***** Step Lock Test from 8000 MHz to 20000 MHz i[illegible] MHz Steps *****

Serial Number: 0016
Model Number: MLSP-8020BD
Time: 2:24:41 PM
Date: 12/14/2011
[illegible]num Frequency: 8000 MHz
[illegible]imum Frequency: 20000 MHz
Temperature: +39.0C Deg. C
NOVO State: Locked
Power Supply Spec: +5.0 VDC +/- 0.25 V @ < 300 mA
Power Supply Spec: +15.0 VDC +/- 0.50 V @ < 1800 mA

Total Frequency Errors: 0

Finish Time: 2:26:19 PM

Begin Random Step Lock Test from 8000 MHz to 20000 MHz (1000 Frequencies)

Total Ramdom Frequency Errors: 0

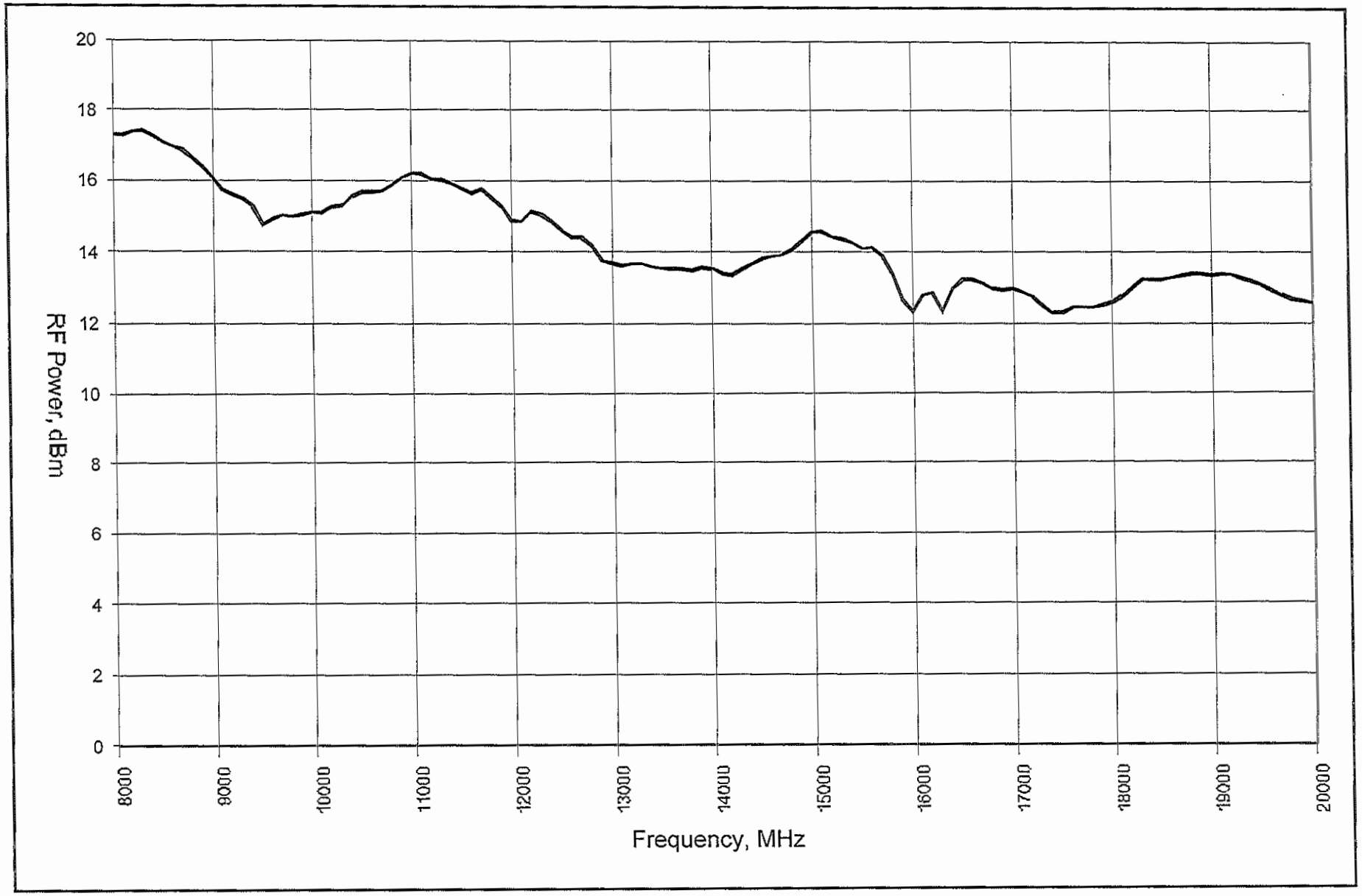
Finish Time: 2:27:42 PM

+5.0 VDC Voltage = 5.002V Pass
+5.0 VDC Current = 300mA Pass
+15.0 VDC Voltage = 14.996V Pass
+15.0 VDC Current = 1755mA Pass

Pass

Model #: MLSF-8020BD Serial #: 0016 Min Power: 10 dBm Max Power: 18 dBm Temp.: +38.8C Deg. C Date: 12-14-2011 Time: 14:21:39 St = Pass

Maximum RF Output Power vs. Frequency



Print

Max Leveled Pwr: N/A dBm Min Leveled Pwr: N/A dBm Leveled Pwr Set: N/A dBm Level Flatness Spec: +/-2.5 dB

***** Harmonic Test from 8000.000000 MHz to 20000.000000 MHz in 100 MHz Steps *****

Model Number: MLSP-8020BD
Serial Number: 0016
Time: 10:54:18 AM
Date: 10/24/2011
Minimum Frequency: 8000.000000 MHz
imum Frequency: 20000.000000 MHz
rent Unit Temperature: +34.7C Deg. C
Harmonic Spec Level (In Band): -12.0 dBc

Frequency	Level	Harm #	Status
8000 MHz	-16 dBc	2	PASS
8100 MHz	-17 dBc	2	PASS
8200 MHz	-16 dBc	2	PASS
8300 MHz	-15 dBc	2	PASS
8400 MHz	-15 dBc	2	PASS
8500 MHz	-15 dBc	2	PASS
8600 MHz	-15 dBc	2	PASS
8700 MHz	-15 dBc	2	PASS
8800 MHz	-16 dBc	2	PASS
8900 MHz	-17 dBc	2	PASS
9000 MHz	-18 dBc	2	PASS
9100 MHz	-20 dBc	2	PASS
9200 MHz	-20 dBc	2	PASS
9300 MHz	-21 dBc	2	PASS
9400 MHz	-22 dBc	2	PASS
9500 MHz	-22 dBc	2	PASS
9600 MHz	-22 dBc	2	PASS
9700 MHz	-23 dBc	2	PASS
9800 MHz	-24 dBc	2	PASS
9900 MHz	-25 dBc	2	PASS
10000 MHz	-25 dBc	2	PASS
10100 MHz	-26 dBc	2	PASS
10200 MHz	-28 dBc	2	PASS
10300 MHz	-30 dBc	2	PASS
10400 MHz	-32 dBc	2	PASS
10500 MHz	-34 dBc	2	PASS
10600 MHz	-39 dBc	2	PASS
10700 MHz	-43 dBc	2	PASS
0 MHz	-49 dBc	2	PASS
0 MHz	-54 dBc	2	PASS
11000 MHz	-64 dBc	2	PASS
11100 MHz	-54 dBc	2	PASS
11200 MHz	-51 dBc	2	PASS
11300 MHz	-45 dBc	2	PASS
11400 MHz	-39 dBc	2	PASS
11500 MHz	-38 dBc	2	PASS
11600 MHz	-37 dBc	2	PASS
11700 MHz	-35 dBc	2	PASS
11800 MHz	-34 dBc	2	PASS
11900 MHz	-34 dBc	2	PASS
12000 MHz	-35 dBc	2	PASS
12100 MHz	-32 dBc	2	PASS
12200 MHz	-31 dBc	2	PASS
12300 MHz	-31 dBc	2	PASS
12400 MHz	-33 dBc	2	PASS
12500 MHz	-36 dBc	2	PASS
12600 MHz	-35 dBc	2	PASS
12700 MHz	-34 dBc	2	PASS
12800 MHz	-34 dBc	2	PASS
12900 MHz	-34 dBc	2	PASS
13000 MHz	-34 dBc	2	PASS
13100 MHz	-33 dBc	2	PASS
13200 MHz	-33 dBc	2	PASS
13300 MHz	-32 dBc	2	PASS
13400 MHz	-32 dBc	2	PASS

Number of Failures: 0

Finish Time: 10:58:56 AM

Harmonic Readings complete

>

***** Random Spur Test from 8000 MHz to 20000 M *****

Serial Number: 0016
Model Number: MLSP-8020BD
Time: 11:02:28 AM
Date: 10/24/2011
imum Frequency: 8000 MHz
ximum Frequency: 20000 MHz
Analyzer Frequency Span Tested: 2 kHz to 2000 MHz
Spur Level Spec: -60.0 dBc
Number of Frequencies Tested: 50
Temperature: +35.2C Deg. C
NOVO State: UnLocked

Frequency Tested = 15678.574 MHz
Frequency Tested = 12039.364 MHz
Frequency Tested = 19233.968 MHz
Frequency Tested = 15446.012 MHz
Frequency Tested = 19869.055 MHz
Frequency Tested = 10927.618 MHz
Frequency Tested = 10473.532 MHz
Frequency Tested = 17078.536 MHz
Frequency Tested = 12633.214 MHz
Frequency Tested = 18082.537 MHz
Frequency Tested = 8288.275 MHz
Frequency Tested = 12537.373 MHz
Frequency Tested = 12720.416 MHz
Frequency Tested = 14255.385 MHz
Frequency Tested = 13496.38 MHz
Frequency Tested = 18576.789 MHz
Frequency Tested = 10639.332 MHz
Frequency Tested = 14190.128 MHz
Frequency Tested = 10304.783 MHz
Frequency Tested = 17160.125 MHz
Frequency Tested = 11981.37 MHz
Frequency Tested = 9677.83 MHz
Frequency Tested = 19119.177 MHz
Frequency Tested = 17244.18 MHz
Frequency Tested = 16319.857 MHz
uency Tested = 16850.329 MHz
uency Tested = 13764.283 MHz
Frequency Tested = 15907.813 MHz
Frequency Tested = 12991.309 MHz
Frequency Tested = 15572.767 MHz
Frequency Tested = 12519.031 MHz
Frequency Tested = 19244.184 MHz
Frequency Tested = 13331.997 MHz
Frequency Tested = 9898.522 MHz
Frequency Tested = 12692.827 MHz
Frequency Tested = 15192.412 MHz
Frequency Tested = 13712.833 MHz
Frequency Tested = 9303.726 MHz
Frequency Tested = 19637.557 MHz
Frequency Tested = 13958.914 MHz
Frequency Tested = 10929.023 MHz
Frequency Tested = 17598.022 MHz
Frequency Tested = 16900.191 MHz
Frequency Tested = 9061.399 MHz
Frequency Tested = 16321.6 MHz
Frequency Tested = 10227.301 MHz
Frequency Tested = 16321.132 MHz
Frequency Tested = 9117.894 MHz
Frequency Tested = 13101.139 MHz
Frequency Tested = 19367.34 MHz

Total Spur Errors: 0

Finish Time: 12:00:57 PM
Pass

***** Phase Noise Test from 8000 MHz to 20000 MH[illegible] 1200 MHz Steps *****

Model Number: MLSP-8020BD
Serial Number: 0016
Time: 4:01:25 PM
Date: 11/4/2011
[illegible]imum Frequency: 8000 MHz
[illegible]ximum Frequency: 20000 MHz
Number of Frequencies Tested: 11
Current Unit Temperature: +34.6C Deg. C

Phase Noise Spec @ Offset:
@ 100 Hz = -70.0 dBc/Hz
@ 1.0 kHz = -87.0 dBc/Hz
@ 10.0 kHz = -88.0 dBc/Hz
@ 100 Hz = -115.0 dBc/Hz
@ 1.0 MHz = -138.0 dBc/Hz
@ 10.0 MHz = -150 dBc/Hz

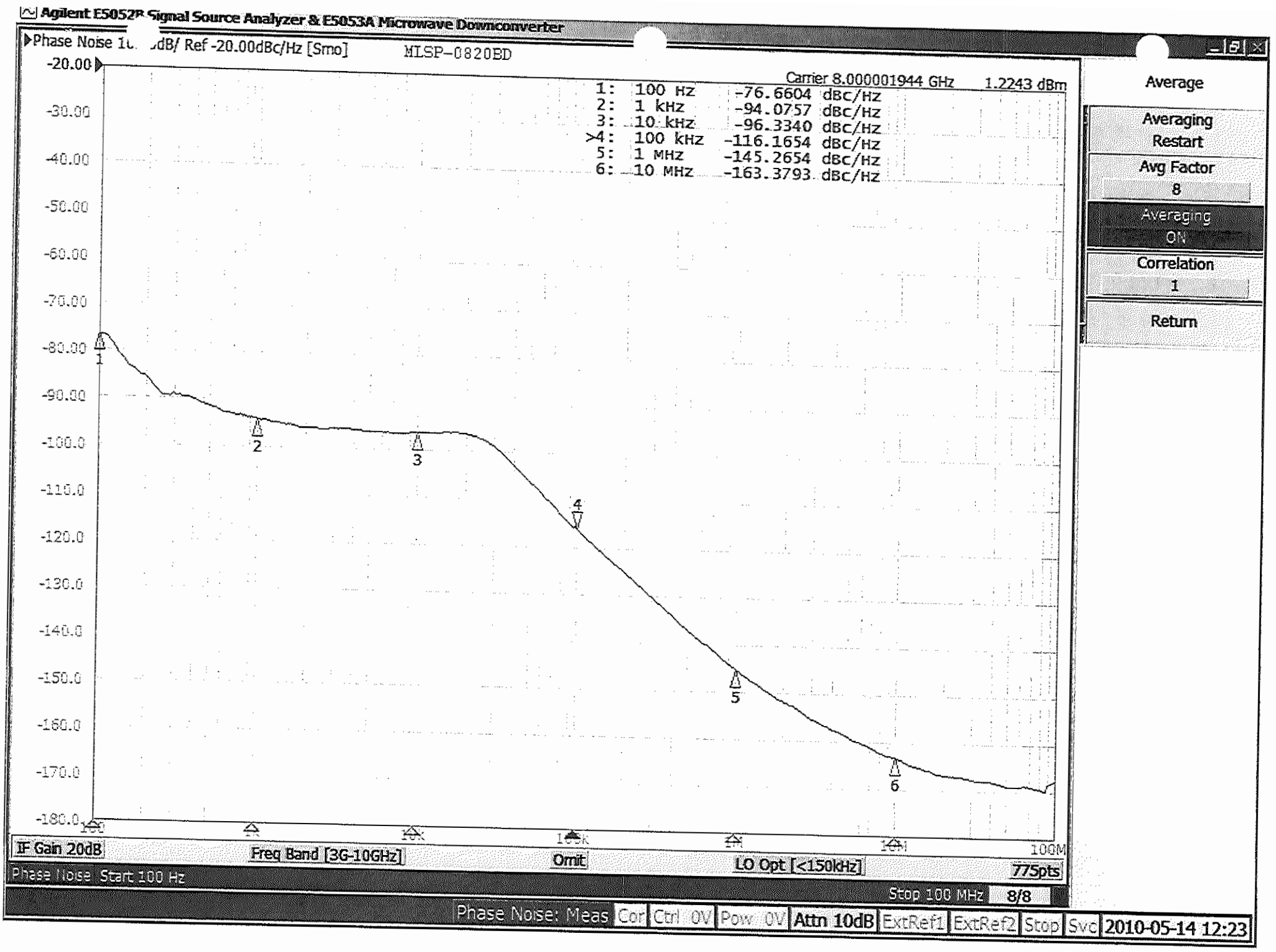
Measured:

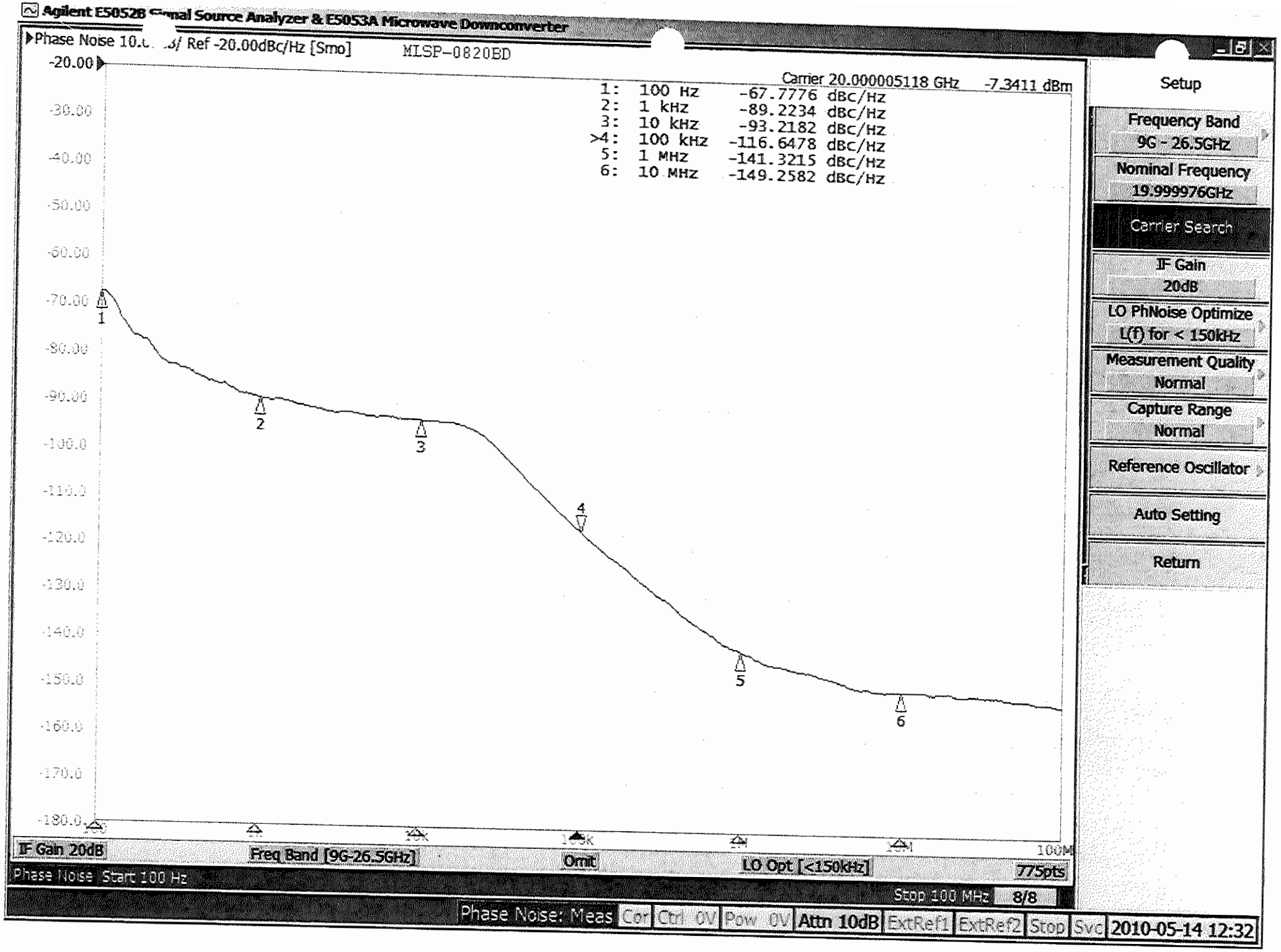
Frequency	100 Hz	1 kHz	10 kHz	100 kHz	1 MHz	10 MHz	Status	RF Power
8000.000	-83.5	-98.1	-98.8	-118.8	-145.1	-164.7	Pass	10.71 dBm
9200.000	-79.9	-96.9	-97.0	-118.8	-145.1	-163.4	Pass	8.96 dBm
10400.000	-80.9	-95.1	-96.2	-119.5	-144.5	-161.6	Pass	6.53 dBm
11600.000	-80.2	-94.3	-95.7	-119.9	-144.1	-161.3	Pass	6.03 dBm
12800.000	-78.4	-93.5	-95.4	-120.6	-144.1	-161.7	Pass	5.01 dBm
14000.000	-74.5	-92.8	-95.4	-120.8	-143.9	-160.6	Pass	4.98 dBm
15200.000	-74.1	-92.5	-94.7	-120.9	-144.0	-160.5	Pass	5.18 dBm
16400.000	-75.8	-91.2	-92.1	-118.9	-143.2	-157.7	Pass	2.82 dBm
17600.000	-73.4	-90.2	-92.0	-119.2	-143.1	-156.1	Pass	2.00 dBm
18800.000	-72.5	-89.9	-90.7	-118.6	-142.9	-155.0	Pass	1.76 dBm
20000.000	-70.1	-88.9	-91.0	-118.1	-141.1	-153.3	Pass	-0.14 dBm

Number of Failures: 0

Finish Time: 4:05:41 PM

Phase Noise Readings Complete


Agilent E5052B Signal Source Analyzer & E5053A Microwave Downconverter
Phase Noise 1t dB/ Ref -20.00dBc/Hz [Smo]
MLSP-0820BD
Carrier 8.000001944 GHz 1.2243 dBm
1: 100 Hz -76.6604 dBc/Hz
2: 1 kHz -94.0757 dBc/Hz
3: 10 kHz -96.3340 dBc/Hz
>4: 100 kHz -116.1654 dBc/Hz
5: 1 MHz -145.2654 dBc/Hz
6: 10 MHz -163.3793 dBc/Hz
-20.00
-30.00
-40.00
-50.00
-60.00
-70.00
-80.00
-90.00
-100.0
-110.0
-120.0
-130.0
-140.0
-150.0
-160.0
-170.0
-180.0
100M
IF Gain 20dB
Freq Band [3G-10GHz]
Omit
LO Opt [<150kHz]
775pts
Phase Noise Start 100 Hz
Stop 100 MHz
8/8
Phase Noise: Meas
Cor
Ctrl 0V
Pow 0V
Attn 10dB
ExtRef1
ExtRef2
Stop
Svc
2010-05-14 12:23
Average
Averaging Restart
Avg Factor
8
Averaging
ON
Correlation
1
Return


Agilent E5052B Signal Source Analyzer & E5053A Microwave Downconverter
Phase Noise 10.0 .3/ Ref -20.00dBc/Hz [Smo]
MLSP-0820BD
Carrier 20.000005118 GHz -7.3411 dBm
1: 100 Hz -67.7776 dBc/Hz
2: 1 kHz -89.2234 dBc/Hz
3: 10 kHz -93.2182 dBc/Hz
>4: 100 kHz -116.6478 dBc/Hz
5: 1 MHz -141.3215 dBc/Hz
6: 10 MHz -149.2582 dBc/Hz
-20.00
-30.00
-40.00
-50.00
-60.00
-70.00
-80.00
-90.00
-100.0
-110.0
-120.0
-130.0
-140.0
-150.0
-160.0
-170.0
-180.0
100M
IF Gain 20dB
Freq Band [9G-26.5GHz]
Omit
LO Opt [<150kHz]
775pts
Phase Noise Start 100 Hz
Stop 100 MHz
8/8
Phase Noise: Meas
Cor
Ctrl 0V
Pow 0V
Attn 10dB
ExtRef1
ExtRef2
Stop
Svc
2010-05-14 12:32
Setup
Frequency Band
9G - 26.5GHz
Nominal Frequency
19.999976GHz
Carrier Search
IF Gain
20dB
LO PhNoise Optimize
L(f) for < 150kHz
Measurement Quality
Normal
Capture Range
Normal
Reference Oscillator
Auto Setting
Return