



**FCC 47 CFR PART 15 SUBPART C
INDUSTRY CANADA RSS-216 ISSUE 1**

CERTIFICATION TEST REPORT

FOR

**MAGNETIC CHARGING DOCK
MODEL NUMBER: A1714**

REPORT NUMBER: 15U21562-E1V2

**FCC ID: BCGA1714
IC: 579C-A1714**

ISSUE DATE: OCTOBER 19, 2015

Prepared for
**APPLE, INC.
1 INFINITE LOOP
CUPERTINO, CA 95014, U.S.A.**

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NVLAP LAB CODE 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
V1	09/29/2015	Initial Issue	M. Mekuria
V2	10/19/2015	Revised report to address TCB's questions	T. Chu

TABLE OF CONTENTS

1. ATTESTATION OF TEST RESULTS.....	4
2. TEST METHODOLOGY	5
3. FACILITIES AND ACCREDITATION.....	5
4. CALIBRATION AND UNCERTAINTY	5
4.1. MEASURING INSTRUMENT CALIBRATION	5
4.2. SAMPLE CALCULATION.....	5
4.3. MEASUREMENT UNCERTAINTY	6
5. EQUIPMENT UNDER TEST	7
5.1. DESCRIPTION OF EUT.....	7
5.2. MAXIMUM OUTPUT POWER.....	7
5.3. SOFTWARE AND FIRMWARE	7
5.4. WORST-CASE CONFIGURATION AND MODE.....	7
5.5. DESCRIPTION OF TEST SETUP.....	8
6. TEST AND MEASUREMENT EQUIPMENT	11
7. OCCUPIED BANDWIDTH.....	12
8. RADIATED EMISSION TEST RESULTS.....	14
8.1. LIMITS AND PROCEDURE	14
8.2. TX FUNDAMENTAL AND SPURIOUS EMISSIONS FROM 0.15 TO 30 MHz.....	15
8.2.1. STANDBY CONFIGURATION	15
8.2.2. OPERATING CONFIGURATION	16
8.3. TX SPURIOUS EMISSION 30 TO 1000 MHz	18
8.3.1. STANDBY CONFIGURATION	18
8.3.2. OPERATING CONFIGURATION	20
9. AC MAINS LINE CONDUCTED EMISSIONS W/ POWER SUPPLY.....	24
9.1. STANDBY CONFIGURATION POWERED FROM AC ADAPTER	25
9.2. OPERATING CONFIGURATION POWERED FORM AC ADAPTER	27
9.3. STANDBY CONFIGURATION POWERED FROM LAPTOP	31
9.4. OPERATING CONFIGURATION POWERED FROM LAPTOP.....	33
10. SETUP PHOTOS.....	37

1. ATTESTATION OF TEST RESULTS

COMPANY NAME: APPLE, INC.
1 INFINITE LOOP
CUPERTINO, CA 95014, U.S.A.

EUT DESCRIPTION: MAGNETIC CHARGING DOCK

MODELNUMBER: A1714

SERIAL NUMBER: DLC304300NMGQ601H

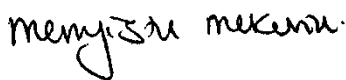
DATE TESTED: SEPTEMBER 23 TO OCTOBER 19, 2015

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC PART 15 SUBPART C	Pass
INDUSTRY CANADA RSS-216 Issue 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.

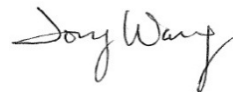
Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL Verification Services Inc. and all revisions are duly noted in the revisions section. 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.

Approved & Released For
UL Verification Services Inc. By:



MENGISTU MEKURIA
SENIOR ENGINEER
UL VERIFICATION SERVICES INC.

Tested By:



TONY WANG
EMC ENGINEER
UL VERIFICATION SERVICES INC.

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.10-2013, FCC CFR 47 Part 2, and FCC CFR 47 Part 15, RSS-GEN Issue 4 and RSS-216 Issue 1 November 2014.

3. FACILITIES AND ACCREDITATION

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
	☐ Chamber G
	☒ Chamber H

The above test sites and facilities are covered under FCC Test Firm Registration # 208313. Chambers A through H are covered under Industry Canada company address code 2324B with site numbers 2324B -1 through 2324B-8, respectively.

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>.

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:

$$\begin{aligned} \text{Field Strength (dBuV/m)} &= \text{Measured Voltage (dBuV)} + \text{Antenna Factor (dB/m)} + \\ &\text{Cable Loss (dB)} - \text{Preamp Gain (dB)} \\ 36.5 \text{ dBuV} + 18.7 \text{ dB/m} + 0.6 \text{ dB} - 26.9 \text{ dB} &= 28.9 \text{ dBuV/m} \end{aligned}$$

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, 30 to 1000 MHz	± 4.94 dB
Radiated Disturbance, 1 to 6 GHz	± 3.86 dB
Radiated Disturbance, 6 to 18 GHz	± 4.23 dB
Radiated Disturbance, 18 to 26 GHz	± 5.30 dB
Radiated Disturbance, 26 to 40 GHz	± 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 magnetic charging dock which includes an inductive charging coil to charge an Apple Watch.

5.2. MAXIMUM OUTPUT POWER

The transmitter has maximum peak radiated electric field strength at 300m distance as follows:

Fundamental Frequency (KHz)	Mode	E field (300m distance) (dBuV/m)
326.5	Standby	-19.05

5.3. SOFTWARE AND FIRMWARE

The firmware installed in the EUT during testing was v1.0.2.

5.4. WORST-CASE CONFIGURATION AND MODE

The EUT is a single frequency stainless steel magnetic charger enclosed in a plastic case. For the entire radiated emissions test, the EUT was examining on the following configuration.

Configuration	Mode	Descriptions
1	Standby	EUT Alone powered by AC/DC adapter
2	Operating	EUT and Watch powered by AC/DC adapter

An AC power line conducted emissions were also investigated on the following configurations.

Configuration	Mode	Descriptions
1	Standby	EUT Alone powered by AC/DC adapter
2	Operating	EUT and Watch powered by AC/DC adapter
3	Standby	EUT Alone powered by laptop
4	Operating	EUT and Watch powered by laptop

5.5. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
AC/DC adapter	Apple	A1385	DLC304300NMGQ601H	N/A
Watch	Apple	A1554	FH7Q200LGR9H	BCG-E2871
Watch	Apple	A1553	FH7PX01PGR97	BCG-E2870

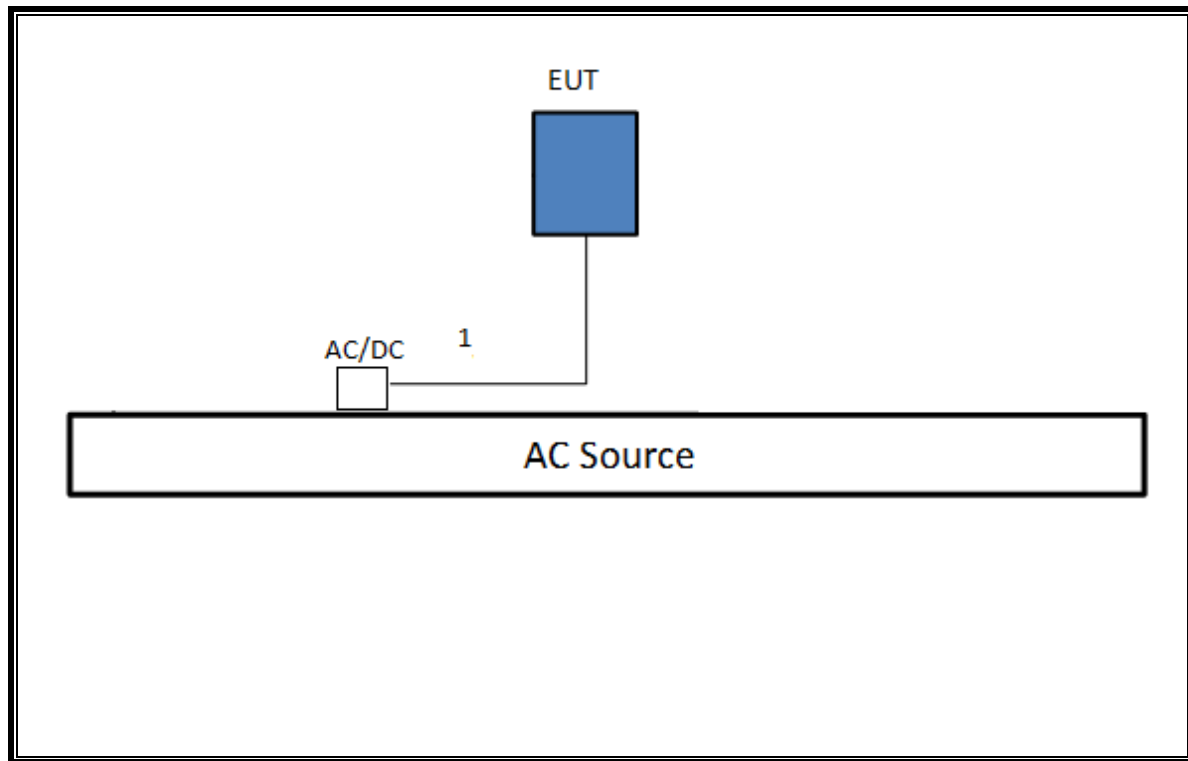
I/O CABLES

I/O CABLE LIST						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	DC	1	USB	Un-shielded	2	5W Power Supply
2	DC	1	4-PIN	Un-shielded	1.8	Support Laptop
3	AC	1	3-PRONG	Un-shielded	2	Support Laptop

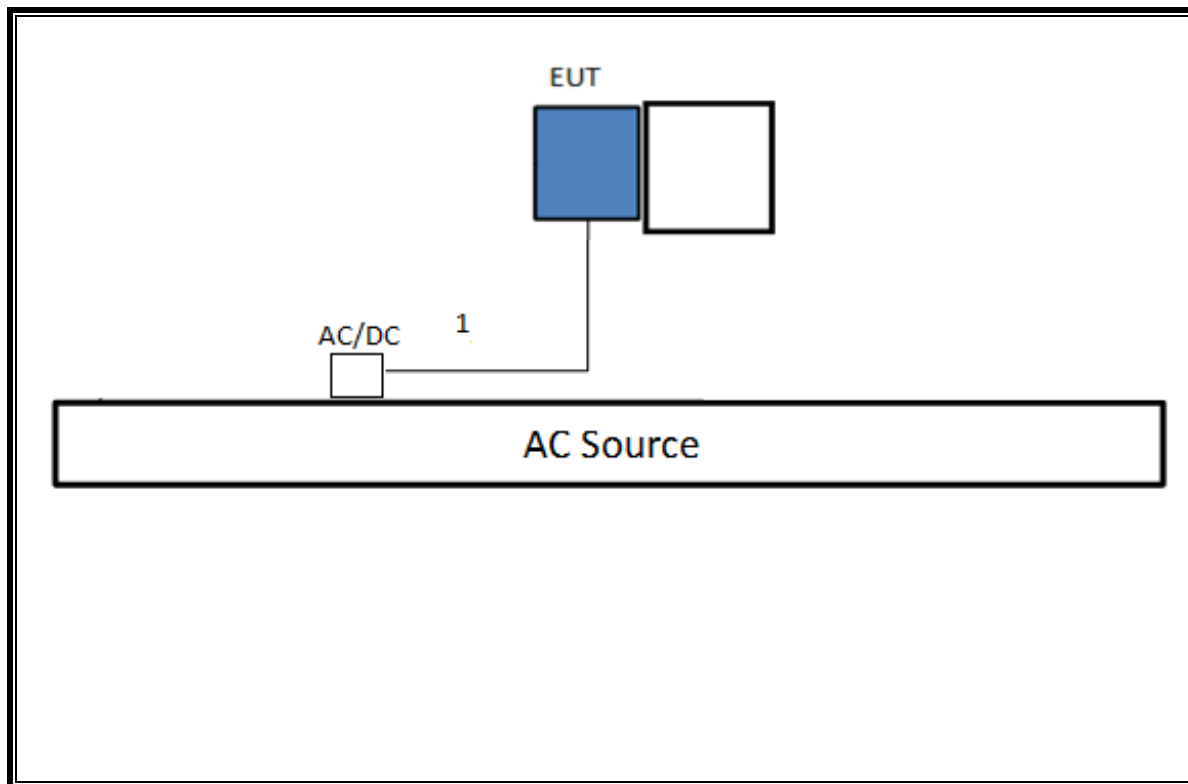
TEST SETUP

Please see the following configurations for the test setups. Both configurations indicate that the EUT is directly connected to an AC/DC adapter via USB cable.

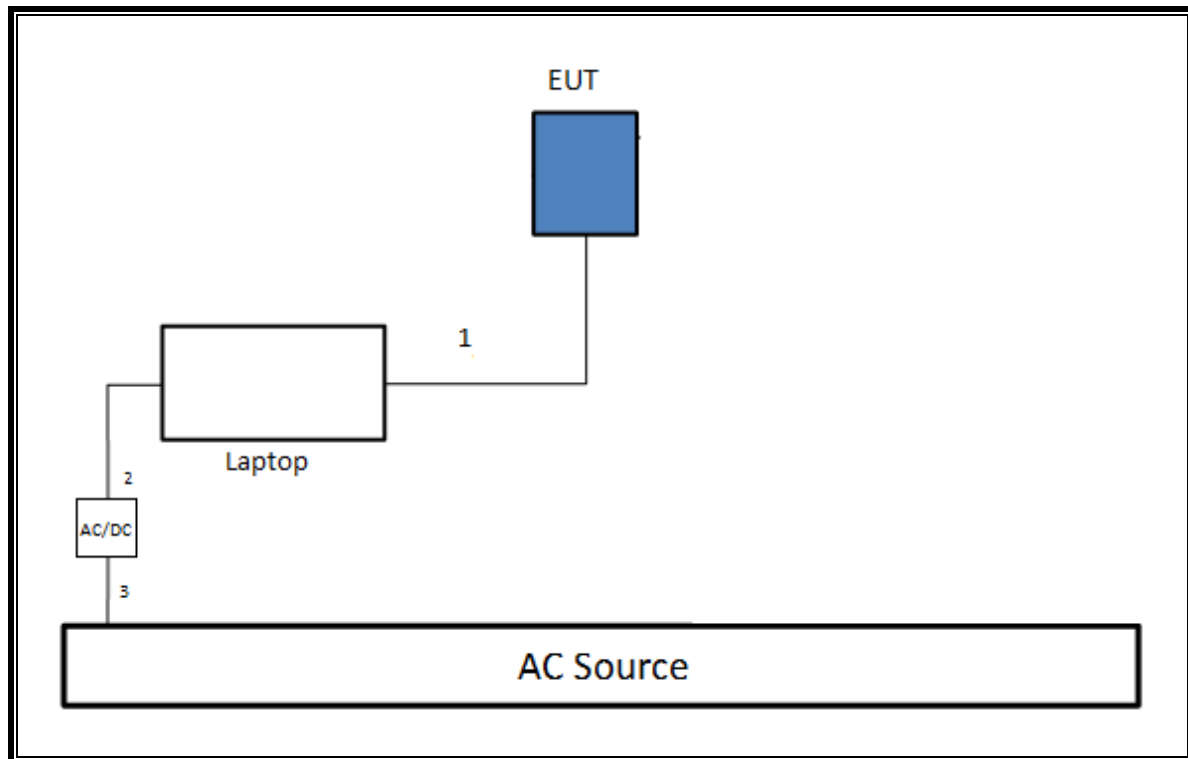
CONFIGURATION 1: STANDBY MODE POWERED WITH AC ADPTER



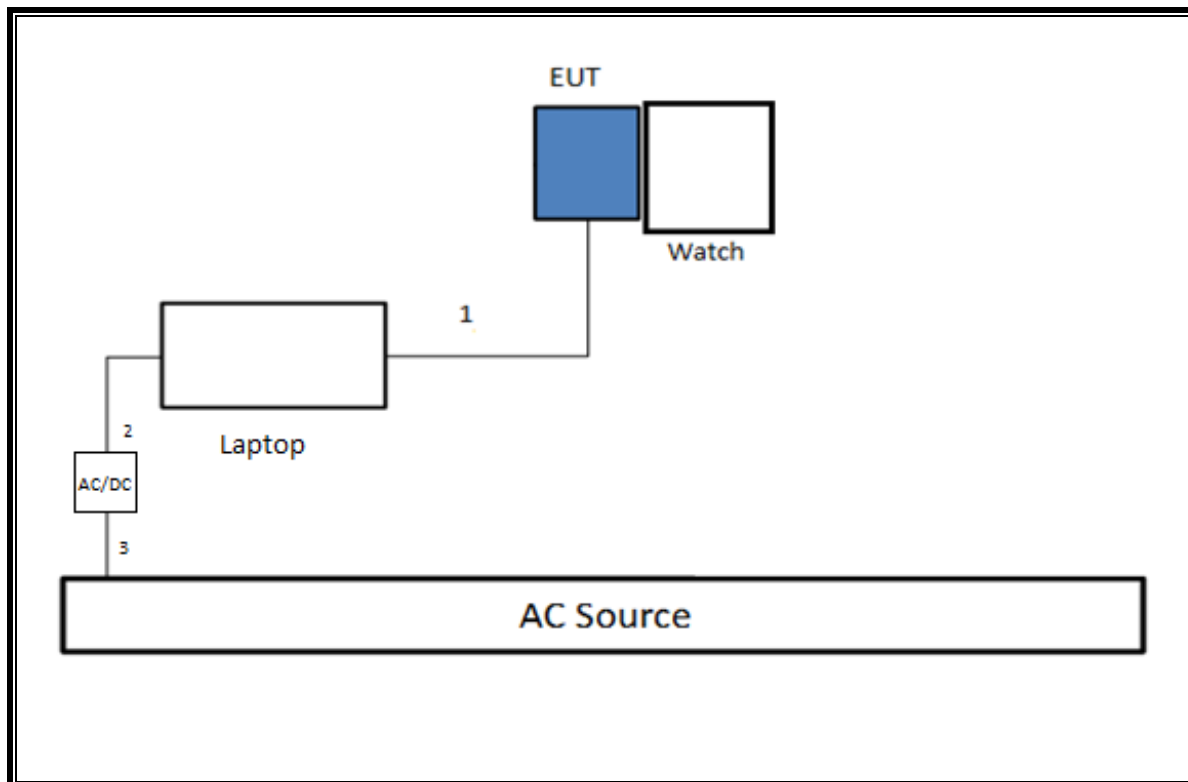
CONFIGURATION 2: OPERATING MODE POWERED WITH AC ADPTER



CONFIGURATION 3: STANDBY MODE POWERED WITH LAPTOP



CONFIGURATION 2: OPERATING MODE POWERED WITH LAPTOP



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, Broadband Hybrid, 30MHz to 2000MHz	Sunol Sciences	JB3	A051314-1	04/10/16
Amplifier, 10KHz to 1GHz, 32dB	Sonoma	310N	325118	02/14/16
Spectrum Analyzer, PXA, 3Hz to 44GHz	Agilent	N9030A	MY53311010	06/11/16
Antenna, Loop, 30 MHz	ETS Lindgren	6502	T757	05/21/16
EMI Test Receiver	R & S	ESCI 7	T284	09/10/16
LISN, 10 kHz - 30 MHz	FCC	50/250-25-2	T24	01/17/16

7. OCCUPIED BANDWIDTH

The emission bandwidth ($\times$ dB) is defined as the frequency range between two points, one above and one below the carrier frequency, at which the spectral density of the emission is attenuated $\times$ dB below the maximum in-band spectral density of the modulated signal. Spectral density (power per unit bandwidth) is to be measured with a detector of resolution bandwidth in the range of 1% to 5% of the anticipated emission bandwidth, and a video bandwidth at least $3\times$ the resolution bandwidth.

When the occupied bandwidth limit is not stated in the applicable RSS or reference measurement method, the transmitted signal bandwidth shall be reported as the 99% emission bandwidth, as calculated or measured.

- The transmitter shall be operated at its maximum carrier power measured under normal test conditions.
- The span of the analyzer shall be set to capture all products of the modulation process, including the emission skirts.
- The resolution bandwidth (RBW) shall be in the range of 1% to 5% of the occupied bandwidth (OBW) and video bandwidth (VBW) shall be greater or equal $3\times$ RBW.

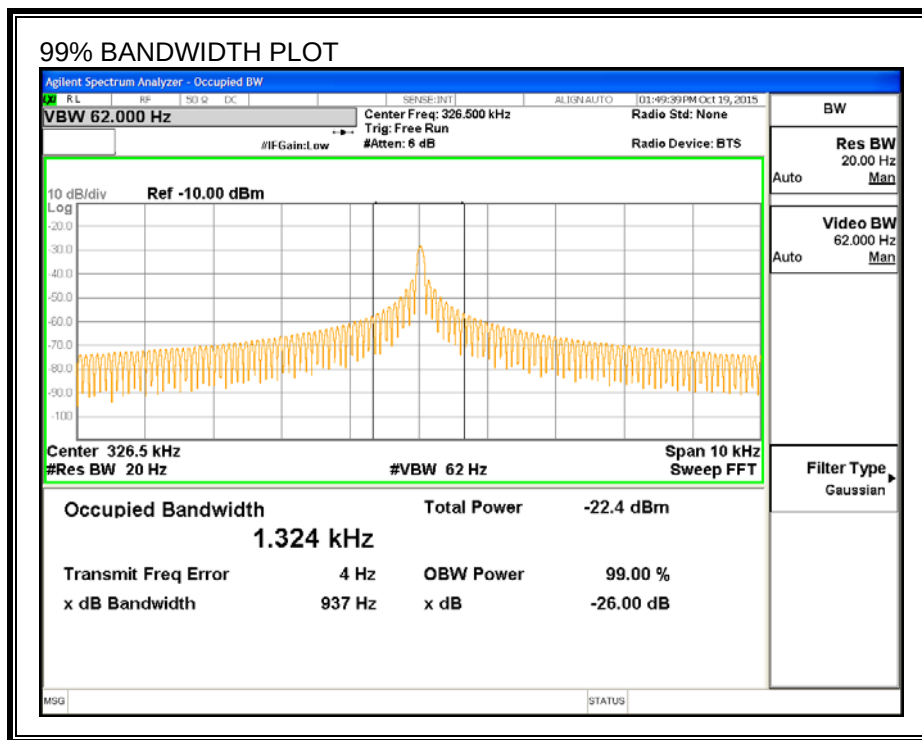
Note: Video averaging is not permitted.

A peak, or peak hold, may be used in place of the sampling detector as this may produce a wider bandwidth than the actual bandwidth (worst-case measurement). Use of a peak hold may be necessary to determine the occupied bandwidth if the device is not transmitting continuously.

The trace data points are recovered and are directly summed in linear power level terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% of the total is reached and that frequency recorded. The process is repeated for the highest frequency data points (starting at the highest frequency, at the right side of the span, and going down in frequency). This frequency is then recorded.

The difference between the two recorded frequencies is the 99% occupied bandwidth.

RESULTS



8. RADIATED EMISSION TEST RESULTS

8.1. LIMITS AND PROCEDURE

LIMITS

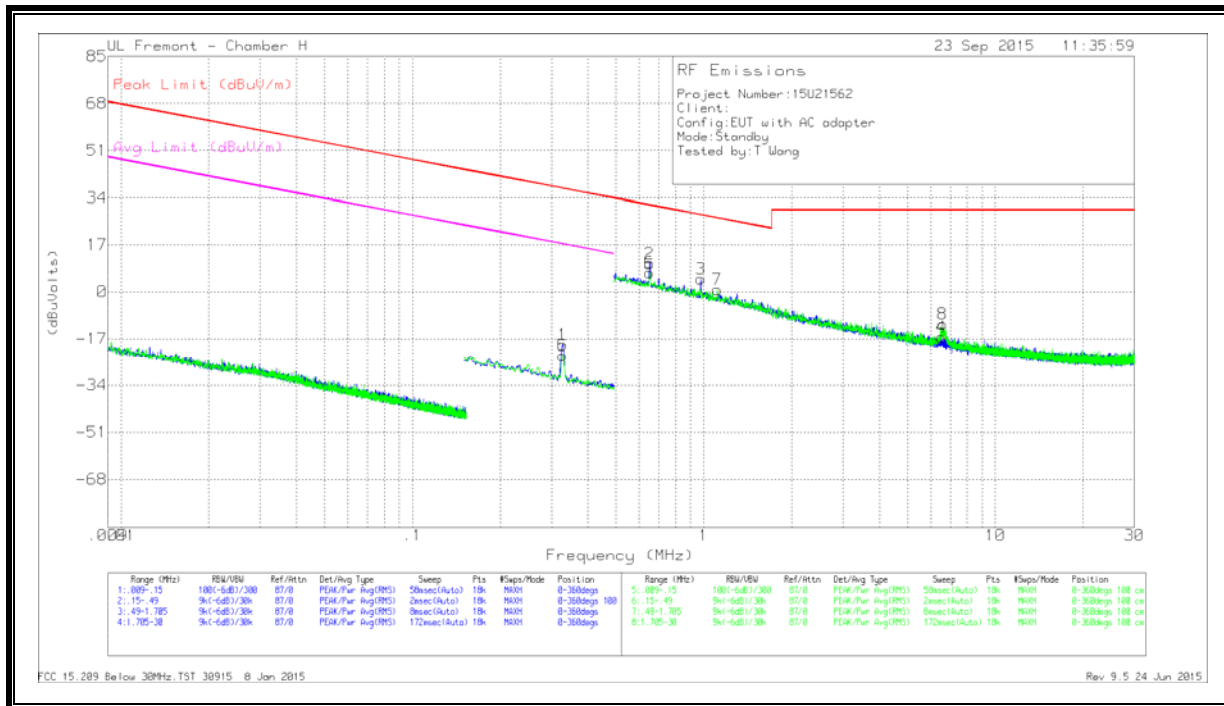
FCC §15.209 (a)
IC RSS-GEN, Section 8.9 and 8.10.

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (m)
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 to 216	150	3
216 to 960	200	3
Above 960 MHz	500	3
Note: The lower limit shall apply at the transition frequency.		

RESULTS

8.2. TX FUNDAMENTAL AND SPURIOUS EMISSIONS FROM 0.15 TO 30 MHz

8.2.1. STANDBY CONFIGURATION



DATA

FUNDAMENTAL

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)	Loop Antenna Face
1	.32786	50.65	Pk	10.2	.1	-80	-19.05	37.29	-56.34	17.29	-36.34	0-360	ON
5	.32794	46.62	Pk	10.2	.1	-80	-23.08	37.29	-60.37	17.29	-40.37	0-360	OFF

Pk - Peak detector

SPURIOUS

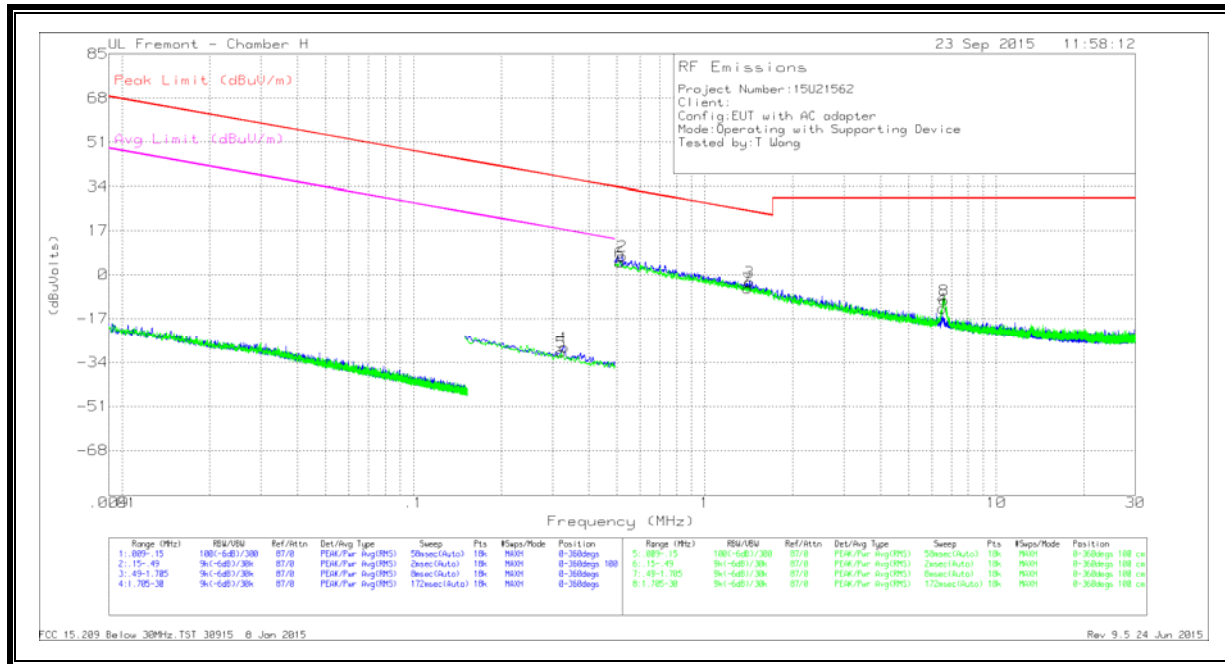
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr 30m	Corrected Reading (dBuVolts)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Loop Antenna Face
2	.65093	39.84	Pk	10.2	.1	-40	10.14	31.33	-21.19	-	-	0-360	ON
6	.65201	36.68	Pk	10.2	.1	-40	6.98	31.32	-24.34	-	-	0-360	OFF
3	.97531	34.04	Pk	10.4	.2	-40	4.64	27.82	-23.18	-	-	0-360	ON
7	1.11199	30.39	Pk	10.4	.2	-40	.99	26.68	-25.69	-	-	0-360	OFF
4	6.52947	12.65	Pk	10.5	.4	-40	-16.45	29.54	-45.99	-	-	0-360	ON
8	6.5892	17.55	Pk	10.5	.4	-40	-11.55	29.54	-41.09	-	-	0-360	OFF

Pk - Peak detector

FCC 15.209 Below 30MHz.TST 30915 8 Jan 2015
Rev 9.5 24 Jun 2015

8.2.2. OPERATING CONFIGURATION

OPERATING WITH A1554 WATCH



DATA

FUNDAMENTAL

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)	Loop Antenna Face
5	.32102	39.84	Pk	10.2	.1	-80	-29.86	37.47	-67.33	17.47	-47.33	0-360	OFF
1	.32944	41.58	Pk	10.2	.1	-80	-28.12	37.25	-65.37	17.25	-45.37	0-360	ON

Pk - Peak detector

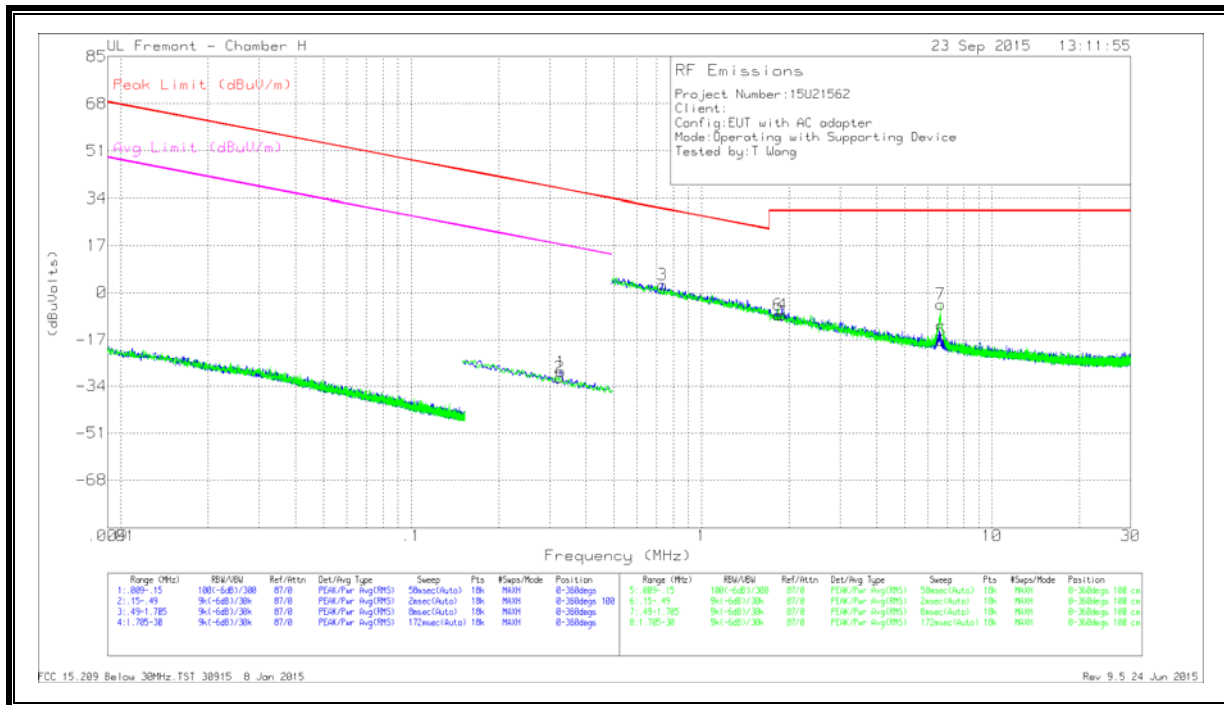
SPURIOUS

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)	Loop Antenna Face
6	.51027	34.4	Pk	10.3	.1	-40	4.8	33.45	-28.65	-	-	0-360	OFF
2	.52045	36.85	Pk	10.3	.1	-40	7.25	33.28	-26.03	-	-	0-360	ON
7	1.39906	24.1	Pk	10.4	.2	-40	-5.3	24.69	-29.99	-	-	0-360	OFF
3	1.4217	26.6	Pk	10.4	.2	-40	-2.8	24.55	-27.35	-	-	0-360	ON
4	6.53576	16.07	Pk	10.5	.4	-40	-13.03	29.54	-42.57	-	-	0-360	ON
8	6.61593	19.26	Pk	10.5	.4	-40	-9.84	29.54	-39.38	-	-	0-360	OFF

Pk - Peak detector

FCC 15.209 Below 30MHz.TST 30915 8 Jan 2015
Rev 9.5 24 Jun 2015

OPERATING WITH A1553 WATCH



DATA

FUNDAMENTAL

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)	Loop Antenna Face
2	.32525	38.79	Pk	10.2	.1	-80	-30.91	37.36	-68.27	17.36	-48.27	0-360	OFF
1	.3273	41.11	Pk	10.2	.1	-80	-28.59	37.31	-65.9	17.31	-45.9	0-360	ON

Pk - Peak detector

SPURIOUS

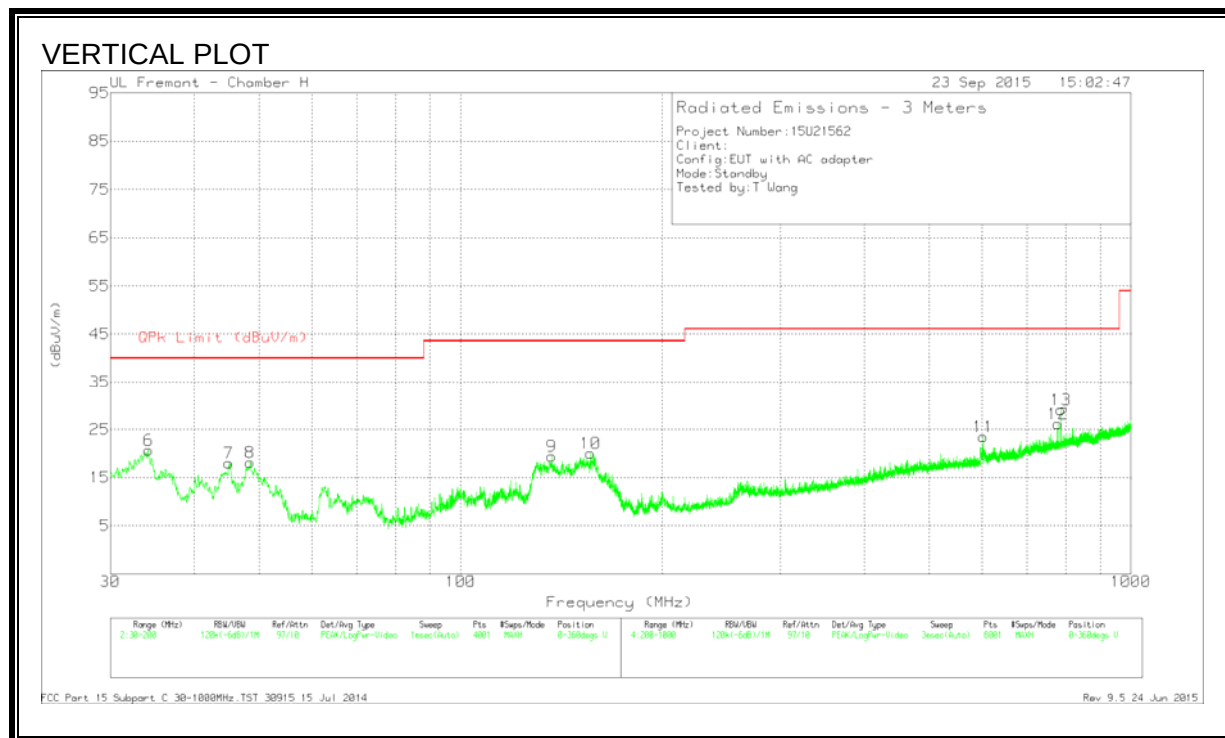
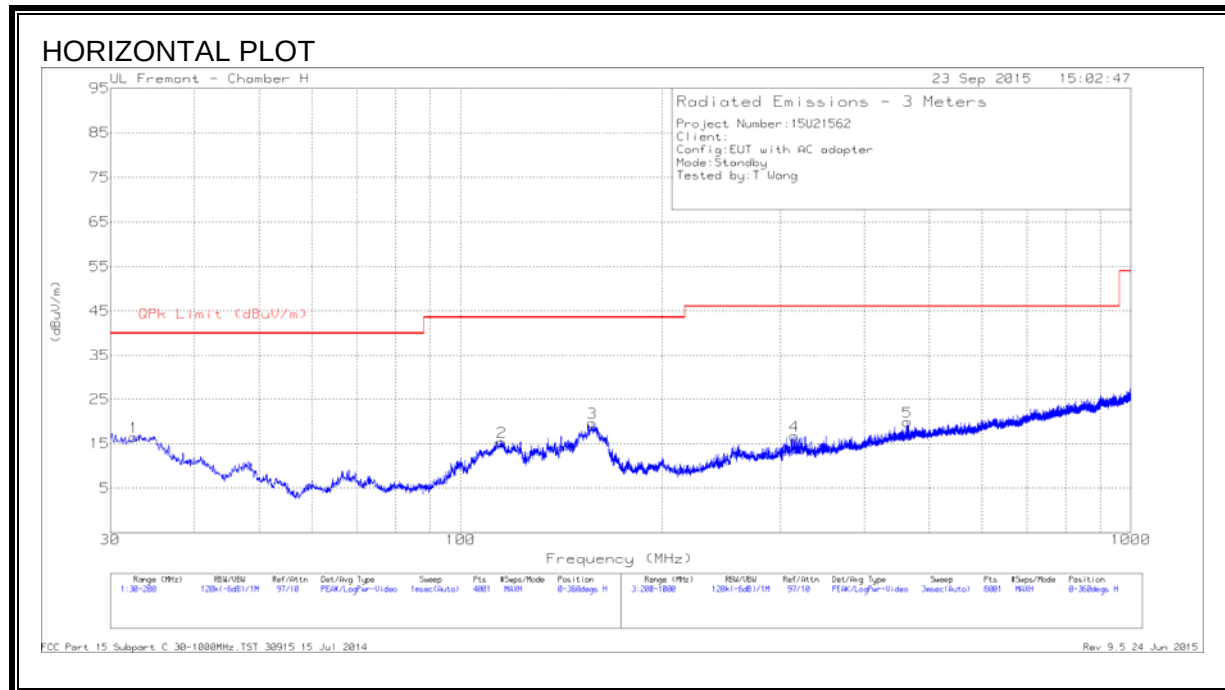
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr 30m	Corrected Reading (dBuVolts)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Loop Antenna Face
3	.73361	32.73	Pk	10.2	.1	-40	3.03	30.29	-27.26	-	-	0-360	ON
6	1.83705	21.42	Pk	10.4	.2	-40	-7.98	29.54	-37.52	-	-	0-360	OFF
4	1.90229	21.43	Pk	10.4	.2	-40	-7.97	29.54	-37.51	-	-	0-360	ON
7	6.65523	24.99	Pk	10.5	.4	-40	-4.11	29.54	-33.65	-	-	0-360	OFF
5	6.67881	11.92	Pk	10.5	.4	-40	-17.18	29.54	-46.72	-	-	0-360	ON

Pk - Peak detector

FCC 15.209 Below 30MHz.TST 30915 8 Jan 2015
Rev 9.5 24 Jun 2015

8.3. TX SPURIOUS EMISSION 30 TO 1000 MHz

8.3.1. STANDBY CONFIGURATION



DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T900 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 115.2125	32.6	Pk	13.2	-30.4	15.4	43.52	-28.12	0-360	301	H
9	* 136.6325	36.27	Pk	13.4	-30.2	19.47	43.52	-24.05	0-360	100	V
1	32.55	27.66	Pk	20.2	-31.3	16.56	40	-23.44	0-360	201	H
6	34.2075	33.15	Pk	18.8	-31.2	20.75	40	-19.25	0-360	100	V
7	45.0875	38.4	Pk	10.8	-31.1	18.1	40	-21.9	0-360	100	V
8	48.53	40.62	Pk	8.5	-31	18.12	40	-21.88	0-360	100	V
10	156.31	37.93	Pk	12.1	-30	20.03	43.52	-23.49	0-360	100	V
3	157.16	37.55	Pk	12.1	-30	19.65	43.52	-23.87	0-360	201	H
4	314.8	32.12	Pk	13.6	-29	16.72	46.02	-29.3	0-360	100	H
5	463.7	31.49	Pk	16.8	-28.4	19.89	46.02	-26.13	0-360	201	H
11	602.3	32.56	Pk	18.8	-27.9	23.46	46.02	-22.56	0-360	99	V
12	778.8	32.63	Pk	20.9	-27.3	26.23	46.02	-19.79	0-360	301	V
13	786.4	35.47	Pk	21	-27.4	29.07	46.02	-16.95	0-360	201	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band

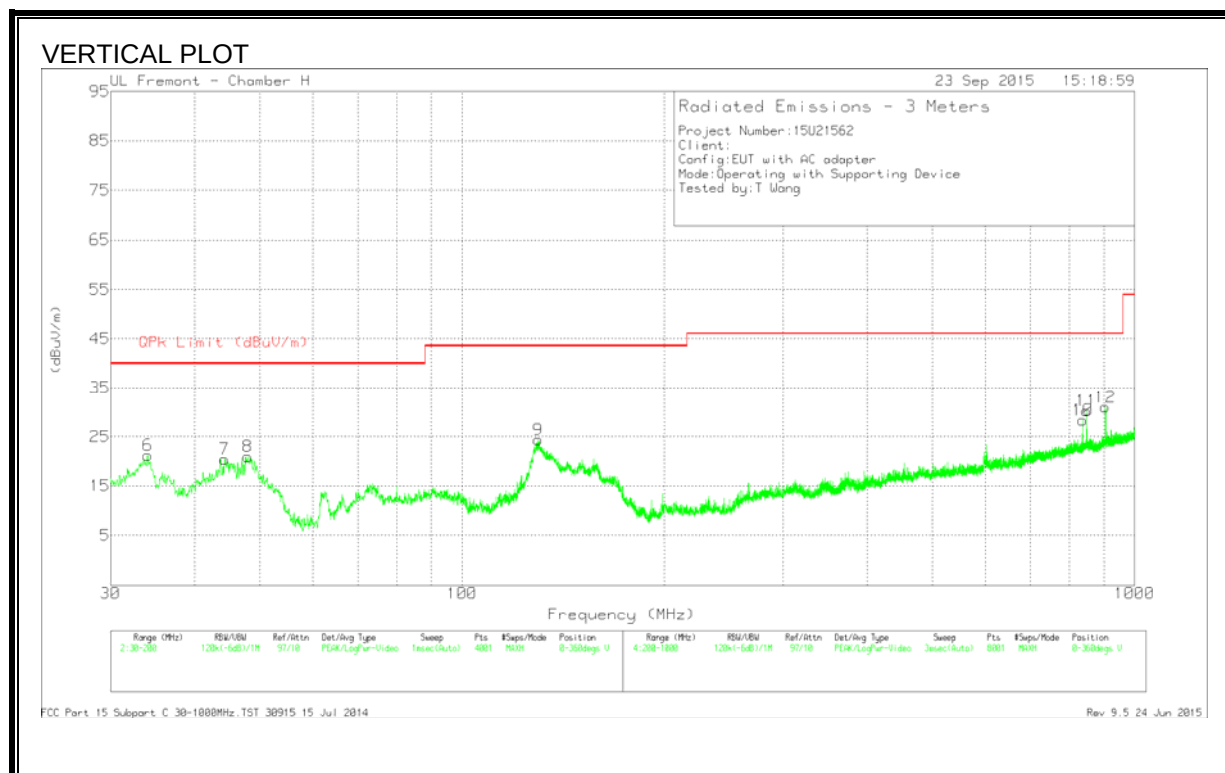
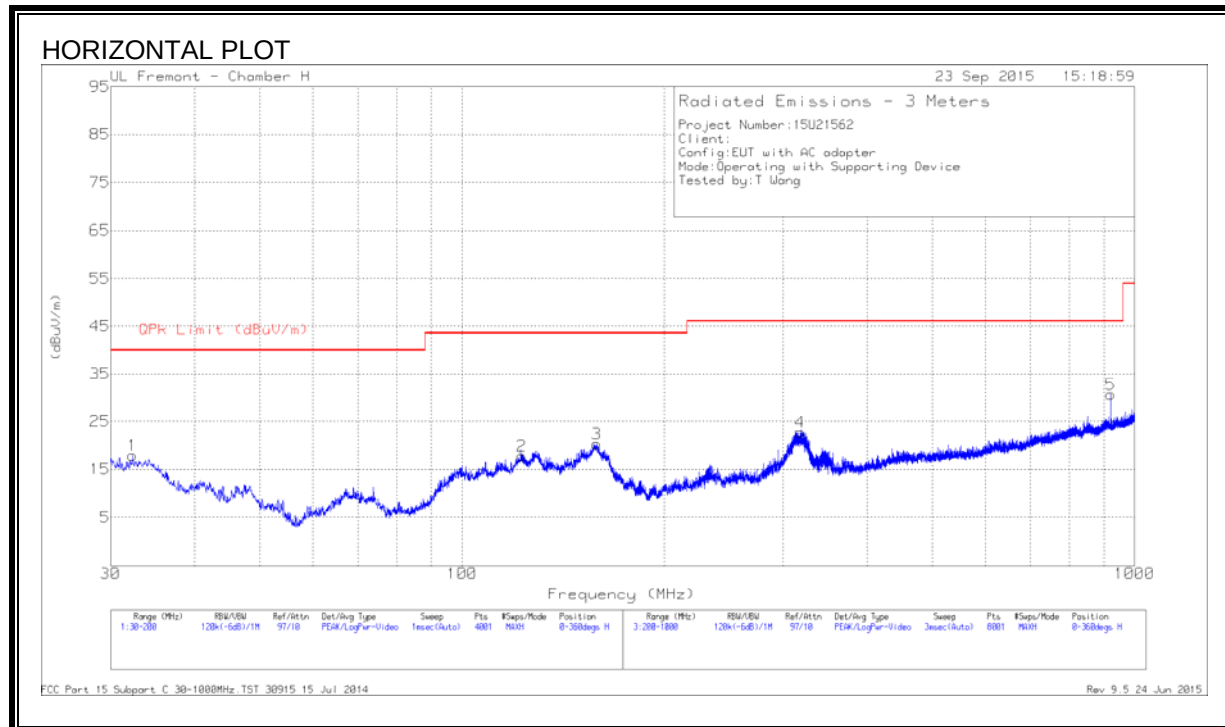
Pk - Peak detector

FCC Part 15 Subpart C 30-1000MHz.TST 30915 15 Jul 2014

Rev 9.5 24 Jun 2015

8.3.2. OPERATING CONFIGURATION

OPERATING WITH A1554 WATCH



DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T900 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 122.6925	34.3	Pk	13.8	-30.3	17.8	43.52	-25.72	0-360	301	H
9	* 129.875	40.75	Pk	13.8	-30.2	24.35	43.52	-19.17	0-360	100	V
1	32.3375	28.86	Pk	20.4	-31.3	17.96	40	-22.04	0-360	400	H
6	34.08	33.59	Pk	18.9	-31.3	21.19	40	-18.81	0-360	100	V
7	44.365	40.15	Pk	11.4	-31.1	20.45	40	-19.55	0-360	100	V
8	47.9775	43.25	Pk	8.8	-31.1	20.95	40	-19.05	0-360	100	V
3	158.435	38.22	Pk	12.1	-30	20.32	43.52	-23.2	0-360	201	H
4	318.4	38.11	Pk	13.7	-29.1	22.71	46.02	-23.31	0-360	100	H
10	836.7	34.12	Pk	21.4	-27.1	28.42	46.02	-17.6	0-360	99	V
11	848.1	35.2	Pk	22	-26.9	30.3	46.02	-15.72	0-360	99	V
12	905.3	34.89	Pk	22.5	-26.4	30.99	46.02	-15.03	0-360	201	V
5	921.5	34.67	Pk	22.2	-26.2	30.67	46.02	-15.35	0-360	100	H

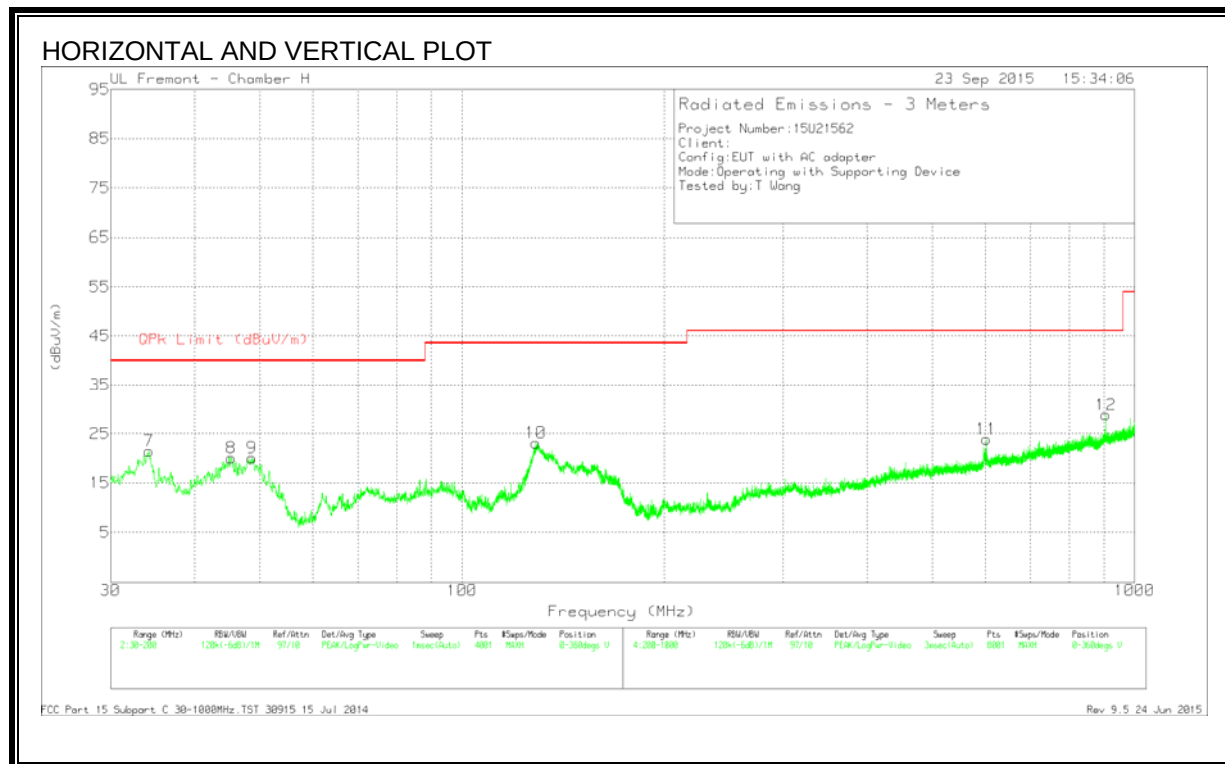
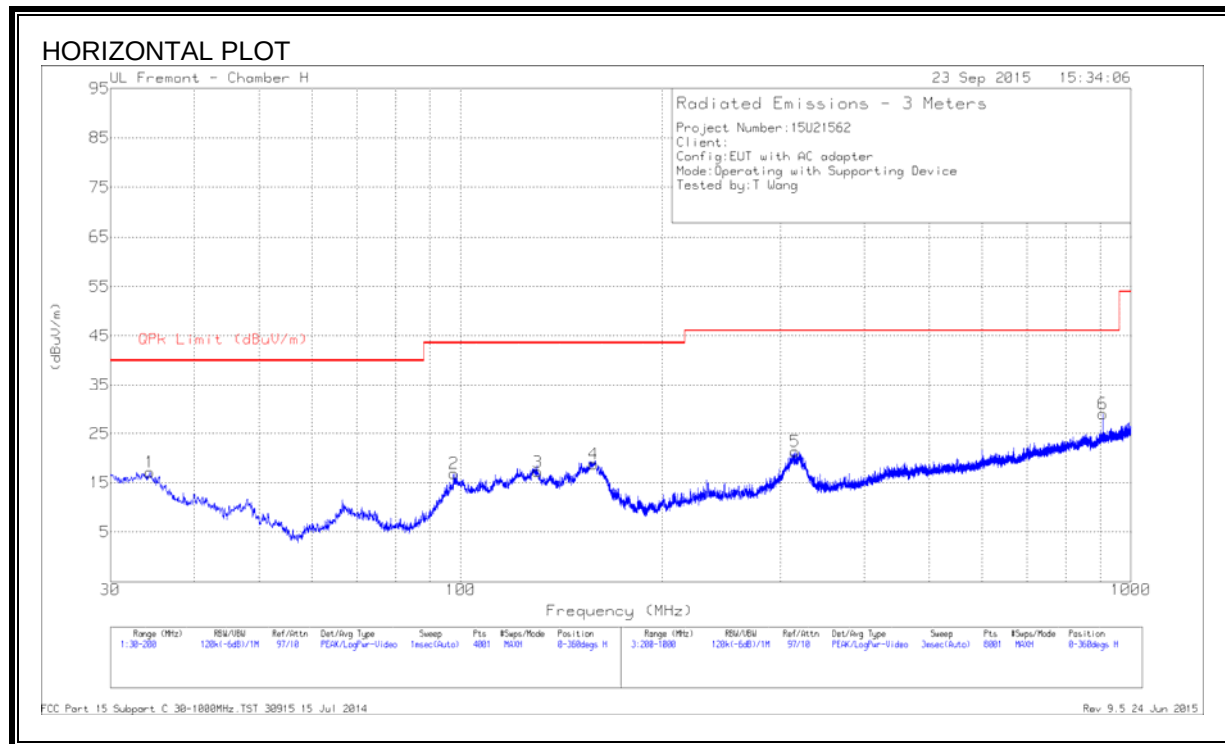
* - indicates frequency in CFR15.205/IC8.10 Restricted Band

Pk - Peak detector

FCC Part 15 Subpart C 30-1000MHz.TST 30915 15 Jul 2014

Rev 9.5 24 Jun 2015

OPERATING WITH A1553 WATCH



DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T900 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* 130.3	33.61	Pk	13.8	-30.2	17.21	43.52	-26.31	0-360	301	H
10	* 128.685	39.64	Pk	13.8	-30.3	23.14	43.52	-20.38	0-360	100	V
7	34.2075	33.9	Pk	18.8	-31.2	21.5	40	-18.5	0-360	100	V
1	34.3775	29.62	Pk	18.7	-31.2	17.12	40	-22.88	0-360	301	H
8	45.385	40.53	Pk	10.6	-31	20.13	40	-19.87	0-360	100	V
9	48.7	42.63	Pk	8.5	-31	20.13	40	-19.87	0-360	100	V
2	97.66	37.82	Pk	9.6	-30.5	16.92	43.52	-26.6	0-360	301	H
4	157.755	36.7	Pk	12.1	-30	18.8	43.52	-24.72	0-360	201	H
5	315.4	36.77	Pk	13.6	-29	21.37	46.02	-24.65	0-360	100	H
11	602.3	33.03	Pk	18.8	-27.9	23.93	46.02	-22.09	0-360	100	V
12	906.5	32.71	Pk	22.5	-26.4	28.81	46.02	-17.21	0-360	201	V
6	907.7	32.95	Pk	22.4	-26.4	28.95	46.02	-17.07	0-360	201	H

* - indicates frequency in CFR15.205/IC8.10 Restricted Band

Pk - Peak detector

FCC Part 15 Subpart C 30-1000MHz.TST 30915 15 Jul 2014

Rev 9.5 24 Jun 2015

9. AC MAINS LINE CONDUCTED EMISSIONS W/ POWER SUPPLY

LIMITS

§15.207 (a)

IC RSS-GEN, Section 8.8

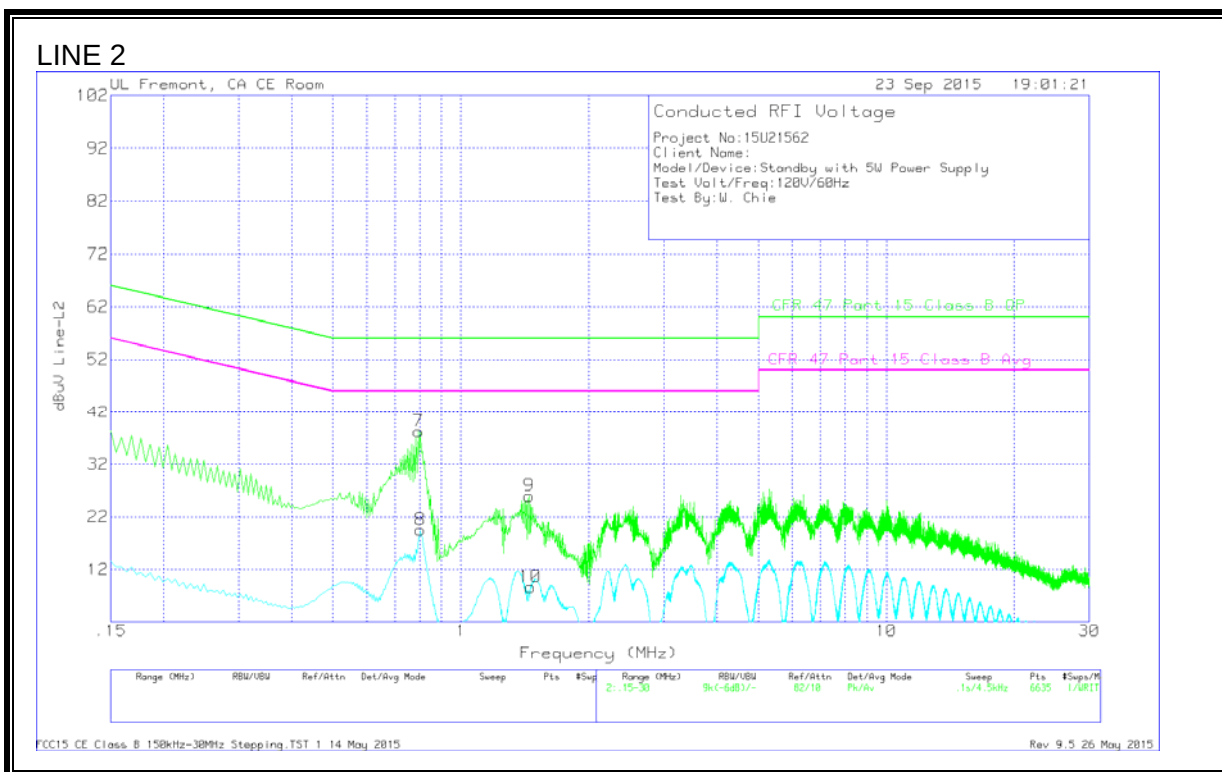
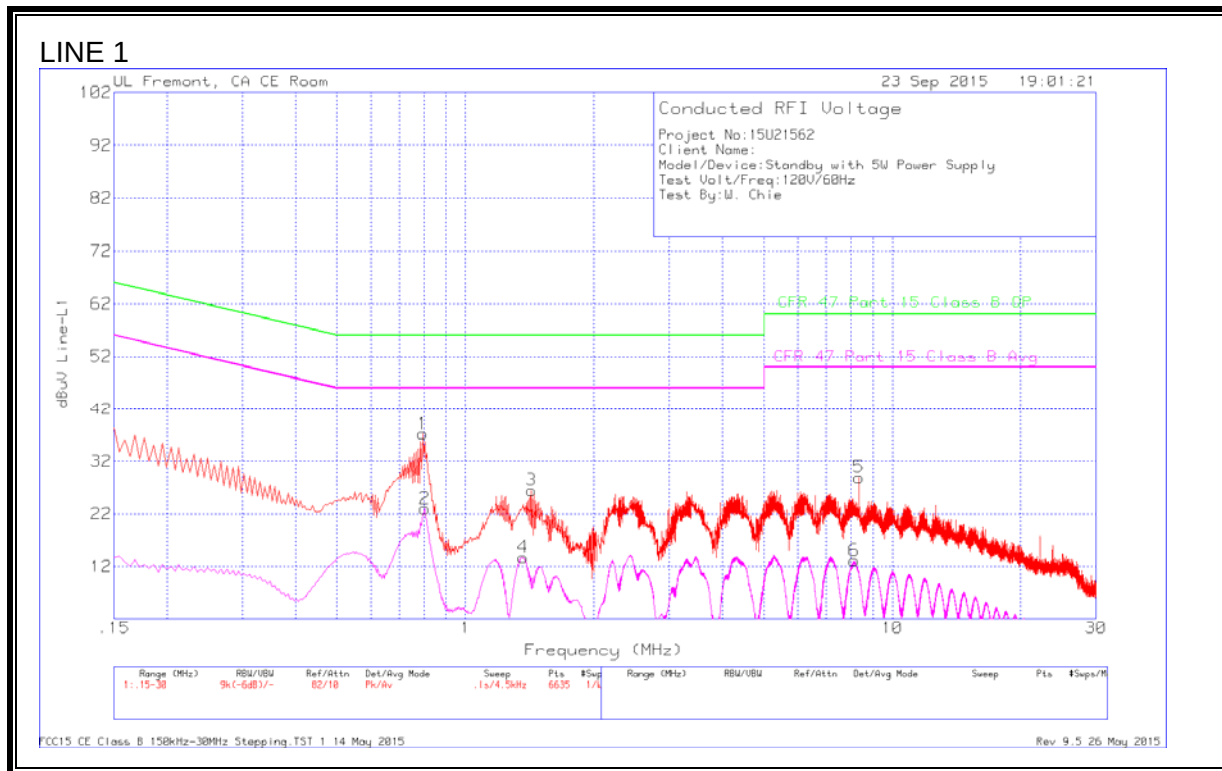
Frequency of emission (MHz)	Conducted Limit (dBμV)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56*	56 to 46*
0.50 to 5	56	46
5 to 30	60	50
* Decreases with the logarithm of the frequency.		

TEST PROCEDURE

ANSI C63.10-2013

RESULTS

9.1. STANDBY CONFIGURATION POWERED FROM AC ADAPTER



DATA

Range 1: Line-L1 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1	LC Cables 1&3	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	Margin (dB)	CFR 47 Part 15 Class B Avg	Margin (dB)
1	.7935	36.88	Pk	.3	0	37.18	56	-18.82	-	-
2	.8025	22.68	Av	.3	0	22.98	-	-	46	-23.02
3	1.428	26.16	Pk	.2	.1	26.46	56	-29.54	-	-
4	1.365	13.42	Av	.2	.1	13.72	-	-	46	-32.28
5	8.358	28.63	Pk	.2	.1	28.93	60	-31.07	-	-
6	8.1465	12.82	Av	.2	.1	13.12	-	-	50	-36.88

Pk - Peak detector

Av - Average detection

Range 2: Line-L2 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2	LC Cables 2&3	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	Margin (dB)	CFR 47 Part 15 Class B Avg	Margin (dB)
7	.7935	37.96	Pk	.3	0	38.26	56	-17.74	-	-
8	.8025	19.22	Av	.3	0	19.52	-	-	46	-26.48
9	1.446	25.7	Pk	.2	.1	26	56	-30	-	-
10	1.455	8.4	Av	.2	.1	8.7	-	-	46	-37.3

Pk - Peak detector

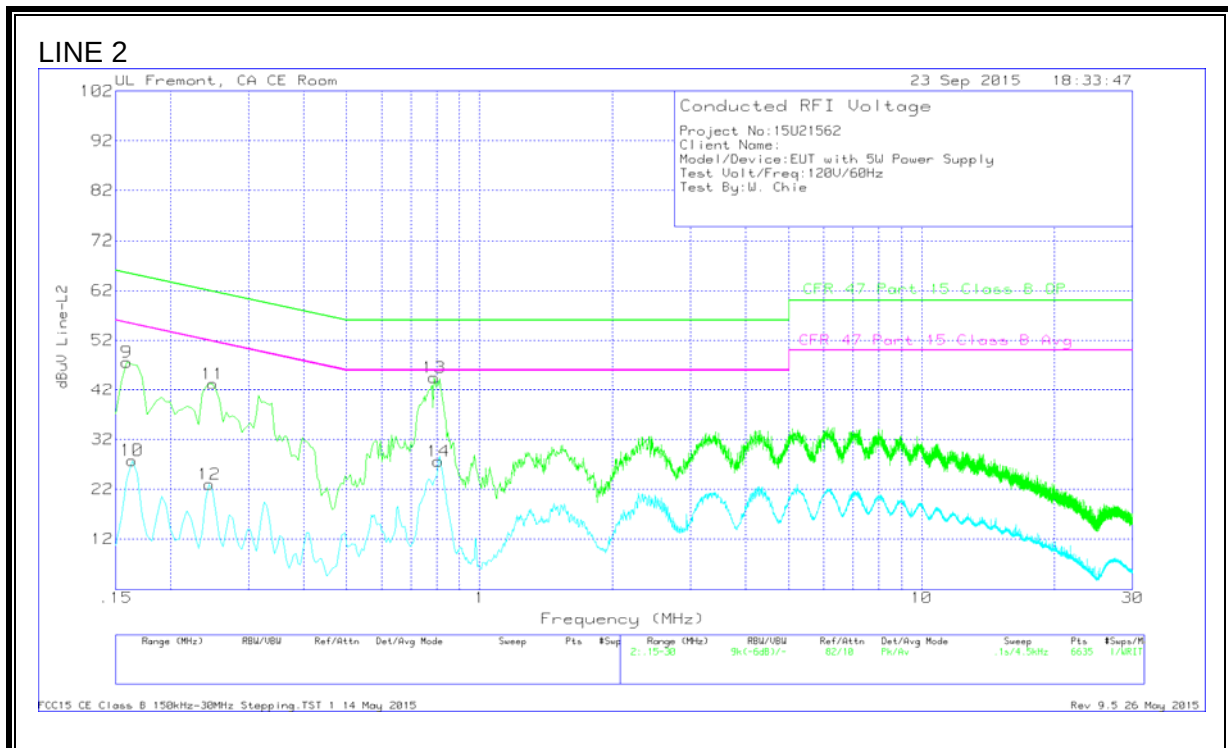
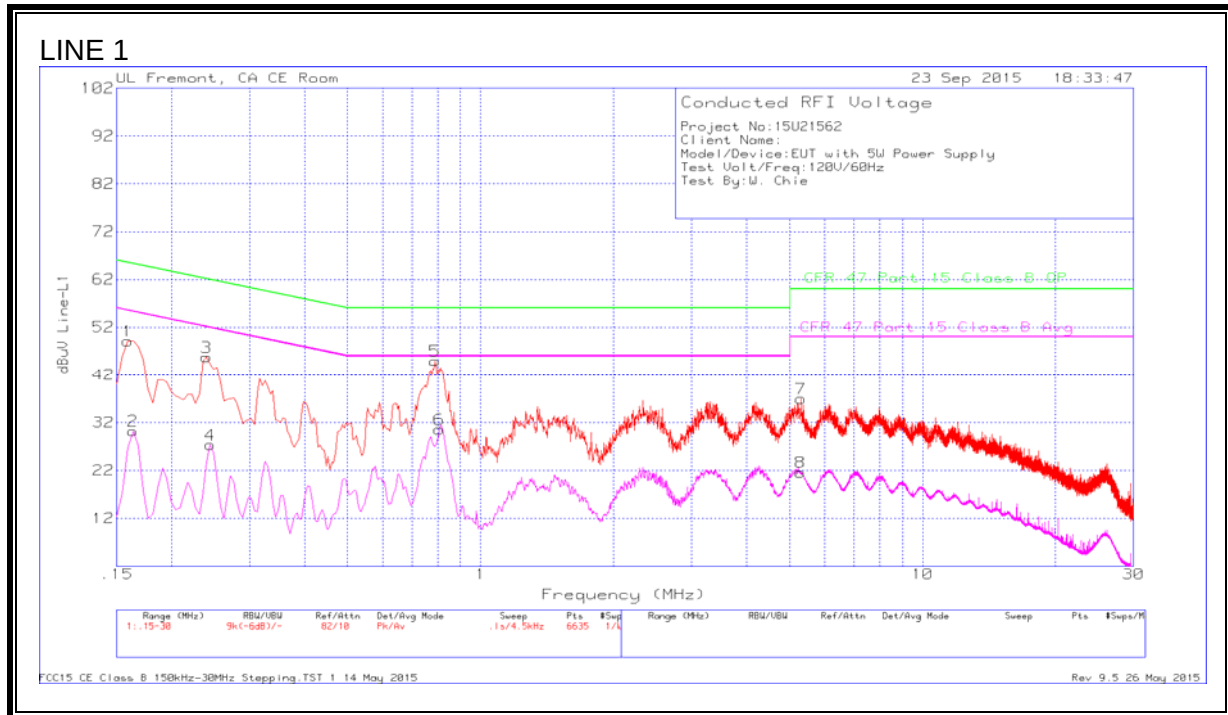
Av - Average detection

FCC15 CE Class B 150kHz-30MHz Stepping.TST 1 14 May 2015

Rev 9.5 26 May 2015

9.2. OPERATING CONFIGURATION POWERED FORM AC ADAPTER

OPERATING WITH A1554 WATCH



DATA

Range 1: Line-L1 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1	LC Cables 1&3	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	Margin (dB)	CFR 47 Part 15 Class B Avg	Margin (dB)
1	.159	47.85	Pk	1.3	0	49.15	65.52	-16.37	-	-
2	.1635	29.03	Av	1.2	0	30.23	-	-	55.28	-25.05
3	.24	45.05	Pk	.7	0	45.75	62.1	-16.35	-	-
4	.2445	26.62	Av	.7	0	27.32	-	-	51.94	-24.62
5	.789	44.66	Pk	.3	0	44.96	56	-11.04	-	-
6	.807	30.28	Av	.3	0	30.58	-	-	46	-15.42
7	5.307	36.7	Pk	.2	.1	37	60	-23	-	-
8	5.2935	21.33	Av	.2	.1	21.63	-	-	50	-28.37

Pk - Peak detector

Av - Average detection

Range 2: Line-L2 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2	LC Cables 2&3	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	Margin (dB)	CFR 47 Part 15 Class B Avg	Margin (dB)
9	.159	46.23	Pk	1.4	0	47.63	65.52	-17.89	-	-
10	.1635	26.49	Av	1.3	0	27.79	-	-	55.28	-27.49
11	.249	42.56	Pk	.7	0	43.26	61.79	-18.53	-	-
12	.2445	22.21	Av	.8	0	23.01	-	-	51.94	-28.93
13	.789	44.25	Pk	.3	0	44.55	56	-11.45	-	-
14	.807	27.34	Av	.3	0	27.64	-	-	46	-18.36

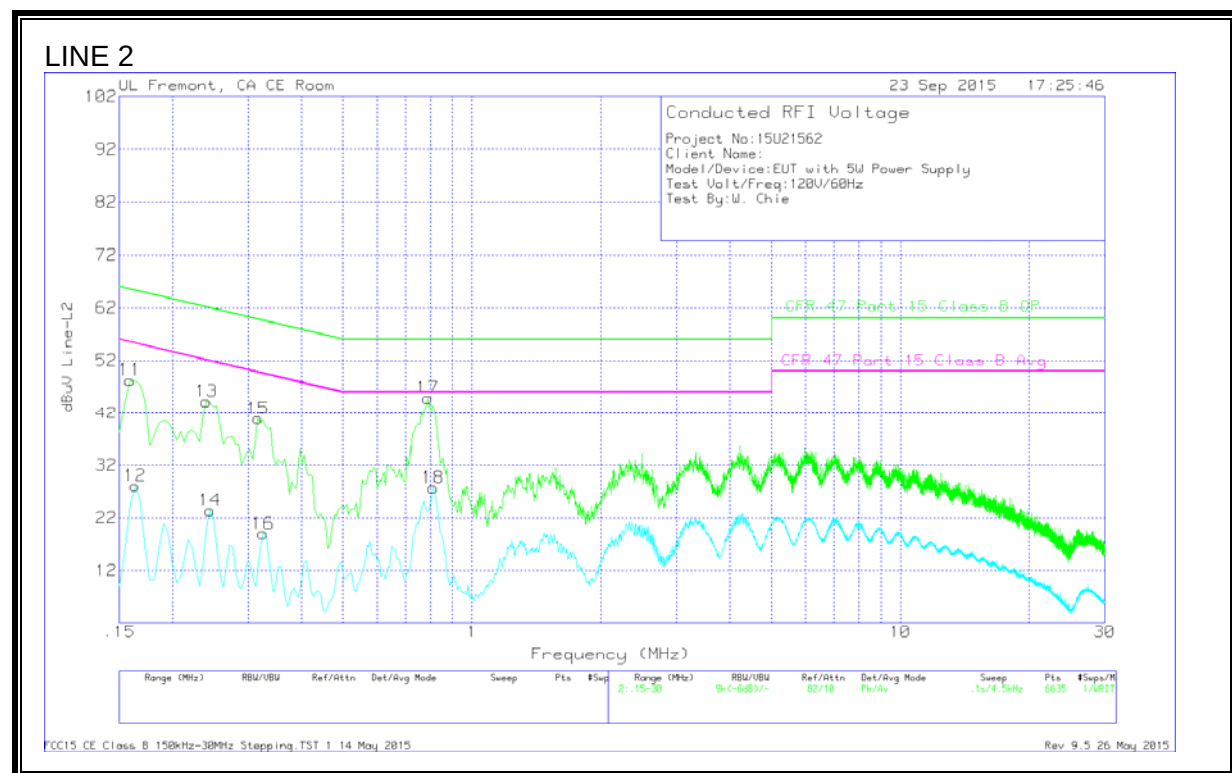
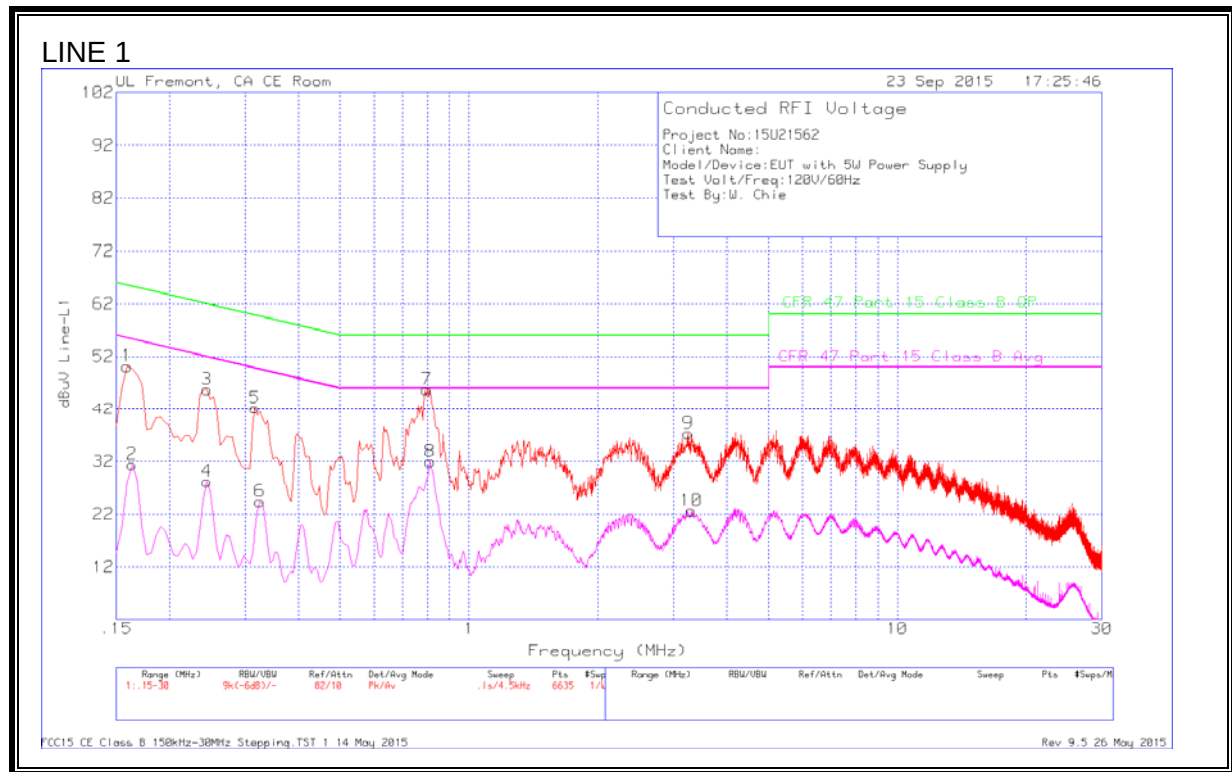
Pk - Peak detector

Av - Average detection

FCC15 CE Class B 150kHz-30MHz Stepping.TST 1 14 May 2015

Rev 9.5 26 May 2015

OPERATING WITH A1553 WATCH



DATA

Range 1: Line-L1 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1	LC Cables 1&3	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	Margin (dB)	CFR 47 Part 15 Class B Avg	Margin (dB)
1	.159	48.9	Pk	1.3	0	50.2	65.52	-15.32	-	-
2	.1635	30.2	Av	1.2	0	31.4	-	-	55.28	-23.88
3	.2445	45.1	Pk	.7	0	45.8	61.94	-16.14	-	-
4	.2445	27.5	Av	.7	0	28.2	-	-	51.94	-23.74
5	.3165	41.74	Pk	.5	0	42.24	59.8	-17.56	-	-
6	.3255	23.94	Av	.5	0	24.44	-	-	49.57	-25.13
7	.798	45.51	Pk	.3	0	45.81	56	-10.19	-	-
8	.8115	31.66	Av	.3	0	31.96	-	-	46	-14.04
9	3.246	36.98	Pk	.2	.1	37.28	56	-18.72	-	-
10	3.3045	22.35	Av	.2	.1	22.65	-	-	46	-23.35

Pk - Peak detector

Av - Average detection

Range 2: Line-L2 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2	LC Cables 2&3	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	Margin (dB)	CFR 47 Part 15 Class B Avg	Margin (dB)
11	.159	46.89	Pk	1.4	0	48.29	65.52	-17.23	-	-
12	.1635	26.77	Av	1.3	0	28.07	-	-	55.28	-27.21
13	.24	43.47	Pk	.8	0	44.27	62.1	-17.83	-	-
14	.2445	22.61	Av	.8	0	23.41	-	-	51.94	-28.53
15	.3165	40.34	Pk	.6	0	40.94	59.8	-18.86	-	-
16	.3255	18.51	Av	.5	0	19.01	-	-	49.57	-30.56
17	.789	44.64	Pk	.3	0	44.94	56	-11.06	-	-
18	.8115	27.41	Av	.3	0	27.71	-	-	46	-18.29

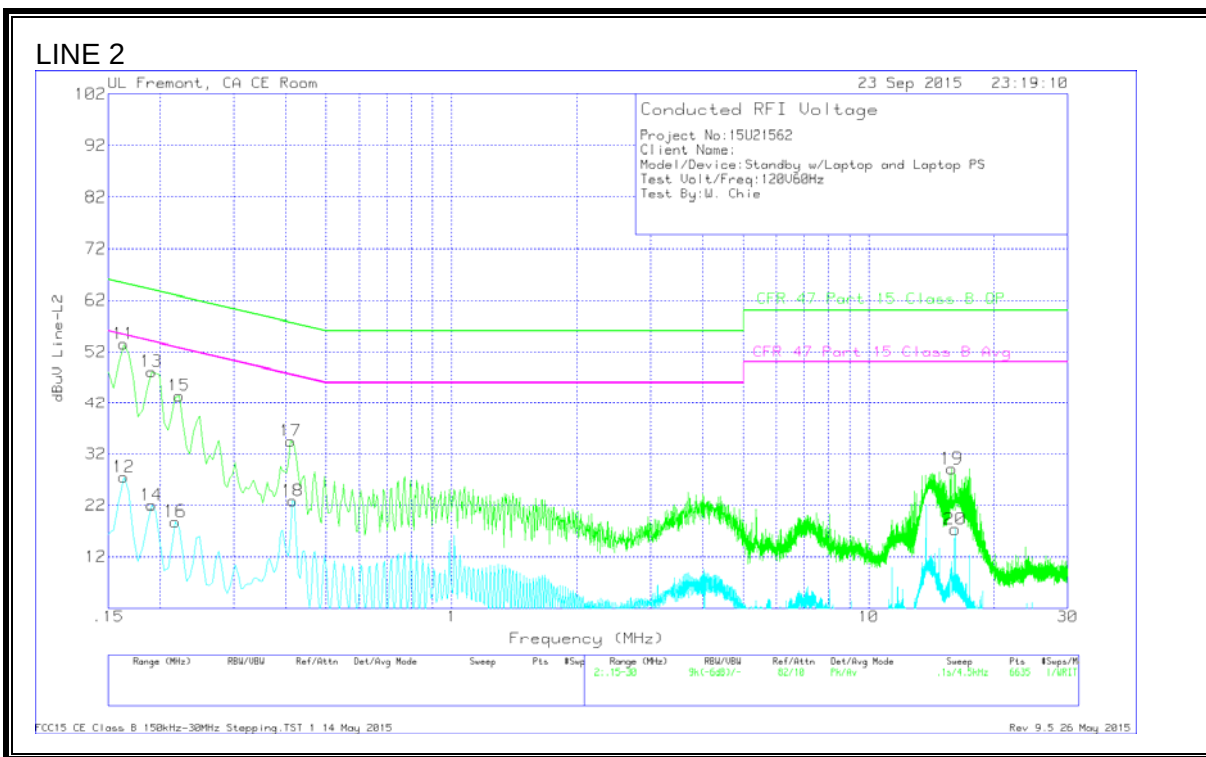
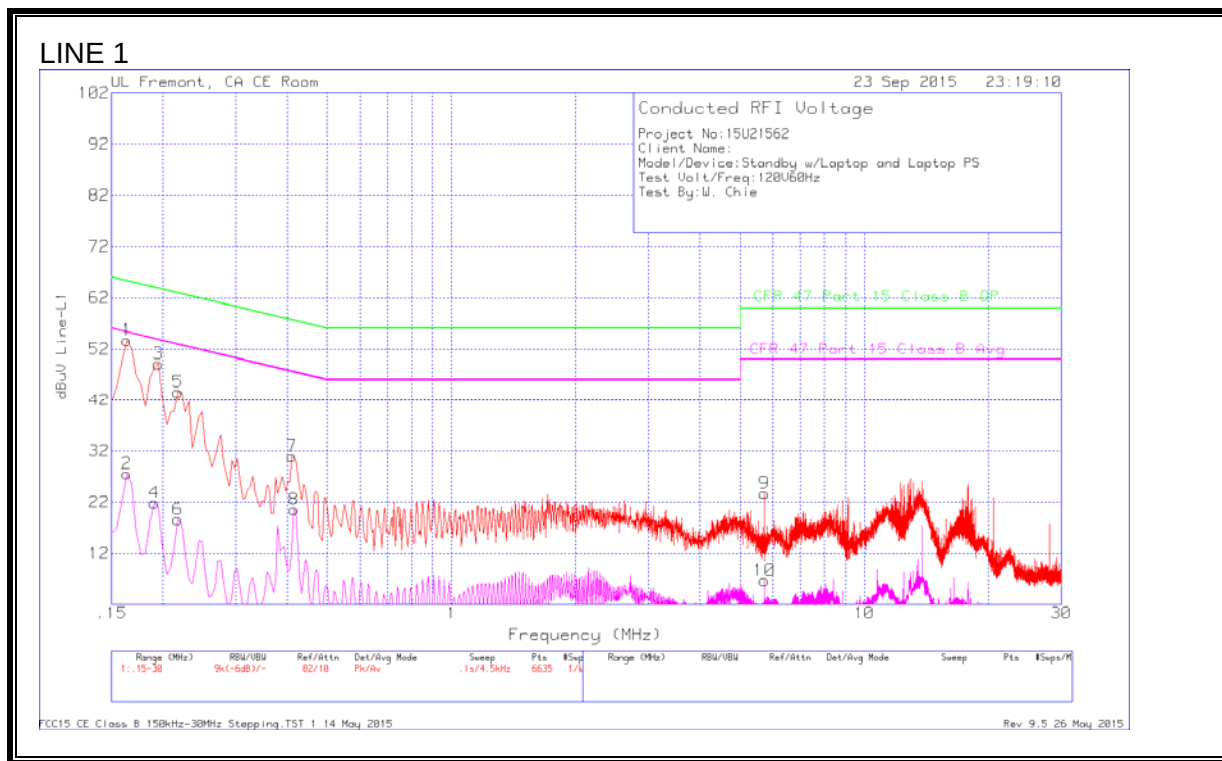
Pk - Peak detector

Av - Average detection

FCC15 CE Class B 150kHz-30MHz Stepping.TST 1 14 May 2015

Rev 9.5 26 May 2015

9.3. STANDBY CONFIGURATION POWERED FROM LAPTOP



DATA

Range 1: Line-L1 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1	LC Cables 1&3	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	Margin (dB)	CFR 47 Part 15 Class B Avg	Margin (dB)
1	.1635	52.59	Pk	1.2	0	53.79	65.28	-11.49	-	-
2	.1635	26.35	Av	1.2	0	27.55	-	-	55.28	-27.73
3	.195	48.18	Pk	1	0	49.18	63.82	-14.64	-	-
4	.1905	20.87	Av	1	0	21.87	-	-	54.01	-32.14
5	.2175	42.86	Pk	.8	0	43.66	62.91	-19.25	-	-
6	.2175	17.86	Av	.8	0	18.66	-	-	52.91	-34.25
7	.411	30.52	Pk	.4	0	30.92	57.63	-26.71	-	-
8	.4155	20.16	Av	.4	0	20.56	-	-	47.54	-26.98
9	5.7255	23.4	Pk	.2	.1	23.7	60	-36.3	-	-
10	5.7255	6.4	Av	.2	.1	6.7	-	-	50	-43.3

Pk - Peak detector

Av - Average detection

Range 2: Line-L2 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2	LC Cables 2&3	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	Margin (dB)	CFR 47 Part 15 Class B Avg	Margin (dB)
11	.1635	52.25	Pk	1.3	0	53.55	65.28	-11.73	-	-
12	.1635	26.17	Av	1.3	0	27.47	-	-	55.28	-27.81
13	.1905	47.08	Pk	1.1	0	48.18	64.01	-15.83	-	-
14	.1905	20.95	Av	1.1	0	22.05	-	-	54.01	-31.96
15	.222	42.61	Pk	.9	0	43.51	62.74	-19.23	-	-
16	.2175	17.92	Av	.9	0	18.82	-	-	52.91	-34.09
17	.411	34.15	Pk	.4	0	34.55	57.63	-23.08	-	-
18	.4155	22.47	Av	.4	0	22.87	-	-	47.54	-24.67
19	15.828	28.61	Pk	.3	.2	29.11	60	-30.89	-	-
20	16.1115	16.88	Av	.3	.2	17.38	-	-	50	-32.62

Pk - Peak detector

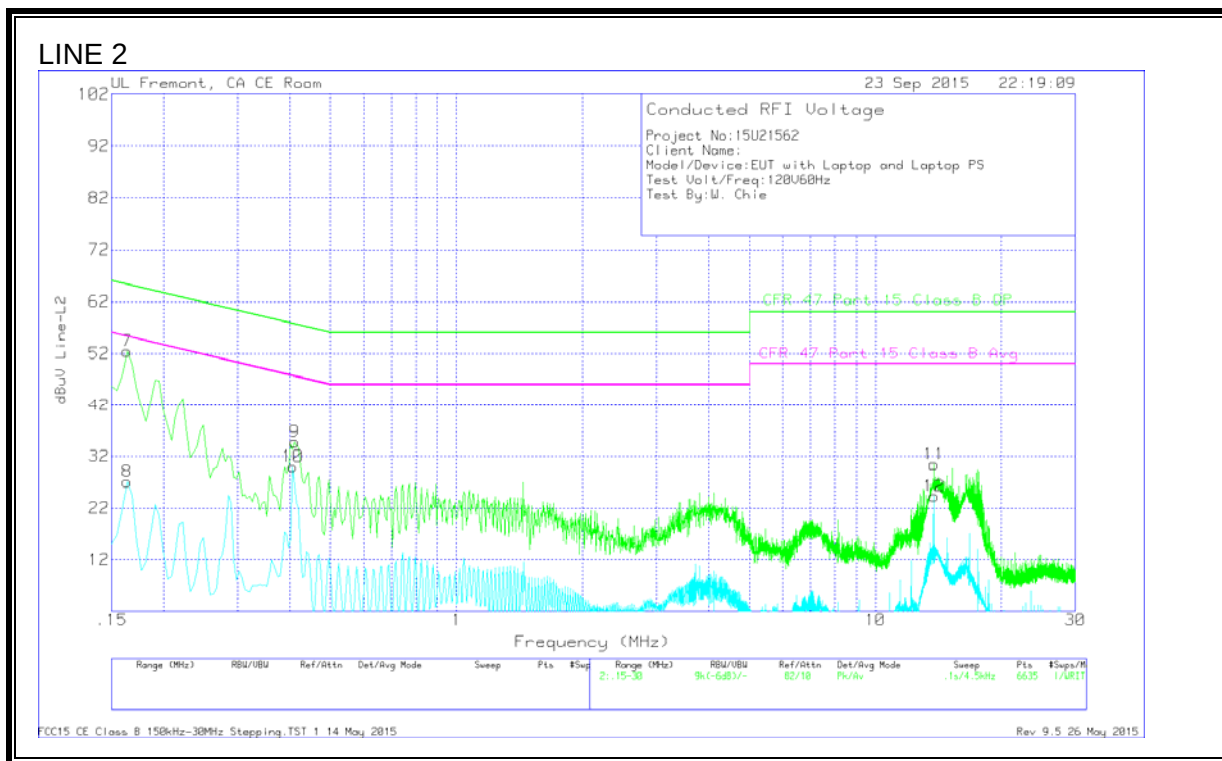
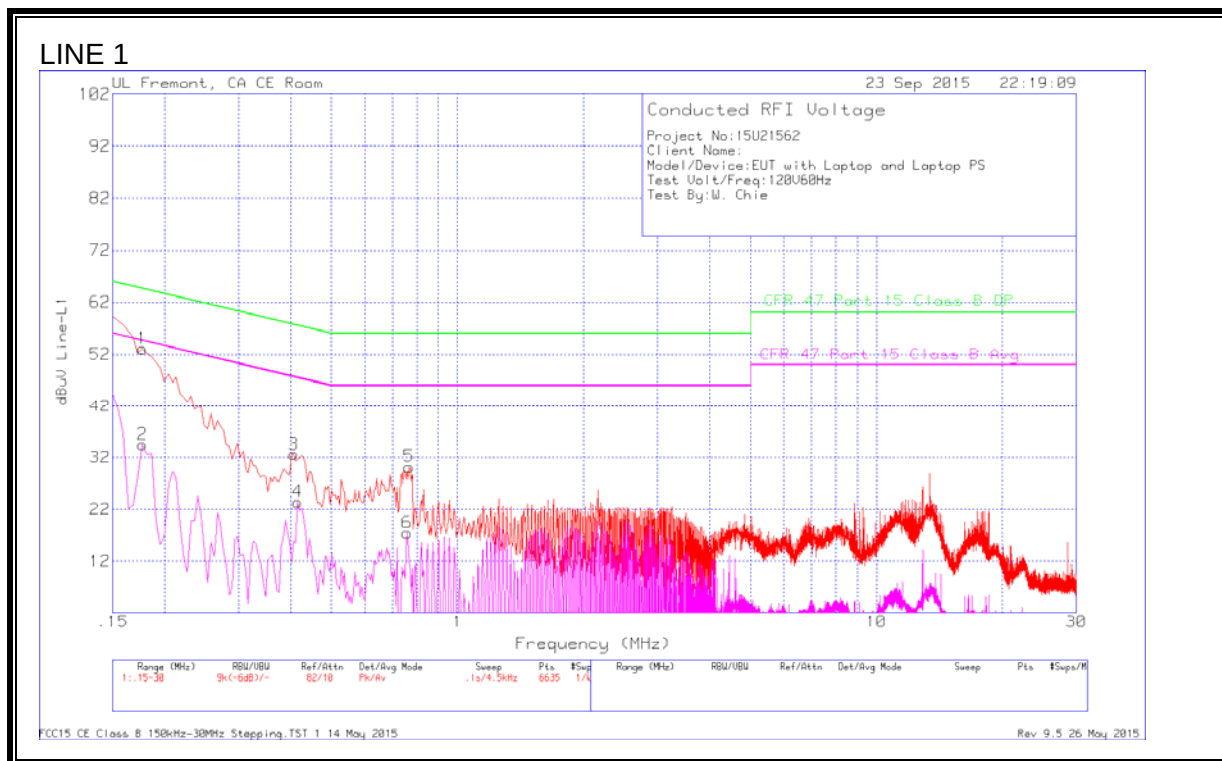
Av - Average detection

FCC15 CE Class B 150kHz-30MHz Stepping.TST 1 14 May 2015

Rev 9.5 26 May 2015

9.4. OPERATING CONFIGURATION POWERED FROM LAPTOP

OPERATING WITH A1554 WATCH



DATA

Range 1: Line-L1 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1	LC Cables 1&3	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	Margin (dB)	CFR 47 Part 15 Class B Avg	Margin (dB)
1	.177	52.04	Pk	1.1	0	53.14	64.63	-11.49	-	-
2	.177	33.38	Av	1.1	0	34.48	-	-	54.63	-20.15
3	.4065	32.17	Pk	.4	0	32.57	57.72	-25.15	-	-
4	.4155	23.04	Av	.4	0	23.44	-	-	47.54	-24.1
5	.7665	29.92	Pk	.3	0	30.22	56	-25.78	-	-
6	.7575	17.18	Av	.3	0	17.48	-	-	46	-28.52

Pk - Peak detector

Av - Average detection

Range 2: Line-L2 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2	LC Cables 2&3	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	Margin (dB)	CFR 47 Part 15 Class B Avg	Margin (dB)
7	.1635	51.17	Pk	1.3	0	52.47	65.28	-12.81	-	-
8	.1635	25.79	Av	1.3	0	27.09	-	-	55.28	-28.19
9	.411	34.39	Pk	.4	0	34.79	57.63	-22.84	-	-
10	.4065	29.58	Av	.4	0	29.98	-	-	47.72	-17.74
11	13.803	30.07	Pk	.2	.2	30.47	60	-29.53	-	-
12	13.8075	23.89	Av	.2	.2	24.29	-	-	50	-25.71

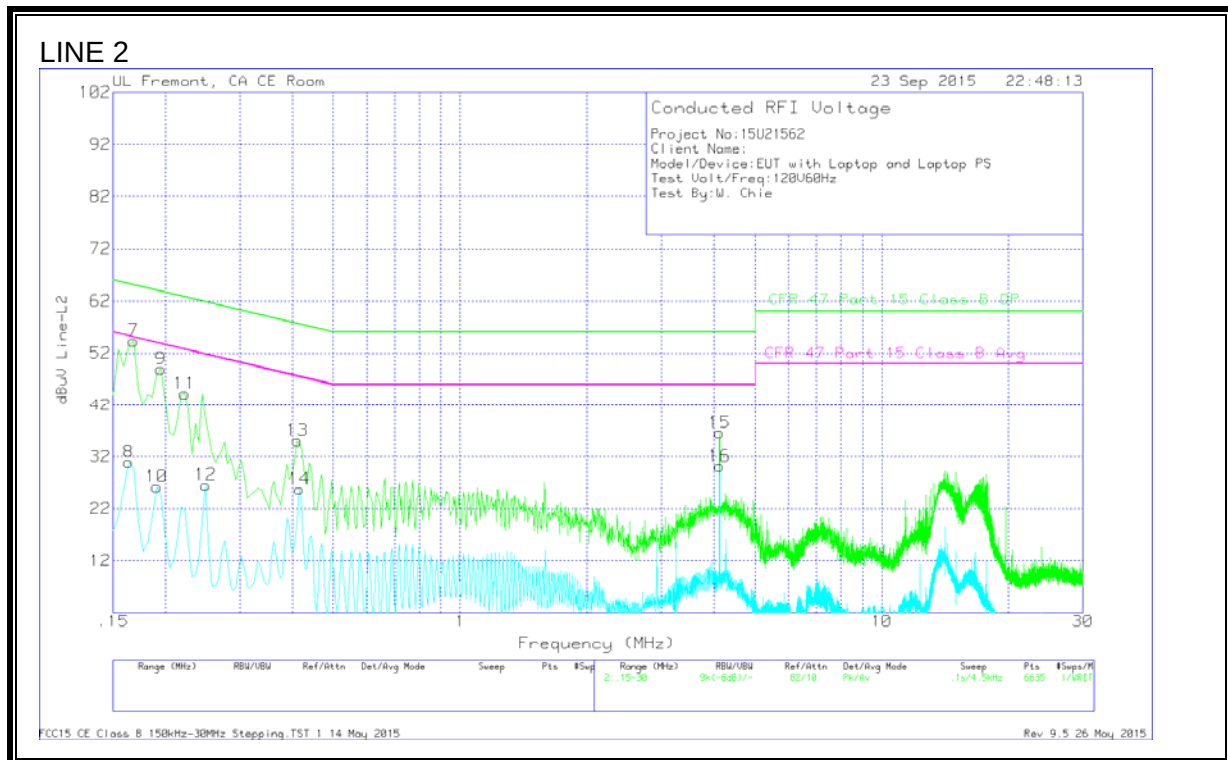
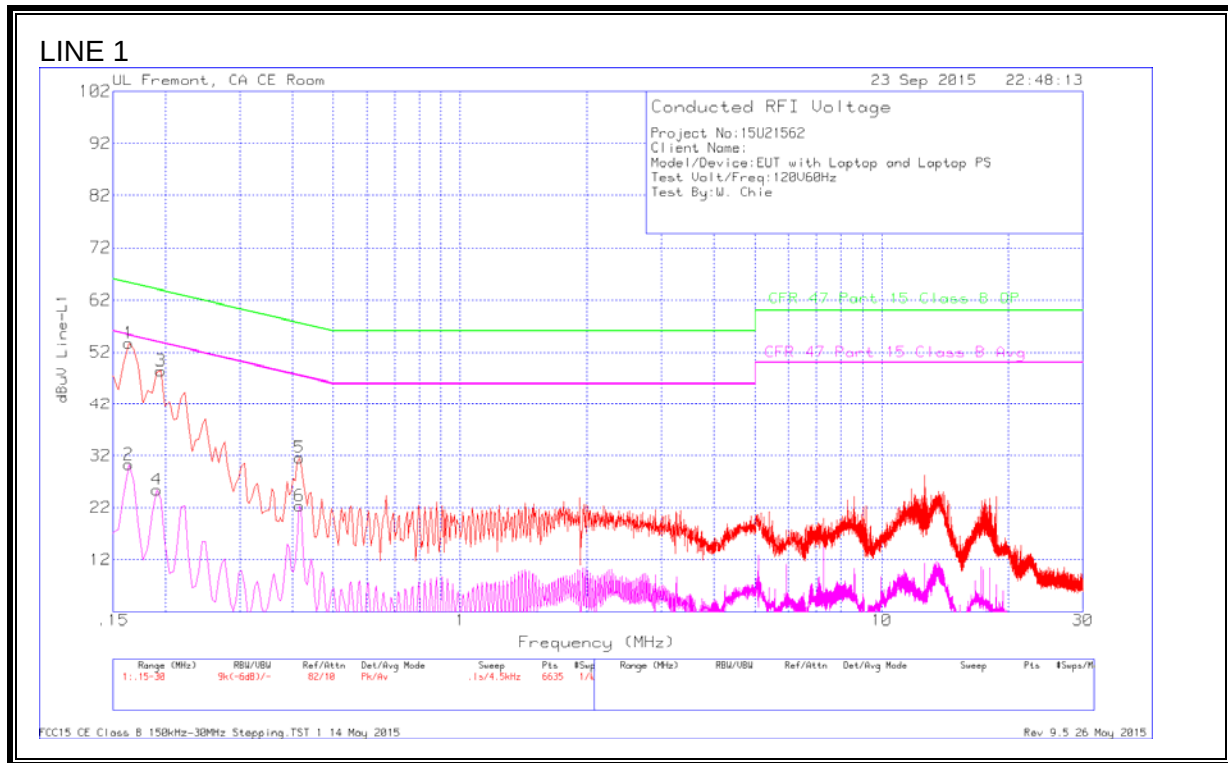
Pk - Peak detector

Av - Average detection

FCC15 CE Class B 150kHz-30MHz Stepping.TST 1 14 May 2015

Rev 9.5 26 May 2015

OPERATING WITH A1553 WATCH



DATA

Range 1: Line-L1 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1	LC Cables 1&3	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	Margin (dB)	CFR 47 Part 15 Class B Avg	Margin (dB)
1	.1635	52.55	Pk	1.2	0	53.75	65.28	-11.53	-	-
2	.1635	29.07	Av	1.2	0	30.27	-	-	55.28	-25.01
3	.195	47.44	Pk	1	0	48.44	63.82	-15.38	-	-
4	.1905	24.45	Av	1	0	25.45	-	-	54.01	-28.56
5	.4155	31.19	Pk	.4	0	31.59	57.54	-25.95	-	-
6	.4155	21.93	Av	.4	0	22.33	-	-	47.54	-25.21

Pk - Peak detector

Av - Average detection

Range 2: Line-L2 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2	LC Cables 2&3	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	Margin (dB)	CFR 47 Part 15 Class B Avg	Margin (dB)
7	.168	53.13	Pk	1.3	0	54.43	65.06	-10.63	-	-
8	.1635	29.64	Av	1.3	0	30.94	-	-	55.28	-24.34
9	.195	48.01	Pk	1	0	49.01	63.82	-14.81	-	-
10	.1905	25.09	Av	1.1	0	26.19	-	-	54.01	-27.82
11	.222	43.39	Pk	.9	0	44.29	62.74	-18.45	-	-
12	.249	25.82	Av	.7	0	26.52	-	-	51.79	-25.27
13	.411	34.67	Pk	.4	0	35.07	57.63	-22.56	-	-
14	.4155	25.36	Av	.4	0	25.76	-	-	47.54	-21.78
15	4.1235	36.26	Pk	.2	.1	36.56	56	-19.44	-	-
16	4.1235	29.85	Av	.2	.1	30.15	-	-	46	-15.85

Pk - Peak detector

Av - Average detection

FCC15 CE Class B 150kHz-30MHz Stepping.TST 1 14 May 2015

Rev 9.5 26 May 2015