

BPBR 2/4 / BRBP 2/4

Band-Pass – Band-Reject Filters for the 2 m Band



DESCRIPTION:

- ★ The BPBR 2/4... and the BRBP 2/4... are 4-cavity pass-reject filters, which pass one frequency or frequency band and reject another in immediate vicinity of the pass frequency.
- ★ The filters are delivered in two basic models: The BPBR-types have the reject range on the high side of the pass frequency and the BRBP-types have the reject range situated on the low side of the pass frequency.
- ★ These filter types can be used to protect a receiver against interference from a nearby transmitter. The filters are tuned to reject the interfering signal. Pass-reject-type filters are applied when the spacing between the utility signal and the interfering signal is so small, that the slope steepness of normal band-pass filters or notch filters are not sufficient enough to provide adequate rejection.
- ★ These filters are primarily intended to pass and reject two single frequencies, but the filters can also be tuned to pass and reject several single frequencies or to having a certain pass and reject port bandwidth. In these cases, factory-tuning is recommended.
- ★ Both the BPBR 2/4... and the BRBP 2/4... are delivered in a high-band and a low-band version tunable within 136-154 and 152-175 MHz, respectively. These models are again divided into submodels, each dedicated to work with a certain spacing between the pass frequency and the reject frequency. See "Ordering information" below.
- ★ The filter has very small physical dimensions owing to the use of high-Q, temperature compensated helical resonators.
- ★ The housing is made of extruded aluminium, the chassis of passivated steel, and teflon insulation has been applied in the rigid coaxial cables and in the connectors.
- ★ The filter is black vinyl coated to prevent corrosion.



SPECIFICATIONS:

ELECTRICAL	
MODEL	BPBR 2/4 / BRBP 2/4
FILTER TYPE	Band-pass / band-reject filters
FREQUENCY	136-175 MHz
MAX. INPUT POWER	50 watts
INSERTION LOSS (PASS BAND) (at 4.5 MHz spacing)	
Single-channel tuned	≤ 1.0 dB
Multi-channel tuned, 1.5 MHz BW	≤ 1.2 dB
REJECT ATTENUATION	
Single channel tuned	> 90 dB
Multi channel tuned, 1.5 MHz BW	> 60 dB
PASS/REJECT SPACING	4-10 MHz (see table)
IMPEDANCE	Nom. 50 Ω
SWR	≤ 1.5
MECHANICAL	
TEMP. RANGE	-30° C → +60° C
FREQ. STABILITY	Approx. 10 ppm/° C
CONNECTORS	BNC-female
DIMENSIONS (L x W x H)	210 x 104 x 33 mm
WEIGHT	Approx. 600 g

MODEL SELECTION TABLE:

TUNING RANGE (MHz)	PASS/REJECT SPACING (MHz)	ORDERING DESIGNATION
136-154	4-6	BPBR 2/4L-4/6 or BRBP 2/4L-4/6
	6-8	BPBR 2/4L-6/8 or BRBP 2/4L-6/8
	8-10	BPBR 2/4L-8/10 or BRBP 2/4L-8/10
152-175	4-6	BPBR 2/4H-4/6 or BRBP 2/4H-4/6
	6-8	BPBR 2/4H-6/8 or BRBP 2/4H-6/8
	8-10	BPBR 2/4H-8/10 or BRBP 2/4H-8/10

ORDERING INFORMATION:

If pass and reject frequencies are stated when ordering, the filters are delivered factory-adjusted. Ordering example:
BRBP 2/4..., LOW: 149.5 MHz, HIGH: 154.0 MHz. In this case, further information is not required.
When ordering **untuned** filters please use the model selection table above to select the appropriate ordering designation for the desired filter type.

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TYPICAL RESPONSE CURVES @ 4.5 MHz DUPLEX SPACING:

