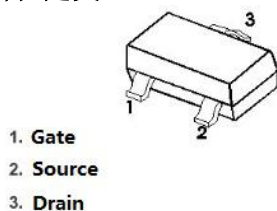


SOT-23

产品特性总结Product Summary	
VDS	50V
RDSON(@VGS= 10V)	<5Ω
RDSON(@VGS= 4.5V)	<6Ω

脚位定义Pin Definition



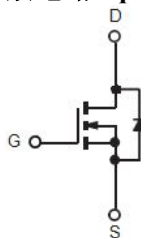
特征Features

- 低导通电阻Low Rds(on)@VGS= 10V
- 无卤、RoHS认证Halogen-free、RoHS Compliant
- 表贴型封装Surface Mount Package

应用Applications

- 继电器驱动 LED Lighting Application
- 通/断开关ON/OFF Switch
- 高速线路驱动 Networking

等效电路Equivalent circuit



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
漏源电压Drain-Source Voltage	VDS	100	V
栅源电压Gate-Source Voltage	VGS	±20	V
漏极连续电流Continuous Drain Current	ID	115	mA
漏极脉冲电流Pulsed Drain Current (note 1)	IDM	460	mA
最大功耗Maximum Power Dissipation	PD	0.3	W
结环热阻Thermal Resistance from Junction to Ambient (note 2)	RθJA	400	℃/W
结温和存储温度Junction and Storage Temperature	TJ、TSTG	-50~+150	℃

电特性 (TA = 25℃ 除非另有规定)

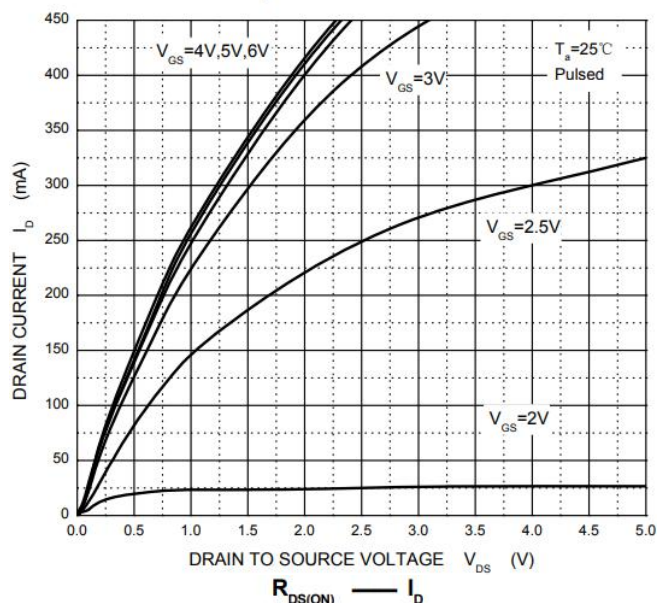
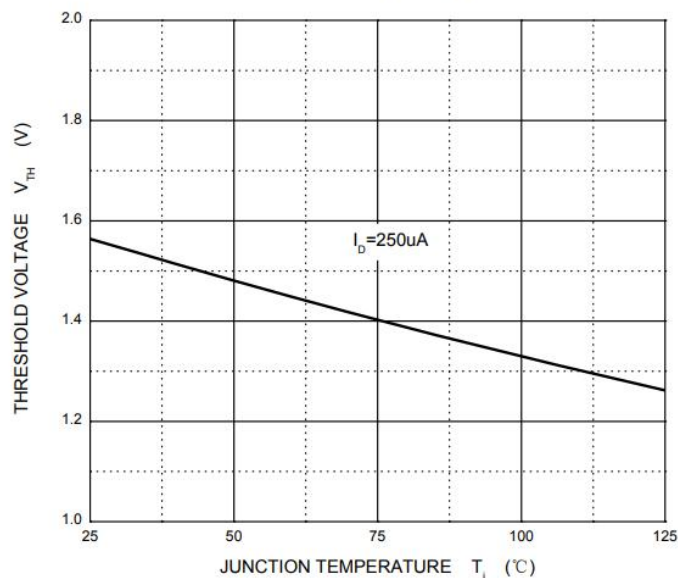
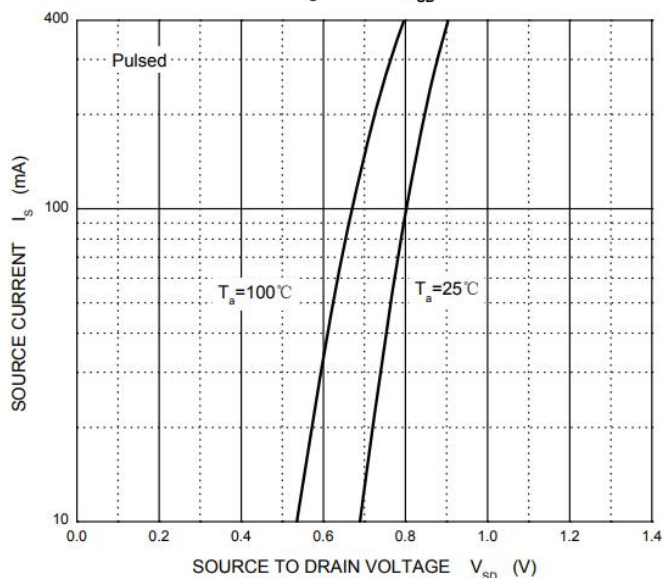
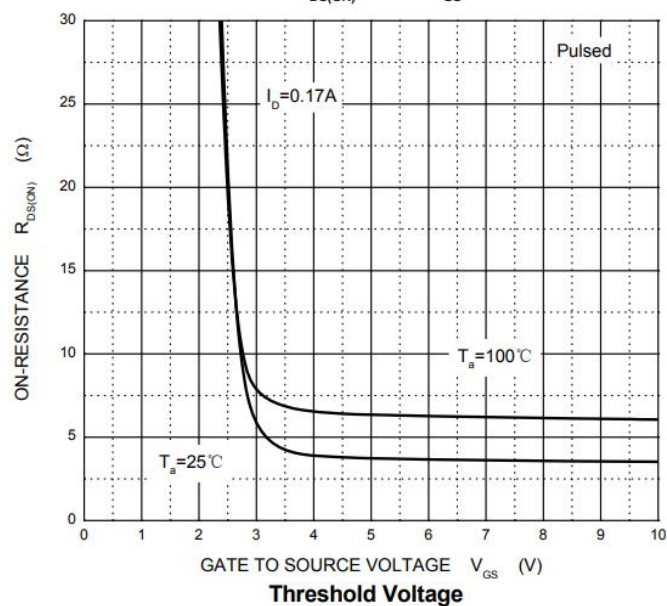
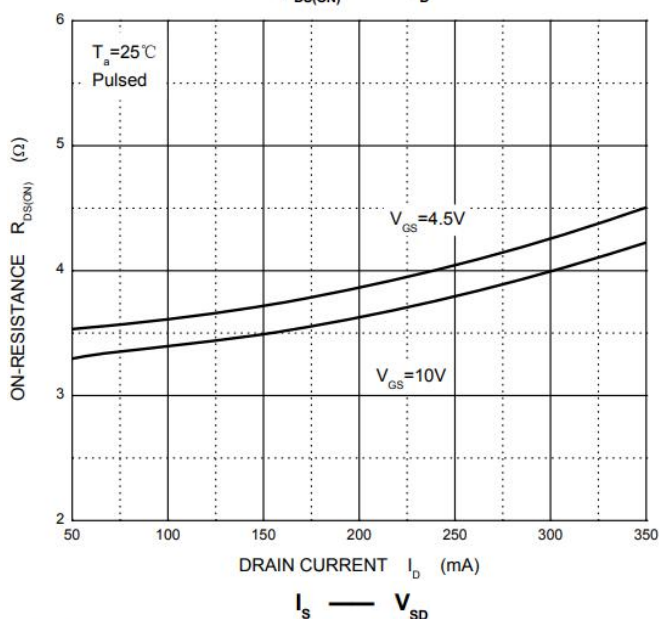
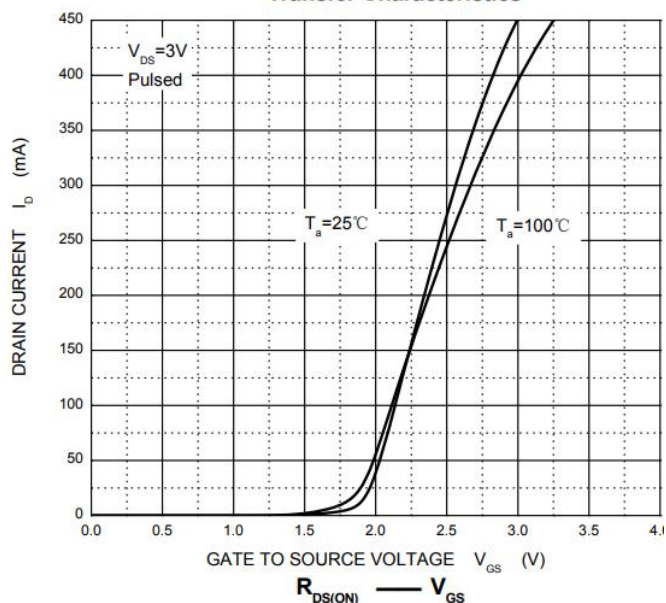
Electrical Characteristics (Ratings at 25℃ ambient temperature unless otherwise specified).

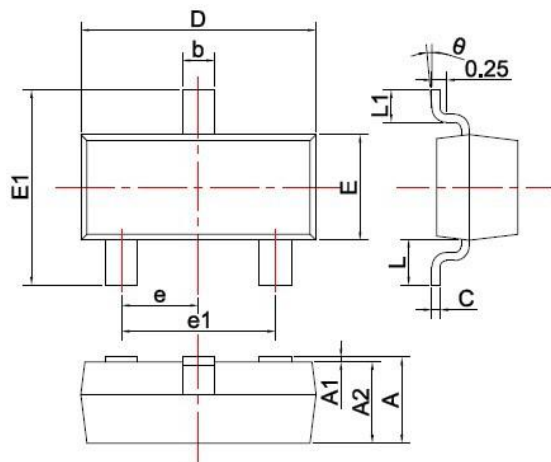
参数 Parameters	符号 Symbol	测试条件 Test Condition	最小值 Min	典型值 Typ	最大值 Max	单位Unit
静态特性Static Characteristics						
漏源击穿电压 Drain-source breakdown voltage	V(BR)DSS	VGS = 0V, ID = 250μA	100	--	--	V
零栅压漏极电流 Zero gate voltage drain current	IDSS	VDS = 100V, VGS = 0V	--	--	1	μA
栅源漏电流Gate-body leakage current	IGSS	VGS = ± 20V, VDS = 0V	--	--	±10	μA
栅源阈值电压 Gate threshold voltage (note 3)	VGS(th)	VDS = VGS, ID = 250μA	1.0	2.0	3.0	V
漏源极导通电阻 Drain-source on-resistance (note 3)	RDS(on)	VGS = 10V, ID = 0.12A	--	3.5	5	Ω
		VGS = 4.5V, ID = 0.1A	--	4	6	Ω
二极管正向电压 Diode forward voltage (note 3)	VSD	IS = 0.2A, VGS = 0V	--	0.85	1.2	V

动态特性Dynamic Characteristics (note4)						
输入电容Input Capacitance	Ciss	VDS= 50V,VGS=0V, f=1MHz	--	31.6	--	pF
输出电容Output Capacitance	Coss		--	1.4	--	pF
反向传输电容 Reverse Transfer Capacitance	Crss		--	1	--	pF
开关特性Switching Characteristics (note 4)						
开启延迟时间Turn-on delay time	td(on)	VDD= 50V,ID= 0.2A,RG= 3.3Ω, VGS= 10V	--	2	--	ns
开启上升沿时间Turn-on rise time	tr		--	3.1	--	ns
关断延迟时间Turn-off delay time	td(off)		--	6.5	--	ns
关断下降沿时间Turn-off fall time	tf		--	15	--	ns
总栅极电荷Total Gate Charge	Qg	VDS= 50V,ID=0.2A, VGS=10V	--	0.54	--	nC
栅源电荷Gate-Source Charge	Qgs		--	0.08	--	nC
栅漏电荷Gate-Drain Charge	Qgd		--	0.18	--	nC

***Notes :**

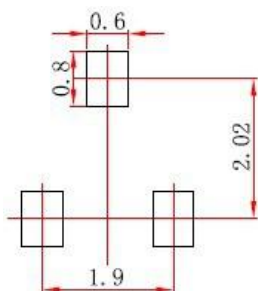
1. Repetitive rating: Pluse width limited by maximum junction temperature
2. Surface Mounted on FR4 board, $t \leq 10$ sec.
3. Pulse test : Pulse width $\leq 300\mu s$, duty cycle $\leq 2\%$.
4. Guaranteed by design, not subject to production.

典型特性曲线 Typical characteristics
Output Characteristics

Transfer Characteristics


封装外形图 SOT-23 Package Outline Dimensions


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

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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