Report Number:	R14639481-E1
Issue Date:	2023-03-16
FCC ID:	PY7-83376C

Electromagnetic Compatibility Test Report

For

Sony Corporation
1-7-1 Konan Minato-ku
Tokyo, 108-0075, Japan

TEST REPORT DETAILS

Tests Performed By:	UL LLC 12 LABORATORY DR. RESEARCH TRIANGLE PARK, NC 27709, U.S.A.
Tests Performed For:	Sony Corporation 1-7-1 Konan Minato-ku Tokyo, 108-0075, Japan
Issue Date:	2023-03-16
FCC ID:	PY7-83376C
Sample Serial Number:	QV7700L2FR, QV7700C9FR
Applicable Standards:	FCC 47 CFR PART 15 SUBPART B:2023
Date Test Item Received:	2023-02-06
Testing Start Date:	2023-02-16
Date Testing Complete:	2023-03-06
Overall Results:	Compliant

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.

REPORT DIRECTORY

REPORT REVISION HISTORY

Revision Date	Revision Version	Description	Revised By	Revision Reviewed By
2023-03-16	V1	Initial Issue	N. Bennett	M. Antola

1.0 TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.4:2014.

1.1 Deviations from standard test methods

None

1.2 Device Modifications Necessary for Compliance

None

1.3 TEST RESULTS SUMMARY

This product is considered Class B

Requirement – Test	Result (Compliant / Non-Compliant)
CONDUCTED EMISSIONS	Compliant
RADIATED EMISSIONS	Compliant

Approved & Released For
UL LLC. By:

Michael Antola
Staff Engineer
Consumer Technology Division
UL LLC.

Prepared By:

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Electrical Engineer
Consumer Technology Division
UL LLC.

2.0 DECISION RULES AND MEASUREMENT UNCERTAINTY

2.1 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

2.2 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).

2.3 Measurement Uncertainty

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

PARAMETER	U_{lab}
Worst Case Conducted Disturbance, 0.15 to 30 MHz	3.40 db
Worst Case Radiated Disturbance, All ranges	6.01 db

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

2.4 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 dBuV + 18.7 dB/m + 0.6 dB – 26.9 dB = 28.9 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 dBuV + 0 dB +10.1 dB+ 0 dB = 46.6 dBuV

3.0 GENERAL - Product Description

3.1 Equipment Description

GSM/WCDMA/LTE/5G Phone with BT, DTS/UNII a/b/g/n/ac/ax, GPS, WPT & NFC

3.2 Device Configuration During Test

3.2.1 Equipment Used During Test:

Use	Product Type	Manufacturer	Model	Comments
EUT	Cell phone	Sony	PY7-83376C	None
AE	Headphones	Sony	MDR-EX15AP	None
AE	Power Supply	Sony	XQZ-UC1	None
AE	Laptop	Lenovo	T450	Used for PC peripheral setup
AE	Laptop	HP	11-ah112dx	Used for PC peripheral setup
AE	Power Supply	Lite-on	ADLX45DLC2A PA-1450-17	Used for PC peripheral setup
AE	Monitor	ViewSonic	VS15562	Used for PC peripheral setup
AE	Mouse	Logitech	B100	Used for PC peripheral setup
Note: **EUT** - Equipment Under Test, **AE** - Auxiliary/Associated Equipment, or **SIM** - Simulator (Not Subjected to Test)				

3.2.2 Input/Output Ports:

Port #	Name	Type*	Cable Max. >3m (Y/N)	Cable Shielded (Y/N)	Comments
0	Enclosure	N/E	—	—	None
1	USB	DC	N	N	Connected to power supply/laptop
2	Audio	I/O	N	N	Connected to headphones
3	HDMI	I/O	N	N	Connected to monitor for support laptop population
4	Audio	I/O	N	N	Connected to monitor for support laptop population
5	Mains	I/O	N	N	Connected to support laptop power supply
*Note: AC = AC Power Port DC = DC Power Port N/E = Non-Electrical I/O = Signal Input or Output Port (Not Involved in Process Control) TP = Telecommunication Ports					

3.2.3 EUT Highest Frequencies:

Frequency (MHz)	Description
5825	Highest Tx Frequency

3.2.4 Power Interface:

Mode # /Rated	Voltage (V)	Current (A)	Power (W)	Frequency (DC/AC-Hz)	Phases (#)	Comments
Rated	100-240	-	-	50/60	Single	None
1	120Vac	-	-	60Hz	Single	Power Supply
2	4.28Vdc	-	-	DC	Single	Battery

3.2.5 Subassemblies

Description	Manufacturer	Model
None		

3.2.6 Manufacturer's Description of Model Differences

None

3.2.7 Software and Firmware

The software installed during testing was 0.99 for idle sample and 0.77 for WWAN Rx sample.

3.3 Block Diagram

Refer to setup exhibit R14639481-EP2 for block diagram.

3.4 EUT Configurations

Configuration #	Description
1	Configured as table top equipment

3.5 EUT Operation Modes

Mode of Operation#	Description
1	Operating as intended on battery. Radio idle.
2	Operating as intended connected to power supply. Radio idle.
3	Operating as intended connected to power supply. Radio in Rx mode on supported LTE bands that transmit <960MHz. Note: Callbox was used to ensure that EUT was placed in Rx mode.
4	Operating as intended connected as PC Peripheral. Radio idle.

Supported Band(s)	Down Link Frequency Range (MHz)
GSM850	869-894
LTE B12	729-746

3.6 Rationale for EUT Configurations

Configuration #	Description
1	EUT was investigated in three orientations, X, Y, and Z. It was determined that worst-case orientation for radiated testing was Y for AC Adaptor Mode, Z for Battery Mode, and X for PC peripheral mode.

3.7 Rationale for EUT Mode of Operation

Mode of Operation #	Description
1,2,3,4	EUT capable of operating on battery, connected to power supply, or connected as PC peripheral.

4.0 APPLICABLE EMISSIONS LIMITS AND TEST RESULTS

4.1 Test Conditions and Results - MAINS TERMINAL - CONDUCTED EMISSIONS

Test Engineer	27465/46722	
Test Date	2023-02-16	
Laboratory Parameters	Required prior to the test	During the test
Ambient Temperature	10 to 40 °C	22.0 C
Humidity	10 % to 90 %	45.3 %
	Frequency range on each side of line	Measurement Point
Fully configured sample scanned over the following frequency range	150kHz to 30MHz	Mains

Limits - Class B

Frequency (MHz)	Limit (dBµV)	
	Quasi-Peak	Average
0.15-0.5	66 to 56	56 to 46
0.5-5	56	46
5-30	60	50

Supplementary information: None

Conducted Emissions EUT Configuration Settings

Power Interface #	EUT Configurations #	EUT Mode of Operation#
1	1	2,4

Supplementary information: **EUT S/N: QV7700L2FR was used.**

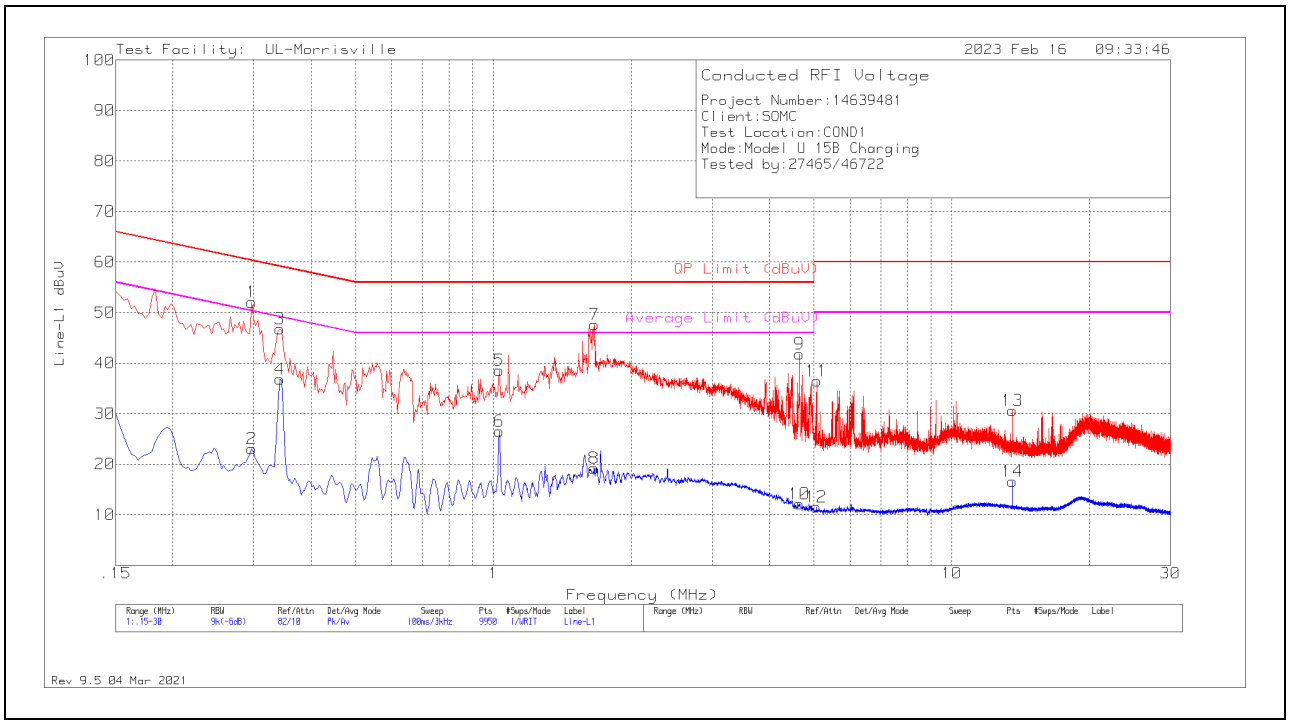
Refer to R14639481-EP2 for setup photos.

Conducted Emissions Test Equipment

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	2022-04-05	2023-04-05
HI0091	Environmental Meter	Fisher Scientific	15-077-963	2022-07-20	2023-07-20
LISN001	LISN, 50-ohm/50-uH, 2-conductor, 25A	Fischer Custom Com.	FCC-LISN-50-25-2-01-550V	2022-08-01	2023-08-01
75141	EMI Test Receiver 9kHz-7GHz	Rohde & Schwarz	ESCI 7	2022-08-03	2023-08-03
ATA222	Transient Limiter, 0.009-100MHz	Electro-Metrics	EM-7600	2022-04-05	2023-04-05
PS214	AC Power Source	Elgar	CW2501M (s/n 1523A02396)	NA	NA
SOFTEMI	EMI Software	UL	Version 9.5 (18 Oct 2021)		
	Miscellaneous (if needed)				
LISN008	LISN, 50-ohm/50-uH, 2-conductor, 25A (For support gear only.)	Solar Electronics	8012-50-R-24-BNC	NA	NA

Conducted Emissions Graph – Power Supply Line 1

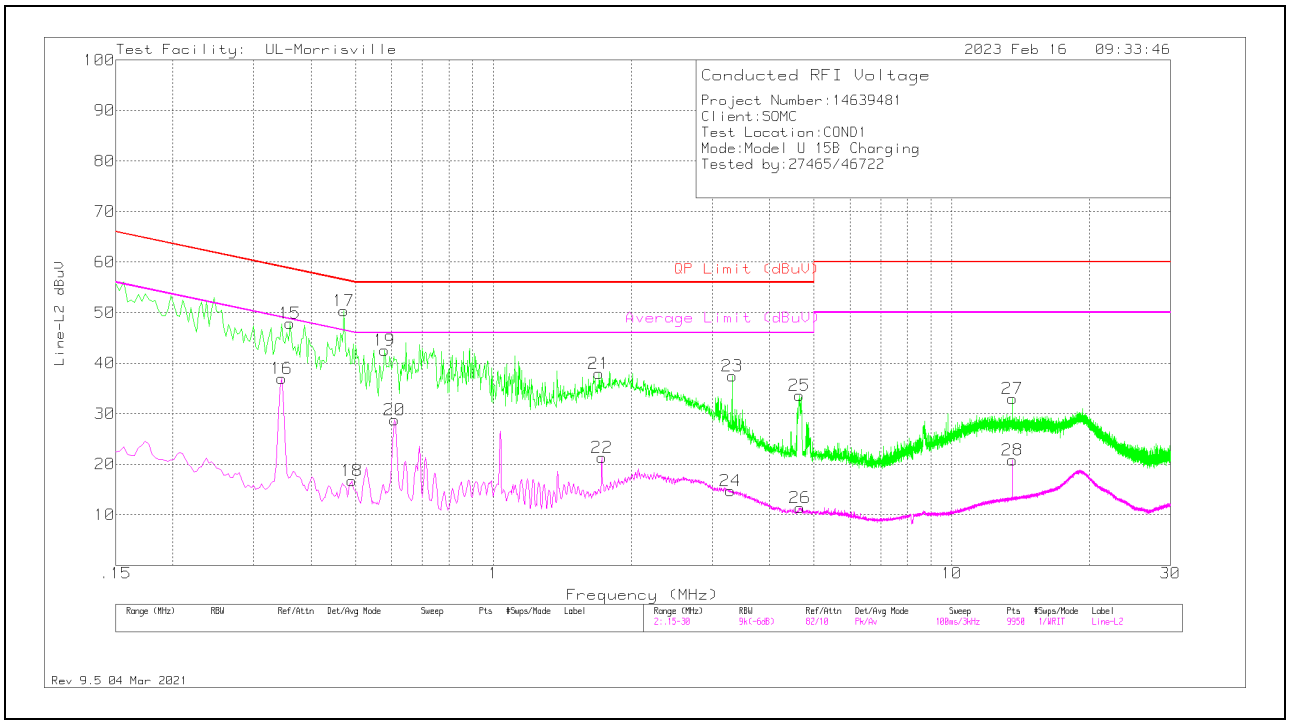


Conducted Emissions Data Points – Power Supply Line 1

Range 1: Line-L1 .15 - 30MHz										
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN VCF (dB)	Cbl/Limiter (dB)	Corrected Reading dBuV	QP Limit (dBuV)	Margin (dB)	Average Limit (dBuV)	Margin (dB)
1	.297	42.15	Pk	.1	9.8	52.05	60.33	-8.28	-	-
2	.297	13.18	Av	.1	9.8	23.08	-	-	50.33	-27.25
3	.342	36.89	Pk	.1	9.8	46.79	59.15	-12.36	-	-
4	.342	26.92	Av	.1	9.8	36.82	-	-	49.15	-12.33
5	1.029	28.75	Pk	0	9.8	38.55	56	-17.45	-	-
6	1.029	16.71	Av	0	9.8	26.51	-	-	46	-19.49
7	1.662	37.83	Pk	0	9.8	47.63	56	-8.37	-	-
8	1.659	9.46	Av	0	9.8	19.26	-	-	46	-26.74
9	4.653	31.96	Pk	0	9.9	41.86	56	-14.14	-	-
10	4.653	2.25	Av	0	9.9	12.15	-	-	46	-33.85
11	5.073	26.58	Pk	0	9.9	36.48	60	-23.52	-	-
12	5.064	1.59	Av	0	9.9	11.49	-	-	50	-38.51
13	13.563	20.58	Pk	.1	10	30.68	60	-29.32	-	-
14	13.56	6.5	Av	.1	10	16.6	-	-	50	-33.40

Pk - Peak detector
Av - Average detection

Conducted Emissions Graph – Power Supply Line 2

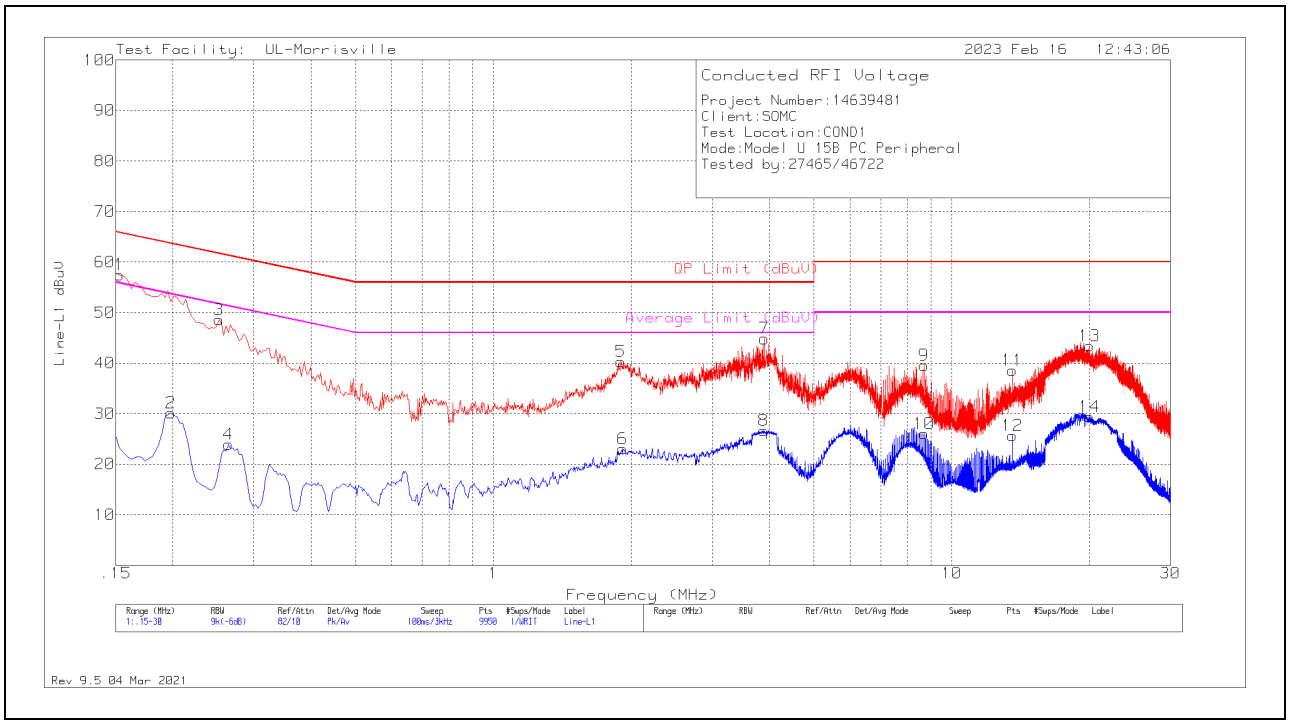


Conducted Emissions Data Points – Power Supply Line 2

Range 2: Line-L2 .15 - 30MHz										
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN VCF (dB)	Cbl/Limiter (dB)	Corrected Reading dBuV	QP Limit (dBuV)	Margin (dB)	Average Limit (dBuV)	Margin (dB)
15	.36	38.02	Pk	.1	9.8	47.92	58.73	-10.81	-	-
16	.345	27.08	Av	.1	9.8	36.98	-	-	49.08	-12.1
17	.471	40.55	Pk	0	9.8	50.35	56.5	-6.15	-	-
18	.492	6.9	Av	0	9.8	16.7	-	-	46.13	-29.43
19	.579	32.77	Pk	0	9.8	42.57	56	-13.43	-	-
20	.609	18.97	Av	0	9.8	28.77	-	-	46	-17.23
21	1.701	28.2	Pk	0	9.8	38	56	-18	-	-
22	1.725	11.52	Av	0	9.8	21.32	-	-	46	-24.68
23	3.318	27.59	Pk	0	9.9	37.49	56	-18.51	-	-
24	3.288	4.85	Av	0	9.9	14.75	-	-	46	-31.25
25	4.647	23.7	Pk	0	9.9	33.6	56	-22.4	-	-
26	4.662	1.43	Av	0	9.9	11.33	-	-	46	-34.67
27	13.56	22.9	Pk	.1	10	33	60	-27	-	-
28	13.56	10.71	Av	.1	10	20.81	-	-	50	-29.19

Pk - Peak detector
Av - Average detection

Conducted Emissions Graph – PC Peripheral Line 1

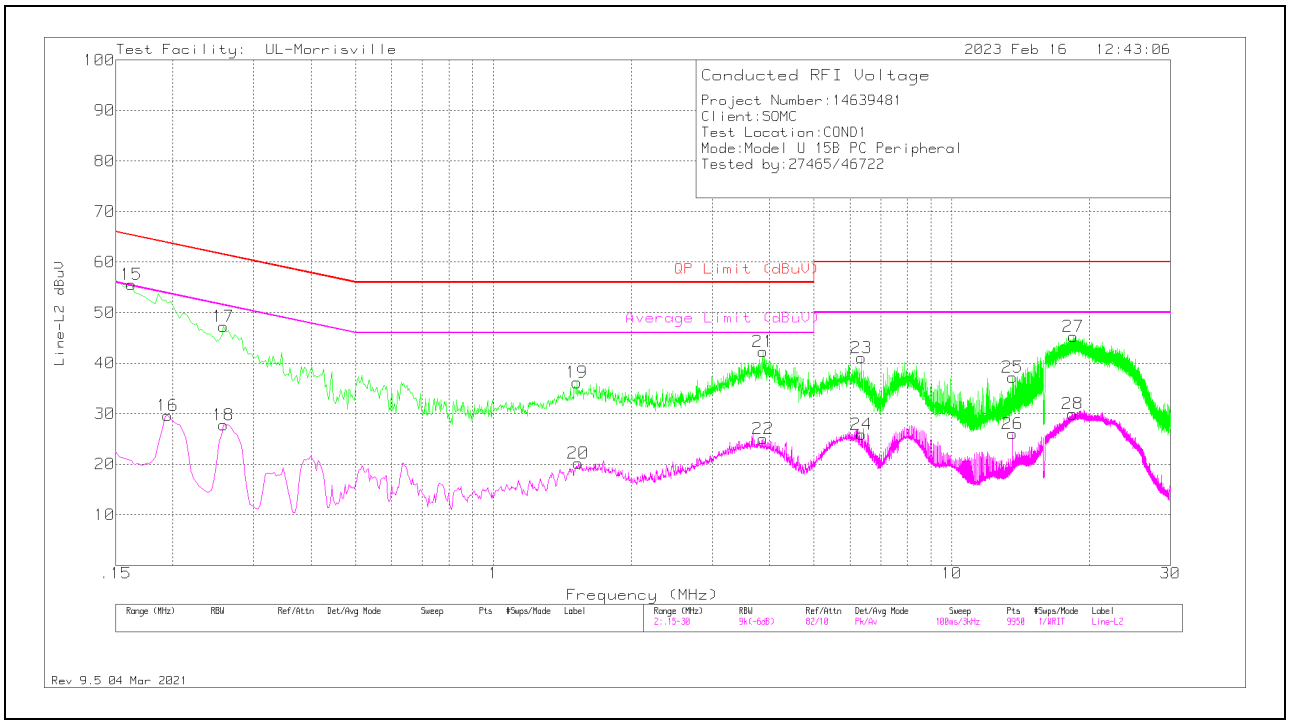


Conducted Emissions Data Points – PC Peripheral Line 1

Range 1: Line-L1 .15 - 30MHz										
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN VCF (dB)	Cbl/Limiter (dB)	Corrected Reading dBuV	QP Limit (dBuV)	Margin (dB)	Average Limit (dBuV)	Margin (dB)
1	.153	47.51	Pk	.2	9.8	57.51	65.84	-8.33	-	-
2	.198	20.17	Av	.2	9.8	30.17	-	-	53.69	-23.52
3	.252	38.73	Pk	.1	9.8	48.63	61.69	-13.06	-	-
4	.264	14.04	Av	.1	9.8	23.94	-	-	51.3	-27.36
5	1.899	30.47	Pk	0	9.8	40.27	56	-15.73	-	-
6	1.917	13.2	Av	0	9.8	23	-	-	46	-23
7	3.9	34.95	Pk	0	9.9	44.85	56	-11.15	-	-
8	3.891	16.71	Av	0	9.9	26.61	-	-	46	-19.39
9	8.706	29.49	Pk	.1	10	39.59	60	-20.41	-	-
10	8.709	15.94	Av	.1	10	26.04	-	-	50	-23.96
11	13.56	28.43	Pk	.1	10	38.53	60	-21.47	-	-
12	13.563	15.51	Av	.1	10	25.61	-	-	50	-24.39
13	19.959	33.12	Pk	.2	10.1	43.42	60	-16.58	-	-
14	19.965	19.05	Av	.2	10.1	29.35	-	-	50	-20.65

Pk - Peak detector
Av - Average detection

Conducted Emissions Graph – PC Peripheral Line 2



Conducted Emissions Data Points – PC Peripheral Line 2

Range 2: Line-L2 .15 - 30MHz										
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN VCF (dB)	Cbl/Limiter (dB)	Corrected Reading dBuV	QP Limit (dBuV)	Margin (dB)	Average Limit (dBuV)	Margin (dB)
15	.162	45.55	Pk	.2	9.8	55.55	65.36	-9.81	-	-
16	.195	19.58	Av	.2	9.8	29.58	-	-	53.82	-24.24
17	.258	37.41	Pk	.1	9.8	47.31	61.5	-14.19	-	-
18	.258	17.86	Av	.1	9.8	27.76	-	-	51.5	-23.74
19	1.521	26.36	Pk	0	9.8	36.16	56	-19.84	-	-
20	1.533	10.35	Av	0	9.8	20.15	-	-	46	-25.85
21	3.873	32.43	Pk	0	9.9	42.33	56	-13.67	-	-
22	3.873	15.09	Av	0	9.9	24.99	-	-	46	-21.01
23	6.36	31.18	Pk	0	9.9	41.08	60	-18.92	-	-
24	6.36	16.05	Av	0	9.9	25.95	-	-	50	-24.05
25	13.56	27.16	Pk	.1	10	37.26	60	-22.74	-	-
26	13.56	15.89	Av	.1	10	25.99	-	-	50	-24.01
27	18.396	35.1	Pk	.1	10.1	45.3	60	-14.7	-	-
28	18.375	19.75	Av	.1	10.1	29.95	-	-	50	-20.05

Pk - Peak detector
Av - Average detection

4.2 Test Conditions and Results - RADIATED EMISSIONS

Test Engineer	28100/11993; 11993; 86150/11993	
Test Date	2023-02-21 to 2023-03-06	
Laboratory Parameters	Required prior to the test	During the test
Ambient Temperature	10 to 40 °C	23.2 – 24.2 C
Humidity	10 % to 90 %	26.9 – 50.2 %
	Frequency range	Measurement Point
Fully configured sample scanned over the following frequency range	Config 1,2,4:30-40000MHz Config 3: 30-13000MHz	3m

Limits - Class B

Frequency (MHz)	Limit (dBµV/m)	
30-88	40	NA
88-216	43.5	NA
216-960	46	NA
Above 960	54	NA
	Peak	Average
Above 1 GHz	74	54

Supplementary information: none.

Radiated Emissions EUT Configuration Settings

Power Interface #	EUT Configurations #	EUT Mode of Operation#
1,2	1	1,2,3,4

Supplementary information**: EUT Mode of Operation 1,2 and 4 tested with: QV7700L2FR**
EUT Mode of Operation 3 tested with: QV7700C9FR

Refer to R14639481-EP2 for setup photos.

Radiated Emissions Test Equipment

Test Equipment Used - Radiated Disturbance Emissions Test Equipment (Morrisville – Chamber 4)

Equip. ID	Description	Manufacturer/Brand	Model Number	Last Cal.	Next Cal.
	30-1000 MHz				
90629 (AT0075)	Hybrid Broadband Antenna	Sunol Sciences Corp.	JB3	2023-01-06	2024-01-06
	1-18 GHz				
AT0067	Double-Ridged Waveguide Horn Antenna, 1 to 18 GHz	ETS Lindgren	3117	2022-05-24	2023-05-24
	18-40 GHz				
204704	Horn Antenna, 18-26.5GHz	Com-Power	AH-626	2022-07-11	2023-07-11
204705	Horn Antenna, 26-40GHz	Com-Power	AH-640	2022-07-11	2023-07-11
	Gain-Loss Chains				
207639	Gain-loss string: 25-1000MHz	Various	Various	2022-05-20	2023-05-20
207640	Gain-loss string: 1-18GHz	Various	Various	2022-05-20	2023-05-20
225795	Gain-loss string: 18-40GHz	Various	Various	2022-10-12	2023-10-12
	Receiver & Software				
197954	Spectrum Analyzer	Rohde & Schwarz	ESW44	2023-02-02	2024-02-02
72823	Spectrum Analyzer	Agilent	E4446A	2022-06-08	2023-06-08
SOFTEMI	EMI Software	UL	Version 9.5 (18 Oct 2021)		
	Additional Equipment used				
200540	Environmental Meter	Fisher Scientific	15-077-963 (s/n 181474409)	2022-08-05	2023-08-05

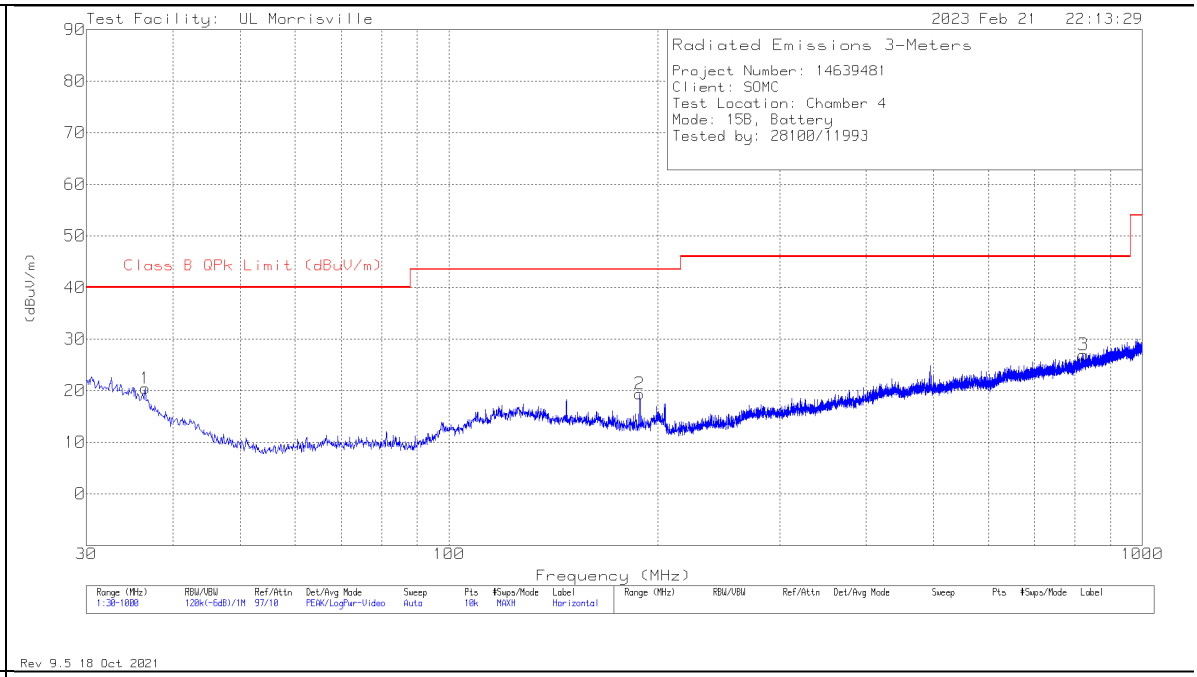
Test Equipment Used - Radiated Disturbance Emissions Test Equipment (Morrisville – Chamber 2)

Equip. ID	Description	Manufacturer/Brand	Model Number	Last Cal.	Next Cal.
	30-1000 MHz				
AT0074	Hybrid Broadband Antenna	Sunol Sciences Corp.	JB3	2022-09-07	2023-09-07
	1-18 GHz				
206211	Double-Ridged Waveguide Horn Antenna, 1 to 18 GHz	ETS Lindgren	3117	2022-03-21	2023-03-21
	Gain-Loss Chains				
91978	Gain-loss string: 25-1000MHz	Various	Various	2022-05-10	2023-05-10
91977	Gain-loss string: 1-18GHz	Various	Various	2022-05-10	2023-05-10
	Receiver & Software				
197955	Spectrum Analyzer	Rohde & Schwarz	ESW44	2022-03-08	2023-03-08
SOFTEMI	EMI Software	UL	Version 9.5 (18 Oct 2021)		
	Additional Equipment used				
210642	Environmental Meter	Fisher Scientific	15-077-963 s/n 210701942	2021-08-16	2023-08-16
213025	Wideband Radio Communications Tester	Rohde and Schwarz	CMW500	2022-09-13	2023-09-13

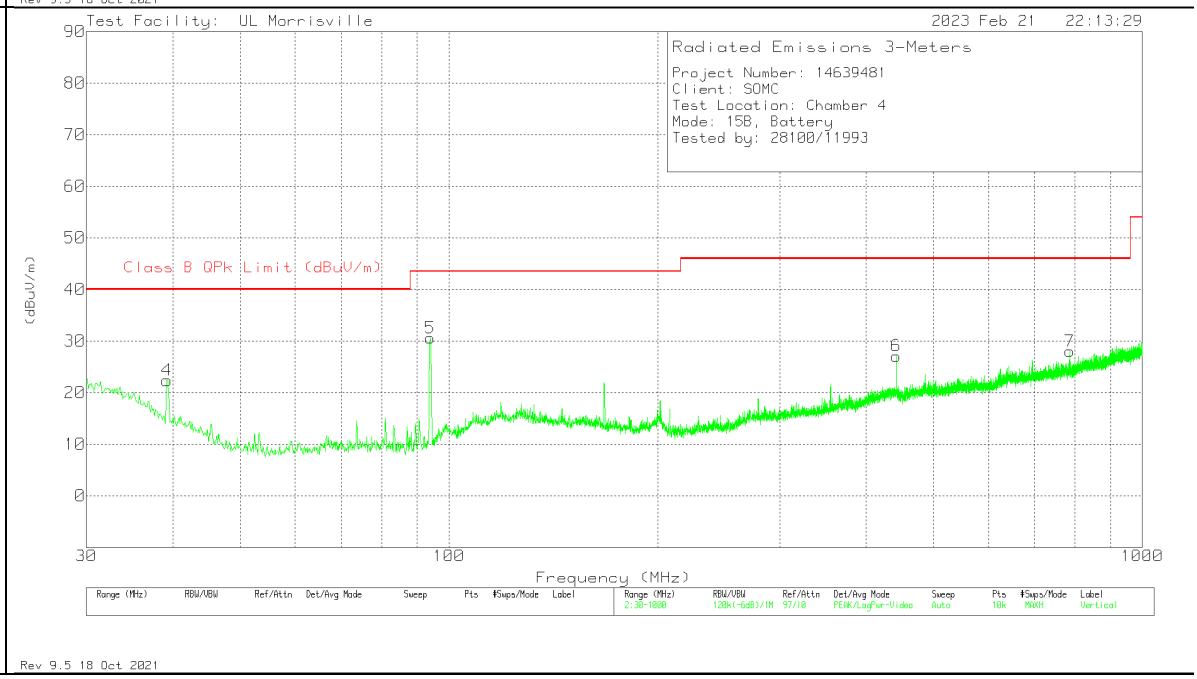
RADIATED EMISSIONS 30 TO 1000 MHz - Battery

Radiated Emissions Graph

HORIZONTAL



VERTICAL



Radiated Emissions Data Points

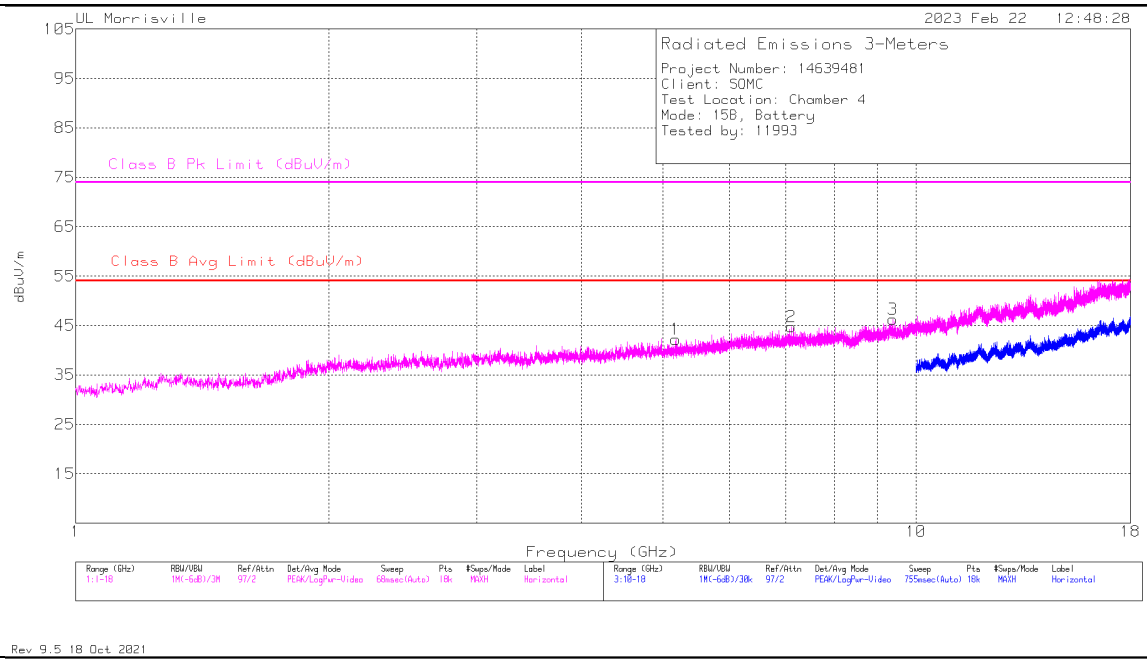
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	90629 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Class B QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	36.499	29.57	Pk	22.4	-31.5	20.47	40	-19.53	0-360	100	H
4	39.215	33.9	Pk	20.2	-31.7	22.4	40	-17.6	0-360	200	V
5	94.02	46.31	Pk	15.1	-30.8	30.61	43.52	-12.91	0-360	100	V
2	188.498	31.81	Pk	17.4	-29.8	19.41	43.52	-24.11	0-360	200	H
6	441.668	32.93	Pk	22.7	-28.5	27.13	46.02	-18.89	0-360	100	V
7	786.794	27.44	Pk	27.2	-26.6	28.04	46.02	-17.98	0-360	100	V
3	822.587	25.19	Pk	27.8	-26	26.99	46.02	-19.03	0-360	100	H

Pk - Peak detector

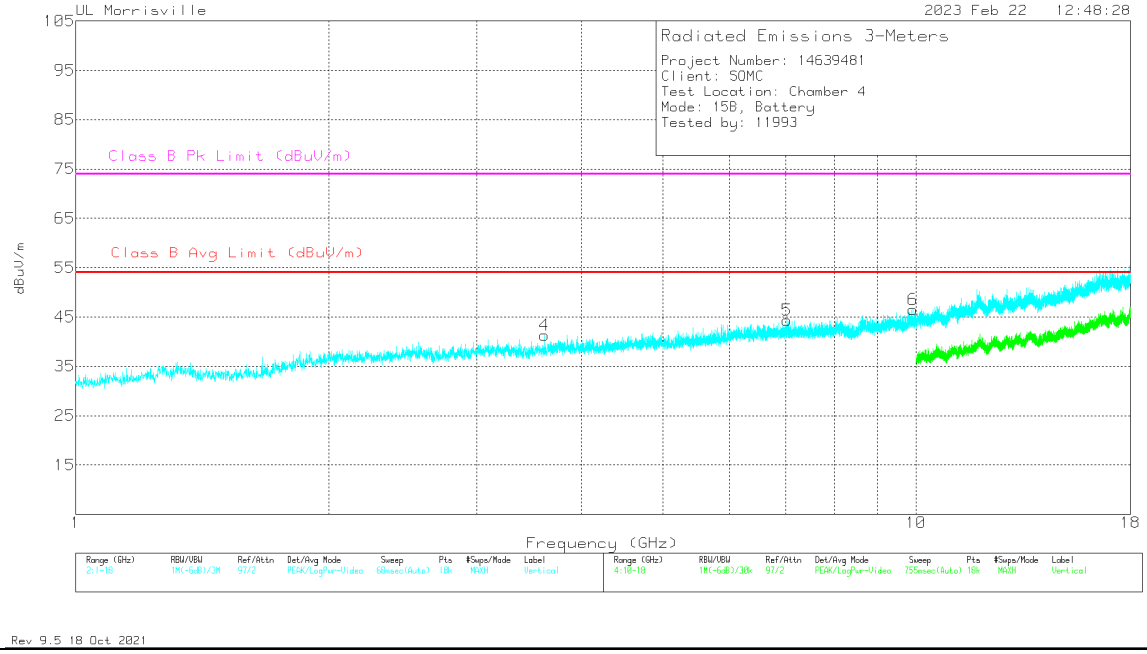
RADIATED EMISSIONS 1000 TO 18,000 MHz – Battery

Radiated Emissions Graph

HORIZONTAL



VERTICAL



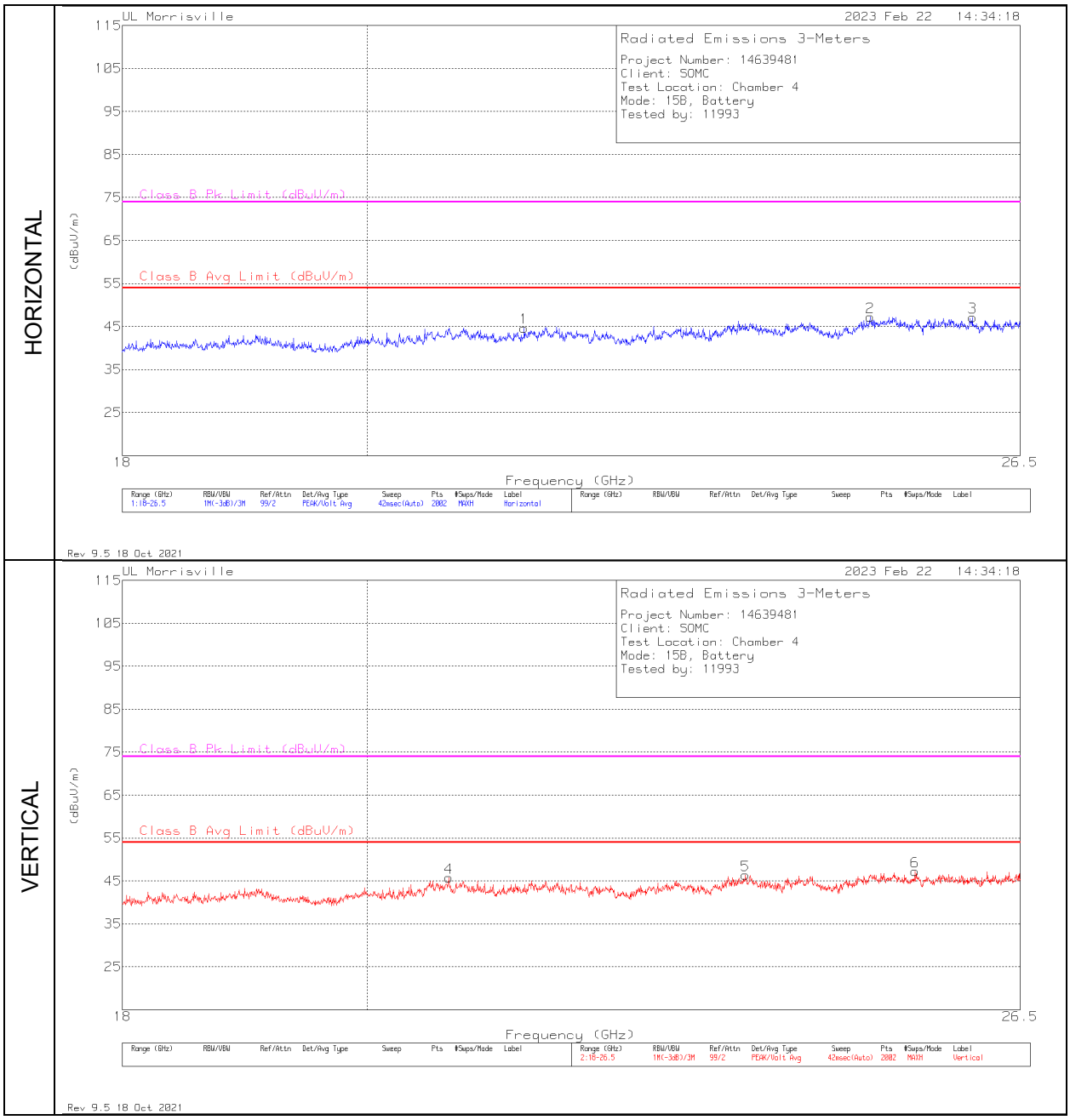
Radiated Emissions Data Points

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0067 (dB/m)	Gain/Loss (dB)	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	3.61139	42.46	Pk	33.1	-34.3	41.26	54	-12.74	74	-32.74	0-360	200	V
1	5.17728	40.13	Pk	34.2	-32.1	42.23	54	-11.77	74	-31.77	0-360	100	H
5	7.02839	37.21	Pk	35.7	-28.5	44.41	54	-9.59	74	-29.59	0-360	200	V
2	7.10489	38.31	Pk	35.6	-29.2	44.71	54	-9.29	74	-29.29	0-360	100	H
3	9.38572	36.05	Pk	36.5	-26.3	46.25	54	-7.75	74	-27.75	0-360	100	H
6	9.90988	36.48	Pk	37	-27	46.48	54	-7.52	74	-27.52	0-360	200	V

Pk - Peak detector

RADIATED EMISSIONS 18,000 TO 26,000 MHz – Battery

Radiated Emissions Graph



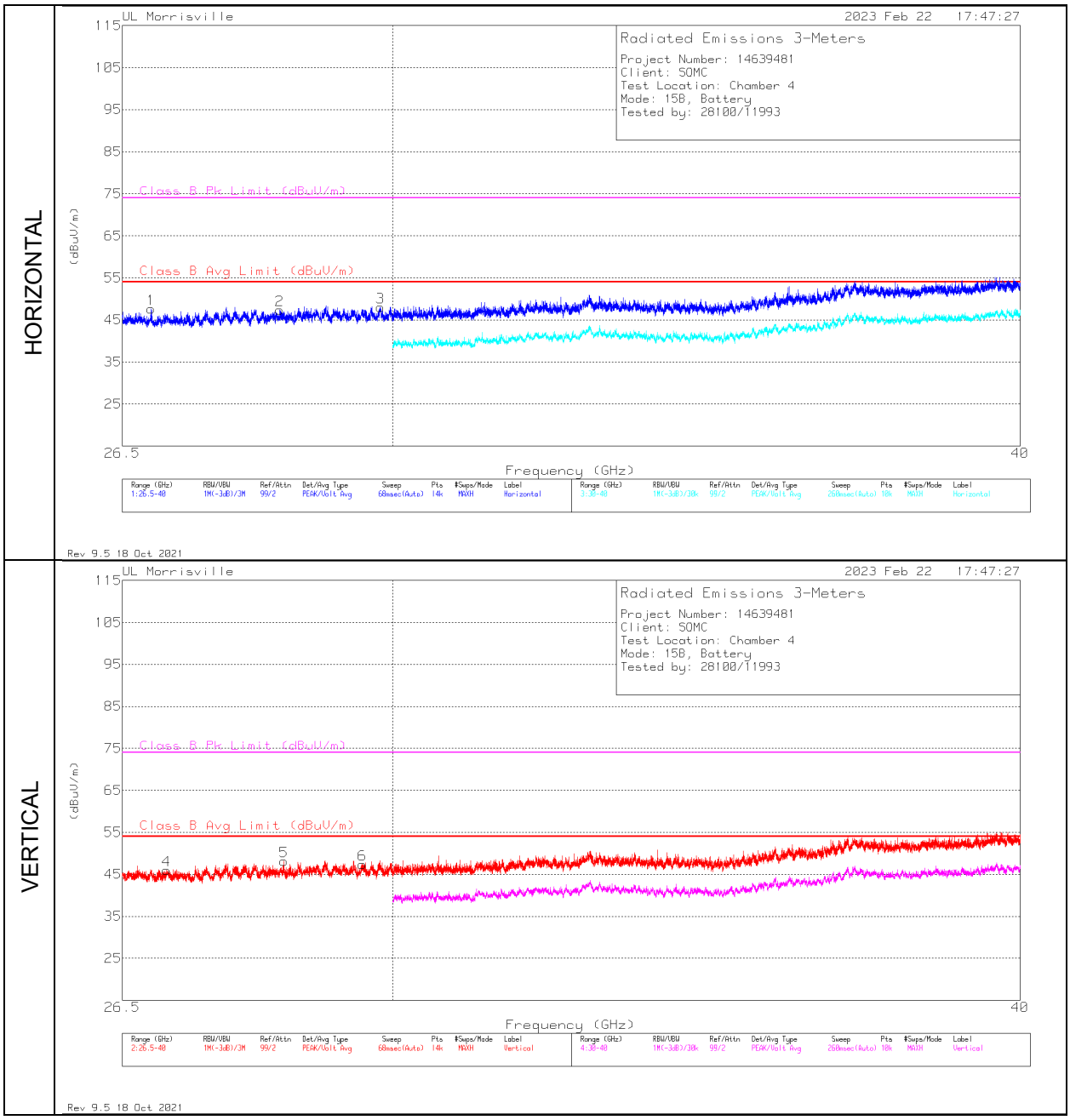
Radiated Emissions Data Points

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	204704 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Class B Avg Limit (dBuV/m)	Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	20.71864	50.64	Pk	34	-38.9	45.74	54	-8.26	74	-28.26	0-360	100	V
1	21.40255	49.8	Pk	33.9	-39	44.7	54	-9.3	74	-29.3	0-360	250	H
5	23.54348	48.53	Pk	35.2	-37.3	46.43	54	-7.57	74	-27.57	0-360	150	V
2	24.84333	48.91	Pk	35.5	-37.2	47.21	54	-6.79	74	-26.79	0-360	250	H
6	25.32759	48.08	Pk	36.2	-37	47.28	54	-6.72	74	-26.72	0-360	150	V
3	25.96052	48.48	Pk	35.9	-37.2	47.18	54	-6.82	74	-26.82	0-360	300	H

Pk - Peak detector

RADIATED EMISSIONS 26,000 TO 40,000 MHz – Battery

Radiated Emissions Graph



Radiated Emissions Data Points

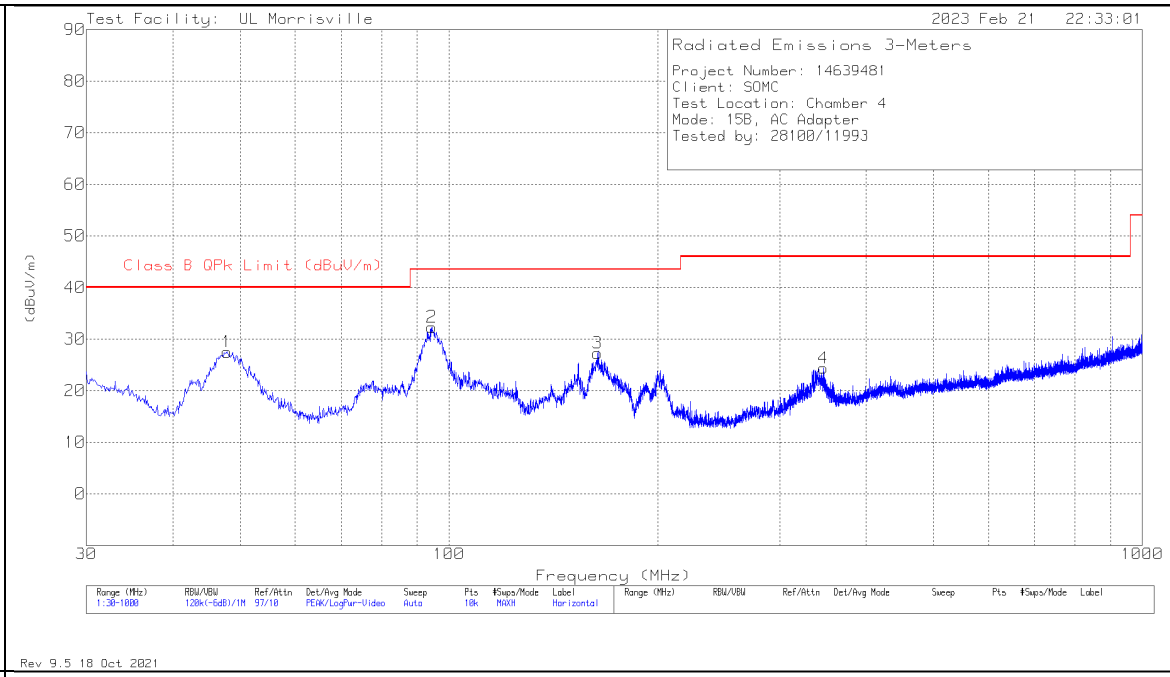
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	204705 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Class B Avg Limit (dBuV/m)	Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	26.85483	47.93	Pk	36.2	-36.5	47.63	54	-6.37	74	-26.37	0-360	100	H
4	27.04093	47.21	Pk	36.2	-37.4	46.01	54	-7.99	74	-27.99	0-360	300	V
2	28.48339	48.86	Pk	36.5	-38	47.36	54	-6.64	74	-26.64	0-360	250	H
5	28.53647	49.83	Pk	36.5	-37.6	48.73	-	-	74	-25.27	319	170	V
	28.53626	40.93	Av	36.5	-37.6	39.83	54	-14.17	-	-	319	170	V
6	29.58549	48.19	Pk	36.5	-37.3	47.39	54	-6.61	74	-26.61	0-360	150	V
3	29.83053	50.23	Pk	36.7	-37.2	49.73	-	-	74	-24.27	149	357	H
	29.82871	41.3	Av	36.7	-37.1	40.9	54	-13.1	-	-	149	357	H

Pk - Peak detector
Av - Average detection

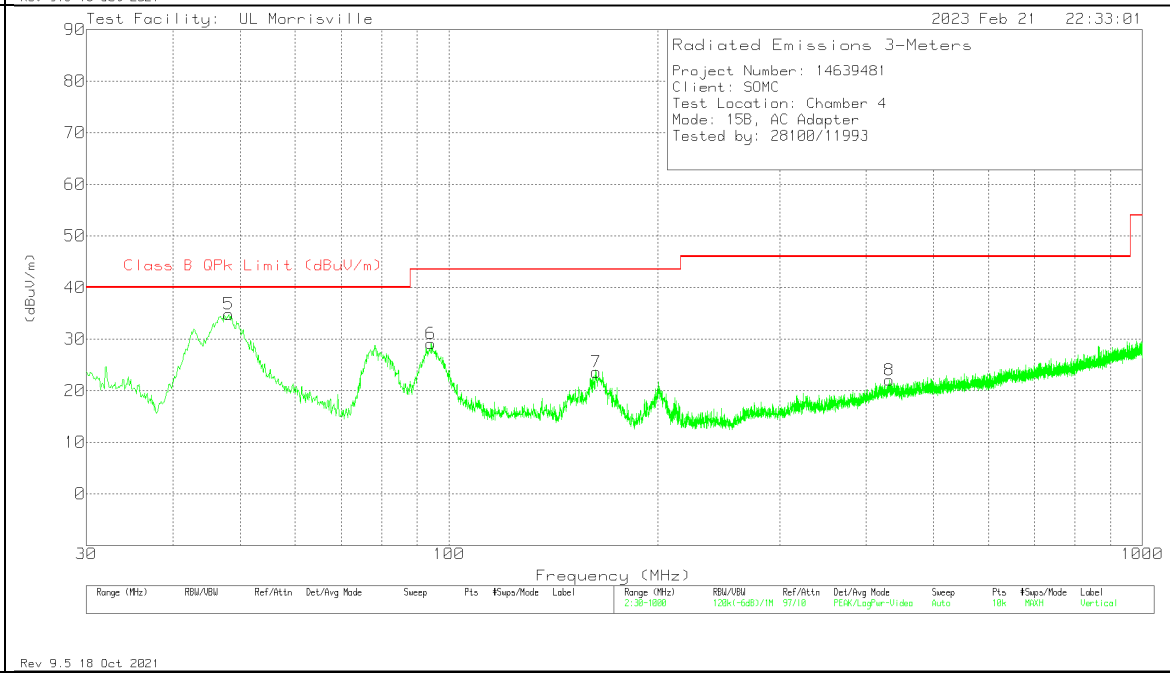
RADIATED EMISSIONS 30 TO 1000 MHz – Power Supply

Radiated Emissions Graph

HORIZONTAL



VERTICAL



Radiated Emissions Data Points

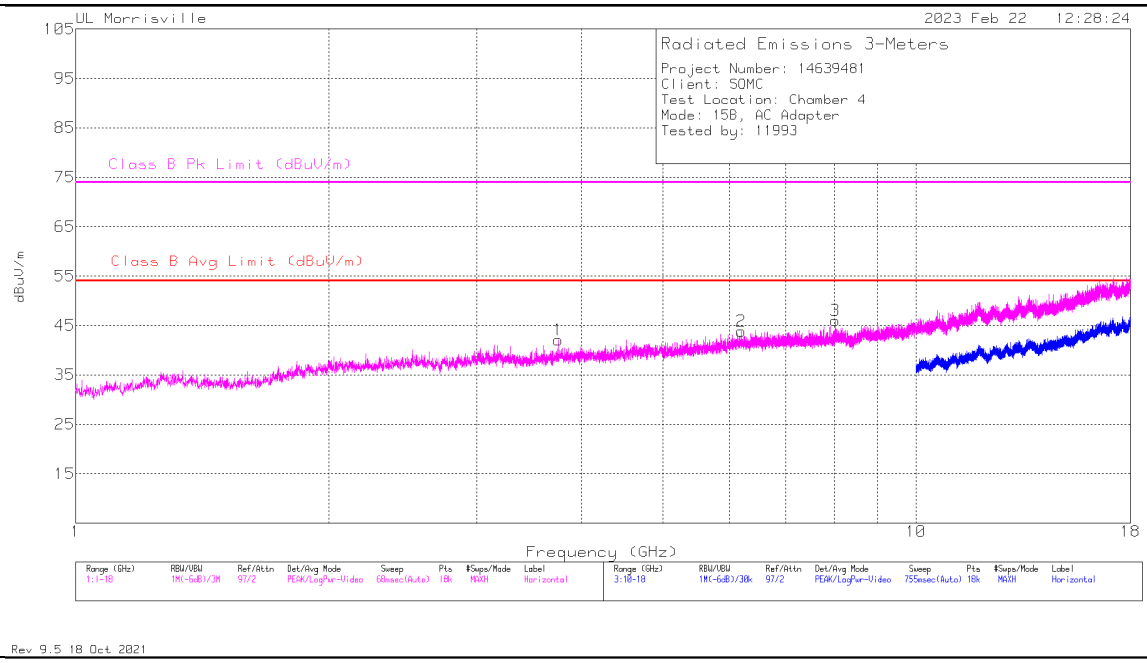
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	90629 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Class B QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	47.848	44.01	Pk	14.9	-31.4	27.51	40	-12.49	0-360	300	H
5	48.1615	48.58	Qp	14.7	-31.4	31.88	40	-8.12	338	102	V
6	94.214	44.74	Pk	15.2	-30.8	29.14	43.52	-14.38	0-360	100	V
2	94.505	47.83	Pk	15.3	-30.8	32.33	43.52	-11.19	0-360	100	H
7	163.181	35.32	Pk	18.4	-30.1	23.62	43.52	-19.9	0-360	100	V
3	163.763	39.07	Pk	18.3	-30.1	27.27	43.52	-16.25	0-360	100	H
4	346.996	32.79	Pk	20.4	-28.8	24.39	46.02	-21.63	0-360	100	H
8	431.483	27.75	Pk	22.6	-28.3	22.05	46.02	-23.97	0-360	100	V

Pk - Peak detector
Qp - Quasi-Peak detector

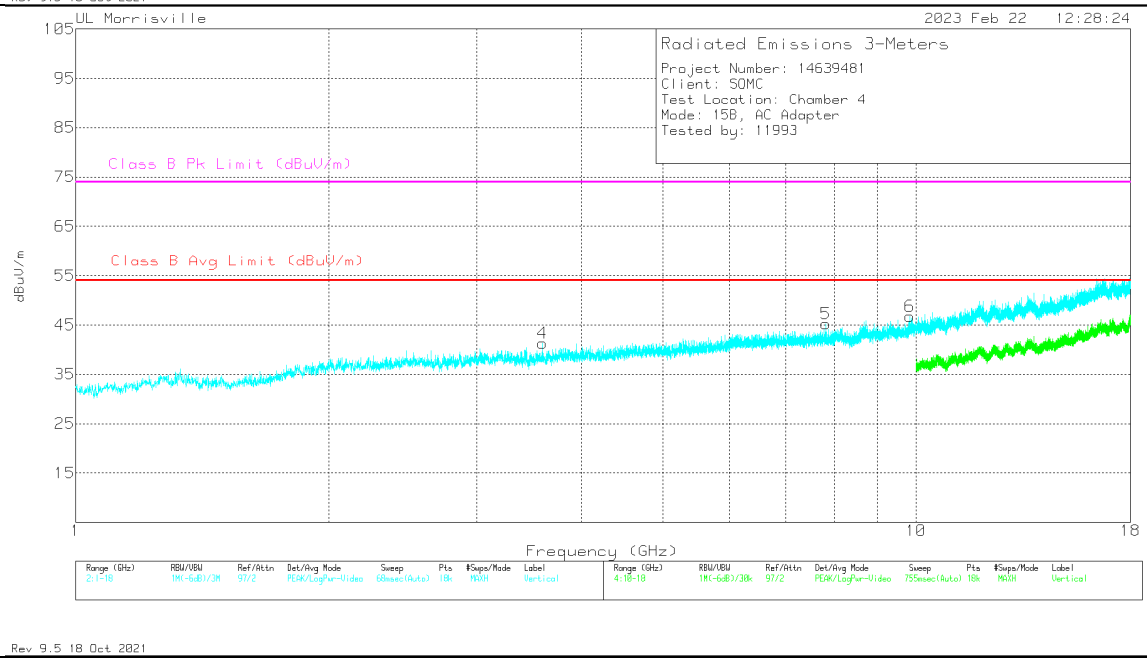
RADIATED EMISSIONS 1000 TO 18,000 MHz – Power Supply

Radiated Emissions Graph

HORIZONTAL



VERTICAL



Radiated Emissions Data Points

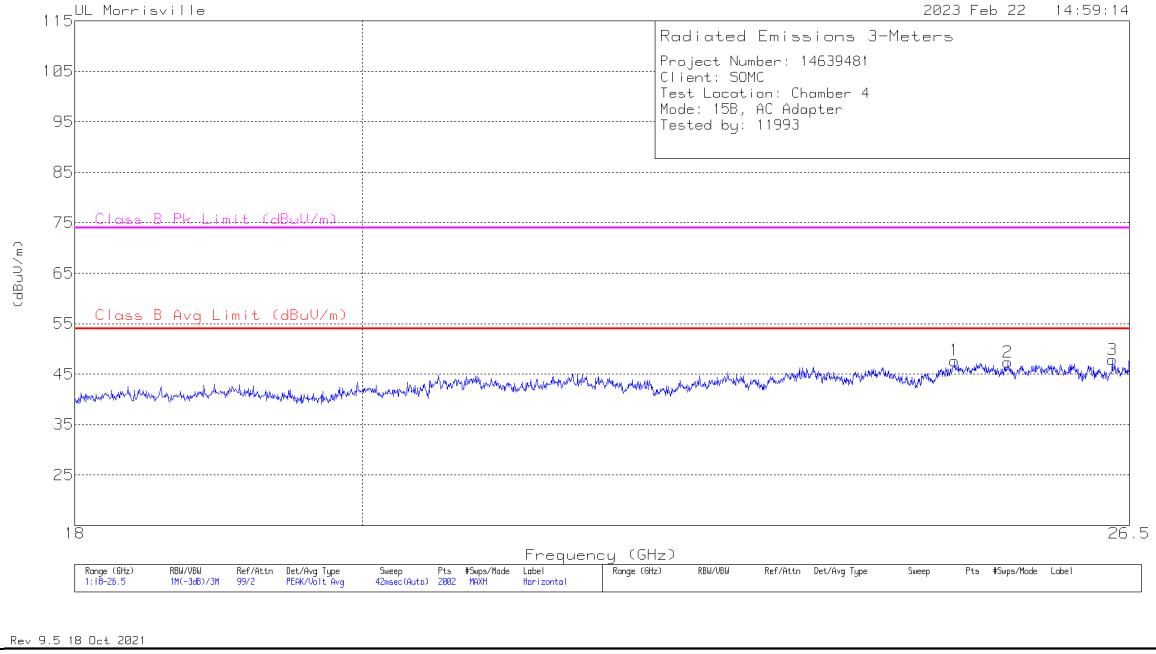
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0067 (dB/m)	Gain/Loss (dB)	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	3.5925	42.76	Pk	33.1	-34.6	41.26	54	-12.74	74	-32.74	0-360	200	V
1	3.75305	42.71	Pk	33.5	-34.1	42.11	54	-11.89	74	-31.89	0-360	100	H
2	6.19539	38.3	Pk	35.5	-30	43.8	54	-10.2	74	-30.2	0-360	100	H
5	7.81511	38.08	Pk	35.7	-28.5	45.28	54	-8.72	74	-28.72	0-360	200	V
3	8.01533	38.64	Pk	35.8	-28.4	46.04	54	-7.96	74	-27.96	0-360	100	H
6	9.84094	36.43	Pk	36.9	-26.6	46.73	54	-7.27	74	-27.27	0-360	200	V

Pk - Peak detector

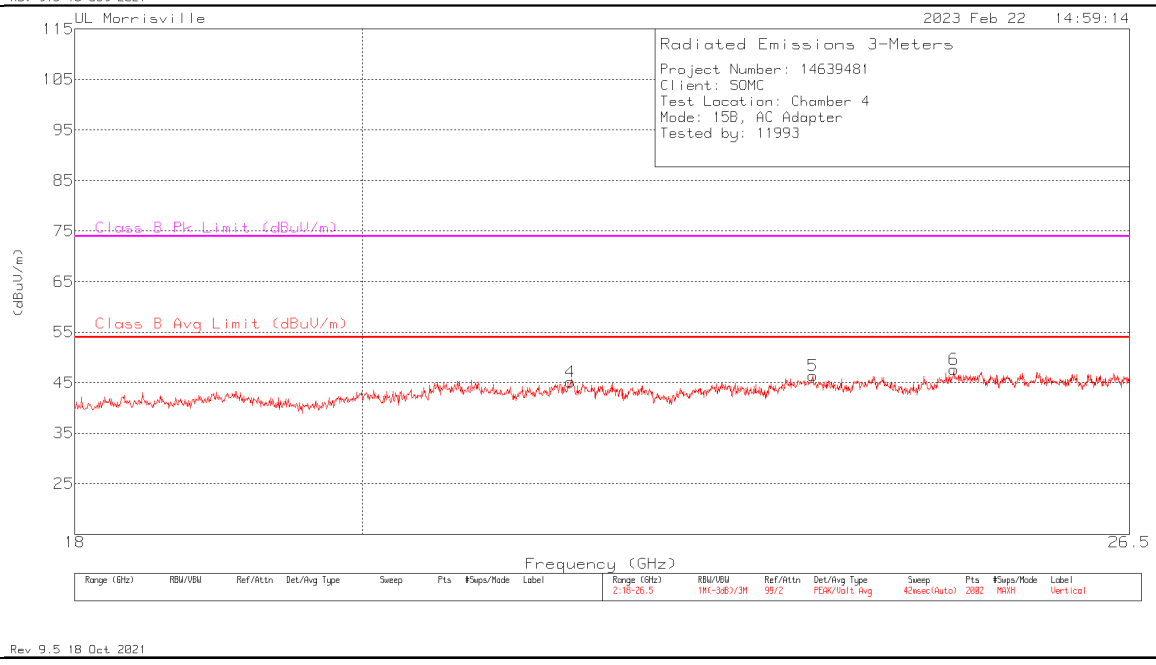
RADIATED EMISSIONS 18,000 TO 26,000 MHz – Power Supply

Radiated Emissions Graph

HORIZONTAL



VERTICAL



Radiated Emissions Data Points

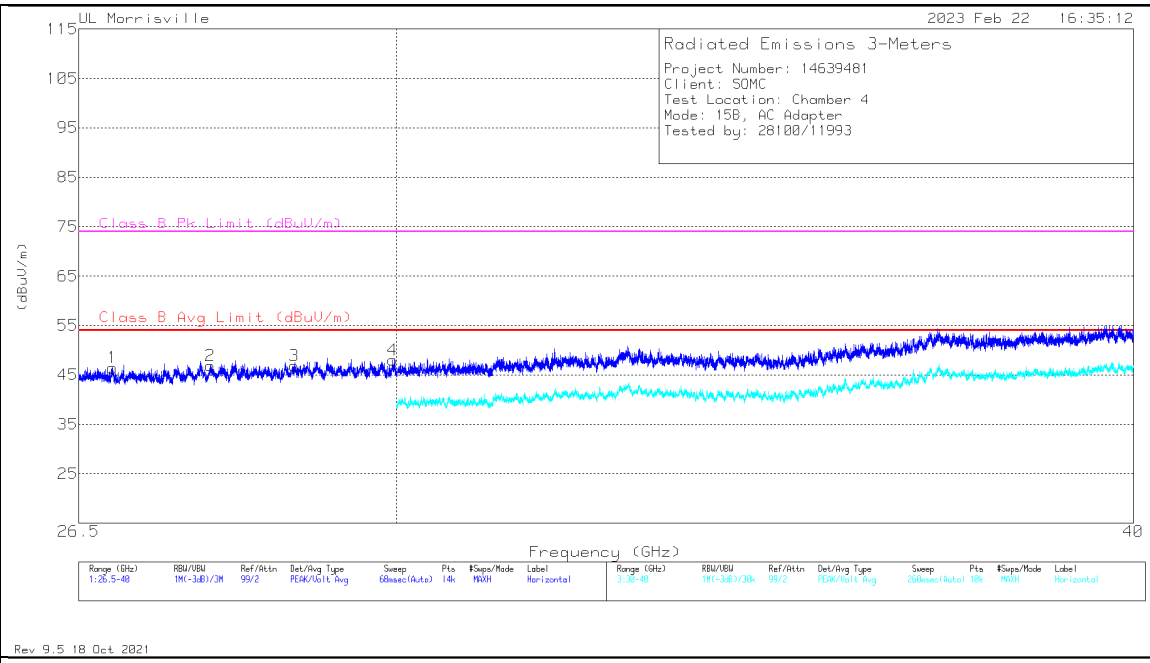
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	204704 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Class B Avg Limit (dBuV/m)	Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	21.58946	49.8	Pk	34.1	-38.8	45.1	54	-8.9	74	-28.9	0-360	150	V
5	23.59445	47.85	Pk	35.3	-36.8	46.35	54	-7.65	74	-27.65	0-360	250	V
6	24.84758	49.3	Pk	35.5	-37.2	47.6	54	-6.4	74	-26.4	0-360	150	V
1	24.85607	49.58	Pk	35.5	-37.4	47.68	54	-6.32	74	-26.32	0-360	250	H
2	25.34458	48.21	Pk	36.1	-36.9	47.41	54	-6.59	74	-26.59	0-360	300	H
3	26.33433	48.8	Pk	35.9	-36.8	47.9	54	-6.1	74	-26.1	0-360	150	H

Pk - Peak detector

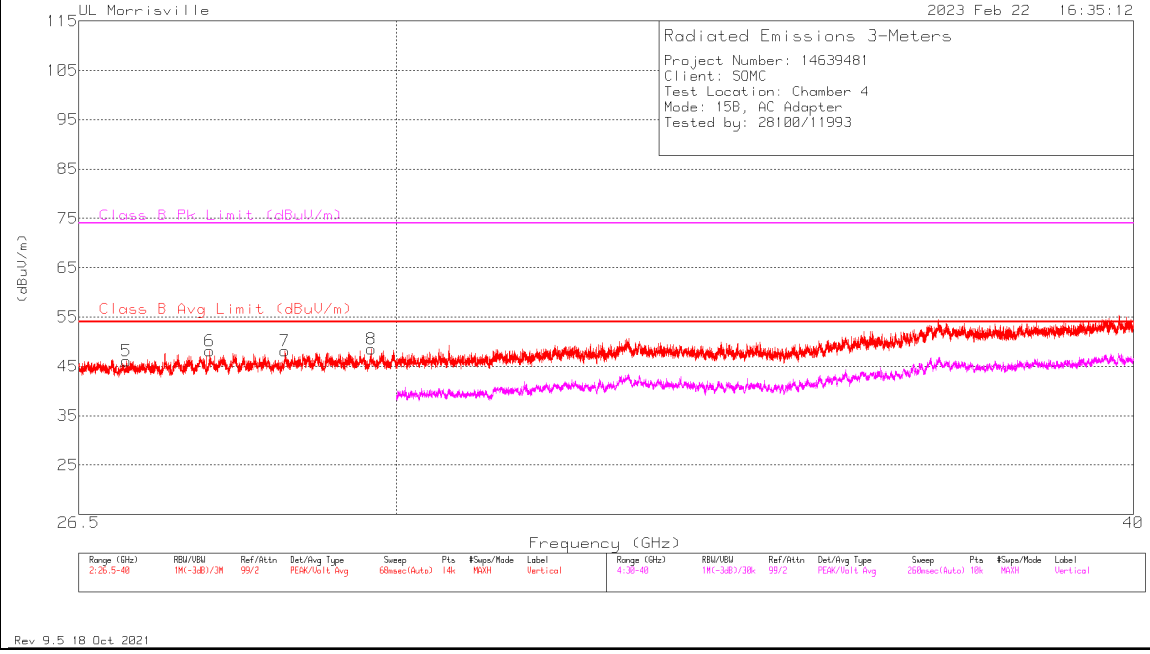
RADIATED EMISSIONS 26,000 TO 40,000 MHz – Power Supply

Radiated Emissions Graph

HORIZONTAL



VERTICAL



Radiated Emissions Data Points

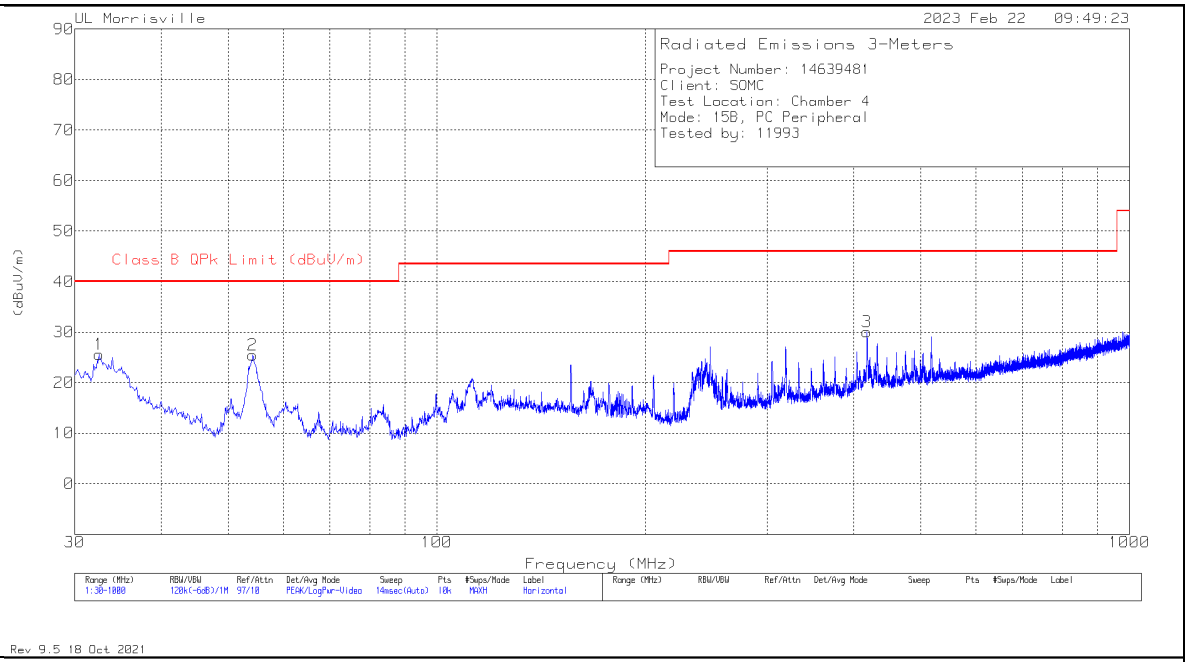
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	204705 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Class B Avg Limit (dBuV/m)	Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	26.85194	46.83	Pk	36.2	-36.6	46.43	54	-7.57	74	-27.57	0-360	100	H
5	26.99561	47.88	Pk	36.1	-37.9	46.08	54	-7.92	74	-27.92	0-360	150	V
6	27.88902	49.4	Pk	36.4	-37.3	48.5	-	-	74	-25.5	114	207	V
	27.88849	41.17	Av	36.4	-37.3	40.27	54	-13.73	-	-	114	207	V
2	27.89908	47.52	Pk	36.4	-37.1	46.82	54	-7.18	74	-27.18	0-360	200	H
7	28.7229	50.56	Pk	36.4	-36.9	50.06	-	-	74	-23.94	123	335	V
	28.72171	41.71	Av	36.4	-37	41.11	54	-12.89	-	-	123	335	V
3	28.82569	47.95	Pk	36.4	-37.5	46.85	54	-7.15	74	-27.15	0-360	100	H
8	29.70382	49.52	Pk	36.6	-37.1	49.02	-	-	74	-24.98	56	196	V
	29.70701	41.55	Av	36.6	-37.2	40.95	54	-13.05	-	-	56	196	V
4	29.95672	48.37	Pk	36.8	-37.2	47.97	54	-6.03	74	-26.03	0-360	100	H

Pk - Peak detector
Av - Average detection

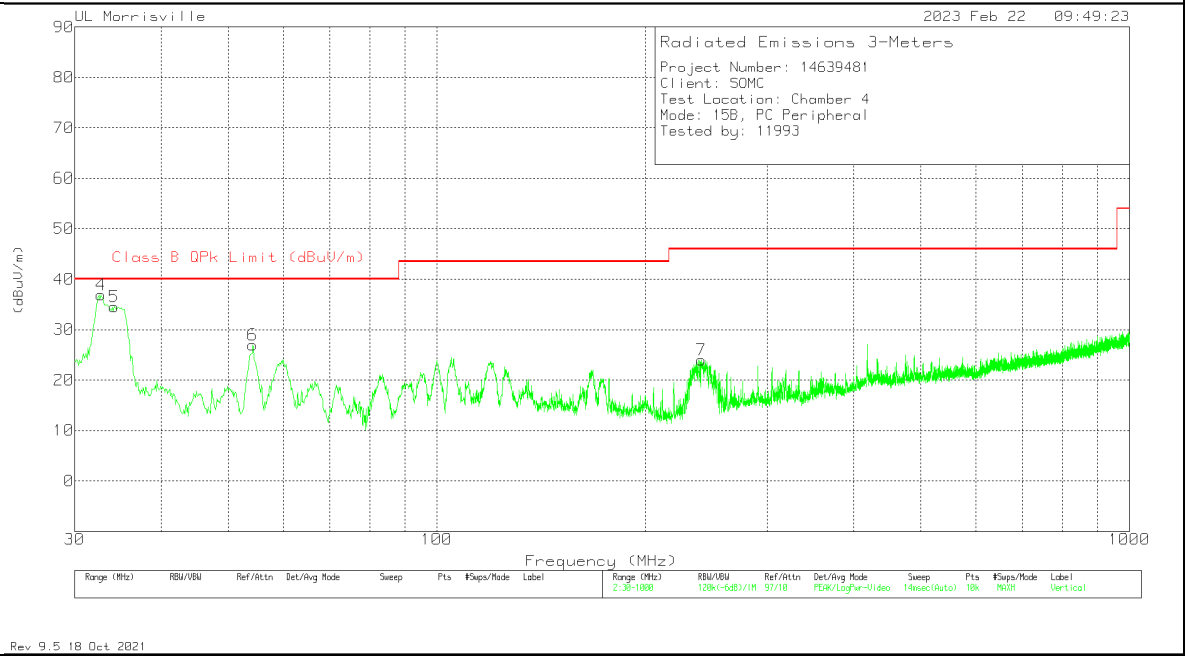
RADIATED EMISSIONS 30 TO 1000 MHz – PC Peripheral

Radiated Emissions Graph

HORIZONTAL



VERTICAL



Radiated Emissions Data Points

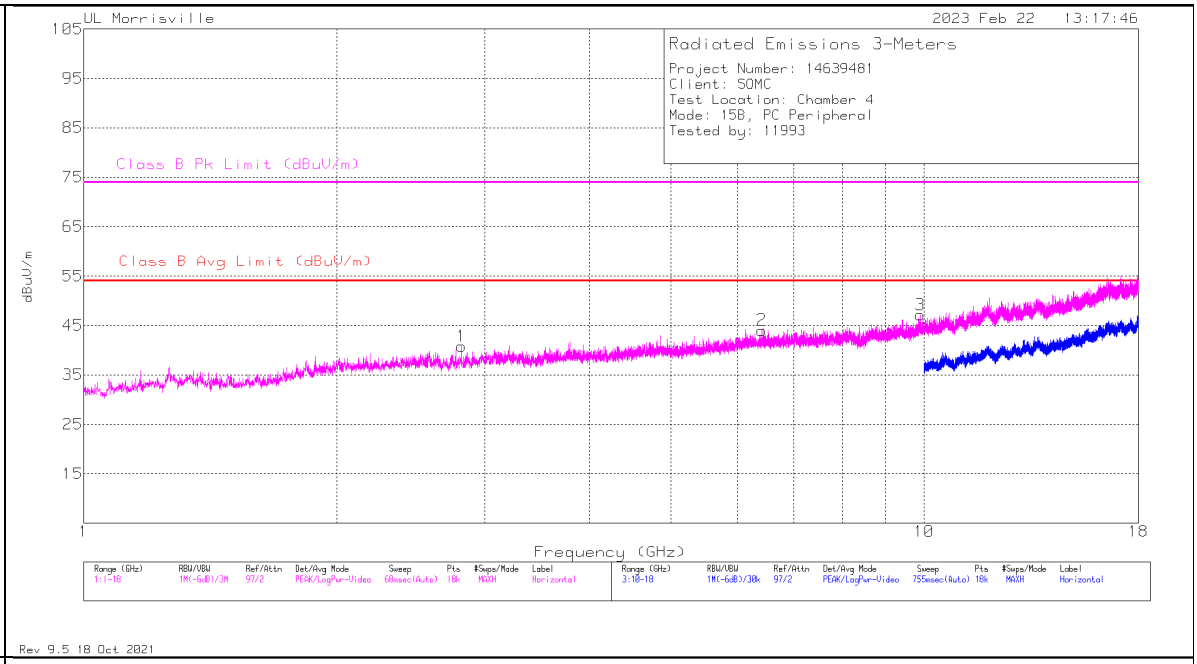
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	90629 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Class B QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	32.522	31.94	Pk	25.3	-31.7	25.54	40	-14.46	0-360	200	H
4	32.7131	41.17	Qp	25.2	-31.7	34.67	40	-5.33	271	103	V
5	33.9758	39.67	Qp	24.2	-31.7	32.17	40	-7.83	258	103	V
2	54.25	43.36	Pk	13.5	-31.4	25.46	40	-14.54	0-360	300	H
6	54.25	44.9	Pk	13.5	-31.4	27	40	-13	0-360	100	V
7	241.072	35.7	Pk	17.7	-29.4	24	46.02	-22.02	0-360	100	V
3	418	36.27	Pk	22.3	-28.5	30.07	46.02	-15.95	0-360	100	H

Pk - Peak detector
Qp - Quasi-Peak detector

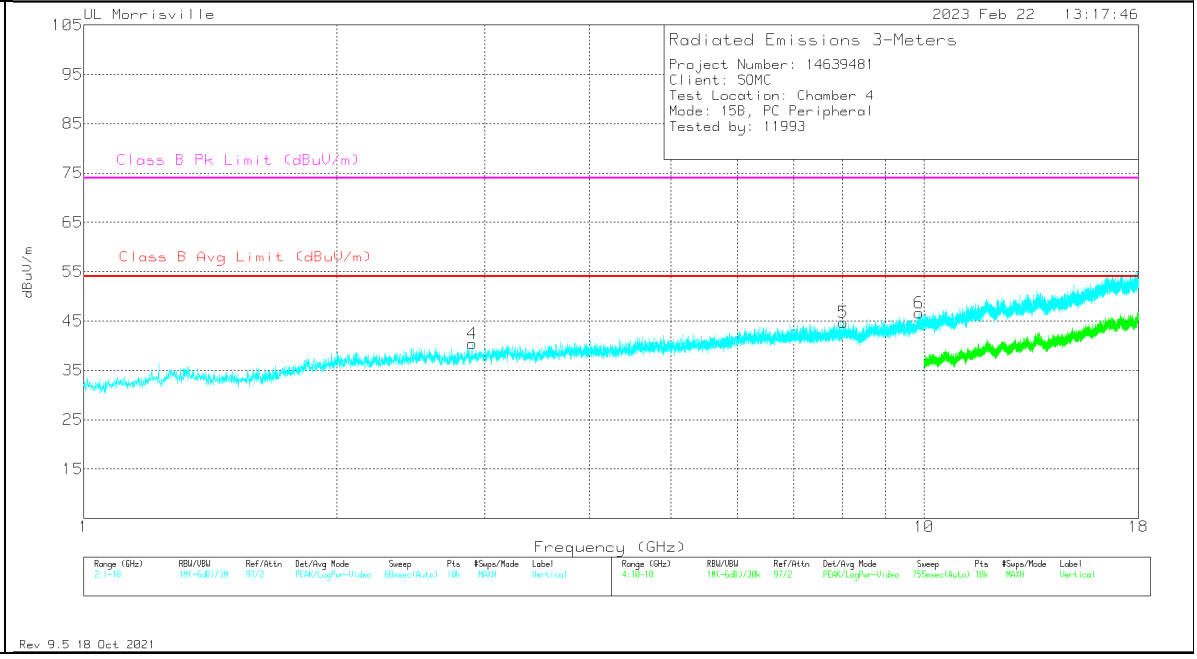
RADIATED EMISSIONS 1000 TO 18,000 MHz – PC Peripheral

Radiated Emissions Graph

HORIZONTAL



VERTICAL



Radiated Emissions Data Points

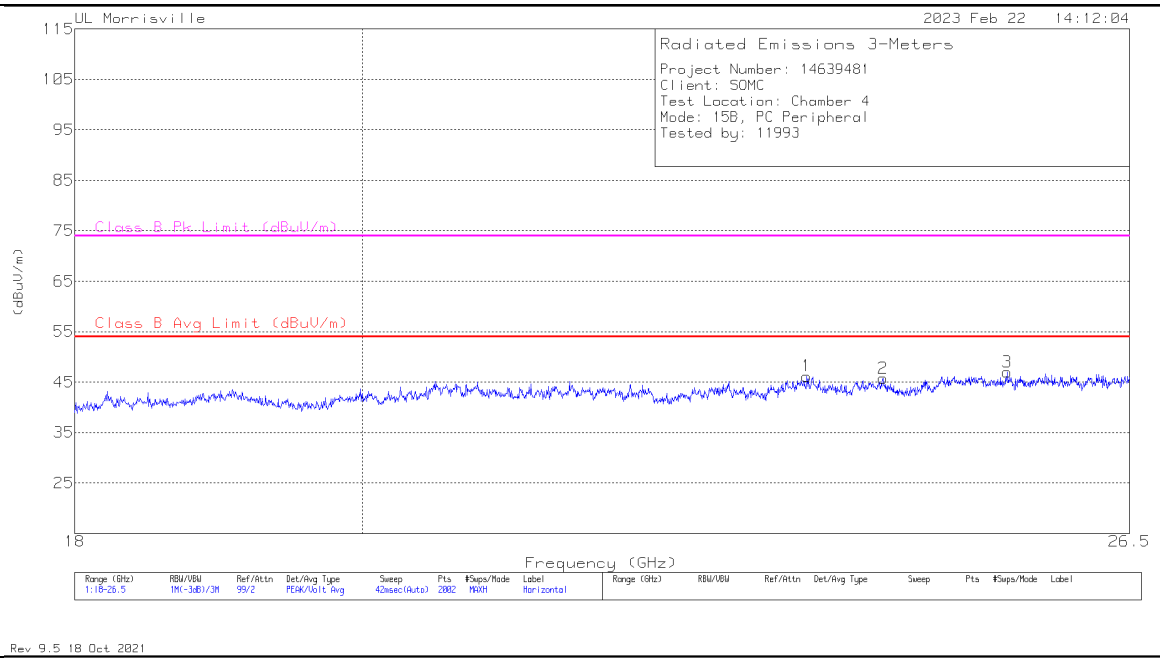
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0067 (dB/m)	Gain/Loss (dB)	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	2.81522	43.92	Pk	32.6	-35.7	40.82	54	-13.18	74	-33.18	0-360	100	H
4	2.89739	43.57	Pk	32.6	-35.7	40.47	54	-13.53	74	-33.53	0-360	200	V
2	6.41544	38.34	Pk	35.6	-29.9	44.04	54	-9.96	74	-29.96	0-360	100	H
5	8.01344	37.3	Pk	35.8	-28.4	44.7	54	-9.3	74	-29.3	0-360	200	V
6	9.86644	36.13	Pk	36.9	-26.4	46.63	54	-7.37	74	-27.37	0-360	200	V
3	9.90422	37.09	Pk	37	-26.9	47.19	54	-6.81	74	-26.81	0-360	100	H

Pk - Peak detector

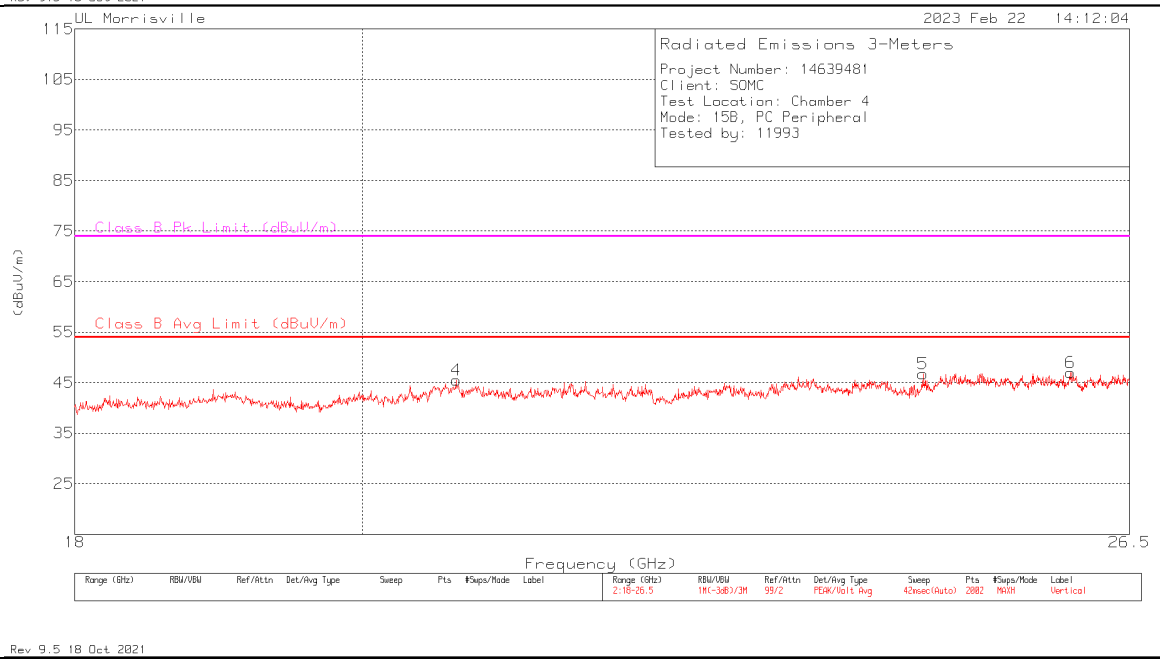
RADIATED EMISSIONS 18,000 TO 26,000 MHz – PC Peripheral

Radiated Emissions Graph

HORIZONTAL



VERTICAL



Radiated Emissions Data Points

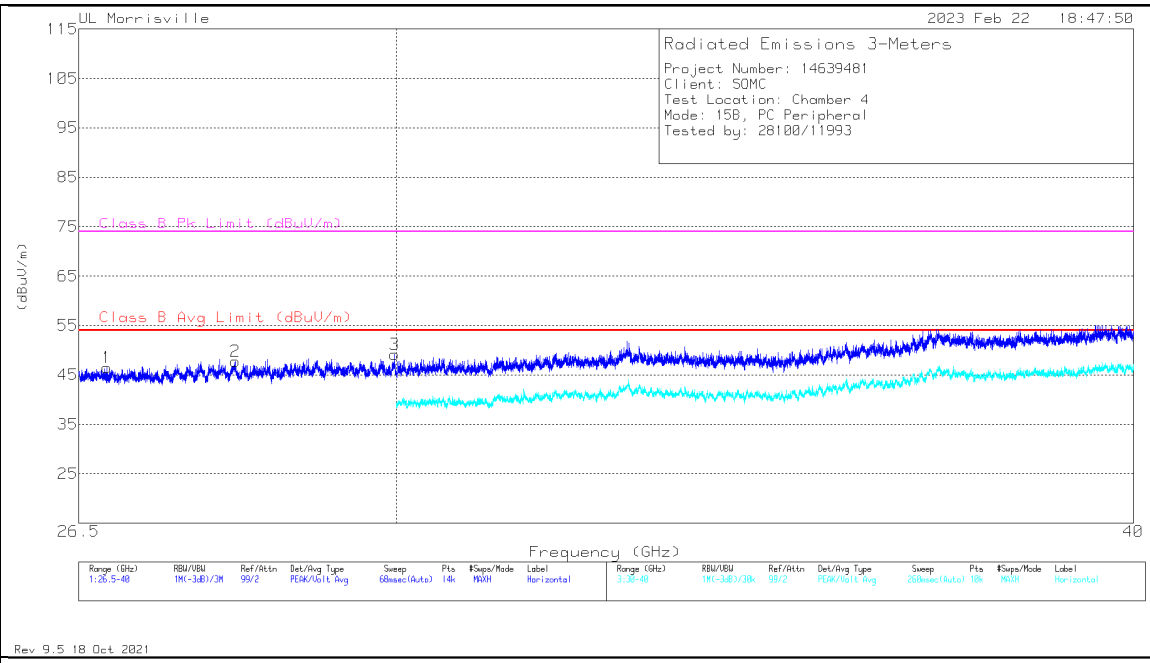
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	204704 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Class B Avg Limit (dBuV/m)	Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	20.70165	50.51	Pk	34	-39	45.51	54	-8.49	74	-28.49	0-360	200	V
1	23.54348	48.29	Pk	35.2	-37.3	46.19	54	-7.81	74	-27.81	0-360	300	H
2	24.21039	47.91	Pk	35.1	-37.2	45.81	54	-8.19	74	-28.19	0-360	300	H
5	24.56722	48.99	Pk	35.1	-37.3	46.79	54	-7.21	74	-27.21	0-360	200	V
3	25.33608	47.81	Pk	36.1	-36.9	47.01	54	-6.99	74	-26.99	0-360	300	H
6	25.93503	48	Pk	35.9	-36.9	47	54	-7	74	-27	0-360	250	V

Pk - Peak detector

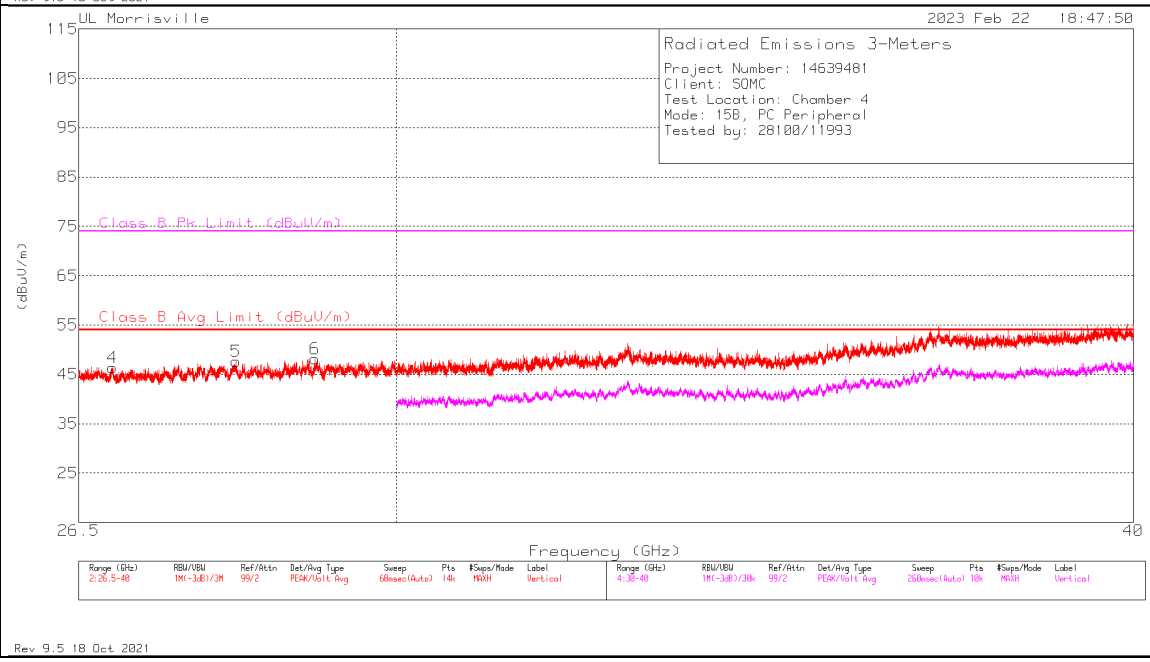
RADIATED EMISSIONS 26,000 TO 40,000 MHz – PC Peripheral

Radiated Emissions Graph

HORIZONTAL



VERTICAL



Radiated Emissions Data Points

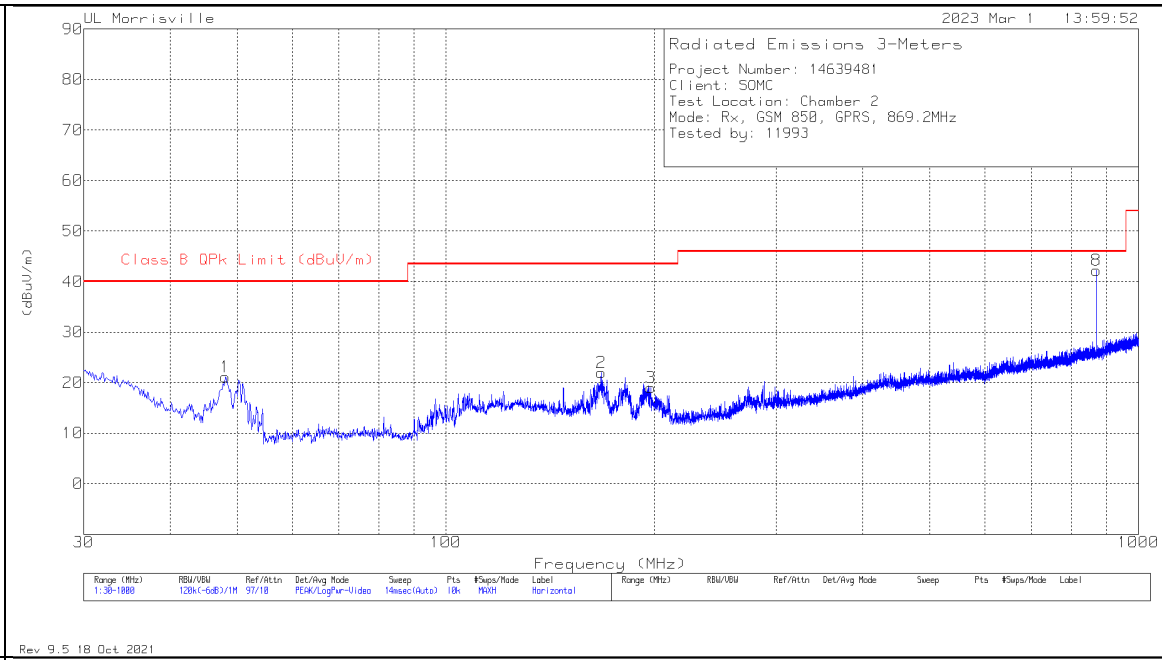
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	204705 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Class B Avg Limit (dBuV/m)	Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	26.79505	48.24	Pk	36.2	-37.9	46.54	54	-7.46	74	-27.46	0-360	100	H
4	26.85387	46.65	Pk	36.2	-36.5	46.35	54	-7.65	74	-27.65	0-360	300	V
2	28.1681	48.35	Pk	36.6	-37.2	47.75	54	-6.25	74	-26.25	0-360	100	H
5	28.17581	48.32	Pk	36.6	-37.3	47.62	54	-6.38	74	-26.38	0-360	300	V
6	29.06151	50.04	Pk	36.5	-37.7	48.84	-	-	74	-25.16	12	336	V
	29.05808	41.68	Av	36.5	-37.9	40.28	54	-13.72	-	-	12	336	V
3	29.97978	49.05	Pk	36.8	-37.5	48.35	-	-	74	-25.65	120	300	H
	29.98046	41.06	Av	36.8	-37.5	40.36	54	-13.64	-	-	120	300	H

Pk - Peak detector
Av - Average detection

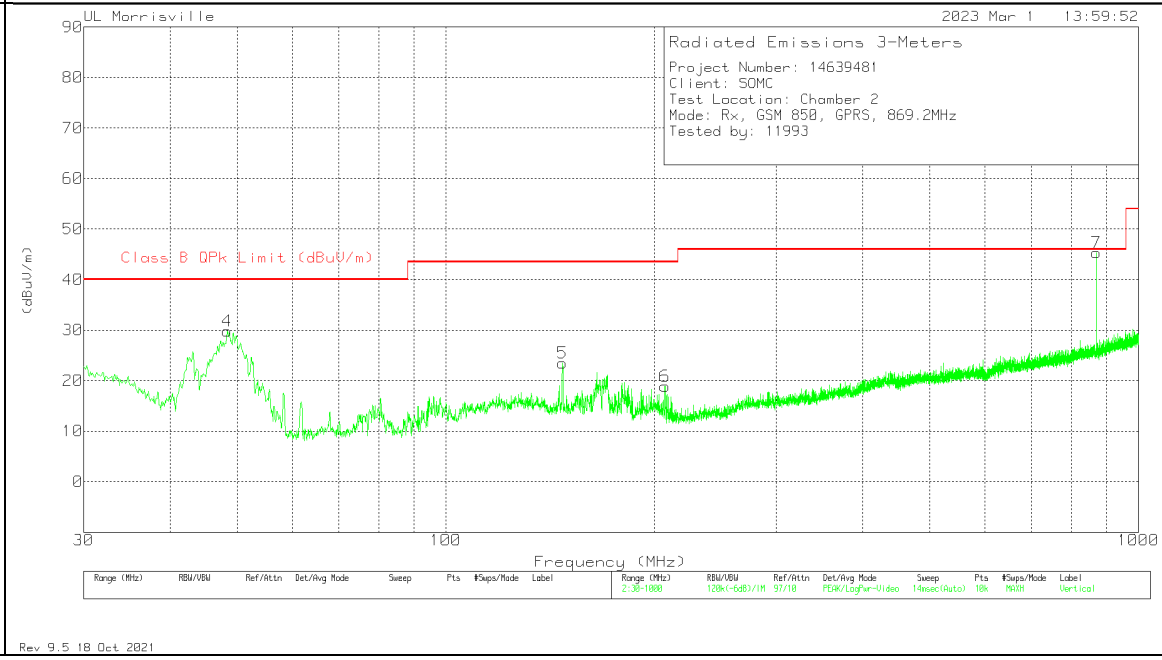
RADIATED EMISSIONS 30 TO 1000 MHz – GSM850 Rx 869.2MHz

Radiated Emissions Graph

HORIZONTAL



VERTICAL



Radiated Emissions Data Points

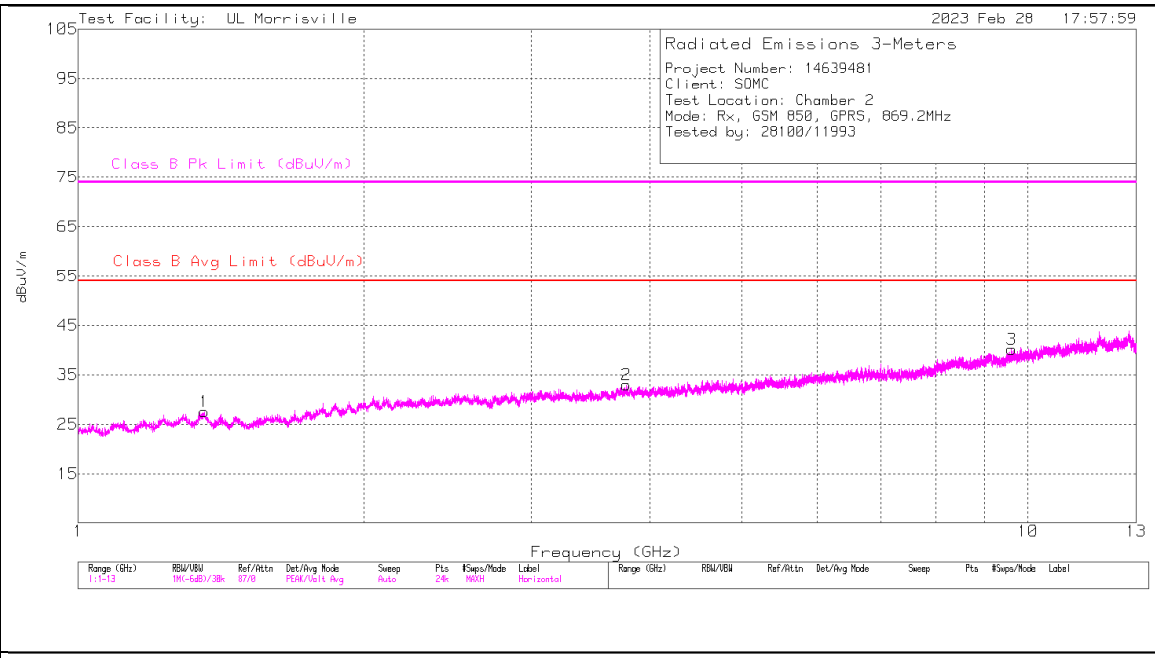
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	90629 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Class B QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	48.042	37.73	Pk	14.8	-31.4	21.13	40	-18.87	0-360	300	H
4	48.333	46.59	Pk	14.7	-31.5	29.79	40	-10.21	0-360	100	V
5	147.37	35.14	Pk	18.7	-30.3	23.54	43.52	-19.98	0-360	100	V
2	167.643	34	Pk	18.1	-30.1	22	43.52	-21.52	0-360	100	H
3	197.616	30.33	Pk	18.4	-29.7	19.03	43.52	-24.49	0-360	100	H
6	207.1705	31.86	Pk	16.7	-29.7	18.86	43.52	-24.66	0-360	100	V
8(DL)	869.147	39.98	Pk	28	-25.8	42.18	-	-	0-360	300	H
7(DL)	869.341	43.25	Pk	28	-25.9	45.35	-	-	0-360	100	V

Pk - Peak detector
DL – Downlink from Callbox

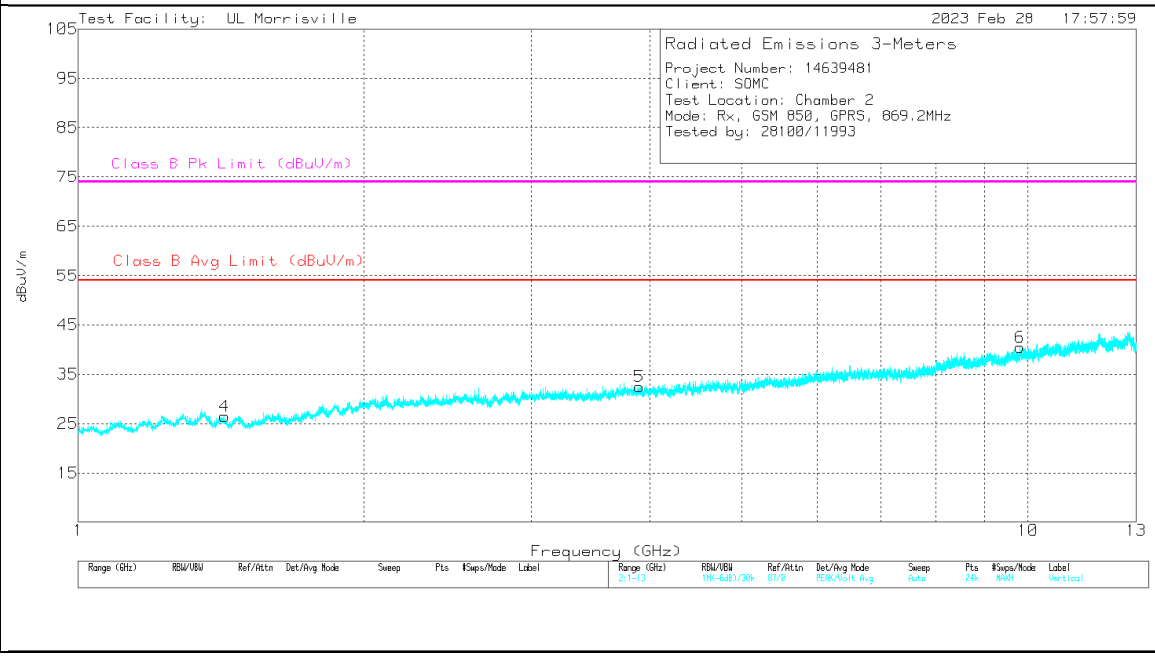
RADIATED EMISSIONS 1000 TO 13,000 MHz – GSM850 Rx 869.2MHz

Radiated Emissions Graph

HORIZONTAL



VERTICAL



Radiated Emissions Data Points

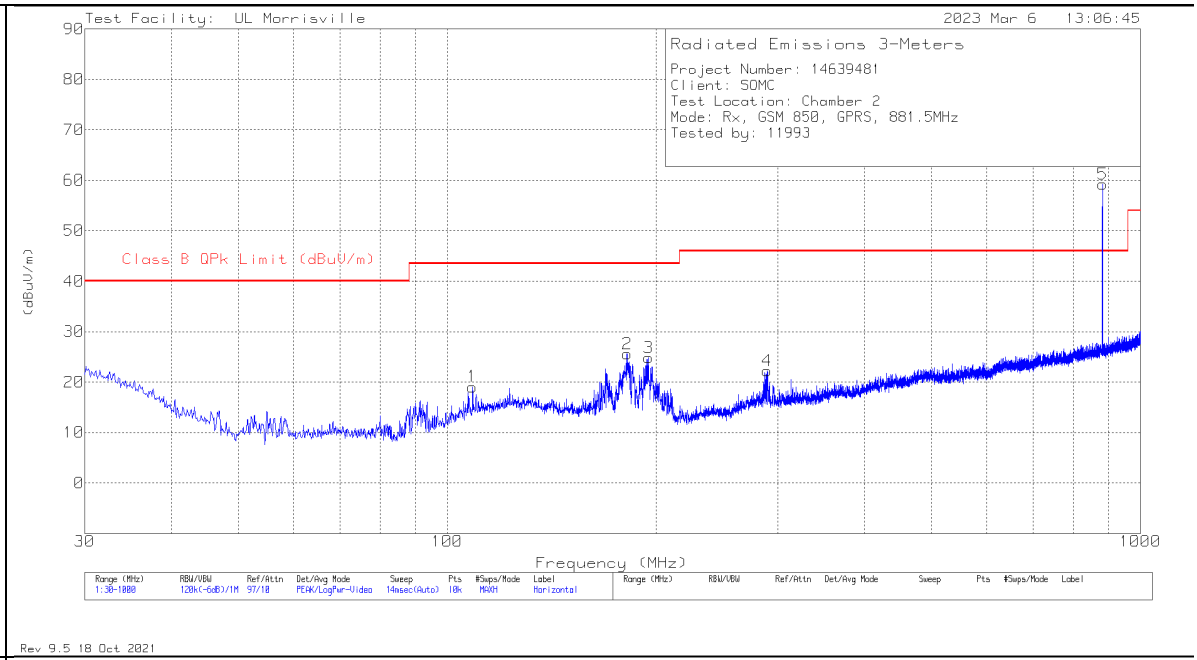
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	206211 (dB/m)	Gain/Loss (dB)	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.35747	33.17	Pk	29.2	-34.8	27.57	54	-26.43	74	-46.43	0-360	100	H
4	1.42546	32.89	Pk	28.2	-34.6	26.49	54	-27.51	74	-47.51	0-360	200	V
2	3.77727	32.09	Pk	33.4	-32.5	32.99	54	-21.01	74	-41.01	0-360	100	H
5	3.89576	31.59	Pk	33.4	-32.5	32.49	54	-21.51	74	-41.51	0-360	200	V
3	9.60728	28.89	Pk	36.7	-25.4	40.19	54	-13.81	74	-33.81	0-360	200	H
6	9.80826	28.98	Pk	36.8	-25.3	40.48	54	-13.52	74	-33.52	0-360	101	V

Pk - Peak detector

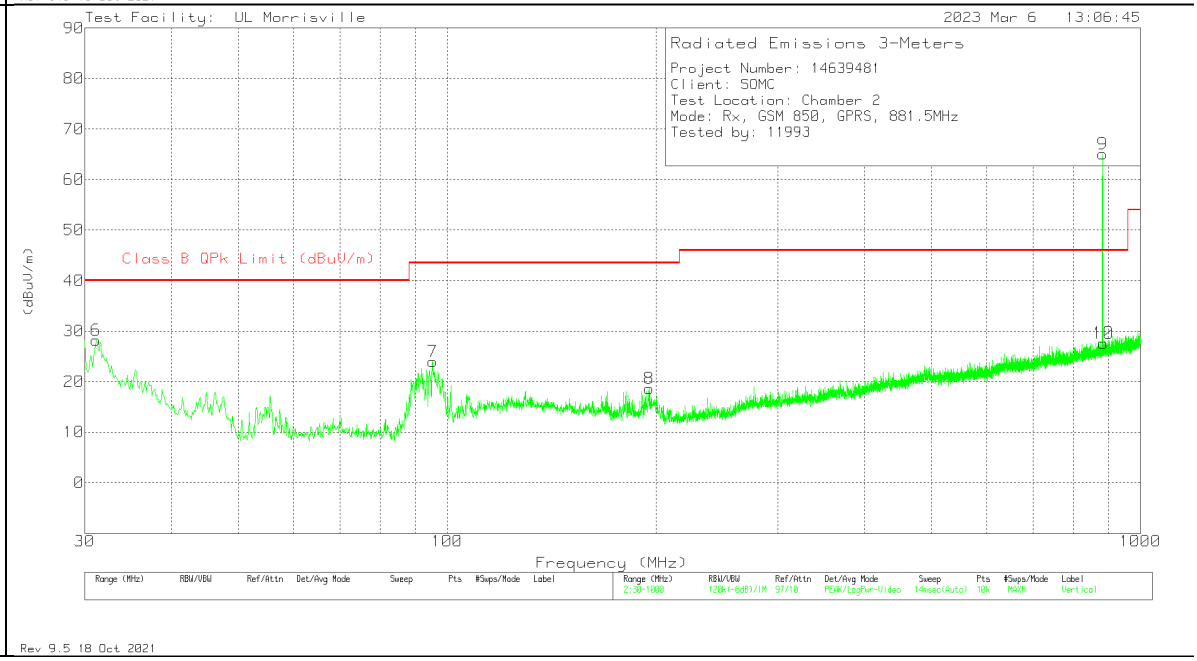
RADIATED EMISSIONS 30 TO 1000 MHz – GSM850 Rx 881.5MHz

Radiated Emissions Graph

HORIZONTAL



VERTICAL



Radiated Emissions Data Points

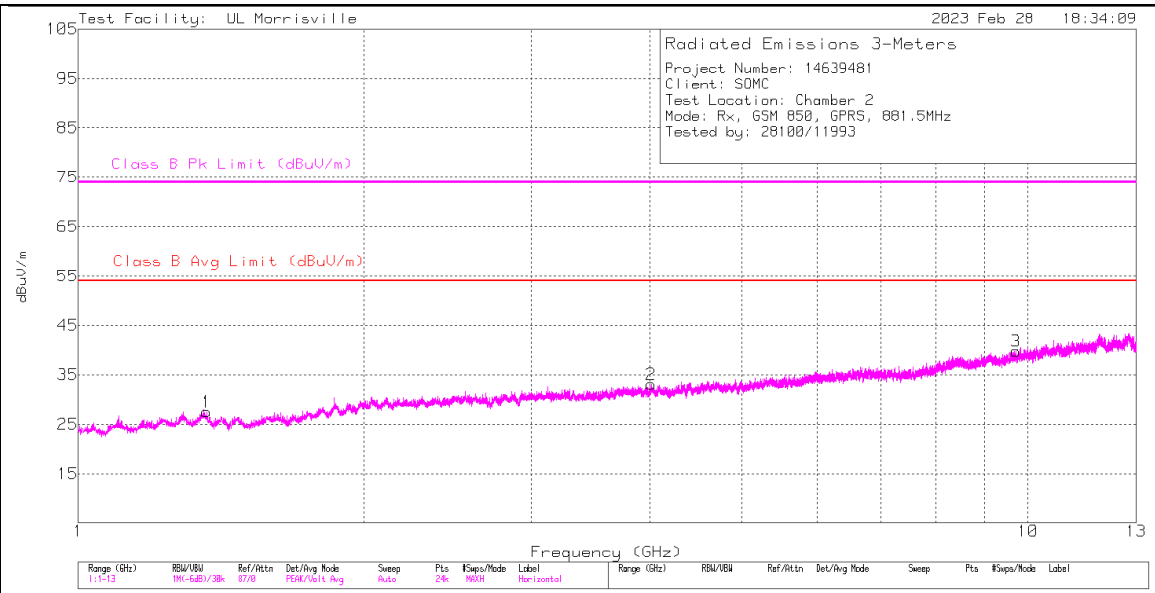
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AT0074 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Class B QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
6	31.164	32.99	Pk	26.5	-31.3	28.19	40	-11.81	0-360	101	V
7	95.281	39.25	Pk	15.2	-30.5	23.95	43.52	-19.57	0-360	101	V
1	108.764	31.08	Pk	18.4	-30.4	19.08	43.52	-24.44	0-360	299	H
2	181.708	37.76	Pk	17.5	-29.7	25.56	43.52	-17.96	0-360	199	H
3	195.094	36.08	Pk	18.5	-29.7	24.88	43.52	-18.64	0-360	199	H
8	195.482	29.7	Pk	18.6	-29.7	18.6	43.52	-24.92	0-360	199	V
4	289.669	31.78	Pk	19.3	-28.8	22.28	46.02	-23.74	0-360	101	H
5	881.757 (DL)	57.26	Pk	27.9	-25.9	59.26	-	-	0-360	101	H
9	881.757 (DL)	63.12	Pk	27.9	-25.9	65.12	-	-	0-360	199	V
10	883.988	25.54	Pk	27.9	-25.8	27.64	46.02	-18.38	0-360	101	V

Pk - Peak detector
DL – Downlink from Callbox

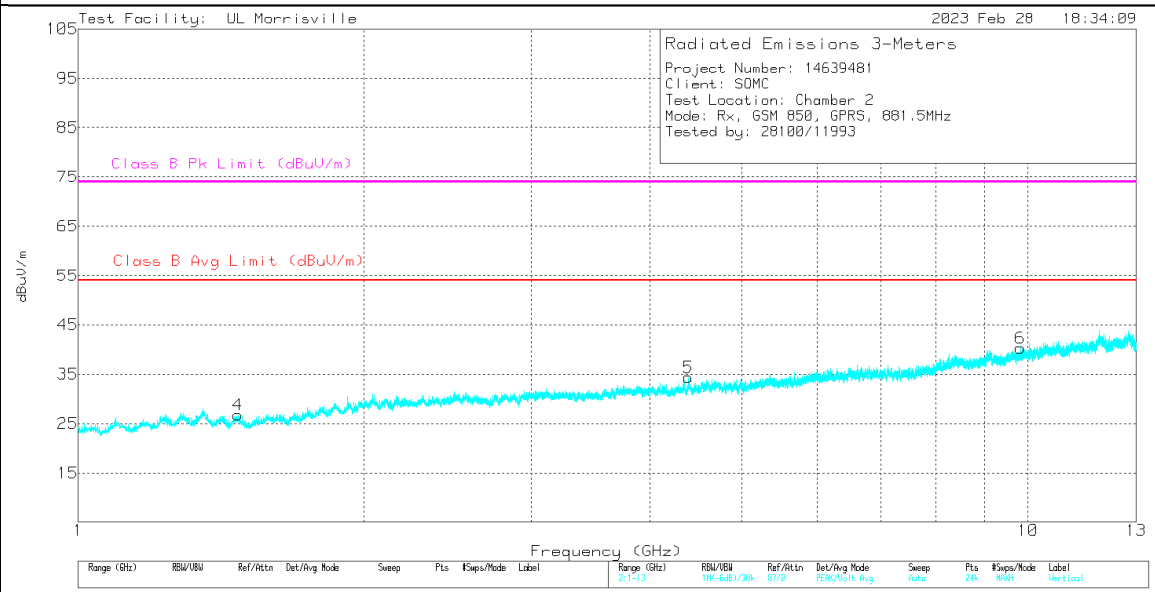
RADIATED EMISSIONS 1000 TO 13,000 MHz – GSM850 Rx 881.5MHz

Radiated Emissions Graph

HORIZONTAL



VERTICAL



Radiated Emissions Data Points

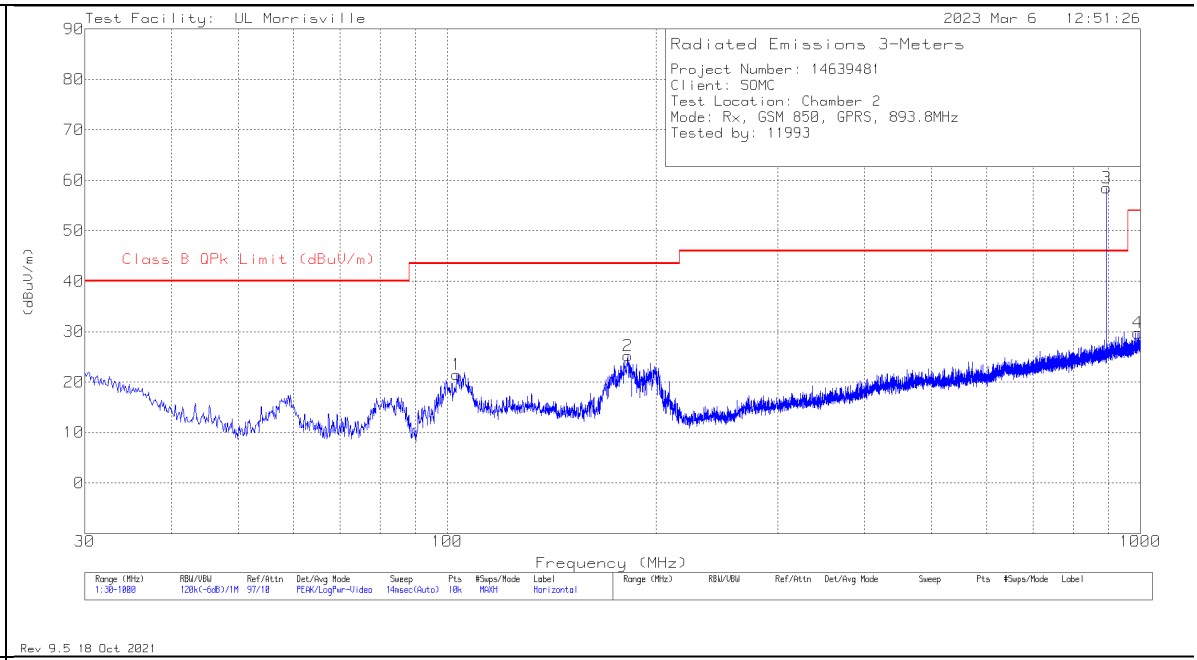
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	206211 (dB/m)	Gain/Loss (dB)	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.36497	33.39	Pk	29.1	-35	27.49	54	-26.51	74	-46.51	0-360	101	H
4	1.47296	33.28	Pk	28.2	-34.7	26.78	54	-27.22	74	-47.22	0-360	101	V
2	4.00925	31.78	Pk	33.4	-32.1	33.08	54	-20.92	74	-40.92	0-360	200	H
5	4.38772	31.85	Pk	33.6	-31.1	34.35	54	-19.65	74	-39.65	0-360	200	V
3	9.71127	28.58	Pk	36.8	-25.6	39.78	54	-14.22	74	-34.22	0-360	200	H
6	9.81826	28.85	Pk	36.8	-25.3	40.35	54	-13.65	74	-33.65	0-360	101	V

Pk - Peak detector

RADIATED EMISSIONS 30 TO 1000 MHz – GSM850 Rx 893.8MHz

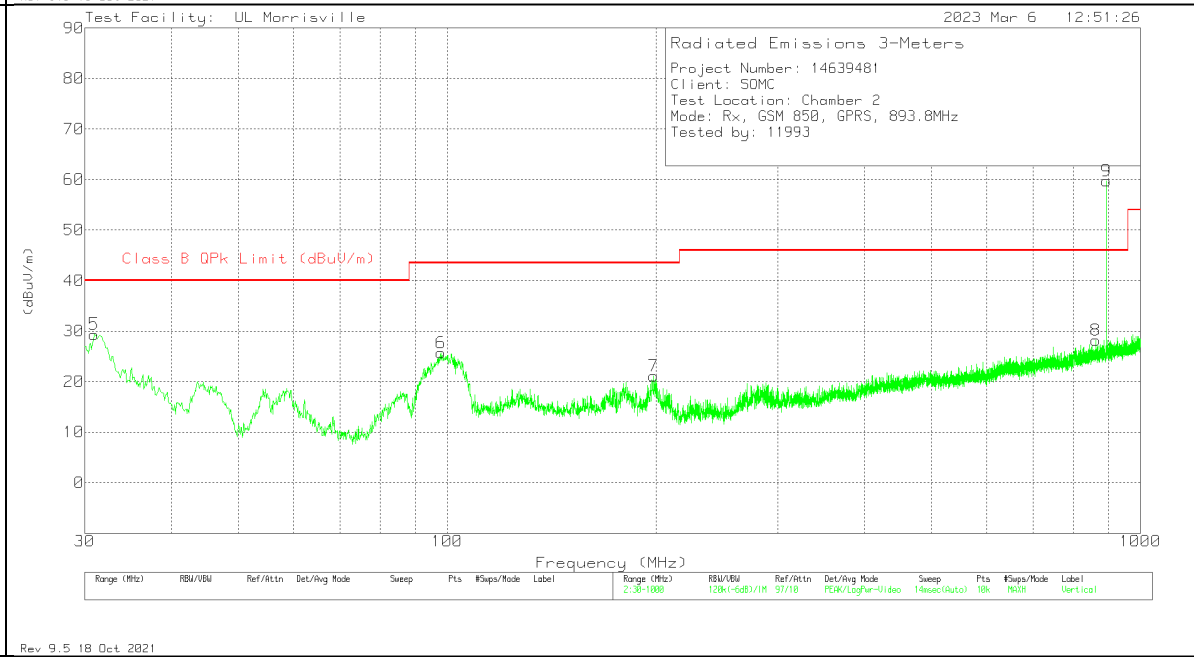
Radiated Emissions Graph

HORIZONTAL



Rev 9.5 18 Oct 2021

VERTICAL



Rev 9.5 18 Oct 2021

Radiated Emissions Data Points

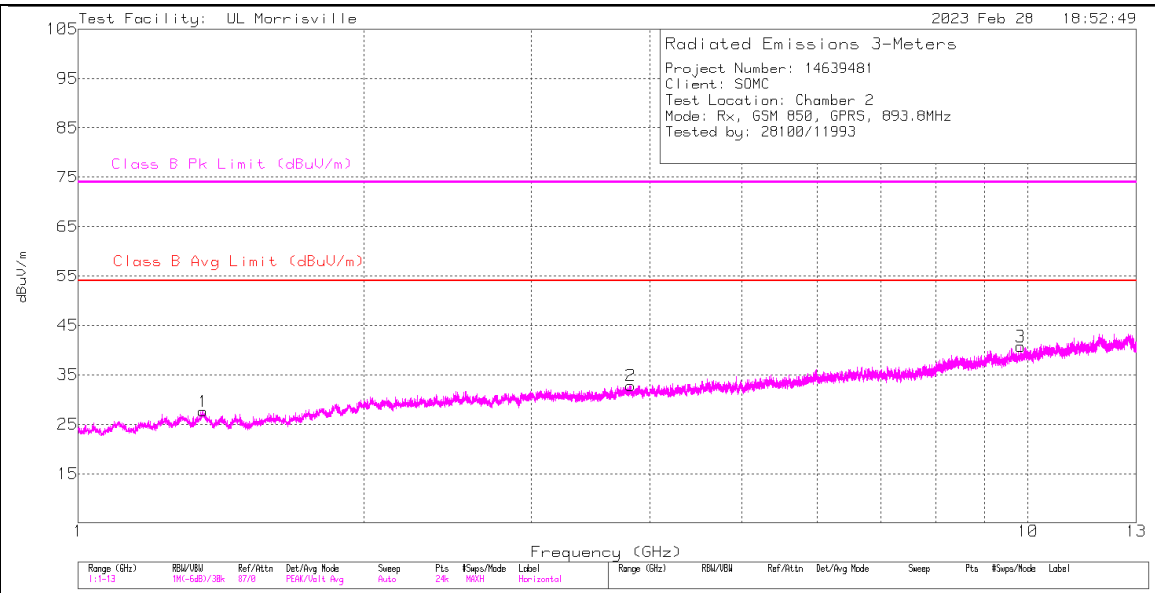
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AT0074 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Class B QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
5	30.97	34.18	Pk	26.6	-31.4	29.38	40	-10.62	0-360	101	V
6	97.9	40.36	Pk	15.9	-30.5	25.76	43.52	-17.76	0-360	101	V
1	103.235	34.55	Pk	17.4	-30.5	21.45	43.52	-22.07	0-360	299	H
2	182.193	37.4	Pk	17.5	-29.7	25.2	43.52	-18.32	0-360	199	H
7	198.586	31.53	Pk	19.1	-29.5	21.13	43.52	-22.39	0-360	101	V
8	861.969	26.56	Pk	27.7	-26	28.26	46.02	-17.76	0-360	101	V
3	893.882 (DL)	55.96	Pk	27.9	-25.4	58.46	-	-	0-360	99	H
9	893.882 (DL)	57.25	Pk	27.9	-25.4	59.75	-	-	0-360	101	V
4	992.046	25.06	Pk	28.9	-24.2	29.76	53.97	-24.21	0-360	299	H

Pk - Peak detector
DL – Downlink from Callbox

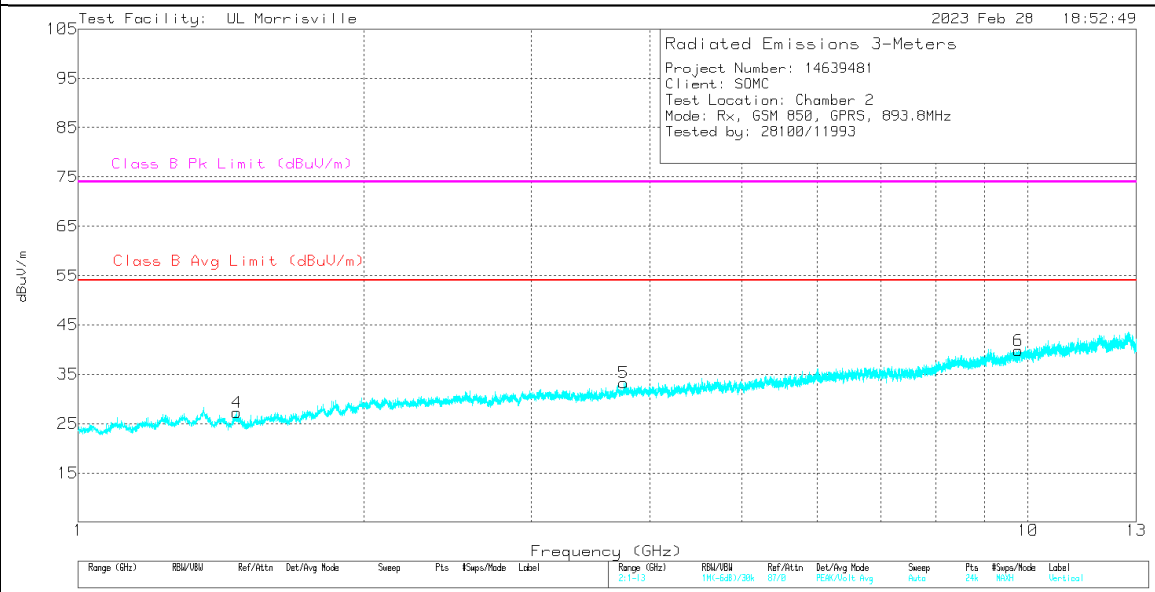
RADIATED EMISSIONS 1000 TO 13,000 MHz – GSM850 Rx 893.8MHz

Radiated Emissions Graph

HORIZONTAL



VERTICAL



Radiated Emissions Data Points

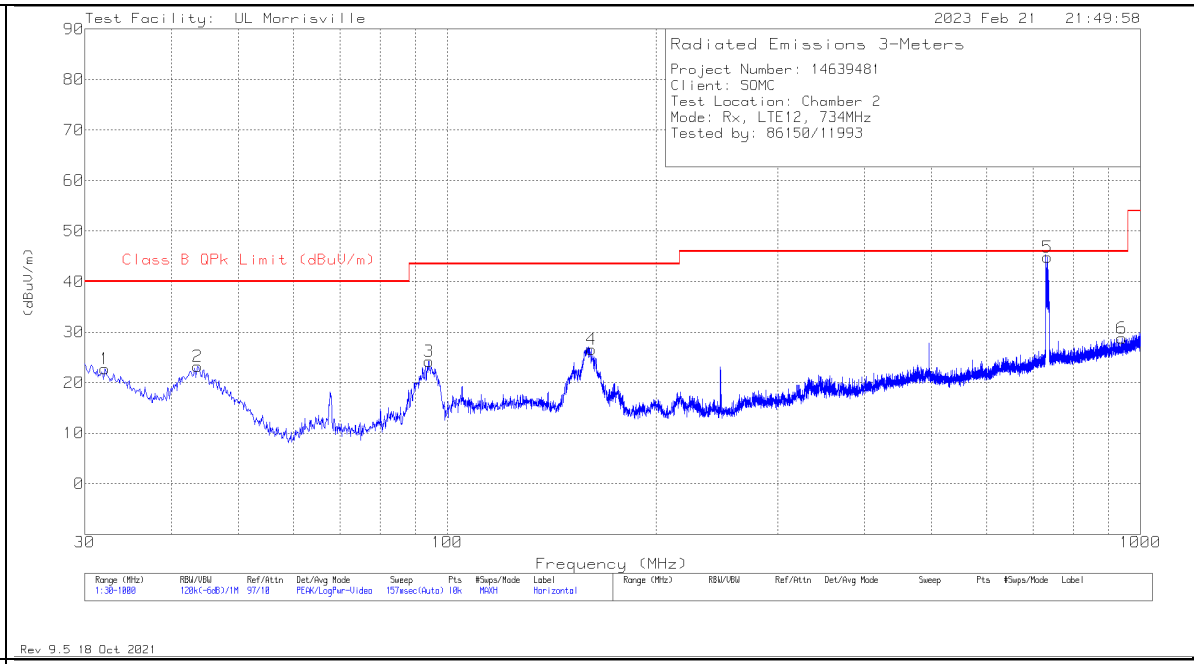
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	206211 (dB/m)	Gain/Loss (dB)	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.35347	33.24	Pk	29.2	-34.8	27.64	54	-26.36	74	-46.36	0-360	200	H
4	1.46846	33.7	Pk	28.2	-34.6	27.3	54	-26.7	74	-46.7	0-360	101	V
5	3.75127	32.17	Pk	33.4	-32.3	33.27	54	-20.73	74	-40.73	0-360	200	V
2	3.81776	31.83	Pk	33.4	-32.4	32.83	54	-21.17	74	-41.17	0-360	101	H
6	9.76776	28.52	Pk	36.8	-25.5	39.82	54	-14.18	74	-34.18	0-360	200	V
3	9.82576	29.12	Pk	36.9	-25.3	40.72	54	-13.28	74	-33.28	0-360	200	H

Pk - Peak detector

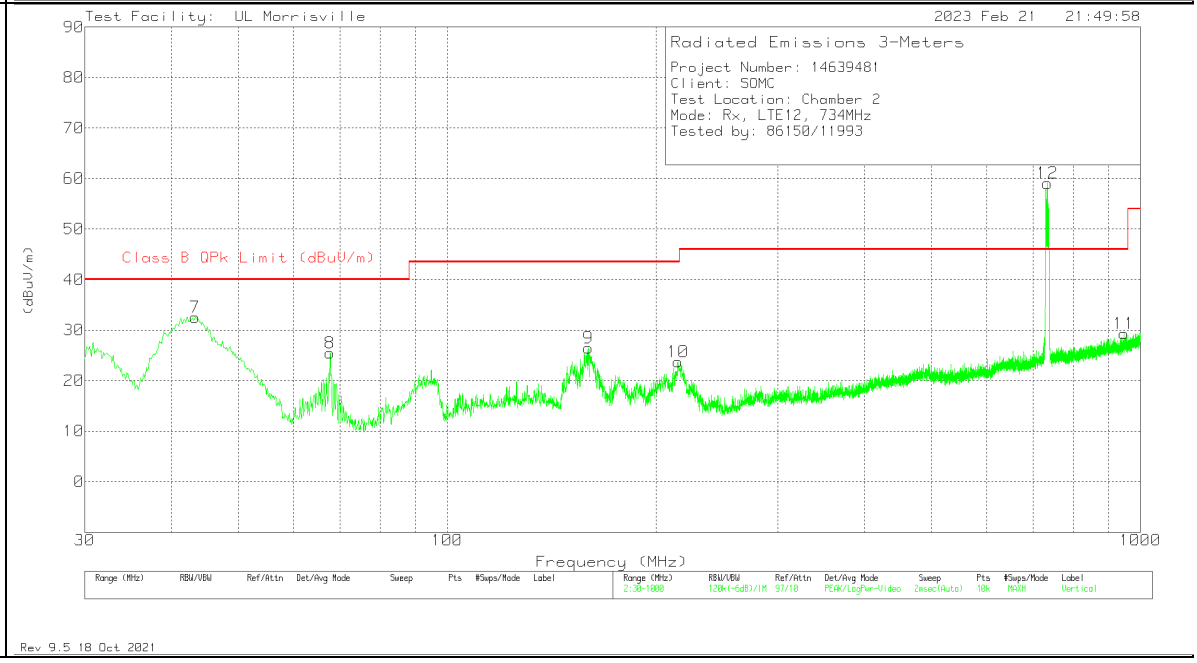
RADIATED EMISSIONS 30 TO 1000 MHz – LTE B12 Rx 734.0MHz

Radiated Emissions Graph

HORIZONTAL



VERTICAL



Radiated Emissions Data Points

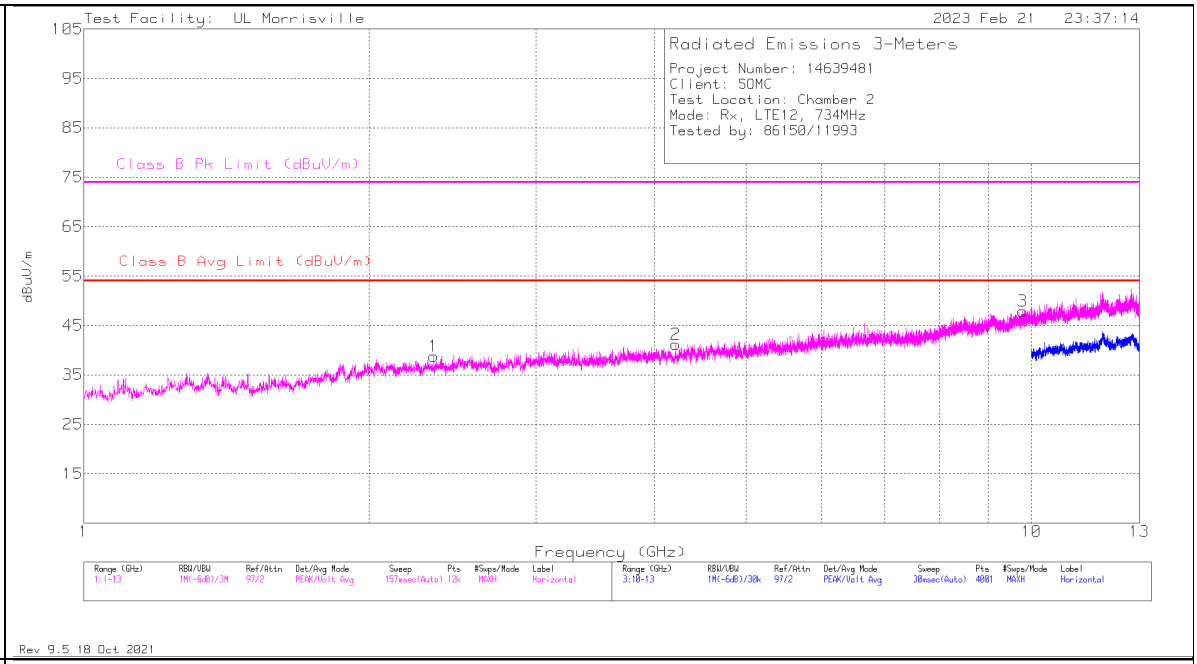
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AT0074 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Class B QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	32.037	28.34	Pk	25.9	-31.5	22.74	40	-17.26	0-360	399	H
7	43.289	46.33	Pk	17.5	-31.3	32.53	40	-7.47	0-360	101	V
2	43.677	37.31	Pk	17.2	-31.3	23.21	40	-16.79	0-360	399	H
8	67.733	42.23	Pk	14.4	-31.2	25.43	40	-14.57	0-360	101	V
3	94.117	39.87	Pk	14.9	-30.5	24.27	43.52	-19.25	0-360	299	H
9	159.786	37.85	Pk	18.4	-29.8	26.45	43.52	-17.07	0-360	101	V
4	161.435	38.22	Pk	18.4	-30	26.62	43.52	-16.9	0-360	199	H
10	215.27	36.48	Pk	16.5	-29.2	23.78	43.52	-19.74	0-360	101	V
5 (DL)	734.22	44.89	Pk	26.6	-26.6	44.89	-	-	0-360	199	H
12(DL)	734.511	59.16	Pk	26.6	-26.7	59.06	-	-	0-360	101	V
6	940.345	25.58	Pk	28.3	-25	28.88	46.02	-17.14	0-360	199	H
11	947.523	25.87	Pk	28.3	-24.8	29.37	46.02	-16.65	0-360	199	V

Pk - Peak detector
DL – Downlink from Callbox

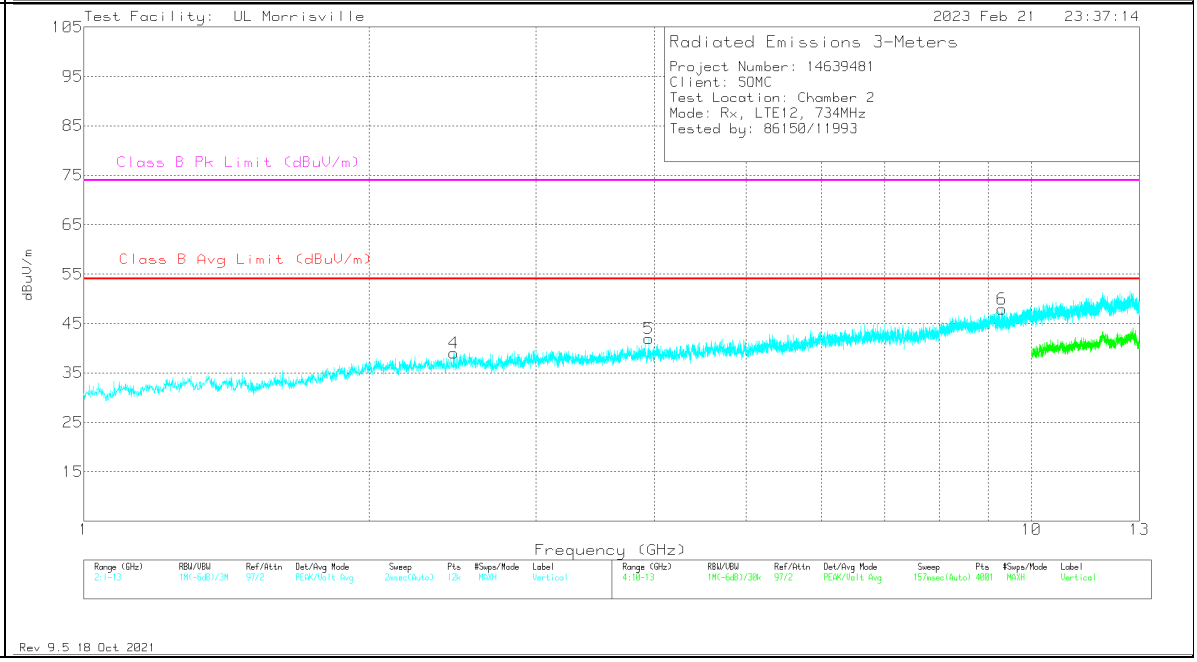
RADIATED EMISSIONS 1000 TO 13,000 MHz – LTE B12 Rx 734.0MHz

Radiated Emissions Graph

HORIZONTAL



VERTICAL



Radiated Emissions Data Points

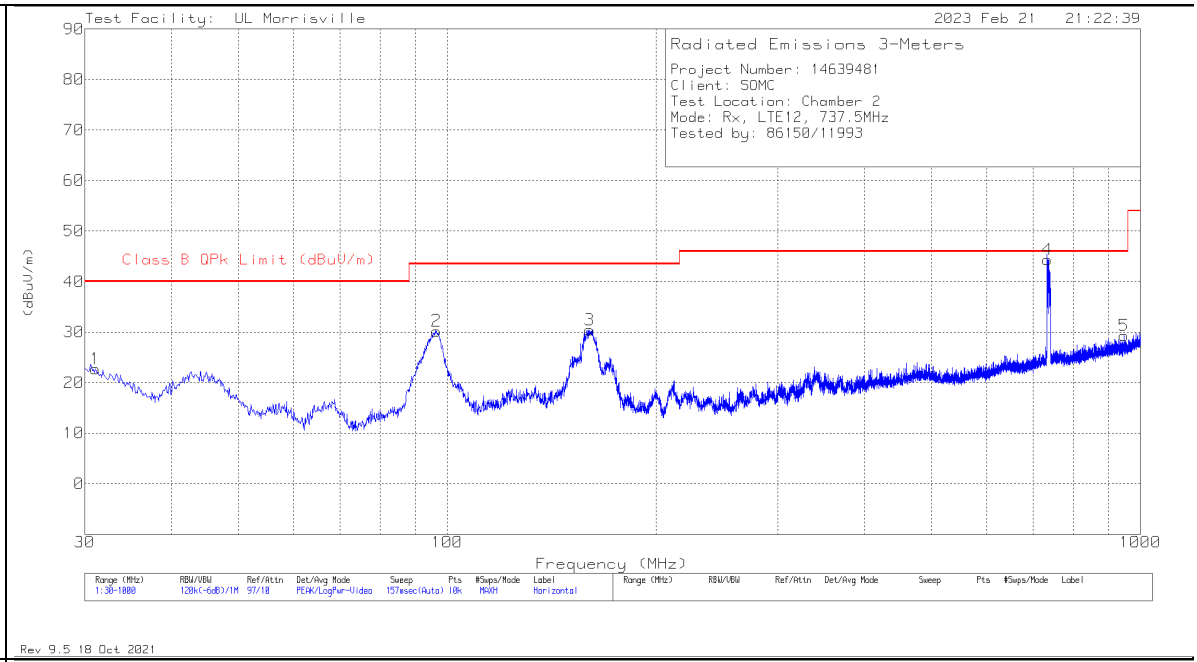
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	206211 (dB/m)	Gain/Loss (dB)	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	2.34	41.02	Pk	31.9	-34.2	38.72	54	-15.28	74	-35.28	0-360	100	H
4	2.459	41.18	Pk	32.1	-34.2	39.08	54	-14.92	74	-34.92	0-360	101	V
5	3.947	40.62	Pk	33.4	-32.1	41.92	54	-12.08	74	-32.08	0-360	101	V
2	4.214	39.96	Pk	33.2	-32	41.16	54	-12.84	74	-32.84	0-360	100	H
6	9.309	37.62	Pk	36.4	-26.1	47.92	54	-6.08	74	-26.08	0-360	199	V
3	9.786	36.75	Pk	36.8	-25.6	47.95	54	-6.05	74	-26.05	0-360	199	H

Pk - Peak detector

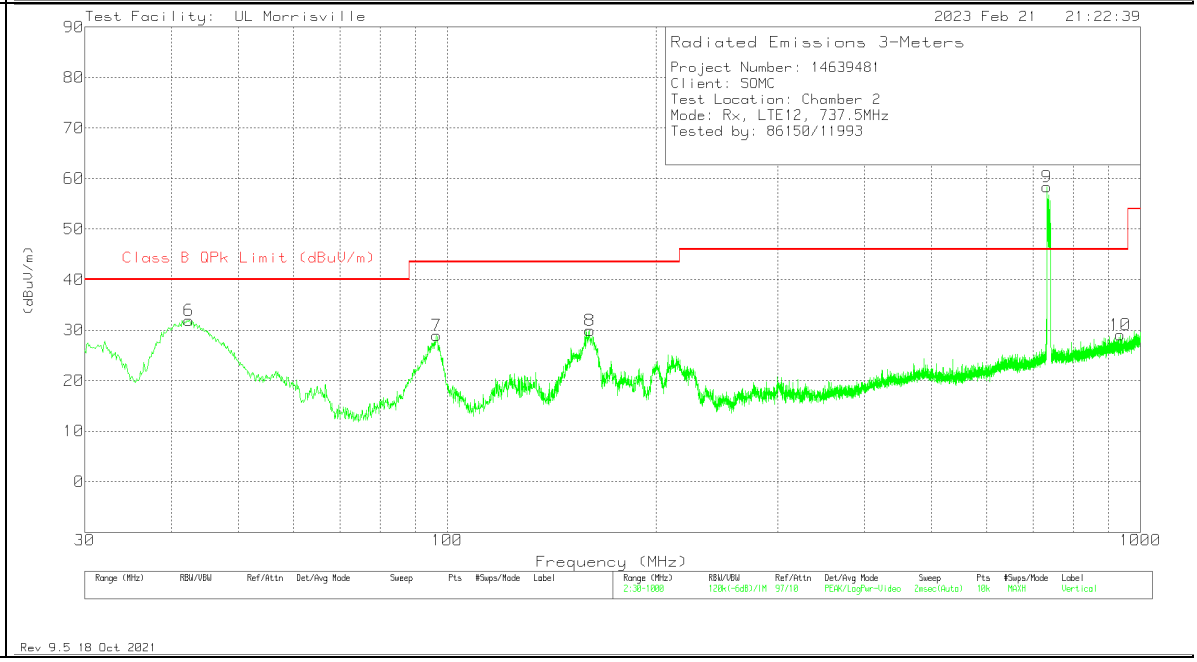
RADIATED EMISSIONS 30 TO 1000 MHz – LTE B12 Rx 737.5MHz

Radiated Emissions Graph

HORIZONTAL



VERTICAL



Radiated Emissions Data Points

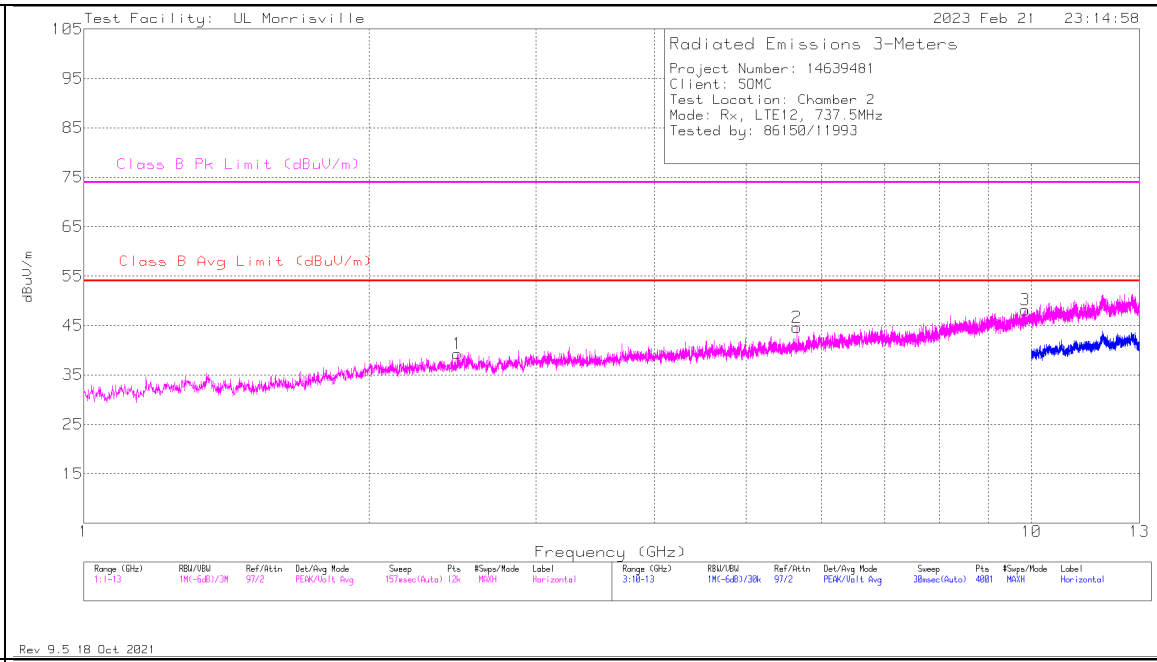
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AT0074 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Class B QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	31.067	27.59	Pk	26.5	-31.3	22.79	40	-17.21	0-360	299	H
6	42.416	45.15	Pk	18.1	-31.3	31.95	40	-8.05	0-360	101	V
7	96.445	43.99	Pk	15.5	-30.5	28.99	43.52	-14.53	0-360	101	V
2	96.4935	45.25	Pk	15.5	-30.5	30.25	43.52	-13.27	0-360	299	H
3	160.562	42.02	Pk	18.4	-30	30.42	43.52	-13.1	0-360	199	H
8	160.659	41.58	Pk	18.4	-30	29.98	43.52	-13.54	0-360	101	V
9 (DL)	733.25	58.47	Pk	26.6	-26.7	58.37	-	-	0-360	101	V
4 (DL)	735.287	44.64	Pk	26.6	-26.9	44.34	-	-	0-360	199	H
10	935.883	25.9	Pk	28.3	-25.1	29.1	46.02	-16.92	0-360	101	V
5	948.008	25.84	Pk	28.4	-24.9	29.34	46.02	-16.68	0-360	299	H

Pk - Peak detector
DL – Downlink from Callbox

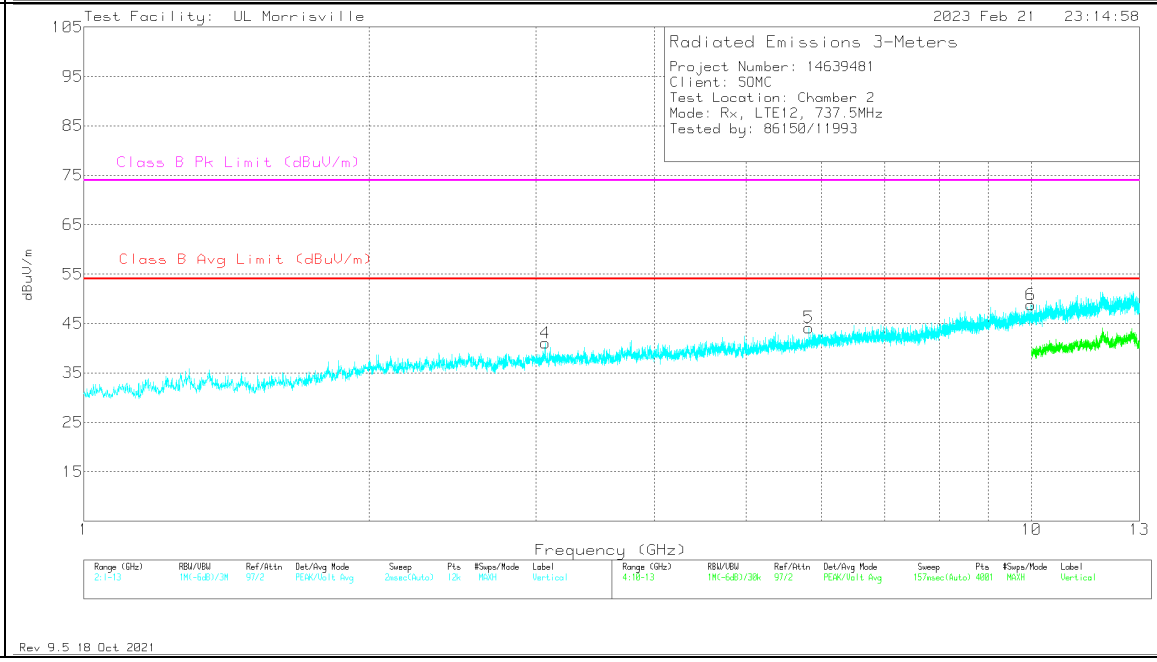
RADIATED EMISSIONS 1000 TO 13,000 MHz – LTE B12 Rx 737.5MHz

Radiated Emissions Graph

HORIZONTAL



VERTICAL



Radiated Emissions Data Points

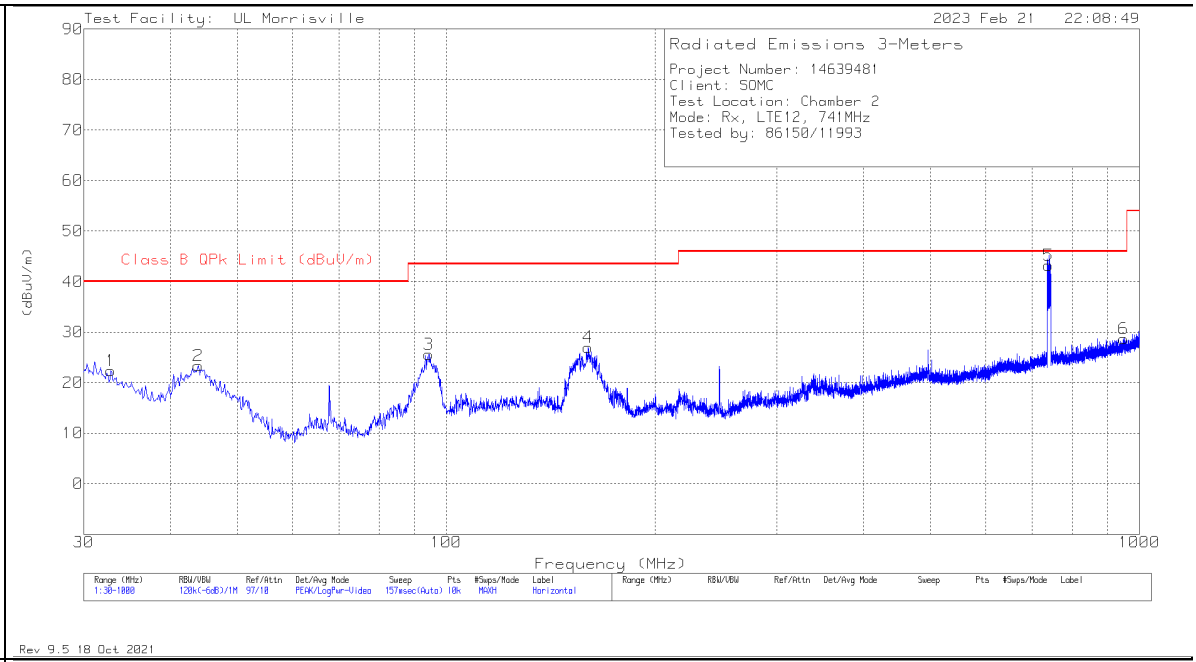
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	206211 (dB/m)	Gain/Loss (dB)	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	2.481	40.96	Pk	32.3	-34	39.26	54	-14.74	74	-34.74	0-360	199	H
4	3.068	41.41	Pk	33	-33.4	41.01	54	-12.99	74	-32.99	0-360	101	V
2	5.653	40.77	Pk	34.5	-30.7	44.57	54	-9.43	74	-29.43	0-360	100	H
5	5.822	39.07	Pk	34.8	-29.7	44.17	54	-9.83	74	-29.83	0-360	199	V
3	9.84921	37.2	Pk	36.9	-25.7	48.4	-	-	74	-25.6	206	283	H
	9.84921	23.89	Av	36.9	-25.7	35.09	54	-18.91	-	-	206	283	H
6	9.99181	37.78	Pk	37.1	-25.5	49.38	-	-	74	-24.62	316	338	V
	9.99181	24.03	Av	37.1	-25.5	35.63	54	-18.37	-	-	316	338	V

Pk - Peak detector
Av - Average detection

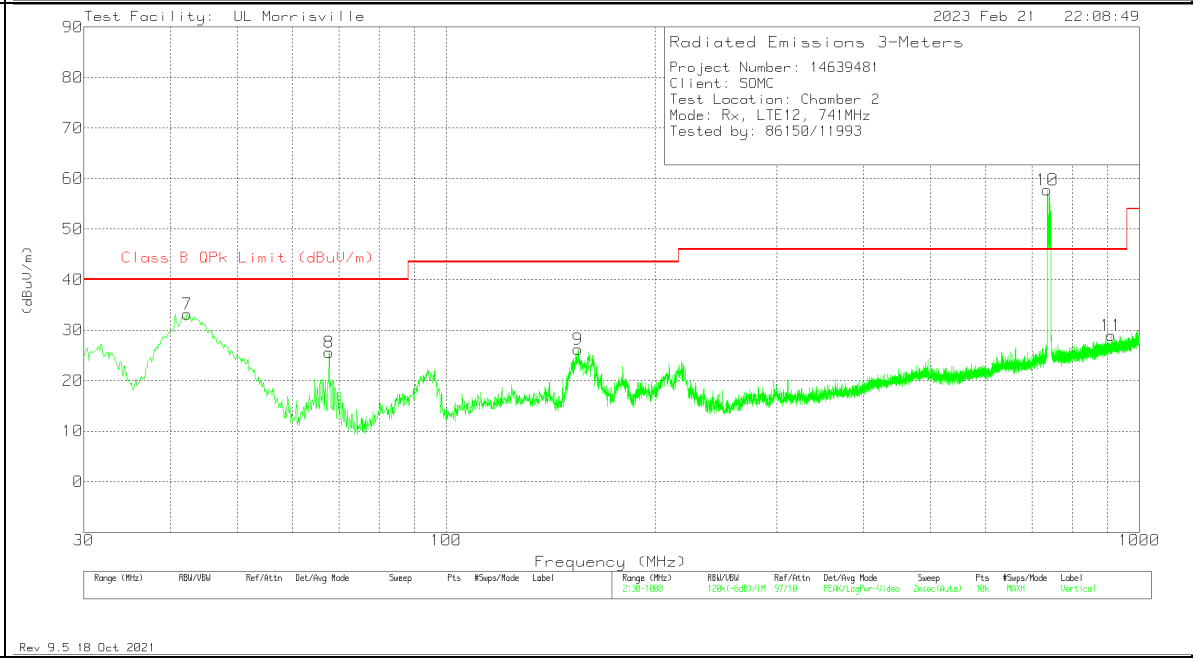
RADIATED EMISSIONS 30 TO 1000 MHz – LTE B12 Rx 741.0MHz

Radiated Emissions Graph

HORIZONTAL



VERTICAL



Radiated Emissions Data Points

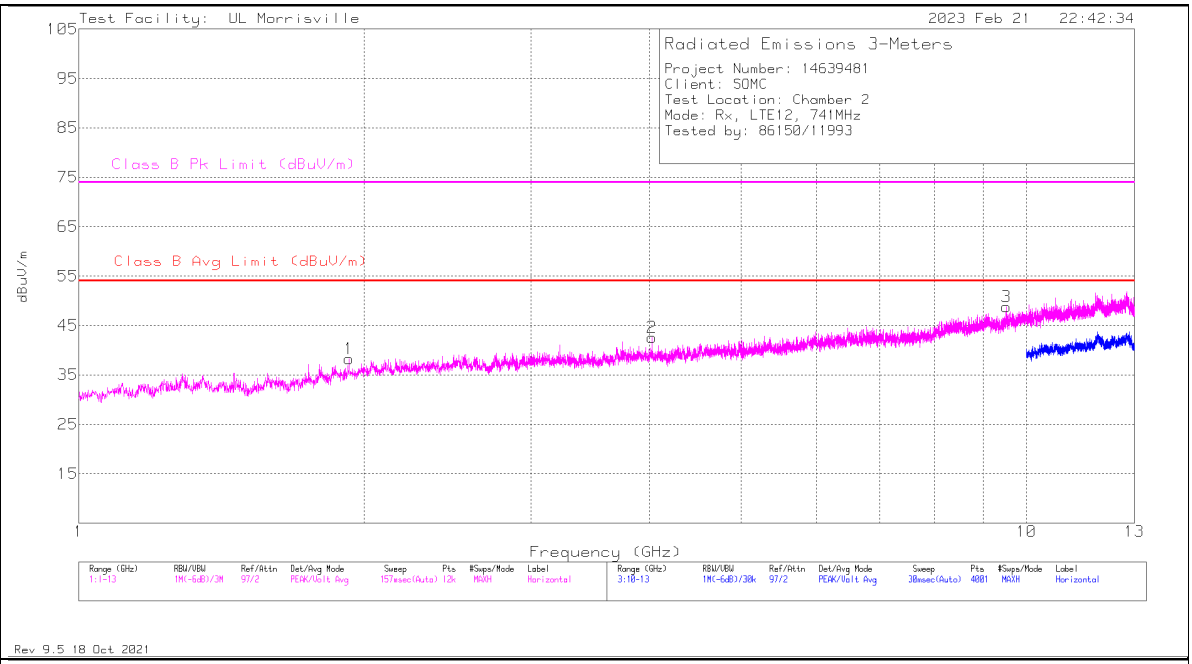
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AT0074 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Class B QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	32.813	28.59	Pk	25.3	-31.5	22.39	40	-17.61	0-360	199	H
7	42.319	46.23	Pk	18.2	-31.3	33.13	40	-6.87	0-360	101	V
2	43.871	37.64	Pk	17.1	-31.4	23.34	40	-16.66	0-360	399	H
8	67.733	42.4	Pk	14.4	-31.2	25.6	40	-14.4	0-360	101	V
3	94.408	41.04	Pk	15	-30.5	25.54	43.52	-17.98	0-360	299	H
9	155.033	37.74	Pk	18.4	-29.9	26.24	43.52	-17.28	0-360	101	V
4	160.174	38.52	Pk	18.4	-29.9	27.02	43.52	-16.5	0-360	199	H
10 (DL)	736.839	58.19	Pk	26.6	-27	57.79	-	-	0-360	101	V
5 (DL)	738.876	43.31	Pk	26.7	-26.8	43.21	-	-	0-360	199	H
11	911.148	26.14	Pk	28.1	-25.3	28.94	46.02	-17.08	0-360	199	V
6	949.075	25.13	Pk	28.4	-24.8	28.73	46.02	-17.29	0-360	299	H

Pk - Peak detector
DL – Downlink from Callbox

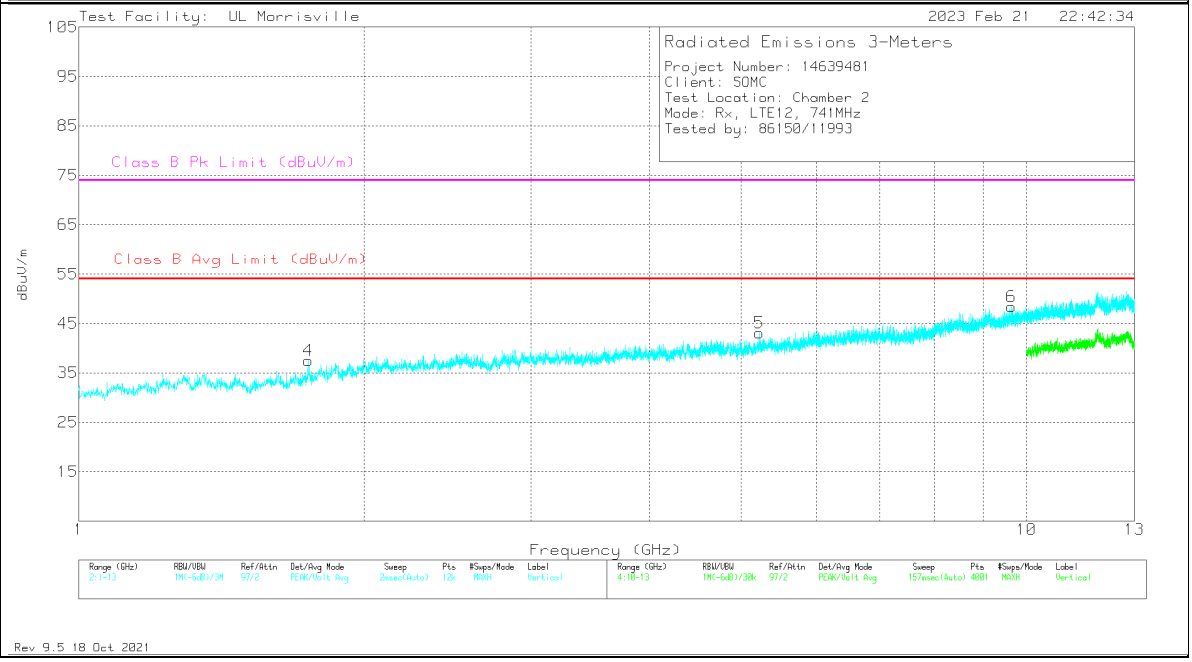
RADIATED EMISSIONS 1000 TO 13,000 MHz – LTE B12 Rx 741.0MHz

Radiated Emissions Graph

HORIZONTAL



VERTICAL



Radiated Emissions Data Points

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	206211 (dB/m)	Gain/Loss (dB)	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	1.746	42.49	Pk	29.4	-34.4	37.49	54	-16.51	74	-36.51	0-360	199	V
1	1.928	41.62	Pk	30.6	-34	38.22	54	-15.78	74	-35.78	0-360	199	H
2	4.027	41.55	Pk	33.4	-32.4	42.55	54	-11.45	74	-31.45	0-360	199	H
5	5.225	39.89	Pk	34.3	-31.1	43.09	54	-10.91	74	-30.91	0-360	199	V
3	9.53399	37.81	Pk	36.6	-25.5	48.91	-	-	74	-25.09	129	129	H
	9.53399	24.09	Av	36.6	-25.5	35.19	54	-18.81	-	-	129	129	H
6	9.64698	38.04	Pk	36.7	-25.6	49.14	-	-	74	-24.86	89	202	V
	9.64698	24.39	Av	36.7	-25.6	35.49	54	-18.51	-	-	89	202	V

Pk - Peak detector
Av - Average detection

Appendix A

Facilities, Accreditations and Authorizations

UL LLC is accredited by A2LA, certification # 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 RTP, NC 27709, U.S.A	US0067	2180C	825374
☒	Building: 2800 Perimeter Park Dr. Suite B Morrisville, NC 27560, U.S.A		27265	

END OF TEST REPORT