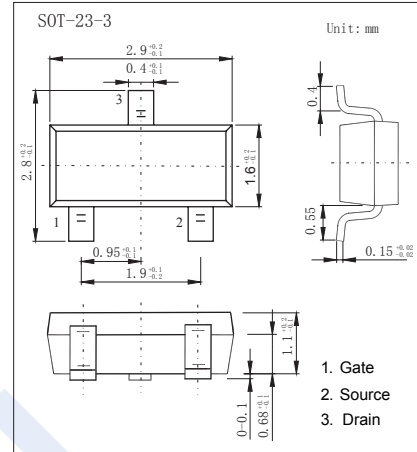
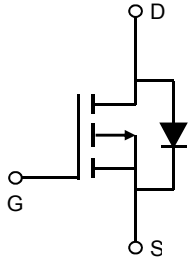


P-Channel MOSFET

AO3435 (KO3435)

■ Features

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



■ 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	I_D	$T_A = 25^\circ C$	-3.5	-2.9	A
		$T_A = 70^\circ C$	-2.7	-2.3	
Pulsed Drain Current	I_{DM}	-25			
Power Dissipation	P_D	$T_A = 25^\circ C$	1.4	1	W
		$T_A = 70^\circ C$	0.9	0.6	
Thermal Resistance.Junction- to-Ambient	R_{thJA}	90	125	$^\circ C/W$	
Thermal Resistance.Junction- to-Lead	R_{thJL}	-	80		
Junction Temperature	T_J	150		$^\circ C$	
Junction Storage Temperature Range	T_{stg}	-55 to 150			

P-Channel MOSFET

AO3435 (KO3435)

■ 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 AO3435 (KO3435)

■ Typical Characteristics

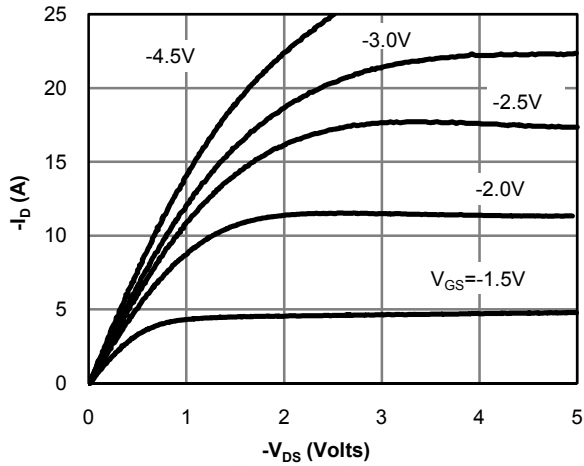


Figure 1: On-Region Characteristics

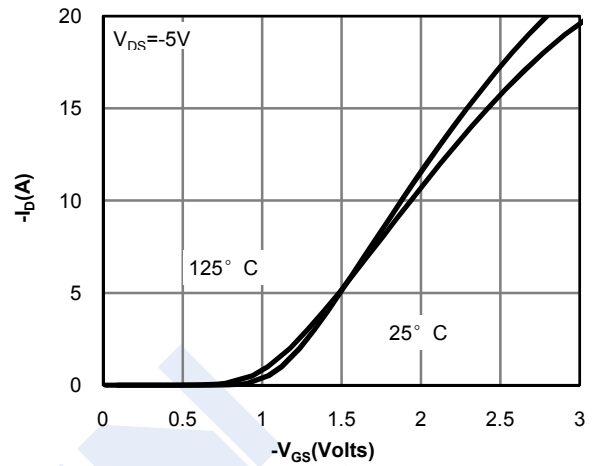


Figure 2: Transfer Characteristics

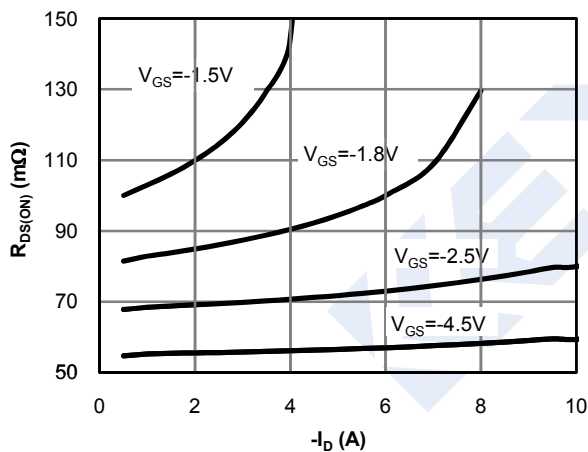


Figure 3: On-Resistance vs. Drain Current and Gate Voltage

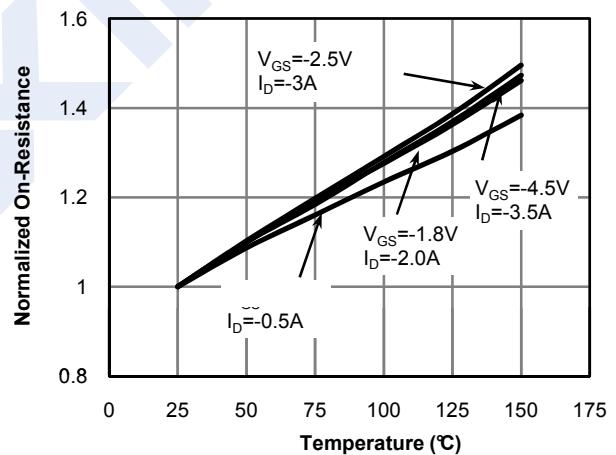


Figure 4: On-Resistance vs. Junction Temperature

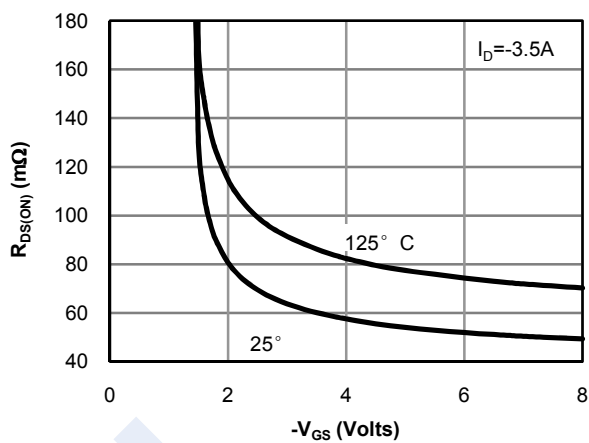


Figure 5: On-Resistance vs. Gate-Source Voltage

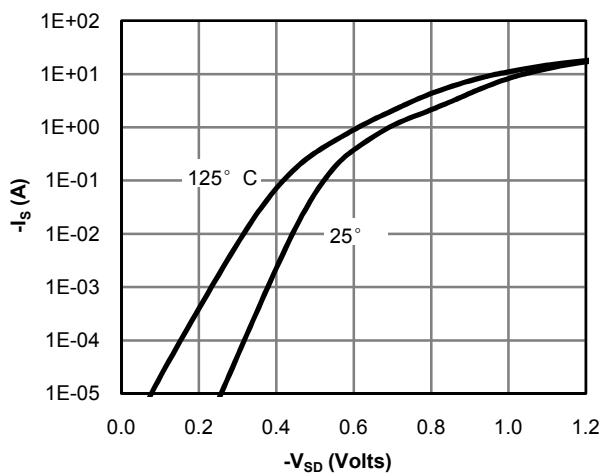


Figure 6: Body-Diode Characteristics

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■ Typical Characteristics

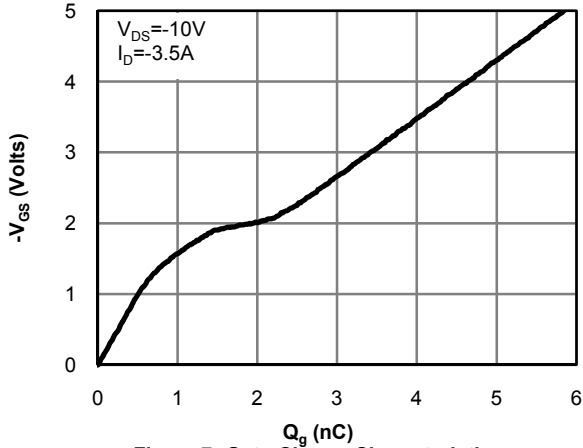


Figure 7: Gate-Charge Characteristics

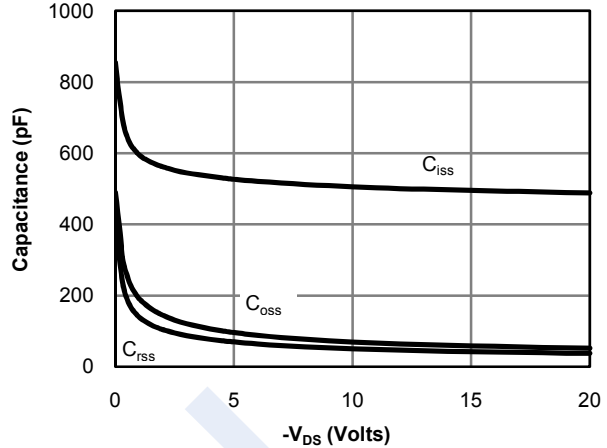


Figure 8: Capacitance Characteristics

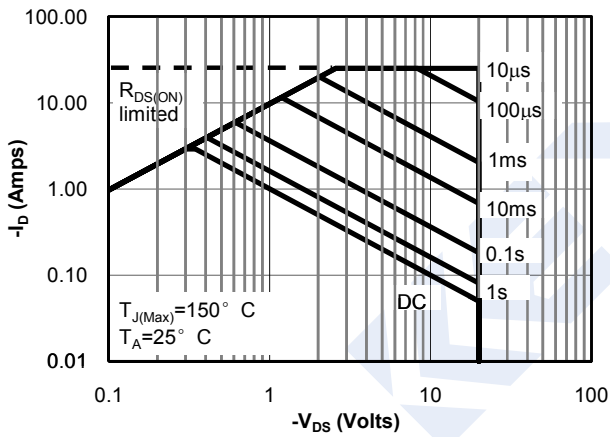


Figure 9: Maximum Forward Biased Safe Operating Area (Note E)

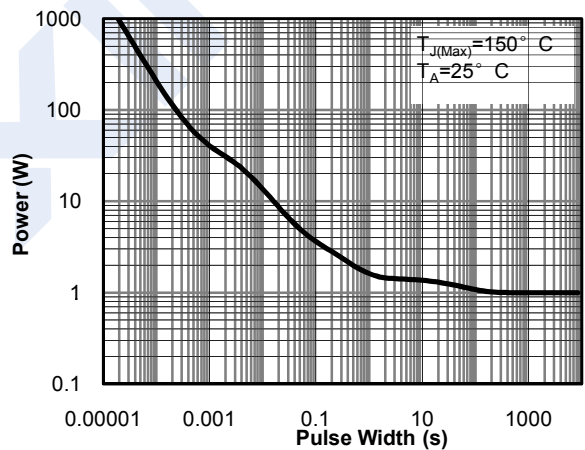


Figure 10: Single Pulse Power Rating Junction-to-Ambient (Note E)

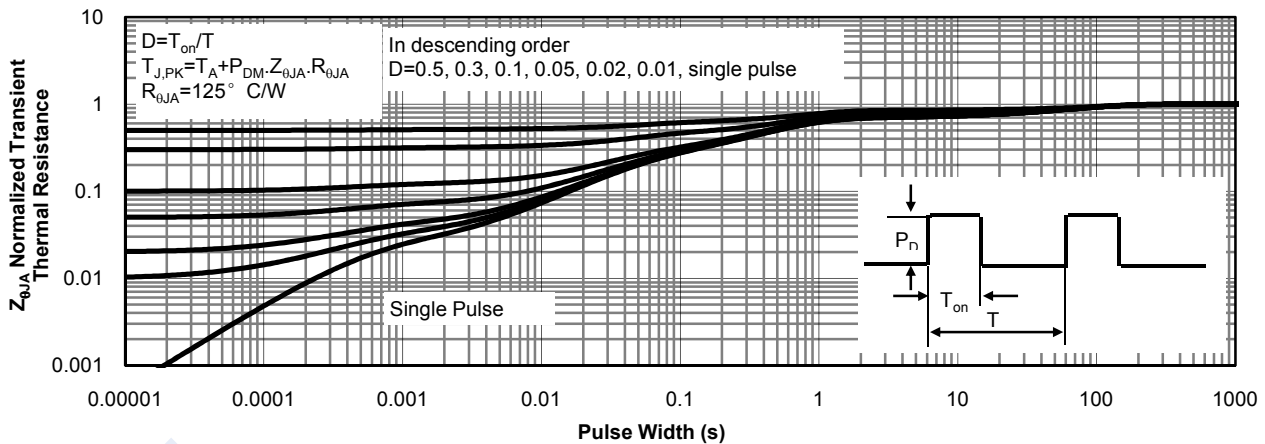


Figure 11: Normalized Maximum Transient Thermal Impedance (Note E)