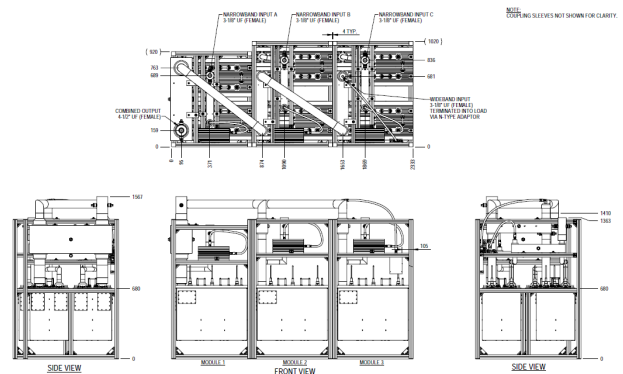


## Balanced VHF TV Combiners

This series of constant impedance VHF combiner modules are designed for multichannel digital and/or analogue TV combining applications. The adjacent channel models enable a contiguous spectrum of analogue and digital transmitters to be transmitted from a shared site. This arrangement provides optimum tracking between channels and the economies associated with shared antenna and tower costs. Each balanced combiner module consists of two 3dB couplers that are connected to a pair of 5 or 6 Pole coaxial, interdigital, or quasi-combine bandpass filters. The narrowband input corresponds to the bandpass resonant frequency, whereas the wideband input can be any other channels in the applicable TV band. Modules can be connected together to provide a multichannel combiner.

### FEATURES / BENEFITS

- ➔ Compact design
- ➔ Adjustable channel bandwidth
- ➔ Tunable across full band
- ➔ Low Insertion Loss
- ➔ Available with patch panel
- ➔ Expandable for future services
- ➔ Cascade modules for multichannel operation
- ➔ Temperature stable.



CA6PX180C Combiner with 3 modules

## Technical Features

### STRUCTURE

Product Line	Combiner TV
Product Type	Band III VHF TV Balanced Combiner
Filter Type	Cross Coupled

### ELECTRICAL SPECIFICATIONS

Frequency Range	MHz	174 - 230
Minimum Channel Spacing		adjacent
Narrowband Input Power (maximum)	kW	15
Output Power (maximum)	kW	70.0 Ave
Impedance (unbalanced)	Ω	50.0
Number of Poles		6
Narrowband Input Connector		1-5/8" EIA
Narrowband Input Channel Bandwidth	MHz	6.0 7.0 8.0
Narrowband Insertion Loss at Channel Centre Frequency	dB	0.1 - 0.3
Narrowband Input Return Loss	dB	26
Narrowband Input Min. Group Delay	ns	400.0
Wideband Input Min. Insertion Loss	dB	0.1
Wideband Input Min. Return Loss	dB	26.0
Narrowband to Wideband Isolation	dB	32.0
Wideband to Narrowband Isolation	dB	50.0

### MECHANICAL SPECIFICATIONS

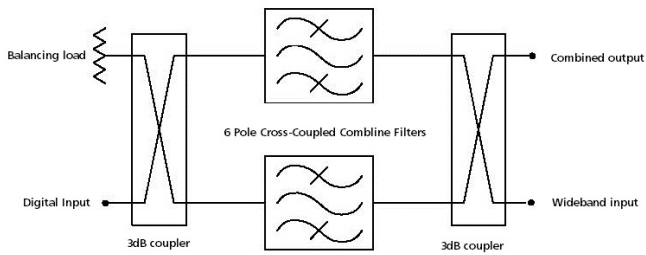
Wideband Input Connector		4-7/8" IEC
Rack		Yes
Weight	kg (lb)	240 (528)
Dimensions (Height or Length)	cm (in)	119 (47)
Dimensions (Width)	cm (in)	103 (41)
Dimensions (Depth)	cm (in)	78 (31)

### TEMPERATURE SPECIFICATIONS

Operating Temperature Range	°C(°F)	0 to 40 (32 to 104 )
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## Balanced VHF TV Combiners



### Combiner Module Configuration

#### External Document Links

6PX180C

#### Notes

- Note 1 Narrowband insertion losses are typical and dependent on channel bandwidth and operating frequency.
- Note 2 Input and output power ratings are dependent on system used ( PAL, NTSC, 8VSB, COFDM etc.), TX powers and number of digital/ analogue systems. Advise RFS of system details to determine optimum multi - channel combiner configuration.
- Note 3 All input and output connector sizes can be varied to suit customer requirements.
- Note 4 Dimensions and weights are approximate and dependent on operating frequency.
- Note 5 The power rating in an adjacent channel combiner depends not only on the power in the filter passband but must also include the power that the filter reflects due to adjacent channels. For further details contact RFS.