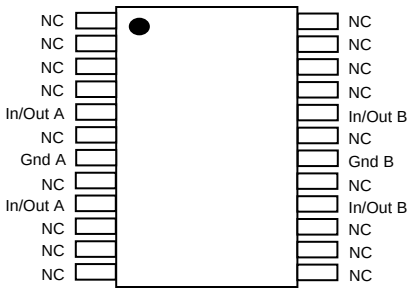
DUAL FIXED SUB-NS DELAY LINE
T_R < 1ns
(SERIES 2027)

FEATURES

- Fast rise time for high frequency applications
- Ideal for differential signaling
- Delays available from 500ps to 2800ps
- Surface-mount device
- Epoxy encapsulated
- Meets or exceeds MIL-D-23859C

IDEAL SUBSTITUTE FOR COAXIAL CABLES

PACKAGE/PINOUT



2027-xx
xx = Delay

FUNCTIONAL DESCRIPTION

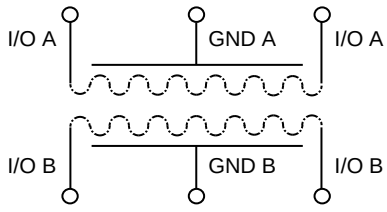
The 2027-series devices are fixed, dual, single-input, single-output, passive delay lines. The signal input (In) on each line is reproduced at the output (Out), shifted by a time (T_D) given by the device dash number. The characteristic impedance of the lines is nominally 50 ohms. The rise time (T_R) of the lines is less than 1ns, resulting in a 3dB bandwidth in excess of 700MHz. Each line is bidirectional – either pin can be used as the input, and the other as the output.

PIN DESCRIPTIONS

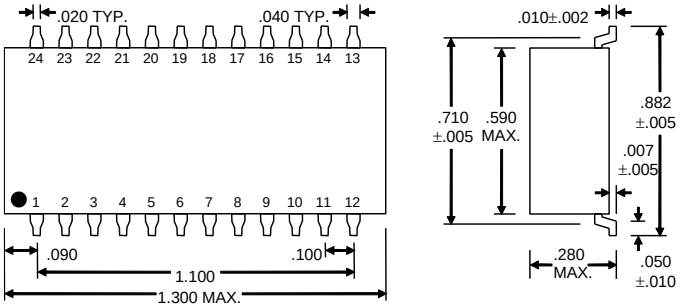
In/Out	Signal In/Out
Gnd	Signal Ground

SERIES SPECIFICATIONS

- **Tolerance:** 3% or 10ps
- **Bandwidth:** >700MHz
- **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



Dimensions

DASH NUMBER SPECIFICATIONS

Part Number	Delay/Line (ps)	Imped. (Ω)
2027-500	500	50
2027-600	600	50
2027-700	700	50
2027-750	750	50
2027-800	800	50
2027-1000	1000	50
2027-1100	1100	50
2027-1200	1200	50
2027-1250	1250	50
2027-1300	1300	50
2027-1400	1400	50
2027-1500	1500	50
2027-1600	1600	50
2027-1700	1700	50
2027-1750	1750	50
2027-1800	1800	50
2027-2000	2000	50
2027-2100	2100	50
2027-2200	2200	50
2027-2250	2250	50
2027-2400	2400	50
2027-2500	2500	50
2027-2600	2600	50
2027-2750	2750	50
2027-2800	2800	50

Note: Any other delay not listed is also available. Contact factory for details.

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PASSIVE DELAY LINE TEST SPECIFICATIONS

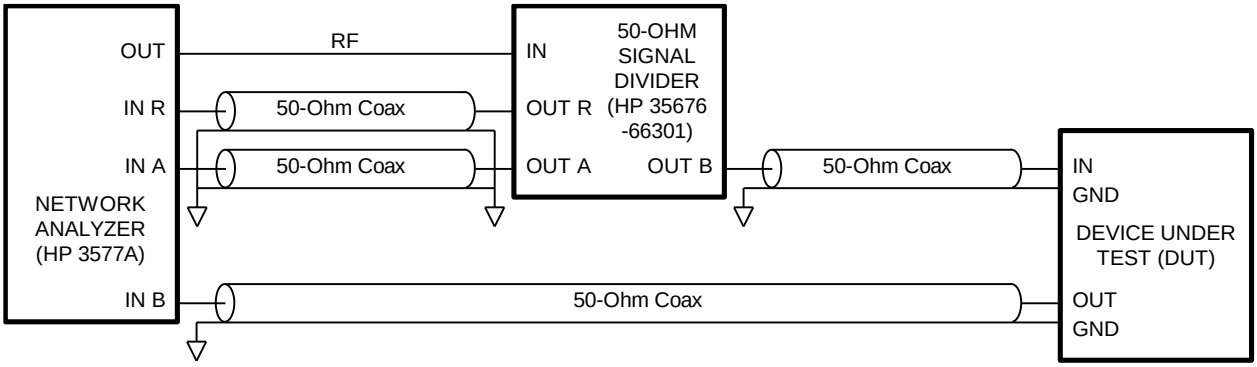
TEST CONDITIONS

INPUT:
Ambient Temperature: 25ºC ± 3ºC
Source Amplitude: 0dBm typical
Source Impedance: 50Ω nominal
Input Frequency: 27.777778MHz

OUTPUT:
Z_{load}: 50Ω nominal

Network analyzer is used in phase measurement mode, normalized with a wire jumper between input and output of DUT test socket. 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