HyperLink Wireless 2.4 GHz 802.11b and 802.11g Compatible 4-Pole Ultra High Q WiFi Band pass Filters

Features

- Ultra-High Quality Microwave Cavity Filter
- Ultra Low Insertion Loss (<2 dB)
- Reduce Interference and Improve Performance
- Rugged Aluminum Construction
- 30 MHz Bandwidth
- Provides Lightning Protection (DC Short)
- Ideal for high data rate 802.11b and 802.11g Wireless LAN applications
- Compact Size
- N-Female Connectors

Description

Superior Performance

The HyperLink 2.4 GHz 4-Pole Ultra-High Q Wi-Fi channel filters are ideal for co-located equipment installations. Available in five versions for Channel 1, 3, 6, 9 and 11. By reducing out of band interference, improved performance of co-located equipment can be achieved. These bandpass filters are wide enough to pass high data rate 802.11g signals without degradation.

Specifications

Model	BPF24-401	BPF24-403	BPF24-406	BPF24-409	BPF24-411
Center Frequencies	2412 MHz - Channel 1	2422 MHz - Channel 3	2437 MHz - Channel 6	2452 MHz - Channel 9	2462 MHz - Channel 11
Bandwidth (-3 dB)	30 MHz				
Insertion Loss	< 2 dB				
Pass band Ripple	< 0.25 dB				
Return Loss	> 15 dB				
Out of Band Rejection	>45 dB @ 2362 MHz >45 dB @ 2462 MHz	>45 dB @ 2372 MHz >45 dB @ 2472 MHz	>45 dB @ 2387 MHz >45 dB @ 2487 MHz	>45 dB @ 2402 MHz >45 dB @ 2502 MHz	>45 dB @ 2412 MHz >45 dB @ 2512 MHz
Harmonic Rejection	> 90 dBc				
Impedance	50 Ohm				
Power Handling	50 Watts				
Connectors	(2) N-Female				
Number of Cavities	4				
Operating Temperature	-40° F to 185° F (-40° C to +85° C)				
Dimensions	2.2" x 2.2" x .8" (56 x 56 x 21 mm)				
Weight	0.50 lbs. (0.23 Kg)				

Guaranteed Quality

This product is backed by L-com's Limited Warranty.

Bandpass Filter Q & A

Question: Why do I need a Hyperlink Ultra High Q band pass filter?

Answers:
• To reduce interference thus improving radio reception.
• To increase performance of co-located equipment.

Question: What is interference and why do I want to eliminate it?

Answers:
• Interference is caused by transmission sources near the channel you are transmitting on. It can be identified by signal strength and frequency.
• Unwanted transmissions, interference, may confuse your receiver or cover up the signal you are trying to receive.

Question: How do the Hyperlink Ultra High Q band pass filters work?

Answers:
• The filter will only pass the frequency, channel, you are transmitting or receiving and reduce the interference of signals outside your channel.
• The filter will NOT reduce interference on your channel caused by other signals or users on the same channel.

Question: What is meant by channel filtering?

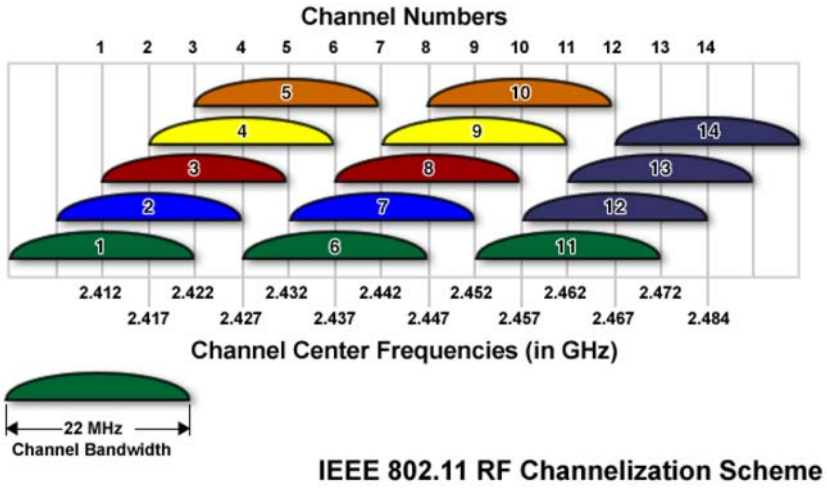
Answers:
• The passing of one channel while rejecting all other non-overlapping channels.
• The isolation of between channels when installing co-located equipment.
• The protection against signals outside your band such as cellular.

Question: What is the difference between the number of poles?

Answers:
• Each pole represents a filtering circuit. The more poles, the more filtering strength.
• The 4-pole band pass filters are recommended to filter out weaker interference signals.
• The 8-pole band pass filters are recommended in high wifi zones or zones with strong RF signals.

802.11 Channel-to-Frequency Mappings

There are 14 total frequency sub-channels available for the wireless radios in the 2.4 GHz band, as listed in the chart below. Although there are several different frequency channel settings, there is a slight overlap between the channels. For example, there are three non-overlapping channels available in the FCC regulatory domain. When choosing frequency channels for wireless stations in the vicinity of each other, you should choose frequency channels that are several channels apart from each other (e.g. Channels 1, 6, and 11). Channels 12-14 are for use outside the US.



IEEE 802.11 RF Channelization Scheme