



WAVEFADE™ LOWPASS FILTER

FL-1200

Wavefade™ filters utilize state-of-the-art filter technology to achieve ultra-flat group delay as compared to conventional Bessel-Thomson filters. These filters are intended for high data rate digital signaling applications and guarantee an open, symmetrical eye without causing unwanted pulse overshoot (ringing) or group delay distortions. Wavefade™ filters are absorptive with excellent 50 Ω impedance match in both passband and stopband thereby reducing unwanted reflections in the system. The nominal magnitude response of Wavefade filters is designed to match the 4th order Bessel magnitude response for compatibility with SONET/SDH compliance testing standards (e.g. ITU-T Recommendation G.691).

Features

- Ultra-Flat Group Delay
- Absorptive-type filter (i.e. Return Loss > 10 dB in Stopband)
- Bessel-like Passband Rolloff
- Yields Symmetrical Eye Diagrams with minimal ringing and group delay distortion
- Standard and User Defined Filters

Applications

- High data rate, high sensitivity digital receivers
- SONET/SDH Optical Reference Receiver compliance testing
- Advanced optical modulation formats (e.g. Duobinary)

Specifications

Parameter	Min	Typ	Max
3 dB Cutoff Frequency (GHz)		12	
Cutoff Tolerance (%)		± 5	
Return Loss (dB)	10	15	
Impedance (Ω)		50	
Rejection @ 2*Cutoff (dB)	11.4	13.4	
RF Power (W)			1
Group Delay Flatness @ 2*Cutoff (ps)			± 5

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Performance Figures

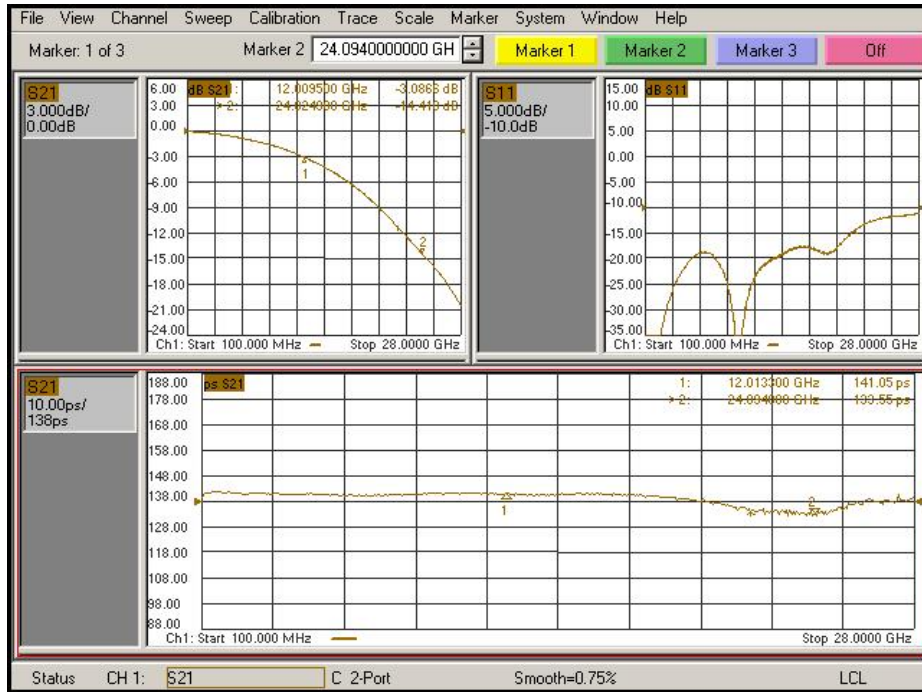


Fig. 1. Magnitude Response(Top) and Group Delay Response(Bottom) for a typical 12 GHz Wavefade™ measured at an Aperture of 200 MHz.

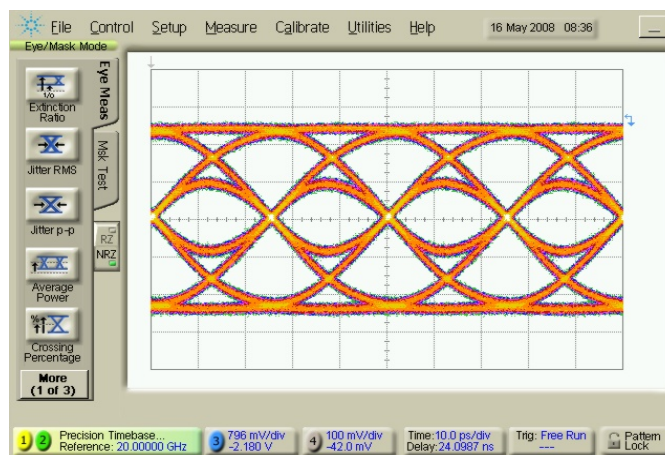


Fig. 2. Filtered output @ 40 Gb/s using a 12 GHz Wavefade™.

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Page 3

Model Number ¹	Connector Options		Description	Outline
	Example: FL-1200-2K (2.92 M-F)			
FL-1200 No dash (F-F)	-1 (F-M) -2 (M-F) -3 (M-M)	S (SMA) K (2.92) V (2.40)	Center Frequency 12 GHz, Lowpass Filter with SMA Female connectors	FL2

¹Connectors are SMA Female by default.

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