

BRF MMIC Innovator

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[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 BL011

### Application Note



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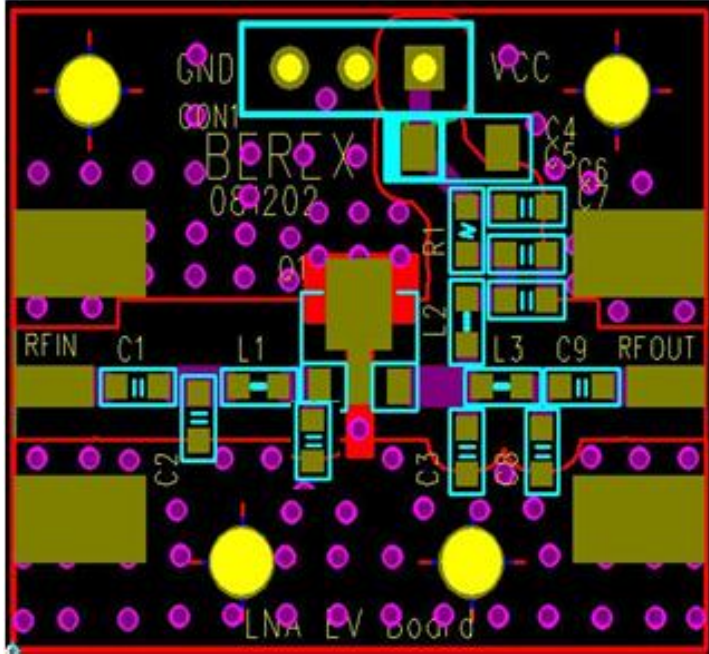
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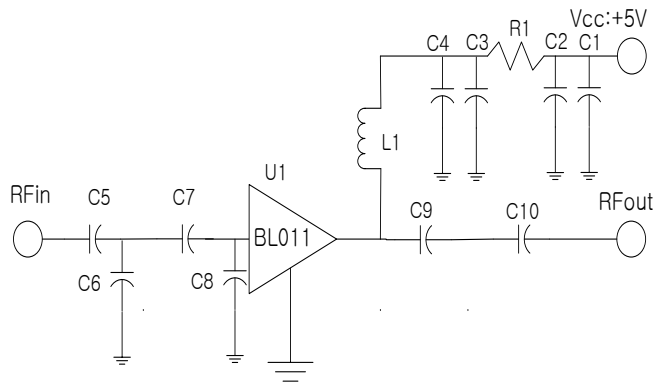
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1. BL011\_ 2600MHz Application Note



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	100pF	Samsung
C6	0603 CAP	1pF	Samsung
C7	0603 CAP	30pF	Samsung
C8	0603 CAP	1pF	Samsung
C9	6003 CAP	100pF	Samsung
C10	0603 CAP	100pF	Samsung
L1	0603 IND	15nH	Ceratech
R1	0603 RES	13ohm	
U1	SOT89 PKG	BL011	BEREX



Note:

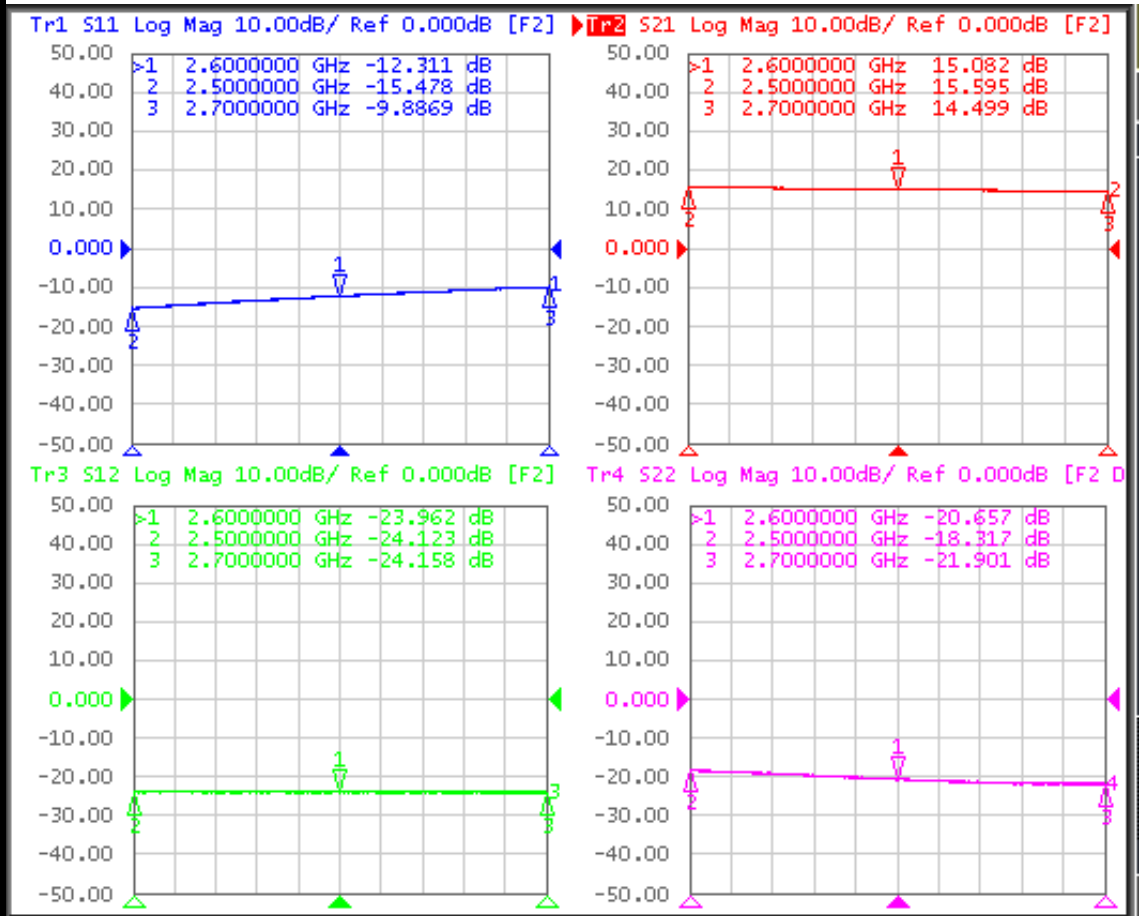
1. PCB: 31mil thick FR4

TITLE	
BL011 Evaluation Board	
(2600 MHz)	
Drawing Number	Rev.
Date	Drawn By
FILE NAME	SHEET

1.1 BL011\_2600MHz Test Result

SN	Freq [MHz]	Vcc [V]	Icc [mA]	Gain [dB]	OIP3 [dBm] <sup>(1)</sup>	P1dB [dBm]	IRL [dB]	ORL [dB]	NF [dB]
-	2600	5	77	15	37	20.2	-12.3	-20.6	1.4

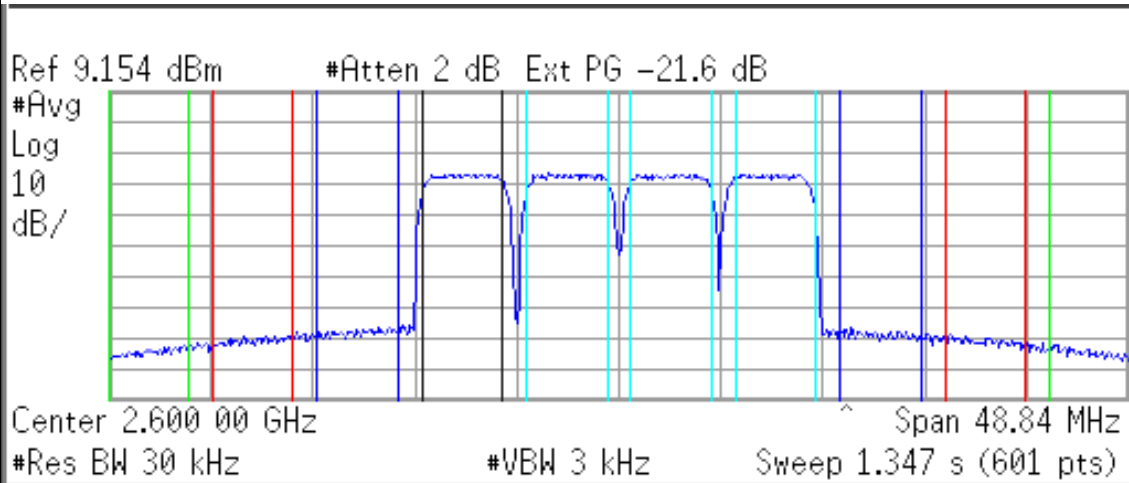
(1) OIP3\_tested @Pout=5dBm/tone 1MHz offset



**1-1. WCDMA 4FA\_ ACLR Test Result**

Out Power : 8.33 dBm

**WCDMA 4FA : 2600 -50dBc**

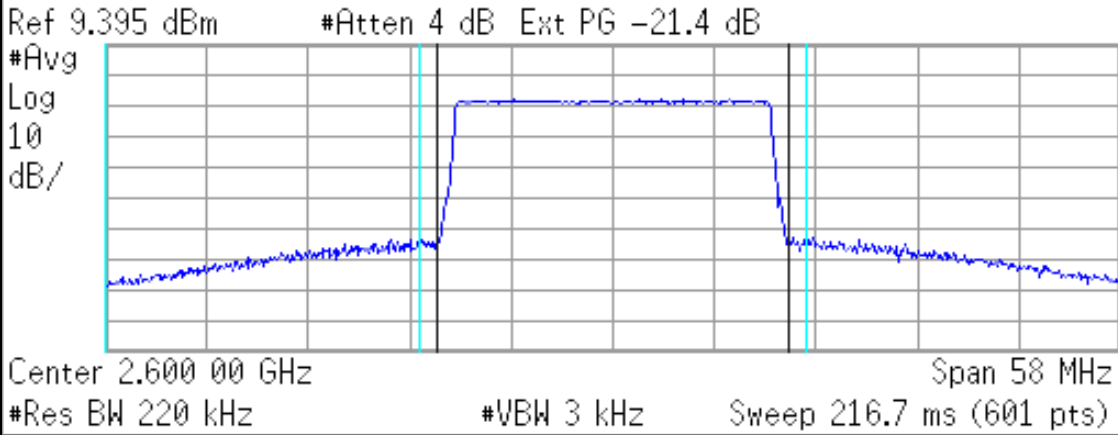


Total Carrier Power		8.33 dBm	/	15.3600 MHz	RRC Filter: Off	Filter Alpha	0.22		
Ref Carrier Power		2.35 dBm	/	3.84000 MHz					
		Offset Freq	Integ BW	dBc	Lower	dBm	dBc	Upper	dBm
1	2.35 dBm	5.000 MHz	3.840 MHz	-50.32	-47.98	-50.99		-48.65	
2	2.43 dBm	10.00 MHz	3.840 MHz	-53.07	-50.72	-53.31		-50.96	
3	2.43 dBm	15.00 MHz	3.840 MHz	-56.69	-54.35	-56.86		-54.51	
4	2.03 dBm								

**1-2. LTE\_20MHz\_ACLR Test Result**

Out Power : 9.61 dBm

**LTE\_FDD\_20MHz\_TM 3p1\_100 : 2600 -50dBc**



<b>RMS Results</b>		Freq Offset	Ref BW	dBc	Lower dBm	dBc	Upper dBm
Carrier Power	20.00 MHz	18.00 MHz	-50.63	-41.02	-50.19	-40.58	
9.61 dBm /							
20.0000 MHz							