_S = 8.0A, V_{GS} = 0V$			1.2	V

Note: Pulse test: pulse width  $\leq 300\mu s$ , duty cycle  $\leq 2\%$  注意: 脉冲测试: 脉冲宽度  $\leq 300\mu s$  死区  $\leq 2\%$



**TYPICAL ELECTRICAL AND THERMAL CHARACTERISTICS**


## PDFN 3.3\*3.3-8L Package Outline Dimensions


 Top View  
 [顶视图]

 Bottom View  
 [背视图]

 Side View  
 [侧视图]

Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.650	0.850	0.026	0.033
A1	0.152 REF.		0.006 REF.	
A2	0~0.05		0~0.002	
D	2.900	3.100	0.114	0.122
D1	2.300	2.600	0.091	0.102
E	2.900	3.100	0.114	0.122
E1	3.150	3.450	0.124	0.136
E2	1.535	1.935	0.060	0.076
b	0.200	0.400	0.008	0.016
e	0.550	0.750	0.022	0.030
L	0.300	0.500	0.012	0.020
L1	0.180	0.480	0.007	0.019
L2	0~0.100		0~0.004	
L3	0~0.100		0~0.004	
H	0.315	0.515	0.012	0.020
θ	9°	13°	9°	13°