

# FIXED HIGH B.W. DELAY LINE

## $T_R < 1\text{ns}$

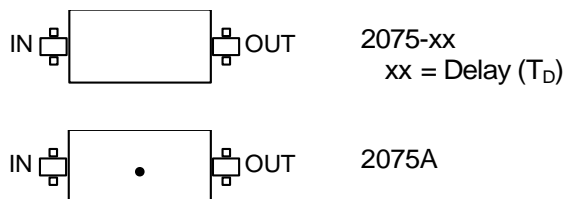
### (SERIES 2075 & 2075A)



#### 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



#### 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.

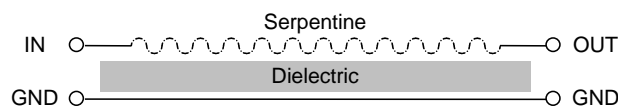
The rise time ( $T_R$ ) of the lines is no more than 1ns, resulting in a 3dB bandwidth of approximately 700MHz. For the 2075A, the delay is mechanically variable from 3ns to 7ns and the bandwidth is 50-150MHz. The characteristic impedance of both lines is nominally 75 ohms.

#### PIN DESCRIPTIONS

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

#### SERIES SPECIFICATIONS

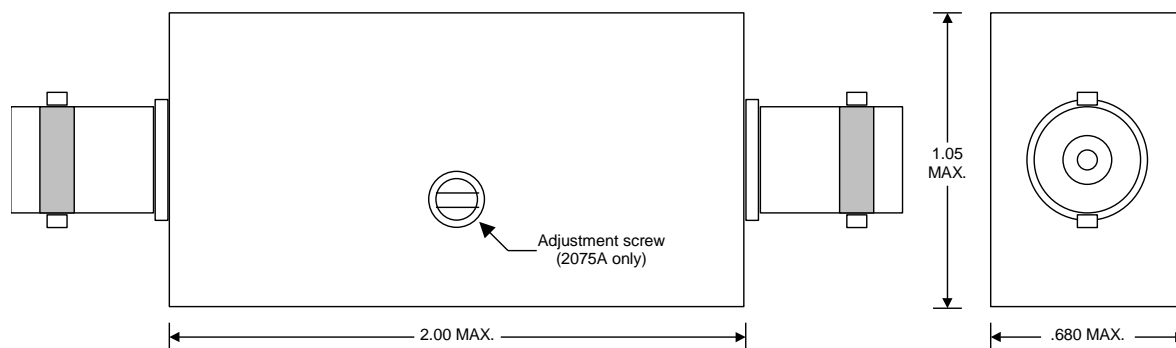
- **Tolerance:** 2% or 20ps
- **Bandwidth (2075):** 700MHz (2075 up to -6000)  
130MHz (2075 above -6000)  
50-150MHz (2075A)
- **Ripple in pass-band:** Approx. 0.2dB
- **Dielectric breakdown:** >500 Vdc
- **Operating temperature:** -65°C to +125°C
- **Temperature coefficient:** <100 PPM/°C



Functional Diagram (2075)

#### DASH NUMBER SPECIFICATIONS

Part Number	Delay (ps)	Imped. ( $\Omega$ )	DC Atten. (dB)
2075-300	300 $\pm$ 20	75	0.01
2075-500	500 $\pm$ 20	75	0.02
2075-1000	1000 $\pm$ 20	75	0.05
2075-2000	2000 $\pm$ 40	75	0.10
2075-3000	3000 $\pm$ 60	75	0.15
2075-4000	4000 $\pm$ 80	75	0.15
2075-5000	5000 $\pm$ 100	75	0.20
2075-6000	6000 $\pm$ 120	75	0.25
2075-7000	7000 $\pm$ 140	75	0.30
2075-7500	7500 $\pm$ 150	75	0.35
2075-8000	8000 $\pm$ 160	75	0.35
2075-10000	10000 $\pm$ 200	75	0.40
2075-12000	12000 $\pm$ 240	75	0.45
2075-13000	13000 $\pm$ 260	75	0.50
2075A	3-7ns	75	0.30



Package Dimensions

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## 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<sub>load</sub>:** 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.

