

20V Dual P-Channel Enhancement-Mode MOSFET 20V Dual P 沟道增强型 MOS 管

VDS= -20V

RDS(ON), Vgs@-4.5V, Ids@-3.4A = 55mΩ

RDS(ON), Vgs@-2.5V, Ids@-1.6A = 75mΩ

RDS(ON), Vgs@-1.8V, Ids@-1.5A = 110mΩ

Features 特性

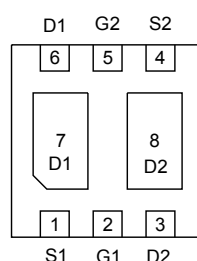
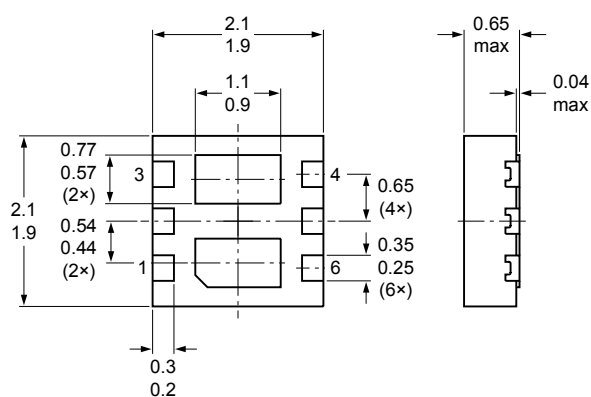
Advanced trench process technology 高级的加工技术

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

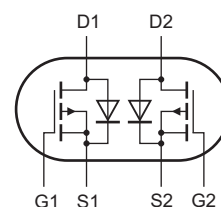
High Power and Current handling capability 大功率高电流

Ideal for Li ion battery pack applications 锂电池的理想选择

Package Dimensions 封装尺寸及外形图



Transparent top view
DFN2*2-6



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

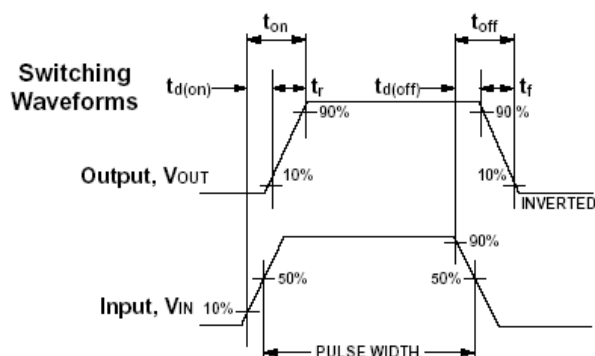
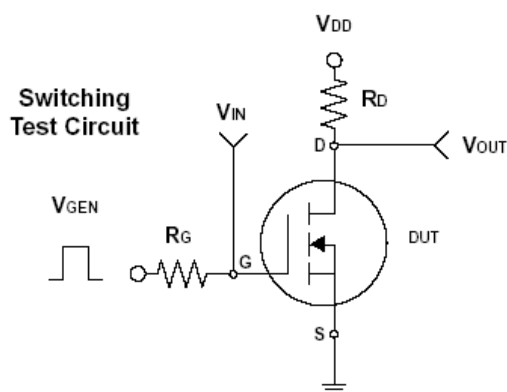
Parameter 极限参数	Symbol 符号	Limit 范围	Unit 单位
Drain-Source Voltage 漏源电压	V _{DS}	-20	V
Gate-Source Voltage 栅源电压	V _{GS}	±12	
Continuous Drain Current 连续漏极电流	I _D	-4.5	A
Pulsed Drain Current 脉冲漏极电流	I _{DM}	-14	
Maximum Power Dissipation 最大耗散功率	P _D	0.8	W
		0.5	
Operating Junction and Storage Temperature Range 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

Device mounted on an FR4 PCB, single-sided copper, tin-plated and mounting pad for drain 6 cm², t ≤ 5 s.

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	-20	-	-	V
Drain-Source On-State Resistance 漏源导通电阻	R _{DS(on)}	V _{GS} = -4.5V, I _D = -3.4A		55.0	70.0	mΩ mΩ
Drain-Source On-State Resistance 漏源导通电阻	R _{DS(on)}	V _{GS} = -2.5V, I _D = -1.6A		78.0	90.0	
Drain-Source On-State Resistance 漏源导通电阻	R _{DS(on)}	V _{GS} = -1.8V, I _D = -1.5A		110	135	
Gate Threshold Voltage 开启电压	V _{GS(th)}	V _{DS} =V _{GS} , I _D = 250uA	-0.48	-0.65	-0.90	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} = ± 12V, V _{DS} = 0V			±100	nA
Forward Transconductance 正向跨导	g _{fs}	V _{DS} = -10V, I _D = 3.4A		15		S
Dynamic 动态参数						
Total Gate Charge 栅极总电荷	Q _g	V _{DS} = -10V, I _D = 3.4A V _{GS} = -5.0V		16.5		nC
Gate-Source Charge 栅-源极电荷	Q _{gs}			1		
Gate-Drain Charge 栅-漏极电荷	Q _{gd}			1.65		
Turn-On Delay Time 导通延迟时间	t _{d(on)}	V _{DS} = -10V, R _G = 6Ω I _D = 1A, V _{GS} = 4.5V		8		ns
Turn-On Rise Time 导通上升时间	t _r			15		
Turn-Off Delay Time 关断延迟时间	t _{d(off)}			40		
Turn-Off Fall Time 关断下降时间	t _f			16		
Input Capacitance 输入电容	C _{iss}	V _{DS} =-10V, V _{GS} = 0V f = 1.0 MHz		785		pF
Output Capacitance 输出电容	C _{oss}			80		
Reverse Transfer Capacitance 反向传输电容	C _{rss}			64		
Source-Drain Diode 源漏二极管参数						
Max. Diode Forward Current 最大正向电流	I _S				-1.2	A
Diode Forward Voltage 正向电压	V _{SD}	I _S = -1.2 A, V _{GS} = 0V			-1.2	V

Note: Pulse test: pulse width ≤ 300μs, duty cycle ≤ 2% 注意：脉冲测试：脉冲宽度 ≤ 300μs 死区 ≤ 2%



TYPICAL ELECTRICAL AND THERMAL CHARACTERISTICS

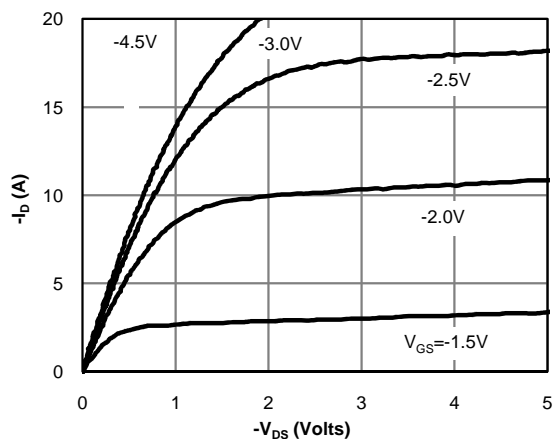


Fig 1: On-Region Characteristics

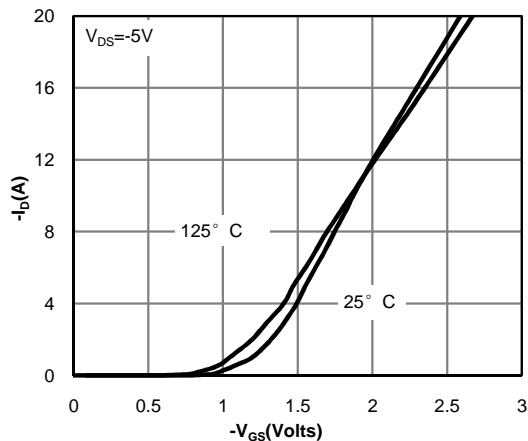


Figure 2: Transfer Characteristics

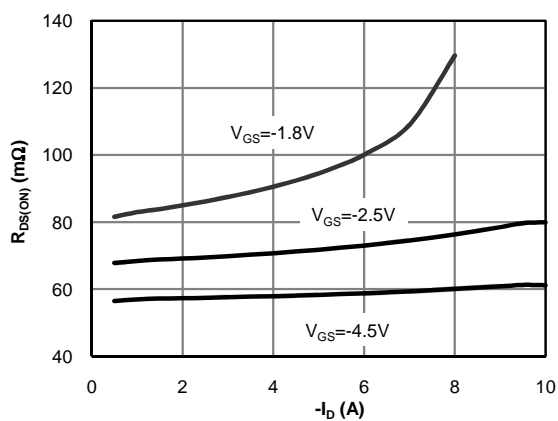


Figure 3: On-Resistance vs. Drain Current and Gate Voltage

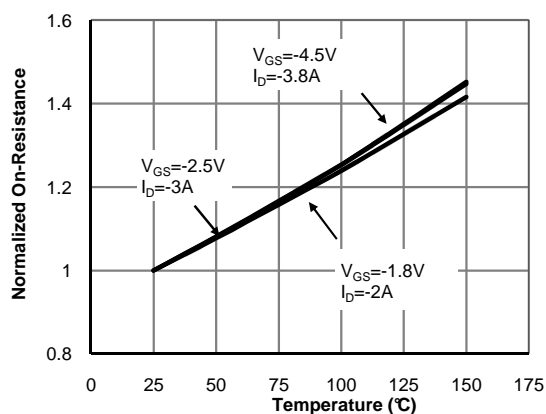


Figure 4: On-Resistance vs. Junction Temperature

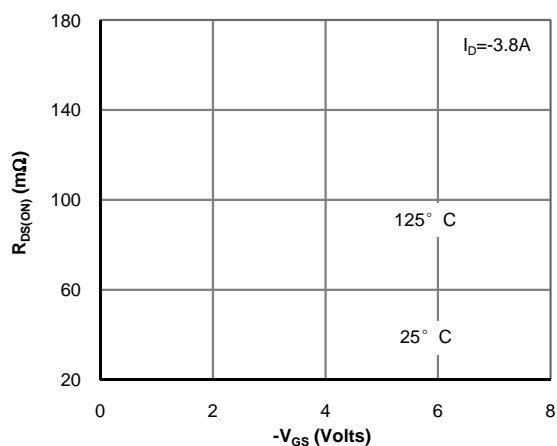


Figure 5: On-Resistance vs. Gate-Source Voltage

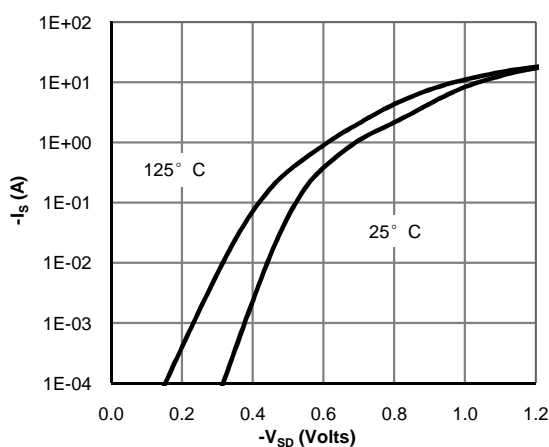


Figure 6: Body-Diode Characteristics