

EVVOSEMI[®]

THINK CHANGE DO



ESD



TVS



MOS



LDO



Diode



Sensor



DC-DC

Product Specification

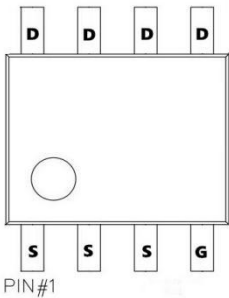
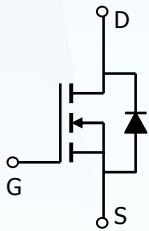
▶ Domestic	Part Number	AO4410
▶ Overseas	Part Number	AO4410
▶ Equivalent	Part Number	AO4410

EV is the abbreviation of name EVVO

N-Channel MOSFET

■ 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	$T_A=25^{\circ}C$	I_D	18	A
	$T_A=70^{\circ}C$		15	
Pulsed Drain Current		I_{DM}	80	
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

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V_{DS}	$I_D=250\text{ }\mu\text{A}$, $V_{GS}=0\text{V}$	30			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=24\text{V}$, $V_{GS}=0\text{V}$			1	μA
		$V_{DS}=24\text{V}$, $V_{GS}=0\text{V}$, $T_J=55^\circ\text{C}$			5	
Gate-Body Leakage Current	I_{GSS}	$V_{DS}=0\text{V}$, $V_{GS}=\pm 12\text{V}$			± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$, $I_D=250\mu\text{A}$	0.8		1.5	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=10\text{V}$, $I_D=18\text{A}$			5.5	m Ω
		$V_{GS}=10\text{V}$, $I_D=18\text{A}$, $T_J=125^\circ\text{C}$			7.4	
		$V_{GS}=4.5\text{V}$, $I_D=15\text{A}$			6.2	
On State Drain Current	$I_{D(ON)}$	$V_{GS}=4.5\text{V}$, $V_{DS}=5\text{V}$	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 DelayTime	$t_{d(on)}$	$V_{GS}=10\text{V}$, $V_{DS}=15\text{V}$, $R_L=0.83\Omega$, $R_{GEN}=3\Omega$		11	15	ns
Turn-On Rise Time	t_r			7	11	
Turn-Off DelayTime	$t_{d(off)}$			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 μs pulses, duty cycle 0.5% max.

N-Channel MOSFET

■ Typical Characteristics

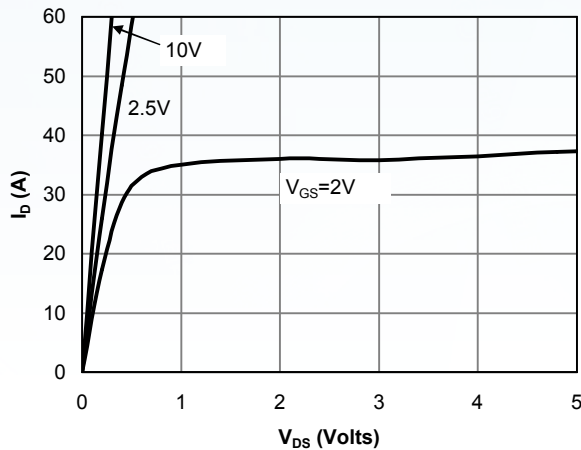


Fig 1: On-Region Characteristics

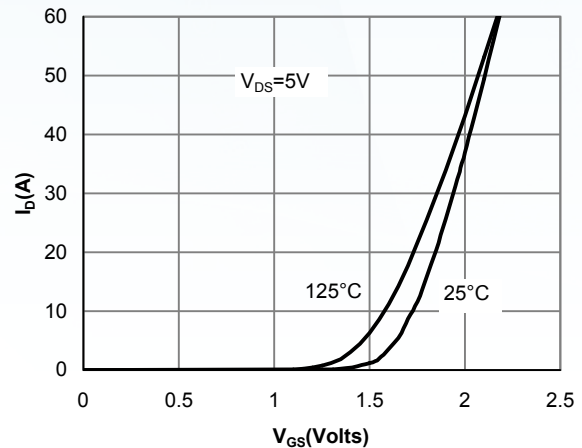


Figure 2: Transfer Characteristics

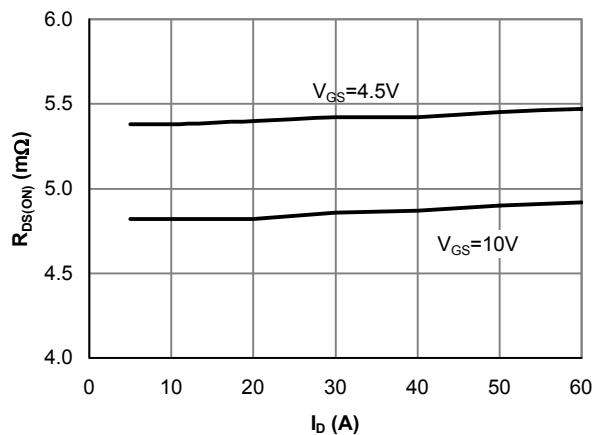


Figure 3: On-Resistance vs. Drain Current and Gate Voltage

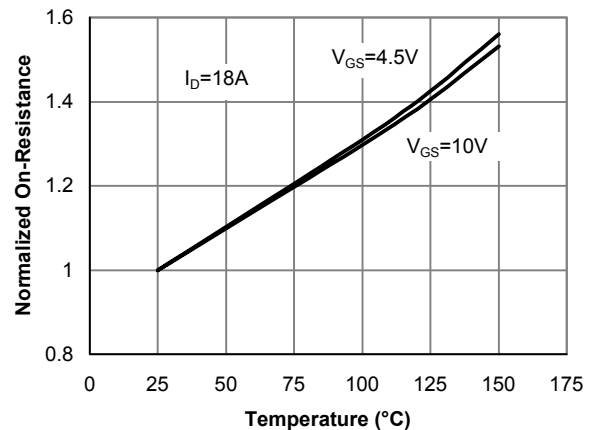


Figure 4: On-Resistance vs. Junction Temperature

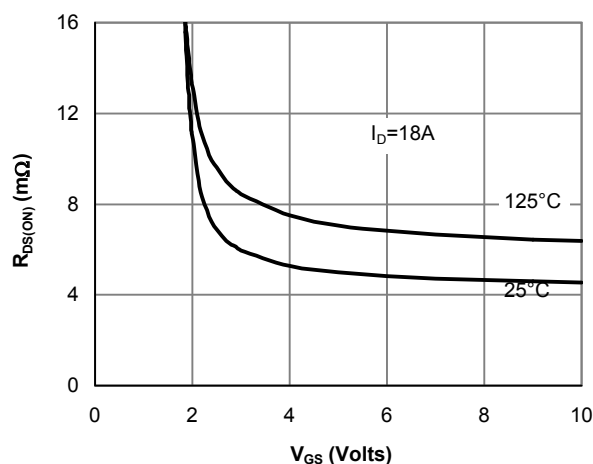


Figure 5: On-Resistance vs. Gate-Source Voltage

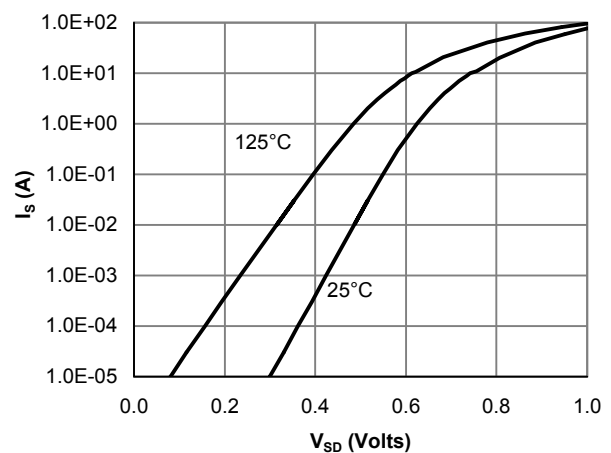
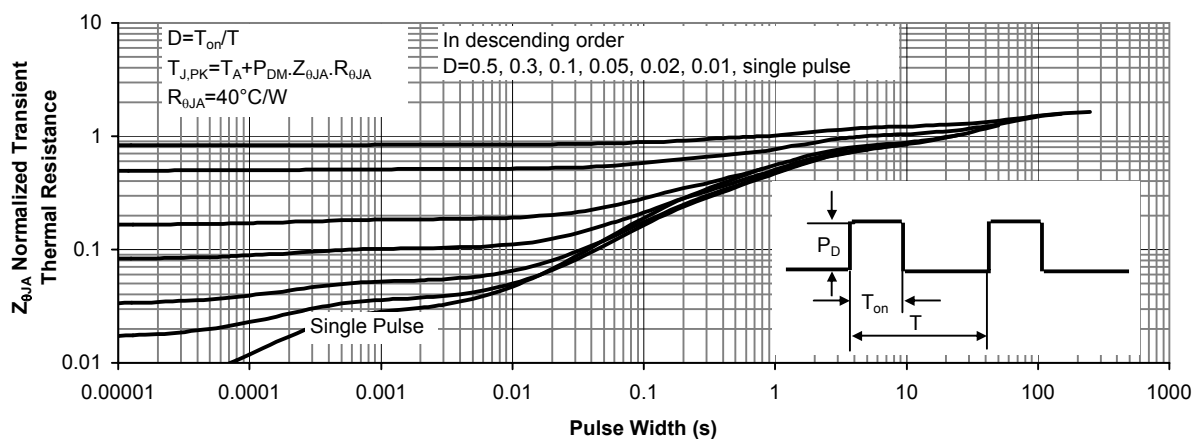
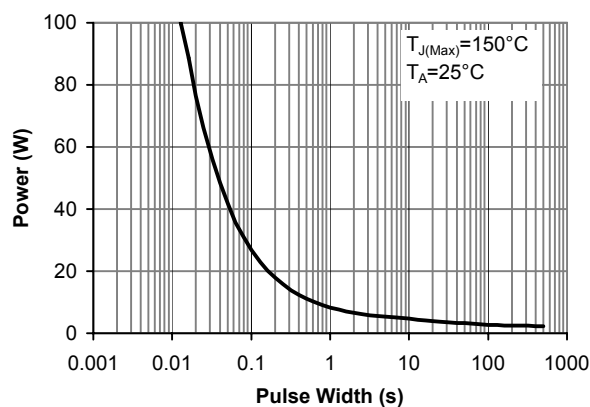
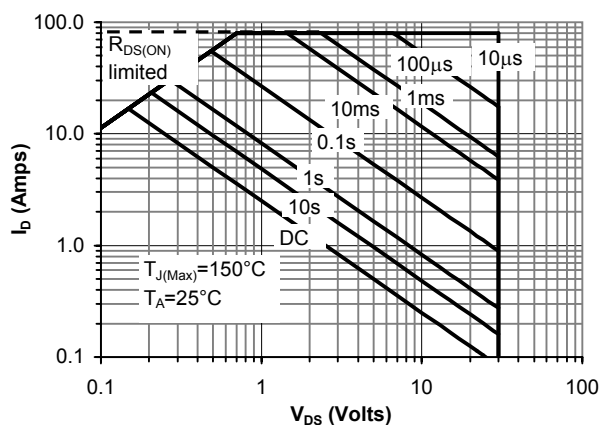
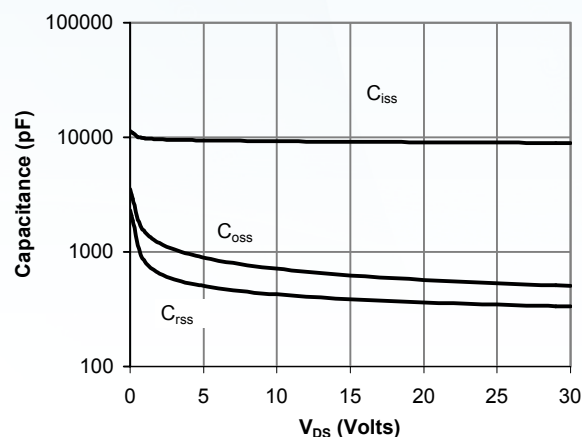
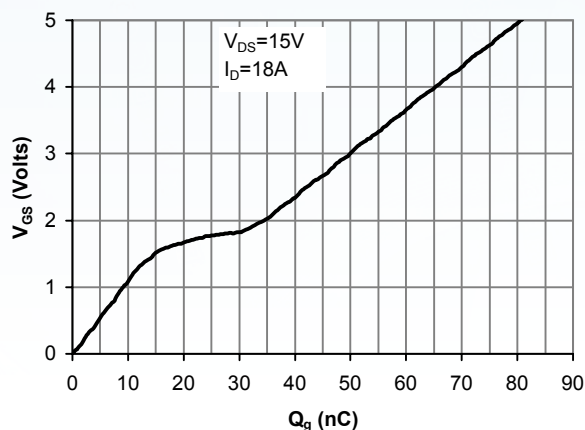


Figure 6: Body-Diode Characteristics

N-Channel MOSFET

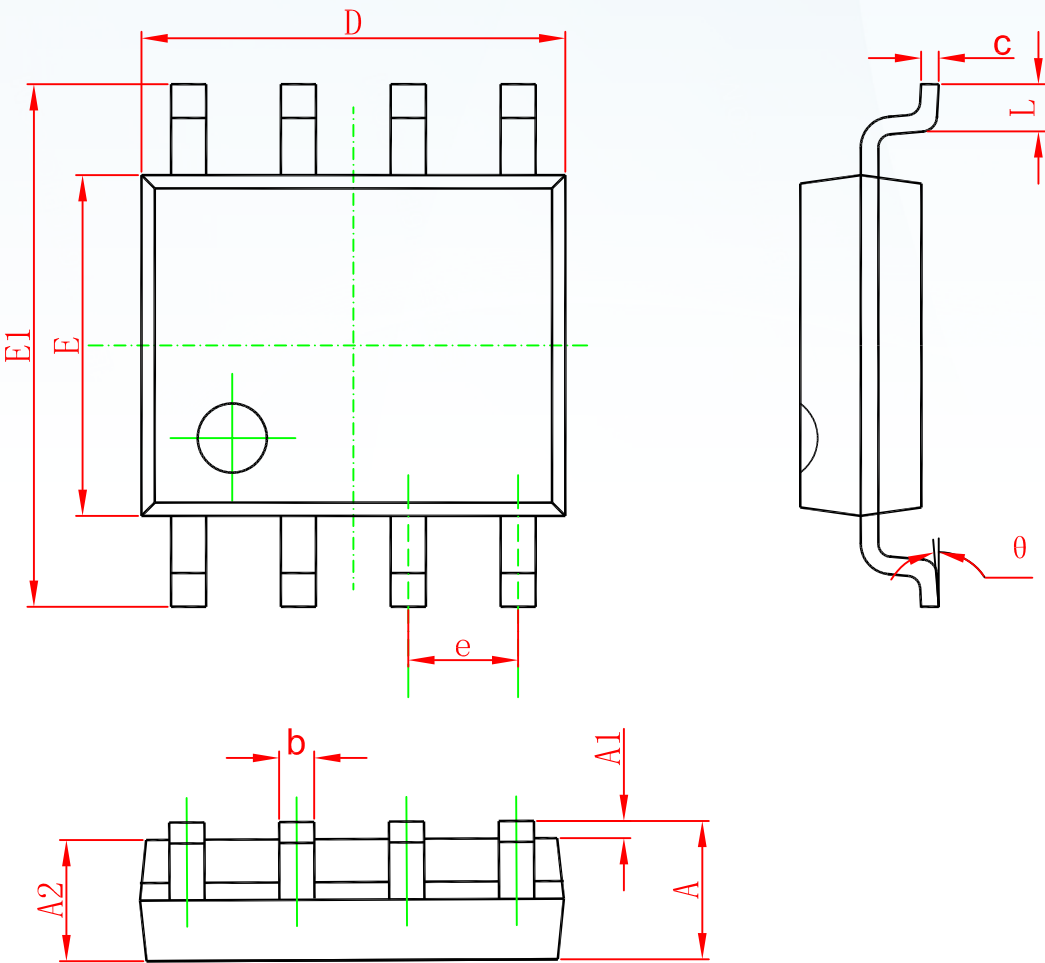
■ Typical Characteristics



PACKAGE OUTLINE DIMENSIONS

N-Channel MOSFET

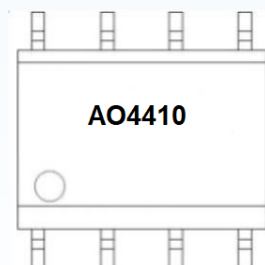
SOP-8



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°

N-Channel MOSFET

Marking



Ordering information

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

Disclaimer

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