

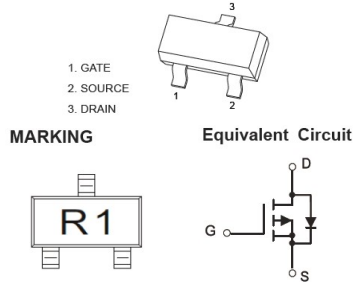


AO3401

P-Channel Enhancement Mode MOSFET

V(BR)DSS	RDS(ON)MAX	ID
30V	65mΩ@-10V	-4.2A
	75mΩ@-4.5V	
	90mΩ@-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	-4.2	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 (note 2)	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	
Off characteristics						
Drain-Source Breakdown Voltage	V(BR)DSS	V _{GS} =0V, I _D =-250uA	-30			V
Zero Gate Voltage Drain current	I _{DSS}	V _{DS} =-24V, V _{GS} =0V			-1	uA
Gate-body Leakage	I _{GSS}	V _{DS} =±12V, V _{GS} =0V			±100	nA
On characteristics						
Drain-Source On-Resistance (note 1)	RDS(ON)	V _{GS} =-10V, I _D =-4.2A		50	65	mΩ
		V _{GS} =-4.5V, I _D =-4A		60	75	
		V _{GS} =-2.5V, I _D =-1A		75	90	
Forward trans conductance	g _{fs}	V _{DS} =-5V, I _D =-5A	7			S
Gate-Threshold voltage*	V _{GS(th)}	V _{DS} =V _{GS} , I _D =-250uA	-0.7	-0.9	-1.3	V
Dynamic characteristics (note 2)						
Input capacitance	C _{iss}	V _{DS} =-15V, V _{GS} =0V, f=1MHz		954		pF
Output capacitance	C _{oss}			115		
Reverse Transfer capacitance	C _{rss}			77		
Switching characteristics (note 2)						
Turn-on Time	td(on)	V _{GS} =-10V, R _L =3.6Ω, V _{DS} =-15V, R _{GEN} =6Ω			6.3	ns
Rise time	tr				3.2	
Turn-off Time	td(off)				38.2	
Fall time	tf				12	
Drain-source diode characteristics and maximum ratings						
Diode forward voltage(note 1)	V _{SD}	I _S =-1A, V _{GS} =0V			-1.0	V

Notes: 1. Pulse Test: Pulse Width ≤300us, Duty Cycle≤2%.

2. These parameters have no way to verify.



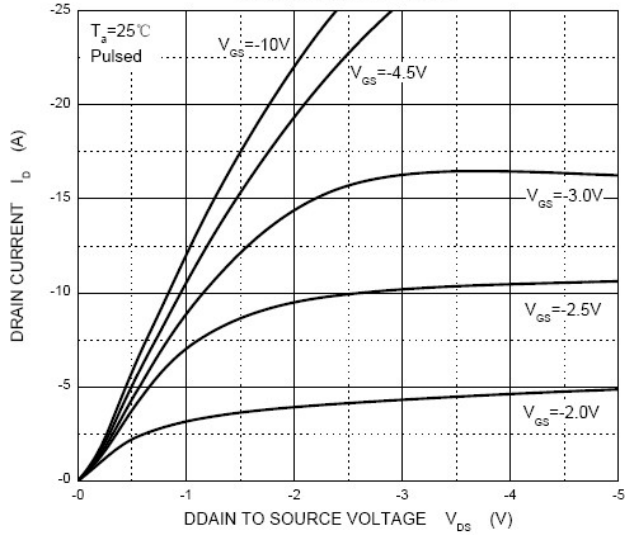


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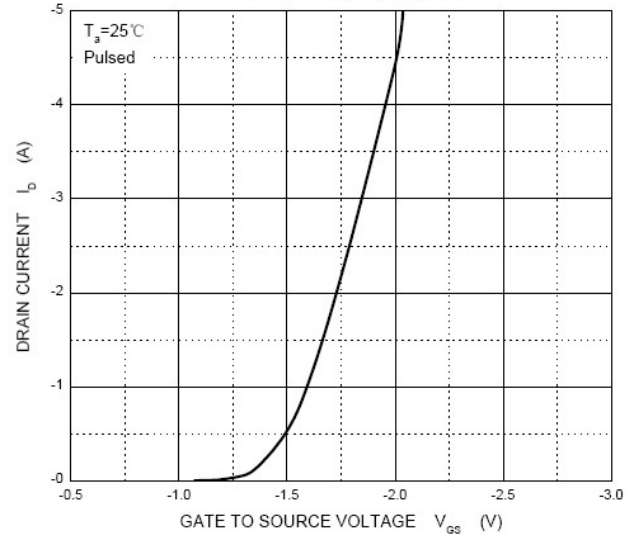
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Typical characteristics

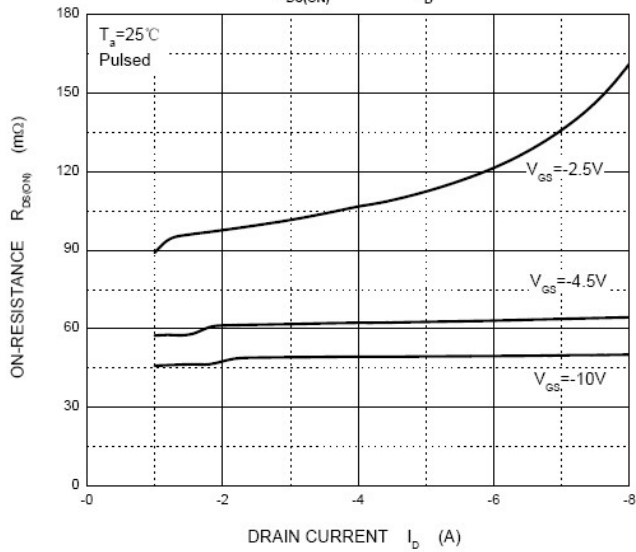
Output Characteristics



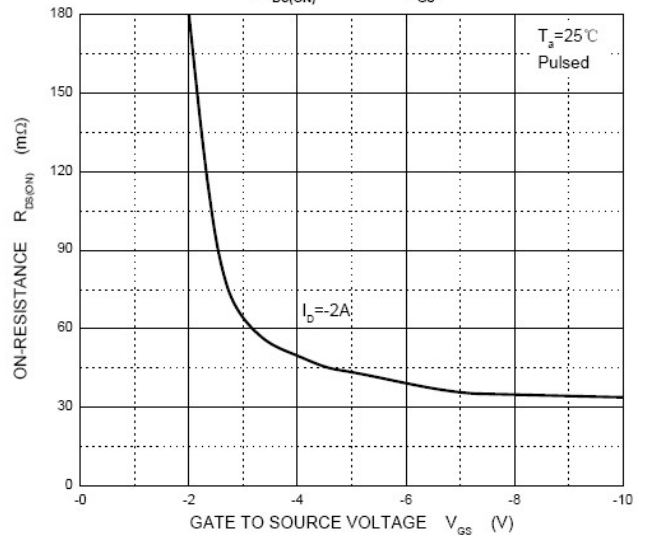
Transfer Characteristics



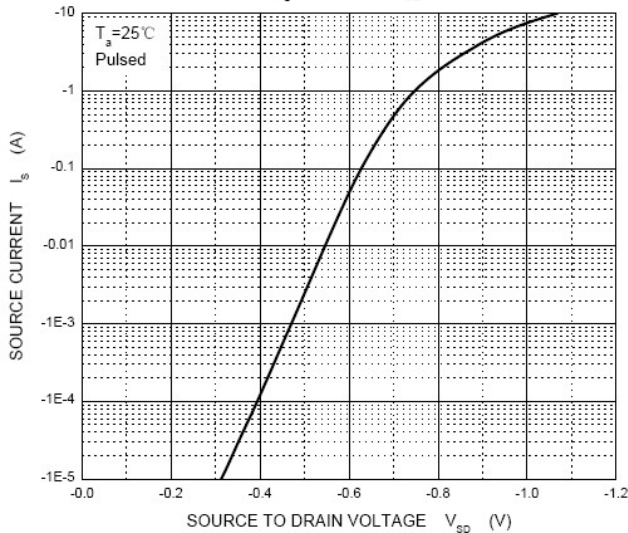
$R_{DS(ON)}$ — I_D



$R_{DS(ON)}$ — V_{GS}



I_S — V_{SD}

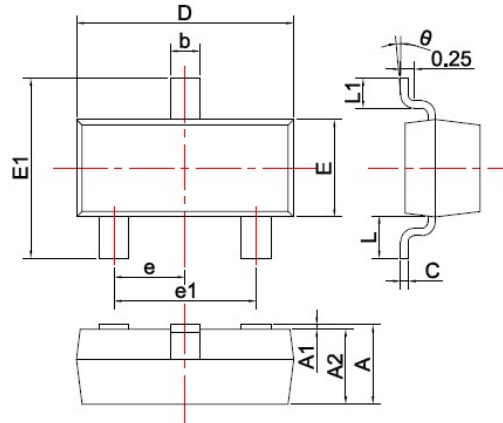




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SOT-23 PACKAGE OUTLINE Plastic surface mounted package

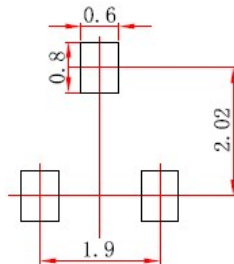


SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	0.900	1.150
A1	0.000	0.100
A2	0.900	1.050
b	0.300	0.500
c	0.080	0.150
D	2.800	3.000
E	1.200	1.400
E1	2.250	2.550
e	0.950TYP	
e1	1.800	2.000
L	0.550REF	
L1	0.300	0.500
∠	0°	8°

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.

