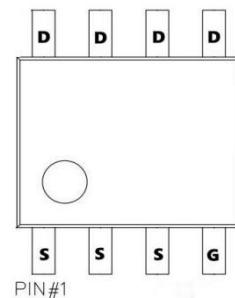
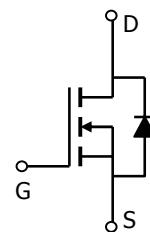


■ Features

- $V_{DS} (V) = 30V$
- $I_D = 18 A$ ($V_{GS} = 10V$)
- $R_{DS(ON)} < 5.5m\Omega$ ($V_{GS} = 10V$)
- $R_{DS(ON)} < 6.2m\Omega$ ($V_{GS} = 4.5V$)



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

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	30	V
Gate-Source Voltage	V_{GS}	± 12	
Continuous Drain Current	I_D	18	A
		15	
Pulsed Drain Current	I_{DM}	80	
Power Dissipation	P_D	3.1	W
		2	
Thermal Resistance.Junction- to-Ambient	R_{thJA}	40	$^\circ C/W$
		75	
Thermal Resistance.Junction- to-Lead	R_{thJL}	24	
Junction Temperature	T_J	150	$^\circ C$
Storage Temperature Range	T_{stg}	-55 to 150	

■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V_{DSS}	$I_D=250 \mu\text{A}, V_{GS}=0\text{V}$	30			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=24\text{V}, V_{GS}=0\text{V}$			1	uA
		$V_{DS}=24\text{V}, V_{GS}=0\text{V}, T_J=55^\circ\text{C}$			5	
Gate-Body Leakage Current	I_{GSS}	$V_{DS}=0\text{V}, V_{GS}=\pm 12\text{V}$			± 100	nA
Gate Threshold Voltage	$V_{GS(\text{th})}$	$V_{DS}=V_{GS}, I_D=250\mu\text{A}$	0.8		1.5	V
Static Drain-Source On-Resistance	$R_{DS(\text{on})}$	$V_{GS}=10\text{V}, I_D=18\text{A}$			5.5	$\text{m } \Omega$
		$V_{GS}=10\text{V}, I_D=18\text{A}, T_J=125^\circ\text{C}$			7.4	
		$V_{GS}=4.5\text{V}, I_D=15\text{A}$			6.2	
On State Drain Current	$I_{D(\text{ON})}$	$V_{GS}=4.5\text{V}, V_{DS}=5\text{V}$	80			A
Forward Transconductance	g_{FS}	$V_{DS}=5\text{V}, I_D=18\text{A}$		102		S
Input Capacitance	C_{iss}	$V_{GS}=0\text{V}, V_{DS}=15\text{V}, f=1\text{MHz}$		9130	10500	pF
Output Capacitance	C_{oss}			625		
Reverse Transfer Capacitance	C_{rss}			387		
Gate Resistance	R_g	$V_{GS}=0\text{V}, V_{DS}=0\text{V}, f=1\text{MHz}$		0.4	0.5	Ω
Total Gate Charge	Q_g	$V_{GS}=10\text{V}, V_{DS}=15\text{V}, I_D=18\text{A}$		72.4	85	nC
Gate Source Charge	Q_{gs}			13.4		
Gate Drain Charge	Q_{gd}			16.8		
Turn-On Delay Time	$t_{d(on)}$	$V_{GS}=10\text{V}, V_{DS}=15\text{V}, R_L=0.83\Omega, R_{GEN}=3\Omega$		11	15	ns
Turn-On Rise Time	t_r			7	11	
Turn-Off Delay Time	$t_{d(off)}$			99	135	
Turn-Off Fall Time	t_f			13	19.5	
Body Diode Reverse Recovery Time	t_{rr}	$I_F=18\text{A}, dI/dt=100\text{A}/\mu\text{s}$		33	40	nC
Body Diode Reverse Recovery Charge	Q_{rr}			22.2	30	
Maximum Body-Diode Continuous Current	I_S				4.5	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 $<300 \mu\text{s}$ pulses, duty cycle 0.5% max.

■ Typical Characteristics

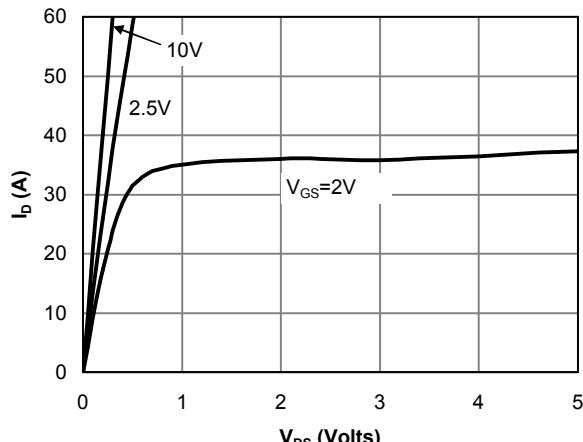


Fig 1: On-Region Characteristics

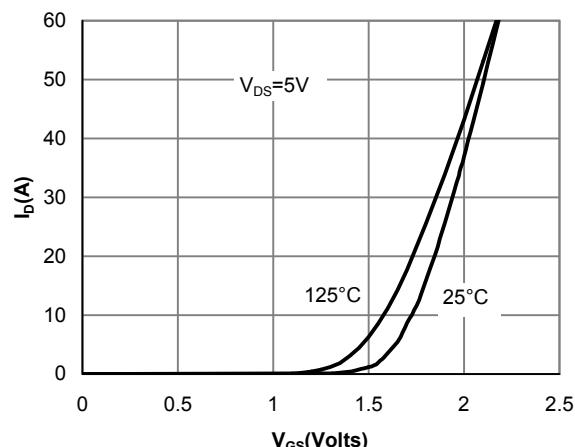


Figure 2: Transfer Characteristics

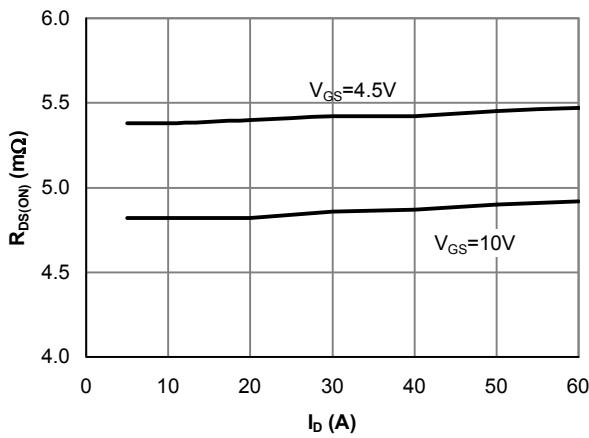


Figure 3: On-Resistance vs. Drain Current and Gate Voltage

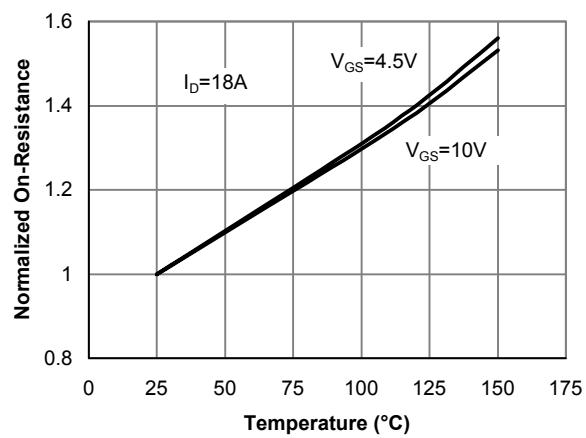


Figure 4: On-Resistance vs. Junction Temperature

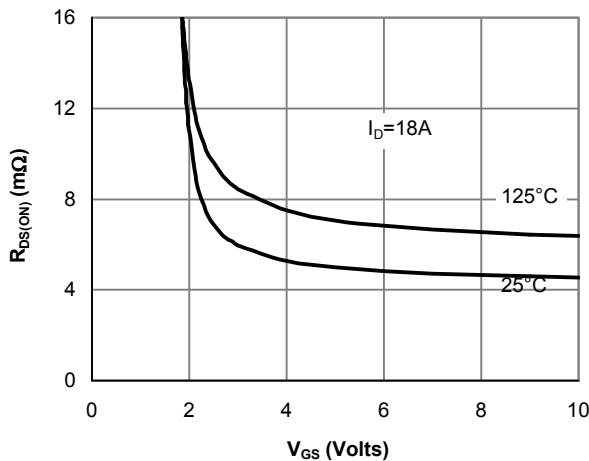


Figure 5: On-Resistance vs. Gate-Source Voltage

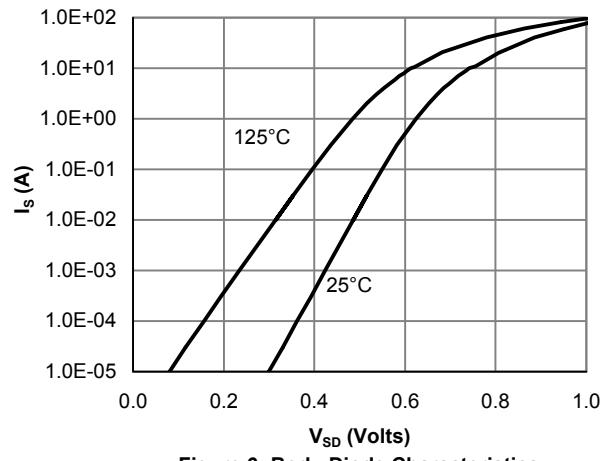
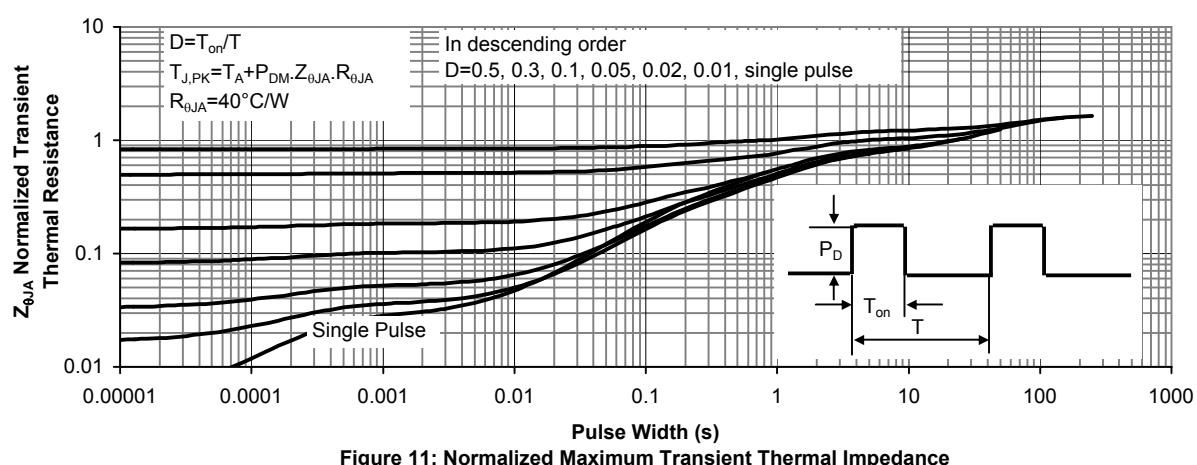
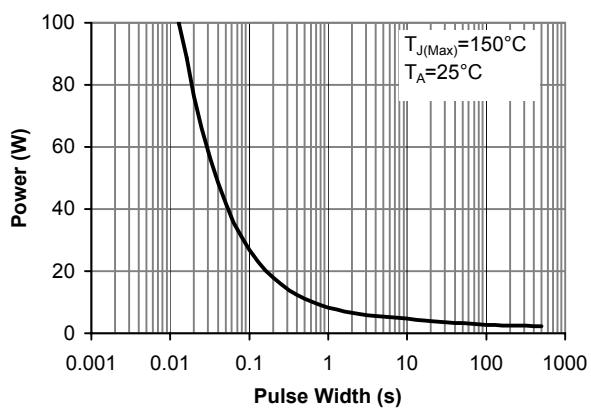
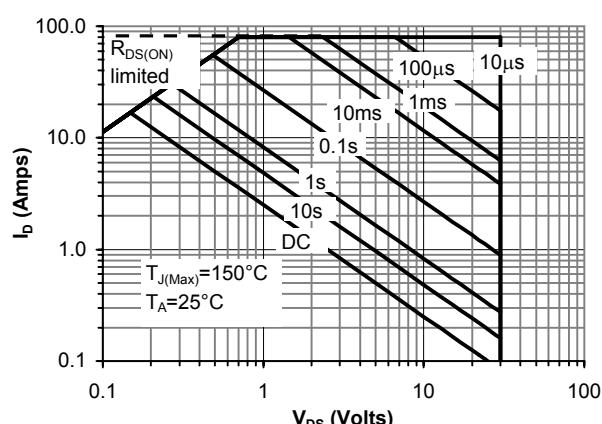
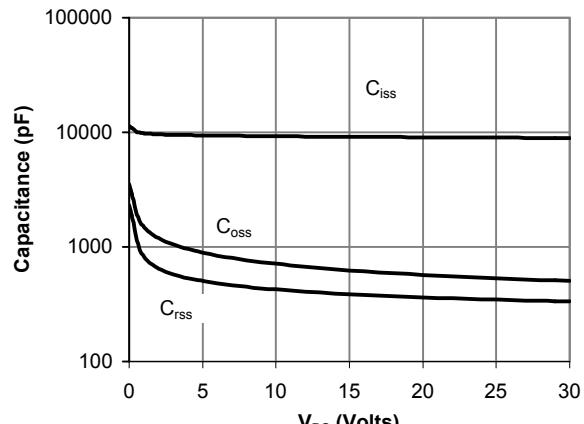
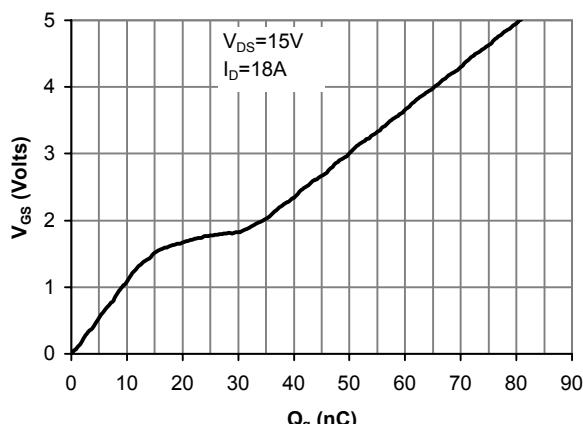


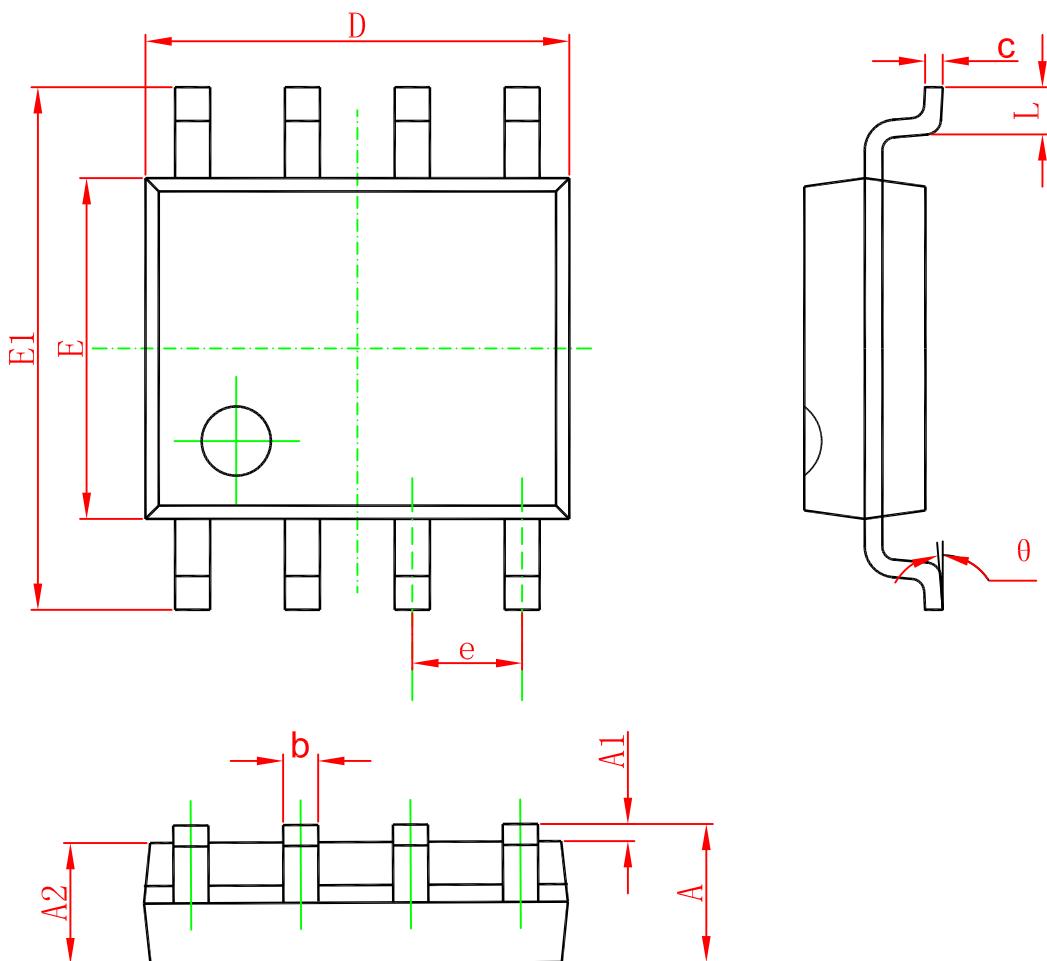
Figure 6: Body-Diode Characteristics

■ Typical Characteristics

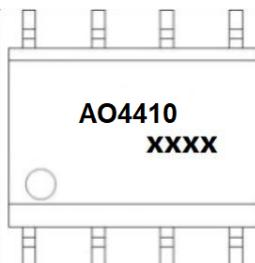


PACKAGE OUTLINE DIMENSIONS

SOP-8



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.350	1.750	0.053	0.069
A1	0.100	0.250	0.004	0.010
A2	1.350	1.550	0.053	0.061
b	0.330	0.510	0.013	0.020
c	0.170	0.250	0.006	0.010
D	4.700	5.100	0.185	0.200
E	3.800	4.000	0.150	0.157
E1	5.800	6.200	0.228	0.244
e	1.270(BSC)		0.050(BSC)	
L	0.400	1.270	0.016	0.050
θ	0°	8°	0°	8°

Marking**Ordering information**

Order code	Package	Baseqty	Deliverymode
AO4410	SOP-8	3000	Tape and reel