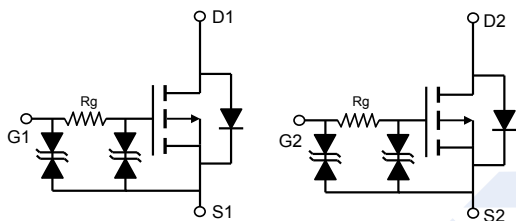
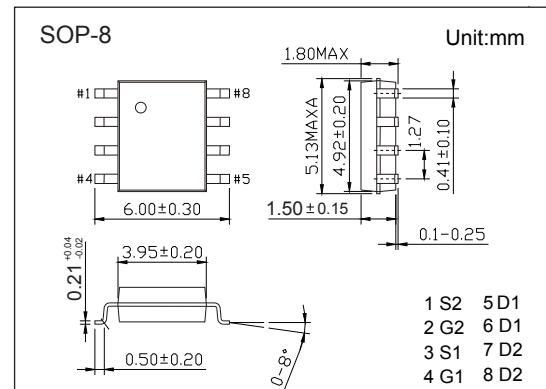


Dual P-Channel MOSFET

AO4821 (KO4821)

■ Features

- $V_{DS} (V) = -12V$
- $I_D = -9 A (V_{GS} = -4.5V)$
- $R_{DS(ON)} < 19m\Omega (V_{GS} = -4.5V)$
- $R_{DS(ON)} < 24m\Omega (V_{GS} = -2.5V)$
- $R_{DS(ON)} < 30m\Omega (V_{GS} = -1.8V)$



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

Parameter	Symbol	Rating	Unit	
Drain-Source Voltage	V_{DS}	-12	V	
Gate-Source Voltage	V_{GS}	± 8		
Continuous Drain Current	I_D	$T_A=25^\circ C$	-9	A
		$T_A=70^\circ C$	-7	
Pulsed Drain Current	I_{DM}	-60		
Power Dissipation	P_D	$T_A=25^\circ C$	2	W
		$T_A=70^\circ C$	1.28	
Thermal Resistance.Junction- to-Ambient	R_{thJA}	$t \leq 10s$	62.5	$^\circ C/W$
		Steady-State	90	
Thermal Resistance.Junction- to-Lead	R_{thJL}	40		
Junction Temperature	T_J	150	$^\circ C$	
Storage Temperature Range	T_{stg}	-55 to 150		

Dual P-Channel MOSFET

AO4821 (KO4821)

■ 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	-12			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =-12V, V _{GS} =0V			-1	μA
		V _{DS} =-12V, V _{GS} =0V, T _J =55°C			-5	
Gate-Body Leakage Current	I _{GSS}	V _{DS} =0V, V _{GS} =±8V			±10	μA
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =-250μA	-0.35		-0.85	V
Static Drain-Source On-Resistance	R _{DS(on)}	V _{GS} =-4.5V, I _D =-9A			19	mΩ
		V _{GS} =-4.5V, I _D =-9A, T _J =125°C			27	
		V _{GS} =-2.5V, I _D =-8A			24	
		V _{GS} =-1.8V, I _D =-6A			30	
On State Drain Current	I _{D(ON)}	V _{GS} =-4.5V, V _{DS} =-5V	-60			A
Forward Transconductance	g _{FS}	V _{DS} =-5V, I _D =-9A		45		S
Input Capacitance	C _{iss}	V _{GS} =0V, V _{DS} =-6V, f=1MHz	1390		2100	pF
Output Capacitance	C _{oss}		230		435	
Reverse Transfer Capacitance	C _{rss}		120		280	
Gate Resistance	R _g	V _{GS} =0V, V _{DS} =0V, f=1MHz	0.9		1.7	KΩ
Total Gate Charge	Q _g	V _{GS} =-4.5V, V _{DS} =-6V, I _D =-9A	15		23	nC
Gate Source Charge	Q _{gs}		3.6		5.4	
Gate Drain Charge	Q _{gd}		3		7.4	
Turn-On DelayTime	t _{d(on)}	V _{GS} =-4.5V, V _{DS} =-6V, R _L =0.67Ω, R _{GEN} =3Ω		240		ns
Turn-On Rise Time	t _r			580		
Turn-Off DelayTime	t _{d(off)}			7		us
Turn-Off Fall Time	t _f			4.2		
Body Diode Reverse Recovery Time	t _{rr}	I _F =-9A, di/dt= 500A/us	18		26	ns
Body Diode Reverse Recovery Charge	Q _{rr}		14		20	nC
Maximum Body-Diode Continuous Current	I _S				-3	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	4821 KA****
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Dual P-Channel MOSFET AO4821 (KO4821)

Typical Characteristics

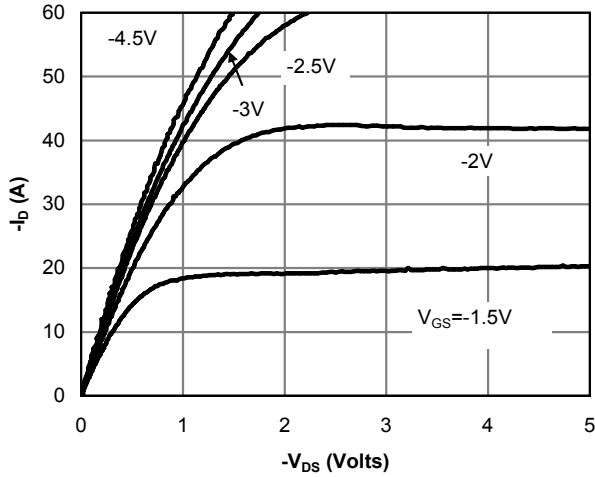


Fig 1: On-Region Characteristics (Note E)

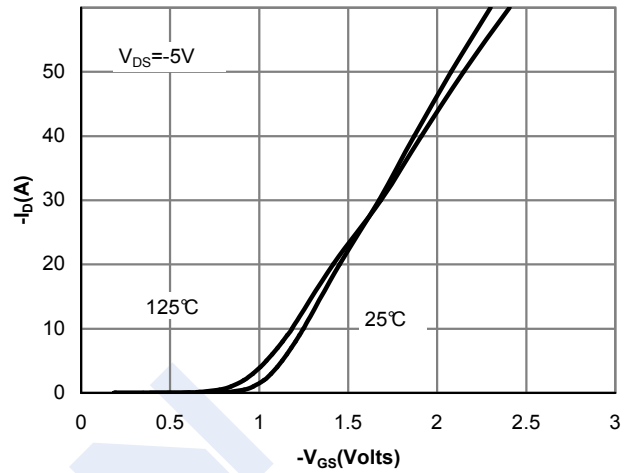


Figure 2: Transfer Characteristics (Note E)

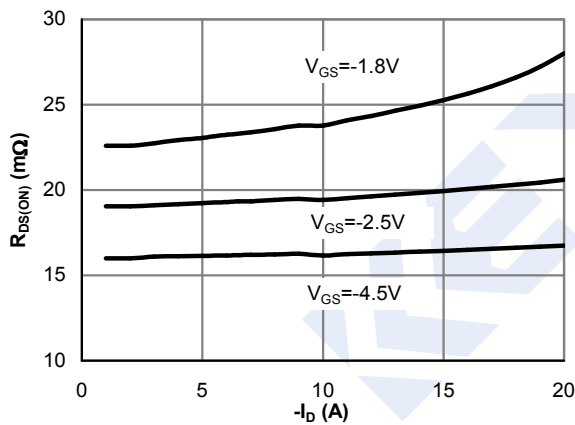


Figure 3: On-Resistance vs. Drain Current and Gate Voltage (Note E)

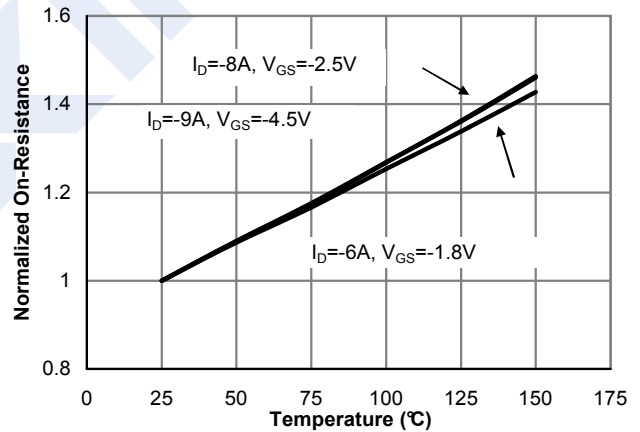


Figure 4: On-Resistance vs. Junction Temperature (Note E)

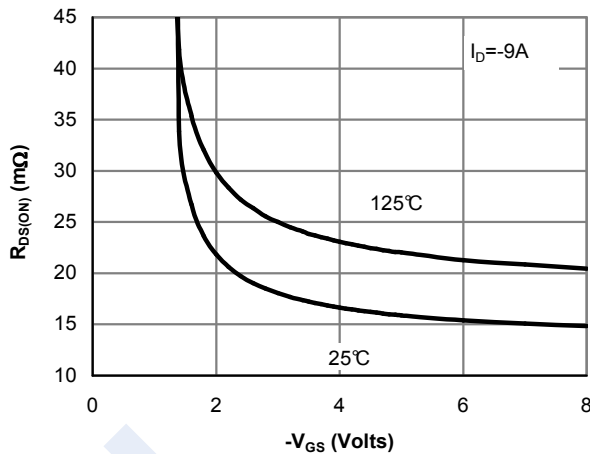


Figure 5: On-Resistance vs. Gate-Source Voltage (Note E)

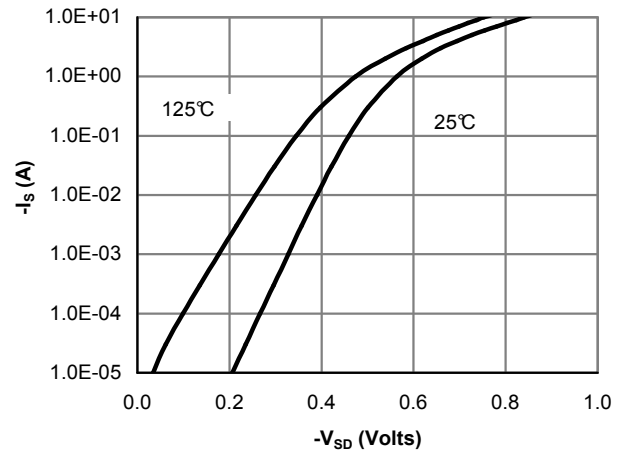


Figure 6: Body-Diode Characteristics (Note E)

Dual P-Channel MOSFET AO4821 (KO4821)

■ Typical Characteristics

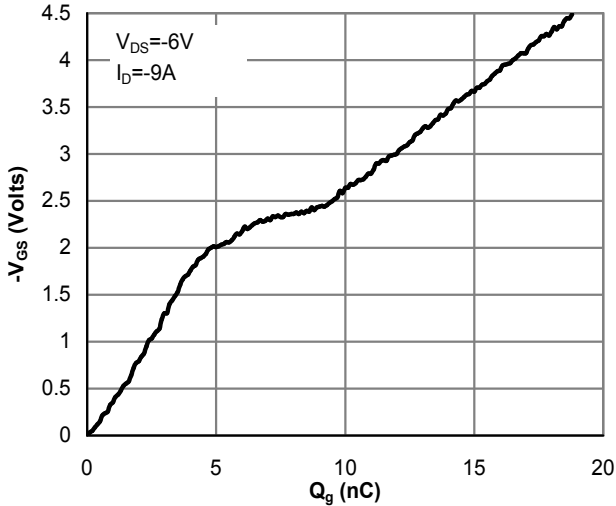


Figure 7: Gate-Charge Characteristics

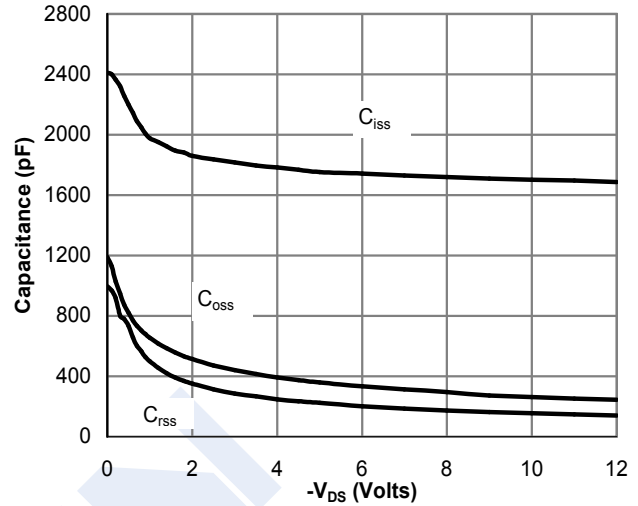


Figure 8: Capacitance Characteristics

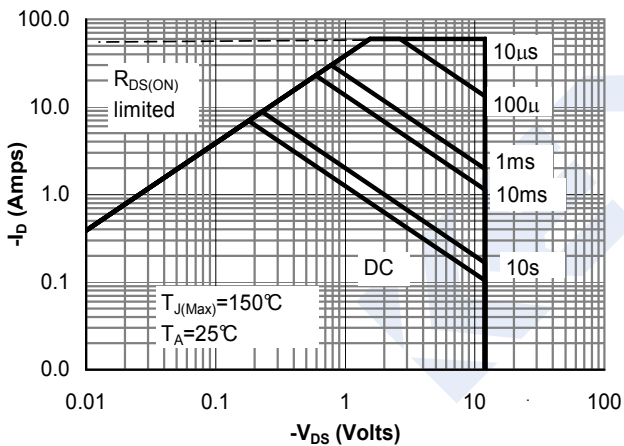


Figure 9: Maximum Forward Biased Safe Operating Area (Note F)

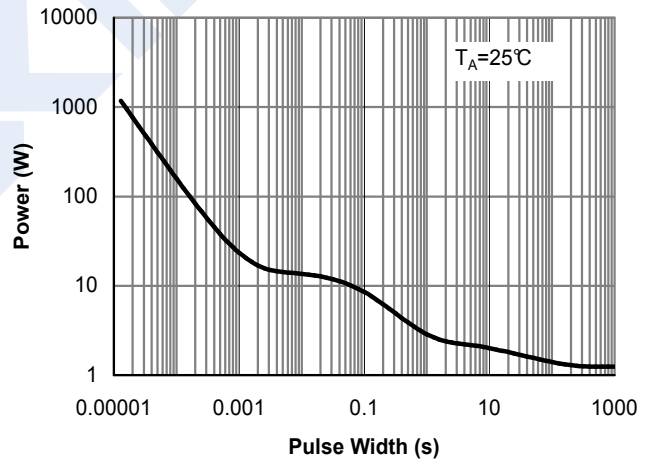


Figure 10: Single Pulse Power Rating Junction-to-Ambient (Note F)

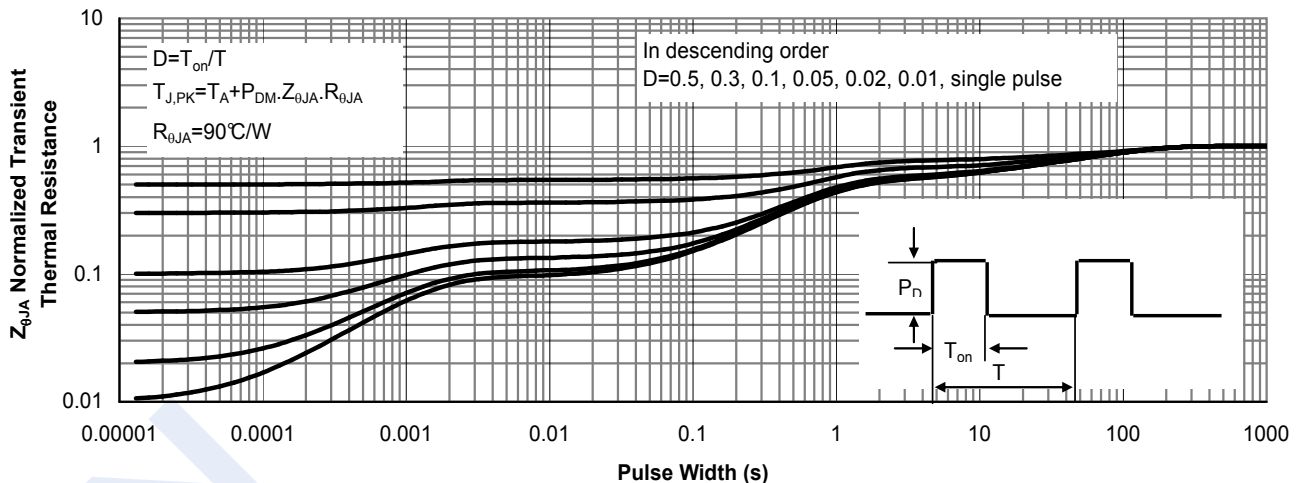


Figure 11: Normalized Maximum Transient Thermal Impedance (Note F)