

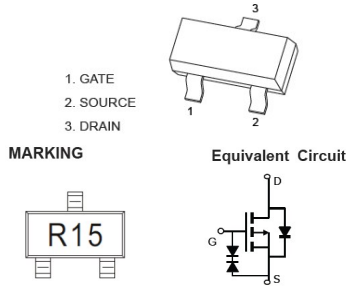


AO3415

P-CHANNEL ENHANCEMENT MOSFET

V(BR)DSS	RDS(ON)MAX	ID
-20V	50mΩ@-4.5V	-4A
	60mΩ@-2.5V	
	73mΩ@-1.8V	

SOT-23



特征 Features

- Excellent RDS(ON), low gate charge, low gate voltages
- Load Switch and in PWM applications.

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}	-20	V
Gate-Source Voltage	V _{GS}	±8	V
Continuous Drain Current	I _D	-4.0	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	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	
Static						
Drain-Source Breakdown Voltage	V(BR)DSS	V _{GS} =0V, I _D =-250uA	-20			V
Gate-Threshold voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =-250uA	-0.3	-0.56	-1.0	V
Gate-body Leakage	I _{GSS}	V _{DS} =0V, V _{GS} =±8V			±10	uA
		V _{DS} =0V, V _{GS} =±4.5V			±1	
Zero Gate Voltage Drain current	I _{DSS}	V _{DS} =-16V, V _{GS} =0V			-1	
Drain-Source On-Resistance ^(a)	R _{DS(ON)}	V _{GS} =-4.5V, I _D =-4A		37	50	mΩ
		V _{GS} =-2.5V, I _C =-4A		45	60	
		V _{GS} =-1.8V, I _C =-2A		56	73	
Forward trans conductance ^(b)	g _{fs}	V _{DS} =-5V, I _D =-4A	8			S
Dynamic^(c)						
Input capacitance	C _{iss}	V _{DS} =-10V, V _{GS} =0V, f=1MHz		1450		pF
Output capacitance	C _{oss}			205		
Reverse Transfer capacitance	C _{rss}			160		
Total gate charge	Q _g	V _{DS} =-10V, V _{GS} =-4.5V, I _D =-4A		17.2		nC
Gate-source charge	Q _{gs}			1.3		
Gate-drain charge	Q _{gd}			4.5		
Gate resistance	R _g		V _{DS} =0V, V _{GS} =0V, f=1MHz		6.5	
Turn-on Time	td(on)	V _{DD} =-10V, R _L =2.5Ω, V _{GEN} =-4.5V, R _{GEN} =3Ω		9.5		ns
Rise time	tr			17		
Turn-off Time	td(off)			94		
Fall time	tf			35		
Drain-source body diode characteristics						
Body diode voltage ^(b)	V _{SD}	I _S =-1A, V _{GS} =0V			-1.0	V

Notes: a. Repetitive rating, pulse width limited by junction temperature.

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

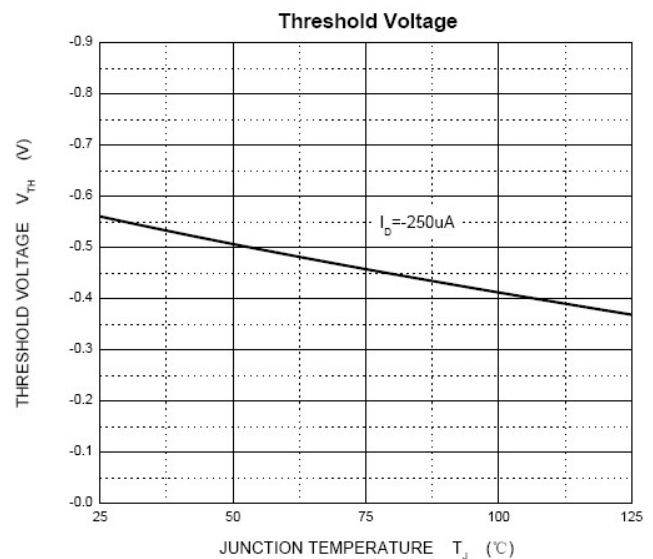
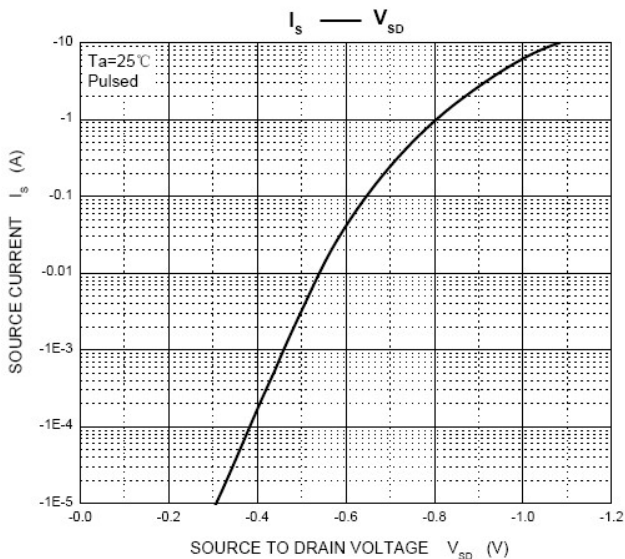
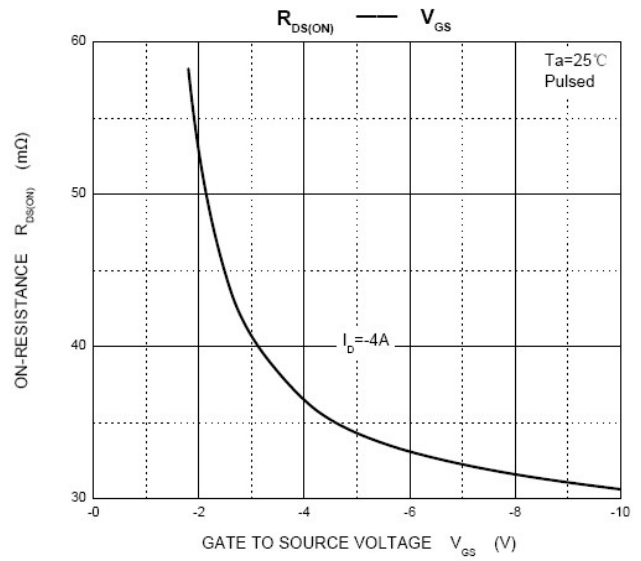
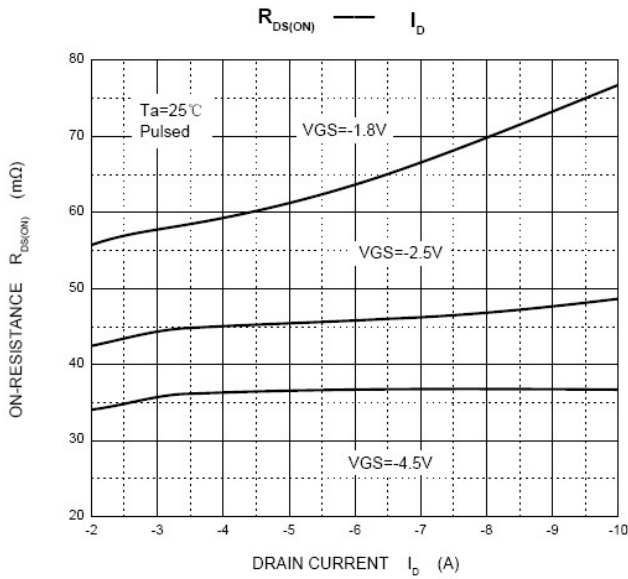
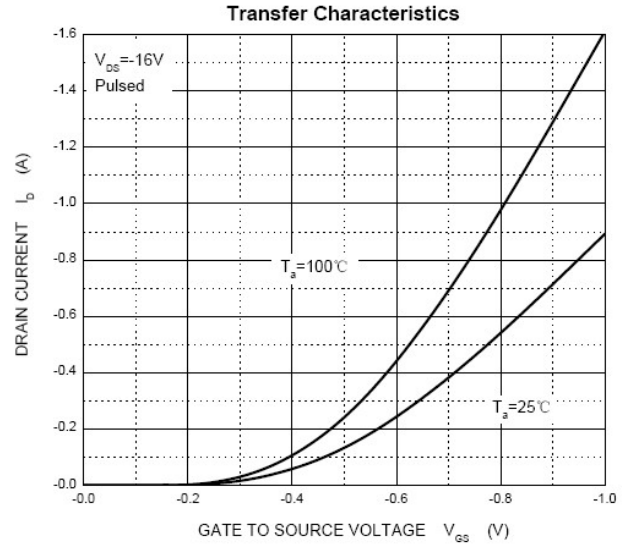
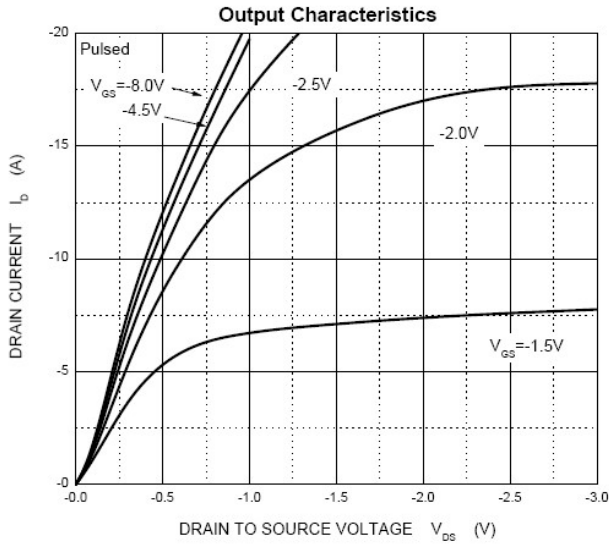
b. These parameters have no way to verify.





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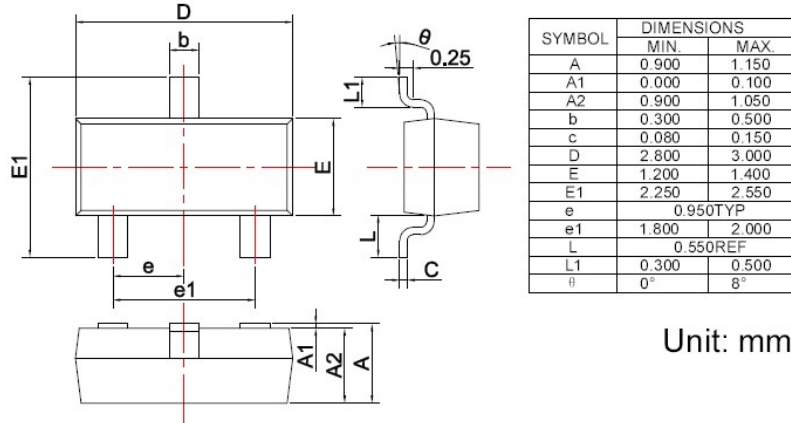
Typical characteristics





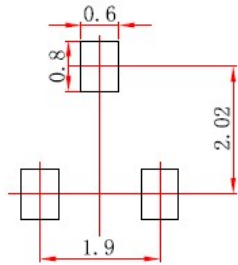
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SOT-23 PACKAGE OUTLINE Plastic surface mounted package



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: ± 0.05mm.
 3. The pad layout is for reference purposes only.

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