



RFS offers a comprehensive product line of FM combiners to suit all common FM combining applications. The balanced, or constant impedance, bandpass design provides the best possible frequency response and specifications, and is ideal for large multi-station channel combiners or when frequency spacings are very close.

A balanced module consists of a balanced pair of bandpass filters, two 3dB couplers and a balancing load. The narrowband input corresponds to the filter resonant frequency, whereas the wideband input can be any other frequency in the 87.5 - 108 MHz band. The wideband input signal loss is very low because it does not pass through the bandpass filters. Modules can therefore be cascaded to form a multichannel combiner. The modular design enables extra channels to be easily added at a future date.

FEATURES / BENEFITS

- Compact size with small footprint for design power rating
- Can be field retuned to any frequency in the 87.5 - 108MHz band
- Invar temperature compensation for stable operation
- Integrated filter and coupler design for high reliability
- Vertical entry and exit without additional elbows
- Natural convection cooling
- Group delay corrector modules are available for complex multichannel systems
- Custom options such as patching facilities and power monitoring are available



CA3P200IB16 Integrated FM Combiner Module

Technical features

STRUCTURE

Product Line		Combiner Radio
Product Type		Band II (VHF) FM Balanced Combiner
Filter Type and Size		3 Pole, 200mm

ELECTRICAL SPECIFICATIONS

Frequency Range	MHz	87.5 - 108	
Impedance	Ω	50	
Minimum Channel Spacing	MHz	0.8	0.4
Narrowband Input Power	kW	3.5 (Temp Rise: 30°C) 5 (Temp Rise: 40°C)	2.4 (Temp Rise: 30°C) 3.2 (Temp Rise: 40°C)
Narrowband Insertion Loss	dB	<0.5	<0.8
Amplitude Variation	dB	< 0.1 to \pm 200 kHz	< 0.1 to \pm 100 kHz
Group Delay	ns	< 28 to \pm 100 kHz	< 390 to \pm 100 kHz
Wideband Input Insertion Loss	dB	<0.1	
Return Loss	dB	>30	
Isolation - N/B to W/B	dB	>32	
Isolation - W/B to N/B	dB	>50	
Model		CA3P200B9	CA3P200B16
Input Connector		7/8" EIA (flanged male)	7/8" EIA (flanged male)
Wideband Input Connector		7/8" EIA (flanged male)	1-5/8" EIA (flanged male)
Output Connector		7/8" EIA (flanged male)	1-5/8" EIA (flanged male)
Maximum Output Power	kW	5	15

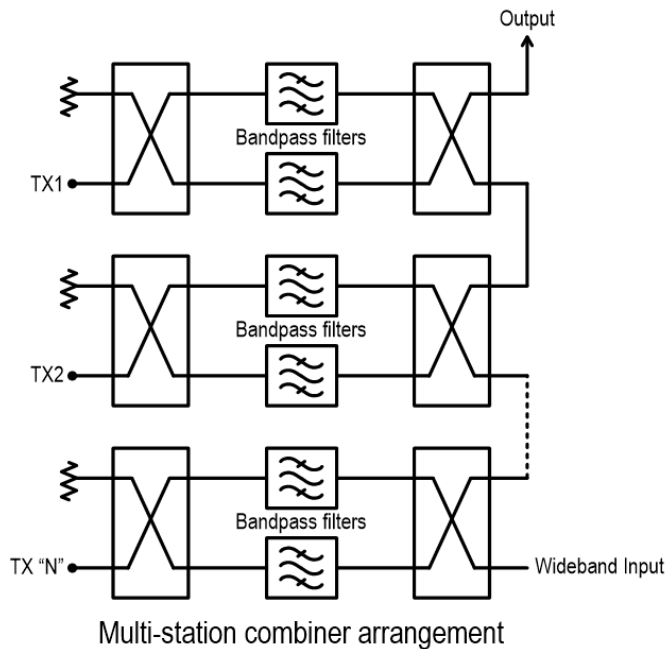
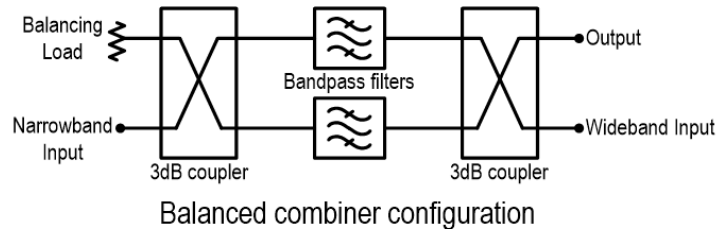


MECHANICAL SPECIFICATIONS

Model		CA3P200B9	CA3P200B16
Weight	kg (lb)	61 (135)	61 (135)
Dimensions (Height or Length)	cm (in)	116 (46)	116 (46)
Dimensions (Width)	cm (in)	50 (20)	50 (20)
Dimensions (Depth)	cm (in)	72 (28)	72 (28)
Cooling		Natural convection	

TEMPERATURE SPECIFICATIONS

Maximum Operating Temperature	°C (°F)	80 (176)
Ambient Temperature Range	°C (°F)	-5 to 55 (23 to 131)
Maximum Temperature Rise	°C (°F)	40 (104)
Humidity	%	95, non-condensing



External Document Links

Notes