

High Frequency Ceramic Solutions

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

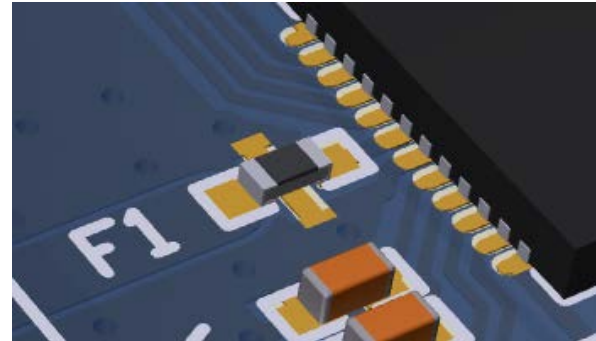
P/N 2450FM07A0029

Detail Specification: 5/26/2017

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General Specifications

Part Number	2450FM07A0029
Frequency (MHz)	2400 - 2500
Insertion loss (dB)	0.8 max.
Return Loss (dB)	10 min.
Input Impedance (Terminal Towards Chipset)	Impedance matched to Nordic Semiconductor nRF52832-QFAA, nRF52832-QFAB
Output Impedance	50Ω
Power Capacity	2W max. (CW)
Attenuation (dB)	
4800~5000MHz	23 typ.@25°C 20 min.
7200~7500MHz	12 typ.@25°C 18 min.



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

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

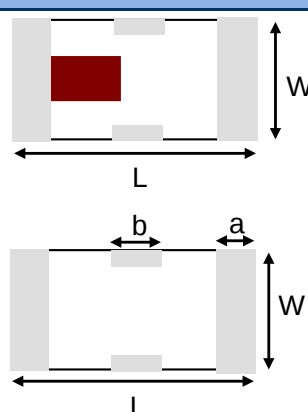
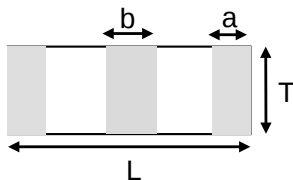
Part Number Explanation

P/N Suffix	Packaging Style	Bulk	Suffix = S	E.g. 2450FM07A0029S
		T & R	Suffix = T	E.g. 2450FM07A0029T
	Termination Style	100% Tin	Suffix = None	E.g. 2450FM07A0029(T or S)

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

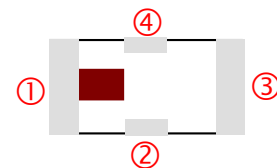
Mechanical Dimensions

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



Terminal Configuration

No.	Function
1	IN (To RFIC)
2	GND
3	OUT (To Antenna)
4	GND



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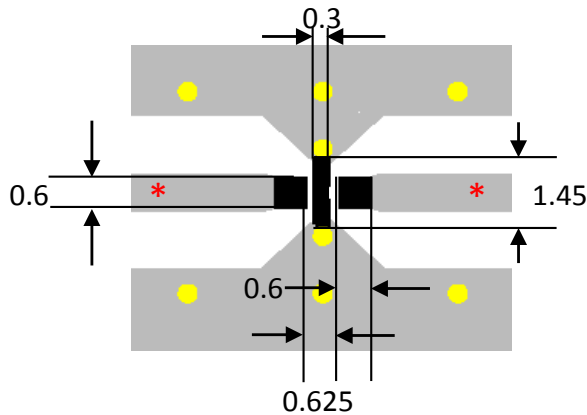
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Mounting Pad Dimensions

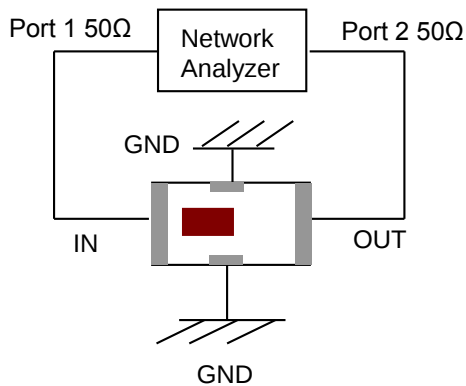


-  Solder Resist
-  Land
-  Through-hole ($\phi 0.35$)

*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: www.johansontechnology.com/nordic or send us a message to review your layout at: www.johansontechnology.com/ask-a-question

Measurement Schematic



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

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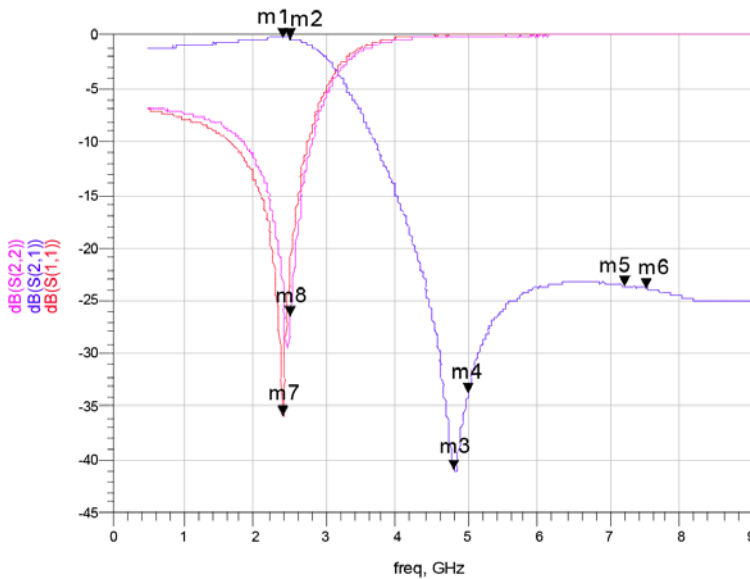
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Typical Electrical Characteristics (T=25°C)



m1
freq=2.400GHz
dB(S(2,1))=-0.224

m3
freq=4.800GHz
dB(S(2,1))=-40.825

m2
freq=2.500GHz
dB(S(2,1))=-0.276

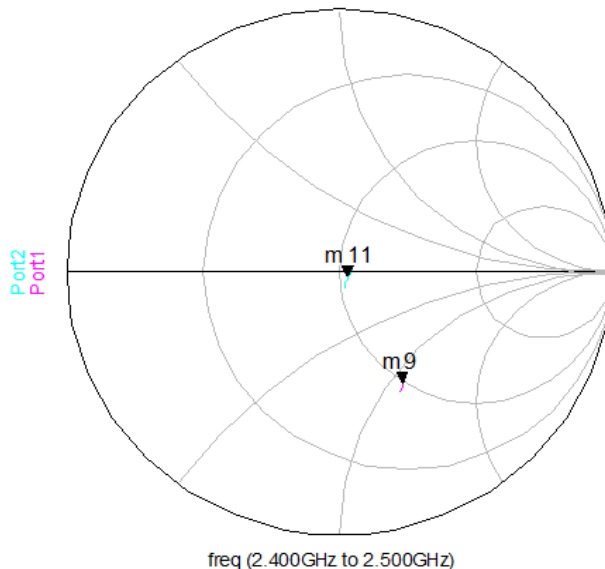
m4
freq=5.000GHz
dB(S(2,1))=-33.724

m7
freq=2.400GHz
dB(S(1,1))=-35.825

m5
freq=7.200GHz
dB(S(2,1))=-23.504

m8
freq=2.500GHz
dB(S(1,1))=-26.511

m6
freq=7.500GHz
dB(S(2,1))=-23.871



m9
freq=2.450GHz
Port1 = 0.483 / -61.920
impedance = 49.243 - j54.723

m11
freq=2.450GHz
Port2 = 0.037 / -37.256
impedance = 52.974 - j2.372

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Application Notes, Layout Files, and more

www.johansontechnology.com/nordic

Packaging information

www.johansontechnology.com/tape-reel-packaging

Soldering Information

www.johansontechnology.com/ipcsoldering-profile

MSL Info

www.johansontechnology.com/msl-rating

Recommended Storage Condition and Max Shelf Life

www.johansontechnology.com/recommended-storage-conditions

RoHS Compliance

www.johansontechnology.com/technical-notes/rohs-compliance

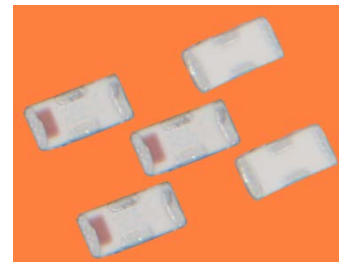
Antenna layout and tuning techniques

www.johansontechnology.com/tuning

Antenna layout review, tuning, and characterization services

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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