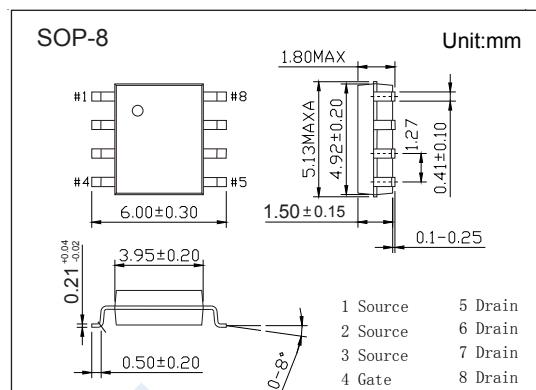
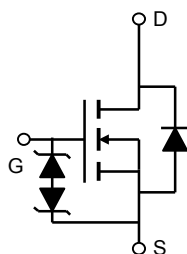


N-Channel MOSFET

AO4488 (KO4488)

■ Features

- $V_{DS} (V) = 30V$
- $I_D = 20 A (V_{GS} = 10V)$
- $R_{DS(ON)} < 4.6m\Omega (V_{GS} = 10V)$
- $R_{DS(ON)} < 6.4m\Omega (V_{GS} = 4.5V)$
- ESD Rating: 2KV HBM

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

Parameter		Symbol	10 Sec	Steady State	Unit
Drain-Source Voltage		V _{DS}	30		V
Gate-Source Voltage		V _{GS}	± 20		
Continuous Drain Current	T _A =25℃	I _D	20	15	A
	T _A =70℃		17	12	
Pulsed Drain Current		I _{DM}	80		
Avalanche Current		I _{AR}	50		
Repetitive Avalanche Energy	L=0.3mH	E _{AR}	375		mJ
Power Dissipation	T _A =25℃	P _D	3.1	1.7	W
	T _A =70℃		2	1.1	
Thermal Resistance.Junction- to-Ambient		R _{thJA}	40	75	℃/W
Thermal Resistance.Junction- to-Lead		R _{thJL}	-	24	
Junction Temperature		T _J	150		℃
Storage Temperature Range		T _{stg}	-55 to 150		

N-Channel MOSFET

AO4488 (KO4488)

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V _{DS}	I _D =250 μA, V _{GS} =0V	30			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =30V, V _{GS} =0V			1	μA
		V _{DS} =30V, V _{GS} =0V, T _J =55°C			5	
Gate-Body Leakage Current	I _{GSS}	V _{DS} =0V, V _{GS} =±16V			±10	μA
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 =20A			4.6	mΩ
		V _{GS} =10V, I _D =20A, T _J =125°C			6.5	
		V _{GS} =4.5V, I _D =18A			6.4	
On State Drain Current	I _{D(on)}	V _{GS} =10V, V _{DS} =5V	80			A
Forward Transconductance	g _{FS}	V _{DS} =5V, I _D =20A		72		S
Input Capacitance	C _{iss}	V _{GS} =0V, V _{DS} =15V, f=1MHz		5450	6800	pF
Output Capacitance	C _{oss}			760		
Reverse Transfer Capacitance	C _{rss}			540		
Gate Resistance	R _g	V _{GS} =0V, V _{DS} =0V, f=1MHz		1	1.5	Ω
Total Gate Charge (10V)	Q _g	V _{GS} =10V, V _{DS} =15V, I _D =20A		84	112	nC
Total Gate Charge (4.5V)				42	56	
Gate Source Charge	Q _{gs}			12		
Gate Drain Charge	Q _{gd}			21		
Turn-On DelayTime	t _{d(on)}			13		
Turn-On Rise Time	t _r	V _{GS} =10V, V _{DS} =15V, R _L =0.75Ω, R _{GEN} =3Ω		9.8		ns
Turn-Off DelayTime	t _{d(off)}			49		
Turn-Off Fall Time	t _f			16		
Body Diode Reverse Recovery Time	t _{rr}	I _F =20A, di/dt=100A/μs		42	56	nC
Body Diode Reverse Recovery Charge	Q _{rr}			31		
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 <300 μs pulses, duty cycle 0.5% max.

■ Marking

Marking	4488 KC****
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N-Channel MOSFET

AO4488 (KO4488)

■ Typical Characteristics

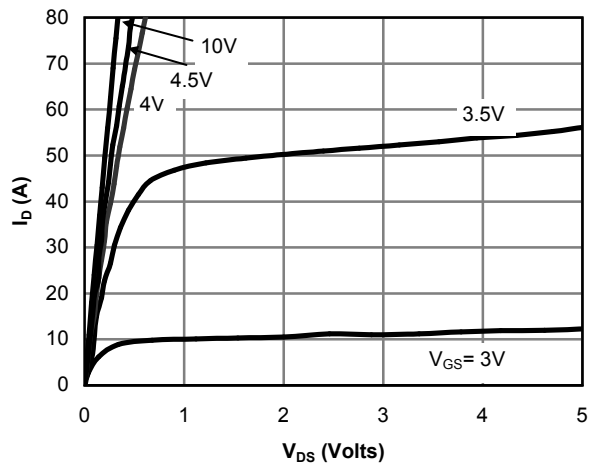


Figure 1: On-Region Characteristics

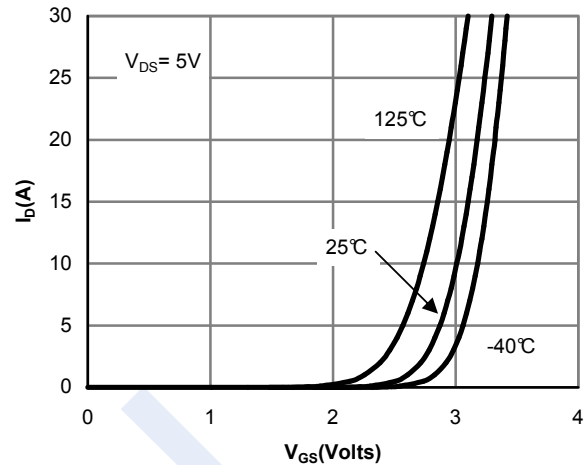


Figure 2: Transfer Characteristics

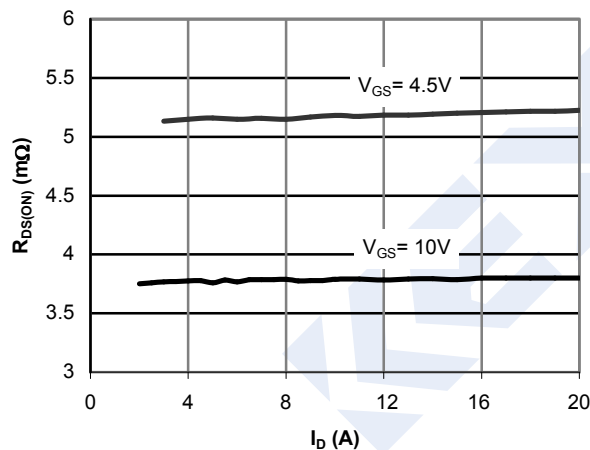


Figure 3: On-Resistance vs. Drain Current and Gate Voltage

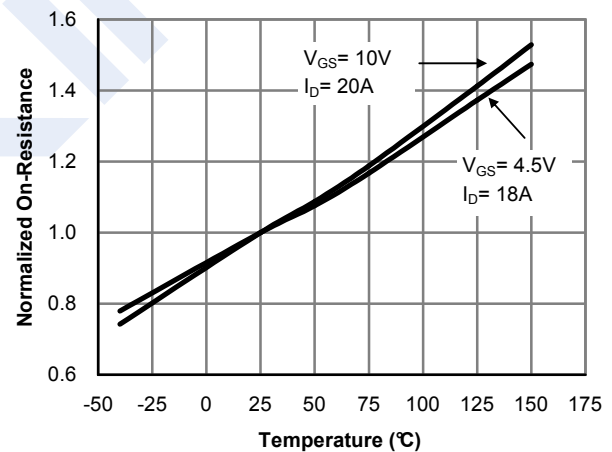


Figure 4: On-Resistance vs. Junction Temperature

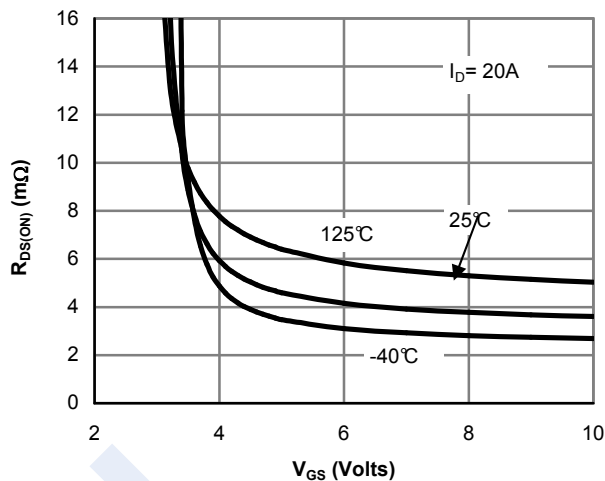


Figure 5: On-Resistance vs. Gate-Source Voltage

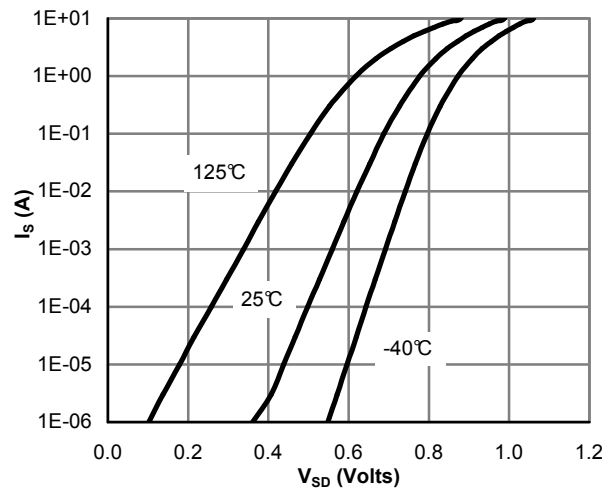


Figure 6: Body-Diode Characteristics

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Typical Characteristics

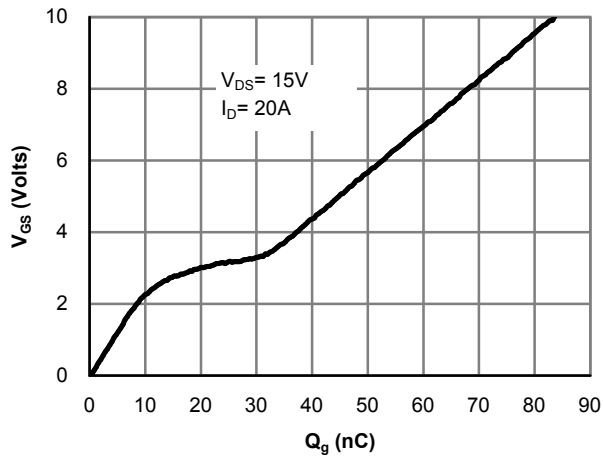


Figure 7: Gate-Charge Characteristics

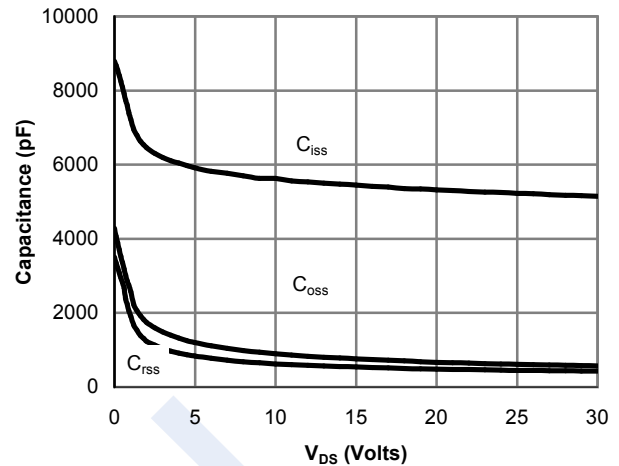


Figure 8: Capacitance Characteristics

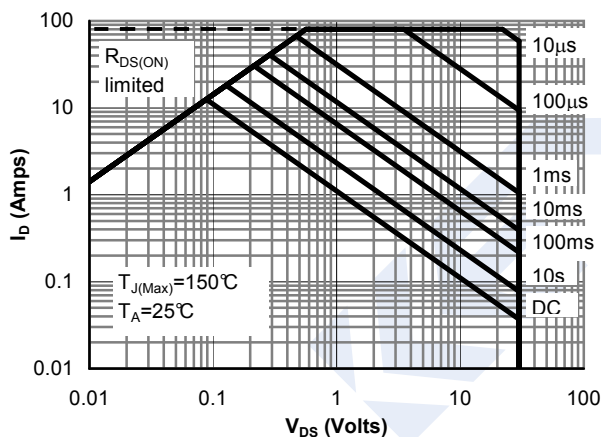


Figure 9: Maximum Forward Biased Safe Operating Area (Note E)

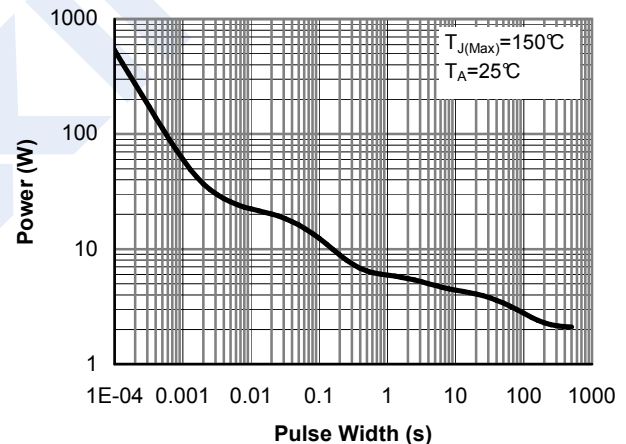


Figure 10: Single Pulse Power Rating Junction-to-Ambient (Note E)

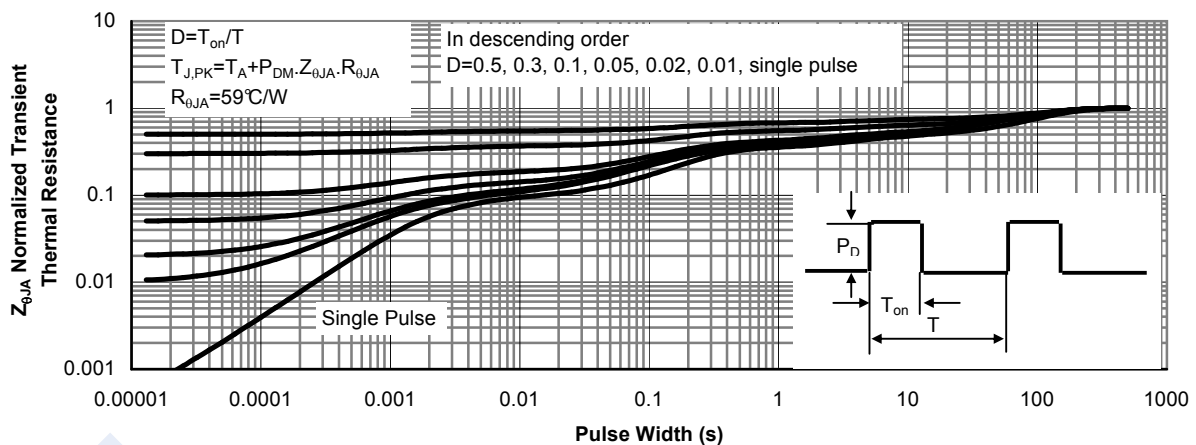


Figure 11: Normalized Maximum Transient Thermal Impedance (Note E)