

FQ20107-3 Cavity filter, Q circuit, high Q, one 7" cavity, 138-174 MHz

- Aluminum cylinder with brass and copper coaxial inner conductor
- Silver plating and chromate conversion coating limit corrosion and enhance performance
- Temperature compensated for extremely low frequency drift

These filters employ the Sinclair-developed Q-circuit design. The operation of the Q-circuit is such that it inverts the characteristics of a standard notch filter, and uses the narrow resonance notch to create the circuit passband while allowing the lower Q elements, such as the loop and its reactance adjustment, to produce the relatively broad isolation notch. In this manner, optimum use of the cavity components is realized, resulting in close pass/reject spacing, low insertion loss, and broad isolation notch. The filters can be tuned for either high or low pass condition, with minimum frequency separations.

The Q-circuit filter combines the features of a bandpass and reject filter. This can be particularly useful when a close frequency might interfere with the desired frequency. For this reason, both the pass and reject frequencies and required insertion loss must be specified when ordering Q-circuit filters. The insertion loss, pass-to-reject frequency spacing and notch depth are all field adjustable.

The FQ series Q-circuit filters are designed to:

- Suppress sideband noise of a single co-located transmitter on a closely-spaced receiver.
- Protect a closely-spaced receiver from front-end overload by the carrier of co-located transmitter.
- Suppress IM generation in one transmitter by protecting it further from an incoming carrier of a closely-spaced co-located transmitter.
- Generally, "Protect One from One" at close frequency spacings.



Region	United States	Europe, Middle East and Africa	Caribbean and Latin America	Canada and rest of the world
Telephone	USA: 1 800 263 3275	International: +44 (0) 1487 84 28 19	International: +1 905 726 7676	Canada: 1 800 263 3275 International: +1 905 727 0165
E-mail	salesusa@sinctech.com	salesuk@sinctech.com	salesla@sinctech.com	salescan@sinctech.com
Product Specification Sheet		FQ20107-3	Issue: 11	Dated: 22-05-19

Electrical Specifications

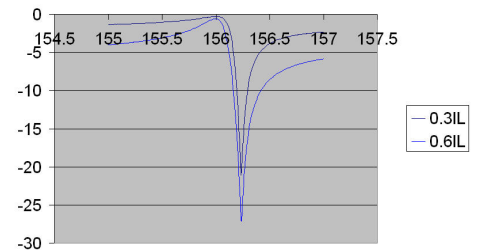
Frequency Range	MHz	138 to 174
Input Connectors		N-Female
Output Connectors		N-Female
Input VSWR (max)		1.5:1
Impedance	Ω	50
Average Input Power (max)	W	350

Mechanical Specifications

Width	in (mm)	7 (178)
Depth	in (mm)	7 (178)
Length/ Height	in (mm)	33.25 (845)
Finish		chromate conversion
Weight	lbs (kg)	8.5 (3.86)
Actual shipping weight	lbs (kg)	10 (4.54)
Shipping dimensions	in (mm)	36x9x9 (914x229x229)

Environmental Specifications

Temperature range	°F (°C)	-40 to +140 (-40 to +60)
-------------------	---------	--------------------------



Region	United States	Europe, Middle East and Africa	Caribbean and Latin America	Canada and rest of the world
Telephone	USA: 1 800 263 3275	International: +44 (0) 1487 84 28 19	International: +1 905 726 7676	Canada: 1 800 263 3275 International: +1 905 727 0165
E-mail	salesusa@sinctech.com	salesuk@sinctech.com	salesla@sinctech.com	salescan@sinctech.com
Product Specification Sheet		FQ20107-3	Issue: 11	Dated: 22-05-19