



CONSTANT IMPEDANCE FM BANDPASS COMBINER

JAMPRO RF Systems' RCCC Bandpass Combiner family consists of RCHC 3 dB hybrids and RCBC FM Bandpass filters to achieve excellent isolation in a temperature stable frequency combiner.

Almost any value of rejection bandwidth can be provided by selection of the cavity size, filter configuration and the coupling iris dimensions. Passband insertion loss is minimized by the use of high Q aluminum cavities. Temperature stability is maintained through the use of invar tuning rods with copper center conductors.

Full Band tunable within the CCIR FM Band 87.5—108 MHz available upon request.

Various Power handlings with input/outputs from 1-5/8" to 6-1/8" EIA connections available.



RCCC-X0X-FM2 4" (10.1 cm) Typical Module Specifications		
Max Input Power		
NB Input (kW)		2
WB Input (kW)		2
Bandwidth (MHz)		$F_c \pm .150$
Insertion Loss		
NB Input (dB)		0.55
WB Input (dB)		0.15
VSWR		
NB Input		1.10:1
WB Input		1.10:1
Isolation		
NB to WB (dB)		> 32
WB to NB (dB)		> 50

Above Specifications to be achieved with a separation of 2.0 MHz

RCCC-X9X-FM2 8" (20.3 cm) Typical Module Specifications		
Max Input Power		
NB Input (kW)		5
WB Input (kW)		10
Bandwidth (MHz)		$F_c \pm .150$
Insertion Loss		
NB Input (dB)		0.40
WB Input (dB)		0.12
VSWR		
NB Input		1.08:1
WB Input		1.10:1
Isolation		
NB to WB (dB)		> 32
WB to NB (dB)		> 50

Above Specifications to be achieved with a separation of 2.0 MHz



RCCC-X1X-FM (X) 11.5" (29.2 cm) Typical Module Specifications

Max Input Power						
	NB Input (kW)	7.5	5	5	7.5	13.5
	WB Input (kW)	7.5	10	25	25	25
Bandwidth (MHz)		Fc ± .150	Fc ± .150	Fc ± .150	Fc ± .150	Fc ± .150
Insertion Loss						
	NB Input (dB)	0.55	0.25	0.75	0.55	0.20
	WB Input (dB)	0.10	0.08	0.13	0.10	0.08
Efficiency						
	NB Input (%)	88.1	94.4	84.1	88.1	95.5
	WB Input (%)	97.7	98.2	97.1	97.7	98.2
VSWR						
	NB Input	1.05:1	1.05:1	1.05:1	1.05:1	1.05:1
	WB Input	1.08:1	1.08:1	1.08:1	1.08:1	1.08:1
Isolation						
	NB to WB (dB)	> 32	> 32	> 32	> 32	> 32
	WB to NB (dB)	> 50	> 50	> 50	> 50	> 50
Above Specifications to be achieved with a separation of:		1.1	4.0	0.8	1.1	4.0

RCCC-X2X-FM (X) 18" (45.7 cm) Typical Module Specifications

Max Input Power					
	NB Input (kW)	25	20	25	30
	WB Input (kW)	35	35	35	35
Bandwidth (MHz)		Fc ± .150	Fc ± .150	Fc ± .150	Fc ± .200
Insertion Loss					
	NB Input (dB)	0.40	0.17	0.20	0.10
	WB Input (dB)	0.12	0.08	0.08	0.08
Efficiency					
	NB Input (%)	91.2	96.2	95.5	97.7
	WB Input (%)	97.3	98.2	98.2	98.2
VSWR					
	NB Input	1.05:1	1.05:1	1.05:1	1.05:1
	WB Input	1.08:1	1.08:1	1.08:1	1.08:1
Isolation					
	NB to WB (dB)	> 32	> 32	> 32	> 32
	WB to NB (dB)	> 50	> 50	> 50	> 50
Above Specifications to be achieved with a separation of:		0.8	2.0	1.6	4.0

Note:

1. 3, 4 & 5 frequency combiners available
2. Specifications are typical. Modifications may be possible upon request—contact factory
3. Specifications are subject to change without further notice.
4. Power levels assume installation below 5000'. Power handling will vary with installation elevation.