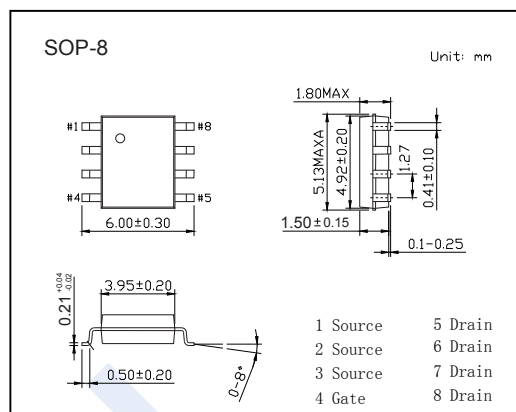
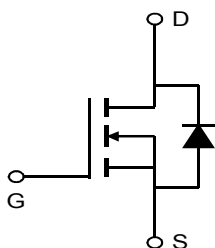


N-Channel MOSFET

AO4292 (KO4292)

■ Features

- $V_{DS} (V) = 100V$
- $I_D = 8 A$ ($V_{GS} = 10V$)
- $R_{DS(ON)} < 23m\Omega$ ($V_{GS} = 10V$)
- $R_{DS(ON)} < 33m\Omega$ ($V_{GS} = 4.5V$)

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

Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DS}	100	V
Gate-Source Voltage		V_{GS}	± 20	
VDS Spike @ 10us		V_{SPIKE}	120	
Continuous Drain Current	$T_A=25^\circ C$	I_D	8	A
	$T_A=70^\circ C$		6.2	
Pulsed Drain Current		I_{DM}	32	
Avalanche Current		I_{AS}	15	
Avalanche Energy	$L=0.1mH$	E_{AS}	11	mJ
Power Dissipation	$T_A=25^\circ C$	P_D	3.1	W
	$T_A=70^\circ C$		2	
Thermal Resistance.Junction- to-Ambient	$t \leq 10s$	R_{thJA}	40	$^\circ C/W$
	Steady-State		75	
Thermal Resistance.Junction- to-Lead		R_{thJL}	24	
Junction Temperature		T_J	150	$^\circ C$
Storage Temperature Range		T_{stg}	-55 to 150	

N-Channel MOSFET

AO4292 (KO4292)

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V_{DS}	$I_D=250\text{ }\mu\text{A}$, $V_{GS}=0\text{V}$	100			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=100\text{V}$, $V_{GS}=0\text{V}$			1	μA
		$V_{DS}=100\text{V}$, $V_{GS}=0\text{V}$, $T_J=55^\circ\text{C}$			5	
Gate-Body Leakage Current	I_{GSS}	$V_{DS}=0\text{V}$, $V_{GS}=\pm 20\text{V}$			± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$, $I_D=250\mu\text{A}$	1.6		2.7	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=10\text{V}$, $I_D=8\text{A}$			23	m Ω
		$V_{GS}=10\text{V}$, $I_D=8\text{A}$, $T_J=125^\circ\text{C}$			42	
		$V_{GS}=4.5\text{V}$, $I_D=6\text{A}$			33	
Forward Transconductance	g_{FS}	$V_{DS}=5\text{V}$, $I_D=8\text{A}$		30		S
Input Capacitance	C_{iss}	$V_{GS}=0\text{V}$, $V_{DS}=50\text{V}$, $f=1\text{MHz}$		1190		pF
Output Capacitance	C_{oss}			95		
Reverse Transfer Capacitance	C_{rss}			7		
Gate Resistance	R_g	$V_{GS}=0\text{V}$, $V_{DS}=0\text{V}$, $f=1\text{MHz}$	0.5		1.7	Ω
Total Gate Charge (10V)	Q_g	$V_{GS}=10\text{V}$, $V_{DS}=50\text{V}$, $I_D=8\text{A}$		16.5	25	nC
Total Gate Charge (4.5V)				7	12	
Gate Source Charge				4.5		
Gate Drain Charge				2.5		
Turn-On DelayTime	$t_{d(on)}$	$V_{GS}=10\text{V}$, $V_{DS}=50\text{V}$, $R_L=6.25\Omega$, $R_{GEN}=3\Omega$		7		ns
Turn-On Rise Time	t_r			3		
Turn-Off DelayTime	$t_{d(off)}$			20		
Turn-Off Fall Time	t_f			3		
Body Diode Reverse Recovery Time	t_{rr}	$I_F=8\text{A}$, $dI/dt=500\text{A}/\mu\text{s}$		20		nC
Body Diode Reverse Recovery Charge	Q_{rr}			90		
Maximum Body-Diode Continuous Current	I_S				4	A
Diode Forward Voltage	V_{SD}	$I_S=1\text{A}$, $V_{GS}=0\text{V}$			1	V

Note : The static characteristics in Figures 1 to 6 are obtained using <300 μs pulses, duty cycle 0.5% max.

■ Marking

Marking	4292 KC****
---------	----------------

N-Channel MOSFET

AO4292 (KO4292)

■ Typical Characteristics

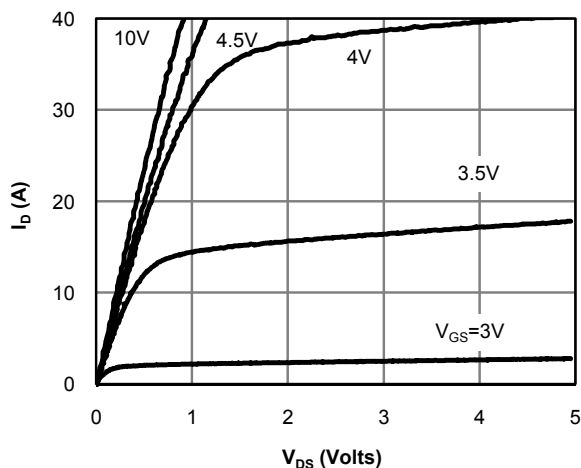


Figure 1: On-Region Characteristics (Note E)

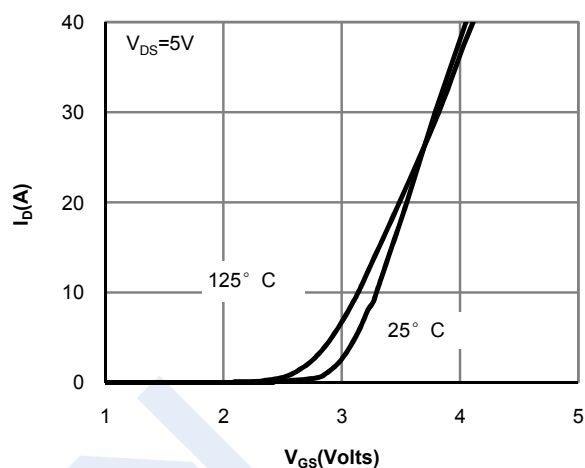


Figure 2: Transfer Characteristics (Note E)

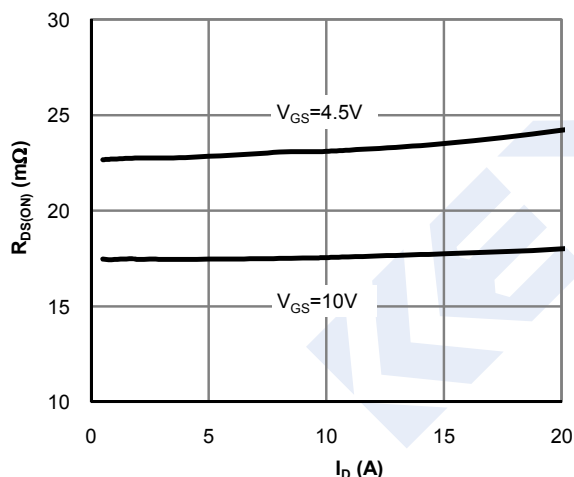


Figure 3: On-Resistance vs. Drain Current and Gate Voltage (Note E)

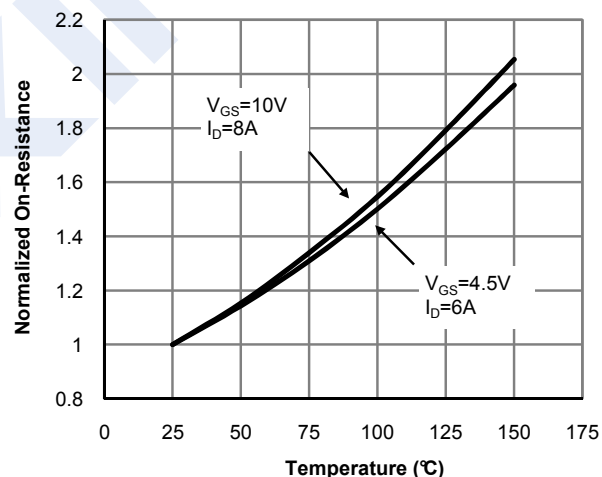


Figure 4: On-Resistance vs. Junction Temperature (Note E)

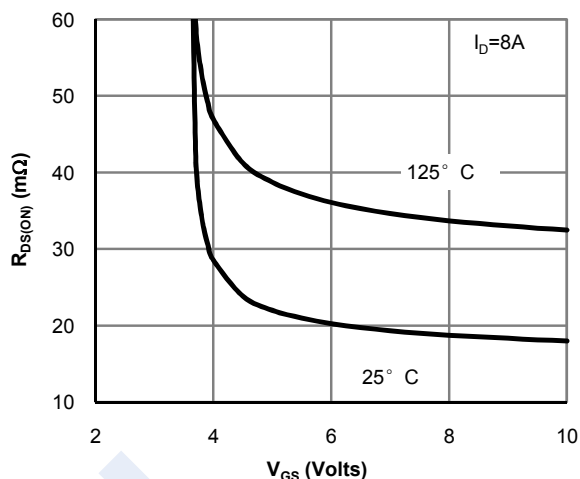


Figure 5: On-Resistance vs. Gate-Source Voltage (Note E)

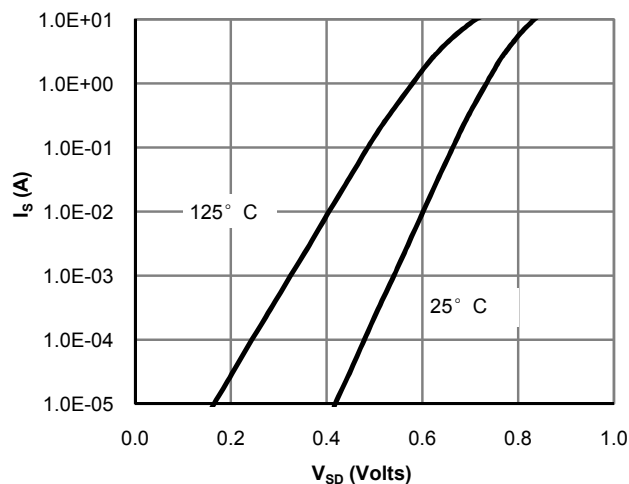


Figure 6: Body-Diode Characteristics (Note E)

N-Channel MOSFET

AO4292 (KO4292)

■ Typical Characteristics

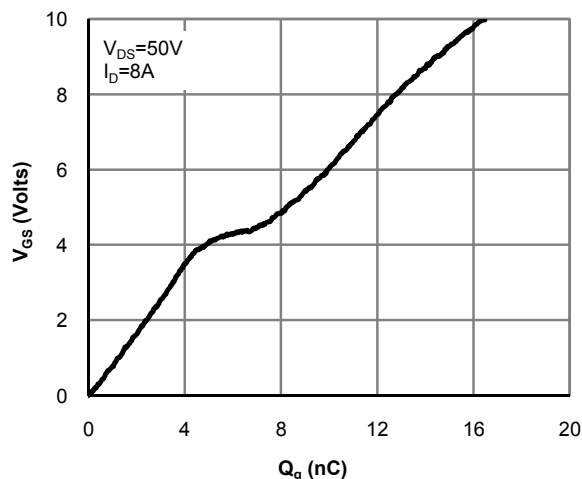


Figure 7: Gate-Charge Characteristics

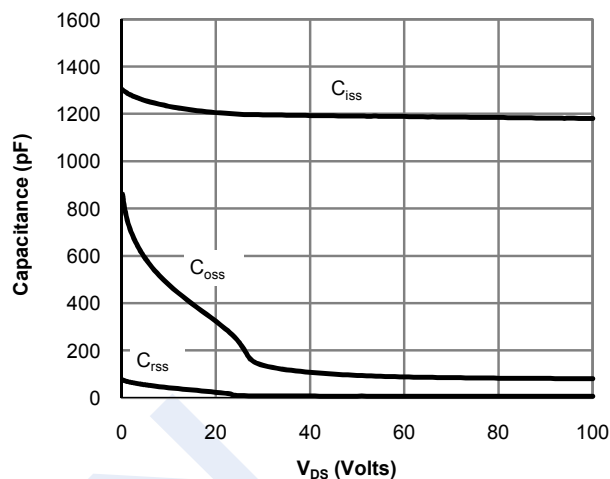


Figure 8: Capacitance Characteristics

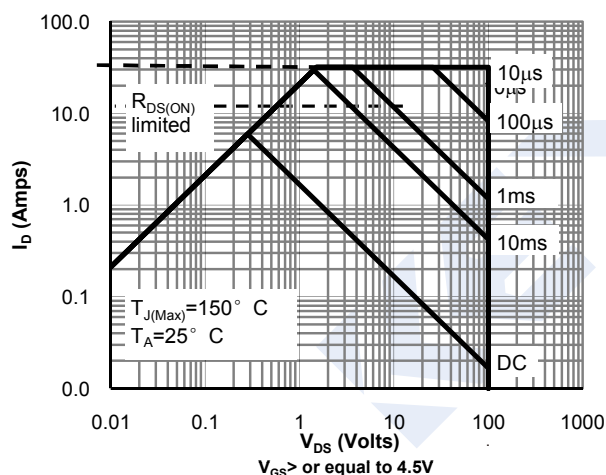


Figure 9: Maximum Forward Biased Safe Operating Area (Note F)

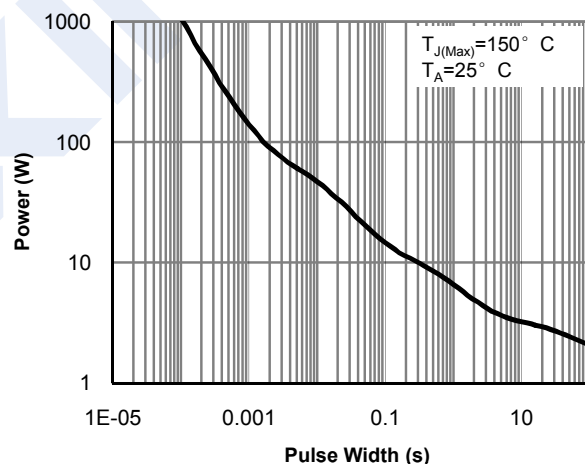


Figure 10: Single Pulse Power Rating Junction-to-Ambient (Note F)

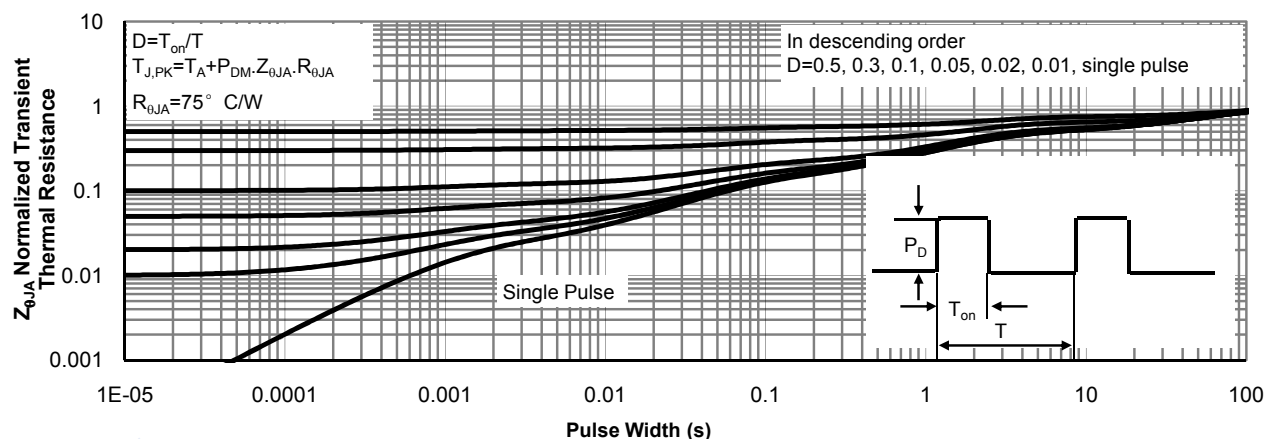


Figure 11: Normalized Maximum Transient Thermal Impedance (Note F)