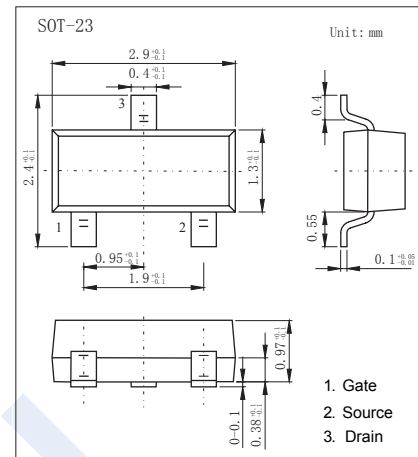
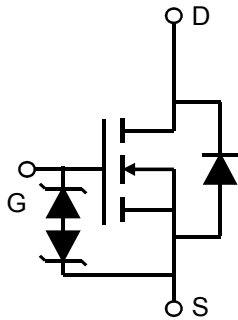


## N-Channel MOSFET

### 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	$V_{GS}$	$\pm 20$	
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	$V_{DS}$	$I_D=250\ \mu A, V_{GS}=0V$	60			V
Zero Gate Voltage Drain Current	$I_{DSS}$	$V_{DS}=60V, V_{GS}=0V$			1	uA
		$V_{DS}=60V, V_{GS}=0V, T_J=55^\circ C$			5	
Gate-Body Leakage Current	$I_{GSS}$	$V_{DS}=0V, V_{GS}=\pm 20V$			$\pm 10$	uA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=250\ \mu A$	1		2.5	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=10V, I_D=0.65A$			1.7	$\Omega$
		$V_{GS}=10V, I_D=0.65A, T_J=125^\circ C$			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	$t_{d(on)}$	$V_{GS}=10V, V_{DS}=30V, R_L=75\ \Omega, R_G=3\ \Omega$		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

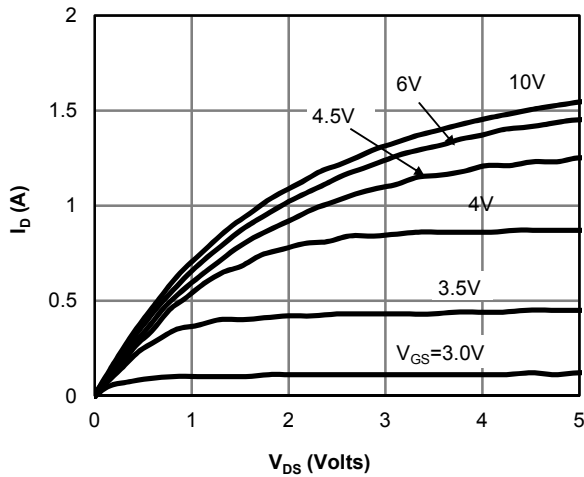


Figure 1: On-Region Characteristics

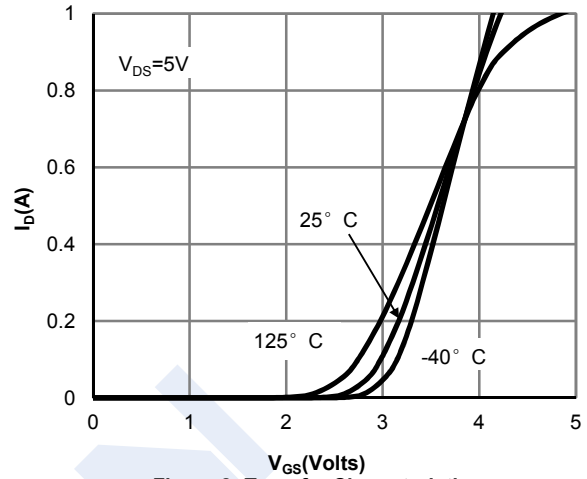


Figure 2: Transfer Characteristics

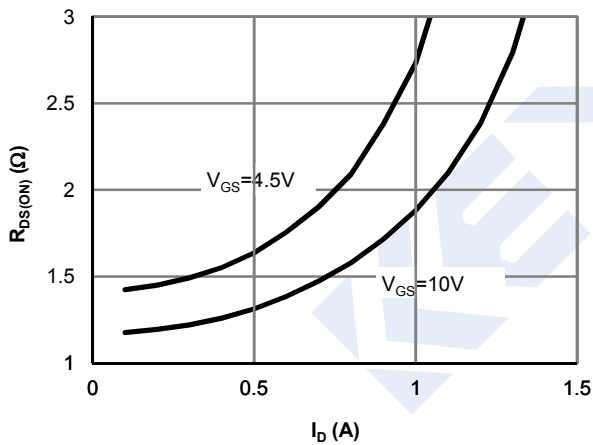


Figure 3: On-Resistance vs. Drain Current and Gate Voltage

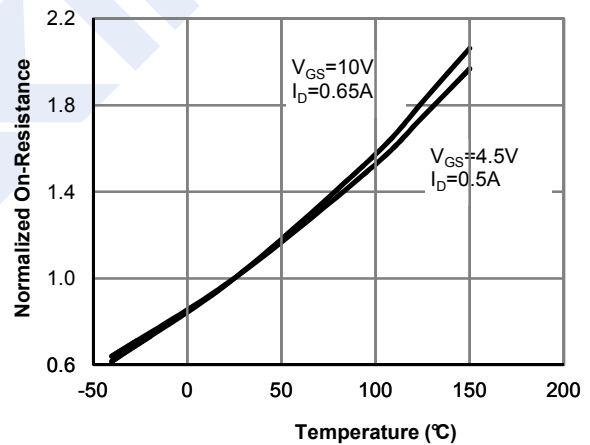


Figure 4: On-Resistance vs. Junction Temperature

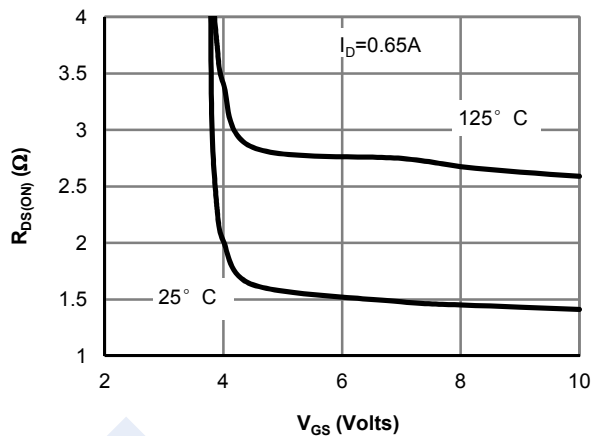


Figure 5: On-Resistance vs. Gate-Source Voltage

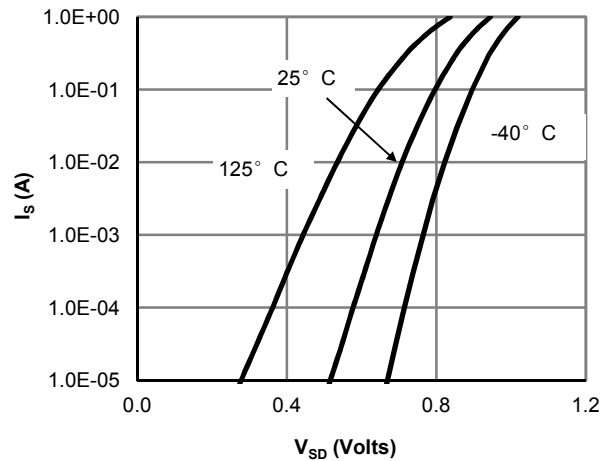


Figure 6: Body-Diode Characteristics

## N-Channel MOSFET AO3460 (KO3460)

■ Typical Characteristics

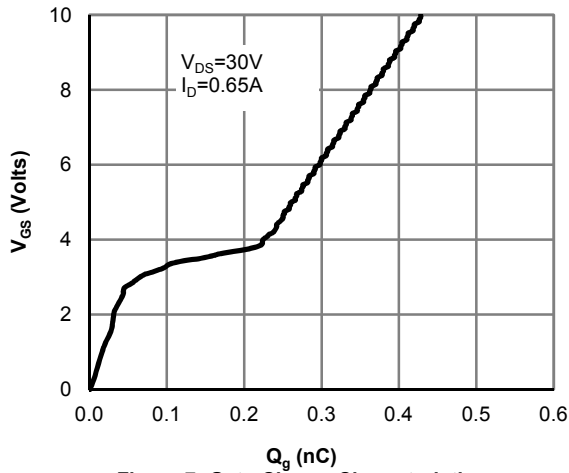


Figure 7: Gate-Charge Characteristics

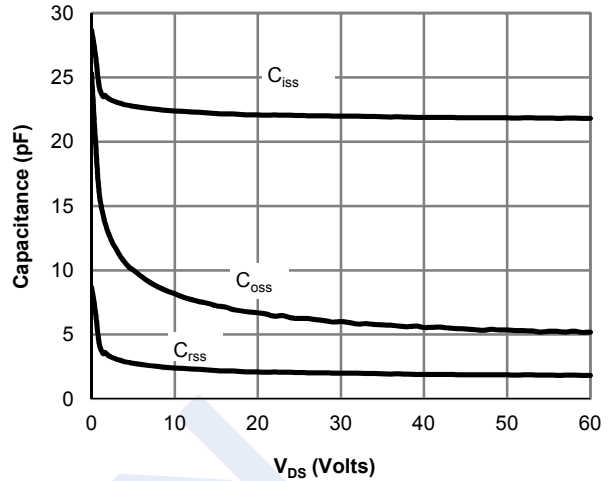


Figure 8: Capacitance Characteristics

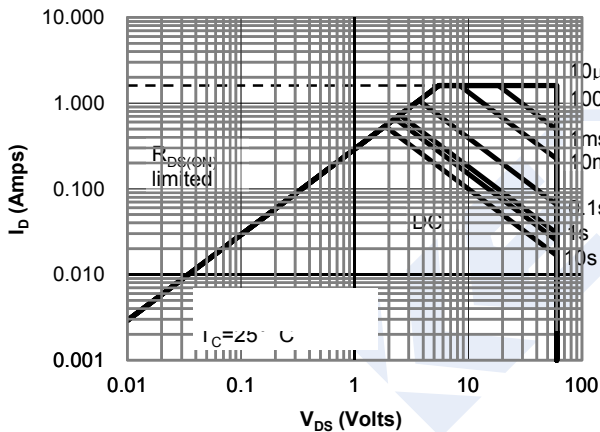


Figure 9: Maximum Forward Biased Safe Operating Area (Note E)

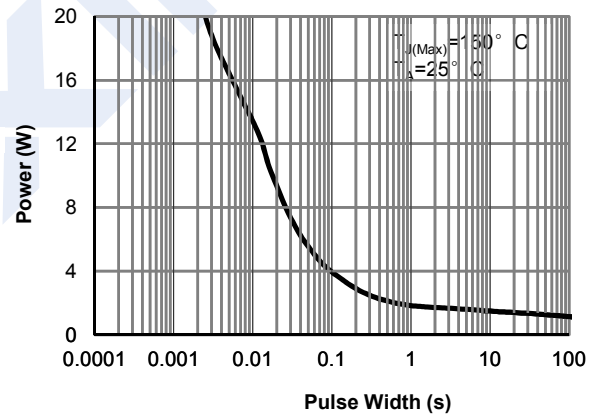


Figure 10: Single Pulse Power Rating Junction-to-Ambient (Note E)

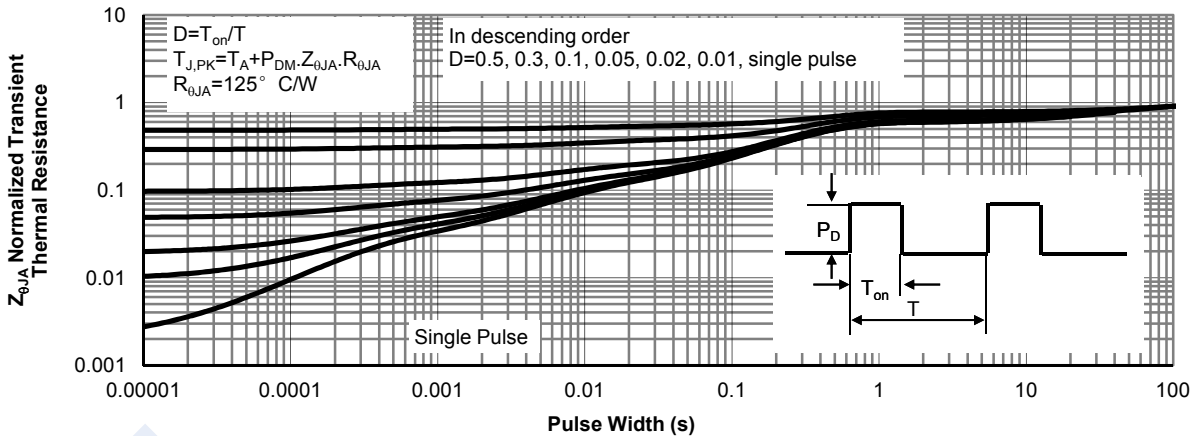


Figure 11: Normalized Maximum Transient Thermal Impedance