Ordering Information

Part Number	Ambient Temperature Range	Package	Environmental
AOZ8222DI-05	-40 °C to +85 °C	DFN 1.0 x 0.6-3L	Green Product

AOS Green Products use reduced levels of Halogens, and are also RoHS compliant.
Please visit www.aosmd.com/media/AOSGreenPolicy.pdf for additional information.

Absolute Maximum Ratings

Exceeding the Absolute Maximum ratings may damage the device.

Parameter	AOZ8222DI-05
Peak Pulse Current, t_P = 8/20 µs	5.5 A
Peak Pulse Power, t_P = 8/20 µs	50 W
Storage Temperature (T_S)	-65 °C to +150 °C
ESD Rating per IEC61000-4-2, Contact(1)	± 20 kV
ESD Rating per IEC61000-4-2, Air(1)	± 20 kV
ESD Rating per Human Body Model(2)	± 30 kV

Notes:
1. IEC 61000-4-2 discharge with $C_{Discharge}$ = 150 pF, $R_{Discharge}$ = 330 Ω.
2. Human Body Discharge per MIL-STD-883, Method 3015 $C_{Discharge}$ = 100 pF, $R_{Discharge}$ = 1.5 kΩ.

Maximum Operating Ratings

Parameter	Rating
Junction Temperature (T_J)	-40 °C to +125 °C

Electrical Characteristics

T_A = 25 °C unless otherwise specified.

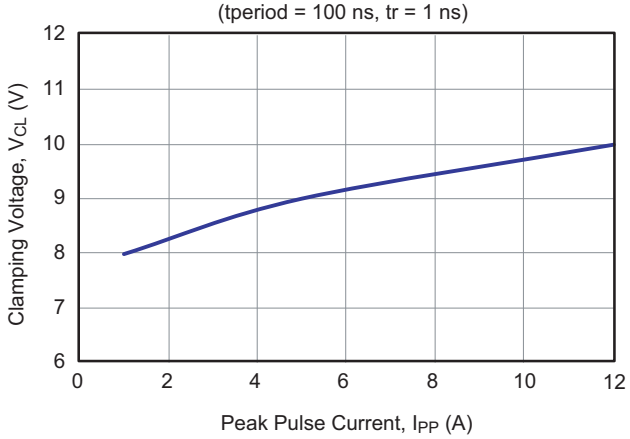
Symbol	Parameter	Conditions	Min.	Typ.	Max.	Units
V_{RWM}	Reverse Working Voltage	Between I/O and VN[3]			5.0	V
V_{BR}	Reverse Breakdown Voltage	I_T = 1 mA, between I/O and VN[4]	6.0			V
I_R	Reverse Leakage Current	V_{RWM} = 5 V, between I/O and VN			1	µA
V_F	Diode Forward Voltage	I_F = 10 mA	0.6	0.7	0.9	V
V_{CL}	Channel Clamp Voltage Positive Transients Negative Transients	I_{PP} = 1 A, tp = 100 ns, any I/O pin to Ground[5][6]			 8.0 -2.0	 V V
	Channel Clamp Voltage Positive Transients Negative Transients	I_{PP} = 5 A, tp = 100 ns, any I/O pin to Ground[5][6]			 9.0 -5.0	 V V
	Channel Clamp Voltage Positive Transients Negative Transients	I_{PP} = 12 A, tp = 100 ns, any I/O pin to Ground[5][6]			 10.0 -10.0	 V V
C_J	Channel Input Capacitance	V_R = 0 V, f = 1 MHz, between I/O pins[6]		8	9	pF
		V_R = 0 V, f = 1 MHz, any I/O pin to Ground[6]		15	18	pF

Notes:

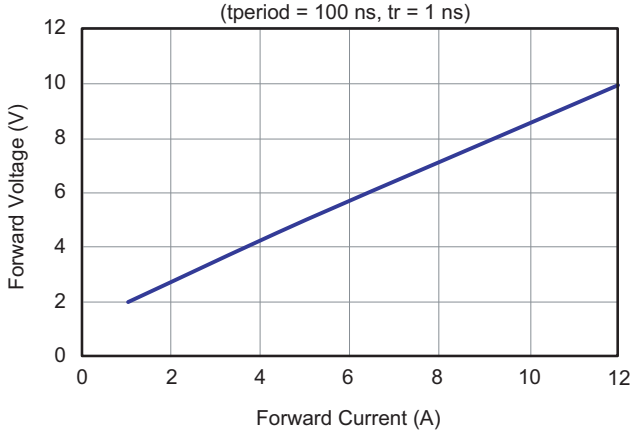
3. The working peak reverse voltage, V_{RWM}, should be equal to or greater than the DC or continuous peak operating voltage level.
4. V_{BR} is measured at the pulse test current I_T.
5. Measurements performed using a 100ns Transmission Line Pulse (TLP) system.
6. Guaranteed by design and characterization.

Typical Performance Characteristics

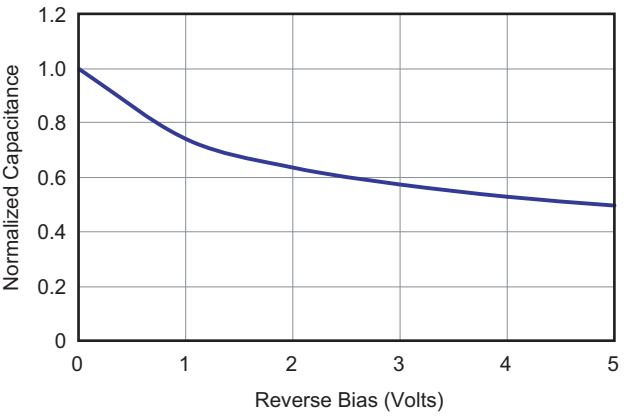
Clamping Voltage vs. Peak Pulse Current
(tperiod = 100 ns, tr = 1 ns)



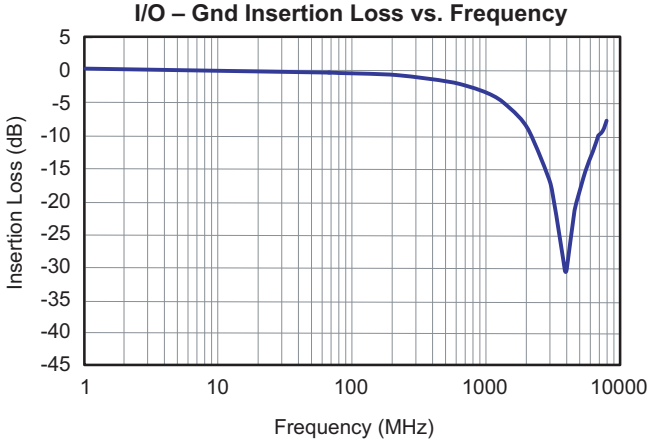
Forward Voltage vs. Forward Current
(tperiod = 100 ns, tr = 1 ns)



Capacitance vs. Reverse Bias



I/O – Gnd Insertion Loss vs. Frequency



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LIFE SUPPORT POLICY

ALPHA AND OMEGA SEMICONDUCTOR PRODUCTS ARE NOT AUTHORIZED FOR USE AS CRITICAL COMPONENTS IN LIFE SUPPORT DEVICES OR SYSTEMS.
As used herein:

1. Life support devices or systems are devices or systems which, (a) are intended for surgical implant into the body or (b) support or sustain life, and (c) whose failure to perform when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in a significant injury of the user.

2. A critical component in any component of a life support, device, or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.