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[Classification] Application Note

[Date] 2013.03

[Revision No.] Rev.A

[Measuring Instruments]

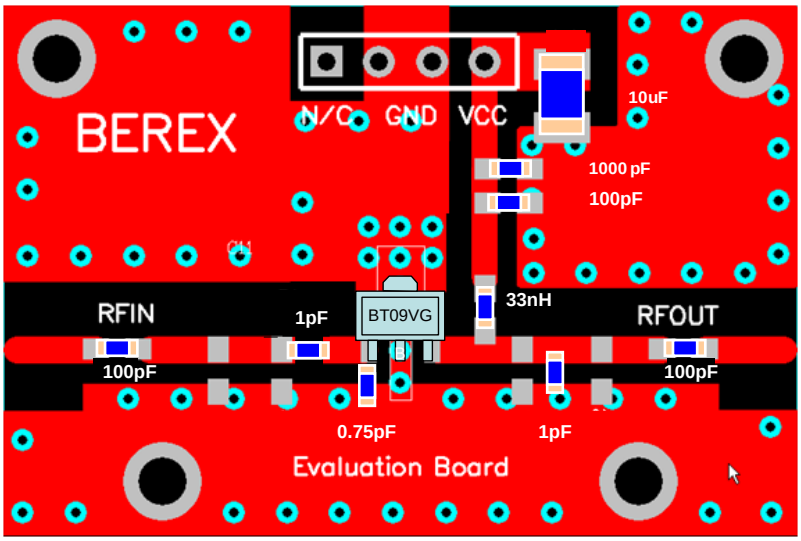
- NA_Agilent 8753ES
- SA_Agilent E4404B
- SG_Agilent 4438C
- SG_IFR 3416

Wide Band Medium Power Amp BT09VG

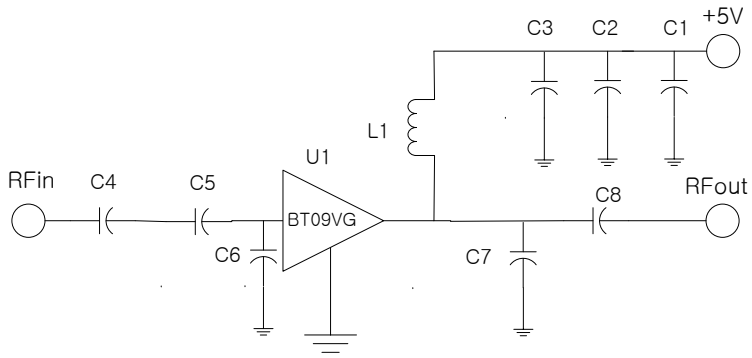
Application Note

Contents

1. BT09VG_ 2600MHz Application Note



Ref. Des.	Description/ Part Number	Values	Vendor
C1	A3216 CAP	10uF	AVX
C2	0603 CAP	1000pF	Samsung
C3	0603 CAP	100pF	Samsung
C4	0603 CAP	100pF	Samsung
C5	0603 CAP	1pF	Samsung
C6	0603 CAP	0.75pF	Samsung
C7	0603 CAP	1pF	Samsung
C8	0603 CAP	100pF	Samsung
L1	0603 IND	39nH	Ceratech
U1	SOT89 PKG	BT09VG	BEREX



Note:

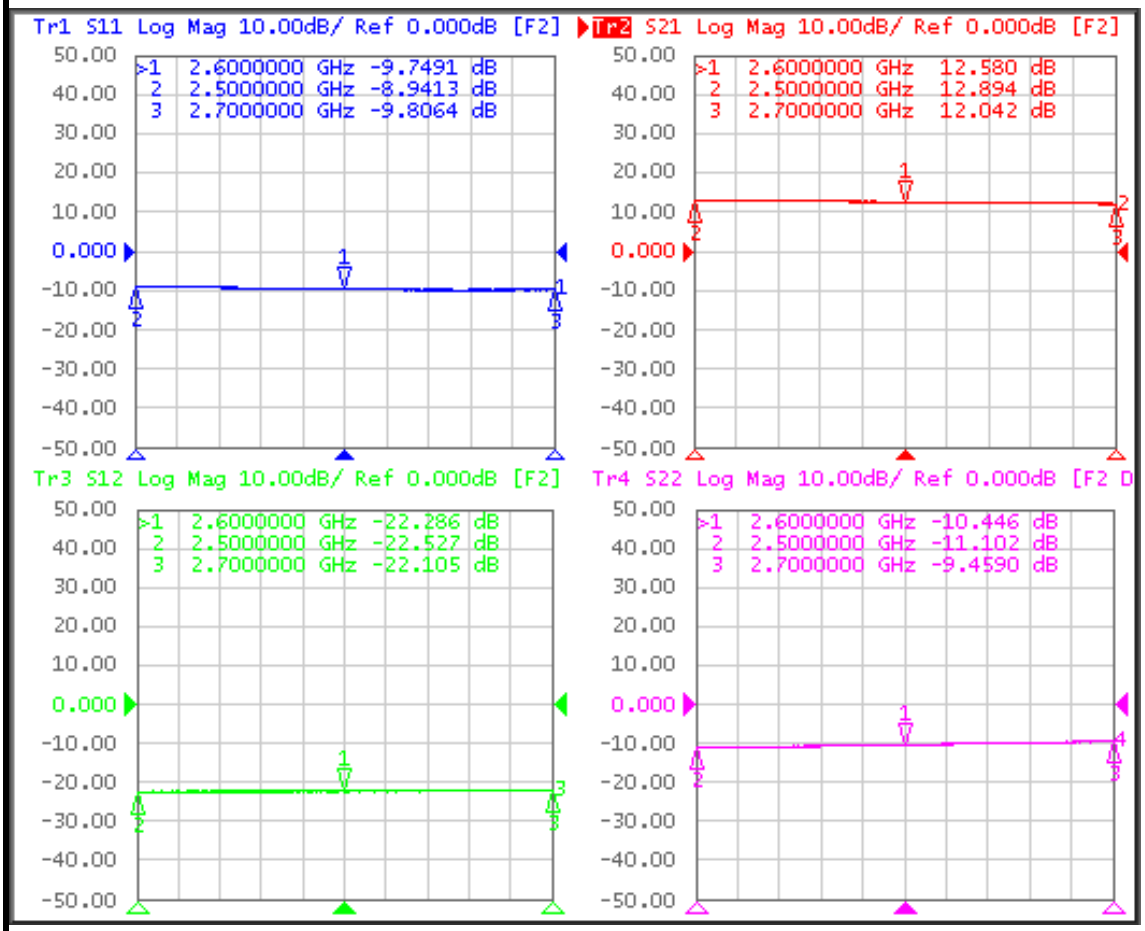
1. PCB: 31mil thick FR4
2. The distance between the center of the series cap(C5) and the Input Pin of BT09VG _ ***3mm***
3. The distance between the center of the shunt cap(C7) and the Output Pin of BT09VG _ ***5.2mm***

TITLE	
BT09VG Evaluation Board	
(2600 MHz)	
Drawing Number	Rev.
Date	Drawn By
FILE NAME	SHEET

1.1 BT09VG_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	162	12.5	41	26	-9.7	-10.4	4.8

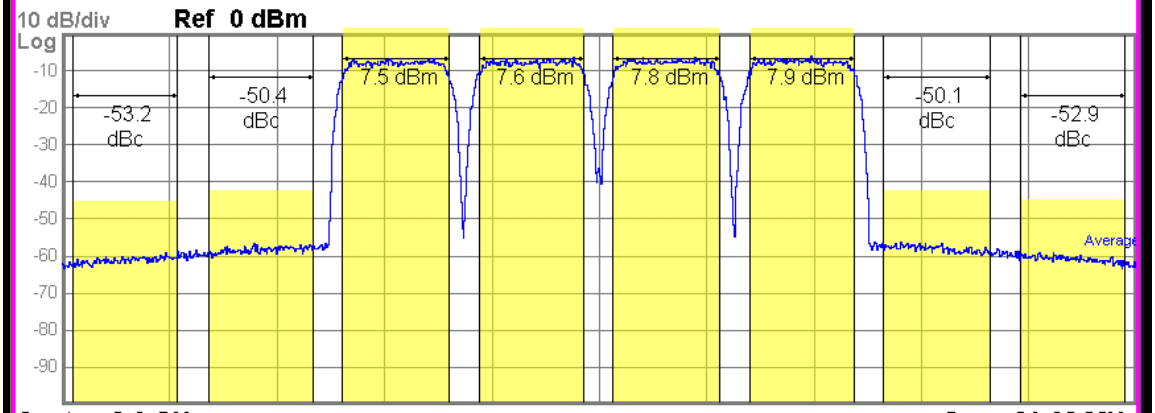
(1) OIP3_tested @Pout=13dBm/tone 1MHz offset



1-1. WCDMA 4FA_ ACLR Test Result

Out Power : 13.73 dBm

WCDMA 4FA : 2600 -50dBc



Total Carrier Power 13.730 dBm/ 15.36 MHz ACP-IBW

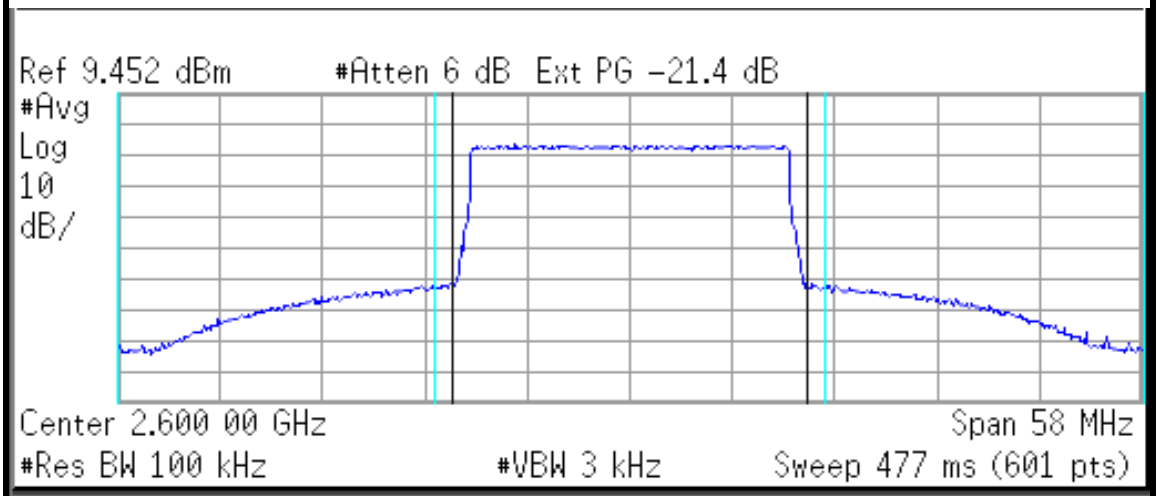
Carrier Power			Filter
1	7.499 dBm /	3.840 MHz	ON
2	7.645 dBm /	3.840 MHz	OFF
3	7.792 dBm /	3.840 MHz	OFF
4	7.896 dBm /	3.840 MHz	OFF

		Lower		Upper		
Offset Freq	Integ BW	dBc	dBm	dBc	dBm	Filter
5.000 MHz	3.840 MHz	-50.43	-42.64	-50.15	-42.36	ON
10.00 MHz	3.840 MHz	-53.24	-45.44	-52.90	-45.10	ON

1-2. LTE_20MHz_ ACLR Test Result

Out Power : 14.28 dBm

LTE_FDD_20MHz_TM 3p1_100 : 2600 -50dBc



RMS Results	Freq Offset	Ref BW	dBc	Lower dBm	dBc	Upper dBm
Carrier Power 14.28 dBm / 20.0000 MHz	20.00 MHz	18.00 MHz	-50.29	-36.01	-50.27	-35.99