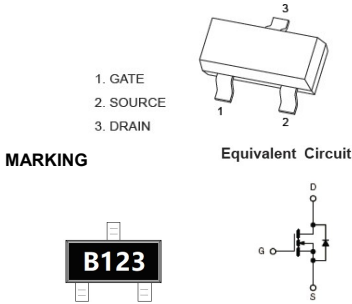




V(BR)DSS	RDS(ON)MAX	ID
100V	6Ω@10V	0.17A
	10Ω@4.5V	

SOT-23



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

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}	100	V
Drain-Source Voltage R _{Gs} ≤ 20K Ω	V _{DRG}	100	V
Gate-Source Voltage	V _{GS}	±20	V
Continuous Drain Current (note1)	I _D	0.17	A
Pulsed Drain Current (tp=10us)	I _{DM}	0.68	A
Power Dissipation	P _D	350	mW
Junction Temperature	T _j	150	°C
Storage Temperature	T _{stg}	-50-+150	°C
Thermal Resistance From Junction to Ambient (note1)	R _{θJA}	357	°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	V _{GS} =0V, I _D =250uA	100			V
Gate-Threshold voltage(note2)	V _{GS(th)}	V _{DS} =V _{GS} , I _D =250uA	1.0	1.6	2.8	V
Gate-body Leakage	I _{GSS}	V _{DS} =0V, V _{GS} =±20V			±50	nA
Zero Gate Voltage Drain current	I _{DSS}	V _{DS} =100V, V _{GS} =0V			1.00	uA
		V _{DS} =20V, V _{GS} =0V			0.01	
Drain-Source On-Resistance (note2)	R _{DS(ON)}	V _{GS} =10V, I _D =0.17A			6	Ω
		V _{GS} =4.5V, I _C =0.17A			10	
Forward trans conductance (note2)	g _{fs}	V _{DS} =10V, I _D =0.17A	80			mS
Diode forward voltage	V _{SD}	I _S =0.34A, V _{GS} =0V			1.3	V
Dynamic(note4)						
Input capacitance	C _{iss}	V _{DS} =25V, V _{GS} =0V, f=1MHz		29	60	pF
Output capacitance	C _{oss}		10	15		
Reverse Transfer capacitance	C _{rss}		2	6		
Switching(note3,4)						
Turn-on Time	t _{d(on)}	V _{DD} =30V, R _{GEN} =50Ω, V _{GS} =10V, I _D ≈0.28A,			8	ns
Rise time	t _r				8	
Turn-off Time	t _{d(off)}				13	
Fall time	t _f				16	
Total Gage Charge	Q _g	V _{DS} =10V, V _{GS} =10V, I _D =0.22A,		1.4	2	nC
Gate-Source Charge	Q _{gs}		0.15	0.25		
Gate-Drain Charge	Q _{gd}		0.2	0.4		

Notes: 1). Surface mounted on FR4 board using the minimum recommended pad size.

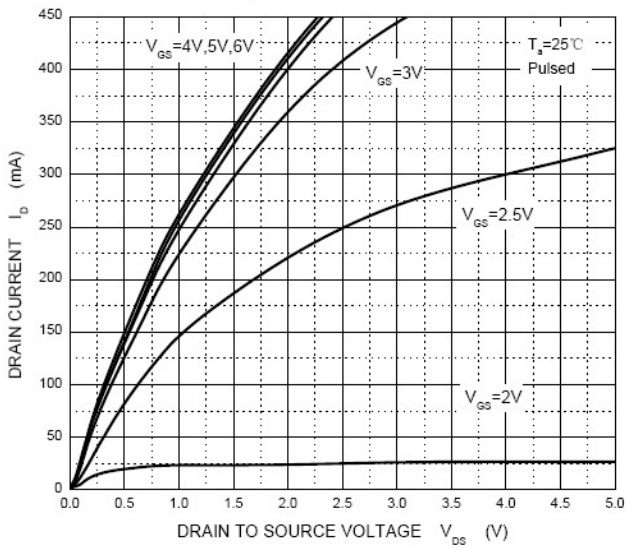
2). Pulse Test: Pulse Width ≤300us, Duty Cycle≤2%.

3). Switching characteristics are independent of operating junction temperature.

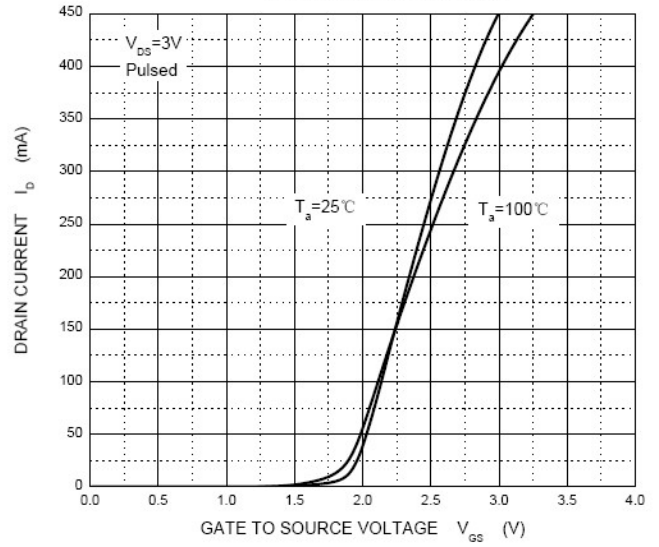


Typical characteristics

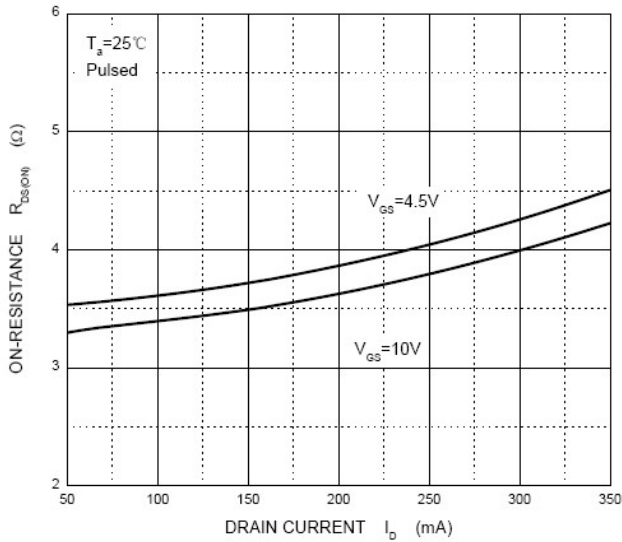
Output Characteristics



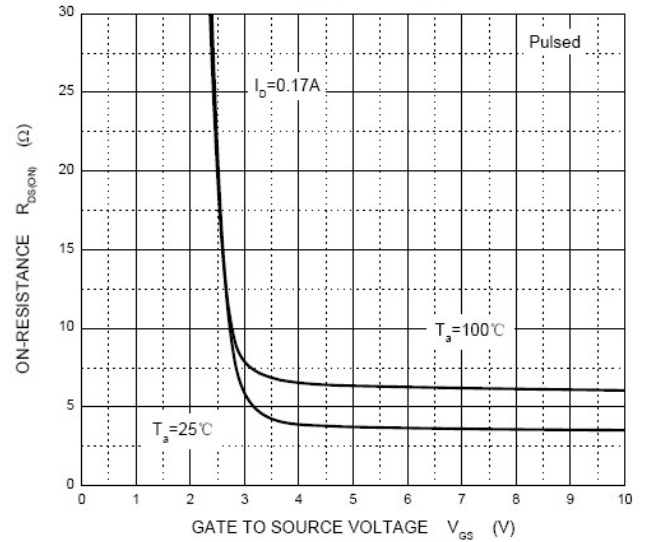
Transfer Characteristics



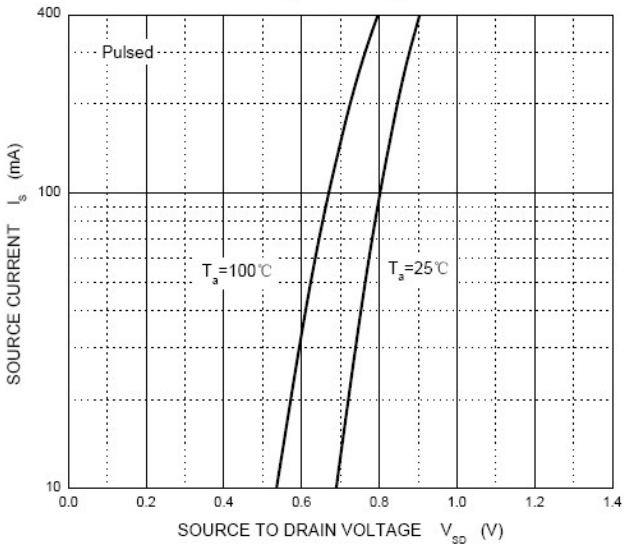
$R_{DS(ON)}$ — I_D



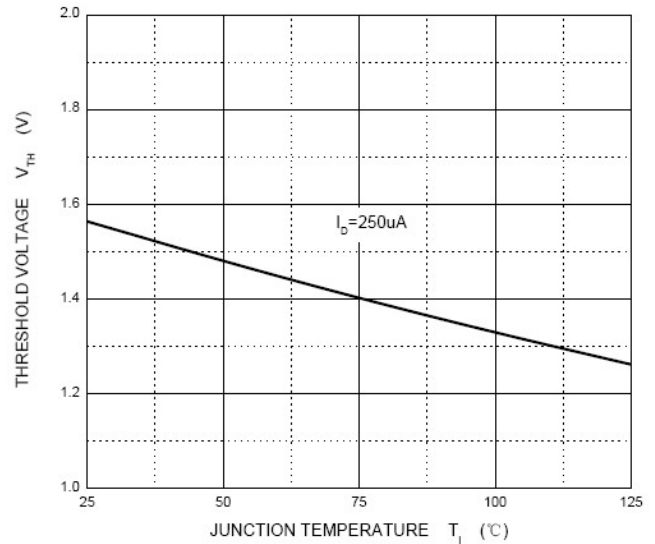
$R_{DS(ON)}$ — V_{GS}



I_S — V_{SD}

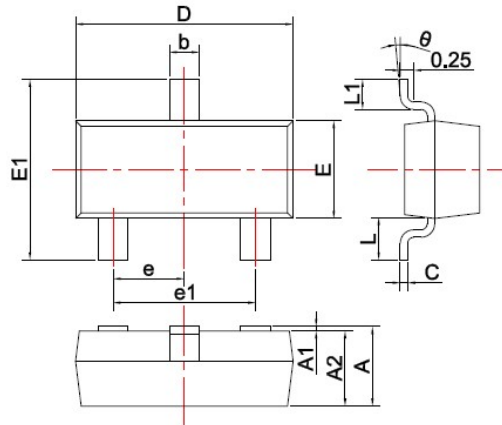


Threshold Voltage





SOT-23 PACKAGE OUTLINE Plastic surface mounted package

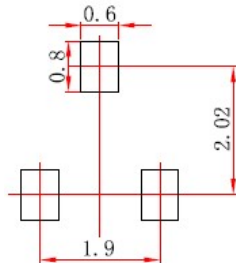


SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	0.900	1.150
A1	0.000	0.100
A2	0.900	1.050
b	0.300	0.500
c	0.080	0.150
D	2.800	3.000
E	1.200	1.400
E1	2.250	2.550
e	0.950TYP	
e1	1.800	2.000
L	0.550REF	
L1	0.300	0.500
θ	0°	8°

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.

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