

Ordering Information

Part Number	Ambient Temperature Range	Package	Environmental
AOZ8821DT-03	-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 for additional information.

Absolute Maximum Ratings

Exceeding the Absolute Maximum ratings may damage the device.

Parameter	Rating
VP – VN	3.6V
Peak Pulse Current (I_{PP}), $t_P = 8/20\mu s$	6A
Peak Pulse Power (P_{PP}), $t_P = 8/20\mu s$	40W
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⁾	±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 (IEC61000-4-5 8/20 μs pulse) ⁽³⁾	
V_{CL}	Clamping Voltage @ $I_{PP}^{(3)}$	
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	
C_J	Capacitance @ $V_R = 0$ and $f = 1\text{MHz}$	

Electrical Characteristics

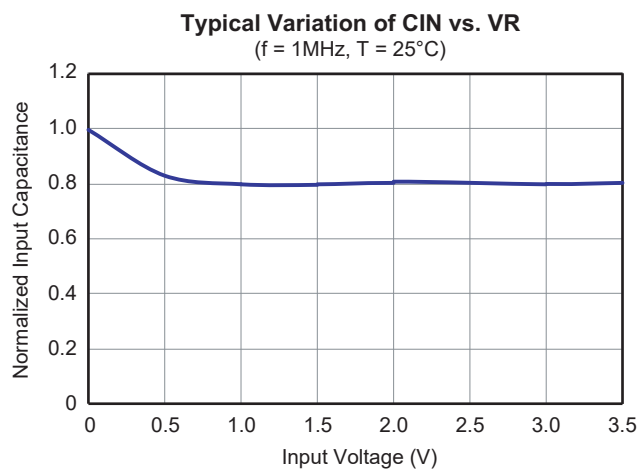
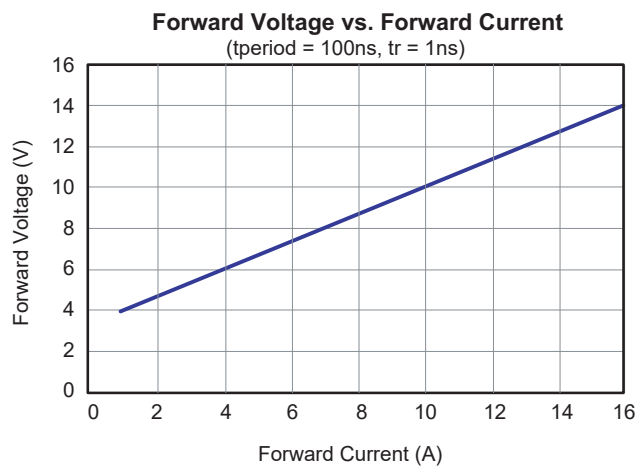
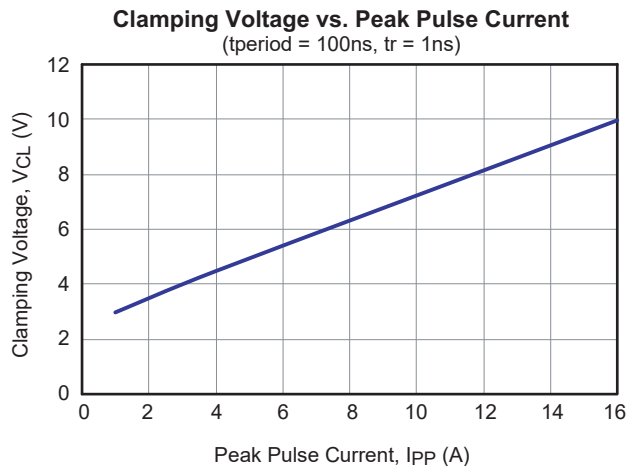
$T_A = 25^\circ\text{C}$ unless otherwise noted, $V_F = 1\text{V Max.}$ @ $I_F = 10\text{mA}$ for all types

Device	Device Marking	V_{RWM} (V) Max.	V_{BR} (V)		I_R (μA) Max.	V_F (V) Typ.	V_{CL} Max.			C_J (pF)	
			Min.	Max.			$I_{PP} = 1\text{A}$	$I_{PP} = 4\text{A}$	$I_{PP} = 6\text{A}$	Typ.	Max.
AOZ8821DT-03	7	3.6	4.0	10.0	0.1	0.75	2.5	5.0	7.0	0.5	0.8

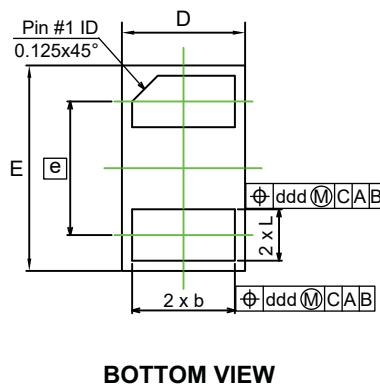
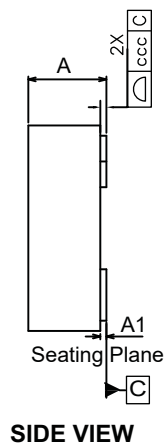
Note:

3. These specifications are guaranteed by design and characterization.

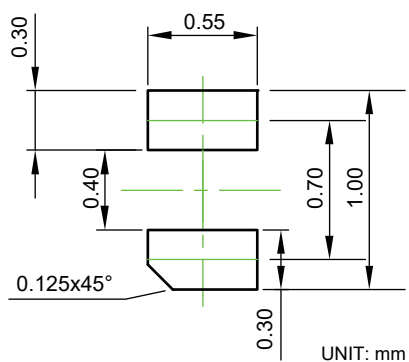
Typical Performance Characteristics



Package Dimensions, DFN 1.0 x 0.6



RECOMMENDED LAND PATTERN



Dimensions in millimeters

Symbols	Min.	Nom.	Max.
A	0.31	0.38	0.40
A1	0.00	0.02	0.05
b	0.45	0.50	0.55
D	0.55	0.60	0.65
E	0.95	1.00	1.05
e	0.65 BSC		
L	0.20	0.25	0.30
ccc	0.03		
ddd	0.10		

Dimensions in inches

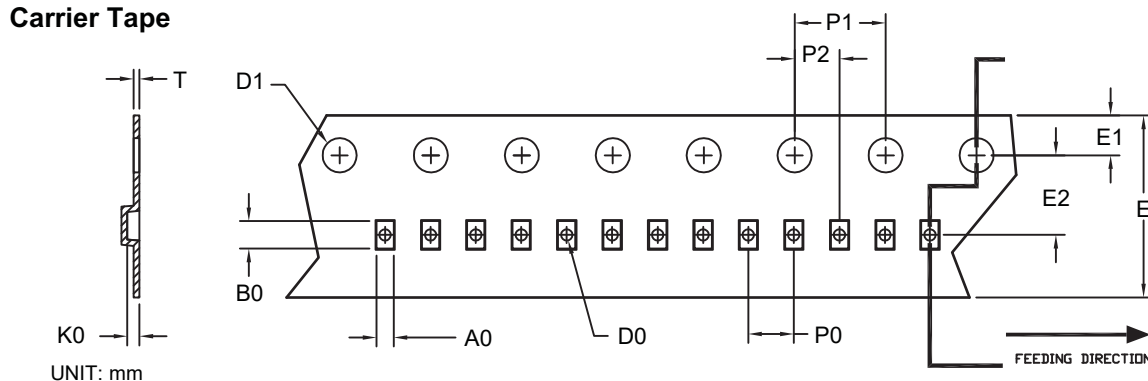
Symbols	Min.	Nom.	Max.
A	0.012	0.015	0.016
A1	0.000	0.001	0.002
b	0.018	0.020	0.022
D	0.022	0.024	0.026
E	0.037	0.039	0.041
e	0.026 BSC		
L	0.008	0.010	0.012
ccc	0.001		
ddd	0.004		

Notes:

1. All dimensions are in millimeters, angles are in degrees.
2. Coplanarity applies to the exposed heat sink slug as well as the terminals.

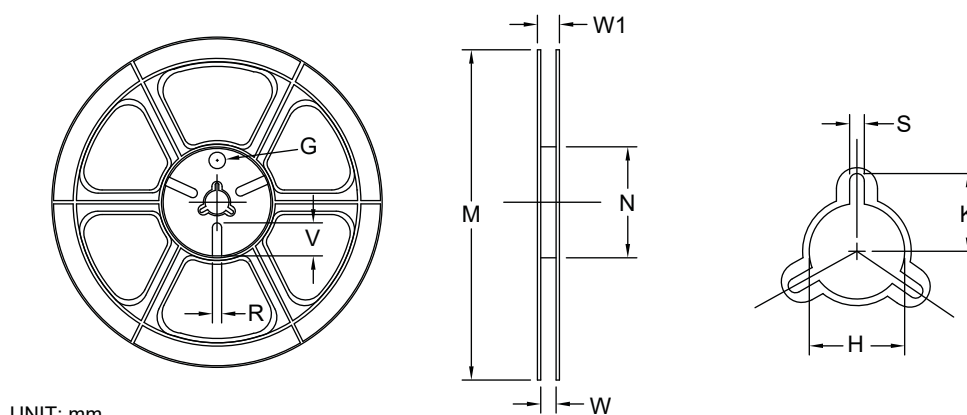
Tape and Reel Dimensions, DFN 1.0 x 0.6

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

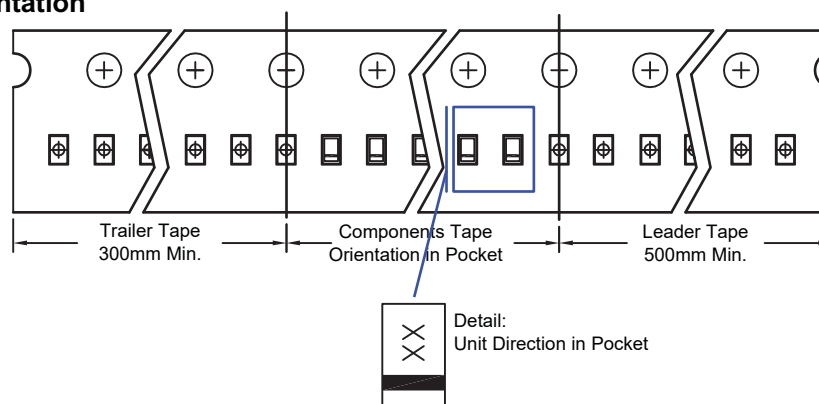
Reel



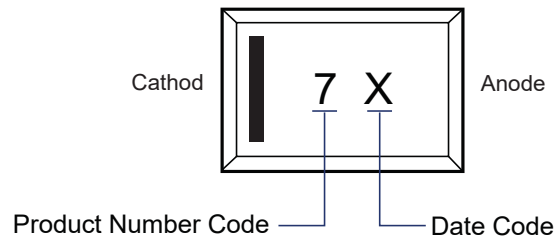
Tape Size	Reel Size	M	N	W	W1	H	K	S	G	R	V
8mm	ø178	ø178 ±0.5	ø55 ±1	8.4 +1.5/-0	Max. 14.4	ø13.0 ±0.5	Max. 10.1	2.0 ±0.5	N/A	N/A	N/A

Leader / Trailer & Orientation

TVS
Unit Per Reel:
10000pcs



Part Marking



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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.