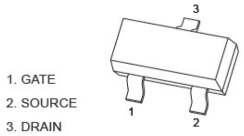
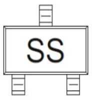
$V_{(BR)DSS}$	$R_{DS(ON)MAX}$	I_D
50V	**3.5Ω@10V** **6Ω@4.5V**	**0.22A**

SOT-23 贴片塑封场效应管
SOT-23 Plastic-Encapsulate MOSFET

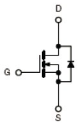
SOT-23



MARKING



Equivalent Circuit



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℃ 除非另有规定)
Maximum Ratings & Thermal Characteristics (Ratings at 25℃ ambient temperature unless otherwise specified.)

参数 Parameters	符号 Symbol	数值 Value	单位 Unit
Drain-Source Voltage	V_{DS}	50	V
Gate-Source Voltage	V_{GS}	±20	V
Continuous Drain Current	I_D	0.22	A
Power Dissipation	P_D	350	mW
Junction Temperature	T_j	150	℃
Storage Temperature	Tstg	-50-+150	℃
Thermal Resistance From Junction to Ambient	$R_{\theta JA}$	357	℃/W

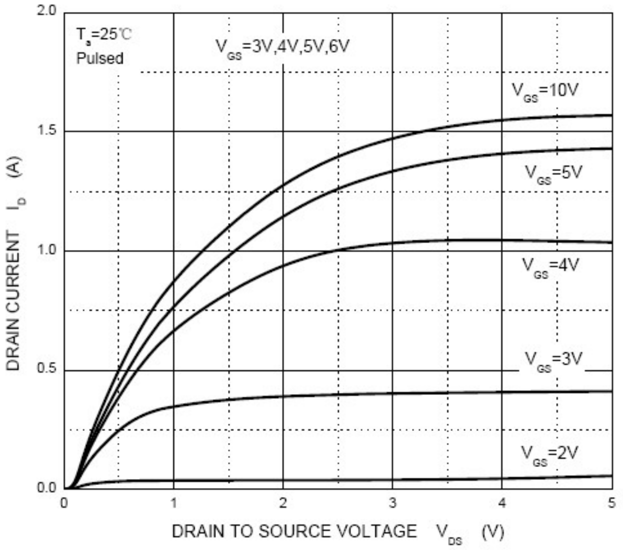
电特性 (TA = 25℃ 除非另有规定)
Electrical Characteristics (Ratings at 25℃ ambient temperature unless otherwise specified).

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=250uA	50			V
Gate-Threshold voltage(note1)	$V_{GS(th)}$	V_{DS}=V_{GS}, I_D=1mA	0.8		1.5	V
Gate-body Leakage	I_{GSS}	V_{DS}=0V, V_{GS}=±20V			±100	nA
Zero Gate Voltage Drain current	I_{DSS}	V_{DS}=50V, V_{GS}=0V			0.5	uA
		V_{DS}=30V, V_{GS}=0V			0.1	
Drain-Source On-Resistance (note1)	$R_{DS(ON)}$	V_{GS}=10V, I_D=0.22A			3.5	Ω
		V_{GS}=4.5V, I_C=0.22A			6	
Forward trans conductance (note1)	gfs	V_{DS}=10V, I_D=0.22A	0.12			S
Diode forward voltage(note1)	V_{SD}	I_S=0.44A, V_{GS}=0V			1.4	V
Dynamic(note2)						
Input capacitance	**Ciss**	V_{DS}=25V, V_{GS}=0V,f=1MHz		27		pF
Output capacitance	**Coss**			13		
Reverse Transfer capacitance	**Crss**			6		
Switching(note1,2)						
Turn-on Time	**td(on)**	V_{DD}=30V, R_{GEN}=6Ω, V_{DS}=10V, I_D≈0.29A,			5	ns
Rise time	**tr**				18	
Turn-off Time	**td(off)**				36	
Fall time	**tf**				14	

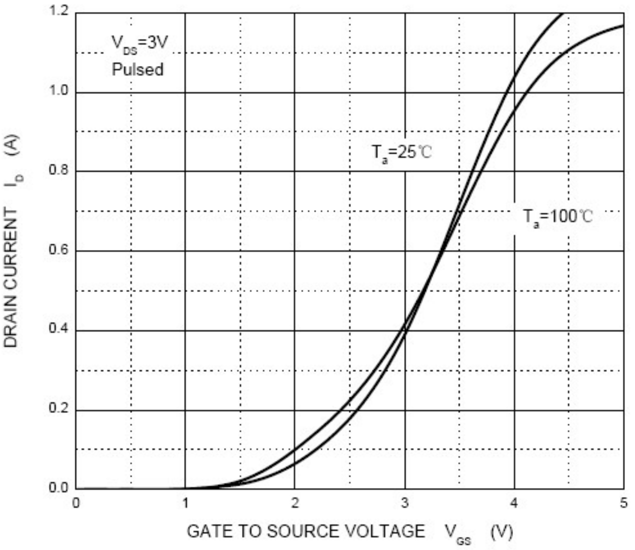
Notes: a. Pulse Test: Pulse Width ≤300us, Duty Cycle≤2%.
b. These parameters have no way to verify.

Typical characteristics

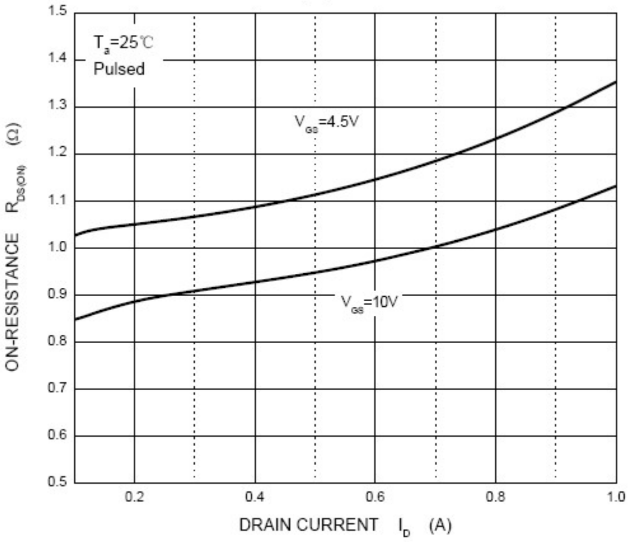
Output Characteristics



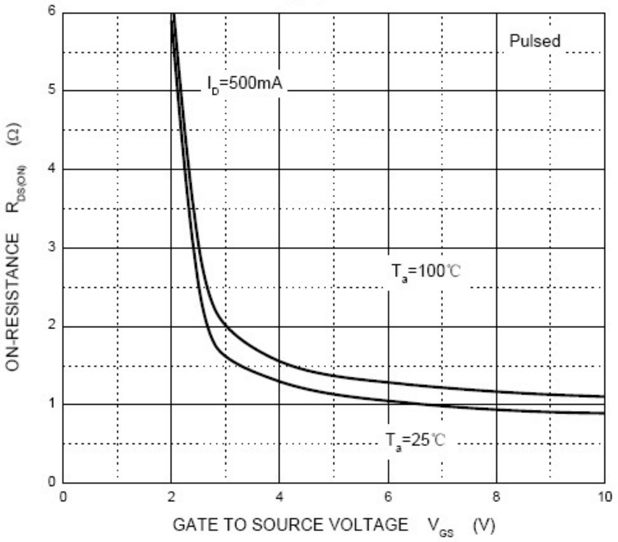
Transfer Characteristics



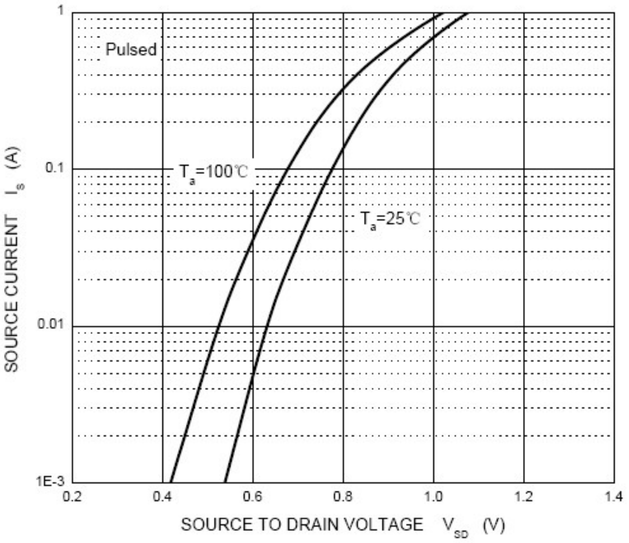
$R_{DS(ON)}$ —— I_D



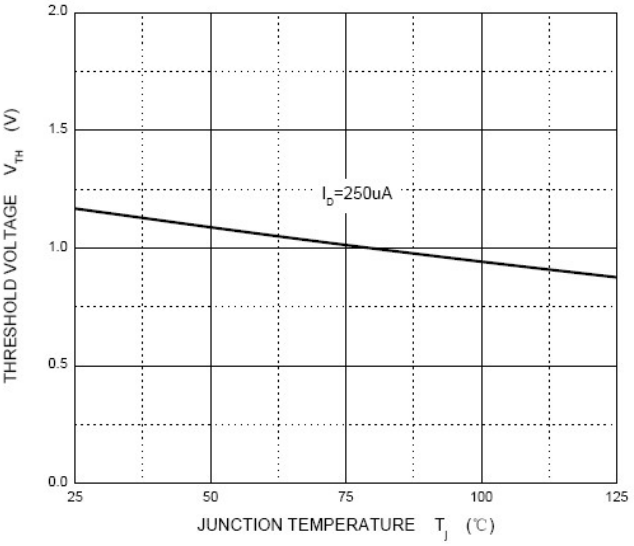
$R_{DS(ON)}$ —— V_{GS}



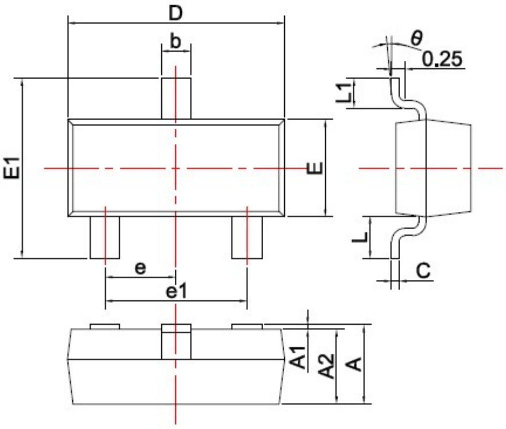
I_S —— V_{SD}



Threshold Voltage



SOT-23 PACKAGE OUTLINE **Plastic surface mounted package**

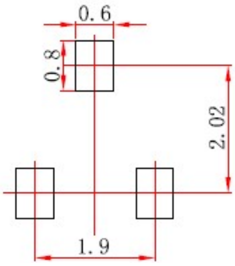


SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	0.900	1.150
A1	0.000	0.100
A2	0.900	1.050
b	0.300	0.500
c	0.080	0.150
D	2.800	3.000
E	1.200	1.400
E1	2.250	2.550
e	0.950TYP	
e1	1.800	2.000
L	0.550REF	
L1	0.300	0.500
θ	0°	8°

Unit: mm

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.