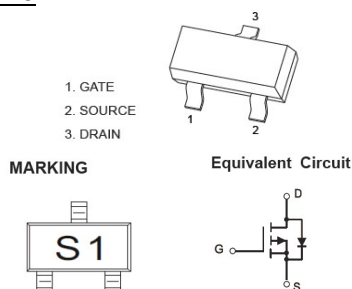


SOT-23



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	A
Pulsed Drain Current	I _{DM}	-10	
Continuous Source-Drain Diode Current	I _S	-0.72	
Power Dissipation	P _D	400	mW
Junction Temperature	T _j	150	°C
Storage Temperature	T _{stg}	-50-+150	°C
Thermal Resistance From Junction to Ambient	R _{θJA}	312.5	°C/W

电特性 (TA = 25°C 除非另有规定)

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

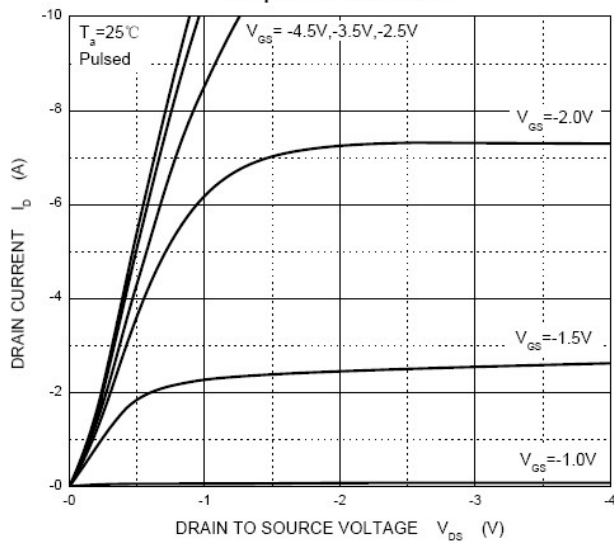
参数 Parameter	符号 Symbols	测试条件 Test Condition	界限 Limits			单位 Unit
			Min	Typ	Max	
Static						
Drain-Source Breakdown Voltage	V(BR)DSS	VGS=0V, ID=-250uA	-20			V
Gate-Threshold voltage	V GS (th)	VDS=VGS, ID=-250uA	-0.4	-0.7	-1.0	V
Gate-body Leakage	IGSS	VDS=0V, VGS=±8V			±100	nA
Zero Gate Voltage Drain current	IDSS	VDS=-20V, VGS=0V			-1	uA
Drain-Source On-Resistance(a)	RDS(ON)	VGS=-4.5V, ID=-2.8A		90	112	mΩ
		VGS=-2.5V, IC=-2A		110	142	
Forward trans conductance(a)	gfs	VDS=-5V, ID=-2.8A		6.5		S
Dynamic(b)						
Input capacitance	Ciss	VDS=-10V, VGS=0V,f=1MHz			405	pF
Output capacitance	Coss				75	
Reverse Transfer capacitance	Crss				55	
Total gate charge	Qg	VDS=-10V, VGS=-4.5V,ID=-3A		5.5	10	nC
Gate-source charge	Qgs	VDS=-10V, VGS=-2.5V,ID=-3A		3.3	6	
Gate-drain charge	Qgd			0.7		
Gate resistance	Rg	F=1MHz		6.0		Ω
Turn-on Time	td(on)	VDD=-10V, RL=10Ω, VGEN=-4.5V, ID=-1A, RG=1Ω		11	20	ns
Rise time	tr			35	60	
Turn-off Time	td(off)			30	50	
Fall time	tf			10	20	
Drain-source body diode characteristics						
Continuous source-drain diode current	IS	Tc=25℃			-3	A
Pulse diode forward current (a)	ISM				-10	
Body diode voltage	VSD	IS=-0.7A,		-0.8	-1.2	V

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

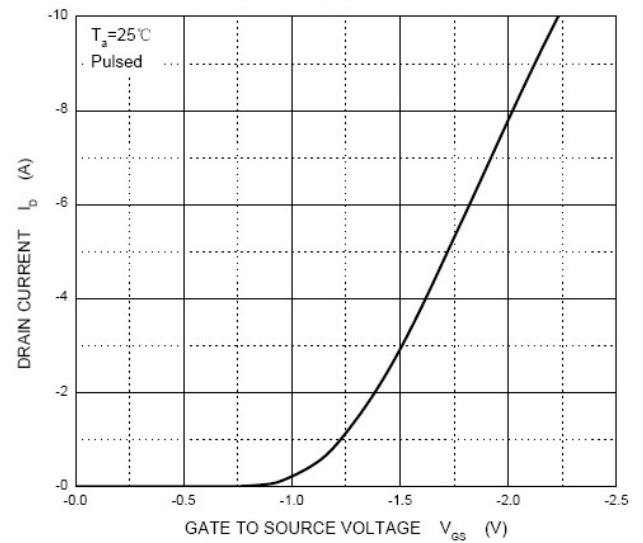
b. Guaranteed by design, not subject to production testing.

Typical characteristics

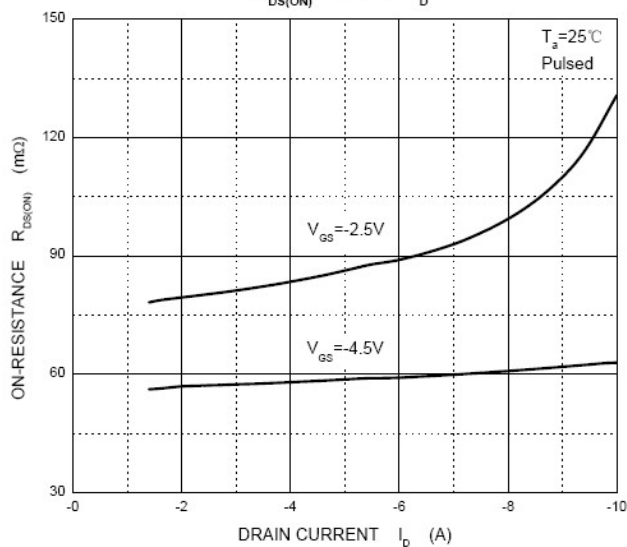
Output Characteristics



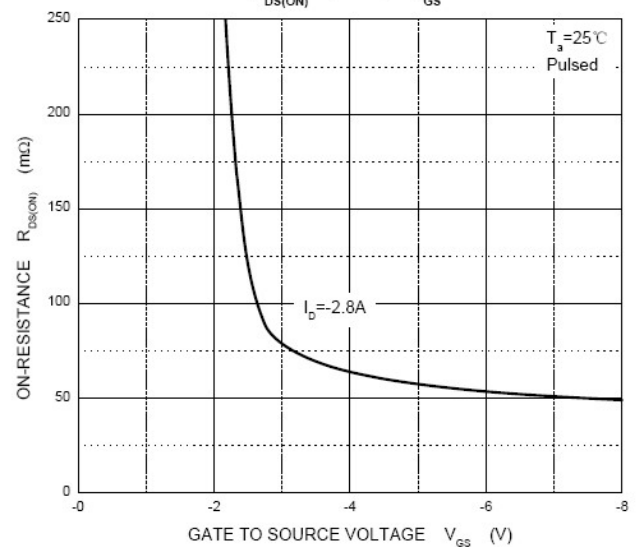
Transfer Characteristics



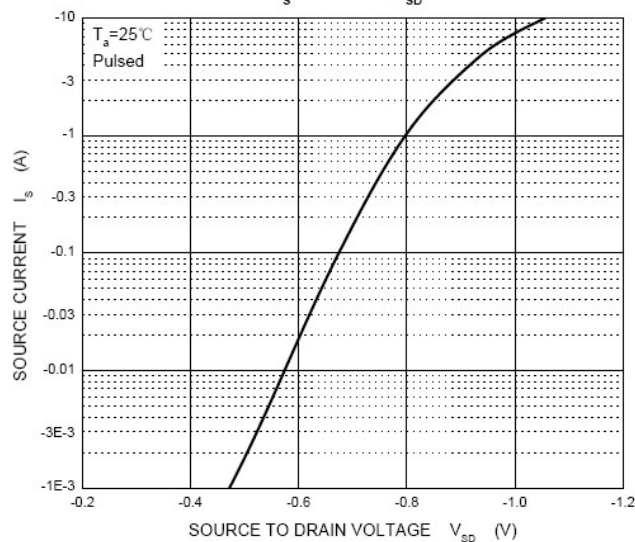
$R_{DS(ON)}$ — I_D



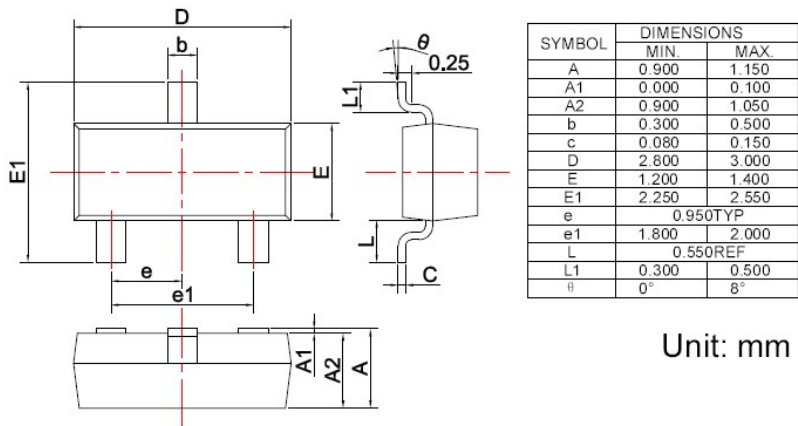
$R_{DS(ON)}$ — V_{GS}



I_S — V_{SD}

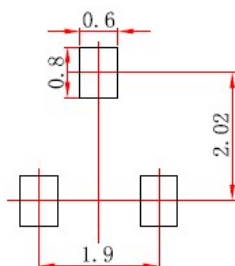


SOT-23 PACKAGE OUTLINE Plastic surface mounted package



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: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.

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