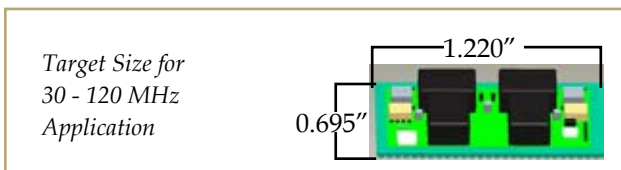
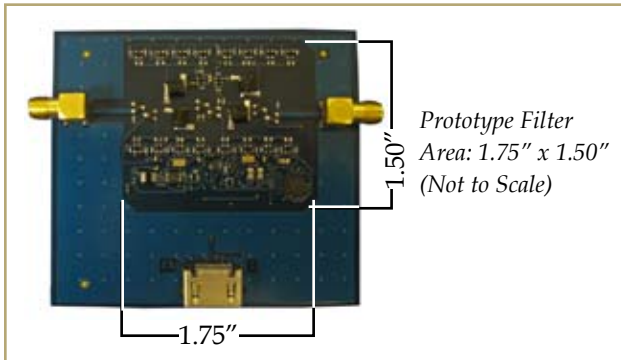


# Miniature Tunable RF Filter

Model TF-30120x



## General Description

The DataSoft Model TF-30120x frequency agile filter, designed specifically for radio frequency (RF) front-end applications, provides a two-pole, binary tuned filter with bandwidth adjustments. Capable of operating from 30 to 120 MHz, the TF-30120x filter supports 256 software programmable discrete tuning steps and is capable of achieving bandwidths from 10% to 20%.

The TF-30120x can be used for both transmit and receive paths. The filter also achieves fast switching speeds in support of frequency hopping waveforms and secure network communications.

Interoperable across multiple communications platforms, the TF-30120x can be integrated into any service branch platform and has multiple commercial applications.

DataSoft will customize the TF-30120x for your unique applications. Contact us today for more information.

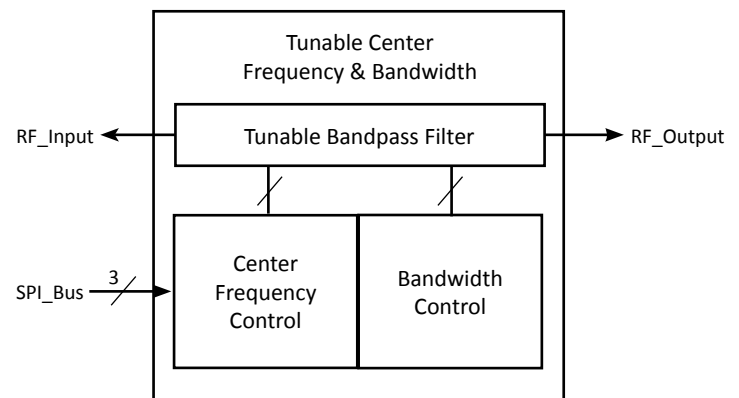
## Features

- Tunable in both frequency and bandwidth
- Tuning range from 30 - 120 MHz
- Provides 10 to 20% bandwidth variation
- Binary tunable with 256 steps
- Small, scalable form factor
- Standard three-wire Serial Peripheral Interface (SPI) control bus

## Benefits

- Customizable for specific application requirements
- Interoperable with a variety of software-defined radio handsets or base stations in both military and commercial applications
- Supports hopping waveforms
- Great for cognitive radio applications and frequency agile sensors
- Smaller sizes can be achieved at higher frequencies
- Available today in prototype form factor

## Block Diagram



# Miniature Tunable RF Filter

## Specifications

| Parameter        | Value (Max)                                  |
|------------------|--|
| Input Voltage    | 3.3V<br>50V<br>22V                           |
| Tuning Range     | 30 - 120 MHz                                 |
| Bandwidth Tuning | 10 - 20%                                     |
| Insertion Loss   | Between 1.5 and 3 dB, depending on bandwidth |
| Return Loss      | > 10 dB                                      |
| IIP3             | > +45 dBm                                    |
| P1dB             | > +20 dBm                                    |

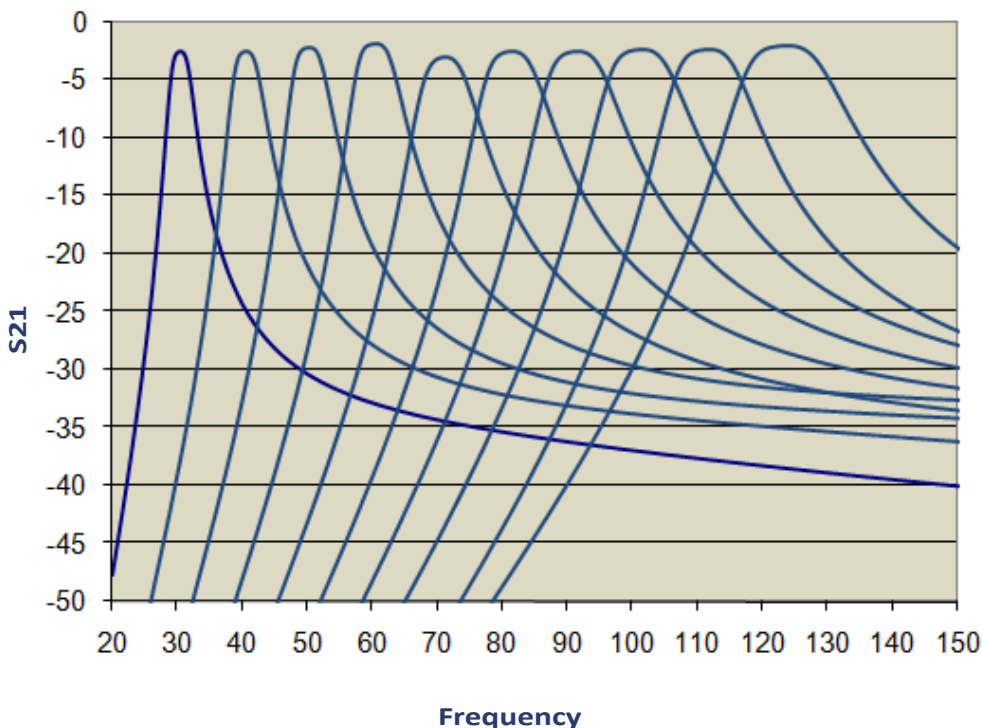
The above specification table contains engineering estimates that are believed to be accurate and reliable. The information is subject to change without notice.

## Applications

- Defense
- Homeland Security
- Police
- Fire
- Aerospace
- Sensors
- IMS and UGS



## Frequency Response at 10% Fractional Bandwidth



## About DataSoft

DataSoft specializes in software and hardware research, design, and engineering of customized components, products, middleware, and protocols for communication systems based on software-defined radio technologies.

As the recipient of multiple Department of Defense research grants (SBIR), DataSoft is actively working on projects for the Joint Tactical Radio System (JTRS) that enable superior wireless communications capabilities. Expertise includes SCA, MANET, tunable RF components, network protocols, advanced network management, modeling and simulation.

Headquartered in Scottsdale, Arizona, DataSoft has a successful history of high technology innovation for multiple markets covering both defense and commercial applications.

For more information about DataSoft and what we can do for you, contact us at:

**DataSoft Corporation**  
1475 N. Scottsdale Rd., Ste 460  
Scottsdale, AZ 85257  
1-800-797-7153  
info@datasoft.com  
www.datasoft.com