Agilent Technologies
Test & Measurement Service Center
Boeblingen
Germany

Agilent Technologies

PERFORMANCE TEST DATA

Attachment for Timebase Oscillator Testing

Report Number: 2-177194422-1
Manufacturer: HEWLETT - PACKARD
Model Name: 8561B
Serial Number: 3031A00485
Option: 003 (HOCXO)

Date: 18. Aug. 05

Technician: Erik Pade
Test Procedure: TOPS-1.3.7

1. NOMINAL FREQUENCY: 10 MHz

2. FREQUENCY TEST

BEFORE ADJUST	
Elapsed time after Power-on	48 h
Measured Value	9.999.999,70722 Hz
Relative Frequency Difference	-2,9278E-8 Hz
Uncertainty (k=2)	± 5,3E-11
Test Limit	± 5,0E-8
Status	PASS

AFTER ADJUST	
Elapsed time after adjust	
Measured Value	
Relative Frequency Difference	
Uncertainty (k=2)	
Adjustment Limit	
Status	

NOTE: No adjustment needed.

Measurement Report

Agilent Technologies
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Report Number: 2-177194422-1
Manufacturer: Hewlett-Packard Co.
(Agilent Technologies)
Model Number: 8561B (HP8561B)
Options Installed: 003
Firmware Version:

Customer: UNIVERSITAET INNSBRUCK

Serial Number: 3031A00485

Test Date: 18 Aug 2005
Temperature: 23.0±5 °C

Tested By: CW
Humidity: 20 to 80% RH

Test Program Name: HP856X Part No. 5011-0289
Test Program Version: A.04.04A
Test Executive: STE/9000 C.07.08A

Calibration Standards Used

Model No.	Serial No.	Trace No.	Cal Due Date
HP11667A	12119	DE082	20 Apr 2006
HP11975A	2517A00859	DE021	23 Nov 2006
HP3325B	2847A07192	DE1577	14 Apr 2006
HP3335A	2843A05343	DECH0205	18 Feb 2006
HP436A	2031U01191	DE1882	18 Nov 2005
HP438A	2517U00353	DECH0268	24 Dec 2006
HP8116A	2334G03104	DE150	14 Apr 2006
HP8340B	2804A00804	DE349	17 Aug 2006
HP8340B	2819A01259	DE109	05 Apr 2006
HP8481D	3318A10901	DE176	06 Jun 2006
HP8482A	2652A20219	DE377	02 Mar 2006
HP8485A	2703A05879	DE413	27 Aug 2005
HP8663A	2846A01496	DE987	24 Aug 2005

Measurement Report

Report Number: 2-177194422-1 **Test Date:** 18 Aug 2005
Model Number: HP8561B **Options:** 003
Serial Number: 3031A00485

Test Summary

Initial Setup	PASSED
10 MHz Precision Ref Output Accy	PASSED
Calibrator Amplitude Accuracy	PASSED
Res BW Accy and Selectivity	PASSED
IF Gain Uncertainty	PASSED
Scale Fidelity	PASSED
Input Attenuator Switching Uncert	PASSED
Residual FM	PASSED
Noise Sidebands	PASSED
Res BW Switching and IF Alignment	PASSED
Frequency Readout and Marker Count Accy	PASSED
Frequency Span Accuracy	PASSED
Frequency Response	PASSED
Image and Multiple Responses	PASSED
Pulse Digitization Uncertainty	PASSED
Sweep Time Accuracy, >=30 ms	PASSED
Third Order Intermodulation (TOI)	PASSED
Gain Compression	PASSED
Second Harmonic Distortion	PASSED
1ST LO OUTPUT Amplitude	PASSED
IF INPUT Amplitude Accuracy	PASSED
Displayed Average Noise Level	PASSED
Residual Responses	PASSED

Report Number: 2-177194422-1 **Test Date:** 18 Aug 2005
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10 MHz Precision Ref Output Accy (Status: PASSED)

	Minimum (Hz)	Actual (Hz)	Maximum (Hz)
5 minute warmup error (0 to +55 deg C)	-1.E-7	2.266E-9	1.E-7
15 minute warmup error	-1.E-8	-1.776E-9	1.E-8

Report Number: 2-177194422-1 **Test Date:** 18 Aug 2005
Model Number: HP8561B **Options:** 003
Serial Number: 3031A00485

Calibrator Amplitude Accuracy (Status: PASSED)

Minimum (dBm)	Actual (dBm)	Maximum (dBm)
-10.3	-10.056	-9.7

Report Number: 2-177194422-1 **Test Date:** 18 Aug 2005
Model Number: HP8561B **Options:** 003
Serial Number: 3031A00485

Res BW Accy and Selectivity (Status: PASSED)

Res Bandwidth	dB Point	Minimum	Actual	Maximum
Bandwidth Accuracy:				
2 MHz	3	-25%	-2.75%	25%
1 MHz	3	-25%	.53%	25%
300 kHz	3	-10%	1.2%	10%
100 kHz	3	-10%	-1.12%	10%
30 kHz	3	-10%	0%	10%
10 kHz	3	-10%	-.32%	10%
3 kHz	3	-10%	.94%	10%
1 kHz	3	-10%	-.98%	10%
300 Hz	3	-10%	1.33%	10%
100 Hz	3	-10%	-1.67%	10%
30 Hz	3	-10%	-5.4%	10%
10 Hz	3	-10%	.58%	10%
Bandwidth Selectivity:				
2 MHz	3	---	5.174	15
1 MHz	3	---	7.126	15
300 kHz	3	---	11.507	15
100 kHz	3	---	12.018	15
30 kHz	3	---	12.633	15
10 kHz	3	---	9.765	15
3 kHz	3	---	11.394	15
1 kHz	3	---	12.763	15
300 Hz	3	---	13.026	15

Report Number: 2-177194422-1 **Test Date:** 18 Aug 2005
Model Number: HP8561B **Options:** 003
Serial Number: 3031A00485

IF Gain Uncertainty (Status: PASSED)

Ref Level (dBm)	Minimum (dB)	Mkr Delta (dB)	Maximum (dB)
Log Mode, 10 dB Steps			
-10	-1	0	1
-20	-1	-.16	1
-30	-1	-.16	1
-40	-1	-.16	1
-50	-1	-.33	1
-60	-1	-.33	1
-70	-1	-.16	1
-80	-1	-.52	1
Log Mode, 1 dB Steps			
-1	-1	0	1
-2	-1	-.02	1
-3	-1	.22	1
-4	-1	.22	1
-5	-1	.18	1
-6	-1	.2	1
-7	-1	.23	1
-8	-1	.22	1
-9	-1	.23	1
-10	-1	.22	1
-11	-1	.2	1
-12	-1	.2	1
Linear Mode, 10 dB Steps			
-10	-1	-.03	1
-20	-1	-.15	1
-30	-1	-.15	1
-40	-1	-.18	1
-50	-1	-.3	1
-60	-1	-.36	1
-70	-1	-.45	1
-80	-1	-.49	1

Report Number: 2-177194422-1 **Test Date:** 18 Aug 2005
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Scale Fidelity (Status: PASSED)

Ref Level (dBm)	Minimum (dB)	Mkr Delta (dB)	Maximum (dB)
Log Mode, Cumulative 10 dB/div, Res BW>= 300 Hz			
0	0 (Ref)	0 (Ref)	0 (Ref)
4	-.4	.17	.4
8	-.8	.17	.8
12	-1.2	-.17	1.2
16	-1.5	0	1.5
20	-1.5	0	1.5
24	-1.5	0	1.5
28	-1.5	0	1.5
32	-1.5	.17	1.5
36	-1.5	.17	1.5
40	-1.5	.17	1.5
44	-1.5	.33	1.5
48	-1.5	.33	1.5
52	-1.5	.33	1.5
56	-1.5	.33	1.5
60	-1.5	.33	1.5
64	-1.5	.31	1.5
68	-1.5	.28	1.5
72	-1.5	.28	1.5
76	-1.5	.24	1.5
80	-1.5	.09	1.5
84	-1.5	.17	1.5
88	-1.5	.05	1.5
90	-1.5	-.24	1.5
Log Mode, Cumulative 10 dB/div, Res BW<= 100 Hz			
0	0 (Ref)	0 (Ref)	0 (Ref)
4	-1.5	-.17	1.5
8	-1.5	-.17	1.5
12	-1.5	0	1.5
16	-1.5	0	1.5
20	-1.5	0	1.5
24	-1.5	0	1.5
28	-1.5	0	1.5
32	-1.5	.17	1.5
36	-1.5	.17	1.5
40	-1.5	.17	1.5
44	-1.5	.17	1.5
48	-1.5	.17	1.5
52	-1.5	.17	1.5
56	-1.5	.17	1.5
60	-1.5	.17	1.5

Report Number: 2-177194422-1 **Test Date:** 18 Aug 2005
Model Number: HP8561B **Options:** 003
Serial Number: 3031A00485

Scale Fidelity (Status: PASSED)

Ref Level (dBm)	Minimum (dB)	Mkr Delta (dB)	Maximum (dB)
64	-1.5	.17	1.5
68	-1.5	.17	1.5
72	-1.5	.17	1.5
76	-1.5	.17	1.5
80	-1.5	.17	1.5
84	-1.5	.29	1.5
88	-1.5	.31	1.5
92	-1.5	.22	1.5
96	-1.5	.07	1.5
98	-1.5	.14	1.5
Log Mode, Cumulative 2 dB/div, >=300 Hz RBW			
0	0 (Ref)	0 (Ref)	0 (Ref)
4	-1.5	.07	1.5
8	-1.5	.03	1.5
12	-1.5	-.2	1.5
16	-1.5	-.03	1.5
18	-1.5	.03	1.5
Linear			
0	0 (Ref)	0 (Ref)	0 (Ref)
2	-2.33	-2.03	-1.68
4	-4.42	-4.04	-3.6
6	-6.54	-6.05	-5.5
8	-8.68	-8.07	-7.37
10	-10.87	-10.08	-9.21
12	-13.1	-12.1	-11.02
14	-15.42	-14.13	-12.78
16	-17.82	-16.19	-14.49
18	-20.36	-18.18	-16.14

Report Number: 2-177194422-1 **Test Date:** 18 Aug 2005
Model Number: HP8561B **Options:** 003
Serial Number: 3031A00485

Input Attenuator Switching Uncert (Status: PASSED)

Attenuation (dB)	Minimum (dB)	Measured (dB)	Maximum (dB)
Cumulative, 50 MHz			
10	0 (ref)	0 (ref)	0 (ref)
20	-.6	-.13	.6
30	-1.2	-.18	1.2
40	-1.8	.02	1.8
50	-1.8	-.04	1.8
60	-1.8	-.18	1.8
70	-1.8	-.23	1.8
Incremental, 50 MHz			
10	0 (ref)	0 (ref)	0 (ref)
20	-.6	-.13	.6
30	-.6	-.05	.6
40	-.6	.2	.6
50	-.6	-.06	.6
60	-.6	-.14	.6
70	-.6	-.05	.6
Cumulative, 2.9 GHz			
10	0 (ref)	0 (ref)	0 (ref)
20	-.6	-.13	.6
30	-1.2	-.18	1.2
40	-1.8	.07	1.8
50	-1.8	-.01	1.8
60	-1.8	-.17	1.8
70	-1.8	-.23	1.8
Incremental, 2.9 GHz			
10	0 (ref)	0 (ref)	0 (ref)
20	-.6	-.13	.6
30	-.6	-.05	.6
40	-.6	.25	.6
50	-.6	-.08	.6
60	-.6	-.16	.6
70	-.6	-.06	.6

Report Number: 2-177194422-1 **Test Date:** 18 Aug 2005
Model Number: HP8561B **Options:** 003
Serial Number: 3031A00485

Residual FM (Status: PASSED)

Frequency	Actual (Hz)	Maximum (Hz)
500 MHz	.268	10
1 GHz	.215	10

Report Number: 2-177194422-1 **Test Date:** 18 Aug 2005
Model Number: HP8561B **Options:** 003
Serial Number: 3031A00485

Noise Sidebands (Status: PASSED)

Noise Sideband	Measured (dBc/Hz)	Maximum (dBc/Hz)
10 kHz	-100	-86
-10 kHz	-99.84	-86
30 kHz	-108	-100
-30 kHz	-108	-100
97 kHz	-115.3	-110
-97 kHz	-115.2	-110

Report Number: 2-177194422-1 **Test Date:** 18 Aug 2005
Model Number: HP8561B **Options:** 003
Serial Number: 3031A00485

Res BW Switching and IF Alignment (Status: PASSED)

Res Bandwidth	Minimum (dB)	Actual (dB)	Maximum (dB)
2 MHz	-.5	-.22	.5
1 MHz	-.5	-.14	.5
100 kHz	-.5	-.14	.5
30 kHz	-.5	-.07	.5
10 kHz	-.5	.02	.5
3 kHz	-.5	-.1	.5
1 kHz	-.5	-.15	.5
300 Hz	-.5	-.12	.5
100 Hz	-.5	.1	.5
30 Hz	-.5	-.01	.5
10 Hz	-.5	-.01	.5

Note: The test limits for the 100 Hz RES BW setting is the sum of the resolution bandwidth switching uncertainty and IF alignment uncertainty specifications.

Report Number: 2-177194422-1 **Test Date:** 18 Aug 2005
Model Number: HP8561B **Options:** 003
Serial Number: 3031A00485

Frequency Readout and Marker Count Accy (Status: PASSED)

Frequency Readout Accuracy:

--Span--	--Minimum Delta--	--Actual Delta--	--Maximum Delta--
1.5 GHz Center Freq			
1 MHz	-.052 MHz	-5 kHz	.052 MHz
10 MHz	-.52 MHz	16.667 kHz	.52 MHz
20 MHz	-1.05 MHz	33.333 kHz	1.05 MHz
50 MHz	-2.55 MHz	0 Hz	2.55 MHz
100 MHz	-5.2 MHz	0 Hz	5.2 MHz
1 GHz	-50 MHz	1.666667 MHz	50 MHz
4 GHz Center Freq			
1 MHz	-.052 MHz	-5 kHz	.052 MHz
10 MHz	-.52 MHz	33.333 kHz	.53 MHz
20 MHz	-1.05 MHz	66.667 kHz	1.06 MHz
50 MHz	-2.55 MHz	83.333 kHz	2.56 MHz
100 MHz	-5.1 MHz	0 Hz	5.2 MHz
1 GHz	-50 MHz	0 Hz	50 MHz

Freq Count Marker Accuracy:

Frequency/Span	Minimum Delta	Actual Delta	Maximum Delta
1.5 GHz/1 GHz	-51 Hz	6 Hz	51 Hz
4 GHz/1 GHz	-51 Hz	-2 Hz	51 Hz

Report Number: 2-177194422-1 **Test Date:** 18 Aug 2005
Model Number: HP8561B **Options:** 003
Serial Number: 3031A00485

Frequency Span Accuracy (Status: PASSED)

Center Frequency/Span	Minimum (%)	Actual (%)	Maximum (%)
300.00004 MHz/100 Hz	-5	-1.25	5
300.00008 MHz/200 Hz	-5	0	5
300.0002 MHz/500 Hz	-5	-.25	5
300.0004 MHz/1 kHz	-5	-.125	5
300.0008 MHz/2 kHz	-5	-.25	5
300.002 MHz/5 kHz	-5	0	5
300.004 MHz/10 kHz	-5	0	5
300.008 MHz/20 kHz	-5	-.625	5
300.02 MHz/50 kHz	-5	-.21	5
300.04 MHz/100 kHz	-5	-.625	5
300.08 MHz/200 kHz	-5	-.417	5
300.2 MHz/500 kHz	-5	-.209	5
300.4 MHz/1 MHz	-5	0	5
300.8 MHz/2 MHz	-5	1.667	5
302 MHz/5 MHz	-5	1.458	5
304 MHz/10 MHz	-5	1.042	5
308 MHz/20 MHz	-5	1.042	5
320 MHz/50 MHz	-5	.833	5
340 MHz/100 MHz	-5	.208	5
380 MHz/200 MHz	-5	.417	5
500 MHz/500 MHz	-5	.417	5
700 MHz/1 GHz	-5	.625	5
1.1 GHz/2 GHz	-5	.208	5

Report Number: 2-177194422-1 **Test Date:** 18 Aug 2005
Model Number: HP8561B **Options:** 003
Serial Number: 3031A00485

Frequency Response (Status: PASSED)

Maximum, Band 0, dc coupled absolute

Maximum Values	Frequency	Min (dB)	Actual (dB)	Max (dB)
Positive	200 Hz	---	.73	1.5
Negative	2.3 GHz	-1.5	-.44	---

Maximum, Band 0, ac coupled absolute

Maximum Values	Frequency	Min (dB)	Actual (dB)	Max (dB)
Positive	500 kHz	---	.56	1.7
Negative	50 MHz	-1.7	-.35	---

Maximum, Band 1, dc coupled absolute

Maximum Values	Frequency	Min (dB)	Actual (dB)	Max (dB)
Positive	3.05 GHz	---	.03	2.5
Negative	3.55 GHz	-2.5	-1.54	---

Maximum, Band 1, ac coupled absolute

Maximum Values	Frequency	Min (dB)	Actual (dB)	Max (dB)
Positive	3.05 GHz	---	.12	3.5
Negative	3.55 GHz	-3.5	-1.48	---

Peak-to-Peak Response, band 0, dc coupled (.0002 to 2900 MHz) relative

Min @ Freq	Max @ Freq	Pk to Pk (dB)	Maximum (dB)
2.3 GHz	200 Hz	1.17	2

Peak-to-Peak Response, band 0, ac coupled (.1 to 2900 MHz) relative

Min @ Freq	Max @ Freq	Pk to Pk (dB)	Maximum (dB)
50 MHz	500 kHz	.91	2.2

Peak-to-Peak Response, band 1, dc coupled (2950 to 6500 MHz) relative

Min @ Freq	Max @ Freq	Pk to Pk (dB)	Maximum (dB)
3.55 GHz	3.05 GHz	1.57	3

Peak-to-Peak Response, band 1, ac coupled (2950 to 6500 MHz) relative

Min @ Freq	Max @ Freq	Pk to Pk (dB)	Maximum (dB)
3.55 GHz	3.05 GHz	1.6	4

Band Switching Uncertainty, dc coupled

--Band--	--Band--	Result (dB)	Maximum (dB)
0	1	.7	3.5
1	0	-.47	3.5

Band Switching Uncertainty, ac coupled

--Band--	--Band--	Result (dB)	Maximum (dB)
0	1	.44	4.1
1	0	-.44	4.1

Report Number: 2-177194422-1 **Test Date:** 18 Aug 2005
Model Number: HP8561B **Options:** 003
Serial Number: 3031A00485

Image and Multiple Responses (Status: PASSED)

Analyzer Freq	Source Freq	Actual (dBc)	Maximum (dBc)
2 GHz	1.9786 GHz	-87.5	-70
2 GHz	2.0214 GHz	-84.5	-70
2 GHz	1.3786 GHz	-87	-70
2 GHz	2.6214 GHz	-90.83	-70
2 GHz	9.8214 GHz	-92.17	-70
2 GHz	3.2893 GHz	-91.67	-70
2 GHz	1.8107 GHz	-88	-70
2 GHz	289.3 MHz	-87.67	-70
4 GHz	8.6107 GHz	-91.5	-70
4 GHz	3.9786 GHz	-91	-70
4 GHz	4.0214 GHz	-82.33	-70
4 GHz	3.3786 GHz	-91.33	-70
4 GHz	4.6214 GHz	-86.17	-70
4 GHz	289.3 MHz	-92.17	-70
4 GHz	3.7214 GHz	-90.83	-70

Report Number: 2-177194422-1 **Test Date:** 18 Aug 2005
Model Number: HP8561B **Options:** 003
Serial Number: 3031A00485

Pulse Digitization Uncertainty (Status: PASSED)

Res BW	Scale	Measured	Maximum
1 MHz	Log 5	.83 dB	1.25 dB
2 MHz	Log 5	1.17 dB	3 dB
1 MHz	Linear	2.15%	4%
2 MHz	Linear	2.78%	12%

Report Number: 2-177194422-1 **Test Date:** 18 Aug 2005
Model Number: HP8561B **Options:** 003
Serial Number: 3031A00485

Sweep Time Accuracy, >=30 ms (Status: PASSED)

Sweep Time	Minimum (%)	Measured (%)	Maximum (%)
30 ms	-1	0	1
50 ms	-1	.42	1
100 ms	-1	.42	1
200 ms	-1	0	1
500 ms	-1	.21	1
1 s	-1	.21	1
2 s	-1	.21	1
5 s	-1	.21	1
10 s	-1	.21	1
20 s	-1	.21	1
50 s	-1	0	1
60 s	-1	.21	1

Report Number: 2-177194422-1 **Test Date:** 18 Aug 2005
Model Number: HP8561B **Options:** 003
Serial Number: 3031A00485

Third Order Intermodulation (TOI) (Status: PASSED)

Applied Frequency	THD (dBc)	Maximum (dBc)
45 MHz	-82.67	-70
9 MHz	-76.83	-64
5 GHz	-81	-75

Report Number: 2-177194422-1 **Test Date:** 18 Aug 2005
Model Number: HP8561B **Options:** 003
Serial Number: 3031A00485

Gain Compression (Status: PASSED)

Source 1 Freq	Source 2 Freq	Actual (dB)	Max (dB)
2.003 GHz	2 GHz	.07	1
4.003 GHz	4 GHz	.07	1

Report Number: 2-177194422-1 **Test Date:** 18 Aug 2005
Model Number: HP8561B **Options:** 003
Serial Number: 3031A00485

Second Harmonic Distortion (Status: PASSED)

Applied Frequency	SHD (dBc)	Maximum (dBc)
9 MHz	-83.67	-60
40 MHz	-89.17	-72
2.95 GHz	-108.38	-72

Report Number: 2-177194422-1 **Test Date:** 18 Aug 2005
Model Number: HP8561B **Options:** 003
Serial Number: 3031A00485

1ST LO OUTPUT Amplitude (Status: PASSED)

1ST LO Freq	Center Freq	Min (dB)	Actual (dB)	Max (dB)
3 GHz	18 GHz	14.5	16.959	18.5
3.2 GHz	19.2 GHz	14.5	16.999	18.5
3.4 GHz	20.4 GHz	14.5	16.721	18.5
3.6 GHz	21.6 GHz	14.5	16.621	18.5
3.8 GHz	22.8 GHz	14.5	17.038	18.5
4 GHz	24 GHz	14.5	16.945	18.5
4.2 GHz	25.2 GHz	14.5	16.544	18.5
4.4 GHz	26.4 GHz	14.5	16.476	18.5
4.6 GHz	27.6 GHz	14.5	16.692	18.5
4.8 GHz	28.8 GHz	14.5	16.952	18.5
5 GHz	30 GHz	14.5	17.051	18.5
5.2 GHz	31.2 GHz	14.5	16.603	18.5
5.4 GHz	32.4 GHz	14.5	16.578	18.5
5.6 GHz	33.6 GHz	14.5	16.735	18.5
5.8 GHz	34.8 GHz	14.5	16.923	18.5
6 GHz	36 GHz	14.5	16.578	18.5
6.2 GHz	37.2 GHz	14.5	16.292	18.5
6.4 GHz	38.4 GHz	14.5	16.269	18.5
6.6 GHz	39.6 GHz	14.5	16.371	18.5
6.8 GHz	39.99997 GHz	14.5	16.41	18.5

Report Number: 2-177194422-1 **Test Date:** 18 Aug 2005
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IF INPUT Amplitude Accuracy (Status: PASSED)

Minimum (dBm)	Actual (dBm)	Maximum (dBm)
-31.5	-30.29	-28.5

Report Number: 2-177194422-1 **Test Date:** 18 Aug 2005
Model Number: HP8561B **Options:** 003
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Displayed Average Noise Level (Status: PASSED)

Frequency Range	Measurement Freq	DANL (dBm)	Spec (dBm)
50 Hz	50 Hz	-87.66	-60
100 Hz	100 Hz	-87.82	-60
1 kHz	1 kHz	-104.99	-85
10 kHz	10 kHz	-119.82	-103
100 kHz	99 kHz	-132.82	-110
1 MHz-2.9 GHz	2.213903333 GHz	-139.82	-130
2.9 GHz-6.5 GHz	3.002 GHz	-136.32	-131

Report Number: 2-177194422-1 **Test Date:** 18 Aug 2005
Model Number: HP8561B **Options:** 003
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Residual Responses (Status: PASSED)

Residuals Freq	Amplitude (dBm)	Maximum (dBm)
2 MHz	-119.5	-90
4 MHz	-119.17	-90
6 MHz	-120.5	-90
10 MHz	-120.17	-90
12 MHz	-120	-90
14 MHz	-120.5	-90
17.5 MHz	-120.17	-90
20 MHz	-121	-90
341.083333 MHz	-119.67	-90
471.44 MHz	-120.83	-90
511.625 MHz	-120	-90
600 MHz	-120.5	-90
666.975 MHz	-119.67	-90
785.733333 MHz	-119.33	-90
992.8666667 MHz	-119.33	-90
1.06716 GHz	-119	-90
1.1786 GHz	-119	-90
1.19144 GHz	-118.33	-90
1.2 GHz	-118.5	-90
1.33395 GHz	-117.17	-90
1.466667 GHz	-117.83	-90
1.472222667 GHz	-118.33	-90
1.4786 GHz	-118.17	-90
1.5 GHz	-118.83	-90
1.566975 GHz	-118	-90
1.64465 GHz	-118.17	-90
1.7786 GHz	-118	-90
1.8 GHz	-118.5	-90
1.985733333 GHz	-118.17	-90
2.1428667 GHz	-105.5	-90
2.192866667 GHz	-118.17	-90
2.3409747 GHz	-115.67	-90
2.3786 GHz	-118.33	-90
2.4 GHz	-118.5	-90
2.466975 GHz	-117.33	-90
2.6786 GHz	-119	-90
2.7 GHz	-118.33	-90
3 GHz	-114.83	-90
3.3 GHz	-116.5	-90
3.4653658 GHz	-105.17	-90
5.102867 GHz	-117.33	-90
6 GHz	-117	-90

Report Number: 2-177194422-1 **Test Date:** 18 Aug 2005
Model Number: HP8561B **Options:** 003
Serial Number: 3031A00485

Residual Responses (Status: PASSED)

Residuals Freq	Amplitude (dBm)	Maximum (dBm)
6.1469747 GHz	-112.17	-90

No residuals were above the maximum specification.
The specified frequency range is 200 kHz to 6.5 GHz.

Agilent Technologies	Agilent Tech. Sales & Serv. GmbH & Co.KG Herrenberger Str. 130, Geb. 4 D-71034 Boeblingen Tel: 0180-5246337 Germany	AGILENT TECHNOLOGIES INTERNAL ASSESSMENT PROGRAM : AQ-SSU-12/95

Kalibrierzertifikat

Agilent Inclusive Calibration

Zertifikat Nr. : 2-177194422-1

Hersteller: Hewlett-Packard Co.
Modell Nr: 8561B
Seriennummer: 3031A00485
Auftraggeber :
Universität Innsbruck
Technikerstr 25
Institut für Experimentalphysik
INNSBRUCK
6020

Bezeichnung: SPECTRUM ANALYZER
Installierte Optionen:
Auftraggeber ID-Nr:
Kalibrierort:
Agilent Tech. Sales & Serv. GmbH & Co.KG
Herrenberger Str. 130, Geb. 4
D-71034 Boeblingen Tel: 0180-5246337
Germany

Auftragsnummer:
Kalibrierdatum: 18 Aug 2005
Temperatur: (23+/-5) °C
Prozedur Nr: STE-50110289-A.04.04A

Vertragsnummer:
Eingangsdatum: 18 Aug 2005
Rel.Luftfeuchte: (50+/-30) %RH

Hiermit bestätigen wir, dass der o.g. Kalibriergegenstand unter Beachtung eines registrierten Qualitätsmanagementsystems gemäss ISO 9001:2000 unter Verwendung entsprechender Agilent Technologies Prozeduren kalibriert wurde.

Zustand bei Anlieferung: Im Anlieferungszustand war der Kalibriergegenstand defekt. Ein Messprotokoll konnte nicht angefertigt werden.

Zustand bei Versand: Im Versandzustand waren die im Messprotokoll genannten Messpunkte INNERHALB DER ZULÄSSIGEN TOLERANZ. Eine Reparatur wurde vorgenommen.

Besondere Bemerkungen:

Die von Agilent Technologies angewandten Kalibrierprozeduren sind so gestaltet, dass die Messunsicherheit gleich oder kleiner ¼ der überprüften Toleranzgrenze, bei einem Erweiterungsfaktor k=2, beträgt.

Die im Messprotokoll genannten Toleranzgrenzen entsprechen den publizierten Spezifikationen des Kalibriergegenstandes an den jeweiligen Messpunkten.

D Trotman

Ausgabedatum : 19 Aug 2005

Dave Trotman - European Support Manager

ver:11-05-02

Agilent Technologies	Agilent Tech. Sales & Serv. GmbH & Co.KG Herrenberger Str. 130, Geb. 4 D-71034 Boeblingen Tel: 0180-5246337 Germany	AGILENT TECHNOLOGIES INTERNAL ASSESSMENT PROGRAM : AQ-SSU-12/95

Kalibrierzertifikat

Agilent Inclusive Calibration

Zertifikat Nr. : 2-177194422-1

Informationen zur Rückführbarkeit :

Techniker ID Nummer: 895304

Die verwendeten Messeinrichtungen sind rückführbar auf nationale Normale der Euromet Mitglieder (NPL, PTB, BNM, etc), das US NIST oder andere nationale metrologische Staatsinstitute.

Messungen bei denen eine Rückführbarkeit auf nationale Normale nicht möglich ist, können auf Naturkonstanten, andere vereinbarte Normale oder auf Verhältnismessungen rückgeführt sein.

Weitere Dokumente bezüglich Rückführbarkeit der Messeinrichtungen stehen zur Verfügung und können nach vorheriger Absprache eingesehen werden.

Dieses Kalibrierzertifikat darf nur vollständig und unverändert weitergegeben werden.

Verwendete Messeinrichtungen:

Modell Nummer	Modell Bezeichnung	ID Nummer	Fälligkeits Datum	Zertifikat Nummer
5065A	FREQUENCY STANDARD	DE648	9 Dez 2005	2-168344810-1
53131A	UNIVERSAL COUNTER	DE2067	7 Sep 2005	2-73269040-1
5370B	UNIVERSAL COUNTER	DE735	18 Mrz 2007	2-147760204-1
11667A	POWER SPLITTER	DE082	20 Apr 2006	2-109527615-1
11975A	2-8 GHZ POWER AMPLIFIER	DE021	23 Nov 2006	2-158579612-1
3325B	SYNTHESIZER/FUNCTION GENERATOR	DE1577	14 Apr 2006	2-151623962-1
3335A	SYNTHESIZER/LEVEL GENERATOR	DECH0205	18 Feb 2006	2-137210536-1
436A	Digital power meter	DE1882	18 Nov 2005	2-139421126-1
438A	TWO CHANNEL POWER METER	DECH0268	24 Dez 2006	2-172545963-1
8116A	PULSE/FUNCTION GENERATOR	DE150	14 Apr 2006	2-107765004-1
8340B	SYNTHESIZED SWEEPER	DE349	17 Aug 2006	2-161804055-1
8340B	SYNTHESIZED SWEEPER	DE109	5 Apr 2006	2-144262110-1
8481D	POWER SENSOR	DE176	6 Jun 2006	2-120568564-1
8482A	POWER SENSOR	DE377	2 Mrz 2006	2-118265008-1
8485A	POWER SENSOR	DE413	27 Aug 2005	2-48820229-1
8663A	SYNTHESIZED SIGNAL GENERATOR	DE987	24 Aug 2005	2-90834021-1

SERVICEBERICHT FÜR DEN ANWENDER

Agilent Technologies

Registered by KEMA

to comply to ISO 9001:2000
Certificate No: 510999.00

Gerätezustand bei Anlieferung:

- ☐ **In Toleranz**
- ☐ **Außer Toleranz**
- ☒ **Reparatur erforderlich**

Durchgeführte Arbeiten:

- ☐ **Funktionstest**
- ☒ **Reparatur**
- ☐ **Akkreditierte Kalibrierung**
- ☐ **AQAP/Z540 Kalibrierung**
- ☒ **Kalibrierung nach Qualitätsnorm**
- ☒ **Gerät gereinigt**
- ☒ **Sicherheitstest (VDE 0701-1)**

Lockere Eingangsbuchse neu befestigt !
Ihr Gerät wurde nach Herstellerangaben kalibriert. Es entspricht vollständig der Herstellerspezifikation.

Modell-Nr.:	Serien-Nr.:	Auftrags-Nr.:
8561B	**3031A00485**	**2-177194422-1**

19. August 2005
Datum

Unterschrift

Agilent Technologies Sales & Services GmbH & Co. KG – Servicezentrum Elektronische Meßtechnik
Herrenberger Str. 130, Gebäude 4 71034 Böblingen
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