

# Xinger®

## Delay Line



### DESCRIPTION

The XDL15-2-020S can be used in amplifier linearization applications from 0.3 – 2.7 GHz. Small form factor of XDL15-2-020S is ideal for cascading to obtain longer delay. 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 finish.

### ELECTRICAL SPECIFICATIONS\*

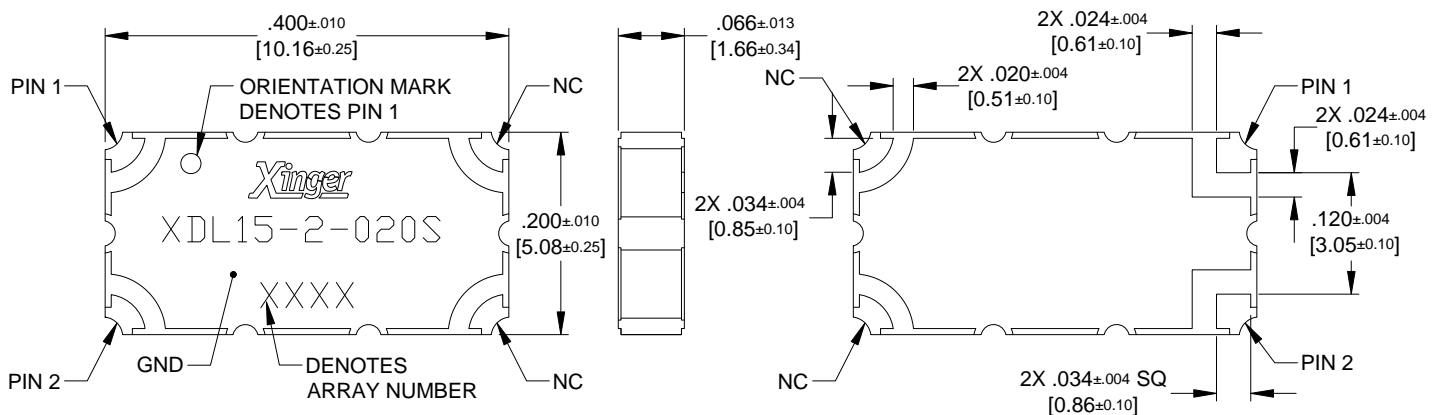
#### Features:

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

Frequency (MHz.)	Return Loss (dB) (min)	Insertion Loss per ns (dB/ns)	Group Delay (ns)
300 -2000	-17	-0.9	2.01 ± 0.17
2000-2700	-14	-1.1	2.20 ± 0.20

\* Specification based on performance of unit properly installed on Anaren Test Board 66111-0001.  
 \* Specifications subject to change without notice. Refer to parameter definitions for details.

### Mechanical Outline

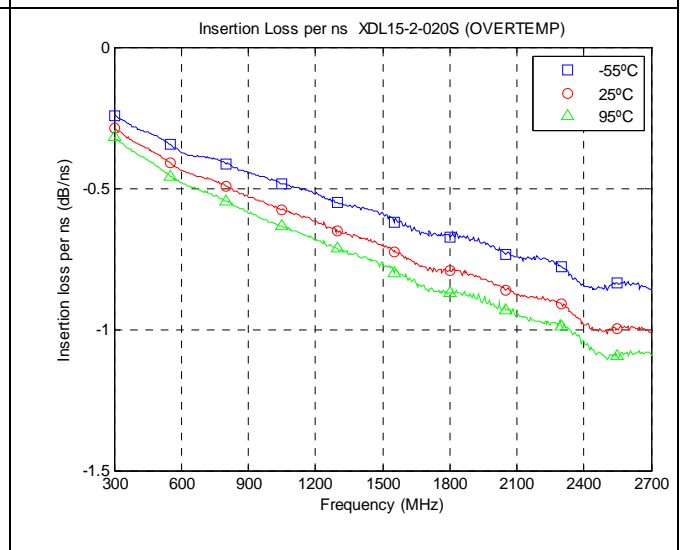
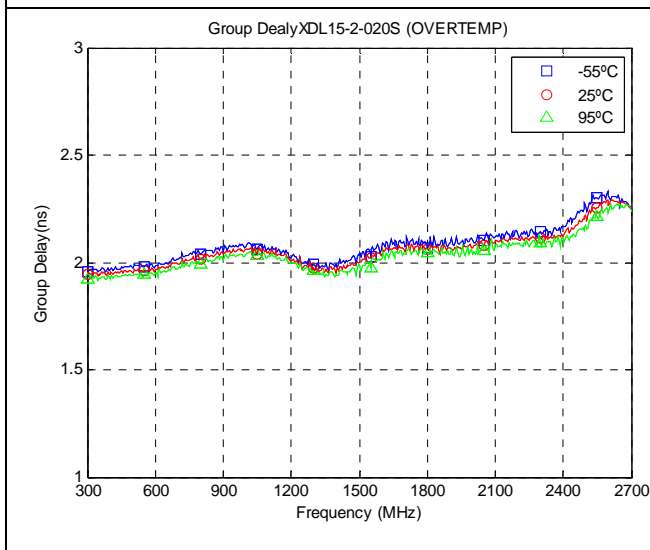
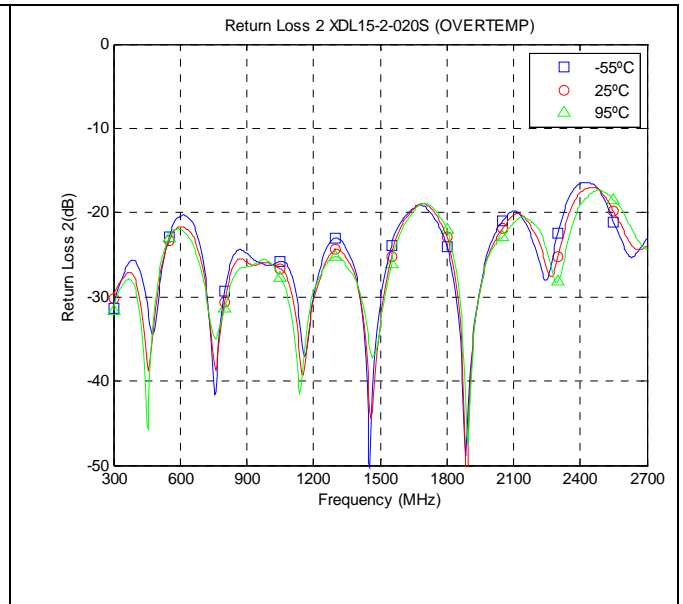
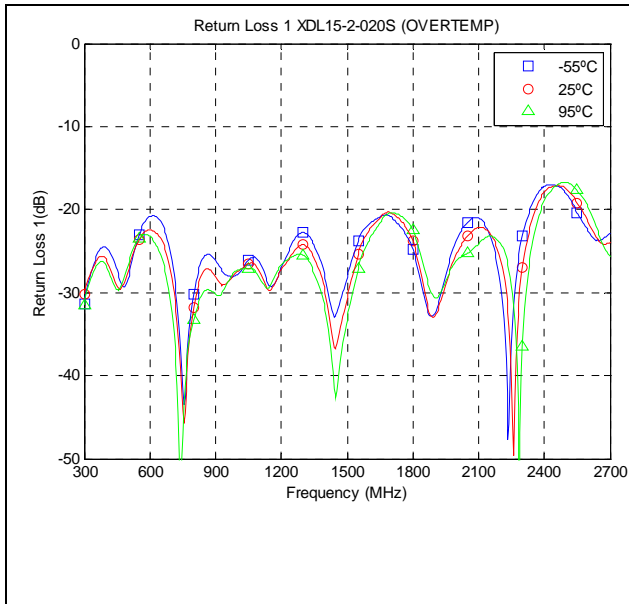


Dimensions are in Inches [Millimeters]  
 XDL15-2-020S Mechanical Outline

Tolerances are Non-Cumulative



### TYPICAL PERFORMANCE: 300 MHz to 2700 MHz



### CASCADING XDL15-2-020S

If more than 2ns delay is needed, cascading XDL15-2-020S can provide group delay of 4ns, 6ns and 8ns. Please refer to the app-note for the recommend mounting footprint for cascading the delay. Gap of 2mm between the cascaded parts is needed with solder mask in between.

USA/Canada: (315) 432-8909  
 Toll Free: (800) 544-2414  
 Europe: +44 2392-232392

Available on Tape and Reel For Pick and Place Manufacturing.

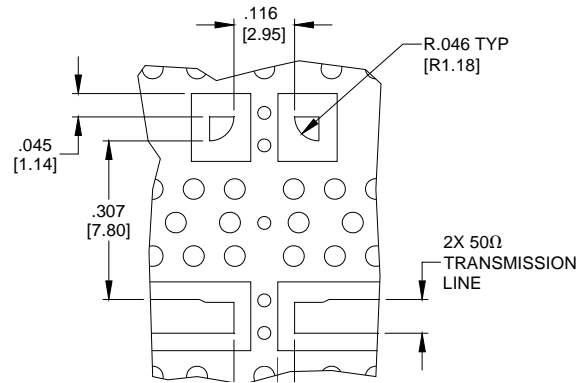
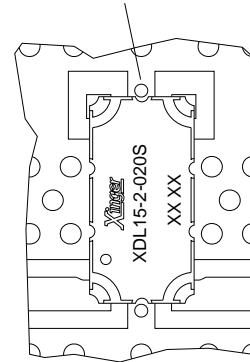


### MOUNTING GUIDELINES:

In order for Xinger surface mount delay lines to work optimally, there must be  $50\Omega$  transmission lines leading to and from all of the RF ports. Also, there must be a very good ground plane under the part with a number of plated thru holes to ensure proper electrical performance. If any of these conditions are not satisfied, insertion loss, average delay and VSWR may not meet published specifications.

When a surface mount delay line is mounted to a printed circuit board (PCB), the primary concerns are; insuring the RF pads of the device are in contact with the circuit trace of the PCB and the ground plane of neither the component nor the PCB are in contact with the RF signal. An example of how the PCB footprint could look is shown below. In particular designs, the  $50\Omega$  lines need to be adjusted to the unique dielectric coefficients and thicknesses as well as varying pick and place equipment tolerances.

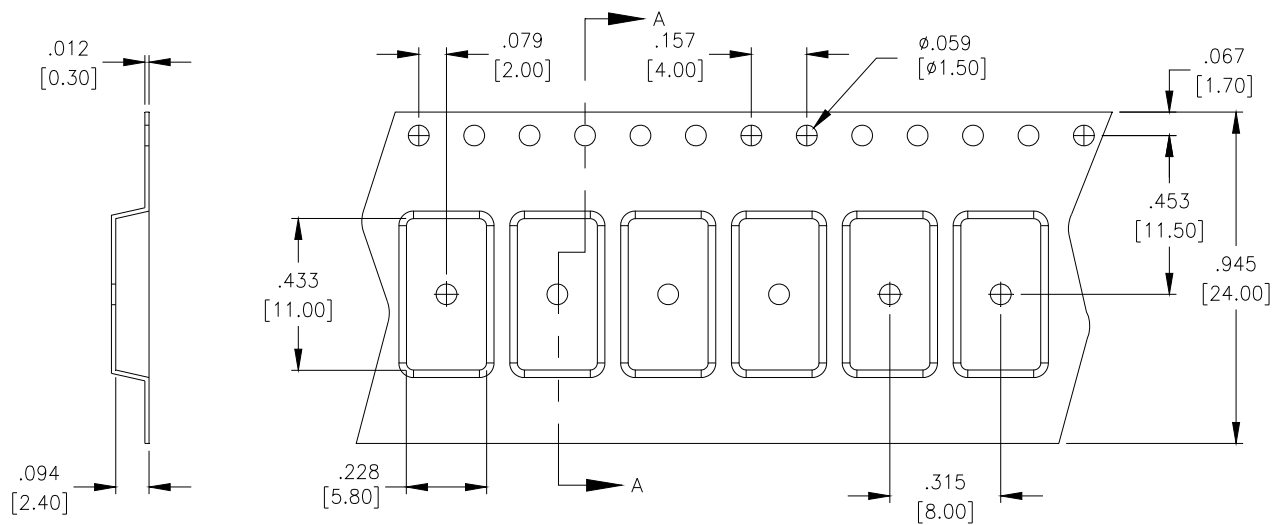
To ensure proper electrical and thermal performance there must be a ground plane with 100% solder connection underneath the part orientated as shown with text facing up.



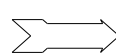
### Packaging and ordering Information

Parts are available in both reel. Packaging follows EIA 481-2. Parts are oriented in tape and reel as shown below. Minimum order quantities are 2000 per reel.

#### Carrier Tape



SECTION A-A



Direction of  
Part Feed  
(Unloading)

Dimensions are in Inches [Millimeters]

#### Reel

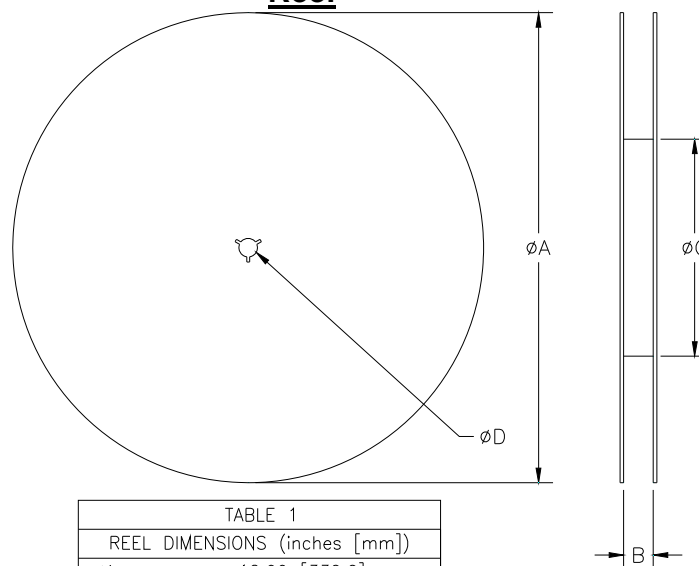


TABLE 1	
REEL DIMENSIONS (inches [mm])	
øA	12.99 [330.0]
B	.945 [24.0]
øC	4.017 [102.03]
øD	0.512 [13.0]

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