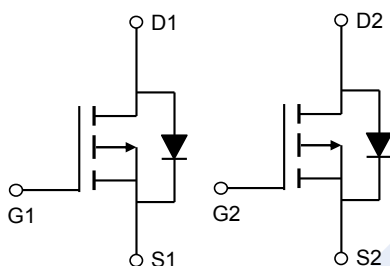
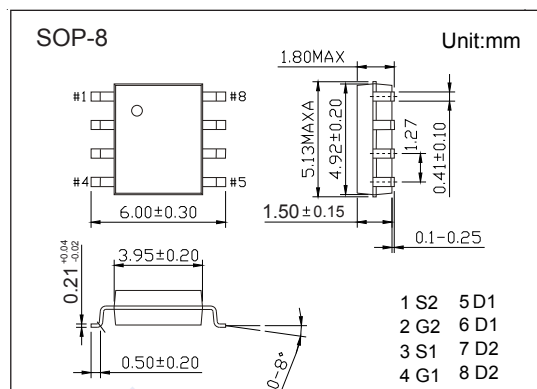


Dual P-Channel MOSFET

AO4801 (KO4801)

■ Features

- $V_{DS} (V) = -30V$
- $I_D = -5 A (V_{GS} = -10V)$
- $R_{DS(ON)} < 48m\Omega (V_{GS} = -10V)$
- $R_{DS(ON)} < 57m\Omega (V_{GS} = -4.5V)$
- $R_{DS(ON)} < 80m\Omega (V_{GS} = -2.5V)$



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

Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DS}	-30	V
Gate-Source Voltage		V_{GS}	± 12	
Continuous Drain Current	$T_A=25^\circ C$	I_D	-5	A
	$T_A=70^\circ C$		-4	
Pulsed Drain Current		I_{DM}	-28	
Avalanche Current		I_{AS}, I_{AR}	-11	
Avalanche Energy	$L=0.3mH$	E_{AS}, E_{AR}	18	mJ
Power Dissipation	$T_A=25^\circ C$	P_D	2	W
	$T_A=70^\circ C$		1.3	
Thermal Resistance.Junction- to-Ambient	$t \leq 10s$	R_{thJA}	62.5	$^\circ C/W$
	Steady-State		90	
Thermal Resistance.Junction- to-Lead		R_{thJL}	40	$^\circ C$
Junction Temperature		T_J	150	
Storage Temperature Range		T_{stg}	-55 to 150	

Dual P-Channel MOSFET

AO4801 (KO4801)

■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V_{DS}	$I_D = -250\ \mu\text{A}$, $V_{GS} = 0\text{V}$	-30			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = -30\text{V}$, $V_{GS} = 0\text{V}$			-1	μA
		$V_{DS} = -30\text{V}$, $V_{GS} = 0\text{V}$, $T_J = 55^\circ\text{C}$			-5	
Gate-Body Leakage Current	I_{GSS}	$V_{DS} = 0\text{V}$, $V_{GS} = \pm 12\text{V}$			± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}$, $I_D = -250\ \mu\text{A}$	-0.5		-1.3	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS} = -10\text{V}$, $I_D = -5\text{A}$			48	$\text{m}\Omega$
		$V_{GS} = -10\text{V}$, $I_D = -5\text{A}$, $T_J = 125^\circ\text{C}$			60	
		$V_{GS} = -4.5\text{V}$, $I_D = -3.5\text{A}$			57	
		$V_{GS} = -2.5\text{V}$, $I_D = -2.5\text{A}$			80	
On State Drain Current	$I_{D(on)}$	$V_{GS} = -4.5\text{V}$, $V_{DS} = -5\text{V}$	-28			A
Forward Transconductance	g_{FS}	$V_{DS} = -5\text{V}$, $I_D = -5\text{A}$		18		S
Input Capacitance	C_{iss}	$V_{GS} = 0\text{V}$, $V_{DS} = -15\text{V}$, $f = 1\text{MHz}$		645		pF
Output Capacitance	C_{oss}			80		
Reverse Transfer Capacitance	C_{rss}			55		
Gate Resistance	R_g	$V_{GS} = 0\text{V}$, $V_{DS} = 0\text{V}$, $f = 1\text{MHz}$	4		12	Ω
Total Gate Charge (4.5V)	Q_g	$V_{GS} = -4.5\text{V}$, $V_{DS} = -15\text{V}$, $I_D = -5\text{A}$		7		nC
Gate Source Charge	Q_{gs}			1.5		
Gate Drain Charge	Q_{gd}			2.5		
Turn-On DelayTime	$t_{d(on)}$	$V_{GS} = -10\text{V}$, $V_{DS} = -15\text{V}$, $R_L = 3\Omega$, $R_{GEN} = 6\Omega$		6.5		ns
Turn-On Rise Time	t_r			3.5		
Turn-Off DelayTime	$t_{d(off)}$			41		
Turn-Off Fall Time	t_f			9		
Body Diode Reverse Recovery Time	t_{rr}	$I_F = -5\text{A}$, $dI/dt = 100\text{A}/\mu\text{s}$		11		nC
Body Diode Reverse Recovery Charge	Q_{rr}			3.5		
Maximum Body-Diode Continuous Current	I_S				-2.5	A
Diode Forward Voltage	V_{SD}	$I_S = -1\text{A}$, $V_{GS} = 0\text{V}$			-1	V

Note. The static characteristics in Figures 1 to 6 are obtained using $<300\mu\text{s}$ pulses, duty cycle 0.5% max.

■ Marking

Marking	4801 KA****
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Dual P-Channel MOSFET

AO4801 (KO4801)

■ Typical Characteristics

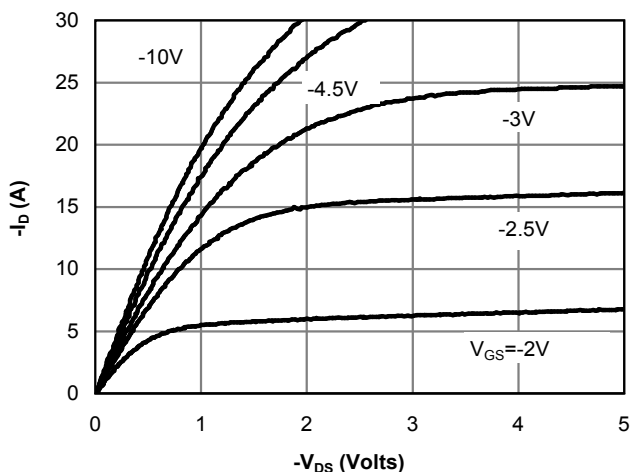


Fig 1: On-Region Characteristics (Note E)

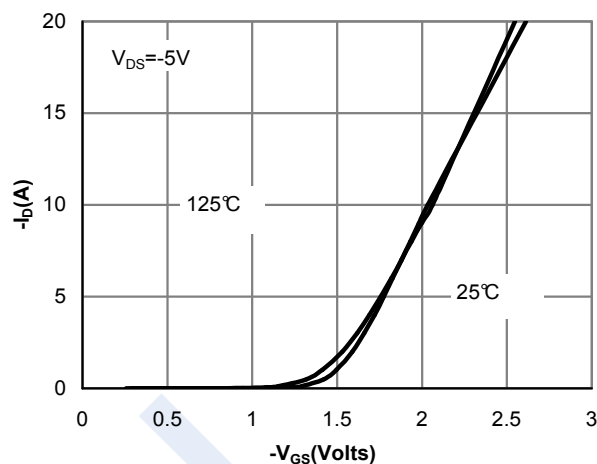


Figure 2: Transfer Characteristics (Note E)

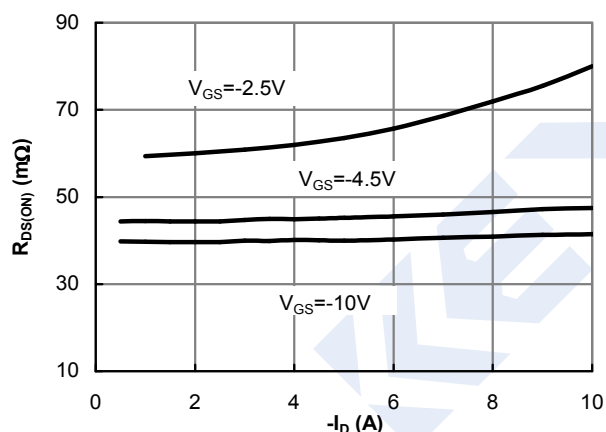


Figure 3: On-Resistance vs. Drain Current and Gate Voltage (Note E)

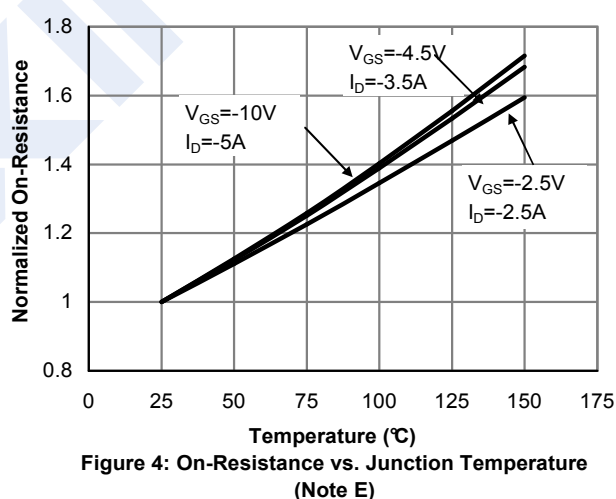


Figure 4: On-Resistance vs. Junction Temperature (Note E)

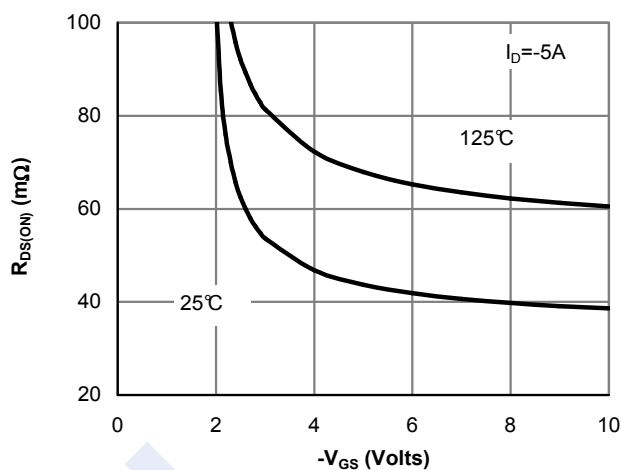


Figure 5: On-Resistance vs. Gate-Source Voltage (Note E)

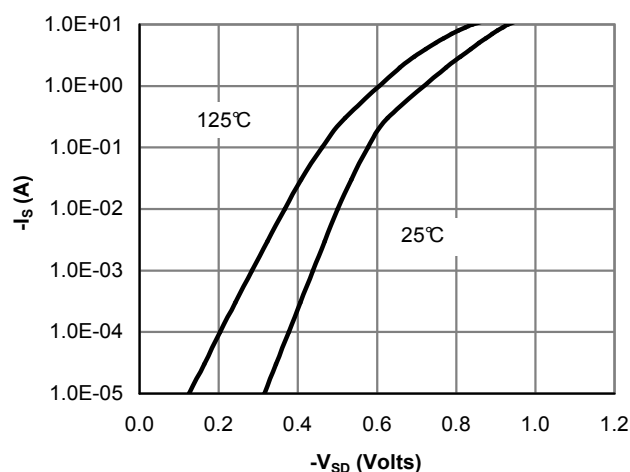


Figure 6: Body-Diode Characteristics (Note E)

Dual P-Channel MOSFET

AO4801 (KO4801)

■ Typical Characteristics

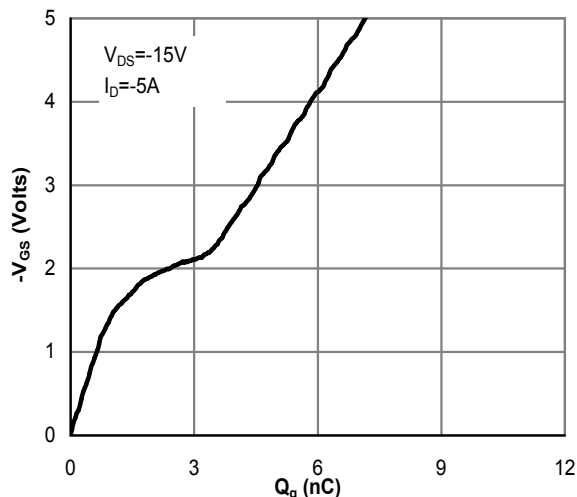


Figure 7: Gate-Charge Characteristics

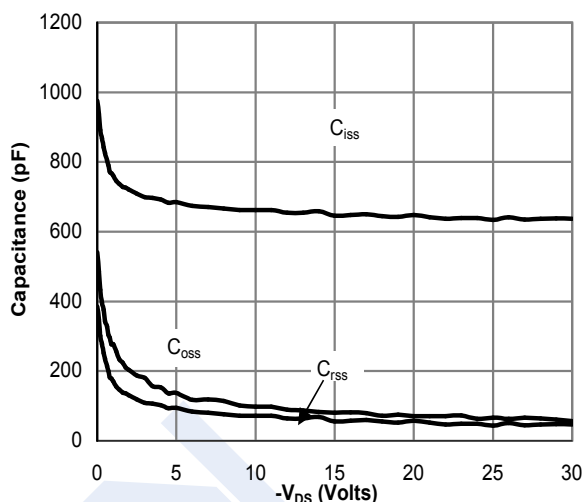


Figure 8: Capacitance Characteristics

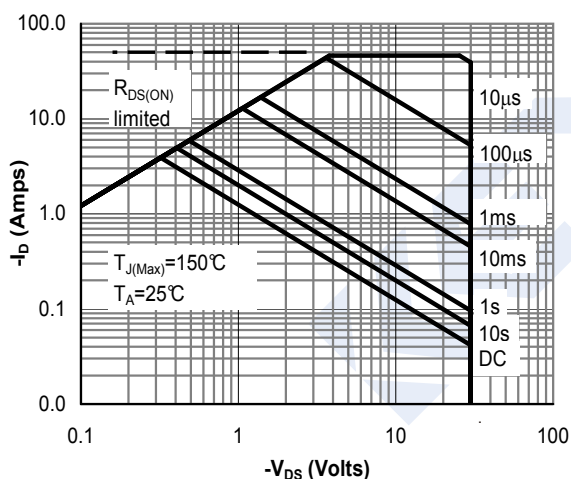


Figure 9: Maximum Forward Biased Safe Operating Area (Note F)

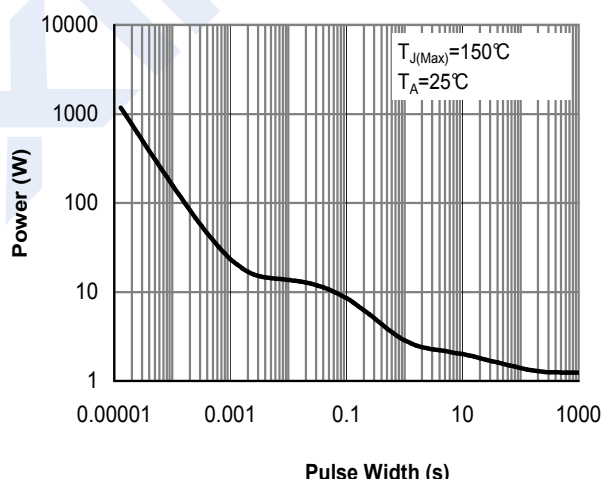


Figure 10: Single Pulse Power Rating Junction-to-Ambient (Note F)

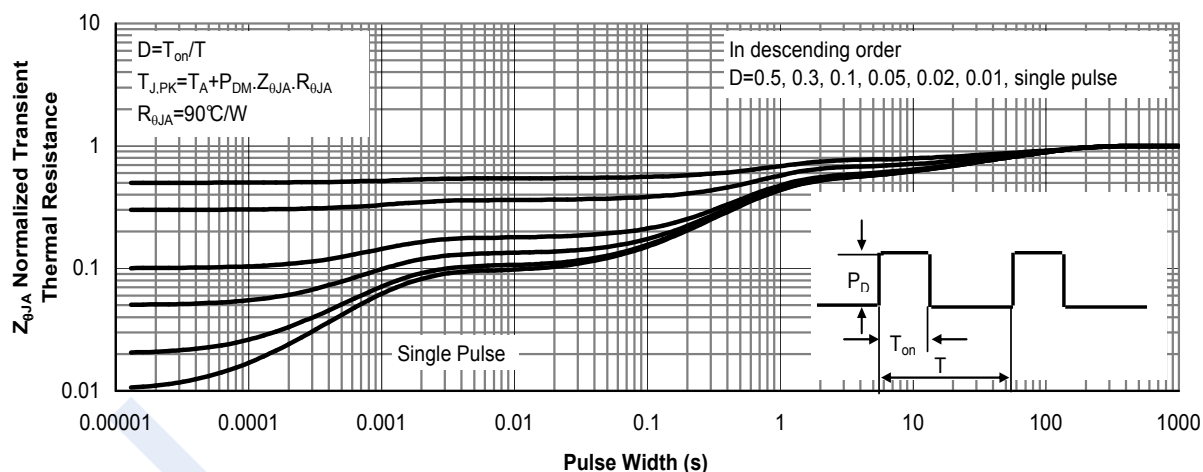


Figure 11: Normalized Maximum Transient Thermal Impedance (Note F)