

High Frequency Ceramic Solutions

Miniature 2.4GHz Impedance Matched Low Pass Filter:
Optimized for Nordic Semiconductor Chipset nRF52805-CAAA

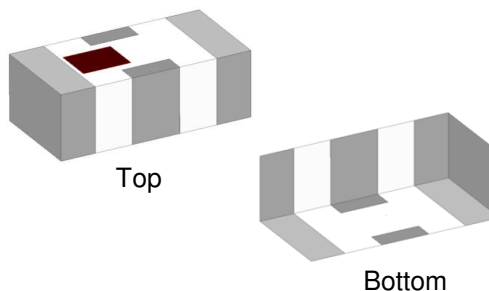
P/N: 2450FM07C0041001T
Legacy P/N: 2450FM07C0041

Detail Specification: 12/13/2022

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General Specifications

Part Number	2450FM07C0041001T
Operating Frequency (MHz)	2400 - 2500
Insertion Loss (dB)	0.35 typ. (0.75 max.)
Return Loss (dB)	20 typ. (9.5 min.)
Input Impedance (Terminal Toward Chipset)	Impedance matched to Nordic Semiconductor nRF52805-CAAA
Output Impedance (Ω)	50
Attenuation (dB)	30 typ. (24 min.) @4800 - 5000MHz 40 typ. (15 min.) @7200 - 7500MHz
Power Capacity (W)	3 max. (CW)
Operating Temperature	-40 to +85°C



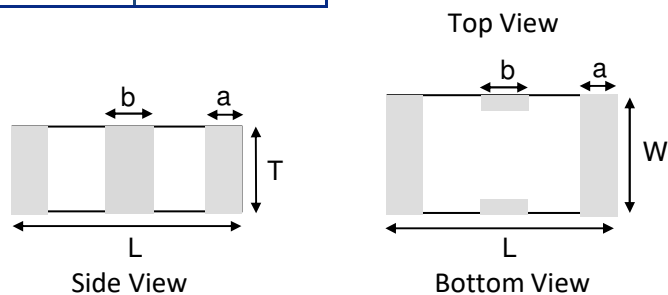
Recommended Storage Conditions and Period for Unused Product on T&R	+5 to +35°C Humidity 45 - 75% RH 18 months max.
Reel Quantity (pcs./reel)	10,000

Part Number Explanation

P/N Suffix	Packing Style	Bulk (loose pcs.)	Suffix = B	E.g. 2450FM07C0041001B
		T & R (7" Reel Paper Tape)	Suffix = T	E.g. 2450FM07C0041001T
	Evaluation Board	Non-Conductive Bags	Suffix = C	E.g. 2450FM07C0041001CE1
		Assembled PCB 1 (50 Ω SMA)	Suffix = E1	

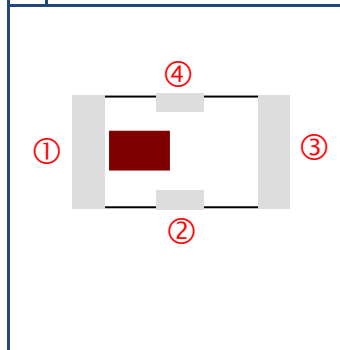
Mechanical Dimensions

	in	mm
L	0.039 \pm 0.002	1.00 \pm 0.05
W	0.020 \pm 0.002	0.50 \pm 0.05
T	0.016 max	0.40 max
a	0.007 \pm 0.004	0.18 \pm 0.10
b	0.010 \pm 0.004	0.25 \pm 0.10



Terminal Configuration

No.	Function
1	IN (Towards the chipset)
2	GND
3	OUT (Towards the antenna)
4	GND



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Ver. 1.0

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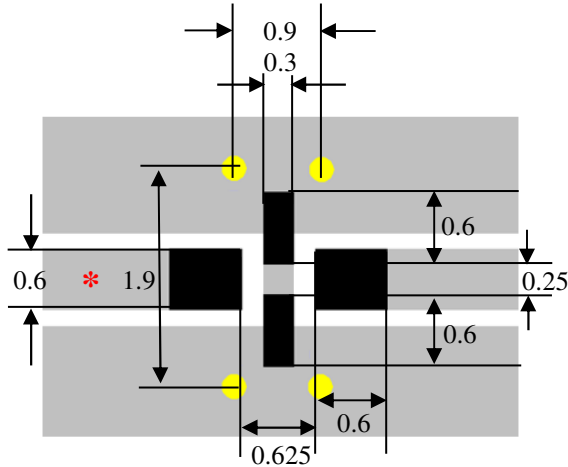
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Mounting Considerations

Mount device with colored mark facing up.



Units: mm

■ Solder Resist

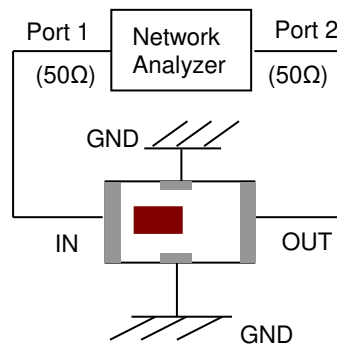
■ Land

○ Through-hole (ϕ 0.20)

* Transmission line width should be designed to match 50 Ω characteristic impedance, depending on PCB material and thickness.

Do you need the layout files of the above? Go to:
<https://www.johansontechnology.com/ask-a-question>

Measurement Schematic



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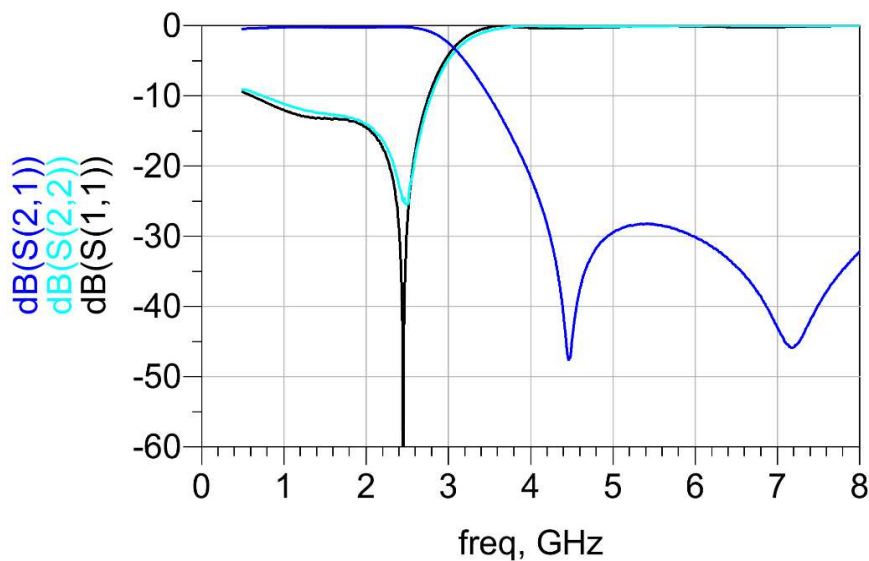
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Typical Electrical Characteristics (T=25°C)

Insertion Loss and Return Loss



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: <https://www.johansontechnology.com/ask-a-question>

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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/rohs-compliance>

Antenna Layout Review, Tuning, and Characterization Services

<https://www.johansontechnology.com/ipc-antenna-services>

Antenna Mounting and Tuning Techniques

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

Johanson's New Global Part Number Schema

Johanson has instituted a new Global Part Numbering (GPN) system. **Only the part number is changing.** The parts are produced with the exact same materials, manufacturing processes, manufacturing controls, dimensions, physical attributes and testing as the parts supplied with the legacy part numbers.

A database for part number crosses can be accessed at:

<https://www.johansontechnology.com/pn-search>

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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