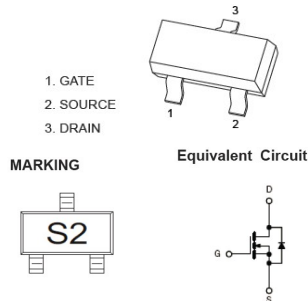


**SOT-23****特征 Features**

- 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 _{DS}	20	V
Gate-Source Voltage	V _{GS}	±8	V
Continuous Drain Current	I _D	3.2	A
Continuous Source-Drain Diode Current	I _S	0.6	
Maximum Power Dissipation(note1)	P _D	1250	mW
Junction Temperature	T _J	150	°C
Storage Temperature	T _{stg}	-50-+150	°C
Thermal Resistance From Junction to Ambient	R _{θJA}	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.)

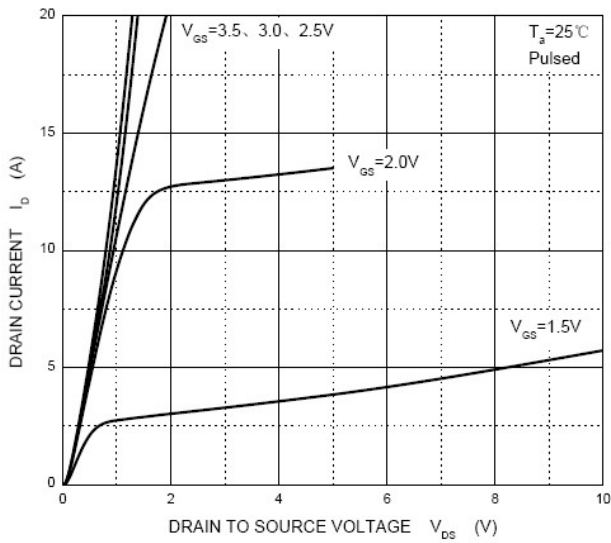
参数 Parameter	符号 Symbols	测试条件 Test Condition	界限 Limits			单位 Unit
			Min	Typ	Max	
Static						
Drain-Source Breakdown Voltage	V(BR)DSS	V _{GS} =0V, I _D =10μA	20			V
Gate-Threshold voltage*	V _{GS(th)}	V _{DS} =V _{GS} , I _D =50μA	0.60	0.95	1.2	V
Gate-body Leakage	I _{GSS}	V _{DS} =0V, V _{GS} =±8V			±100	nA
Zero Gate Voltage Drain current	I _{DSS}	V _{DS} =20V, V _{GS} =0V			1.5	μA
Drain-Source On-Resistance (a)	R _{DSON}	V _{GS} =4.5V, I _D =3.6A	70	80		mΩ
		V _{GS} =2.5V, I _C =3.1A	85	115		
Forward trans conductance (a)	g _{fs}	V _{DS} =5V, I _D =3.6A	8			S
Diode forward voltage	V _{SD}	I _S =0.94A, V _{GS} =0V		0.76	1.2	V
Dynamic						
Input capacitance(b)	C _{iss}	V _{DS} =10V, V _{GS} =0V, f=1MHz		300		pF
Output capacitance(b)	C _{oss}			120		
Reverse Transfer capacitance(b)	C _{rss}			80		
Total gate charge	Q _g	V _{DS} =10V, V _{GS} =4.5V, I _D =3.6A		4.0	10	nC
Gate-source charge	Q _{gs}			0.65		
Gate-drain charge	Q _{gd}			1.5		
Switching (b)						
Turn-on Time	td(on)	V _{DD} =10V, R _L =5.5Ω, V _{GEN} =4.5V, I _D ≈3.6A, R _G =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%.

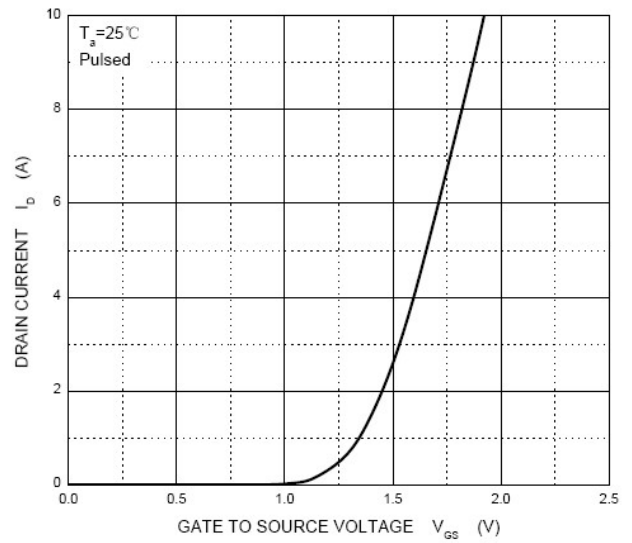


Typical characteristics

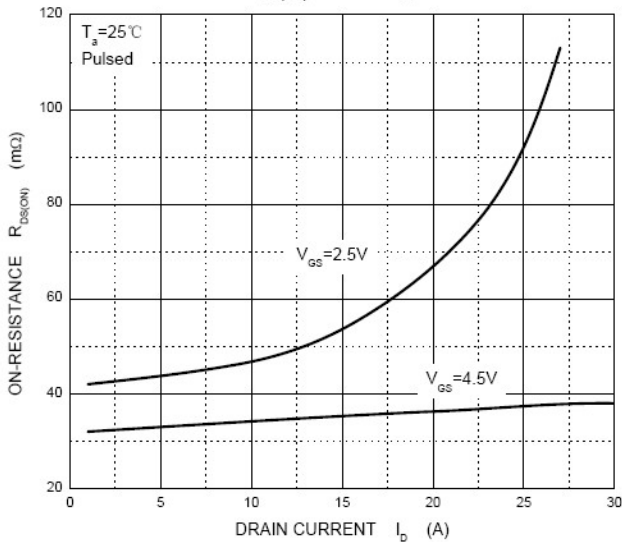
Output Characteristics



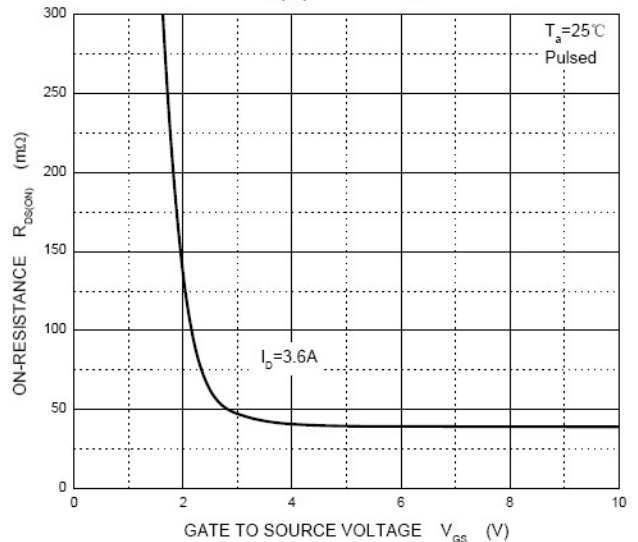
Transfer Characteristics



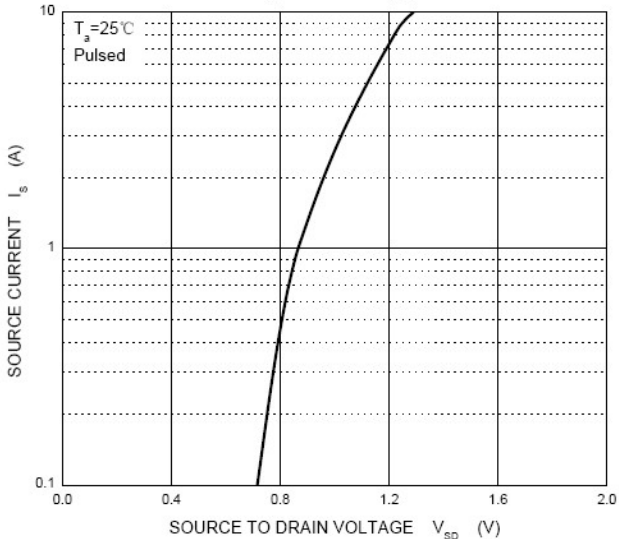
$R_{DS(ON)}$ — I_D



$R_{DS(ON)}$ — V_{GS}

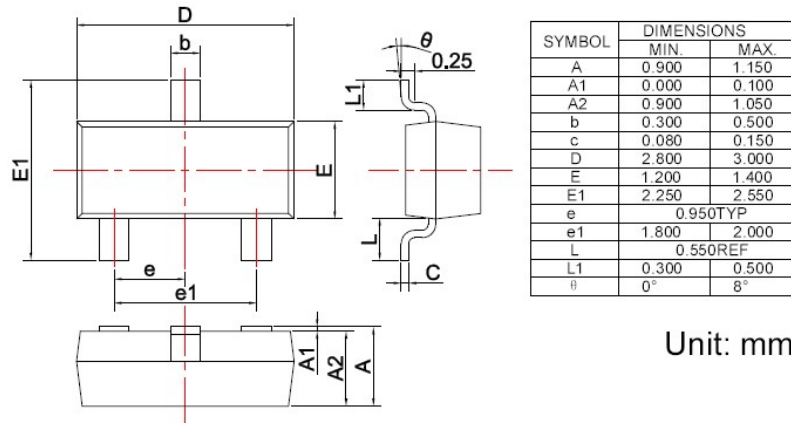


I_S — V_{SD}



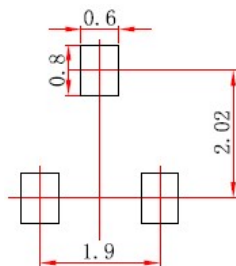


SOT-23 Package Information



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.