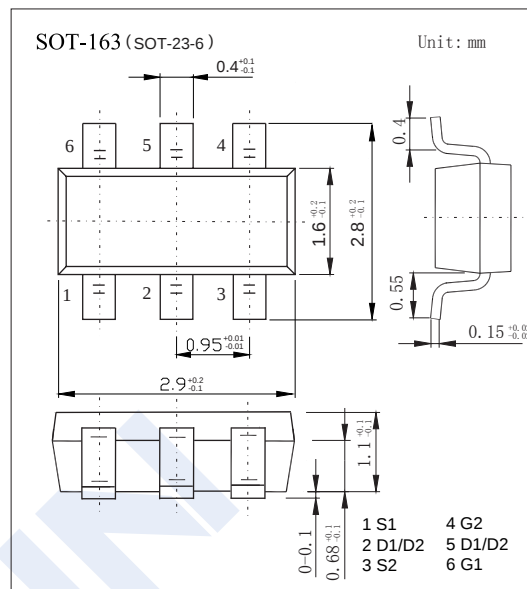
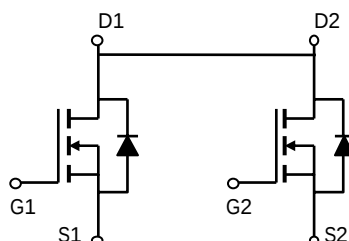


Dual N-Channel MOSFET

AO6804 (KO6804)

■ Features

- $V_{DS} = 20V$
- $I_D = 5A$ ($V_{GS} = 4.5V$)
- $R_{DS(ON)} < 32m\Omega$ ($V_{GS} = 4.5V$)
- $R_{DS(ON)} < 34m\Omega$ ($V_{GS} = 4V$)
- $R_{DS(ON)} < 37m\Omega$ ($V_{GS} = 3.1V$)
- $R_{DS(ON)} < 42m\Omega$ ($V_{GS} = 2.5V$)

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

Parameter		Symbol	10 Sec	Steady State	Unit
Drain-Source Voltage		V _{DS}	20		V
Gate-Source Voltage		V _{GS}	± 12		
Continuous Drain Current	TA=25°C	I _D	5	4	A
	TA=70°C		4	3.2	
Pulsed Drain Current		I _{DM}	25		W
Power Dissipation	TA=25°C	P _D	1.3	0.8	
	TA=70°C		0.8	0.5	
Thermal Resistance.Junction- to-Ambient		R _{thJA}	95	150	°C/W
Thermal Resistance.Junction- to-Lead		R _{thJL}	-	68	
Junction Temperature		T _J	150		°C
Storage Temperature Range		T _{stg}	-55 to 150		

Dual N-Channel MOSFET

AO6804 (KO6804)

■ 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	20			V
Zero Gate Voltage Drain Current	I _{DSS}	V _D =20V, V _{GS} =0V			1	μA
		V _D =20V, V _{GS} =0V, T _J =55°C			5	
Gate-Body Leakage Current	I _{GSS}	V _D =0V, V _{GS} =±12V			±500	nA
Gate Threshold Voltage	V _{GS(th)}	V _D =V _{GS} , I _D =250 μA	0.5		1.2	V
Static Drain-Source On-Resistance	R _{DS(on)}	V _{GS} =4.5V, I _D =5A			32	mΩ
		V _{GS} =4.5V, I _D =5A, T _J =125°C			43	
		V _{GS} =4V, I _D =4.5A			34	
		V _{GS} =3.1V, I _D =4.5A			37	
		V _{GS} =2.5V, I _D =4A			42	
On State Drain Current	I _{D(ON)}	V _{GS} =4.5V, V _D =5V	25			A
Forward Transconductance	g _{FS}	V _D =5V, I _D =5A		7		S
Input Capacitance	C _{iss}	V _{GS} =0V, V _D =10V, f=1MHz		580	725	pF
Output Capacitance	C _{oss}			95		
Reverse Transfer Capacitance	C _{rss}			70		
Gate Resistance	R _g	V _{GS} =0V, V _D =0V, f=1MHz		3.5	5.3	Ω
Total Gate Charge	Q _g	V _{GS} =4.5V, V _D =10V, I _D =5A		5.8	7.7	nC
Gate Source Charge	Q _{gs}			1		
Gate Drain Charge	Q _{gd}			1.6		
Turn-On DelayTime	t _{d(on)}	V _{GS} =10V, V _D =10V, R _L =2 Ω, R _G =3 Ω		2.4		ns
Turn-On Rise Time	t _r			6.4		
Turn-Off DelayTime	t _{d(off)}			38		
Turn-Off Fall Time	t _f			9.5		
Body Diode Reverse Recovery Time	t _{rr}	I _F = 5A, di/dt= 100A/μs		18	24	nC
Body Diode Reverse Recovery Charge	Q _{rr}			6		
Maximum Body-Diode Continuous Current	I _S				1.1	A
Diode Forward Voltage	V _{SD}	I _S =1A, V _{GS} =0V			1	V

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

■ Marking

Marking	H4**
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Dual N-Channel MOSFET

AO6804 (KO6804)

■ Typical Characteristics

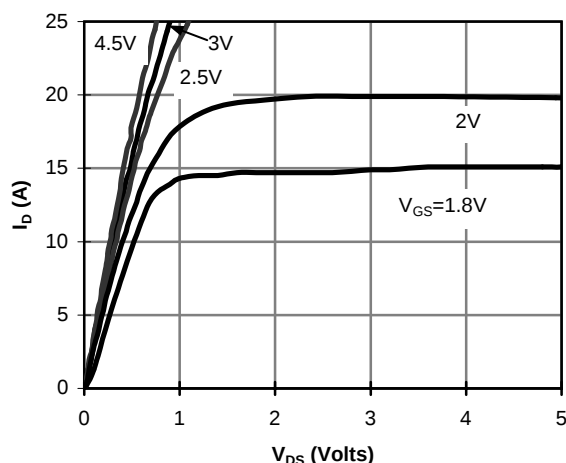


Figure 1: On-Region Characteristics

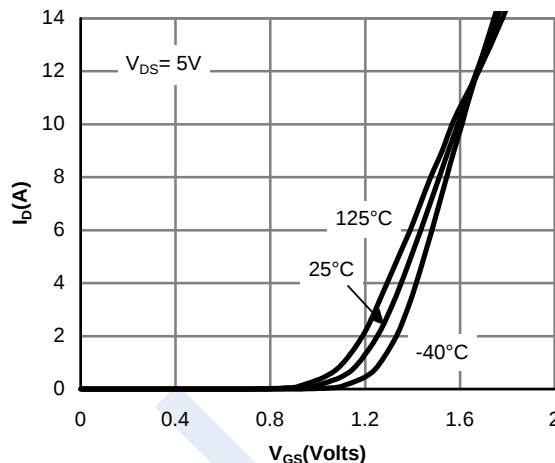


Figure 2: Transfer Characteristics

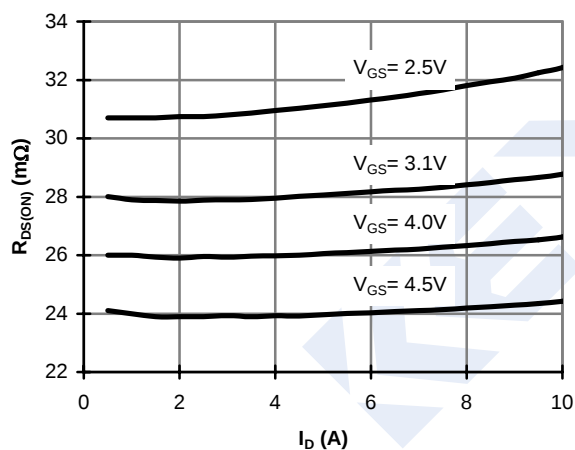


Figure 3: On-Resistance vs. Drain Current and Gate Voltage

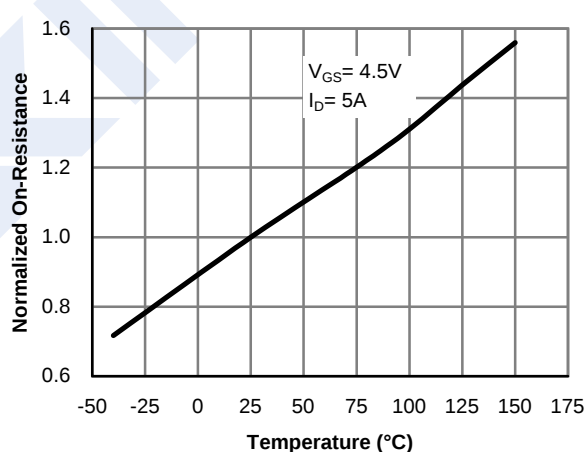


Figure 4: On-Resistance vs. Junction Temperature

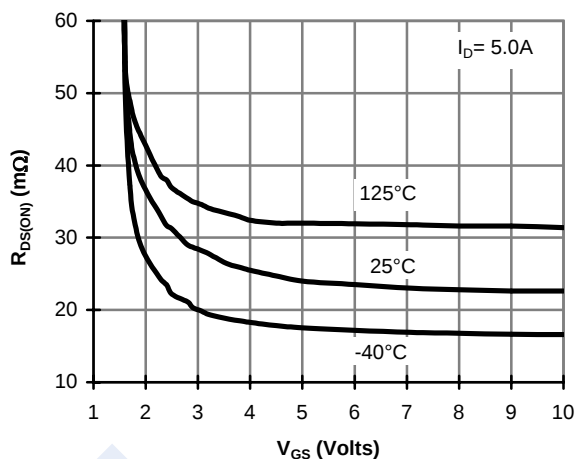


Figure 5: On-Resistance vs. Gate-Source Voltage

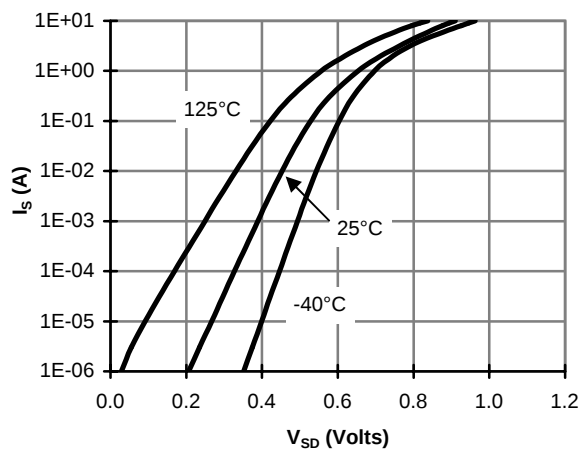


Figure 6: Body-Diode Characteristics

Dual N-Channel MOSFET

AO6804 (KO6804)

■ Typical Characteristics

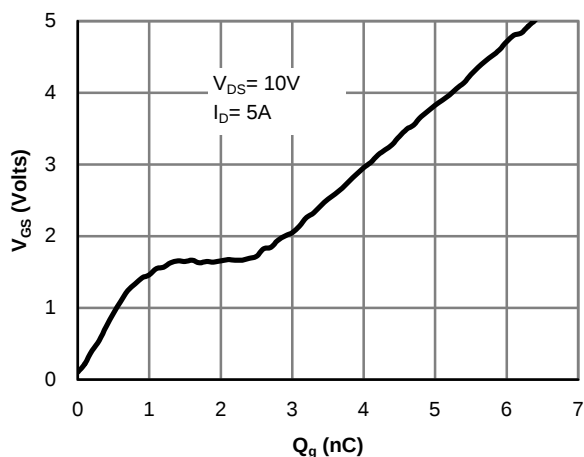


Figure 7: Gate-Charge Characteristics

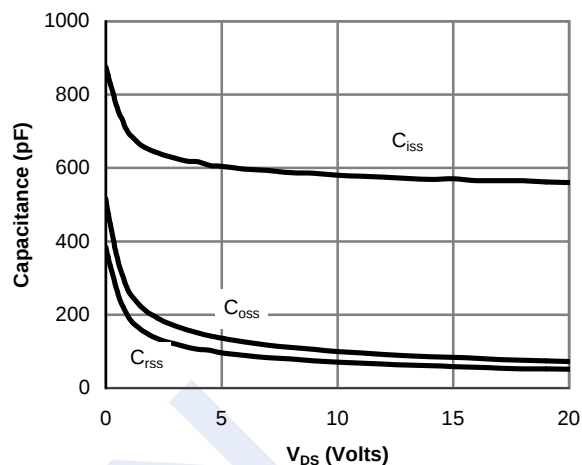


Figure 8: Capacitance Characteristics

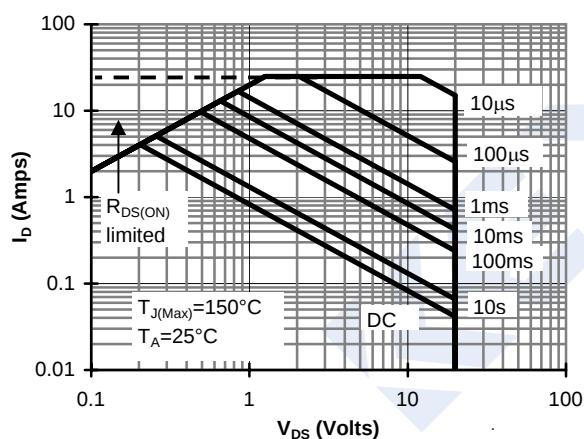


Figure 9: Maximum Forward Biased Safe Operating Area (Note E)

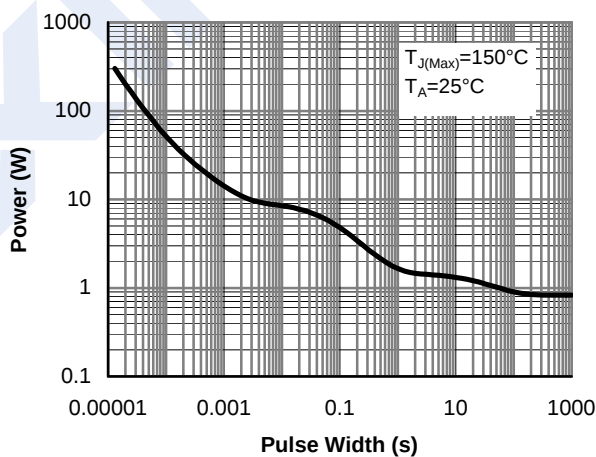


Figure 10: Single Pulse Power Rating Junction-to-Ambient (Note E)

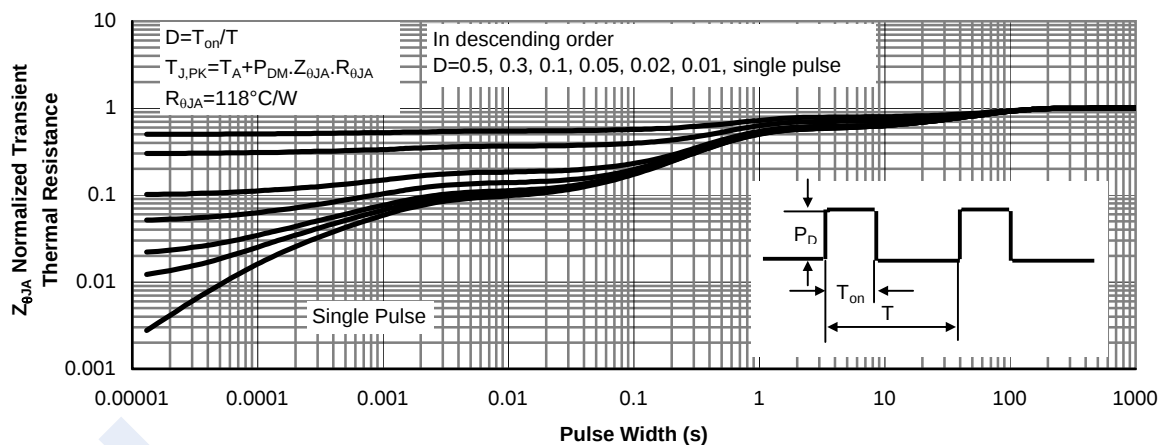


Figure 11: Normalized Maximum Transient Thermal Impedance (Note E)