

RF MMIC Innovator

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[CLASSIFICATION] APPLICATION NOTE

[DATE] 2021.01

[REVISION NO.] REV.A

[MEASURING INSTRUMENTS]

- NA_AGILENT E5071B

- SA_AGILENT E4440A

- SG_AGILENT N5182A

- SG_AGILENT N5182B

Broadband Amp BNT22

Application Note



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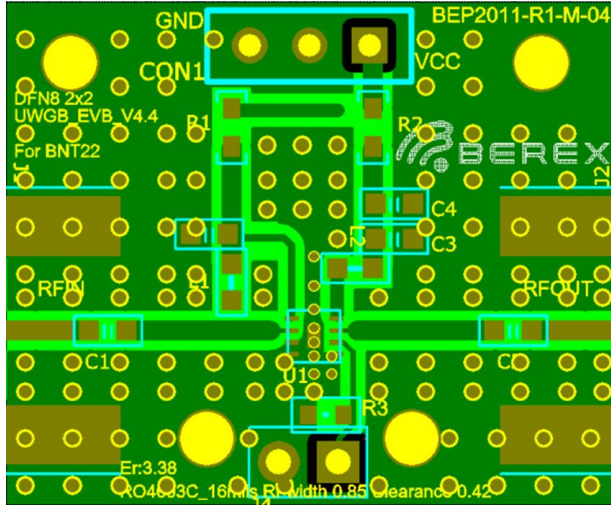
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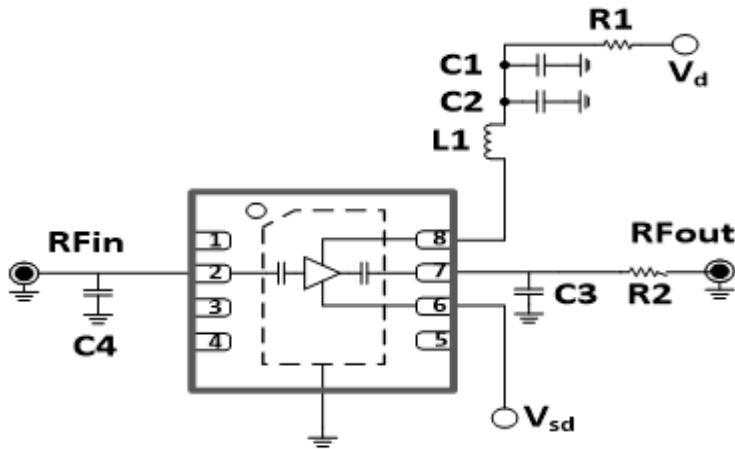
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1. BNT22_ 6.4GHz Application Note



Ref. Des.	Description/ Part Number	Values	Vendor
C1	0603 CAP	1 nF	Samsung
C2	0603 CAP	100 pF	Samsung
C3	0603 CAP	0.3 pF	Samsung
C4	0603 CAP	0.3 pF	Samsung
L1	0603 IND	1 nH	Samsung
R1	0603 RES	3 ohm	Samsung
R2	0603 RES	0 ohm	Samsung
U1	DFN 2X2	BNT22	BEREX



Note:

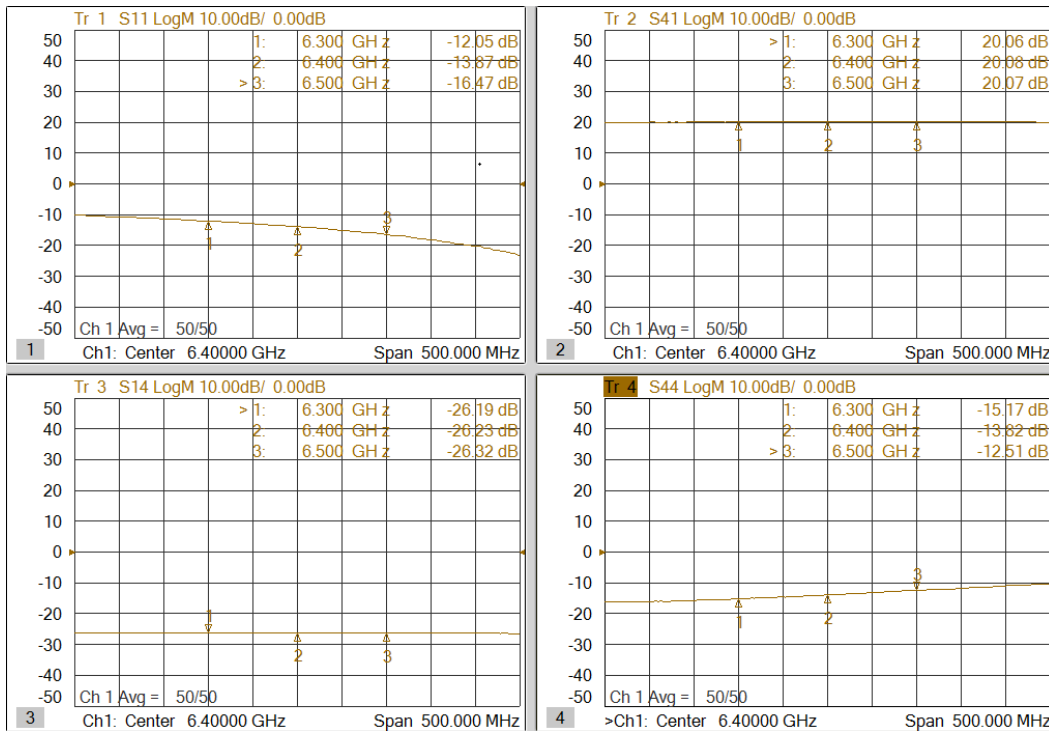
1. PCB: 16mil thick RO4003

TITLE	
BNT22 Evaluation Board	
(6.4GHz)	
Drawing Number	Rev.
Date	Drawn By
FILE NAME	SHEET

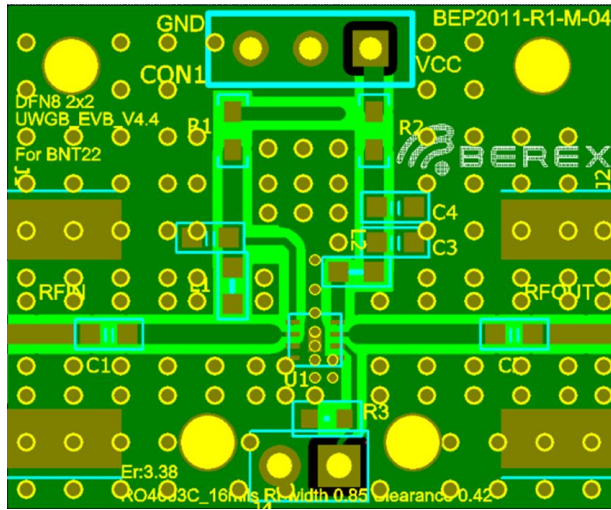
1.1 BNT22_6.4GHz Test Result

SN	Freq [GHz]	Vcc [V]	Icc [mA]	Gain [dB]	OIP3 [dBm] ⁽¹⁾	P1dB [dBm]	IRL [dB]	ORL [dB]	NF [dB]
-	6.3	5	94	20.0	31.3	17.5	-12.0	-15.1	2.95
-	6.4	5	94	20.0	31.4	17.1	-13.8	-13.8	3.02
-	6.5	5	94	20.0	31.4	16.9	-16.4	-12.5	3.08

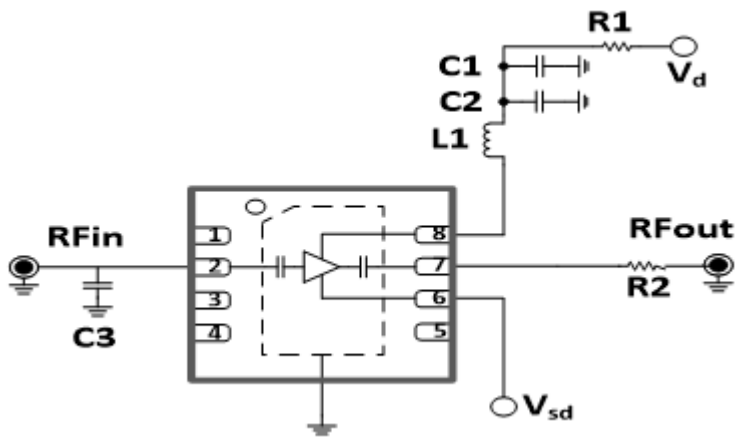
(1) OIP3 was tested @Pout = 5dBm/tone 1MHz offset



2. BNT22_ 7.2GHz Application Note



Ref. Des.	Description/ Part Number	Values	Vendor
C1	0603 CAP	1 nF	Samsung
C2	0603 CAP	100 pF	Samsung
C3	0603 CAP	0.3 pF	Samsung
L1	0603 IND	1.2 nH	Samsung
R1	0603 RES	3 ohm	Samsung
R2	0603 RES	0 ohm	Samsung
U1	DFN 2X2	BNT22	BEREX



Note:

1. PCB: 16mil thick RO4003

TITLE	
BNT22 Evaluation Board	
(7.2GHz)	
Drawing Number	Rev.
Date	Drawn By
FILE NAME	SHEET

A. BNT22_ 7.2GHz Test Result

SN	Freq [GHz]	Vcc [V]	Icc [mA]	Gain [dB]	OIP3 [dBm] ⁽¹⁾	P1dB [dBm]	IRL [dB]	ORL [dB]	NF [dB]
-	7.1	5	94	21.3	29.1	17.2	-26.4	-15.3	3.24
-	7.2	5	94	21.3	27.9	16.4	-17.4	-18.7	3.31
-	7.3	5	94	21.2	27.3	16.6	-12.3	-23.6	3.39

(1) OIP3 was tested @Pout = 5Bm/tone 1MHz offset

