



TEST REPORT

Report Number. : 14118885-E1V3

Applicant : BELKIN INTERNATIONAL, INC.
555 S. AVIATION BLVD., SUITE 180
EL SEGUNDO, CA 90245, USA

Model : WIZ017

FCC ID : K7SWIZ017

EUT Description : WIRELESS CHARGER

Test Standard(s) : FCC 47 CFR PART 15 SUBPART C

Date Of Issue:

January 28, 2022

Prepared by:

UL Verification Services Inc.
47173 Benicia Street
Fremont, CA 94538 U.S.A.
TEL: (510) 319-4000
FAX: (510) 661-0888



Revision History

<u>Rev.</u>	<u>Issue Date</u>	<u>Revisions</u>	<u>Revised By</u>
V1	1/21/2022	Initial Issue	---
V2	1/26/2022	Removed highlights on page 18	Tina Chu
V3	1/28/2022	Added note on page 17- 22 to address TCB's question	Tina Chu

TABLE OF CONTENTS

1. ATTESTATION OF TEST RESULTS	5
2. TEST METHODOLOGY	7
3. FACILITIES AND ACCREDITATION	7
4. DECISION RULES AND MEASUREMENT UNCERTAINTY	8
4.1. METROLOGICAL TRACEABILITY	8
4.2. DECISION RULES.....	8
4.3. MEASUREMENT UNCERTAINTY.....	8
5. EQUIPMENT UNDER TEST.....	9
5.1. DESCRIPTION OF EUT	9
5.2. MAXIMUM E-FIELD AND H-FIELD STRENGTH	9
5.3. SOFTWARE AND FIRMWARE.....	9
5.4. WORST-CASE CONFIGURATION.....	10
6. TEST AND MEASUREMENT EQUIPMENT	12
7. OCCUPIED BANDWIDTH	13
8. RADIATED EMISSION TEST RESULTS	15
8.1. LIMITS AND PROCEDURE.....	15
8.2. FCC TX FUNDAMENTAL AND SPURIOUS EMISSIONS FROM 9 kHz TO 30 MHz ..	16
8.2.1. CONFIGURATION 1: STANDBY MODE.....	16
8.2.2. CONFIGURATION 2: OPERATING MODE WITH iPhone (360kHz)	17
8.2.3. CONFIGURATION 3: OPERATING MODE WITH iPhone (127.7kHz)	18
8.2.4. CONFIGURATION 4: OPERATING MODE WITH AirPods Pro Case (127.7kHz) ..	19
8.2.5. CONFIGURATION 5: OPERATING MODE WITH AirPods Case (110.5kHz to	
148.5kHz)	20
8.2.6. CONFIGURATION 6: OPERATING MODE WITH Apple Watch (326.5kHz)	21
8.2.7. CONFIGURATION 7: OPERATING MODE WITH Apple Watch (1.778MHz)	22
8.2.8. CONFIGURATION 8: OPERATING MODE WITH iPhone (360kHz) + AirPods	
Case + Apple Watch (326.5kHz).....	23
8.2.9. CONFIGURATION 9: OPERATING MODE WITH iPhone (360kHz) + AirPods	
Case + Apple Watch (1.778MHz).....	24
8.2.10. CONFIGURATION 10: OPERATING MODE WITH iPhone (127.7kHz) + AirPods	
Case + Apple Watch (326.5kHz)	25
8.2.11. CONFIGURATION 11: OPERATING MODE WITH iPhone (127.7kHz) + AirPods	
Case + Apple Watch (1.778MHz).....	26
8.2.12. CONFIGURATION 12: OPERATING MODE WITH AirPods Pro Case	
(127.7kHz) + AirPods Case (110.5kHz to 148.5kHz) + Apple Watch (326.5kHz)	27
8.2.13. CONFIGURATION 13: OPERATING MODE WITH AirPods Pro Case	
(127.7kHz) + AirPods Case (110.5kHz to 148.5kHz) + Apple Watch (1.778MHz)	28
8.3. FCC TX SPURIOUS EMISSION 30 TO 1000 MHz	29

8.3.1.	CONFIGURATION 1: STANDBY MODE.....	29
8.3.2.	CONFIGURATION 9: OPERATING MODE WITH iPhone (15W) + AirPods Case (1W) + Apple Watch (5W)	31
9.	AC MAINS LINE CONDUCTED EMISSIONS.....	33
9.1.	CONFIGURATION 1: STANDBY MODE.....	34
9.2.	CONFIGURATION 9: OPERATING MODE WITH iPhone (15W) + AirPods Case (1W) + Apple Watch (5W)	36
10.	DESCRIPTION OF TEST SETUP AND SETUP PHOTOS	38

1. ATTESTATION OF TEST RESULTS

COMPANY NAME: BELKIN INTERNATIONAL, INC.
555 S. AVIATION BLVD., SUITE 180
EL SEGUNDO, CA 90245, USA

EUT DESCRIPTION: WIRELESS CHARGER

MODEL NUMBER: WIZ017

BRAND: BELKIN

SERIAL NUMBER: 52B10F6BB00122

SAMPLE RECEIPT DATE: DECEMBER 1, 2021

DATE TESTED: DECEMBER 14, 2021 to DECEMBER 28, 2021

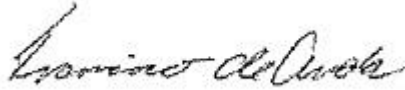
APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC PART 15 SUBPART C	Complies

UL Verification Services Inc. 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 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 A2LA, NIST, any agency of the Federal Government, or any agency of the U.S. government.

Approved & Released For
UL Verification Services Inc. By:



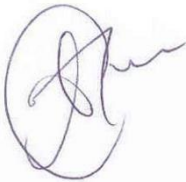
Francisco de Anda
Staff Engineer
Consumer Technology Division
UL Verification Services Inc.

Prepared By:



Glenn Escano
Test Engineer
Consumer Technology Division
UL Verification Services Inc.

Reviewed By:



Tina Chu
Senior Project Engineer
Consumer Technology Division
UL Verification Services Inc.

2. TEST METHODOLOGY

This report contains data provided by the customer which can impact the validity of results. UL Verification Services Inc. is only responsible for the validity of results after the integration of the data provided by the customer.

The tests documented in this report were performed in accordance with:

ANSI C63.10-2013

FCC CFR 47 Part 2

FCC CFR 47 Part 15

KDB 414788 D01 Radiated Test Site v01r01

3. FACILITIES AND ACCREDITATION

UL LLC is accredited by A2LA, certification #0751.05, for all testing performed within the scope of this report. Testing was performed at the locations noted below.

	Address	ISED CABID	ISED Company Number	FCC Registration
<input type="checkbox"/>	Building 1: 47173 Benicia Street, Fremont, CA 94538, USA	US0104	2324A	550739
<input type="checkbox"/>	Building 2: 47266 Benicia Street, Fremont, CA 94538, USA	US0104	22541	550739
<input checked="" type="checkbox"/>	Building 4: 47658 Kato Rd, Fremont, CA 94538, USA	US0104	2324B	550739

4. DECISION RULES AND MEASUREMENT UNCERTAINTY

4.1. 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.

4.2. 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.)

4.3. MEASUREMENT UNCERTAINTY

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

PARAMETER	U _{Lab}
Worst Case Conducted Disturbance, 9KHz to 0.15 MHz	3.78 dB
Worst Case Conducted Disturbance, 0.15 to 30 MHz	3.40 dB
Worst Case Radiated Disturbance, 9KHz to 30 MHz (E-field)	2.84 dB
Worst Case Radiated Disturbance, 9KHz to 30 MHz (H-field)	2.87 dB
Worst Case Radiated Disturbance, 30 to 1000 MHz	6.01 dB
Worst Case Radiated Disturbance, 1000 to 18000 MHz	4.73 dB
Worst Case Radiated Disturbance, 18000 to 26000 MHz	4.51 dB
Worst Case Radiated Disturbance, 26000 to 40000 MHz	5.29 dB

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

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is a Wireless Charger with 3 separated charging coils that is capable of charging 3 client devices at the same time.

The first coil is used for charging a MagSafe iPhone at 360kHz (15W), a legacy iPhone at 127.7kHz (7.5W), and an AirPods Pro Case at 127.7kHz (1W). A second coil is used to charge the AirPods Case at 110.5kHz - 148.5kHz (1W). A third coil is used for charging an Apple Watch at either 326.5kHz or 1.778MHz with a maximum power of 5W.

EUT is powered by AC/DC adapter only.

5.2. MAXIMUM E-FIELD AND H-FIELD STRENGTH

The transmitter has maximum peak radiated electric field strength as follows:

Fundamental Frequency (KHz)	E field (300m distance) FCC (dBuV/m)
360 (1 st coil, MagSafe iPhone)	-25.39
127.7 (1 st coil, Legacy iPhone)	-8.76
127.7 (1 st coil, AirPods Case)	-5.33
110.5 to 148.5 (2 nd coil)	-5.43
326.5 (3 rd coil)	-19.99
1778 (3 rd coil)	4.9

5.3. SOFTWARE AND FIRMWARE

The firmware version installed in the EUT during testing was:

360kHz/127.7kHz: V2.41

110.5 to 148.5kHz: V1.2

326kHz /1.778MHz: V19.60

5.4. WORST-CASE CONFIGURATION

EUT is a desktop charger. For all tests, the EUT was connected to an AC/DC power adapter.

Worst case orientation of the client devices have been investigated as follow:

- 1) iPhone (MagSafe): Portrait orientation where the lighting connector of iPhone on top.
- 2) iPhone (Legacy): Landscape orientation with the front camera on the left hand side.
- 3) AirPods Pro Case (1st coil): Landscape orientation with the lighting connector at the bottom.
- 4) AirPods Case (2nd coil): Flatbed orientation, 90 degree
- 5) Apple Watch (New/Legacy): Landscape orientation with the digital crown/home button at the bottom.

For the radiated emissions and AC power conducted emissions test, the EUT was tested in desktop position in the following configurations: Standby and While charging with client devices between 20% to 50% state of charge.

AC power line conducted testing and radiated spurious emission 30MHz to 1GHz was performed on Configuration 1 and 9 at EUT minimum and maximum load respectively only as worse case.

MagSafe phone and the watch are based on direct contact with no shifts in position due to the embedded magnet in the charger pad and in the clients.

2nd coil, Legacy phone and the AirPods Case that do not have embedded magnet, clients are placed at the maximum power position during the testing.

The following configurations were tested:

Config	Descriptions	Mode	Client
1	EUT stand alone, standby, powered by AC/DC adapter.	@110.5kHz to 148.5kHz @326.5kHz	None
2	Direct contact during charging/operating between the EUT & WPT Client, EUT is powered by AC/DC adapter.	@360kHz	1 st coil: iPhone 12
3		@127.7kHz	1 st coil: Legacy iPhone
4		@127.7kHz	1 st coil: AirPods Pro Case
5		@110.5kHz to 148.5kHz	2 nd coil: AirPods Case
6		@326.5kHz	3 rd coil: Legacy Apple Watch (Series 4, 5)
7		@1.778MHz	3 rd coil: New Apple Watch (Series 7)
8		@360kHz @110.5kHz to 148.5kHz @326.5kHz	1 st coil: iPhone 12 2 nd coil: AirPods Case 3 rd coil: Legacy Apple Watch(Series 4, 5)
9		@360kHz @110.5kHz to 148.5kHz @1.778MHz	1 st coil: iPhone 12 2 nd coil: AirPods Case 3 rd coil: New Apple Watch(Series 7)
10		@127.7kHz @110.5kHz to 148.5kHz @326.5kHz	1 st coil: Legacy iPhone 2 nd coil AirPods Case 3 rd coil: Legacy Apple Watch(Series 4, 5)
11		@127.7kHz @110.5kHz to 148.5kHz @1.778MHz	1 st coil: Legacy iPhone 2 nd coil AirPods Case 3 rd coil: New Apple Watch(Series 7)
12		@127.7kHz @110.5kHz to 148.5kHz @326.5kHz	1 st coil: AirPods Pro Case 2 nd coil AirPods Case 3 rd coil: Legacy Apple Watch(Series 4, 5)
13		@127.7kHz @110.5kHz to 148.5kHz @ 1.778MHz	1 st coil: AirPods Pro Case 2 nd coil AirPods Case 3 rd coil: New Apple Watch(Series 7)

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	ID Num	Cal Due	Last Cal
Antenna, Passive Loop 30Hz - 1MHz	ELECTRO-METRICS	EM-6871	PRE0179465	07/29/2022	07/29/2021
Antenna, Passive Loop 100KHz - 30MHz	ELECTRO-METRICS	EM-6872	PRE0179467	07/29/2022	07/29/2021
Antenna, Broadband Hybrid, 30MHz to 2000MHz w/4dB	Sunol Sciences Crop.	JB3	171862	09/28/2022	09/28/2021
Amplifier, 10kHz to 1GHz, 32dB	Sonoma Instrument	310	175953	01/21/2022	01/21/2021
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	PRE0179377	02/23/2022	02/23/2021

AC Line Conducted					
Description	Manufacturer	Model	ID Num	Cal Due	Last Cal
LISN	Fischer Custom Communications, Inc	FCC-LISN-50/250-25-2-01-480V	PRE0186447	01/20/2022	01/20/2021
EMI TEST RECEIVER	Rohde & Schwarz	ESR	T1436	02/19/2022	02/19/2021
Transient Limiter	TE	TBFL1	207996	06/01/2022	06/01/2021
UL AUTOMATION SOFTWARE					
Radiated Software	UL	UL EMC	Rev 9.5, Apr 30, 2020 / Oct., 1 2019		
AC Line Conducted Software	UL	UL EMC	Rev 9.5, 07 Jul 2020		

7. OCCUPIED BANDWIDTH

TEST PROCEDURE

The transmitter output is connected to the spectrum analyzer. The RBW is set to 300Hz. The VBW is set to 3 times the RBW. The sweep time is coupled. The spectrum analyzer internal 99% bandwidth function is utilized.

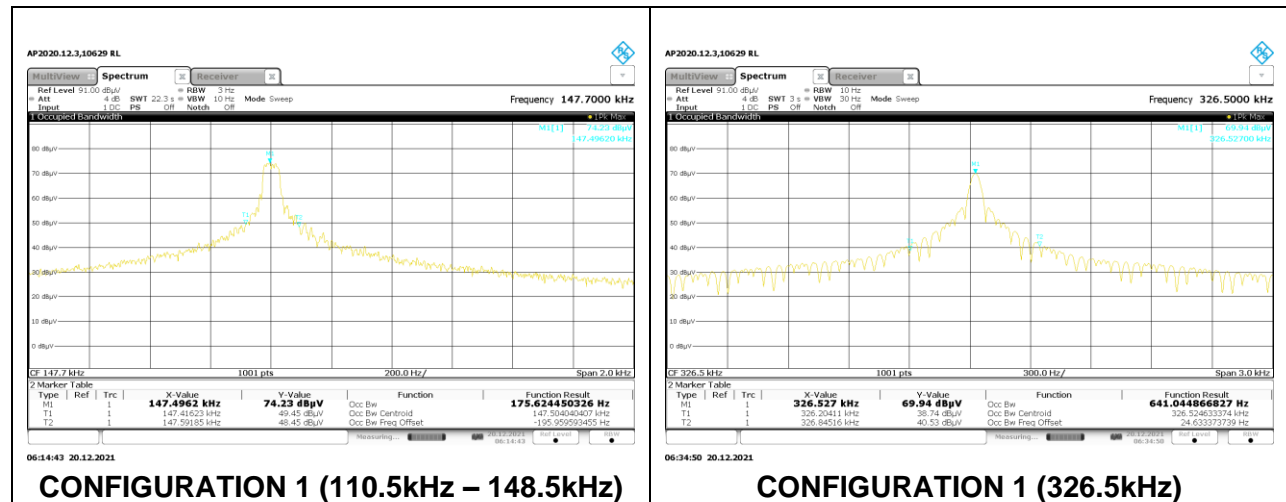
Note: Because the measured signal is CW-like, adjusting the RBW per C63.10 would not be practical since measured bandwidth will always follow the RBW and the result will be approximately twice the RBW.

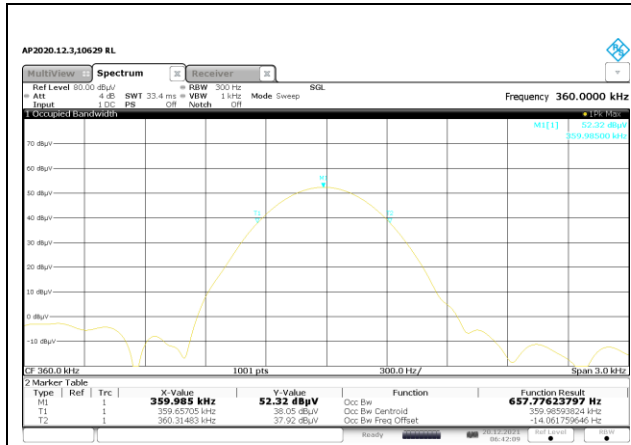
RESULTS

Test Engineer:	10629 RL
----------------	----------

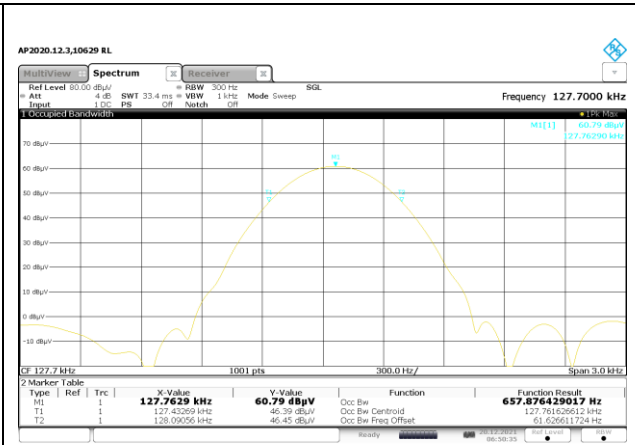
Configuration	Frequency (kHz)	99% Bandwidth (Hz)
1	147.7	175.6245
1	326.5	641.0449
2	360	657.7762
3	127.7	657.8764
4	127.7	657.5071
5	147.8	651.4927
6	326.5	657.9095
7	1778	658.6291

Configuration 1, 1st coil: N/A due to no intended radiator.

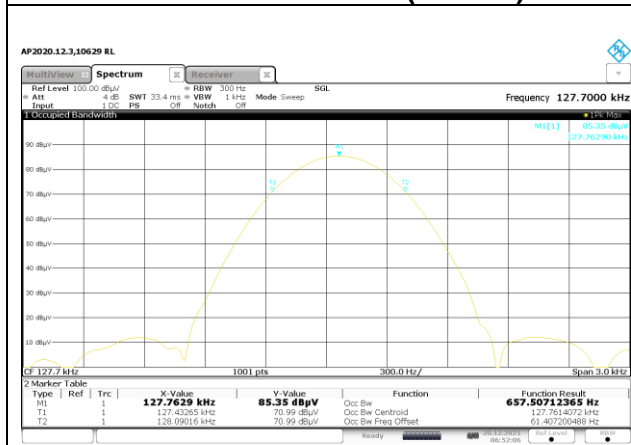




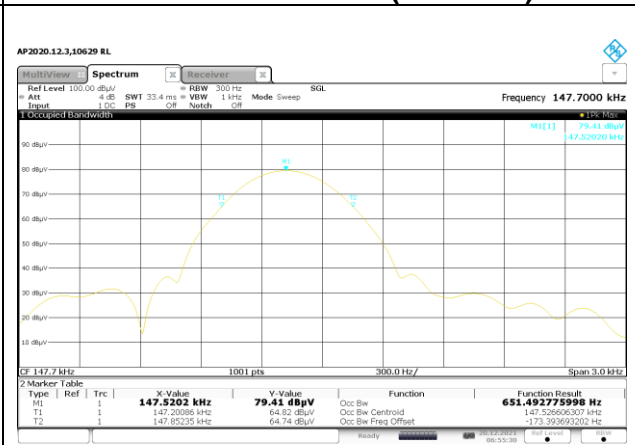
CONFIGURATION 2 (360kHz)



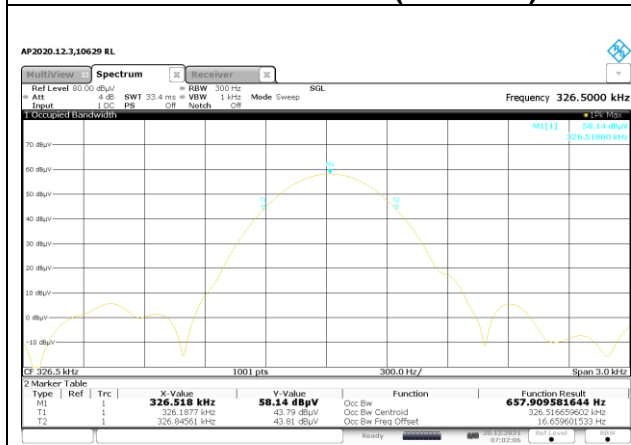
CONFIGURATION 3 (127.7kHz)



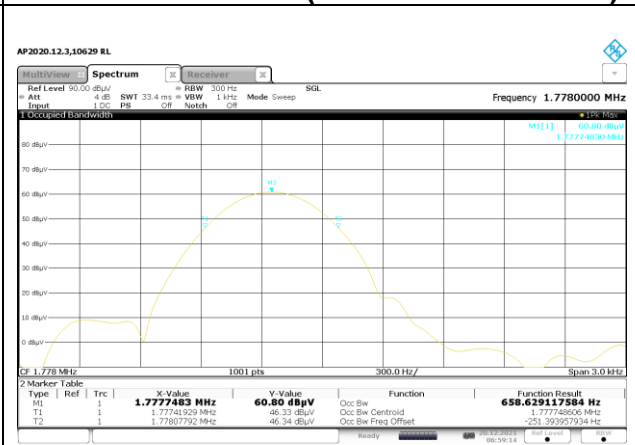
CONFIGURATION 4 (127.7kHz)



CONFIGURATION 5 (110.5kHz to 148.5kHz)



CONFIGURATION 6 (326.5kHz)



CONFIGURATION 7 (1.778MHz)

8. RADIATED EMISSION TEST RESULTS

8.1. LIMITS AND PROCEDURE

LIMIT

FCC §15.209 (a)

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.		

TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane for measurement below 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.

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.

For below 30MHz testing, investigation was done on three antenna orientations (parallel, perpendicular, and ground-parallel), parallel and perpendicular are the worst orientations, therefore testing was performed on these two orientations only. Blue color trace on plots: Parallel orientation. Green color trace on plots: Perpendicular orientation.

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

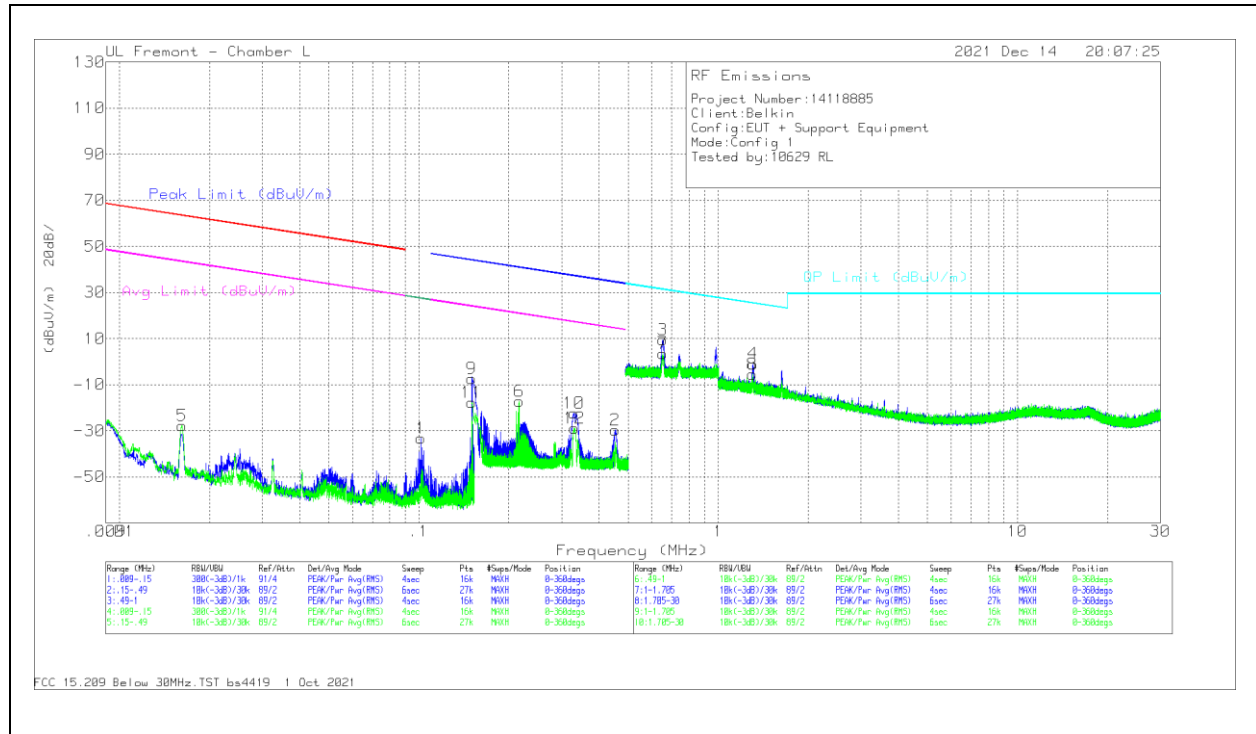
Base on FCC 15.31 (f) (2): measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field.

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

RESULTS

8.2. FCC TX FUNDAMENTAL AND SPURIOUS EMISSIONS FROM 9 kHz TO 30 MHz

8.2.1. CONFIGURATION 1: STANDBY MODE



DATA

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (ACF)	Amp/Cbl (dB)	Dist Corr 300m	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Orientation
1	.1015	23.15	Pk	55.6	-32	-80	-33.25	-	-	-	-	27.48	-60.73	0-360	Face On
2	.4537	26.23	Pk	56.2	-32	-80	-29.57	34.47	-64.04	14.47	-44.04	-	-	0-360	Face On
9	.1501	48.75	Pk	56	-32	-80	-17.25	44.1	-51.35	24.1	-31.35	-	-	0-360	Face On
10	.3293	33.36	Pk	56.2	-32	-80	-22.44	37.26	-59.7	17.26	-39.7	-	-	0-360	Face On
5	.0162	23.15	Pk	59.5	-30.4	-80	-27.75	63.42	-91.17	43.42	-71.17	-	-	0-360	Face Off
6	.2164	38.48	Pk	56.3	-32	-80	-17.22	40.91	-58.13	20.91	-38.13	-	-	0-360	Face Off
11	.1501	38.38	Pk	56	-32	-80	-17.62	44.1	-61.72	24.1	-41.72	-	-	0-360	Face Off
12	.3306	26.9	Pk	56.2	-32	-80	-28.9	37.23	-66.13	17.23	-46.13	-	-	0-360	Face Off

Pk - Peak detector

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (ACF)	Amp/Cbl (dB)	Dist Corr 300m	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Orientation
3	.6526	25.33	Pk	56.2	-31.9	-40	9.63	-	-	-	-	31.32	-21.69	0-360	Face On
7	.6524	19.86	Pk	56.2	-31.9	-40	3.66	-	-	-	-	31.32	-27.66	0-360	Face Off
4	1.3049	25.64	Pk	45.3	-31.9	-40	-9.6	-	-	-	-	25.32	-25.29	0-360	Face On
8	1.3029	21.17	Pk	45.3	-31.9	-40	-5.43	-	-	-	-	25.33	-30.76	0-360	Face Off

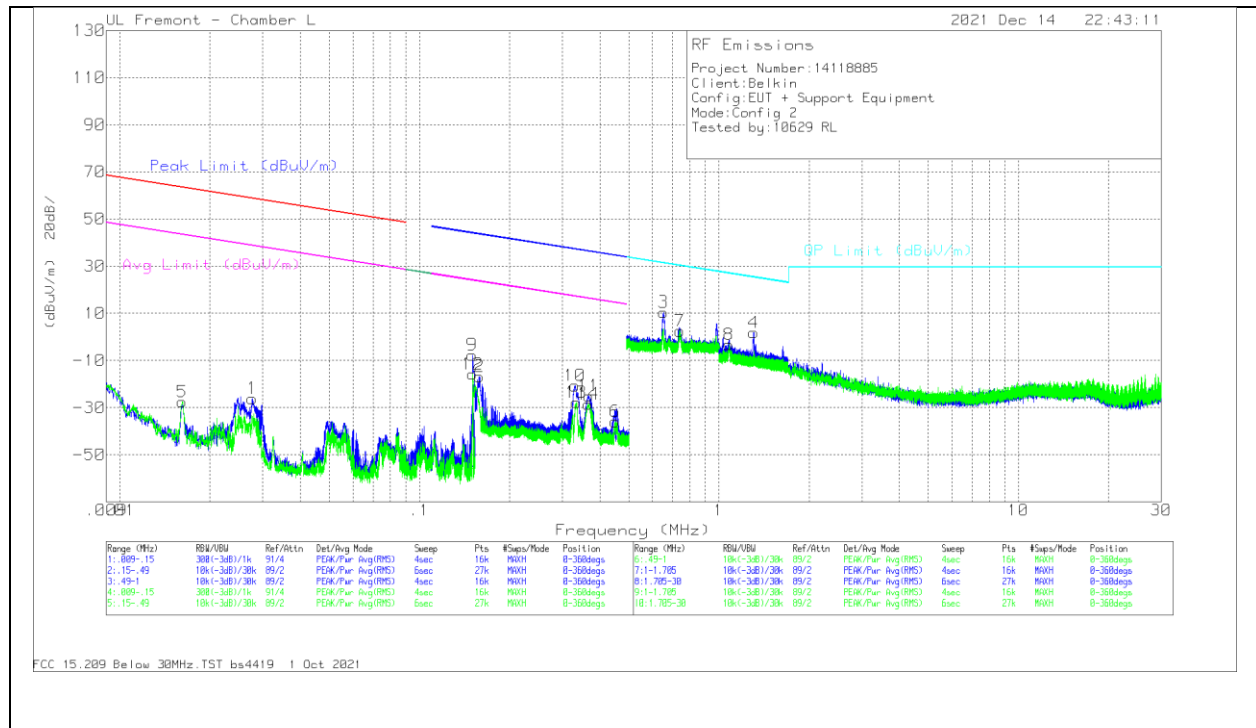
Pk - Peak detector

Radiated Emissions

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (ACF)	Amp/Cbl (dB)	Dist Corr 300m	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Orientation
9	.1475	49.58	Pk	55.9	-32	-80	-6.52	44.25	-50.77	24.25	-30.77	-	-	340	Face On
10	.3261	35.22	Pk	56.2	-32	-80	-20.58	37.34	-57.92	17.34	-37.92	-	-	234	Face On
11	.1475	40.15	Pk	55.9	-32	-80	-15.95	44.25	-60.2	24.25	-40.2	-	-	69	Face Off
12	.3268	27.45	Pk	56.2	-32	-80	-28.35	37.32	-65.67	17.32	-45.67	-	-	150	Face Off

Pk - Peak detector

8.2.2. CONFIGURATION 2: OPERATING MODE WITH iPhone (360kHz)



DATA

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (ACF)	Amp/Cbl (dB)	Dist Corr 300m	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Orientation
1	.0277	27.19	Pk	58.2	-31.5	-80	-26.11	58.75	-84.86	38.75	-64.86	-	-	0-360	Face On
2	.1584	39.19	Pk	56	-32	-80	-16.81	43.62	-60.43	23.62	-40.43	-	-	0-360	Face On
9	.15	48.3	Pk	56	-32	-80	7.7	44.1	-51.8	24.1	-31.8	-	-	0-360	Face On
10	.3303	35.11	Pk	56.2	-32	-80	-20.69	37.23	-57.92	17.23	-37.92	-	-	0-360	Face On
11	.3677	30.68	Pk	56.2	-31.9	-80	-25.02	36.3	-61.32	16.3	-41.32	-	-	0-360	Face On
5	.0162	23.35	Pk	59.5	-30.4	-80	-27.55	63.42	-90.97	43.42	-70.97	-	-	0-360	Face Off
6	.45	19.9	Pk	56.2	-32	-80	-35.9	34.54	-70.44	14.54	-50.44	-	-	0-360	Face Off
12	.1502	40.16	Pk	56	-32	-80	-15.84	44.09	-59.93	24.09	-39.93	-	-	0-360	Face On
13	.3338	27.99	Pk	56.2	-32	-80	-27.81	37.14	-64.95	17.14	-44.95	-	-	0-360	Face Off
14	.3663	27.3	Pk	56.2	-32	-80	-28.5	36.33	-64.83	16.33	-44.83	-	-	0-360	Face Off

Pk - Peak detector

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (ACF)	Amp/Cbl (dB)	Dist Corr 300m	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Orientation
3	.6531	26.16	Pk	56.2	-31.9	-40	10.46	-	-	-	-	31.31	-20.85	0-360	Face On
7	.7398	18.22	Pk	56.2	-31.9	-40	2.52	-	-	-	-	30.23	-27.71	0-360	Face Off
4	1.3069	28.36	Pk	45.3	-31.9	-40	1.76	-	-	-	-	25.3	-23.54	0-360	Face On
8	1.0802	22.11	Pk	46.5	-31.9	-40	-3.29	-	-	-	-	26.95	-30.24	0-360	Face Off

Pk - Peak detector

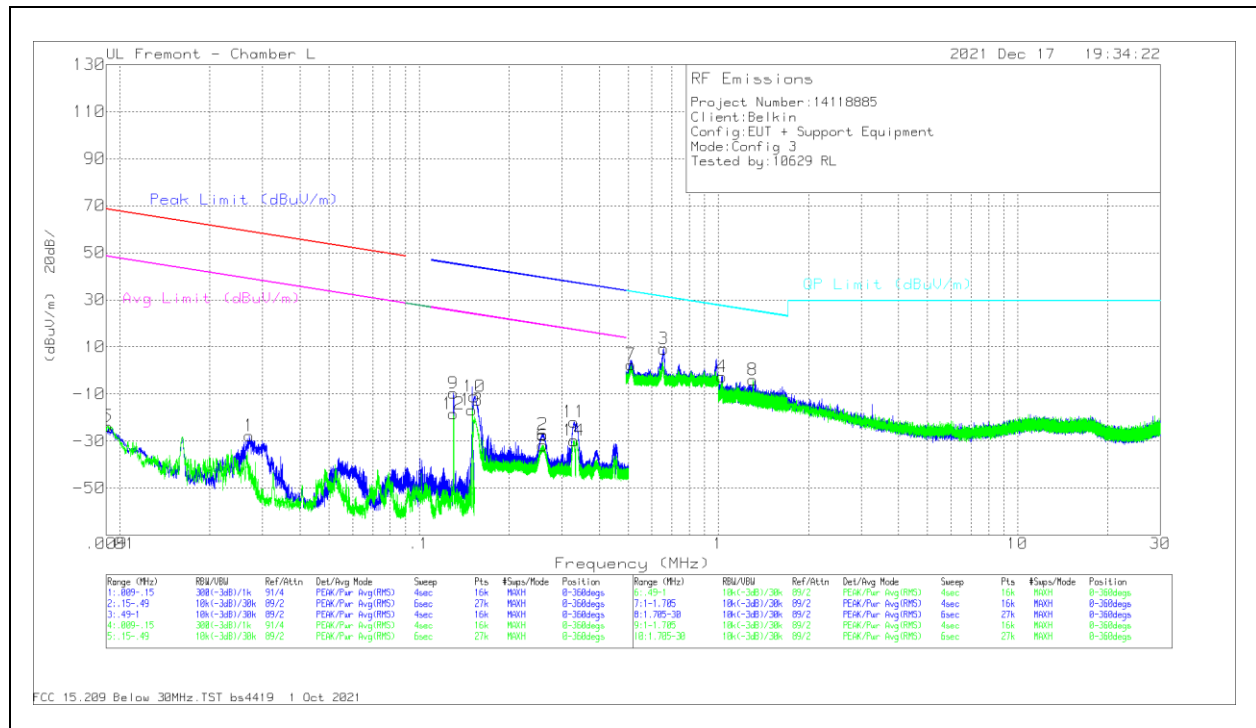
Radiated Emissions

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (ACF)	Amp/Cbl (dB)	Dist Corr 300m	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Orientation
9	.1475	49.8	Pk	55.9	-32	-80	-6.3	44.25	-50.55	24.25	-30.55	-	-	355	Face On
10	.3272	35.63	Pk	56.2	-32	-80	-20.17	37.31	-57.48	17.31	-37.48	-	-	262	Face On
11	.3592	30.41	Pk	56.2	-32	-80	-25.39	36.5	-61.89	16.5	-41.89	-	-	295	Face On
12	.1475	40.66	Pk	55.9	-32	-80	-15.44	44.25	-59.69	24.25	-39.69	-	-	81	Face Off
13	.3255	28.25	Pk	56.2	-32	-80	-27.55	37.36	-64.91	17.36	-44.91	-	-	318	Face Off
14	.3591	26.94	Pk	56.2	-32	-80	-28.86	36.51	-65.37	16.51	-45.37	-	-	236	Face Off

Pk - Peak detector

Note :Marker 9, 12 and Markers 10, 13 are 2nd coil and 3rd coil beaconing signals respectively when not in charging mode.

8.2.3. CONFIGURATION 3: OPERATING MODE WITH iPhone (127.7kHz)



DATA

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (ACF)	Amp/Cbl (dB)	Dist Corr 300m	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Orientation
1	.0271	25.47	Pk	58.3	-31.5	-80	-27.73	58.93	-86.66	38.93	-66.66	-	-	0-360	Face On
9	.1303	45.5	Pk	55.8	-32	-80	-10.7	45.33	-56.03	25.33	-36.03	-	-	0-360	Face On
2	.259	28.57	Pk	56.2	-32	-80	-27.23	39.35	-66.58	19.35	-46.58	-	-	0-360	Face On
10	.153	44.93	Pk	56	-32	-80	-11.07	43.93	-55	23.93	-35	-	-	0-360	Face On
11	.3295	33.95	Pk	56.2	-32	-80	-21.85	37.25	-59.1	17.25	-39.1	-	-	0-360	Face On
5	.0091	23.79	Pk	61.2	-28.7	-80	-23.71	68.4	-92.11	48.4	-72.11	-	-	0-360	Face Off
12	.1303	37.75	Pk	55.8	-32	-80	-18.45	45.33	-63.78	25.33	-43.78	-	-	0-360	Face Off
6	.2591	23.92	Pk	56.2	-32	-80	-31.88	39.35	-71.23	19.35	-51.23	-	-	0-360	Face Off
13	.15	39.19	Pk	56	-32	-80	-16.81	44.1	-60.91	24.1	-40.91	-	-	0-360	Face Off
14	.3287	26.01	Pk	56.2	-32	-80	-29.79	37.28	-67.07	17.28	-47.07	-	-	0-360	Face Off

Pk - Peak detector

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (ACF)	Amp/Cbl (dB)	Dist Corr 300m	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Orientation
3	.6562	24.9	Pk	56.2	-31.9	-40	9.2	-	-	-	-	31.27	-22.07	0-360	Face On
7	.5105	18.13	Pk	56.2	-31.9	-40	2.43	-	-	-	-	33.45	-31.02	0-360	Face Off
4	1.0301	22.53	Pk	46.7	-31.9	-40	-2.67	-	-	-	-	27.36	-30.03	0-360	Face On
8	1.3036	22.59	Pk	45.3	-31.9	-40	-4.01	-	-	-	-	25.33	-29.34	0-360	Face Off

Pk - Peak detector

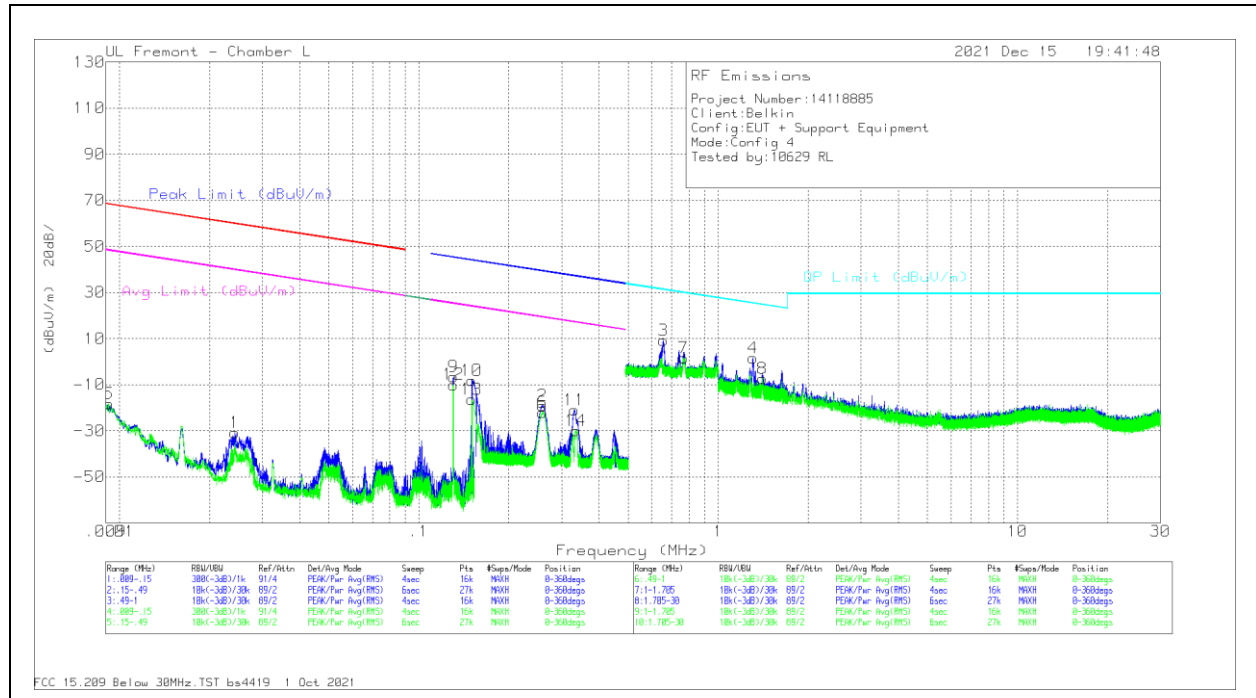
Radiated Emissions

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (ACF)	Amp/Cbl (dB)	Dist Corr 300m	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Orientation
9	.1278	46.21	Pk	55.8	-32	-80	-9.99	45.5	-55.49	25.5	-35.49	-	-	122	Face On
10	.1475	49.59	Pk	55.9	-32	-80	-6.51	44.25	-50.76	24.25	-30.76	-	-	35.4	Face On
11	.3271	35.81	Pk	56.2	-32	-80	-19.99	37.32	-57.31	17.32	-37.31	-	-	226	Face On
12	.1278	38.19	Pk	55.8	-32	-80	-18.01	45.5	-63.51	25.5	-43.51	-	-	9	Face Off
13	.1475	40.49	Pk	55.9	-32	-80	-15.61	44.25	-59.86	24.25	-39.86	-	-	70	Face Off
14	.3249	28.19	Pk	56.2	-32	-80	-27.61	37.38	-64.99	17.38	-44.99	-	-	150	Face Off

Pk - Peak detector

Note :Marker 10, 13 and Markers 11, 14 are 2nd coil and 3rd coil beaconing signals respectively when not in charging mode.

8.2.4. CONFIGURATION 4: OPERATING MODE WITH AirPods Pro Case (127.7kHz)



DATA

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (ACF)	Amp/Cbl (dB)	Dist Corr 300m	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Orientation
1	0243	22.04	Pk	59.6	-31.3	-80	-30.66	59.87	-90.53	39.87	-70.53	-	-	0-360	Face On
9	1303	49.65	Pk	55.8	-32	-80	-6.55	45.33	-51.88	25.33	-31.88	-	-	0-360	Face On
2	2593	36.84	Pk	56.2	-32	-80	-18.96	39.34	-58.3	19.34	-38.3	-	-	0-360	Face On
10	.15	47.74	Pk	56	-32	-80	-8.26	44.1	-52.36	24.1	-32.36	-	-	0-360	Face On
11	3314	34.75	Pk	56.2	-32	-80	-21.05	37.2	-58.25	17.2	-38.25	-	-	0-360	Face On
5	0092	29.5	Pk	61.1	-28.8	-80	-18.2	68.3	-86.5	48.3	-66.5	-	-	0-360	Face Off
12	1303	46.26	Pk	55.8	-32	-80	-9.94	45.33	-55.27	25.33	-35.27	-	-	0-360	Face Off
6	2596	33.79	Pk	56.2	-32	-80	-22.01	39.36	-61.37	19.36	-41.37	-	-	0-360	Face Off
13	.15	39.68	Pk	56	-32	-80	-16.32	44.1	-60.42	24.1	-40.42	-	-	0-360	Face Off
14	3339	25.78	Pk	56.2	-32	-80	-30.02	37.14	-67.16	17.14	-47.16	-	-	0-360	Face Off

Pk - Peak detector

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (ACF)	Amp/Cbl (dB)	Dist Corr 40Log	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Orientation
3	6563	24.92	Pk	56.2	-31.9	-40	9.22	-	-	-	-	31.27	-22.05	0-360	Face On
7	7673	17.43	Pk	56.2	-31.9	-40	1.73	-	-	-	-	29.92	-28.19	0-360	Face Off
4	13057	28.13	Pk	45.3	-31.9	-40	1.53	-	-	-	-	25.31	-23.78	0-360	Face On
8	14051	19.72	Pk	44.8	-31.9	-40	-7.38	-	-	-	-	24.68	-32.06	0-360	Face Off

Pk - Peak detector

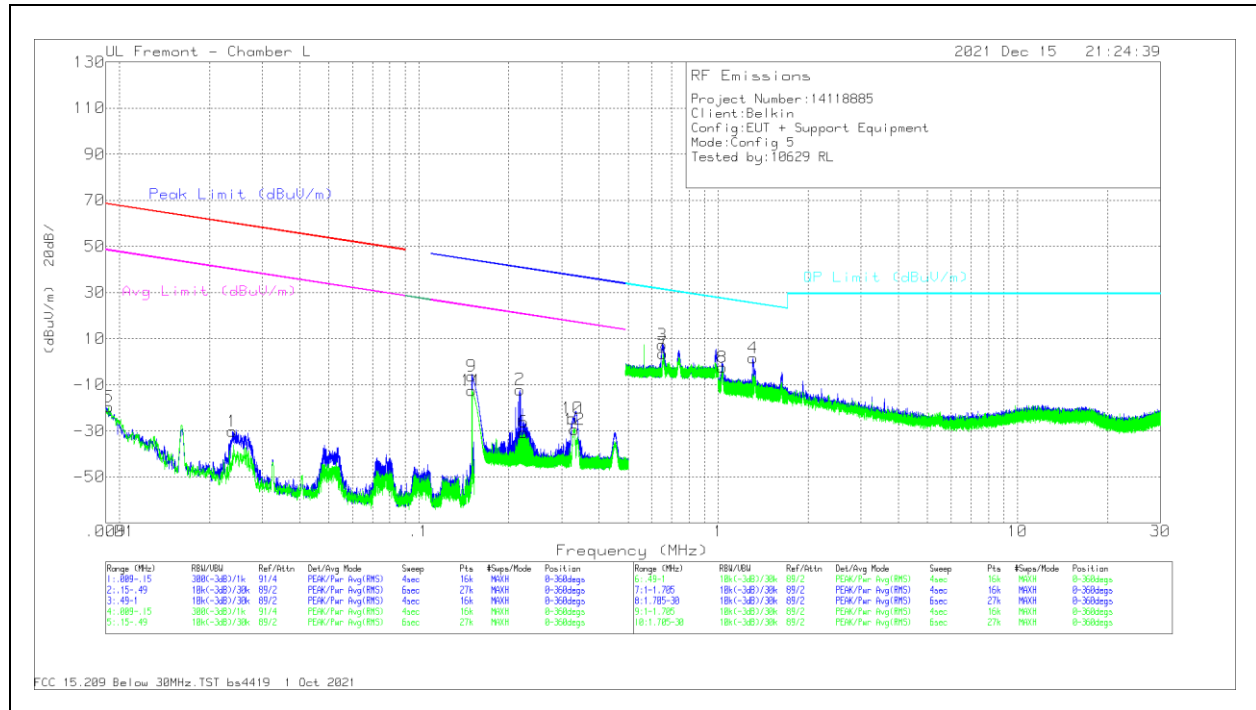
Radiated Emissions

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (ACF)	Amp/Cbl (dB)	Dist Corr 300m	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Orientation
9	1278	49.92	Pk	55.8	-32	-80	-6.28	45.5	-51.78	25.5	-31.78	-	-	37	Face On
10	1475	49.46	Pk	55.9	-32	-80	-6.64	44.25	-50.89	24.25	-30.89	-	-	341	Face On
11	3259	35.03	Pk	56.2	-32	-80	-20.77	37.35	-58.12	17.35	-38.12	-	-	241	Face On
12	1278	46.33	Pk	55.8	-32	-80	-9.87	45.5	-55.37	25.5	-35.37	-	-	319	Face Off
13	1475	39.87	Pk	55.9	-32	-80	-16.23	44.25	-60.48	24.25	-40.48	-	-	74	Face Off
14	.327	27.08	Pk	56.2	-32	-80	-28.72	37.32	-66.04	17.32	-46.04	-	-	320	Face Off

Pk - Peak detector

Note :Marker 10, 13 and Markers 11, 14 are 2nd coil and 3rd coil beaconing signals respectively when not in charging mode.

8.2.5. CONFIGURATION 5: OPERATING MODE WITH AirPods Case (110.5kHz to 148.5kHz)



DATA

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (ACF)	Amp/Cbl (dB)	Dist Corr 300m	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Orientation
1	0239	22.54	Pk	58.6	-31.3	-80	-30.16	60.03	-90.19	40.03	-70.19	-	-	0-360	Face On
2	2173	43.58	Pk	56.3	-32	-80	-12.12	40.88	-53	20.88	-33	-	-	0-360	Face On
9	.15	49.62	Pk	56	-32	-80	-6.38	44.1	-50.48	24.1	-30.48	-	-	0-360	Face On
10	3267	31.17	Pk	56.2	-32	-80	-24.63	37.33	-61.96	17.33	-41.96	-	-	0-360	Face On
5	0092	28.08	Pk	61.1	-28.8	-80	-19.62	68.3	-87.92	48.3	-67.92	-	-	0-360	Face Off
6	2241	25.08	Pk	56.3	-32	-80	-30.62	40.61	-71.23	20.61	-51.23	-	-	0-360	Face Off
11	1501	43.49	Pk	56	-32	-80	-12.51	44.1	-56.61	24.1	-36.61	-	-	0-360	Face Off
12	3306	26.51	Pk	56.2	-32	-80	-29.29	37.22	-66.51	17.22	-46.51	-	-	0-360	Face Off

Pk - Peak detector

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (ACF)	Amp/Cbl (dB)	Dist Corr 300m	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Orientation
3	6506	23.02	Pk	56.2	-31.9	-40	7.32	-	-	-	-	31.34	-24.02	0-360	Face On
7	6545	19.37	Pk	56.2	-31.9	-40	1.67	-	-	-	-	31.29	-27.62	0-360	Face Off
4	13053	28.17	Pk	45.3	-31.9	-40	1.57	-	-	-	-	25.31	-23.74	0-360	Face On
8	10319	22.79	Pk	46.7	-31.9	-40	-2.41	-	-	-	-	27.35	-29.76	0-360	Face Off

Pk - Peak detector

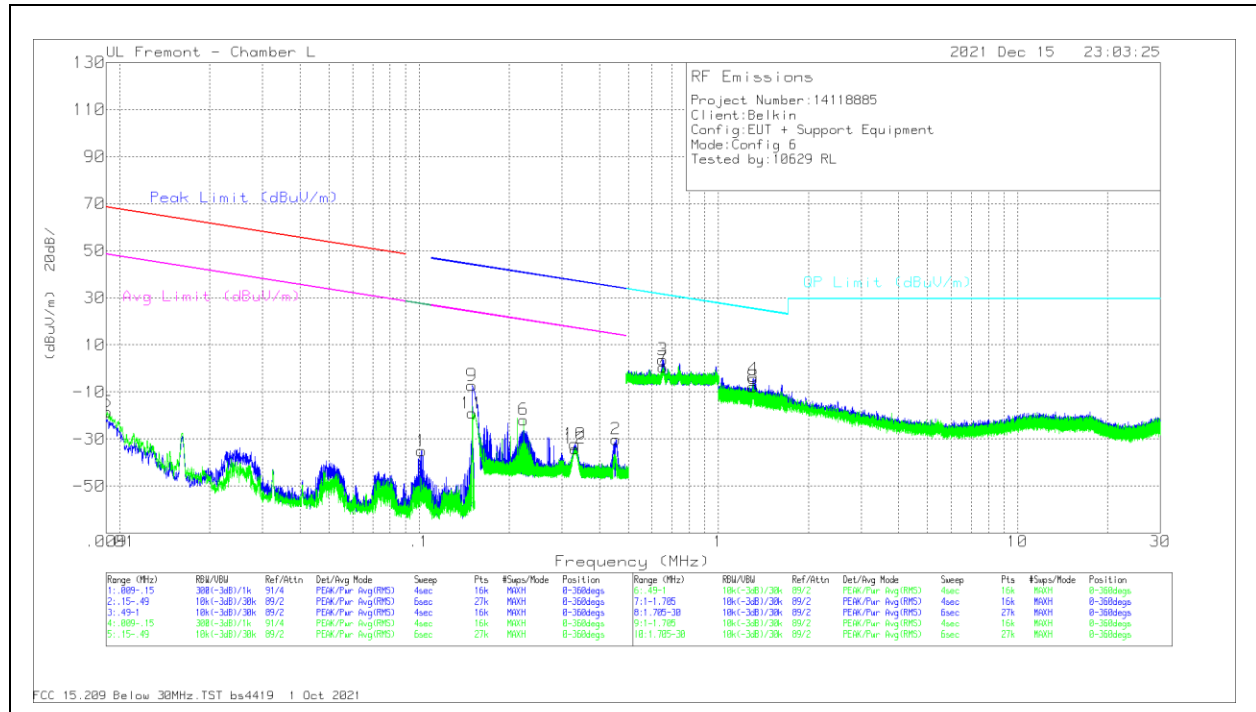
Radiated Emissions

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (ACF)	Amp/Cbl (dB)	Dist Corr 300m	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Orientation
9	1474	50.23	Pk	55.9	-32	-80	-5.87	44.25	-50.12	24.25	-30.12	-	-	324	Face On
10	3269	35.08	Pk	56.2	-32	-80	-20.72	37.32	-58.04	17.32	-38.04	-	-	238	Face On
11	1475	44.15	Pk	55.9	-32	-80	-11.95	44.25	-56.2	24.25	-36.2	-	-	56	Face Off
12	3257	27.08	Pk	56.2	-32	-80	-28.72	37.35	-66.07	17.35	-46.07	-	-	335	Face Off

Pk - Peak detector

Note : Markers 10, 12 are 3rd coil beaconing signals when not in charging mode.

8.2.6. CONFIGURATION 6: OPERATING MODE WITH Apple Watch (326.5kHz)



DATA

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (ACF)	Amp/Cbl (dB)	Dist Corr 300m	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Orientation
1	.1019	21.37	Pk	55.6	-32	-80	-35.03	-	-	-	-	27.45	-62.48	0-360	Face On
2	.4544	25.73	Pk	56.2	-32	-80	-30.07	34.46	-64.63	14.46	-44.53	-	-	0-360	Face On
9	.15	49.79	Pk	56	-32	-80	-7.22	44.1	-51.32	24.1	-31.32	-	-	0-360	Face On
10	.3313	23.63	Pk	56.2	-32	-80	-32.17	37.21	-69.38	17.21	-49.38	-	-	0-360	Face On
5	.0091	29	Pk	61.2	-28.7	-80	-18.5	68.41	-86.91	48.41	-66.91	-	-	0-360	Face Off
6	.2235	33.9	Pk	56.3	-32	-80	-21.8	40.63	-62.43	20.63	-42.43	-	-	0-360	Face Off
11	.1501	37	Pk	56	-32	-80	-19	44.09	-63.09	24.09	-43.09	-	-	0-360	Face Off
12	.3321	21.64	Pk	56.2	-32	-80	-34.16	37.19	-71.35	17.19	-51.35	-	-	0-360	Face Off

Pk - Peak detector

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (ACF)	Amp/Cbl (dB)	Dist Corr 40Log	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Orientation
3	.6518	19.44	Pk	56.2	-31.9	-40	3.74	-	-	-	-	31.33	-27.59	0-360	Face On
7	.6525	16.15	Pk	56.2	-31.9	-40	.45	-	-	-	-	31.32	-30.87	0-360	Face Off
4	1.3081	22.23	Pk	45.3	-31.9	-40	-4.37	-	-	-	-	25.3	-29.67	0-360	Face On
8	1.3069	18.9	Pk	45.3	-31.9	-40	-7.7	-	-	-	-	25.3	-33	0-360	Face Off

Pk - Peak detector

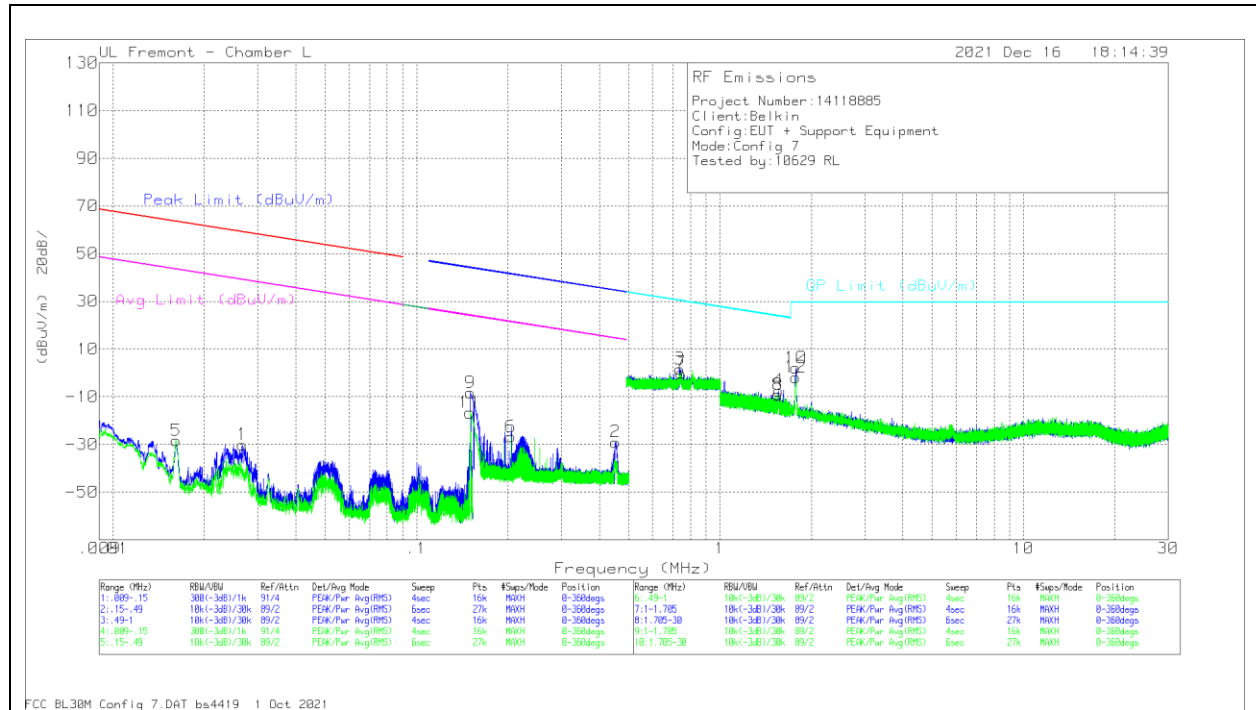
Radiated Emissions

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (ACF)	Amp/Cbl (dB)	Dist Corr 300m	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Orientation
9	.1475	49.52	Pk	55.9	-32	-80	-6.58	44.25	-50.83	24.25	-30.83	-	-	350	Face On
10	.3267	26.01	Pk	56.2	-32	-80	-29.79	37.33	-67.12	17.33	-47.12	-	-	39	Face On
11	.1475	40.18	Pk	55.9	-32	-80	-15.92	44.25	-60.17	24.25	-40.17	-	-	260	Face Off
12	.3255	22.11	Pk	56.2	-32	-80	-33.69	37.36	-71.05	17.36	-51.05	-	-	134	Face Off

Pk - Peak detector

Note : Markers 9, 11 are 2nd coil beaconing signals when not in charging mode.

8.2.7. CONFIGURATION 7: OPERATING MODE WITH Apple Watch (1.778MHz)



DATA

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (ACF)	Amp/Cbl (dB)	Dist Corr 300m	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Orientation
1	0266	23.1	Pk	58.3	-31.5	-80	-30.1	59.08	-89.18	39.08	-69.18	-	-	0-360	Face On
2	4525	26.8	Pk	56.2	-32	-80	-29	34.49	-63.49	14.49	-43.49	-	-	0-360	Face On
9	1503	47.62	Pk	56	-32	-80	-3.38	44.08	-32.48	24.08	-32.48	-	-	0-360	Face On
5	0161	22.44	Pk	59.5	-30.3	-80	-28.36	63.44	-91.8	43.44	-71.8	-	-	0-360	Face Off
6	2044	28.93	Pk	56.3	-32	-80	-26.77	41.41	-68.18	21.41	-48.18	-	-	0-360	Face Off
11	.15	39.33	Pk	56	-32	-80	-16.67	44.1	-60.77	24.1	-40.77	-	-	0-360	Face Off

Pk - Peak detector

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (ACF)	Amp/Cbl (dB)	Dist Corr 300m	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Orientation
3	7384	17.35	Pk	56.2	-31.9	-40	1.65	-	-	-	-	30.25	-28.6	0-360	Face On
7	7433	15.69	Pk	56.2	-31.9	-40	-.01	-	-	-	-	30.19	-30.2	0-360	Face Off
4	1.957	20.56	Pk	43.9	-31.9	-40	-7.44	-	-	-	-	23.79	-31.23	0-360	Face On
10	1.7784	31.1	Pk	42.8	-31.8	-40	2.1	-	-	-	-	29.5	-27.4	0-360	Face On
8	1.5533	18.72	Pk	44	-31.9	-40	-9.18	-	-	-	-	23.81	-32.99	0-360	Face Off
12	1.7752	27.15	Pk	42.8	-31.8	-40	-1.85	-	-	-	-	29.5	-31.35	0-360	Face Off

Pk - Peak detector

Radiated Emissions

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (ACF)	Amp/Cbl (dB)	Dist Corr 300m	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Orientation
9	1475	49.54	Pk	55.9	-32	-80	-5.56	44.25	-50.81	24.25	-30.81	-	-	340	Face On
11	1475	40.15	Pk	55.9	-32	-80	-15.96	44.25	-60.2	24.25	-40.2	-	-	74	Face Off

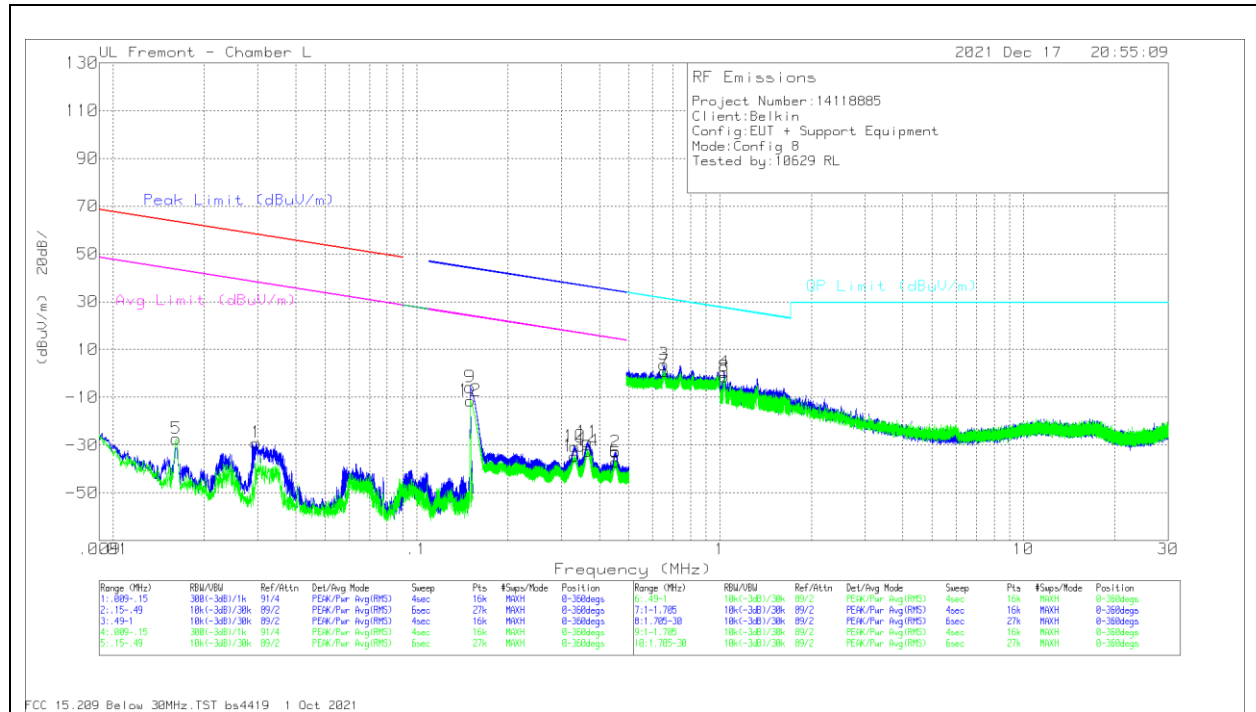
Pk - Peak detector

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (ACF)	Amp/Cbl (dB)	Dist Corr 300m	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Orientation
10	1.7772	32.21	Pk	42.8	-31.8	-40	3.21	-	-	-	-	29.5	-26.29	280	Face On
12	1.7767	29.07	Pk	42.8	-31.8	-40	.07	-	-	-	-	29.5	-29.43	198	Face Off

Pk - Peak detector

Note : Markers 9, 11 are 2nd coil beaconing signals when not in charging mode.

8.2.8. CONFIGURATION 8: OPERATING MODE WITH iPhone (360kHz) + AirPods Case + Apple Watch (326.5kHz)



DATA

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (ACF)	Amp/Cbl (dB)	Dist Corr 300m	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Orientation
1	0296	24.58	Pk	56	-31.6	-80	-29.01	58.16	-87.17	38.16	-67.17	-	-	0-360	Face On
2	4532	22.86	Pk	56.2	-32	-80	-32.94	34.48	-67.42	14.48	-47.42	-	-	0-360	Face On
9	.15	50.23	Pk	56	-32	-80	-5.77	44.1	-49.87	24.1	-29.87	-	-	0-360	Face On
10	3319	25.12	Pk	56.2	-32	-80	-30.68	37.19	-67.87	17.19	-47.87	-	-	0-360	Face On
11	.366	27.14	Pk	56.2	-32	-80	-28.66	36.34	-65	16.34	-45	-	-	0-360	Face On
5	0161	23.51	Pk	59.5	-30.4	-80	-27.39	63.43	-90.82	43.43	-70.82	-	-	0-360	Face Off
6	4518	18.79	Pk	56.2	-32	-80	-37.01	34.51	-71.52	14.51	-51.52	-	-	0-360	Face Off
12	1501	44.57	Pk	56	-32	-80	-11.43	44.09	-55.52	24.09	-35.52	-	-	0-360	Face Off
13	3301	21.14	Pk	56.2	-32	-80	-34.66	37.24	-71.9	17.24	-51.9	-	-	0-360	Face Off
14	3665	23.38	Pk	56.2	-32	-80	-32.42	36.33	-68.75	16.33	-48.75	-	-	0-360	Face Off

Pk - Peak detector

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (ACF)	Amp/Cbl (dB)	Dist Corr 300m	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Orientation
3	6529	19.45	Pk	56.2	-31.9	-40	3.75	-	-	-	-	31.31	-27.56	0-360	Face On
7	6556	16.63	Pk	56.2	-31.9	-40	.93	-	-	-	-	31.28	-30.35	0-360	Face Off
4	1.0351	25.68	Pk	46.7	-31.9	-40	.48	-	-	-	-	27.32	-26.84	0-360	Face On
8	1.0323	23.8	Pk	46.7	-31.9	-40	-1.4	-	-	-	-	27.35	-28.75	0-360	Face Off

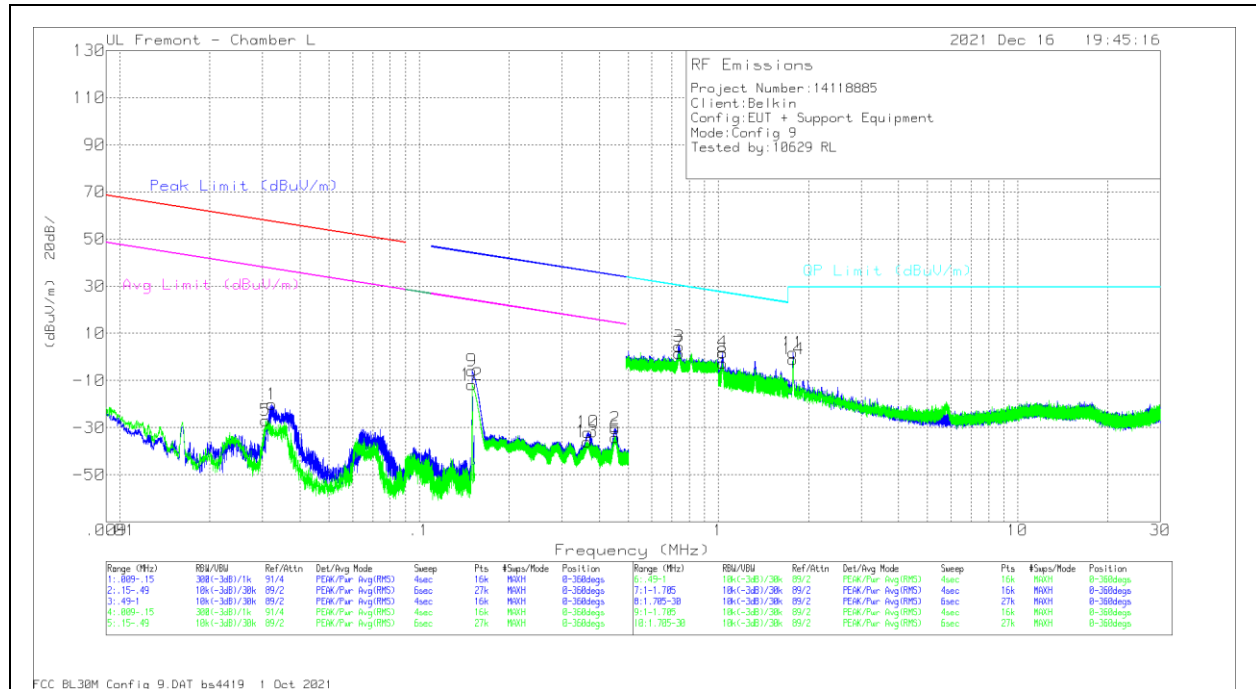
Pk - Peak detector

Radiated Emissions

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (ACF)	Amp/Cbl (dB)	Dist Corr 300m	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Orientation
9	1474	50.67	Pk	55.9	-32	-80	-5.43	44.25	-49.68	24.25	-29.68	-	-	326	Face On
10	3261	25.16	Pk	56.2	-32	-80	-30.64	37.34	-67.98	17.34	-47.98	-	-	60	Face On
11	3597	26.67	Pk	56.2	-32	-80	-29.13	36.49	-65.62	16.49	-45.62	-	-	123	Face On
12	1474	45.19	Pk	55.9	-32	-80	-10.92	44.25	-55.17	24.25	-35.17	-	-	54	Face Off
13	3251	21.91	Pk	56.2	-32	-80	-33.89	37.37	-71.26	17.37	-51.26	-	-	142	Face Off
14	3582	23.82	Pk	56.2	-32	-80	-31.98	36.53	-68.51	16.53	-48.51	-	-	217	Face Off

Pk - Peak detector

8.2.9. CONFIGURATION 9: OPERATING MODE WITH iPhone (360kHz) + AirPods Case + Apple Watch (1.778MHz)



DATA

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (ACF)	Amp/Cbl (dB)	Dist Corr 300m	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Orientation
1	0321	33.77	Pk	57.8	-31.7	-80	-20.13	57.44	-77.57	37.44	-57.57	-	-	0-360	Face On
2	4523	25.37	Pk	56.2	-32	-80	-30.43	34.5	-64.93	14.5	-44.93	-	-	0-360	Face On
9	1501	50.12	Pk	56	-32	-80	-5.88	44.1	-49.98	24.1	-29.98	-	-	0-360	Face On
10	3668	23.75	Pk	56.2	-31.9	-80	-31.95	36.32	-68.27	16.32	-48.27	-	-	0-360	Face On
5	0307	26.89	Pk	57.9	-31.7	-80	-26.91	57.84	-84.75	37.84	-64.75	-	-	0-360	Face Off
6	4531	21.72	Pk	56.2	-32	-80	-34.08	34.48	-68.56	14.48	-48.56	-	-	0-360	Face Off
12	.15	44.24	Pk	56	-32	-80	-11.76	44.1	-55.86	24.1	-35.86	-	-	0-360	Face Off
13	3643	19.81	Pk	56.2	-32	-80	-35.99	36.38	-72.37	16.38	-52.37	-	-	0-360	Face Off

Pk - Peak detector

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (ACF)	Amp/Cbl (dB)	Dist Corr 30m (dB) 40Log	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Orientation
3	.7385	20.19	Pk	56.2	-31.9	-40	4.49	-	-	-	-	30.25	-25.76	0-360	Face On
7	.7389	17.34	Pk	56.2	-31.9	-40	1.64	-	-	-	-	30.24	-28.6	0-360	Face Off
4	1.0323	27.12	Pk	46.7	-31.9	-40	1.92	-	-	-	-	27.35	-25.43	0-360	Face On
11	1.7773	30.82	Pk	42.8	-31.8	-40	1.82	-	-	-	-	29.5	-27.68	0-360	Face On
8	1.0322	22.64	Pk	46.7	-31.9	-40	-2.66	-	-	-	-	27.35	-30.01	0-360	Face Off
14	1.7784	28.02	Pk	42.8	-31.8	-40	-.98	-	-	-	-	29.5	-30.48	0-360	Face Off

Pk - Peak detector

Radiated Emissions

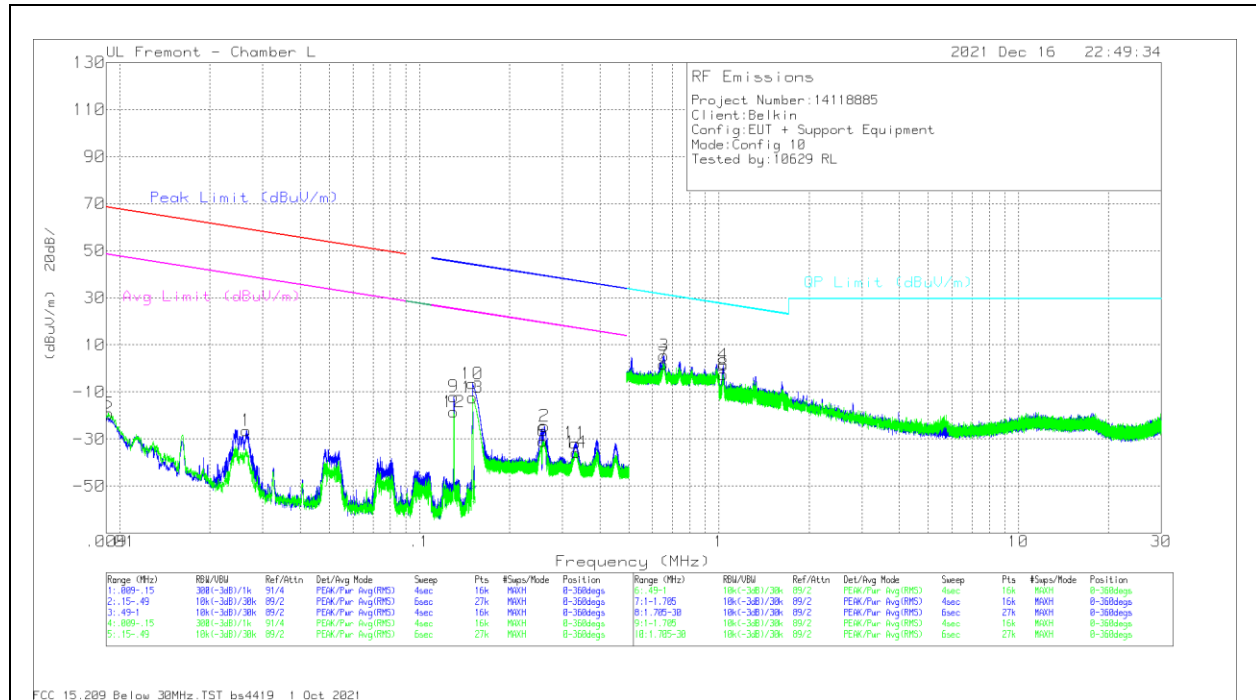
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (ACF)	Amp/Cbl (dB)	Dist Corr 300m	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Orientation
9	1474	50.51	Pk	55.9	-32	-80	-5.59	44.25	-49.84	24.25	-29.84	-	-	324	Face On
10	3598	24.27	Pk	56.2	-32	-80	-31.53	36.49	-68.02	16.49	-48.02	-	-	46	Face On
12	1474	44.77	Pk	55.9	-32	-80	-11.33	44.25	-55.58	24.25	-35.58	-	-	50	Face Off
13	3623	19.57	Pk	56.2	-32	-80	-36.23	36.43	-72.66	16.43	-52.66	-	-	145	Face Off

Pk - Peak detector

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (ACF)	Amp/Cbl (dB)	Dist Corr 30m (dB) 40Log	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Orientation
11	1.7772	32.74	Pk	42.8	-31.8	-40	3.74	-	-	-	-	29.5	-25.76	310	Face On
14	1.7782	29.15	Pk	42.8	-31.8	-40	.15	-	-	-	-	29.5	-29.35	195	Face Off

Pk - Peak detector

8.2.10. CONFIGURATION 10: OPERATING MODE WITH iPhone (127.7kHz) + AirPods Case + Apple Watch (326.5kHz)



DATA

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (ACF)	Amp/Cbl (dB)	Dist Corr 300m	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Orientation
1	0264	26.96	Pk	56.4	-31.5	-80	-26.44	59.14	-85.58	39.14	-65.58	-	-	0-360	Face On
9	1303	44.22	Pk	56.8	-32	-80	-11.98	45.33	-57.31	25.33	-37.31	-	-	0-360	Face On
2	2615	31.29	Pk	56.2	-32	-80	-24.51	39.26	-63.77	19.26	-43.77	-	-	0-360	Face On
10	1501	49.53	Pk	56	-32	-80	-6.47	44.1	-50.57	24.1	-30.57	-	-	0-360	Face On
11	3314	24.09	Pk	56.2	-32	-80	-31.71	37.2	-68.91	17.2	-48.91	-	-	0-360	Face On
5	0091	28.42	Pk	61.2	-28.7	-80	-19.08	68.36	-87.44	48.36	-67.44	-	-	0-360	Face Off
12	1303	37.89	Pk	55.8	-32	-80	-18.51	45.33	-63.84	25.33	-43.84	-	-	0-360	Face Off
6	2587	24.91	Pk	56.2	-32	-80	-30.69	39.36	-70.25	19.36	-50.25	-	-	0-360	Face Off
13	1502	43.6	Pk	56	-32	-80	-12.4	44.09	-56.49	24.09	-36.49	-	-	0-360	Face Off
14	3333	20.07	Pk	56.2	-32	-80	-35.73	37.15	-72.88	17.15	-52.88	-	-	0-360	Face Off

Pk - Peak detector

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (ACF)	Amp/Cbl (dB)	Dist Corr 300m (dB) 40log	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Orientation
3	6552	21.14	Pk	56.2	-31.9	-40	5.44	-	-	-	-	31.28	-25.84	0-360	Face On
7	6528	17.57	Pk	56.2	-31.9	-40	1.87	-	-	-	-	31.32	-29.45	0-360	Face Off
4	1.033	26.59	Pk	46.7	-31.9	-40	1.39	-	-	-	-	27.34	-25.95	0-360	Face On
8	1.0349	22.65	Pk	46.7	-31.9	-40	-2.55	-	-	-	-	27.32	-29.87	0-360	Face Off

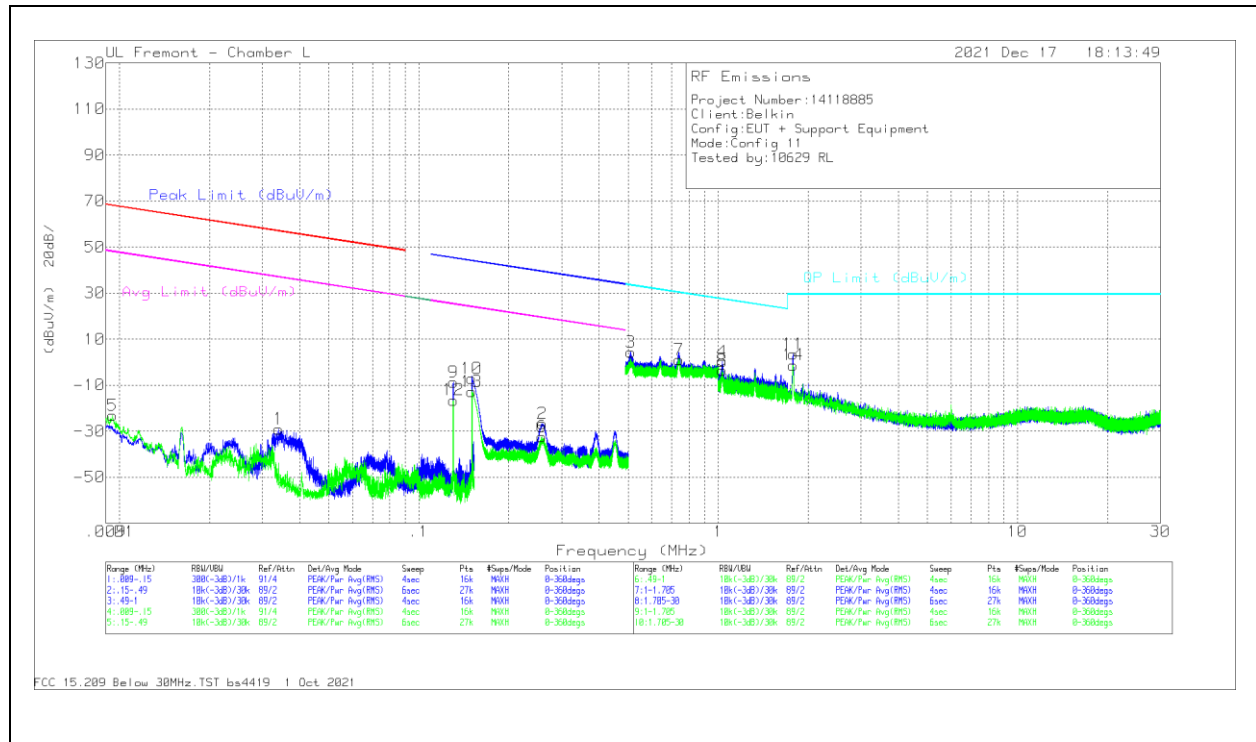
Pk - Peak detector

Radiated Emissions

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (ACF)	Amp/Cbl (dB)	Dist Corr 300m	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Orientation
9	1278	47.44	Pk	55.8	-32	-80	-8.76	45.5	-54.26	25.5	-34.26	-	-	89	Face On
10	1474	50.1	Pk	55.9	-32	-80	-6	44.25	-50.25	24.25	-30.25	-	-	333	Face On
11	3258	24.99	Pk	56.2	-32	-80	-30.81	37.35	-68.16	17.35	-48.16	-	-	84	Face On
12	1278	41.7	Pk	55.8	-32	-80	-14.5	45.5	-60	25.5	-40	-	-	360	Face Off
13	1474	44.29	Pk	55.9	-32	-80	-11.81	44.25	-56.06	24.25	-36.06	-	-	59	Face Off
14	3265	21.34	Pk	56.2	-32	-80	-34.46	37.33	-71.79	17.33	-51.79	-	-	304	Face Off

Pk - Peak detector

8.2.11. CONFIGURATION 11: OPERATING MODE WITH iPhone (127.7kHz) + AirPods Case + Apple Watch (1.778MHz)



DATA

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (ACF)	Amp/Cbl (dB)	Dist Corr 300m	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Orientation
1	.034	25	Pk	57.7	-31.7	-80	-29	56.95	-85.95	36.95	-65.95	-	-	0-360	Face On
9	.1303	47.37	Pk	55.8	-32	-80	-8.83	45.33	-54.16	25.33	-34.16	-	-	0-360	Face On
2	2.591	29.03	Pk	56.2	-32	-80	-26.77	39.34	-66.11	19.34	-46.11	-	-	0-360	Face On
10	.15	49.01	Pk	56	-32	-80	-6.99	44.1	-51.09	24.1	-31.09	-	-	0-360	Face On
5	0.095	25.07	Pk	60.8	-28.9	-80	-23.03	68.04	-91.07	48.04	-71.07	-	-	0-360	Face Off
12	1.303	39.73	Pk	55.8	-32	-80	-16.47	45.33	-61.8	25.33	-41.8	-	-	0-360	Face Off
6	25.74	23.32	Pk	56.2	-32	-80	-32.48	39.4	-71.88	19.4	-51.88	-	-	0-360	Face Off
13	.15	43.32	Pk	56	-32	-80	-12.68	44.1	-56.78	24.1	-36.78	-	-	0-360	Face Off

Pk - Peak detector

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (ACF)	Amp/Cbl (dB)	Dist Corr 300m	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Orientation
3	5102	20	Pk	56.2	-31.9	-40	4.3	-	-	-	-	33.45	-29.15	0-360	Face On
7	7394	16.83	Pk	56.2	-31.9	-40	1.13	-	-	-	-	30.24	-29.11	0-360	Face Off
4	1.0311	25.43	Pk	46.7	-31.9	-40	.23	-	-	-	-	27.36	-27.13	0-360	Face On
11	1.7773	32.46	Pk	42.8	-31.8	-40	3.46	-	-	-	-	29.5	-26.04	0-360	Face On
8	1.0329	21.57	Pk	46.7	-31.9	-40	-3.63	-	-	-	-	27.34	-30.97	0-360	Face Off
14	1.7773	27.77	Pk	42.8	-31.8	-40	-1.23	-	-	-	-	29.5	-30.73	0-360	Face Off

Pk - Peak detector

Radiated Emissions

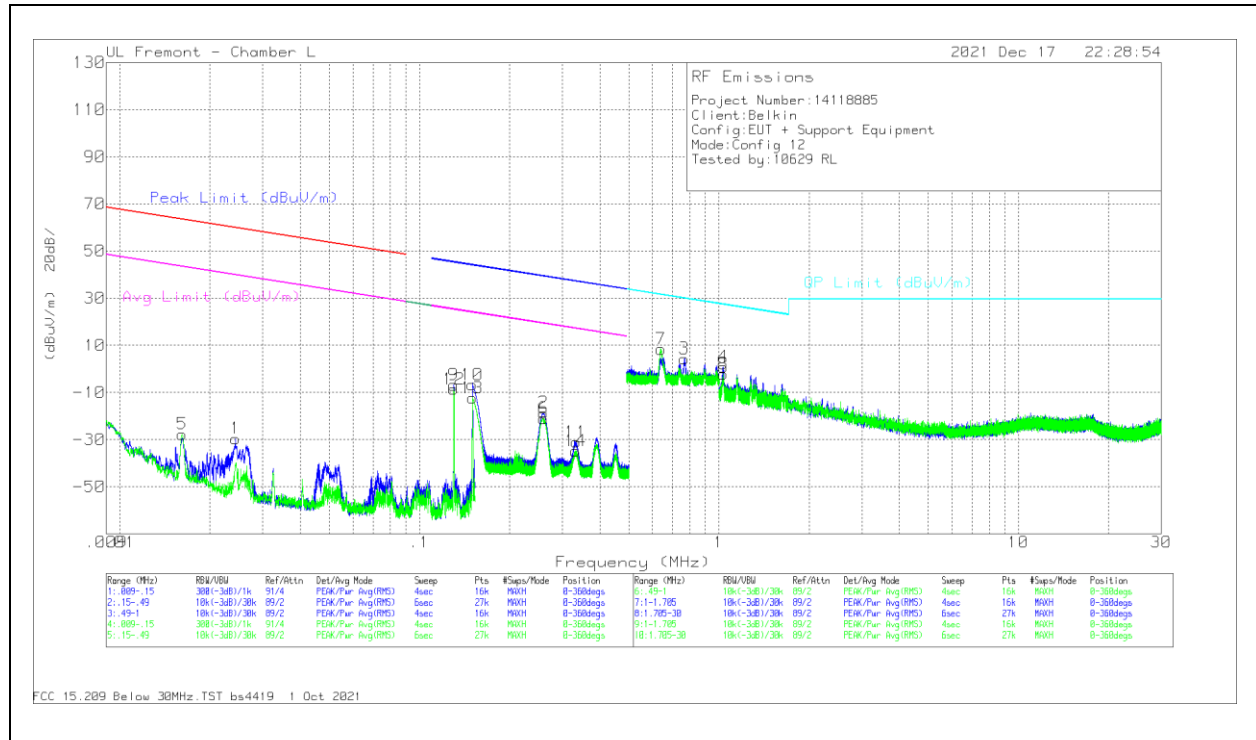
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (ACF)	Amp/Cbl (dB)	Dist Corr 300m	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Orientation
9	1.278	45.76	Pk	55.8	-32	-80	-10.44	45.5	-55.94	25.5	-35.94	-	-	100	Face On
10	1.475	49.66	Pk	55.9	-32	-80	-6.44	44.25	-50.69	24.25	-30.69	-	-	324	Face On
12	1.278	39.8	Pk	55.8	-32	-80	-16.4	45.5	-61.9	25.5	-41.9	-	-	182	Face Off
13	1.474	43.94	Pk	55.9	-32	-80	-12.16	44.25	-56.41	24.25	-36.41	-	-	49	Face Off

Pk - Peak detector

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (ACF)	Amp/Cbl (dB)	Dist Corr 300m	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Orientation
11	1.7772	33.9	Pk	42.8	-31.8	-40	4.9	-	-	-	-	29.5	-24.6	306	Face On
14	1.7775	29.63	Pk	42.8	-31.8	-40	.63	-	-	-	-	29.5	-28.87	225	Face Off

Pk - Peak detector

8.2.12. CONFIGURATION 12: OPERATING MODE WITH AirPods Pro Case (127.7kHz) + AirPods Case (110.5kHz to 148.5kHz) + Apple Watch (326.5kHz)



DATA

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (ACF)	Amp/Cbl (dB)	Dist Corr 300m	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Orientation
1	0243	23.15	Pk	56.6	-31.3	-80	-29.55	69.96	-89.41	30.86	-69.41	-	-	0-360	Face On
9	1303	49.4	Pk	55.8	-32	-80	-6.8	45.33	-25.33	25.33	-32.13	-	-	0-360	Face On
2	2597	37.13	Pk	56.2	-32	-80	-18.67	39.33	-58	19.33	-38	-	-	0-360	Face On
10	1501	49.27	Pk	56	-32	-80	-6.73	44.1	-50.83	24.1	-30.83	-	-	0-360	Face On
11	3332	24.74	Pk	56.2	-32	-80	-31.06	37.16	-68.22	17.16	-48.22	-	-	0-360	Face On
5	0161	23.22	Pk	59.5	-30.4	-80	-27.68	63.43	-91.11	43.43	-71.11	-	-	0-360	Face Off
12	1303	47.6	Pk	55.8	-32	-80	-8.6	45.33	-53.93	25.33	-33.93	-	-	0-360	Face Off
6	2593	34.82	Pk	56.2	-32	-80	-20.98	39.34	-60.32	19.34	-40.32	-	-	0-360	Face Off
13	1501	43.67	Pk	56	-32	-80	-12.33	44.09	-56.42	24.09	-36.42	-	-	0-360	Face Off
14	3325	20.95	Pk	56.2	-32	-80	-34.85	37.18	-72.03	17.18	-52.03	-	-	0-360	Face Off

Pk - Peak detector

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (ACF)	Amp/Cbl (dB)	Dist Corr 30m (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Orientation
3	7652	20.03	Pk	56.2	-31.9	-40	4.33	-	-	-	-	29.94	-25.61	0-360	Face On
7	6399	24.11	Pk	56.2	-31.9	-40	8.41	-	-	-	-	31.49	-23.08	0-360	Face On
4	1.0337	26	Pk	46.7	-31.9	-40	.8	-	-	-	-	27.33	-26.53	0-360	Face On
8	1.0332	23.06	Pk	46.7	-31.9	-40	-2.14	-	-	-	-	27.34	-29.48	0-360	Face Off

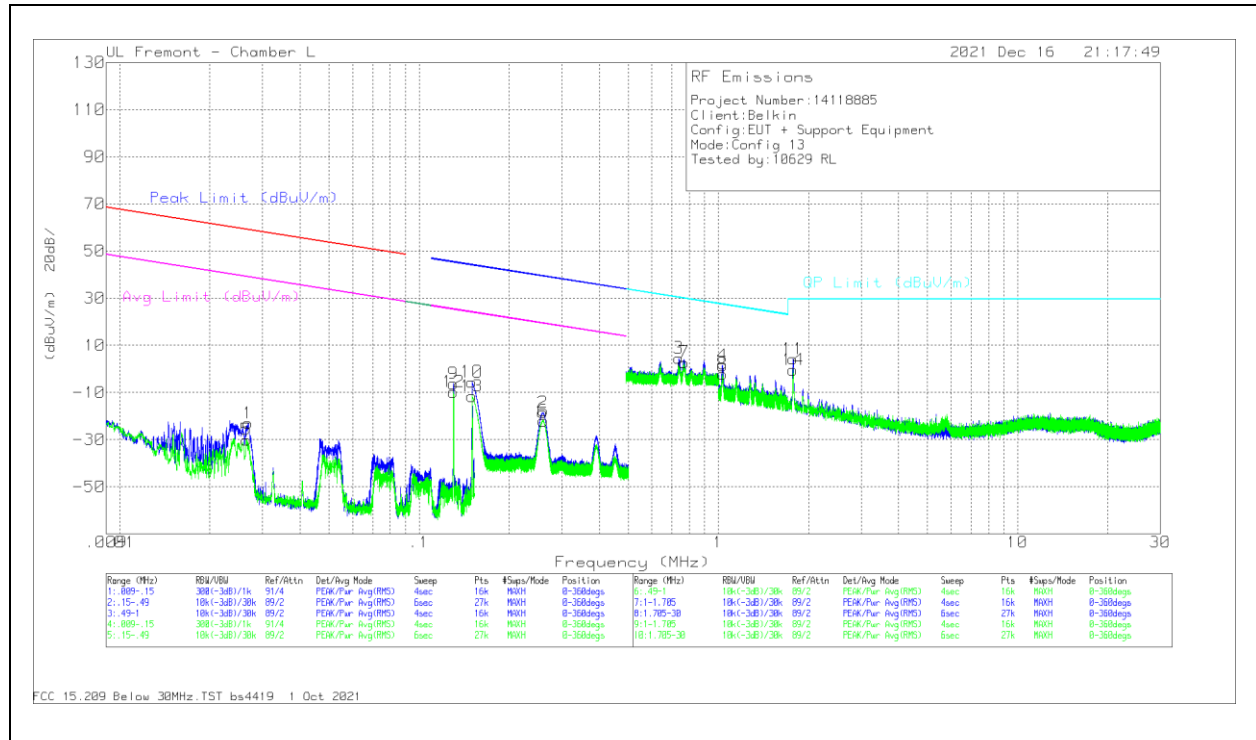
Pk - Peak detector

Radiated Emissions

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (ACF)	Amp/Cbl (dB)	Dist Corr 300m	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Orientation
9	1278	50.87	Pk	55.8	-32	-80	-5.33	45.5	-50.83	25.5	-30.83	-	-	44	Face On
10	1474	50.02	Pk	55.9	-32	-80	-6.08	44.25	-50.33	24.25	-30.33	-	-	331	Face On
11	3248	24.49	Pk	56.2	-32	-80	-31.31	37.38	-68.69	17.38	-48.69	-	-	25	Face On
12	1278	47.74	Pk	55.8	-32	-80	-8.46	45.5	-53.96	25.5	-33.96	-	-	316	Face Off
13	1474	44.42	Pk	55.9	-32	-80	-11.68	44.25	-55.93	24.25	-35.93	-	-	58	Face Off
14	3248	21.51	Pk	56.2	-32	-80	-34.29	37.38	-71.67	17.38	-51.67	-	-	91	Face Off

Pk - Peak detector

8.2.13. CONFIGURATION 13: OPERATING MODE WITH AirPods Pro Case (127.7kHz) + AirPods Case (110.5kHz to 148.5kHz) + Apple Watch (1.778MHz)



DATA

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (ACF)	Amp/Cbl (dB)	Dist Corr 300m	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Orientation
1	0268	30.19	Pk	58.3	-31.5	-80	-23.01	69.01	-92.02	30.01	-62.02	-	-	0-360	Face On
9	1303	49.92	Pk	55.8	-32	-80	-4.29	45.33	-51.61	25.33	-31.61	-	-	0-360	Face On
2	2591	37.28	Pk	56.2	-32	-80	-18.52	39.34	-57.86	19.34	-37.86	-	-	0-360	Face On
10	.15	50.39	Pk	56	-32	-80	-5.61	44.1	-49.71	24.1	-29.71	-	-	0-360	Face On
5	0265	23.02	Pk	58.4	-31.5	-80	-30.08	59.13	-89.21	39.13	-69.21	-	-	0-360	Face Off
12	1303	46.45	Pk	55.8	-32	-80	-9.75	45.33	-55.08	25.33	-35.08	-	-	0-360	Face Off
6	2601	33.79	Pk	56.2	-32	-80	-22.01	39.31	-61.32	19.31	-41.32	-	-	0-360	Face Off
13	1501	44.4	Pk	56	-32	-80	-11.6	44.1	-55.7	24.1	-35.7	-	-	0-360	Face Off

Pk - Peak detector

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (ACF)	Amp/Cbl (dB)	Dist Corr 300m 40Log	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Orientation	
3	7379	20.24	Pk	56.2	-31.9	-40	4.54	-	-	-	30.25	-	-	-25.71	0-360	Face On
7	7676	18.39	Pk	56.2	-31.9	-40	2.69	-	-	-	29.91	-	-	-27.22	0-360	Face Off
4	1.0324	26.67	Pk	46.7	-31.9	-40	1.47	-	-	-	27.34	-	-	-25.87	0-360	Face On
11	1.7784	33.18	Pk	42.8	-31.8	-40	4.18	-	-	-	29.5	-	-	-25.32	0-360	Face On
8	1.0326	23.07	Pk	46.7	-31.9	-40	-2.13	-	-	-	27.34	-	-	-29.47	0-360	Face Off
14	1.7784	28.6	Pk	42.8	-31.8	-40	-4	-	-	-	29.5	-	-	-29.9	0-360	Face Off

Pk - Peak detector

Radiated Emissions

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (ACF)	Amp/Cbl (dB)	Dist Corr 300m	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Orientation
9	1278	50.42	Pk	55.8	-32	-80	-5.78	45.5	-51.28	25.5	-31.28	-	-	51	Face On
10	1475	50.8	Pk	55.9	-32	-80	-5.5	44.25	-49.75	24.25	-29.75	-	-	330	Face On
12	1279	46.62	Pk	55.9	-32	-80	-9.69	45.5	-55.08	25.5	-35.08	-	-	227	Face Off
13	1475	45.08	Pk	55.9	-32	-80	-11.01	44.25	-55.26	24.25	-35.26	-	-	55	Face Off

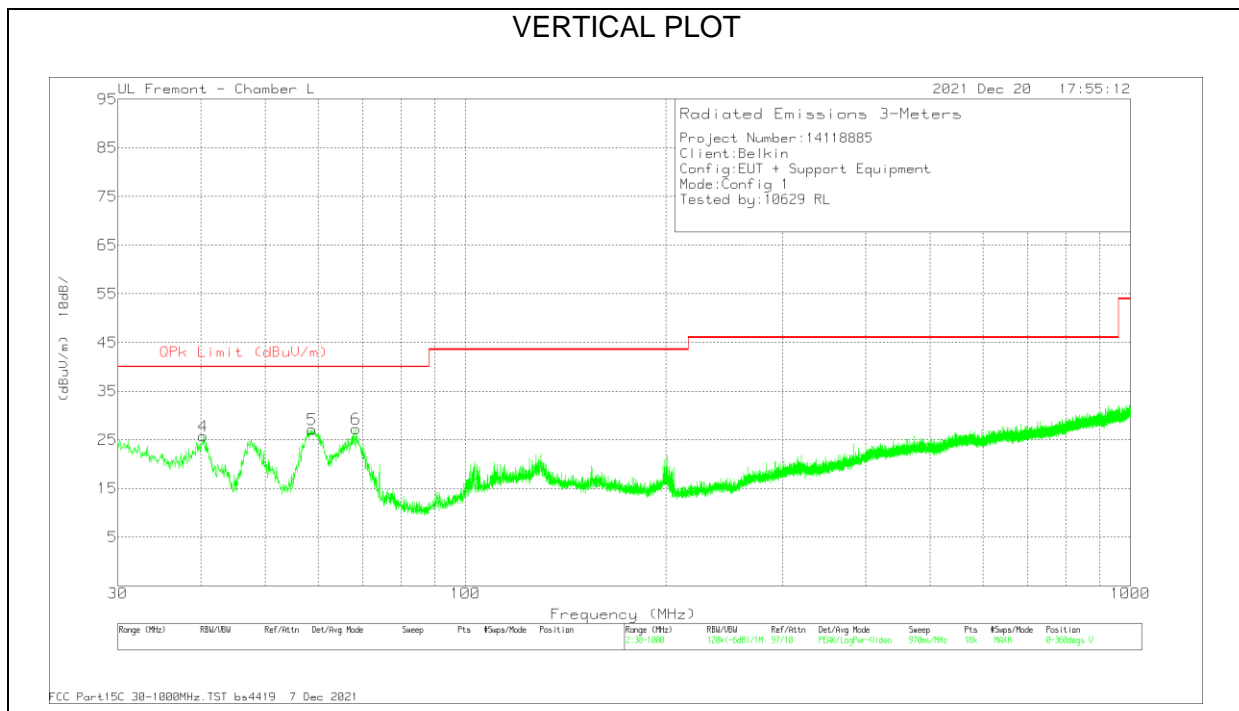
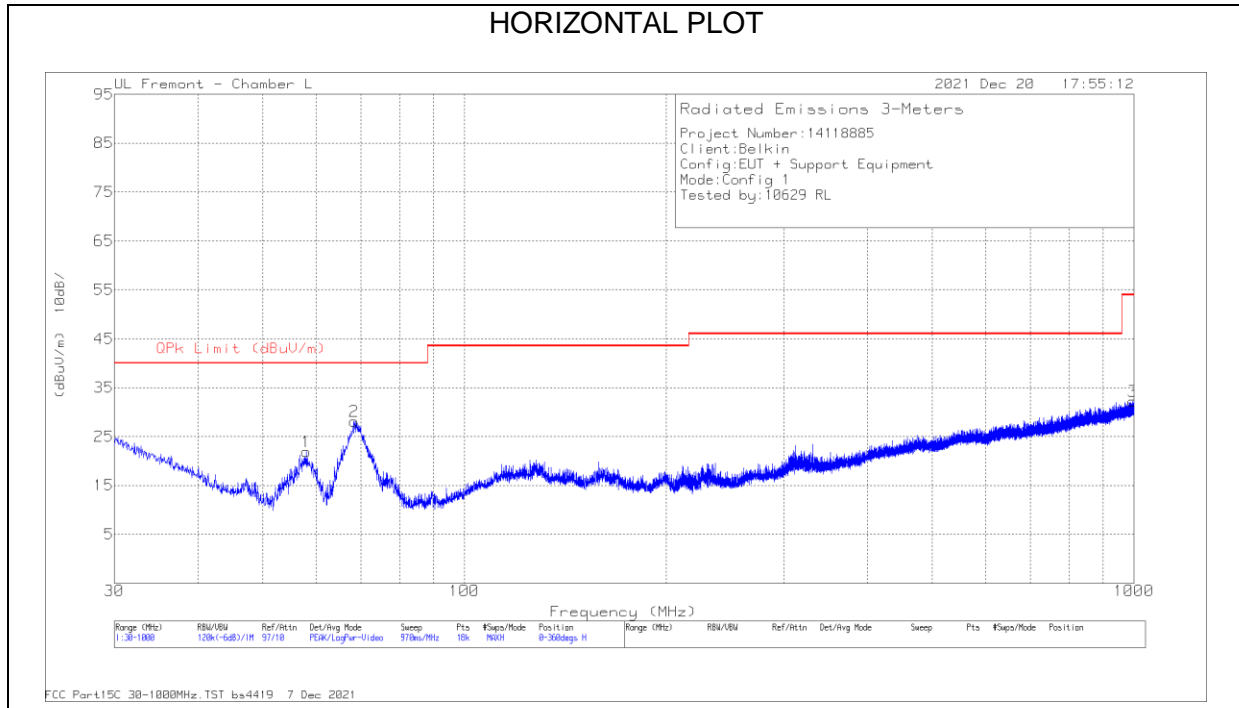
Pk - Peak detector

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (ACF)	Amp/Cbl (dB)	Dist Corr 30m (dB) 40Log	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Orientation	
11	1.7785	33.51	Pk	42.8	-31.8	-40	4.51	-	-	-	29.5	-	-	-24.99	336	Face On
14	1.778	29.52	Pk	42.8	-31.8	-40	3.2	-	-	-	29.5	-	-	-28.98	77	Face Off

Pk - Peak detector

8.3. FCC TX SPURIOUS EMISSION 30 TO 1000 MHz

8.3.1. CONFIGURATION 1: STANDBY MODE

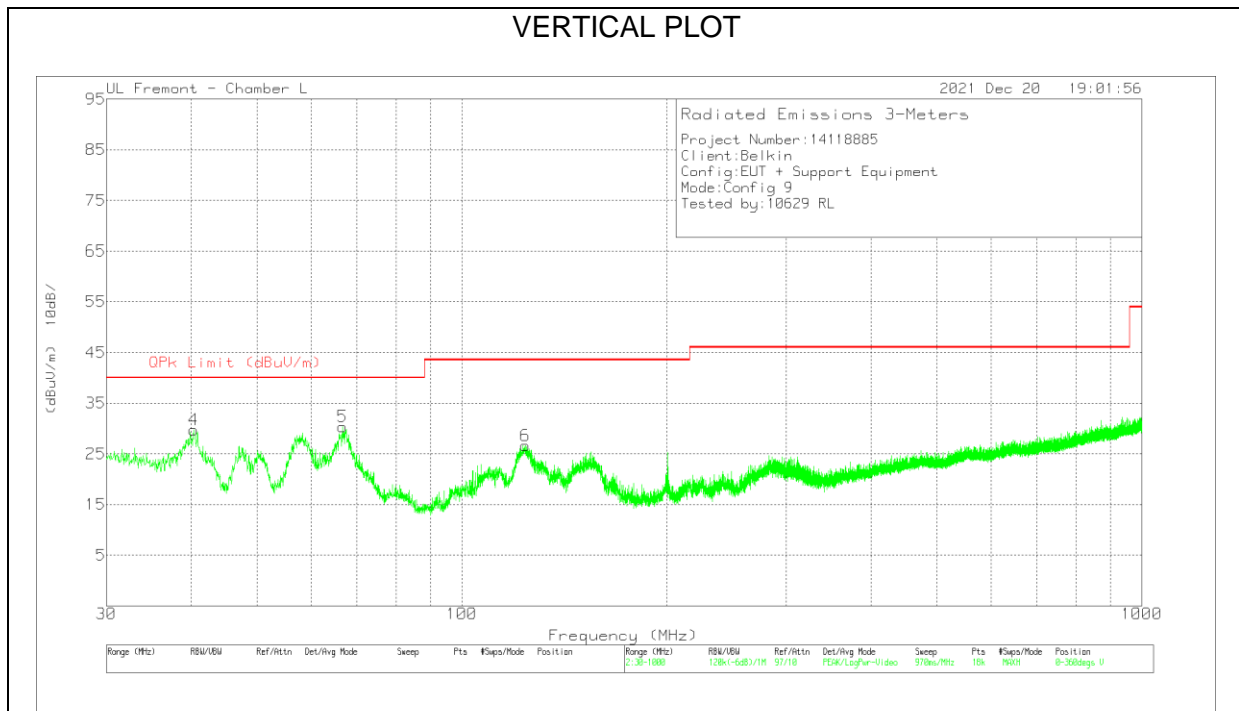
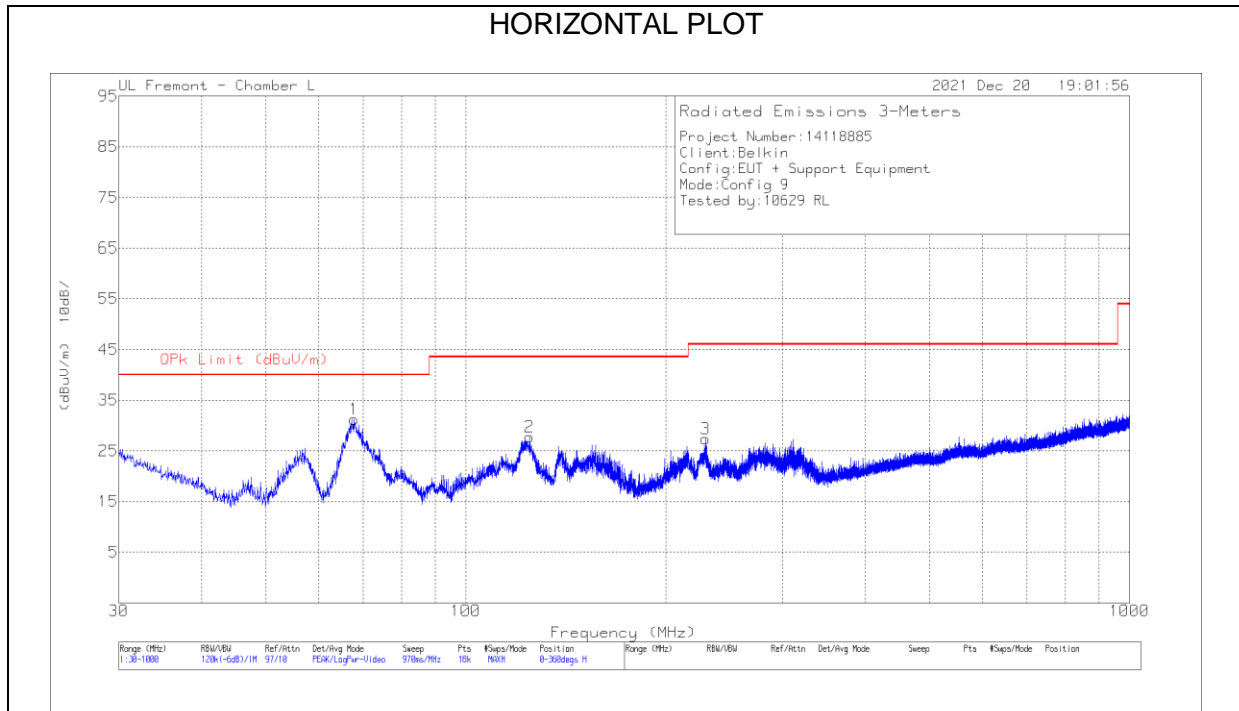


DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	171862 ACF (dB)	Amp/CbI (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	58.0223	39.85	Pk	13.1	-31.1	21.85	40	-18.15	0-360	299	H
2	68.4229	45.37	Pk	13.8	-31	28.17	40	-11.83	0-360	299	H
	69.2051	42.03	Qp	13.8	-31	24.83	40	-15.17	281	260	H
3	994.883	29.25	Pk	29.3	-26.3	32.25	53.97	-21.72	0-360	100	H
4	40.3467	37.63	Pk	19.4	-31.3	25.73	40	-14.27	0-360	100	V
5	58.7767	44.98	Pk	13.2	-31.1	27.08	40	-12.92	0-360	100	V
6	68.4229	44.43	Pk	13.8	-31	27.23	40	-12.77	0-360	299	V

Pk - Peak detector
 Qp - Quasi-Peak detector

8.3.2. CONFIGURATION 9: OPERATING MODE WITH iPhone (15W) + AirPods Case (1W) + Apple Watch (5W)



DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	171862 ACF (dB)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	67.9379	48.47	Pk	13.8	-31	31.27	40	-8.73	0-360	299	H
	67.4614	45.16	Qp	13.8	-31	27.96	40	-12.04	267	241	H
2	124.845	38.55	Pk	19.7	-30.5	27.75	43.52	-15.77	0-360	199	H
3	229.497	40.5	Pk	16.8	-29.9	27.4	46.02	-18.62	0-360	99	H
4	40.3467	41.61	Pk	19.4	-31.3	29.71	40	-10.29	0-360	101	V
5	66.6984	47.57	Pk	13.8	-31	30.37	40	-9.63	0-360	299	V
6	123.875	37.46	Pk	19.7	-30.5	26.66	43.52	-16.86	0-360	101	V

Pk - Peak detector

Qp - Quasi-Peak detector

9. AC MAINS LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

Frequency of Emission (MHz)	Conducted Limit (dBµV)	
	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.

ICES-001 Issue 5 Table 1

Frequency range (MHz)	Appliances rated 120 V, without an earth connection	Appliances rated 120 V, without an earth connection	All other appliances	All other appliances
	Quasi-peak (dBµV)	Average (dBµV)	Quasi-peak (dBµV)	Average (dBµV)
0.009 – 0.05	122	—	110	—
0.05 – 0.15	102 to 92 *	—	90 to 80 *	—
0.15 – 0.5	72 to 62 *	62 to 52 *	66 to 56 *	56 to 46 *
0.5 – 5	56	46	56	46
5 – 30	60	50	60	50

Note: The more stringent limit applies at transition frequencies.
 *The limit level in dBµV decreases linearly with the logarithm of frequency.

TEST PROCEDURE

The EUT is placed on a non-conducting table 40 cm from the vertical ground plane and 80 cm above the horizontal ground plane. The EUT is configured in accordance with ANSI C63.10.

The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

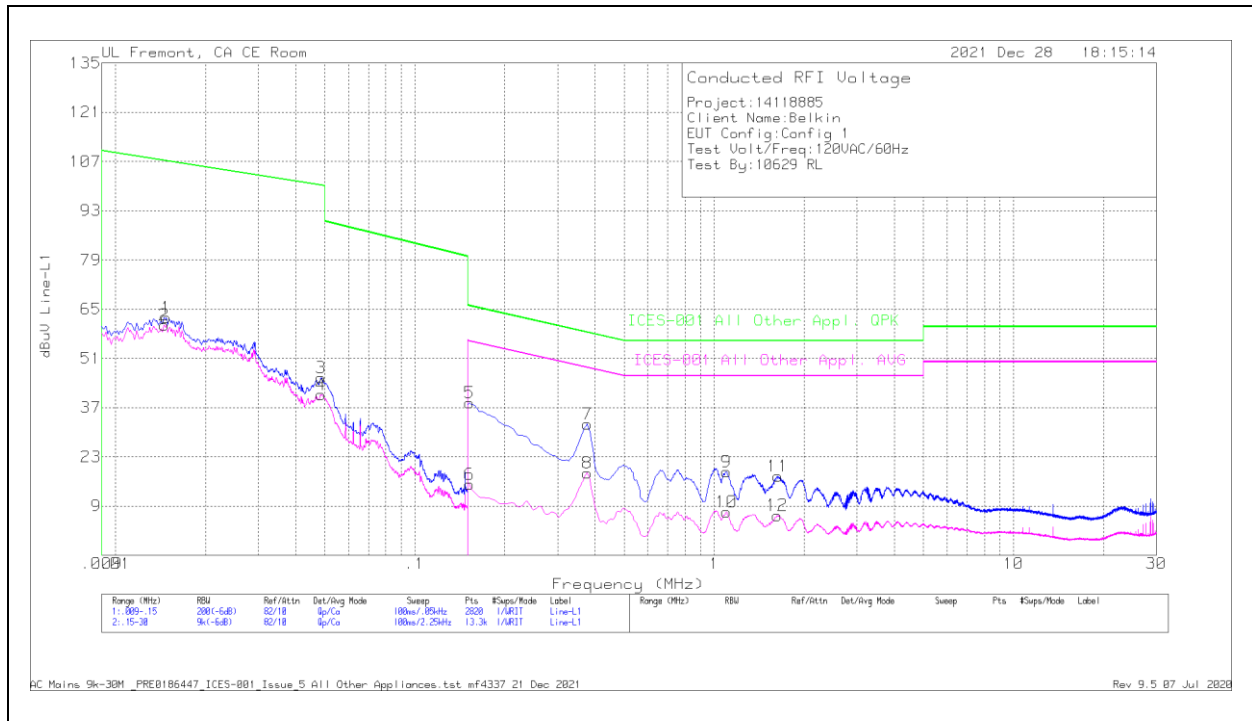
Line conducted data is recorded for both NEUTRAL and HOT lines.

RESULTS

Testing range from 9kHz to 30MHz using ICES-001 Issue Table 1 “All other appliances” limit to cover both FCC and ISED frequency range.

9.1. CONFIGURATION 1: STANDBY MODE

LINE 1 RESULTS



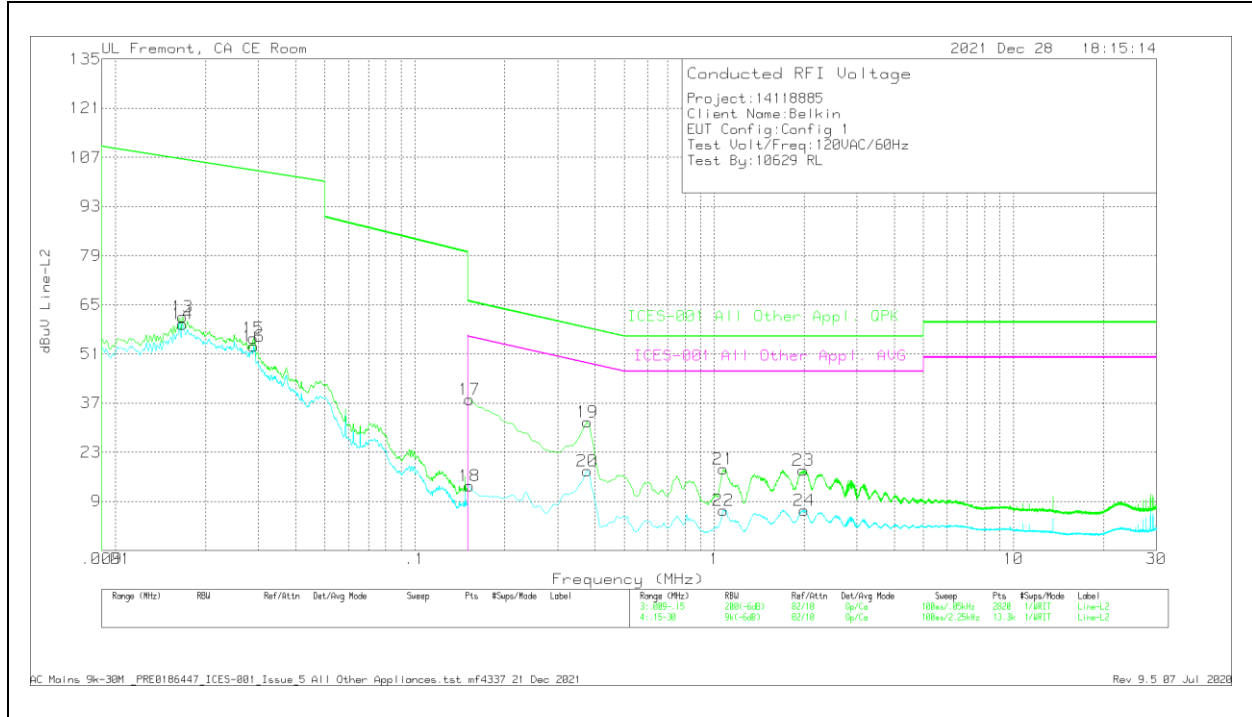
WORST EMISSIONS

Range 1: Line-L1 .009 - .15MHz												
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	PRE0186447 L1	C1&C3 cable calibration factor	TekBox Limiter TBFL1 Model 207	Corrected Reading dBuV	ICES-001 All Other Appl. QPK	Margin (dB)	ICES-001 All Other Appl. AVG	Margin (dB)	
2	.01455	48.03	Ca	.1	0	12.3	60.43	-	-	-	-	
4	.04865	29.3	Ca	.1	0	11.3	40.7	-	-	-	-	
1	.0148	50.19	Qp	.1	0	12.3	62.59	107.1	-44.51	-	-	
3	.04865	34.11	Qp	.1	0	11.3	45.51	100.16	-54.65	-	-	

Range 2: Line-L1 .15 - 30MHz												
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	PRE0186447 L1	C1&C3 cable calibration factor	TekBox Limiter TBFL1 Model 207	Corrected Reading dBuV	ICES-001 All Other Appl. QPK	Margin (dB)	ICES-001 All Other Appl. AVG	Margin (dB)	
6	.15225	5.59	Ca	.1	0	9.4	15.09	-	-	55.88	-40.79	
8	.37613	9.07	Ca	0	0	9.3	18.37	-	-	48.36	-29.99	
10	1.0995	-2.05	Ca	0	.1	9.3	7.35	-	-	46	-38.65	
12	1.62488	-3.07	Ca	0	.1	9.3	6.33	-	-	46	-39.67	
5	.15225	28.91	Qp	.1	0	9.4	38.41	65.88	-27.47	-	-	
7	.37725	22.98	Qp	0	0	9.3	32.28	58.34	-26.06	-	-	
9	1.09725	9.37	Qp	0	.1	9.3	18.77	56	-37.23	-	-	
11	1.62825	8	Qp	0	.1	9.3	17.4	56	-38.6	-	-	

Qp - Quasi-Peak detector
 Ca - CISPR average detection

LINE 2 RESULTS



WORST EMISSIONS

Range 3: Line-L2 .009 - .15MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	PRE0186447 L2	C2&C3 cable	TekBox Limiter TBFL1 Model 207	Corrected Reading dBuV	ICES-001 All Other Appl. QPK	Margin (dB)	ICES-001 All Other Appl. AVG	Margin (dB)
14	.01675	47.2	Ca	0	0	12.3	59.5	-	-	-	-
16	.02895	41.34	Ca	0	0	11.9	53.24	-	-	-	-
13	.01675	49.19	Qp	0	0	12.3	61.49	106.38	-44.89	-	-
15	.0289	43.64	Qp	0	0	11.9	55.54	103.2	-47.66	-	-

Range 4: Line-L2 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	PRE0186447 L2	C2&C3 cable	TekBox Limiter TBFL1 Model 207	Corrected Reading dBuV	ICES-001 All Other Appl. QPK	Margin (dB)	ICES-001 All Other Appl. AVG	Margin (dB)
18	.15225	3.9	Ca	0	0	9.4	13.3	-	-	55.88	-42.58
20	.37725	8.33	Ca	0	0	9.3	17.63	-	-	48.34	-30.71
22	1.07475	-3.01	Ca	0	.1	9.3	6.39	-	-	46	-39.61
24	2.00175	-2.95	Ca	0	.1	9.3	6.45	-	-	46	-39.55
17	.15225	28.62	Qp	0	0	9.4	38.02	65.88	-27.86	-	-
19	.37725	22.31	Qp	0	0	9.3	31.61	58.34	-26.73	-	-
21	1.07475	8.81	Qp	0	.1	9.3	18.21	56	-37.79	-	-
23	1.98375	8.37	Qp	0	.1	9.3	17.77	56	-38.23	-	-

Qp - Quasi-Peak detector
 Ca - CISPR average detection

9.2. CONFIGURATION 9: OPERATING MODE WITH iPhone (15W) + AirPods Case (1W) + Apple Watch (5W)

LINE 1 RESULTS



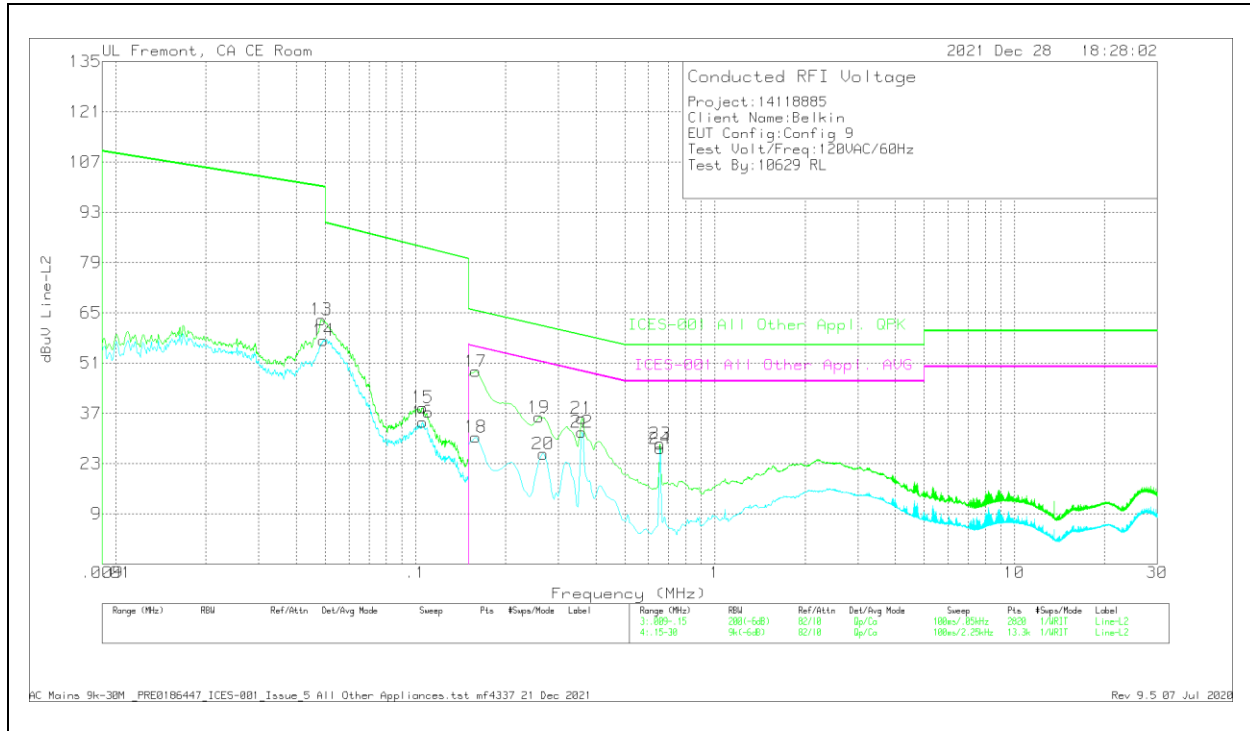
WORST EMISSIONS

Range 1: Line-L1 .009 - .15MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	PRE0186447 L1	C1&C3 cable calibration factor	TekBox Limiter TBFL1 Model 207	Corrected Reading dBuV	ICES-001 All Other Appl. QPK	Margin (dB)	ICES-001 All Other Appl. AVG	Margin (dB)
2	.0494	46.28	Ca	.1	0	11.3	57.68	-	-	-	-
4	.1052	24.3	Ca	.1	0	9.5	33.9	-	-	-	-
1	.04928	51.9	Qp	.1	0	11.3	63.3	100.08	-36.78	-	-
3	.10545	29.01	Qp	.1	0	9.5	38.61	83.21	-44.6	-	-

Range 2: Line-L1 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	PRE0186447 L1	C1&C3 cable calibration factor	TekBox Limiter TBFL1 Model 207	Corrected Reading dBuV	ICES-001 All Other Appl. QPK	Margin (dB)	ICES-001 All Other Appl. AVG	Margin (dB)
6	.159	20.78	Ca	.1	0	9.4	30.28	-	-	55.52	-25.24
8	.267	19.18	Ca	0	0	9.3	28.48	-	-	51.21	-22.73
10	.35925	22.39	Ca	0	0	9.3	31.69	-	-	48.75	-17.06
12	.65625	14.42	Ca	0	.1	9.3	23.82	-	-	46	-22.18
5	.15675	38.64	Qp	.1	0	9.4	48.14	65.63	-17.49	-	-
7	.222	28.43	Qp	0	0	9.3	37.73	62.74	-25.01	-	-
9	.35925	27.33	Qp	0	0	9.3	36.63	58.75	-22.12	-	-
11	.65625	20.44	Qp	0	.1	9.3	29.84	56	-26.16	-	-

Qp - Quasi-Peak detector
 Ca - CISPR average detection

LINE 2 RESULTS



WORST EMISSIONS

Range 3: Line-L2 .009 - .15MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	PRE0186447 L2	C2&C3 cable	TekBox Limiter TBFL1 Model 207	Corrected Reading dBuV	ICES-001 All Other Appl. QPK	Margin (dB)	ICES-001 All Other Appl. AVG	Margin (dB)
14	.0493	45.99	Ca	0	0	11.3	57.29	-	-	-	-
16	.10575	25.04	Ca	0	0	9.5	34.54	-	-	-	-
13	.04855	51.8	Qp	0	0	11.3	63.1	100.17	-37.07	-	-
15	.1057	29.1	Qp	0	0	9.5	38.6	83.19	-44.59	-	-

Range 4: Line-L2 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	PRE0186447 L2	C2&C3 cable	TekBox Limiter TBFL1 Model 207	Corrected Reading dBuV	ICES-001 All Other Appl. QPK	Margin (dB)	ICES-001 All Other Appl. AVG	Margin (dB)
18	.159	20.95	Ca	0	0	9.4	30.35	-	-	55.52	-25.17
20	.267	16.41	Ca	0	0	9.3	25.71	-	-	51.21	-25.5
22	.35925	22.46	Ca	0	0	9.3	31.76	-	-	48.75	-16.99
24	.65625	17.74	Ca	0	.1	9.3	27.14	-	-	46	-18.86
17	.159	39.29	Qp	0	0	9.4	48.69	65.52	-16.83	-	-
19	.258	26.62	Qp	0	0	9.3	35.92	61.5	-25.58	-	-
21	.35925	26.3	Qp	0	0	9.3	35.6	58.75	-23.15	-	-
23	.65625	19.1	Qp	0	.1	9.3	28.5	56	-27.5	-	-

Qp - Quasi-Peak detector
 Ca - CISPR average detection

10. DESCRIPTION OF TEST SETUP AND SETUP PHOTOS

Please refer to 14118885-EP1 (FCC) for description of test up and setup photo.

END OF TEST REPORT