

GMOS Technology Crop.

20V N-Channel Enhancement-Mode MOSFET 20V N-沟道增强型 MOS

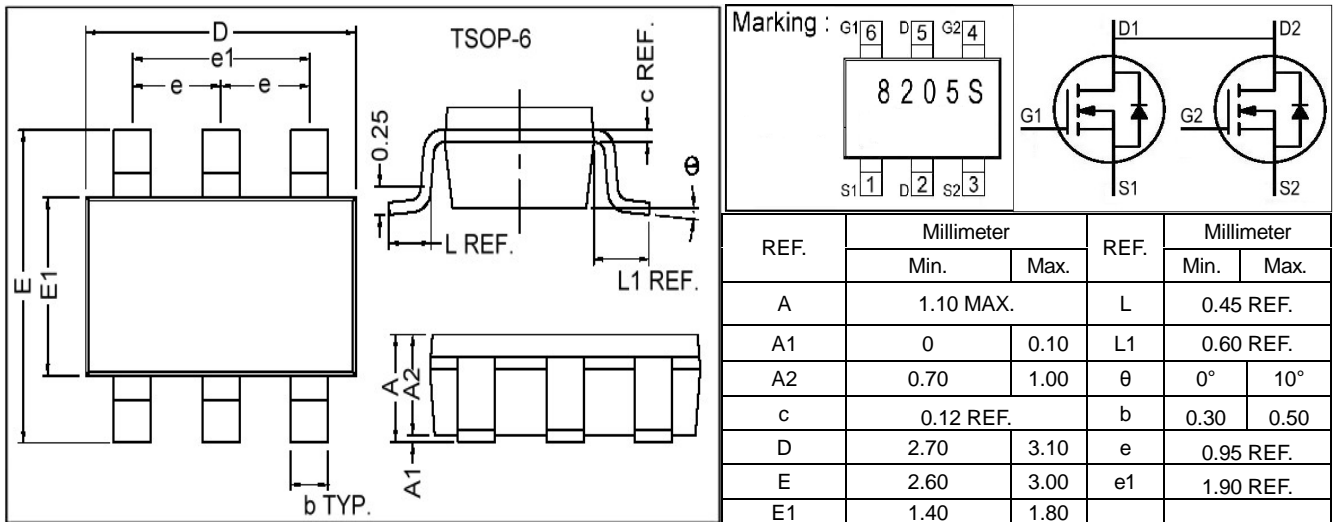
VDS = 20V
RDS(ON), Vgs@2.5V, Ids@4.5A = 38mΩ
RDS(ON), Vgs@4.5V, Ids@5A = 28mΩ
Features 特性

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、大电流

Ideal for Li ion battery pack applications 理想的锂电池应用

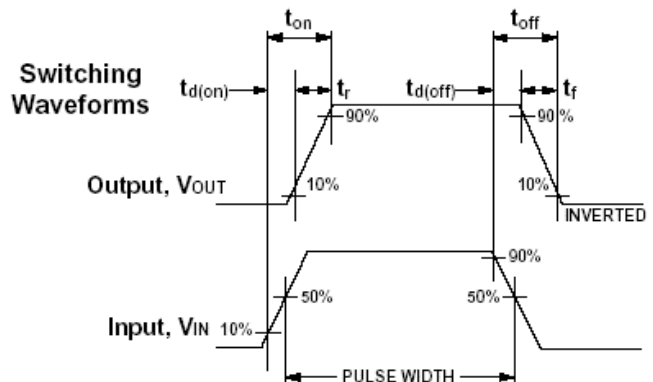
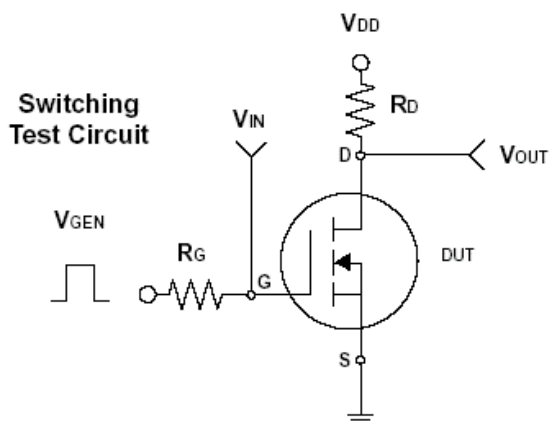
Package Dimensions 封装尺寸及外形图

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}	20	V	
Gate-Source Voltage 栅源电压	V _{GS}	± 12		
Continuous Drain Current 连续漏极电流	I _D	5	A	
Pulsed Drain Current 脉冲漏极电流	I _{DM}	20		
Maximum Power Dissipation 最大耗散功率	P _D	TA = 25°C	1.4	W
		TA = 75°C	1	
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}	78	°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}	$V_{GS} = 0V, I_D = 250\mu A$	20			V
Drain-Source On-State Resistance 漏源导通电阻	$R_{DS(on)}$	$V_{GS} = 2.5V, I_D = 4.2A$		30.0	38.0	mΩ
Drain-Source On-State Resistance 漏源导通电阻	$R_{DS(on)}$	$V_{GS} = 4.5V, I_D = 5A$		21.0	28.0	
Gate Threshold Voltage 开启电压	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250\mu A$	0.6	0.85	1.2	V
Zero Gate Voltage Drain Current 零栅压漏极电流	I_{DSS}	$V_{DS} = 20V, V_{GS} = 0V$			1	uA
Gate Body Leakage 漏极短路时截止栅电流	I_{GSS}	$V_{GS} = \pm 12V, V_{DS} = 0V$			±100	nA
Forward Transconductance 正向跨导	g_{fs}	$V_{DS} = 5V, I_D = 6A$		22	—	S
Dynamic 动态参数						
Total Gate Charge 栅极总电荷	Q_g	$V_{DS} = 10V, I_D = 6A$ $V_{GS} = 4.5V$		5		nC
Gate-Source Charge 栅-源极电荷	Q_{gs}			1.1		
Gate-Drain Charge 栅-漏极电荷	Q_{gd}			2.1		
Turn-On Delay Time 导通延迟时间	$t_{d(on)}$	$V_{DD} = 10V, R_G = 6\Omega$ $I_D = 1A, V_{GS} = 4.5V$				ns
Turn-On Rise Time 导通上升时间	t_r					
Turn-Off Delay Time 关断延迟时间	$t_{d(off)}$					
Turn-Off Fall Time 关断下降时间	t_f					
Input Capacitance 输入电容	C_{iss}	$V_{DS} = 8V, V_{GS} = 0V$ $f = 1.0\text{ MHz}$				pF
Output Capacitance 输出电容	C_{oss}					
Reverse Transfer Capacitance 反向传输电容	C_{rss}					
Source-Drain Diode 源漏二极管参数						
Max. Diode Forward Current 最大正向电流	I_S					A
Diode Forward Voltage 正向电压	V_{SD}	$I_S = 1.7A, V_{GS} = 0V$				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)
