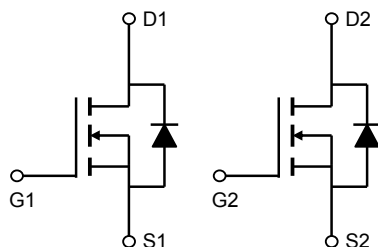
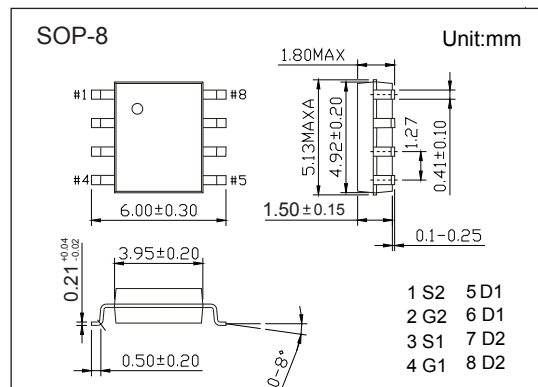


Dual N-Channel MOSFET

AO4830 (KO4830)

■ Features

- $V_{DS} (V) = 80V$
- $I_D = 3.5A$ ($V_{GS} = 10V$)
- $R_{DS(ON)} < 75m\Omega$ ($V_{GS} = 10V$)

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

Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DS}	80	V
Gate-Source Voltage		V_{GS}	± 30	
Continuous Drain Current	$T_A=25^\circ C$	I_D	3.5	A
	$T_A=70^\circ C$		2.9	
Pulsed Drain Current		I_{DM}	18	
Avalanche Current		I_{AR}	16	
Repetitive Avalanche Energy	$L=0.1mH$	E_{AR}	12.8	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 N-Channel MOSFET

AO4830 (KO4830)

■ 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	80			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =80V, V _{GS} =0V			1	μA
		V _{DS} =80V, V _{GS} =0V, T _J =55°C			5	
Gate-Body Leakage Current	I _{GSS}	V _{DS} =0V, V _{GS} =±30V			±100	nA
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =250μA	3.5		5	V
Static Drain-Source On-Resistance	R _{DS(on)}	V _{GS} =10V, I _D =3.5A			75	mΩ
		V _{GS} =10V, I _D =3.5A T _J =125°C			135	
On State Drain Current	I _{D(ON)}	V _{GS} =10V, V _{DS} =5V	18			A
Forward Transconductance	g _{FS}	V _{DS} =5V, I _D =3.5A		15		S
Input Capacitance	C _{iss}	V _{GS} =0V, V _{DS} =40V, f=1MHz	510		770	pF
Output Capacitance	C _{oss}		28		52	
Reverse Transfer Capacitance	C _{rss}		12		30	
Gate Resistance	R _g	V _{GS} =0V, V _{DS} =0V, f=1MHz	0.9		2.7	Ω
Total Gate Charge (10V)	Q _g	V _{GS} =10V, V _{DS} =40V, I _D =3.5A	8		13	nC
Total Gate Charge (4.5V)			4		7	
Gate Source Charge	Q _{gs}		4		6	
Gate Drain Charge	Q _{gd}		0.7		1.7	
Turn-On DelayTime	t _{d(on)}	V _{GS} =10V, V _{DS} =40V, R _L =8Ω, R _{GEN} =3Ω		7.2		ns
Turn-On Rise Time	t _r			2.2		
Turn-Off DelayTime	t _{d(off)}			17		
Turn-Off Fall Time	t _f			2		
Body Diode Reverse Recovery Time	t _{rr}	I _F = 3.5A, di/dt= 300A/μs	14		26	nC
Body Diode Reverse Recovery Charge	Q _{rr}		35		65	
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	4830 KA****
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Dual N-Channel MOSFET

AO4830 (KO4830)

■ Typical Characteristics

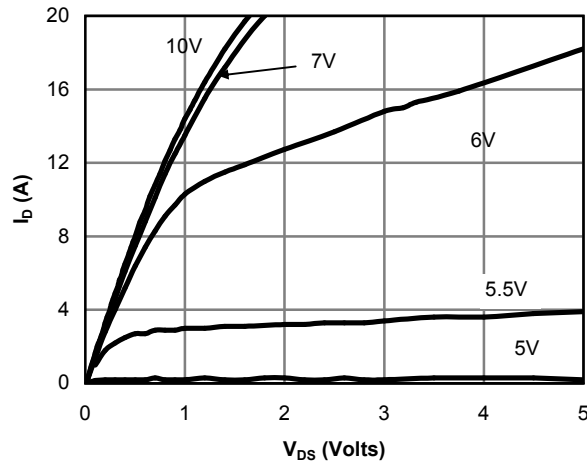


Fig 1: On-Region Characteristics (Note E)

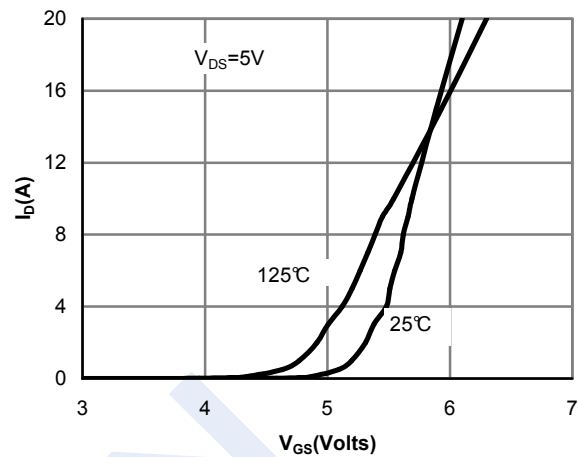


Figure 2: Transfer Characteristics (Note E)

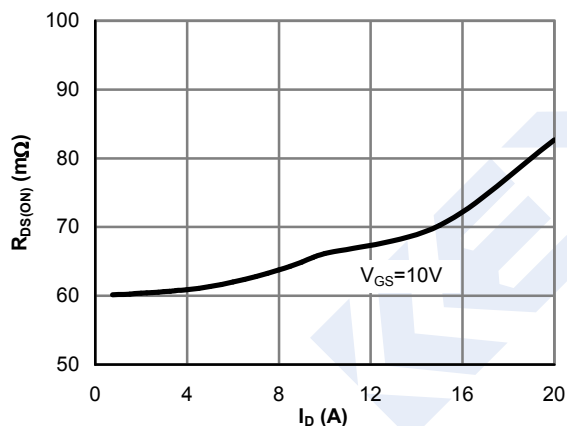


Figure 3: On-Resistance vs. Drain Current and Gate Voltage (Note E)

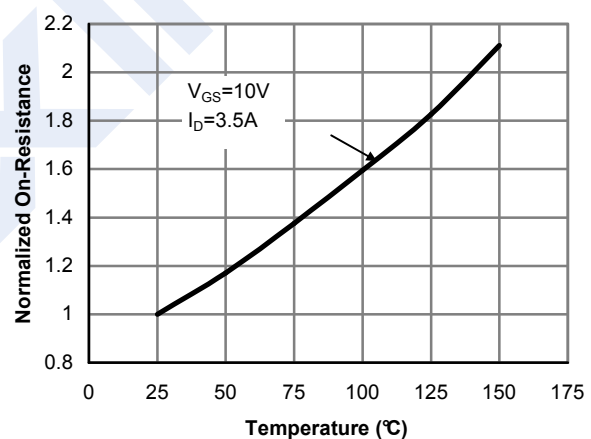


Figure 4: On-Resistance vs. Junction Temperature (Note E)

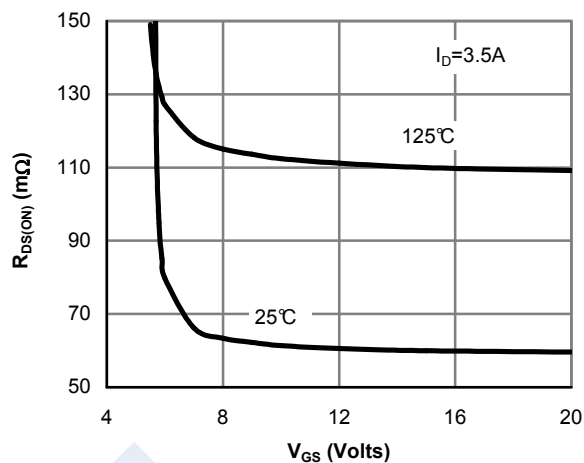


Figure 5: On-Resistance vs. Gate-Source Voltage (Note E)

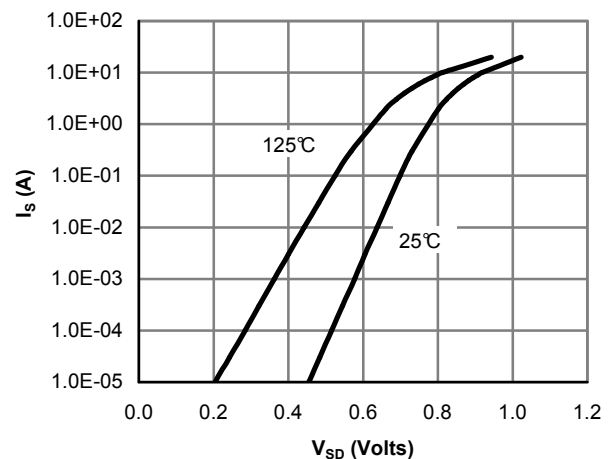


Figure 6: Body-Diode Characteristics (Note E)

Dual N-Channel MOSFET

AO4830 (KO4830)

■ Typical Characteristics

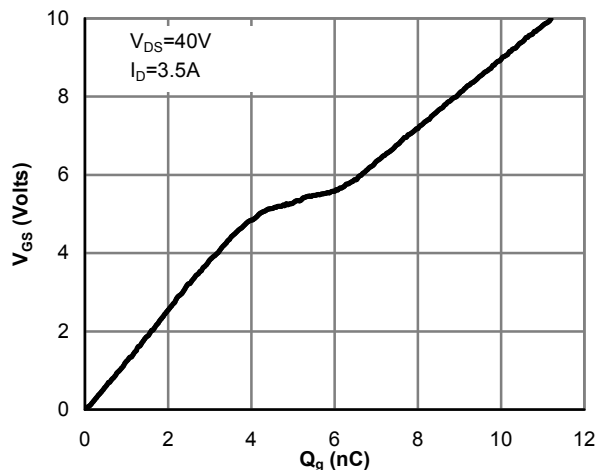


Figure 7: Gate-Charge Characteristics

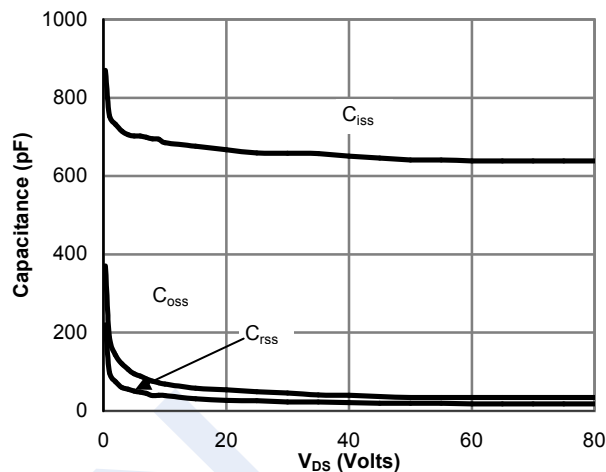


Figure 8: Capacitance Characteristics

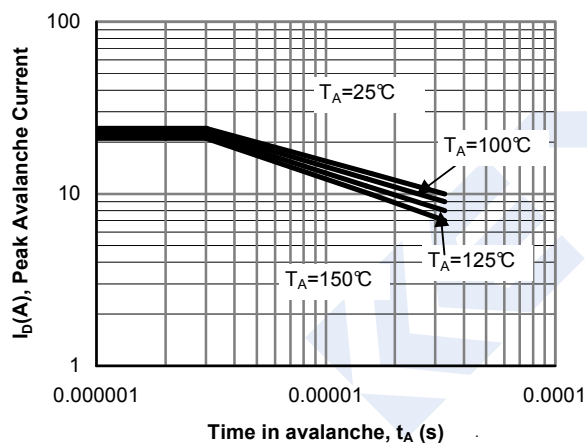


Figure 12: Single Pulse Avalanche capability

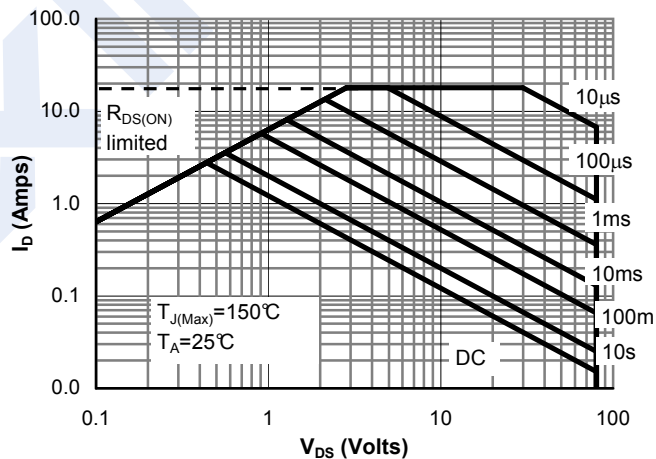


Figure 9: Maximum Forward Biased Safe Operating Area (Note F)

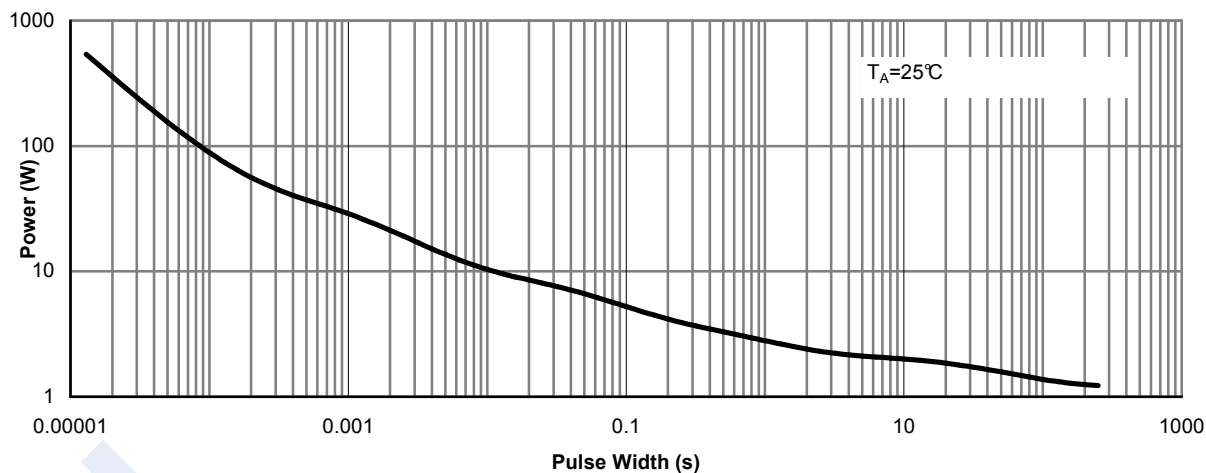


Figure 10: Single Pulse Power Rating Junction-to-Ambient (Note F)

Dual N-Channel MOSFET

AO4830 (KO4830)

■ Typical Characteristics

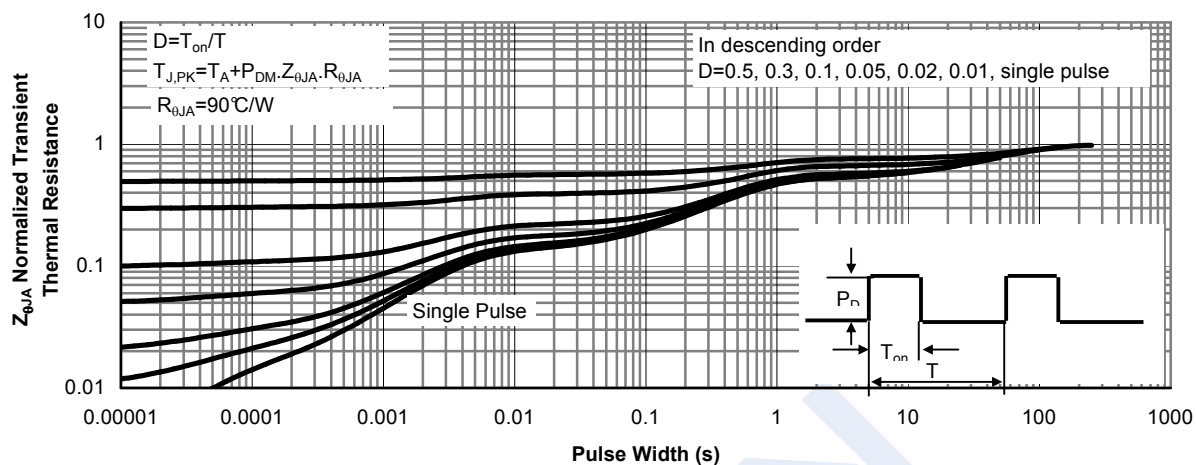


Figure 11: Normalized Maximum Transient Thermal Impedance (Note F)