

[Application Note]

- Part Name : BNT21
- Test Frequency : 700~4900MHz_3.3V & 5V Application note
- Main Application Goal : Evaluation Board Application Circuit Notes
- Measuring Equipment List

Network Analyzer : E5071B , Signal : N5182A, Spectrum Analyzer : N9020A

▪ Test Result :

Frequency	MHz	700	1800	2100	2600	3600	4000	4900	Remark
Gain	dB	18.3	19.0	18.7	17.9	15.7	15.2	13.5	-
S11	dB	-4.6	-9.1	-9.1	-8.7	-7.4	-7.2	-5.9	Log magnitude
S22	dB	-3.9	-14.1	-17.6	-12.3	-6.1	-4.9	-2.9	Log magnitude
OIP3	dBm	26.7	33.4	32.8	31.4	29.8	28.4	25.4	@5dBm/tone, Δf=1MHz
P1dB	dBm	15.7	18.1	17.9	17.5	16.9	16.3	14.8	-
NF	dB	1.0	1.2	1.2	1.3	1.4	1.5	1.9	-
Current	mA	49							@Vd = 3.3V

Frequency	MHz	700	1800	2100	2600	3600	4000	4900	Remark
Gain	dB	18.8	19.5	19.4	18.6	16.6	16.0	14.5	-
S11	dB	-4.9	-9.8	-9.9	-9.7	-8.2	-8.0	-6.6	Log magnitude
S22	dB	-3.9	-13.3	-17.4	-13.5	-6.6	-5.2	-3.2	Log magnitude
OIP3	dBm	32.4	38.2	38.8	38.6	37.0	36.0	33.1	@5dBm/tone, Δf=1MHz
P1dB	dBm	19.1	22.0	22.0	21.4	20.6	20.0	18.7	-
NF	dB	1.1	1.3	1.3	1.3	1.5	1.6	2.0	-
Current	mA	85							@Vd = 5V

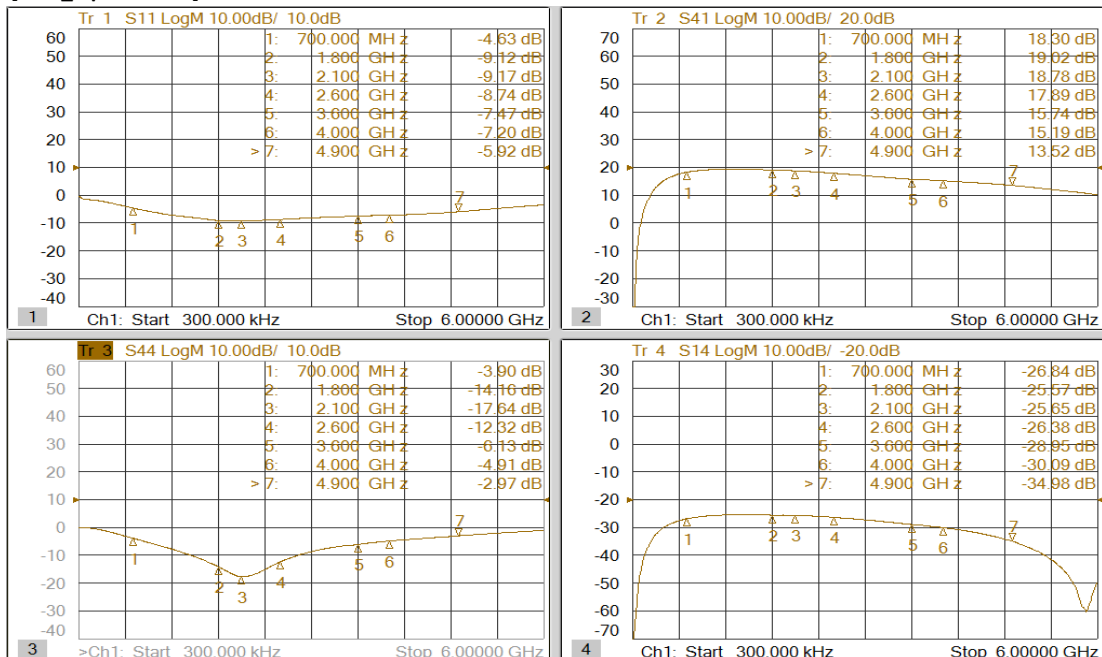
* N.F : Losses on input and output transmission lines on PCB are not de-embedded.

*Appendix: TEST items available to change depending on the situation.

*Application Circuit_700~4900MHz

Schematic Diagram		BOM		Remark	
		C1	0603	1.2nF	-
		C2	0603	10uF	-
		C3	0603	200pF	-
		C4	0603	20pF	-
		L1	0603	5.6nH	-
		R1	0603	20Kohm	-
E/B Configuration		Object	Distance	Remark	
		input	-	mm	-
		input	-	mm	-
		output	-	mm	-

[3.3V_S-parameter]



[5V_S-parameter]

