

General Description

The AOZ7000 is designed to offer galvanic isolation for signal communication, and it uses inductively coupled coils and includes one primary winding and one secondary winding.

The AOZ7000 is available in a 9.5mm×5.5mm×1.8mm 4-pin surface mount package

Features

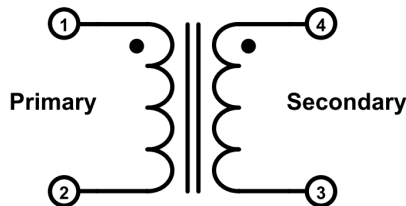
- Isolation up to 5.5kVrms
- Compact Footprint
- PCB Mounting
- 9.5mm×5.5mm×1.8mm 4-pin package
- CB test Ref. Certif. No. DK-71718-UL

Applications

- Switching Applications that need Isolation



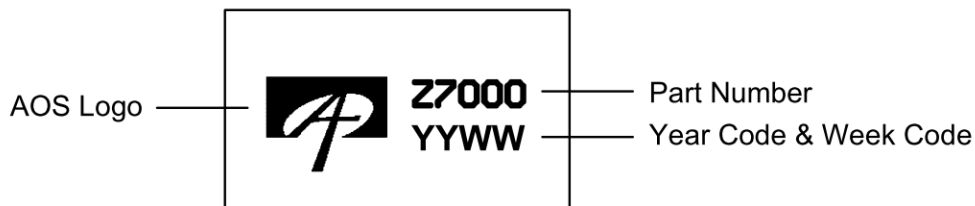
Electrical Schematic



Pin Configuration



Marking Information



Electrical Characteristics

Parameter	Min.	Typ	Max	Units
Primary DC Resistance	0.15	0.3	0.45	Ω
Secondary DC Resistance	0.4	0.6	0.8	Ω



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Detailed Description

The AOZ7000 is a multi-layered coreless printed circuit board (PCB) pulse transformer for signal transmission, and it uses inductively coupled coils and includes one primary winding and one secondary winding. The PCB material is FR-4 and whose electric strength is 40kV/mm that provide high galvanic isolation.

The electrical schematic is shown in Figure 1, and the phase dots are used to indicate polarities.

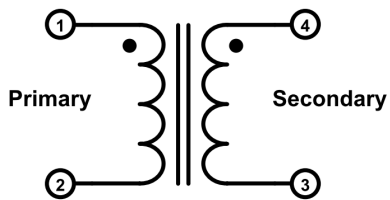


Figure 1. Electrical Schematic

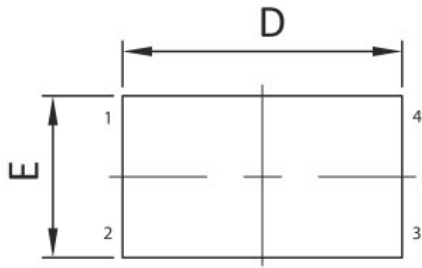
M is as mutual inductance between the two coils, and the typical mutual inductance is 50nH, so the voltage induced in secondary coil is:

$$v_2 = M \frac{di_1}{dt}$$

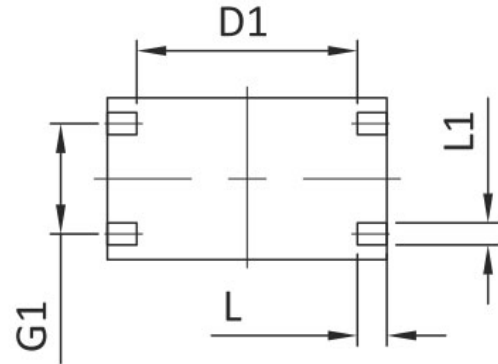
It means v_2 level can be control by time-varying current source.

To design the time-varying current source of the transmitter according to the detect voltage of receiver.

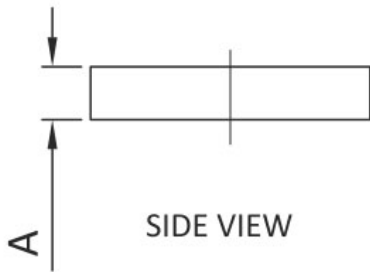
Packaging Dimensions DFN9.5x5.5_4L_S



TOP VIEW



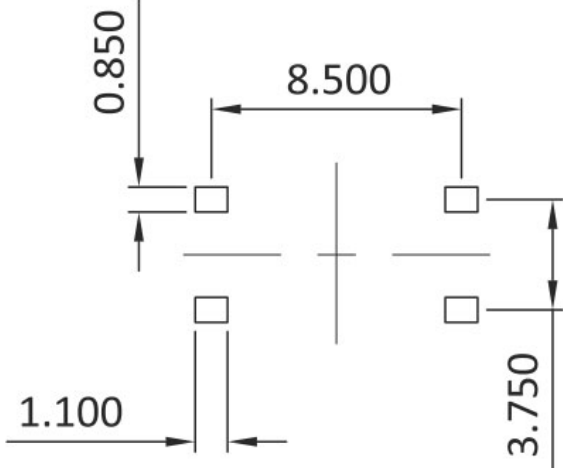
SIDE VIEW



SIDE VIEW

SYMBOLS	DIMENSION IN MILLIMETRES			DIMENSION IN INCHS		
	MIN.	NOM.	MAX.	MIN.	NOM.	MAX.
A	1.620	1.800	1.980	0.064	0.071	0.078
D	9.025	9.500	9.975	0.355	0.374	0.393
D1	7.125	7.500	7.875	0.281	0.295	0.310
E	5.225	5.500	5.775	0.206	0.217	0.227
E1	3.563	3.750	3.938	0.140	0.148	0.155
L	0.800	1.000	1.200	0.031	0.039	0.047
L1	0.600	0.750	0.900	0.024	0.030	0.035

LAND PATTERN RECOMMENDATIONS



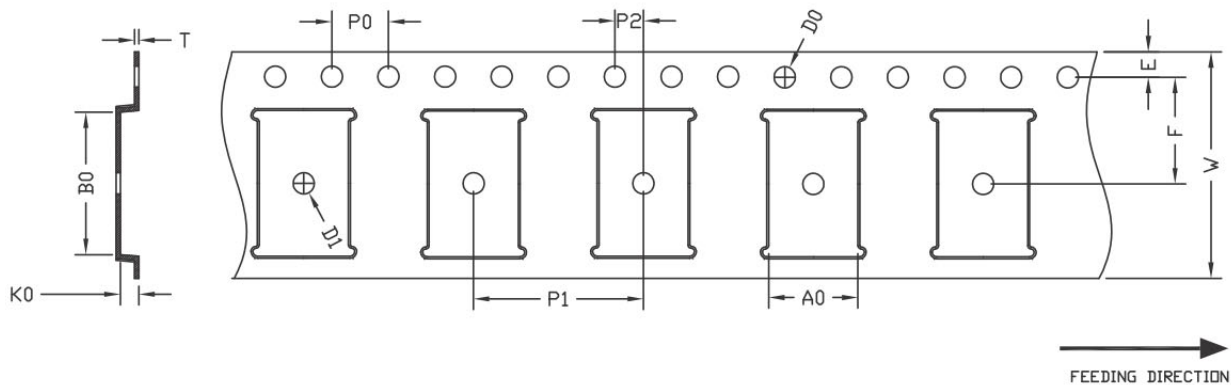
UNIT: mm

NOTES

1. TOLERANCE 0.100 MILLIMETERS UNLESS OTHERWISE SPECIFIED.
2. CONTROLLING DIMENSION IS MILLIMETER, CONVERTED INCH DIMENSIONS ARE NOT NESSECARILY EXACT.

Tape and Reel Dimensions, DFN9.5x5.5_4L_S

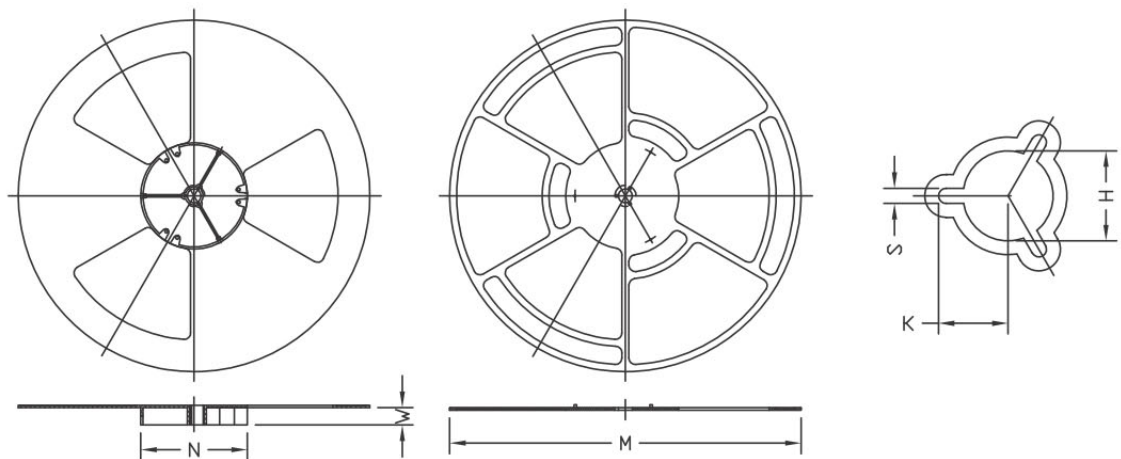
Carrier Tape



UNIT: MM

PACKAGE	A0	B0	K0	D0	D1	W	E	F	P0	P1	P2	T
DFN9.5x5.5	6.30 ±0.1	10.30 ±0.1	2.20 ±0.1	∅1.50 +0.1 -0.0	∅1.50 MIN.	16.00 +0.3 -0.1	1.75 ±0.1	7.50 ±0.1	4.00 ±0.1	12.00 ±0.1	2.00 ±0.1	0.30 ±0.05

Reel



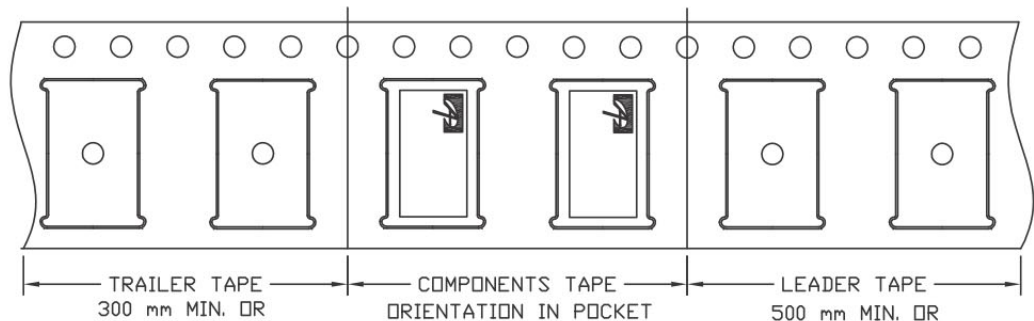
UNIT: MM

TAPE SIZE	REEL SIZE	M	N	W	H	K	S
16 mm	∅330	∅330.00 +0.25 -4.00	∅100.00 ±0.2	16.4 +2.0 -0.0	∅13.00 +0.50 -0.20	10.5 ±0.25	2.2 ±0.25

Tape

Leader / Trailer
& Orientation

Unit Per Reel:
3000pcs



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