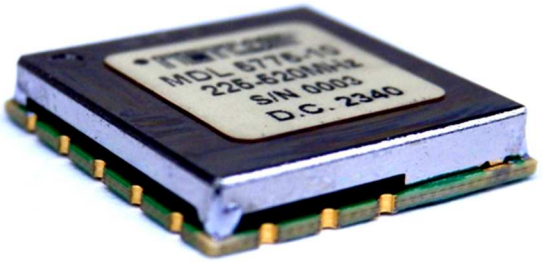
Model 5774-W-9.5 - Tunable Filter 90 - 225 MHz

Specifications



FEATURES

Netcom's 5774-W-9.5 tunable filter covers the frequency range of 90MHz to 225MHz.

The filter is a single band tunable filter offering the advantage of small size with a control system comparable to larger size filters. The 5774-W-9.5 filter has 2 watt power handling capability.

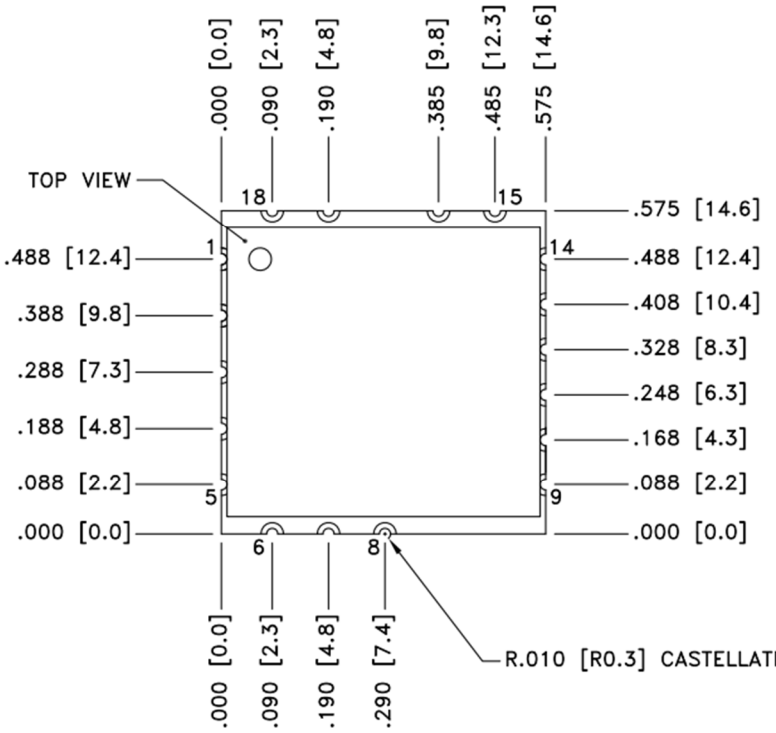
The following table shows the typical performance of the filter.

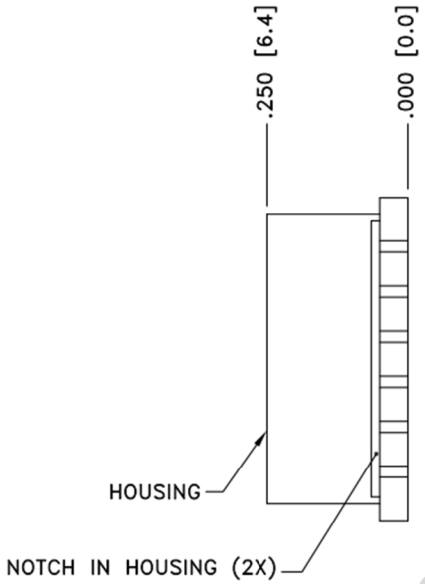
Frequency Range	90 to 225 MHz
Available BW	9.5%
Ftune +/- 10% Rejection (Typical)	< -10 dB
Ftune +/- 15% Rejection (Typical)	< -15 dB
Ftune +/- 20% Rejection (Typical)	< -19 dB
Insertion Loss (Typical)	4.6 dB
Impedance (Input /Output)	50 Ω
Tuning Speed	10 µs
Tuning Resolution*	250 KHz
P1dB	+33 dBm
IIP3	+45 dBm
Noise Figure	< 0.5 dB above Insertion Loss
DC Power	
DC Voltage	3.3 VDC +/- 0.3 VDC
DC Current Max	30 mA
Operating Temperature Range	-40 to +85°C
Control Interface	- SPI Serial Input
Dimensions [L x W x H]	0.575 x 0.575 x 0.250 inches 14.605 x 14.605 x 8.890 mm

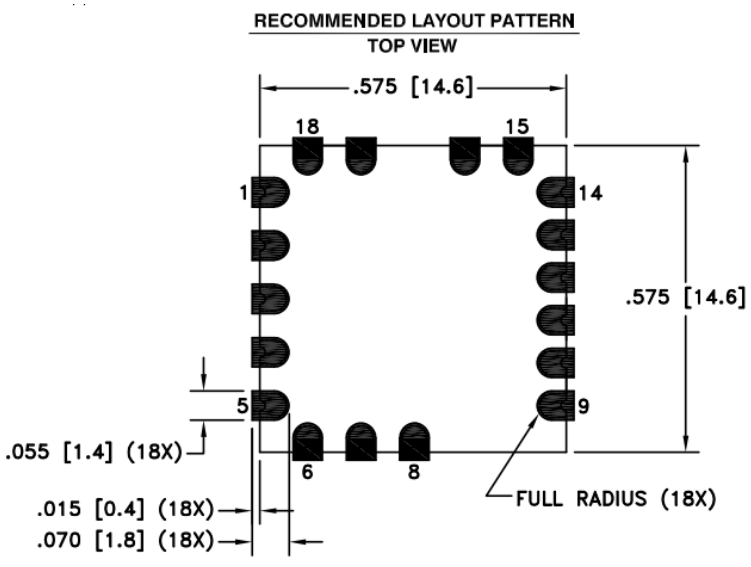
*See page 3 for details

RoHS COMPLIANT

Mechanical







PIN DESIGNATORS			
PIN Number	Description	PIN Number	Description
1	RF_IN	10	NC
2	GND	11	NC
3	SPI_CLK	12	TUNE_READY
4	SPI_MOSI	13	GND
5	NC	14	RF_OUT
6	NC	15	GND
7	NC	16	VCC (+3.3V)
8	NC	17	SPI_CS
9	NC	18	GND
NC = NO CONNECT			

NOTES:

1. TOLERANCES ±.010 (0.25) UNLESS OTHERWISE SPECIFIED.
2. DIMENSIONS ARE IN INCHES (mm).

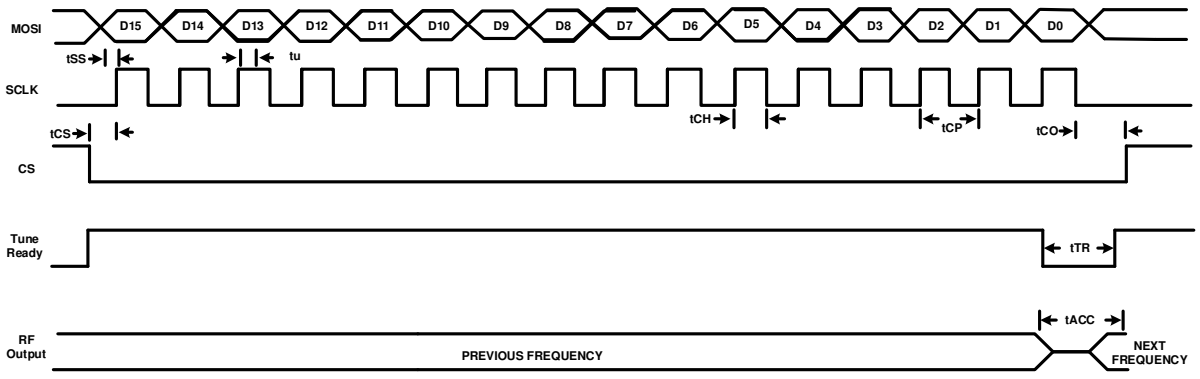
Serial Address Input Timing Diagram

Tuning resolution is 250KHz from address 720 decimal (90.000MHz) to 1023 decimal (127.750MHz) .
Tuning resolution is 500KHz from address 1024 decimal (128.000MHz) to 1800 decimal (225.000MHz) .
Tuning of the filter starts when the last data clock (16th) pulse of the address is sent to the unit while the CS (Chip select) is low.

The filter will move to the correct tune channel which allows the tuned address frequency to pass while meeting all of the tuning parameters. In some cases the filter tune channel may not move.

Symbol	Parameter	Min	Max	Units
tSS	Setup time MOSI Data to SCLK*	50		ns
tu	Hold Time MOSI Data From SCLK		0	ns
tCH	Clock High Time	125		ns
tCP	Clock Period	250		ns
tCS	Chip Setup Time (CS falling edge to SCLK start)	125		ns
tTR	Tune_Ready indicator***		10	us
tACC	Access time from Last (16th) SCLK edge to Fo**		10	us

57XX ADDRESS PROTOCOL



* Data clocked in on SCLK leading edge.
** Filter tunes to address on last clock bit of address SCLK.
*** Tune_Ready at logic low when filter processing tuned address.

Environmental Specification Standards (Development stage testing)

Temperature: MIL-STD-810E,

- High temperature shall meet Method 501.3, Procedure I to 125°C storage, and procedure II to 85°C operating.
- Low temperature shall meet Method 502.3, Procedure I to -57°C storage, and Procedure II to -40°C operating.

Vibration: MIL-STD-810E Method 514.4

Shock: MIL-STD-810E Procedure VI, Method 516.4

Solder Reflow: 245°C [max] for 30 seconds [max]

Ordering Information

Model Number	(-)	Bandwidth	(-)	Options	Add "-EB" for Unit Mounted on Evaluation Board	
5774-W	(-)	9.5	(-)		(-)	EB

Options:

A:
B:
C:

Available Bandwidths

*Options available upon request

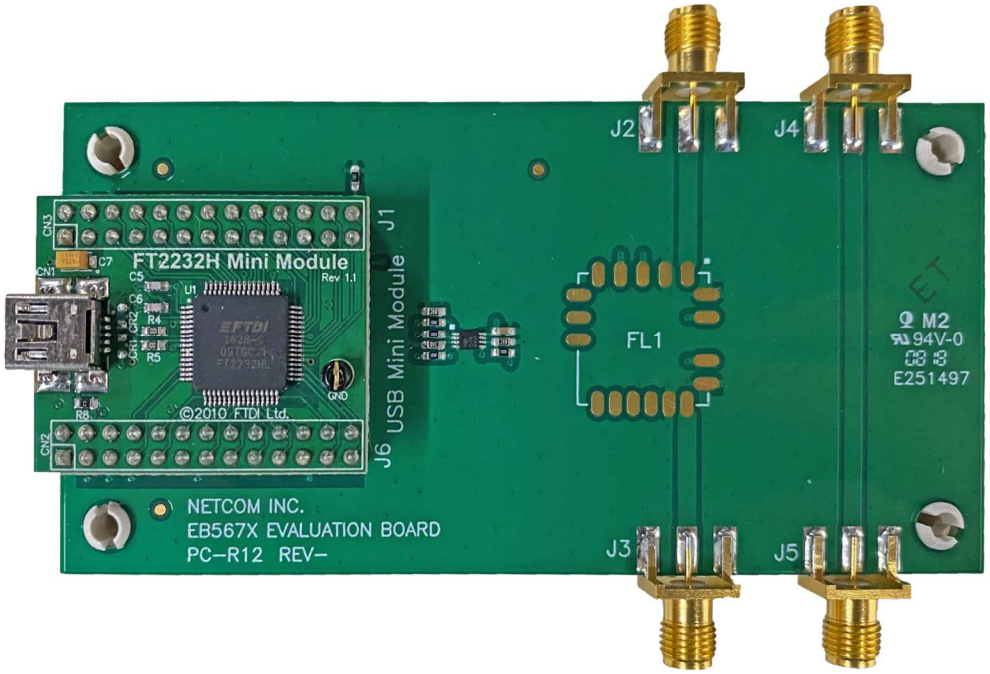
Frequency Range	90 to 225 MHz	
Available BW	7%	9.5%
*Ftune +/- 10% Rejection (Typical)	TBD	< -12 dB
*Ftune +/- 15% Rejection (Typical)	TBD	< -18 dB
*Ftune +/- 20% Rejection (Typical)	TBD	< -22 dB
Insertion Loss (Typical)	TBD	3.9 dB

Corresponding Evaluation Board

Netcom's TunePro Series Filters are tunable bandpass filters with frequency ranges from 30MHz to 2.3GHz.

The EB567X Evaluation Board is designed to test and evaluate Netcom's Model 5774-W Frequency Agile Filter. The evaluation board is used to supply power to the filter, provide tuning control. Facilitate measurement of the filter's RF parameters. Switching speed and power consumption.

Tuning control of the filter is provided by the EB567X Evaluation Board in the form of frequency tuning control for the 5774-W uses a USB input and user interface program to provide frequency tuning control for the 5774-W Frequency Agile Filter. The EB567X Evaluation Board includes a separate RF thru path for calibration of test equipment to improve the accuracy of RF measurements.



Preliminary

Note: Parameters subject to change

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