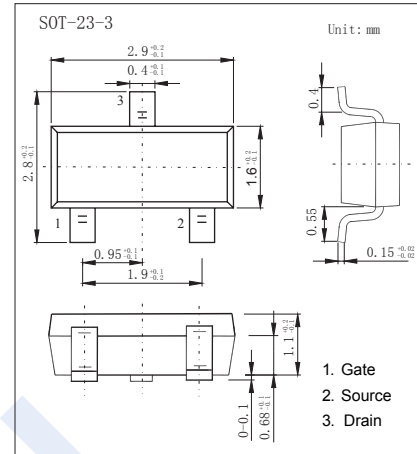
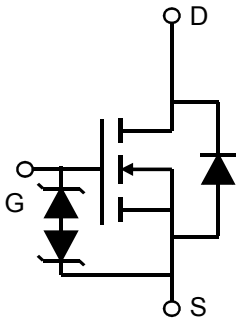


N-Channel MOSFET

AO3460 (KO3460)

■ Features

- $V_{DS} (V) = 60V$
- $I_D = 0.65 A (V_{GS} = 10V)$
- $R_{DS(ON)} < 1.7 \Omega (V_{GS} = 10V)$
- $R_{DS(ON)} < 2 \Omega (V_{GS} = 4.5V)$



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

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	60	V
Gate-Source Voltage	V_{GS}	± 20	
Continuous Drain Current	I_D	$T_A=25^\circ C$	0.65
		$T_A=70^\circ C$	0.5
Pulsed Drain Current	I_{DM}	1.6	A
Power Dissipation	P_D	$T_A=25^\circ C$	1.4
		$T_A=70^\circ C$	0.9
Thermal Resistance.Junction- to-Ambient	R_{thJA}	$t \leq 10s$	90
		Steady-State	125
Thermal Resistance.Junction- to-Case	R_{thJC}	80	$^\circ C/W$
Junction Temperature	T_J	150	$^\circ C$
Storage Temperature Range	T_{stg}	-55 to 150	

N-Channel MOSFET

AO3460 (KO3460)

■ 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	60			V	
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =60V, V _{GS} =0V			1	μA	
		V _{DS} =60V, V _{GS} =0V, T _J =55°C			5		
Gate-Body Leakage Current	I _{GSS}	V _{DS} =0V, V _{GS} =±20V			±10	μA	
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =250 μA	1		2.5	V	
Static Drain-Source On-Resistance	R _{DS(on)}	V _{GS} =10V, I _D =0.65A			1.7	Ω	
		V _{GS} =10V, I _D =0.65A, T _J =125°C			3		
		V _{GS} =4.5V, I _D =0.5A			2		
On state drain current	I _{D(ON)}	V _{GS} =10V, V _{DS} =5V	1.6			A	
Forward Transconductance	g _{FS}	V _{DS} =5V, I _D =0.65A		0.8		S	
Input Capacitance	C _{iss}	V _{GS} =0V, V _{DS} =30V, f=1MHz		22	27	pF	
Output Capacitance	C _{oss}			6	10		
Reverse Transfer Capacitance	C _{rss}			2	6		
Gate Resistance	R _g		V _{GS} =0V, V _{DS} =0V, f=1MHz		250		400
Total Gate Charge (10V)	Q _g	V _{GS} =10V, V _{DS} =30V, I _D =0.65A		0.8	2	nC	
Total Gate Charge (4.5V)				0.4	1.5		
Gate Source Charge			Q _{gs}		0.17		1
Gate Drain Charge			Q _{gd}		0.2		1
Turn-On DelayTime	t _{d(on)}	V _{GS} =10V, V _{DS} =30V, R _L =75Ω, R _G =3Ω		5.3	12	ns	
Turn-On Rise Time	t _r			2.8	6		
Turn-Off DelayTime	t _{d(off)}			19.7	30		
Turn-Off Fall Time	t _f			5.5	11		
Body Diode Reverse Recovery Time	t _{rr}	I _F =0.65A, di/dt=100A/us		11.3	14	nC	
Body Diode Reverse Recovery Charge	Q _{rr}			7.5			
Maximum Body-Diode Continuous Current	I _S				1.2	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	C0**
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N-Channel MOSFET AO3460 (KO3460)

■ Typical Characteristics

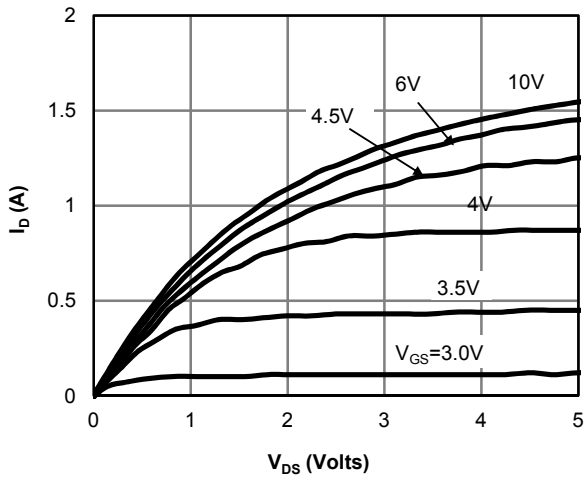


Figure 1: On-Region Characteristics

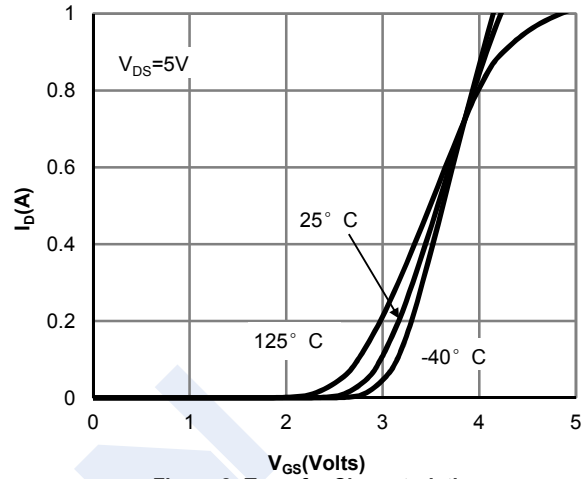


Figure 2: Transfer Characteristics

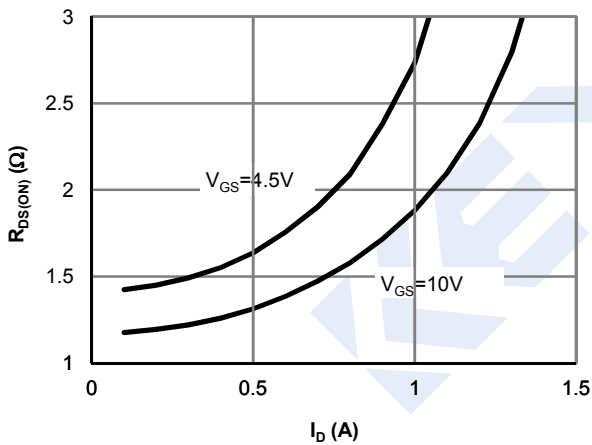


Figure 3: On-Resistance vs. Drain Current and Gate Voltage

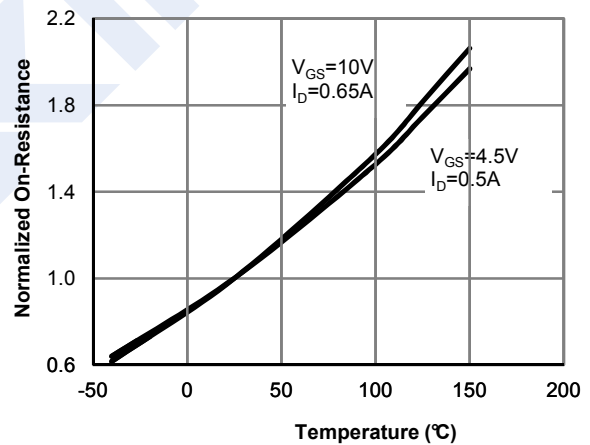


Figure 4: On-Resistance vs. Junction Temperature

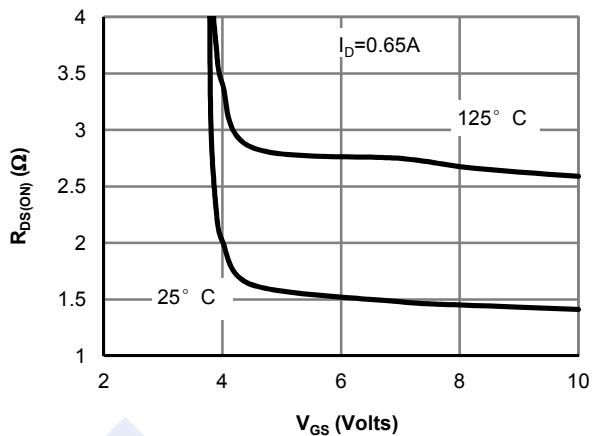


Figure 5: On-Resistance vs. Gate-Source Voltage

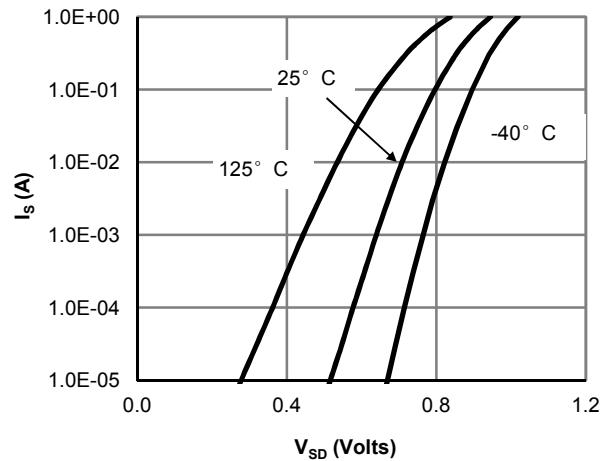


Figure 6: Body-Diode Characteristics

N-Channel MOSFET AO3460 (KO3460)

■ Typical Characteristics

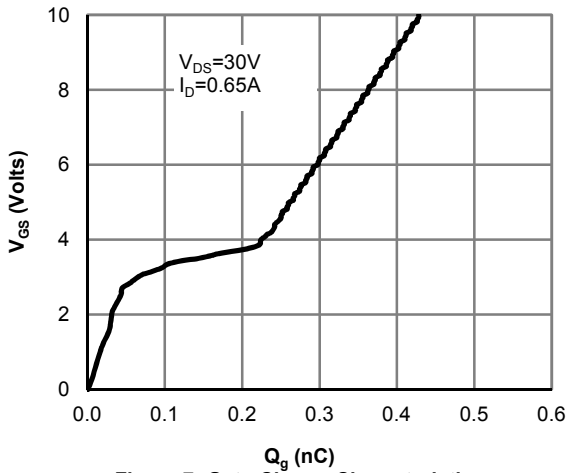


Figure 7: Gate-Charge Characteristics

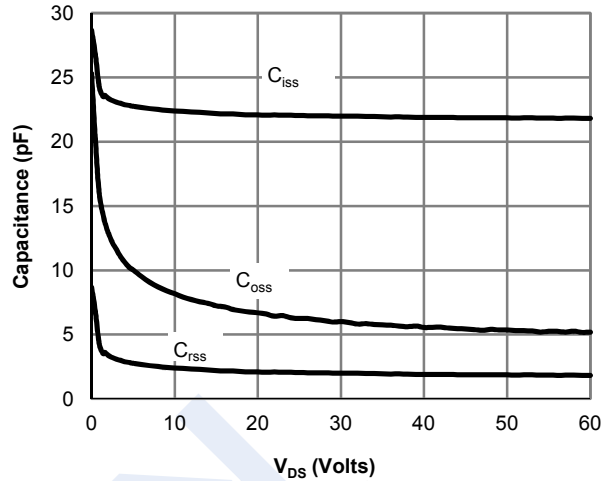


Figure 8: Capacitance Characteristics

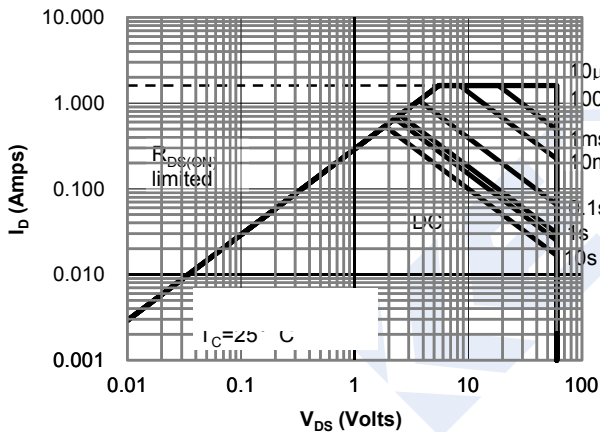


Figure 9: Maximum Forward Biased Safe Operating Area (Note E)

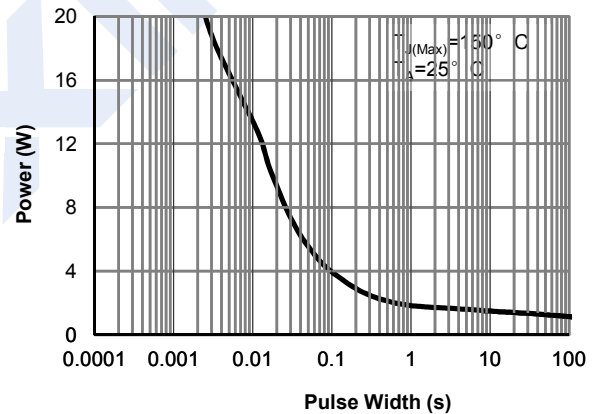


Figure 10: Single Pulse Power Rating Junction-to-Ambient (Note E)

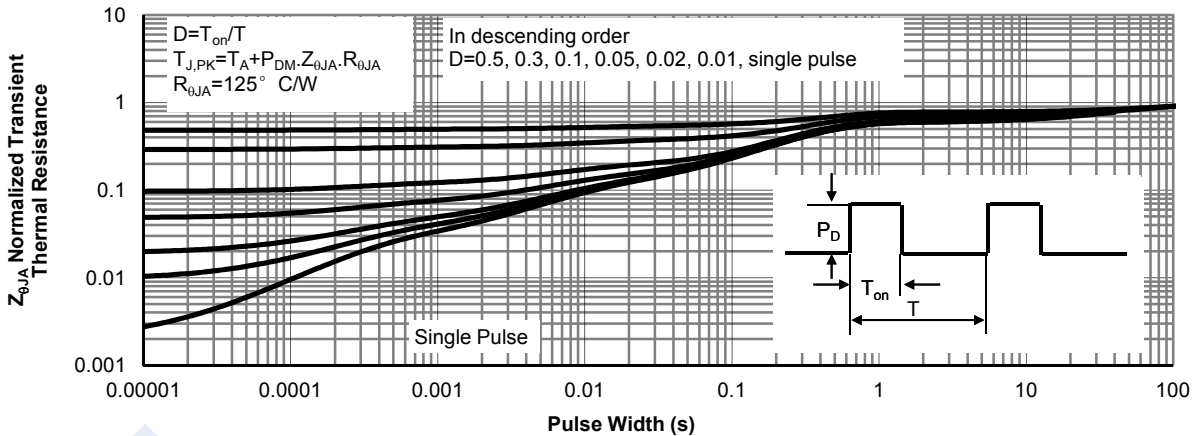


Figure 11: Normalized Maximum Transient Thermal Impedance