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Find the *Tektronix / Picosecond Pulse Labs 5915-7.46GHz* at our website: *Click HERE*

MODEL 5915-X
LOW-PASS RISETIME FILTERS

PRODUCT SPECIFICATION

- **-3 dB Frequency 35 MHz to 10 GHz**
- **Available For All Data Rates**
- **Z-Matched, No Reflection - No Echo**
- **Risetime 35 ps to 10 ns**
- **Now Available Without Mounting Plate**



The Model 5915-X Low-Pass Risetime Filters are designed for use in high-speed digital networks and telecom systems. Filters are available for all data rates. The -3 dB bandwidth of the standard filters is 0.75 * Bit Rate. In addition, PSPL can build custom filters for any frequency from 35 MHz to 10 GHz. These filters are a PSPL proprietary, absorption filter design that has attenuation and group delay responses similar to those of the **Bessel-Thomson** filter. Bessel-Thomson filters filter by reflection and thus can cause increased bit error rates and eye diagram closure due to multiple reflections. By contrast, the PSPL filters filter by absorption. They have excellent impedance matches and very good return losses, both within and above the filter pass band. For additional details on these filters, see PSPL application note, AN-7a, "Low-Pass Risetime Filters for Time Domain Applications." When ordering, specify the desired -3 dB bandwidth frequency or 10%-90% risetime.

Return Loss	>15 dB at f_o, typical	**Max Voltage**	50 V DC
Risetime	Tr ~= 0.35/f_o	**Insertion Loss**	< 0.02 dB at DC
Bandwidth (-3 dB), f_o	35 MHz to 10 GHz, specify on order	**Impedance**	50 Ω
f_o Tolerance at 23 C	2%, 5% f > 4 GHz	**Connectors**	SMA (refer to ordering information below)
Max. Power	23 dBm at f_o	**Temperature**	-25 C to + 90 C
Max Current	1 A	**Warranty**	One year. See Terms and Conditions of Sale for details

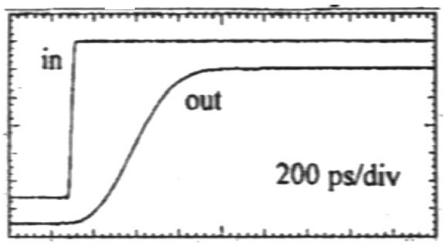
Ordering Information

Base Model Number	Description	
5915-100-XXX	Low-Pass Filter or Risetime Filter; SMA input jack — output jack	with mounting plate
5915-110-XXX	Low-Pass Filter or Risetime Filter; SMA input jack — output plug	
5915-121-XXX	Low-Pass Filter or Risetime Filter; SMA input plug — output plug	
5915-131-XXX	Low-Pass Filter or Risetime Filter; SMA input jack — output jack	without mounting plate
5915-132-XXX	Low-Pass Filter or Risetime Filter; SMA input jack — output plug	
5915-133-XXX	Low-Pass Filter or Risetime Filter; SMA input plug — output plug	
Add a three-character value to specify frequency or risetime as follows: XXXMHZ or GHZ where XXX = –3 dB frequency between 35.0 and 999 MHz or between 1.00 and 10.0 GHz XXXNS or PS where XXX = 10% - 90% risetime between 1.00 and 10.0 ns or between 35.0 and 999 ps		

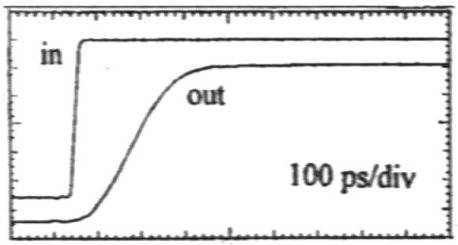
Contact PSPL for other connector combinations. These filters are bi-directional. Either port may be the input.

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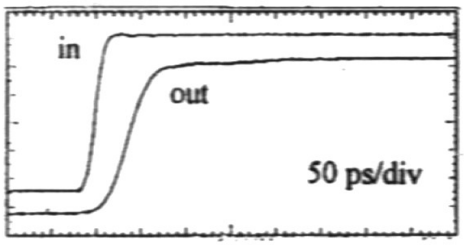
Gigabit Ethernet Filter
f(-3 dB) = 938 MHz

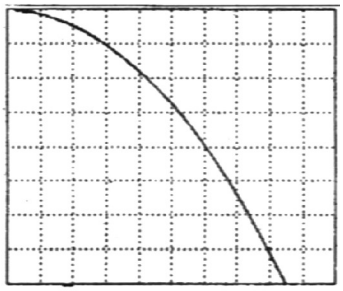


SONET OC-48 Filter
f(-3 dB) = 1.87 GHz

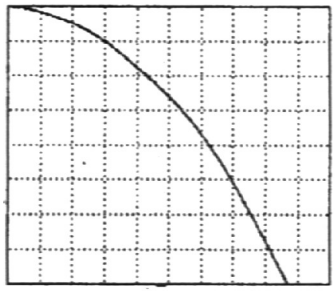


SONET OC-192 Filter
f(-3 dB) = 7.46 GHz

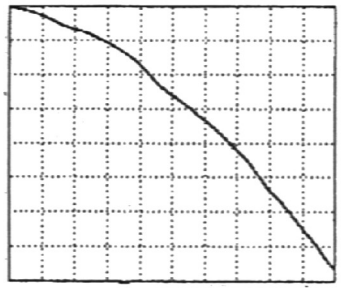




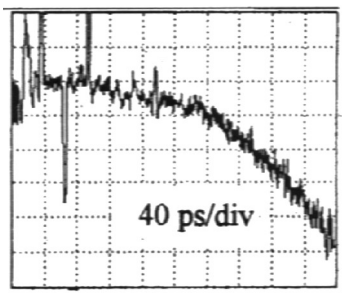
2 dB/div and 250 MHz/div
S_{21} Insertion Loss



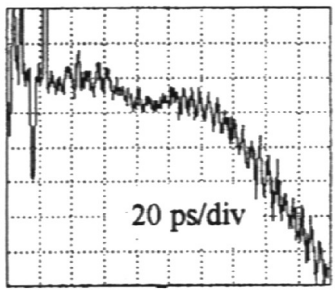
2 dB/div and 500 MHz/div
S_{21} Insertion Loss



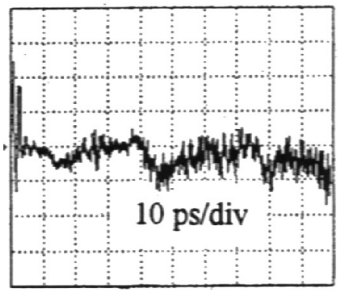
2 dB/div and 2 GHz/div
S_{21} Insertion Loss



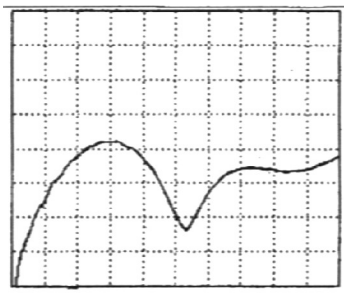
40 ps/div and 250 MHz/div
S_{21} Group Delay



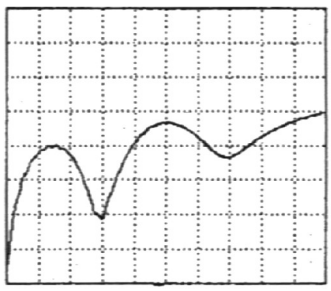
20 ps/div and 500 MHz/div
S_{21} Group Delay



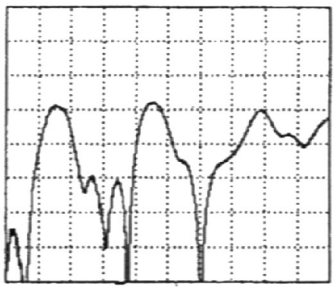
10 ps/div and 2 GHz/div
S_{21} Group Delay



5 dB/div and 250 MHz/div
S_{11} Return Loss



5 dB/div and 500 MHz/div
S_{11} Return Loss

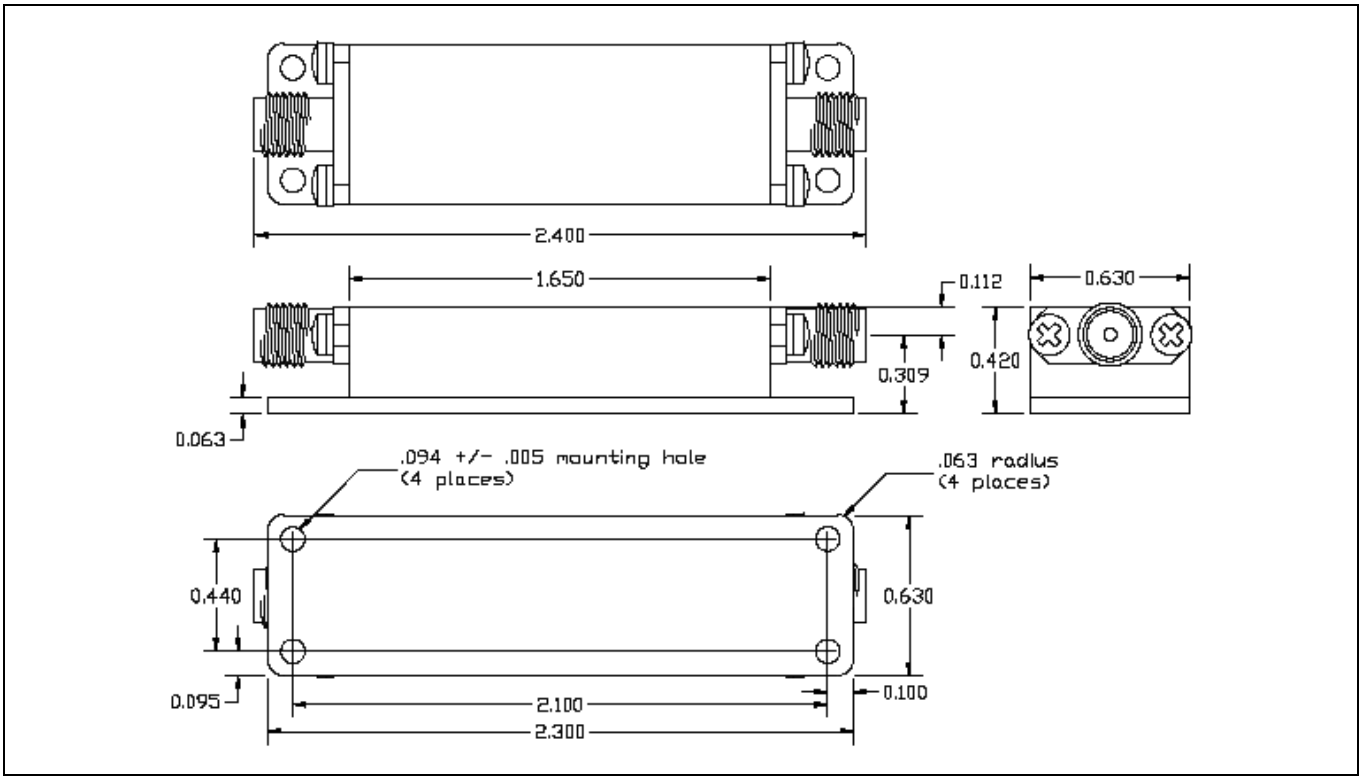


5 dB/div and 2 GHz/div
S_{11} Return Loss

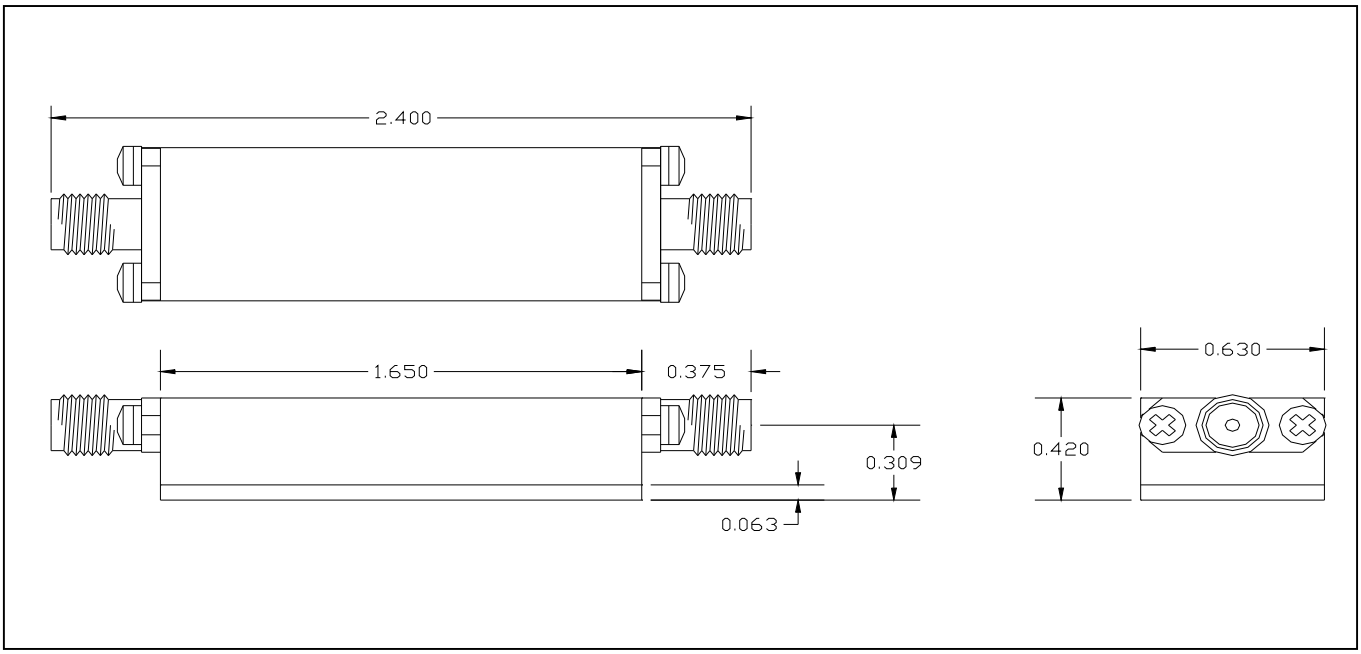
Frequency responses measured using a Wiltron 37369A, 40 MHz to 40 GHz vector network analyzer.
20 ps risetime, pulse step responses measured using a PSPL Model 4015C 15 ps Pulse Generator
and an HP-54124A, 50 GHz oscilloscope.

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Mechanical Drawing with Mounting Plate



Mechanical Drawing without Mounting Plate



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