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Find the *Tektronix / Picosecond Pulse Labs 5933-110-7.46GHZ* at our website: *Click HERE*

Model 5933-7.46GHz
10 Gbit Flat Group Delay Filter



- **OC-192**
- **Z-matched**
- **Low Reflection**
- **Low-Pass Risetime Filter**

The PSPL model 5933 Flat Group Delay Low-Pass Filter is designed for OEM use in high-speed digital networks and telecom systems. The devices use a proprietary, absorptive filter design that has attenuation and time domain characteristics similar to those of the 4th order ***Bessel-Thomson*** filter. Traditional Bessel-Thomson designs filter by reflecting stop-band frequency signals 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. The Flat Group Delay style filter exhibits quasi-Gaussian insertion loss characteristics, with superior time domain performance.

Parameter	Performance	Comments
Bandwidth (-3dB), f_o	7.46 GHz standard	0.75 * OC-192 Bit Rate Frequencies from 4.5 – 18 GHz available as custom product
BW Tolerance @ 23° C	±3%	
Risetime	47 ps (OC-192 version)	10% - 90%
Return Loss	>12 dB	0-25 GHz
Group Delay	±3ps	0.1-13 GHz
Max Power, avg	29 dBm	Total Spectral Power
Operating/Storage Temperature	-10 to +70 °C, max power	linearly de-rated to 0W at 110 °C
BW Thermal Drift	-2.1 MHz / °C typical	-3.1 MHz / °C maximum
Impedance	50 Ω	
Warranty	One Year	See Terms and Conditions of Sale for details.
Dimensions	41.5 x 15.9 x 10.5 mm, overall	

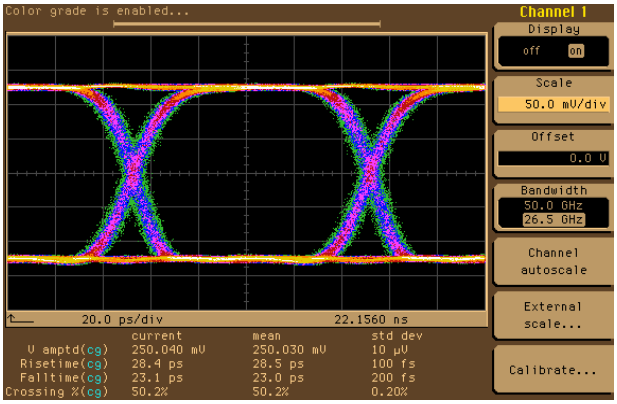
Note: All parameters listed are typical unless max/min guaranteed limits are provided.

Ordering Information

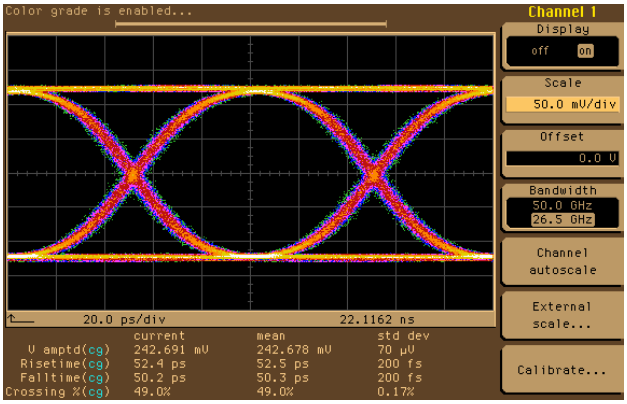
Model Number	Connector Configuration*	
5933-110-7.46GHZ	SMA	Jack (f) — Plug (m)
5933-100-7.46GHZ	SMA	Jack (f) — Jack (f)
5933-205-7.46GHZ	2.4mm	Jack (f) — Plug (m)
5933-200-7.46GHZ	2.4mm	Jack (f) — Jack (f)

* Other connector combinations are available on request.

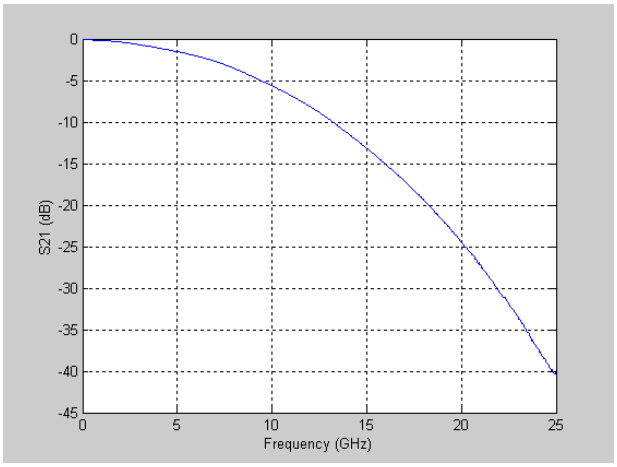
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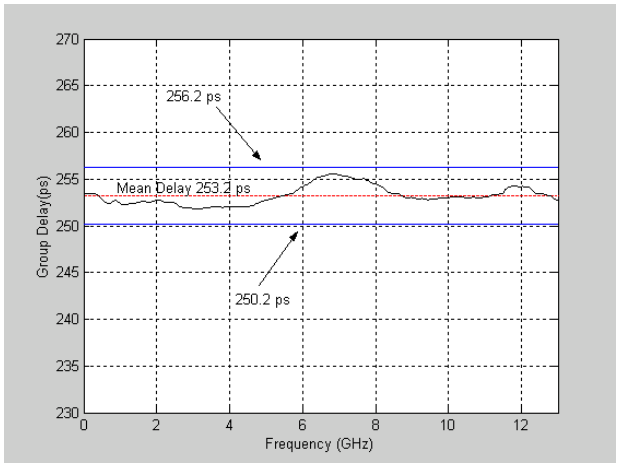
Input Eye Diagram, 10 Gbit/s Data Stream



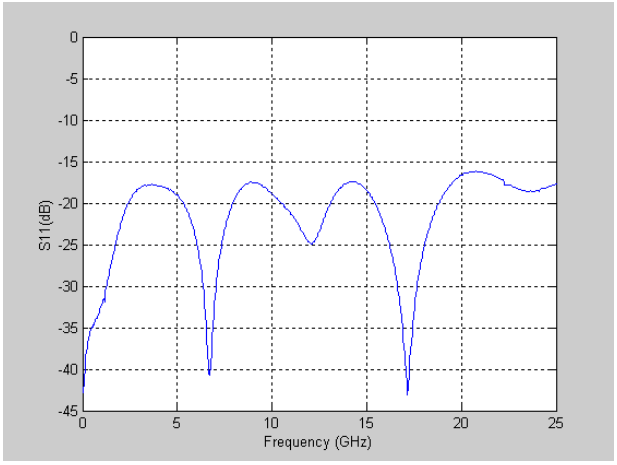
Filter Eye Diagram, 10 GBit/s Datastream



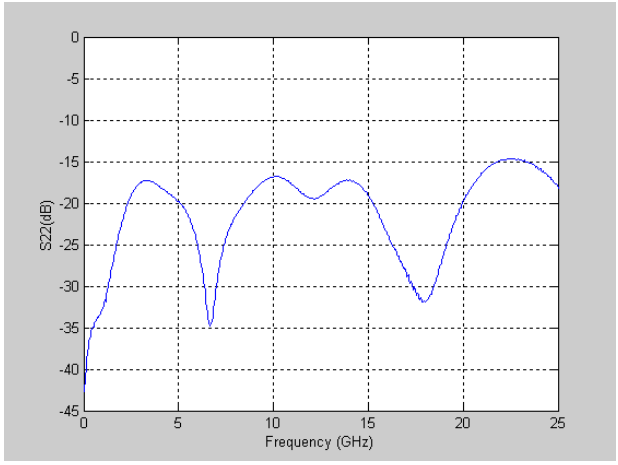
Insertion Loss, 0-25 GHz



Group Delay, 0.1-13 GHz
Measured with Anritsu 37397C Vector Network Analyzer

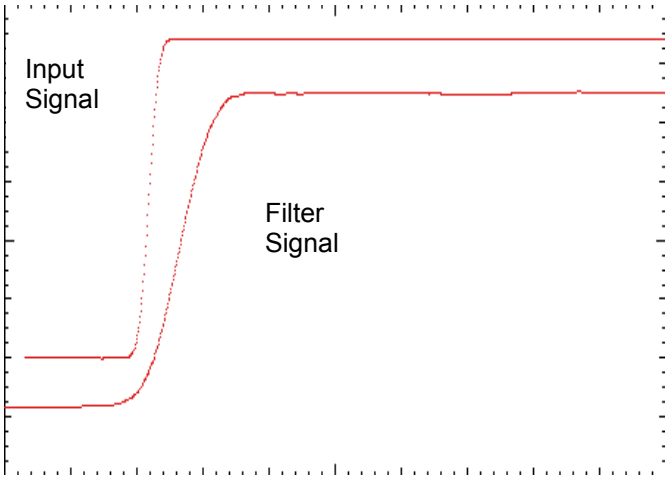


Input Return Loss, 0-25 GHz



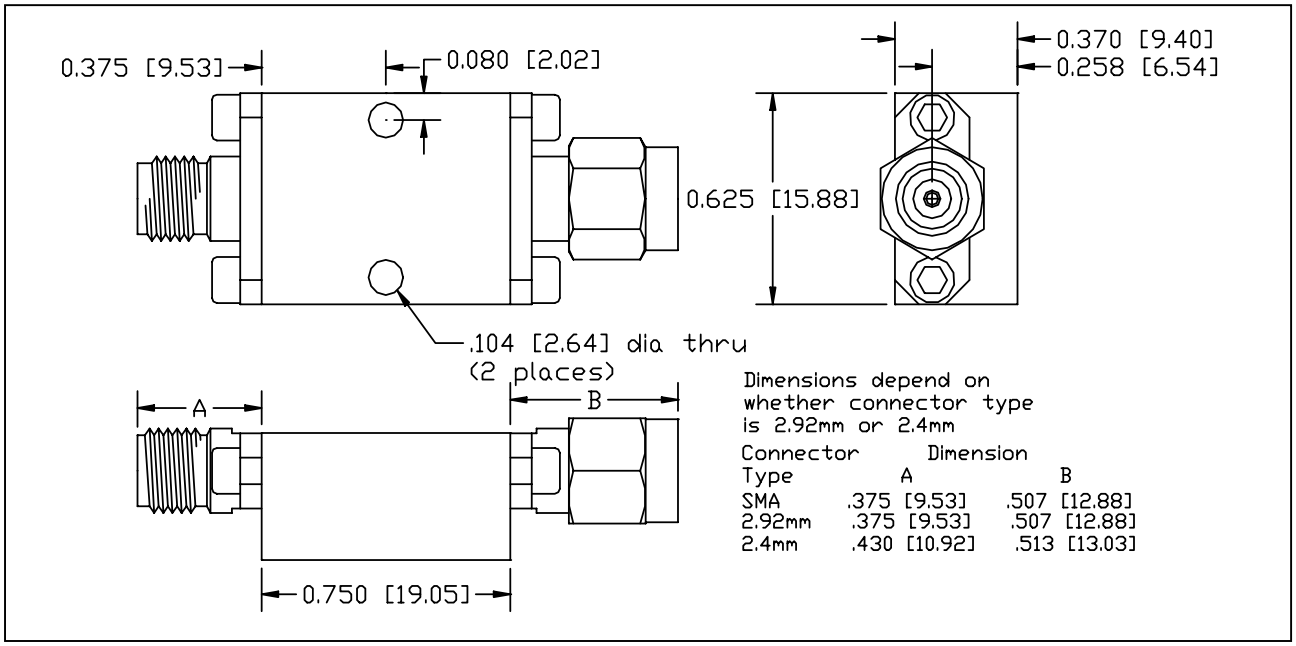
Output Return Loss, 0-25 GHz

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TDT Response to 15 ps step. Timebase 50 ps/div.
Measured with PSPL 4015C, 15 ps Pulse Generator
& HP54750, 50 GHz Oscilloscope.
See AN-5C for details.

5933 Mechanical Drawing



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