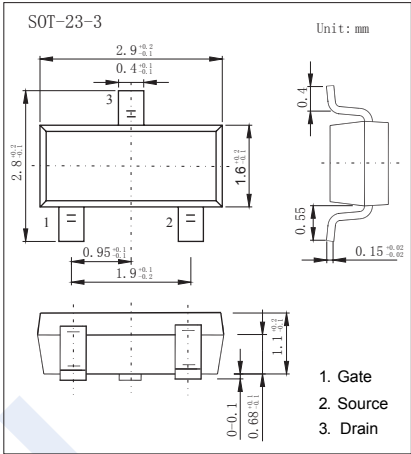
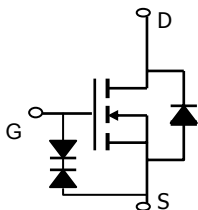


N-Channel MOSFET AO3434 (KO3434)

■ Features

- $V_{DS} (V) = 30V$
- $I_D = 4.2 A (V_{GS} = 10V)$
- $R_{DS(ON)} < 52m \Omega (V_{GS} = 10V)$
- $R_{DS(ON)} < 75m \Omega (V_{GS} = 4.5V)$
- ESD Protected



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

Parameter		Symbol	10 Sec	Steady State	Unit
Drain-Source Voltage		V _{DS}	30		V
Gate-Source Voltage		V _{GS}	± 20		
Continuous Drain Current	TA=25°C	I _D	4.2	3.5	A
	TA=70°C		3.3	2.8	
Pulsed Drain Current		I _{DM}	30		
Power Dissipation	TA=25°C	P _D	1.4	1	W
	TA=70°C		0.9	0.64	
Thermal Resistance.Junction- to-Ambient		R _{thJA}	90	125	°C/W
Thermal Resistance.Junction- to-Lead		R _{thJL}	-	80	
Junction Temperature		T _J	150		°C
Storage Temperature Range		T _{stg}	-55 to 150		

N-Channel MOSFET

AO3434 (KO3434)

■ 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} =±16V			±10	μA
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =250 μA	1		1.8	V
Static Drain-Source On-Resistance	R _{DS(on)}	V _{GS} =10V, I _D =4.2A			52	mΩ
		V _{GS} =10V, I _D =4.2A, T _J =125°C			74	
		V _{GS} =4.5V, I _D =2A			75	
On State Drain Current	I _{D(on)}	V _{GS} =10V, V _{DS} =5V	30			A
Forward Transconductance	g _{FS}	V _{DS} =5V, I _D =4.2A		8.5		S
Input Capacitance	C _{iss}	V _{GS} =0V, V _{DS} =15V, f=1MHz		269	340	pF
Output Capacitance	C _{oss}			65		
Reverse Transfer Capacitance	C _{rss}			41		
Gate Resistance	R _g	V _{GS} =0V, V _{DS} =0V, f=1MHz		1	1.5	Ω
Total Gate Charge (10V)	Q _g	V _{GS} =10V, V _{DS} =15V, I _D =4.2A		5.7	7.2	nC
Total Gate Charge (4.5V)				3		
Gate Source Charge	Q _{gs}			1.37		
Gate Drain Charge	Q _{gd}			0.65		
Turn-On DelayTime	t _{d(on)}	V _{GS} =10V, V _{DS} =15V, R _L =3.6 Ω, R _G =3 Ω			3.8	ns
Turn-On Rise Time	t _r				8	
Turn-Off DelayTime	t _{d(off)}				23	
Turn-Off Fall Time	t _f				5.5	
Body Diode Reverse Recovery Time	t _{rr}	I _F =4.2A, di/dt=100A/μs		15.5	21	nC
Body Diode Reverse Recovery Charge	Q _{rr}			7.1		
Maximum Body-Diode Continuous Current	I _S				1.8	A
Diode Forward Voltage	V _{SD}	I _S =1A, V _{GS} =0V			1	V

■ Marking

Marking	B4**
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N-Channel MOSFET

AO3434 (KO3434)

Typical Characteristics

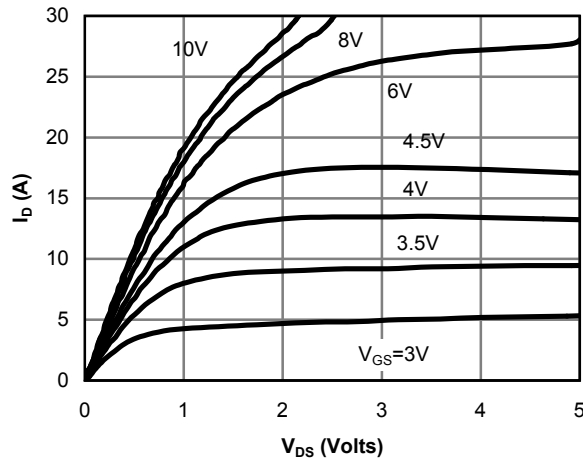


Fig 1: On-Region Characteristics

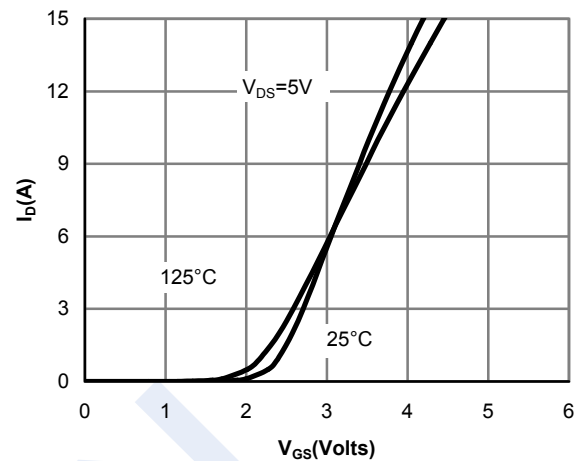


Figure 2: Transfer Characteristics

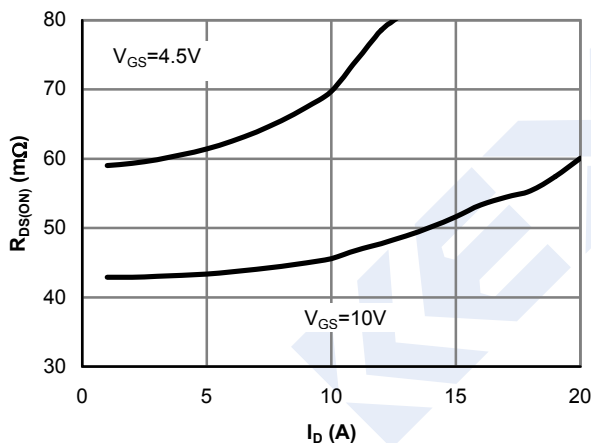


Figure 3: On-Resistance vs. Drain Current and Gate Voltage

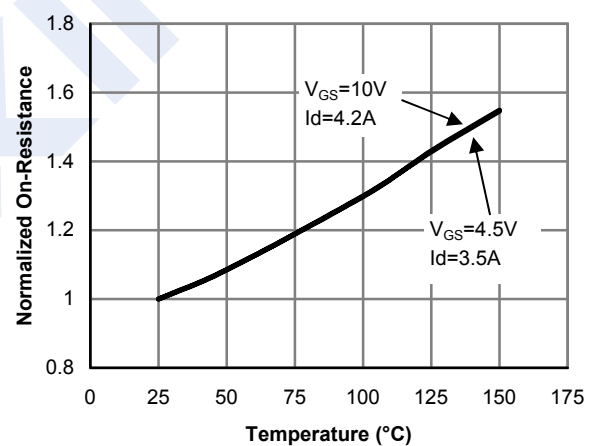


Figure 4: On-Resistance vs. Junction Temperature

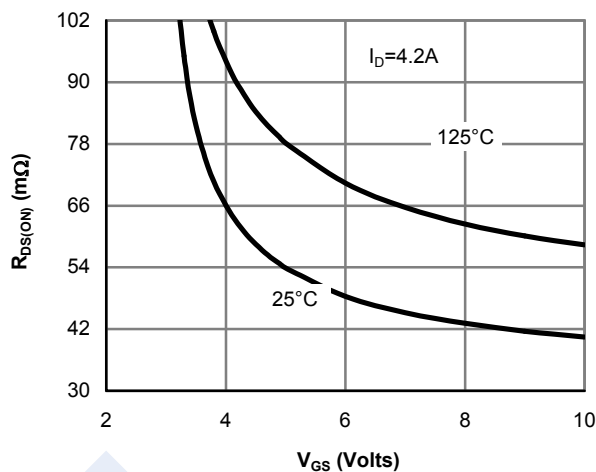


Figure 5: On-Resistance vs. Gate-Source Voltage

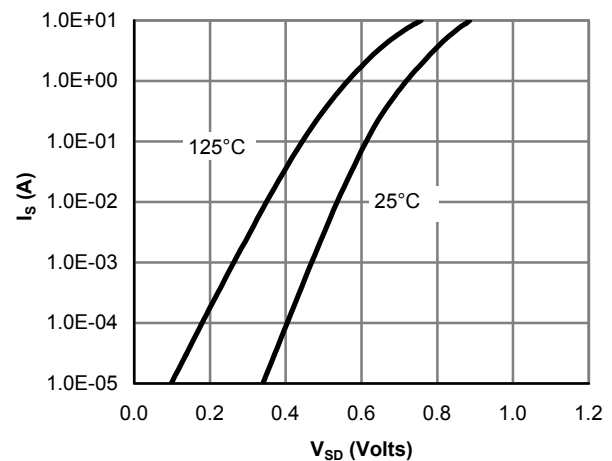


Figure 6: Body-Diode Characteristics

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■ Typical Characteristics

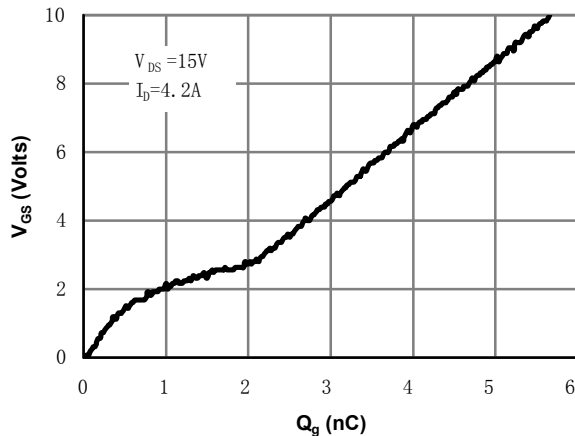


Figure 7: Gate-Charge Characteristics

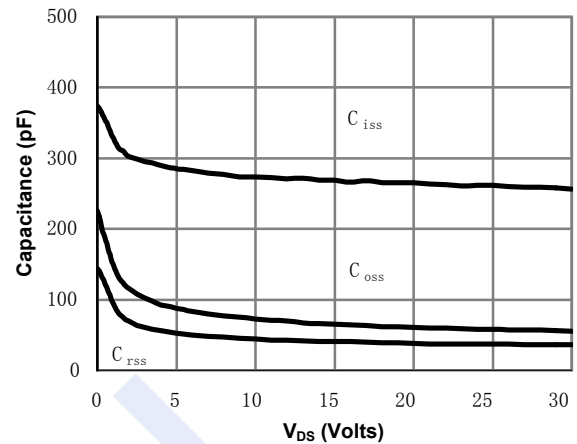


Figure 8: Capacitance Characteristics

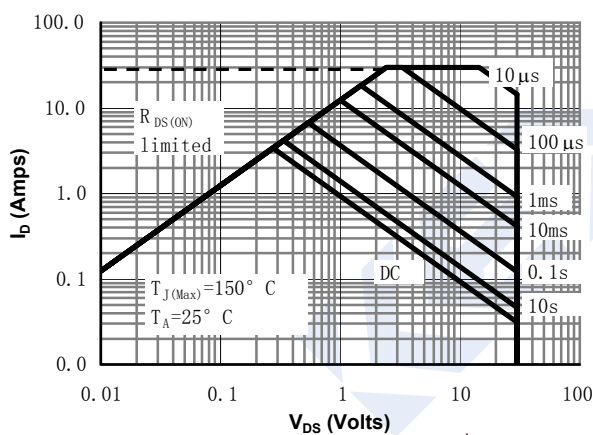


Figure 9: Maximum Forward Biased Safe Operating Area (Note E)

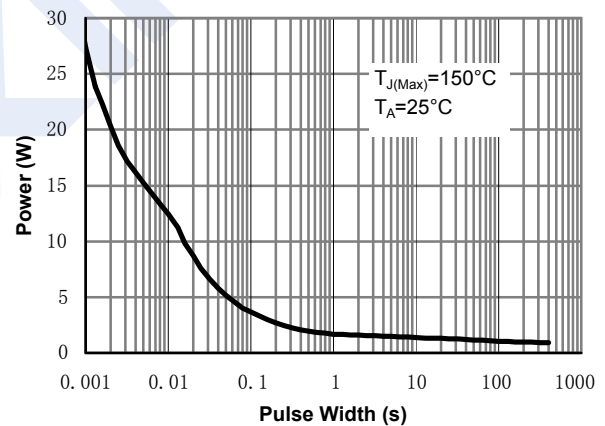


Figure 10: Single Pulse Power Rating Junction-to-Ambient (Note E)

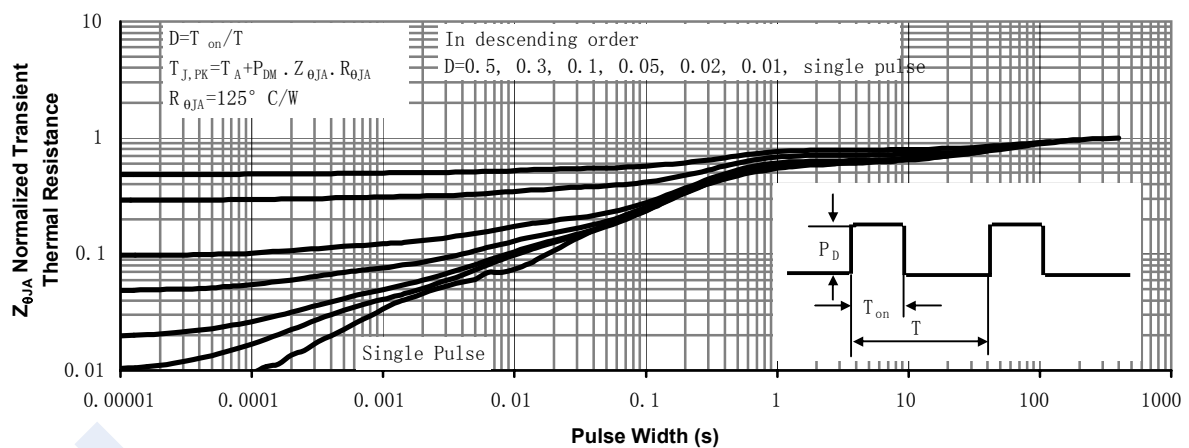


Figure 11: Normalized Maximum Transient Thermal Impedance