



Nemko Test Report: 2015_278957_FCC_15517 R4

Applicant: ABG Tag and Traq, Inc.
2300 Joe Ramsey Blvd E
Greenville, TX 75401
USA

**Equipment Under Test:
(E.U.T.)** Ultra-wideband Transmitter Module (MOD1UWB)

FCC Identifier: 2AAXVTNTMOD1

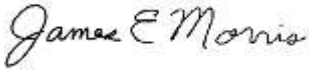
IC Identifier: 11400A-TNTMOD1

In Accordance With: **FCC Part 15, Subpart C, 15.517 and
Industry Canada RSS-220, Issue 1**
Technical requirements for indoor UWB systems

Tested By: Nemko USA, Inc.
2210 Faraday Ave. Ste 150
Carlsbad, CA 92008
USA

TESTED BY: 
David Light, Wireless Engineer

DATE: 19 October 2015

APPROVED BY: 
James Morris, EMC/Wireless
Manager

DATE: 19 October 9, 2015

Total Number of Pages: 33

Table of Contents

SECTION 1. SUMMARY OF TEST RESULTS	3
SECTION 2. GENERAL EQUIPMENT SPECIFICATION	5
SECTION 3. RADIATED EMISSIONS	6
SECTION 4. PEAK EMISSIONS	23
SECTION 5. DEFINITION OF UWB TRANSMITTER	25
SECTION 6. POWERLINE CONDUCTED EMISSIONS	30
SECTION 7. TEST EQUIPMENT LIST	32
ANNEX A TEST DIAGRAMS	33

Section 1. Summary Of Test Results

Manufacturer: ABG Tag and Traq

Model No.: MOD1UWB

Serial No.: None

General: **All measurements are traceable to national standards.**

These tests were conducted on a sample of the equipment for the purpose of demonstrating compliance with FCC Part 15, Subpart C, Paragraph 15.517 and Industry Canada RSS-220, Issue 1 for ultra wide band operation. All tests were conducted using measurement procedure ANSI C63.10-2013.



New Submission



Production Unit



Class II Permissive Change



Pre-Production Unit

THIS TEST REPORT RELATES ONLY TO THE ITEM(S) TESTED.

THE FOLLOWING DEVIATIONS FROM, ADDITIONS TO, OR EXCLUSIONS FROM THE TEST SPECIFICATIONS HAVE BEEN MADE. NONE
See " Summary of Test Data".



NVLAP Lab Code 200116-0

This report must not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government. Nemko USA, Inc. is a NVLAP accredited laboratory.

Nemko USA Inc. authorizes the above named company to reproduce this report provided it is reproduced in its entirety and for use by the company's employees only.

Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. Nemko USA Inc. accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report. This report applies only to the items tested.

Summary Of Test Data

NAME OF TEST	PARA. NO.	RESULT
Conducted Emissions	15.207 / RSS-Gen Para. 7.2.4	Complies
Definition of UWB	15.503(d) / RSS-220 Para. 2	Complies
Radiated Emissions	15.517(c) / RSS-220 Para 5.2.1(d)	Complies
Radiated Emissions	15.517(d) / RSS-220 Para. 5.2.1(e)	Complies
Peak Emission at f_M	15.517(e) / RSS-220 Annex 4(c)	Complies

Footnotes:

Section 2. General Equipment Specification

Frequency Range: 3.1 GHz to 4.46 GHz

Operating Frequency(ies) of Sample: 3.15-4 GHz or 3.48-4.46 GHz

Center Frequency: 3.5 GHz or 4.0 GHz

10 dB Occupied Bandwidth: 550 to 580 MHz

User Frequency Adjustment: None

Integral Antenna

Yes

No

**Description of Device Tested**

The model MOD1UWB Ultra-wideband transmitter module is intended for use with proximity detection and other related device applications

Section 3. Radiated Emissions

NAME OF TEST: Radiated Emissions	PARA. NO.: FCC 15.517(c)&(d) RSS-220 5.2.1(d)&(e)
TESTED BY: David Light	DATE: 27 February 2015

Test Results: Complies

Measurement Data: See attached table(s).

Maximizing Emission Levels:

The emissions were scanned from 30 MHz to 16000 MHz.

For measurements below 960 MHz the emissions were made using a PEAK detector
RBW=VBW=100 kHz.

For Frequency above 960 MHz and outside the below frequency bands, the emissions
were measured using RMS detector, RBW=1MHz, VBW=3MHz

For frequencies fall inside 1164-1240 and 1559-1610 MHz, the emissions were
measured using EMI RMS Detector, RBW = 1 KHz, VBW = 1 MHz

Spectrum Analyzer Settings:

Below 1000 MHz: RBW=VBW=100 kHz Peak detector

Above 1000 MHz: RBW=1 MHz VBW=3MHz RMS detector

GPS Bands: RBW=1 kHz VBW=1 MHz RMS detector

Equipment Used: 1036-877-E1029-1480-902

Measurement Uncertainty: +/-3.7 dB

Temperature: 21 °C

Relative Humidity: 48 %

Note: Noise floor readings were verified using a higher gain without the radios
transmitting.

FCC Limits below 960 MHz (15.209)

Frequency (MHz)	Field Strength Limits (microvolts/m)	Measuring RBW	Distance (Meters)
0.009-0.490	2400/F(kHz)	1 kHz	300
0.490-1.705	24000/F(kHz)	10 kHz	30
1.705-30.0	30	10 kHz	30
30-88	100	100 kHz	3
88-216	150	100 kHz	3
216-960	200	100 kHz	3

FCC Limits above 960 MHz (15.517)

Frequency (MHz)	E.I.R.P. (dBm)	Measuring RBW	Distance (Meters)
960-1610	-75.3	1 MHz	3
1610-1990	-53.3	1 MHz	3
1990-3100	-51.3	1 MHz	3
3100-10600	-41.3	1 MHz	3
Above 10600	-51.3	1 MHz	3
1164-1240	-85.3	1 kHz	3
1559-1610	-85.3	1 kHz	3

Industry Canada Limits below 960 MHz (RSS-220, Section 3.4)

Frequency (MHz)	Field Strength (Microvolts/m)	Measurement Distance (Metres)	E.i.r.p. (dBmW)
0.009-0.490	$2,400/F$ (F in kHz)	300	$10 \log (17.28 / F^2)$ (F in kHz)
0.490-1.705	$24,000/F$ (F in kHz)	30	$10 \log (17.28 / F^2)$ (F in kHz)
1.705-30	30	30	-45.7
30-88	100	3	-55.2
88-216	150	3	-51.7
216-960	200	3	-49.2

Industry Canada Limits Above 1 GHz (RSS-220, section 5.2.1(d))

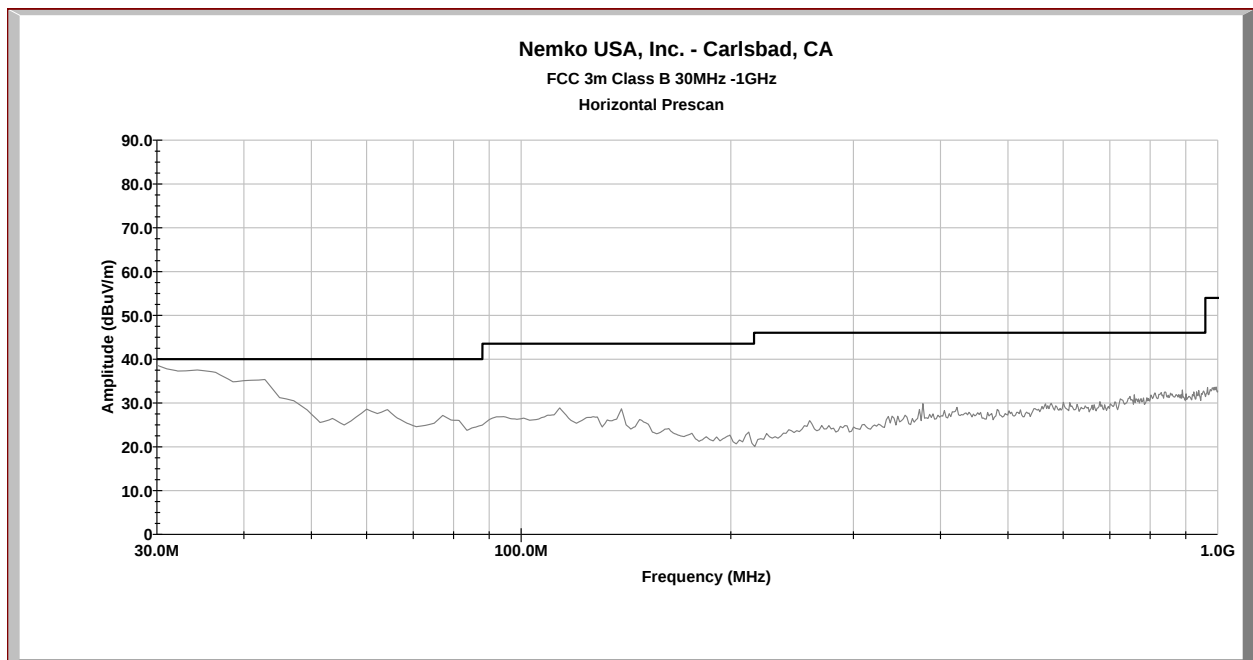
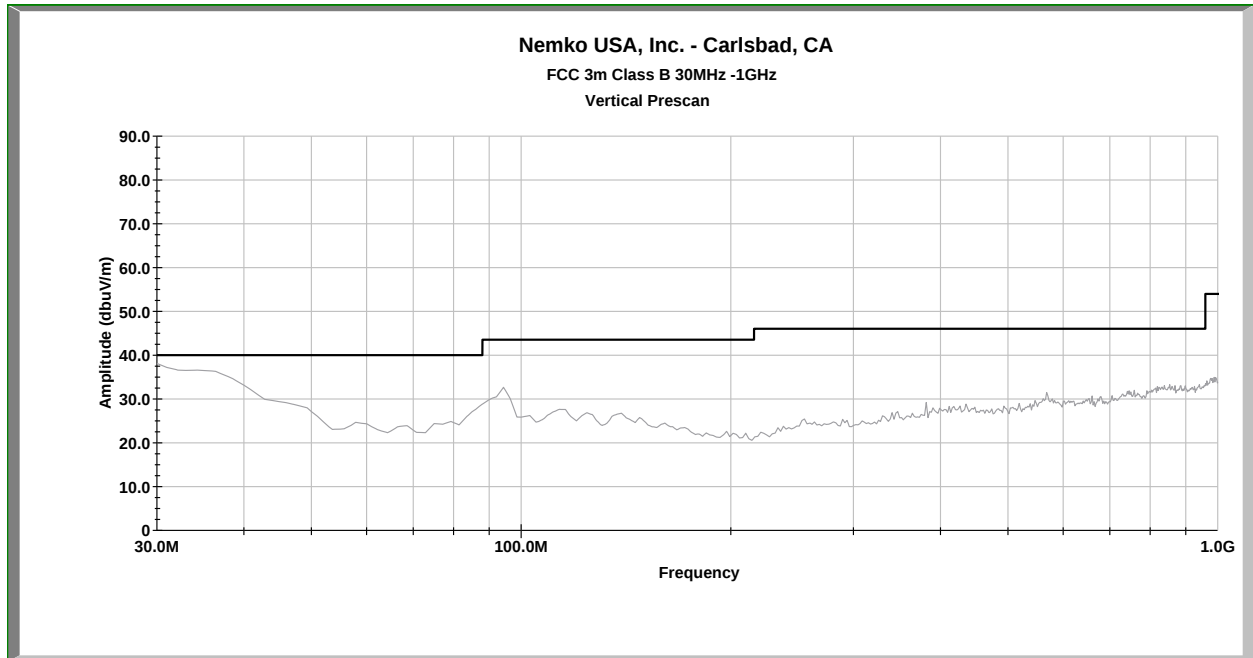
Indoor Communication, Measurement, Location Sensing and Tracking Devices	
Frequency	E.i.r.p. in a Resolution Bandwidth of 1 MHz
960-1 610 MHz	-75.3 dBm
1.61-4.75 GHz	-70.0 dBm
4.75-10.6 GHz	-41.3 dBm
Above 10.6 GHz	-51.3 dBm

Industry Canada Limits Above 1 GHz (RSS-220, section 5.2.1(e))

Frequency	E.i.r.p. in a Resolution Bandwidth of no less than 1 kHz
1 164-1 240 MHz	-85.3 dBm
1 559-1 610 MHz	-85.3 dBm

Test Data – Radiated Emissions

3.5 GHz Configuration



Test Data – Radiated Emissions

FCC Results above 960 MHz (15.517(c))

3.5 GHz Configuration

Meas. Freq. (MHz)	Ant. Pol. (H/V)	Atten. (dB)	Meter Reading (dBuV)	Antenna Factor (dB)	Path Loss (dB)	RF Gain (dB)	EIRP (dBm)	EIRP Limit (dBm)	CR/SL Diff. (dB)	Pass Fail Unc.	Comment
1000	V	-95.2	32.1	24.0	4.1	42.1	-77.1	-75.3	-1.8	Pass.	
1620	V	-95.2	32.0	25.8	4.7	43.0	-75.7	-53.3	-22.4	Pass	
2550	V	-95.2	29.5	28.7	5.8	44.2	-75.4	-51.3	-24.1	Pass	
7000	V	-95.2	26.1	35.1	9.5	45.1	-69.6	-41.3	-28.3	Pass	
16000	V	-95.2	24.3	37.6	14.2	44.2	-63.3	-51.3	-12.0	Pass	
1000	H	-95.2	32.0	24.0	4.1	42.1	-77.2	-75.3	-1.9	Pass.	
1620	H	-95.2	32.0	25.8	4.7	43.0	-75.7	-53.3	-22.4	Pass	
2550	H	-95.2	29.0	28.7	5.8	44.2	-75.9	-51.3	-24.6	Pass	
7000	H	-95.2	26.3	35.1	9.5	45.1	-69.4	-41.3	-28.1	Pass	
16000	H	-95.2	24.1	37.6	14.2	44.2	-63.5	-51.3	-12.2	Pass	

Industry Canada Limits Above 1 GHz (RSS-220, section 5.2.1(d))

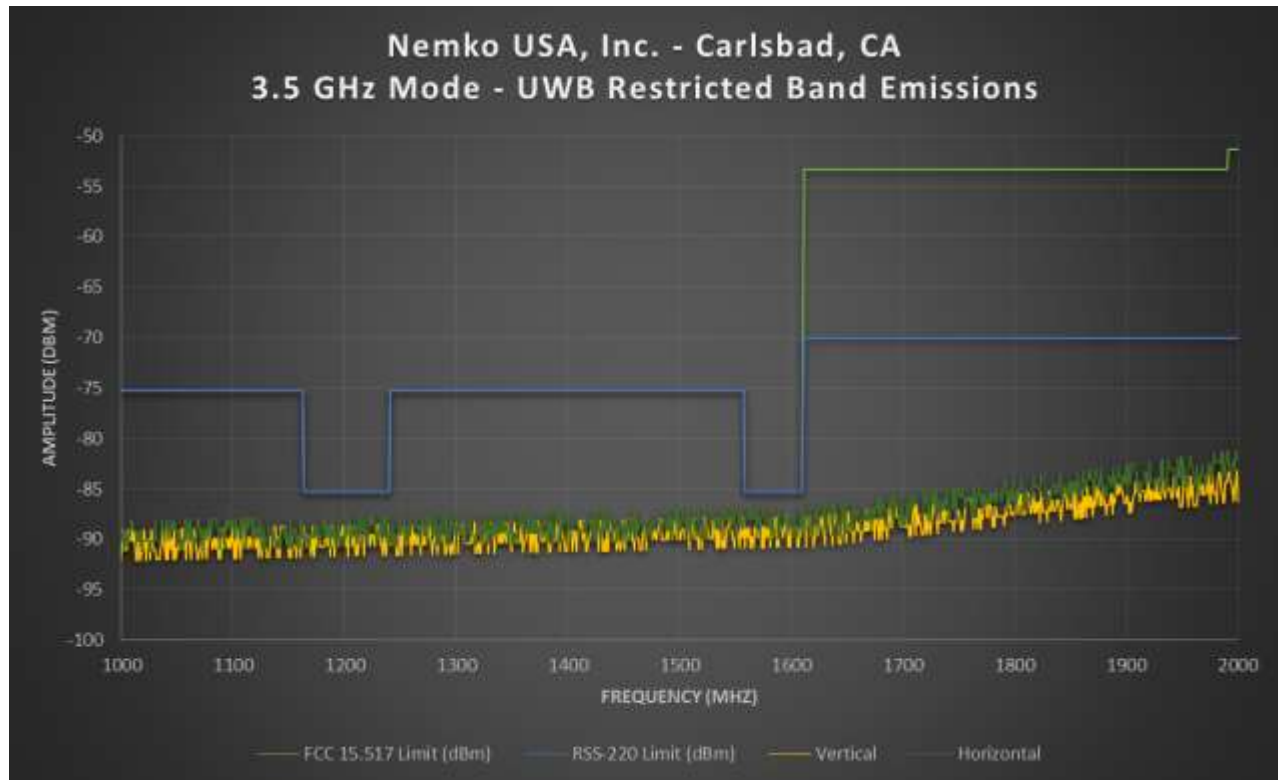
3.5 GHz Configuration

Meas. Freq. (MHz)	Ant. Pol. (H/V)	Atten. (dB)	Meter Reading (dBuV)	Antenna Factor (dB)	Path Loss (dB)	RF Gain (dB)	EIRP (dBm)	EIRP Limit (dBm)	CR/SL Diff. (dB)	Pass Fail Unc.	Comment
1000	V	-95.2	32.1	24.0	4.1	42.1	-77.1	-75.3	-1.8	Pass.	
1620	V	-95.2	32.0	25.8	4.7	43.0	-75.7	-70.0	-5.7	Pass	
2550	V	-95.2	29.5	28.7	5.8	44.2	-75.4	-70.0	-5.4	Pass	
7000	V	-95.2	26.1	35.1	9.5	45.1	-69.6	-41.3	-28.3	Pass	
16000	V	-95.2	24.3	37.6	14.2	44.2	-63.3	-51.3	-12.0	Pass	
1000	H	-95.2	32.0	24.0	4.1	42.1	-77.2	-75.3	-1.9	Pass.	
1620	H	-95.2	32.0	25.8	4.7	43.0	-75.7	-70.0	-5.7	Pass	
2550	H	-95.2	29.0	28.7	5.8	44.2	-75.9	-70.0	-5.9	Pass	
7000	H	-95.2	26.3	35.1	9.5	45.1	-69.4	-41.3	-28.1	Pass	
16000	H	-95.2	24.1	37.6	14.2	44.2	-63.5	-51.3	-12.2	Pass	

Test Data – Radiated Emissions

FCC & Industry Canada Results above 960 MHz (15.517(d) & RSS-220 5.2.1(e))

3.5 GHz Configuration



Test Data – Radiated Emissions

FCC & Industry Canada Results above 960 MHz (15.517(d) & RSS-220 5.2.1(e))

3.5 GHz Configuration

Freq (MHz)	15.517 Limit (dBm)	RSS-220 Limit (dBm)	Vertical Result (dBm)	Horizontal Result (dBm)	Diff Limit (V)	Diff Limit (H)	Result	Comments
1164	-85.3	-85.3	-88.73	-89.83	-3.43	-4.53	PASS	1kHz RBW
1165	-85.3	-85.3	-90.73	-89.83	-5.43	-4.53	PASS	1kHz RBW
1166	-85.3	-85.3	-89.73	-90.83	-4.43	-5.53	PASS	1kHz RBW
1167	-85.3	-85.3	-89.72	-89.82	-4.42	-4.52	PASS	1kHz RBW
1168	-85.3	-85.3	-89.72	-90.82	-4.42	-5.52	PASS	1kHz RBW
1169	-85.3	-85.3	-90.72	-89.82	-5.42	-4.52	PASS	1kHz RBW
1170	-85.3	-85.3	-91.72	-89.82	-6.42	-4.52	PASS	1kHz RBW
1171	-85.3	-85.3	-88.71	-89.81	-3.41	-4.51	PASS	1kHz RBW
1172	-85.3	-85.3	-90.71	-88.81	-5.41	-3.51	PASS	1kHz RBW
1173	-85.3	-85.3	-91.71	-88.81	-6.41	-3.51	PASS	1kHz RBW
1174	-85.3	-85.3	-89.71	-89.81	-4.41	-4.51	PASS	1kHz RBW
1175	-85.3	-85.3	-88.70	-88.80	-3.40	-3.50	PASS	1kHz RBW
1176	-85.3	-85.3	-90.70	-88.80	-5.40	-3.50	PASS	1kHz RBW
1177	-85.3	-85.3	-89.70	-90.80	-4.40	-5.50	PASS	1kHz RBW
1178	-85.3	-85.3	-89.70	-89.80	-4.40	-4.50	PASS	1kHz RBW
1179	-85.3	-85.3	-90.70	-89.80	-5.40	-4.50	PASS	1kHz RBW
1180	-85.3	-85.3	-90.69	-88.79	-5.39	-3.49	PASS	1kHz RBW
1181	-85.3	-85.3	-90.69	-87.79	-5.39	-2.49	PASS	1kHz RBW
1182	-85.3	-85.3	-90.69	-89.79	-5.39	-4.49	PASS	1kHz RBW
1183	-85.3	-85.3	-88.69	-87.79	-3.39	-2.49	PASS	1kHz RBW
1184	-85.3	-85.3	-89.68	-89.78	-4.38	-4.48	PASS	1kHz RBW
1185	-85.3	-85.3	-90.68	-88.78	-5.38	-3.48	PASS	1kHz RBW
1186	-85.3	-85.3	-88.68	-88.78	-3.38	-3.48	PASS	1kHz RBW
1187	-85.3	-85.3	-91.68	-90.78	-6.38	-5.48	PASS	1kHz RBW
1188	-85.3	-85.3	-88.68	-87.78	-3.38	-2.48	PASS	1kHz RBW
1189	-85.3	-85.3	-90.67	-89.77	-5.37	-4.47	PASS	1kHz RBW
1190	-85.3	-85.3	-88.67	-89.77	-3.37	-4.47	PASS	1kHz RBW
1191	-85.3	-85.3	-91.67	-88.77	-6.37	-3.47	PASS	1kHz RBW
1192	-85.3	-85.3	-90.67	-90.77	-5.37	-5.47	PASS	1kHz RBW
1193	-85.3	-85.3	-89.66	-90.76	-4.36	-5.46	PASS	1kHz RBW
1194	-85.3	-85.3	-90.66	-88.76	-5.36	-3.46	PASS	1kHz RBW
1195	-85.3	-85.3	-90.66	-88.76	-5.36	-3.46	PASS	1kHz RBW
1196	-85.3	-85.3	-90.66	-90.76	-5.36	-5.46	PASS	1kHz RBW
1197	-85.3	-85.3	-89.66	-89.76	-4.36	-4.46	PASS	1kHz RBW

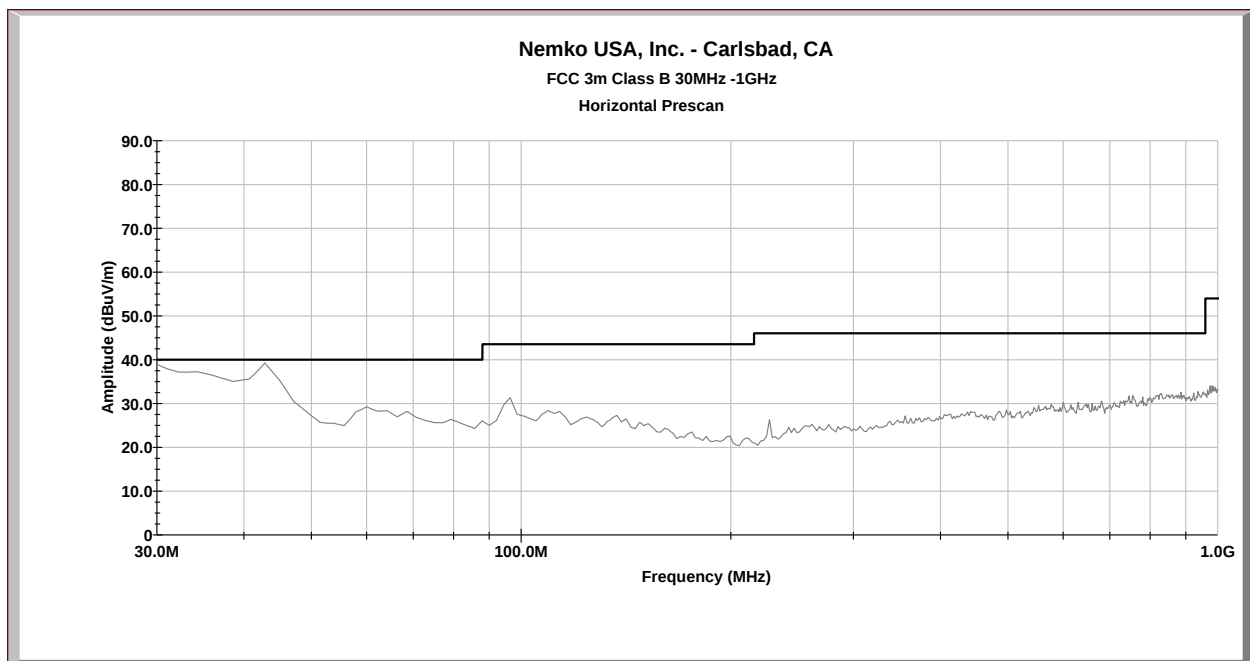
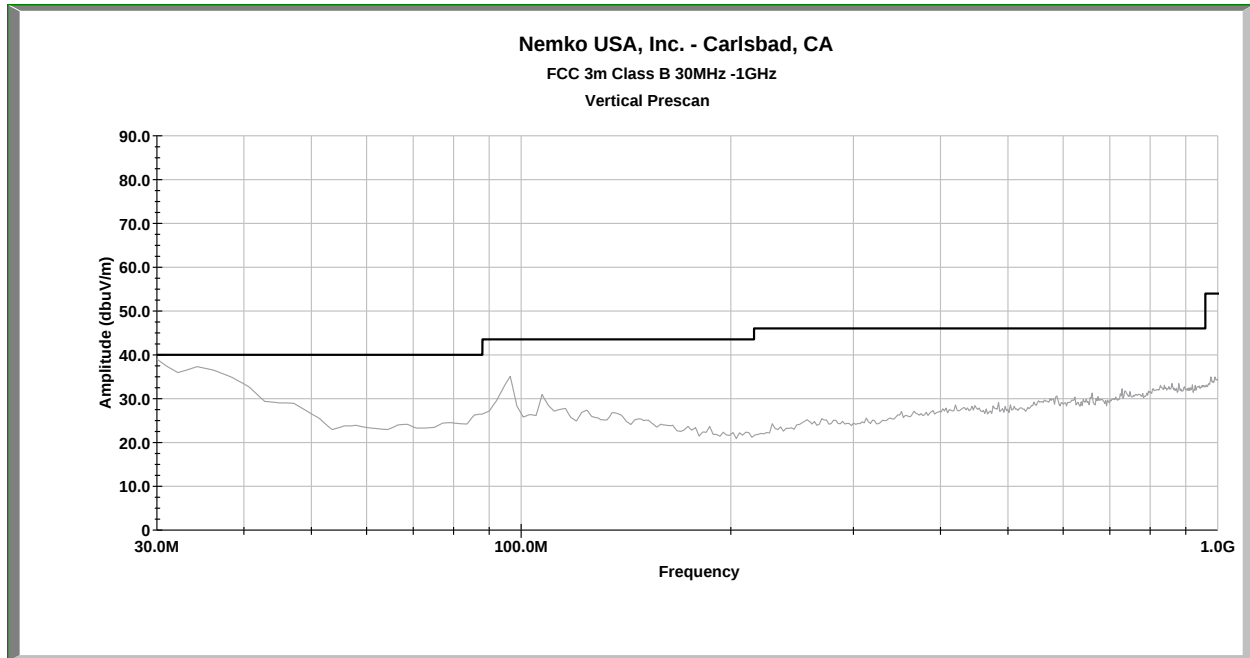
Freq (MHz)	15.517 Limit (dBm)	RSS-220 Limit (dBm)	Vertical Result (dBm)	Horizontal Result (dBm)	Diff Limit (V)	Diff Limit (H)	Result	Comments
1198	-85.3	-85.3	-88.65	-89.75	-3.35	-4.45	PASS	1kHz RBW
1199	-85.3	-85.3	-90.65	-90.75	-5.35	-5.45	PASS	1kHz RBW
1200	-85.3	-85.3	-90.65	-88.75	-5.35	-3.45	PASS	1kHz RBW
1201	-85.3	-85.3	-90.65	-89.75	-5.35	-4.45	PASS	1kHz RBW
1202	-85.3	-85.3	-89.64	-88.74	-4.34	-3.44	PASS	1kHz RBW
1203	-85.3	-85.3	-91.64	-87.74	-6.34	-2.44	PASS	1kHz RBW
1204	-85.3	-85.3	-88.64	-87.74	-3.34	-2.44	PASS	1kHz RBW
1205	-85.3	-85.3	-88.64	-90.74	-3.34	-5.44	PASS	1kHz RBW
1206	-85.3	-85.3	-89.63	-89.73	-4.33	-4.43	PASS	1kHz RBW
1207	-85.3	-85.3	-90.63	-88.73	-5.33	-3.43	PASS	1kHz RBW
1208	-85.3	-85.3	-89.63	-89.73	-4.33	-4.43	PASS	1kHz RBW
1209	-85.3	-85.3	-88.63	-88.73	-3.33	-3.43	PASS	1kHz RBW
1210	-85.3	-85.3	-91.63	-89.73	-6.33	-4.43	PASS	1kHz RBW
1211	-85.3	-85.3	-90.62	-88.72	-5.32	-3.42	PASS	1kHz RBW
1212	-85.3	-85.3	-91.62	-89.72	-6.32	-4.42	PASS	1kHz RBW
1213	-85.3	-85.3	-90.62	-88.72	-5.32	-3.42	PASS	1kHz RBW
1214	-85.3	-85.3	-89.62	-87.72	-4.32	-2.42	PASS	1kHz RBW
1215	-85.3	-85.3	-89.61	-90.71	-4.31	-5.41	PASS	1kHz RBW
1216	-85.3	-85.3	-89.61	-88.71	-4.31	-3.41	PASS	1kHz RBW
1217	-85.3	-85.3	-91.61	-87.71	-6.31	-2.41	PASS	1kHz RBW
1218	-85.3	-85.3	-89.61	-87.71	-4.31	-2.41	PASS	1kHz RBW
1219	-85.3	-85.3	-90.61	-90.71	-5.31	-5.41	PASS	1kHz RBW
1220	-85.3	-85.3	-90.60	-90.70	-5.30	-5.40	PASS	1kHz RBW
1221	-85.3	-85.3	-89.60	-89.70	-4.30	-4.40	PASS	1kHz RBW
1222	-85.3	-85.3	-89.60	-87.70	-4.30	-2.40	PASS	1kHz RBW
1223	-85.3	-85.3	-90.60	-87.70	-5.30	-2.40	PASS	1kHz RBW
1224	-85.3	-85.3	-89.59	-88.69	-4.29	-3.39	PASS	1kHz RBW
1225	-85.3	-85.3	-89.59	-87.69	-4.29	-2.39	PASS	1kHz RBW
1226	-85.3	-85.3	-89.59	-87.69	-4.29	-2.39	PASS	1kHz RBW
1227	-85.3	-85.3	-90.59	-88.69	-5.29	-3.39	PASS	1kHz RBW
1228	-85.3	-85.3	-89.59	-88.69	-4.29	-3.39	PASS	1kHz RBW
1229	-85.3	-85.3	-89.58	-90.68	-4.28	-5.38	PASS	1kHz RBW
1230	-85.3	-85.3	-88.58	-89.68	-3.28	-4.38	PASS	1kHz RBW
1231	-85.3	-85.3	-89.58	-88.68	-4.28	-3.38	PASS	1kHz RBW
1232	-85.3	-85.3	-90.58	-89.68	-5.28	-4.38	PASS	1kHz RBW
1233	-85.3	-85.3	-90.57	-87.67	-5.27	-2.37	PASS	1kHz RBW
1234	-85.3	-85.3	-91.57	-89.67	-6.27	-4.37	PASS	1kHz RBW

Freq (MHz)	15.517 Limit (dBm)	RSS-220 Limit (dBm)	Vertical Result (dBm)	Horizontal Result (dBm)	Diff Limit (V)	Diff Limit (H)	Result	Comments
1235	-85.3	-85.3	-89.57	-89.67	-4.27	-4.37	PASS	1kHz RBW
1236	-85.3	-85.3	-90.57	-87.67	-5.27	-2.37	PASS	1kHz RBW
1237	-85.3	-85.3	-91.56	-88.66	-6.26	-3.36	PASS	1kHz RBW
1238	-85.3	-85.3	-90.56	-87.66	-5.26	-2.36	PASS	1kHz RBW
1239	-85.3	-85.3	-88.56	-90.66	-3.26	-5.36	PASS	1kHz RBW
1240	-85.3	-85.3	-90.56	-89.66	-5.26	-4.36	PASS	1kHz RBW
1559	-85.3	-85.3	-90.84	-87.94	-5.54	-2.64	PASS	1kHz RBW
1560	-85.3	-85.3	-88.84	-87.94	-3.54	-2.64	PASS	1kHz RBW
1561	-85.3	-85.3	-89.83	-87.93	-4.53	-2.63	PASS	1kHz RBW
1562	-85.3	-85.3	-88.83	-86.93	-3.53	-1.63	PASS	1kHz RBW
1563	-85.3	-85.3	-90.83	-87.93	-5.53	-2.63	PASS	1kHz RBW
1564	-85.3	-85.3	-89.83	-86.93	-4.53	-1.63	PASS	1kHz RBW
1565	-85.3	-85.3	-89.82	-87.92	-4.52	-2.62	PASS	1kHz RBW
1566	-85.3	-85.3	-90.82	-86.92	-5.52	-1.62	PASS	1kHz RBW
1567	-85.3	-85.3	-88.82	-87.92	-3.52	-2.62	PASS	1kHz RBW
1568	-85.3	-85.3	-88.82	-87.92	-3.52	-2.62	PASS	1kHz RBW
1569	-85.3	-85.3	-88.82	-88.92	-3.52	-3.62	PASS	1kHz RBW
1570	-85.3	-85.3	-89.81	-86.91	-4.51	-1.61	PASS	1kHz RBW
1571	-85.3	-85.3	-89.81	-87.91	-4.51	-2.61	PASS	1kHz RBW
1572	-85.3	-85.3	-88.81	-89.91	-3.51	-4.61	PASS	1kHz RBW
1573	-85.3	-85.3	-88.81	-87.91	-3.51	-2.61	PASS	1kHz RBW
1574	-85.3	-85.3	-90.80	-87.90	-5.50	-2.60	PASS	1kHz RBW
1575	-85.3	-85.3	-88.80	-86.90	-3.50	-1.60	PASS	1kHz RBW
1576	-85.3	-85.3	-90.80	-86.90	-5.50	-1.60	PASS	1kHz RBW
1577	-85.3	-85.3	-88.80	-86.90	-3.50	-1.60	PASS	1kHz RBW
1578	-85.3	-85.3	-89.79	-88.89	-4.49	-3.59	PASS	1kHz RBW
1579	-85.3	-85.3	-88.79	-88.89	-3.49	-3.59	PASS	1kHz RBW
1580	-85.3	-85.3	-88.79	-87.89	-3.49	-2.59	PASS	1kHz RBW
1581	-85.3	-85.3	-90.79	-87.89	-5.49	-2.59	PASS	1kHz RBW
1582	-85.3	-85.3	-88.79	-89.89	-3.49	-4.59	PASS	1kHz RBW
1583	-85.3	-85.3	-89.78	-87.88	-4.48	-2.58	PASS	1kHz RBW
1584	-85.3	-85.3	-88.78	-88.88	-3.48	-3.58	PASS	1kHz RBW
1585	-85.3	-85.3	-88.78	-89.88	-3.48	-4.58	PASS	1kHz RBW
1586	-85.3	-85.3	-87.78	-89.88	-2.48	-4.58	PASS	1kHz RBW
1587	-85.3	-85.3	-90.77	-89.87	-5.47	-4.57	PASS	1kHz RBW
1588	-85.3	-85.3	-89.77	-89.87	-4.47	-4.57	PASS	1kHz RBW
1589	-85.3	-85.3	-90.77	-86.87	-5.47	-1.57	PASS	1kHz RBW

Freq (MHz)	15.517 Limit (dBm)	RSS-220 Limit (dBm)	Vertical Result (dBm)	Horizontal Result (dBm)	Diff Limit (V)	Diff Limit (H)	Result	Comments
1590	-85.3	-85.3	-88.77	-89.87	-3.47	-4.57	PASS	1kHz RBW
1591	-85.3	-85.3	-88.77	-88.87	-3.47	-3.57	PASS	1kHz RBW
1592	-85.3	-85.3	-88.76	-88.86	-3.46	-3.56	PASS	1kHz RBW
1593	-85.3	-85.3	-89.76	-88.86	-4.46	-3.56	PASS	1kHz RBW
1594	-85.3	-85.3	-88.76	-87.86	-3.46	-2.56	PASS	1kHz RBW
1595	-85.3	-85.3	-87.76	-87.86	-2.46	-2.56	PASS	1kHz RBW
1596	-85.3	-85.3	-87.75	-88.85	-2.45	-3.55	PASS	1kHz RBW
1597	-85.3	-85.3	-90.75	-87.85	-5.45	-2.55	PASS	1kHz RBW
1598	-85.3	-85.3	-89.75	-87.85	-4.45	-2.55	PASS	1kHz RBW
1599	-85.3	-85.3	-90.75	-88.85	-5.45	-3.55	PASS	1kHz RBW
1600	-85.3	-85.3	-88.75	-88.85	-3.45	-3.55	PASS	1kHz RBW
1601	-85.3	-85.3	-88.74	-88.84	-3.44	-3.54	PASS	1kHz RBW
1602	-85.3	-85.3	-88.74	-87.84	-3.44	-2.54	PASS	1kHz RBW
1603	-85.3	-85.3	-88.74	-89.84	-3.44	-4.54	PASS	1kHz RBW
1604	-85.3	-85.3	-88.74	-88.84	-3.44	-3.54	PASS	1kHz RBW
1605	-85.3	-85.3	-89.73	-89.83	-4.43	-4.53	PASS	1kHz RBW
1606	-85.3	-85.3	-90.73	-88.83	-5.43	-3.53	PASS	1kHz RBW
1607	-85.3	-85.3	-90.73	-88.83	-5.43	-3.53	PASS	1kHz RBW
1608	-85.3	-85.3	-88.73	-88.83	-3.43	-3.53	PASS	1kHz RBW
1609	-85.3	-85.3	-89.72	-86.82	-4.42	-1.52	PASS	1kHz RBW
1610	-85.3	-85.3	-89.72	-89.82	-4.42	-4.52	PASS	1kHz RBW

Test Data – Radiated Emissions

4.0 GHz Configuration



Test Data – Radiated Emissions

FCC Results above 960 MHz (15.517(c))

4.0 GHz Configuration

Meas. Freq. (MHz)	Ant. Pol. (H/V)	Atten. (dB)	Meter Reading (dBuV)	Antenna Factor (dB)	Path Loss (dB)	RF Gain (dB)	EIRP (dBm)	EIRP Limit (dBm)	CR/SL Diff. (dB)	Pass Fail Unc.	Comment
1000	V	-95.2	21.0	24.0	4.1	42.1	-88.2	-75.3	-12.9	Pass.	
1620	V	-95.2	32.0	25.8	4.7	43.0	-75.7	-53.3	-22.4	Pass	
2550	V	-95.2	29.0	28.7	5.8	44.2	-75.9	-51.3	-24.6	Pass	
7000	V	-95.2	26.0	35.1	9.5	45.1	-69.7	-41.3	-28.4	Pass	
16000	V	-95.2	24.0	37.6	14.2	44.2	-63.6	-51.3	-12.3	Pass	
1000	H	-95.2	21.0	24.0	4.1	42.1	-88.2	-75.3	-12.9	Pass.	
1620	H	-95.2	32.0	25.8	4.7	43.0	-75.7	-53.3	-22.4	Pass	
2550	H	-95.2	29.0	28.7	5.8	44.2	-75.9	-51.3	-24.6	Pass	
7000	H	-95.2	26.0	35.1	9.5	45.1	-69.7	-41.3	-28.4	Pass	
16000	H	-95.2	24.0	37.6	14.2	44.2	-63.6	-51.3	-12.3	Pass	

Industry Canada Limits Above 1 GHz (RSS-220, section 5.2.1(d))

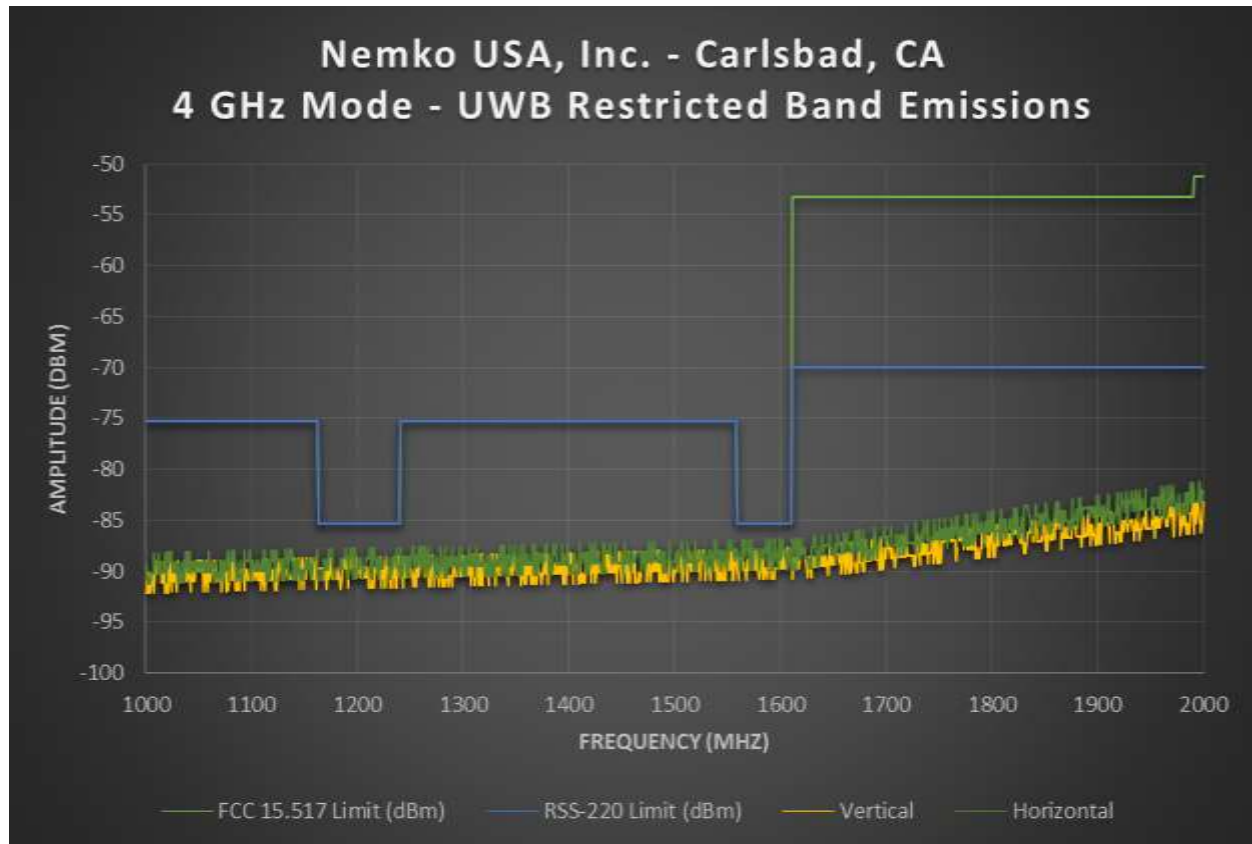
4.0 GHz Configuration

Meas. Freq. (MHz)	Ant. Pol. (H/V)	Atten. (dB)	Meter Reading (dBuV)	Antenna Factor (dB)	Path Loss (dB)	RF Gain (dB)	EIRP (dBm)	EIRP Limit (dBm)	CR/SL Diff. (dB)	Pass Fail Unc.	Comment
1000	V	-95.2	21.0	24.0	4.1	42.1	-88.2	-75.3	-12.9	Pass.	
1620	V	-95.2	32.0	25.8	4.7	43.0	-75.7	-70.0	-5.7	Pass	
2550	V	-95.2	29.0	28.7	5.8	44.2	-75.9	-70.0	-5.9	Pass	
7000	V	-95.2	26.0	35.1	9.5	45.1	-69.7	-41.3	-28.4	Pass	
16000	V	-95.2	24.0	37.6	14.2	44.2	-63.6	-51.3	-12.3	Pass	
1000	H	-95.2	21.0	24.0	4.1	42.1	-88.2	-75.3	-12.9	Pass.	
1620	H	-95.2	32.0	25.8	4.7	43.0	-75.7	-70.0	-5.7	Pass	
2550	H	-95.2	29.0	28.7	5.8	44.2	-75.9	-70.0	-5.9	Pass	
7000	H	-95.2	26.0	35.1	9.5	45.1	-69.7	-41.3	-28.4	Pass	
16000	H	-95.2	24.0	37.6	14.2	44.2	-63.6	-51.3	-12.3	Pass	

Test Data – Radiated Emissions

FCC & Industry Canada Results above 960 MHz (15.517(d) & RSS-220 5.2.1(e))

4 GHz Configuration



Test Data – Radiated Emissions

FCC & Industry Canada Results above 960 MHz (15.517(d) & RSS-220 5.2.1(e))

4 GHz Configuration

Freq (MHz)	15.517 Limit (dBm)	RSS-220 Limit (dBm)	Vertical Result (dBm)	Horizontal Result (dBm)	Diff Limit (V)	Diff Limit (H)	Result	Comments
1164	-85.3	-85.3	-89.73	-90.83	-4.43	-5.53	PASS	1kHz RBW
1165	-85.3	-85.3	-89.73	-90.83	-4.43	-5.53	PASS	1kHz RBW
1166	-85.3	-85.3	-89.73	-89.83	-4.43	-4.53	PASS	1kHz RBW
1167	-85.3	-85.3	-89.72	-90.82	-4.42	-5.52	PASS	1kHz RBW
1168	-85.3	-85.3	-90.72	-89.82	-5.42	-4.52	PASS	1kHz RBW
1169	-85.3	-85.3	-89.72	-88.82	-4.42	-3.52	PASS	1kHz RBW
1170	-85.3	-85.3	-89.72	-88.82	-4.42	-3.52	PASS	1kHz RBW
1171	-85.3	-85.3	-91.71	-89.81	-6.41	-4.51	PASS	1kHz RBW
1172	-85.3	-85.3	-89.71	-89.81	-4.41	-4.51	PASS	1kHz RBW
1173	-85.3	-85.3	-90.71	-87.81	-5.41	-2.51	PASS	1kHz RBW
1174	-85.3	-85.3	-89.71	-87.81	-4.41	-2.51	PASS	1kHz RBW
1175	-85.3	-85.3	-88.70	-87.80	-3.40	-2.50	PASS	1kHz RBW
1176	-85.3	-85.3	-89.70	-87.80	-4.40	-2.50	PASS	1kHz RBW
1177	-85.3	-85.3	-90.70	-89.80	-5.40	-4.50	PASS	1kHz RBW
1178	-85.3	-85.3	-90.70	-90.80	-5.40	-5.50	PASS	1kHz RBW
1179	-85.3	-85.3	-90.70	-89.80	-5.40	-4.50	PASS	1kHz RBW
1180	-85.3	-85.3	-89.69	-89.79	-4.39	-4.49	PASS	1kHz RBW
1181	-85.3	-85.3	-90.69	-89.79	-5.39	-4.49	PASS	1kHz RBW
1182	-85.3	-85.3	-89.69	-89.79	-4.39	-4.49	PASS	1kHz RBW
1183	-85.3	-85.3	-90.69	-89.79	-5.39	-4.49	PASS	1kHz RBW
1184	-85.3	-85.3	-91.68	-88.78	-6.38	-3.48	PASS	1kHz RBW
1185	-85.3	-85.3	-90.68	-89.78	-5.38	-4.48	PASS	1kHz RBW
1186	-85.3	-85.3	-90.68	-89.78	-5.38	-4.48	PASS	1kHz RBW
1187	-85.3	-85.3	-88.68	-88.78	-3.38	-3.48	PASS	1kHz RBW
1188	-85.3	-85.3	-88.68	-88.78	-3.38	-3.48	PASS	1kHz RBW
1189	-85.3	-85.3	-89.67	-87.77	-4.37	-2.47	PASS	1kHz RBW
1190	-85.3	-85.3	-88.67	-88.77	-3.37	-3.47	PASS	1kHz RBW
1191	-85.3	-85.3	-91.67	-89.77	-6.37	-4.47	PASS	1kHz RBW
1192	-85.3	-85.3	-90.67	-90.77	-5.37	-5.47	PASS	1kHz RBW
1193	-85.3	-85.3	-88.66	-88.76	-3.36	-3.46	PASS	1kHz RBW
1194	-85.3	-85.3	-89.66	-87.76	-4.36	-2.46	PASS	1kHz RBW
1195	-85.3	-85.3	-88.66	-87.76	-3.36	-2.46	PASS	1kHz RBW
1196	-85.3	-85.3	-90.66	-90.76	-5.36	-5.46	PASS	1kHz RBW
1197	-85.3	-85.3	-89.66	-90.76	-4.36	-5.46	PASS	1kHz RBW

Freq (MHz)	15.517 Limit (dBm)	RSS-220 Limit (dBm)	Vertical Result (dBm)	Horizontal Result (dBm)	Diff Limit (V)	Diff Limit (H)	Result	Comments
1198	-85.3	-85.3	-89.65	-87.75	-4.35	-2.45	PASS	1kHz RBW
1199	-85.3	-85.3	-88.65	-90.75	-3.35	-5.45	PASS	1kHz RBW
1200	-85.3	-85.3	-90.65	-89.75	-5.35	-4.45	PASS	1kHz RBW
1201	-85.3	-85.3	-89.65	-89.75	-4.35	-4.45	PASS	1kHz RBW
1202	-85.3	-85.3	-89.64	-88.74	-4.34	-3.44	PASS	1kHz RBW
1203	-85.3	-85.3	-90.64	-88.74	-5.34	-3.44	PASS	1kHz RBW
1204	-85.3	-85.3	-89.64	-88.74	-4.34	-3.44	PASS	1kHz RBW
1205	-85.3	-85.3	-90.64	-90.74	-5.34	-5.44	PASS	1kHz RBW
1206	-85.3	-85.3	-89.63	-89.73	-4.33	-4.43	PASS	1kHz RBW
1207	-85.3	-85.3	-90.63	-89.73	-5.33	-4.43	PASS	1kHz RBW
1208	-85.3	-85.3	-90.63	-88.73	-5.33	-3.43	PASS	1kHz RBW
1209	-85.3	-85.3	-90.63	-88.73	-5.33	-3.43	PASS	1kHz RBW
1210	-85.3	-85.3	-89.63	-88.73	-4.33	-3.43	PASS	1kHz RBW
1211	-85.3	-85.3	-91.62	-88.72	-6.32	-3.42	PASS	1kHz RBW
1212	-85.3	-85.3	-91.62	-87.72	-6.32	-2.42	PASS	1kHz RBW
1213	-85.3	-85.3	-91.62	-89.72	-6.32	-4.42	PASS	1kHz RBW
1214	-85.3	-85.3	-88.62	-90.72	-3.32	-5.42	PASS	1kHz RBW
1215	-85.3	-85.3	-89.61	-87.71	-4.31	-2.41	PASS	1kHz RBW
1216	-85.3	-85.3	-91.61	-87.71	-6.31	-2.41	PASS	1kHz RBW
1217	-85.3	-85.3	-89.61	-88.71	-4.31	-3.41	PASS	1kHz RBW
1218	-85.3	-85.3	-89.61	-89.71	-4.31	-4.41	PASS	1kHz RBW
1219	-85.3	-85.3	-89.61	-88.71	-4.31	-3.41	PASS	1kHz RBW
1220	-85.3	-85.3	-90.60	-90.70	-5.30	-5.40	PASS	1kHz RBW
1221	-85.3	-85.3	-90.60	-90.70	-5.30	-5.40	PASS	1kHz RBW
1222	-85.3	-85.3	-88.60	-88.70	-3.30	-3.40	PASS	1kHz RBW
1223	-85.3	-85.3	-91.60	-89.70	-6.30	-4.40	PASS	1kHz RBW
1224	-85.3	-85.3	-89.59	-89.69	-4.29	-4.39	PASS	1kHz RBW
1225	-85.3	-85.3	-90.59	-88.69	-5.29	-3.39	PASS	1kHz RBW
1226	-85.3	-85.3	-88.59	-88.69	-3.29	-3.39	PASS	1kHz RBW
1227	-85.3	-85.3	-91.59	-88.69	-6.29	-3.39	PASS	1kHz RBW
1228	-85.3	-85.3	-89.59	-88.69	-4.29	-3.39	PASS	1kHz RBW
1229	-85.3	-85.3	-89.58	-88.68	-4.28	-3.38	PASS	1kHz RBW
1230	-85.3	-85.3	-89.58	-89.68	-4.28	-4.38	PASS	1kHz RBW
1231	-85.3	-85.3	-91.58	-90.68	-6.28	-5.38	PASS	1kHz RBW
1232	-85.3	-85.3	-91.58	-89.68	-6.28	-4.38	PASS	1kHz RBW
1233	-85.3	-85.3	-90.57	-88.67	-5.27	-3.37	PASS	1kHz RBW
1234	-85.3	-85.3	-90.57	-89.67	-5.27	-4.37	PASS	1kHz RBW

Freq (MHz)	15.517 Limit (dBm)	RSS-220 Limit (dBm)	Vertical Result (dBm)	Horizontal Result (dBm)	Diff Limit (V)	Diff Limit (H)	Result	Comments
1235	-85.3	-85.3	-88.57	-88.67	-3.27	-3.37	PASS	1kHz RBW
1236	-85.3	-85.3	-91.57	-88.67	-6.27	-3.37	PASS	1kHz RBW
1237	-85.3	-85.3	-91.56	-87.66	-6.26	-2.36	PASS	1kHz RBW
1238	-85.3	-85.3	-90.56	-89.66	-5.26	-4.36	PASS	1kHz RBW
1239	-85.3	-85.3	-88.56	-89.66	-3.26	-4.36	PASS	1kHz RBW
1240	-85.3	-85.3	-88.56	-90.66	-3.26	-5.36	PASS	1kHz RBW
1559	-85.3	-85.3	-89.84	-87.94	-4.54	-2.64	PASS	1kHz RBW
1560	-85.3	-85.3	-90.84	-88.94	-5.54	-3.64	PASS	1kHz RBW
1561	-85.3	-85.3	-88.83	-88.93	-3.53	-3.63	PASS	1kHz RBW
1562	-85.3	-85.3	-88.83	-89.93	-3.53	-4.63	PASS	1kHz RBW
1563	-85.3	-85.3	-88.83	-88.93	-3.53	-3.63	PASS	1kHz RBW
1564	-85.3	-85.3	-87.83	-86.93	-2.53	-1.63	PASS	1kHz RBW
1565	-85.3	-85.3	-88.82	-86.92	-3.52	-1.62	PASS	1kHz RBW
1566	-85.3	-85.3	-89.82	-88.92	-4.52	-3.62	PASS	1kHz RBW
1567	-85.3	-85.3	-89.82	-87.92	-4.52	-2.62	PASS	1kHz RBW
1568	-85.3	-85.3	-90.82	-86.92	-5.52	-1.62	PASS	1kHz RBW
1569	-85.3	-85.3	-88.82	-87.92	-3.52	-2.62	PASS	1kHz RBW
1570	-85.3	-85.3	-89.81	-88.91	-4.51	-3.61	PASS	1kHz RBW
1571	-85.3	-85.3	-89.81	-89.91	-4.51	-4.61	PASS	1kHz RBW
1572	-85.3	-85.3	-89.81	-86.91	-4.51	-1.61	PASS	1kHz RBW
1573	-85.3	-85.3	-87.81	-86.91	-2.51	-1.61	PASS	1kHz RBW
1574	-85.3	-85.3	-87.80	-89.90	-2.50	-4.60	PASS	1kHz RBW
1575	-85.3	-85.3	-89.80	-87.90	-4.50	-2.60	PASS	1kHz RBW
1576	-85.3	-85.3	-88.80	-87.90	-3.50	-2.60	PASS	1kHz RBW
1577	-85.3	-85.3	-87.80	-87.90	-2.50	-2.60	PASS	1kHz RBW
1578	-85.3	-85.3	-89.79	-87.89	-4.49	-2.59	PASS	1kHz RBW
1579	-85.3	-85.3	-89.79	-87.89	-4.49	-2.59	PASS	1kHz RBW
1580	-85.3	-85.3	-90.79	-89.89	-5.49	-4.59	PASS	1kHz RBW
1581	-85.3	-85.3	-88.79	-88.89	-3.49	-3.59	PASS	1kHz RBW
1582	-85.3	-85.3	-88.79	-87.89	-3.49	-2.59	PASS	1kHz RBW
1583	-85.3	-85.3	-90.78	-87.88	-5.48	-2.58	PASS	1kHz RBW
1584	-85.3	-85.3	-88.78	-87.88	-3.48	-2.58	PASS	1kHz RBW
1585	-85.3	-85.3	-90.78	-88.88	-5.48	-3.58	PASS	1kHz RBW
1586	-85.3	-85.3	-89.78	-87.88	-4.48	-2.58	PASS	1kHz RBW
1587	-85.3	-85.3	-89.77	-86.87	-4.47	-1.57	PASS	1kHz RBW
1588	-85.3	-85.3	-90.77	-87.87	-5.47	-2.57	PASS	1kHz RBW
1589	-85.3	-85.3	-88.77	-89.87	-3.47	-4.57	PASS	1kHz RBW

Freq (MHz)	15.517 Limit (dBm)	RSS-220 Limit (dBm)	Vertical Result (dBm)	Horizontal Result (dBm)	Diff Limit (V)	Diff Limit (H)	Result	Comments
1590	-85.3	-85.3	-89.77	-87.87	-4.47	-2.57	PASS	1kHz RBW
1591	-85.3	-85.3	-87.77	-86.87	-2.47	-1.57	PASS	1kHz RBW
1592	-85.3	-85.3	-90.76	-89.86	-5.46	-4.56	PASS	1kHz RBW
1593	-85.3	-85.3	-90.76	-89.86	-5.46	-4.56	PASS	1kHz RBW
1594	-85.3	-85.3	-90.76	-87.86	-5.46	-2.56	PASS	1kHz RBW
1595	-85.3	-85.3	-89.76	-86.86	-4.46	-1.56	PASS	1kHz RBW
1596	-85.3	-85.3	-89.75	-87.85	-4.45	-2.55	PASS	1kHz RBW
1597	-85.3	-85.3	-89.75	-88.85	-4.45	-3.55	PASS	1kHz RBW
1598	-85.3	-85.3	-89.75	-89.85	-4.45	-4.55	PASS	1kHz RBW
1599	-85.3	-85.3	-89.75	-86.85	-4.45	-1.55	PASS	1kHz RBW
1600	-85.3	-85.3	-88.75	-88.85	-3.45	-3.55	PASS	1kHz RBW
1601	-85.3	-85.3	-89.74	-88.84	-4.44	-3.54	PASS	1kHz RBW
1602	-85.3	-85.3	-87.74	-86.84	-2.44	-1.54	PASS	1kHz RBW
1603	-85.3	-85.3	-89.74	-87.84	-4.44	-2.54	PASS	1kHz RBW
1604	-85.3	-85.3	-88.74	-87.84	-3.44	-2.54	PASS	1kHz RBW
1605	-85.3	-85.3	-89.73	-88.83	-4.43	-3.53	PASS	1kHz RBW
1606	-85.3	-85.3	-88.73	-89.83	-3.43	-4.53	PASS	1kHz RBW
1607	-85.3	-85.3	-87.73	-89.83	-2.43	-4.53	PASS	1kHz RBW
1608	-85.3	-85.3	-87.73	-87.83	-2.43	-2.53	PASS	1kHz RBW
1609	-85.3	-85.3	-88.72	-87.82	-3.42	-2.52	PASS	1kHz RBW
1610	-85.3	-85.3	-89.72	-89.82	-4.42	-4.52	PASS	1kHz RBW

Section 4. Peak Emissions

NAME OF TEST: Peak Emissions	PARA. NO.: FCC 15.517(e)
	RSS-220 Annex 4(c)
TESTED BY: David Light	DATE: 27 February 2015

Limits: There is a limit on the peak level of the emissions contained within a 50 MHz bandwidth centered on the frequency at which the highest radiated emission occurs, fM . That limit is 0 dBm EIRP. It is acceptable to employ a different resolution bandwidth, and a correspondingly different peak emission limit

Equipment Used: 1036-993-1783

Measurement Uncertainty: +/-1.7 dB

Temperature: 21 °C

Relative Humidity: 48 %

Test Data:**EIRP @ 3.5 GHz Configuration (50 MHz RBW limit adjusted to 10 MHz RBW)**

Meas.	Ant.	Atten.	Meter	Antenna	Path	RF	10 MHz	50 MHz	EIRP	CR/SL	Pass	
Freq.	Pol.		Reading	Factor	Loss	Gain	EIRP	EIRP	Limit	Diff.	Fail	Commen
(MHz)	(H/V)	(dB)	(dBuV)	(dB)	(dB)	(dB)	(dBm)	(dBm)	(dBm)	(dB)	Unc.	t
3500	V	-95.2	61.2	32.5	7.3	30.0	-24.2	-17.21	0	-10.2	Pass	
3500	H	-95.2	54.4	32.5	7.3	30.0	-31.0	-24.01	0	-17.0	Pass	

EIRP @ 4.0 GHz Configuration (50 MHz RBW limit adjusted to 10 MHz RBW)

Meas.	Ant.	Atten.	Meter	Antenna	Path	RF	10 MHz	50 MHz	EIRP	CR/SL	Pass	
Freq.	Pol.		Reading	Factor	Loss	Gain	EIRP	EIRP	Limit	Diff.	Fail	Commen
(MHz)	(H/V)	(dB)	(dBuV)	(dB)	(dB)	(dB)	(dBm)	(dBm)	(dBm)	(dB)	Unc.	t
4000	V	-95.2	69.3	32.5	7.3	30.0	-16.1	-9.11	0	-2.1	Pass	
4000	H	-95.2	60.0	32.5	7.3	30.0	-25.4	-18.41	0	-11.4	Pass	

The measurement was made using a RBW = 10 MHz and VBW = 10 MHz, Peak detector. The conversion method was used to adjust results to 50MHz RBW.

Nemko USA, Inc.

FCC PART 15, SUBPART C, Paragraph 15.517

Industry Canada RSS-220

Ultra Wide Band Operation

EQUIPMENT: MOD1UWB

Test Report No.: 2015_278957_FCC_15517 R4

Conversion factor for EIRP (10MHz to 50 MHz) = $(10 \cdot \log(10/50)) = + 7 \text{ dBm}$

Section 5. Definition of UWB Transmitter

NAME OF TEST: Definition of UWB Transmitter

PARA. NO.: FCC 15.503(d)

RSS-220 Para. 2

TESTED BY: David Light

DATE: 27 February 2015

Limits: *Ultra-wideband (UWB) transmitter.* An intentional radiator that, at any point in time, has a fractional bandwidth equal to or greater than 0.20 or has a UWB bandwidth equal to or greater than 500 MHz, regardless of the fractional bandwidth.

Equipment Used: 877-E1029

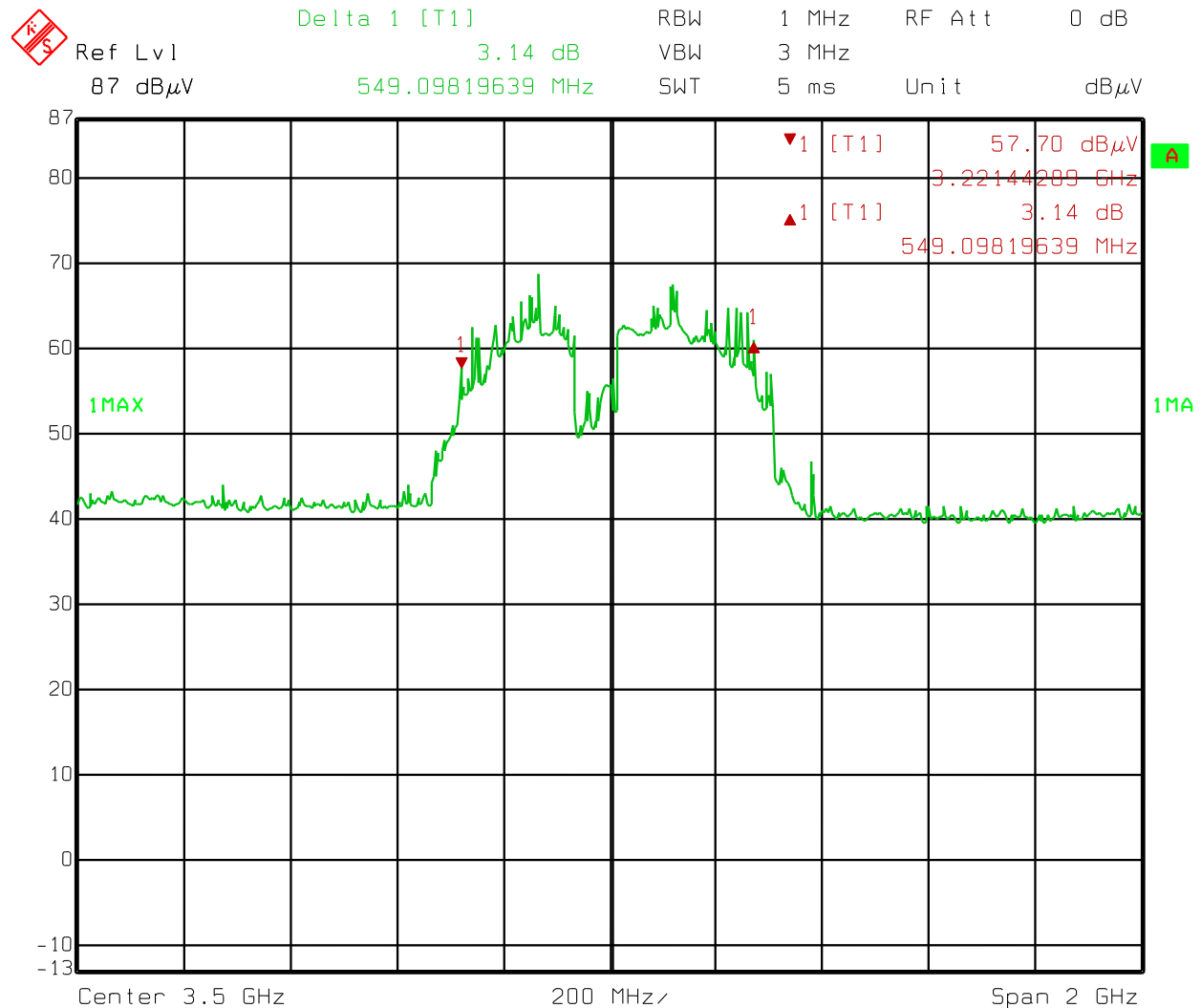
Measurement Uncertainty: +/-1.7 dB

Temperature: 21 °C

Relative Humidity: 48 %

Test Data

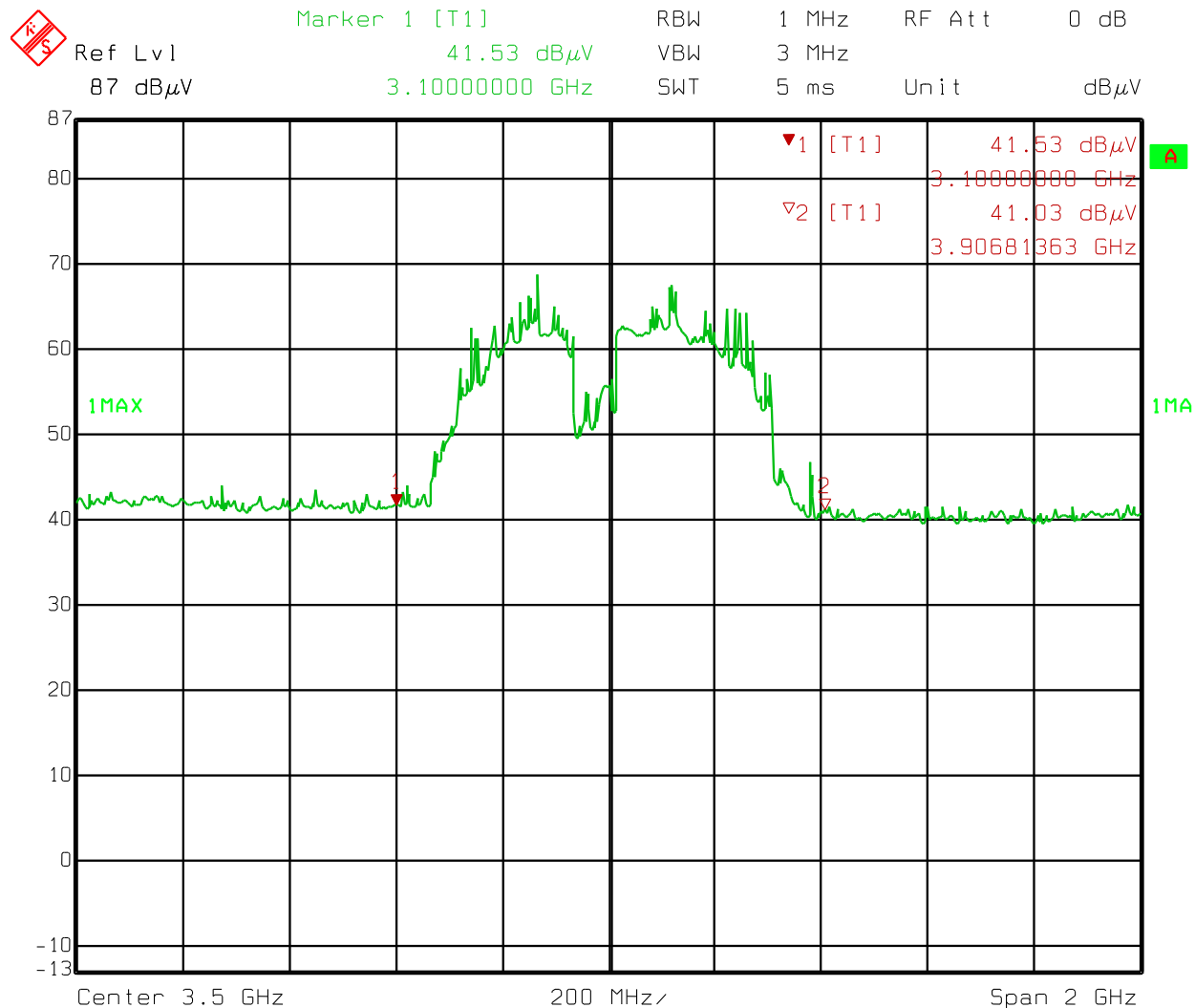
3.5 GHz Configuration



Date: 27.FEB.2015 11:25:25

EQUIPMENT: MOD1UWB

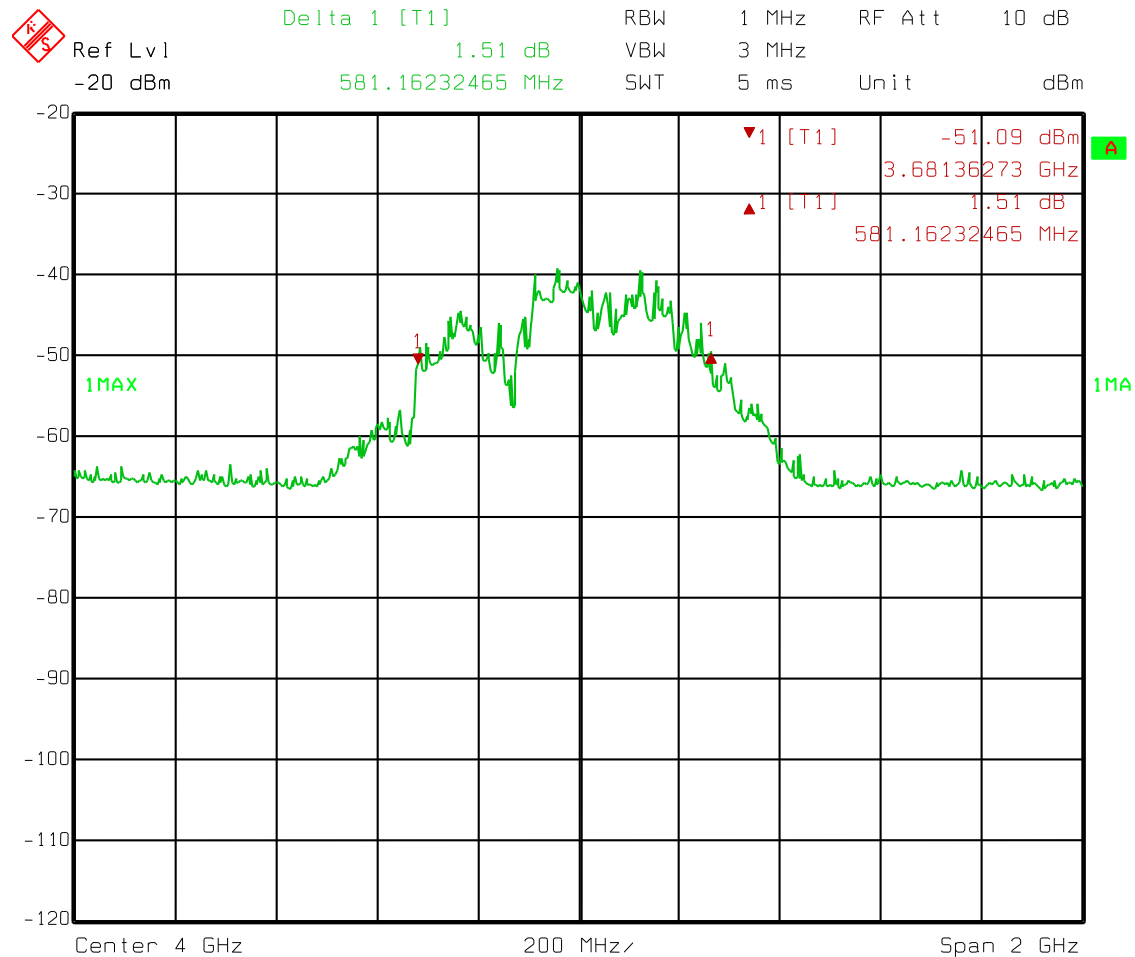
Test Report No.: 2015_278957_FCC_15517 R4



Date: 27.FEB.2015 11:26:07

Test Data

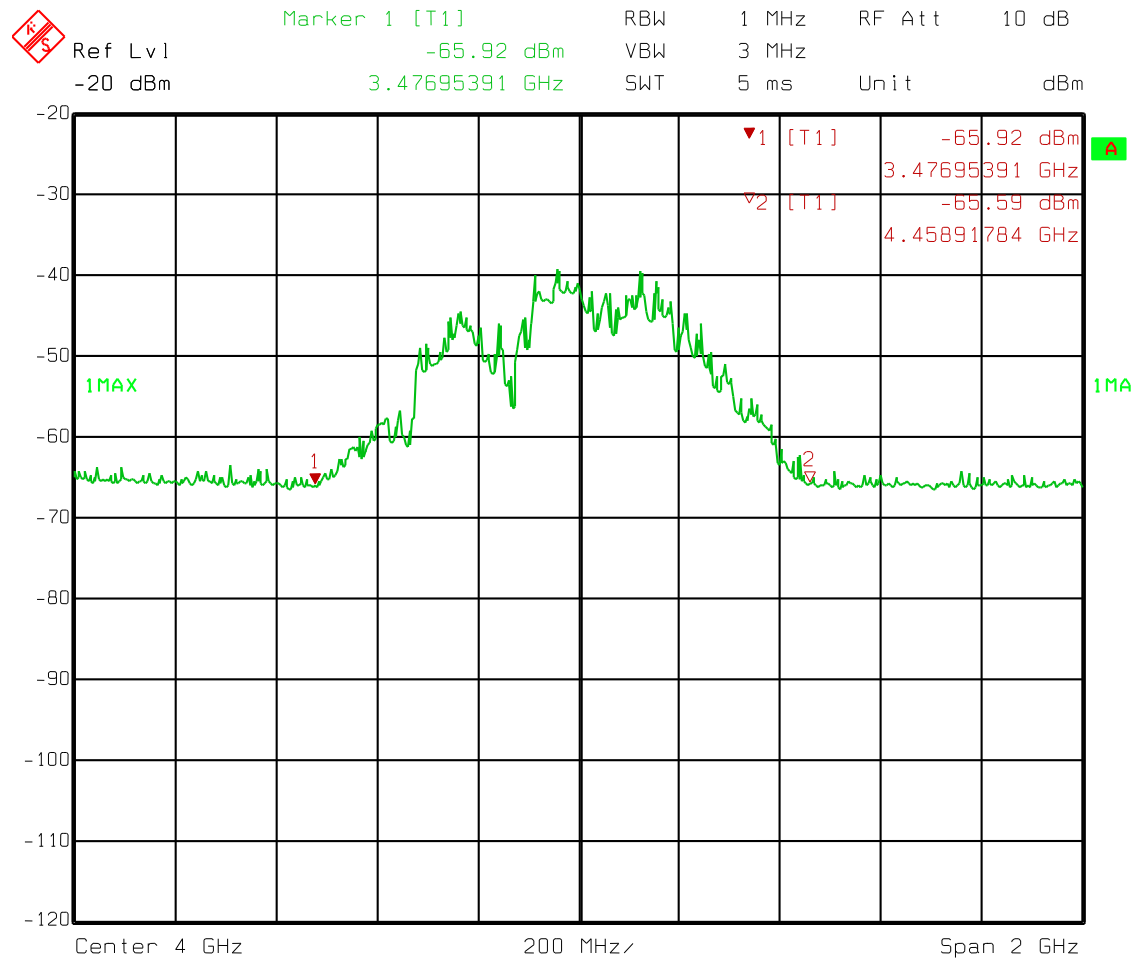
4.0 GHz Configuration



Date: 26.FEB.2015 15:41:48

EQUIPMENT: MOD1UWB

Test Report No.: 2015_278957_FCC_15517 R4



Date: 26.FEB.2015 15:42:17

Section 6. Powerline Conducted Emissions

NAME OF TEST: Powerline Conducted Emissions

PARA. NO.: 15.207(a)

TESTED BY: David Light

DATE: 27 February 2015

Test Results:

Complies. The worst case emission was 52.7 dB μ V at 163.1 kHz. This is 12.9 dB below the quasi-peak specification limit of 65.6 dB μ V.

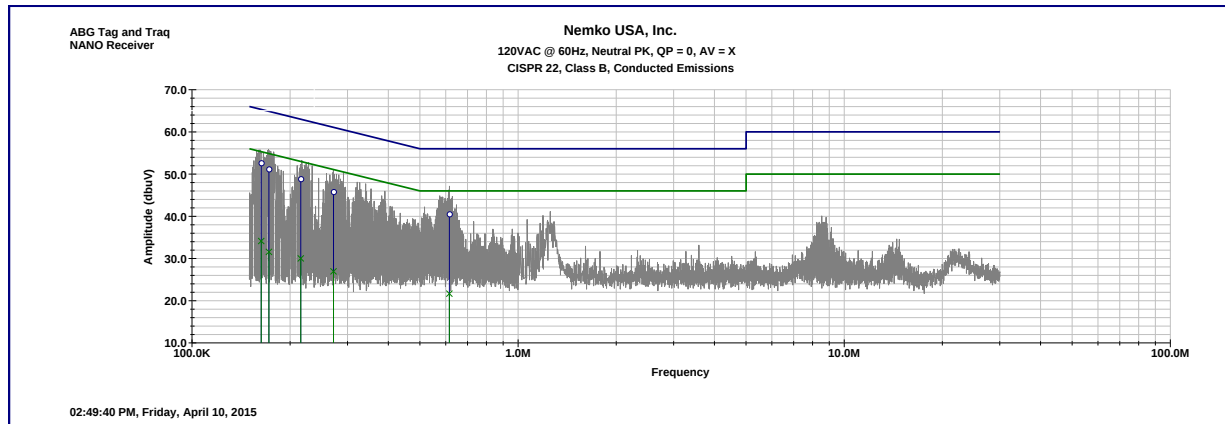
Test Data:

Refer to attached plots

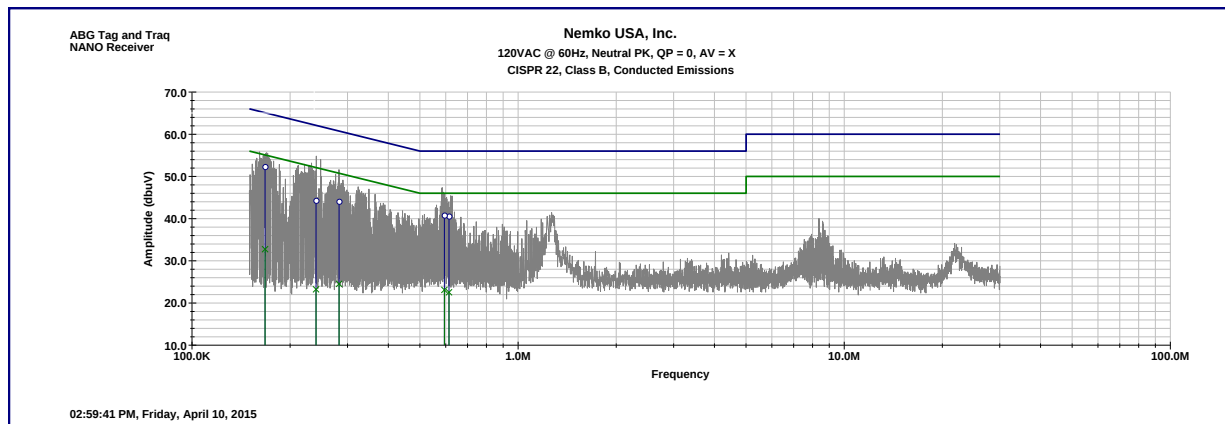
Equipment Used: E1026-E1029**Measurement Uncertainty:** +/- 1.7 dB**Temperature:** 22 °C**Relative Humidity:** 47 %

Test Data – Powerline Conducted Emissions

Line side



Neutral side



Section 7. Test Equipment List

Asset Tag	Description	Manufacturer	Model	Serial #	Last Cal	Next Cal
877	Antenna,	AH Systems	SAS-571	688	25-Nov-2014	25-Nov-2016
902	pre amp	Sonoma	310 N	185803	08-Aug-2014	08-Aug-2015
E1019	Two Line V- Network	Rohde & Schwarz	ENV216	101045	07-May-2014	07-May-2015
E1026	EMI Test Receiver 9kHz to 7GHz	Rohde & Schwarz	ESCI 7	100800	14-Aug-2014	14-Aug-2015
E1029	Preamplifier	A.H. Systems, Inc.	PAM-0118	343	12-Aug-2014	12-Aug-2015
1036	Spectrum Analyzer	Rohde & Schwartz	FSEK30	830844/006	15-Jul-2013	15-Jul-2015
1480	Antenna, Bilog	Schaffner- Chase	CBL6111C	2572	02-Apr-2014	02-Apr-2015

ANNEX A

TEST DIAGRAMS

Radiated Emissions

