

BRF MMIC Innovator

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[CLASSIFICATION] APPLICATION NOTE

[DATE] 2015.04

[REVISION No.] REV.A

[MEASURING INSTRUMENTS]

- NA_AGILENT 8753ES

- SA_AGILENT E4404B

- SG_AGILENT 4438C

- SG_IFR 3416

High Power Amp BT331

Application Note



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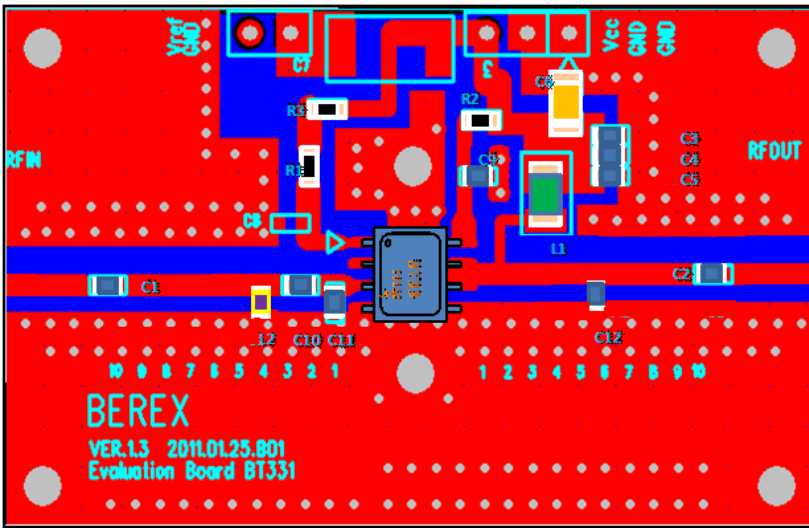
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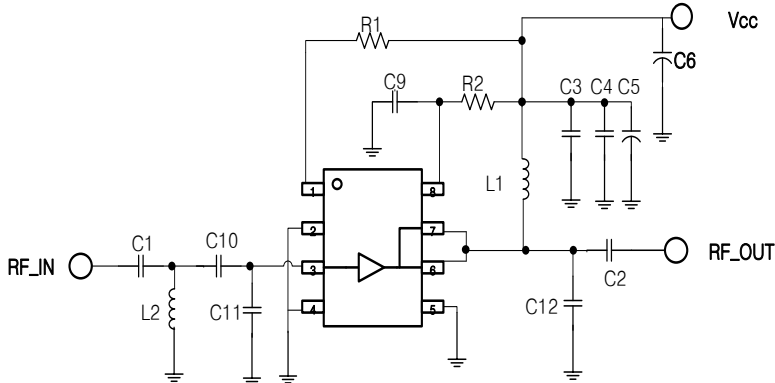
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1. BT331_ 738,793MHz Application Note



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
C9	0603 CAP	1pF	Samsung
C10	0603 CAP	3.9pF	Samsung
C11	0603 CAP	10pF	Samsung
C12	0603 CAP	8pF	Samsung
L1	1008 IND	33nH	Ceratech
L2	0603 IND	8.2nH	Ceratech
R1	0603RES	4.3Kohm	Samsung
R2	0603RES	100ohm	Samsung
U1	SOIC8	BT331	BEREX



Note:

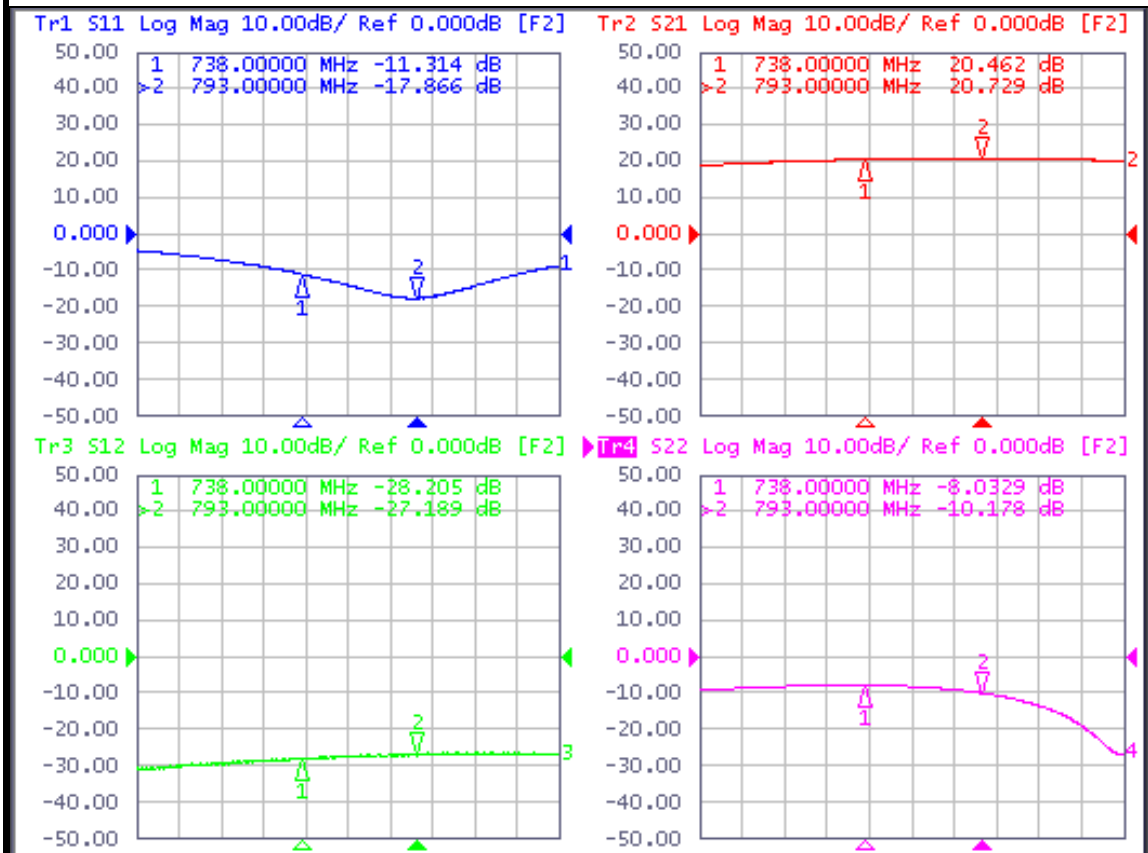
1. PCB: 31mil thick FR4

TITLE	
BT331 Evaluation Board	
(738,793 MHz)	
Drawing Number	Rev.
Date	Drawn By
FILE NAME	SHEET

1.1 BT331_738,793MHz Test Result

SN	Freq [MHz]	Vcc [V]	Icc [mA]	Gain [dB]	OIP3 [dBm] ⁽¹⁾	P1dB [dBm]	IRL [dB]	ORL [dB]	NF [dB]
-	738	5	418	20.5	52.0	33.0	-11.3	-8.0	4.7
-	793	5	418	20.7	49.0	32.5	-17.8	-10.2	4.7

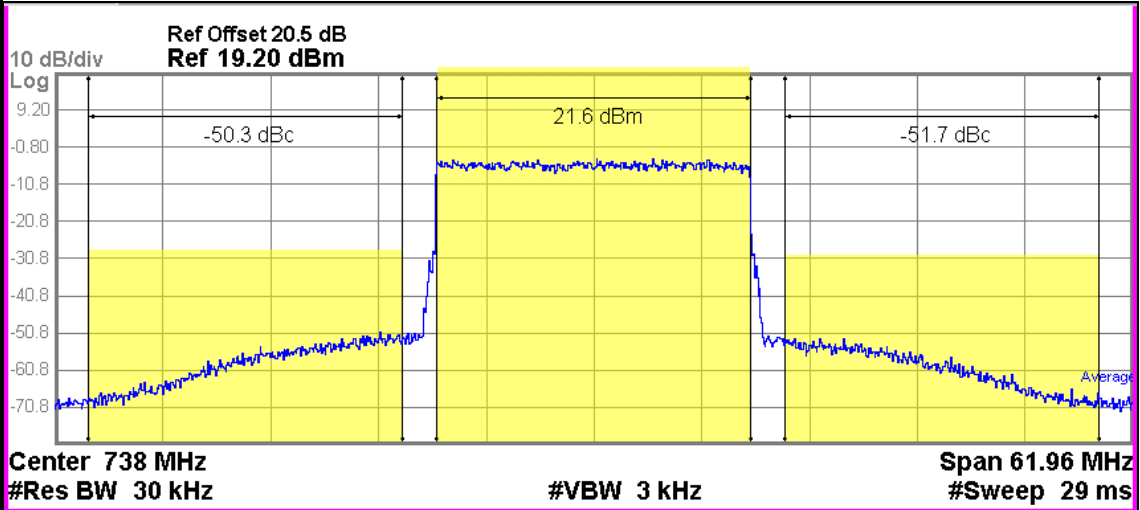
(1) OIP3_tested @Pout=20dBm/tone 1MHz offset



1-2. LTE_20MHz_ACLR Test Result

Out Power : 21.61 dBm

LTE_FDD_20MHz_TM 3p1_100 : 738MHz -50dBc

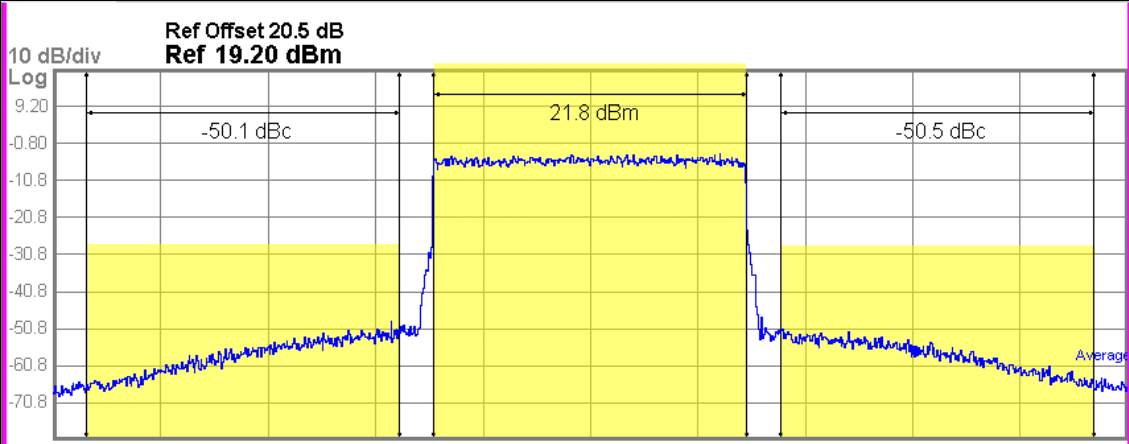


Total Carrier Power		21.614 dBm/ 18.00 MHz		ACP-IBW				
Carrier Power	Filter	Offset Freq	Integ BW	Lower		Upper		Filter
1	21.614 dBm / 18.00 MHz ON	20.00 MHz	18.00 MHz	-50.28	-28.66	-51.67	-30.06	ON

1-2. LTE_20MHz_ACLR Test Result

Out Power : 21.84 dBm

LTE_FDD_20MHz_TM 3p1_100 : 793MHz -50dBc



Center 793 MHz #Res BW 30 kHz #VBW 3 kHz Span 61.96 MHz #Sweep 29 ms

Carrier Power		Filter	Offset Freq	Integ BW	Lower		Upper		Filter
					dBc	dBm	dBc	dBm	
1	21.848 dBm / 18.00 MHz	ON	20.00 MHz	18.00 MHz	-50.13	-28.28	-50.50	-28.65	ON

Total Carrier Power 21.848 dBm/ 18.00 MHz ACP-IBW