

TEST REPORT

of

FCC Part 15 Subpart C §15.247

FCC ID: A3LGTN7108

Equipment Under Test : Mobile Phone
 Model Name : GT-N7108
 Serial No. : N/A
 Applicant : SAMSUNG ELECTRONICS CO., LTD.
 Manufacturer : SAMSUNG ELECTRONICS CO., LTD.
 Date of Test(s) : 2012. 09. 20 – 2012. 10. 10
 Date of Issue : 2012. 10. 10

In the configuration tested, the EUT complied with the standards specified above.

Tested By:

Am.

Date

2012. 10. 10

Alvin Kim

Approved By:

3

Date

2012. 10. 10

Feel Jeong

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1. General Information

1.1. Testing Laboratory

SGS Korea Co., Ltd. (Gunpo Laboratory)

- 705, Dongchun-Dong Sooji-Gu, Yongin-Shi, Kyungki-Do, South Korea.
- Wireless Div. 3FL, 18-34, Sanbon-dong, Gunpo-si, Gyeonggi-do, Korea 435-040

All SGS services are rendered in accordance with the applicable SGS conditions of service available on request and accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx>.

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1.2. Details of Applicant

Applicant : SAMSUNG ELECTRONICS CO., LTD.
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Contact Person : Wang, Gye-Sung
Phone No. : +82 10 2727 7211
Fax No. : +82 31 301 7507

1.3. Description of EUT

Kind of Product	Mobile Phone
Model Name	GT-N7108
Serial Number	N/A
Power Supply	DC 3.8 V
Frequency Range	2 412 MHz ~ 2 462 MHz (11b/g/n_HT20), 5 745 MHz ~ 5 825 MHz (11a/n_HT20), 5 755 MHz ~ 5 795 MHz (11n_HT40), 5 180 MHz ~ 5 240 MHz (11a/n_HT20 – Non DFS), 5 190 MHz ~ 5 230 MHz (11n_HT40 – Non DFS), 5 260 MHz ~ 5 320 MHz (11a/n_HT20 – DFS), 5 270 MHz ~ 5 310 MHz (11n_HT40 – DFS), 5 500 MHz ~ 5 700 MHz (11a/n_HT20 – DFS), 5 510 MHz ~ 5 670 MHz (11n_HT40 – DFS)
Modulation Technique	DSSS, OFDM
Number of Channels	11 channel (11b/g/n_HT20), 5 channel (11a/n_HT20), 2 channel (11n_HT40), 4 channel (11a/n_HT20–Non DFS), 2 channel (11n_HT40 – Non DFS), 15 channel (11a/n_HT20 – DFS), 7 channel (11n_HT40 – DFS)
Antenna Type	Internal type (SISO)
Antenna Gain	2 412 MHz ~ 2 462 MHz: 0.37 dB i 5 180 MHz ~ 5 320 MHz: 2.83 dB i 5 500 MHz ~ 5 700 MHz: 1.95 dB i 5 745 MHz ~ 5 825 MHz: 1.95 dB i

1.4. Declaration by the manufacturer

- WLAN & BT can not transmit simultaneously.

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1.5. Test Equipment List

Equipment	Manufacturer	Model	S/N	Cal Date	Cal Interval	Cal Due.
Signal Generator	R & S	SMBV100A	255834	Jul, 02. 2012	Annual	Jul, 02. 2013
Signal Generator	R & S	SMR40	100272	Aug. 23, 2012	Annual	Aug. 23, 2013
Spectrum Analyzer	R & S	FSV30	100768	Mar, 29. 2012	Annual	Mar, 29. 2013
Spectrum Analyzer	Agilent	N9030A	US51350132	Oct, 28. 2011	Annual	Oct, 28. 2012
Attenuator	AEROFLEX /WEINSCHEL	89-20-12	408	Jul, 02. 2012	Annual	Jul, 02. 2013
High Pass Filter	Wainwright	WHK3.0/18G-10SS	344	Jul, 12. 2012	Annual	Jul, 12. 2013
High Pass Filter	Wainwright	WHK7.5/26.5G-6SS	11	Jul, 12. 2012	Annual	Jul, 12. 2013
Low Pass Filter	Mini-Circuits	NLP-1200+	V8979400903-1	Jul. 12, 2012	Annual	Jul. 12, 2013
Power Sensor	R & S	NRP-Z81	100669	Apr, 03. 2012	Annual	Apr, 03. 2013
DC power Supply	Agilent	U8002A	MY49030063	Jan, 03. 2012	Annual	Jan, 03. 2013
Preamplifier	R & S	8447F	2944A03909	Jul, 03. 2012	Annual	Jul, 03. 2013
Preamplifier	R & S	SCU 18	10117	Jan. 02, 2012	Annual	Jan. 02, 2013
Preamplifier	MITEQ Inc.	JS44-18004000-35-8P	1546891	Jul, 12. 2012	Annual	Jul, 12. 2013
Test Receiver	R & S	ESU26	100109	Feb, 21. 2012	Annual	Feb, 21. 2013
Bilog Antenna	SCHWARZBECK	VULB9163	396	May 12. 2011	Biennial	May 12. 2013
Horn Antenna	SCHWARZBECK	BBHA9170	BBHA9170431	May 15, 2012	Biennial	May 15, 2014
Horn Antenna	R & S	HF 906	100326	Nov, 23. 2011	Biennial	Nov, 23. 2013
Antenna Master	INN-CO	MM4000	N/A	N/A	N/A	N.C.R.
Turn Table	INN-CO	DS 1200 S	N/A	N/A	N/A	N.C.R.
Test Receiver	R & S	ESHS10	863365/018	Jun, 04. 2012	Annual	Jun, 04. 2013
Two-Line V-Network	R & S	ENV216	100190	Jan, 09. 2012	Annual	Jan, 09. 2013
Anechoic Chamber	SY Corporation	L × W × H (6.5 m × 3.5 m × 3.5 m)	N/A	N/A	N/A	N.C.R.
Anechoic Chamber	SY Corporation	L × W × H (9.6 m × 6.4 m × 6.6 m)	N/A	N/A	N/A	N.C.R.

► Support equipment

Description	Manufacturer	Model	Serial Number
N/A	-	-	-

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1.6. Summary of Test Results

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC Part15 Subpart C § 15.247		
FCC Part Section(s)	Test Item(s)	Result
15.205 15.209 15.247(d)	Transmitter Radiated Spurious Emissions Conducted Spurious Emission	Complied
15.247(a)(2)	6 dB Bandwidth	Complied
15.247(b)(3)	Maximum Peak Output Power	Complied
15.247(e)	Power Spectral Density	Complied
15.207	Transmitter AC Power Line Conducted Emission	Complied

1.7. Test Procedure(s)

The measurement procedures described in the American National Standard for Methods of Measurement of Radio-Noise Emission from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz (ANSI C63.4-2003) and the guidance provided in KDB 558074 were used in the measurement of the DUT.

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1.8. Sample calculation

Where relevant, the following sample calculation is provided:

1.8.1. Conducted test

Offset value (dB) = Attenuator (dB) + Cable loss (dB)

1.8.2. Radiation test

Field strength level (dB μ V/m) = Measured level (dB μ V) + Antenna factor (dB) + Cable loss (dB) - amplifier (dB)

1.9. Test report revision

Revision	Report number	Description
0	F690501/RF-RTL005845	Initial

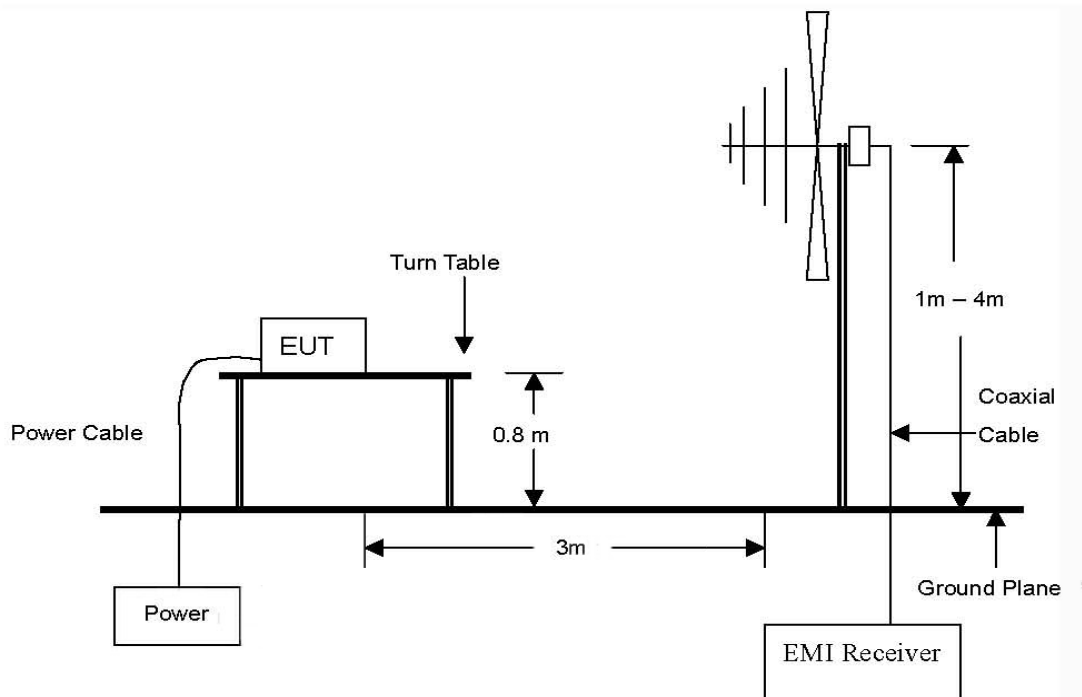
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2. Transmitter Radiated Spurious Emissions and Conducted Spurious Emission

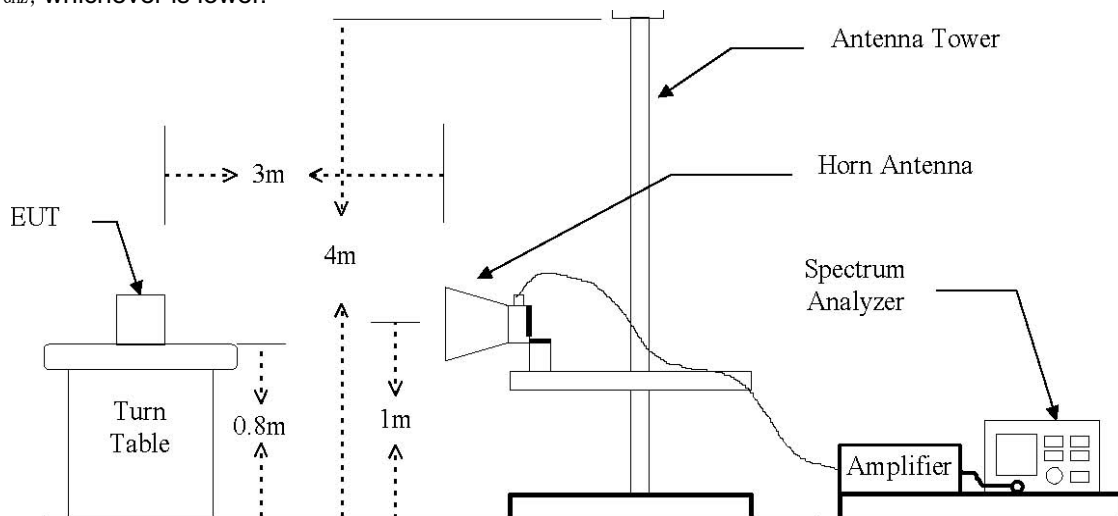
2.1. Test Setup

2.1.1. Transmitter Radiated Spurious Emissions

The diagram below shows the test setup that is utilized to make the measurements for emission from 30 MHz to 1 GHz Emissions.

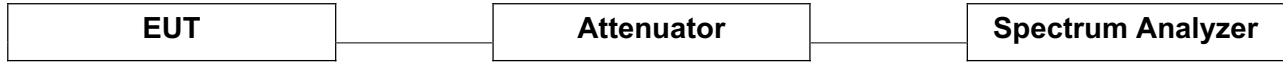


The diagram below shows the test setup that is utilized to make the measurements for emission. The spurious emissions were investigated from 1 GHz to the 10th harmonic of the highest fundamental frequency or 40 GHz, whichever is lower.



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2.1.2. Conducted Spurious Emission



2.2. Limit

According to §15.247(d), in any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph(b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in section §15.209(a) is not required. In addition, radiated emission which in the restricted band, as define in section §15.205(a), must also comply the radiated emission limits specified in section §15.209(a) (see section §15.205(c))

According to § 15.209(a), Except as provided elsewhere in this Subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table :

Frequency (MHz)	Distance (Meters)	Field Strength (dBμV/m)	Field Strength (μV/m)
30 - 88	3	40.0	100
88 – 216	3	43.5	150
216 – 960	3	46.0	200
Above 960	3	54.0	500

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2.3. Test Procedures

Radiated emissions from the EUT were measured according to the dictates in section 5.4 of KDB 558074

2.3.1. Test Procedures for Radiated Spurious Emissions

1. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter anechoic chamber test site. The table was rotated 360 degrees to determine the position of the highest radiation.
2. During performing radiated emission below 1 GHz, the EUT was set 3 meters away from the interference receiving antenna, which was mounted on the top of a variable-height antenna tower. During performing radiated emission above 1 GHz, the EUT was set 3 meter away from the interference-receiving antenna.
3. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the table was turned from 0 degrees to 360 degrees to find the maximum reading.
5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
6. If the emission level of the EUT in peak mode was 10 dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10 dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

NOTE ;

All data rates and modes were investigated for radiated spurious emissions. Only the radiated emissions of the configuration that produced the worst case emissions are reported in this section.

1. The measurements for below 1 GHz

Set the RBW = 100 - 120 kHz and VBW $\geq$ 3 x RBW of test receiver/spectrum analyzer for Peak detection (PK) or Quasi-peak detection (QP)

2. The measurements for above 1 GHz

Average measurements are recorded using the RBAVG1 measurement procedure of KDB 558074.

Peak measurements are recorded using RBW = 1 MHz, VBW = 3 MHz, Detector = power average (RMS)

Ensure that the number of measurement points in the sweep to $\geq$ 2 x (span/RBW)

Manually set the sweep time to: $\geq$ 10x(number of measurement points in sweep) x (transmission symbol period)

(symbol period: 11b/g = 4 μ s, 11n_HT20, 40 = 3.6 μ s)

Perform the measurement over a single sweep.

Use the peak marker function to determine the maximum average power level in any 1 MHz of the unwanted emission

3. To get a maximum emission level from the EUT, the EUT is manipulated through three orthogonal planes.

2.3.2. Test Procedures for Conducted Spurious Emissions

All data rates and modes were investigated for conducted spurious emissions. Only the conducted emissions of the configuration that produced the worst case emissions are reported in this section.

Per the guidance of KDB 558074, section 5.4.1.1, the reference level for out of band emissions is established from the plots of this section since the band edge emissions are measured with a RBW of 100 kHz. This reference level is then used as the limit in subsequent plots for out of band spurious emissions shown in section 2.4.3. The limit for out of band spurious emission at the band edge is 30 dB below the fundamental emission level measured in a 100 kHz bandwidth.

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2.4. Test Results

Ambient temperature : (24 ± 2) °C
Relative humidity : 47 % R.H.

2.4.1. Radiated Spurious Emission (Worst case configuration_11a mode, 6 Mbps, Middle channel)

The frequency spectrum from 30 MHz to 1 000 MHz was investigated. Emission levels are not reported much lower than the limits by over 30 dB. All reading values are peak values.

Radiated Emissions			Ant	Correction Factors		Total	FCC Limit	
Frequency (MHz)	Reading (dBμV)	Detect Mode	Pol.	AF (dB/m)	AMP + CL (dB)	Actual (dBμV/m)	Limit (dBμV/m)	Margin (dB)
42.89	37.20	Peak	H	14.00	-26.20	25.00	40.00	15.00
102.67	34.50	Peak	H	11.50	-26.20	19.80	43.50	23.70
516.21	35.50	Peak	H	16.20	-24.80	26.90	46.00	19.10
Above 600.00	Not detected	-	-	-	-	-	-	-

Remark:

1. All spurious emission at channels are almost the same below 1 GHz, so that the middle channel was chosen at representative in final test.
2. Actual = Reading + AF + AMP + CL

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2.4.2. Spurious Radiated Emission

The frequency spectrum above 1 000 MHz was investigated. Emission levels are not reported much lower than the limits by over 30 dB.

DSSS : 802.11b(1 Mbps)

Low Channel (2 412 MHz)

Radiated Emissions			Ant	Correction Factors		Total	FCC Limit	
Frequency (MHz)	Reading (dBμV)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Actual (dBμV/m)	Limit (dBμV/m)	Margin (dB)
*2 390.00	25.27	Peak	H	28.05	6.30	59.62	74.00	14.38
*2 390.00	14.68	Average	H	28.05	6.30	49.03	54.00	4.97

Radiated Emissions			Ant	Correction Factors		Total	FCC Limit	
Frequency (MHz)	Reading (dBμV)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	Actual (dBμV/m)	Limit (dBμV/m)	Margin (dB)
*4 824.12	45.94	Peak	H	32.31	-32.80	45.45	74.00	28.55
*4 824.12	41.97	Average	H	32.31	-32.80	41.48	54.00	12.52
Above 4 900.00	Not detected	-	-	-	-	-	-	-

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Middle Channel (2 437 MHz)

Radiated Emissions			Ant	Correction Factors		Total	FCC Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
*4 874.04	46.46	Peak	H	32.79	-33.05	46.20	74.00	27.80
*4 874.04	42.33	Average	H	32.79	-33.05	42.07	54.00	11.93
Above 4 900.00	Not detected	-	-	-	-	-	-	-

High Channel (2 462 MHz)

Radiated Emissions			Ant	Correction Factors		Total	FCC Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
*2 483.50	23.97	Peak	H	28.31	6.56	58.84	74.00	15.16
*2 483.50	15.11	Average	H	28.31	6.56	49.98	54.00	4.02

Radiated Emissions			Ant	Correction Factors		Total	FCC Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
*4 924.08	45.50	Peak	H	33.10	-32.93	45.67	74.00	28.33
*4 924.08	41.28	Average	H	33.10	-32.93	41.45	54.00	12.55
Above 5 000.00	Not detected	-	-	-	-	-	-	-

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DSSS : 802.11g(6 Mbps)

Low Channel (2 412 MHz)

Radiated Emissions			Ant	Correction Factors		Total	FCC Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
*2 390.00	26.37	Peak	H	28.05	6.30	60.72	74.00	13.28
*2 390.00	15.50	Average	H	28.05	6.30	49.85	54.00	4.15

Radiated Emissions			Ant	Correction Factors		Total	FCC Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
*4 823.65	42.55	Peak	H	32.30	-32.81	42.04	74.00	31.96
*4 823.65	31.48	Average	H	32.30	-32.81	30.97	54.00	23.03
Above 4 900.00	Not detected	-	-	-	-	-	-	-

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Middle Channel (2 437 MHz)

Radiated Emissions			Ant	Correction Factors		Total	FCC Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
*4 877.90	41.28	Peak	H	32.82	-33.05	41.05	74.00	32.95
*4 877.90	32.12	Average	H	32.82	-33.05	31.89	54.00	22.11
Above 4 900.00	Not detected	-	-	-	-	-	-	-

High Channel (2 462 MHz)

Radiated Emissions			Ant	Correction Factors		Total	FCC Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
*2 483.50	25.78	Peak	H	28.31	6.56	60.65	74.00	13.35
*2 483.50	15.90	Average	H	28.31	6.56	50.77	54.00	3.23

Radiated Emissions			Ant	Correction Factors		Total	FCC Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
*4 925.70	41.53	Peak	H	33.12	-32.93	41.72	74.00	32.28
*4 925.70	31.92	Average	H	33.12	-32.93	32.11	54.00	21.89
Above 5 000.00	Not detected	-	-	-	-	-	-	-

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DSSS : 802.11n_HT20(MCS0)

Low Channel (2 412 MHz)

Radiated Emissions			Ant	Correction Factors		Total	FCC Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
*2 390.00	26.40	Peak	H	28.05	6.30	60.75	74.00	13.25
*2 390.00	15.51	Average	H	28.05	6.30	49.86	54.00	4.14

Radiated Emissions			Ant	Correction Factors		Total	FCC Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
*4 827.55	41.13	Peak	H	32.36	-32.81	40.68	74.00	33.32
*4 827.55	31.17	Average	H	32.36	-32.81	30.72	54.00	23.28
Above 4 900.00	Not detected	-	-	-	-	-	-	-

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Middle Channel (2 437 MHz)

Radiated Emissions			Ant	Correction Factors		Total	FCC Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
*4 871.65	41.15	Peak	H	32.77	-33.07	40.85	74.00	33.15
*4 871.65	31.66	Average	H	32.77	-33.07	31.36	54.00	22.64
Above 4 900.00	Not detected	-	-	-	-	-	-	-

High Channel (2 462 MHz)

Radiated Emissions			Ant	Correction Factors		Total	FCC Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
*2 483.50	29.90	Peak	H	28.31	6.56	64.77	74.00	9.23
*2 483.50	15.99	Average	H	28.31	6.56	50.86	54.00	3.14

Radiated Emissions			Ant	Correction Factors		Total	FCC Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
*4 927.65	41.79	Peak	H	33.14	-32.93	42.00	74.00	32.00
*4 927.65	31.73	Average	H	33.14	-32.93	31.94	54.00	22.06
Above 5 000.00	Not detected	-	-	-	-	-	-	-

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802.11a (6 Mbps)

A. Low Channel (5 745 MHz)

Radiated Emissions			Ant	Correction Factors		Total	Limit	
Frequency (MHz)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
5 743.70	56.17	Peak	H	34.16	9.82	100.15	-	-
5 748.78	55.20	Peak	V	34.14	9.88	99.22	-	-

Frequency (MHz)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
*11 508.85	33.73	Peak	H	38.47	-26.64	45.56	74.00	28.44
*11 508.85	23.03	Average	H	38.47	-26.64	34.86	54.00	19.14
Above 11 600.00	Not detected	-	-	-	-	-	-	-

B. Middle Channel (5 785 MHz)

Radiated Emissions			Ant	Correction Factors		Total	Limit	
Frequency (MHz)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
5 786.20	56.28	Peak	H	34.07	9.22	99.57	-	-
5 783.74	57.85	Peak	V	34.08	9.27	101.20	-	-

Frequency (MHz)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
*11 577.50	31.14	Peak	H	38.41	-26.42	43.13	74.00	30.87
*11 577.50	20.52	Average	H	38.41	-26.42	32.51	54.00	21.49
Above 11 600.00	Not detected	-	-	-	-	-	-	-

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C. High Channel (5 825 MHz)

Radiated Emissions			Ant	Correction Factors		Total	Limit	
Frequency (MHz)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
5 820.00	55.21	Peak	H	34.11	9.20	98.52	-	-
5 824.74	55.82	Peak	V	34.10	9.25	99.17	-	-

Frequency (MHz)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
*11 657.24	32.36	Peak	H	38.37	-25.91	44.82	74.00	29.18
*11 657.24	22.49	Average	H	38.37	-25.91	34.95	54.00	19.05
Above 11 700.00	Not detected	-	-	-	-	-	-	-

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802.11n-HT20 (MCS0)

A. Low Channel (5 745 MHz)

Radiated Emissions			Ant	Correction Factors		Total	Limit	
Frequency (MHz)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
5 743.75	56.06	Peak	H	34.16	9.82	100.04	-	-
5 746.28	56.77	Peak	V	34.15	9.85	100.77	-	-

Frequency (MHz)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
*11 496.68	32.70	Peak	H	38.44	-26.69	44.45	74.00	29.55
*11 496.68	22.70	Average	H	38.44	-26.69	34.45	54.00	19.55
Above 11 500.00	Not detected	-	-	-	-	-	-	-

B. Middle Channel (5 785 MHz)

Radiated Emissions			Ant	Correction Factors		Total	Limit	
Frequency (MHz)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
5 783.75	55.93	Peak	H	34.08	9.27	99.28	-	-
5 790.00	56.16	Peak	V	34.06	9.15	99.37	-	-

Frequency (MHz)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
*11 562.04	30.05	Peak	H	38.44	-26.47	42.02	74.00	31.98
*11 562.04	20.55	Average	H	38.44	-26.47	32.52	54.00	21.49
Above 11 600.00	Not detected	-	-	-	-	-	-	-

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C. High Channel (5 825 MHz)

Radiated Emissions			Ant	Correction Factors		Total	Limit	
Frequency (MHz)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
5 818.75	53.42	Peak	H	34.10	9.18	96.70	-	-
5 824.38	55.19	Peak	V	34.10	9.25	98.54	-	-

Frequency (MHz)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
*11 641.02	33.43	Peak	H	38.35	-26.03	45.75	74.00	28.26
*11 641.02	22.49	Average	H	38.35	-26.03	34.81	54.00	19.19
Above 11 700.00	Not detected	-	-	-	-	-	-	-

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802.11n_HT40(MCS0)

A. Low Channel (5 755 MHz)

Radiated Emissions			Ant	Correction Factors		Total	Limit	
Frequency (MHz)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
5 748.80	49.19	Peak	H	34.14	9.88	93.21	-	-
5 758.75	51.05	Peak	V	34.10	9.73	94.88	-	-

Frequency (MHz)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
*11 518.24	33.20	Peak	H	38.47	-26.61	45.06	74.00	28.94
*11 518.24	22.96	Average	H	38.47	-26.61	34.82	54.00	19.18
Above 11 600.00	Not detected	-	-	-	-	-	-	-

B. High Channel (5 795 MHz)

Radiated Emissions			Ant	Correction Factors		Total	Limit	
Frequency (MHz)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
5 781.25	49.56	Peak	H	34.09	9.32	92.97	-	-
5 810.05	51.34	Peak	V	34.06	9.08	94.48	-	-

Frequency (MHz)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
*11 587.22	30.57	Peak	H	38.40	-26.39	42.58	74.00	31.42
*11 587.22	20.98	Average	H	38.40	-26.39	32.99	54.00	21.01
Above 11 600.00	Not detected	-	-	-	-	-	-	-

Remarks :

1. "*" means the restricted band.
2. Radiated emissions measured in frequency above 1 000 MHz were made with an instrument using Peak /average detector mode.
3. Average test would be performed if the peak result were greater than the average limit.
4. Actual = Reading + AF + AMP + CL

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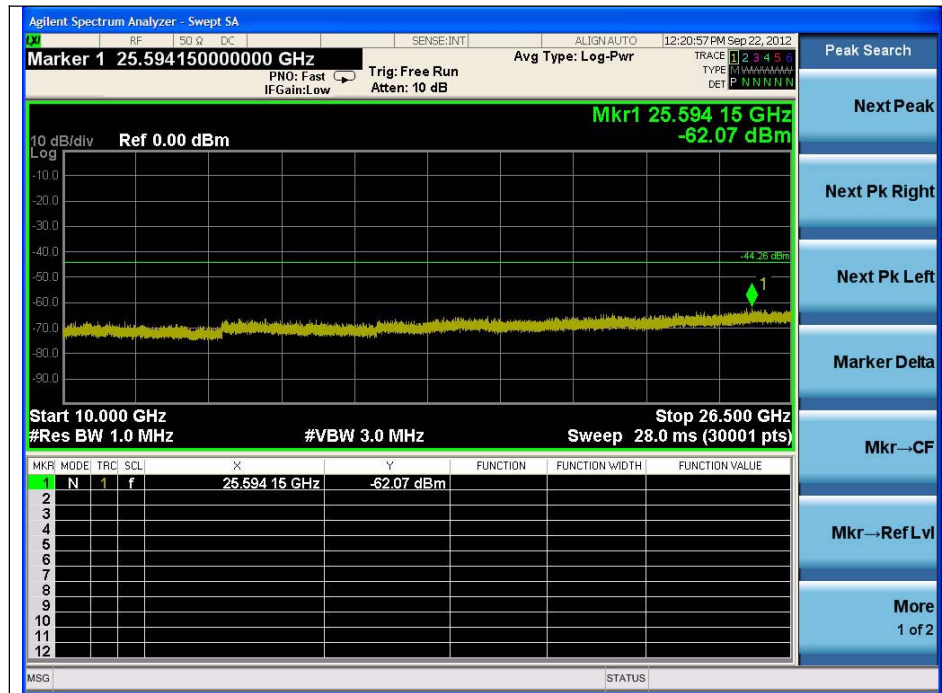
2.4.3. Spurious RF Conducted Emissions: Plot of Spurious RF Conducted Emission

DSSS : 802.11b(1 Mbps)

Low Channel



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Note:

Offset (dB) = Attenuator (dB) + Cable loss (dB)

Result (dB m) = Spurious offset (dB) + Reading values (dB m)

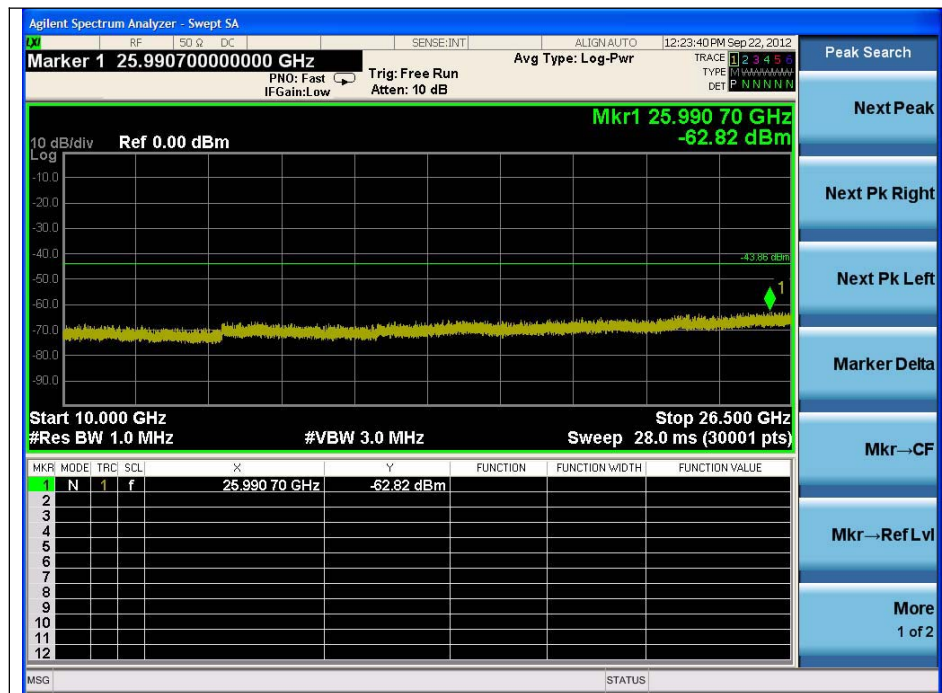
Frequency (MHz)	offset (dB)	Reading values (dB m)	Result (dB m)
2 390.0	20.55	-78.85	-58.30
2 399.5	20.55	-57.73	-37.18
2 400.0	20.55	-64.99	-44.44
3 786.0	Noise Level	-	-
25 594.2	Noise Level	-	-

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Middle Channel



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Note:

Offset (dB) = Attenuator (dB) + Cable loss (dB)

Result (dB m) = Spurious offset (dB) + Reading values (dB m)

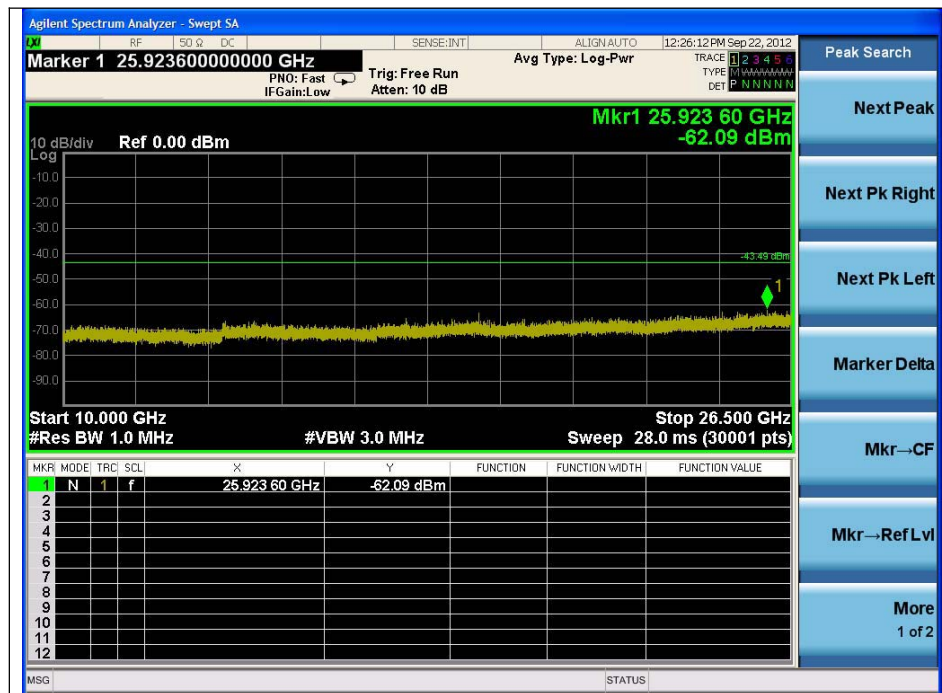
Frequency (MHz)	offset (dB)	Reading values (dB m)	Result (dB m)
2 508.5	21.11	-63.85	-42.74
25 990.7	Noise Level	-	-

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High Channel



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Note:

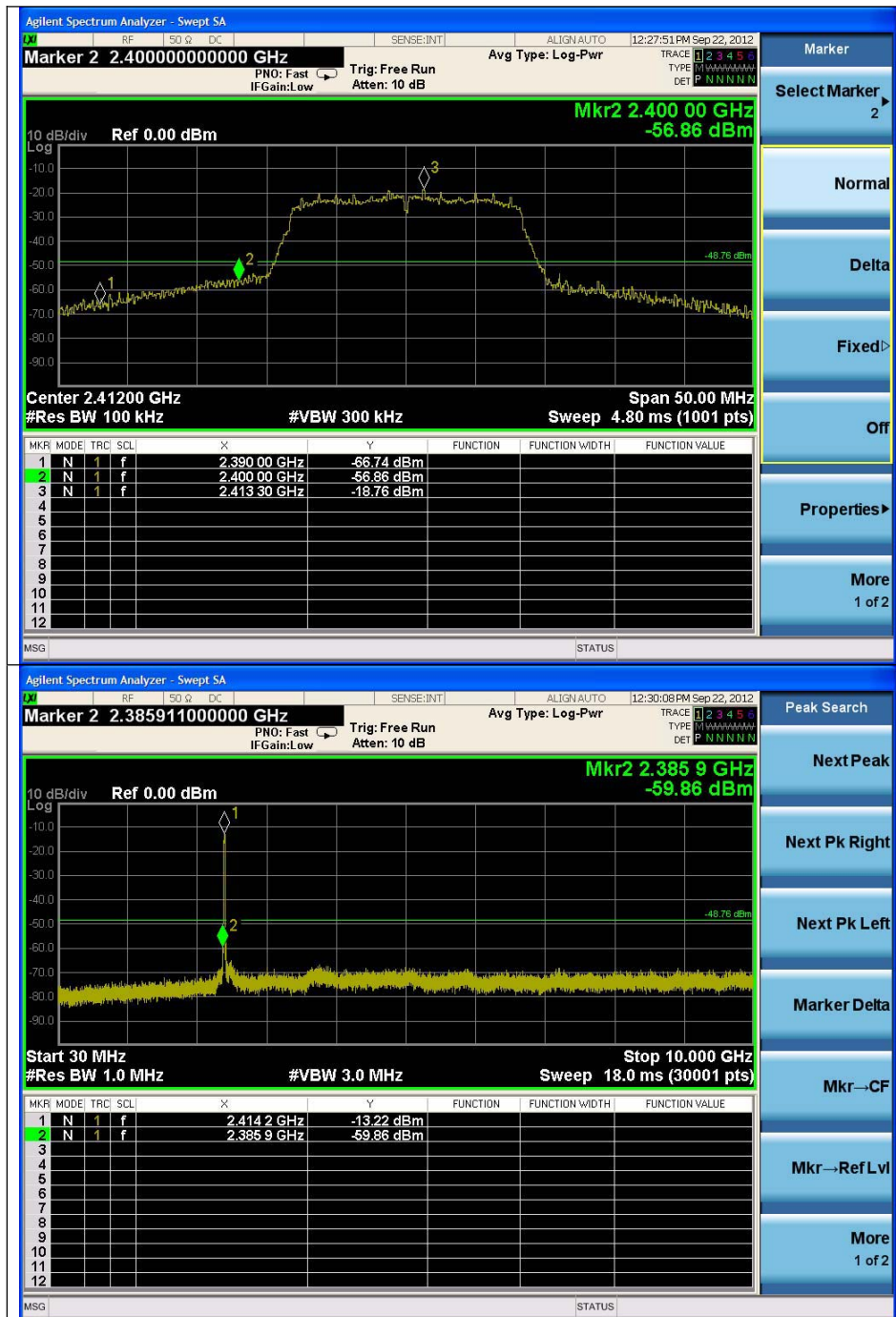
Offset (dB) = Attenuator (dB) + Cable loss (dB)

Result (dB m) = Spurious offset (dB) + Reading values (dB m)

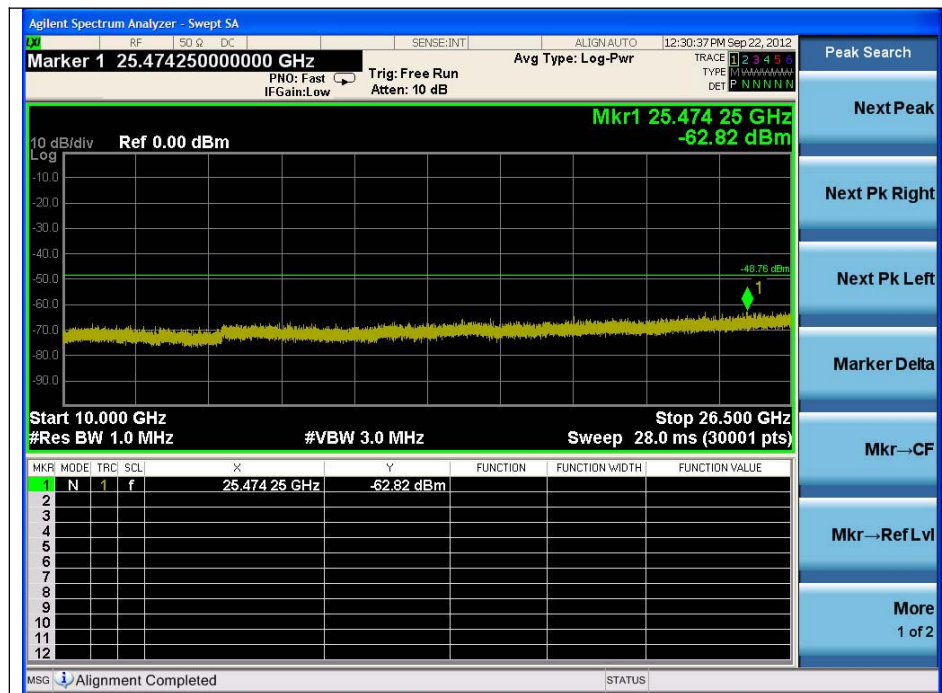
Frequency (MHz)	offset (dB)	Reading values (dB m)	Result (dB m)
2 483.5	20.98	-77.56	-56.58
2 535.1	21.11	-64.75	-43.64
25 923.6	Noise Level	-	-

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OFDM : 802.11g(6 Mbps) Low Channel



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Note:

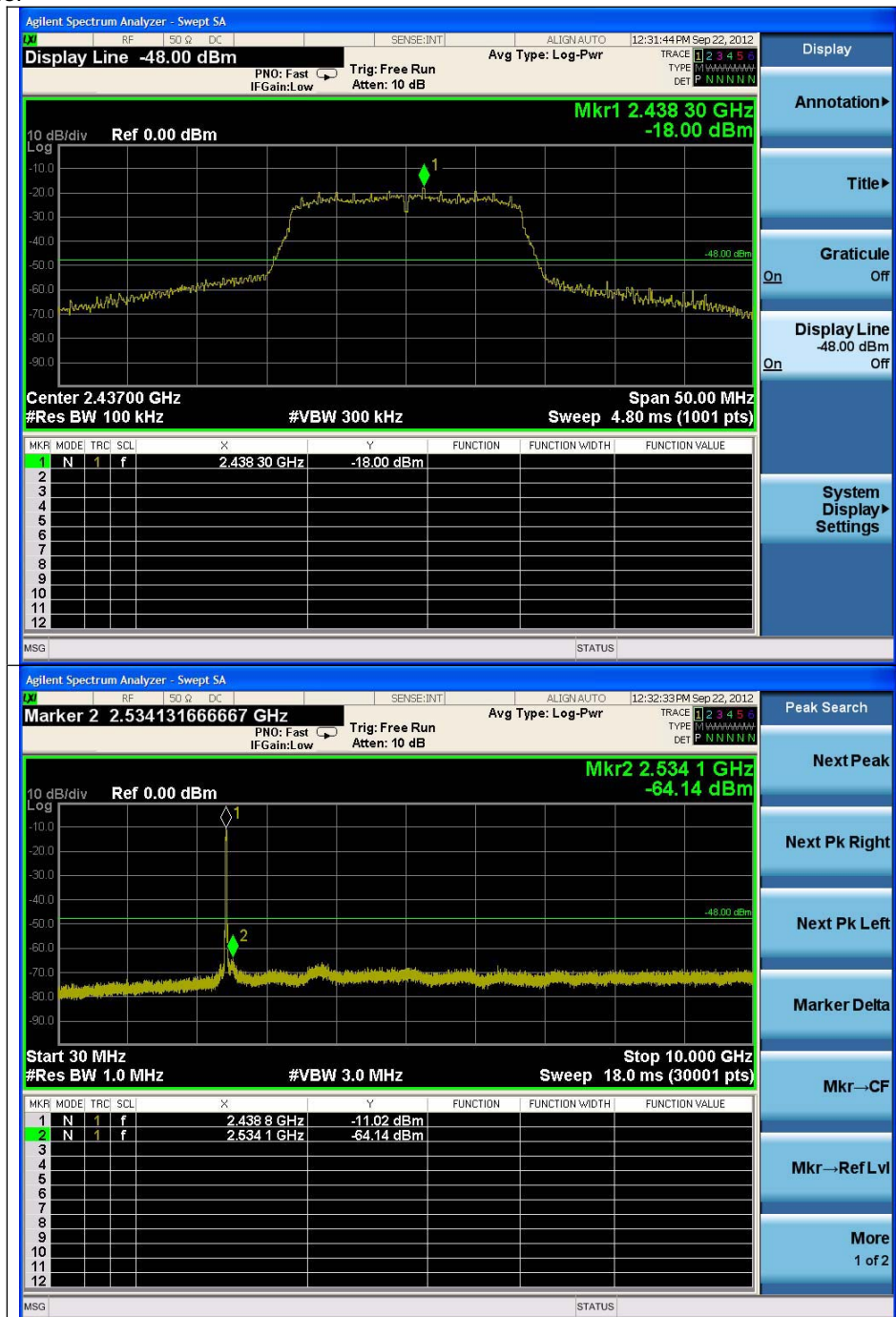
Offset (dB) = Attenuator (dB) + Cable loss (dB)

Result (dB m) = Spurious offset (dB) + Reading values (dB m)

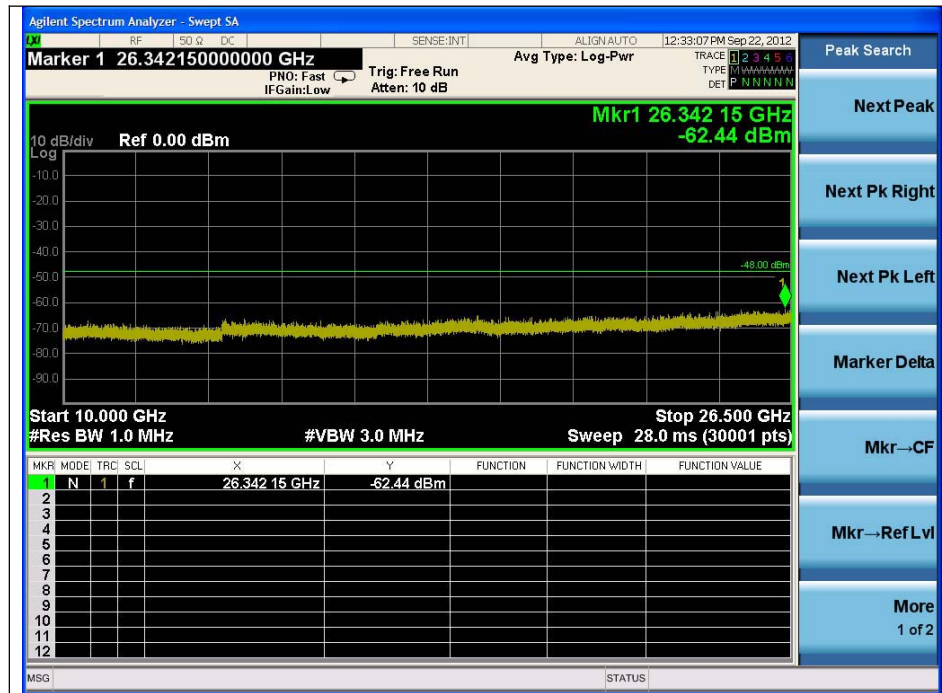
Frequency (MHz)	offset (dB)	Reading values (dB m)	Result (dB m)
2 385.9	20.55	-59.86	-39.31
2 390.0	20.55	-66.74	-46.19
2 400.0	20.55	-56.86	-36.31
25 474.3	Noise Level	-	-

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Middle Channel



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Note:

Offset (dB) = Attenuator (dB) + Cable loss (dB)

Result (dB m) = Spurious offset (dB) + Reading values (dB m)

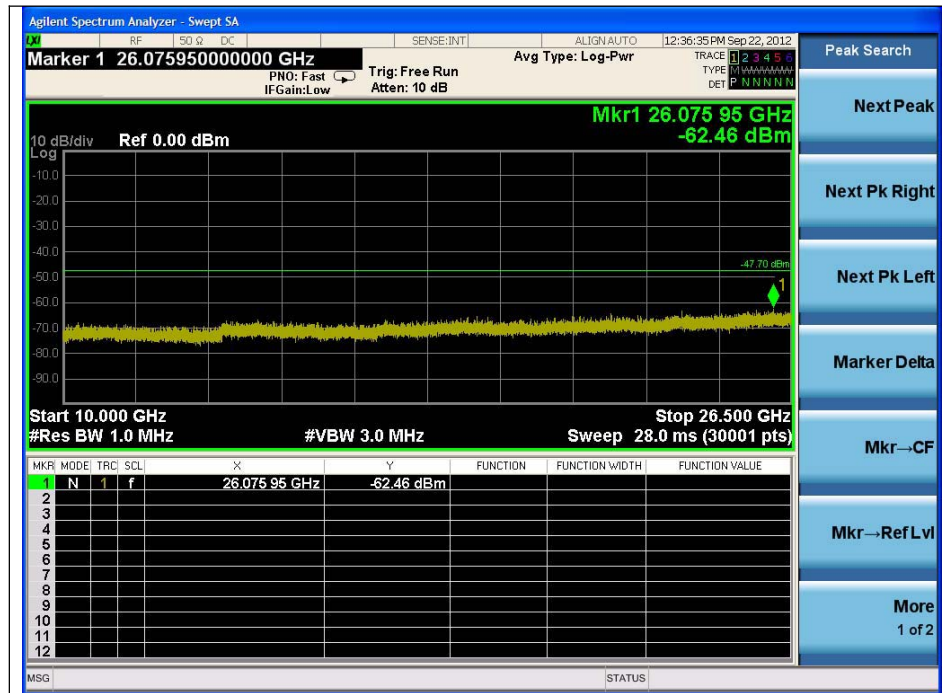
Frequency (MHz)	offset (dB)	Reading values (dB m)	Result (dB m)
2 534.1	-21.11	-64.14	-43.03
26 342.2	Noise Level	-	-

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High Channel



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Note:

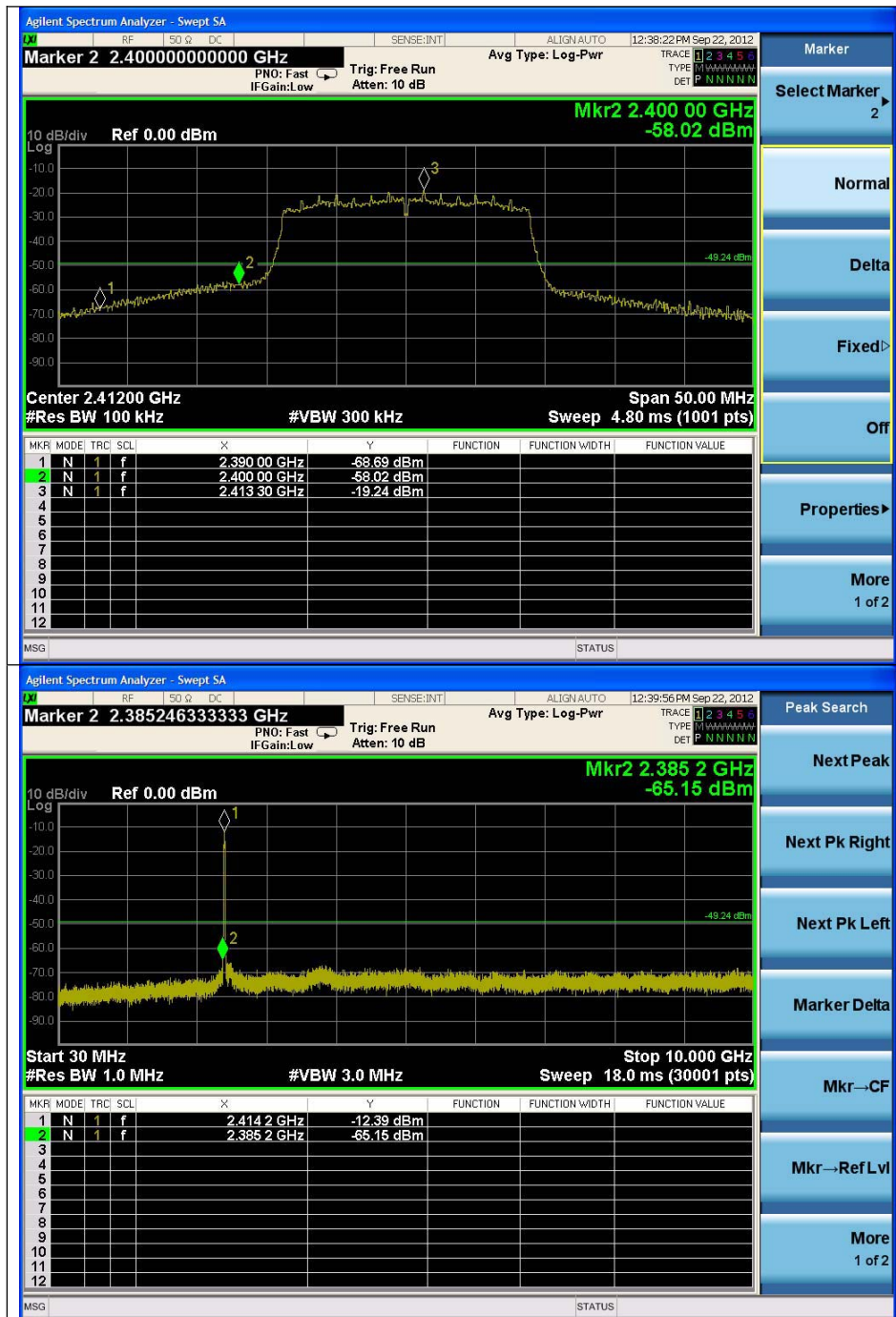
Offset (dB) = Attenuator (dB) + Cable loss (dB)

Result (dB m) = Spurious offset (dB) + Reading values (dB m)

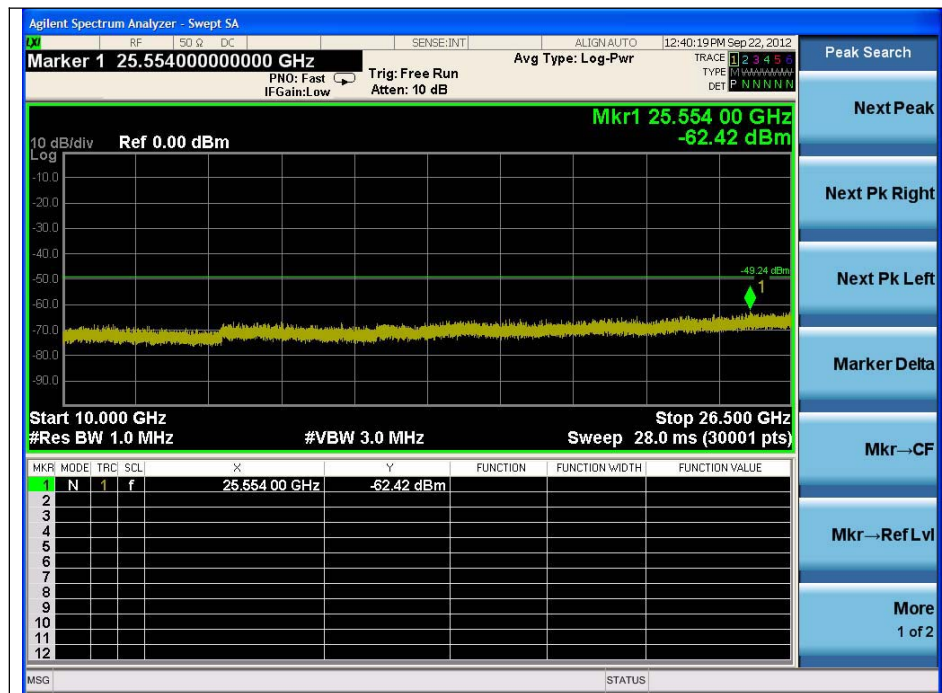
Frequency (MHz)	offset (dB)	Reading values (dB m)	Result (dB m)
2 483.5	20.98	-64.67	-43.69
2 492.6	20.98	-57.66	-36.68
26 076.0	Noise Level	-	-

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OFDM : 802.11n_HT20(MCS0) Low Channel



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Note:

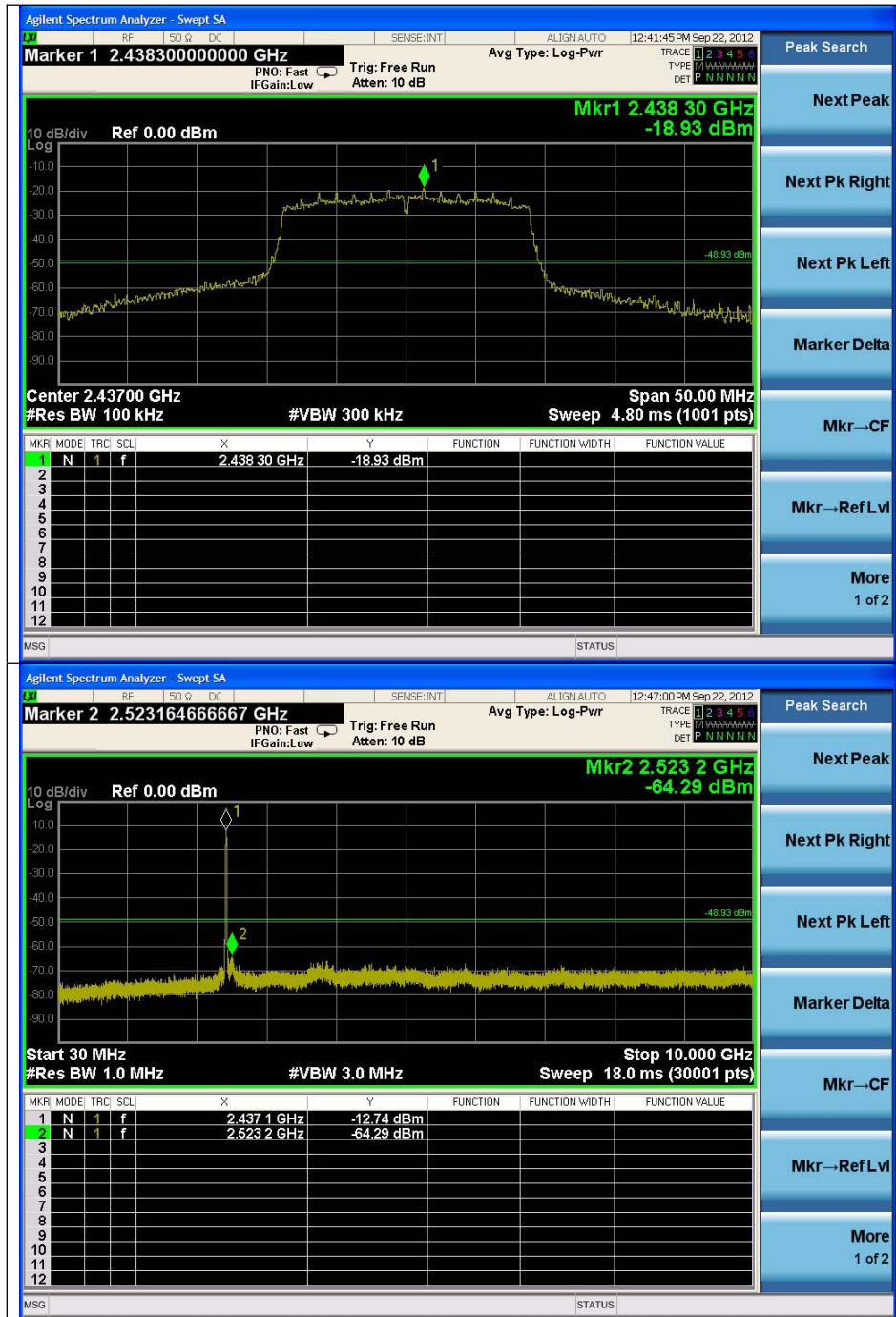
Offset (dB) = Attenuator (dB) + Cable loss (dB)

Result (dB m) = Spurious offset (dB) + Reading values (dB m)

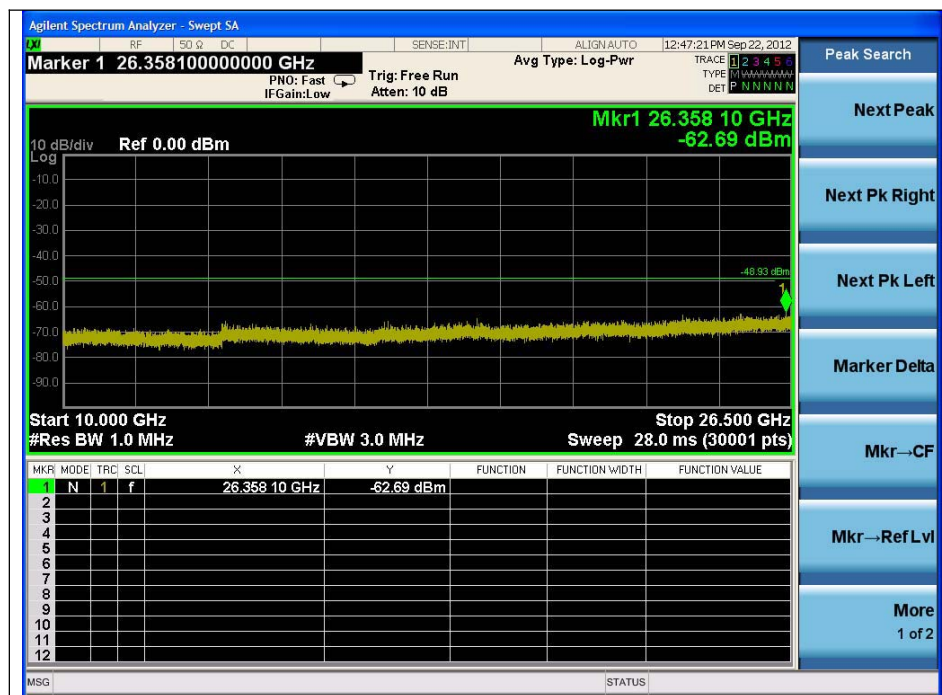
Frequency (MHz)	offset (dB)	Reading values (dB m)	Result (dB m)
2 385.2	20.55	-65.15	-44.60
2 390.0	20.55	-68.69	-48.14
2 400.0	20.55	-58.02	-37.47
25 554.0	Noise Level	-	-

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Middle Channel



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Note:

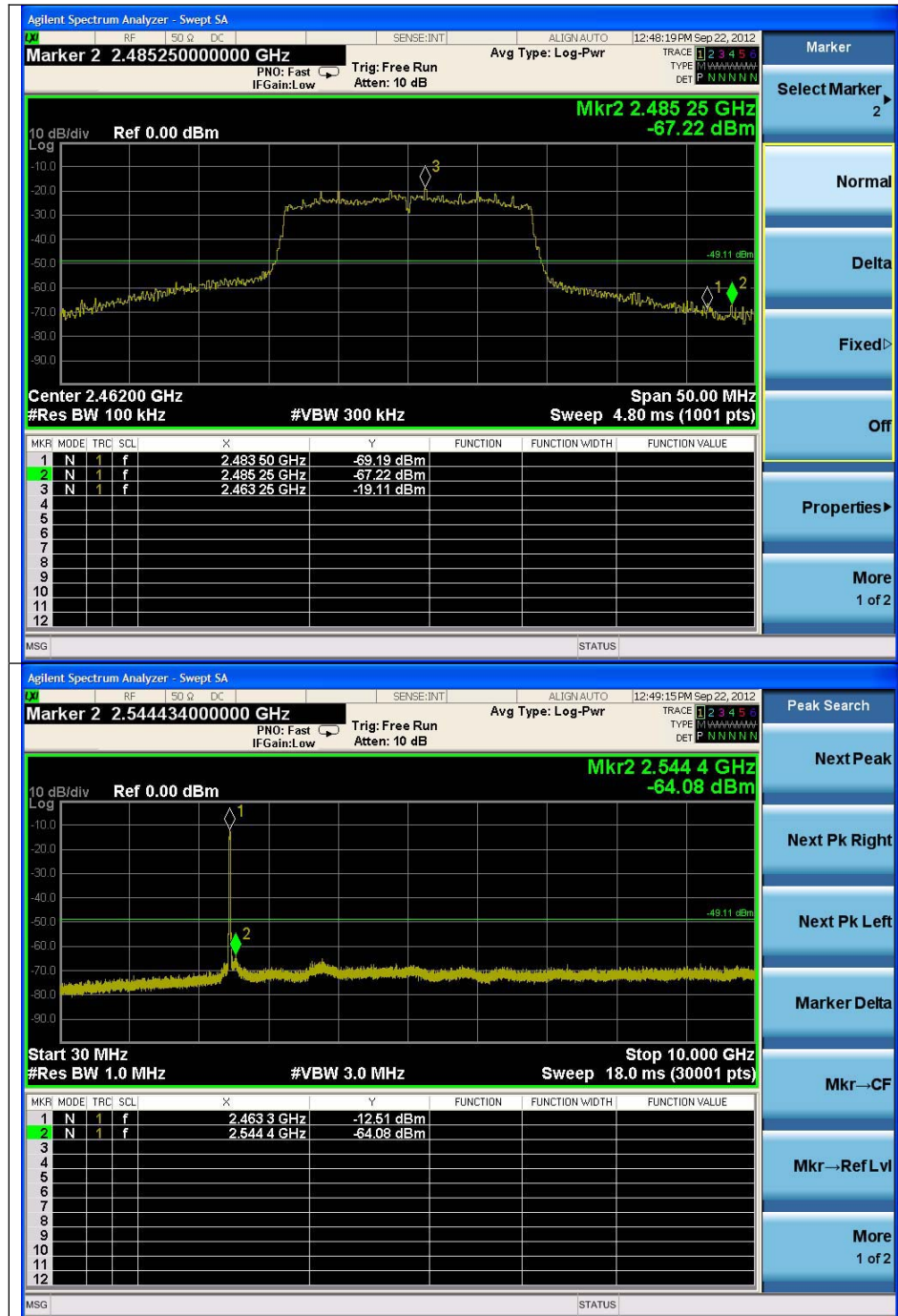
Offset (dB) = Attenuator (dB) + Cable loss (dB)

Result (dB m) = Spurious offset (dB) + Reading values (dB m)

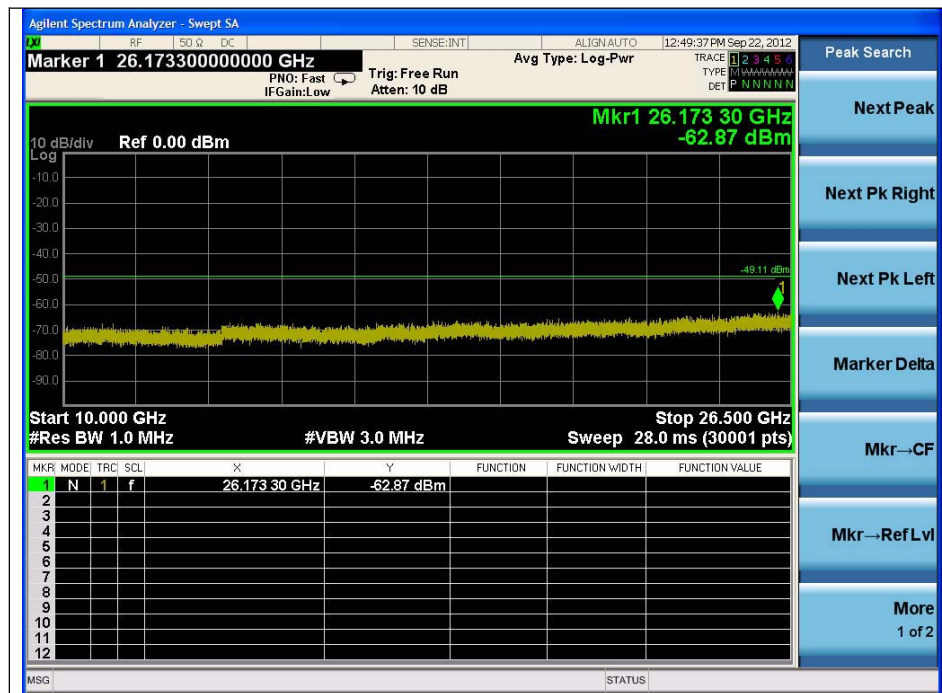
Frequency (MHz)	offset (dB)	Reading values (dB m)	Result (dB m)
2 523.2	21.11	-64.29	-43.18
26 358.1	Noise Level	-	-

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High Channel



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Note:

Offset (dB) = Attenuator (dB) + Cable loss (dB)

Result (dB m) = Spurious offset (dB) + Reading values (dB m)

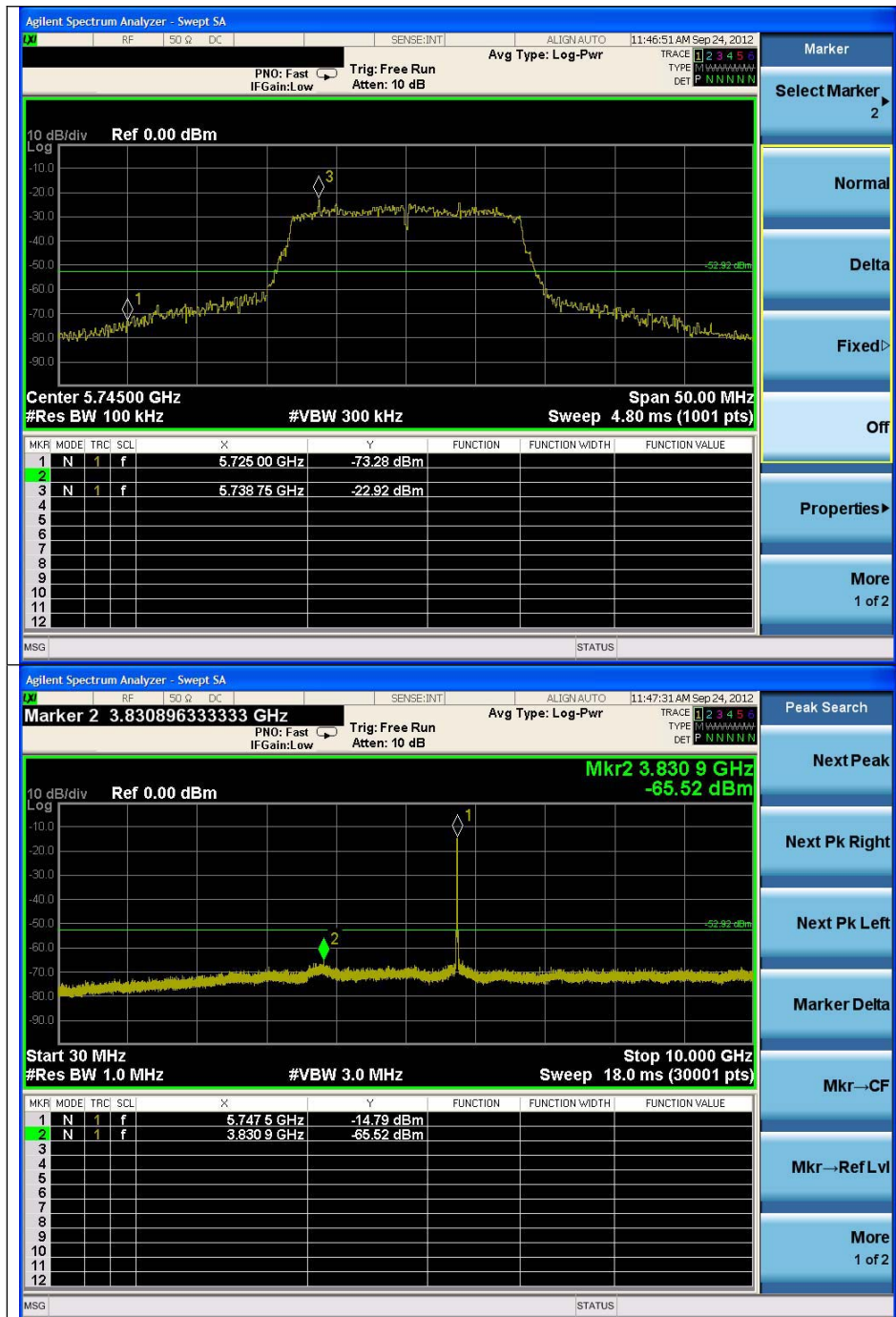
Frequency (MHz)	offset (dB)	Reading values (dB m)	Result (dB m)
2 483.5	20.98	-69.19	-48.21
2 485.3	20.98	-67.22	-46.24
2 544.4	21.11	-64.08	-42.97
26 173.3	Noise Level	-	-

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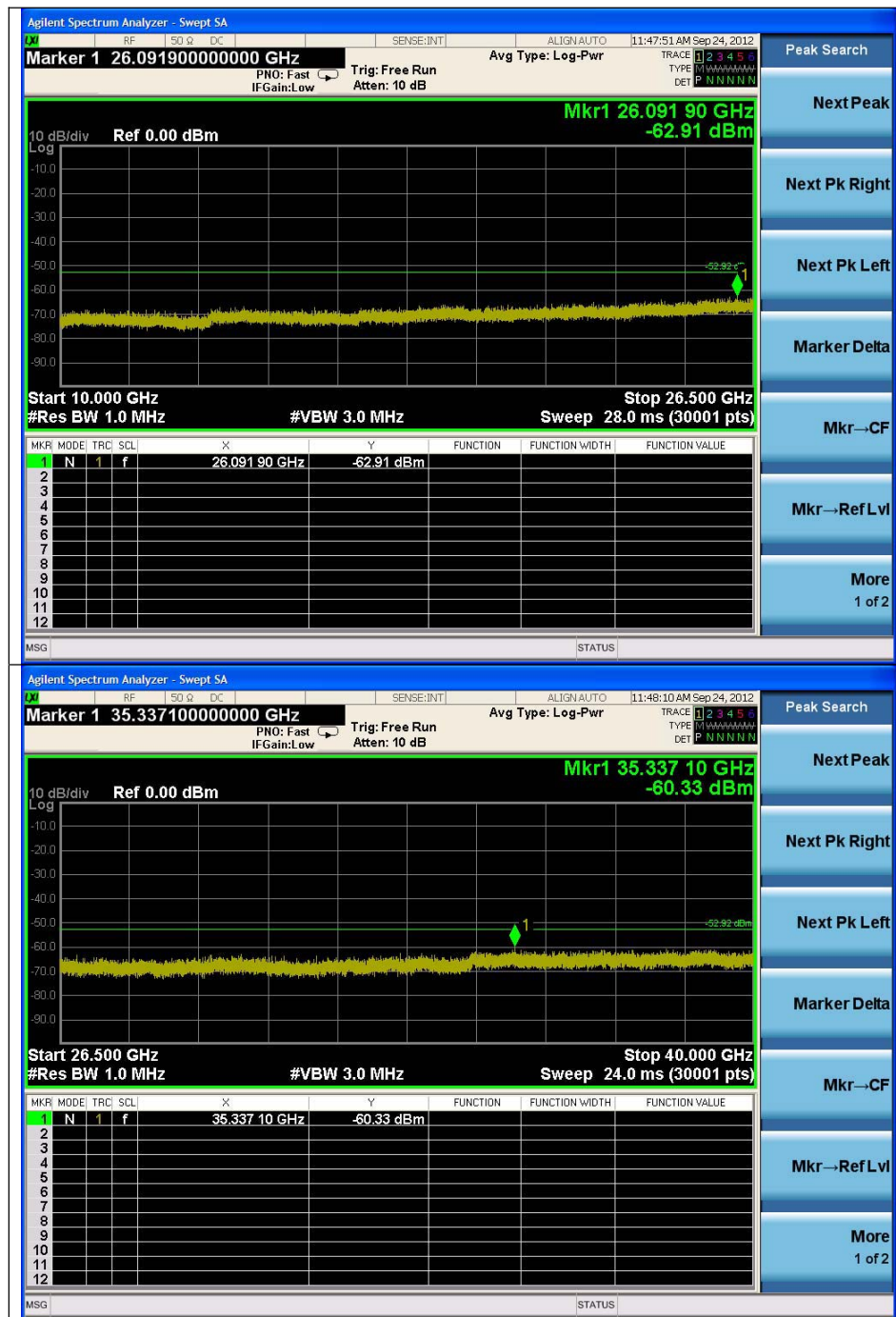
5.8 GHz

OFDM : 802.11a(6 Mbps)

Low Channel



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Note:

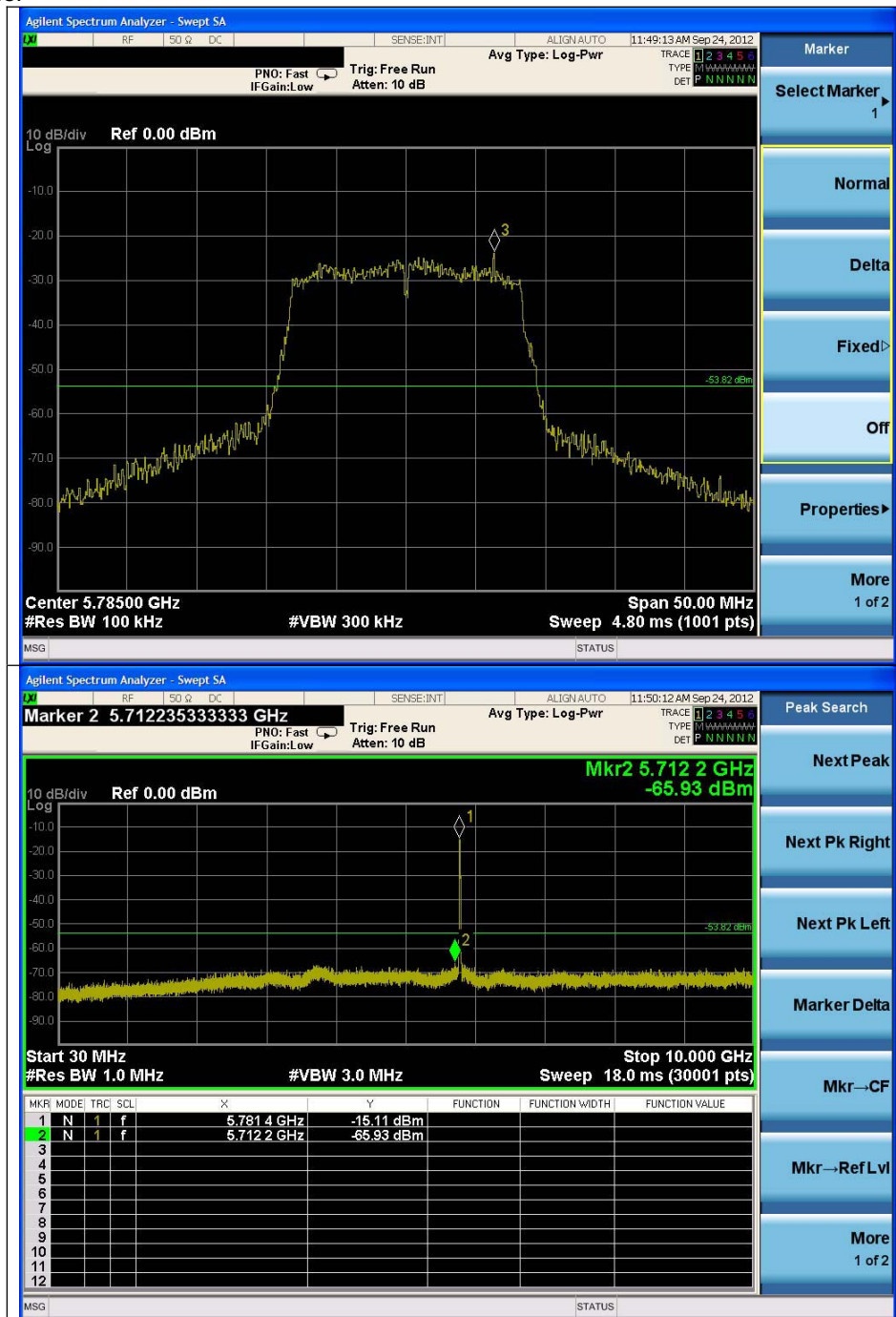
Offset (dB) = Attenuator (dB) + Cable loss (dB)

Result (dB m) = Spurious offset (dB) + Reading values (dB m)

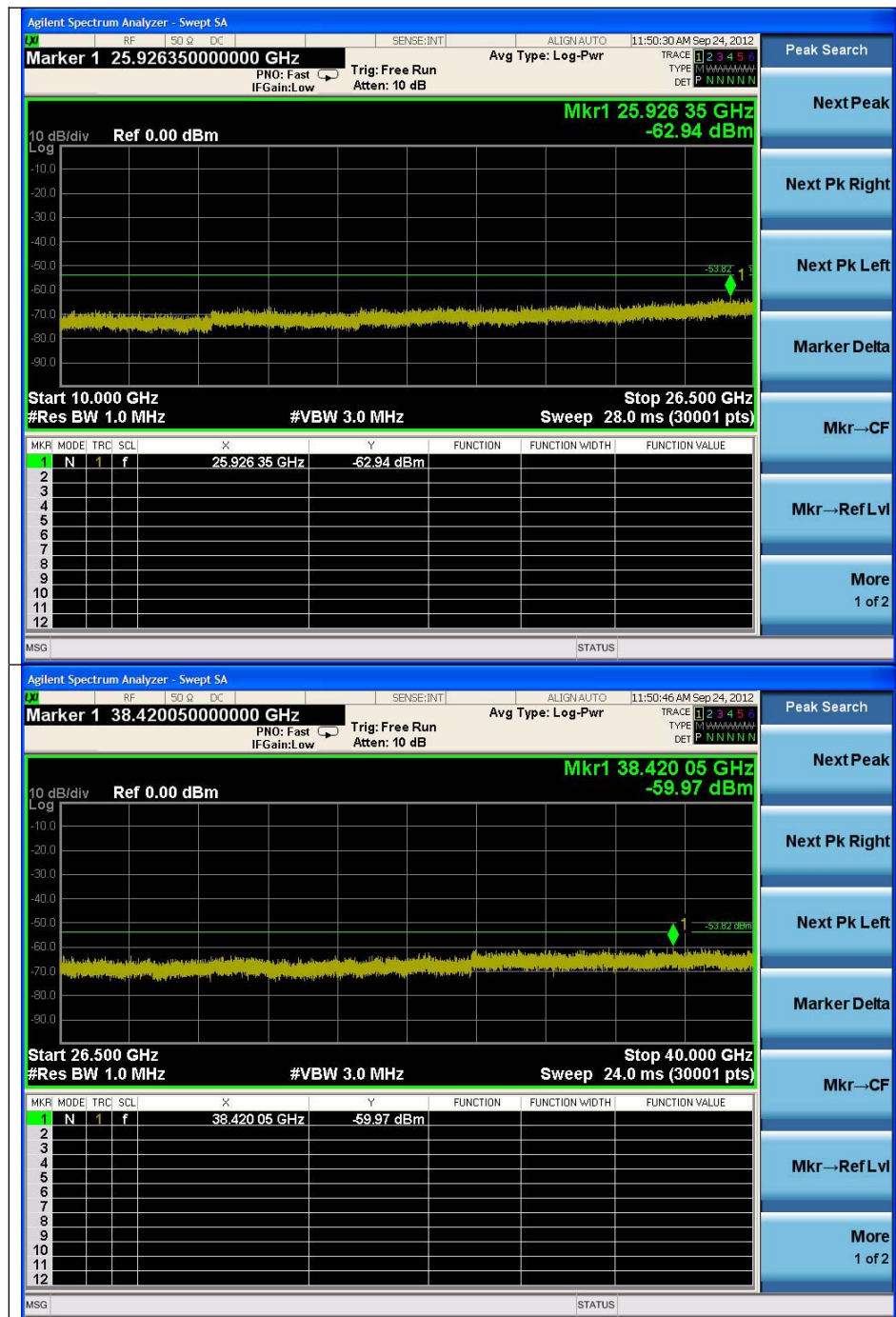
Frequency (MHz)	offset (dB)	Reading values (dB m)	Result (dB m)
3 830.9	Noise Level	-	-
5 725.0	21.43	-73.28	-51.85
26 091.9	Noise Level	-	-
35 337.1	Noise Level	-	-

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Middle Channel



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Note:

Offset (dB) = Attenuator (dB) + Cable loss (dB)

Result (dB m) = Spurious offset (dB) + Reading values (dB m)

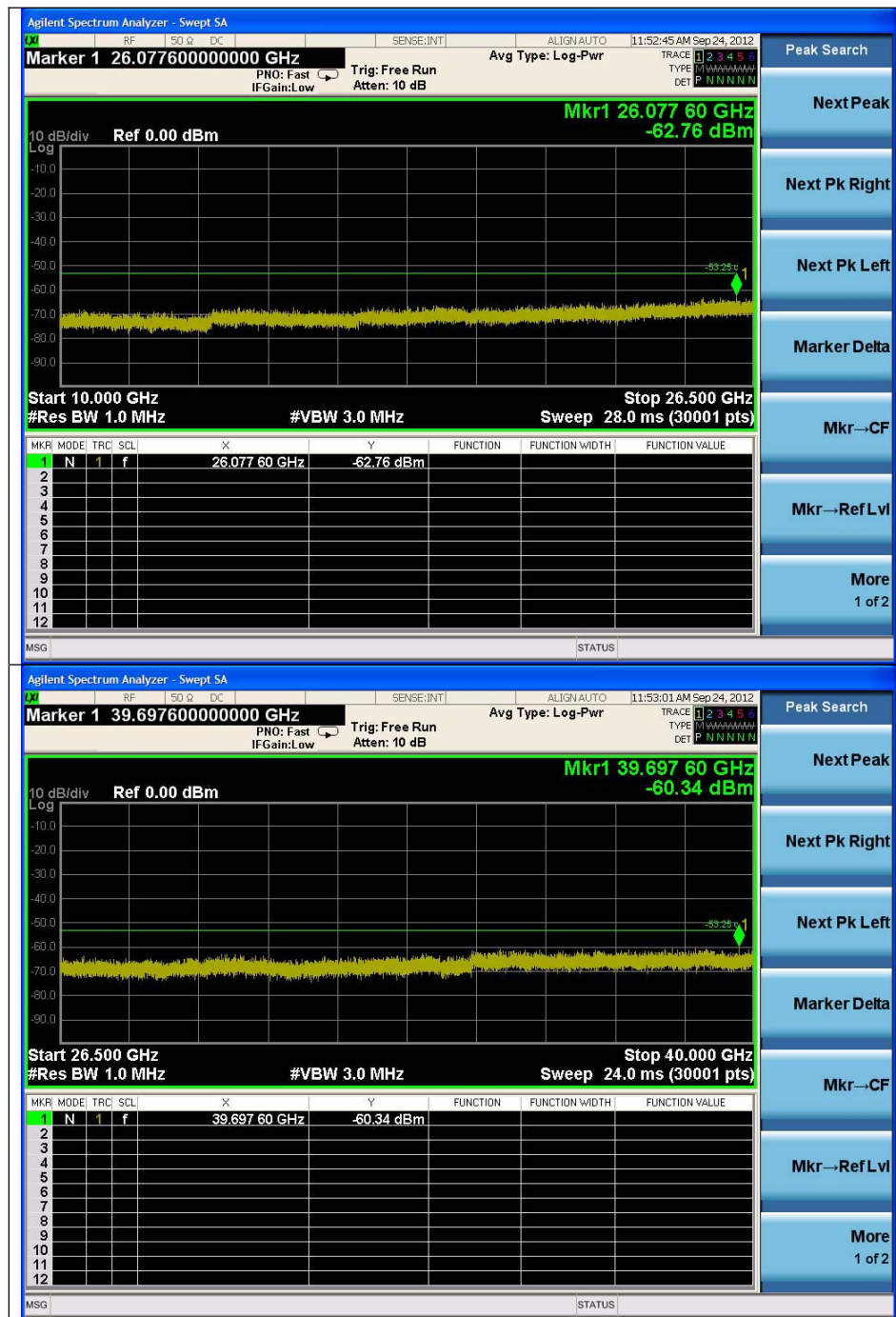
Frequency (MHz)	offset (dB)	Reading values (dB m)	Result (dB m)
5 712.2	Noise Level	-	-
25 926.4	Noise Level	-	-
38 420.1	Noise Level	-	-

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High Channel



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Note:

Offset (dB) = Attenuator (dB) + Cable loss (dB)

Result (dB m) = Spurious offset (dB) + Reading values (dB m)

Frequency (MHz)	offset (dB)	Reading values (dB m)	Result (dB m)
3 884.1	Noise Level	-	-
5 850.0	21.60	-79.24	-57.64
26 077.6	Noise Level	-	-
39 697.6	Noise Level	-	-

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