



恒芯微  
XUANXINWEI

SMD Type

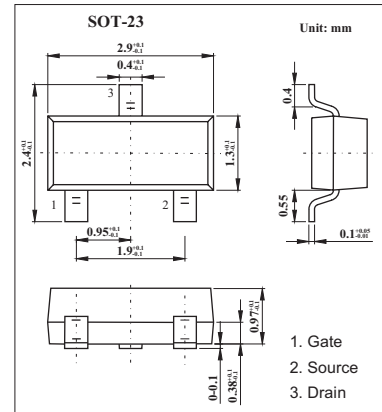
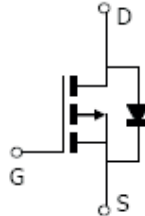
MOSFET

# P-Channel Enhancement Mode Field Effect Transistor

## AO3403

### Features

- $V_{DS} (V) = -30V$
- $I_D = -2.6 A (V_{GS} = -10V)$
- $R_{DS(ON)} < 130 m\Omega (V_{GS} = -10V)$
- $R_{DS(ON)} < 180 m\Omega (V_{GS} = -4.5V)$
- $R_{DS(ON)} < 260 m\Omega (V_{GS} = -2.5V)$



### Absolute Maximum Ratings $T_a = 25^\circ C$

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	$V_{DS}$	-30	V
Gate-Source Voltage	$V_{GS}$	$\pm 12$	V
Continuous Drain Current *1 $T_A = 25^\circ C$	$I_D$	-2.6	A
Current *1 $T_A = 70^\circ C$		-2.2	
Pulsed Drain Current *2	$I_{DM}$	-20	
Power Dissipation *1 $T_A = 25^\circ C$	$P_D$	1.4	W
$T_A = 70^\circ C$		1	
Junction and Storage Temperature Range	$T_J, T_{STG}$	-55 to 150	$^\circ C$

\*1 The value of  $R_{\theta JA}$  is measured with the device mounted on  $1 in^2$  FR-4 board with 2oz.

Copper, in a still air environment with  $T_A = 25^\circ C$

\*2 Repetitive rating, pulse width limited by junction temperature.

### Thermal Characteristics

Parameter		Symbol	Typ	Max	Unit
Maximum Junction-to-Ambient *1	$t \leq 10s$	$R_{\theta JA}$	70	90	$^\circ C/W$
Maximum Junction-to-Ambient *1	Steady-State		100	125	$^\circ C/W$
Maximum Junction-to-Lead *2	Steady-State	$R_{\theta JL}$	63	80	$^\circ C/W$

\*1 The value of  $R_{\theta JA}$  is measured with the device mounted on  $1 in^2$  FR-4 board with 2oz.

Copper, in a still air environment with  $T_A = 25^\circ C$

\*2 . The  $R_{\theta JA}$  is the sum of the thermal impedance from junction to lead  $R_{\theta JL}$  and lead to ambient.



**炬芯微**  
 XUANXINWEI

SMD Type

MOSFET

**AO3403**

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BVDSS	Id=-250 μ A, VGS=0V	-30			V
Zero Gate Voltage Drain Current	IdSS	VDS=-24V, VGS=0V			-1	μ A
		VDS=-24V, VGS=0V, TJ=55°C			-5	
Gate-Body leakage current	IGSS	VDS=0V, VGS=± 12V			± 100	nA
Gate Threshold Voltage	VGS(th)	VDS=VGS Id=-250 μ A	-0.6	-1	-1.4	V
On state drain current	ID(ON)	VGS=-4.5V, VDS=-5V	-10			A
Static Drain-Source On-Resistance	RDS(ON)	VGS=-10V, Id=-2.6A		102	130	m Ω
		VGS=-10V, Id=-2.6A TJ=125°C		154	200	
		VGS=-4.5V, Id=-2A		128	180	m Ω
		VGS=-2.5V, Id=-1A		187	260	m Ω
Forward Transconductance	gFS	VDS=5V, Id=-2.5A	3	4.5		S
Diode Forward Voltage	VSD	IS=-1A, VGS=0V		-0.85	-1	V
Maximum Body-Diode Continuous Current	IS				-2	A
Reverse Transfer Capacitance	Ciss	VGS=0V, VDS=-15V, f=1MHz		400	500	pF
Gate resistance	Coss			55		pF
Input Capacitance	Crss			42		pF
Output Capacitance	Rg	VGS=0V, VDS=0V, f=1MHz		12	16	Ω
Total Gate Charge	Qg	VGS=-4.5V, VDS=-15V, Id=-2.5A		4.4	5.3	nC
Gate Source Charge	Qgs			0.8		nC
Gate Drain Charge	Qgd			1.32		nC
Turn-On Rise Time	tD(on)	VGS=-10V, VDS=-15V, RL=6 Ω, RGEN=3 Ω		5.3	8	ns
Turn-Off DelayTime	tr			4.4	9	ns
Turn-Off Fall Time	tD(off)			31.5	45	ns
Turn-On DelayTime	tf			8	16	ns
Body Diode Reverse Recovery Time	trr	IF=-2.5A, di/dt=100A/ μ s		15.8	19	ns
Body Diode Reverse Recovery Charge	Qrr	IF=-2.5A, di/dt=100A/ μ s		8	12	nC

■ Marking

Marking	A3
---------	----