

Highly Selective Band-Pass Filter for the 2 m Band with High Power-Handling Capability (150 W)

DESCRIPTION

- This band-pass filter is mainly applied to prevent interference between transceivers with narrow frequency spacing which are operating on antennas installed very close to each other.
- One of the transmitters may cause intermodulation in the output amplifier of the other transmitter, or the presence of one transmitter might “block” the contrary receiver or desense it because of excess sideband noise.
- The BPF 2/3-150... consists of 3 full-size quarter wavelength cavities with adjustable capacitive coupling between the resonators. This filter is applied when other available band-pass filters or pass-reject filters do not provide adequate power handling capability, or lack in attenuation at narrow separations.
- The filter has a very steep rolloff between the pass-range and the stop-band. This rolloff can be made even steeper by sacrificing on insertion loss. This “trade-off” may be necessary by very small separations or by high required stop-band attenuation. Please note that the full power rating of 150 watts can only be kept when keeping insertion loss below 1 dB. If insertion loss is raised to 2 dB, maximum allowable input power is 75 W.
- Another feature of this filter is its ability to be tuned with a certain pass-range bandwidth.
- The filter is delivered in two basic models: Model BPF 2/3-150 L can be applied within the band 136 - 154 MHz and model BPF 2/3-150 H within the band 152 - 175 MHz.
- The housing is made of extruded aluminium, the chassis of passivated steel, and teflon insulation has been used in the coaxial cables and in the connectors. The filter is coated with black vinyl to prevent corrosion.



ORDERING

Model	Product No.	Description
BPF 2/3-150L	200000842	136 - 154 MHz
BPF 2/3-150H	200000843	152 - 175 MHz

SPECIFICATIONS

Electrical	
Model	BPF 2/3-150...
Filter Type	Band-pass filter
Frequency	BPF 2/3-150 L : 136 - 154 MHz BPF 2/3-150 H : 152 - 175 MHz
Max. Input Power	@ max. 1 dB insertion loss: 150 W @ max. 2 dB insertion loss: 75 W
Impedance	50 Ω
Reject Attenuation	See curves
VSWR	< 1.4:1
Mechanical	
Connection(s)	N(f)
Length	Type L: 550 mm / 21.65 in. (incl. conn.) Type H: 535 mm / 21.06 in. (incl. conn.)
Width	125 mm / 4.92 in.
Height	50 mm / 1.97 in.
Weight	Approx. 2.1 kg / 4.63 lb
Environmental	
Operating Temperature Range	-30°C to +60°C
Frequency Stability	18 ppm/° C (approx.)

ORDERING INFORMATION

The BPF 2/3-150... is delivered factory tuned. Depending on the nature of the problem the band-pass filter has to solve, please specify the relevant of the following data when ordering:  
Centre frequency, operating frequency of disturbed or disturbing transmitter, required attenuation at stop-frequency, tolerable insertion loss and, optionally: pass range bandwidth.

Typical response curves

