

Highly Selective Band-Pass Filter for the 450 MHz 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 70/3-150 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 highly required stop-band attenuation. Please note that the full power rating of 150 W 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 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.



SPECIFICATIONS

Electrical	
Model	BPF 70/3-150
Filter Type	Band-pass filter
Frequency	380 - 470 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

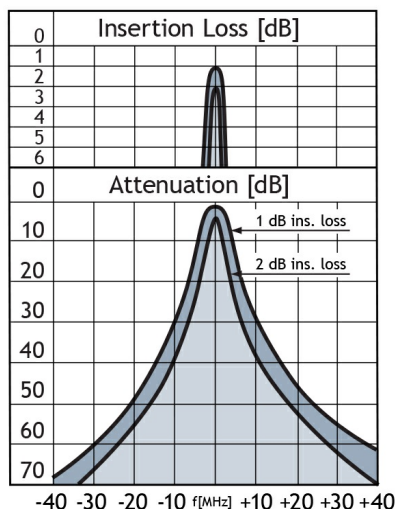
Environmental	
Operating Temperature Range	-30°C to +60°C

Mechanical	
Connection(s)	N(f)
Dimensions	L:257 (incl. conn.) x W:125 x H:50 mm L:10.11 (incl. conn.) x W:4.92 x H:1.96 in.
Weight	Approx. 1.17 kg / 2.58 lb.

ORDERING

Model	Product No.
BPF 70/3-150	200000926

TYPICAL RESPONSE CURVES



ORDERING INFORMATION

The BPF 70/3-150 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.