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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

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Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



# High Frequency Ceramic Solutions

## Miniature 2.45GHz Impedance Matched Front-End Filter Optimized for Semtech SX1280, SX1281

P/N 2450FM07D0034

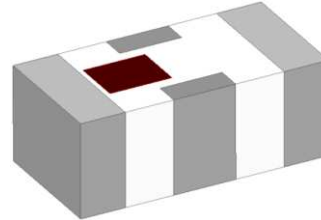
Detail Specification: 5/10/2018

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AEC-Q200 qualified component available, contact us at: [www.johansontechnology.com/ask-a-question](http://www.johansontechnology.com/ask-a-question)

### General Specifications

<b>Part Number</b>	2450FM07D0034
<b>Frequency (MHz)</b>	2400 - 2500
<b>Insertion loss (dB)</b>	0.75 Typ. (1.0 max.)
<b>Return Loss (dB)</b>	14 Typ. (10 min.)
<b>Input Impedance (Terminal Toward Chipset)</b>	Impedance matched to Semtech SX1280, SX1281
<b>Output Impedance</b>	50Ω
<b>Power Capacity</b>	3W max. (CW)



Attenuation (dB)		Reel Quantity	Storage Temperature
4800 - 5000MHz	35 Typ. (30 min.)	10,000 pcs	-40 to +85°C
7200 - 7500MHz	30 Typ. (25 min.)	<b>Operating Temperature</b>	-40 to +85°C
9600 - 10000MHz	30 Typ. (25 min.)		
12000 - 12500MHz	25 Typ. (20 min.)	<b>Recommended Storage Conditions for unused T&amp;R product</b>	+5 to +35°C, Humidity: 45-75%RH, 18 mo. Max.
14400 - 15000MHz	9.5 Typ. (4.5 min.)		
16800 - 17000MHz	8.0 Typ. (3.0 min.)		

You can download measured s-parameters of this component at: [www.johansontechnology.com/semtech](http://www.johansontechnology.com/semtech)

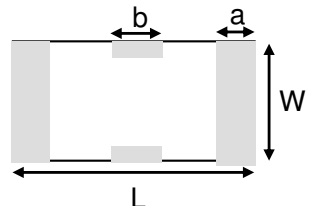
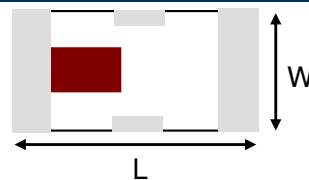
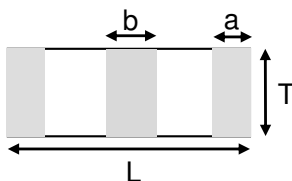
### Part Number Explanation

P/N Suffix	Packaging Style	Bulk	Suffix = S	E.g. 2450FM07D0034S
		T & R	Suffix = T	E.g. 2450FM07D0034T
	<b>Termination Style</b>	100% Tin	Suffix = None	E.g. 2450FM07D0034(T or S)

For the Full App Note and Layout Files, go to: [www.johansontechnology.com/semtech](http://www.johansontechnology.com/semtech)

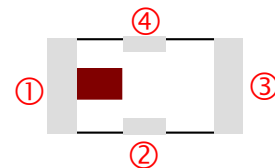
### Mechanical Dimensions

	In	mm
<b>L</b>	0.039 ± 0.002	1.00 ± 0.05
<b>W</b>	0.020 ± 0.002	0.50 ± 0.05
<b>T</b>	0.016 max.	0.40 max.
<b>a</b>	0.007 ± 0.004	0.18 ± 0.10
<b>b</b>	0.010 ± 0.004	0.25 ± 0.10



### Terminal Configuration

No.	Function
<b>1</b>	IN (Toward the chipset)
<b>2</b>	GND
<b>3</b>	OUT (Toward the antenna)
<b>4</b>	GND



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# High Frequency Ceramic Solutions

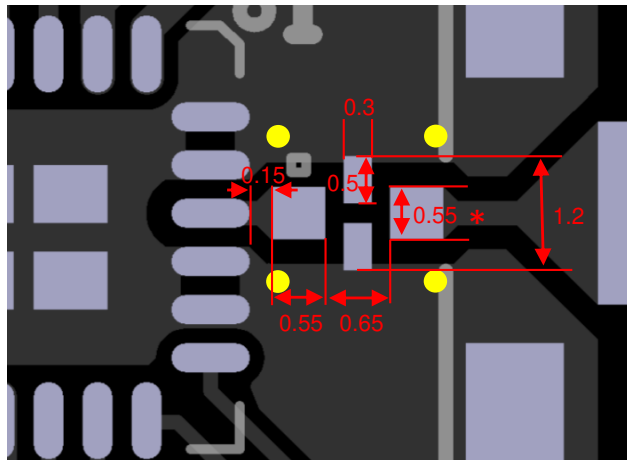
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## Mounting Pad Dimensions



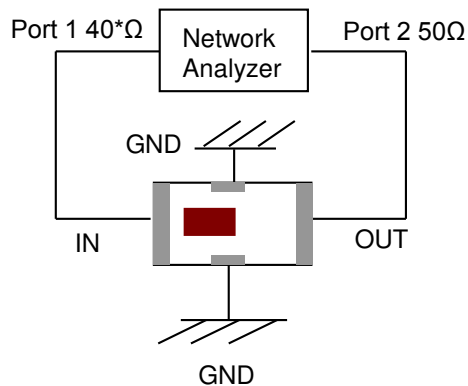
-  Solder Resist
-  Land
-  Through-hole ( $\phi$  0.20)

\*Line width should be designed to match 50 $\Omega$  characteristic impedance, depending on PCB material and thickness.

Units in mm

Do you need the layout files of the above? Go to: [www.johansontechnology.com/ask-a-question](http://www.johansontechnology.com/ask-a-question)

## Measurement Schematic



Port 1: Filter IN (red marking side toward chipset)

\*Port 1 is indeed 40ohms!

Port 2: Filter OUT (toward antenna)

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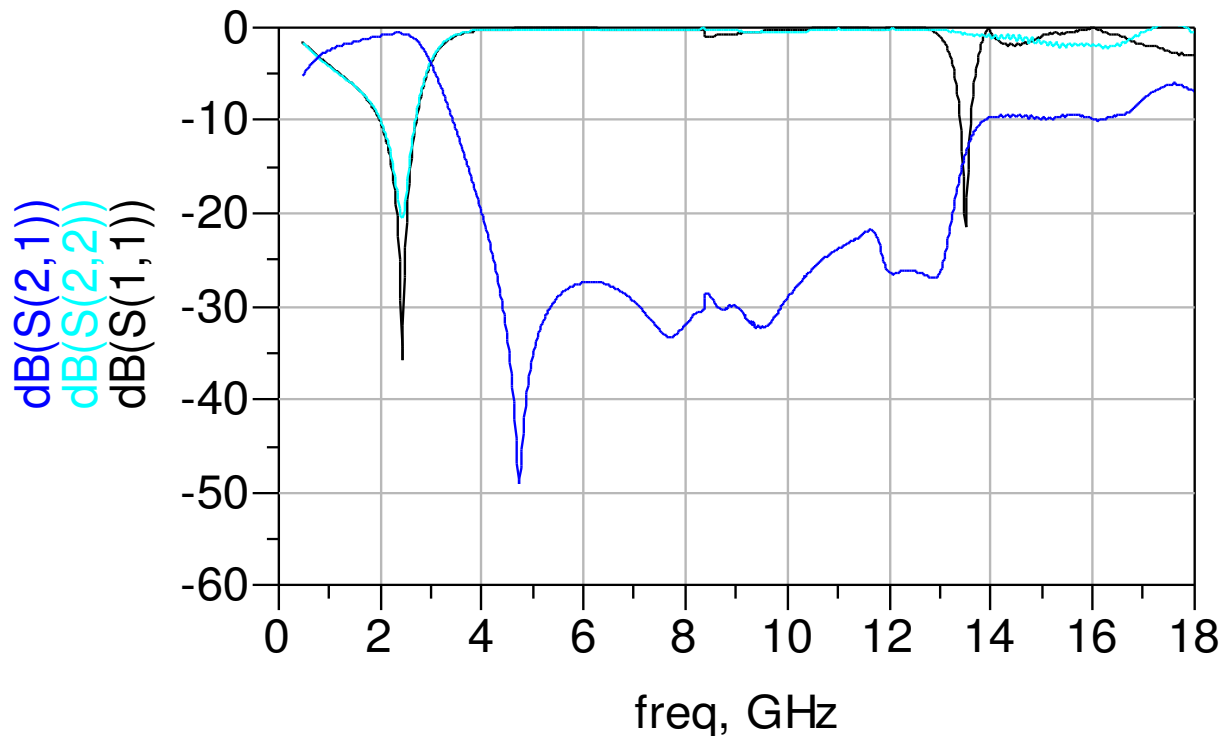
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## Typical Electrical Characteristics (T=25°C)



If you would like recommendation on a mini 2.4G embedded antenna, free layout verification, reference design files (gerbers, schematic, etc) or s-parameter files, please contact us at:

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## Application Notes, Layout Files, and more

[www.johansontechnology.com/semtech](http://www.johansontechnology.com/semtech)

## Packaging information

[www.johansontechnology.com/tape-reel-packaging](http://www.johansontechnology.com/tape-reel-packaging)

## Soldering Information

[www.johansontechnology.com/ipcsoldering-profile](http://www.johansontechnology.com/ipcsoldering-profile)

## MSL Info

[www.johansontechnology.com/msl-rating](http://www.johansontechnology.com/msl-rating)

## Recommended Storage Condition and Max Shelf Life

[www.johansontechnology.com/recommended-storage-conditions](http://www.johansontechnology.com/recommended-storage-conditions)

## RoHS Compliance

[www.johansontechnology.com/rohs-compliance](http://www.johansontechnology.com/rohs-compliance)

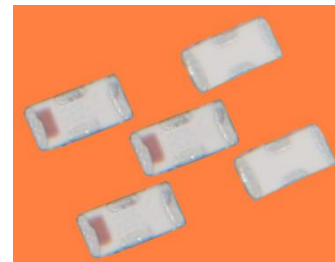
## Antenna layout and tuning techniques

[www.johansontechnology.com/tuning](http://www.johansontechnology.com/tuning)

## Antenna layout review, tuning, and characterization services

[www.johansontechnology.com/ipc-antenna-services](http://www.johansontechnology.com/ipc-antenna-services)

Johanson uses 6/6 RoHS Green Low-Temperature-Co-fired-Ceramic (LTCC) integrated passive technology in a 4-pin (Sn plated) monolithic structure. This component is 100% RF Tested, making it a more reliable system, impedance controlled environment, consistent-guaranteed RF performance in a very small RF front end-solution compared to the L/C discrete solution.



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