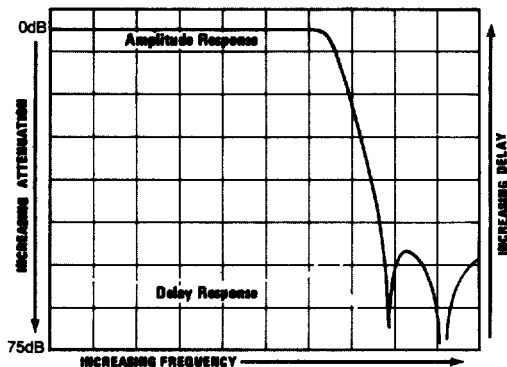


VIDEO FILTERS

DELAY EQUALIZED NTSC LOWPASS FILTERS VFL, MVFL & VCL SERIES

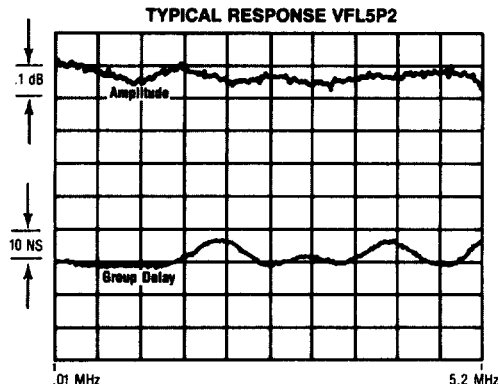
The delay equalized Lowpass Filters VFL, MVFL & VCL are designed for analog and digital video filtering applications. Band limiting of video signals is accomplished with very low distortion due to the tight control of delay in the passband. The fast transition from passband to stopband along with good stopband rejection to over 100 MHz make them very useful filters.

These filters are also used as Anti-Aliasing Pre Filters before analog to digital converters. When used as Post-Aliasing Filters in digital processing applications the passband can be shaped to correct for $\frac{\sin x}{x}$. (See VSL series.)



TYPICAL AMPLITUDE & DELAY RESPONSE VFL & NEW MINIATURE SIZE MVFL SERIES

These graphs display the typical amplitude and delay response of the VFL series of Delay Equalized Lowpass Filters. This family of filters is based on a transition shape factor of 1.375.



We have designed many Lowpass Filters for the video field having sharp roll-offs and good passband delay linearity with cut-off frequencies from .1 MHz to 10 MHz. The most popular of these are used to attenuate the harmonics of the NTSC color sub-carrier frequency 3.58 MHz. The most commonly used filters in this group are tabulated below:

VFL & NEW MINIATURE SIZE MVFL SERIES

Standard Size Max. Insertion Loss = 1dB	Miniature Size Max. Insertion Loss = 2dB	Max. .25dB Attenuation @ Frequency (MHz)	Max. 3.0dB Attenuation @ Frequency (MHz)	Min. 45dB Attenuation @ Frequency (MHz)	Approximate Passband Delay (Nanoseconds)
Part No.	Part No.				
VFL1P7	MVFL1P7	1.75	1.92	2.41	1691
VFL2P2	MVFL2P2	2.25	2.45	3.10	1325
VFL2P7	MVFL2P7	2.75	3.00	3.77	1082
VFL3P2	MVFL3P2	3.20	3.50	4.40	928
VFL3P5	MVFL3P5	3.50	3.84	4.82	846
VFL3P8	MVFL3P8	3.80	4.16	5.22	781
VFL4P0	MVFL4P0	4.00	4.38	5.51	741
VFL4P5	MVFL4P5	4.50	4.93	6.19	659
VFL5P2	MVFL5P2	5.20	5.70	7.16	570
VFL6P0	MVFL6P0	6.00	6.58	8.27	494
VFL6P5	MVFL6P5	6.50	7.12	8.95	457

Maximum Delay Variation = 3% to .25dB Frequency

Maximum Passband Ripple = $\pm .125$ dB, 10 kHz to passband end

Maximum Insertion Loss < 1 dB at 10kHz

Impedance = 75 Ohms

VFL Size: 4" x 2" x 1/4" in metal can with BNC Connectors.

MVFL Size: 3" x 1 1/4" x 1/2" in metal can with terminals for PC mounting.

DELIVERY FROM STOCK

VCL SERIES

Part No.	Maximum 3% Delay Distortion to Frequency (MHz)	Maximum .25dB Attenuation @ Frequency (MHz)	Minimum 45dB Attenuation @ Frequency (MHz)	Approximate Passband Delay (Nanoseconds)
VCL3P2	3.2	3.2	3.90	1100
VCL3P5	3.5	3.5	4.27	1010
VCL3P8	3.8	3.8	4.63	930
VCL4P2	4.2	4.2	5.12	840
VCL4P5	4.5	4.5	5.49	780
VCL4P9	4.9	4.9	5.98	720
VCL5P2	5.2	5.2	6.34	680
VCL5P7	5.7	5.7	6.95	620

Maximum Delay Variation = 3%

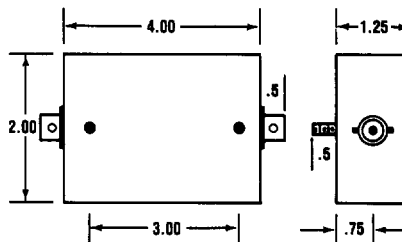
Maximum Passband Ripple = $\pm .125$ dB, 10 kHz to passband end

Maximum Insertion Loss < 2.5dB at 10kHz

Impedance = 75 Ohms

Size: 5" x 2" x 1/4" in metal can with BNC Connectors.

DELIVERY FROM STOCK



VFL series with B.N.C. connectors size = 4" x 2" x 1/4"

VCL series with B.N.C. connectors size = 5" x 2" x 1/4"

MVFL SERIES WITH PC TERMINALS 3" x 1 1/4" x 1/2"

