



## Delay Line



### Description:

The XDL09-9-204S is a surface mount delay line that uses a slow wave coupling structure that maximizes the amount of delay per unit area over other distributed delay structures. The XDL09-9-204S can be used in amplifier linearization applications from 869 – 894 MHz. The XDL09-9-204S is ideal for the delay element required in the main loop of feed forward amplifiers. The Xinger delay lines are a low cost, high quality alternative to the traditional coaxial and filter solutions presently available. Parts have been subjected to rigorous qualification testing and units are 100% tested. Produced with 6 of 6 RoHS compliant tin immersion.

### Features:

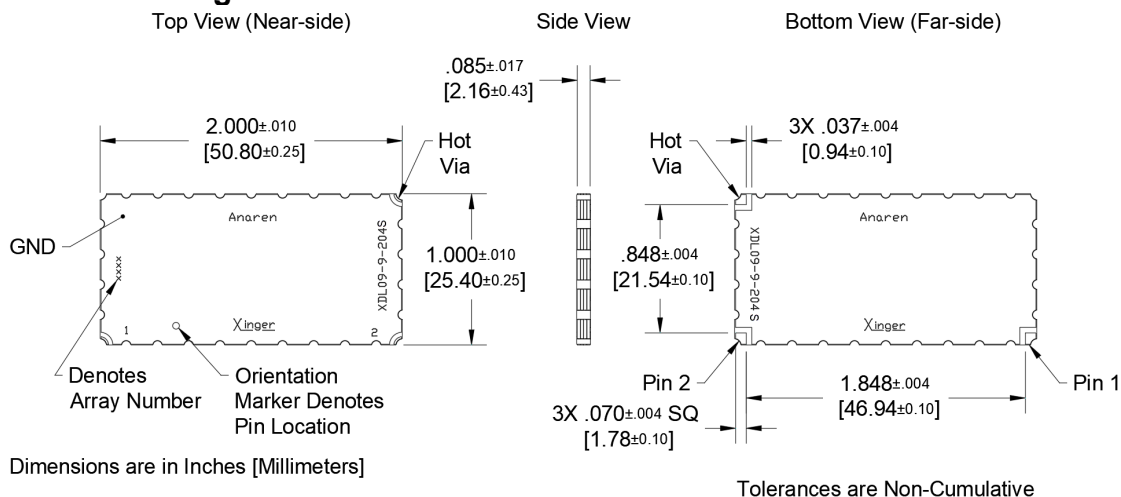
- Production Friendly
- Consistent Delay
- Stable over Temperature
- Surface Mountable
- Available in Tape & Reel
- Non-Lead Solder Paste Compatible
- 100% Tested
- Lead Free

### Electrical Specifications:

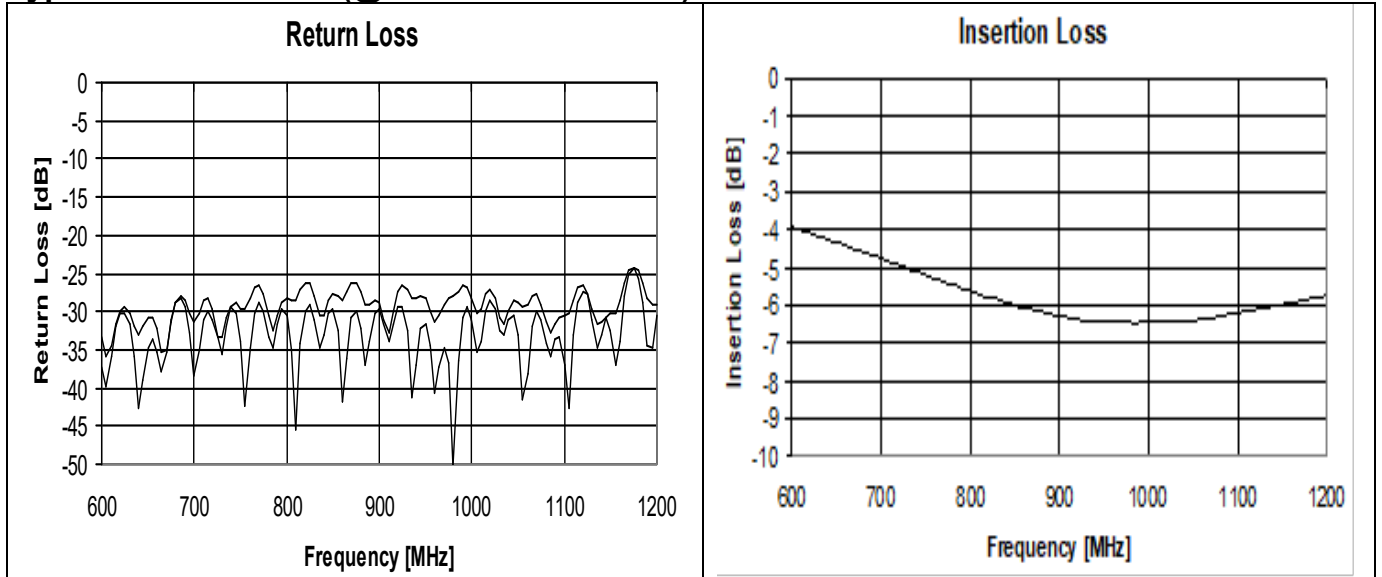
Frequency (MHz.)	869-894
Mean Delay (nS)	20.25±0.40
Deviation from Linear Phase (Degrees Max)	±1.00
Amplitude Flatness (dB p-p)	0.20
Return Loss (dB min)	20
Insertion Loss (dB/nS)	0.35
Power Handling (Watts)	1
Operating Temp. (°C)	-55 to +150

Specification based on performance of unit properly installed on microstrip printed circuit boards with 50 Ω nominal impedance. Specifications subject to change without notice

### Mechanical Drawing:



**Typical Performance: (@ 25°C on test board)**



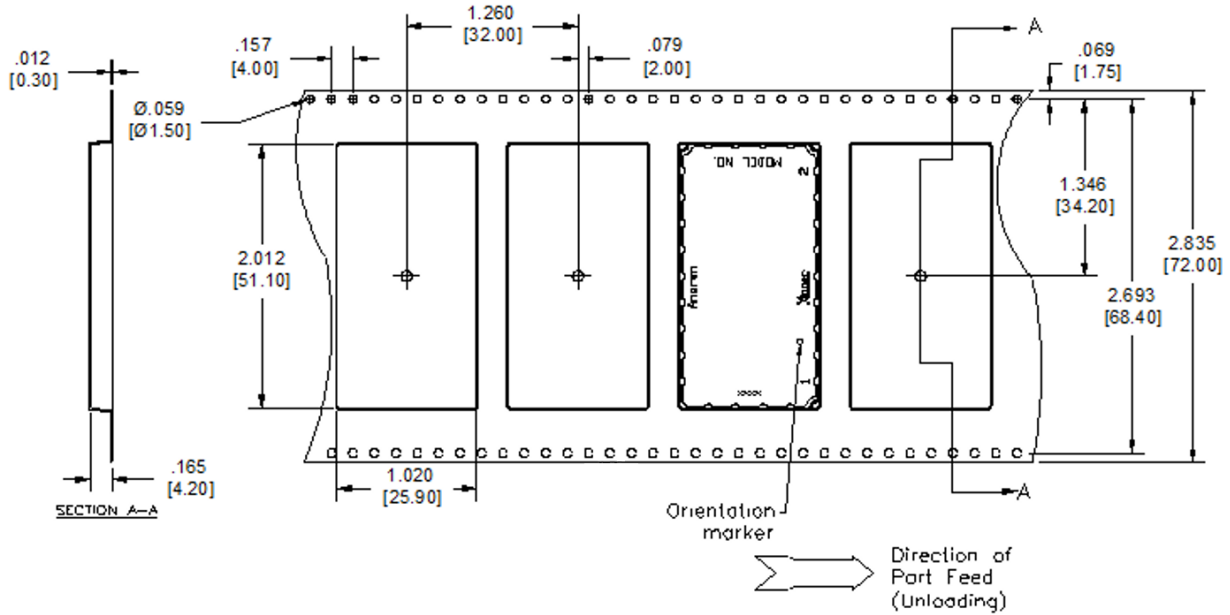
**Average Delay**

The average delay is defined as the group delay of the input signal through the delay line. The lot-to-lot variation is reflected in the plus/minus tolerance given in specifications.

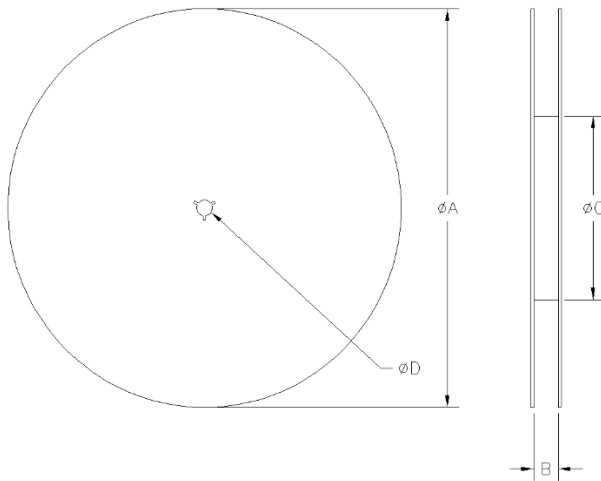
Refer to TTM Application Note AAN-232 for further information on Xinger delay lines.

**Packaging and Ordering Information:**

Parts are available in tape and reel. Packaging follows EIA 481. Parts are oriented in tape and reel as shown below. Minimum order quantities are 300 pieces per reel.



DIMENSIONS ARE IN INCHES [MILLIMETERS]



**TABLE 1 (for 300 pcs)**  
**REEL DIMENSIONS: inches [mm]**

ØA	13.0 [330.0]
B	2.835 [72.0]
ØC	6.00 [152.4]
ØD	0.512 [13.0]

**Contact us:**  
rf&s\_support@ttm.com