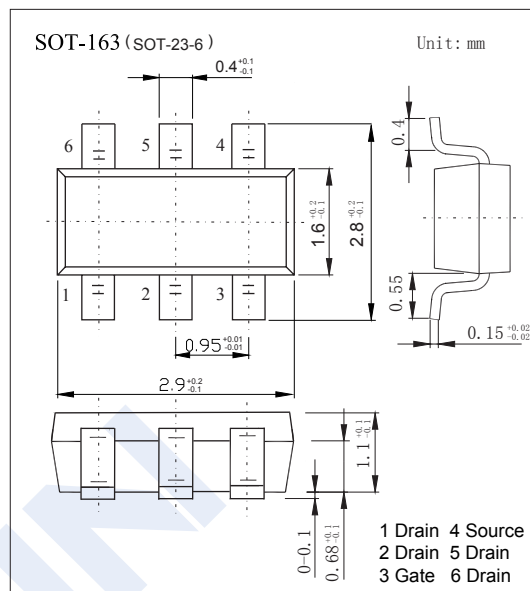
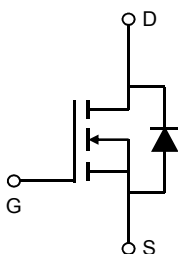


N-Channel MOSFET

AO6422 (KO6422)

■ Features

- $V_{DS} (V) = 20V$
- $I_D = 5 A (V_{GS} = 4.5V)$
- $R_{DS(ON)} < 44m\Omega (V_{GS} = 4.5V)$
- $R_{DS(ON)} < 55m\Omega (V_{GS} = 2.5V)$
- $R_{DS(ON)} < 72m\Omega (V_{GS} = 1.8V)$

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

Parameter		Symbol	10 Sec	Steady State	Unit
Drain-Source Voltage		V _{bs}	20		V
Gate-Source Voltage		V _{GS}	±8		
Continuous Drain Current	TA=25℃	I _D	5	3.9	A
	TA=70℃		4.2	3	
Pulsed Drain Current		I _{DM}	30		
Power Dissipation	TA=25℃	P _D	2	1.1	W
	TA=70℃		1.3	0.7	
Thermal Resistance.Junction- to-Ambient		R _{thJA}	62.5	110	℃/W
Thermal Resistance.Junction- to-Lead		R _{thJL}	-	68	
Junction Temperature		T _J	150		℃
Storage Temperature Range		T _{stg}	-55 to 150		

N-Channel MOSFET

AO6422 (KO6422)

■ 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 _{DS} =20V, V _{GS} =0V			1	μA
		V _{DS} =20V, V _{GS} =0V, T _J =55°C			5	
Gate-Body Leakage Current	I _{GSS}	V _{DS} =0V, V _{GS} =±8V			±100	nA
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =250 μA	0.4		1	V
Static Drain-Source On-Resistance	R _{DS(on)}	V _{GS} =4.5V, I _D =5A			44	mΩ
		V _{GS} =4.5V, I _D =5A, T _J =125°C			60	
		V _{GS} =2.5V, I _D =4.5A			55	
		V _{GS} =1.8V, I _D =3.5A			72	
On State Drain Current	I _{D(on)}	V _{GS} =4.5V, V _{DS} =5V	30			A
Forward Transconductance	g _{FS}	V _{DS} =5V, I _D =5A		14		S
Input Capacitance	C _{iss}	V _{GS} =0V, V _{DS} =10V, f=1MHz		450	560	pF
Output Capacitance	C _{oss}			74		
Reverse Transfer Capacitance	C _{rss}			52		
Gate Resistance	R _g	V _{GS} =0V, V _{DS} =0V, f=1MHz		4.9	7.5	Ω
Total Gate Charge	Q _g	V _{GS} =4.5V, V _{DS} =10V, I _D =5A		6.2	8.2	nC
Gate Source Charge	Q _{gs}			0.4		
Gate Drain Charge	Q _{gd}			1.3		
Turn-On DelayTime	t _{d(on)}	V _{GS} =4.5V, V _{DS} =10V, R _L =2 Ω, R _G =3 Ω		4.5		ns
Turn-On Rise Time	t _r			6		
Turn-Off DelayTime	t _{d(off)}			33		
Turn-Off Fall Time	t _f			7.1		
Body Diode Reverse Recovery Time	t _{rr}	I _F = 5A, dI/dt= 100A/us		13	17	nC
Body Diode Reverse Recovery Charge	Q _{rr}			3.3		
Maximum Body-Diode Continuous Current	I _S				2	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 <300us pulses, duty cycle 0.5% max.

■ Marking

Marking	DR**
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N-Channel MOSFET

AO6422 (KO6422)

■ Typical Characteristics

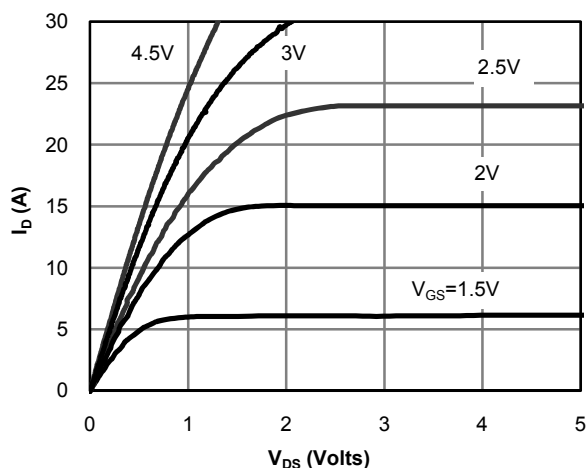


Figure 1: On-Region Characteristics

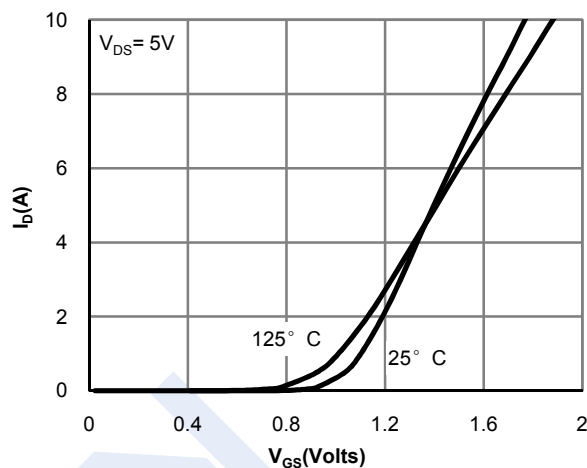


Figure 2: Transfer Characteristics

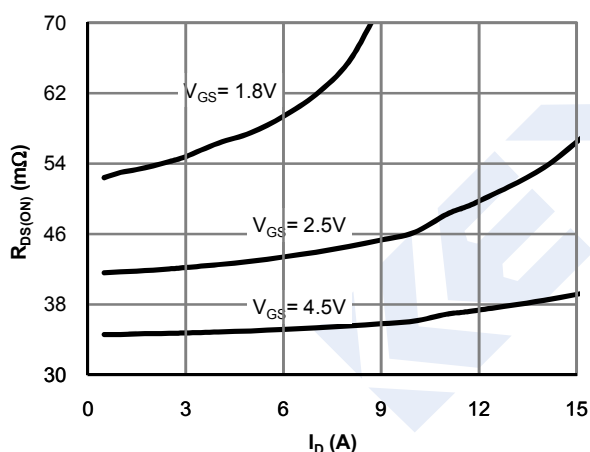


Figure 3: On-Resistance vs. Drain Current and Gate Voltage

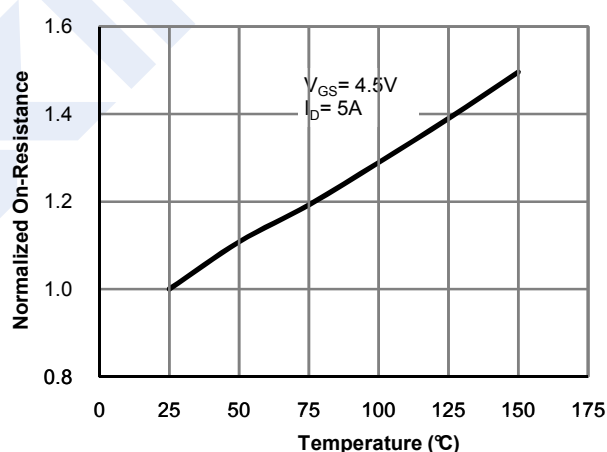


Figure 4: On-Resistance vs. Junction Temperature

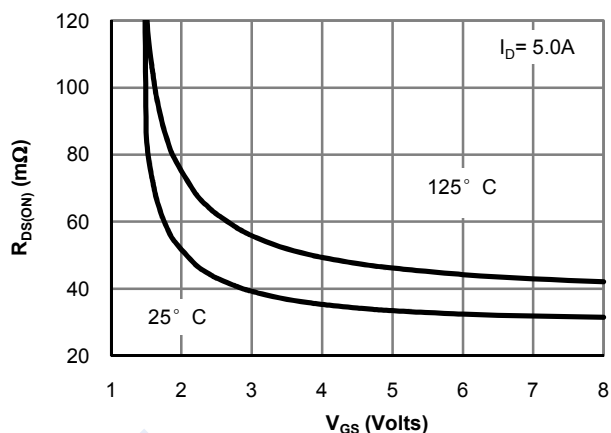


Figure 5: On-Resistance vs. Gate-Source Voltage

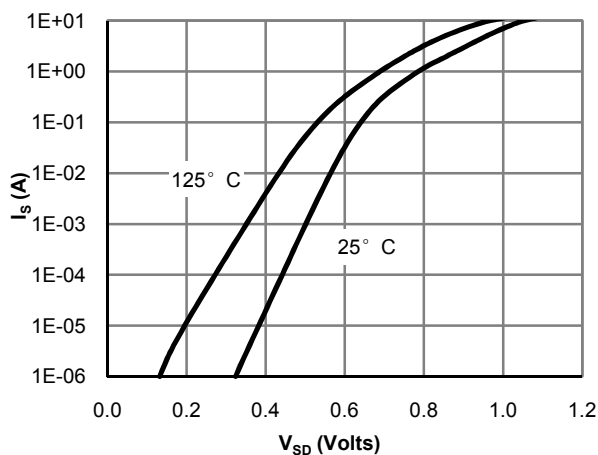


Figure 6: Body-Diode Characteristics

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■ Typical Characteristics

