

TEST REPORT

Report Number: 14916801-E3V4

Applicant : SRAM LLC
1000 W Fulton Market 4th Floor
Chicago, IL 60607, United States

Model : 55503

Brand : SRAM

FCC ID : C9O-PMB3

IC : 10161A-PMB3

EUT Description : Pressure Sensor

Test Standard(s) : FCC 47 CFR PART 15 SUBPART C
ISED RSS-210 ISSUE 11
ISED RSS-GEN ISSUE 5 + A1 + A2

Date Of Issue:
2024-12-18

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REPORT REVISION HISTORY

Rev.	Issue Date	Revisions	Revised By
V1	2024-11-05	Initial Issue	
V2	2024-12-13	Updated Section 4, 6.2, 6.6, 8,10.4 and 10.6	Kiya Kedida
V3	2024-12-16	Updated Section 6.2	Kiya Kedida
V4	2024-12-18	Updated Section 9.1, 10.4 and 10.5	Kiya Kedida

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: SRAM LLC
1000 W Fulton Market 4th Floor
Chicago, IL 60607, United States

EUT DESCRIPTION: Pressure Sensor

MODEL: 55503

BRAND: SRAM

SERIAL NUMBER: Conducted: AHK00007
Radiated: AHK12038

SAMPLE RECEIPT DATE: 2024-07-19 and 2024-10-18

DATE TESTED: 2024-08-08 to 2024-10-18

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
47 CFR Part 15 Subpart C	Complies
ISED RSS-210 Issue 11	Complies
ISED RSS-GEN Issue 5 + A1 + A2	Complies

UL Verification Services Inc. tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. It is the manufacturer's responsibility to ensure that additional production units of this model are manufactured with identical electrical and mechanical components. All samples tested were in good operating condition throughout the entire test program. Measurement Uncertainties are published for informational purposes only and were not taken into account unless noted otherwise.

This document may not be altered or revised in any way unless done so by UL Verification Services Inc. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Verification Services Inc. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by A2LA, NIST, or any agency of the U.S. government.

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2. TEST RESULTS SUMMARY

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

Below is a list of the data provided by the customer:

- 1) Antenna gain and type (see section 6.3)

FCC Clause	ISED Clause	Requirement	Result	Comment
See Comment	See Comment	Duty Cycle	Reporting purposes only	Based on the manufacturer's declaration
See Comment	RSS-GEN 6.7	20dB BW / 99% OBW	Reporting purposes only	ANSI C63.10 Sections 6.9.2 and 6.9.3.
15.249 (a) (c)	RSS-GEN 8.9, 8.10	Radiated Emissions	Compliant	None.
15.207	RSS-Gen 8.8	AC Mains Conducted Emissions	NA	A.C. line conducted was not evaluated because the E.U.T. uses the battery

3. TEST METHODOLOGY

The tests documented in this report were performed in accordance with FCC 47 CFR Part 2, FCC 47 CFR Part 15, ANSI C63.10-2013, KDB 414788 D01 Radiated Test Site v01r01, ISED RSS-GEN Issue 5 + A1 + A2 and ISED RSS-210 Issue 11.

4. FACILITIES AND ACCREDITATION

UL Verification Services Inc. is accredited by A2LA, Certificate Number 0751.05, for all testing performed within the scope of this report. Testing was performed at the locations noted below.

	Address	ISED CABID	ISED Company Number	FCC Registration
<input checked="" type="checkbox"/>	Building 1: 47173 Benicia Street, Fremont, CA 94538, USA	US0104	2324A	550739
<input type="checkbox"/>	Building 2: 47266 Benicia Street, Fremont, CA 94538, USA			
<input type="checkbox"/>	Building 3: 843 Auburn Court, Fremont, CA 94538, USA			
<input type="checkbox"/>	Building 4: 47658 Kato Rd, Fremont, CA 94538, USA			
<input checked="" type="checkbox"/>	Building 5: 47670 Kato Rd, Fremont, CA 94538, USA			

5. DECISION RULES AND MEASUREMENT UNCERTAINTY

5.1. METROLOGICAL TRACEABILITY

All test and measuring equipment utilized to perform the tests documented in this report are calibrated on a regular basis, with a maximum time between calibrations of one year or the manufacturers' recommendation, whichever is less, and where applicable is traceable to recognized national standards.

5.2. DECISION RULES

The Decision Rule is based on Simple Acceptance in accordance with ISO Guide 98-4:2012 Clause 8.2. (Measurement uncertainty is not taken into account when stating conformity with a specified requirement.)

5.3. MEASUREMENT UNCERTAINTY

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

PARAMETER	U _{Lab}
Radio Frequency (Spectrum Analyzer)	141.16 Hz
Occupied Bandwidth	1.22%
Power Spectral Density	2.47 dB
RF Power Measurement Direct Method Using Power Meter	1.3 dB (PK) / 0.45 dB (AV)
Unwanted Emissions, Conducted	1.94 dB
Worst Case Conducted Disturbance, 9KHz to 0.15 MHz	3.78 dB
Worst Case Conducted Disturbance, 0.15 to 30 MHz	3.40 dB
Worst Case Radiated Disturbance, 9KHz to 30 MHz	2.87 dB
Worst Case Radiated Disturbance, 30 to 1000 MHz	6.01 dB
Worst Case Radiated Disturbance, 1000 to 18000 MHz	4.73 dB
Worst Case Radiated Disturbance, 18000 to 26000 MHz	4.51 dB
Worst Case Radiated Disturbance, 26000 to 40000 MHz	5.29 dB
Time Domain Measurements	3.39%
Temperature	0.57°C
Humidity	3.39%
DC Supply Voltages	0.57%

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

5.4. SAMPLE CALCULATION

RADIATED EMISSIONS

Where relevant, the following sample calculation is provided:

Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable
Loss (dB) – Preamp Gain (dB)

$36.5 \text{ dBuV} + 18.7 \text{ dB/m} + 0.6 \text{ dB} - 26.9 \text{ dB} = 28.9 \text{ dBuV/m}$

6. EQUIPMENT UNDER TEST

6.1. EUT DESCRIPTION

The EUT is a Pressure Sensor.

6.2. MAXIMUM FUNDAMENTAL FIELD STRENGTH

The transmitter has maximum fundamental peak and average E-field strength output powers as follows:

Frequency Range (MHz)	Mode	Peak E-field Strength (dBuV/m)	Avg E-field Strength (dBuV/m)	Distance (m)
2405 - 2475	ANT+	94.26	80.28	3.00

6.3. DESCRIPTION OF AVAILABLE ANTENNAS

The antenna gain and type, as provided by the manufacturer, are as follows:

The radio utilizes a ceramic chip antenna, with a maximum gain of -0.5 dBi.

6.4. SOFTWARE AND FIRMWARE

The EUT firmware installed during testing was version B-1.0.

The test utility software used during testing was nRF Connect version 4.26.0.

6.5. WORST-CASE CONFIGURATION AND MODE

Radiated emissions below 1GHz and above 18GHz were performed with the EUT set to transmit at the channel with highest output power as worst-case scenario.

Band edge and radiated emissions between 1GHz and 18GHz were performed with the EUT set to transmit at the highest power on low, middle, and high channels.

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

6.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List			
Description	Manufacturer	Model	Serial Number
Phone	Apple	iPhone 6s	FK1TR0AVGRY1
Phone	Apple	iPhone Xr	F71Z4FB4KXKN
DC Power Supply	Kenwood Corporation	TMI PA36-3A	N/A
DC Power Supply	Kenwood Corporation	PA36-3A	7060074
DC Power Supply	TDK.Lambda	ZUP20-10	PRE0137675

I/O CABLES (CONDUCTED EMISSIONS)

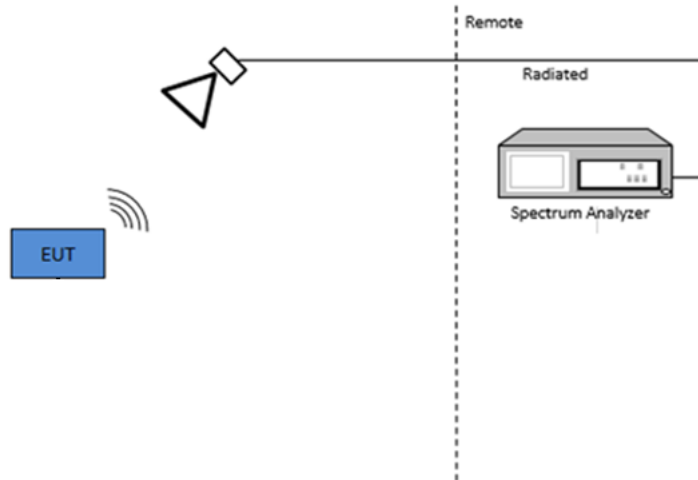
I/O CABLE LIST						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	AC	1	AC	Unshielded	1.5	AC Main to DC Supply
2	DC	1	DC	Unshielded	0.5	Power Supply to EUT
3	Antenna Port	1	SMA	Unshielded	0.1	EUT to Analyzer

TEST SETUP

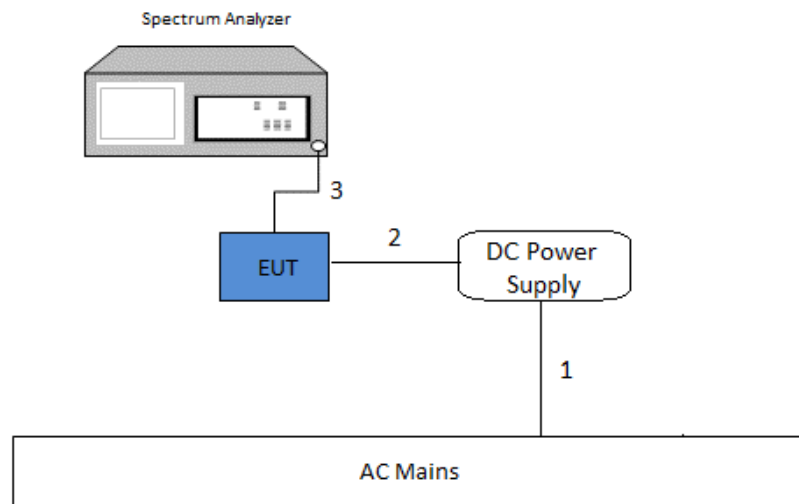
For the purposes of testing, the EUT is connected to a 3VDC power supply for conducted and radiated emissions. A Li-Ion battery at 3V is used. The EUT is normally powered by a Li-Ion battery at 3V. The phone is used for setting up purposes and was removed during testing.

SETUP DIAGRAM

Radiated Configuration



Conducted Configuration



7. MEASUREMENT METHOD

On Time and Duty Cycle: ANSI C63.10-2013 Section 11.6

** The On-time and Duty Cycle was based on the manufacturer's declaration.*

Occupied BW (20dB): ANSI C63.10-2013 Section 6.9.2

Occupied BW (99%): ANSI C63.10-2013 Section 6.9.3

Radiated Spurious Emissions 30-1000MHz: ANSI C63.10-2013 Section 6.3 and 6.5

Radiated Spurious Emissions above 1GHz: ANSI C63.10-2013 Section 6.3 and 6.6

Radiated Spurious Emissions Below 30MHz: ANSI C63.10-2013 Section 6.4

Radiated Band-edge: ANSI C63.10-2013 Section 6.10.5

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

** The A.C. line conducted was not evaluated because the EUT is powered by a Li-Ion 3VDC battery.*

8. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

TEST EQUIPMENT LIST					
Description	Manufacturer	Model	ID Num	Cal Due	Last Cal
Antenna, Broadband Hybrid, 30MHz to 3GHz	SunAR RF Motion	JB3	203089	2025-04-30	2023-04-09
Amplifier, 9KHz to 1GHz, 32dB	SONOMA INSTRUMENT	310	175953	2025-03-31	2024-03-25
Amplifier, 9KHz to 1GHz, 32dB	SONOMA INSTRUMENT	310	29654	2025-02-28	2024-02-05
Antenna, Horn 1-18GHz	ETS-Lindgren (Cedar Park, Texas)	3117	80404	2024-08-31	2023-08-08
RF Filter Box, 1-18GHz	FREMONT	n/a	197920	2025-03-31	2024-03-30
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	225688	2025-02-11	2024-02-11
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	191429	2025-02-28	2024-02-11
Antenna, Broadband Hybrid, 30MHz to 3GHz	SunAR RF Motion	JB3	203089	2025-04-30	2023-04-09
Antenna, Horn 18 to 26.5GHz	ARA	MWH-1826/B	199659	2024-12-31	2022-12-06
Amplifier 18-26.5GHz, +5Vdc, 60dB min	AMPLICAL	AMP18G26.5-60	234683	2025-05-31	2024-05-13
Antenna, Passive Loop 100KHz - 30MHz	ELECTRO METRICS	EM-6872	219911	2024-12-31	2023-12-05
Antenna, Passive Loop 30Hz - 1MHz	ELECTRO METRICS	EM-6871	219909	2025-06-30	2024-06-20
Spectrum Analyzer, PXA, 3Hz to 44GHz	Agilent Technologies	N9030A	80396	2025-02-28	2024-02-21
10dB Fixed Attenuator	Pasternack Enterprises	PE7087-10	N/A	Verified	Verified
UL TEST SOFTWARE LIST					
Radiated Software	UL	UL EMC	Ver 2023-01-18, 2023-03-03, 2023-05-01		
Antenna Port Software	UL	UL RF	Ver 2022.8.16		

NOTES:

1. Equipment listed above that calibrated during the testing period was set for test after the calibration.
2. Equipment listed above that has a calibration due date during the testing period, the testing is completed before equipment expiration date.

9. ANTENNA PORT TEST RESULTS

9.1. ON TIME AND DUTY CYCLE

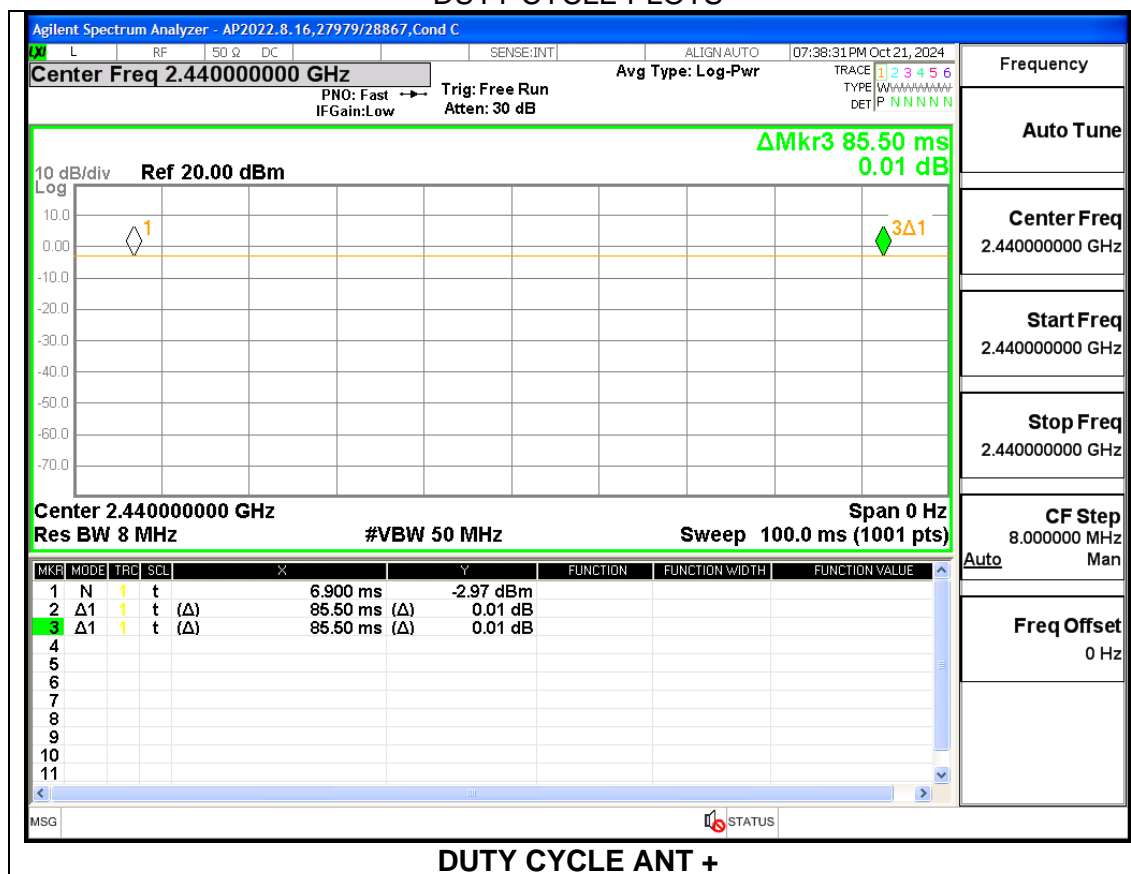
LIMITS

None; for reporting purposes only.

ON TIME AND DUTY CYCLE RESULTS

Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/B Minimum VBW (kHz)
2.4GHz Band						
ANT+	85.50	85.50	1.000	100.00	0.00	0.010

DUTY CYCLE PLOTS



Note: Measured DC is 100% but manufacturer's declared duty cycle of 20%, $20\log(0.2) = -13.98\text{dB DCCF}$.

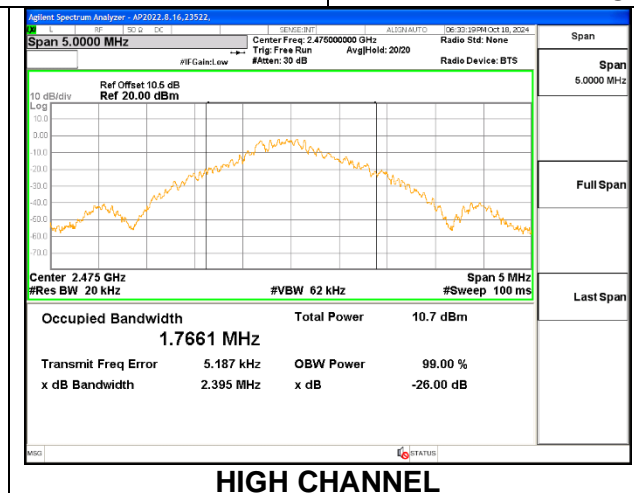
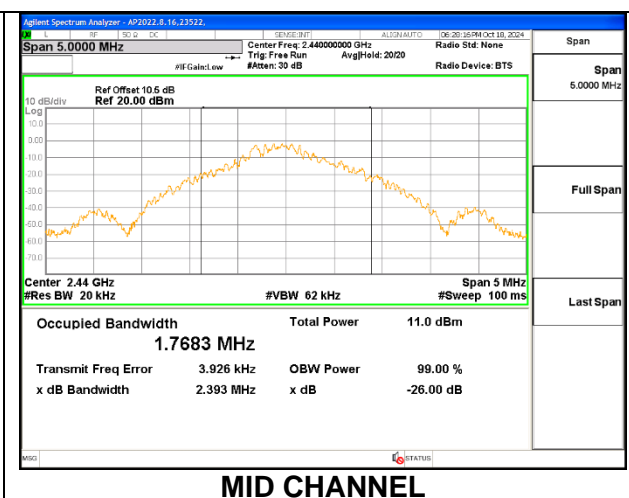
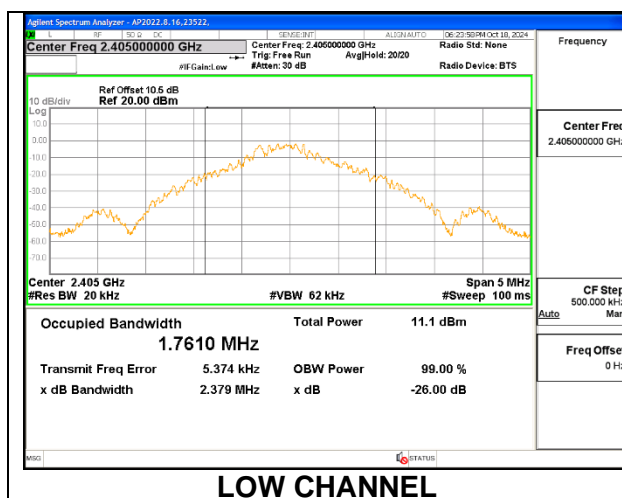
9.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2405	1.7610
Middle	2440	1.7683
High	2475	1.7661



9.3. 20 dB BANDWIDTH

LIMITS

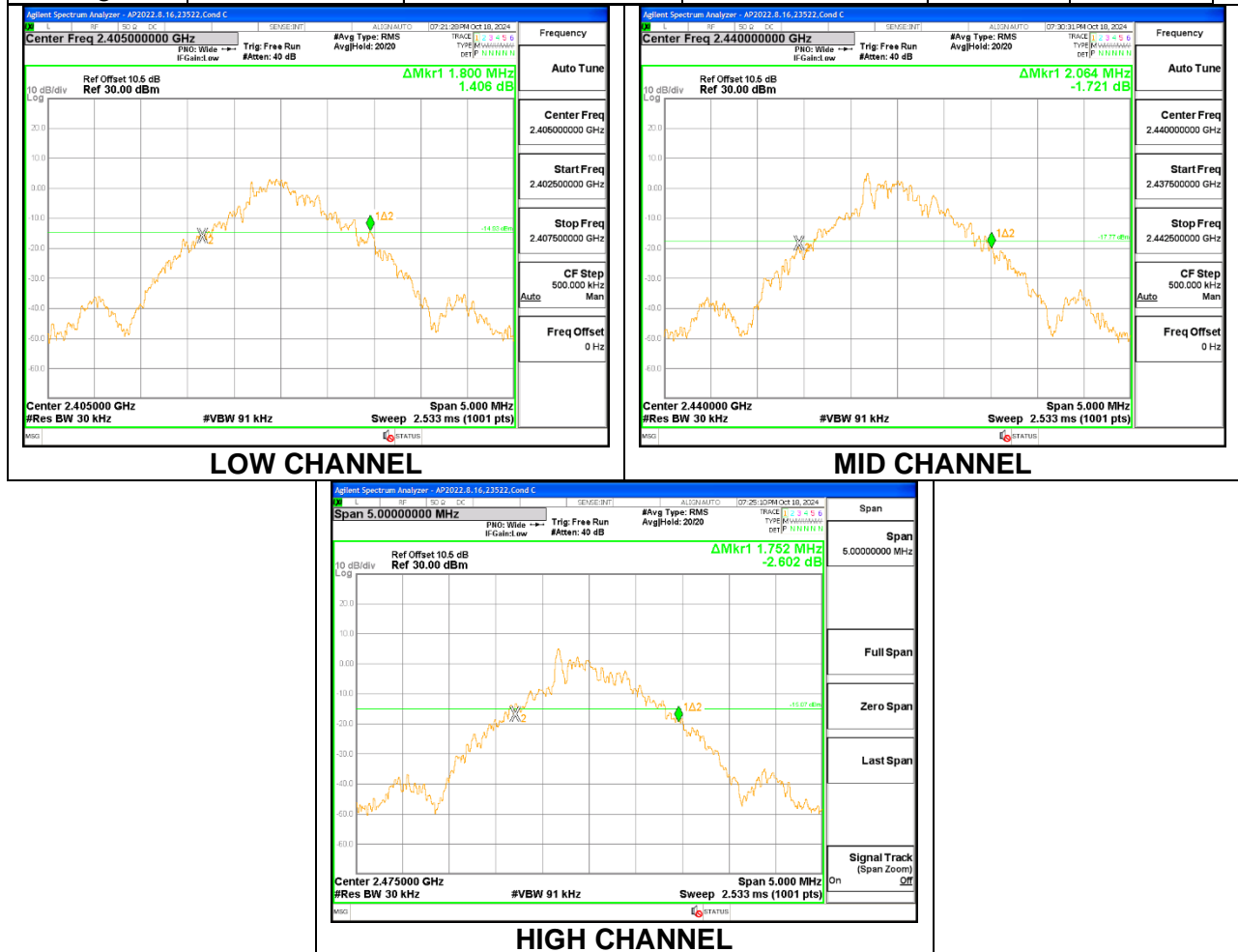
None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a spectrum analyzer. The RBW is set to 1% to 5% of the 20 dB bandwidth. The VBW is set to approximately three times RBW. The sweep time is coupled.

RESULTS

Channel	Frequency (MHz)	20 dB Bandwidth (MHz)	Frequency Edge (MHz)	Limit (MHz)	Margin (MHz)
Low	2405	1.800	2404.100	2400	-4.100
Middle	2440	2.064	N/A	N/A	N/A
High	2475	1.752	2475.876	2483.5	-7.624



10. RADIATED TEST RESULTS

10.1. LIMITS AND PROCEDURE

LIMITS

FCC §15.249

FCC §15.205 and §15.209

RSS-210 Annex B.10.

ISED RSS-GEN, Section 8.9 and 8.10

Operation within the bands 902–928 MHz, 2400–2483.5 MHz, 5725–5875 MHz, and 24.0–24.25 GHz.

(a) Except as provided in paragraph (b) of this section, the field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:

Fundamental frequency	Field strength of fundamental (millivolts/ meter)	Field strength of harmonics (microvolts/ meter)
902–928 MHz	50	500
2400–2483.5 MHz	50	500
5725–5875 MHz	50	500
24.0–24.25 GHz	250	2500

(d) Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in § 15.209, whichever is the lesser attenuation.

(e) As shown in Sec. 15.35(b), for frequencies above 1000 MHz, the field strength limits in paragraphs (a) and (b) of this section are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.

Frequency Range (MHz)	Field Strength Limit (uV/m) at 3 m	Field Strength Limit (dBuV/m) at 3 m
0.009-0.490	2400/F(kHz) @ 300 m	-
0.490-1.705	24000/F(kHz) @ 30 m	-
1.705 - 30	30 @ 30m	-
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane for measurement below 1GHz; 1.5 m above the ground plane for measurement 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 in the 30-1000MHz range, 9kHz for peak and/or quasi-peak detection measurements in the 0.15-30MHz range and 200Hz for peak and/or quasi-peak detection measurements in the 9 to 150kHz range. Peak detection is used unless otherwise noted as quasi-peak or average (9-90kHz and 110-490kHz).

For pre-scans above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 30 KHz for peak measurements.

For final measurements above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 3 MHz for peak measurements and as applicable for average measurements.

The spectrum from 1 GHz to 18 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in each applicable band. Below 1GHz and above 18GHz emissions, the channel with the highest output power was tested.

The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized in both the vertical and the horizontal positions.

For below 30MHz testing, investigation was done on three antenna orientations (parallel, perpendicular, and ground-parallel), parallel and perpendicular are the worst orientations, therefore testing was performed on these two orientations only.

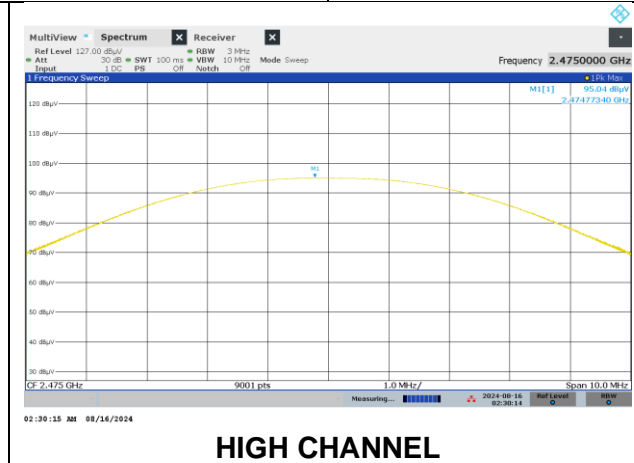
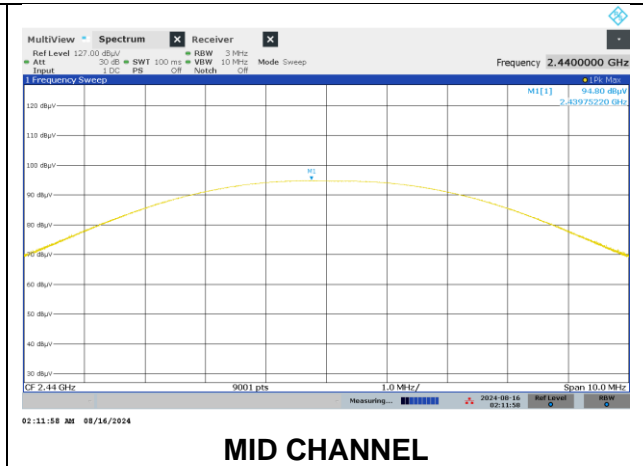
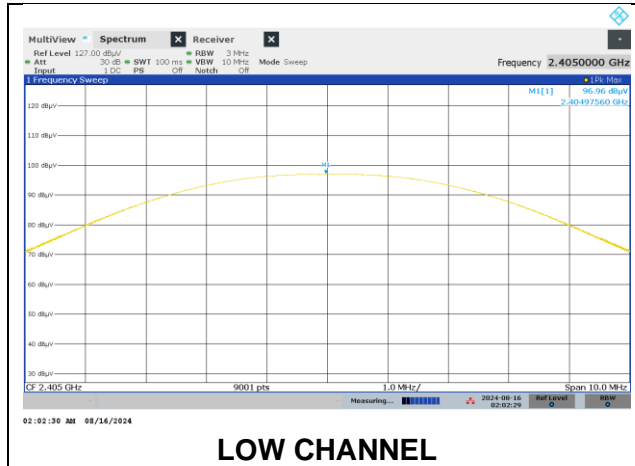
Based on FCC 15.31 (f) (2): measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field.

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

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

NOTE: The limits in CFR 47, Part 15, Subpart C, paragraph 15.209(a), are identical to those in RSS-Gen section 8.9, Table 6, since the measurements are performed in terms of magnetic field strength and converted to electric field strength levels (as reported in the table), using the free space impedance of 377 Ohms. For example, the measurement at frequency X kHz resulted in a level of Y dBuV/m, which is equivalent to $Y - 51.5 = Z$ dBuA/m, which has the same margin, W dB, to the corresponding RSS-Gen Table 6 limit as it has to 15.209(a) limit.

10.2. FUNDAMENTAL FREQUENCY RADIATED EMISSION



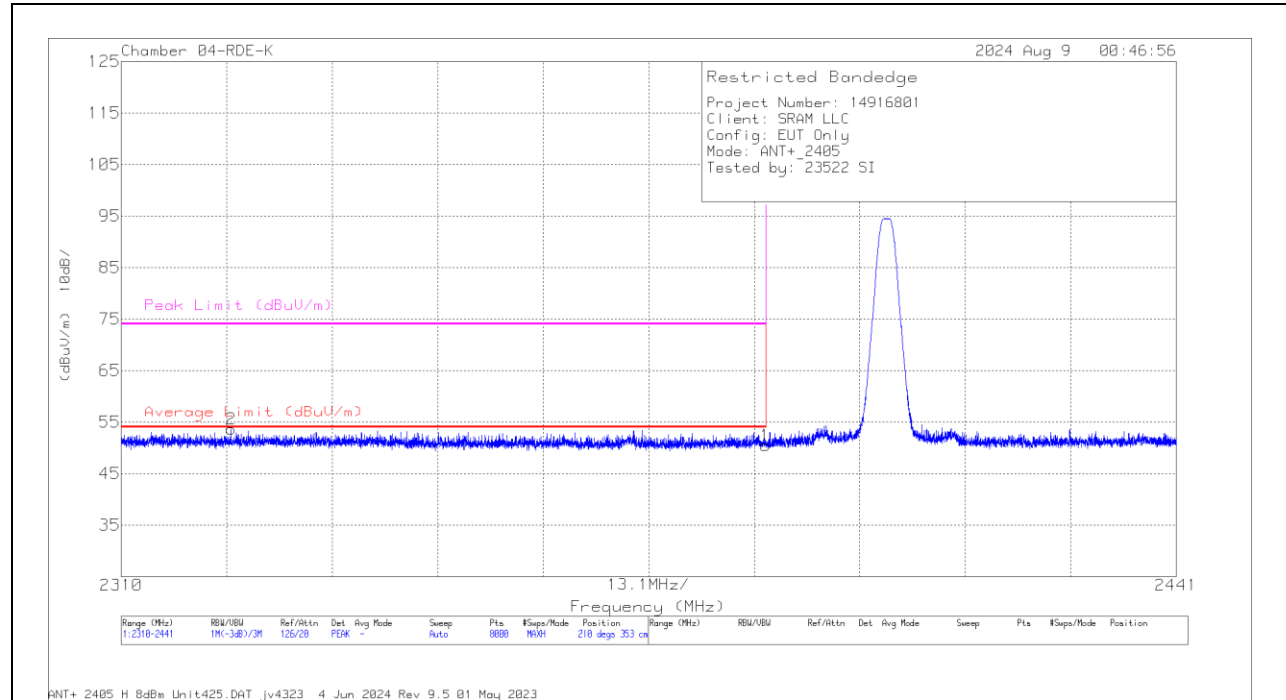
Frequency (GHz)	Meter Reading (dBuV)	Det	80404 3m ACF(dB/m)	Amp/Cbl/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2.405	96.96	PK	32.4	-35.1	-	94.26	-	-	114	19.74	229	309	H
	96.96	AVG	32.4	-35.1	-13.98	80.28	94	-13.72	-	-	229	309	H
	91.12	PK	32.4	-35.1	-	88.42	-	-	114	-25.58	339	327	V
	91.12	AVG	32.4	-35.1	-13.98	74.44	94	-19.56	-	-	339	327	V
2.440	94.8	PK	32.6	-34.9	-	92.5	-	-	114	-21.5	179	169	H
	94.8	AVG	32.6	-34.9	-13.98	78.52	94	-15.48	-	-	179	169	H
	89.73	PK	32.6	-34.9	-	87.43	-	-	114	-26.57	13	219	V
	89.73	AVG	32.6	-34.9	-13.98	73.54	94	-19.45	-	-	13	219	V
2.475	95.04	PK	32.3	-34.8	-	92.54	-	-	114	-21.46	44	255	H
	95.04	AVG	32.3	-34.8	-13.98	78.56	94	-15.44	-	-	44	255	H
	90.09	PK	32.3	-34.8	-	87.59	-	-	114	-26.41	20	398	V
	90.09	AVG	32.3	-34.8	-13.98	73.61	94	-20.39	-	-	20	398	V

PK - Peak detector
AVG = Peak Reading + Duty Cycle Correction Factor
Duty Cycle Correction Factor = -13.98 dB

10.3. TRANSMITTER ABOVE 1 GHz

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT



Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	80404 3m ACF(dB/m)	Amp/Cbl/Pad (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	*2390	53.44	PK	32.2	-35.2	-	50.44	-	-	74	-23.56	210	353	H
	*2390	53.44	AVG	32.2	-35.2	-13.98	36.46	54	-17.54	-	-	210	353	H
2	*2323.626	56.32	PK	32.7	-35.4	-	53.62	-	-	74	-20.38	210	353	H
	*2323.626	56.32	AVG	32.7	-35.4	-13.98	39.64	54	-14.36	-	-	210	353	H

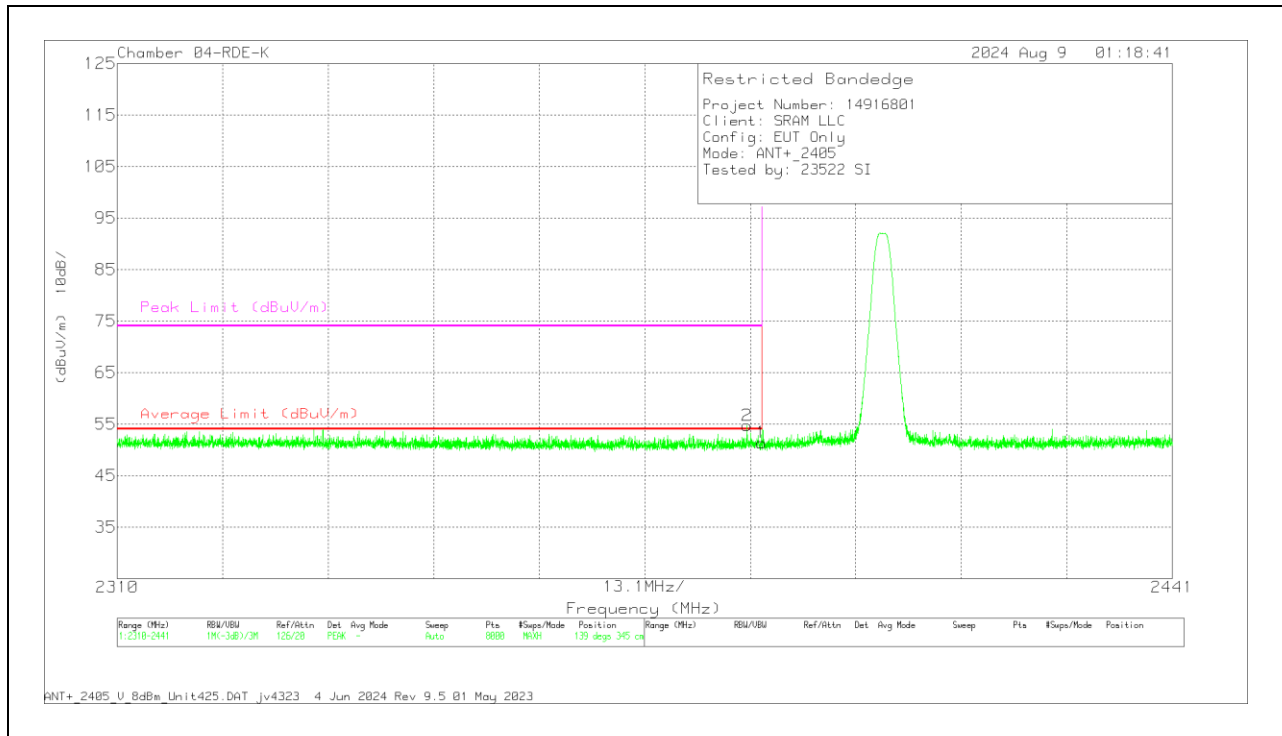
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PK - RB=1MHz VB=3 x RB, Peak

AVG = Peak Reading + Duty Cycle Correction Factor

Duty Cycle Correction Factor = -13.98 dB

VERTICAL RESULT



Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	80404 3m ACF(dB/m)	Amp/Cbl/Pad (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	*2390	54.37	Pk	32.2	-35.2	-	51.37	-	-	74	-22.63	139	345	V
	*2390	54.37	AVG	32.2	-35.2	-13.98	37.39	54	-16.61	-	-	139	345	V
2	*2388.2	57.6	Pk	32.2	-35.1	-	54.7	-	-	74	-19.3	139	345	V
	*2388.2	57.6	AVG	32.2	-35.1	-13.98	40.72	54	-13.28	-	-	139	345	V

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

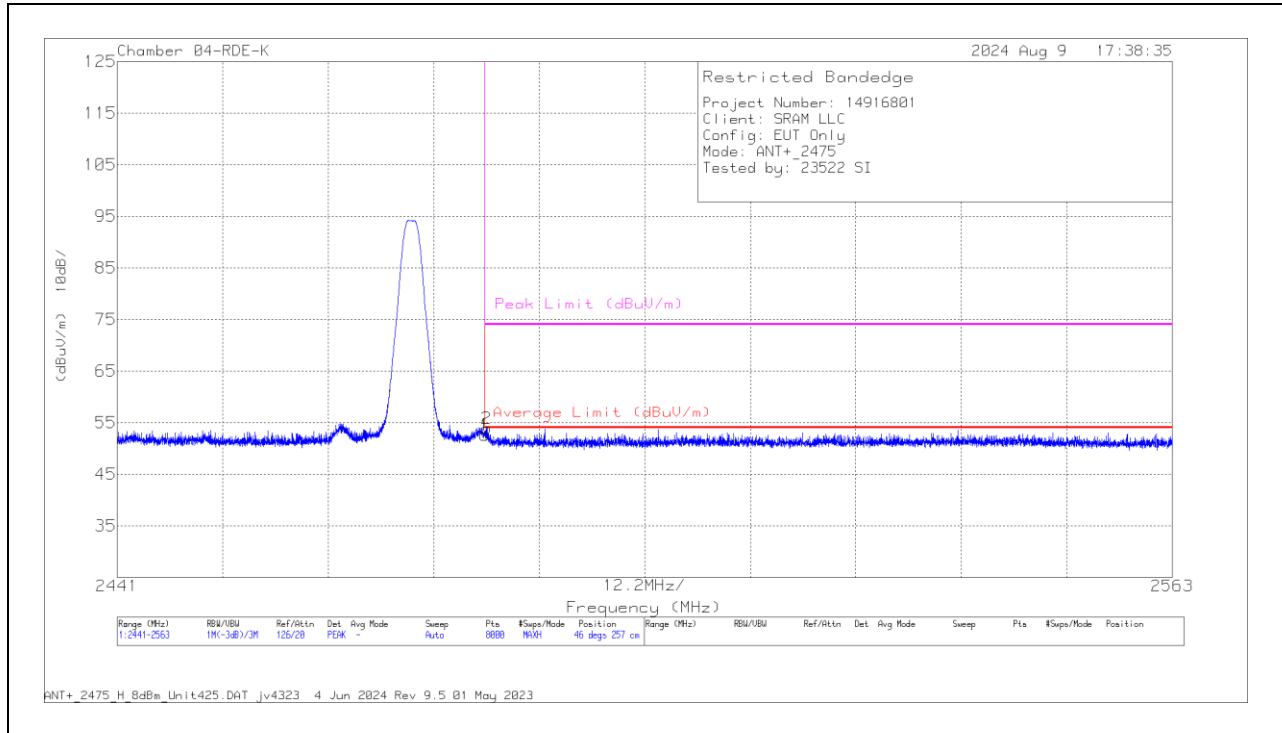
PK - RB=1MHz VB=3 x RB, Peak

AVG = Peak Reading + Duty Cycle Correction Factor

Duty Cycle Correction Factor = -13.98 dB

BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT

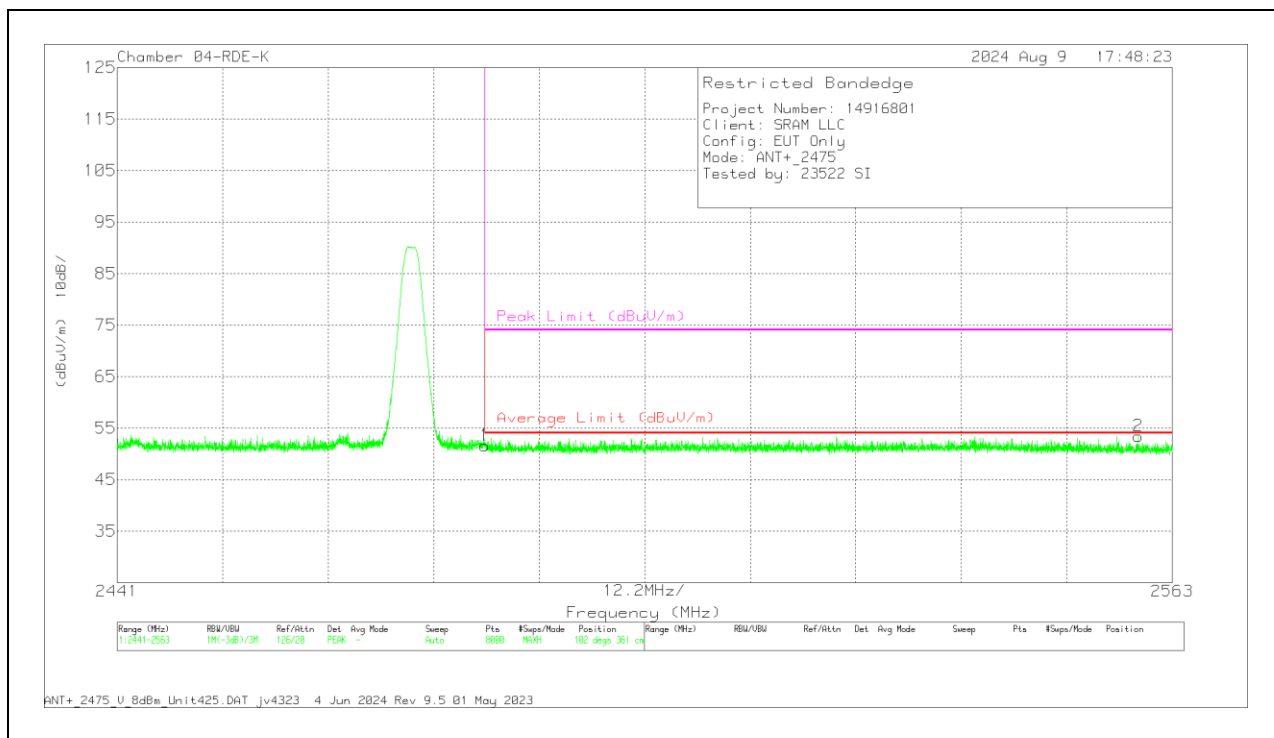


Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	80404 3m ACF(dB/m)	Amp/Cbl/Pad (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	*2483.5	55.22	PK	32.2	-34.8	-	52.62	-	-	74	-21.38	46	257	H
	*2483.5	55.22	AVG	32.2	-34.8	-13.98	38.64	54	-15.36	-	-	46	257	H
2	*2483.706	56.45	PK	32.2	-34.8	-	53.85	-	-	74	-20.15	46	257	H
	*2483.706	56.45	AVG	32.2	-34.8	-13.98	39.87	54	-14.13	-	-	46	257	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK - RB=1MHz VB=3 x RB, Peak
AVG = Peak Reading + Duty Cycle Correction Factor
Duty Cycle Correction Factor = -13.98 dB

VERTICAL RESULT



Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	80404 3m ACF(dB/m)	Amp/Cbl/Pad (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	2483.5	54.19	PK	32.2	-34.8	-	51.59	-	-	74	-22.41	102	361	V
	2483.5	54.19	AVG	32.2	-34.8	-13.98	37.61	54	-16.39	-	-	102	361	V
2	2559.05	55.94	PK	32	-34.5	-	53.44	-	-	74	-20.56	102	361	V
	2559.05	55.94	AVG	32	-34.5	-13.98	39.46	54	-14.54	-	-	102	361	V

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

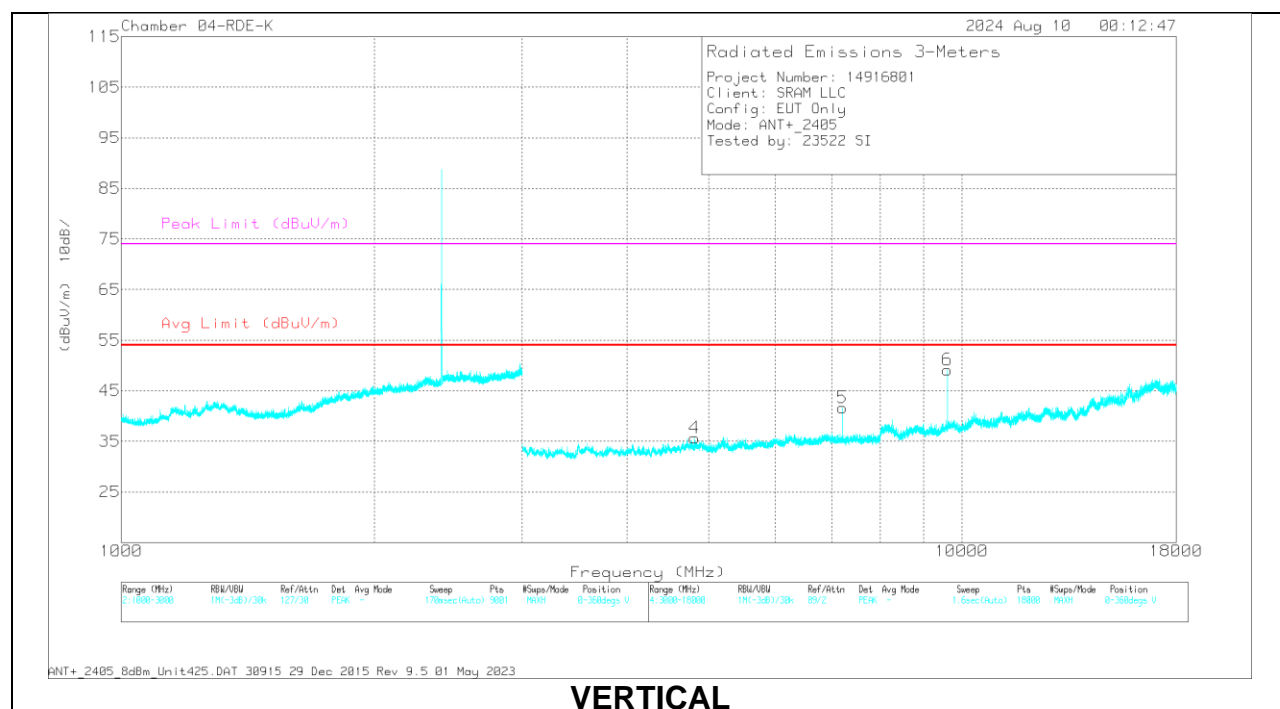
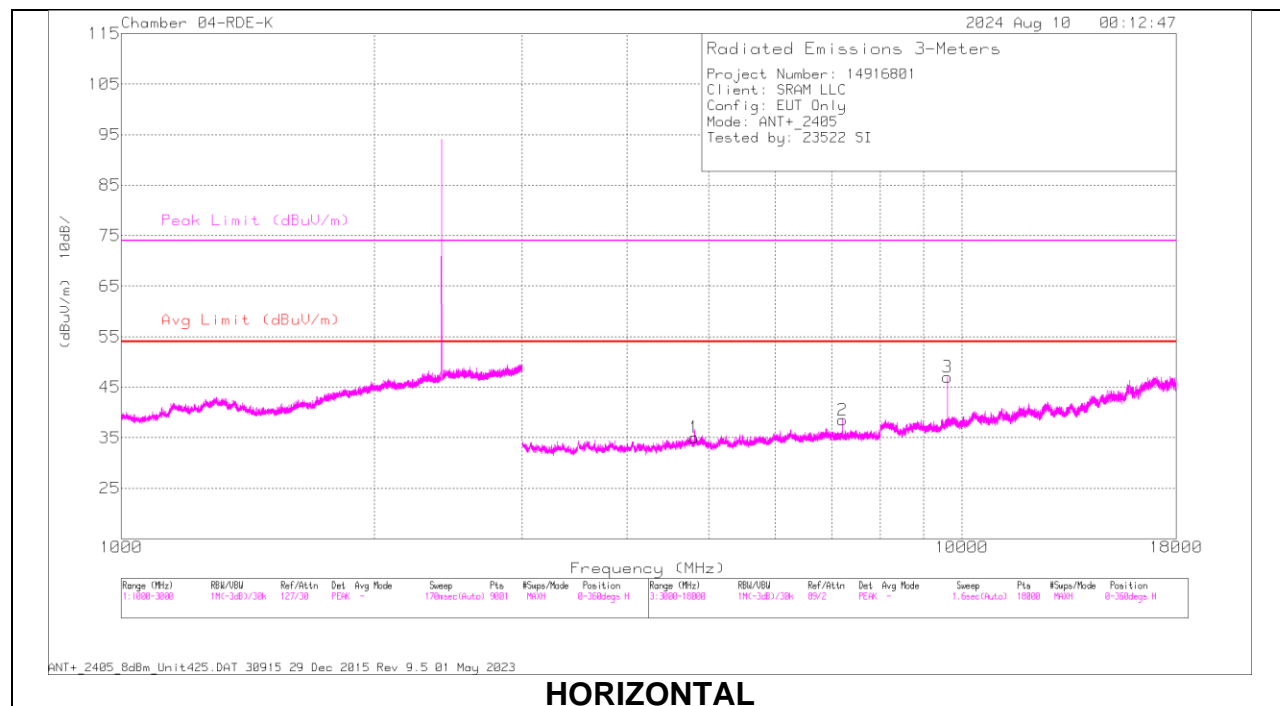
PK - RB=1MHz VB=3 x RB, Peak

AVG = Peak Reading + Duty Cycle Correction Factor

Duty Cycle Correction Factor = -13.98 dB

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL RESULTS



RADIATED EMISSIONS

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	80404 3m ACF(dB/m)	Amp/Cbl/Fitr (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*4810.205	50.86	PK	34.9	-40.9		44.86	-	-	74	-29.14	228	278	H
	*4810.205	50.86	AVG	34.9	-40.9	-13.98	30.88	54	-23.12	-	-	228	278	H
4	*4810.674	51.91	PK	34.9	-40.9		45.91	-	-	74	-28.09	343	150	V
	*4810.674	51.91	AVG	34.9	-40.9	-13.98	31.93	54	-22.07	-	-	343	150	V
5	7213.762	48.95	PK	36.1	-39		46.05	-	-	74	-27.95	287	317	V
	7213.762	48.95	AVG	36.1	-39	-13.98	32.07	54	-21.93	-	-	287	317	V
2	7213.834	49.27	PK	36.1	-39		46.37	-	-	74	-27.63	182	326	H
	7213.834	49.27	AVG	36.1	-39	-13.98	32.39	54	-21.61	-	-	182	326	H
6	9615.232	48.27	PK	36.8	-37.3		47.77	-	-	74	-26.23	264	208	V
	9615.232	48.27	AVG	36.8	-37.3	-13.98	33.79	54	-20.21	-	-	264	208	V
3	9623.971	48.81	PK	36.8	-37.2		48.41	-	-	74	-25.59	252	358	H
	9623.971	48.81	AVG	36.8	-37.2	-13.98	34.43	54	-19.57	-	-	252	358	H

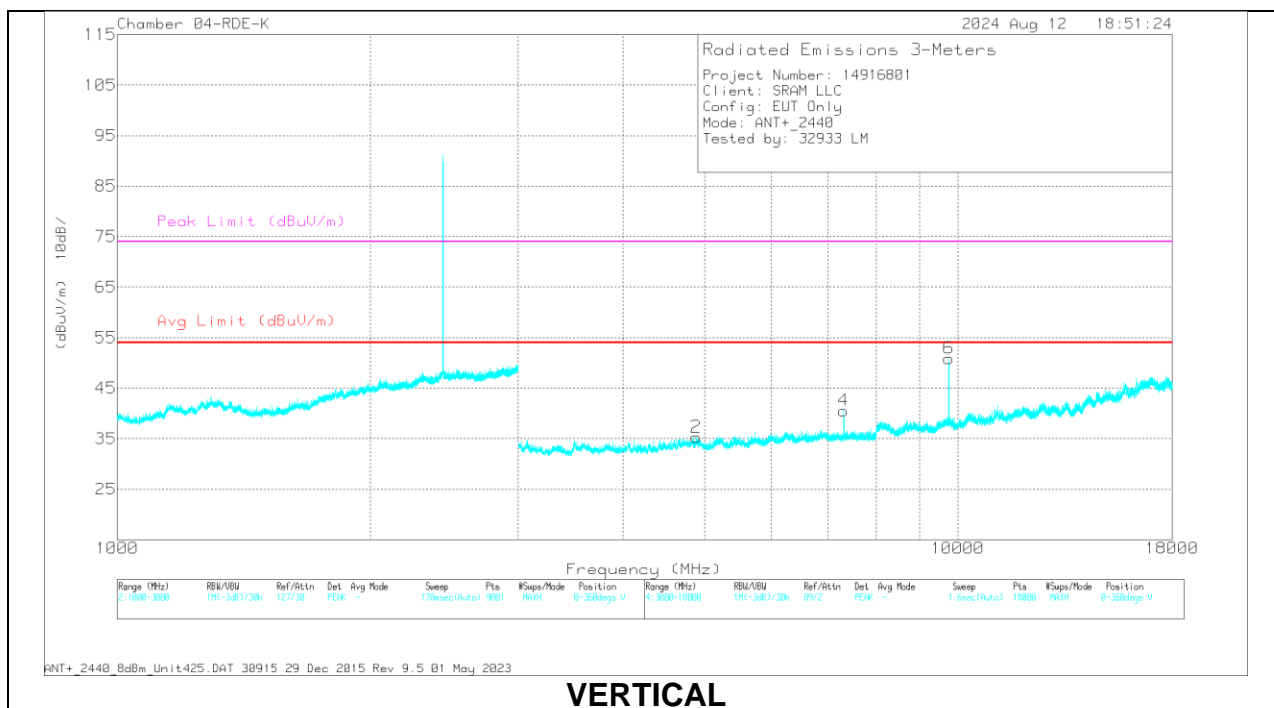
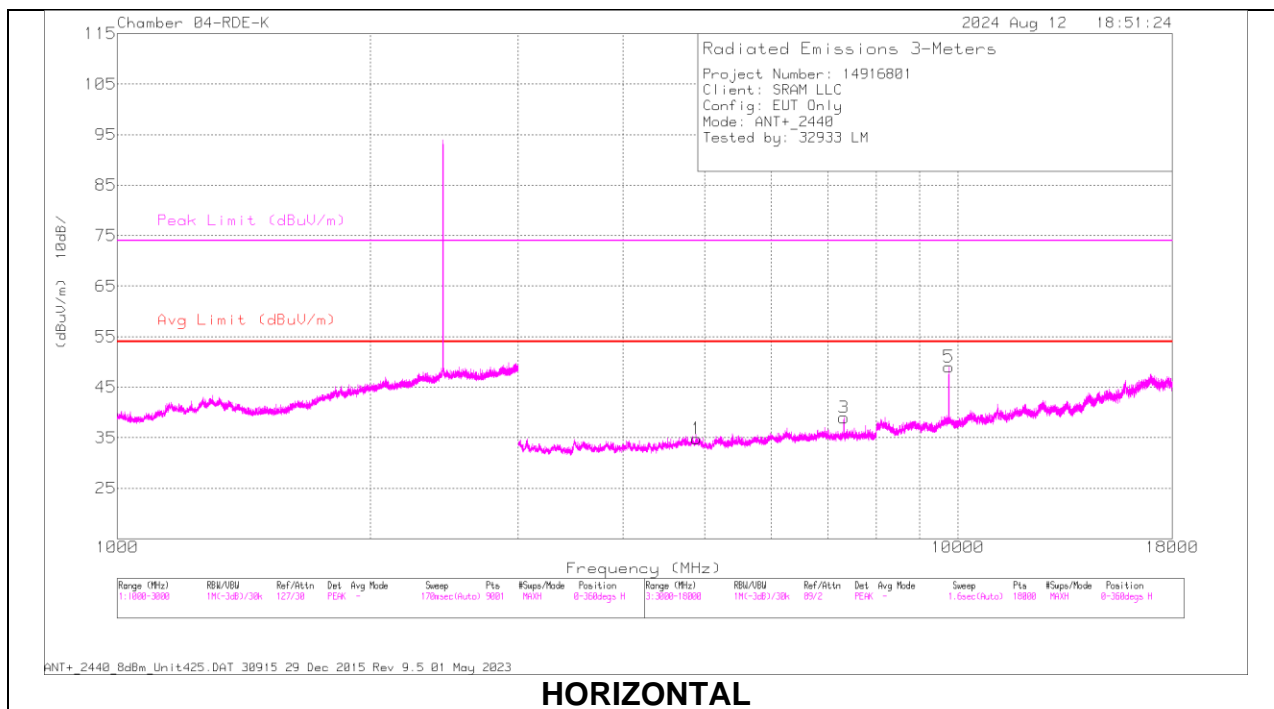
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PK - RB=1MHz VB=3 x RB, Peak

AVG = Peak Reading + Duty Cycle Correction Factor

Duty Cycle Correction Factor = -13.98 dB

MID CHANNEL RESULTS



RADIATED EMISSIONS

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	80404 3m ACF(dB/m)	Amp/Cbl/Fitr (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4882.636	52.17	PK	34.4	-41		45.57	-	-	74	-28.43	246	369	H
	* 4882.636	52.17	AVG	34.4	-41	-13.98	31.59	54	-22.41	-	-	246	369	H
3	* 7318.797	49.15	PK	36	-38.5		46.65	-	-	74	-27.35	86	123	H
	* 7318.797	49.15	AVG	36	-38.5	-13.98	32.67	54	-21.33	-	-	86	123	H
2	* 4885.646	51.39	PK	34.4	-41		44.79	-	-	74	-29.21	134	395	V
	* 4885.646	51.39	AVG	34.4	-41	-13.98	30.99	54	-23.01	-	-	134	395	V
4	* 7314.151	49.26	PK	36	-38.5		46.76	-	-	74	-27.24	108	346	V
	* 7314.151	49.26	AVG	36	-38.5	-13.98	32.78	54	-21.22	-	-	108	346	V
5	9757.891	48.88	PK	36.9	-37.2		48.58	-	-	74	-25.42	69	298	H
	9757.891	48.88	AVG	36.9	-37.2	-13.98	34.6	54	-19.4	-	-	69	298	H
6	9758.697	48.5	PK	36.9	-37.2		48.2	-	-	74	-25.8	268	219	V
	9758.697	48.5	AVG	36.9	-37.2	-13.98	34.22	54	-19.78	-	-	268	219	V

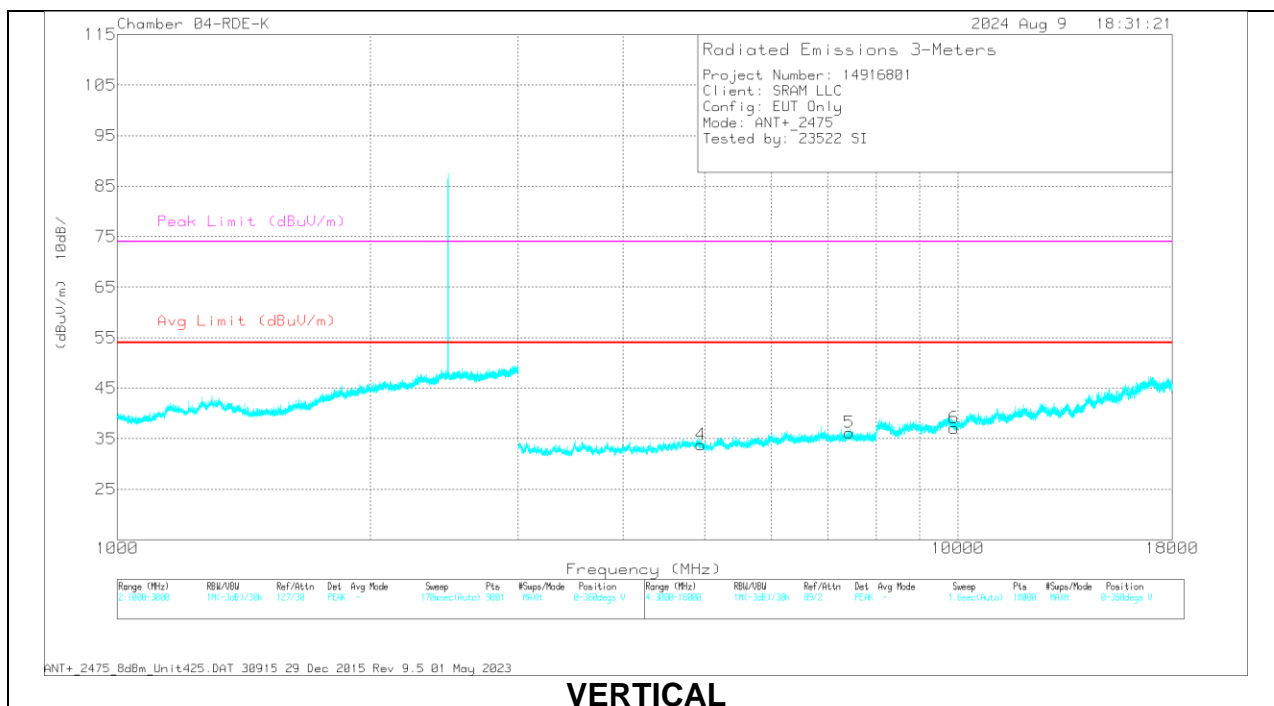
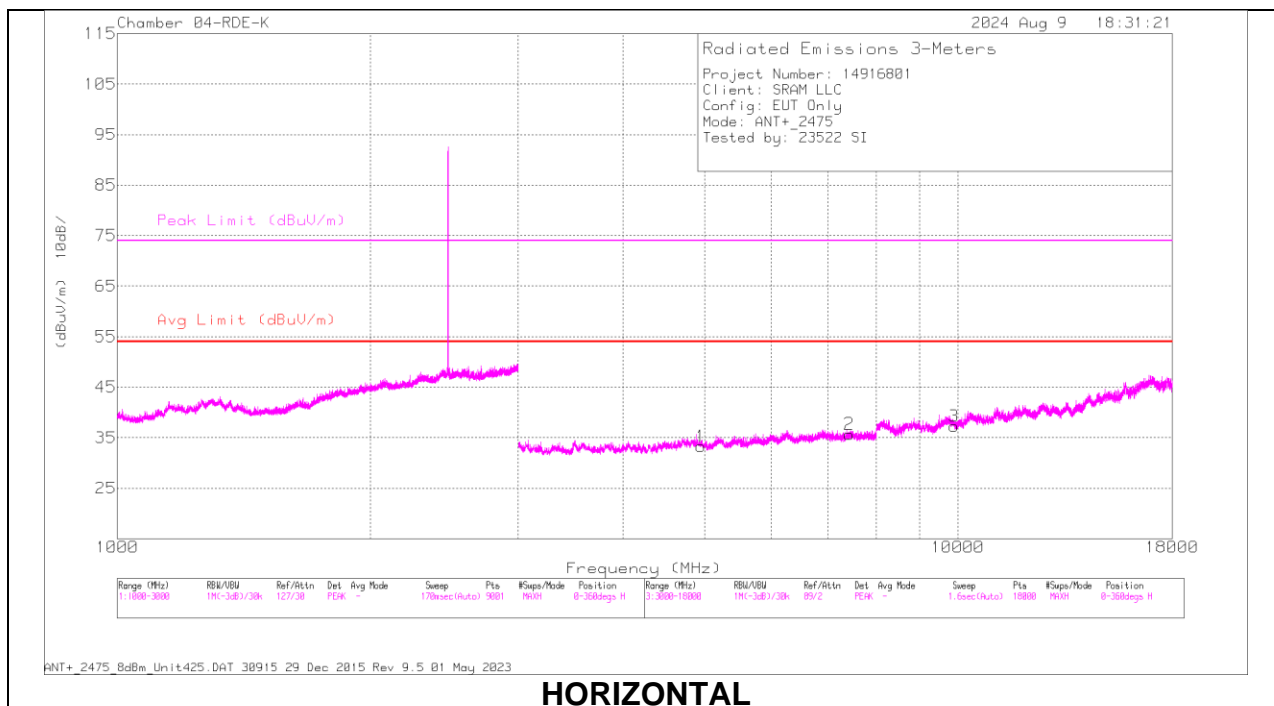
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PK - RB=1MHz VB=3 x RB, Peak

AVG = Peak Reading + Duty Cycle Correction Factor

Duty Cycle Correction Factor = -13.98 dB

HIGH CHANNEL RESULTS



RADIATED EMISSIONS

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	80404 3m ACF(dB/m)	Amp/Cbl/Fitr (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4950.687	51.7	PK	34.1	-41		44.8	-	-	74	-29.2	206	390	H
	* 4950.687	51.7	AVG	34.1	-41	-13.98	30.82	54	-23.18	-	-	206	390	H
4	* 4946.273	51.69	PK	34.1	-41		44.79	-	-	74	-29.21	351	335	V
	* 4946.273	51.69	AVG	34.1	-41	-13.98	30.81	54	-23.19	-	-	351	335	V
2	* 7424.052	48.42	PK	35.9	-38.4		45.92	-	-	74	-28.08	17	207	H
	* 7424.052	48.42	AVG	35.9	-38.4	-13.98	31.94	54	-22.06	-	-	17	207	H
5	* 7423.149	48.32	PK	36	-38.4		45.92	-	-	74	-28.08	189	249	V
	* 7423.149	48.32	AVG	36	-38.4	-13.98	31.94	54	-22.06	-	-	189	249	V
3	9899.239	48.37	PK	37.2	-37		48.57	-	-	74	-25.43	349	254	H
	9899.239	48.37	AVG	37.2	-37	-13.98	34.59	54	-19.41	-	-	349	254	H
6	9899.381	48.11	PK	37.2	-37		48.31	-	-	74	-25.69	360	253	V
	9899.381	48.11	AVG	37.2	-37	-13.98	34.33	54	-19.67	-	-	360	253	V

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

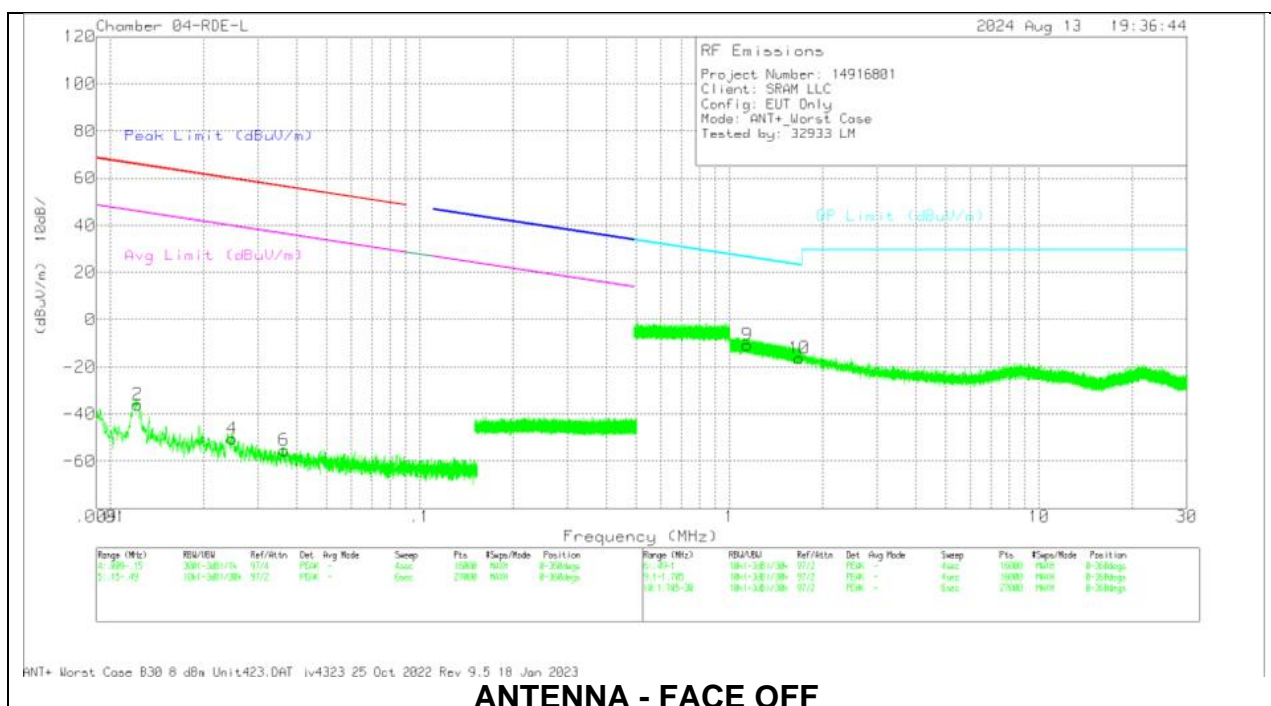
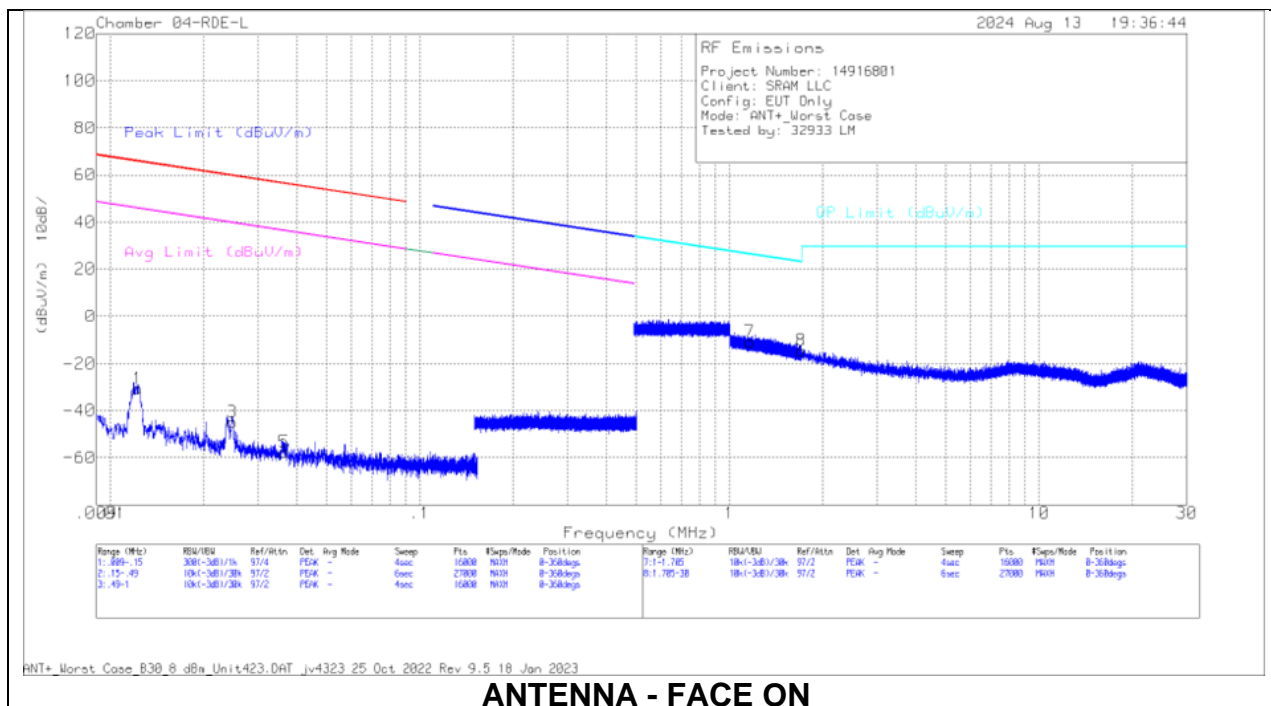
PK - RB=1MHz VB=3 x RB, Peak

AVG = Peak Reading + Duty Cycle Correction Factor

Duty Cycle Correction Factor = -13.98 dB

10.4. WORST CASE BELOW 30 MHz

SPURIOUS EMISSIONS BELOW 30 MHz (WORST-CASE CONFIGURATION)



Below 30MHz Data

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna E(ACF) (dB/m)	CBL/AMP (dB)	Dist Corr 300m(dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Polarity (Degs)
1	.0123	18.81	Pk	60	-29.5	-80	-30.69	65.8	-96.49	45.8	-76.49	0-360	0-deg
3	.0248	7.9	Pk	58.5	-31.3	-80	-44.9	59.71	-104.61	39.71	-84.61	0-360	0-deg
5	.0364	-3.45	Pk	57.4	-31.7	-80	-57.75	56.35	-114.1	36.35	-94.1	0-360	0-deg
2	.0123	13.53	Pk	60	-29.5	-80	-35.97	65.8	-101.77	45.8	-81.77	0-360	90-degs
4	.0248	2.36	Pk	58.5	-31.3	-80	-50.44	59.71	-110.15	39.71	-90.15	0-360	90-degs
6	.0364	-1.01	Pk	57.4	-31.7	-80	-55.31	56.35	-111.66	36.35	-91.66	0-360	90-degs

Pk - Peak detector

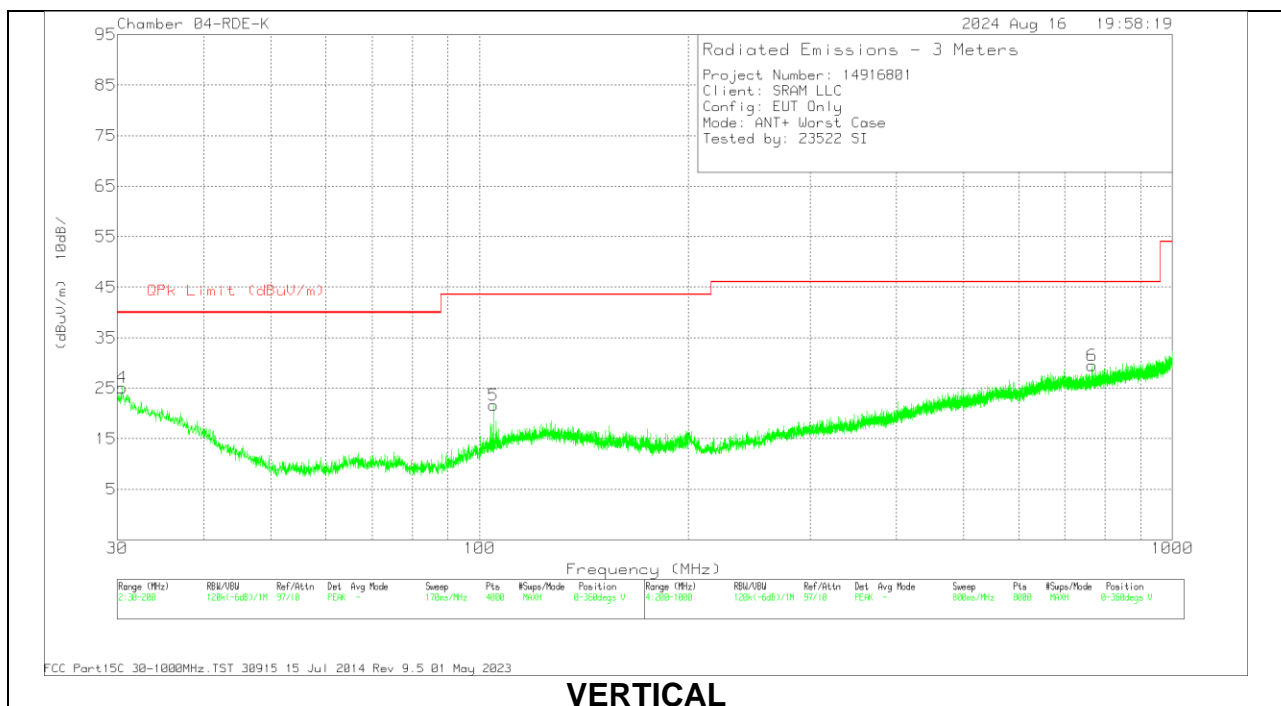
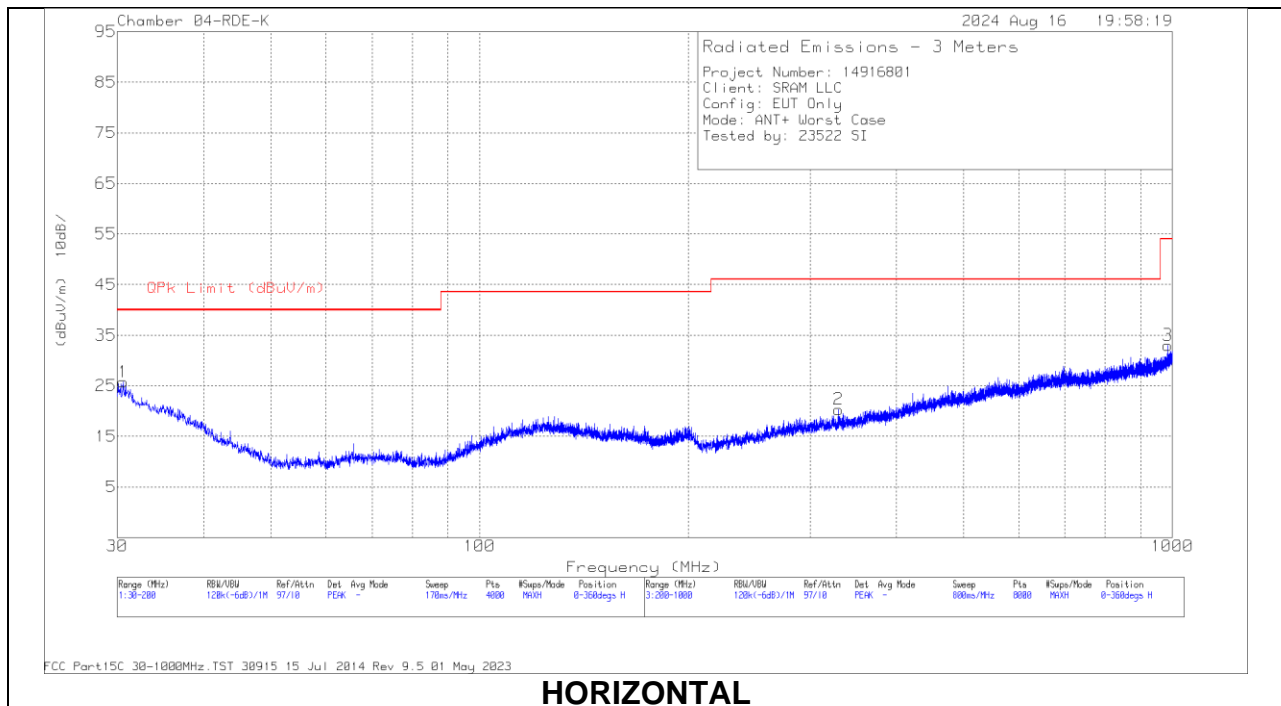
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna E(ACF) (dB/m)	CBL/AMP(dB)	Dist Corr 30m (dB) 40Log	Corrected Reading (dBuV/m)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Polarity (Degs)
7	1.1627	14.81	Pk	46.1	-31.8	-40	-10.89	26.32	-37.21	0-360	0-deg
8	1.7037	14.05	Pk	43.2	-31.8	-40	-14.55	23.01	-37.56	0-360	0-deg
9	1.1404	14.99	Pk	46.2	-31.8	-40	-10.61	26.48	-37.09	0-360	90-degs
10	1.6792	12.1	Pk	43.4	-31.8	-40	-16.3	23.13	-39.43	0-360	90-degs

Pk - Peak detector

Note: The Limits in CRF 47, Part 15, Subpart C, Paragraph 15.209(a), are identical to those in RSS-Gen section 8.9, Table 6, since the measurements are performed in terms of magnetic field strength and converted to electric field strength levels (as reported in the table) using the free space impedance of 377 Ohms. For example, the measurement at frequency X kHz resulted in a level of Y dBuV/m, which is equivalent to $Y - 51.5 = Z$ dBuA/m, which has the same margin, W dB, to the corresponding RSS-Gen Table 6 limit as it has to 15.209(a) limit.

10.5. WORST CASE BELOW 1 GHz

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



Below 1GHz Data

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	203089 ACF (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	30.4676	29.39	Pk	26.8	-31.1	25.09	40	-14.91	0-360	100	V
1	30.2117	26.48	Pk	27	-31.1	22.38	40	-17.62	80	375	H
	30.2117	21.77	Qp	27	-31.1	17.67	40	-22.33	80	375	H
5	104.819	34.52	Pk	17.8	-30.7	21.62	43.52	-21.9	0-360	100	V
2	329.917	29.23	Pk	20.1	-29	20.33	46.02	-25.69	0-360	299	H
6	766.174	29.68	Pk	26.7	-26.9	29.48	46.02	-16.54	0-360	199	V
3	985.302	29.4	Pk	28.9	-25.3	33	53.97	-20.97	0-360	99	H

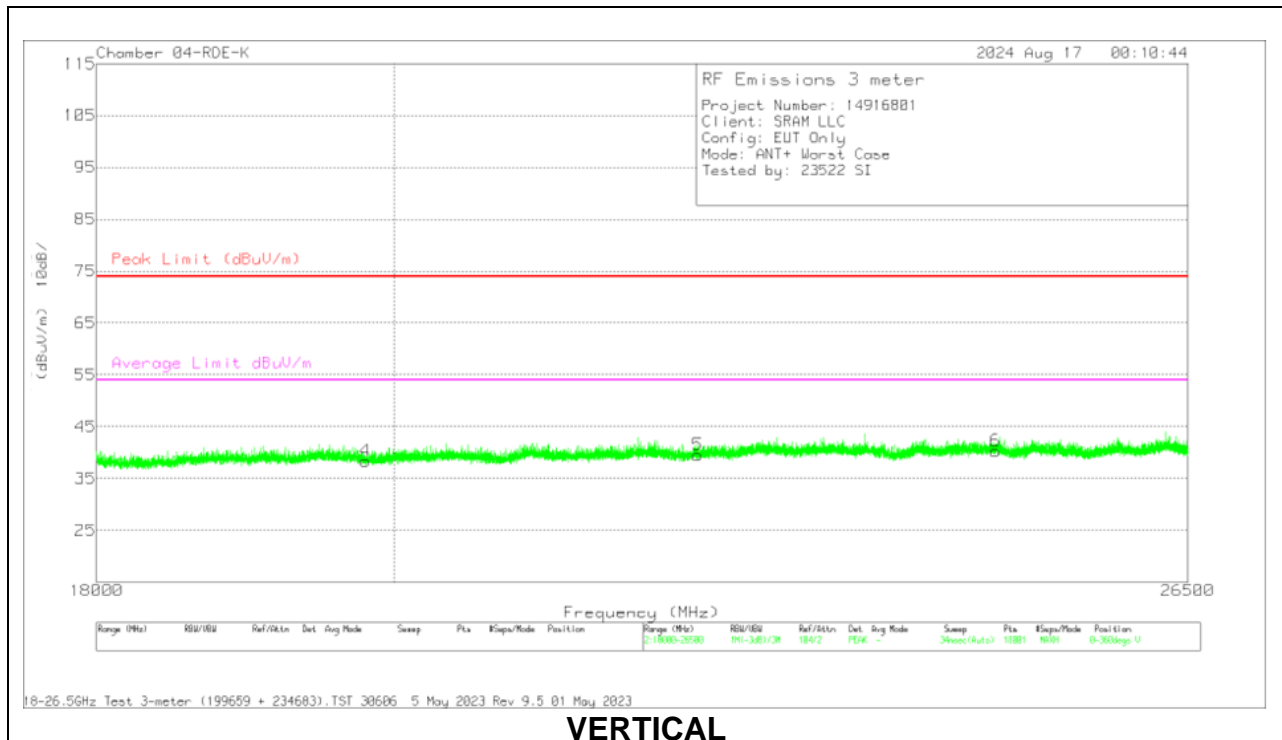
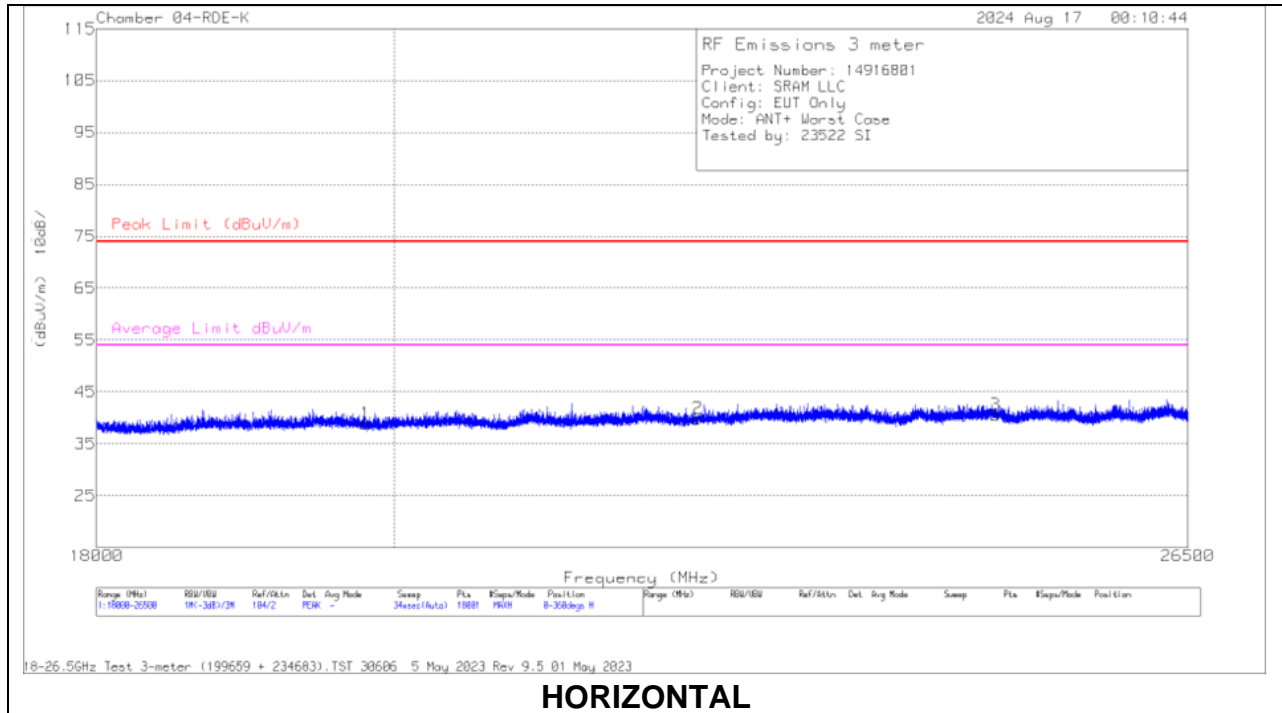
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

Qp - Quasi-Peak detector

10.6. WORST CASE 18-26 GHz

SPURIOUS EMISSIONS 18-26 GHz (WORST-CASE CONFIGURATION)



18 – 26GHz DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Horn ACF (dB/m)	234683 Amp/Cbl (dB)	Cable (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Average Limit dBuV/m	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	19801.055	49.82	Pk	32.7	-62.6	19	38.92	74	-35.08	54	-15.08	0-360	200	H
4	19801.055	49.35	Pk	32.7	-62.6	19	38.45	74	-35.55	54	-15.55	0-360	101	V
2	22275.026	49.22	Pk	33.3	-62.6	20	39.92	74	-34.08	54	-14.08	0-360	101	H
5	22275.026	48.81	Pk	33.3	-62.6	20	39.51	74	-34.49	54	-14.49	0-360	199	V
3	24750.413	47.68	Pk	33.9	-62.2	21.1	40.48	74	-33.52	54	-15.52	0-360	101	H
6	24750.413	47.49	Pk	33.9	-62.2	21.1	40.29	74	-33.71	54	-13.71	0-360	101	V

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

Pk - Peak detector