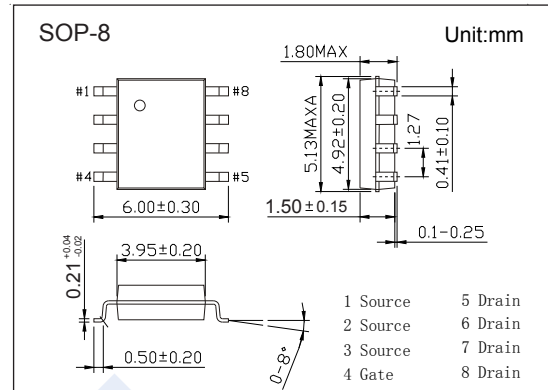
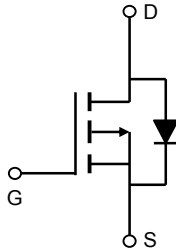


P-Channel MOSFET

AO4485 (KO4485)

■ Features

- $V_{DS} (V) = -40V$
- $I_D = -10 A (V_{GS} = -10V)$
- $R_{DS(ON)} < 15m\Omega (V_{GS} = -10V)$
- $R_{DS(ON)} < 20m\Omega (V_{GS} = -4.5V)$



■ 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	$T_A = 25^\circ C$	I_D	-12	-10	A
	$T_A = 70^\circ C$		-9	-8	
Pulsed Drain Current		I_{DM}	-120		
Avalanche Current		I_{AR}	-28		
Repetitive avalanche energy	$L = 0.3mH$	E_{AR}	118		mJ
Power Dissipation	$T_A = 25^\circ C$	P_D	3.1	1.7	W
	$T_A = 70^\circ C$		2	1.1	
Thermal Resistance.Junction- to-Ambient		R_{thJA}	40	75	$^\circ C/W$
Thermal Resistance.Junction- to-Case		R_{thJC}	-	24	
Junction Temperature		T_J	150		$^\circ C$
Junction Storage Temperature Range		T_{stg}	-55 to 150		

P-Channel MOSFET

AO4485 (KO4485)

■ 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	-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°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 =-250 μA	-1.7		-2.5	V	
Static Drain-Source On-Resistance	R _{DS(on)}	V _{GS} =-10V, I _D =-10A			15	mΩ	
		V _{GS} =-10V, I _D =-10A T _J =125°C			23		
		V _{GS} =-4.5V, I _D =-8A			20		
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		25		S	
Input Capacitance	C _{iss}	V _{GS} =0V, V _{DS} =-20V, f=1MHz		2500	3000	pF	
Output Capacitance	C _{oss}			260			
Reverse Transfer Capacitance	C _{rss}			180			
Gate resistance	R _g	V _{GS} =0V, V _{DS} =0V, f=1MHz	2.5		6	Ω	
Total Gate Charge (10V)	Q _g	V _{GS} =-10V, V _{DS} =-20V, I _D =-10A		42	55	nC	
Total Gate Charge (4.5V)				18.6			
Gate Source Charge			Q _{gs}		7		
Gate Drain Charge			Q _{gd}		8.6		
Turn-On DelayTime			t _{d(on)}		9.4		
Turn-On Rise Time	t _r	V _{GS} =-10V, V _{DS} =-20V, R _L = 2Ω, R _{GEN} =3Ω		20			
Turn-Off DelayTime	t _{d(off)}			55			
Turn-Off Fall Time	t _f			30			
Body Diode Reverse Recovery Time	t _{rr}		I _F =-10A, di/dt=100A/us		38	49	
Body Diode Reverse Recovery Charge	Q _{rr}				47		nC
Maximum Body-Diode Continuous Current	I _S				-3	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 t ≤ 300us pulses, duty cycle 0.5% max.

■ Marking

Marking	4485 KC****
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P-Channel MOSFET AO4485 (KO4485)

■ Typical Characteristics

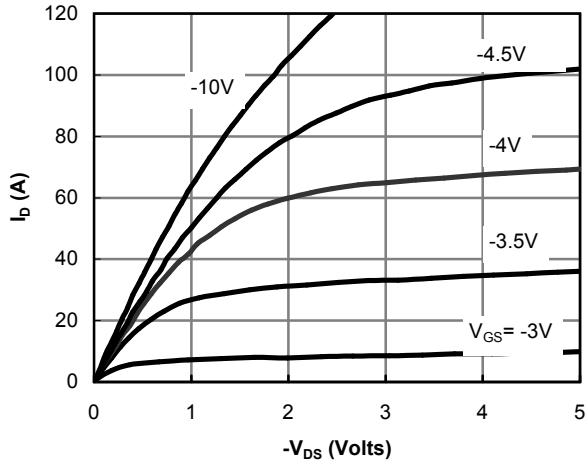


Figure 1: On-Region Characteristics

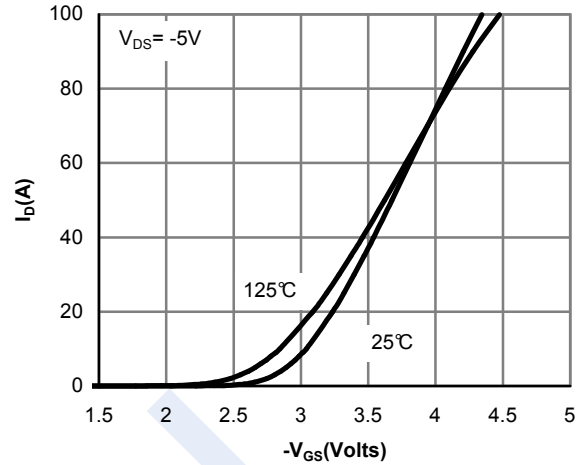


Figure 2: Transfer Characteristics

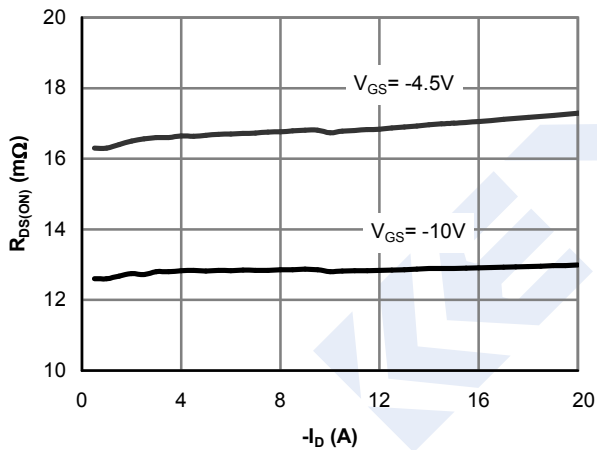


Figure 3: On-Resistance vs. Drain Current and Gate Voltage

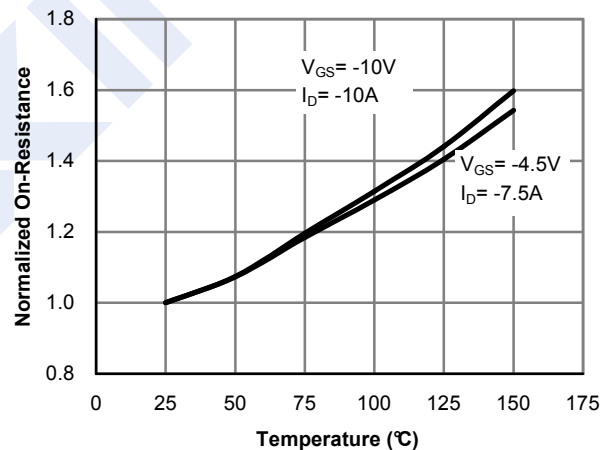


Figure 4: On-Resistance vs. Junction Temperature

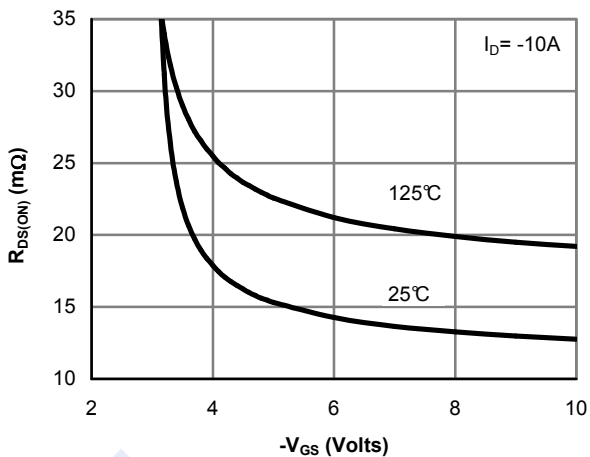


Figure 5: On-Resistance vs. Gate-Source Voltage

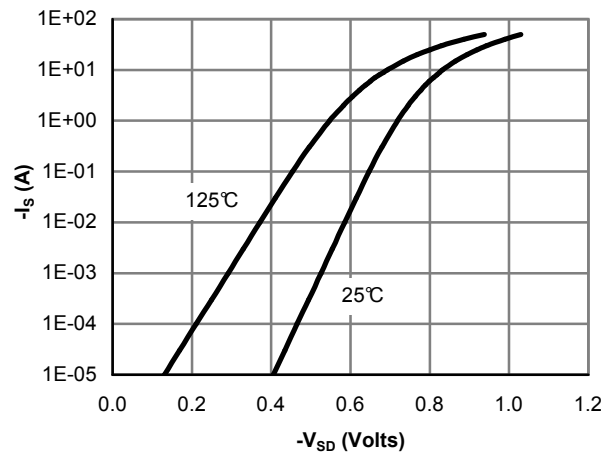


Figure 6: Body-Diode Characteristics

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■ Typical Characteristics

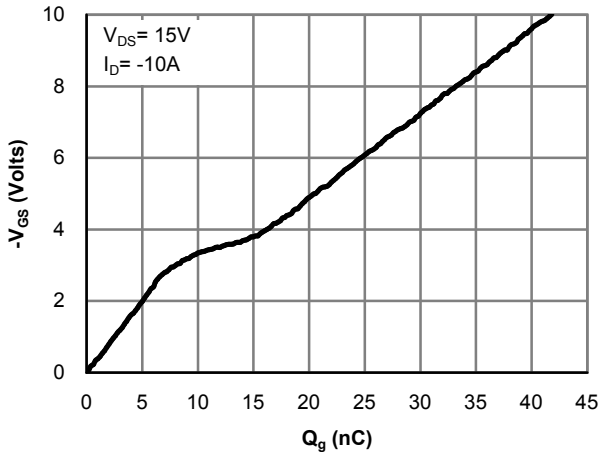


Figure 7: Gate-Charge Characteristics

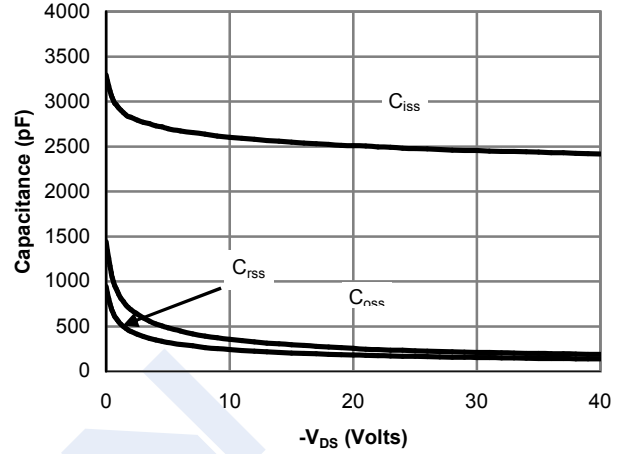


Figure 8: Capacitance Characteristics

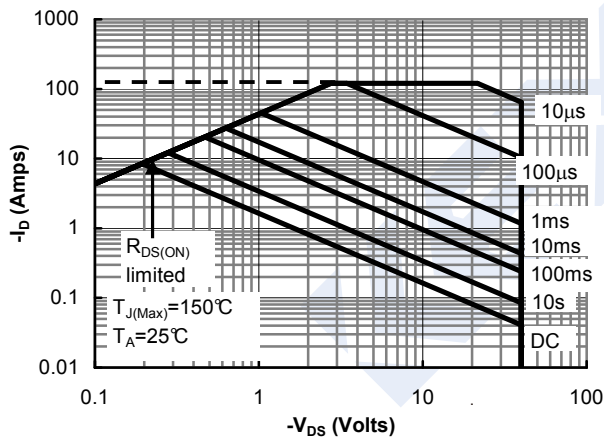


Figure 9: Maximum Forward Biased Safe Operating Area (Note E)

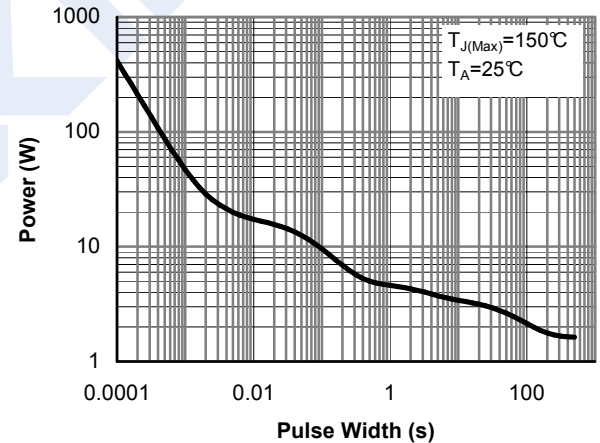


Figure 10: Single Pulse Power Rating Junction-to-Ambient (Note E)

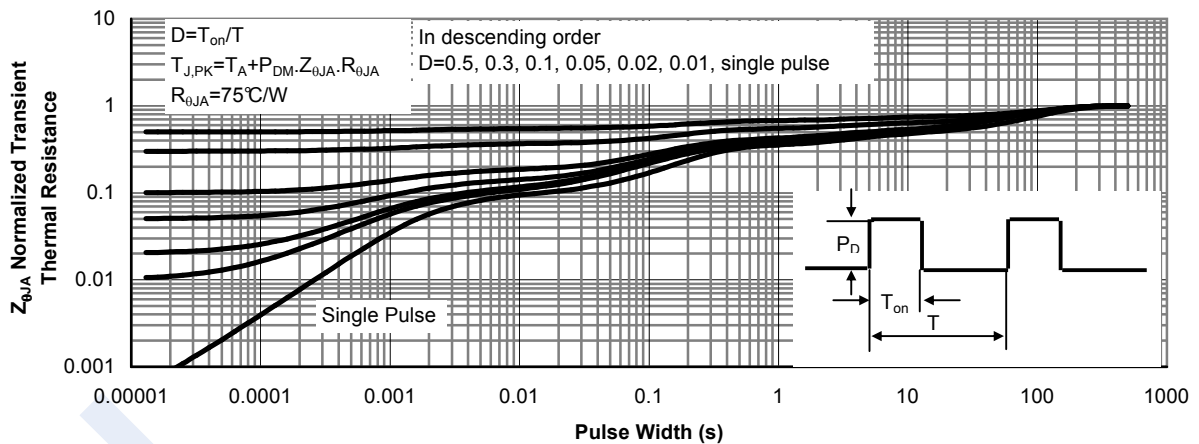


Figure 11: Normalized Maximum Transient Thermal Impedance (Note E)