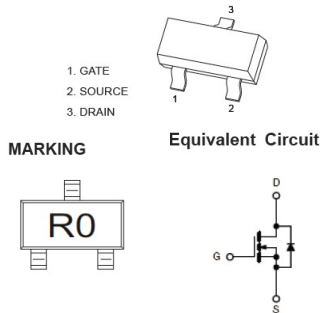


3400 N-Channel Enhancement Mode Field Effect Transistor

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

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

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 <sub>DS</sub>	30	V
Gate-Source Voltage	V <sub>GS</sub>	±12	V
Continuous Drain Current	I <sub>D</sub>	5.8	A
Drain Current-Pulsed(note 1)	I <sub>DM</sub>	30	
Power Dissipation	P <sub>D</sub>	350	mW
Junction Temperature	T <sub>j</sub>	150	°C
Storage Temperature	T <sub>stg</sub>	-50-+150	°C
Thermal Resistance From Junction to Ambient (note 2)	R <sub>θJA</sub>	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	
<b>Off characteristics</b>						
Drain-Source Breakdown Voltage	V(BR)DSS	V <sub>GS</sub> =0V, I <sub>D</sub> =250uA	30			V
Zero Gate Voltage Drain current	I <sub>DSS</sub>	V <sub>DS</sub> =24V, V <sub>GS</sub> =0V			1	uA
Gate-body Leakage	I <sub>GSS</sub>	V <sub>DS</sub> =12V, V <sub>GS</sub> =0V			±100	nA
<b>On characteristics</b>						
Drain-Source On-Resistance (note 3)	RDS(ON)	V <sub>GS</sub> =10V, I <sub>D</sub> =5.8A			35	mΩ
		V <sub>GS</sub> =4.5V, I <sub>D</sub> =5A			40	
		V <sub>GS</sub> =2.5V, I <sub>D</sub> =4A			52	
Forward trans conductance	g <sub>fs</sub>	V <sub>DS</sub> =5V, I <sub>D</sub> =5A	8			S
Gate-Threshold voltage*	V <sub>GS(th)</sub>	V <sub>DS</sub> =V <sub>GS</sub> , I <sub>D</sub> =250uA	0.7		1.4	V
<b>Dynamic characteristics (note 4,5)</b>						
Input capacitance	C <sub>iss</sub>	V <sub>DS</sub> =15V, V <sub>GS</sub> =0V, f=1MHz			1050	pF
Output capacitance	C <sub>oss</sub>				99	
Reverse Transfer capacitance	C <sub>rss</sub>				77	
Gate resistance	R <sub>g</sub>	V <sub>DS</sub> =0V, V <sub>GS</sub> =0V, f=1MHz			3.6	Ω
<b>Switching characteristics (note 4,5)</b>						
Turn-on Time	td(on)	V <sub>GS</sub> =10V, R <sub>L</sub> =2.7Ω, V <sub>DS</sub> =15V, R <sub>GEN</sub> =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	V <sub>SD</sub>	I <sub>S</sub> =1A, V <sub>GS</sub> =0V			1.0	V

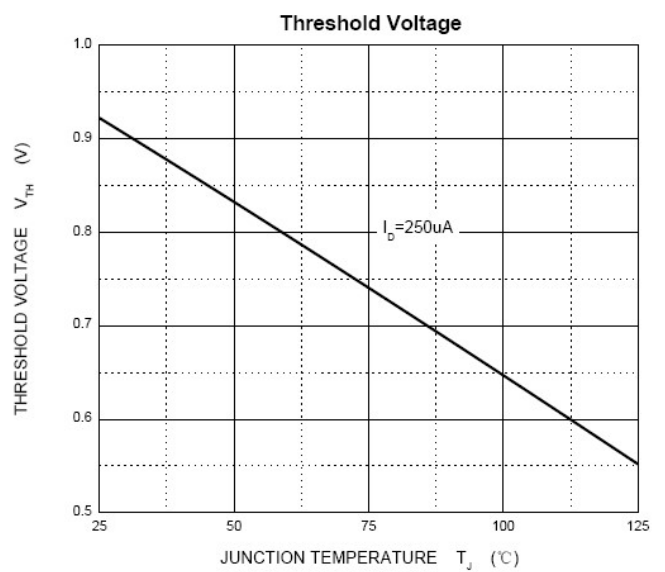
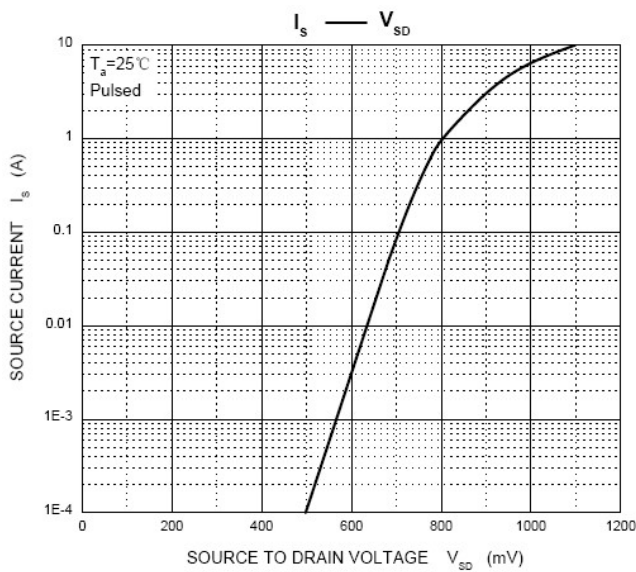
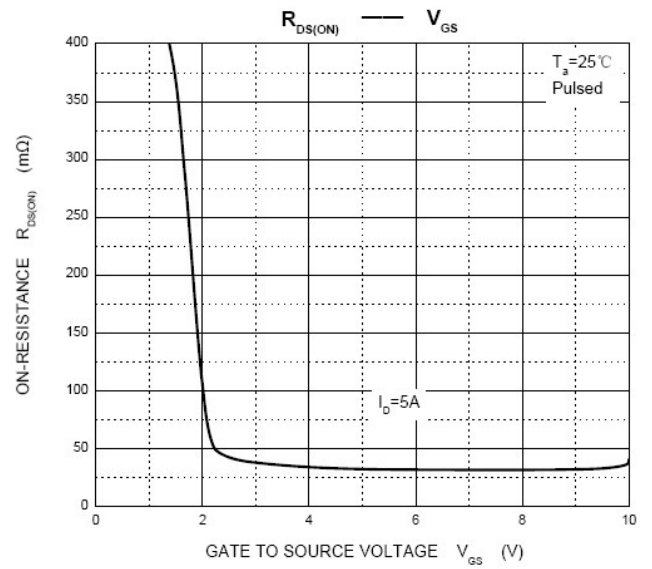
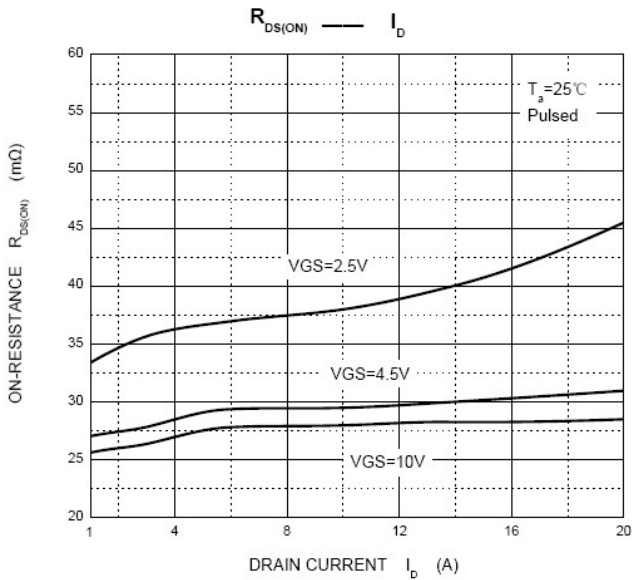
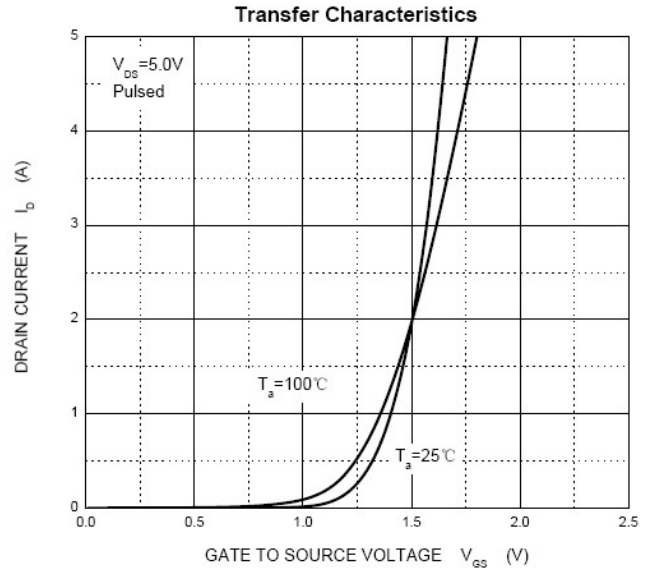
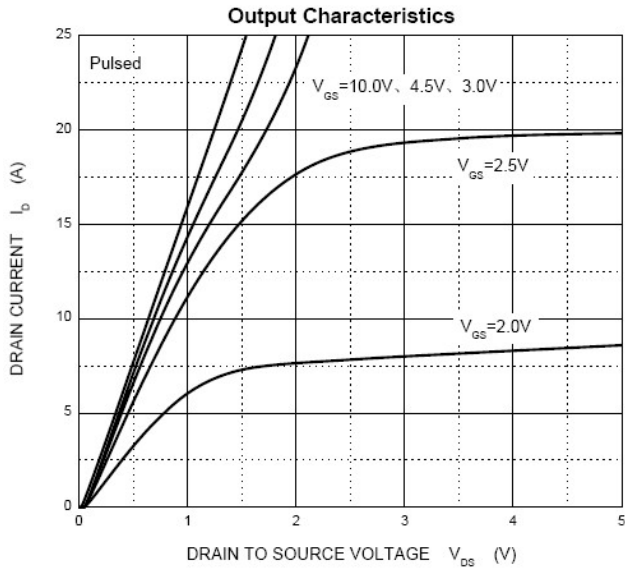
Notes: 1. Repetitive Rating: Pulse width limited by maximum junction temperature.

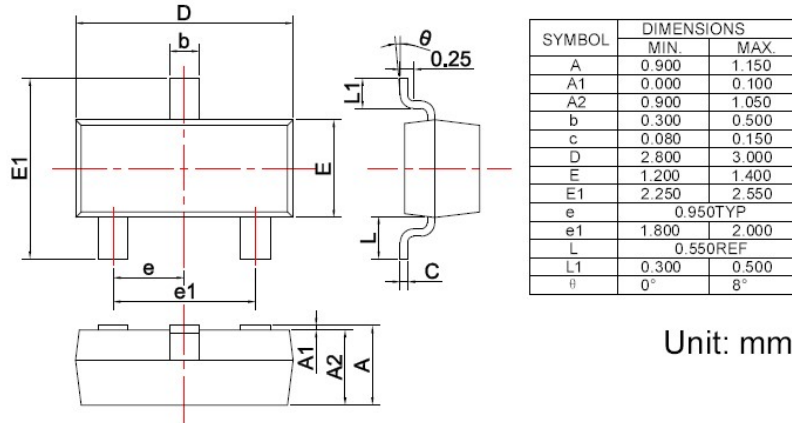
2. Surface Mounted on FR4 Board, t<5 sec.

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

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

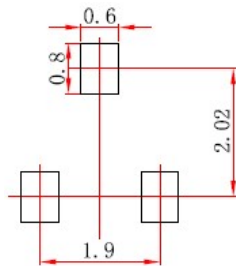
Typical characteristics



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


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.