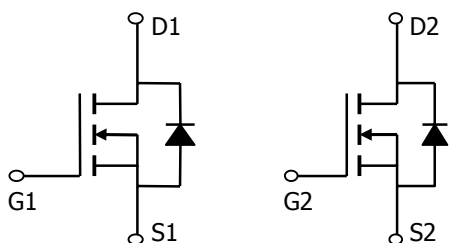
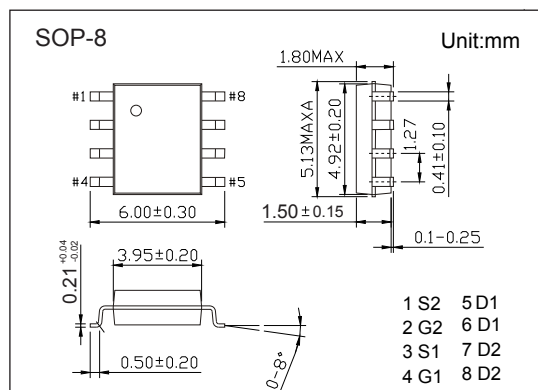


Dual N-Channel MOSFET

AO4850 (KO4850)

■ Features

- $V_{DS} (V) = 75V$
- $I_D = 3.1A$ ($V_{GS} = 10V$)
- $R_{DS(ON)} < 130m\Omega$ ($V_{GS} = 10V$)
- $R_{DS(ON)} < 165m\Omega$ ($V_{GS} = 4.5V$)

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

Parameter		Symbol	10 Sec	Steady State	Unit
Drain-Source Voltage		V _{DS}	75		V
Gate-Source Voltage		V _{GS}	±25		
Continuous Drain Current	T _A =25℃	I _D	3.1	2.3	A
	T _A =70℃		2.4	1.8	
Pulsed Drain Current		I _{DM}	15		
Avalanche Current		I _{AR}	10		
Repetitive Avalanche Energy	L=0.3mH	E _{AR}	15		mJ
Power Dissipation	T _A =25℃	P _D	2	1.1	W
	T _A =70℃		1.3	0.7	
Thermal Resistance.Junction- to-Ambient		R _{thJA}	62.5	110	℃/W
Thermal Resistance.Junction- to-Lead		R _{thJL}		50	
Junction Temperature		T _J	150		℃
Storage Temperature Range		T _{stg}	-55 to 150		

Dual N-Channel MOSFET

AO4850 (KO4850)

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V _{DSS}	I _D =10mA, V _{GS} =0V	75			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =75V, V _{GS} =0V			1	μA
		V _{DS} =75V, V _{GS} =0V, T _J =55°C			5	
Gate-Body Leakage Current	I _{GSS}	V _{DS} =0V, V _{GS} =±25V			±100	nA
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =250μA	1		3	V
Static Drain-Source On-Resistance	R _{DS(on)}	V _{GS} =10V, I _D =3.1A			130	mΩ
		V _{GS} =10V, I _D =3.1A T _J =125°C			195	
		V _{GS} =4.5V, I _D =2A			165	
On State Drain Current	I _{D(ON)}	V _{GS} =10V, V _{DS} =5V	15			A
Forward Transconductance	g _{FS}	V _{DS} =5V, I _D =3.1A		10		S
Input Capacitance	C _{iss}	V _{GS} =0V, V _{DS} =30V, f=1MHz		290	380	pF
Output Capacitance	C _{oss}			54		
Reverse Transfer Capacitance	C _{rss}			24		
Gate Resistance	R _g	V _{GS} =0V, V _{DS} =0V, f=1MHz		2.4	3.5	Ω
Total Gate Charge (10V)	Q _g	V _{GS} =10V, V _{DS} =30V, I _D =3.1A		5.14	7	nC
Total Gate Charge (4.5V)				2.34		
Gate Source Charge	Q _{gs}			0.97		
Gate Drain Charge	Q _{gd}			1.18		
Turn-On DelayTime	t _{d(on)}	V _{GS} =10V, V _{DS} =30V, R _L =9.7Ω, R _{GEN} =3Ω		4		ns
Turn-On Rise Time	t _r			3.4		
Turn-Off DelayTime	t _{d(off)}			14.4		
Turn-Off Fall Time	t _f			2.4		
Body Diode Reverse Recovery Time	t _{rr}	I _F = 3.1A, dI/dt= 100A/us		30.2	45	nC
Body Diode Reverse Recovery Charge	Q _{rr}			21.5		
Maximum Body-Diode Continuous Current	I _S				2.5	A
Diode Forward Voltage	V _{SD}	I _S =1A, V _{GS} =0V			1	V

Note. The static characteristics in Figures 1 to 6 are obtained using <300us pulses, duty cycle 0.5% max.

■ Marking

Marking	4850 KA****
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Dual N-Channel MOSFET

AO4850 (KO4850)

■ Typical Characteristics

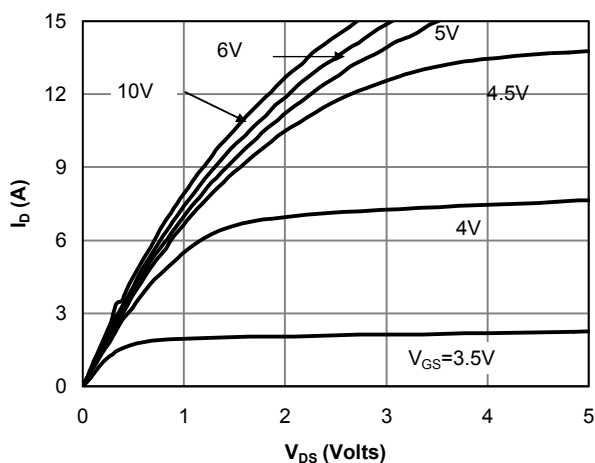


Fig 1: On-Region Characteristics

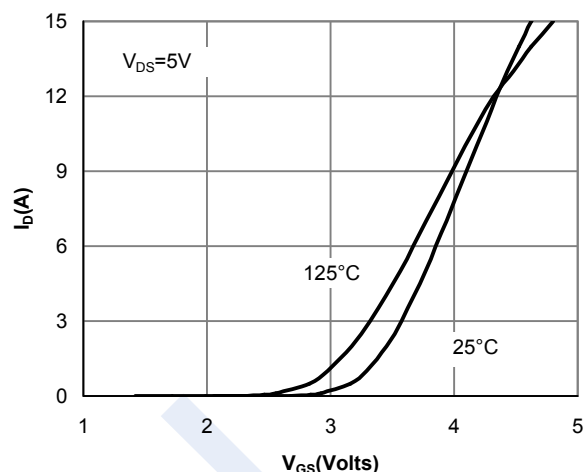


Figure 2: Transfer Characteristics

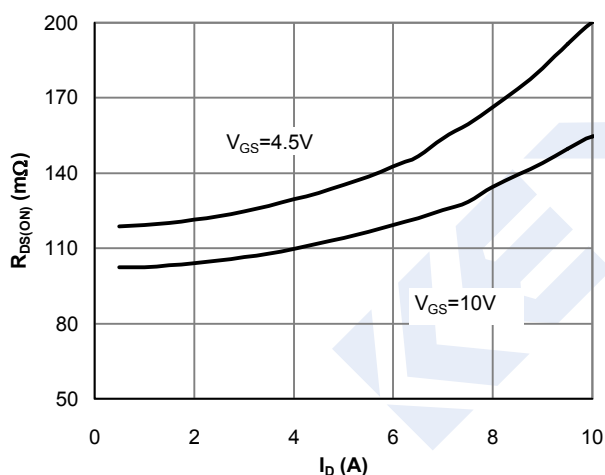


Figure 3: On-Resistance vs. Drain Current and Gate Voltage

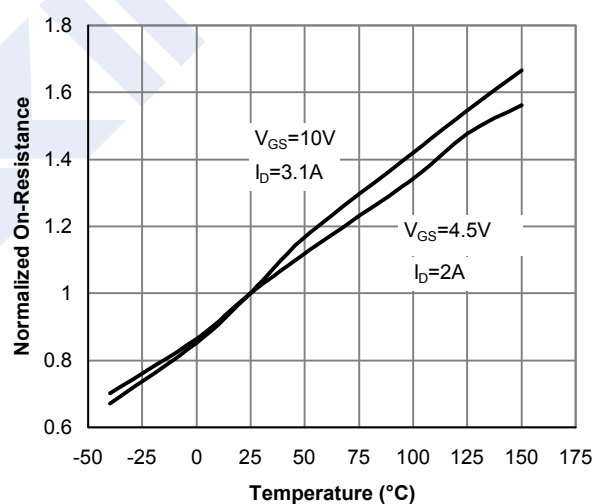


Figure 4: On-Resistance vs. Junction Temperature

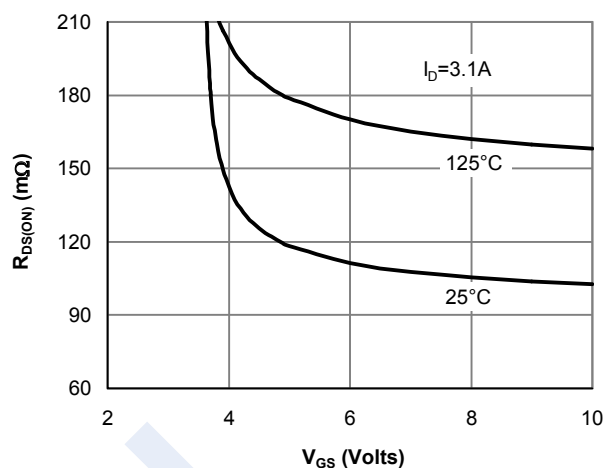


Figure 5: On-Resistance vs. Gate-Source Voltage

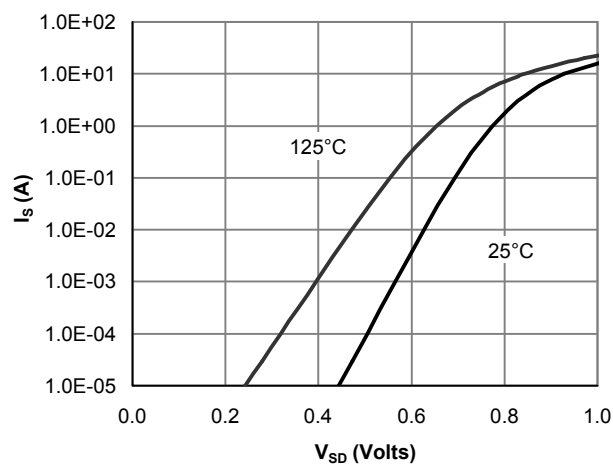


Figure 6: Body-Diode Characteristics

Dual N-Channel MOSFET

AO4850 (KO4850)

■ Typical Characteristics

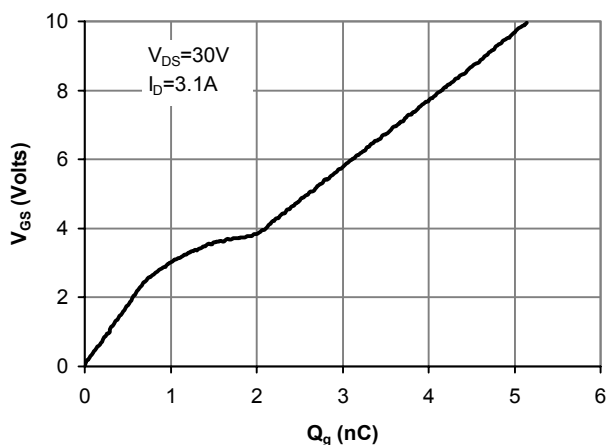


Figure 7: Gate-Charge Characteristics

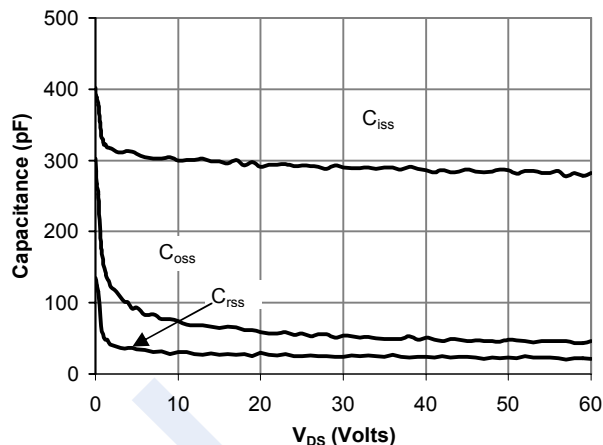


Figure 8: Capacitance Characteristics

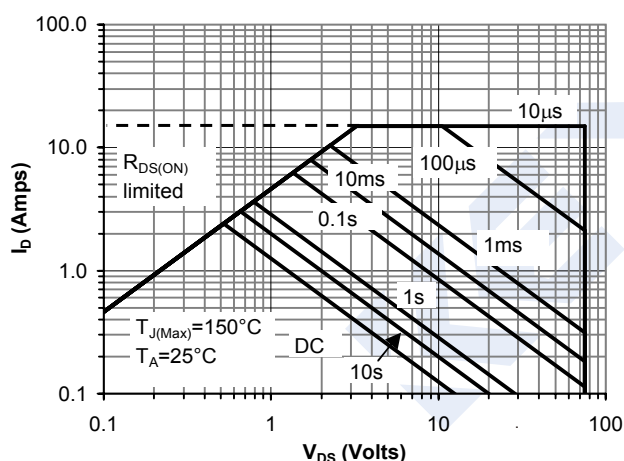


Figure 9: Maximum Forward Biased Safe Operating Area (Note E)

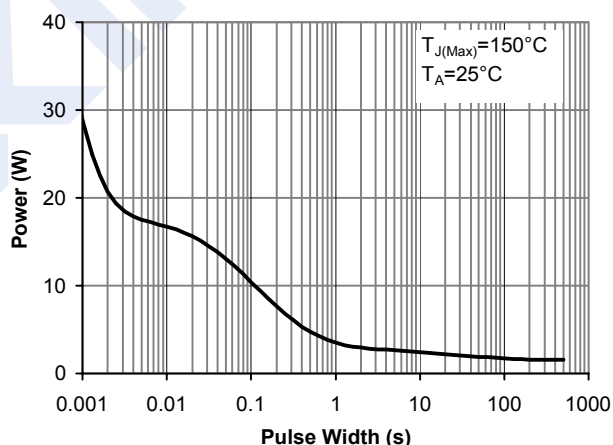


Figure 10: Single Pulse Power Rating Junction-to-Ambient (Note E)

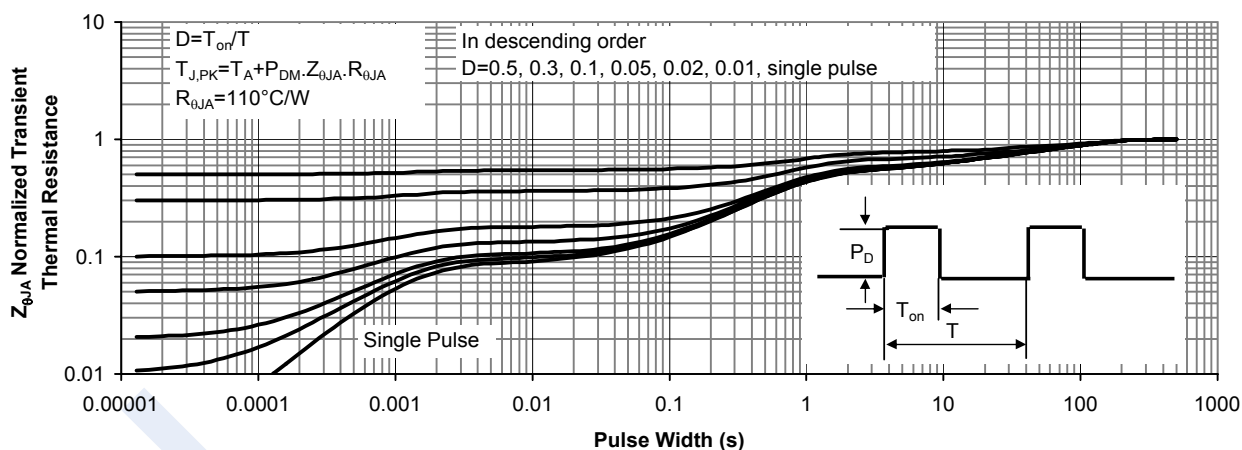


Figure 11: Normalized Maximum Transient Thermal Impedance