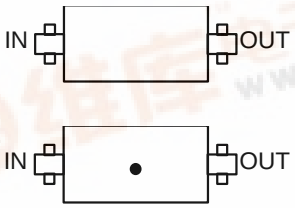
FIXED HIGH B.W. DELAY LINE
T_R < 1ns
(SERIES 2075 & 2075A)

data delay devices, inc.

FEATURES

- Microstrip Technology
- Fast rise time for high frequency applications
- Fixed delays available from 300ps to 6ns
- Mechanically variable delay available (2075A)
- I/O reversible
- BNC female connectors
- Meets or exceeds MIL-D-23859C

PACKAGES



2075-xx
xx = Delay (T_D)

2075A

FUNCTIONAL DESCRIPTION

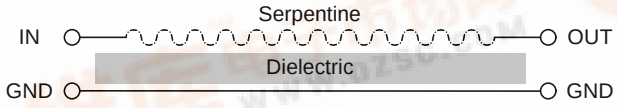
The 2075- and 2075A-series devices are single-input, single-output, passive delay lines. For the 2075, the signal input (IN) is reproduced at the output (OUT), shifted by a time (T_D) given by the device dash number. The rise time (T_R) of the lines is no more than 1ns, resulting in a 3dB bandwidth of at least 350MHz. For the 2075A, the delay is mechanically variable from 3ns to 7ns and the bandwidth is 6MHz. The characteristic impedance of both lines is nominally 75 ohms.

PIN DESCRIPTIONS

IN	Signal Input (BNC)
OUT	Signal Output (BNC)

SERIES SPECIFICATIONS

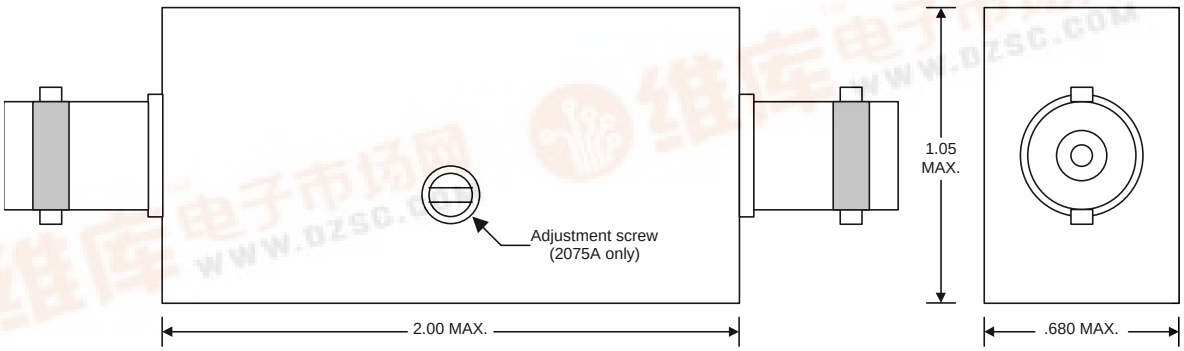
- **Tolerance:** 2% or 20ps
- **Bandwidth (2075):** >350MHz (2075)
  6MHz (2075A)
- **Ripple in pass-band:** Approx. 0.2dB
- **Dielectric breakdown:** >500 Vdc
- **Operating temperature:** -65°C to +125°C
- **Temperature coefficient:** <100 PPM/°C



Functional Diagram (2075)

DASH NUMBER SPECIFICATIONS

Part Number	Delay (ps)	Imped. (Ω)
2075-300	300 ± 20	75
2075-500	500 ± 20	75
2075-1000	1000 ± 20	75
2075-2000	2000 ± 40	75
2075-3000	3000 ± 60	75
2075-4000	4000 ± 80	75
2075-5000	5000 ± 100	75
2075-6000	6000 ± 120	75
2075A	3-7ns	75



Package Dimensions

PASSIVE DELAY LINE TEST SPECIFICATIONS

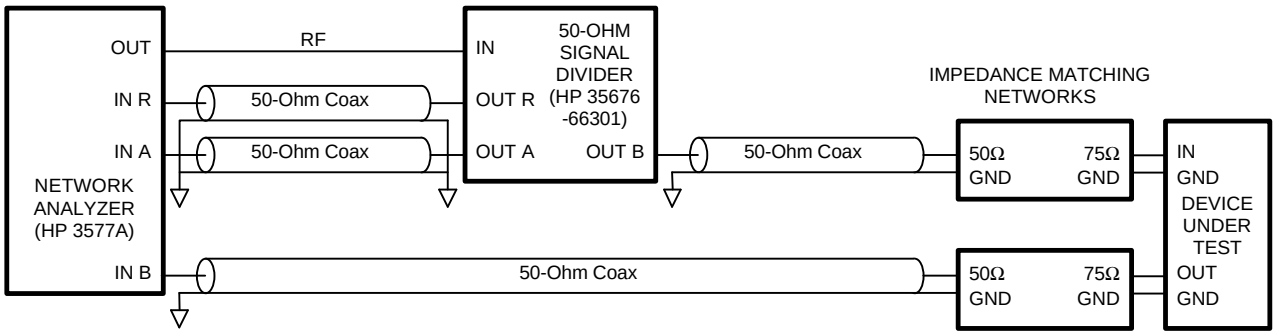
TEST CONDITIONS

INPUT:
Ambient Temperature: 25°C ± 3°C
Source Amplitude: 0dBm typical
Source Impedance: 75Ω nominal
Input Frequency: 27.777778MHz

OUTPUT:
Z_{load}: 75Ω nominal

Network analyzer is used in phase measurement mode, normalized with a calibrated BNC jumper between input and output signals. Delay is related to phase lag with proportionality constant of 100ps/deg.

NOTE: The above conditions are for test only and do not in any way restrict the operation of the device.



Test Setup