

RF MMIC Innovator

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[Classification] Application Note

[Date] 2014.03

[Revision No.] Rev.A

[Measuring Instruments]

- NA\_Agilent E5071C

- SA\_Agilent N9020A

- SG\_Agilent 4438C

- SG\_IFR 3416

## Gain Block Amp BNT01

### Application Note



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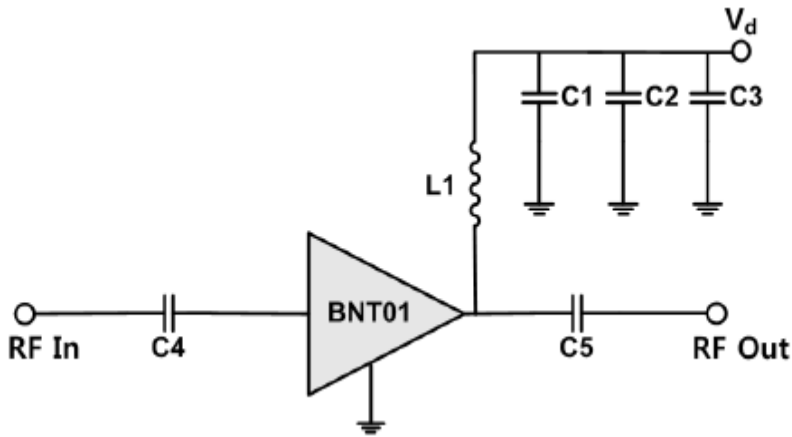
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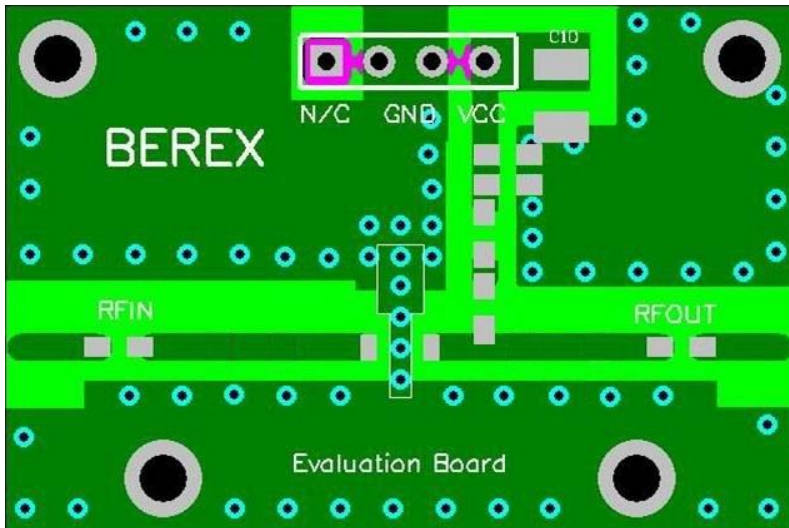
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1. BNT01\_ 70MHz Application Note



Ref. Des.	Description/ Part Number	Values	Vendor
C1	0603 CAP	100pF	Samsung
C2	0603 CAP	1000pF	Samsung
C3	A3216 CAP	10uF	AVX
C4	0603 CAP	1.2nF	Samsung
C5	0603 CAP	1.2nF	Samsung
L1	0603 CAP	680nH	Samsung
U1	SOT89 PKG	BNT01	BEREX



Note:

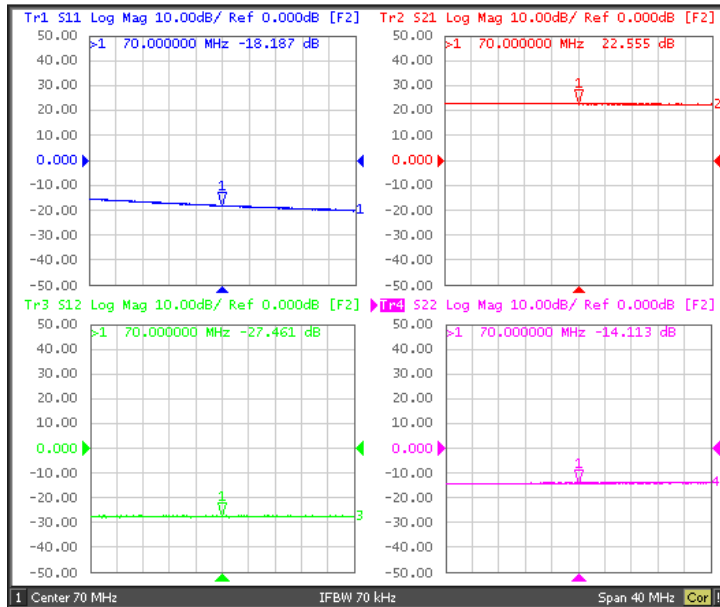
1. PCB: 31mil thick FR4

TITLE	
BGS3 Evaluation Board	
(831.5MHz)	
Drawing Number	Rev.
Date	Drawn By
FILE NAME	SHEET

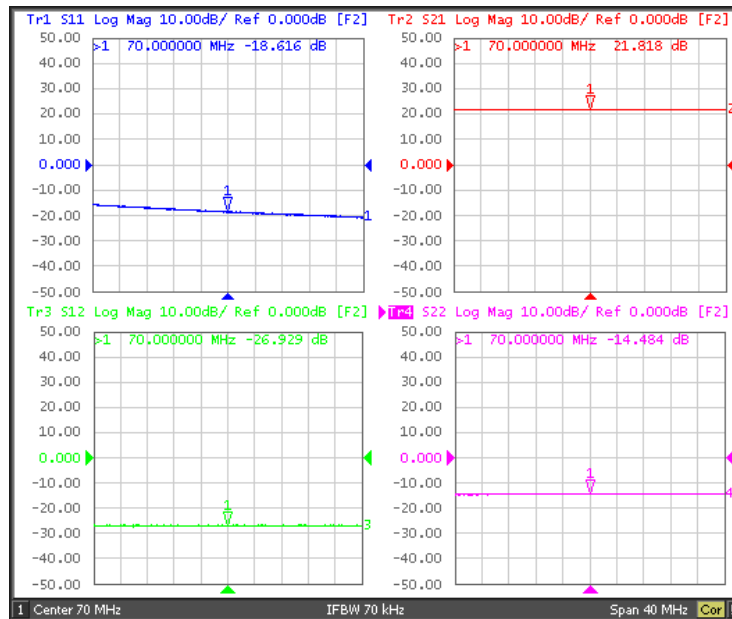
### 1.1 BNT01\_70MHz Test Result

SN	Freq [MHz]	Vcc [V]	Icc [mA]	Gain [dB]	OIP3 [dBm] <sup>(1)</sup>	P1dB [dBm]	IRL [dB]	ORL [dB]	NF [dB]
1	70	4.4	65	22.5	29	22	-18.1	-14.1	2.5
2	70	3.3	44	21.8	33.5	19.5	-18.6	-14.4	1.8

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

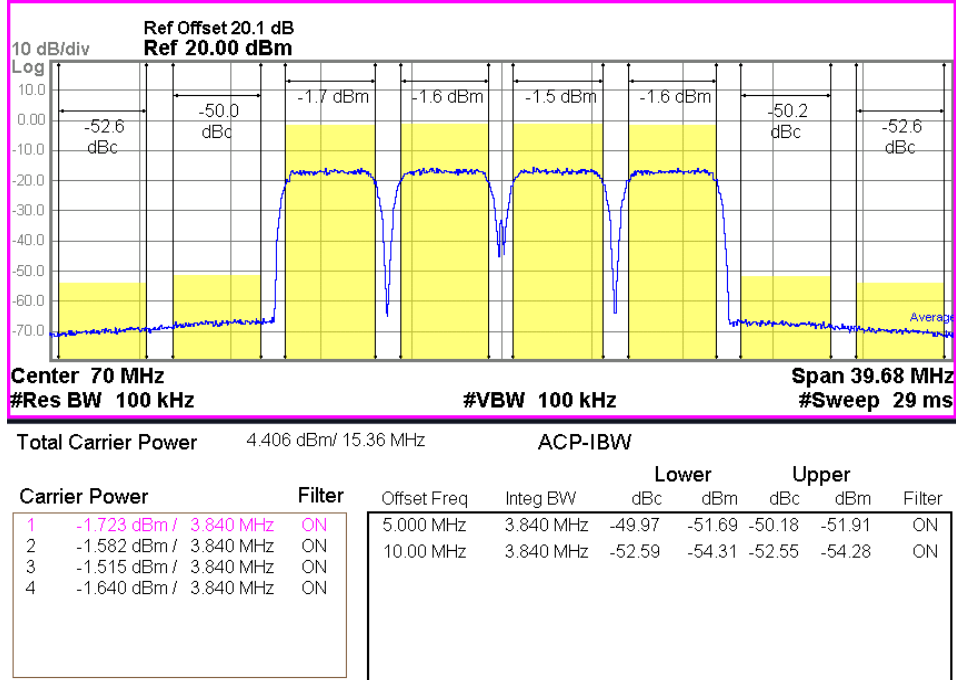


(2) OIP3 was tested @Pout=3dBm/tone 1MHz offset

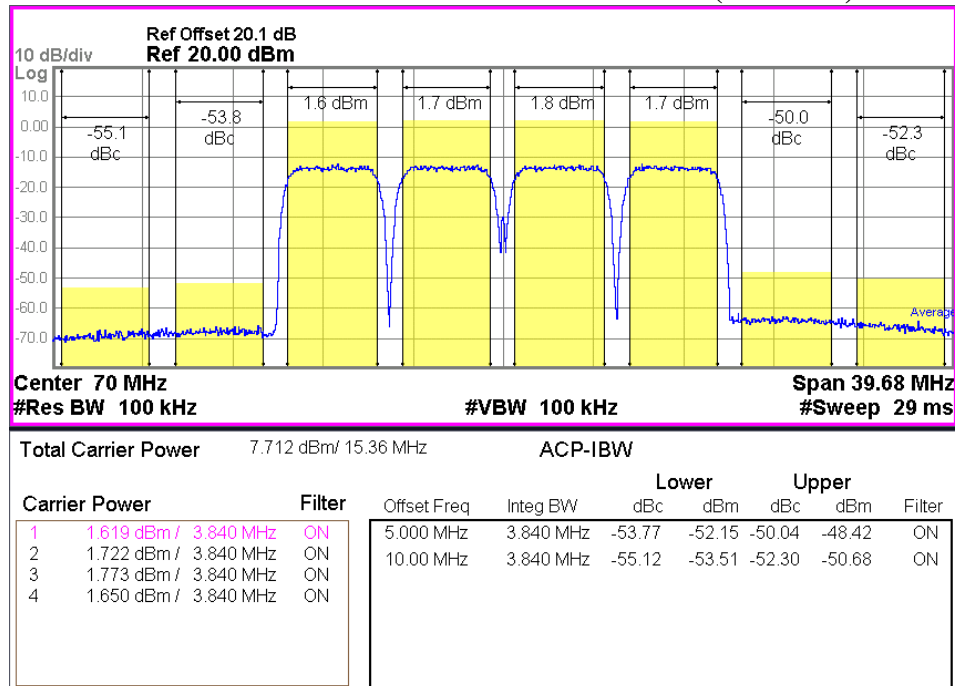


1-1.WCDMA4FA\_ ACLR Test Result

WCDMA 4FA 1-64DPCH : 70MHz -50dBc (Vd=4.4V)

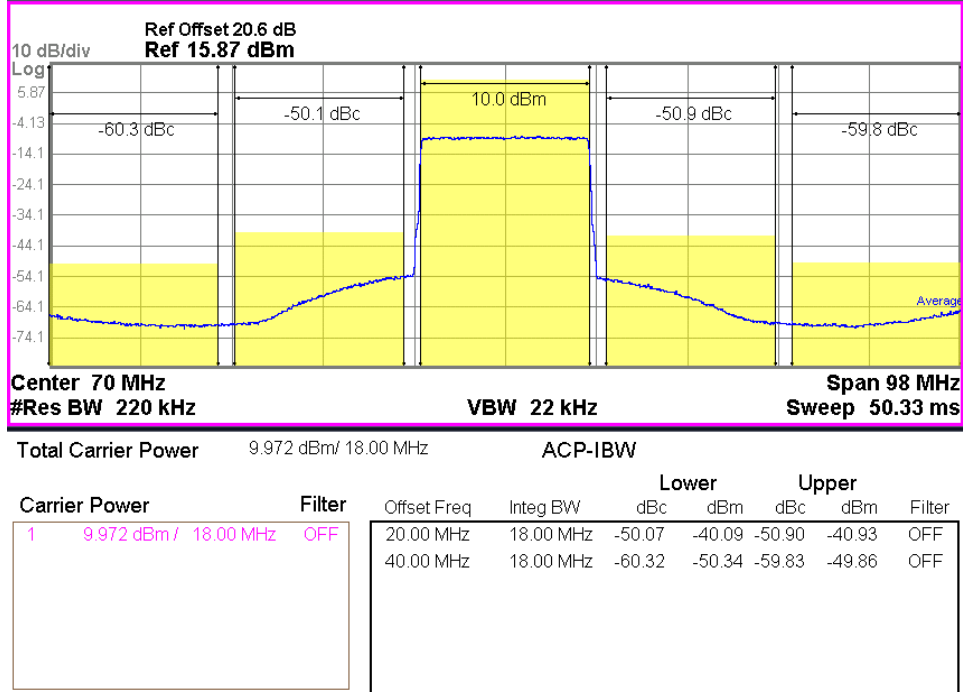


WCDMA 4FA 1-64DPCH : 70MHz -50dBc (Vd=3.3V)



1-2. LTE\_20MHz\_ACLR Test Result

LTE FDD 20MHz TM 3.1 100% : 70MHz -50dBc (Vd=4.4V)



LTE FDD 20MHz TM 3.1 100% : 70MHz -50dBc (Vd=3.3V)

