FCC PART 15, SUBPART B and C
TEST REPORT

for

BLE MODULE

HOST MODELS: 8621 AND 8630

Prepared for

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DATE: FEBRUARY 11, 2016

	REPORT BODY	APPENDICES					TOTAL
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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 endorsement by NVLAP, NIST or any other agency of the U.S. Government.

Device Tested:	BLE Module Host Models: 8621 and 8630 S/N: N/A
Product Description:	The EUT is a BLE radio transceiver module installed in a Wireless Transmitter, Model 8621 and a Wireless Receiver, Model: 8630.
Modifications:	The EUT was not modified during the testing.
Manufacturer:	Posey Company 5635 Peck Road Arcadia, California 91006
Test Dates:	December 30, 2015 and January 5, 7 and 8, 2016
Test Specifications:	EMI requirements CFR Title 47, Part 15, Subpart B; and Subpart C, sections 15.205, 15.207, 15.209, and 15.247
Test Procedure:	ANSI C63.4: 2014 and ANSI C63.10: 2013
Test Deviations:	The test procedure was not deviated from during the testing.

SUMMARY OF TEST RESULTS

TEST	DESCRIPTION	RESULTS
1	Conducted RF Emissions, 150 kHz – 30 MHz	The Host devices do not directly or indirectly connect to the AC mains, thus this test was not performed
2	Spurious Radiated RF Emissions, 10 kHz – 25000 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
3	Emissions produced by the intentional radiator in non-restricted bands, 10 kHz – 25 GHz	This test is covered under the original certification.
4	Emissions produced by the intentional radiator in restricted bands, 10 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)
5	Peak Power Output	This test is covered under the original certification.
6	RF Conducted Antenna Test	This test is covered under the original certification.
7	Peak Power Spectral Density from the Intentional Radiator to the Antenna	This test is covered under the original certification.

1. PURPOSE

This document is a Class II Permissive change test report based on the Electromagnetic Interference (EMI) tests performed on the BLE Module in Host Models: 8621 and 8630. The EMI measurements were performed according to the measurement procedure described in ANSI C63.4: 2014 and ANSI C63.10: 2013. 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, 15.207, 15.209, and 15.247.

This Module has the same exact layout and components as the original certification. Due to this, the direct measurements were covered under the original certification.

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

Posey Company

Alexander Starick	Electrical Engineer

Compatible Electronics, Inc.

Kyle Fujimoto	Test Engineer
James Ross	Lab Manager

2.4 Date Test Sample was Received

The test sample was received on January 6, 2016.

2.5 Disposition of the Test Sample

The sample was returned to Posey Company prior to the date of this 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 EMI 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
ANSI C63.10 2013	American National Standard for Testing Unlicensed Wireless Devices
FCC Title 47, Part 15 Subpart B	FCC Rules - Radio frequency devices (including digital devices) – Unintentional Radiators

4. DESCRIPTION OF TEST CONFIGURATION

4.1 Description of Test Configuration

Host Model 8621: The BLE Module was installed in the Wireless Transmitter, Model: 8621 (EUT) which was conntected to a sensor pad via its sensor port. The EUT was tested in three orthogonal axis. The EUT was continuously transmitting.

Host Model 8630: The BLE Module was installed in the Wireless Receiver, Model: 8630 (EUT) which was conntected to a sensor alarm via its alarm port. The EUT was tested in three orthogonal axis. The EUT was continuously transmitting.

Both EUT's were programmed so that it could be tested at the low, middle, and high channels for fundamental for harmonics.

The spurious radiated emission tests were done with the EUT's programmed to continuously frequency hop on a continuous basis.

The EUT's were tested with new batteries.

The final radiated data for the EUT as was taken in the modes described above. Please see Appendix E for the data sheets.

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4.1.1 Cable Construction and Termination

Cable 1 **(Wireless Transmitter, Model: 8621)**
This is a 2.2-meter unshielded cable connecting the EUT to the sensor pad. The cable has an RJ-11 connector at the EUT end and is hard wired into the sensor pad.

Cable 2 **(Wireless Receiver, Model: 8630)**
This is a 10-centimeer unshielded cable connecting the EUT to the sensor alarm. The cable has an RJ-11 connector at the EUT end and is hard wired into the sensor alarm.

5. LISTS OF EUT, ACCESSORIES AND TEST EQUIPMENT

5.1 EUT and Accessory List

EQUIPMENT	MANUFACTURER	MODEL NUMBER	SERIAL NUMBER	FCC ID
BLE MODULE (EUT)	POSEY COMPANY	N/A	N/A	XA4-8600
WIRELESS TRANSMITTER (EUT)	POSEY COMPANY	8621	N/A	CONTAINS FCC ID: XA4-8600
WIRELESS RECEIVER (EUT)	POSEY COMPANY	8630	N/A	CONTAINS FCC ID: XA4-8600
SENSOR PAD	POSEY COMPANY	8283	N/A	N/A
SENSOR ALARM	POSEY COMPANY	8345	N/A	N/A

5.2 EMI Test Equipment

EQUIPMENT TYPE	MANU-FACTURER	MODEL NUMBER	SERIAL NUMBER	CALIBRATION DATE	CALIBRATION DUE DATE
RF RADIATED EMISSIONS TEST EQUIPMENT					
TDK TestLab	TDK RF Solutions, Inc.	9.22	700145	N/A	N/A
EMI Receiver, 20 Hz – 26.5 GHz	Agilent Technologies	N9038A	MY51100115	April 3, 2015	1 Year
CombiLog Antenna	Com-Power	AC-220	61060	September 3, 2015	1 Year
Preamplifier	Com-Power	PA-118	551024	March 6, 2015	1 Year
Preamplifier	Com-Power	PA-840	711013	May 13, 2014	2 Year
Loop Antenna	Com-Power	AL-130	17089	February 6, 2015	2 Year
Horn Antenna	Com-Power	AH-118	071175	February 26, 2014	2 Year
Horn Antenna	Com-Power	AH-826	0071957	N/A	N/A
Computer	Hewlett Packard	p6716f	MXX1030PX0	N/A	N/A
LCD Monitor	Hewlett Packard	52031a	3CQ046N3MG	N/A	N/A
System Controller	Sunol Sciences Corporation	SC110V	112213-1	N/A	N/A
Turntable	Sunol Sciences Corporation	2011VS	N/A	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 EMI test location.

6.2 EUT Mounting, Bonding and Grounding

The EUT was mounted on a 1.0 by 1.5 meter non-conductive table 0.8 meters above the ground plane.

The EUT was not grounded.

7. CHARACTERISTICS OF THE TRANSMITTER

7.1 Channel Description and Frequencies

The lowest frequency the EUT will use is 2402 MHz and the highest frequency the EUT will use is 2480 MHz. The EUT will be able to be tuned every 2 MHz between the lowest frequency and the highest frequency.

7.2 Antenna Gain

The EUT utilizes an internal PCB antenna that has a gain of -1.5 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:

The EUT’s do not directly or indirectly connect to the AC mains, thus this test was not performed.

8.1.2 Radiated Emissions (Spurious and Harmonics) Test

The EMI Receiver was used as the measuring meter. Below 1 GHz, a built-in, internal preamplifier was used to increase the sensitivity of the instrument. At frequencies above 1 GHz, external preamplifiers were used. The Com Power Microwave Preamplifier Model: PA-118 was used for frequencies above from1 GHz to 18 GHz, and the Com Power Microwave Preamplifier Model: PA-840 was used for frequencies above 18 GHz. 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.

The frequencies above 1 GHz were averaged by using the RMS average detector function on the EMI Receiver.

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.

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
BLE Module, Host Model: 8621

Frequency MHz	Corrected Reading* dBuV	Specification Limit dBuV	Delta (Cor. Reading – Spec. Limit) dB
2483.5 (H)(X-axis)	50.94 (Avg)	54.00	-3.06
2483.5 (V)(Z-axis)	49.98 (Avg)	54.00	-4.02
7206 (H)(Z-axis)	49.82 (Avg)	54.00	-4.18
7440 (H)(X-axis)	46.93 (Avg)	54.00	-7.07
2390 (H)(X-axis)	46.33 (Pk)	54.00	-7.67
7440 (V)(Y-axis)	46.26 (Avg)	54.00	-7.74

Table 2.0 RADIATED EMISSION RESULTS
BLE Module, Host Model: 8630

Frequency MHz	Corrected Reading* dBuV	Specification Limit dBuV	Delta (Cor. Reading – Spec. Limit) dB
7206 (V)(Y-axis)	48.88 (Avg)	54.00	-5.12
2390 (V)(Y-axis)	47.50 (Avg)	54.00	-6.50
7206 (H)(Y-axis)	47.45 (Avg)	54.00	-6.55
7320 (V)(Y-axis)	47.31 (Avg)	54.00	-6.69
4880 (H)(Y-axis)	47.17 (Avg)	54.00	-6.83
2390 (H)(X-axis)	46.95 (Avg)	54.00	-7.05

Notes:

*	The complete emissions data is given in Appendix E of this report.		
Pk	Peak Reading	A	Average Reading
H	Horizontal Polarization	V	Vertical Polarization

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:

This test is covered under the original certification.

8.3 Peak Output Power

The Peak Output Power was taken using the power meter and power sensor. The EUT was directly connected to the power sensor, which was directly connected to the power meter. The Peak Output Power was then taken.

Test Results:

This test is covered under the original certification.

8.4 RF Antenna Conducted Test

The RF antenna conducted test was performed using the EMI Receiver. The RF antenna conducted test measured using a direct connection from the RF out on the EUT into the input of the EMI Receiver. The resolution bandwidth was 100 kHz, and the video bandwidth was 300 kHz. The spans were wide enough to include all the harmonics and emissions that were produced by the intentional radiator.

Test Results:

This test is covered under the original certification.

8.5 RF Band Edges

The RF band edges were taken at 2390 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.

A plot was also taken at 2400 MHz to show that the band edge at that frequency was 20 dB below the fundamental. The band edge at 2400 MHz was measured using a direct connection from the RF output of the EUT to the RF input of the EMI Receiver. Note: This test is covered under the original certification.

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 also 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:

This test is covered under the original certification.

9. CONCLUSIONS

The BLE Module in Host Models: 8621 and 8630, as tested, meets all of the specification limits defined in FCC Title 47, Part 15, Subpart C, sections 15.205, 15.207, 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 RECOGNITIONS

LABORATORY ACCREDITATIONS AND RECOGNITIONS

NVLAP LAB CODES 200063-0, 200528-0, 200527-0

For US, Canada, Australia/New Zealand, Japan, Taiwan, Korea, and the European Union, Compatible Electronics is currently accredited by NVLAP to ISO/IEC 17025. Please follow the link to the NIST/NVLAP site for each of our facilities' NVLAP certificate and scope of accreditation

NVLAP listing links

Agoura Division / **Brea Division** / **Silverado/Lake Forest Division**

.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."

ANSI listing CETCB

Compatible Electronics has been nominated as a Conformity Assessment Body (CAB) for EMC under the US/EU Mutual Recognition Agreement (MRA).
US/EU MRA list NIST MRA site

Compatible Electronics has been nominated as a Conformity Assessment Body (CAB) for Taiwan/BSMI under the US/APEC (Asia-Pacific Economic Cooperation) Mutual Recognition Agreement (MRA).
APEC MRA list NIST MRA site

We are also listed for IT products by the following country/agency:

VCCI Support member: Please visit http://www.vcci.jp/vcci_e/

FCC Listing, from FCC OET site
FCC test lab search https://fjallfoss.fcc.gov/oetcf/eas/reports/TestFirmSearch.cfm

Industry Canada Industrie Canada

Compatible Electronics IC listing can be found at:
http://www.ic.gc.ca/eic/site/ic1.nsf/eng/home

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

BLE Module
Host Models: 8621 and 8630
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

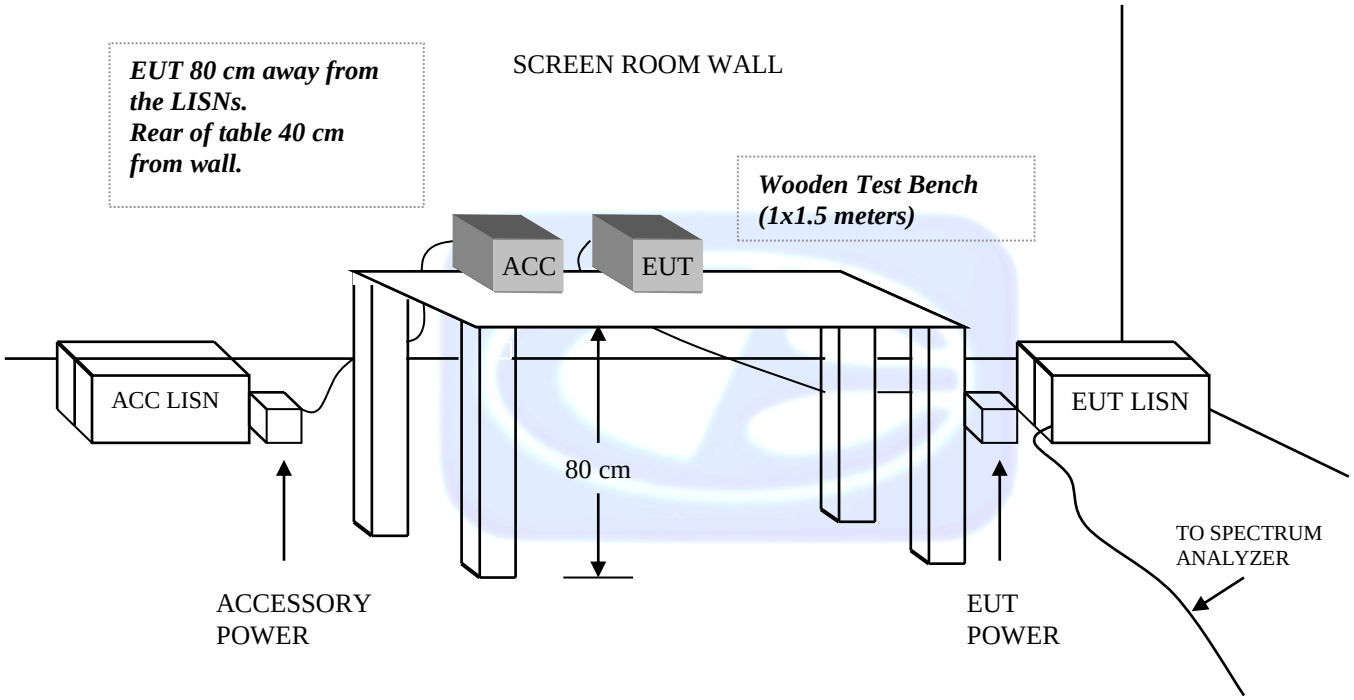
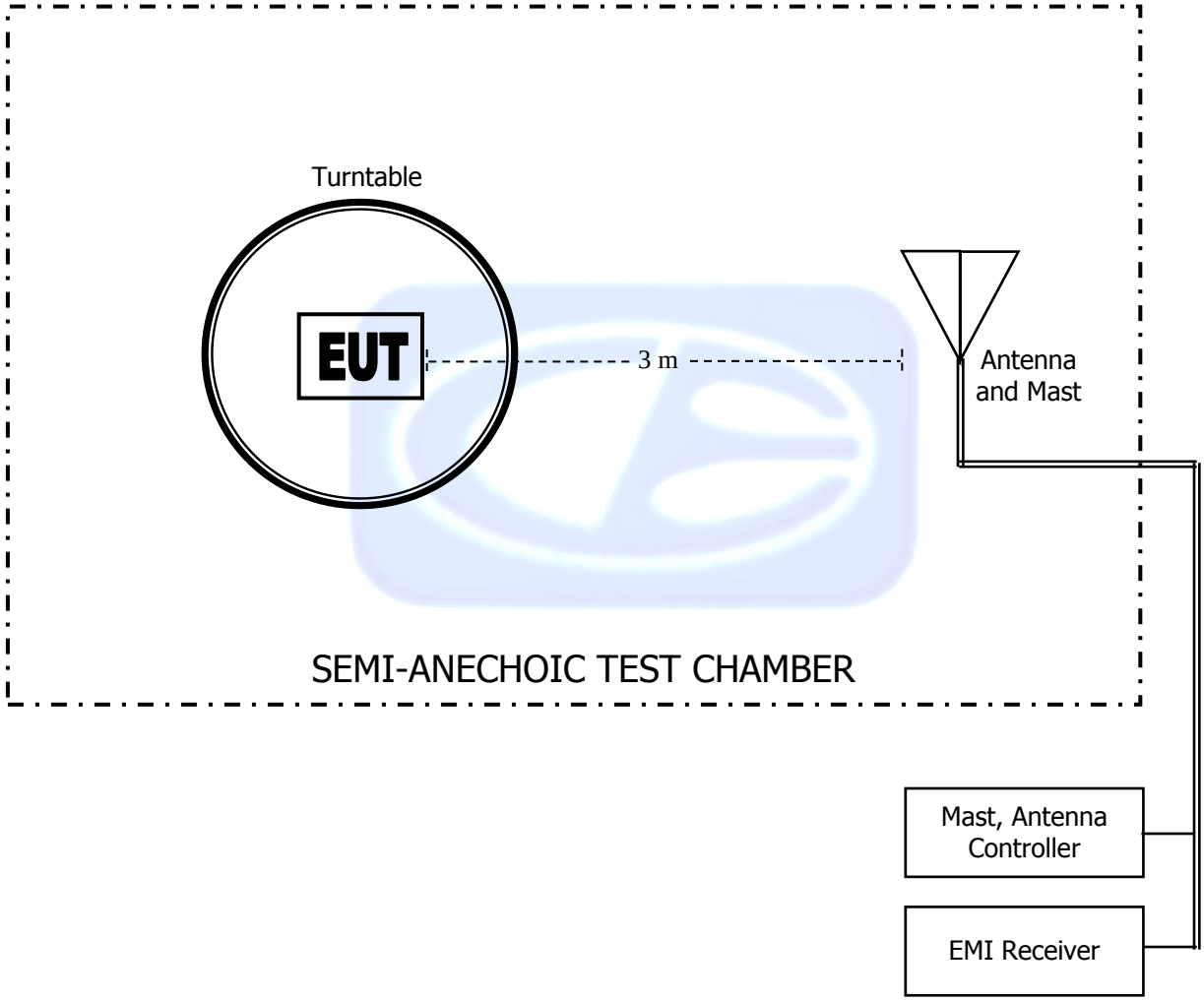


FIGURE 2: LAYOUT OF THE SEMI-ANECHOIC TEST CHAMBER



COM-POWER AL-130

LOOP ANTENNA

S/N: 17089

CALIBRATION DATE: FEBRUARY 6, 2015

FREQUENCY (MHz)	MAGNETIC (dB/m)	ELECTRIC (dB/m)
0.009	-33.18	18.32
0.01	-34.10	17.40
0.02	-38.65	12.85
0.03	-39.28	12.22
0.04	-40.09	11.41
0.05	-40.85	10.65
0.06	-40.88	10.62
0.07	-41.07	10.43
0.08	-41.04	10.46
0.09	-41.19	10.31
0.1	-41.20	10.30
0.2	-41.52	9.98
0.3	-41.53	9.97
0.4	-41.42	10.08
0.5	-41.53	9.97
0.6	-41.53	9.97
0.7	-41.43	10.07
0.8	-41.23	10.27
0.9	-41.13	10.37
1	-41.14	10.36
2	-40.80	10.70
3	-40.66	10.84
4	-40.61	10.89
5	-40.33	11.17
6	-40.53	10.97
7	-40.47	11.03
8	-40.48	11.02
9	-39.93	11.57
10	-39.81	11.69
15	-43.35	8.15
20	-39.16	12.34
25	-40.24	11.26
30	-43.18	8.32

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 AH-118

HORN ANTENNA

S/N: 071175

CALIBRATION DATE: FEBRUARY 26, 2014

FREQUENCY (GHz)	FACTOR (dB)	FREQUENCY (GHz)	FACTOR (dB)
1.0	24.23	10.0	38.43
1.5	25.84	10.5	40.19
2.0	28.14	11.0	40.49
2.5	29.51	11.5	41.39
3.0	31.20	12.0	42.02
3.5	32.17	12.5	43.30
4.0	31.40	13.0	42.77
4.5	31.86	13.5	40.18
5.0	34.82	14.0	42.59
5.5	34.38	14.5	41.74
6.0	36.31	15.0	41.84
6.5	34.81	15.5	38.48
7.0	37.48	16.0	39.52
7.5	36.98	16.5	37.85
8.0	36.66	17.0	41.33
8.5	38.47	17.5	44.96
9.0	37.22	18.0	48.50
9.5	37.86		

COM-POWER PA-118

PREAMPLIFIER

S/N: 551024

CALIBRATION DATE: MARCH 6, 2015

FREQUENCY (GHz)	FACTOR (dB)	FREQUENCY (GHz)	FACTOR (dB)
1.0	39.76	6.0	38.77
1.1	40.46	6.5	38.46
1.2	40.05	7.0	38.27
1.3	40.58	7.5	38.77
1.4	39.50	8.0	39.25
1.5	39.92	8.5	38.63
1.6	40.40	9.0	39.58
1.7	40.10	9.5	42.12
1.8	40.49	10.0	38.53
1.9	38.86	11.0	40.21
2.0	41.53	12.0	41.15
2.5	41.05	13.0	40.51
3.0	40.29	14.0	40.32
3.5	40.82	15.0	39.47
4.0	40.88	16.0	39.88
4.5	41.37	17.0	39.79
5.0	40.73	18.0	40.61
5.5	39.05		

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

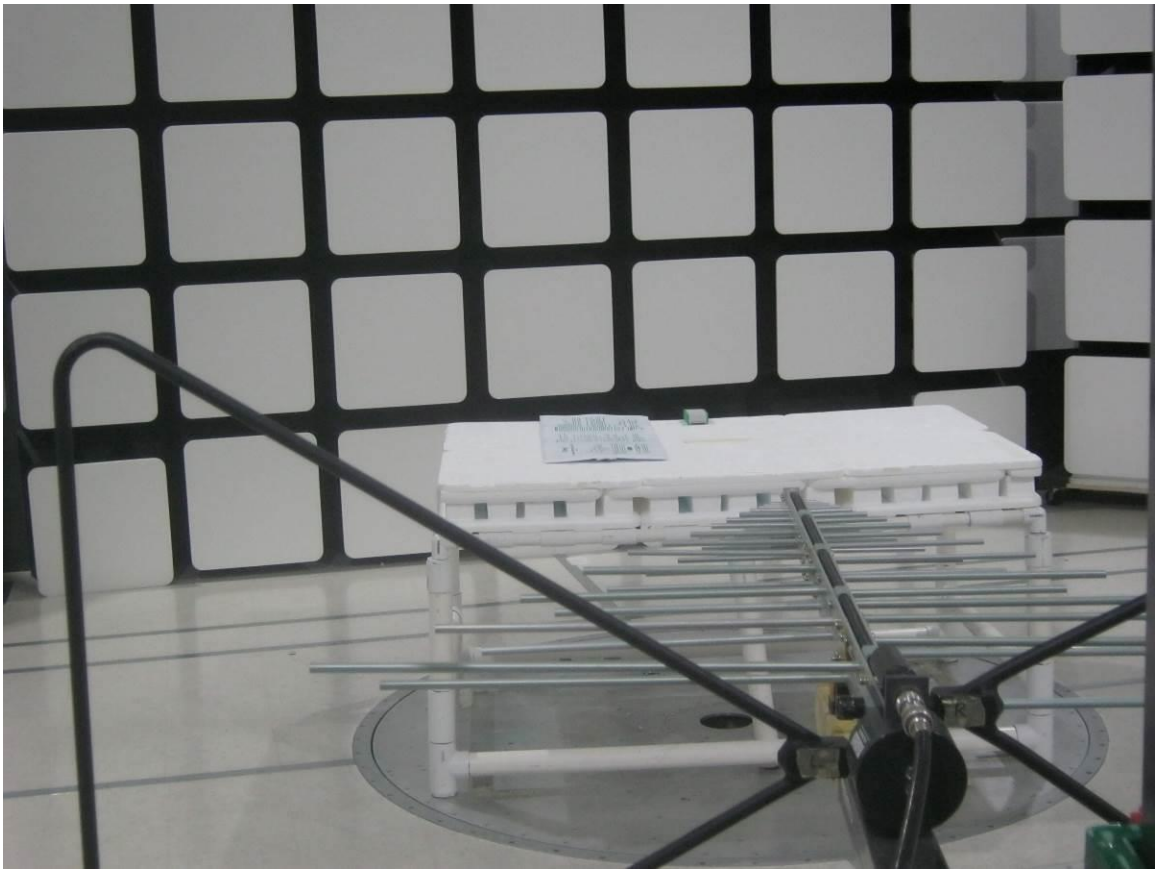
COM-POWER PA-840

MICROWAVE PREAMPLIFIER

S/N: 711013

CALIBRATION DATE: MAY 13, 2014

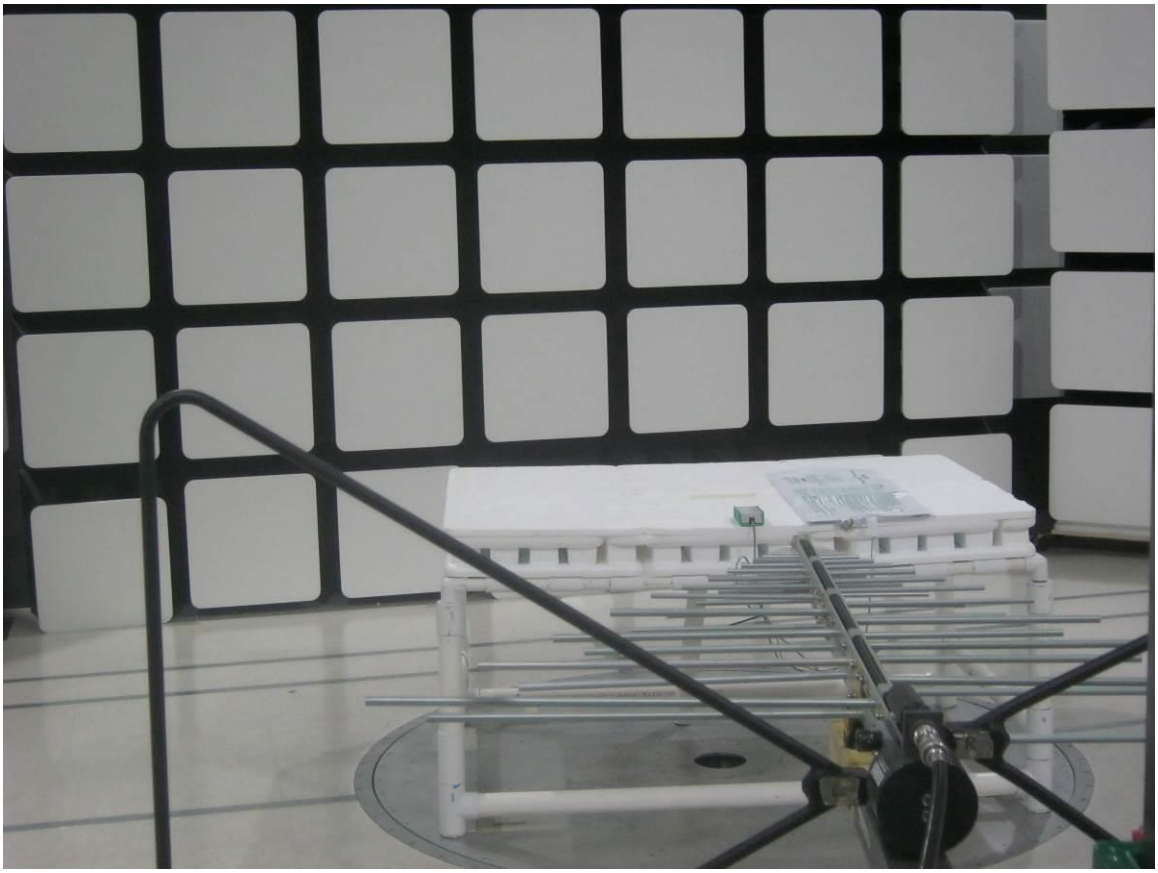
FREQUENCY (GHz)	FACTOR (dB)	FREQUENCY (GHz)	FACTOR (dB)
18.0	25.19	31.0	25.69
19.0	24.48	31.5	25.74
20.0	24.39	32.0	26.35
21.0	24.73	32.5	26.64
22.0	23.49	33.0	25.98
23.0	24.23	33.5	24.68
24.0	24.59	34.0	24.61
25.0	25.32	34.5	23.78
26.0	25.66	35.0	24.74
26.5	25.99	35.5	24.39
27.0	26.26	36.0	23.46
27.5	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

POSEY COMPANY
BLE MODULE
HOST MODEL: 8621
FCC SUBPART B and C – RADIATED EMISSIONS – BELOW 1 GHz

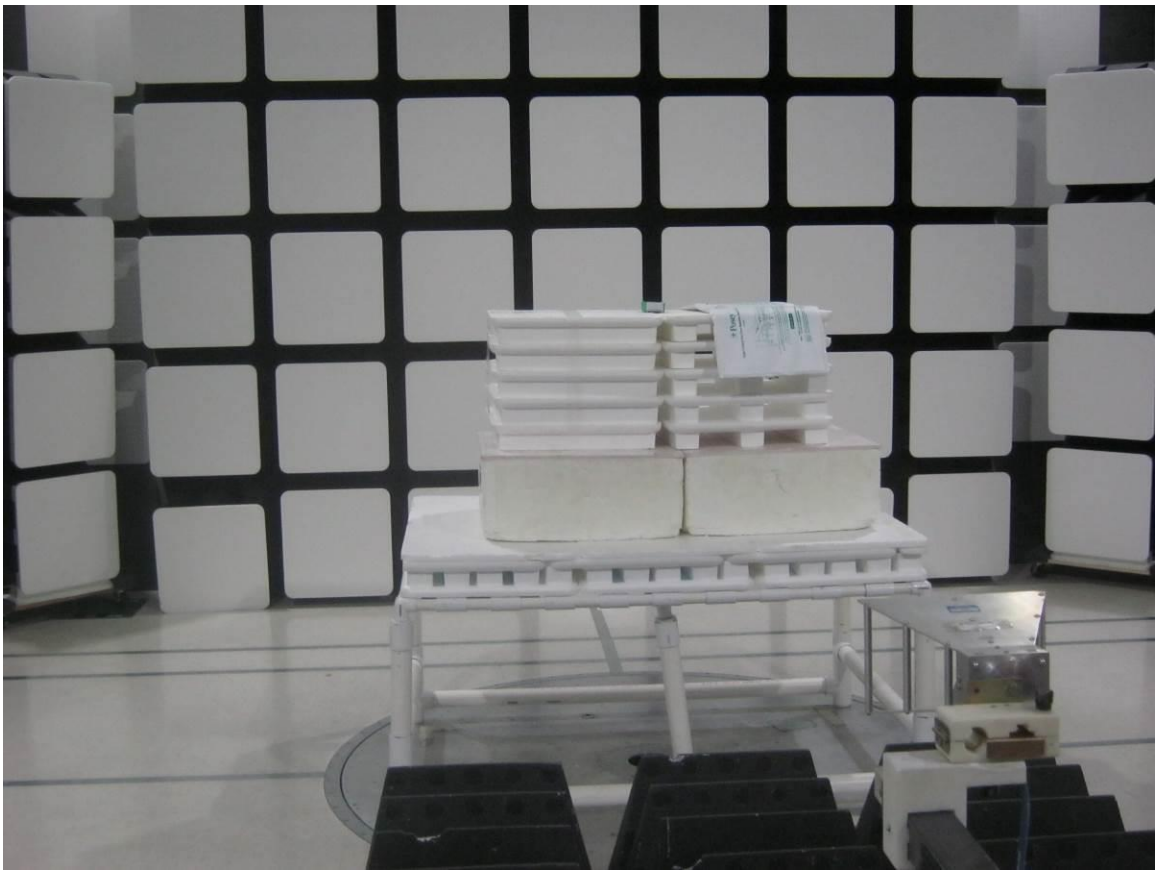
PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS



REAR VIEW

POSEY COMPANY
BLE MODULE
HOST MODEL: 8621
FCC SUBPART B and C – RADIATED EMISSIONS – BELOW 1 GHz

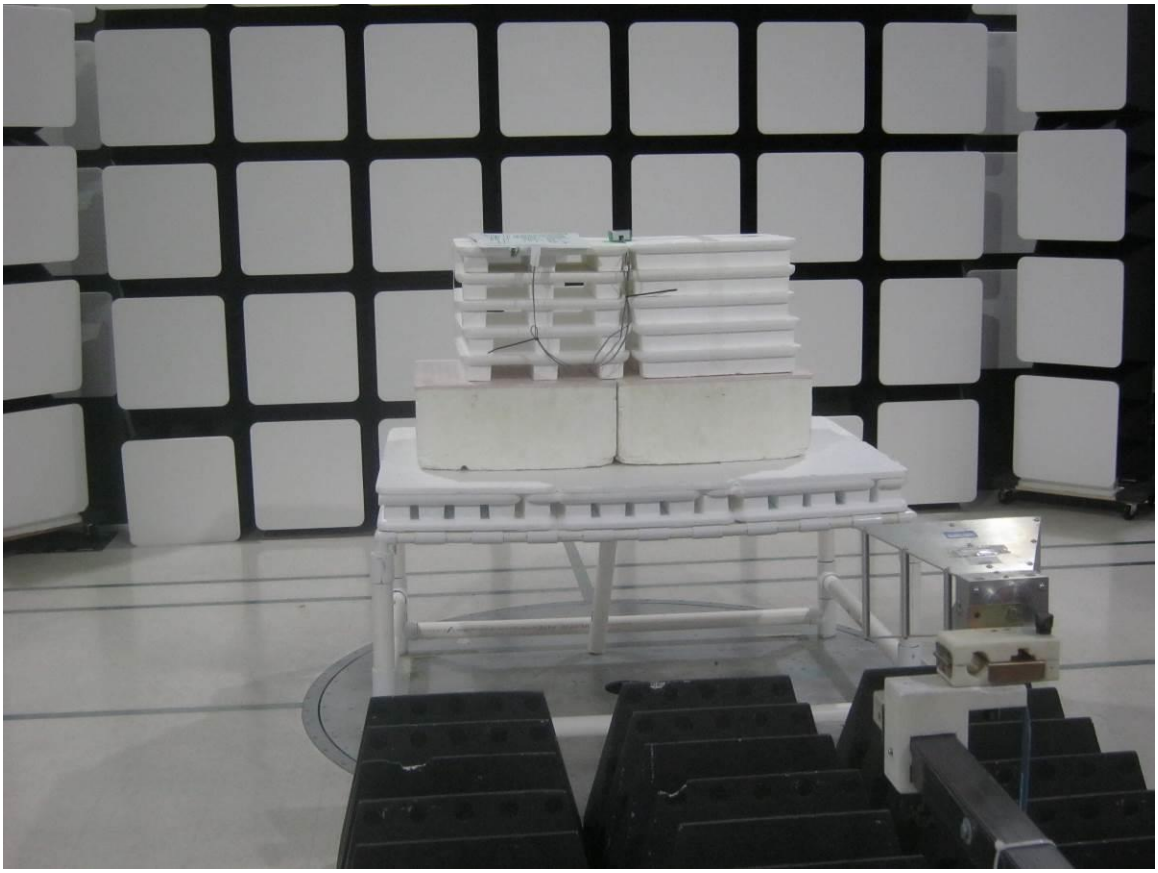
PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS



FRONT VIEW

POSEY COMPANY
BLE MODULE
HOST MODEL: 8621
FCC SUBPART B and C – RADIATED EMISSIONS – ABOVE 1 GHz

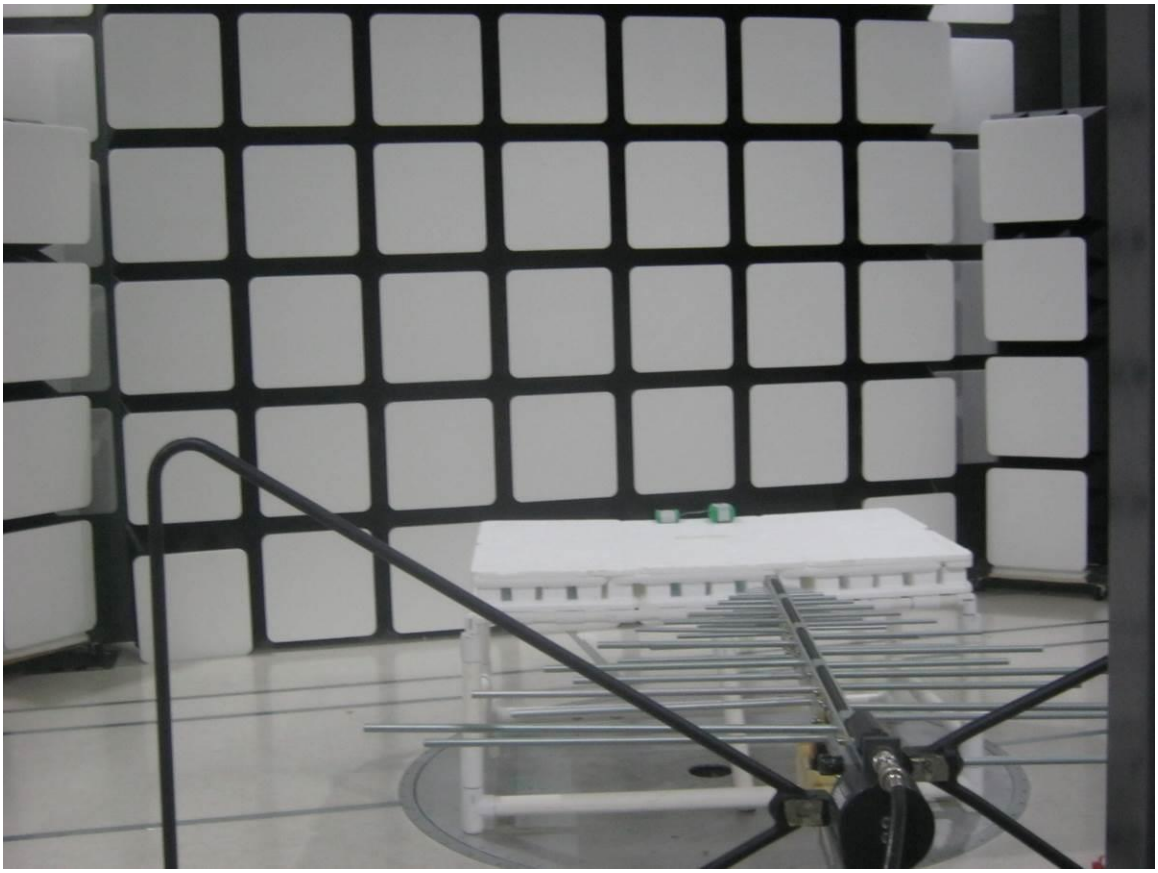
PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS



REAR VIEW

POSEY COMPANY
BLE MODULE
HOST MODEL: 8621
FCC SUBPART B and C – RADIATED EMISSIONS – ABOVE 1 GHz

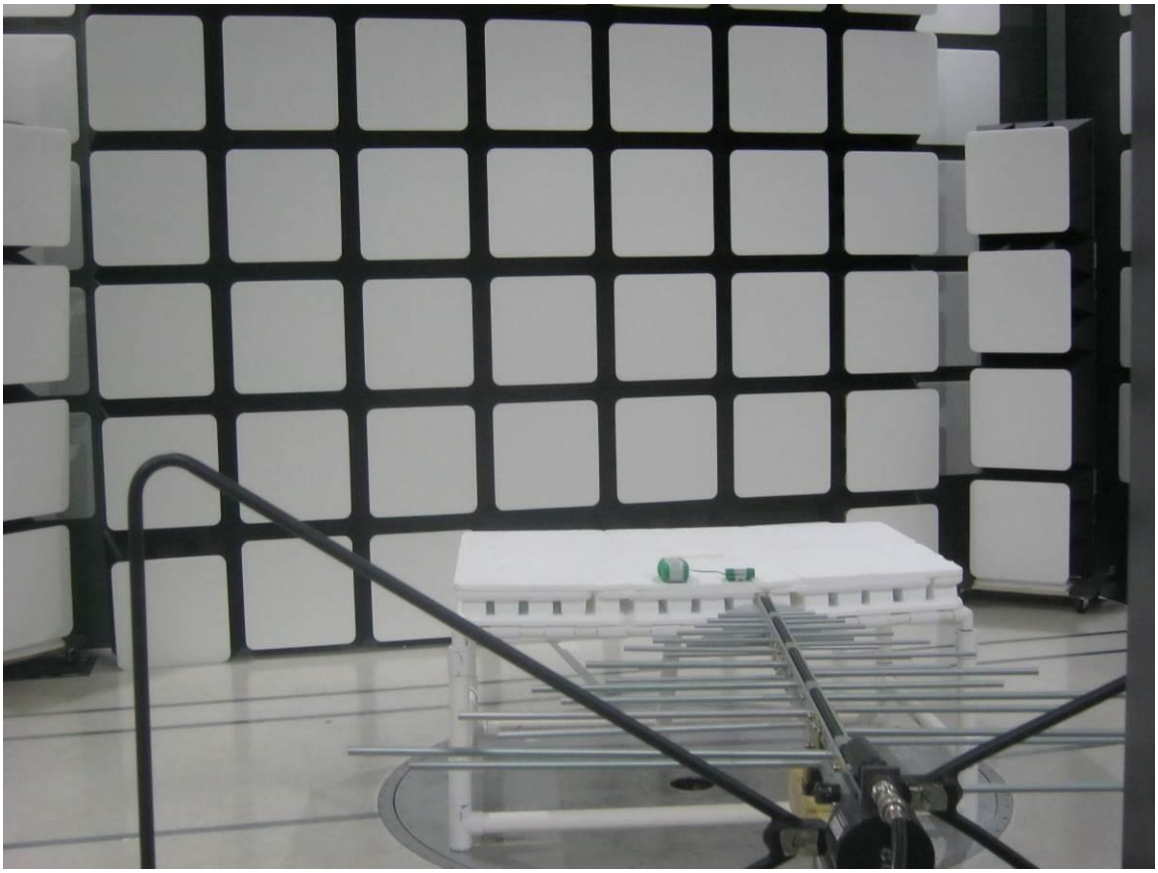
PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS



FRONT VIEW

POSEY COMPANY
BLE MODULE
HOST MODEL: 8630
FCC SUBPART B and C – RADIATED EMISSIONS – BELOW 1 GHz

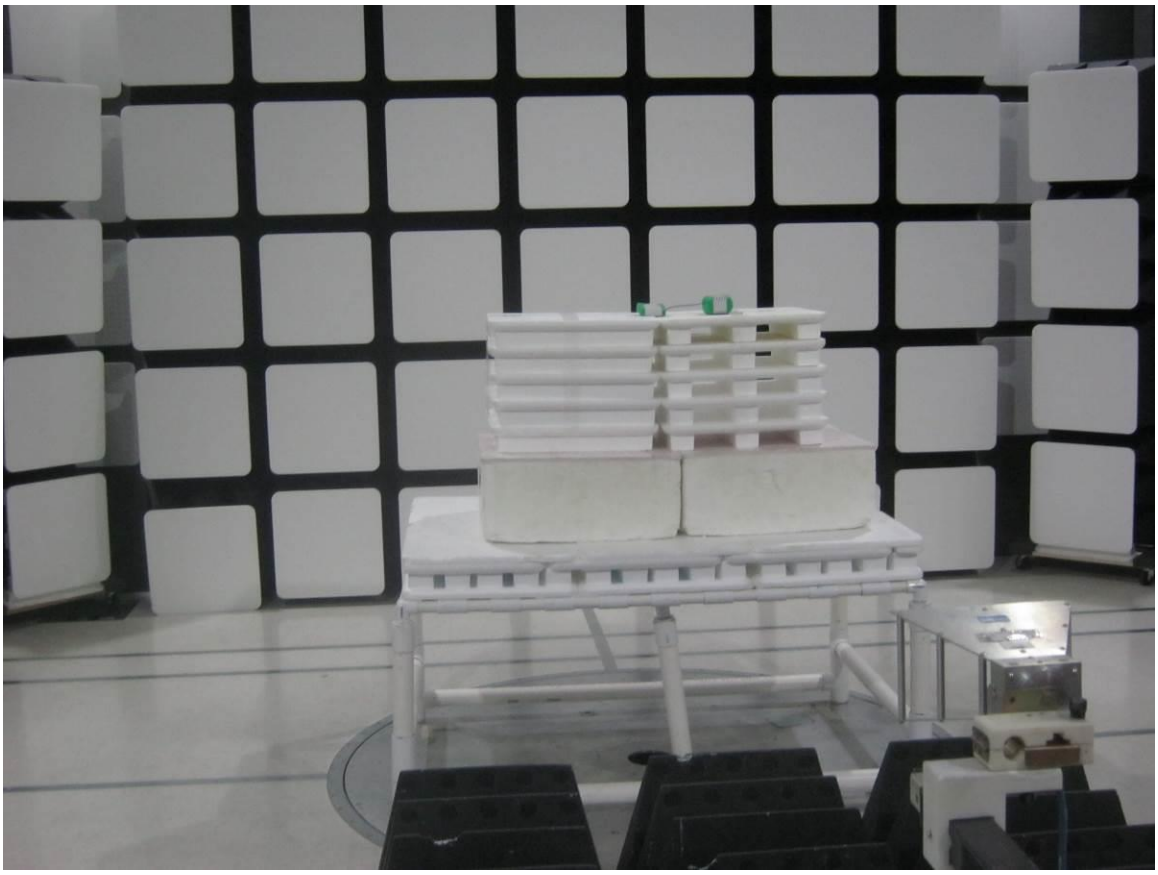
PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS



REAR VIEW

POSEY COMPANY
BLE MODULE
HOST MODEL: 8630
FCC SUBPART B and C – RADIATED EMISSIONS – BELOW 1 GHz

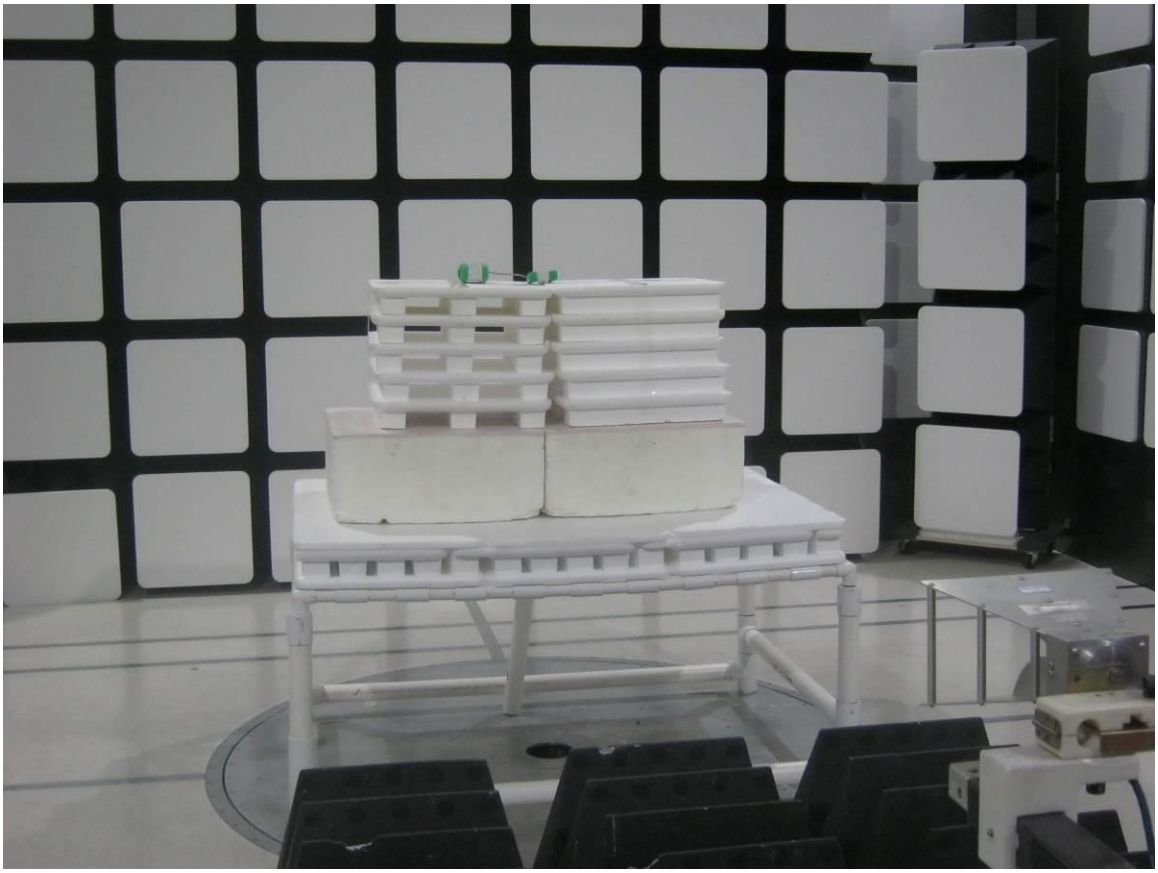
PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS



FRONT VIEW

POSEY COMPANY
BLE MODULE
HOST MODEL: 8630
FCC SUBPART B and C – RADIATED EMISSIONS – ABOVE 1 GHz

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS



REAR VIEW

POSEY COMPANY
BLE MODULE
HOST MODEL: 8630
FCC SUBPART B and C – RADIATED EMISSIONS – ABOVE 1 GHz

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

APPENDIX E

DATA SHEETS

RADIATED EMISSIONS DATA SHEETS HOST MODEL 8621

FCC 15.247
Posey Company
Wireless Transmitter
Model: 8621

Date: 12/30/2015
Lab: D
Tested By: Kyle Fujimoto

Low Channel
Transmit Mode - X-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4804	52.58	V	74	-21.42	Peak	305.00	171.58	
4804	37.32	V	54	-16.68	Avg	305.00	171.58	
7206	58.93	V	74	-15.07	Peak	240.25	150.74	
7206	43.83	V	54	-10.17	Avg	240.25	150.74	
9608								**No Emissions**
9608								**Detected**
12010								**No Emissions**
12010								**Detected**
14412								**No Emissions**
14412								**Detected**
16814								**No Emissions**
16814								**Detected**
19216								**No Emissions**
19216								**Detected**
21618								**No Emissions**
21618								**Detected**
24020								**No Emissions**
24020								**Detected**

FCC 15.247

Posey Company
Wireless Transmitter
Model: 8621

Date: 12/30/2015
Lab: D
Tested By: Kyle Fujimoto

Low Channel
Transmit Mode - Y-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4804	54.93	V	74	-19.07	Peak	329.75	190.74	
4804	41.75	V	54	-12.25	Avg	329.75	190.74	
7206	59.23	V	74	-14.77	Peak	137.25	225.19	
7206	45.00	V	54	-9.00	Avg	137.25	225.19	
9608								**No Emissions**
9608								**Detected**
12010								**No Emissions**
12010								**Detected**
14412								**No Emissions**
14412								**Detected**
16814								**No Emissions**
16814								**Detected**
19216								**No Emissions**
19216								**Detected**
21618								**No Emissions**
21618								**Detected**
24020								**No Emissions**
24020								**Detected**

FCC 15.247

Posey Company
Wireless Transmitter
Model: 8621

Date: 12/30/2015
Lab: D
Tested By: Kyle Fujimoto

Low Channel
Transmit Mode - Z-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4804	55.40	V	74	-18.60	Peak	173.75	172.47	
4804	43.75	V	54	-10.25	Avg	173.75	172.47	
7206	55.79	V	74	-18.21	Peak	124.75	134.44	
7206	43.92	V	54	-10.08	Avg	124.75	134.44	
9608								**No Emissions**
9608								**Detected**
12010								**No Emissions**
12010								**Detected**
14412								**No Emissions**
14412								**Detected**
16814								**No Emissions**
16814								**Detected**
19216								**No Emissions**
19216								**Detected**
21618								**No Emissions**
21618								**Detected**
24020								**No Emissions**
24020								**Detected**

FCC 15.247

Posey Company
Wireless Transmitter
Model: 8621

Date: 12/30/2015
Lab: D
Tested By: Kyle Fujimoto

Low Channel
Transmit Mode - X-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4804	53.99	H	74	-20.01	Peak	215.25	161.13	
4804	41.16	H	54	-12.84	Avg	215.25	161.13	
7206	57.23	H	74	-16.77	Peak	230.50	210.14	
7206	44.02	H	54	-9.98	Avg	230.50	210.14	
9608								**No Emissions**
9608								**Detected**
12010								**No Emissions**
12010								**Detected**
14412								**No Emissions**
14412								**Detected**
16814								**No Emissions**
16814								**Detected**
19216								**No Emissions**
19216								**Detected**
21618								**No Emissions**
21618								**Detected**
24020								**No Emissions**
24020								**Detected**

FCC 15.247

Posey Company
Wireless Transmitter
Model: 8621

Date: 12/30/2015
Lab: D
Tested By: Kyle Fujimoto

Low Channel
Transmit Mode - Y-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4804	53.75	H	74	-20.25	Peak	138.00	152.05	
4804	40.33	H	54	-13.67	Avg	138.00	152.05	
7206	58.94	H	74	-15.06	Peak	238.25	163.94	
7206	44.10	H	54	-9.90	Avg	238.25	163.94	
9608								**No Emissions**
9608								**Detected**
12010								**No Emissions**
12010								**Detected**
14412								**No Emissions**
14412								**Detected**
16814								**No Emissions**
16814								**Detected**
19216								**No Emissions**
19216								**Detected**
21618								**No Emissions**
21618								**Detected**
24020								**No Emissions**
24020								**Detected**

FCC 15.247

Posey Company
Wireless Transmitter
Model: 8621

Date: 12/30/2015
Lab: D
Tested By: Kyle Fujimoto

Low Channel
Transmit Mode - Z-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4804	55.36	H	74	-18.64	Peak	81.00	238.02	
4804	44.92	H	54	-9.08	Avg	81.00	238.02	
7206	61.01	H	74	-12.99	Peak	94.75	222.20	
7206	49.82	H	54	-4.18	Avg	94.75	222.20	
9608								**No Emissions**
9608								**Detected**
12010								**No Emissions**
12010								**Detected**
14412								**No Emissions**
14412								**Detected**
16814								**No Emissions**
16814								**Detected**
19216								**No Emissions**
19216								**Detected**
21618								**No Emissions**
21618								**Detected**
24020								**No Emissions**
24020								**Detected**

FCC 15.247

Posey Company
Wireless Transmitter
Model: 8621

Date: 12/30/2015
Lab: D
Tested By: Kyle Fujimoto

Middle Channel
Transmit Mode - X-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4880	51.58	V	74	-22.42	Peak	24.00	129.19	
4880	37.49	V	54	-16.51	Avg	24.00	129.19	
7320	56.35	V	74	-17.65	Peak	5.00	135.15	
7320	43.53	V	54	-10.47	Avg	5.00	135.15	
9760								**No Emissions**
9760								**Detected**
12200								**No Emissions**
12200								**Detected**
14640								**No Emissions**
14640								**Detected**
17080								**No Emissions**
17080								**Detected**
19520								**No Emissions**
19520								**Detected**
21960								**No Emissions**
21960								**Detected**
24400								**No Emissions**
24400								**Detected**

FCC 15.247

Posey Company
Wireless Transmitter
Model: 8621

Date: 12/30/2015
Lab: D
Tested By: Kyle Fujimoto

Middle Channel
Transmit Mode - Y-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4880	54.06	V	74	-19.94	Peak	30.25	141.25	
4880	41.71	V	54	-12.29	Avg	30.25	141.25	
7320	58.79	V	74	-15.21	Peak	134.00	114.50	
7320	44.58	V	54	-9.42	Avg	134.00	114.50	
9760								**No Emissions**
9760								**Detected**
12200								**No Emissions**
12200								**Detected**
14640								**No Emissions**
14640								**Detected**
17080								**No Emissions**
17080								**Detected**
19520								**No Emissions**
19520								**Detected**
21960								**No Emissions**
21960								**Detected**
24400								**No Emissions**
24400								**Detected**

FCC 15.247

Posey Company
Wireless Transmitter
Model: 8621

Date: 12/30/2015
Lab: D
Tested By: Kyle Fujimoto

Middle Channel
Transmit Mode - Z-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4880	53.29	V	74	-20.71	Peak	198.50	123.82	
4880	39.98	V	54	-14.02	Avg	198.50	123.82	
7320	56.52	V	74	-17.48	Peak	243.75	128.25	
7320	44.43	V	54	-9.57	Avg	243.75	128.25	
9760								**No Emissions**
9760								**Detected**
12200								**No Emissions**
12200								**Detected**
14640								**No Emissions**
14640								**Detected**
17080								**No Emissions**
17080								**Detected**
19520								**No Emissions**
19520								**Detected**
21960								**No Emissions**
21960								**Detected**
24400								**No Emissions**
24400								**Detected**

FCC 15.247

Posey Company
Wireless Transmitter
Model: 8621

Date: 12/30/2015
Lab: D
Tested By: Kyle Fujimoto

Middle Channel
Transmit Mode - X-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4880	53.93	H	74	-20.07	Peak	224.50	202.86	
4880	40.42	H	54	-13.58	Avg	224.50	202.86	
7320	58.12	H	74	-15.88	Peak	335.75	121.02	
7320	43.47	H	54	-10.53	Avg	335.75	121.02	
9760								**No Emissions**
9760								**Detected**
12200								**No Emissions**
12200								**Detected**
14640								**No Emissions**
14640								**Detected**
17080								**No Emissions**
17080								**Detected**
19520								**No Emissions**
19520								**Detected**
21960								**No Emissions**
21960								**Detected**
24400								**No Emissions**
24400								**Detected**

FCC 15.247

Posey Company
Wireless Transmitter
Model: 8621

Date: 12/30/2015
Lab: D
Tested By: Kyle Fujimoto

Middle Channel
Transmit Mode - Y-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4880	52.01	H	74	-21.99	Peak	37.00	151.82	
4880	39.25	H	54	-14.75	Avg	37.00	151.82	
7320	58.36	H	74	-15.64	Peak	130.25	165.67	
7320	43.99	H	54	-10.01	Avg	130.25	165.67	
9760								**No Emissions**
9760								**Detected**
12200								**No Emissions**
12200								**Detected**
14640								**No Emissions**
14640								**Detected**
17080								**No Emissions**
17080								**Detected**
19520								**No Emissions**
19520								**Detected**
21960								**No Emissions**
21960								**Detected**
24400								**No Emissions**
24400								**Detected**

FCC 15.247

Posey Company
Wireless Transmitter
Model: 8621

Date: 12/30/2015
Lab: D
Tested By: Kyle Fujimoto

Middle Channel
Transmit Mode - Z-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4880	55.00	H	74	-19.00	Peak	148.25	159.64	
4880	42.27	H	54	-11.73	Avg	148.25	159.64	
7320	56.96	H	74	-17.04	Peak	202.25	176.00	
7320	43.74	H	54	-10.26	Avg	202.25	176.00	
9760								**No Emissions**
9760								**Detected**
12200								**No Emissions**
12200								**Detected**
14640								**No Emissions**
14640								**Detected**
17080								**No Emissions**
17080								**Detected**
19520								**No Emissions**
19520								**Detected**
21960								**No Emissions**
21960								**Detected**
24400								**No Emissions**
24400								**Detected**

FCC 15.247

Posey Company
Wireless Transmitter
Model: 8621

Date: 12/30/2015
Lab: D
Tested By: Kyle Fujimoto

High Channel
Transmit Mode - X-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4960	49.89	V	74	-24.11	Peak	31.00	184.35	
4960	38.53	V	54	-15.47	Avg	31.00	184.35	
7440	57.88	V	74	-16.12	Peak	151.25	148.95	
7440	43.06	V	54	-10.94	Avg	151.25	148.95	
9920								**No Emissions**
9920								**Detected**
12400								**No Emissions**
12400								**Detected**
14880								**No Emissions**
14880								**Detected**
17360								**No Emissions**
17360								**Detected**
19840								**No Emissions**
19840								**Detected**
22320								**No Emissions**
22320								**Detected**
24800								**No Emissions**
24800								**Detected**

FCC 15.247

Posey Company
Wireless Transmitter
Model: 8621

Date: 12/30/2015
Lab: D
Tested By: Kyle Fujimoto

High Channel
Transmit Mode - Y-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4960	52.98	V	74	-21.02	Peak	235.75	134.74	
4960	40.73	V	54	-13.27	Avg	235.75	134.74	
7440	58.84	V	74	-15.16	Peak	358.50	184.23	
7440	46.26	V	54	-7.74	Avg	358.50	184.23	
9920								**No Emissions**
9920								**Detected**
12400								**No Emissions**
12400								**Detected**
14880								**No Emissions**
14880								**Detected**
17360								**No Emissions**
17360								**Detected**
19840								**No Emissions**
19840								**Detected**
22320								**No Emissions**
22320								**Detected**
24800								**No Emissions**
24800								**Detected**

FCC 15.247

Posey Company
Wireless Transmitter
Model: 8621

Date: 12/30/2015
Lab: D
Tested By: Kyle Fujimoto

High Channel
Transmit Mode - Z-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4960	54.93	V	74	-19.07	Peak	337.25	194.08	
4960	38.43	V	54	-15.57	Avg	337.25	194.08	
7440	54.82	V	74	-19.18	Peak	97.25	205.25	
7440	43.47	V	54	-10.53	Avg	97.25	205.25	
9920								**No Emissions**
9920								**Detected**
12400								**No Emissions**
12400								**Detected**
14880								**No Emissions**
14880								**Detected**
17360								**No Emissions**
17360								**Detected**
19840								**No Emissions**
19840								**Detected**
22320								**No Emissions**
22320								**Detected**
24800								**No Emissions**
24800								**Detected**

FCC 15.247

Posey Company
Wireless Transmitter
Model: 8621

Date: 12/30/2015
Lab: D
Tested By: Kyle Fujimoto

High Channel
Transmit Mode - X-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4960	53.23	H	74	-20.77	Peak	10.50	155.46	
4960	39.51	H	54	-14.49	Avg	10.50	155.46	
7440	59.31	H	74	-14.69	Peak	240.75	116.00	
7440	46.93	H	54	-7.07	Avg	240.75	116.00	
9920								**No Emissions**
9920								**Detected**
12400								**No Emissions**
12400								**Detected**
14880								**No Emissions**
14880								**Detected**
17360								**No Emissions**
17360								**Detected**
19840								**No Emissions**
19840								**Detected**
22320								**No Emissions**
22320								**Detected**
24800								**No Emissions**
24800								**Detected**

FCC 15.247

Posey Company
Wireless Transmitter
Model: 8621

Date: 12/30/2015
Lab: D
Tested By: Kyle Fujimoto

High Channel
Transmit Mode - Y-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4960	50.70	H	74	-23.30	Peak	140.75	118.74	
4960	38.03	H	54	-15.97	Avg	140.75	118.74	
7440	55.44	H	74	-18.56	Peak	313.25	112.89	
7440	43.16	H	54	-10.84	Avg	313.25	112.89	
9920								**No Emissions**
9920								**Detected**
12400								**No Emissions**
12400								**Detected**
14880								**No Emissions**
14880								**Detected**
17360								**No Emissions**
17360								**Detected**
19840								**No Emissions**
19840								**Detected**
22320								**No Emissions**
22320								**Detected**
24800								**No Emissions**
24800								**Detected**

FCC 15.247

Posey Company
Wireless Transmitter
Model: 8621

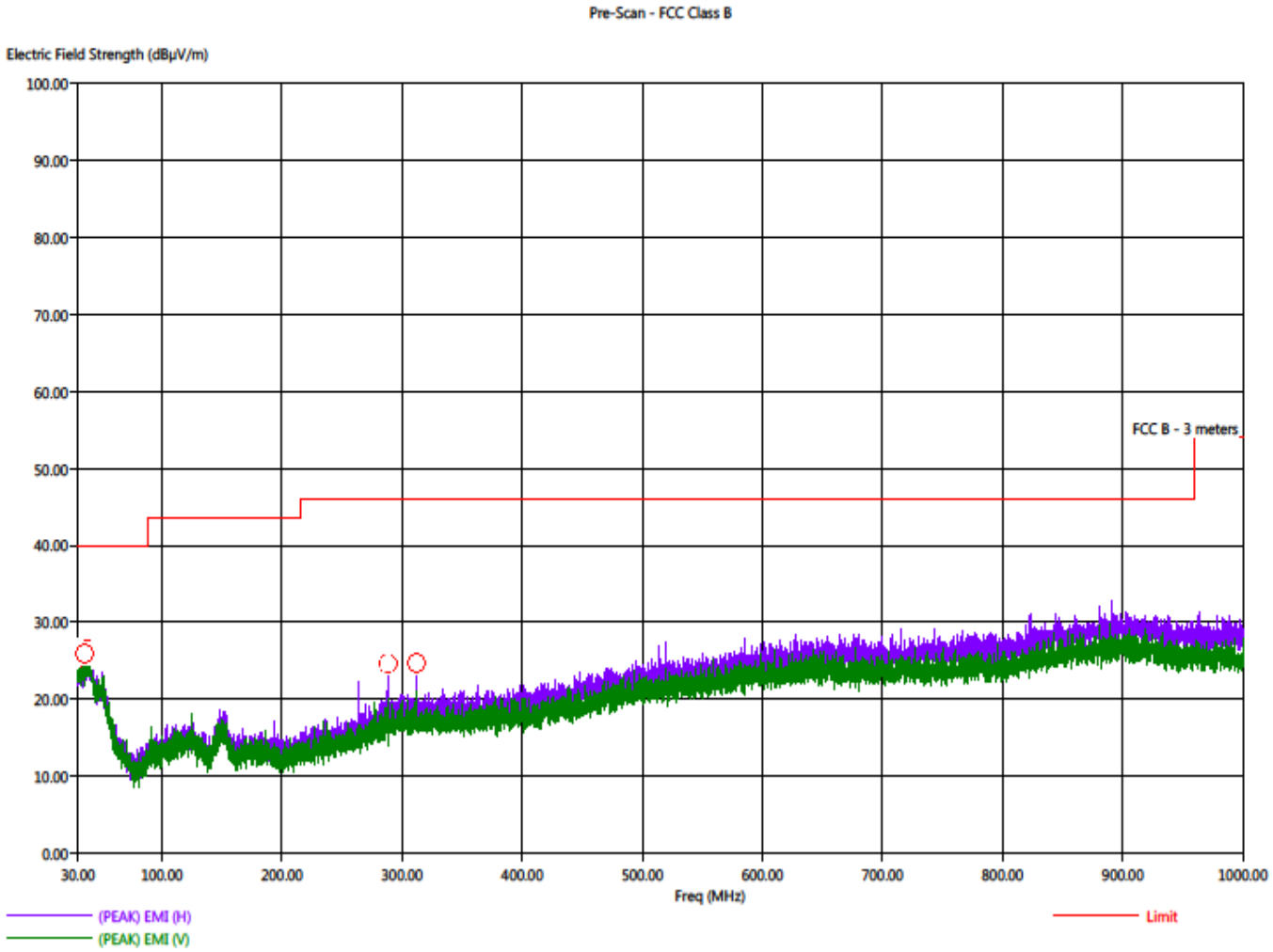
Date: 12/30/2015
Lab: D
Tested By: Kyle Fujimoto

High Channel
Transmit Mode - Z-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4960	54.06	H	74	-19.94	Peak	271.50	165.13	
4960	42.02	H	54	-11.98	Avg	271.50	165.13	
7440	58.27	H	74	-15.73	Peak	2.50	197.07	
7440	43.05	H	54	-10.95	Avg	2.50	197.07	
9920								**No Emissions**
9920								**Detected**
12400								**No Emissions**
12400								**Detected**
14880								**No Emissions**
14880								**Detected**
17360								**No Emissions**
17360								**Detected**
19840								**No Emissions**
19840								**Detected**
22320								**No Emissions**
22320								**Detected**
24800								**No Emissions**
24800								**Detected**

Title: Pre-Scan - FCC Class B
File: Pre-Scan - 8621 Wireless Tx - X-Axis - FCC Class B.set
Operator: Kyle Fujimoto
EUT Type: 8621 Wireless Transmitter
EUT Condition: The EUT is continuously Frequency Hopping - X-Axis
Comments: Customer: Posey Company
Model: 8621

1/5/2016 7:55:45 AM
Sequence: Preliminary Scan



Worst case axis
No additional spurious emissions were found between 10 kHz - 30 MHz and 1 GHz – 25 GHz

Title: Radiated Final - 30-1000 MHz - FCC Class B
File: Final Scan - 8621 Wireless Tx - X-Axis - FCC Class B.set
Operator: Kyle Fujimoto
EUT Type: 8621 Wireless Transmitter
EUT Condition: The EUT is continuously Frequency Hopping - X-Axis Worst Case
Comments: Customer: Posey Company
Model: 8621

1/7/2016 8:43:42 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)	Cable (dB)	Transducer (dB)	Twr Ht (cm)	Tttbl Agl (deg)
34.90	H	26.21	22.11	-13.79	-17.89	40.00	0.39	24.30	351.88	24.00
35.40	V	26.40	22.08	-13.60	-17.92	40.00	0.40	24.43	400.00	242.50
37.60	V	27.45	22.66	-12.55	-17.34	40.00	0.41	24.87	384.53	193.75
39.20	H	26.90	23.32	-13.10	-16.68	40.00	0.42	25.21	159.88	306.25
288.00	H	20.95	17.17	-25.05	-28.83	46.00	1.30	17.55	240.29	75.25
312.00	H	29.17	27.09	-16.83	-18.91	46.00	1.36	18.12	127.40	59.00

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FCC 15.247
Poset Company
Wireless Transmitter
Model: 8621

Date: 12/30/2015
Lab: D
Tested By: Kyle Fujimoto

Band Edges
Low Channel - See Comments for Worst Case Axis

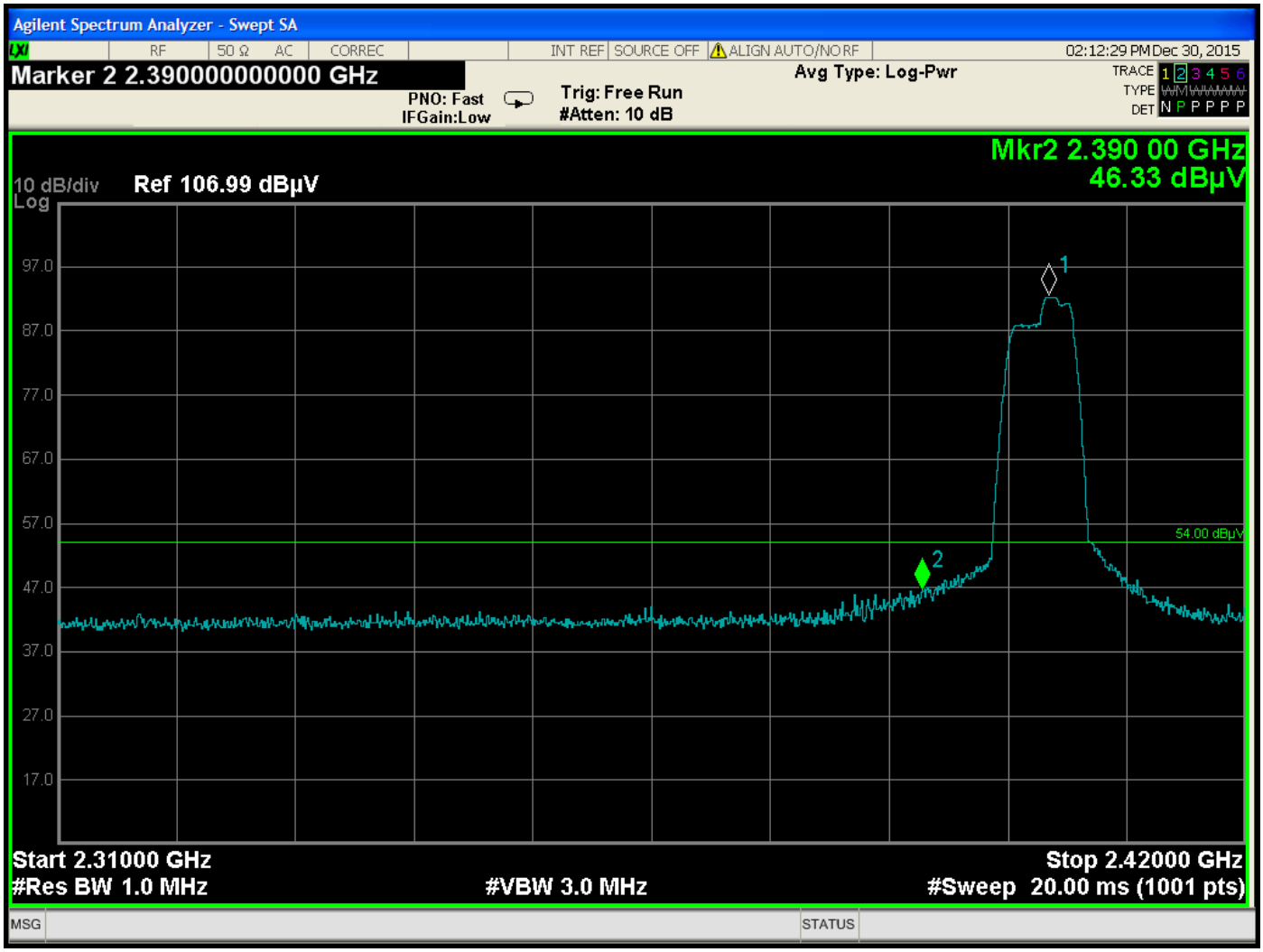
Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2402.00	92.27	H	--	--	Peak	325.75	147.76	Fundamental
								of Low Channel
2390.00	46.33	H	54.00	-7.67	Peak	325.75	147.76	**Band Edge of Low Channel**
								X-Axis Worst Case
2402.00	90.71	V	--	--	Peak	328.75	168.35	Fundamental of
								Low Channel
2390.00	44.90	V	54.00	-9.10	Peak	328.75	168.35	**Band Edge of Low Channel**
								Z-Axis Worst Case

FCC 15.247
Poset Company
Wireless Transmitter
Model: 8621

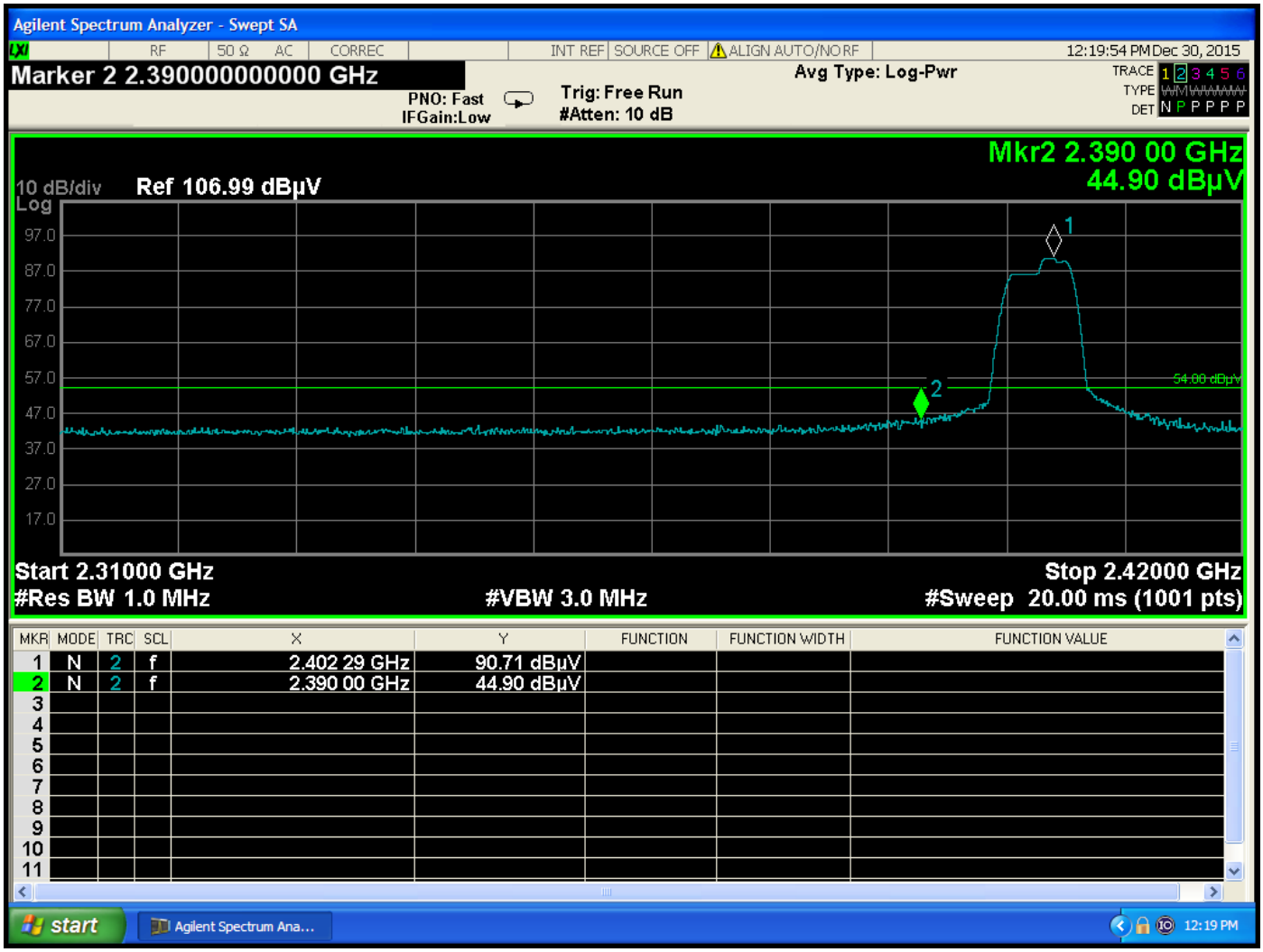
Date: 12/30/2015
Lab: D
Tested By: Kyle Fujimoto

Band Edges
High Channel - See Comments for Worst Case Axis

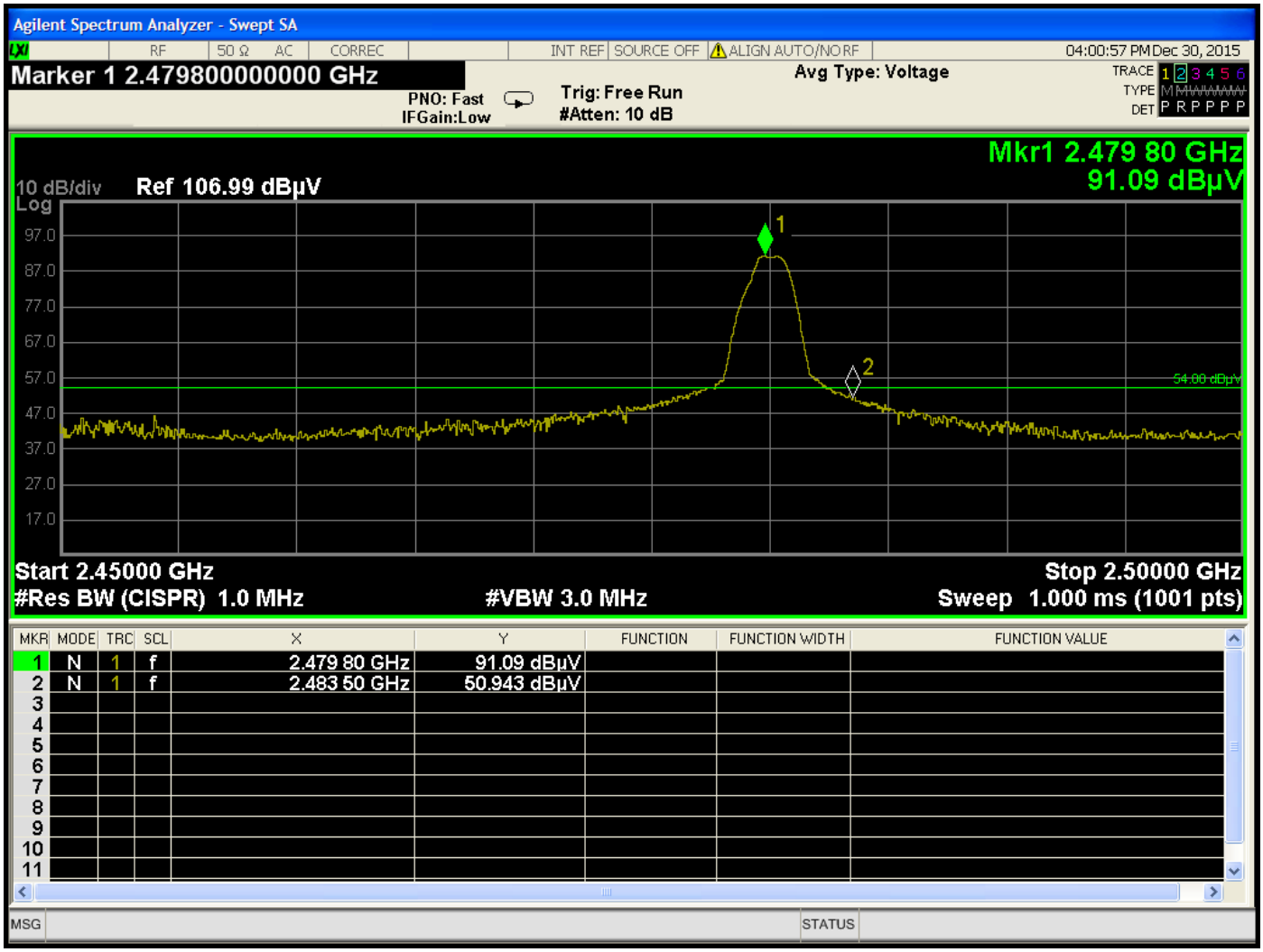
Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2480.00	91.09	H	--	--	Peak	346.50	139.64	Fundamental
								of High Channel
2483.50	50.94	H	54.00	-3.06	Peak	346.50	139.64	**Band Edge of High Channel**
								X-Axis Worst Case
2480.00	89.89	V	--	--	Peak	343.00	163.40	Fundamental of
								High Channel
2483.50	49.98	V	54.00	-4.02	Peak	343.00	163.40	**Band Edge of High Channel**
								Z-Axis Worst Case



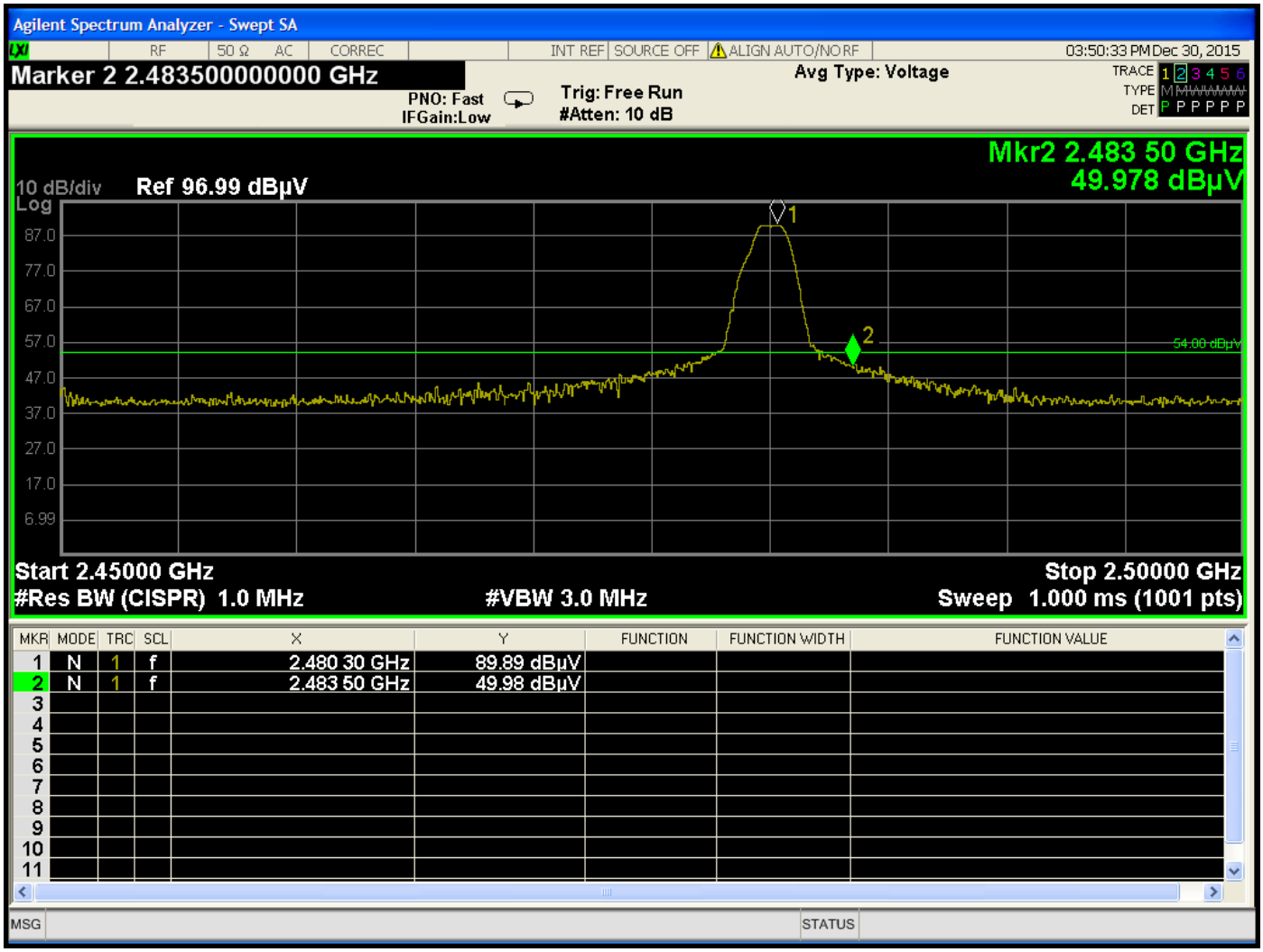
Low Band Edge – Horizontal – X-axis



Low Band Edge – Vertical – Z-axis



High Band Edge – Horizontal – X-axis



High Band Edge – Vertical – Z-axis

RADIATED EMISSIONS DATA SHEETS HOST MODEL 8630

FCC 15.247
Posey Company
Wireless Receiver
Model: 8630

Date: 01/07/2016
Lab: D
Tested By: Kyle Fujimoto

Low Channel
Transmit Mode - X-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4804	53.71	V	74	-20.28	Peak	158.25	143.22	
4804	40.48	V	54	-13.51	Avg	158.25	143.22	
7206	59.65	V	74	-14.35	Peak	24.25	155.10	
7206	46.51	V	54	-7.49	Avg	24.25	155.10	
9608								**No Emissions**
9608								**Detected**
12010								**No Emissions**
12010								**Detected**
14412								**No Emissions**
14412								**Detected**
16814								**No Emissions**
16814								**Detected**
19216								**No Emissions**
19216								**Detected**
21618								**No Emissions**
21618								**Detected**
24020								**No Emissions**
24020								**Detected**

FCC 15.247
Posey Company
Wireless Receiver
Model: 8630

Date: 01/07/2016
Lab: D
Tested By: Kyle Fujimoto

Low Channel
Transmit Mode - Y-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4804	53.43	V	74	-20.57	Peak	92.25	128.95	
4804	40.04	V	54	-13.96	Avg	92.25	128.95	
7206	60.04	V	74	-13.96	Peak	164.75	171.76	
7206	48.88	V	54	-5.12	Avg	164.75	171.76	
9608								**No Emissions**
9608								**Detected**
12010								**No Emissions**
12010								**Detected**
14412								**No Emissions**
14412								**Detected**
16814								**No Emissions**
16814								**Detected**
19216								**No Emissions**
19216								**Detected**
21618								**No Emissions**
21618								**Detected**
24020								**No Emissions**
24020								**Detected**

FCC 15.247
Posey Company
Wireless Receiver
Model: 8630

Date: 01/07/2016
Lab: D
Tested By: Kyle Fujimoto

Low Channel
Transmit Mode - Z-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4804	51.76	V	74	-22.24	Peak	37.75	187.46	
4804	37.95	V	54	-16.05	Avg	37.75	187.46	
7206	58.23	V	74	-15.77	Peak	317.75	109.55	
7206	44.27	V	54	-9.73	Avg	317.75	109.55	
9608								**No Emissions**
9608								**Detected**
12010								**No Emissions**
12010								**Detected**
14412								**No Emissions**
14412								**Detected**
16814								**No Emissions**
16814								**Detected**
19216								**No Emissions**
19216								**Detected**
21618								**No Emissions**
21618								**Detected**
24020								**No Emissions**
24020								**Detected**

FCC 15.247
Posey Company
Wireless Receiver
Model: 8630

Date: 01/07/2016
Lab: D
Tested By: Kyle Fujimoto

Low Channel
Transmit Mode - X-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4804	53.42	H	74	-20.57	Peak	88.75	175.80	
4804	42.45	H	54	-11.55	Avg	88.75	175.88	
7206	58.86	H	74	-15.14	Peak	97.00	127.82	
7206	45.81	H	54	-8.19	Avg	97.00	127.82	
9608								**No Emissions**
9608								**Detected**
12010								**No Emissions**
12010								**Detected**
14412								**No Emissions**
14412								**Detected**
16814								**No Emissions**
16814								**Detected**
19216								**No Emissions**
19216								**Detected**
21618								**No Emissions**
21618								**Detected**
24020								**No Emissions**
24020								**Detected**

FCC 15.247
Posey Company
Wireless Receiver
Model: 8630

Date: 01/07/2016
Lab: D
Tested By: Kyle Fujimoto

Low Channel
Transmit Mode - Y-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4804	53.72	H	74	-20.28	Peak	126.00	128.29	
4804	41.89	H	54	-12.11	Avg	126.00	128.29	
7206	59.64	H	74	-14.36	Peak	33.00	204.89	
7206	47.45	H	54	-6.55	Avg	33.00	204.89	
9608								**No Emissions**
9608								**Detected**
12010								**No Emissions**
12010								**Detected**
14412								**No Emissions**
14412								**Detected**
16814								**No Emissions**
16814								**Detected**
19216								**No Emissions**
19216								**Detected**
21618								**No Emissions**
21618								**Detected**
24020								**No Emissions**
24020								**Detected**

FCC 15.247
Posey Company
Wireless Receiver
Model: 8630

Date: 01/07/2016
Lab: D
Tested By: Kyle Fujimoto

Low Channel
Transmit Mode - Z-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4804	55.05	H	74	-18.95	Peak	76.75	152.11	
4804	44.40	H	54	-9.60	Avg	76.75	152.11	
7206	59.66	H	74	-14.34	Peak	184.50	170.02	
7206	46.32	H	54	-7.68	Avg	184.50	170.02	
9608								**No Emissions**
9608								**Detected**
12010								**No Emissions**
12010								**Detected**
14412								**No Emissions**
14412								**Detected**
16814								**No Emissions**
16814								**Detected**
19216								**No Emissions**
19216								**Detected**
21618								**No Emissions**
21618								**Detected**
24020								**No Emissions**
24020								**Detected**

FCC 15.247
Posey Company
Wireless Receiver
Model: 8630

Date: 01/07/2016
Lab: D
Tested By: Kyle Fujimoto

Middle Channel
Transmit Mode - X-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4880	52.56	V	74	-21.44	Peak	252.25	206.38	
4880	37.59	V	54	-16.41	Avg	252.25	206.38	
7320	57.91	V	74	-16.09	Peak	321.75	219.46	
7320	43.44	V	54	-10.56	Avg	321.75	219.46	
9760								**No Emissions**
9760								**Detected**
12200								**No Emissions**
12200								**Detected**
14640								**No Emissions**
14640								**Detected**
17080								**No Emissions**
17080								**Detected**
19520								**No Emissions**
19520								**Detected**
21960								**No Emissions**
21960								**Detected**
24400								**No Emissions**
24400								**Detected**

FCC 15.247
Posey Company
Wireless Receiver
Model: 8630

Date: 01/07/2016
Lab: D
Tested By: Kyle Fujimoto

Middle Channel
Transmit Mode - Y-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4880	57.05	H	74	-16.95	Peak	257.00	133.19	
4880	47.17	H	54	-6.83	Avg	257.00	133.19	
7320	59.22	H	74	-14.78	Peak	227.25	124.83	
7320	46.34	H	54	-7.66	Avg	227.25	124.83	
9760								**No Emissions**
9760								**Detected**
12200								**No Emissions**
12200								**Detected**
14640								**No Emissions**
14640								**Detected**
17080								**No Emissions**
17080								**Detected**
19520								**No Emissions**
19520								**Detected**
21960								**No Emissions**
21960								**Detected**
24400								**No Emissions**
24400								**Detected**

FCC 15.247
Posey Company
Wireless Receiver
Model: 8630

Date: 01/07/2016
Lab: D
Tested By: Kyle Fujimoto

Middle Channel
Transmit Mode - Z-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4880	52.15	V	74	-21.85	Peak	276.00	177.19	
4880	37.71	V	54	-16.29	Avg	276.00	177.19	
7320	57.86	V	74	-16.14	Peak	204.75	114.20	
7320	43.40	V	54	-10.60	Avg	204.75	114.20	
9760								**No Emissions**
9760								**Detected**
12200								**No Emissions**
12200								**Detected**
14640								**No Emissions**
14640								**Detected**
17080								**No Emissions**
17080								**Detected**
19520								**No Emissions**
19520								**Detected**
21960								**No Emissions**
21960								**Detected**
24400								**No Emissions**
24400								**Detected**

FCC 15.247
Posey Company
Wireless Receiver
Model: 8630

Date: 01/07/2016
Lab: D
Tested By: Kyle Fujimoto

Middle Channel
Transmit Mode - X-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4880	54.44	H	74	-19.56	Peak	75.50	167.76	
4880	43.25	H	54	-10.75	Avg	75.50	167.76	
7320	55.90	H	74	-18.10	Peak	4.50	220.05	
7320	43.90	H	54	-10.10	Avg	4.50	220.05	
9760								**No Emissions**
9760								**Detected**
12200								**No Emissions**
12200								**Detected**
14640								**No Emissions**
14640								**Detected**
17080								**No Emissions**
17080								**Detected**
19520								**No Emissions**
19520								**Detected**
21960								**No Emissions**
21960								**Detected**
24400								**No Emissions**
24400								**Detected**

FCC 15.247
Posey Company
Wireless Receiver
Model: 8630

Date: 01/07/2016
Lab: D
Tested By: Kyle Fujimoto

Middle Channel
Transmit Mode - Y-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4880	53.16	V	74	-20.84	Peak	117.25	135.70	
4880	40.36	V	54	-13.65	Avg	117.25	135.70	
7320	59.89	V	74	-14.11	Peak	135.75	205.31	
7320	47.31	V	54	-6.69	Avg	135.75	205.31	
9760								**No Emissions**
9760								**Detected**
12200								**No Emissions**
12200								**Detected**
14640								**No Emissions**
14640								**Detected**
17080								**No Emissions**
17080								**Detected**
19520								**No Emissions**
19520								**Detected**
21960								**No Emissions**
21960								**Detected**
24400								**No Emissions**
24400								**Detected**

FCC 15.247
Posey Company
Wireless Receiver
Model: 8630

Date: 01/07/2016
Lab: D
Tested By: Kyle Fujimoto

Middle Channel
Transmit Mode - Z-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4880	56.77	H	74	-17.23	Peak	94.75	146.44	
4880	46.61	H	54	-7.39	Avg	94.75	146.44	
7320	59.37	H	74	-14.63	Peak	108.75	144.71	
7320	46.02	H	54	-7.98	Avg	108.75	144.71	
9760								**No Emissions**
9760								**Detected**
12200								**No Emissions**
12200								**Detected**
14640								**No Emissions**
14640								**Detected**
17080								**No Emissions**
17080								**Detected**
19520								**No Emissions**
19520								**Detected**
21960								**No Emissions**
21960								**Detected**
24400								**No Emissions**
24400								**Detected**

FCC 15.247
Posey Company
Wireless Receiver
Model: 8630

Date: 01/07/2016
Lab: D
Tested By: Kyle Fujimoto

High Channel
Transmit Mode - X-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4960	52.70	V	74	-21.30	Peak	212.75	146.08	
4960	38.29	V	54	-15.71	Avg	212.75	146.08	
7440	57.09	V	74	-16.91	Peak	138.50	168.41	
7440	44.34	V	54	-9.66	Avg	138.50	168.41	
9920								**No Emissions**
9920								**Detected**
12400								**No Emissions**
12400								**Detected**
14880								**No Emissions**
14880								**Detected**
17360								**No Emissions**
17360								**Detected**
19840								**No Emissions**
19840								**Detected**
22320								**No Emissions**
22320								**Detected**
24800								**No Emissions**
24800								**Detected**

FCC 15.247
Posey Company
Wireless Receiver
Model: 8630

Date: 01/07/2016
Lab: D
Tested By: Kyle Fujimoto

High Channel
Transmit Mode - Y-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4960	52.12	V	74	-21.88	Peak	193.75	126.32	
4960	38.92	V	54	-15.08	Avg	193.75	126.32	
7440	58.23	V	74	-15.77	Peak	149.25	179.52	
7440	45.91	V	54	-8.09	Avg	149.25	179.52	
9920								**No Emissions**
9920								**Detected**
12400								**No Emissions**
12400								**Detected**
14880								**No Emissions**
14880								**Detected**
17360								**No Emissions**
17360								**Detected**
19840								**No Emissions**
19840								**Detected**
22320								**No Emissions**
22320								**Detected**
24800								**No Emissions**
24800								**Detected**

FCC 15.247
Posey Company
Wireless Receiver
Model: 8630

Date: 01/07/2016
Lab: D
Tested By: Kyle Fujimoto

High Channel
Transmit Mode - Z-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4960	53.01	V	74	-20.99	Peak	181.75	144.11	
4960	38.89	V	54	-15.11	Avg	181.75	144.11	
7440	57.66	V	74	-16.34	Peak	162.70	155.22	
7440	43.57	V	54	-10.43	Avg	162.75	155.22	
9920								**No Emissions**
9920								**Detected**
12400								**No Emissions**
12400								**Detected**
14880								**No Emissions**
14880								**Detected**
17360								**No Emissions**
17360								**Detected**
19840								**No Emissions**
19840								**Detected**
22320								**No Emissions**
22320								**Detected**
24800								**No Emissions**
24800								**Detected**

FCC 15.247
Posey Company
Wireless Receiver
Model: 8630

Date: 01/07/2016
Lab: D
Tested By: Kyle Fujimoto

High Channel
Transmit Mode - X-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4960	55.69	H	74	-18.31	Peak	105.50	142.56	
4960	44.79	H	54	-9.21	Avg	105.50	142.56	
7440	56.21	H	74	-17.79	Peak	352.00	153.37	
7440	42.75	H	54	-11.25	Avg	352.00	153.37	
9920								**No Emissions**
9920								**Detected**
12400								**No Emissions**
12400								**Detected**
14880								**No Emissions**
14880								**Detected**
17360								**No Emissions**
17360								**Detected**
19840								**No Emissions**
19840								**Detected**
22320								**No Emissions**
22320								**Detected**
24800								**No Emissions**
24800								**Detected**

FCC 15.247
Posey Company
Wireless Receiver
Model: 8630

Date: 01/07/2016
Lab: D
Tested By: Kyle Fujimoto

High Channel
Transmit Mode - Y-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4960	52.34	H	74	-21.66	Peak	119.50	166.80	
4960	40.20	H	54	-13.80	Avg	119.50	166.80	
7440	57.57	H	74	-16.43	Peak	0.00	136.95	
7440	44.00	H	54	-10.00	Avg	0.00	136.95	
9920								**No Emissions**
9920								**Detected**
12400								**No Emissions**
12400								**Detected**
14880								**No Emissions**
14880								**Detected**
17360								**No Emissions**
17360								**Detected**
19840								**No Emissions**
19840								**Detected**
22320								**No Emissions**
22320								**Detected**
24800								**No Emissions**
24800								**Detected**

FCC 15.247
Posey Company
Wireless Receiver
Model: 8630

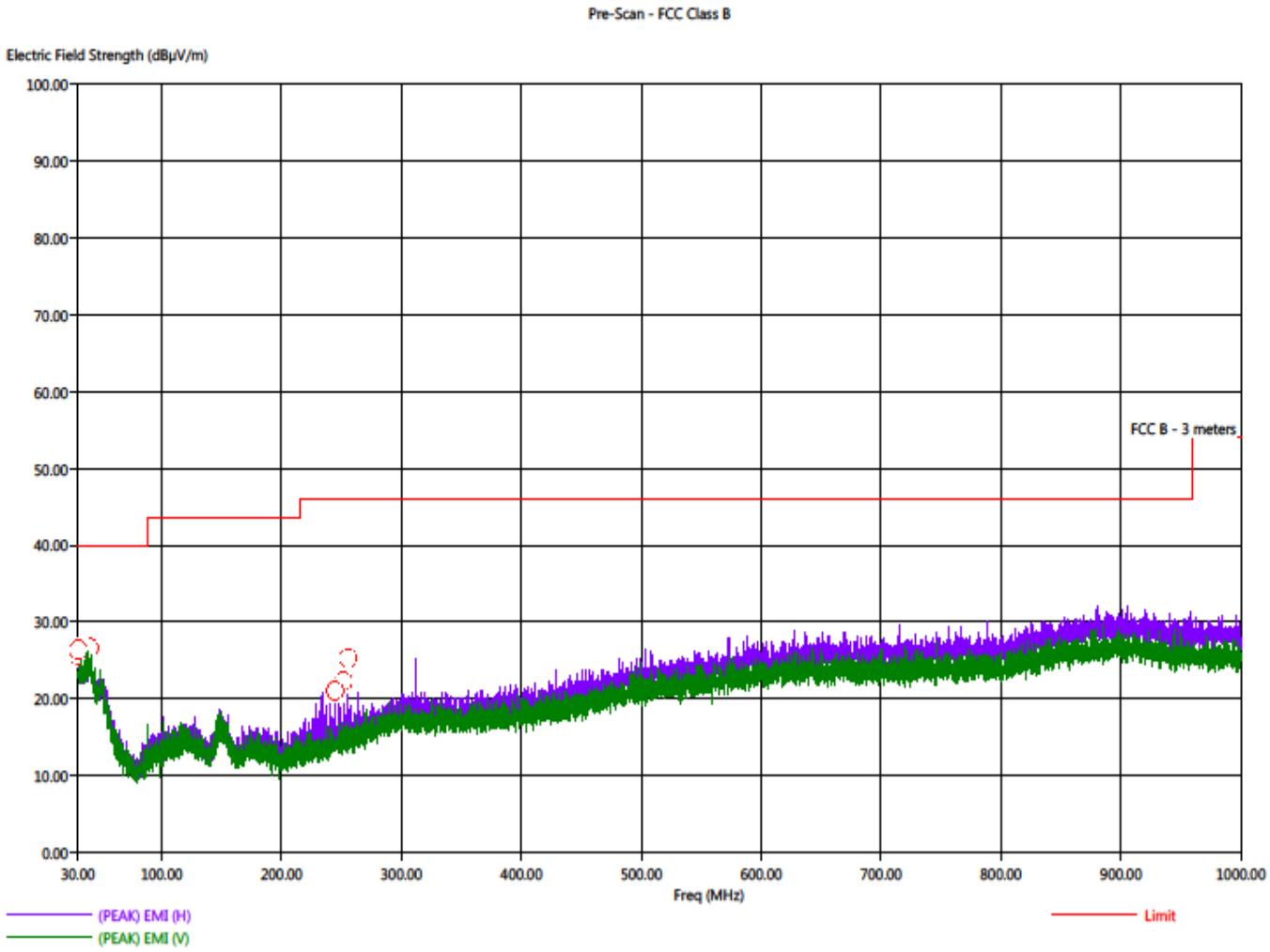
Date: 01/07/2016
Lab: D
Tested By: Kyle Fujimoto

High Channel
Transmit Mode - Z-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4960	53.96	H	74	-20.04	Peak	110.25	212.35	
4960	40.19	H	54	-13.81	Avg	110.25	212.35	
7440	58.48	H	74	-15.52	Peak	5.00	248.35	
7440	44.39	H	54	-9.61	Avg	5.00	248.35	
9920								**No Emissions**
9920								**Detected**
12400								**No Emissions**
12400								**Detected**
14880								**No Emissions**
14880								**Detected**
17360								**No Emissions**
17360								**Detected**
19840								**No Emissions**
19840								**Detected**
22320								**No Emissions**
22320								**Detected**
24800								**No Emissions**
24800								**Detected**

Title: Pre-Scan - FCC Class B
File: Pre-Scan - 8630 - Wireless Rx - X-Axis - FCC Class B.set
Operator: Kyle Fujimoto
EUT Type: 8630 Wireless Receiver
EUT Condition: The EUT is continuously Frequency Hopping - X-Axis
Comments: Customer: Posey Company
Model: 8630

1/7/2016 9:25:28 AM
Sequence: Preliminary Scan



Worst case axis
No additional spurious emissions were found between 10 kHz - 30 MHz and 1 GHz – 25 GHz

Title: Radiated Final - 30-1000 MHz - FCC Class B
File: Final Scan - 8630 Wireless Rx - X-Axis - FCC Class B.set
Operator: Kyle Fujimoto
EUT Type: 8630 Wireless Receiver
EUT Condition: The EUT is continuously Frequency Hopping - X-Axis Worst Case
Comments: Customer: Posey Company
Model: 8630

1/7/2016 10:00:32 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)	Cable (dB)	Transducer (dB)	Twr Ht (cm)	Tbl Agl (deg)
30.30	H	26.69	21.78	-13.31	-18.22	40.00	0.35	24.02	353.49	50.75
30.70	H	26.09	21.81	-13.91	-18.19	40.00	0.36	24.04	159.34	194.50
39.80	H	27.36	23.15	-12.64	-16.85	40.00	0.43	25.35	367.94	188.50
244.30	H	24.27	14.17	-21.73	-31.83	46.00	1.20	15.07	142.68	0.00
251.40	H	28.40	14.90	-17.60	-31.10	46.00	1.22	15.40	112.17	346.25
255.40	H	28.67	14.99	-17.33	-31.01	46.00	1.23	15.63	112.89	0.25

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FCC 15.247
Posey Company
Wireless
Receiver
Model: 8630

Date: 01/07/2016

Lab: D
Tested By: Kyle Fujimoto

Band Edges
Low Channel - See Comments for Worst Case Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2402.00	94.30	H	--	--	Peak	286.50	181.61	Fundamental
								of Low Channel
2390.00	46.95	H	54.00	-7.05	Peak	286.50	181.61	**Band Edge of Low Channel**
								X-Axis Worst Case
2402.00	94.35	V	--	--	Peak	251.75	112.89	Fundamental of
								Low Channel
2390.00	47.50	V	54.00	-6.50	Peak	251.75	112.89	**Band Edge of Low Channel**
								Y-Axis Worst Case

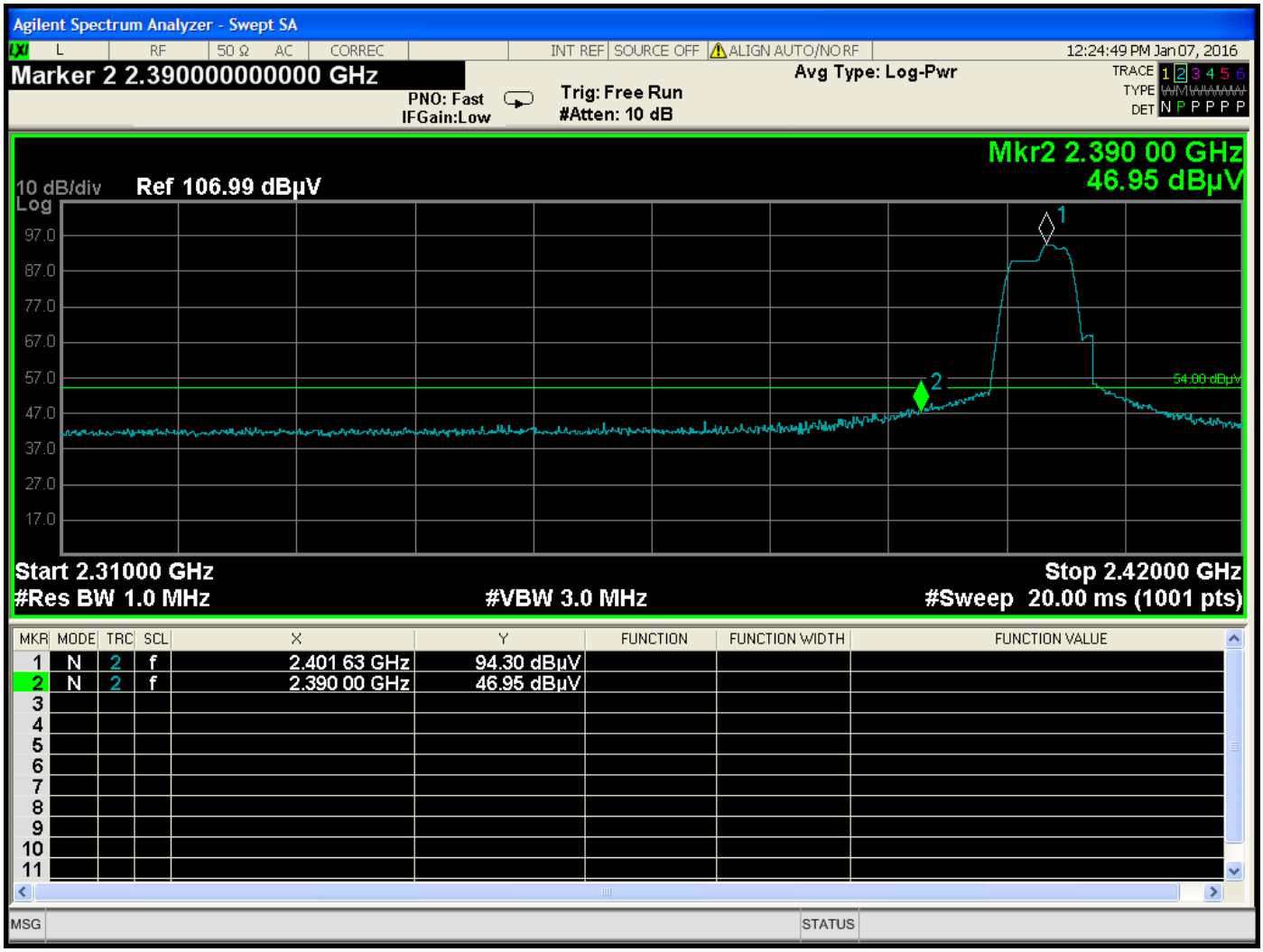
FCC 15.247
Posey Company
Wireless
Receiver
Model: 8630

Date: 01/07/2016

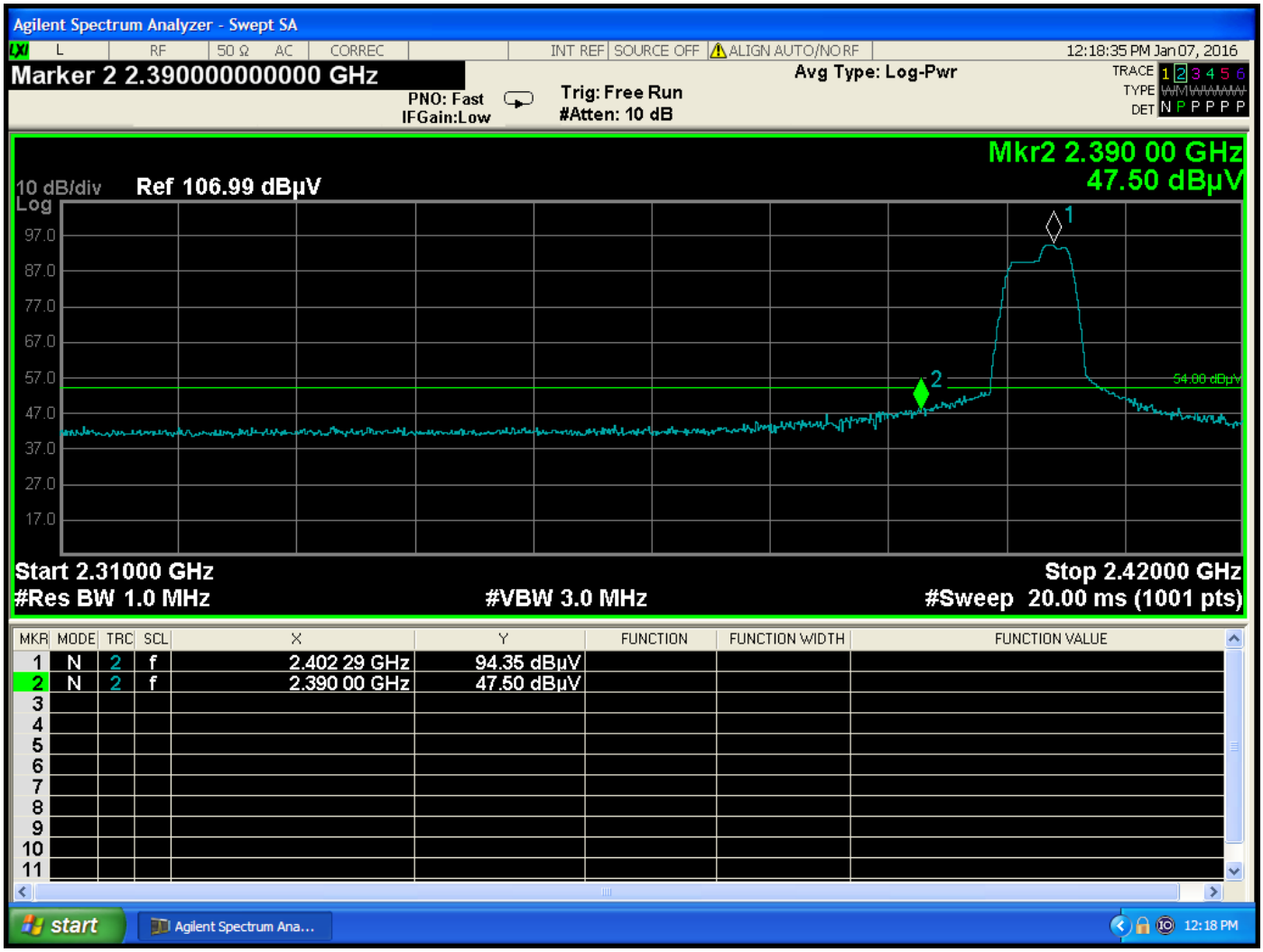
Lab: D
Tested By: Kyle Fujimoto

Band Edges
High Channel - See Comments for Worst Case Axis

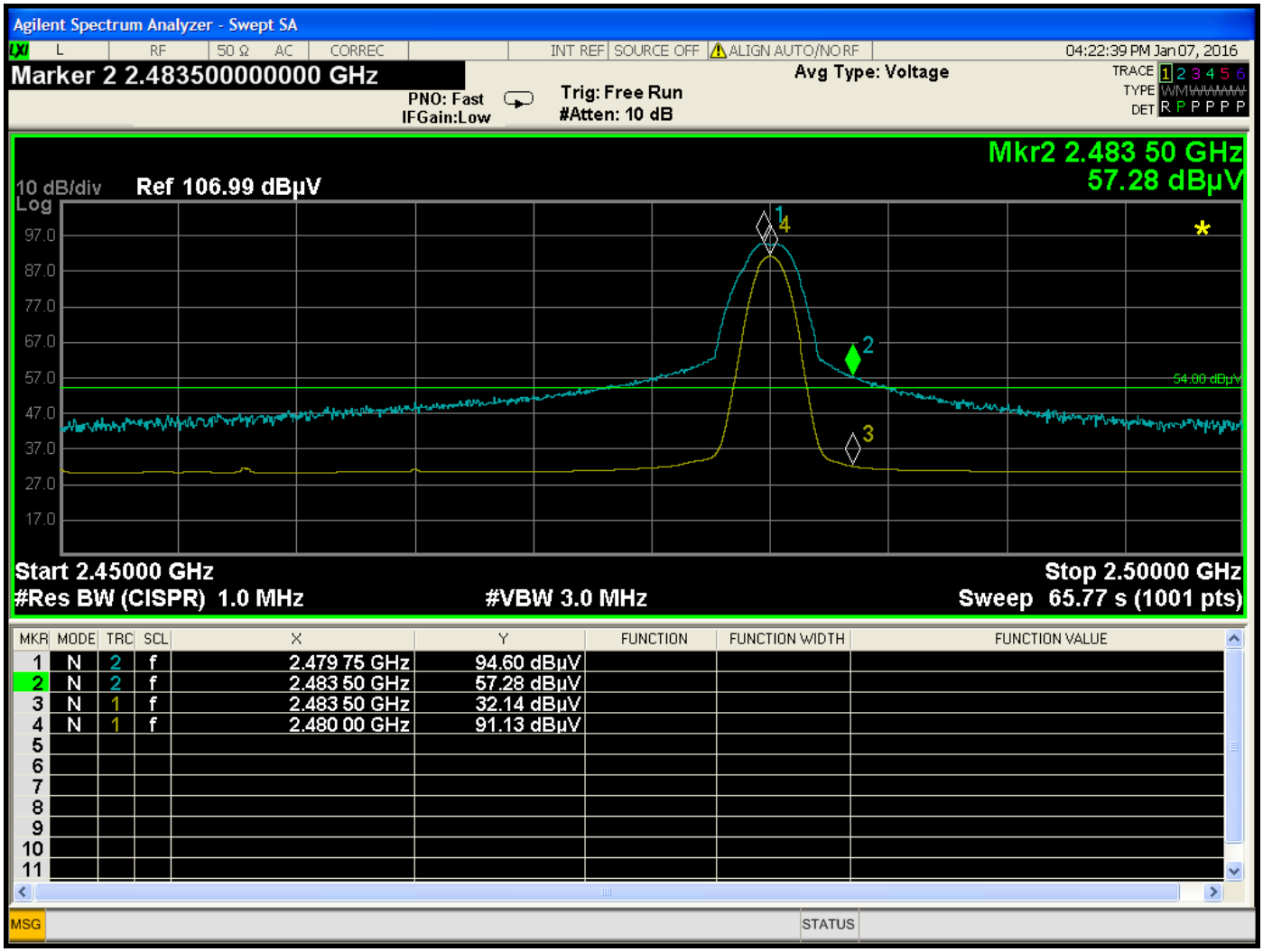
Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2480.00	94.60	H	--	--	Peak	206.50	144.29	Fundamental
2480.00	91.13	H	--	--	Avg	206.50	144.29	of High Channel
2483.50	57.28	H	74.00	-16.72	Peak	206.50	144.29	**Band Edge of High Channel**
2483.50	32.14	H	54.00	-21.86	Avg	206.50	144.29	**X-Axis Worst Case**
2480.00	91.92	V	--	--	Peak	165.50	114.62	Fundamental of
2480.00	88.48	V	--	--	Avg	165.50	114.62	High Channel
2483.50	55.43	V	74.00	-18.57	Peak	165.50	114.62	**Band Edge of High Channel**
2843.50	31.49	V	54.00	-22.51	Avg	165.50	114.62	**Z-Axis Worst Case**



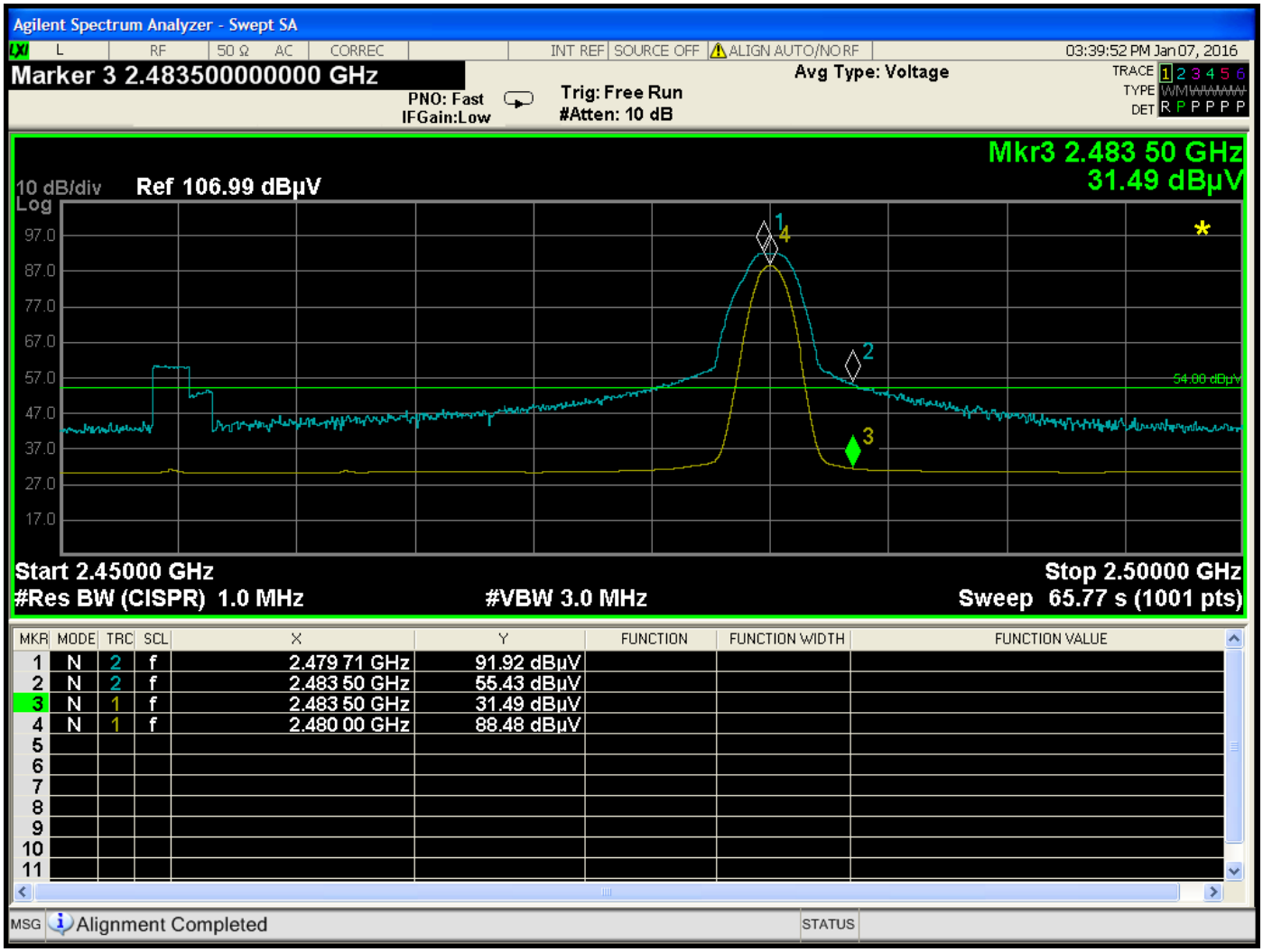
Low Band Edge – Horizontal – X-axis



Low Band Edge – Vertical – Y-axis



High Band Edge – Horizontal – X-axis



High Band Edge – Vertical – Z-axis