

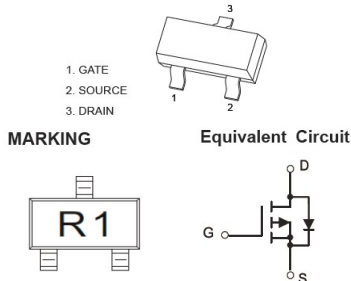


**JX3401**

# N-Channel Enhancement Mode Power 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>	-4.2	A
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 1)	RDS(ON)	V <sub>GS</sub> =-10V, I <sub>D</sub> =-4.2A		50	65	mΩ
		V <sub>GS</sub> =-4.5V, I <sub>D</sub> =-4A		60	75	
		V <sub>GS</sub> =-2.5V, I <sub>D</sub> =-1A		75	90	
Forward trans conductance	g <sub>fs</sub>	V <sub>DS</sub> =-5V, I <sub>D</sub> =-5A	7			S
Gate-Threshold voltage*	V <sub>GS(th)</sub>	V <sub>DS</sub> =V <sub>GS</sub> , I <sub>D</sub> =-250uA	-0.7	-0.9	-1.3	V
<b>Dynamic characteristics (note 2)</b>						
Input capacitance	C <sub>iss</sub>	V <sub>DS</sub> =-15V, V <sub>GS</sub> =0V, f=1MHz		954		pF
Output capacitance	C <sub>oss</sub>			115		
Reverse Transfer capacitance	C <sub>rss</sub>			77		
<b>Switching characteristics (note 2)</b>						
Turn-on Time	td(on)	V <sub>GS</sub> =-10V, R <sub>L</sub> =3.6Ω, V <sub>DS</sub> =-15V, R <sub>GEN</sub> =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 <sub>sD</sub>	I <sub>S</sub> =-1A, V <sub>GS</sub> =0V			-1.0	V

Notes: 1. Pulse Test: Pulse Width ≤300us, Duty Cycles≤2%.  
2. These parameters have no way to verify.

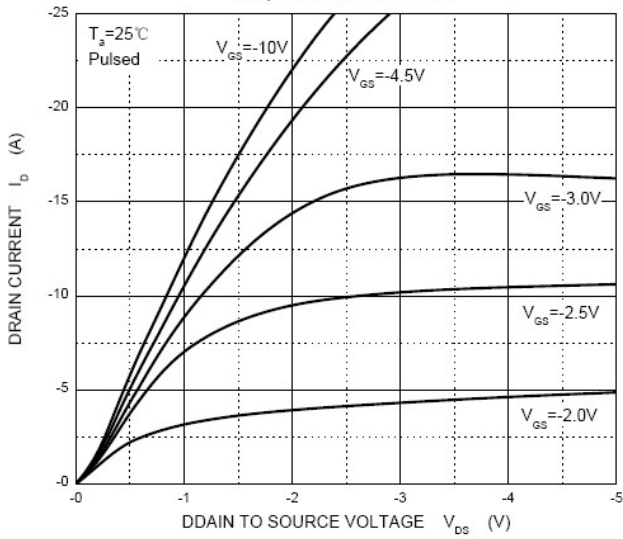


**JX3401**

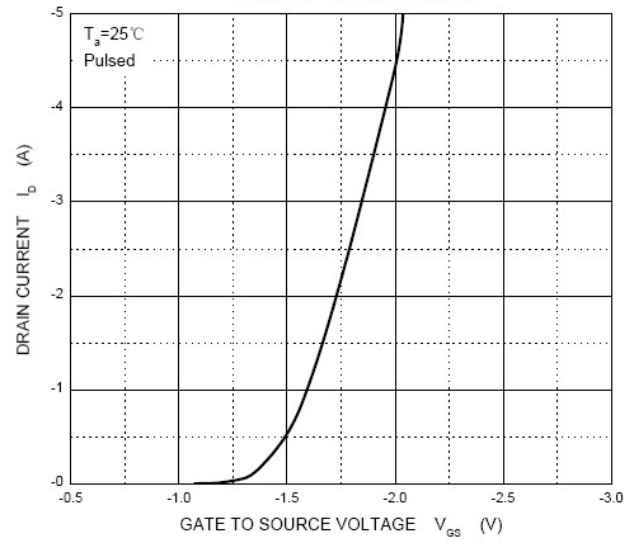
# N-Channel Enhancement Mode Power MOSFET

## Typical characteristics

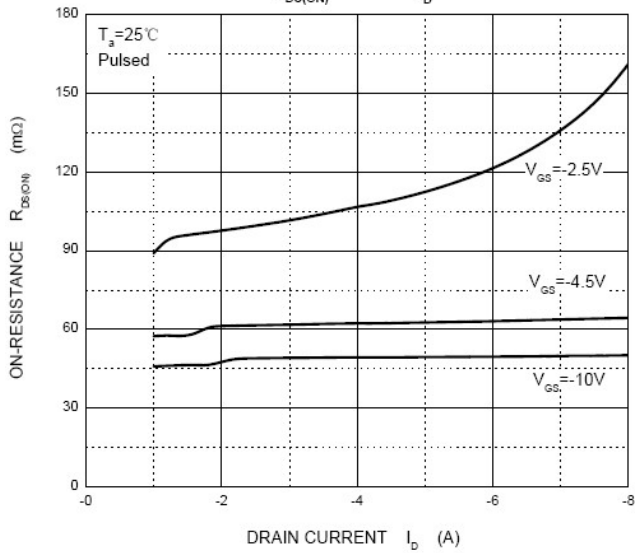
**Output Characteristics**



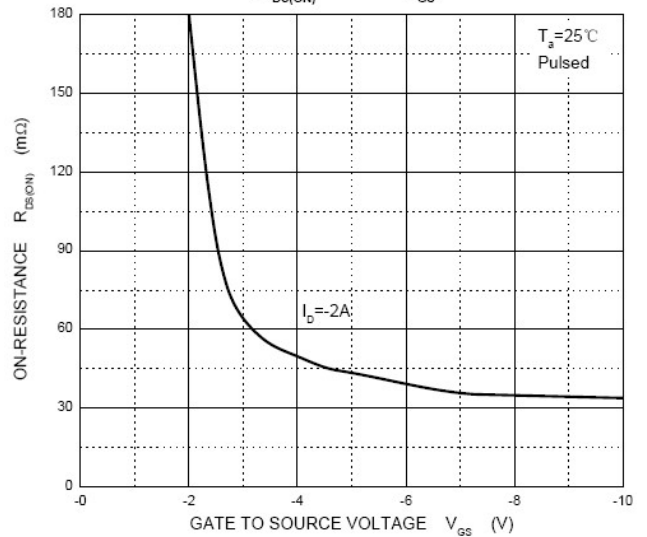
**Transfer Characteristics**



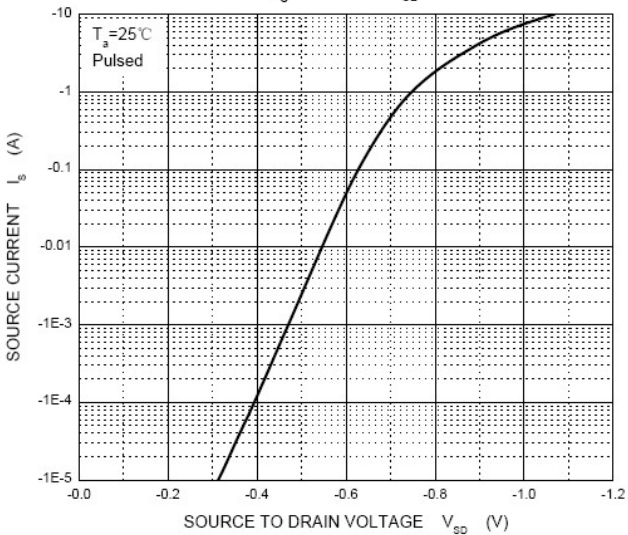
**$R_{DS(ON)}$  —  $I_D$**



**$R_{DS(ON)}$  —  $V_{GS}$**



**$I_S$  —  $V_{SD}$**

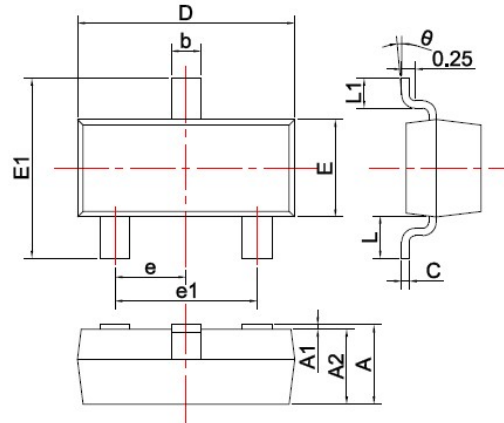




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## SOT-23 PACKAGE OUTLINE Plastic surface mounted package

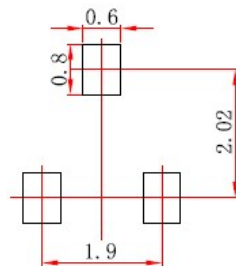


SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	0.900	1.150
A1	0.000	0.100
A2	0.900	1.050
b	0.300	0.500
c	0.080	0.150
D	2.800	3.000
E	1.200	1.400
E1	2.250	2.550
e	0.950TYP	
e1	1.800	2.000
L	0.550REF	
L1	0.300	0.500
∠	0°	8°

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.