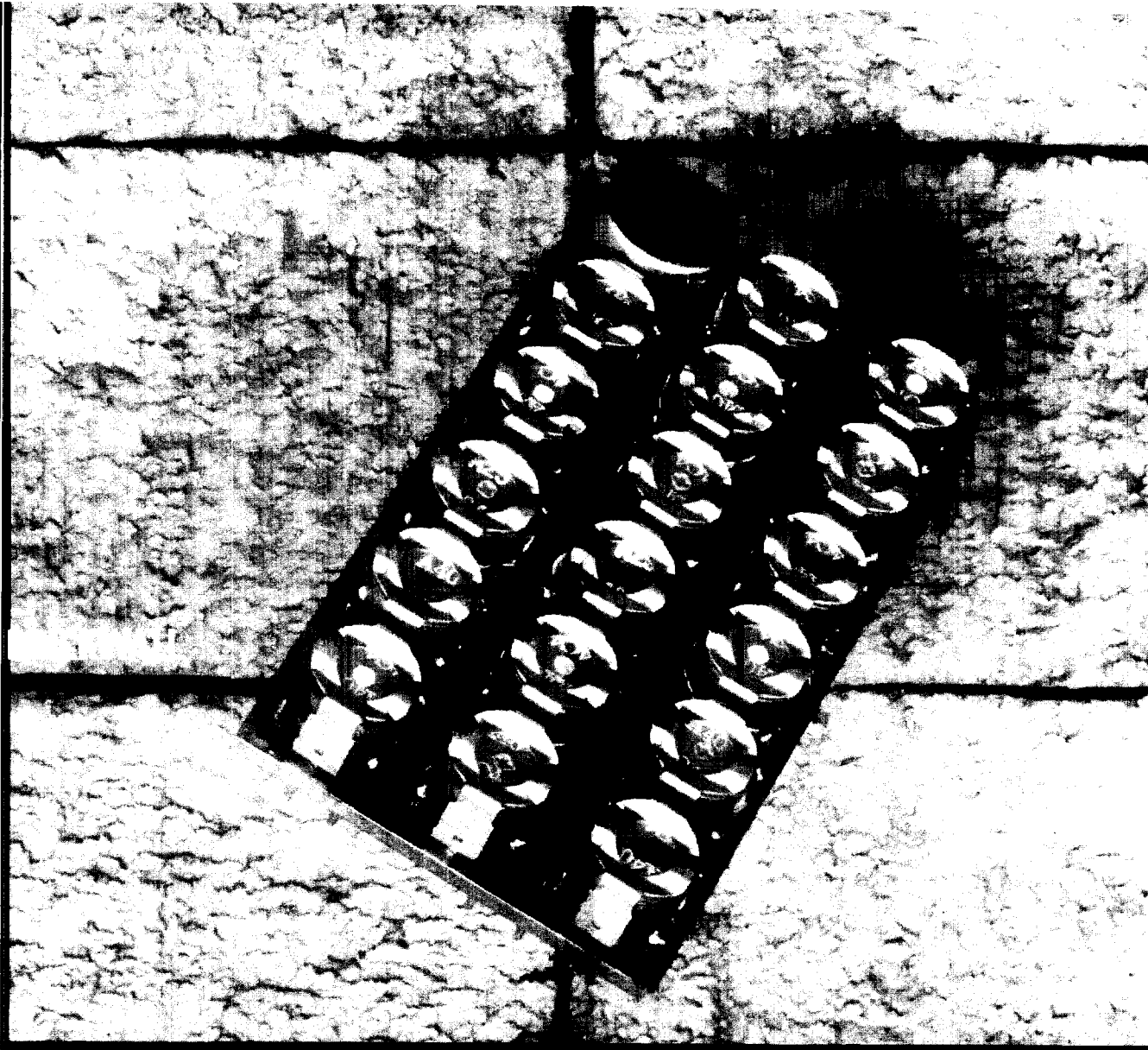


# BRICKWALL FILTER

THE COMPACT



ALLEN AVIONICS  
ABW SERIES  
**ULTRA SHARP  
CUTOFF  
MINIATURE  
LOWPASS VIDEO  
BRICKWALL FILTER**

ALLEN AVIONICS, INC.

\*ALVAS002\*

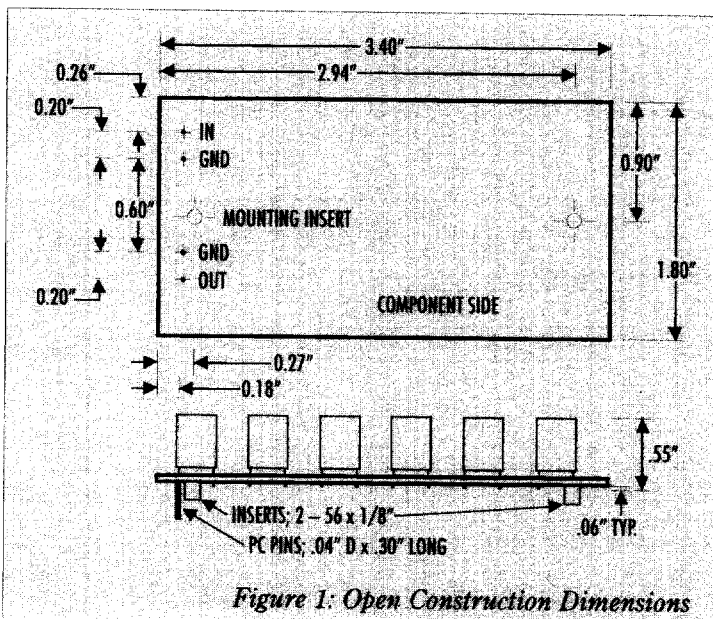
# ALLEN AVIONICS ABW SERIES ULTRA SHARP CUTOFF MINIATURE LOWPASS VIDEO BRICKWALL FILTER

The ABW Series Miniature Broadcast Quality Brickwall Filters were designed with original equipment manufacturers in mind. Their miniature size and superior performance will enhance any analog or digital television, RF or microwave product.

## APPLICATIONS

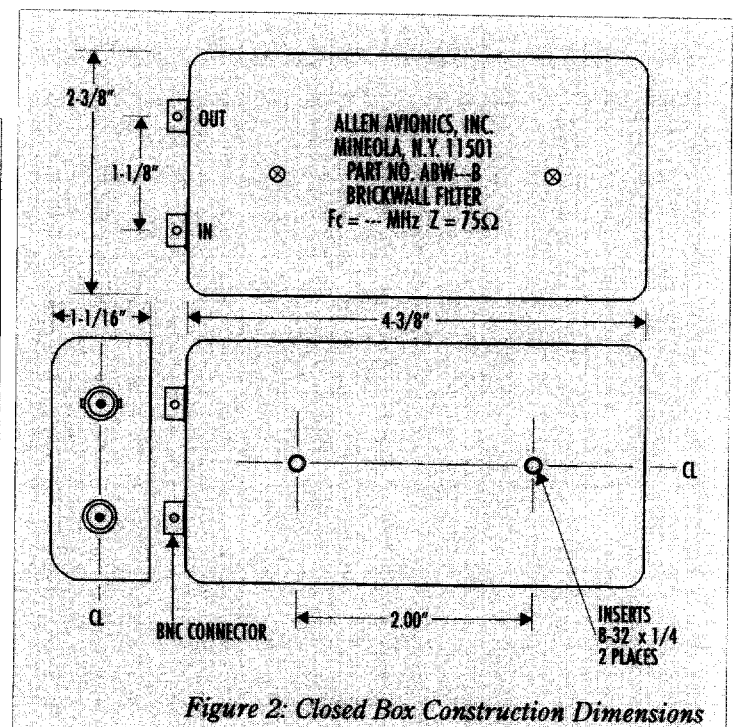
These ultra sharp cutoff filters are designed to improve analog and digital television signals by reducing interference from higher frequency subcarriers. Some applications are:

- NTSC and PAL video systems.
- ENG microwave systems.
- Microwave and studio equipment.
- Roofing filters.
- Lowpass filtering of audio from video signals.
- Removing out-of-band interference.
- Eliminating audio buzz caused by audio sub-carriers.



## FEATURES

- Ultra sharp cutoff filter with greater than 42dB attenuation.
- Stopband ratio =  $1.066 \times F_c$  (end of passband ripple frequency).
- ABW-4P20 will pass 4.2 MHz and give greater than 42 dB rejection at 4.48 MHz.
- Cutoff frequency available from 2 MHz to 8 MHz.
- Phase & Delay equalized over 92.8% of the passband.
- 75 Ohm impedance.
- Good return loss. Greater than 20 dB.
- Available in open or closed-box construction.



# TECHNICAL DATA

## Description

Ultra sharp cutoff video lowpass filter available in open or closed-box construction.

## Performance

- Passband flatness from 100 KHz..... Less than .15 dB peak-to-peak
- Insertion loss at 100 KHz..... 5 dB max.
- Impedance ..... 75 Ohms
- Return loss..... Greater than 20 dB
- Group delay ripple .....  $\pm 10$  nanoseconds max.\*
- Stopband attenuation ..... 42 dB min. to over 100 MHz
- Stopband ratio @ 42 dB .....  $1.066 \times Fc^{**}$
- Operating temperature .....  $+32^\circ$  to  $+150^\circ F$  ( $0^\circ$  to  $+65^\circ C$ )

\*ABW-2P00 =  $\pm 15$  nanoseconds max.  
 \*\*Fc = end of passband ripple frequency

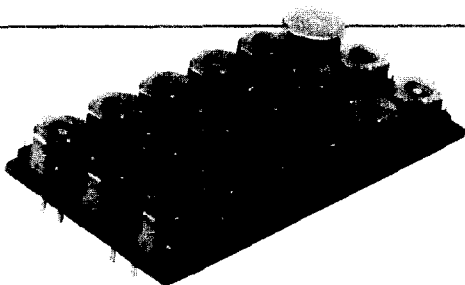
## Specifications

Part Number	End of Passband Ripple (MHz)	Start of Stopband (42 dB); Reference Frequency 100 KHz (MHz)	Group Delay Ripple nsec to (MHz)	Nominal Propagation Delay (Microseconds)
ABW-2P00-P	2.00	2.13	30	1.85
ABW-4P20-P	4.20	4.48	20	3.90
ABW-4P49-P	4.49	4.79	20	4.17
ABW-5P00-P	5.00	5.33	15	4.64
ABW-5P10-P	5.10	5.44	15	4.73
ABW-5P40-P	5.40	5.76	15	5.01
ABW-5P56-P	5.56	5.93	15	5.16
ABW-6P00-P	6.00	6.40	15	5.57
ABW-6P80-P	6.80	7.25	15	6.31
ABW-8P40-P	8.40	8.95	15	7.80

For boxed unit (closed construction) replace "P" with "B" in part number. Example: ABW-4P20-B

The above filters are suitable for use with any of the following television systems: M-NTSC, B & G-PAL, I-PAL and D-PAL.

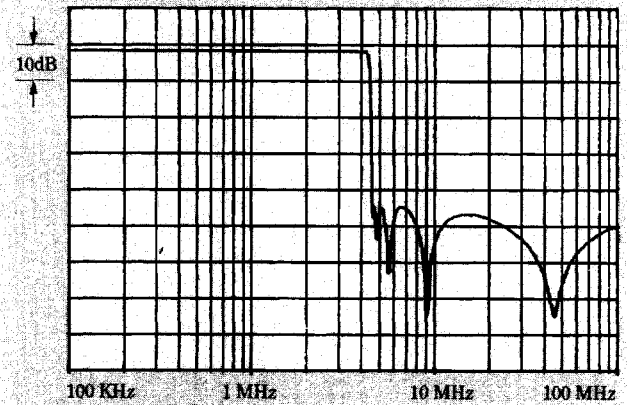
The above table lists the most popular cut-off frequencies. Any other cut-off frequency can be supplied to your requirement. Please call for information.



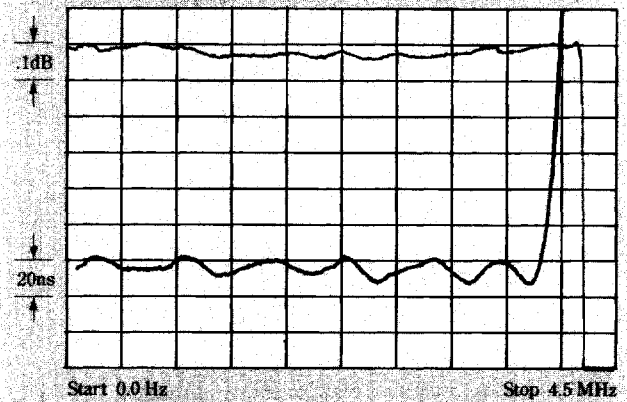
# PERFORMANCE DATA

## Typical Response Curves: ABW-4P20

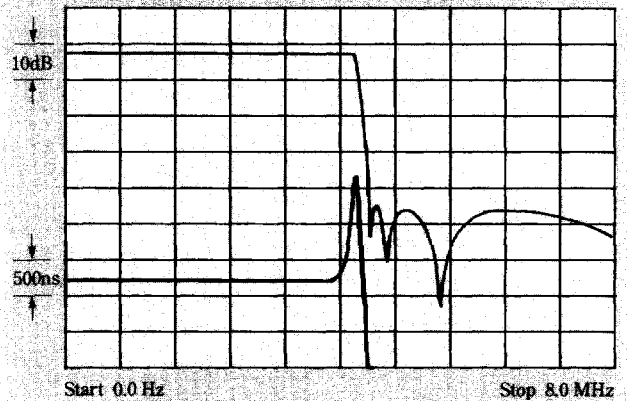
### Amplitude to 100 MHz.



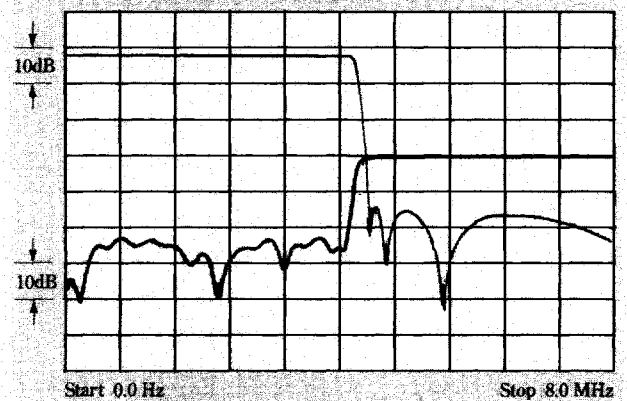
### Amplitude & Delay.



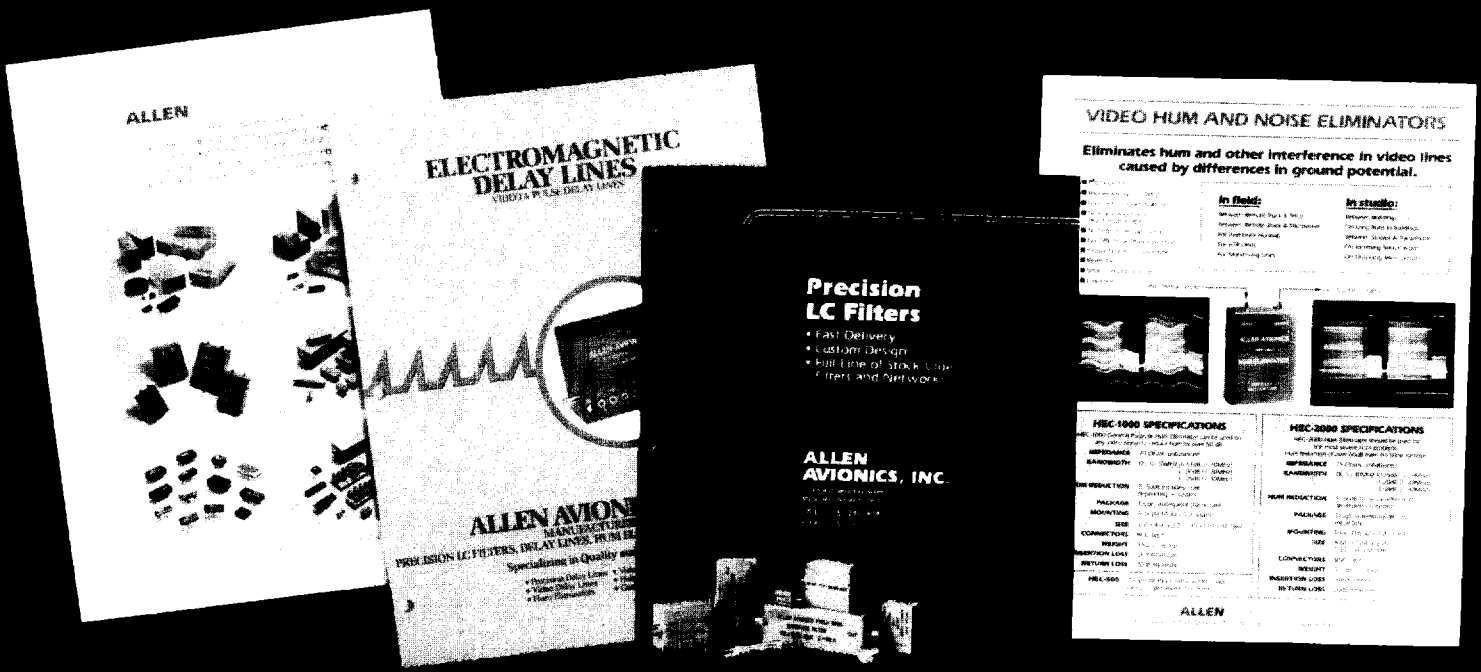
### Amplitude & Delay.



### Amplitude & Return Loss.



Actual plot of performance.



Allen Avionics, Inc. is the world's most complete single source for standard and custom filters and delay lines including Video Delay Lines, General Purpose Delay Lines, Video Filters, LC Filters from 20 Hz to 3 GHz, Video Hum Eliminators and Isolation Transformers, Digital Delay Lines, Video Instrumentation and Miniature Lowpass Video Brickwall Filters.

Call, write or fax for additional literature, specifications or sales assistance.

Thank you for your inquiry.

**ALLEN AVIONICS, INC.**  
 224 East Second Street • Mineola, N.Y. 11501 • Tel: (516) 248-8080 • Fax: (516) 747-6724  
 Represented by