

BPBR 4/4 / BRBP 4/4

Band-Pass – Band-Reject Filters for the 80 MHz Band



DESCRIPTION:

- ★ The BPBR 4/4... and the BRBP 4/4... 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 to provide adequate rejection.
- ★ The 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.
- ★ The standard BPBR-filters can be tuned within the complete 4 m-band with 2 to 16 MHz spacing between the operating frequencies. Insertion loss is below 1.3 dB at spacings between 3 and 16 MHz. At the narrowest spacing of 2 MHz, insertion loss is kept under 2.0 dB.
- ★ The filters have very small dimensions owing to the use of high-Q helical resonators with discrete-component interconnections.
- ★ The housing is made of extruded aluminium, the chassis of passivated steel, and the connectors are provided with teflon insulation. The filters are black vinyl coated to prevent corrosion.
- ★ Careful design and choice of materials ensure reliable operation over a wide temperature range.

SPECIFICATIONS:

ELECTRICAL	
MODEL	BPBR 4/4 / BRBP 4/4
FILTER TYPE	Band-pass / band-reject filters
TUNING RANGE	66-88 MHz (Option: 88-104 MHz)
MAX. INPUT POWER	@ 3-16 MHz spacing : 50 watts @ ≤3 MHz spacing : 35 watts
INSERTION LOSS	
Single-channel tuned	
at 2 MHz spacing	≤ 2.0 dB
at 3 MHz spacing	≤ 1.3 dB
at 4 MHz spacing	≤ 1.0 dB
at 16 MHz spacing	≤ 0.6 dB
Multi-channel tuned	
closest spacing 2 MHz	≤ 1.5 dB
closest spacing 3 MHz	≤ 1.0 dB
closest spacing 4 MHz	≤ 0.8 dB
closest spacing 16 MHz	≤ 0.6 dB
REJECT ATTENUATION	
Single-channel tuned	> 90 dB
Multi-channel tuned, 2 MHz BW	> 60 dB
PASS/REJECT SPACING	2-16 MHz
IMPEDANCE	Nom. 50 Ω
SWR	≤ 1.5
MECHANICAL	
TEMP. RANGE	-30° C → +60° C
CONNECTORS	BNC-female
DIMENSIONS (L x W x H)	152 x 104 x 33 mm
WEIGHT	Approx. 430 g



TYPE NO.	PASS RANGE	REJECT RANGE
BPBR 4/4	Low	High
BRBP 4/4	High	Low

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TYPICAL RESPONSE CURVES:

