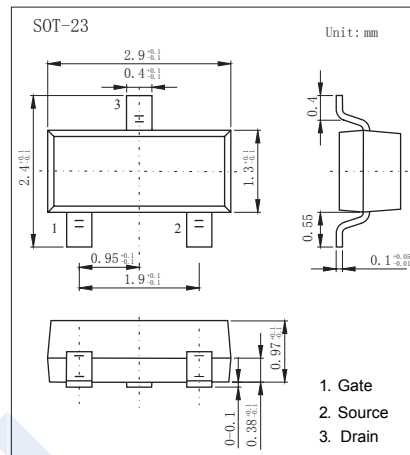
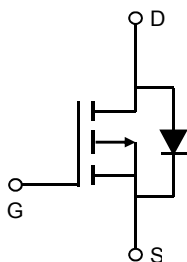


P-Channel MOSFET

AO3435 (KO3435)

■ Features

- $V_{DS}(V) \approx -20V$
- $I_D \approx -3.5 A$ ($V_{GS} \approx -4.5V$)
- $R_{DS(ON)} < 70m\Omega$ ($V_{GS} \approx -4.5V$)
- $R_{DS(ON)} < 90m\Omega$ ($V_{GS} \approx -2.5V$)
- $R_{DS(ON)} < 110m\Omega$ ($V_{GS} \approx -1.8V$)
- $R_{DS(ON)} < 130m\Omega$ ($V_{GS} \approx -1.5V$)



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

Parameter		Symbol	10 Sec	Steady State	Unit
Drain-Source Voltage		V _{DS}	-20		V
Gate-Source Voltage		V _{GS}	± 8		
Continuous Drain Current	T _A =25°C	I _D	-3.5	-2.9	A
	T _A =70°C		-2.7	-2.3	
Pulsed Drain Current		I _{DM}	-25		
Power Dissipation	T _A =25°C	P _D	1.4	1	W
	T _A =70°C		0.9	0.6	
Thermal Resistance.Junction- to-Ambient		R _{thJA}	90	125	°C/W
Thermal Resistance.Junction- to-Lead			R _{thJL}	-	
Junction Temperature		T _J	150		°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	-20			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =-20V, V _{GS} =0V			-1	μA
		V _{DS} =-20V, V _{GS} =0V, T _J =55°C			-5	
Gate-Body leakage current	I _{GSS}	V _{DS} =0V, V _{GS} =±8V			±100	nA
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =-250 μA	-0.5		-1	V
Static Drain-Source On-Resistance	R _{DS(on)}	V _{GS} =-4.5V, I _D =-3.5A			70	mΩ
		V _{GS} =-4.5V, I _D =-3.5A, T _J =125°C			100	
		V _{GS} =-2.5V, I _D =-3A			90	
		V _{GS} =-1.8V, I _D =-2A			110	
		V _{GS} =-1.5V, I _D =-0.5A			130	
On state drain current	I _{D(ON)}	V _{GS} =-4.5V, V _{DS} =-5V	-25			A
Forward Transconductance	g _{FS}	V _{DS} =-5V, I _D =-3.5A		15		S
Input Capacitance	C _{iss}	V _{GS} =0V, V _{DS} =-10V, f=1MHz		510	745	pF
Output Capacitance	C _{oss}			70		
Reverse Transfer Capacitance	C _{rss}			52		
Gate resistance	R _g	V _{GS} =0V, V _{DS} =0V, f=1MHz		18	23	Ω
Total Gate Charge	Q _g	V _{GS} =-4.5V, V _{DS} =-10V, I _D =-3.5A		5.6	11	nC
Gate Source Charge	Q _{gs}			0.6		
Gate Drain Charge	Q _{gd}			1.8		
Turn-On DelayTime	t _{d(on)}	V _{GS} =-4.5V, V _{DS} =-10V, R _L =3Ω, R _{GEN} =6Ω		11		ns
Turn-On Rise Time	t _r			10		
Turn-Off DelayTime	t _{d(off)}			60		
Turn-Off Fall Time	t _f			30		
Body Diode Reverse Recovery Time	t _{rr}	I _F =-3.5A, dI/dt=100A/μs		17	49	nC
Body Diode Reverse Recovery Charge	Q _{rr}			4		
Maximum Body-Diode Continuous Current	I _S				-1.4	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	B5**
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P-Channel MOSFET

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■ Typical Characteristics

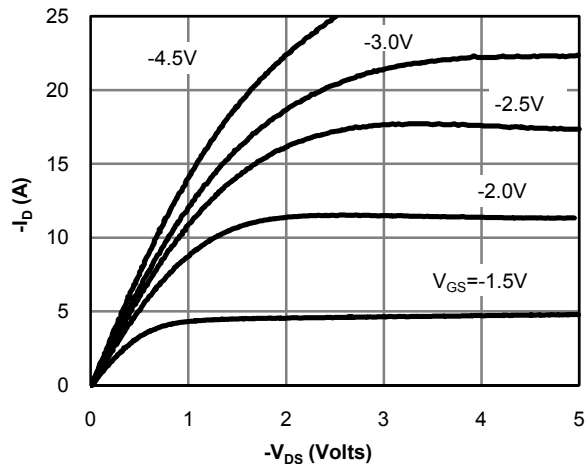


Figure 1: On-Region Characteristics

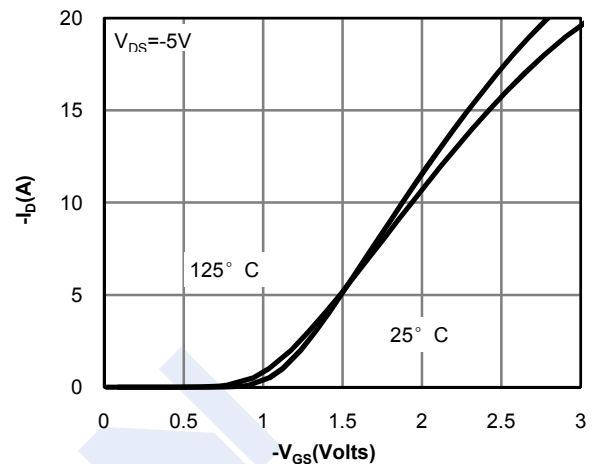


Figure 2: Transfer Characteristics

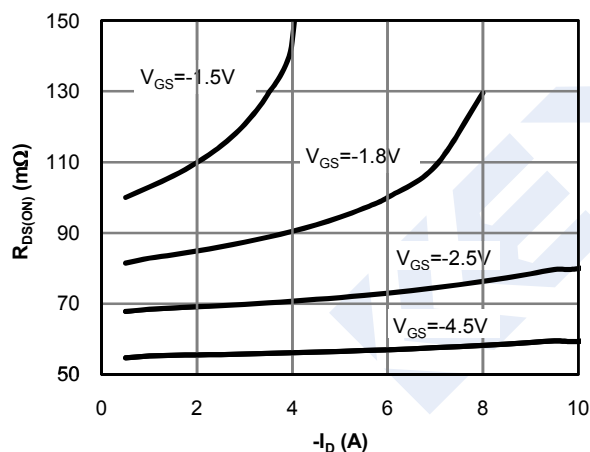


Figure 3: On-Resistance vs. Drain Current and Gate Voltage

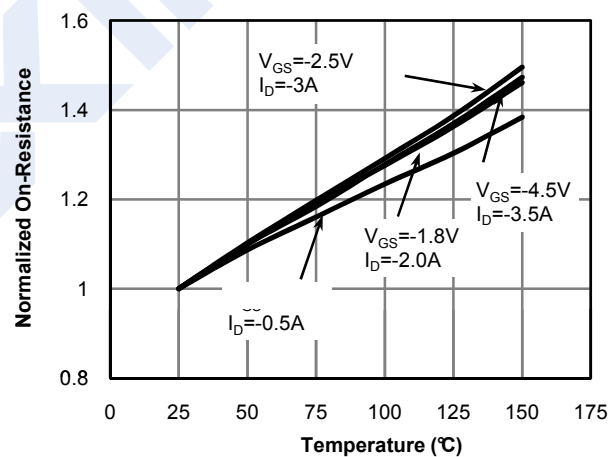


Figure 4: On-Resistance vs. Junction Temperature

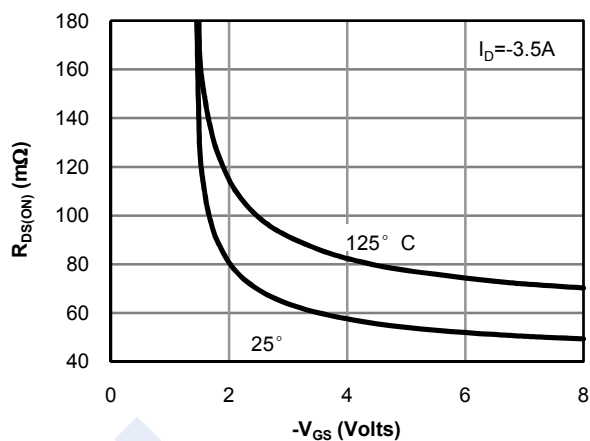


Figure 5: On-Resistance vs. Gate-Source Voltage

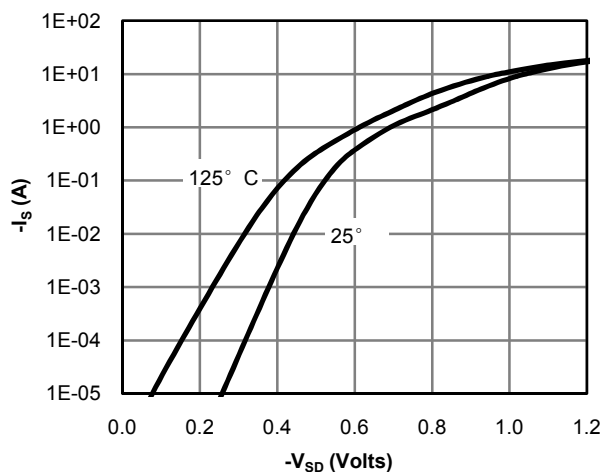


Figure 6: Body-Diode Characteristics

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■ Typical Characteristics

