



TEST REPORT

Report Number. : R13337971-E1

Applicant : Raspberry Pi (Trading) Ltd
Maurice Wilkes Building
Cowley Road
Cambridge
CB4 0DS
United Kingdom

Model : RPI-RM0 (Gamma)

FCC ID : 2ABCB-RPIRM0

IC : 20953-RPIRM0

EUT Description : Bluetooth and WiFi radio module

Test Standard(s) : FCC 47 CFR PART 15 SUBPART C
ISED RSS-247 ISSUE 2
ISED RSS-GEN ISSUE 5

Date Of Issue:
2020-09-17

Prepared by:
UL LLC
12 Laboratory Dr.
Research Triangle Park, NC 27709 U.S.A.
TEL: (919) 549-1400

REPORT REVISION HISTORY

Rev.	Issue Date	Revisions	Revised By
V1	2020-09-17	Initial Issue	Niklas Haydon
V2	2020-10-26	Added conducted emissions (mains) data	Mike Antola

REPORT REVISION HISTORY	2
1. ATTESTATION OF TEST RESULTS	4
2. TEST RESULTS SUMMARY	5
3. TEST METHODOLOGY	6
4. FACILITIES AND ACCREDITATION	6
5. DECISION RULES AND MEASUREMENT UNCERTAINTY	7
5.1. METROLOGICAL TRACEABILITY	7
5.2. DECISION RULES	7
5.3. MEASUREMENT UNCERTAINTY	7
5.4. SAMPLE CALCULATION	8
6. EQUIPMENT UNDER TEST	9
6.1. EUT DESCRIPTION	9
6.2. POWER SETTINGS USED FOR TESTING	9
6.3. DESCRIPTION OF AVAILABLE ANTENNAS	10
6.4. SOFTWARE AND FIRMWARE	10
6.5. WORST-CASE CONFIGURATION AND MODE	10
6.6. DESCRIPTION OF TEST SETUP	11
7. MEASUREMENT METHOD	12
8. TEST AND MEASUREMENT EQUIPMENT	13
9. RADIATED TEST RESULTS	16
9.1. TRANSMITTER ABOVE 1 GHz	18
9.1.1. TX ABOVE 1 GHz 802.11b MODE IN THE 2.4 GHz BAND	18
9.1.2. TX ABOVE 1 GHz 802.11g MODE IN THE 2.4 GHz BAND	28
9.1.3. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 2.4 GHz BAND	40
9.1.4. TX ABOVE 1 GHz 802.11n HT40 MODE IN THE 2.4 GHz BAND	52
9.2. WORST CASE BELOW 30MHZ	62
9.3. WORST CASE BELOW 1 GHZ	64
9.4. WORST CASE 18-26 GHZ	66
10. AC POWER LINE CONDUCTED EMISSIONS	68
10.1. ANTENNA 1	69
11. SETUP PHOTOS	71

1. ATTESTATION OF TEST RESULTS

COMPANY NAME: Raspberry Pi (Trading) Ltd
Maurice Wilkes Building
Cowley Road
Cambridge
CB4 0DS
United Kingdom

EUT DESCRIPTION: Bluetooth and WiFi radio module

MODEL: RPI-RM0 (Gamma)

SERIAL NUMBER: Non-serialized

DATE TESTED: 2020-08-18 to 2020-08-26

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 Part 15 Subpart C	Complies
ISED RSS-247 Issue 2	Complies
ISED RSS-GEN Issue 5	Complies

UL LLC tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. All samples tested were in good operating condition throughout the entire test program. Measurement Uncertainties are published for informational purposes only and were not taken into account unless noted otherwise.

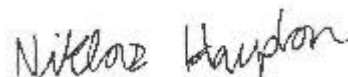
This document may not be altered or revised in any way unless done so by UL LLC and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL LLC will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of the U.S. government.

Approved & Released For
UL Verification Services Inc. By:



Bob DeLisi
Principal Engineer
Consumer Technology Division
UL Verification Services Inc.

Prepared By:



Niklas Haydon
Operations Leader
Consumer Technology Division
UL Verification Services Inc.

2. TEST RESULTS SUMMARY

FCC Clause	ISED Clause	Requirement	Result	Comment
ANSI C63.10 Section 11.6.		Duty Cycle	Not performed in this report.	Refer to UL VS LTD report UL-RPT-RP13337971-1416A.
ANSI C63.10 Section 6.9.3.	RSS-GEN 6.7	99% OBW		
15.247 (a) (2)	RSS-247 5.2 (a)	6dB BW		
15.247 (b) (3)	RSS-247 5.4 (d)	Output Power		
ANSI C63.10, Section 11.9.2.3.2.		Average power		
15.247 (e)	RSS-247 5.2 (b)	PSD		
15.247 (d)	RSS-247 5.5	Conducted Spurious Emissions	Compliant.	None.
15.209, 15.205	RSS-GEN 8.9, 8.10	Radiated Emissions		
15.207	RSS-Gen 8.8	AC Mains Conducted Emissions		

3. TEST METHODOLOGY

The tests documented in this report were performed in accordance with FCC CFR 47 Part 2, FCC CFR 47 Part 15, ANSI C63.10-2013, KDB 558074 D01 15.247 Meas Guidance v05, RSS-GEN Issue 5, and RSS-247 Issue 2.

4. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 12 Laboratory Drive, Research Triangle Park, North Carolina, USA and 2800 Perimeter Park Dr., Suite B, Morrisville, North Carolina, USA. 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.

12 Laboratory Dr.	2800 Perimeter Park Dr.
Site Code: 2180C	
☐ Chamber A RTP	☒ North Chamber
☒ Chamber C RTP	☒ South Chamber

The above test sites and facilities are covered under FCC Test Firm Registration # 703469. Chambers above are covered under Industry Canada company address and respective code.

UL LLC (RTP) is accredited by NVLAP, Laboratory Code 200246-0

5. DECISION RULES AND MEASUREMENT UNCERTAINTY

5.1. METROLOGICAL TRACEABILITY

All test and measuring equipment utilized to perform the tests documented in this report are calibrated on a regular basis, with a maximum time between calibrations of one year or the manufacturers' recommendation, whichever is less, and where applicable is traceable to recognized national standards.

5.2. DECISION RULES

The Decision Rule is based on Simple Acceptance in accordance with ISO Guide 98-4:2012 Clause 8.2. (Measurement uncertainty is not taken into account when stating conformity with a specified requirement.)

5.3. MEASUREMENT UNCERTAINTY

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

PARAMETER	UNCERTAINTY
Radio Frequency (Spectrum Analyzer)	141.2 Hz
Occupied Channel Bandwidth	2.00%
RF output power, conducted	1.3 dB (PK) 0.45 dB (AV)
Power Spectral Density, conducted	2.47 dB
Unwanted Emissions, conducted	1.94 dB
All emissions, radiated	4.88 dB
Conducted Emissions (0.150-30MHz) - LISN	3.07 dB
Temperature	2.26°C
Humidity	6.79%
DC Supply voltages	1.70%
Time	3.39%

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

5.4. SAMPLE CALCULATION

RADIATED EMISSIONS

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)

$36.5 \text{ dBuV} + 18.7 \text{ dB/m} + 0.6 \text{ dB} - 26.9 \text{ dB} = 28.9 \text{ dBuV/m}$

MAINS CONDUCTED EMISSIONS

Where relevant, the following sample calculation is provided:

Final Voltage (dBuV) = Measured Voltage (dBuV) + Cable Loss (dB) + Limiter Factor (dB) + LISN Insertion Loss.

$36.5 \text{ dBuV} + 0 \text{ dB} + 10.1 \text{ dB} + 0 \text{ dB} = 46.6 \text{ dBuV}$

6. EQUIPMENT UNDER TEST

6.1. EUT DESCRIPTION

The EUT is a Bluetooth and WiFi radio module. The PMN and HVIN = Raspberry Pi RM0.

6.2. POWER SETTINGS USED FOR TESTING

The power settings are as follows:

Frequency Band	Wi-Fi Channels	802.11b	802.11g	802.11n20	802.11n40
2400 to 2483.5 MHz	1	52	57	58	
	3				56
	6	52	57	58	56
	9				56
	10		57	58	
	11	51	42	38	

6.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes an internal antenna with a maximum gain of 3.5dBi.

6.4. SOFTWARE AND FIRMWARE

The EUT hardware during testing was v1.0.

The EUT software during testing was v1.0.

6.5. WORST-CASE CONFIGURATION AND MODE

Radiated emissions below 1GHz and above 18GHz were performed with the EUT set to transmit at the channel with highest output power as worst-case scenario.

Band edge and radiated emissions between 1GHz and 18GHz were performed with the EUT set to transmit at the highest power on low, middle, high channels and inner channels where required.

The fundamental of the EUT was investigated with in three orthogonal orientations X,Y,Z, it was determined that Z orientation was worst-case orientation; therefore, all final radiated testing was performed with both antennas in the Z orientation.

Worst-case data rates as declared by the client were:

802.11b mode: 1 Mbps

802.11g mode: 6 Mbps

802.11n HT20mode: MCS0

802.11n HT40mode: MCS0

Duty cycle from UL-RPT-RP13337971-1416A:

Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Voltage Averaging Duty Cycle Correction Factor (dB)
2.4GHz Band					
802.11n HT40	0.942	0.968	0.973	97.31%	0.24

Note: All other modes were found to have a duty cycle greater than 98%.

6.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Description	Manufacturer	Model	Serial Number
AC/DC Adapter	Raspberry Pi	KSA-15E-051300HK	3037350
Raspberry Pi Board	Raspberry Pi	Raspberry Pi 4 Model B	3157590

I/O CABLES

I/O Cable List						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	AC	1	Mains	IEC	< 3M	Feeds AC/DC adapter
2	DC	1	DC plug	2-wire	< 3M	Powers EUT from AC/DC adapter

TEST SETUP

Test software exercised the radio card of the EUT.

SETUP DIAGRAM

Please refer to R13337971-EP1 for setup diagrams.

7. MEASUREMENT METHOD

Emissions in non-restricted frequency bands: ANSI C63.10 Subclause -11.11 and 6.10.4

Emissions in restricted frequency bands: ANSI C63.10 Subclause -11.12.1 and 6.10.5

General Radiated Emissions: ANSI C63.10:2013 Sections 6.3 – 6.6

AC Power Line Conducted Emissions: ANSI C63.10:2013 Sections 6.2

8. TEST AND MEASUREMENT EQUIPMENT

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

Test Equipment Used - Radiated Disturbance Emissions Test Equipment (RTP – Chamber C)

Equip. ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
	1-18 GHz				
AT0062	HORN Antenna	ETS-Lindgren	3117	2020-01-30	2021-01-30
	Gain-Loss Chains				
C-SAC02	Gain-loss string: 1-18GHz	Various	Various	2020-03-03	2021-03-03
C-SAC02 Path 7	Gain-loss string 1-7GHz	Various	Various	2020-04-03	2021-04-03
	Receiver & Software				
SA0018	Spectrum Analyzer	Agilent	PXA (N9030A)	2020-03-02	2021-03-02
SOFTEMI	EMI Software	UL	Version 9.5	NA	NA
	Additional Equipment used				
HI0085	Temp/Humid/Pressure Meter	EXTECH	SD700	2020-04-20	2021-04-30

Test Equipment Used - Radiated Disturbance Emissions Test Equipment (Morrisville - South Chamber)

Equip. ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
	1-18 GHz				
AT0067	Double-Ridged Waveguide Horn Antenna, 1 to 18 GHz	ETS Lindgren	3117	2020-04-28	2021-04-28
	Gain-Loss Chains				
S-SAC03	Gain-loss string: 1-18GHz	Various	Various	2020-07-06	2020-07-06
	Receiver & Software				
SA0025	Spectrum Analyzer	Agilent	N9030A	2020-03-17	2021-03-17
SOFTEMI	EMI Software	UL	Version 9.5	NA	NA
	Additional Equipment used				
s/n 181474409	Environmental Meter	Fisher Scientific	15-077-963	2018-07-27	2020-07-27
s/n 200037635	Environmental Meter	Fisher Scientific	06-662-4	2020-01-22	2022-01-22

Test Equipment Used - Radiated Disturbance Emissions Test Equipment (Morrisville - North Chamber)

Equip. ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
	0.009-30MHz	(Loop Ant.)			
AT0059	Active Loop Antenna	EMCO	6502	2020-08-06	2021-08-06
	30-1000 MHz				
AT0074	Hybrid Broadband Antenna	Sunol Sciences Corp.	JB3	2020-07-27	2021-07-27
	1-18 GHz				
AT0072	Double-Ridged Waveguide Horn Antenna, 1 to 18 GHz	ETS Lindgren	3117	2020-04-27	2021-04-27
	18-40 GHz				
AT0076	Horn Antenna, 18-26.5GHz	ARA	MWH-1826/B	2019-11-07	2020-11-07
AT0077	Horn Antenna, 26-40GHz	ARA	MWH-2640/B	2019-11-07	2020-11-07
	Gain-Loss Chains				
N-SAC01	Gain-loss string: 0.009-30MHz	Various	Various	2020-07-29	2021-07-29
N-SAC02	Gain-loss string: 25-1000MHz	Various	Various	2020-07-29	2021-07-29
N-SAC03	Gain-loss string: 1-18GHz	Various	Various	2020-07-28	2021-07-28
N-SAC04	Gain-loss string: 18-40GHz	Various	Various	2020-07-31	2021-07-31
	Receiver & Software				
197954	Spectrum Analyzer	Rohde & Schwarz	ESW44	2020-03-27	2021-03-27
SOFTEMI	EMI Software	UL	Version 9.5	NA	NA
	Additional Equipment used				
s/n 200037610	Environmental Meter	Fisher Scientific	06-662-4	2020-01-22	2022-01-22
ATA174	10dB, DC-18GHz, 5W	Mini-Circuits	BW-N10W5	2020-02-19	2021-02-19

NOTES:

1. For equipment listed above that was calibrated during the testing period, please note the equipment was used for testing after calibration.
2. For equipment listed above that has a calibration due date during the testing period, the testing was completed before the equipment expiration date.

Test Equipment Used - Line-Conducted Emissions – Voltage (Morrisville – Conducted 1)

Equipment ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
CBL087	Coax cable, RG223, N-male to BNC-male, 20-ft.	Pasternack	PE3W06143-240	2020-03-26	2021-03-26
HI0091	Environmental Meter	Fisher Scientific	14-650-118	2020-06-26	2021-06-26
LISN003	LISN, 50-ohm/50-uH, 2-conductor, 25A	Fischer Custom Com.	FCC-LISN-50-25-2-01-550V	2020-08-18	2021-08-18
75141	EMI Test Receiver 9kHz-7GHz	Rohde & Schwarz	ESCI 7	2020-08-18	2021-08-18

Equipment ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
ATA222	Transient Limiter, 0.009-100MHz	Electro-Metrics	EM-7600	2020-03-26	2021-03-26
PS215	AC Power Source	Elgar	CW2501M (s/n 1523A02397)		
SOFTMI	EMI Software	UL	Version 9.5 (2020-07-07)		
CDECABLE001	ANSI C63.4 1m extension cable.	UL	Per Annex B of ANSI C63.4	2020-08-08	2021-08-08

9. RADIATED TEST RESULTS

LIMITS

FCC §15.205 and §15.209
RSS-GEN, Section 8.9 and 8.10

Frequency Range (MHz)	Field Strength Limit (uV/m) at 3 m	Field Strength Limit (dBuV/m) at 3 m
0.009-0.490	2400/F(kHz) @ 300 m	-
0.490-1.705	24000/F(kHz) @ 30 m	-
1.705 - 30	30 @ 30m	-
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane for measurement below 1GHz; 1.5 m above the ground plane for measurement 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 pre-scans above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 30 kHz for peak measurements.

For final measurements above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 3 MHz for peak measurements and as applicable for average measurements.

The spectrum from 1 GHz to 18 GHz is investigated with the transmitter set to the low, middle, high channels and inner channels where required in each applicable band. Below 1GHz and above 18GHz emissions, the channel with the highest output power was tested.

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.

3D antenna use - For below 30MHz testing, investigation was done on three antenna orientations (parallel, perpendicular, and ground-parallel).

KDB 414788 Open Field Site(OFS) and Chamber Correlation Justification

Base on FCC 15.31 (f) (2): measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field.

OFS and chamber correlation testing had been performed and chamber measured test result is the worst case test result.

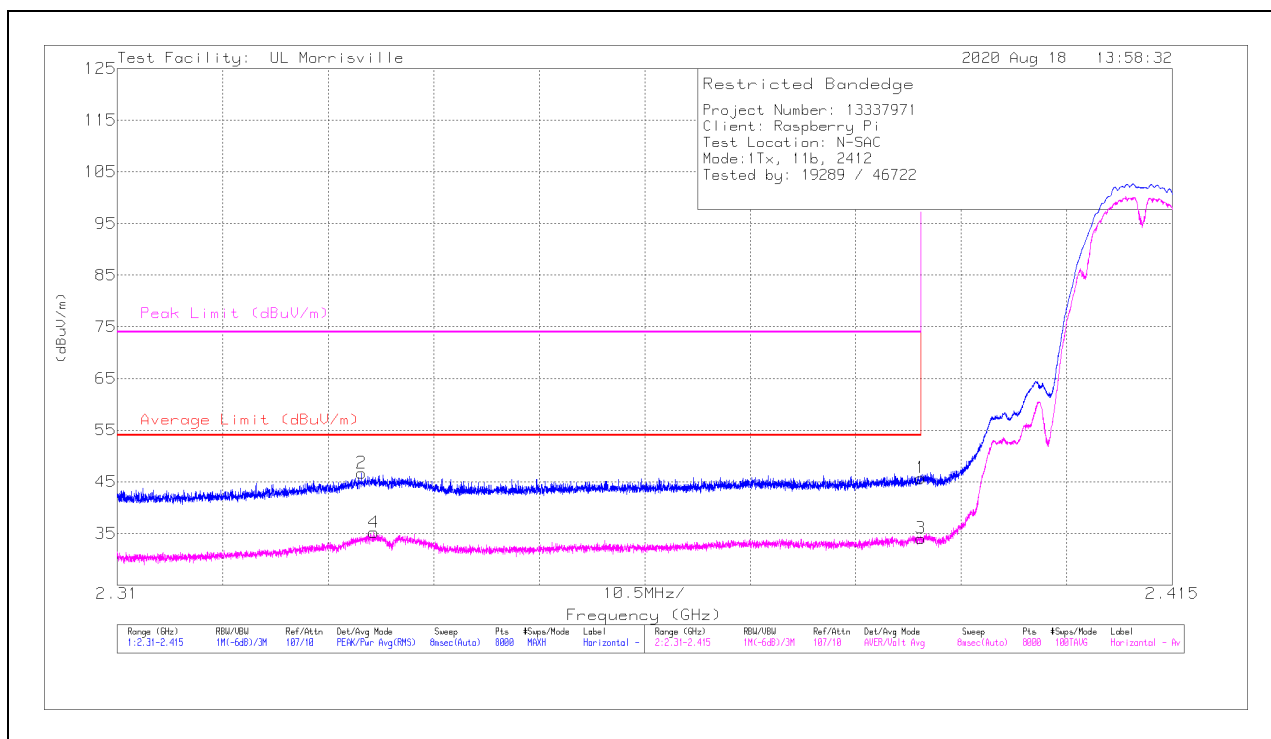
9.1. TRANSMITTER ABOVE 1 GHz

9.1.1. TX ABOVE 1 GHz 802.11b MODE IN THE 2.4 GHz BAND

1TX Antenna 1 MODE

BANDEDGE (LOW CHANNEL, CH 1)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* * * 2.39	38.35	Pk	31.8	-24.4	45.75	-	-	74	-28.25	39	213	H
2	* * * 2.33432	39.3	Pk	31.8	-24.4	46.7	-	-	74	-27.3	39	213	H
3	* * * 2.39	26.65	ADV	31.8	-24.4	34.05	54	-19.95	-	-	39	213	H
4	* * * 2.33553	27.81	ADV	31.8	-24.4	35.21	54	-18.79	-	-	39	213	H

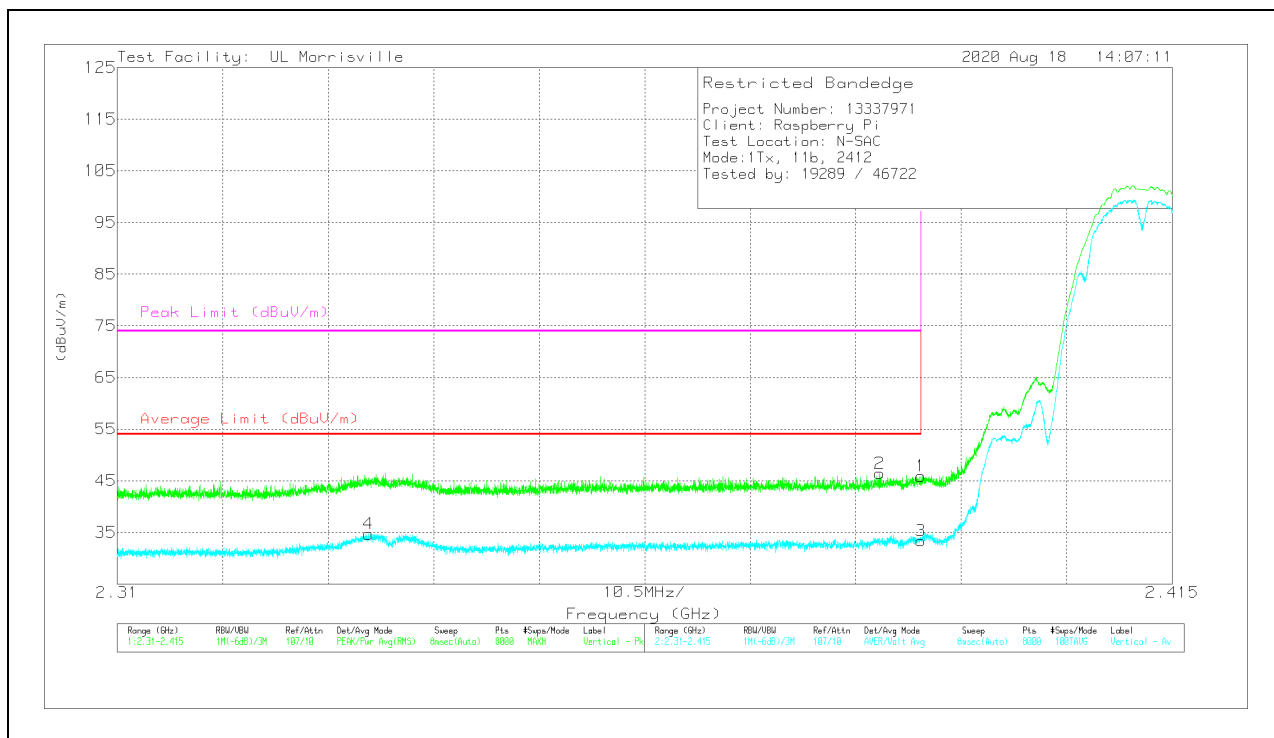
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.39	38.48	Pk	31.8	-24.4	45.88	-	-	74	-28.12	286	129	V
2	* ** 2.38587	38.99	Pk	31.8	-24.4	46.39	-	-	74	-27.61	286	129	V
3	* ** 2.39	25.96	ADV	31.8	-24.4	33.36	54	-20.64	-	-	286	129	V
4	* ** 2.33501	27.28	ADV	31.8	-24.4	34.68	54	-19.32	-	-	286	129	V

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

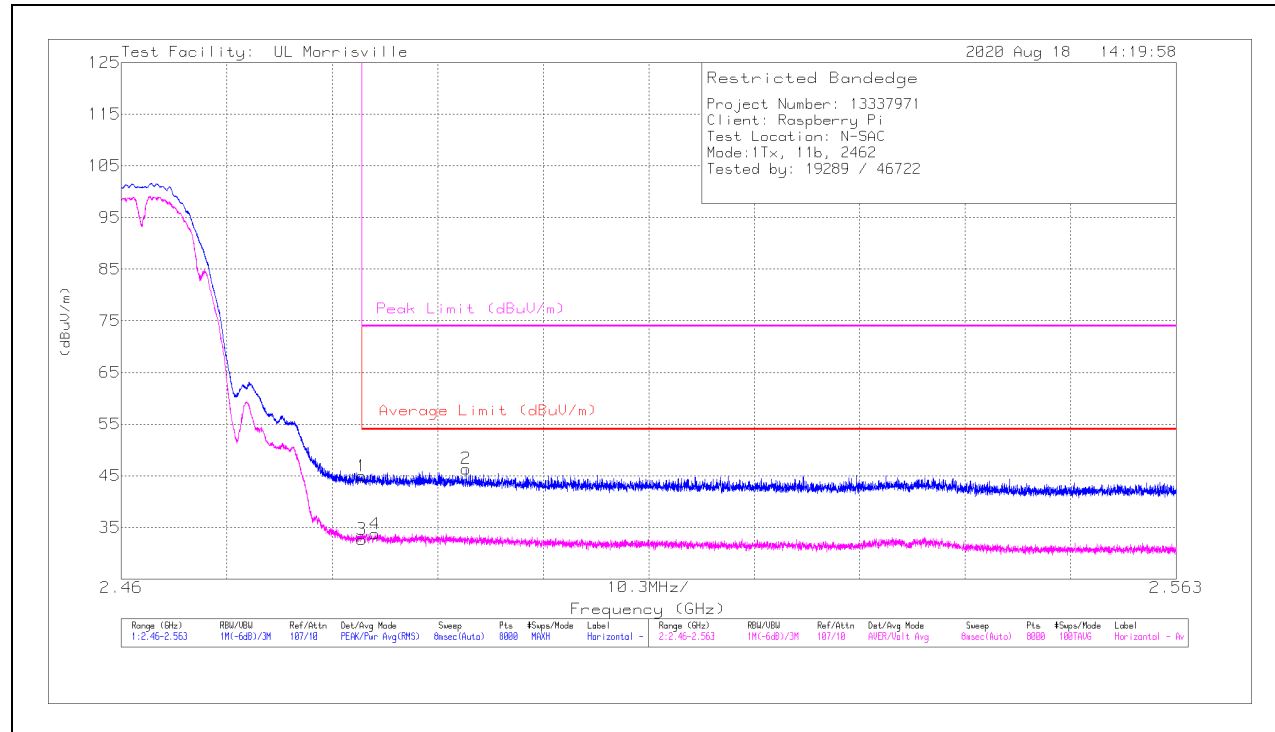
** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

BANDEDGE (HIGH CHANNEL, CH 11)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.4835	36.86	Pk	32.4	-24.3	44.96	-	-	74	-29.04	53	263	H
2	* ** 2.49367	38.15	Pk	32.5	-24.3	46.35	-	-	74	-27.65	53	263	H
3	* ** 2.4835	24.58	ADV	32.4	-24.3	32.68	54	-21.32	-	-	53	263	H
4	* ** 2.48478	25.55	ADV	32.5	-24.3	33.75	54	-20.25	-	-	53	263	H

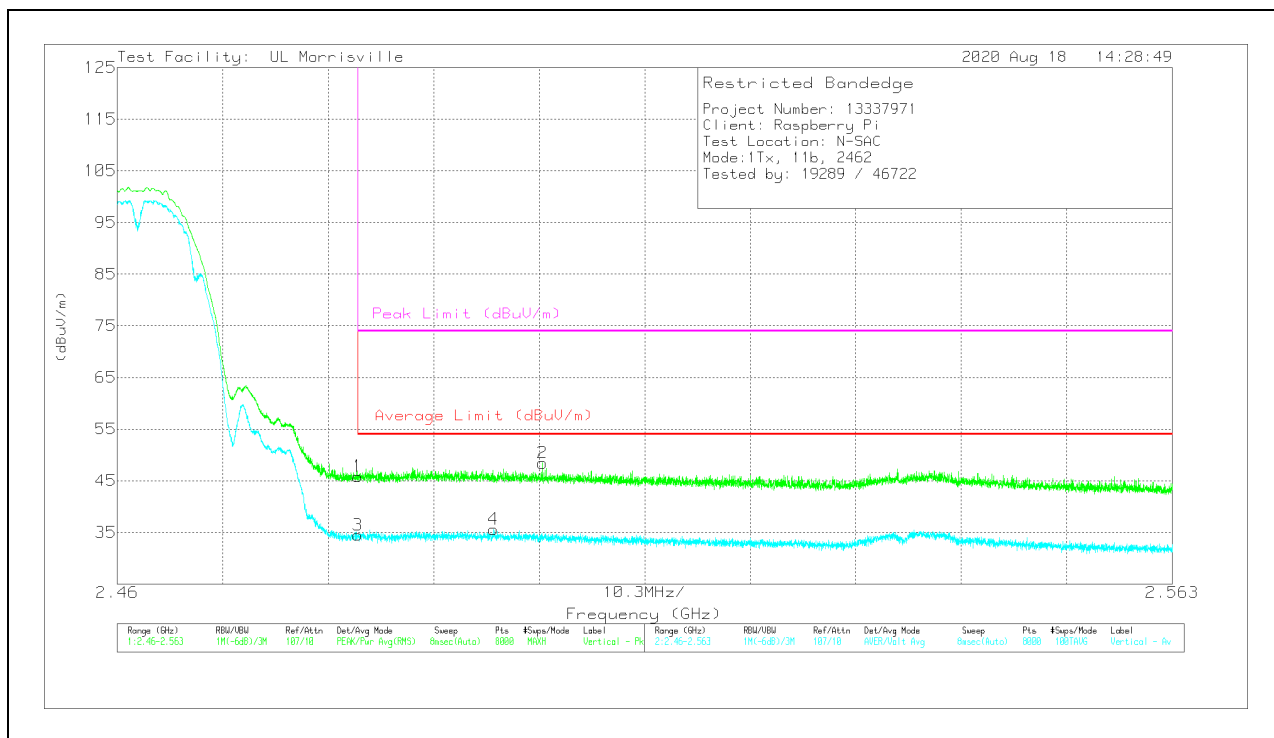
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.4835	37.73	Pk	32.4	-24.3	45.83	-	-	74	-28.17	291	121	V
2	** 2.50152	40.34	Pk	32.5	-24.4	48.44	-	-	74	-25.56	291	121	V
3	*** 2.4835	26.36	ADV	32.4	-24.3	34.46	54	-19.54	-	-	291	120	V
4	*** 2.49674	27.41	ADV	32.5	-24.3	35.61	54	-18.39	-	-	291	120	V

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

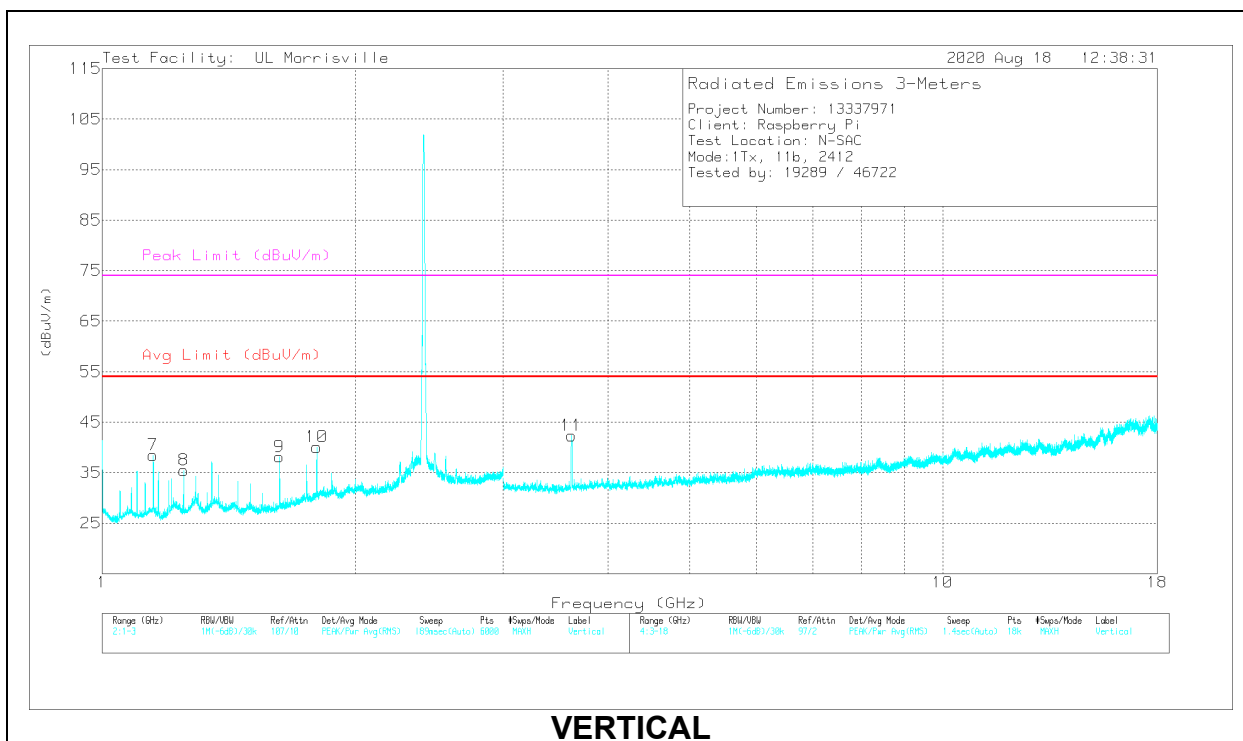
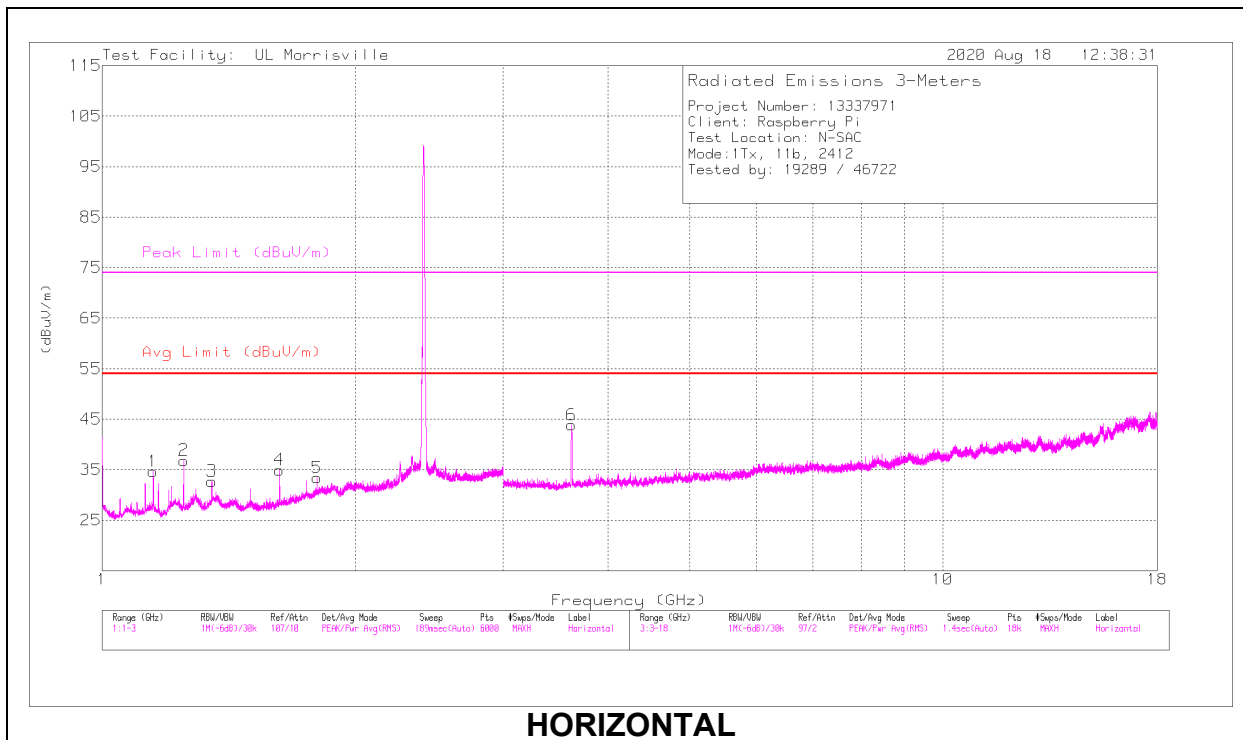
** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL, CH 1 RESULTS



RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 1.14975	39.75	PK2	28.1	-26.4	41.45	-	-	74	-32.55	328	101	H
	*** 1.15008	31.47	ADV	28.1	-26.4	33.17	54	-20.83	-	-	328	101	H
2	* 1.25008	39.07	PK2	29.1	-25.8	42.37	-	-	74	-31.63	280	103	H
	* 1.25004	32.45	ADV	29.1	-25.8	35.75	54	-18.25	-	-	280	103	H
3	*** 1.35032	37.74	PK2	29.5	-25.3	41.94	-	-	74	-32.06	16	245	H
	*** 1.34998	27.91	ADV	29.5	-25.3	32.11	54	-21.89	-	-	16	245	H
4	*** 1.62478	37.94	PK2	28.2	-24.5	41.64	-	-	74	-32.36	240	335	H
	*** 1.6251	29	ADV	28.2	-24.5	32.7	54	-21.3	-	-	240	335	H
7	*** 1.15013	41.66	PK2	28.1	-26.4	43.36	-	-	74	-30.64	285	141	V
	*** 1.14997	35.53	ADV	28.1	-26.4	37.23	54	-16.77	-	-	285	141	V
8	* 1.25007	39.14	PK2	29.1	-25.8	42.44	-	-	74	-31.56	275	271	V
	* 1.25001	32.5	ADV	29.1	-25.8	35.8	54	-18.2	-	-	275	271	V
9	*** 1.62521	40.33	PK2	28.2	-24.5	44.03	-	-	74	-29.97	85	117	V
	*** 1.62506	32.91	ADV	28.2	-24.5	36.61	54	-17.39	-	-	85	117	V
6	*** 3.61627	48.51	PK2	33	-31.5	50.01	-	-	74	-23.99	49	120	H
	*** 3.6171	42.69	ADV	33	-31.4	44.29	54	-9.71	-	-	49	120	H
11	*** 3.61947	47.17	PK2	32.9	-31.3	48.77	-	-	74	-25.23	5	142	V
	*** 3.61896	40.17	ADV	32.9	-31.4	41.67	54	-12.33	-	-	5	142	V
10	1.7998	34.19	Pk	30.2	-24.3	40.09	-	-	-	-	0-360	101	V
5	1.80013	27.49	Pk	30.2	-24.3	33.39	-	-	-	-	0-360	101	H

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

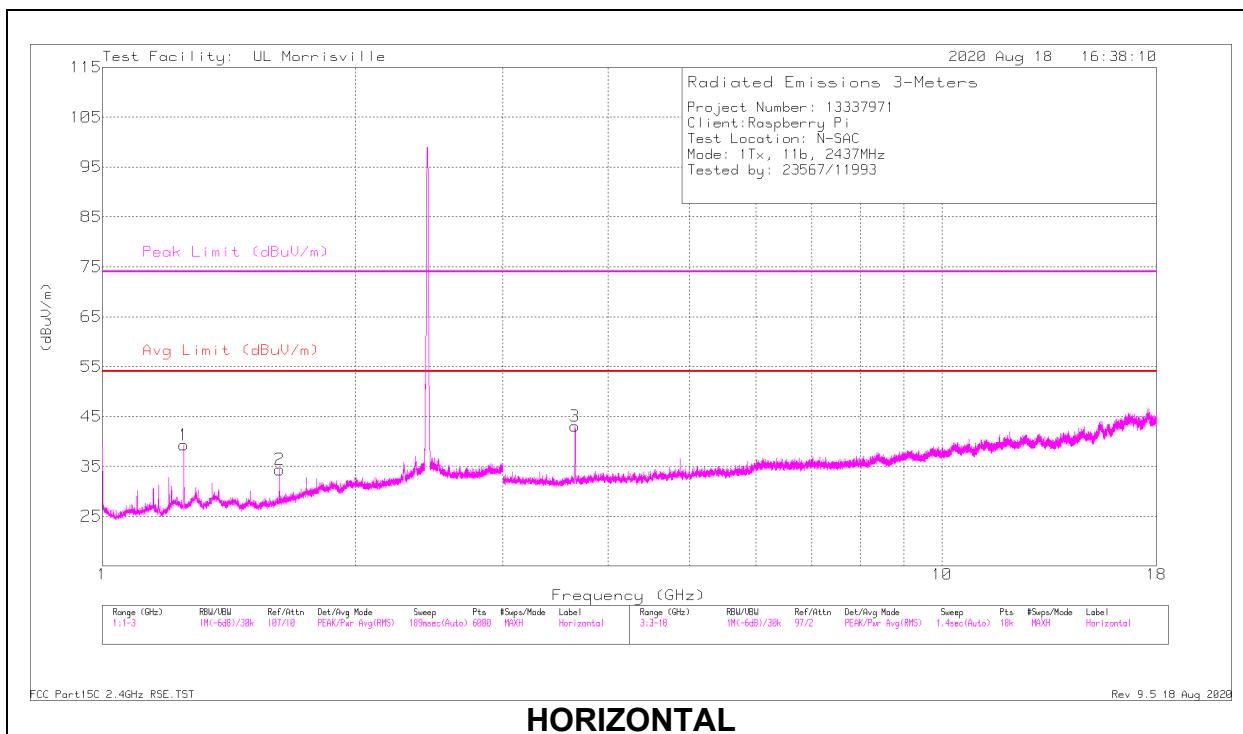
** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK2 - Maximum Peak

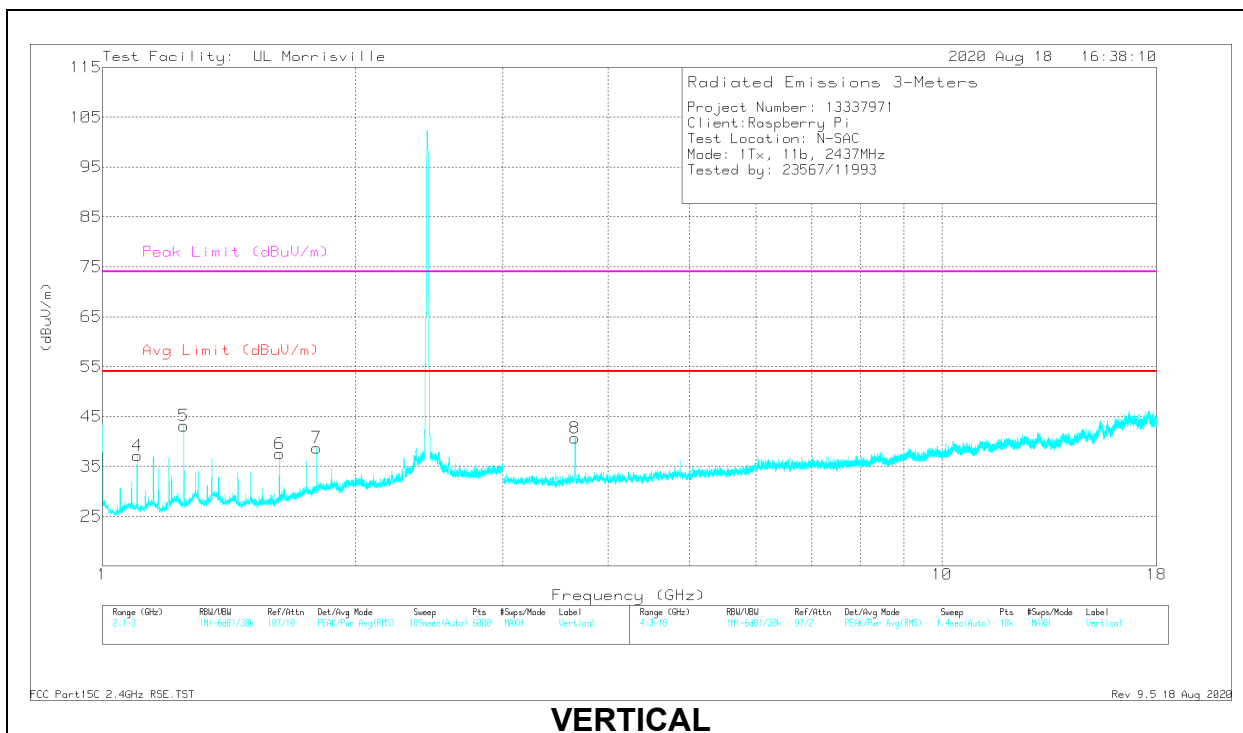
ADV - Linear Voltage Average

Pk - Peak detector

MID CHANNEL, CH 6 RESULTS



HORIZONTAL



VERTICAL

RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(/m)	Amp/Cbl/Fitr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.25002	41.44	PK2	29.1	-25.8	44.74	-	-	74	-29.26	17	232	H
	* 1.25004	36.48	ADV	29.1	-25.8	39.78	54	-14.22	-	-	17	232	H
2	*** 1.62478	36.11	PK2	28.2	-24.5	39.81	-	-	74	-34.19	90	106	H
	*** 1.62516	28.42	ADV	28.2	-24.5	32.12	54	-21.88	-	-	90	106	H
4	*** 1.1002	40.36	PK2	28.1	-26.6	41.86	-	-	74	-32.14	297	210	V
	*** 1.1	34.14	ADV	28.1	-26.6	35.64	54	-18.36	-	-	297	210	V
5	* 1.25003	43.25	PK2	29.1	-25.8	46.55	-	-	74	-27.45	360	119	V
	* 1.25006	39.07	ADV	29.1	-25.8	42.37	54	-11.63	-	-	360	119	V
6	*** 1.62516	38.8	PK2	28.2	-24.5	42.5	-	-	74	-31.5	44	105	V
	*** 1.62516	31.95	ADV	28.2	-24.5	35.65	54	-18.35	-	-	44	105	V
3	*** 3.65546	47.35	PK2	32.9	-31.5	48.75	-	-	74	-25.25	50	111	H
	*** 3.65649	41.12	ADV	32.9	-31.5	42.52	54	-11.48	-	-	50	111	H
8	*** 3.65632	45.8	PK2	32.9	-31.5	47.2	-	-	74	-26.8	16	143	V
	*** 3.65467	38.45	ADV	32.9	-31.5	39.85	54	-14.15	-	-	16	143	V
7	1.7998	32.82	Pk	30.2	-24.3	38.72	-	-	-	-	0-360	101	V

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

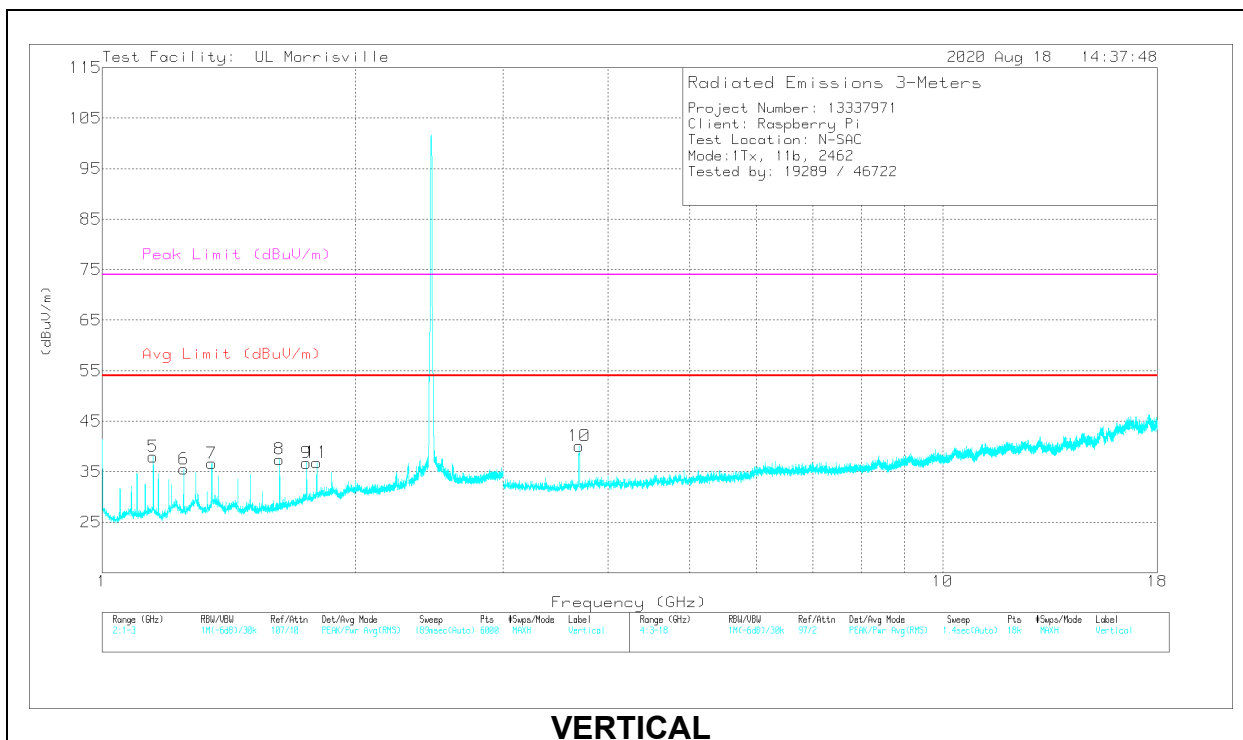
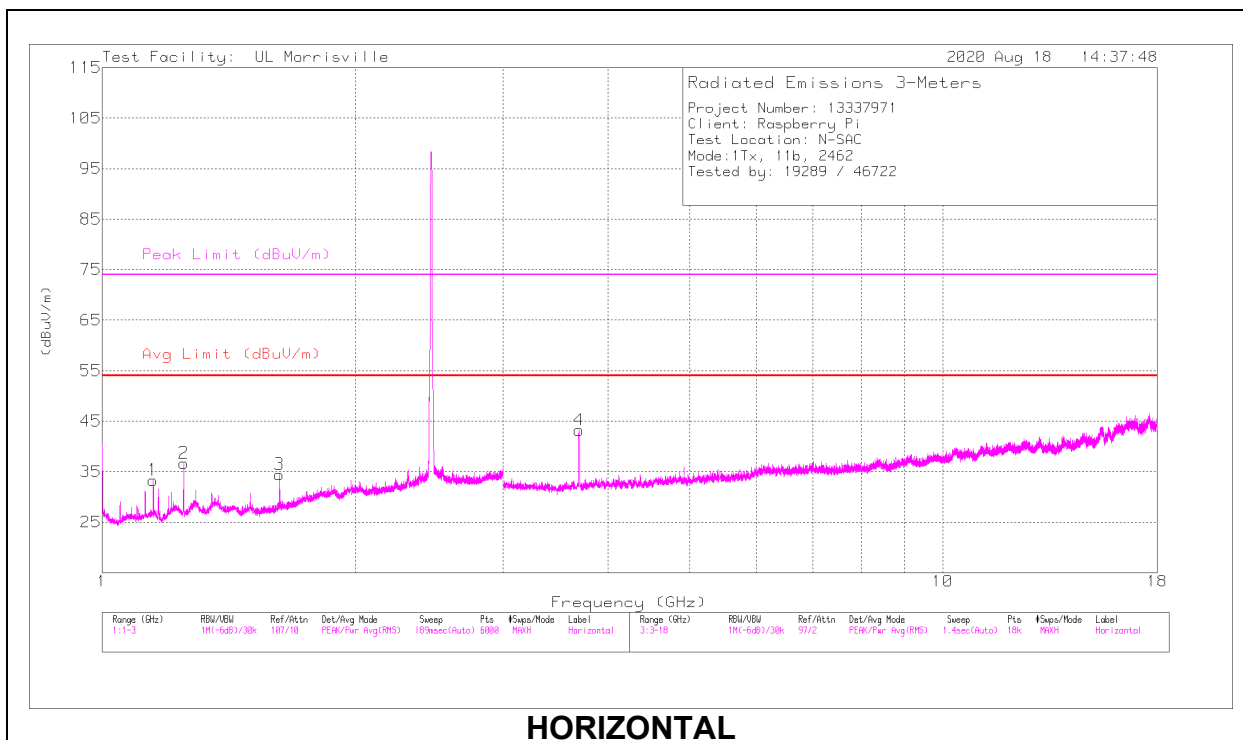
** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK2 - Maximum Peak

ADV - Linear Voltage Average

Pk - Peak detector

HIGH CHANNEL, CH 11 RESULTS



RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* ** 1.6251	38.6	PK2	28.2	-24.5	42.3	-	-	74	-31.7	76	125	H
	* ** 1.62509	30.31	ADV	28.2	-24.5	34.01	54	-19.99	-	-	76	125	H
5	* ** 1.14982	39.4	PK2	28.1	-26.4	41.1	-	-	74	-32.9	311	106	H
	* ** 1.14998	31.36	ADV	28.1	-26.4	33.06	54	-20.94	-	-	311	106	H
2	* 1.24994	38.97	PK2	29.1	-25.8	42.27	-	-	74	-31.73	304	103	H
	* 1.25001	32.32	ADV	29.1	-25.8	35.62	54	-18.38	-	-	304	103	H
1	* ** 1.15028	41.71	PK2	28.1	-26.4	43.41	-	-	74	-30.59	10	104	V
	* ** 1.15006	35.63	ADV	28.1	-26.4	37.33	54	-16.67	-	-	10	104	V
6	* 1.24979	38.56	PK2	29.1	-25.8	41.86	-	-	74	-32.14	303	268	V
	* 1.24999	31.33	ADV	29.1	-25.8	34.63	54	-19.37	-	-	303	268	V
7	* ** 1.34989	39.08	PK2	29.5	-25.3	43.28	-	-	74	-30.72	274	124	V
	* ** 1.35002	31.59	ADV	29.5	-25.3	35.79	54	-18.21	-	-	274	124	V
8	* ** 1.62481	39.99	PK2	28.2	-24.5	43.69	-	-	74	-30.31	64	124	V
	* ** 1.62503	33.52	ADV	28.2	-24.5	37.22	54	-16.78	-	-	64	124	V
9	** 1.75006	38.52	PK2	29.6	-24.3	43.82	-	-	74	-30.18	40	123	V
	** 1.74995	28.98	ADV	29.6	-24.3	34.28	54	-19.72	-	-	40	123	V
4	* ** 3.69435	48.5	PK2	33.1	-32	49.6	-	-	74	-24.4	56	114	H
	* ** 3.69402	41.93	ADV	33.1	-32	43.03	54	-10.97	-	-	56	114	H
10	* ** 3.69279	46.68	PK2	33.1	-32	47.78	-	-	74	-26.22	13	140	V
	* ** 3.69213	39.73	ADV	33.1	-31.9	40.93	54	-13.07	-	-	13	140	V
11	1.7998	30.9	Pk	30.2	-24.3	36.8	-	-	74	-37.2	0-360	200	V

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

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK2 - Maximum Peak

ADV - Linear Voltage Average

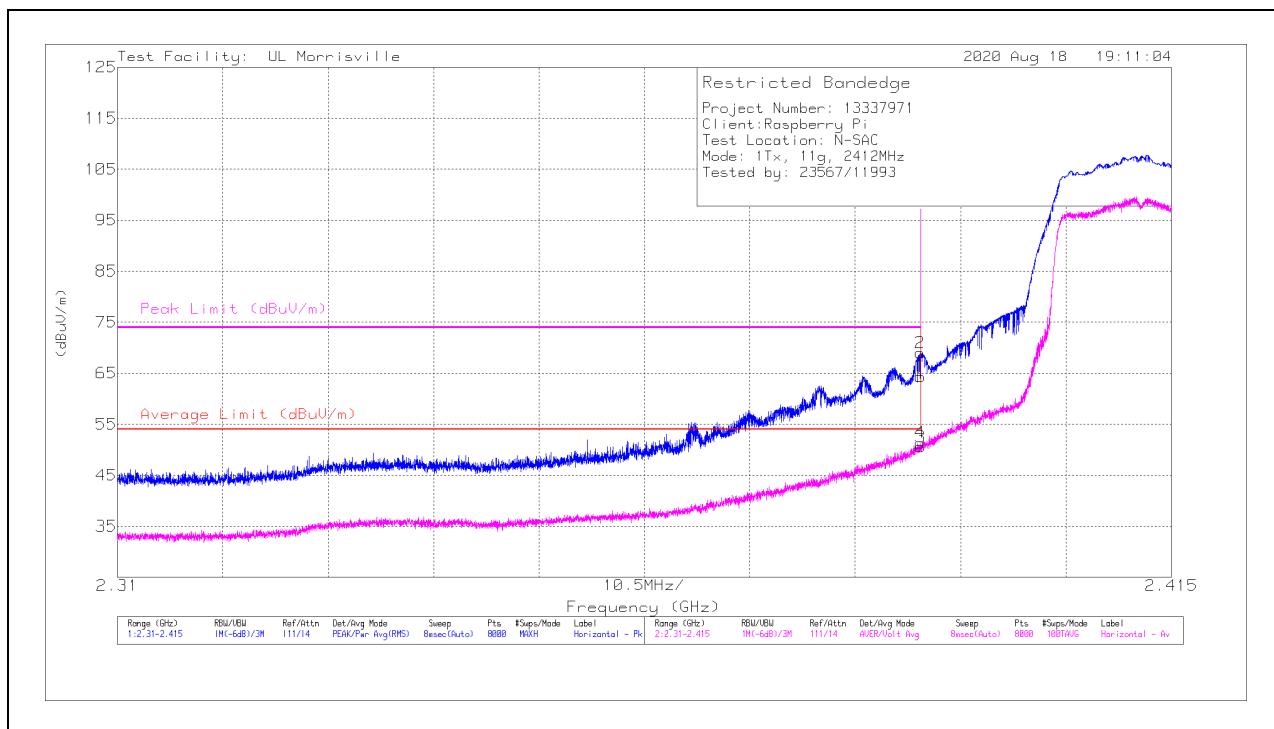
Pk - Peak detector

9.1.2. TX ABOVE 1 GHz 802.11g MODE IN THE 2.4 GHz BAND

1TX Antenna 1 MODE

BANDEDGE (LOW CHANNEL, CH 1)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* * * 2.39	56.94	Pk	31.8	-24.4	64.34	-	-	74	-9.66	52	143	H
2	* * * 2.38994	61.65	Pk	31.8	-24.4	69.05	-	-	74	-4.95	52	143	H
3	* * * 2.39	43.2	ADV	31.8	-24.4	50.6	54	-3.4	-	-	52	142	H
4	* * * 2.38998	43.99	ADV	31.8	-24.4	51.39	54	-2.61	-	-	52	142	H

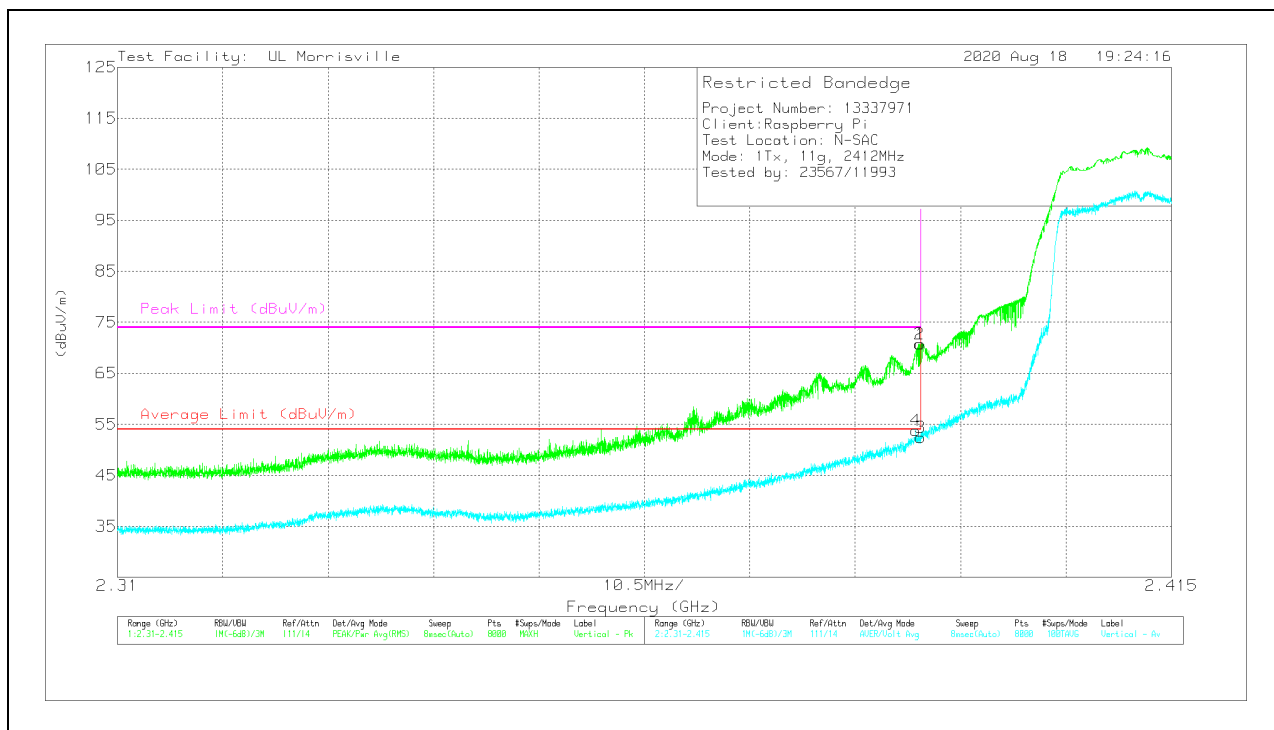
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBUV)	Det	AT0072 dB(m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBUV/m)	Average Limit (dBUV/m)	Margin (dB)	Peak Limit (dBUV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* * * 2.39	63.36	Pk	31.8	-24.4	70.76	-	-	74	-3.24	3	112	V
2	* * * 2.3899	63.36	Pk	31.8	-24.4	70.76	-	-	74	-3.24	3	112	V
3	* * * 2.39	45.05	ADV	31.8	-24.4	52.45	54	-1.55	-	-	3	112	V
4	* * * 2.38955	46.35	ADV	31.8	-24.4	53.75	54	-0.25	-	-	3	112	V

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

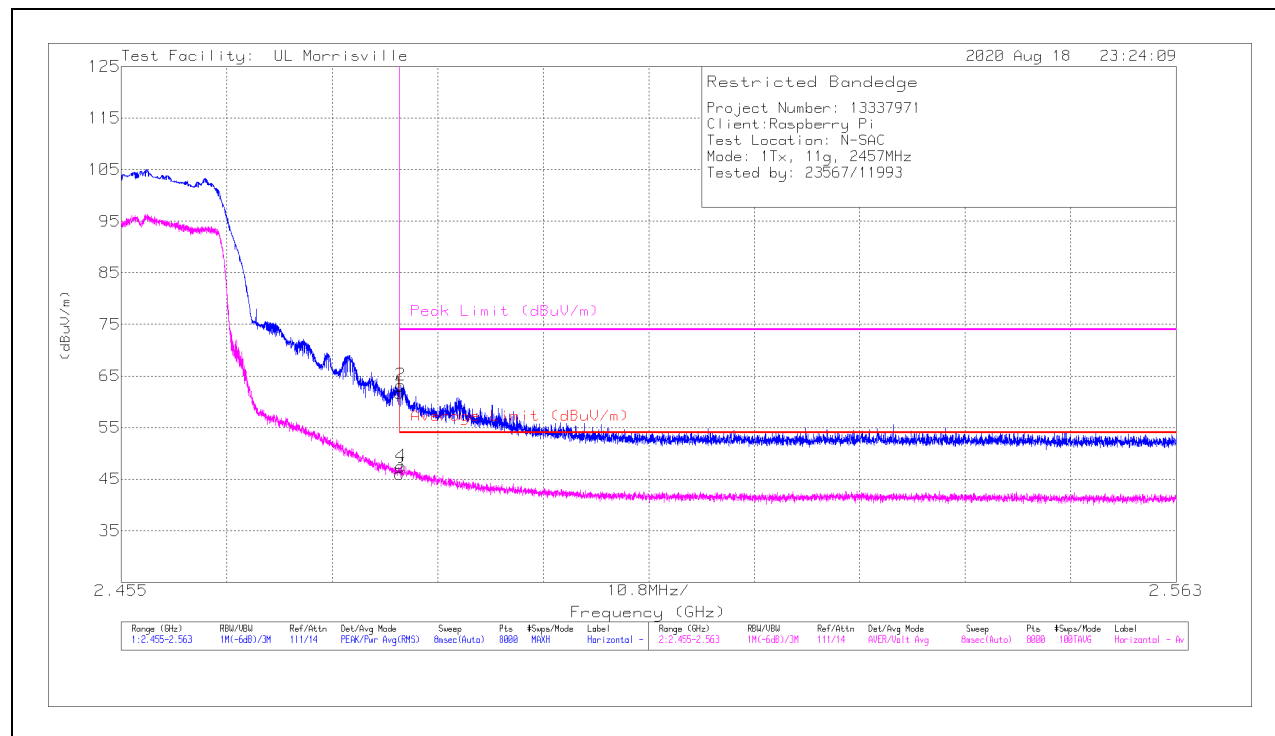
** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

BANDEDGE (HIGH CHANNEL, CH 10)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB/(m)	Amp/Cbl/Filtr/Pad (dB)	Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.4835	43.63	Pk	32.4	-24.3	10	61.73	-	-	74	-12.27	102	208	H
2	* ** 2.4836	45.17	Pk	32.4	-24.3	10	63.27	-	-	74	-10.73	102	208	H
3	* ** 2.4835	27.92	ADV	32.4	-24.3	10	46.02	54	-7.98	-	-	102	208	H
4	* ** 2.48365	29.45	ADV	32.4	-24.3	10	47.55	54	-6.45	-	-	102	208	H

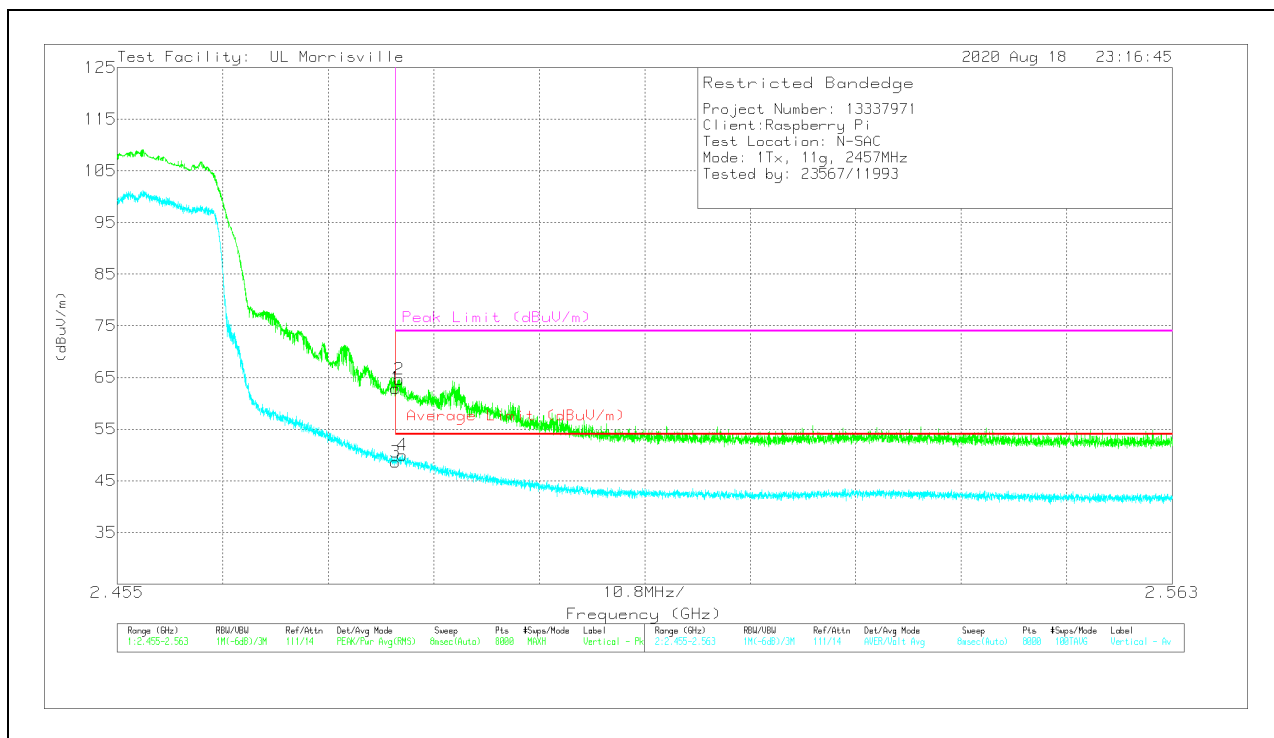
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBUV)	Det	AT0072 dB(/m)	Amp/Cbl/Filtr/Pad (dB)	Pad (dB)	Corrected Reading (dBUV/m)	Average Limit (dBUV/m)	Margin (dB)	Peak Limit (dBUV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.4835	44.8	Pk	32.4	-24.3	10	62.9	-	-	74	-11.1	7	118	V
2	*** 2.48387	46.54	Pk	32.4	-24.3	10	64.64	-	-	74	-9.36	7	118	V
3	*** 2.4835	30.49	ADV	32.4	-24.3	10	48.59	54	-5.41	-	-	7	118	V
4	*** 2.48418	31.87	ADV	32.4	-24.3	10	49.97	54	-4.03	-	-	7	118	V

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

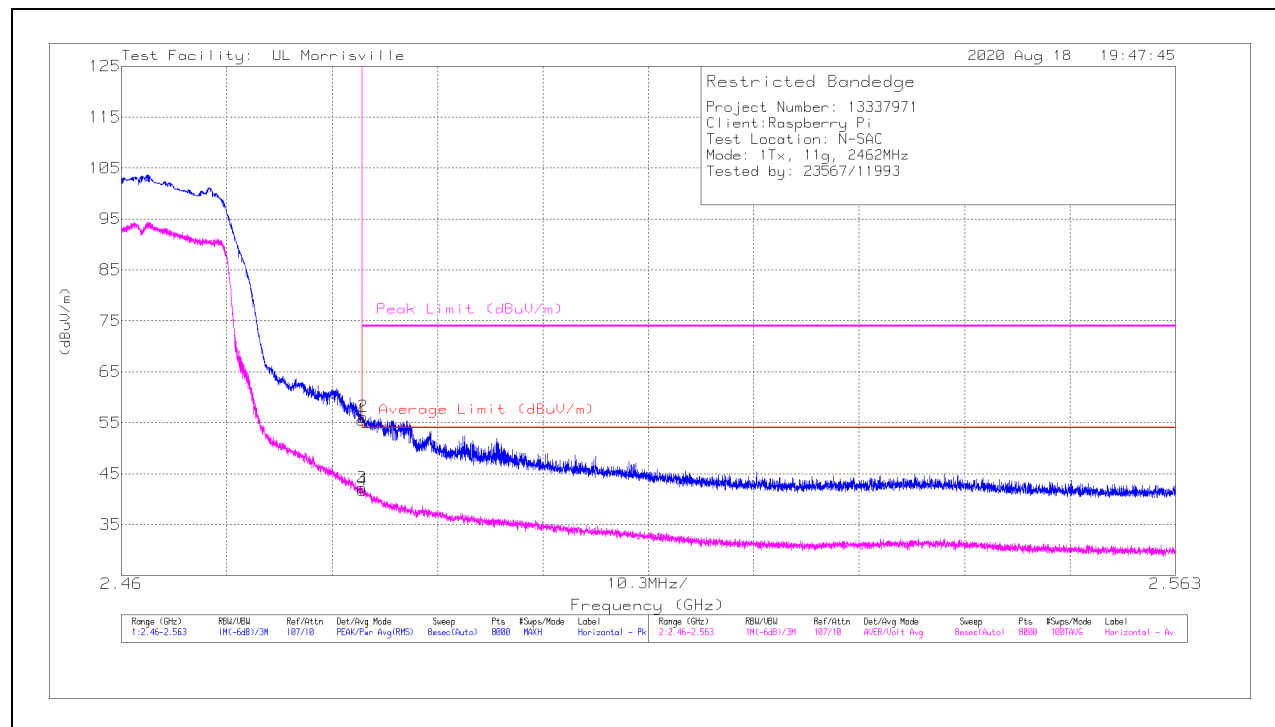
** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

BANDEDGE (HIGH CHANNEL, CH 11)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.4835	47.46	Pk	32.4	-24.3	55.56	-	-	74	-18.44	95	145	H
2	* ** 2.4836	48.08	Pk	32.4	-24.3	56.18	-	-	74	-17.82	95	145	H
3	* ** 2.4835	34.13	ADV	32.4	-24.3	42.23	54	-11.77	-	-	95	145	H
4	* ** 2.48358	33.67	ADV	32.4	-24.3	41.77	54	-12.23	-	-	95	145	H

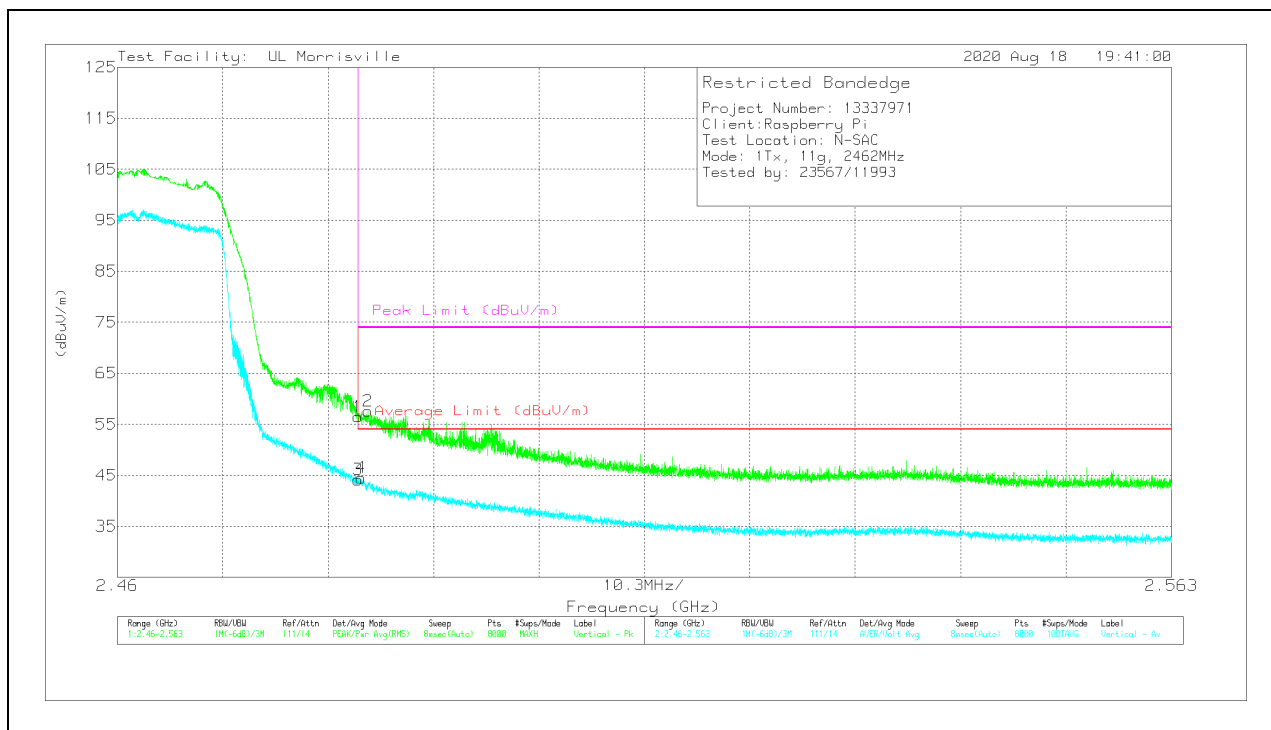
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.4835	48.4	Pk	32.4	-24.3	56.5	-	-	74	-17.5	6	144	V
2	* ** 2.4845	49.5	Pk	32.4	-24.3	57.6	-	-	74	-16.4	6	144	V
3	* ** 2.4835	36.05	ADV	32.4	-24.3	44.15	54	-9.85	-	-	6	144	V
4	* ** 2.48381	36.42	ADV	32.4	-24.3	44.52	54	-9.48	-	-	6	144	V

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

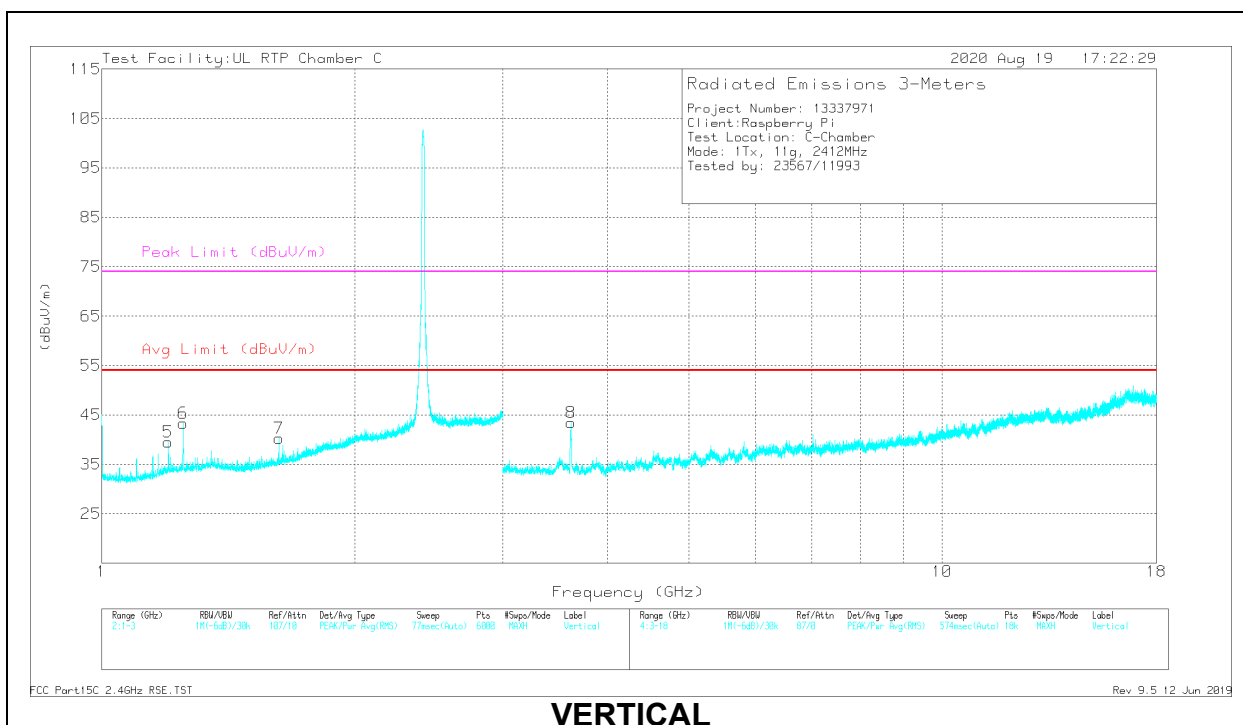
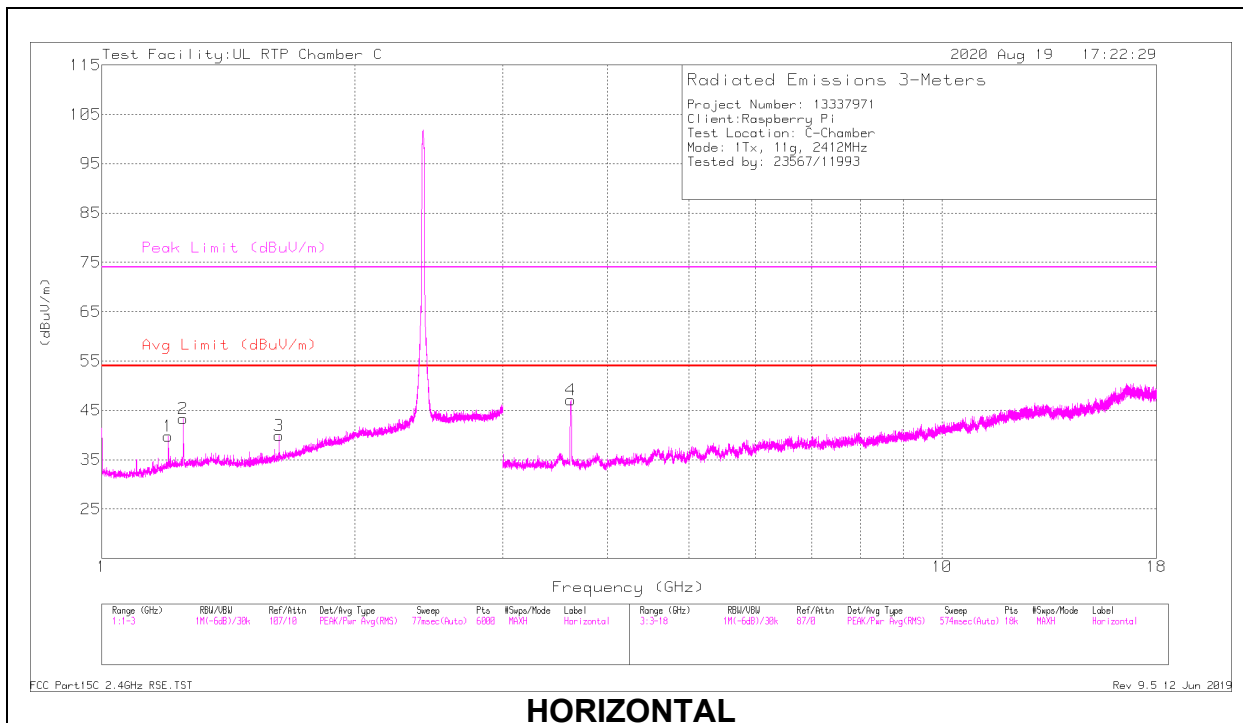
** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL, CH 1 RESULTS



RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 1.20005	37.27	PK2	28.1	-21.5	43.87	-	-	74	-30.13	192	254	H
	*** 1.20003	29.14	ADV	28.1	-21.5	35.74	54	-18.26	-	-	192	254	H
2	* 1.25007	39.96	PK2	28.6	-21.5	47.06	-	-	74	-26.94	103	111	H
	* 1.24998	33.91	ADV	28.6	-21.5	41.01	54	-12.99	-	-	103	111	H
3	*** 1.62488	35.63	PK2	28.5	-20.7	43.43	-	-	74	-30.57	245	147	H
	*** 1.62488	26.32	ADV	28.5	-20.7	34.12	54	-19.88	-	-	245	147	H
5	*** 1.19977	37.62	PK2	28.1	-21.5	44.22	-	-	74	-29.78	317	223	V
	*** 1.20001	30.02	ADV	28.1	-21.5	36.62	54	-17.38	-	-	317	223	V
6	* 1.24987	39.71	PK2	28.6	-21.5	46.81	-	-	74	-27.19	353	197	V
	* 1.24999	33.64	ADV	28.6	-21.5	40.74	54	-13.26	-	-	353	197	V
7	*** 1.6245	37.26	PK2	28.4	-20.7	44.96	-	-	74	-29.04	136	137	V
	*** 1.62488	28.61	ADV	28.5	-20.7	36.41	54	-17.59	-	-	136	137	V
4	*** 3.61722	69.18	PK2	33.1	-49.9	52.38	-	-	74	-21.62	87	102	H
	*** 3.61589	59.41	ADV	33.1	-49.9	42.61	54	-11.39	-	-	87	102	H
8	*** 3.61731	65.47	PK2	33.1	-49.9	48.67	-	-	74	-25.33	56	158	V
	*** 3.61728	54.77	ADV	33.1	-49.9	37.97	54	-16.03	-	-	56	158	V

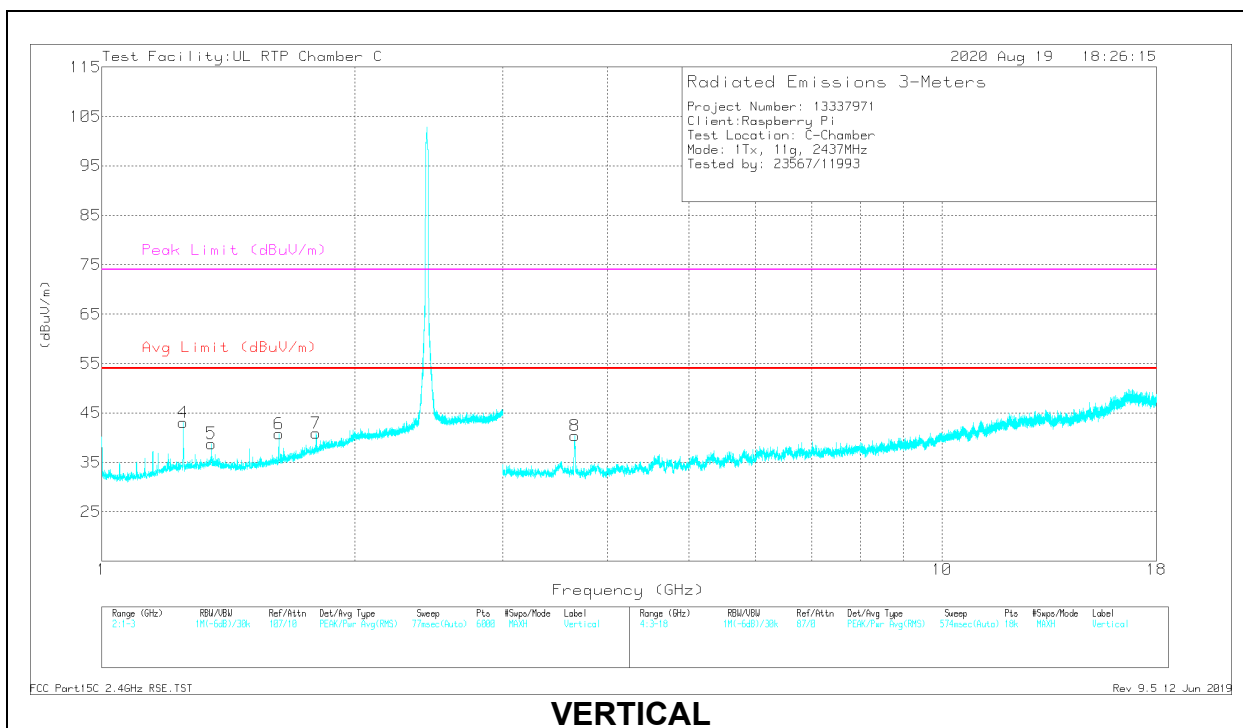
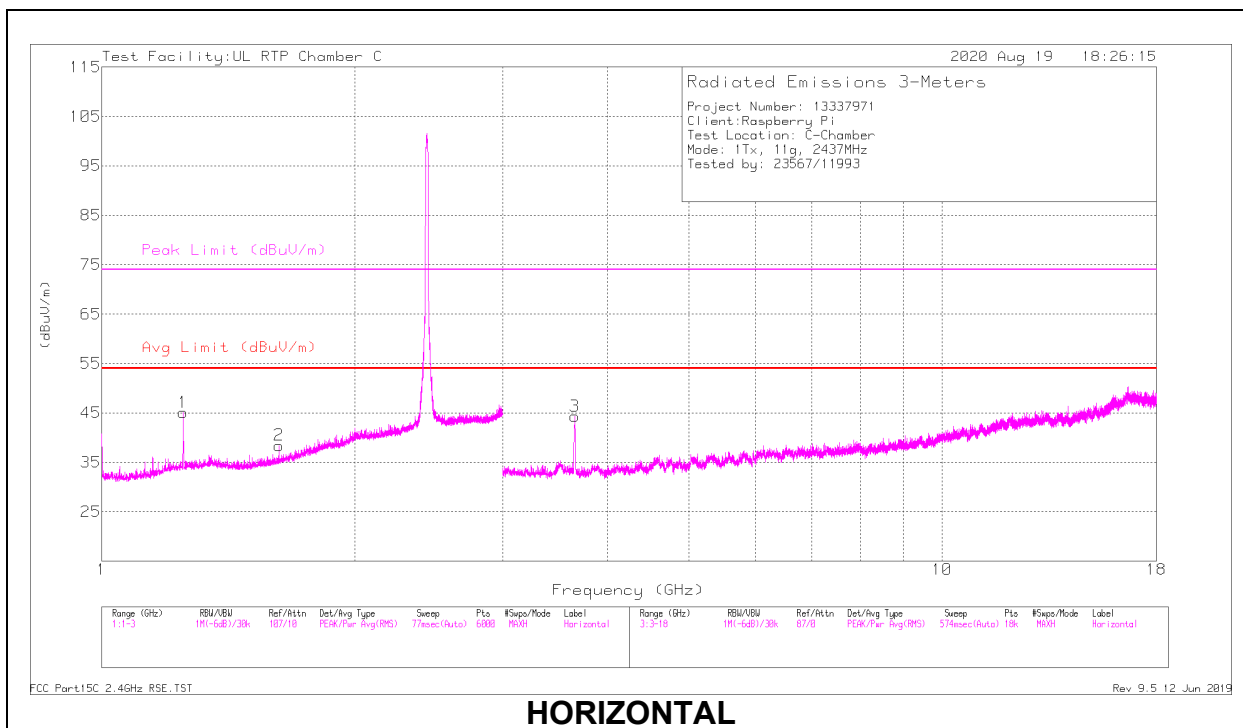
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK2 - Maximum Peak

ADV - Linear Voltage Average

MID CHANNEL, CH 6 RESULTS



RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.24992	40.97	PK2	28.6	-21.5	48.07	-	-	74	-25.93	107	103	H
	* 1.25004	35.81	ADV	28.6	-21.5	42.91	54	-11.09	-	-	107	103	H
2	** 1.62488	36.7	PK2	28.5	-20.7	44.5	-	-	74	-29.5	190	123	H
	** 1.62488	27.6	ADV	28.5	-20.7	35.4	54	-18.6	-	-	190	123	H
4	* 1.25017	39.74	PK2	28.6	-21.5	46.84	-	-	74	-27.16	315	194	V
	* 1.25003	33.63	ADV	28.6	-21.5	40.73	54	-13.27	-	-	315	194	V
5	** 1.35005	36.61	PK2	28.8	-21.2	44.21	-	-	74	-29.79	299	202	V
	** 1.35004	27.57	ADV	28.8	-21.2	35.17	54	-18.83	-	-	299	202	V
6	** 1.62563	37	PK2	28.5	-20.7	44.8	-	-	74	-29.2	85	103	V
	** 1.62488	29.1	ADV	28.5	-20.7	36.9	54	-17.1	-	-	85	103	V
3	** 3.65435	67.85	PK2	33.1	-49.8	51.15	-	-	74	-22.85	104	110	H
	** 3.65498	57.95	ADV	33.1	-49.8	41.25	54	-12.75	-	-	104	110	H
8	** 3.65638	64.03	PK2	33.1	-49.8	47.33	-	-	74	-26.67	68	103	V
	** 3.656	53.01	ADV	33.1	-49.8	36.31	54	-17.69	-	-	68	103	V
7	1.80013	31.12	Pk	30.2	-20.4	40.92	-	-	-	-	0-360	102	V

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

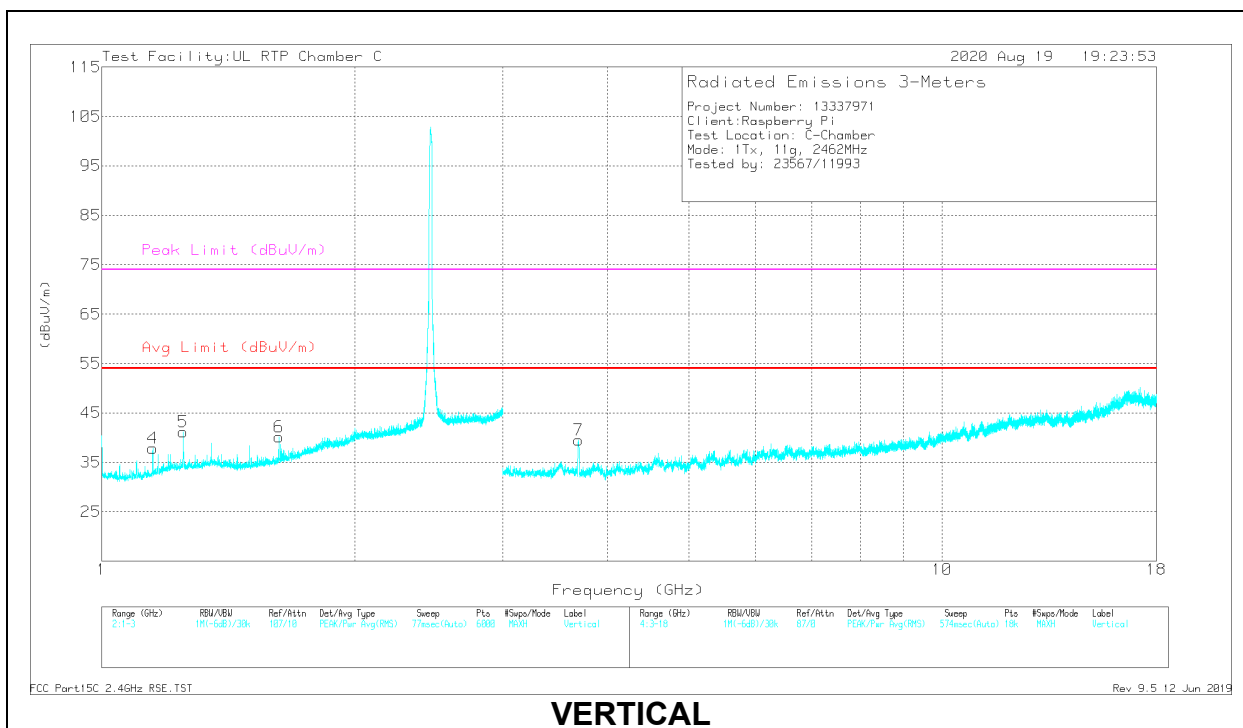
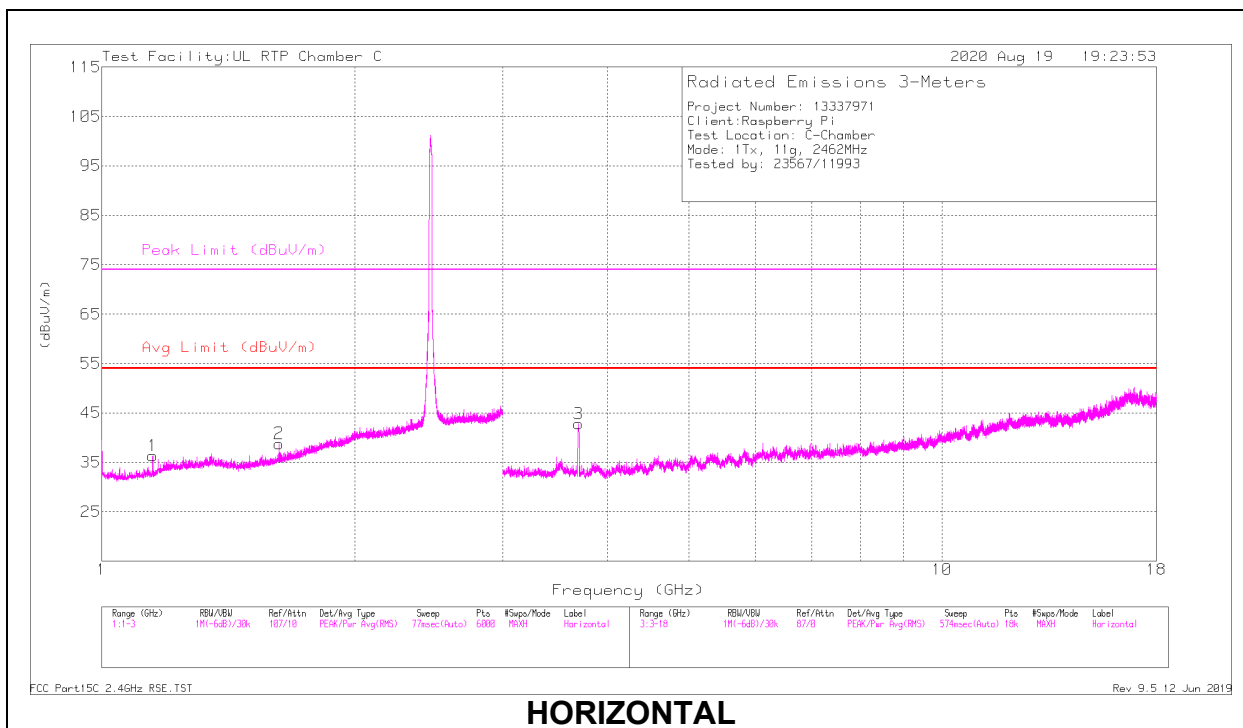
** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK2 - Maximum Peak

ADV - Linear Voltage Average

Pk - Peak detector

HIGH CHANNEL, CH 11 RESULTS



RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 1.15012	36.88	PK2	27.4	-21.7	42.58	-	-	74	-31.42	234	208	H
	*** 1.15001	26.97	ADV	27.4	-21.7	32.67	54	-21.33	-	-	234	208	H
2	*** 1.68938	35.18	PK2	29	-20.7	43.48	-	-	74	-30.52	120	199	H
	*** 1.62488	24.47	ADV	28.5	-20.7	32.27	54	-21.73	-	-	120	199	H
4	*** 1.15024	36.98	PK2	27.4	-21.7	42.68	-	-	74	-31.32	337	235	V
	*** 1.15006	28.8	ADV	27.4	-21.7	34.5	54	-19.5	-	-	337	235	V
5	* 1.24982	38.54	PK2	28.6	-21.5	45.64	-	-	74	-28.36	98	143	V
	* 1.2501	31.52	ADV	28.6	-21.5	38.62	54	-15.38	-	-	98	143	V
6	*** 1.6245	36.59	PK2	28.4	-20.7	44.29	-	-	74	-29.71	147	102	V
	*** 1.62488	28.11	ADV	28.5	-20.7	35.91	54	-18.09	-	-	147	102	V
3	*** 3.69374	65.2	PK2	33.2	-49.6	48.8	-	-	74	-25.2	95	102	H
	*** 3.69343	54.56	ADV	33.2	-49.6	38.16	54	-15.84	-	-	95	102	H
7	*** 3.69319	63.13	PK2	33.2	-49.6	46.73	-	-	74	-27.27	38	168	V
	*** 3.69353	51.91	ADV	33.2	-49.6	35.51	54	-18.49	-	-	38	168	V

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

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK2 - Maximum Peak

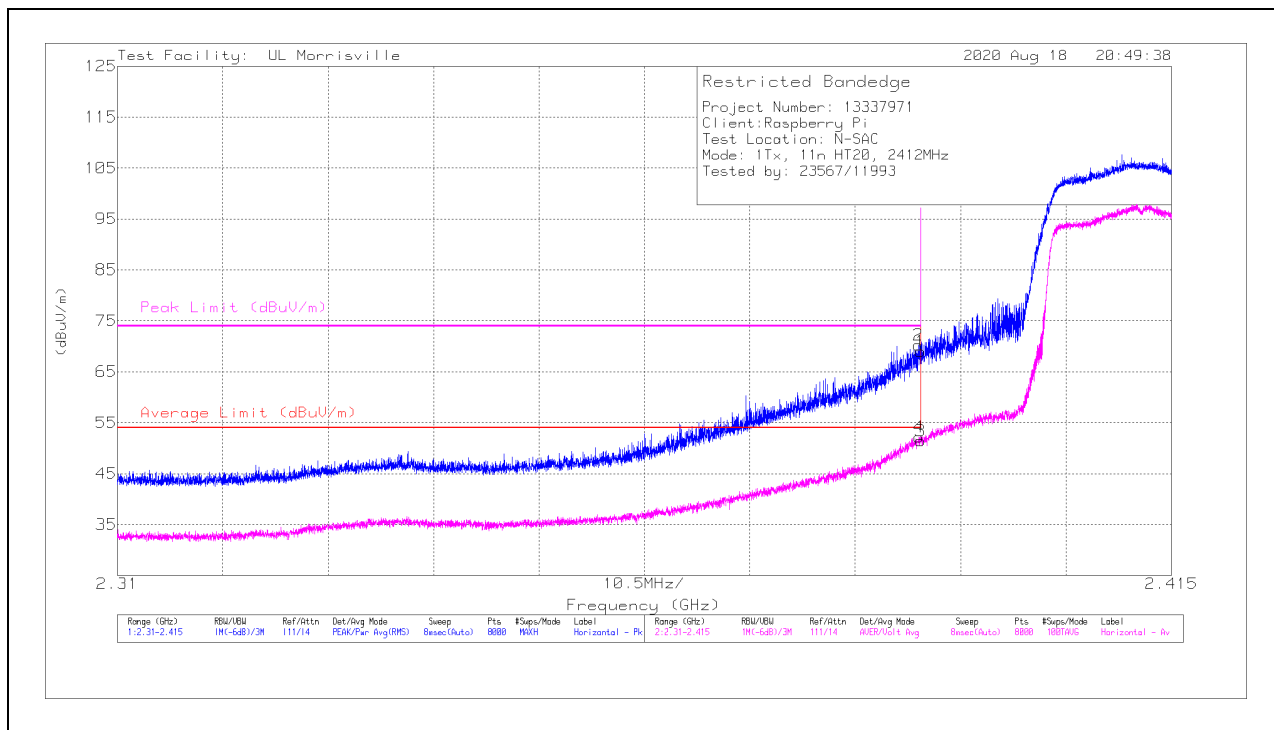
ADV - Linear Voltage Average

9.1.3. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 2.4 GHz BAND

1TX Antenna 1 MODE

BANDEDGE (LOW CHANNEL, CH 1)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.39	61.65	Pk	31.8	-24.4	69.05	-	-	74	-4.95	31	167	H
2	* ** 2.3898	62.82	Pk	31.8	-24.4	70.22	-	-	74	-3.78	31	167	H
3	* ** 2.39	44.06	ADV	31.8	-24.4	51.46	54	-2.54	-	-	31	167	H
4	* ** 2.38984	44.81	ADV	31.8	-24.4	52.21	54	-1.79	-	-	31	167	H

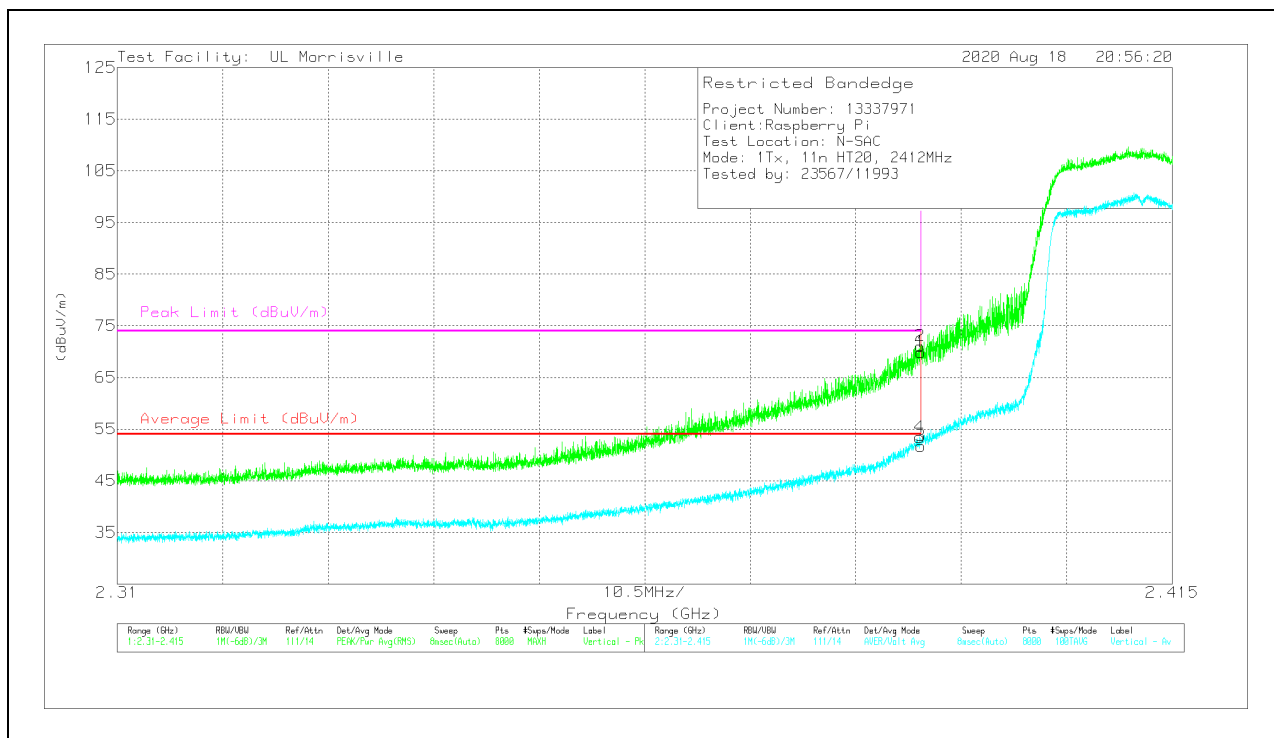
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.39	62.49	Pk	31.8	-24.4	69.89	-	-	74	-4.11	348	104	V
2	*** 2.38992	63.68	Pk	31.8	-24.4	71.08	-	-	74	-2.92	348	104	V
3	*** 2.39	44.34	ADV	31.8	-24.4	51.74	54	-2.26	-	-	348	104	V
4	*** 2.38988	46.04	ADV	31.8	-24.4	53.44	54	-.56	-	-	348	104	V

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

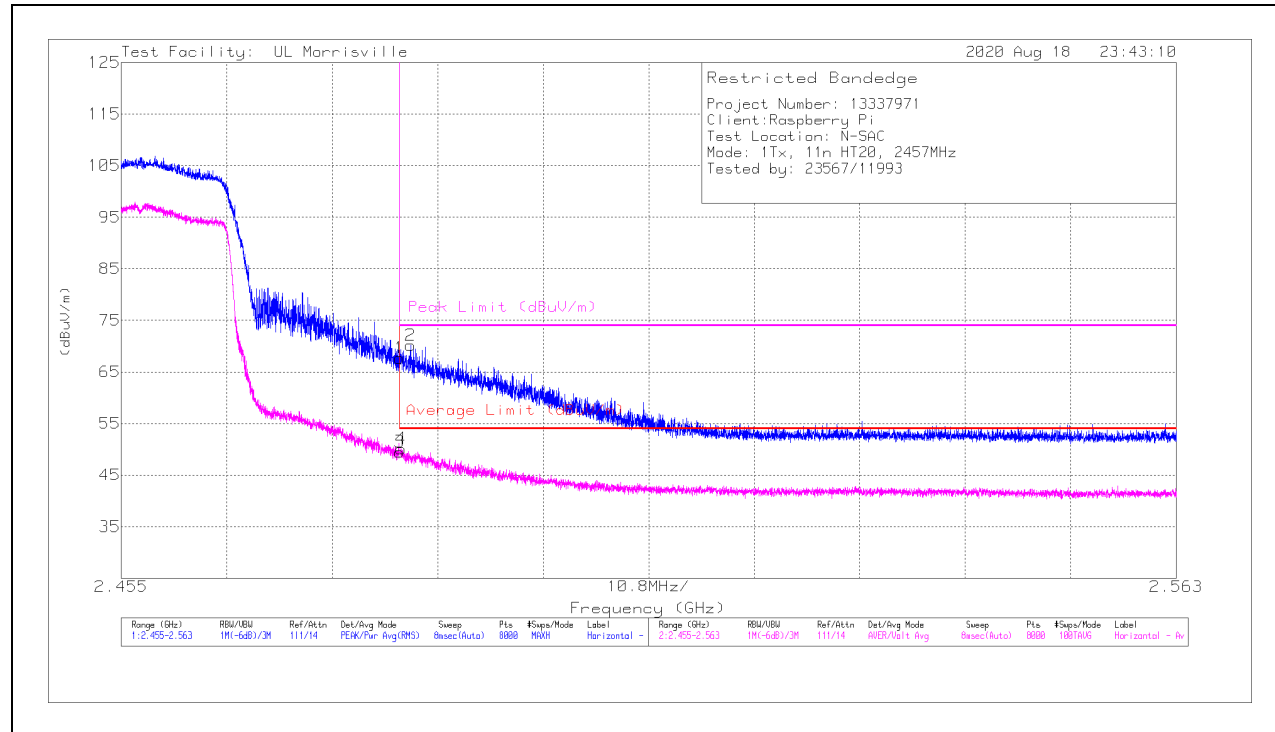
** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

BANDEDGE (HIGH CHANNEL, CH 10)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB/(m)	Amp/Cbl/Filtr/Pad (dB)	Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.4835	49.6	Pk	32.4	-24.3	10	67.7	-	-	74	-6.3	70	264	H
2	*** 2.48461	52.06	Pk	32.4	-24.3	10	70.16	-	-	74	-3.84	70	264	H
3	*** 2.4835	31.41	ADV	32.4	-24.3	10	49.51	54	-4.49	-	-	70	264	H
4	*** 2.48365	32	ADV	32.4	-24.3	10	50.1	54	-3.9	-	-	70	264	H

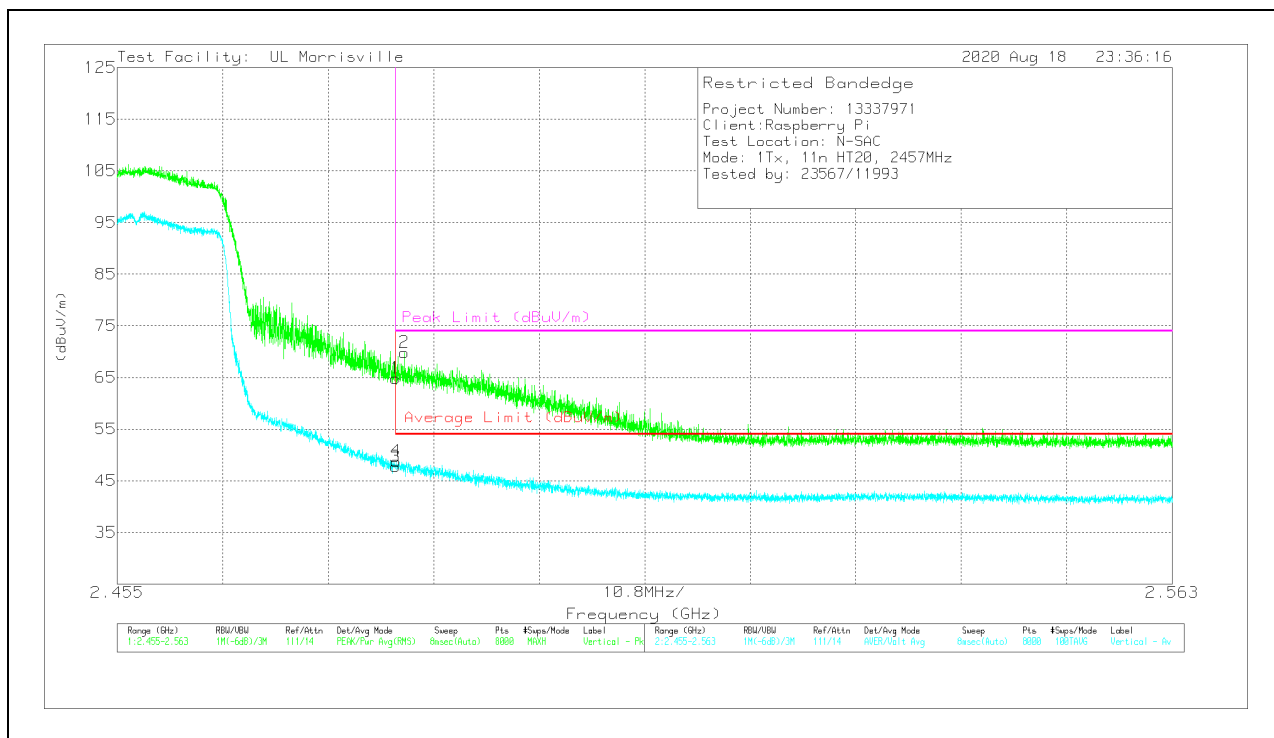
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(/m)	Amp/Cbl/Filtr/Pad (dB)	Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.4835	46.74	Pk	32.4	-24.3	10	64.84	-	-	74	-9.16	34	169	V
2	*** 2.48438	51.75	Pk	32.4	-24.3	10	69.85	-	-	74	-4.15	34	169	V
3	*** 2.4835	29.66	ADV	32.4	-24.3	10	47.76	54	-6.24	-	-	34	169	V
4	*** 2.48356	30.68	ADV	32.4	-24.3	10	48.78	54	-5.22	-	-	34	169	V

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

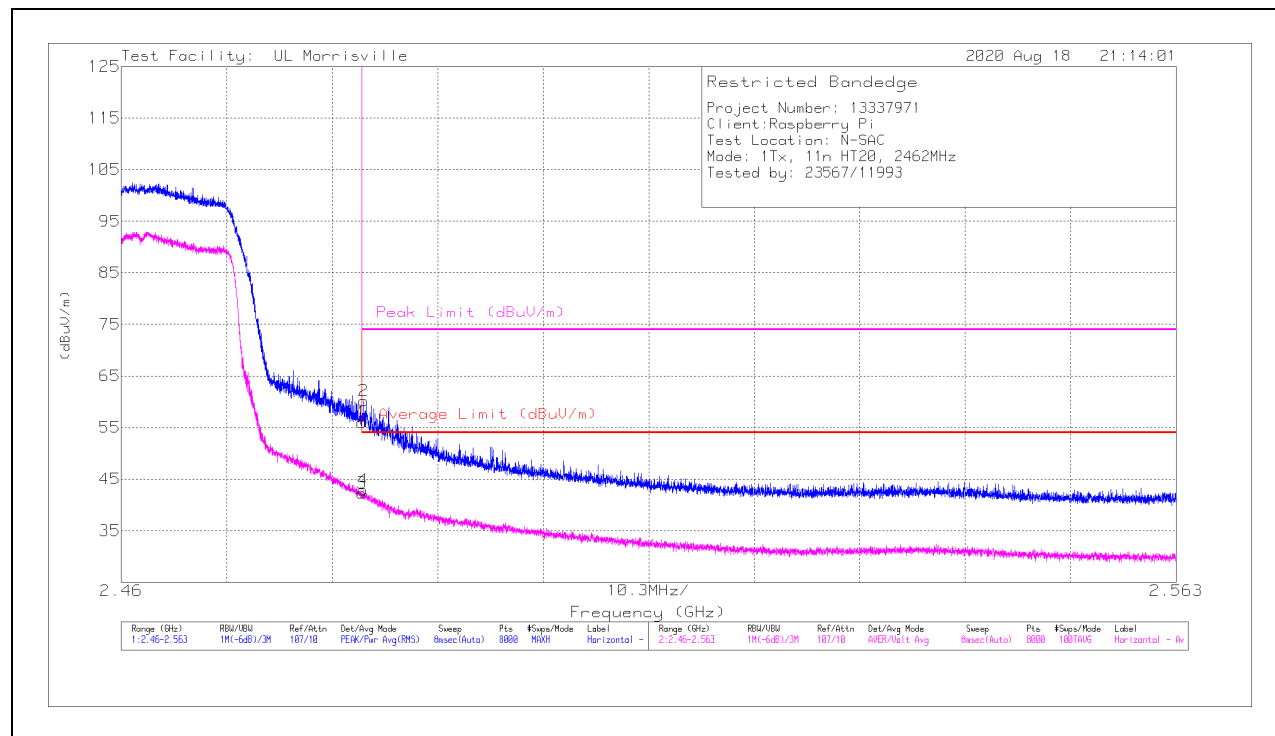
** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

BANDEDGE (HIGH CHANNEL, CH 11)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.4835	47.9	Pk	32.4	-24.3	56	-	-	74	-18	98	143	H
2	* ** 2.48367	52.07	Pk	32.4	-24.3	60.17	-	-	74	-13.83	98	143	H
3	* ** 2.4835	34.17	ADV	32.4	-24.3	42.27	54	-11.73	-	-	98	143	H
4	* ** 2.48362	34.76	ADV	32.4	-24.3	42.86	54	-11.14	-	-	98	143	H

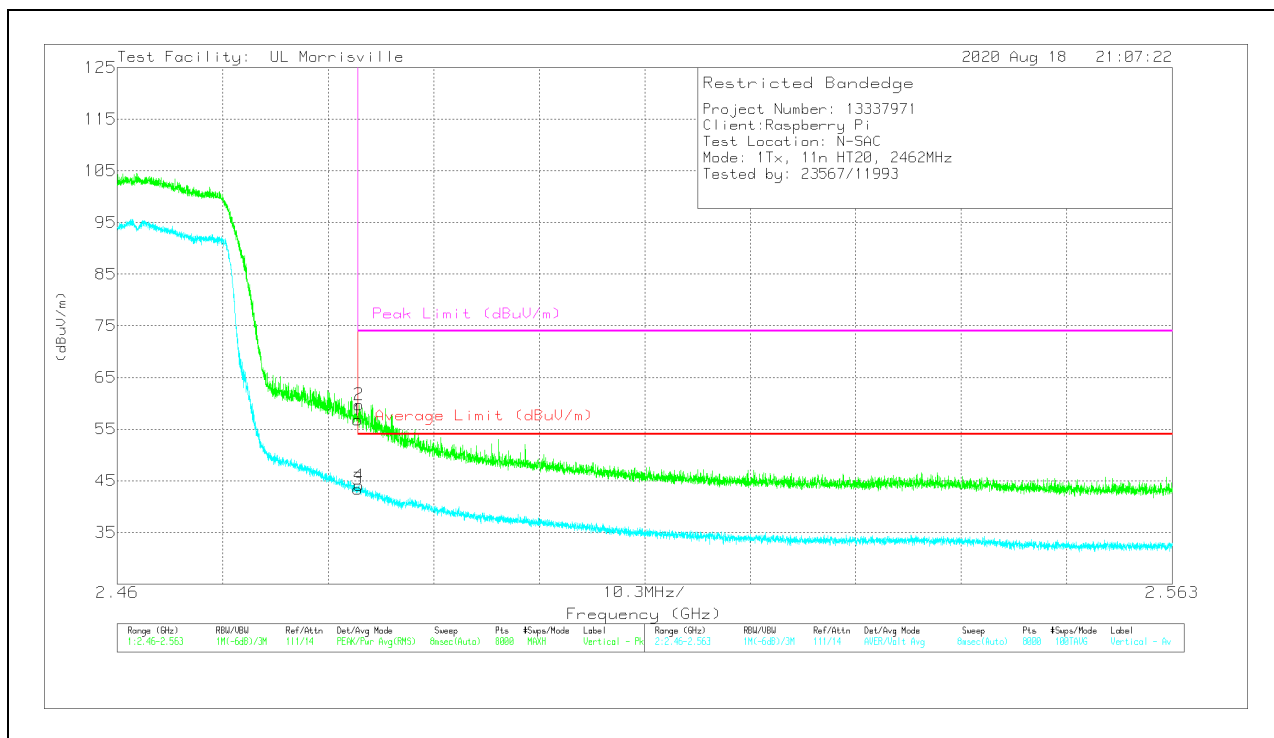
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.4835	48.66	Pk	32.4	-24.3	56.76	-	-	74	-17.24	350	127	V
2	*** 2.48363	51.64	Pk	32.4	-24.3	59.74	-	-	74	-14.26	350	127	V
3	*** 2.4835	35.31	ADV	32.4	-24.3	43.41	54	-10.59	-	-	350	127	V
4	*** 2.4836	36	ADV	32.4	-24.3	44.1	54	-9.9	-	-	350	127	V

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

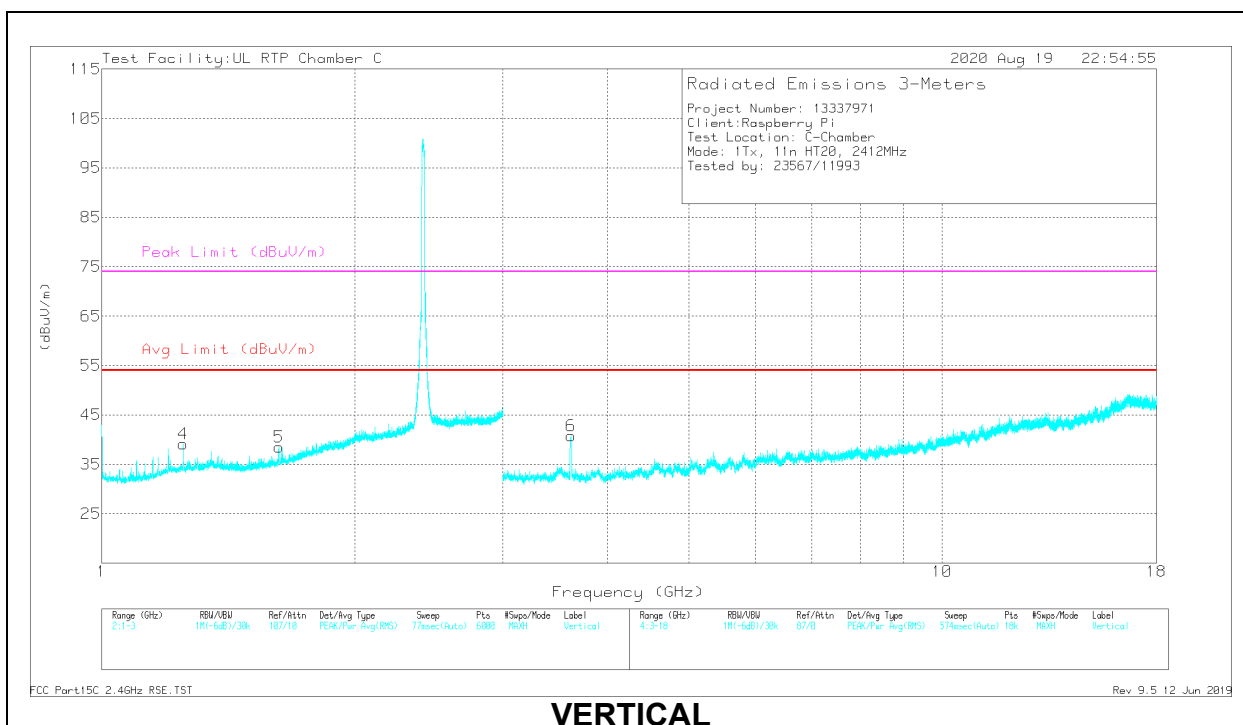
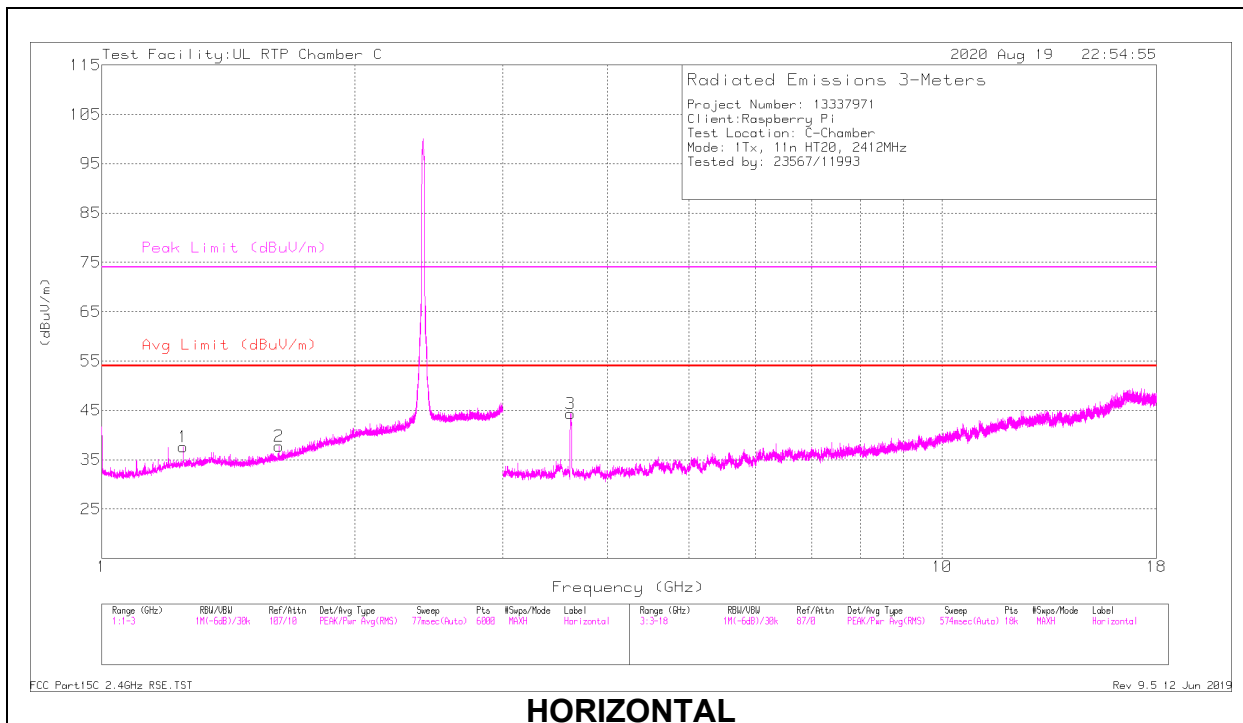
** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL, CH 1 RESULTS



RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.24985	36.57	PK2	28.6	-21.5	43.67	-	-	74	-30.33	130	103	H
	* 1.25006	27.95	ADV	28.6	-21.5	35.05	54	-18.95	-	-	130	103	H
2	* ** 1.62488	36.97	PK2	28.5	-20.7	44.77	-	-	74	-29.23	144	102	H
	* ** 1.62488	26.51	ADV	28.5	-20.7	34.31	54	-19.69	-	-	144	102	H
4	* 1.24986	36.96	PK2	28.6	-21.5	44.06	-	-	74	-29.94	142	159	V
	* 1.24999	27.73	ADV	28.6	-21.5	34.83	54	-19.17	-	-	142	159	V
5	* ** 1.62488	36.61	PK2	28.5	-20.7	44.41	-	-	74	-29.59	174	162	V
	* ** 1.62488	28.16	ADV	28.5	-20.7	35.96	54	-18.04	-	-	174	162	V
3	* ** 3.61249	66.79	PK2	33.1	-50	49.89	-	-	74	-24.11	82	102	H
	* ** 3.61257	54.98	ADV	33.1	-50	38.08	54	-15.92	-	-	82	102	H
6	* ** 3.61729	64.63	PK2	33.1	-49.9	47.83	-	-	74	-26.17	34	146	V
	* ** 3.61738	53.99	ADV	33.1	-49.9	37.19	54	-16.81	-	-	34	146	V

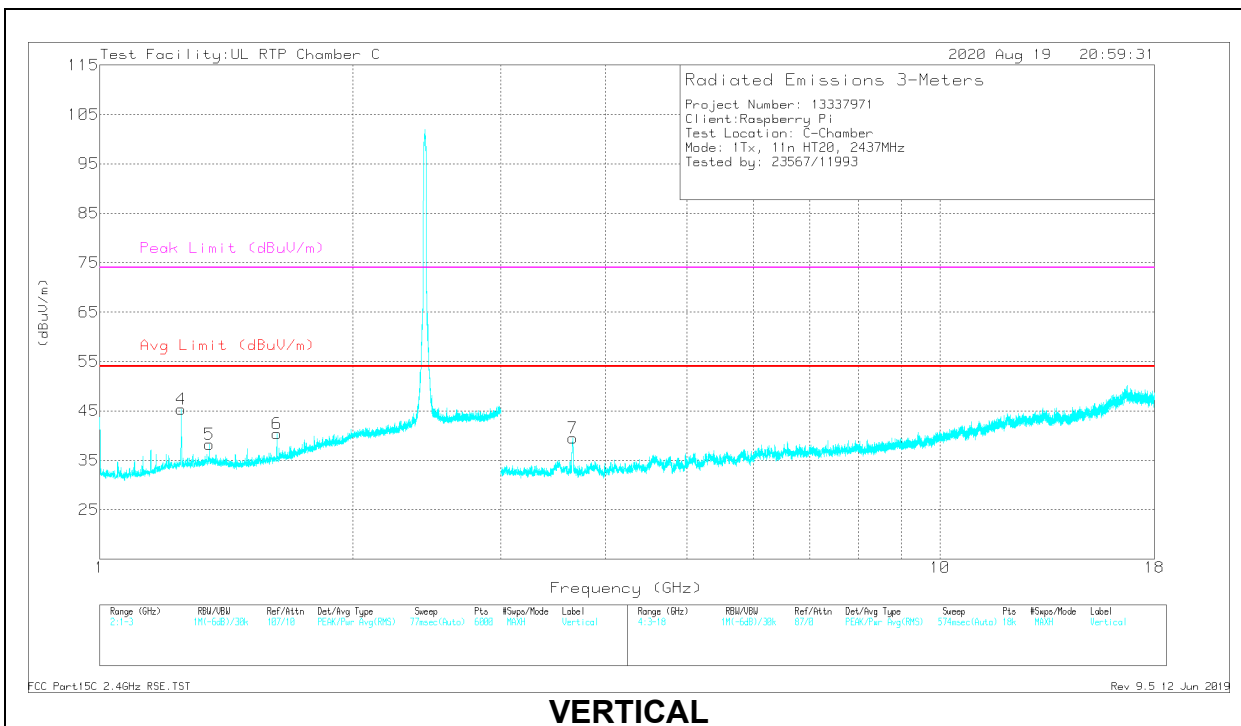
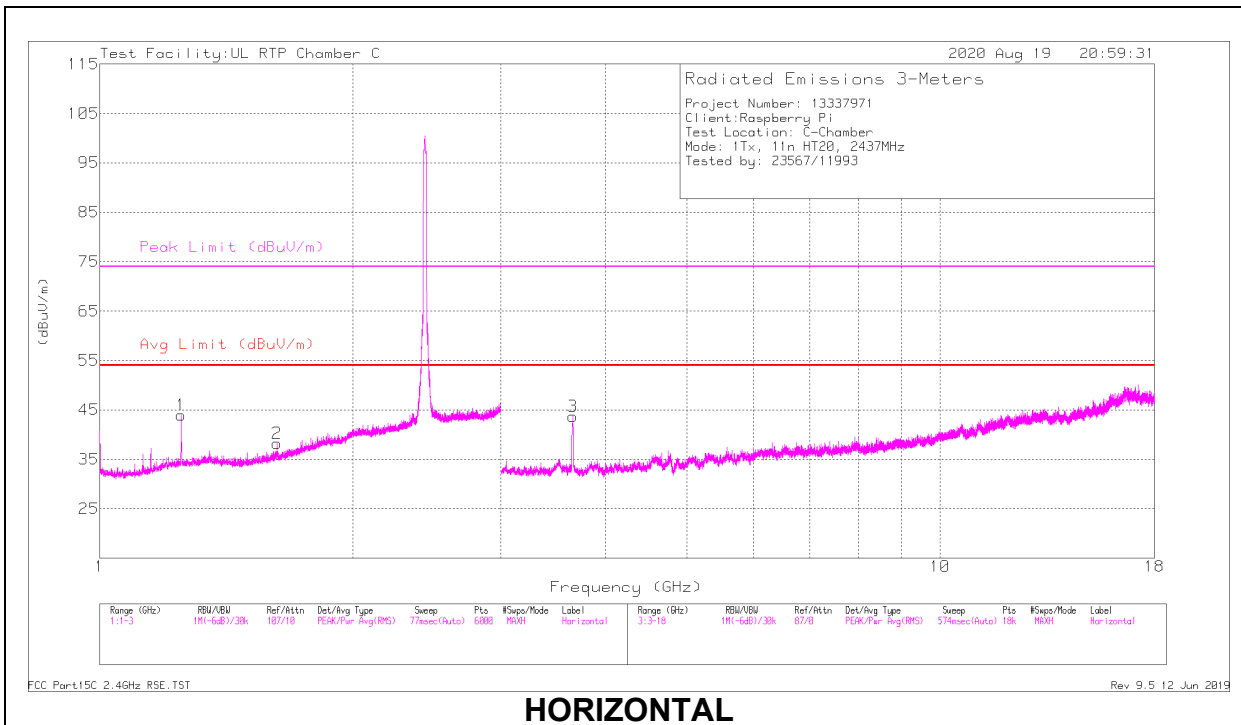
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK2 - Maximum Peak

ADV - Linear Voltage Average

MID CHANNEL, CH 6 RESULTS



RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.24985	41.09	PK2	28.6	-21.5	48.19	-	-	74	-25.81	120	106	H
	* 1.25002	35.35	ADV	28.6	-21.5	42.45	54	-11.55	-	-	120	106	H
2	* ** 1.62525	35.76	PK2	28.5	-20.7	43.56	-	-	74	-30.44	119	108	H
	* ** 1.62488	26.01	ADV	28.5	-20.7	33.81	54	-20.19	-	-	119	108	H
4	* 1.24984	40.99	PK2	28.6	-21.5	48.09	-	-	74	-25.91	323	192	V
	* 1.25006	36.04	ADV	28.6	-21.5	43.14	54	-10.86	-	-	323	192	V
5	* ** 1.34983	35.89	PK2	28.8	-21.2	43.49	-	-	74	-30.51	66	183	V
	* ** 1.34998	25.54	ADV	28.8	-21.2	33.14	54	-20.86	-	-	66	183	V
6	* ** 1.62525	37.36	PK2	28.5	-20.7	45.16	-	-	74	-28.84	125	145	V
	* ** 1.62488	28.84	ADV	28.5	-20.7	36.64	54	-17.36	-	-	125	145	V
3	* ** 3.65614	66.93	PK2	33.1	-49.8	50.23	-	-	74	-23.77	102	102	H
	* ** 3.65603	56.74	ADV	33.1	-49.8	40.04	54	-13.96	-	-	102	102	H
7	* ** 3.65571	62.62	PK2	33.1	-49.8	45.92	-	-	74	-28.08	50	102	V
	* ** 3.65613	51.74	ADV	33.1	-49.8	35.04	54	-18.96	-	-	50	102	V

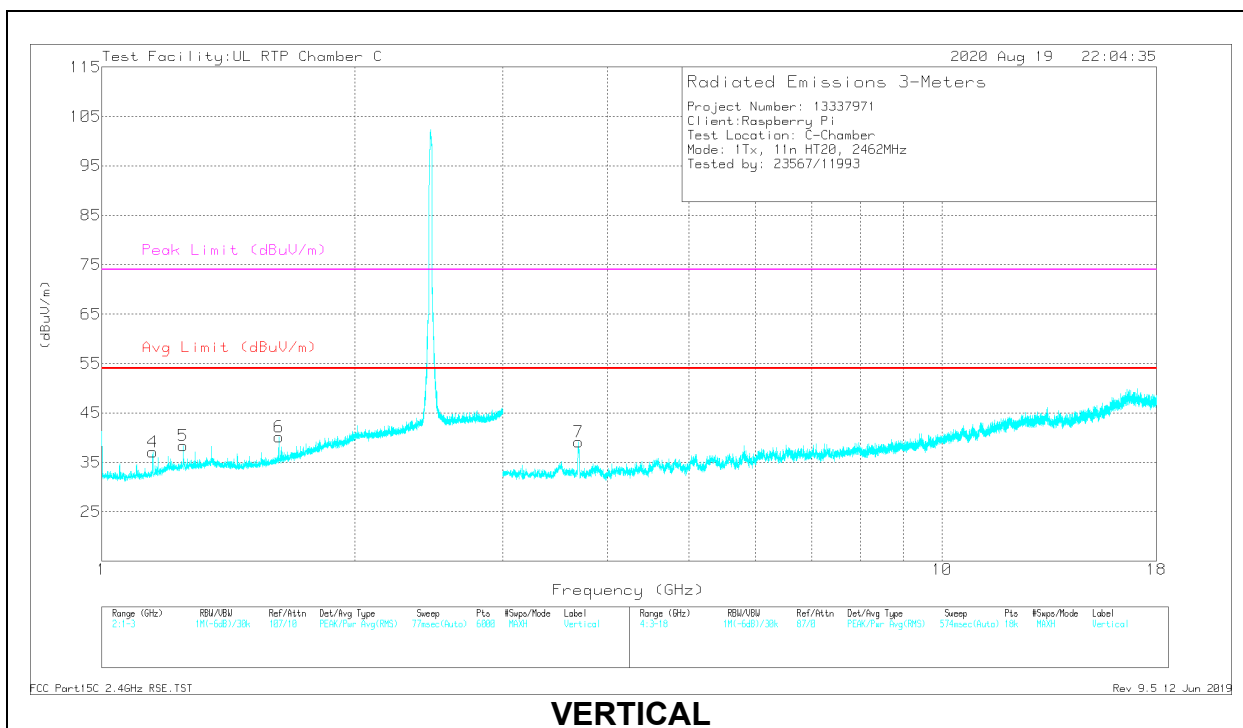
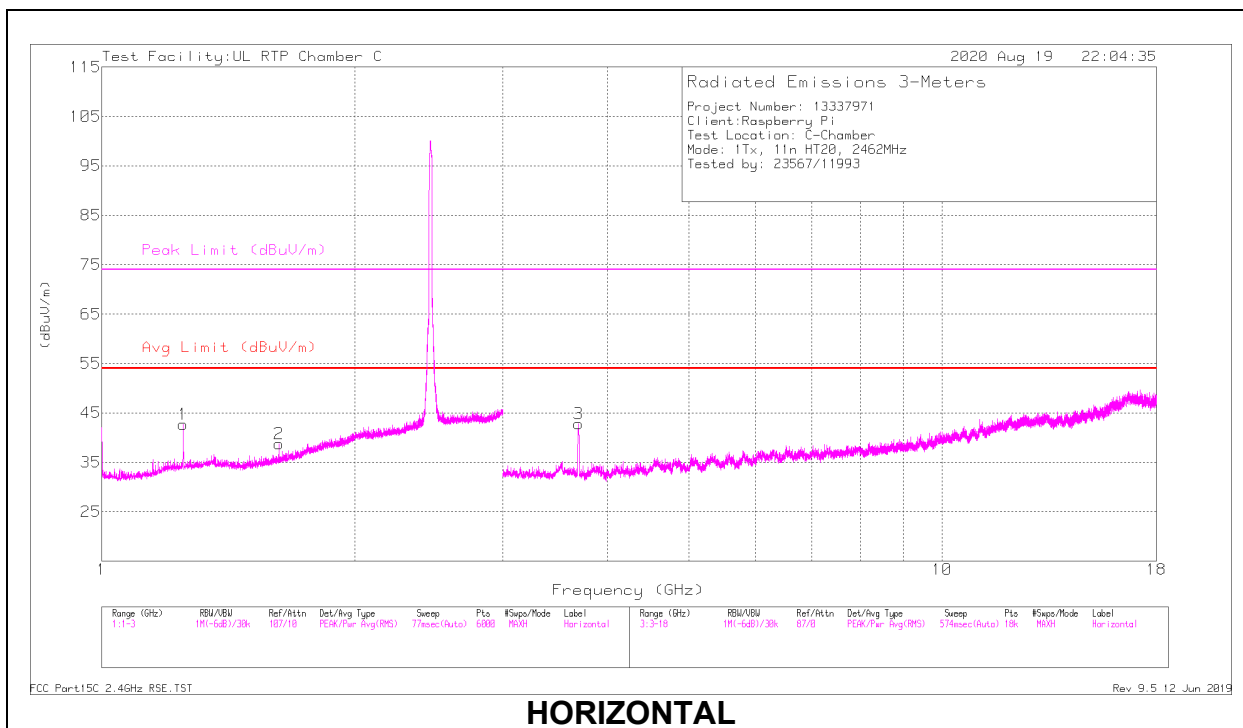
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK2 - Maximum Peak

ADV - Linear Voltage Average

HIGH CHANNEL, CH 11 RESULTS



RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.24987	38.82	PK2	28.6	-21.5	45.92	-	-	74	-28.08	117	102	H
	* 1.25003	31.99	ADV	28.6	-21.5	39.09	54	-14.91	-	-	117	102	H
2	*** 1.6245	37.45	PK2	28.4	-20.7	45.15	-	-	74	-28.85	249	202	H
	*** 1.62488	26.22	ADV	28.5	-20.7	34.02	54	-19.98	-	-	249	202	H
4	*** 1.14968	37	PK2	27.4	-21.7	42.7	-	-	74	-31.3	200	106	V
	*** 1.14999	28.36	ADV	27.4	-21.7	34.06	54	-19.94	-	-	200	106	V
5	* 1.25019	38.17	PK2	28.6	-21.5	45.27	-	-	74	-28.73	319	195	V
	* 1.25007	29.61	ADV	28.6	-21.5	36.71	54	-17.29	-	-	319	195	V
6	*** 1.62488	36.25	PK2	28.5	-20.7	44.05	-	-	74	-29.95	93	107	V
	*** 1.62488	27.4	ADV	28.5	-20.7	35.2	54	-18.8	-	-	93	107	V
3	*** 3.69533	65.07	PK2	33.2	-49.6	48.67	-	-	74	-25.33	99	102	H
	*** 3.69359	54.16	ADV	33.2	-49.6	37.76	54	-16.24	-	-	99	102	H
7	*** 3.69432	61.53	PK2	33.2	-49.6	45.13	-	-	74	-28.87	44	142	V
	*** 3.6935	50.43	ADV	33.2	-49.6	34.03	54	-19.97	-	-	44	142	V

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

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK2 - Maximum Peak

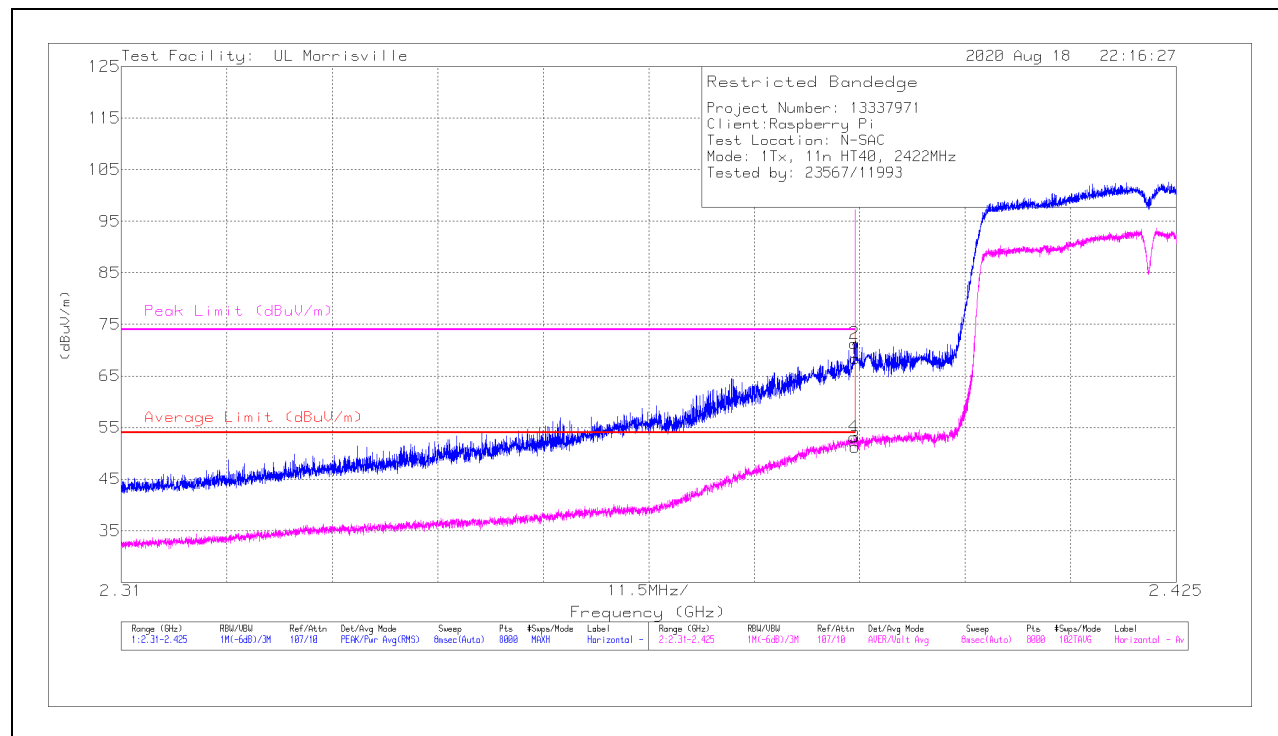
ADV - Linear Voltage Average

9.1.4. TX ABOVE 1 GHz 802.11n HT40 MODE IN THE 2.4 GHz BAND

1TX Antenna 1 MODE

BANDEDGE (LOW CHANNEL, CH 3)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.38999	60.95	Pk	31.8	-24.4	0	68.35	-	-	74	-5.65	35	188	H
2	*** 2.38991	63.89	Pk	31.8	-24.4	0	71.29	-	-	74	-2.71	35	188	H
3	*** 2.38999	43.6	ADV	31.8	-24.4	.24	51.24	54	-2.76	-	-	35	188	H
4	*** 2.38988	45.53	ADV	31.8	-24.4	.24	53.17	54	-.83	-	-	35	188	H

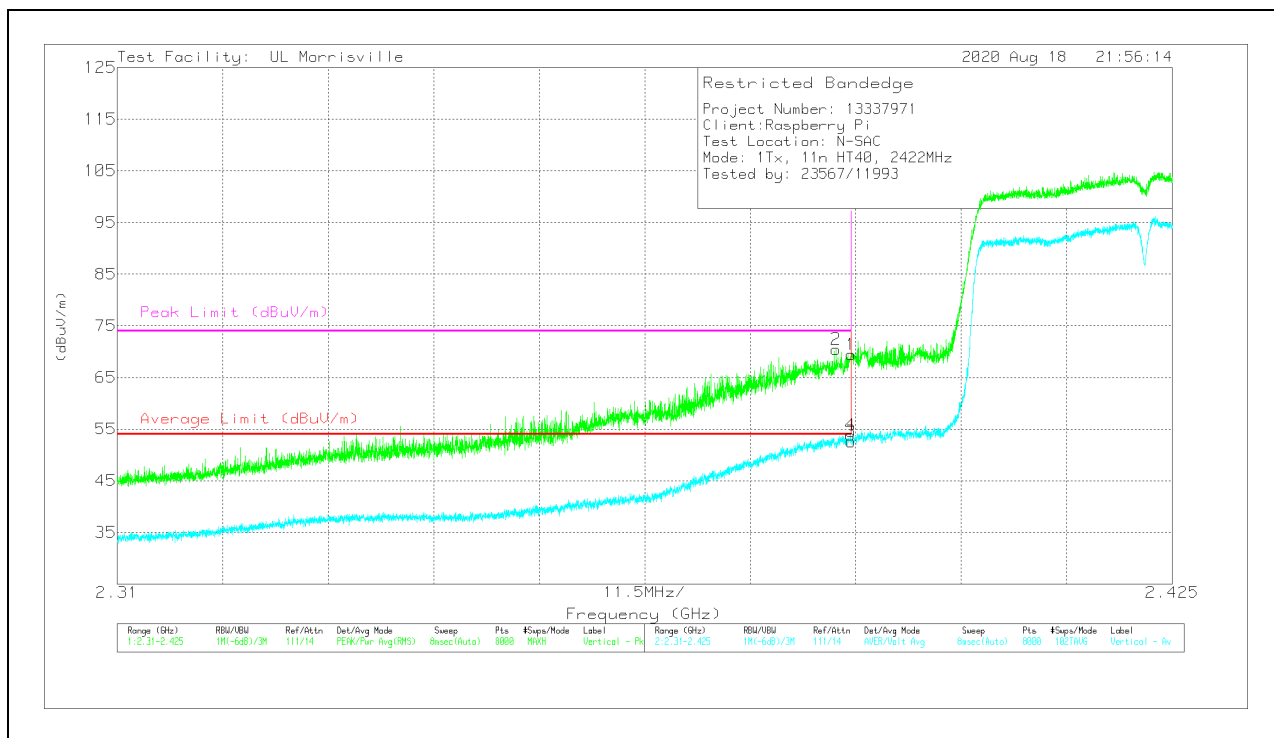
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.38999	62.04	Pk	31.8	-24.4	0	69.44	-	-	74	-4.56	322	110	V
2	*** 2.38834	63.03	Pk	31.8	-24.4	0	70.43	-	-	74	-3.57	322	110	V
3	*** 2.38999	44.96	ADV	31.8	-24.4	.24	52.6	54	-1.4	-	-	322	110	V
4	*** 2.38994	46.2	ADV	31.8	-24.4	.24	53.84	54	-1.6	-	-	322	110	V

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

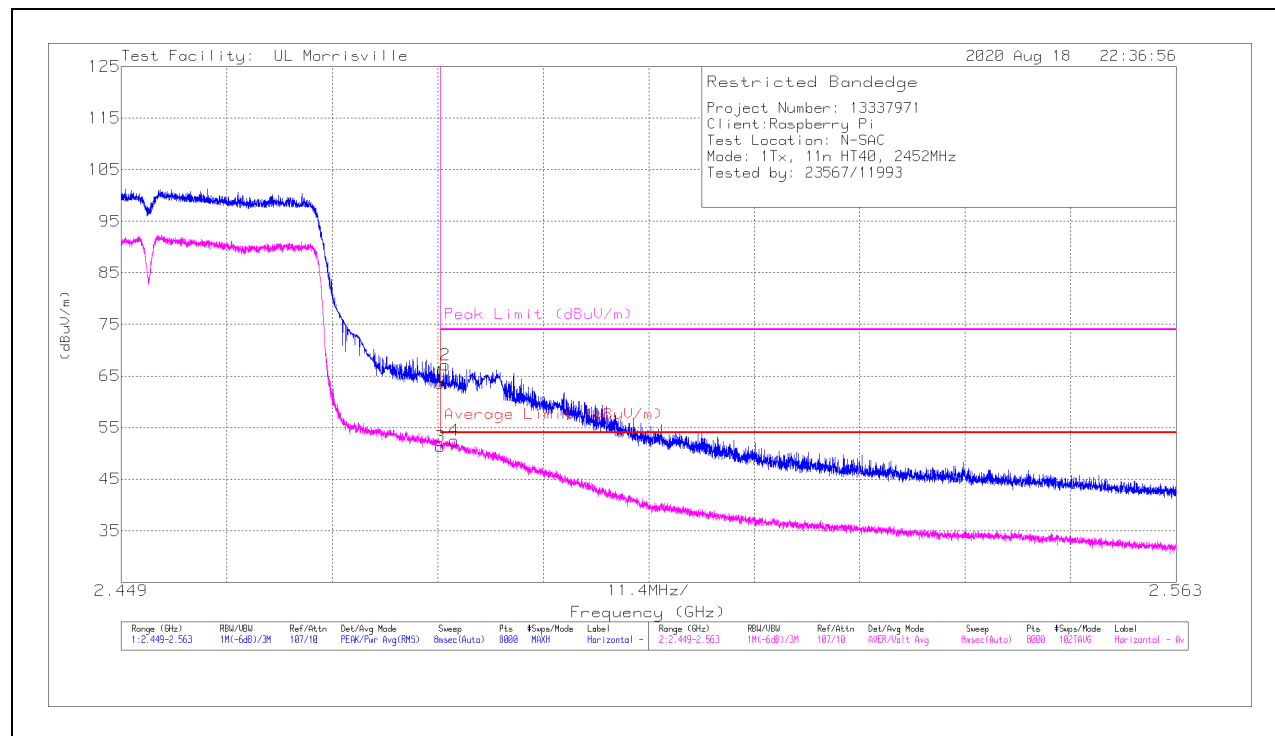
** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

BANDEDGE (HIGH CHANNEL, CH 9)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.4835	55.52	Pk	32.4	-24.3	0	63.62	-	-	74	-10.38	97	209	H
2	* ** 2.48403	59.02	Pk	32.4	-24.3	0	67.12	-	-	74	-6.88	97	209	H
3	* ** 2.4835	42.93	ADV	32.4	-24.3	.24	51.27	54	-2.73	-	-	97	209	H
4	* ** 2.485	44.02	ADV	32.5	-24.3	.24	52.46	54	-1.54	-	-	97	209	H

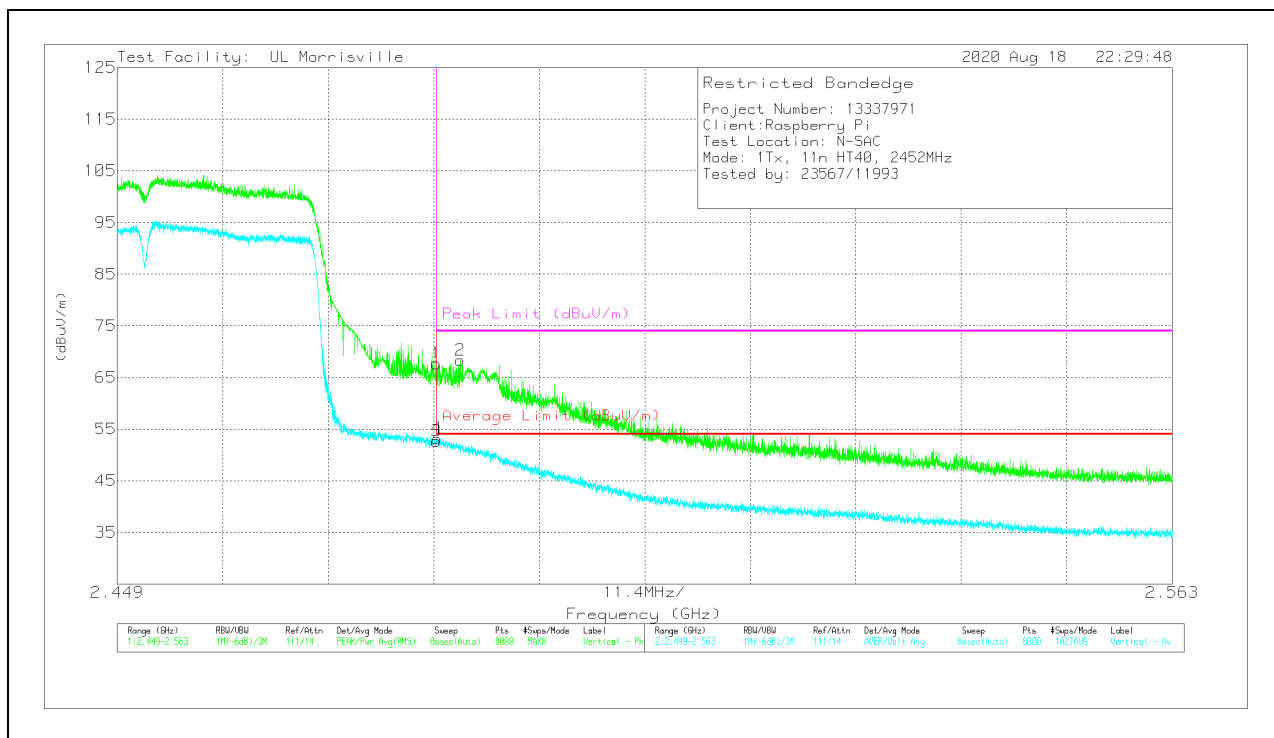
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.4835	59.6	Pk	32.4	-24.3	0	67.7	-	-	74	-6.3	356	128	V
2	*** 2.48608	60.14	Pk	32.5	-24.3	0	68.34	-	-	74	-5.66	356	128	V
3	*** 2.4835	44.36	ADV	32.4	-24.3	.24	52.7	54	-1.3	-	-	356	128	V
4	*** 2.48355	44.82	ADV	32.4	-24.3	.24	53.16	54	-.84	-	-	356	128	V

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

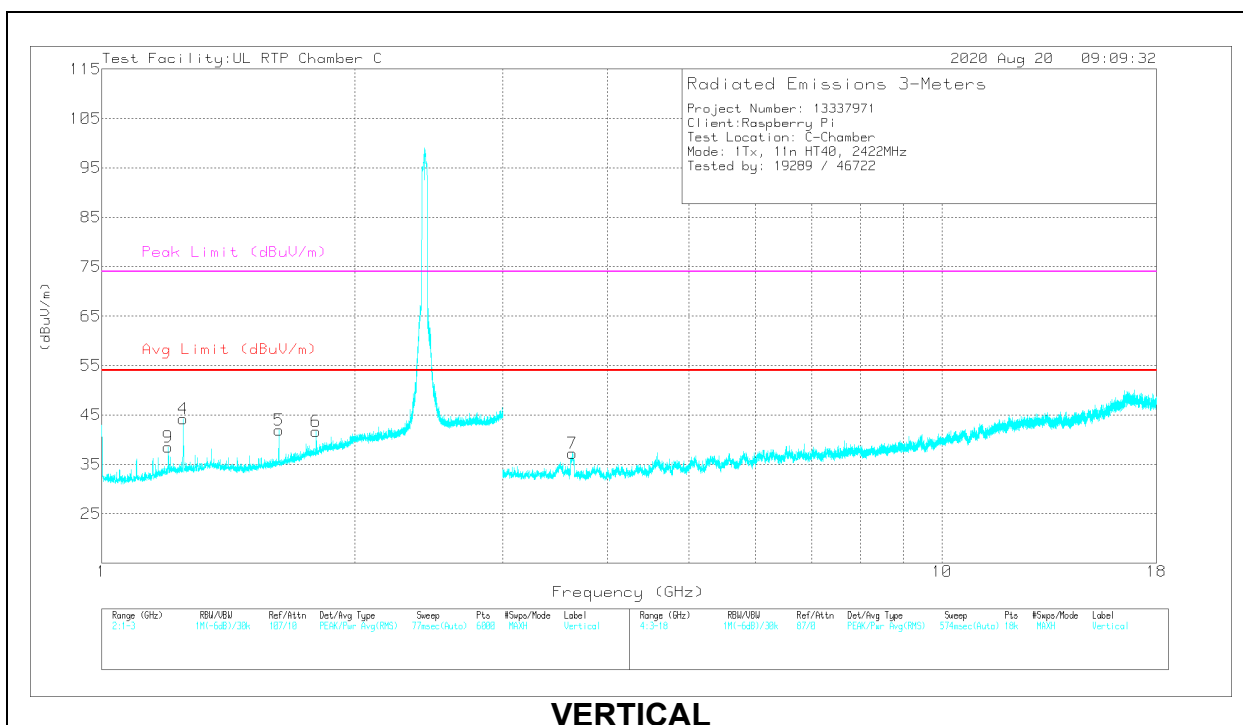
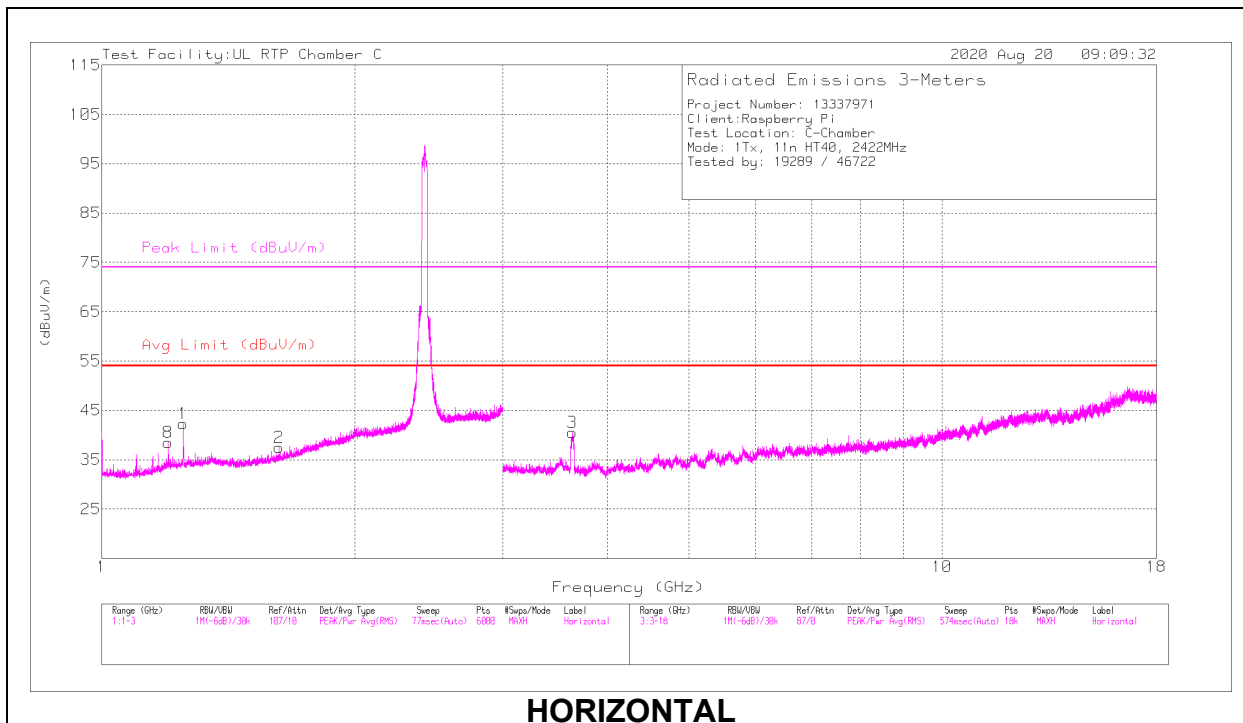
** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL, CH 3 RESULTS



RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.25008	39.72	PK2	28.6	-21.5	0	46.82	-	-	74	-27.18	146	104	H
	* 1.24998	32.5	ADV	28.6	-21.5	.24	39.84	54	-14.16	-	-	146	104	H
2	* ** 1.6252	36.31	PK2	28.5	-20.7	0	44.11	-	-	74	-29.89	163	103	H
	* ** 1.62503	25.35	ADV	28.5	-20.7	.24	33.39	54	-20.61	-	-	163	103	H
8	* ** 1.19992	37.25	PK2	28.1	-21.5	0	43.85	-	-	74	-30.15	185	102	H
	* ** 1.20002	28.24	ADV	28.1	-21.5	.24	35.08	54	-18.92	-	-	185	102	H
4	* 1.25016	40.47	PK2	28.6	-21.5	0	47.57	-	-	74	-26.43	284	104	V
	* 1.25	34.37	ADV	28.6	-21.5	.24	41.71	54	-12.29	-	-	284	104	V
5	* ** 1.6249	38.69	PK2	28.5	-20.7	0	46.49	-	-	74	-27.51	133	102	V
	* ** 1.62502	30.93	ADV	28.5	-20.7	.24	38.97	54	-15.03	-	-	133	102	V
9	* ** 1.19964	37.79	PK2	28.1	-21.5	0	44.39	-	-	74	-29.61	175	102	V
	* ** 1.20004	29.58	ADV	28.1	-21.5	.24	36.42	54	-17.58	-	-	175	102	V
3	* ** 3.63423	63.32	PK2	33.1	-49.9	0	46.52	-	-	74	-27.48	89	102	H
	* ** 3.63398	52.77	ADV	33.1	-49.9	.24	36.21	54	-17.79	-	-	89	102	H
7	* ** 3.63018	61.21	PK2	33.1	-50	0	44.31	-	-	74	-29.69	40	102	V
	* ** 3.63073	49.23	ADV	33.1	-50	.24	32.57	54	-21.43	-	-	40	102	V
6	1.80013	31.88	Pk	30.2	-20.4	0	41.68	-	-	-	-	0-360	102	V

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

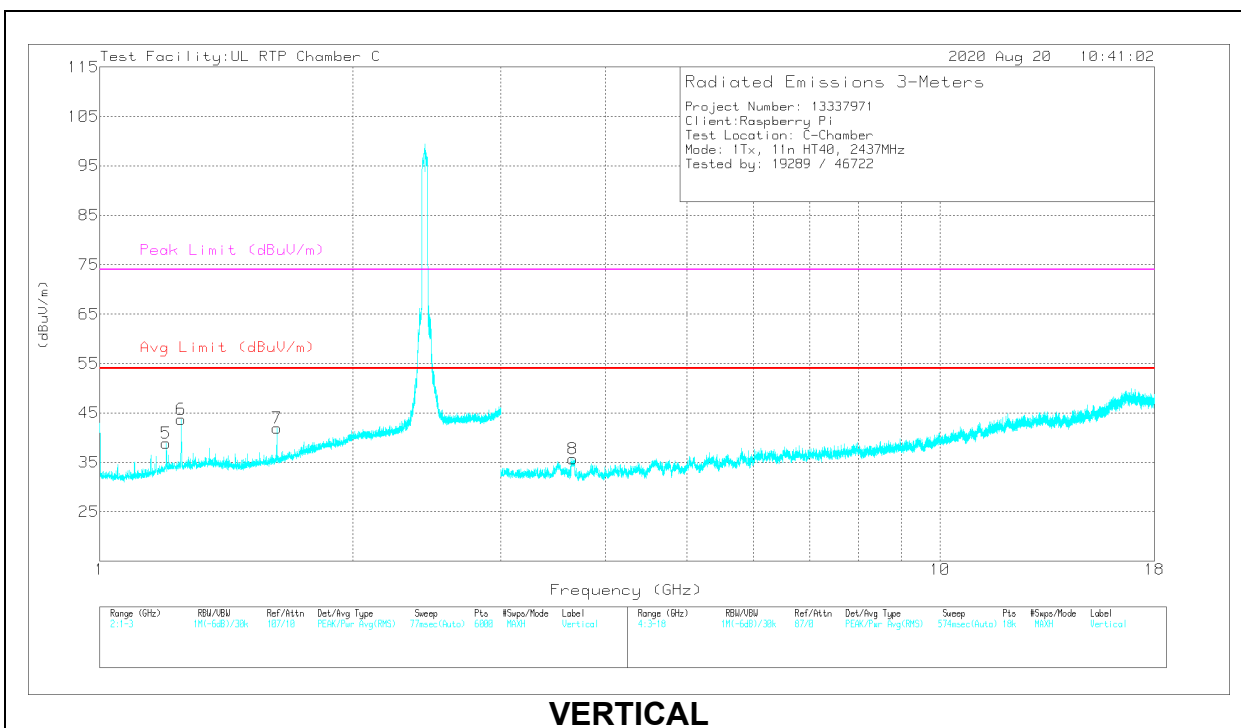
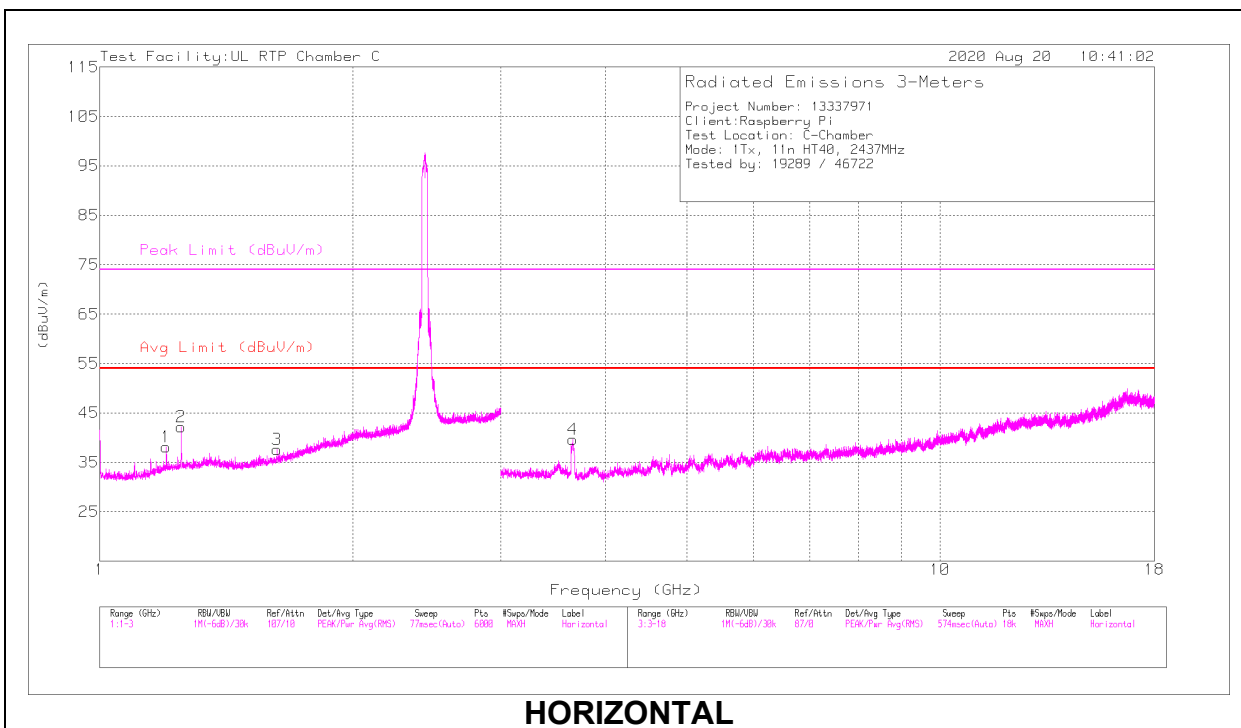
** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK2 - Maximum Peak

ADV - Linear Voltage Average

Pk - Peak detector

MID CHANNEL, CH 6 RESULTS



RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 1.19996	37.26	PK2	28.1	-21.5	0	43.86	-	-	74	-30.14	187	103	H
	* ** 1.20001	28.08	ADV	28.1	-21.5	.24	34.92	54	-19.08	-	-	187	103	H
2	* 1.25032	39.61	PK2	28.6	-21.5	0	46.71	-	-	74	-27.29	142	102	H
	* 1.25001	32.56	ADV	28.6	-21.5	.24	39.9	54	-14.1	-	-	142	102	H
3	* ** 1.62492	35.47	PK2	28.5	-20.7	0	43.27	-	-	74	-30.73	149	400	H
	* ** 1.62506	21.84	ADV	28.5	-20.7	.24	29.88	54	-24.12	-	-	149	400	H
5	* ** 1.19984	37.38	PK2	28.1	-21.5	0	43.98	-	-	74	-30.02	319	179	V
	* ** 1.20005	28.39	ADV	28.1	-21.5	.24	35.23	54	-18.77	-	-	319	179	V
6	* 1.24999	40.63	PK2	28.6	-21.5	0	47.73	-	-	74	-26.27	135	161	V
	* 1.25004	34.55	ADV	28.6	-21.5	.24	41.89	54	-12.11	-	-	135	161	V
7	* ** 1.62504	38.64	PK2	28.5	-20.7	0	46.44	-	-	74	-27.56	139	127	V
	* ** 1.62507	30.31	ADV	28.5	-20.7	.24	38.35	54	-15.65	-	-	139	127	V
4	* ** 3.65426	62.74	PK2	33.1	-49.8	0	46.04	-	-	74	-27.96	110	103	H
	* ** 3.65434	52.13	ADV	33.1	-49.8	.24	35.67	54	-18.33	-	-	110	103	H
8	* ** 3.65463	60.28	PK2	33.1	-49.8	0	43.58	-	-	74	-30.42	191	102	V
	* ** 3.65622	47.61	ADV	33.1	-49.8	.24	31.15	54	-22.85	-	-	191	102	V

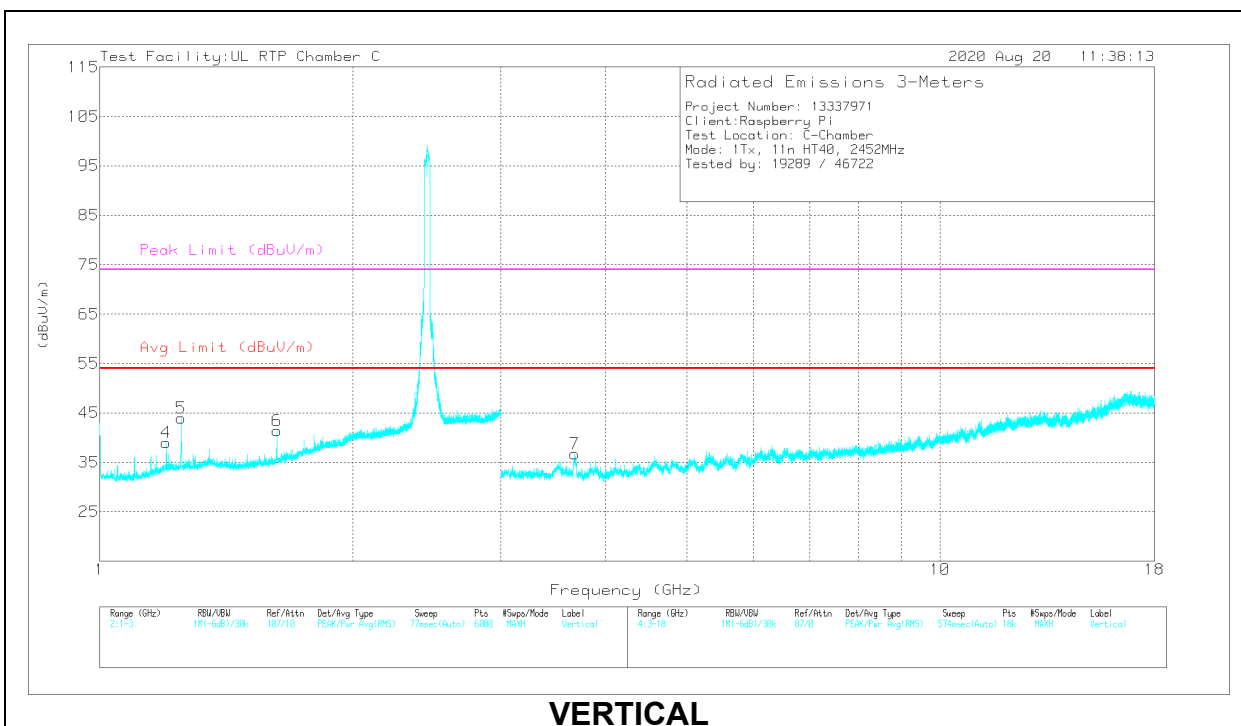
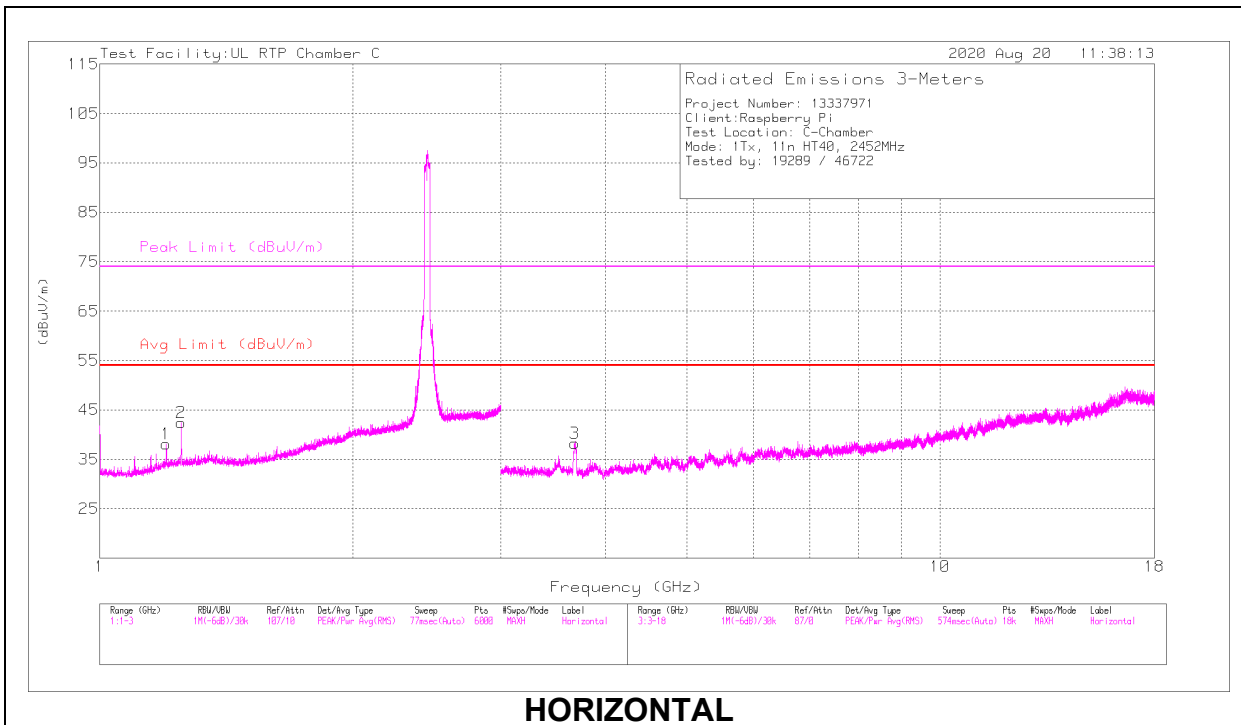
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK2 - Maximum Peak

ADV - Linear Voltage Average

HIGH CHANNEL, CH 9 RESULTS



RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 1.20017	36.92	PK2	28.1	-21.5	0	43.52	-	-	74	-30.48	176	148	H
	* ** 1.20003	27.28	ADV	28.1	-21.5	.24	34.12	54	-19.88	-	-	176	148	H
2	* 1.25006	39.55	PK2	28.6	-21.5	0	46.65	-	-	74	-27.35	140	104	H
	* 1.25003	32.41	ADV	28.6	-21.5	.24	39.75	54	-14.25	-	-	140	104	H
4	* ** 1.19975	37.33	PK2	28.1	-21.5	0	43.93	-	-	74	-30.07	164	103	V
	* ** 1.19996	28.87	ADV	28.1	-21.5	.24	35.71	54	-18.29	-	-	164	103	V
5	* 1.25018	40.17	PK2	28.6	-21.5	0	47.27	-	-	74	-26.73	107	103	V
	* 1.25004	33.86	ADV	28.6	-21.5	.24	41.2	54	-12.8	-	-	107	103	V
6	* ** 1.62481	38.96	PK2	28.5	-20.7	0	46.76	-	-	74	-27.24	130	102	V
	* ** 1.62507	30.54	ADV	28.5	-20.7	.24	38.58	54	-15.42	-	-	130	102	V
3	* ** 3.67704	62.5	PK2	33.2	-49.6	0	46.1	-	-	74	-27.9	97	102	H
	* ** 3.67896	51.82	ADV	33.2	-49.6	.24	35.66	54	-18.34	-	-	97	102	H
7	* ** 3.67959	58.88	PK2	33.2	-49.7	0	42.38	-	-	74	-31.62	152	103	V
	* ** 3.67911	47.79	ADV	33.2	-49.6	.24	31.63	54	-22.37	-	-	152	103	V

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

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK2 - Maximum Peak

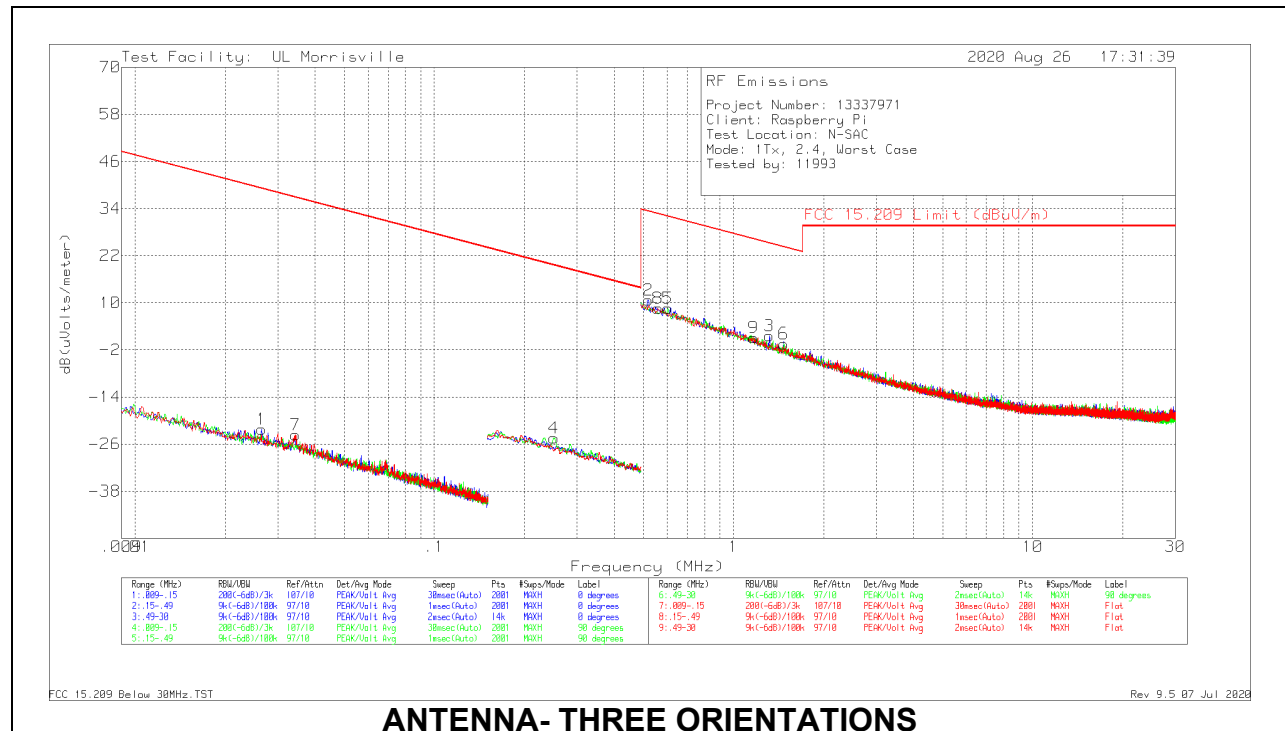
ADV - Linear Voltage Average

9.2. WORST CASE BELOW 30MHZ

Note: All measurements were made at a test distance of 3 m. The measured data was extrapolated from the test distance (3m) to the specification distance (300 m from 9-490 kHz and 30 m from 490 kHz – 30 MHz) to clearly show the relative levels of fundamental and spurious emissions and demonstrate compliance with the requirement that the level of any spurious emissions be below the level of the intentionally transmitted signal. The extrapolation factor for the limits were 40*Log (test distance / specification distance).

The below 30 MHz limits in CFR 47, Part 15, Subpart C, paragraph 15.209 (a), are identical to those in RSS-GEN Section 8.9, Table 6, since the measurements are performed in terms of magnetic field strength and converted to electric field strength levels (as reported in the table) using the free space impedance of 377Ω. For example, the measurement frequency 151.02 kHz resulted in a level of -22.23 dBuV/m, which is equivalent to $-22.23-51.5 = -73.73$ dBuA/m, which has the same margin, -61.38 dB, to the corresponding RSS-GEN Table 6 limit as it has to be 15.209(a) limit.

SPURIOUS EMISSIONS BELOW 30 MHz (WORST-CASE CONFIGURATION)

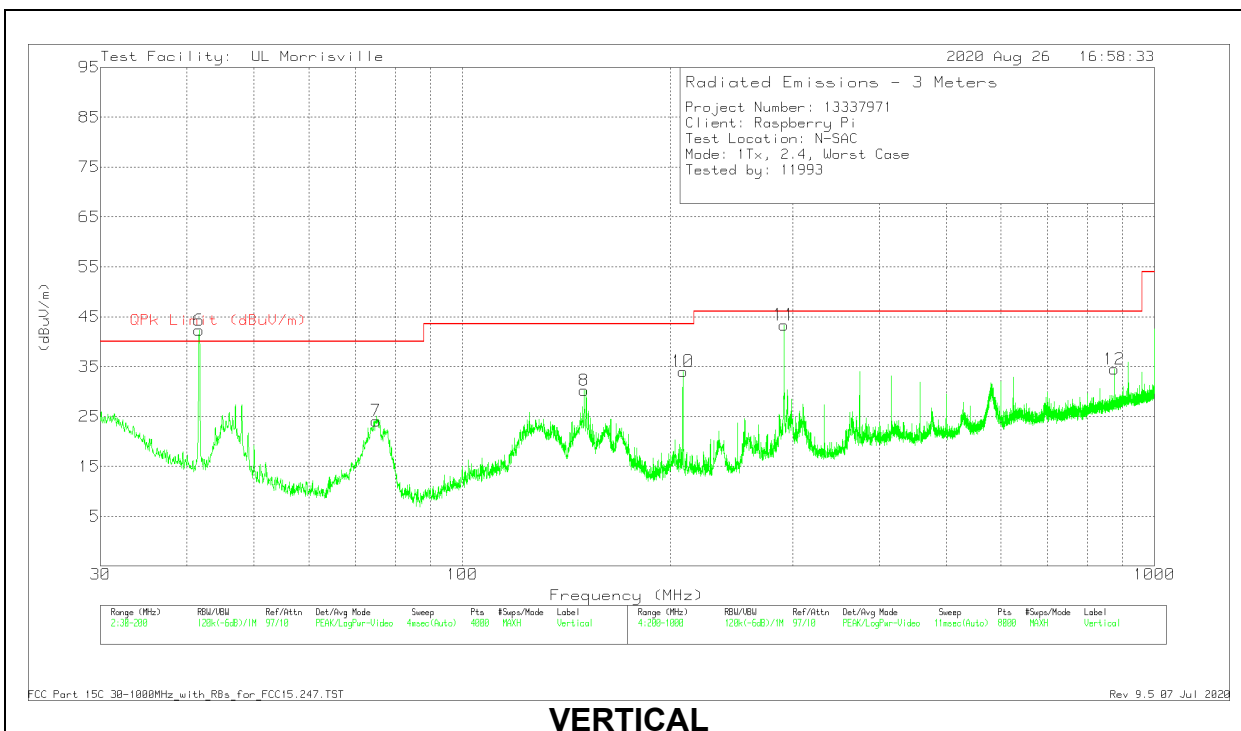
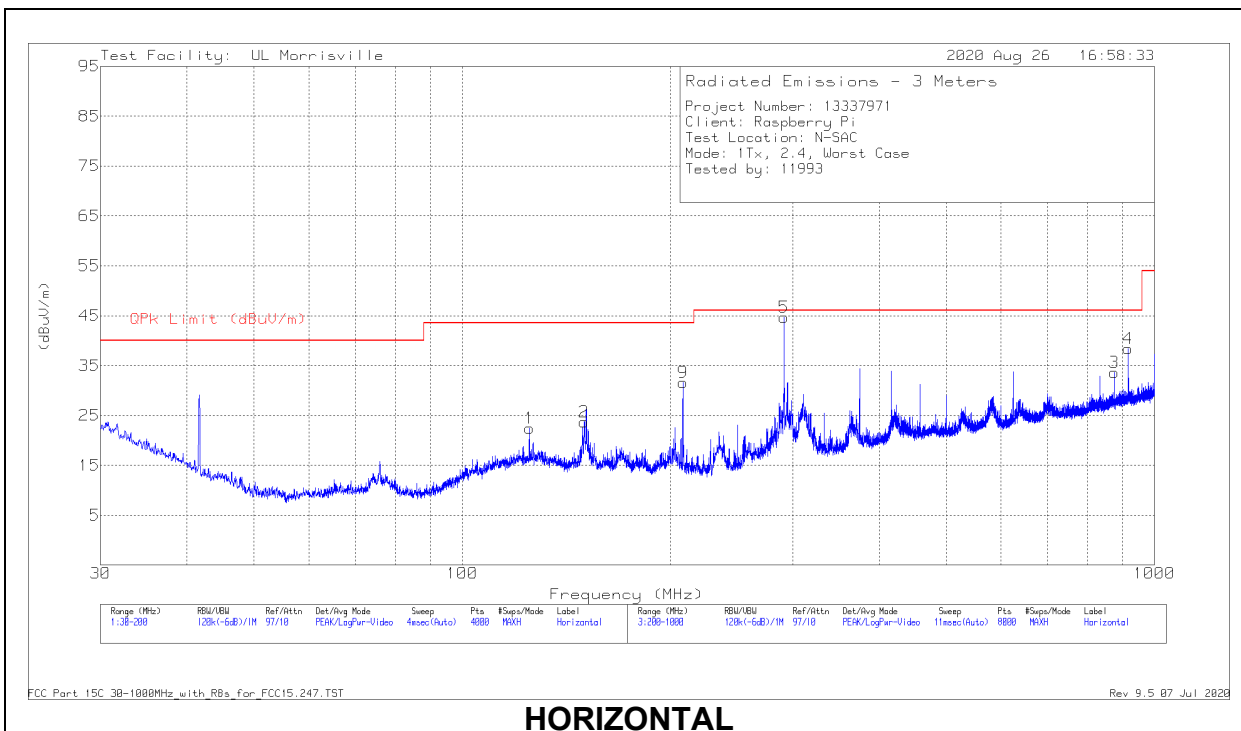


Below 30MHz Data

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AT0059 (dB/m)	Cbl (dB)	Dist. Corr. Factor (dB)	Corrected Reading dB(uVolts/meter)	FCC 15.209 Limit (dBuV/m)	FCC 15.209 Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Antenna Face
1	.02647	44.07	Pk	13.6	.1	-80	-22.23	39.15	39.15	-61.38	0-360	On
2	.51951	40.11	Pk	10.4	.2	-40	10.71	33.29	33.29	-22.58	0-360	On
3	1.31844	30.73	Pk	10.6	.2	-40	1.53	25.2	25.2	-23.67	0-360	On
4	.25124	45.27	Pk	10.2	.1	-80	-24.43	19.6	19.6	-44.03	0-360	Off
5	.60383	38.03	Pk	10.4	.2	-40	8.63	31.99	31.99	-23.36	0-360	Off
6	1.47444	28.74	Pk	10.6	.2	-40	-.46	24.23	24.23	-24.69	0-360	Off
7	.03442	43.37	Pk	12.9	.1	-80	-23.63	36.87	36.87	-60.5	0-360	Flat
8	.55956	38.01	Pk	10.4	.2	-40	8.61	32.65	32.65	-24.04	0-360	Flat
9	1.16878	30.28	Pk	10.6	.2	-40	1.08	26.25	26.25	-25.17	0-360	Flat

Pk - Peak detector

9.3. WORST CASE BELOW 1 GHZ



Below 1GHz DATA

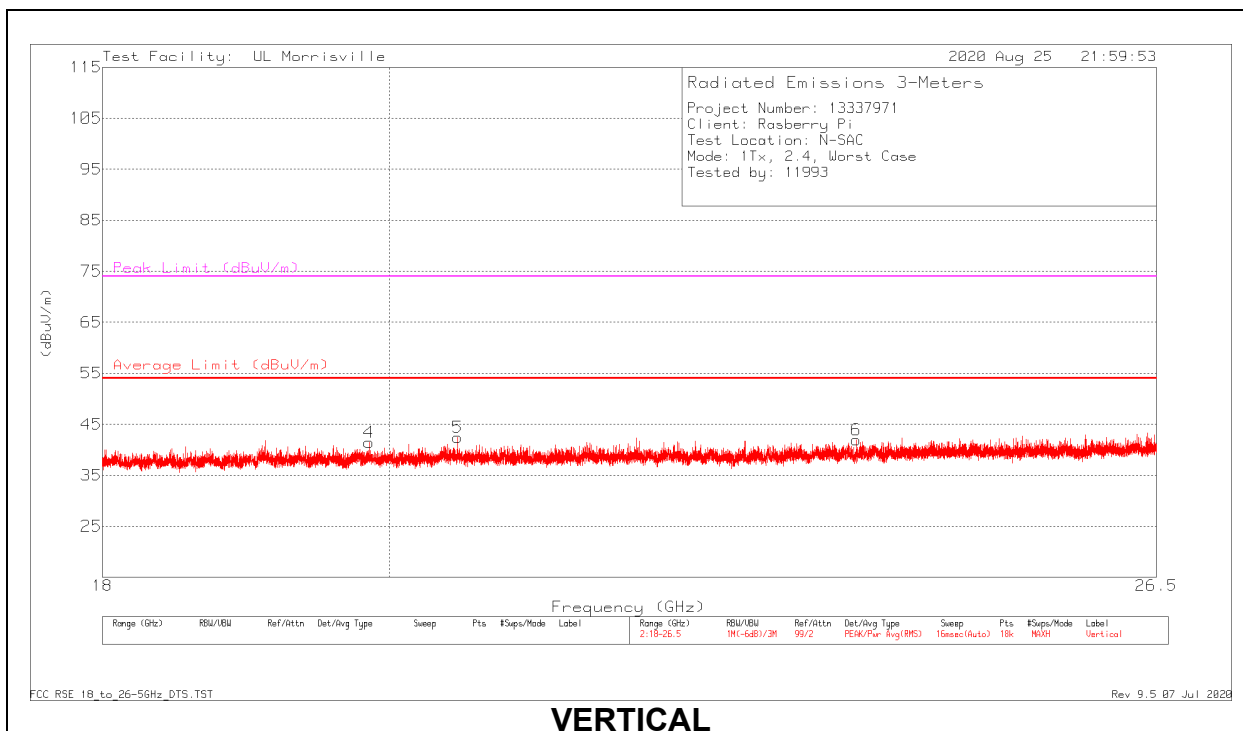
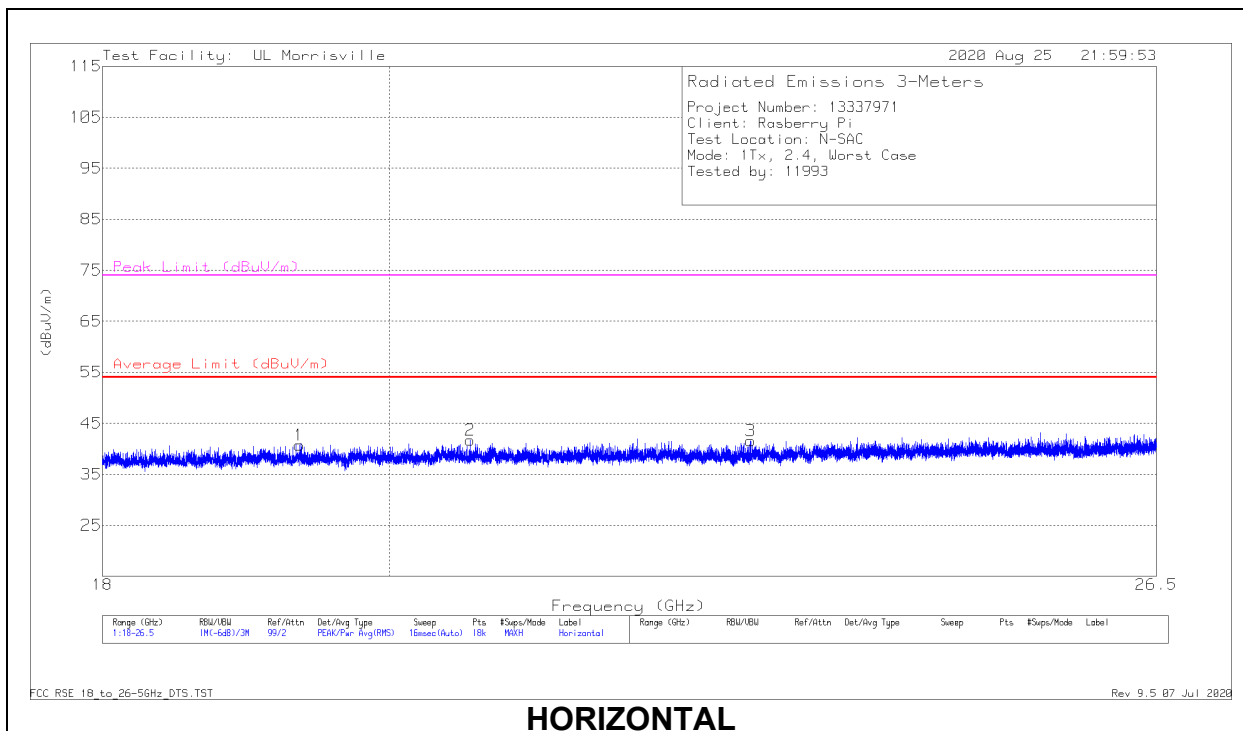
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AT0074 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 125.0121	32.53	Pk	20	-30.1	22.43	43.52	-21.09	0-360	200	H
2	* ** 150.0086	34.92	Pk	18.7	-29.9	23.72	43.52	-19.8	0-360	200	H
7	* ** 75.0191	40.94	Pk	14	-30.8	24.14	40	-15.86	0-360	101	V
8	* ** 150.0086	41.42	Pk	18.7	-29.9	30.22	43.52	-13.3	0-360	101	V
3	** 875.0878	30.52	Pk	28.2	-25.1	33.62	46.02	-12.4	0-360	101	H
12	** 875.0878	31.42	Pk	28.2	-25.1	34.52	46.02	-11.5	0-360	101	V
6	41.648	55.19	Pk	18.4	-31.3	42.29	-	-	0-360	101	V
9	208.3011	44.4	Pk	16.5	-29.3	31.6	-	-	0-360	101	H
10	208.3011	46.84	Pk	16.5	-29.3	34.04	-	-	0-360	101	V
5	291.6119	53.98	Pk	19.4	-28.7	44.68	-	-	0-360	101	H
11	291.6119	52.65	Pk	19.4	-28.7	43.35	-	-	0-360	200	V
4	916.6932	34.31	Pk	28.7	-24.6	38.41	-	-	0-360	101	H

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

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

9.4. WORST CASE 18-26 GHZ



18 – 26GHz DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0076 AF (dB/m)	Amp/CBL (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 19.34921	48.38	Pk	32.8	-40.5	40.68	54	-13.32	74	-33.32	0-360	149	H
2	* ** 20.59973	49.58	Pk	33	-40.9	41.68	54	-12.32	74	-32.32	0-360	101	H
3	* ** 22.83346	48.74	Pk	33.7	-40.9	41.54	54	-12.46	74	-32.46	0-360	250	H
4	* ** 19.8498	49.17	Pk	32.9	-40.6	41.47	54	-12.53	74	-32.53	0-360	250	V
5	* ** 20.50669	49.85	Pk	33.3	-40.7	42.45	54	-11.55	74	-31.55	0-360	101	V
6	* ** 23.73781	48.41	Pk	34	-40.5	41.91	54	-12.09	74	-32.09	0-360	150	V

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

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

10. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)
RSS-Gen 8.8

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

* Decreases with the logarithm of the frequency.

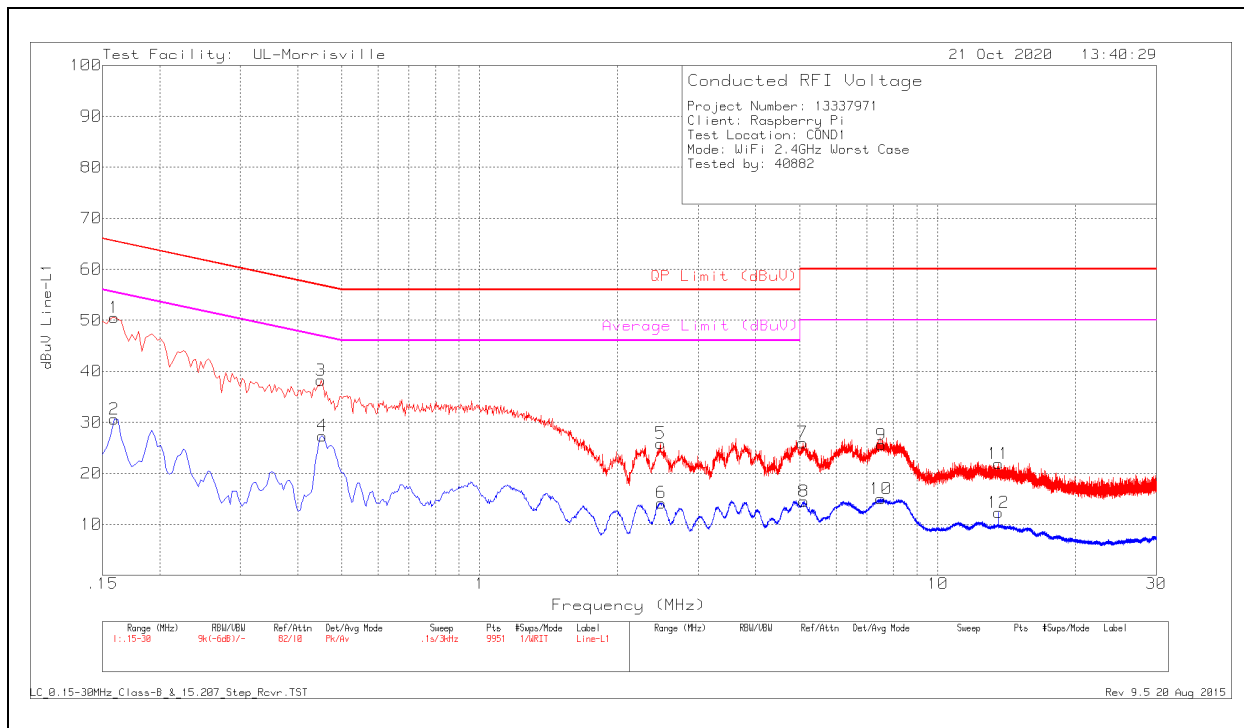
TEST PROCEDURE

ANSI C63.10

RESULTS

10.1. ANTENNA 1

LINE 1 RESULTS

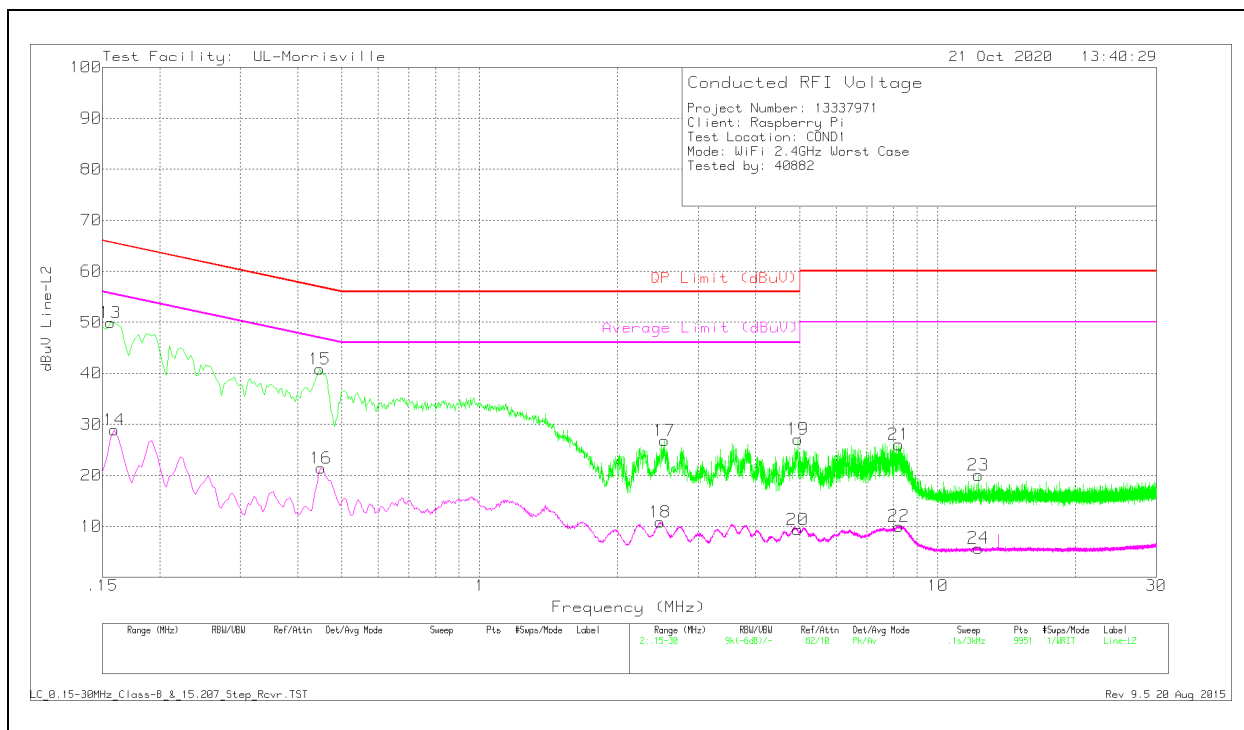


Range 1: Line-L1 .15 - 30MHz										
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN VCF (dB)	Cbl/Limiter (dB)	Corrected Reading dBuV	QP Limit (dBuV)	Margin (dB)	Average Limit (dBuV)	Margin (dB)
1	.159	40.65	Pk	.2	9.7	50.55	65.52	-14.97	-	-
2	.159	20.75	Av	.2	9.7	30.65	-	-	55.52	-24.87
3	.45	28.36	Pk	.1	9.8	38.26	56.88	-18.62	-	-
4	.453	17.46	Av	.1	9.8	27.36	-	-	46.82	-19.46
5	2.481	16.08	Pk	0	9.8	25.88	56	-30.12	-	-
6	2.487	4.42	Av	0	9.8	14.22	-	-	46	-31.78
7	5.067	16	Pk	.1	9.9	26	60	-34	-	-
8	5.1	4.52	Av	.1	9.9	14.52	-	-	50	-35.48
9	7.53	15.57	Pk	.1	9.9	25.57	60	-34.43	-	-
10	7.512	5.02	Av	.1	9.9	15.02	-	-	50	-34.98
11	13.563	11.82	Pk	.1	10	21.92	60	-38.08	-	-
12	13.56	2.23	Av	.1	10	12.33	-	-	50	-37.67

Pk - Peak detector

Av - Average detection

LINE 2 RESULTS



Range 2: Line-L2 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN VCF (dB)	Cbl/Limiter (dB)	Corrected Reading dBuV	QP Limit (dBuV)	Margin (dB)	Average Limit (dBuV)	Margin (dB)
13	.156	39.99	Pk	.2	9.7	49.89	65.67	-15.78	-	-
14	.159	19	Av	.2	9.7	28.9	-	-	55.52	-26.62
15	.447	31.01	Pk	.1	9.7	40.81	56.93	-16.12	-	-
16	.45	11.51	Av	.1	9.8	21.41	-	-	46.88	-25.47
17	2.532	16.99	Pk	0	9.8	26.79	56	-29.21	-	-
18	2.475	1.03	Av	0	9.8	10.83	-	-	46	-35.17
19	4.944	17.1	Pk	.1	9.9	27.1	56	-28.9	-	-
20	4.941	-.61	Av	.1	9.9	9.39	-	-	46	-36.61
21	8.22	15.93	Pk	.1	10	26.03	60	-33.97	-	-
22	8.226	-.07	Av	.1	10	10.03	-	-	50	-39.97
23	12.255	9.91	Pk	.1	10	20.01	60	-39.99	-	-
24	12.267	-4.37	Av	.1	10	5.73	-	-	50	-44.27

Pk - Peak detector

Av - Average detection

11. SETUP PHOTOS

Please refer to R13337971-EP1 for setup photos.

END OF TEST REPORT