

*FCC PART 15, SUBPART B and C
TEST REPORT**for***AMR-LRC****MODEL: RXT6000-4701F**

Prepared for

**SMK-LINK ELECTRONICS
3601-B CALLE TECATE
CAMARILLO, CA 93012**

Prepared by: _____

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DATE: APRIL 15, 2016

	REPORT	APPENDICES					TOTAL
	BODY	A	B	C	D	E	
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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: AMR-LRC
Model: RXT6000-4701F
S/N: N/A

Product Description: See Operational Description.

Modifications: The EUT was not modified in order to meet the specifications.

Customer: SMK-Link Electronics
3601-B Calle Tecate
Camarillo, California, 93012

Test Date: January 14, 2016

Test Specifications: Emissions requirements
CFR Title 47, Part 15, Subpart B; and Subpart C, sections 15.205, 15.209, and 15.249

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

Test Deviations: The test procedure was not deviated from during the testing.

SUMMARY OF TEST RESULTS

TEST	DESCRIPTION	RESULTS
1	Spurious Radiated RF Emissions, 10 kHz – 25,000 MHz (Transmitter and Digital portion)	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 15.205, 15.209 and 15.249 Highest reading in relation to spec limit: 50.68 dBuV @ 2.4 GHz (*U = 3.70 dB)
2	Conducted RF Emissions, 150 kHz to 30 MHz	This test was not performed because the EUT operates on battery power and does not connect to the AC mains.

*U = Expanded Uncertainty with a coverage factor of k=2

1. PURPOSE

This document is a qualification test report based on the emissions tests performed on the AMR-LRC, Model: RXT6000-4701F. The emissions 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 15.249.



2. ADMINISTRATIVE DATA

2.1 Location of Testing

The emissions 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

SMK-Link Electronics

Massoud Niakan
Daniel Grieder

G.M. Engineering & Program Management
RF/HW Engineer

Compatible Electronics Inc.

Kyle Fujimoto Test Engineer
James Ross Test Engineer

2.4 Date Test Sample was Received

The test sample was received on January 14, 2016.

2.5 Disposition of the Test Sample

The test sample has not been returned to SMK-Link Electronics 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
DNF	Do Not Fit
URC	Universal Remote Control

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
FCC Title 47, Part 15 Subpart B	FCC Rules - Radio frequency devices (including digital devices) – Unintentional Radiators
ANSI C63.4 2014	American National Standard for 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

4. DESCRIPTION OF TEST CONFIGURATION

4.1 Description of Test Configuration - Emissions

Radiated Emissions: The AMR-LRC, Model: RXT6000-4701F (EUT) was tested as a stand alone device. The EUT was also tested with a cable connected to its supplemental button port, however the stand alone configuration was worst case and final testing was performed in that configuration. A fresh battery was inserted into the EUT prior to the testing.

The EUT was tested for emissions at the low, middle, and high channels while in the X, Y and Z axis. During the testing, the EUT was continuously transmitting.

The X orientation is when the EUT is parallel to the ground. The Y orientation is when the EUT is perpendicular to the ground mounted vertically. The Z orientation is when the EUT is perpendicular to the ground mounted horizontally.

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

4.1.1 Cable Construction and Termination

Cable 1

This is a 1-meter unshielded cable connected to the EUT. The cable has an 1/8 inch stereo connector at the EUT end and was unterminated at the other end. The cable was bundled to a length of 40 cm.

5. LISTS OF EUT, ACCESSORIES AND TEST EQUIPMENT**5.1 EUT and Accessory List**

EQUIPMENT	MANUFACTURER	MODEL NUMBER	SERIAL NUMBER	FCC ID
AMR-LRC	SMK-LINK ELECTRONICS	RXT6000-4701F	N/A	IE3LRC15

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	Agilent Technologies	N9038A	MY51100115	April 3, 2015	1 Year
RF RADIATED EMISSIONS TEST EQUIPMENT					
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
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 emissions test location.

6.2 EUT Mounting, Bonding and Grounding

For frequencies 1 GHz and below: 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 a 1.0 by 1.5 meter non-conductive table 1.5 meters above the ground plane.

The EUT was not grounded.

7. TEST PROCEDURES

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

7.1 RF Emissions

7.1.1 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 average by a “duty cycle correction factor”, derived from $20 \log(\text{dwell time} / 100 \text{ ms})$. This duty cycle correction factor was then subtracted from the peak reading.

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.

Radiated Emissions Test (Continued)

The EUT was tested at a 3-meter test distance from 10 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 15.249 for radiated emissions. Please see Appendix E for the data sheets.



7.1.3 RF Emissions Test Results

Table 1.0 RADIATED EMISSION RESULTS
AMR-LRC, Model: RXT6000-4701F

Frequency MHz	Corrected Reading* dBuV	Specification Limit dBuV	Delta (Cor. Reading – Spec. Limit) dB
2400 (H) (X-Axis)	50.68 (Avg)	54.00	-3.32
2400 (V) (Z-Axis)	50.16 (Avg)	54.00	-3.84
2483.5 (H) (X-Axis)	40.44 (Avg)	54.00	-13.56
9880 (H) (X-Axis)	40.40 (Avg)	54.00	-13.60
9764 (V) (X-Axis)	40.14 (Avg)	54.00	-13.87
9764 (V) (Y-Axis)	40.14 (Avg)	54.00	-13.87

Notes:

- (H) Horizontal
(V) Vertical
(Avg) Averaged Reading
* The complete emissions data is given in Appendix E of this report.

8. CONCLUSIONS

The AMR-LRC, Model: RXT6000-4701F (EUT), as tested, meets all of the specification limits defined in FCC Title 47, Part 15, Subpart B; and Subpart C, sections 15.205, 15.209, and 15.249.



APPENDIX A

LABORATORY ACCREDITATIONS AND RECOGNITIONS

Brea Division
114 Olinda Drive
Brea, CA 92823
(714) 579-0500

Agoura Division
2337 Troutdale Drive
Agoura, CA 91301
(818) 597-0600

Silverado Division
19121 El Toro Road
Silverado, CA 92676
(949) 589-0700

Lake Forest Division
20621 Pascal Way
Lake Forest, CA 92630
(949) 587-0400

LABORATORY ACCREDITATIONS AND RECOGNITIONS



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](http://fjallfoss.fcc.gov/oetcf/eas/reports/TestFirmSearch.cfm) [https://fjallfoss.fcc.gov/oetcf/eas/reports/TestFirmSearch.cfm](http://fjallfoss.fcc.gov/oetcf/eas/reports/TestFirmSearch.cfm)



Compatible Electronics IC listing can be found at:

<http://www.ic.gc.ca/eic/site/ic1.nsf/eng/home>

Brea Division
114 Olinda Drive
Brea, CA 92823
(714) 579-0500

Agoura Division
2337 Troutdale Drive
Agoura, CA 91301
(818) 597-0600

Silverado Division
19121 El Toro Road
Silverado, CA 92676
(949) 589-0700

Lake Forest Division
20621 Pascal Way
Lake Forest, CA 92630
(949) 587-0400

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 15.249 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

AMR-LRC
Model: RXT6000-4701F
S/N: N/A

ADDITIONAL MODELS COVERED:

The following models are considered by the manufacturer to be similar to the sample tested, however the test results contained in this report relate only to the sample tested.

There are no additional models.

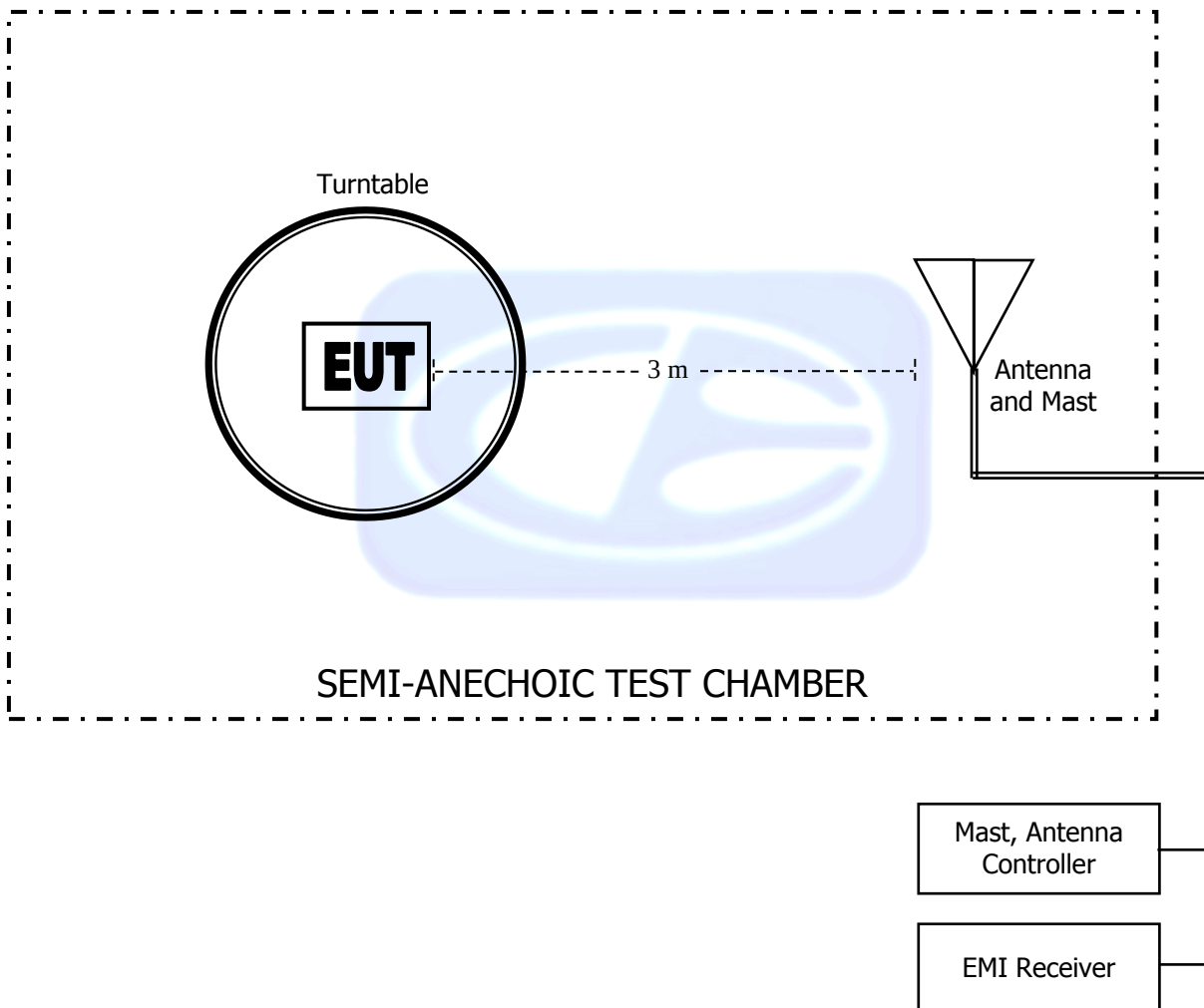




APPENDIX D

DIAGRAMS AND CHARTS

FIGURE 1: 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



CLOSE UP VIEW

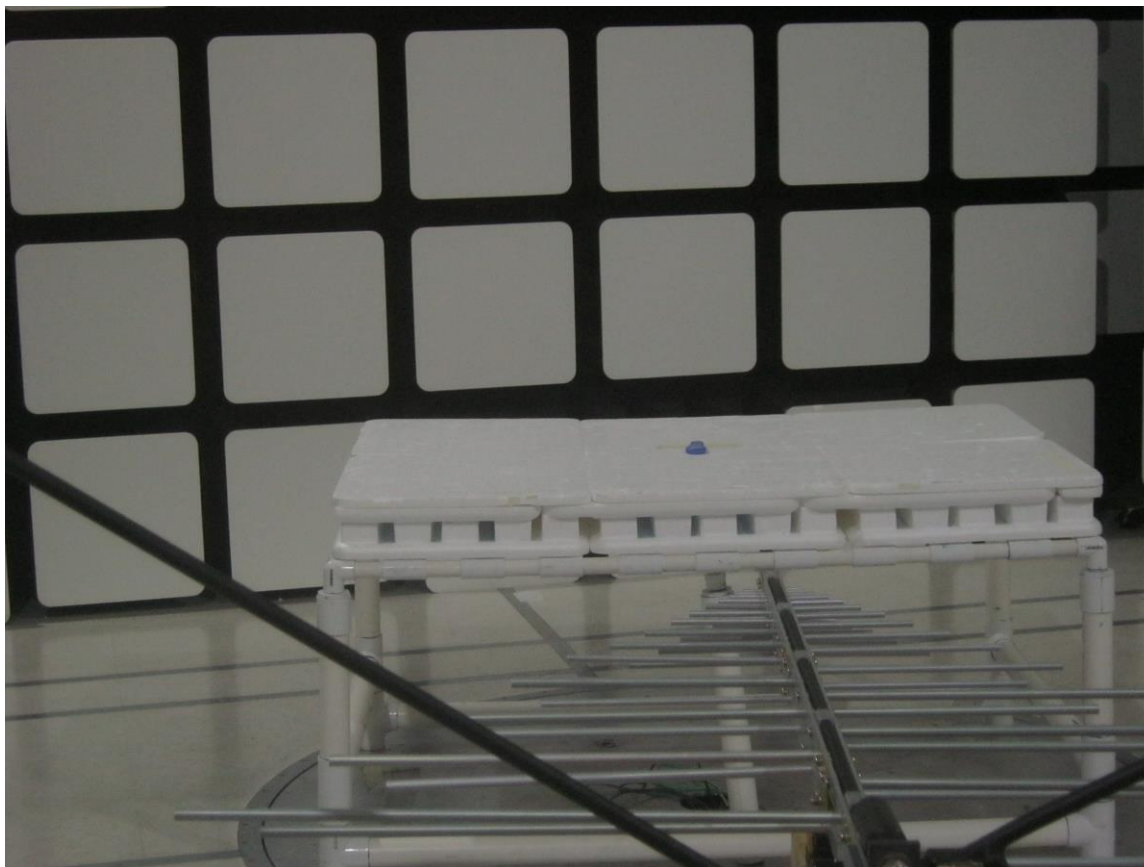
SMK-LINK ELECTRONICS

AMR-LRC

MODEL: RXT6000-4701F

FCC SUBPART B AND C – RADIATED EMISSIONS – BELOW 1 GHz

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**



FRONT VIEW

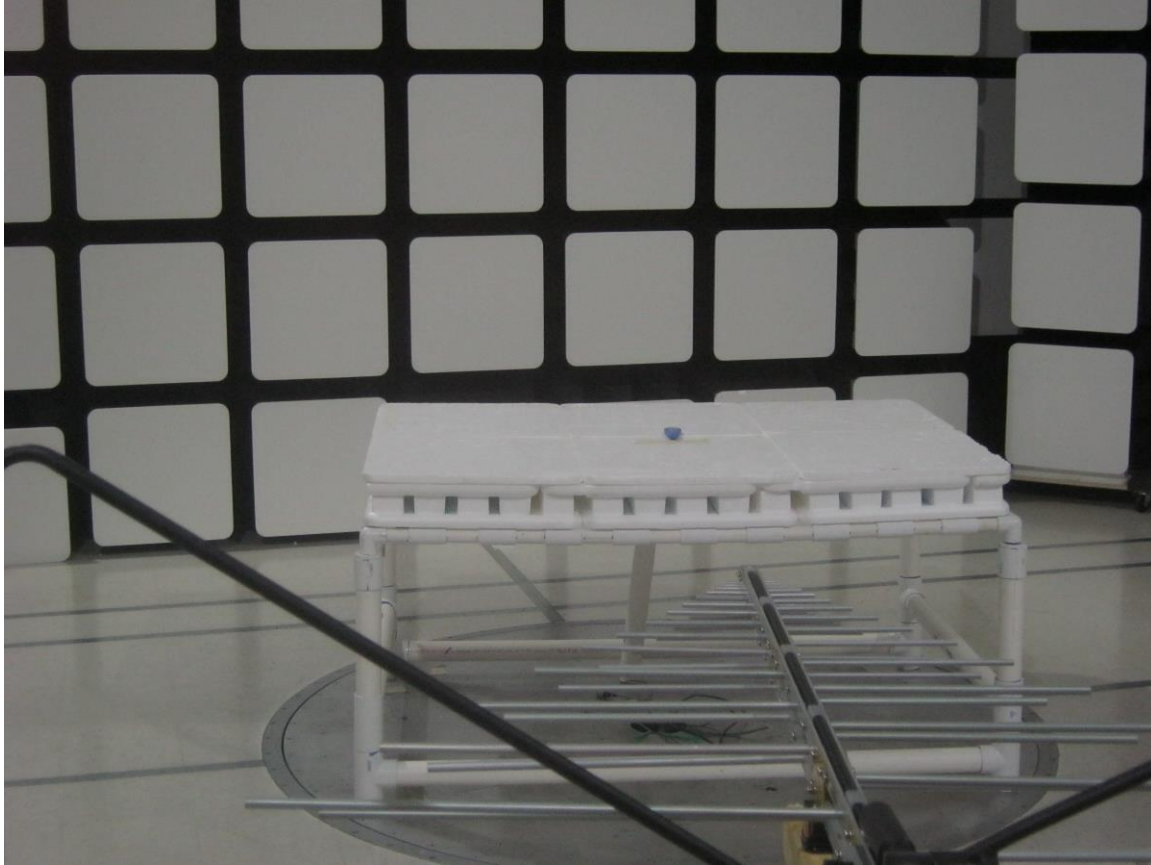
SMK-LINK ELECTRONICS

AMR-LRC

MODEL: RXT6000-4701F

FCC SUBPART B AND C – RADIATED EMISSIONS – BELOW 1 GHz

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**

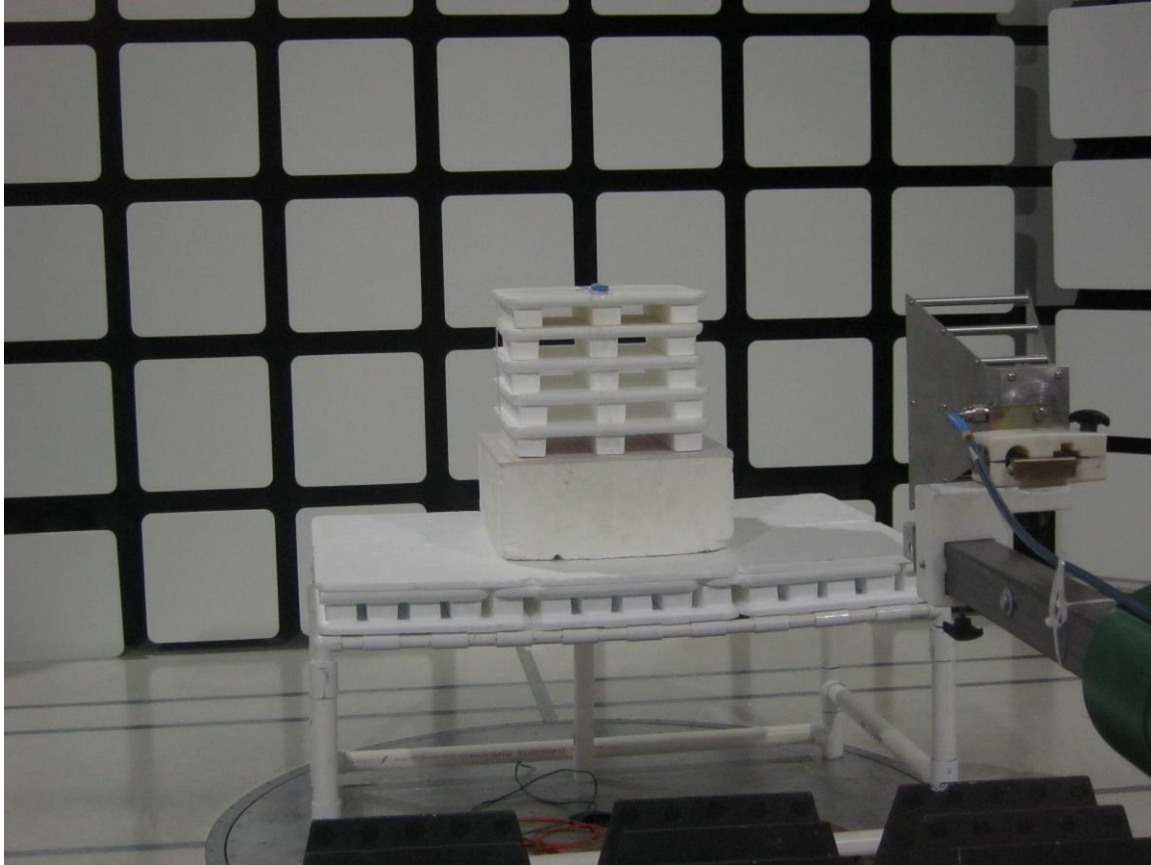


REAR VIEW

SMK-LINK ELECTRONICS
AMR-LRC
MODEL: RXT6000-4701F

FCC SUBPART B AND C – RADIATED EMISSIONS – BELOW 1 GHz

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**



FRONT VIEW

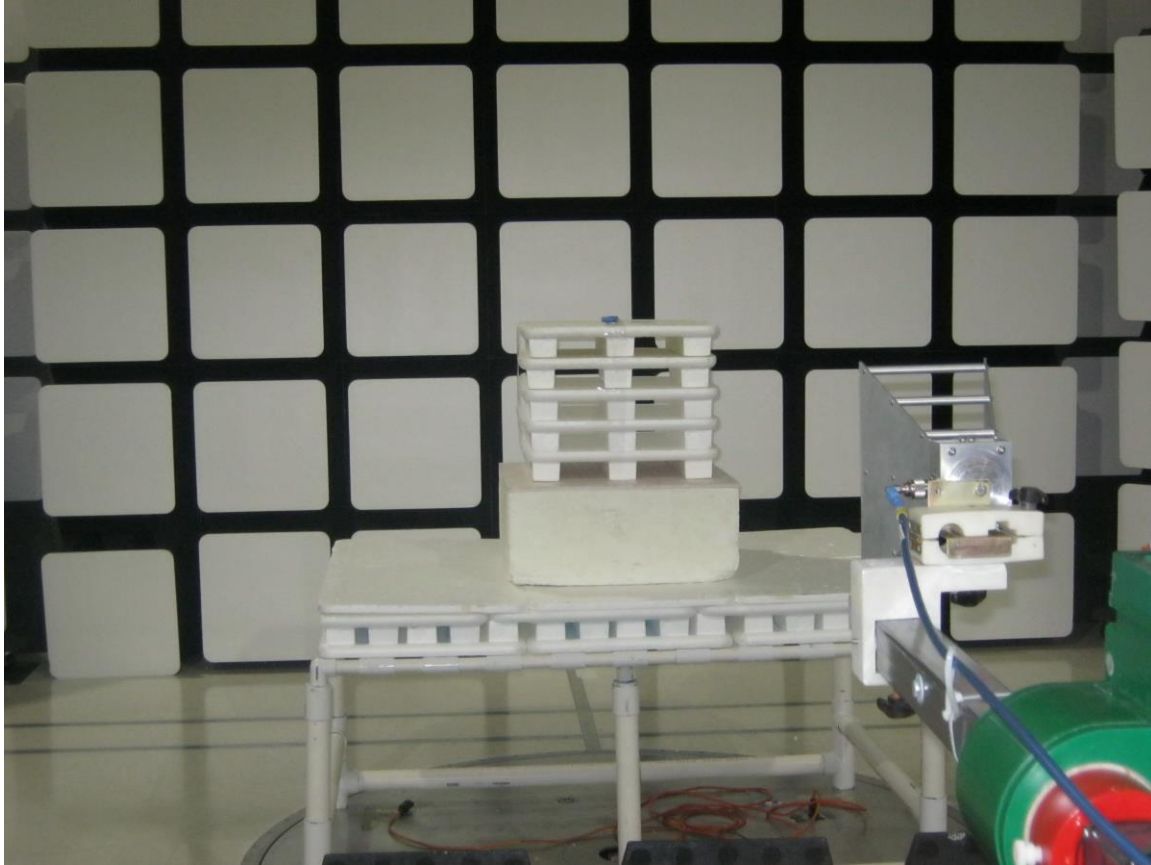
SMK-LINK ELECTRONICS

AMR-LRC

MODEL: RXT6000-4701F

FCC SUBPART B AND C – RADIATED EMISSIONS – ABOVE 1 GHz

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**



REAR VIEW

SMK-LINK ELECTRONICS

AMR-LRC

MODEL: RXT6000-4701F

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***

FCC 15.249

SMK-Link Electronics
AMR-LRC
Model: RXT6000-4701F

Date: 01/14/2016
Lab: D
Tested By: Kyle Fujimoto

Harmonics - Low Channel
X-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4810	51.61	V	74.00	-22.39	Peak	200.00	139.52	
4810	31.61	V	54.00	-22.39	Avg	200.00	139.52	
7215	58.68	V	74.00	-15.32	Peak	130.00	130.86	
7215	38.68	V	54.00	-15.32	Avg	130.00	130.86	
9620	58.81	V	74.00	-15.19	Peak	217.50	151.04	
9620	38.81	V	54.00	-15.19	Avg	217.50	151.04	
12025								No Emissions
12025								Detected
14430								No Emissions
14430								Detected
16835								No Emissions
16835								Detected
19240								No Emissions
19240								Detected
21645								No Emissions
21645								Detected
24050								No Emissions
24050								Detected

FCC 15.249

SMK-Link Electronics
AMR-LRC
Model: RXT6000-4701F

Date: 01/14/2016
Lab: D
Tested By: Kyle Fujimoto

**Harmonics - Low Channel
X-Axis**

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4810	55.27	H	74.00	-18.73	Peak	41.25	186.14	
4810	35.27	H	54.00	-18.73	Avg	41.25	186.14	
7215	58.83	H	74.00	-15.17	Peak	48.25	169.73	
7215	38.83	H	54.00	-15.17	Avg	48.25	169.73	
9620	59.91	H	74.00	-14.09	Peak	80.00	181.43	
9620	39.91	H	54.00	-14.09	Avg	80.00	181.43	
12025								No Emissions
12025								Detected
14430								No Emissions
14430								Detected
16835								No Emissions
16835								Detected
19240								No Emissions
19240								Detected
21645								No Emissions
21645								Detected
24050								No Emissions
24050								Detected

FCC 15.249

SMK-Link Electronics
AMR-LRC
Model: RXT6000-4701F

Date: 01/14/2016
Lab: D
Tested By: Kyle Fujimoto

**Harmonics - Low Channel
Y-Axis**

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4810	53.86	V	74.00	-20.14	Peak	4.50	138.38	
4810	33.86	V	54.00	-20.14	Avg	4.50	138.38	
7215	58.26	V	74.00	-15.75	Peak	186.00	121.49	
7215	38.26	V	54.00	-15.74	Avg	186.00	121.49	
9620	58.59	V	74.00	-15.41	Peak	89.50	133.85	
9620	38.59	V	54.00	-15.41	Avg	89.50	133.85	
12025								No Emissions
12025								Detected
14430								No Emissions
14430								Detected
16835								No Emissions
16835								Detected
19240								No Emissions
19240								Detected
21645								No Emissions
21645								Detected
24050								No Emissions
24050								Detected

FCC 15.249

SMK-Link Electronics
AMR-LRC
Model: RXT6000-4701F

Date: 01/14/2016
Lab: D
Tested By: Kyle Fujimoto

**Harmonics - Low Channel
Y-Axis**

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4810	50.91	H	74.00	-23.09	Peak	239.75	135.22	
4810	30.91	H	54.00	-23.09	Avg	239.75	135.22	
7215	59.32	H	74.00	-14.68	Peak	32.00	144.17	
7215	39.32	H	54.00	-14.68	Avg	32.00	144.17	
9620	58.47	H	74.00	-15.53	Peak	140.00	158.92	
9620	38.47	H	54.00	-15.53	Avg	140.00	158.92	
12025								No Emissions
12025								Detected
14430								No Emissions
14430								Detected
16835								No Emissions
16835								Detected
19240								No Emissions
19240								Detected
21645								No Emissions
21645								Detected
24050								No Emissions
24050								Detected

FCC 15.249

SMK-Link Electronics
AMR-LRC
Model: RXT6000-4701F

Date: 01/14/2016
Lab: D
Tested By: Kyle Fujimoto

Harmonics - Low Channel
Z-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4810	54.15	V	74.00	-19.85	Peak	195.50	171.64	
4810	34.15	V	54.00	-19.85	Avg	195.50	171.64	
7215	59.45	V	74.00	-14.55	Peak	106.50	119.28	
7215	39.45	V	54.00	-14.55	Avg	106.50	119.28	
9620	58.39	V	74.00	-15.61	Peak	41.25	101.25	
9620	38.39	V	54.00	-15.61	Avg	41.25	101.25	
12025								No Emissions
12025								Detected
14430								No Emissions
14430								Detected
16835								No Emissions
16835								Detected
19240								No Emissions
19240								Detected
21645								No Emissions
21645								Detected
24050								No Emissions
24050								Detected

FCC 15.249

SMK-Link Electronics
AMR-LRC
Model: RXT6000-4701F

Date: 01/14/2016
Lab: D
Tested By: Kyle Fujimoto

Harmonics - Low Channel
Z-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4810	50.37	H	74.00	-23.63	Peak	164.50	158.92	
4810	30.37	H	54.00	-23.63	Avg	164.50	158.92	
7215	57.77	H	74.00	-16.23	Peak	67.75	129.61	
7215	37.77	H	54.00	-16.23	Avg	67.75	129.61	
9620	58.84	H	74.00	-15.16	Peak	13.50	255.76	
9620	38.84	H	54.00	-15.16	Avg	13.50	255.76	
12025								No Emissions
12025								Detected
14430								No Emissions
14430								Detected
16835								No Emissions
16835								Detected
19240								No Emissions
19240								Detected
21645								No Emissions
21645								Detected
24050								No Emissions
24050								Detected

FCC 15.249

SMK-Link Electronics
AMR-LRC
Model: RXT6000-4701F

Date: 01/14/2016
Lab: D
Tested By: Kyle Fujimoto

Harmonics - Middle Channel
X-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4882	51.59	V	74.00	-22.41	Peak	51.00	143.16	
4882	31.59	V	54.00	-22.41	Avg	51.00	143.16	
7323	58.58	V	74.00	-15.42	Peak	150.50	158.44	
7323	38.58	V	54.00	-15.42	Avg	150.50	158.44	
9764	60.14	V	74.00	-13.87	Peak	355.00	153.31	
9764	40.14	V	54.00	-13.87	Avg	355.00	153.31	
12205								No Emissions
12205								Detected
14646								No Emissions
14646								Detected
17087								No Emissions
17087								Detected
19528								No Emissions
19528								Detected
21969								No Emissions
21969								Detected
24410								No Emissions
24410								Detected

FCC 15.249

SMK-Link Electronics
AMR-LRC
Model: RXT6000-4701F

Date: 01/14/2016
Lab: D
Tested By: Kyle Fujimoto

**Harmonics - Middle Channel
X-Axis**

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4882	56.49	H	74.00	-17.51	Peak	51.00	143.16	
4882	36.49	H	54.00	-17.51	Avg	51.00	143.16	
7323	59.40	H	74.00	-14.60	Peak	192.75	158.50	
7323	39.40	H	54.00	-14.60	Avg	192.75	158.50	
9764	59.99	H	74.00	-14.01	Peak	164.25	178.14	
9764	39.99	H	54.00	-14.01	Avg	164.25	178.14	
12205								No Emissions
12205								Detected
14646								No Emissions
14646								Detected
17087								No Emissions
17087								Detected
19528								No Emissions
19528								Detected
21969								No Emissions
21969								Detected
24410								No Emissions
24410								Detected

FCC 15.249

SMK-Link Electronics
AMR-LRC
Model: RXT6000-4701F

Date: 01/14/2016
Lab: D
Tested By: Kyle Fujimoto

**Harmonics - Middle Channel
Y-Axis**

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4882	54.68	V	74.00	-19.32	Peak	300.75	138.08	
4882	34.68	V	54.00	-19.32	Avg	300.75	138.08	
7323	57.35	V	74.00	-16.65	Peak	83.50	139.25	
7323	37.35	V	54.00	-16.65	Avg	83.50	139.25	
9764	60.14	V	74.00	-13.87	Peak	113.00	142.38	
9764	40.14	V	54.00	-13.87	Avg	113.00	142.38	
12205								No Emissions
12205								Detected
14646								No Emissions
14646								Detected
17087								No Emissions
17087								Detected
19528								No Emissions
19528								Detected
21969								No Emissions
21969								Detected
24410								No Emissions
24410								Detected

FCC 15.249

SMK-Link Electronics
AMR-LRC
Model: RXT6000-4701F

Date: 01/14/2016
Lab: D
Tested By: Kyle Fujimoto

**Harmonics - Middle Channel
Y-Axis**

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4882	53.44	H	74.00	-20.56	Peak	300.25	211.34	
4882	33.44	H	54.00	-20.56	Avg	300.25	211.34	
7323	59.91	H	74.00	-14.09	Peak	189.75	196.00	
7323	39.91	H	54.00	-14.09	Avg	189.75	196.00	
9764	59.13	H	74.00	-14.87	Peak	101.00	201.43	
9764	39.13	H	54.00	-14.87	Avg	101.00	201.43	
12205								No Emissions
12205								Detected
14646								No Emissions
14646								Detected
17087								No Emissions
17087								Detected
19528								No Emissions
19528								Detected
21969								No Emissions
21969								Detected
24410								No Emissions
24410								Detected

FCC 15.249

SMK-Link Electronics
AMR-LRC
Model: RXT6000-4701F

Date: 01/14/2016
Lab: D
Tested By: Kyle Fujimoto

Harmonics - Middle Channel
Z-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4882	56.05	V	74.00	-17.95	Peak	181.75	180.00	
4882	36.05	V	54.00	-17.95	Avg	181.75	180.00	
7323	58.66	V	74.00	-15.34	Peak	252.50	180.05	
7323	38.66	V	54.00	-15.34	Avg	252.50	180.05	
9764	58.98	V	74.00	-15.02	Peak	97.25	180.05	
9764	38.98	V	54.00	-15.02	Avg	97.25	180.05	
12205								No Emissions
12205								Detected
14646								No Emissions
14646								Detected
17087								No Emissions
17087								Detected
19528								No Emissions
19528								Detected
21969								No Emissions
21969								Detected
24410								No Emissions
24410								Detected

FCC 15.249

SMK-Link Electronics
AMR-LRC
Model: RXT6000-4701F

Date: 01/14/2016
Lab: D
Tested By: Kyle Fujimoto

Harmonics - Middle Channel
Z-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4882	55.19	H	74.00	-18.81	Peak	105.50	188.41	
4882	35.19	H	54.00	-18.81	Avg	105.50	188.41	
7323	59.60	H	74.00	-14.40	Peak	223.50	142.92	
7323	39.60	H	54.00	-14.40	Avg	223.50	142.92	
9764	59.78	H	74.00	-14.22	Peak	10.00	133.19	
9764	39.78	H	54.00	-14.22	Avg	10.00	133.19	
12205								No Emissions
12205								Detected
14646								No Emissions
14646								Detected
17087								No Emissions
17087								Detected
19528								No Emissions
19528								Detected
21969								No Emissions
21969								Detected
24410								No Emissions
24410								Detected

FCC 15.249

SMK-Link Electronics
AMR-LRC
Model: RXT6000-4701F

Date: 01/14/2016
Lab: D
Tested By: Kyle Fujimoto

**Harmonics - High Channel
X-Axis**

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4940	51.59	V	74.00	-22.41	Peak	15.75	177.67	
4940	31.59	V	54.00	-22.41	Avg	15.75	177.67	
7410	57.50	V	74.00	-16.50	Peak	109.75	178.52	
7410	37.50	V	54.00	-16.50	Avg	109.75	178.52	
9880	58.71	V	74.00	-15.29	Peak	50.25	180.25	
9880	38.71	V	54.00	-15.29	Avg	50.25	180.25	
12350								No Emissions
12350								Detected
14820								No Emissions
14820								Detected
17290								No Emissions
17290								Detected
19760								No Emissions
19760								Detected
22230								No Emissions
22230								Detected
24700								No Emissions
24700								Detected

FCC 15.249

SMK-Link Electronics
AMR-LRC
Model: RXT6000-4701F

Date: 01/14/2016
Lab: D
Tested By: Kyle Fujimoto

**Harmonics - High Channel
X-Axis**

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4940	56.90	H	74.00	-17.10	Peak	173.00	155.52	
4940	36.90	H	54.00	-17.10	Avg	173.00	155.52	
7410	58.93	H	74.00	-15.07	Peak	96.25	140.29	
7410	38.93	H	54.00	-15.07	Avg	96.25	140.29	
9880	60.40	H	74.00	-13.60	Peak	159.00	140.29	
9880	40.40	H	54.00	-13.60	Avg	159.00	140.29	
12350								No Emissions
12350								Detected
14820								No Emissions
14820								Detected
17290								No Emissions
17290								Detected
19760								No Emissions
19760								Detected
22230								No Emissions
22230								Detected
24700								No Emissions
24700								Detected

FCC 15.249

SMK-Link Electronics
AMR-LRC
Model: RXT6000-4701F

Date: 01/14/2016
Lab: D
Tested By: Kyle Fujimoto

Harmonics - High Channel
Y-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4940	55.34	V	74.00	-18.66	Peak	351.50	147.10	
4940	35.34	V	54.00	-18.66	Avg	351.50	147.10	
7410	58.76	V	74.00	-15.24	Peak	72.75	156.89	
7410	38.76	V	54.00	-15.24	Avg	72.75	156.89	
9880	59.06	V	74.00	-14.95	Peak	115.50	137.67	
9880	39.06	V	54.00	-14.94	Avg	115.50	137.67	
12350								No Emissions
12350								Detected
14820								No Emissions
14820								Detected
17290								No Emissions
17290								Detected
19760								No Emissions
19760								Detected
22230								No Emissions
22230								Detected
24700								No Emissions
24700								Detected

FCC 15.249

SMK-Link Electronics
AMR-LRC
Model: RXT6000-4701F

Date: 01/14/2016
Lab: D
Tested By: Kyle Fujimoto

**Harmonics - High Channel
Y-Axis**

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4940	54.08	H	74.00	-19.92	Peak	328.75	142.20	
4940	34.08	H	54.00	-19.92	Avg	328.75	142.20	
7410	58.12	H	74.00	-15.88	Peak	167.50	145.20	
7410	38.12	H	54.00	-15.88	Avg	167.50	145.20	
9880	58.97	H	74.00	-15.03	Peak	112.00	132.83	
9880	38.97	H	54.00	-15.03	Avg	112.00	132.83	
12350								No Emissions
12350								Detected
14820								No Emissions
14820								Detected
17290								No Emissions
17290								Detected
19760								No Emissions
19760								Detected
22230								No Emissions
22230								Detected
24700								No Emissions
24700								Detected

FCC 15.249

SMK-Link Electronics
AMR-LRC
Model: RXT6000-4701F

Date: 01/14/2016
Lab: D
Tested By: Kyle Fujimoto

Harmonics - High Channel
Z-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4940	57.05	V	74.00	-16.95	Peak	203.75	127.76	
4940	37.05	V	54.00	-16.95	Avg	203.75	127.76	
7410	57.22	V	74.00	-16.78	Peak	60.25	137.19	
7410	37.22	V	54.00	-16.78	Avg	60.25	137.19	
9880	58.74	V	74.00	-15.26	Peak	114.75	157.31	
9880	38.74	V	54.00	-15.26	Avg	114.75	157.31	
12350								No Emissions
12350								Detected
14820								No Emissions
14820								Detected
17290								No Emissions
17290								Detected
19760								No Emissions
19760								Detected
22230								No Emissions
22230								Detected
24700								No Emissions
24700								Detected

FCC 15.249

SMK-Link Electronics
AMR-LRC
Model: RXT6000-4701F

Date: 01/14/2016
Lab: D
Tested By: Kyle Fujimoto

Harmonics - High Channel
Z-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4940	57.29	H	74.00	-16.71	Peak	240.50	170.74	
4940	37.29	H	54.00	-16.71	Avg	240.50	170.74	
7410	58.90	H	74.00	-15.10	Peak	5.00	152.58	
7410	38.90	H	54.00	-15.10	Avg	5.00	152.58	
9880	58.81	H	74.00	-15.20	Peak	91.00	147.16	
9880	38.81	H	54.00	-15.20	Avg	91.00	147.16	
12350								No Emissions
12350								Detected
14820								No Emissions
14820								Detected
17290								No Emissions
17290								Detected
19760								No Emissions
19760								Detected
22230								No Emissions
22230								Detected
24700								No Emissions
24700								Detected

Title: Pre-Scan - FCC Class B

File: Aqilent - Radiated Pre-Scan - 30-1000 MHz - FCC Class B - LRC - X-Axis - 01-13-2016.set

Operator: Kyle Fujimoto

EUT Type: AMR-LRC

EUT Condition: The EUT is continuously transmitting - X-Axis

Comments: Company: SMK-Link Electronics

Model: RXT6000-4701F

S/N: N/A

Worst Case Axis

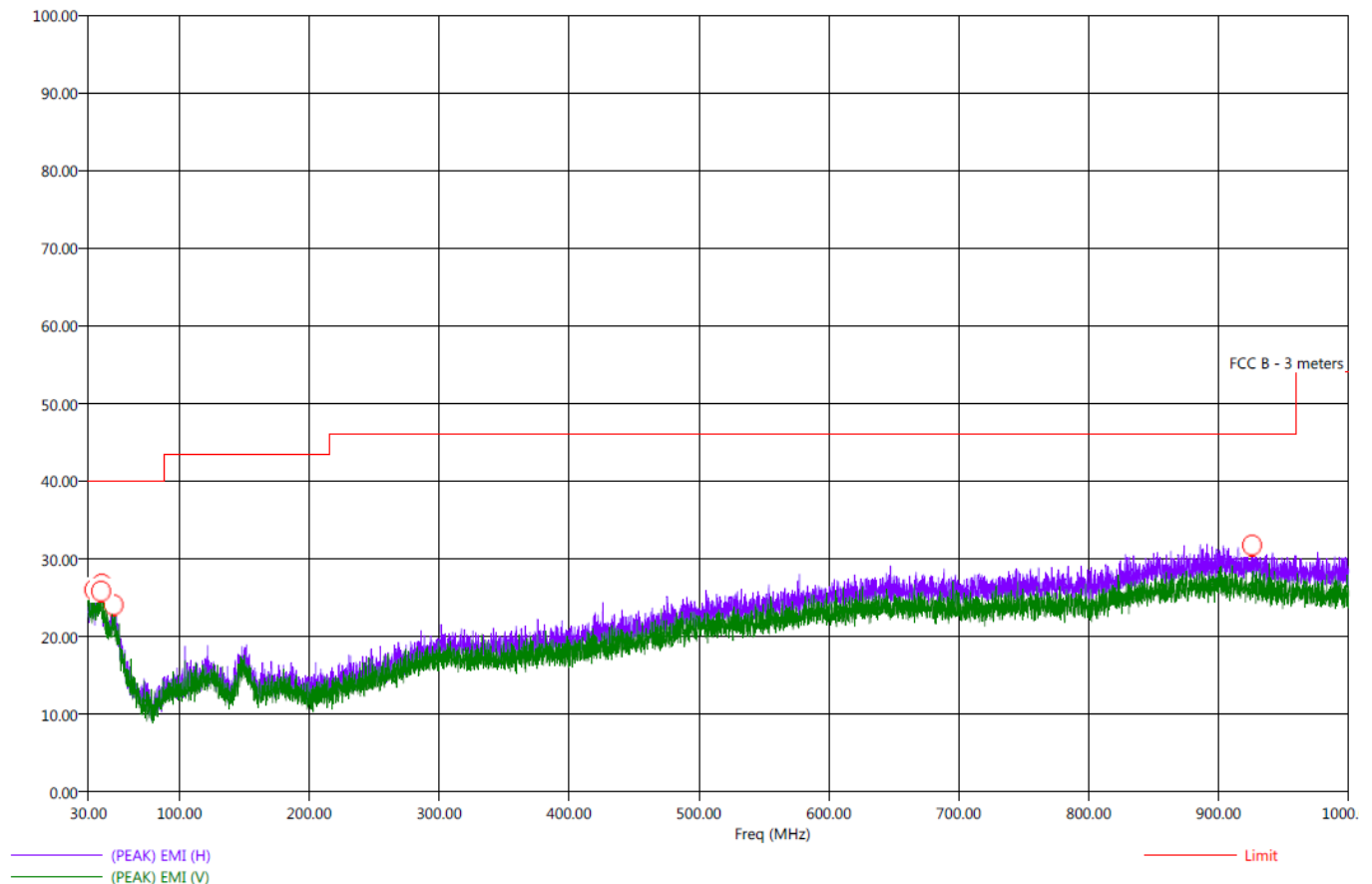
No additional spurious emissions found between

10 kHz - 30 MHz and 1 GHz - 25 GHz

1/14/2016 5:16:41

Sequence: Preliminary S

Pre-Scan - FCC Class B

Electric Field Strength (dB μ V/m)

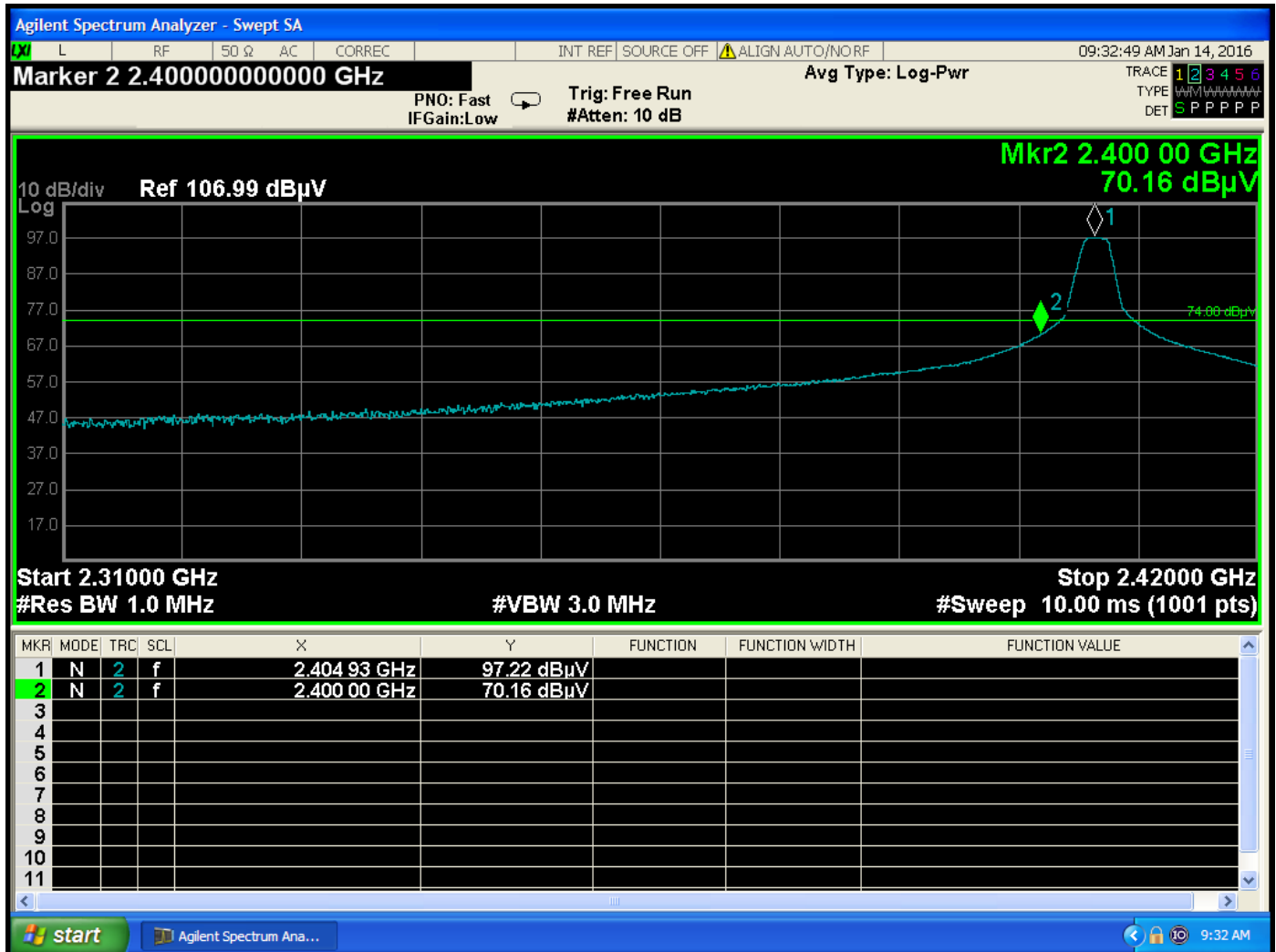
Title: Radiated Final - 30-1000 MHz - FCC Class B
File: Agilent - Radiated Final Scan - 30-1000 MHz - FCC Class B - LRC - X-Axis - 01-13-2016.set
Operator: Kyle Fujimoto
EUT Type: AMR-LRC
EUT Condition: The EUT is continuously transmitting - X-Axis Worst Case
Comments: Customer: SMK-Link Electronics
Model: RXT6000-4701F
S/N: N/A
Worst Case Axis
No additional spurious emissions found between
10 kHz - 30 MHz and 1 GHz - 25 GHz

1/14/2016 5:44:21 AM
Sequence: Final Measurements

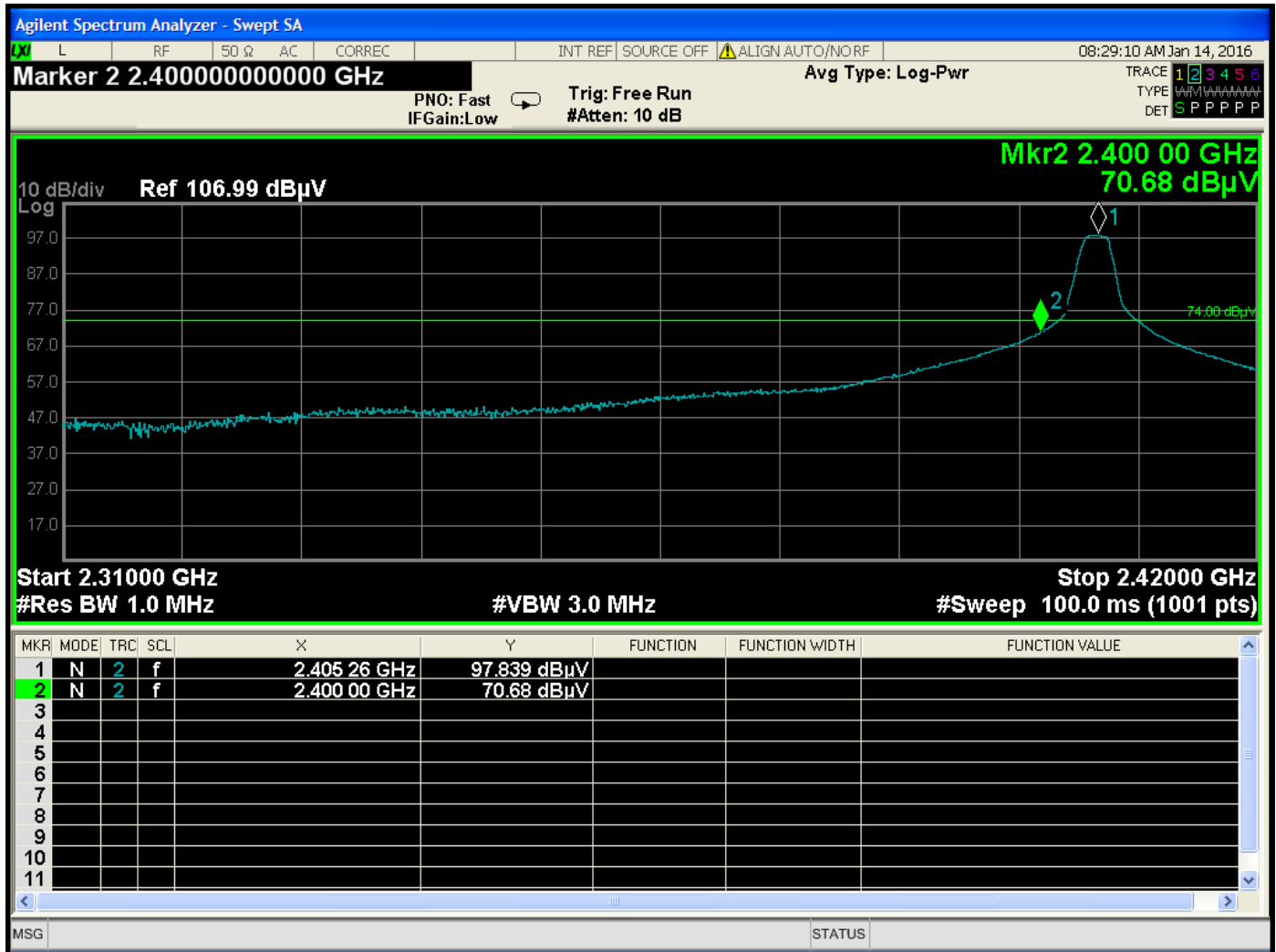
Final-Scan - FCC Class B

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)
34.50	H	27.12	22.06	-22.88	-27.94	50.00	24.27	0.39	110.25	370.08
37.00	H	26.55	22.53	-23.45	-27.47	50.00	24.71	0.41	204.25	193.19
39.80	V	27.40	23.21	-22.60	-26.79	50.00	25.36	0.43	176.25	193.01
40.30	V	26.87	22.78	-23.13	-27.22	50.00	24.99	0.43	125.25	209.55
49.50	H	24.44	20.29	-25.56	-29.71	50.00	22.42	0.50	285.50	193.19
925.80	H	31.42	27.30	-25.58	-29.70	57.00	26.43	2.68	163.50	209.31

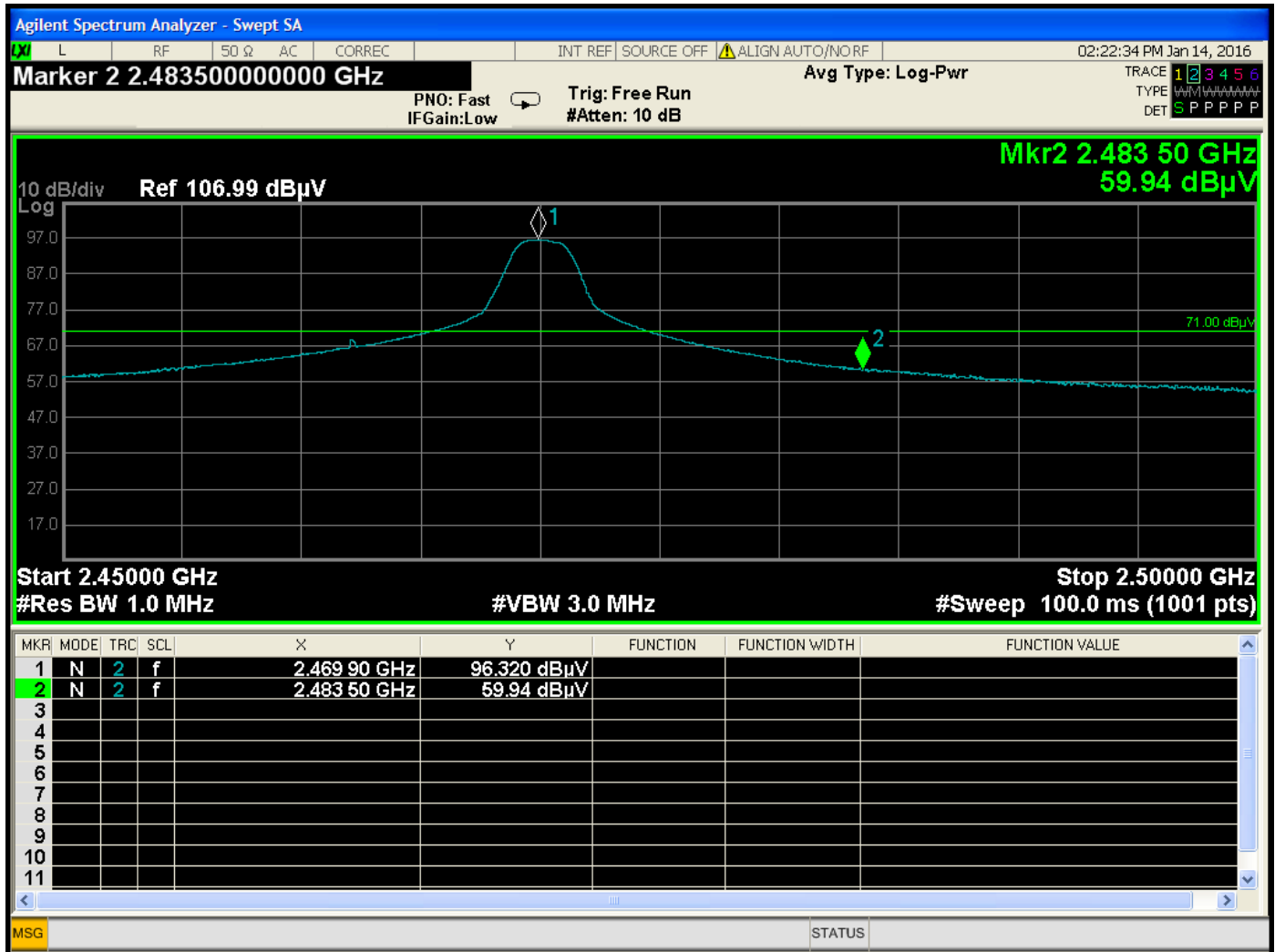




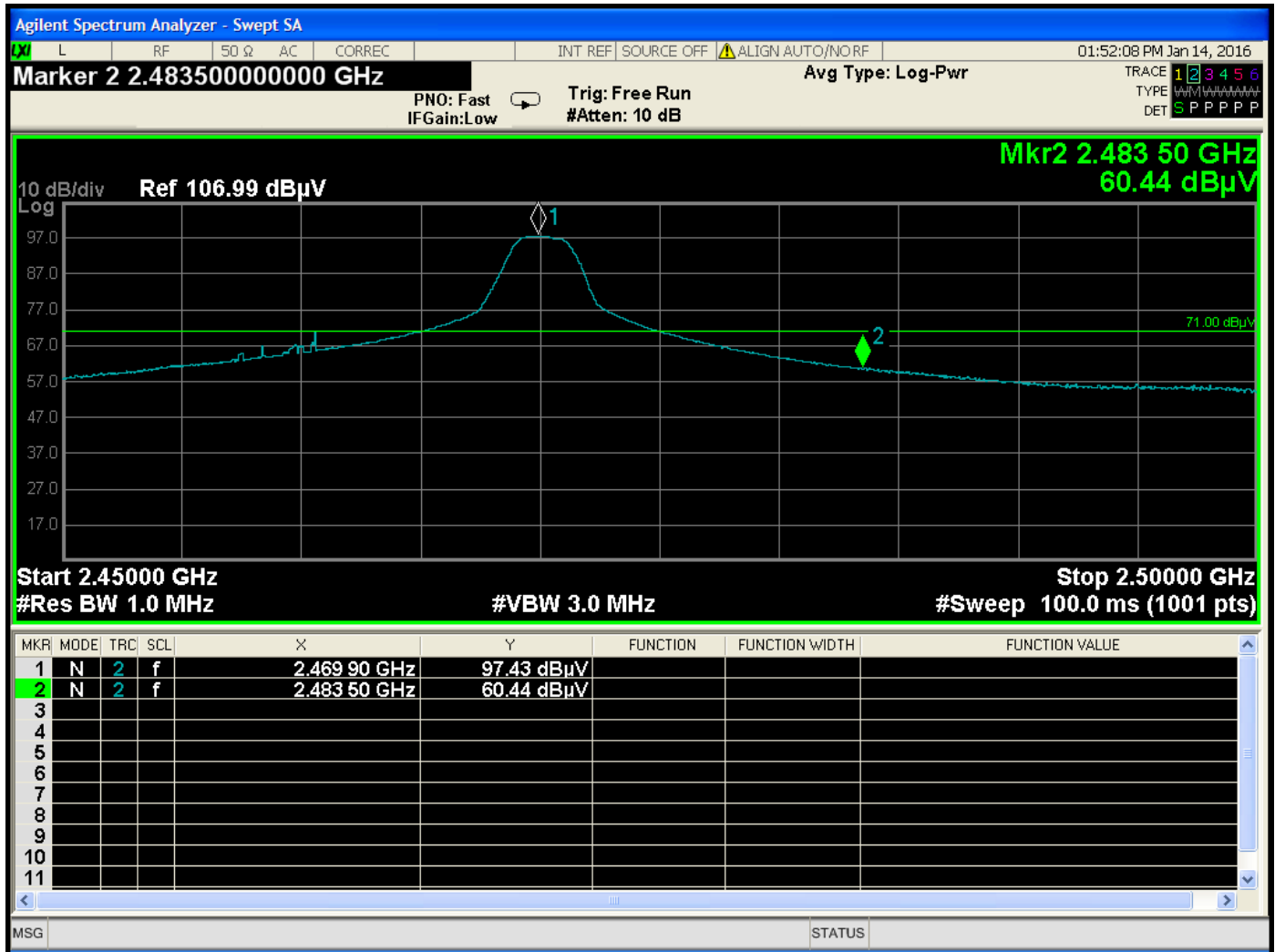
Band Edge – Low Channel – Vertical – Z-Axis



Band Edge – Low Channel – Horizontal – X-Axis



Band Edge – High Channel – Vertical – Z-Axis



Band Edge – High Channel – Horizontal – X-Axis