



CERTIFICATION TEST REPORT

Report Number. : 4790716492-E4V1

Applicant : SAMSUNG ELECTRONICS CO., LTD.
129 SAMSUNG-RO, YEONGTONG-GU, SUWON-SI,
GYEONGGI-DO, 16677, KOREA

Model : SM-A145FB/DS

FCC ID : A3LSMA145F

EUT Description : GSM/WCDMA/LTE Phone + BT/BLE, DTS/UNII a/b/g/n/ac.

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

Date Of Issue:

2023-02-07

Prepared by:

UL Korea, Ltd.

26th floor, 152, Teheran-ro, Gangnam-gu Seoul, 06236, Korea

Suwon Test Site: UL Korea, Ltd. Suwon Laboratory

218 Maeyeong-ro, Yeongtong-gu,
Suwon-si, Gyeonggi-do, 16675, Korea

TEL: (031) 337-9902

FAX: (031) 213-5433



ACCREDITED™

Testing Laboratory

TL-637

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: SAMSUNG ELECTRONICS CO., LTD.
EUT DESCRIPTION: GSM/WCDMA/LTE Phone + BT/BLE, DTS/UNII a/b/g/n/ac.
MODEL NUMBER: SM-A145FB/DS
SERIAL NUMBER: R38T90084BB, R38T90083YX (CONDUCTED)
R38T90076XE, R38T90085AH, R38T90083KP (RADIATED)
DATE TESTED: 2023-01-27 ~ 2023-02-07

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 Part 15 Subpart C	Complies

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

Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL Korea, Ltd. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Korea, Ltd. 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 IAS, any agency of the Federal Government, or any agency of any government.

Approved & Released For
UL Korea, Ltd. By:



Seokhwan Hong
Suwon Lab Engineer
UL Korea, Ltd.

Tested By:



Yeonhee Lim
Suwon Lab Engineer
UL Korea, Ltd.

2. TEST METHODOLOGY

1. FCC CFR 47 Part 2.
2. FCC CFR 47 Part 15.
3. KDB 558074 D01 15.247 Meas Guidance v05r02.
4. ANSI C63.10-2013.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 218 Maeyeong-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16675, Korea. Line conducted emissions are measured only at the 218 address. The following table identifies which facilities were utilized for radiated emission measurements documented in this report. Specific facilities are also identified in the test results sections.

218 Maeyeong-ro	
<input checked="" type="checkbox"/>	Chamber 1(3m semi-anechoic chamber)
<input checked="" type="checkbox"/>	Chamber 2(3m semi-anechoic chamber)
<input checked="" type="checkbox"/>	Chamber 3(3m semi-anechoic chamber)
<input type="checkbox"/>	Chamber 4(3m Full-anechoic chamber)
<input type="checkbox"/>	Chamber 5(3m Full-anechoic chamber)

UL Korea, Ltd. is accredited by IAS, Laboratory Code TL-637. The full scope of accreditation can be viewed at <https://www.iasonline.org/wp-content/uploads/2017/05/TL-637-cert-New.pdf>.

4. DECISION RULES AND MEASUREMENT UNCERTAINTY

4.1. METROLOGICAL TRACEABILITY

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

4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

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

$$\begin{aligned} \text{AC Corrected Reading (dBuV)} &= \text{Measured Voltage (dBuV)} + \text{Extension Cord} \\ &\text{Loss (dB)} + \text{Cable Loss (dB)} \\ 44.72 \text{ dBuV} &= 34.72 \text{ dBuV} + 9.9 \text{ dB} + 0.1 \text{ dB} \end{aligned}$$

4.3. MEASUREMENT UNCERTAINTY

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

PARAMETER	UNCERTAINTY
Conducted Disturbance, 0.15 to 30 MHz	2.80 dB
Radiated Disturbance, 30 MHz to 1 GHz	3.92 dB
Radiated Disturbance, 1 GHz to 18 GHz	5.06 dB
Radiated Disturbance, 18 GHz to 40 GHz	6.02 dB

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

4.4. DECISION RULES

Decision rule for statement(s) of conformity is based on Procedure 2, Clause 4.4.3 in IEC Guide 115:2021.

5. EQUIPMENT UNDER TEST

5.1. EUT DESCRIPTION

The EUT is a GSM/WCDMA/LTE Phone + BT/BLE, DTS/UNII a/b/g/n/ac.
This test report addresses the DTS (BLE) operational mode.

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum peak conducted output power as follows:

Frequency Range[MHz]	Mode	Power Mode	Output Power [dBm]	Output Power [mW]
2 402 ~ 2 480	500kbps (37pkt)	Peak	5.980	3.963
		Average	5.288	3.379
	2Mbps (255pkt)	Peak	5.940	3.926
		Average	5.125	3.254

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

An intentional radiator antenna shall be designed to ensure that no antenna other than that furnished by the responsible party can be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.

**The internal antenna was Permanently attached.
Therefore this E.U.T Complies with the requirement of §15.203.**

The radio utilizes an internal antennas, with ANT maximum gain of -4.51 dBi.

5.4. WORST-CASE CONFIGURATION AND MODE

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

Radiated emission above 1GHz was performed with the EUT set to transmit low/mid/high channels.

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

Note : All radiated and power line conducted tests were performed attached with travel adapter for the worst case condition mode.

Power verification

The Output Power of all data rate are all investigated, the 500 kbps(37 pkt) and 2 Mbps(255 pkt) power is the worst case for symbol rate. All tests were performed in these two modes.

Symbol Rate [Ms/s]	Mode	Freq. [MHz]	Conducted Burst Avg [dBm]	Symbol Rate [Ms/s]	Mode	Freq. [MHz]	Conducted Burst Avg [dBm]
1	1Mbps 37pkt	2402	4.732	2	2Mbps 37pkt	2402	4.495
		2440	5.228			2440	5.000
		2480	5.246			2480	5.023
	1Mbps 255pkt	2402	4.751		2Mbps 255pkt	2402	4.593
		2440	5.251			2440	5.094
		2480	5.284			2480	5.125
1 Coded S=8	125kbps 37pkt	2402	4.746	1 Coded S=2	500kbps 37pkt	2402	4.787
		2440	5.241			2440	5.258
		2480	5.259			2480	5.288
	125kbps 255pkt	2402	4.735		500kbps 255pkt	2402	4.775
		2440	5.217			2440	5.245
		2480	5.251			2480	5.282

5.5. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacture	Model	Serial Number	FCC ID
Charger	SAMSUNG	EP-TA200	R37NS8Q7J35DK3	N/A
Data Cable	SAMSUNG	EP-DR140AWE	GH39-02134A	N/A
Charger	SAMSUNG	EP-TA800	R37T2H82D29SEA	N/A
Data Cable	SAMSUNG	EP-DN980BWE	GH39-02115A	N/A
Earphone	SAMSUNG	EHS61ASFBE	GH59-15063A	N/A

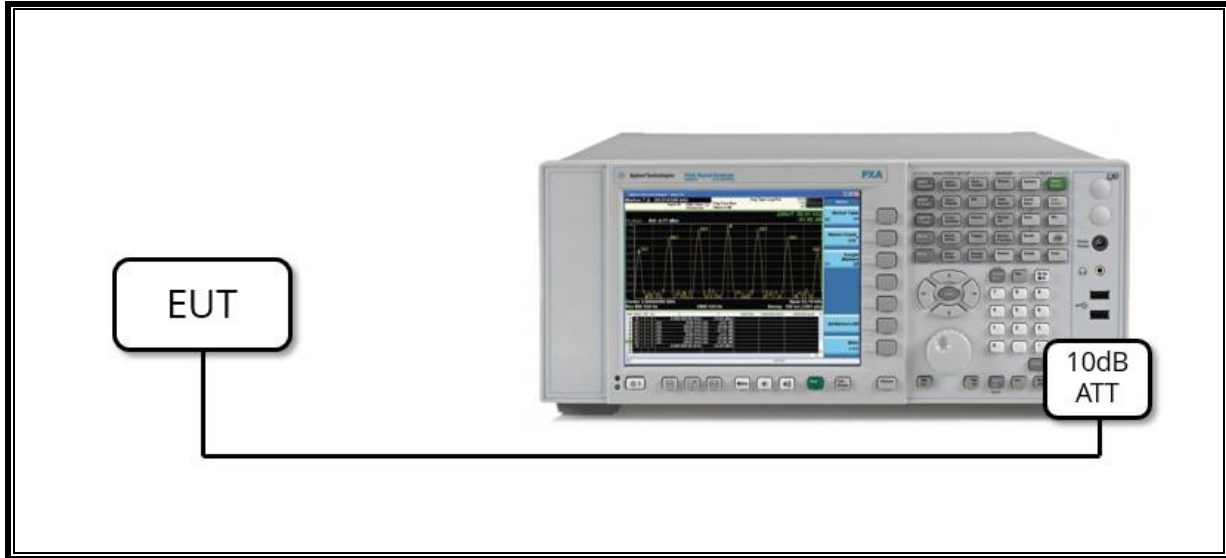
I/O CABLE

I/O Cable List						
Cable No.	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	DC Power	1	C Type	Shielded	1.0 m	N/A
2	Audio	2	Mini-jack	Unshielded	0.7 m	N/A

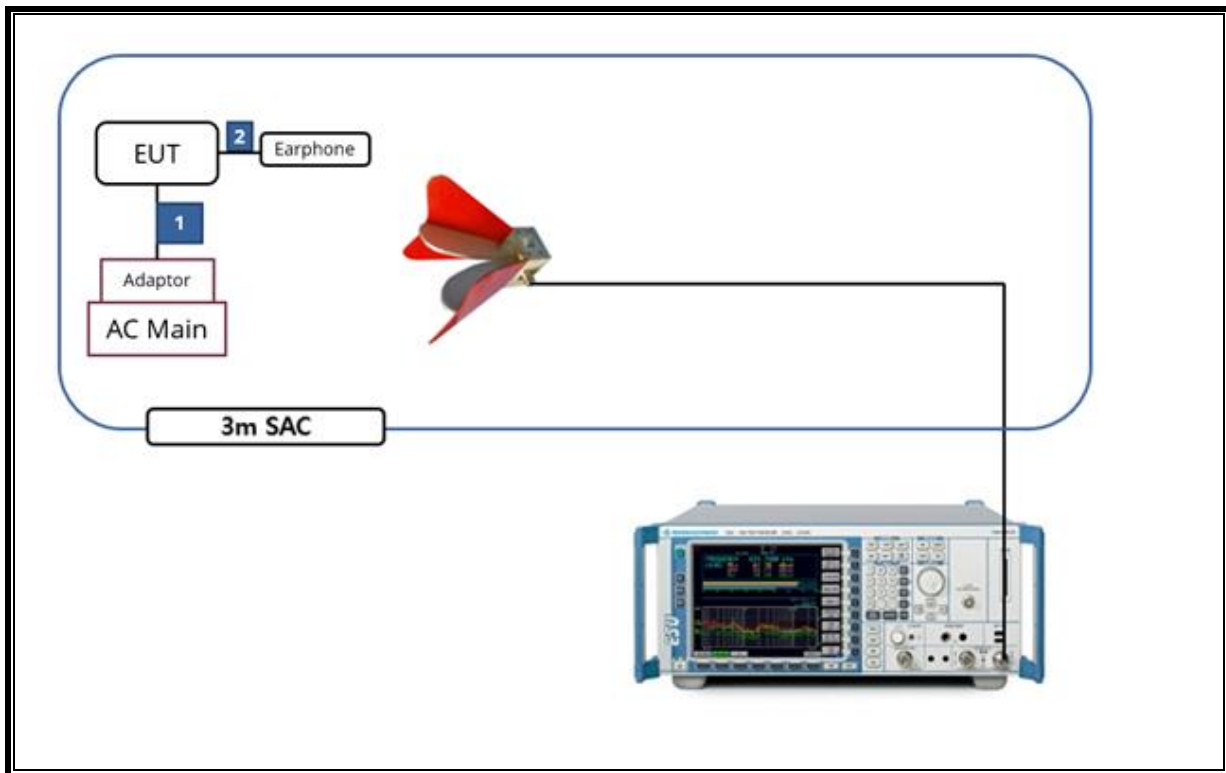
TEST SETUP

The EUT is a stand-alone unit during the tests.
 Test software in hidden menu exercised the EUT to enable BLE mode.

SETUP DIAGRAM FOR TESTS (CONDUCTED TEST SETUP)



SETUP DIAGRAM FOR TESTS (RADIATED TEST SETUP)



6. MEASUREMENT METHOD

6 dB BW : ANSI C63.10-2013, Section 11.8.2 Option 2

OUTPUT POWER : ANSI C63.10-2013, Section 11.9.1.1 RBW \geq DTS bandwidth

POWER SPECTRAL DENSITY : ANSI C63.10-2013, Section 11.10.2 Method PKPSD (peak PSD)

Out-of-band Emissions (Conducted) : ANSI C63.10-2013, Section 11.11 Emissions in nonrestricted frequency bands

Out-of-band Emissions in Non-restricted Bands: ANSI C63.10-2013, Section 11.11 Emissions in nonrestricted frequency bands

Out-of-band Emissions in Restricted Bands : ANSI C63.10-2013, Section 11.12 Emissions in restricted frequency bands

AC Power Line Conducted Emission : ANSI C63.10-2013, Section 6.2

7. 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	S/N	Cal Due
Antenna, Bilog, 30MHz-1GHz	SCHWARZBECK	VULB9163	750	2024-08-15
Antenna, Bilog, 30MHz-1GHz	SCHWARZBECK	VULB9163	749	2024-08-15
Antenna, Bilog, 30MHz-1GHz	SCHWARZBECK	VULB9163	845	2024-08-15
Antenna, Horn, 18 GHz	ETS	3115	00167211	2024-08-04
Antenna, Horn, 18 GHz	ETS	3115	00161451	2024-08-21
Antenna, Horn, 18 GHz	ETS	3117	00168724	2024-08-04
Antenna, Horn, 18 GHz	ETS	3117	00168717	2024-08-21
Antenna, Horn, 40 GHz	ETS	3116C	00166155	2024-08-02
Preamplifier	ETS	3116C-PA	00168841	2023-08-04
Preamplifier, 1000 MHz	Sonoma	310N	341282	2023-08-02
Preamplifier, 1000 MHz	Sonoma	310N	351741	2023-08-02
Preamplifier, 18 GHz	Miteq	AFS42-00101800-25-S-42	1876511	2023-08-02
Preamplifier, 18 GHz	Miteq	AFS42-00101800-25-S-42	1896138	2023-08-01
Preamplifier, 18 GHz	Miteq	AFS42-00101800-25-S-42	2029169	2023-08-01
Spectrum Analyzer, 44 GHz	Agilent / HP	N9030A	MY54170614	2023-08-03
Spectrum Analyzer, 44 GHz	Agilent / HP	N9030A	MY54490312	2023-08-01
Spectrum Analyzer, 44 GHz	KEYSIGHT	N9030B	MY60070693	2024-01-09
Spectrum Analyzer, 44 GHz	KEYSIGHT	N9040B	MY60080268	2024-01-09
Average Power Sensor	Agilent / HP	U2000A	MY54270007	2023-08-03
Average Power Sensor	Agilent / HP	U2000A	MY54260010	2023-08-03
Attenuator	PASTERNAK	PE7087-10	A001	2023-08-03
Attenuator	PASTERNAK	PE7087-10	A008	2023-08-03
Attenuator	PASTERNAK	PE7004-10	2	2023-08-01
Attenuator	PASTERNAK	PE7087-10	A009	2023-08-03
EMI Test Receive, 40 GHz	R&S	ESU40	100439	2023-08-02
EMI Test Receive, 40 GHz	R&S	ESU40	100457	2023-07-29
EMI Test Receive, 3 GHz	R&S	ESR3	101832	2023-08-01
Low Pass Filter 5GHz	Micro-Tronics	LPS17541	009	2023-08-02
Low Pass Filter 5GHz	Micro-Tronics	LPS17541	015	2023-08-01
Low Pass Filter 5GHz	Micro-Tronics	LPS17541	020	2023-08-01
High Pass Filter 3GHz	Micro-Tronics	HPM17543	010	2023-08-02
High Pass Filter 3GHz	Micro-Tronics	HPM17543	020	2023-08-01
High Pass Filter 6GHz	Micro-Tronics	HPS17542	009	2023-08-02
High Pass Filter 6GHz	Micro-Tronics	HPS17542	021	2023-08-01
LISN	R&S	ENV-216	101837	2023-08-04
Antenna, Loop, 9kHz-30MHz	R&S	HFH2-Z2	100418	2023-10-06
UL Software				
Description	Manufacturer	Model	Version	
Radiated software	UL	UL EMC	Ver 9.5	
AC Line Conducted software	UL	UL EMC	Ver 9.5	

8. TEST RESULTS SUMMARY

FCC Part Section	Test Description	Test Limit	Test Condition	Test Result
15.247 (a)(2)	Occupied Bandwidth(6dB)	> 500kHz	Conducted	Complies
2.1051, 15.247(d)	Band Edge / Conducted Spurious Emission	-20 dBc		Complies
15.247 (b)(3)	TX conducted output power	< 30 dBm		Complies
15.247(e)	PSD	< 8 dBm/3kHz		Complies
15.207(a)	AC Power Line conducted emissions	Section 11	Power Line conducted	Complies
15.205, 15.209	Radiated Spurious Emission	< 54dBuV/m(Av)	Radiated	Complies

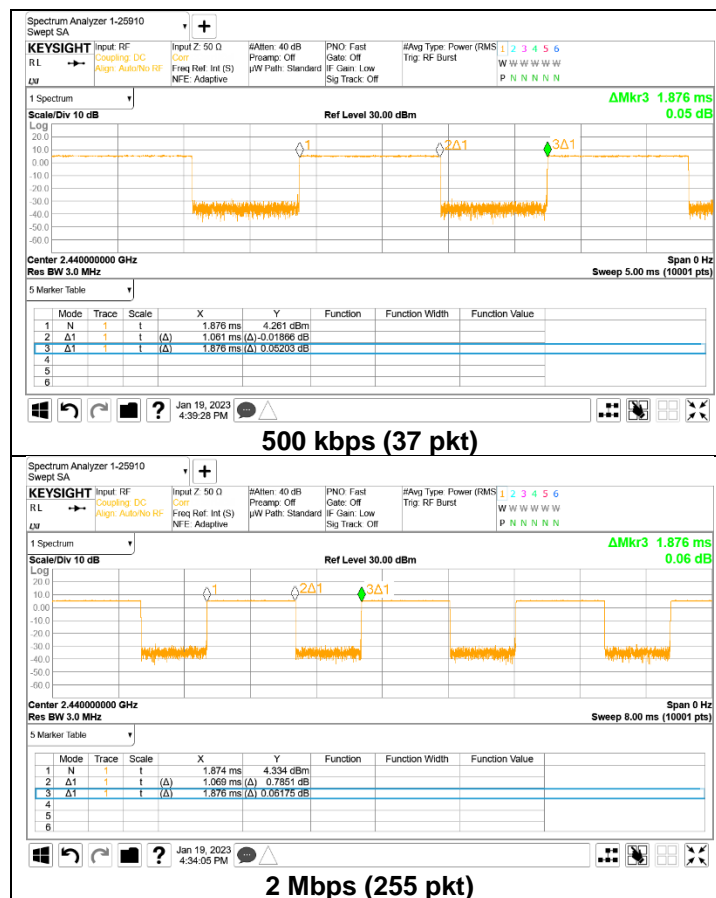
9. ANTENNA PORT TEST RESULTS

9.1. ON TIME AND DUTY CYCLE

LIMITS

None; for reporting purposes only.

Mode	On time [msec]	Period [msec]	Duty cycle x [Linear]	Duty Cycle [%]	Duty Cycle Correction Factor [dB]	1/T Minimum VBW [kHz]
2 400 ~ 2 483.5 MHz Bands						
500 kbps [37pkt]	1.061	1.876	0.566	56.557	2.475	0.943
2 Mbps [255pkt]	1.069	1.876	0.570	56.983	2.443	0.935



9.2. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

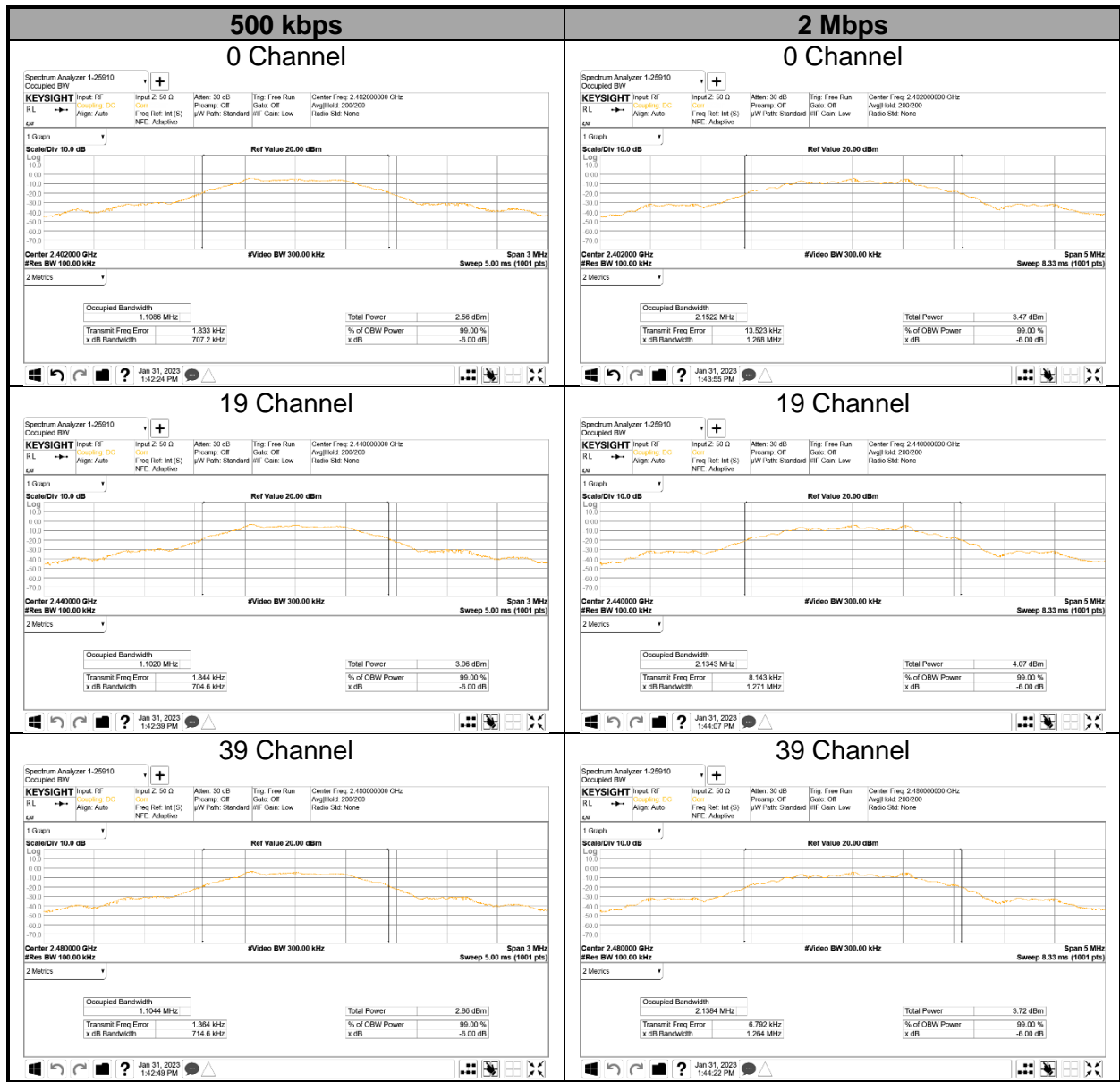
The minimum 6 dB bandwidth shall be at least 500 kHz.

RESULTS

9.2.1. Test data

Mode	Channel	Frequency [MHz]	6 dB Bandwidth [kHz]	Minimum Limit [kHz]
500kbps (37pkt)	0	2 402	707.2	500.0
	19	2 440	704.6	500.0
	39	2 480	714.6	500.0
2Mbps (255pkt)	0	2 402	1 268.0	500.0
	19	2 440	1 271.0	500.0
	39	2 480	1 264.0	500.0
Worst			704.6	500.0

9.2.2. 6 dB BANDWIDTH PLOTS



9.3. OUTPUT POWER

LIMITS

FCC §15.247 (b) (3)

The maximum antenna gain is less than or equal to 6 dBi, therefore the limit is 30 dBm.

TEST PROCEDURE

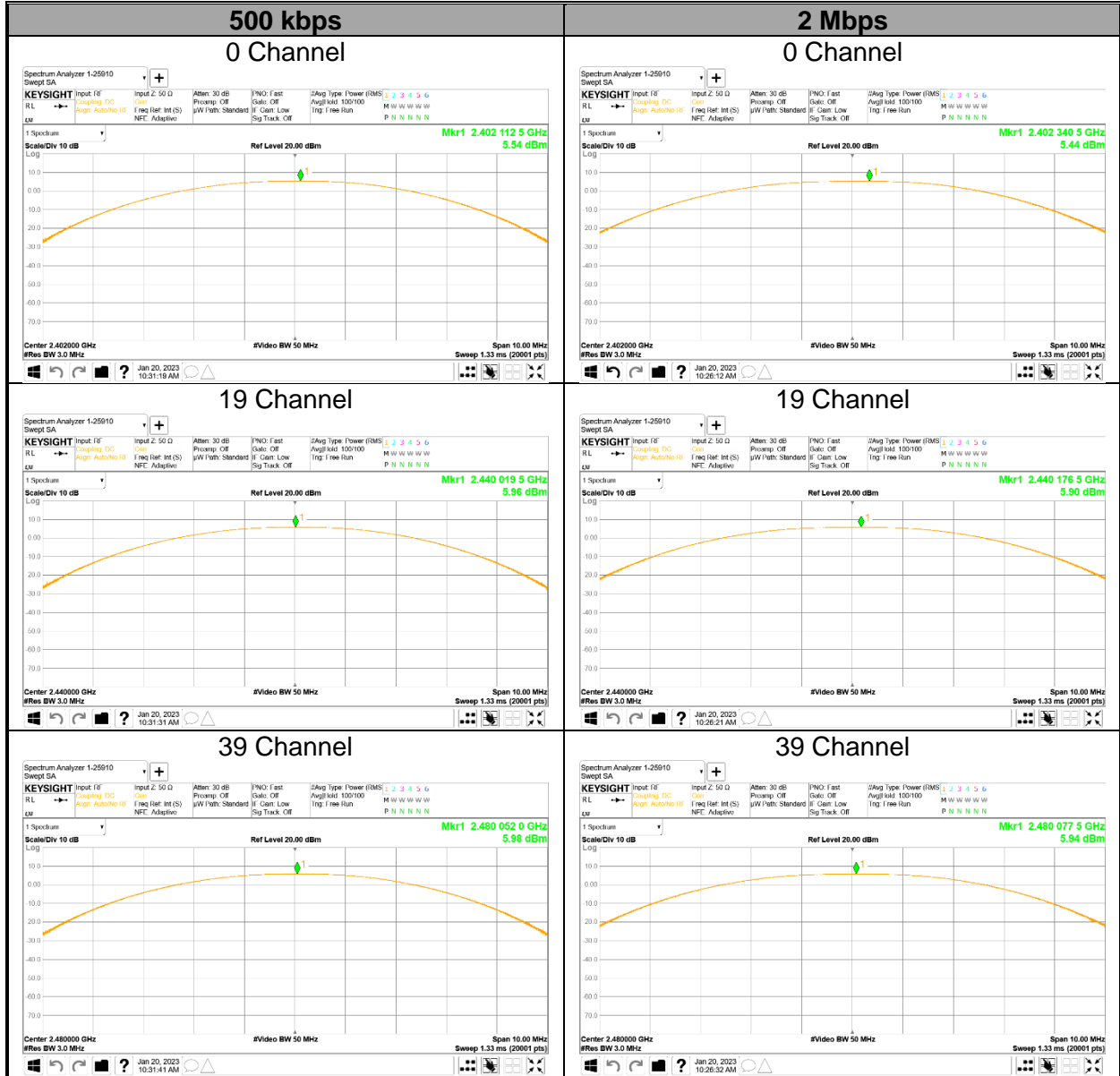
Peak power is measured using ANSI C63.10(2013) under section 11.9.1.1 utilizing spectrum analyzer(RBW \cong DTS bandwidth).

RESULTS

9.3.1. Test data

Mode	Channel	Frequency [MHz]	Peak Output Power [dBm]	Limit [dBm]	Margin [dB]	
500 kbps (37 pkt)	0	2 402	5.540	30.000	-24.460	
	19	2 440	5.960		-24.040	
	39	2 480	5.980		-24.020	
2 Mbps (255 pkt)	0	2 402	5.440		-24.560	
	19	2 440	5.900		-24.100	
	39	2 480	5.940		-24.060	
Worst			5.980			-24.020

9.3.2. PEAK POWER PLOTS



9.4. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband RF frame average power sensor. The cable assembly insertion loss and duty cycle correction factor were entered as an offset in the power meter to allow for direct reading of power.

RESULTS

9.4.1. Test data

Mode	Channel	Frequency [MHz]	Average Output Power [dBm]	Average Output Power [mW]
500 kbps (37pkt)	0	2 402	4.787	3.011
	19	2 440	5.258	3.356
	39	2 480	5.288	3.379
2 Mbps (255pkt)	0	2 402	4.593	2.879
	19	2 440	5.094	3.231
	39	2 480	5.125	3.254

9.5. POWER SPECTRAL DENSITY

LIMITS

FCC §15.247 (e)

The power spectral density conducted from the transmitter to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

TEST PROCEDURE

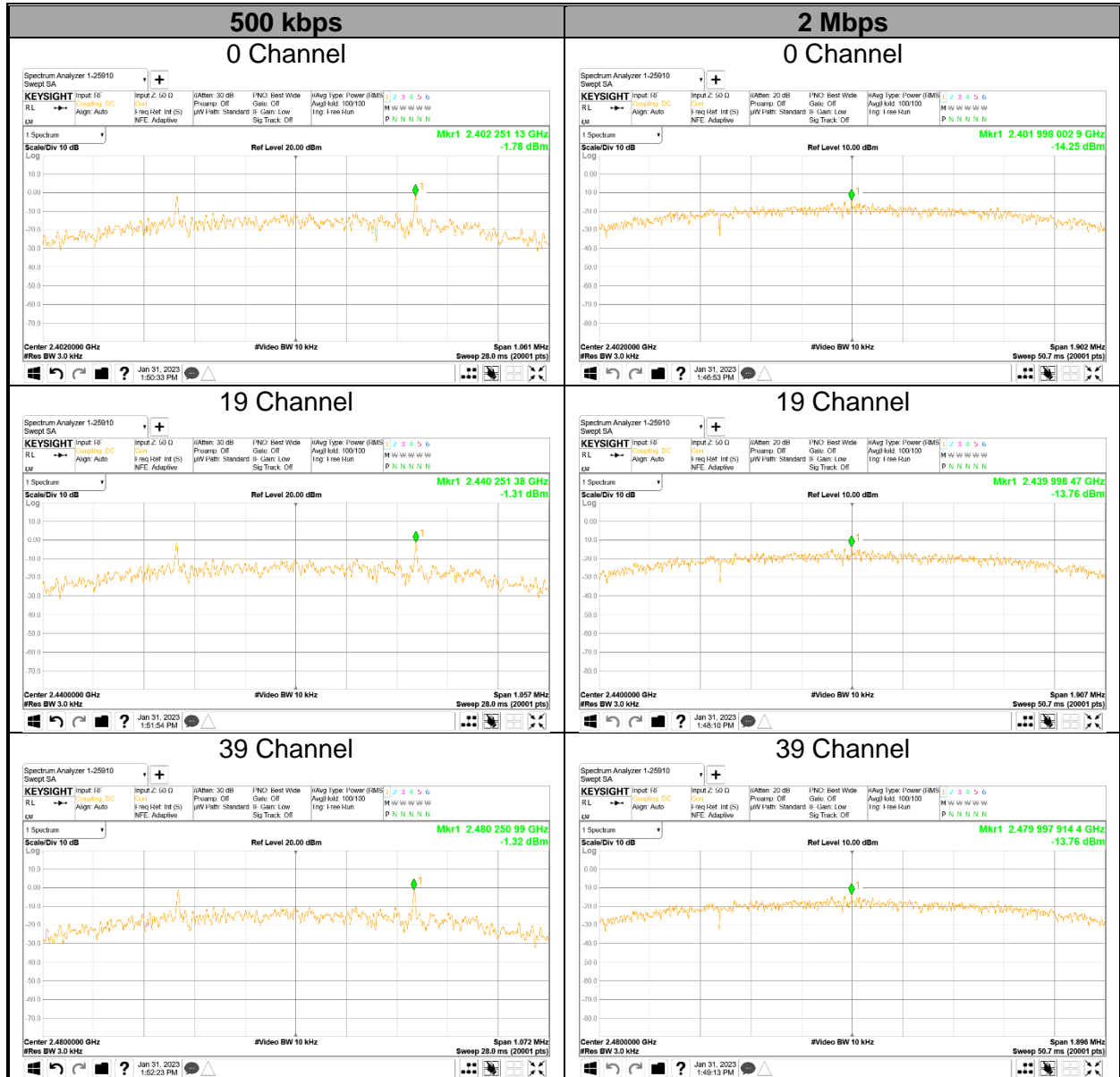
ANSI C63.10-2013, Section 11.10.2 Method PKPSD (peak PSD)

RESULTS

9.5.1. Test data

Mode	Channel	Frequency [MHz]	PSD [dBm/3kHz]	Limit [dBm/3kHz]	Margin [dB]
500 kbps (37pkt)	0	2 402	-1.78	8.00	-9.78
	19	2 440	-1.31		-9.31
	39	2 480	-1.32		-9.32
2 Mbps (255pkt)	0	2 402	-14.25		-22.25
	19	2 440	-13.76		-21.76
	39	2 480	-13.76		-21.76
Worst			-1.31	-9.31	

9.5.2. PSD TEST PLOTS



9.6. CONDUCTED SPURIOUS EMISSIONS

LIMITS

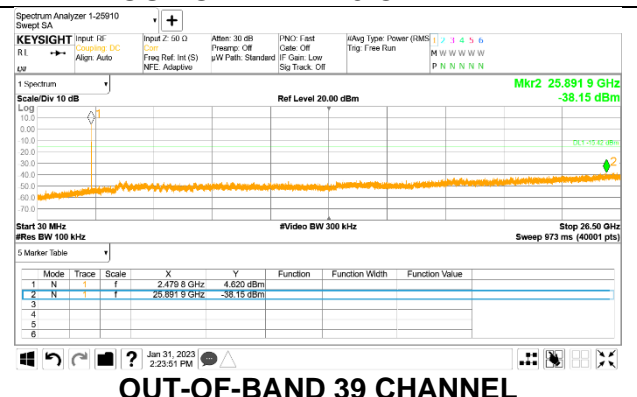
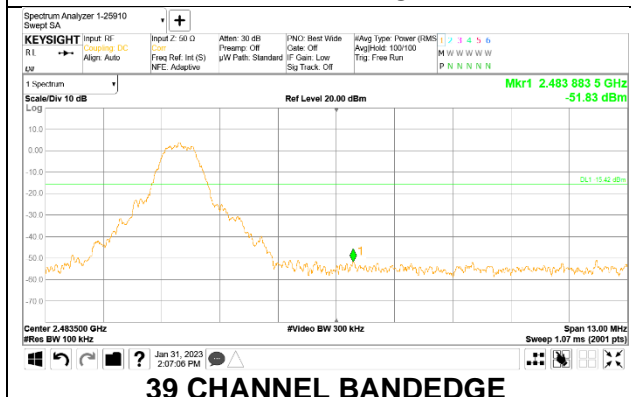
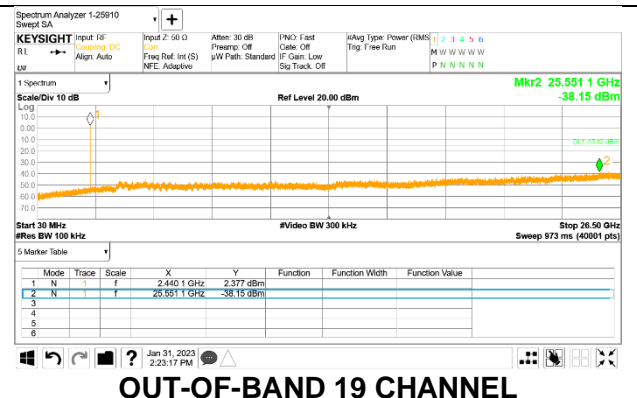
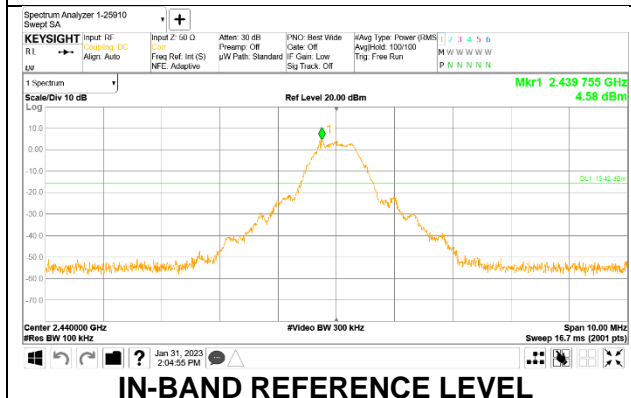
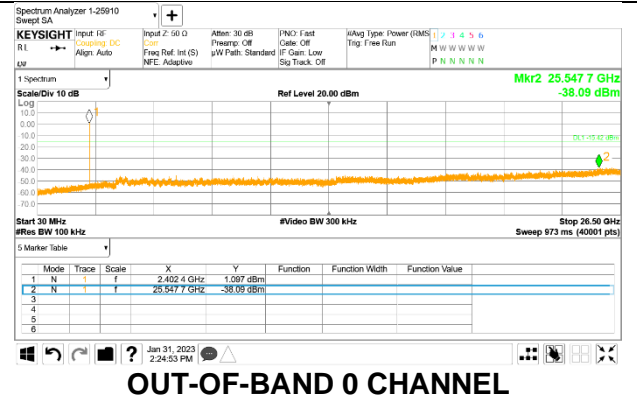
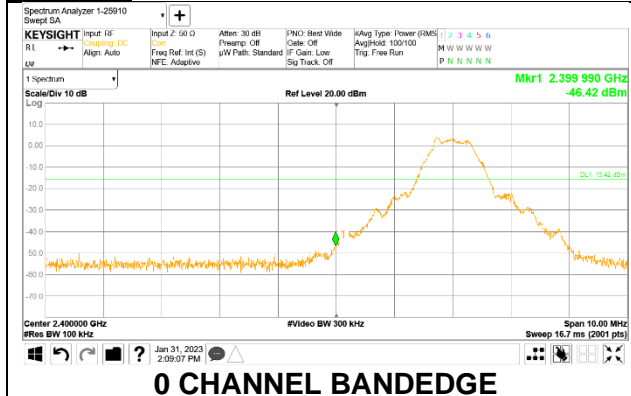
FCC §15.247 (d)

Output power was measured based on the use of a peak measurement.
Therefore, spurious emissions are required to be 20 dBc.

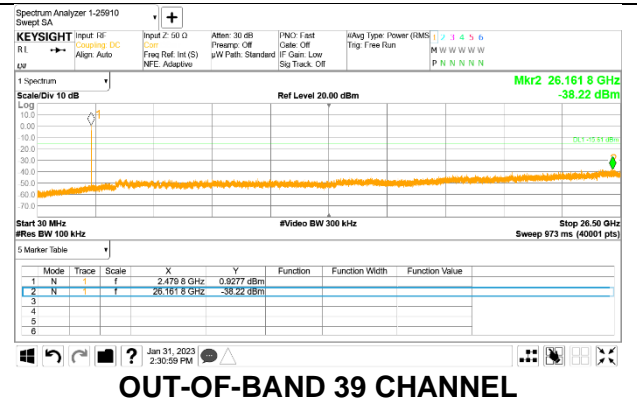
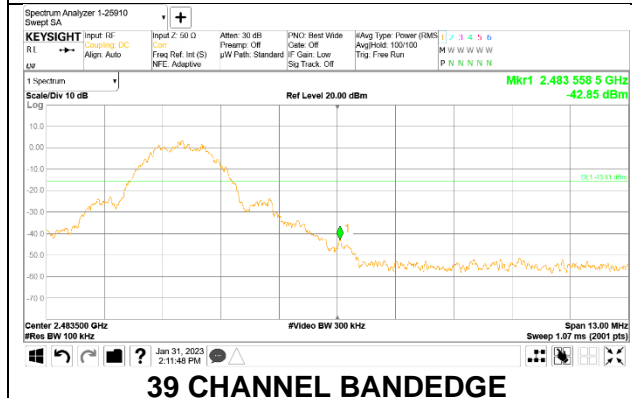
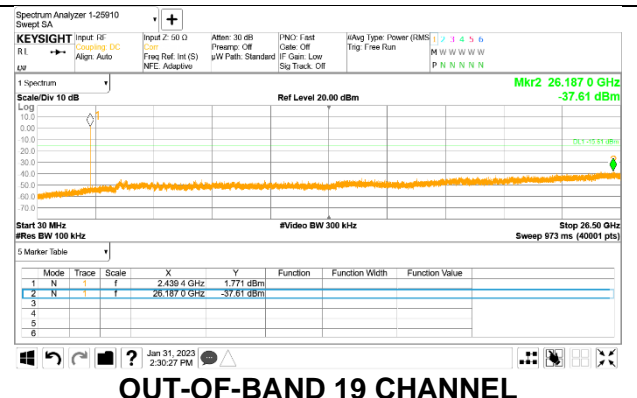
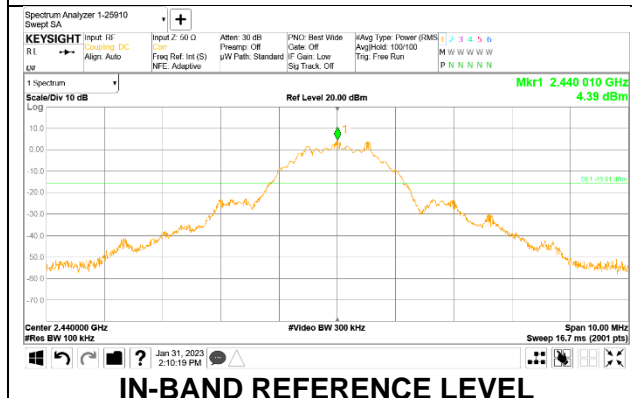
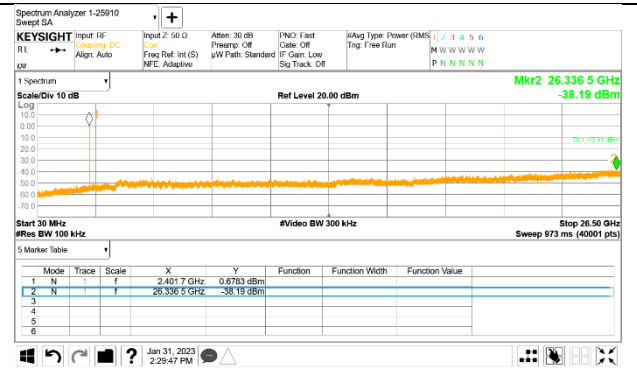
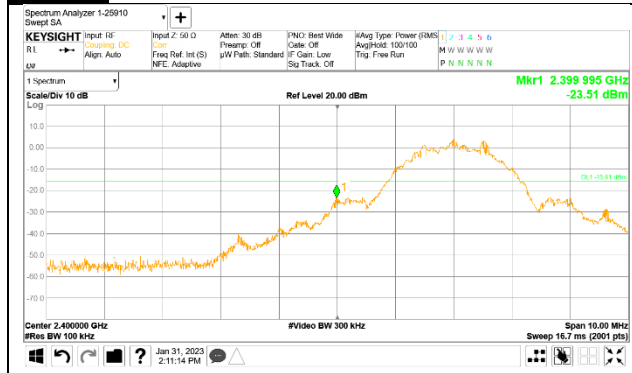
RESULTS

9.6.1. Test plot

500 kbps



2 Mbps



10. RADIATED TEST RESULTS

10.1. LIMITS AND PROCEDURE

LIMITS

FCC §15.205 and §15.209

Limits for radiated disturbance of an intentional radiator		
Frequency range (MHz)	Limits ($\mu\text{V}/\text{m}$)	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 - 216	150**	3
216 – 960	200**	3
Above 960	500	3

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

TEST PROCEDURE

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

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

For measurements above 1 GHz the resolution bandwidth is set to 1 MHz, then the video bandwidth is set to 3 MHz for peak measurements and add duty cycle factor for average measurements. (Restricted band-edge, Final detection of spurious harmonic emissions)
Duty cycle factor = $10 \log(1/x)$. For this sample: For 500 kbps, DCF = $10 \log(1/0.566)=2.475\text{dB}$ (Spectrum Analyzer round it up to 2.48 dB) and for 2 Mbps, DCF = $10 \log(1/0.570)=2.443 \text{ dB}$ (Spectrum Analyzer round it up to 2.44 dB).

Pre-scans to detect harmonic and spurious emissions, the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 30 kHz for peak measurements.

The spectrum from 1 GHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in the 2.4 GHz band.
(From 30MHz to 1GHz, test was performed with the EUT set to transmit at the channel with highest output power)

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.

Note : Emission was pre-scanned from 9kHz to 30MHz; No emissions were detected which was at least 20dB below the specification limit (consider distance correction factor).
Per FCC part 15.31(o), test results were not reported.

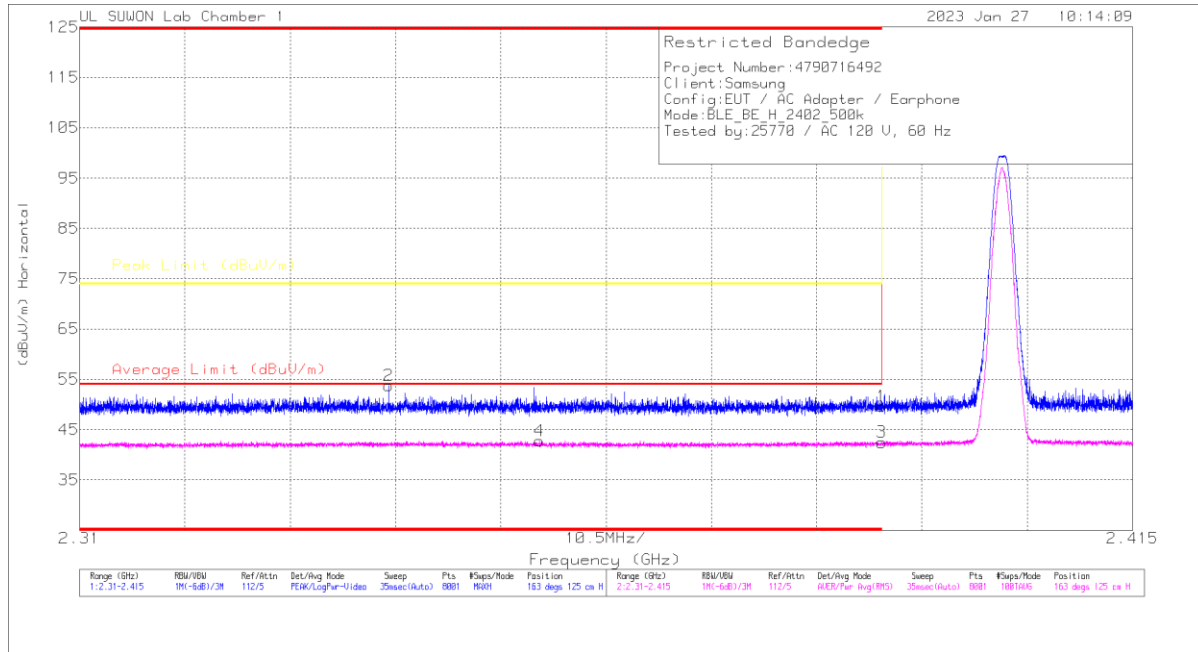
Although these tests were performed other than open field test site, adequate comparison measurements were confirmed against 30 m open are test site.
Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the one of tests made in an open field based on KDB 414788.

10.2. TRANSMITTER ABOVE 1 GHz

10.2.1. 500 kbps

BANDEDGE (0 CHANNEL)

HORIZONTAL RESULT

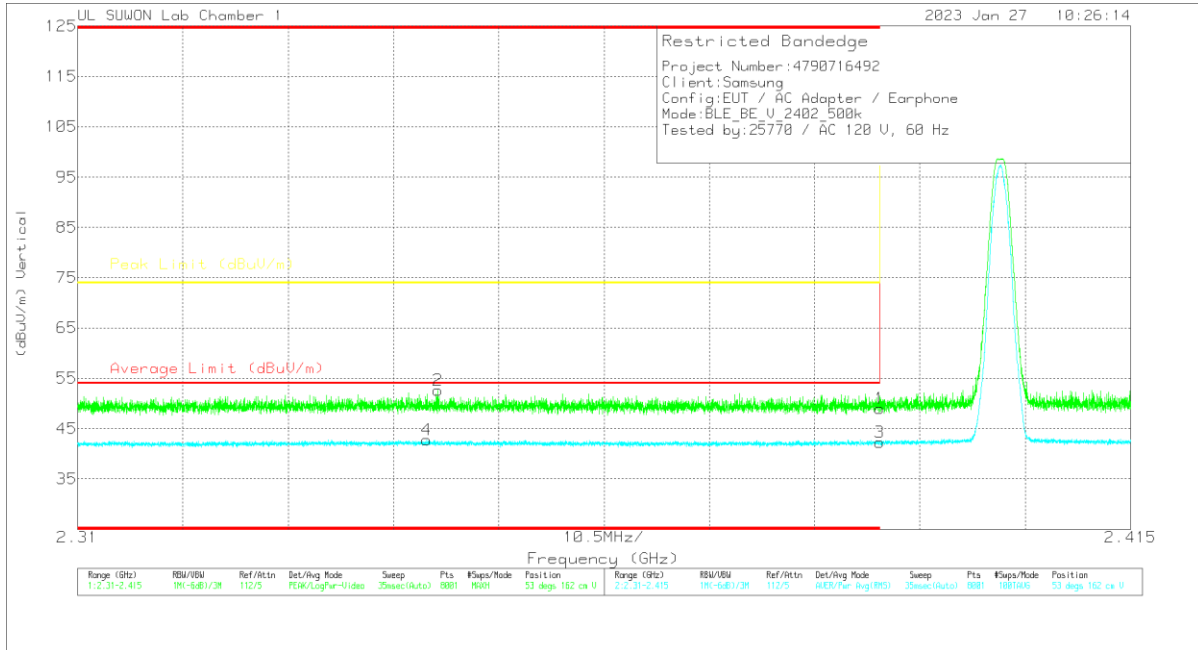


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	10dB_ATT(dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	46.13	Pk	31.9	-28.4	0	49.53	-	-	74	-24.37	163	125	H
2	* 2.34082	50.39	Pk	31.8	-28.5	0	53.89	-	-	74	-20.31	163	125	H
3	* 2.39	36.49	RMS	31.9	-28.4	2.48	42.47	54	-11.53	-	-	163	125	H
4	* 2.35583	36.99	RMS	31.8	-28.5	2.48	42.77	54	-11.23	-	-	163	125	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 Pk - Peak detector
 RMS - RMS detection

VERTICAL RESULT



Trace Markers

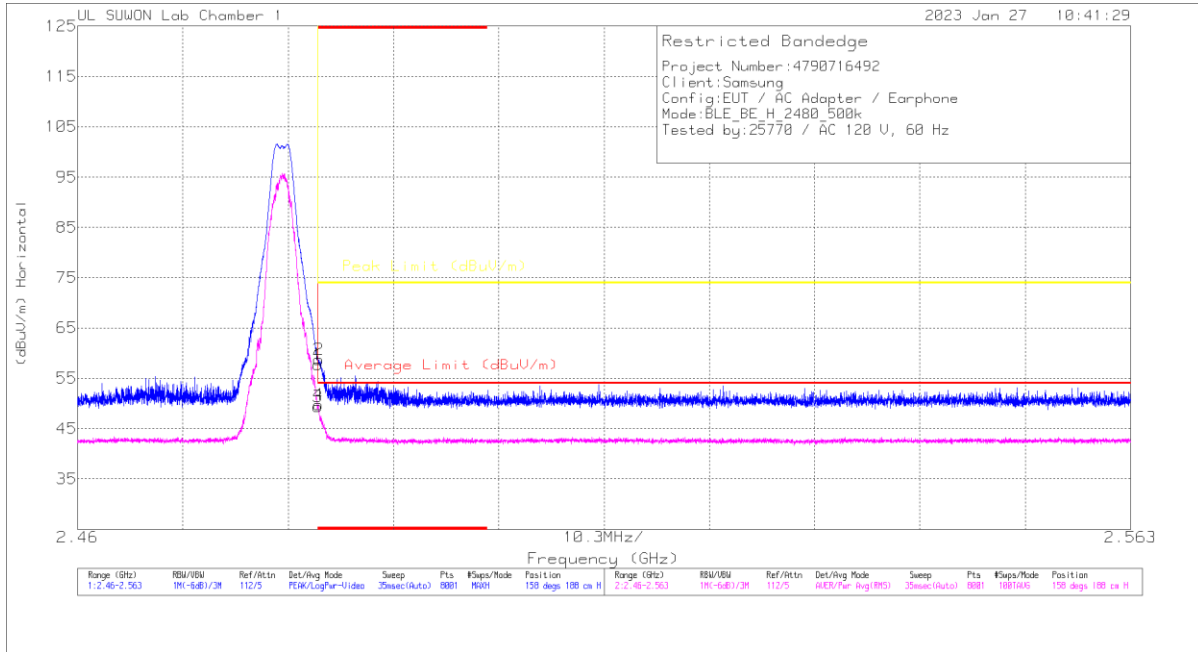
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	10dB_ATT(dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	45.56	PK	31.9	-28.4	0	49.06	-	-	74	-24.94	53	162	V
2	* 2.34591	49.26	PK	31.8	-28.4	0	52.66	-	-	74	-21.34	53	162	V
3	* 2.39	36.3	RMS	31.9	-28.4	2.48	42.28	54	-11.72	-	-	53	162	V
4	* 2.34481	36.9	RMS	31.8	-28.4	2.48	42.78	54	-11.22	-	-	53	162	V

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

PK - Peak detector
 RMS - RMS detection

BANDEDGE (39 CHANNEL)

HORIZONTAL RESULT

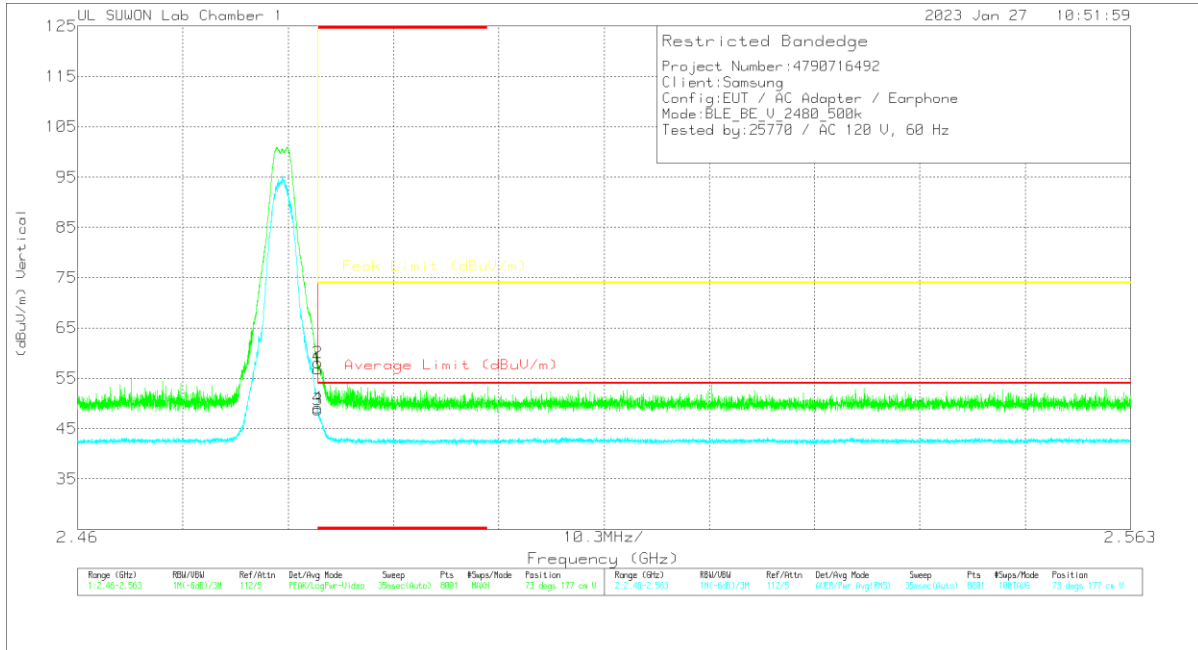


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	10dB_ATT(dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.48351	53.9	Pk	32.2	-28.3	0	57.7	-	-	74	-16.3	158	188	H
2	* 2.48359	54.88	Pk	32.2	-28.3	0	58.78	-	-	74	-15.22	158	188	H
3	* 2.48351	43	RMS	32.2	-28.3	2.48	49.38	54	-4.62	-	-	158	188	H
4	* 2.48355	43.43	RMS	32.2	-28.3	2.48	49.81	54	-4.19	-	-	158	188	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 Pk - Peak detector
 RMS - RMS detection

VERTICAL RESULT



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	10dB_ATT(dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.48351	53	PK	32.2	-28.3	0	56.9	-	-	74	-17.1	73	177	V
2	* 2.48352	54.25	PK	32.2	-28.3	0	58.15	-	-	74	-15.85	73	177	V
3	* 2.48351	42.41	RMS	32.2	-28.3	2.48	48.79	54	-5.21	-	-	73	177	V
4	* 2.48352	42.71	RMS	32.2	-28.3	2.48	49.09	54	-4.91	-	-	73	177	V

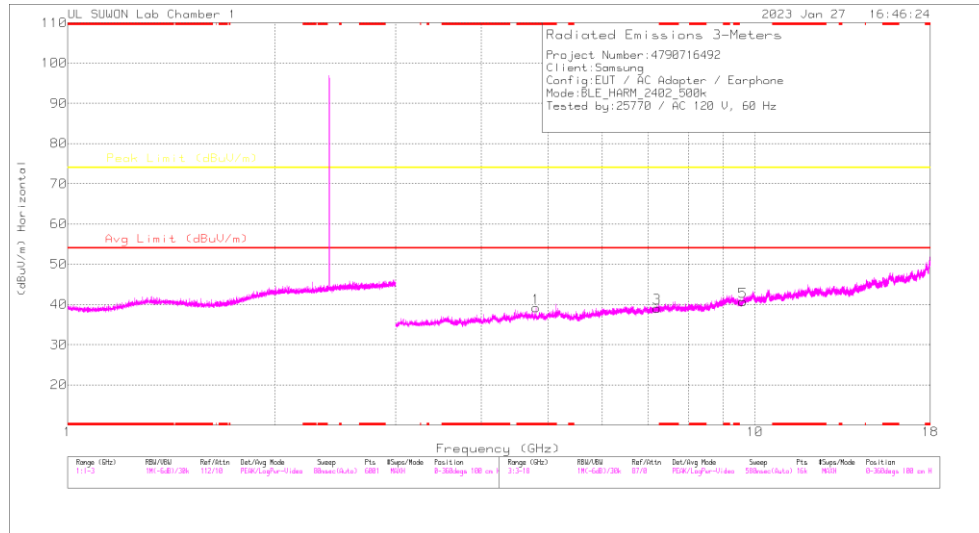
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PK - Peak detector

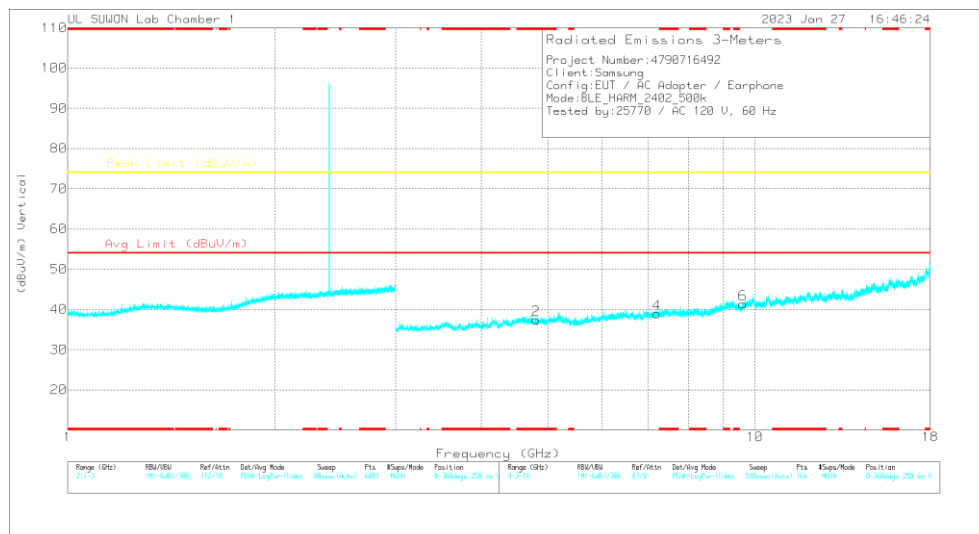
RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

0 CHANNEL RESULTS



HORIZONTAL



VERTICAL

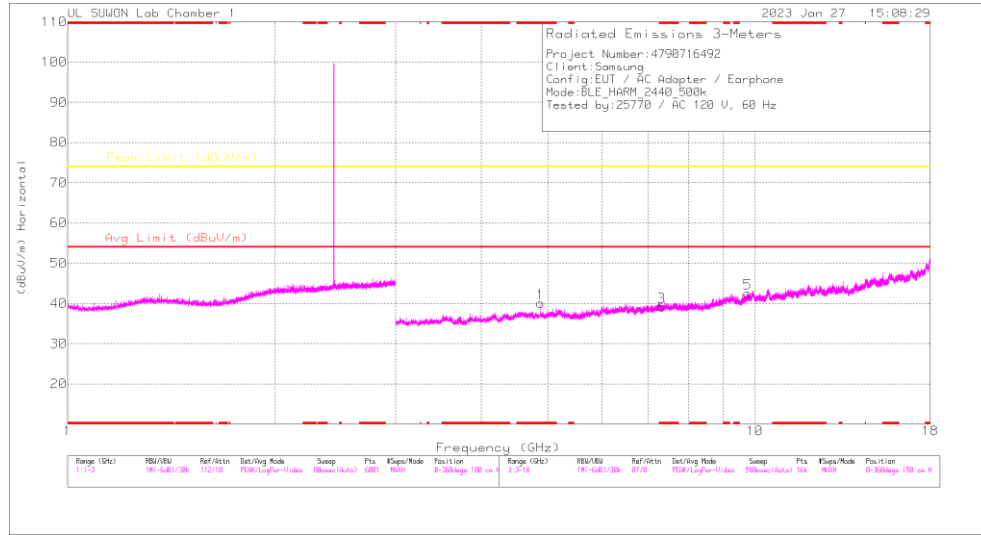
Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

Radiated Emissions

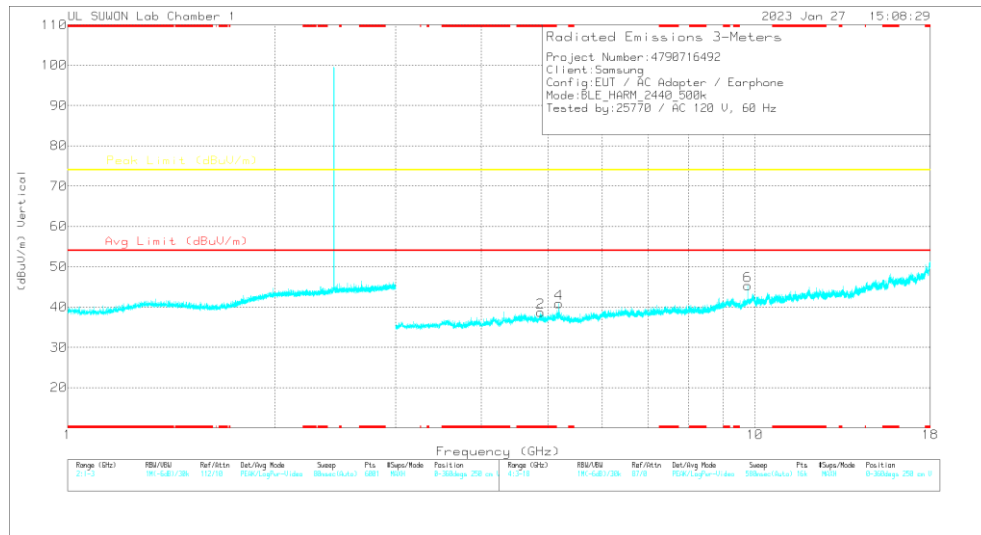
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_0016871 7	3GHz_HP(dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.80352	47.53	PK2	34.2	-33.2	0	48.53	-	-	74	-25.47	176	106	H
* 4.80406	37.29	MAV1	34.2	-33.2	2.48	40.77	54	-13.23	-	-	176	106	H
* 4.80798	45.65	PK2	34.2	-33.2	0	46.65	-	-	74	-27.35	0	100	V
7.20587	42.37	PK2	35.8	-30.1	0	48.07	-	-	74	-25.93	0	100	H
7.1984	42.34	PK2	35.8	-30.1	0	48.04	-	-	74	-25.96	0	100	V
9.59952	38.84	PK2	37.1	-26.3	0	49.64	-	-	74	-24.36	0	100	H
9.61134	38.96	PK2	37.1	-26.2	0	49.86	-	-	74	-24.14	0	100	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 PK2 - KDB558074 Method: Maximum Peak
 MAV1 - KDB558074 Option 1 Maximum RMS Average

19 CHANNEL RESULTS



HORIZONTAL



VERTICAL

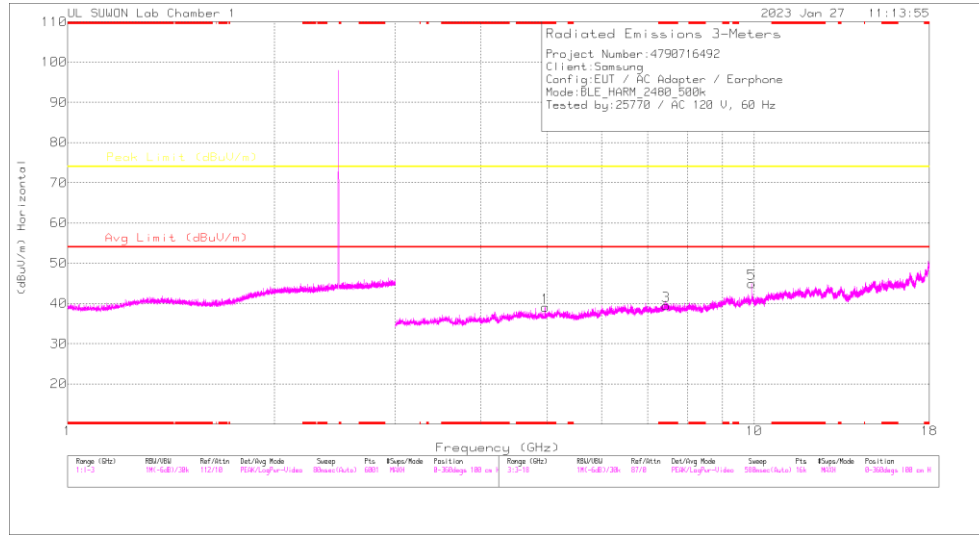
Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

Radiated Emissions

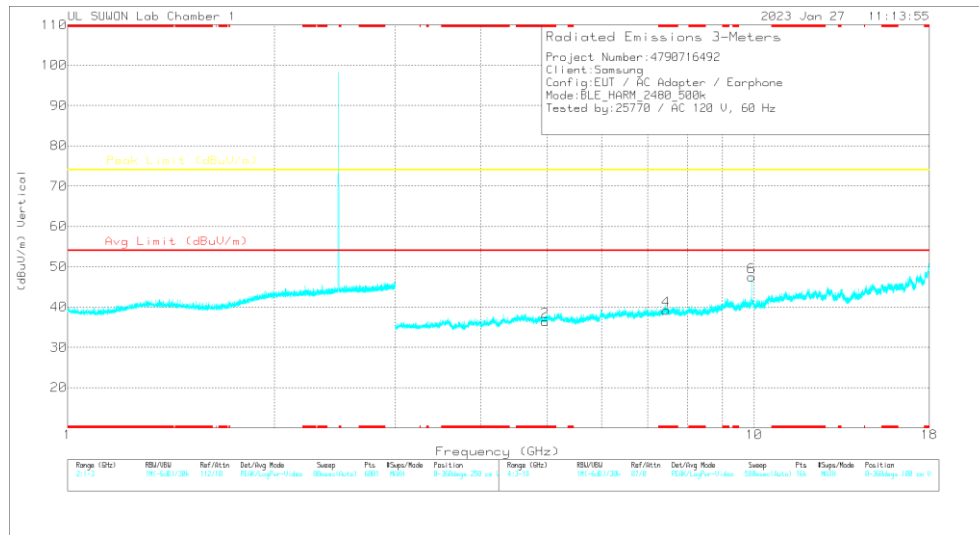
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_0016871 7	3GHz_HP(dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.87937	47.78	PK2	34.2	-33.1	0	48.88	-	-	74	-25.12	197	101	H
* 4.87987	37.17	MAV1	34.2	-33.1	2.48	40.75	54	-13.25	-	-	197	101	H
* 4.88002	46.9	PK2	34.2	-33.1	0	48	-	-	74	-26	89	118	V
* 4.8803	35.52	MAV1	34.2	-33.1	2.48	39.1	54	-14.9	-	-	89	118	V
* 7.32288	42.59	PK2	35.7	-30.2	0	48.09	-	-	74	-25.91	0	100	H
5.17891	44.16	PK2	34.5	-32.2	0	46.46	-	-	74	-27.54	6	188	V
9.76005	41.76	PK2	37.3	-26.5	0	52.56	-	-	74	-21.44	170	132	H
9.75987	41.99	PK2	37.3	-26.5	0	52.79	-	-	74	-21.21	184	142	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 PK2 - KDB558074 Method: Maximum Peak
 MAV1 - KDB558074 Option 1 Maximum RMS Average

39 CHANNEL RESULTS



HORIZONTAL



VERTICAL

Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

Radiated Emissions

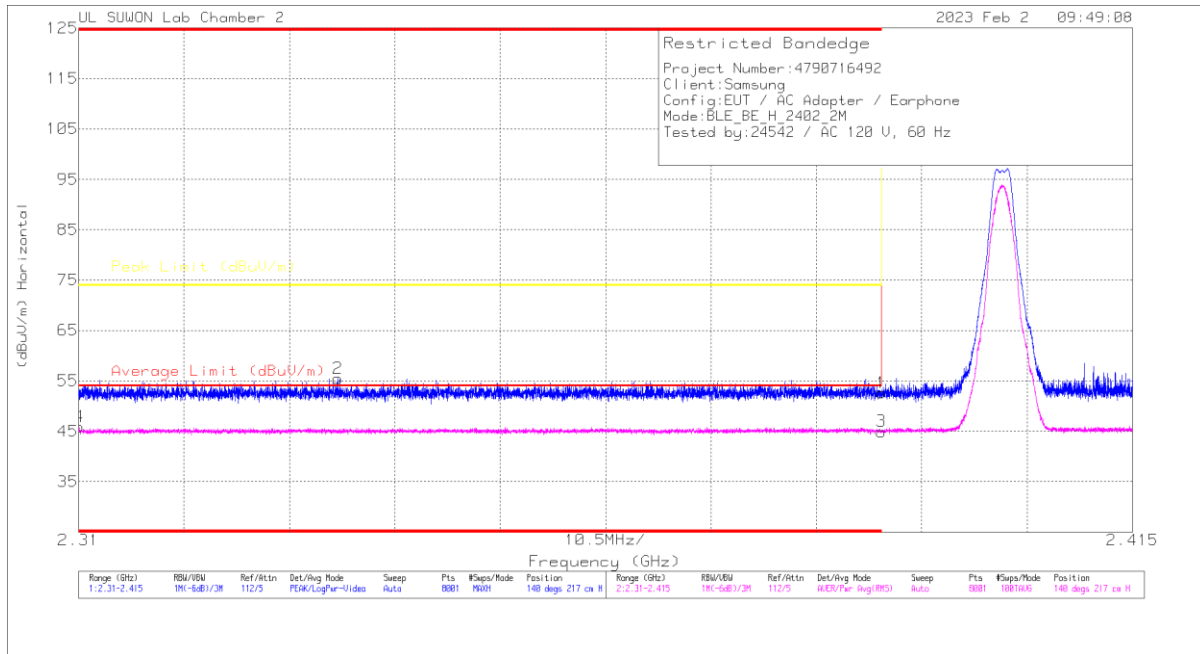
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_0016871 7	3GHz_HP(dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.959	47.79	PK2	34.2	-33.3	0	48.69	-	-	74	-25.31	190	127	H
* 4.95894	35.81	MAV1	34.2	-33.3	2.48	39.19	54	-14.81	-	-	190	127	H
* 4.95616	46.47	PK2	34.2	-33.3	0	47.37	-	-	74	-26.63	86	127	V
* 4.959	34.96	MAV1	34.2	-33.3	2.48	38.34	54	-15.66	-	-	86	127	V
* 7.43181	42.25	PK2	35.6	-29.5	0	48.35	-	-	74	-25.65	0	100	H
* 7.44564	42.16	PK2	35.6	-29.6	0	48.16	-	-	74	-25.84	0	100	V
9.9202	41.87	PK2	37.6	-25.3	0	54.17	-	-	74	-19.83	164	122	H
9.92015	42.5	PK2	37.6	-25.3	0	54.8	-	-	74	-19.2	177	142	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 PK2 - KDB558074 Method: Maximum Peak
 MAV1 - KDB558074 Option 1 Maximum RMS Average

10.2.2. 2 Mbps

BANDEDGE (0 CHANNEL)

HORIZONTAL RESULT



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.339	40.61	Pk	31.7	-19.7	0	52.61	-	-	74	-21.39	140	217	H
2	* 2.3358	43.45	Pk	31.6	-19.6	0	55.45	-	-	74	-18.55	140	217	H
3	* 2.339	30.52	RMS	31.7	-19.7	2.44	44.96	54	-9.04	-	-	140	217	H
4	* 2.31008	31.44	RMS	31.6	-19.6	2.44	45.88	54	-8.12	-	-	140	217	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 Pk - Peak detector
 RMS - RMS detection

VERTICAL RESULT



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	39.98	Pk	31.7	-19.7	0	51.98	-	-	74	-22.02	83	103	V
2	* 2.32918	43.64	Pk	31.6	-19.6	0	55.64	-	-	74	-18.36	83	103	V
3	* 2.39	30.93	RMS	31.7	-19.7	2.44	45.57	54	-8.63	-	-	83	103	V
4	* 2.3887	31.27	RMS	31.7	-19.6	2.44	45.81	54	-8.19	-	-	83	103	V

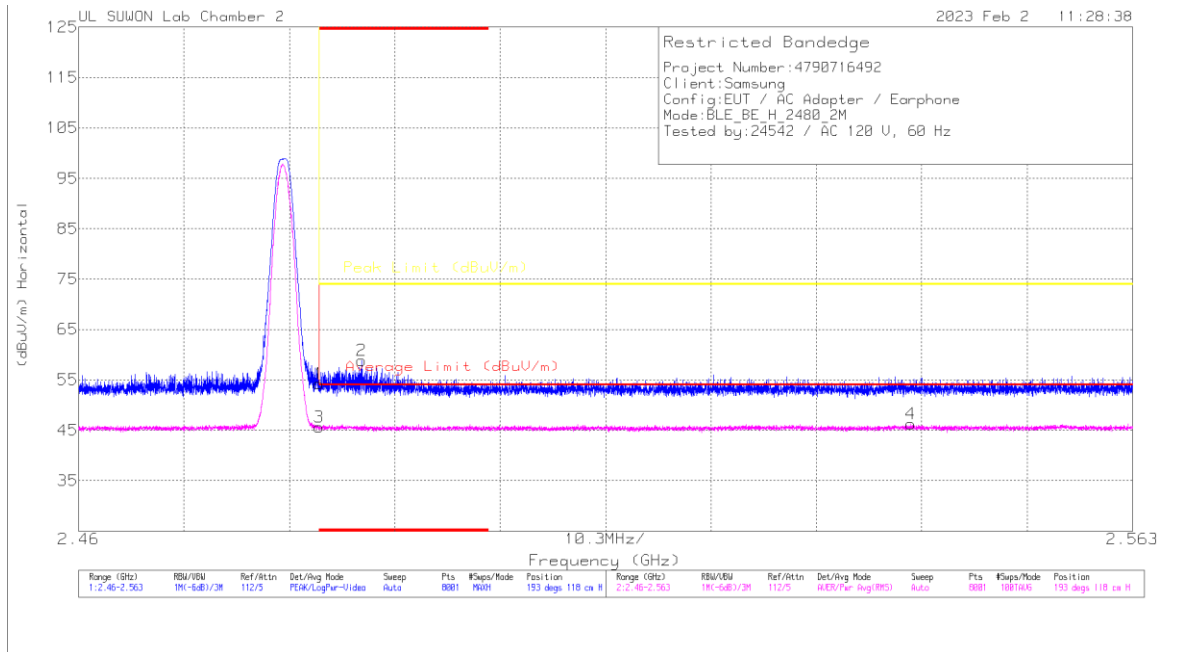
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

BANDEDGE (39 CHANNEL)

HORIZONTAL RESULT

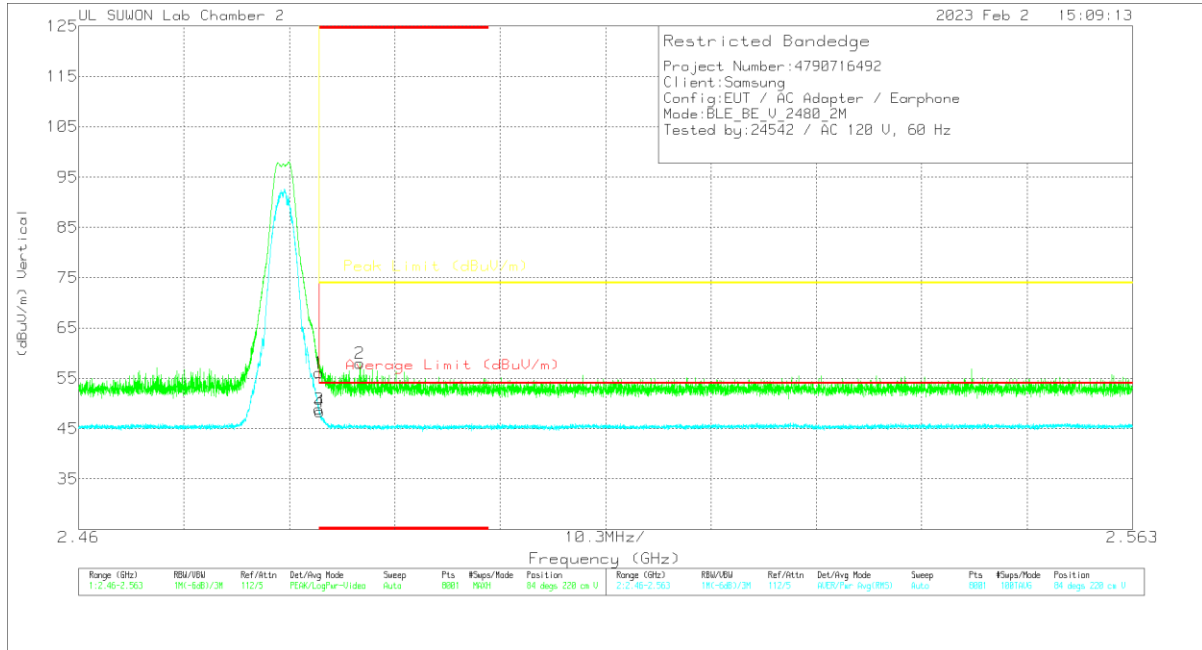


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	10dB_ATT(dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.48351	42	Pk	31.9	-19.6	0	54.3	-	-	74	-19.7	193	118	H
2	* 2.48763	46.6	Pk	31.9	-19.6	0	58.9	-	-	74	-15.1	193	118	H
3	* 2.48351	30.94	RMS	31.9	-19.6	2.44	45.68	54	-8.32	-	-	193	118	H
4	2.54134	31.27	RMS	32	-19.4	2.44	46.31	54	-7.69	-	-	193	118	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 Pk - Peak detector
 RMS - RMS detection

VERTICAL RESULT



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.48351	43.78	Pk	31.9	-19.6	0	56.08	-	-	74	-17.92	84	220	V
2	* 2.4875	45.63	Pk	31.9	-19.6	0	57.93	-	-	74	-16.07	84	220	V
3	* 2.48351	34.1	RMS	31.9	-19.6	2.44	48.84	54	-5.16	-	-	84	220	V
4	* 2.48354	33.68	RMS	31.9	-19.6	2.44	48.42	54	-5.58	-	-	84	220	V

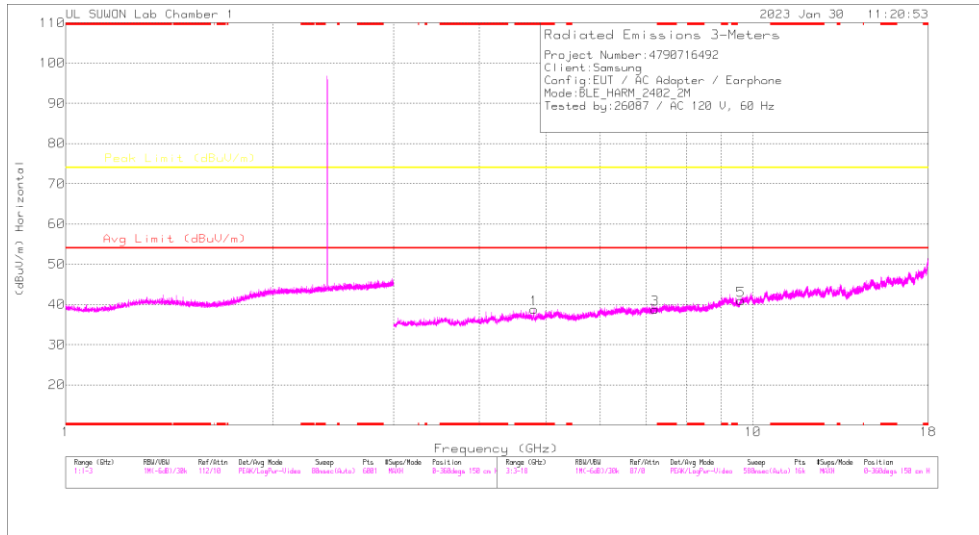
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

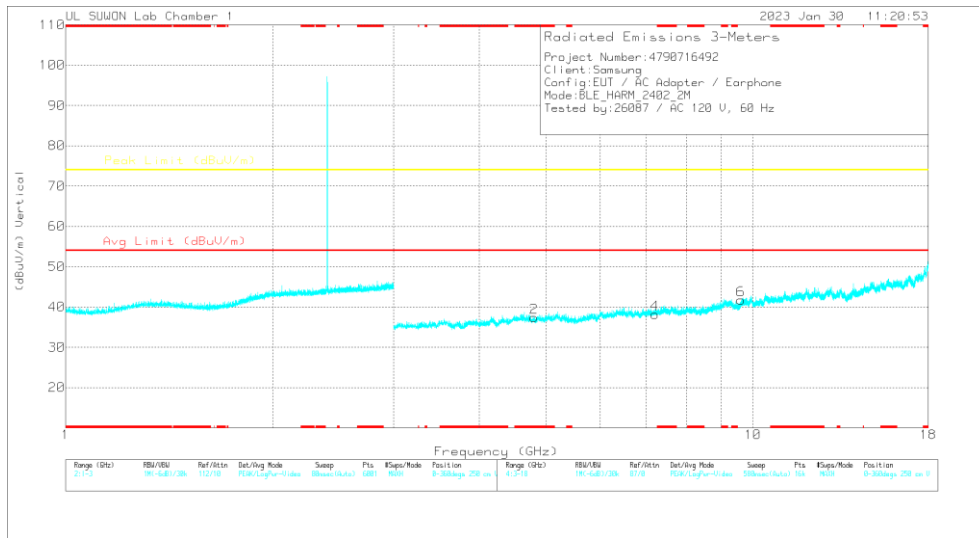
RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

0 CHANNEL RESULTS



HORIZONTAL



VERTICAL

Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

Radiated Emissions

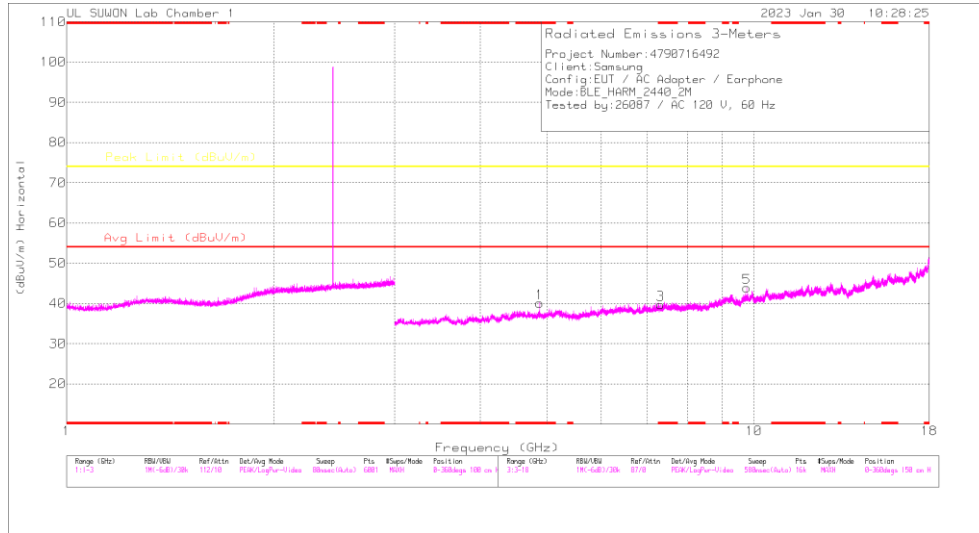
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_0016871 7	3GHz_HP(dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.80355	48.61	PK2	34.2	-33.2	0	49.61	-	-	74	-24.39	176	102	H
* 4.80363	37.47	MAV1	34.2	-33.2	2.44	40.91	54	-13.09	-	-	176	102	H
* 4.80436	46.7	PK2	34.2	-33.2	0	47.7	-	-	74	-26.3	86	113	V
* 4.80394	35.54	MAV1	34.2	-33.2	2.44	38.98	54	-15.02	-	-	86	113	V
7.19656	41.96	PK2	35.8	-30.1	0	47.66	-	-	74	-26.34	0	100	H
7.21083	42.17	PK2	35.8	-30.1	0	47.87	-	-	74	-26.13	0	100	V
9.60806	39.03	PK2	37.1	-26.2	0	49.93	-	-	74	-24.07	150	102	H
9.6079	40.69	PK2	37.1	-26.2	0	51.59	-	-	74	-22.41	184	111	V

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

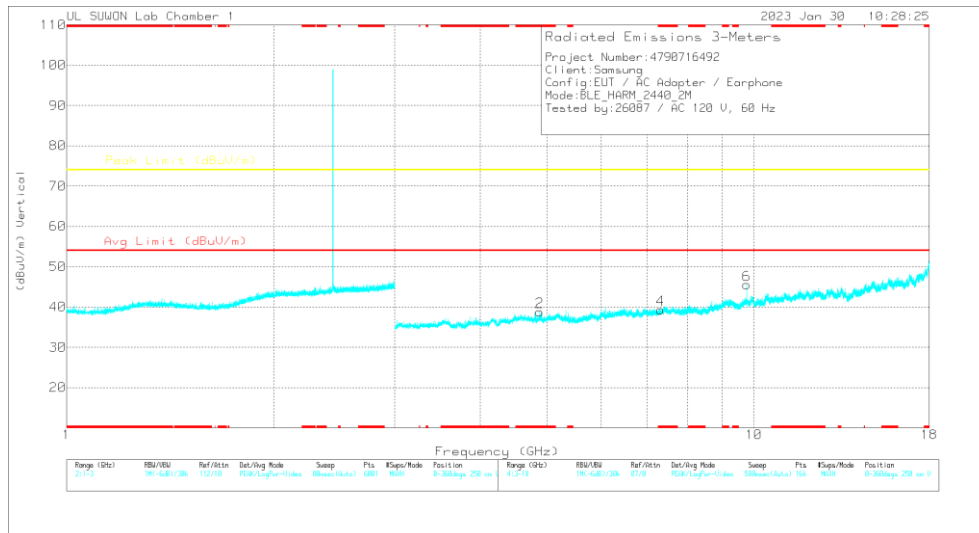
PK2 - KDB558074 Method: Maximum Peak

MAV1 - KDB558074 Option 1 Maximum RMS Average

19 CHANNEL RESULTS



HORIZONTAL



VERTICAL

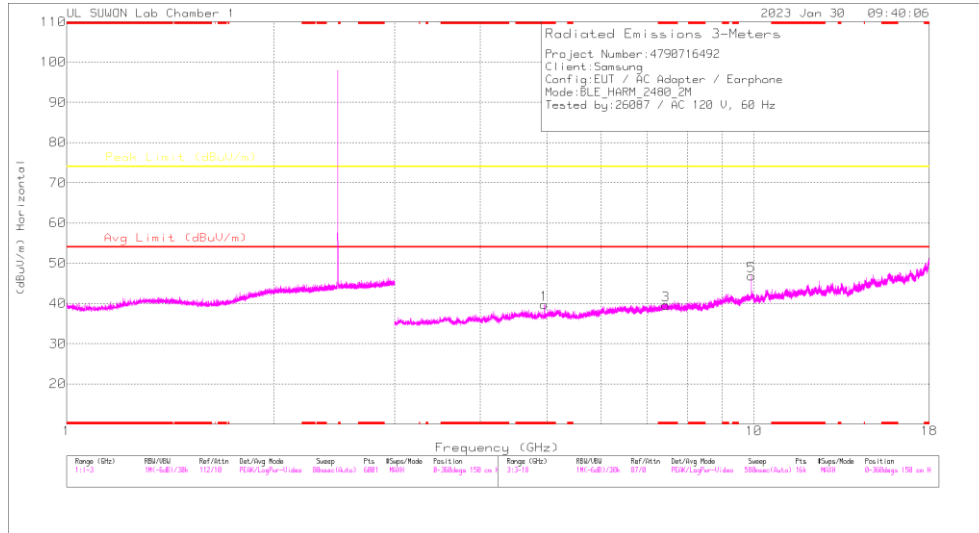
Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

Radiated Emissions

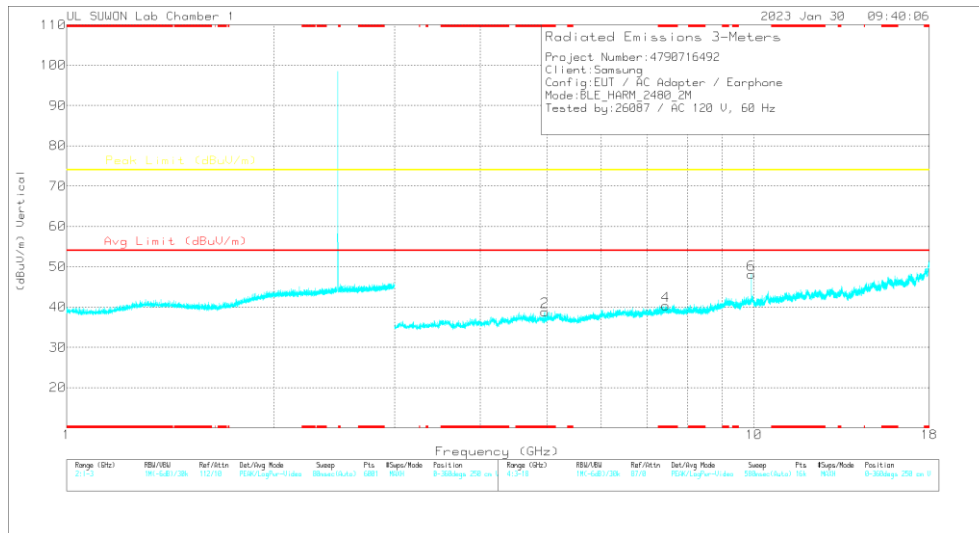
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168 717	3GHz_HP(dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.8805	48.05	PK2	34.2	-33.1	0	49.15	-	-	74	-24.85	173	103	H
* 4.88006	38.02	MAV1	34.2	-33.1	2.44	41.56	54	-12.44	-	-	173	103	H
* 4.88041	47.33	PK2	34.2	-33.1	0	48.43	-	-	74	-25.57	89	120	V
* 4.87967	35.9	MAV1	34.2	-33.1	2.44	39.44	54	-14.56	-	-	89	120	V
* 7.31857	42.5	PK2	35.7	-30.2	0	48	-	-	74	-26	0	100	H
* 7.32276	42.84	PK2	35.7	-30.2	0	48.34	-	-	74	-25.66	0	100	V
9.75973	41.23	PK2	37.3	-26.5	0	52.03	-	-	74	-21.97	149	100	H
9.76013	42.24	PK2	37.3	-26.5	0	53.04	-	-	74	-20.96	177	124	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 PK2 - KDB558074 Method: Maximum Peak
 MAV1 - KDB558074 Option 1 Maximum RMS Average

39 CHANNEL RESULTS



HORIZONTAL



VERTICAL

Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

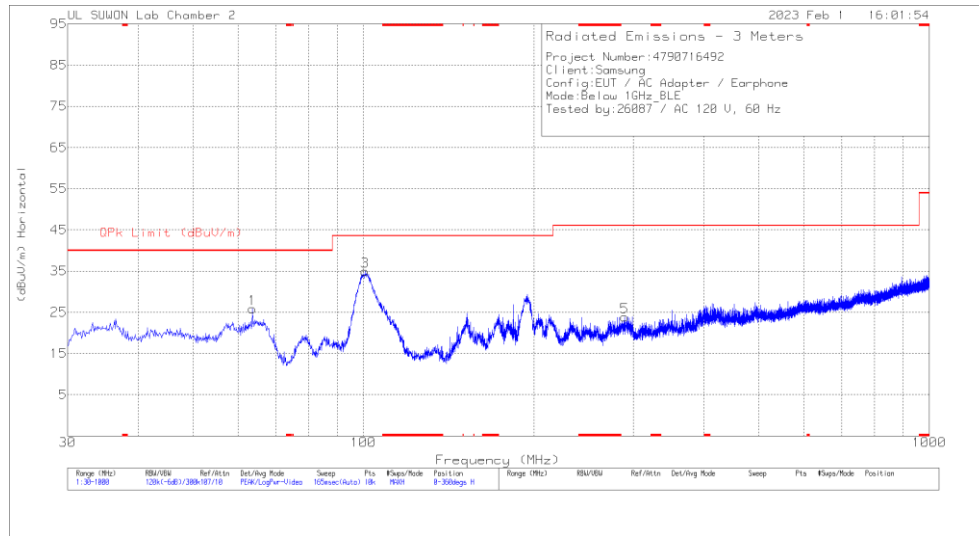
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	3117_0016871 7	3GHz_HP(dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.96053	47.98	PK2	34.2	-33.3	0	48.88	-	-	74	-25.12	186	100	H
* 4.96023	38.24	MAv1	34.2	-33.3	2.44	41.58	54	-12.42	-	-	186	100	H
* 4.96072	47.41	PK2	34.2	-33.3	0	48.31	-	-	74	-25.69	90	125	V
* 4.95961	36.46	MAv1	34.2	-33.3	2.44	39.6	54	-14.2	-	-	90	125	V
* 7.43912	42.34	PK2	35.6	-29.6	0	48.34	-	-	74	-25.66	0	100	H
* 7.44059	42.65	PK2	35.6	-29.6	0	48.65	-	-	74	-25.35	0	100	V
9.92011	41.79	PK2	37.6	-25.3	0	54.09	-	-	74	-19.91	164	100	H
9.91994	43.38	PK2	37.6	-25.3	0	55.68	-	-	74	-18.32	177	128	V

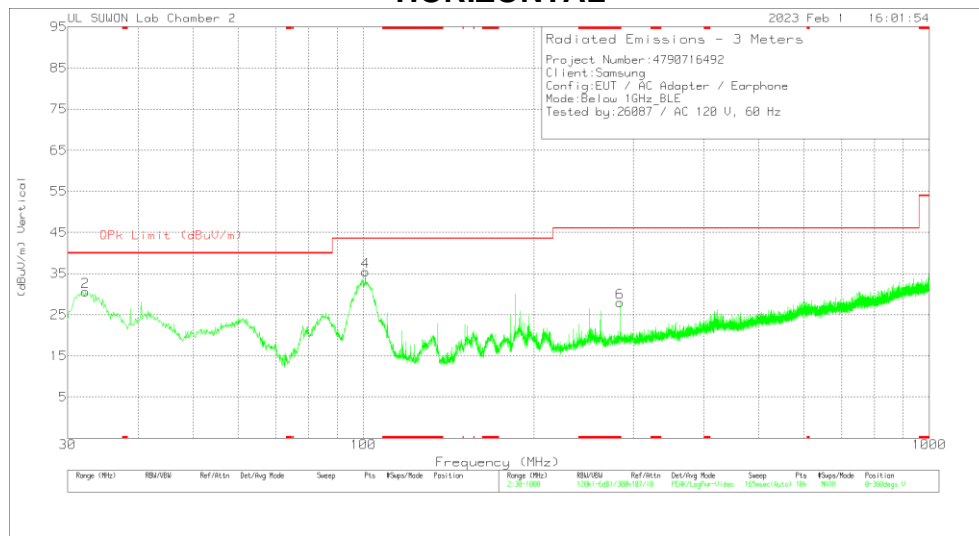
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 PK2 - KDB558074 Method: Maximum Peak
 MAv1 - KDB558074 Option 1 Maximum RMS Average

10.3. WORST CASE BELOW 1 GHz

SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION)



HORIZONTAL



VERTICAL

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Below 1G[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	63.659	39.24	Pk	17.7	-31.1	0	25.84	40	-14.16	0-360	100	H
3	100.616	48.13	Pk	17.5	-30.7	0	34.93	43.52	-8.59	0-360	100	H
5	289.572	33.99	Pk	19	-29.1	0	23.89	46.02	-22.13	0-360	100	H
2	32.231	46.54	Pk	15.6	-31.5	0	30.64	40	-9.36	0-360	100	V
4	100.81	48.56	Pk	17.5	-30.6	0	35.46	43.52	-8.06	0-360	100	V
6	* 284.043	38.23	Pk	18.9	-29.1	0	28.03	46.02	-17.99	0-360	100	V

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

11. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

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

* Decreases with the logarithm of the frequency.

TEST PROCEDURE

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.

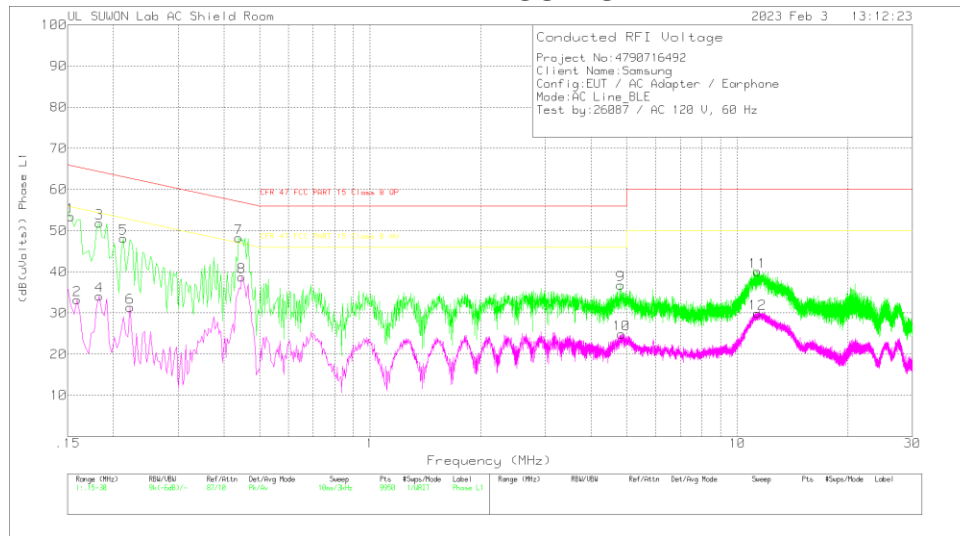
The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

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

RESULTS

11.1. AC Power Line (USB C to C Cable)

LINE 1 RESULTS



Trace Markers

Range 1: Phase L1 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	101836_With EX_L1[dB]	CABLELOS S(dB)	Corrected Reading (dB(uVolts))	CFR 47 FCC PART 15 Class B QP	Margin (dB)	CFR 47 FCC PART 15 Class B AV	Margin (dB)
1	.153	43.48	Pk	9.8	.1	53.38	65.84	-12.46	-	-
2	.159	23.23	Av	9.9	.1	33.23	-	-	55.52	-22.29
3	.183	41.65	Pk	10	.2	51.85	64.35	-12.5	-	-
4	.183	23.94	Av	10	.2	34.14	-	-	54.35	-20.21
5	.213	38.19	Pk	9.8	.2	48.19	63.09	-14.9	-	-
6	.222	21.4	Av	9.8	.2	31.4	-	-	52.74	-21.34
7	.438	38.14	Pk	9.9	.2	48.24	57.1	-8.86	-	-
8	.447	28.65	Av	9.9	.2	38.75	-	-	46.93	-8.18
9	4.815	26.73	Pk	9.8	.3	36.83	56	-19.17	-	-
10	4.836	14.78	Av	9.8	.3	24.88	-	-	46	-21.12
11	11.358	29.77	Pk	10	.3	40.07	60	-19.93	-	-
12	11.361	19.62	Av	10	.3	29.92	-	-	50	-20.08

Pk - Peak detector
 Av - Average detection

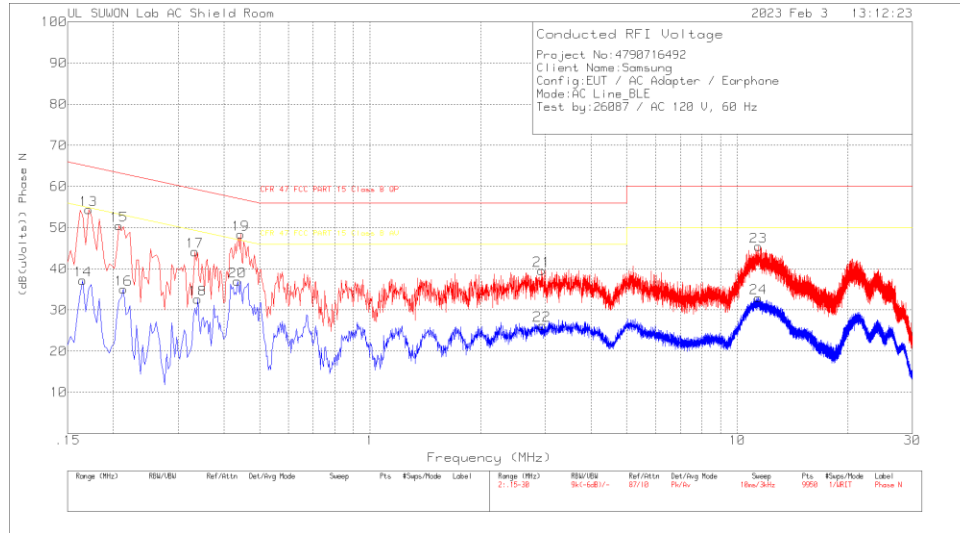
Quasi-Peak Emissions

Range 1: Phase L1 .15 - 30MHz

Frequency (MHz)	Meter Reading (dBuV)	Det	101836_With EX_L1[dB]	CABLELOS S(dB)	Corrected Reading (dB(uVolts))	CFR 47 FCC PART 15 Class B QP	Margin (dB)	CFR 47 FCC PART 15 Class B AV	Margin (dB)
.43875	30.06	Qp	9.9	.2	40.16	57.09	-16.93	-	-

Qp - Quasi-Peak detector

LINE 2 RESULTS



Trace Markers

Range 2: Phase N .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	101836_With EX_N[dB]	CABLELOS S(dB)	Corrected Reading (dB(uVolts))	CFR 47 FCC PART 15 Class B QP	Margin (dB)	CFR 47 FCC PART 15 Class B AV	Margin (dB)
13	.171	44.08	Pk	10.1	.2	54.38	64.91	-10.53	-	-
14	.165	27.11	Av	10	.1	37.21	-	-	55.21	-18
15	.207	40.43	Pk	9.9	.2	50.53	63.32	-12.79	-	-
16	.213	25.06	Av	9.8	.2	35.06	-	-	53.09	-18.03
17	.333	34.18	Pk	9.8	.2	44.18	59.38	-15.2	-	-
18	.339	22.62	Av	9.8	.2	32.62	-	-	49.23	-16.61
19	.444	38.27	Pk	9.9	.2	48.37	56.99	-8.62	-	-
20	.435	26.9	Av	9.9	.2	37	-	-	47.16	-10.16
21	2.934	29.51	Pk	9.8	.3	39.61	56	-16.39	-	-
22	2.937	16.21	Av	9.8	.3	26.31	-	-	46	-19.69
23	11.418	35.16	Pk	10	.3	45.46	60	-14.54	-	-
24	11.418	22.69	Av	10	.3	32.99	-	-	50	-17.01

Pk - Peak detector
 Av - Average detection

Quasi-Peak Emissions

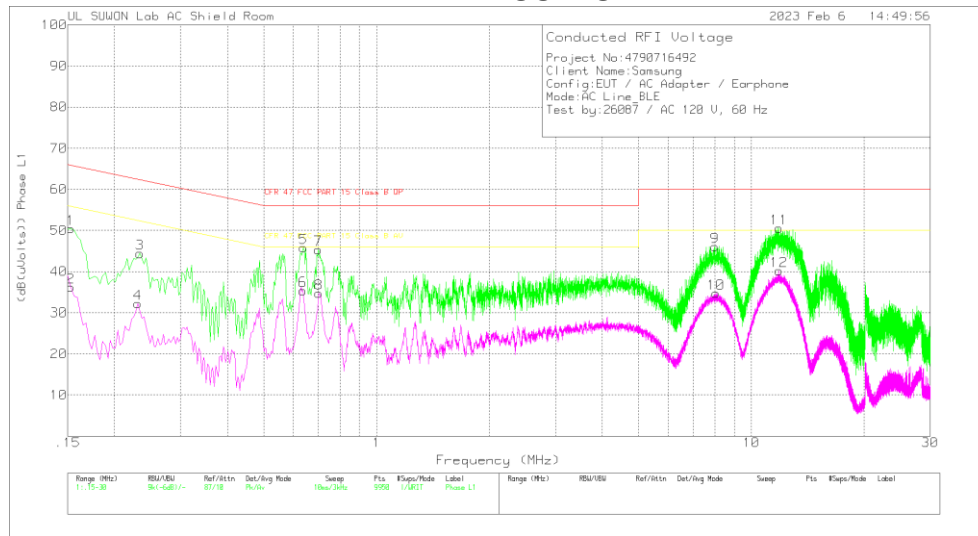
Range 2: Phase N .15 - 30MHz

Frequency (MHz)	Meter Reading (dBuV)	Det	101836_With EX_N[dB]	CABLELOS S(dB)	Corrected Reading (dB(uVolts))	CFR 47 FCC PART 15 Class B QP	Margin (dB)	CFR 47 FCC PART 15 Class B AV	Margin (dB)
.44325	33.77	Qp	9.9	.2	43.87	57	-13.13	-	-

Qp - Quasi-Peak detector

11.2. AC Power Line (USB A to C Cable)

LINE 1 RESULTS



Trace Markers

Range 1: Phase L1 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	101836_With EX_L1[dB]	CABLELOS S(dB)	Corrected Reading (dB(uVolts))	CFR 47 FCC PART 15 Class B QP	Margin (dB)	CFR 47 FCC PART 15 Class B AV	Margin (dB)
1	.153	40.52	Pk	9.8	.1	50.42	65.84	-15.42	-	-
2	.153	26.35	Av	9.8	.1	36.25	-	-	55.84	-19.59
3	.234	34.49	Pk	9.7	.2	44.39	62.31	-17.92	-	-
4	.231	22.35	Av	9.7	.2	32.25	-	-	52.41	-20.16
5	.639	35.81	Pk	9.8	.2	45.81	56	-10.19	-	-
6	.636	25.41	Av	9.8	.2	35.41	-	-	46	-10.59
7	.699	35.38	Pk	9.8	.2	45.38	56	-10.62	-	-
8	.702	24.73	Av	9.8	.2	34.73	-	-	46	-11.27
9	8.004	36.01	Pk	9.8	.3	46.11	60	-13.89	-	-
10	8.043	24.65	Av	9.8	.3	34.75	-	-	50	-15.25
11	11.847	40.3	Pk	9.9	.3	50.5	60	-9.5	-	-
12	11.847	30.03	Av	9.9	.3	40.23	-	-	50	-9.77

Pk - Peak detector

Av - Average detection

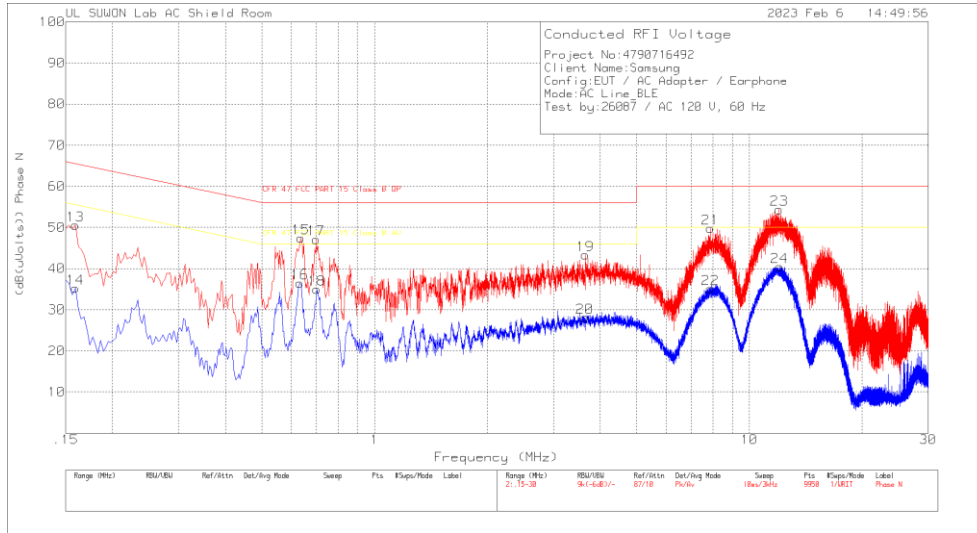
Quasi-Peak Emissions

Range 1: Phase L1 .15 - 30MHz

Frequency (MHz)	Meter Reading (dBuV)	Det	101836_With EX_L1[dB]	CABLELOS S(dB)	Corrected Reading (dB(uVolts))	CFR 47 FCC PART 15 Class B QP	Margin (dB)	CFR 47 FCC PART 15 Class B AV	Margin (dB)
11.8478	35.05	Qp	9.9	.3	45.25	60	-14.75	-	-

Qp - Quasi-Peak detector

LINE 2 RESULTS



Trace Markers

Range 2: Phase N .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	101836_With EX_N[dB]	CABLELOS S(dB)	Corrected Reading (dB(uVolts))	CFR 47 FCC PART 15 Class B QP	Margin (dB)	CFR 47 FCC PART 15 Class B AV	Margin (dB)
13	.159	40.6	Pk	9.8	.1	50.5	65.52	-15.02	-	-
14	.159	25.31	Av	9.8	.1	35.21	-	-	55.52	-20.31
15	.636	37.43	Pk	9.8	.2	47.43	56	-8.57	-	-
16	.633	26.53	Av	9.8	.2	36.53	-	-	46	-9.47
17	.699	37.13	Pk	9.8	.2	47.13	56	-8.87	-	-
18	.702	24.99	Av	9.8	.2	34.99	-	-	46	-11.01
19	3.648	33.37	Pk	9.7	.3	43.37	56	-12.63	-	-
20	3.642	18.11	Av	9.7	.3	28.11	-	-	46	-17.89
21	7.86	39.68	Pk	9.8	.3	49.78	60	-10.22	-	-
22	7.863	25.05	Av	9.8	.3	35.15	-	-	50	-14.85
23	12.018	44.06	Pk	10	.3	54.36	60	-5.64	-	-
24	12.024	30.12	Av	10	.3	40.42	-	-	50	-9.58

Pk - Peak detector

Av - Average detection

Quasi-Peak Emissions

Range 2: Phase N .15 - 30MHz

Frequency (MHz)	Meter Reading (dBuV)	Det	101836_With EX_N[dB]	CABLELOS S(dB)	Corrected Reading (dB(uVolts))	CFR 47 FCC PART 15 Class B QP	Margin (dB)	CFR 47 FCC PART 15 Class B AV	Margin (dB)
.63675	34.42	Qp	9.8	.2	44.42	56	-11.58	-	-
.63315	34.42	Qp	9.8	.2	44.42	56	-11.58	-	-
.69825	32.37	Qp	9.8	.2	42.37	56	-13.63	-	-
12.0188	36.94	Qp	10	.3	47.24	60	-12.76	-	-
12.0248	38.25	Qp	10	.3	48.55	60	-11.45	-	-

Qp - Quasi-Peak detector

END OF TEST REPORT