

BRF MMIC Innovator

www.berex.com

[Classification] Application Note

[Date] 2013.03

[Revision No.] Rev.A

[Measuring Instruments]

- NA_Agilent 8753ES

- SA_Agilent E4404B

- SG_Agilent 4438C

- SG_IFR 3416

Wide Band Low Noise Amp BL081

Application Note



Contents

RF MMIC INNOVATOR WWW.BEREX.COM 1

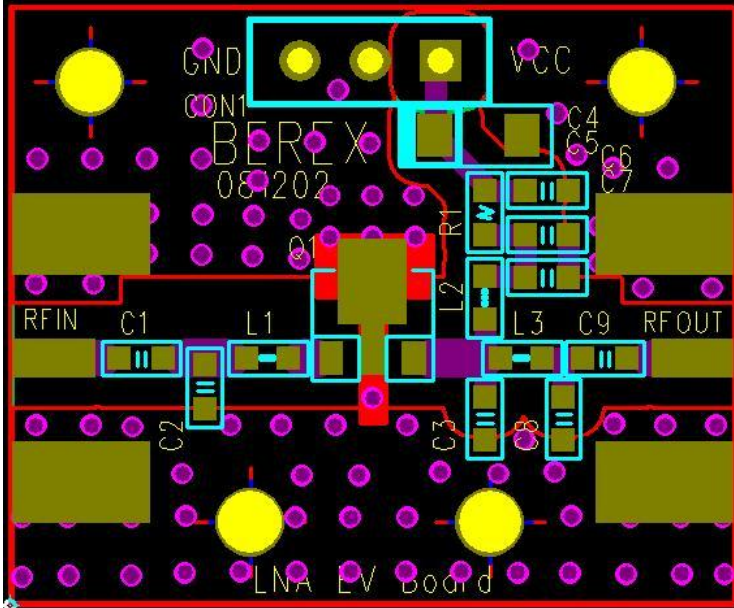
1. 2600MHZ APPLICATION 3

1.1 2600MHZ TEST RESULT(S-PARAMETER, OIP3, P1, NF) 4

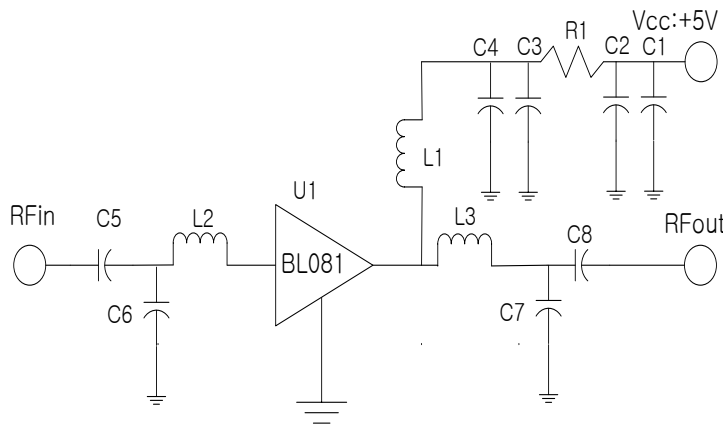
1-1 2600MHZ WCDMA 4FA_ ACLR TEST RESULT 5

1-2 2600MHZ LTE_20MHZ_ACLR TEST RESULT..... 6

1. BL081_ 2600MHz 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	100pF	Samsung
C5	0603 CAP	22pF	Samsung
C6	0603 CAP	0.5pF	Samsung
C7	0603 CAP	1pF	Samsung
C8	0603 CAP	22pF	Samsung
L1	0603 IND	22nH	Ceratech
L2	0603 IND	1.8nH	Ceratech
L3	0603 IND	3.3nH	Ceratech
R1	0603 RES	0ohm	
U1	SOT89 PKG	BL081	BEREX



Note:

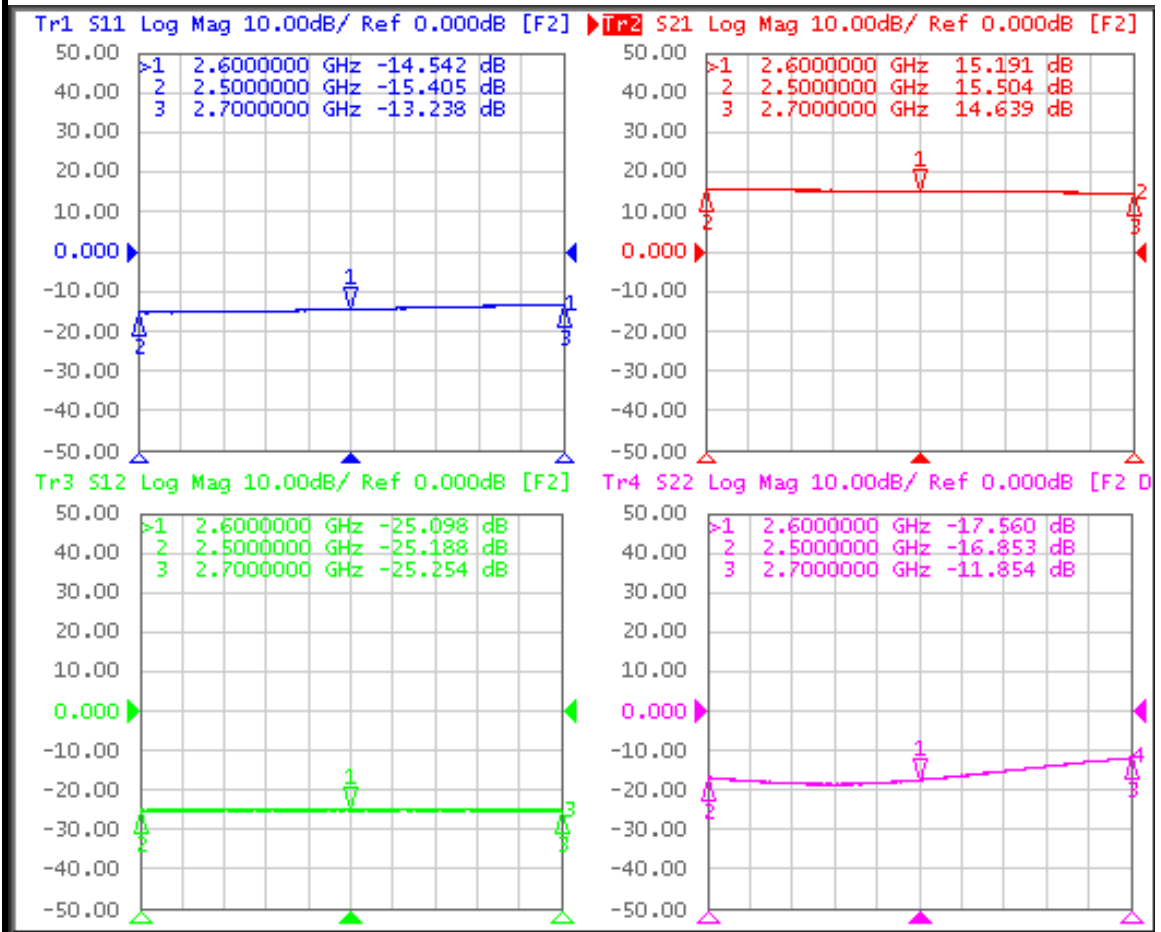
1. PCB: 31mil thick FR4

TITLE	
BL081 Evaluation Board	
(2600 MHz)	
Drawing Number	Rev.
Date	Drawn By
FILE N ME	SHEET

1.1BL081_2600MHz Test Result

SN	Freq [MHz]	Vcc [V]	Icc [mA]	Gain [dB]	OIP3 [dBm] ⁽¹⁾	P1dB [dBm]	IRL [dB]	ORL [dB]	NF [dB]
-	2600	5	28	15.1	31.4	17.5	-14.5	-17.5	1.25

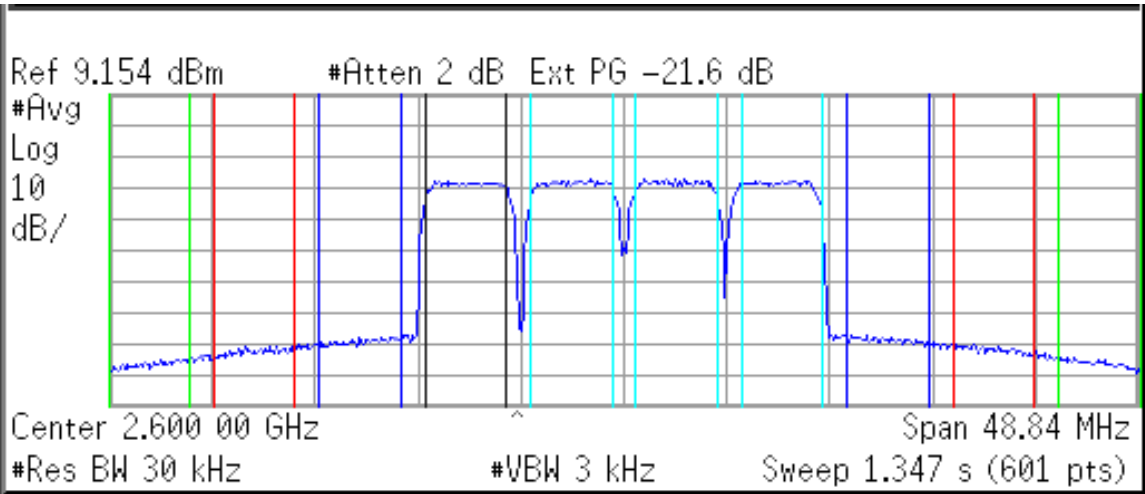
(1) OIP3_tested @Pout=5dBm/tone 1MHz offset



1-1. WCDMA 4FA_ ACLR Test Result

Out Power : 7.40 dBm

WCDMA 4FA : 2600 -50dBc

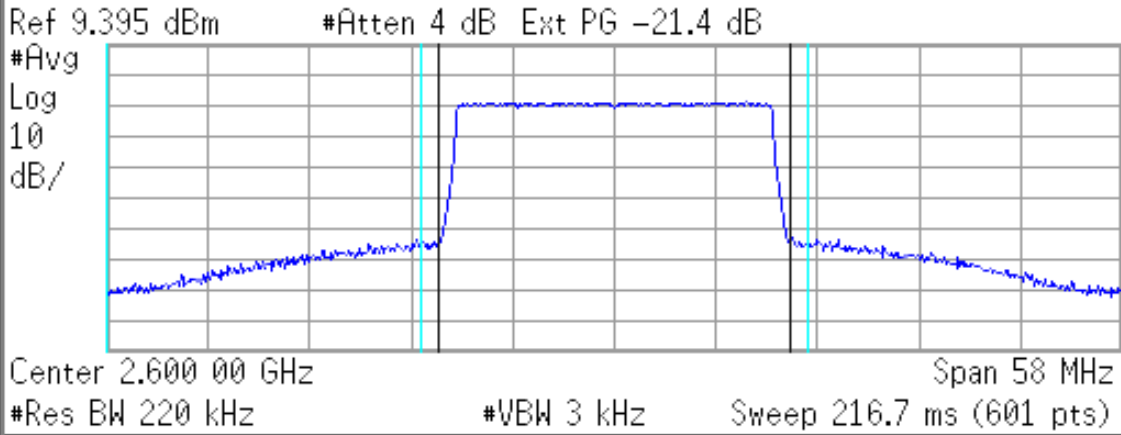


Total Carrier Power		7.40 dBm	/	15.3600 MHz	RRC Filter: Off	Filter Alpha	0.22		
Ref Carrier Power		1.29 dBm	/	3.84000 MHz					
		Offset Freq	Integ BW	dBc	Lower	dBm	dBc	Upper	dBm
1	1.29 dBm	5.000 MHz	3.840 MHz	-50.26	-48.97	-49.92		-48.62	
2	1.47 dBm	10.00 MHz	3.840 MHz	-53.58	-52.29	-52.94		-51.64	
3	1.54 dBm	15.00 MHz	3.840 MHz	-57.71	-56.42	-57.31		-56.01	
4	1.22 dBm								

1-2. LTE_20MHz_ACLR Test Result

Out Power : 9.71 dBm

LTE_FDD_20MHz_TM 3p1_100 : 2600 -50dBc



RMS Results		Freq Offset	Ref BW	dBc	Lower	dBm	dBc	Upper	dBm
Carrier Power	20.00 MHz	18.00 MHz	-50.64	-41.93	-50.35	-41.64			
8.71 dBm /									
20.0000 MHz									