EMC TEST REPORT
No. 1900 FR
Issue#2: 26th March 2020

FCC Part 15B and 15C Radio EMC Test Report

for

Mysteryvibe Limited

MysteryVibe

Model: Poco

FCC ID: 2AHVA-6903

Project Engineer: M. Musgrave

Approval Signatory

Approved signatories: J. A. Jones ☐ D. Tiroke ☑ A. R. Coombes ☐

The above named are authorised Eurofins Hursley signatories.

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Document History:

Issue#1: 20th February 2020 was withdrawn and replaced by Issue#2: updated with editorial correction.

1.0 DECLARATION

1.1 FCC Part 15B and 15C Declaration Statement

The Equipment Under Test (EUT), as described and reported within this document, complies with the selected sections of part 15B and 15C of the CFR 47:2017 FCC rules. The equipment complies with 15.207 and 15.209 of the CFR 47 FCC rules in accordance with ANSI C63.4-2014. The equipment complies with 15.247 of the CFR 47 FCC rules in accordance with ANSI C63.10-2013.

The highest internal operating frequency declared by the manufacturer is a clock rate of 2480 MHz in Bluetooth radio.

This report relates to the sample tested and may not represent the entire population. It is valid only for the product identified, either in part or in full, to the relevant electromagnetic requirements necessary for compliance.

Eurofins Hursley is recognised by the Federal Communications Commissions (FCC) as an EMI laboratory, outside of the USA, for the measurement of radiated emissions at three metres.

1.2 Product Modifications

None to sample submitted.

1.3 EMC Test Lab Reference

Eurofins Hursley file: 1900.
Sulis test plan ref: SC_TR_411-A.

1.4 EUT Manufacturer

Trade name:	Mysteryvibe Limited
Company name:	Mysteryvibe Limited
Company address:	Wework 10 York Road London SE1 7ND United Kingdom
Manufacturing address:	As above.
Test commissioned by:	Mr Charlie Blackham (Sulis Consultants)

2.0 EUT DESCRIPTION

2.1 Identity

Product (EUT): MysteryVibe
Model: Poco
Serial numbers: 001(Conducted measurements)
002 (Radiated measurements)

Product build level: Production sample

Product power: Internal battery

2.2 EUT Description

The EUT is a personal vibrator toy.

The device operates inside the 2400 – 2483.5 MHz band:

- 40 channels with centre frequencies on 2 MHz spacing from 2402 to 2480 MHz inclusive
- The device includes a rechargeable Li-ion battery.
- The product is designed for portable use and the radio does not operate whilst the device is being charged

The following test frequencies were used to cover the full band of operation of the device:

Test mode	Description
TX1	Continuous transmit on 2402 MHz
TX2	Continuous transmit on 2440 MHz
TX3	Continuous transmit on 2480 MHz

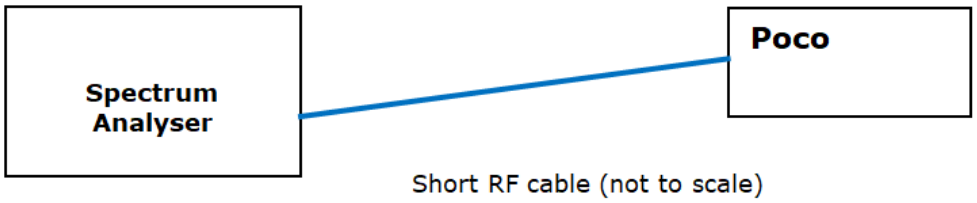
2.3 EUT Support Equipment

No support equipment.

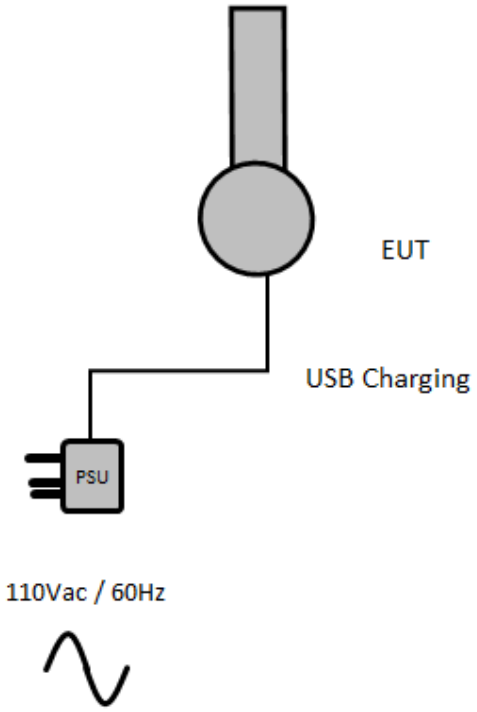
2.4 EUT Test Exerciser

The EUT was put into test mode which was used to select one of three radio channels, Bottom 2402 MHz, Middle 2440 MHz and Top 2480 MHz each with modulation. Each different radio channel was tested in different orientations, i.e. flat, side and vertical.

2.5 EUT Test Configurations



Test Configuration for conducted measurements



Note: USB cable and charger only fitted for 15B measurements.

3.0 MEASUREMENT PROCEDURE AND INSTRUMENTATION

3.1 EMI Site Address & Test Date

EMI Company Offices	Eurofins Hursley Trafalgar House, Trafalgar Close, Chandlers Ford, Hampshire
Test Dates	13th to the 14th February 2020

3.2 General Operating Conditions

Testing was performed according to the procedures in ANSI C63.4-2014 and ANSI C63.10-2013.

Final radiated testing was performed at a EUT to antenna distance of three metres in a FCC registered chamber measurement facility.

3.3 Environmental Ambient

Temperature	20 to 20.6ºCelsius
Relative Humidity	45 to 47 %
Atmospheric Pressure	996.6 to 1019.7 millibars

3.4 Radiated Emissions

Initial Scan

Radiated profile scans were taken on eight azimuths between 30.0 MHz and 25.0 GHz in both the vertical and horizontal polarities of the antennae in a semi-anechoic chamber. The worst case resulting data obtained from these scans was used to determine subsequent measurement for final measurement evaluation.

Final Measurements

The EUT was then measured at three metres in the chamber using the pre-scan results as a guide. Emissions from the EUT were maximised by revolving the system on the turntable and moving the antennae in height and azimuth. Cable and system component positions had been investigated for maximum emissions, and the system under test represented the worst-case configuration. The highest values obtained are presented in this report.

The instrumentation used in the CISPR 16-1-4 compliant semi-anechoic chamber was as below:

#ID	CP	Manufacturer	Type	Serial Nø	Description	Calibration due date
053	1	HP	8449B	3008A01394	Pre-amplifier (1.0-26.5GHz)	17/10/2020
456	1	Rohde & Schwarz	ESCI7	1144573407	EMI Test Receiver	21/08/2020
466	3	Schwarzbeck	BBHA 9120 571	571	1-10GHz Horn	28/02/2022
644	1	Intelliconnect	yellow H duty	15072	10m - 18GHz sma to N type H duty	30/10/2020
651	1	Rohde & Schwarz	ESIB 40 no.2	100262	40GHz receiver	27/11/2020
750	1	Global	CISPR16	1	11 x 7 x 6.2m chamber	28/10/2020
762	3	Schwarzbeck	VULB9162	129	30-7000MHz	07/04/2020
769	3	Schwarzbeck	BBHA 9120 C	631	2-18GHz Horn antenna (RE)	06/12/2020
776	2	IntelliConnect	C-NPS-2301-4M-NPS	I11816	4M N-TYPE 18GHz cable	25/04/2021
779	3	Steatite	QWH-SL-18-40-K-SG	17504	18-40GHz wideband horn antenna	11/05/2021

CP = Interval period [year] prescribed for external calibrations

Note: 'Calibration due date' means that the instrument is certified with a UKAS or traceable calibration certificate.
'Internal' means internally calibrated using Eurofins Hursley procedures

4.0 TEST DATA

4.1 Radiated Emissions; 30 to 1000 MHz

The measurements reported are the highest emissions relative to the FCC & CISPR Class B limits and take into account the antenna and cable loss factors. The measurements were made according to CISPR & ANSI C63:4 Class B test standard and Eurofins Hursley test procedure RAD-01.

The measurements were taken at a distance of three metres.

4.1.1 Data; Position 1, Charging and Idle Mode

Emission frequency	Measured quasi-peak value	Class B specified quasi-peak limit	Pass Margin	Antenna polarity	Antenna height	Turntable azimuth	
MHz	dBµV/m	dBµV/m	dB	H/V	cm	deg	Status
41.952706	25.69	40.00	14.31	V	116.0	113.0	Pass
45.943788	26.43	40.00	13.57	V	304.0	67.0	Pass
61.792317	24.91	40.00	15.09	H	249.0	218.0	Pass
495.935460	31.50	46.00	14.50	H	335.0	355.0	Pass
718.011896	36.87	46.00	9.13	H	122.0	210.0	Pass
904.763480	39.59	46.00	6.41	H	396.0	81.0	Pass

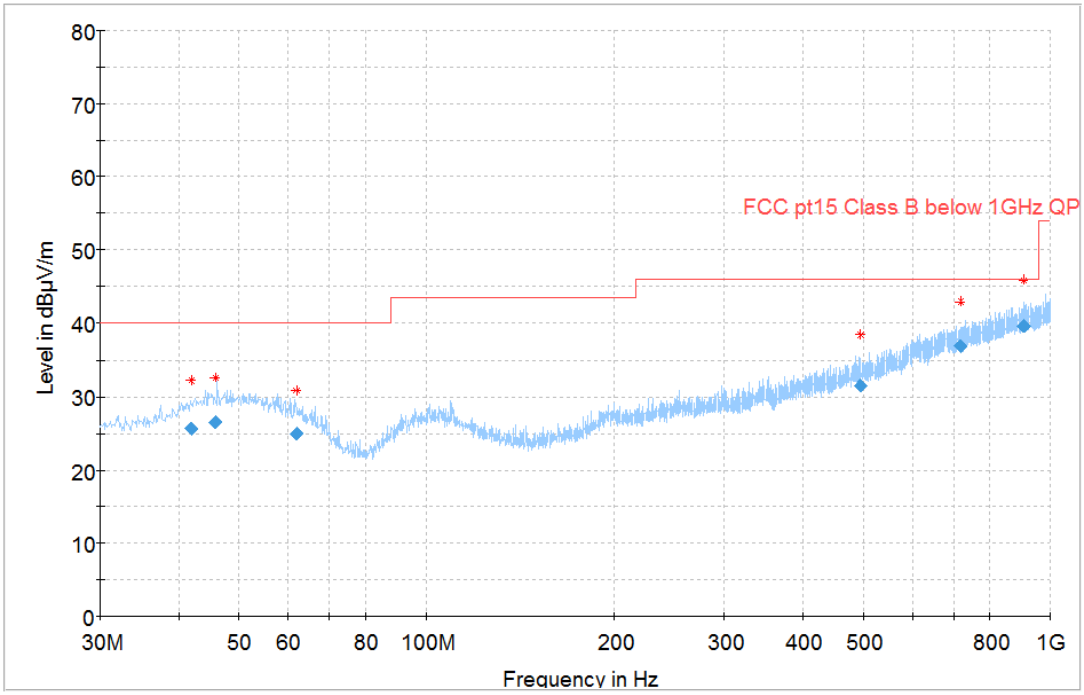
V = Vertical / H = Horizontal

The emission measurements taken were relative to the FCC Class B limit and take into account the antenna and cable loss factors.

TEST ENGINEER: Malcolm Musgrave

4.1.2 Profile; Charging and Idle Mode

Peak trace profile with quasi-peak



Radiated emissions (continued)

4.1.3 Data; Position 1, Bottom Channel 2402 MHz

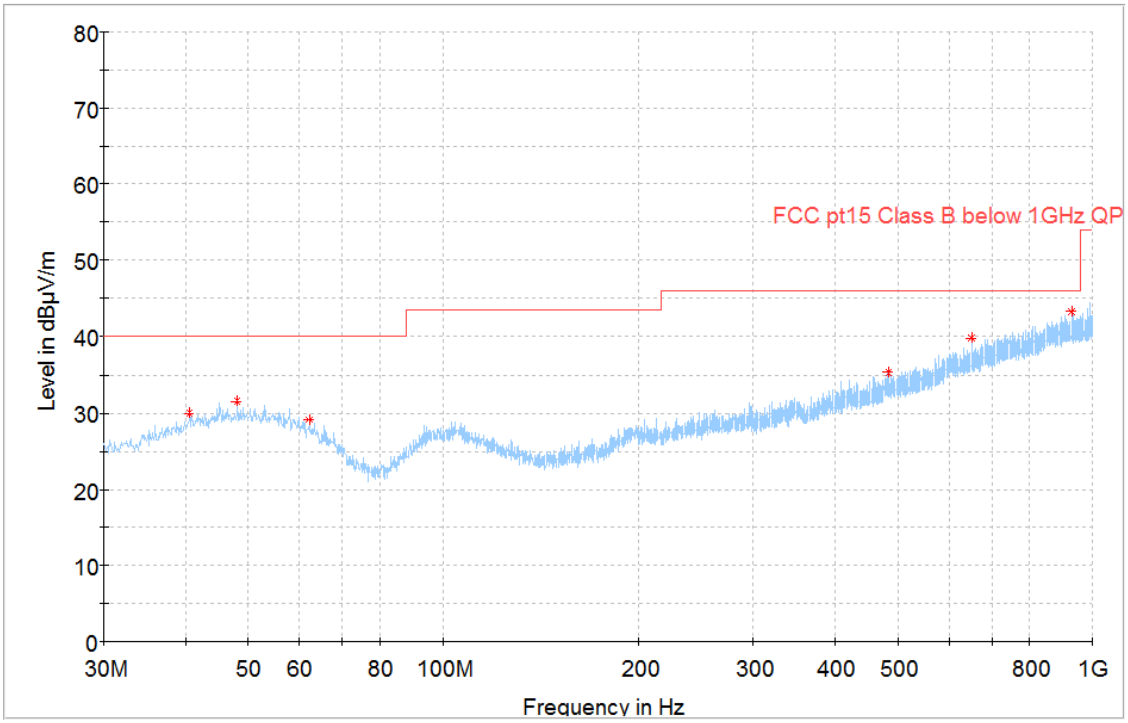
Emission frequency	Measured quasi-peak value	Class B specified quasi-peak limit	Pass Margin	Antenna polarity	Antenna height	Turntable azimuth	
MHz	dBµV/m	dBµV/m	dB	H/V	m	deg	Status
No significant peaks found within the specified limit. There were no frequencies found within the laboratory's ±12dB criterion and so no further measurements were necessary.							Pass

V = Vertical / H = Horizontal

TEST ENGINEER: Malcolm Musgrave

4.1.4 Profile; Position 1, Bottom Channel 2402 MHz

Peak trace profile with quasi-peak



Radiated emissions (continued)

4.1.5 Data; Position 2, Middle Channel 2440 MHz

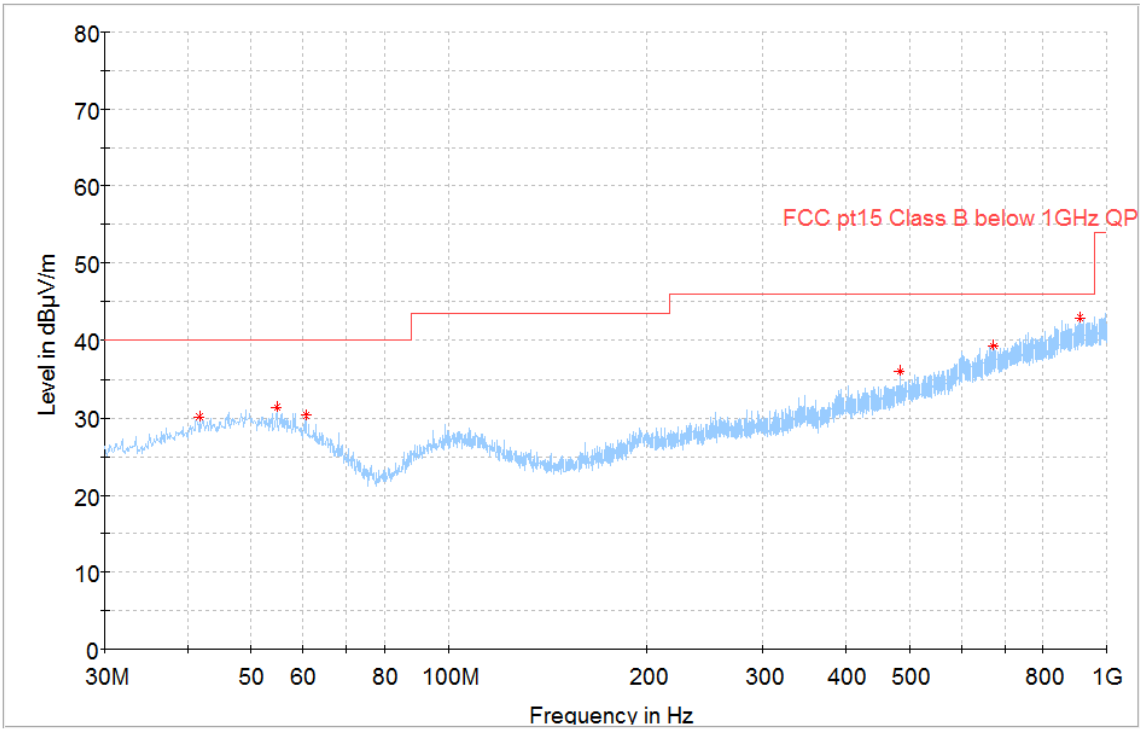
Emission frequency	Measured quasi-peak value	Class B specified quasi-peak limit	Pass Margin	Antenna polarity	Antenna height	Turntable azimuth	
MHz	**dBµV/m**	**dBµV/m**	**dB**	**H/V**	**m**	**deg**	**Status**
No significant peaks found within the specified limit. There were no frequencies found within the laboratory's ±12dB criterion and so no further measurements were necessary.							Pass

V = Vertical / H = Horizontal

TEST ENGINEER: Malcolm Musgrave

4.1.6 Profile; Position 2, Middle Channel 2440 MHz

Peak trace profile with quasi-peak



Radiated emissions (continued)

4.1.7 Data; Position 3, Top Channel 2480 MHz

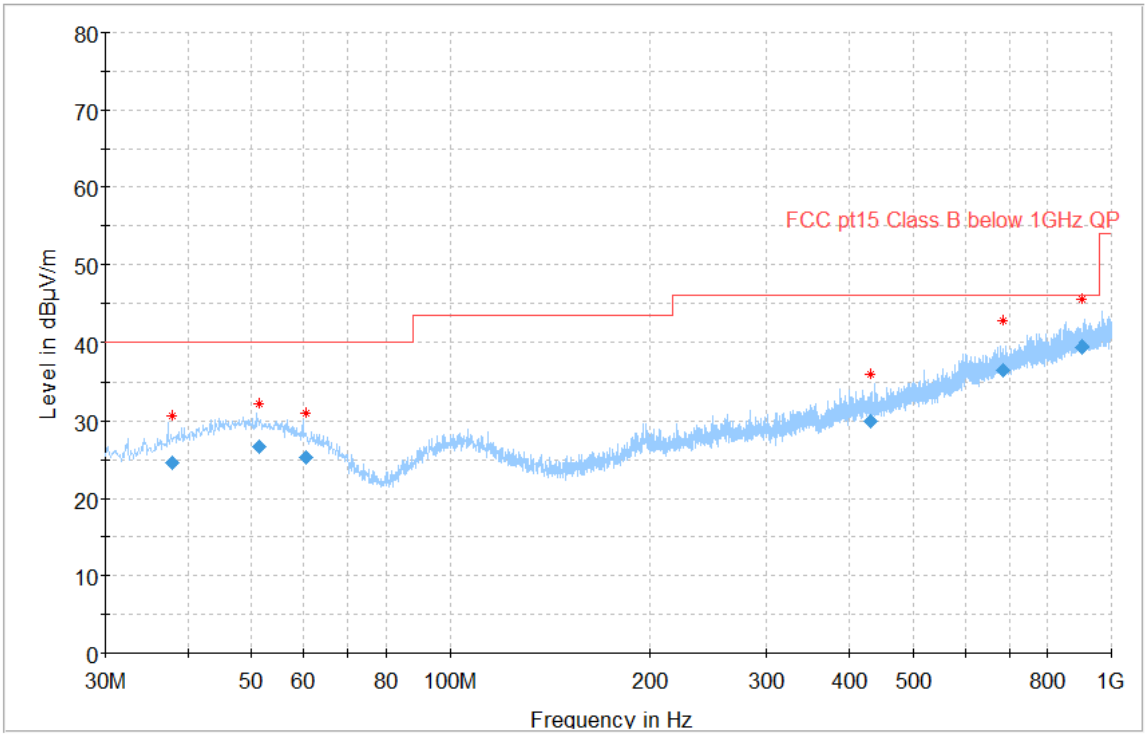
Emission frequency	Measured quasi-peak value	Class B specified quasi-peak limit	Pass Margin	Antenna polarity	Antenna height	Turntable azimuth	
MHz	dBµV/m	dBµV/m	dB	H/V	m	deg	Status
37.876606	24.51	40.00	15.49	V	334.0	176.0	Pass
51.429839	26.62	40.00	13.38	V	400.0	54.0	Pass
60.498205	25.25	40.00	14.75	H	318.0	290.0	Pass
432.299560	29.92	46.00	16.08	H	298.0	99.0	Pass
684.419137	36.52	46.00	9.48	H	191.0	275.0	Pass
902.904935	39.56	46.00	6.44	H	254.0	266.0	Pass

V = Vertical / H = Horizontal

TEST ENGINEER: Malcolm Musgrave

4.1.8 Profile; Position 3, Top Channel 2480 MHz

Peak trace profile with quasi-peak



4.2 Radiated Emissions; 1.0 to 40 GHz

Radiated emissions pre-scan profile measurements were taken at a distance of three metres with the EUT turned through 360°, with both horizontal and vertical antennae polarities in a semi-anechoic chamber. This pre-scan profile was made from 1.0 to 40.0 GHz and evaluated against the FCC Class B limit.

4.2.1 Data; Position 1, Charging Mode

Frequency	Peak	CISPR Average	Limit	Margin	Height	Pol	Azimuth	Corr.	
MHz	dBµV/m	dBµV/m	dBµV/m	dB	cm	H/V	Deg	dB/m	Status
6990.426646	---	37.82	54.00	16.18	182.0	H	138.0	2.4	Pass
8737.063937	---	36.94	54.00	17.06	336.0	V	187.0	4.1	Pass
9802.104208	---	37.05	54.00	16.95	332.0	H	230.0	4.4	Pass
12083.35000	---	45.15	54.00	8.85	250.0	H	137.0	12.8	Pass
12234.67194	59.28	---	74.00	14.72	215.0	H	44.0	12.9	Pass

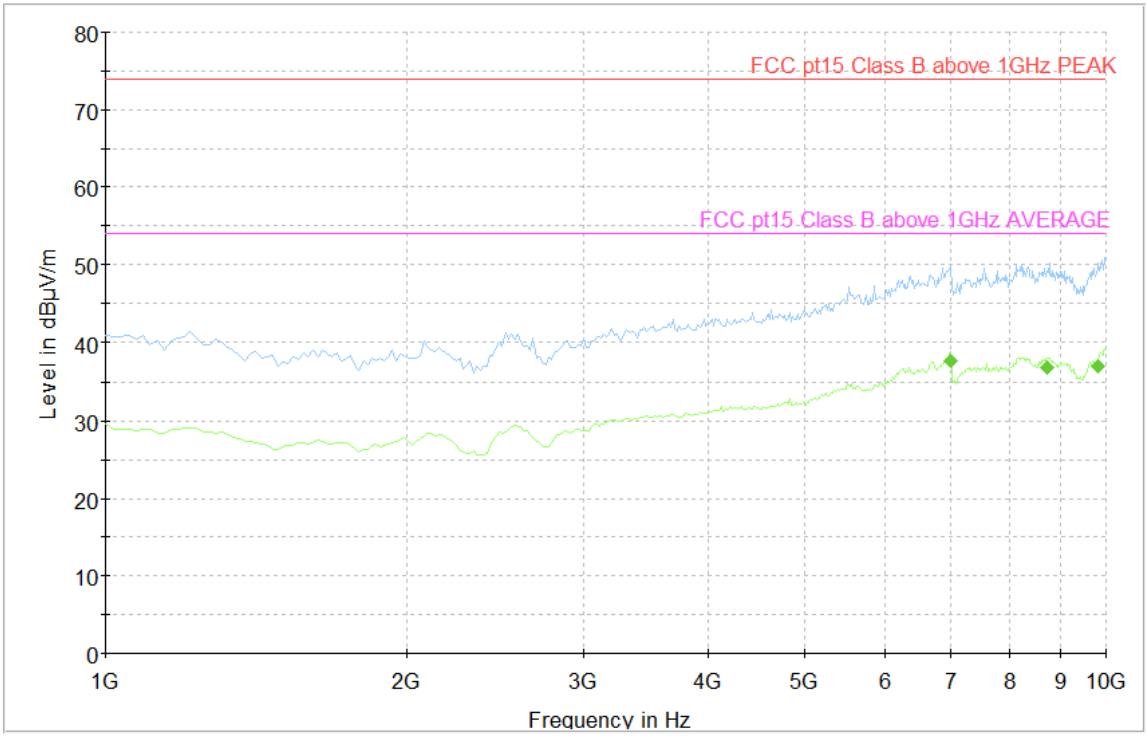
V = Vertical / H = Horizontal

The emission measurements taken were relative to the FCC Class B limit and take into account the antenna and cable loss factors. Measurements made are according to the FCC test standard and Eurofins Hursley test procedure RHF-01.

TEST ENGINEER: Malcolm Musgrave

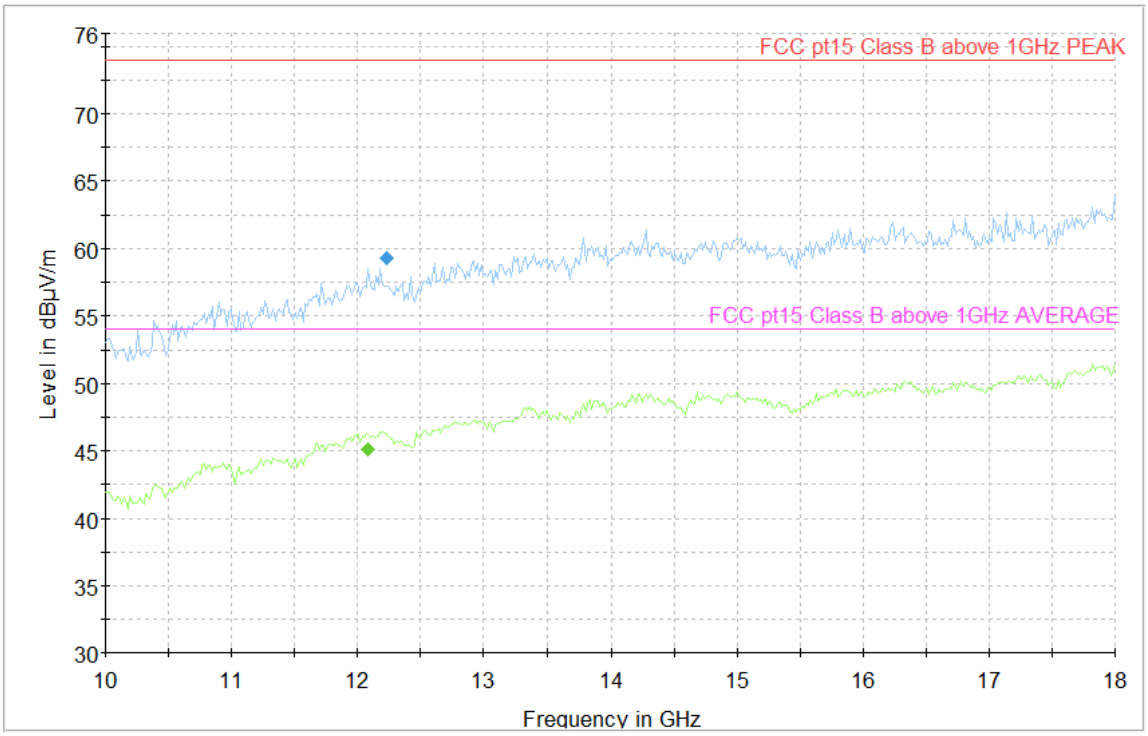
4.2.2 Profiles; Position 1, Charging Mode

1.0 to 10.0 GHz, Peak trace profile



Profiles (continued)

10.0 to 18.0 GHz, Peak trace profile



Radiated emissions (continued)

4.2.3 Data; Position 1, Bottom Channel 2402

Frequency	Peak	CISPR Average	Limit	Margin	Height	Pol	Azimuth	Corr.	
MHz	dBµV/m	dBµV/m	dBµV/m	dB	cm	H/V	Deg	dB/m	Status
17733.27576	64.05	---	74.00	9.95	163.0	H	250.0	19.1	Pass
17765.62133	---	50.45	54.00	3.55	363.0	H	61.0	19.1	Pass

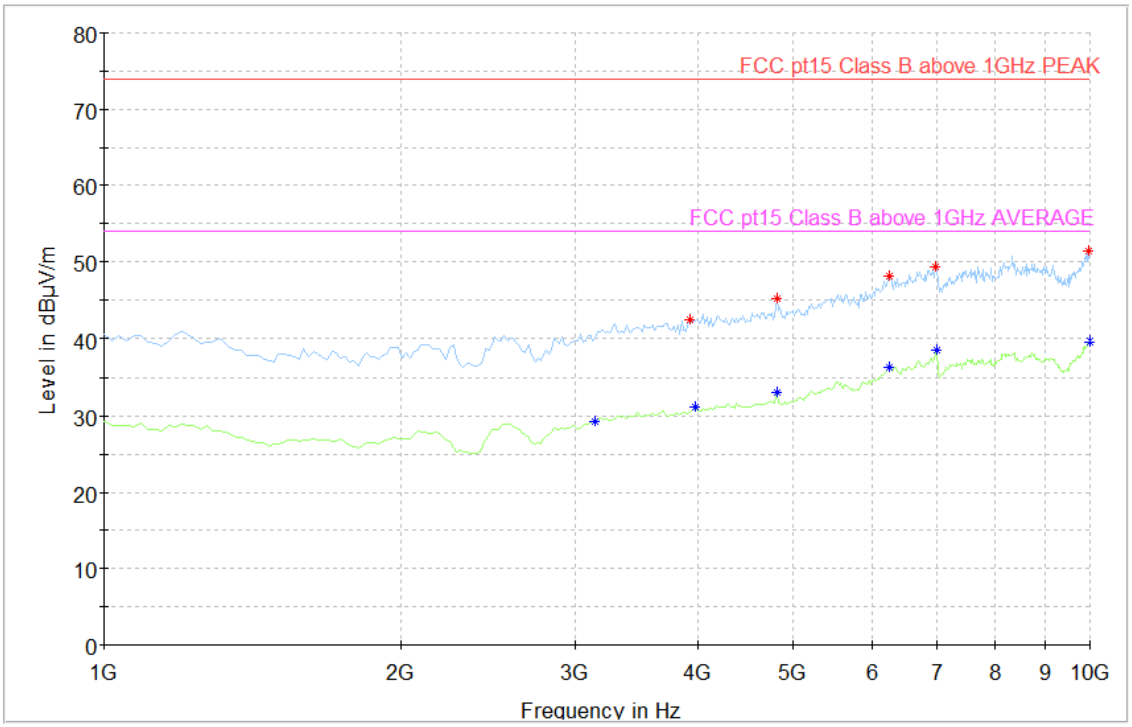
V = Vertical / H = Horizontal

The emission measurements taken were relative to the FCC Class B limit and take into account the antenna and cable loss factors. Measurements made are according to the FCC test standard and Eurofins Hursley test procedure RHF-01.

TEST ENGINEER: Malcolm Musgrave

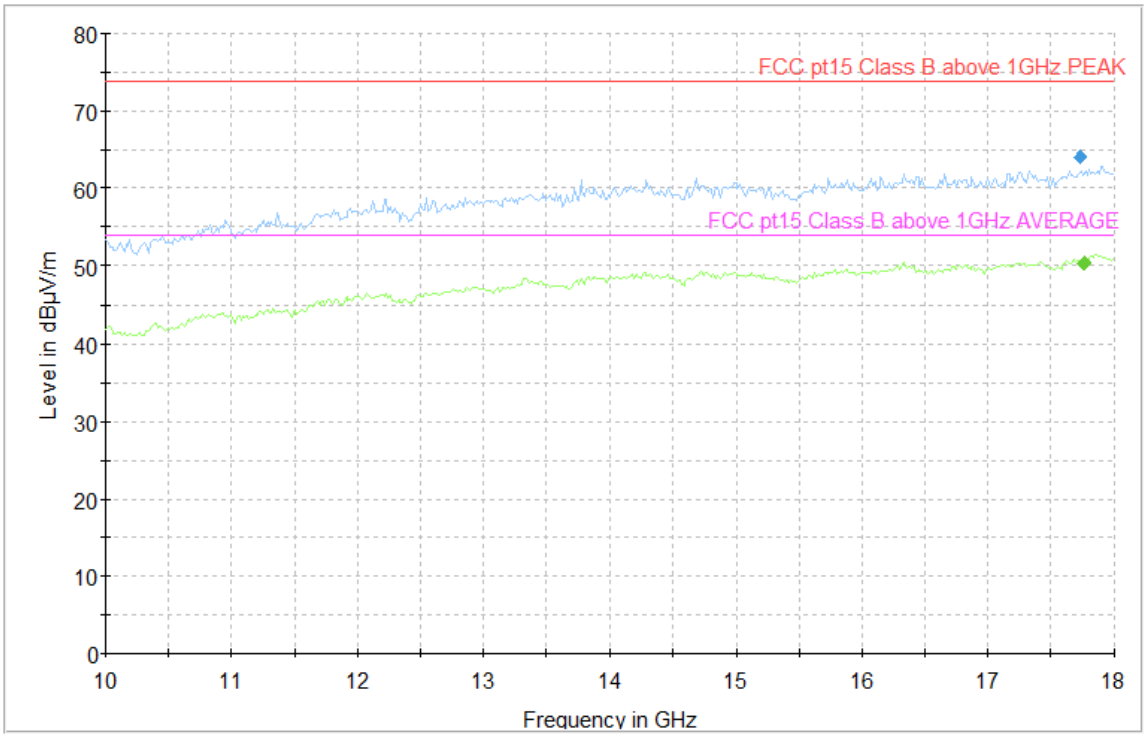
4.2.4 Profiles; Position 1, Bottom Channel 2402

1.0 to 10.0 GHz, Peak trace profile



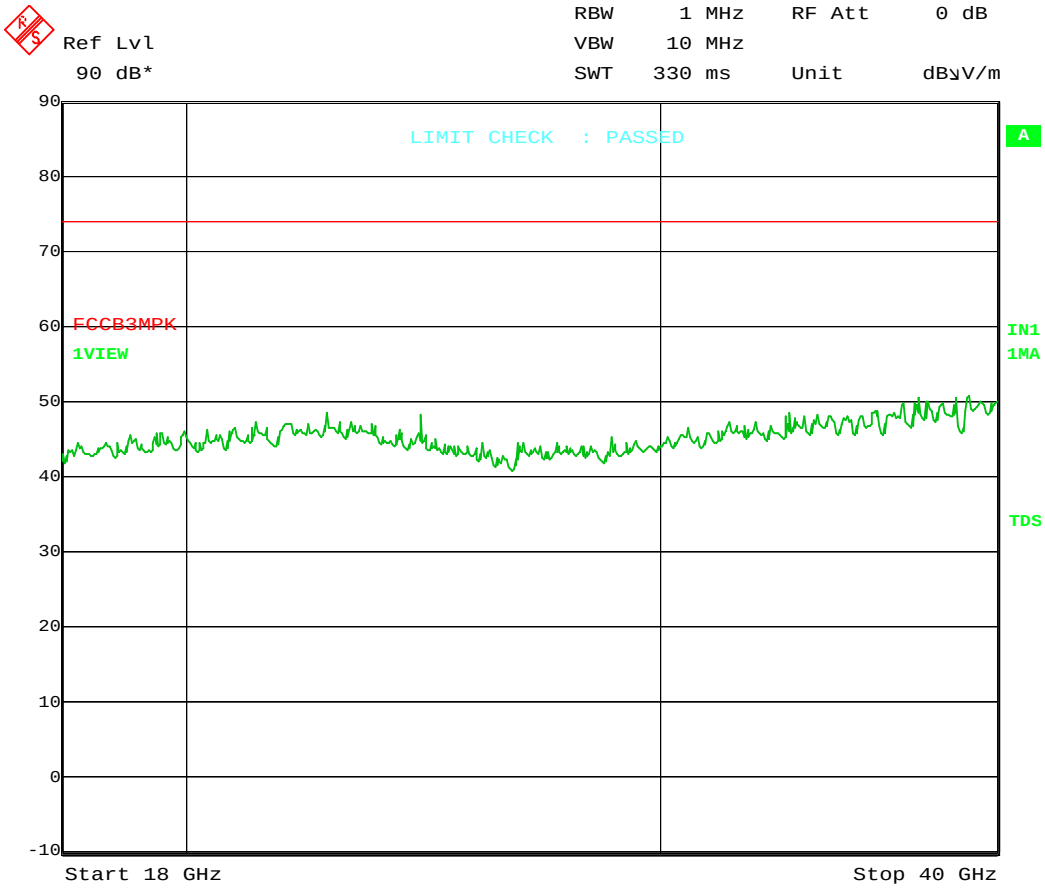
Profiles (continued)

10.0 to 18.0 GHz, Peak trace profile



Profiles (continued)

18.0 to 40.0 GHz, Peak trace profile



Radiated emissions (continued)

4.2.5 Data; Position 2, Middle Channel 2440

Frequency	Peak	CISPR Average	Limit	Margin	Height	Pol	Azimuth	Corr.	
MHz	dBµV/m	dBµV/m	dBµV/m	dB	cm	H/V	Deg	dB/m	Status
12055.14028	59.27	---	74.00	14.73	213.0	V	344.0	12.8	Pass
12063.69739	---	45.77	54.00	8.23	125.0	V	211.0	12.8	Pass
14293.07014	---	47.63	54.00	6.37	285.0	V	96.0	16.1	Pass
14344.41282	61.71	---	74.00	12.29	232.0	V	6.0	16.1	Pass
17310.18637	63.61	---	74.00	10.39	139.0	H	355.0	18.5	Pass
17436.83166	---	49.74	54.00	4.26	154.0	H	10.0	18.7	Pass

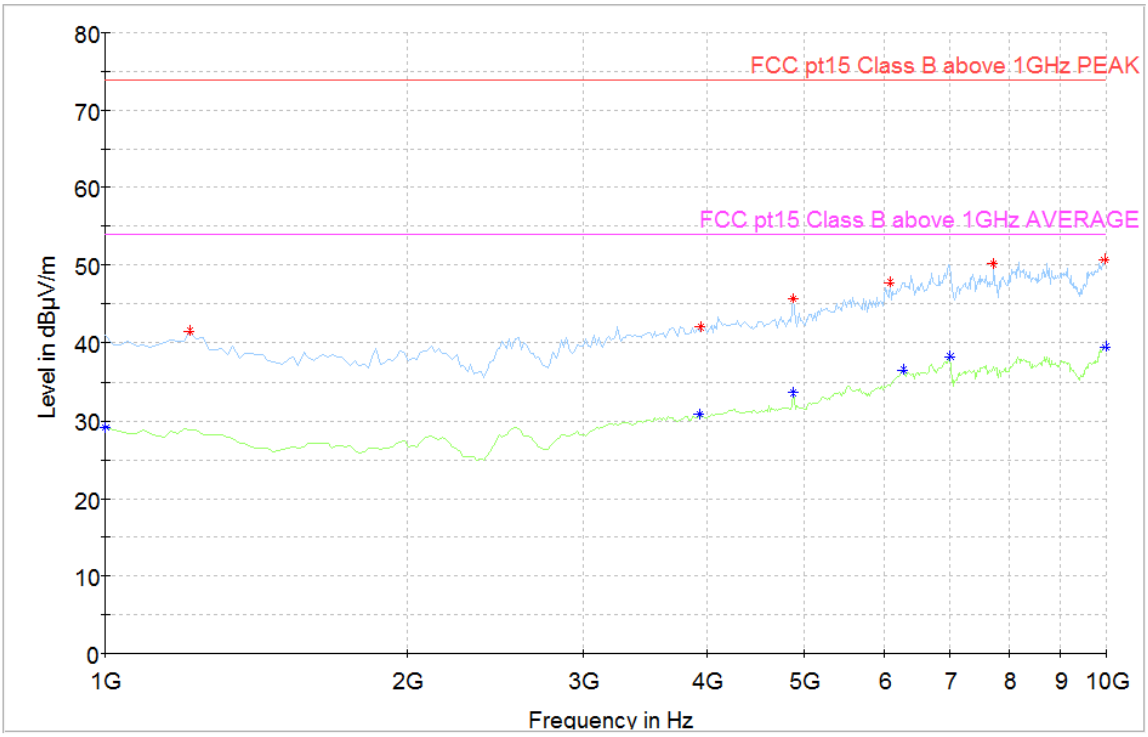
V = Vertical / H = Horizontal

The emission measurements taken were relative to the FCC Class B limit and take into account the antenna and cable loss factors. Measurements made are according to the FCC test standard and Eurofins Hursley test procedure RHF-01.

TEST ENGINEER: Malcolm Musgrave

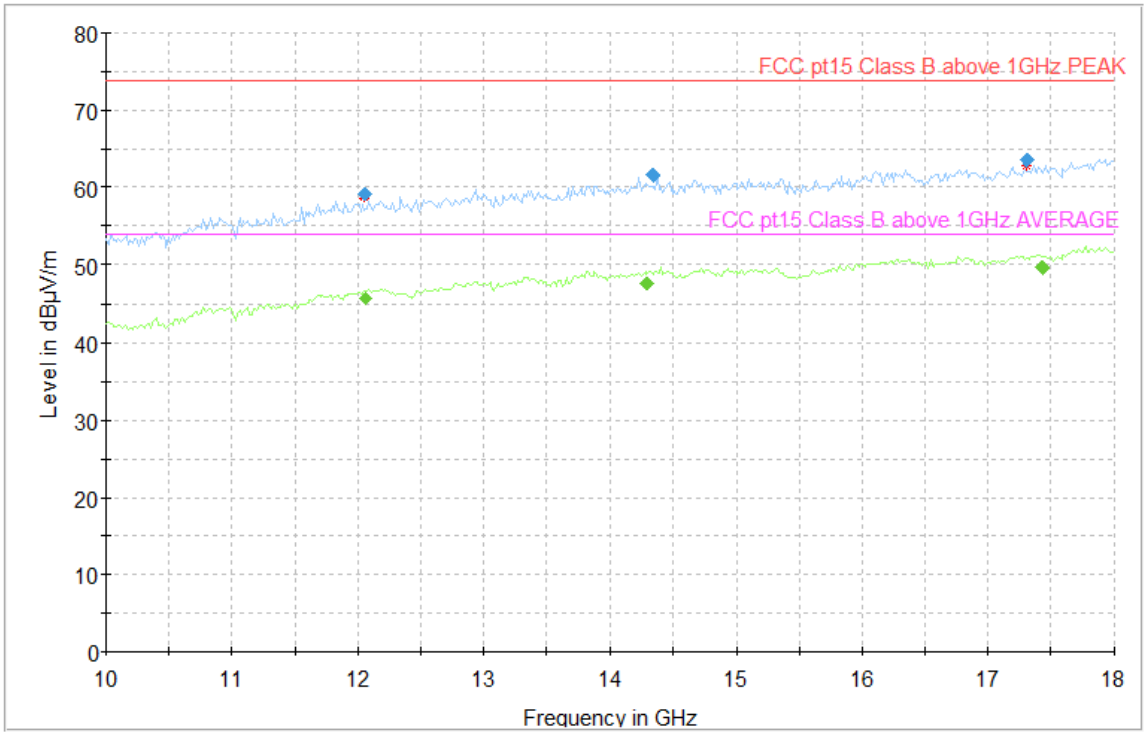
4.2.6 Profiles; Position 2, Middle Channel 2440

1.0 to 10.0 GHz, Peak trace profile



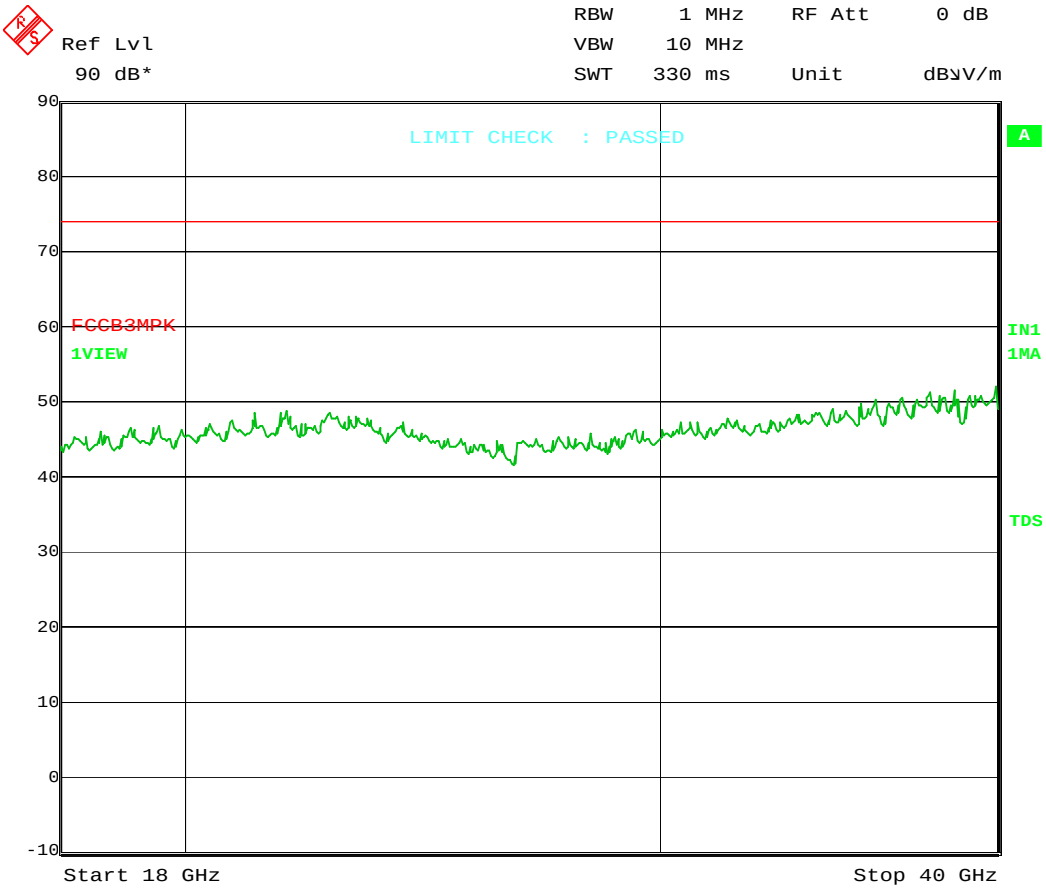
Profiles (continued)

10.0 to 18.0 GHz, Peak trace profile



Profiles (continued)

18.0 to 40.0 GHz, Peak trace profile



Radiated emissions (continued)

4.2.7 Data; Position 3, Top Channel 2480

Frequency	Peak	CISPR Average	Limit	Margin	Height	Pol	Azimuth	Corr.	
MHz	dBµV/m	dBµV/m	dBµV/m	dB	cm	H/V	Deg	dB/m	Status
12400.00000	---	45.79	54.00	8.21	170.0	V	147.0	13.0	Pass
12400.00000	59.15	---	74.00	14.85	382.0	V	39.0	13.0	Pass
14880.00000	---	47.34	54.00	6.66	373.0	H	31.0	16.3	Pass
14880.00000	61.22	---	74.00	12.78	211.0	H	224.0	16.3	Pass
17360.00000	---	49.66	54.00	4.34	115.0	H	7.0	18.6	Pass
17360.00000	63.53	---	74.00	10.47	189.0	V	144.0	18.6	Pass

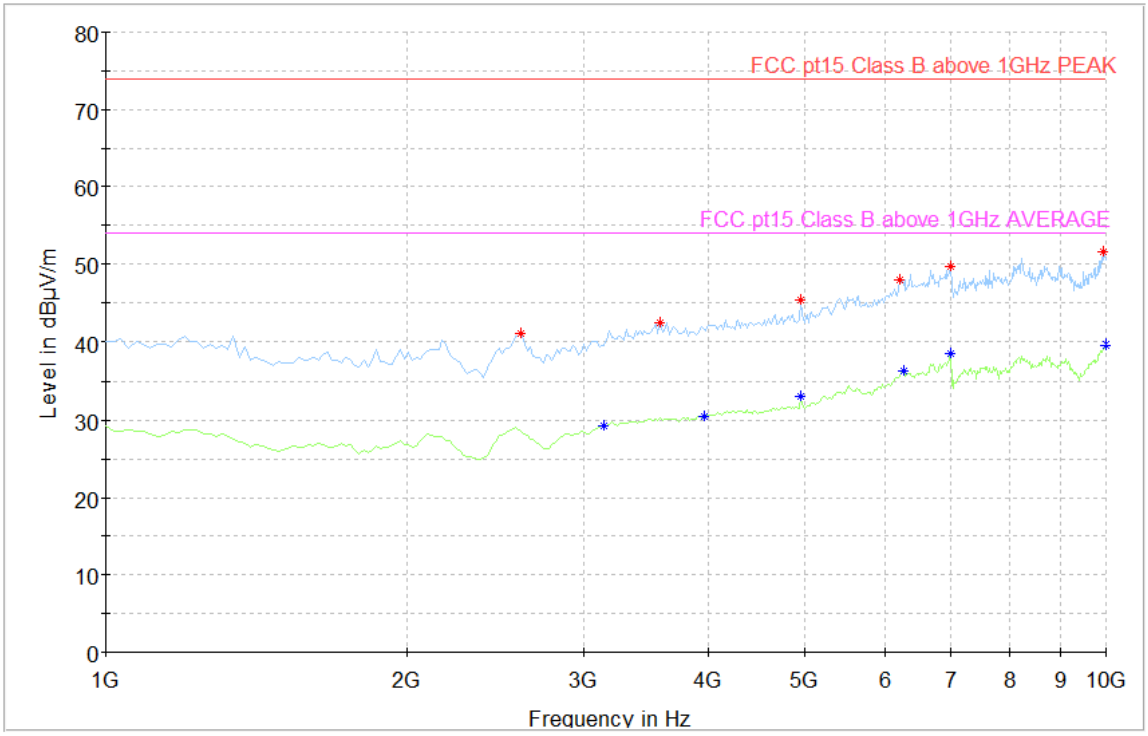
V = Vertical / H = Horizontal

The emission measurements taken were relative to the FCC Class B limit and take into account the antenna and cable loss factors. Measurements made are according to the FCC test standard and Eurofins Hursley test procedure RHF-01.

TEST ENGINEER: Malcolm Musgrave

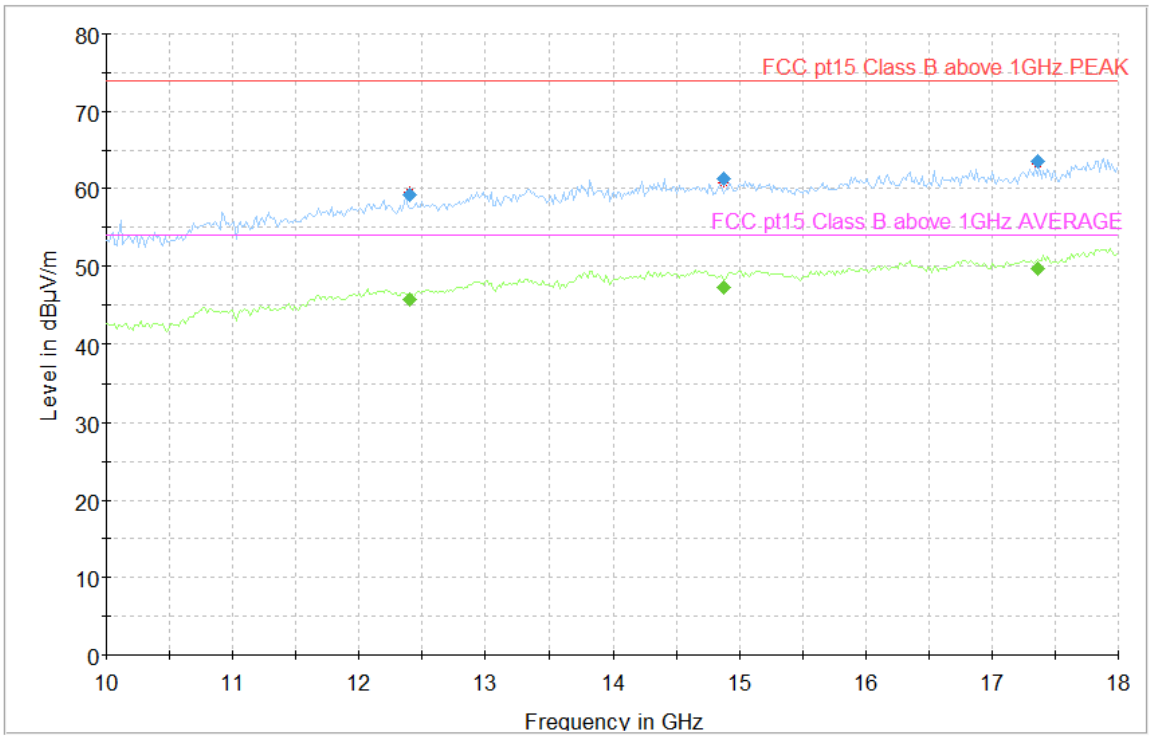
4.2.8 Profiles; Position 3, Top Channel 2480

1.0 to 10.0 GHz, Peak trace profile



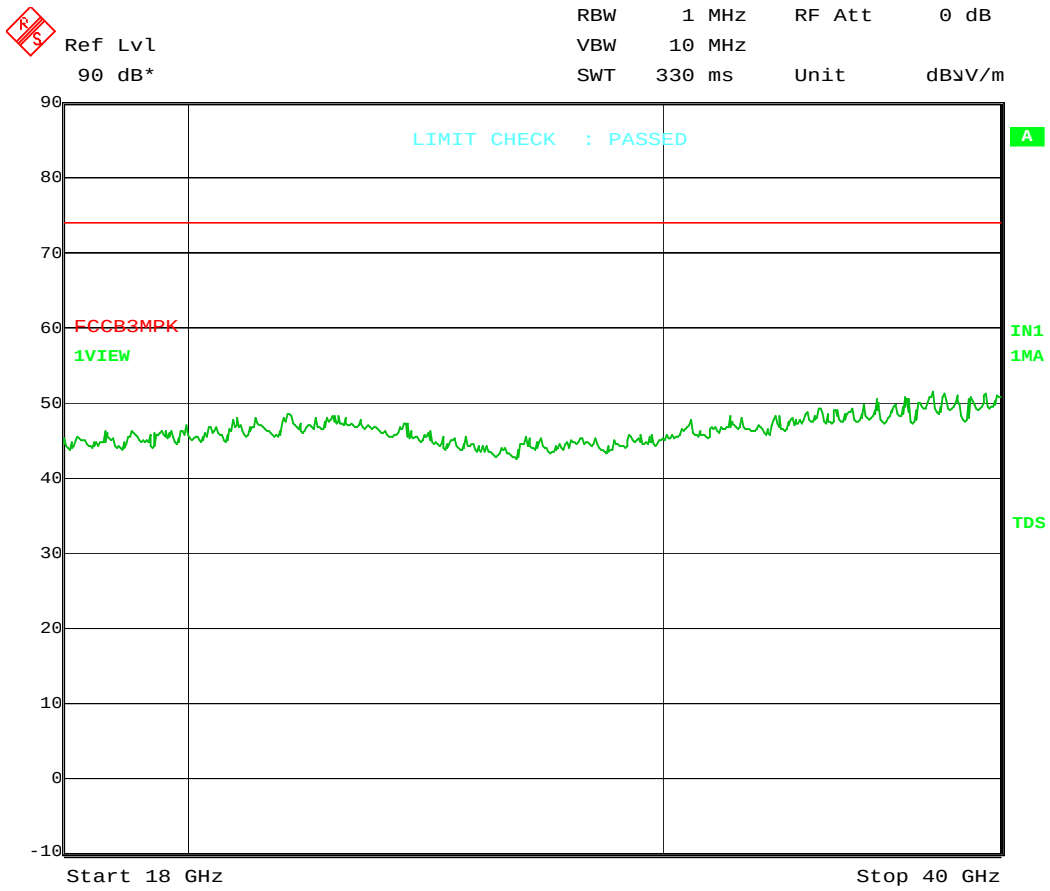
Profiles (continued)

10.0 to 18.0 GHz, Peak trace profile



Profiles (continued)

18.0 to 40.0 GHz, Peak trace profile

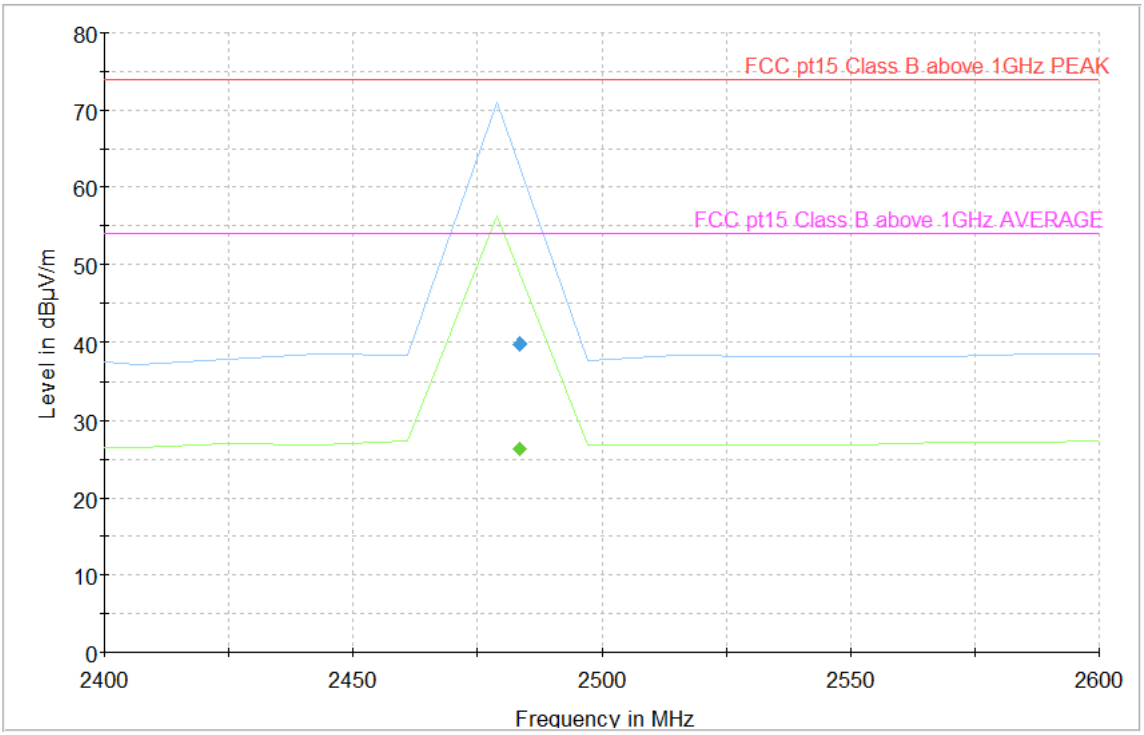


4.2.9 Band Edge – Top channel 2483.5 MHz

Position 1

Frequency	Peak	CISPR Average	Limit	Margin	Height	Pol	Azimuth	Corr.	
MHz	dBµV/m	dBµV/m	dBµV/m	dB	cm	H/V	Deg	dB/m	Status
2483.50000	---	26.38	54.00	27.62	162.0	H	257.0	-6.8	Pass
2483.50000	39.79	---	74.00	34.21	129.0	H	89.0	-6.8	Pass

V = Vertical / H = Horizontal

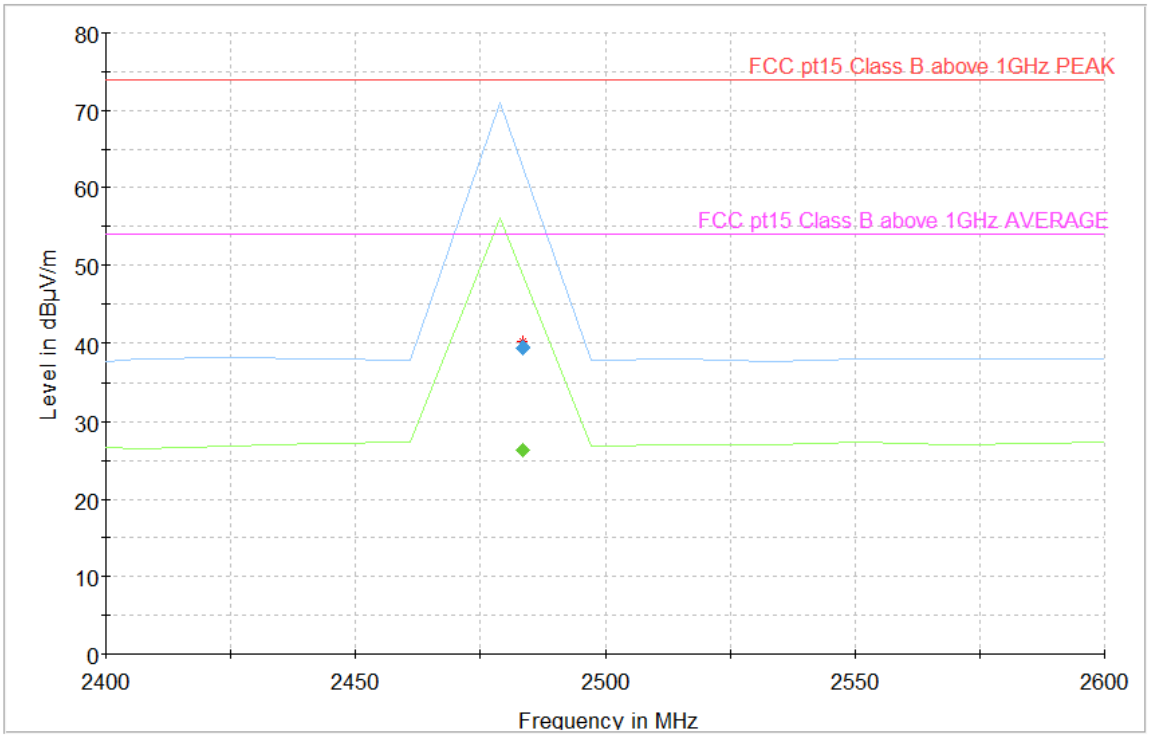


Band Edge – Top Channel 2483.5 MHz (continued)

Position 2

Frequency	Peak	CISPR Average	Limit	Margin	Height	Pol	Azimuth	Corr.	
MHz	dBµV/m	dBµV/m	dBµV/m	dB	cm	H/V	Deg	dB/m	Status
2483.50000	---	26.40	54.00	27.60	100.0	V	287.0	-6.8	Pass
2483.50000	39.42	---	74.00	34.58	155.0	V	157.0	-6.8	Pass

V = Vertical / H = Horizontal

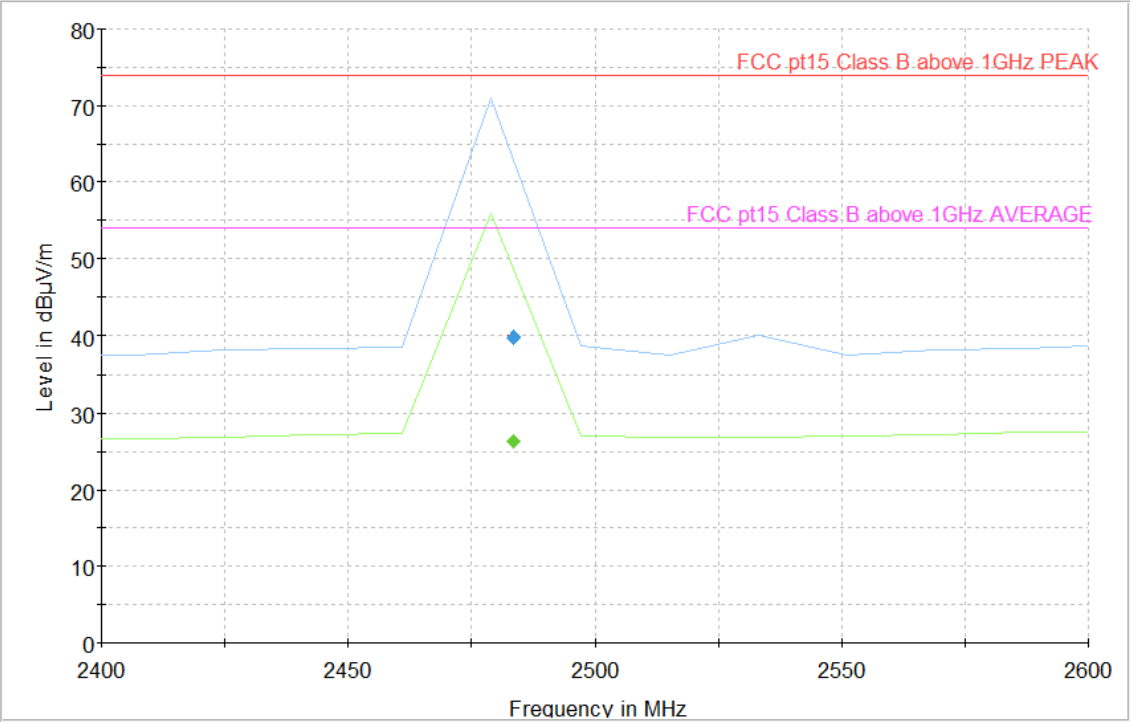


Band Edge – Top Channel 2483.5 MHz (continued)

Position 3

Frequency	Peak	CISPR Average	Limit	Margin	Height	Pol	Azimuth	Corr.	
MHz	dBµV/m	dBµV/m	dBµV/m	dB	cm	H/V	Deg	dB/m	Status
2483.50000	---	26.28	54.00	27.72	149.0	V	259.0	-6.8	Pass
2483.50000	39.79	---	74.00	34.21	211.0	V	217.0	-6.8	Pass

V = Vertical / H = Horizontal



5.0 ANTENNA PORT TESTS

Test	Clause	Limit / Requirement	Result
6dB bandwidth	15.247(a)(2)	> 500 kHz	Pass
Occupied bandwidth		None	Noted
Max peak conducted TX power	15.247(b)(3)	1 W	Pass
Power Spectral Density	15.247(e)	8dBm / 3 kHz	Pass
Out of Band Emissions Non-restricted bands: Radiated with antenna	15.247(d)	-20 dBc (peak power)	Pass
Out of Band Emissions Restricted-band: Radiated with antenna	15.247(d) / 15.205(a) and 15.209(a)	15.209(a) table	Pass
Max antenna gain	15.247(b)(4)	≤ 6dBi	Pass

Table 1: Summary of test results

5.1 Test equipment

Description	Manufacturer	Name	Serial Number	Calibration certificate
Spectrum Analyser	Rohde & Schwarz	ESCI7	#761	02/03/2023
Spectrum Analyser	Rohde & Schwarz	ESIB40	#651	27/11/2020

6.0 DTS BANDWIDTH

6.1 Measurement method

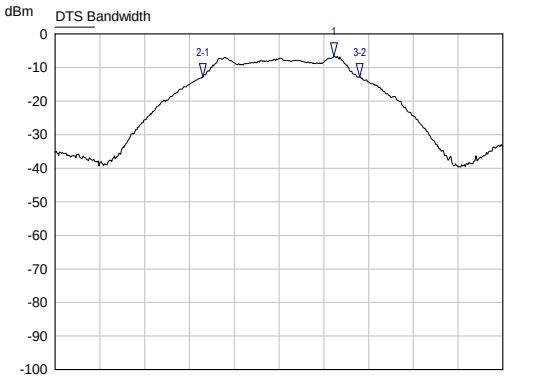
Test was conducted in accordance with ANSI C63.10 Clause 11.8:

a) Set resolution bandwidth to 100 kHz
b) Set the video bandwidth to ≥ 3 x RBW
c) Detector = Peak.
d) Trace mode = max hold.
e) Sweep = auto couple.
f) Allow the trace to stabilize.
g) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

6.1.1 Test results

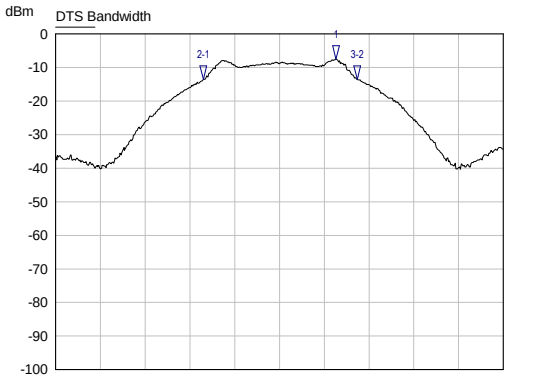
Channel	6dB DTS Bandwidth (kHz)	Requirement	Result
2402	700	> 500 kHz	Pass
2440	688	> 500 kHz	Pass
2480	684	> 500 kHz	Pass

Table 2: DTS Bandwidth



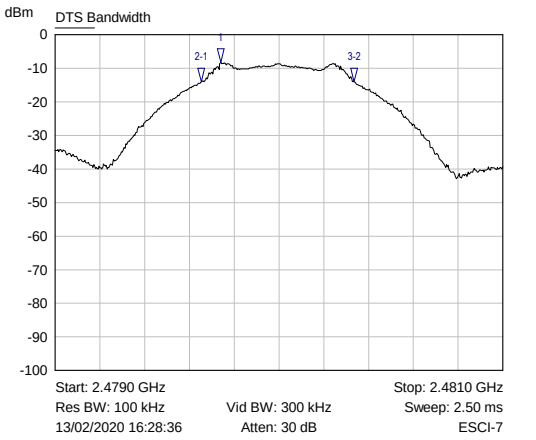
Mkr	Trace	X-Axis	Value	Notes
1	DTS Bandwidth	2.4022 GHz	-6.67 dBm	Peak
2-1	DTS Bandwidth	-584.0000 kHz	-6.14 dB	-6dB (left)
3-2	DTS Bandwidth	700.0000 kHz	0.05 dB	Relative to marker 2

2402



Mkr	Trace	X-Axis	Value	Notes
1	DTS Bandwidth	2.4403 GHz	-7.55 dBm	Peak
2-1	DTS Bandwidth	-592.0000 kHz	-5.98 dB	-6dB (left)
3-2	DTS Bandwidth	688.0000 kHz	0.01 dB	Relative to marker 2

2440



Mkr	Trace	X-Axis	Value	Notes
1	DTS Bandwidth	2.4797 GHz	-8.18 dBm	Peak
2-1	DTS Bandwidth	-88.0000 kHz	-5.82 dB	-6dB (left)
3-2	DTS Bandwidth	684.0000 kHz	0.05 dB	Relative to marker 2

2480

Figure 1: DTS Bandwidth plots

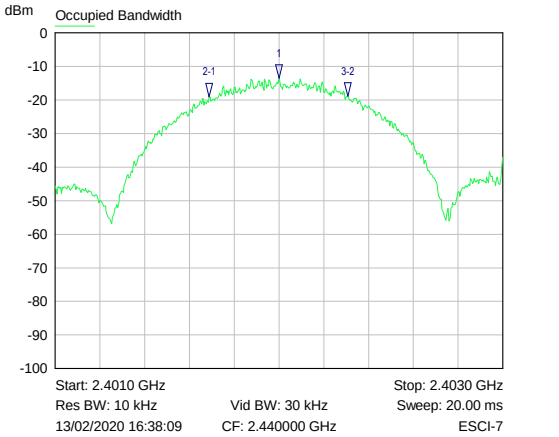
7.0 OCCUPIED BANDWIDTH

Test was conducted in accordance with ANSI C63-10 clause 6.9:

The 6dB occupied bandwidth measured using Softplot software relative markers

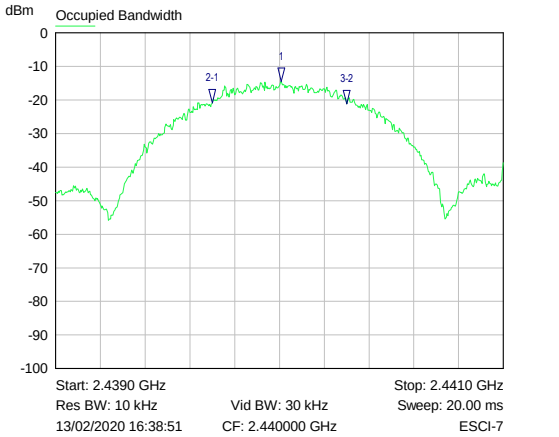
Channel	Occupied Bandwidth (kHz)	Requirement	Result
2402	620	None	For information
2440	600	None	For information
2480	532	None	For information

Table 3: Occupied Bandwidth



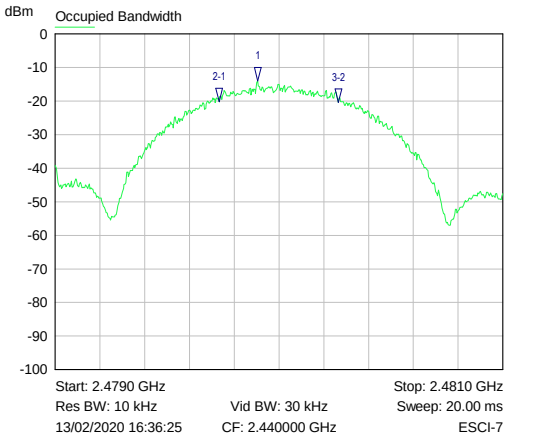
Mkr	Trace	X-Axis	Value	Notes
1	Occupied Bandwidth	2.4020 GHz	-13.51 dBm	Peak
2-1	Occupied Bandwidth	2.4017 GHz	-5.52 dB	-6 dB point
3-2	Occupied Bandwidth	620.0000 kHz	0.24 dB	-6dB bandwidth

TX1



Mkr	Trace	X-Axis	Value	Notes
1	Occupied Bandwidth	2.4400 GHz	-14.47 dBm	Peak
2-1	Occupied Bandwidth	2.4397 GHz	-6.44 dB	-6 dB point
3-2	Occupied Bandwidth	600.0000 kHz	-0.22 dB	-6dB bandwidth

TX2



Mkr	Trace	X-Axis	Value	Notes
1	Occupied Bandwidth	2.4799 GHz	-13.96 dBm	Peak
2-1	Occupied Bandwidth	2.4797 GHz	-6.19 dB	-6 dB point
3-2	Occupied Bandwidth	532.0000 kHz	-0.12 dB	-6dB bandwidth

TX3

Figure 2: Occupied Bandwidth

8.0 MAXIMUM PEAK CONDUCTED OUTPUT POWER

8.1 Measurement method

Test was conducted in accordance with ANSI C63-10 clause 11.9:

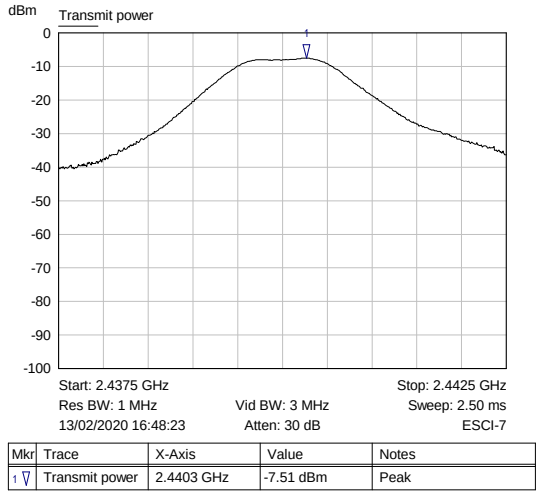
a) Set the RBW ≥ DTS bandwidth.
b) Set VBW ≥ 3 x RBW.
c) Set span ≥ 3 x RBW
d) Sweep time = auto couple.
e) Detector = peak.
f) Trace mode = max hold.
g) Allow trace to fully stabilize.
h) Use peak marker function to determine the peak amplitude level.

8.1.1 Test result

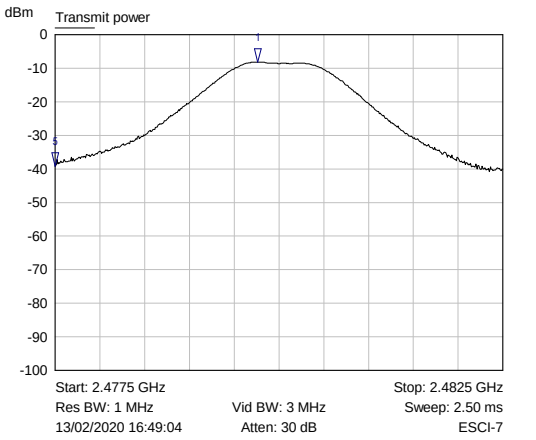
Channel (MHz)	Channel Power (dBm)	Limit (dBm)	Result
2402	-6.7	30.0	Pass
2440	-7.5	30.0	Pass
2480	-8.1	30.0	Pass

Table 4: R Power

2402



2440



Mkr	Trace	X-Axis	Value	Notes
1	Transmit power	2.4798 GHz	-8.09 dBm	Peak
5	Transmit power	2.4775 GHz	-39.15 dBm	

2480	

Figure 3: Peak Conducted Power plots

9.0 POWER SPECTRAL DENSITY

9.1 Measurement method

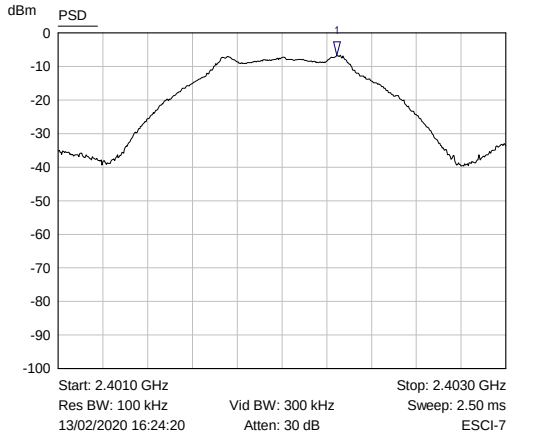
Test was conducted in accordance with ANSI C63.10 Clause 11.10.2:

a) Set analyzer center frequency to DTS channel center frequency.
b) Set the span to ≥ 1.5 x DTS bandwidth.
c) Set the RBW to: 3 kHz ≤ RBW ≤ 100 kHz.
d) Set the VBW ≥ 3 x RBW.
e) Detector = peak.
f) Sweep time = auto couple.
g) Trace mode = max hold.
h) Allow trace to fully stabilize.
i) Use the peak marker function to determine the maximum amplitude level within the RBW.
j) If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

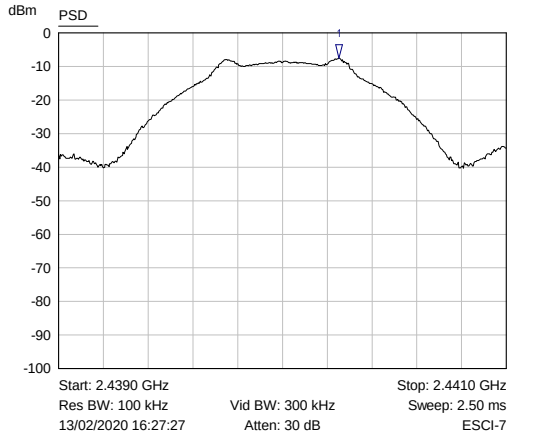
9.1.1 Test results

Channel	Power Spectral Density	Requirement	Result
2402	-6.67 dBm	< 8 dBm	Pass
2440	-7.55 dBm	< 8 dBm	Pass
2480	-8.18 dBm	< 8 dBm	Pass

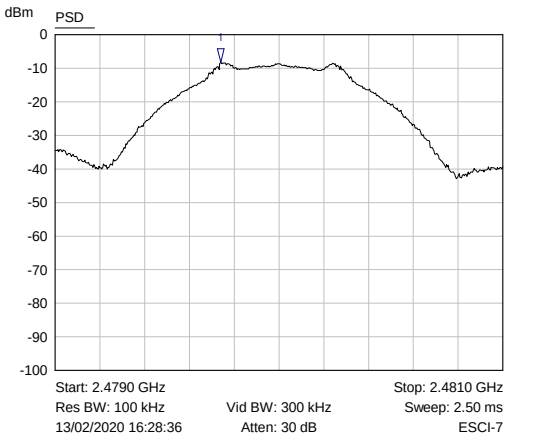
Table 5: DTS Bandwidth



2402



2440



Mkr	Trace	X-Axis	Value	Notes
1	PSD	2.4797 GHz	-8.18 dBm	Peak

2480

Figure 4: Power Spectral Density plots

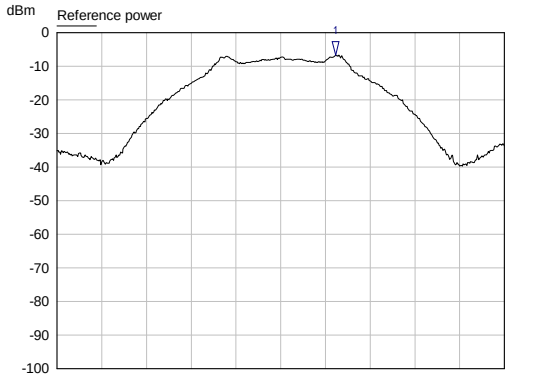
10.0 EMISSIONS IN NON-RESTRICTED BANDS

10.1 Measurement method – reference level

Test was conducted in accordance with ANSI C63-10 clause 11.11:

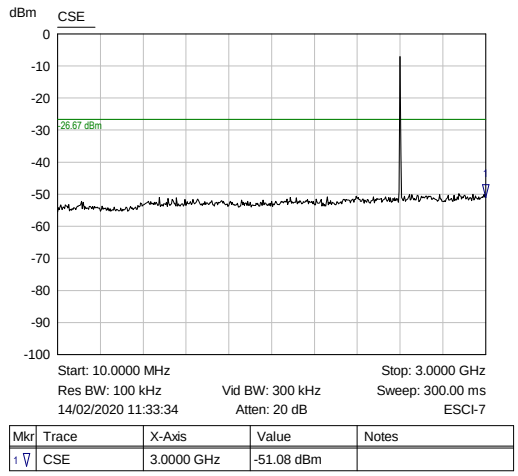
10.2 Test result – reference level

The highest emissions found was channel 2402



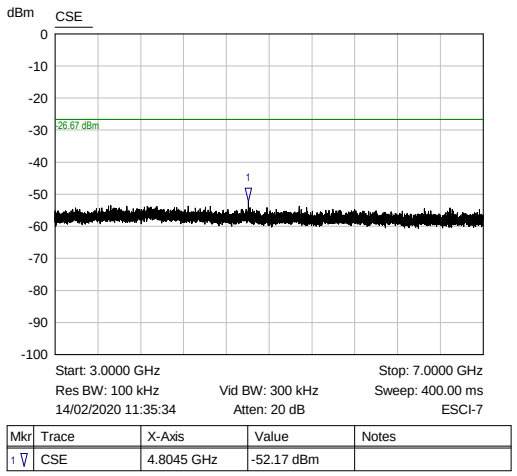
Mkr	Trace	X-Axis	Value	Notes
1	Reference power	2.4022 GHz	-6.67 dBm	Peak

2402



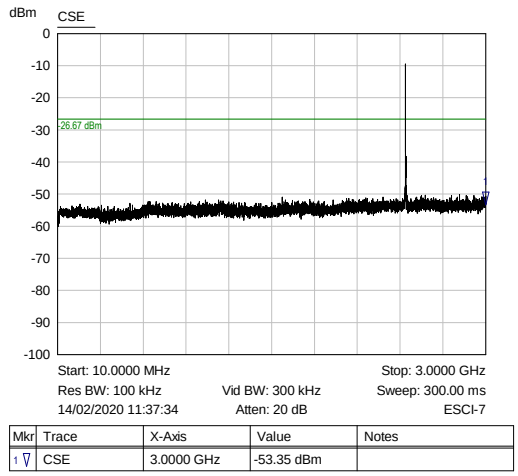
Mkr	Trace	X-Axis	Value	Notes
1	CSE	3.0000 GHz	-51.08 dBm	

2402: 10 – 3000 MHz



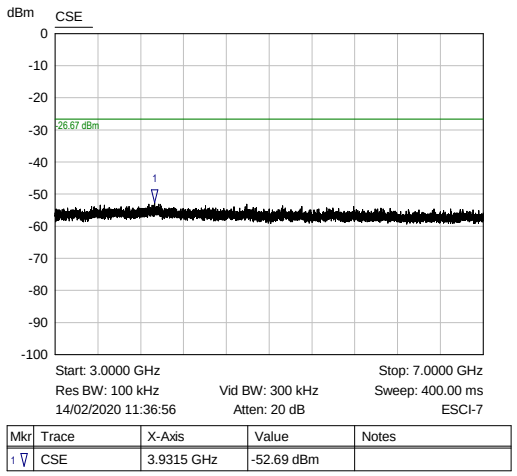
Mkr	Trace	X-Axis	Value	Notes
1	CSE	4.8045 GHz	-52.17 dBm	

2402: 3-7 GHz



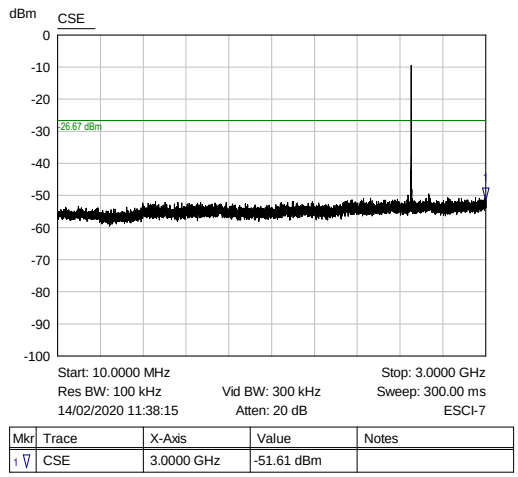
Mkr	Trace	X-Axis	Value	Notes
1	CSE	3.0000 GHz	-53.35 dBm	

2440: 10 – 3000 MHz



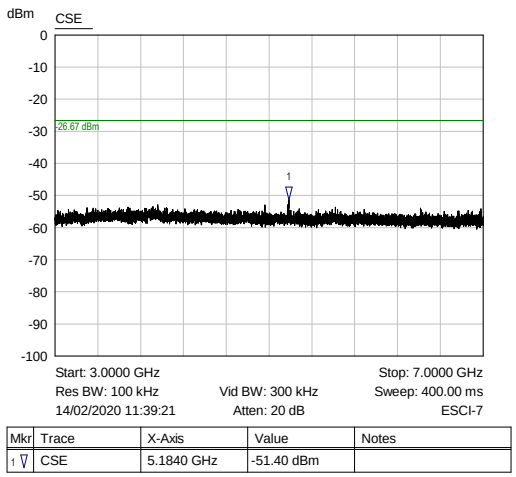
Mkr	Trace	X-Axis	Value	Notes
1	CSE	3.9315 GHz	-52.69 dBm	

2440: 3-7 GHz



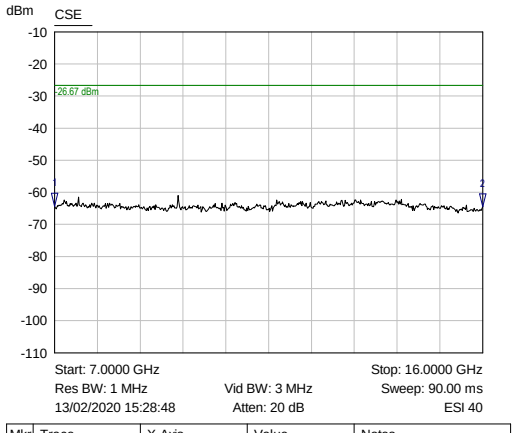
Mkr	Trace	X-Axis	Value	Notes
1	CSE	3.0000 GHz	-51.61 dBm	

2480: 10 – 3000 MHz



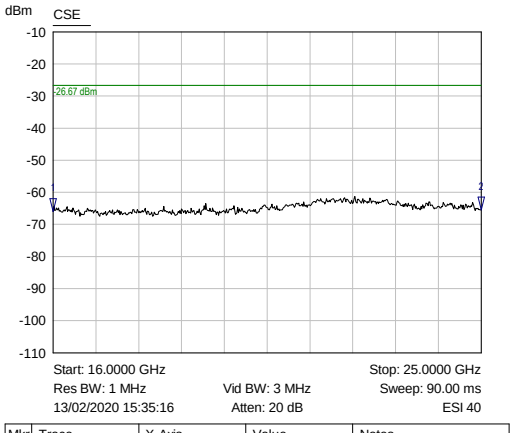
Mkr	Trace	X-Axis	Value	Notes
1	CSE	5.1840 GHz	-51.40 dBm	

2480: 3-7 GHz



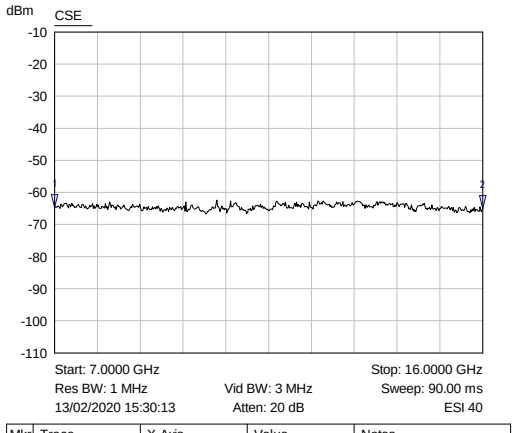
Mkr	Trace	X-Axis	Value	Notes
1	CSE	7.0000 GHz	-64.33 dBm	
2	CSE	16.0000 GHz	-64.43 dBm	

2402: 7-16 GHz



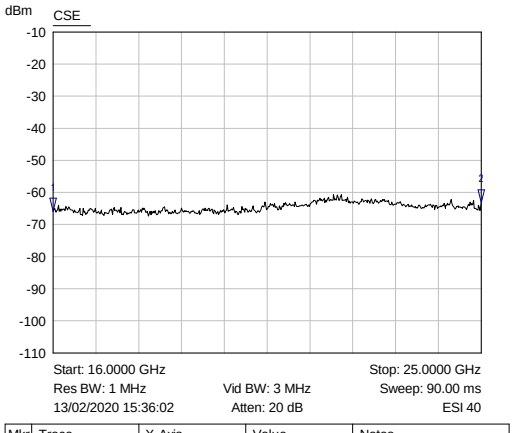
Mkr	Trace	X-Axis	Value	Notes
1	CSE	16.0000 GHz	-66.00 dBm	
2	CSE	25.0000 GHz	-65.47 dBm	

2402: 16-25 GHz



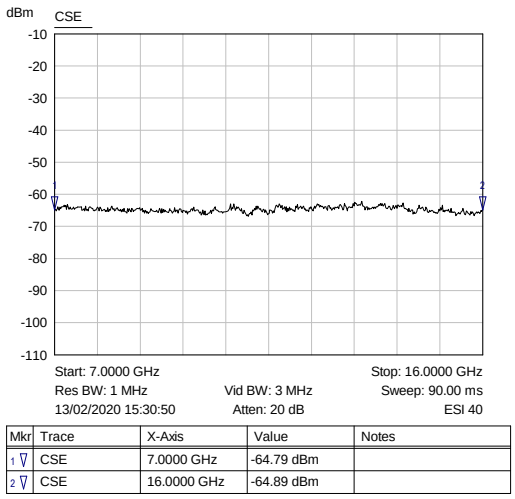
Mkr	Trace	X-Axis	Value	Notes
1	CSE	7.0000 GHz	-64.69 dBm	
2	CSE	16.0000 GHz	-65.04 dBm	

2440: 7-16 GHz



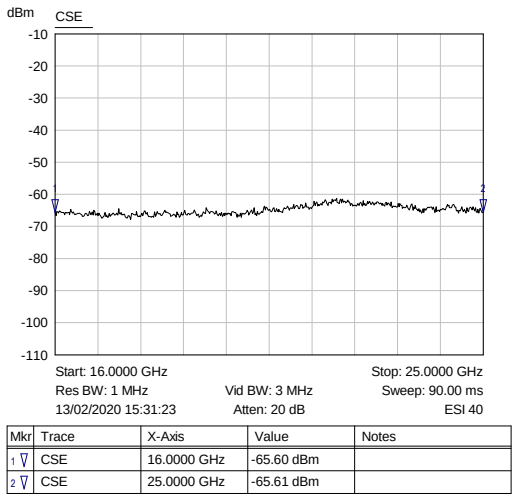
Mkr	Trace	X-Axis	Value	Notes
1	CSE	16.0000 GHz	-65.76 dBm	
2	CSE	25.0000 GHz	-63.19 dBm	

2440: 16-25 GHz



Mkr	Trace	X-Axis	Value	Notes
1	CSE	7.0000 GHz	-64.79 dBm	
2	CSE	16.0000 GHz	-64.89 dBm	

2480: 7-16 GHz



Mkr	Trace	X-Axis	Value	Notes
1	CSE	16.0000 GHz	-65.60 dBm	
2	CSE	25.0000 GHz	-65.61 dBm	

2480: 16-25 GHz

11.0 PHOTO LOG (EXAMPLES)

Emissions:

Radiated emissions; Idle Charging Mode

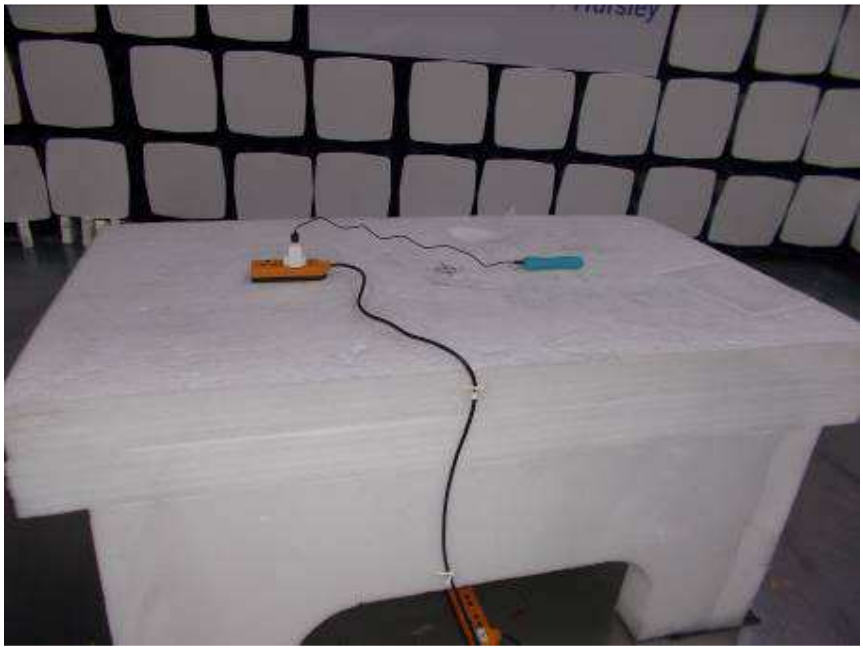


Photo Log Continued

Emissions:

Radiated emissions; Idle Mode

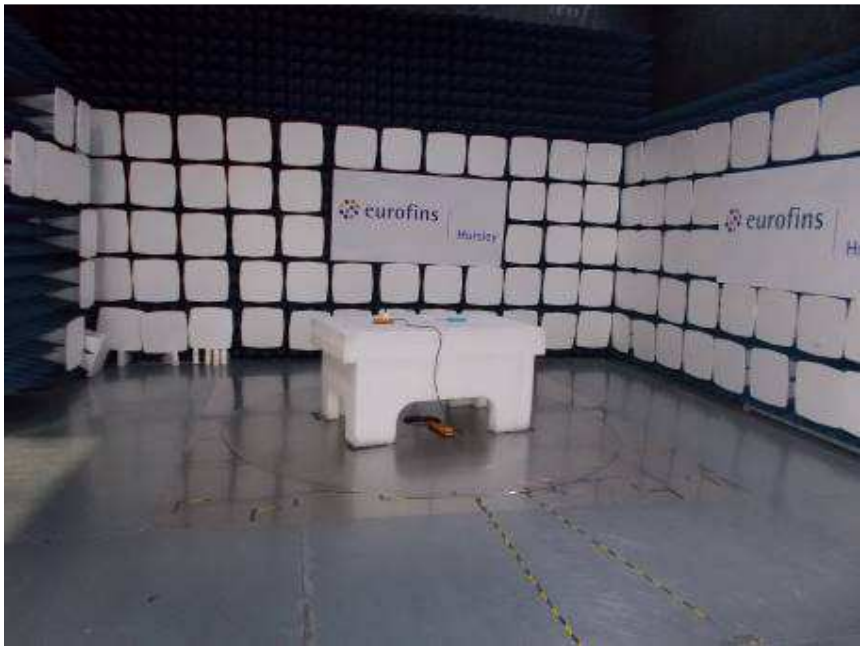


Photo Log Continued

Emissions:

Radiated emissions; Position 1 Mode

Photo Log Continued

Emissions:

Radiated emissions; Position 2 Mode

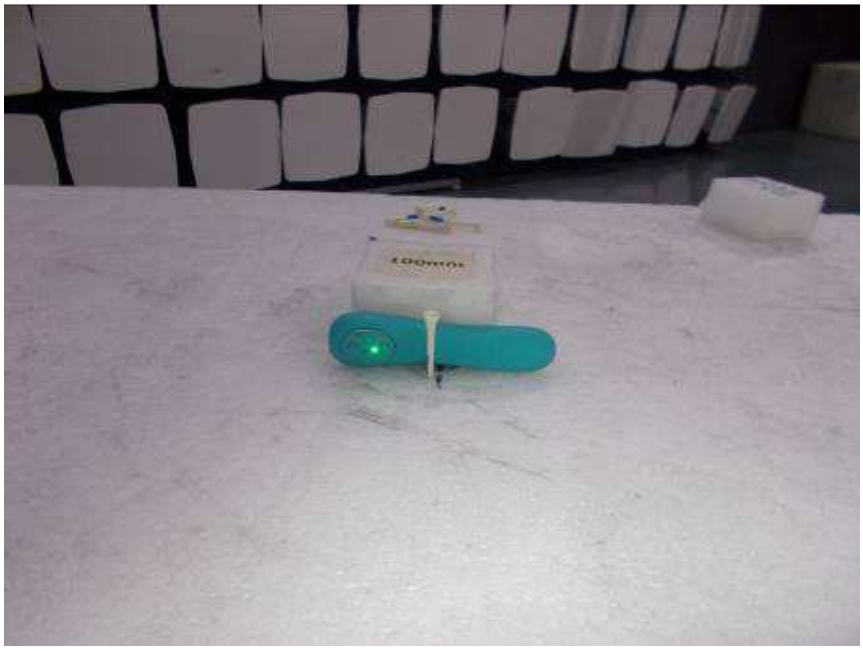
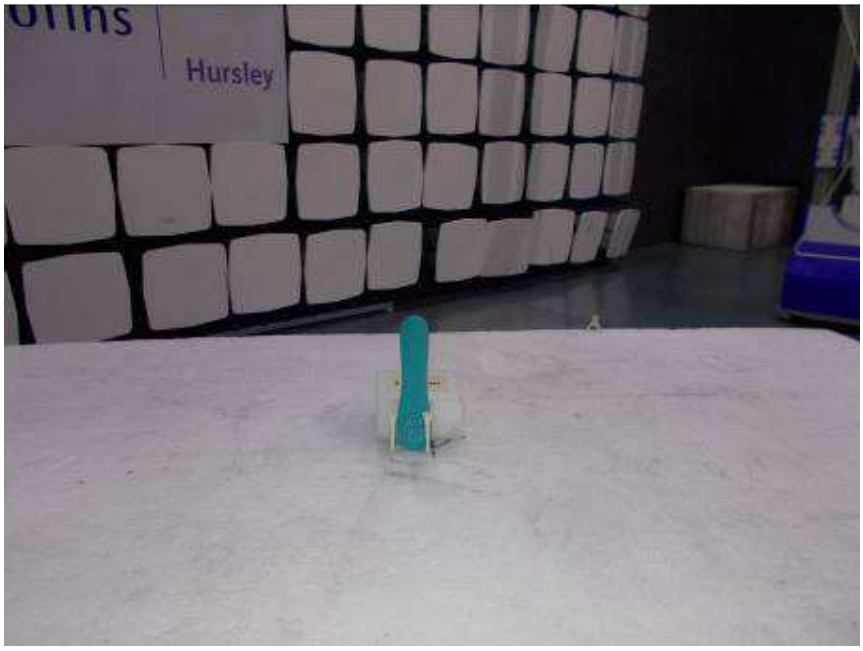


Photo Log Continued

Emissions:

Radiated emissions; Position 3 Mode



12.0 MEASUREMENT UNCERTAINTIES

Emissions tests

For all emissions tests, measurement uncertainties have been calculated in line with the requirements of CISPR 16-4-2 to give a confidence level of greater than 95%. In all cases the laboratories calculated uncertainty values (known as Ulab) are equal to or are less than the expected uncertainty values contained in CISPR 16-4-2 (known as Ucispr). Below is a list of the laboratories calculated measurement uncertainties:

Conducted emissions:

Via AMN/LISN:	±3.27 dB (9 kHz – 150 kHz), ±3.28 dB (150 kHz – 30 MHz)
Via AAN/ISN:	±4.99 dB (150 kHz – 30 MHz)
Via CVP:	±3.47 dB (150 kHz – 30 MHz)
Via CP:	±2.69 dB (150 kHz – 30 MHz)
Via 100 Ω:	±2.69 dB (150 kHz – 30 MHz)
Clicks:	±3.34 dB (150 kHz – 30 MHz)
Harmonics:	±5.82 % (100 Hz – 2 kHz)
Flicker:	±3.78 % (worst case for all parameters)

Radiated emissions:

H-Field:	±2.73 dB (9 kHz – 3 MHz), ±2.88 dB (3 MHz – 30 MHz)
D = 3.0 m (Horizontal):	±3.92 dB (30 MHz – 200 MHz), ±3.78 dB (200 MHz – 1 GHz)
D = 3.0 m (Vertical):	±3.74 dB (30 MHz – 200 MHz), ±5.06 dB (200 MHz – 1 GHz)
D = 3.0 m:	±4.50 dB (1 GHz – 6 GHz), ±4.04 dB (6 GHz – 18 GHz), ±4.27 dB (18 GHz – 40 GHz)
D = 10.0 m (Horizontal):	±4.53 dB (30 MHz – 200 MHz), ±4.61 dB (200 MHz – 1 GHz)
D = 10.0 m (Vertical):	±4.41 dB (30 MHz – 200 MHz), ±4.77 dB (200 MHz – 1 GHz)

End of document