

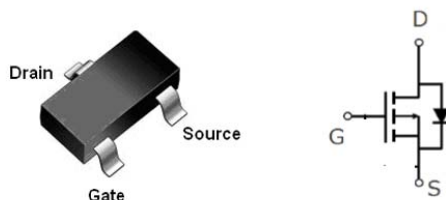
Features

- Low $R_{DS(on)}$ @ $V_{GS} = -10V$
- -3.3V Logic Level Control
- P Channel SOT23 Package
- Pb-Free, RoHS Compliant

$V_{(BR)DSS}$	$R_{DS(on)}$ Typ	I_D Max
-30V	55mΩ @ -10V	-4.2A
	65mΩ @ -4.5V	

Applications

- Load Switch
- Switching circuits
- High-speed line driver
- Power Management Functions



Order Information

SOT23-3

Product	Package	Marking	Packing
JW3401	SOT23-3	A19T	3000PCS/Reel

Absolute Maximum Ratings

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

Symbol	Parameter	Rating	Unit	
Common Ratings (T _A =25°C Unless Otherwise Noted)				
V _{GS}	Gate-Source Voltage	±12	V	
V _{(BR)DSS}	Drain-Source Breakdown Voltage	-30	V	
T _J	Maximum Junction Temperature	150	°C	
T _{STG}	Storage Temperature Range	-50 to 150	°C	
Mounted on Large Heat Sink				
I _{DM}	Pulse Drain Current Tested①	T _A =25°C	-16.8	A
I _D	Continuous Drain Current	T _A =25°C	-4.2	A
		T _A =70°C	-3.2	
P _D	Maximum Power Dissipation	T _A =25°C	1.2	W
		T _A =70°C	0.9	
R _{θJA}	Thermal Resistance Junction-Ambient		100	°C/W

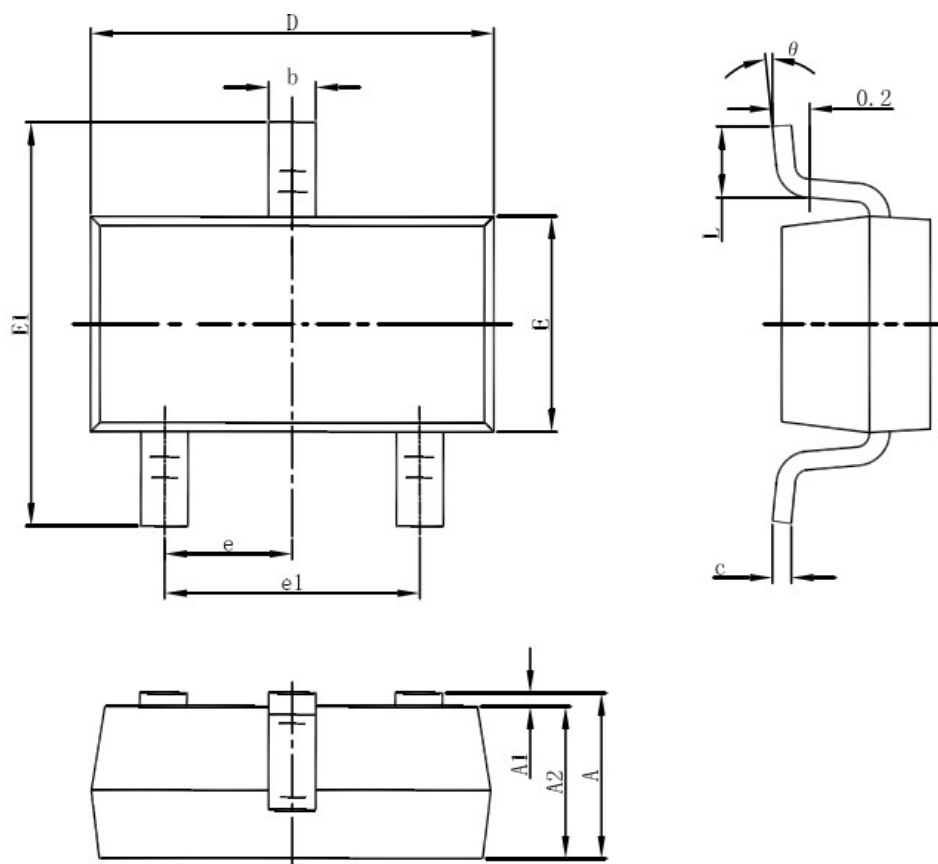
Symbol	Parameter	Condition	Min	Typ	Max	Unit
Static Electrical Characteristics @ T _J = 25°C (unless otherwise stated)						
V _{(BR)DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V I _D =-250μA	-30	--	--	V
I _{DSS}	Zero Gate Voltage Drain Current(T _A =25°C)	V _{DS} =-30V, V _{GS} =0V	--	--	-1	μA
	Zero Gate Voltage Drain Current(T _A =125°C)	V _{DS} =-24V, V _{GS} =0V	--	--	-100	uA
I _{GSS}	Gate-Body Leakage Current	V _{GS} =±12V, V _{DS} =0V	--	--	±100	nA
V _{GS(TH)}	Gate Threshold Voltage	V _{DS} =V _{GS} , I _D =-250μA	-0.5	-0.7	-1.5	V
R _{DS(ON)}	Drain-Source On-State Resistance②	V _{GS} =-10V, I _D =-4.2A	--	55	70	mΩ
R _{DS(ON)}	Drain-Source On-State Resistance②	V _{GS} =-4.5V, I _D =-4A	--	65	90	
R _{DS(ON)}	Drain-Source On-State Resistance②	V _{GS} =-3.3V, I _D =-2A	--	85	120	mΩ
Dynamic Electrical Characteristics @ T _J = 25°C (unless otherwise stated)						
C _{iss}	Input Capacitance	V _{DS} =-15V, V _{GS} =0V, f=1MHz	--	710	--	pF
C _{oss}	Output Capacitance		--	90	--	pF
C _{rss}	Reverse Transfer Capacitance		--	40	--	pF
Q _g	Total Gate Charge	V _{DS} =-15V I _D =-4A, V _{GS} =-4.5V	--	8.5	--	nC
Q _{gs}	Gate Source Charge		--	1	--	nC
Q _{gd}	Gate Drain Charge		--	1.7	--	nC
Switching Characteristics @ T _J = 25°C (unless otherwise stated)						
t _{d(on)}	Turn on Delay Time	V _{DD} =-15V, I _D =-4A, R _G =3.3Ω, V _{GS} =-4.5V	--	8.5	--	ns
t _r	Turn on Rise Time		--	5.5	--	ns
t _{d(off)}	Turn Off Delay Time		-	26	--	ns
t _f	Turn Off Fall Time		--	12.5	--	ns
Source Drain Diode Characteristics						
I _{SD}	Source drain current(Body Diode)	T _A =25°C	--	--	-1.5	A
V _{SD}	Forward on voltage②	T _J =25°C, I _{SD} =-4A, V _{GS} =0V	--	-0.85	-1.2	V

Notes: ① Pulse width limited by maximum allowable junction temperature

② Pulse test ; Pulse width≤300μs, duty cycle≤2%.

Packaging Information

SOT23-3L



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.300	0.500	0.012	0.020
c	0.100	0.200	0.004	0.008
D	2.820	3.020	0.111	0.119
E	1.500	1.700	0.059	0.067
E1	2.650	2.950	0.104	0.116
e	0.950(BSC)		0.037(BSC)	
e1	1.800	2.000	0.071	0.079
L	0.300	0.600	0.012	0.024
θ	0°	8°	0°	8°