

RF MMIC Innovator

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[Classification] Application Note

[Date] 2010.05

[Revision No.] Rev.A

[Measuring Instruments]

- NA_Agilent 8753ES

- SA_Agilent E4404B

- SG_Agilent 4438C

- SG_IFR 3416

Internally matched IF Amp BIF 7

Application Note



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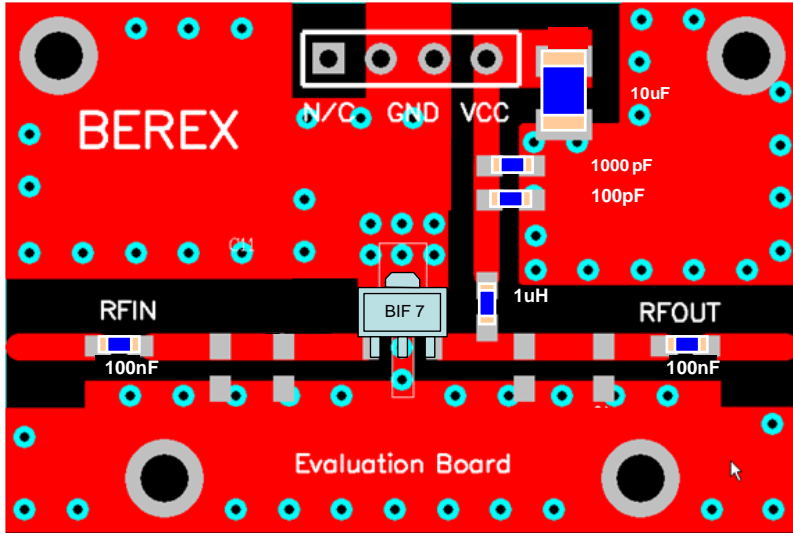
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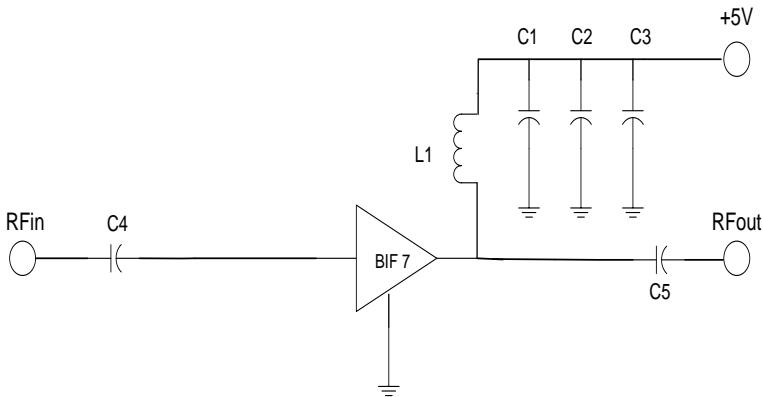
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1. BIF7 70~1000MHz Application Note



Ref. Des.	Description/ Part Number	Values	Vendor
C1	0603 CAP	100pF	Samsung
C2	604 CAP	1000pF	Samsung
C3	A3216 CAP	10uF	AVX
C4	0603 CAP	100nF	Samsung
C5	0603 CAP	100nF	Samsung
C6	0603 CAP	NA	
C7	0603 CAP	NA	
C8	0603 CAP	NA	
C9	0603 CAP	NA	
C10	0603 CAP	NA	
C11	0603 CAP	NA	
C12	0603 CAP	NA	
L1	0603 IND	1uH	Ceratech
L2	0603 IND	NZ	
L3	0603 IND	NA	
R1	0603 RES	NA	
U1	SOT89 PKG	BIF 7	BEREX



Note:

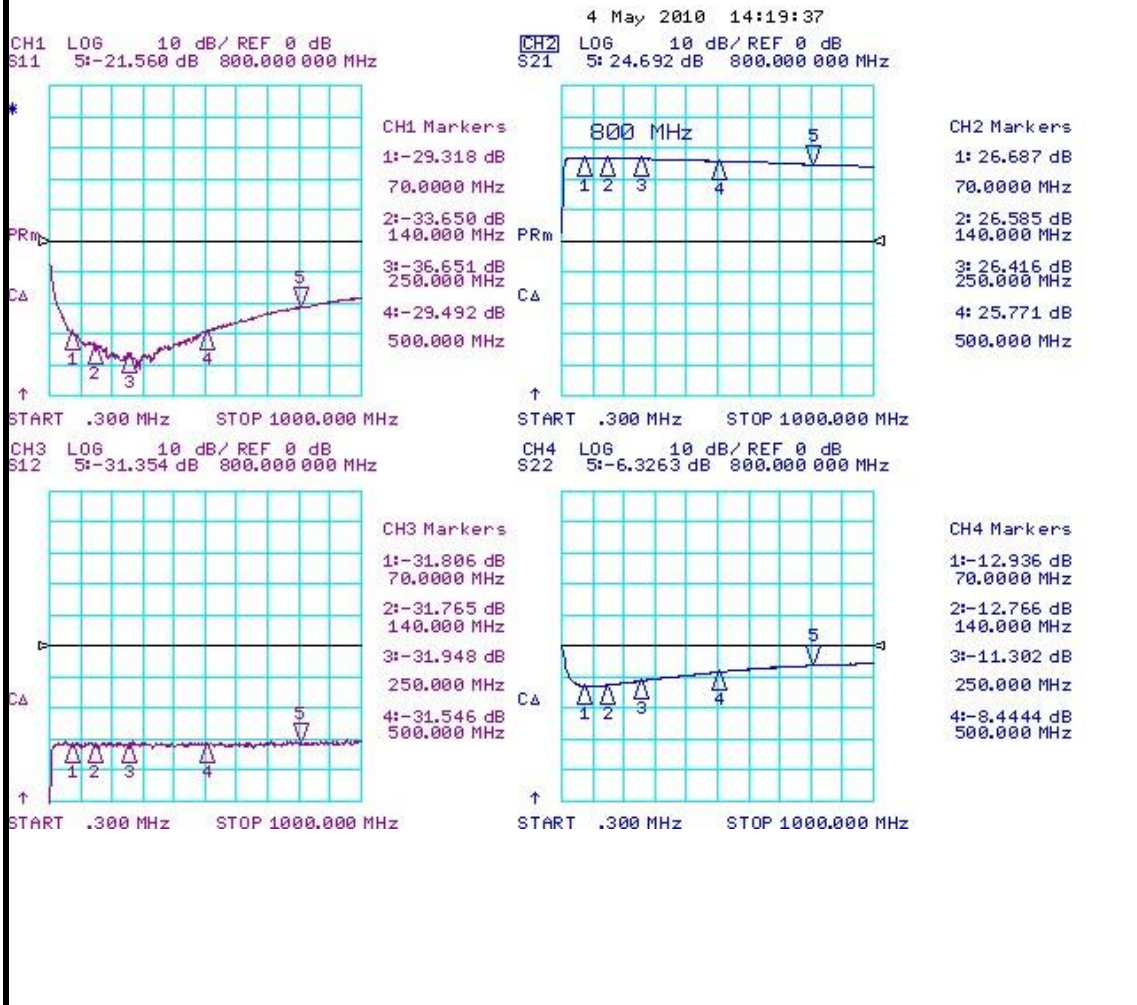
1. PCB: 31mil thick FR4

TITLE	
BIF7 Evaluation Board	
(70~1000MHz)	
Drawing Number	Rev.
Date	Drawn By
FILE NAME	SHEET

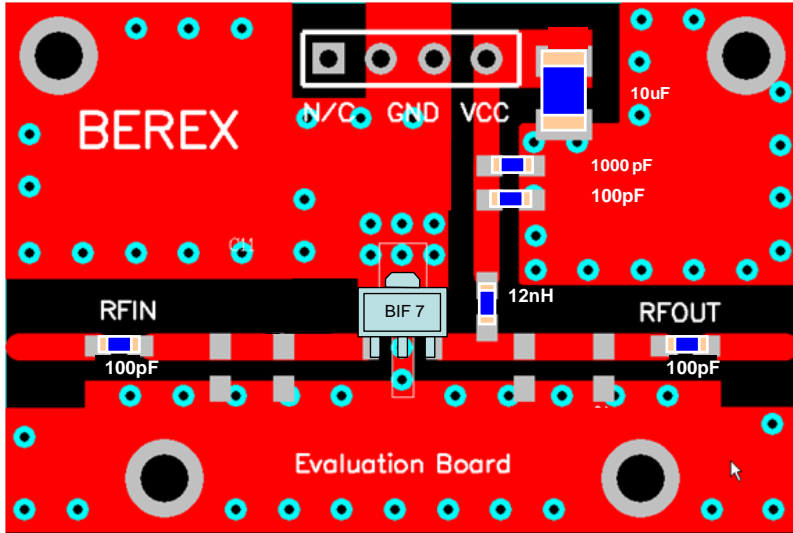
1.1 BIF7_70~1000MHz Test Result

SN	Freq [MHz]	Vcc [V]	Icc [mA]	Gain [dB]	OIP3 [dBm] ⁽¹⁾	P1dB [dBm]	IRL [dB]	ORL [dB]	NF [dB]
-	70	5	93	26.6	39	21.6	-29	-12	2.9
-	140	5	93	26.5	38	21.9	-33	-12	2.9
-	250	5	93	26.4	38.2	21.9	-36	-11	3.0
-	500	5	93	25.7	37.9	21.1	-29	-8	3.0
-	800	5	93	24.7	33	19.7	-21	-6	3.0

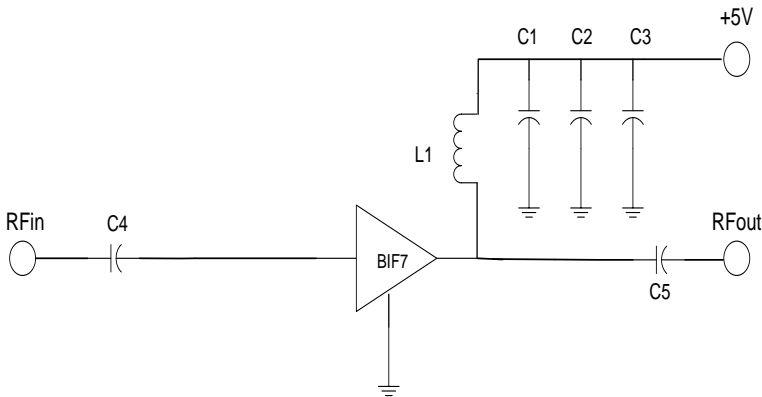
(1) OIP3 was tested @Pout=10dBm/tone 1MHz offset



2. BIF7_500~2400MHz Application Note



Ref. Des.	Description/ Part Number	Values	Vendor
C1	0603 CAP	100pF	Samsung
C2	604 CAP	1000pF	Samsung
C3	A3216 CAP	10uF	AVX
C4	0603 CAP	100pF	Samsung
C5	0603 CAP	100pF	Samsung
C6	0603 CAP	NA	
C7	0603 CAP	NA	
C8	0603 CAP	NA	
C9	0603 CAP	NA	
C10	0603 CAP	NA	
C11	0603 CAP	NA	
C12	0603 CAP	NA	
L1	0603 IND	12nH	Ceratech
L2	0603 IND	NZ	
L3	0603 IND	NA	
R1	0603 RES	NA	
U1	SOT89 PKG	BIF 7	BEREX



Note:

- 2. PCB: 31mil thick FR4

TITLE	
BIF7 Evaluation Board	
(500~2400MHz)	
Drawing Number	Rev.
Date	Drawn By
FILE NAME	SHEET

2.1 BIF7_500~2400MHz Test Result

SN	Freq [MHz]	Vcc [V]	Icc [mA]	Gain [dB]	OIP3 [dBm] ⁽¹⁾	P1dB [dBm]	IRL [dB]	ORL [dB]	NF [dB]
-	500	5	96	25.8	36.5	20.4	-9	-10	3.0
-	800	5	96	25.9	32	19.4	-14	-15	3.0
-	900	5	96	25.3	30.5	18.9	-15	-11	3.3
-	1900	5	96	20.8	23	14.1	-16	-5	4
-	2400	5	96	19.2	21	13	-13	-5	4.5

(1) OIP3 was tested @Pout=10dBm/tone 1MHz offset

