

## Ordering Information

Part Number	Ambient Temperature Range	Package	Environmental
AOZ8811DI-05	-40°C to +85°C	DFN 1.0 x 0.6	RoHS Compliant Green Product



AOS Green Products use reduced levels of Halogens, and are also RoHS compliant.

Please visit [www.aosmd.com/media/AOSGreenPolicy.pdf](http://www.aosmd.com/media/AOSGreenPolicy.pdf) for additional information.

## Absolute Maximum Ratings

*Exceeding the Absolute Maximum ratings may damage the device.*

Parameter	Rating
VP – VN	5V
Peak Pulse Current ( $I_{PP}$ ), $t_P = 8/20\mu s$	2A
Storage Temperature ( $T_S$ )	-65°C to +150°C
ESD Rating per IEC61000-4-2, Contact <sup>(1)</sup>	±15kV
ESD Rating per IEC61000-4-2, Air <sup>(1)</sup>	±15kV
ESD Rating per Human Body Model <sup>(2)</sup>	±15kV

### Notes:

1. IEC 61000-4-2 discharge with  $C_{Discharge} = 150pF$ ,  $R_{Discharge} = 330\Omega$ .

2. Human Body Discharge per MIL-STD-883, Method 3015  $C_{Discharge} = 100pF$ ,  $R_{Discharge} = 1.5k\Omega$ .

## Maximum Operating Ratings

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

## Electrical Characteristics

$T_A = 25^\circ\text{C}$  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	
$I_T$	Test Current	
$I_F$	Forward Current	
$V_F$	Forward Voltage	
$P_{PK}$	Peak Power Dissipation	
$C_J$	Capacitance @ $V_R = 0$ and $f = 1\text{MHz}$	

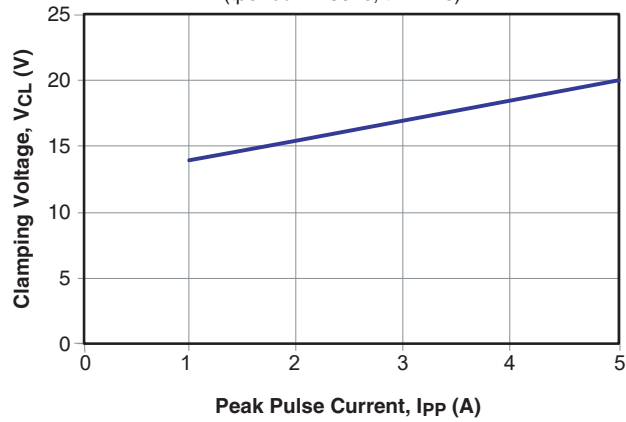
## Electrical Characteristics

$T_A = 25^\circ\text{C}$  unless otherwise noted,  $V_F = 0.95\text{V Max.}$  @  $I_F = 15\text{mA}$  for all types

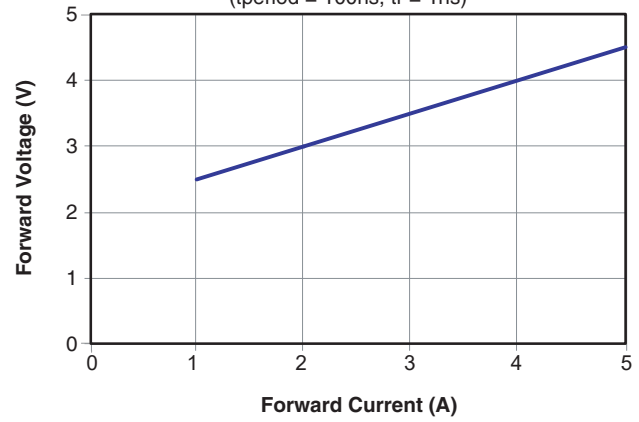
Device	Device Marking	$V_{RWM}$ (V) Max.	$V_{BR}$ (V) Max.	$I_R$ ( $\mu\text{A}$ ) Max.	$V_F$ (V) Typ.	$V_{CL}$ Max.			$C_J$ (pF) Typ.	$C_J$ (pF) Max.
						$I_{PP} = 1\text{A}$	$I_{PP} = 2\text{A}$	$I_{PP} = 5\text{A}$		
AOZ8811DI-05	C	5.0	6.0	1.0	0.75	14.00	15.50	20.00	0.65	0.75

## Typical Performance Characteristics

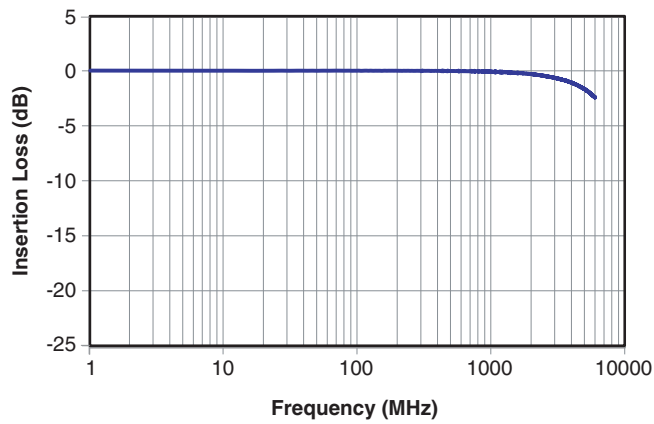
**Clamping Voltage vs. Peak Pulse Current**  
(tperiod = 100ns, tr = 1ns)



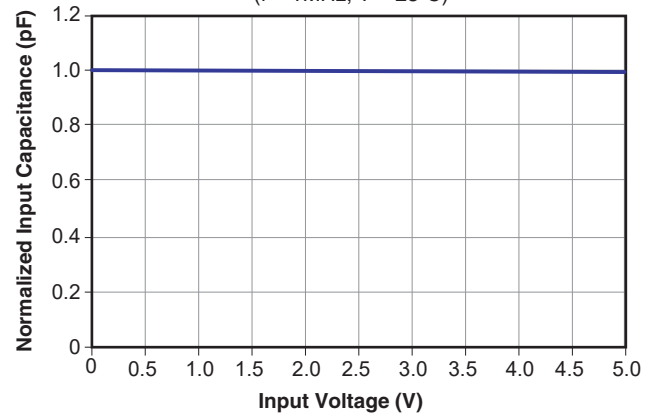
**Forward Voltage vs. Forward Current**  
(tperiod = 100ns, tr = 1ns)



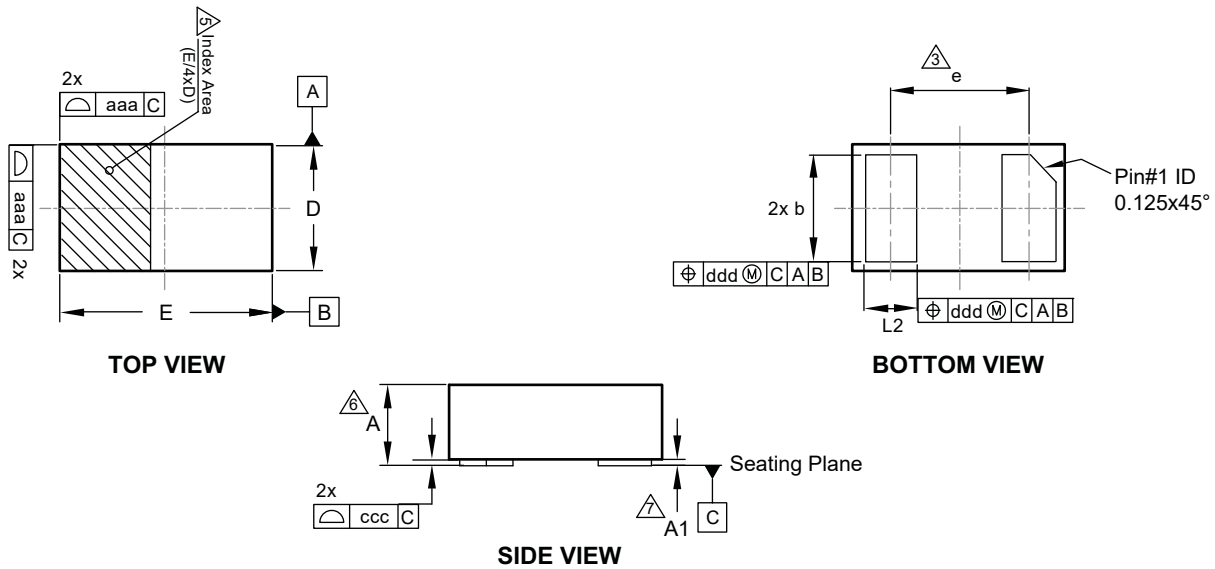
**I/O – Gnd Insertion Loss (S21) vs. Frequency**



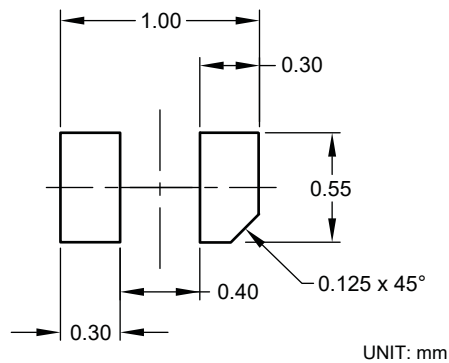
**Typical Variation of  $C_{IN}$  vs.  $V_R$**   
(f = 1MHz, T = 25°C)



## Package Dimensions, DFN 1.0 x 0.6



### RECOMMENDED LAND PATTERN



### Dimensions in millimeters

Symbols	Min.	Nom.	Max.
A	0.47	0.51	0.55
A1	0.00	0.02	0.05
b	0.45	0.50	0.55
D	0.60 BSC		
E	1.00 BSC		
e	0.65 BSC		
L	0.20	0.25	0.30
aaa	0.05		
ccc	0.03		
ddd	0.10		

### Dimensions in inches

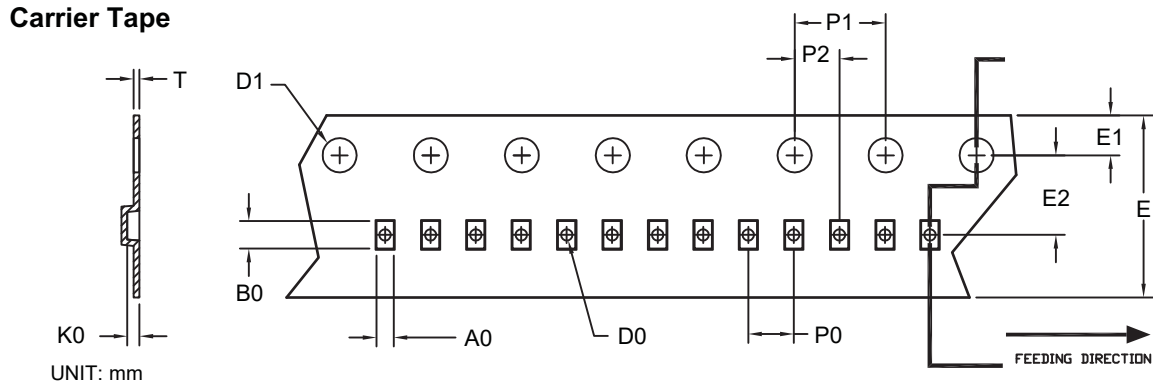
Symbols	Min.	Nom.	Max.
A	0.019	0.020	0.022
A1	0.000	0.001	0.002
b	0.018	0.020	0.022
D	0.024		
E	0.039		
e	0.026		
L	0.008	0.010	0.012
aaa	0.002		
ccc	0.001		
ddd	0.004		

### Notes:

- Dimensions and tolerancing conform to ASME Y14.5-2009.
- All dimensions are in millimeters.
- "e" represents the terminal grid pitch.
- N is the total number of terminals.
- A visual index feature must be located within the hatched area. Typical index feature (chamfer) must be located on the edge of the Pin#1 feature.
- This dimension includes stand-off height "A1" and packaged body thickness, but does not include attached feature e.g. external heatsink or chip capacitors, an internal heatslug is not considered as attached feature.
- Dimension "A1" is primarily terminal plating, and does not include small metal protrusions.

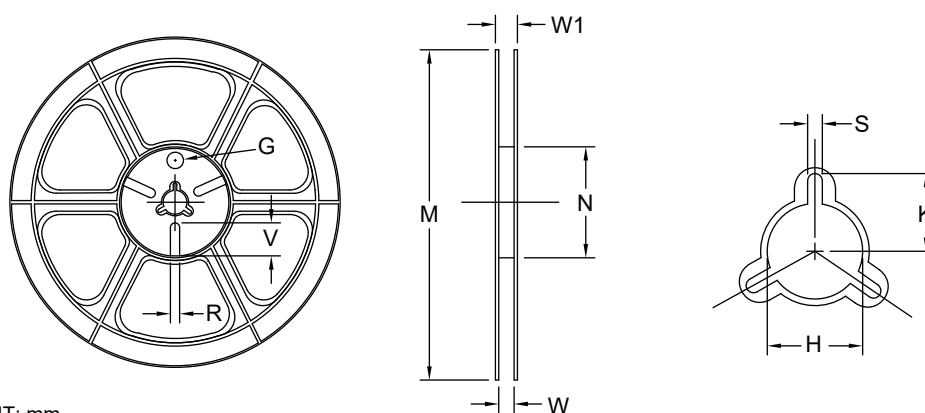
## Tape and Reel Dimensions, DFN 1.0 x 0.6

### Carrier Tape



Option	Package	A0	B0	K0	D0	D1	E	E1	E2	P0	P1	P2	T
A	DFN 1.0x0.6/ DFN 1.0x0.6A (8 mm)	0.69 ±0.05	1.19 ±0.05	0.66 ±0.05	0.40 ±0.05	1.50 ±0.10	8.00 +0.3/-0.1	1.75 ±0.10	3.50 ±0.05	2.00 ±0.05	4.00 ±0.10	2.00 ±0.05	0.23 ±0.02
B	DFN 1.0x0.6/ DFN 1.0x0.6A (8 mm)	0.65 ±0.04	1.05 ±0.04	0.61 ±0.04	0.40 ±0.05	1.50 ±0.10	8.00 +0.3/-0.1	1.75 ±0.10	3.50 ±0.05	2.00 ±0.10	4.00 ±0.10	2.00 ±0.05	0.20 ±0.05

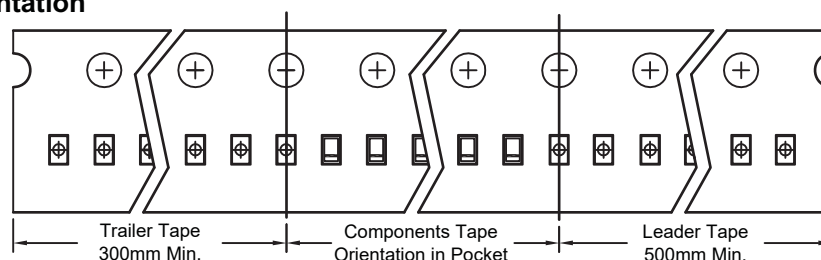
### Reel



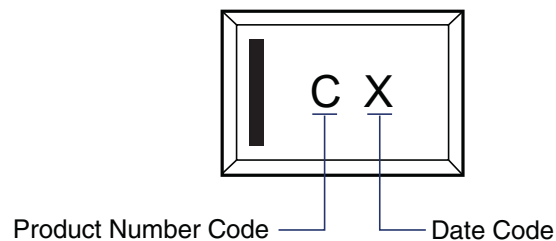
Tape Size	Reel Size	M	N	W	W1	H	K	S	G	R	V
8mm	ø178	ø178 ±0.5	ø55 ±1	8.4 +1.5/-0	Max. 14.4	ø13.0 ±0.5	Max. 10.1	2.0 ±0.5	N/A	N/A	N/A

### Leader / Trailer & Orientation

TVS  
Unit Per Reel:  
10000pcs



## Part Marking



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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.