BORN SEMICONDUCTOR

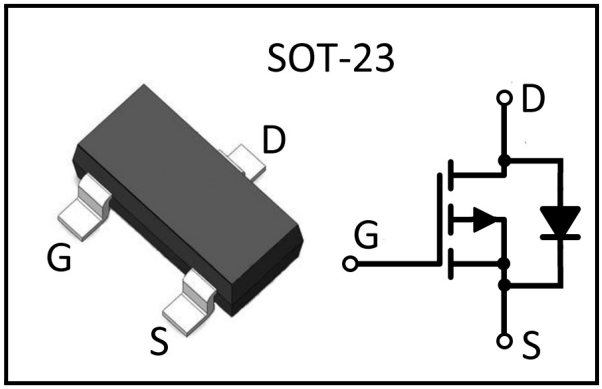
AO3401F

P-Channel MOSFET

Features

- V_{DS}=-30V
- I_D=-3A
- $R_{DS(ON)}$ @V_{GS}=-10V, TYP=55mΩ
- $R_{DS(ON)}$ @V_{GS}=-4.5V, TYP=65mΩ

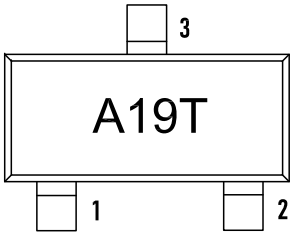
Package



General Description

- Advanced trench process technology
- High Density Cell Design For Ultra Low On-Resistance
- SOT-23 for Surface Mount Package.

Marking



Ordering information

Order code	Package	Marking	Base qty	Delivery mode
AO3401F	SOT-23	A19T	3K	Tape and reel

Absolute Maximum Ratings (@T_A=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
BV_{DSS}	Drain-Source Voltage	-30	V
V_{GS}	Gate-Source Voltage	±12	V
I_D	Continuous Drain Current	-3.0	A
I_{DM}	Pulsed Drain Current	-12	A
P_D	Total Device Dissipation	1200	mW
T_J	Operating Junction Temperature	150	°C
T_{stg}	Storage Temperature Range	-55 to +150	°C

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AO3401F

P-Channel MOSFET

Electrical Characteristics @T_A=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Unit
BV_{DSS}	Drain-Source Breakdown Voltage	V_{GS}=0V,I_D=-250uA	-30	–	–	V
$V_{GS(th)}$	Gate Threshold Voltage	V_{DS}=V_{GS},I_D=-250uA	-0.5	-0.9	-1.2	V
V_{SD}	Diode Forward Voltage Drop	V_{GS}=0V,I_S=-3A	–	–	-1.2	V
I_{DSS}	Zero Gate Voltage Drain Current	V_{DS}=-24V,V_{GS}=0V	–	–	-1	uA
I_{GSS}	Gate Body Leakage Current	V_{GS}=±12V,V_{DS}=0V	–	–	±100	nA
$R_{DS(on)}$	Drain-Source On-State Resistance	V_{GS}=-10V,I_D=-3A	–	55	70	mΩ
		V_{GS}=-4.5V,I_D=-3A	–	65	80	
C_{iss}	Input Capacitance	V_{GS}=0V,V_{DS}=-15V,f=1MHz	–	954	–	pF
C_{oss}	Output Capacitance		–	115	–	
$t_{(on)}$	Turn-On Time	V_{GS}=-10V,V_{DS}=-15V,	–	6	–	ns
$t_{(off)}$	Turn-Off Time	R_{GEN}=6Ω	–	38	–	

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AO3401F

P-Channel MOSFET

Typical Performance Characteristics(T_J = 25°C, unless otherwise noted)

Figure 1 :Output Characteristics

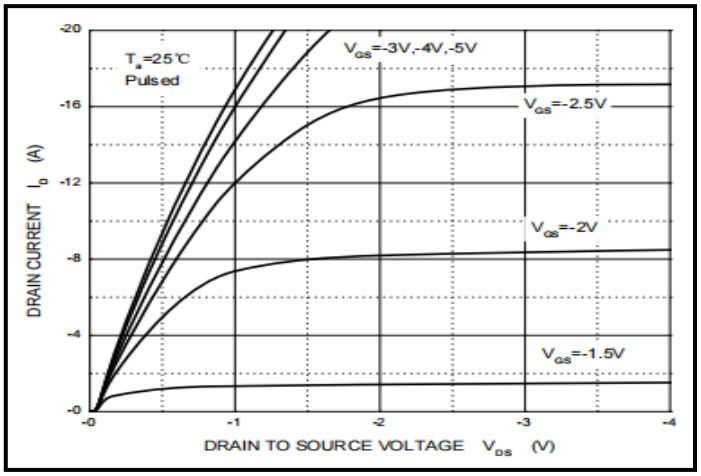


Figure 2 :Transfer Characteristics

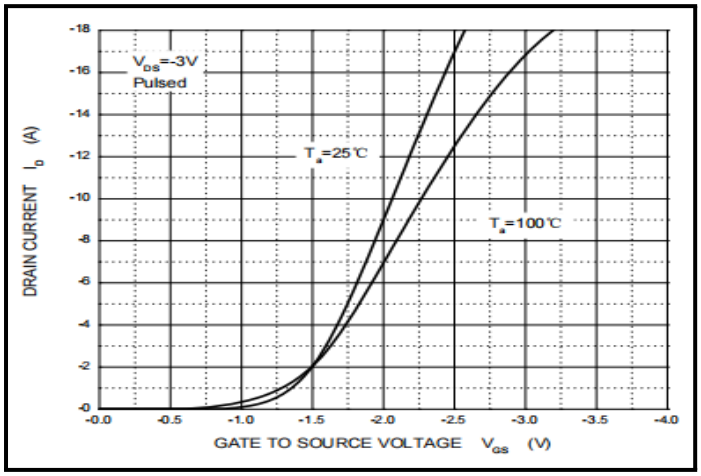


Figure 3 :$R_{DS(on)}$——I_D

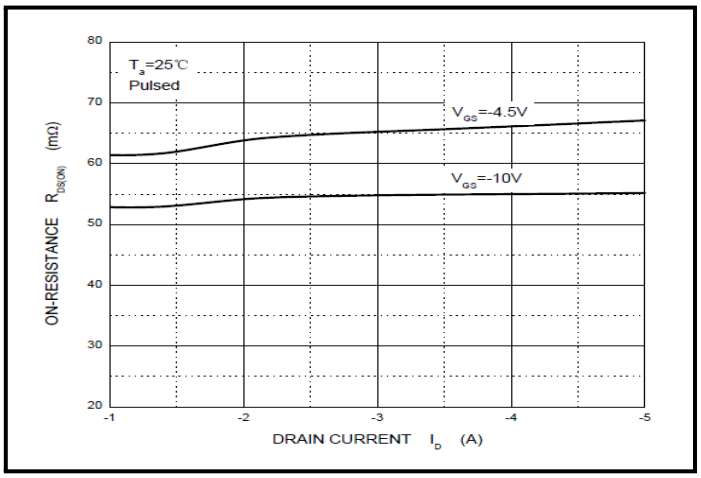


Figure 4 :$R_{DS(on)}$——V_{GS}

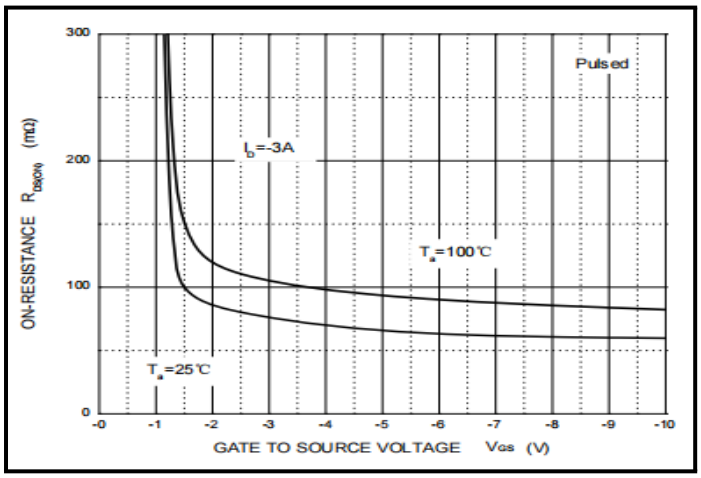


Figure 5 :I_S——V_{SD}

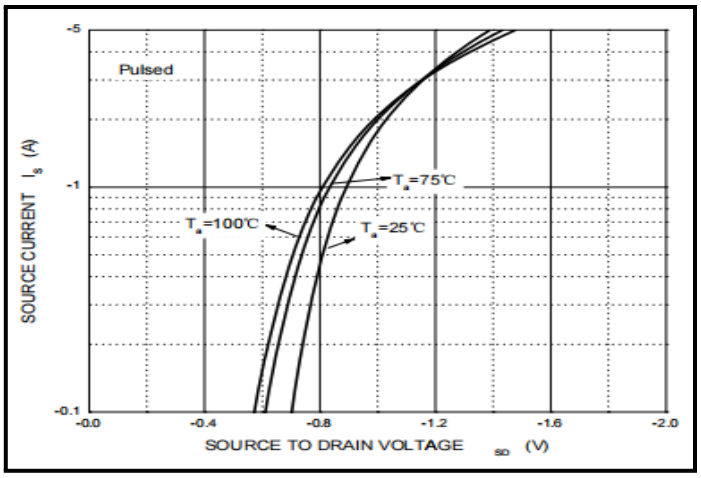
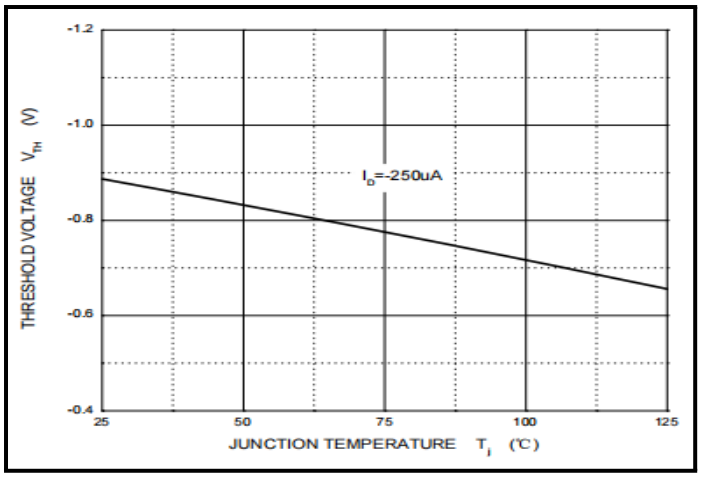


Figure 6 : Threshold Voltage



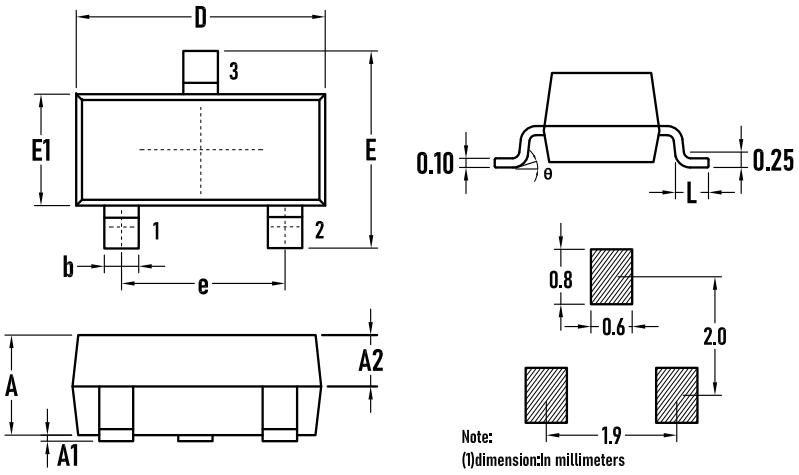
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AO3401F

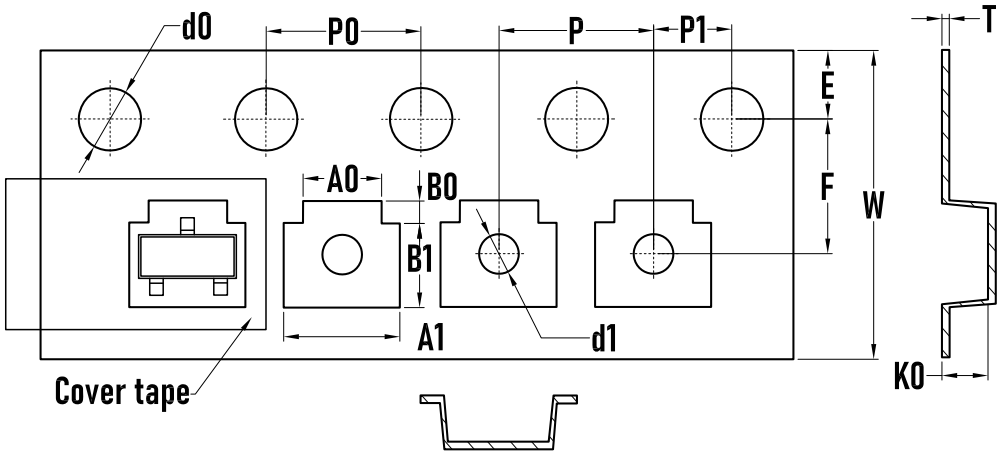
P-Channel MOSFET

Outline Drawing - SOT-23



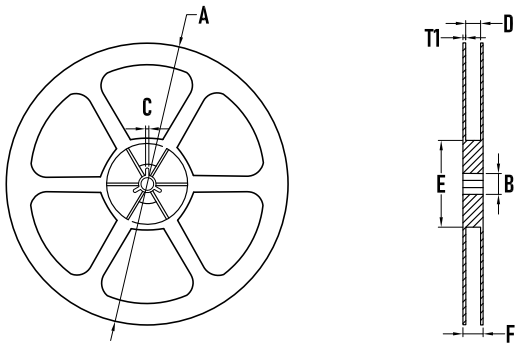
SYMBOL	MILLIMETER		
	MIN.	Typ.	MAX.
A	0.90	1.00	1.10
A1	0.01	–	0.10
A2	0.50	0.60	0.70
D	2.80	2.90	3.00
b	0.25	0.35	0.45
E	2.10	2.30	2.50
E1	1.20	1.30	1.40
e	1.80	1.90	2.00
L	0.25	0.35	0.45
θ	0	–	8°

Packaging Tape - SOT-23



SYMBOL	MILLIMETER
A0	2.10±0.10
A1	3.10±0.10
B0	0.65±0.10
B1	2.75±0.10
d0	1.55±0.10
d1	1.00±0.05
E	1.75±0.10
F	3.50±0.10
K0	1.10±0.10
P	4.00±0.10
P0	4.00±0.10
P1	2.00±0.10
W	8.00±0.30
T	0.20 ±0.05

Packaging Reel



SYMBOL	MILLIMETER
A	177.8±0.2
B	3.1
C	13.50
D	9.6±0.3
E	75±0.2
F	12.3±0.3
T1	1.0±0.2
Quantity	3000PCS

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