



## ABW Miniature Brickwall Filter

### ULTRA SHARP CUTOFF MINIATURE LOWPASS VIDEO BRICKWALL FILTER

abwpr

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

#### Key Features and Benefits

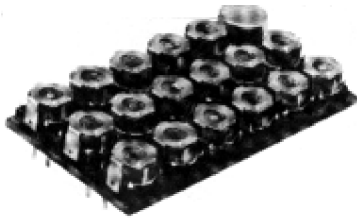
These ultra sharp cutoff filters are designed to improve analog and digital television signal by reducing interference from higher frequency subcarriers. Some application are:

- ▶ NTSC and PAL video systems
- ▶ ENG microwave system
- ▶ 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

- 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 42dB 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

#### Description

- Ultra sharp cutoff video lowpass filter available in open or closed box construction.
- For boxed unit (closed construction) replace "P" with "B" in part number. Example: ABW-4P20-B



#### Performance

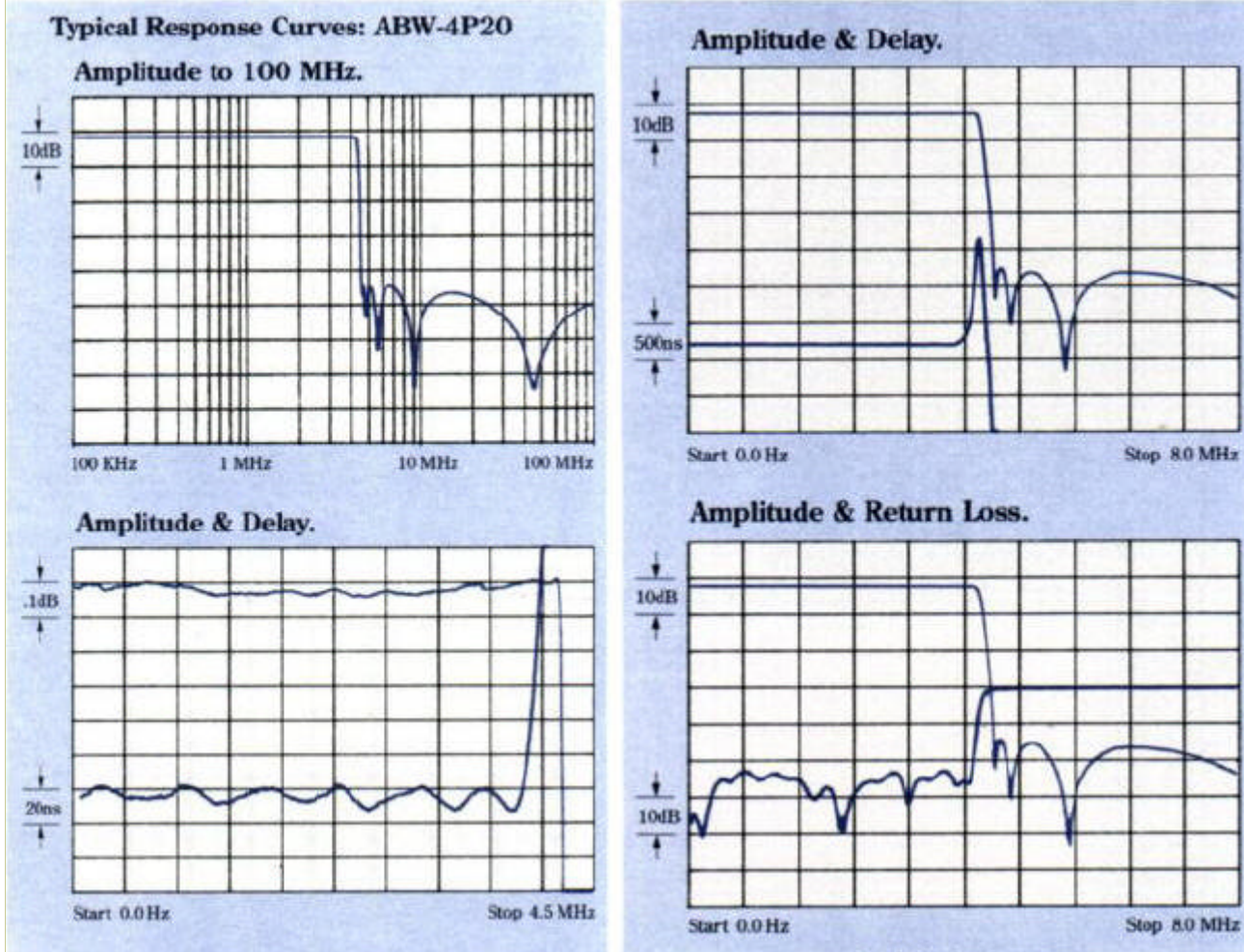
- Passband Flatness from 100KHz Less than .15 dB peak to peak
- Insertion Loss at 100 KHz 5 dB max.
- Impedance 75 Ohms
- Return Loss Greater than 20 dB
- Group Delay Ripple  $\pm 10$  nanoseconds max.\*
- Stopband Attenuation 42 dB min. to over 100 MHz
- Stopband Ratio @ 42 dB  $1.066 \times F_c$  \*\*
- Operating Temperature +32° to +150°F (0° to +65°C)

\* ABW-2P00 =  $\pm 15$  nanoseconds max.

\*\*  $F_c$  = end of passband frequency

Part Number	End of Passband Ripple (MHz)	Start of Stopband (42 dB); Reference Frequency 100 KHz (MHz)	Group Delay Ripple		Nominal Propagation Delay (microseconds)
			nsec to	(MHz)	
ABW-2P00-P	2.00	2.13	30	1.85	3.045
ABW-4P20-P	4.20	4.48	20	3.90	1.450
ABW-4P49-P	4.49	4.79	20	4.17	1.356
ABW-5P00-P	5.00	5.33	15	4.64	1.218
ABW-5P10-P	5.10	5.44	15	4.73	1.190
ABW-5P40-P	5.40	5.76	15	5.01	1.130
ABW-5P56-P	5.56	5.93	15	5.16	1.095
ABW-6P00-P	6.00	6.40	15	5.57	1.015
ABW-6P80-P	6.80	7.25	15	6.31	0.895
ABW-8P40-P	8.40	8.95	15	7.80	0.725

**Performance Data**  
 Typical Response Curves: ABW-4P20



**Package Dimensions**

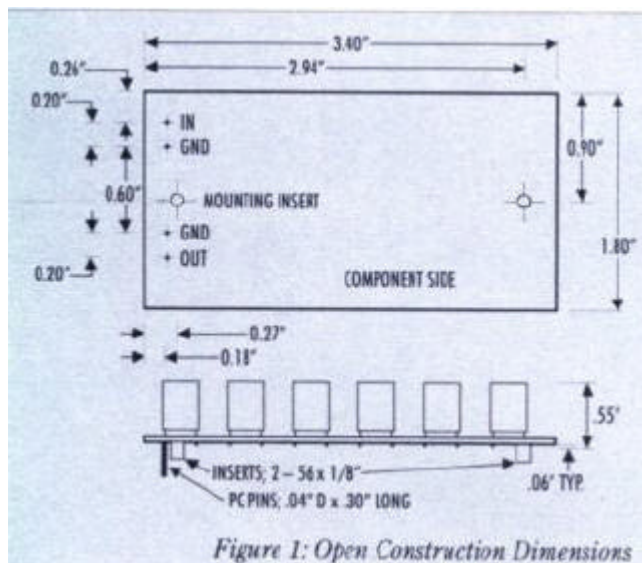


Figure 1: Open Construction Dimensions

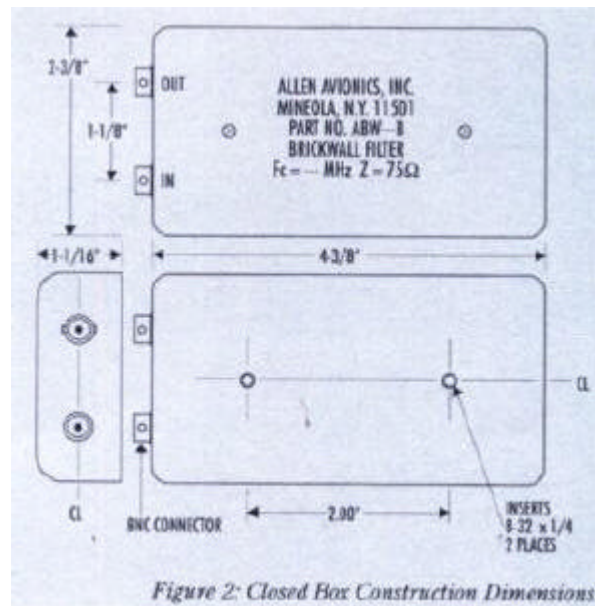


Figure 2: Closed Box Construction Dimensions

***Allen Avionics, Inc.***

224 East Second Street, Mineola, NY 11501

**Phone:** (516) 248-8080

**Fax:** (516) 747-6724

**E-Mail:** [Info@AllenAvionics.com](mailto:Info@AllenAvionics.com)

**We are pleased to accept**

