



AOS
SEMICONDUCTOR

产品规格说明书

Product Data Sheet

AO3401

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电源管理IC



通信接口芯片



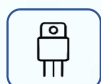
二三极管



LDO稳压器



逻辑器件



MOSFETs



运算放大器



显示驱动



MCU单片机



光电器件

AO3401

Data Sheet

Transistor-MOSFET

Plastic-Encapsulate MOSFET

■ 主要特性/Features

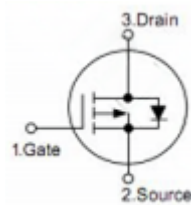
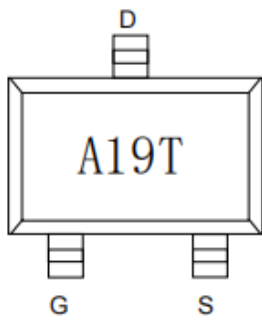
电流能力强 Strong current capacity

导通电阻低 Low on resistance

■ 应用/Application

用于一般开关和低压电源电路

■ 印字/MARKING 等效电路/Equivalent Circuit



■ 极限参数/Absolute Maximum Ratings(TA=25℃ Unless otherwise noted)

参数/Parameter	Symbol	Maximum	Units
漏极 - 源极电压/Drain-Source Voltage	V_{DS}	-30	V
栅极 - 源极电压/Gate-Source Voltage	V_{GS}	± 12	
漏极电流（持续）/Continuous Drain Current	I_D	-4.2	A
耗散功率/Power Dissipation	P_D	0.35	W
热阻/Thermal Resistance Junction to Ambient	$R_{\theta JA}$	350	$^{\circ}\text{C} / \text{mW}$
结温/Junction Temperature	T_j	150	$^{\circ}\text{C}$
储存温度/Storage Temperature	T_{STG}	-55~150	



AO3401

Data Sheet

■ 电性能参数/Electrical Characteristics(TA=25℃ unless otherwise noted)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
静态/Static Characteristics						
源极-漏极击穿电压	$V_{BR(DSS)}$	$V_{GS}=0V, I_D=-250\mu A$	-30			V
栅极开启电压	$V_{GS(th)}$	$I_D=-250\mu A, V_{GS}=V_{DS}$	-0.7		-1.3	
栅极漏电流	I_{GSS}	$V_{GS}=\pm 12V, V_{DS}=0V$			± 100	nA
零栅极漏极电流	I_{DSS}	$V_{GS}=0V, V_{DS}=-24V$			-1	μA
漏极源极导通电阻	$R_{DS(ON)}$	$V_{GS}=-10V, I_D=-4.2A$			65	m Ω
		$V_{GS}=-4.5V, I_D=-4A$			75	
		$V_{GS}=-2.5V, I_D=-1A$			90	
正向跨导 ^①	g_{fs}	$V_{DS}=-5V, I_D=-5A$	7			S
动态/Dynamic Characteristics						
输入电容 ^②	C_{iss}	$V_{DS}=-15V, V_{GS}=0V, f=1MHz$		954		pF
输出电容 ^②	C_{oss}			115		
反向传输电容 ^②	C_{rss}			77		
开关参数/Swicthing Characteristics						
总栅极充电电荷	Q_G	$V_{DS}=-6V, V_{GS}=-4.5V, I_D=-2.8A$		5.4	10	nC
栅极-源极充电电荷	Q_{GS}			0.8		
栅极-漏极充电电荷	Q_{GD}			1.1		
开启延时 ^②	$t_{d(on)}$	$V_{DD}=-10V, V_{GEN}=-15V, R_{GEN}=6\Omega, R_L=3.6\Omega$			6.3	ns
上升时间 ^②	t_r				3.2	
关闭延时 ^②	$t_{d(off)}$				38.2	
下降延时 ^②	t_f				12	
漏极-源极二极管参数/Drain-source Body Diode Charateristicis						
二极管正向压降 ^①	V_{SD}	$I_S=-1A, V_{GS}=0V$			-1	V

注：①脉冲测试脉冲宽度 $\leq 300\mu s$ ，占空比 $\leq 2\%$ ；

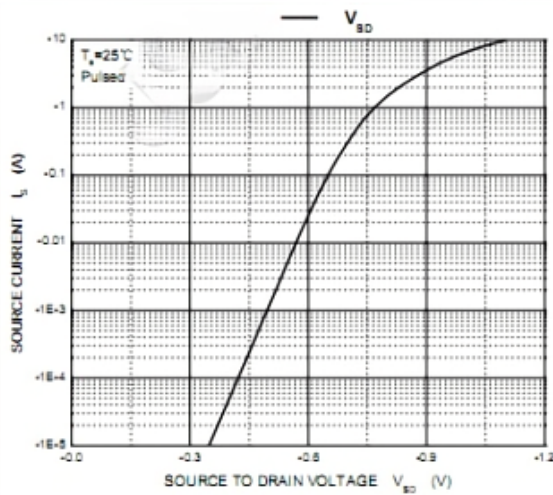
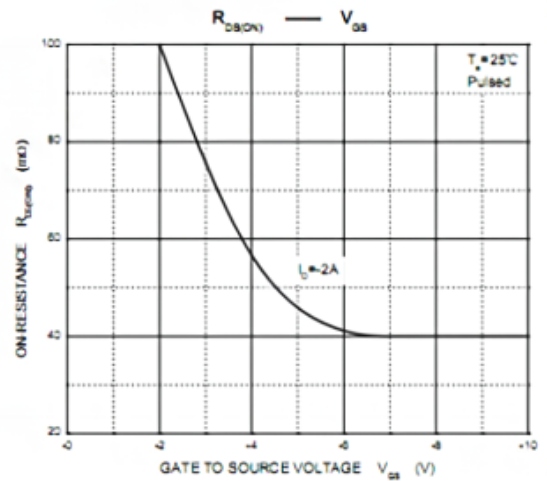
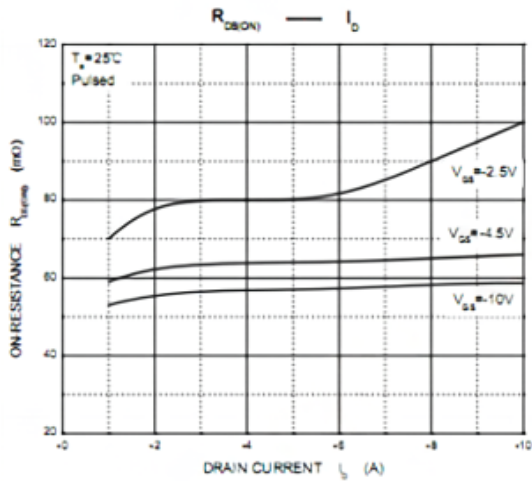
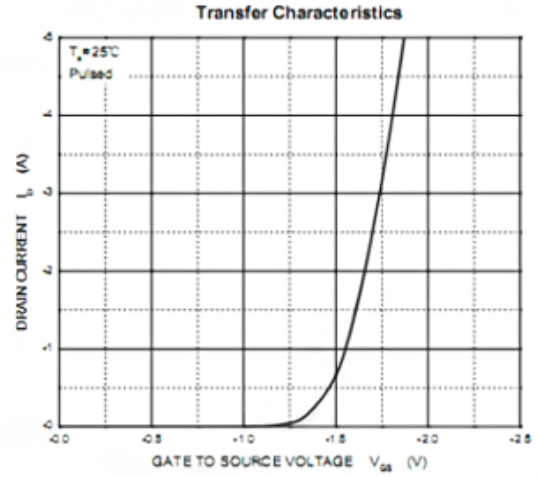
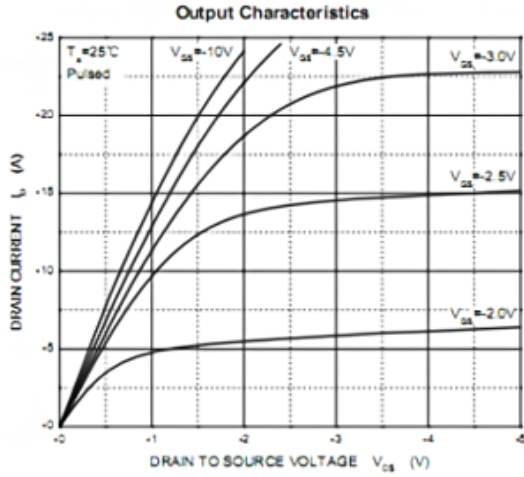
②这些参数未通过验证。



AO3401

Data Sheet

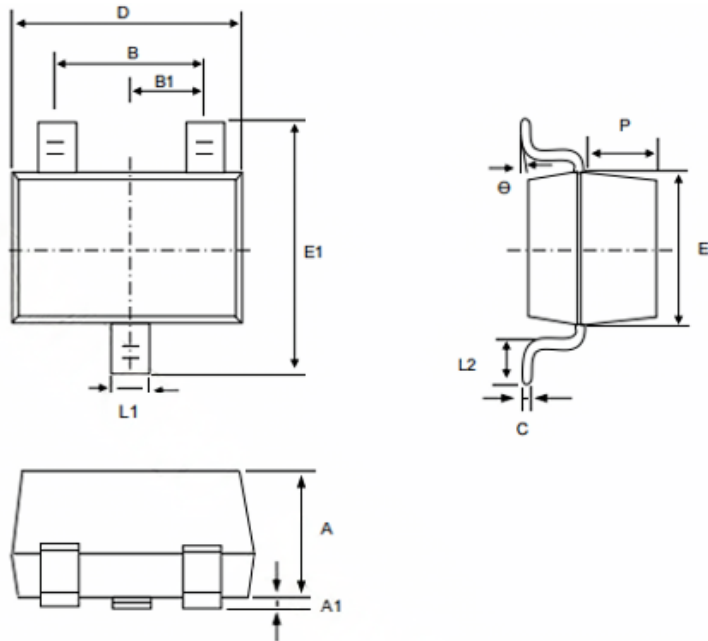
■ 典型特性曲线图/Typical Characteristics



AO3401

Data Sheet

成品外观尺寸/Package Information



Symbol	Dim in mm		
	Min	Nor	Max
A	0.900	1.000	1.100
A1	0.000	0.050	0.100
L1	0.350	0.400	0.500
C	0.100	0.110	0.120
D	2.800	2.900	3.000
E	1.250	1.300	1.350
E1	2.250	2.400	2.550
B	1.800	1.900	2.000
B1	0.950 TPY.		
L2	0.200	0.350	0.450
P	0.550	0.575	0.600

