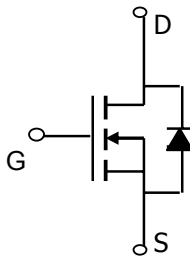
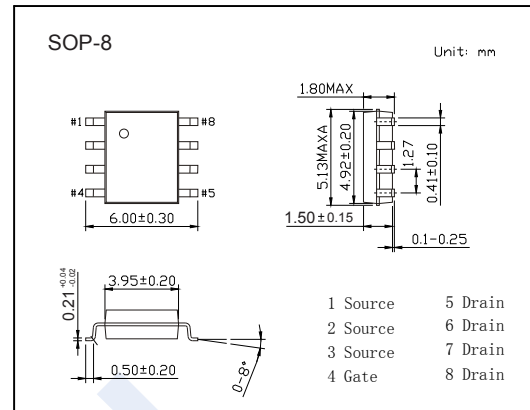


N-Channel MOSFET

AO4476 (KO4476)

■ Features

- $V_{DS} (V) = 30V$
- $I_D = 15 A (V_{GS} = 10V)$
- $R_{DS(ON)} < 10.5m\Omega (V_{GS} = 10V)$
- $R_{DS(ON)} < 17m\Omega (V_{GS} = 4.5V)$



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

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	30	V
Gate-Source Voltage	V_{GS}	± 20	V
Continuous Drain Current	I_D	$T_A=25^\circ C$	15
		$T_A=70^\circ C$	12
Pulsed Drain Current	I_{DM}	60	A
Power Dissipation	P_D	$T_A=25^\circ C$	3.7
		$T_A=70^\circ C$	2.4
Thermal Resistance.Junction- to-Ambient	R_{thJA}	$t \leq 10s$	34
		Steady-State	71
Thermal Resistance.Junction- to-Lead	R_{thJL}	23	$^\circ C/W$
Junction Temperature	T_J	150	$^\circ C$
Storage Temperature Range	T_{stg}	-55 to 150	$^\circ C$

N-Channel MOSFET

AO4476 (KO4476)

■ 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	30			V	
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =24V, V _{GS} =0V			1	μA	
		V _{DS} =24V, 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		2.5	V	
Static Drain-Source On-Resistance	R _{DS(on)}	V _{GS} =10V, I _D =15A			10.5	mΩ	
		V _{GS} =10V, I _D =15A, T _J =125°C		11			
		V _{GS} =4.5V, I _D =12A			17		
On State Drain Current	I _{D(ON)}	V _{GS} =10V, V _{DS} =5V	60			A	
Forward Transconductance	g _{FS}	V _{DS} =5V, I _D =15A		33		S	
Input Capacitance	C _{iss}	V _{GS} =0V, V _{DS} =15V, f=1MHz		1000		pF	
Output Capacitance	C _{oss}			340			
Reverse Transfer Capacitance	C _{rss}			100			
Gate Resistance	R _g	V _{GS} =0V, V _{DS} =0V, f=1MHz		1.3		Ω	
Total Gate Charge (10V)	Q _g	V _{GS} =10V, V _{DS} =15V, I _D =15A		18		nC	
Total Gate Charge (4.5V)				8.5			
Gate Source Charge			Q _{gs}		3.1		
Gate Drain Charge			Q _{gd}		4.8		
Turn-On DelayTime	t _{d(on)}	V _{GS} =10V, V _{DS} =15V, R _L =1Ω, R _{GEN} =3Ω		6		ns	
Turn-On Rise Time	t _r			3.8			
Turn-Off DelayTime	t _{d(off)}			20			
Turn-Off Fall Time	t _f			3.8			
Body Diode Reverse Recovery Time	t _{rr}	I _F =15A, di/dt=100A/μs		28		nC	
Body Diode Reverse Recovery Charge	Q _{rr}			21			
Maximum Body-Diode Continuous Current	I _S				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	4476 KC****
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N-Channel MOSFET AO4476 (KO4476)

■ Typical Characteristics

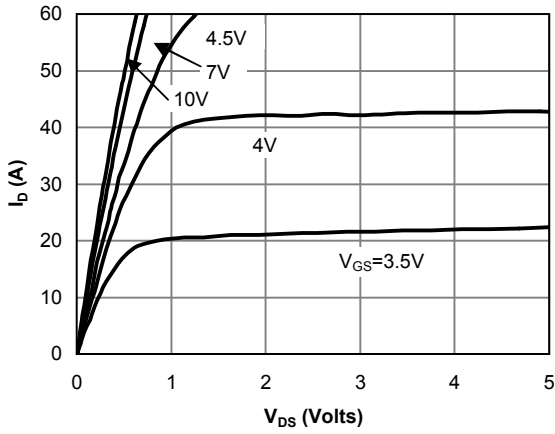


Figure 1: On-Region Characteristics

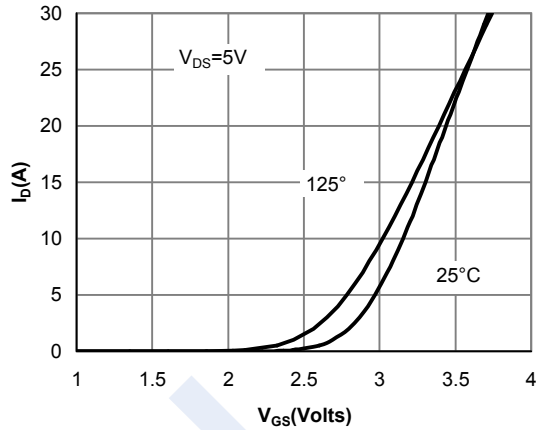


Figure 2: Transfer Characteristics

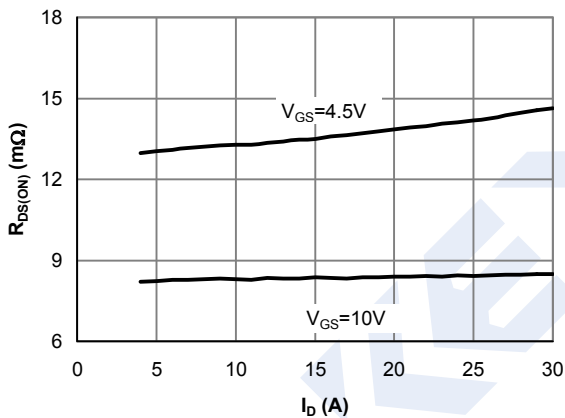


Figure 3: On-Resistance vs. Drain Current and Gate Voltage

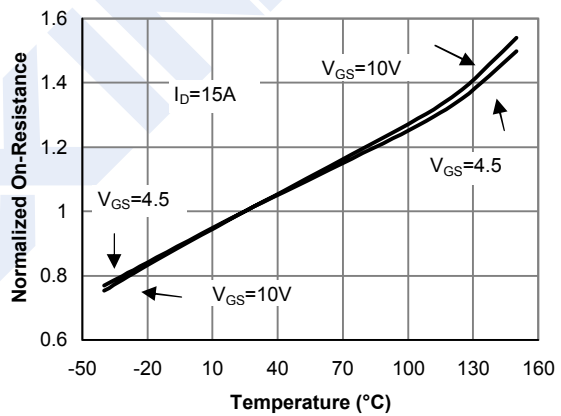


Figure 4: On-Resistance vs. Junction Temperature

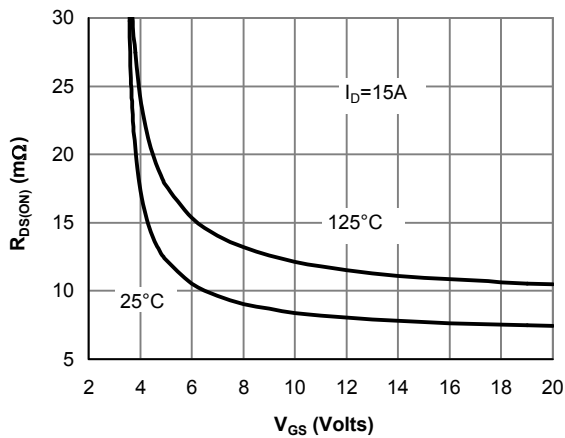


Figure 5: On-Resistance vs. Gate-Source Voltage

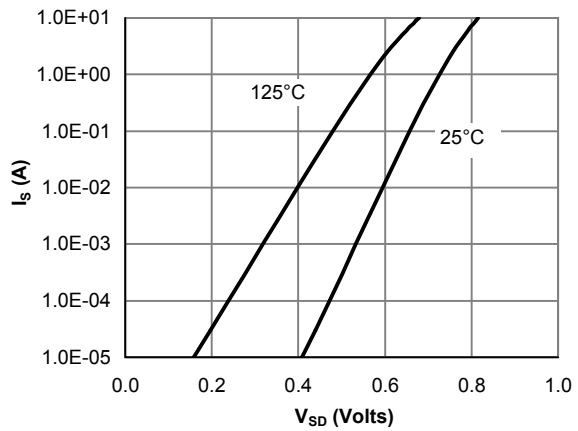


Figure 6: Body-Diode Characteristics

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■ Typical Characteristics

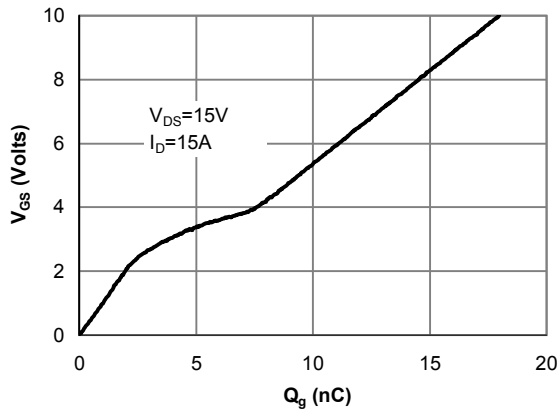


Figure 7: Gate-Charge Characteristics

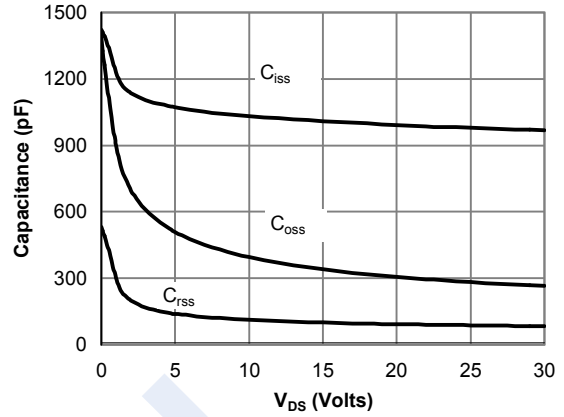


Figure 8: Capacitance Characteristics

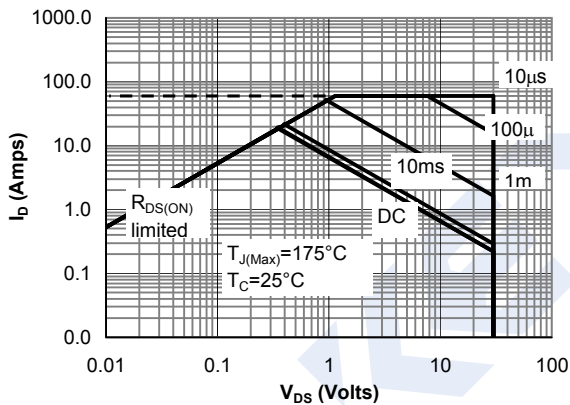


Figure 9: Maximum Forward Biased Safe Operating Area (Note F)

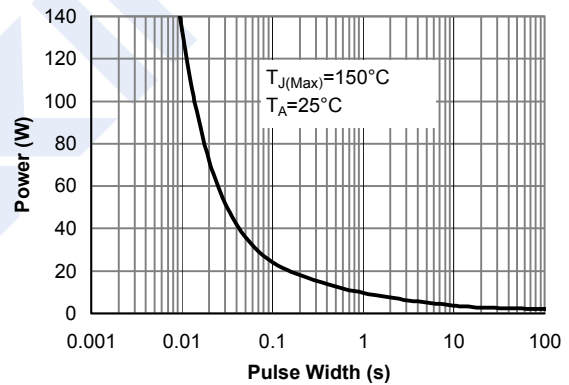


Figure 10: Single Pulse Power Rating Junction-to-Ambient (Note G)

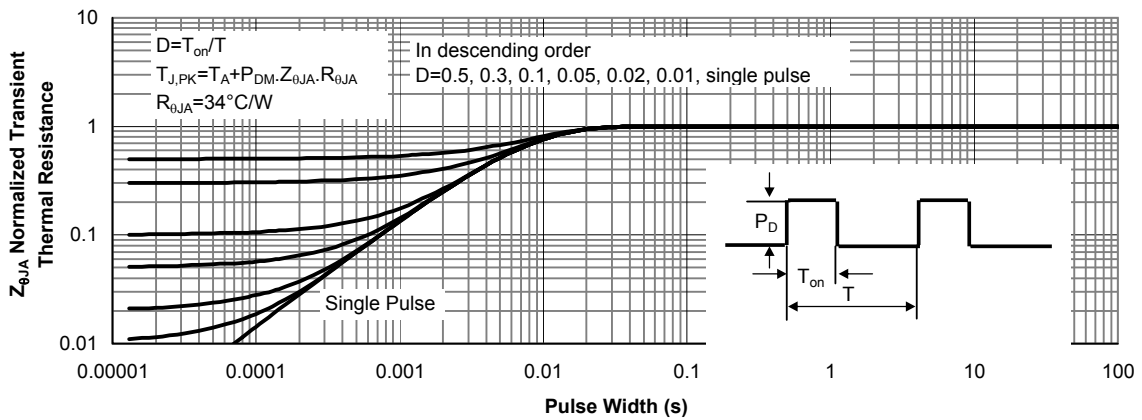


Figure 11: Normalized Maximum Transient Thermal Impedance (Note G)