

BRF MMIC Innovator

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[CLASSIFICATION] APPLICATION NOTE

[DATE] 2015.01

[REVISION No.] REV.A

[MEASURING INSTRUMENTS]

- NA_AGILENT E5071B

- SA_AGILENT N9020A

- SG_AGILENT 4438C

- SG_IFR 3416

Wide Band Low Noise Amp BL081

Application Note



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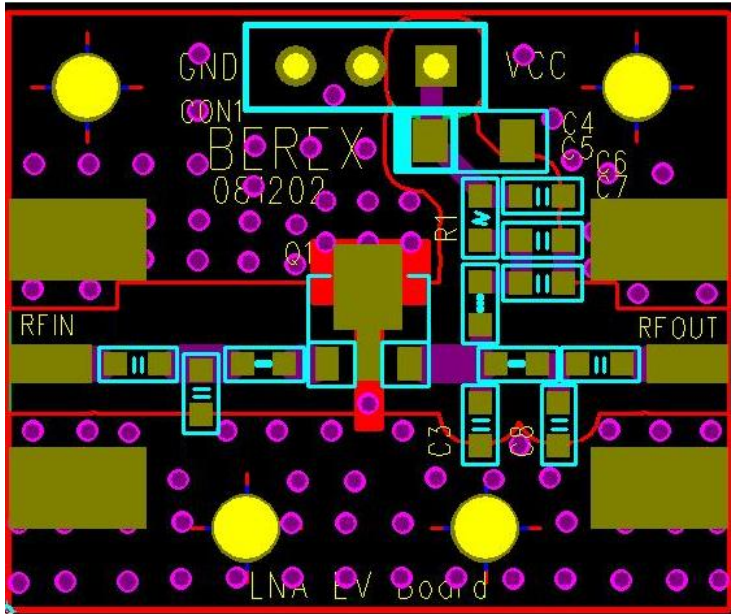
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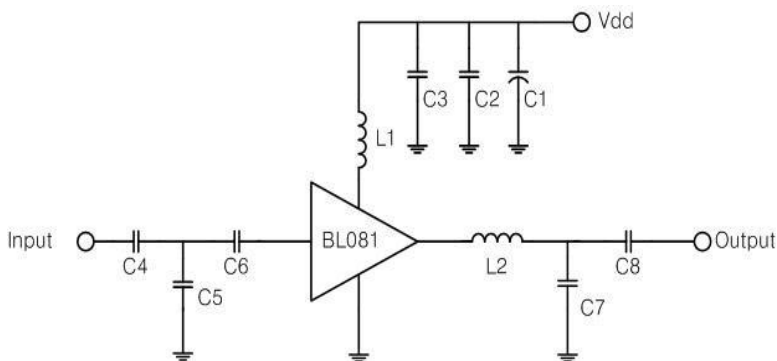
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1. BL081_ 3500MHz Application Note



Ref. Des.	Description/ Part Number	Values	Vendor
C1	3216 CAP	10uF	Samsung
C2	6003 CAP	1000pF	Samsung
C3	0603 CAP	100pF	Samsung
C4	3216 CAP	18pF	Samsung
C5	0603 CAP	0.3pF	Samsung
C6	0603 CAP	4.3pF	Samsung
C7	0603 CAP	1pF	Samsung
C8	0603 CAP	18pF	Samsung
L1	0603 IND	47nH	Ceratech
L2	0603 IND	1.8nH	Ceratech
U1	SOT89 PKG	BL081	BEREX



Note:

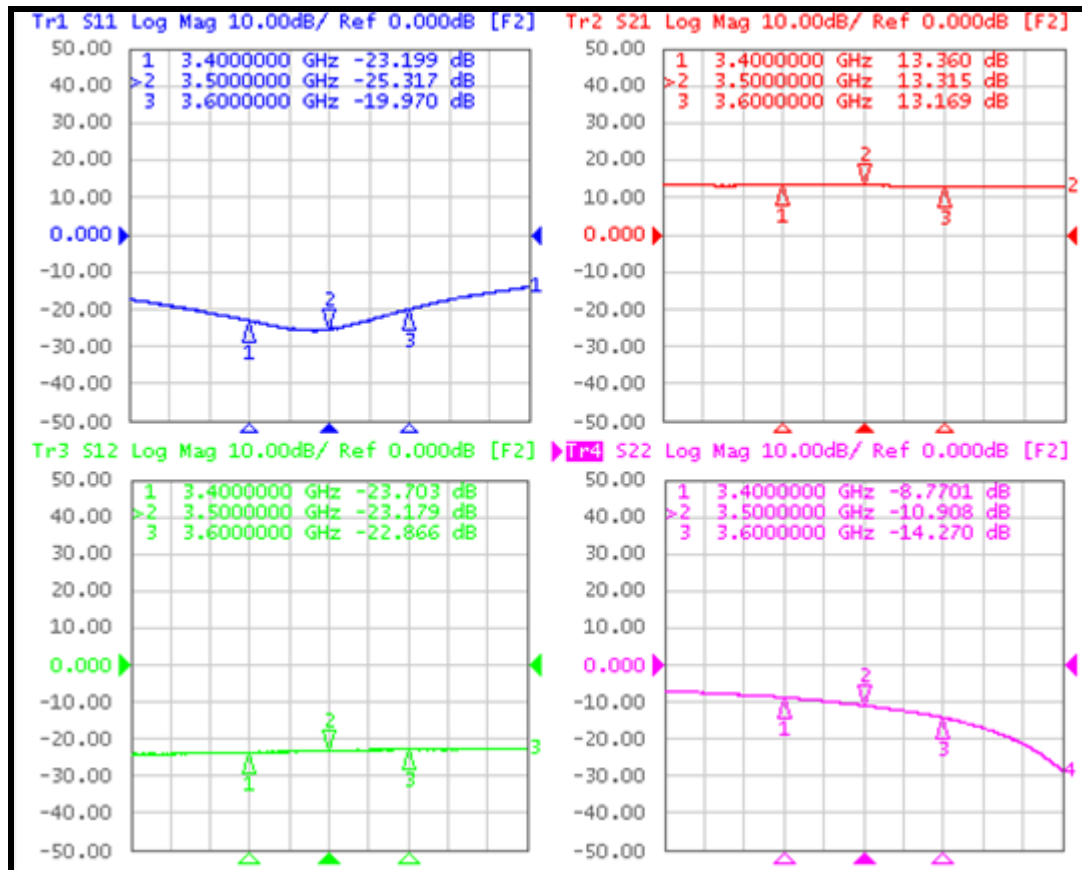
1. PCB: 31mil thick FR4

TITLE	
BL081 Evaluation Board	
(3500 MHz)	
Drawing Number	Rev.
Date	Drawn By
FILE N ME	SHEET

1.1BL081_3500MHz Test Result

SN	Freq [MHz]	Vcc [V]	Icc [mA]	Gain [dB]	OIP3 [dBm] ⁽¹⁾	P1dB [dBm]	IRL [dB]	ORL [dB]	NF [dB]
-	3400	5	30	13.4	30.1	18.6	-23.2	-8.8	1.2
-	3500	5	30	13.3	30.5	18.7	-25.3	-10.9	1.2
-	3600	5	30	13.2	30.6	18.6	-20.0	-14.2	1.2

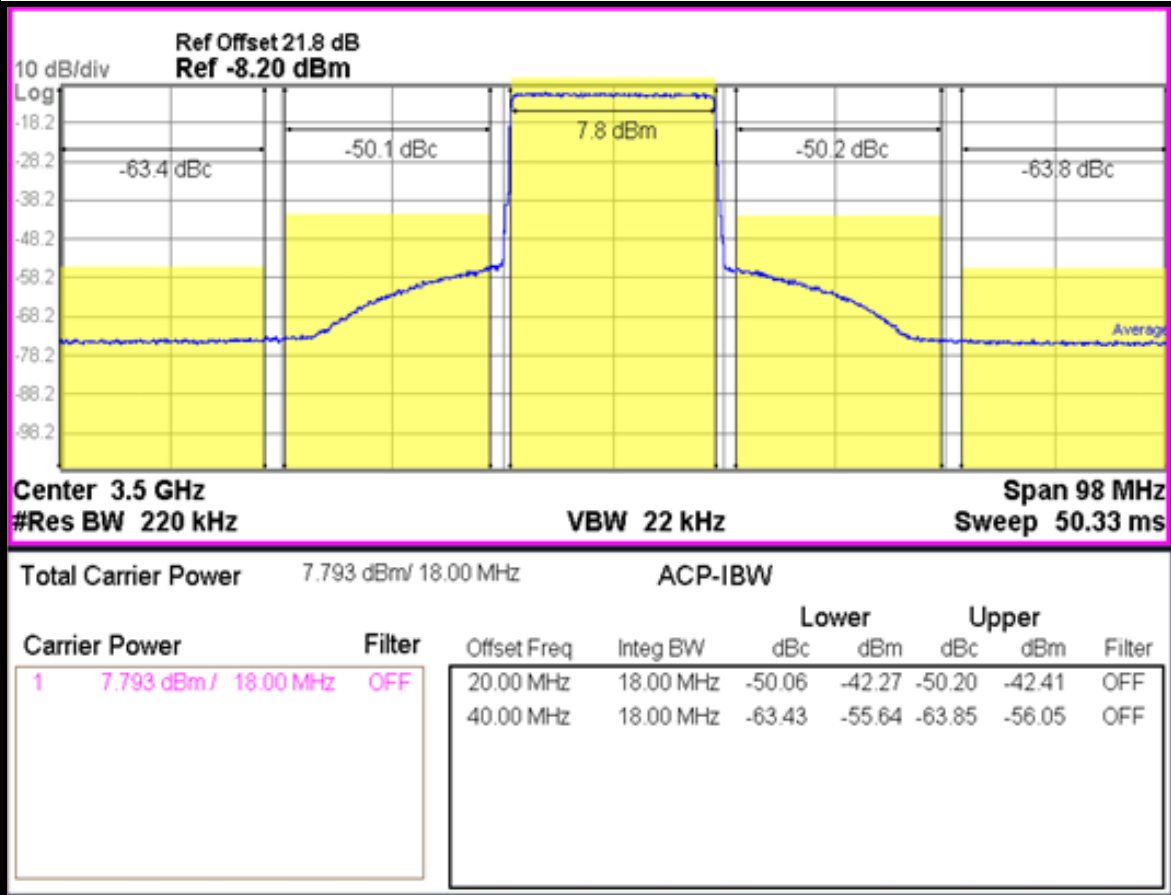
(1) OIP3_tested @Pout=5dBm/tone 1MHz offset



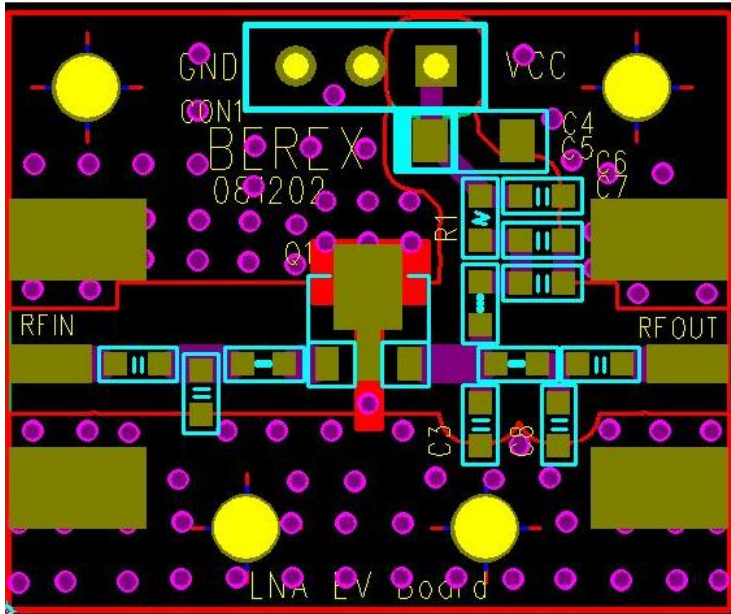
1.2 LTE_20MHz_ACLR Test Result

Out Power : 7.8 dBm

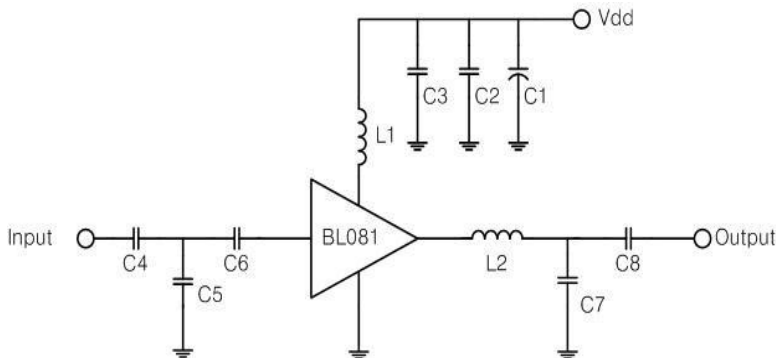
LTE_FDD_20MHz_TM 3p1_100 : 3500 -50dBc



2. BL081_ 3700MHz Application Note



Ref. Des.	Description/ Part Number	Values	Vendor
C1	3216 CAP	10uF	Samsung
C2	6003 CAP	1000pF	Samsung
C3	0603 CAP	100pF	Samsung
C4	3216 CAP	18pF	Samsung
C5	0603 CAP	0.3pF	Samsung
C6	0603 CAP	3pF	Samsung
C7	0603 CAP	0.75pF	Samsung
C8	0603 CAP	18pF	Samsung
L1	0603 IND	47nH	Ceratech
L2	0603 IND	1.8nH	Ceratech
U1	SOT89 PKG	BL081	BEREX



Note:

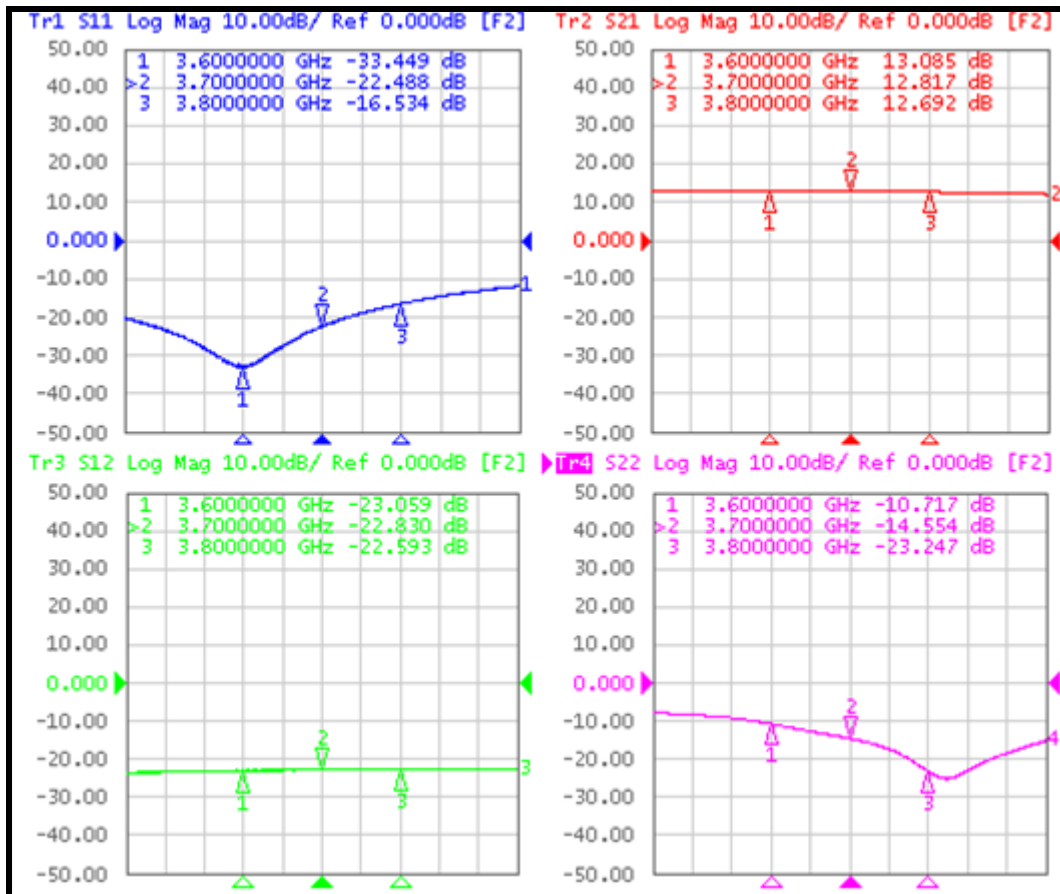
- 2. PCB: 31mil thick FR4

TITLE	
BL081 Evaluation Board	
(3700 MHz)	
Drawing Number	Rev.
Date	Drawn By
FILE N ME	SHEET

2.1BL081_3700MHz Test Result

SN	Freq [MHz]	Vcc [V]	Icc [mA]	Gain [dB]	OIP3 [dBm] ⁽¹⁾	P1dB [dBm]	IRL [dB]	ORL [dB]	NF [dB]
-	3600	5	30	13.1	30.1	18.8	-33.4	-10.7	1.4
-	3700	5	30	12.8	30.3	18.7	-22.5	-14.6	1.7
-	3800	5	30	12.7	30.7	18.6	-16.5	-23.2	1.8

(1) OIP3_tested @Pout=5dBm/tone 1MHz offset



2-2. LTE_20MHz_ACLR Test Result

Out Power : 8.1 dBm

LTE_FDD_20MHz_TM 3p1_100 : 3700 -50dBc

