

BRF MMIC Innovator

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[CLASSIFICATION] APPLICATION NOTE

[DATE] 2015. 01

[REVISION No.] REV.A

[MEASURING INSTRUMENTS]

- NA\_AGILENT 8753ES

- SA\_AGILENT E4404A

- SG\_AGILENT 4438C

- SG\_IFR 3416

## High Power Amp BT331

### Application Note



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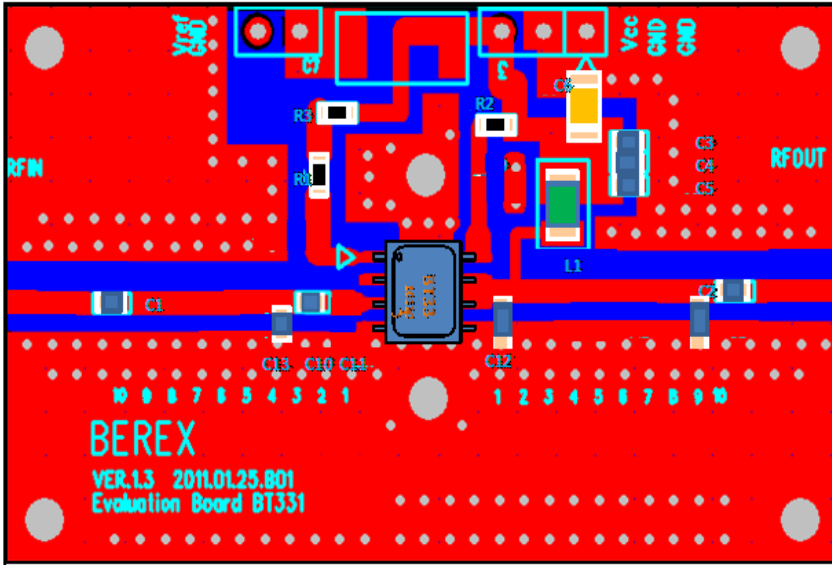
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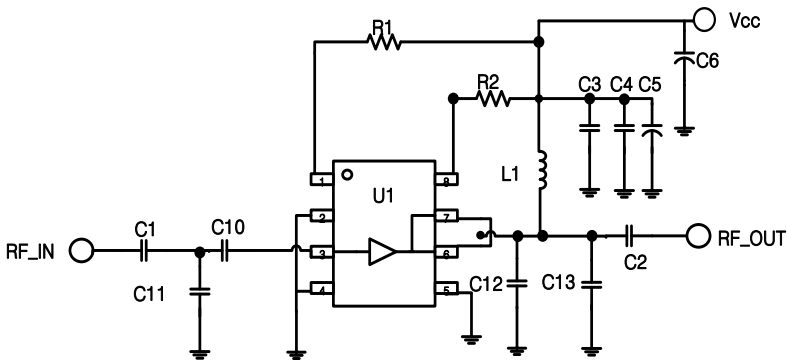
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1. BT331\_ 3500MHz Application Note



Ref. Des.	Description/ Part Number	Values	Vendor
C1	0603 CAP	10pF	Samsung
C2	0603 CAP	10pF	Samsung
C3	0603 CAP	100pF	Samsung
C4	0603 CAP	1000pF	Samsung
C5	0603 CAP	1uF	Samsung
C6	A3216 CAP	10uF	AVX
C10	0603 CAP	0.75pF	Samsung
C11	0603 CAP	0.5pF	Samsung
C12	0603 CAP	0.75pF	Samsung
C13	0603 CAP	0.75pF	Samsung
L1	1008 IND	18nH	Ceratech
R1	0603RES	4.3Kohm	Samsung
R2	0603RES	100ohm	Samsung
R3	0603RES	0ohm	Samsung
U1	SOIC8	BT331	BEREX



TITLE	
BT331 Evaluation Board	
(3500 MHz)	
Drawing Number	Rev.
Date	Drawn By
FILE NAME	SHEET

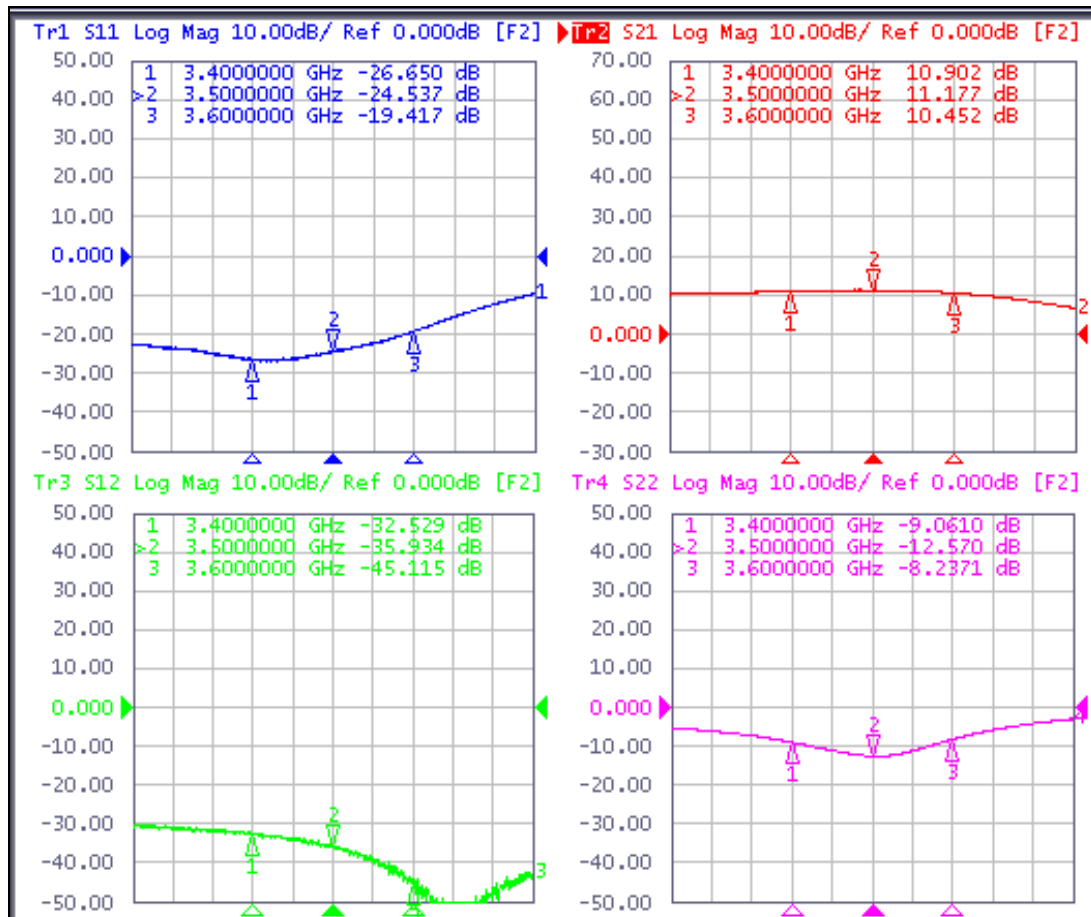
Note:

1. PCB: 31mil thick FR4

1.1 BT331\_3500MHz Test Result

SN	Freq [MHz]	Vcc [V]	Icc [mA]	Gain [dB]	OIP3 [dBm] <sup>(1)</sup>	P1dB [dBm]	IRL [dB]	ORL [dB]	NF [dB]
-	3400	5	423	10.9	47.6	29.6	-26.6	-9.0	5.8
-	3500	5	423	11.7	44.7	29.3	-24.5	-12.5	6.3
-	3600	5	423	10.4	40.6	27.7	-19.4	-8.2	7.1

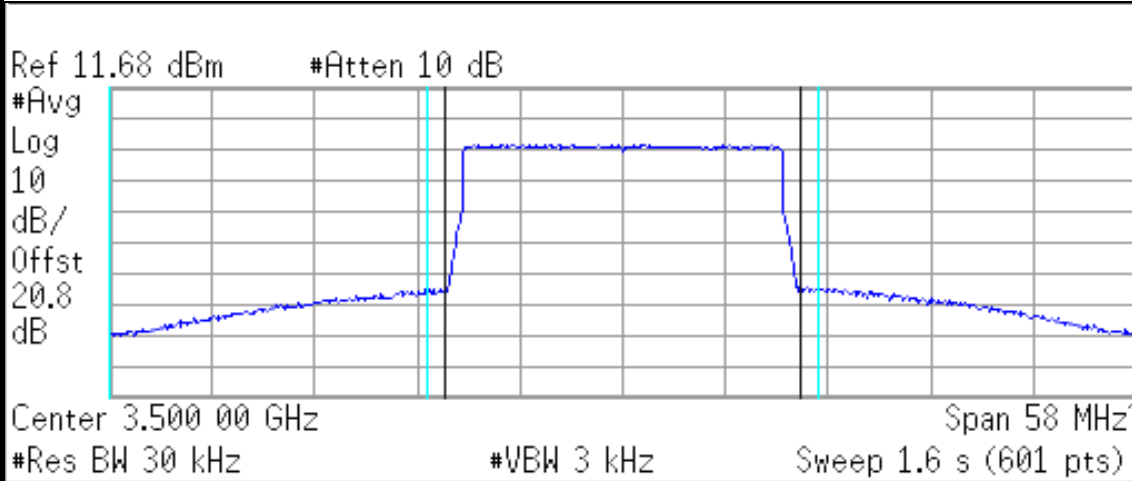
(1) OIP3\_tested @Pout=20dBm/tone 1MHz offset



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

Out Power : 20.0 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	-51.16	-31.13	-50.31	-30.27	
	20.04 dBm /						
	20.0000 MHz						