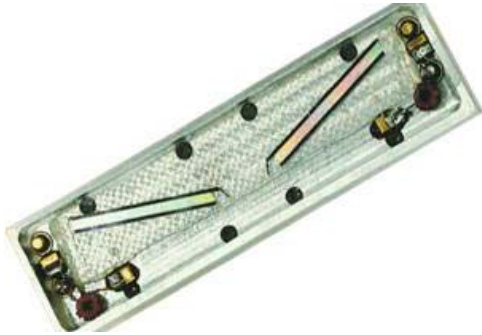


SAW Delay Lines



Key Features

- **Frequency Range:** 20 MHz to 2000 MHz
- **Delay:** .1 μ sec to 10 μ sec
- **Insertion Loss:** Starting at 3 dB, increases with delay and bandwidth
- **Stability:** Temperature stability dependent on substrate
- **Bandwidth:** Fractional bandwidths between 5 & 55%
- **Package Size:** CLCC and through-hole/platform.

API Technologies' line of SAW Delay Lines offer semi-standard or custom designs with various delay and bandwidth options.

SAW Delay Lines are available in several packaging options to suit the application and functionality of the product. All packaging options are hermetic to ensure robust performance. Ceramic leadless chip carriers provide small size and weight, while platform packages may provide larger delays and are better suited for harsh environments.

API Technologies has experience with delay lines on quartz, lithium tantalate and lithium niobate, which provides the ability to provide a range of electrical specifications. Applications for delay lines include radar systems, electronic warfare and communication systems.

Typical Specifications

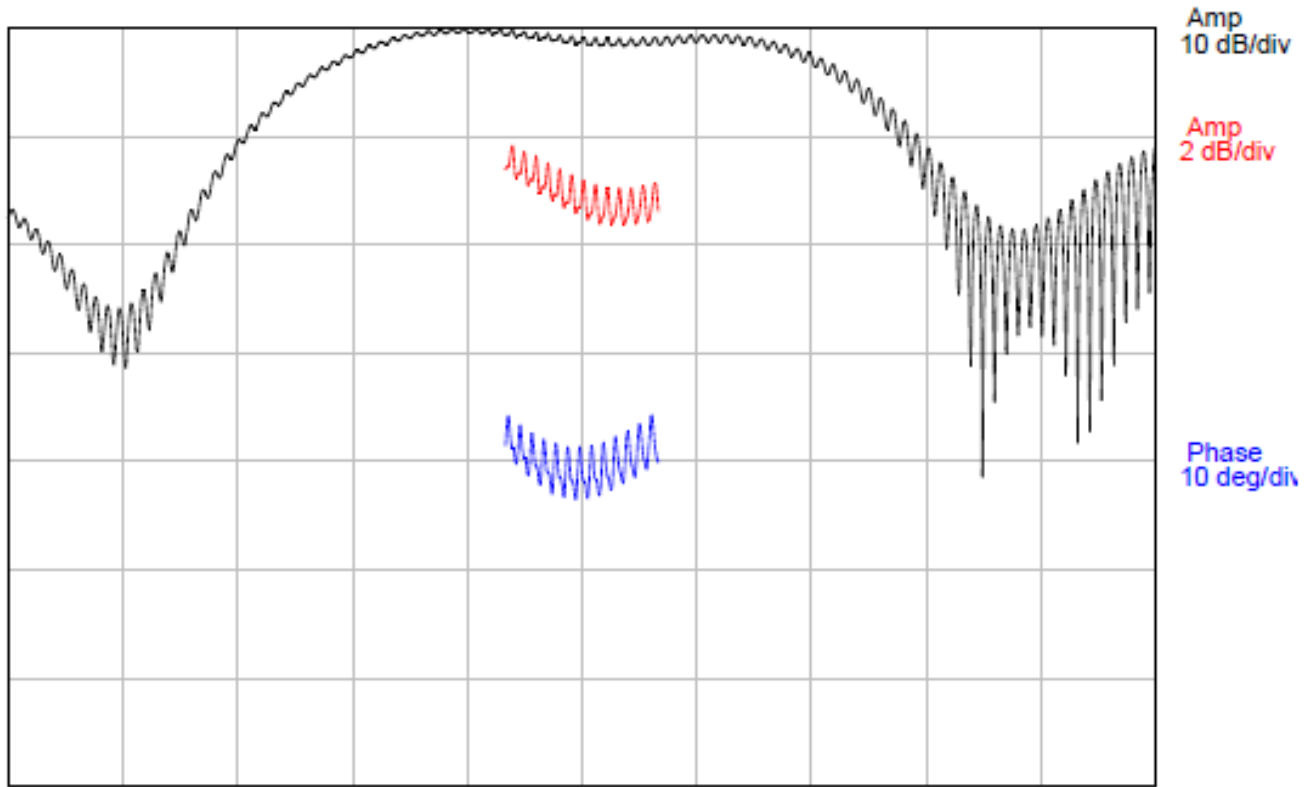
Parameter	Min	Typ	Max	Units
Center Frequency, (F_c) ¹	-	850	-	MHz
Minimum Insertion Loss	-	25.8	28	dB
Device Delay (at F_c)	2.450	2.506	2.550	us
3 dB Bandwidth ²	80	241.2	-	MHz
Lower 3 dB Frequency ²	-	724.2	810	MHz
Upper 3 dB Frequency ²	890	965.3	-	MHz
Amplitude Ripple (810-890 MHz)	-	1.4	2	dB p-p
Temperature Coefficient of Frequency	-86			ppm/ $^{\circ}$ C
Source and Load Impedance	50			ohms
Ambient Temperature	25			$^{\circ}$ C

Notes: 1. Reference frequency. Computed as mean of the 3 dB frequencies.
2. All dB values are referenced to the insertion loss value.

Maximum Ratings

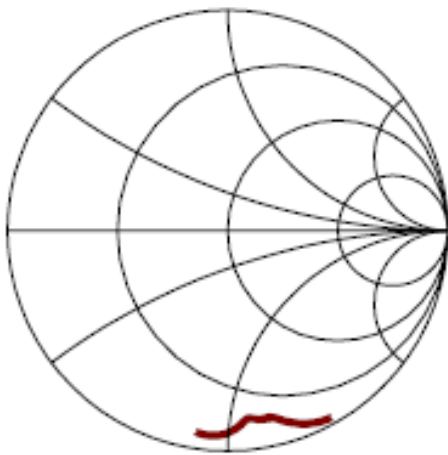
Parameter	Min	Max	Units
Storage Temperature Range	-40	85	$^{\circ}$ C
Input Power Level	-	+10	dBm

Typical Performance

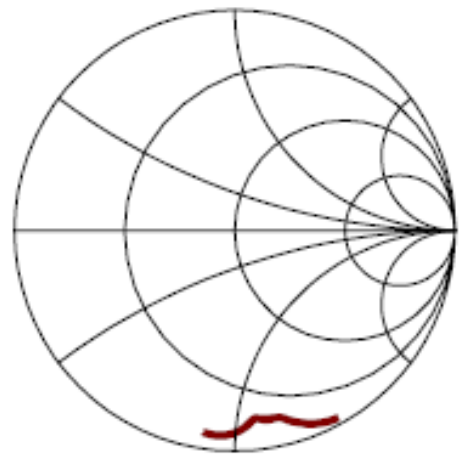


Center = 850 MHz, 60 MHz/div (375 kHz incr)

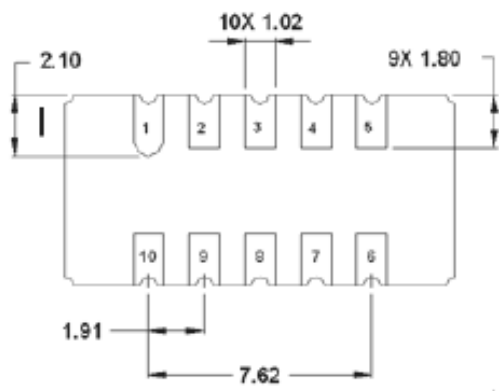
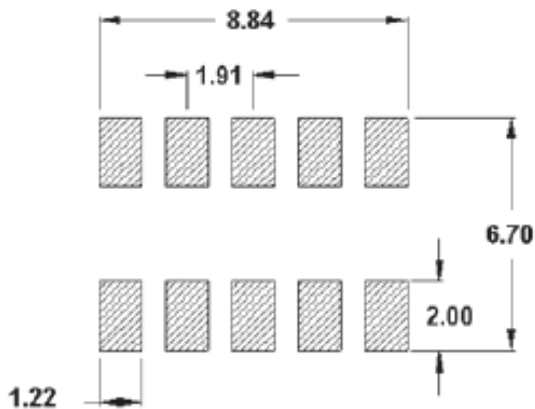
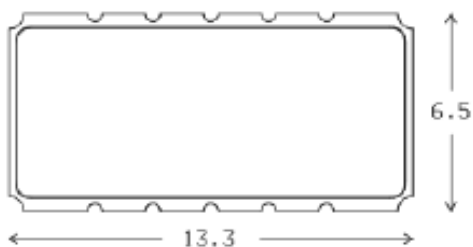
S11 (550-1150 MHz)



S22 (550-1150 MHz)



Outline Drawing



Units: mm

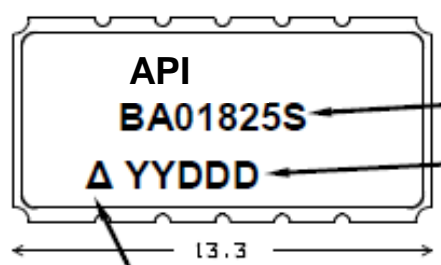
Tolerances are ± 0.15 mm except where indicated.

Pad Configuration:

- Input: 10
- Output: 5
- Ground: All other pads

Package Material:
 Body: Al_2O_3 ceramic
 Lid: Kovar, Ni plated
 Terminations: Au plating 1 μ m min, over a 1.3-8.9 μ m Ni plating

MARKING



Part Number
 Date Code (YY=year, DDD=day)

ESD Mark
 Denotes Pad 1

