Q-FILTER PRODUCTS™
A DIVISION OF BARTLEY MACHINE & MFG. CO. INC.

UNI-Q™ Active Front End Crystal Filter

"When Communication Is Critical You Can't Afford Interference"

Features

- Eliminates Adjacent Channel Interference
- Entire Receiver Front End Solution: Includes Pre-Amplifier, and Channel Selection Filtering
- Fixed Frequency Filter, No Tuning Required
- Factory Set Gain From 0 to 10 dB
- Very Low Noise Figure
- Available Bandwidths: 6.25 kHz, 12.5 kHz, or 25 kHz
- 4-Pole or 8-Pole Filter Response from 10 – 250 MHz
- DC: Into Side Terminal or External Bias Tee on Output

Description

The UNI-Q is an active bandpass filter designed to solve interference problems by eliminating unwanted signals before they get to the receiver. The UNI-Q is factory tuned to pass your specific receive frequency at the gain you choose. A channel that was once plagued by interference and rendered useless can be made useful again with the UNI-Q filter. With wireless technology becoming more widely used, the issue of receiver interference is getting worse. Giving up a channel isn't feasible, especially with today's demands to keep the lines of communication open. Typical applications include Police, Fire, EMS, SCADA, and commercial two-way radio systems.

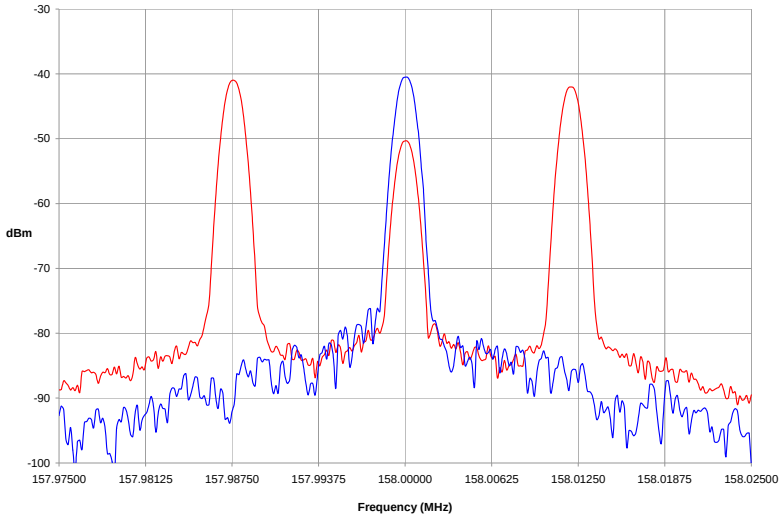
Electrical Specifications

Parameter[1]	Frequency	Min.	Typ.	Max.	Units
Gain (Customer Specified)	10 - 250 MHz	0		10	dB
Noise Figure	10 - 250 MHz		1.0	1.2	dB
Intermodulation Products[2]	10 - 250 MHz			-100	dBm
Input Power for 1 dB Compression	10 - 250 MHz	-2	0		dBm
VSWR (I/O)	10 - 250 MHz		1.4:1	1.5:1	
6.25 kHz Bandwidth Availability	10 – 150 MHz				
12.5 kHz Bandwidth Availability	10 – 200 MHz				
25 kHz Bandwidth Availability	10 – 250 MHz				
Bandwidth Tolerance	-/+ 5 %				
Channel Ripple	1 dB max				
Channel Configuration	1 Simplex Channel				
I/O Impedance	50 Ω				
I/O Connectors	Type N Female (Other Connectors Available Upon Request)				
Power Requirement	70 mA @ 12V DC Stand-Alone (115V AC, 9 - 36V DC, or 18 - 75V DC in 19" Rack)				
Weight	< 1 lb Stand-Alone (< 5 lbs in 1U 19" Rack Mount Chassis)				
Size	2.4" x 4.4" x 1.3" Stand-Alone (1U 19" Rack Mount Chassis 19" x 8" x 1.75")				

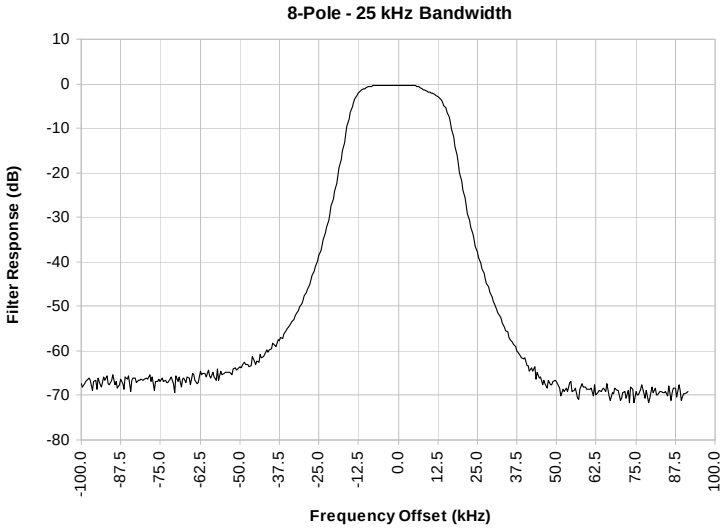
1. All measurements made in a 50 Ω system
2. Intermodulation product tone spacing = 500 kHz, Pin per tone = -40 dBm

Performance Data

The red trace shows 50 kHz of VHF spectrum measured at a receiver site in a heavily populated metropolitan area. The blue trace shows the same spectrum measured after installation of the UNI-Q filter. The desired signal is amplified while interference is eliminated. The lines of communication are kept clear.



Filter Response Data – Normalized to 0 dB Gain



Absolute Maximum Ratings

Characteristic	Value
RF Input Power	-15 dBm - Gain
Operating Temperature	-20°C to +60°C
Storage Temperature	-40°C to +85°C

Note: Exceeding these parameters may cause permanent damage.