Ordering Information

Part Number	Ambient Temperature Range	Package	Environmental
AOZ8206DI-05	-40°C to +85°C	DFN 1.6x1.6_6L	Green Product RoHS Compliant

AOS Green Products use reduced levels of Halogens, and are also RoHS compliant.
Please visit www.aosmd.com/web/quality/rohs_compliant.jsp for additional information.

Absolute Maximum Ratings

Exceeding the Absolute Maximum ratings may damage the device.

Parameter	Rating
Peak Pulse Current (I_{PP}), t_P = 8/20µs	5A
Storage Temperature (T_S)	-65°C to +150°C
ESD Rating per IEC61000-4-2, Contact(1)	±20kV
ESD Rating per IEC61000-4-2, Air(1)	±20kV
ESD Rating per Human Body Model(2)	±20kV

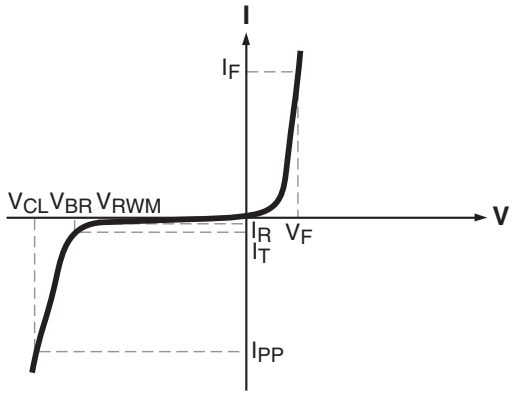
Notes:
1. IEC 61000-4-2 discharge with $C_{Discharge}$ = 150pF, $R_{Discharge}$ = 330Ω.
2. Human Body Discharge per MIL-STD-883, Method 3015 $C_{Discharge}$ = 100pF, $R_{Discharge}$ = 1.5kΩ.

Maximum Operating Ratings

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

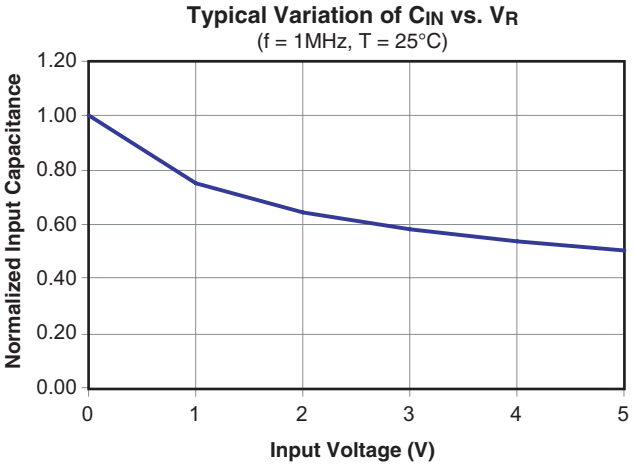
Electrical Characteristics

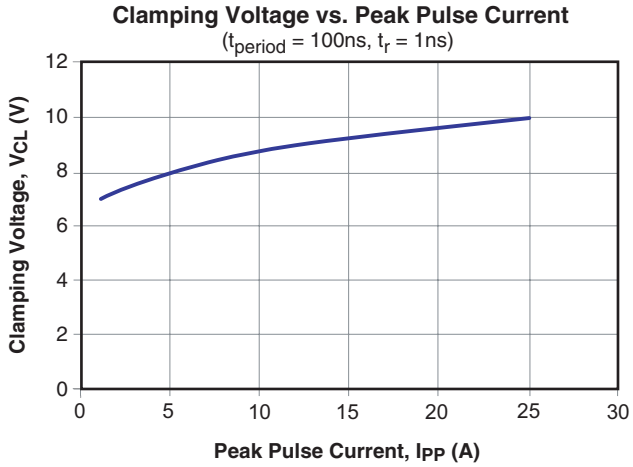
T_A = 25°C unless otherwise specified.

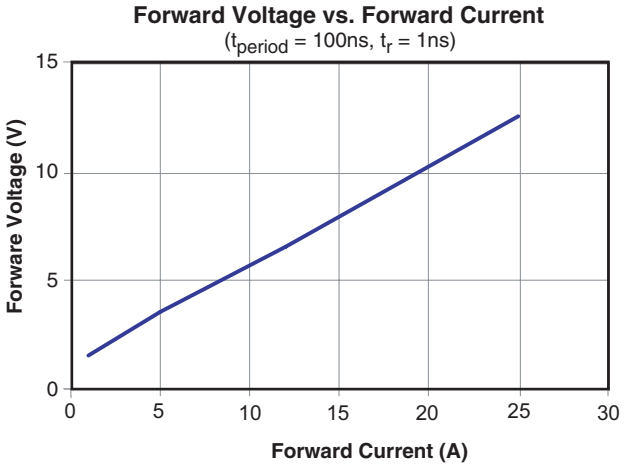
Symbol	Parameter	Diagram
I_{PP}	Maximum Reverse Peak Pulse Current	
V_{CL}	Clamping Voltage @ I_{PP}	
V_{RWM}	Working Peak Reverse Voltage	
I_R	Maximum Reverse Leakage Current	
V_{BR}	Breakdown Voltage	
I_F	Forward Current	
V_F	Forward Voltage	
P_{PK}	Peak Power Dissipation	
C_J	Max. Capacitance @ V_R = 0 and f = 1MHz	

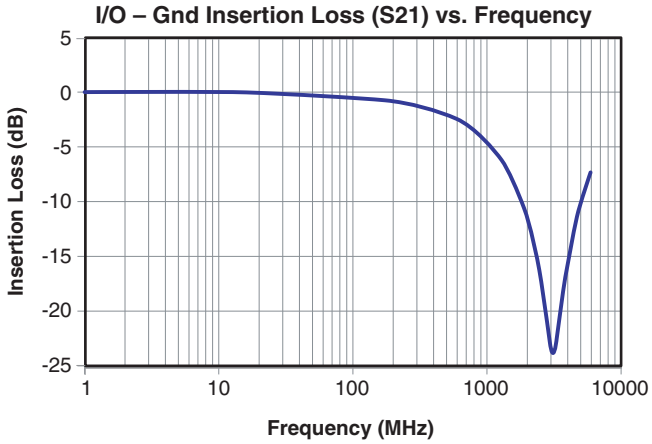
Device	Device Marking	V_{RWM} (V) Max.	V_{BR} (V) Min.	I_R (µA) Max.	V_F (V) Typ.	V_{CL} Max.			C_J (pF) Max.
						I_{PP} = 1A	I_{PP} = 5A	I_{PP} = 12A	
AOZ8206DI-05	C	5	6.0	0.1	0.85	7.0	8.0	9.0	17

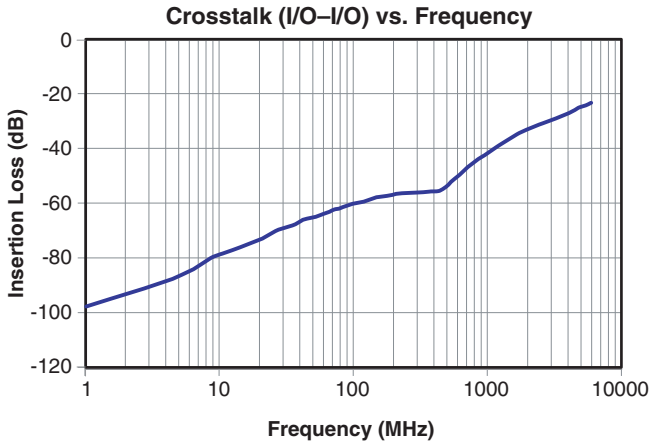
Typical Performance Characteristics









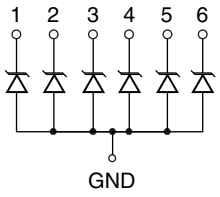


Applications Information

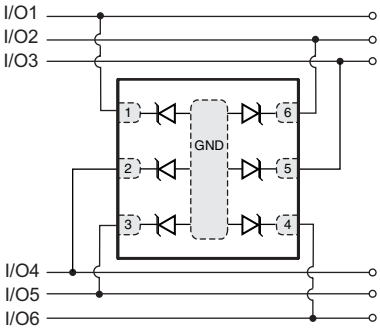
Device Connection for Protection of Six Unidirectional Data Lines

These devices are designed to protect up to six unidirectional data lines. The device is connected as follows.

1. Unidirectional protection of six I/O lines is achieved by connecting pins 1, 2, 3, 4, 5 and 6 to the data lines. The ground connection should be made directly to the ground plane for best results. The path length is kept as short as possible to reduce the effects of parasitic inductance in the board traces.



Circuit Diagram



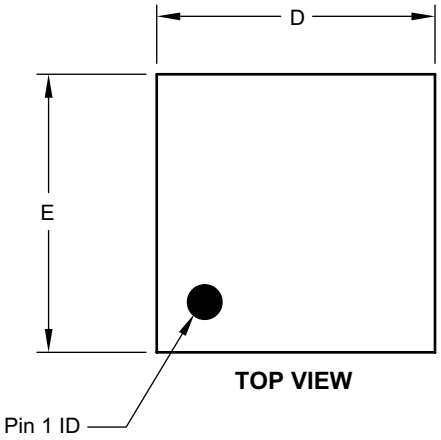
Protection of Six Unidirection Lines

Circuit Board Layout Recommendations for Suppression of ESD

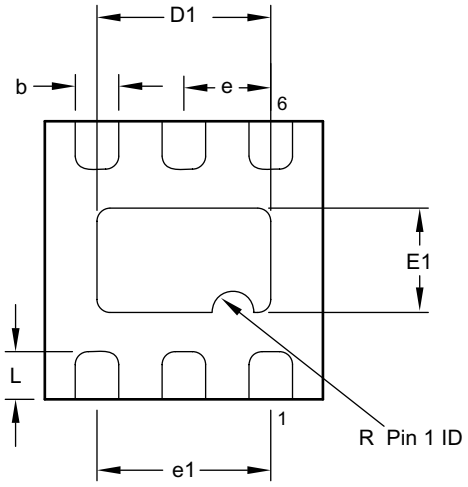
Good circuit board layout is critical for the suppression of ESD induced transients. The following guidelines are recommended:

- Place the TVS near the input terminals or connectors to restrict transient coupling.
- Minimize the path length between the TVS and the protected line.
- Minimize all conductive loops including power and ground loops.
- The ESD transient return path to ground should be kept as short as possible.
- Never run critical signals near board edges.
- Use ground planes whenever possible.

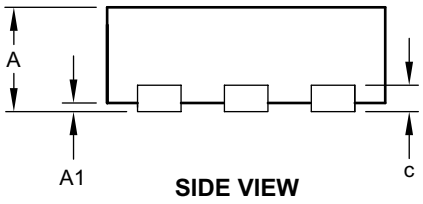
Package Dimensions, DFN 1.6mm x 1.6mm



TOP VIEW



BOTTOM VIEW



SIDE VIEW

Dimensions in millimeters

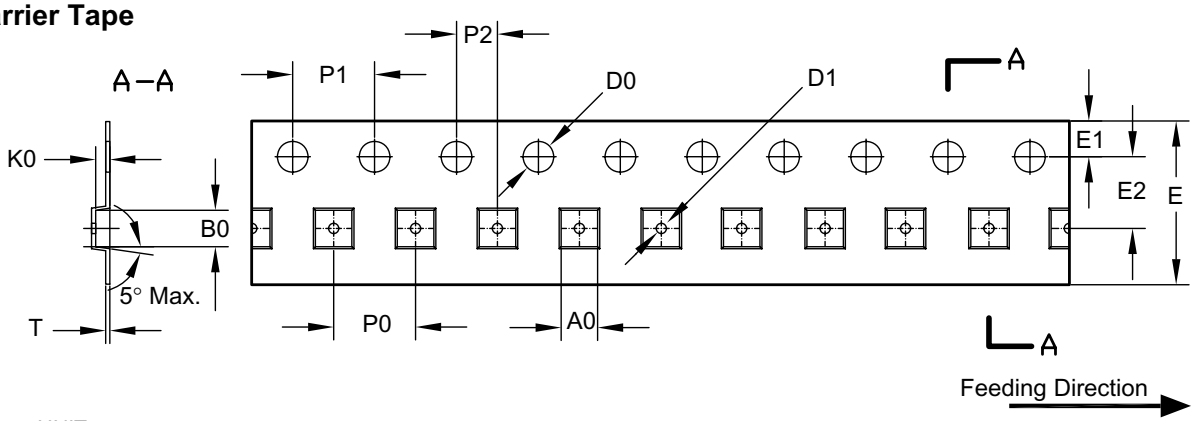
Symbols	Min.	Nom.	Max.
A	0.50	0.55	0.60
A1	0.00	0.02	0.05
b	0.22	0.25	0.28
c		1.52 REF.	
D	1.55	1.60	1.65
D1	0.95	1.00	1.05
E	1.55	1.60	1.65
E1	0.55	0.60	0.65
e		0.50 BSC	
e1		1.0 REF	
L	0.225	0.275	0.325
R		0.20	

Notes:

1. Dimensions and tolerancing conform to ASME Y14.5M-1994.
2. All dimensions are in millimeters.

Tape and Reel Dimensions, DFN 1.6mm x 1.6mm

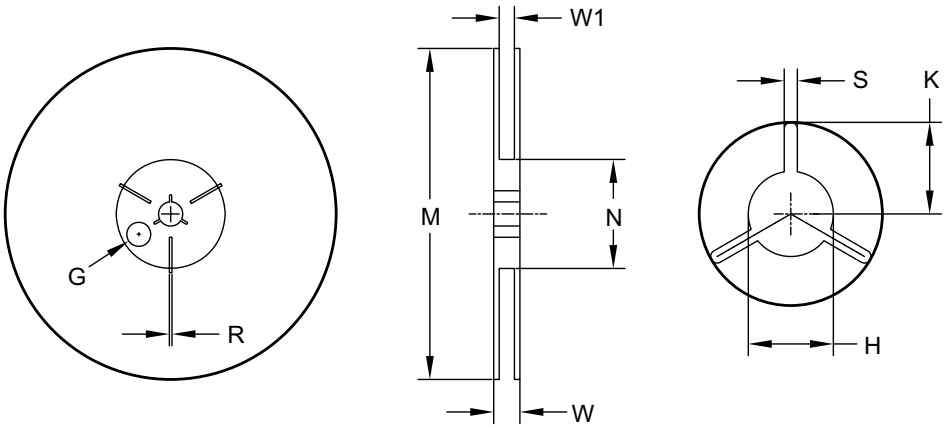
Carrier Tape



UNIT: mm

Package	A0	B0	K0	D0	D1	E	E1	E2	P0	P1	P2	T
DFN 1.6x1.6	1.78 ±0.05	1.78 ±0.05	0.69 ±0.05	ø1.50 ±0.10	ø0.50 ±0.05	8.00 +0.30 / -0.10	1.75 ±0.10	3.50 ±0.05	4.00 ±0.10	4.00 ±0.10	2.00 ±0.05	0.20 ±0.02

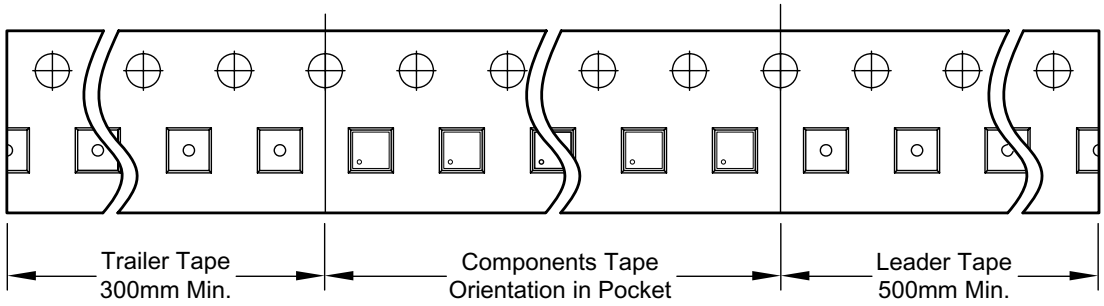
Reel



UNIT: mm

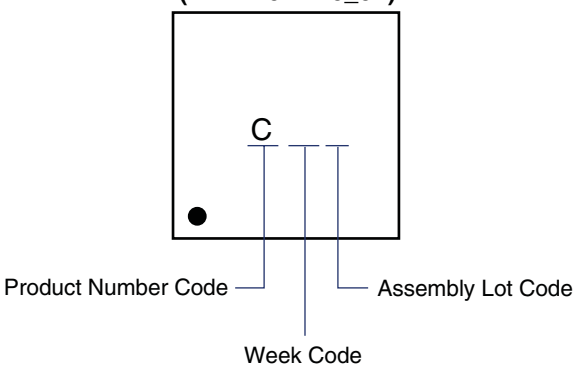
Tape Size	Reel Size	M	N	W	W1	H	S	K	E	R
8mm	ø178	ø178.0 ±1.0	ø60.0 ±1.0	11.80 ±0.5	9.0 ±0.5	ø13.0 +0.5 / –0.2	2.40 ±0.10	10.25 ±0.2	ø9.8	—

Leader / Trailer & Orientation



Package Marking

AOZ8206DI-05
(DFN 1.6 x 1.6_6L)



Revision History

Revision	Revised Item
Rev. 1.3	Initial release
Rev. 1.4	Package marking information added

This data sheet contains preliminary data; supplementary data may be published at a later date.
Alpha & Omega Semiconductor reserves the right to make changes at any time without notice.