

# BpBr Circuit® DUPLEXER

## WP-604

30-50 MHz

MIN. FREQ. SPACING: 300KHz

POWER: TO 275 WATTS

**MODEL WP-604** is a 4-cavity BpBr Circuit® duplexer designed for use with duplex systems operating at 300 KHz or more frequency separation in the 30-50 MHz band. It consists of four 8" OD cavities interconnected with double shielded coaxial cable in a bandpass-reject configuration. Four models, each with a tuning range of approximately 5 MHz are available to cover the 30-50 MHz range. To maintain maximum isolation, double shielded coaxial cable must be used to interconnect the duplexer to the transmitter and receiver. Numerous duplexer installation cable kits are available but must be ordered as an optional item.

The BpBr Circuit®, which was developed and patented by Wacom, is a unique circuit for coupling energy into and out of a cavity filter. It provides a bandpass cavity response at the pass frequency and a deeper and wider notch at the reject frequency. BpBr Circuit® duplexers are equally suitable for use in systems with close or wide frequency separations.

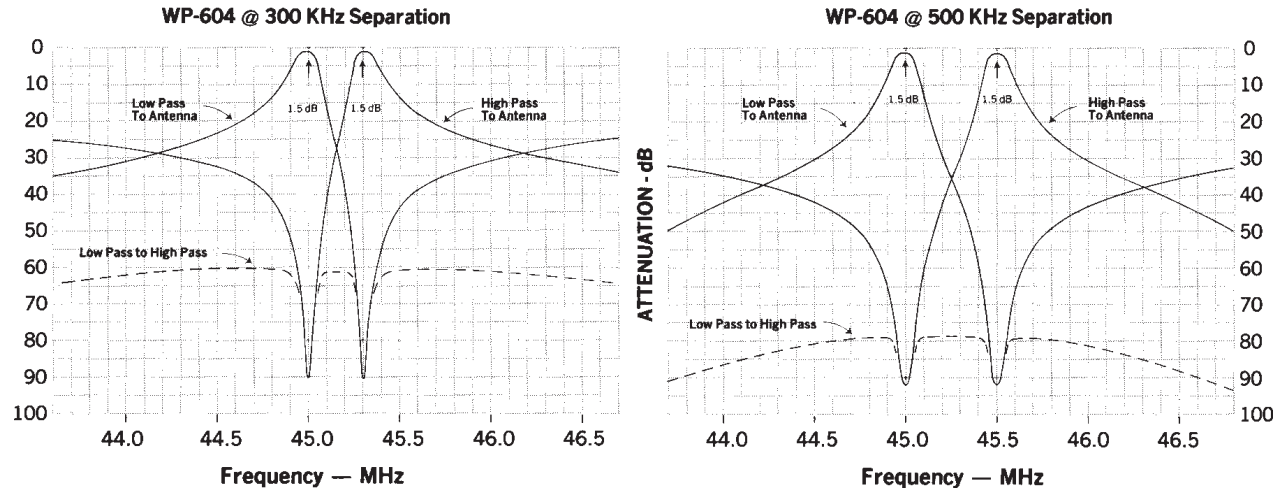
**WHEN ORDERING**, specify model number and exact transmit and receive frequencies to which the duplexer should be tuned. If the optional Type N connectors are preferred (same price), so indicate by adding "with Type N connectors" after the model number.



Model WP-604-C

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## TYPICAL DUPLEX RESPONSE CURVES



	WP-604-A	WP-604-B	WP-604-C	WP-604-D
<b>Tuning Range</b>	30-35 MHz	35-40 MHz	40-45 MHz	45-50 MHz
<b>Minimum Frequency Separation</b>	0.3 MHz or more	0.3 MHz or more	0.3 MHz or more	0.3 MHz or more
<b>Maximum power input</b> (continuous duty)	275 watts	275 watts	275 watts	275 watts
<b>Insertion Loss</b> (Tx and Rx to Antenna)				
at 0.3 MHz separation	1.5 dB	1.5 dB	1.5 dB	1.5 dB
at 0.5 MHz separation	1.5 dB	1.5 dB	1.5 dB	1.5 dB
<b>Attenuation at Tx Frequency</b>				
at 0.3 MHz separation	85 dB	85 dB	85 dB	85 dB
at 0.5 MHz or more separation	90 dB	90 dB	90 dB	90 dB
<b>Attenuation at Rx Frequency</b>				
at 0.3 MHz separation	85 dB	85 dB	85 dB	85 dB
at 0.5 MHz or more separation	90 dB	90 dB	90 dB	90 dB
<b>Isolation</b> (midway between channels)				
with 0.3 MHz separation	60 dB	60 dB	60 dB	60 dB
with 0.5 MHz or more separation	75 dB	75 dB	75 dB	75 dB
<b>Maximum VSWR</b> (Ref. 50 ohms)	1.3 to 1	1.3 to 1	1.3 to 1	1.3 to 1
<b>Temperature Range</b>	-30° to + 60°C	-30° to + 60°C	-30° to + 60°C	-30° to +60°C
<b>Number of Cavity Filters</b>	4	4	4	4
<b>Dimensions:</b>				
Individual Cavity (not incl. tuning rod)	8" dia. x 80"	8" dia. x 80"	8" dia. x 80"	8" dia. x 72"
Duplexer (DxWxH) with tuning rods				
fully extended	17" x 19" x 91"	17" x 19" x 91"	17" x 19" x 91"	17" x 19" x 82"
<b>Connector Terminations</b> (Tx, Rx, Ant.)	UHF female (Type N optional)	UHF female (Type N optional)	UHF female (Type N optional)	UHF female (Type N optional)
<b>Finish</b>	Black Enamel	Black Enamel	Black Enamel	Gray Enamel
<b>Net Weight</b>	112 lbs.	110 lbs.	105 lbs.	98 lbs.
<b>Shipping Weight</b>	195 lbs.	195 lbs.	190 lbs.	185 lbs.