



CERTIFICATION TEST REPORT

Report Number. : 4790089626-E4V1

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

Model : SM-S906B/DS

FCC ID : A3LSMS906B

EUT Description : GSM/WCDMA/LTE/5G NR Phone + BT/BLE, DTS/UNII a/b/g/n/ac/ax,
NFC, WPT and UWB

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

Date Of Issue:

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Revision History

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: SAMSUNG ELECTRONICS CO., LTD.

EUT DESCRIPTION: GSM/WCDMA/LTE/5G NR Phone + BT/BLE, DTS/UNII a/b/g/n/ac/ax, NFC, WPT and UWB

MODEL NUMBER: SM-S906B/DS

SERIAL NUMBER: R3CR80TBVKZ (CONDUCTED);
R3CR80TBTVN, R3CR70QKDGf (RADIATED);

DATE TESTED: 2021-10-05 ~ 2021-10-29

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
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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	
☒	Chamber 1
☒	Chamber 2
☐	Chamber 3

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:

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

4.3. MEASUREMENT UNCERTAINTY

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

PARAMETER	UNCERTAINTY
Conducted Disturbance, 0.15 to 30 MHz	3.02 dB
Radiated Disturbance, 30 MHz to 1 GHz	4.05 dB
Radiated Disturbance, 1 GHz to 18 GHz	5.78 dB
Radiated Disturbance, 18 GHz to 40 GHz	5.58 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 115:2007.

5. EQUIPMENT UNDER TEST

5.1. EUT DESCRIPTION

The EUT is a GSM/WCDMA/LTE/5G NR Phone + BT/BLE, DTS/UNII a/b/g/n/ac/ax, NFC, WPT and UWB. 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	1Mbps	Peak	16.030	40.087
		Average	15.759	37.662
	2Mbps	Peak	16.610	45.814
		Average	16.246	42.131

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 1's maximum gain of -6.4 dBi and ANT 2's maximum gain of -1.9 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.

For Antenna 1, 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.

For Antenna 2, the fundamental of the EUT was investigated in three orthogonal orientations X, Y and Z it was determined that X orientation was worst-case orientation; therefore, all final radiated testing was performed with the EUT in X orientation.

- Supported PA modes:

ANT. Pre-Amp.	ANT1	ANT2	BLE-Dual
ePA	O	O	
iPA	O	O	O

Since the summed target power of BLE-Dual mode is lower than the target power of ePA SISO, the test was performed in ePA SISO mode.

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

Power verification

The Output Power of all data rate are all investigated, the 1 Mbps(37 pkt) and 2 Mbps(37 pkt) power is the worst case for symbol rate. All tests were performed in these two modes.

Symbol Rate [Ms/s]	ANT.	Mode	Freq. [MHz]	Conducted Burst Avg [dBm]	Symbol Rate [Ms/s]	ANT.	Mode	Freq. [MHz]	Conducted Burst Avg [dBm]
1	ANT1	1Mbps 37pkt (ePA)	2402	14.981	2	ANT1	2Mbps 37pkt (ePA)	2402	14.963
			2440	15.759				2440	16.246
			2480	15.148				2480	15.673
	ANT2		2402	15.660		ANT2		2402	16.028
			2440	15.686				2440	16.092
			2480	15.017				2480	15.495
	ANT1	1Mbps 255pkt (ePA)	2402	14.722		ANT1	2Mbps 255pkt (ePA)	2402	14.771
			2440	15.603				2440	15.999
			2480	14.778				2480	15.210
	ANT2		2402	14.601		ANT2		2402	15.465
			2440	15.447				2440	15.740
			2480	14.627				2480	15.031
	DUAL 1	1Mbps 37pkt (iPA)	2402	8.868		DUAL 1	2Mbps 37pkt (iPA)	2402	8.800
			2440	9.345				2440	9.343
			2480	8.909				2480	8.801
	DUAL 2		2402	8.333		DUAL 2		2402	8.222
			2440	7.875				2440	7.706
			2480	7.712				2480	7.548
	Aggregate DUAL1&2		2402	11.619		Aggregate DUAL1&2		2402	11.531
			2440	11.682				2440	11.612
			2480	11.362				2480	11.230
	DUAL 1	1Mbps 37pkt (iPA)	2402	8.953		DUAL 1	2Mbps 37pkt (iPA)	2402	8.866
			2440	9.485				2440	9.345
			2480	8.922				2480	8.799
	DUAL 2		2402	8.113		DUAL 2		2402	8.090
			2440	7.785				2440	7.693
			2480	7.612				2480	7.634
	Aggregate DUAL1&2		2402	11.564		Aggregate DUAL1&2		2402	11.506
			2440	11.728				2440	11.607
			2480	11.326				2480	11.266
1 Coded S=8	ANT1	125kbps 37pkt (iPA)	2402	8.790	1 Coded S=2	ANT1	500kbps 37pkt (iPA)	2402	8.856
			2440	9.448				2440	9.496
			2480	8.893				2480	8.889
	ANT2		2402	8.303		ANT2		2402	8.380
			2440	7.834				2440	7.855
			2480	7.670				2480	7.686
	ANT1	125kbps 255pkt (iPA)	2402	8.934		ANT1	500kbps 255pkt (iPA)	2402	8.863
			2440	9.474				2440	9.410
			2480	8.911				2480	8.840
	ANT2		2402	8.062		ANT2		2402	8.262
			2440	7.773				2440	7.790
			2480	7.599				2480	7.621

5.5. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
Charger	SAMSUNG	EP-TA800	R37N9BV0382HM3	N/A
Data Cable	SAMSUNG	EP-DN980BBE	N/A	N/A

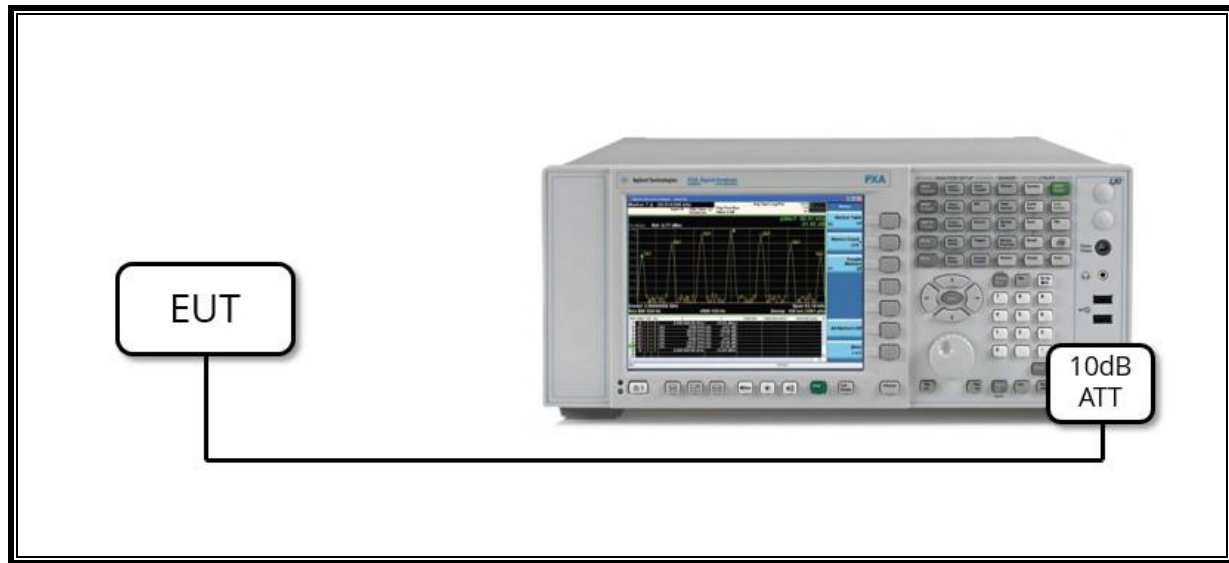
I/O CABLE

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

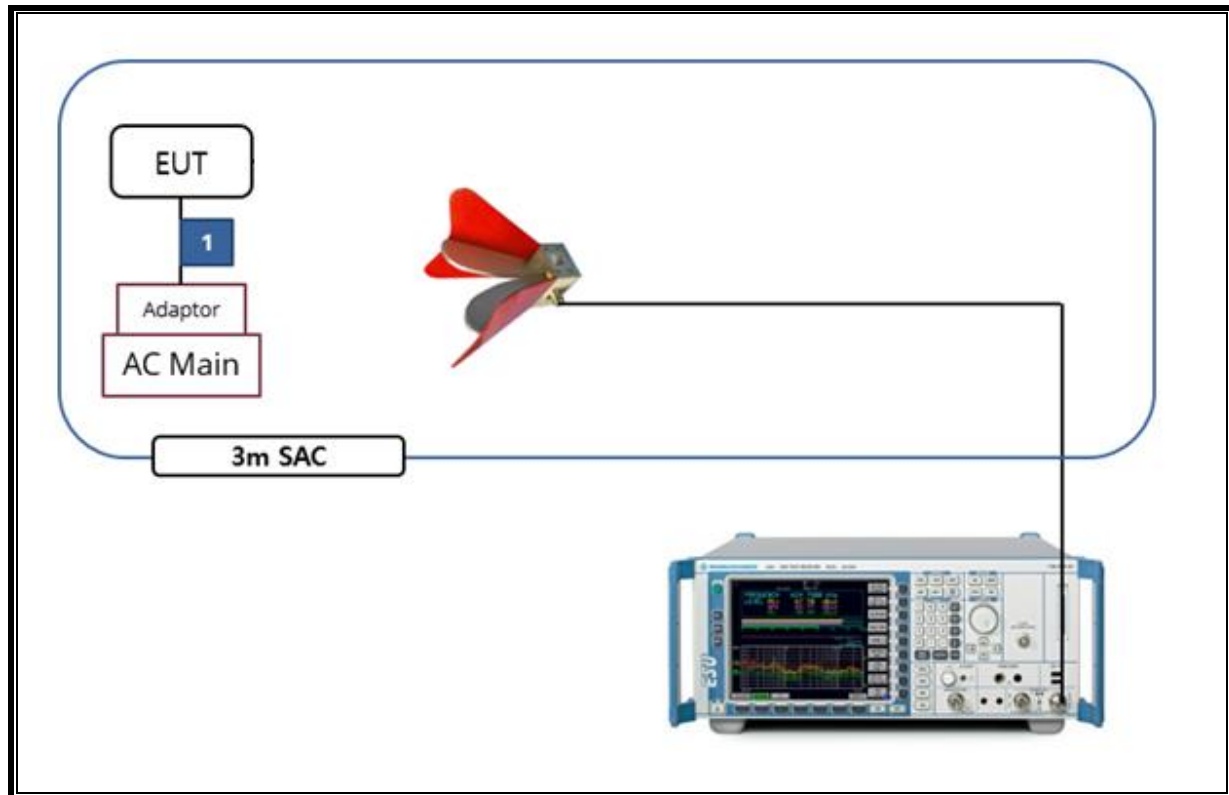
TEST SETUP

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 : KDB 558074 D01 v05r02, Section 8.2.

OUTPUT POWER : KDB 558074 D01 v05r02, Section 8.3.1.1

POWER SPECTRAL DENSITY : KDB 558074 D01 v05r02, Section 8.4.

Out-of-band Emissions (Conducted) : KDB 558074 D01 v05r02, Section 8.5.

Out-of-band Emissions in Non-restricted Bands: KDB 558074 D01 v05r02, Section 8.5.

Out-of-band Emissions in Restricted Bands : KDB 558074 D01 v05r02, Section 8.6.

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	2022-08-19
Antenna, Bilog, 30MHz-1GHz	SCHWARZBECK	VULB9163	749	2022-08-13
Antenna, Bilog, 30MHz-1GHz	SCHWARZBECK	VULB9163	845	2022-08-13
Antenna, Horn, 18 GHz	ETS	3115	00167211	2022-07-27
Antenna, Horn, 18 GHz	ETS	3115	00161451	2022-08-15
Antenna, Horn, 18 GHz	ETS	3117	00168724	2022-07-27
Antenna, Horn, 18 GHz	ETS	3117	00168717	2022-08-15
Antenna, Horn, 40 GHz	ETS	3116C	00166155	2022-08-04
Preamplifier	ETS	3116C-PA	00168841	2022-08-04
Preamplifier, 1000 MHz	Sonoma	310N	341282	2022-08-02
Preamplifier, 1000 MHz	Sonoma	310N	351741	2022-08-02
Preamplifier, 1000 MHz	Sonoma	310N	370599	2022-08-02
Preamplifier, 18 GHz	Miteq	AFS42-00101800-25-S-42	1876511	2022-08-02
Preamplifier, 18 GHz	Miteq	AFS42-00101800-25-S-42	1896138	2022-08-02
Preamplifier, 18 GHz	Miteq	AFS42-00101800-25-S-42	2029168	2022-08-02
Spectrum Analyzer, 44 GHz	Agilent / HP	N9030A	MY54170614	2022-08-04
Spectrum Analyzer, 44 GHz	Agilent / HP	N9030A	MY54490312	2022-08-04
Spectrum Analyzer, 44 GHz	KEYSIGHT	N9030B	MY60070693	2022-01-03
Average Power Sensor	Agilent / HP	U2000	MY54270007	2022-08-04
Average Power Sensor	Agilent / HP	U2000	MY54260010	2022-08-04
Attenuator	PASTERNAK	PE7087-10	A001	2022-08-03
Attenuator	PASTERNAK	PE7087-10	A008	2022-08-03
Attenuator	PASTERNAK	PE7004-10	2	2022-08-02
Attenuator	PASTERNAK	PE7087-10	A009	2022-08-03
EMI Test Receive, 40 GHz	R&S	ESU40	100439	2022-08-02
EMI Test Receive, 40 GHz	R&S	ESU40	100457	2022-08-02
EMI Test Receive, 3 GHz	R&S	ESR3	101832	2022-08-02
Low Pass Filter 5GHz	Micro-Tronics	LPS17541	009	2022-08-02
Low Pass Filter 5GHz	Micro-Tronics	LPS17541	015	2022-08-02
Low Pass Filter 5GHz	Micro-Tronics	LPS17541	019	2022-08-02
High Pass Filter 3GHz	Micro-Tronics	HPM17543	010	2022-08-02
High Pass Filter 3GHz	Micro-Tronics	HPM17543	015	2022-08-02
High Pass Filter 3GHz	Micro-Tronics	HPM17543	020	2022-08-02
High Pass Filter 6GHz	Micro-Tronics	HPS17542	009	2022-08-02
High Pass Filter 6GHz	Micro-Tronics	HPS17542	016	2022-08-02
High Pass Filter 6GHz	Micro-Tronics	HPS17542	020	2022-08-02
LISN	R&S	ENV-216	101837	2022-08-05
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	PASS
2.1051, 15.247(d)	Band Edge / Conducted Spurious Emission	-20 dBc		PASS
15.247 (b)(3)	TX conducted output power	< 30 dBm		PASS
15.247(e)	PSD	< 8 dBm/3kHz		PASS
15.207(a)	AC Power Line conducted emissions	Section 11	Power Line conducted	PASS
15.205, 15.209	Radiated Spurious Emission	< 54dBuV/m(Av)	Radiated	PASS

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						
1 Mbps [37pkt]	0.377	0.625	0.603	60.342	2.19	2.651
2 Mbps [37pkt]	0.195	0.625	0.312	31.200	5.06	5.141



9.2. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

RSS-247 5.2 (a)

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

RESULTS

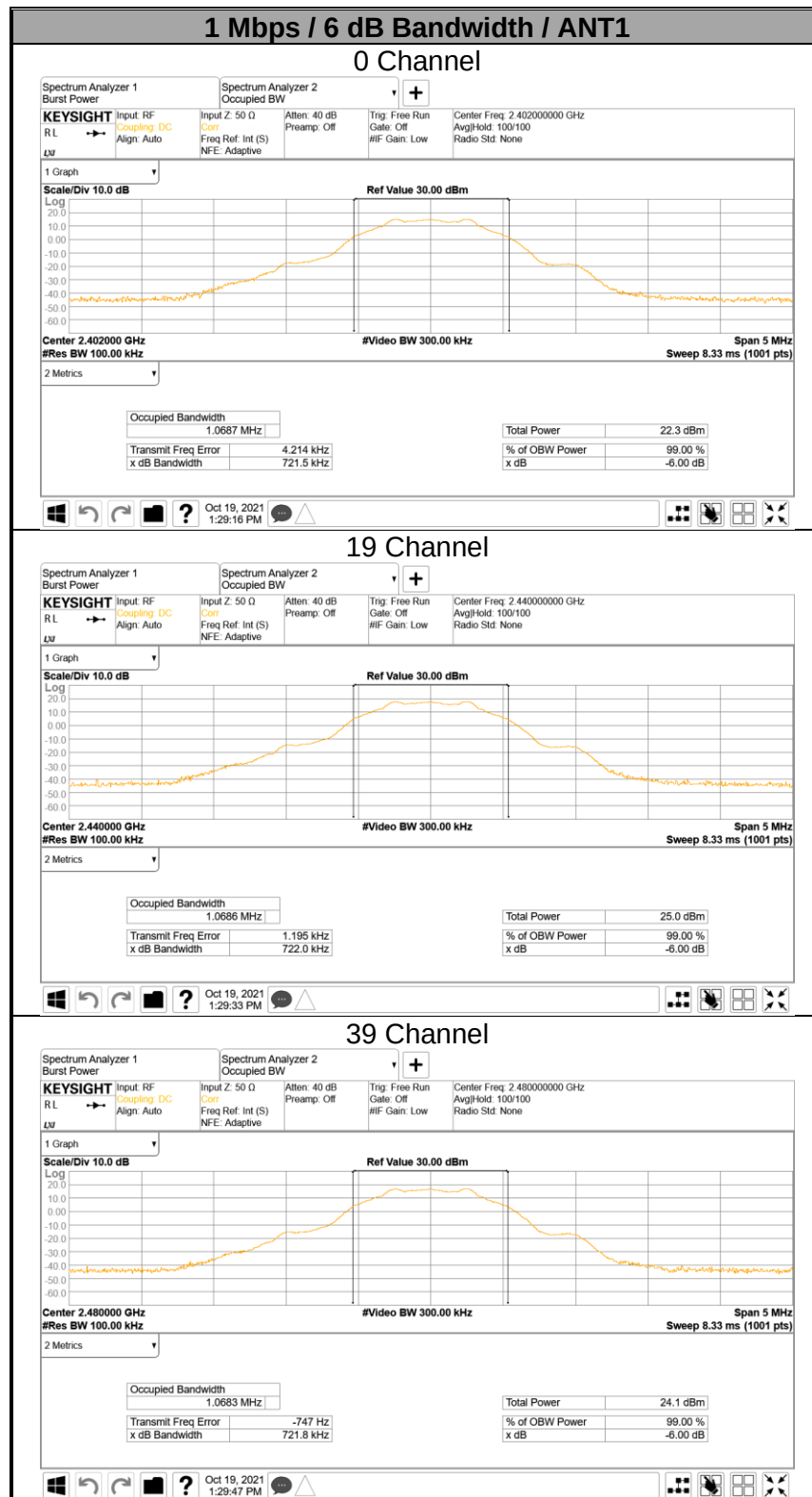
9.2.1. 1 Mbps

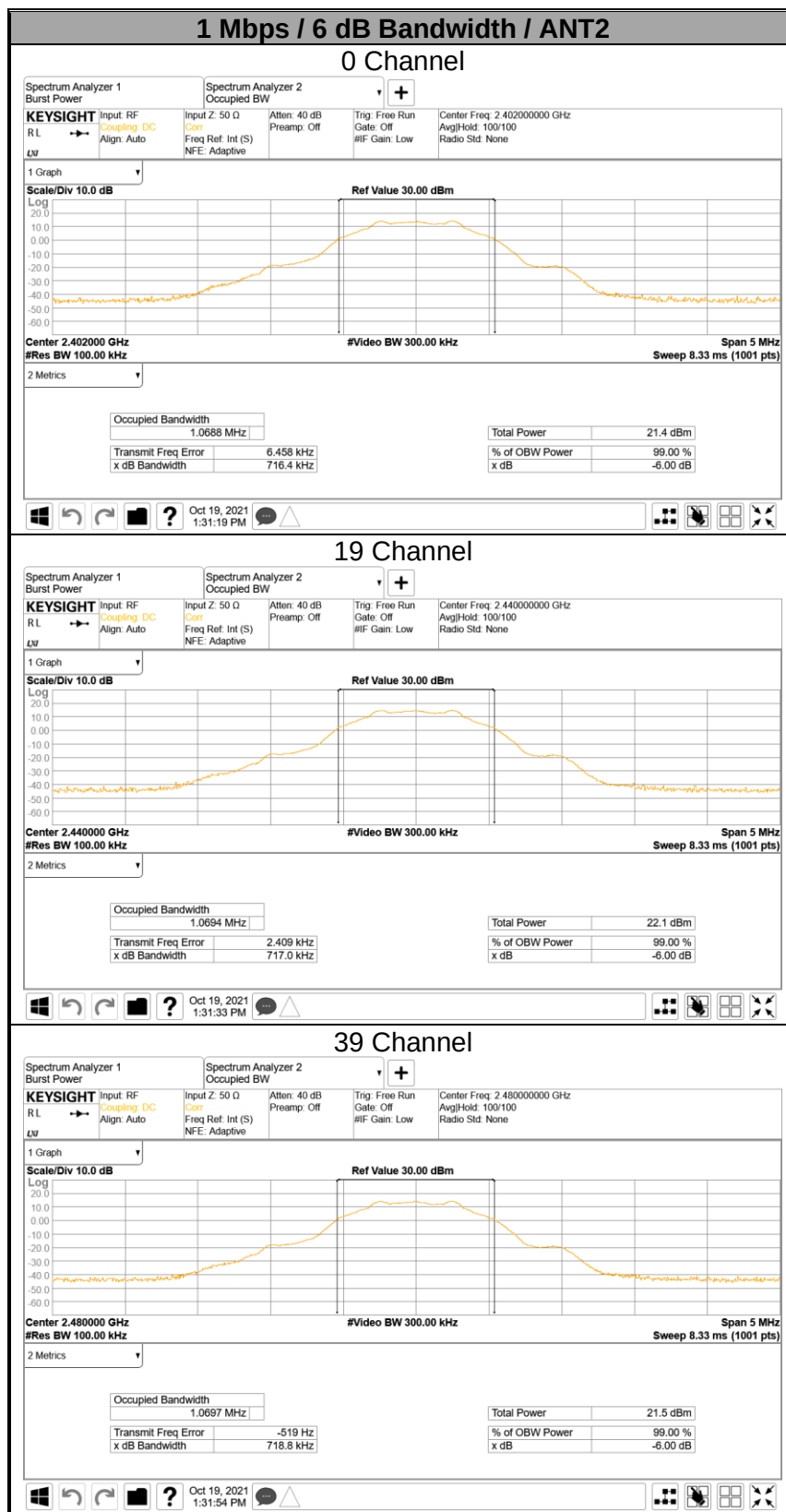
Ant.	Channel	Frequency [MHz]	6 dB Bandwidth [kHz]	Minimum Limit [kHz]
ANT1	0	2 402	721.5	500.0
	19	2 440	722.0	500.0
	39	2 480	721.8	500.0
ANT2	0	2 402	716.4	500.0
	19	2 440	717.0	500.0
	39	2 480	718.8	500.0
Worst			716.4	500.0

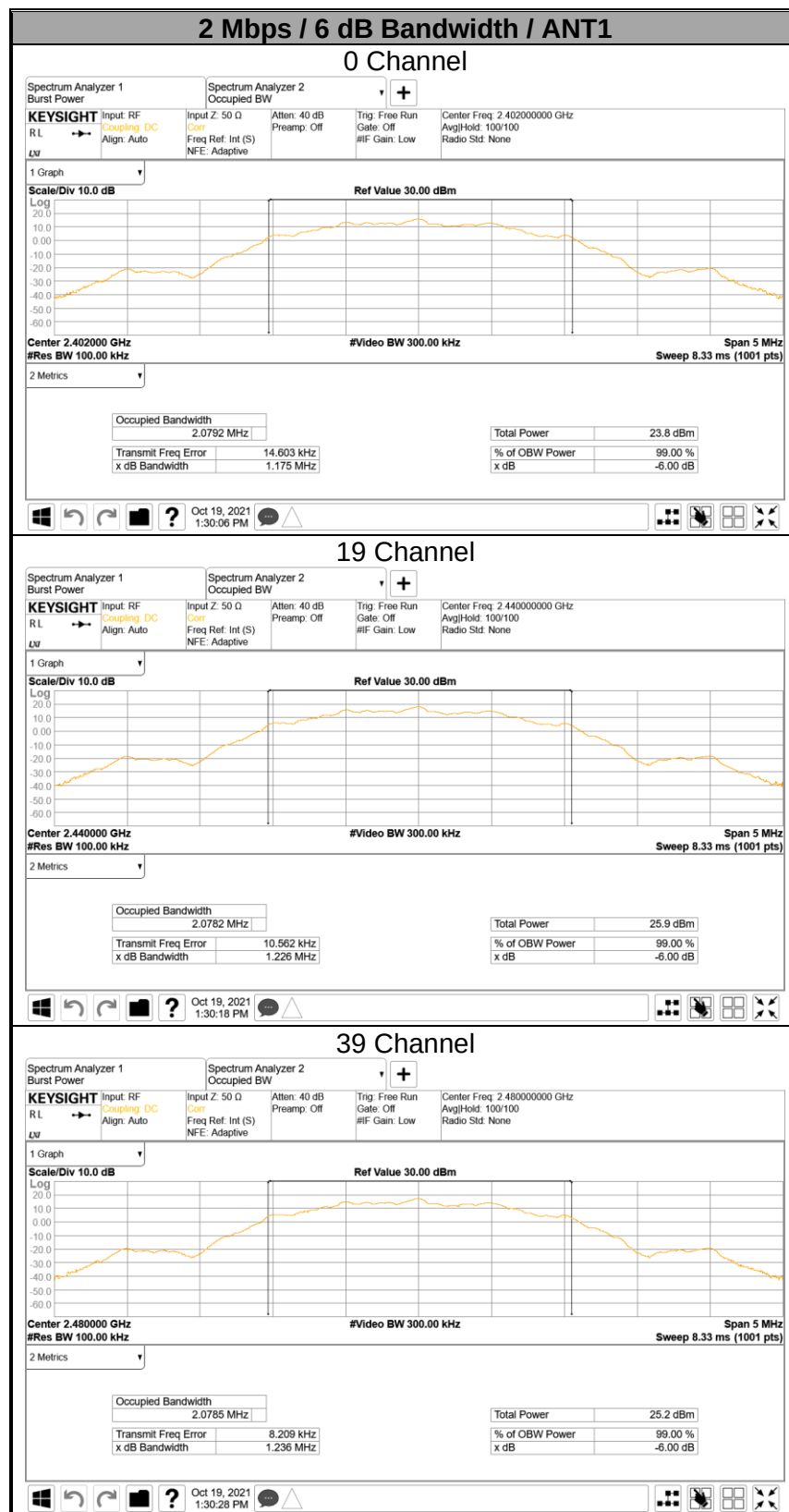
9.2.2. 2 Mbps

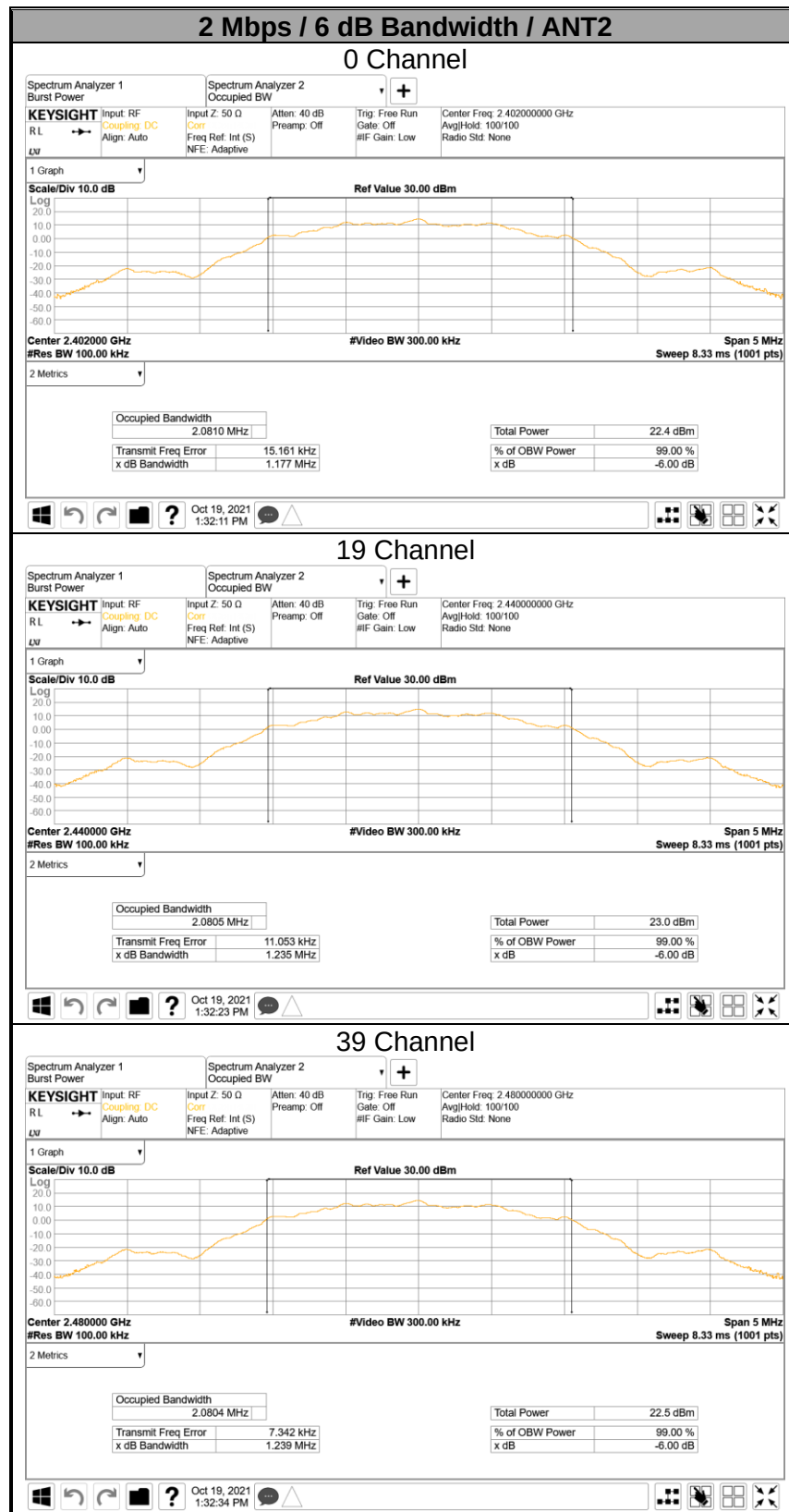
Ant.	Channel	Frequency [MHz]	6 dB Bandwidth [kHz]	Minimum Limit [kHz]
ANT1	0	2 402	1 175.0	500.0
	19	2 440	1 226.0	500.0
	39	2 480	1 236.0	500.0
ANT2	0	2 402	1 177.0	500.0
	19	2 440	1 235.0	500.0
	39	2 480	1 239.0	500.0
Worst			1 175.0	500.0

9.2.3. 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.

RESULTS

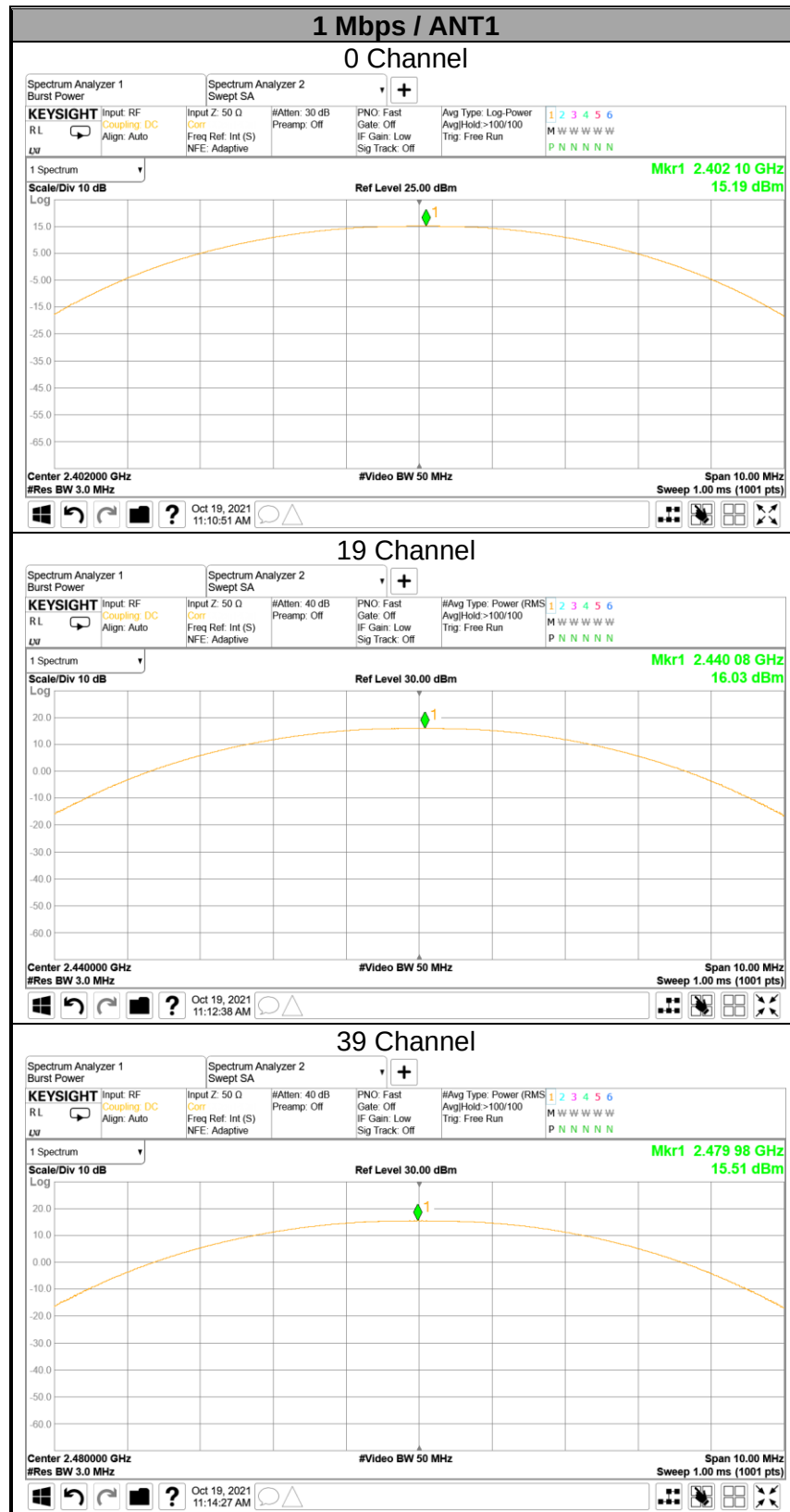
9.3.1. 1 Mbps

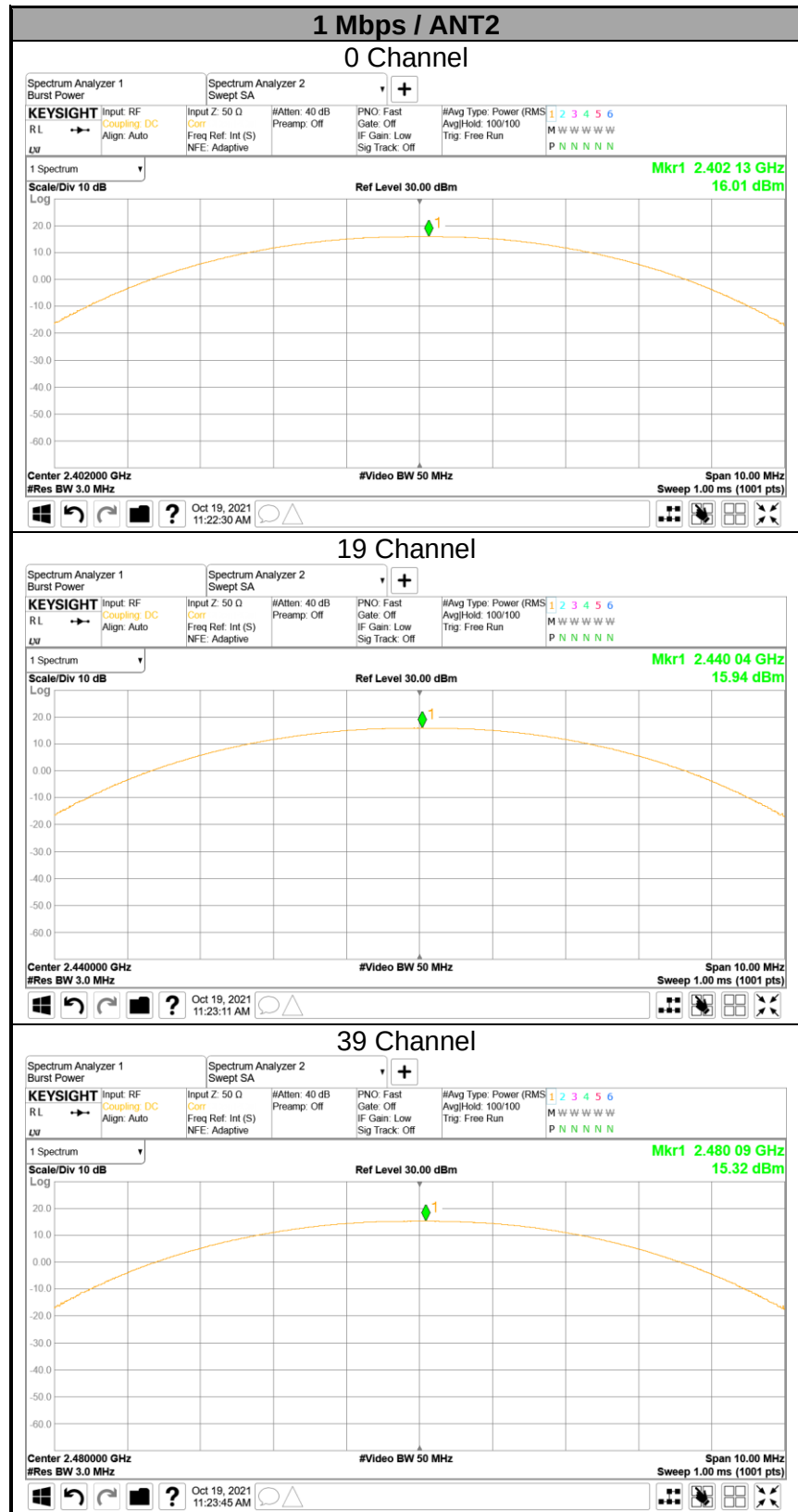
Antenna	PA.	Channel	Frequency [MHz]	Peak Output Power [dBm]	Limit [dBm]	Margin [dB]
ANT1	ePA	0	2 402	15.19	30.000	-14.81
		19	2 440	16.03		-13.97
		39	2 480	15.51		-14.49
ANT2		0	2 402	16.01		-13.99
		19	2 440	15.94		-14.06
		39	2 480	15.32		-14.68
Worst				16.03	-13.97	

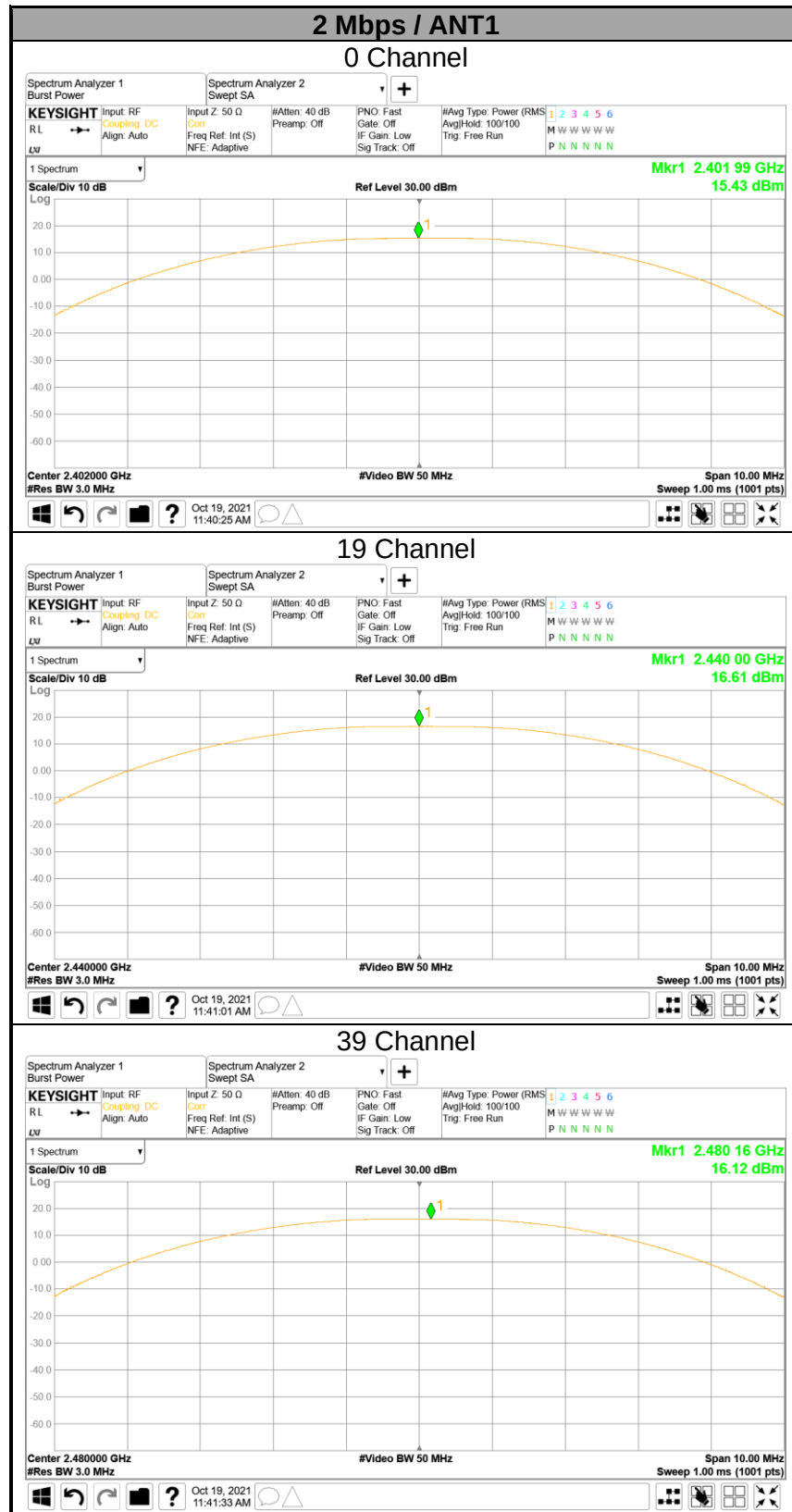
9.3.2. 2 Mbps

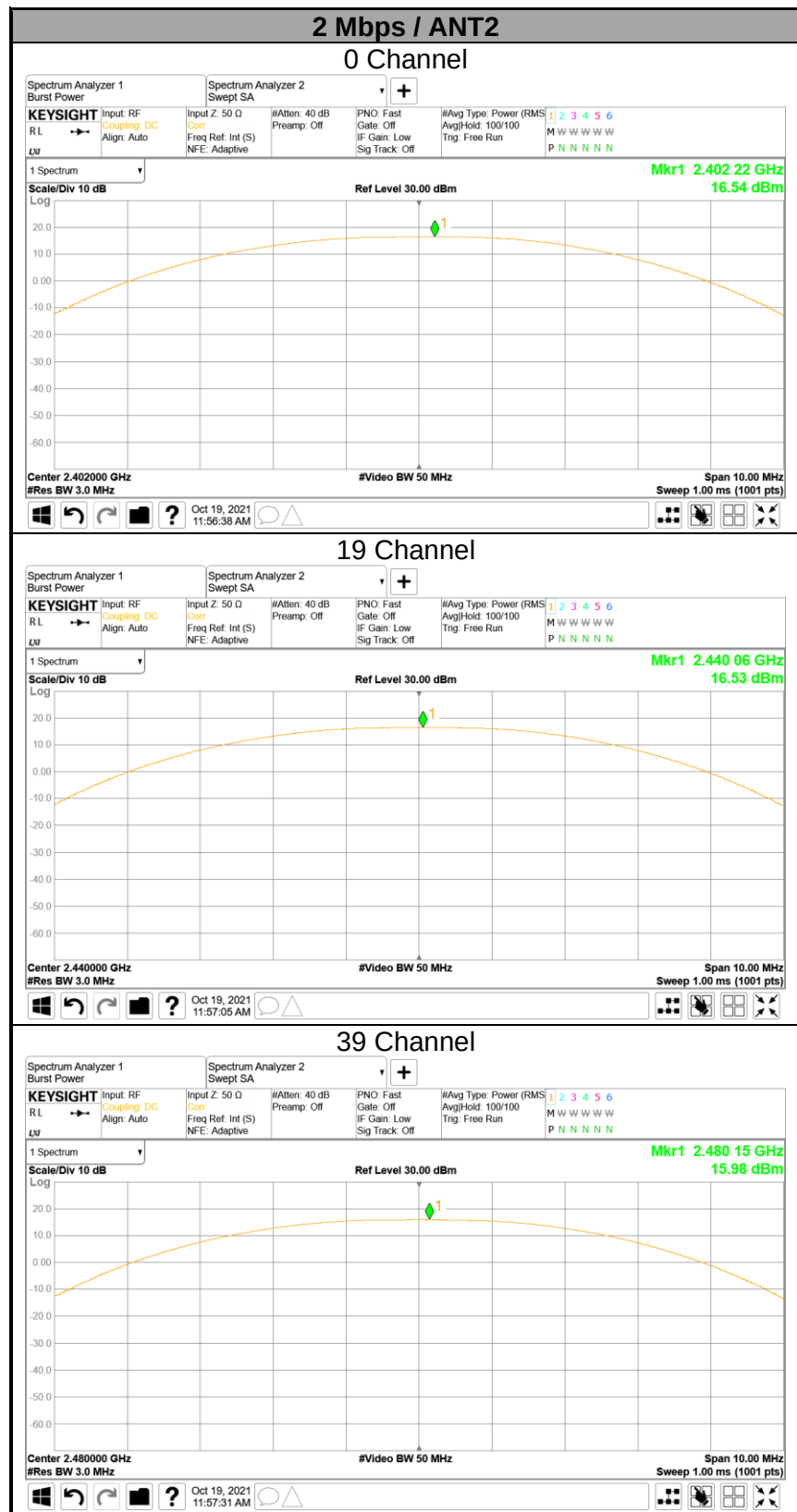
Antenna	PA.	Channel	Frequency [MHz]	Peak Output Power [dBm]	Limit [dBm]	Margin [dB]
ANT1	ePA	0	2 402	15.43	30.000	-14.57
		19	2 440	16.61		-13.39
		39	2 480	16.12		-13.88
ANT2		0	2 402	16.54		-13.46
		19	2 440	16.53		-13.47
		39	2 480	15.98		-14.02
Worst				16.61		-13.39

9.3.3. 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. 1 Mbps

Antenna	PA.	Channel	Frequency [MHz]	Average Output Power [dBm]	Average Output Power [mW]
ANT1	ePA	0	2 402	14.981	31.485
		19	2 440	15.759	37.662
		39	2 480	15.148	32.719
ANT2		0	2 402	15.660	36.813
		19	2 440	15.686	37.034
		39	2 480	15.017	31.747

9.4.2. 2 Mbps

Antenna	PA.	Channel	Frequency [MHz]	Average Output Power [dBm]	Average Output Power [mW]
ANT1	ePA	0	2 402	14.963	31.355
		19	2 440	16.246	42.131
		39	2 480	15.673	36.923
ANT2		0	2 402	16.028	40.068
		19	2 440	16.092	40.663
		39	2 480	15.495	35.441

9.5. POWER SPECTRAL DENSITY

LIMITS

FCC §15.247 (e)

RSS-247 (5.2) (b)

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.

RESULTS

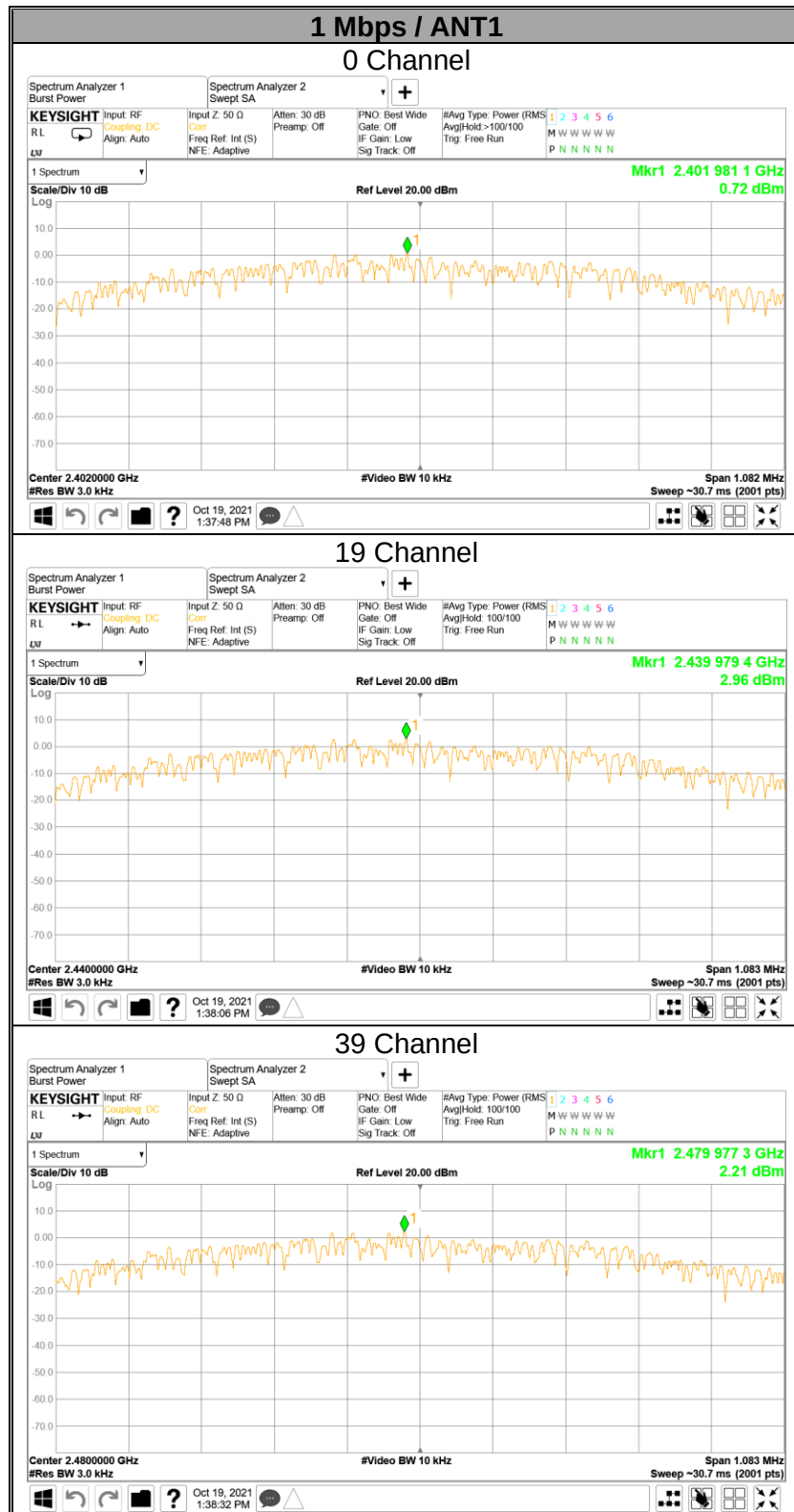
9.5.1. 1 Mbps

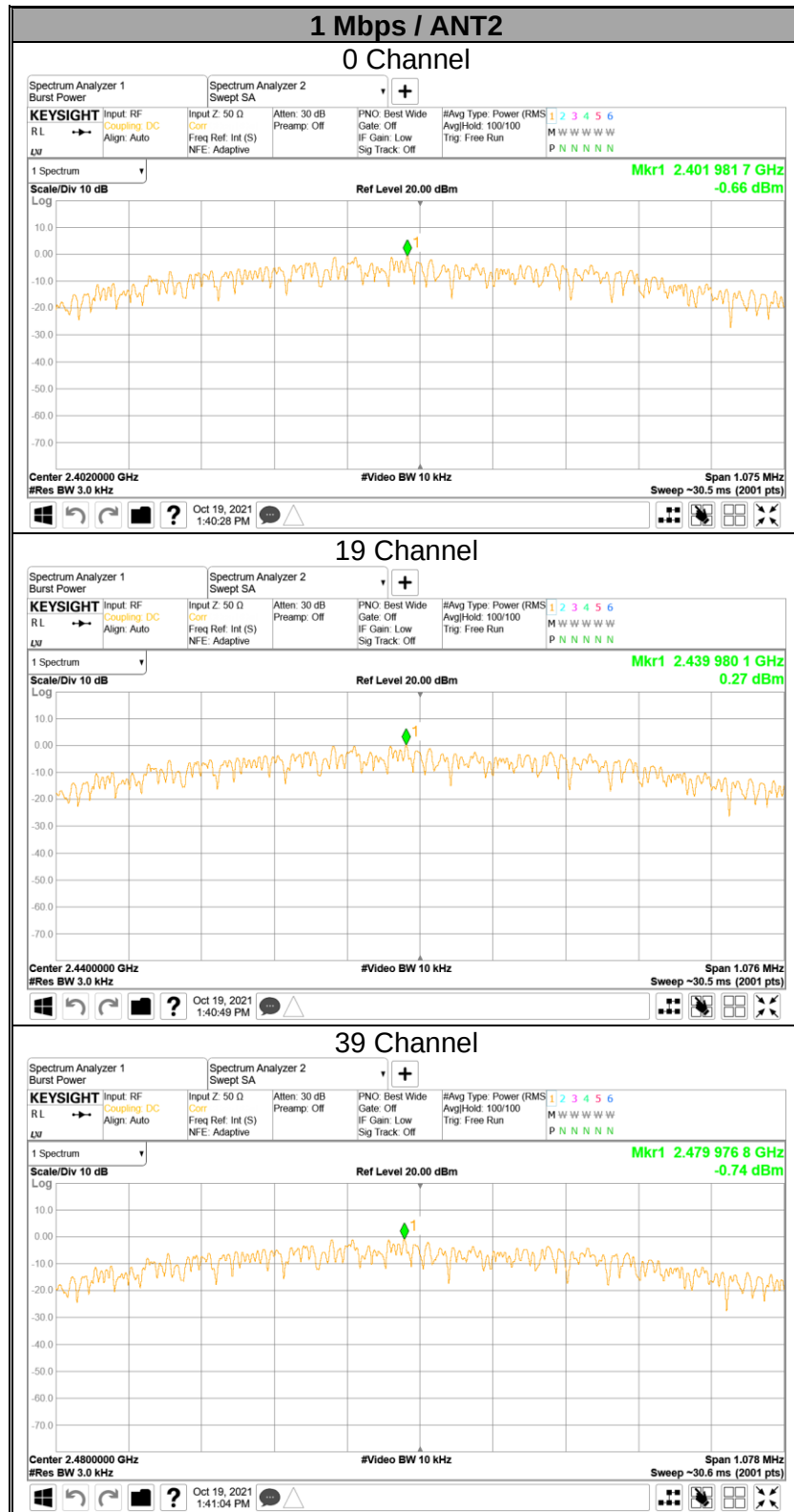
Antenna	PA.	Channel	Frequency [MHz]	PSD [dBm/3kHz]	Limit [dBm/3kHz]	Margin [dB]
ANT1	ePA	0	2 402	0.72	8.00	-7.28
		19	2 440	2.96		-5.04
		39	2 480	2.21		-5.79
ANT2		0	2 402	-0.66		-8.66
		19	2 440	0.27		-7.73
		39	2 480	-0.74		-8.74
Worst				2.96		-5.04

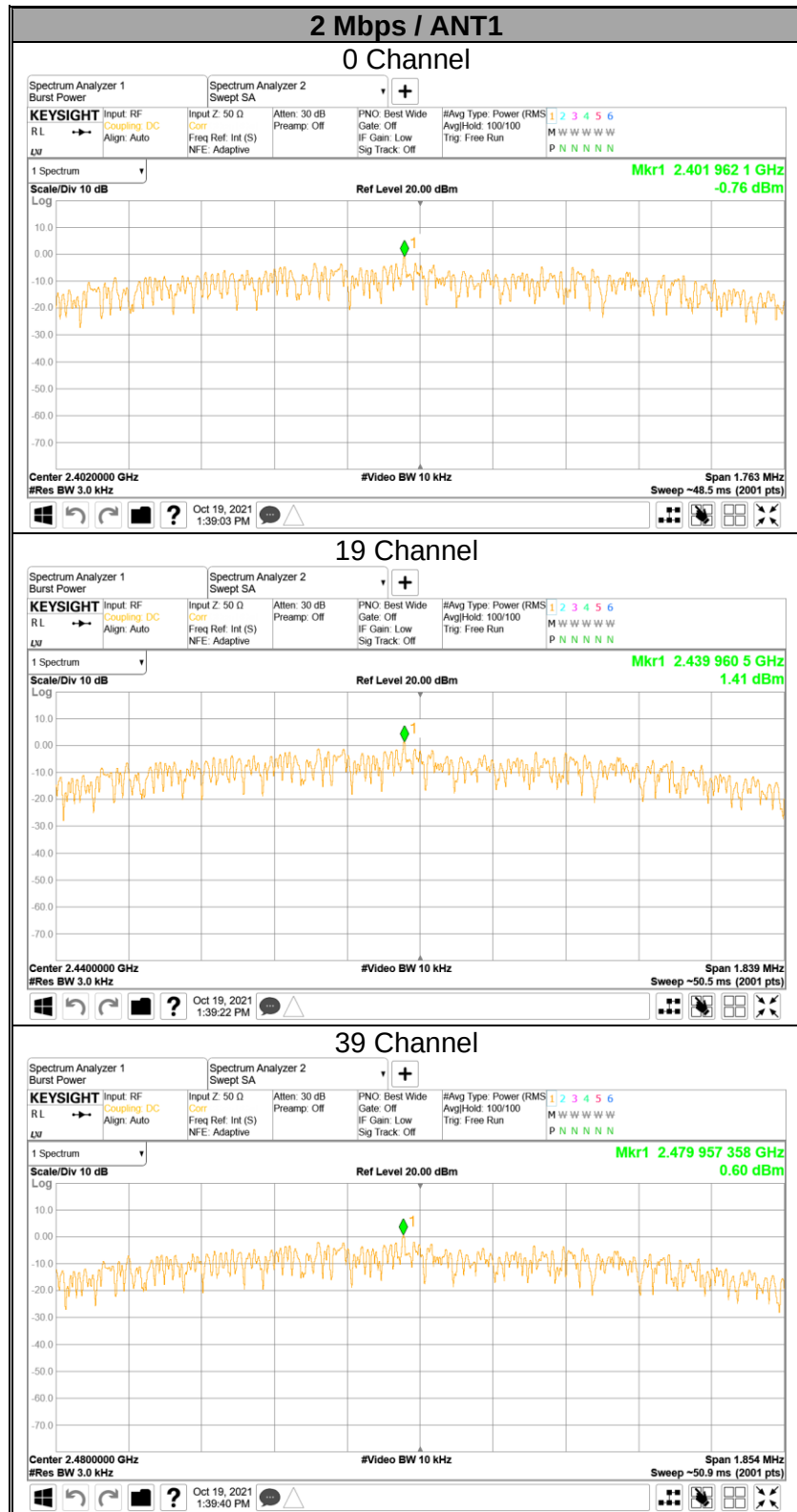
9.5.2. 2 Mbps

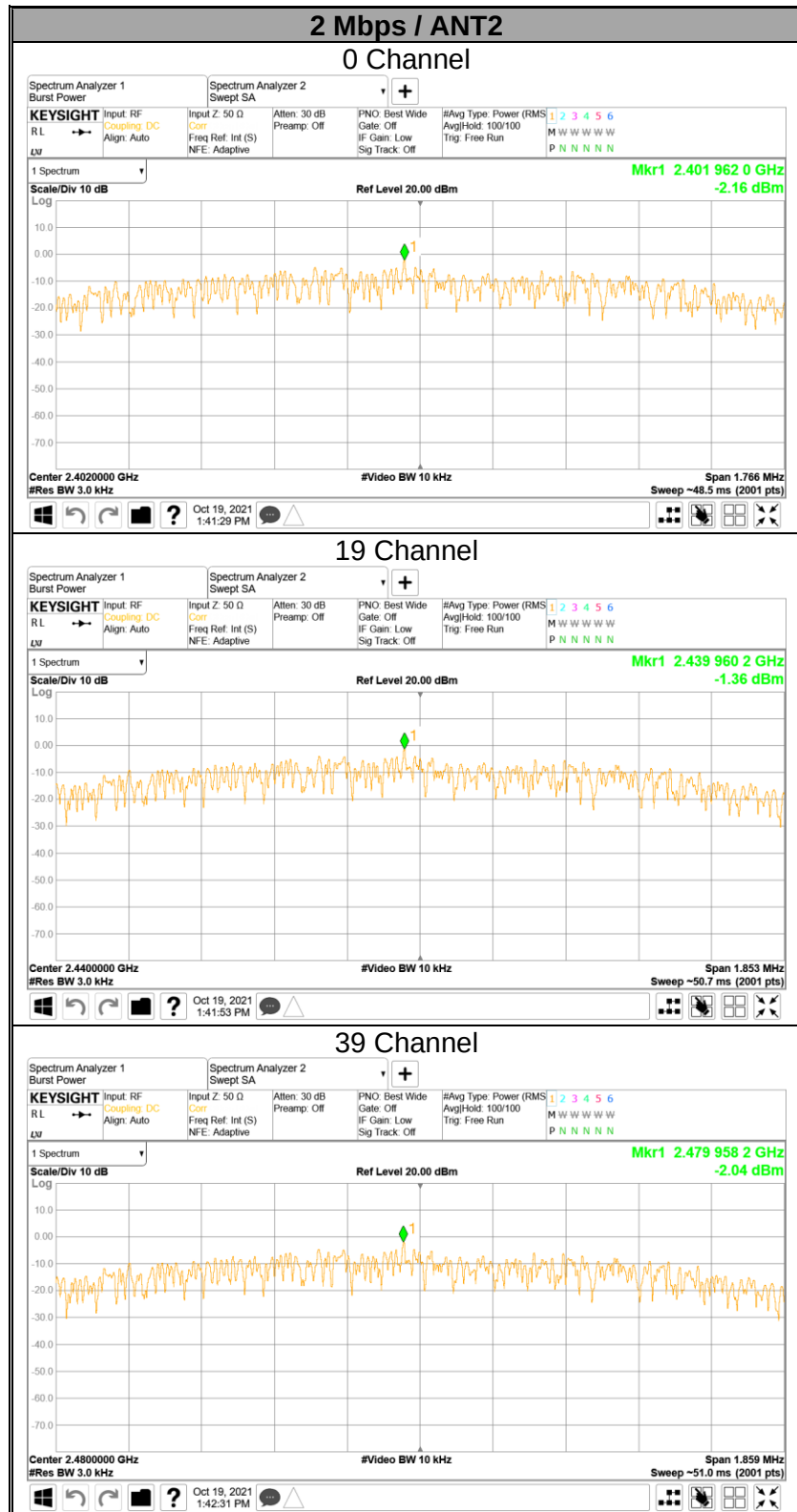
Antenna	PA.	Channel	Frequency [MHz]	PSD [dBm/3kHz]	Limit [dBm/3kHz]	Margin [dB]
ANT1	ePA	0	2 402	-0.76	8.00	-8.76
		19	2 440	1.41		-6.59
		39	2 480	0.60		-7.40
ANT2		0	2 402	-2.16		-10.16
		19	2 440	-1.36		-9.36
		39	2 480	-2.04		-10.04
Worst				1.41		-6.59

9.5.3. PSD TEST PLOTS









9.6. CONDUCTED SPURIOUS EMISSIONS

LIMITS

FCC §15.247 (d)

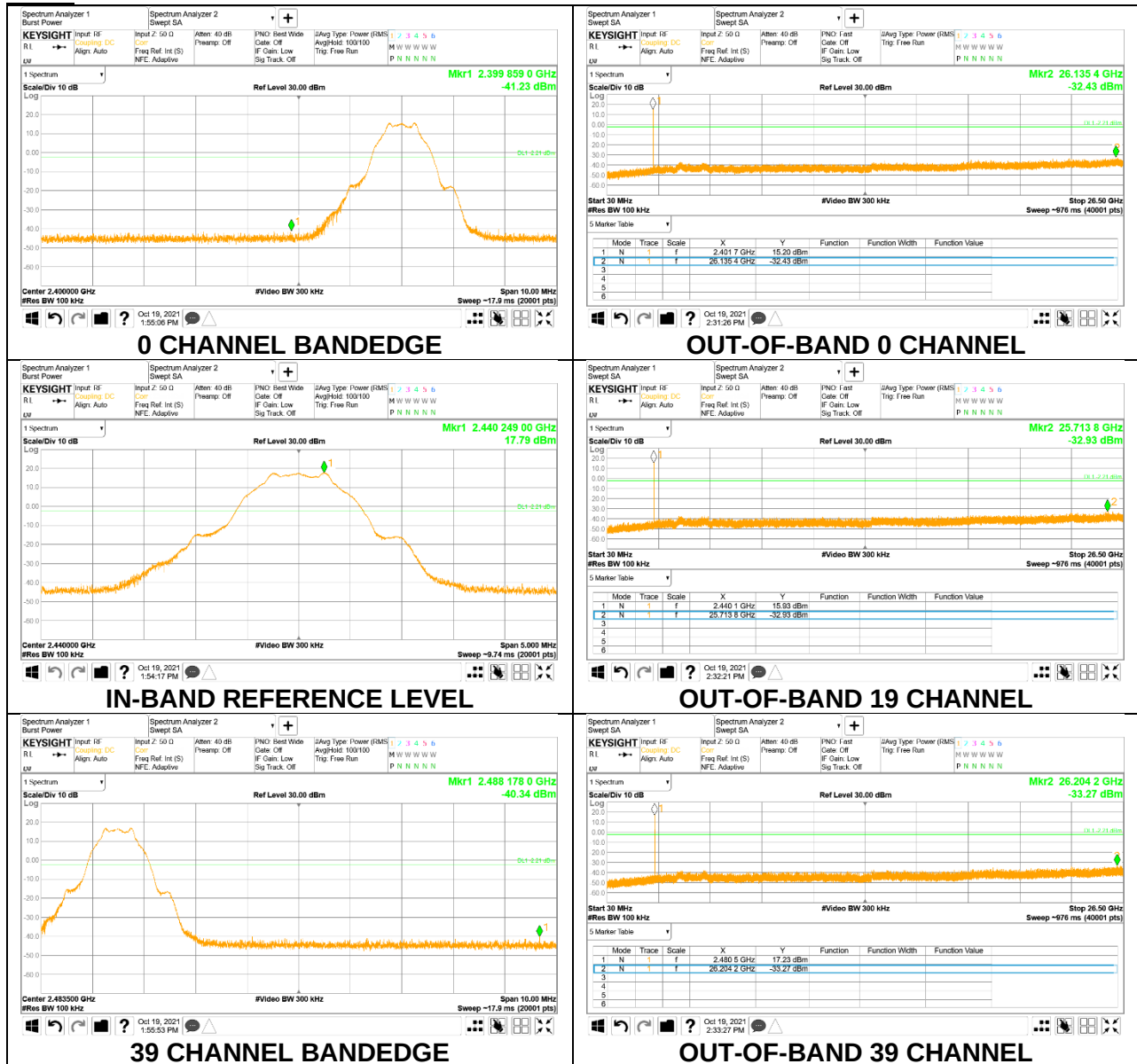
RSS-247 5.5

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

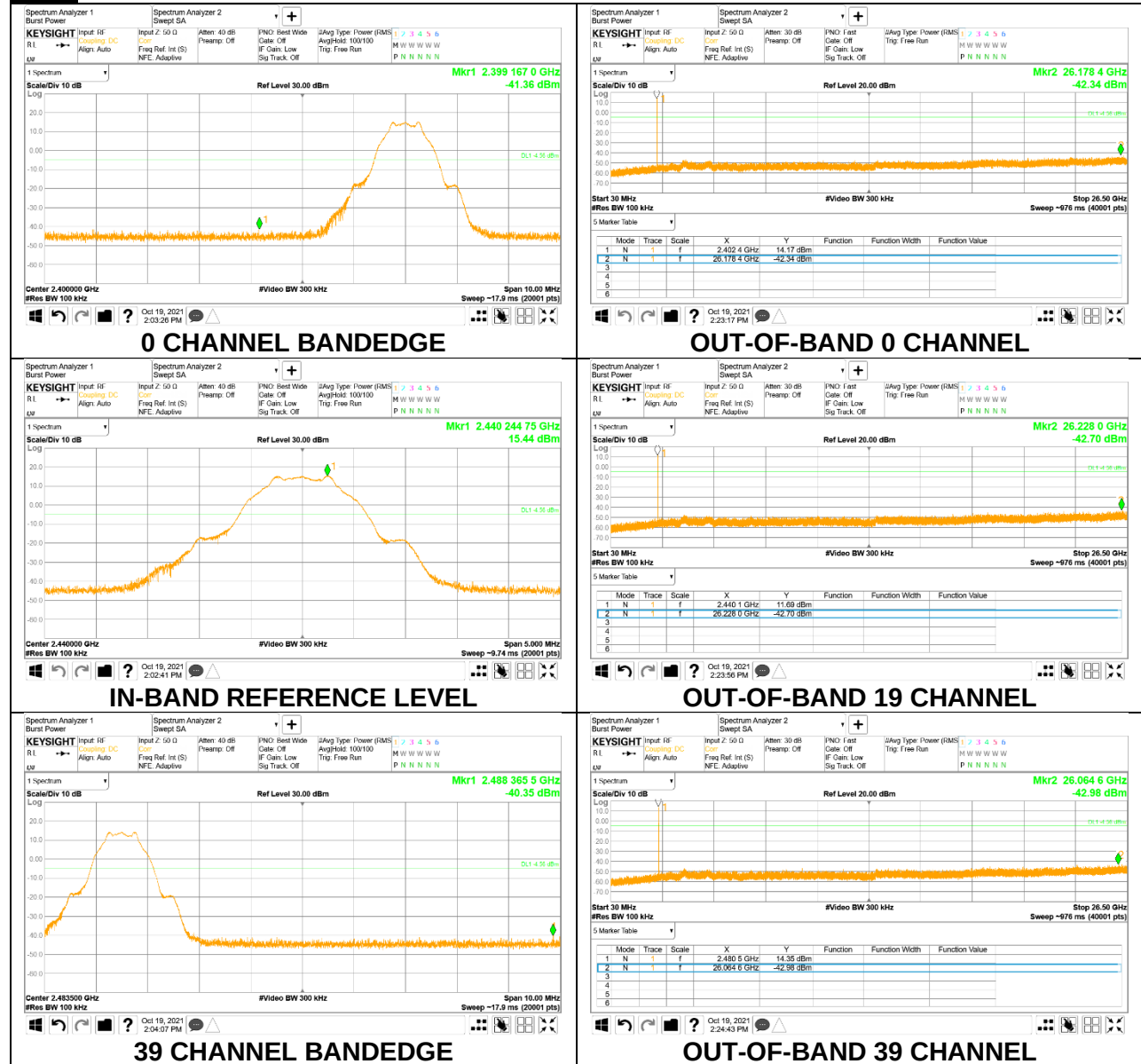
RESULTS

9.6.1. 1 Mbps

ANT1

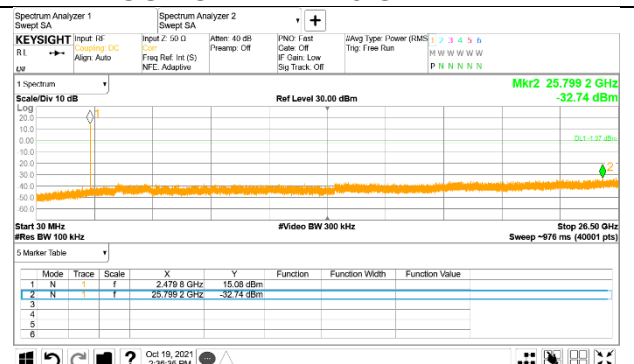
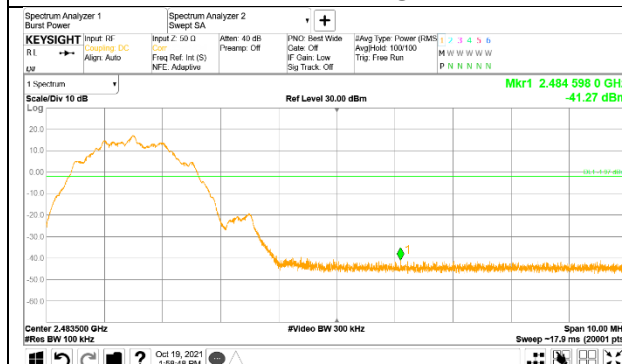
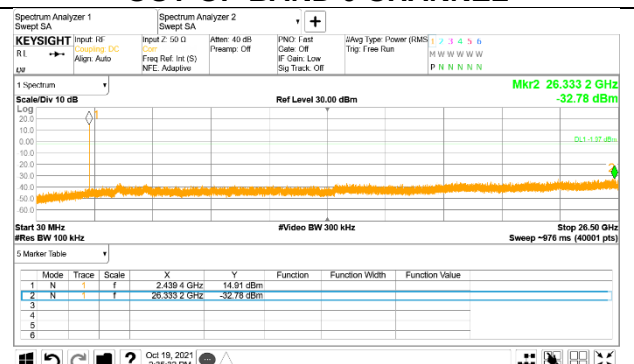
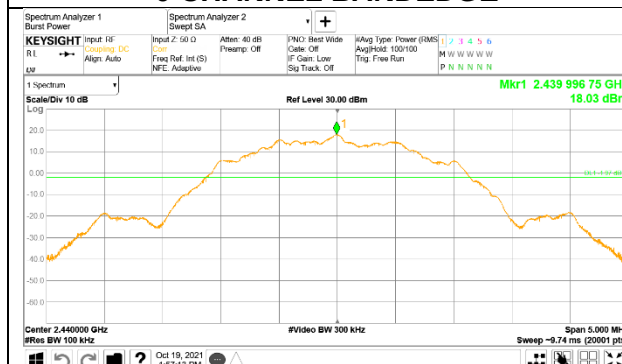
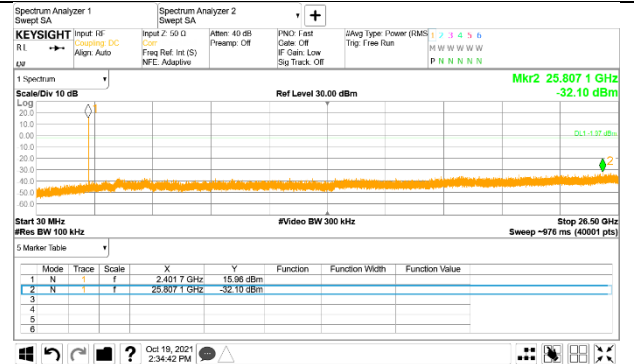
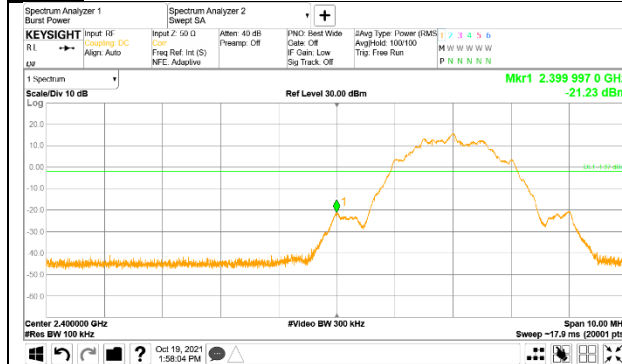


ANT2

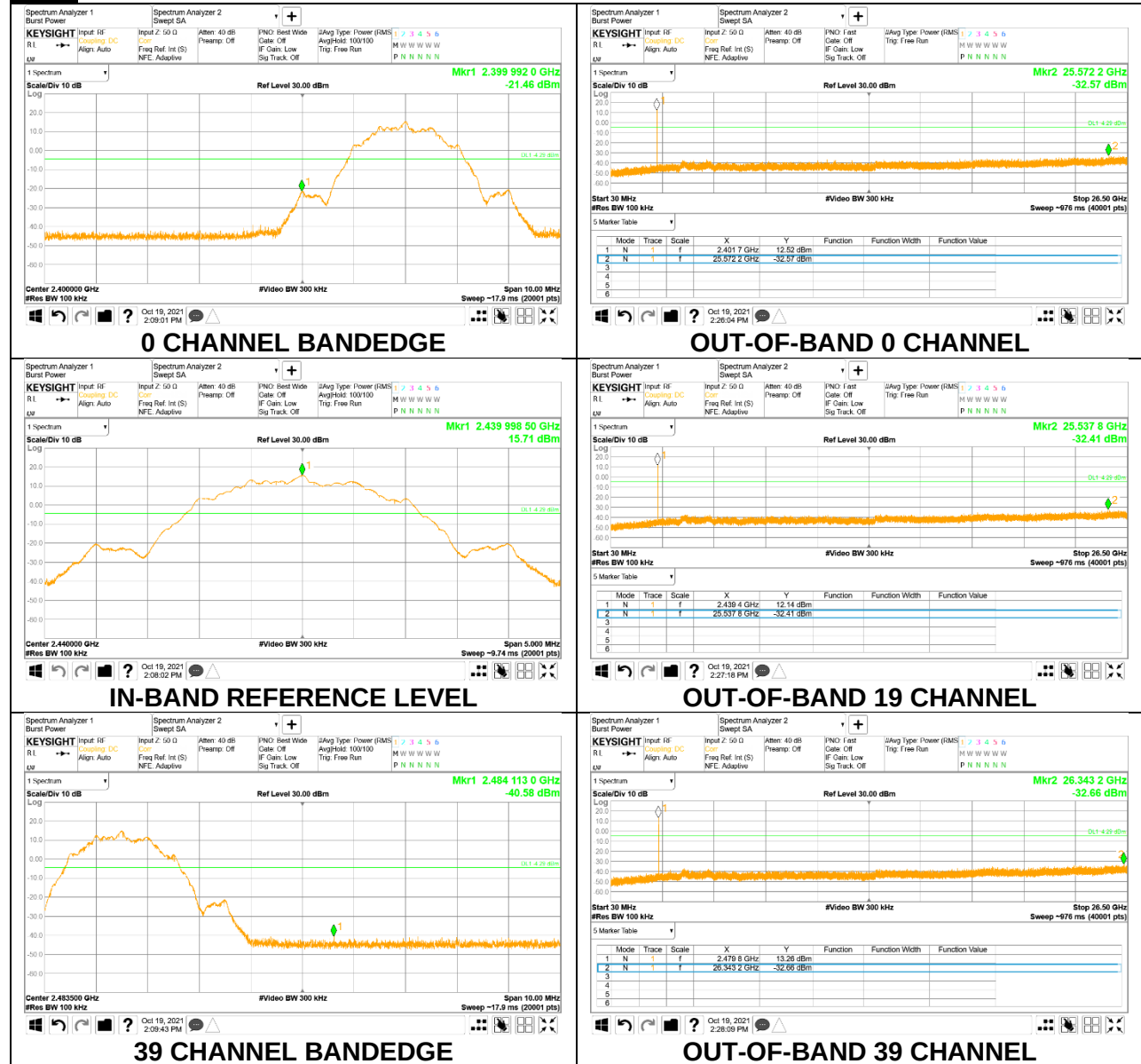


9.6.2. 2Mbps

ANT1



ANT2



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 (μV/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 1 Mbps, DCF = $10\log(1/0.6034)=2.194$ dB (Spectrum Analyzer round it up to 2.20 dB) and for 2 Mbps, DCF = $10\log(1/0.3120)=5.058$ dB (Spectrum Analyzer round it up to 5.06 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.

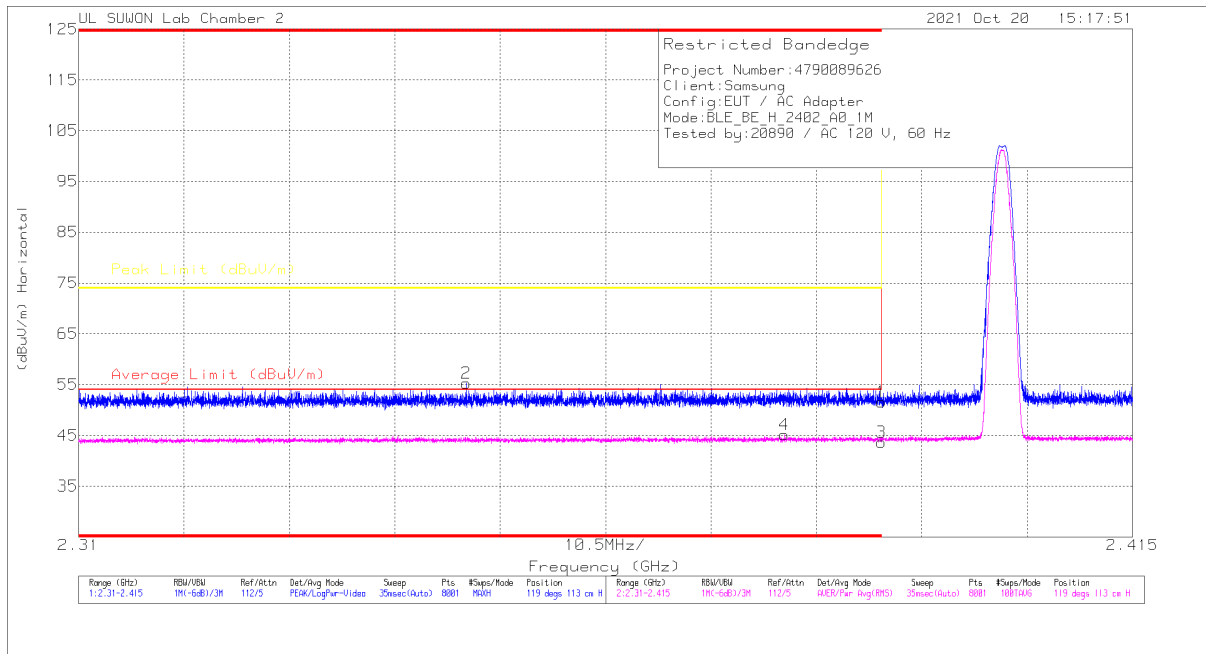
10.2. TRANSMITTER ABOVE 1 GHz

10.2.1. 1 Mbps

ANT1

BANDEDGE (0 CHANNEL)

HORIZONTAL RESULT

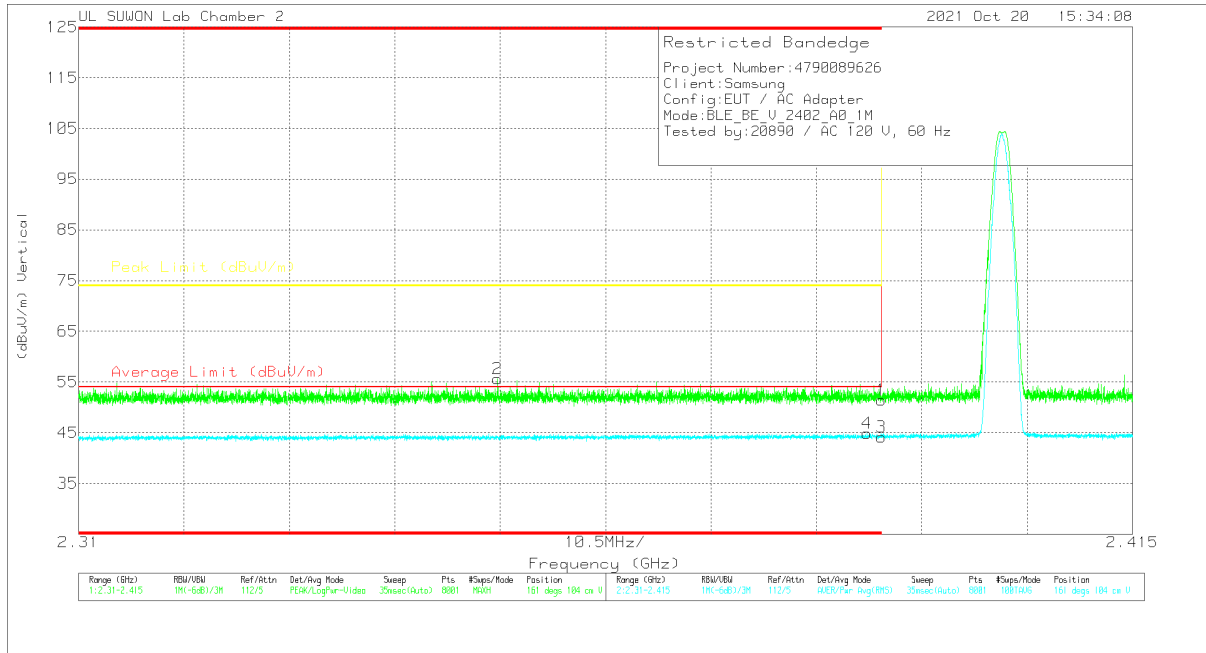


Trace Markers

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	* 2.39	40.31	PK	31.9	-20.6	0	51.61	-	-	74	-22.39	119	113	H
2	* 2.34859	44.07	PK	31.8	-20.6	0	55.27	-	-	74	-18.73	119	113	H
3	* 2.39	30.13	RMS	31.9	-20.6	2.2	43.63	54	-10.37	-	-	119	113	H
4	* 2.38032	31.65	RMS	31.9	-20.6	2.2	45.15	54	-8.85	-	-	119	113	H

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

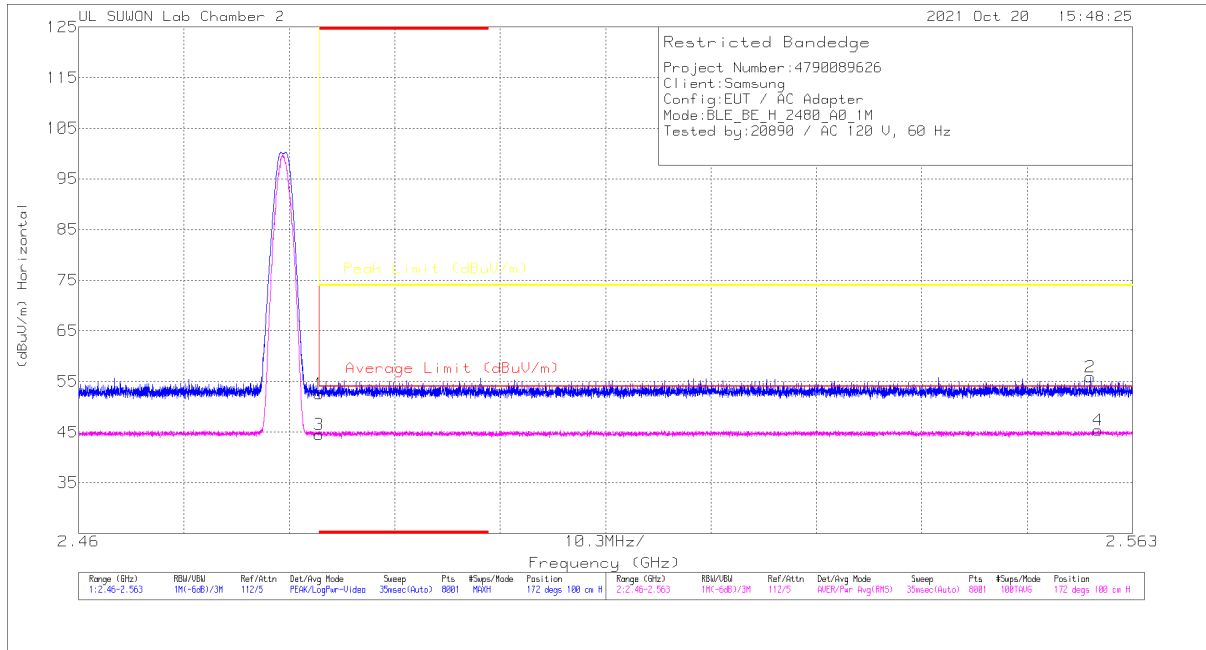
VERTICAL RESULT



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00108724	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	40.16	PK	31.9	-20.6	0	51.46	-	-	74	-22.54	161	104	V
2	* 2.35175	44.41	PK	31.8	-20.6	0	55.61	-	-	74	-18.39	161	104	V
3	* 2.39	30.59	RMS	31.9	-20.6	2.2	44.09	54	-9.91	-	-	161	104	V
4	* 2.38855	31.4	RMS	31.9	-20.6	2.2	44.9	54	-9.1	-	-	161	104	V

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

BANDEDGE (39 CHANNEL)**HORIZONTAL RESULT****Trace Markers**

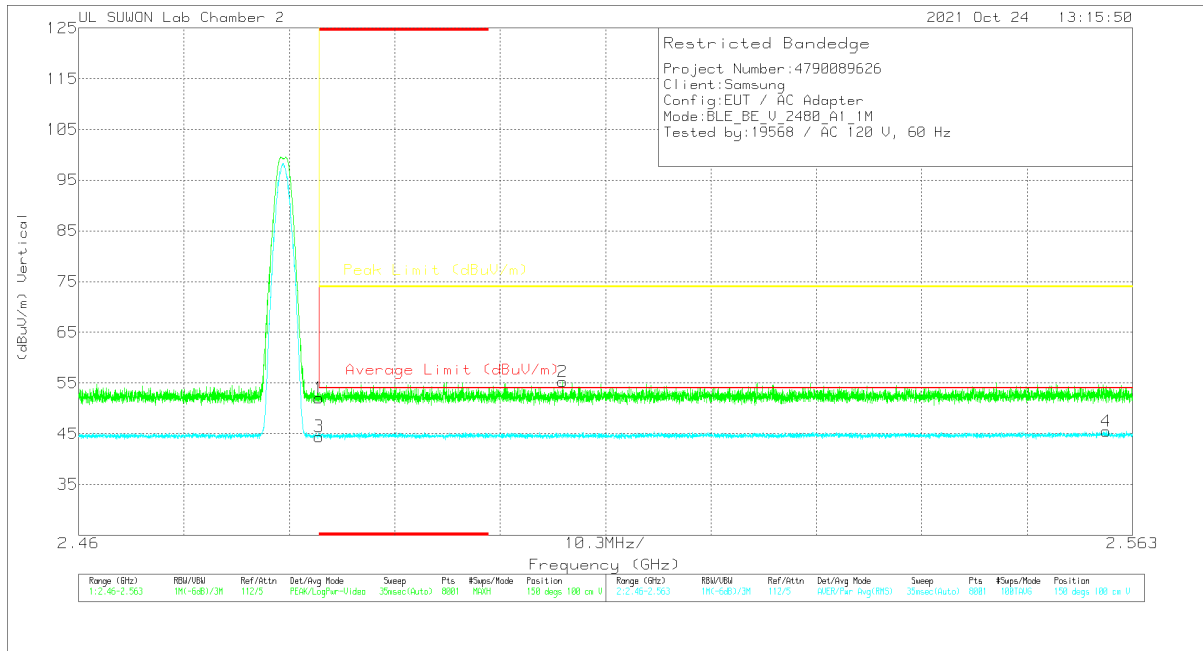
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	10dB_ATT[dB]	DC Cor (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.48351	40.9	PK	32	-20.4	0	52.5	-	-	74	-21.5	172	100	H
2	2.55887	43.97	PK	32.2	-20.3	0	55.87	-	-	74	-18.13	172	100	H
3	* 2.48351	30.77	RMS	32	-20.4	2.2	44.57	54	-9.43	-	-	172	100	H
4	2.55963	31.19	RMS	32.2	-20.2	2.2	45.39	54	-8.61	-	-	172	100	H

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

PK - Peak detector

RMS - RMS detection

VERTICAL RESULT



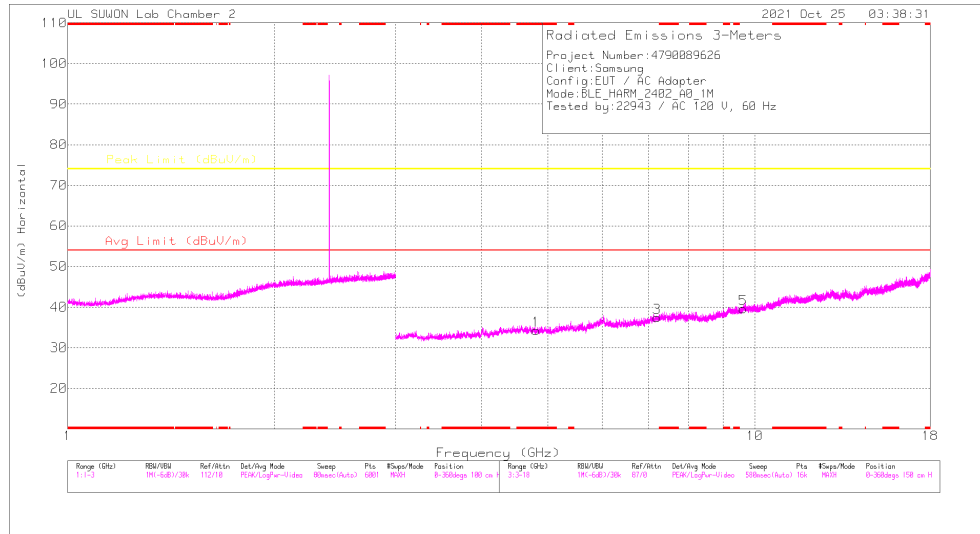
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_90168724	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Altitude (Degs)	Height (cm)	Polarity
1	* 2.48351	40.48	PK	32	-20.4	0	52.08	-	-	74	-21.92	150	100	V
2	2.50729	43.63	PK	32.1	-20.4	0	55.33	-	-	74	-18.67	150	100	V
3	* 2.48351	30.65	RMS	32	-20.4	2.2	44.45	54	-9.55	-	-	150	100	V
4	2.56045	31.3	RMS	32.2	-20.2	2.2	45.5	54	-8.5	-	-	150	100	V

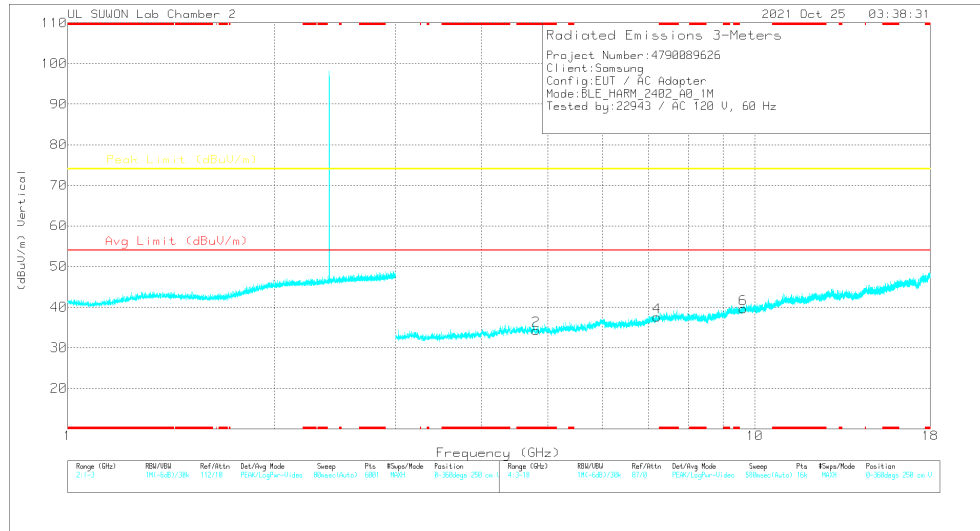
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK - Peak detector
RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

0 CHANNEL RESULTS



HORIZONTAL



VERTICAL

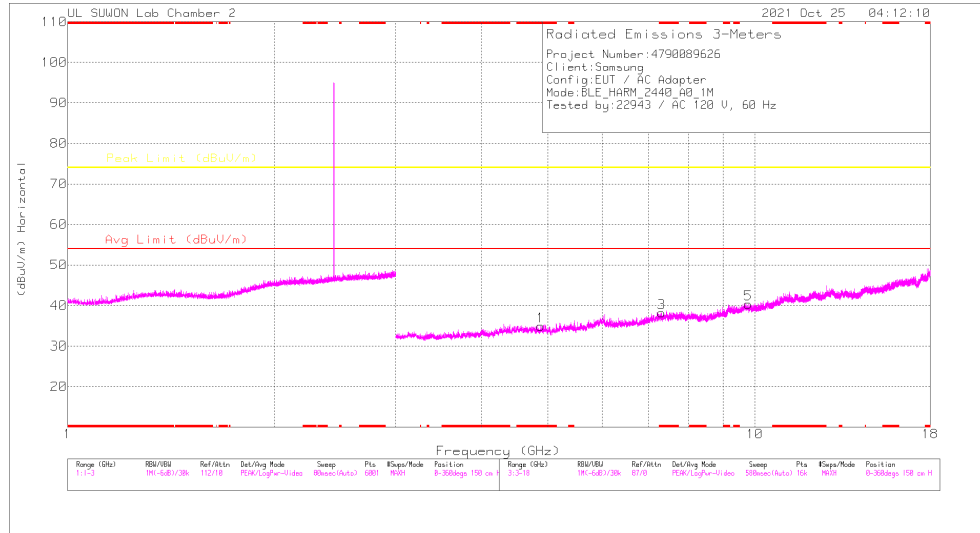
Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

RADIATED EMISSIONS

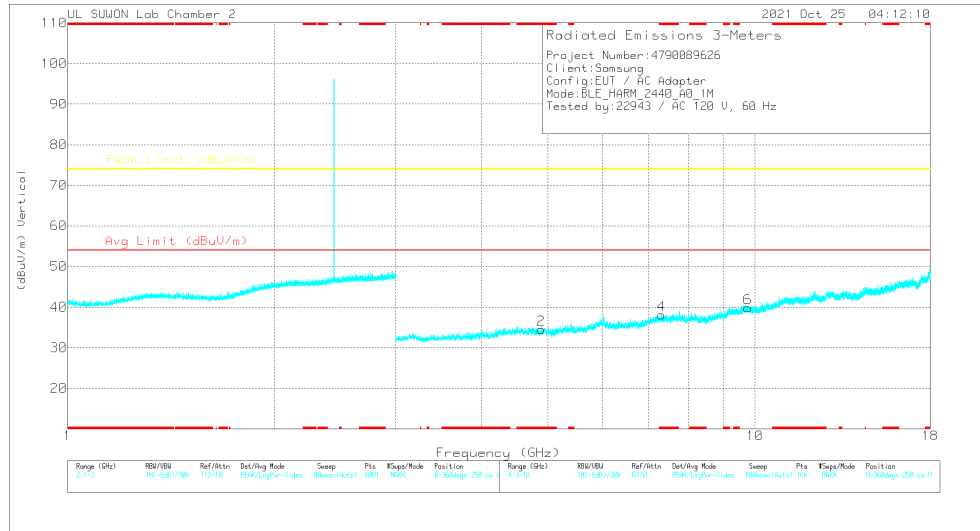
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	3GHz_HP[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.80533	36.79	PK2	34.1	-28	0	42.89	-	-	74	-31.11	0	100	H
* 4.8023	37.36	PK2	34.1	-28	0	43.46	-	-	74	-30.54	0	100	V
7.20467	35.83	PK2	36.2	-25.3	0	46.73	-	-	74	-27.27	0	100	H
7.20674	36.02	PK2	36.2	-25.3	0	46.92	-	-	74	-27.08	0	100	V
9.60606	32.73	PK2	37	-21.7	0	48.03	-	-	74	-25.97	0	100	H
9.60906	33.71	PK2	37	-21.7	0	49.01	-	-	74	-24.99	0	100	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK2 - KDB558074 Method: Maximum Peak

19 CHANNEL RESULTS



HORIZONTAL



VERTICAL

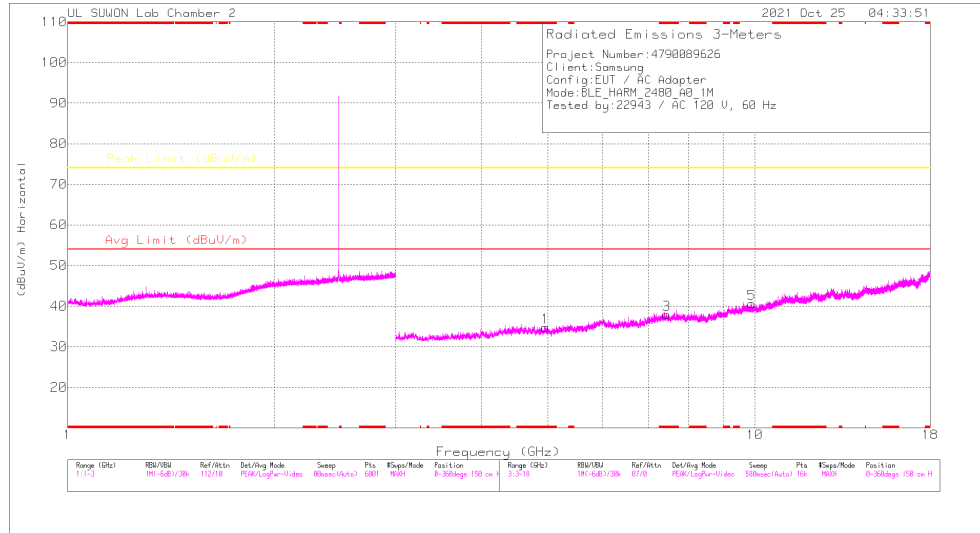
Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

RADIATED EMISSIONS

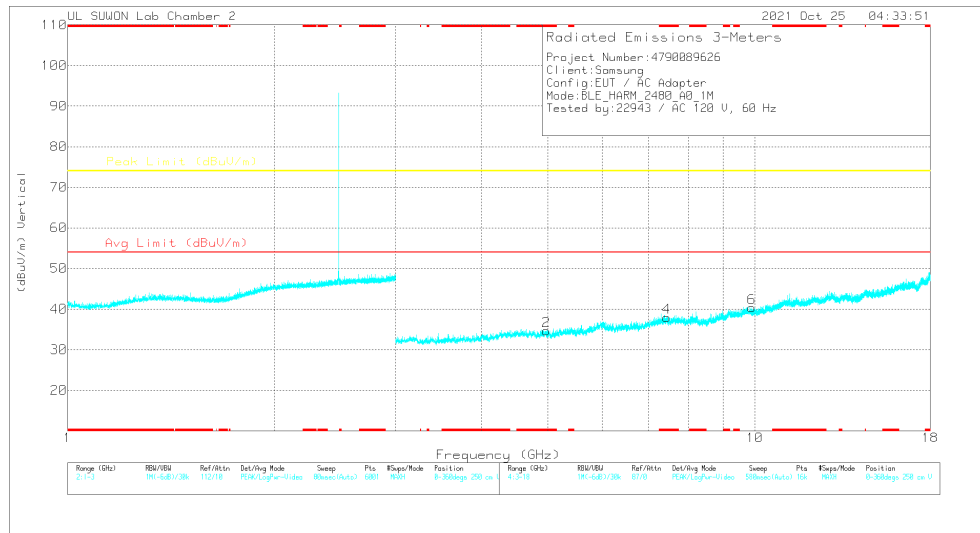
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	3GHz_HP(dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.8818	37.07	PK2	34.1	-27.8	0	43.37	-	-	74	-30.63	0	100	H
* 4.88051	36.74	PK2	34.1	-27.8	0	43.04	-	-	74	-30.96	0	100	V
* 7.31808	35.22	PK2	36.1	-24.9	0	46.42	-	-	74	-27.58	0	100	H
* 7.3182	35.51	PK2	36.1	-24.9	0	46.71	-	-	74	-27.29	0	100	V
9.77918	32.43	PK2	37.2	-21.6	0	48.03	-	-	74	-25.97	0	100	H
9.7787	32.71	PK2	37.2	-21.6	0	48.31	-	-	74	-25.69	0	100	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK2 - KDB558074 Method: Maximum Peak

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.

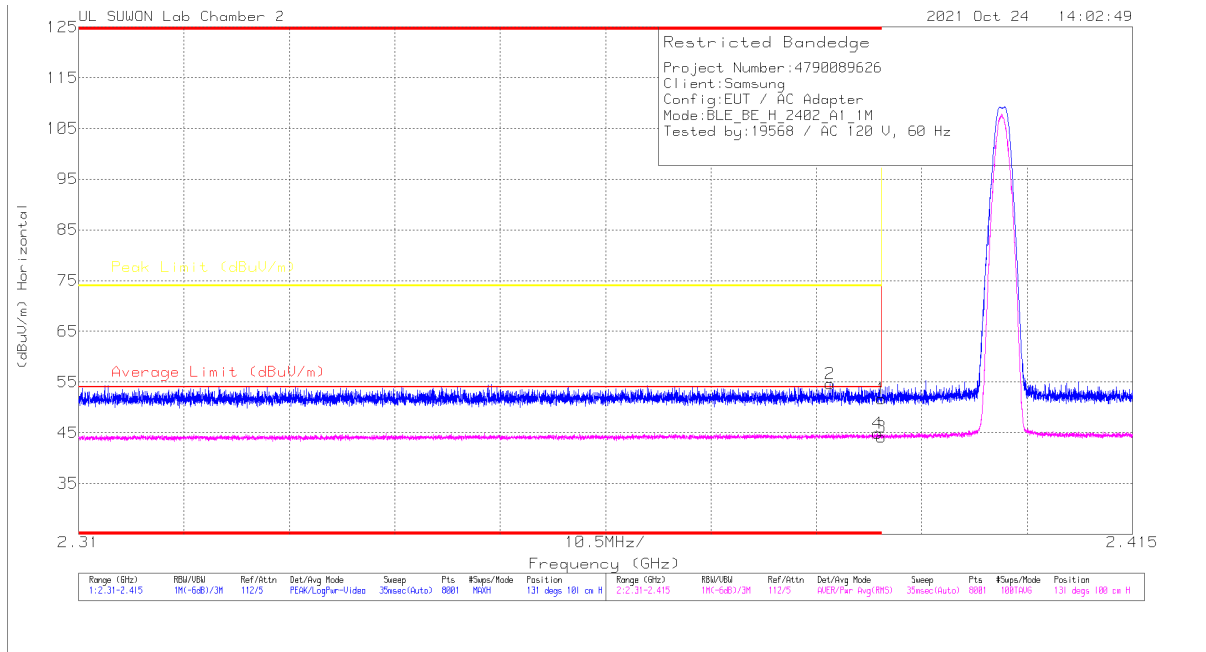
RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	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
* 4.96049	36.47	PK2	34.1	-27.2	0	43.37	-	-	74	-30.63	0	100	H
* 4.96074	37.26	PK2	34.1	-27.2	0	44.16	-	-	74	-29.84	0	100	V
* 7.44135	34.33	PK2	36	-24.1	0	46.23	-	-	74	-27.77	0	100	H
* 7.44165	34.75	PK2	36	-24.1	0	46.65	-	-	74	-27.35	0	100	V
9.92038	32.44	PK2	37.4	-21.2	0	48.64	-	-	74	-25.36	0	100	H
9.91809	32.12	PK2	37.4	-21.3	0	48.22	-	-	74	-25.78	0	100	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK2 - KDB558074 Method: Maximum Peak

ANT2
BANDEDGE (0 CHANNEL)

HORIZONTAL RESULT



Trace Markers

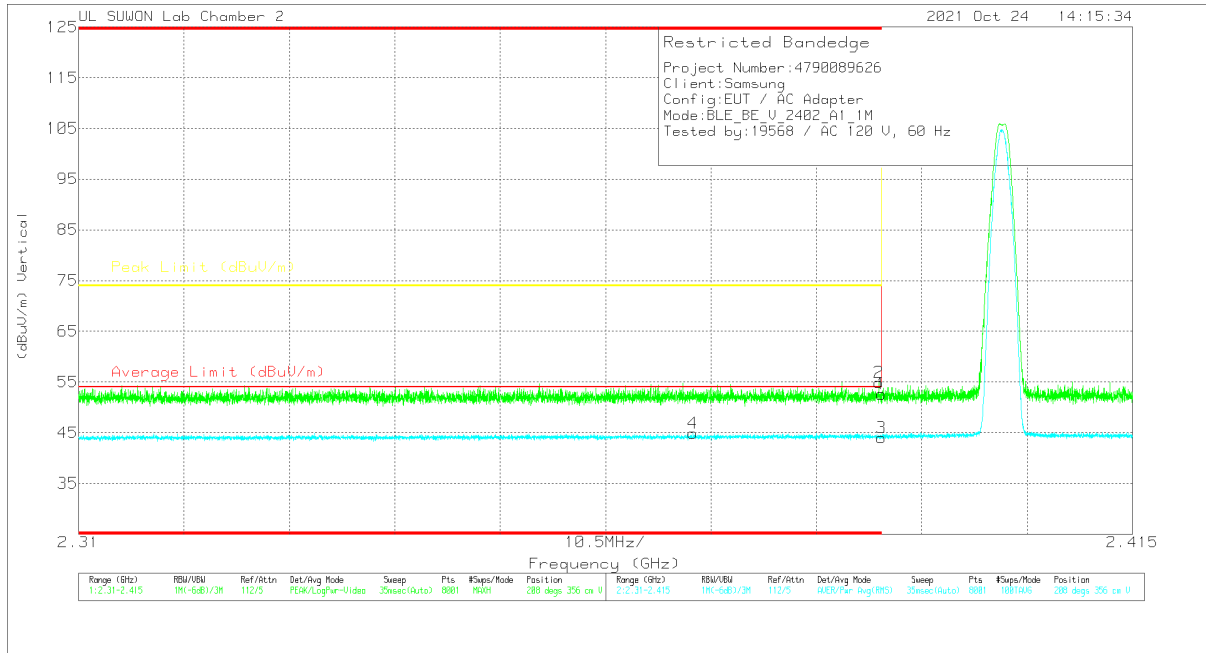
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (m)	Polarity
1	* 2.39	40.38	PK	31.9	-20.6	0	51.08	-	-	74	-22.32	131	101	H
2	* 2.38485	43.4	PK	31.9	-20.6	0	54.7	-	-	74	-19.3	131	101	H
3	* 2.39	30.62	RMS	31.9	-20.6	2.2	44.12	54	-9.88	-	-	131	100	H
4	* 2.38959	31.43	RMS	31.9	-20.6	2.2	44.93	54	-9.07	-	-	131	100	H

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

PK - Peak detector

RMS - RMS detection

VERTICAL RESULT



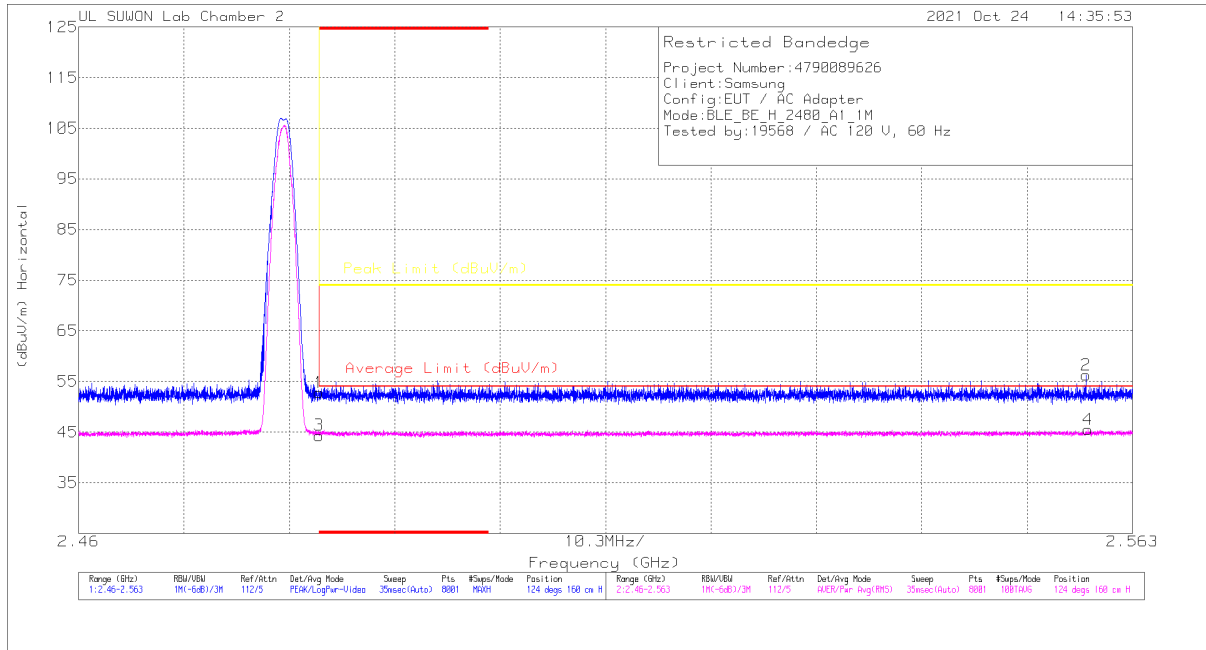
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00188724	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	41.32	Pk	31.9	-20.6	0	52.62	-	-	74	-21.38	208	356	V
2	* 2.38973	43.59	Pk	31.9	-20.6	0	54.89	-	-	74	-19.11	208	356	V
3	* 2.39	30.51	RMS	31.9	-20.6	2.2	44.01	54	-9.99	-	-	208	356	V
4	* 2.37122	31.52	RMS	31.8	-20.6	2.2	44.92	54	-9.08	-	-	208	356	V

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

PK - Peak detector

RMS - RMS detection

BANDEDGE (39 CHANNEL)**HORIZONTAL RESULT****Trace Markers**

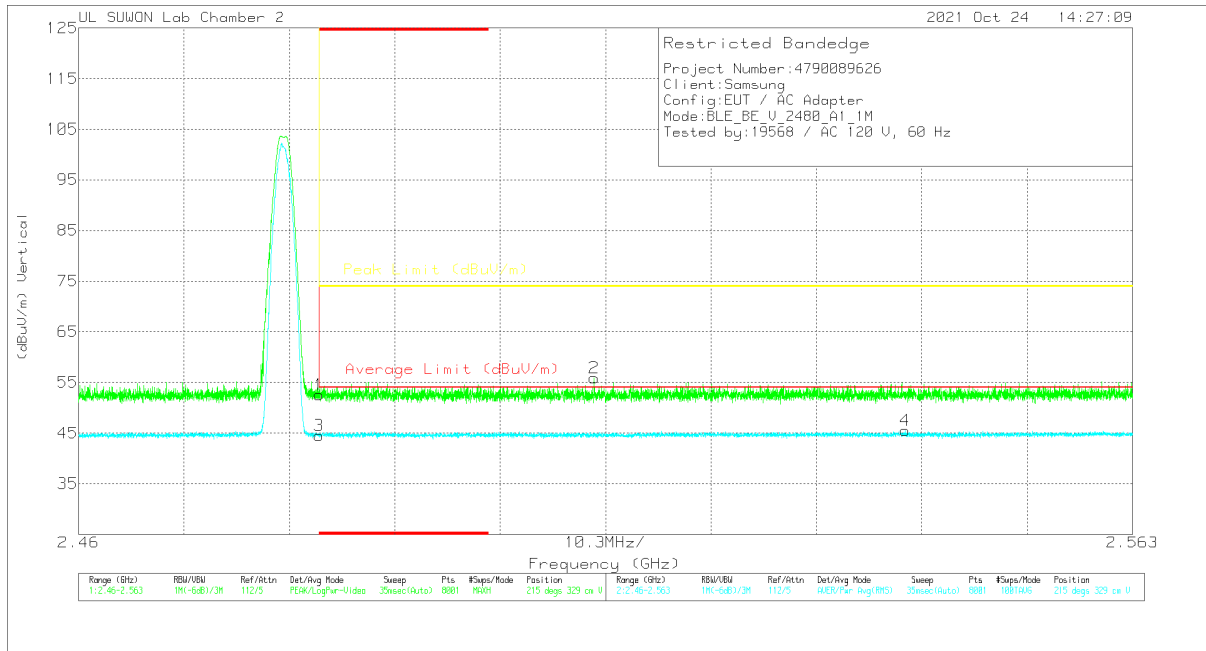
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	10dB_ATT[dB]	DC Cor (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.48351	41.16	PK	32	-20.4	0	52.76	-	-	74	-21.24	124	160	H
2	2.55844	44.31	PK	32.2	-20.3	0	56.21	-	-	74	-17.79	124	160	H
3	* 2.48351	30.53	RMS	32	-20.4	2.2	44.33	54	-9.67	-	-	124	160	H
4	2.55864	31.38	RMS	32.2	-20.3	2.2	45.48	54	-8.52	-	-	124	160	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_90168724	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Acimuth (Degs)	Height (cm)	Polarity
1	* 2.48351	41	Pk	32	-20.4	0	52.6	-	-	74	-21.4	215	329	V
2	2.51039	44.16	Pk	32.1	-20.4	0	55.86	-	-	74	-18.14	215	329	V
3	* 2.48351	30.72	RMS	32	-20.4	2.2	44.52	54	-9.48	-	-	215	329	V
4	2.5408	31.49	RMS	32.1	-20.3	2.2	45.49	54	-8.51	-	-	215	329	V

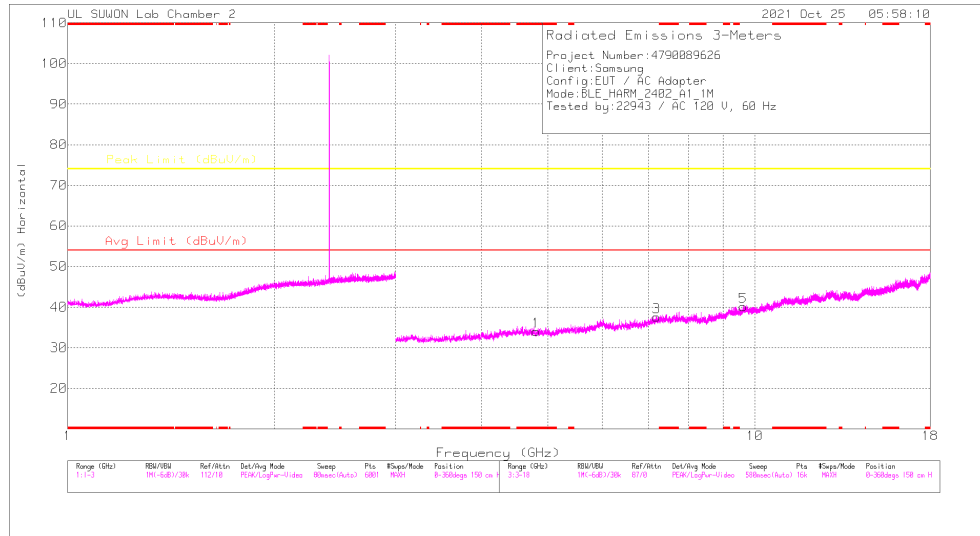
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PK - Peak detector

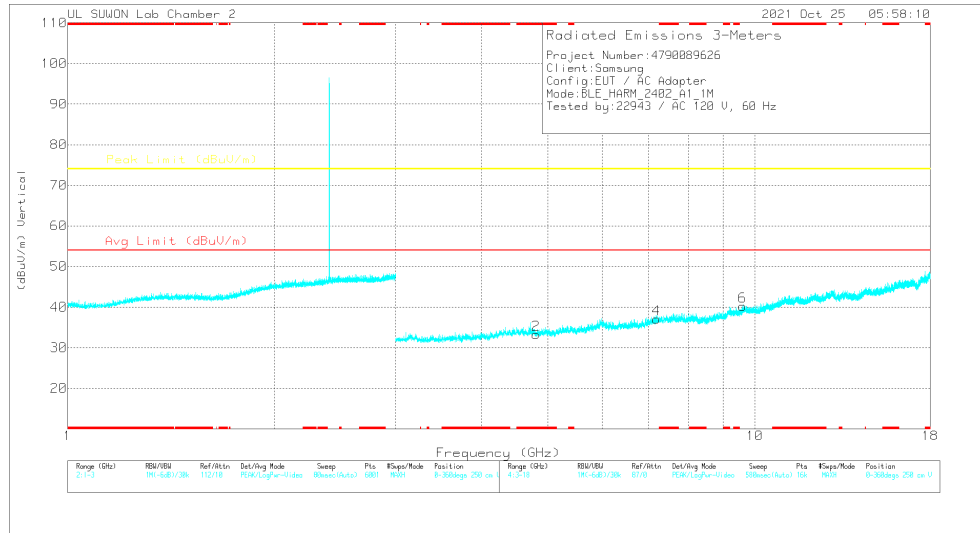
RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

0 CHANNEL RESULTS



HORIZONTAL



VERTICAL

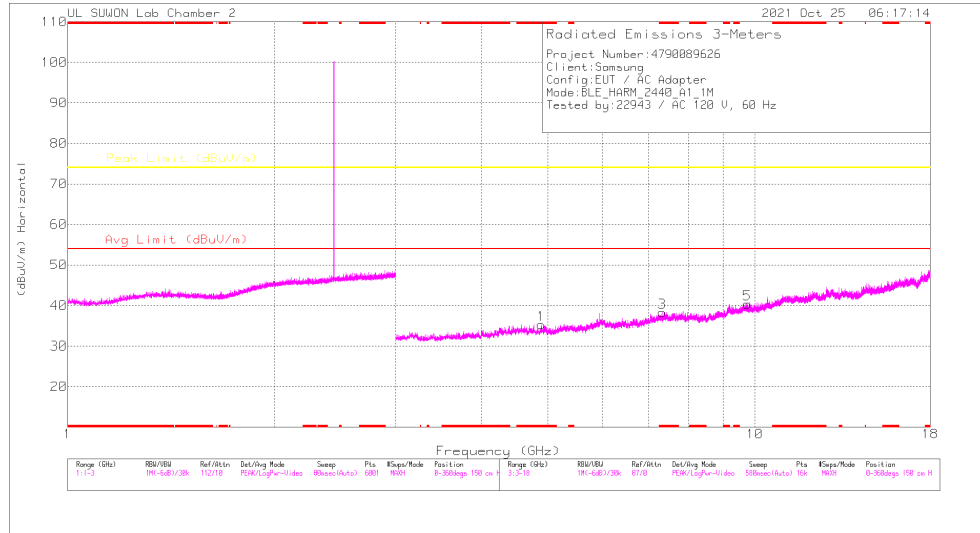
Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

RADIATED EMISSIONS

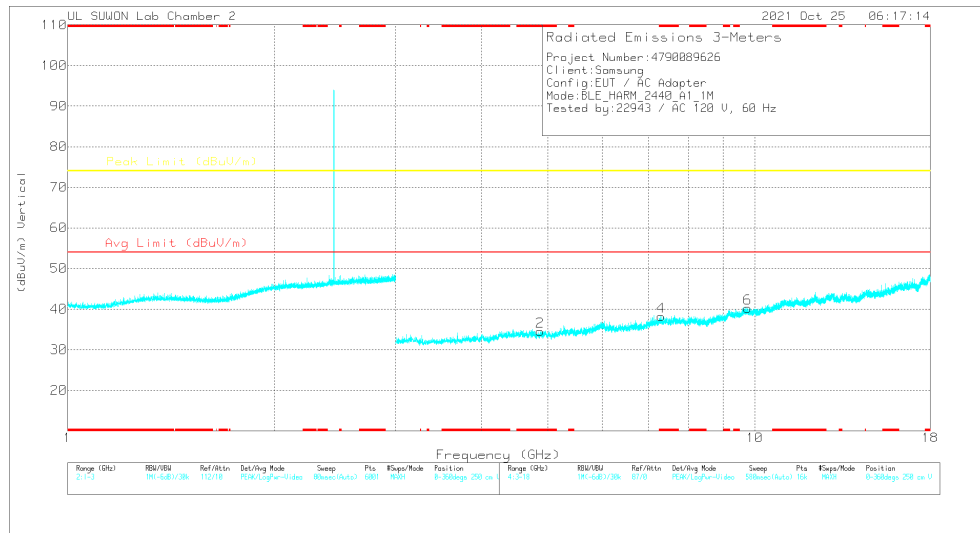
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	3GHz_HP[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.80307	36.93	PK2	34.1	-28	0	43.03	-	-	74	-30.97	0	100	H
* 4.8047	36.23	PK2	34.1	-28	0	42.33	-	-	74	-31.67	0	100	V
7.20553	35.11	PK2	36.2	-25.3	0	46.01	-	-	74	-27.99	0	100	H
7.20607	35.25	PK2	36.2	-25.3	0	46.15	-	-	74	-27.85	0	100	V
9.60939	32.9	PK2	37	-21.7	0	48.2	-	-	74	-25.8	0	100	H
9.60819	32.86	PK2	37	-21.7	0	48.16	-	-	74	-25.84	0	100	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK2 - KDB558074 Method: Maximum Peak

19 CHANNEL RESULTS



HORIZONTAL



VERTICAL

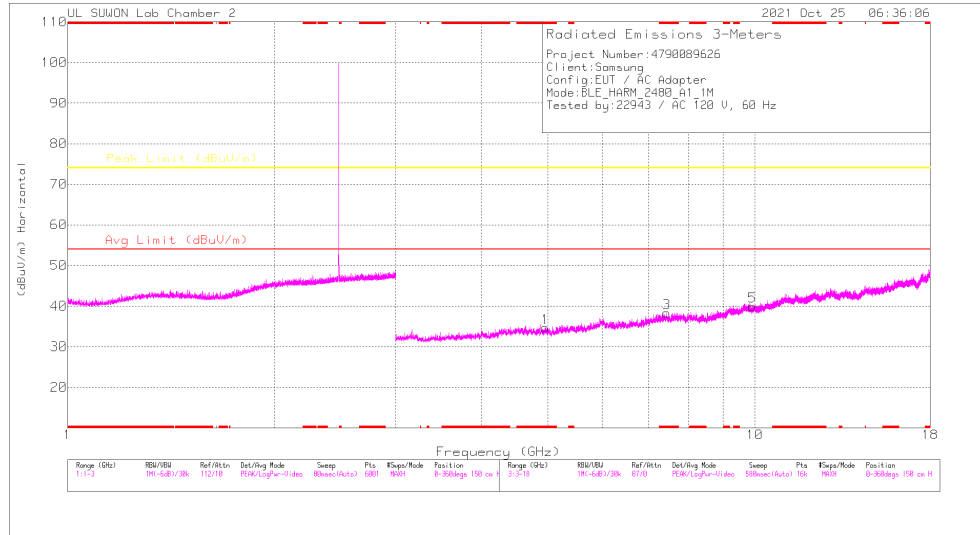
Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

RADIATED EMISSIONS

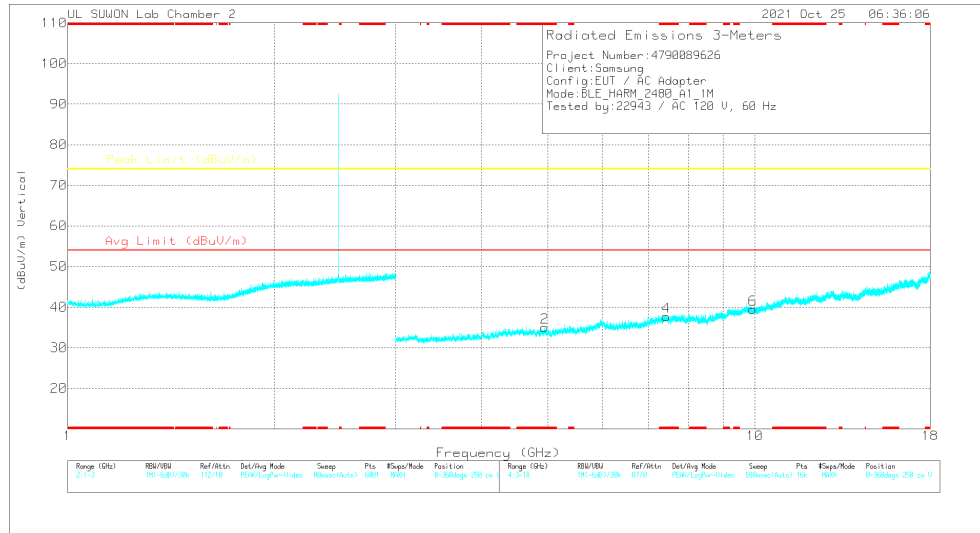
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	3GHz_HP[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.87889	36.65	PK2	34.1	-27.8	0	42.95	-	-	74	-31.05	0	100	H
* 4.87984	37.3	PK2	34.1	-27.8	0	43.6	-	-	74	-30.4	0	100	V
* 7.32181	35.09	PK2	36.1	-24.9	0	46.29	-	-	74	-27.71	0	100	H
* 7.32133	35.06	PK2	36.1	-24.9	0	46.26	-	-	74	-27.74	0	100	V
9.76004	32.94	PK2	37.2	-21.5	0	48.64	-	-	74	-25.36	0	100	H
9.75861	32.45	PK2	37.2	-21.5	0	48.15	-	-	74	-25.85	0	100	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK2 - KDB558074 Method: Maximum Peak

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

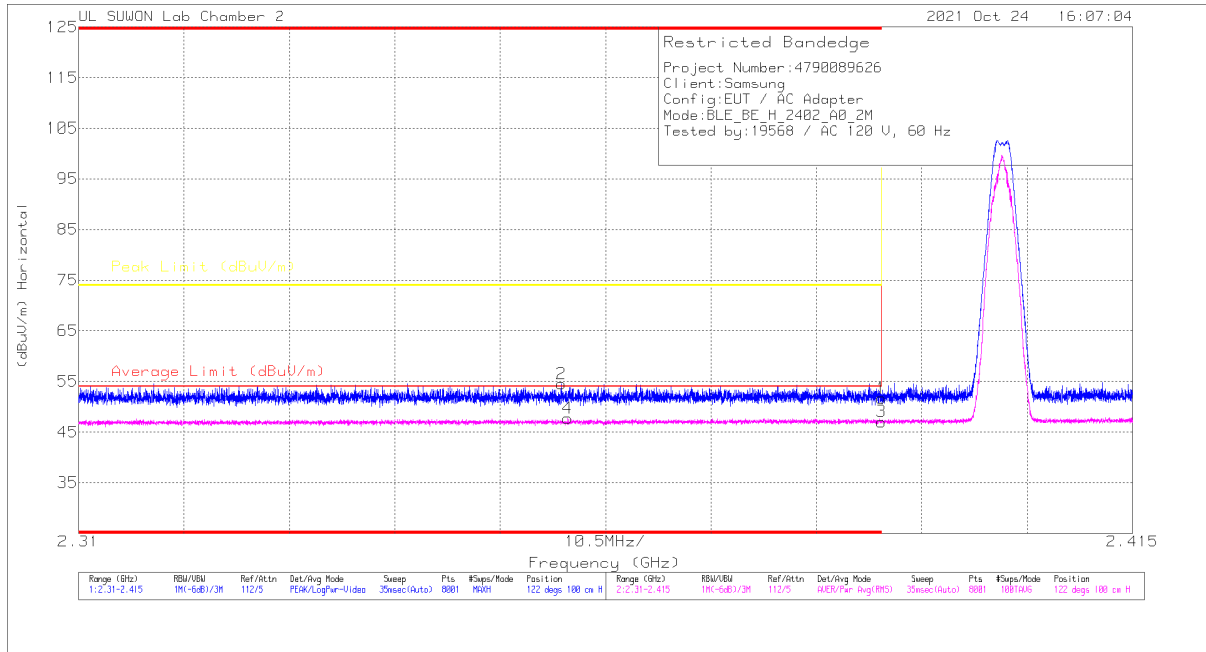
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	3GHz_HP(dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.96087	36.06	PK2	34.1	-27.2	0	42.96	-	-	74	-31.04	0	100	H
* 4.96194	36.96	PK2	34.1	-27.2	0	43.86	-	-	74	-30.14	0	100	V
* 7.44117	34.94	PK2	36	-24.1	0	46.84	-	-	74	-27.16	0	100	H
* 7.44052	34.86	PK2	36	-24.1	0	46.76	-	-	74	-27.24	0	100	V
9.92011	32.31	PK2	37.4	-21.2	0	48.51	-	-	74	-25.49	0	100	H
9.91926	31.84	PK2	37.4	-21.3	0	47.94	-	-	74	-26.06	0	100	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK2 - KDB558074 Method: Maximum Peak

10.2.2. 2 Mbps

ANT1 BANDEDGE (0 CHANNEL)

HORIZONTAL RESULT

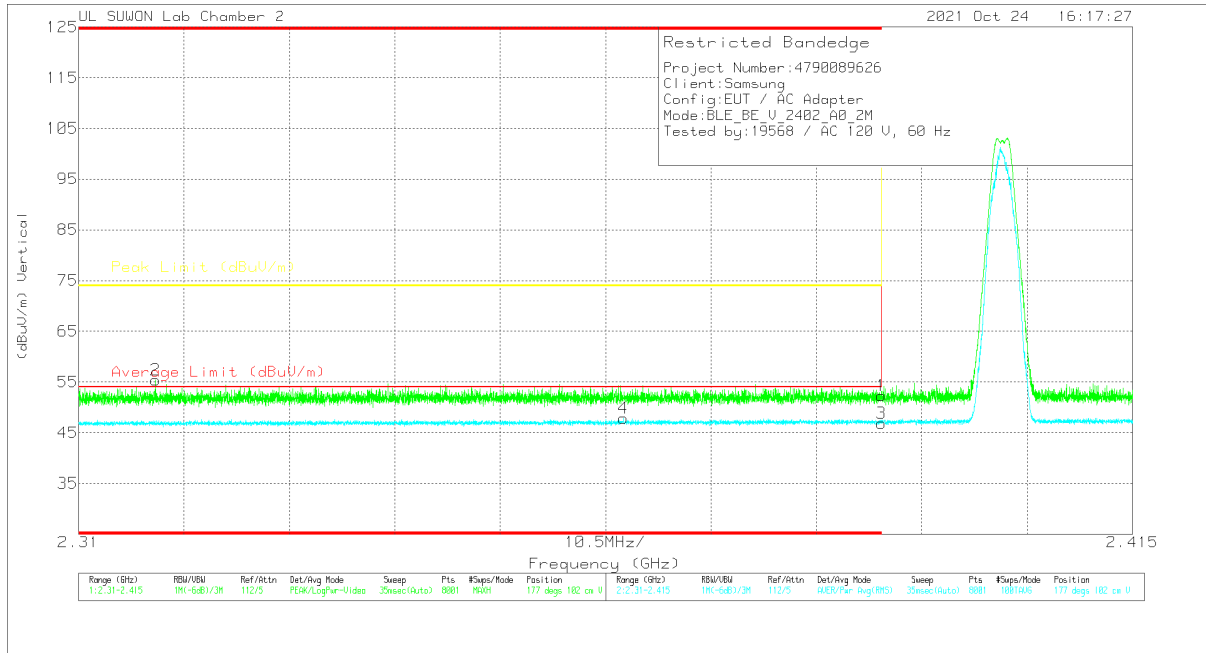


Trace Markers

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	* 2.39	40.38	PK	31.9	-20.6	0	51.68	-	-	74	-22.32	122	100	H
2	* 2.35808	43.36	PK	31.8	-20.6	0	54.56	-	-	74	-19.44	122	100	H
3	* 2.39	30.69	RMS	31.9	-20.6	5.06	47.05	54	-6.95	-	-	122	100	H
4	* 2.35873	31.45	RMS	31.8	-20.6	5.06	47.71	54	-6.29	-	-	122	100	H

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

VERTICAL RESULT



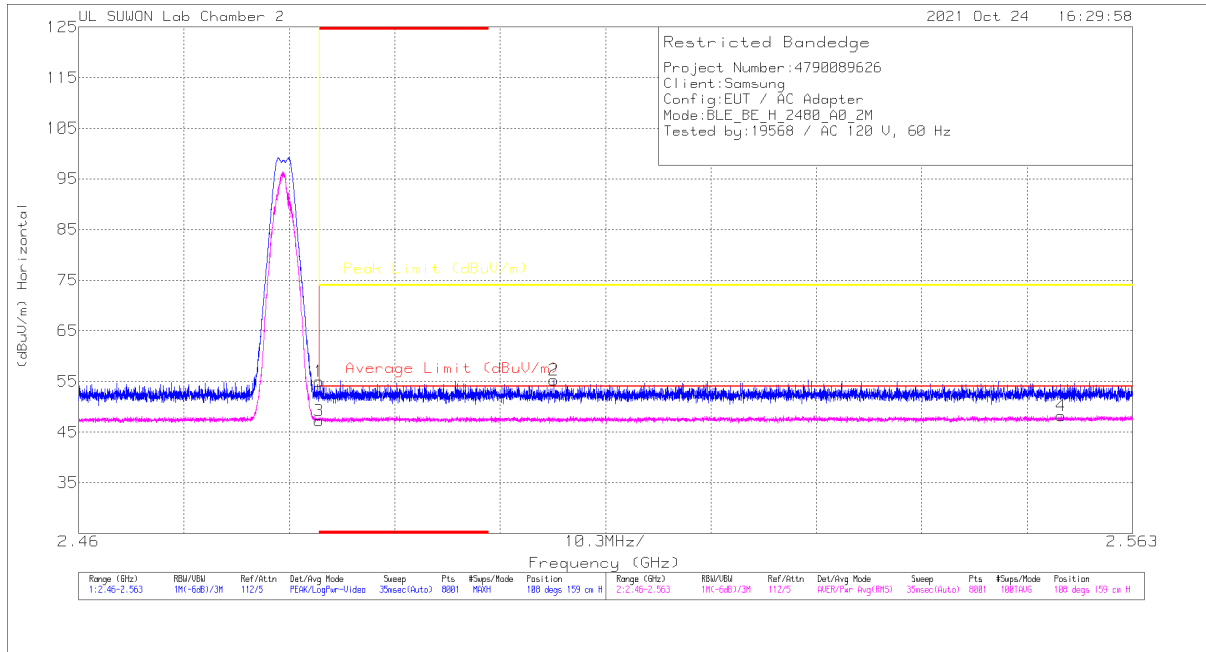
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00188724	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	40.99	PK	31.9	-20.6	0	52.29	-	-	74	-21.71	177	102	V
2	* 2.31765	44.4	PK	31.7	-20.7	0	55.4	-	-	74	-18.6	177	102	V
3	* 2.39	30.55	RMS	31.9	-20.6	5.06	46.91	54	-7.09	-	-	177	102	V
4	* 2.36427	31.61	RMS	31.8	-20.6	5.06	47.87	54	-6.13	-	-	177	102	V

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

BANDEDGE (39 CHANNEL)

HORIZONTAL RESULT

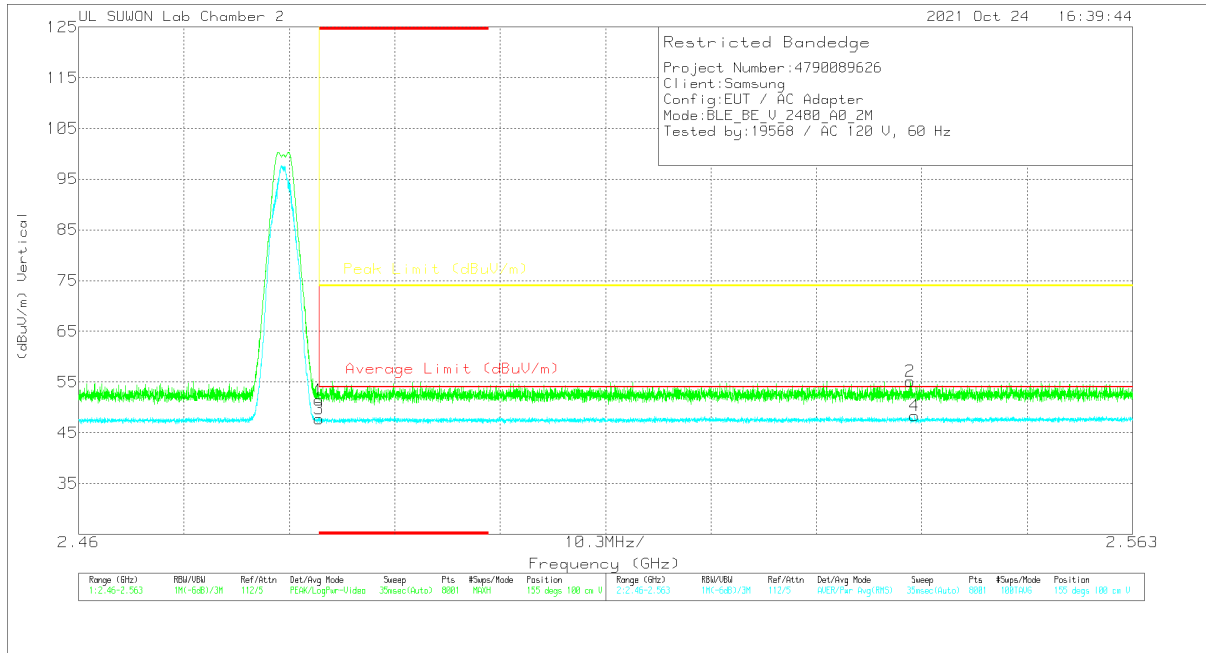


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	10dB_ATT[dB]	DC Cor (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Altitude (deg)	Height (cm)	Polarity
1	* 2.48351	43.38	PK	32	-20.4	0	54.98	-	-	74	-19.02	108	159	H
2	2.50644	43.55	PK	32.1	-20.4	0	55.25	-	-	74	-18.75	108	159	H
3	* 2.48351	30.6	RMS	32	-20.4	5.06	47.26	54	-6.74	-	-	108	159	H
4	2.55605	31.27	RMS	32.2	-20.3	5.06	48.23	54	-5.77	-	-	108	159	H

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

VERTICAL RESULT



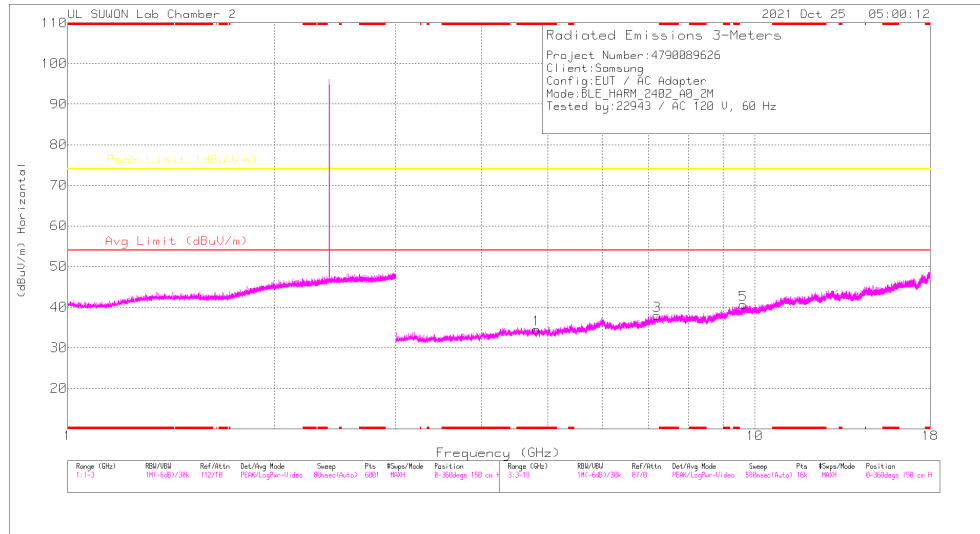
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00158724	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Acimuth (Degs)	Height (cm)	Polarity
1	* 2.48351	39.79	PK	32	-20.4	0	51.39	-	-	74	-22.61	155	100	V
2	2.54129	43.34	PK	32.1	-20.3	0	55.14	-	-	74	-18.86	155	100	V
3	* 2.48351	31.09	RMS	32	-20.4	5.06	47.75	54	-6.25	-	-	155	100	V
4	2.54172	31.57	RMS	32.1	-20.4	5.06	48.33	54	-5.67	-	-	155	100	V

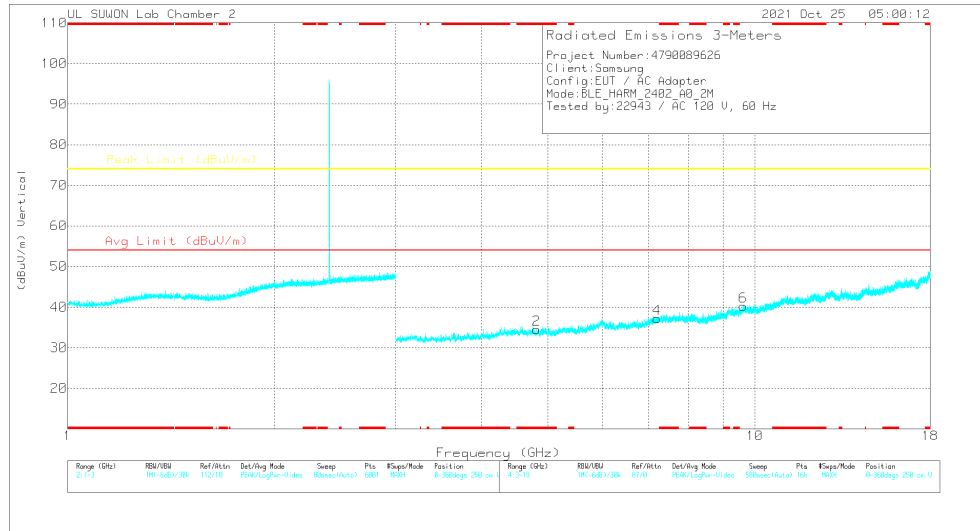
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK - Peak detector
RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

0 CHANNEL RESULTS



HORIZONTAL



VERTICAL

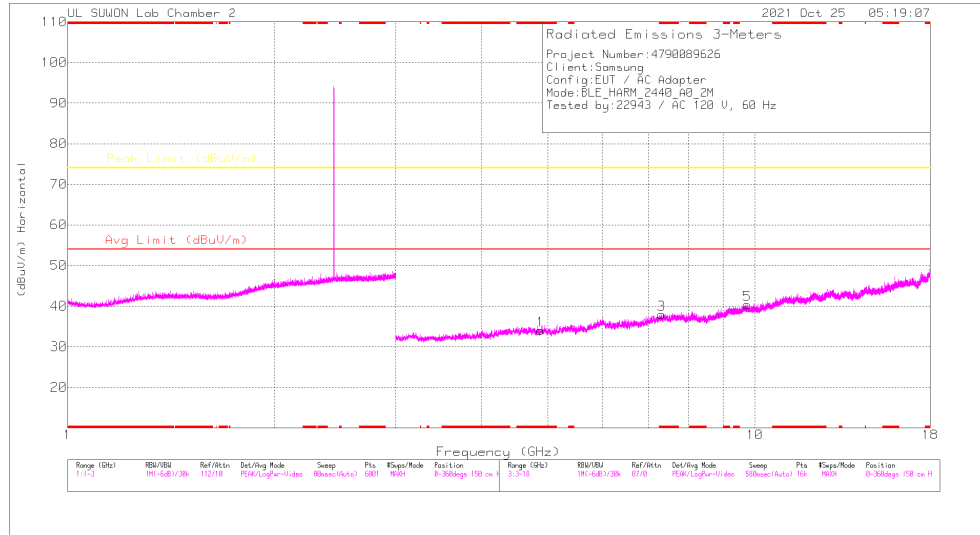
Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

RADIATED EMISSIONS

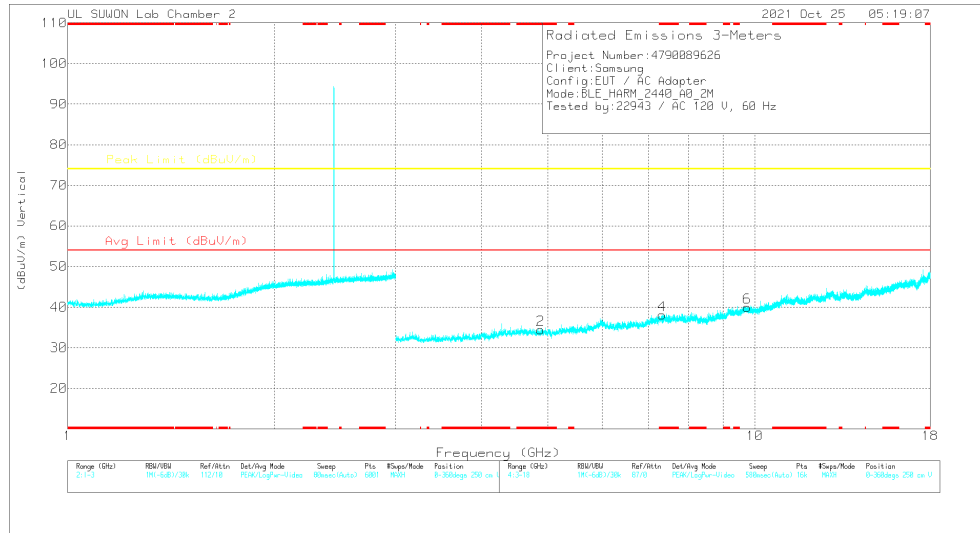
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	3GHz_HP[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.80314	36.89	PK2	34.1	-28	0	42.99	-	-	74	-31.01	0	100	H
* 4.80298	36.51	PK2	34.1	-28	0	42.61	-	-	74	-31.39	0	100	V
7.20532	35.39	PK2	36.2	-25.3	0	46.29	-	-	74	-27.71	0	100	H
7.20403	34.94	PK2	36.2	-25.3	0	45.84	-	-	74	-28.16	0	100	V
9.60797	32.71	PK2	37	-21.7	0	48.01	-	-	74	-25.99	0	100	H
9.60997	33.22	PK2	37	-21.7	0	48.52	-	-	74	-25.48	0	100	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK2 - KDB558074 Method: Maximum Peak

19 CHANNEL RESULTS



HORIZONTAL



VERTICAL

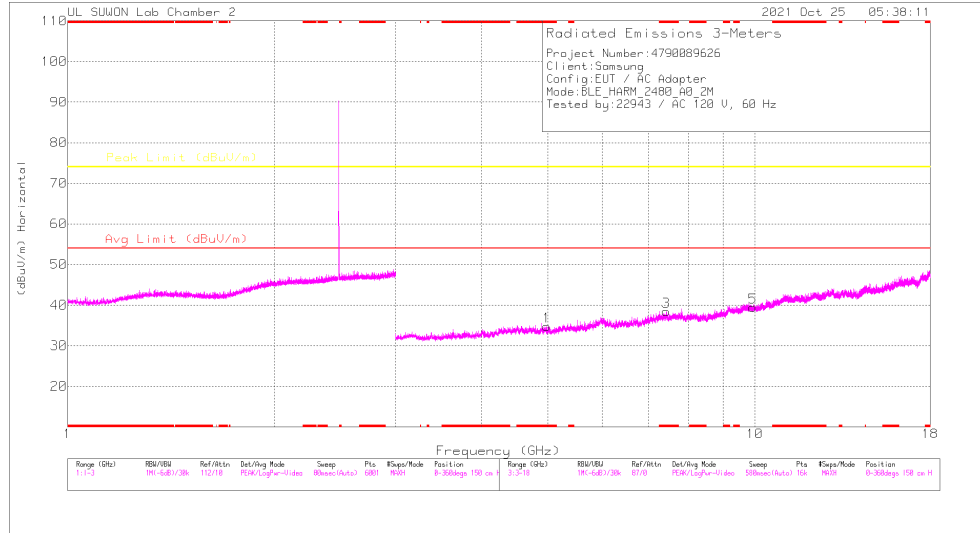
Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

RADIATED EMISSIONS

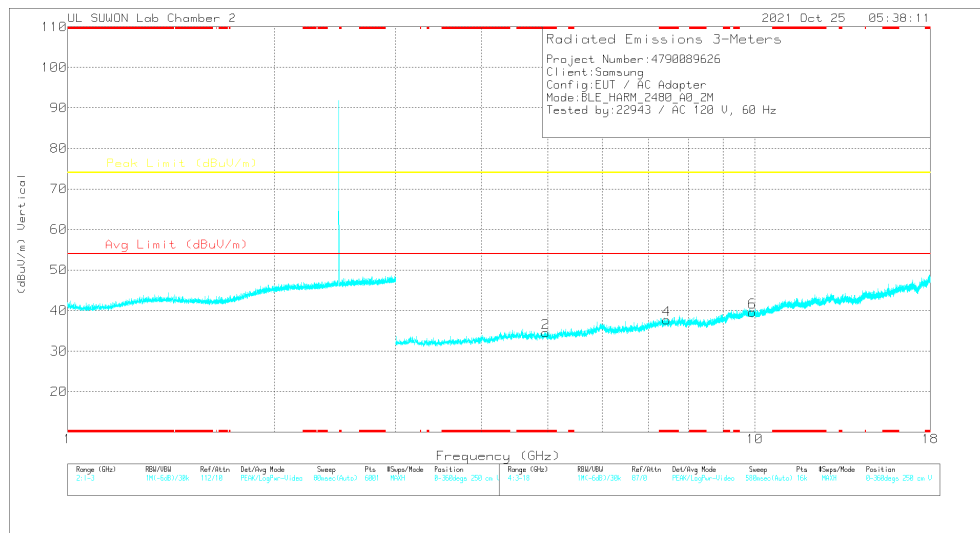
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	3GHz_HP(dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.87999	37.01	PK2	34.1	-27.8	0	43.31	-	-	74	-30.69	0	100	H
* 4.88099	37.65	PK2	34.1	-27.8	0	43.95	-	-	74	-30.05	0	100	V
* 7.31827	35.38	PK2	36.1	-24.9	0	46.58	-	-	74	-27.42	0	100	H
* 7.32175	35.32	PK2	36.1	-24.9	0	46.52	-	-	74	-27.48	0	100	V
9.76124	32.45	PK2	37.2	-21.5	0	48.15	-	-	74	-25.85	0	100	H
9.76018	33.32	PK2	37.2	-21.5	0	49.02	-	-	74	-24.98	0	100	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK2 - KDB558074 Method: Maximum Peak

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.

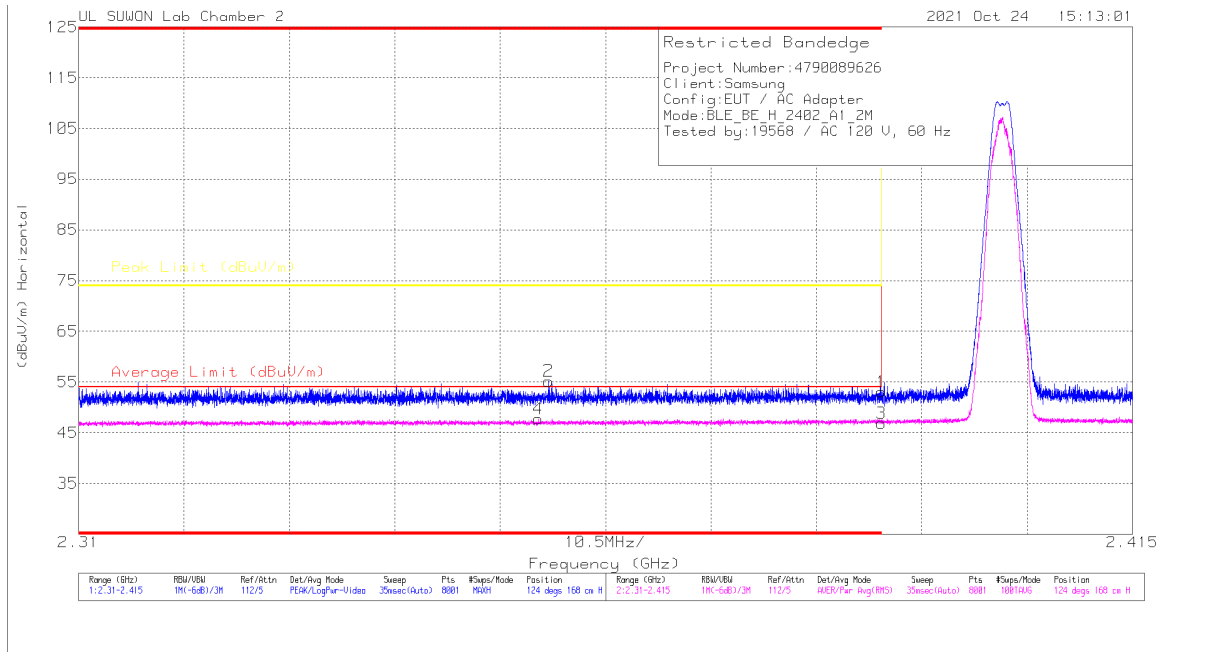
RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	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
* 4.9616	36.24	PK2	34.1	-27.2	0	43.14	-	-	74	-30.86	0	100	H
* 4.96195	36.74	PK2	34.1	-27.2	0	43.64	-	-	74	-30.36	0	100	V
* 7.44199	35.11	PK2	36	-24.1	0	47.01	-	-	74	-26.99	0	100	H
* 7.43865	34.85	PK2	36	-24.1	0	46.75	-	-	74	-27.25	0	100	V
9.9187	31.9	PK2	37.4	-21.3	0	48	-	-	74	-26	0	100	H
9.91843	32.31	PK2	37.4	-21.3	0	48.41	-	-	74	-25.59	0	100	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK2 - KDB558074 Method: Maximum Peak

ANT2
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 (m)	Polarity
1	* 2.39	41.9	PK	31.9	-20.6	0	53.1	-	-	74	-20.9	124	168	H
2	* 2.35582	44.01	PK	31.8	-20.6	0	55.21	-	-	74	-18.79	124	168	H
3	* 2.39	30.55	RMS	31.9	-20.6	5.06	46.91	54	-7.09	-	-	124	168	H
4	* 2.35579	31.52	RMS	31.8	-20.6	5.06	47.78	54	-6.22	-	-	124	168	H

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

PK - Peak detector

RMS - RMS detection

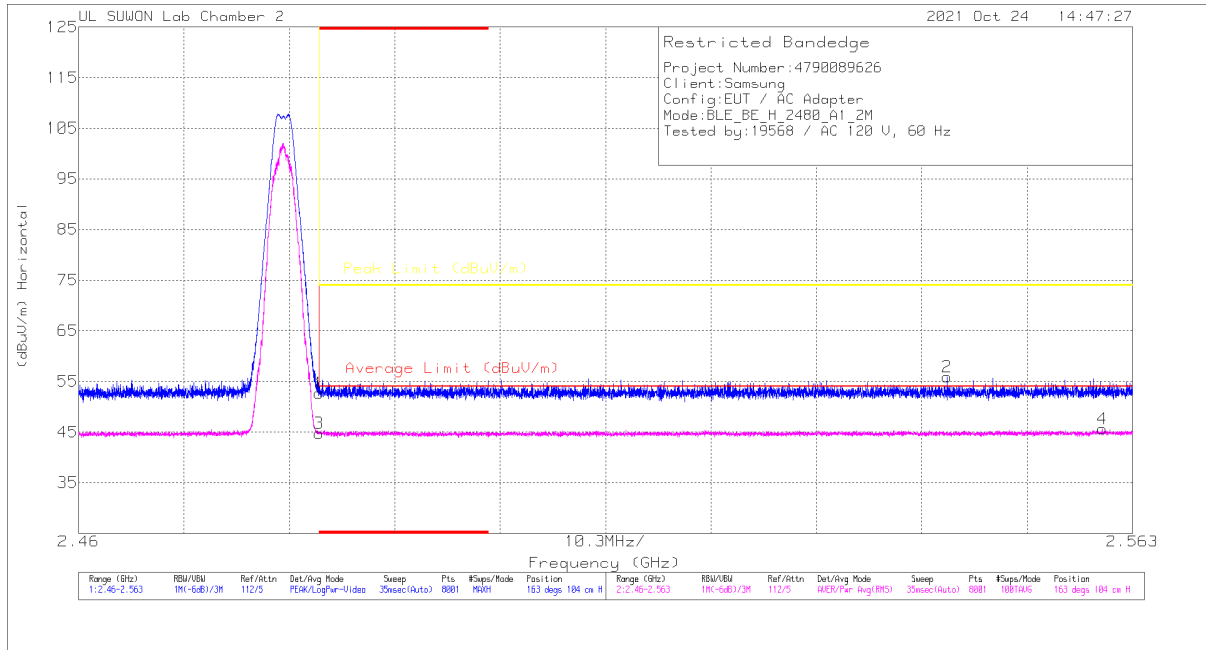
VERTICAL RESULT



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00100724	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Altitude (Degs)	Height (cm)	Polarity
1	* 2.39	39.7	PK	31.9	-20.6	0	51	-	-	74	-23	208	352	V
2	* 2.36578	43.65	PK	31.8	-20.6	0	54.85	-	-	74	-19.15	208	352	V
3	* 2.39	30.55	RMS	31.9	-20.6	5.06	46.91	54	-7.09	-	-	208	352	V
4	* 2.37267	31.33	RMS	31.9	-20.6	5.06	47.69	54	-6.31	-	-	208	352	V

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

BANDEDGE (39 CHANNEL)**HORIZONTAL RESULT****Trace Markers**

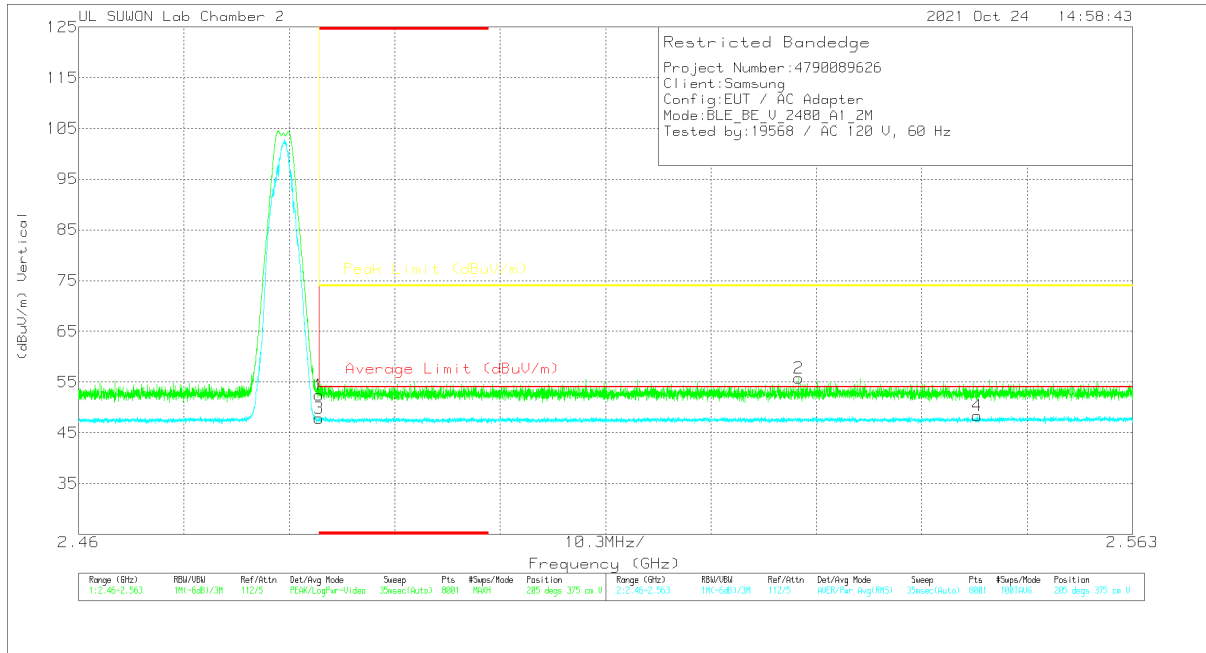
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	10dB_ATT[dB]	DC Cor (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.48351	41.13	PK	32	-20.4	0	52.73	-	-	74	-21.27	163	104	H
2	2.54491	44.14	PK	32.1	-20.4	0	55.84	-	-	74	-18.16	163	104	H
3	* 2.48351	28.07	RMS	32	-20.4	5.06	44.73	54	-9.27	-	-	163	104	H
4	2.56005	28.55	RMS	32.2	-20.2	5.06	45.61	54	-8.39	-	-	163	104	H

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

PK - Peak detector

RMS - RMS detection

VERTICAL RESULT



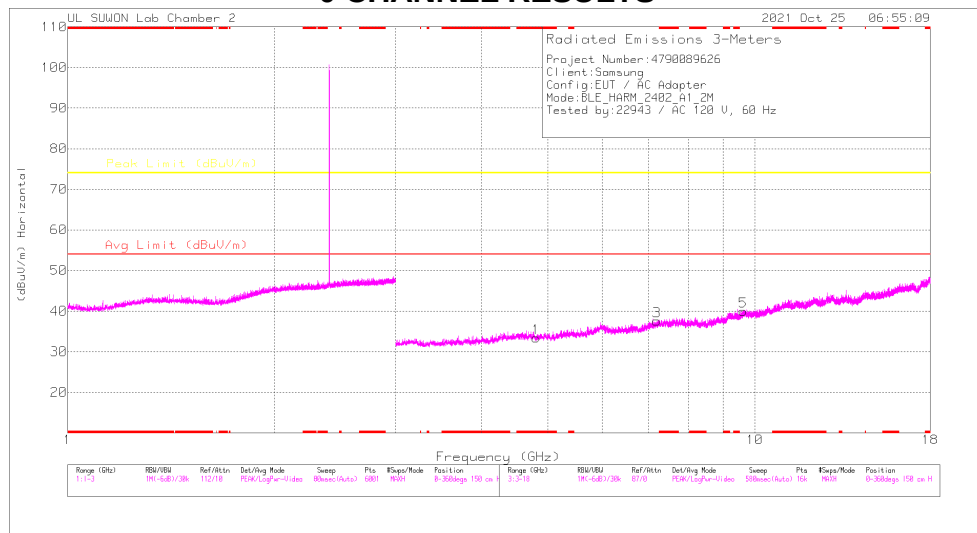
Trace Markers

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)	Acimuth (Degs)	Height (cm)	Polarity
1	* 2.48351	40.86	PK	32	-20.4	0	52.46	-	-	74	-21.54	205	375	V
2	2.53036	43.93	PK	32.1	-20.3	0	55.73	-	-	74	-18.27	205	375	V
3	* 2.48351	31.24	RMS	32	-20.4	5.06	47.9	54	-6.1	-	-	205	375	V
4	2.54783	31.57	RMS	32.1	-20.4	5.06	48.33	54	-5.67	-	-	205	375	V

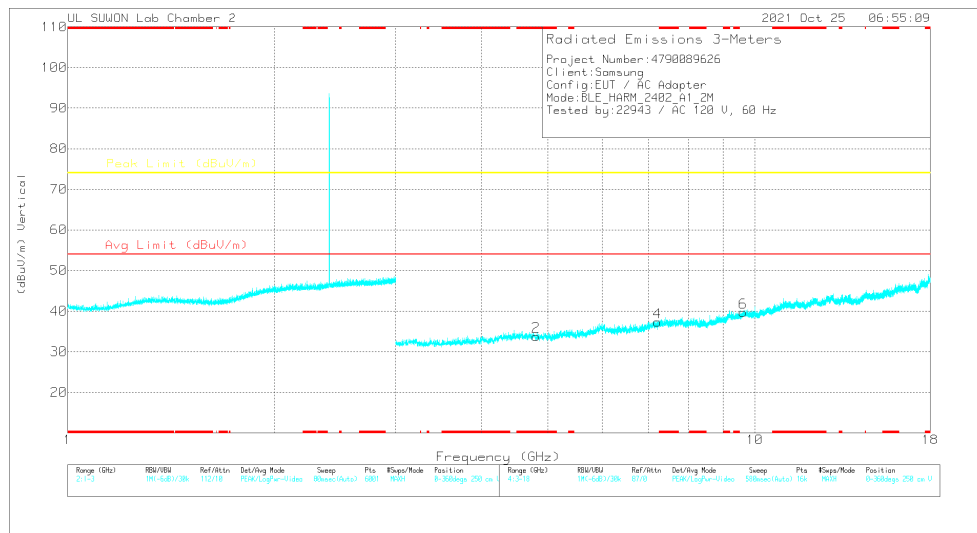
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK - Peak detector
RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

0 CHANNEL RESULTS



HORIZONTAL



VERTICAL

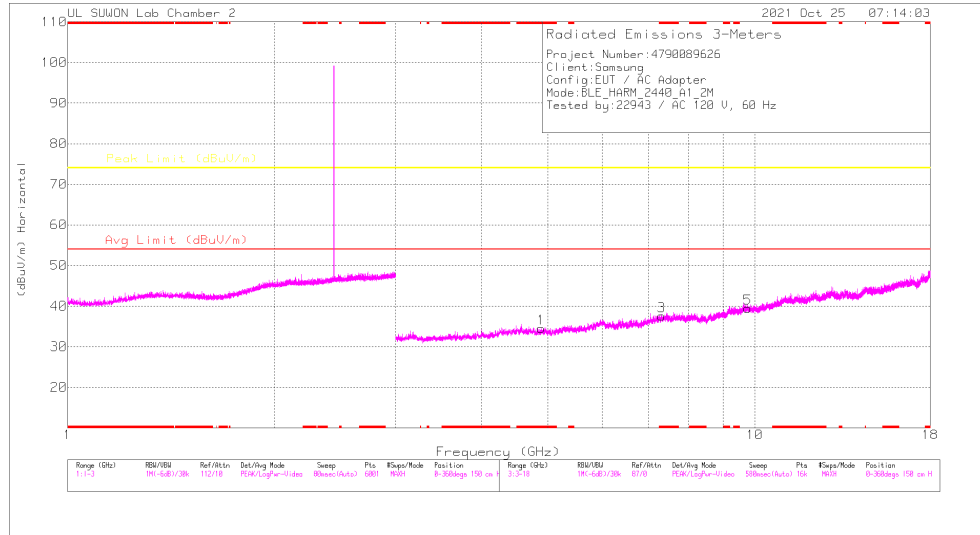
Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

RADIATED EMISSIONS

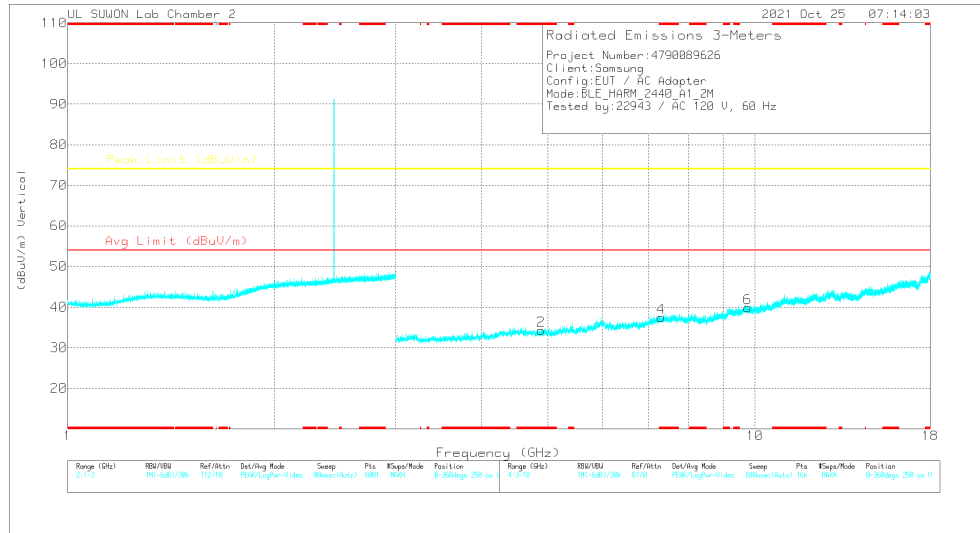
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	3GHz_HP[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.80291	36.85	PK2	34.1	-28	0	42.95	-	-	74	-31.05	0	100	H
* 4.80303	36.52	PK2	34.1	-28	0	42.62	-	-	74	-31.38	0	100	V
7.20656	34.91	PK2	36.2	-25.3	0	45.81	-	-	74	-28.19	0	100	H
7.20415	35.19	PK2	36.2	-25.3	0	46.09	-	-	74	-27.91	0	100	V
9.60611	33.91	PK2	37	-21.7	0	49.21	-	-	74	-24.79	0	100	H
9.60674	33	PK2	37	-21.8	0	48.2	-	-	74	-25.8	0	100	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK2 - KDB558074 Method: Maximum Peak

19 CHANNEL RESULTS



HORIZONTAL



VERTICAL

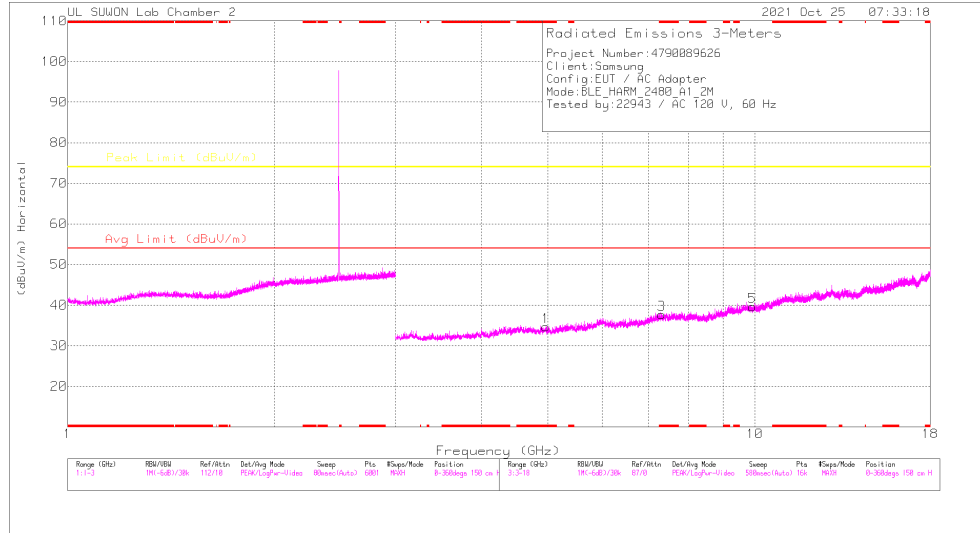
Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

RADIATED EMISSIONS

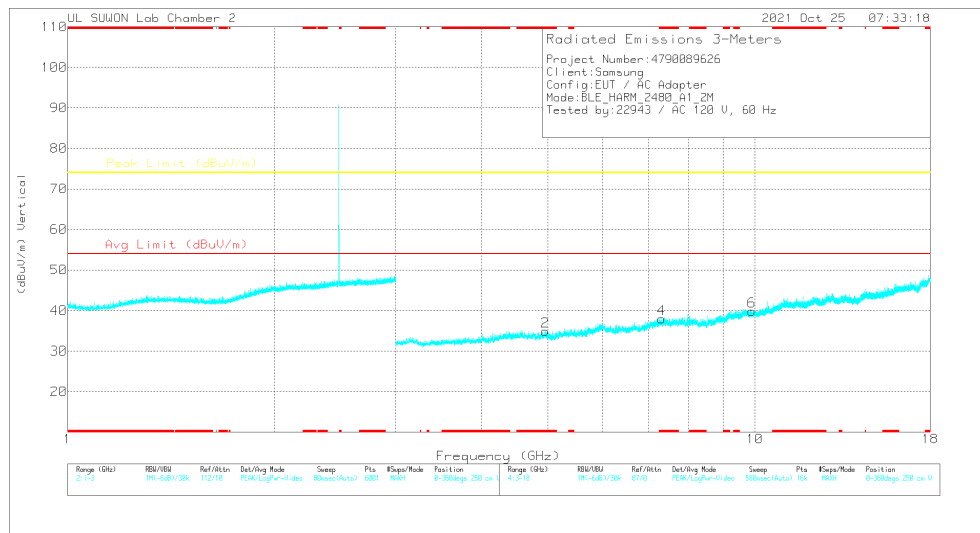
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	3GHz_HP(dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.88023	36.77	PK2	34.1	-27.8	0	43.07	-	-	74	-30.93	0	100	H
* 4.88086	37.21	PK2	34.1	-27.8	0	43.51	-	-	74	-30.49	0	100	V
* 7.32068	35.39	PK2	36.1	-24.8	0	46.69	-	-	74	-27.31	0	100	H
* 7.32114	35.61	PK2	36.1	-24.9	0	46.81	-	-	74	-27.19	0	100	V
9.76047	32.8	PK2	37.2	-21.5	0	48.5	-	-	74	-25.5	0	100	H
9.76166	32.6	PK2	37.2	-21.5	0	48.3	-	-	74	-25.7	0	100	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK2 - KDB558074 Method: Maximum Peak

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.

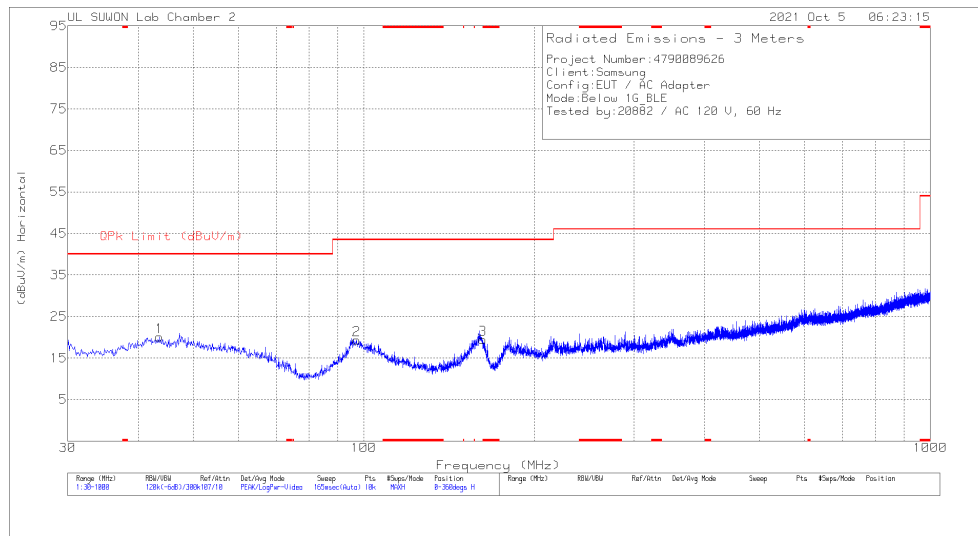
RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	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
* 4.96155	35.83	PK2	34.1	-27.2	0	42.73	-	-	74	-31.27	0	100	H
* 4.95811	35.79	PK2	34.1	-27.2	0	42.69	-	-	74	-31.31	0	100	V
* 7.3183	35.67	PK2	36.1	-24.9	0	46.87	-	-	74	-27.13	0	100	H
* 7.43918	35.53	PK2	36	-24.1	0	47.43	-	-	74	-26.57	0	100	V
9.92036	32.3	PK2	37.4	-21.2	0	48.5	-	-	74	-25.5	0	100	H
9.91827	31.93	PK2	37.4	-21.3	0	48.03	-	-	74	-25.97	0	100	V

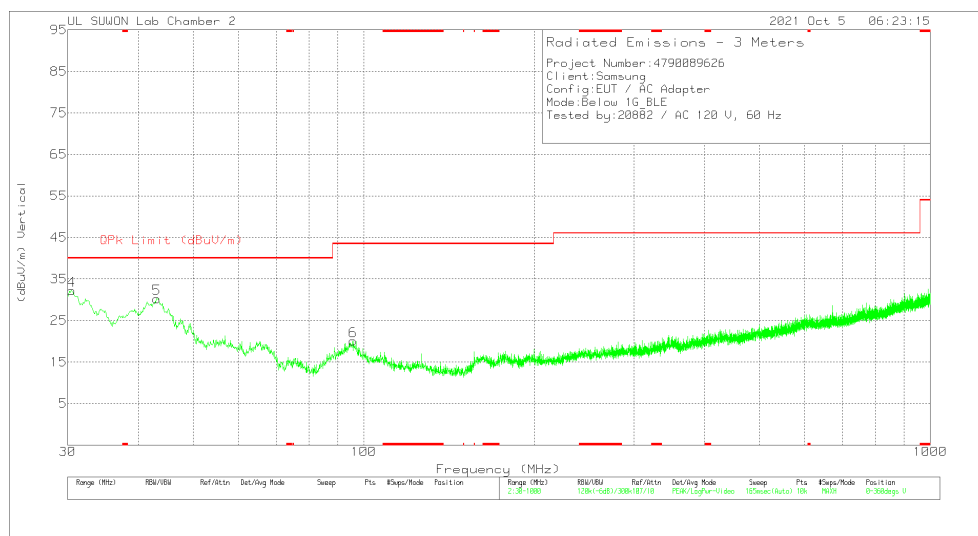
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK2 - KDB558074 Method: Maximum Peak

10.3. WORST CASE BELOW 1 GHz

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



HORIZONTAL



VERTICAL

Below 1GHz Data

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Below 1G[dB]	Corrected Reading (dBuV/m)	OPK Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	43.58	32.52	Pk	19.4	-31.8	20.12	40	-19.88	0-360	100	H
2	97.124	33.62	Pk	17	-31.3	19.32	43.52	-24.2	0-360	100	H
3	* 162.114	36.14	Pk	14.3	-31	19.44	43.52	-24.08	0-360	100	H
4	30.485	48.65	Pk	15.6	-32.1	32.15	40	-7.85	0-360	100	V
5	43.095	42.78	Pk	19.3	-31.8	30.28	40	-9.72	0-360	100	V
6	95.669	34.7	Pk	16.7	-31.3	20.1	43.52	-23.42	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)

RSS-Gen 8.8

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

* Decreases with the logarithm of the frequency.

TEST PROCEDURE

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.

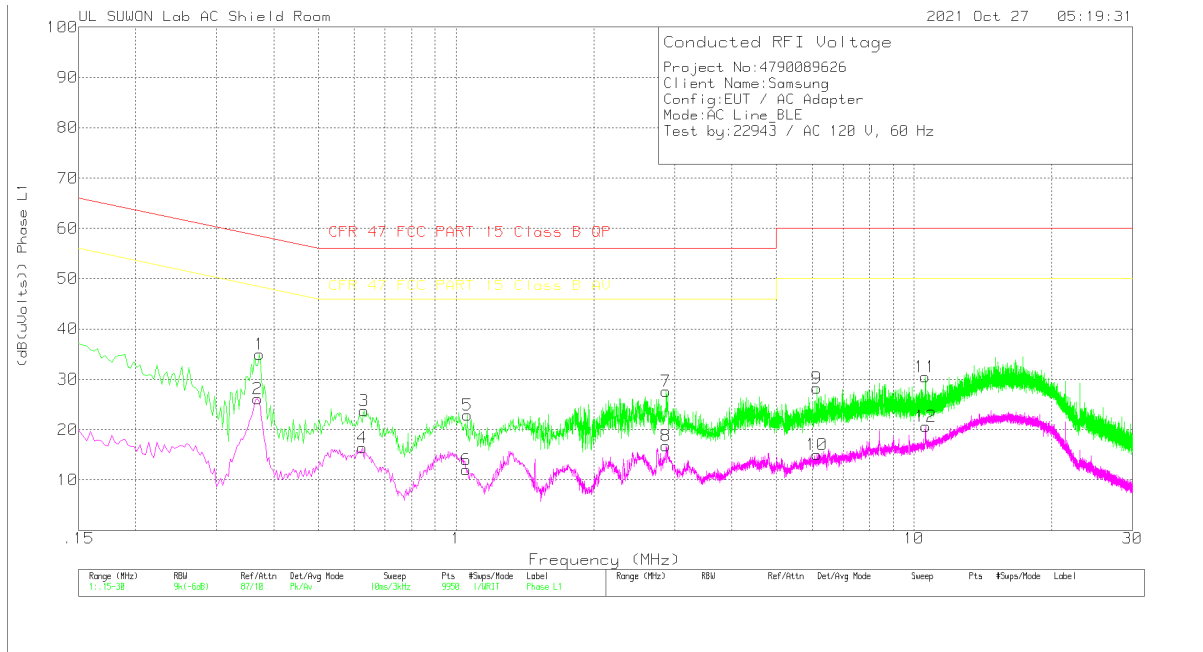
The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

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

RESULTS

11.1.1. AC Power Line

LINE 1 RESULTS



Trace Markers

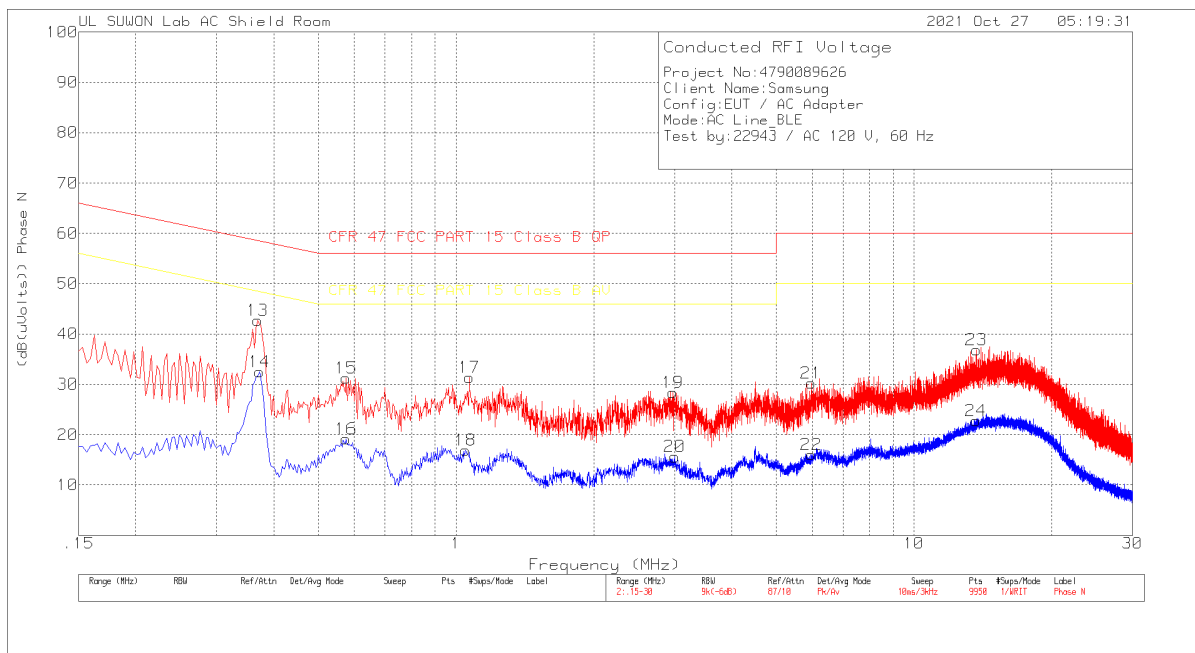
Range 1: Phase L1 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	101836_Wit h 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	.372	24.94	Pk	9.8	.2	34.94	58.46	-23.52	-	-
2	.369	16.12	Av	9.8	.2	26.12	-	-	48.52	-22.4
3	.63	13.79	Pk	9.8	.2	23.79	56	-32.21	-	-
4	.624	6.35	Av	9.8	.2	16.35	-	-	46	-29.65
5	1.059	12.94	Pk	9.7	.3	22.94	56	-33.06	-	-
6	1.053	2.02	Av	9.7	.3	12.02	-	-	46	-33.98
7	2.874	17.63	Pk	9.7	.3	27.63	56	-28.37	-	-
8	2.877	6.76	Av	9.7	.3	16.76	-	-	46	-29.24
9	6.141	18.3	Pk	9.7	.3	28.3	60	-31.7	-	-
10	6.141	5.02	Av	9.7	.3	15.02	-	-	50	-34.98
11	10.596	20.2	Pk	9.9	.4	30.5	60	-29.5	-	-
12	10.599	10.34	Av	9.9	.4	20.64	-	-	50	-29.36

Pk - Peak detector

Av - Average detection

LINE 2 RESULTS



Trace Markers

Range 2: Phase N .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	101836_Wit h 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	.369	32.66	Pk	9.8	.2	42.66	58.52	-15.86	-	-
14	.372	22.49	Av	9.8	.2	32.49	-	-	48.46	-15.97
15	.576	21.09	Pk	9.9	.2	31.19	56	-24.81	-	-
16	.576	9.04	Av	9.9	.2	19.14	-	-	46	-26.86
17	1.068	21.37	Pk	9.7	.3	31.37	56	-24.63	-	-
18	1.05	6.95	Av	9.7	.3	16.95	-	-	46	-29.05
19	2.973	18.38	Pk	9.7	.3	28.38	56	-27.62	-	-
20	3.006	5.6	Av	9.7	.3	15.6	-	-	46	-30.4
21	5.97	20.1	Pk	9.8	.3	30.2	60	-29.8	-	-
22	5.961	5.91	Av	9.8	.3	16.01	-	-	50	-33.99
23	13.677	26.44	Pk	10	.4	36.84	60	-23.16	-	-
24	13.668	12.39	Av	10	.4	22.79	-	-	50	-27.21

Pk - Peak detector

Av - Average detection

END OF TEST REPORT