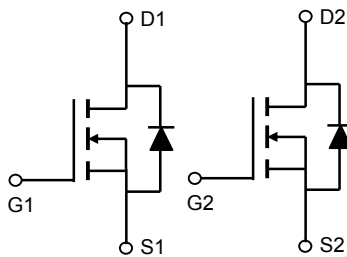
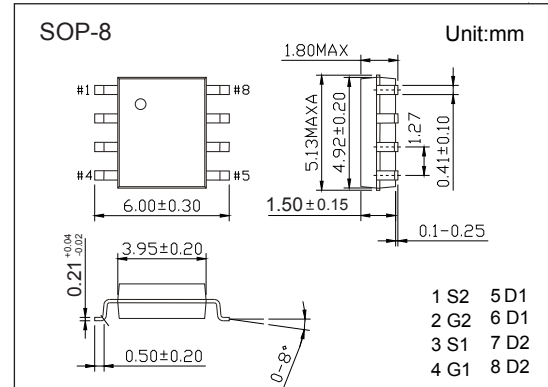


Dual N-Channel MOSFET

AO4852-HF (KO4852-HF)

■ Features

- $V_{DS} (V) = 60V$
- $I_D = 3.5A$ ($V_{GS} = 10V$)
- $R_{DS(ON)} < 90m\Omega$ ($V_{GS} = 10V$)
- $R_{DS(ON)} < 105m\Omega$ ($V_{GS} = 4.5V$)
- Pb-Free Package May be Available. The G-Suffix Denotes a Pb-Free Lead Finish



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

Parameter		Symbol	10 Sec	Steady State	Unit
Drain-Source Voltage		V _{DS}	60		V
Gate-Source Voltage		V _{GS}	±20		
Continuous Drain Current	T _A =25°C	I _D	3.5	3	A
	T _A =70°C		2.8	2.4	
Pulsed Drain Current		I _{DM}	20		
Avalanche Current		I _{AR}	8		
Repetitive Avalanche Energy	L=0.3mH	E _{AR}	9.6		mJ
Power Dissipation	T _A =25°C	P _D	2	1.4	W
	T _A =70°C		1.3	0.9	
Thermal Resistance.Junction- to-Ambient		R _{thJA}	62.5	90	°C/W
Thermal Resistance.Junction- to-Lead		R _{thJL}		40	
Junction Temperature		T _J	150		°C
Storage Temperature Range		T _{stg}	-55 to 150		

Dual N-Channel MOSFET

AO4852-HF (KO4852-HF)

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V _{DSS}	I _D =250μA, V _{GS} =0V	60			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =60V, V _{GS} =0V			1	μA
		V _{DS} =60V, V _{GS} =0V, T _J =55°C			5	
Gate-Body Leakage Current	I _{GSS}	V _{DS} =0V, V _{GS} =±20V			±100	nA
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =250μA	1.7		2.6	V
Static Drain-Source On-Resistance	R _{DS(on)}	V _{GS} =10V, I _D =3A			90	mΩ
		V _{GS} =10V, I _D =3A, T _J =125°C			159	
		V _{GS} =4.5V, I _D =2A			105	
On State Drain Current	I _{D(on)}	V _{GS} =10V, V _{DS} =5V	20			A
Forward Transconductance	g _{FS}	V _{DS} =5V, I _D =3A		15		S
Input Capacitance	C _{iss}	V _{GS} =0V, V _{DS} =30V, f=1MHz		372	450	pF
Output Capacitance	C _{oss}			31		
Reverse Transfer Capacitance	C _{rss}			17		
Gate Resistance	R _g	V _{GS} =0V, V _{DS} =0V, f=1MHz		1.7	2.6	Ω
Total Gate Charge (10V)	Q _g	V _{GS} =10V, V _{DS} =30V, I _D =3A		7.1	9.2	nC
Total Gate Charge (4.5V)				3.6		
Gate Source Charge	Q _{gs}			1		
Gate Drain Charge	Q _{gd}			2		
Turn-On DelayTime	t _{d(on)}	V _{GS} =10V, V _{DS} =30V, R _L =10Ω, R _{GEN} =3Ω		4.1	5.3	ns
Turn-On Rise Time	t _r			2.1		
Turn-Off DelayTime	t _{d(off)}			15		
Turn-Off Fall Time	t _f			2.1		
Body Diode Reverse Recovery Time	t _{rr}	I _F = 3A, di/dt= 100A/μs		23.4	29	nC
Body Diode Reverse Recovery Charge	Q _{rr}			23.2		
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 <300μs pulses, duty cycle 0.5% max.

■ Marking

Marking	4852 KA**** F
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Dual N-Channel MOSFET

AO4852-HF (KO4852-HF)

■ Typical Characteristics

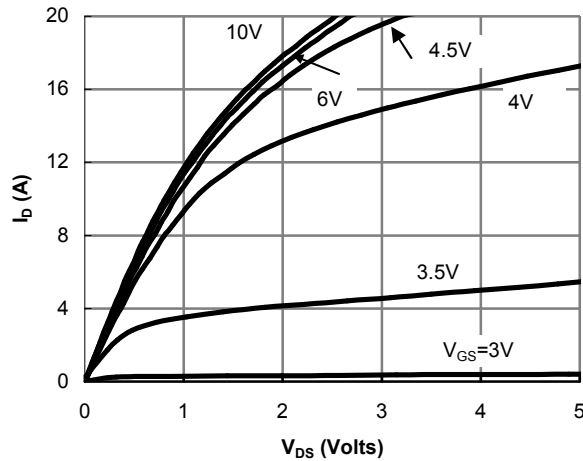


Fig 1: On-Region Characteristics

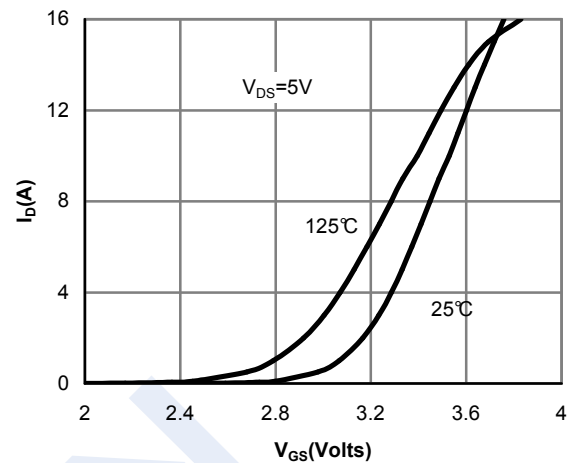


Figure 2: Transfer Characteristics

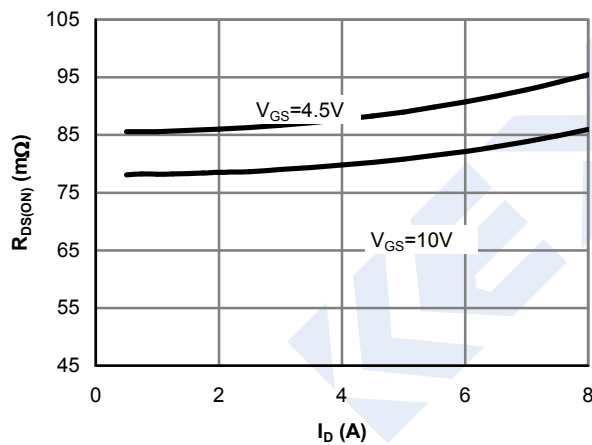


Figure 3: On-Resistance vs. Drain Current and Gate Voltage

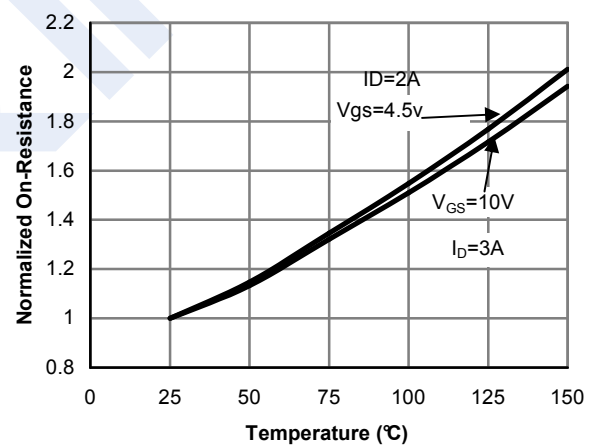


Figure 4: On-Resistance vs. Junction Temperature

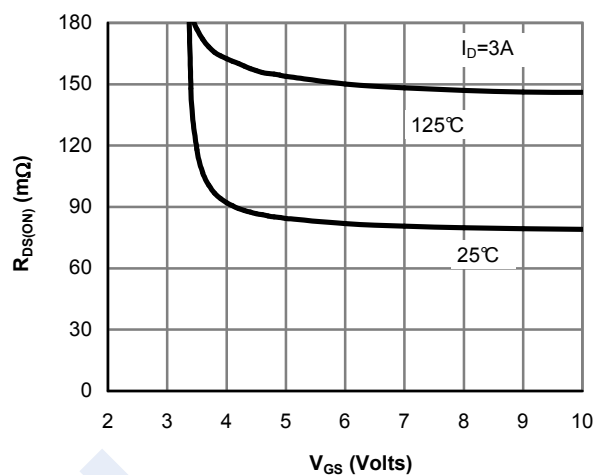


Figure 5: On-Resistance vs. Gate-Source Voltage

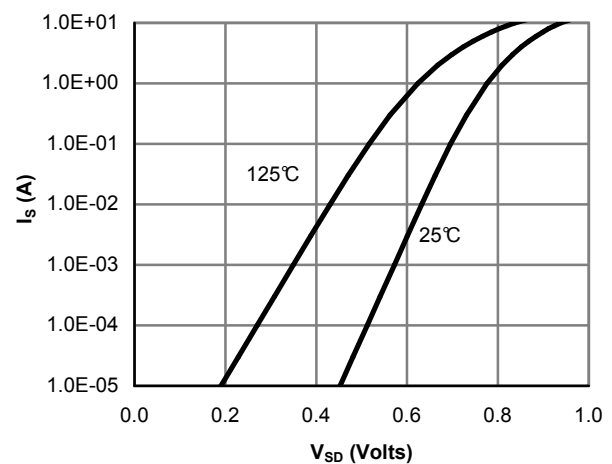


Figure 6: Body-Diode Characteristics

Dual N-Channel MOSFET

AO4852-HF (KO4852-HF)

■ Typical Characteristics

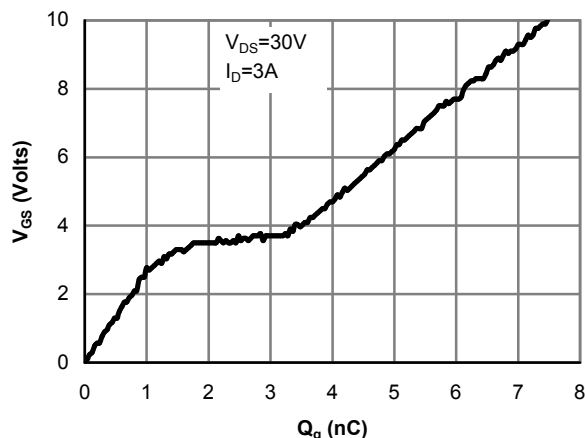


Figure 7: Gate-Charge Characteristics

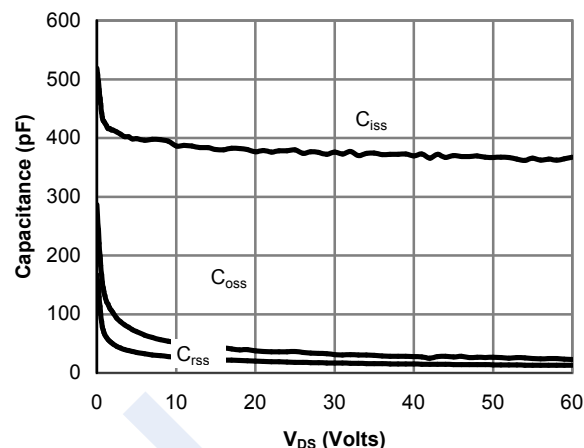


Figure 8: Capacitance Characteristics

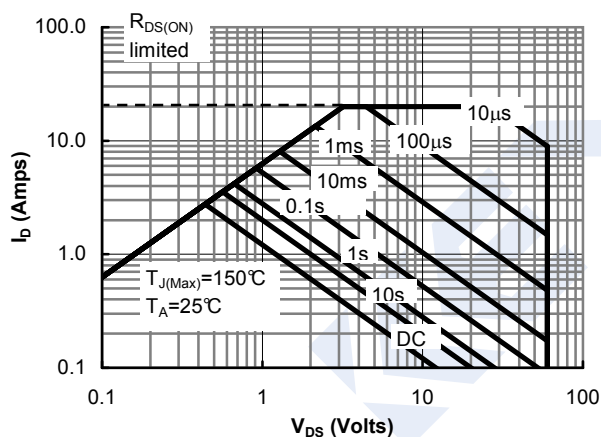


Figure 9: Maximum Forward Biased Safe Operating Area (Note E)

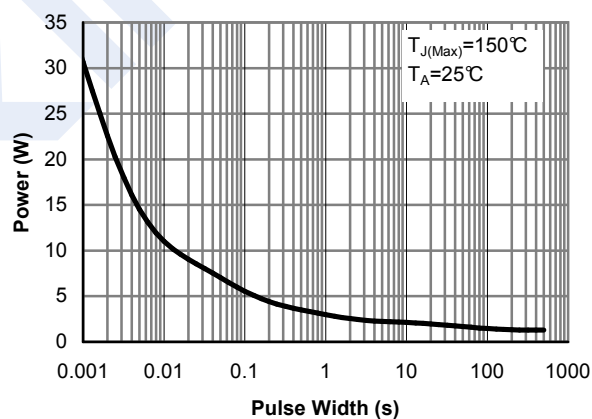


Figure 10: Single Pulse Power Rating Junction-to-Ambient (Note E)

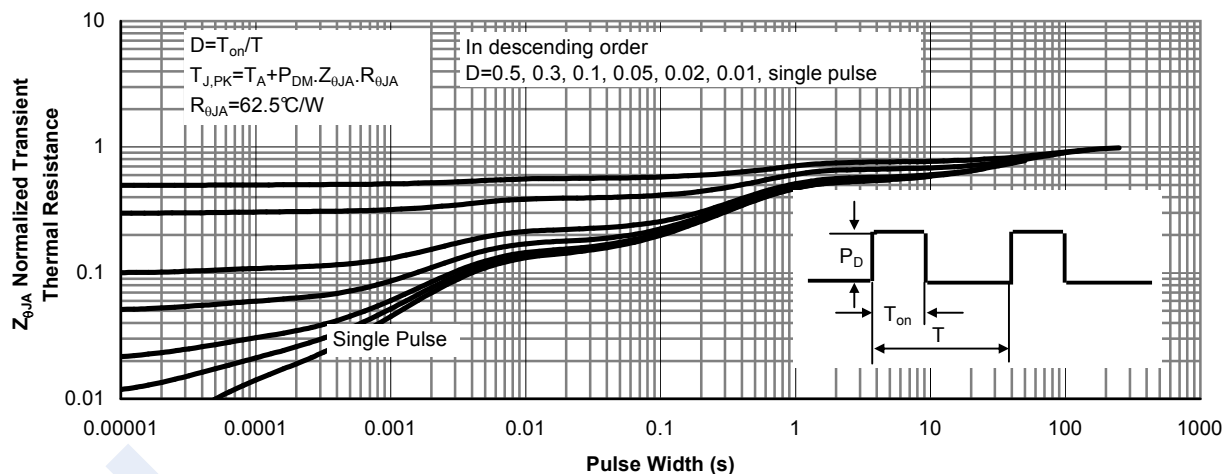


Figure 11: Normalized Maximum Transient Thermal Impedance