

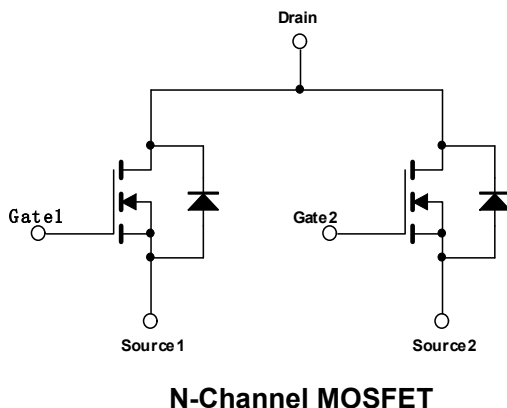
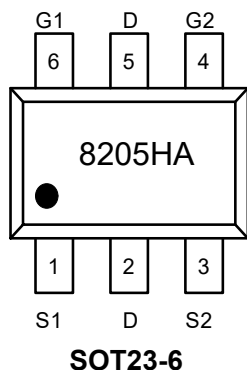
20V N-Channel Enhancement-Mode MOSFET

$R_{DS(ON)}, V_{GS}@2.5V, I_{DS}@3.0A = 25m\Omega$

$R_{DS(ON)}, V_{GS}@4.5V, I_{DS}@4.0A = 20m\Omega$

特点

- 专有的先进平面技术
- 高密度超低电阻设计
- 大功率、大电流应用
- 理想的锂电池应用
- 封装形式：SOT23-6



最大额定值和热特性 (Ta = 25℃，除非另有说明。)

参数		符号	值	单位
漏源电压		V_{DS}	20	V
栅源电压		V_{GS}	± 12	
漏极电流		I_D	6	A
漏极脉冲电流		I_{DM}	18	
最大功耗	TA = 25℃	P_D	1.98	W
	TA = 75℃		1.28	
工作结温和存储温度范围		T_J, T_{stg}	-55 to 150	℃
结环热阻 (PCB 安装)		$R_{\theta JA}$	61.5	℃/W

注：重复性极限值：脉冲宽度由最高结温限制。

贴片时回流焊炉温请控制在 265℃ 以下。

电特性

参数	符号	测试条件	最小	典型	最大	单位
静电						
漏源击穿电压	BV _{DSS}	V _{GS} = 0V, I _D = 250uA	--	20	--	V
漏源导通内阻	R _{DS(on)}	V _{GS} = 2.5V,I _D = 3.0A	--	25.0	28.0	mΩ
		V _{GS} = 4.5V,I _D = 4.0A		20.0	23.0	
栅极阈值电压	V _{GS(th)}	V _{DS} = V _{GS} , I _D = 250uA	0.4	0.65	0.95	V
栅源短路时漏极电流	I _{DSS}	V _{DS} = 19V, V _{GS} = 0V	--	--	1	uA
漏极短路时截止栅电流	I _{GSS}	V _{GS} = ±12V, I _D =0uA	--	--	±100	nA
跨导	g _{fs}	V _{DS} = 10V, I _D = 6.0A	--	25	--	S
动态						
总栅极电荷	Q _g	V _{DS} = 10V,I _D = 6A V _{GS} = 4.5V		7.49	8.50	nC
栅源电荷	Q _{gs}			2.48	2.96	
栅漏电荷	Q _{gd}			2.04	2.65	
延迟时间（On）	t _{d(on)}	V _{DD} = 10V,I _D = 6A I _D = 1A,V _{GS} = 4.5V		17.5	29.8	ns
上升时间（On）	t _r			28.5	38.2	
延迟时间（Off）	t _{d(off)}			41.2	59.6	
下降时间（Off）	t _f			10.4	26.3	
输入电容	C _{iss}	V _{DS} = 10V, V _{GS} = 0V f=1.0MHz	--	492	--	pF
输出电容	C _{oss}		--	54	--	
反向传输电容	C _{rss}		--	7	--	
漏源二极管						
二极管最大正向电流	I _S	--	--	--	2.0	A
二极管正向电压	V _{SD}	I _S = 1.7A, V _{GS} = 0V	--	--	1.2	V

注：脉冲测试：脉冲宽度≤300us，占空比≤2%

Typical Performance Characteristics

Figure1: On-Region Characteristics

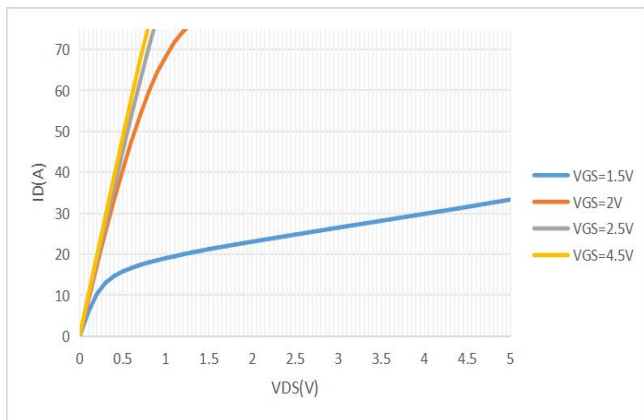


Figure 2: Transfer Characteristics

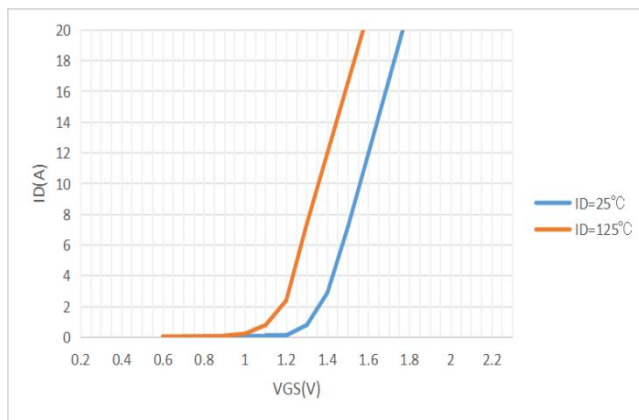


Figure 3: On-resistance vs. Drain Current and Gate Voltage

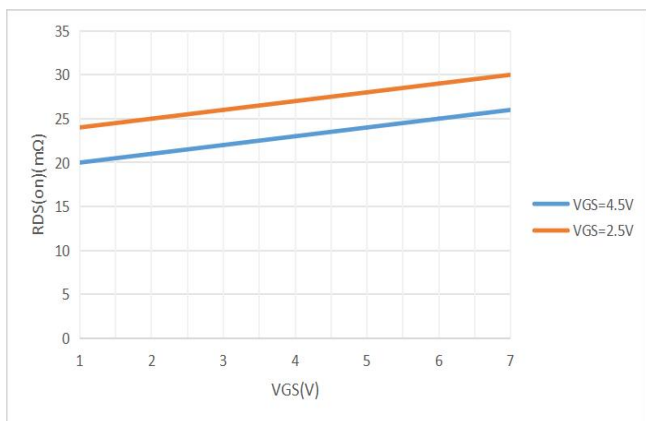


Figure 4: On-Resistance vs. Gate-Source Voltage

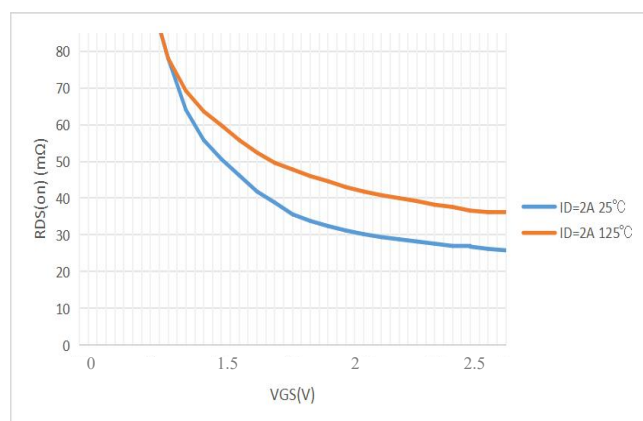


Figure 5: On-Resistance vs. Junction Temperature

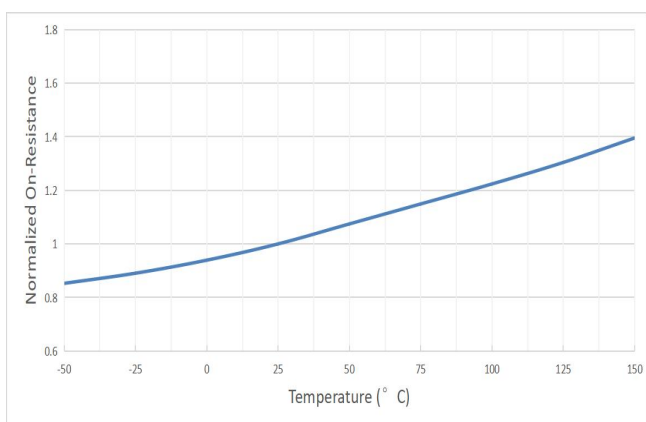
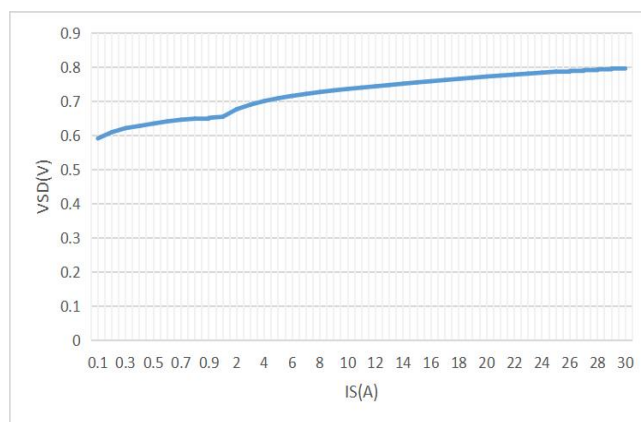


Figure 6: Body-Diode Characteristics



Typical Performance Characteristics

Figure7: Capacitance Characteristics C(pF)

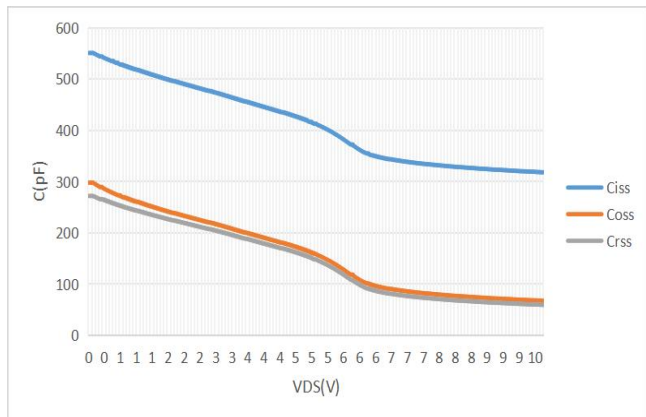


Figure 8: Gate-Charge Characteristics

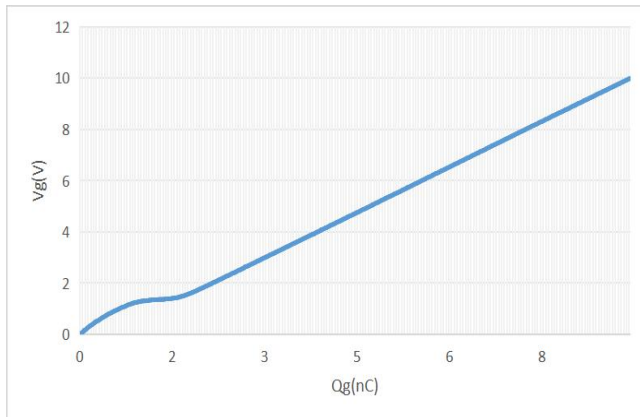
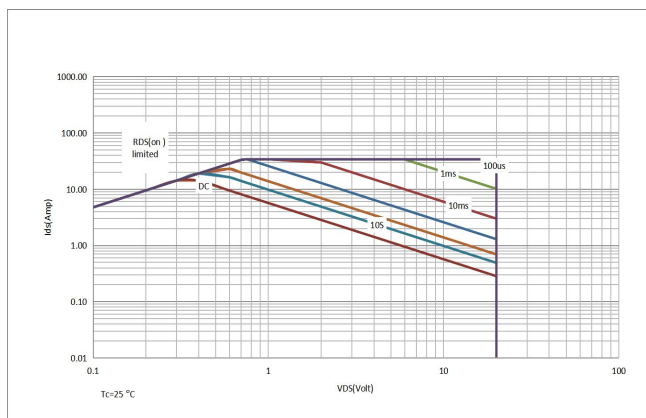
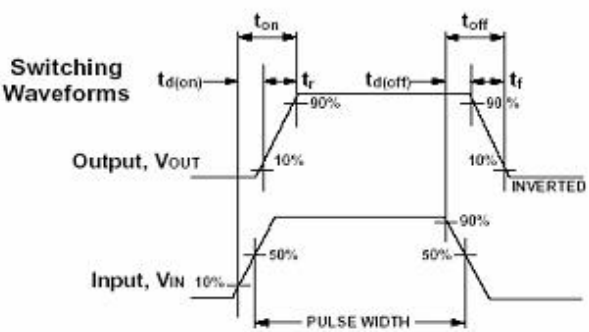
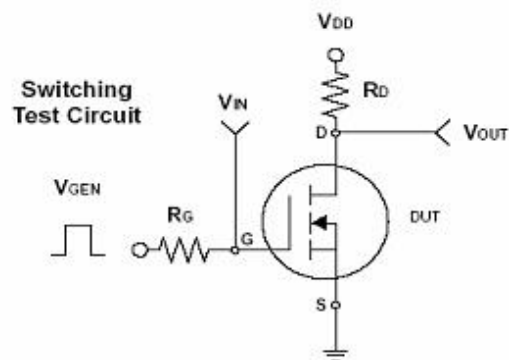


Figure9: Maximum Forward Biased Safe Operating Area

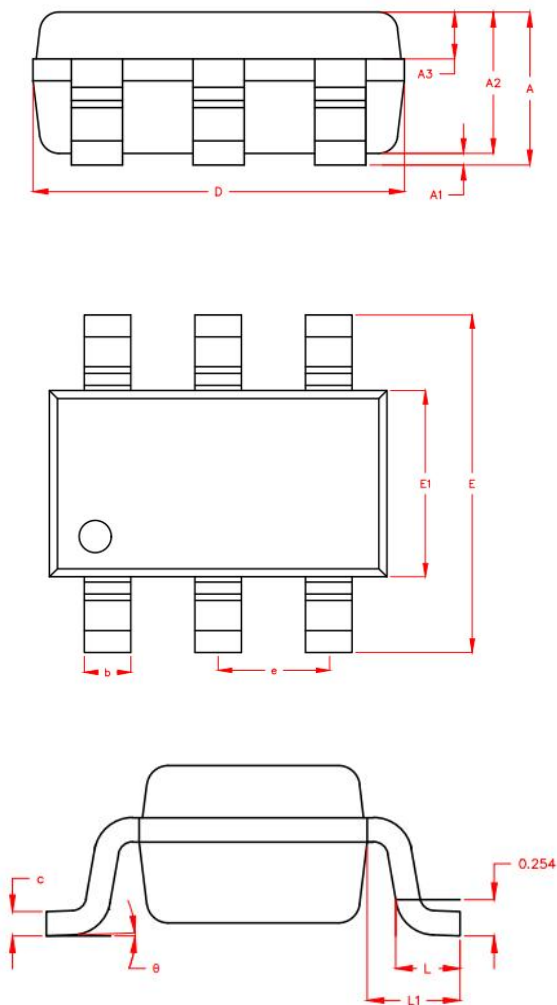


Test Circuit



封装信息

SOT23-6



SYMBOL	MILLIMETER		
	MIN	NOM	MAX
A	1.14	1.19	1.24
A1	0	0.05	0.15
A2	1.05	1.10	1.15
A3	0.28	0.30	0.32
b	0.35	0.40	0.45
c	0.12	0.17	0.22
D	2.85	2.90	2.95
E	2.85	2.95	3.05
E1	1.55	1.60	1.65
e	0.95BSC		
L	0.30	0.45	0.60
L1	0.65BSC		
θ	0°	2°	8°