

CERTIFICATION TEST REPORT

Report Number. : 4791083081-E6V2

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

Model : SC-53E, SCG27

FCC ID : A3LSMA556JPN

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

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

Date Of Issue:

2024-02-02

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

Revision History

Rev.	Issue Date	Revisions	Revised By
V1	2024-01-22	Initial issue	Dexter(Hyunsik) Yun
V2	2024-02-02	Updated to address TCB's question	Dexter(Hyunsik) Yun

TABLE OF CONTENTS

1. ATTESTATION OF TEST RESULTS	5
2. TEST METHODOLOGY	6
3. FACILITIES AND ACCREDITATION	6
4. DECISION RULES AND MEASUREMENT UNCERTAINTY	7
4.1. METROLOGICAL TRACEABILITY.....	7
4.2. SAMPLE CALCULATION.....	7
4.3. MEASUREMENT UNCERTAINTY	7
4.4. DECISION RULES.....	7
5. EQUIPMENT UNDER TEST	8
5.1. EUT DESCRIPTION.....	8
5.2. MAXIMUM OUTPUT POWER.....	8
5.3. DESCRIPTION OF AVAILABLE ANTENNAS	9
5.4. WORST-CASE CONFIGURATION AND MODE	9
5.5. DESCRIPTION OF TEST SETUP	10
6. MEASUREMENT METHOD.....	12
7. TEST AND MEASUREMENT EQUIPMENT	13
8. TEST RESULTS SUMMARY.....	14
9. ANTENNA PORT TEST RESULTS	15
9.1. ON TIME AND DUTY CYCLE	15
9.2. 6 dB BANDWIDTH	16
9.2.1. Test data.....	16
9.2.2. 6 dB BANDWIDTH PLOTS	17
9.3. OUTPUT POWER.....	19
9.3.1. PEAK POWER PLOTS	20
9.4. AVERAGE POWER	21
9.5. POWER SPECTRAL DENSITY	22
9.5.1. Test data.....	22
9.5.2. PSD TEST PLOTS	23
9.6. CONDUCTED SPURIOUS EMISSIONS	25
9.6.1. Test plot.....	26
10. RADIATED TEST RESULTS	28
10.1. LIMITS AND PROCEDURE	28

10.2.	TRANSMITTER ABOVE 1 GHz	30
10.2.1.	1 Mbps ANT1	30
10.2.2.	2 Mbps ANT1	37
10.3.	WORST CASE BELOW 1 GHz	44
11.	AC POWER LINE CONDUCTED EMISSIONS	45
11.1.	AC Power Line	46

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, and NFC

MODEL NUMBER: SC-53E, SCG27

SERIAL NUMBER: 7ab3a2c4292c7ece, 7ab3a2c5c72c7ece (CONDUCTED);
7ab3a2c4e12c7ece (RADIATED);

DATE TESTED: 2023-12-20 ~ 2024-01-22

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
47 CFR 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:



Dexter(Hyunsik) Yun
Suwon Lab Engineer
UL KOREA LTD.

2. TEST METHODOLOGY

1. FCC 47 CFR Part 2.
2. FCC 47 CFR 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(3m semi-anechoic chamber)
☒	Chamber 2(3m semi-anechoic chamber)
☒	Chamber 3(3m semi-anechoic chamber)
☐	Chamber 4(3m Full-anechoic chamber)
☐	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:

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

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

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/5G NR Phone + BT/BLE, DTS/UNII a/b/g/n/ac/ax, and NFC. This test report addresses the DTS (BLE) operational mode.

Representative model	Difference	Derivative model
		SCG27
SC-53E	Hardware	Same as SC-53E
	Software	Different UI

The model SC-53E was used for final testing and is representative of the test results in this report.

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	1 Mbps (255 pkt)	Peak	10.16	10.38
		Average	9.79	9.53
	2Mbps (255 pkt)	Peak	10.27	10.64
		Average	9.72	9.38

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 a internal antenna, with a maximum gain of: -6.01 dBi

“BT/WIFI #1_2.4GHz, 5GHz (SUB4)” as indicated in antenna specification are written as ANT1 in this report.

5.4. WORST-CASE CONFIGURATION AND MODE

The fundamentals of the EUT were investigated in three orthogonal orientations X, Y and Z. It was determined that below table's orientation was the worst-case orientation.

ANT1
X

Radiated and power line conducted tests were performed with EUT connected to AC power adapter as the worst-case configuration. Radiated harmonics spurious 1~18 GHz Low/Mid/High channels, 18-26GHz were performed with the EUT set at the 1Tx 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.

For Radiated band-edge and spurious test, tests were performed on 1Tx mode.

Due to modulation characteristics, 125 kbps data is worse than 1Mbps in the RBW 3kHz PSD setting. However, based on the RBW (1MHz) when measuring radiated spurious, the PSD of 1Mbps is higher, so 1Mbps was selected as the worst case to suit the radiation test environment.

For 6 dB bandwidth, 125 kbps 6dB bandwidth was measured(for PSD span setting purpose).

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 1 Mbps(255 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	1 Mbps 37 pkt ANT1	2 402	9.771	2	2 Mbps 37 pkt ANT1	2 402	9.676
		2 440	9.614			2 440	9.650
		2 480	9.061			2 480	8.806
	1 Mbps 255 pkt ANT1	2 402	9.792		2 Mbps 255 pkt ANT1	2 402	9.724
		2 440	9.707			2 440	9.626
		2 480	9.033			2 480	8.851
1 Coded S=8	125 kbps 37 pkt ANT1	2 402	9.657	1 Coded S=2	500 kbps 37 pkt ANT1	2 402	9.663
		2 440	9.621			2 440	9.649
		2 480	9.025			2 480	9.032
	125 kbps 255 pkt ANT1	2 402	9.685		500 kbps 255 pkt ANT1	2 402	9.672
		2 440	9.516			2 440	9.632
		2 480	8.986			2 480	8.822

5.5. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
Charger	SAMSUNG	EP-TA800	R37W61WENTASEA	N/A
Data Cable	SAMSUNG	EP-DN980	GH39-02117A	N/A

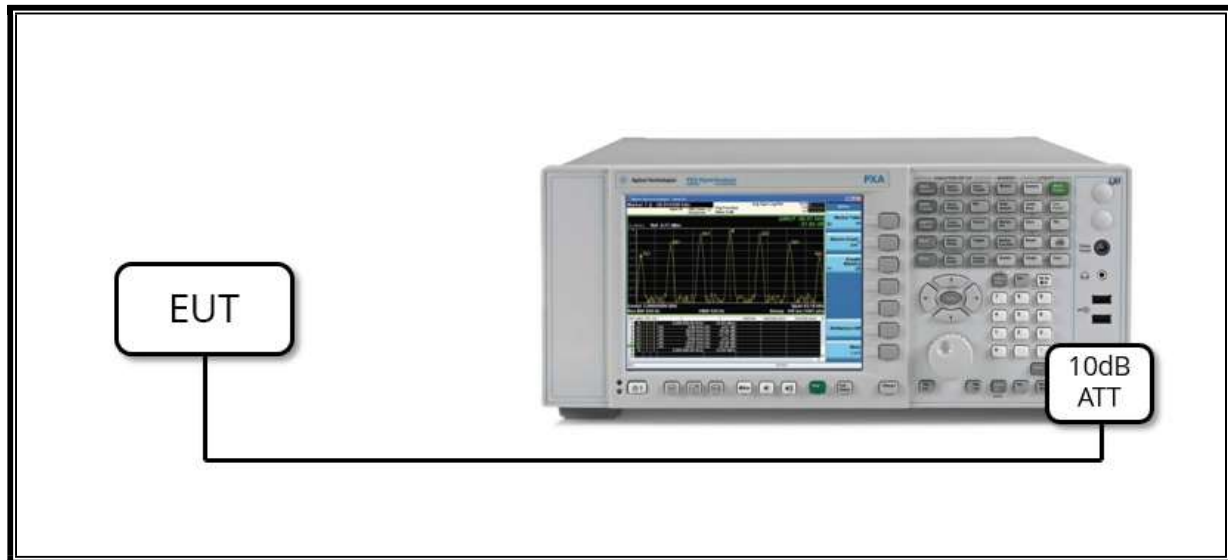
I/O CABLE

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

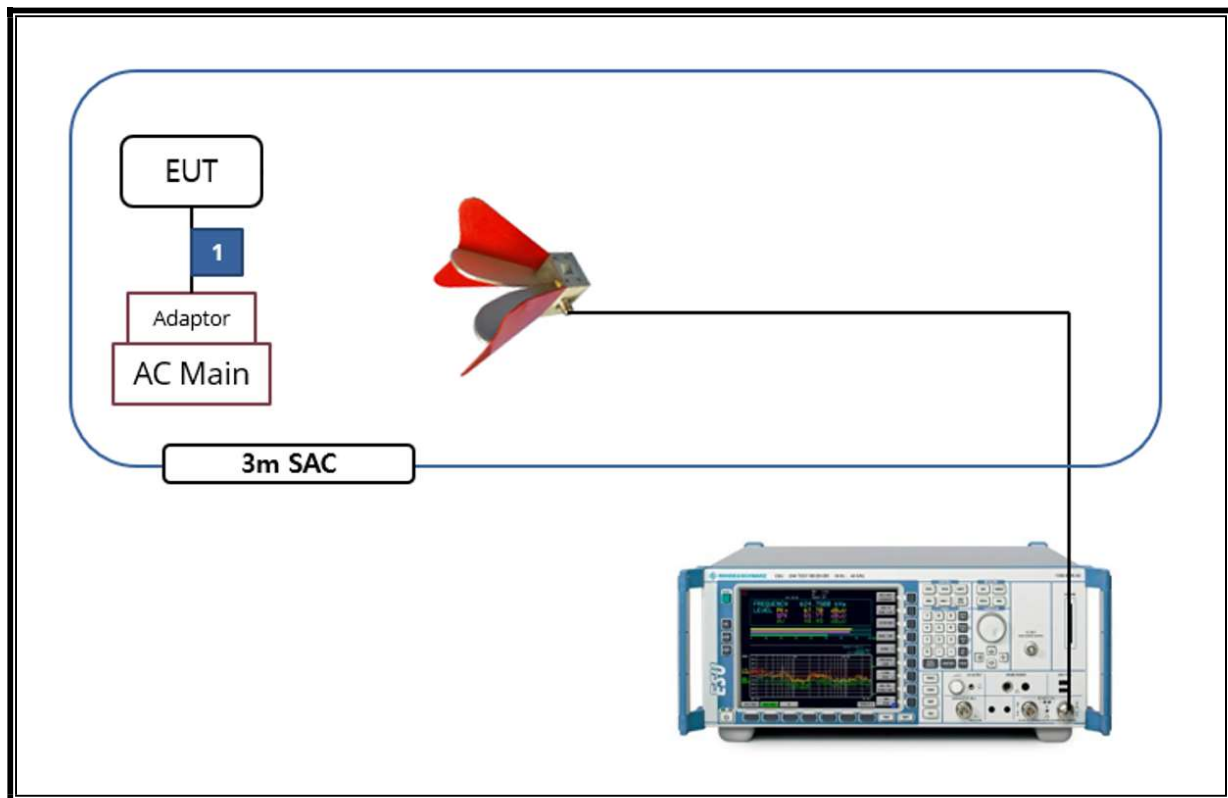
TEST SETUP

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 : 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, Horn, 18 GHz	ETS	3117	00168717	2024-08-21
Antenna, Horn, 40 GHz	ETS	3116C	00166155	2024-08-02
Preamplifier	ETS	3116C-PA	00168841	2024-07-25
Preamplifier, 1000 MHz	Sonoma	310N	341282	2024-07-24
Preamplifier, 18 GHz	Miteq	AFS42-00101800-25-S-42	2029169	2024-07-24
Spectrum Analyzer, 44 GHz	Agilent / HP	N9030A	MY54170614	2024-07-25
Spectrum Analyzer, 44 GHz	Agilent / HP	N9030A	MY54490312	2024-07-24
Spectrum Analyzer, 44 GHz	KEYSIGHT	N9040B	MY60080268	2025-01-03
Average Power Sensor	Agilent / HP	U2000A	MY54270007	2024-07-23
Average Power Sensor	Agilent / HP	U2000A	MY54260010	2024-07-24
Attenuator	PASTERNAK	PE7087-10	A001	2024-07-23
Attenuator	PASTERNAK	PE7087-10	A008	2024-07-27
EMI Test Receive, 40 GHz	R&S	ESU40	100439	2024-07-23
EMI Test Receive, 40 GHz	R&S	ESU40	100457	2024-07-24
EMI Test Receive, 3 GHz	R&S	ESR3	101832	2024-07-23
Low Pass Filter 5GHz	Micro-Tronics	LPS17541	009	2024-07-23
High Pass Filter 3GHz	Micro-Tronics	HPM17543	010	2024-07-23
High Pass Filter 6GHz	Micro-Tronics	HPS17542	021	2024-07-24
LISN	R&S	ENV-216	101837	2024-07-23
Antenna, Loop, 9kHz-30MHz	R&S	HFH2-Z2	100418	2025-09-06
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

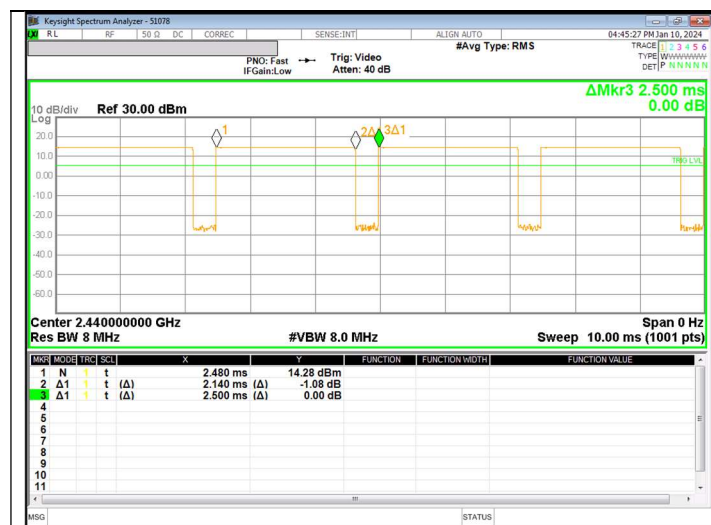
9. ANTENNA PORT TEST RESULTS

9.1. ON TIME AND DUTY CYCLE

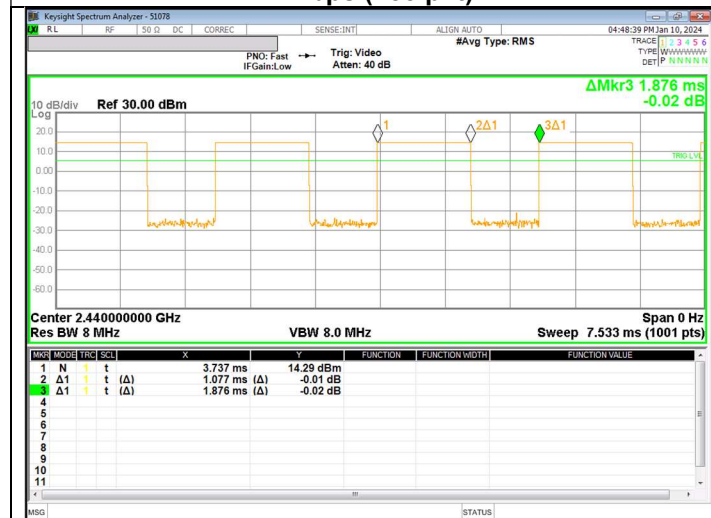
LIMITS

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						
1 Mbps [255 pkt]	2.140	2.500	0.856	85.60	0.68	0.47
2 Mbps [255 pkt]	1.077	1.876	0.574	57.41	2.41	0.93



1 Mbps (255 pkt)



2 Mbps (255 pkt)

9.2. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

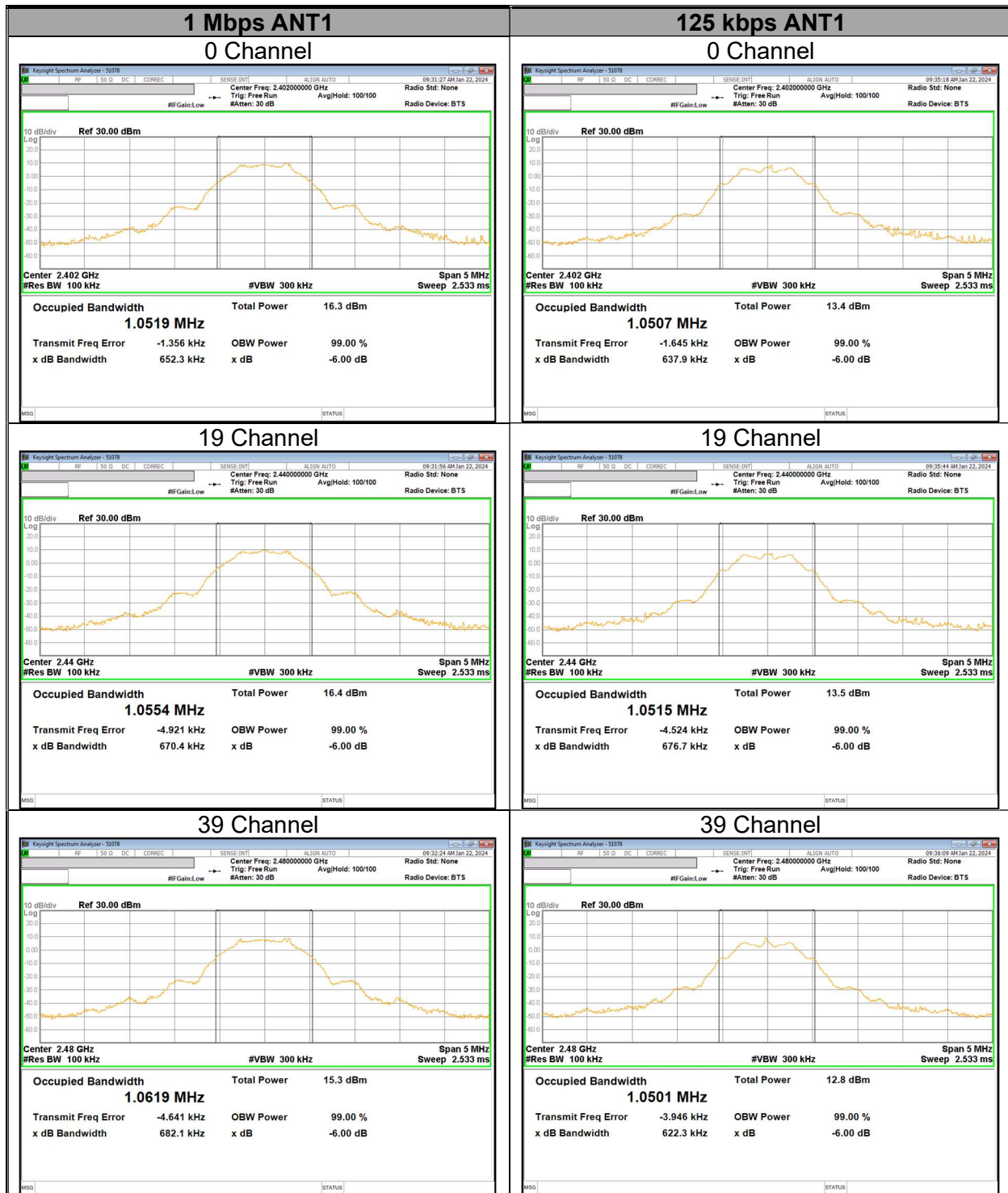
The minimum 6 dB bandwidth shall be at least 500 kHz.

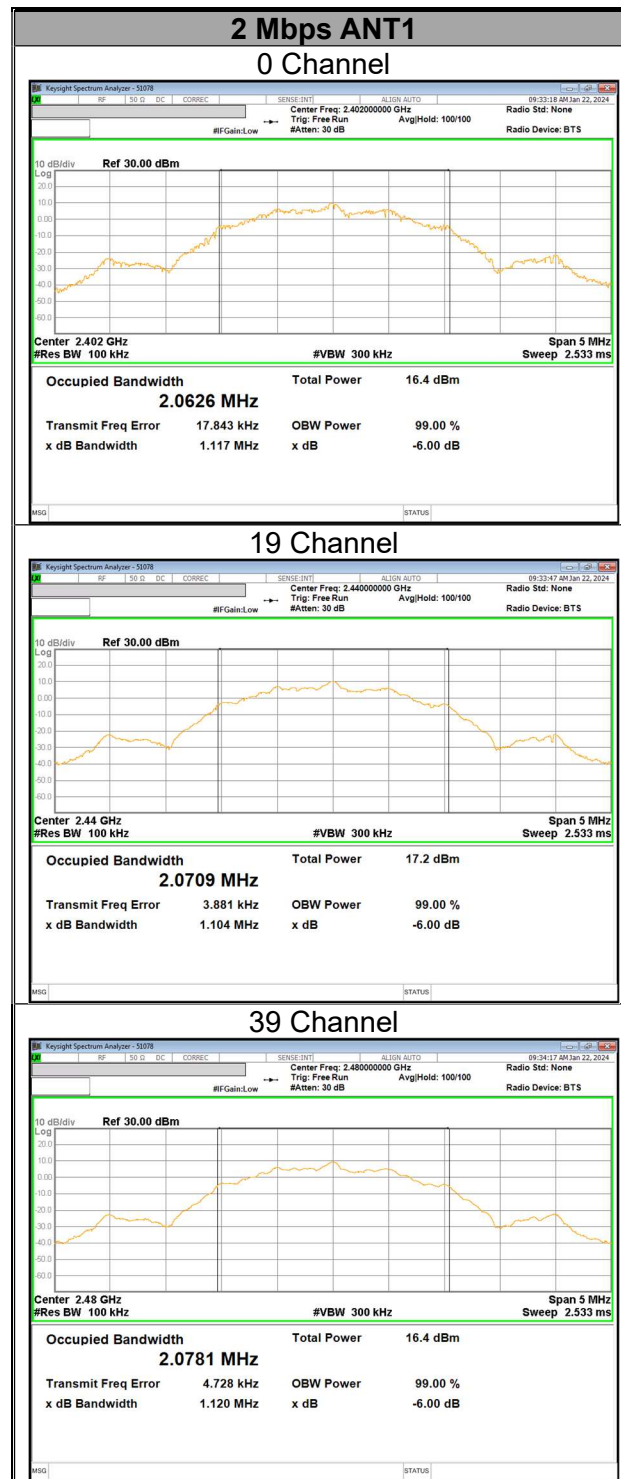
RESULTS

9.2.1. Test data

Mode	Antenna	Channel	Frequency [MHz]	6 dB Bandwidth [kHz]	Minimum Limit [kHz]
1 Mbps (255 pkt)	ANT1	0	2 402	652.3	500.0
		19	2 440	670.4	
		39	2 480	682.1	
125 kbps (255 pkt)		0	2 402	637.9	
		19	2 440	676.7	
		39	2 480	622.3	
2 Mbps (255 pkt)		0	2 402	1.117	
		19	2 440	1.104	
		39	2 480	1.120	
Worst				622.3	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.

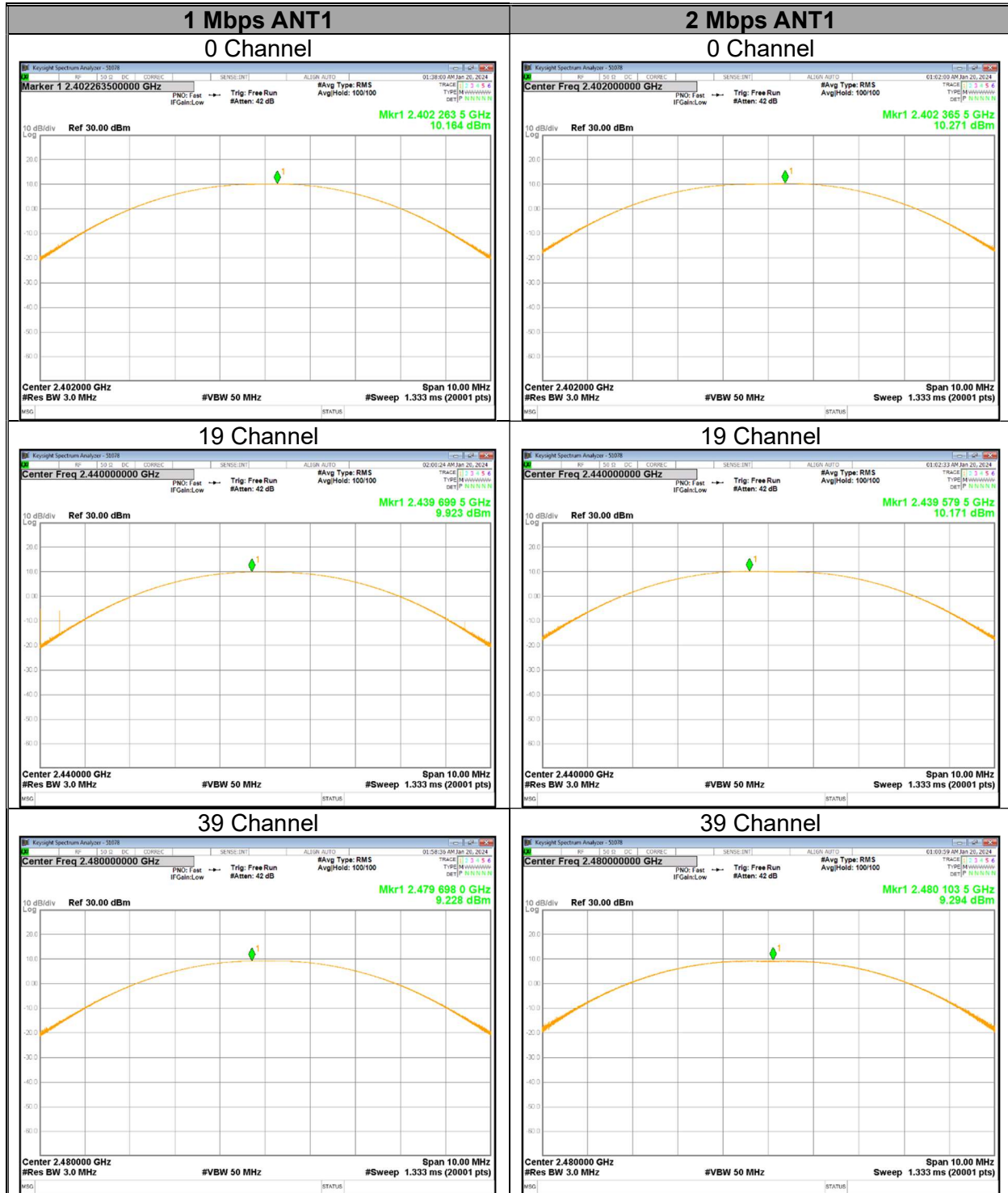
TEST PROCEDURE

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

RESULTS

Mode	Antenna	Channel	Frequency [MHz]	Peak Output Power [dBm]	Limit [dBm]	Margin [dB]
1 Mbps (255 pkt)	ANT1	0	2 402	10.16	30.000	-19.87
		19	2 440	9.92		-20.08
		39	2 480	9.23		-20.77
2 Mbps (255 pkt)		0	2 402	10.27		-19.73
		19	2 440	10.17		-19.83
		39	2 480	9.29		-20.71
Worst				10.27	-19.73	

9.3.1. 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

Mode	Antenna	Channel	Frequency [MHz]	Average Output Power [dBm]	Average Output Power [mW]
1 Mbps (255 pkt)	ANT1	0	2 402	9.79	9.53
		19	2 440	9.71	9.35
		39	2 480	9.03	8.00
2 Mbps (255 pkt)		0	2 402	9.72	9.38
		19	2 440	9.63	9.18
		39	2 480	8.85	7.68

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

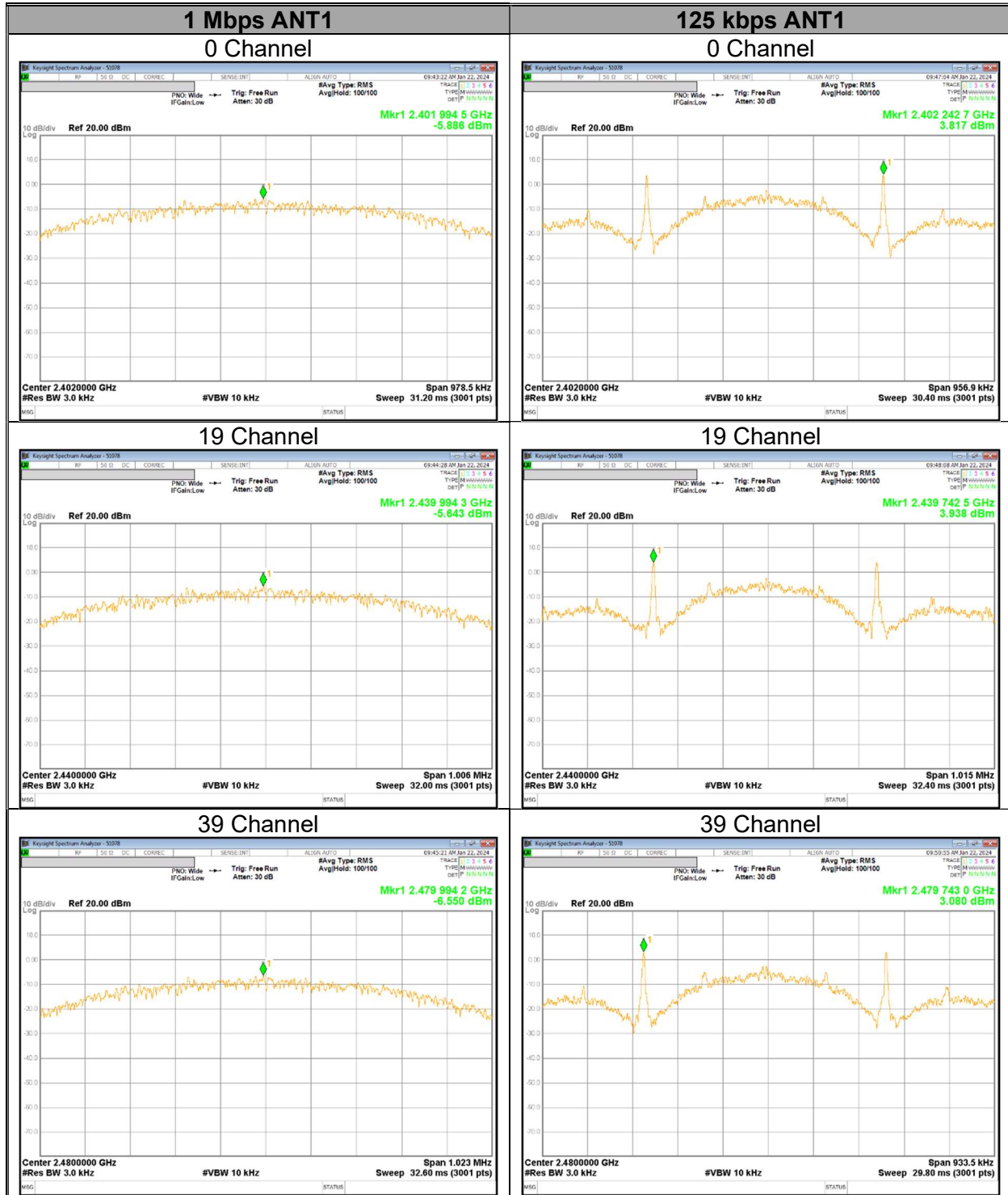
ANSI C63.10-2013, Section 11.10.2 Method PKPSD (peak PSD)

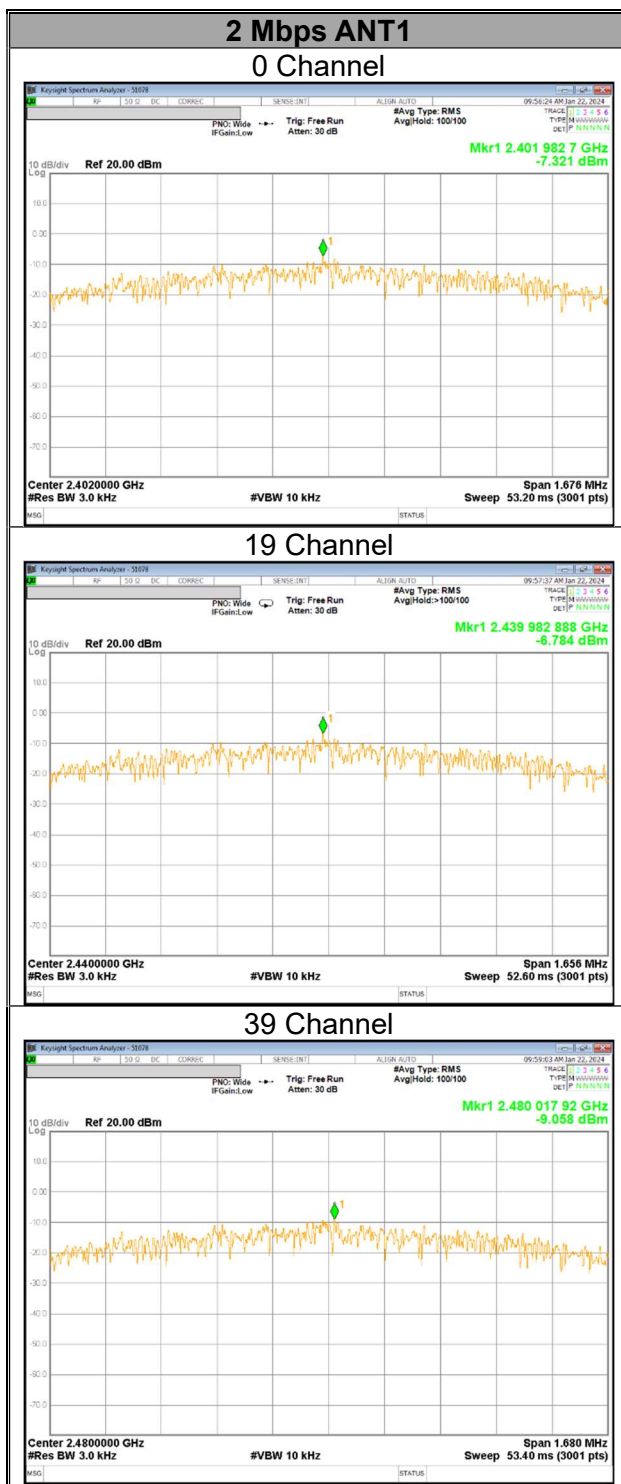
RESULTS

9.5.1. Test data

Mode	Antenna	Channel	Frequency [MHz]	PSD [dBm/3kHz]	Limit [dBm/3kHz]	Margin [dB]
1 Mbps (255 pkt)	ANT1	0	2 402	-5.89	8.00	-13.89
		19	2 440	-5.64		-13.64
		39	2 480	-6.55		-14.55
0		2 402	3.82	-4.18		
19		2 440	3.94	-4.06		
39		2 480	3.08	-4.92		
2 Mbps (255 pkt)		0	2 402	-7.32		-15.32
		19	2 440	-6.78		-14.78
		39	2 480	-9.06		-17.06
Worst				3.94		-4.06

9.5.2. PSD TEST PLOTS





9.6. CONDUCTED SPURIOUS EMISSIONS

LIMITS

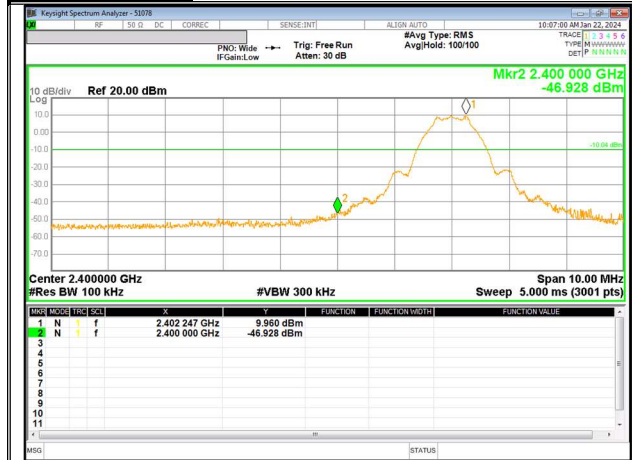
FCC §15.247 (d)

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

1 Mbps ANT1



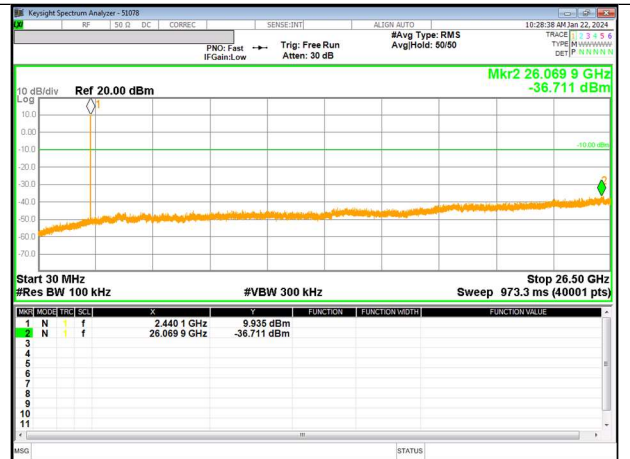
0 CHANNEL BANDEDGE



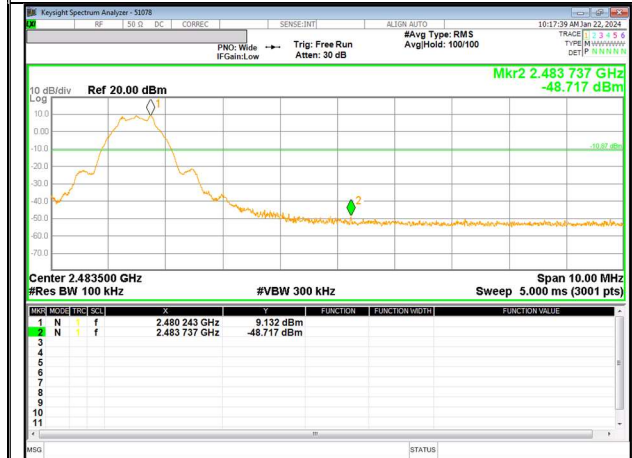
OUT-OF-BAND 0 CHANNEL



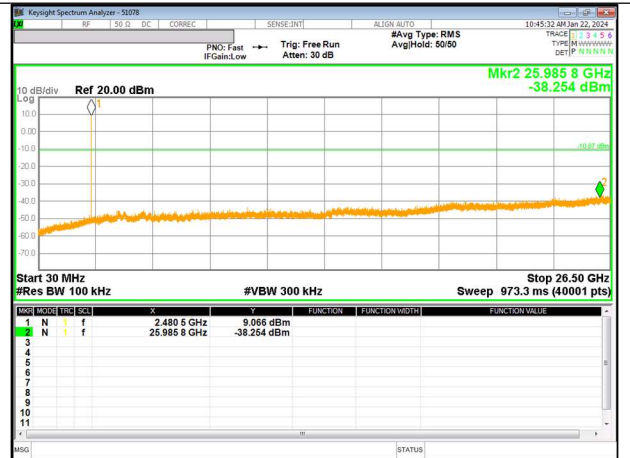
IN-BAND REFERENCE LEVEL



OUT-OF-BAND 19 CHANNEL

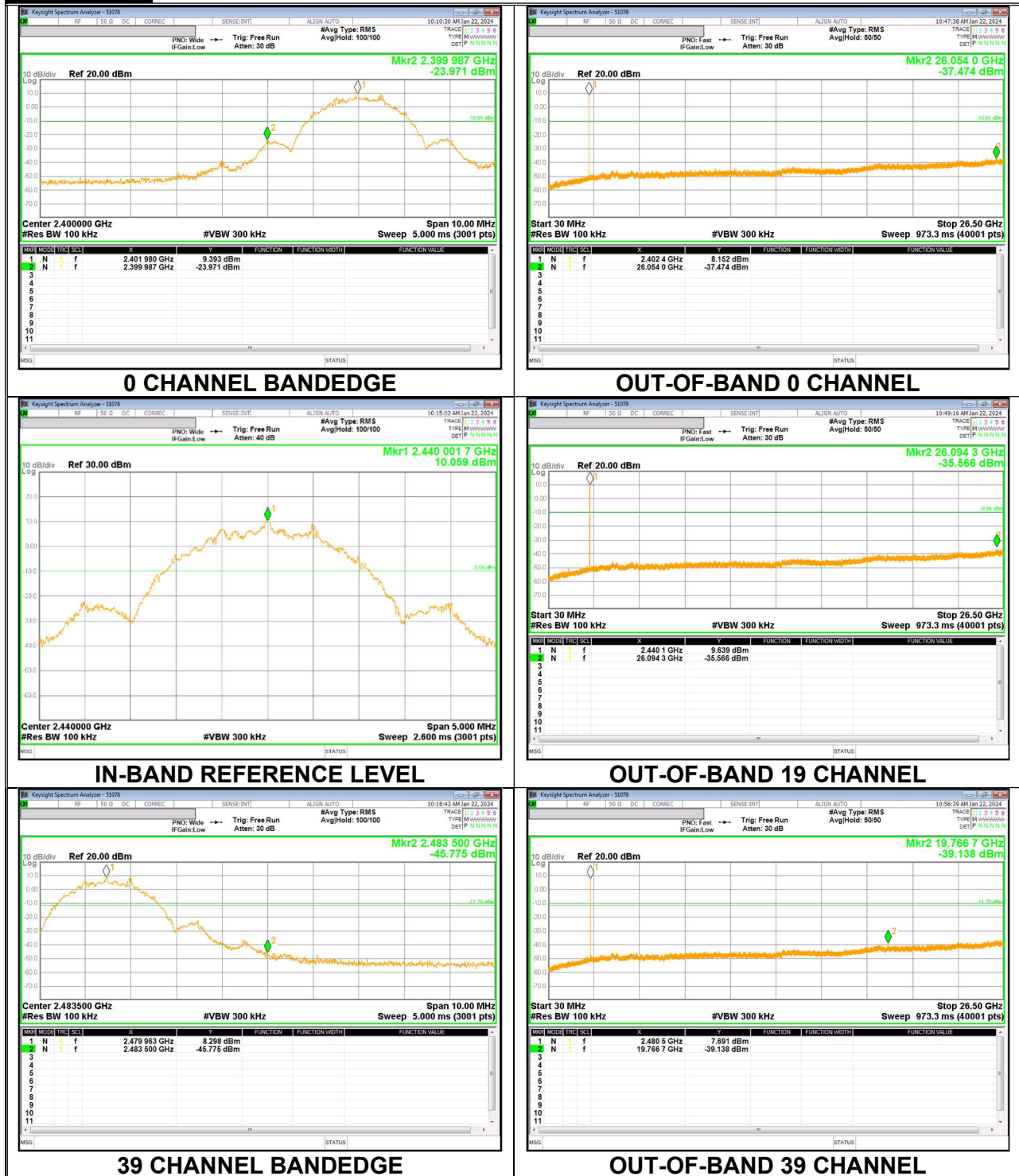


39 CHANNEL BANDEDGE



OUT-OF-BAND 39 CHANNEL

2 Mbps ANT1



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 = $10 \log(1/0.856) = 0.68 \text{ dB}$ (Spectrum Analyzer round it up to 0.70 dB) and for 2 Mbps, DCF = $10 \log(1/0.574) = 2.41 \text{ dB}$ (Spectrum Analyzer round it up to 2.41 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.

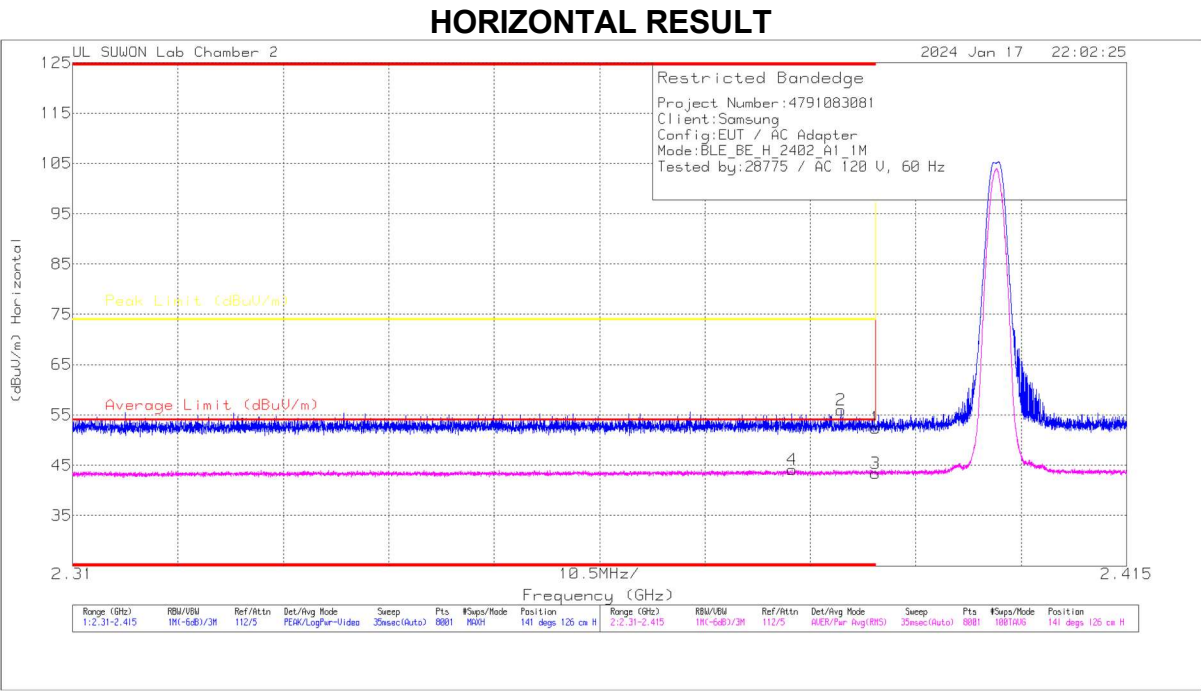
Note : Emission was pre-scanned from 9kHz to 30MHz; No emissions were detected which was at least 20dB below the specification limit (consider distance correction factor).
Per FCC part 15.31(o), test results were not reported.

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)

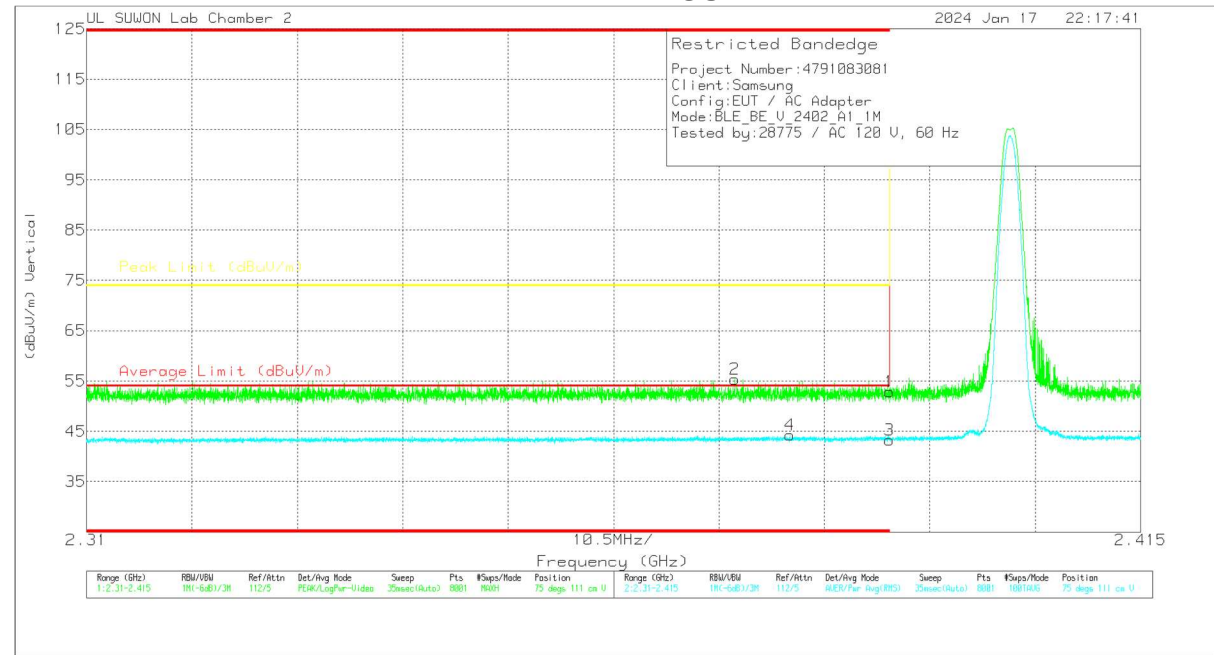


Trace Markers

Marker	Frequency (GHz)	Marker Reading (dBuV)	Det	Antenna Correction Factor(dBm)	Loss(dB)	DC Cor (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	40.34	PK	-31.7	-19.6	0	52.44	-	-	74	-21.56	141	126	H
2	* 2.38553	43.86	PK	-31.7	-19.6	0	55.06	-	-	74	-18.04	141	126	H
3	* 2.39	30.61	RMS	-31.7	-19.6	.7	43.41	54	-10.59	-	-	141	126	H
4	* 2.38169	31.23	RMS	-31.7	-19.5	.7	44.13	54	-9.87	-	-	141	126	H

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

VERTICAL RESULT



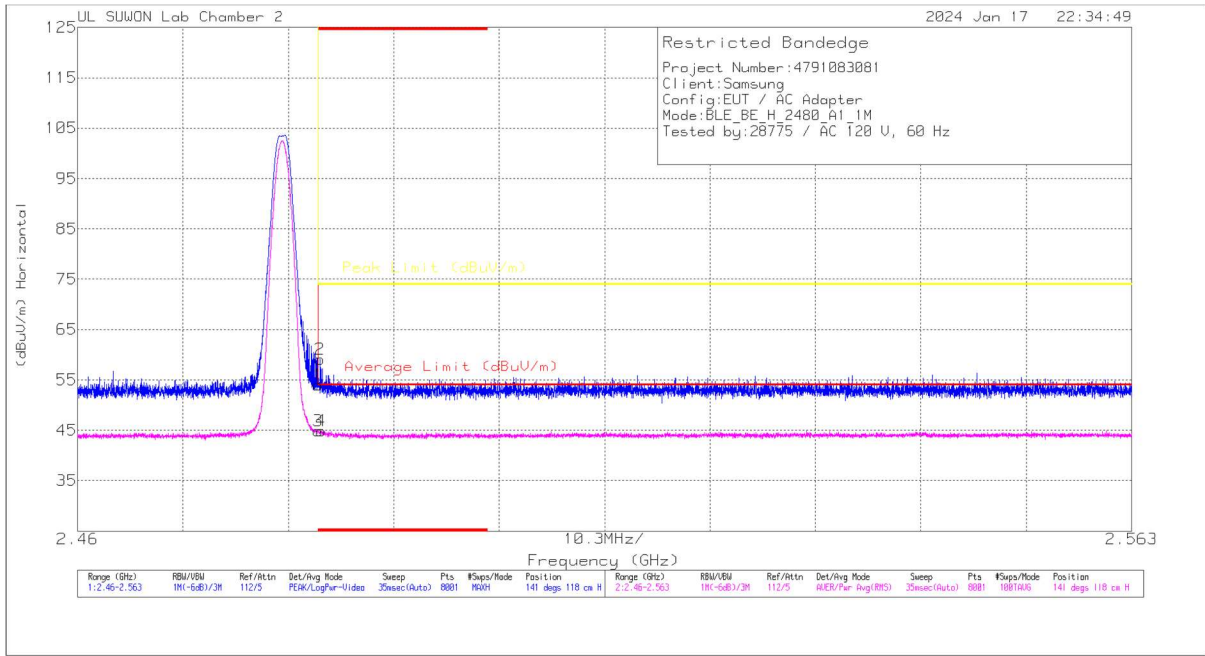
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	Antenna Correction Factor (dBm)	Loss (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	* 2.39	40.73	Pk	31.7	-19.6	0	52.83	-	-	74	-21.17	75	111	V
2	* 2.37456	43.27	Pk	31.7	-19.6	0	55.37	-	-	74	-18.63	75	111	V
3	* 2.39	30.43	RMS	31.7	-19.6	7	43.23	S4	-10.77	-	-	75	111	V
4	* 2.38006	31.44	RMS	31.7	-19.6	7	44.24	S4	-9.76	-	-	75	111	V

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

BANDEDGE (39 CHANNEL)

HORIZONTAL RESULT

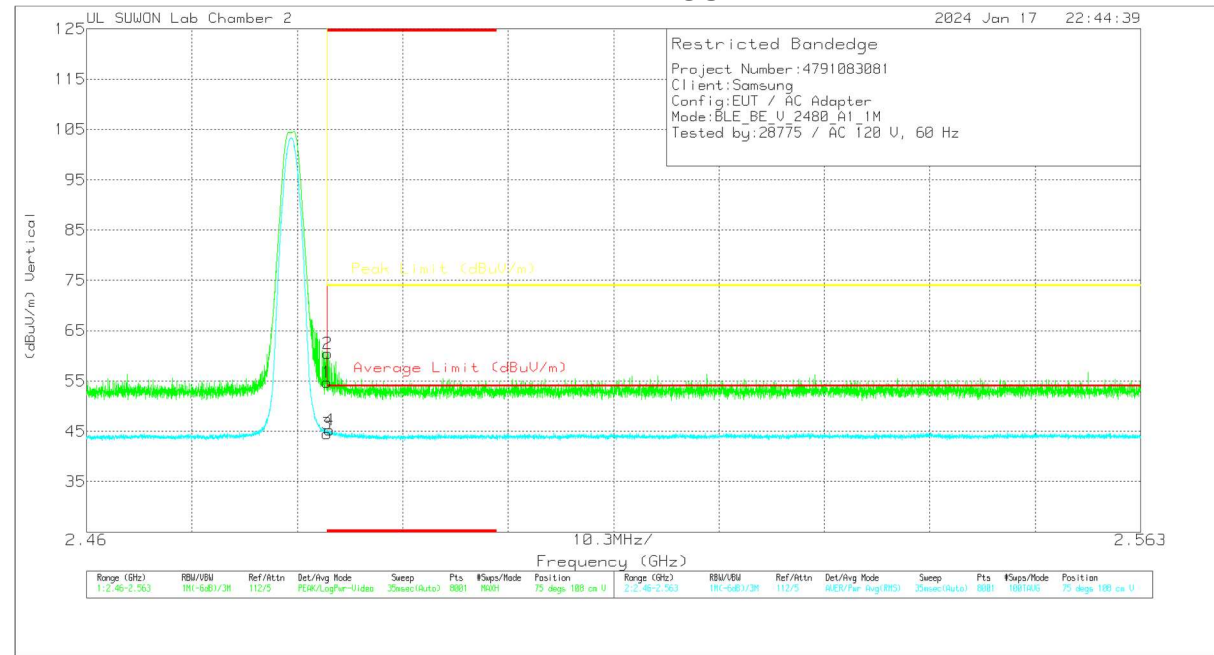


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	Antenna Correction Factor(dBm)	Loss(dB)	DC Cor (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Altitude (deg)	Height (m)	Polarity
1	* 2.48351	41.36	PK	31.9	-19.3	0	53.96	-	-	74	-20.04	141	118	H
2	* 2.4837	46.49	PK	31.9	-19.3	0	59.09	-	-	74	-14.91	141	118	H
3	* 2.48351	31.65	RMS	31.9	-19.3	7	44.95	54	-9.05	-	-	141	118	H
4	* 2.48379	31.6	RMS	31.9	-19.3	7	44.9	54	-9.1	-	-	141	118	H

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

VERTICAL RESULT



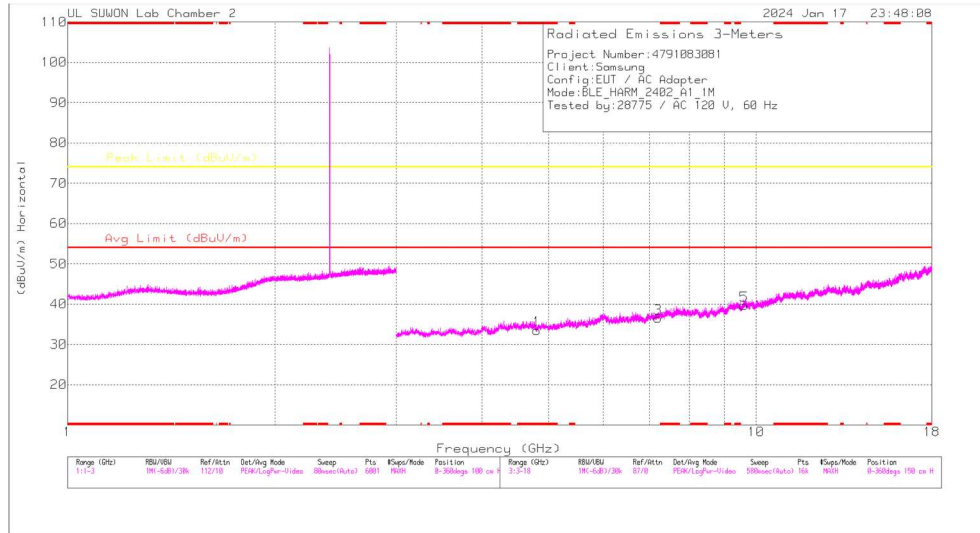
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	Antenna Correction Factor (dBm)	Loss (dB)	DC Cor (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	42.1	PK	31.9	-19.3	0	54.7	-	-	74	-19.3	75	108	V
2	* 2.48355	47.88	PK	31.9	-19.3	0	60.48	-	-	74	-13.52	75	108	V
3	* 2.48351	31.26	RMS	31.9	-19.3	7	44.56	54	-9.44	-	-	75	108	V
4	* 2.48374	31.93	RMS	31.9	-19.3	7	45.23	54	-8.77	-	-	75	108	V

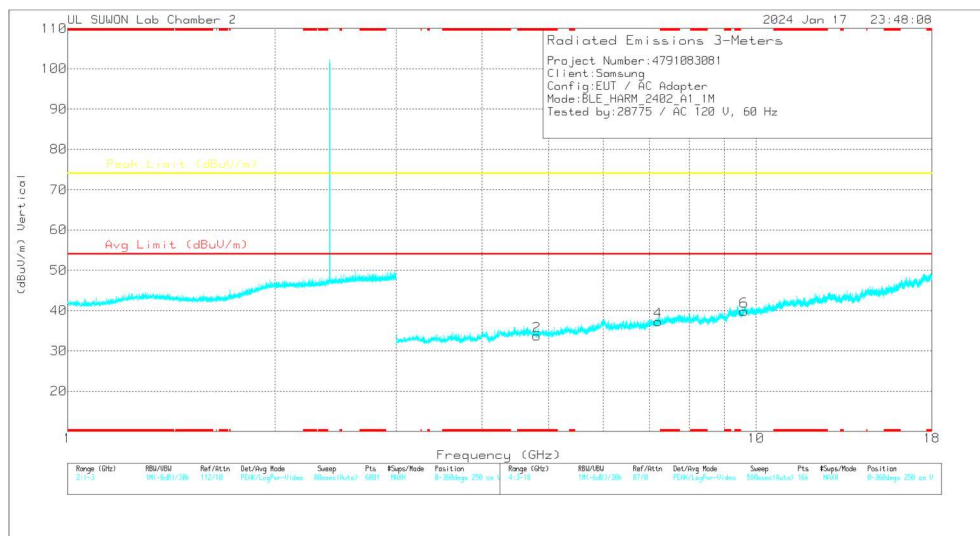
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK - Peak detector
RMS - RMS detection

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

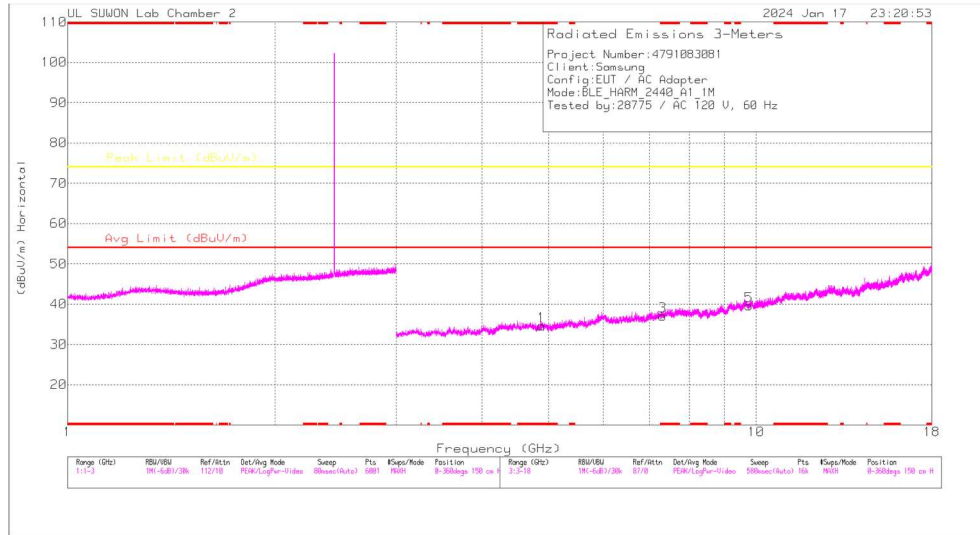
Frequency (GHz)	Meter Reading (dBuV)	Det	Antenna Correction Factor (dB/m)	Loss (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.80682	36.1	PK2	34	-26.8	0	43.3	-	-	74	-30.7	0	100	H
* 4.80407	36.1	PK2	34	-26.8	0	43.3	-	-	74	-30.7	0	100	V
7.21349	35.34	PK2	35.7	-24.3	0	46.74	-	-	74	-27.26	0	100	H
7.20549	35	PK2	35.7	-24.2	0	46.5	-	-	74	-27.5	0	100	V
9.61402	33.19	PK2	36.9	-21	0	49.09	-	-	74	-24.91	0	100	H
9.6095	33.17	PK2	36.9	-21	0	49.07	-	-	74	-24.93	0	100	V

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

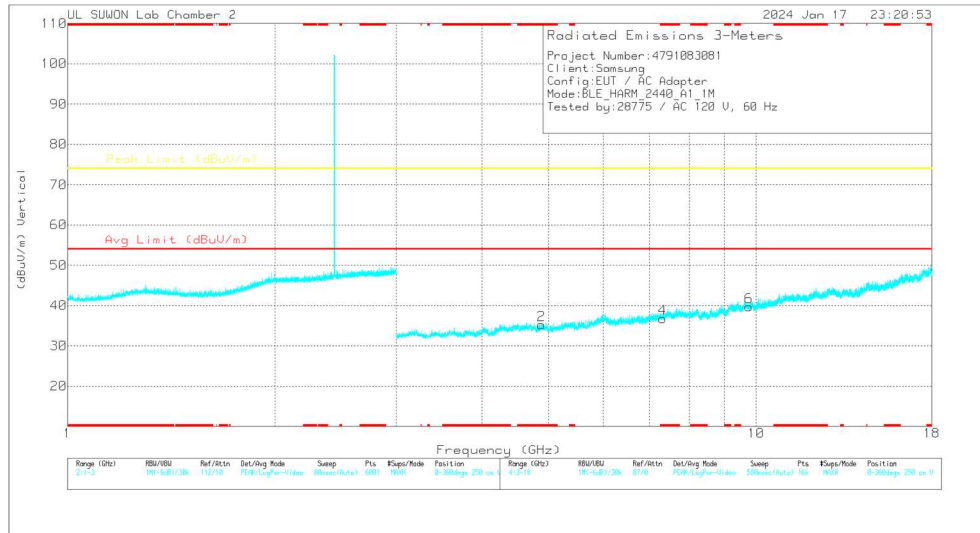
PK2 - KDB558074 Method: Maximum Peak

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

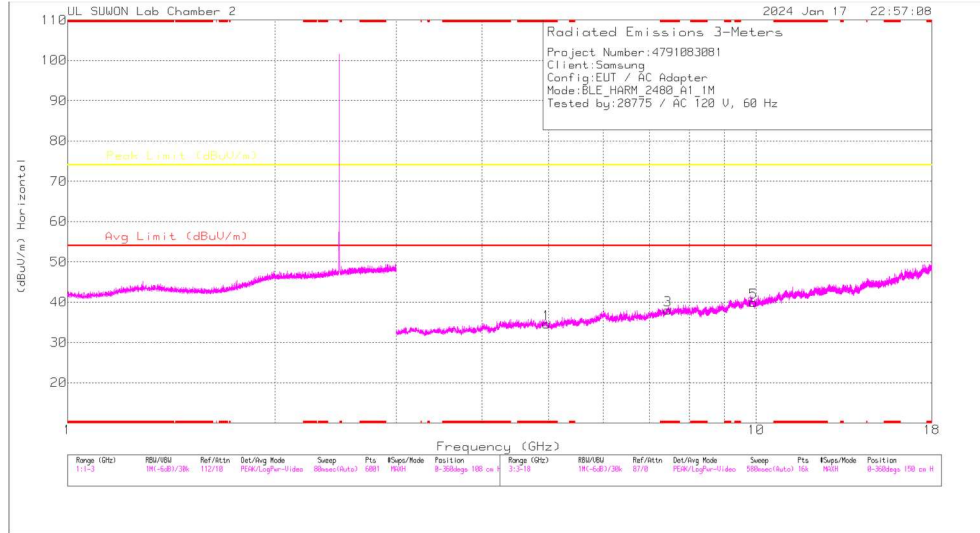
Frequency (GHz)	Meter Reading (dBuV)	Det	Antenna Correction Factor (dB/m)	Loss (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.88458	36.49	PK2	34	-26.7	0	43.79	-	-	74	-30.21	0	100	H
* 4.88183	36.68	PK2	34	-26.6	0	44.08	-	-	74	-29.92	0	100	V
* 7.31326	34.92	PK2	35.7	-23.8	0	46.82	-	-	74	-27.18	0	100	H
* 7.32128	34.91	PK2	35.7	-23.7	0	46.91	-	-	74	-27.09	0	100	V
9.75379	32.14	PK2	37.1	-20.7	0	48.54	-	-	74	-25.46	0	100	H
9.75926	32.07	PK2	37.1	-20.7	0	48.47	-	-	74	-25.53	0	100	V

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

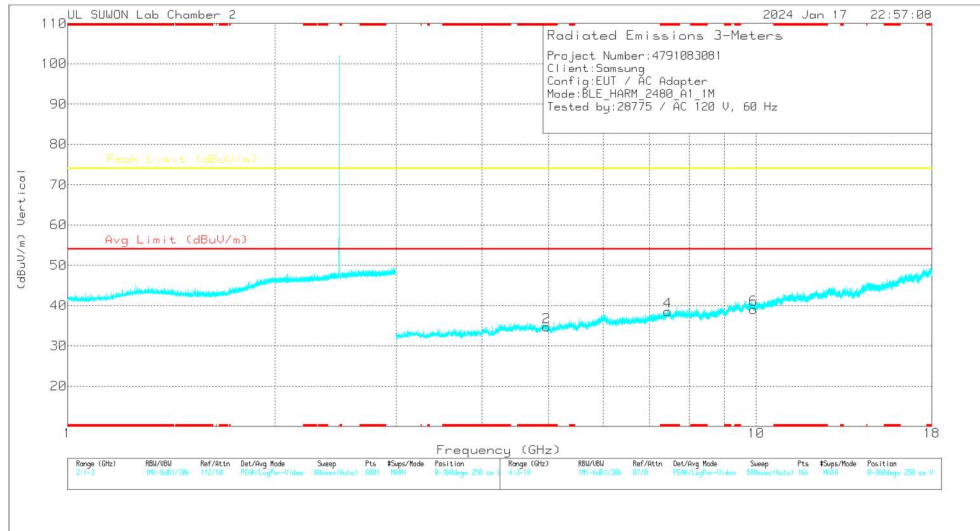
PK2 - KDB558074 Method: Maximum Peak

MAV1 - KDB558074 Option 1 Maximum RMS Average

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	Antenna Correction Factor (dB/m)	Loss (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
* 4.96656	35.81	PK2	34	-26	0	43.81	-	-	74	-30.19	0	100	H
* 4.96758	36.46	PK2	34	-26.1	0	44.36	-	-	74	-29.64	0	100	V
* 7.44368	34.75	PK2	35.7	-23	0	47.45	-	-	74	-26.55	0	100	H
* 7.43596	34.62	PK2	35.7	-23	0	47.32	-	-	74	-26.68	0	100	V
9.92352	32.36	PK2	37.3	-20.5	0	49.16	-	-	74	-24.84	0	100	H
9.91513	31.82	PK2	37.3	-20.6	0	48.52	-	-	74	-25.48	0	100	V

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

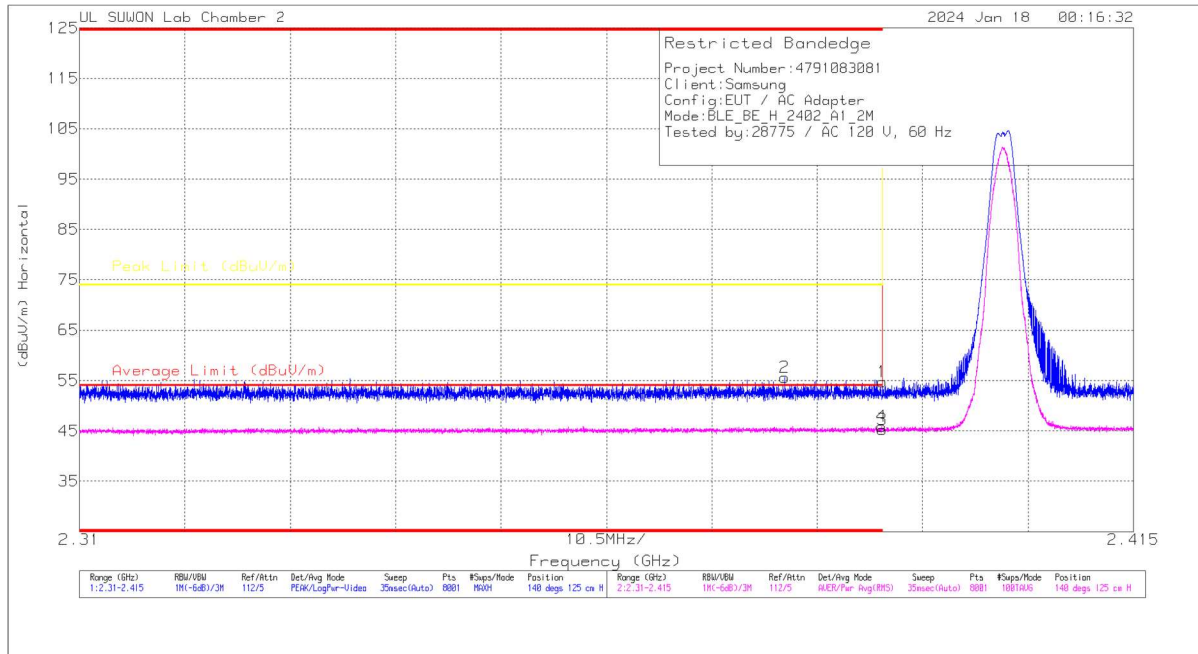
PK2 - KDB558074 Method: Maximum Peak

MAV1 - KDB558074 Option 1 Maximum RMS Average

10.2.2. 2 Mbps ANT1

BANDEDGE (0 CHANNEL)

HORIZONTAL RESULT



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	Antenna Correction Factor(dBm)	Loss(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	42.66	Pk	31.7	-19.6	0	54.76	-	-	74	-19.24	140	125	H
2	* 2.38025	43.5	Pk	31.7	-19.6	0	55.6	-	-	74	-18.4	140	125	H
3	* 2.39	30.79	RMS	31.7	-19.6	2.41	45.3	54	-8.7	-	-	140	125	H
4	* 2.38993	31.4	RMS	31.7	-19.6	2.41	45.91	54	-8.09	-	-	140	125	H

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

PK - Peak detector

RMS - RMS detection