FCC PART 15, SUBPART B and C
TEST REPORT

for

OHM ZIGBEE V.2

MODEL: 450202

Prepared for

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DATE: APRIL 5, 2018

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GENERAL REPORT SUMMARY

This electromagnetic emission test report is generated by Compatible Electronics Inc., which is an independent testing and consulting firm. The test report is based on testing performed by Compatible Electronics personnel according to the measurement procedures described in the test specifications given below and in the "Test Procedures" section of this report.

The measurement data and conclusions appearing herein relate only to the sample tested and this report may not be reproduced without the written permission of Compatible Electronics, unless done so in full.

This report must not be used to claim product certification, approval or endorsement by NVLAP, NIST or any agency of the federal government.

Device Tested:	OHM Zigbee v.2 Model: 450202 S/N: N/A
Product Description:	This is an RF module used in door handles with smartcode locks.
Modifications:	The EUT was not modified during the testing.
Manufacturer:	Spectrum Brands, Inc. 19701 Da Vinci Lake Forest, California 92610
Test Dates:	July 19, 21, and 31, 2017; January 23, 24, 26, and 30 2018; February 9 and 13, 2018; and April 4, 2018
Test Specifications:	EMI requirements CFR Title 47, Part 15, Subpart B; and Subpart C, sections 15.205, 15.209, and 15.247
Test Procedure:	ANSI C63.4, ANSI C63:10
Test Deviations:	The test procedure was not deviated from during the testing.

Test Specifications covered by accreditation:
CFR Title 47, Part 15, Subpart B; and Subpart C, sections 15.205, 15.209, and 15.247

Test Procedure: ANSI C63.4, ANSI C63.10

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SUMMARY OF TEST RESULTS

TEST	DESCRIPTION	RESULTS
1	Conducted RF Emissions, 150 kHz – 30 MHz	This test was not performed because the EUT will operate on DC power only and cannot be plugged into the AC public mains.
2	Spurious Radiated RF Emissions, 30 MHz – 1000 MHz	Complies with the **Class B** limits of CFR Title 47, Part 15 Subpart B; and the limits of CFR Title 47, Part 15, Subpart C, section 15.209 Highest reading in relation to spec limit 34.32 dBuV/m (QP) @ 40.20 MHz (*U = 4.54 dB)
3	Spurious Radiated RF Emissions, 9 kHz – 30 MHz and 1000 MHz – 25000 MHz	Complies with the **Class B** limits of CFR Title 47, Part 15, Subpart B; and CFR Title 47, Part 15, Subpart C, section 15.247(d) Highest reading in relation to spec limit 53.79 dBuV/m (Avg) @ 7425 MHz (*U = 3.67 dB)
4	Fundamental and Emissions produced by the intentional radiator in non-restricted bands, 9 kHz – 25 GHz	Complies with the relevant requirements of CFR Title 47, Part 15, Subpart C, section 15.247(d)
5	Emissions produced by the intentional radiator in restricted bands, 9 kHz – 25 GHz	Complies with the relevant requirements of CFR Title 47, Part 15, Subpart C, section 15.205, 15.209, and section 15.247 (d)
6	DTS Bandwidth	Complies with the relevant requirements of CFR Title 47, Part 15, Subpart C, section 15.205, 15.209, and section 15.247 (a)(2).
7	Peak Power Output	Complies with the relevant requirements of FCC Title 47, Part 15, Subpart C, section 15.247 (b)(3).
8	RF Conducted Antenna Test	Complies with the relevant requirements of CFR Title 47, Part 15, Subpart C, section 15.247 (d).
9	Peak Power Spectral Density from the Intentional Radiator to the Antenna	Complies with the relevant requirements of CFR Title 47, Part 15, Subpart C, section 15.247 (e).

1. PURPOSE

This document is a qualification test report based on the emissions tests performed on the OHM Zigbee v.2, Model: 450202. The EMI measurements were performed according to the measurement procedure described in ANSI C63.4 and ANSI C63.10. The tests were performed in order to determine whether the electromagnetic emissions from the equipment under test, referred to as EUT hereafter, are within the Class B specification limits defined by CFR Title 47, Part 15, Subpart B; and Subpart C, sections 15.205, 15.209, and 15.247.

Note: For the unintentional radiator portion of the test, the EUT was within the **Class B** specification limits defined by CFR Title 47, Part 15, Subpart B.

2. ADMINISTRATIVE DATA

2.1 Location of Testing

The EMI tests described herein were performed at the test facility of Compatible Electronics, 114 Olinda Drive, Brea, California 92823.

2.2 Traceability Statement

The calibration certificates of all test equipment used during the test are on file at the location of the test. The calibration is traceable to the National Institute of Standards and Technology (NIST).

2.3 Cognizant Personnel

Spectrum Brands, Inc.

Thuan Nguyen Senior RF Engineer

Compatible Electronics Inc.

James Ross Test Engineer
Kyle Fujimoto Test Engineer

2.4 Date Test Sample was Received

The test sample was received prior to the date of testing.

2.5 Disposition of the Test Sample

The test sample has not been returned to Spectrum Brands, Inc as of the date of this test report.

2.6 Abbreviations and Acronyms

The following abbreviations and acronyms may be used in this document.

RF	Radio Frequency
EMI	Electromagnetic Interference
EUT	Equipment Under Test
P/N	Part Number
S/N	Serial Number
HP	Hewlett Packard
ITE	Information Technology Equipment
CML	Corrected Meter Limit
LISN	Line Impedance Stabilization Network
N/A	Not Applicable

3. APPLICABLE DOCUMENTS

The following documents are referenced or used in the preparation of this emissions test report.

SPEC	TITLE
FCC Title 47, Part 15 Subpart C	FCC Rules - Radio frequency devices (including digital devices) – Intentional Radiators
ANSI C63.4 2014	Methods of measurement of radio-noise emissions from low-voltage electrical and electronic equipment in the range of 9 kHz to 40 GHz
KDB 558074 D01 DTS Meas Guidance v04	Guidance For Performing Compliance Measurements On Digital Transmission Systems (DTS) Operating Under Section 15.247
FCC Title 47, Part 15 Subpart B	FCC Rules - Radio frequency devices (including digital devices) – Unintentional Radiators
ANSI C63.10 2013	American National Standard for Testing Unlicensed Wireless Devices

4. DESCRIPTION OF TEST CONFIGURATION

4.1 Description of Test Configuration - Emissions

The OHM Zigbee v.2, Model: 450202 (EUT) was mounted inside the following hosts:

1. 910 SmartCode Deadbolt
2. 912 SmartCode Lever
3. 916 SmartCode Deadbolt
4. Obsidian 954
5. Comcast Convert
6. 914 SmartCode Deadbolt

The EUT was continuously transmitting during the testing. A laptop was used to program the EUT so that it could transmit at the low, middle and high channels.

The firmware is stored at the company's server.

The final data for the EUT was taken for each host mentioned above. Please see Appendix E for the data sheets.

4.1.1 Cable Construction and Termination

There were no external cables connected to the EUT.

5. LISTS OF EUT, ACCESSORIES AND TEST EQUIPMENT

5.1 EUT and Accessory List

EQUIPMENT	MANUFACTURER	MODEL NUMBER	SERIAL NUMBER	FCC ID
OHM ZIGBEE V.2 (EUT)	SPECTRUM BRANDS, INC.	450202	N/A	NUL4502003ZIG
SMARTCODE DEADBOLT	SPECTRUM BRANDS, INC.	COMCAST CONVERT	N/A	N/A
SMARTCODE DEADBOLT	SPECTRUM BRANDS, INC.	910 SMARTCODE DEADBOLT	N/A	N/A
SMARTCODE LEVER	SPECTRUM BRANDS, INC.	912 SMARTCODE LEVER	N/A	N/A
SMARTCODE DEADBOLT	SPECTRUM BRANDS, INC.	914 SMARTCODE DEADBOLT	N/A	N/A
SMARTCODE DEADBOLT	SPECTRUM BRANDS, INC.	OBSIDIAN 954	N/A	N/A
SMARTCODE DEADBOLT	SPECTRUM BRANDS, INC.	916 SMARTCODE DEADBOLT	N/A	N/A
LAPTOP*	DELL	PP18L	G0X80C1	N/A
FIRMWARE*	SILICION LABS	SIMPLICITY STUDIO 4	VERSION 5.7.3	N/A

*Used to program the EUT only prior to testing so that it could be tested at the low, middle, and high channels.

5.2 Emissions Test Equipment

EQUIPMENT TYPE	MANU-FACTURER	MODEL NUMBER	SERIAL NUMBER	CALIBRATION DATE	CAL. CYCLE
GENERAL TEST EQUIPMENT USED IN LAB D					
TDK TestLab	TDK RF Solutions, Inc.	9.22	700145	N/A	N/A
Computer	Hewlett Packard	p6716f	MXX1030PX0	N/A	N/A
LCD Monitor	Hewlett Packard	52031a	3CQ046N3MG	N/A	N/A
EMI Receiver, 20 Hz – 26.5 GHz	Keysight	N9038A	MY51210150	December 29, 2015	2 Year
EMI Receiver, 20 Hz – 26.5 GHz	Keysight	N9038A	MY51210150	December 6, 2017	1 Year
RF RADIATED EMISSIONS TEST EQUIPMENT					
Loop Antenna	Com-Power	AL-130R	121090	February 9, 2017	2 Year
CombiLog Antenna	Com-Power	AC-220	61060	September 3, 2015	2 Year
CombiLog Antenna	Com-Power	AC-220	61060	July 27, 2017	2 Year
System Controller	Sunol Sciences Corporation	SC110V	112213-1	N/A	N/A
Turntable	Sunol Sciences Corporation	2011VS	N/A	N/A	N/A
Horn Antenna	Com-Power	AH-118	071175	February 26, 2016	2 Year
Preamplifier	Com-Power	PAM-118A	551024	May 12, 2016	2 Year
Preamplifier	Com-Power	PA-840	711013	May 13, 2016	2 Year
Horn Antenna	Com-Power	AH-826	71957	N/A	N/A
Antenna-Mast	Sunol Sciences Corporation	TWR95-4	112213-3	N/A	N/A

6. TEST SITE DESCRIPTION

6.1 Test Facility Description

Please refer to section 2.1 and 7.1 of this report for emissions test location.

6.2 EUT Mounting, Bonding and Grounding

For frequencies below 1 GHz: The EUT was mounted on a 1.0 by 1.5 meter non-conductive table 0.8 meters above the ground plane.

For frequencies above 1 GHz: The EUT was mounted on non-conductive blocks that totaled 70 cm high. The blocks were mounted on a 1.5 meter (length) X 1.0 meter (width) X 0.8 meter (height) non-conductive table. This made the EUT 1.5 meters off the ground plane.

The EUT was not grounded.

7. CHARACTERISTICS OF THE TRANSMITTER

7.1 Transmitter Power

Transmit power is herein defined as the power delivered to a 50 ohm load at the RF output of the EUT. The levels from the original certification were used and verified prior to the testing.

Peak Power	Frequency
11.675 dBm	2405 MHz
12.100 dBm	2425 MHz
10.249 dBm	2445 MHz
11.656 dBm	2450 MHz
12.218 dBm	2475 MHz
1.251 dBm	2480 MHz

7.2 Channel Number and Frequencies

Channel 11: 2405 MHz
Channel 15: 2425 MHz
Channel 19: 2445 MHz
Channel 20: 2450 MHz
Channel 25: 2475 MHz
Channel 26: 2480 MHz

7.3 Antenna Gain

The antenna has a gain of 2 dBi.

8. TEST PROCEDURES

The following sections describe the test methods and the specifications for the tests. Test results are also included in this section.

8.1 RF Emissions

8.1.1 Conducted Emissions Test

The spectrum analyzer was used as a measuring meter. The data was collected with the spectrum analyzer in the peak detect mode with the "Max Hold" feature activated. The quasi-peak was used only where indicated in the data sheets. A transient limiter was used for the protection of the spectrum analyzer input stage, and the offset was adjusted accordingly to read the actual data measured. The LISN output was measured using the spectrum analyzer. The output of the second LISN was terminated by a 50 ohm termination. The effective measurement bandwidth used for this test was 9 kHz.

Please see section 6.2 of this report for mounting, bonding and grounding of the EUT. The EUT was powered through the LISN, which was bonded to the ground plane. The LISN power was filtered and the filter was bonded to the ground plane. The EUT was set up with the minimum distances from any conductive surfaces as specified in ANSI C63.4. The excess power cord was wrapped in a figure eight pattern to form a bundle not exceeding 0.4 meters in length.

The conducted emissions from the EUT were maximized for operating mode as well as cable placement. The final data was collected under program control by the Compatible Electronics conducted emissions software in several overlapping sweeps by running the spectrum analyzer at a minimum scan rate of 10 seconds per octave. The final qualification data is located in Appendix E.

Test Results:

This test was not performed because the EUT will operate on DC power only and cannot be plugged in the AC public mains.

8.1.2 Radiated Emissions Test

The EMI Receiver was used as the measuring meter. A built-in, internal preamplifier was used to increase the sensitivity of the instrument. The EMI Receiver was initially used with the Analyzer mode feature activated. In this mode, the EMI receiver can then record the actual frequency to be measured. This final reading is then taken accurately in the EMI Receiver mode, which takes into account the cable loss, amplifier gain and antenna factors, so that a true reading is compared to the true limit. A quasi-peak reading was taken only for those readings, which are marked accordingly on the data sheets.

For frequencies above 1 GHz, the readings were averaged by a "duty cycle correction factor", derived from 20 log (dwell time / 100 ms).

The measurement bandwidths and transducers used for the radiated emissions test were:

FREQUENCY RANGE	EFFECTIVE MEASUREMENT BANDWIDTH	TRANSDUCER
9 kHz to 150 kHz	200 Hz	Loop Antenna
150 kHz to 30 MHz	9 kHz	Loop Antenna
30 MHz to 1 GHz	120 kHz	Combilog Antenna
1 GHz to 25 GHz	1 MHz	Horn Antenna

The EMI test chamber of Compatible Electronics, Inc. was used for radiated emissions testing. This test site is in full compliance with ANSI C63.4. Please see section 6.2 of this report for mounting, bonding and grounding of the EUT. The turntable supporting the EUT is remote controlled using a motor. The turntable permits EUT rotation of 360 degrees in order to maximize emissions. Also, the antenna mast allows height variation of the antenna from 1 meter to 4 meters. Data was collected in the worst case (highest emission) configuration of the EUT. At each reading, the EUT was rotated 360 degrees and the antenna height was varied from 1 to 4 meters (for E field radiated field strength). The gunsight method was used when measuring with the horn antenna in order to ensure accurate results.

The EUT was tested at a 3-meter test distance from 9 kHz to 25 GHz.

Test Results:

The EUT complies with the **Class B** limits of CFR Title 47, Part 15, Subpart B; and the limits of CFR Title 47, Part 15, Subpart C, Sections 15.209 and 15.247 (d) for radiated emissions. Please see Appendix E for the data sheets.

8.1.3 RF Emissions Test Results

Table 1.0 RADIATED EMISSION RESULTS
OHM ZIGBEE v.2, Model: 450202

Frequency MHz	Corrected Reading* dBuV/m	Specification Limit dBuV/m	Delta (Cor. Reading – Spec. Limit) dB
7425 (Vertical) (910)	53.76 (AVG)	53.97	-0.21
2483.5 (Horizontal) (Comcast 954)	53.74 (AVG)	53.97	-0.23
2483.5 (Vertical) (Comcast 954)	53.24 (AVG)	53.97	-0.73
7275 (Horizontal) (916)	53.16 (AVG)	53.97	-0.81
7350 (Vertical) (916)	53.05 (AVG)	53.97	-0.92
7425 (Horizontal) (912)	52.32 (AVG)	53.97	-1.65

Notes:

*	The complete emissions data is given in Appendix E of this report.
QP	Quasi-Peak Reading
AVG	Average Reading
BE	Band Edge

8.2 DTS Bandwidth

The DTS Bandwidth was measured using the EMI Receiver. The bandwidth was measured using a direct connection from the RF output of the EUT. The following steps were performed for measuring the DTS Bandwidth.

1. Set RBW = 100 kHz
2. Set the video bandwidth (VBW) to equal or greater than 3 times the RBW
3. Detector = Peak
4. Trace Mode = Max Hold
5. Sweep = Auto Couple
6. Allow the trace to stabilize
7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

Test Results:

Complies with the relevant requirements of CFR Title 47, Part 15, Subpart C, section 15.205, 15.209, and section 15.247 (a)(2).

8.3 Peak Output Power

The Peak Output Power was measured using the EMI Receiver. The peak output power was measured using a direct connection from the RF output of the EUT. The resolution bandwidth was 8 MHz and the video bandwidth was 50 MHz. The cable loss was also added back into the reading using the reference level offset. The Peak Output Power was then taken.

Test Results:

Complies with the relevant requirements of FCC Title 47, Part 15, Subpart C, section 15.247 (b)(3).

8.4 RF Antenna Conducted Test

The emissions in the non-restricted frequency bands measurements were performed using the EMI Receiver. The emissions were measured using a direct connection from the RF output of the EUT. The reference level was established by setting the instrument center frequency to DTS channel center frequency. A peak detector was used with sweep set to auto. A max hold trace was used and allowed to fully stabilize. The peak marker function was used to determine the level and 20 dB below that was the reference level. For emission level measurement, the center frequency and span were set to encompass the frequency range to be measured. A peak detector was used with a sweep time set to auto. The number of measurement points were greater than the span/RBW. A max hold trace was used and allowed to fully stabilize. The peak marker function was used to determine the maximum amplitude level. The final qualification data sheets are located in Appendix E.

Test Results:

The EUT complies with the relevant requirements of FCC Title 47, Part 15, Subpart C section 15.247 (d) for non-restricted emissions. Please see the data sheets located in Appendix E.

8.5 RF Band Edges

RF band edges were taken at the edges of the ISM spectrum (2400 MHz when the EUT was on the low channel and 2483.5 MHz when the EUT was on the high channel) using the EMI Receiver. A preamplifier was used to boost the signal level, with the plots being taken at a 3 meter test distance. The radiated emissions test procedure as describe in section 8.1.2 of this test report was used to maximize the emission.

Test Results:

The EUT complies with the relevant requirements of FCC Title 47, Part 15, Subpart C section 15.247 (d). The RF power at the restricted bands closest to the band edges at 2390 MHz and 2483.5 MHz meet the limits of section 15.209. Please see the data sheets located in Appendix E.

8.6 Spectral Density Test

The spectrum density output was measured using the EMI Receiver. The spectral density output was measured using a direct connection from the RF out on the EUT into the input of the EMI Receiver. The following steps were performed for measuring the spectral density.

1. Set analyzer center frequency to DTS channel center frequency
2. Set the span to 1.5 times the DTS bandwidth.
3. Set the RBW to 3 kHz <= RBW <= 100 kHz
4. Set the VBW >= 3 X RBW
5. Detector = peak
6. Sweep time = auto couple
7. Trace mode = max hold
8. Allow trace to fully stabilize
9. Use the peak marker function to determine the maximum amplitude level within the RBW
10. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

Test Results:

Complies with the relevant requirements of CFR Title 47, Part 15, Subpart C, section 15.247 (e).

8.7 Duty Cycle

The Door Lock mode produced the worst case when measured and is as follows:

$$\delta(\mathrm{dB}) = 20\log\left[\sum\left(nt_1 + mt_2 + \ldots + \xi t_x\right)/T\right]$$

Where

n is the number of pulses of duration *t*1
m is the number of pulses of duration *t*2
ξ is the number of pulses of duration *tx*
T is the period of the pulse train or 100 ms if the pulse train length is greater than 100 ms

Pulse 1 = 1.002004 ms
Pulse 2 = 1.202405 ms
Pulse 3 = 1.002004 ms
Pulse 4 = 1.202405 ms
Pulse 5 = 1.202405 ms
Pulse 6 = 1.002004 ms
Pulse 7 = 1.002004 ms
Pulse 8 = 1.002004 ms
Pulse 9 = 1.002004 ms
Pulse 10 = 1.002004 ms
Pulse 11 = 1.002004 ms
Pulse 12 = 1.002004 ms

Total On Time = 12.625251 ms

Number of Pulses in worst case 100 ms was 12.

12.625251 ms / 100 ms = 12.625251%

Note: The absolute worst case duty cycle according to the firmware designer is 12.625251% and this was used for all duty cycle calculations instead.

20 log (0.12625251) = -17.97 dB correction factor

9. CONCLUSIONS

The OHM Zigbee v.2, Model: 450202 meets all of the specification limits defined in FCC Title 47, Part 15, Subpart C, sections 15.205, 15.209, and 15.247.

Note: For the unintentional radiator portion of the test, the EUT was within the **Class B** specification limits defined by CFR Title 47, Part 15, Subpart B.

APPENDIX A

LABORATORY ACCREDITATIONS AND RECOGNITIONS

LABORATORY ACCREDITATIONS AND RECOGNITIONS

NVLAP TESTING
NVLAP LAB CODE 200528-0

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For US, Canada, Australia/New Zealand, Japan, Taiwan, Korea, and the European Union, Compatible Electronics is currently accredited by NVLAP to ISO/IEC 17025.
For the most up-to-date version of our scopes and certificates please visit http://celectronics.com/quality/scope/

Quote from ISO-ILAC-IAF Communiqué on 17025:
"A laboratory's fulfilment of the requirements of ISO/IEC 17025:2005 means the laboratory meets both the technical competence requirements and management system requirements that are necessary for it to consistently deliver technically valid test results and calibrations. The management system requirements in ISO/IEC 17025:2005 (Section 4) are written in language relevant to laboratory operations and meet the principles of ISO 9001:2008 Quality Management Systems — Requirements."

APPENDIX B

MODIFICATIONS TO THE EUT

MODIFICATIONS TO THE EUT

The modifications listed below were made to the EUT to pass FCC Subpart B and FCC 15.247 specifications.

All the rework described below was implemented during the test in a method that could be reproduced in all the units by the manufacturer.

No modifications were made to the EUT during the testing.

APPENDIX C

ADDITIONAL MODELS COVERED UNDER THIS REPORT

ADDITIONAL MODELS COVERED UNDER THIS REPORT

USED FOR THE PRIMARY TEST

OHM Zibgee v.2
Model: 450202
S/N: N/A

There were no additional models covered under this report.

APPENDIX D

DIAGRAMS, CHARTS, AND PHOTOS

FIGURE 1: CONDUCTED EMISSIONS TEST SETUP

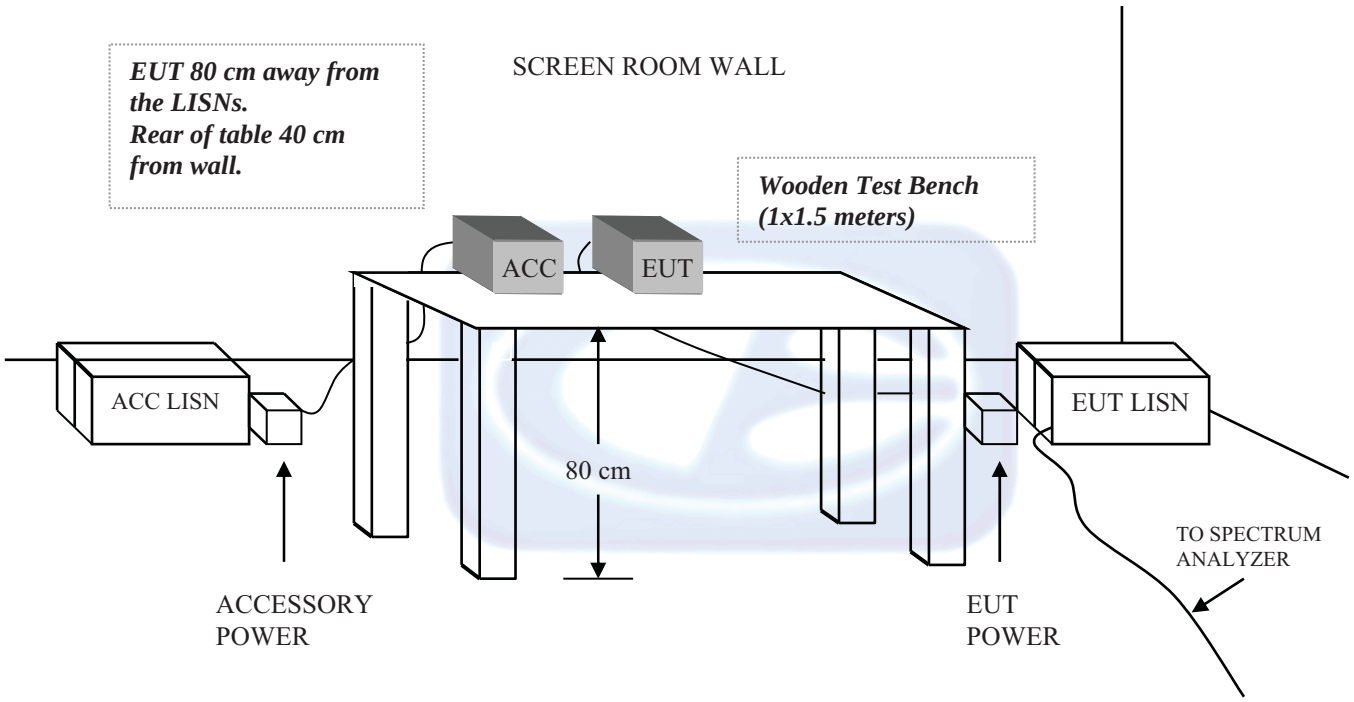
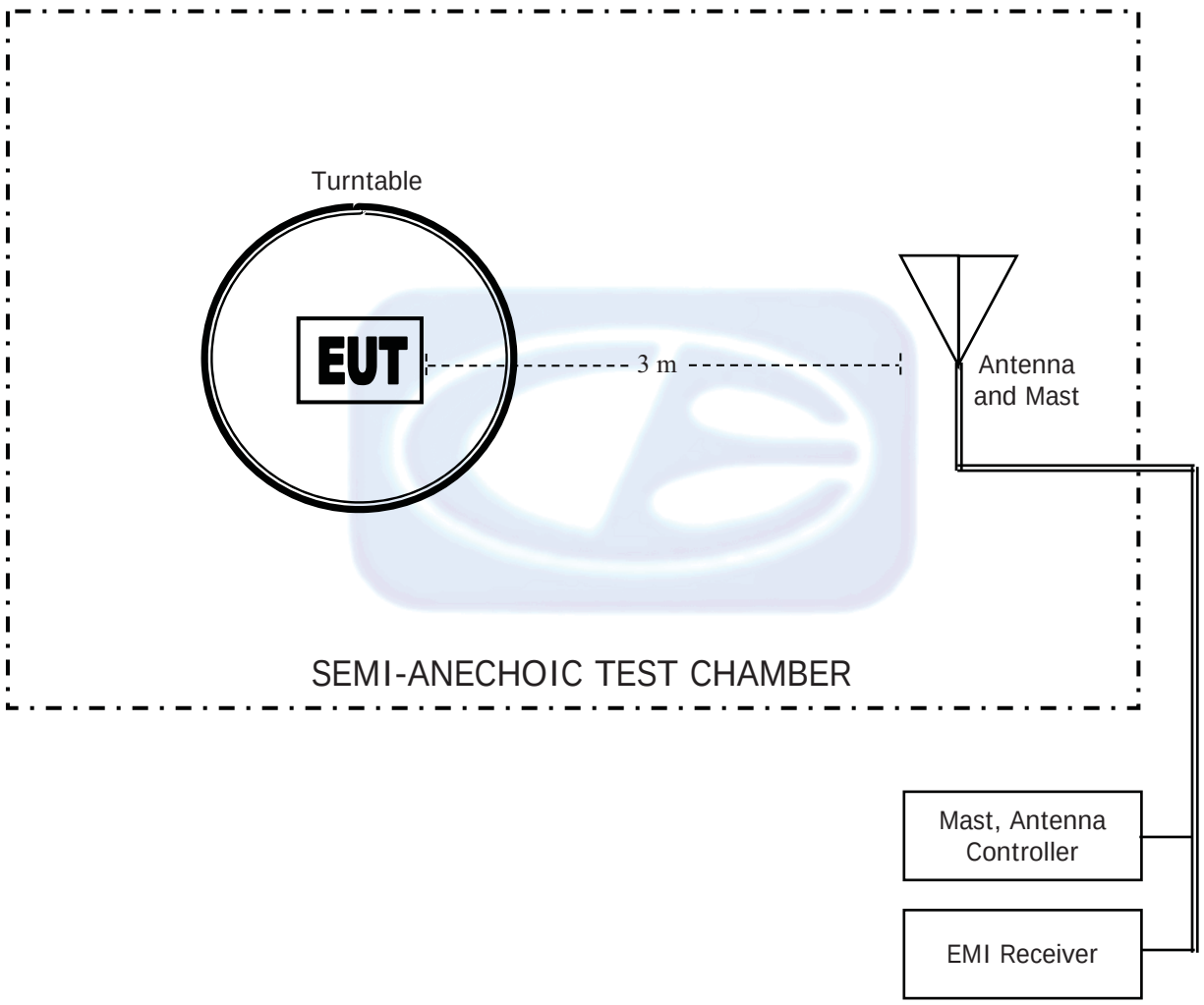


FIGURE 2: LAYOUT OF THE SEMI-ANECHOIC TEST CHAMBER



COM-POWER AL-130

LOOP ANTENNA

S/N: 121090

CALIBRATION DATE: FEBRUARY 9, 2017

FREQUENCY (MHz)	MAGNETIC (dB/m)	ELECTRIC (dB/m)
0.009	-36.17	15.33
0.01	-35.86	15.64
0.02	-37.30	14.20
0.03	-36.58	14.92
0.04	-36.99	14.51
0.05	-37.66	13.84
0.06	-37.53	13.97
0.07	-37.64	13.86
0.08	-37.52	13.98
0.09	-37.62	13.88
0.1	-37.59	13.91
0.2	-37.79	13.71
0.3	-37.80	13.70
0.4	-37.70	13.80
0.5	-37.79	13.71
0.6	-37.79	13.71
0.7	-37.69	13.81
0.8	-37.49	14.01
0.9	-37.39	14.11
1	-37.39	14.11
2	-37.09	14.41
3	-37.09	14.41
4	-37.19	14.31
5	-36.98	14.52
6	-37.17	14.33
7	-37.05	14.45
8	-36.85	14.65
9	-36.84	14.66
10	-36.75	14.75
15	-37.16	14.34
20	-36.44	15.06
25	-37.88	13.62
30	-39.14	12.36

COM-POWER AC-220

COMBILOG ANTENNA

S/N: 61060

CALIBRATION DATE: SEPTEMBER 3, 2015

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
30	24.00	200	13.00
35	24.30	250	15.30
40	25.40	300	18.20
45	21.50	350	17.90
50	22.50	400	18.60
60	15.40	450	19.80
70	12.70	500	21.60
80	11.10	550	22.40
90	13.40	600	23.70
100	13.80	650	24.30
120	15.40	700	24.00
125	15.40	750	24.50
140	13.10	800	24.30
150	17.20	850	26.30
160	13.20	900	26.90
175	14.20	950	26.00
180	14.30	1000	25.60

COM-POWER AC-220

COMBILOG ANTENNA

S/N: 61060

CALIBRATION DATE: JULY 27, 2017

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
30	23.80	200	14.10
35	24.00	250	15.30
40	24.70	300	17.70
45	22.90	350	17.70
50	22.10	400	19.00
60	17.60	450	21.30
70	12.70	500	21.00
80	11.20	550	22.30
90	13.10	600	23.40
100	14.40	650	22.90
120	15.30	700	24.60
125	15.00	750	24.50
140	12.80	800	25.40
150	16.50	850	26.40
160	12.90	900	27.20
175	14.30	950	27.80
180	14.50	1000	26.80

COM POWER AH-118

HORN ANTENNA

S/N: 071175

CALIBRATION DATE: FEBRUARY 26, 2016

FREQUENCY (GHz)	FACTOR (dB)	FREQUENCY (GHz)	FACTOR (dB)
1.0	23.93	10.0	39.33
1.5	25.54	10.5	39.64
2.0	28.09	11.0	41.04
2.5	30.21	11.5	44.29
3.0	30.15	12.0	41.22
3.5	30.17	12.5	41.50
4.0	31.90	13.0	41.62
4.5	33.51	13.5	40.63
5.0	33.87	14.0	39.94
5.5	35.08	14.5	41.84
6.0	34.81	15.0	42.69
6.5	34.26	15.5	39.03
7.0	36.33	16.0	39.07
7.5	37.03	16.5	41.40
8.0	37.56	17.0	43.18
8.5	40.07	17.5	47.01
9.0	38.92	18.0	46.48
9.5	38.21		

COM-POWER PA-118

PREAMPLIFIER

S/N: 551024

CALIBRATION DATE: MAY 12, 2016

FREQUENCY (GHz)	FACTOR (dB)	FREQUENCY (GHz)	FACTOR (dB)
1.0	39.84	6.0	39.05
1.1	39.40	6.5	38.94
1.2	39.58	7.0	39.25
1.3	39.68	7.5	39.09
1.4	39.91	8.0	39.01
1.5	39.78	8.5	38.60
1.6	39.50	9.0	38.64
1.7	39.81	9.5	39.67
1.8	39.89	10.0	39.30
1.9	39.94	11.0	39.15
2.0	39.57	12.0	39.24
2.5	40.39	13.0	39.49
3.0	40.63	14.0	39.44
3.5	40.80	15.0	39.94
4.0	40.86	16.0	40.09
4.5	39.94	17.0	40.06
5.0	34.47	18.0	39.76
5.5	39.32		

COM-POWER AH-826

HORN ANTENNA

S/N: 71957

FREQUENCY (GHz)	FACTOR (dB)	FREQUENCY (GHz)	FACTOR (dB)
18.0	33.5	22.5	35.5
18.5	33.5	23.0	35.9
19.0	34.0	23.5	35.7
19.5	34.0	24.0	35.6
20.0	34.3	24.5	36.0
20.5	34.9	25.0	36.2
21.0	34.7	25.5	36.1
21.5	35.0	26.0	36.2
22.0	35.0	26.5	35.7

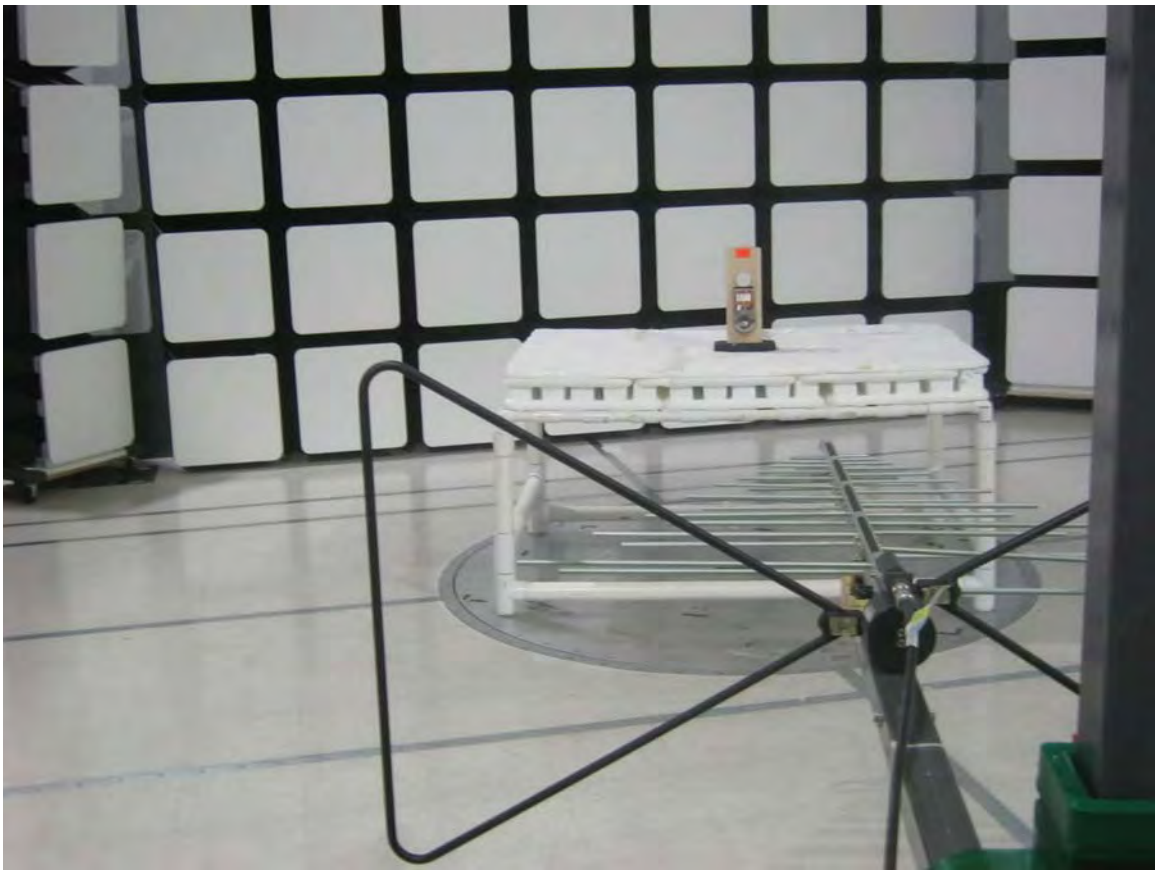
COM-POWER PA-840

MICROWAVE PREAMPLIFIER

S/N: 711013

CALIBRATION DATE: MAY 13, 2016

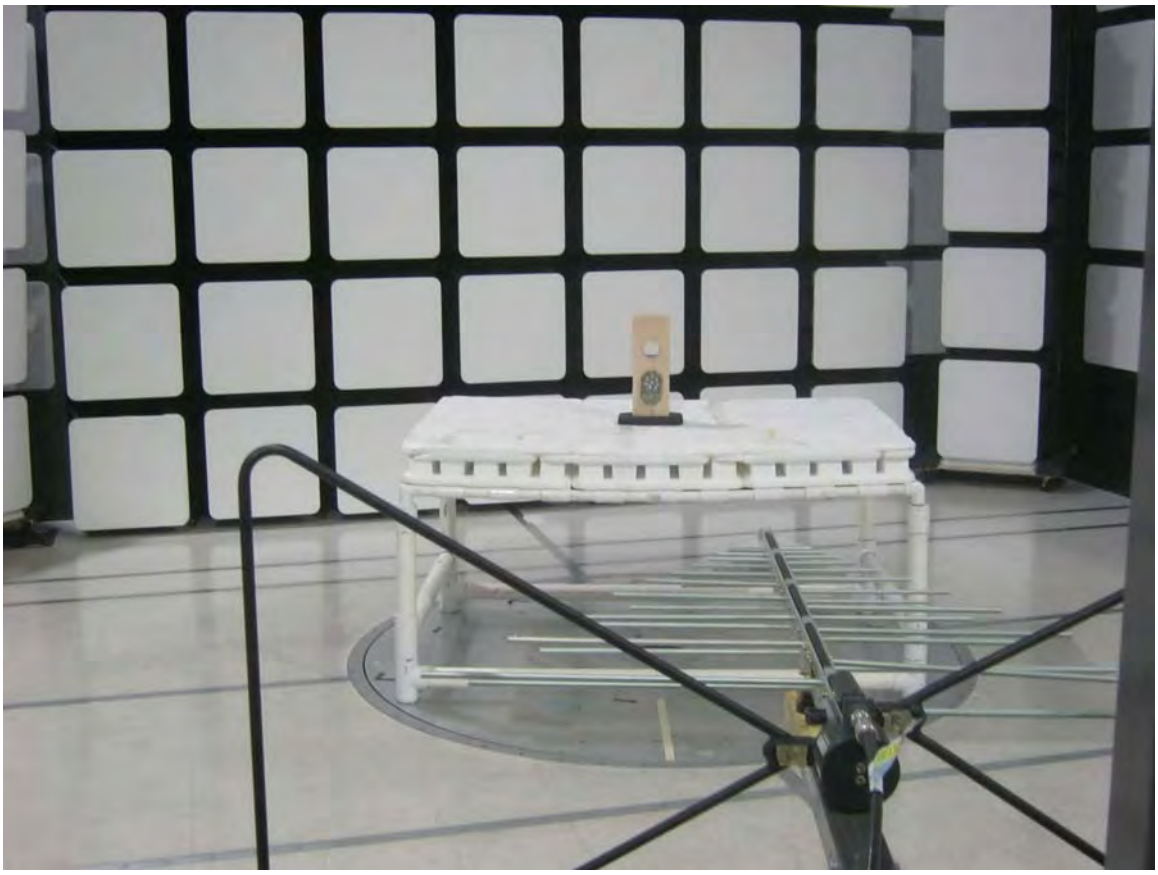
FREQUENCY (GHz)	FACTOR (dB)	FREQUENCY (GHz)	FACTOR (dB)
18.0	25.19	31.0	25.69
19.0	24.48	31.5	25.74
20.0	24.39	32.0	26.35
21.0	24.73	32.5	26.64
22.0	23.49	33.0	25.98
23.0	24.23	33.5	24.68
24.0	24.59	34.0	24.61
25.0	25.32	34.5	23.78
26.0	25.66	35.0	24.74
26.5	25.99	35.5	24.39
27.0	26.26	36.0	23.46
27.5	25.33	36.5	23.71
28.0	24.49	37.0	26.35
28.5	24.74	37.5	23.49
29.0	25.93	38.0	25.42
29.5	26.28	38.5	24.87
30.0	26.17	39.0	22.60
30.5	26.11	39.5	20.57
		40.0	19.15



FRONT VIEW

SPECTRUM BRANDS, INC.
OHM ZIGBEE V.2
MODEL: 450202
FCC SUBPART B AND C – RADIATED EMISSIONS – BELOW 1 GHz
INSIDE THE 910 SMARTCODE DEADBOLT

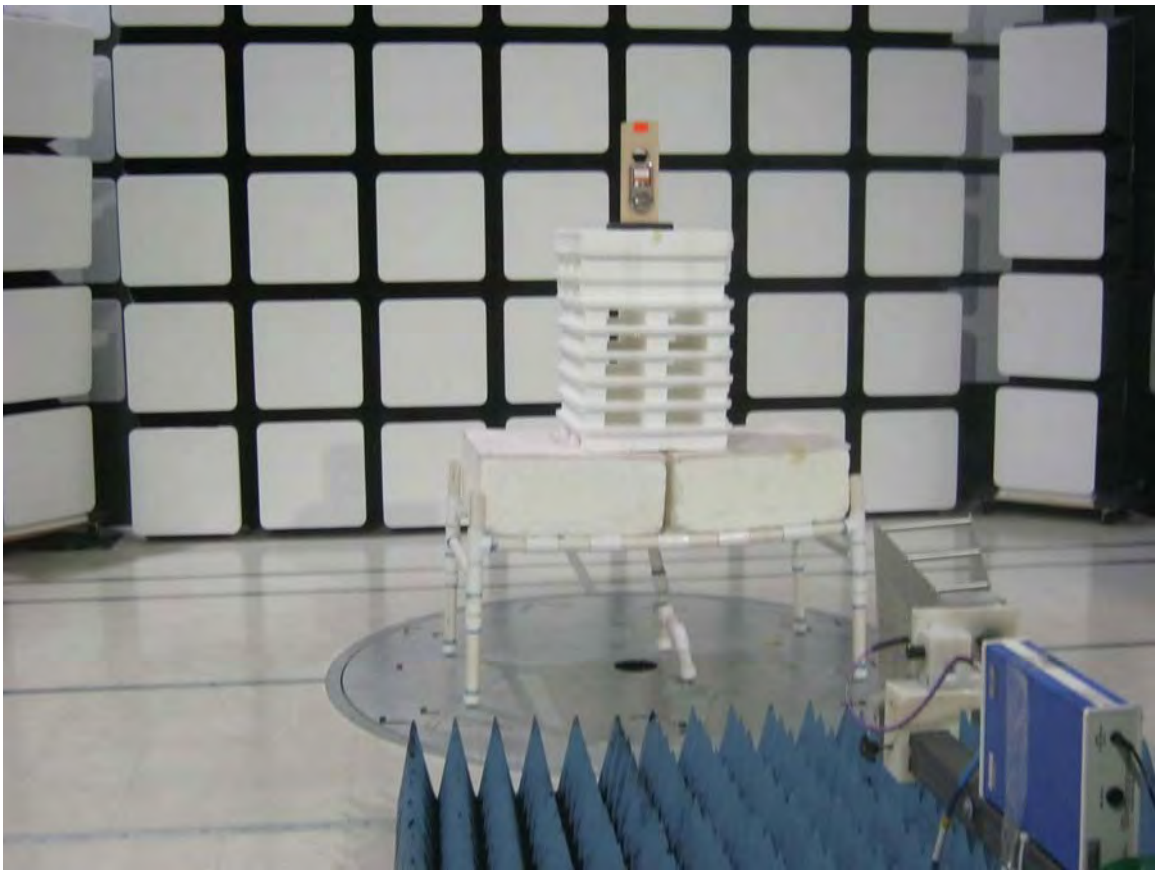
PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS



REAR VIEW

SPECTRUM BRANDS, INC.
OHM ZIGBEE V.2
MODEL: 450202
FCC SUBPART B AND C – RADIATED EMISSIONS – BELOW 1 GHz
INSIDE THE 910 SMARTCODE DEADBOLT

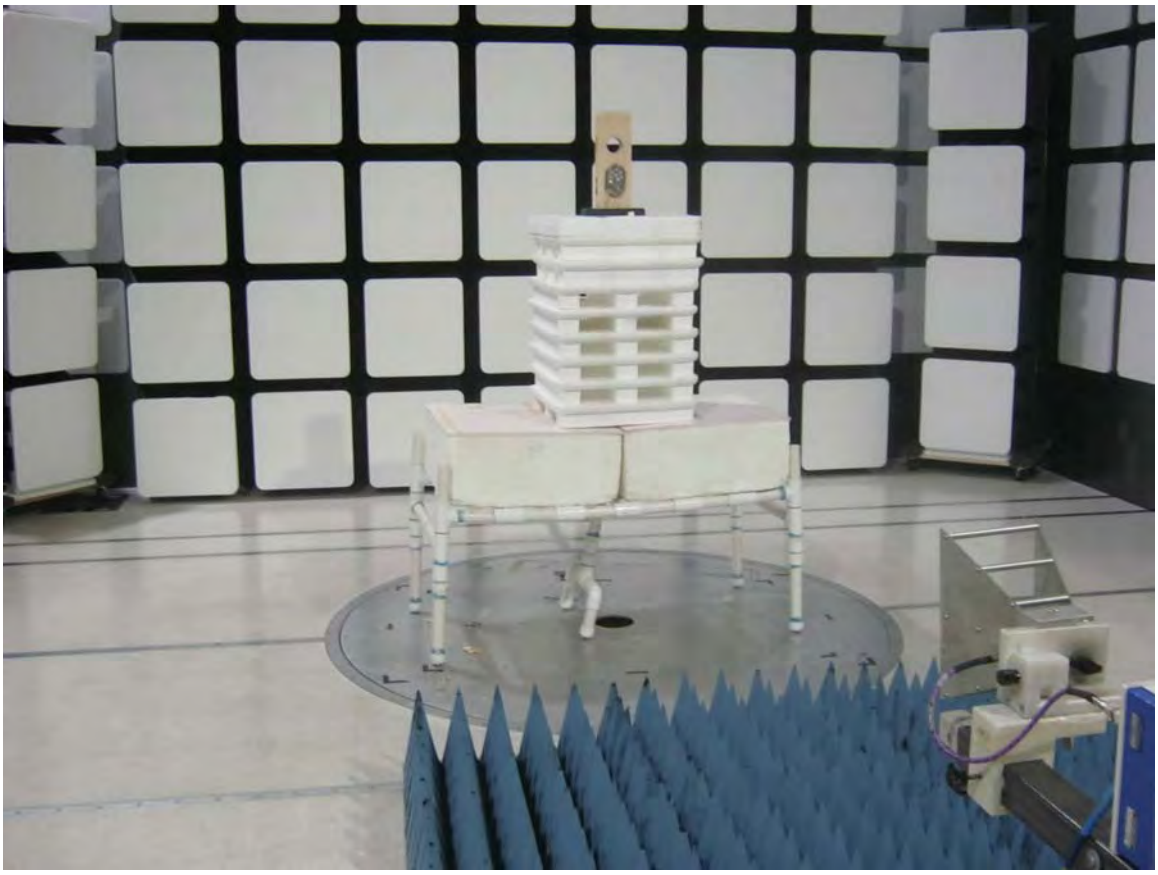
PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS



FRONT VIEW

SPECTRUM BRANDS, INC.
OHM ZIGBEE V.2
MODEL: 450202
FCC SUBPART B AND C – RADIATED EMISSIONS – ABOVE 1 GHz
INSIDE THE 910 SMARTCODE DEADBOLT

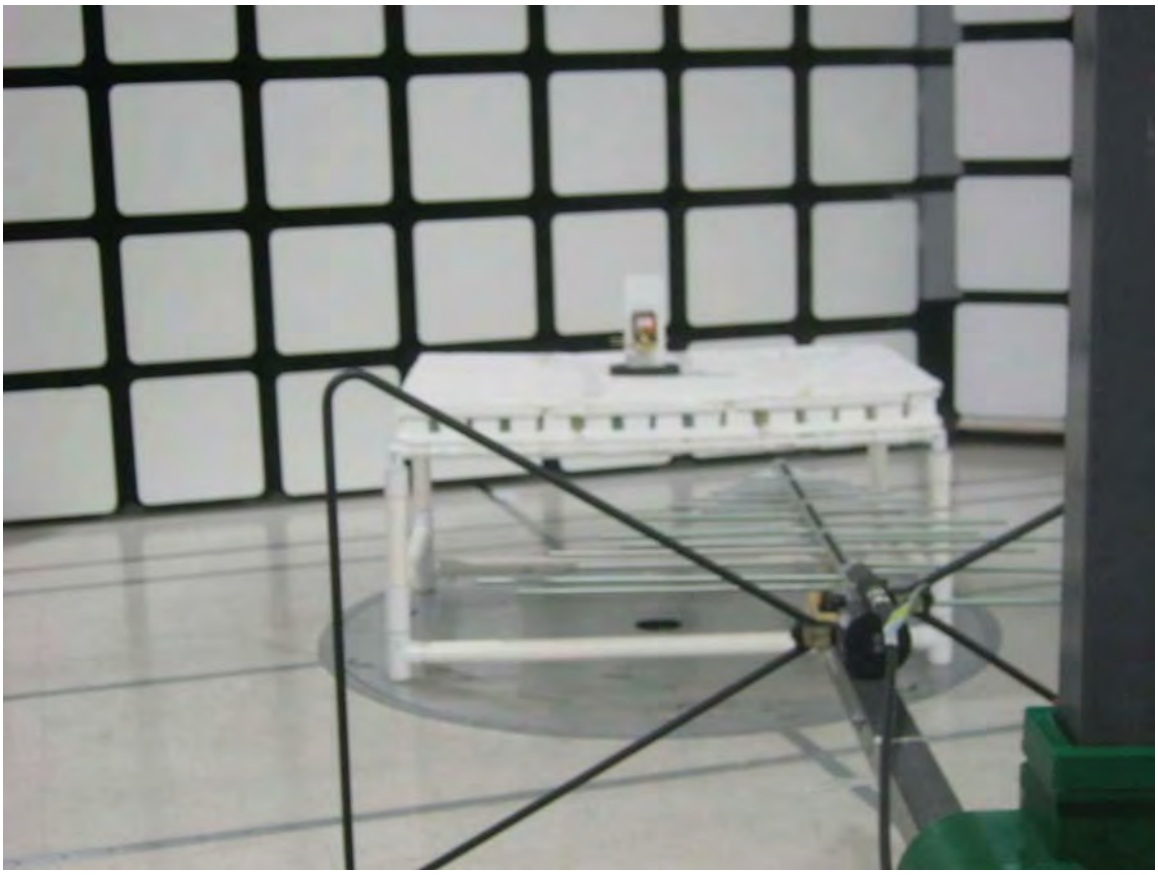
PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS



REAR VIEW

SPECTRUM BRANDS, INC.
OHM ZIGBEE V.2
MODEL: 450202
FCC SUBPART B AND C – RADIATED EMISSIONS – ABOVE 1 GHz
INSIDE THE 910 SMARTCODE DEADBOLT

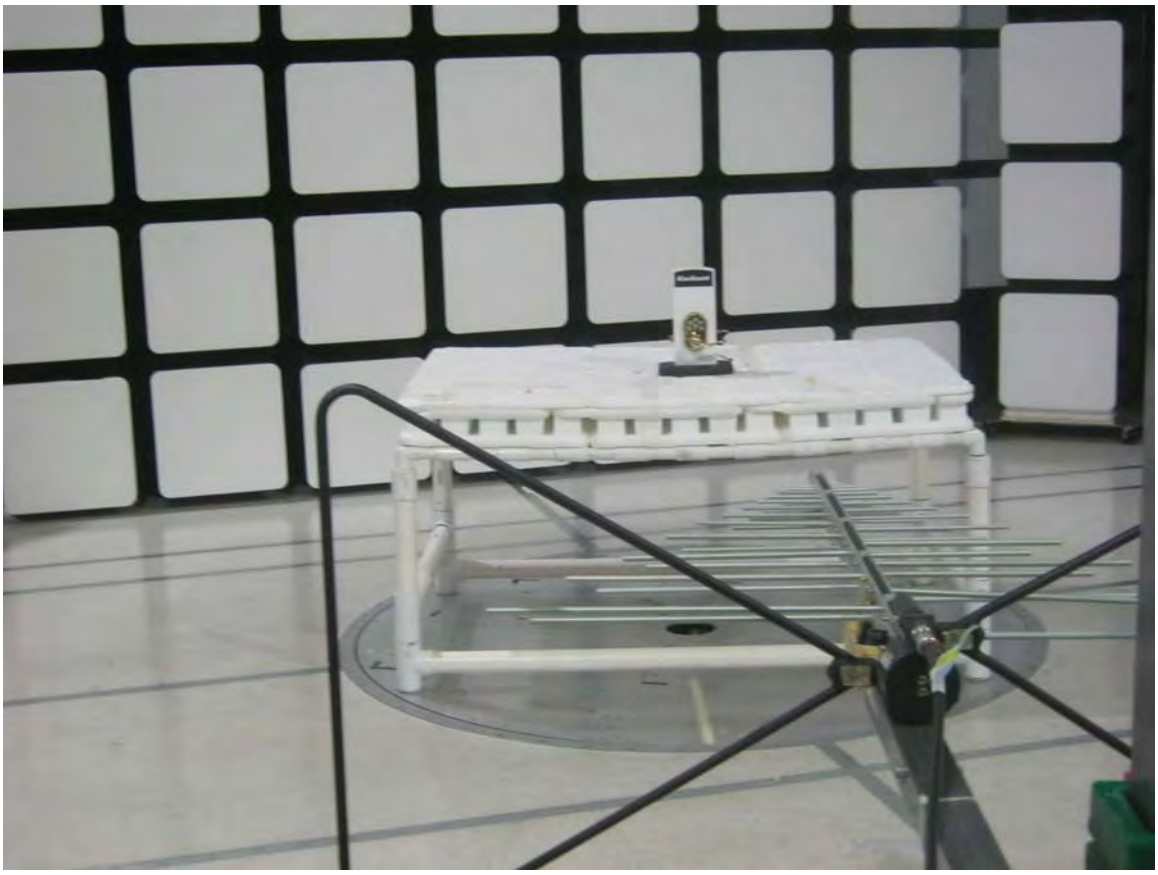
PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS



FRONT VIEW

SPECTRUM BRANDS, INC.
OHM ZIGBEE V.2
MODEL: 450202
FCC SUBPART B AND C – RADIATED EMISSIONS – BELOW 1 GHz
INSIDE THE 912 SMARTCODE LEVER

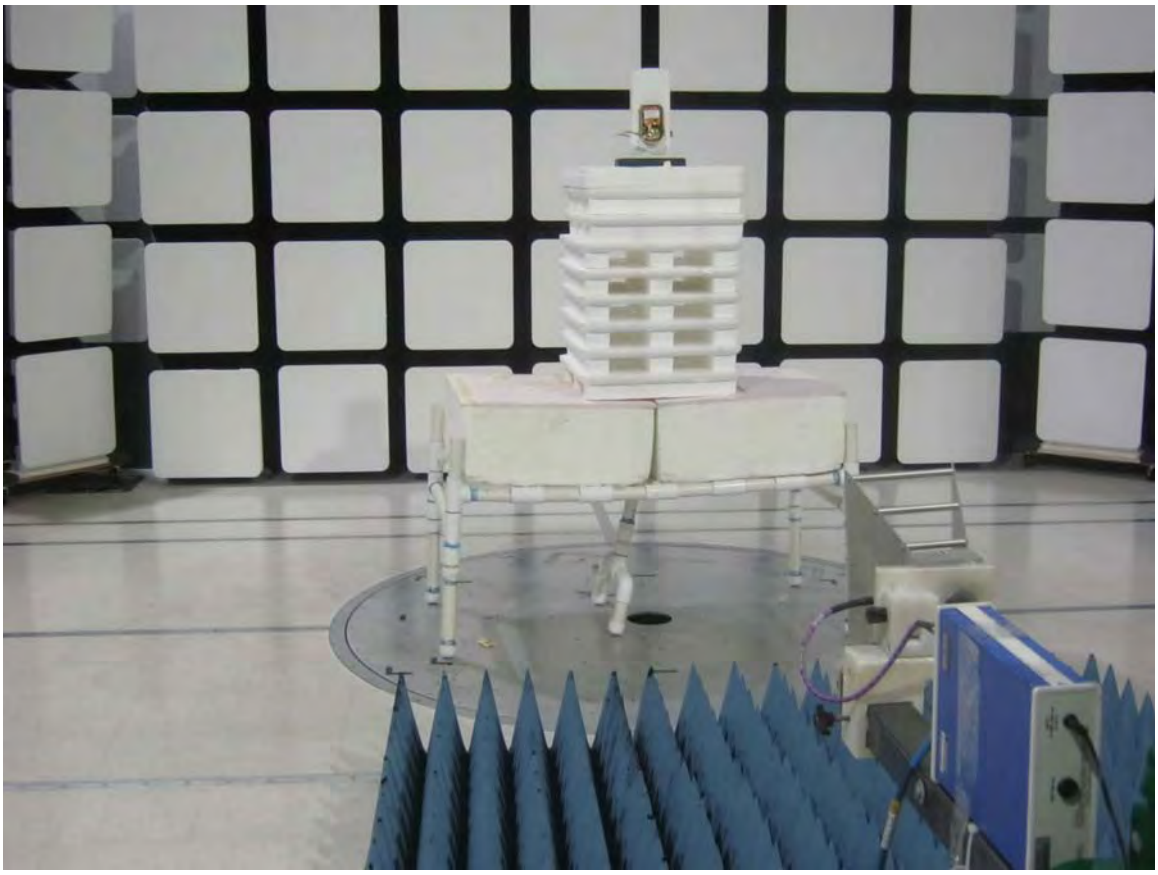
PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS



REAR VIEW

SPECTRUM BRANDS, INC.
OHM ZIGBEE V.2
MODEL: 450202
FCC SUBPART B AND C – RADIATED EMISSIONS – BELOW 1 GHz
INSIDE THE 912 SMARTCODE LEVER

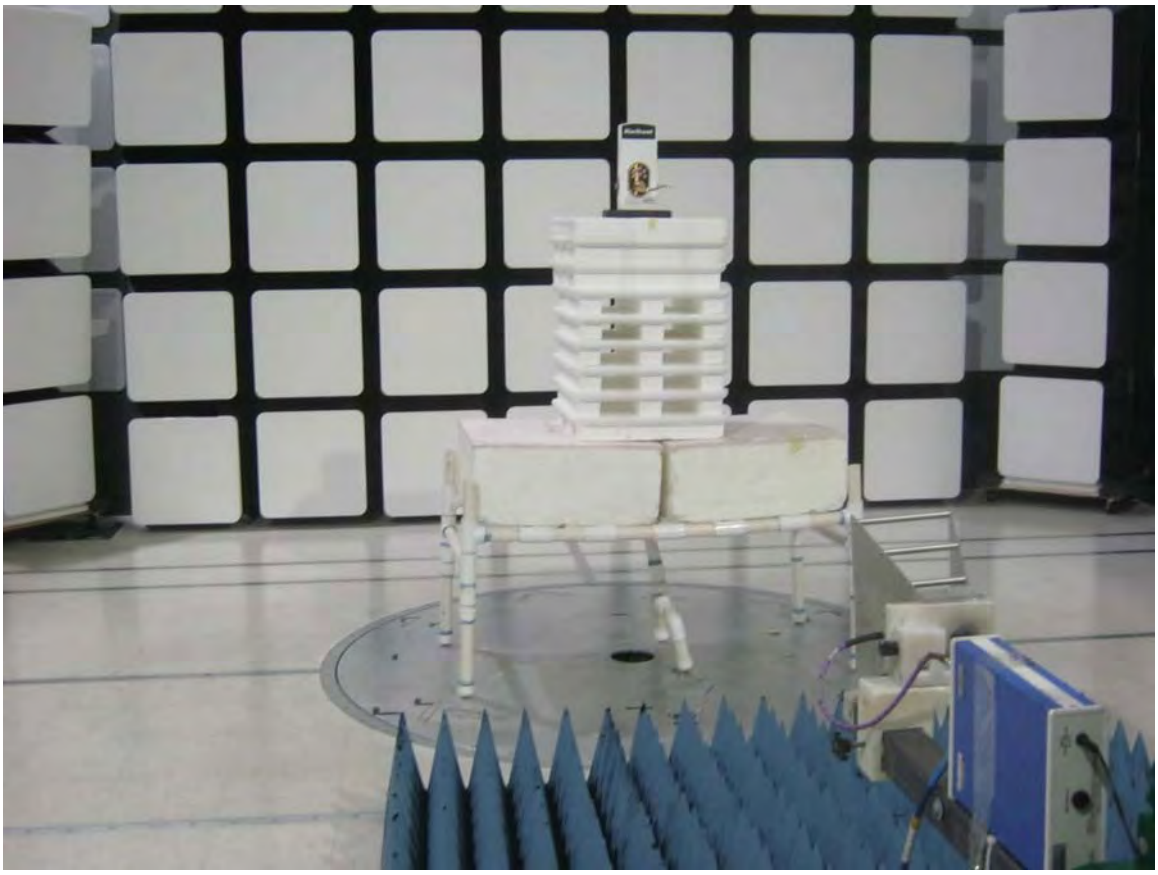
PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS



FRONT VIEW

SPECTRUM BRANDS, INC.
OHM ZIGBEE V.2
MODEL: 450202
FCC SUBPART B AND C – RADIATED EMISSIONS – ABOVE 1 GHz
INSIDE THE 912 SMARTCODE LEVER

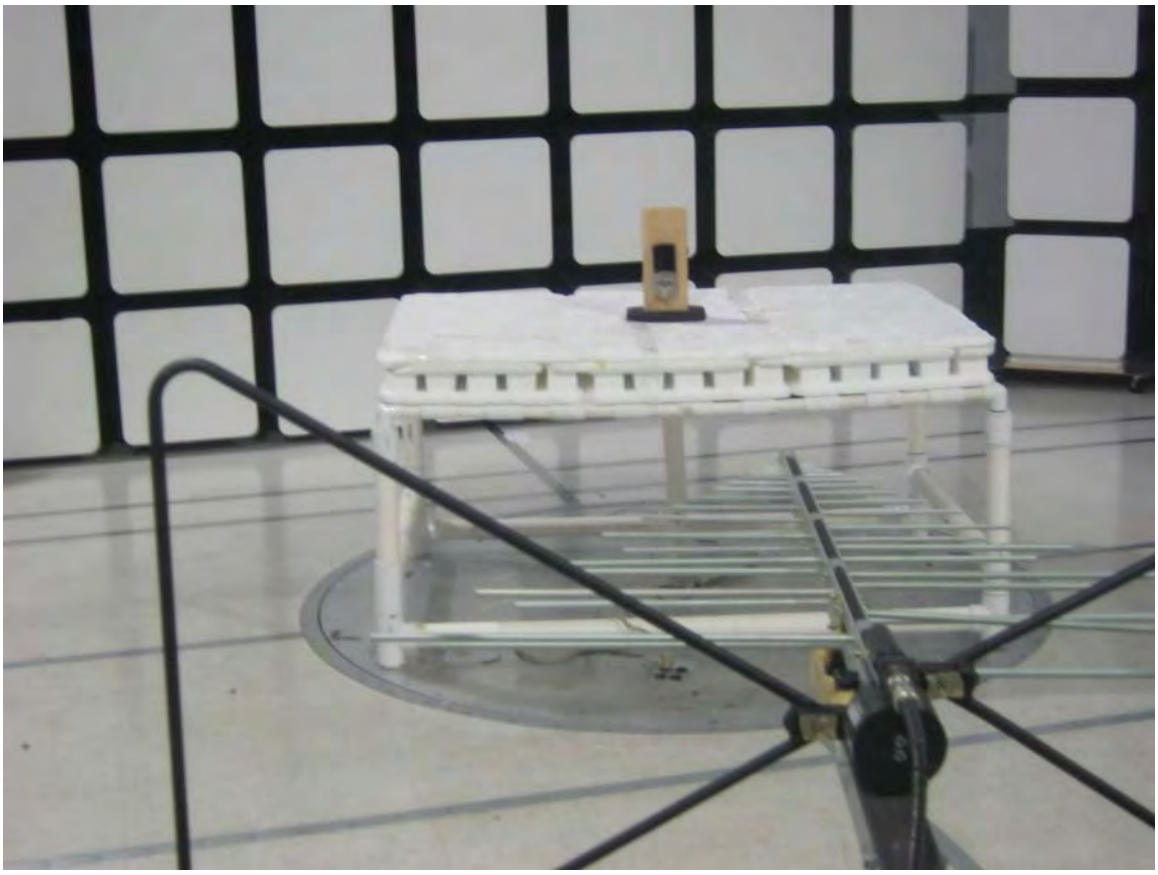
PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS



REAR VIEW

SPECTRUM BRANDS, INC.
OHM ZIGBEE V.2
MODEL: 450202
FCC SUBPART B AND C – RADIATED EMISSIONS – ABOVE 1 GHz
INSIDE THE 912 SMARTCODE LEVER

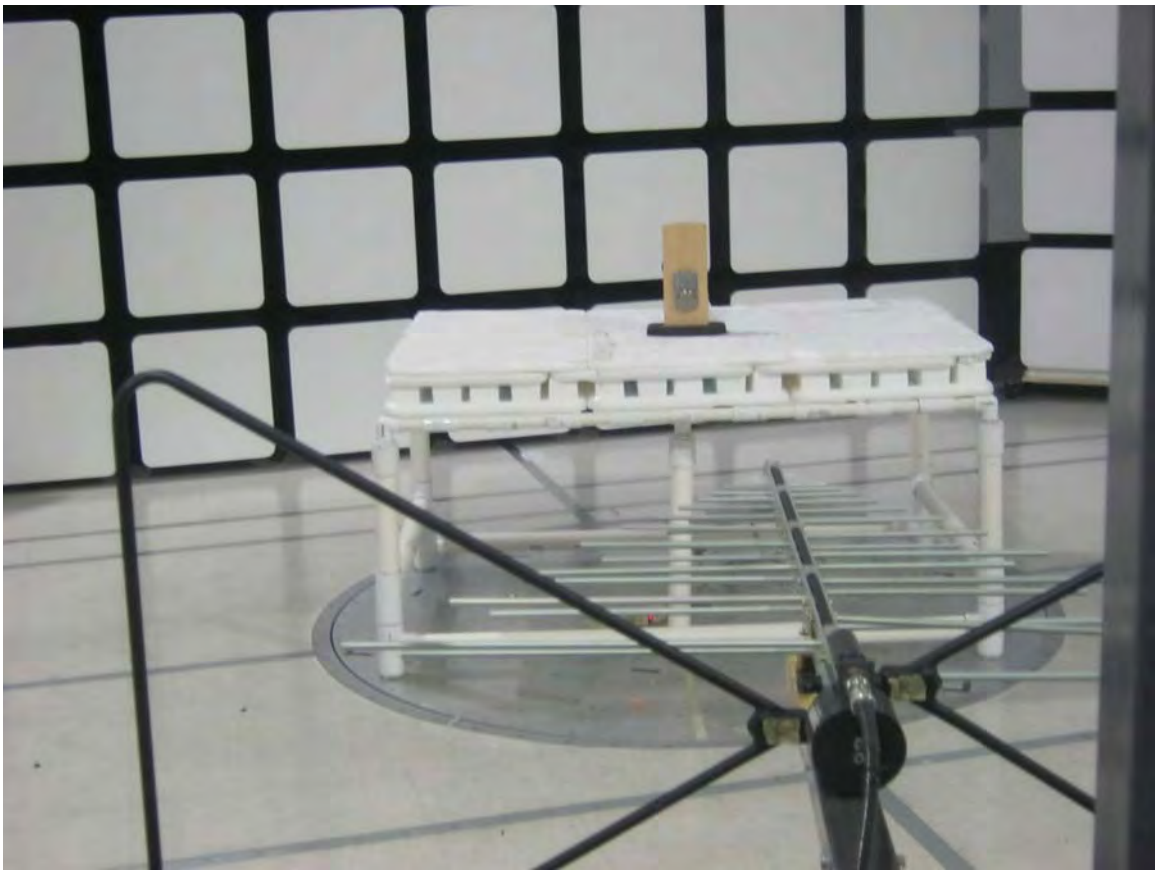
PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS



FRONT VIEW

SPECTRUM BRANDS, INC.
OHM ZIGBEE V.2
MODEL: 450202
FCC SUBPART B AND C – RADIATED EMISSIONS – BELOW 1 GHz
INSIDE THE 914 SMARTCODE DEADBOLT

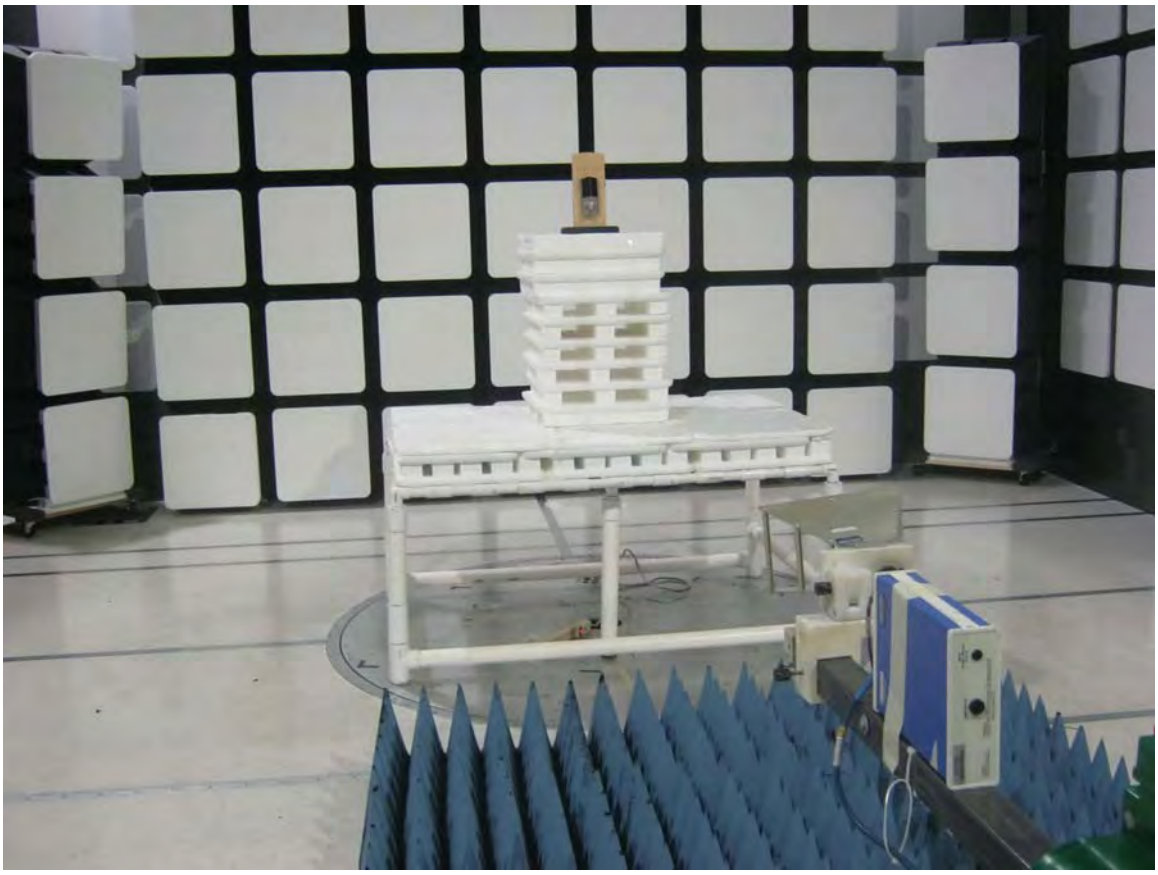
PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS



REAR VIEW

SPECTRUM BRANDS, INC.
OHM ZIGBEE V.2
MODEL: 450202
FCC SUBPART B AND C – RADIATED EMISSIONS – BELOW 1 GHz
INSIDE THE 914 SMARTCODE DEADBOLT

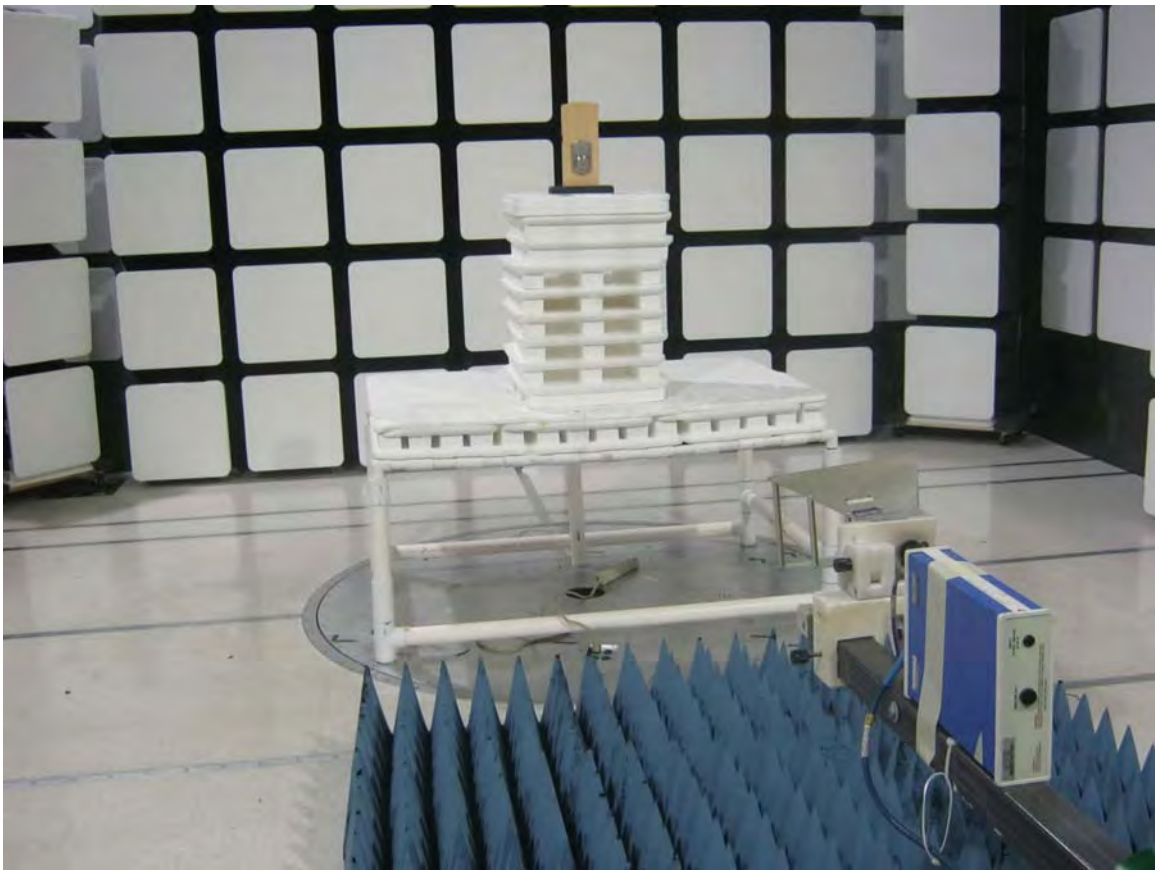
PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS



FRONT VIEW

SPECTRUM BRANDS, INC.
OHM ZIGBEE V.2
MODEL: 450202
FCC SUBPART B AND C – RADIATED EMISSIONS – ABOVE 1 GHz
INSIDE THE 914 SMARTCODE DEADBOLT

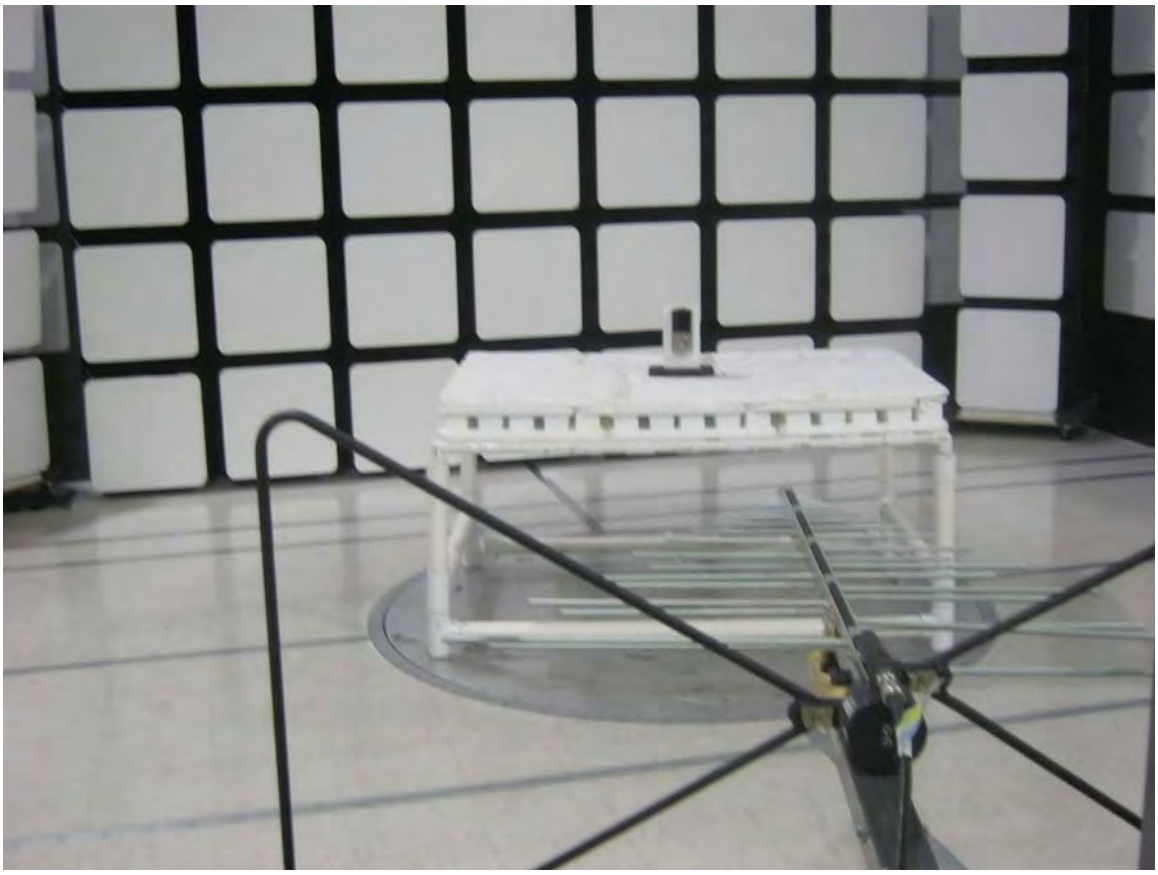
PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS



REAR VIEW

SPECTRUM BRANDS, INC.
OHM ZIGBEE V.2
MODEL: 450202
FCC SUBPART B AND C – RADIATED EMISSIONS – ABOVE 1 GHz
INSIDE THE 914 SMARTCODE DEADBOLT

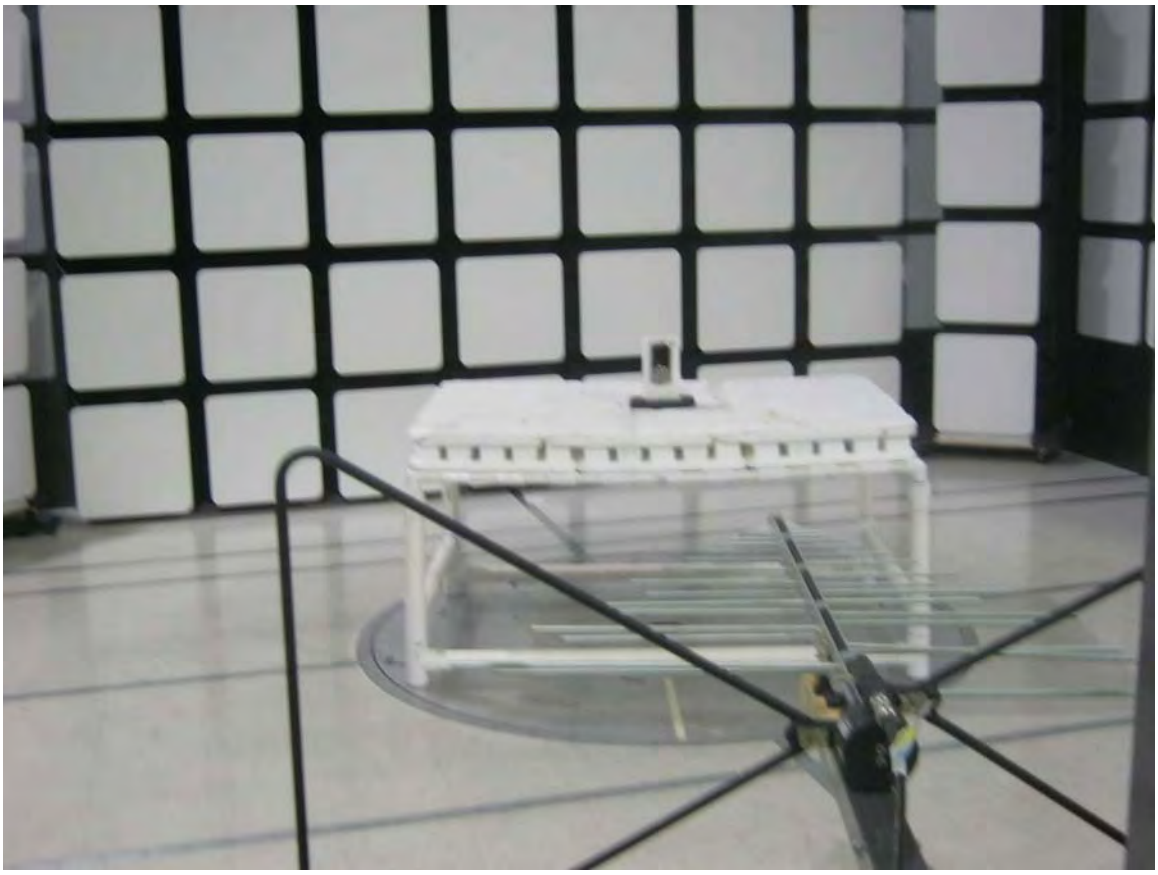
PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS



FRONT VIEW

SPECTRUM BRANDS, INC.
OHM ZIGBEE V.2
MODEL: 450202
FCC SUBPART B AND C – RADIATED EMISSIONS – BELOW 1 GHz
INSIDE THE 916 SMARTCODE DEADBOLT

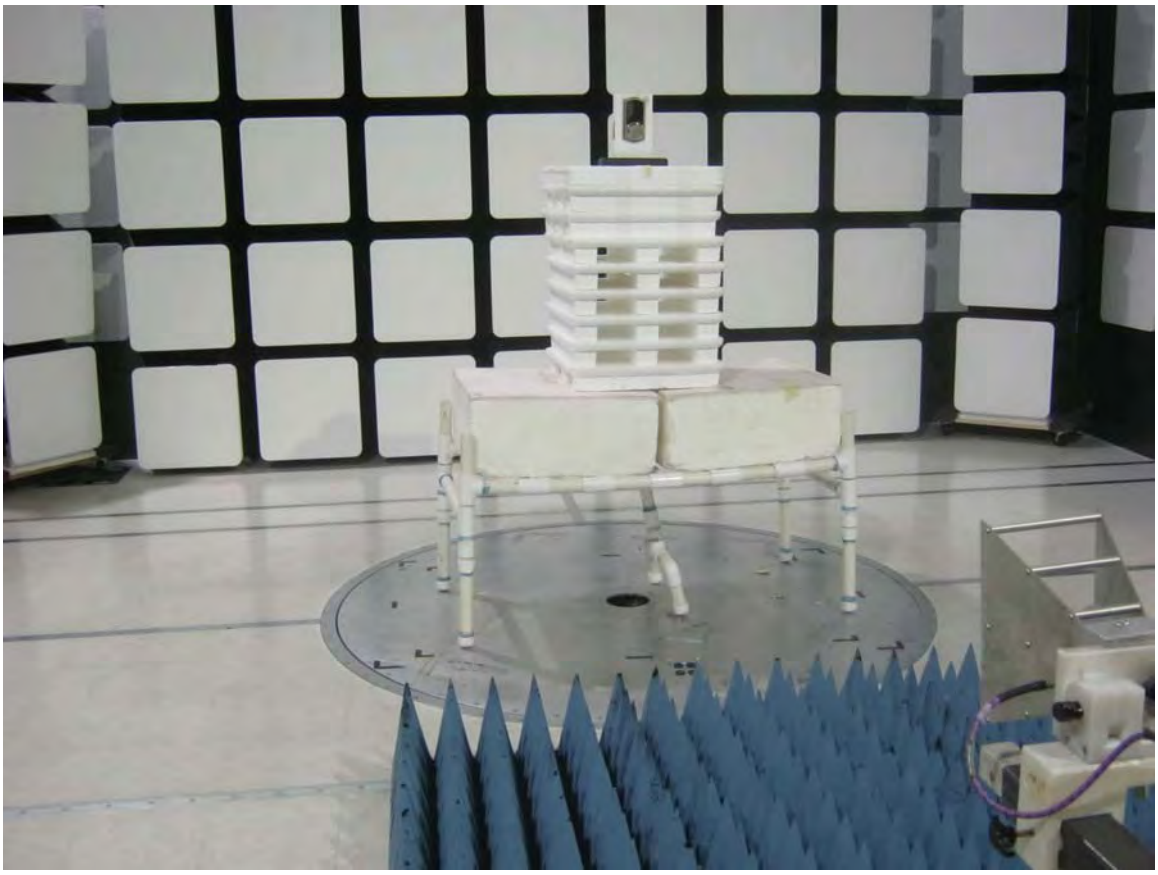
PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS



REAR VIEW

SPECTRUM BRANDS, INC.
OHM ZIGBEE V.2
MODEL: 450202
FCC SUBPART B AND C – RADIATED EMISSIONS – BELOW 1 GHz
INSIDE THE 916 SMARTCODE DEADBOLT

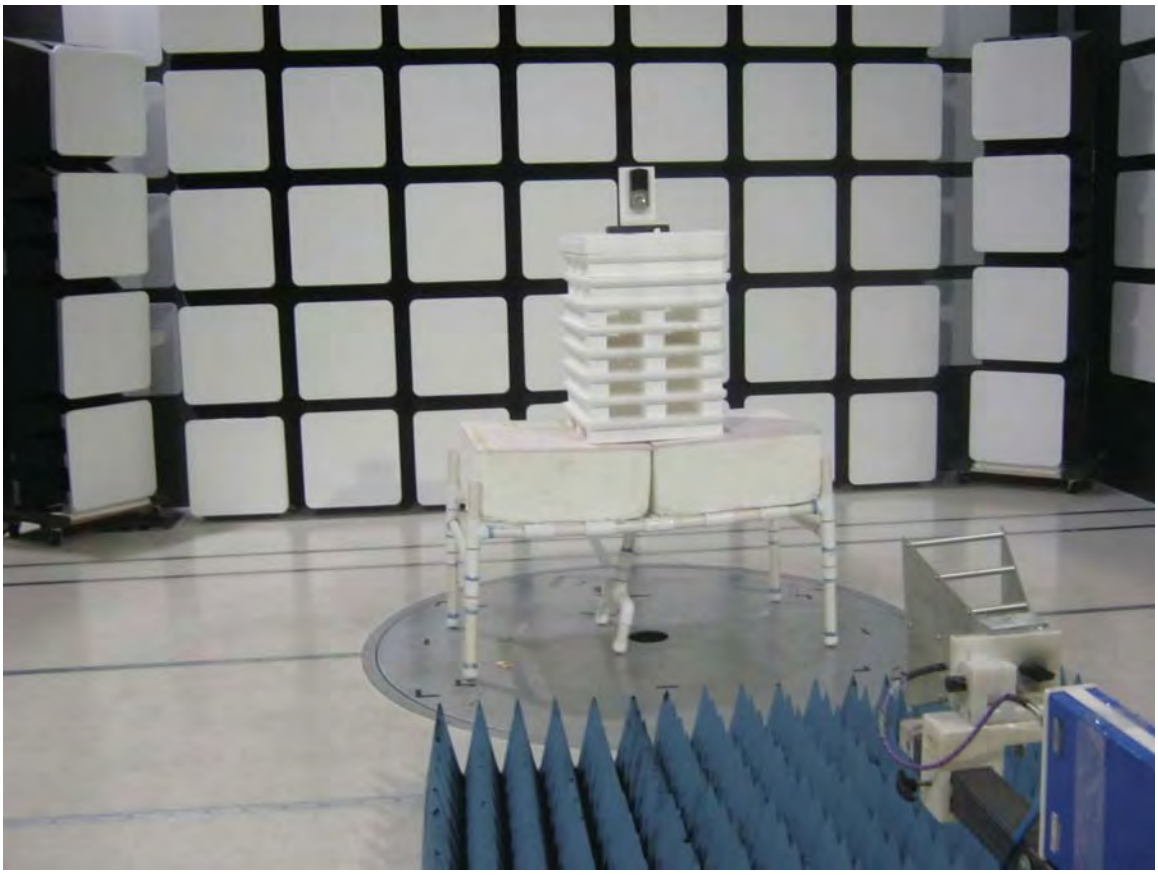
PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS



FRONT VIEW

SPECTRUM BRANDS, INC.
OHM ZIGBEE V.2
MODEL: 450202
FCC SUBPART B AND C – RADIATED EMISSIONS – ABOVE 1 GHz
INSIDE THE 916 SMARTCODE DEADBOLT

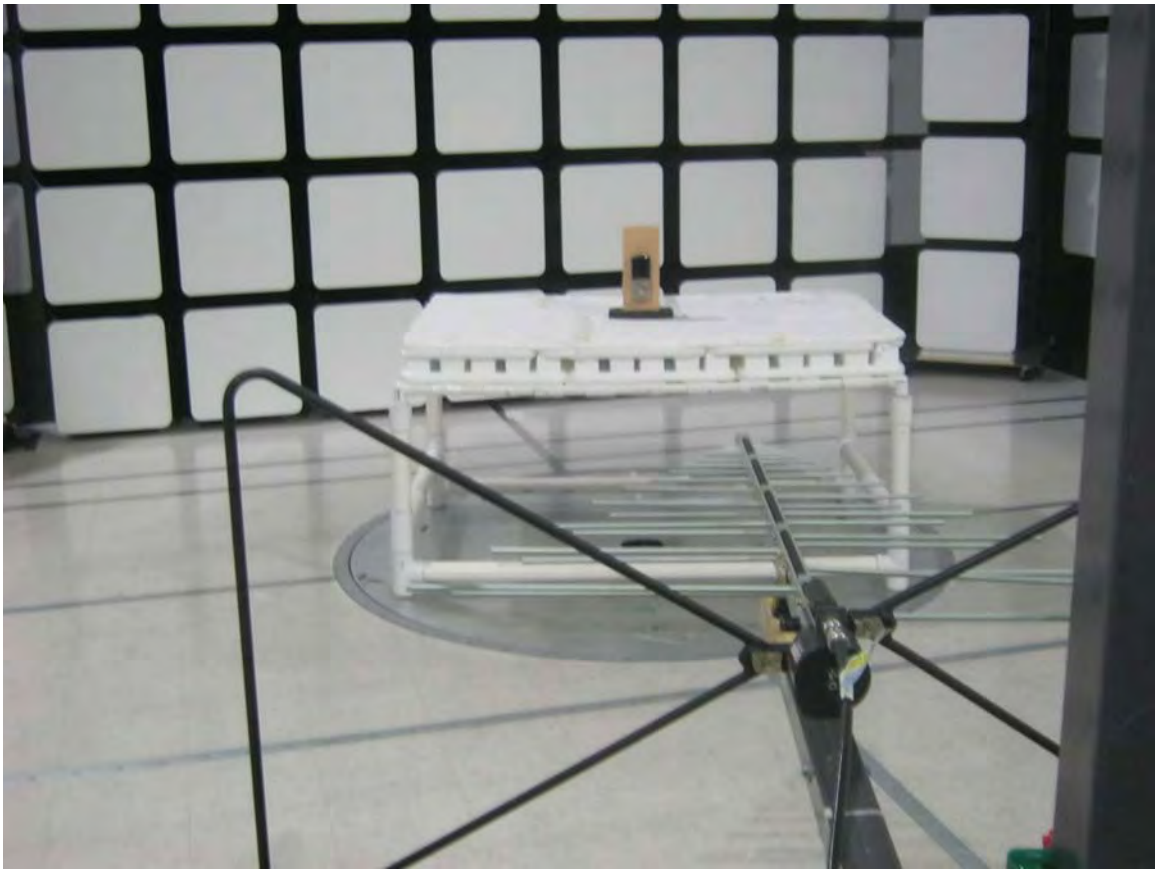
PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS



REAR VIEW

SPECTRUM BRANDS, INC.
OHM ZIGBEE V.2
MODEL: 450202
FCC SUBPART B AND C – RADIATED EMISSIONS – ABOVE 1 GHz
INSIDE THE 916 SMARTCODE DEADBOLT

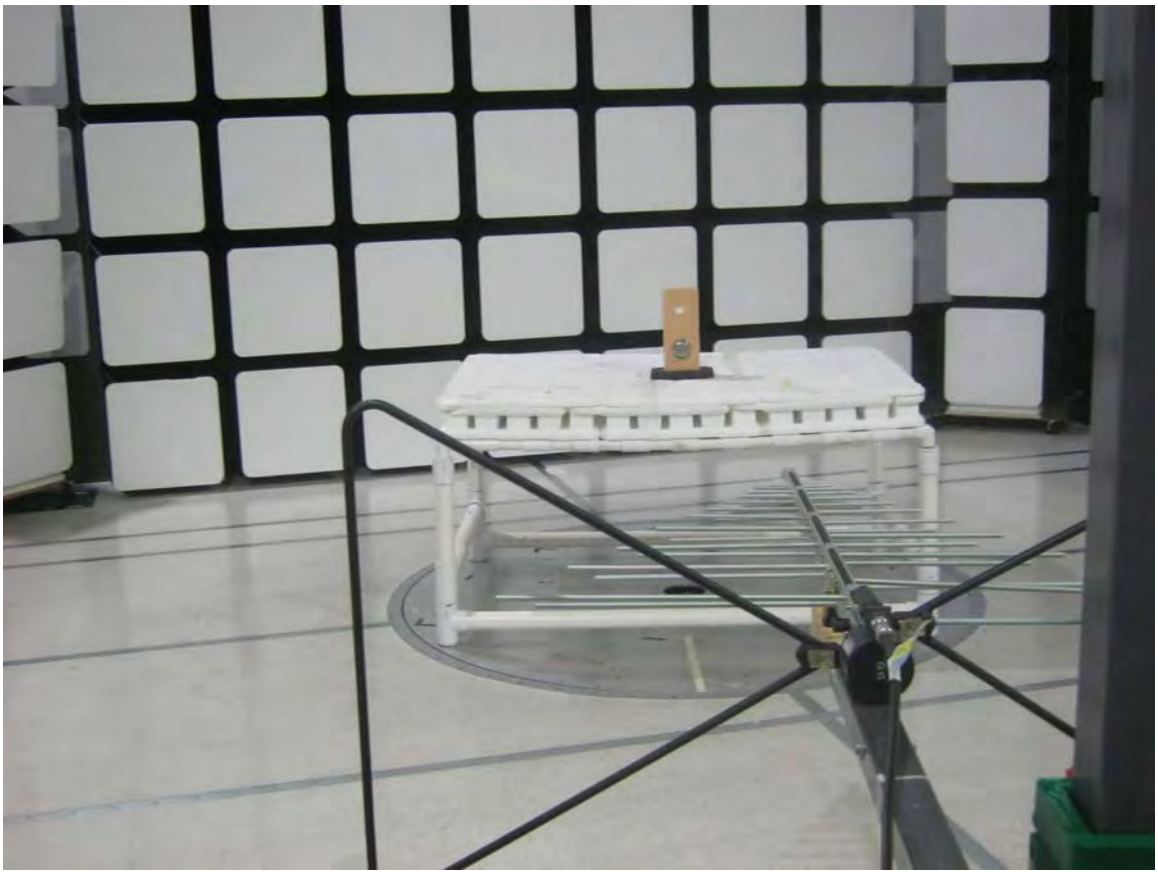
PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS



FRONT VIEW

SPECTRUM BRANDS, INC.
OHM ZIGBEE V.2
MODEL: 450202
FCC SUBPART B AND C – RADIATED EMISSIONS – BELOW 1 GHz
INSIDE THE COMCAST CONVERT

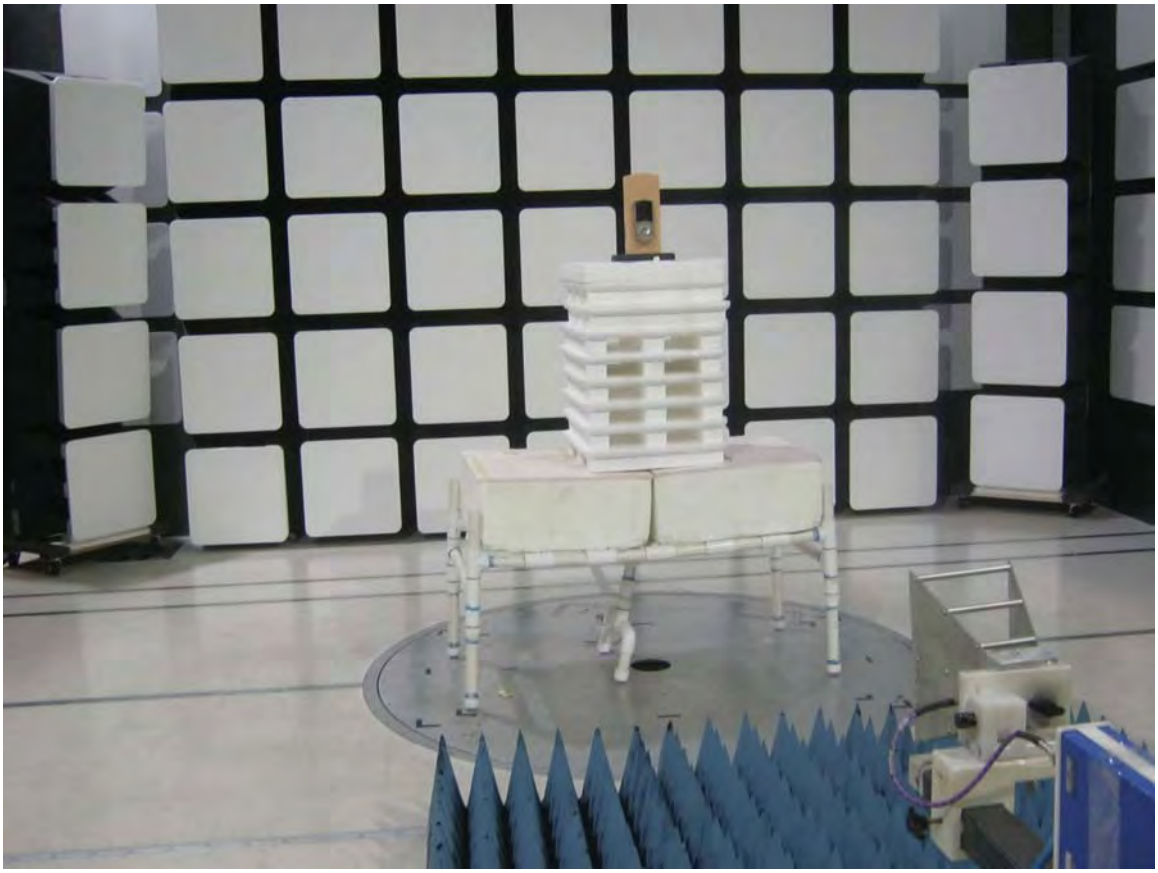
PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS



REAR VIEW

SPECTRUM BRANDS, INC.
OHM ZIGBEE V.2
MODEL: 450202
FCC SUBPART B AND C – RADIATED EMISSIONS – BELOW 1 GHz
INSIDE THE COMCAST CONVERT

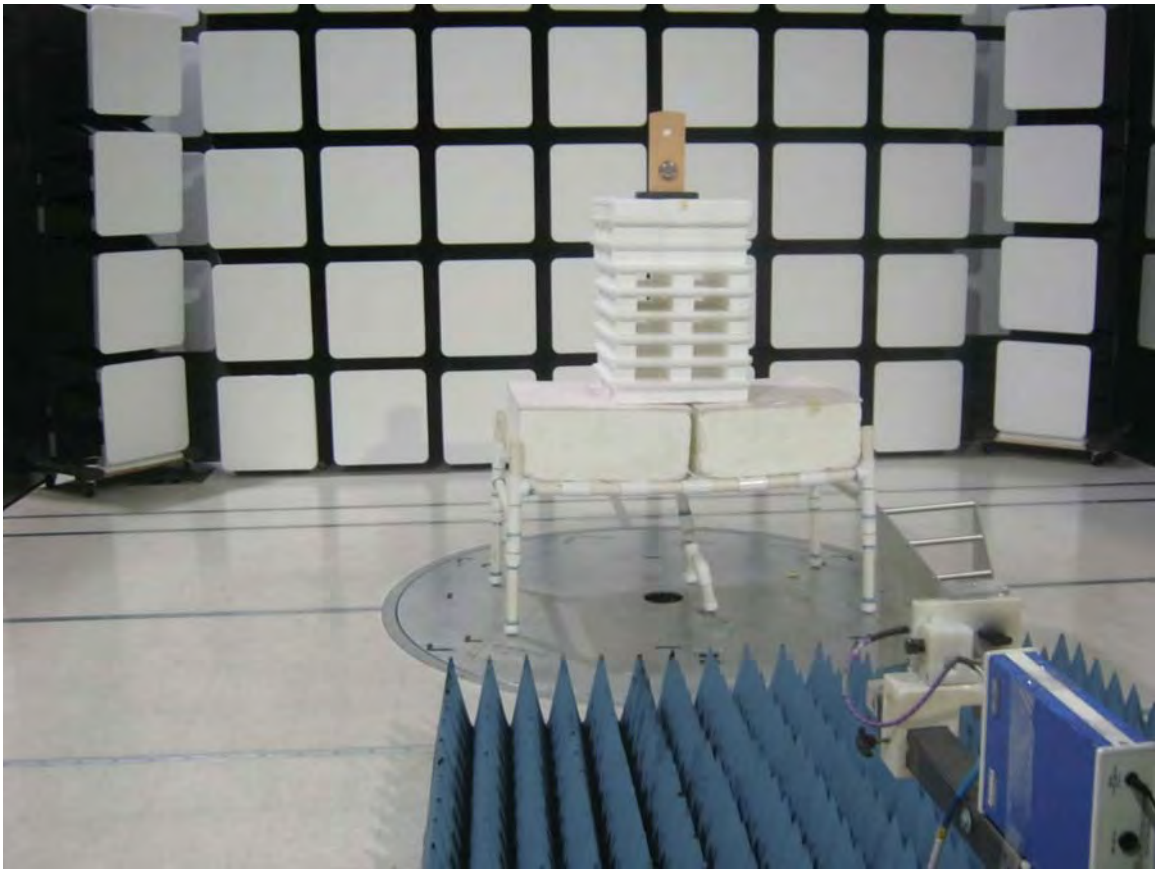
PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS



FRONT VIEW

SPECTRUM BRANDS, INC.
OHM ZIGBEE V.2
MODEL: 450202
FCC SUBPART B AND C – RADIATED EMISSIONS – ABOVE 1 GHz
INSIDE THE COMCAST CONVERT

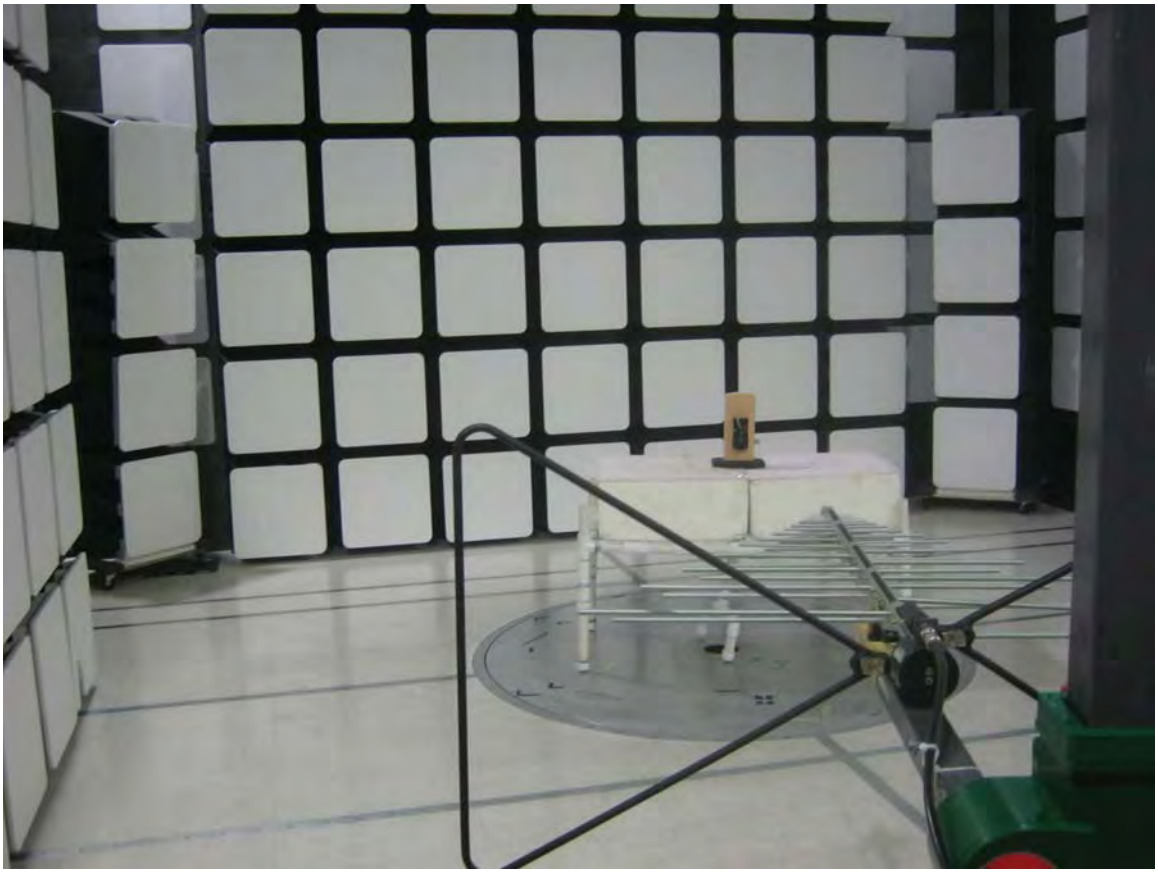
PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS



REAR VIEW

SPECTRUM BRANDS, INC.
OHM ZIGBEE V.2
MODEL: 450202
FCC SUBPART B AND C – RADIATED EMISSIONS – ABOVE 1 GHz
INSIDE THE COMCAST CONVERT

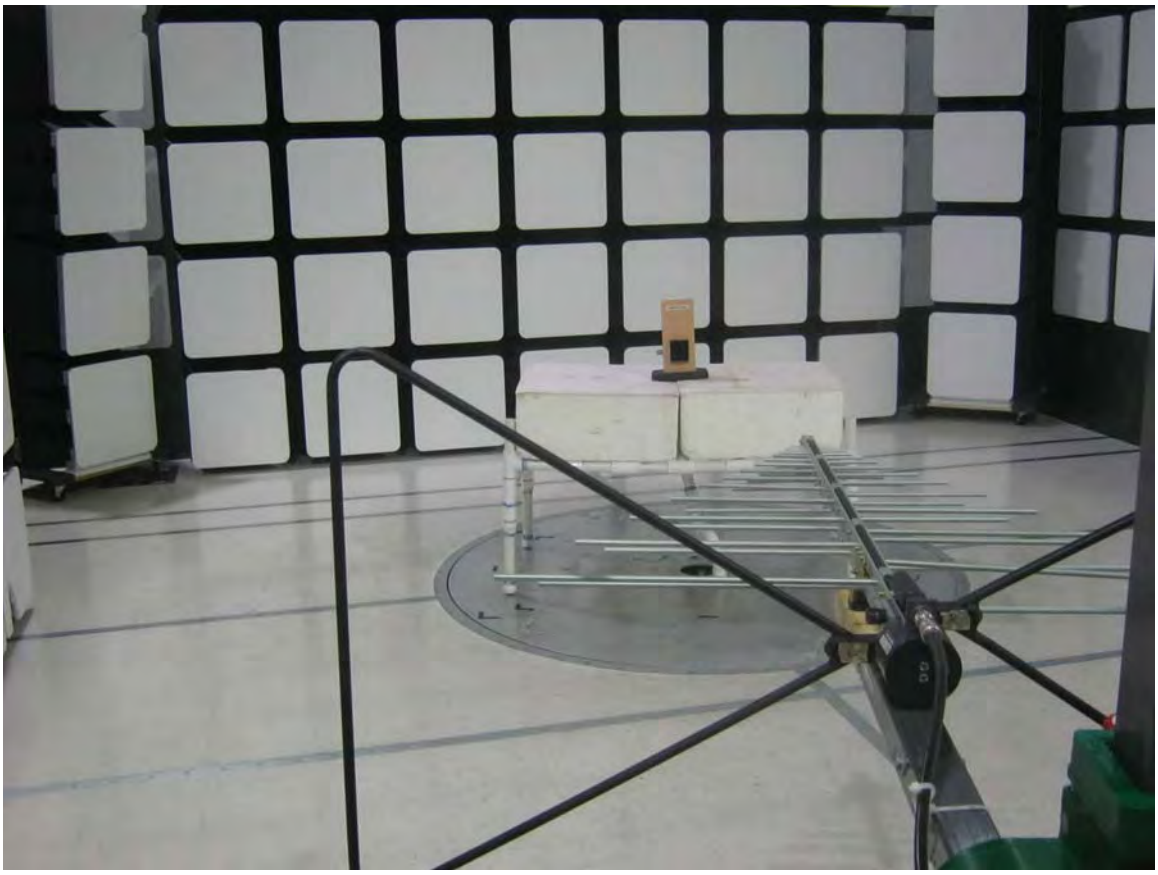
PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS



FRONT VIEW

SPECTRUM BRANDS, INC.
OHM ZIGBEE V.2
MODEL: 450202
FCC SUBPART B AND C – RADIATED EMISSIONS – BELOW 1 GHz
INSIDE THE OBSIDIAN

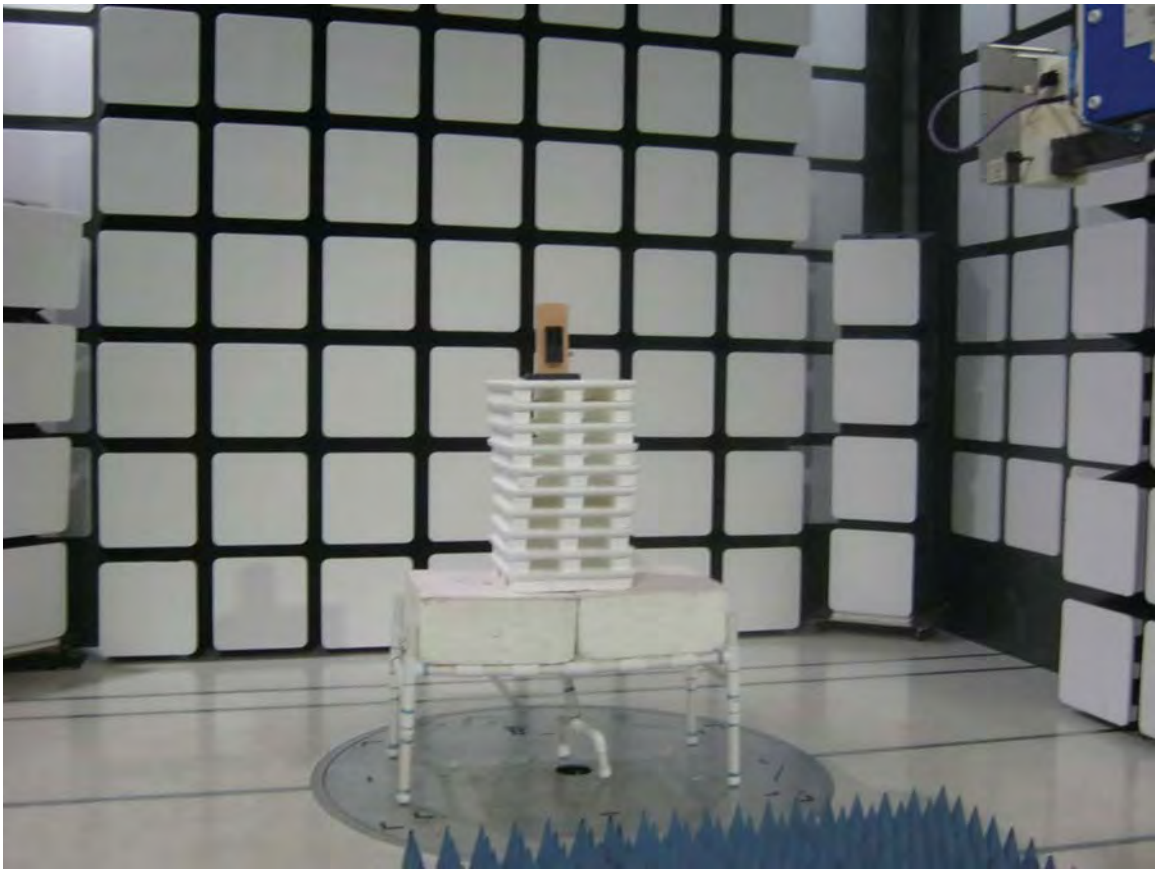
PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS



REAR VIEW

SPECTRUM BRANDS, INC.
OHM ZIGBEE V.2
MODEL: 450202
FCC SUBPART B AND C – RADIATED EMISSIONS – BELOW 1 GHz
INSIDE THE OBSIDIAN

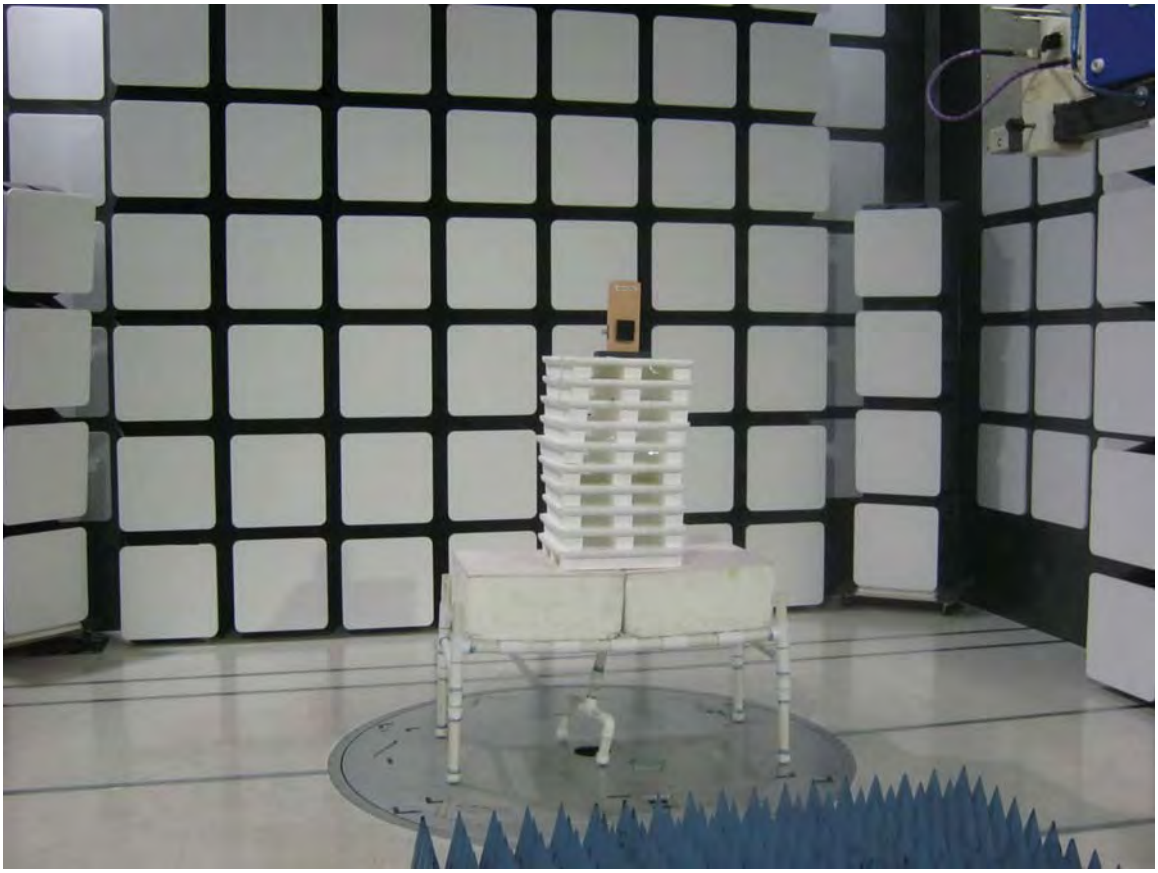
PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS



FRONT VIEW

SPECTRUM BRANDS, INC.
OHM ZIGBEE V.2
MODEL: 450202
FCC SUBPART B AND C – RADIATED EMISSIONS – ABOVE 1 GHz
INSIDE THE OBSIDIAN

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS



REAR VIEW

SPECTRUM BRANDS, INC.
OHM ZIGBEE V.2
MODEL: 450202
FCC SUBPART B AND C – RADIATED EMISSIONS – ABOVE 1 GHz
INSIDE THE OBSIDIAN

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

APPENDIX E

DATA SHEETS

RADIATED EMISSIONS

DATA SHEETS

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the 910 SmartCode Deadbolt

Date: 01/22/2018
Lab: D
Tested By: Kyle Fujimoto

2405 MHz Harmonics - Power Setting = -4
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4810	42.05	V	73.97	-31.92	Peak	153.75	174.95	
4810	24.08	V	53.97	-29.89	Avg	153.75	174.95	
7215	61.12	V	73.97	-12.85	Peak	211.00	206.65	
7215	43.15	V	53.97	-10.82	Avg	211.00	206.65	
9620								**Done via Conducted -**
9620								**Not in Restricted Band**
12025	48.48	V	73.97	-25.49	Peak	279.00	159.07	
12025	30.51	V	53.97	-23.46	Avg	279.00	159.07	
14430								**Done via Conducted -**
14430								**Not in Restricted Band**
16835								**No Emissions**
16835								**Detected**
19240								**No Emissions**
19240								**Detected**
21645								**No Emissions**
21645								**Detected**
24050								**No Emissions**
24050								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the 910 SmartCode Deadbolt

Date: 01/22/2018
Lab: D
Tested By: Kyle Fujimoto

2405 MHz Harmonics - Power Setting = -4
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4810	45.93	H	73.97	-31.92	Peak	155.25	206.65	
4810	27.96	H	53.97	-26.01	Avg	155.25	206.65	
7215	62.04	H	73.97	-11.93	Peak	209.25	111.13	
7215	44.07	H	53.97	-9.90	Avg	209.25	111.13	
9620								**Done via Conducted -**
9620								**Not in Restricted Band**
12025	48.38	H	73.97	-25.59	Peak	359.00	158.95	
12025	30.41	H	53.97	-23.56	Avg	359.00	158.95	
14430								**Done via Conducted -**
14430								**Not in Restricted Band**
16835								**No Emissions**
16835								**Detected**
19240								**No Emissions**
19240								**Detected**
21645								**No Emissions**
21645								**Detected**
24050								**No Emissions**
24050								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the 910 SmartCode Deadbolt

Date: 01/22/2018
Lab: D
Tested By: Kyle Fujimoto

2425 MHz Harmonics - Power Setting = -1
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4850	42.52	V	73.97	-31.45	Peak	146.75	175.31	
4850	24.55	V	53.97	-29.42	Avg	146.75	175.31	
7275	65.28	V	73.97	-8.69	Peak	203.25	127.25	
7275	47.31	V	53.97	-6.66	Avg	203.25	127.25	
9700								**Done via Conducted -**
9700								**Not in Restricted Band**
12125	47.46	V	73.97	-26.51	Peak	69.50	126.89	
12125	29.49	V	53.97	-24.48	Avg	69.50	126.89	
14550								**Done via Conducted -**
14550								**Not in Restricted Band**
16975								**No Emissions**
16975								**Detected**
19400								**No Emissions**
19400								**Detected**
21825								**No Emissions**
21825								**Detected**
24250								**No Emissions**
24250								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the 910 SmartCode Deadbolt

Date: 01/22/2018
Lab: D
Tested By: Kyle Fujimoto

2425 MHz Harmonics - Power Setting = -1
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4850	44.37	H	73.97	-29.60	Peak	223.50	126.89	
4850	26.40	H	53.97	-27.57	Avg	223.50	126.89	
7275	64.78	H	73.97	-9.19	Peak	203.00	111.25	
7275	46.81	H	53.97	-7.16	Avg	203.00	111.25	
9700								**Done via Conducted -**
9700								**Not in Restricted Band**
12125	47.89	H	73.97	-26.08	Peak	46.50	238.65	
12125	29.92	H	53.97	-24.05	Avg	46.50	238.65	
14550								**Done via Conducted -**
14550								**Not in Restricted Band**
16975								**No Emissions**
16975								**Detected**
19400								**No Emissions**
19400								**Detected**
21825								**No Emissions**
21825								**Detected**
24250								**No Emissions**
24250								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the 910 SmartCode Deadbolt

Date: 01/22/2018
Lab: D
Tested By: Kyle Fujimoto

2445 MHz Harmonics - Power Setting = -5
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4890	48.16	V	73.97	-25.81	Peak	179.25	174.83	
4890	30.19	V	53.97	-23.78	Avg	179.25	174.83	
7335	64.01	V	73.97	-9.96	Peak	219.25	222.77	
7335	46.04	V	53.97	-7.93	Avg	219.25	222.77	
9780								**Done via Conducted -**
9780								**Not in Restricted Band**
12225	47.70	V	73.97	-26.27	Peak	193.75	190.77	
12225	29.73	V	53.97	-24.24	Avg	193.75	190.77	
14670								**Done via Conducted -**
14670								**Not in Restricted Band**
17115								**No Emissions**
17115								**Detected**
19560								**No Emissions**
19560								**Detected**
22005								**No Emissions**
22005								**Detected**
24450								**No Emissions**
24450								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the 910 SmartCode Deadbolt

Date: 01/22/2018
Lab: D
Tested By: Kyle Fujimoto

2445 MHz Harmonics - Power Setting = -5
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4890	46.49	H	73.97	-27.48	Peak	119.75	111.37	
4890	28.52	H	53.97	-25.45	Avg	119.75	111.37	
7335	66.03	H	73.97	-7.94	Peak	214.50	111.25	
7335	48.06	H	53.97	-5.91	Avg	214.50	111.25	
9780								**Done via Conducted -**
9780								**Not in Restricted Band**
12225	47.12	H	73.97	-26.85	Peak	160.25	222.77	
12225	29.15	H	53.97	-24.82	Avg	160.25	222.77	
14670								**Done via Conducted -**
14670								**Not in Restricted Band**
17115								**No Emissions**
17115								**Detected**
19560								**No Emissions**
19560								**Detected**
22005								**No Emissions**
22005								**Detected**
24450								**No Emissions**
24450								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the 910 SmartCode Deadbolt

Date: 01/22/2018
Lab: D
Tested By: Kyle Fujimoto

2450 MHz Harmonics - Power Setting = -1
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4900	44.87	V	73.97	-29.10	Peak	193.00	127.25	
4900	26.90	V	53.97	-27.07	Avg	193.00	127.25	
7350	68.70	V	73.97	-5.27	Peak	194.50	238.77	
7350	50.73	V	53.97	-3.24	Avg	194.50	238.77	
9800								**Done via Conducted -**
9800								**Not in Restricted Band**
12250	53.95	V	73.97	-20.02	Peak	111.25	111.37	
12250	35.98	V	53.97	-17.99	Avg	111.25	111.37	
14700								**Done via Conducted -**
14700								**Not in Restricted Band**
17150								**No Emissions**
17150								**Detected**
19600								**No Emissions**
19600								**Detected**
22050								**No Emissions**
22050								**Detected**
24500								**No Emissions**
24500								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Installed Inside the 910 SmartCode Deadbolt

Date: 01/22/2018
Lab: D
Tested By: Kyle Fujimoto

2450 MHz Harmonics - Power Setting = -1
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4900	40.75	H	73.97	-33.22	Peak	148.50	190.77	
4900	22.78	H	53.97	-31.19	Avg	148.50	190.77	
7350	64.41	H	73.97	-9.56	Peak	162.25	127.25	
7350	46.44	H	53.97	-7.53	Avg	162.25	127.25	
9800								**Done via Conducted -**
9800								**Not in Restricted Band**
12250	51.50	H	73.97	-22.47	Peak	183.00	127.37	
12250	33.53	H	53.97	-20.44	Avg	183.00	127.37	
14700								**Done via Conducted -**
14700								**Not in Restricted Band**
17150								**No Emissions**
17150								**Detected**
19600								**No Emissions**
19600								**Detected**
22050								**No Emissions**
22050								**Detected**
24500								**No Emissions**
24500								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the 910 SmartCode Deadbolt

Date: 01/22/2018
Lab: D
Tested By: Kyle Fujimoto

2475 MHz Harmonics - Power Setting = 0
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4950	46.96	V	73.97	-27.01	Peak	165.50	158.83	
4950	28.99	V	53.97	-24.98	Avg	165.50	158.83	
7425	71.73	V	73.97	-2.24	Peak	192.25	222.77	
7425	53.76	V	53.97	-0.21	Avg	192.25	222.77	
9900								**Done via Conducted -**
9900								**Not in Restricted Band**
12375	53.17	V	73.97	-20.80	Peak	201.75	111.25	
12375	35.20	V	53.97	-18.77	Avg	201.75	111.25	
14850								**Done via Conducted -**
14850								**Not in Restricted Band**
17325								**No Emissions**
17325								**Detected**
19800								**No Emissions**
19800								**Detected**
22275								**No Emissions**
22275								**Detected**
24750								**No Emissions**
24750								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the 910 SmartCode Deadbolt

Date: 01/22/2018
Lab: D
Tested By: Kyle Fujimoto

2475 MHz Harmonics - Power Setting = 0
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4950	44.73	H	73.97	-29.24	Peak	136.50	143.19	
4950	26.76	H	53.97	-27.21	Avg	136.50	143.19	
7425	67.52	H	73.97	-6.45	Peak	153.25	111.37	
7425	49.55	H	53.97	-4.42	Avg	153.25	111.37	
9900								**Done via Conducted -**
9900								**Not in Restricted Band**
12375	58.78	H	73.97	-15.19	Peak	180.00	111.43	
12375	40.81	H	53.97	-13.16	Avg	180.00	111.43	
14850								**Done via Conducted -**
14850								**Not in Restricted Band**
17325								**No Emissions**
17325								**Detected**
19800								**No Emissions**
19800								**Detected**
22275								**No Emissions**
22275								**Detected**
24750								**No Emissions**
24750								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the 910 SmartCode Deadbolt

Date: 01/22/2018
Lab: D
Tested By: Kyle Fujimoto

2480 MHz Harmonics - Power Setting = -a
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4960	46.07	V	73.97	-27.90	Peak	232.25	159.31	
4960	28.10	V	53.97	-25.87	Avg	232.25	159.31	
7440	55.12	V	73.97	-18.85	Peak	181.25	111.19	
7440	37.15	V	53.97	-16.82	Avg	181.25	111.19	
9920								**Done via Conducted -**
9920								**Not in Restricted Band**
12400	45.69	V	73.97	-28.28	Peak	360.00	185.25	
12400	27.72	V	53.97	-26.25	Avg	360.00	185.25	
14880								**Done via Conducted -**
14880								**Not in Restricted Band**
17360								**No Emissions**
17360								**Detected**
19840								**No Emissions**
19840								**Detected**
22320								**No Emissions**
22320								**Detected**
24800								**No Emissions**
24800								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the 910 SmartCode Deadbolt

Date: 01/22/2018
Lab: D
Tested By: Kyle Fujimoto

2480 MHz Harmonics - Power Setting = -a
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4960	59.17	H	73.97	-14.80	Peak	335.25	179.97	
4960	41.20	H	53.97	-12.77	Avg	335.25	179.97	
7440	64.92	H	73.97	-9.05	Peak	57.00	130.59	
7440	46.95	H	53.97	-7.02	Avg	57.00	130.59	
9920								**Done via Conducted -**
9920								**Not in Restricted Band**
12400	47.11	H	73.97	-26.86	Peak	218.50	222.00	
12400	29.14	H	53.97	-24.83	Avg	218.50	222.00	
14880								**Done via Conducted -**
14880								**Not in Restricted Band**
17360								**No Emissions**
17360								**Detected**
19840								**No Emissions**
19840								**Detected**
22320								**No Emissions**
22320								**Detected**
24800								**No Emissions**
24800								**Detected**

FCC 15.247 and FCC Class B

Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the 910 SmartCode Deadbolt

Date: 01/22/2018
Lab: D
Tested By: Kyle Fujimoto

Non Harmonic Emissions from the Tx and Digital Portion -- 10 kHz to 30 MHz
Non Harmonic Emissions from the Tx and Digital Portion – 1 GHz to 25 GHz
Vertical and Horizontal Polarizations

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
								No Emissions Found for the
								Digital Portion
								from 10 kHz to 30 MHz
								for both Vertical and Horizontal
								Polarizations
								No Non Harmonic Emissions Found
								for the Tx Mode
								from 10 kHz to 30 MHz
								for both Vertical and Horizontal
								Polarizations
								No Emissions Found for the
								Digital Portion
								from 1 GHz to 25 GHz
								for both Vertical and Horizontal
								Polarizations
								No Non Harmonic Emissions Found
								for the Tx Mode
								from 1 GHz to 25 GHz
								for both Vertical and Horizontal
								Polarizations

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the 912 SmartCode Lever

Date: 01/23/2018
Lab: D
Tested By: Kyle Fujimoto

2405 MHz Harmonics - Power Setting = -4
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4810	47.05	V	73.97	-26.92	Peak	171.50	110.95	
4810	29.08	V	53.97	-24.89	Avg	171.50	110.95	
7215	56.10	V	73.97	-17.87	Peak	197.00	110.89	
7215	38.13	V	53.97	-15.84	Avg	197.00	110.89	
9620								**Done via Conducted -**
9620								**Not in Restricted Band**
12025	33.16	V	73.97	-40.81	Peak	121.50	159.07	
12025	15.19	V	53.97	-38.78	Avg	121.50	159.07	
14430								**Done via Conducted -**
14430								**Not in Restricted Band**
16835								**No Emissions**
16835								**Detected**
19240								**No Emissions**
19240								**Detected**
21645								**No Emissions**
21645								**Detected**
24050								**No Emissions**
24050								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the 912 SmartCode Lever

Date: 01/23/2018
Lab: D
Tested By: Kyle Fujimoto

2405 MHz Harmonics - Power Setting = -4
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4810	49.21	H	73.97	-26.92	Peak	181.50	127.25	
4810	31.24	H	53.97	-22.73	Avg	181.50	127.25	
7215	58.12	H	73.97	-15.85	Peak	166.00	111.19	
7215	40.15	H	53.97	-13.82	Avg	166.00	111.19	
9620								**Done via Conducted -**
9620								**Not in Restricted Band**
12025	33.02	H	73.97	-40.95	Peak	146.00	127.01	
12025	15.05	H	53.97	-38.92	Avg	146.00	127.01	
14430								**Done via Conducted -**
14430								**Not in Restricted Band**
16835								**No Emissions**
16835								**Detected**
19240								**No Emissions**
19240								**Detected**
21645								**No Emissions**
21645								**Detected**
24050								**No Emissions**
24050								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the 912 SmartCode Lever

Date: 01/23/2018
Lab: D
Tested By: Kyle Fujimoto

2425 MHz Harmonics - Power Setting = -1
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4850	50.15	V	73.97	-23.82	Peak	359.75	111.37	
4850	32.18	V	53.97	-21.79	Avg	359.75	111.37	
7275	60.49	V	73.97	-13.48	Peak	14.75	159.01	
7275	42.52	V	53.97	-11.45	Avg	14.75	159.01	
9700								**Done via Conducted -**
9700								**Not in Restricted Band**
12125	31.27	V	73.97	-42.70	Peak	243.00	190.83	
12125	13.30	V	53.97	-40.67	Avg	243.00	190.83	
14550								**Done via Conducted -**
14550								**Not in Restricted Band**
16975								**No Emissions**
16975								**Detected**
19400								**No Emissions**
19400								**Detected**
21825								**No Emissions**
21825								**Detected**
24250								**No Emissions**
24250								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the 912 SmartCode Lever

Date: 01/23/2018
Lab: D
Tested By: Kyle Fujimoto

2425 MHz Harmonics - Power Setting = -1
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4850	49.99	H	73.97	-23.98	Peak	1.75	143.13	
4850	32.02	H	53.97	-21.95	Avg	1.75	143.13	
7275	61.76	H	73.97	-12.21	Peak	342.50	111.13	
7275	43.79	H	53.97	-10.18	Avg	342.50	111.13	
9700								**Done via Conducted -**
9700								**Not in Restricted Band**
12125	32.57	H	73.97	-41.40	Peak	42.25	143.13	
12125	14.60	H	53.97	-39.37	Avg	42.25	143.13	
14550								**Done via Conducted -**
14550								**Not in Restricted Band**
16975								**No Emissions**
16975								**Detected**
19400								**No Emissions**
19400								**Detected**
21825								**No Emissions**
21825								**Detected**
24250								**No Emissions**
24250								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the 912 SmartCode Lever

Date: 01/23/2018
Lab: D
Tested By: Kyle Fujimoto

2445 MHz Harmonics - Power Setting = -5
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4890	53.06	V	73.97	-20.91	Peak	0.50	222.17	
4890	35.09	V	53.97	-18.88	Avg	0.50	222.17	
7335	53.00	V	73.97	-20.97	Peak	359.25	111.19	
7335	35.03	V	53.97	-18.94	Avg	359.25	111.19	
9780								**Done via Conducted -**
9780								**Not in Restricted Band**
12225	32.84	V	73.97	-41.13	Peak	79.50	127.31	
12225	14.87	V	53.97	-39.10	Avg	79.50	127.31	
14670								**Done via Conducted -**
14670								**Not in Restricted Band**
17115								**No Emissions**
17115								**Detected**
19560								**No Emissions**
19560								**Detected**
22005								**No Emissions**
22005								**Detected**
24450								**No Emissions**
24450								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the 912 SmartCode Lever

Date: 01/23/2018
Lab: D
Tested By: Kyle Fujimoto

2445 MHz Harmonics - Power Setting = -5
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4890	53.16	H	73.97	-20.81	Peak	0.25	222.53	
4890	35.19	H	53.97	-18.78	Avg	0.25	222.53	
7335	53.81	H	73.97	-20.16	Peak	12.00	174.89	
7335	35.84	H	53.97	-18.13	Avg	12.00	174.89	
9780								**Done via Conducted -**
9780								**Not in Restricted Band**
12225	35.67	H	73.97	-38.30	Peak	78.00	111.07	
12225	17.70	H	53.97	-36.27	Avg	78.00	111.07	
14670								**Done via Conducted -**
14670								**Not in Restricted Band**
17115								**No Emissions**
17115								**Detected**
19560								**No Emissions**
19560								**Detected**
22005								**No Emissions**
22005								**Detected**
24450								**No Emissions**
24450								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the 912 SmartCode Lever

Date: 01/23/2018
Lab: D
Tested By: Kyle Fujimoto

2450 MHz Harmonics - Power Setting = -1
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4900	49.57	V	73.97	-24.40	Peak	157.25	159.01	
4900	31.60	V	53.97	-22.37	Avg	157.25	159.01	
7350	62.21	V	73.97	-11.76	Peak	164.25	111.31	
7350	44.24	V	53.97	-9.73	Avg	164.25	111.31	
9800								**Done via Conducted -**
9800								**Not in Restricted Band**
12250	37.10	V	73.97	-36.87	Peak	201.75	111.37	
12250	19.13	V	53.97	-34.84	Avg	201.75	111.37	
14700								**Done via Conducted -**
14700								**Not in Restricted Band**
17150								**No Emissions**
17150								**Detected**
19600								**No Emissions**
19600								**Detected**
22050								**No Emissions**
22050								**Detected**
24500								**No Emissions**
24500								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the 912 SmartCode Lever

Date: 01/23/2018
Lab: D
Tested By: Kyle Fujimoto

2450 MHz Harmonics - Power Setting = -1
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4900	50.76	H	73.97	-23.21	Peak	176.00	222.59	
4900	32.79	H	53.97	-21.18	Avg	176.00	222.59	
7350	61.07	H	73.97	-12.90	Peak	193.25	174.59	
7350	43.10	H	53.97	-10.87	Avg	193.25	174.59	
9800								**Done via Conducted -**
9800								**Not in Restricted Band**
12250	42.09	H	73.97	-31.88	Peak	207.75	222.65	
12250	24.12	H	53.97	-29.85	Avg	207.75	222.65	
14700								**Done via Conducted -**
14700								**Not in Restricted Band**
17150								**No Emissions**
17150								**Detected**
19600								**No Emissions**
19600								**Detected**
22050								**No Emissions**
22050								**Detected**
24500								**No Emissions**
24500								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the 912 SmartCode Lever

Date: 01/23/2018
Lab: D
Tested By: Kyle Fujimoto

2475 MHz Harmonics - Power Setting = 0
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4950	52.16	V	73.97	-21.81	Peak	156.50	174.95	
4950	34.19	V	53.97	-19.78	Avg	156.50	174.95	
7425	64.48	V	73.97	-9.49	Peak	158.50	111.97	
7425	46.51	V	53.97	-7.46	Avg	158.50	111.97	
9900								**Done via Conducted -**
9900								**Not in Restricted Band**
12375	43.22	V	73.97	-30.75	Peak	182.75	111.19	
12375	25.25	V	53.97	-28.72	Avg	182.75	111.19	
14850								**Done via Conducted -**
14850								**Not in Restricted Band**
17325								**No Emissions**
17325								**Detected**
19800								**No Emissions**
19800								**Detected**
22275								**No Emissions**
22275								**Detected**
24750								**No Emissions**
24750								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the 912 SmartCode Lever

Date: 01/23/2018
Lab: D
Tested By: Kyle Fujimoto

2475 MHz Harmonics - Power Setting = 0
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4950	54.14	H	73.97	-19.83	Peak	95.50	143.13	
4950	36.17	H	53.97	-17.80	Avg	95.50	143.13	
7425	70.29	H	73.97	-3.68	Peak	159.00	111.25	
7425	52.32	H	53.97	-1.65	Avg	159.00	111.25	
9900								**Done via Conducted -**
9900								**Not in Restricted Band**
12375	52.86	H	73.97	-21.11	Peak	180.50	190.71	
12375	34.89	H	53.97	-19.08	Avg	180.50	190.71	
14850								**Done via Conducted -**
14850								**Not in Restricted Band**
17325								**No Emissions**
17325								**Detected**
19800								**No Emissions**
19800								**Detected**
22275								**No Emissions**
22275								**Detected**
24750								**No Emissions**
24750								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the 912 SmartCode Lever

Date: 01/23/2018
Lab: D
Tested By: Kyle Fujimoto

2480 MHz Harmonics - Power Setting = -a
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4960	47.53	V	73.97	-26.44	Peak	153.75	174.89	
4960	29.56	V	53.97	-24.41	Avg	153.75	174.89	
7440	47.53	V	73.97	-26.44	Peak	158.25	111.37	
7440	29.56	V	53.97	-24.41	Avg	158.25	111.37	
9920								**Done via Conducted -**
9920								**Not in Restricted Band**
12400	31.21	V	73.97	-42.76	Peak	56.00	127.43	
12400	13.24	V	53.97	-40.73	Avg	56.00	127.43	
14880								**Done via Conducted -**
14880								**Not in Restricted Band**
17360								**No Emissions**
17360								**Detected**
19840								**No Emissions**
19840								**Detected**
22320								**No Emissions**
22320								**Detected**
24800								**No Emissions**
24800								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the 912 SmartCode Lever

Date: 01/23/2018
Lab: D
Tested By: Kyle Fujimoto

2480 MHz Harmonics - Power Setting = -a
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4960	46.66	H	73.97	-27.31	Peak	168.25	190.95	
4960	28.69	H	53.97	-25.28	Avg	168.25	190.95	
7440	43.52	H	73.97	-30.45	Peak	189.75	111.43	
7440	25.55	H	53.97	-28.42	Avg	189.75	111.43	
9920								**Done via Conducted -**
9920								**Not in Restricted Band**
12400	31.29	H	73.97	-42.68	Peak	188.75	143.07	
12400	13.32	H	53.97	-40.65	Avg	188.75	143.07	
14880								**Done via Conducted -**
14880								**Not in Restricted Band**
17360								**No Emissions**
17360								**Detected**
19840								**No Emissions**
19840								**Detected**
22320								**No Emissions**
22320								**Detected**
24800								**No Emissions**
24800								**Detected**

FCC 15.247 and FCC Class B
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the 912 SmartCode Lever

Date: 01/23/2018
Lab: D
Tested By: Kyle Fujimoto

Non Harmonic Emissions from the Tx and Digital Portion – 10 kHz to 30 MHz
Non Harmonic Emissions from the Tx and Digital Portion – 1 GHz to 25 GHz
Vertical and Horizontal Polarizations

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
								No Emissions Found for the
								Digital Portion
								from 10 kHz to 30 MHz
								for both Vertical and Horizontal
								Polarizations
								No Non Harmonic Emissions Found
								for the Tx Mode
								from 10 kHz to 30 MHz
								for both Vertical and Horizontal
								Polarizations
								No Emissions Found for the
								Digital Portion
								from 1 GHz to 25 GHz
								for both Vertical and Horizontal
								Polarizations
								No Non Harmonic Emissions Found
								for the Tx Mode
								from 1 GHz to 25 GHz
								for both Vertical and Horizontal
								Polarizations

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the 916 SmartCode Deadbolt

Date: 01/24/2018
Lab: D
Tested By: Kyle Fujimoto

2405 MHz Harmonics - Power Setting = -4
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4810	53.41	V	73.97	-20.56	Peak	5.50	159.25	
4810	35.44	V	53.97	-18.53	Avg	5.50	159.25	
7215	69.38	V	73.97	-4.59	Peak	340.25	111.49	
7215	51.41	V	53.97	-2.56	Avg	340.25	111.49	
9620								**Done via Conducted -**
9620								**Not in Restricted Band**
12025	51.85	V	73.97	-22.12	Peak	20.75	111.37	
12025	33.88	V	53.97	-20.09	Avg	20.75	111.37	
14430								**Done via Conducted -**
14430								**Not in Restricted Band**
16835								**No Emissions**
16835								**Detected**
19240								**No Emissions**
19240								**Detected**
21645								**No Emissions**
21645								**Detected**
24050								**No Emissions**
24050								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the 916 SmartCode Deadbolt

Date: 01/24/2018
Lab: D
Tested By: Kyle Fujimoto

2405 MHz Harmonics - Power Setting = -4
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4810	54.91	H	73.97	-20.56	Peak	3.75	175.61	
4810	36.94	H	53.97	-17.03	Avg	3.75	175.61	
7215	69.98	H	73.97	-3.99	Peak	344.75	111.49	
7215	52.01	H	53.97	-1.96	Avg	344.75	111.49	
9620								**Done via Conducted -**
9620								**Not in Restricted Band**
12025	49.46	H	73.97	-24.51	Peak	294.75	143.13	
12025	31.49	H	53.97	-22.48	Avg	294.75	143.13	
14430								**Done via Conducted -**
14430								**Not in Restricted Band**
16835								**No Emissions**
16835								**Detected**
19240								**No Emissions**
19240								**Detected**
21645								**No Emissions**
21645								**Detected**
24050								**No Emissions**
24050								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the 916 SmartCode Deadbolt

Date: 01/24/2018
Lab: D
Tested By: Kyle Fujimoto

2425 MHz Harmonics - Power Setting = -1
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4850	51.30	V	73.97	-22.67	Peak	5.75	190.89	
4850	33.33	V	53.97	-20.64	Avg	5.75	190.89	
7275	68.04	V	73.97	-5.93	Peak	0.00	127.19	
7275	50.07	V	53.97	-3.90	Avg	0.00	127.19	
9700								**Done via Conducted -**
9700								**Not in Restricted Band**
12125	48.84	V	73.97	-25.13	Peak	1.75	174.95	
12125	30.87	V	53.97	-23.10	Avg	1.75	174.95	
14550								**Done via Conducted -**
14550								**Not in Restricted Band**
16975								**No Emissions**
16975								**Detected**
19400								**No Emissions**
19400								**Detected**
21825								**No Emissions**
21825								**Detected**
24250								**No Emissions**
24250								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the 916 SmartCode Deadbolt

Date: 01/24/2018
Lab: D
Tested By: Kyle Fujimoto

2425 MHz Harmonics - Power Setting = -1
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4850	54.10	H	73.97	-19.87	Peak	358.00	175.01	
4850	36.13	H	53.97	-17.84	Avg	358.00	175.01	
7275	71.13	H	73.97	-2.84	Peak	20.50	127.25	
7275	53.16	H	53.97	-0.81	Avg	20.50	127.25	
9700								**Done via Conducted -**
9700								**Not in Restricted Band**
12125	50.53	H	73.97	-23.44	Peak	359.75	127.37	
12125	32.56	H	53.97	-21.41	Avg	359.75	127.37	
14550								**Done via Conducted -**
14550								**Not in Restricted Band**
16975								**No Emissions**
16975								**Detected**
19400								**No Emissions**
19400								**Detected**
21825								**No Emissions**
21825								**Detected**
24250								**No Emissions**
24250								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the 916 SmartCode Deadbolt

Date: 01/24/2018
Lab: D
Tested By: Kyle Fujimoto

2445 MHz Harmonics - Power Setting = -5
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4890	54.30	V	73.97	-19.67	Peak	352.75	159.07	
4890	36.33	V	53.97	-17.64	Avg	352.75	159.07	
7335	64.41	V	73.97	-9.56	Peak	65.75	159.19	
7335	46.44	V	53.97	-7.53	Avg	65.75	159.19	
9780								**Done via Conducted -**
9780								**Not in Restricted Band**
12225	48.85	V	73.97	-25.12	Peak	95.00	222.77	
12225	30.88	V	53.97	-23.09	Avg	95.00	222.77	
14670								**Done via Conducted -**
14670								**Not in Restricted Band**
17115								**No Emissions**
17115								**Detected**
19560								**No Emissions**
19560								**Detected**
22005								**No Emissions**
22005								**Detected**
24450								**No Emissions**
24450								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the 916 SmartCode Deadbolt

Date: 01/24/2018
Lab: D
Tested By: Kyle Fujimoto

2445 MHz Harmonics - Power Setting = -5
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4890	57.96	H	73.97	-16.01	Peak	0.50	190.77	
4890	39.99	H	53.97	-13.98	Avg	0.50	190.77	
7335	65.16	H	73.97	-8.81	Peak	336.50	111.31	
7335	47.19	H	53.97	-6.78	Avg	336.50	111.31	
9780								**Done via Conducted -**
9780								**Not in Restricted Band**
12225	47.46	H	73.97	-26.51	Peak	334.50	111.25	
12225	29.49	H	53.97	-24.48	Avg	334.50	111.25	
14670								**Done via Conducted -**
14670								**Not in Restricted Band**
17115								**No Emissions**
17115								**Detected**
19560								**No Emissions**
19560								**Detected**
22005								**No Emissions**
22005								**Detected**
24450								**No Emissions**
24450								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the 916 SmartCode Deadbolt

Date: 01/24/2018
Lab: D
Tested By: Kyle Fujimoto

2450 MHz Harmonics - Power Setting = -1
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4900	53.19	V	73.97	-20.78	Peak	358.50	111.43	
4900	35.22	V	53.97	-18.75	Avg	358.50	111.43	
7350	71.02	V	73.97	-2.95	Peak	25.50	111.37	
7350	53.05	V	53.97	-0.92	Avg	25.50	111.37	
9800								**Done via Conducted -**
9800								**Not in Restricted Band**
12250	58.05	V	73.97	-15.92	Peak	299.25	222.95	
12250	40.08	V	53.97	-13.89	Avg	299.25	222.95	
14700								**Done via Conducted -**
14700								**Not in Restricted Band**
17150								**No Emissions**
17150								**Detected**
19600								**No Emissions**
19600								**Detected**
22050								**No Emissions**
22050								**Detected**
24500								**No Emissions**
24500								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the 916 SmartCode Deadbolt

Date: 01/24/2018
Lab: D
Tested By: Kyle Fujimoto

2450 MHz Harmonics - Power Setting = -1
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4900	54.80	H	73.97	-19.17	Peak	0.00	174.83	
4900	36.83	H	53.97	-17.14	Avg	0.00	174.83	
7350	67.68	H	73.97	-6.29	Peak	326.50	111.32	
7350	49.71	H	53.97	-4.26	Avg	326.50	111.32	
9800								**Done via Conducted -**
9800								**Not in Restricted Band**
12250	55.56	H	73.97	-18.41	Peak	40.00	222.59	
12250	37.59	H	53.97	-16.38	Avg	40.00	222.59	
14700								**Done via Conducted -**
14700								**Not in Restricted Band**
17150								**No Emissions**
17150								**Detected**
19600								**No Emissions**
19600								**Detected**
22050								**No Emissions**
22050								**Detected**
24500								**No Emissions**
24500								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the 916 SmartCode Deadbolt

Date: 01/24/2018
Lab: D
Tested By: Kyle Fujimoto

2475 MHz Harmonics - Power Setting = 0
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4950	58.45	V	73.97	-15.52	Peak	354.75	111.43	
4950	40.48	V	53.97	-13.49	Avg	354.75	111.43	
7425	69.39	V	73.97	-4.58	Peak	0.75	191.01	
7425	52.42	V	53.97	-2.55	Avg	0.75	191.01	
9900								**Done via Conducted -**
9900								**Not in Restricted Band**
12375	65.12	V	73.97	-8.85	Peak	56.75	143.25	
12375	47.15	V	53.97	-6.82	Avg	56.75	143.25	
14850								**Done via Conducted -**
14850								**Not in Restricted Band**
17325								**No Emissions**
17325								**Detected**
19800								**No Emissions**
19800								**Detected**
22275								**No Emissions**
22275								**Detected**
24750								**No Emissions**
24750								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the 916 SmartCode Deadbolt

Date: 01/24/2018
Lab: D
Tested By: Kyle Fujimoto

2475 MHz Harmonics - Power Setting = 0
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4950	57.20	H	73.97	-16.77	Peak	324.00	175.13	
4950	39.23	H	53.97	-14.74	Avg	324.00	175.13	
7425	70.16	H	73.97	-3.81	Peak	25.50	127.31	
7425	52.19	H	53.97	-1.78	Avg	25.50	127.31	
9900								**Done via Conducted -**
9900								**Not in Restricted Band**
12375	64.47	H	73.97	-9.50	Peak	329.25	159.13	
12375	46.50	H	53.97	-7.47	Avg	329.25	159.13	
14850								**Done via Conducted -**
14850								**Not in Restricted Band**
17325								**No Emissions**
17325								**Detected**
19800								**No Emissions**
19800								**Detected**
22275								**No Emissions**
22275								**Detected**
24750								**No Emissions**
24750								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the 916 SmartCode Deadbolt

Date: 01/24/2018
Lab: D
Tested By: Kyle Fujimoto

2480 MHz Harmonics - Power Setting = -a
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4960	42.59	V	73.97	-31.38	Peak	356.75	250.00	
4960	24.62	V	53.97	-29.35	Avg	356.75	250.00	
7440	57.85	V	73.97	-16.12	Peak	78.50	143.07	
7440	39.88	V	53.97	-14.09	Avg	78.50	143.07	
9920								**Done via Conducted -**
9920								**Not in Restricted Band**
12400	47.73	V	73.97	-26.24	Peak	336.75	158.71	
12400	29.76	V	53.97	-24.21	Avg	336.75	158.71	
14880								**Done via Conducted -**
14880								**Not in Restricted Band**
17360								**No Emissions**
17360								**Detected**
19840								**No Emissions**
19840								**Detected**
22320								**No Emissions**
22320								**Detected**
24800								**No Emissions**
24800								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the 916 SmartCode Deadbolt

Date: 01/24/2018
Lab: D
Tested By: Kyle Fujimoto

2480 MHz Harmonics - Power Setting = -a
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4960	55.07	H	73.97	-18.90	Peak	0.00	159.01	
4960	37.10	H	53.97	-16.87	Avg	0.00	159.01	
7440	56.70	H	73.97	-17.27	Peak	340.50	111.19	
7440	38.73	H	53.97	-15.24	Avg	340.50	111.19	
9920								**Done via Conducted -**
9920								**Not in Restricted Band**
12400	47.23	H	73.97	-26.74	Peak	165.25	174.77	
12400	29.26	H	53.97	-24.71	Avg	165.25	174.77	
14880								**Done via Conducted -**
14880								**Not in Restricted Band**
17360								**No Emissions**
17360								**Detected**
19840								**No Emissions**
19840								**Detected**
22320								**No Emissions**
22320								**Detected**
24800								**No Emissions**
24800								**Detected**

FCC 15.247 and FCC Class B

Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the 916 SmartCode Deadbolt

Date: 01/24/2018
Lab: D
Tested By: Kyle Fujimoto

Non Harmonic Emissions from the Tx and Digital Portion -- 10 kHz to 30 MHz
Non Harmonic Emissions from the Tx and Digital Portion – 1 GHz to 25 GHz
Vertical and Horizontal Polarizations

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
								No Emissions Found for the
								Digital Portion
								from 10 kHz to 30 MHz
								for both Vertical and Horizontal
								Polarizations
								No Non Harmonic Emissions Found
								for the Tx Mode
								from 10 kHz to 30 MHz
								for both Vertical and Horizontal
								Polarizations
								No Emissions Found for the
								Digital Portion
								from 1 GHz to 25 GHz
								for both Vertical and Horizontal
								Polarizations
								No Non Harmonic Emissions Found
								for the Tx Mode
								from 1 GHz to 25 GHz
								for both Vertical and Horizontal
								Polarizations

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the Obsidian

Date: 01/26/2018
Lab: D
Tested By: Kyle Fujimoto

2405 MHz Harmonics - Power Setting = -4
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4810	52.17	V	73.97	-21.80	Peak	171.00	159.19	
4810	34.20	V	53.97	-19.77	Avg	171.00	159.19	
7215	58.51	V	73.97	-15.46	Peak	224.50	111.31	
7215	40.54	V	53.97	-13.43	Avg	224.50	111.31	
9620								**Done via Conducted -**
9620								**Not in Restricted Band**
12025	35.20	V	73.97	-38.77	Peak	210.50	223.07	
12025	17.23	V	53.97	-36.74	Avg	210.50	223.07	
14430								**Done via Conducted -**
14430								**Not in Restricted Band**
16835								**No Emissions**
16835								**Detected**
19240								**No Emissions**
19240								**Detected**
21645								**No Emissions**
21645								**Detected**
24050								**No Emissions**
24050								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the Obsidian

Date: 01/26/2018
Lab: D
Tested By: Kyle Fujimoto

2405 MHz Harmonics - Power Setting = -4
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4810	38.41	H	73.97	-21.80	Peak	151.00	143.07	
4810	20.44	H	53.97	-33.53	Avg	151.00	143.07	
7215	55.96	H	73.97	-18.01	Peak	205.75	190.95	
7215	37.99	H	53.97	-15.98	Avg	205.75	190.95	
9620								**Done via Conducted -**
9620								**Not in Restricted Band**
12025	36.28	H	73.97	-37.69	Peak	222.25	127.31	
12025	18.31	H	53.97	-35.66	Avg	222.25	127.31	
14430								**Done via Conducted -**
14430								**Not in Restricted Band**
16835								**No Emissions**
16835								**Detected**
19240								**No Emissions**
19240								**Detected**
21645								**No Emissions**
21645								**Detected**
24050								**No Emissions**
24050								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the Obsidian

Date: 01/26/2018
Lab: D
Tested By: Kyle Fujimoto

2425 MHz Harmonics - Power Setting = -1
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4850	50.42	V	73.97	-23.55	Peak	173.00	190.77	
4850	32.45	V	53.97	-21.52	Avg	173.00	190.77	
7275	64.55	V	73.97	-9.42	Peak	201.00	174.95	
7275	46.58	V	53.97	-7.39	Avg	201.00	174.95	
9700								**Done via Conducted -**
9700								**Not in Restricted Band**
12125	38.68	V	73.97	-35.29	Peak	175.25	249.99	
12125	20.71	V	53.97	-33.26	Avg	175.25	249.99	
14550								**Done via Conducted -**
14550								**Not in Restricted Band**
16975								**No Emissions**
16975								**Detected**
19400								**No Emissions**
19400								**Detected**
21825								**No Emissions**
21825								**Detected**
24250								**No Emissions**
24250								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the Obsidian

Date: 01/26/2018
Lab: D
Tested By: Kyle Fujimoto

2425 MHz Harmonics - Power Setting = -1
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4850	51.06	H	73.97	-22.91	Peak	157.75	159.13	
4850	33.09	H	53.97	-20.88	Avg	157.75	159.13	
7275	60.31	H	73.97	-13.66	Peak	213.50	127.31	
7275	42.34	H	53.97	-11.63	Avg	213.50	127.31	
9700								**Done via Conducted -**
9700								**Not in Restricted Band**
12125	39.69	H	73.97	-34.28	Peak	183.25	127.31	
12125	21.72	H	53.97	-32.25	Avg	183.25	127.31	
14550								**Done via Conducted -**
14550								**Not in Restricted Band**
16975								**No Emissions**
16975								**Detected**
19400								**No Emissions**
19400								**Detected**
21825								**No Emissions**
21825								**Detected**
24250								**No Emissions**
24250								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the Obsidian

Date: 01/26/2018
Lab: D
Tested By: Kyle Fujimoto

2445 MHz Harmonics - Power Setting = -5
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4890	51.79	V	73.97	-22.18	Peak	177.25	190.89	
4890	33.82	V	53.97	-20.15	Avg	177.25	190.89	
7335	58.79	V	73.97	-15.18	Peak	228.50	143.49	
7335	40.82	V	53.97	-13.15	Avg	228.50	143.49	
9780								**Done via Conducted -**
9780								**Not in Restricted Band**
12225	31.50	V	73.97	-42.47	Peak	240.00	249.99	
12225	13.53	V	53.97	-40.44	Avg	240.00	249.99	
14670								**Done via Conducted -**
14670								**Not in Restricted Band**
17115								**No Emissions**
17115								**Detected**
19560								**No Emissions**
19560								**Detected**
22005								**No Emissions**
22005								**Detected**
24450								**No Emissions**
24450								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the Obsidian

Date: 01/26/2018
Lab: D
Tested By: Kyle Fujimoto

2445 MHz Harmonics - Power Setting = -5
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4890	58.01	H	73.97	-15.96	Peak	152.25	190.89	
4890	40.04	H	53.97	-13.93	Avg	152.25	190.89	
7335	59.86	H	73.97	-14.11	Peak	214.00	111.43	
7335	41.89	H	53.97	-12.08	Avg	214.00	111.43	
9780								**Done via Conducted -**
9780								**Not in Restricted Band**
12225	31.48	H	73.97	-42.49	Peak	183.50	127.31	
12225	13.51	H	53.97	-40.46	Avg	183.50	127.31	
14670								**Done via Conducted -**
14670								**Not in Restricted Band**
17115								**No Emissions**
17115								**Detected**
19560								**No Emissions**
19560								**Detected**
22005								**No Emissions**
22005								**Detected**
24450								**No Emissions**
24450								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the Obsidian

Date: 01/26/2018
Lab: D
Tested By: Kyle Fujimoto

2450 MHz Harmonics - Power Setting = -1
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4900	49.01	V	73.97	-24.96	Peak	1.00	190.71	
4900	31.04	V	53.97	-22.93	Avg	1.00	190.71	
7350	59.38	V	73.97	-14.59	Peak	76.25	143.25	
7350	41.41	V	53.97	-12.56	Avg	76.25	143.25	
9800								**Done via Conducted -**
9800								**Not in Restricted Band**
12250	40.67	V	73.97	-33.30	Peak	358.50	249.94	
12250	22.70	V	53.97	-31.27	Avg	358.50	249.94	
14700								**Done via Conducted -**
14700								**Not in Restricted Band**
17150								**No Emissions**
17150								**Detected**
19600								**No Emissions**
19600								**Detected**
22050								**No Emissions**
22050								**Detected**
24500								**No Emissions**
24500								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the Obsidian

Date: 01/26/2018
Lab: D
Tested By: Kyle Fujimoto

2450 MHz Harmonics - Power Setting = -1
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4900	51.66	H	73.97	-22.31	Peak	0.00	158.83	
4900	33.69	H	53.97	-20.28	Avg	0.00	158.83	
7350	59.92	H	73.97	-14.05	Peak	342.00	101.01	
7350	41.95	H	53.97	-12.02	Avg	342.00	101.01	
9800								**Done via Conducted -**
9800								**Not in Restricted Band**
12250	39.66	H	73.97	-34.31	Peak	5.50	143.13	
12250	21.69	H	53.97	-32.28	Avg	5.50	143.13	
14700								**Done via Conducted -**
14700								**Not in Restricted Band**
17150								**No Emissions**
17150								**Detected**
19600								**No Emissions**
19600								**Detected**
22050								**No Emissions**
22050								**Detected**
24500								**No Emissions**
24500								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the Obsidian

Date: 01/26/2018
Lab: D
Tested By: Kyle Fujimoto

2475 MHz Harmonics - Power Setting = 0
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4950	51.29	V	73.97	-22.68	Peak	337.75	160.32	
4950	33.32	V	53.97	-20.65	Avg	337.75	160.32	
7425	62.39	V	73.97	-11.58	Peak	26.75	143.19	
7425	44.42	V	53.97	-9.55	Avg	26.75	143.19	
9900								**Done via Conducted -**
9900								**Not in Restricted Band**
12375	46.49	V	73.97	-27.48	Peak	331.50	143.25	
12375	28.52	V	53.97	-25.45	Avg	331.50	143.25	
14850								**Done via Conducted -**
14850								**Not in Restricted Band**
17325								**No Emissions**
17325								**Detected**
19800								**No Emissions**
19800								**Detected**
22275								**No Emissions**
22275								**Detected**
24750								**No Emissions**
24750								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the Obsidian

Date: 01/26/2018
Lab: D
Tested By: Kyle Fujimoto

2475 MHz Harmonics - Power Setting = 0
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4950	52.11	H	73.97	-21.86	Peak	0.00	111.43	
4950	34.14	H	53.97	-19.83	Avg	0.00	111.43	
7425	57.75	H	73.97	-16.22	Peak	81.25	206.89	
7425	39.78	H	53.97	-14.19	Avg	81.25	206.89	
9900								**Done via Conducted -**
9900								**Not in Restricted Band**
12375	49.30	H	73.97	-24.67	Peak	357.00	249.88	
12375	31.33	H	53.97	-22.64	Avg	357.00	249.88	
14850								**Done via Conducted -**
14850								**Not in Restricted Band**
17325								**No Emissions**
17325								**Detected**
19800								**No Emissions**
19800								**Detected**
22275								**No Emissions**
22275								**Detected**
24750								**No Emissions**
24750								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the Obsidian

Date: 01/26/2018
Lab: D
Tested By: Kyle Fujimoto

2480 MHz Harmonics - Power Setting = -a
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4960	47.30	V	73.97	-26.67	Peak	61.50	111.31	
4960	29.33	V	53.97	-24.64	Avg	61.50	111.31	
7440	54.35	V	73.97	-19.62	Peak	55.25	141.19	
7440	36.38	V	53.97	-17.59	Avg	55.25	141.19	
9920								**Done via Conducted -**
9920								**Not in Restricted Band**
12400	31.31	V	73.97	-42.66	Peak	240.50	223.01	
12400	13.34	V	53.97	-40.63	Avg	240.50	223.01	
14880								**Done via Conducted -**
14880								**Not in Restricted Band**
17360								**No Emissions**
17360								**Detected**
19840								**No Emissions**
19840								**Detected**
22320								**No Emissions**
22320								**Detected**
24800								**No Emissions**
24800								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the Obsidian

Date: 01/26/2018
Lab: D
Tested By: Kyle Fujimoto

2480 MHz Harmonics - Power Setting = -a
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4960	56.89	H	73.97	-17.08	Peak	165.00	127.31	
4960	38.92	H	53.97	-15.05	Avg	165.00	127.31	
7440	66.92	H	73.97	-7.05	Peak	163.75	126.53	
7440	48.95	H	53.97	-5.02	Avg	163.75	126.53	
9920								**Done via Conducted -**
9920								**Not in Restricted Band**
12400	48.29	H	73.97	-25.68	Peak	204.25	190.23	
12400	30.32	H	53.97	-23.65	Avg	204.25	190.23	
14880								**Done via Conducted -**
14880								**Not in Restricted Band**
17360								**No Emissions**
17360								**Detected**
19840								**No Emissions**
19840								**Detected**
22320								**No Emissions**
22320								**Detected**
24800								**No Emissions**
24800								**Detected**

FCC 15.247 and FCC Class B
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the Obsidian

Date: 01/26/2018
Lab: D
Tested By: Kyle Fujimoto

Non Harmonic Emissions from the Tx and Digital Portion – 10 kHz to 30 MHz
Non Harmonic Emissions from the Tx and Digital Poriton – 1 GHz to 25 GHz
Vertical and Horizontal Polarizations

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
								No Emissions Found for the
								Digital Portion
								from 10 kHz to 30 MHz
								for both Vertical and Horizontal
								Polarizations
								No Non Harmonic Emissions Found
								for the Tx Mode
								from 10 kHz to 30 MHz
								for both Vertical and Horizontal
								Polarizations
								No Emissions Found for the
								Digital Portion
								from 1 GHz to 25 GHz
								for both Vertical and Horizontal
								Polarizations
								No Non Harmonic Emissions Found
								for the Tx Mode
								from 1 GHz to 25 GHz
								for both Vertical and Horizontal
								Polarizations

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the Comcast Convert

Date: 01/24/2018
Lab: D
Tested By: Kyle Fujimoto

2405 MHz Harmonics - Power Setting = -4
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4810	54.62	V	73.97	-19.35	Peak	298.50	174.59	
4810	36.65	V	53.97	-17.32	Avg	298.50	174.59	
7215	67.86	V	73.97	-6.11	Peak	66.25	174.77	
7215	49.89	V	53.97	-4.08	Avg	66.25	174.77	
9620								**Done via Conducted -**
9620								**Not in Restricted Band**
12025	49.44	V	73.97	-24.53	Peak	358.75	174.53	
12025	31.47	V	53.97	-22.50	Avg	358.75	174.53	
14430								**Done via Conducted -**
14430								**Not in Restricted Band**
16835								**No Emissions**
16835								**Detected**
19240								**No Emissions**
19240								**Detected**
21645								**No Emissions**
21645								**Detected**
24050								**No Emissions**
24050								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the Comcast Convert

Date: 01/24/2018
Lab: D
Tested By: Kyle Fujimoto

2405 MHz Harmonics - Power Setting = -4
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4810	51.23	H	73.97	-19.35	Peak	334.00	127.37	
4810	33.26	H	53.97	-20.71	Avg	334.00	127.37	
7215	67.76	H	73.97	-6.21	Peak	31.75	111.25	
7215	49.79	H	53.97	-4.18	Avg	31.75	111.25	
9620								**Done via Conducted -**
9620								**Not in Restricted Band**
12025	48.78	H	73.97	-25.19	Peak	177.25	190.65	
12025	30.81	H	53.97	-23.16	Avg	177.25	190.65	
14430								**Done via Conducted -**
14430								**Not in Restricted Band**
16835								**No Emissions**
16835								**Detected**
19240								**No Emissions**
19240								**Detected**
21645								**No Emissions**
21645								**Detected**
24050								**No Emissions**
24050								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the Comcast Convert

Date: 01/24/2018
Lab: D
Tested By: Kyle Fujimoto

2425 MHz Harmonics - Power Setting = -1
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4850	53.08	V	73.97	-20.89	Peak	2.50	191.01	
4850	35.11	V	53.97	-18.86	Avg	2.50	191.01	
7275	69.32	V	73.97	-4.65	Peak	73.75	175.07	
7275	51.35	V	53.97	-2.62	Avg	73.75	175.07	
9700								**Done via Conducted -**
9700								**Not in Restricted Band**
12125	54.25	V	73.97	-19.72	Peak	359.25	190.83	
12125	36.28	V	53.97	-17.69	Avg	359.25	190.83	
14550								**Done via Conducted -**
14550								**Not in Restricted Band**
16975								**No Emissions**
16975								**Detected**
19400								**No Emissions**
19400								**Detected**
21825								**No Emissions**
21825								**Detected**
24250								**No Emissions**
24250								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the Comcast Convert

Date: 01/24/2018
Lab: D
Tested By: Kyle Fujimoto

2425 MHz Harmonics - Power Setting = -1
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4850	55.34	H	73.97	-18.63	Peak	340.75	206.83	
4850	37.37	H	53.97	-16.60	Avg	340.75	206.83	
7275	69.73	H	73.97	-4.24	Peak	25.50	111.19	
7275	51.76	H	53.97	-2.21	Avg	25.50	111.19	
9700								**Done via Conducted -**
9700								**Not in Restricted Band**
12125	54.74	H	73.97	-19.23	Peak	331.25	111.31	
12125	36.77	H	53.97	-17.20	Avg	331.25	111.31	
14550								**Done via Conducted -**
14550								**Not in Restricted Band**
16975								**No Emissions**
16975								**Detected**
19400								**No Emissions**
19400								**Detected**
21825								**No Emissions**
21825								**Detected**
24250								**No Emissions**
24250								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the Comcast Convert

Date: 01/24/2018
Lab: D
Tested By: Kyle Fujimoto

2445 MHz Harmonics - Power Setting = -5
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4890	55.28	V	73.97	-18.69	Peak	0.00	190.65	
4890	37.31	V	53.97	-16.66	Avg	0.00	190.65	
7335	67.19	V	73.97	-6.78	Peak	65.75	143.25	
7335	49.22	V	53.97	-4.75	Avg	65.75	143.25	
9780								**Done via Conducted -**
9780								**Not in Restricted Band**
12225	49.11	V	73.97	-24.86	Peak	0.00	206.77	
12225	31.14	V	53.97	-22.83	Avg	0.00	206.77	
14670								**Done via Conducted -**
14670								**Not in Restricted Band**
17115								**No Emissions**
17115								**Detected**
19560								**No Emissions**
19560								**Detected**
22005								**No Emissions**
22005								**Detected**
24450								**No Emissions**
24450								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the Comcast Convert

Date: 01/24/2018
Lab: D
Tested By: Kyle Fujimoto

2445 MHz Harmonics - Power Setting = -5
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4890	57.66	H	73.97	-16.31	Peak	0.00	156.32	
4890	39.69	H	53.97	-14.28	Avg	0.00	156.32	
7335	65.94	H	73.97	-8.03	Peak	331.50	174.95	
7335	47.97	H	53.97	-6.00	Avg	331.50	174.95	
9780								**Done via Conducted -**
9780								**Not in Restricted Band**
12225	47.38	H	73.97	-26.59	Peak	0.25	127.37	
12225	29.41	H	53.97	-24.56	Avg	0.25	127.37	
14670								**Done via Conducted -**
14670								**Not in Restricted Band**
17115								**No Emissions**
17115								**Detected**
19560								**No Emissions**
19560								**Detected**
22005								**No Emissions**
22005								**Detected**
24450								**No Emissions**
24450								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the Comcast Convert

Date: 01/24/2018
Lab: D
Tested By: Kyle Fujimoto

2450 MHz Harmonics - Power Setting = -1
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4900	52.06	V	73.97	-21.91	Peak	0.00	174.89	
4900	34.09	V	53.97	-19.88	Avg	0.00	174.89	
7350	68.42	V	73.97	-5.55	Peak	78.50	111.25	
7350	50.45	V	53.97	-3.52	Avg	78.50	111.25	
9800								**Done via Conducted -**
9800								**Not in Restricted Band**
12250	56.72	V	73.97	-17.25	Peak	0.25	206.77	
12250	38.75	V	53.97	-15.22	Avg	0.25	206.77	
14700								**Done via Conducted -**
14700								**Not in Restricted Band**
17150								**No Emissions**
17150								**Detected**
19600								**No Emissions**
19600								**Detected**
22050								**No Emissions**
22050								**Detected**
24500								**No Emissions**
24500								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the Comcast Convert

Date: 01/24/2018
Lab: D
Tested By: Kyle Fujimoto

2450 MHz Harmonics - Power Setting = -1
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4900	57.04	H	73.97	-16.93	Peak	0.00	142.89	
4900	39.07	H	53.97	-14.90	Avg	0.00	142.89	
7350	67.58	H	73.97	-6.39	Peak	329.00	111.31	
7350	49.61	H	53.97	-4.36	Avg	329.00	111.31	
9800								**Done via Conducted -**
9800								**Not in Restricted Band**
12250	51.24	H	73.97	-22.73	Peak	53.00	222.53	
12250	33.27	H	53.97	-20.70	Avg	53.00	222.53	
14700								**Done via Conducted -**
14700								**Not in Restricted Band**
17150								**No Emissions**
17150								**Detected**
19600								**No Emissions**
19600								**Detected**
22050								**No Emissions**
22050								**Detected**
24500								**No Emissions**
24500								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the Comcast Convert

Date: 01/24/2018
Lab: D
Tested By: Kyle Fujimoto

2475 MHz Harmonics - Power Setting = 0
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4950	56.68	V	73.97	-17.29	Peak	0.25	174.77	
4950	38.71	V	53.97	-15.26	Avg	0.25	174.77	
7425	68.11	V	73.97	-5.86	Peak	329.00	222.35	
7425	50.14	V	53.97	-3.83	Avg	329.00	222.35	
9900								**Done via Conducted -**
9900								**Not in Restricted Band**
12375	64.70	V	73.97	-9.27	Peak	2.00	238.41	
12375	46.73	V	53.97	-7.24	Avg	2.00	238.41	
14850								**Done via Conducted -**
14850								**Not in Restricted Band**
17325								**No Emissions**
17325								**Detected**
19800								**No Emissions**
19800								**Detected**
22275								**No Emissions**
22275								**Detected**
24750								**No Emissions**
24750								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the Comcast Convert

Date: 01/24/2018
Lab: D
Tested By: Kyle Fujimoto

2475 MHz Harmonics - Power Setting = 0
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4950	58.10	H	73.97	-15.87	Peak	337.75	142.95	
4950	40.13	H	53.97	-13.84	Avg	337.75	142.95	
7425	69.72	H	73.97	-4.25	Peak	31.50	127.25	
7425	51.75	H	53.97	-2.22	Avg	31.50	127.25	
9900								**Done via Conducted -**
9900								**Not in Restricted Band**
12375	60.60	H	73.97	-13.37	Peak	334.75	143.13	
12375	42.63	H	53.97	-11.34	Avg	334.75	143.13	
14850								**Done via Conducted -**
14850								**Not in Restricted Band**
17325								**No Emissions**
17325								**Detected**
19800								**No Emissions**
19800								**Detected**
22275								**No Emissions**
22275								**Detected**
24750								**No Emissions**
24750								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the Comcast Convert

Date: 01/24/2018
Lab: D
Tested By: Kyle Fujimoto

2480 MHz Harmonics - Power Setting = -a
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4960	49.79	V	73.97	-24.18	Peak	238.50	126.83	
4960	31.82	V	53.97	-22.15	Avg	238.50	126.83	
7440	55.81	V	73.97	-18.16	Peak	86.75	127.25	
7440	37.84	V	53.97	-16.13	Avg	86.75	127.25	
9920								**Done via Conducted -**
9920								**Not in Restricted Band**
12400	47.22	V	73.97	-26.75	Peak	352.75	222.41	
12400	29.25	V	53.97	-24.72	Avg	352.75	222.41	
14880								**Done via Conducted -**
14880								**Not in Restricted Band**
17360								**No Emissions**
17360								**Detected**
19840								**No Emissions**
19840								**Detected**
22320								**No Emissions**
22320								**Detected**
24800								**No Emissions**
24800								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Installed Inside the Comcast Convert

Date: 01/24/2018
Lab: D
Tested By: Kyle Fujimoto

2480 MHz Harmonics - Power Setting = -a
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4960	53.80	H	73.97	-20.17	Peak	156.00	174.95	
4960	35.83	H	53.97	-18.14	Avg	156.00	174.95	
7440	57.89	H	73.97	-16.08	Peak	219.00	174.95	
7440	39.92	H	53.97	-14.05	Avg	219.00	174.95	
9920								**Done via Conducted -**
9920								**Not in Restricted Band**
12400	47.79	H	73.97	-26.18	Peak	42.50	142.89	
12400	29.82	H	53.97	-24.15	Avg	42.50	142.89	
14880								**Done via Conducted -**
14880								**Not in Restricted Band**
17360								**No Emissions**
17360								**Detected**
19840								**No Emissions**
19840								**Detected**
22320								**No Emissions**
22320								**Detected**
24800								**No Emissions**
24800								**Detected**

FCC 15.247 and FCC Class B
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the Comcast Convert

Date: 01/24/2018
Lab: D
Tested By: Kyle Fujimoto

Non Harmonic Emissions from the Tx and Digital Portion – 10 kHz to 30 MHz
Non Harmonic Emissions from the Tx and Digital Portion – 1 GHz to 25 GHz
Vertical and Horizontal Polarizations

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
								No Emissions Found for the
								Digital Portion
								from 10 kHz to 30 MHz
								for both Vertical and Horizontal
								Polarizations
								No Non Harmonic Emissions Found
								for the Tx Mode
								from 10 kHz to 30 MHz
								for both Vertical and Horizontal
								Polarizations
								No Emissions Found for the
								Digital Portion
								from 1 GHz to 25 GHz
								for both Vertical and Horizontal
								Polarizations
								No Non Harmonic Emissions Found
								for the Tx Mode
								from 1 GHz to 25 GHz
								for both Vertical and Horizontal
								Polarizations

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the 914 SmartCode Deadbolt

Date: 07/19/2017
Lab: D
Tested By: Kyle Fujimoto

2405 MHz Harmonics - Power Setting = -4
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4810	57.67	V	73.97	-16.30	Peak	356.50	178.23	
4810	39.70	V	53.97	-14.27	Avg	356.50	178.23	
7215	66.50	V	73.97	-7.47	Peak	320.75	167.55	
7215	48.53	V	53.97	-5.44	Avg	320.75	167.55	
9620								**Done via Conducted -**
9620								**Not in Restricted Band**
12025	52.61	V	73.97	-21.36	Peak	14.00	235.67	
12025	34.64	V	53.97	-19.33	Avg	14.00	235.67	
14430								**Done via Conducted -**
14430								**Not in Restricted Band**
16835								**No Emissions**
16835								**Detected**
19240								**No Emissions**
19240								**Detected**
21645								**No Emissions**
21645								**Detected**
24050								**No Emissions**
24050								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the 914 SmartCode Deadbolt

Date: 07/19/2017
Lab: D
Tested By: Kyle Fujimoto

2405 MHz Harmonics - Power Setting = -4
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4810	57.13	H	73.97	-16.30	Peak	339.50	126.83	
4810	39.16	H	53.97	-14.81	Avg	339.50	126.83	
7215	71.43	H	73.97	-2.54	Peak	27.25	222.89	
7215	53.46	H	53.97	-0.51	Avg	27.25	222.89	
9620								**Done via Conducted -**
9620								**Not in Restricted Band**
12025	51.61	H	73.97	-22.36	Peak	16.75	120.62	
12025	33.64	H	53.97	-20.33	Avg	16.75	120.62	
14430								**Done via Conducted -**
14430								**Not in Restricted Band**
16835								**No Emissions**
16835								**Detected**
19240								**No Emissions**
19240								**Detected**
21645								**No Emissions**
21645								**Detected**
24050								**No Emissions**
24050								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the 914 SmartCode Deadbolt

Date: 07/19/2017
Lab: D
Tested By: Kyle Fujimoto

2425 MHz Harmonics - Power Setting = -1
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4850	54.43	V	73.97	-19.54	Peak	359.00	176.98	
4850	36.46	V	53.97	-17.51	Avg	359.00	176.98	
7275	71.25	V	73.97	-2.72	Peak	34.25	225.22	
7275	53.28	V	53.97	-0.69	Avg	34.25	225.22	
9700								**Done via Conducted -**
9700								**Not in Restricted Band**
12125	60.24	V	73.97	-13.73	Peak	320.25	213.88	
12125	42.27	V	53.97	-11.70	Avg	320.25	213.88	
14550								**Done via Conducted -**
14550								**Not in Restricted Band**
16975								**No Emissions**
16975								**Detected**
19400								**No Emissions**
19400								**Detected**
21825								**No Emissions**
21825								**Detected**
24250								**No Emissions**
24250								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the 914 SmartCode Deadbolt

Date: 07/19/2017
Lab: D
Tested By: Kyle Fujimoto

2425 MHz Harmonics - Power Setting = -1
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4850	71.49	H	73.97	-2.48	Peak	25.75	199.67	
4850	53.52	H	53.97	-0.45	Avg	25.75	199.67	
7275	67.87	H	73.97	-6.10	Peak	72.25	110.59	
7275	49.90	H	53.97	-4.07	Avg	72.25	110.59	
9700								**Done via Conducted -**
9700								**Not in Restricted Band**
12125	60.42	H	73.97	-13.55	Peak	27.25	118.83	
12125	42.45	H	53.97	-11.52	Avg	27.25	118.83	
14550								**Done via Conducted -**
14550								**Not in Restricted Band**
16975								**No Emissions**
16975								**Detected**
19400								**No Emissions**
19400								**Detected**
21825								**No Emissions**
21825								**Detected**
24250								**No Emissions**
24250								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the 914 SmartCode Deadbolt

Date: 07/19/2017
Lab: D
Tested By: Kyle Fujimoto

2445 MHz Harmonics - Power Setting = -5
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4890	41.36	V	73.97	-32.61	Peak	32.50	139.73	
4890	23.39	V	53.97	-30.58	Avg	32.50	139.73	
7335	44.62	V	73.97	-29.35	Peak	53.75	168.80	
7335	26.65	V	53.97	-27.32	Avg	53.75	168.80	
9780								**Done via Conducted -**
9780								**Not in Restricted Band**
12225	50.79	V	73.97	-23.18	Peak	349.75	153.04	
12225	32.82	V	53.97	-21.15	Avg	349.75	153.04	
14670								**Done via Conducted -**
14670								**Not in Restricted Band**
17115								**No Emissions**
17115								**Detected**
19560								**No Emissions**
19560								**Detected**
22005								**No Emissions**
22005								**Detected**
24450								**No Emissions**
24450								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the 914 SmartCode Deadbolt

Date: 07/19/2017
Lab: D
Tested By: Kyle Fujimoto

2445 MHz Harmonics - Power Setting = -5
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4890	40.73	H	73.97	-33.24	Peak	131.25	142.17	
4890	22.76	H	53.97	-31.21	Avg	131.25	142.17	
7335	45.82	H	73.97	-28.15	Peak	191.25	133.52	
7335	27.85	H	53.97	-26.12	Avg	191.25	133.52	
9780								**Done via Conducted -**
9780								**Not in Restricted Band**
12225	47.75	H	73.97	-26.22	Peak	101.00	161.40	
12225	29.78	H	53.97	-24.19	Avg	101.00	161.40	
14670								**Done via Conducted -**
14670								**Not in Restricted Band**
17115								**No Emissions**
17115								**Detected**
19560								**No Emissions**
19560								**Detected**
22005								**No Emissions**
22005								**Detected**
24450								**No Emissions**
24450								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the 914 SmartCode Deadbolt

Date: 07/19/2017
Lab: D
Tested By: Kyle Fujimoto

2450 MHz Harmonics - Power Setting = -1
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4900	55.00	V	73.97	-18.97	Peak	49.00	179.43	
4900	37.03	V	53.97	-16.94	Avg	49.00	179.43	
7350	66.87	V	73.97	-7.10	Peak	289.25	116.80	
7350	48.90	V	53.97	-5.07	Avg	289.25	116.80	
9800								**Done via Conducted -**
9800								**Not in Restricted Band**
12250	57.61	V	73.97	-16.36	Peak	12.25	101.88	
12250	39.64	V	53.97	-14.33	Avg	12.25	101.88	
14700								**Done via Conducted -**
14700								**Not in Restricted Band**
17150								**No Emissions**
17150								**Detected**
19600								**No Emissions**
19600								**Detected**
22050								**No Emissions**
22050								**Detected**
24500								**No Emissions**
24500								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the 914 SmartCode Deadbolt

Date: 07/19/2017
Lab: D
Tested By: Kyle Fujimoto

2450 MHz Harmonics - Power Setting = -1
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4900	58.88	H	73.97	-15.09	Peak	336.75	185.10	
4900	40.91	H	53.97	-13.06	Avg	336.75	185.10	
7350	70.89	H	73.97	-3.08	Peak	30.00	152.74	
7350	52.92	H	53.97	-1.05	Avg	30.00	152.74	
9800								**Done via Conducted -**
9800								**Not in Restricted Band**
12250	54.33	H	73.97	-19.64	Peak	304.75	217.04	
12250	36.36	H	53.97	-17.61	Avg	304.75	217.04	
14700								**Done via Conducted -**
14700								**Not in Restricted Band**
17150								**No Emissions**
17150								**Detected**
19600								**No Emissions**
19600								**Detected**
22050								**No Emissions**
22050								**Detected**
24500								**No Emissions**
24500								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the 914 SmartCode Deadbolt

Date: 07/19/2017
Lab: D
Tested By: Kyle Fujimoto

2475 MHz Harmonics - Power Setting = 0
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4950	56.74	V	73.97	-17.23	Peak	13.50	170.77	
4950	38.77	V	53.97	-15.20	Avg	13.50	170.77	
7425	69.53	V	73.97	-4.44	Peak	15.00	184.20	
7425	51.56	V	53.97	-2.41	Avg	15.00	184.20	
9900								**Done via Conducted -**
9900								**Not in Restricted Band**
12375	67.24	V	73.97	-6.73	Peak	360.00	202.89	
12375	49.27	V	53.97	-4.70	Avg	360.00	202.89	
14850								**Done via Conducted -**
14850								**Not in Restricted Band**
17325								**No Emissions**
17325								**Detected**
19800								**No Emissions**
19800								**Detected**
22275								**No Emissions**
22275								**Detected**
24750								**No Emissions**
24750								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the 914 SmartCode Deadbolt

Date: 07/19/2017
Lab: D
Tested By: Kyle Fujimoto

2475 MHz Harmonics - Power Setting = 0
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4950	54.93	H	73.97	-19.04	Peak	313.50	181.52	
4950	36.96	H	53.97	-17.01	Avg	313.50	181.52	
7425	70.96	H	73.97	-3.01	Peak	335.25	136.98	
7425	52.99	H	53.97	-0.98	Avg	335.25	136.98	
9900								**Done via Conducted -**
9900								**Not in Restricted Band**
12375	63.36	H	73.97	-10.61	Peak	4.75	103.85	
12375	45.39	H	53.97	-8.58	Avg	4.75	103.85	
14850								**Done via Conducted -**
14850								**Not in Restricted Band**
17325								**No Emissions**
17325								**Detected**
19800								**No Emissions**
19800								**Detected**
22275								**No Emissions**
22275								**Detected**
24750								**No Emissions**
24750								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the 914 SmartCode Deadbolt

Date: 07/19/2017
Lab: D
Tested By: Kyle Fujimoto

2480 MHz Harmonics - Power Setting = -a
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4960	54.27	V	73.97	-19.70	Peak	52.75	187.91	
4960	36.30	V	53.97	-17.67	Avg	52.75	187.91	
7440	67.01	V	73.97	-6.96	Peak	283.75	115.07	
7440	49.04	V	53.97	-4.93	Avg	283.75	115.07	
9920								**Done via Conducted -**
9920								**Not in Restricted Band**
12400	54.06	V	73.97	-19.91	Peak	35.50	203.19	
12400	36.09	V	53.97	-17.88	Avg	35.50	203.19	
14880								**Done via Conducted -**
14880								**Not in Restricted Band**
17360								**No Emissions**
17360								**Detected**
19840								**No Emissions**
19840								**Detected**
22320								**No Emissions**
22320								**Detected**
24800								**No Emissions**
24800								**Detected**

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the 914 SmartCode Deadbolt

Date: 07/19/2017
Lab: D
Tested By: Kyle Fujimoto

2480 MHz Harmonics - Power Setting = -a
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4960	59.17	H	73.97	-14.80	Peak	335.25	179.97	
4960	41.20	H	53.97	-12.77	Avg	335.25	179.97	
7440	64.92	H	73.97	-9.05	Peak	57.00	130.59	
7440	46.95	H	53.97	-7.02	Avg	57.00	130.59	
9920								**Done via Conducted -**
9920								**Not in Restricted Band**
12400	51.58	H	73.97	-22.39	Peak	79.00	147.89	
12400	33.61	H	53.97	-20.36	Avg	79.00	147.89	
14880								**Done via Conducted -**
14880								**Not in Restricted Band**
17360								**No Emissions**
17360								**Detected**
19840								**No Emissions**
19840								**Detected**
22320								**No Emissions**
22320								**Detected**
24800								**No Emissions**
24800								**Detected**

FCC 15.247 and FCC Class B

Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the 914 SmartCode Deadbolt

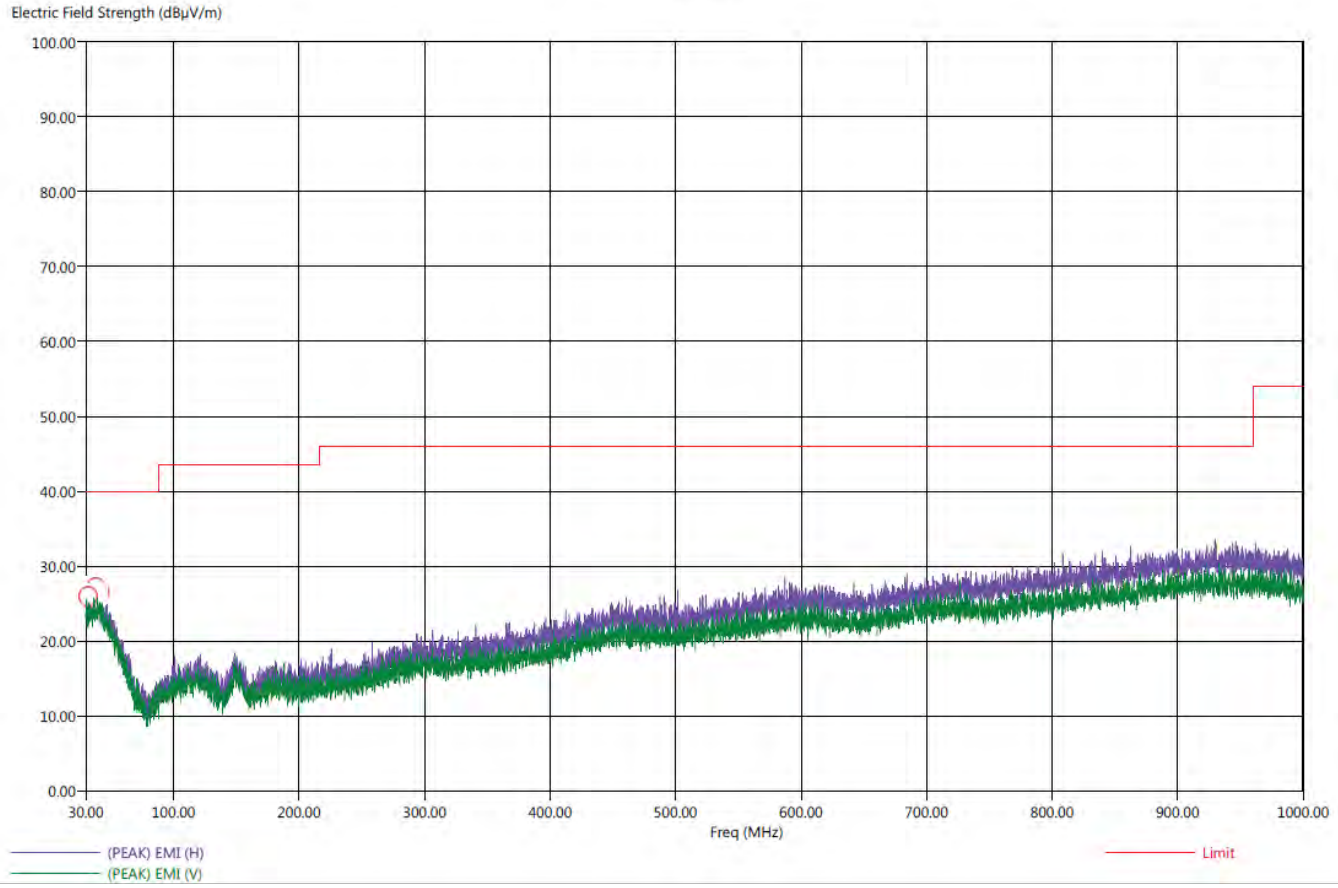
Date: 07/19/2018
Lab: D
Tested By: Kyle Fujimoto

Non Harmonic Emissions from the Tx and Digital Portion – 10 kHz to 30 MHz
Non Harmonic Emissions from the Tx and Digital Portion – 1 GHz to 25 GHz
Vertical and Horizontal Polarizations

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
								No Emissions Found for the
								Digital Portion
								from 10 kHz to 30 MHz
								for both Vertical and Horizontal
								Polarizations
								No Non Harmonic Emissions Found
								for the Tx Mode
								from 10 kHz to 30 MHz MHz
								for both Vertical and Horizontal
								Polarizations
								No Emissions Found for the
								Digital Portion
								from 1 GHz to 25 GHz
								for both Vertical and Horizontal
								Polarizations
								No Non Harmonic Emissions Found
								for the Tx Mode
								from 1 GHz to 25 GHz
								for both Vertical and Horizontal
								Polarizations

Title: Pre-Scan - 30-1000 MHz - FCC Class B
File: Agilent - Channel 25 (in 910 Unit)- Radiated Pre-Scan 30-1000MHz - FCC Class B.set
Operator: James Ross
EUT Type: OHM Zigbee v.2
EUT Condition: The EUT was installed within the 910 SmartCode Deadbolt unit and continously transmitting (Ch. 25)
Customer: Spectrum Brands, Inc.
Model: 450202
S/N: N/A

1/30/2018 9:41:35 AM
Sequence: Preliminary Scan



Note: Channel 25 is the worst case channel.

-

Title: Radiated Final - 30-1000 MHz - FCC Class B
File: Agilent - Channel 25 (in 910 Unit)- Radiated Final-Scan 30-1000MHz - FCC Class B.set
Operator: James Ross
EUT Type: OHM Zigbee v.2
EUT Condition: The EUT was installed within the 910 Smartcode Deadbolt unit and continously transmitting (Ch. 25)
Customer: Spectrum Brands, Inc.
Model: 450202
S/N: N/A

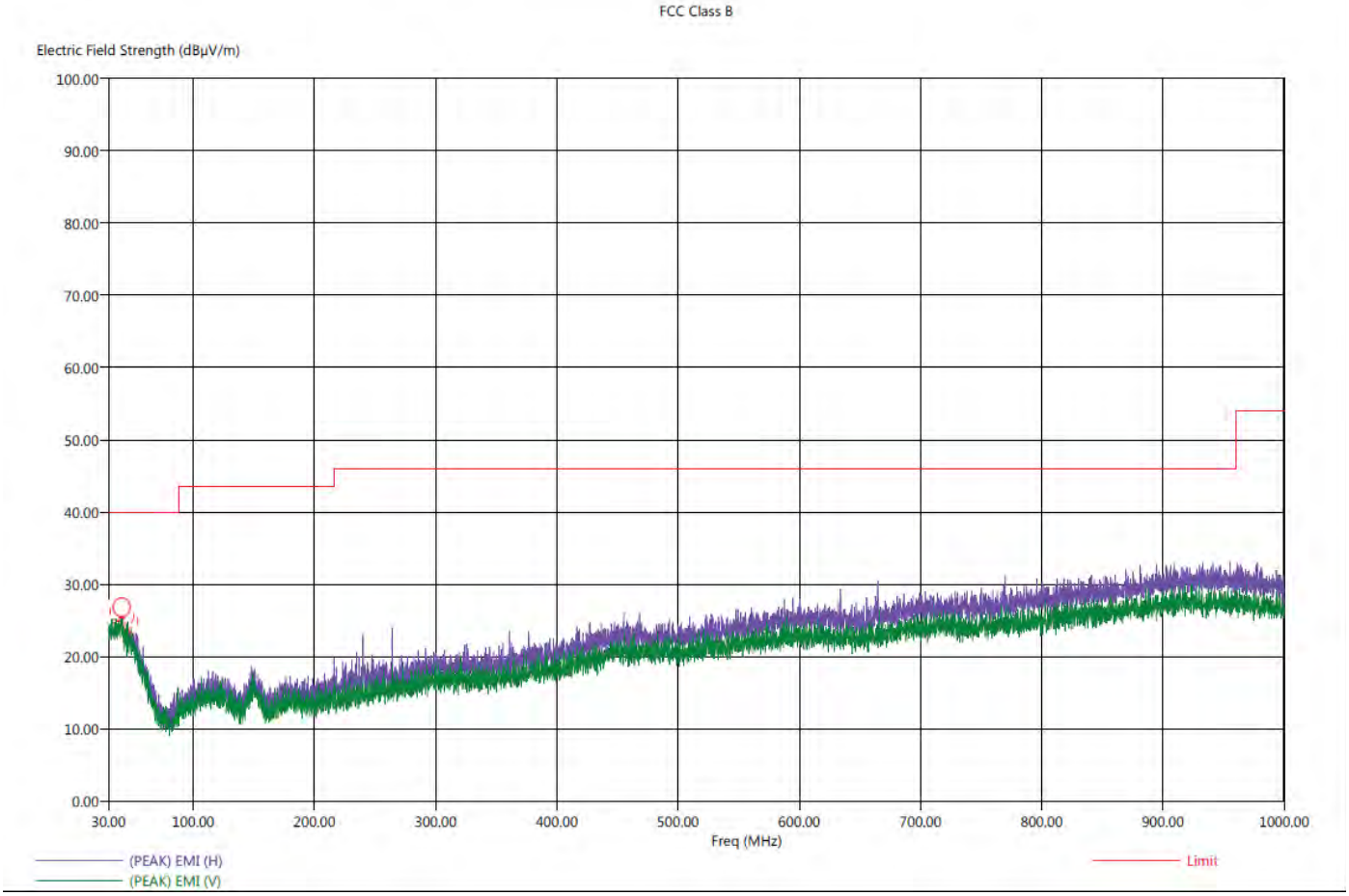
1/30/2018 10:20:48 AM
Sequence: Final Measurements

FCC Class B - 30 MHz - 1 GHz

Freq (MHz)	Pol	(PEAK) EMI (dBµV/m)	(QP) EMI (dBµV/m)	(PEAK) Margin (dB)	(QP) Margin (dB)	Limit (dBµV/m)	Transducer (dB)	Cable (dB)	Ttbl Agl (deg)	Twr Ht (cm)
31.90	H	27.17	22.71	-12.83	-17.29	40.00	23.87	0.82	232.25	254.71
34.10	H	27.17	22.86	-12.83	-17.14	40.00	23.96	0.84	76.75	398.05
35.40	H	26.79	22.95	-13.21	-17.05	40.00	24.05	0.86	171.00	286.29
36.50	H	26.86	22.97	-13.14	-17.03	40.00	24.21	0.87	255.75	270.47
38.00	H	27.27	23.28	-12.73	-16.72	40.00	24.43	0.88	154.00	350.00
41.20	H	27.16	23.18	-12.84	-16.82	40.00	24.27	0.90	166.00	190.71
42.40	H	26.92	22.54	-13.08	-17.46	40.00	23.74	0.90	201.50	206.83

Title: Pre-Scan - 30-1000 MHz - FCC Class B
File: Agilent - Channel 25 (in 912 Unit)- Radiated Pre-Scan 30-1000MHz - FCC Class B.set
Operator: Kyle Fujimoto
EUT Type: OHM Zigbee v.2
EUT Condition: The EUT was installed within the 912 SmartCode Lever unit and continously transmitting (Ch. 25)
Customer: Spectrum Brands, Inc.
Model: 450202
S/N: N/A

2/9/2018 9:33:29 AM
Sequence: Preliminary Scan



Note: Channel 25 is the worst case channel.

Title: Radiated Final - 30-1000 MHz - FCC Class B
File: Agilent - Channel 25 (in 912 Unit)- Radiated Final-Scan 30-1000MHz - FCC Class B.set
Operator: James Ross
EUT Type: OHM Zigbee v.2
EUT Condition: The EUT was installed within the 912 SmartCode Lever unit and continously transmitting (Ch. 25)
Customer: Spectrum Brands, Inc.
Model: 450202
S/N: N/A

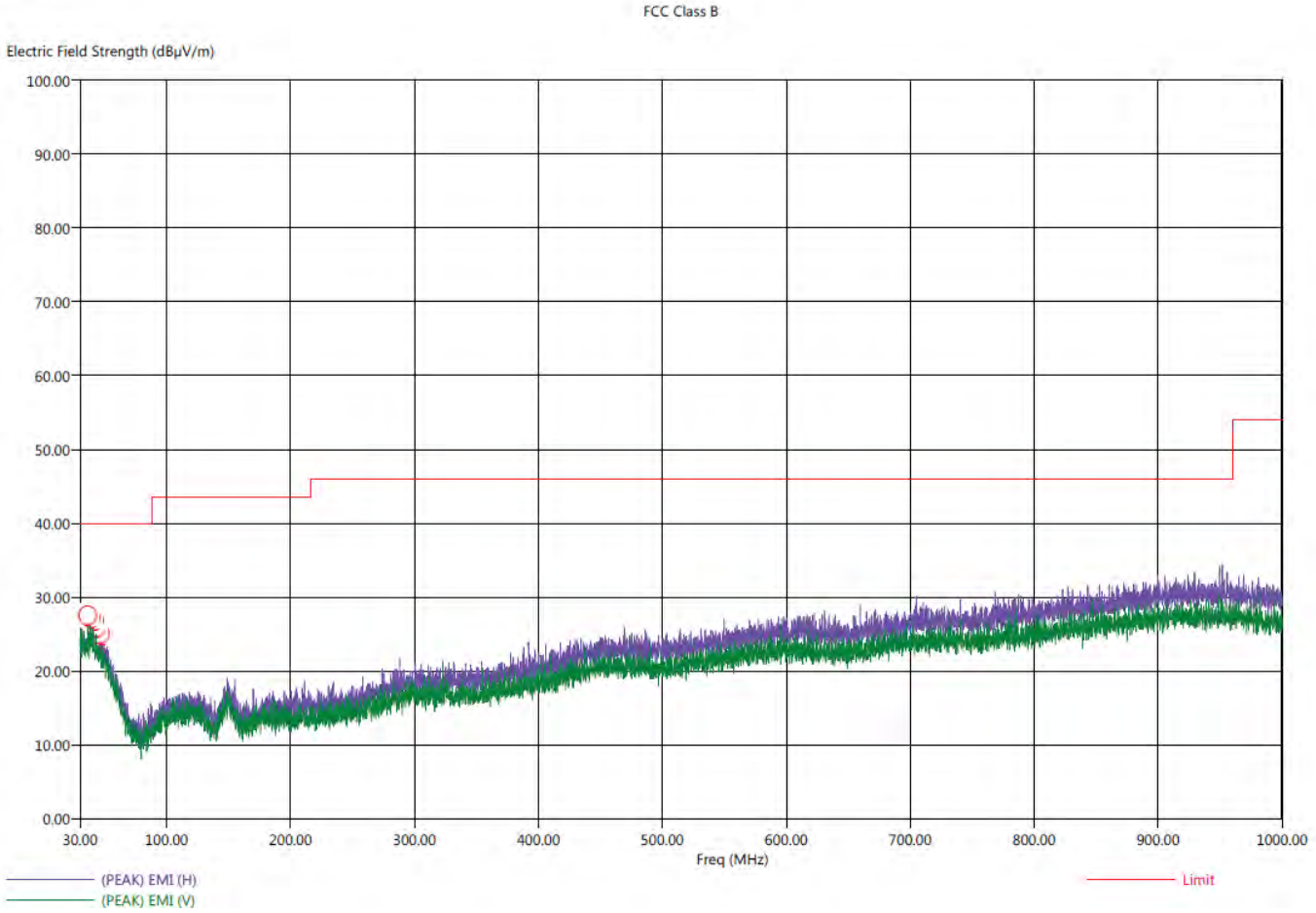
2/9/2018 9:45:40 AM
Sequence: Final Measurements

FCC Class B - 30 MHz - 1 GHz

Freq (MHz)	Pol	(PEAK) EMI (dBµV/m)	(QP) EMI (dBµV/m)	(PEAK) Margin (dB)	(QP) Margin (dB)	Limit (dBµV/m)	Transducer (dB)	Cable (dB)	Ttbl Agl (deg)	Twr Ht (cm)
38.70	H	27.82	23.29	-12.18	-16.71	40.00	24.50	0.89	355.50	270.97
39.50	H	28.03	23.56	-11.97	-16.44	40.00	24.62	0.89	225.50	366.55
41.00	V	27.44	23.28	-12.56	-16.72	40.00	24.37	0.90	57.75	382.43
43.70	H	26.59	22.05	-13.41	-17.95	40.00	23.43	0.90	243.25	207.02
44.20	H	26.96	21.88	-13.04	-18.12	40.00	23.18	0.90	147.25	159.26
46.90	H	26.17	21.53	-13.83	-18.47	40.00	22.60	0.90	64.75	175.20

Title: Pre-Scan - 30-1000 MHz - FCC Class B
File: Agilent - Channel 25 (in 916 unit)- Radiated Pre-Scan 30-1000MHz - FCC Class B.set
Operator: Kyle Fujimoto
EUT Type: OHM Zigbee v.2
EUT Condition: The EUT was installed within the 916 SmartCode Deadbolt unit and continously transmitting (Ch. 25)
Customer: Spectrum Brands, Inc.
Model: 450202
S/N: N/A

2/9/2018 10:46:59 AM
Sequence: Preliminary Scan



Note: Channel 25 is the worst case channel.

Title: Radiated Final - 30-1000 MHz - FCC Class B
File: Agilent - Channel 25 (in 916 Unit)- Radiated Final-Scan 30-1000MHz - FCC Class B.set
Operator: Kyle Fujimoto
EUT Type: OHM Zigbee v.2
EUT Condition: The EUT was installed within the 916 SmartCode Deadbolt unit and continously transmitting (Ch. 25)
Customer: Spectrum Brands, Inc.
Model: 450202
S/N: N/A

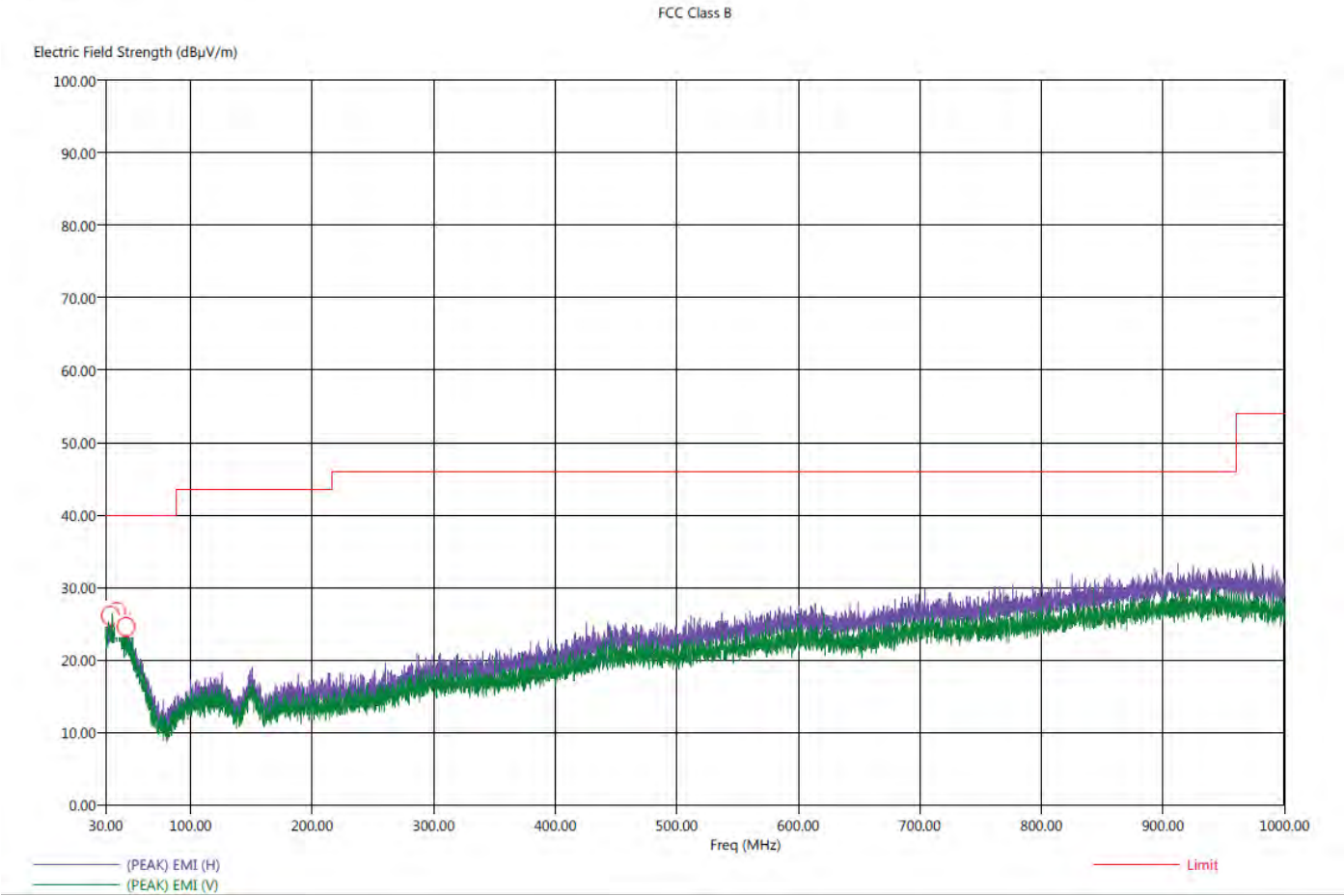
2/9/2018 10:55:26 AM
Sequence: Final Measurements

FCC Class B - 30 MHz - 1 GHz

Freq (MHz)	Pol	(PEAK) EMI (dBµV/m)	(QP) EMI (dBµV/m)	(PEAK) Margin (dB)	(QP) Margin (dB)	Limit (dBµV/m)	Transducer (dB)	Cable (dB)	Ttbl Agl (deg)	Twr Ht (cm)
36.40	V	27.26	22.89	-12.74	-17.11	40.00	24.20	0.87	269.75	318.67
39.00	H	27.35	23.48	-12.65	-16.52	40.00	24.58	0.89	247.75	270.97
41.70	H	27.46	22.87	-12.54	-17.13	40.00	24.04	0.90	206.25	158.97
43.40	H	26.52	22.20	-13.48	-17.80	40.00	23.48	0.90	53.25	382.79
46.30	H	26.16	21.56	-13.84	-18.44	40.00	22.71	0.90	137.00	127.44
47.90	H	25.57	21.25	-14.43	-18.75	40.00	22.40	0.90	152.50	175.38

Title: Pre-Scan - 30-1000 MHz - FCC Class B
File: Agilent - Channel 25 (in 954 unit)- Radiated Pre-Scan 30-1000MHz - FCC Class B.set
Operator: Kyle Fujimoto
EUT Type: OHM Zigbee v.2
EUT Condition: The EUT was installed inside the Obisdian unit and continously transmitting (Ch. 25)
Customer: Spectrum Brands, Inc.
Model: 450202
S/N: N/A

2/9/2018 11:24:22 AM
Sequence: Preliminary Scan



Note: Channel 25 is the worst case channel.

Title: Radiated Final - 30-1000 MHz - FCC Class B
File: Agilent - Channel 25 (in 954 Unit)- Radiated Final-Scan 30-1000MHz - FCC Class B.set
Operator: Kyle Fujimoto
EUT Type: OHM Zigbee v.2
EUT Condition: The EUT was installed inside the Obsidian unit and continously transmitting (Ch. 25)
Customer: Spectrum Brands, Inc.
Model: 450202
S/N: N/A

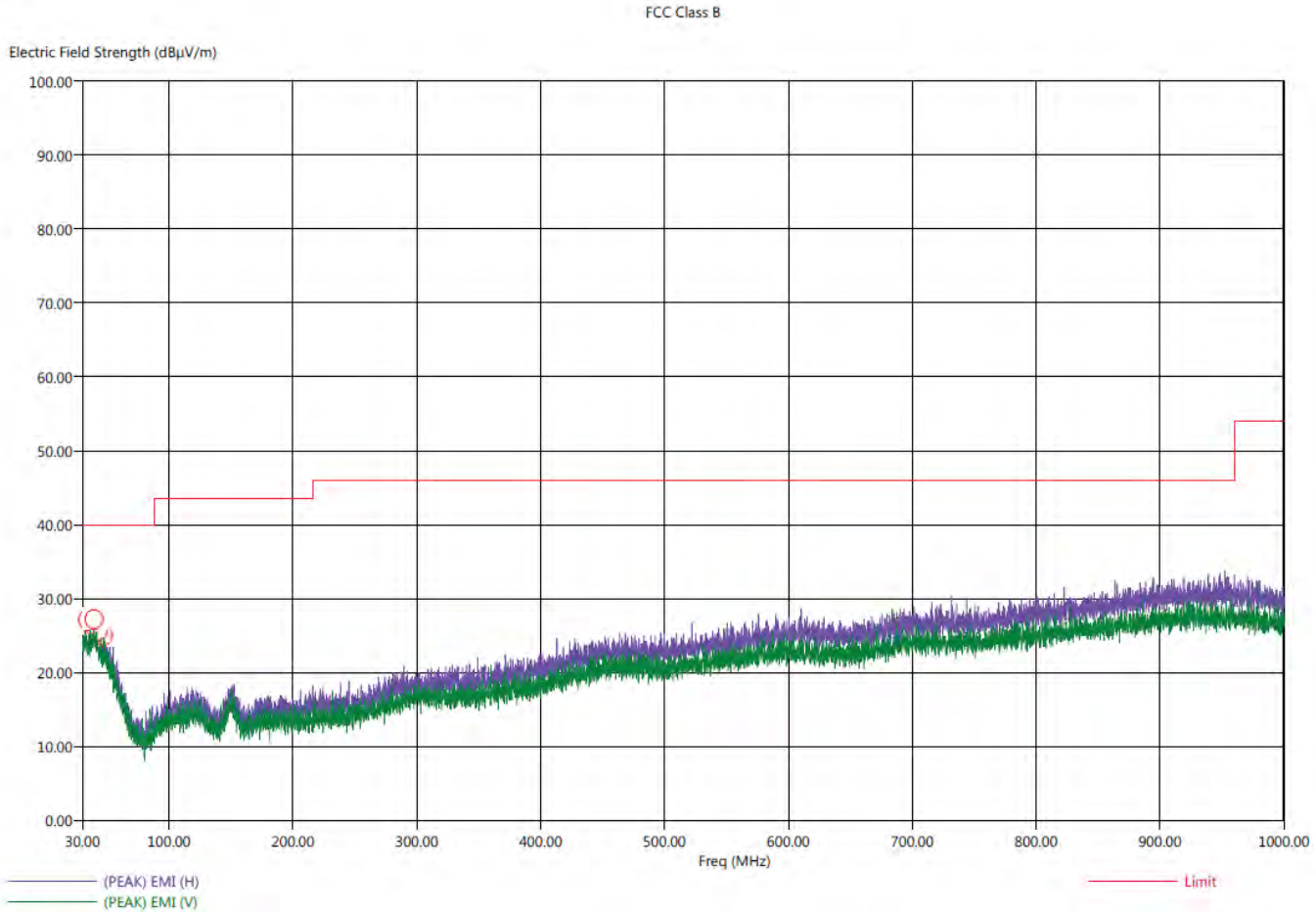
2/9/2018 11:35:02 AM
Sequence: Final Measurements

FCC Class B - 30 MHz - 1 GHz

Freq (MHz)	Pol	(PEAK) EMI (dBµV/m)	(QP) EMI (dBµV/m)	(PEAK) Margin (dB)	(QP) Margin (dB)	Limit (dBµV/m)	Transducer (dB)	Cable (dB)	Ttbl Agl (deg)	Twr Ht (cm)
34.00	H	38.70	33.70	-1.30	-6.30	40.00	23.97	0.85	147.00	350.37
39.30	H	39.07	34.30	-0.93	-5.70	40.00	24.58	0.89	112.00	206.91
40.20	H	38.96	34.32	-1.04	-5.68	40.00	24.59	0.90	104.00	318.79
42.50	H	38.21	33.43	-1.79	-6.57	40.00	23.75	0.90	208.00	366.67
44.20	H	36.81	32.83	-3.19	-7.17	40.00	23.14	0.90	99.50	366.43
46.80	V	36.83	32.22	-3.17	-7.78	40.00	22.61	0.90	161.25	159.20

Title: Pre-Scan - 30-1000 MHz - FCC Class B
File: Agilent - Channel 25 (in Convert unit)- Radiated Pre-Scan 30-1000MHz - FCC Class B.set
Operator: Kyle Fujimoto
EUT Type: OHM Zigbee v.2
EUT Condition: The EUT was installed inside the Comcast Convert unit and continously transmitting (Ch. 25)
Customer: Spectrum Brands, Inc.
Model: 450202
S/N: N/A

2/9/2018 10:13:14 AM
Sequence: Preliminary Scan



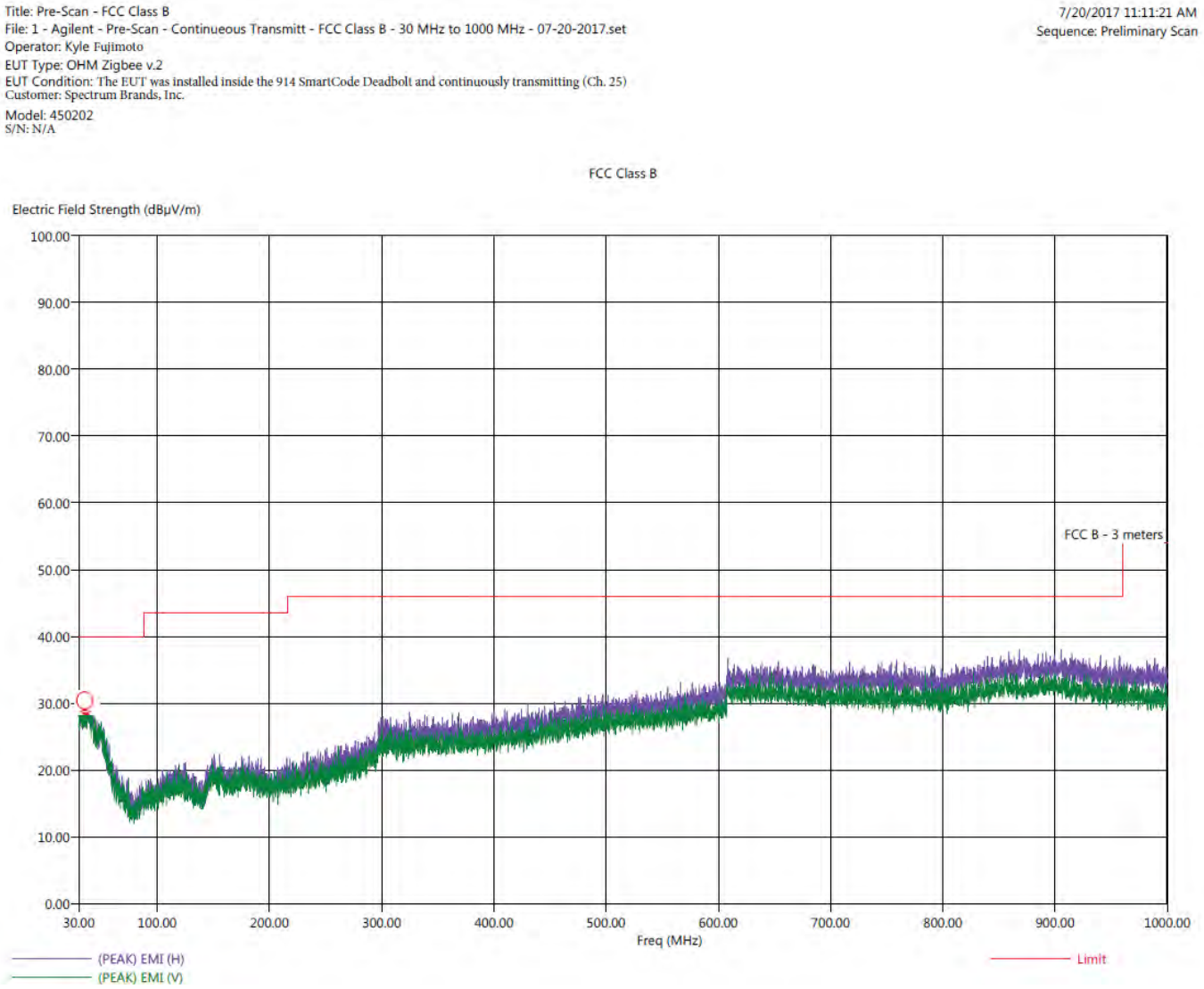
Note: Channel 25 is the worst case channel.

Title: Radiated Final - 30-1000 MHz - FCC Class B
File: Agilent - Channel 25 (in Convert Unit)- Radiated Final-Scan 30-1000MHz - FCC Class B.set
Operator: Kyle Fujimoto
EUT Type: OHM Zigbee v.2
EUT Condition: The EUT was installed inside the Comcast Convert unit and continously transmitting (Ch. 25)
Customer: Spectrum Brands, Inc.
Model: 450202
S/N: N/A

2/9/2018 10:23:29 AM
Sequence: Final Measurements

FCC Class B - 30 MHz - 1 GHz

Freq (MHz)	Pol	(PEAK) EMI (dBµV/m)	(QP) EMI (dBµV/m)	(PEAK) Margin (dB)	(QP) Margin (dB)	Limit (dBµV/m)	Transducer (dB)	Cable (dB)	Ttbl Agl (deg)	Twr Ht (cm)
34.20	H	27.45	22.84	-12.55	-17.16	40.00	23.97	0.85	284.50	318.31
37.30	H	27.11	23.07	-12.89	-16.93	40.00	24.35	0.88	278.50	334.73
39.40	V	27.98	23.55	-12.02	-16.45	40.00	24.61	0.89	308.50	207.14
40.70	H	28.23	23.34	-11.77	-16.66	40.00	24.41	0.90	254.00	366.25
42.90	H	27.14	22.22	-12.86	-17.78	40.00	23.60	0.90	134.25	111.50
47.10	H	26.69	21.40	-13.31	-18.60	40.00	22.54	0.90	93.50	127.38



Note: Channel 25 is the worst case channel.

Title: Radiated Final - FCC Class B
File: 1 - Agilent - Final-Scan - TX Stream - FCC Class B - 30 MHz to 1000 MHz - 07-20-2017.set
Operator: Kyle Fujimoto
EUT Type: OHM Zigbee v.2
EUT Condition: The EUT Was installed inside the 914 SmartCode Deadbolt and continuously transmitting (Ch. 25)
Customer: Spectrum Brands, Inc.
Model: 450202
S/N: N/A

7/20/2017 11:30:43 AM
Sequence: Final Measurements

FCC Class B

Freq (MHz)	Pol	(PEAK) EMI (dBµV/m)	(QP) EMI (dBµV/m)	(PEAK) Margin (dB)	(QP) Margin (dB)	Limit (dBµV/m)	Transducer (dB)	Cable (dB)	Ttbl Aql (deg)	Twr Ht (cm)
35.50	V	31.90	26.73	-8.10	-13.27	40.00	24.42	0.36	167.25	350.41
36.20	V	32.40	26.85	-7.60	-13.15	40.00	24.62	0.37	287.50	143.43
37.00	V	32.13	27.03	-7.87	-12.97	40.00	24.77	0.37	68.75	191.07
37.70	H	32.16	27.17	-7.84	-12.83	40.00	24.91	0.38	266.50	318.65
38.20	H	32.62	27.30	-7.38	-12.70	40.00	25.00	0.38	135.75	350.59
39.80	H	33.42	27.67	-6.58	-12.33	40.00	25.33	0.40	164.75	222.95

BAND EDGES

DATA SHEETS

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the 910 SmartCode Deadbolt

Date: 01/23/2018
Lab: D
Tested By: Kyle Fujimoto

2405 MHz - Band Edges - Power Setting = -4
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
2405	103.82	V	--	--	Peak	164.50	191.73	
2405	85.85	V	--	--	Avg	164.50	191.73	
2390	48.00	V	73.97	-25.97	Peak	164.50	191.73	
2390	30.03	V	53.97	-23.94	Avg	164.50	191.73	
2405	103.17	H	--	--	Peak	184.50	174.11	
2405	85.20	H	--	--	Avg	184.50	174.11	
2390	47.86	H	73.97	-26.12	Peak	184.50	174.11	
2390	29.89	H	53.97	-24.09	Avg	184.50	174.11	

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the 910 SmartCode Deadbolt

Date: 01/23/2018
Lab: D
Tested By: Kyle Fujimoto

2475 MHz - Band Edges - Power Setting = 0
Transmit Mode - Duty Cycle 12.625251%

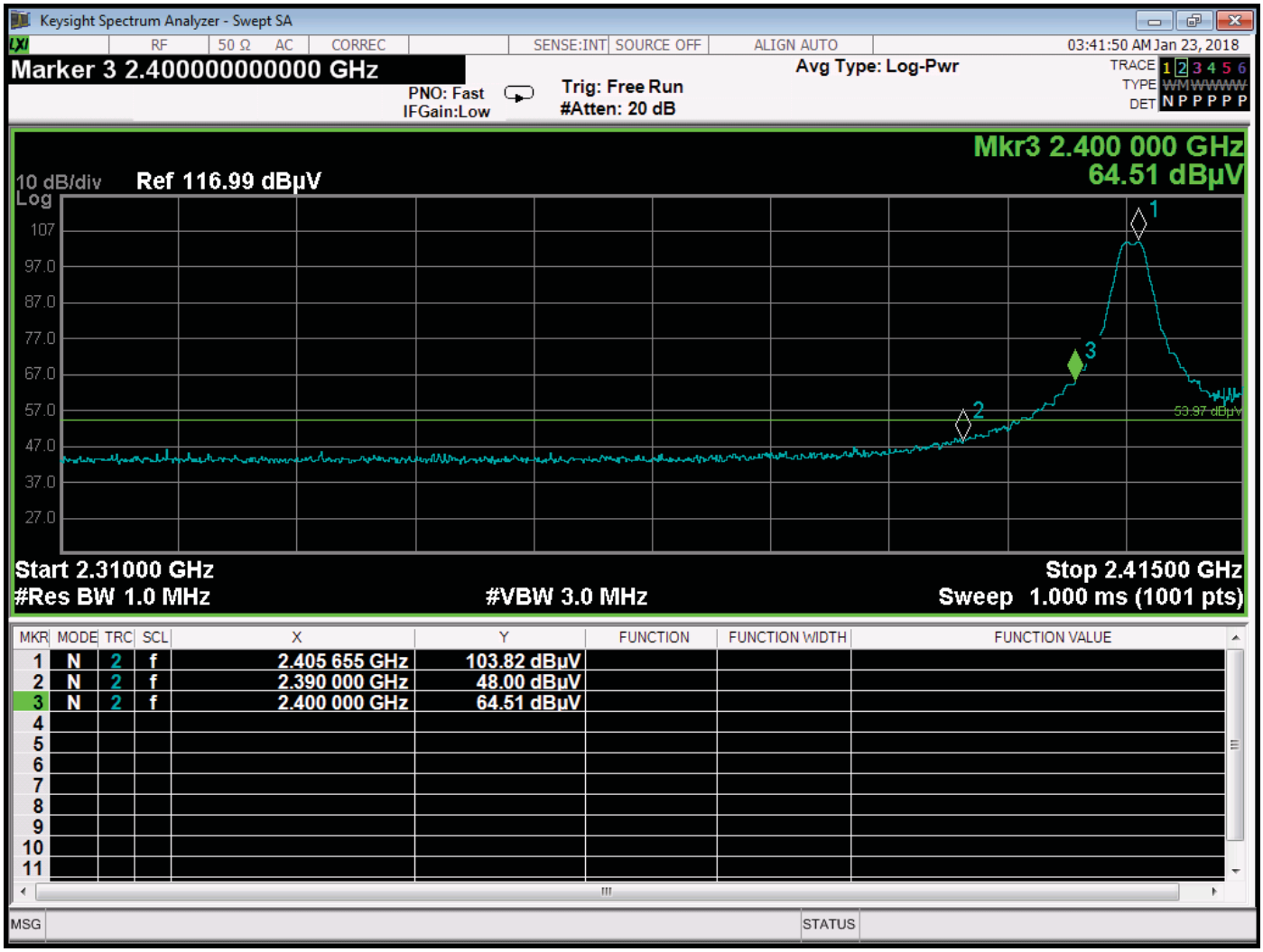
Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
2475	101.88	V	--	--	Peak	202.75	206.89	
2475	83.91	V	--	--	Avg	202.75	206.89	
2483.5	55.79	V	73.97	-18.18	Peak	202.75	206.89	
2483.5	37.82	V	53.97	-16.15	Avg	202.75	206.89	
2475	105.05	H	--	--	Peak	151.50	218.83	
2475	87.08	H	--	--	Avg	151.50	218.83	
2483.5	57.63	H	73.97	-16.34	Peak	151.50	218.83	
2483.5	39.66	H	53.97	-14.31	Avg	151.50	218.83	

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the 910 SmartCode Deadbolt

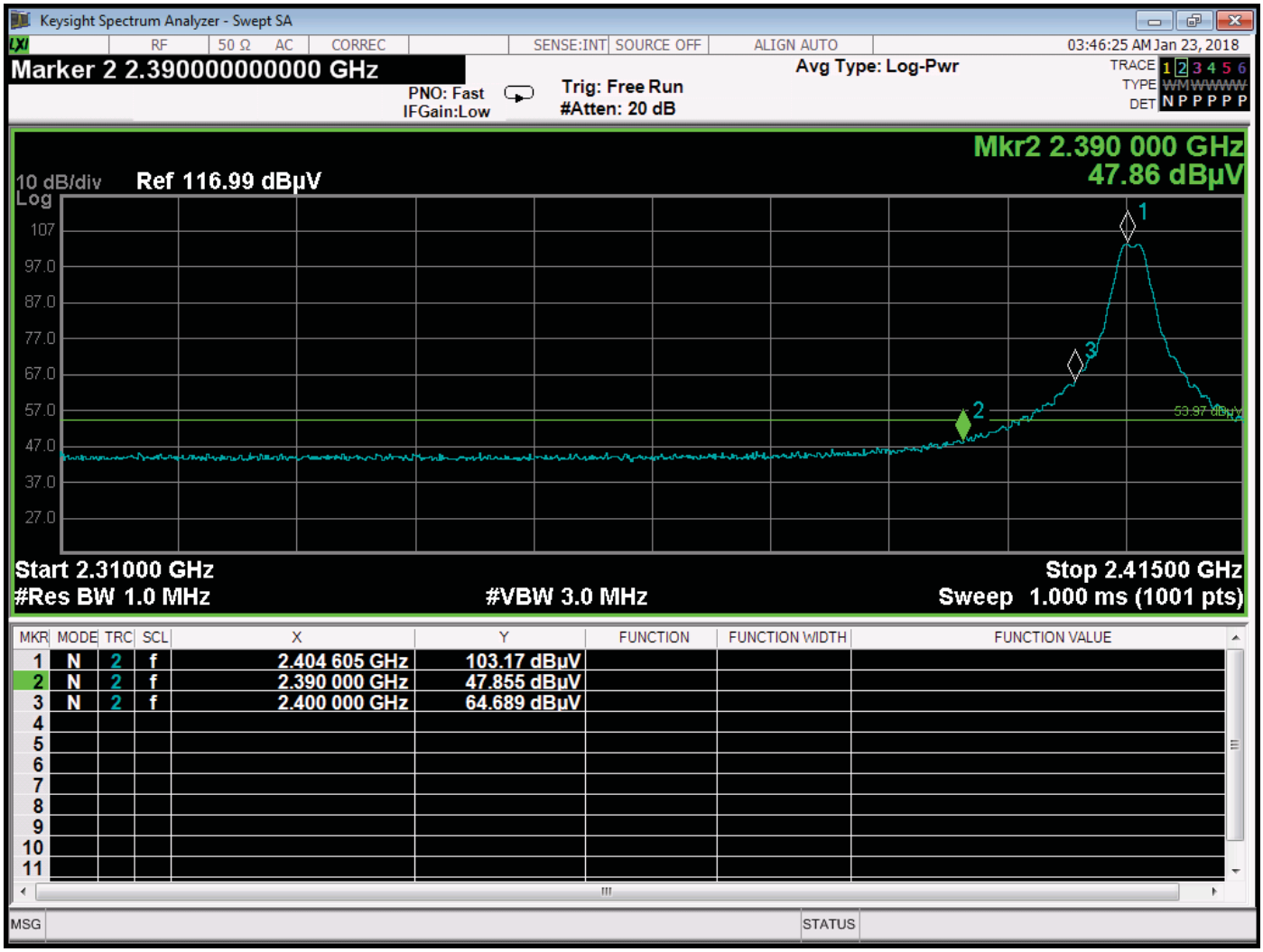
Date: 01/23/2018
Lab: D
Tested By: Kyle Fujimoto

2480 MHz - Band Edges - Power Setting = -a
Transmit Mode - Duty Cycle 12.625251%

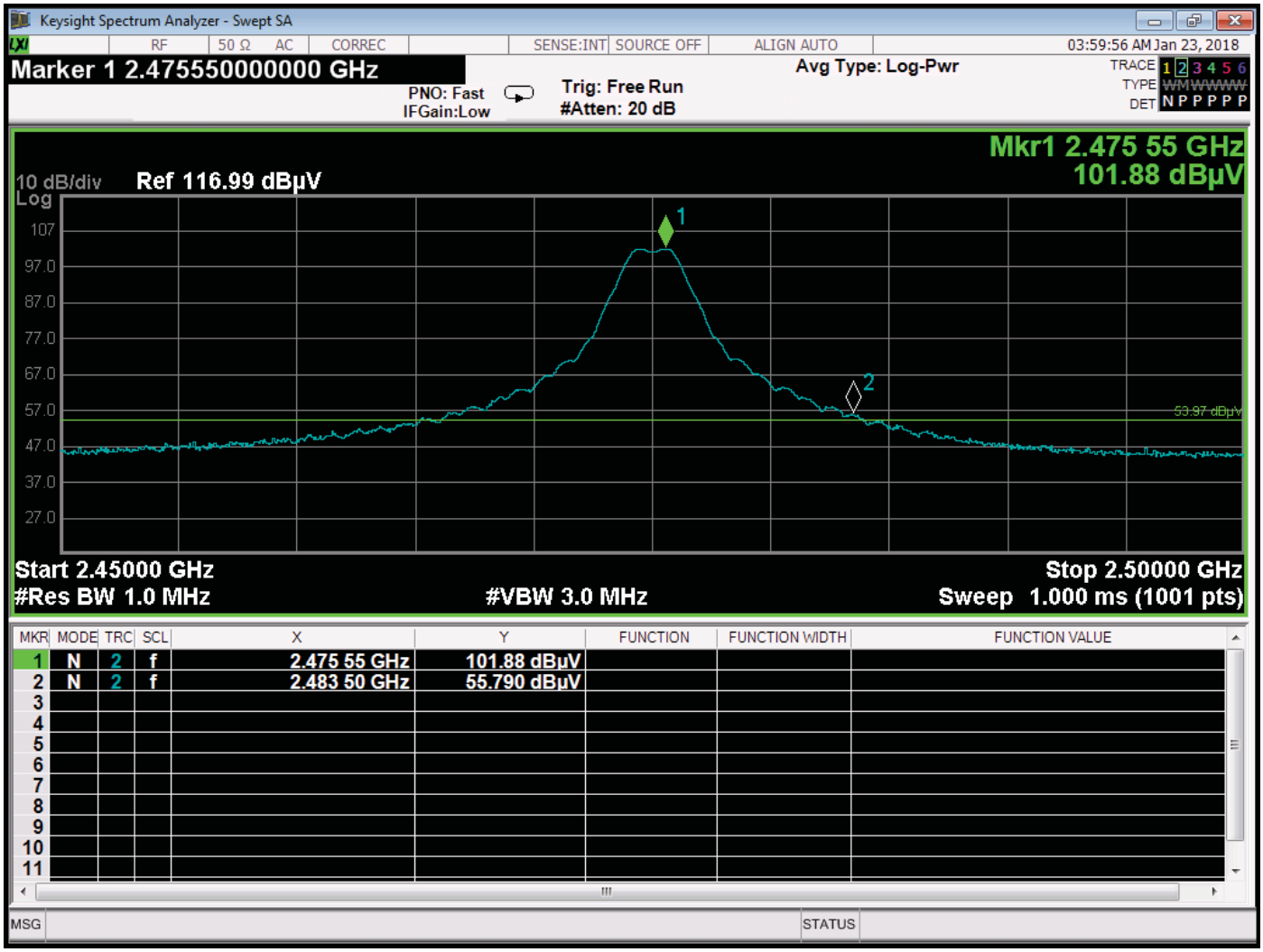
Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
2480	96.91	V	--	--	Peak	188.50	203.91	
2480	78.94	V	--	--	Avg	188.50	203.91	
2483.5	65.50	V	73.97	-8.47	Peak	188.50	203.91	
2483.5	47.53	V	53.97	-6.44	Avg	188.50	203.91	
2480	99.01	H	--	--	Peak	187.50	177.70	
2480	81.04	H	--	--	Avg	187.50	177.70	
2483.5	67.94	H	73.97	-6.03	Peak	187.50	177.70	
2483.5	49.97	H	53.97	-4.00	Avg	187.50	177.70	



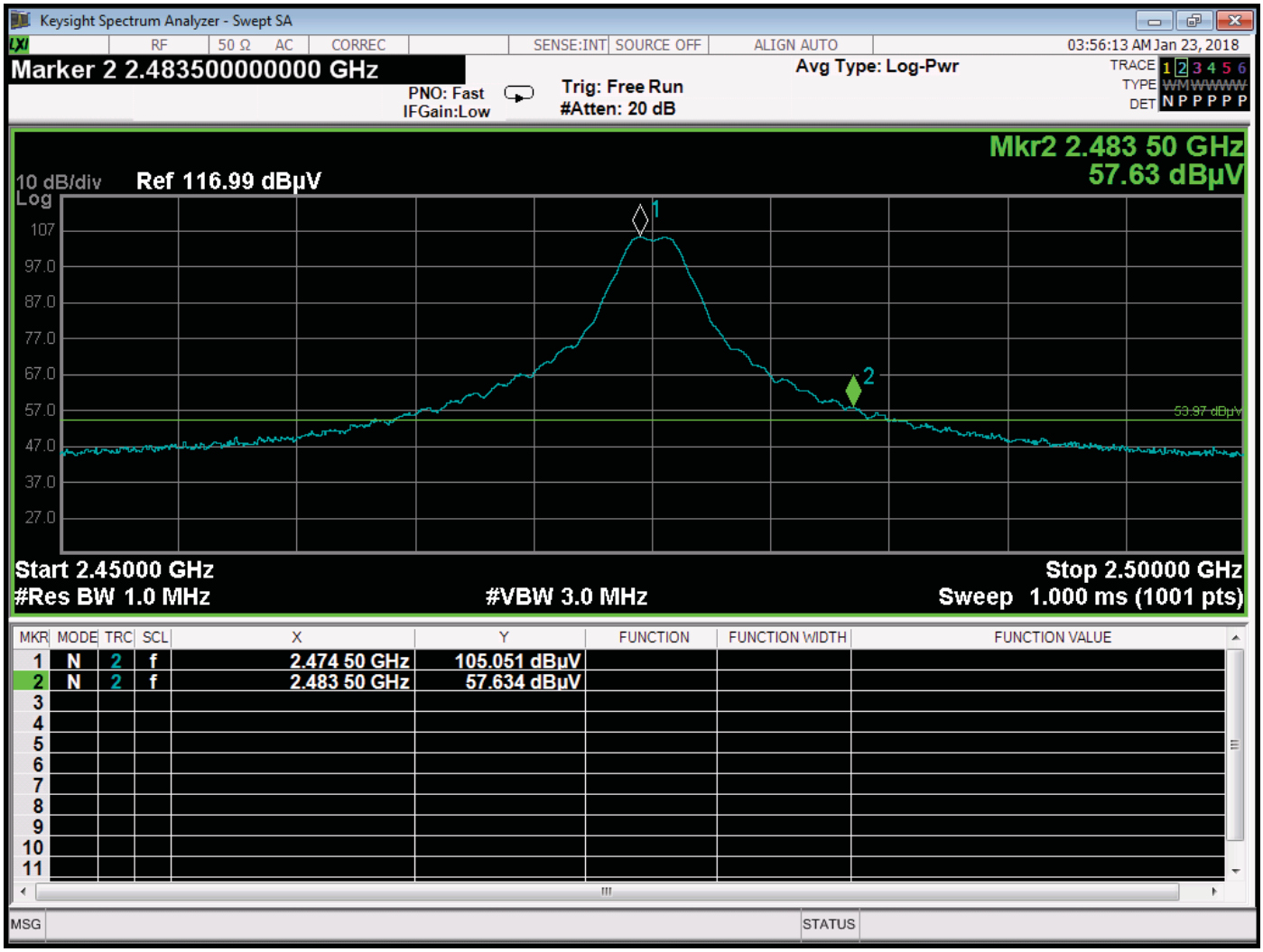
Band Edge for 2405 MHz Fundamental – Vertical Polarization



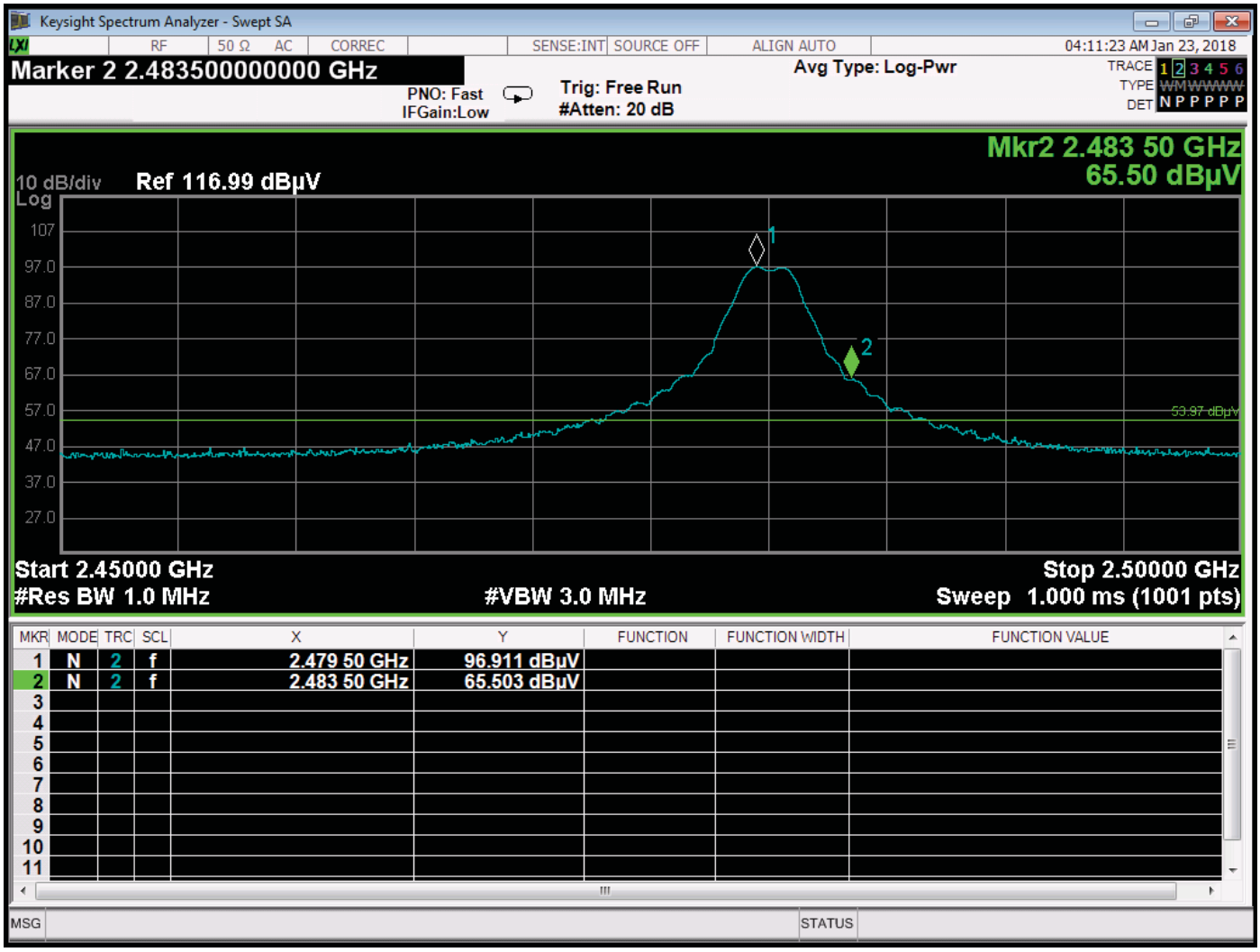
Band Edge for 2405 MHz Fundamental – Horizontal Polarization



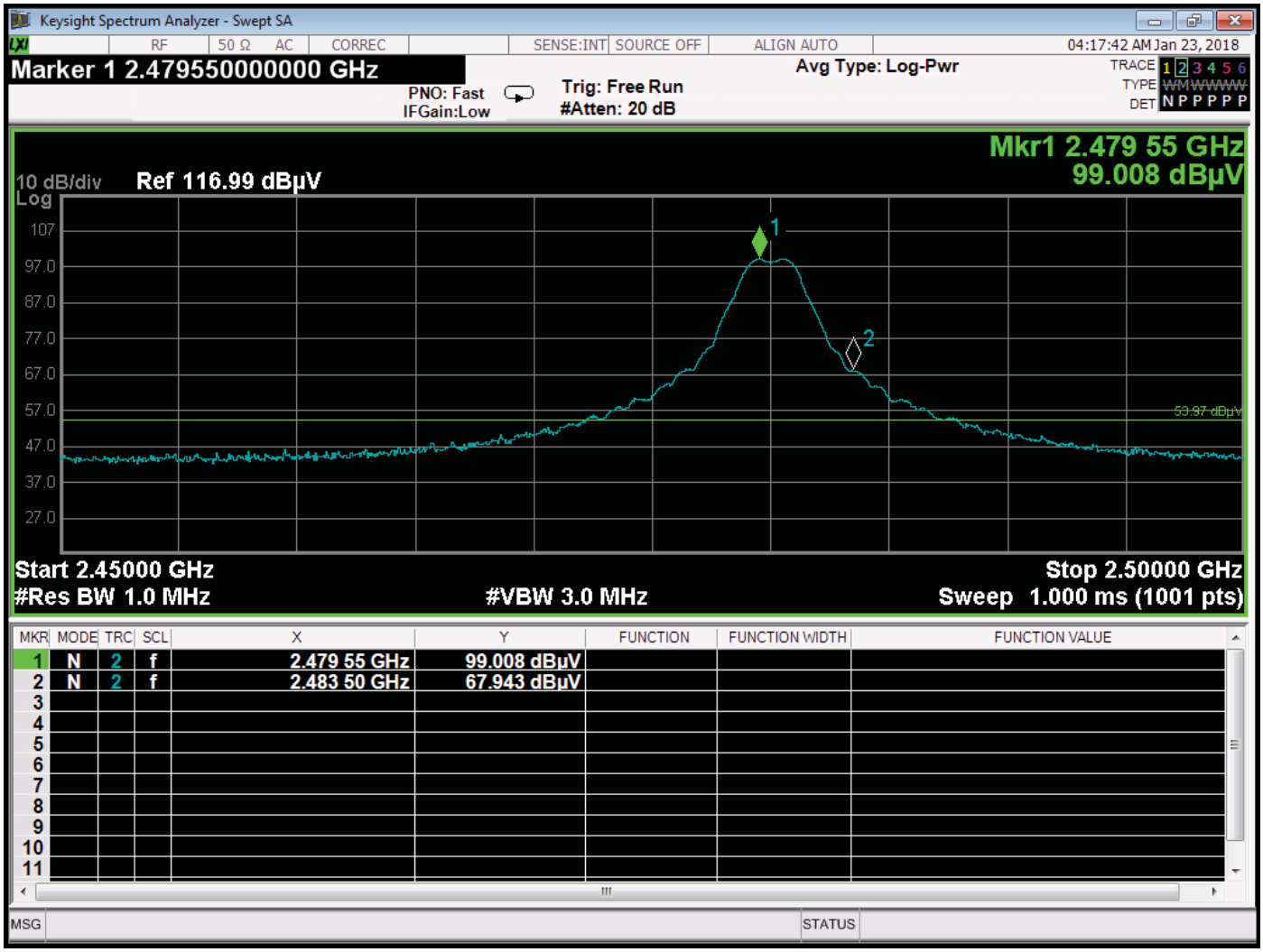
Band Edge for 2475 MHz Fundamental – Vertical Polarization



Band Edge for 2475 MHz Fundamental – Horizontal Polarization



Band Edge for 2480 MHz Fundamental – Vertical Polarization



Band Edge for 2480 MHz Fundamental – Horizontal Polarization

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the 912 SmartCode Lever

Date: 01/24/2018
Lab: D
Tested By: Kyle Fujimoto

2405 MHz - Band Edges - Power Setting = -4
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
2405	103.51	V	--	--	Peak	135.00	190.47	
2405	85.54	V	--	--	Avg	135.00	190.47	
2390	64.39	V	73.97	-9.58	Peak	135.00	190.47	
2390	46.42	V	53.97	-7.55	Avg	135.00	190.47	
2405	101.97	H	--	--	Peak	126.75	129.04	
2405	84.00	H	--	--	Avg	126.75	129.04	
2390	46.44	H	73.97	-27.53	Peak	126.75	129.04	
2390	28.47	H	53.97	-25.50	Avg	126.75	129.04	

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the 912 SmartCode Lever

Date: 01/24/2018
Lab: D
Tested By: Kyle Fujimoto

2475 MHz - Band Edges - Power Setting = 0
Transmit Mode - Duty Cycle 12.625251%

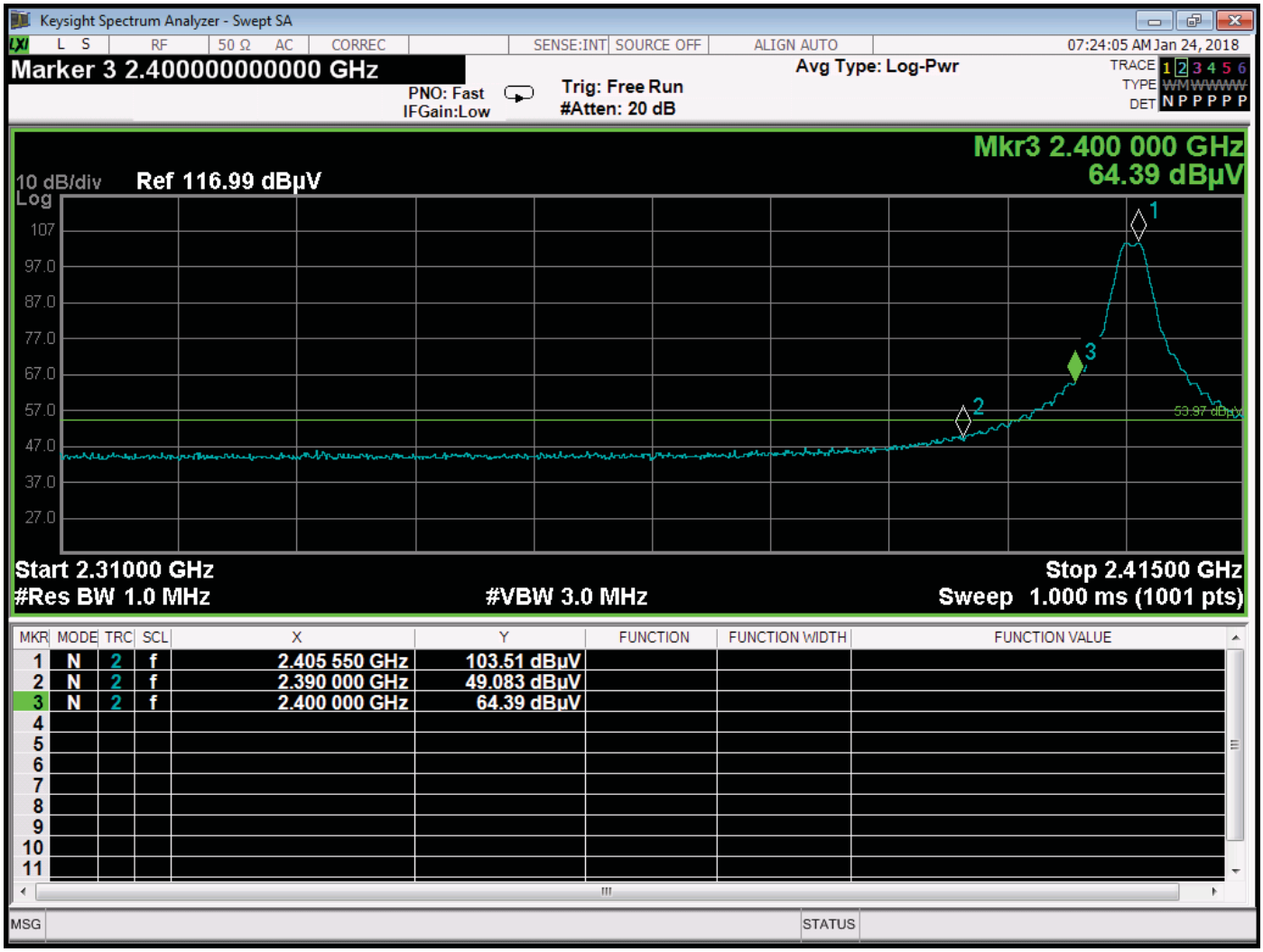
Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
2475	104.65	V	--	--	Peak	210.00	151.55	
2475	86.68	V	--	--	Avg	210.00	151.55	
2483.5	58.71	V	73.97	-15.26	Peak	210.00	151.55	
2483.5	40.74	V	53.97	-13.23	Avg	210.00	151.55	
2475	106.55	H	--	--	Peak	97.00	144.38	
2475	88.58	H	--	--	Avg	97.00	144.38	
2483.5	60.25	H	73.97	-13.72	Peak	97.00	144.38	
2483.5	42.28	H	53.97	-11.69	Avg	97.00	144.38	

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the 912 SmartCode Lever

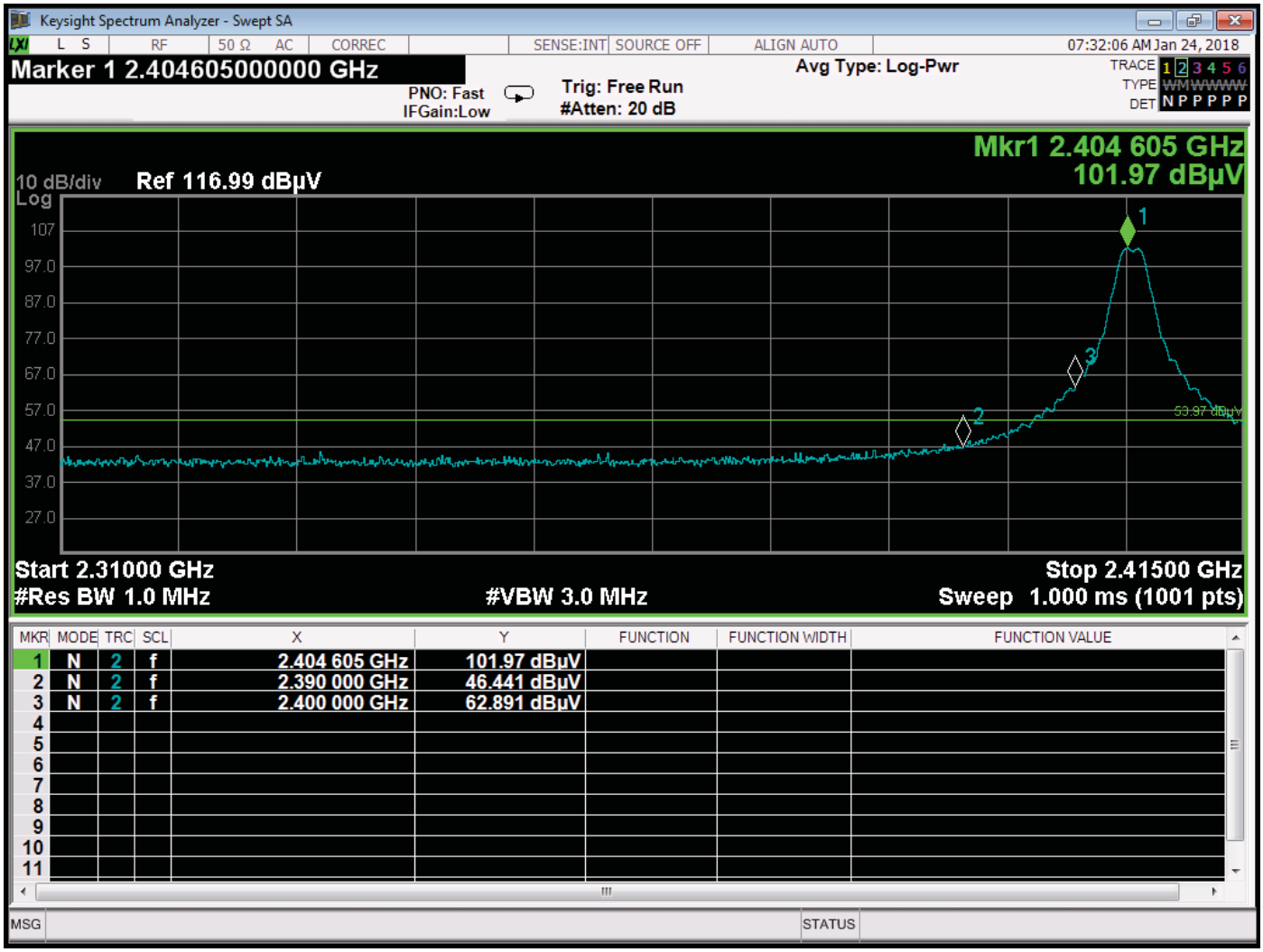
Date: 01/24/2018
Lab: D
Tested By: Kyle Fujimoto

2480 MHz - Band Edges - Power Setting = -a
Transmit Mode - Duty Cycle 12.625251%

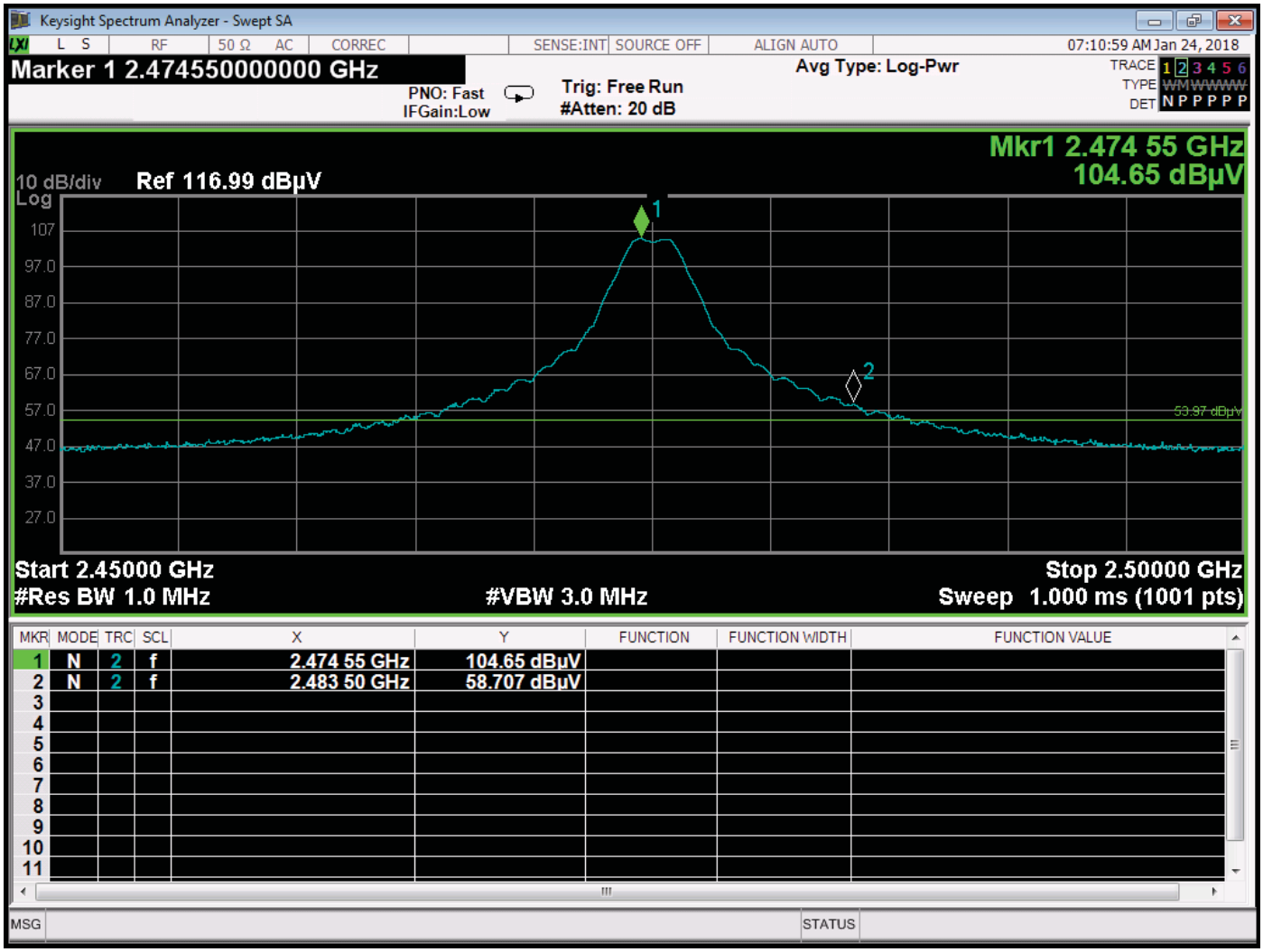
Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
2480	96.76	V	--	--	Peak	169.00	227.07	
2480	78.79	V	--	--	Avg	169.00	227.07	
2483.5	66.39	V	73.97	-7.58	Peak	169.00	227.07	
2483.5	48.42	V	53.97	-5.55	Avg	169.00	227.07	
2480	97.32	H	--	--	Peak	85.75	163.73	
2480	79.35	H	--	--	Avg	85.75	163.73	
2483.5	66.78	H	73.97	-7.19	Peak	85.75	163.73	
2483.5	48.81	H	53.97	-5.16	Avg	85.75	163.73	



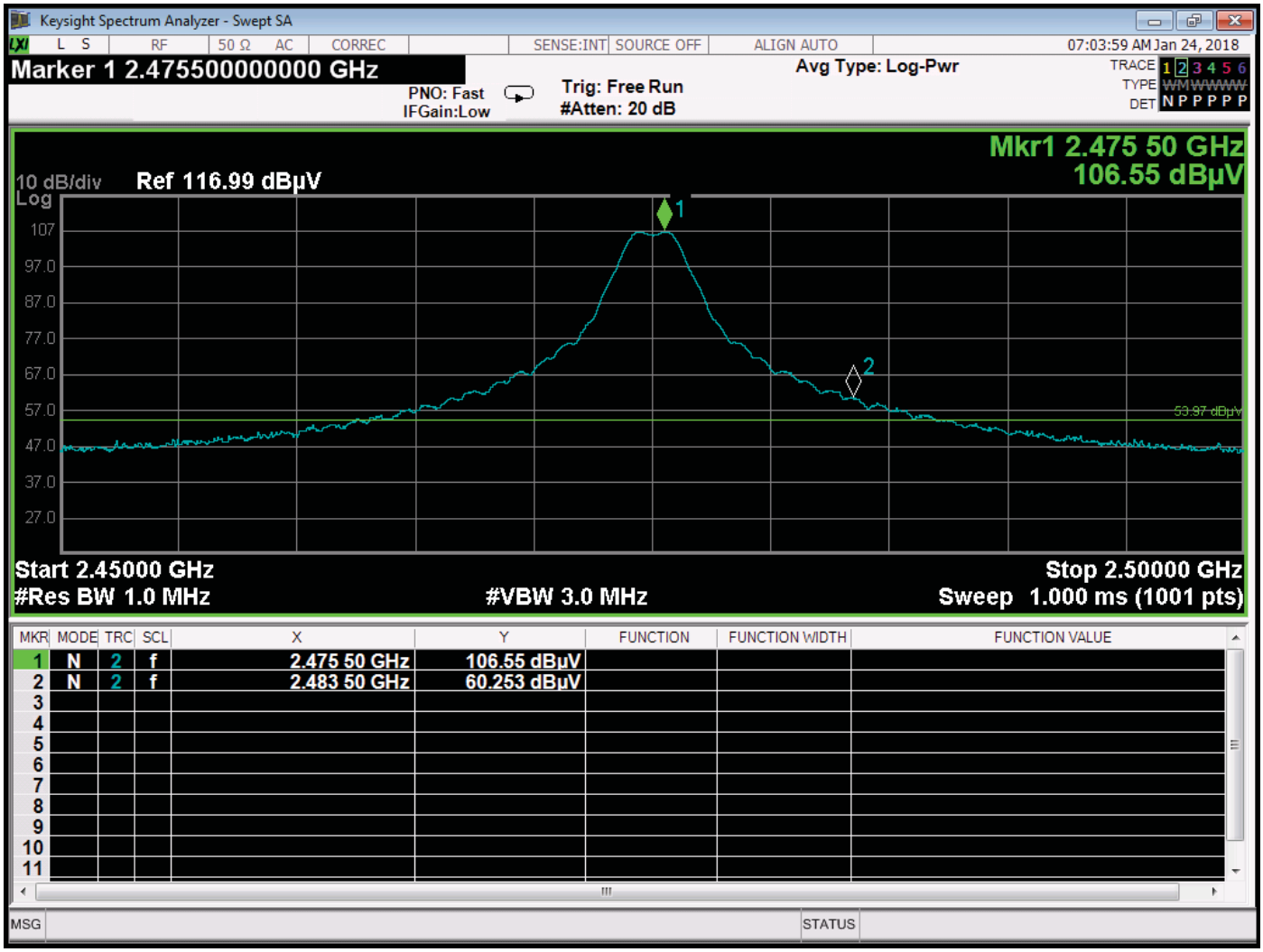
Band Edge for 2405 MHz Fundamental – Vertical Polarization



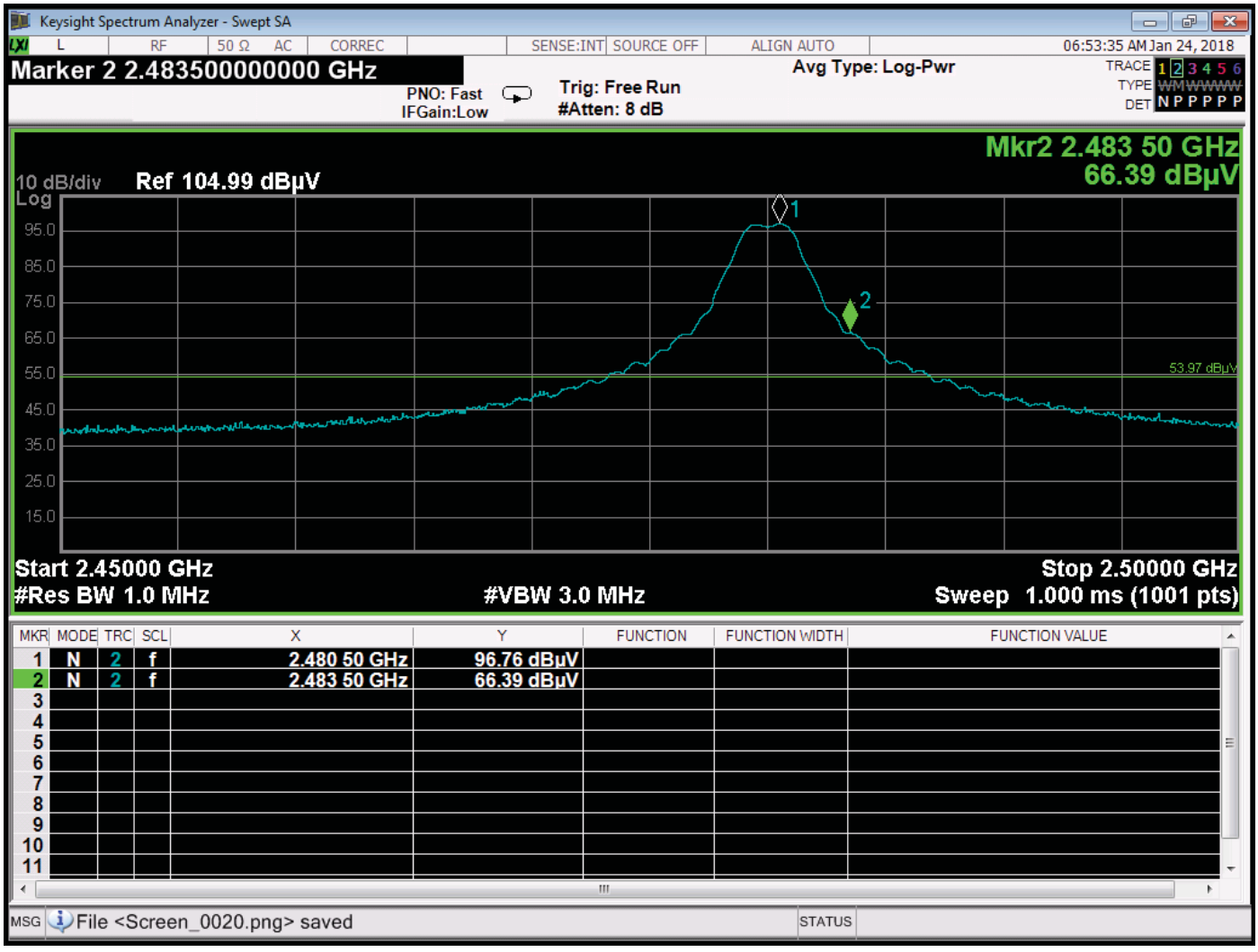
Band Edge for 2405 MHz Fundamental – Horizontal Polarization



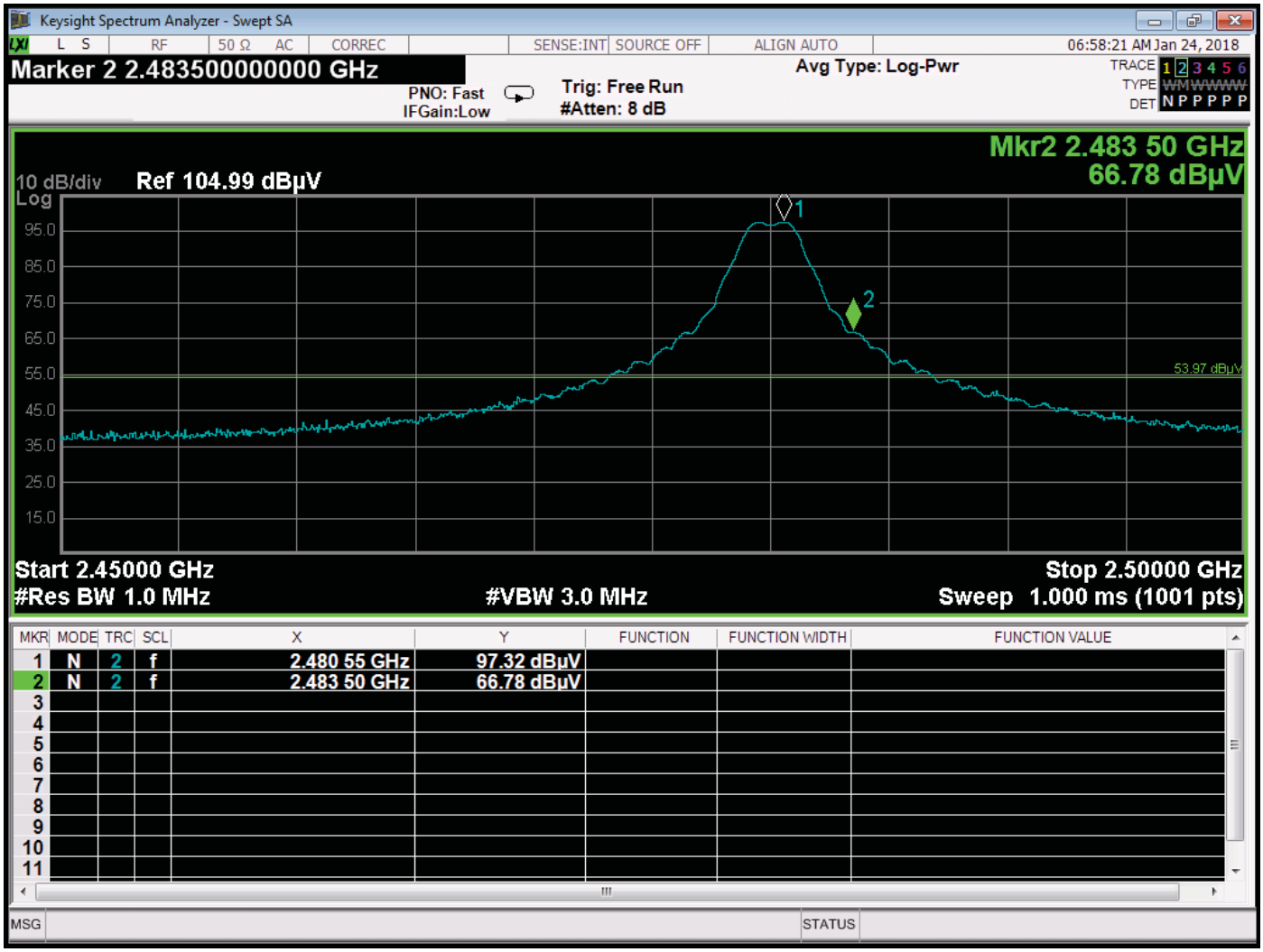
Band Edge for 2475 MHz Fundamental – Vertical Polarization



Band Edge for 2475 MHz Fundamental – Horizontal Polarization



Band Edge for 2480 MHz Fundamental – Vertical Polarization



Band Edge for 2480 MHz Fundamental – Horizontal Polarization

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the 916 SmartCode Deadbolt

Date: 01/24/2018
Lab: D
Tested By: Kyle Fujimoto

2405 MHz - Band Edges - Power Setting = -4
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
2405	98.63	V	--	--	Peak	316.00	100.02	
2405	80.66	V	--	--	Avg	316.00	100.02	
2390	44.98	V	73.97	-28.99	Peak	316.00	100.02	
2390	27.01	V	53.97	-26.96	Avg	316.00	100.02	
2405	104.22	H	--	--	Peak	27.25	209.10	
2405	86.25	H	--	--	Avg	27.25	209.10	
2390	49.07	H	73.97	-24.90	Peak	27.25	209.10	
2390	31.10	H	53.97	-22.87	Avg	27.25	209.10	

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the 916 SmartCode Deadbolt

Date: 01/24/2018
Lab: D
Tested By: Kyle Fujimoto

2475 MHz - Band Edges - Power Setting = 0
Transmit Mode - Duty Cycle 12.625251%

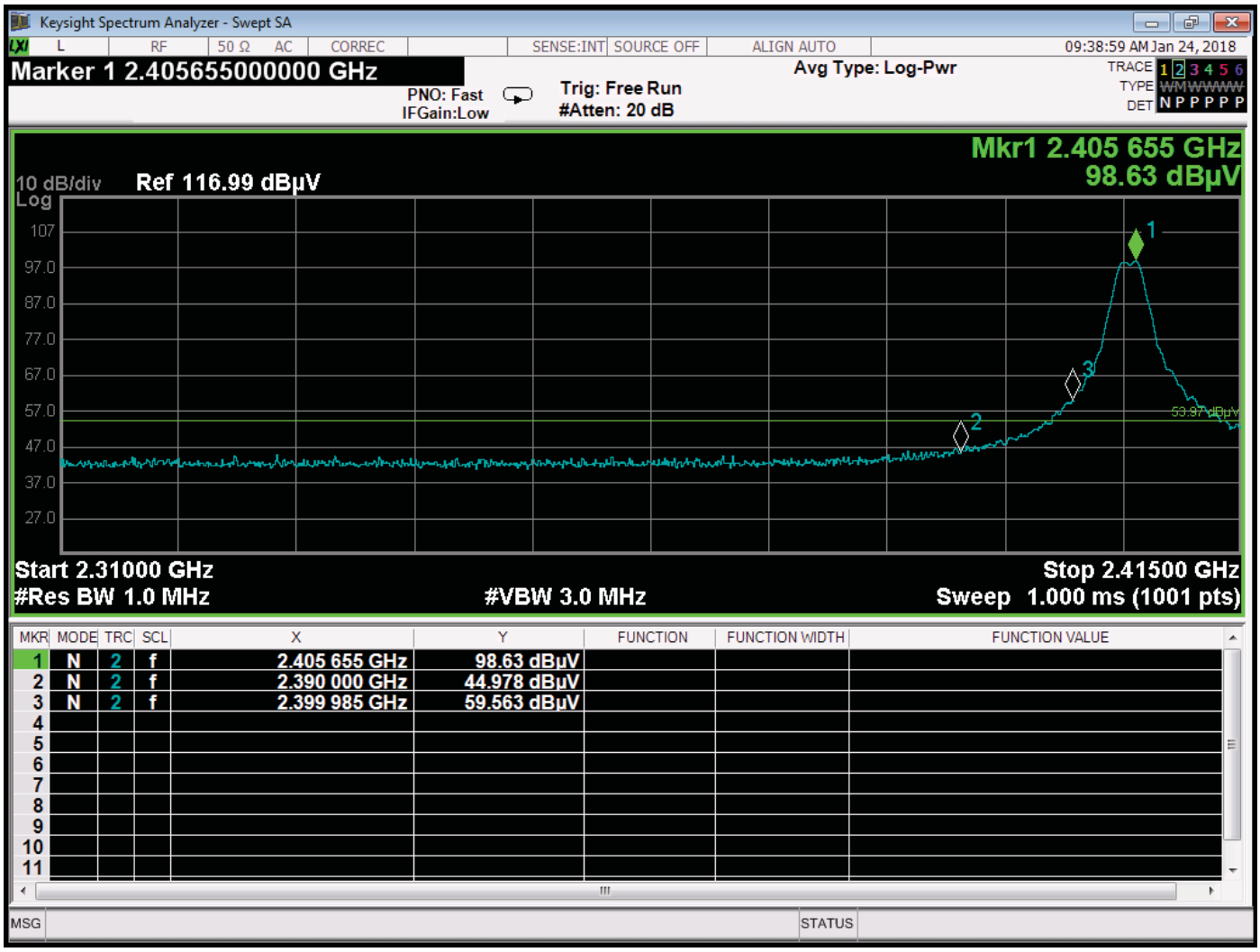
Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
2475	102.36	V	--	--	Peak	292.75	168.68	
2475	84.39	V	--	--	Avg	292.75	168.68	
2483.5	56.11	V	73.97	-17.86	Peak	292.75	168.68	
2483.5	38.14	V	53.97	-15.83	Avg	292.75	168.68	
2475	108.31	H	--	--	Peak	192.25	198.65	
2475	90.34	H	--	--	Avg	192.25	198.65	
2483.5	61.42	H	73.97	-12.55	Peak	192.25	198.65	
2483.5	43.45	H	53.97	-10.52	Avg	192.25	198.65	

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the 916 SmartCode Deadbolt

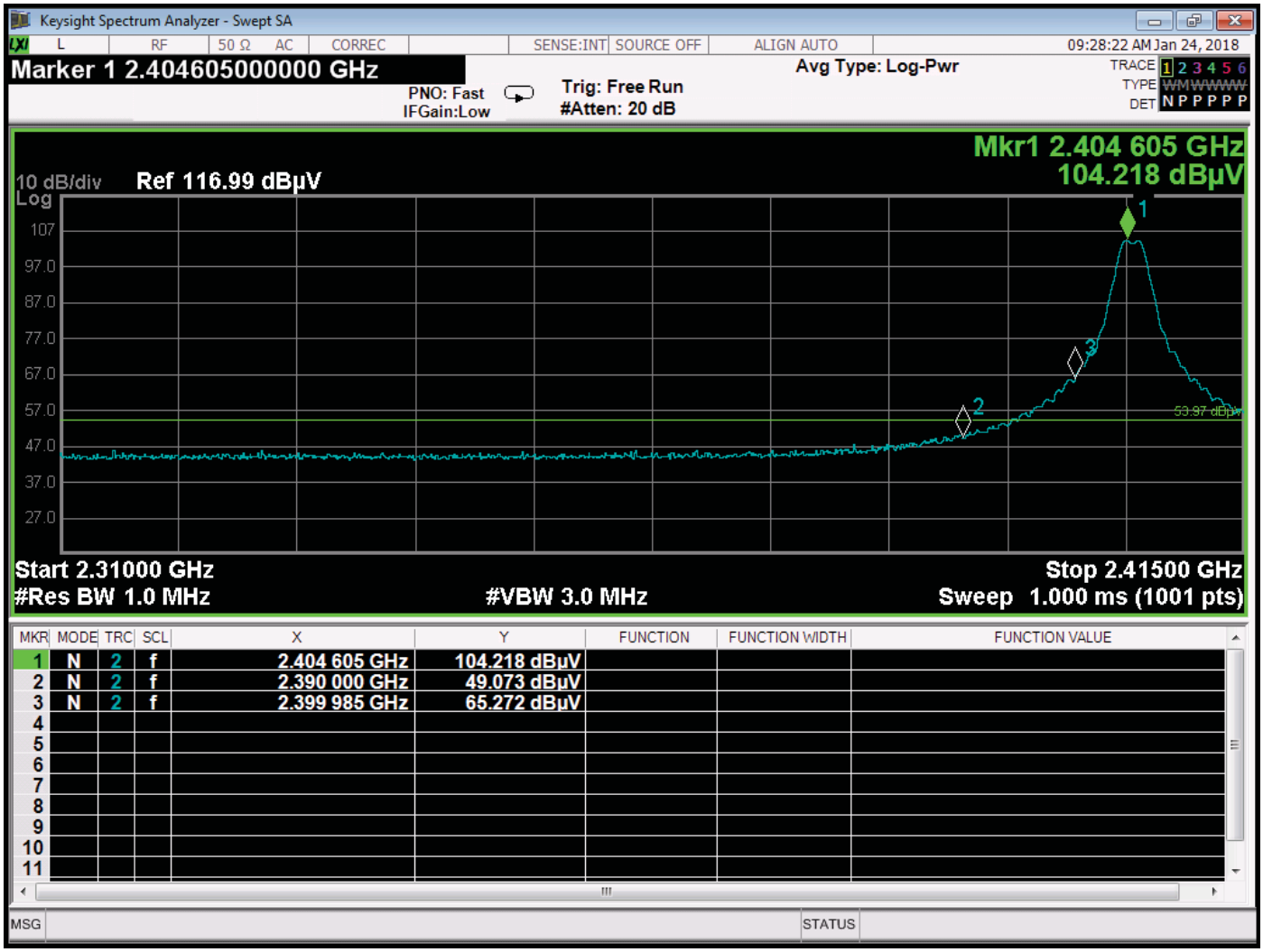
Date: 01/24/2018
Lab: D
Tested By: Kyle Fujimoto

2480 MHz - Band Edges - Power Setting = -a
Transmit Mode - Duty Cycle 12.625251%

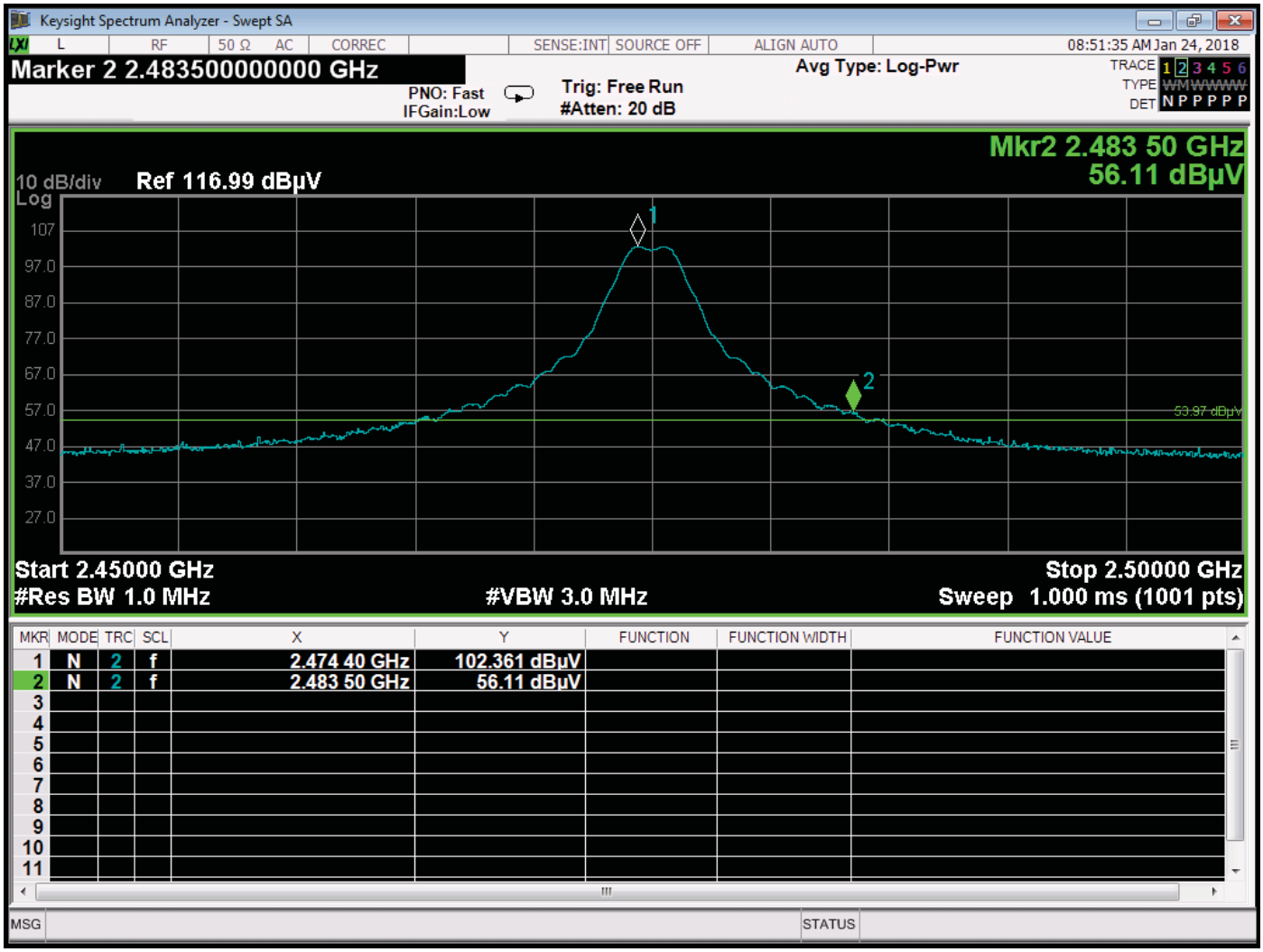
Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
2480	99.51	V	--	--	Peak	324.50	168.74	
2480	81.54	V	--	--	Avg	324.50	168.74	
2483.5	68.56	V	73.97	-5.41	Peak	324.50	168.74	
2483.5	50.59	V	53.97	-3.38	Avg	324.50	168.74	
2480	100.80	H	--	--	Peak	83.50	178.89	
2480	82.83	H	--	--	Avg	83.50	178.89	
2483.5	70.02	H	73.97	-3.95	Peak	83.50	178.89	
2483.5	52.05	H	53.97	-1.92	Avg	83.50	178.89	



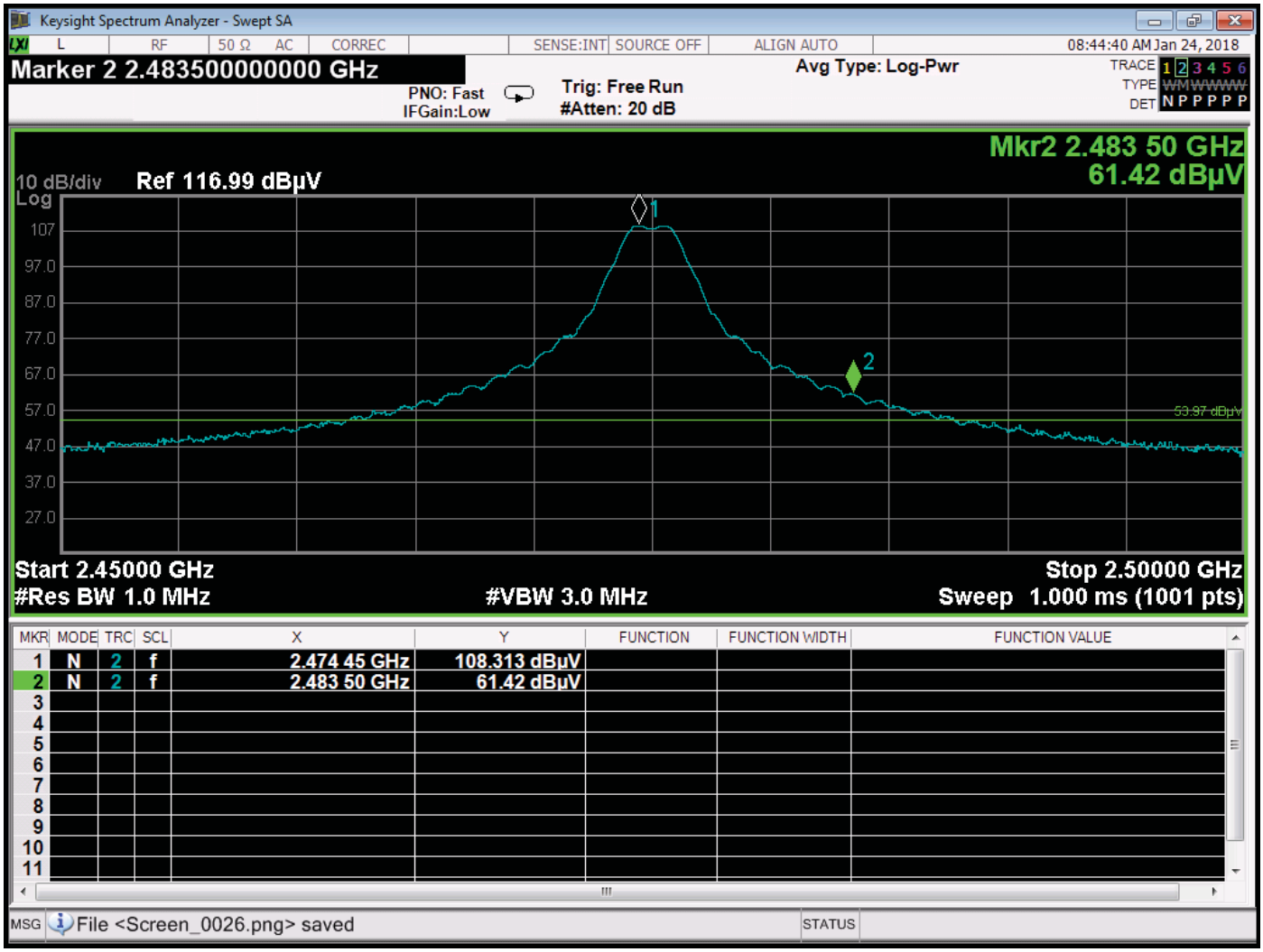
Band Edge for 2405 MHz Fundamental – Vertical Polarization



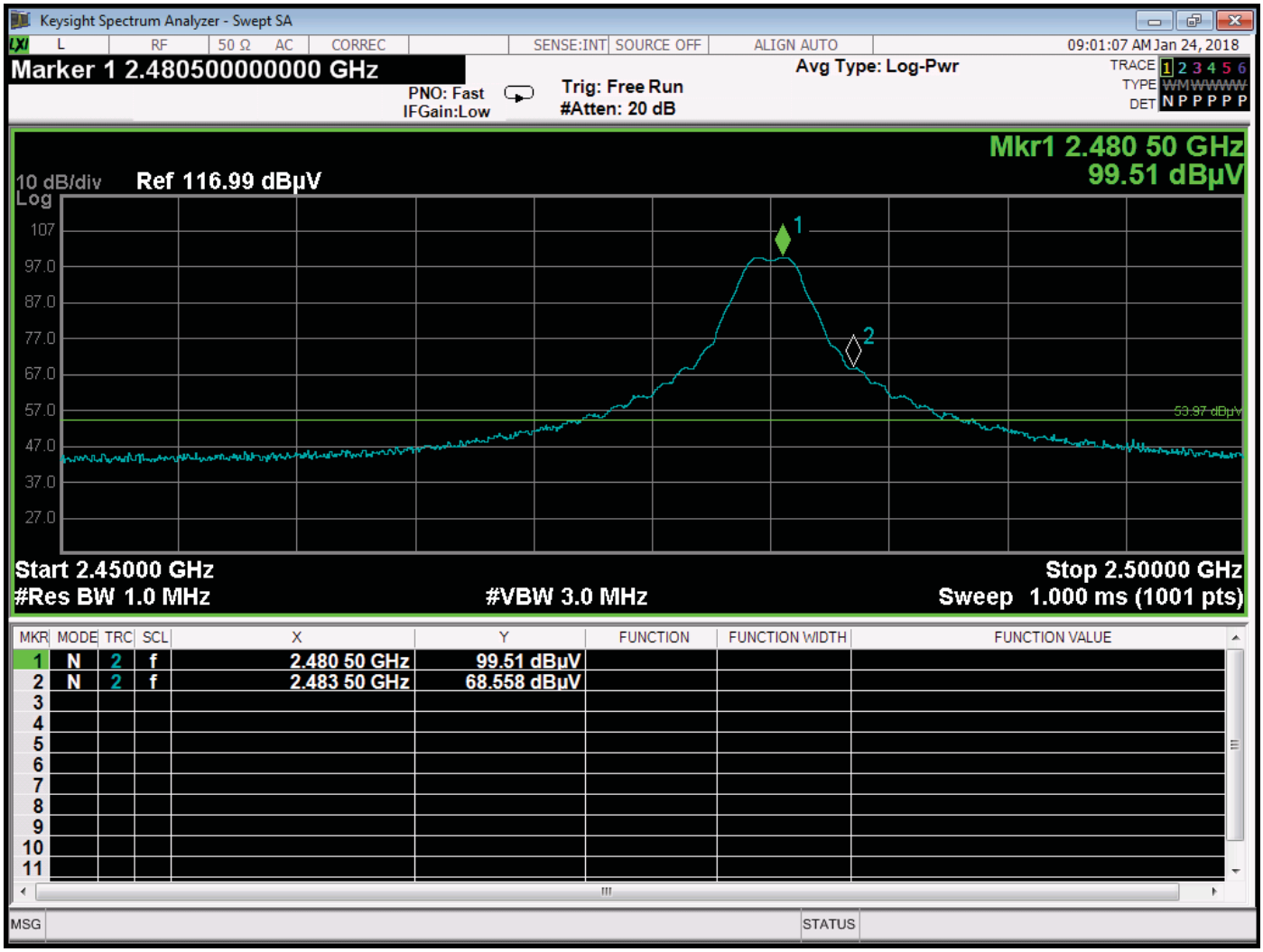
Band Edge for 2405 MHz Fundamental – Horizontal Polarization



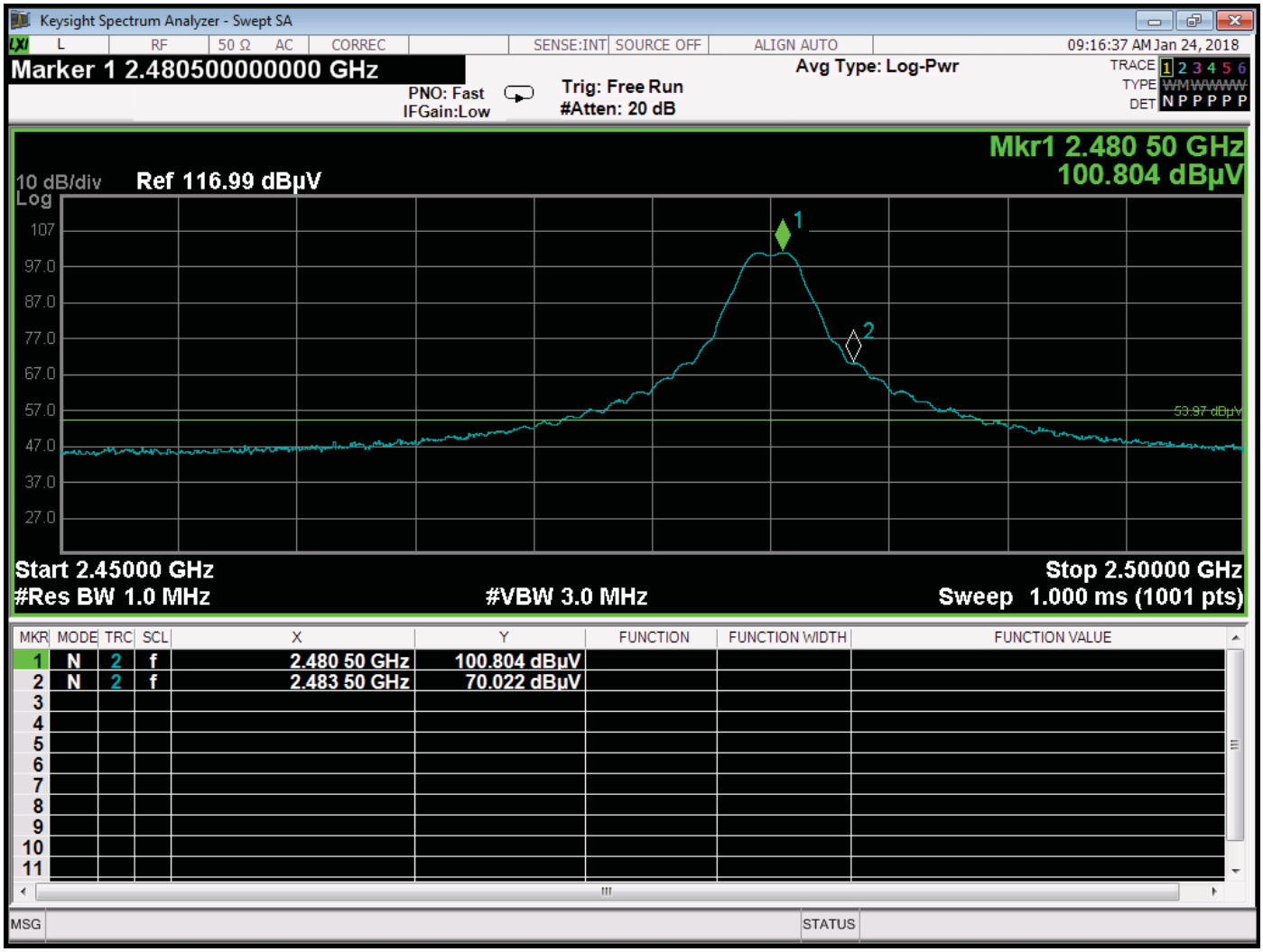
Band Edge for 2475 MHz Fundamental – Vertical Polarization



Band Edge for 2475 MHz Fundamental – Horizontal Polarization



Band Edge for 2480 MHz Fundamental – Vertical Polarization



Band Edge for 2480 MHz Fundamental – Horizontal Polarization

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the Obsidian

Date: 01/30/2018
Lab: D
Tested By: Kyle Fujimoto

2405 MHz - Band Edges - Power Setting = -4
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
2405	106.35	V	--	--	Peak	46.50	162.35	
2405	88.38	V	--	--	Avg	46.50	162.35	
2390	49.65	V	73.97	-24.32	Peak	46.50	162.35	
2390	31.68	V	53.97	-22.29	Avg	46.50	162.35	
2405	107.79	H	--	--	Peak	31.75	180.74	
2405	89.82	H	--	--	Avg	31.75	180.74	
2390	50.38	H	73.97	-23.59	Peak	31.75	180.74	
2390	32.41	H	53.97	-21.56	Avg	31.75	180.74	

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Installed Inside the Obsidian

Date: 01/30/2018
Lab: D
Tested By: Kyle Fujimoto

2475 MHz - Band Edges - Power Setting = 0
Transmit Mode - Duty Cycle 12.625251%

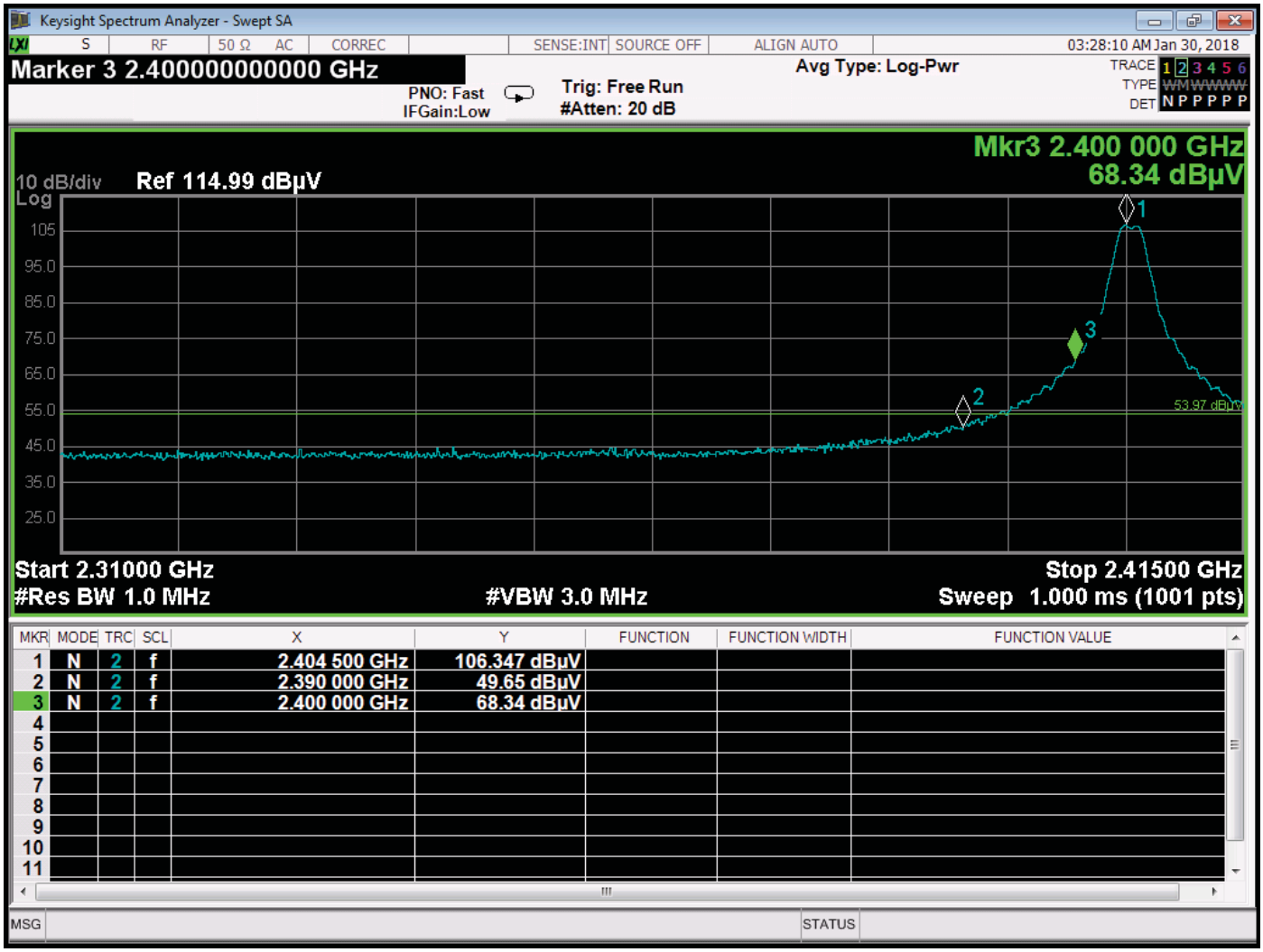
Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
2475	106.71	V	--	--	Peak	48.25	174.47	
2475	88.74	V	--	--	Avg	48.25	174.47	
2483.5	60.17	V	73.97	-13.80	Peak	48.25	174.47	
2483.5	42.20	V	53.97	-11.77	Avg	48.25	174.47	
2475	108.56	H	--	--	Peak	41.25	170.71	
2475	90.59	H	--	--	Avg	41.25	170.71	
2483.5	62.45	H	73.97	-11.52	Peak	41.25	170.71	
2483.5	44.48	H	53.97	-9.49	Avg	41.25	170.71	

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the Obsidian

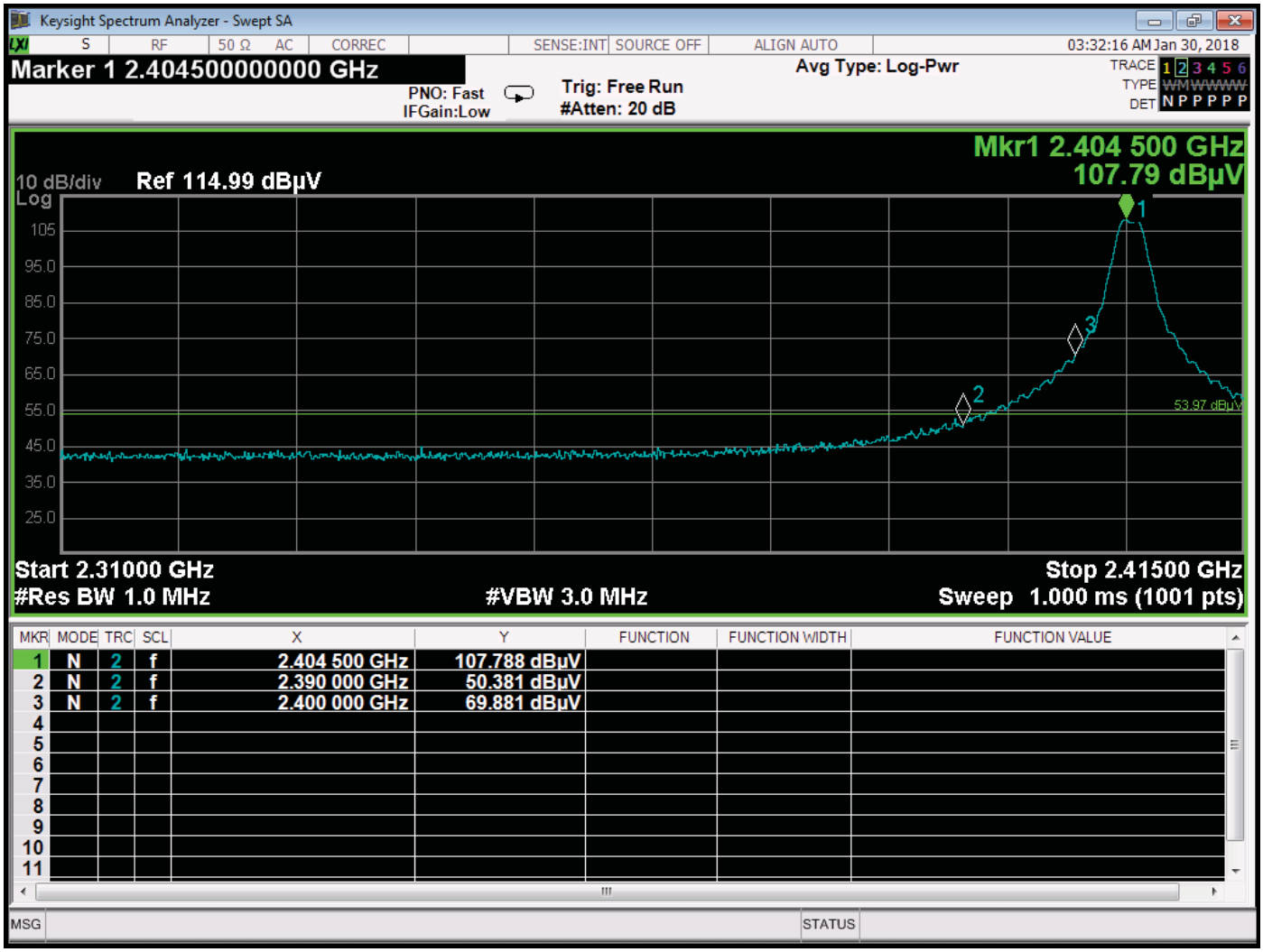
Date: 01/30/2018
Lab: D
Tested By: Kyle Fujimoto

2480 MHz - Band Edges - Power Setting = -a
Transmit Mode - Duty Cycle 12.625251%

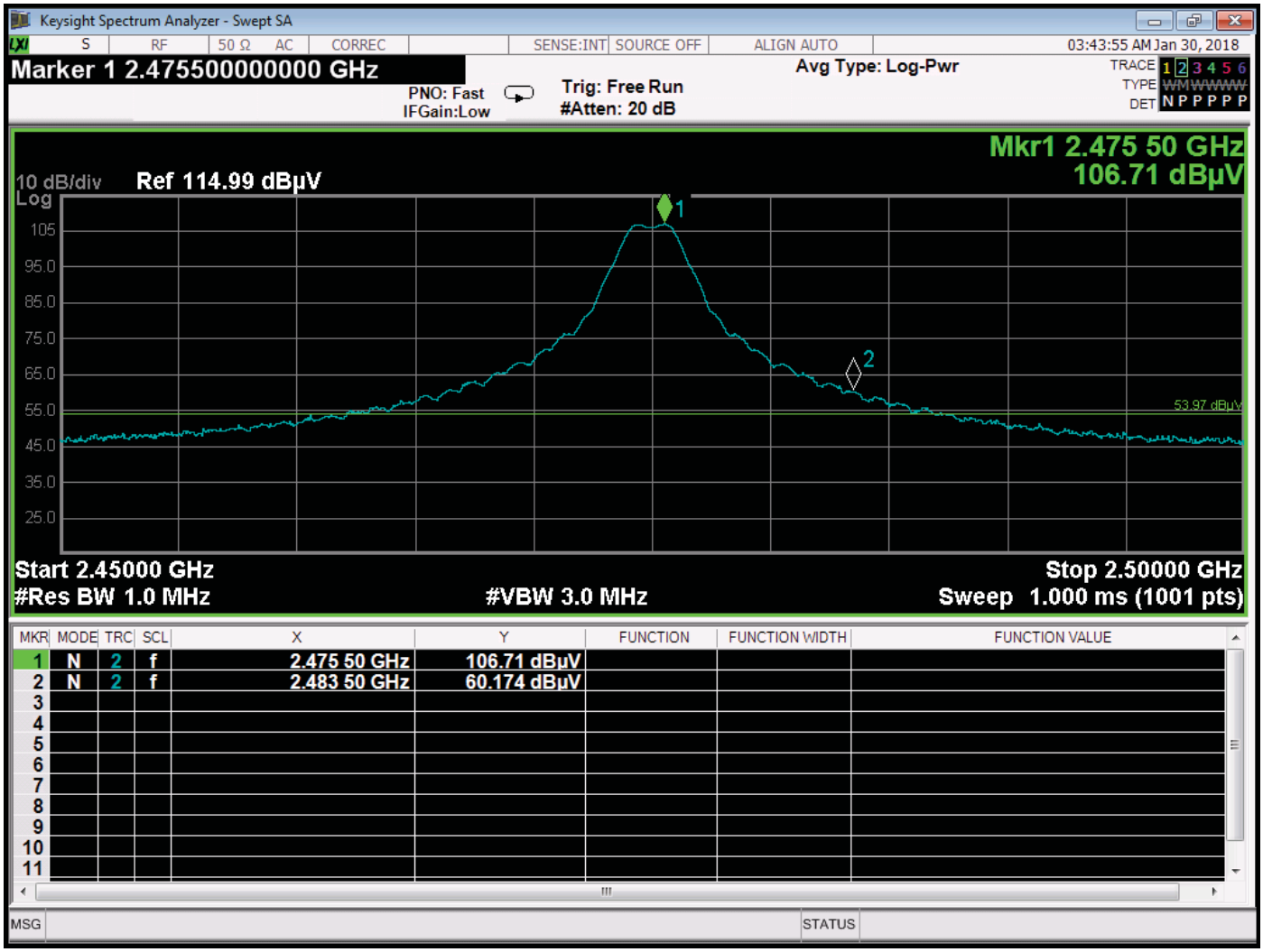
Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
2480	102.43	V	--	--	Peak	156.75	169.58	
2480	84.46	V	--	--	Avg	156.75	169.58	
2483.5	71.21	V	73.97	-2.76	Peak	156.75	169.58	
2483.5	53.24	V	53.97	-0.73	Avg	156.75	169.58	
2480	102.88	H	--	--	Peak	207.75	187.73	
2480	84.91	H	--	--	Avg	207.75	187.73	
2483.5	71.71	H	73.97	-2.27	Peak	207.75	187.73	
2483.5	53.74	H	53.97	-0.23	Avg	207.75	187.73	



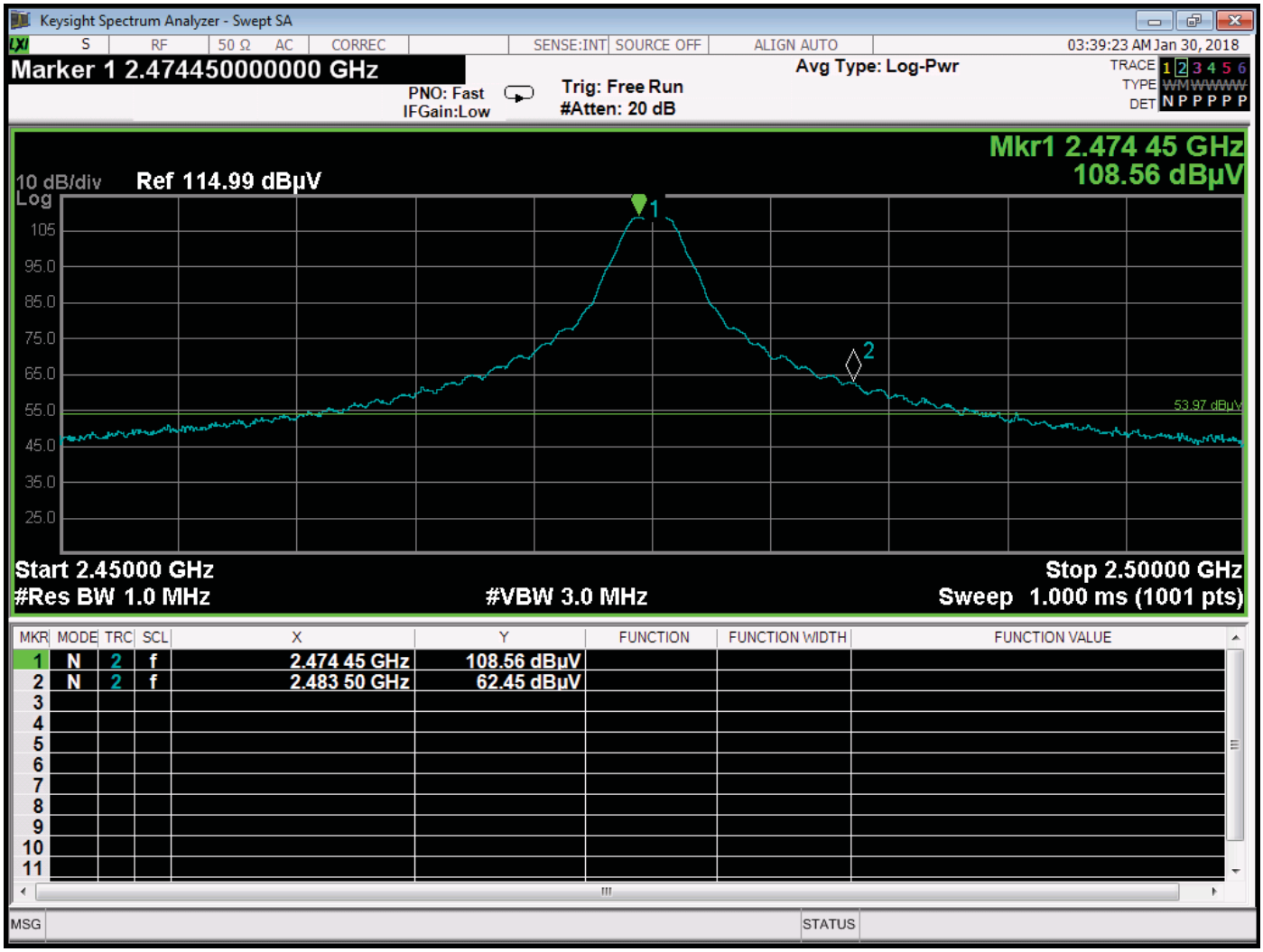
Band Edge for 2405 MHz Fundamental – Vertical Polarization



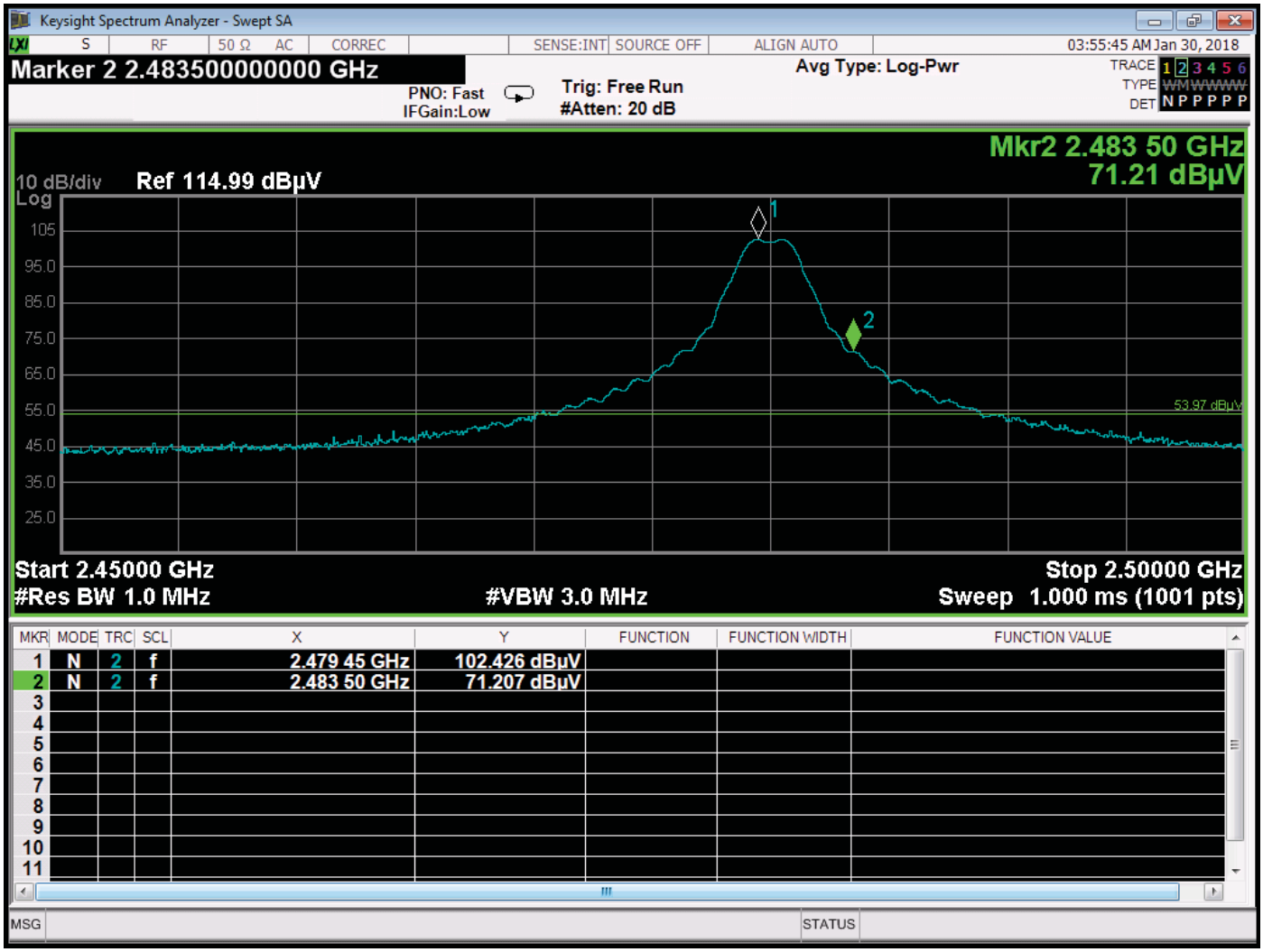
Band Edge for 2405 MHz Fundamental – Horizontal Polarization



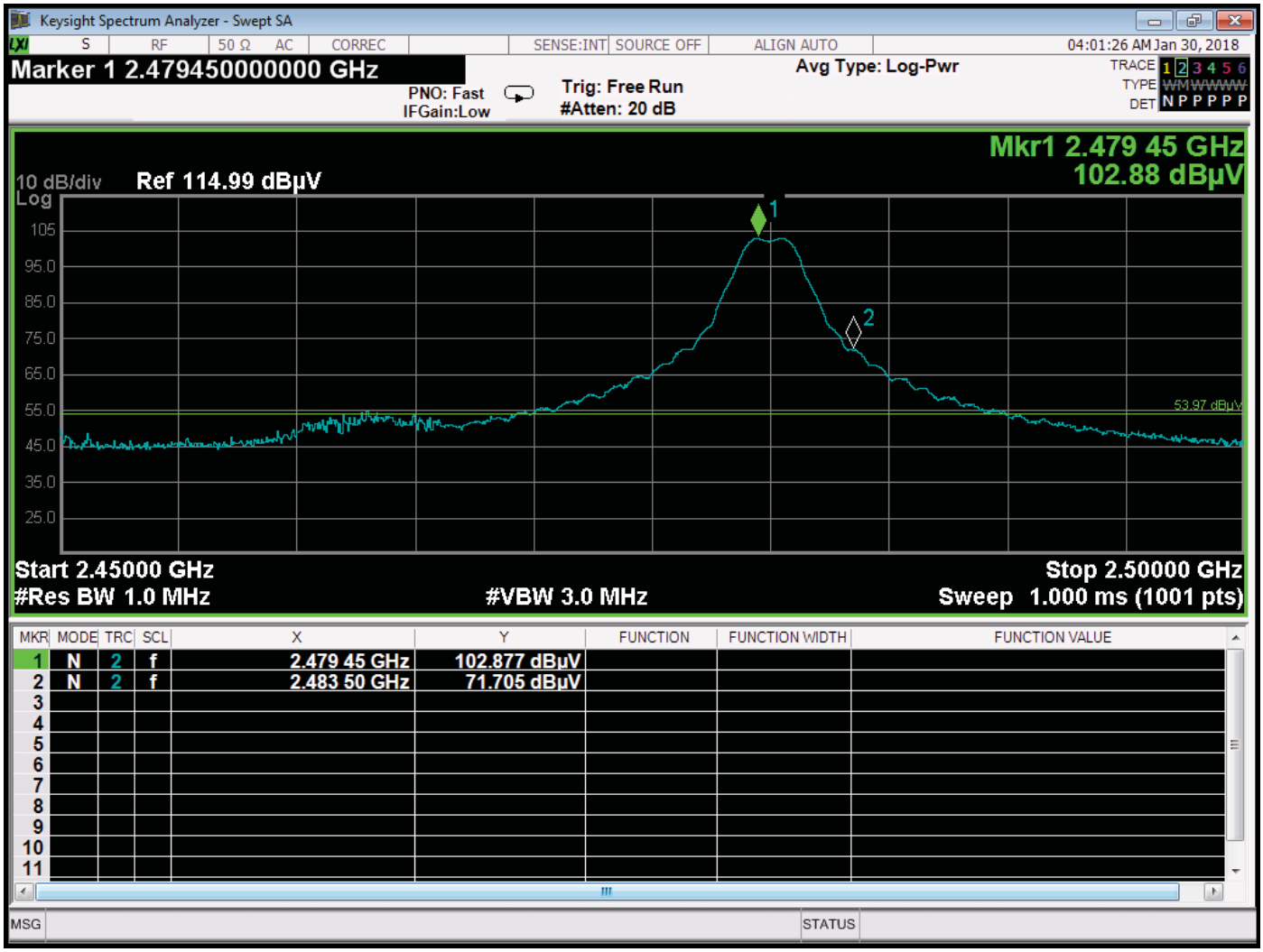
Band Edge for 2475 MHz Fundamental – Vertical Polarization



Band Edge for 2475 MHz Fundamental – Horizontal Polarization



Band Edge for 2480 MHz Fundamental – Vertical Polarization



Band Edge for 2480 MHz Fundamental – Horizontal Polarization

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the Comcast Convert

Date: 01/26/2018
Lab: D
Tested By: Kyle Fujimoto

2405 MHz - Band Edges - Power Setting = -4
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
2405	104.50	V	--	--	Peak	159.00	214.23	
2405	86.53	V	--	--	Avg	159.00	214.23	
2390	47.74	V	73.97	-26.23	Peak	159.00	214.23	
2390	29.77	V	53.97	-24.20	Avg	159.00	214.23	
2405	106.09	H	--	--	Peak	186.50	178.65	
2405	88.12	H	--	--	Avg	186.50	178.65	
2390	48.99	H	73.97	-24.98	Peak	186.50	178.65	
2390	31.02	H	53.97	-22.95	Avg	186.50	178.65	

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the Comcast Convert

Date: 01/26/2018
Lab: D
Tested By: Kyle Fujimoto

2475 MHz - Band Edges - Power Setting = 0
Transmit Mode - Duty Cycle 12.625251%

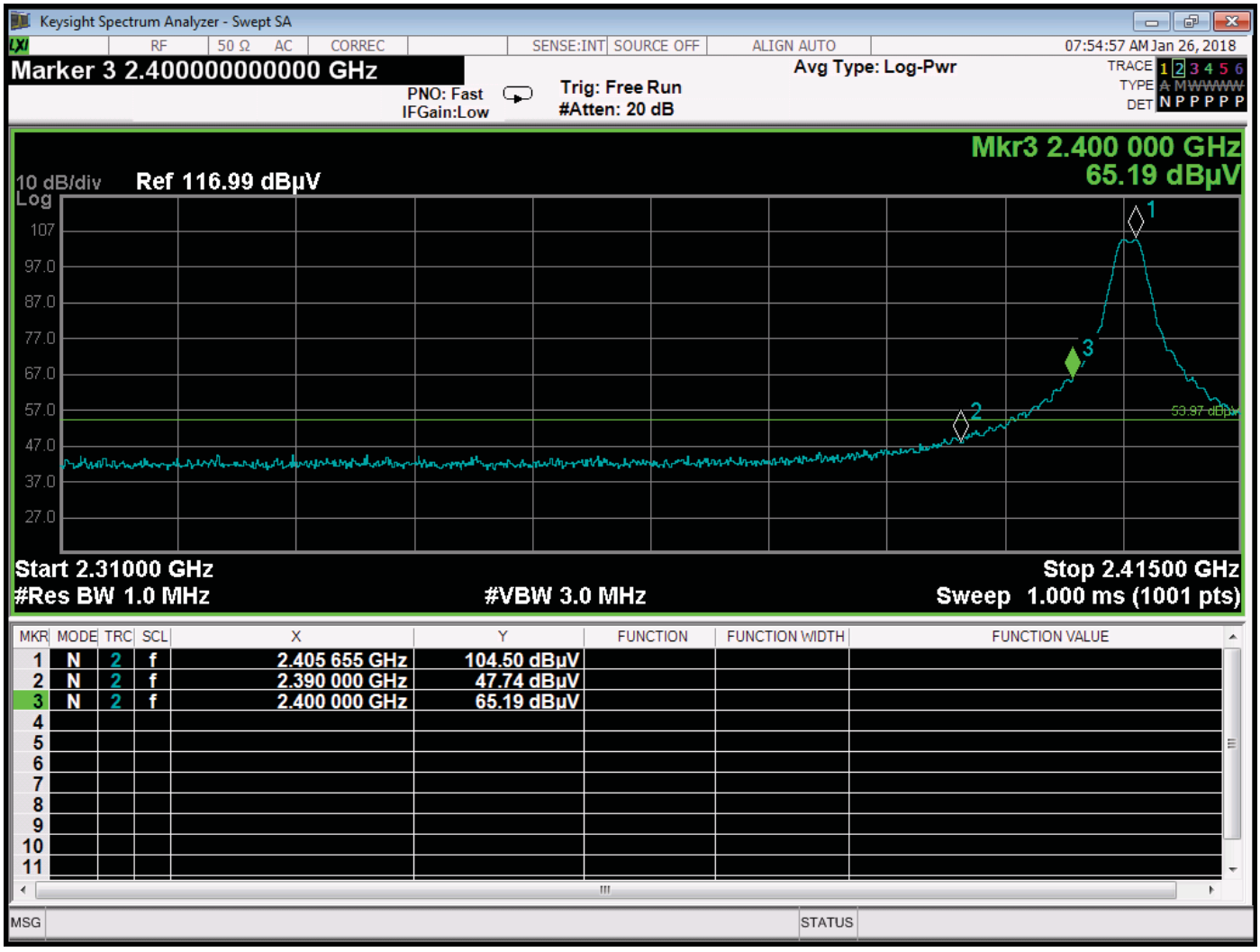
Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
2475	107.14	V	--	--	Peak	194.75	170.83	
2475	89.17	V	--	--	Avg	194.75	170.83	
2483.5	61.28	V	73.97	-12.69	Peak	194.75	170.83	
2483.5	43.31	V	53.97	-10.66	Avg	194.75	170.83	
2475	108.54	H	--	--	Peak	196.50	175.31	
2475	90.57	H	--	--	Avg	196.50	175.31	
2483.5	62.09	H	73.97	-11.88	Peak	196.50	175.31	
2483.5	44.12	H	53.97	-9.85	Avg	196.50	175.31	

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the Comcast Convert

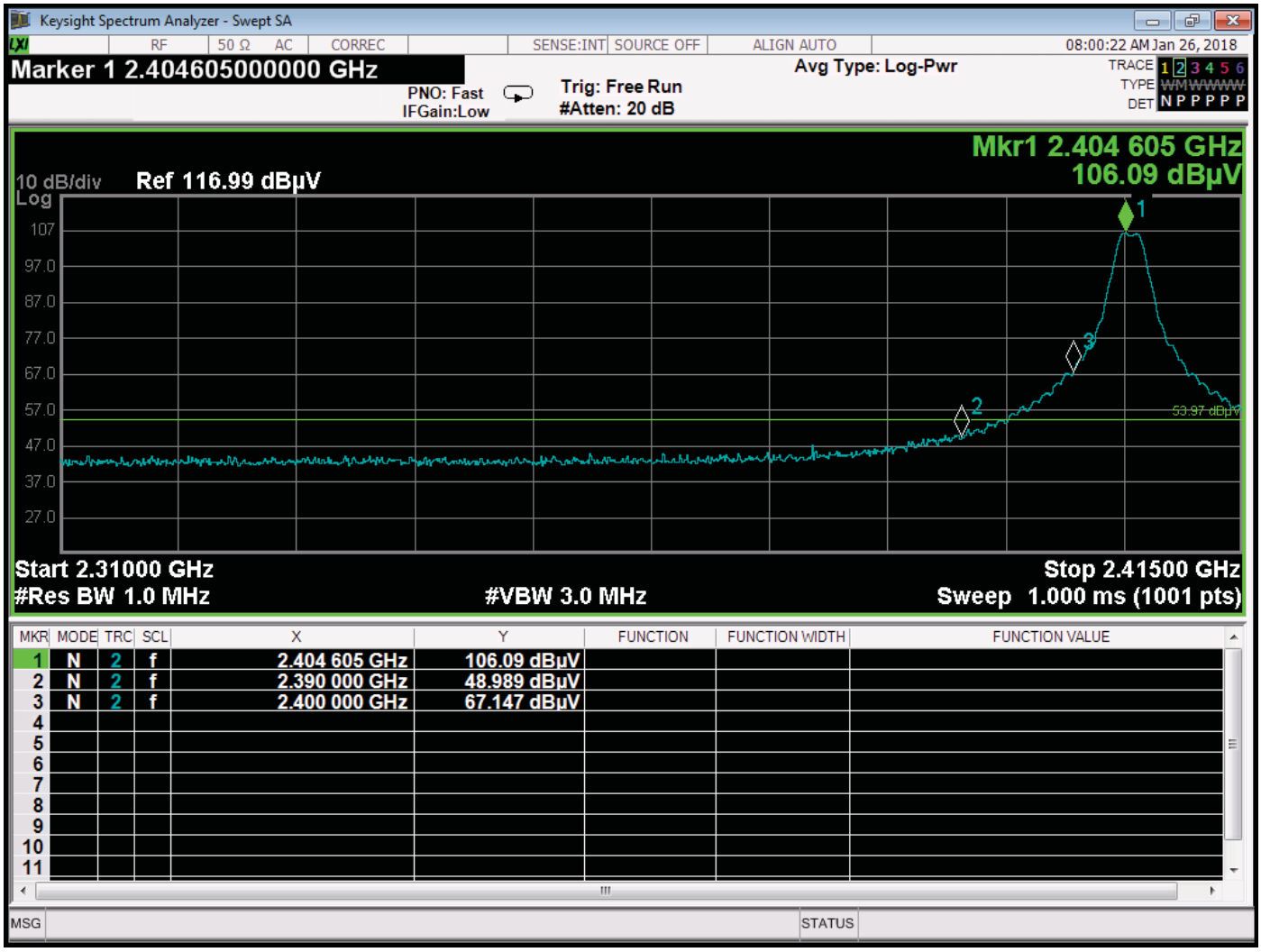
Date: 01/26/2018 and 04/04/2018
Lab: D
Tested By: Kyle Fujimoto

2480 MHz - Band Edges - Power Setting = -a
Transmit Mode - Duty Cycle 12.625251%

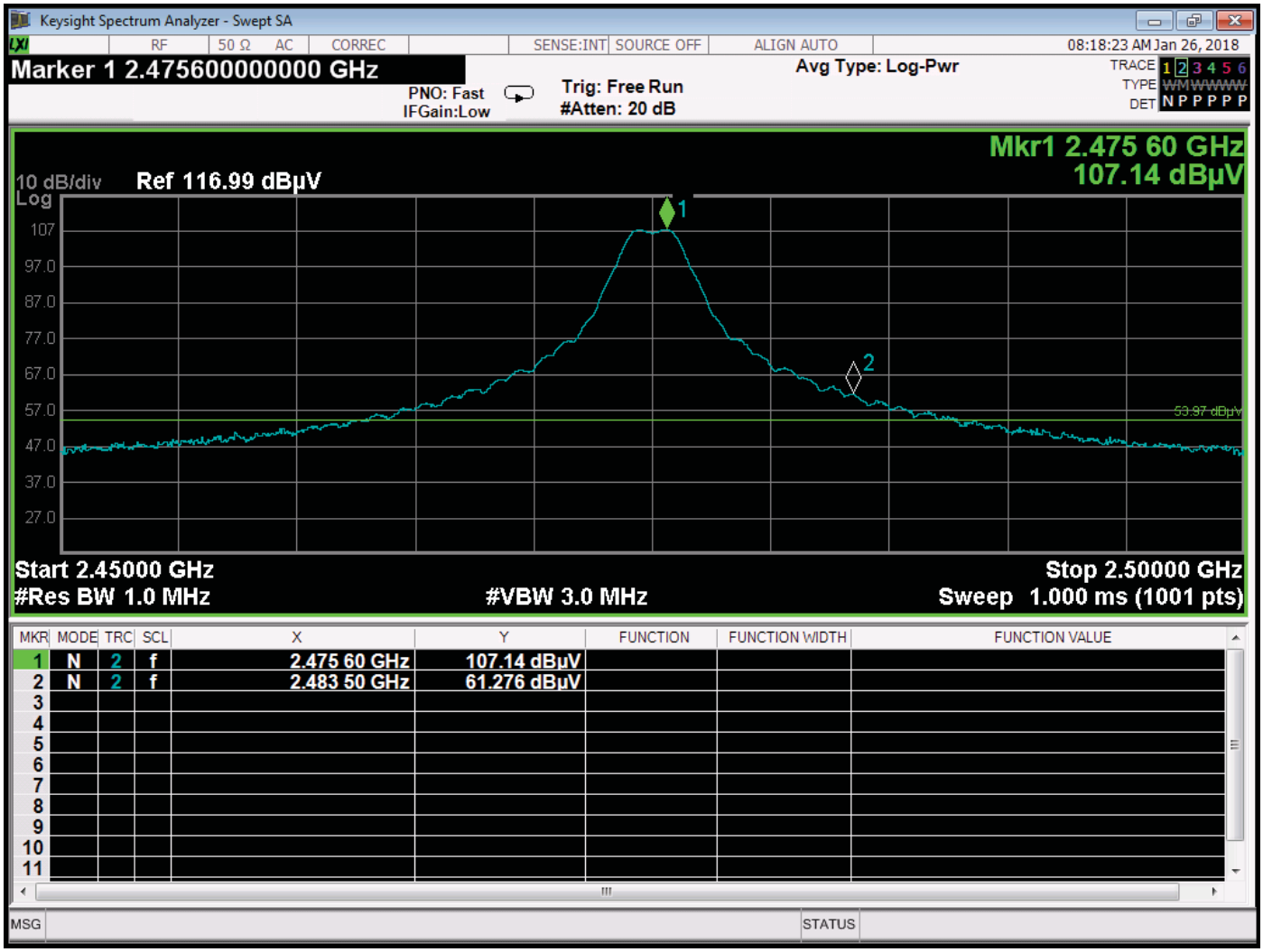
Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
2480	100.42	H	--	--	Peak	178.75	170.47	
2480	82.45	H	--	--	Avg	178.75	170.47	
2483.5	68.62	H	73.97	-5.35	Peak	178.75	170.47	
2483.5	50.65	H	53.97	-3.32	Avg	178.75	170.47	
2480	99.46	V	--	--	Peak	171.75	188.14	
2480	81.49	V	--	--	Avg	171.75	188.14	
2483.5	67.46	V	73.97	-6.51	Peak	171.75	188.14	
2483.5	49.49	V	53.97	-4.48	Avg	171.75	188.14	



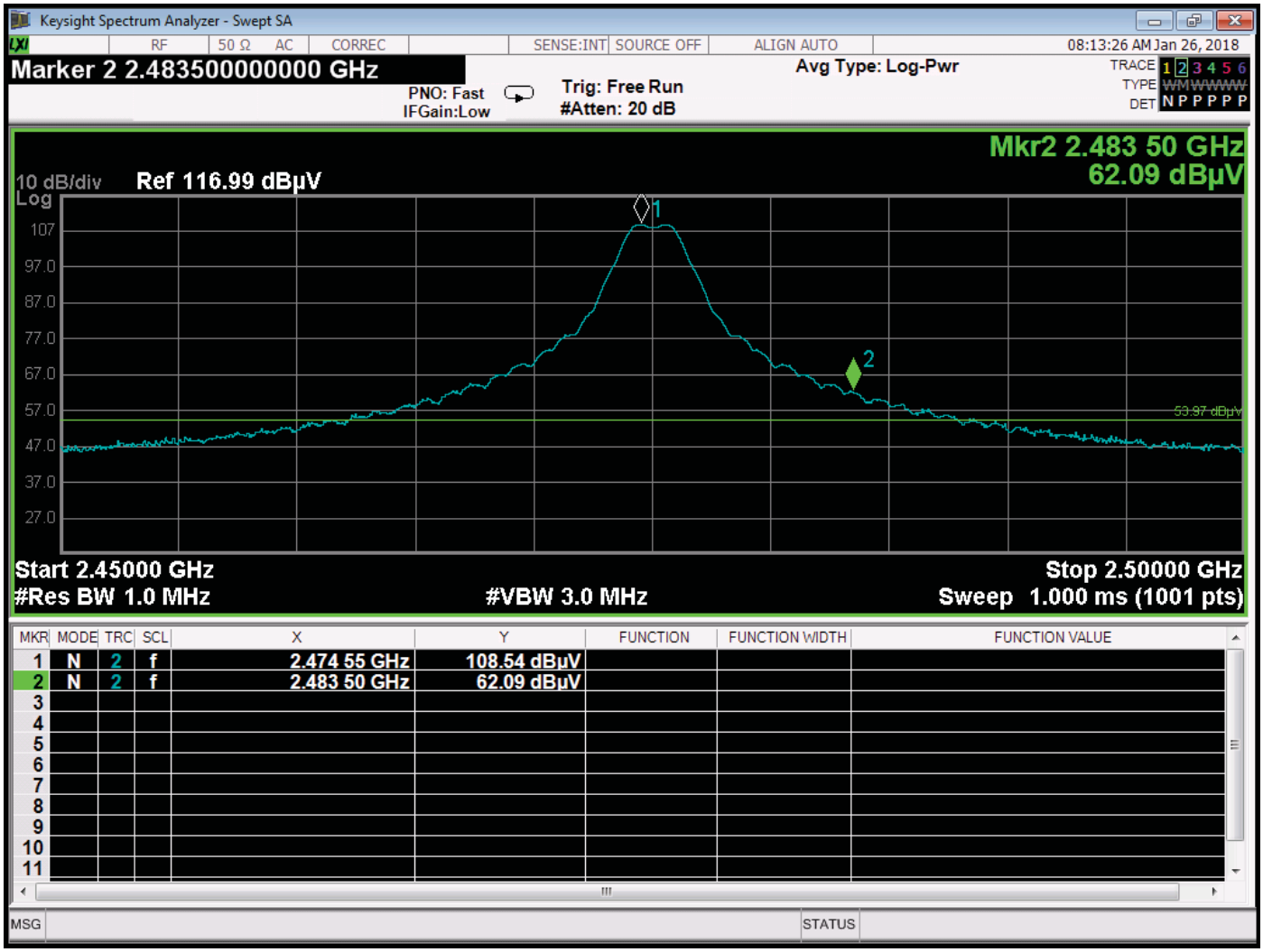
Band Edge for 2405 MHz Fundamental – Vertical Polarization



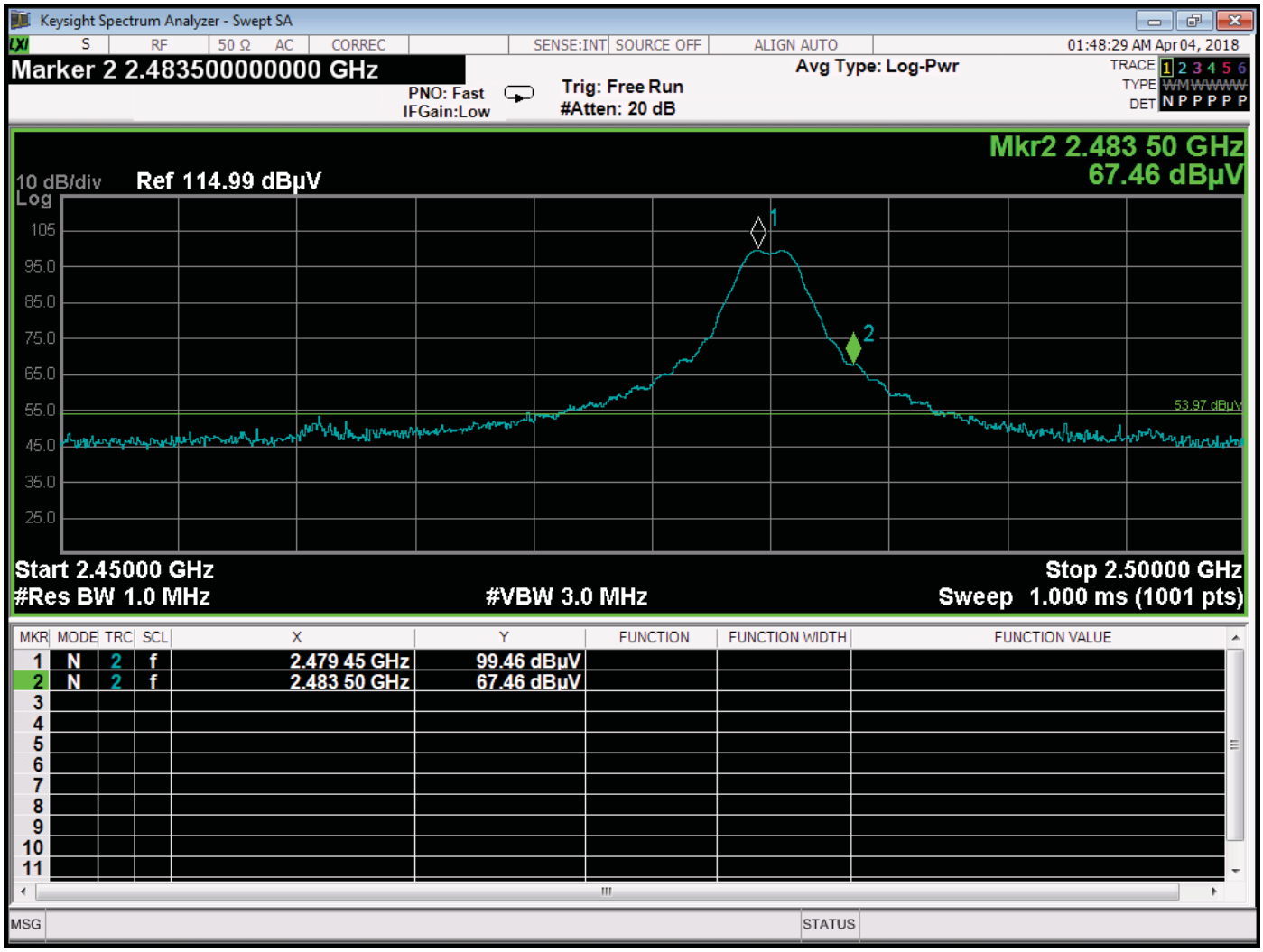
Band Edge for 2405 MHz Fundamental – Horizontal Polarization



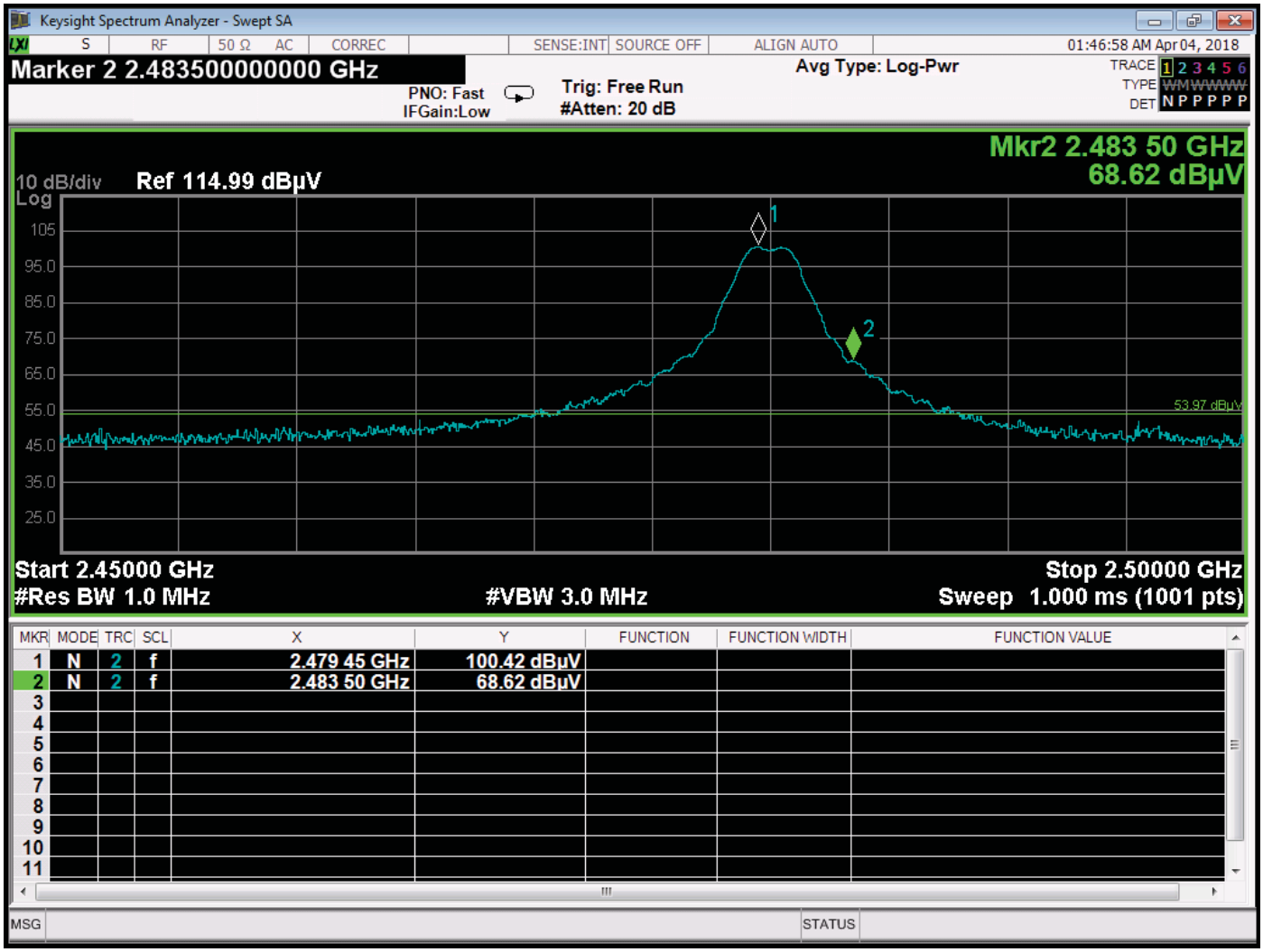
Band Edge for 2475 MHz Fundamental – Vertical Polarization



Band Edge for 2475 MHz Fundamental – Horizontal Polarization



Band Edge for 2480 MHz Fundamental – Vertical Polarization



Band Edge for 2480 MHz Fundamental – Horizontal Polarization

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the 914 SmartCode Deadbolt

Date: 07/21/2017
Lab: D
Tested By: Kyle Fujimoto

2405 MHz - Band Edges - Power Setting = -4
Transmit Mode - Duty Cycle 12.625251%

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
2405	104.30	V	--	--	Peak	158.00	101.50	
2405	86.33	V	--	--	Avg	158.00	101.50	
2390	47.19	V	73.97	-26.78	Peak	158.00	101.50	
2390	29.22	V	53.97	-24.75	Avg	158.00	101.50	
2405	106.44	H	--	--	Peak	16.00	158.58	
2405	88.47	H	--	--	Avg	16.00	158.58	
2390	48.14	H	73.97	-25.83	Peak	181.00	245.58	
2390	30.17	H	53.97	-23.80	Avg	181.00	245.58	

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the 914 SmartCode Deadbolt

Date: 07/21/2017
Lab: D
Tested By: Kyle Fujimoto

2475 MHz - Band Edges - Power Setting = 0
Transmit Mode - Duty Cycle 12.625251%

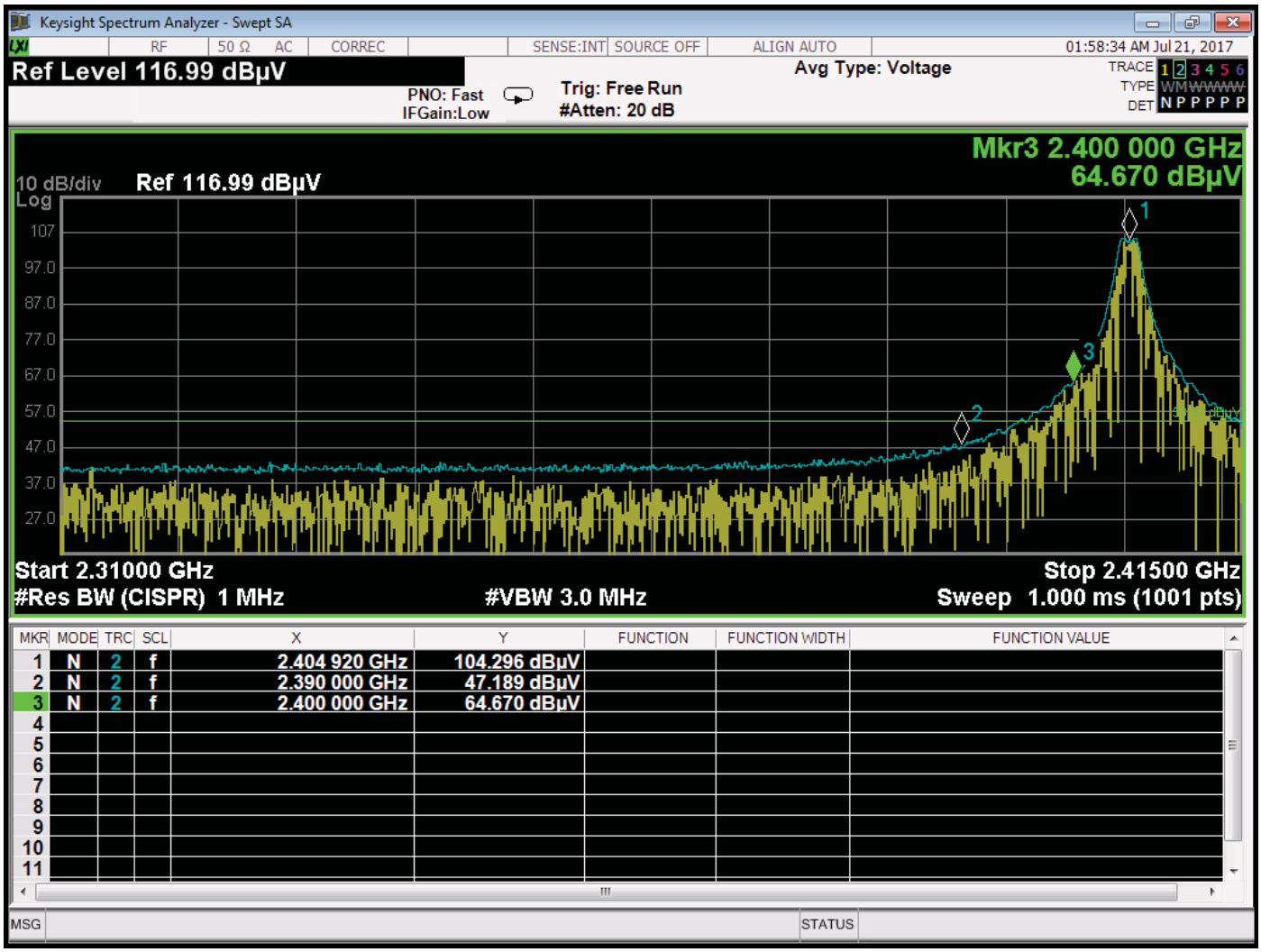
Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
2475	106.68	V	--	--	Peak	181.00	122.50	
2475	88.71	V	--	--	Avg	181.00	122.50	
2483.5	58.93	V	73.97	-15.04	Peak	181.00	122.50	
2483.5	40.96	V	53.97	-13.01	Avg	181.00	122.50	
2475	108.13	H	--	--	Peak	215.00	195.00	
2475	90.16	H	--	--	Avg	215.00	195.00	
2483.5	60.83	H	73.97	-13.14	Peak	206.00	225.00	
2483.5	42.86	H	53.97	-11.11	Avg	206.00	225.00	

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Inside the 914 SmartCode Deadbolt

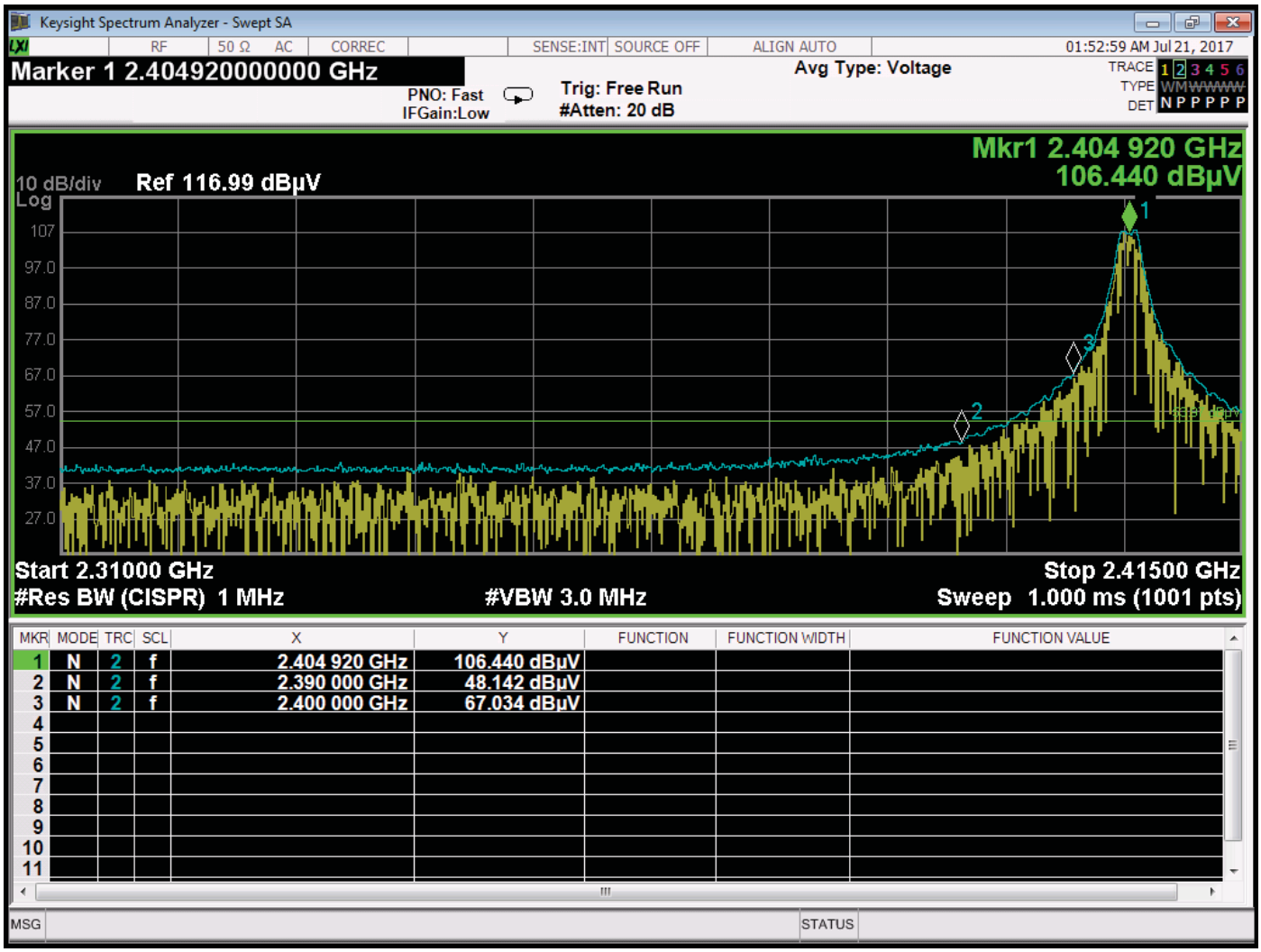
Date: 07/21/2017
Lab: D
Tested By: Kyle Fujimoto

2480 MHz - Band Edges - Power Setting = -a
Transmit Mode - Duty Cycle 12.625251%

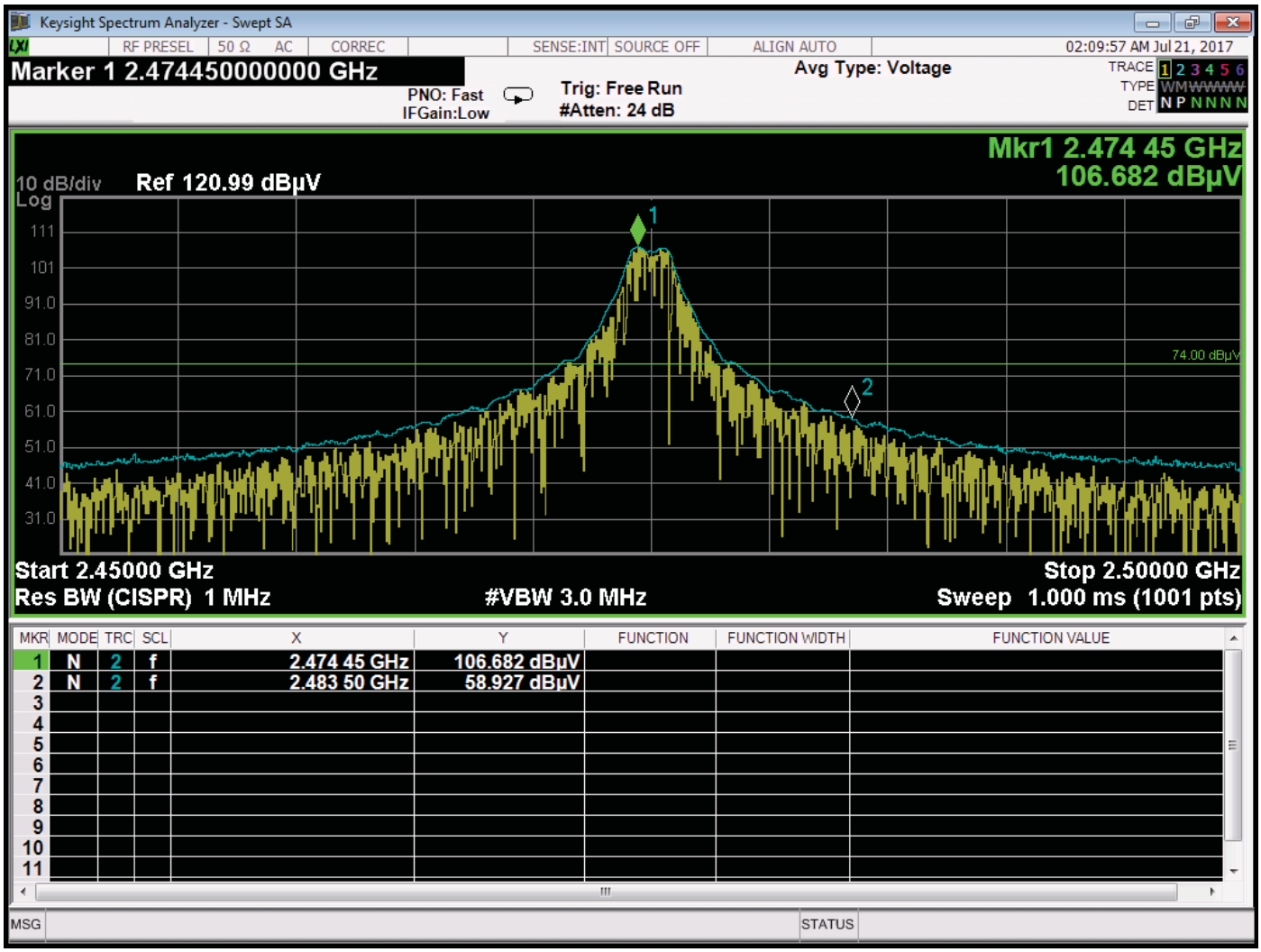
Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
2480	98.83	V	--	--	Peak	194.00	152.00	
2480	80.86	V	--	--	Avg	194.00	152.00	
2483.5	66.69	V	73.97	-7.28	Peak	194.00	152.00	
2483.5	48.72	V	53.97	-5.25	Avg	194.00	152.00	
2480	101.63	H	--	--	Peak	204.00	142.25	
2480	83.66	H	--	--	Avg	204.00	142.25	
2483.5	69.85	H	73.97	-4.12	Peak	204.00	142.25	
2483.5	51.88	H	53.97	-2.09	Avg	204.00	142.25	



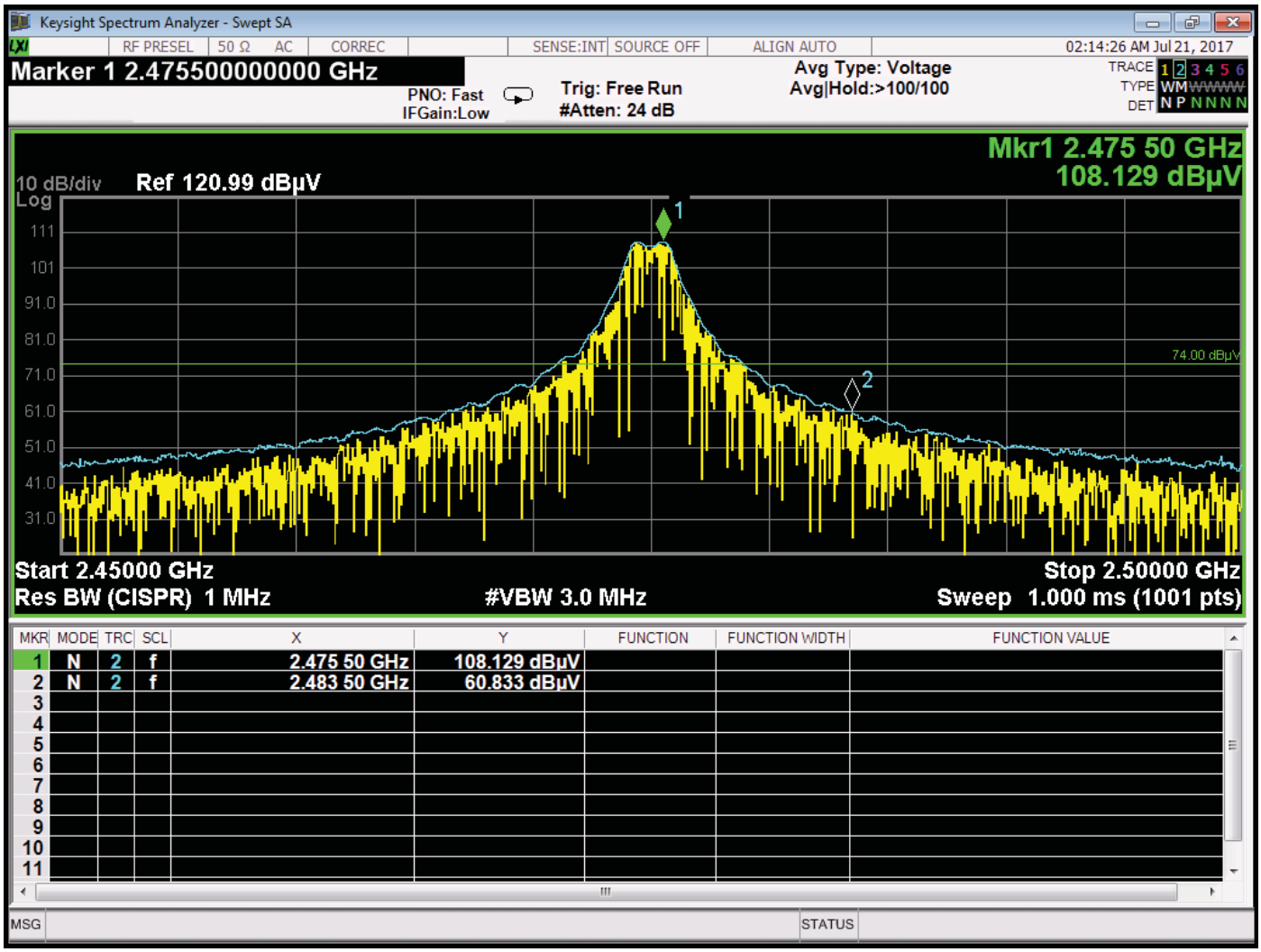
Band Edge for 2405 MHz Fundamental – Vertical Polarization



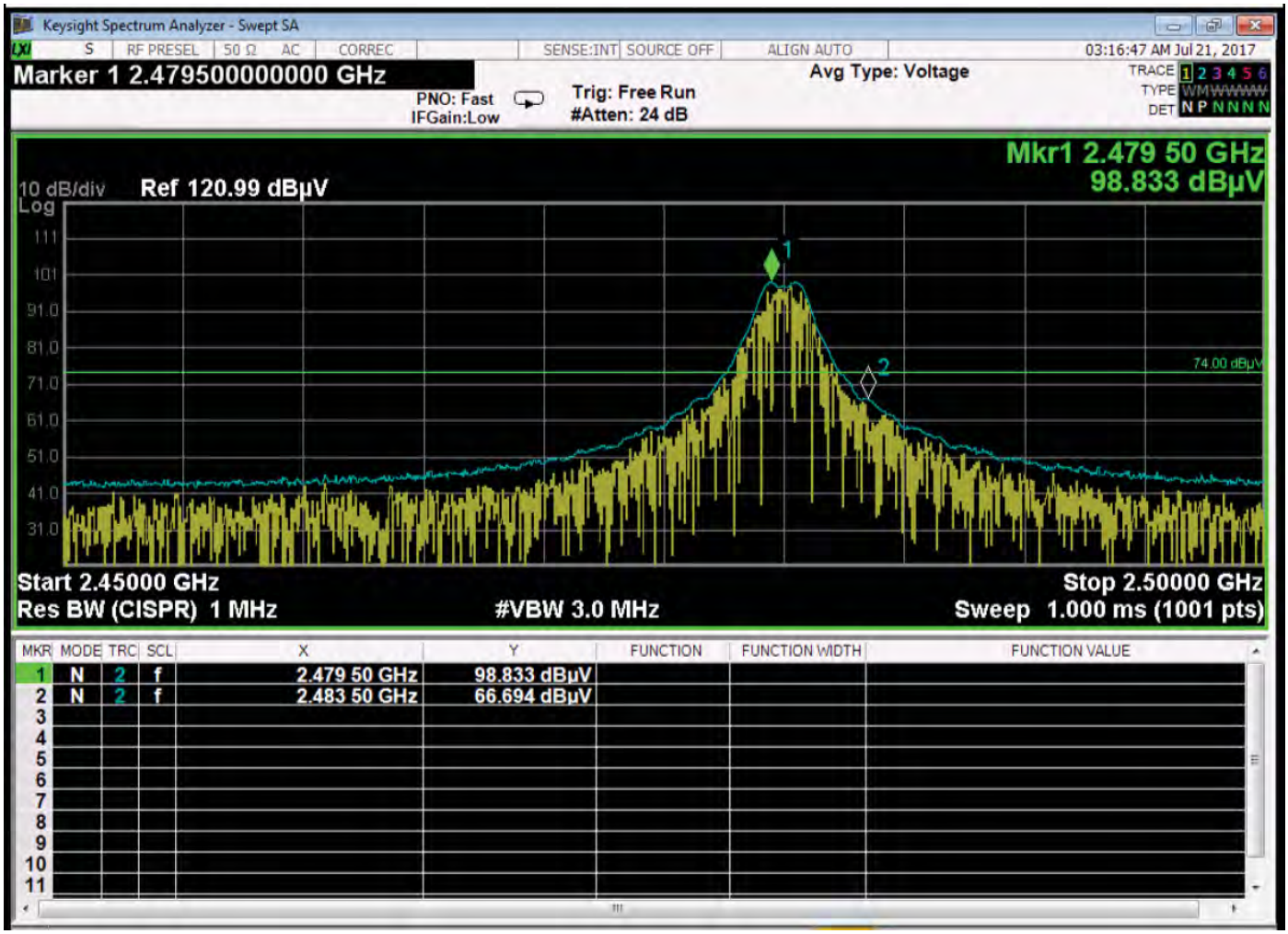
Band Edge for 2405 MHz Fundamental – Horizontal Polarization



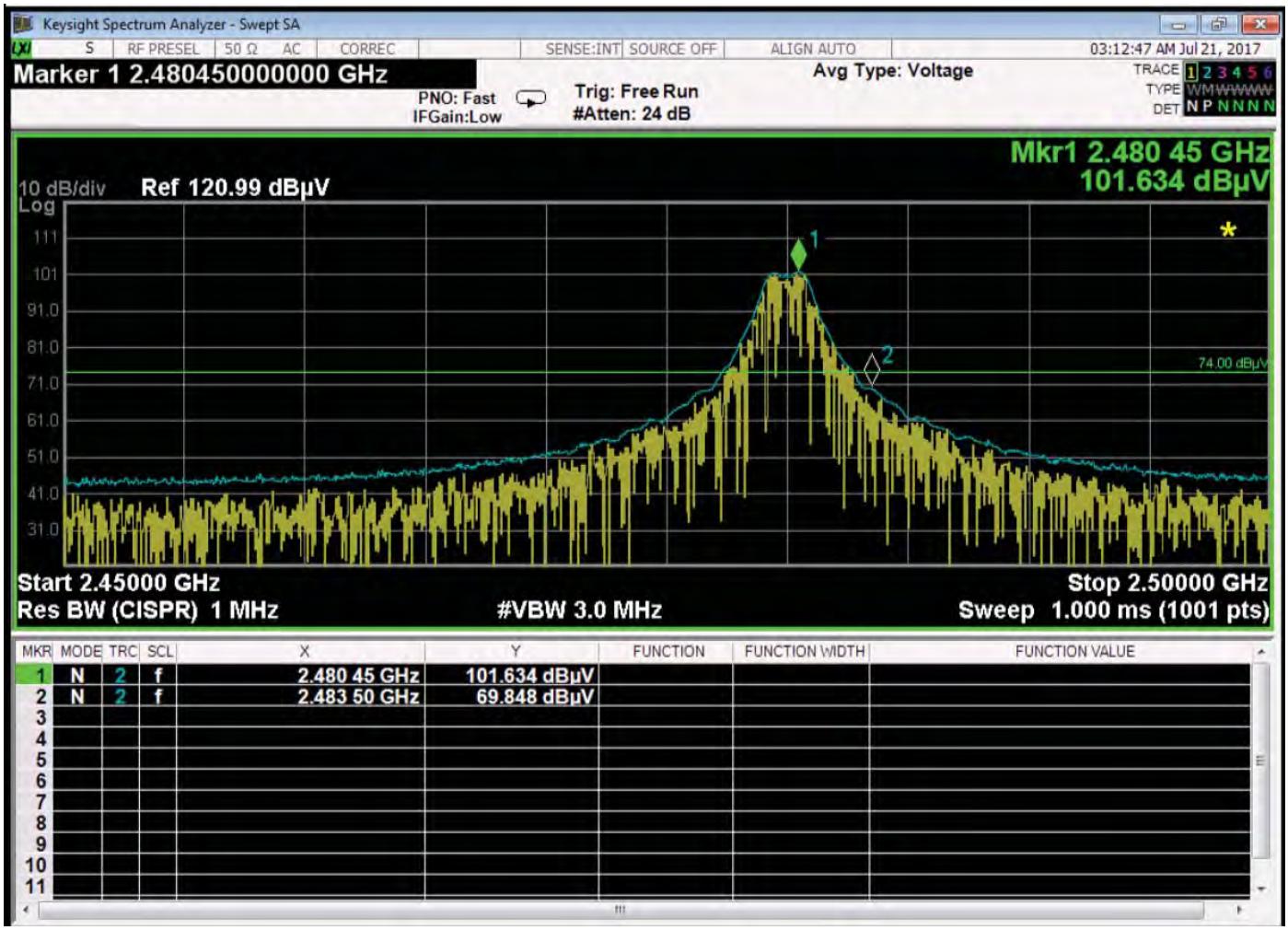
Band Edge for 2475 MHz Fundamental – Vertical Polarization



Band Edge for 2475 MHz Fundamental – Horizontal Polarization



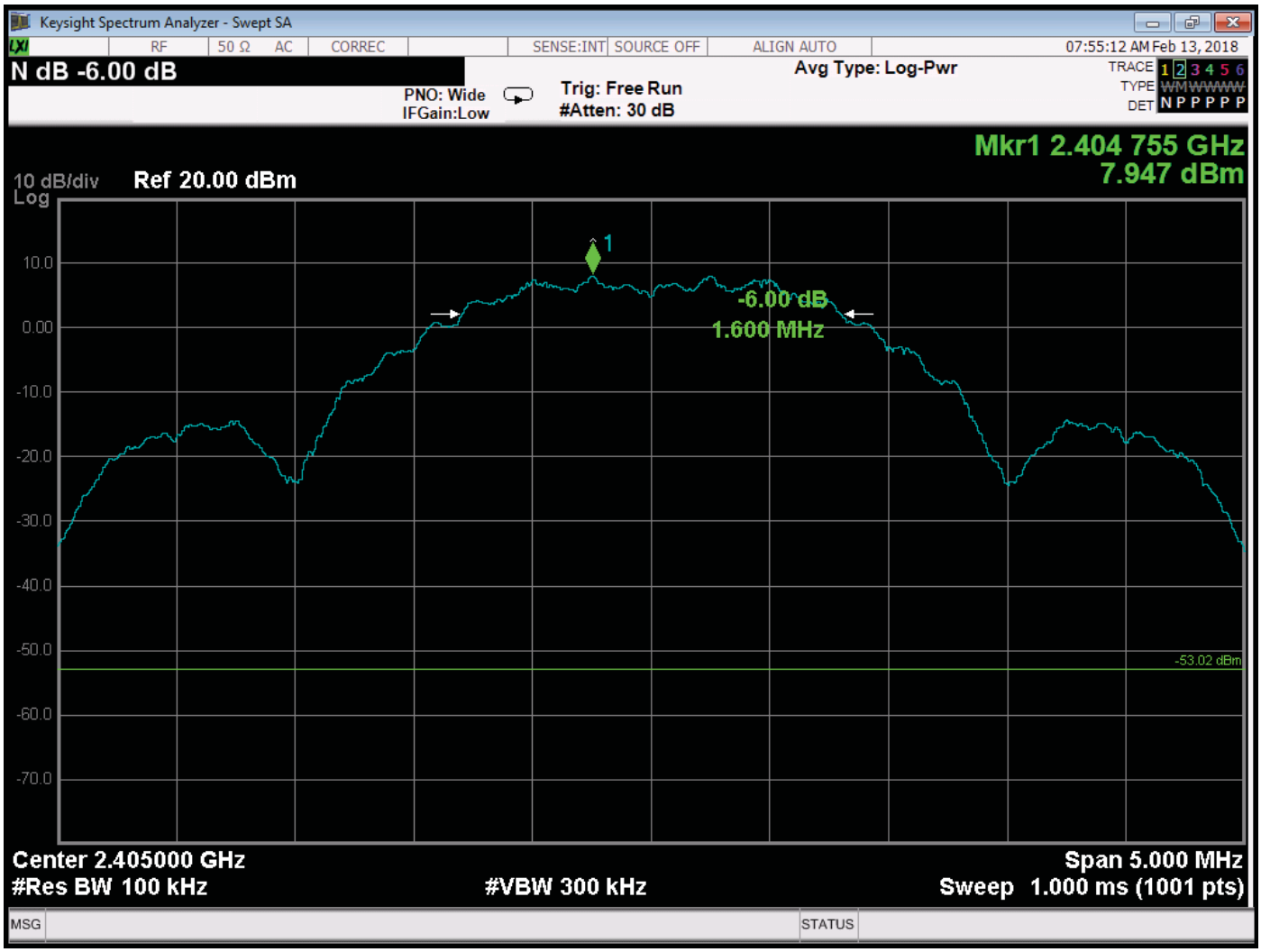
Band Edge for 2480 MHz Fundamental – Vertical Polarization



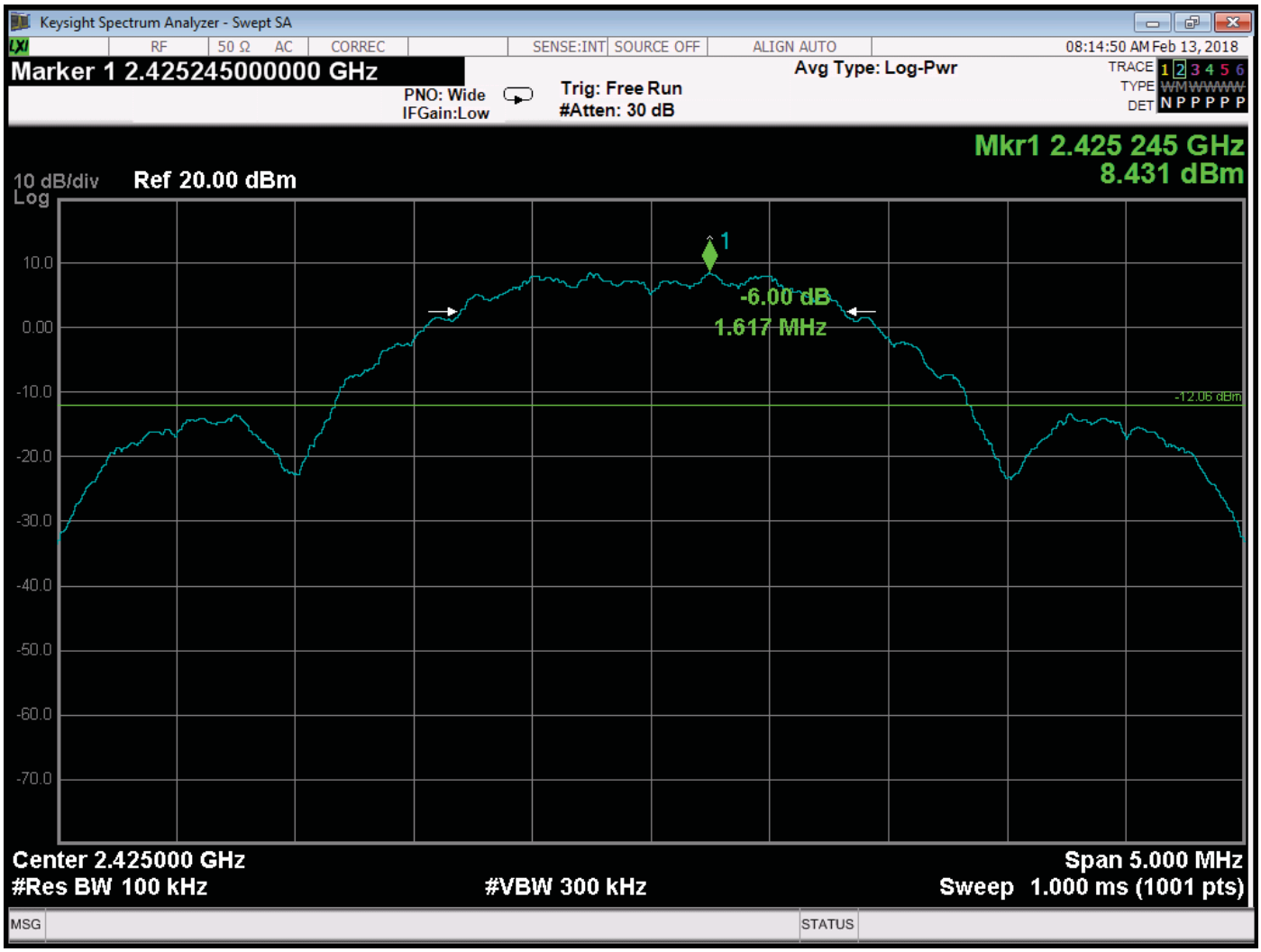
Band Edge for 2480 MHz Fundamental – Horizontal Polarization

6 dB BANDWIDTH

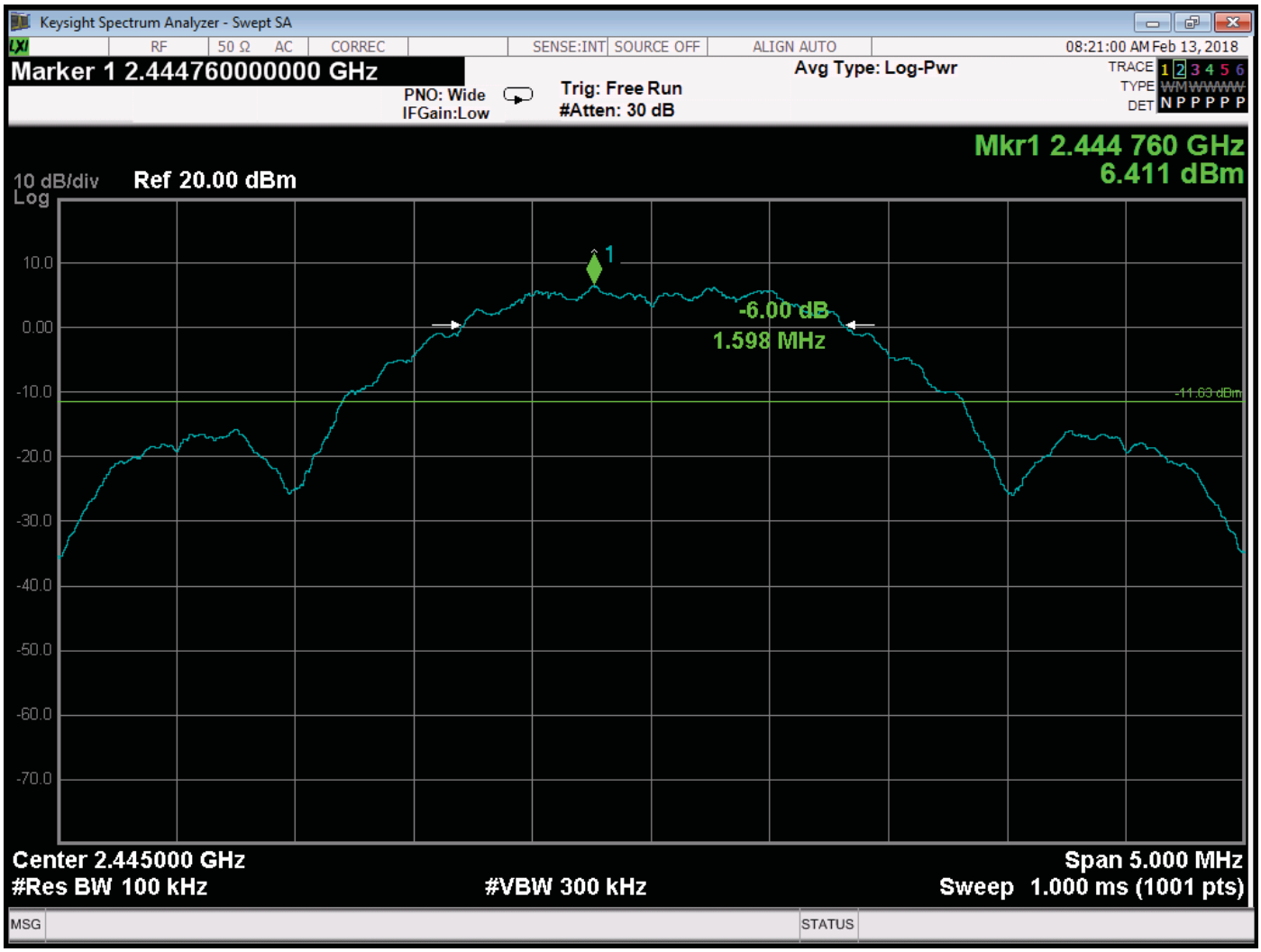
DATA SHEETS



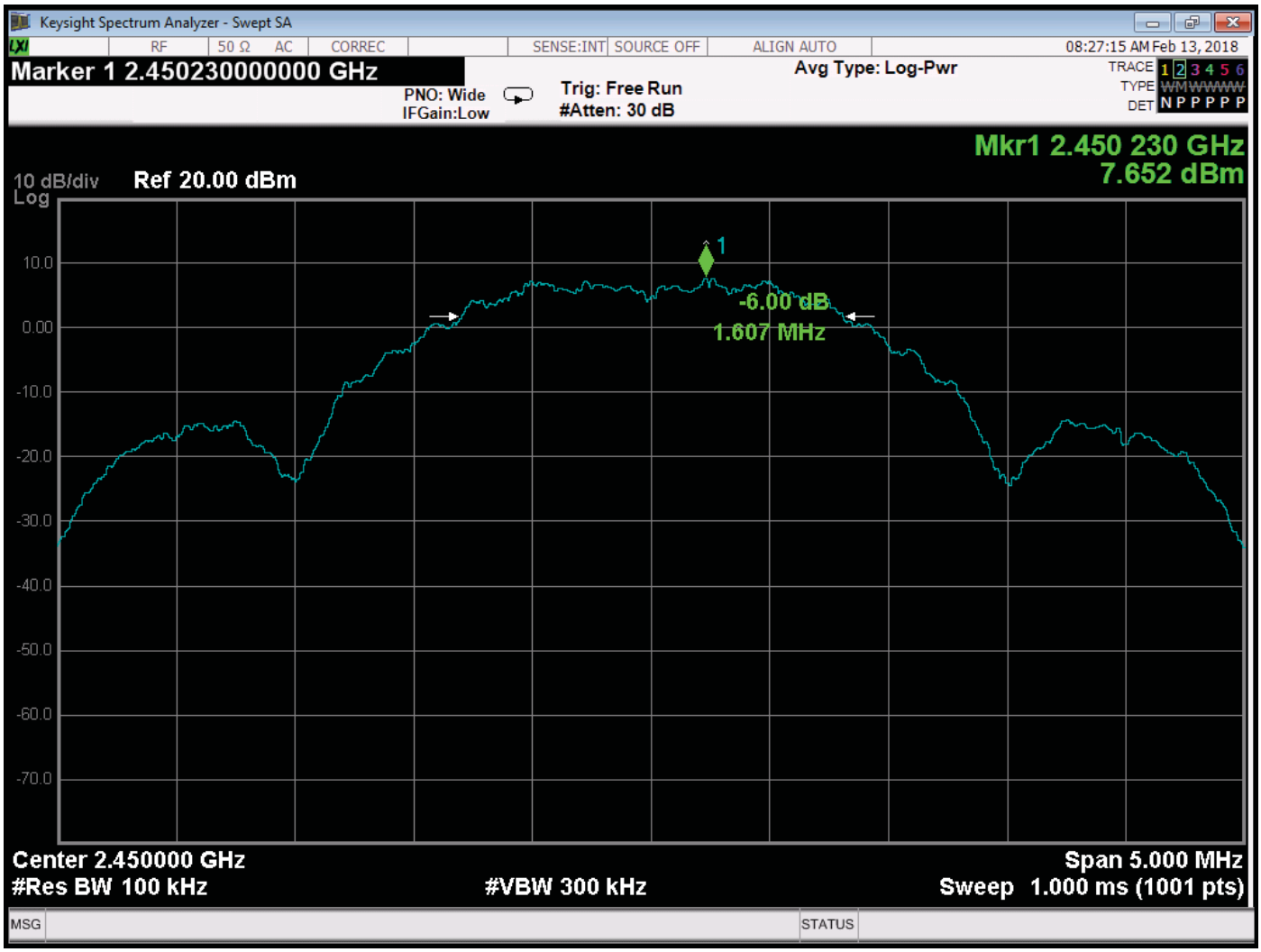
6 dB Bandwidth – 2405 MHz Fundamental



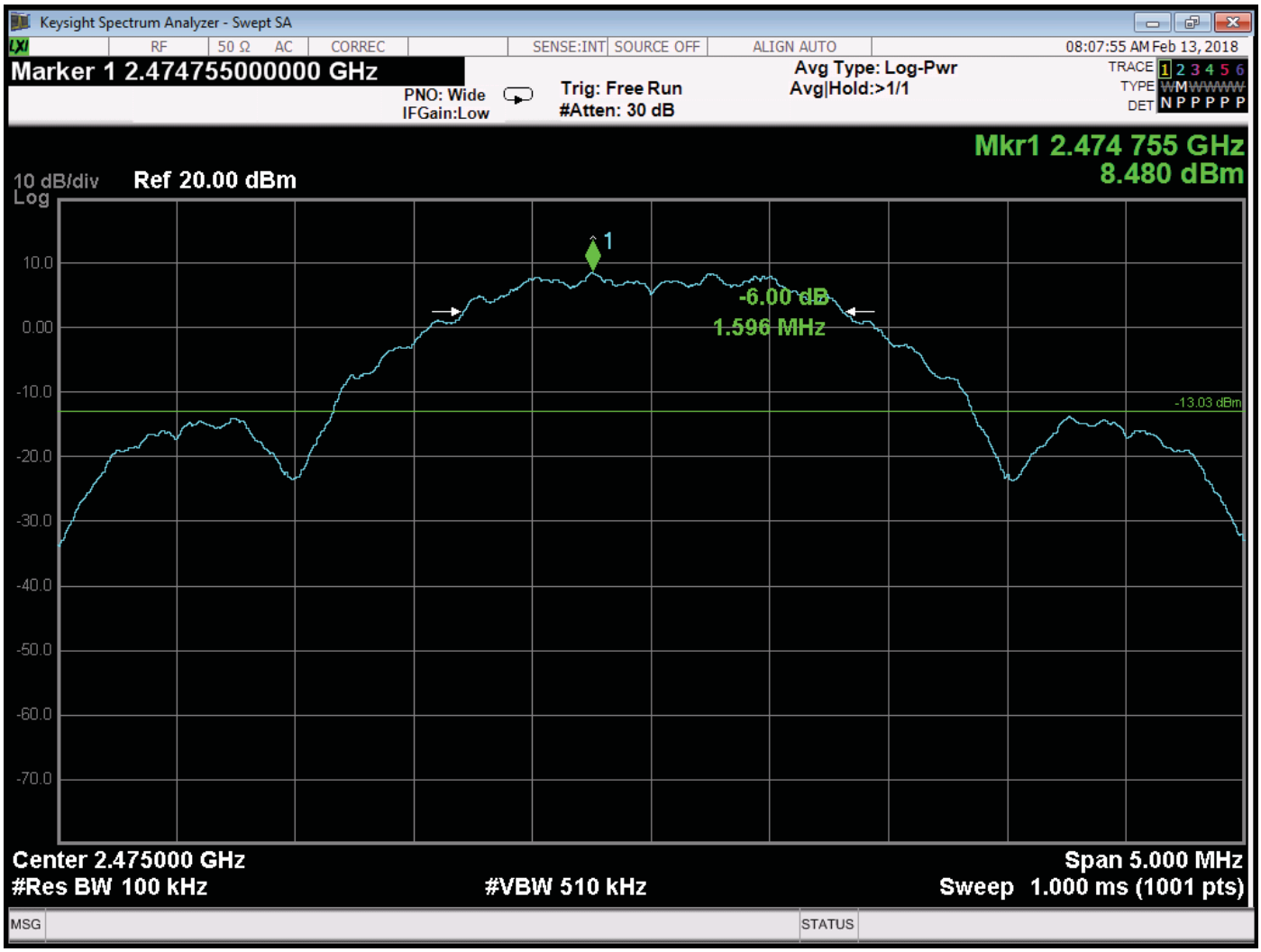
6 dB Bandwidth – 2425 MHz Fundamental



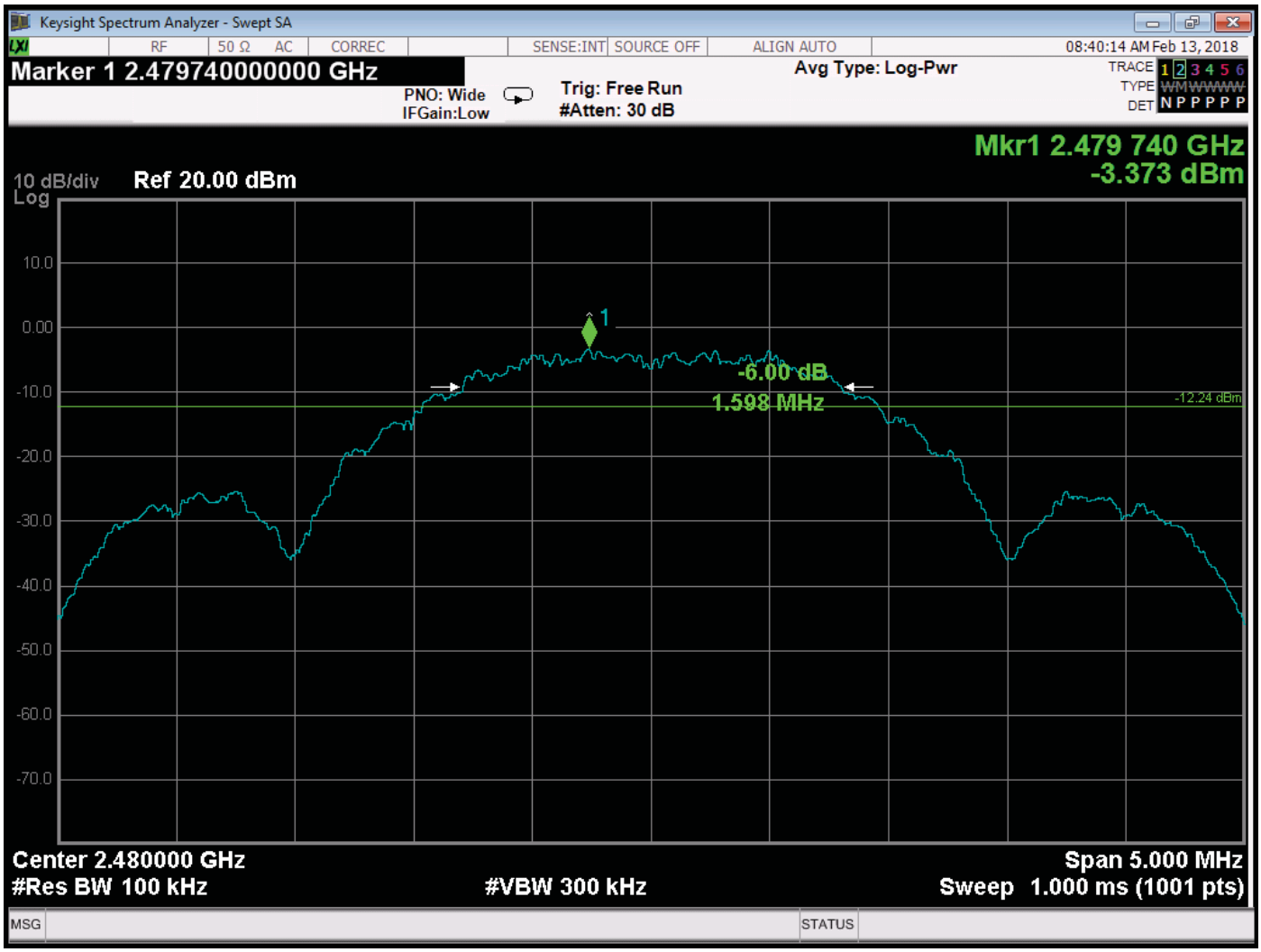
6 dB Bandwidth – 2445 MHz Fundamental



6 dB Bandwidth – 2450 MHz Fundamental



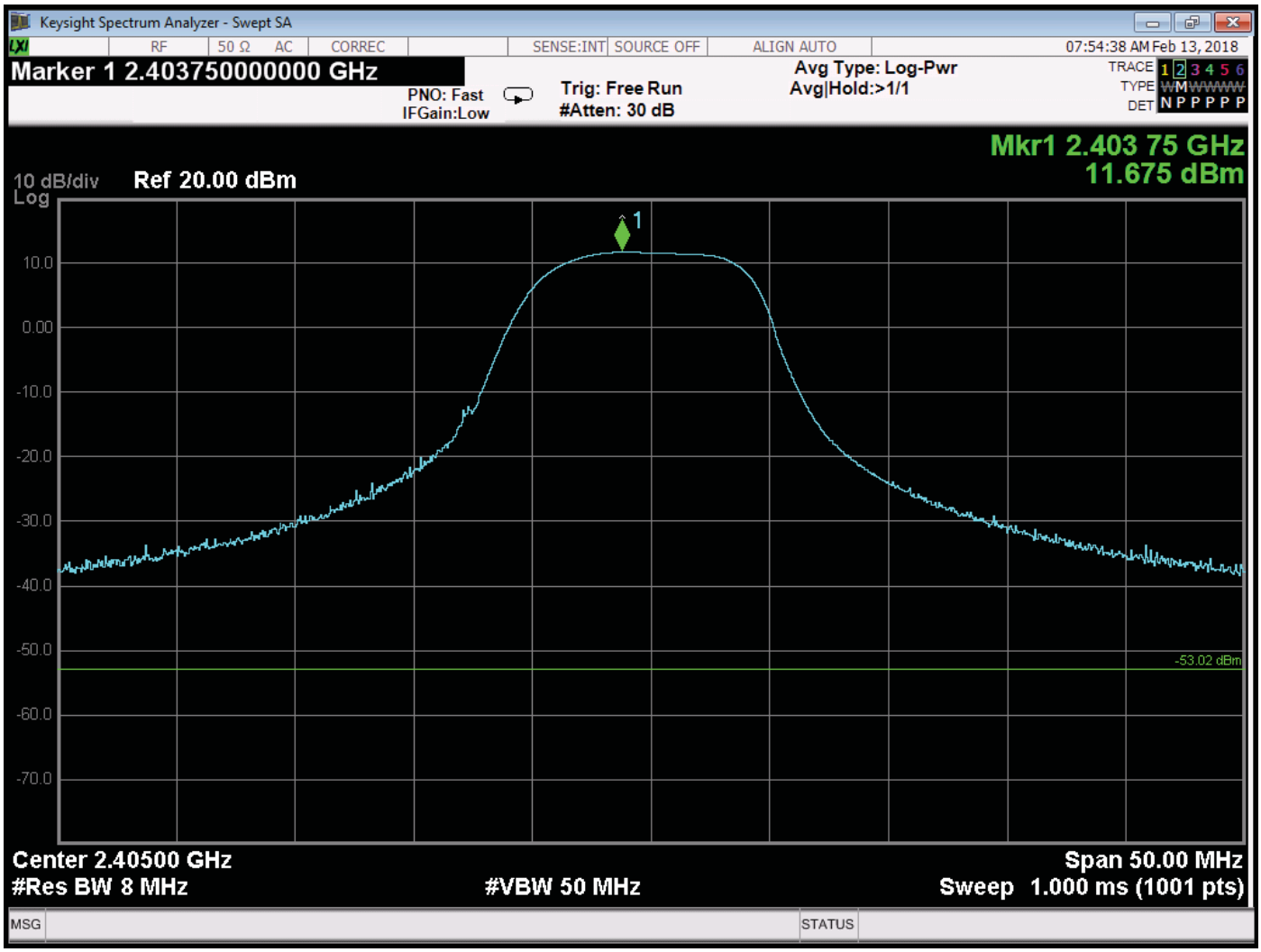
6 dB Bandwidth – 2475 MHz Fundamental



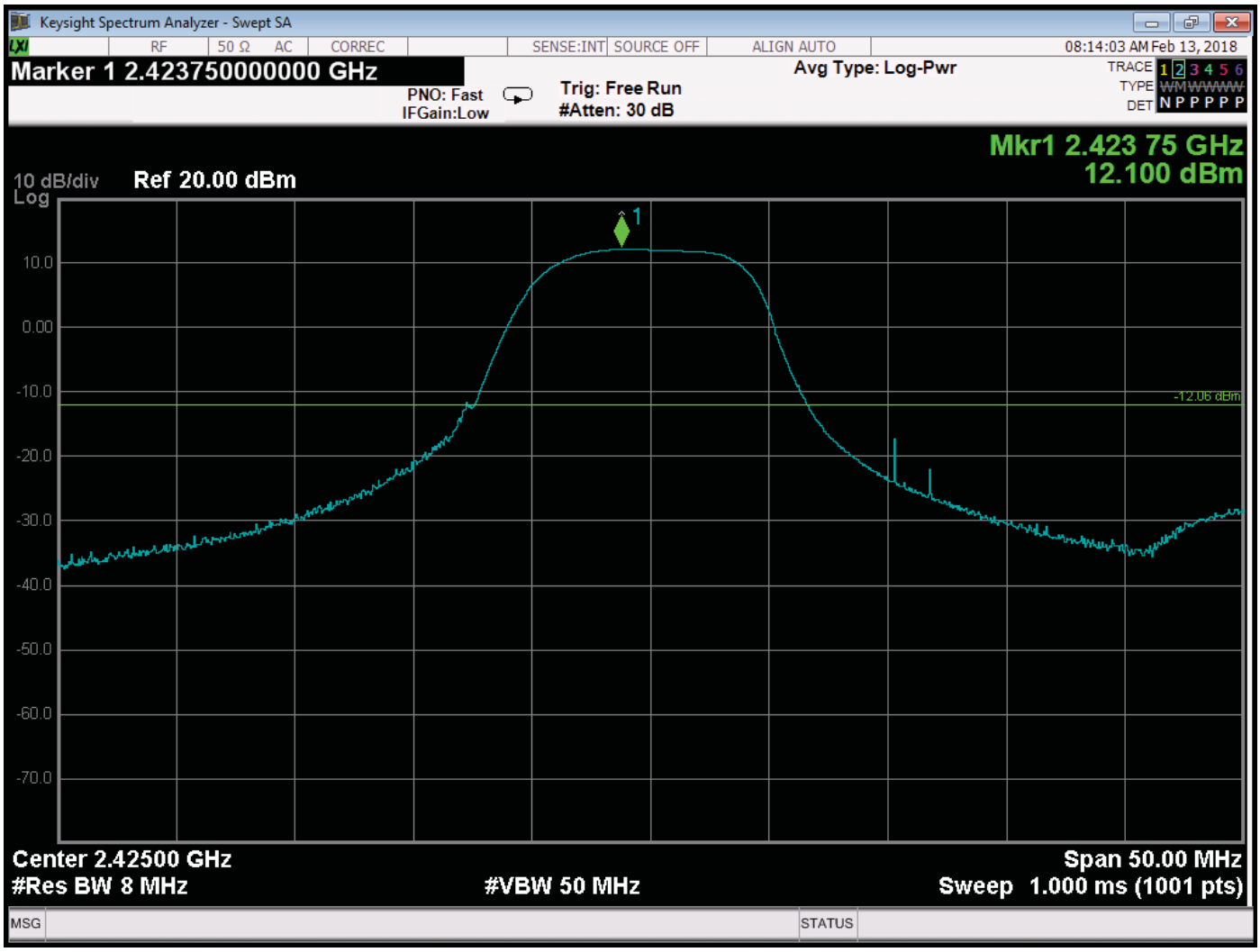
6 dB Bandwidth – 2480 MHz Fundamental

PEAK POWER

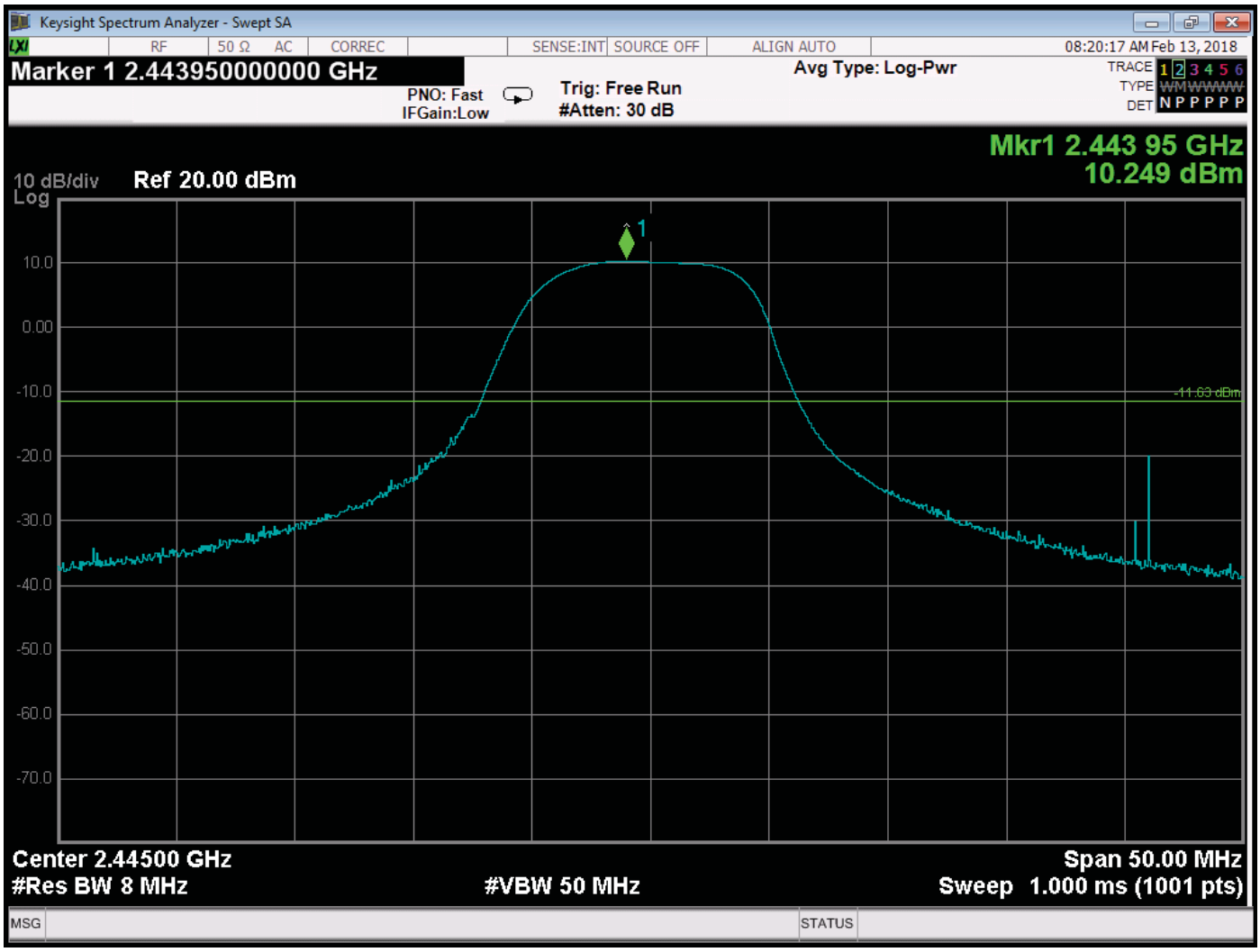
DATA SHEETS



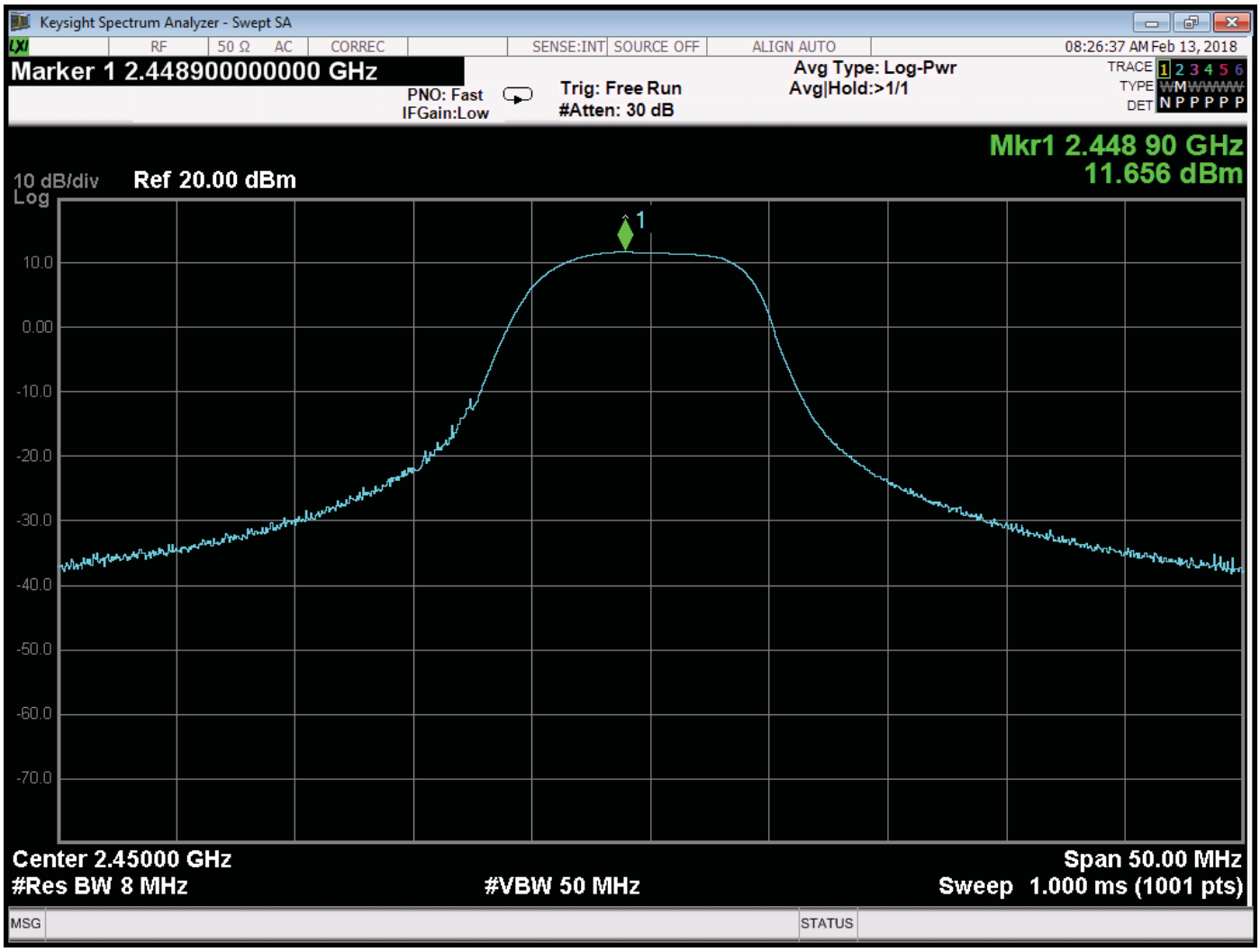
Peak Power Output – 2405 MHz Fundamental



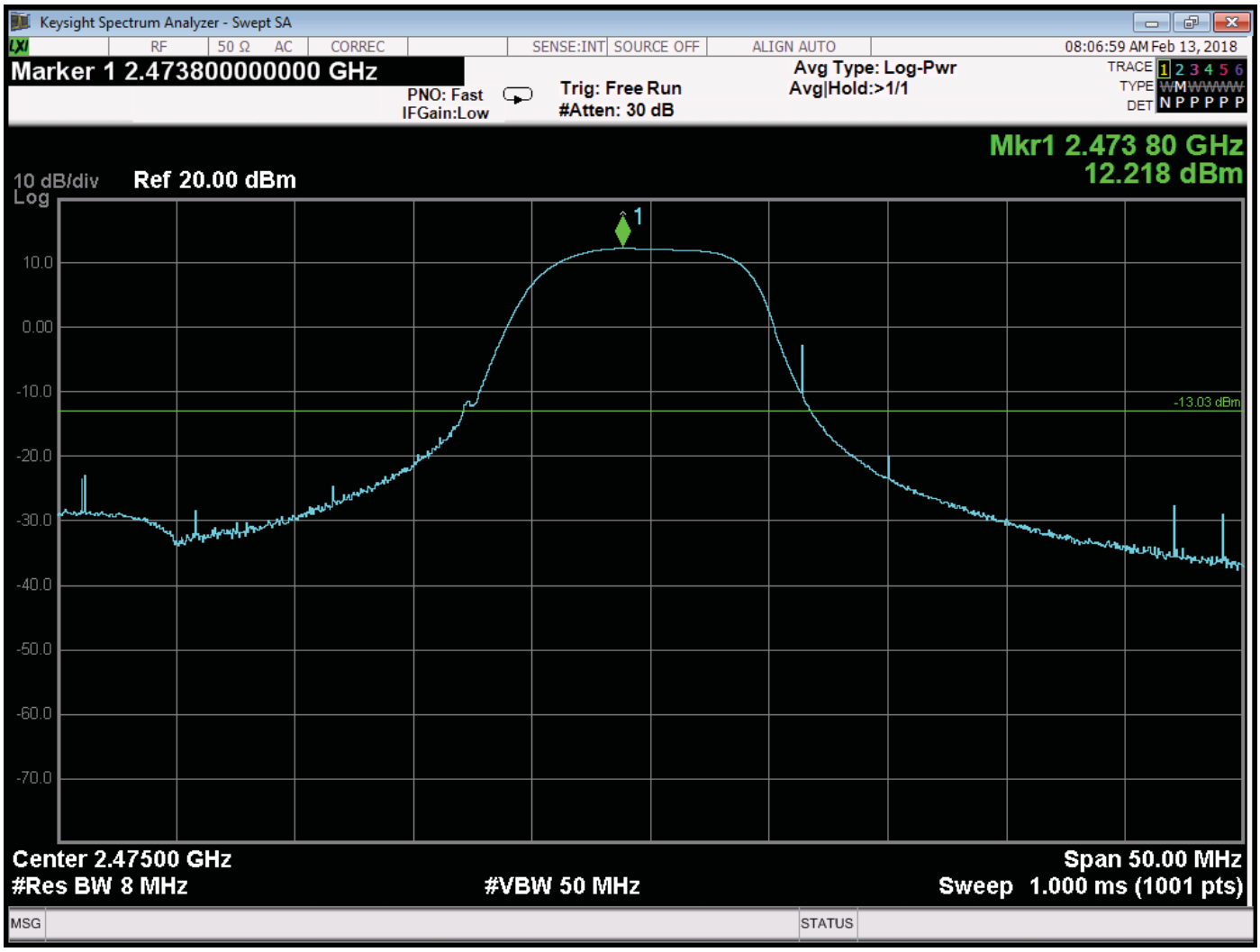
Peak Power Output – 2425 MHz Fundamental



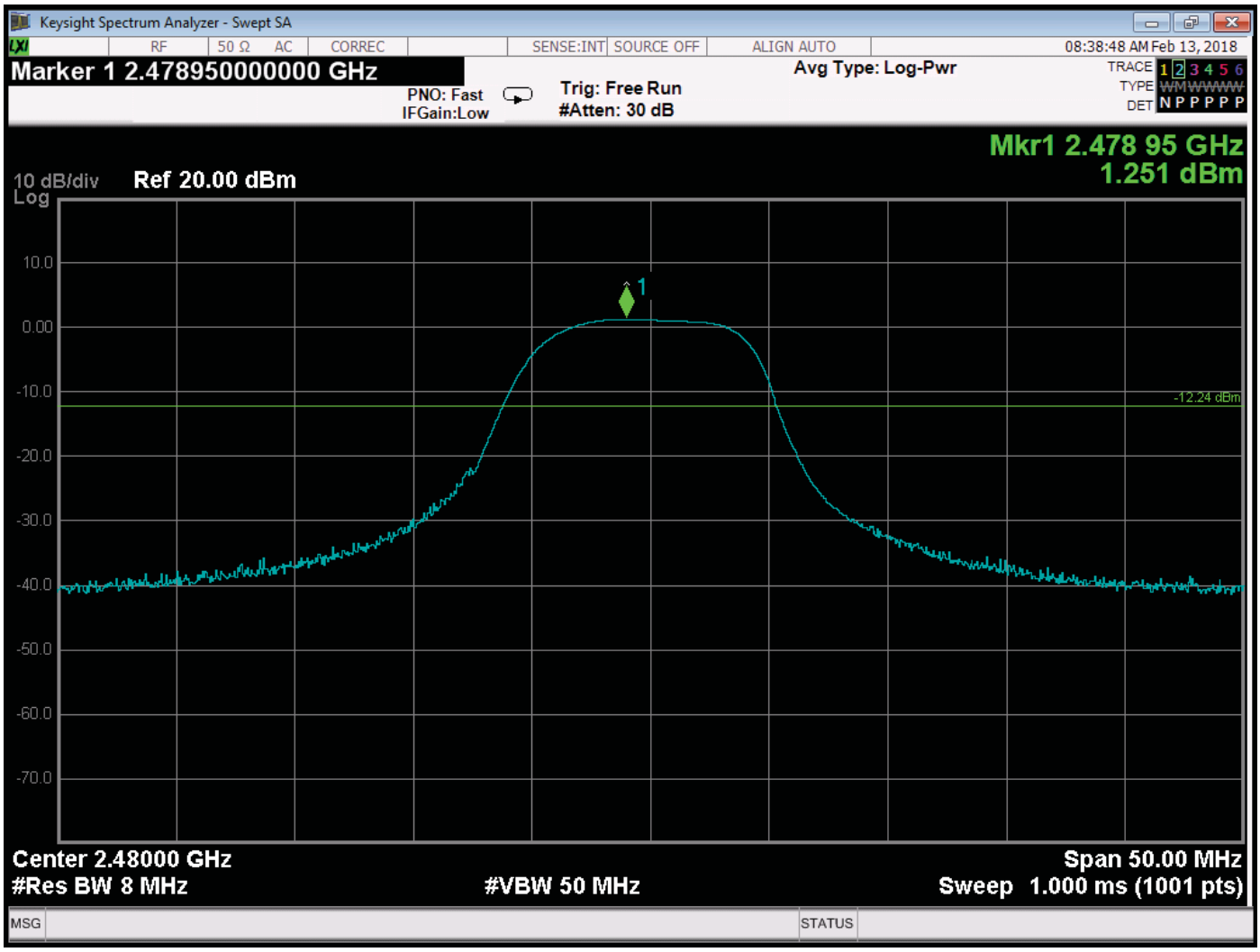
Peak Power Output – 2445 MHz Fundamental



Peak Power Output – 2450 MHz Fundamental



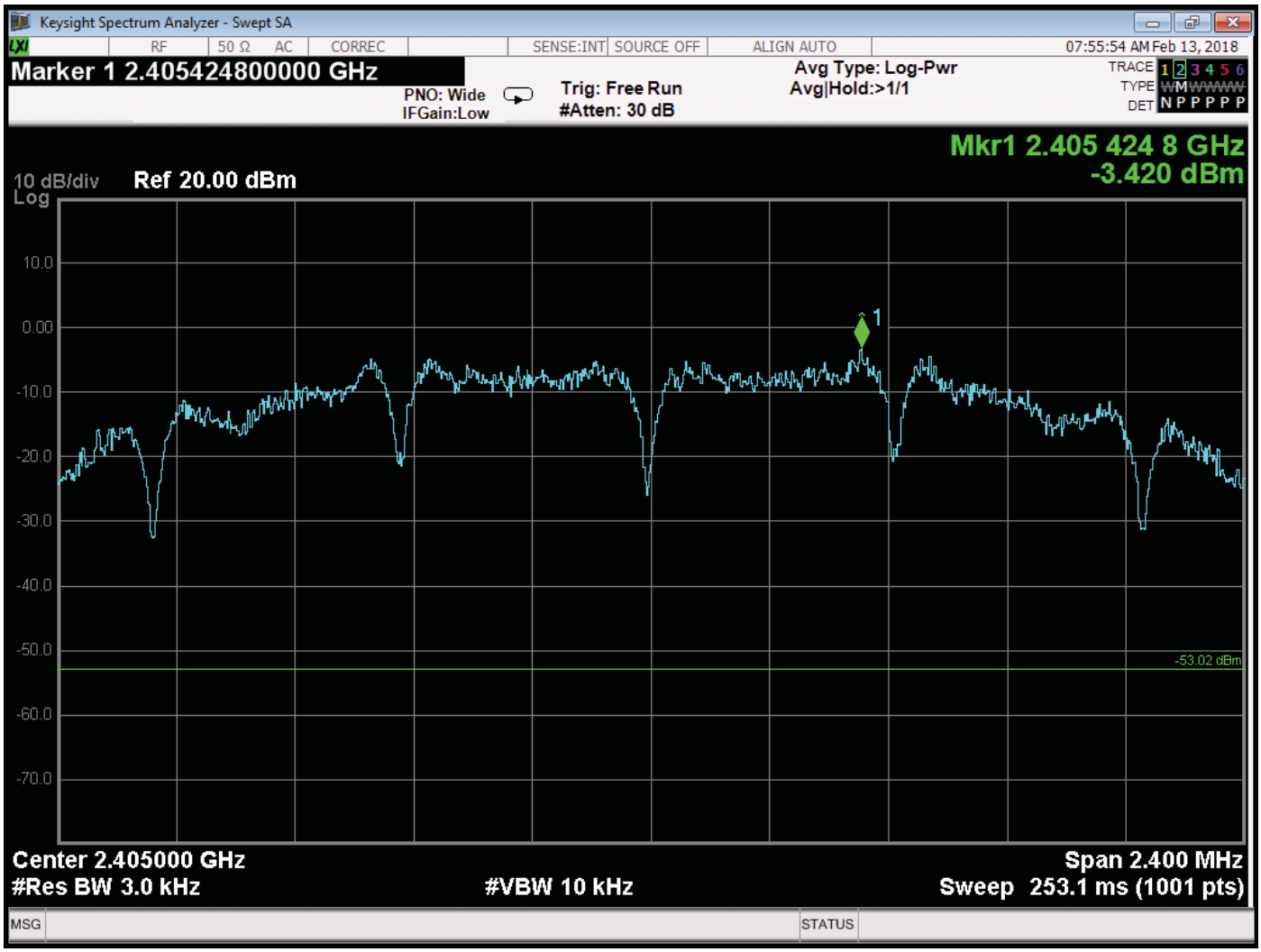
Peak Power Output – 2475 MHz Fundamental



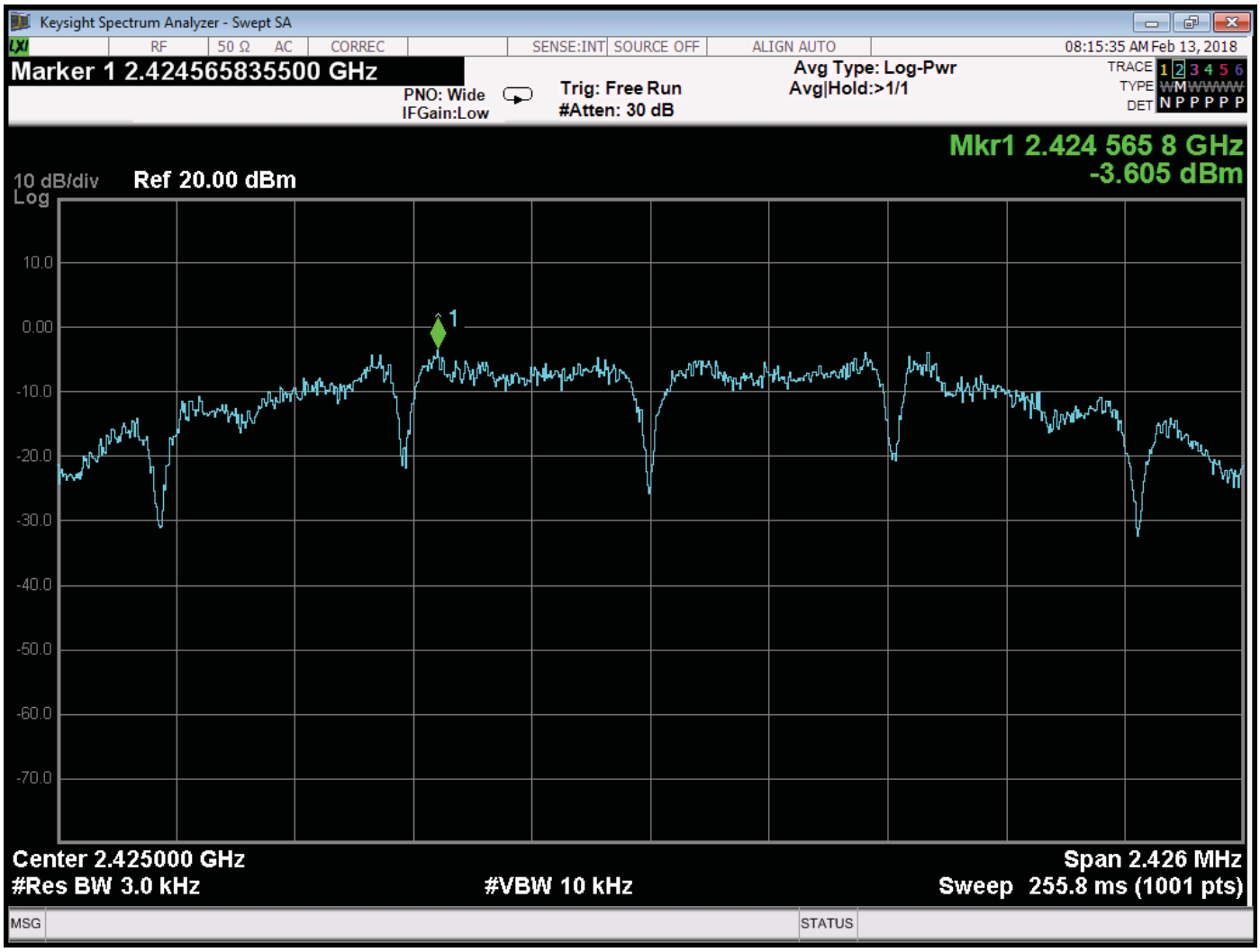
Peak Power Output – 2480 MHz Fundamental

SPECTRAL DENSITY OUTPUT

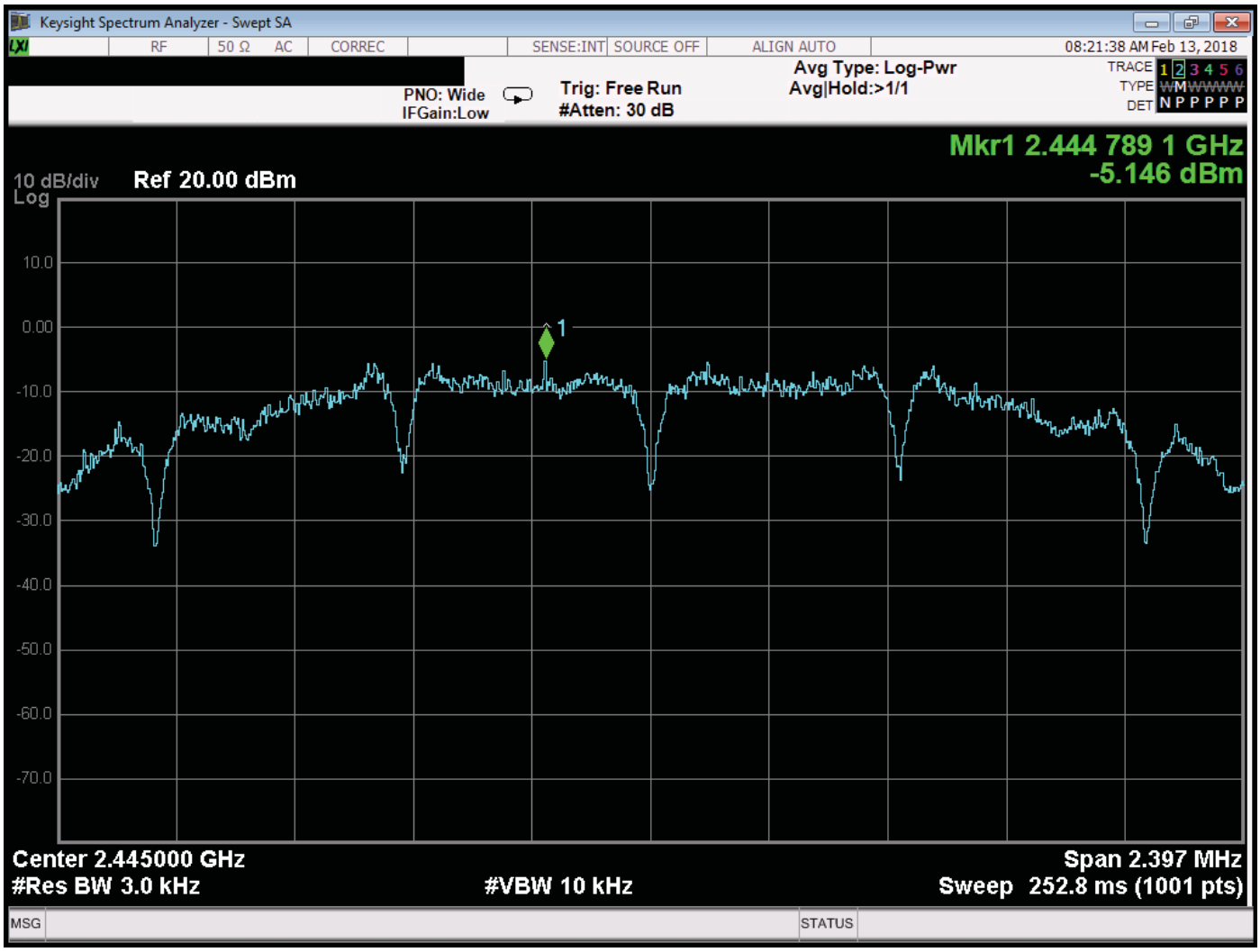
DATA SHEETS



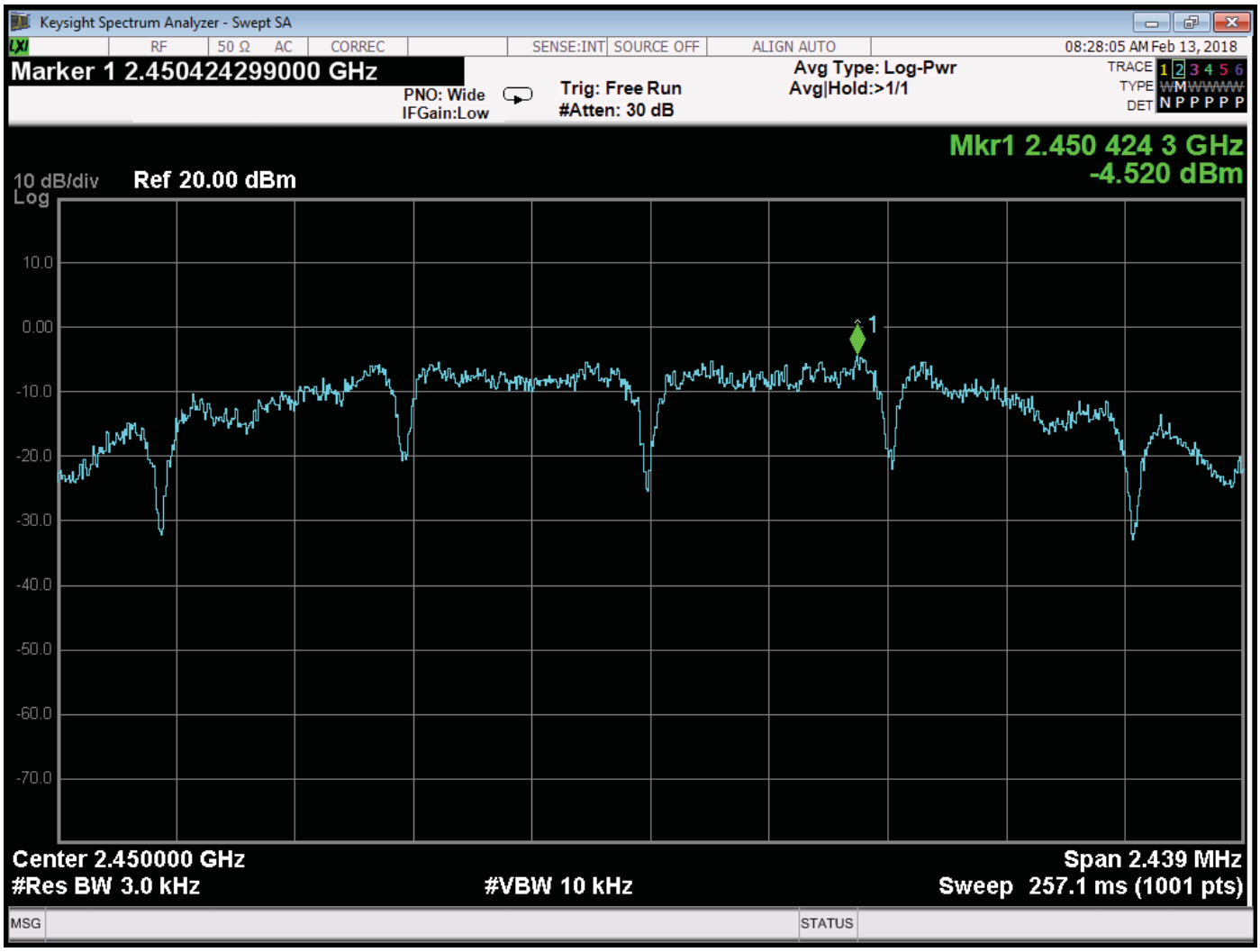
Peak Power Spectral Density – 2405 MHz Fundamental



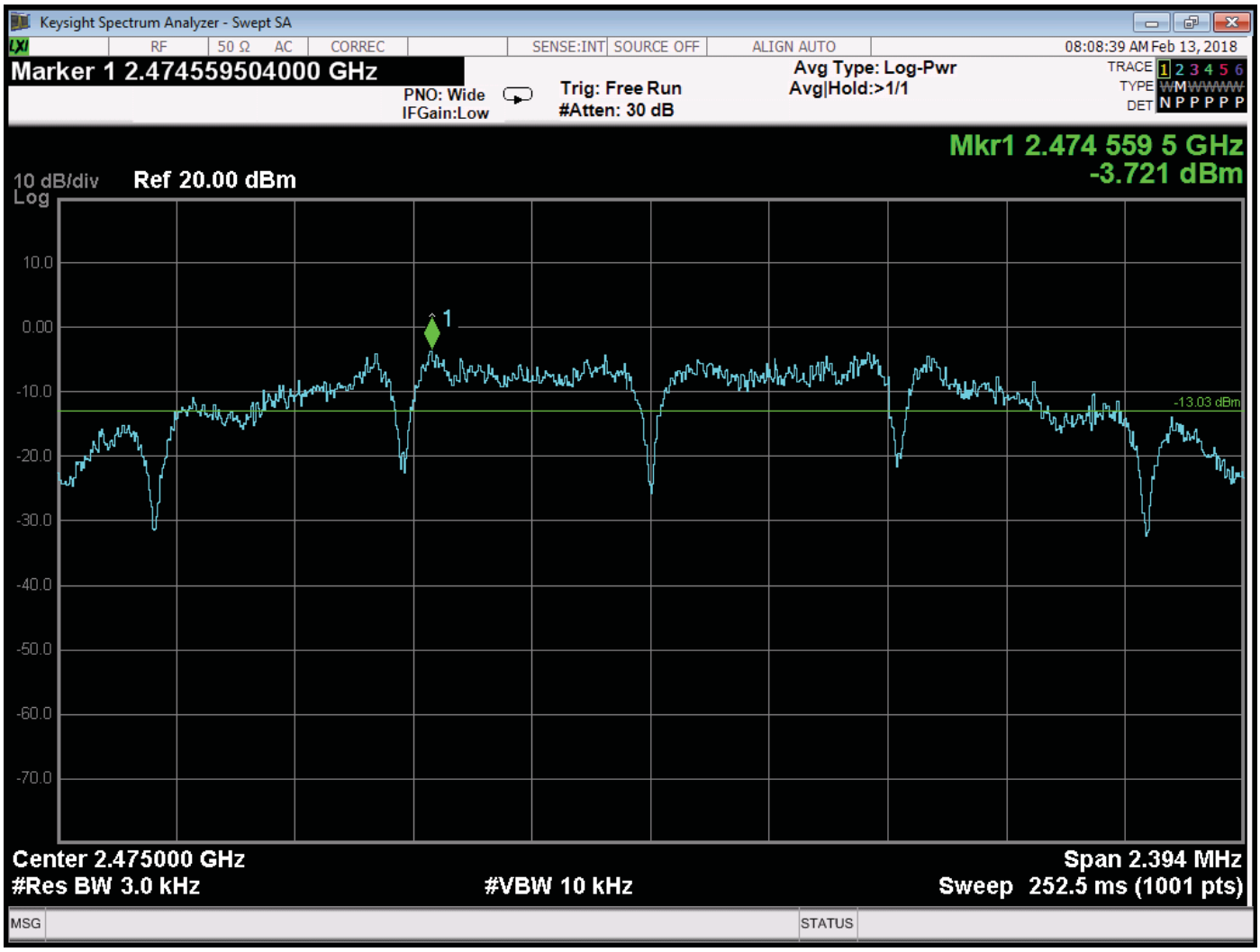
Peak Power Spectral Density – 2425 MHz Fundamental



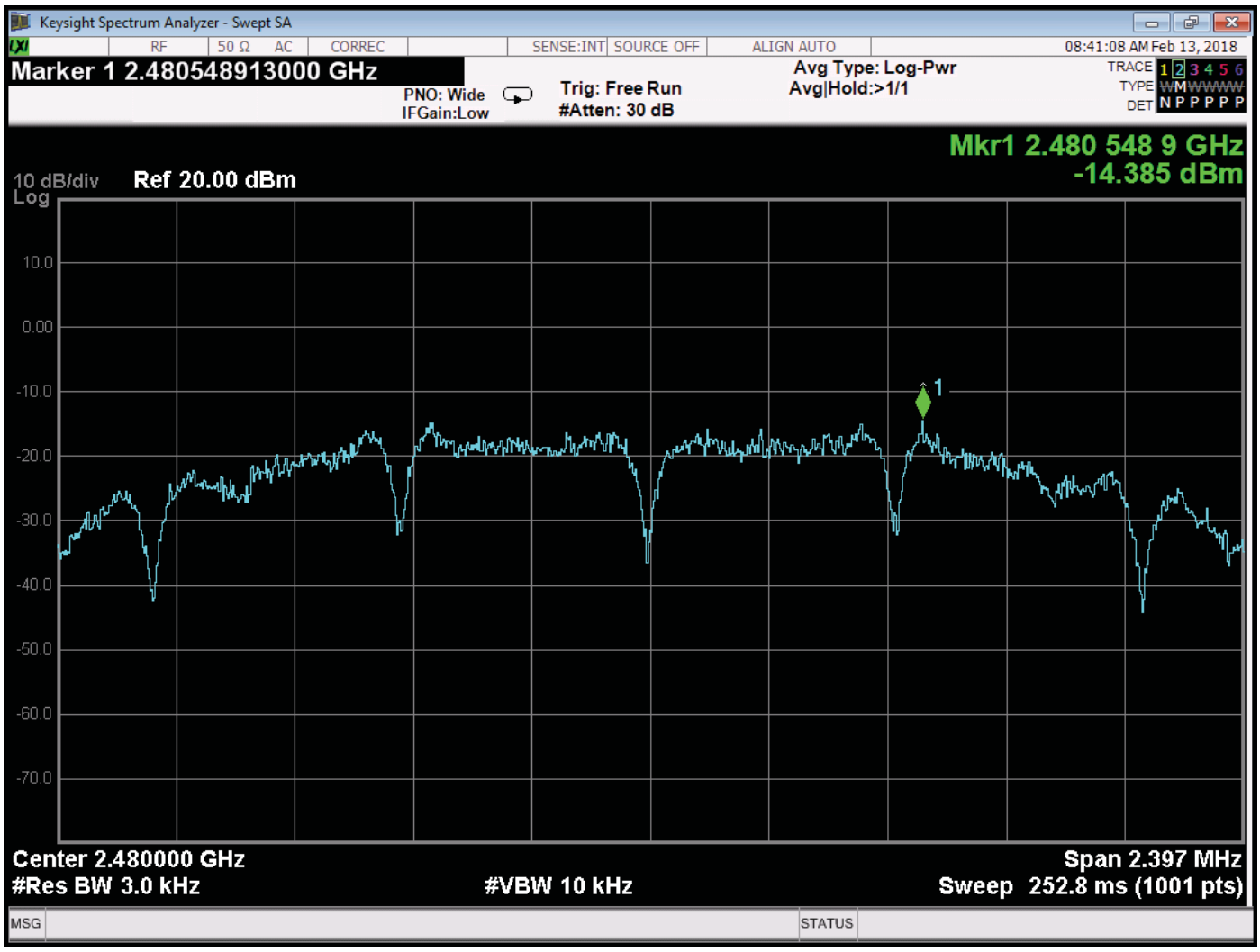
Peak Power Spectral Density – 2445 MHz Fundamental



Peak Power Spectral Density – 2450 MHz Fundamental



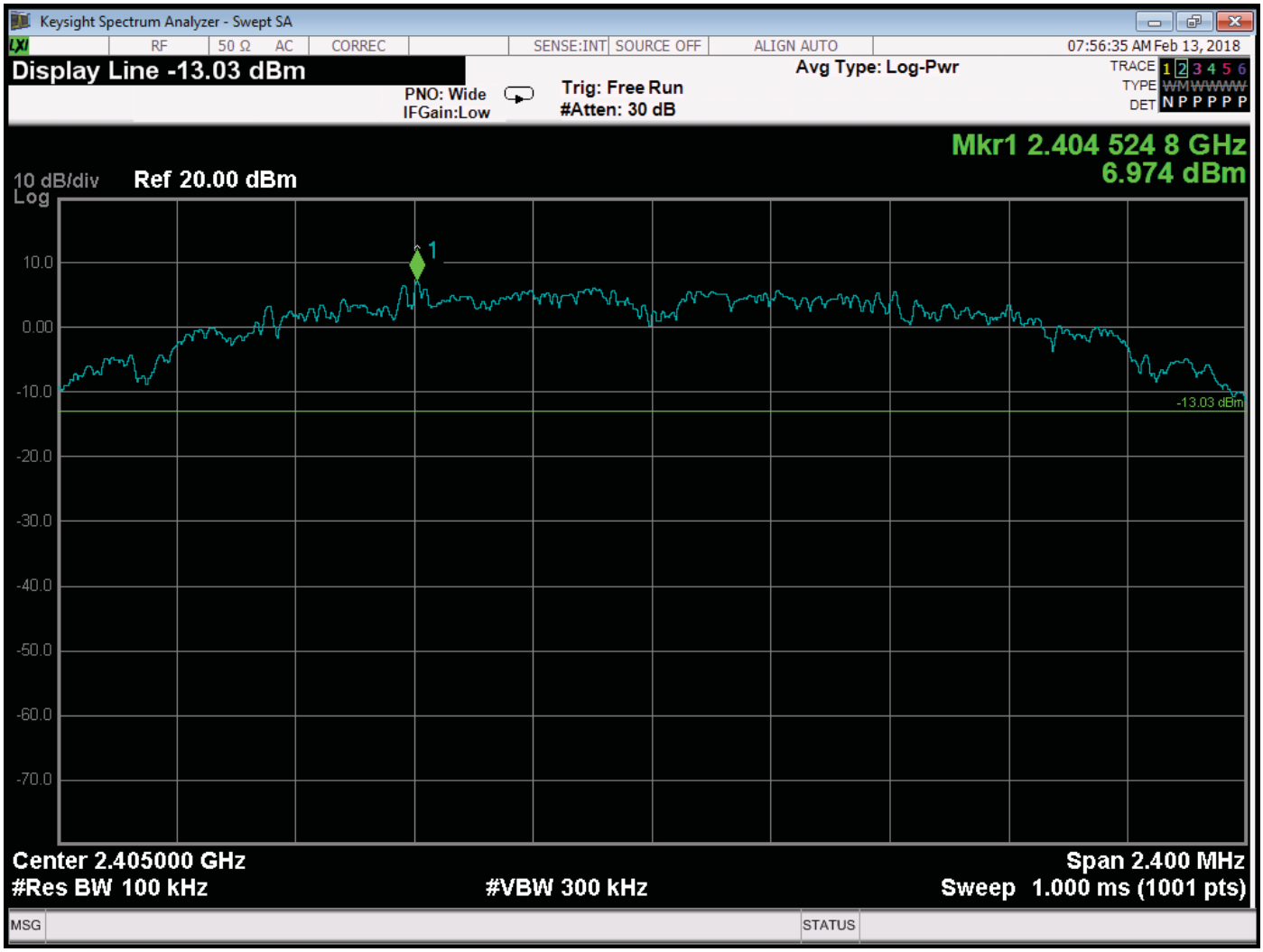
Peak Power Spectral Density – 2475 MHz Fundamental



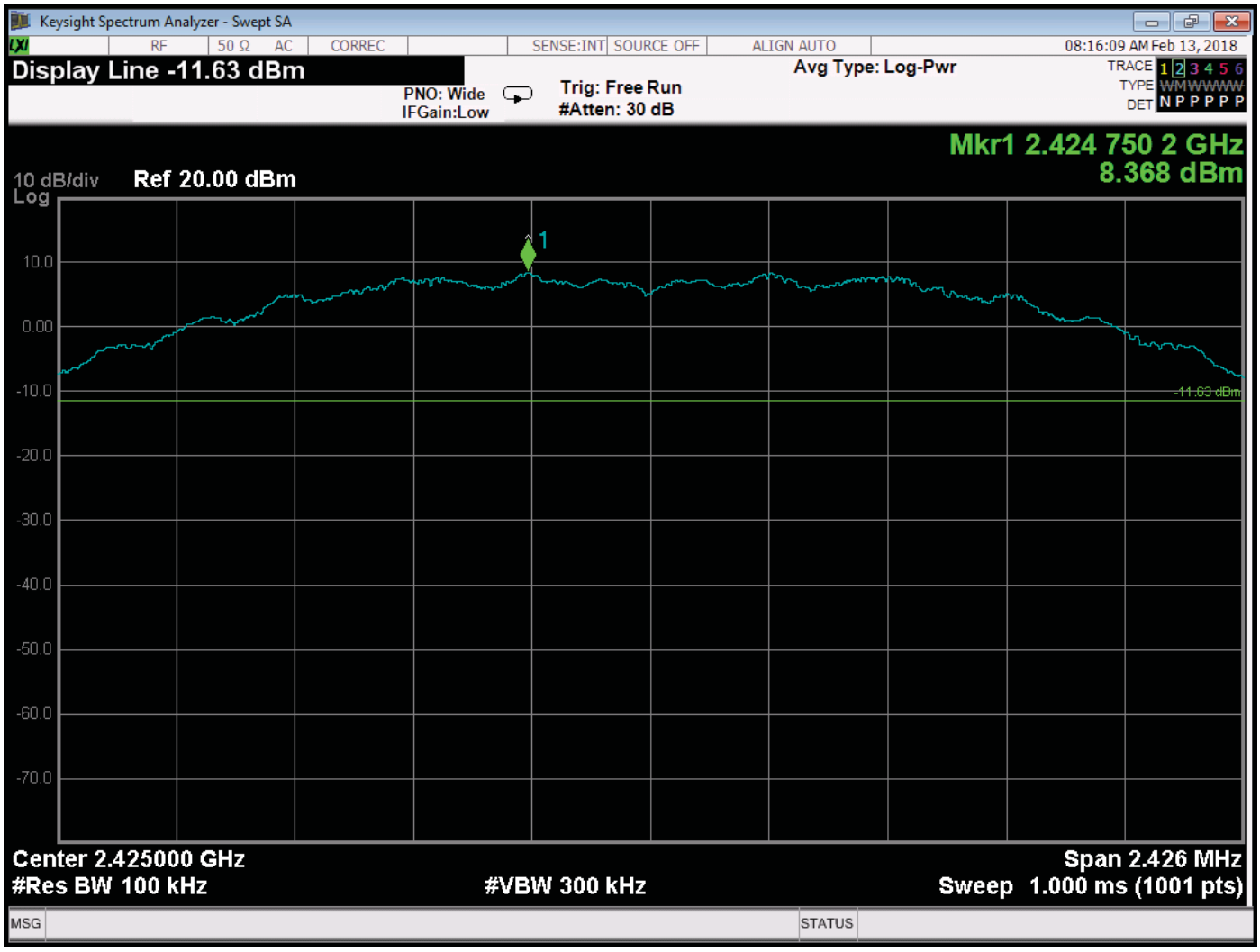
Peak Power Spectral Density – 2480 MHz Fundamental

RF ANTENNA CONDUCTED

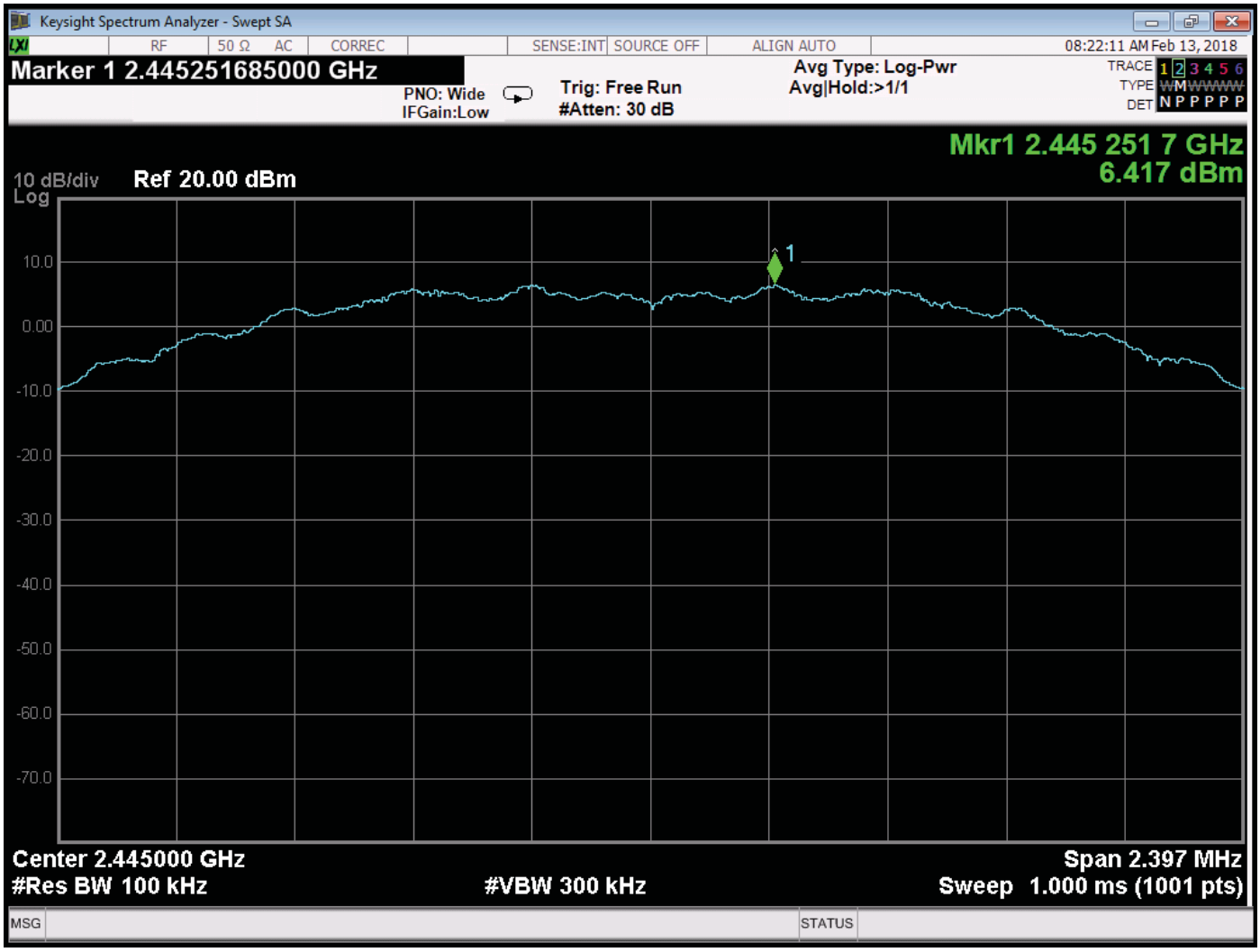
DATA SHEETS



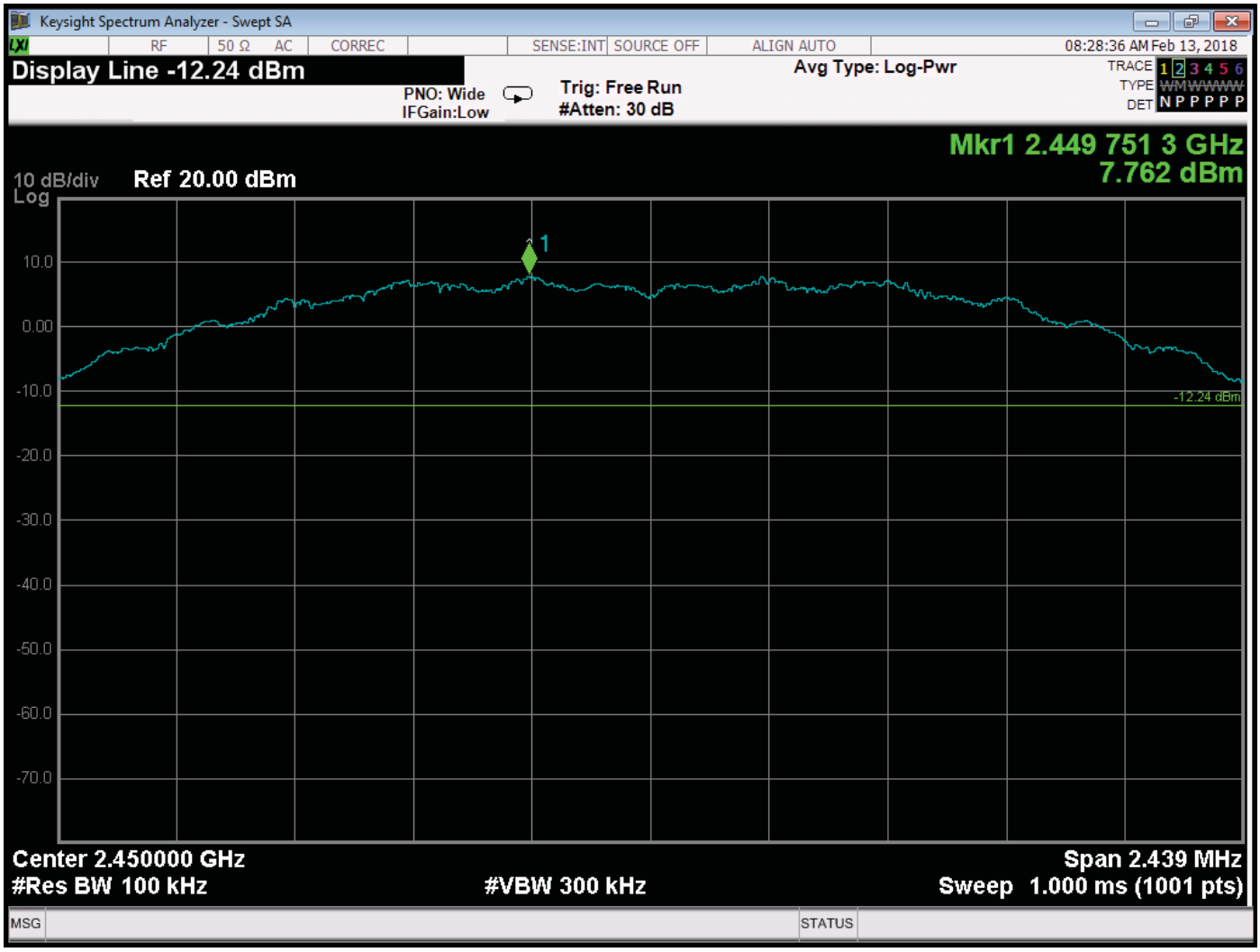
RF Antenna Conducted – Reference Level – 2405 MHz Fundamental



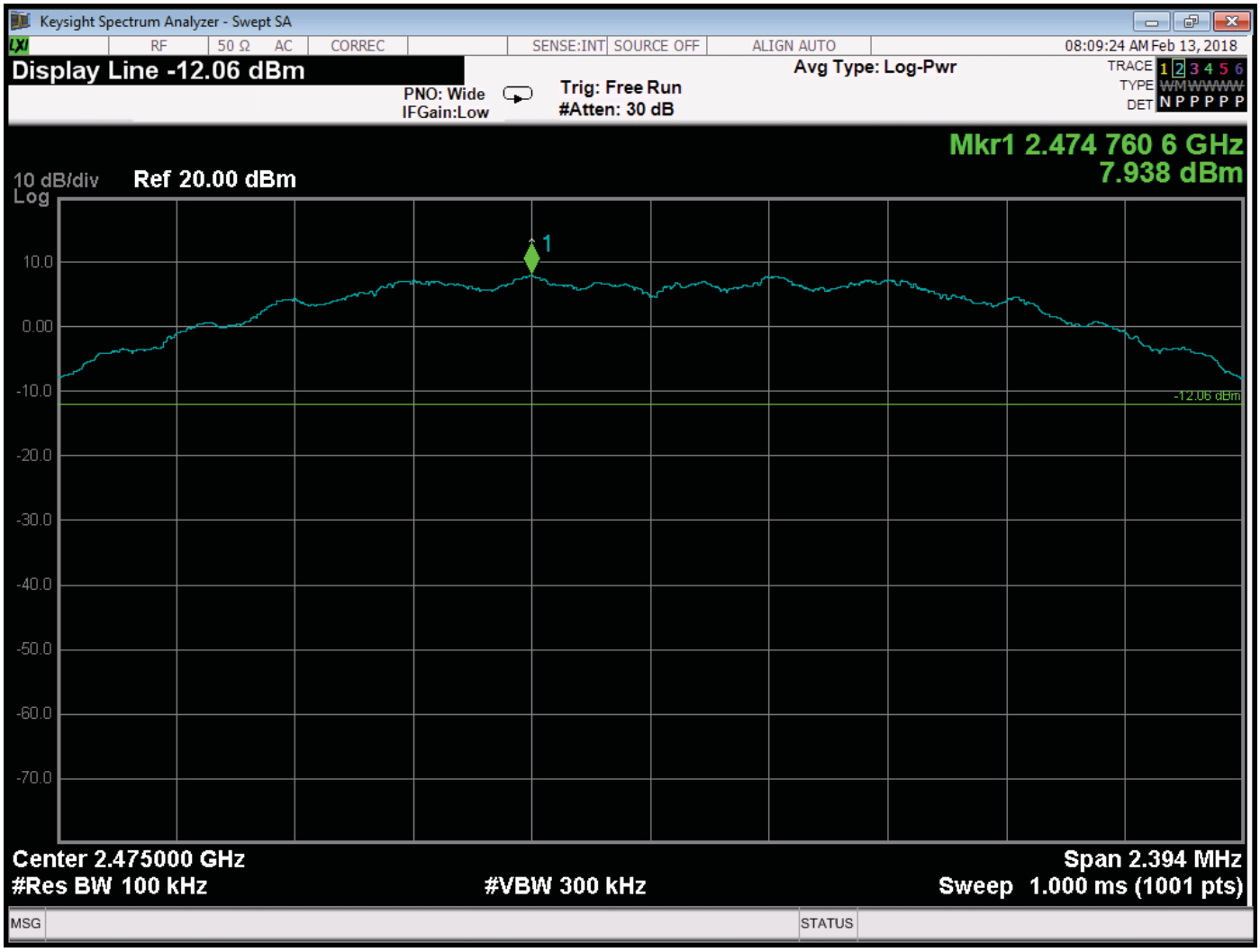
RF Antenna Conducted – Reference Level – 2425 MHz Fundamental



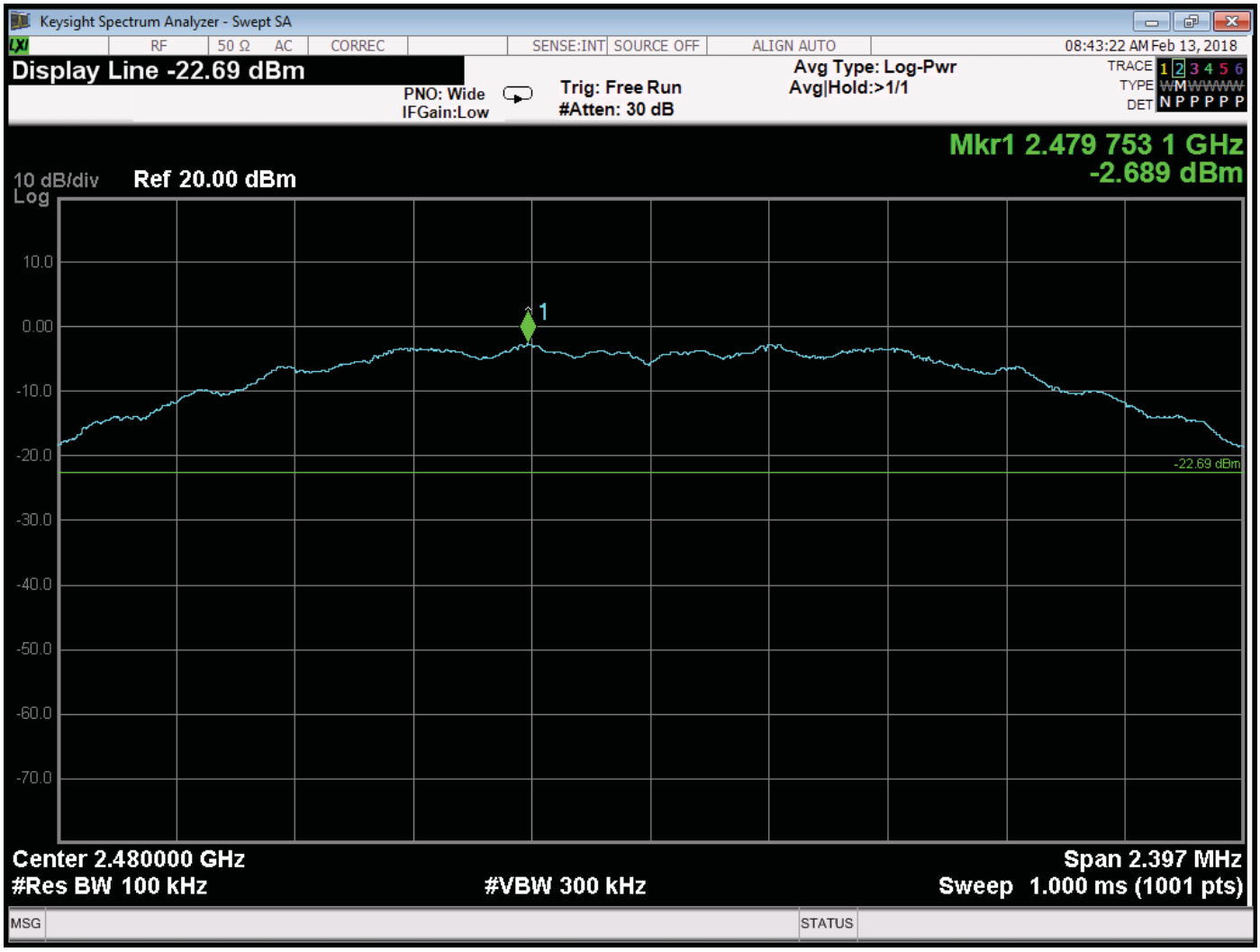
RF Antenna Conducted – Reference Level – 2445 MHz Fundamental



RF Antenna Conducted – Reference Level – 2450 MHz Fundamental



RF Antenna Conducted – Reference Level – 2475 MHz Fundamental



RF Antenna Conducted – Reference Level – 2480 MHz Fundamental

FCC 15.247
Spectrum Brands, Inc.
OHM Zigbee v.2
Model: 450202
Three Highest Non-Restricted Band Harmonics

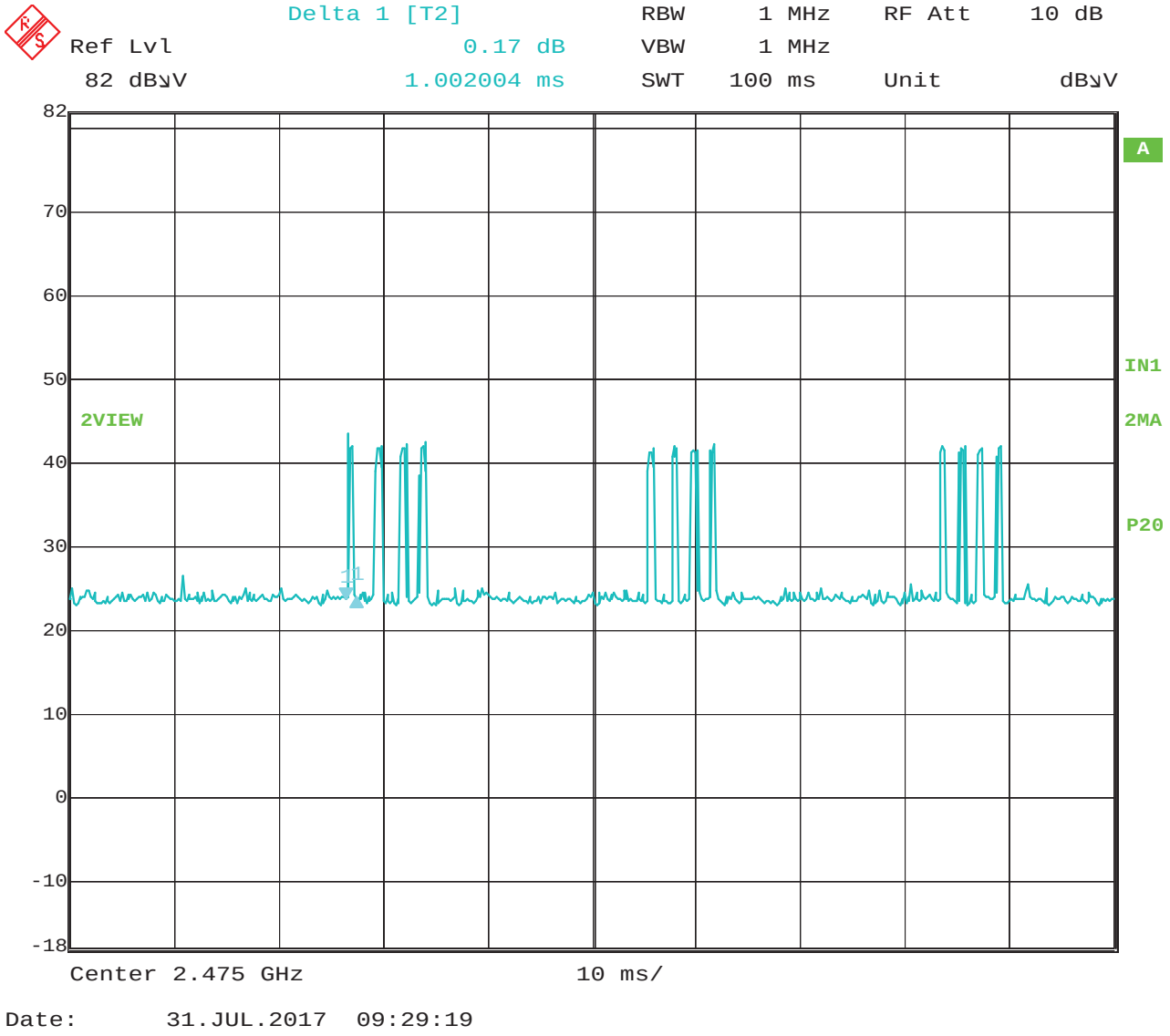
Date: 02/13/2018
Lab: D
Tested By: Kyle Fujimoto

Freq. (MHz)	Level (dBm)	Pol (v/h)	Limit	Margin	Peak/QP	Table Angle (deg)	Ant. Height (cm)	Comments
2425	8.368	--	--	--	Peak	--	--	**Highest Fundamental**
								Done via Conducted
9713.21	-44.78	--	-11.632	-33.148	Peak	--	--	**Highest emission**
								Relative to the limit
								Done via Conducted
9802.32	-41.76	--	-11.632	-30.128	Peak	--	--	**2nd Highest emission**
								Relative to the limit
								Done via Conducted
9853.62	-42.01	--	-11.632	-30.378	Peak	--	--	**3rd Highest emission**
								Relative to the limit
								Done via Conducted

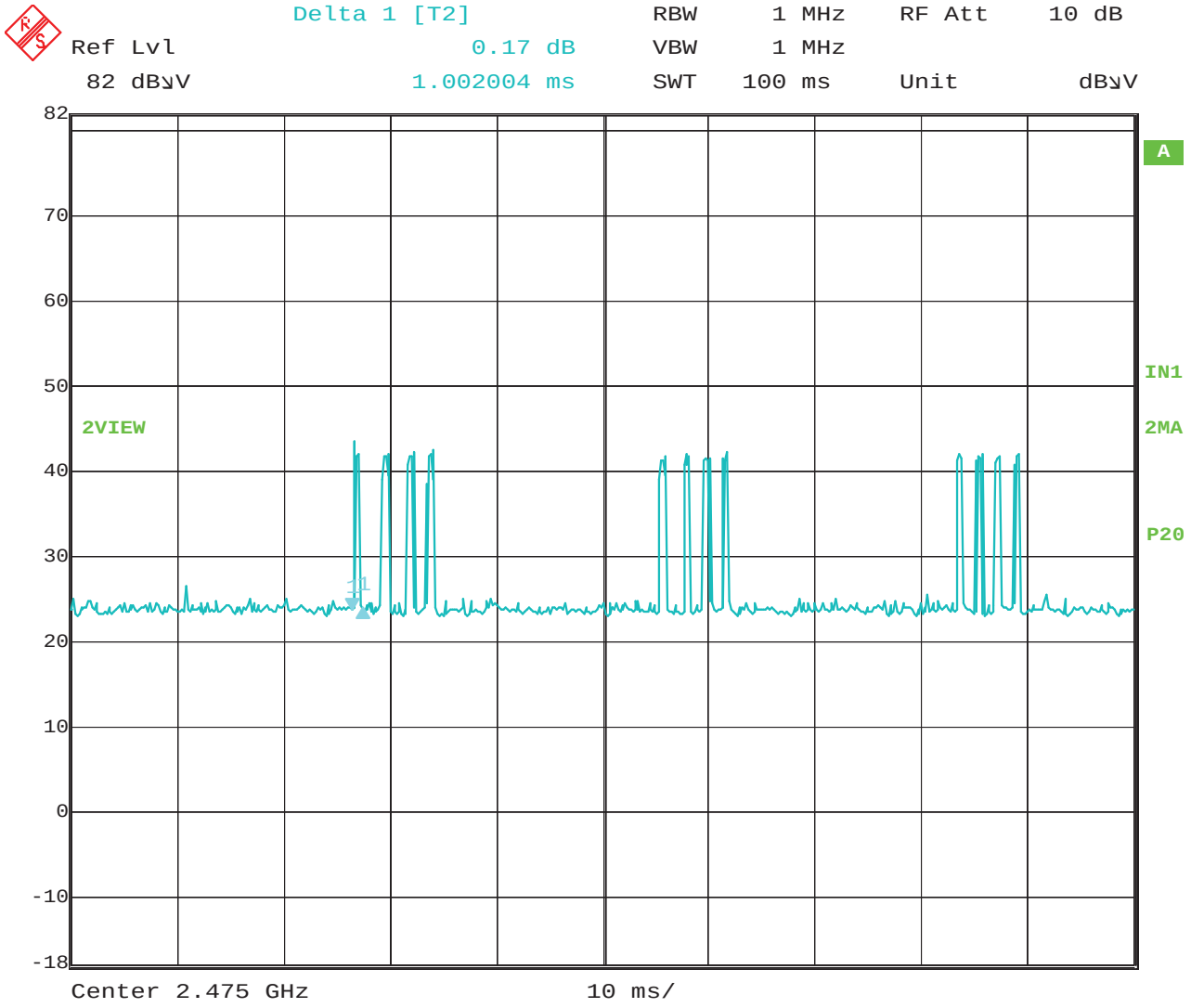
Note: Per Section 11.11.2 of ANSI C63.10: 2013, the channel found to contain the maximum PSD level can be used to establish the reference level. The fundamental at 2425 MHz is the channel that has the maximum PSD level and thus is used to determine the limit for the non-restricted harmonics.

DUTY CYCLE

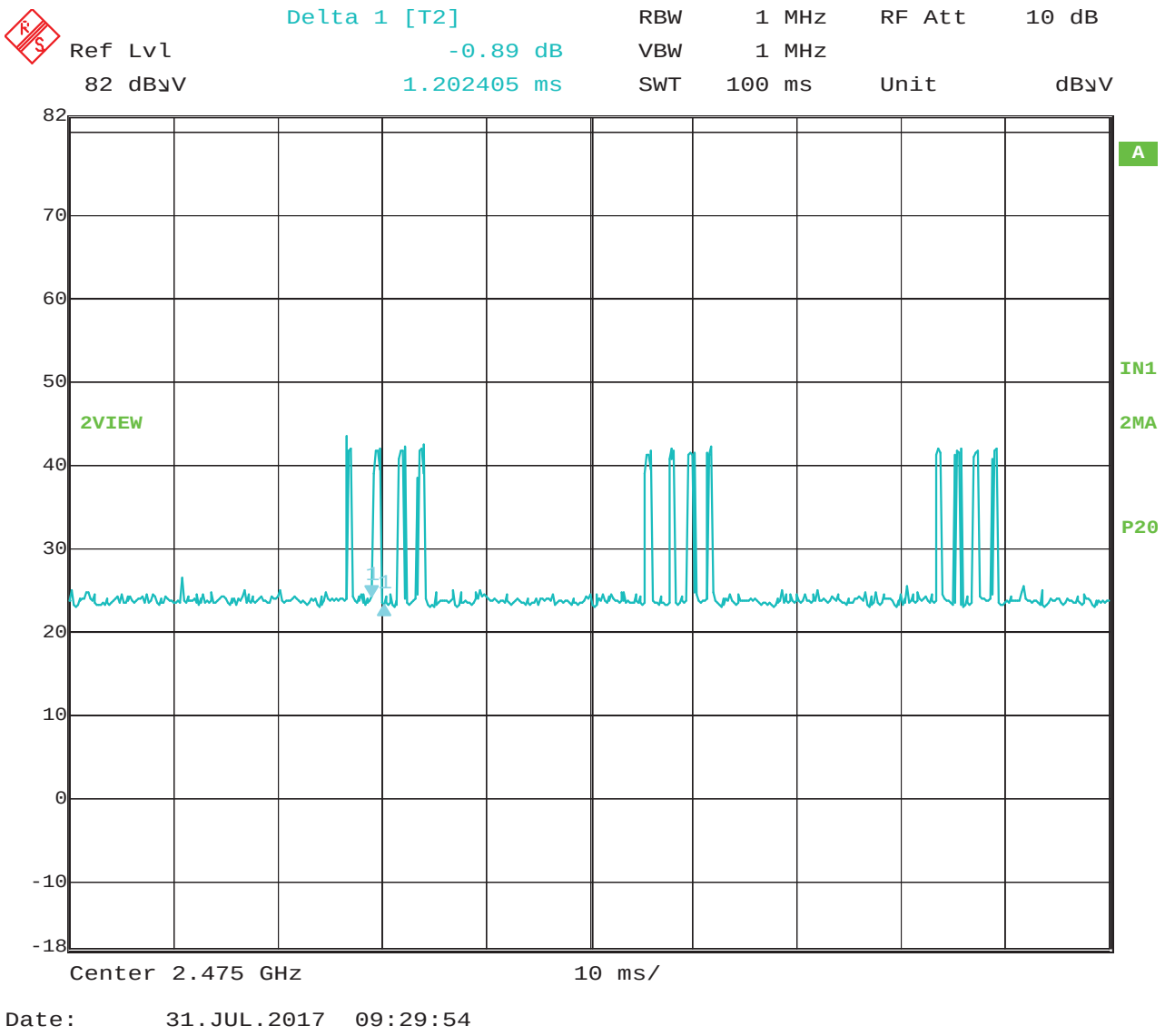
DATA SHEETS



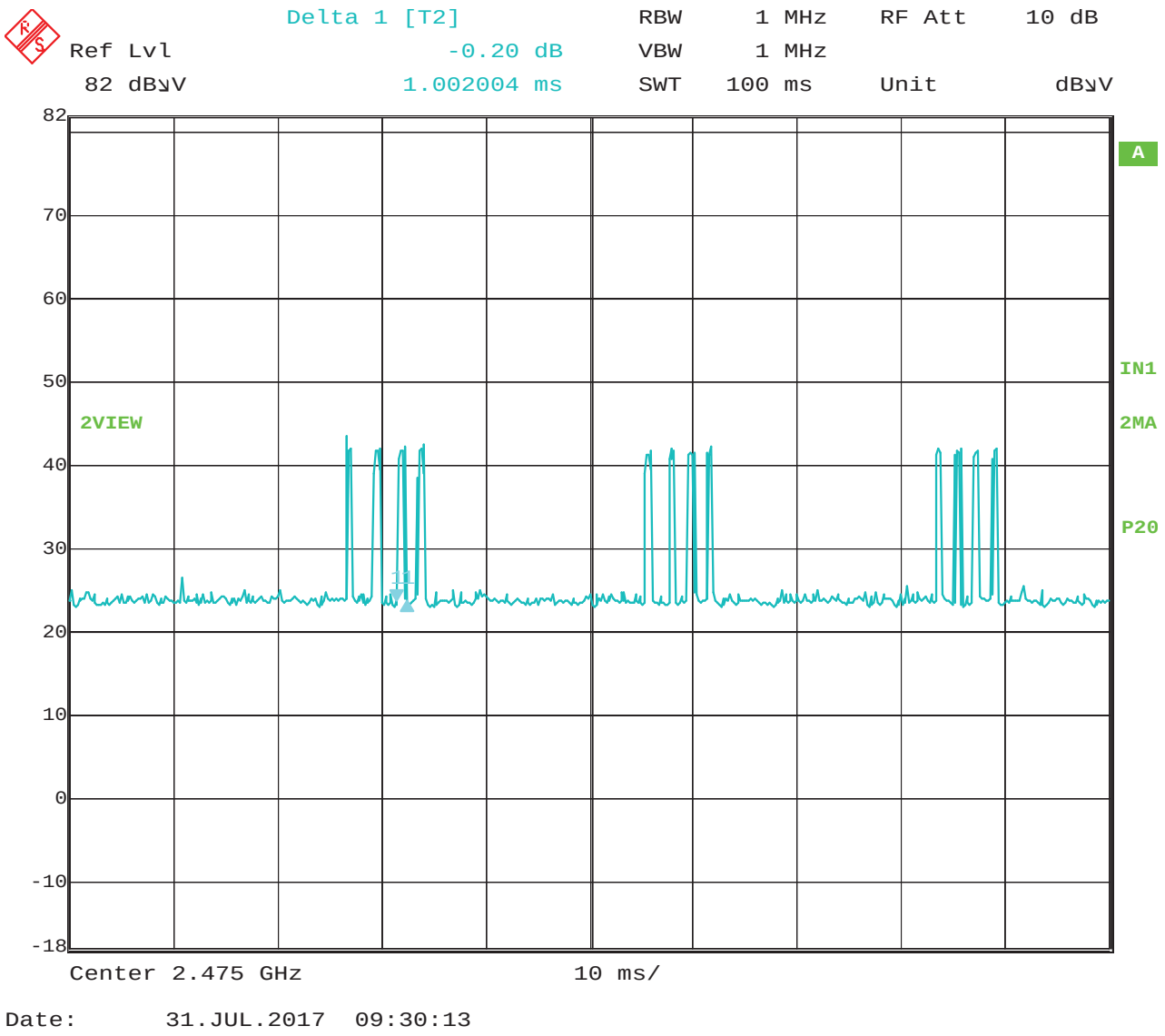
Number of Pulses in worst case 100 ms = 12



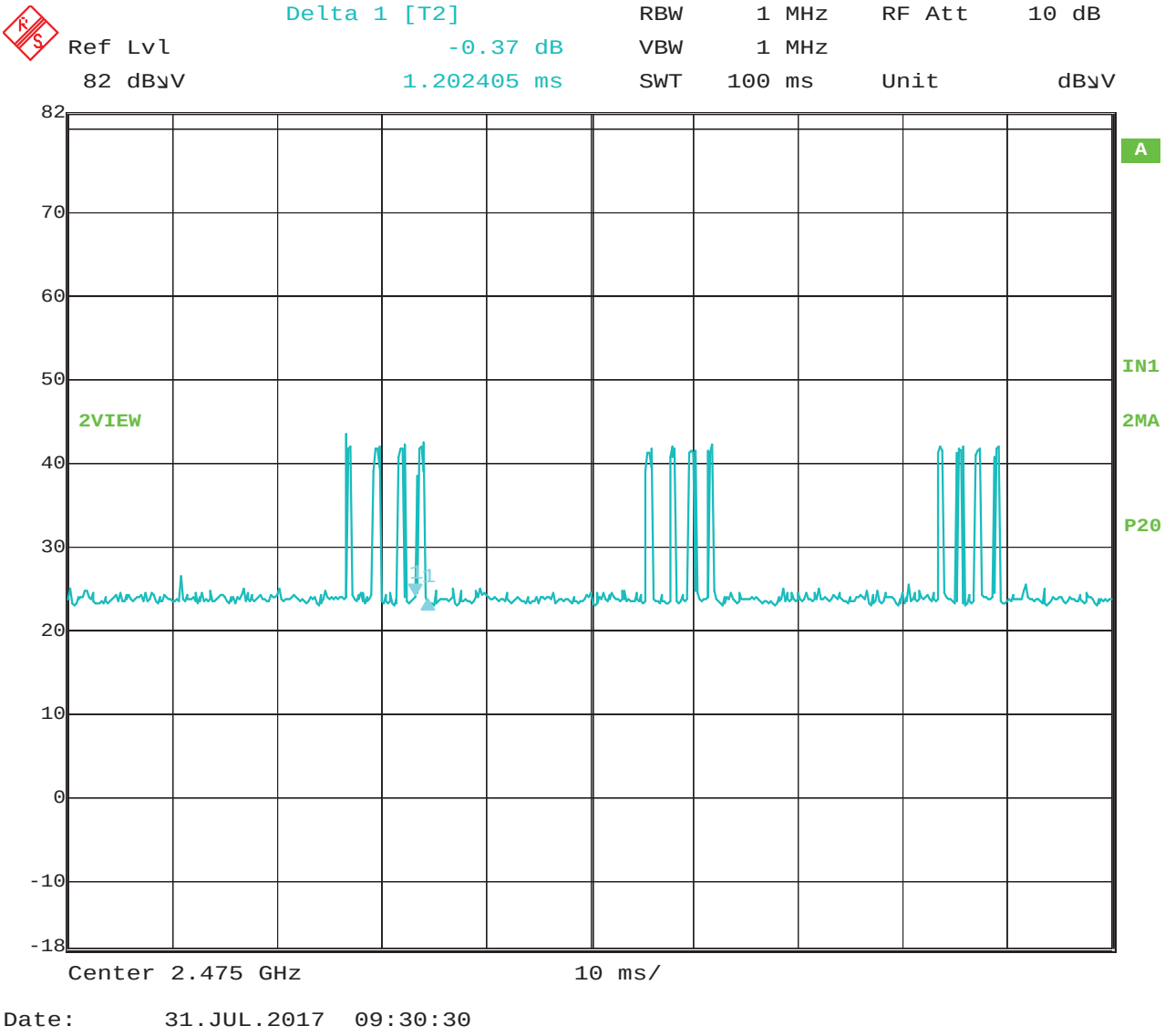
Time of Pulse 1 = 1.002004 ms



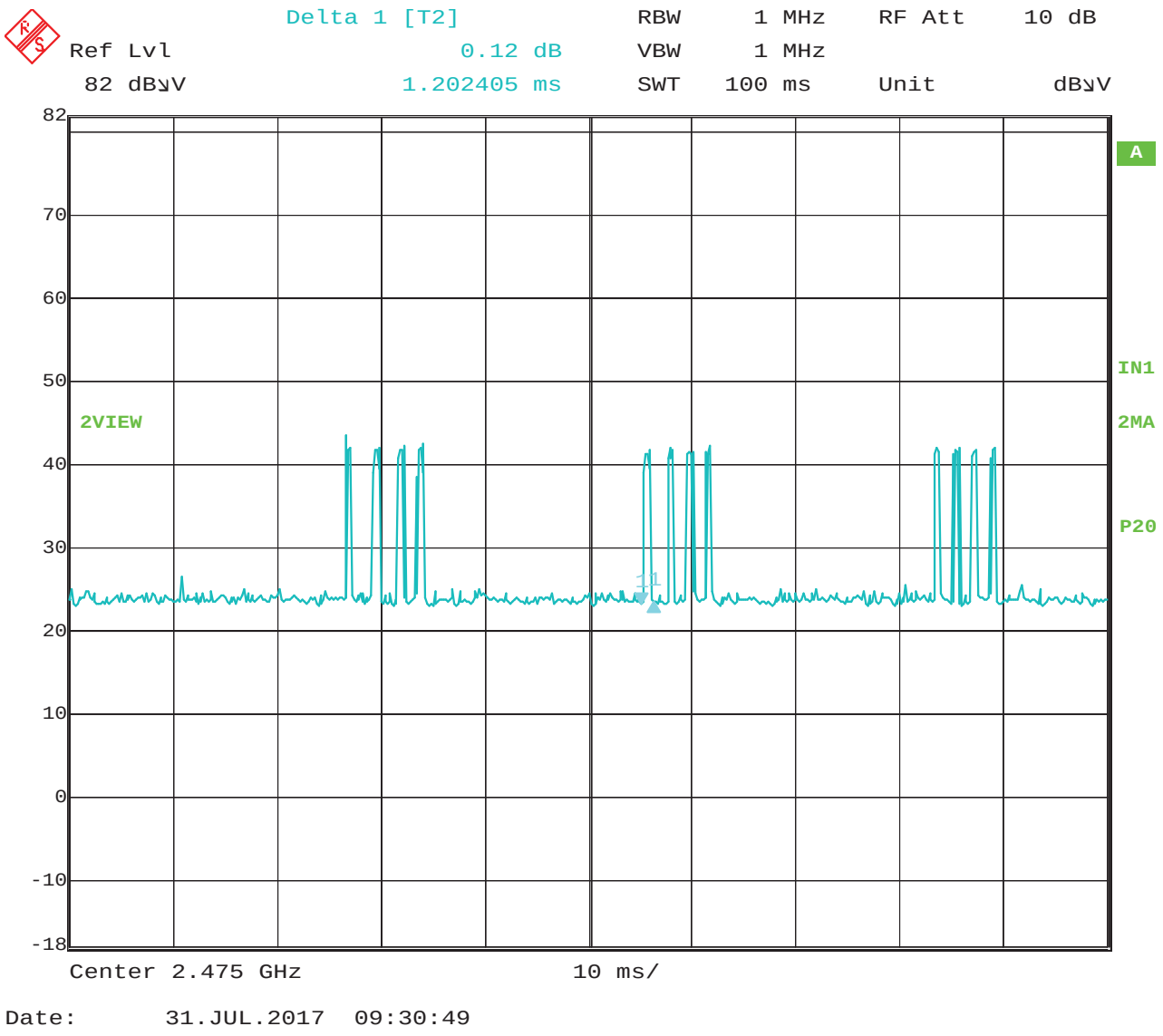
Time of Pulse 2 = 1.202405 ms



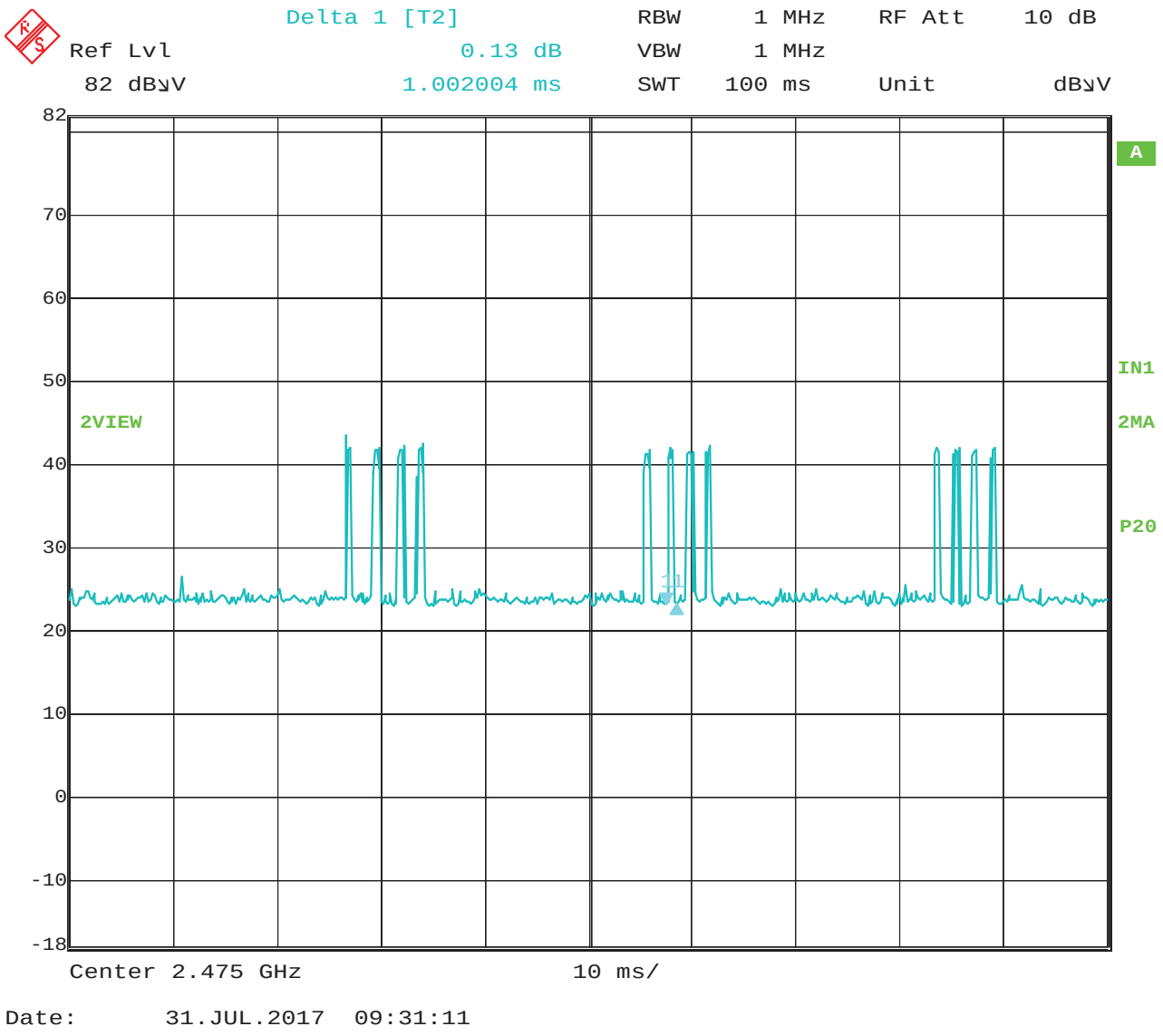
Time of Pulse 3 = 1.002004 ms



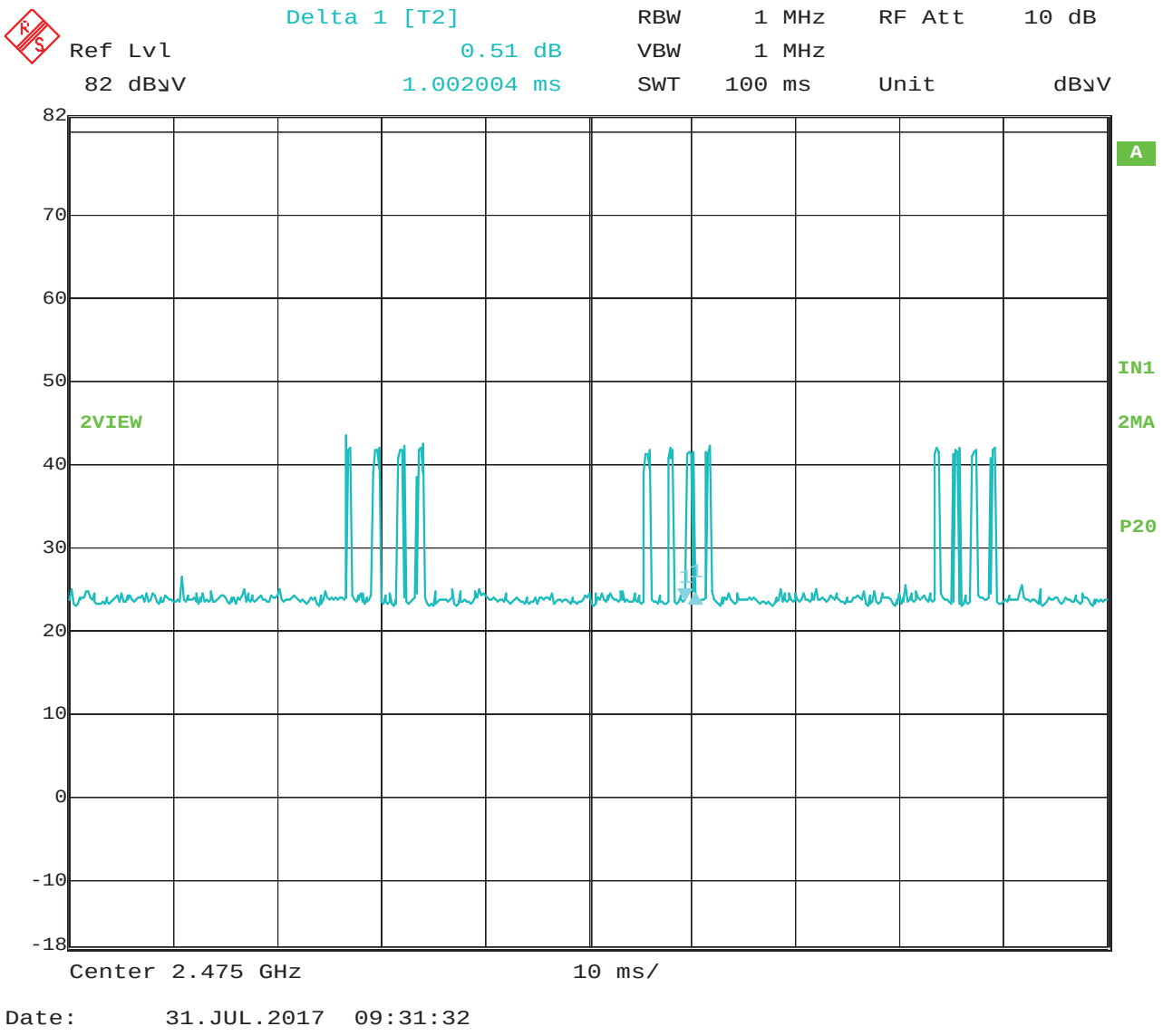
Time of Pulse 4 = 1.202405 ms



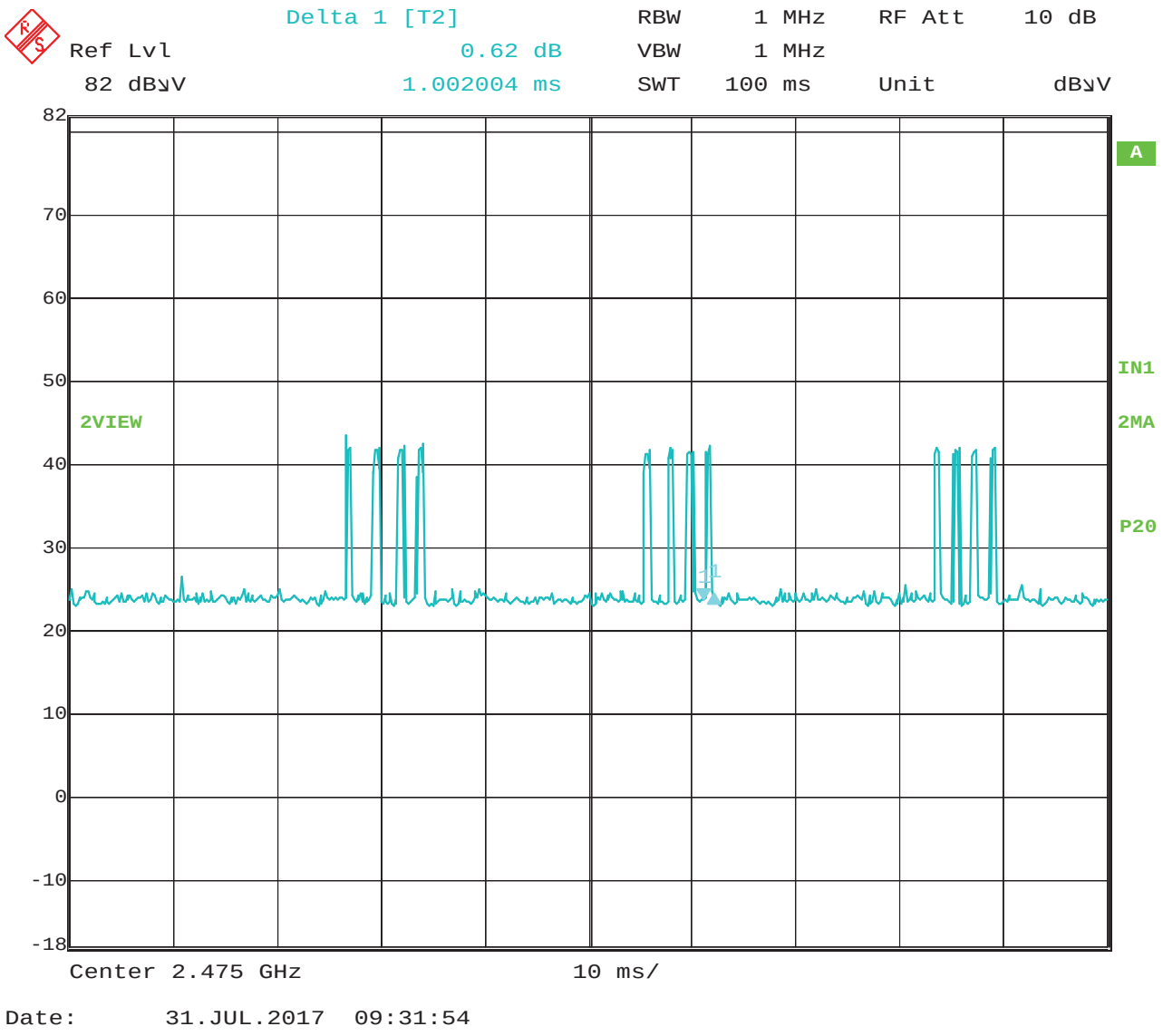
Time of Pulse #5 = 1.202405 ms



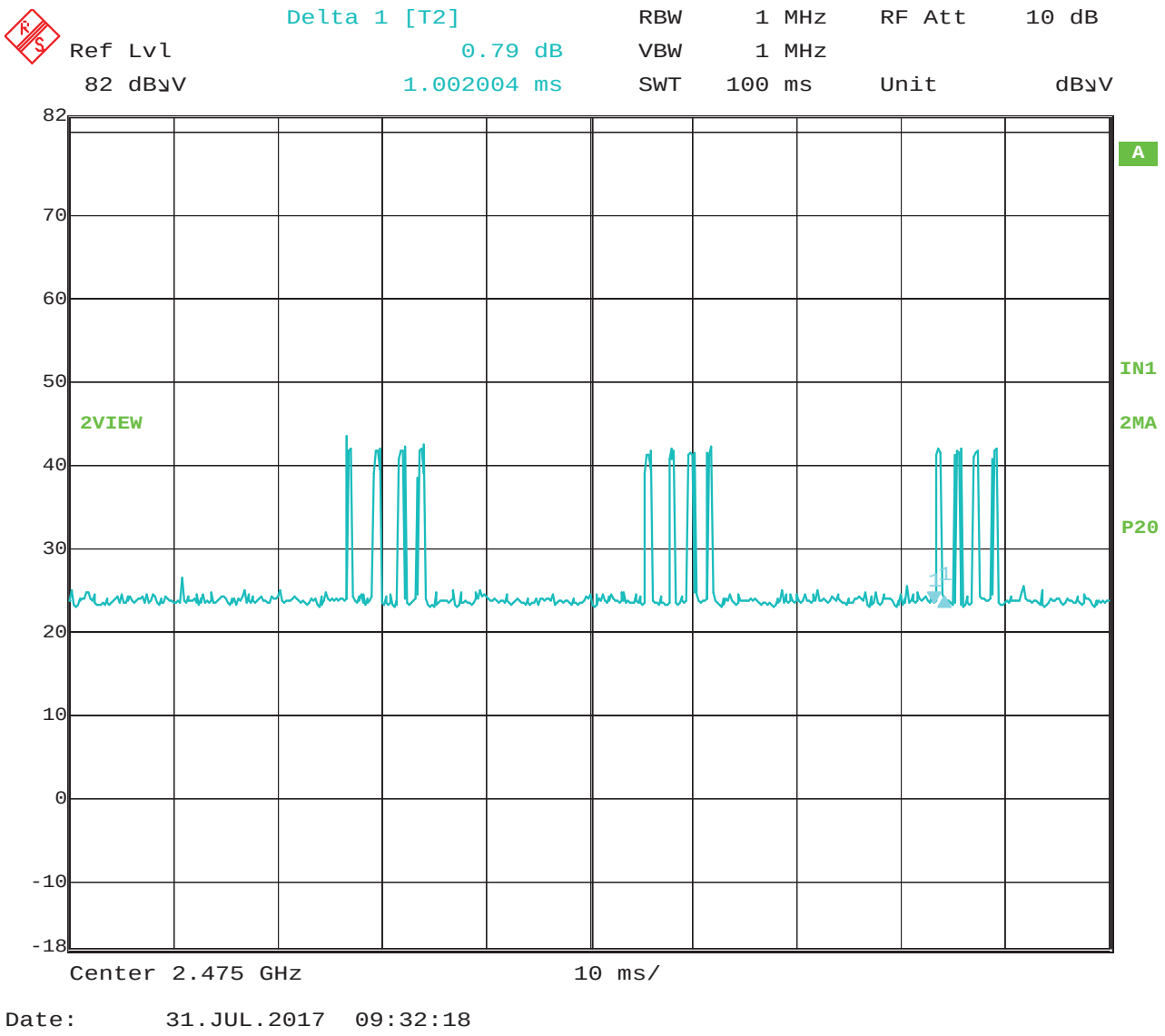
Time of Pulse #6 = 1.002004 ms



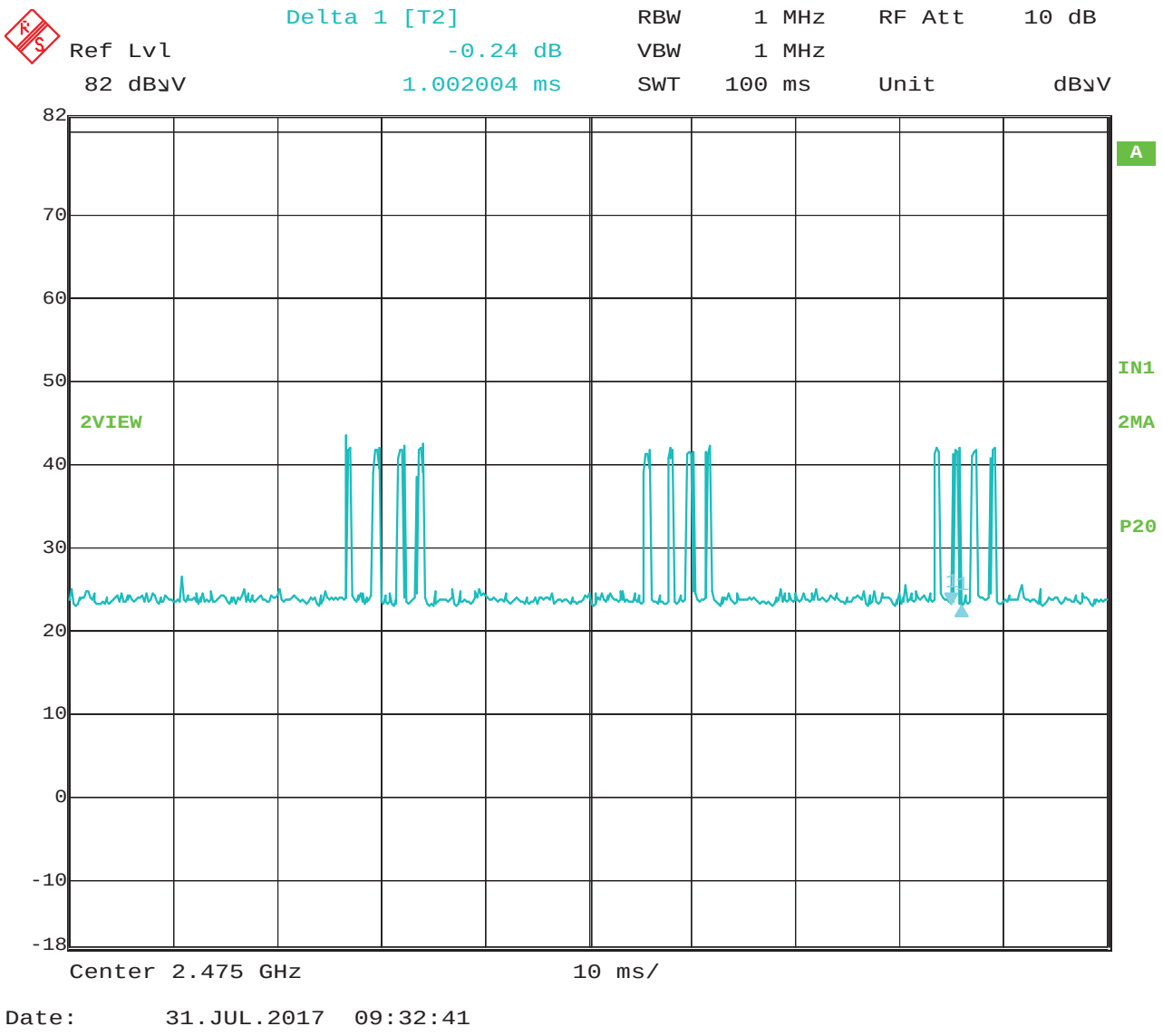
Time of Pulse #7 = 1.002004 ms



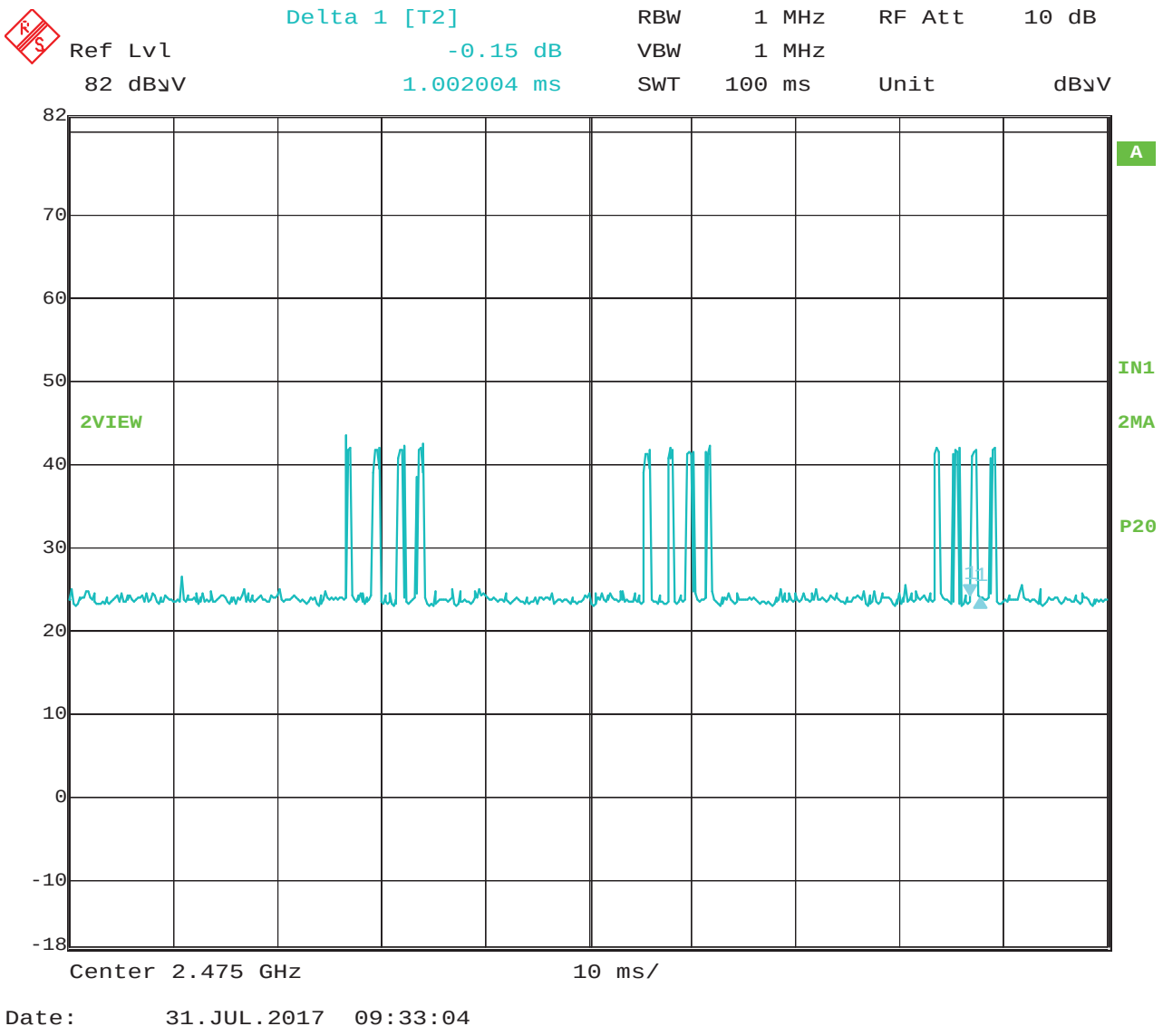
Time of Pulse #8 = 1.002004 ms



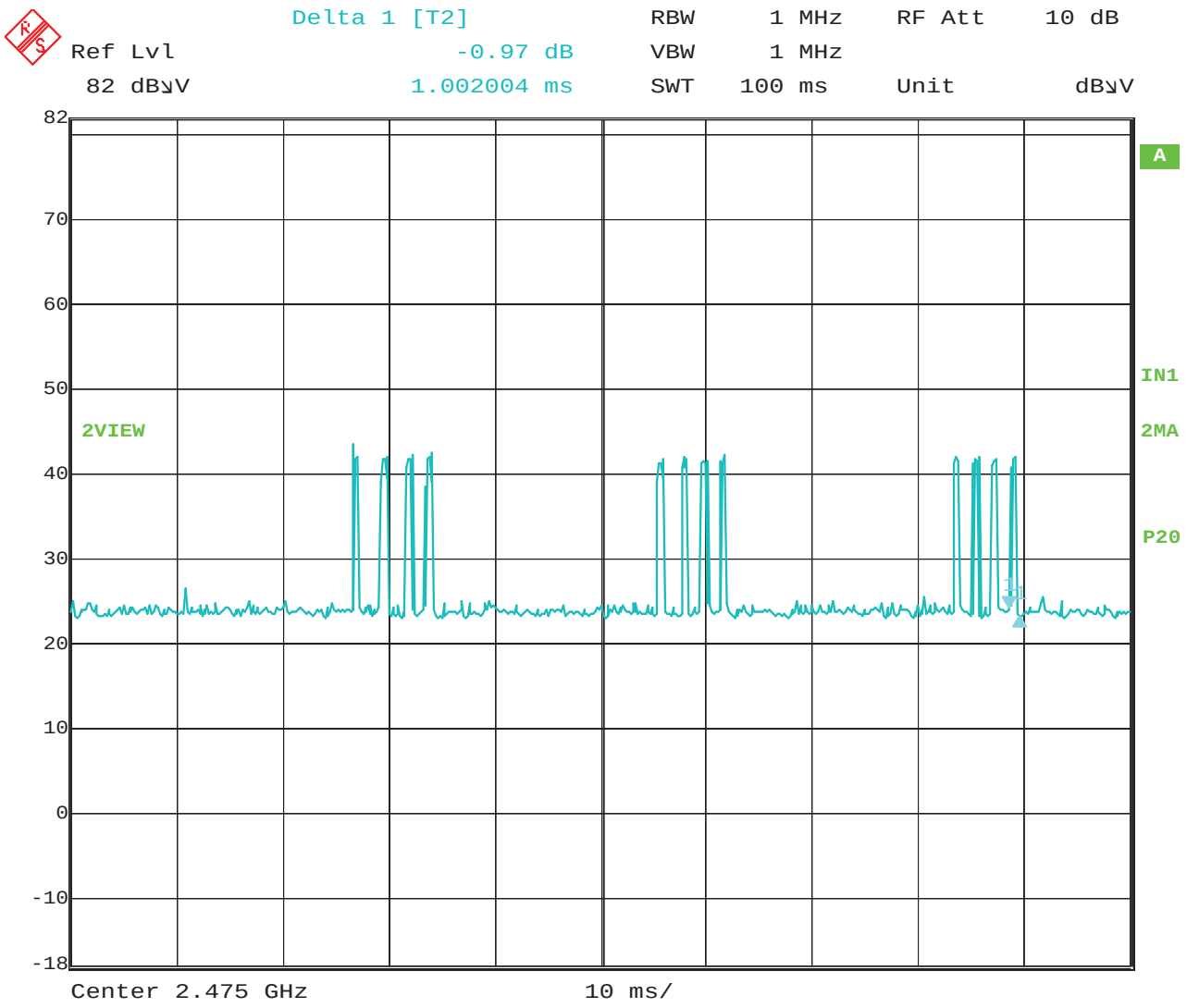
Time of Pulse #9 = 1.002004 ms



Time of Pulse #10 = 1.002004 ms



Time of Pulse #11 = 1.002004 ms



Time of Pulse #12 = 1.002004 ms

Total on Time = 12.625251 ms

Total Duty Cycle = 12.625251 ms / 100 ms = 12.625251%

Peak to Average Ratio = -17.97 dB