



## Hybrid Combiner

Employed as either a mask filter or a constant impedance combining module for high power UHF broadcast. The compactness of this device allows for combining of multiple signals while taking up a minimum amount of space. The structure of this device affords it the ability to provide constant impedance performance in adjacent channel applications as well as channel separations greater than 15 channels. Filters of this design have been used for many years in higher frequency space applications and now they are available for broadcast. The RWED filter is a constant impedance three, four or six pole filter device that has all of the attributes of a constant impedance mask filter/combiner.



- Compact design facilitates numerous mounting options
- High isolation synonymous with traditional style of constant impedance module
- Elliptical response achieved without the use of external coupling mechanisms
- Sampling ports available both before and after the filter
- Exceeds bandwidth limitations of traditional constant impedance devices using standard hybrid technology
- Combining systems are easily expanded to accommodate the addition of future channels
- Temperature compensated filters for close spaced combining applications



TYPICAL SPECIFICATIONS		
	4-Pole Filter	6-Pole Filter
Frequency Range, MHz	470 - 700, 600 - 860	
Channel Spacing	2 or more	Adjacent
Narrowband Input Power (maximum), kW Average*	35	25
Output Power (maximum), kW Average*	200	
Impedance, ohms	50	
Filter Type	Directional waveguide	Directional cross coupled Waveguide
Narrowband Input Connector	Variable based on application Up to 6-1/8" EIA Maximum	
Standard	ATSC, DVB-T, ISDB-T, NTSC & PAL	
Narrowband Insertion Loss at Channel Centre Frequency, dB (Nominal)	0.3	0.2-.03
Narrowband Group Delay Variation Over Channel BW, nsec (typ.)	+/-20	< 400
Wideband Input Connector	Variable based on application Up to 6-1/8" EIA Maximum	
Wideband Input Insertion Loss, dB (typ.)	< 0.05	< 0.1
Wideband Input Return Loss, dB (typ.)	> 26	
Narrowband to Wideband Isolation, dB (typ.)	> 32	
Wideband to Narrowband Isolation dB (typ.)	> 50	
Mounting	Frame Mounted	
Operating Temperature Range, degrees C	10 to 40	

\* Power ratings vary by application; contact Jampro for details.