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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.

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High Frequency Ceramic Solutions

2.45GHz Impedance Matched Balun + Band Pass Filter: Optimized for Nordic's Chipsets: nRF51822-QFAA, P/N 2450BM14E0003
 nRF51422-QFAA, nRF51822-QFAB, nRF51422-QFAB, nRF51822-QFAC, nRF51422-QFAC, nRF51802-QFAA

Detail Specification: 6/29/2016

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

General Specifications

Part Number	2450BM14E0003
Frequency (MHz)	2400 - 2500
Unbalanced Impedance	50 Ω (single ended)
Differential Balanced Impedance	Impedance matched to Nordic Semi nRF51822-QFAx, nRF51422-QFAx, and nRF51802-QFAA chipsets
Average Insertion Loss when connected to the nRF51XX chipset (Active OP)	0.9dB Typ. @25C, 1.5dB max. (-40 to +85C), 2.0dB (+85 to +105C)
Insertion Loss when component measured by itself (passive insertion loss)	2.1dB typ. @25C, 2.5dB max. (-40 to +85C), 3.0dB (+85 to 105C)



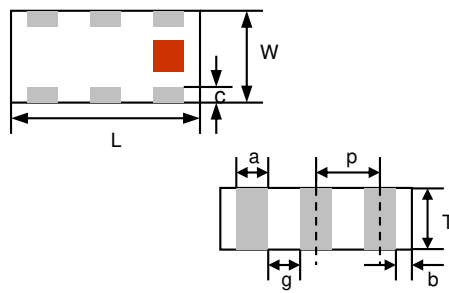
Attenuation Differential mode (dB):	Return Loss (dB)	15 typ. 9.5 min.
800-928 MHz	15 typ.@25°C 10 min.	Amplitude Difference
1200-1500 MHz	14 typ.@25°C 10 min.	150 ± 15deg
4800~5000MHz	35 typ.@25°C 20 min.	Reel Quantity
7200~7500MHz	21 typ.@25°C 18 min.	4,000 pcs
Attenuation Common mode (dB):	Operating Temperature	-40 to +105°C
4800~5000MHz	44 typ.@25°C 20 min.	Storage Temperature
		-40 to +85°C
		Recommended Storage Conditions for unused product on T&R
		+5 to +35°C, Humidity: 45-75%RH, 18 mos. Max
		Power Capacity
		1W max.(CW)

Part Number Explanation

P/N Suffix	Packaging Style	Bulk	Suffix = S	E.g.. 2450BM14E0003S
		T & R	Suffix = T	E.g.. 2450BM14E0003T
	Termination Style	100% Tin	Suffix = None	E.g.. 2450BM14E0003(T or S)

Mechanical Dimensions

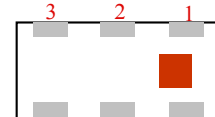
	In	mm
L	0.063 ± 0.004	1.60 ± 0.10
W	0.031 ± 0.004	0.80 ± 0.10
T	0.024 ± 0.004	0.60 ± 0.10
a	0.008 ± 0.004	0.20 ± 0.10
b	0.008 +.004/-0.006	0.20 +0.1/-0.15
c	0.006 ± 0.004	0.15 ± 0.10
g	0.012 ± 0.004	0.30 ± 0.10
p	0.020 ± 0.002	0.50 ± 0.05



You can download layout files, schematics, output power measured results (App Note AN020), and s-parameters at: <http://johansontechnology.com/nordic>

Terminal Configuration

No.	Function
1	Unbalanced Port
2	GND
3	Balanced Port
4	Balanced Port
5	DC Feed
6	GND



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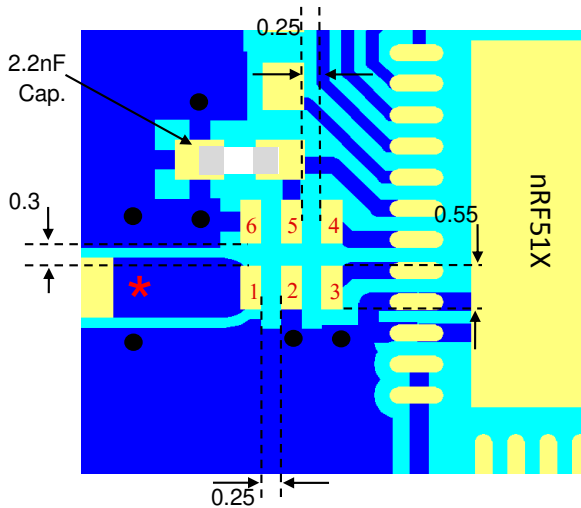
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Mounting Considerations

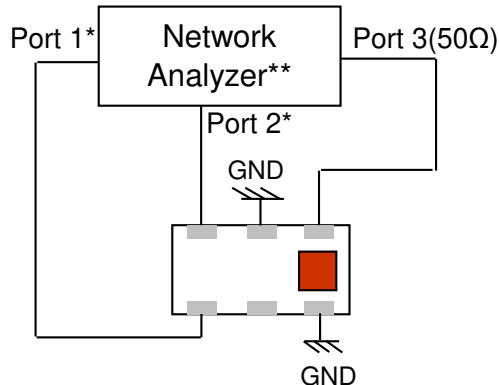


- Land
- Via Through

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

Do you need the layout/gerber files of the above? Go to: www.johansontechnology.com/nordic or send us a message to review your layout at: www.johansontechnology.com/component/ask-a-question

Solo-Component Characterization Scheme



Port 3: Unbalanced Port
 Ports 1 and 2: Balanced Port
 $IL = S_{ds21}$, $Att_{DM} = S_{ds21}$, $Att_{CM} = S_{cs21}$
 $RL = S_{ss11}$
 $Amp_balance = dB(S(1,3)/S(2,3))$
 $Phase_balance = Phase(S(1,3)/S(2,3))$

*Impedance for ports 1 and 2
 = Conjugate to Balanced Impedance/2
 **E5071B from Agilent

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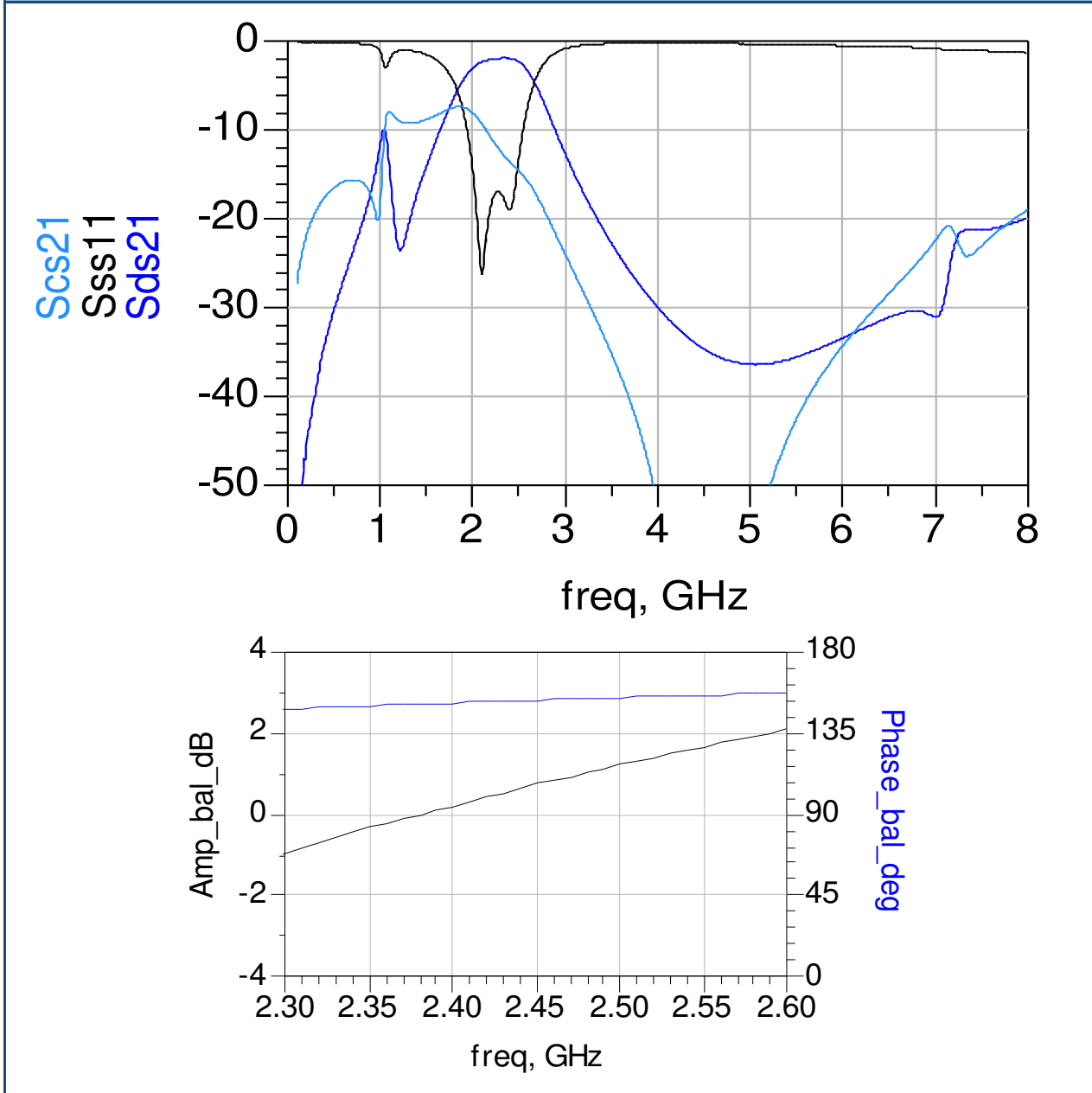
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Typical Electrical Characteristics (T=25°C)



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Application Notes, Layout Files, and more

www.johansontechnology.com/nordic

Packaging information

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

Soldering Information

www.johansontechnology.com/ipcsoldering-profile

MSL Info

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

Recommended Storage Condition and Max Shelf Life

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

RoHS Compliance

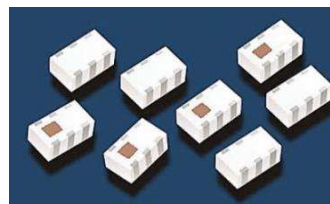
<http://www.johansontechnology.com/rohs-compliance>

Antenna layout and tuning techniques

www.johansontechnology.com/tuning

Antenna layout review, tuning, and characterization services

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