

TEST REPORT

Report Number: R16238088-E30

Applicant : Samsung Electronics Co Ltd
129, Samsung-ro, Yeongtong-gu, Suwon-si,
Gyeonggi-do, 16677, Rep. of Korea

Model : SC-56G, SCG39

FCC ID : A3LSMF976JPN

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

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:
2026-06-03

Prepared by:
UL LLC
12 Laboratory Dr.
Durham, NC 27713 USA
TEL: (919) 549-1400



Revision History

<u>Rev.</u>	<u>Issue Date</u>	<u>Revisions</u>	<u>Revised By</u>
V1	2026-06-03	Initial Issue	Chandler Stanley

TABLE OF CONTENTS

1. ATTESTATION OF TEST RESULTS	4
2. TEST METHODOLOGY	5
3. SUMMARY OF TEST RESULTS.....	5
4. FACILITIES AND ACCREDITATION	5
5. DECISION RULES AND MEASUREMENT UNCERTAINTY	6
5.1. METROLOGICAL TRACEABILITY	6
5.2. DECISION RULES.....	6
5.3. MEASUREMENT UNCERTAINTY.....	6
5.4. SAMPLE CALCULATION	6
6. EQUIPMENT UNDER TEST	7
6.1. DESCRIPTION OF EUT	7
6.2. MAXIMUM ELECTRIC FIELD STRENGTH.....	7
6.3. SOFTWARE AND FIRMWARE.....	7
6.4. WORST-CASE CONFIGURATION AND MODE.....	7
6.5. DESCRIPTION OF TEST SETUP.....	8
7. TEST AND MEASUREMENT EQUIPMENT	9
8. 20dB and 99% BANDWIDTH.....	11
8.1. Type B (No Tag)	11
9. RADIATED EMISSION TEST RESULTS.....	12
9.1. LIMITS AND PROCEDURE	12
9.2. FUNDAMENTAL AND SPURIOUS EMISSIONS (0.15 - 30 MHz)	14
9.2.1. Type B (Tag Off)	14
9.3. TX SPURIOUS EMISSION 30 TO 1000 MHz	18
9.3.1. Type B (Tag Off)	18
10. FREQUENCY STABILITY.....	20
10.1. NO TAG, TYPE B, 106 Kbps.....	20
11. AC MAINS LINE CONDUCTED EMISSIONS	21
11.1. Type B (Tag Off).....	22
11.1.1. NORMAL OPERATION, 106Kbps	22
11.1.2. TERMINATED SAMPLE.....	24
12. SETUP PHOTOS	26

1. ATTESTATION OF TEST RESULTS

COMPANY NAME: Samsung Electronics Co Ltd
129, Samsung-ro, Yeongtong-gu, Suwon-si,
Gyeonggi-do, 16677, Rep. of Korea

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

MODEL: SC-56G, SCG39

SERIAL NUMBER: ZD22387M, ZD21843M

SAMPLE RECEIPT DATE: 2026-04-15

DATE TESTED: 2026-05-01 to 2026-05-15

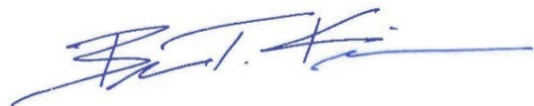
APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC PART 15 SUBPART C	Complies
ISED RSS-210 Issue 11, Annex B	Complies
ISED RSS-GEN Issue 5 + A1 + A2	Complies

UL LLC 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 assure 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 LLC and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL LLC 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.

Approved & Released For
UL LLC By:



Brian Kiewra
Project Engineer
Consumer, Medical and IT Segment
UL LLC

Prepared By:



Chandler Stanley
Engineer Project Associate
Consumer, Medical and IT Segment
UL LLC

2. TEST METHODOLOGY

This report contains data provided by the customer which can impact the validity of results. UL LLC is only responsible for correctly integrating customer-provided data with measurements performed by UL LLC.

The tests documented in this report were performed in accordance with:

- FCC CFR 47 Part 2
- FCC CFR 47 Part 15
- FCC ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024
- ISED ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024
- KDB 414788 D01 Radiated Test Site v01r01
- RSS-GEN Issue 5 + A1 + A2
- RSS-210 Issue 11 Annex B.6

3. SUMMARY OF TEST RESULTS

Requirement Description	Requirement Clause Number	Result	Remarks
Occupied Bandwidth	FCC §15.215 (c) RSS-Gen 6.7	Compliant	None
Fundamental Measurements.	FCC §15.225 (a-d) FCC §15.209 (d)		
Tx Spurious Emissions	IC RSS-210, Annex B.6 IC RSS-GEN, Section 8.9 (Transmitter)		
Frequency Stability	FCC §15.225 (e) RSS-210, Annex B.6		
AC Mains Line Conducted Emissions	FCC §15.207 IC RSS-GEN, Section 8.8		

4. FACILITIES AND ACCREDITATION

UL LLC is accredited by A2LA, Certificate Number #0751.06, 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
☐	Building: 12 Laboratory Dr Durham, NC 27713, U.S.A	US0067	2180C	825374
☒	Building: 2800 Perimeter Park Dr. Suite B Morrisville, NC 27560, U.S.A		27265	

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 Channel Bandwidth	1.22%
RF output power, conducted	1.3 dB (PK) 0.45 dB (AV)
Power Spectral Density, conducted	2.47 dB
Unwanted Emissions, conducted	1.94 dB
All emissions, radiated	6.01 dB
Conducted Emissions (0.150-30MHz) - LISN	3.40 dB
Temperature	0.57°C
Humidity	3.39%
DC Supply voltages	1.70%

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

MAINS CONDUCTED EMISSIONS

Where relevant, the following sample calculation is provided:

Final Voltage (dBuV) = Measured Voltage (dBuV) + Cable Loss (dB) + Limiter Factor (dB) + LISN Insertion Loss.
 $36.5 \text{ dBuV} + 0 \text{ dB} + 10.1 \text{ dB} + 0 \text{ dB} = 46.6 \text{ dBuV}$

6. EQUIPMENT UNDER TEST

6.1. DESCRIPTION OF EUT

The EUT is a GSM/WCDMA/LTE/NR/SCS Phone + BT/BLE, DTS/UNII a/b/g/n/ac/ax/be, UWB, WPT and NFC. This reports covers testing on the NFC radio.

6.2. MAXIMUM ELECTRIC FIELD STRENGTH

The transmitter has a maximum peak radiated magnetic field strength as follows:

Frequency Range (MHz)	Mode		Kbps	E Field at 30m distance (dBuV/m)
13.56	Type B	Tag Off	106	13.5

6.3. SOFTWARE AND FIRMWARE

The EUT firmware installed during testing was F976USQU0AZB7.

6.4. WORST-CASE CONFIGURATION AND MODE

The manufacturer has declared that the worst case mode is Type B, 106 kbps. The EUT was investigated for tag on, tag on with separation, and tag off. It was determined that tag off is worst case.

The EUT can open 180 degrees. Fully closed, fully opened 180 degrees, and open 90 degrees were investigated and it was found that open 90 degrees was worst case.

Additionally, the EUT was investigated in three orthogonal orientations X, Y, and Z. It was determined that the Y orientation was worst-case orientation; therefore, all final radiated testing was performed with the EUT in the Y orientation, no tag, opened 90 degrees, and with the mode set to Type B, 106 kbps.

This report covers 2 models, the model differences and the representative model is shown below:

Representative Model	Difference	Derivative Model
		SCG39
SC-56G	Hardware	Same as SC-56G
	Software	Different UI

6.5. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
Power Adapter	Sony	XQZ-UC11-010-236-21	NA	NA
Badge 13.56 MHz	NXP Semiconductors	NA	NA	NA

I/O CABLES

I/O Cable List						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	USB-C	1	USB-C	Shielded	<3m	EUT to power adapter

TEST SETUP

The EUT is configured using its own built-in software.

SETUP DIAGRAM

Refer to R16238088-EP1c for setup diagrams

7. TEST AND MEASUREMENT EQUIPMENT

Test Equipment Used - Wireless Conducted Measurement Equipment

Equipment ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
Conducted Room 2					
90410	Spectrum Analyzer	Keysight Technologies	N9030A	2025-07-10	2026-07-10
245765	Environmental Meter	Control Company	06-662-4	2026-03-10	2027-03-10
76023	Temp/Humid Chamber	Cincinnati Sub-Zero	ZPH-8-3.5-SCT/AC	2026-01-29	2027-01-29
SOFTEMI	Antenna Port Software	UL	Version 2024.2.23	NA	NA
NA	Near Field Probe Kit	EMC Test Systems	7405	NA	NA

Test Equipment Used - Radiated Disturbance Emissions Test Equipment (Morrisville – Chamber 2)

Equip. ID	Description	Manufacturer/Brand	Model Number	Last Cal.	Next Cal.
0.009-30MHz					
65682	Active Loop Antenna	ETS-Lindgren	6502	2025-10-14	2027-10-14
30-1000 MHz					
159203	Hybrid Broadband Antenna	Sunol Sciences Corp.	JB3	2026-04-09	2028-04-09
Gain-Loss Chains					
91975	Gain-loss string: 0.009-30MHz	Various	Various	2025-05-31	2026-05-31
91978	Gain-loss string: 25-1000MHz	Various	Various	2025-05-31	2026-05-31
Receiver & Software					
197955	Spectrum Analyzer	Rohde & Schwarz	ESW44	2025-05-12	2026-05-31
SOFTEMI	EMI Software	UL	Version 9.5 (18 Oct 2021)		
Additional Equipment used					
239540	Environmental Meter	Fisher Scientific	15-077-963	2025-08-05	2027-08-05

Note: All equipment was in calibration at the time of tests.

Test Equipment Used - Line-Conducted Emissions – Voltage (Morrisville – Conducted 1)

Equipment ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
CBL087	Coax cable, RG223, N-male to BNC-male, 20-ft.	Pasternack	PE3W06143-240	2026-05-11	2027-05-11
179892	Environmental Meter	Fisher Scientific	15-077-963	2025-08-05	2026-08-05
80391	LISN, 50-ohm/50-uH, 2-conductor, 25A	Fischer Custom Com.	FCC-LISN-50-25-2-01-550V	2025-08-01	2026-08-01
75141	EMI Test Receiver 9kHz-7GHz	Rohde & Schwarz	ESCI 7	2025-07-30	2026-07-30
52859	Transient Limiter, 0.009-100MHz	Electro-Metrics	EM-7600	2026-05-11	2027-05-11
PS214	AC Power Source	Elgar	CW2501M	NA	NA
SOFTEMI	EMI Software	UL	Version 9.5 (18 Oct 2021)		
Miscellaneous (if needed)					
84681	ANSI C63.4 1m extension cable.	UL	Per Annex B of ANSI C63.4	2026-05-11	2027-05-11

Note: All equipment was in calibration at the time of tests.

8. 20dB and 99% BANDWIDTH

LIMITS

§15.215 (c) Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§ 15.217 through 15.257 and in subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.

TEST PROCEDURE

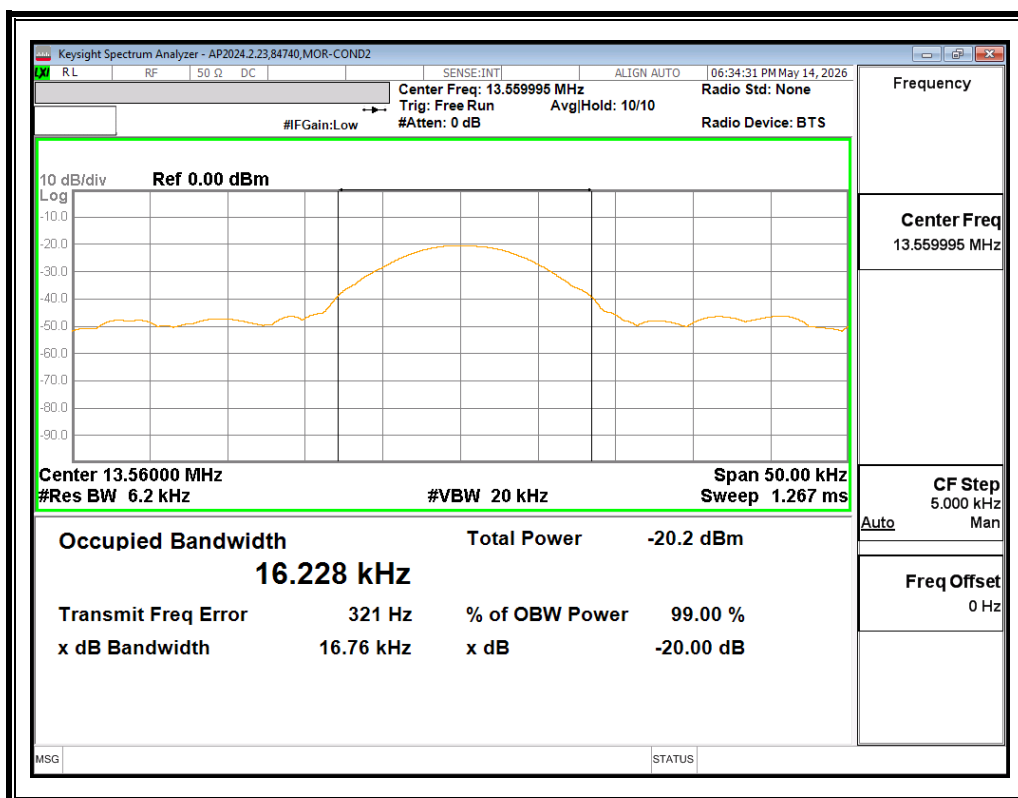
The transmitter output is connected to the spectrum analyzer. The RBW is set to 1-5% of the 20dB bandwidth. The VBW is set to 3 times the RBW. The sweep time is coupled. The spectrum analyzer internal 99% bandwidth function is utilized.

RESULTS

Note: Because the measured signal is CW or CW-like, adjusting the RBW per C63.10 would not be practical since the measured bandwidth will always follow the RBW.

8.1. Type B (No Tag)

Mode Kbps	Frequency (MHz)	99% Bandwidth (kHz)	20dB Bandwidth (kHz)
106	13.56	16.228	16.76



9. RADIATED EMISSION TEST RESULTS

9.1. LIMITS AND PROCEDURE

LIMIT

FCC §15.225

IC RSS-210, Annex B.6

IC RSS-GEN, Section 8.9 (Transmitter)

(a) The field strength of any emissions within the band 13.553–13.567 MHz shall not exceed 15,848 microvolts/ meter at 30 meters.

(b) Within the bands 13.410–13.553 MHz and 13.567–13.710 MHz, the field strength of any emissions shall not exceed 334 microvolts/meter at 30 meters.

(c) Within the bands 13.110–13.410 MHz and 13.710–14.010 MHz the field strength of any emissions shall not exceed 106 microvolts/meter at 30 meters.

(d) The field strength of any emissions appearing outside of the 13.110– 14.010 MHz and shall not exceed the general radiated emission limits in § 15.209 as follows:

§15.209 (a) Except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

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

RSS-GEN, Section 8.9 and 8.10.

Frequency Range (MHz)	Field Strength Limit (uA/m) at 3 m	Field Strength Limit (dBuA/m) at 3 m
0.009-0.490	6.37/F(kHz) @ 300 m	-
0.490-1.705	63.7/F(kHz) @ 30 m	-
1.705 - 30	0.08 @ 30m	-
Frequency Range (MHz)	Field Strength Limit (uV/m) at 3 m	Field Strength Limit (dBuV/m) at 3 m
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

** 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.

§15.209 (b) In the emission table above, the tighter limit applies at the band edges.

Formula for converting the field strength from uV/m to dBuV/m is:

Limit (dBuV/m) = 20 log limit (uV/m)

In addition:

§15.209 (d) The emission limits shown the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emissions limits in these three bands are based on measurements employing an average detector.

§15.209 (d) The provisions in §§ 15.225, measuring emissions at distances other than the distances specified in the above table, determining the frequency range over which radiated emissions are to be measured, and limiting peak emissions apply to all devices operated under this part.

TEST PROCEDURE

ANSI C63.10 - 2020

The EUT is an intentional radiator that incorporates a digital device, the highest fundamental frequency generated or used in the device is 13.56 MHz; therefore, the frequency range was investigated from 9kHz to the 10th harmonic of the highest fundamental frequency, or 1000 MHz, whichever is greater.

Note: For all Below 30MHz test data, all measurements were made at a test distance of 3 m. The measured data was extrapolated from the test distance (3m) to the specification distance (300 m from 9-490 kHz and 30 m from 490 kHz – 30 MHz) to clearly show the relative levels of fundamental and spurious emissions and demonstrate compliance with the requirement that the level of any spurious emissions be below the level of the intentionally transmitted signal. The extrapolation factor for the limits were $40 \cdot \log(\text{test distance} / \text{specification distance})$.

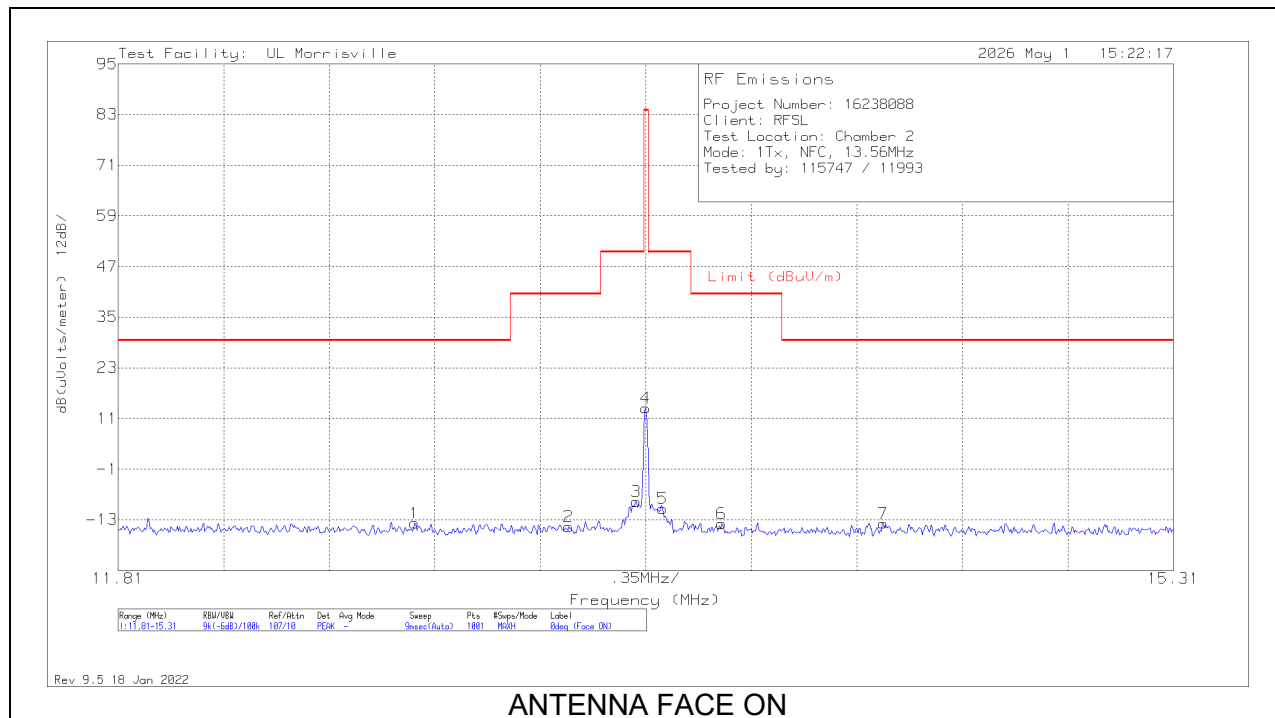
Although these tests were performed other than open area test site, adequate comparison measurements were confirmed against 30 m open area test site. Therefore, sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field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

RESULTS

9.2. FUNDAMENTAL AND SPURIOUS EMISSIONS (0.15 - 30 MHz)

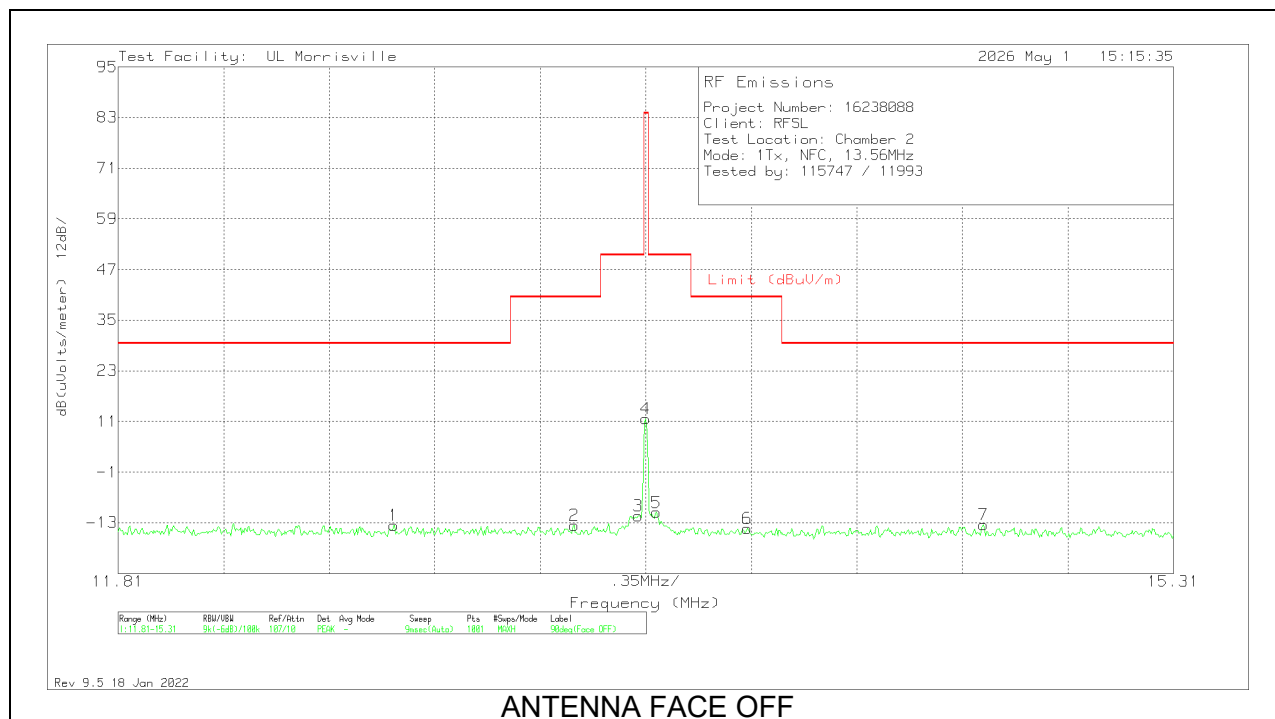
9.2.1. Type B (Tag Off)

FUNDAMENTAL 106Kbps



Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	ANT (dB/m)	Gain/Loss (dB)	Dist. Corr. Factor (dB)	Corrected Reading dB(uVolts/meter)	Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Loop Angle
1	12.7935	14.98	Pk	10.6	.6	-40	-13.82	29.5	-43.32	311	100	0 degs
2	13.3045	14.18	Pk	10.6	.6	-40	-14.62	40.5	-55.12	311	100	0 degs
3	13.5285	20.15	Pk	10.6	.6	-40	-8.65	50.5	-59.15	311	100	0 degs
4	13.56	42.3	Pk	10.6	.6	-40	13.5	84	-70.5	311	100	0 degs
5	13.616	18.52	Pk	10.6	.6	-40	-10.28	50.5	-60.78	311	100	0 degs
6	13.812	14.93	Pk	10.6	.6	-40	-13.87	40.5	-54.37	311	100	0 degs
7	14.3475	14.96	Pk	10.6	.6	-40	-13.84	29.5	-43.34	311	100	0 degs

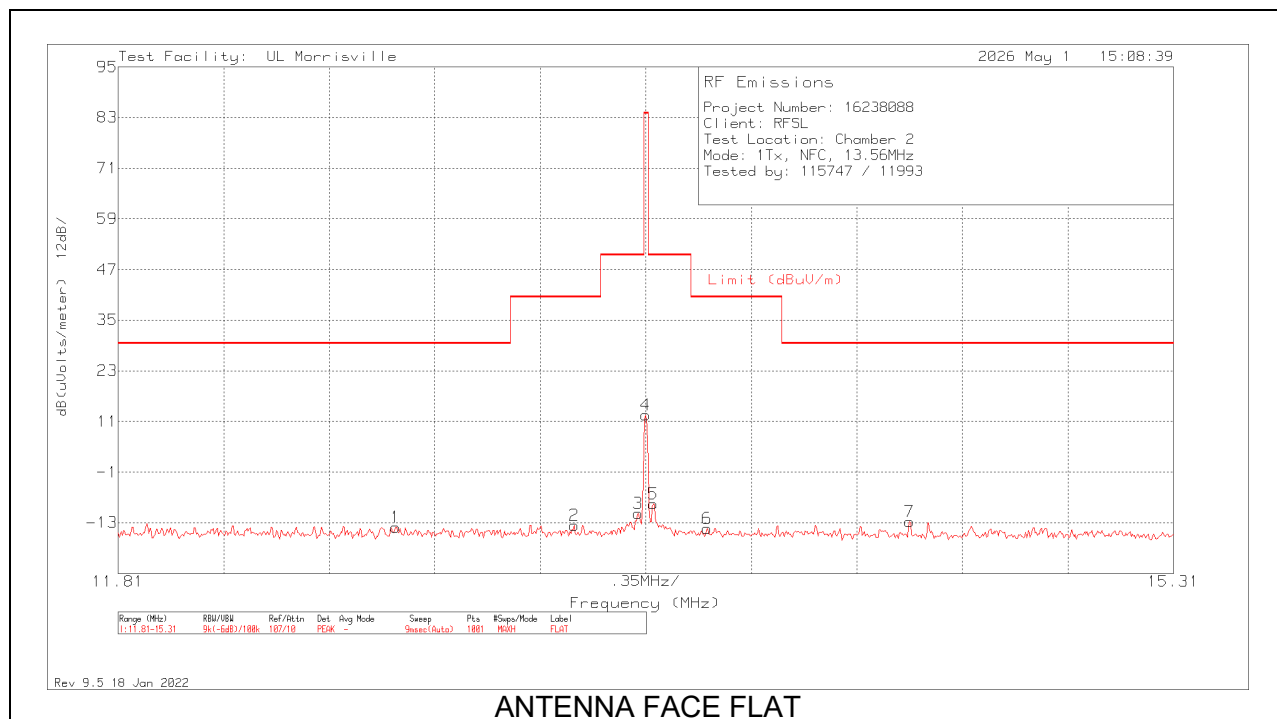
Pk - Peak detector



ANTENNA FACE OFF

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	ANT (dB/m)	Gain/Loss (dB)	Dist. Corr. Factor (dB)	Corrected Reading dB(uVolts/meter)	Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Loop Angle
1	12.7235	15.23	Pk	10.6	.6	-40	-13.57	29.5	-43.07	211	100	90 degs
2	13.322	15.24	Pk	10.6	.6	-40	-13.56	40.5	-54.06	211	100	90 degs
3	13.5355	17.42	Pk	10.6	.6	-40	-11.38	50.5	-61.88	211	100	90 degs
4	13.56	40.42	Pk	10.6	.6	-40	11.62	84	-72.38	211	100	90 degs
5	13.595	18.24	Pk	10.6	.6	-40	-10.56	50.5	-61.06	211	100	90 degs
6	13.896	14.5	Pk	10.6	.6	-40	-14.3	40.5	-54.8	211	100	90 degs
7	14.68	15.36	Pk	10.6	.6	-40	-13.44	29.5	-42.94	211	100	90 degs

Pk - Peak detector

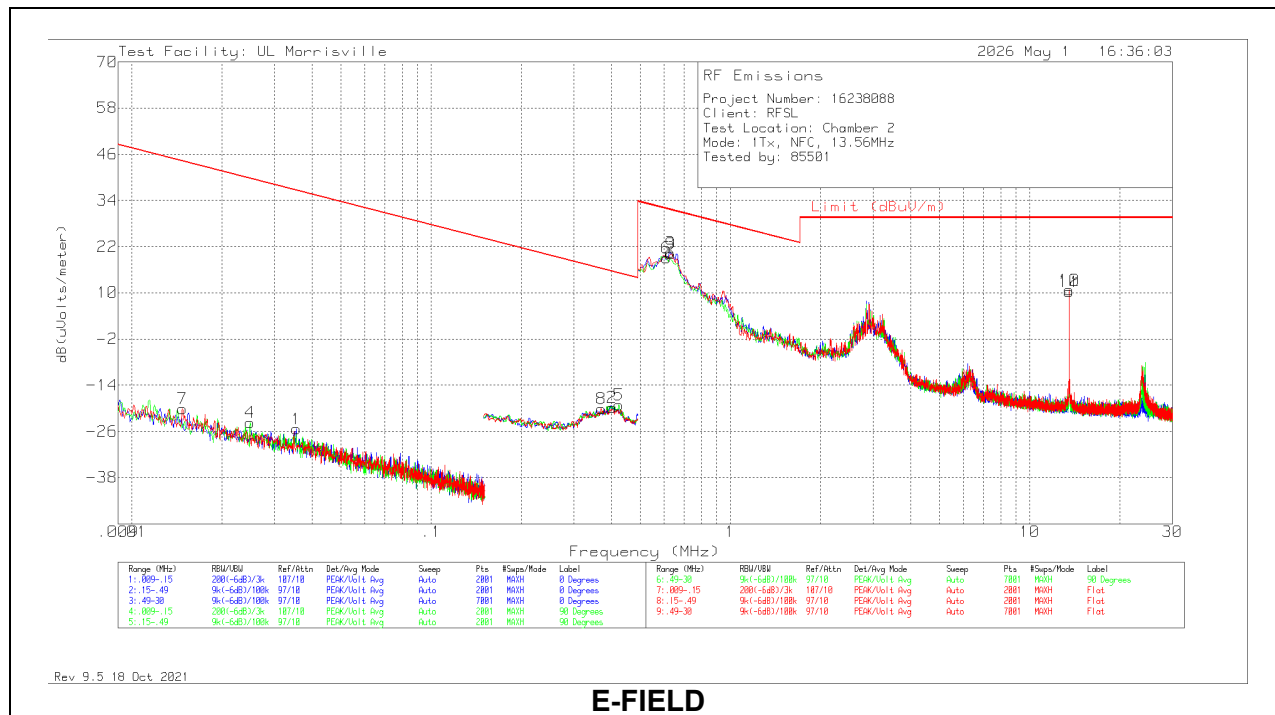


ANTENNA FACE FLAT

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	ANT (dB/m)	Gain/Loss (dB)	Dist. Corr. Factor (dB)	Corrected Reading dB(uVolts/meter)	Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	LoopAngle
1	12.7305	14.81	Pk	10.6	.6	-40	-13.99	29.5	-43.49	156	100	Flat
2	13.322	15.16	Pk	10.6	.6	-40	-13.64	40.5	-54.14	156	100	Flat
3	13.5355	18.02	Pk	10.6	.6	-40	-10.78	50.5	-61.28	156	100	Flat
4	13.56	41.3	Pk	10.6	.6	-40	12.5	84	-71.5	156	100	Flat
5	13.5845	20.31	Pk	10.6	.6	-40	-8.49	50.5	-58.99	156	100	Flat
6	13.763	14.49	Pk	10.6	.6	-40	-14.31	40.5	-54.81	156	100	Flat
7	14.435	16.06	Pk	10.6	.6	-40	-12.74	29.5	-42.24	156	100	Flat

Pk - Peak detector

SPURIOUS EMISSION – E FIELD



E-FIELD

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	ANT (dB/m)	Gain/Loss (dB)	Dist. Corr. Factor (dB)	Corrected Reading dB(uVolts/meter)	QP/AV Limit (dBuV/m)	PK Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Loop Angle
7	.01475	43.24	Pk	16.6	.1	-80	-20.06	44.23	64.23	-64.29	0-360	Flat
4	.02483	42.56	Pk	13.6	.1	-80	-23.74	39.7	59.7	-63.44	0-360	90 degs
1	.03541	41.8	Pk	12.7	.1	-80	-25.4	36.62	56.62	-62.02	0-360	0 degs
8	.37015	48.92	Pk	10.9	.1	-80	-20.08	16.24	36.24	-36.32	0-360	Flat
2	.40305	49.16	Pk	11	.1	-80	-19.74	15.5	35.5	-35.24	0-360	0 degs
5	.42404	49.83	Pk	11	.1	-80	-19.07	15.06	35.06	-34.13	0-360	90 degs
6	.61226	48.03	Pk	11	.1	-40	19.13	31.87	-	-12.74	0-360	90 degs
3	.62913	49.37	Pk	11	.1	-40	20.47	31.63	-	-11.16	0-360	0 degs
9	.63334	49.04	Pk	11	.1	-40	20.14	31.57	-	-11.43	0-360	Flat
*10	13.5596	39.51	Pk	10.6	.6	-40	10.71	-	-	-	0-360	0 degs
*11	13.5596	39.03	Pk	10.6	.6	-40	10.23	-	-	-	0-360	90 degs
*12	13.5596	39.51	Pk	10.6	.6	-40	10.71	-	-	-	0-360	Flat

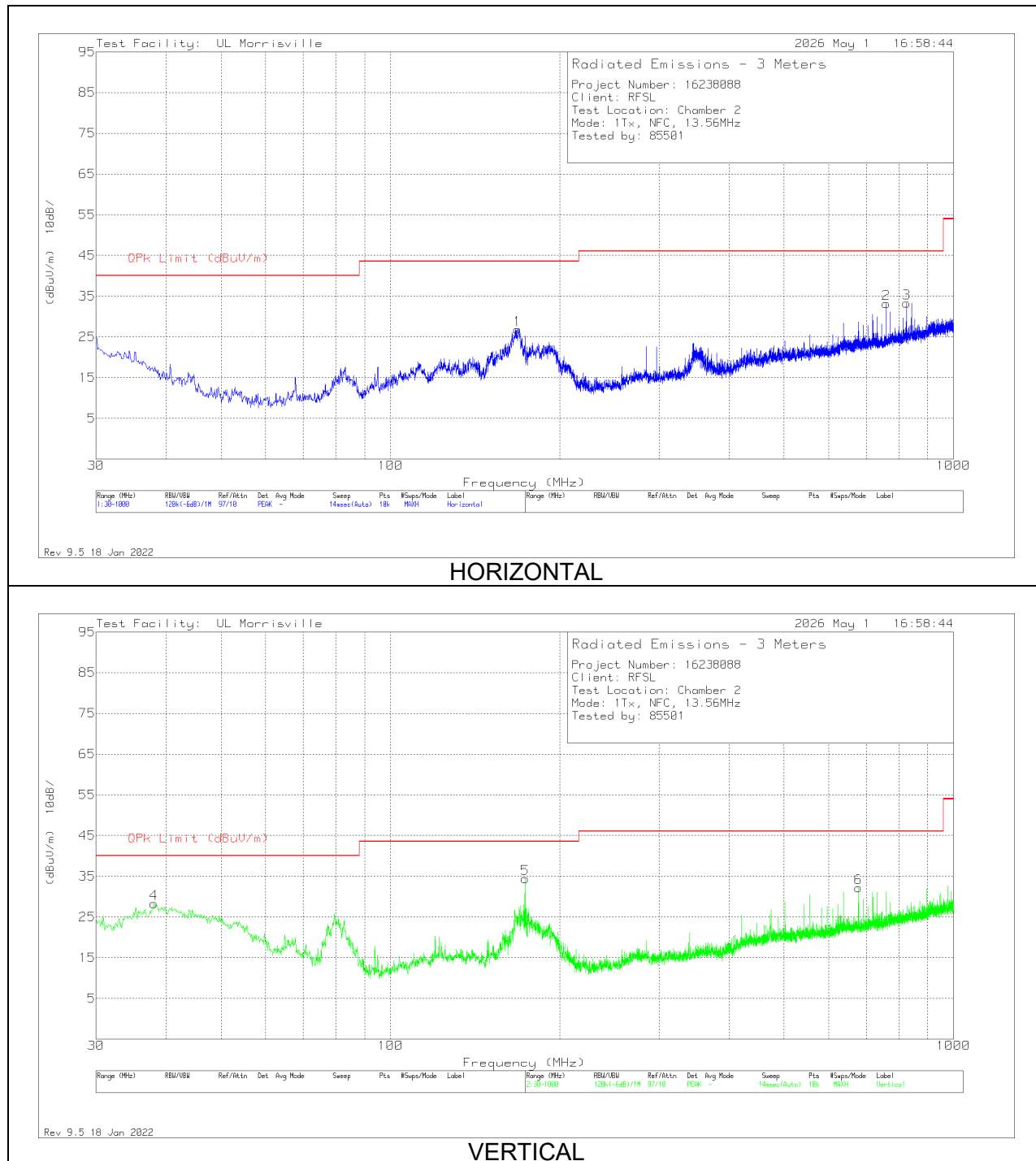
Pk - Peak detector

*Fundamental

9.3. TX SPURIOUS EMISSION 30 TO 1000 MHz

9.3.1. Type B (Tag Off)

SPURIOUS EMISSION 106Kbps



Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	85717 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	38.051	38.32	Pk	21.6	-31.6	28.32	40	-11.68	0-360	101	V
1	168.322	39.44	Pk	17.7	-30.3	26.84	43.52	-16.68	0-360	199	H
5	173.366	46.93	Pk	17.6	-30.1	34.43	43.52	-9.09	0-360	101	V
6	678.057	33.96	Pk	25.9	-27.7	32.16	46.02	-13.86	0-360	101	V
2	759.44	34.2	Pk	26.6	-27.6	33.2	46.02	-12.82	0-360	199	H
3	825.109	32.37	Pk	27.6	-26.7	33.27	46.02	-12.75	0-360	299	H

Pk - Peak detector

10. FREQUENCY STABILITY

LIMIT

§15.225 (e) The frequency tolerance of the carrier signal shall be maintained within $\pm 0.01\%$ of the operating frequency, over a temperature variation of -20 degrees to +50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from the maximum and minimum voltages declared by the client. For battery operated equipment, the equipment tests shall be performed using a new battery.

IC RSS-210, Annex B.6

Carrier frequency stability shall be maintained to $\pm 0.01\%$ (± 100 ppm).

TEST PROCEDURE

ANSI C63.10-2020 Clause 6.8

RESULTS

No non-compliance noted.

10.1. NO TAG, TYPE B, 106 Kbps

Reference Frequency: EUT Channel 13.56 MHz @ 20°C Limit: ± 100 ppm = 1.356 kHz										
Power Supply	Envir. Temp	Frequency Deviation Measured with Time Elapse								
(Vdc)	(°C)	Startup (MHz)	Delta (ppm)	@ 2 mins (MHz)	Delta (ppm)	@ 5 mins (MHz)	Delta (ppm)	@ 10 mins (MHz)	Delta (ppm)	Limit (ppm)
3.89	50	13.5599518	2.817	13.5599518	2.817	13.5599518	2.817	13.5599522	2.788	± 100
3.89	40	13.5599688	1.563	13.5599640	1.917	13.5599606	2.168	13.5599578	2.375	± 100
3.89	30	13.5599818	0.605	13.5599794	0.782	13.5599774	0.929	13.5599744	1.150	± 100
3.89	20	13.5599900	0.000	13.5599902	-0.015	13.5599903	-0.022	13.5599904	-0.029	± 100
3.89	10	13.5600242	-2.522	13.5600230	-2.434	13.5600220	-2.360	13.5600206	-2.257	± 100
3.89	0	13.5600412	-3.776	13.5600406	-3.732	13.5600396	-3.658	13.5600386	-3.584	± 100
3.89	-10	13.5600408	-3.746	13.5600412	-3.776	13.5600416	-3.805	13.5600418	-3.820	± 100
3.89	-20	13.5600398	-3.673	13.5600394	-3.643	13.5600384	-3.569	13.5600344	-3.274	± 100
3.70	20	13.5599854	0.339	13.5599868	0.236	13.5599878	0.162	13.5599886	0.103	± 100
4.45	20	13.5599896	0.029	13.5599880	0.147	13.5599876	0.177	13.5599878	0.162	± 100

Tested by: 85502

Test date: 2026-05-05

11. AC MAINS LINE CONDUCTED EMISSIONS

LIMITS

§15.207

IC RSS-GEN, Section 8.8

Frequency range (MHz)	Limits (dB μ V)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56	56 to 46
0.50 to 5	56	46
5 to 30	60	50
Notes: 1. The lower limit shall apply at the transition frequencies 2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz.		

TEST PROCEDURE

ANSI C63.10:2020

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.

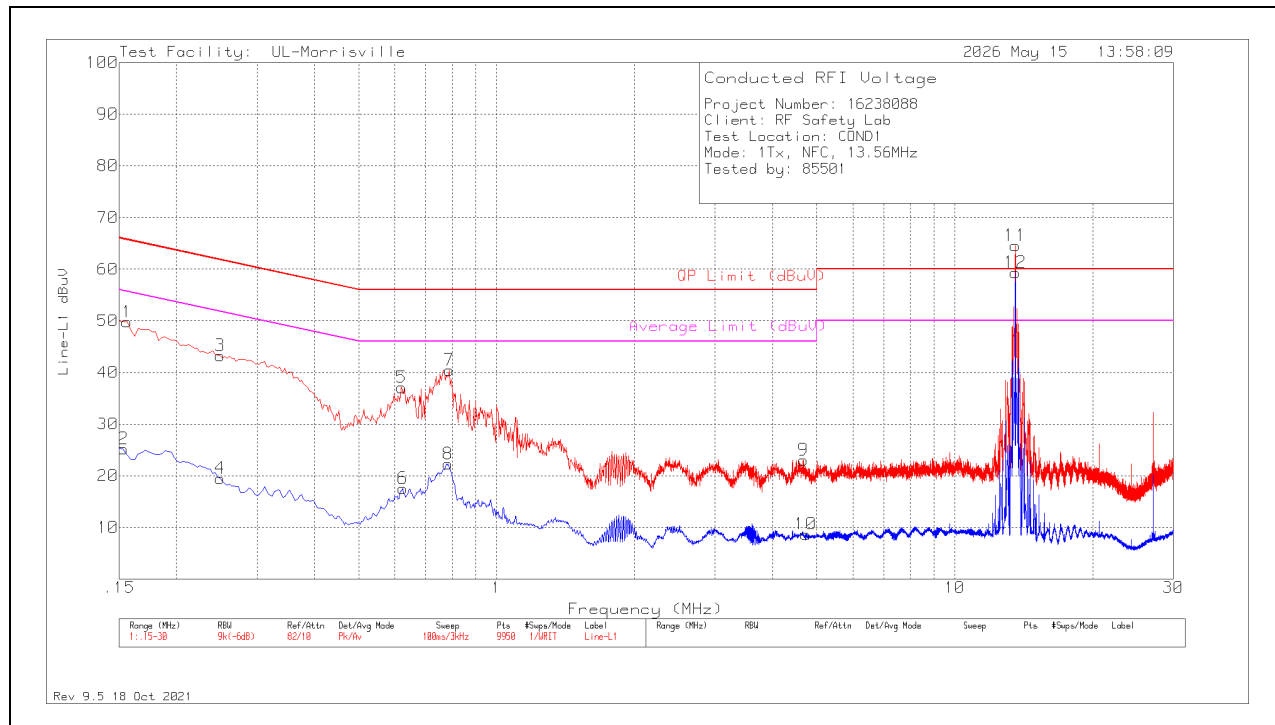
RESULTS

No non-compliance noted:

11.1. Type B (Tag Off)

11.1.1. NORMAL OPERATION, 106Kbps

LINE 1 RESULTS



Range 1: Line-L1 .15 - 30MHz										
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN VDF (dB)	Cbl/Limiter (dB)	Corrected Reading dBuV	QP Limit (dBuV)	Margin (dB)	Average Limit (dBuV)	Margin (dB)
2	.153	15.31	Av	.2	9.7	25.21	-	-	55.84	-30.63
1	.156	39.9	Pk	.2	9.7	49.8	65.67	-15.87	-	-
3	.249	33.46	Pk	.1	9.7	43.26	61.79	-18.53	-	-
4	.249	9.71	Av	.1	9.7	19.51	-	-	51.79	-32.28
5	.621	27.4	Pk	0	9.7	37.1	56	-18.9	-	-
6	.624	7.87	Av	0	9.7	17.57	-	-	46	-28.43
8	.783	12.58	Av	0	9.7	22.28	-	-	46	-23.72
7	.789	30.76	Pk	0	9.7	40.46	56	-15.54	-	-
9	4.674	13.35	Pk	0	9.7	23.05	56	-32.95	-	-
10	4.728	-1.01	Av	0	9.7	8.69	-	-	46	-37.31
11	13.56004	53.91	Qp	.1	9.8	63.81	60	3.81	-	-
12	13.56004	49.93	Ca	.1	9.8	59.83	-	-	50	9.83

Pk - Peak detector

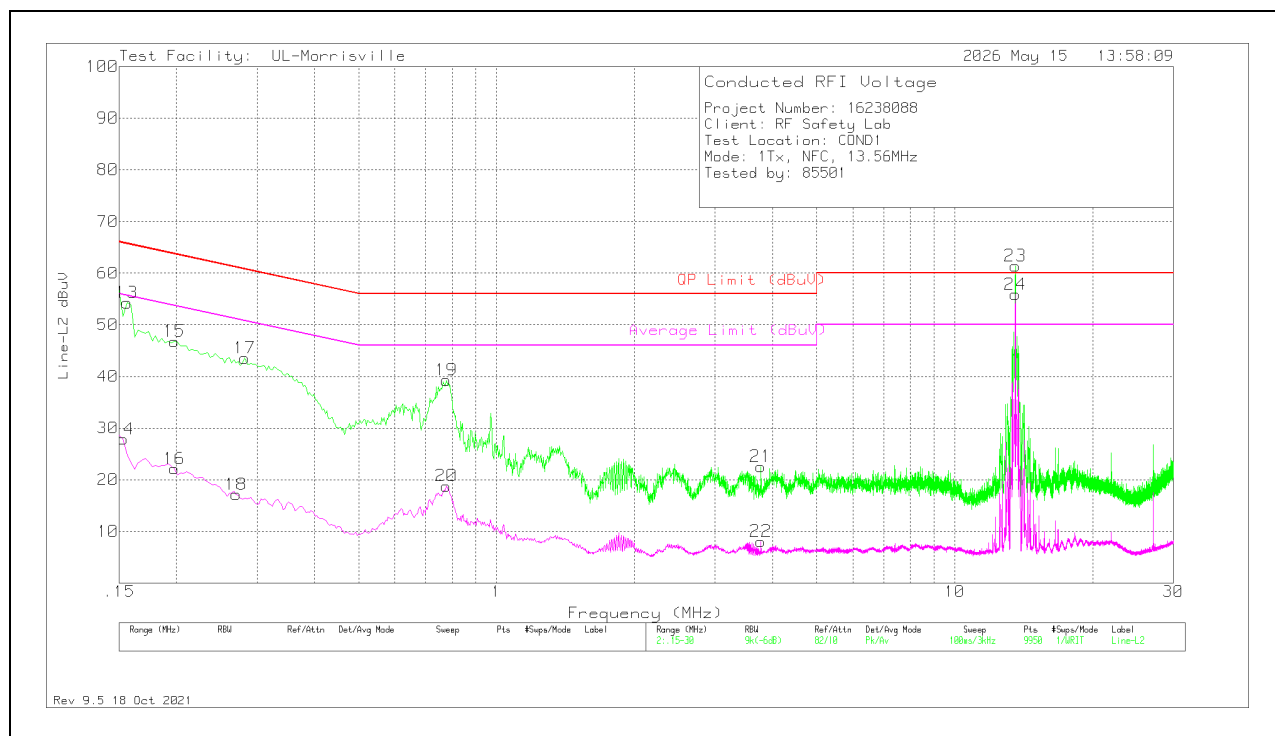
Av - Average detection

Qp - Quasi-Peak detector

Ca - CISPR average detection

Note: 13.56 MHz signal comes from EUT radio. Terminated scan shows this scan to be compliant.

LINE 2 RESULTS



Range 2: Line-L2 .15 - 30MHz										
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN VDF (dB)	Cbl/Limiter (dB)	Corrected Reading dBuV	QP Limit (dBuV)	Margin (dB)	Average Limit (dBuV)	Margin (dB)
14	.153	17.96	Av	.2	9.7	27.86	-	-	55.84	-27.98
13	.156	44.37	Pk	.2	9.7	54.27	65.67	-11.4	-	-
15	.198	37	Pk	.1	9.7	46.8	63.69	-16.89	-	-
16	.198	12.35	Av	.1	9.7	22.15	-	-	53.69	-31.54
18	.27	7.33	Av	.1	9.7	17.13	-	-	51.12	-33.99
17	.282	33.75	Pk	.1	9.7	43.55	60.76	-17.21	-	-
19	.777	29.57	Pk	0	9.7	39.27	56	-16.73	-	-
20	.777	9.1	Av	0	9.7	18.8	-	-	46	-27.2
21	3.771	12.84	Pk	0	9.7	22.54	56	-33.46	-	-
22	3.774	-1.63	Av	0	9.7	8.07	-	-	46	-37.93
23	13.56054	50.55	Qp	.1	9.8	60.45	60	.45	-	-
24	13.56054	46.4	Ca	.1	9.8	56.3	-	-	50	6.3

Pk - Peak detector

Qp - Quasi-Peak detector

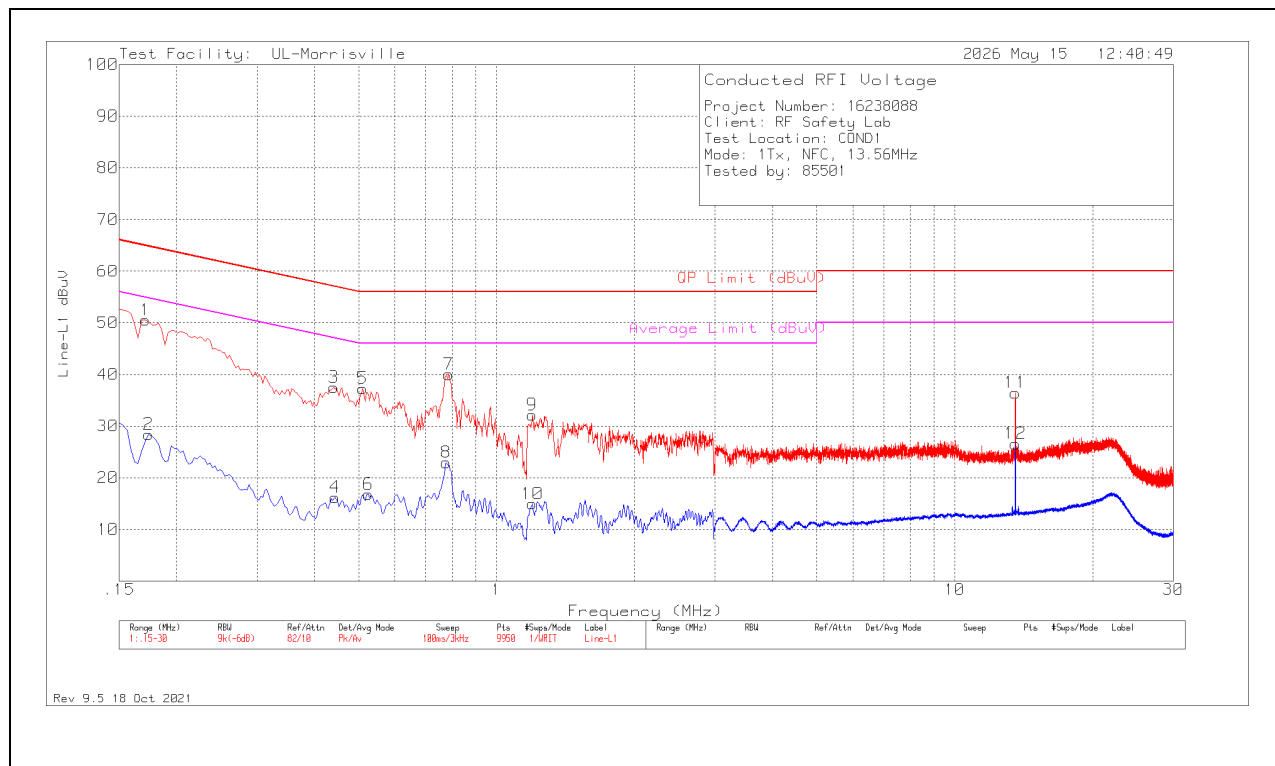
Av - Average detection

Ca - CISPR average detection

Note: 13.56 MHz signal comes from EUT radio. Terminated scan shows this scan to be compliant.

11.1.2. TERMINATED SAMPLE

LINE 1 RESULTS

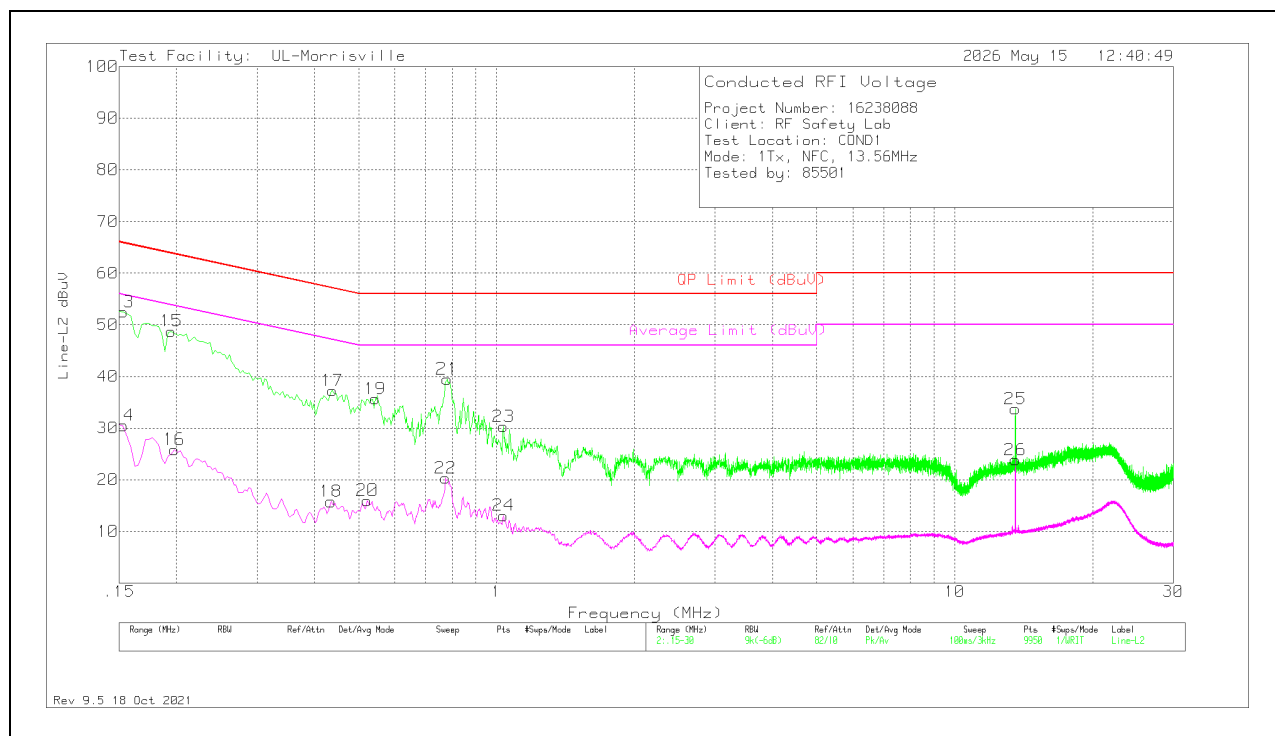


Range 1: Line-L1 .15 - 30MHz										
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN VDF (dB)	Cbl/Limiter (dB)	Corrected Reading dBuV	QP Limit (dBuV)	Margin (dB)	Average Limit (dBuV)	Margin (dB)
1	.171	40.62	Pk	.2	9.7	50.52	64.91	-14.39	-	-
2	.174	18.51	Av	.2	9.7	28.41	-	-	54.77	-26.36
3	.441	27.81	Pk	0	9.7	37.51	57.04	-19.53	-	-
4	.444	6.52	Av	0	9.7	16.22	-	-	46.99	-30.77
5	.51	27.57	Pk	0	9.7	37.27	56	-18.73	-	-
6	.525	7.1	Av	0	9.7	16.8	-	-	46	-29.2
8	.777	13.25	Av	0	9.7	22.95	-	-	46	-23.05
7	.786	30.32	Pk	0	9.7	40.02	56	-15.98	-	-
9	1.197	22.46	Pk	0	9.7	32.16	56	-23.84	-	-
10	1.197	5.26	Av	0	9.7	14.96	-	-	46	-31.04
11	13.56	26.56	Pk	.1	9.8	36.46	60	-23.54	-	-
12	13.56	16.69	Av	.1	9.8	26.59	-	-	50	-23.41

Pk - Peak detector

Av - Average detection

LINE 2 RESULTS



Range 2: Line-L2 .15 - 30MHz										
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN VDF (dB)	Cbl/Limiter (dB)	Corrected Reading dBuV	QP Limit (dBuV)	Margin (dB)	Average Limit (dBuV)	Margin (dB)
13	.153	42.56	Pk	.2	9.7	52.46	65.84	-13.38	-	-
14	.153	20.6	Av	.2	9.7	30.5	-	-	55.84	-25.34
15	.195	38.86	Pk	.2	9.7	48.76	63.82	-15.06	-	-
16	.198	16.03	Av	.1	9.7	25.83	-	-	53.69	-27.86
18	.435	6.07	Av	0	9.7	15.77	-	-	47.16	-31.39
17	.438	27.53	Pk	0	9.7	37.23	57.1	-19.87	-	-
20	.522	6.25	Av	0	9.7	15.95	-	-	46	-30.05
19	.543	25.97	Pk	0	9.7	35.67	56	-20.33	-	-
22	.774	10.61	Av	0	9.7	20.31	-	-	46	-25.69
21	.78	29.77	Pk	0	9.7	39.47	56	-16.53	-	-
23	1.035	20.59	Pk	0	9.7	30.29	56	-25.71	-	-
24	1.035	3.38	Av	0	9.7	13.08	-	-	46	-32.92
26	13.56	13.94	Av	.1	9.8	23.84	-	-	50	-26.16
25	13.5615	23.8	Pk	.1	9.8	33.7	60	-26.3	-	-

Pk - Peak detector

Av - Average detection

12. SETUP PHOTOS

Refer to R16238088-EP1c for setup diagrams

END OF TEST REPORT