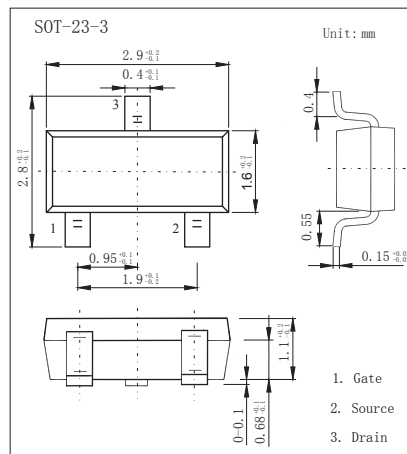
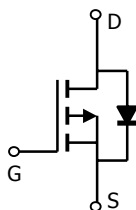


P-Channel Enhancement MOSFET

AO3407 (KO3407)

■ Features

- $V_{DS} (V) = -30V$
- $I_D = -4.1 A$
- $R_{DS(ON)} < 52m\Omega$ ($V_{GS} = -10V$)
- $R_{DS(ON)} < 87m\Omega$ ($V_{GS} = -4.5V$)



■ 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	
Continuous Drain Current $T_a = 25^\circ C$	I_D	-4.1	A
$T_a = 70^\circ C$		-3.5	
Pulsed Drain Current	I_{DM}	-20	
Power Dissipation $T_a = 25^\circ C$	P_D	1.4	W
$T_a = 70^\circ C$		1	
Thermal Resistance.Junction- to-Ambient $t \leq 10s$ Steady State	R_{thJA}	90	$^\circ C/W$
		125	
Thermal Resistance.Junction- to-Lead	R_{thJL}	60	
Junction Temperature	T_J	150	$^\circ C$
Storage Temperature Range	T_{stg}	-55 to 150	

P-Channel Enhancement MOSFET

AO3407 (KO3407)

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V_{DS}	$I_D = -250 \mu A$, $V_{GS} = 0V$	-30			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = -24V$, $V_{GS} = 0V$			-1	μA
		$V_{DS} = -24V$, $V_{GS} = 0V$, $T_J = 55^\circ C$			-5	
Gate-Body leakage current	I_{GSS}	$V_{DS} = 0V$, $V_{GS} = \pm 20V$			± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}$, $I_D = -250 \mu A$	-1	-1.8	-3	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS} = -10V$, $I_D = -4.1A$		40.5	52	m Ω
		$V_{GS} = -10V$, $I_D = -4A$, $T_J = 125^\circ C$		57	73	
		$V_{GS} = -4.5V$, $I_D = -3A$		64	87	
On state drain current	$I_{D(on)}$	$V_{GS} = -4.5V$, $V_{DS} = -5V$	-10			A
Forward Transconductance	g_{FS}	$V_{DS} = -5V$, $I_D = -4A$	5.5	8.2		S
Input Capacitance	C_{iss}	$V_{GS} = 0V$, $V_{DS} = -15V$, $f = 1MHz$		700		pF
Output Capacitance	C_{oss}			120		
Reverse Transfer Capacitance	C_{rss}			75		
Gate resistance	R_g	$V_{GS} = 0V$, $V_{DS} = 0V$, $f = 1MHz$		10		Ω
Total Gate Charge	Q_g	$V_{GS} = -4.5V$, $V_{DS} = -15V$, $I_D = -4A$		14.3		nC
Gate Source Charge	Q_{gs}			7		
Gate Drain Charge	Q_{gd}			3.1		
Turn-On DelayTime	$t_{d(on)}$	$V_{GS} = -10V$, $V_{DS} = -15V$, $R_L = 3.6 \Omega$, $R_{GEN} = 3 \Omega$		8.6		ns
Turn-On Rise Time	t_r			5		
Turn-Off DelayTime	$t_{d(off)}$			28.2		
Turn-Off Fall Time	t_f			13.5		
Body Diode Reverse Recovery Time	t_{rr}	$I_F = -4A$, $dI/dt = 100A/\mu s$		27		nC
Body Diode Reverse Recovery Charge	Q_{rr}			15		
Maximum Body-Diode Continuous Current	I_S				-2.2	A
Diode Forward Voltage	V_{SD}	$I_S = -1A$, $V_{GS} = 0V$		-0.77	-1	V

■ Marking

Marking	A7*
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P-Channel Enhancement MOSFET

AO3407 (KO3407)

■ Typical Characteristics

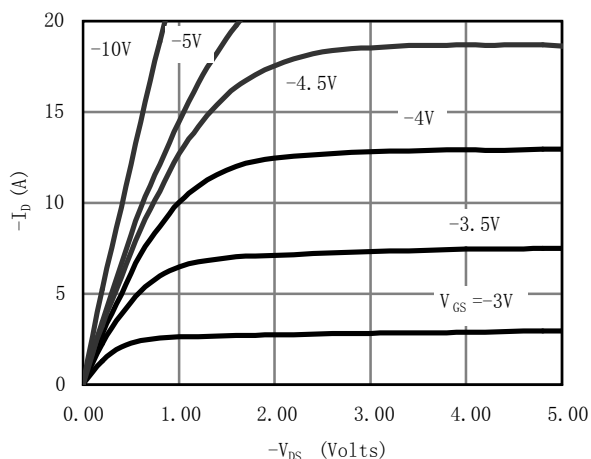


Figure 1: On-Region Characteristics

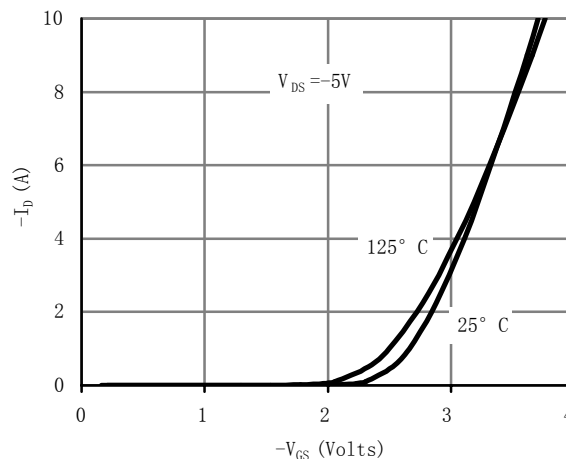


Figure 2: Transfer Characteristics

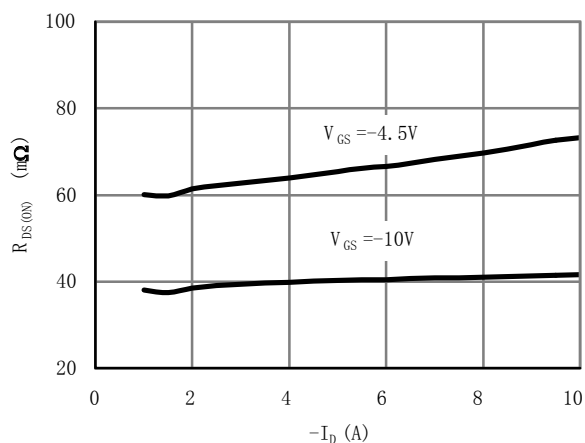


Figure 3: On-Resistance vs. Drain Current and Gate Voltage

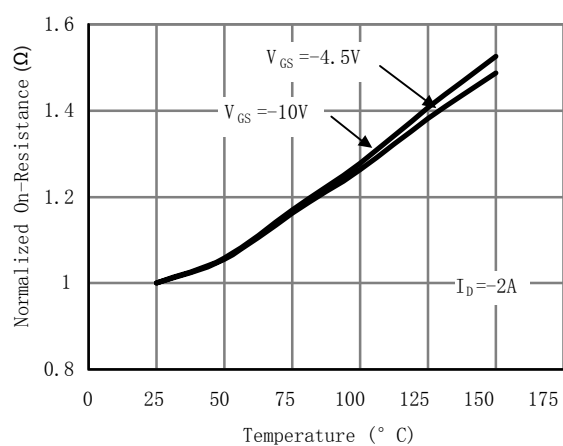


Figure 4: On-Resistance vs. Junction Temperature

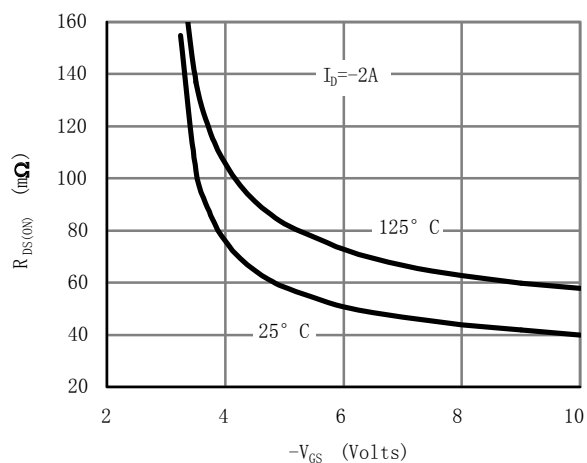


Figure 5: On-Resistance vs. Gate-Source Voltage

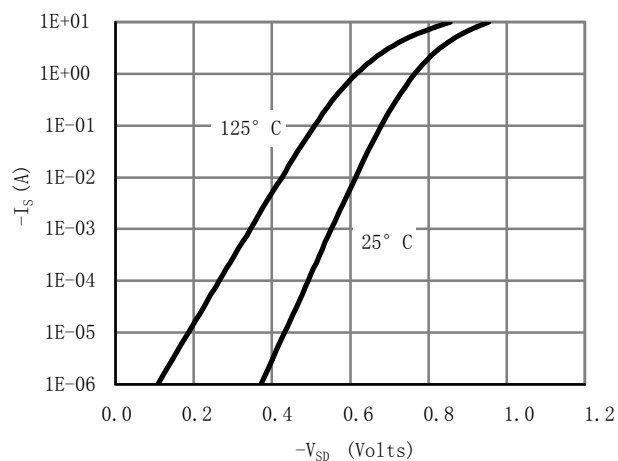


Figure 6: Body-Diode Characteristics

P-Channel Enhancement MOSFET

AO3407 (KO3407)

■ Typical Characteristics

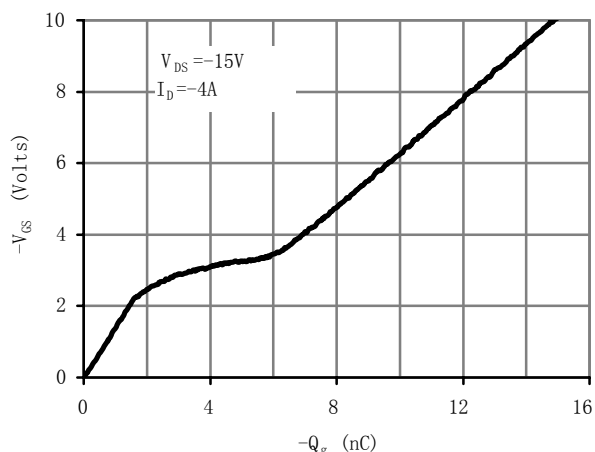


Figure 7: Gate-Charge Characteristics

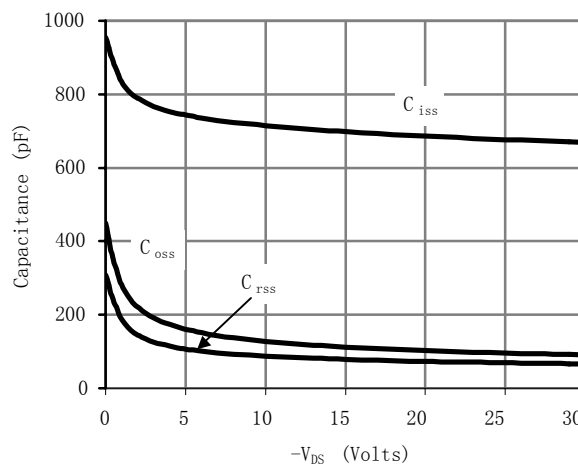


Figure 8: Capacitance Characteristics

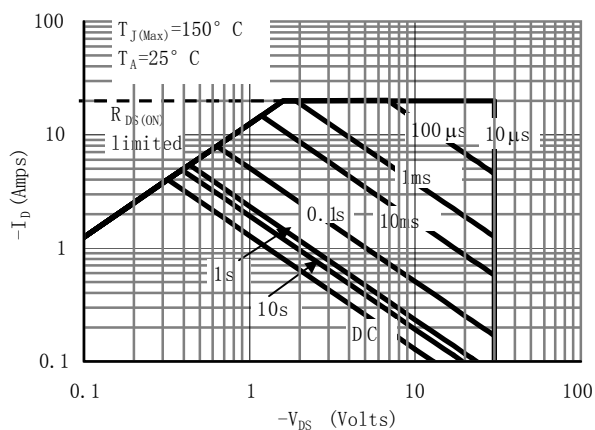


Figure 9: Maximum Forward Biased Safe Operating Area (Note E)

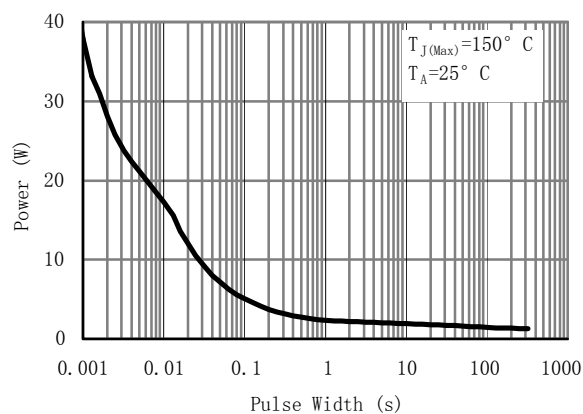


Figure 10: Single Pulse Power Rating Junction-to-Ambient (Note E)

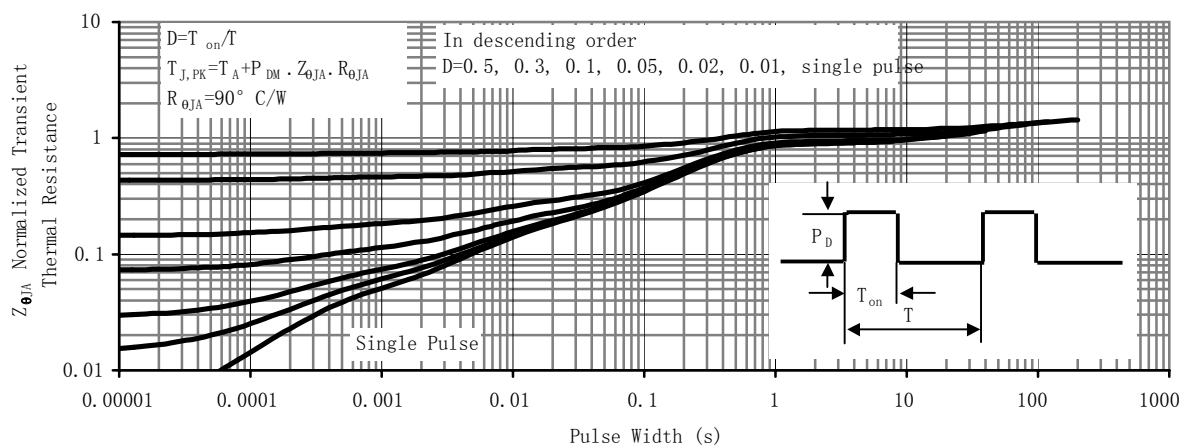


Figure 11: Normalized Maximum Transient Thermal Impedance