

955 Series Low Power FM Band Pass Filter



Electronics Research, Inc. 955 Series FM Band Pass Filter product line for IBOC and Low Power Analog FM applications. The filter series is designed for use as a band pass filter for protection from undesirable cross modulation products and can also be configured as a branch combiner for combining two, three or more analog, HD Radio or Hybrid FM transmitters into a single antenna. ERI also has a constant impedance FM combining module available in the 955 Series. The filters are rated at 4.5 kilowatts average power (9 kilowatts with optional forced air-cooling) and can be tuned for any FM operating channel between 88 and 108 MHz.

The filter cavities are sized to provide low insertion loss resulting in minimal temperature rise and reduced transmitter power loss. The individual cavities are loop coupled so that each filter bank can be optimized for the particular application required and can be retuned in the field if necessary. The filters are provided with an integrated floor mounting frame, that can be suspended from a ceiling or wall mounted, with appropriate, customer supplied, mounting hardware.



Model TB55-8NA-2 Two Channel FM Tee Combiner. This system includes optional forced air cooling to increase power handling capability for both band pass filters and it includes optional non-adjacent coupling due to having two closely frequency spaced FM stations combined by the system.

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955 Series Reflective FM Band Pass Filter Specifications

Model	Input and Output	Number of Poles	Insertion Loss	Frequency Band Width to 30 dB Limit	Power Handling Capability	Forced Air Cooling Required	Non-Adjacent Coupling
955-3-00-22	1-5/8-inch	3	-0.30 dB	±1.5 MHz	4.5 kW	No	No
955-3A-00-22	1-5/8-inch	3	-0.30 dB	±1.5 MHz	9.0 kW	Yes	No
955-4-00-22	1-5/8-inch	4	-0.40 dB	±1.0 MHz	4.5 kW	No	No
955-4-0N-22	1-5/8-inch	4	-0.40 dB	±1.0 MHz	4.5 kW	No	Yes
955-4A-00-22	1-5/8-inch	4	-0.40 dB	±1.0 MHz	9.0 kW	Yes	No
955-4A-0N-22	1-5/8-inch	4	-0.40 dB	±1.0 MHz	9.0 kW	Yes	Yes

Model	Size							
	Height		Width		Length		Weight	
955-3-00-22	39.50 in	1003 mm	15.75 in	400 mm	42.00 in	1067 mm	150 lbm	68.0 kg
955-3A-00-22	42.50 in	1080 mm	15.75 in	400 mm	32.00 in	813 mm	155 lbm	70.3 kg
955-4-00-22	39.50 in	1003 mm	15.75 in	400 mm	55.13 in	1400 mm	200 lbm	90.7 kg
955-4-0N-22	52.25 in	1327 mm	15.75 in	400 mm	55.13 in	1400 mm	210 lbm	95.3 kg
955-4A-00-22	42.50 in	1080 mm	15.75 in	400 mm	55.13 in	1400 mm	205 lbm	93.0 kg
955-4A-0N-22	52.25 in	1327 mm	15.75 in	400 mm	55.13 in	1400 mm	215 lbm	97.5 kg

General Specifications

Group Delay Variation: < 100 nsec overall variation ±200 KHz carrier,

Minimum Channel Spacing: 955-3 2.0 MHz

955-4 0.8 MHz

VSWR: <1.10 : 1 at ±200 KHz, with combiner terminated into a 50-ohm resistive load

Input and output connection are 1-5/8-inch unflanged, male

AC power required for forced air-cooling: 115 VAC, 0.15 amps per fan. One (1) fan provided for 3-section filters and two (2) fans provided for 4-section filters.

Optional non-adjacent coupling loops or group delay correction recommended for frequency separations less than 1.2 MHz.

Loss values may be somewhat greater for frequency separations less than 1.8 MHz.

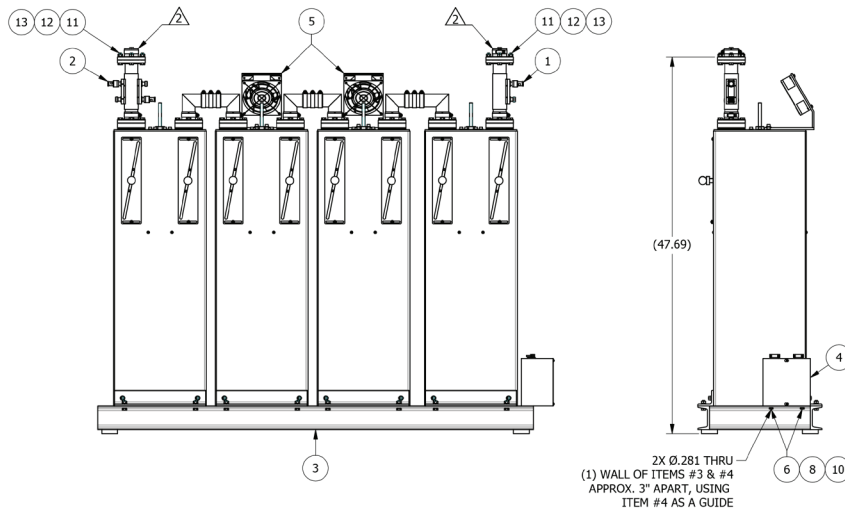
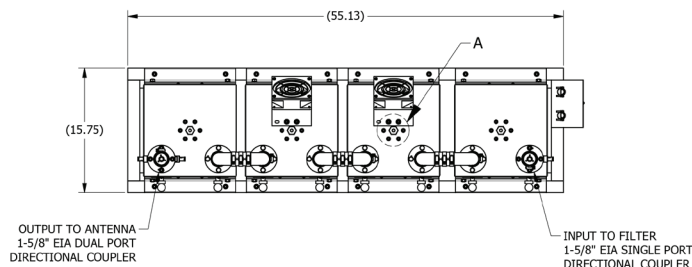
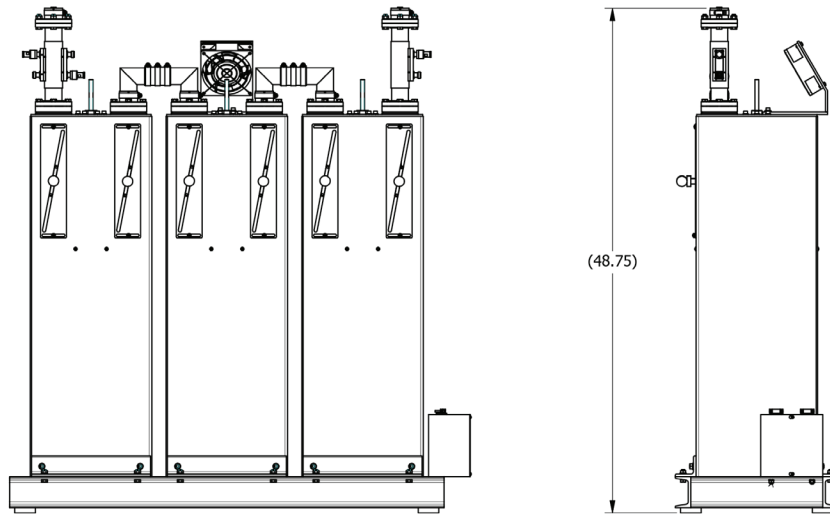
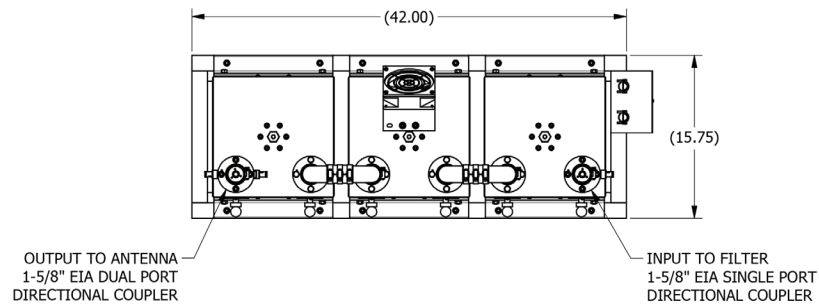
Specifications presented are typical, total system performance may vary. ERI reserves the right to change specifications and features.

Input power rating is valid to 2,000 feet (610 meters) above mean sea level, contact ERI for rating at higher elevations.

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Model 955-3A

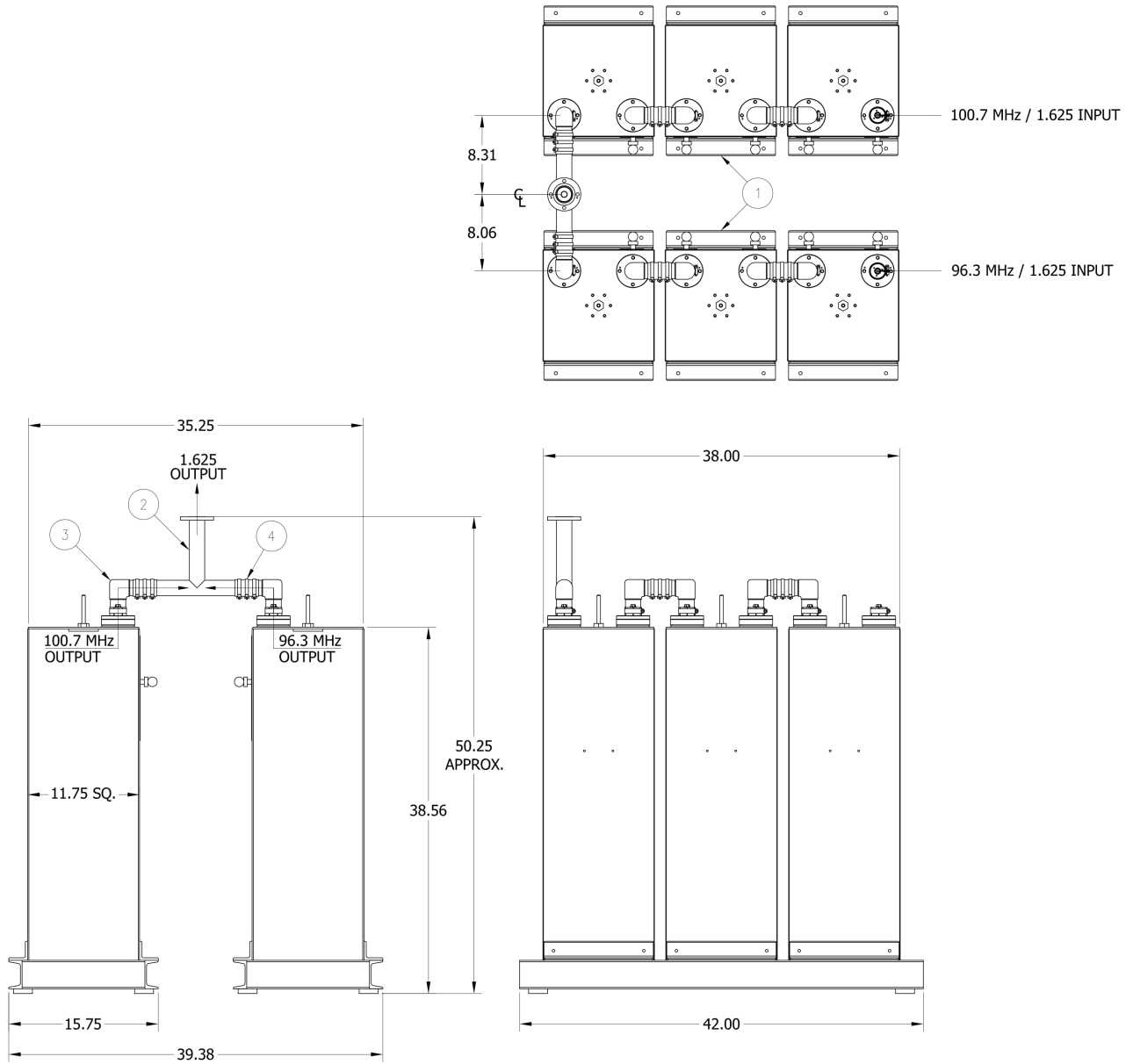
Three (3) Section FM Band Pass Filter with optional forced air cooling



Model 955-4A

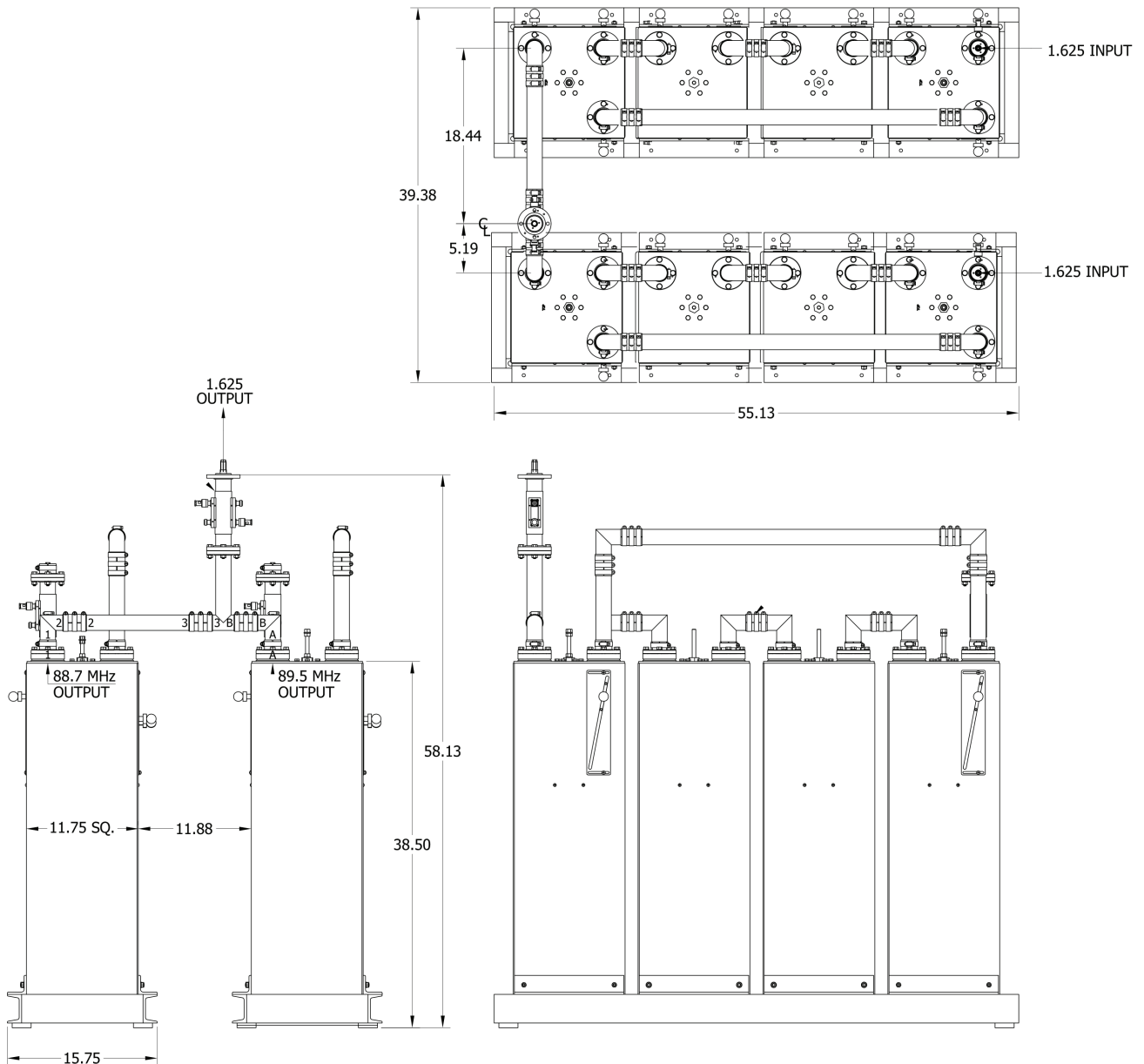
Four (4) Section FM Band Pass Filter with optional forced air cooling

955 Series Low Power FM Band Pass Filter



Typical Layout for TB55-6/2 FM Tee Combiner. Note that dimensions change, depending on frequency. Directional couplers at combiner inputs and combined output are not shown.

955 Series Low Power FM Band Pass Filter



Typical Layout for TB55-8/2 FM Tee Combiner. Note that dimensions change, depending on frequency. Directional couplers at combiner inputs included, shown with optional non-adjacent coupling loops.