

RF MMIC Innovator

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[CLASSIFICATION] APPLICATION NOTE

[DATE] 2016.03

[REVISION No.] REV.A

[MEASURING INSTRUMENTS]

- NA_AGILENT 8753ES

- SA_AGILENT E4404B

- SG_AGILENT 4438C

- SG_IFR 3416

3.0~3.3V Supply Amplifier BGS6

Application Note



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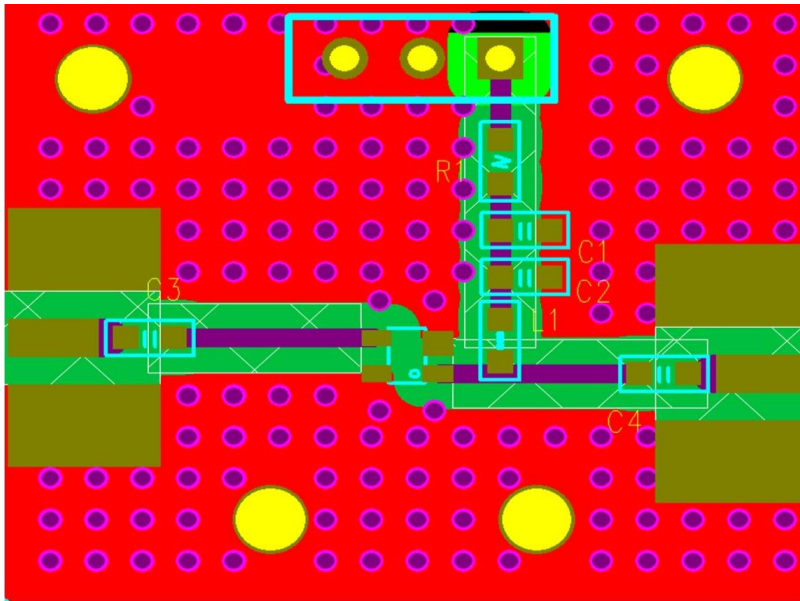
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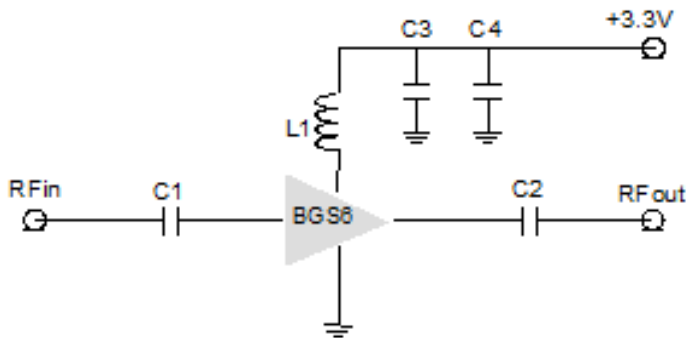
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1. BGS6_ 3500MHz Application Note



Ref. Des.	Description/ Part Number	Values	Vendor
C1	0603 CAP	100pF	Samsung
C2	0603 CAP	100pF	Samsung
C3	0603 CAP	100pF	Samsung
C4	0603 CAP	1000pF	Samsung
L1	0603 CAP	33nH	Samsung
U1	SOT343 PKG	BGS6	BEREX



Note:

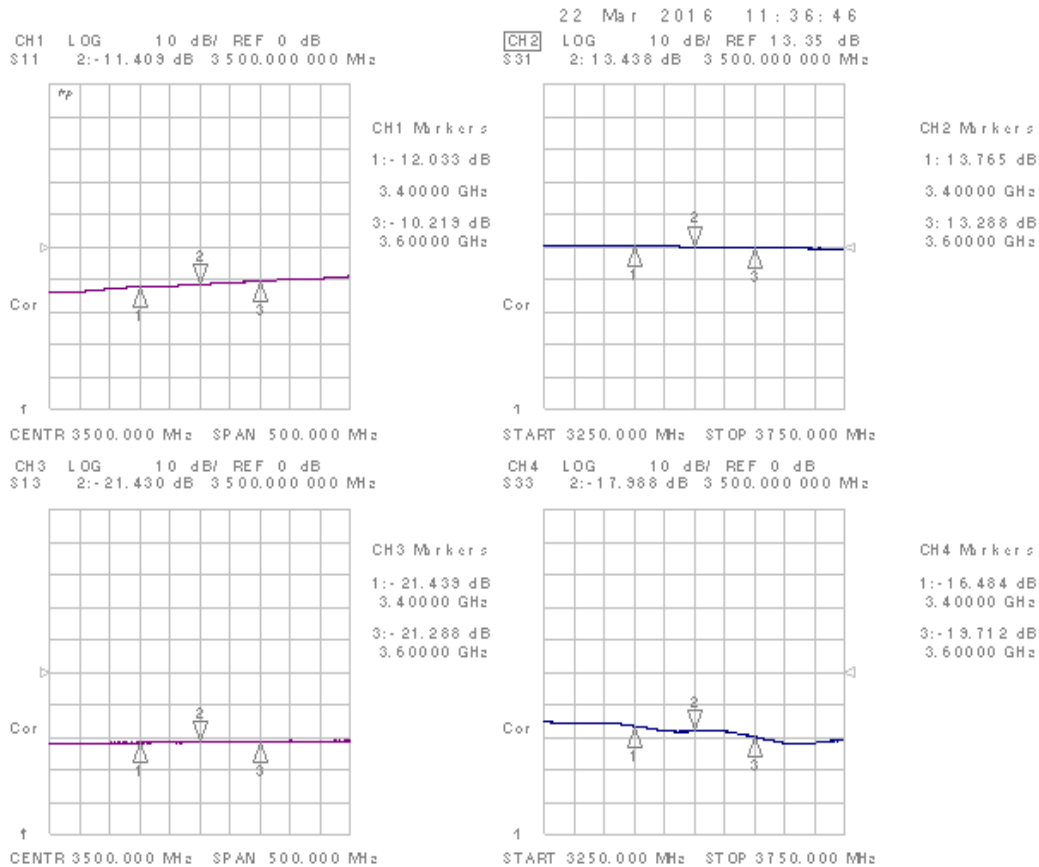
1. PCB: 31mil thick FR4

TITLE	
BGS6 Evaluation Board	
(3500MHz)	
Drawing Number	Rev.
Date	Drawn By
FILE NAME	SHEET

1.1 BGS6_3500MHz Test Result

SN	Freq [MHz]	Vcc [V]	Icc [mA]	Gain [dB]	OIP3 [dBm] ⁽¹⁾	P1dB [dBm]	IRL [dB]	ORL [dB]	NF [dB]
-	3400	3.3	25	13.6	20.1	10.1	-12.7	-11.7	3.7
-	3500	3.3	25	13.4	20.2	10.6	-12.2	-12.4	3.7
-	3600	3.3	25	13.2	20.3	10.4	-11.3	-13.2	3.7

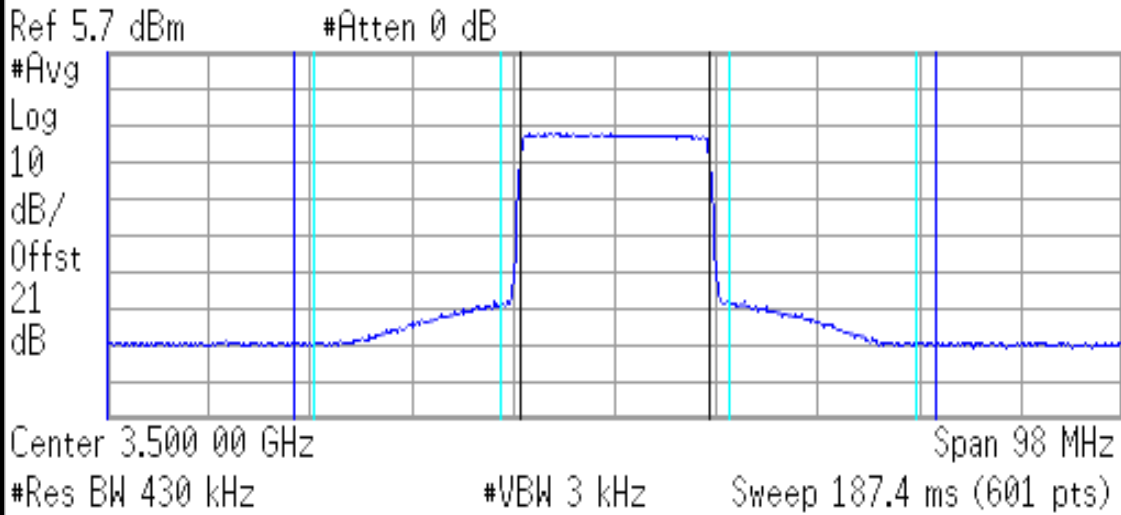
(1) OIP3 was tested @Pout= 0dBm/tone 1MHz offset



1-2. LTE_20MHz_ACLR Test Result

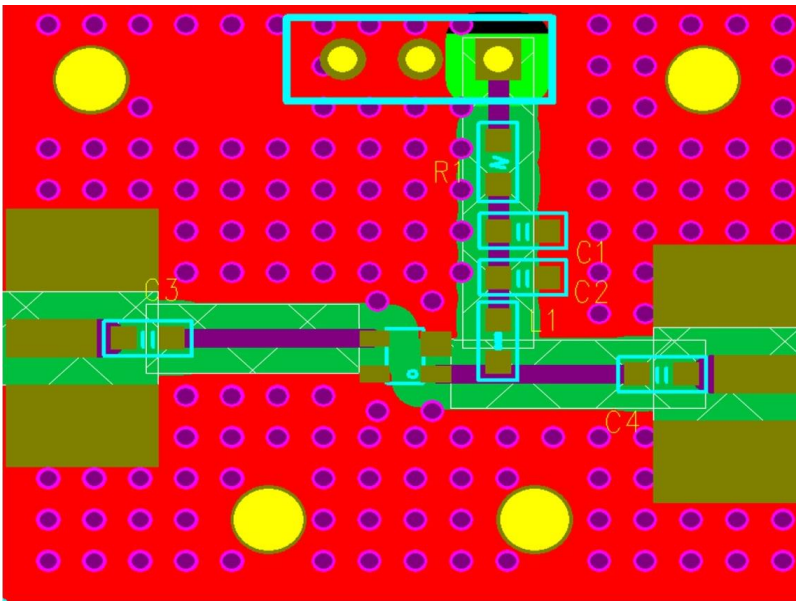
Out Power : -1.14 dBm

LTE_FDD_20MHz_TM 3p1_100% : 3500MHz -50dBc

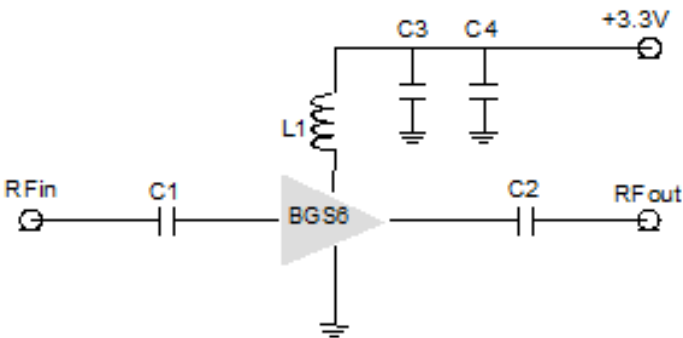


RMS Results		Freq Offset	Ref BW	dBc	Lower dBm	dBc	Upper dBm
Carrier Power	20.00 MHz	18.00 MHz	-50.45	-51.58	-50.02	-51.15	
-1.14 dBm /	40.00 MHz	18.00 MHz	-56.76	-57.89	-56.95	-58.08	
18.0000 MHz							

2. BGS6_ 3700MHz Application Note



Ref. Des.	Description/ Part Number	Values	Vendor
C1	0603 CAP	100pF	Samsung
C2	0603 CAP	100pF	Samsung
C3	0603 CAP	100pF	Samsung
C4	0603 CAP	1000pF	Samsung
L1	0603 CAP	33nH	Samsung
U1	SOT343 PKG	BGS6	BEREX



Note:

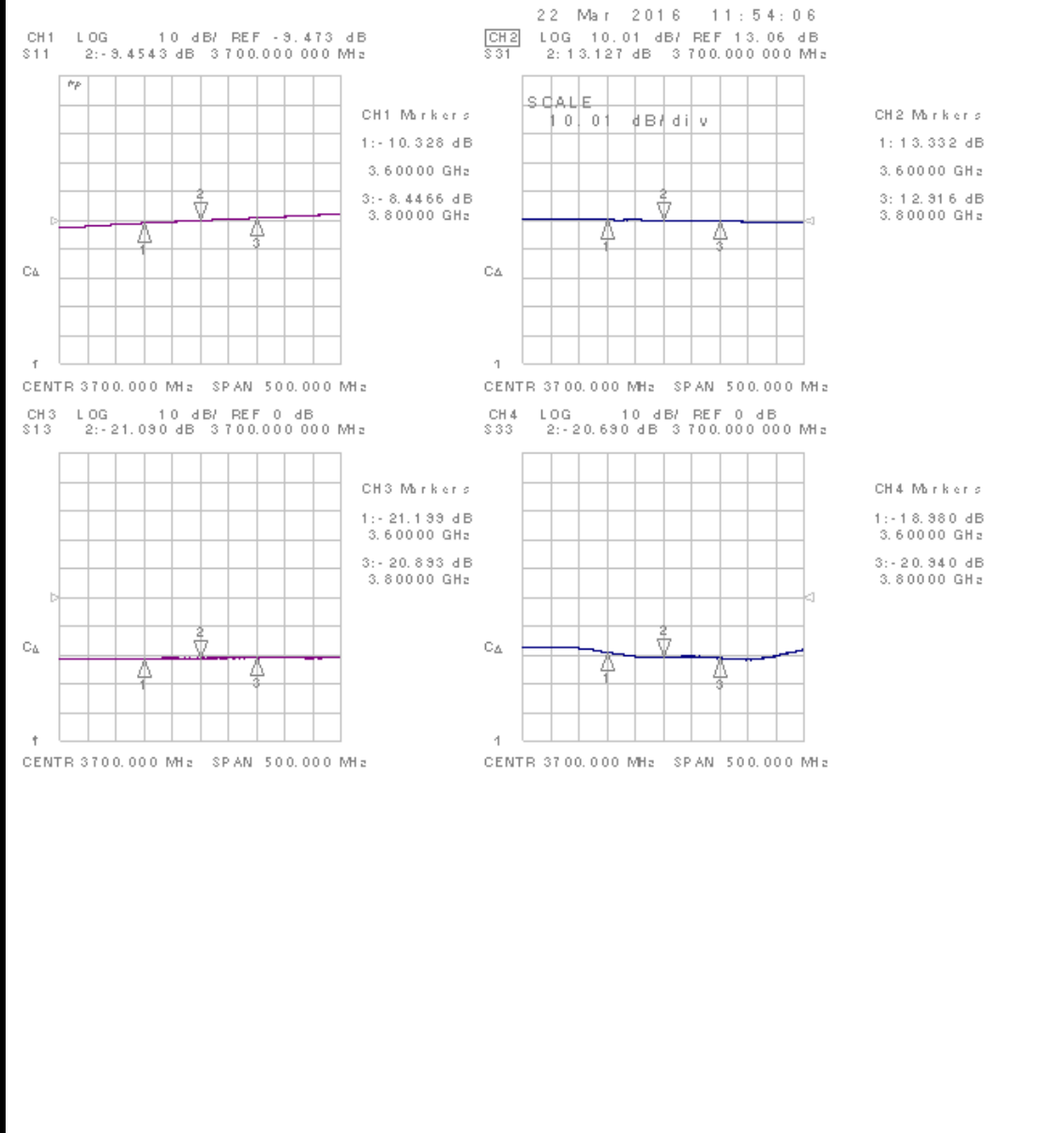
- 2. PCB: 31mil thick FR4

TITLE	
BGS6 Evaluation Board	
(3700MHz)	
Drawing Number	Rev.
Date	Drawn By
FILE NAME	SHEET

2.1 BGS6_3700MHz Test Result

SN	Freq [MHz]	Vcc [V]	Icc [mA]	Gain [dB]	OIP3 [dBm] ⁽¹⁾	P1dB [dBm]	IRL [dB]	ORL [dB]	NF [dB]
-	3600	3.3	25	13.3	19.6	10.2	-10.3	-19.5	3.7
-	3700	3.3	25	13.0	19.7	10.5	-9.4	-20.3	3.7
-	3800	3.3	25	12.9	19.9	10.4	-8.4	-21.2	3.7

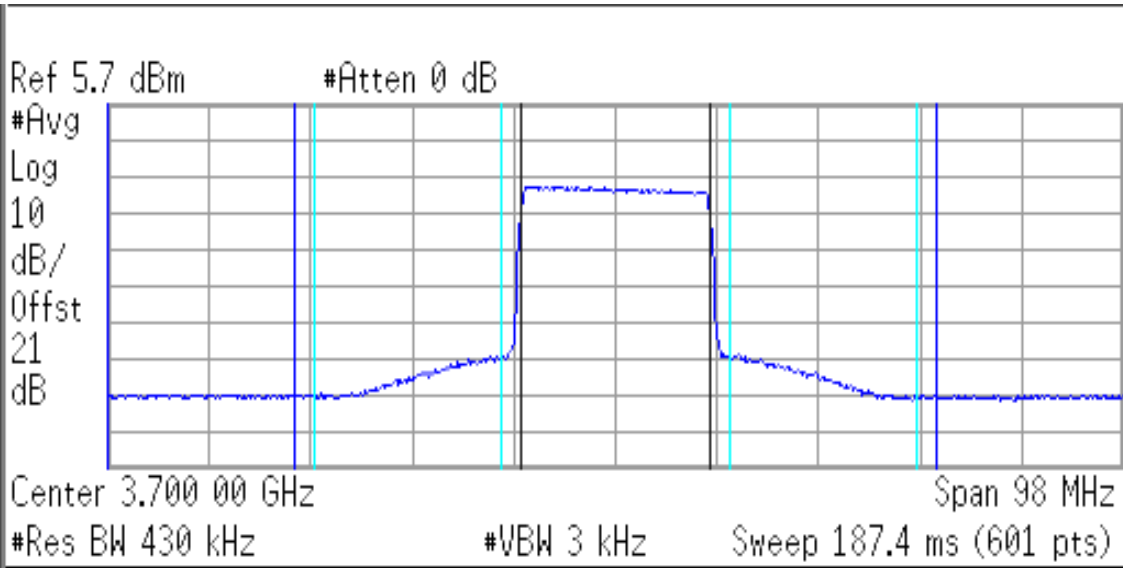
(1) OIP3 was tested @Pout= 0dBm/tone 1MHz offset



2.2 LTE_20MHz_ACLR Test Result

Out Power : -1.98 dBm

LTE_FDD_20MHz_TM 3p1_100% : 3700MHz -50dBc



RMS Results		Freq	Offset	Ref BW	dBc	Lower	dBm	dBc	Upper	dBm
Carrier Power		20.00 MHz		18.00 MHz	-50.29	-52.28		-50.18		-52.16
-1.98 dBm /		40.00 MHz		18.00 MHz	-56.59	-58.58		-56.91		-58.89
		18.0000 MHz								