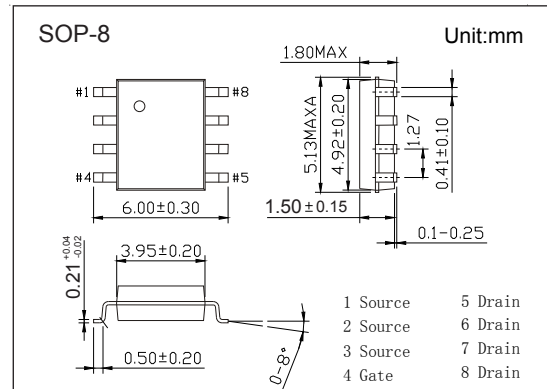
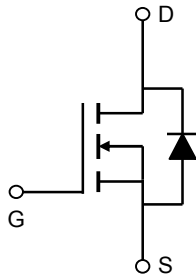


N-Channel MOSFET

AO4484-HF (KO4484-HF)

■ Features

- $V_{DS} (V) = 40V$
- $I_D = 10 A$ ($V_{GS} = 10V$)
- $R_{DS(ON)} < 10m\Omega$ ($V_{GS} = 10V$)
- $R_{DS(ON)} < 12m\Omega$ ($V_{GS} = 4.5V$)
- 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}	40		V
Gate-Source Voltage		V _{GS}	± 20		
Continuous Drain Current	T _A =25°C	I _D	13.5	10	A
	T _A =70°C		10.8	8	
Pulsed Drain Current		I _{DM}	120		
Avalanche Current		I _{AR}	23		
Repetitive Avalanche Energy	L=0.3mH	E _{AR}	79		mJ
Power Dissipation	T _A =25°C	P _D	3.1	2.7	W
	T _A =70°C		2	1.1	
Thermal Resistance.Junction- to-Ambient		R _{thJA}	40	75	°C/W
Thermal Resistance.Junction- to-Lead		R _{thJL}	-	24	
Junction Temperature		T _J	150		°C
Storage Temperature Range		T _{stg}	-55 to 150		

N-Channel MOSFET

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■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V_{DS}	$I_D=250\mu A$, $V_{GS}=0V$	40			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=40V$, $V_{GS}=0V$			1	μA
		$V_{DS}=40V$, $V_{GS}=0V$, $T_J=55^\circ C$			5	
Gate-Body Leakage Current	I_{GSS}	$V_{DS}=0V$, $V_{GS}=\pm 20V$			± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$, $I_D=250\mu A$	1.7		3	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=10V$, $I_D=10A$			10	m Ω
		$V_{GS}=10V$, $I_D=10A$, $T_J=125^\circ C$			16	
		$V_{GS}=4.5V$, $I_D=8A$			12.5	
On State Drain Current	$I_{D(on)}$	$V_{GS}=10V$, $V_{DS}=5V$	120			A
Forward Transconductance	g_{FS}	$V_{DS}=5V$, $I_D=10A$		75		S
Input Capacitance	C_{iss}	$V_{GS}=0V$, $V_{DS}=20V$, $f=1MHz$		1500	1950	pF
Output Capacitance	C_{oss}			215		
Reverse Transfer Capacitance	C_{rss}			135		
Gate Resistance	R_g	$V_{GS}=0V$, $V_{DS}=0V$, $f=1MHz$	2		5	Ω
Total Gate Charge (10V)	Q_g	$V_{GS}=10V$, $V_{DS}=20V$, $I_D=10A$		27.2	37	nC
Total Gate Charge (4.5V)				13.6	18	
Gate Source Charge				4.5		
Gate Drain Charge				6.4		
Turn-On DelayTime	$t_{d(on)}$	$V_{GS}=10V$, $V_{DS}=20V$, $R_L=2\Omega$, $R_{GEN}=3\Omega$		6.4		ns
Turn-On Rise Time	t_r			17.2		
Turn-Off DelayTime	$t_{d(off)}$			29.6		
Turn-Off Fall Time	t_f			16.8		
Body Diode Reverse Recovery Time	t_{rr}	$I_F=10A$, $dI/dt=100A/\mu s$		30	40	nC
Body Diode Reverse Recovery Charge	Q_{rr}			19		
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 <300 μs pulses, duty cycle 0.5% max.

■ Marking

Marking	4484 KC**** F
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N-Channel MOSFET

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■ Typical Characteristics

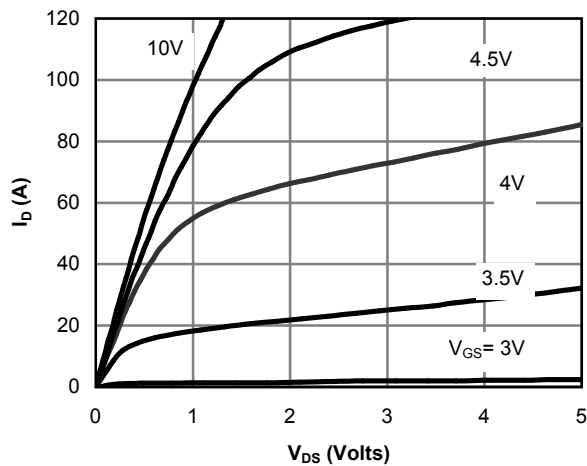


Figure 1: On-Region Characteristics

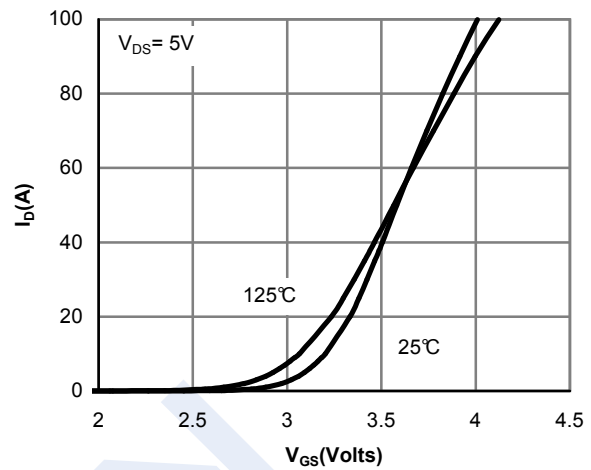


Figure 2: Transfer Characteristics

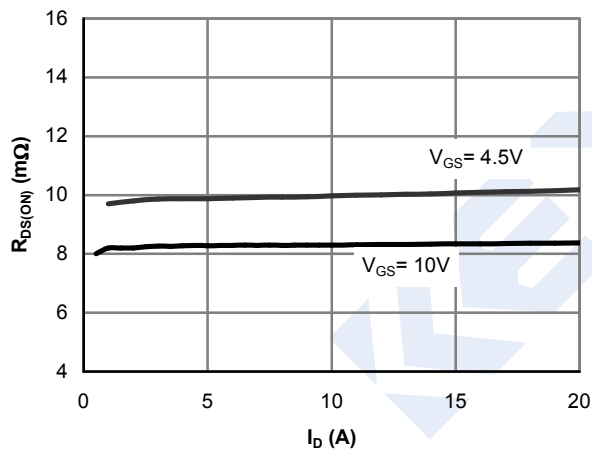


Figure 3: On-Resistance vs. Drain Current and Gate Voltage

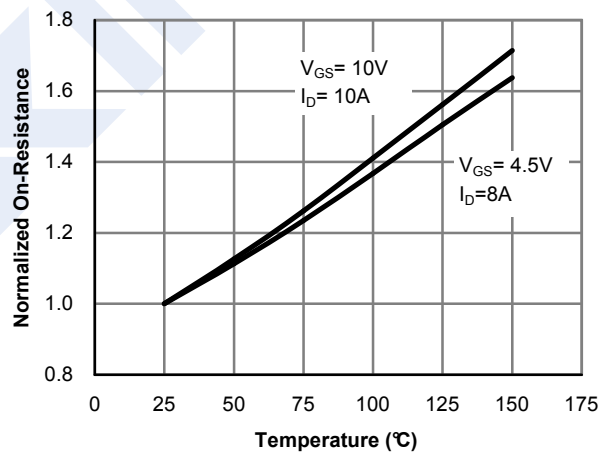


Figure 4: On-Resistance vs. Junction Temperature

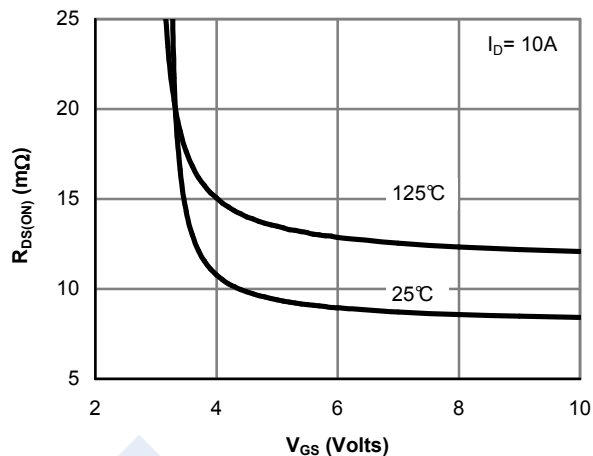


Figure 5: On-Resistance vs. Gate-Source Voltage

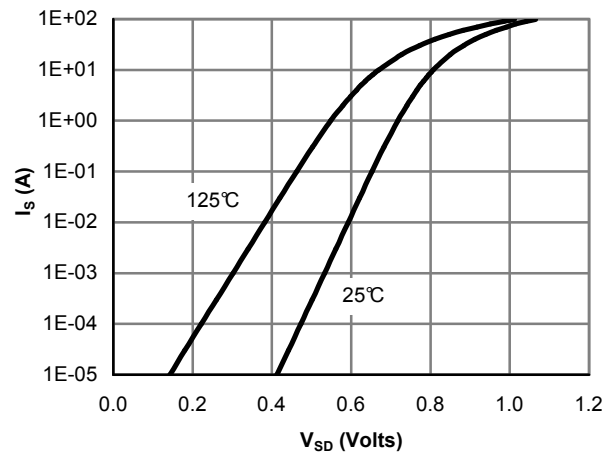


Figure 6: Body-Diode Characteristics

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■ Typical Characteristics

