CC 47 CFR PART 15 SUBPART C
INDUSTRY CANADA RSS 210

CIIPC CERTIFICATION TEST REPORT

FOR

4-BUTTON WIRELESS SECURITY REMOTE KEY FOB

MODEL NUMBER: WST-101

FCC ID: XQC-WST101
IC: 9863B-WST101

REPORT NUMBER: 11377729-E1V2

ISSUE DATE: 08/30/16

Prepared for
ECOLINK INTELLIGENT TECHNOLOGY
2055 CORTE DEL NOGAL
CARLSBAD, CA 92011, U.S.A

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NVLAP LAB CODE 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
V1	08/01/16	Initial Issue	-
V2	08/30/16	Added statement in Page 26 and Updated Section 7.2.	C. Vergonio

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: Econlink Intelligent Technology.
2055 CORTE DEL NOGAL
CARLSBAD CA 92011, USA

EUT DESCRIPTION: 4-BUTTON WIRELESS SECURITY REMOTE KEY FOB

MODEL: WST-101

Serial Number: Non-serialized production unit

DATE TESTED: July 28 – August 30, 2016

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
FCC PART 15 SUBPART C	Pass
INDUSTRY CANADA RSS-210 Issue 8, Annex 1	Pass
INDUSTRY CANADA RSS-GEN Issue 4	Pass

UL Verification Services Inc tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by UL Verification Services Inc. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL Verification Services Inc. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Verification Services Inc will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of any government.

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Prepared By:

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WISE LABORATORY ENGINEER
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2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.10-2013, FCC CFR 47 Part 2, FCC CFR 47 Part 15, RSS-GEN Issue 4, and RSS-210 Issue 8.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 Benicia Street, Fremont, California, USA.

The test sites and measurement facilities used to collect data are located at 47173 and 47266 Benicia Street, Fremont, California, USA. Line conducted emissions are measured only at the 47173 address. The following table identifies which facilities were utilized for radiated emission measurements documented in this report. Specific facilities are also identified in the test results sections.

47173 Benicia Street	47266 Benicia Street
☒ Chamber A	☐ Chamber D
☒ Chamber B	☐ Chamber E
☐ Chamber C	☐ Chamber F

UL Verification Services Inc. is accredited by NVLAP, Laboratory Code 200065-0. The full scope of accreditation can be viewed at http://ts.nist.gov/standards/scopes/2000650.htm.

Chambers A through H are covered under Industry Canada company address code 2324B with site numbers 2324B -1 through 2324B-8, respectively.

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB)

36.5 dBuV + 18.7 dB/m + 0.6 dB – 26.9 dB = 28.9 dBuV/m

4.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER	UNCERTAINTY
Conducted Disturbance, 0.15 to 30 MHz	3.52 dB
Radiated Disturbance, 9KHz to 30 MHz	2.14 dB
Radiated Disturbance, 30 to 1000 MHz	4.98 dB
Radiated Disturbance,1000 to 6000 MHz	3.86 dB
Radiated Disturbance,6000 to 18000 MHz	4.23 dB
Radiated Disturbance,18000 to 26000 MHz	5.30 dB
Radiated Disturbance,26000 to 40000 MHz	5.23 dB

Uncertainty figures are valid to a confidence level of 95%.

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is a Wireless Security Remote Key Fob. The EUT operates from a 3VDC, internal CR2032 battery.

5.2. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes an internal, loop antenna, with a maximum gain of -15 dBi.

5.3. SOFTWARE AND FIRMWARE

Not Applicable. The manufacturer configured a sample of the device to constantly transmit and a sample to operate as intended when normally operated.

5.4. WORST-CASE CONFIGURATION AND MODE

The EUT has only one channel (319.5MHz) and after preliminary testing it was determined that the X axis was the worst case configuration.

5.5. MODIFICATIONS

No modifications were made during testing.

5.6. DESCRIPTION OF CLASS II PERMISSIVE CHANGE

The purpose of this C2PC:

1. PCB with dome switches and new RF running component values.

5.7. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

NONE

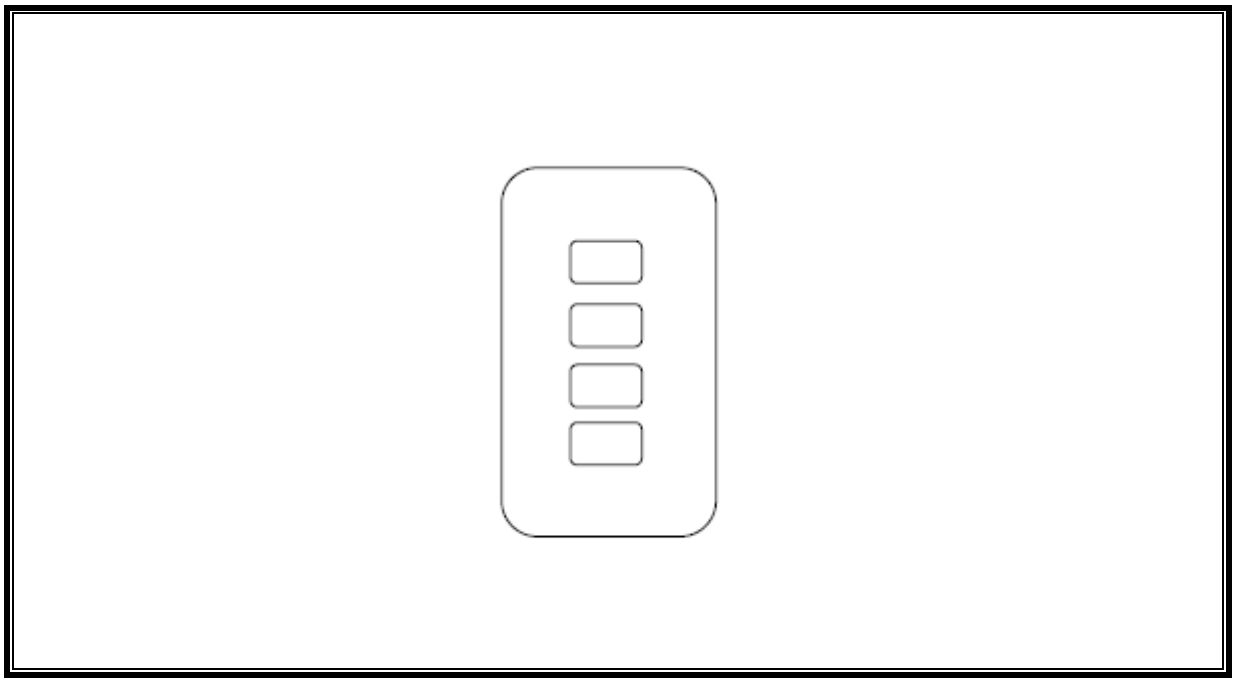
I/O CABLES

NONE

TEST SETUP

The EUT was tested as a standalone device.

SETUP DIAGRAM FOR TESTS



6. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

Test Equipment List				
Description	**Manufacturer**	**Model**	**Asset**	**Cal Due**
Antenna, Biconolog, 30MHz-1GHz	Sunol Sciences	JB3	T899	05/26/17
Antenna, Horn, 18GHz	ETS Lindgren	3117	T346	02/22/17
Antenna, Loop, 30 MHz	ETS Lindgren	80465	T35	03/24/17
Preamplifier, 10kHz to 1GHz	Sonoma	310	T300	11/05/16
Preamplifier, 26.5 GHz	Agilent / HP	8449B	C01052	10/22/16
PXA Signal Analyzer, 44 GHz	Keysight	N9030A	N/A	12/21/16
PXA Signal Analyzer, 44 GHz	Keysight	N9030A	T908	04/13/17

Test Software List			
Description	**Manufacturer**	**Model**	**Version**
Radiated Software	UL	UL EMC	Ver 9.5, Apr 26, 2016

7. ANTENNA PORT TEST RESULTS

7.1. DUTY CYCLE

LIMITS

FCC §15.35 (c)
The measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum value. The exact method of calculating the average field strength shall be submitted with any application for certification or shall be retained in the measurement data file for equipment subject to notification or verification.

TEST PROCEDURE

The transmitter output is connected to a spectrum analyzer or radiated field strength. The RBW is set to 1MHz and the VBW is set to 1MHz. The sweep time is coupled and the span is set to 0 Hz. The number of pulses is measured and calculated in a 100 ms scan.

CALCULATION

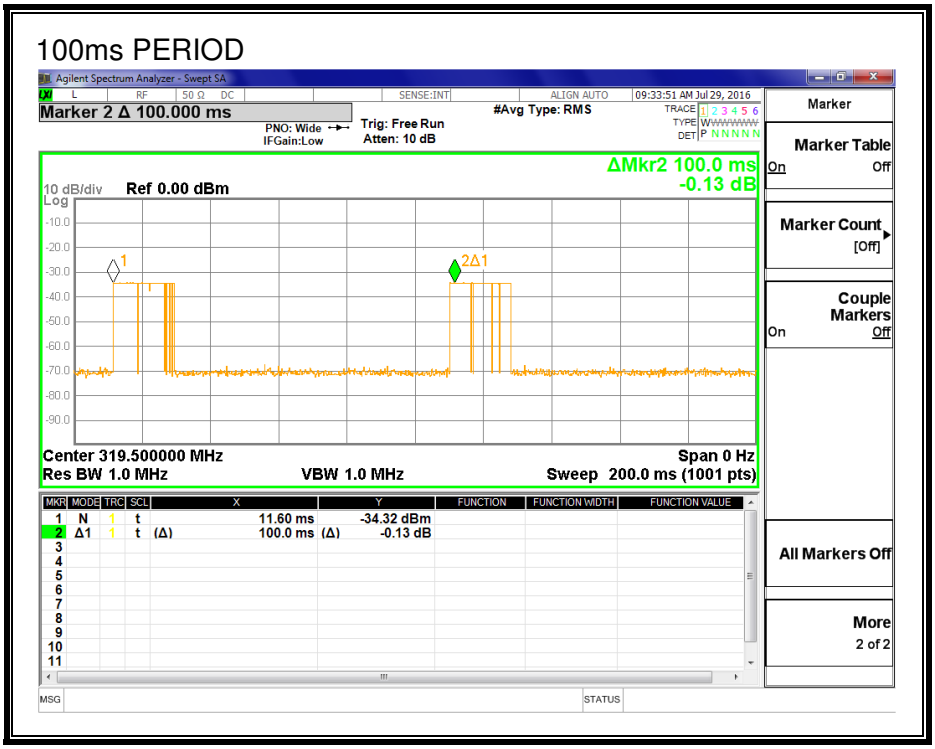
Average Reading = Peak Reading (dBuV/m) + 20log (Duty Cycle), Where Duty Cycle is (# of 1^{st} pulses* 1^{st} pulses width) + (# of 2^{nd} pulses* 2^{nd} pulses width) + (# of 3^{rd} pulses* 3^{rd} pulses width) + (# of 4^{th} pulses* 4^{th} pulses width) / 100 or T

RESULTS

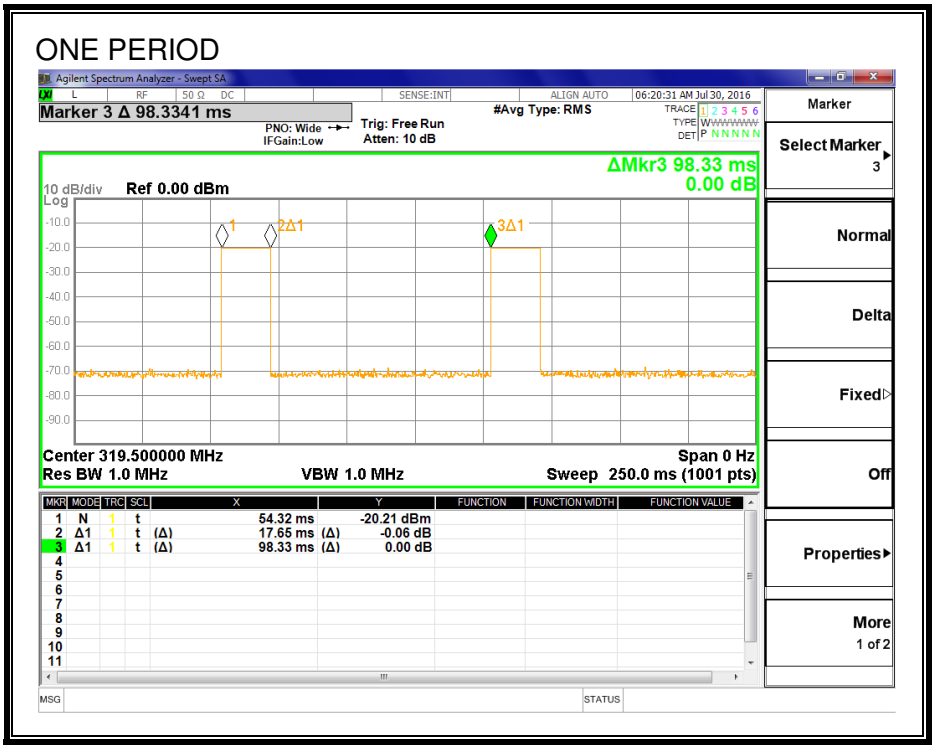
No non-compliance noted:

One Period (ms)	1st Width (ms)	# of 1st Pulses	2nd Width (ms)	# of 2nd Pulses	3rd Width (ms)	# of 3rd Pulses	4th Width (ms)	# of 4th Pulses	Duty Cycle	20*Log Duty (dB)
100	0.9517	2	0.12	60	0.48	1	0.11	1	0.097	-20.27

100ms PERIOD

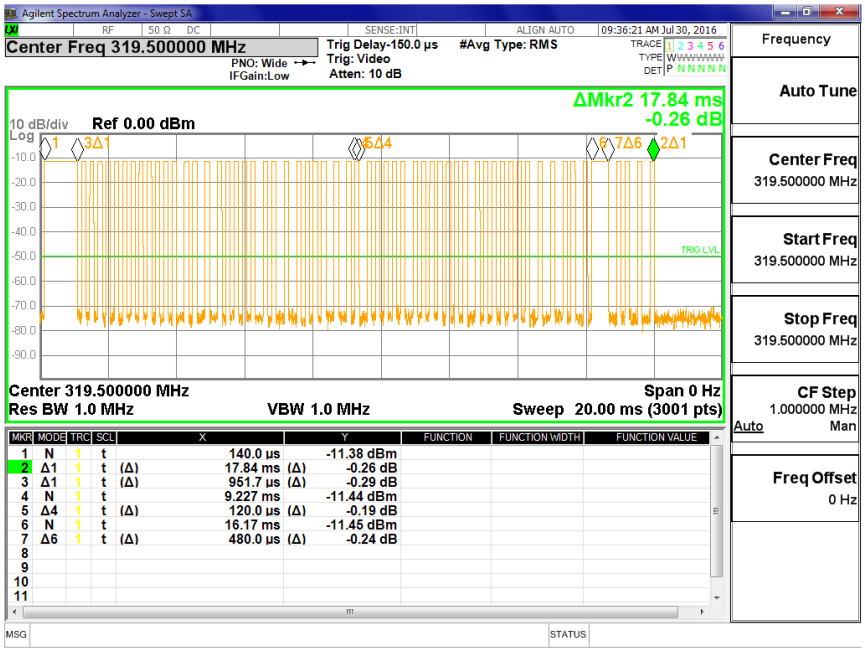


ONE PERIOD



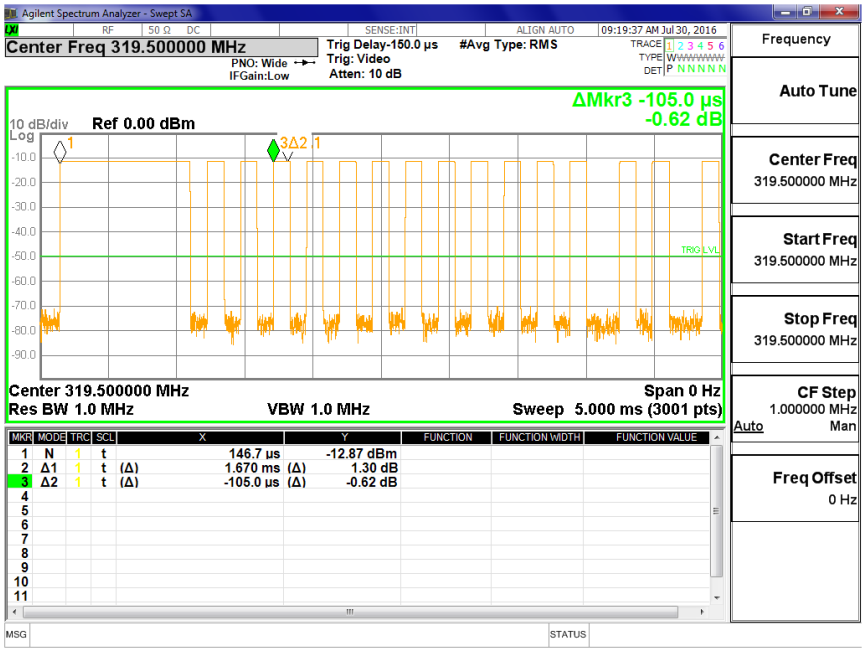
1st, 2nd and 3rd PULSE WIDTH

PULSE WIDTH



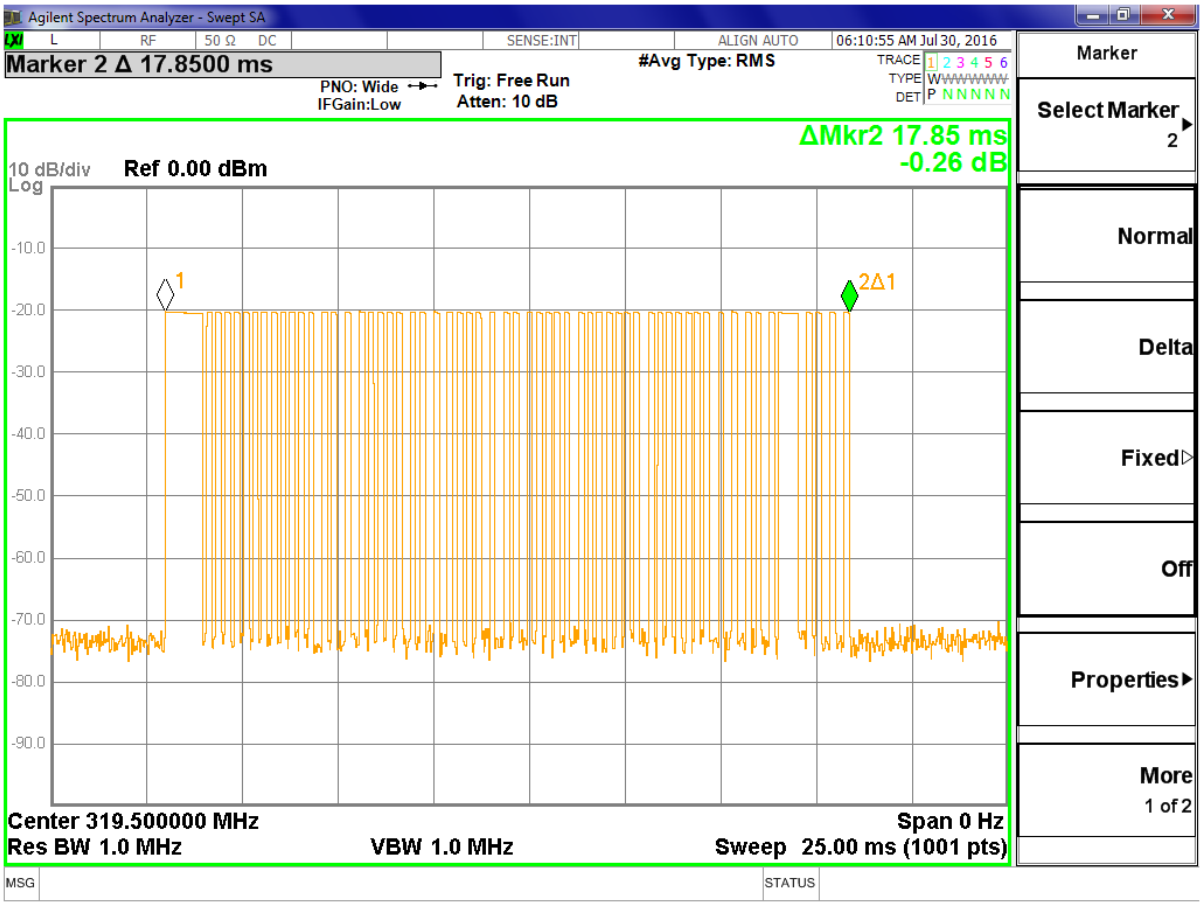
4th PULSE WIDTH

PULSE WIDTH



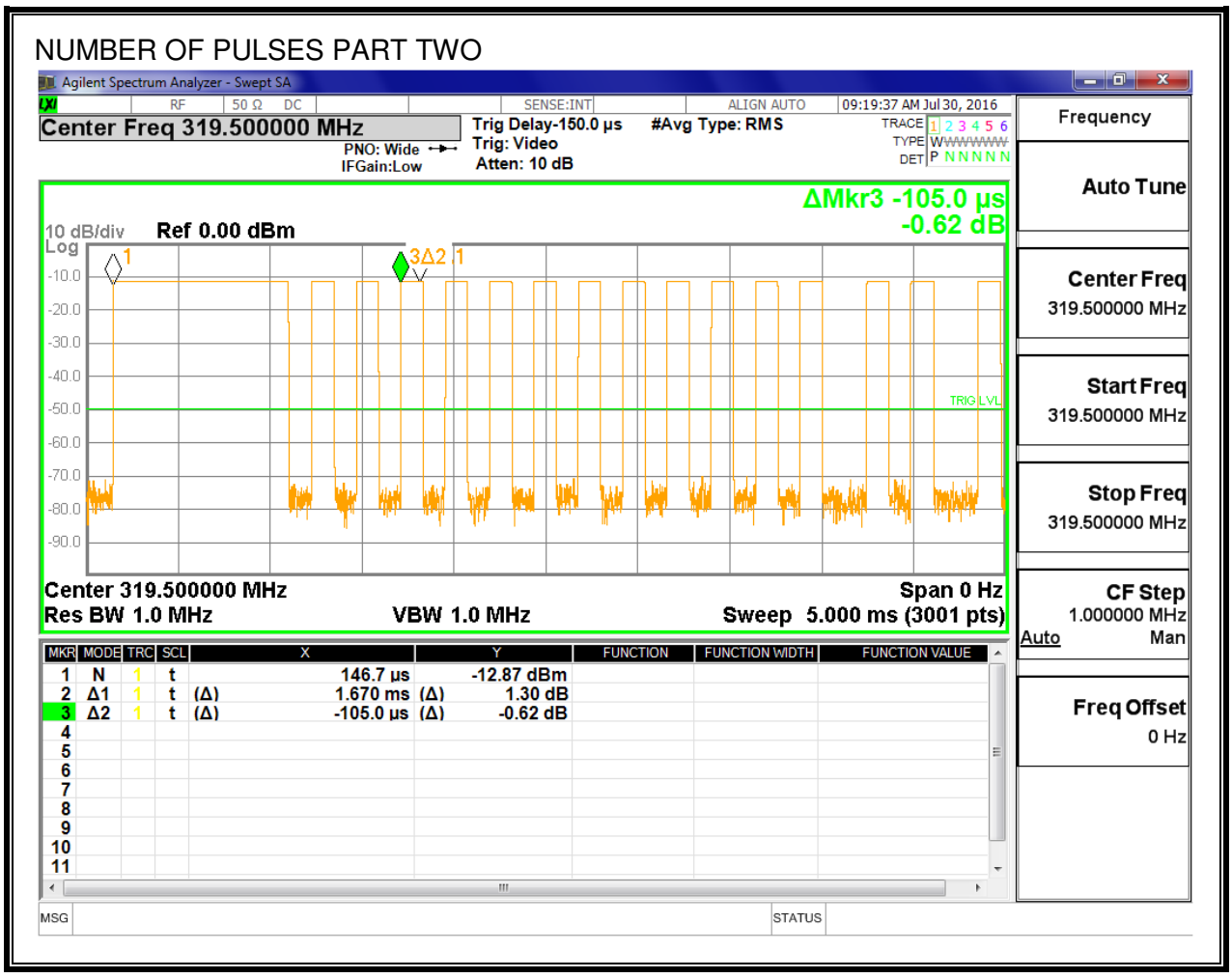
NUMBER OF PULSES PART ONE

NUMBER OF PULSES PART ONE



NUMBER OF PULSES PART TWO

*Note: According one period plot, a whole period is 98.33ms, and an addition part at above plot, from marker 1 to marker 2 is



1.67ms. Therefore, the 100ms period is equal one period plus the additional part.

7.2. 20 dB AND 99% BW

LIMITS

FCC §15.231 (c)
The bandwidth of the emission shall be no wider than 0.25% of the center frequency for devices operating above 70 MHz and below 900 MHz. For devices operating above 900 MHz, the emission shall be no wider than 0.5% of the center frequency. Bandwidth is determined at the points 20 dB down from the modulated carrier.

IC A1.1.3
For the purpose of Section A1.1, the 99% Bandwidth shall be no wider than 0.25% of the center frequency for devices operating between 70-900 MHz. For devices operating above 900 MHz, the emission shall be no wider than 0.5% of the center frequency.

TEST PROCEDURE

ANSI C63.10

The transmitter output is connected to the spectrum analyzer.

20dB Bandwidth: The RBW is set to 1% to 5% of OBW. The VBW is set to 3 times the RBW. The sweep time is coupled. Bandwidth is determined at the points 20 dB down from the modulated carrier.

99% Bandwidth: The RBW is set to 1% to 3% of the 99 % bandwidth. The VBW is set to 3 times the RBW. The sweep time is coupled. The spectrum analyzer internal 99% bandwidth function is utilized.

RESULTS

No non-compliance noted:

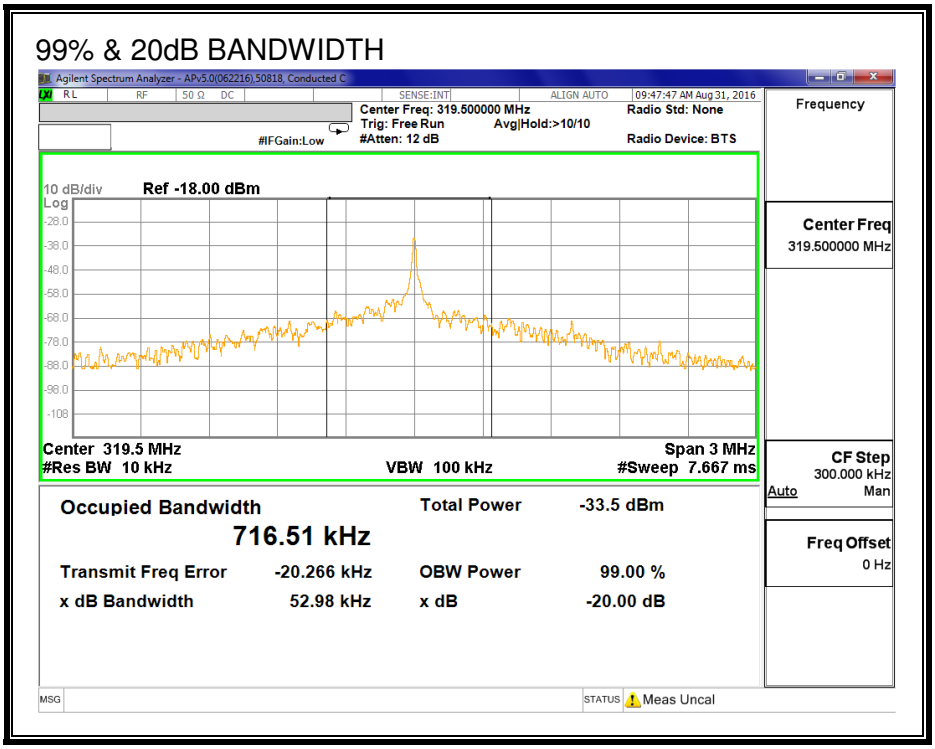
20dB Bandwidth

Frequency (MHz)	20dB Bandwidth (kHz)	Limit (kHz)	Margin (kHz)
319.5	52.98	798.75	-745.77

99% Bandwidth

Frequency (MHz)	99% Bandwidth (kHz)	Limit (kHz)	Margin (kHz)
319.5	716.51	798.75	-82.24

99% % 20dB BANDWIDTH



7.3. TRANSMISSION TIME

LIMITS

FCC §15.231 (a) (2)

IC A1.1.1 (b)

A transmitter activated automatically shall cease transmission within 5 seconds after activation.

TEST PROCEDURE

The transmitter output is connected to a spectrum analyzer or radiated field strength. The RBW is set to 1MHz and the VBW is set to 1MHz. The sweep time is set to 10 seconds and the span is set to 0 Hz.

RESULTS

No non-compliance noted:

LESS THAN 5 SECONDS

8. RADIATED EMISSION TEST RESULTS

8.1. TX RADIATED SPURIOUS EMISSION

LIMITS

FCC §15.231 (b)
IC A1.1.2
In addition to the provisions of § 15.205, the field strength of emissions from Intentional radiators operated under this section shall not exceed the following:

Fundamental frequency (MHz)	Field strength of fundamental (microvolts/meter)	Field strength of spurious emissions (microvolts/meter)
40.66-40.70	2,250	225
70-130	1,250	125
130-174	[1]1,250 to 3,750	[1]125 to 375
174-260	3,750	375
260-470	[1]3,750 to 12,500	[1]375 to 1,250
Above 470	12,500	1,250

[1]Linear interpolation

§15.205 (a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
[1]0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 -	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.52525	2655 - 2900	22.01 - 23.12
8.41425 - 8.41475	156.7 - 156.9	3260 - 3267	23.6 - 24.0
12.29 - 12.293	162.0125 - 167.17	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	167.72 - 173.2	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	240 - 285	3600 - 4400	([2])
13.36 – 13.41	322 - 335.4		

1 Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.
2 Above 38.6

§15.205 (b) Except as provided in paragraphs (d) and (e), the field strength of emissions appearing within these frequency bands shall not exceed the limits shown in Section 15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in Section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi peak detector. Above 1000 MHz, compliance with the emission limits in Section 15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in Section 15.35 apply to these measurements.

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

quency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g., Sections 15.231 and 15.241.

§15.209 (b) In the emission table above, the tighter limit applies at the band edges.

TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane for below 1GHz and 150cm for above 1GHz. The antenna to EUT distance is 3 meters. The EUT is configured in accordance with ANSI C63.10. The EUT is set to transmit in a continuous mode.

For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

For measurements above 1 GHz the resolution bandwidth is set to 1 MHz, then the video bandwidth is set to 3 MHz for peak measurements and apply DCCF for average measurements.

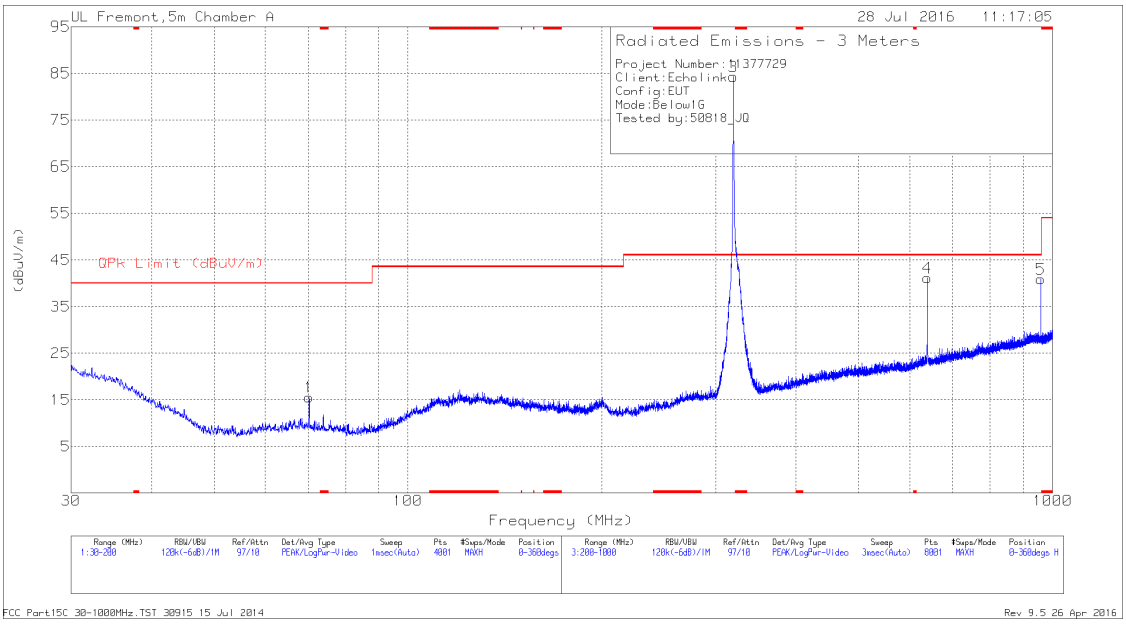
The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized in both the vertical and the horizontal positions.

RESULTS

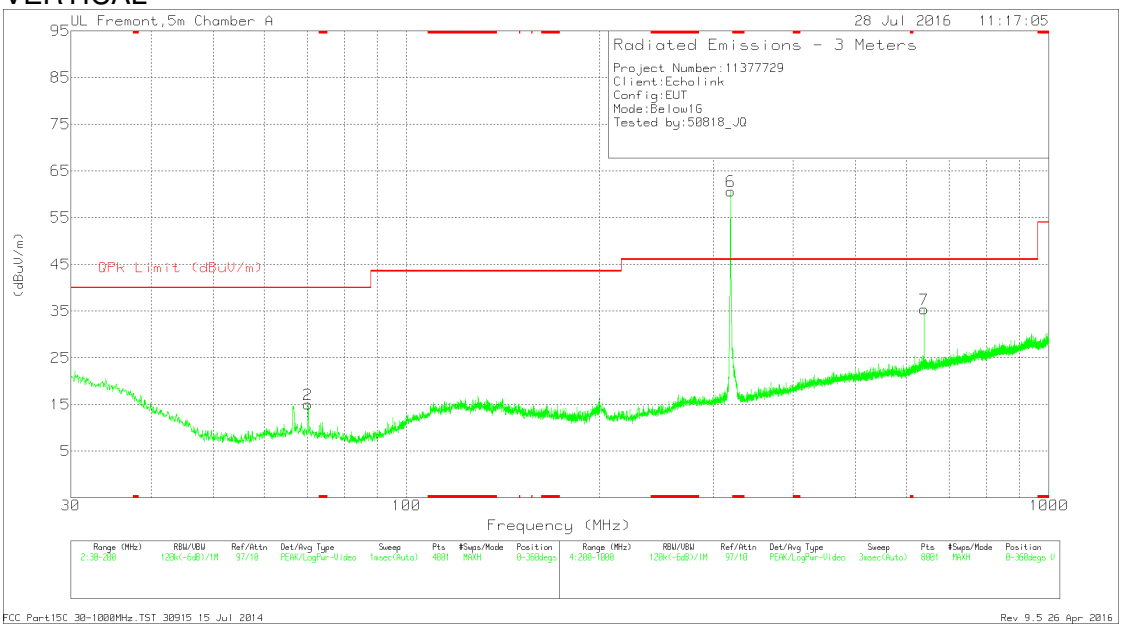
No non-compliance noted:

FUNDAMENTAL, HARMONICS AND TX SPURIOUS EMISSION (30 – 1000 MHz)

HORIZONTAL



VERTICAL



BELOW 1GHZ RADIATED EMISSIONS

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T899 (dB/m)	Amp/Cbl (dB/m)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	70.2475	34.29	Pk	12.1	-30.8	15.59	40	-24.41	0-360	200	H
2	70.2475	33.73	Pk	12.1	-30.8	15.03	40	-24.97	0-360	100	V
6	319.5	72.05	Pk	17.9	-29.3	60.65	-	-	0-360	300	V
3	319.8	95.72	Pk	17.9	-29.3	84.32	-	-	0-360	100	H
7	639	40.1	Pk	23.7	-28.4	35.4	-	-	0-360	200	V
4	639.3	45.88	Pk	23.7	-28.4	41.18	-	-	0-360	100	H
5	958.8	41.13	Pk	26.7	-26.9	40.93	-	-	0-360	100	H

FUNDAMENTAL AND HARMONICS SPURIOUS EMISSIONS

Frequency (MHz)	Meter Reading (dBuV)	Det	AF T899 (dB/m)	Amp/Cbl (dB/m)	Corrected Reading (dBuV/m)	Pk Limit (dBuV/m)	Avg Limit (dBuV/m)	PK Margin (dBuV/m)	Avg Margin (dBuV/m)	Azimuth (Degs)	Height (cm)	Polarity
319.498	90.92	Pk	17.9	-29.3	79.52	95.89	-	-16.37	-	107	156	H
		Av			59.25	-	75.89	-	-16.64	107	156	H
319.503	76.91	Pk	17.9	-29.3	65.51	95.89	-	-30.38	-	338	112	V
		Av			45.24	-	75.89	-	-30.65	338	112	V
**638.997	40.41	Pk	23.7	-28.4	35.71	75.89	-	-40.18	-	215	109	V
		Av			15.44	-	55.89	-	-40.45	215	109	V
**639.006	44.95	Pk	23.7	-28.4	40.25	75.89	-	-35.64	-	256	134	H
		Av			19.98	-	55.89	-	-35.91	256	134	H
**958.498	40.81	Pk	26.7	-26.9	40.61	75.89	-	-35.28	-	173	148	H
		Av			20.34	-	55.89	-	-35.55	173	148	H

Pk - Peak detector

* Average Reading = Peak Reading (dBuV/m) + 20log (Duty Cycle), Where Duty Cycle is 0.1

(# of long pulses * long pulse width) + (# of short pulses * short pulse width) / 100 or T

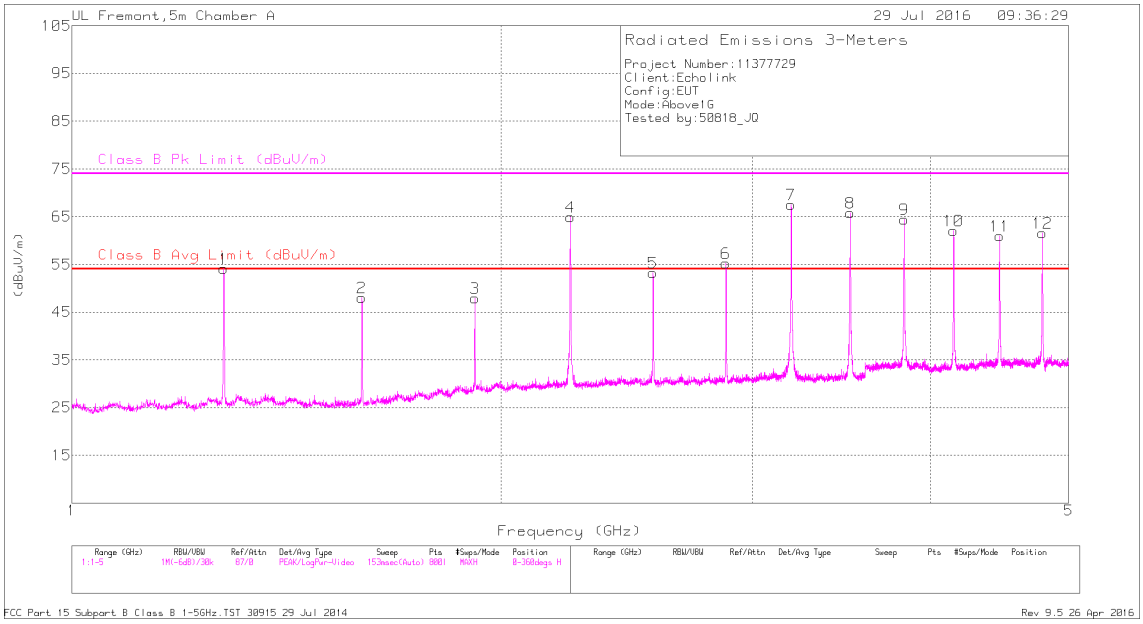
Refer to section 7.2 for duty cycle factor calculation (-20.27dB)

Note: Radiated peak result is based on 100% duty cycle sample; average reading = peak reading + DCCF

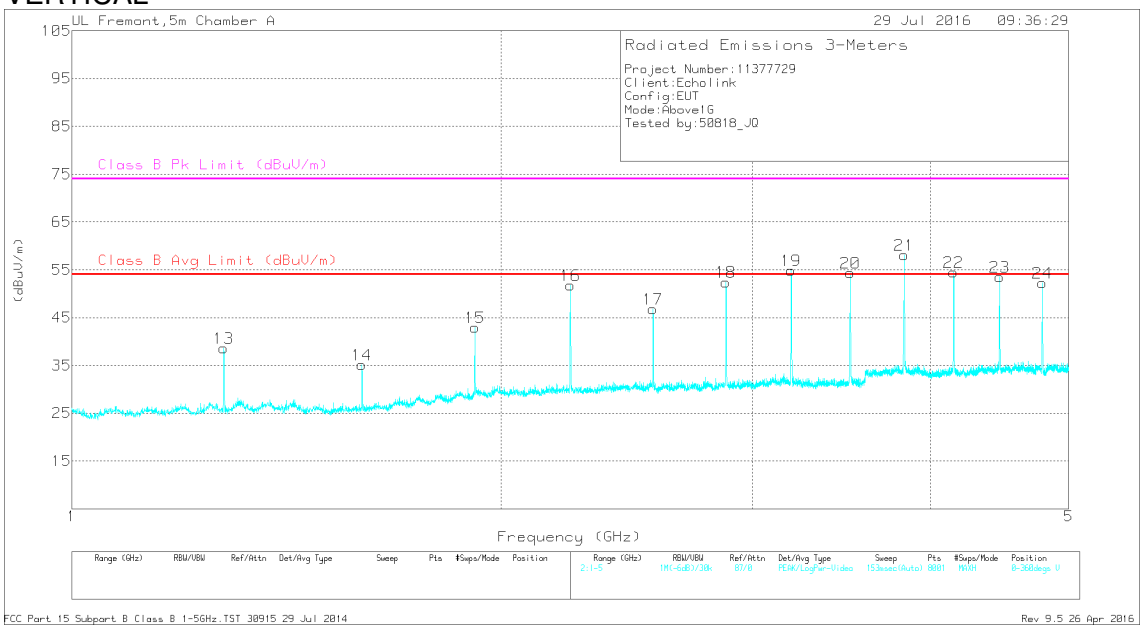
** Harmonics of fundamental 319.5 MHz

HARMONICS AND TX SPURIOUS EMISSIONS ABOVE 1GHz

HORIZONTAL



VERTICAL



Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (db/m)	Amp/Cbl (dB)	Corrected Avg Reading (dBuV/m)	Class B Avg Limit (dBuV/m)	Av(CISPR) Margin (dB)	Corrected pk Reading (dBuV/m)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.278	61.36	Pk	28.8	-34.6	-	-	-	55.56	75.89	-20.33	40	191	H
		Av			35.29	55.89	-20.6	-	-	-	40	191	H
1.278	52.27	Pk	28.8	-34.6	-	-	-	46.47	75.89	-29.42	77	393	V
		Av			26.3	55.89	-29.69	-	-	-	77	393	V
*1.598	56.25	Pk	28.2	-34.3	-	-	-	50.15	74	-23.85	7	358	H
		Av			39.88	54	-24.12	-	-	-	7	358	H
*1.597	50.59	Pk	28.2	-34.3	-	-	-	44.49	74	-29.51	166	347	V
		Av			24.22	54	-29.78	-	-	-	166	347	V
1.917	56.41	Pk	31.2	-33.9	-	-	-	53.71	75.89	-22.18	115	249	H
		Av			33.44	55.89	-22.45	-	-	-	115	249	H
1.917	51.05	Pk	31.2	-33.9	-	-	-	48.35	75.89	-27.54	77	337	V
		Av			28.08	55.89	-27.81	-	-	-	77	337	V
*2.236	67.23	Pk	31.8	-33.5	-	-	-	65.53	74	-8.47	74	294	H
		Av			45.26	54	-8.74	-	-	-	74	294	H
*2.236	59.62	Pk	31.8	-33.5	-	-	-	57.92	74	-16.08	256	322	V
		Av			37.65	54	-16.35	-	-	-	256	322	V
2.556	55.87	Pk	32.4	-33.1	-	-	-	55.17	75.89	-20.72	134	200	H
		Av			34.9	55.89	-20.99	-	-	-	134	200	H
2.556	51.28	Pk	32.4	-33.1	-	-	-	50.58	75.89	-25.31	282	321	V
		Av			30.31	55.89	-25.58	-	-	-	282	321	V
*2.875	56.75	Pk	32.6	-32.3	-	-	-	57.05	74	-16.95	291	205	H
		Av			36.78	54	-17.22	-	-	-	291	205	H
*2.876	55.64	Pk	32.6	-32.4	-	-	-	55.84	74	-18.16	125	387	V
		Av			35.57	54	-18.43	-	-	-	125	387	V
3.195	68.31	Pk	33.2	-32.1	-	-	-	69.41	75.89	-6.48	39	116	H
		Av			49.14	55.89	-6.75	-	-	-	39	116	H
3.195	64.44	Pk	33.2	-32.1	-	-	-	65.54	75.89	-10.35	173	369	V
		Av			45.27	55.89	-10.62	-	-	-	173	369	V
3.515	66.27	Pk	33	-31.8	-	-	-	67.47	75.89	-8.42	38	124	H
		Av			47.2	55.89	-8.69	-	-	-	38	124	H
3.515	63.37	Pk	33	-31.8	-	-	-	64.57	75.89	-11.32	169	400	V
		Av			44.3	55.89	-11.59	-	-	-	169	400	V
*3.834	65.78	Pk	33.6	-31	-	-	-	68.38	74	-5.62	214	378	H
		Av			48.11	54	-5.89	-	-	-	214	378	H
*3.834	61.83	Pk	33.6	-31	-	-	-	64.43	74	-9.57	153	397	V
		Av			44.16	54	-9.84	-	-	-	153	397	V
*4.154	60.26	Pk	33.6	-30.8	-	-	-	63.06	74	-10.94	108	164	H
		Av			42.79	54	-11.21	-	-	-	108	164	H
*4.153	58.74	Pk	33.6	-30.8	-	-	-	61.54	74	-12.46	158	394	V
		Av			41.27	54	-12.73	-	-	-	158	394	V
4.474	58.33	Pk	34.2	-30.4	-	-	-	62.13	75.89	-13.76	342	113	H
		Av			41.86	55.89	-14.03	-	-	-	342	113	H
4.473	56.97	Pk	34.2	-30.4	-	-	-	60.77	75.89	-15.12	246	361	V
		Av			40.5	55.89	-15.39	-	-	-	246	361	V
*4.793	61.3	Pk	34.3	-29.8	-	-	-	65.8	74	-8.2	0	110	H
		Av			45.53	54	-8.47	-	-	-	0	110	H
*4.792	56.35	Pk	34.3	-29.8	-	-	-	60.85	74	-13.15	216	352	V
		Av			40.58	54	-13.42	-	-	-	216	352	V

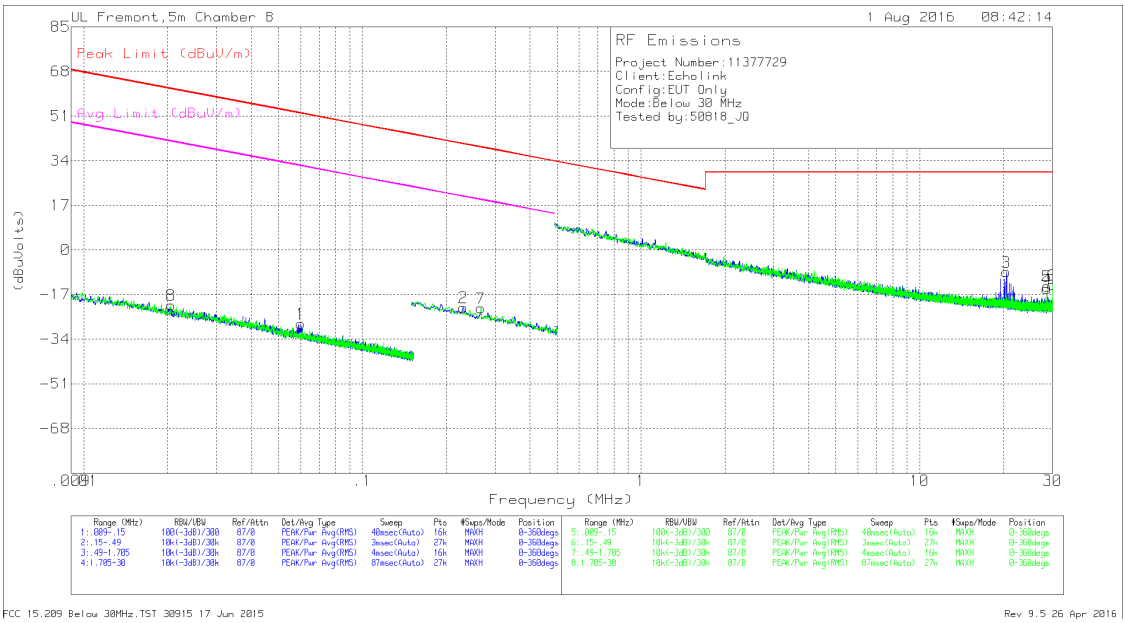
Pk - Peak detector

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Average Reading = Peak Reading (dBuV/m) + 20log (Duty Cycle), Where Duty Cycle is
(# of long pulses * long pulse width) + (# of short pulses * short pulse width) / 100 or T
Refer to section 7.2 for duty cycle factor calculation (-20.27dB)
Note: Radiated peak result is based on 100% duty cycle sample; average reading = peak reading + DCCF

RBW = 1MHz, VBW = 3MHz for the final Peak and Average readings

BELOW 30MHz



Note: The anechoic chamber has been properly calibrated so that the measurement results correspond to what would be obtained from an open field sites.

BELOW 1GHZ RADIATED EMISSIONS

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr 300m	Corrected Reading (dBuVolts)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
8	.02056	43.81	Pk	13.8	1.4	-80	-20.99	61.35	-82.34	41.35	-62.34	0-360
1	.06017	39.38	Pk	11.1	1.4	-80	-28.12	52.02	-80.14	32.02	-60.14	0-360
2	.23011	45.79	Pk	10.8	1.5	-80	-21.91	40.37	-62.28	20.37	-42.28	0-360
7	.26623	45.51	Pk	10.8	1.5	-80	-22.19	39.1	-61.29	19.1	-41.29	0-360

Pk - Peak detector

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr 30m	Corrected Reading (dBuVolts)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
3	20.43695	19.9	Pk	10	1.7	-40	-8.4	29.54	-37.94	-	-	0-360
4	28.64174	15.13	Pk	8.3	1.7	-40	-14.87	29.54	-44.41	-	-	0-360
5	28.71144	16.16	Pk	8.3	1.7	-40	-13.84	29.54	-43.38	-	-	0-360
6	29.94755	17	Pk	8	1.7	-40	-13.3	29.54	-42.84	-	-	0-360

Pk - Peak detector