

API Technologies' comprehensive line of high performance delay lines are offered in various topologies covering a wide range of specifications. With an extensive heritage in designing and manufacturing delay lines, API can ensure both semi-standard or custom delay lines are configured to meet customer requirements.

Available in many package sizes and interface options, API's delay lines are ideal for use in signal processing circuits, radar systems, electronic warfare, and other applications that require channel equalization and calibration.

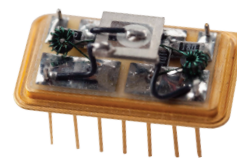
## Delay Line Applications

API Technologies' complete offering of delay lines are ideal for applications where high performance and reliability is required.

- Electronic Warfare
- Communications Systems
- Ultrasonic Imaging Systems
- Steering of Phased Array Antennas
- Linear & Non-Linear FM Generation
- Signal Processing Circuits
  - Transponders
  - EW target generation
  - Radar systems
  - Pulse-Doppler signaling
  - Clock synchronization
  - Spectrum estimation

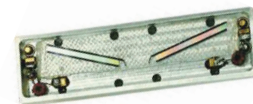
### BAW Delay Lines

- Frequency Range: 10MHz – 120 MHz
- Delay: 0.15  $\mu$ sec – 3,000  $\mu$ sec
- Insertion Loss: 6dB – 65 dB
- Available in connectorized or pin and surface mount
- SMA (Female and Male), N-Type (Female), TNC (Female), Leaded and SMD interface options



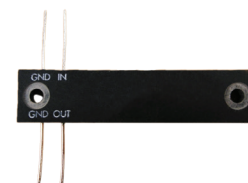
### SAW Delay Lines

- Frequency Range: 20 MHz to 2,000 MHz
- Delay: 0.1  $\mu$ sec to 10  $\mu$ sec
- Insertion Loss: Starts at 3 dB, increases with delay and bandwidth
- Available in non-dispersive and dispersive designs
- Packaging options include ceramic leadless chip carriers and platform packages



### Lumped Constant (LC) Delay Lines

- Frequency Range: DC to 150 MHz
- Delay: 10 nSec to 5,000 nSec
- Insertion Loss: 5%
- Active buffered, passive fixed and variable designs are available
- Interface options are offered include DIP, SIP Leaded and SMD



### Dispersive Steel (Pulse Compression) Delay Lines

- Frequency Range: 5 MHz to 65 MHz
- Delay: 10  $\mu$  Sec to 350  $\mu$  Sec
- Insertion Loss: 20-45 dB
- Ovenized for high stability center frequencies



### Coaxial Delay Lines

- Frequency Range: DC to 6 GHz
- Delay: 1 nSec to 250 nSec
- Insertion Loss: 0.2dB – 50dB
- Utilizes semi-rigid cable from .041" up to diameters of .250"
- Can be heated to improve temperature stability

