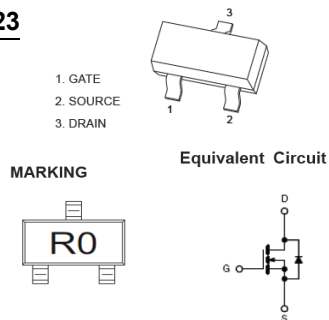


V(BR)DSS	RDS(ON)MAX	ID
30V	35mΩ@10V	5.8A
	40mΩ@4.5V	
	52mΩ@2.5V	

SOT-23



特征 Features

- High dense cell design for extremely low RDS(on).
- Exceptional on-resistance and maximum DC current capability.
- Load/Power Switching.
- Interfacing Switching

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}	30	V
Gate-Source Voltage	V _{GS}	±12	V
Continuous Drain Current	I _D	5.8	A
Drain Current-Pulsed(note 1)	I _{DM}	30	
Power Dissipation	P _D	1400	mW
Junction Temperature	T _j	150	°C
Storage Temperature	T _{stg}	-50-+150	°C
Thermal Resistance From Junction to Ambient (note 2)	R _{θJA}	89	°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	
Off characteristics						
Drain-Source Breakdown Voltage	V(BR)DSS	VGS=0V, ID=250uA	30			V
Zero Gate Voltage Drain current	IDSS	VDS=24V, VGS=0V			1	uA
Gate-body Leakage	IGSS	VDS=±12V, VDS=0V			±100	nA
On characteristics						
Drain-Source On-Resistance (note 3)	RDS(ON)	VGS=10V, ID=5.8A			35	mΩ
		VGS=4.5V, ID=5A			40	
		VGS=2.5V, ID=4A			52	
Forward trans conductance	gfs	VDS=5V, ID=5A	8			S
Gate-Threshold voltage*	V GS (th)	VDS=VGS, ID=250uA	0.7		1.4	V
Dynamic characteristics (note 4,5)						
Input capacitance	Ciss	VDS=15V, VGS=0V,f=1MHz			1050	pF
Output capacitance	Coss			99		
Reverse Transfer capacitance	Crss			77		
Gate resistance	Rg	VDS=0V, VGS=0V,f=1MHz			3.6	Ω
Switching characteristics (note 4,5)						
Turn-on Time	td(on)	VGS=10V, RL=2.7Ω, VDS=15V, RGEN=3Ω			5	ns
Rise time	tr				7	
Turn-off Time	td(off)				40	
Fall time	tf				6	
Drain-source diode characteristics and maximum ratings						
Diode forward voltage	VSD	IS=1A, VGS=0V			1.0	V

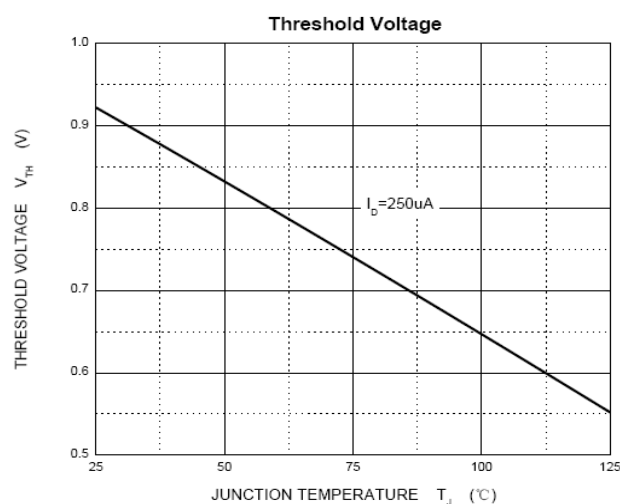
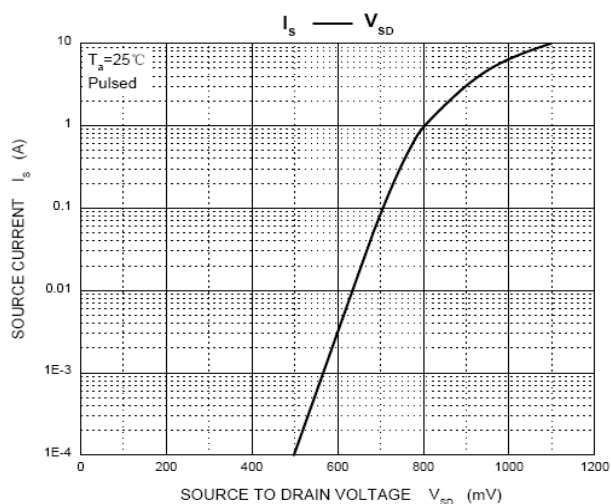
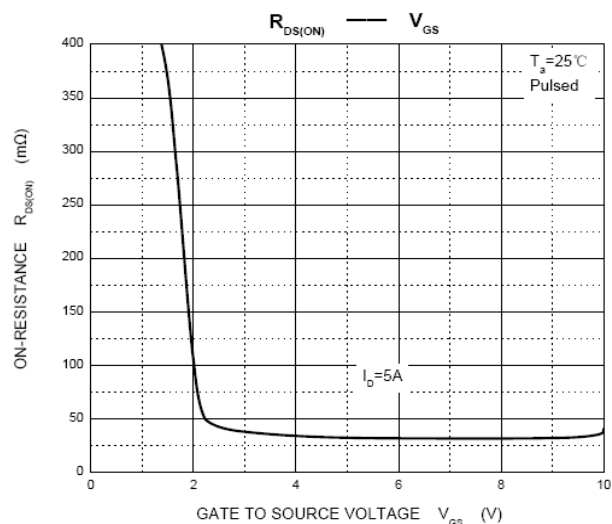
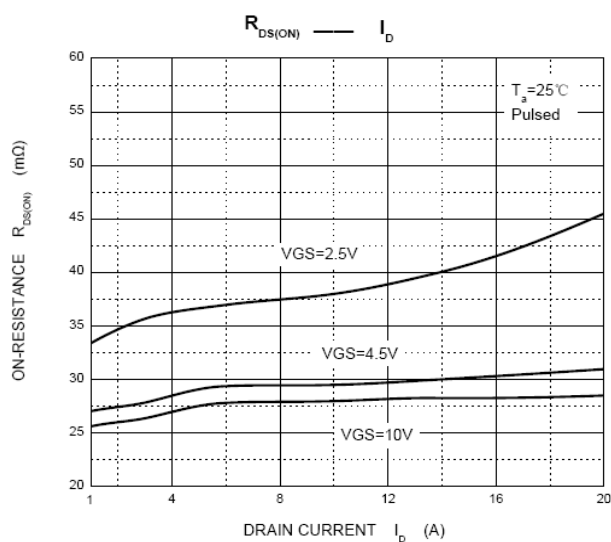
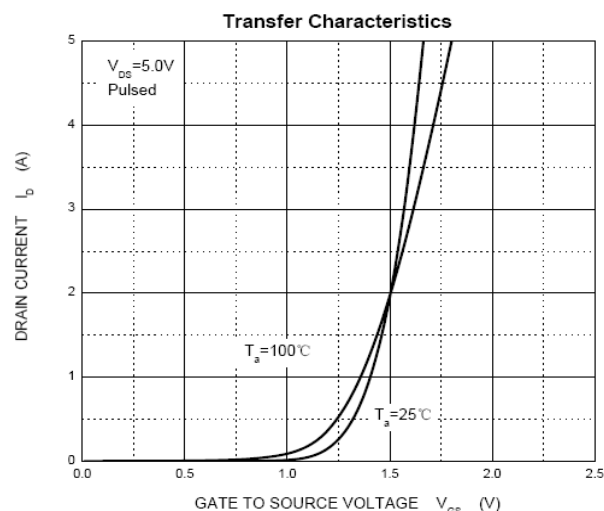
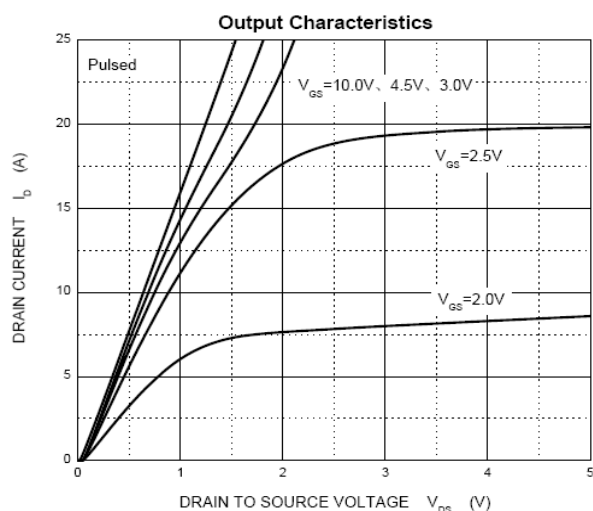
Notes: 1. Repetitive Rating: Pulse width limited by maximum junction temperature.

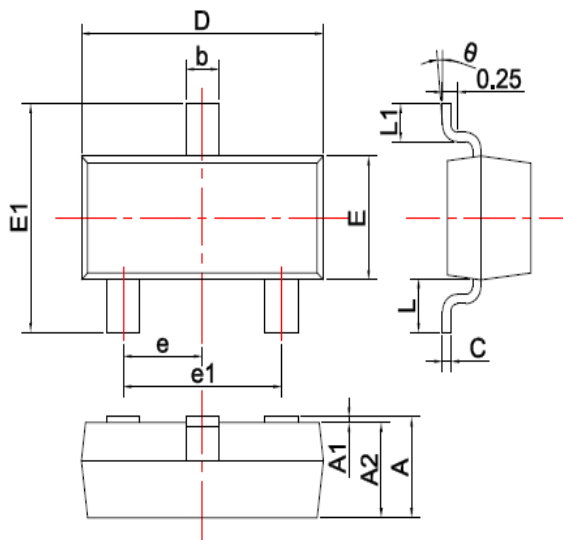
2. Surface Mounted on FR4 Board, t<5 sec.

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

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

Typical characteristics



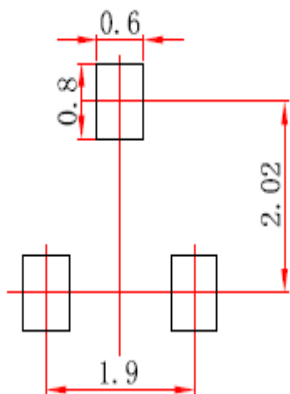
SOT-23 PACKAGE OUTLINE Plastic surface mounted package


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

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