

# High Frequency Ceramic Solutions

**Ultra Miniature 2.45GHz Impedance Matched FCC / ETSI Compliant Low Pass Filter: Optimized for Nordic's Chipset nRF52832-CIAA**

P/N 2450FM07A0035001T

Legacy P/N 2450FM07A0035

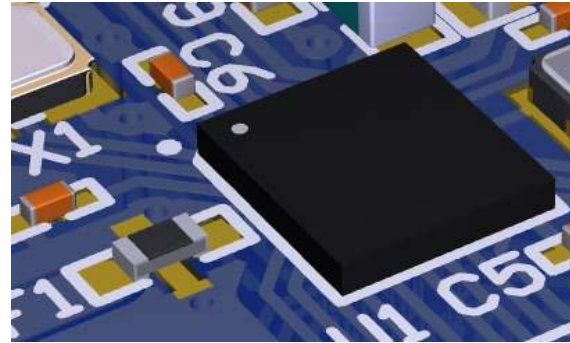
Detail Specification: 4/13/2023

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AEC-Q200 qualified component available, contact us at: <https://www.johansontechnology.com/ask-a-question>

## General Specifications

|   |   |
|---|---|
| <b>Part Number</b>                                | 2450FM07A0035   |
| <b>Frequency (MHz)</b>                            | 2400 - 2500   |
| <b>Insertion loss (dB)</b>                        | 0.35 Typ. (0.75 max.)                                   |
| <b>Return Loss (dB)</b>                           | 10 Typ. (10 min.)                                       |
| <b>Input Impedance (Terminal Towards Chipset)</b> | Impedance matched to Nordic Semiconductor nRF52832-CIAA |
| <b>Output Impedance</b>                           | 50Ω   |
| <b>Power Capacity</b>                             | 3W max. (CW)  |
| <b>Attenuation (dB)</b>                           |   |
| 4800~5000MHz                                      | 26 typ.@25°C 24 min.                                    |
| 7200~7500MHz                                      | 17 typ.@25°C 15 min.                                    |



|  |  |
|--|--|
| <b>Reel Quantity</b>   | 10,000 pcs                                   |
| <b>Operating Temperature</b>                                     | -40 to +85°C                                 |
| <b>Recommended Storage Conditions for unused T&amp;R product</b> | +5 to +35°C, Humidity: 45-75%RH, 18 mo. Max. |

You can download measured s-parameters of this component at: <https://www.johansontechnology.com/nordic>

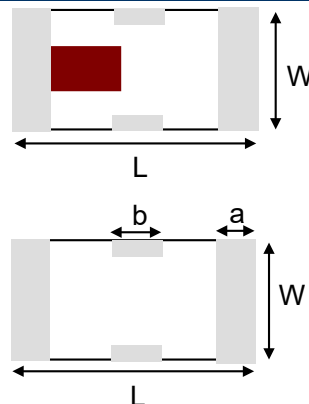
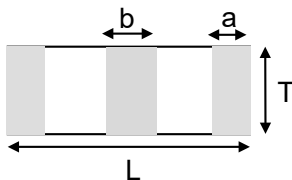
## Part Number Explanation

|                   |                          |          |               |                            |
|-------------------|--------------------------|----------|---------------|----------------------------|
| <b>P/N Suffix</b> | <b>Packaging Style</b>   | Bulk     | Suffix = S    | E.g. 2450FM07A0035S        |
|                   |                          | T & R    | Suffix = T    | E.g. 2450FM07A0035T        |
|                   | <b>Termination Style</b> | 100% Tin | Suffix = None | E.g. 2450FM07A0035(T or S) |

For the Full App Note and Layout Files, go to: <https://www.johansontechnology.com/nordic>

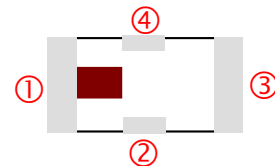
## Mechanical Dimensions

|          | 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          |
|-----|-------------------|
| 1   | IN (To the nRF52) |
| 2   | GND               |
| 3   | OUT (To Antenna)  |
| 4   | GND               |



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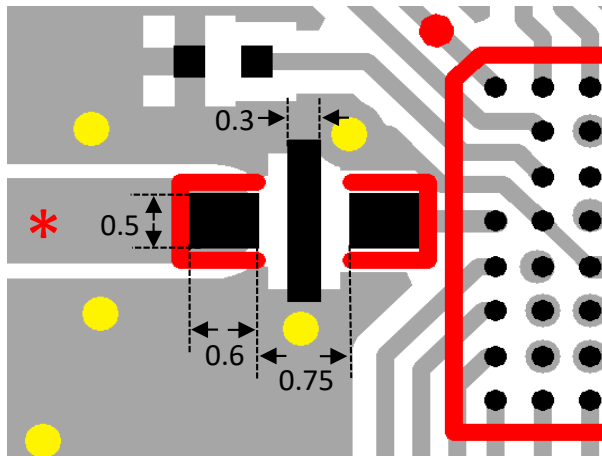
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## Mounting Pad Dimensions

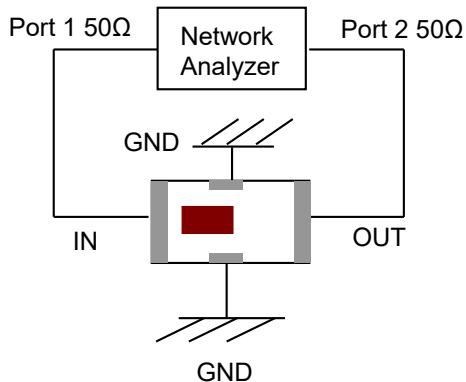


-  Solder Resist
-  Land
-  Through-hole ( $\phi 0.20$ )

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

Do you need the layout files of the above? Go to: <https://www.johansontechnology.com/nordic> or send us a message to review your layout at: [www.johansontechnology.com/ask-a-question](http://www.johansontechnology.com/ask-a-question)

## Measurement Schematic



Port 1: Filter IN (marking side)  
Port 2: Filter OUT

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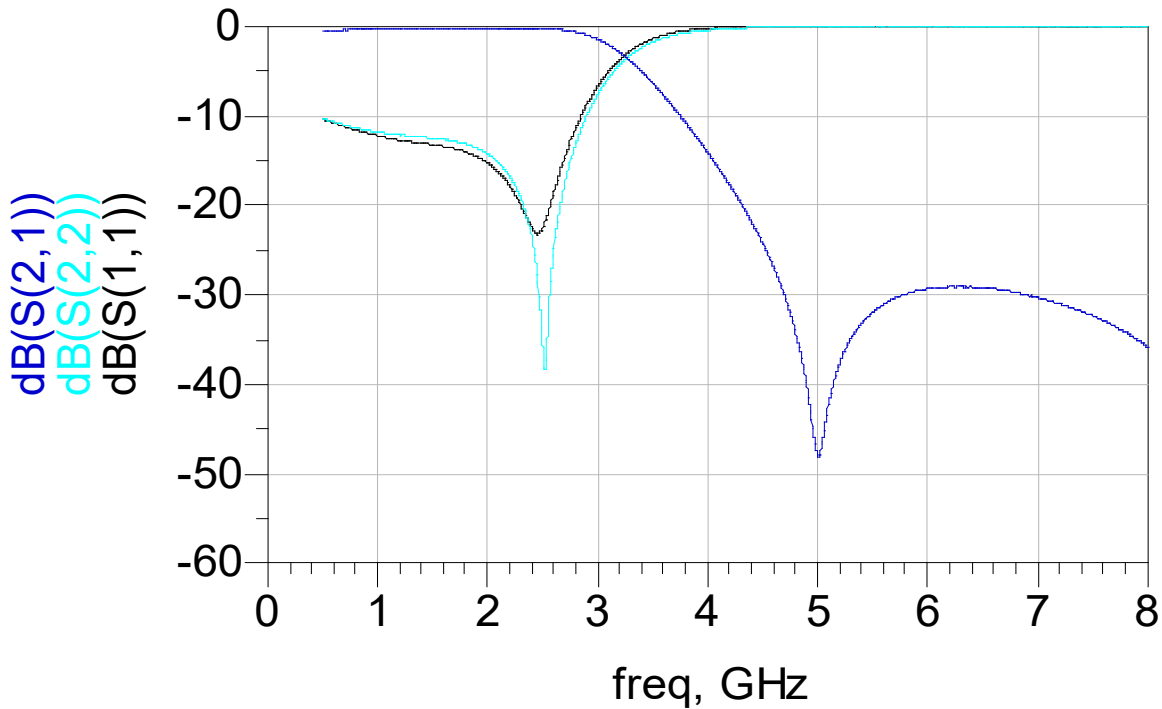
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## Typical Electrical Characteristics (T=25°C)



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

<https://www.johansontechnology.com/nordic>

## Packaging information

<https://www.johansontechnology.com/tape-reel-packaging>

## Soldering Information

<https://www.johansontechnology.com/ipcsoldering-profile>

## MSL Info

<https://www.johansontechnology.com/msl-rating>

## Recommended Storage Condition and Max Shelf Life

<https://www.johansontechnology.com/recommended-storage-conditions>

## RoHS Compliance

<https://www.johansontechnology.com/technical-notes/rohs-compliance>

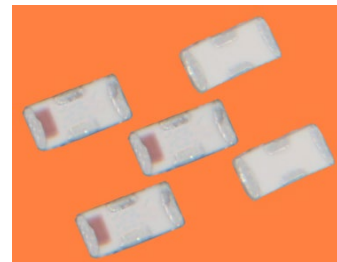
## Antenna layout and tuning techniques

<https://www.johansontechnology.com/tuning>

## Antenna layout review, tuning, and characterization services

<https://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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