GT9435BDY

Data Sheet

YGMOS Technology Crop.

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

VDS= -30V

RDS(ON), Vgs@-10V, Ids@-5.7A = 42mΩ

RDS(ON), Vgs@-4.5V, Ids@-4.4A = 70mΩ

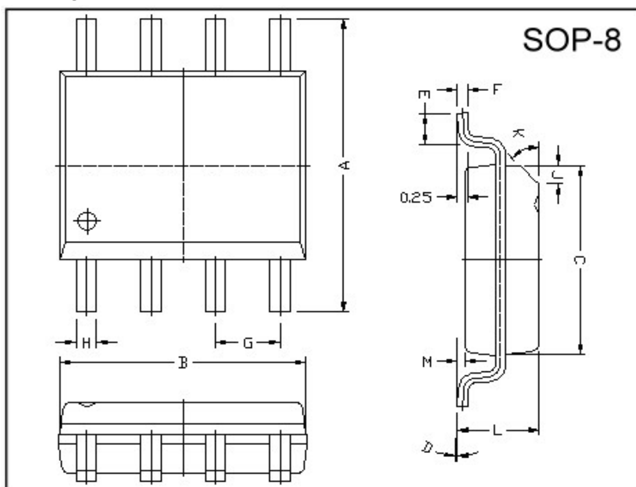
Features　特性

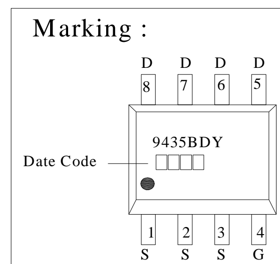
Advanced trench process technology　高级的加工技术

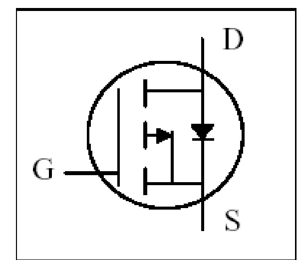
High Density Cell Design For Ultra Low On-Resistance　极低的导通电阻高密度的单元设计

Improved Shoot-Through FOM　改进的成型工艺

Package Dimensions 封装尺寸及外形图







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 = 25oC 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	-5.7	A
Pulsed Drain Current　脉冲漏极电流		I_{DM}	-30	
Maximum Power Dissipation　最大耗散功率	TA = 25°C	P_D	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-Case Thermal Resistance　结壳热阻		$R_{\theta JC}$	24	°C/W
Junction-to-Ambient Thermal Resistance (PCB mounted)　结环热阻		$R_{\theta JA}$	62.5	

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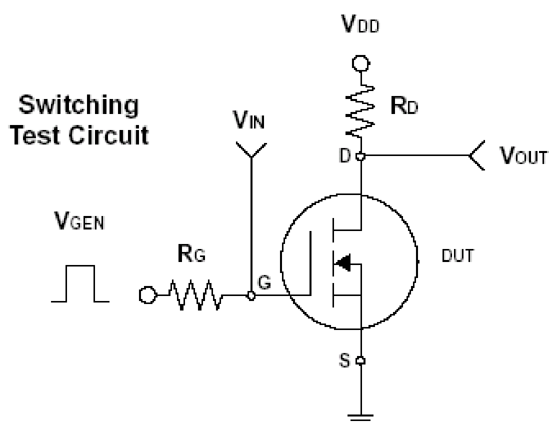
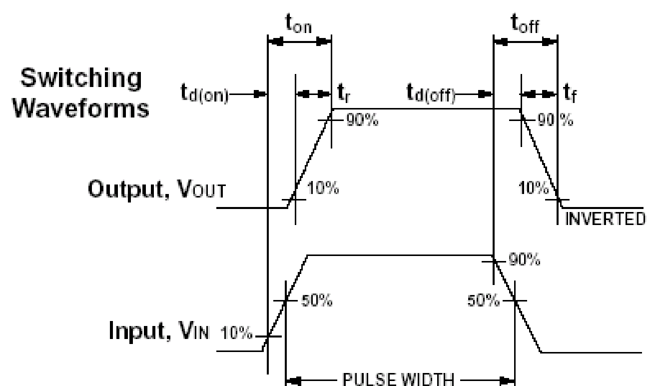
ELECTRICAL CHARACTERISTICS 一般电气特性

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 = -250uA	-30			V
Drain-Source On-State Resistance 漏源导通电阻	$R_{DS(on)}$	V_{GS} = -4.5V, I_D = -4.4A		56	70	mΩ
Drain-Source On-State Resistance 漏源导通电阻	$R_{DS(on)}$	V_{GS} = -10V, I_D = -5.7A		33	42	mΩ
Gate Threshold Voltage 开启电压	$V_{GS(th)}$	V_{DS} =V_{GS}, I_D = -250uA	-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	uA
Gate Body Leakage 漏极短路时截止栅电流	I_{GSS}	V_{GS} = ± 20V, V_{DS} = 0V			±100	nA
Gate Resistance	Rg	V_{DS} = 0V, V_{GS} = 1V at 1MHz		4.5		Ω
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 = -5.0A V_{GS} = -10V		22.5		nC
Gate-Source Charge 栅-源极电荷	Q_{gs}			4.83		nC
Gate-Drain Charge 栅-漏极电荷	Q_{gd}			5.08		nC
Turn-On Delay Time 导通延迟时间	$t_{d(on)}$	V_{DD} = -15V, R_L = 15Ω I_D = -1A, V_{GEN} = -10V R_G = 4.5Ω		36.4		ns
Turn-On Rise Time 导通上升时间	t_r			14.8		ns
Turn-Off Delay Time 关断延迟时间	$t_{d(off)}$			58.3		ns
Turn-Off Fall Time 关断下降时间	t_f			6.85		ns
Input Capacitance 输入电容	C_{iss}	V_{DS} = -15V, V_{GS} = 0V f = 1.0 MHz		840		pF
Output Capacitance 输出电容	C_{oss}			112		pF
Reverse Transfer Capacitance 反向传输电容	C_{rss}			31.8		pF
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 = -2.6A, V_{GS} = 0V			-1.2	V

Note: Pulse test: pulse width <= 300us, duty cycle<= 2% 注意：脉冲测试：脉冲宽度<= 300us 死区<= 2%





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Characteristics Curve 电性能特征曲线

Typical Characteristics (T_J =25℃ Noted)