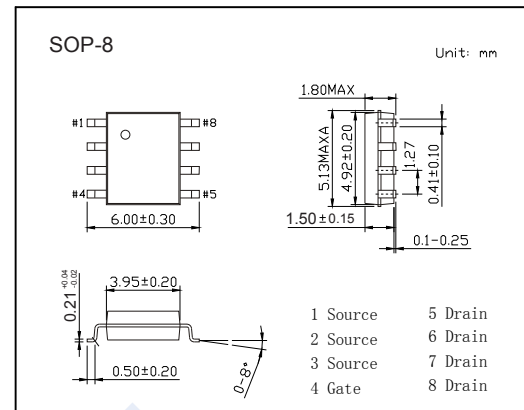
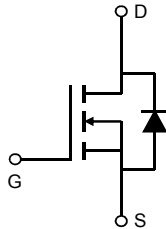


N-Channel MOSFET

AO4286-HF (KO4286-HF)

Features

- $V_{DS} (V) = 100V$
- $I_D = 4 A (V_{GS} = 10V)$
- $R_{DS(ON)} < 68m\Omega (V_{GS} = 10V)$
- $R_{DS(ON)} < 92m\Omega (V_{GS} = 4.5V)$
- 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	Rating	Unit
Drain-Source Voltage	V_{DS}	100	V
Gate-Source Voltage	V_{GS}	±20	V
Continuous Drain Current	I_D	$T_A=25^\circ C$	4
		$T_A=70^\circ C$	3
Pulsed Drain Current	I_{DM}	25	A
Avalanche Current	I_{AS}	4	A
Avalanche energy	E_{AS}	0.8	mJ
Power Dissipation	P_D	$T_A=25^\circ C$	2.5
		$T_A=70^\circ C$	1.6
Thermal Resistance.Junction- to-Ambient	R_{thJA}	$t \leq 10s$	50
		Steady-State	85
Thermal Resistance.Junction- to-Lead	R_{thJL}	30	$^\circ C/W$
Junction Temperature	T_J	150	$^\circ C$
Storage Temperature Range	T_{stg}	-55 to 150	$^\circ C$

N-Channel MOSFET

AO4286-HF (KO4286-HF)

■ 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	100			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =100V, V _{GS} =0V			1	μA
		V _{DS} =100V, 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	1.7		2.9	V
Static Drain-Source On-Resistance	R _{DS(on)}	V _{GS} =10V, I _D =4A			68	mΩ
		V _{GS} =10V, I _D =4A T _J =125°C			127	
		V _{GS} =4.5V, I _D =3A			92	
On State Drain Current	I _{D(ON)}	V _{GS} =10V, V _{DS} =5V	25			A
Forward Transconductance	g _{FS}	V _{DS} =5V, I _D =4A		13		S
Input Capacitance	C _{iss}	V _{GS} =0V, V _{DS} =50V, f=1MHz		390		pF
Output Capacitance	C _{oss}			30		
Reverse Transfer Capacitance	C _{rss}			3		
Gate Resistance	R _g	V _{GS} =0V, V _{DS} =0V, f=1MHz		7		Ω
Total Gate Charge (10V)	Q _g	V _{GS} =10V, V _{DS} =50V, I _D =4A		5.8	10	nC
Total Gate Charge (4.5V)				2.8	5	
Gate Source Charge	Q _{gs}			1.1		
Gate Drain Charge	Q _{gd}			1.2		
Turn-On DelayTime	t _{d(on)}			6		
Turn-On Rise Time	t _r	V _{GS} =10V, V _{DS} =50V, R _L =12.5Ω, R _{GEN} =3Ω		2.5		
Turn-Off DelayTime	t _{d(off)}			18		
Turn-Off Fall Time	t _f			2.5		
Body Diode Reverse Recovery Time	t _{rr}			15		
Body Diode Reverse Recovery Charge	Q _{rr}	I _F = 4A, di/dt= 500A/us		53		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 <300 μs pulses, duty cycle 0.5% max.

■ Marking

Marking	4286
	KC**** F

N-Channel MOSFET AO4286-HF (KO4286-HF)

■ Typical Characteristics

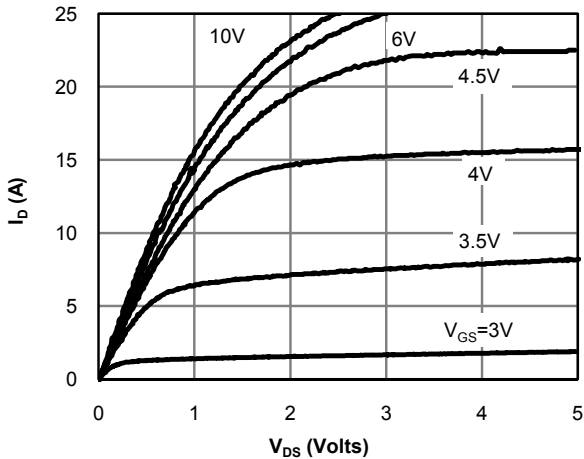


Figure 1: On-Region Characteristics (Note E)

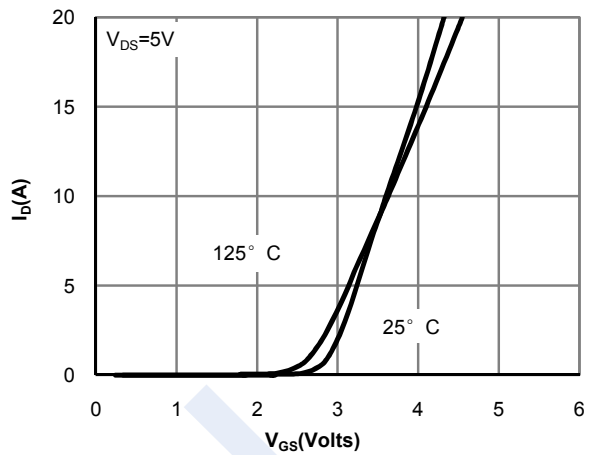


Figure 2: Transfer Characteristics (Note E)

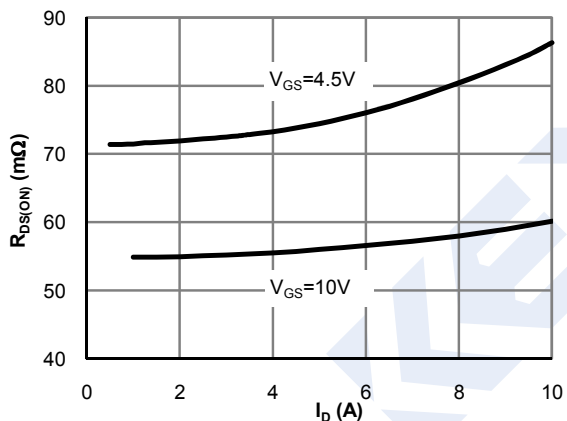


Figure 3: On-Resistance vs. Drain Current and Gate Voltage (Note E)

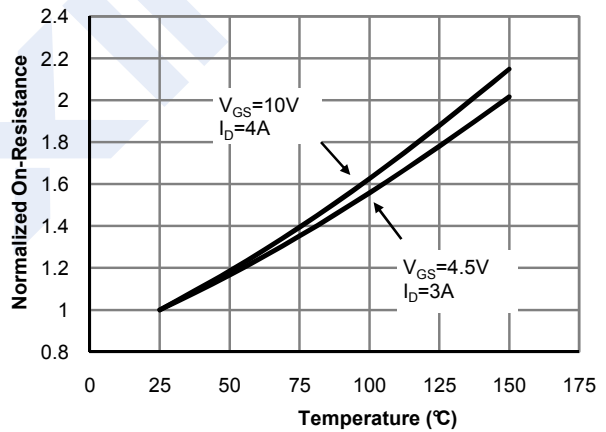


Figure 4: On-Resistance vs. Junction Temperature

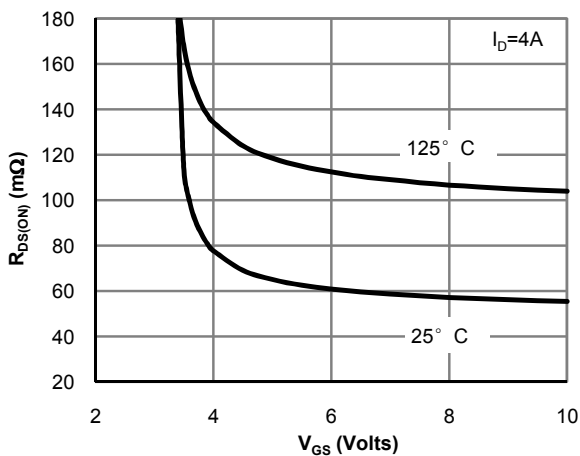


Figure 5: On-Resistance vs. Gate-Source Voltage (Note E)

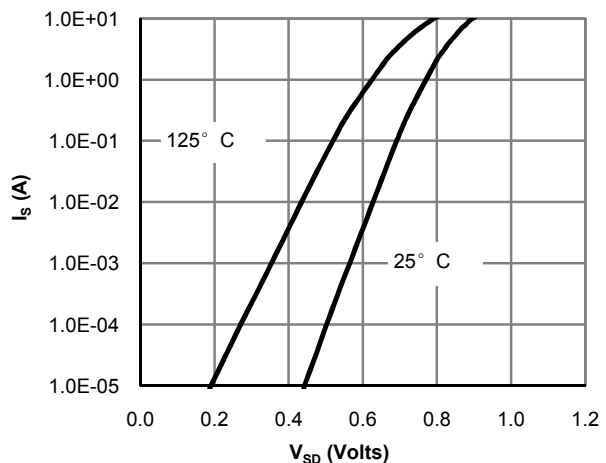


Figure 6: Body-Diode Characteristics (Note E)

N-Channel MOSFET AO4286-HF (KO4286-HF)

■ Typical Characteristics

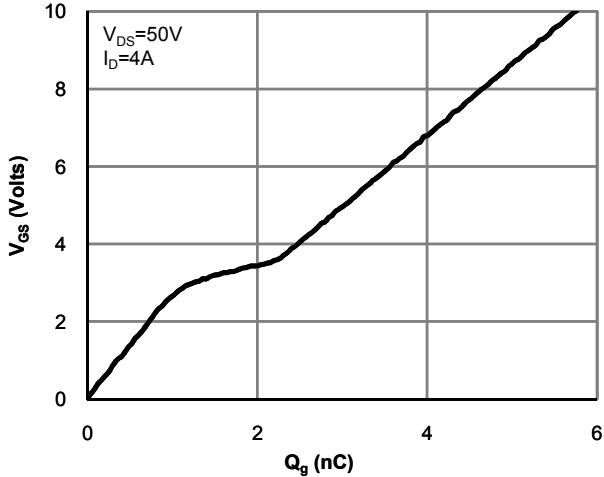


Figure 7: Gate-Charge Characteristics

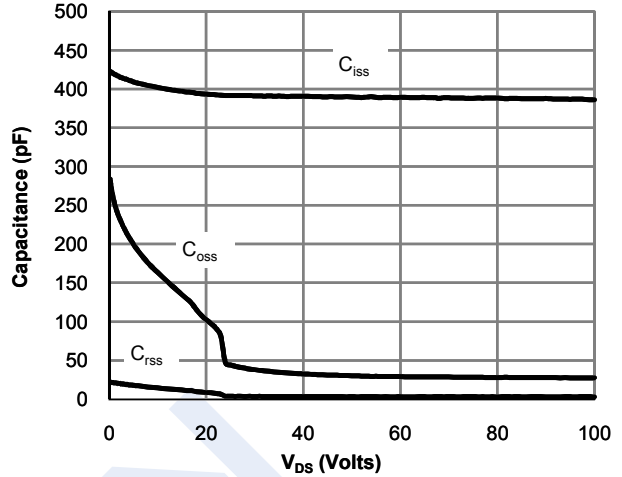


Figure 8: Capacitance Characteristics

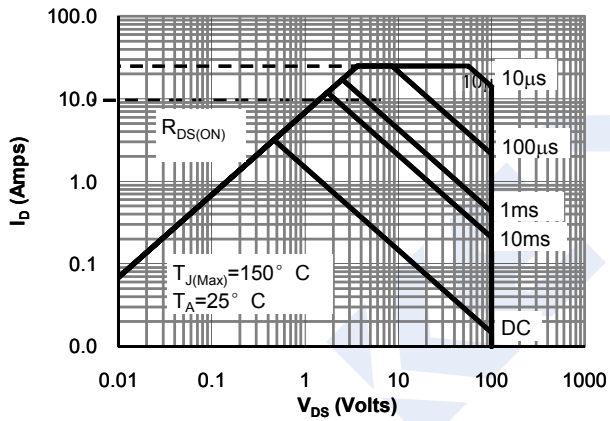


Figure 9: Maximum Forward Biased Safe Operating Area (Note F)

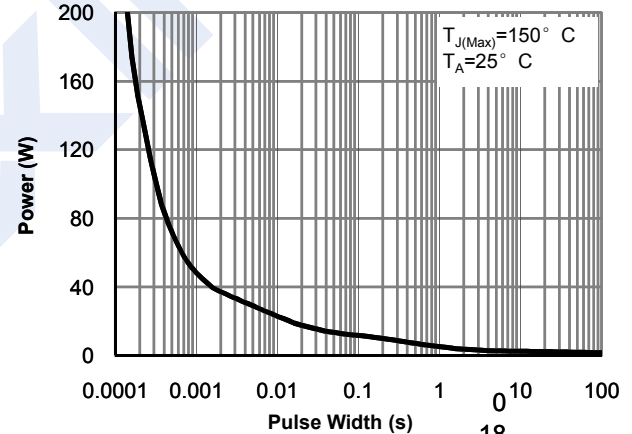


Figure 10: Single Pulse Power Rating Junction-to-Ambient (Note F)

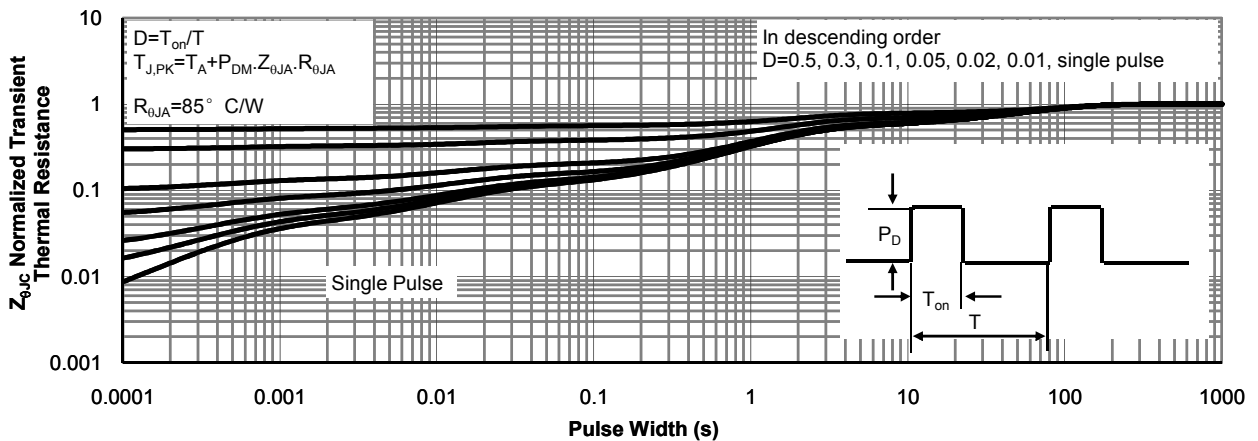


Figure 11: Normalized Maximum Transient Thermal Impedance (Note F)