

Band-Pass/Band-Reject Filters for the 2m 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 helicalresonators.
- 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 W
Pass Band Insertion Loss	Single-channel tuned ≤ 1.0 dB Multi-channel tuned, 1.5 MHz BW ≤ 1.2 dB
Impedance	50 Ω
Pass-Reject Spacing	4 - 10 MHz (see table)
Reject Attenuation	Single channel tuned > 90 dB Multi channel tuned, 1.5 MHz BW > 60 dB
VSWR	$\leq 1.5:1$
Mechanical	
Connection(s)	BNC(f)
Dimensions	210 x 104 x 33 mm / 8.26 x 4.09 x 1.29 in.
Weight	Approx. 0.6 kg / 1.32 lb.
Environmental	
Operating temperature range	-30 °C to +60 °C
Frequency Stability	Approx. 10 ppm / °C

ORDERING

Model	Product No.	Description	Frequency
BPBR 2/4 L-4/6	200001349	SPACING: 4 - 6 MHz	136 - 154 MHz
BRBP 2/4 L-4/6	200001474	SPACING: 4 - 6 MHz	136 - 154 MHz
BPBR 2/4 L-6/8	200001350	SPACING: 6 - 8 MHz	136 - 154 MHz
BRBP 2/4 L-6/8	200001478	SPACING: 6 - 8 MHz	136 - 154 MHz
BPBR 2/4 L-8/10	200001351	SPACING: 8 - 10 MHz	136 - 154 MHz
BRBP 2/4 L-8/10	200001479	SPACING: 8 - 10 MHz	136 - 154 MHz
BPBR 2/4 H-4/6	200001345	SPACING: 4 - 6 MHz	152 -175 MHz
BRBP 2/4 H-4/6	200001468	SPACING: 4 - 6 MHz	152 -175 MHz
BPBR 2/4 H-6/8	200001328	SPACING: 6 - 8 MHz	152 -175 MHz
BRBP 2/4 H-6/8	200001463	SPACING: 6 - 8 MHz	152 -175 MHz
BPBR 2/4 H-8/10	200001337	SPACING: 8 - 10 MHz	152 -175 MHz
BRBP 2/4 H-8/10	200001465	SPACING: 8 - 10 MHz	152 -175 MHz

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.

TYPICAL RESPONSE CURVES @ 4.5 MHZ DUPLEX SPACING

