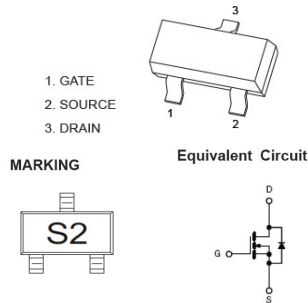


**SOT-23****特征 Features**

- TrenchFET Power MOSFET
- Load Switch for Portable Devices.
- DC/DC Converter.

**机械数据 Mechanical Data**

- 封装: SOT-23 封装 SOT-23 Small Outline Plastic Package.
- 环氧树脂 UL 易燃等级 Epoxy UL: 94V-0.
- 安装位置: 任意 Mounting Position: Any.

极限值和温度特性(TA = 25°C 除非另有规定)

**Maximum Ratings & Thermal Characteristics** (Ratings at 25°C ambient temperature unless otherwise specified.)

参数 Parameters	符号 Symbol	数值 Value	单位 Unit
Drain-Source Voltage	V <sub>DS</sub>	20	V
Gate-Source Voltage	V <sub>GS</sub>	±8	V
Continuous Drain Current	I <sub>D</sub>	3.2	A
Continuous Source-Drain Diode Current	I <sub>S</sub>	0.6	
Maximum Power Dissipation(note1)	P <sub>D</sub>	1250	mW
Junction Temperature	T <sub>J</sub>	150	°C
Storage Temperature	T <sub>stg</sub>	-50-+150	°C
Thermal Resistance From Junction to Ambient	R <sub>θJA</sub>	100	°C/W

Note 1: Surface-mounted on FR4 board using 1 in sq pad size(Cu area=1.127 in sq[1 oz] including traces).

电特性 (TA = 25°C 除非另有规定)

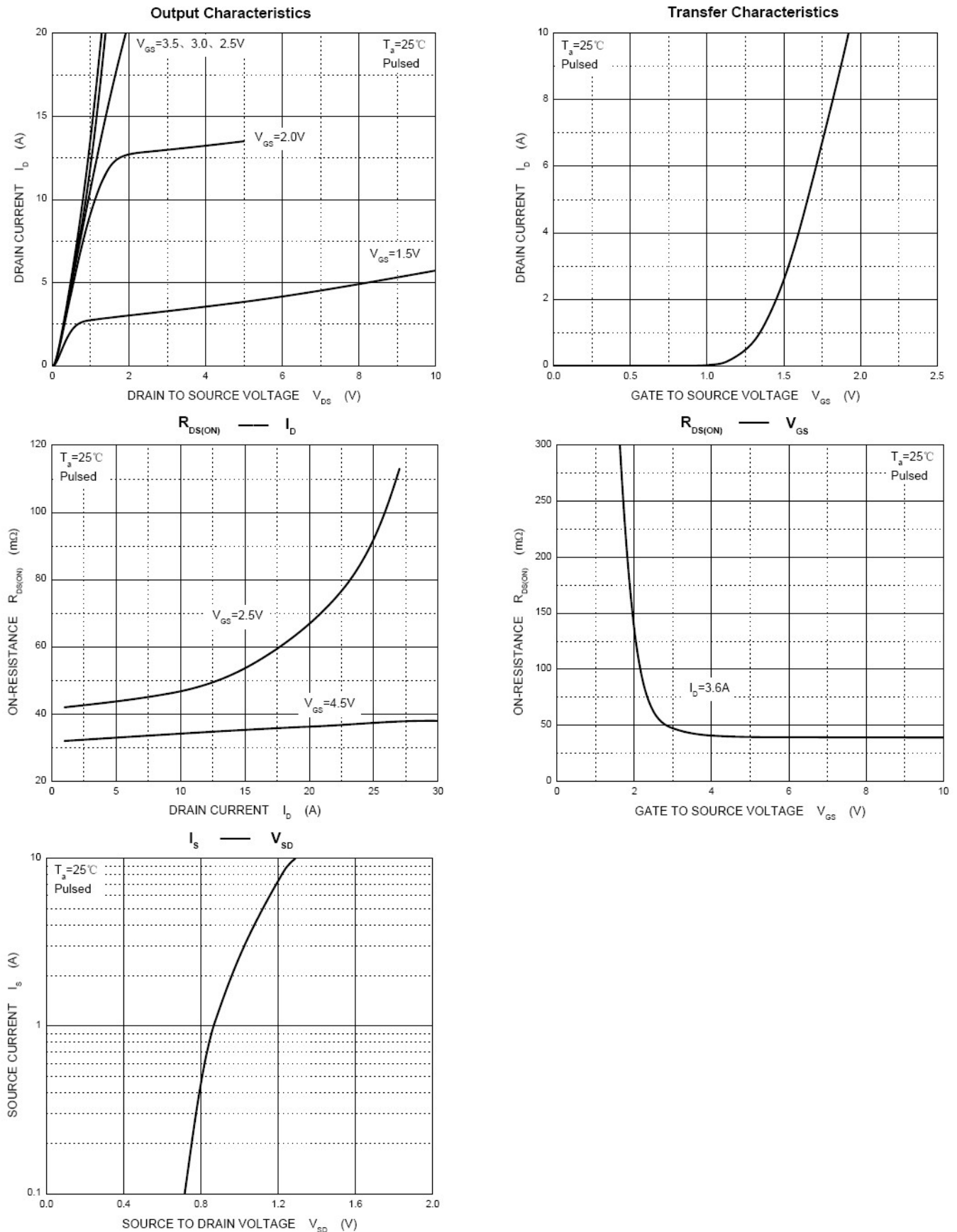
**Electrical Characteristics** (Ratings at 25°C ambient temperature unless otherwise specified.)

参数 Parameter	符号 Symbols	测试条件 Test Condition	界限 Limits			单位 Unit
			Min	Typ	Max	
<b>Static</b>						
Drain-Source Breakdown Voltage	V(BR)DSS	V <sub>GS</sub> =0V, I <sub>D</sub> =10uA	20			V
Gate-Threshold voltage*	V <sub>GS(th)</sub>	V <sub>DS</sub> =V <sub>GS</sub> , I <sub>D</sub> =50uA	0.60	0.95	1.2	V
Gate-body Leakage	I <sub>GSS</sub>	V <sub>DS</sub> =0V, V <sub>GS</sub> =±8V			±100	nA
Zero Gate Voltage Drain current	I <sub>DSS</sub>	V <sub>DS</sub> =20V, V <sub>GS</sub> =0V			1.5	uA
Drain-Source On-Resistance (a)	R <sub>DSON</sub>	V <sub>GS</sub> =4.5V, I <sub>D</sub> =3.6A	70	80		mΩ
		V <sub>GS</sub> =2.5V, I <sub>C</sub> =3.1A	85	115		
Forward trans conductance (a)	g <sub>fs</sub>	V <sub>DS</sub> =5V, I <sub>D</sub> =3.6A	8			S
Diode forward voltage	V <sub>SD</sub>	I <sub>S</sub> =0.94A, V <sub>GS</sub> =0V		0.76	1.2	V
<b>Dynamic</b>						
Input capacitance(b)	C <sub>iss</sub>	V <sub>DS</sub> =10V, V <sub>GS</sub> =0V, f=1MHz		300		pF
Output capacitance(b)	C <sub>oss</sub>			120		
Reverse Transfer capacitance(b)	C <sub>rss</sub>			80		
Total gate charge	Q <sub>g</sub>	V <sub>DS</sub> =10V, V <sub>GS</sub> =4.5V, I <sub>D</sub> =3.6A		4.0	10	nC
Gate-source charge	Q <sub>gs</sub>			0.65		
Gate-drain charge	Q <sub>gd</sub>			1.5		
<b>Switching (b)</b>						
Turn-on Time	td(on)	V <sub>DD</sub> =10V, R <sub>L</sub> =5.5Ω, V <sub>GEN</sub> =4.5V, I <sub>D</sub> ≈3.6A, R <sub>G</sub> =6Ω		7	15	ns
Rise time	tr			55	80	
Turn-off Time	td(off)			16	60	
Fall time	tf			10	25	

Notes: a. Pulse Test: Pulse Width ≤300us, Duty Cycle≤2%.

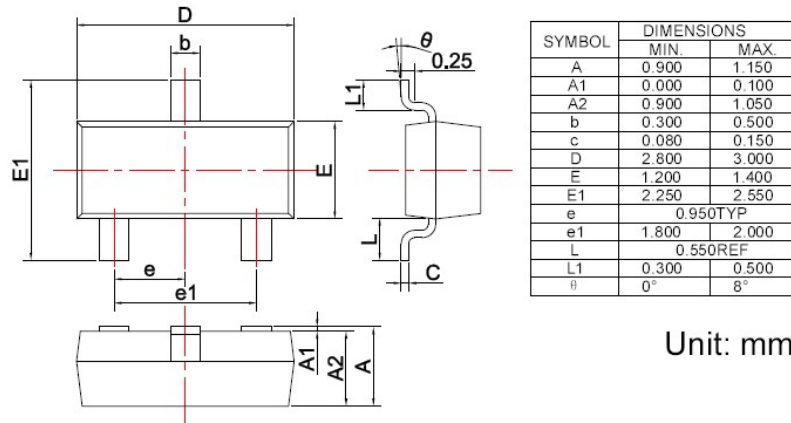


## Typical characteristics



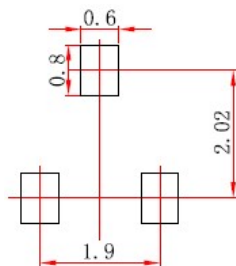


### SOT-23 Package Information



#### 焊盘设计参考 Precautions: PCB Design

Recommended land dimensions for SOT-23 diode. Electrode patterns for PCBs



- Note:
1. Controlling dimension: In millimeters.
  2. General tolerance: ± 0.05mm.
  3. The pad layout is for reference purposes only.

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