N5224B and N5225B 4-Port Overall Block Diagram

Including Options 400-Standard; 401-Configurable Test Set; 417-Attenuators; and 419-Attenuators and Bias Tees

Band	Mixer Brick LO Harmonic Number	❶ LO Synthesizer Frequency (GHz)	❷ A25 HMA26.5 Frequency (GHz)	❸ RF Synthesizer Frequency (GHz)	❹ A5/A10 Source Frequency (GHz)	❺ A7/A8/A9/A13 50 GHz Doubler Frequency (GHz)
0	1	---	---	---	---	---
1	1	---	---	---	---	---
2	1	0.01248 to 0.05548	0.01248 to 0.05548	0.010 to 0.083	0.010 to 0.053	0.010 to 0.053
3	1	0.06034 to 0.16344	0.06034 to 0.16344	0.053 to 0.175	0.053 to 0.175	0.053 to 0.175
4	1	0.18244 to 0.25744	0.18244 to 0.25744	0.175 to 0.250	0.175 to 0.250	0.175 to 0.250
5	1	0.25744 to 0.50744	0.25744 to 0.50744	0.250 to 0.500	0.250 to 0.500	0.250 to 0.500
6	1	0.50744 to 3.2074	0.50744 to 3.2074	0.500 to 3.200	0.500 to 3.200	0.500 to 3.200
7	1	3.2074 to 6.0074	3.2074 to 6.0074	3.200 to 6.000	3.200 to 6.000	3.200 to 6.000
8	1	6.0074 to 7.8074	6.0074 to 7.8074	6.000 to 7.800	6.000 to 7.800	6.000 to 7.800
9	1	7.8074 to 9.5274	7.8074 to 9.5274	7.800 to 9.520	7.800 to 9.520	7.800 to 9.520
10	1	9.5274 to 11.2074	9.5274 to 12.0074	9.520 to 12.000	9.520 to 12.000	9.520 to 12.000
11	1	12.0074 to 13.5174	12.0074 to 13.5174	12.000 to 13.510	12.000 to 13.510	12.000 to 13.510
12	1	6.7587 to 7.4037	13.5174 to 15.2074	6.755 to 7.400	13.510 to 15.200	13.510 to 15.200
13	1	7.8037 to 8.3937	15.2074 to 16.7074	7.800 to 8.390	15.200 to 16.700	15.200 to 16.700
14	1	8.3937 to 9.3237	16.7074 to 18.0474	8.390 to 9.320	16.700 to 18.040	16.700 to 18.040
15	1	9.5237 to 10.0037	19.0474 to 20.0074	9.520 to 10.000	19.040 to 20.000	19.040 to 20.000
16	1	10.0037 to 10.6537	20.0074 to 21.3074	10.000 to 10.650	20.000 to 21.300	20.000 to 21.300
17	1	10.6537 to 12.0037	21.3074 to 24.0074	10.650 to 12.000	21.300 to 24.000	21.300 to 24.000
18	1	12.0037 to 13.2537	24.0074 to 26.5074	12.000 to 13.250	24.000 to 26.500	24.000 to 26.500
19	1	8.8358 to 9.0091	8.6358 to 9.0091	13.250 to 13.510	13.250 to 13.510	26.500 to 27.000
20	3	9.0091 to 9.5025	9.0091 to 9.5025	6.753 to 7.125	13.510 to 14.250	27.020 to 28.500
21	3	9.5025 to 10.1358	9.5025 to 10.1358	7.125 to 7.600	14.250 to 15.200	28.500 to 30.400
22	3	10.1358 to 10.6691	10.1358 to 10.6691	7.600 to 8.000	15.200 to 16.000	30.400 to 32.000
23	3	10.6691 to 12.0358	10.6691 to 12.0358	8.000 to 8.025	16.000 to 18.050	32.000 to 36.100
24	3	12.0358 to 12.6958	12.0358 to 12.6958	9.025 to 9.520	18.050 to 19.040	36.100 to 38.080
25	3	12.6958 to 13.5125	12.6958 to 13.5125	9.520 to 10.133	19.040 to 20.265	38.080 to 40.530
26	3	6.7582 to 7.0012	13.5125 to 14.0025	10.133 to 10.500	20.265 to 21.000	40.530 to 42.000
27	3	7.0012 to 7.2512	14.0025 to 14.5025	10.500 to 10.875	21.000 to 21.750	42.000 to 43.500
28	3	7.2512 to 7.6012	14.5025 to 15.2025	10.875 to 11.400	21.750 to 22.800	43.500 to 45.600
29	3	7.6012 to 8.0012	15.2025 to 16.0025	11.400 to 12.000	22.800 to 24.000	45.600 to 48.000
30	3	8.0012 to 8.3346	16.0025 to 16.6691	12.000 to 12.500	24.000 to 25.000	48.000 to 50.000

Test Node	Error Description	Assembly	Frequency Band
9	Unleveled, Source 1, Out 1	A5	0.01 - 13.5 GHz
		A7	13.5 - 50 GHz
9	Unleveled, Source 1, Out 2	A5	0.01 - 13.5 GHz
		A8	13.5 - 50 GHz
10	Unleveled, Source 1 Synthesizer	A4	Full Range
11	Unleveled, Source 2, Out 1	A10	0.01 - 13.5 GHz
		A12	13.5 - 50 GHz
12	Unleveled, Source 2, Out 2	A10	0.01 - 13.5 GHz
		A13	13.5 - 50 GHz
13	Unleveled, Source 2 Synthesizer	A17	Full Range
14	Unleveled, LO Drive	A25	Full Range
15	Unleveled, LO Synthesizer	A15	Full Range
16	Unlocked, Source 1 Synthesizer, Integrator Low	A4	Full Range
17	Unlocked, Source 1 Synthesizer, Integrator High	A4	Full Range
19	Unlocked, Source 2 Synthesizer, Integrator Low	A17	Full Range
20	Unlocked, Source 2 Synthesizer, Integrator High	A17	Full Range
22	Unlocked, LO Synthesizer, Integrator Low	A15	Full Range
23	Unlocked, LO Synthesizer, Integrator High	A15	Full Range
25	Unleveled, Doubler 1, Prelevel	A7	13.5 - 70 GHz
26	Unleveled, Doubler 2, Prelevel	A8	13.5 - 70 GHz
27	Unleveled, Doubler 3, Prelevel	A12	13.5 - 70 GHz
28	Unleveled, Doubler 4, Prelevel	A13	13.5 - 70 GHz
29	Unleveled, Source 1, Pk	A5	13.5 - 70 GHz
30	Unleveled, Source 2, Pk	A10	13.5 - 70 GHz