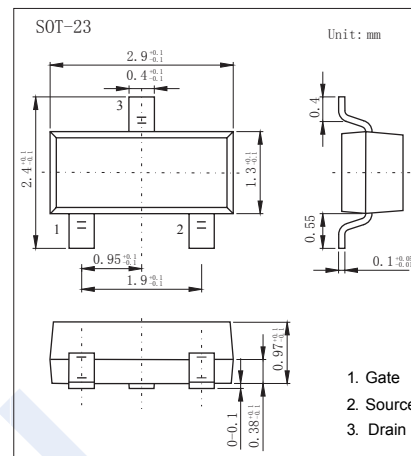
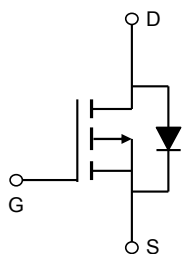


P-Channel MOSFET

AO3421 (KO3421)

■ Features

- $V_{DS} (V) \approx -30V$
- $I_D \approx -2.6 A$ ($V_{GS} \approx -10V$)
- $R_{DS(ON)} < 110m\Omega$ ($V_{GS} \approx -10V$)
- $R_{DS(ON)} < 180m\Omega$ ($V_{GS} \approx -4.5V$)

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

Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DS}	-30	V
Gate-Source Voltage		V_{GS}	± 20	
Continuous Drain Current	$T_A = 25^\circ C$	I_D	-2.6	A
	$T_A = 70^\circ C$		-2.2	
Pulsed Drain Current		I_{DM}	-20	
Power Dissipation	$T_A = 25^\circ C$	P_D	1.4	W
	$T_A = 70^\circ C$		1	
Thermal Resistance.Junction- to-Ambient	$t \leq 10s$	R_{thJA}	90	$^\circ C/W$
	Steady-State		125	
Thermal Resistance.Junction- to-Lead		R_{thJL}	80	
Junction Temperature		T_J	150	$^\circ C$
Junction Storage Temperature Range		T_{stg}	-55 to 150	

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■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V _{DSS}	I _D =-250 μA, V _{GS} =0V	-30			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =-30V, V _{GS} =0V			-1	μA
		V _{DS} =-30V, V _{GS} =0V, T _J =55°C			-5	
Gate-Body leakage current	I _{GSS}	V _{DS} =0V, V _{GS} =±20V			±100	nA
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =-250 μA	-1.4		-2.4	V
Static Drain-Source On-Resistance	R _{DS(on)}	V _{GS} =-10V, I _D =-2.6A			110	mΩ
		V _{GS} =-10V, I _D =-2.6A T _J =125°C			140	
		V _{GS} =-4.5V, I _D =-2A			180	
On state drain current	I _{D(on)}	V _{GS} =-10V, V _{DS} =-5V	-20			A
Forward Transconductance	g _{FS}	V _{DS} =-5V, I _D =-2.6A		5		S
Input Capacitance	C _{iss}	V _{GS} =0V, V _{DS} =-15V, f=1MHz		197	240	pF
Output Capacitance	C _{oss}			42		
Reverse Transfer Capacitance	C _{rss}			26	37	
Gate resistance	R _g	V _{GS} =0V, V _{DS} =0V, f=1MHz	3.5		11	Ω
Total Gate Charge (10V)	Q _g	V _{GS} =-10V, V _{DS} =-15V, I _D =-2.6A		4.3	5.2	nC
Total Gate Charge (4.5V)				2.2	3	
Gate Source Charge	Q _{gs}			0.7		
Gate Drain Charge	Q _{gd}			1.1		
Turn-On DelayTime	t _{d(on)}	V _{GS} =-10V, V _{DS} =-15V, R _L =5.8Ω, R _{GEN} =3Ω		7.5		ns
Turn-On Rise Time	t _r			4.1		
Turn-Off DelayTime	t _{d(off)}			11.8		
Turn-Off Fall Time	t _f			3.8		
Body Diode Reverse Recovery Time	t _{rr}	I _F =-2.6A, dI/dt=100A/μs		11.3	14	nC
Body Diode Reverse Recovery Charge	Q _{rr}			4.4		
Maximum Body-Diode Continuous Current	I _S				-1.5	A
Diode Forward Voltage	V _{SD}	I _S =-1A, V _{GS} =0V			-1	V

* The static characteristics in Figures 1 to 6 are obtained using <300us pulses, duty cycle 0.5% max.

■ Marking

Marking	AP**
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P-Channel MOSFET

AO3421 (KO3421)

■ Typical Characteristics

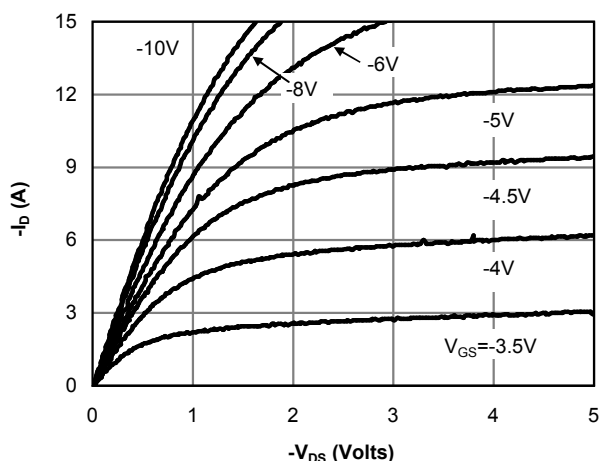


Fig 1: On-Region Characteristics (Note E)

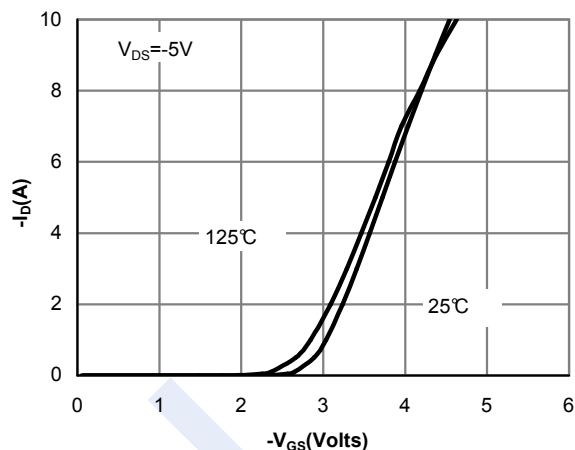


Figure 2: Transfer Characteristics (Note E)

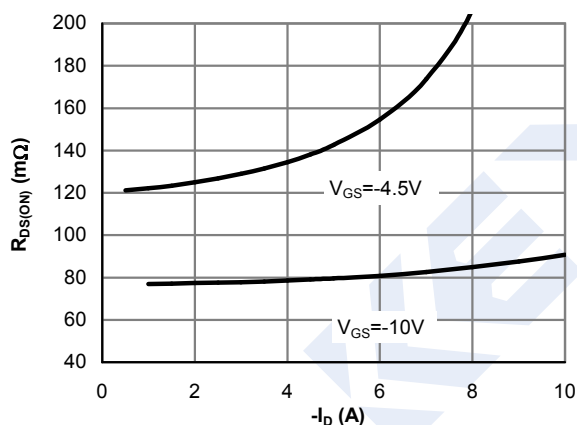


Figure 3: On-Resistance vs. Drain Current and Gate Voltage (Note E)

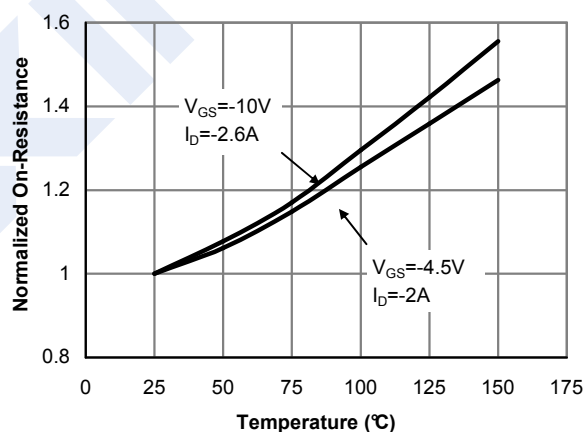


Figure 4: On-Resistance vs. Junction Temperature (Note E)

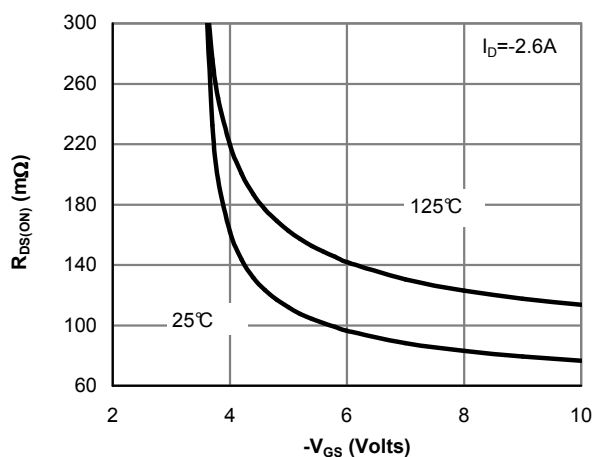


Figure 5: On-Resistance vs. Gate-Source Voltage (Note E)

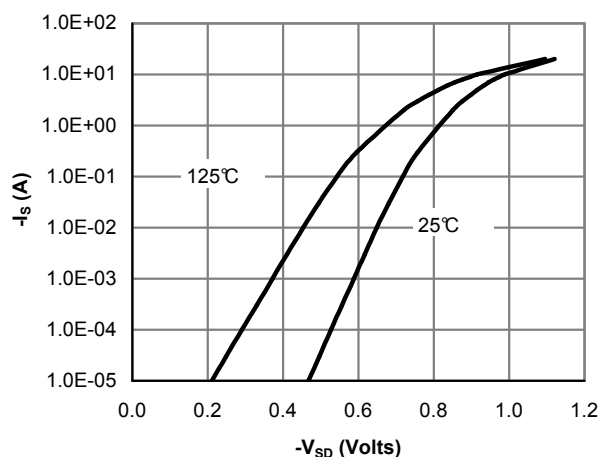


Figure 6: Body-Diode Characteristics (Note E)

P-Channel MOSFET

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■ Typical Characteristics

