

YGMOS Technology Crop.

-30V P- Channel Enhancement-Mode MOSFET -30V 双P沟道增强型MOS管

VDS= -30V
RDS(ON), Vgs@-10V, Ids@-6.0A = 42mΩ
RDS(ON), Vgs@-4.5V, Ids@-4.5A = 60mΩ
Features 特性

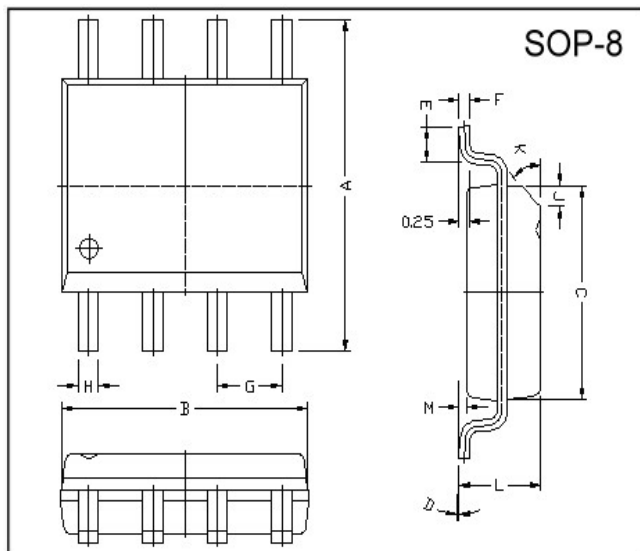
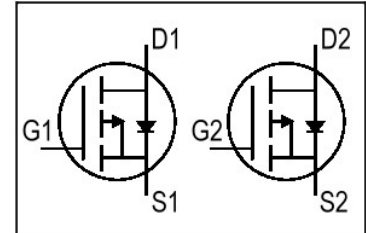
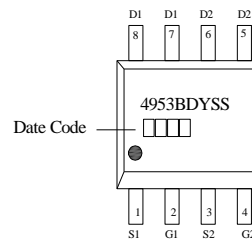
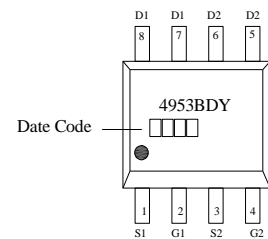
Advanced trench process technology 高级的加工技术

High Density Cell Design For Ultra Low On-Resistance

极低的导通电阻高密度的单元设计

Improved Shoot-Through FOM 改进的成型工艺

Package Dimensions 封装尺寸及外形图


Marking 1

Marking 2


REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	5.80	6.20	M	0.10	0.25
B	4.80	5.00	H	0.35	0.49
C	3.80	4.00	L	1.35	1.75
D	0	8	J	0.375 REF.	
E	0.40	0.90	K	45	
F	0.19	0.25	G	1.27 TYP.	

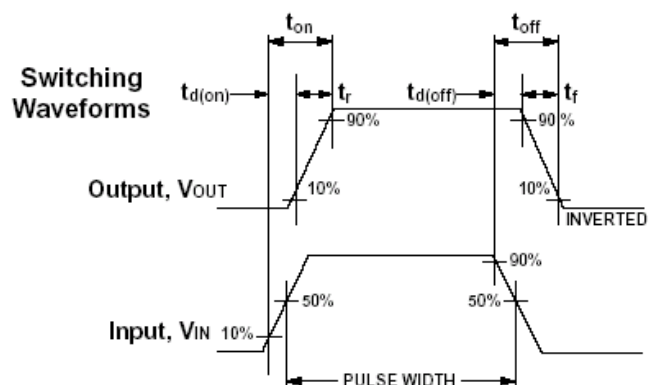
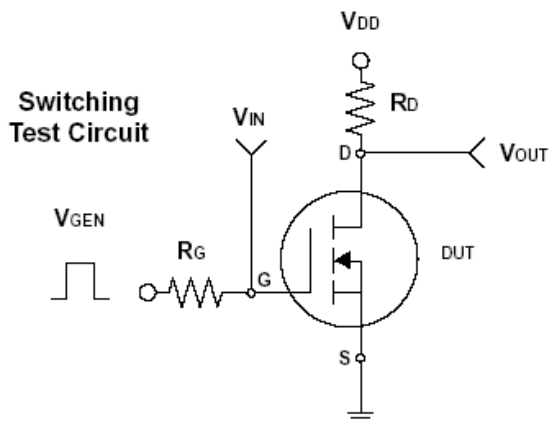
Maximum Ratings and Thermal Characteristics (TA = 25°C unless otherwise noted) 25°C 极限参数和热特性

Parameter 极限参数	Symbol 符号	Limit 范围	Unit 单位	
Drain-Source Voltage 漏源电压	V _{DS}	-30	V	
Gate-Source Voltage 栅源电压	V _{GS}	± 20		
Continuous Drain Current 连续漏极电流	I _D	-6.0	A	
Pulsed Drain Current 脉冲漏极电流	I _{DM}	-30		
Maximum Power Dissipation 最大耗散功率	P _D	TA = 25°C	2.5	W
		TA = 75°C	1.6	
Operating Junction and Storage Temperature Range 使用及储存温度	T _J , T _{stg}	-55 to 150	°C	
Junction-to-Ambient Thermal Resistance (PCB mounted) 结环热阻	R _{θJA}	62.5	°C/W	

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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
Static 静态参数						
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	$R_{DS(on)}$	$V_{GS} = -4.5V, I_D = -4.4A$		45	60	mΩ
Drain-Source On-State Resistance 漏源导通电阻	$R_{DS(on)}$	$V_{GS} = -10V, I_D = -5.7A$		36	42	
Gate Threshold Voltage 开启电压	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = -250\mu A$	-1	-1.7	-3	V
Zero Gate Voltage Drain Current 零栅压漏极电流	I_{DSS}	$V_{DS} = -30V, V_{GS} = 0V$			-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}	$V_{DS} = -5V, I_D = -5A$		5		S
Dynamic 动态参数						
Total Gate Charge 栅极总电荷	Q_g	$V_{DS} = -15V, I_D = -5A$ $V_{GS} = -10V$		18.8		nC
Gate-Source Charge 栅-源极电荷	Q_{gs}			1.6		
Gate-Drain Charge 栅-漏极电荷	Q_{gd}			4.35		
Turn-On Delay Time 导通延迟时间	$t_{d(on)}$	$V_{DD} = -15V, R_L = 15\Omega$ $I_D = -1A, V_{GEN} = -10V$ $R_G = 6\Omega$		6.7		ns
Turn-On Rise Time 导通上升时间	t_r			12.7		
Turn-Off Delay Time 关断延迟时间	$t_{d(off)}$			41.2		
Turn-Off Fall Time 关断下降时间	t_f			9.4		
Input Capacitance 输入电容	C_{iss}	$V_{DS} = -15V, V_{GS} = 0V$ $f = 1.0\text{ MHz}$		935		pF
Output Capacitance 输出电容	C_{oss}			109		
Reverse Transfer Capacitance 反向传输电容	C_{rss}			86		
Source-Drain Diode 源漏二极管参数						
Max. Diode Forward Current 最大正向电流	I_S				-2.3	A
Diode Forward Voltage 正向电压	V_{SD}	$I_S = -2.3A, V_{GS} = 0V$			-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 $\leq 2\%$



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Typical Characteristics (T_J = 25°C Noted)
