CERTIFICATION TEST REPORT

Report Number. : 4790541040-E1V1

Applicant	:	SAMSUNG ELECTRONICS CO., LTD. 129 SAMSUNG-RO, YEONGTONG-GU, SUWON-SI, GYEONGGI-DO, 16677, KOREA
Model	:	SM-S916B/DS, SM-S916B
FCC ID	:	A3LSMS916B
EUT Description	:	GSM/WCDMA/LTE/5G NR Phone + BT/BLE, DTS/UNII a/b/g/n/ac/ax, NFC, WPT and UWB.
Test Standard(s)	:	FCC 47 CFR PART 15 SUBPART B

Date Of Issue:
2022-10-21

Prepared by:
UL Korea, Ltd.
26th floor, 152, Teheran-ro, Gangnam-gu Seoul, 06236, Korea

Suwon Test Site: UL Korea, Ltd. Suwon Laboratory
218 Maeyeong-ro, Yeongtong-gu,
Suwon-si, Gyeonggi-do, 16675, Korea
TEL: (031) 337-9902
FAX: (031) 213-5433

IAS ACCREDITED Testing Laboratory

Revision History

Rev.	Issue Date	Revisions	Revised By
V1	2022-10-21	Initial issue	Yeonhee Lim

UL Korea, Ltd. Suwon Laboratory FORM ID: FCC_15B(04)
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1. ATTESTATION OF TEST RESULTS

COMPANY NAME:	SAMSUNG ELECTRONICS CO., LTD.
EUT DESCRIPTION:	GSM/WCDMA/LTE/5G NR Phone + BT/BLE, DTS/UNII a/b/g/n/ac/ax, NFC, WPT and UWB.
MODEL NUMBER:	SM-S916B/DS, SM-S916B
SERIAL NUMBER:	R3CT8056EHV (RADIATED)
DATE TESTED:	2022-09-14 ~ 2022-10-13;

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
FCC PART 15B	Complies

UL Korea, Ltd. tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by UL Korea, Ltd. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL Korea, Ltd. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Korea, Ltd. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by IAS, any agency of the Federal Government, or any agency of any government.

Approved & Released For
UL Korea, Ltd. By:

Seokhwan Hong
Suwon Lab Engineer
UL Korea, Ltd.

Tested By:

Yeonhee Lim
Suwon Lab Engineer
UL Korea, Ltd.

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with following methods.

1. FCC CFR 47 Part 2.
2. FCC CFR 47 Part 15.
3. ANSI C63.4-2014

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 218 Maeyeong-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do,16675, Korea. Line conducted emissions are measured only at the 218 address. The following table identifies which facilities were utilized for radiated emission measurements documented in this report. Specific facilities are also identified in the test results sections.

218 Maeyeong-ro
☐ Chamber 1(3m semi-anechoic chamber)
☒ Chamber 2(3m semi-anechoic chamber)
☐ Chamber 3(3m semi-anechoic chamber)
☐ Chamber 4(3m Full-anechoic chamber)
☐ Chamber 5(3m Full-anechoic chamber)

UL Korea, Ltd. is accredited by IAS, Laboratory Code TL-637. The full scope of accreditation can be viewed at https://www.iasonline.org/wp-content/uploads/2017/05/TL-637-cert-New.pdf.

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

EIRP = PSA reading with EUT worst orientation (dBm) + Path loss (dB) – cable loss(between the SG and substitution antenna) + Substitution Antenna Factor (dBi)

ERP = PSA reading with EUT worst orientation (dBm) + Path loss (dB) – cable loss(between the SG and substitution antenna)

(Path loss = Signal generator output – PSA reading with substitution antenna)

4.3. MEASUREMENT UNCERTAINTY

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

PARAMETER	UNCERTAINTY
Conducted Disturbance, 0.15 to 30 MHz	3.02 dB
Radiated Disturbance, 30 MHz to 1 GHz	4.05 dB
Radiated Disturbance, 1 GHz to 18 GHz	5.78 dB

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

4.4. DECISION RULE

Decision rule for statement(s) of conformity is based on Procedure 2, Clause 4.4.3 in IEC Guide 115:2007.

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is a GSM/WCDMA/LTE/5G NR Phone + BT/BLE, DTS/UNII a/b/g/n/ac/ax, NFC, WPT, and UWB. This test report addresses the WWAN operational mode.

This report covers the Samsung models SM-S916B/DS and SM-S916B.
These models are identical in hardware except SM-S916B has single SIM tray.
With some pre-scan, model SM-S916B/DS was set for final test.

5.2. TEST MODE

Mode	Description
GSM850	Communicating with Call simulator(CMW500)
WCDMA BAND 5	Communicating with Call simulator(CMW500)
LTE BAND 5	Communicating with Call simulator(CMW500)
LTE BAND 12	Communicating with Call simulator(CMW500)
LTE BAND 13	Communicating with Call simulator(CMW500)
LTE BAND 26	Communicating with Call simulator(CMW500)

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5.3. WORST-CASE ORIENTATION AND MODE

The fundamental and radiated spurious emission were investigated in three orthogonal orientations X,Y and Z, it was determined that below orientation was worst-case orientation for each band.

i. Worst Axis Condition

Band	Worst Case		
	X	Y	Z
GSM 850	O	-	-
WCDMA B5	O	-	-
LTE B5	O	-	-
LTE B12	O	-	-
LTE B13	O	-	-
LTE B26	O	-	-

WCDMA Band5
WCDMA Band 5(Rx Frequncy range: 871.4-891.6 MHz) is covered by GSM 850(Rx Frequency range: 869-894 MHz) due to same frequency range and maximum tune-up limit is higher than WCDMA Band5. Therefore, only Mid channel was checked.

LTE Band 17
LTE Band 17(Rx Frequency range: 734-746 MHz) is covered by LTE Band 12(Rx Frequency range: 729-746 MHz) due to overlapping frequency range, same maximum tune-up limit and same channel bandwidth.

5G NR Band n5
5G NR BAND n5 (Rx Frequncy range: 869-894 MHz) is covered by GSM 850(Rx Frequency range: 869-894 MHz) due to same frequency range and maximum tune-up limit is higher than 5G NR BAND n5.

Note : The EUT is continuously communicated with the call box during the tests. Also attached with travel adapter for the worst case condition.

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5.4. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	**Manufacture**	**Model**	**Serial Number**	**FCC ID**
Charger	SAMSUNG	EP-TA800	R37T53J83Z9SEA	N/A
Data Cable	SAMSUNG	EP-DN980	GH39-02111ABBE	N/A

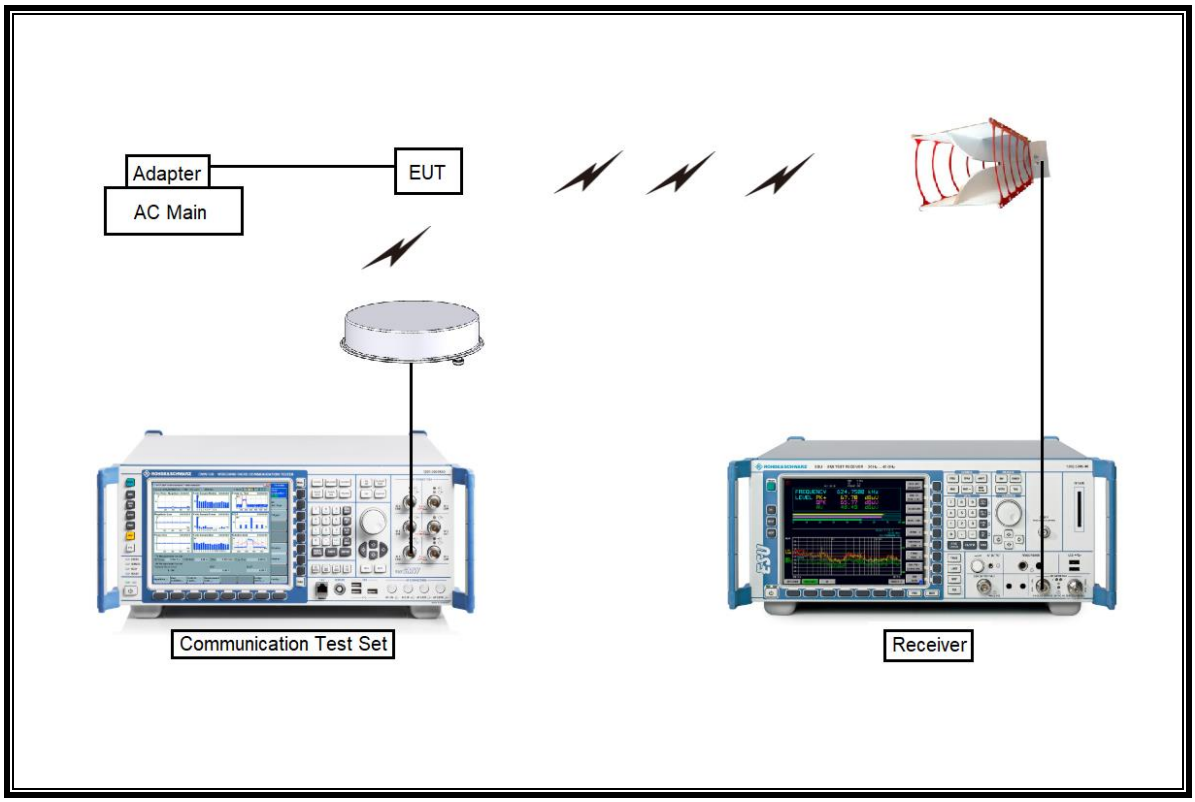
I/O CABLE

I/O Cable List						
Cable No.	**Port**	**# of identical ports**	**Connector Type**	**Cable Type**	**Cable Length (m)**	**Remarks**
1	DC Power	1	C Type	Shielded	1.0 m	N/A

TEST SETUP

The EUT is continuously communicated with the call box during the tests.

SETUP DIAGRAM FOR TESTS (RADIATED TEST SETUP)



6. TEST AND MEASUREMENT EQUIPMENT

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

Test Equipment List				
Description	**Manufacturer**	**Model**	**S/N**	**Cal Due**
Antenna, Tuned Dipole 400~1000 MHz	ETS	3121D DB4	00164753	2023-02-08
Preamplifier	ETS	3116C-PA	00168841	2023-08-04
Antenna, Bilog, 30MHz-1GHz	SCHWARZBECK	VULB9163	750	2024-08-15
Antenna, Bilog, 30MHz-1GHz	SCHWARZBECK	VULB9163	845	2024-08-15
Antenna, Bilog, 30MHz-1GHz	SCHWARZBECK	VULB9163	749	2024-08-15
Communications Test Set	R&S	CMW500	169796	2023-01-07
Preamplifier, 1000 MHz	Sonoma	310N	341282	2023-08-02
Preamplifier, 1000 MHz	Sonoma	310N	351741	2023-08-02
Preamplifier, 18 GHz	Miteq	AFS42-00101800-25-S-42	1876511	2023-08-02
Preamplifier, 18 GHz	Miteq	AFS42-00101800-25-S-42	2029169	2023-08-01
Preamplifier, 18 GHz	Miteq	AFS42-00101800-25-S-42	1896138	2023-08-01
EMI Test Receive, 40 GHz	R&S	ESU40	100439	2023-08-02
EMI Test Receive, 40 GHz	R&S	ESU40	100457	2023-07-29
Directional Antenna	Cobham	FPA3-0.8-6.0R/1329	80108-0004	N/A
Directional Antenna	Cobham	FPA3-0.8-6.0R/1329	110367-0003	N/A
High Pass Filter 1.2GHz	Micro-Tronics	HPM50108-02	G005	2023-08-01
High Pass Filter 1.2GHz	Micro-Tronics	HPM50108-02	G006	2023-08-01
High Pass Filter 2.8GHz	Micro-Tronics	HPM50111-02	010	2023-08-01
High Pass Filter 2.8GHz	Micro-Tronics	HPM50111-02	011	2023-08-01
High Pass Filter 4GHz	Micro-Tronics	HPM50118-02	G001	2023-08-01
High Pass Filter 4GHz	Micro-Tronics	HPM50118-02	G002	2023-08-01
Attenuator	PASTERNACK	PE7087-10	A009	2023-08-03
Attenuator	PASTERNACK	PE7087-10	A001	2023-08-03
Attenuator	PASTERNACK	PE7087-10	A008	2023-08-03
Attenuator	PASTERNACK	PE7004-10	2	2023-08-01
Attenuator	PASTERNACK	PE7395-10	A011	2023-08-03
EMI Test Receive, 3 GHz	R&S	ESR3	101832	2023-08-01
LISN	R&S	ENV-216	101836	2023-08-04
LISN	R&S	ENV-216	101837	2023-08-04
UL Software				
Description	**Manufacturer**	**Model**	**Version**	
Radiated software	UL	UL EMC	Ver 9.5	
AC Line Conducted software	UL	UL EMC	Ver 9.5	

7. APPLICABLE LIMITS AND TEST RESULTS

7.1. RADIATED EMISSIONS

TEST PROCEDURE

ANSI C63.4-2014

LIMIT

§15.109 (a) Except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

Limits for radiated disturbance of Class B ITE at measuring distance of 3 m	
Frequency range (MHz)	Quasi-peak limits (dBµV/m)
30 to 88	40
88 to 216	43.5
216 to 960	46
Above 960 MHz	54
Note: The lower limit shall apply at the transition frequency.	

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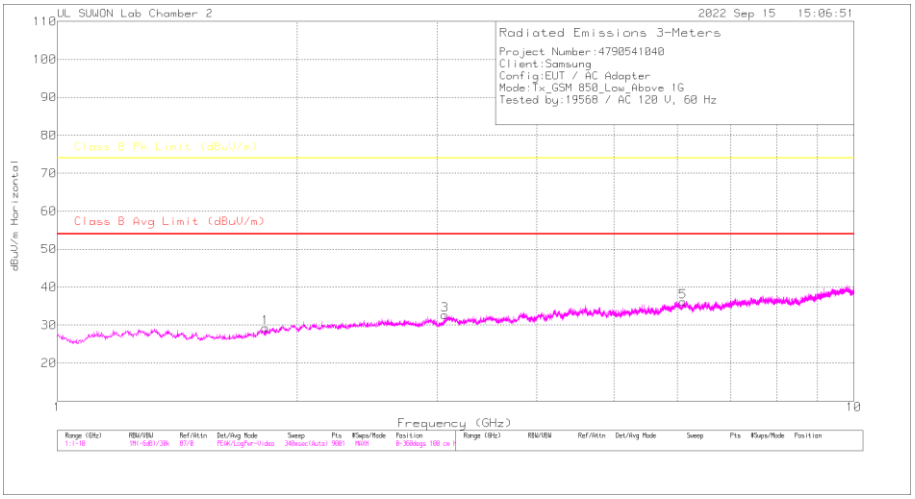
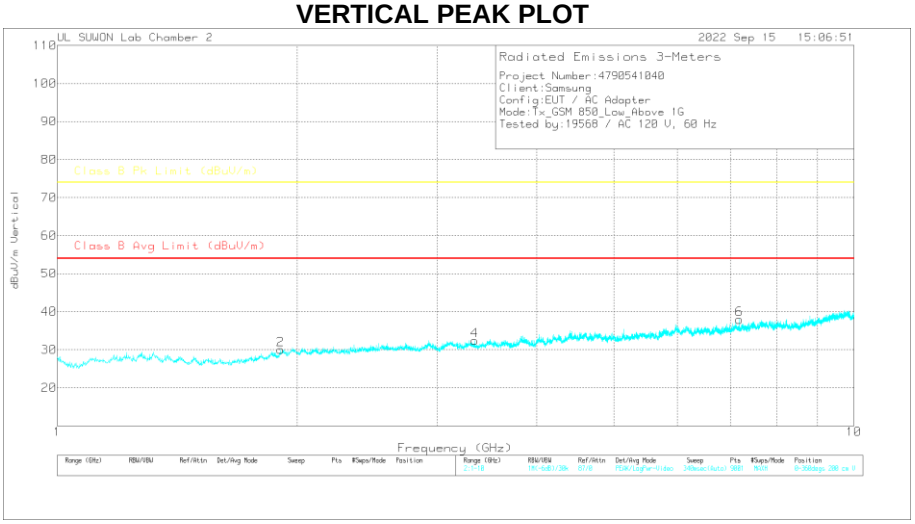
7.1.1. Above 1 GHz in the GSM850

LOW CHANNEL(869.2 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

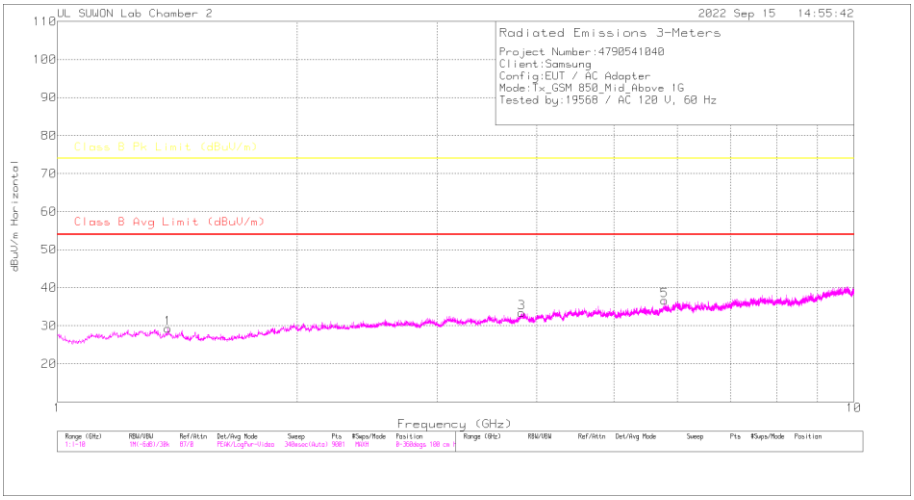
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	3117_0016872 4	1-18GHz[dB]	1G HPF[dB]	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Av(CISPR)Mar gin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.826	36.22	Pk	29.9	-30.9	.6	35.82	-	-	74	-38.18	0	100	H
1.826	24.05	Ca	29.9	-30.9	.6	23.65	54	-30.35	-	-	0	100	H
1.907	36.79	Pk	30.8	-30.7	.5	37.39	-	-	74	-36.61	0	100	V
1.907	24.22	Ca	30.8	-30.7	.5	24.82	54	-29.18	-	-	0	100	V
3.068	35.69	Pk	32.6	-29.9	.5	38.89	-	-	74	-35.11	0	100	H
3.068	23.7	Ca	32.6	-29.9	.5	26.9	54	-27.1	-	-	0	100	H
3.344	35.46	Pk	32.6	-29.7	.6	38.96	-	-	74	-35.04	0	100	V
3.344	23.4	Ca	32.6	-29.7	.6	26.9	54	-27.1	-	-	0	100	V
6.102	35.62	Pk	35.2	-27	.5	44.32	-	-	74	-29.68	0	100	H
6.102	23.11	Ca	35.2	-27	.5	31.81	54	-22.19	-	-	0	100	H
7.182	34.21	Pk	35.6	-25.5	.4	44.71	-	-	74	-29.29	0	100	V
7.182	21.86	Ca	35.6	-25.5	.4	32.36	54	-21.64	-	-	0	100	V

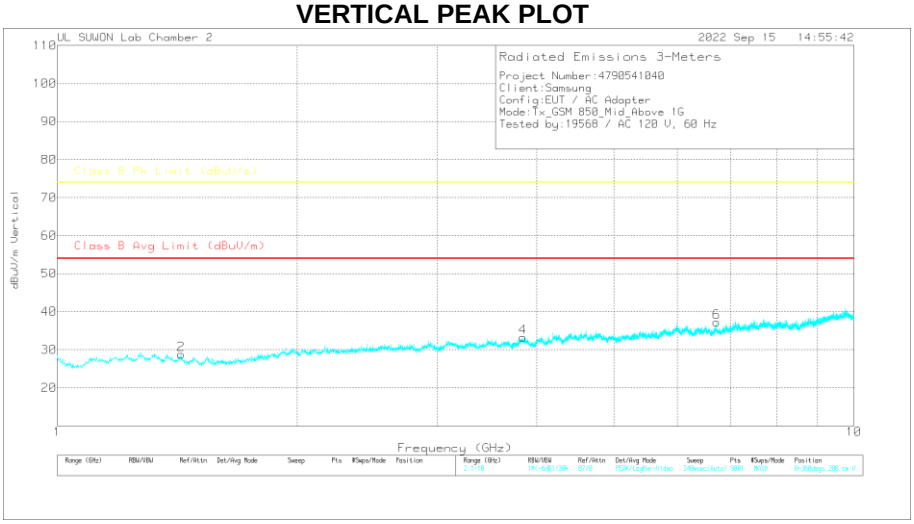
Pk - Peak detector
Ca - CISPR average detection

MID CHANNEL(881.6 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

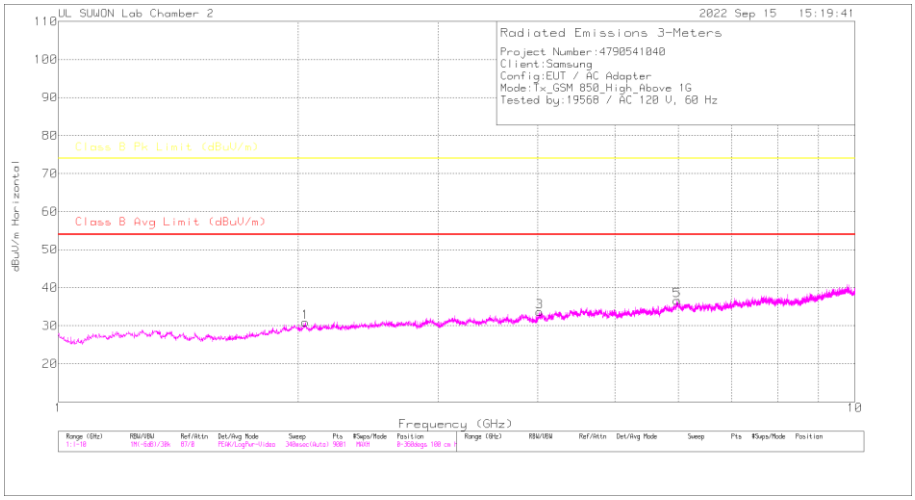
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	3117_0016872 4	1-18GHz[dB]	1G HPF[dB]	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Av(CISPR)Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.378	38.12	Pk	29.2	-31.6	.8	36.52	-	-	74	-37.48	0	100	H
1.378	25.43	Ca	29.2	-31.6	.8	23.83	54	-30.17	-	-	0	100	H
1.43	38.63	Pk	28.9	-31.5	.8	36.83	-	-	74	-37.17	0	100	V
1.43	25.43	Ca	28.9	-31.5	.8	23.63	54	-30.37	-	-	0	100	V
3.827	36.48	Pk	33.1	-29.1	.7	41.18	-	-	74	-32.82	0	100	H
3.827	23.98	Ca	33.1	-29.1	.7	28.68	54	-25.32	-	-	0	100	H
3.844	36.05	Pk	33.2	-29.1	.7	40.85	-	-	74	-33.15	0	100	V
3.844	23.91	Ca	33.2	-29.1	.7	28.71	54	-25.29	-	-	0	100	V
5.787	35.19	Pk	34.6	-27.1	.6	43.29	-	-	74	-30.71	0	100	H
5.787	23.09	Ca	34.6	-27.1	.6	31.19	54	-22.81	-	-	0	100	H
6.721	34.63	Pk	35.4	-26.1	.5	44.43	-	-	74	-29.57	0	100	V
6.721	22.26	Ca	35.4	-26.1	.5	32.06	54	-21.94	-	-	0	100	V

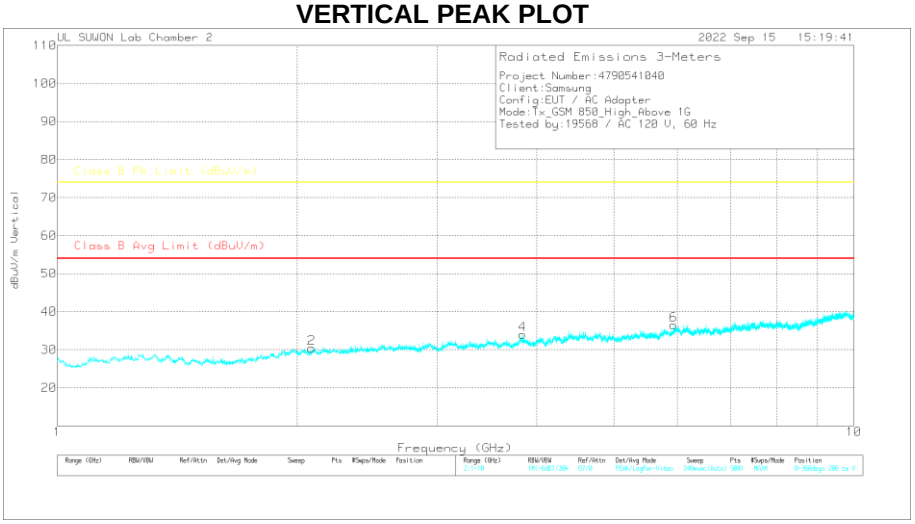
Pk - Peak detector
Ca - CISPR average detection

HIGH CHANNEL(893.8 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	3117_0016872 4	1-18GHz[dB]	1G HPF[dB]	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Av(CISPR)Mar gin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2.041	36.97	Pk	31.4	-30.5	.6	38.47	-	-	74	-35.53	0	100	H
2.041	24.28	Ca	31.4	-30.5	.6	25.78	54	-28.22	-	-	0	100	H
2.086	36.04	Pk	31.4	-30.5	.6	37.54	-	-	74	-36.46	0	100	V
2.086	23.83	Ca	31.4	-30.5	.6	25.33	54	-28.67	-	-	0	100	V
4.02	35.53	Pk	33.2	-29.1	.5	40.13	-	-	74	-33.87	0	100	H
4.02	23.73	Ca	33.2	-29.1	.5	28.33	54	-25.67	-	-	0	100	H
3.836	36.07	Pk	33.2	-29.1	.7	40.87	-	-	74	-33.13	0	100	V
3.836	23.97	Ca	33.2	-29.1	.7	28.77	54	-25.23	-	-	0	100	V
5.982	34.87	Pk	35	-27.4	.6	43.07	-	-	74	-30.93	0	100	H
5.982	23.5	Ca	35	-27.4	.6	31.7	54	-22.3	-	-	0	100	H
5.938	34.88	Pk	34.9	-27.4	.6	42.98	-	-	74	-31.02	0	100	V
5.938	22.87	Ca	34.9	-27.4	.6	30.97	54	-23.03	-	-	0	100	V

Pk - Peak detector
Ca - CISPR average detection

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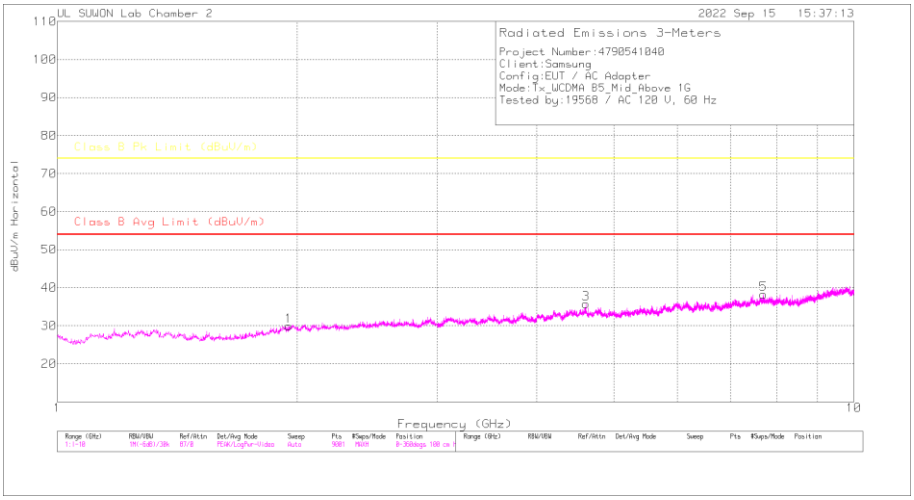
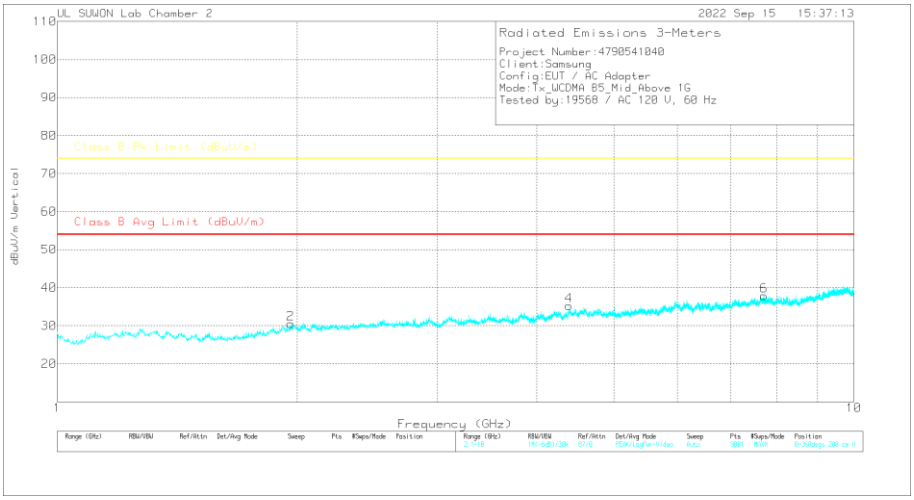
7.1.2. Above 1 GHz in the WCDMA Band 5

MID CHANNEL(881.6 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

Radiated Emissions

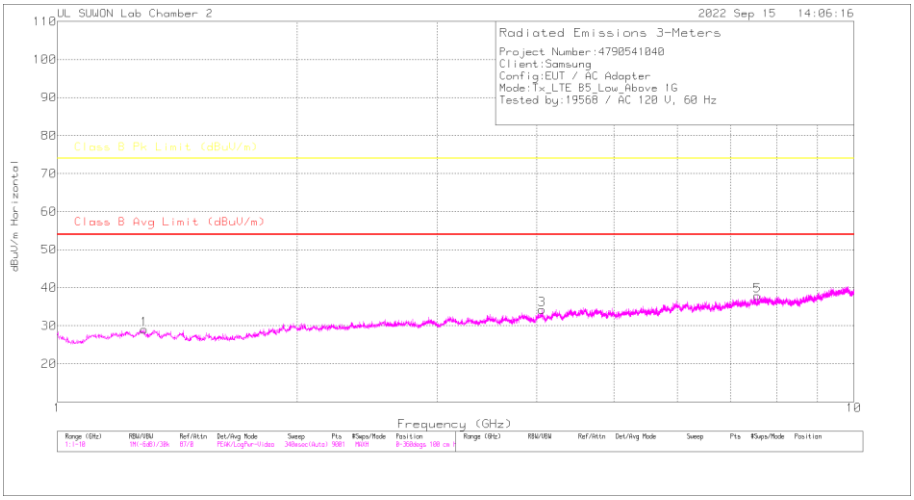
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_0016872 4	1-18GHz[dB]	1G HPF[dB]	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Av(CISPR)Mar gin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.951	35.9	Pk	31.1	-30.9	.5	36.6	-	-	74	-37.4	0	100	H
1.951	24.04	Ca	31.1	-30.9	.5	24.74	54	-29.26	-	-	0	100	H
1.964	37	Pk	31.1	-30.8	.6	37.9	-	-	74	-36.1	0	100	V
1.964	24.38	Ca	31.1	-30.8	.6	25.28	54	-28.72	-	-	0	100	V
4.611	36.19	Pk	34.1	-28.8	.5	41.99	-	-	74	-32.01	0	100	H
4.611	24.25	Ca	34.1	-28.8	.5	30.05	54	-23.95	-	-	0	100	H
4.388	36.43	Pk	33.6	-28.6	.5	41.93	-	-	74	-32.07	0	100	V
4.388	24.18	Ca	33.6	-28.6	.5	29.68	54	-24.32	-	-	0	100	V
7.698	33.82	Pk	35.9	-24.6	.5	45.62	-	-	74	-28.38	0	100	H
7.698	21.66	Ca	35.9	-24.6	.5	33.46	54	-20.54	-	-	0	100	H
7.708	33.2	Pk	35.9	-24.5	.5	45.1	-	-	74	-28.9	0	100	V
7.708	21.54	Ca	35.9	-24.5	.5	33.44	54	-20.56	-	-	0	100	V

Pk - Peak detector
Ca - CISPR average detection

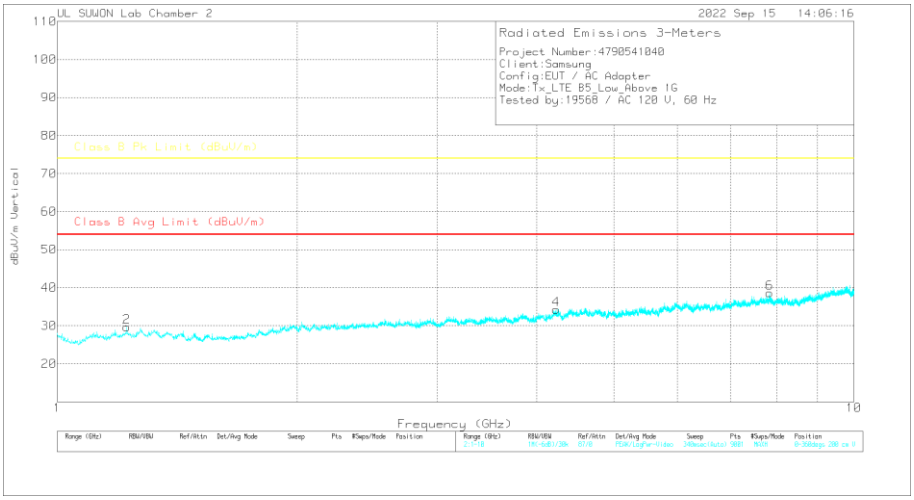
7.1.3. Above 1 GHz in the LTE Band 5

LOW CHANNEL(871.5 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

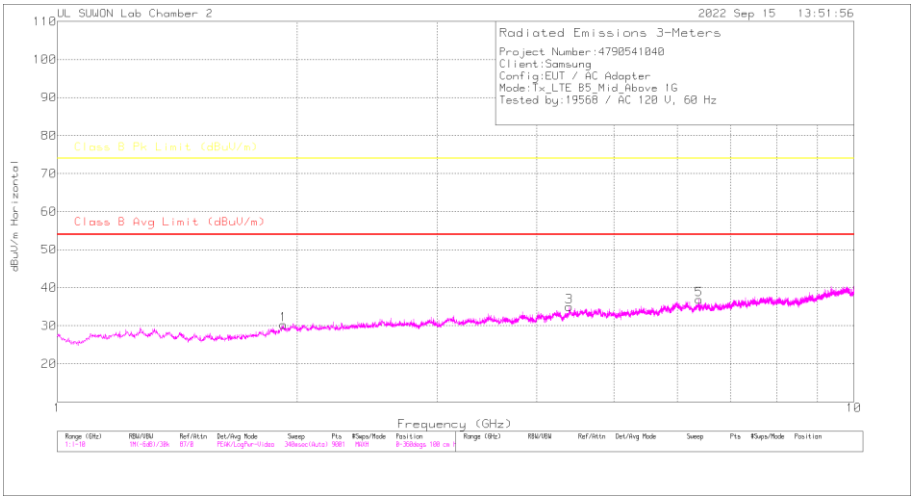
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	3117_0016872 4	1-18GHz[dB]	1G HPF[dB]	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Av(CISPR)Mar gin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.286	36.71	Pk	29.5	-31.6	1	35.61	-	-	74	-38.39	0	100	H
1.286	24.85	Ca	29.5	-31.6	1	23.75	54	-30.25	-	-	0	100	H
1.223	37.46	Pk	29.2	-31.8	1.1	35.96	-	-	74	-38.04	0	100	V
1.223	25.52	Ca	29.2	-31.8	1.1	24.02	54	-29.98	-	-	0	100	V
4.061	36.63	Pk	33.2	-28.9	.6	41.53	-	-	74	-32.47	0	100	H
4.061	23.67	Ca	33.2	-28.9	.6	28.57	54	-25.43	-	-	0	100	H
4.231	35.5	Pk	33.3	-28.5	.6	40.9	-	-	74	-33.1	0	100	V
4.231	23.81	Ca	33.3	-28.5	.6	29.21	54	-24.79	-	-	0	100	V
7.562	33.88	Pk	35.8	-25.1	.4	44.98	-	-	74	-29.02	0	100	H
7.562	21.8	Ca	35.8	-25.1	.4	32.9	54	-21.1	-	-	0	100	H
7.835	34.34	Pk	35.9	-24.4	.4	46.24	-	-	74	-27.76	0	100	V
7.835	21.63	Ca	35.9	-24.4	.4	33.53	54	-20.47	-	-	0	100	V

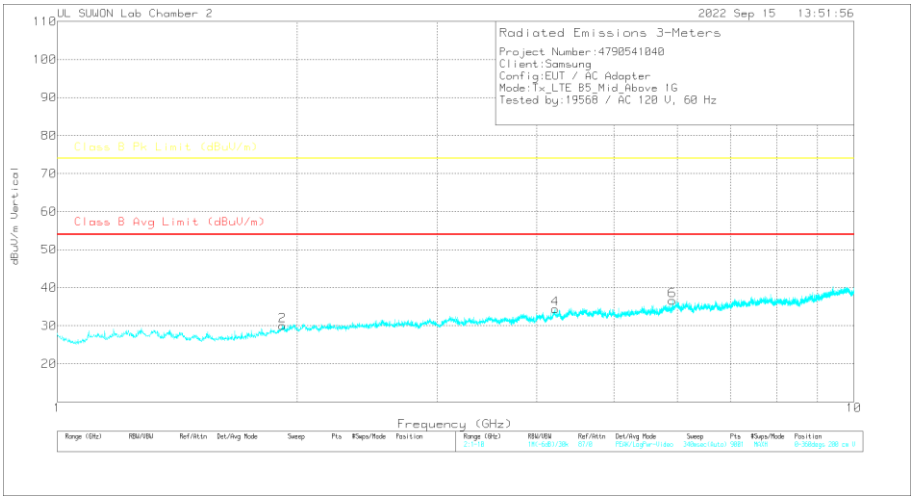
Pk - Peak detector
Ca - CISPR average detection

MID CHANNEL(881.5 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

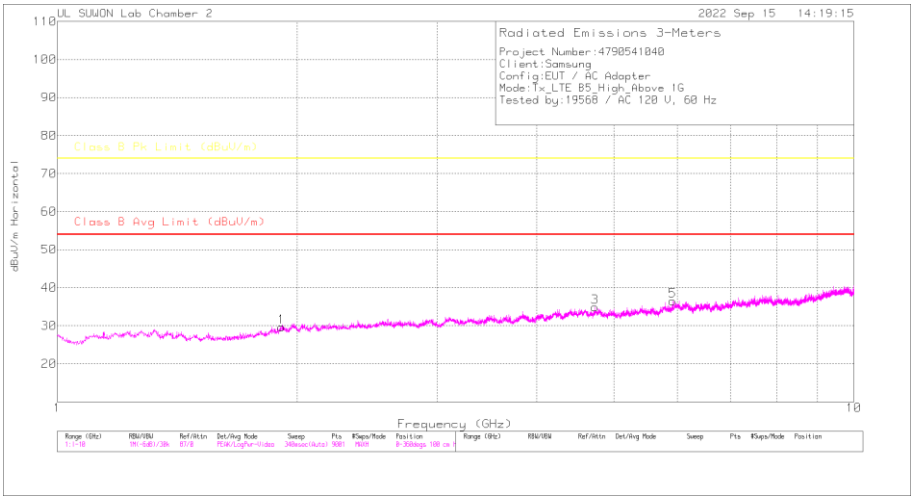
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	3117_0016872 4	1-18GHz[dB]	1G HPF[dB]	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Av(CISPR)Mar gin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.923	36.35	Pk	30.9	-30.8	.5	36.95	-	-	74	-37.05	0	100	H
1.923	24.66	Ca	30.9	-30.8	.5	25.26	54	-28.74	-	-	0	100	H
1.917	36.67	Pk	30.8	-30.8	.5	37.17	-	-	74	-36.83	0	100	V
1.917	24.6	Ca	30.8	-30.8	.5	25.1	54	-28.9	-	-	0	100	V
4.391	36.1	Pk	33.6	-28.7	.5	41.5	-	-	74	-32.5	0	100	H
4.391	24.19	Ca	33.6	-28.7	.5	29.59	54	-24.41	-	-	0	100	H
4.216	36.44	Pk	33.3	-28.4	.5	41.84	-	-	74	-32.16	0	100	V
4.216	24.08	Ca	33.3	-28.4	.5	29.48	54	-24.52	-	-	0	100	V
6.394	34.92	Pk	35.3	-26.8	.5	43.92	-	-	74	-30.08	0	100	H
6.394	22.28	Ca	35.3	-26.8	.5	31.28	54	-22.72	-	-	0	100	H
5.917	35.14	Pk	34.9	-27.3	.5	43.24	-	-	74	-30.76	0	100	V
5.917	22.96	Ca	34.9	-27.3	.5	31.06	54	-22.94	-	-	0	100	V

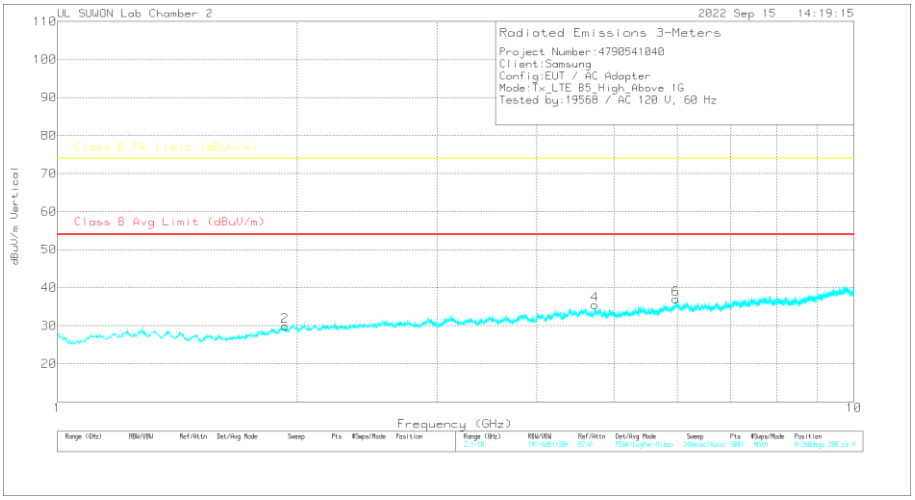
Pk - Peak detector
Ca - CISPR average detection

HIGH CHANNEL(891.5 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

Radiated Emissions

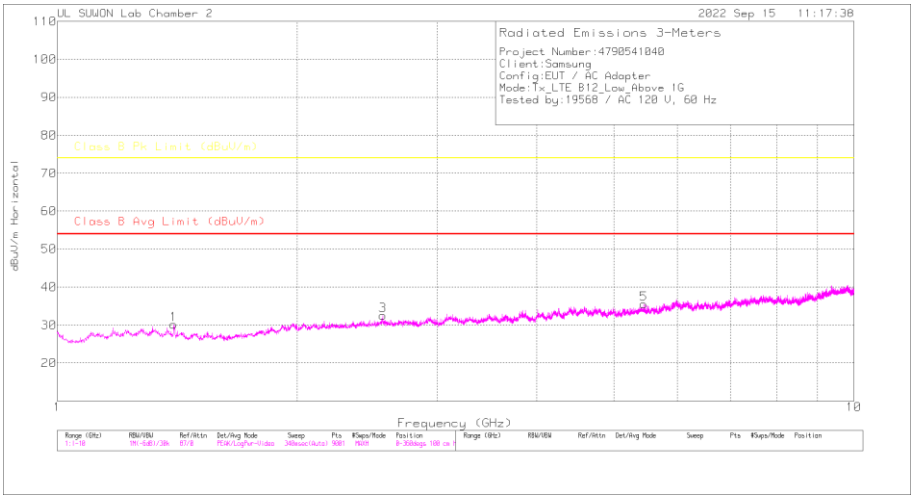
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	1-18GHz[dB]	1G HPF[dB]	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Av(CISPR)Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.913	36.09	Pk	30.8	-30.8	.5	36.59	-	-	74	-37.41	0	100	H
1.913	24.55	Ca	30.8	-30.8	.5	25.05	54	-28.95	-	-	0	100	H
1.93	35.79	Pk	30.9	-30.8	.5	36.39	-	-	74	-37.61	0	100	V
1.93	24.4	Ca	30.9	-30.8	.5	25	54	-29	-	-	0	100	V
4.73	35.77	Pk	34	-28.7	.6	41.67	-	-	74	-32.33	0	100	H
4.73	23.98	Ca	34	-28.7	.6	29.88	54	-24.12	-	-	0	100	H
4.731	36.1	Pk	34	-28.7	.6	42	-	-	74	-32	0	100	V
4.731	23.89	Ca	34	-28.7	.6	29.79	54	-24.21	-	-	0	100	V
5.922	35.4	Pk	34.9	-27.3	.5	43.5	-	-	74	-30.5	0	100	H
5.922	23.08	Ca	34.9	-27.3	.5	31.18	54	-22.82	-	-	0	100	H
5.981	35.42	Pk	35	-27.5	.6	43.52	-	-	74	-30.48	0	100	V
5.981	23.49	Ca	35	-27.5	.6	31.59	54	-22.41	-	-	0	100	V

Pk - Peak detector
Ca - CISPR average detection

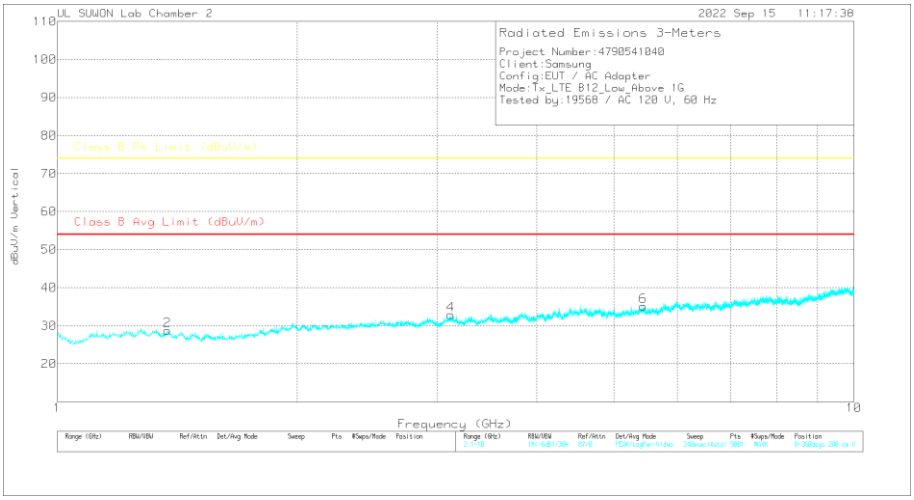
7.1.4. Above 1 GHz in the LTE Band 12

LOW CHANNEL(730.5 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

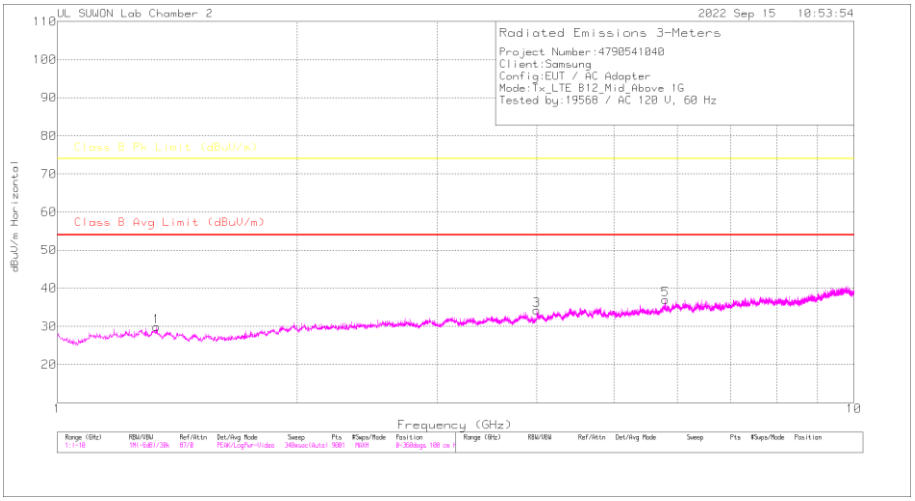
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	3117_0016872 4	1-18GHz[dB]	1G HPF[dB]	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Av(CISPR)Mar gin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.4	38.68	Pk	29.1	-31.5	.8	37.08	-	-	74	-36.92	0	100	H
1.4	26.49	Ca	29.1	-31.5	.8	24.89	54	-29.11	-	-	0	100	H
1.376	37.18	Pk	29.3	-31.6	.8	35.68	-	-	74	-38.32	0	100	V
1.376	25.52	Ca	29.3	-31.6	.8	24.02	54	-29.98	-	-	0	100	V
2.562	35.89	Pk	32	-29.8	.6	38.69	-	-	74	-35.31	0	100	H
2.562	23.99	Ca	32	-29.8	.6	26.79	54	-27.21	-	-	0	100	H
3.119	36.22	Pk	32.7	-29.6	.6	39.92	-	-	74	-34.08	0	100	V
3.119	23.87	Ca	32.7	-29.6	.6	27.57	54	-26.43	-	-	0	100	V
5.447	35.77	Pk	34.4	-27.8	.5	42.87	-	-	74	-31.13	0	100	H
5.447	23.15	Ca	34.4	-27.8	.5	30.25	54	-23.75	-	-	0	100	H
5.443	35.14	Pk	34.4	-27.8	.5	42.24	-	-	74	-31.76	0	100	V
5.443	23.14	Ca	34.4	-27.8	.5	30.24	54	-23.76	-	-	0	100	V

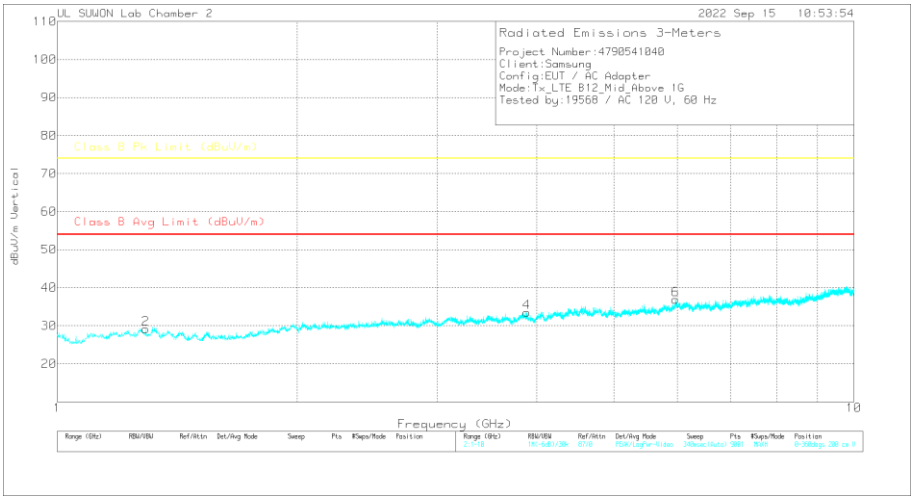
Pk - Peak detector
Ca - CISPR average detection

MID CHANNEL(737.5 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

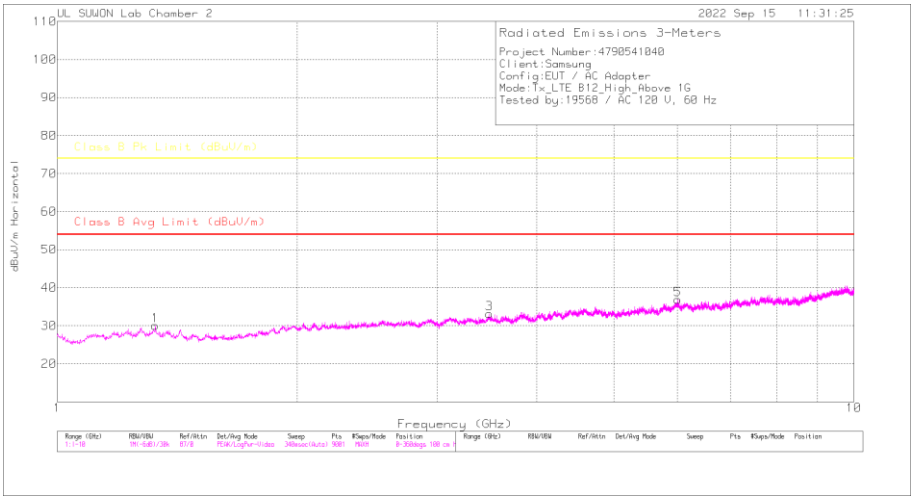
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	3117_0016872 4	1-18GHz[dB]	1G HPF[dB]	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Av(CISPR)Mar gin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.332	37.18	Pk	29.5	-31.5	.9	36.08	-	-	74	-37.92	0	100	H
1.332	25.43	Ca	29.5	-31.5	.9	24.33	54	-29.67	-	-	0	100	H
1.292	36.96	Pk	29.5	-31.6	1	35.86	-	-	74	-38.14	0	100	V
1.292	24.76	Ca	29.5	-31.6	1	23.66	54	-30.34	-	-	0	100	V
3.998	35.86	Pk	33.2	-29.2	.5	40.36	-	-	74	-33.64	0	100	H
3.998	23.66	Ca	33.2	-29.2	.5	28.16	54	-25.84	-	-	0	100	H
3.885	35.82	Pk	33.2	-29.4	.6	40.22	-	-	74	-33.78	0	100	V
3.885	23.94	Ca	33.2	-29.4	.6	28.34	54	-25.66	-	-	0	100	V
5.797	36.24	Pk	34.7	-27	.6	44.54	-	-	74	-29.46	0	100	H
5.797	23.01	Ca	34.7	-27	.6	31.31	54	-22.69	-	-	0	100	H
5.967	35.57	Pk	35	-27.4	.6	43.77	-	-	74	-30.23	0	100	V
5.967	23.48	Ca	35	-27.4	.6	31.68	54	-22.32	-	-	0	100	V

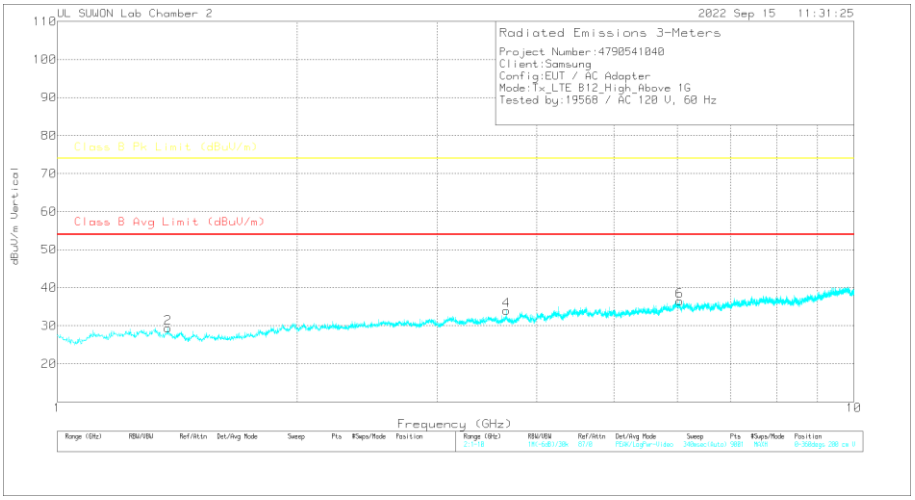
Pk - Peak detector
Ca - CISPR average detection

HIGH CHANNEL(744.5 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

Radiated Emissions

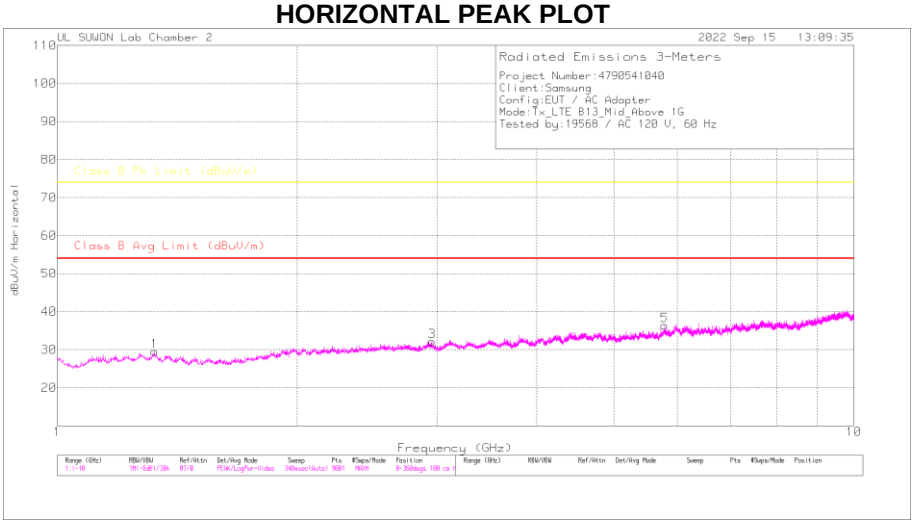
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	1-18GHz[dB]	1G HPF[dB]	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Av(CISPR)Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.328	37.85	Pk	29.5	-31.5	.9	36.75	-	-	74	-37.25	0	100	H
1.328	25.61	Ca	29.5	-31.5	.9	24.51	54	-29.49	-	-	0	100	H
1.377	37.83	Pk	29.3	-31.6	.8	36.33	-	-	74	-37.67	0	100	V
1.377	25.52	Ca	29.3	-31.6	.8	24.02	54	-29.98	-	-	0	100	V
3.487	35.57	Pk	32.7	-28.9	.5	39.87	-	-	74	-34.13	0	100	H
3.487	23.54	Ca	32.7	-28.9	.5	27.84	54	-26.16	-	-	0	100	H
3.663	36.56	Pk	32.8	-29.7	.5	40.16	-	-	74	-33.84	0	100	V
3.663	24.37	Ca	32.8	-29.7	.5	27.97	54	-26.03	-	-	0	100	V
6.011	35.88	Pk	35	-27.4	.5	43.98	-	-	74	-30.02	0	100	H
6.011	23.44	Ca	35	-27.4	.5	31.54	54	-22.46	-	-	0	100	H
6.046	35.06	Pk	35.1	-27.3	.5	43.36	-	-	74	-30.64	0	100	V
6.046	23.34	Ca	35.1	-27.3	.5	31.64	54	-22.36	-	-	0	100	V

Pk - Peak detector
Ca - CISPR average detection

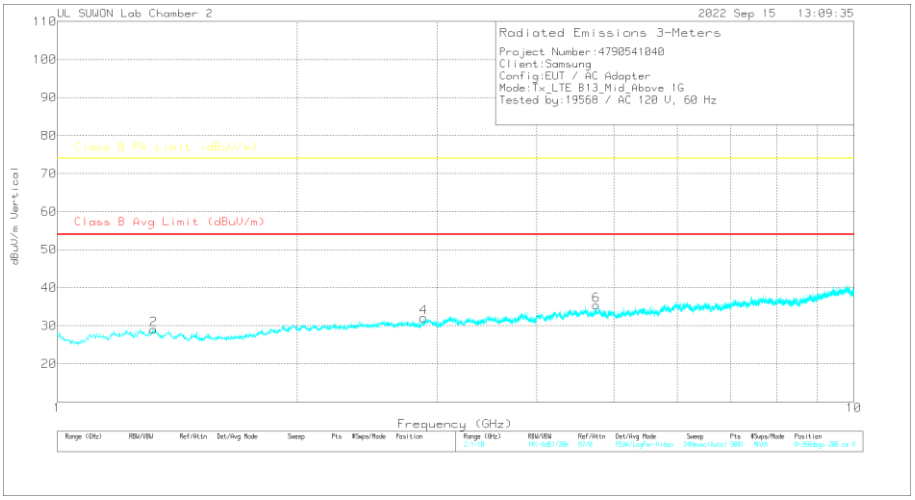
7.1.5. Above 1 GHz in the LTE Band 13

MID CHANNEL(751.0 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

Radiated Emissions

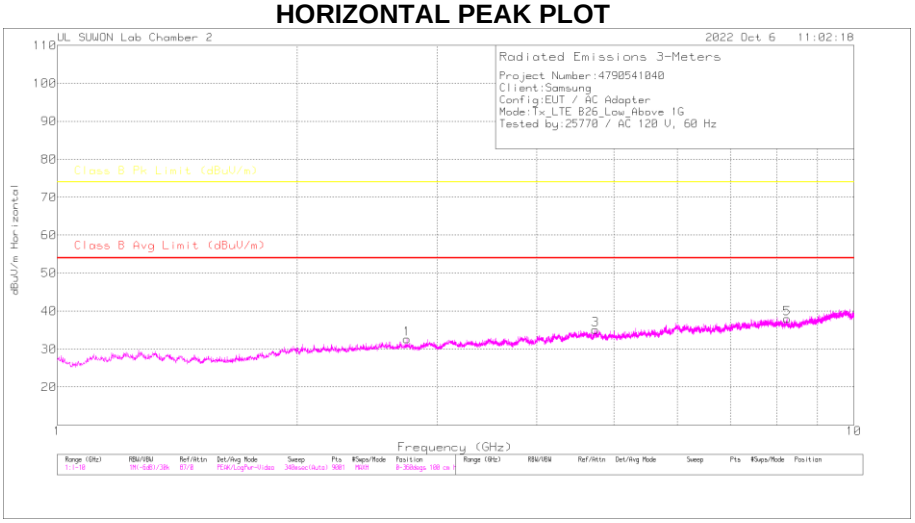
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_0016872 4	1-18GHz[dB]	1G HPF[dB]	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Av(CISPR)Mar gin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.325	37.83	Pk	29.5	-31.5	.9	36.73	-	-	74	-37.27	0	100	H
1.325	25.54	Ca	29.5	-31.5	.9	24.44	54	-29.56	-	-	0	100	H
1.322	38.19	Pk	29.5	-31.6	.9	36.99	-	-	74	-37.01	0	100	V
1.322	25.46	Ca	29.5	-31.6	.9	24.26	54	-29.74	-	-	0	100	V
2.953	35.44	Pk	32.3	-30.1	.6	38.24	-	-	74	-35.76	0	100	H
2.953	24.03	Ca	32.3	-30.1	.6	26.83	54	-27.17	-	-	0	100	H
2.884	35.88	Pk	32.1	-29.9	.7	38.78	-	-	74	-35.22	0	100	V
2.884	23.68	Ca	32.1	-29.9	.7	26.58	54	-27.42	-	-	0	100	V
5.786	35.51	Pk	34.6	-27	.6	43.71	-	-	74	-30.29	0	100	H
5.786	22.94	Ca	34.6	-27	.6	31.14	54	-22.86	-	-	0	100	H
4.749	37.04	Pk	34	-28.5	.6	43.14	-	-	74	-30.86	0	100	V
4.749	23.72	Ca	34	-28.5	.6	29.82	54	-24.18	-	-	0	100	V

Pk - Peak detector
Ca - CISPR average detection

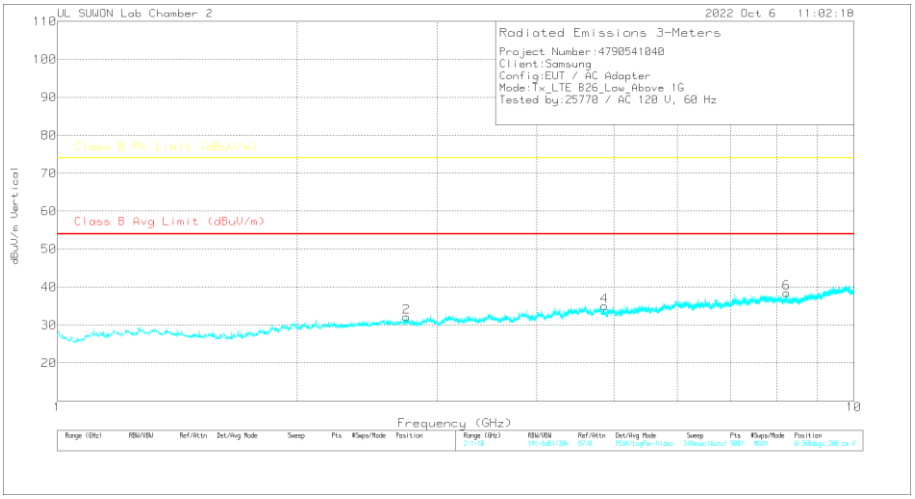
7.1.6. Above 1 GHz in the LTE Band 26

LOW CHANNEL(860.5 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

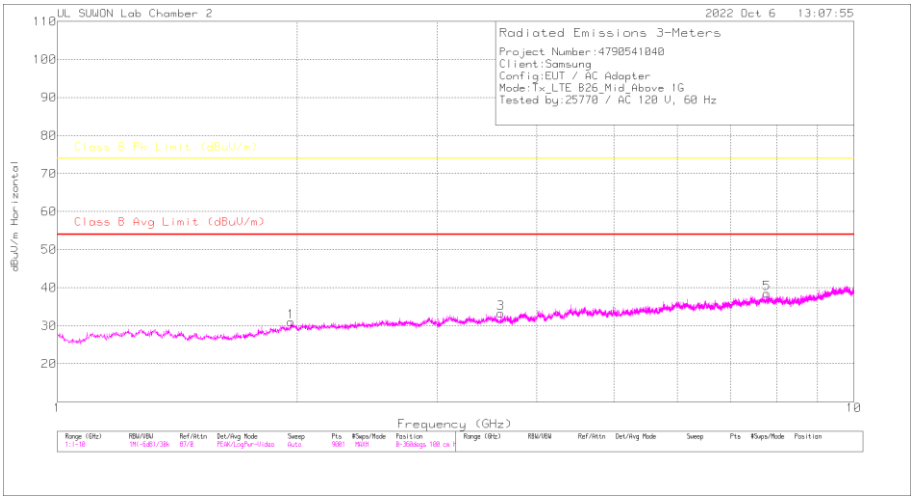
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	3117_0016872 4	1-18GHz[dB]	1G HPF[dB]	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Av(CISPR)Mar gin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2.748	36.7	Pk	32.1	-29.7	.5	39.6	-	-	74	-34.4	0	100	H
2.748	24.02	Ca	32.1	-29.7	.5	26.92	54	-27.08	-	-	0	100	H
2.743	36.77	Pk	32.1	-29.9	.5	39.47	-	-	74	-34.53	0	100	V
2.743	24.01	Ca	32.1	-29.9	.5	26.71	54	-27.29	-	-	0	100	V
4.737	37.01	Pk	34	-28.7	.6	42.91	-	-	74	-31.09	0	100	H
4.737	24.17	Ca	34	-28.7	.6	30.07	54	-23.93	-	-	0	100	H
4.864	35.18	Pk	34	-28.1	.5	41.58	-	-	74	-32.42	0	100	V
4.864	23.48	Ca	34	-28.1	.5	29.88	54	-24.12	-	-	0	100	V
8.246	33.69	Pk	35.9	-24.5	.4	45.49	-	-	74	-28.51	0	100	H
8.246	21.32	Ca	35.9	-24.5	.4	33.12	54	-20.88	-	-	0	100	H
8.23	33.09	Pk	35.9	-24.4	.4	44.99	-	-	74	-29.01	0	100	V
8.23	21.3	Ca	35.9	-24.4	.4	33.2	54	-20.8	-	-	0	100	V

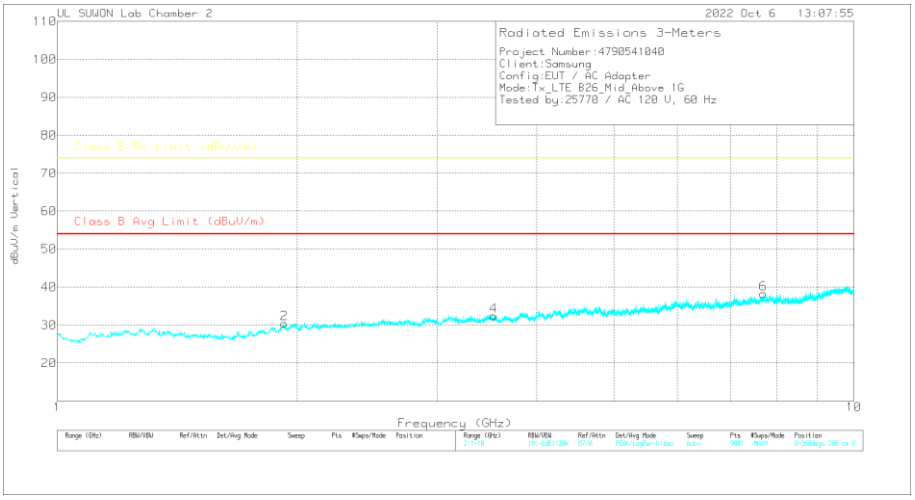
Pk - Peak detector
Ca - CISPR average detection

MID CHANNEL(876.5 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

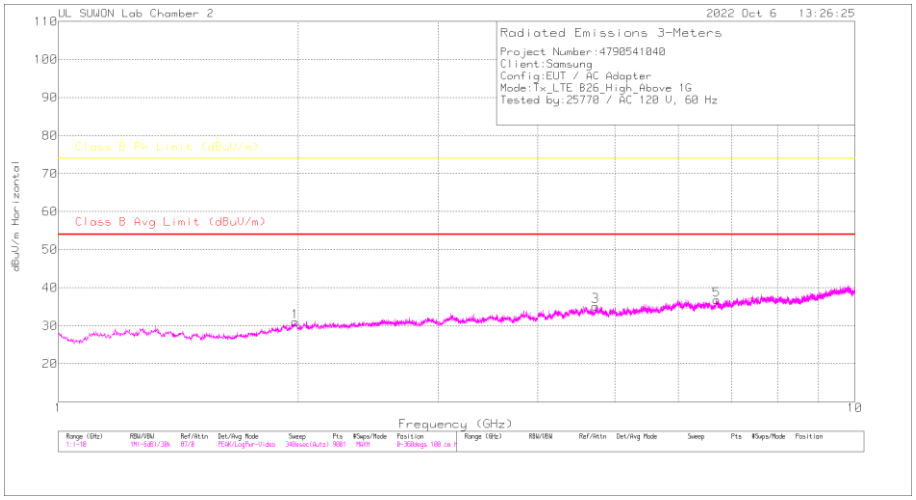
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	3117_0016872 4	1-18GHz[dB]	1G HPF[dB]	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Av(CISPR)Mar gin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.965	36.22	Pk	31.1	-30.8	.6	37.12	-	-	74	-36.88	0	100	H
1.965	24.54	Ca	31.1	-30.8	.6	25.44	54	-28.56	-	-	0	100	H
1.928	37.06	Pk	30.9	-30.8	.5	37.66	-	-	74	-36.34	0	100	V
1.928	24.77	Ca	30.9	-30.8	.5	25.37	54	-28.63	-	-	0	100	V
3.602	36.24	Pk	32.7	-29.3	.6	40.24	-	-	74	-33.76	0	100	H
3.602	23.67	Ca	32.7	-29.3	.6	27.67	54	-26.33	-	-	0	100	H
3.529	34.96	Pk	32.7	-29	.5	39.16	-	-	74	-34.84	0	100	V
3.529	23.17	Ca	32.7	-29	.5	27.37	54	-26.63	-	-	0	100	V
7.775	34.17	Pk	35.9	-24.3	.4	46.17	-	-	74	-27.83	0	100	H
7.775	21.42	Ca	35.9	-24.3	.4	33.42	54	-20.58	-	-	0	100	H
7.698	33.6	Pk	35.9	-24.6	.5	45.4	-	-	74	-28.6	0	100	V
7.698	21.75	Ca	35.9	-24.6	.5	33.55	54	-20.45	-	-	0	100	V

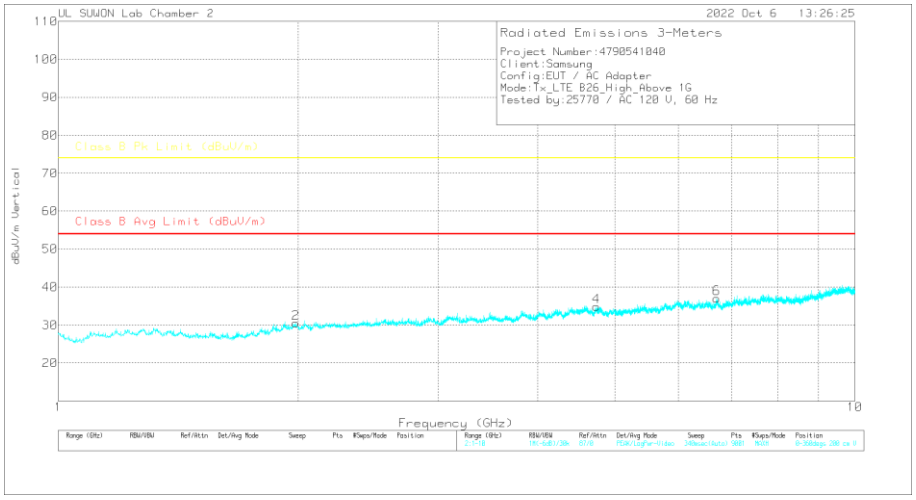
Pk - Peak detector
Ca - CISPR average detection

HIGH CHANNEL(892.5 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	3117_0016872 4	1-18GHz[dB]	1G HPF[dB]	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Av(CISPR)Mar gin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.985	36.92	Pk	31.2	-30.7	.6	38.02	-	-	74	-35.98	0	100	H
1.985	24.7	Ca	31.2	-30.7	.6	25.8	54	-28.2	-	-	0	100	H
1.986	37.81	Pk	31.2	-30.7	.6	38.91	-	-	74	-35.09	0	100	V
1.986	24.74	Ca	31.2	-30.7	.6	25.84	54	-28.16	-	-	0	100	V
4.727	36.13	Pk	34	-28.8	.6	41.93	-	-	74	-32.07	0	100	H
4.727	24.17	Ca	34	-28.8	.6	29.97	54	-24.03	-	-	0	100	H
4.738	35.55	Pk	34	-28.6	.6	41.55	-	-	74	-32.45	0	100	V
4.738	24.11	Ca	34	-28.6	.6	30.11	54	-23.89	-	-	0	100	V
6.709	34.92	Pk	35.4	-26.2	.6	44.72	-	-	74	-29.28	0	100	H
6.709	22.61	Ca	35.4	-26.2	.6	32.41	54	-21.59	-	-	0	100	H
6.703	34.91	Pk	35.4	-26.2	.6	44.71	-	-	74	-29.29	0	100	V
6.703	22.63	Ca	35.4	-26.2	.6	32.43	54	-21.57	-	-	0	100	V

Pk - Peak detector
Ca - CISPR average detection

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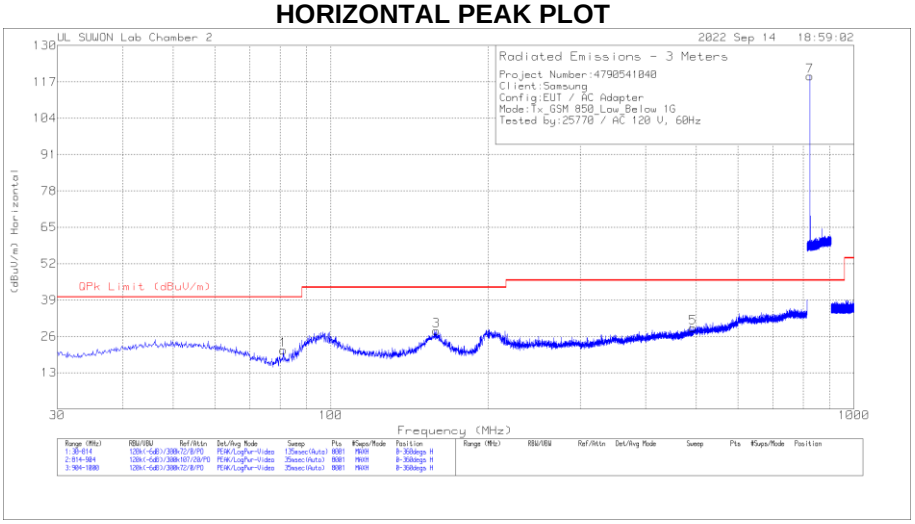
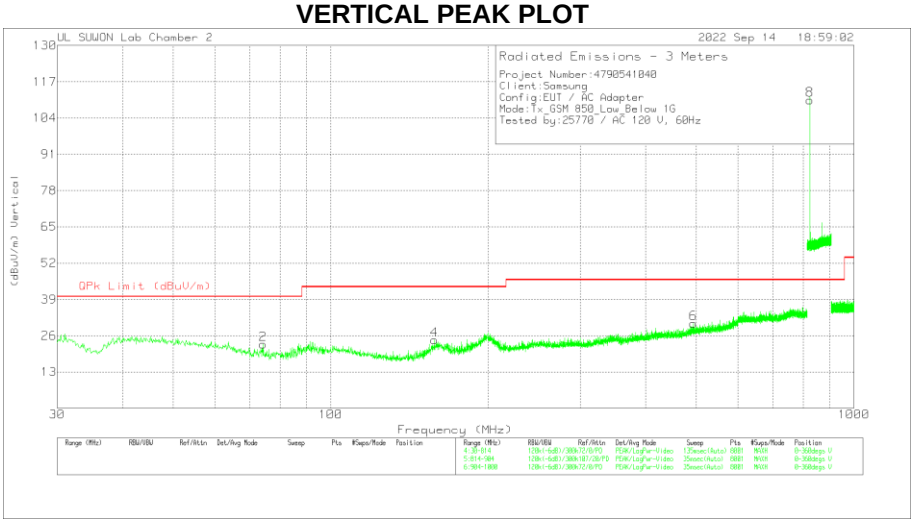
7.1.7. Below 1 GHz in the GSM850

LOW CHANNEL(869.2 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Below 1G_Bypass[dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	81.156	7.13	Pk	13	1	21.13	40	-18.87	0-360	300	H
3	159.066	12.34	Pk	14.3	1.4	28.04	43.52	-15.48	0-360	100	H
5	492.168	3.84	Pk	22.7	2.5	29.04	46.02	-16.98	0-360	300	H
7	824.2038	89.21	Pk	26.5	3.3	119.01	**46.02**	**72.99**	0-360	100	H
2	74.296	8.02	Pk	13.9	1	22.92	40	-17.08	0-360	400	V
4	157.792	8.7	Pk	14.3	1.4	24.4	43.52	-19.12	0-360	200	V
6	493.246	5.04	Pk	22.8	2.5	30.34	46.02	-15.68	0-360	300	V
8	824.2038	80.67	Pk	26.5	3.3	110.47	**46.02**	**64.45**	0-360	300	V

Pk - Peak detector

Note: Unwanted emissions captured from 824MHz to 849MHz and from 869MHz to 894MHz were the TX and RX signals generated from the call-simulator.

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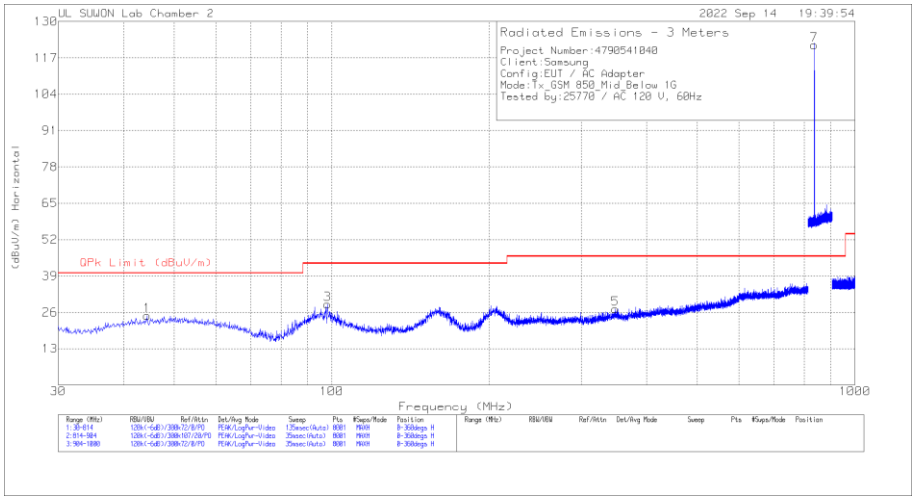
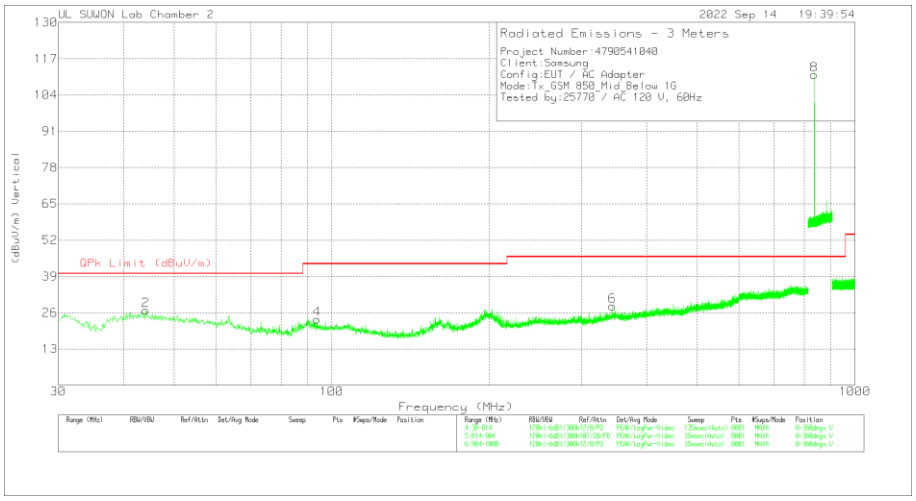
MID CHANNEL(881.6 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

Trace Markers

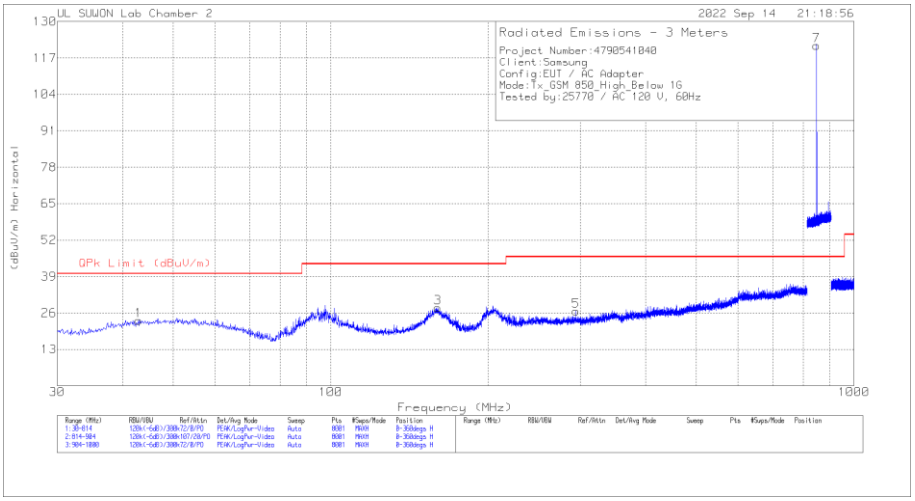
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Below 1G_Bypass[dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	44.406	4.25	Pk	19.7	.8	24.75	40	-15.25	0-360	200	H
3	98.11	10.51	Pk	17.2	1.1	28.81	43.52	-14.71	0-360	200	H
5	348.5	4.35	Pk	20.7	2.1	27.15	46.02	-18.87	0-360	200	H
7	836.6013	91.62	Pk	26.6	3.3	121.52	**46.02**	**75.5**	0-360	200	H
2	44.112	6.28	Pk	19.7	.8	26.78	40	-13.22	0-360	100	V
4	93.7	6.19	Pk	16.4	1.1	23.69	43.52	-19.83	0-360	100	V
6	344.188	5.66	Pk	20.6	2.1	28.36	46.02	-17.66	0-360	300	V
8	836.6013	81.27	Pk	26.6	3.3	111.17	**46.02**	**65.15**	0-360	300	V

Pk - Peak detector

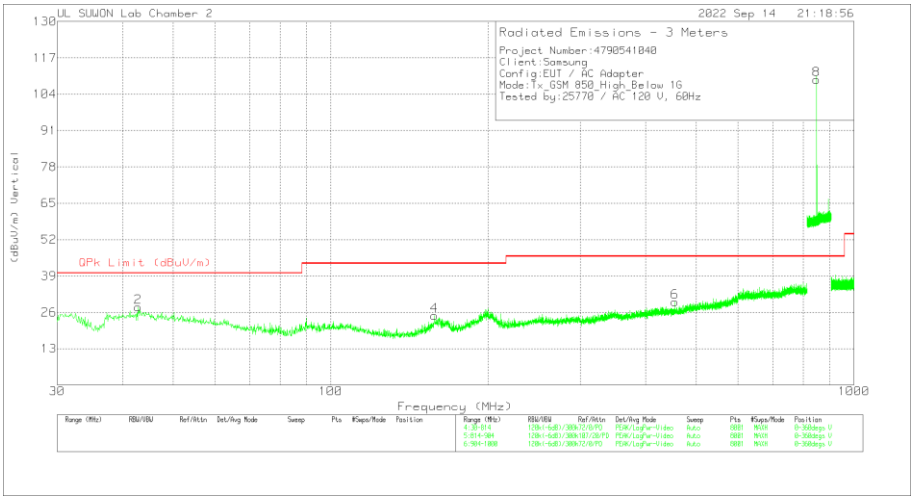
Note: Unwanted emissions captured from 824MHz to 849MHz and from 869MHz to 894MHz were the TX and RX signals generated from the call-simulator.

HIGH CHANNEL(893.8 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Below 1G_Bypass[dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	42.936	3	Pk	19.5	.8	23.3	40	-16.7	0-360	100	H
3	160.144	11.99	Pk	14.4	1.5	27.89	43.52	-15.63	0-360	100	H
5	294.208	5.6	Pk	19.1	2	26.7	46.02	-19.32	0-360	100	H
7	848.8075	91.24	Pk	26.9	3.3	121.44	**46.02**	**75.42**	0-360	200	H
2	42.838	7.57	Pk	19.5	.8	27.87	40	-12.13	0-360	200	V
4	157.792	9.11	Pk	14.3	1.4	24.81	43.52	-18.71	0-360	200	V
6	455.222	5.36	Pk	21.9	2.4	29.66	46.02	-16.36	0-360	300	V
8	848.8075	79.02	Pk	26.9	3.3	109.22	**46.02**	**63.2**	0-360	100	V

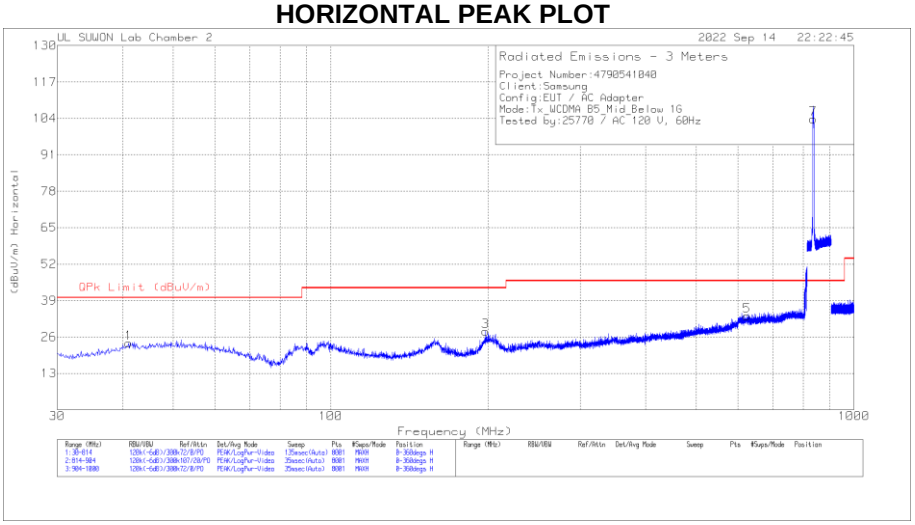
Pk - Peak detector

Note: Unwanted emissions captured from 824MHz to 849MHz and from 869MHz to 894MHz were the TX and RX signals generated from the call-simulator.

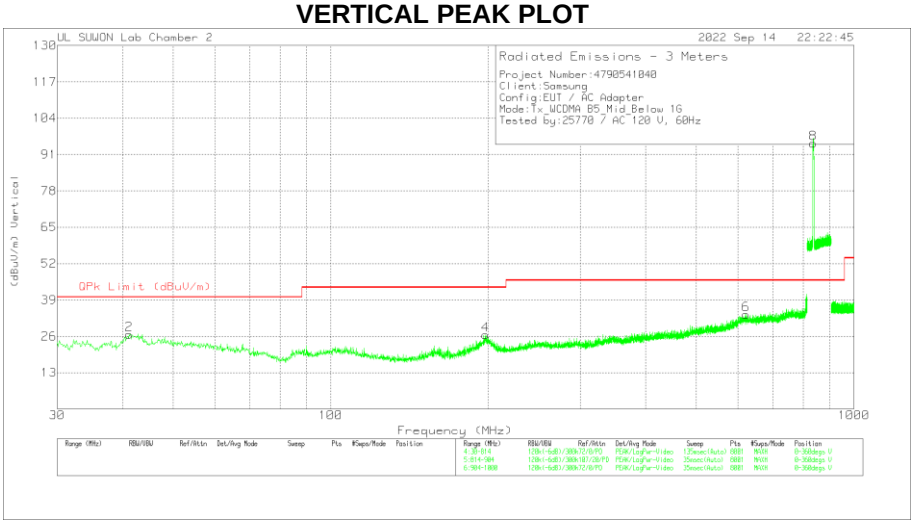
7.1.8. Below 1 GHz in the WCDMA Band 5

MID CHANNEL(881.6 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Below 1G_Bypass[dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	41.074	4.14	Pk	19	.7	23.84	40	-16.16	0-360	100	H
3	197.776	8.36	Pk	18	1.6	27.96	43.52	-15.56	0-360	100	H
5	623.978	5.72	Pk	25	2.8	33.52	46.02	-12.5	0-360	200	H
7	836.6013	73.93	Pk	26.6	3.3	103.83	**46.02**	**57.81**	0-360	200	H
2	41.172	6.94	Pk	19.1	.7	26.74	40	-13.26	0-360	200	V
4	197.678	6.96	Pk	18	1.6	26.56	43.52	-16.96	0-360	200	V
6	622.018	5.92	Pk	25	2.8	33.72	46.02	-12.3	0-360	300	V
8	836.6013	65	Pk	26.6	3.3	94.9	**46.02**	**48.88**	0-360	100	V

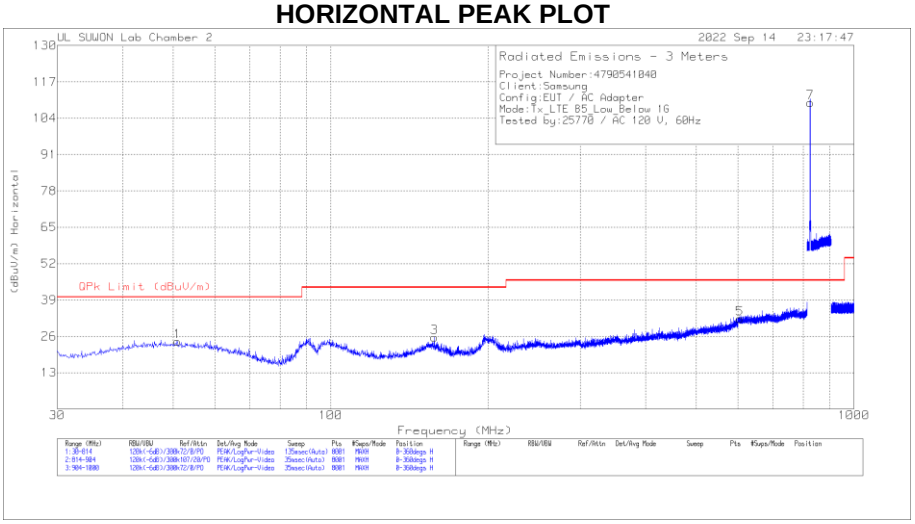
Pk - Peak detector

Note: Unwanted emissions captured from 824MHz to 849MHz and from 869MHz to 894MHz were the TX and RX signals generated from the call-simulator.

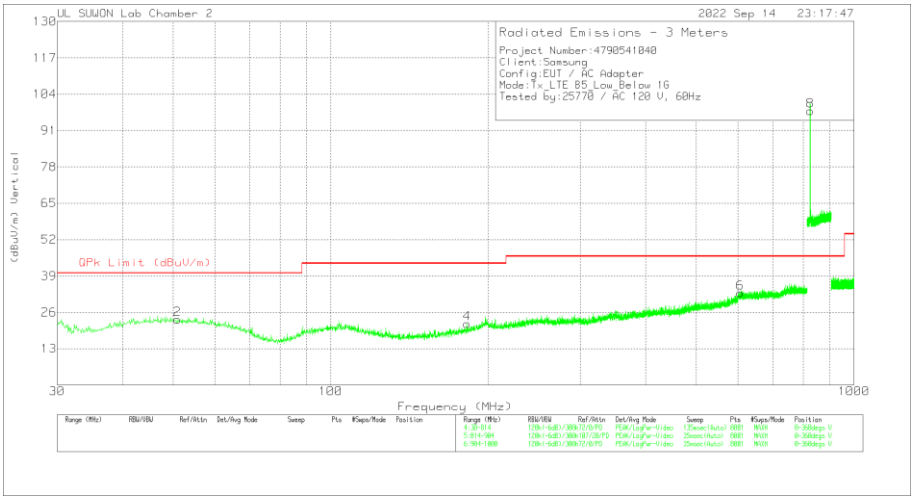
7.1.9. Below 1 GHz in the LTE Band 5

LOW CHANNEL(871.5 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

Trace Markers

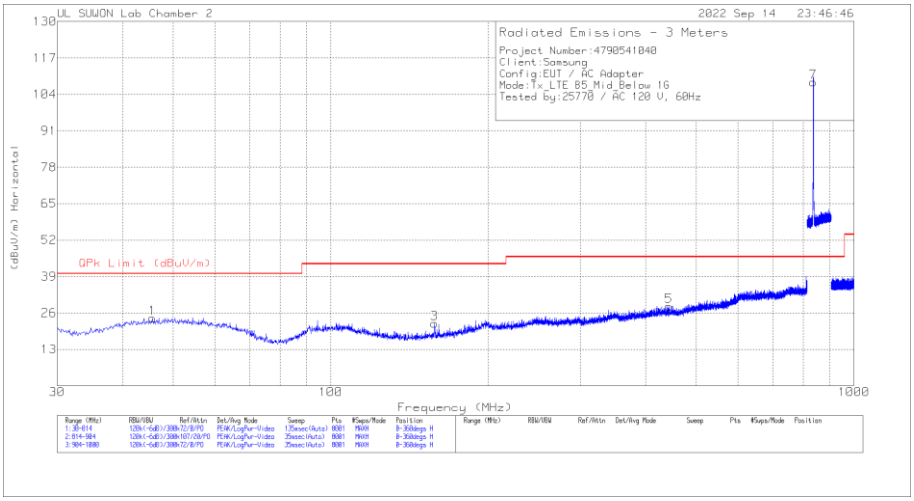
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Below 1G_Bypass[dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	50.874	3.38	Pk	20	.8	24.18	40	-15.82	0-360	100	H
3	157.792	10.01	Pk	14.3	1.4	25.71	43.52	-17.81	0-360	100	H
5	605.554	4.49	Pk	24.9	2.8	32.19	46.02	-13.83	0-360	200	H
7	824.71	79.69	Pk	26.5	3.3	109.49	**46.02**	**63.47**	0-360	200	H
2	50.874	2.61	Pk	20	.8	23.41	40	-16.59	0-360	400	V
4	182.096	4.84	Pk	15.6	1.5	21.94	43.52	-21.58	0-360	200	V
6	605.946	5.3	Pk	24.9	2.8	33	46.02	-13.02	0-360	300	V
8	824.71	68.26	Pk	26.5	3.3	98.06	**46.02**	**52.04**	0-360	100	V

Pk - Peak detector

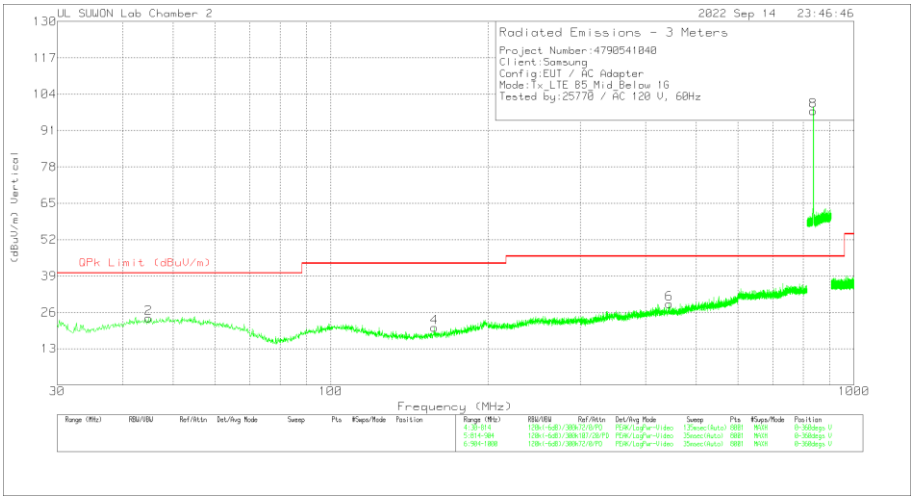
Note: Unwanted emissions captured from 814MHz to 849MHz and from 849MHz to 859MHz were the TX and RX signals generated from the call-simulator.

MID CHANNEL(881.5 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

Trace Markers

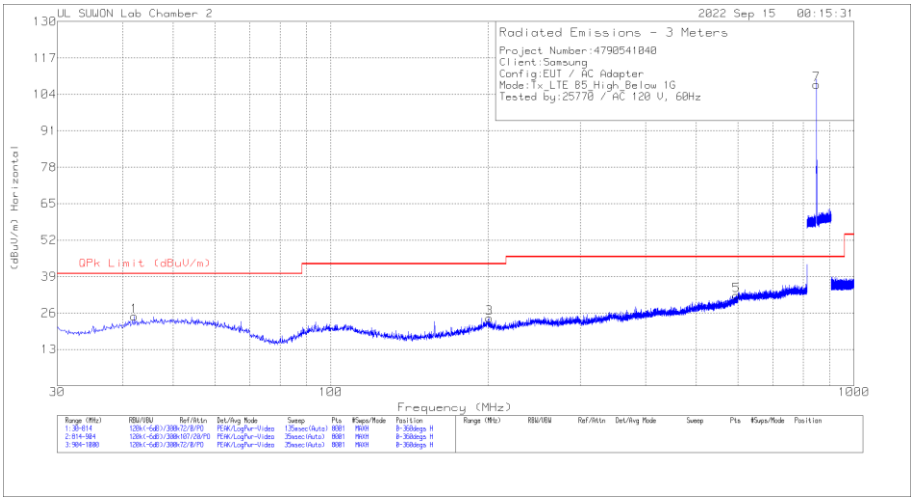
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Below 1G_Bypass[dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	45.582	3.43	Pk	19.9	.8	24.13	40	-15.87	0-360	100	H
3	157.89	6.55	Pk	14.3	1.4	22.25	43.52	-21.27	0-360	100	H
5	442.482	4.12	Pk	21.8	2.4	28.32	46.02	-17.7	0-360	100	H
7	836.5	78.45	Pk	26.6	3.3	108.35	**46.02**	**62.33**	0-360	200	H
2	44.798	3.34	Pk	19.8	.8	23.94	40	-16.06	0-360	400	V
4	157.89	4.88	Pk	14.3	1.4	20.58	43.52	-22.94	0-360	200	V
6	443.56	4.9	Pk	21.8	2.4	29.1	46.02	-16.92	0-360	200	V
8	836.5	68.05	Pk	26.6	3.3	97.95	**46.02**	**51.93**	0-360	100	V

Pk - Peak detector

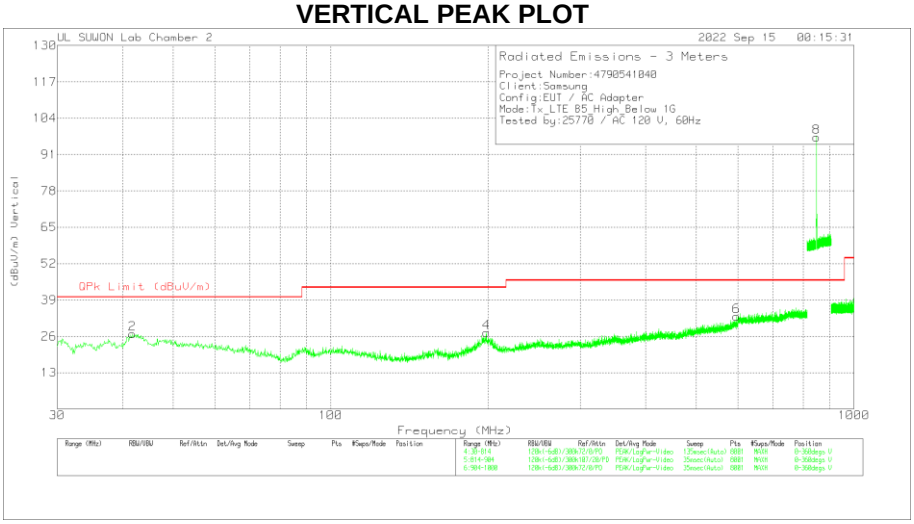
Note: Unwanted emissions captured from 814MHz to 849MHz and from 849MHz to 859MHz were the TX and RX signals generated from the call-simulator.

HIGH CHANNEL(891.5 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Below 1G_Bypass[dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	42.152	4.74	Pk	19.3	.8	24.84	40	-15.16	0-360	200	H
3	201.108	5.1	Pk	17.4	1.6	24.1	43.52	-19.42	0-360	200	H
5	596.342	4.6	Pk	24.9	2.8	32.3	46.02	-13.72	0-360	300	H
7	848.3013	77.24	Pk	26.9	3.3	107.44	**46.02**	**61.42**	0-360	200	H
2	41.76	6.87	Pk	19.2	.7	26.77	40	-13.23	0-360	200	V
4	198.462	7.78	Pk	17.9	1.6	27.28	43.52	-16.24	0-360	200	V
6	596.146	5.42	Pk	24.9	2.8	33.12	46.02	-12.9	0-360	300	V
8	848.3013	66.9	Pk	26.9	3.3	97.1	**46.02**	**51.08**	0-360	100	V

Pk - Peak detector

Note: Unwanted emissions captured from 814MHz to 849MHz and from 849MHz to 859MHz were the TX and RX signals generated from the call-simulator.

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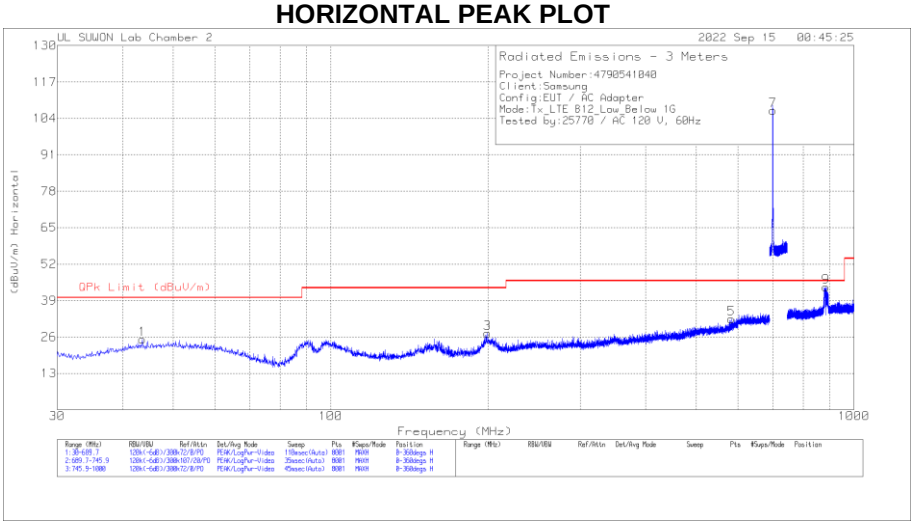
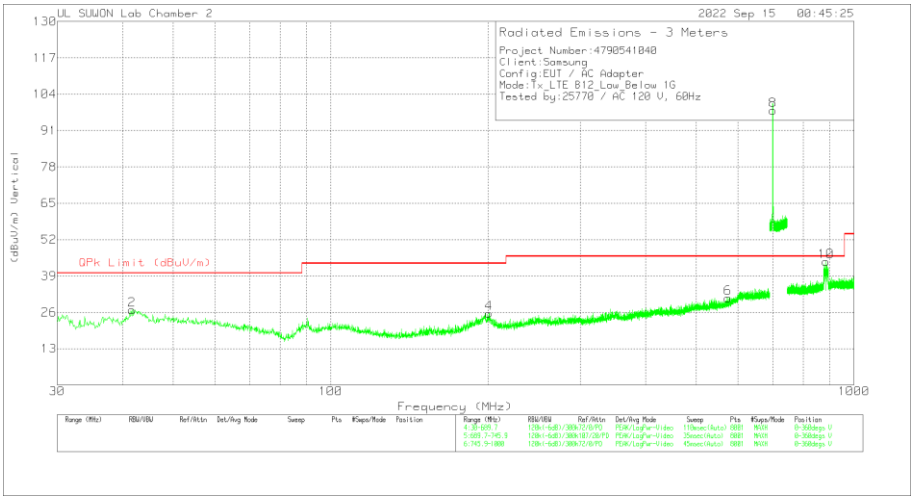
7.1.10.Below 1 GHz in the LTE Band 12

LOW CHANNEL(730.5 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

Trace Markers

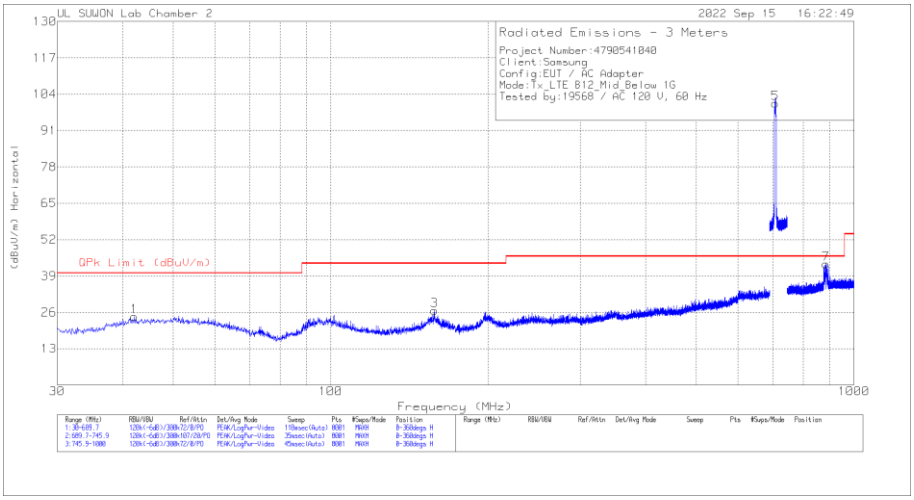
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Below 1G_Bypass[dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	43.6064	4.72	Pk	19.6	.8	25.12	40	-14.88	0-360	100	H
3	199.2965	8.11	Pk	17.7	1.6	27.41	43.52	-16.11	0-360	100	H
5	582.832	5.36	Pk	24.3	2.7	32.36	46.02	-13.66	0-360	100	H
7	699.7106	78.54	Pk	25.3	3	106.84	**46.02**	**60.82**	0-360	200	H
9	884.6408	13.03	Pk	27.4	3.4	43.83	46.02	-2.19	0-360	300	H
2	41.7097	7.01	Pk	19.2	.7	26.91	40	-13.09	0-360	200	V
4	200.5335	6.48	Pk	17.5	1.6	25.58	43.52	-17.94	0-360	200	V
6	574.3383	4.52	Pk	23.9	2.7	31.12	46.02	-14.9	0-360	400	V
8	699.7106	69.84	Pk	25.3	3	98.14	**46.02**	**52.12**	0-360	100	V
10	884.5455	13.32	Pk	27.4	3.4	44.12	46.02	-1.9	0-360	300	V

Pk - Peak detector

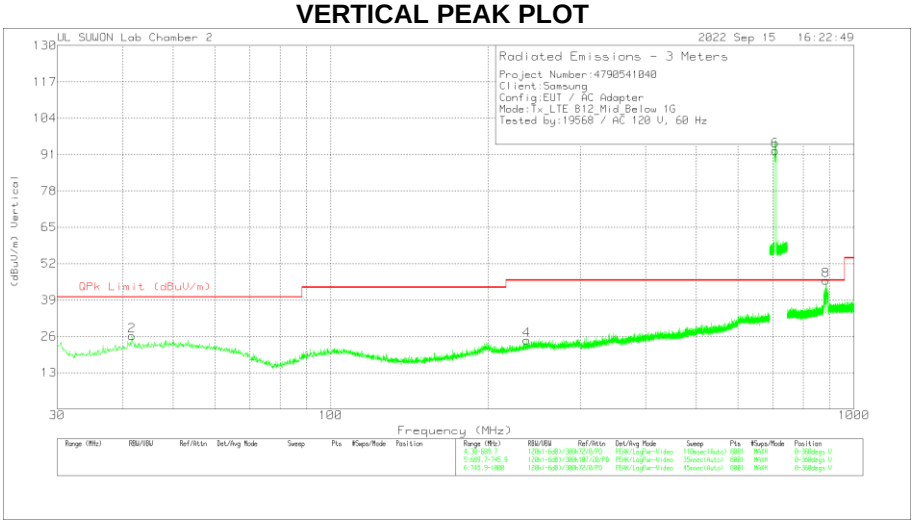
Note: Unwanted emissions captured from 699MHz to 716MHz and from 729MHz to 746MHz were the TX and RX signals generated from the call-simulator.

MID CHANNEL(737.5 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Below 1G_Bypass[dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	42.1221	4.3	Pk	19.3	.8	24.4	40	-15.6	0-360	100	H
3	157.7352	10.95	Pk	14.3	1.4	26.65	43.52	-16.87	0-360	100	H
5	707.5857	72.46	Pk	25.2	3	100.66	**46.02**	**54.64**	0-360	200	H
7	885.0855	12.44	Pk	27.4	3.4	43.24	46.02	-2.78	0-360	100	H
2	41.7097	6.29	Pk	19.2	.7	26.19	40	-13.81	0-360	200	V
4	237.0646	4.91	Pk	18	1.8	24.71	46.02	-21.31	0-360	400	V
6	707.5505	64.24	Pk	25.2	3	92.44	**46.02**	**46.42**	0-360	100	V
8	884.8631	15.21	Pk	27.4	3.4	46.01	46.02	-.01	0-360	400	V

Pk - Peak detector

Radiated Emissions

Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Below 1G_Bypass[dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
885.0855	10.19	Qp	27.4	3.4	40.99	46.02	-5.03	326	141	H
884.8631	7.1	Qp	27.4	3.4	37.9	46.02	-8.12	8	397	V

Qp - Quasi-Peak detector

Note: Unwanted emissions captured from 699MHz to 716MHz and from 729MHz to 746MHz were the TX and RX signals generated from the call-simulator.

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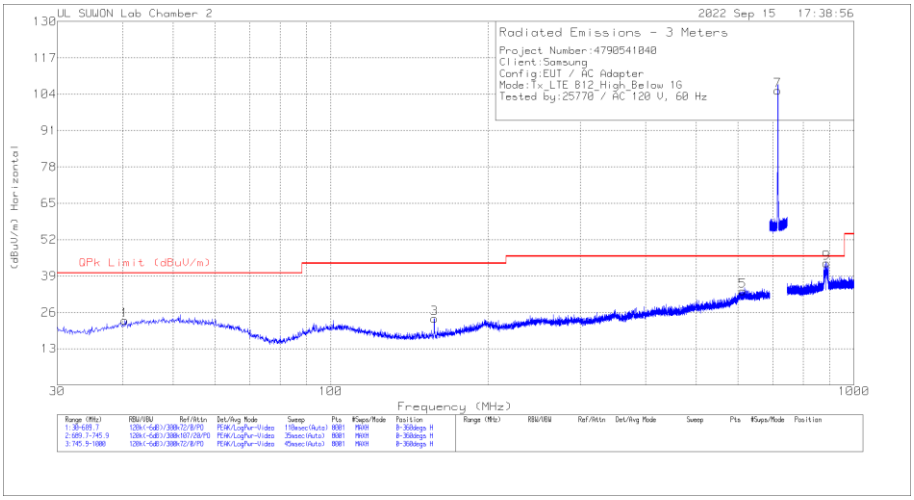
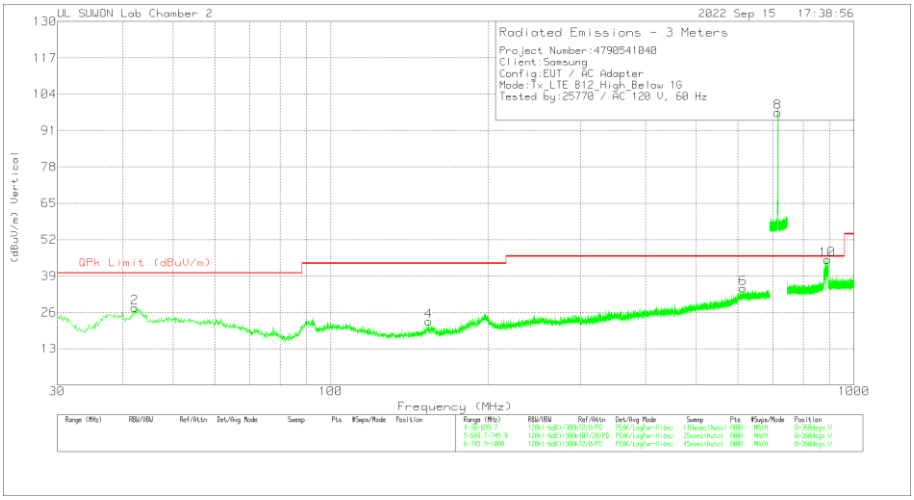
HIGH CHANNEL(744.5 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Below 1G_Bypass[dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	40.3903	3.54	Pk	18.8	.7	23.04	40	-16.96	0-360	100	H
3	157.8177	8.12	Pk	14.3	1.4	23.82	43.52	-19.7	0-360	100	H
5	612.8485	5.85	Pk	24.9	2.8	33.55	46.02	-12.47	0-360	100	H
7	715.3061	77.13	Pk	25.2	3	105.33	**46.02**	**59.31**	0-360	200	H
9	885.276	12.89	Pk	27.4	3.4	43.69	46.02	-2.33	0-360	100	H
2	42.2045	7.64	Pk	19.3	.8	27.74	40	-12.26	0-360	200	V
4	153.8594	7.24	Pk	14.2	1.4	22.84	43.52	-20.68	0-360	200	V
6	613.838	7.01	Pk	24.9	2.8	34.71	46.02	-11.31	0-360	400	V
8	715.3061	69.23	Pk	25.2	3	97.43	**46.02**	**51.41**	0-360	100	V
10	890.3264	13.91	Pk	27.5	3.4	44.81	46.02	-1.21	0-360	400	V

Pk - Peak detector

Radiated Emissions

Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Below 1G_Bypass[dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
885.276	7.71	Qp	27.4	3.4	38.51	46.02	-7.51	272	388	H
890.3264	6.8	Qp	27.5	3.4	37.7	46.02	-8.32	222	321	V

Qp - Quasi-Peak detector

Note: Unwanted emissions captured from 699MHz to 716MHz and from 729MHz to 746MHz were the TX and RX signals generated from the call-simulator.

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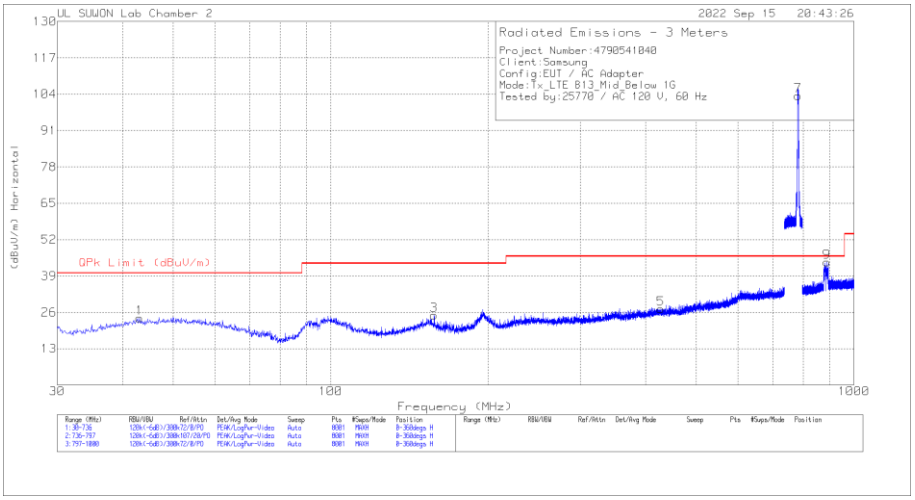
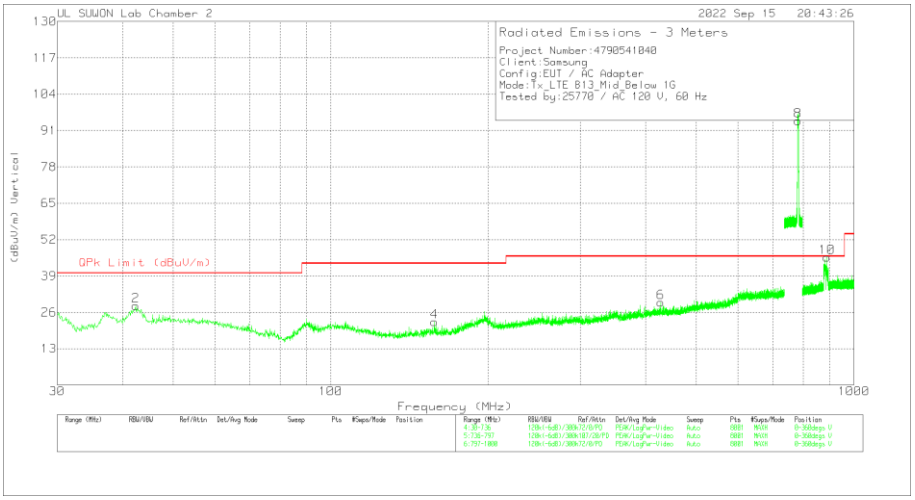
7.1.11.Below 1 GHz in the LTE Band 13

MID CHANNEL(751.0 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Below 1G_Bypass[dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	43.061	3.65	Pk	19.5	.8	23.95	40	-16.05	0-360	200	H
3	157.6095	9.2	Pk	14.3	1.4	24.9	43.52	-18.62	0-360	100	H
5	427.478	3.01	Pk	21.7	2.4	27.11	46.02	-18.91	0-360	200	H
7	782.0016	73.87	Pk	26.3	3.2	103.37	**46.02**	**57.35**	0-360	200	H
9	887.9948	13.03	Pk	27.5	3.4	43.93	46.02	-2.09	0-360	300	H
2	42.355	8.13	Pk	19.4	.8	28.33	40	-11.67	0-360	200	V
4	157.6978	6.98	Pk	14.3	1.4	22.68	43.52	-20.84	0-360	300	V
6	427.3898	5.41	Pk	21.7	2.4	29.51	46.02	-16.51	0-360	200	V
8	782.0016	64.91	Pk	26.3	3.2	94.41	**46.02**	**48.39**	0-360	100	V
10	887.9948	14.76	Pk	27.5	3.4	45.66	46.02	-.36	0-360	200	V

Pk - Peak detector

Radiated Emissions

Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Below 1G_Bypass[dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
887.9948	10.08	Qp	27.5	3.4	40.98	46.02	-5.04	57	353	H
887.9948	9.6	Qp	27.5	3.4	40.5	46.02	-5.52	9	105	V

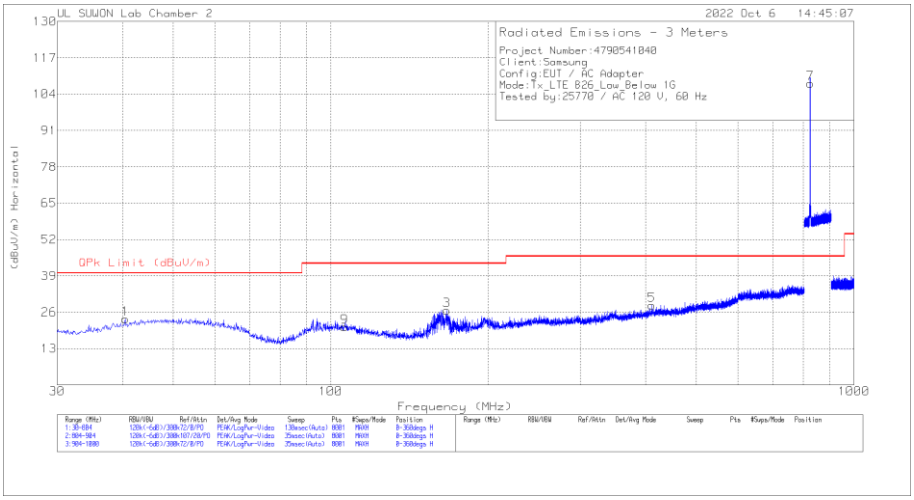
Qp - Quasi-Peak detector

Note: Unwanted emissions captured from 777MHz to 787MHz and from 746MHz to 756MHz were the TX and RX signals generated from the call-simulator.

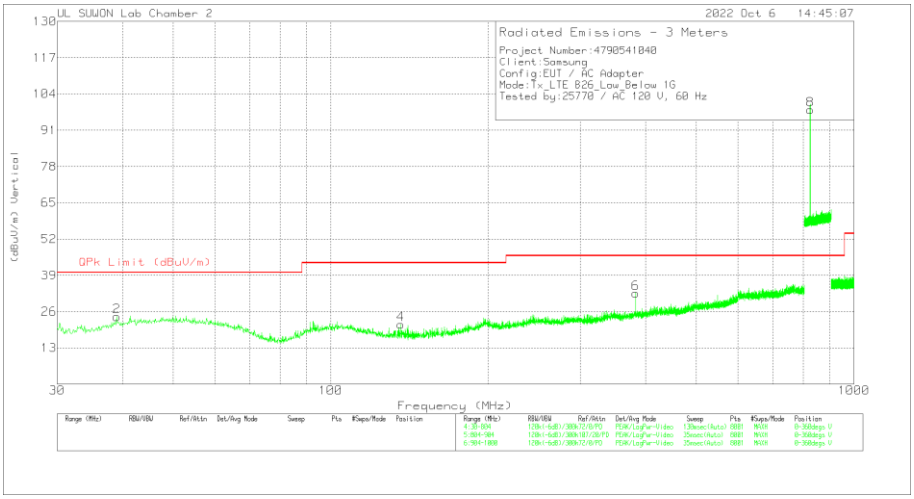
7.1.12.Below 1 GHz in the LTE Band 26

LOW CHANNEL(860.5 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

Trace Markers

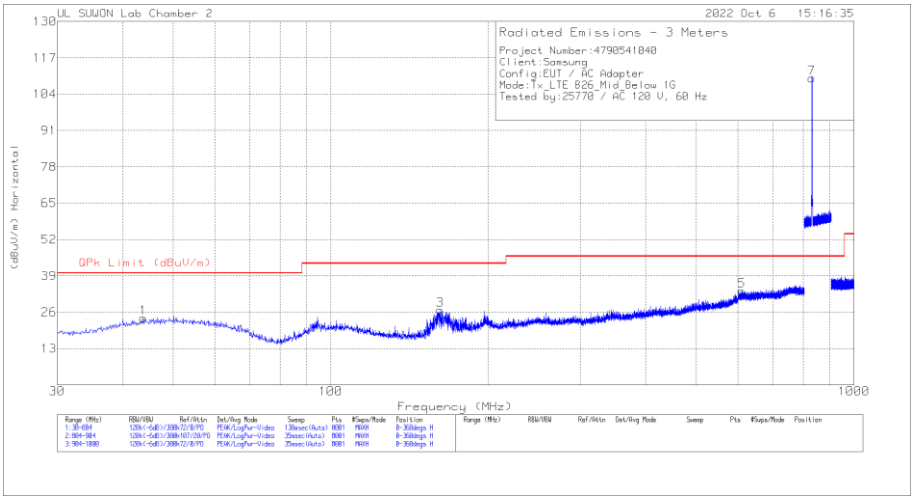
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Below 1G_Bypass[dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	40.449	4.18	Pk	18.8	.7	23.68	40	-16.32	0-360	100	H
2	38.9978	5.12	Pk	18.4	.7	24.22	40	-15.78	0-360	200	V
3	166.611	10.65	Pk	14.5	1.5	26.65	43.52	-16.87	0-360	100	H
4	136.1348	6.2	Pk	14	1.3	21.5	43.52	-22.02	0-360	200	V
5	410.421	4.87	Pk	21.4	2.3	28.57	46.02	-17.45	0-360	300	H
6	382.6538	9.49	Pk	20.9	2.2	32.59	46.02	-13.43	0-360	400	V
7	824.7	78.1	Pk	26.5	3.3	107.9	**46.02**	**61.88**	0-360	200	H
8	824.7	68.55	Pk	26.5	3.3	98.35	**46.02**	**52.33**	0-360	100	V

Pk - Peak detector

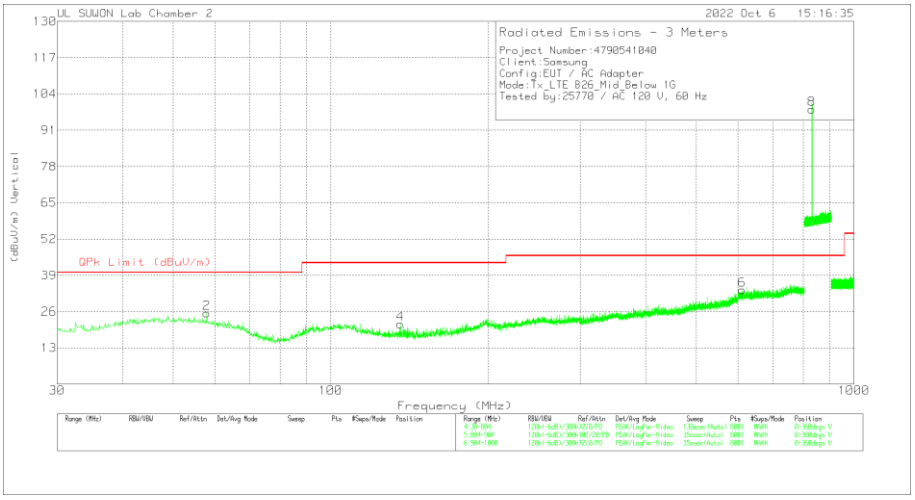
Note: Unwanted emissions captured from 814MHz to 849MHz and from 849MHz to 859MHz were the TX and RX signals generated from the call-simulator.

MID CHANNEL(876.5 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

Trace Markers

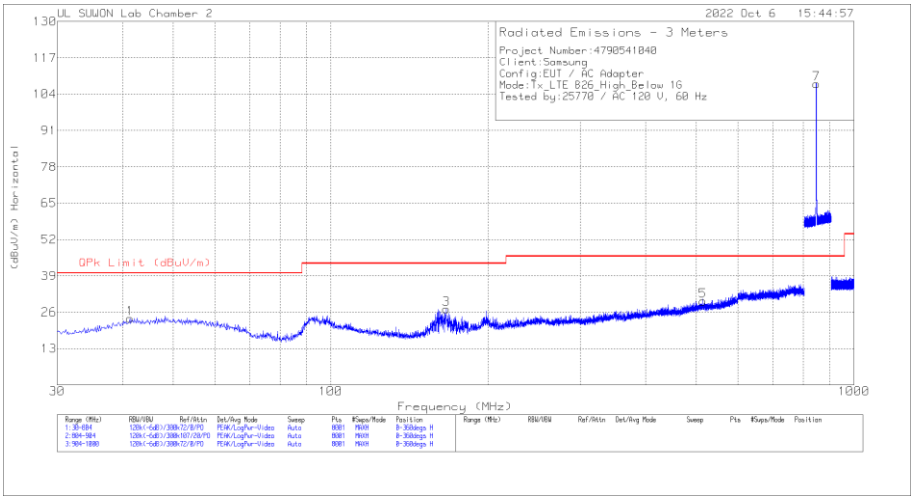
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Below 1G_Bypass[dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	43.8353	3.53	Pk	19.7	.8	24.03	40	-15.97	0-360	100	H
2	57.9608	5.48	Pk	19.1	.9	25.48	40	-14.52	0-360	400	V
3	161.8703	11	Pk	14.4	1.5	26.9	43.52	-16.62	0-360	100	H
4	135.7478	6.32	Pk	14	1.3	21.62	43.52	-21.9	0-360	200	V
5	610.6935	5.97	Pk	24.9	2.8	33.67	46.02	-12.35	0-360	200	H
6	611.1773	6.15	Pk	24.9	2.8	33.85	46.02	-12.17	0-360	200	V
7	831.5	79.81	Pk	26.6	3.3	109.71	**46.02**	**63.69**	0-360	200	H
8	831.5	68.61	Pk	26.6	3.3	98.51	**46.02**	**52.49**	0-360	100	V

Pk - Peak detector

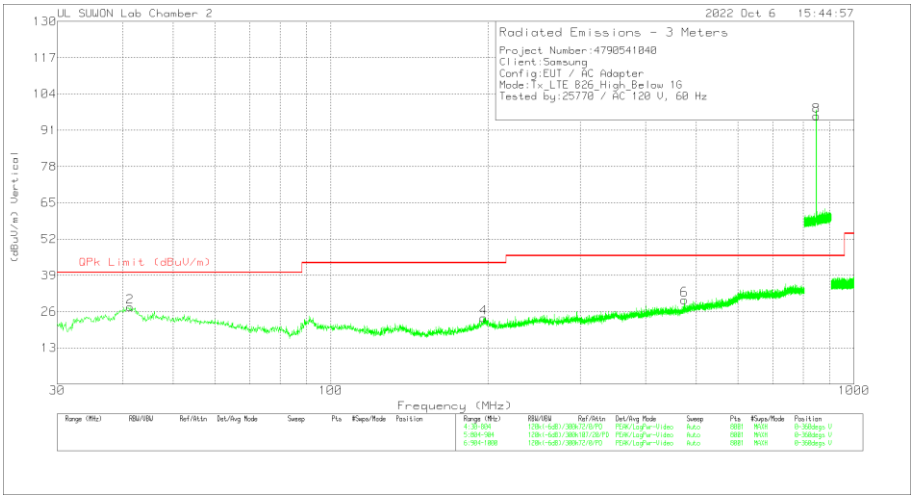
Note: Unwanted emissions captured from 814MHz to 849MHz and from 849MHz to 859MHz were the TX and RX signals generated from the call-simulator.

HIGH CHANNEL(892.5 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Below 1G_Bypass[dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	41.3198	4.04	Pk	19.1	.7	23.84	40	-16.16	0-360	200	H
2	41.3198	7.83	Pk	19.1	.7	27.63	40	-12.37	0-360	200	V
3	166.3208	11.2	Pk	14.5	1.5	27.2	43.52	-16.32	0-360	100	H
4	196.1198	4.4	Pk	17.8	1.6	23.8	43.52	-19.72	0-360	200	V
5	514.6208	4.38	Pk	23	2.6	29.98	46.02	-16.04	0-360	100	H
6	473.7923	5.61	Pk	22.2	2.5	30.31	46.02	-15.71	0-360	200	V
7	847.5	77.54	Pk	26.9	3.3	107.74	**46.02**	**61.72**	0-360	200	H
8	847.5125	65.94	Pk	26.9	3.3	96.14	**46.02**	**50.12**	0-360	100	V

Pk - Peak detector

Note: Unwanted emissions captured from 814MHz to 849MHz and from 849MHz to 859MHz were the TX and RX signals generated from the call-simulator.

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7.2. CONDUCTED EMISSIONS

TEST PROCEDURE

ANSI C63.4-2014

LIMIT

§15.107 (a) Except for Class A digital devices, for equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50 μH/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the band edges.

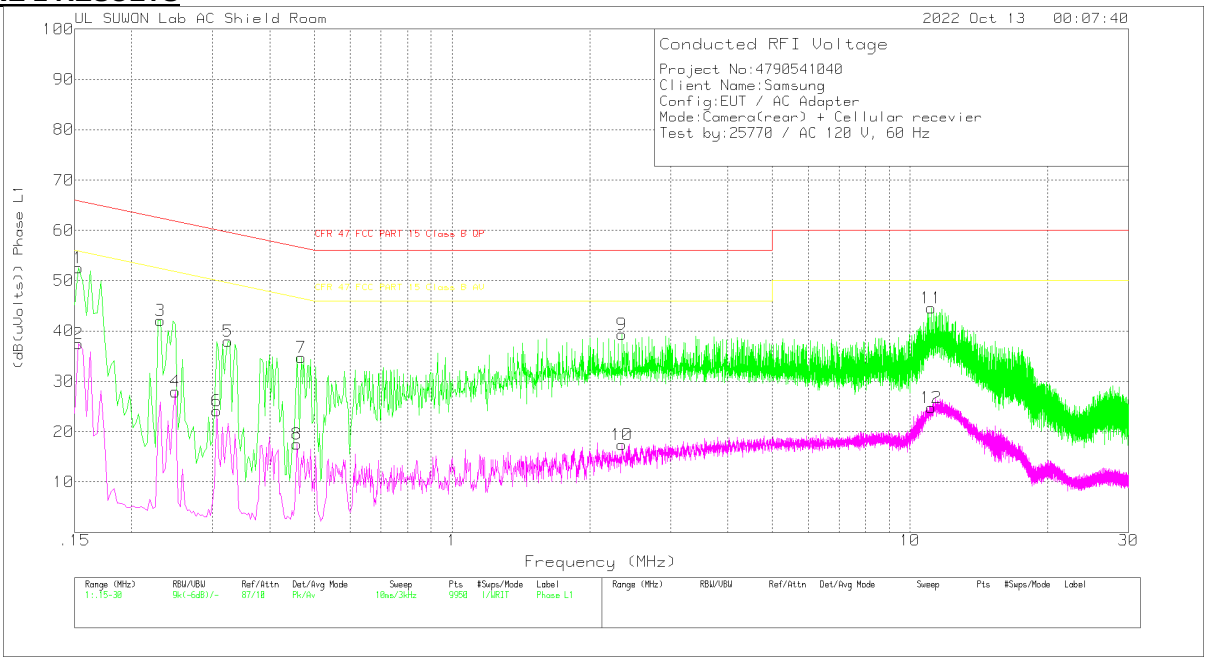
Frequency range (MHz)	Limits (dBμV)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56	56 to 46
0.50 to 5	56	46
5 to 30	60	50
Notes: 1. The lower limit shall apply at the transition frequencies 2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz.		

7.2.1 CONDUCTED EMISSIONS

6 WORST EMISSIONS(GSM850 + Rear camera on)

Line-L1 .15 – 30 MHz

LINE 1 RESULTS



Trace Markers

Range 1: Phase L1 .15 - 30MHz

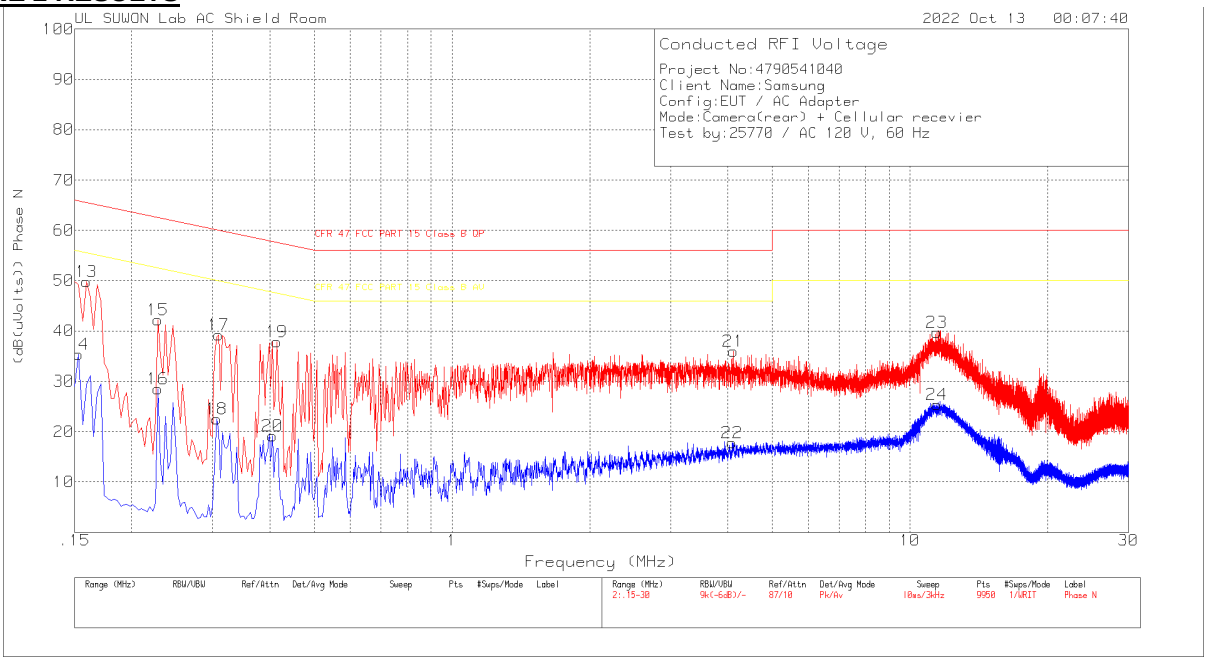
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	101836_With EX_L1[dB]	CABLELOSS(dB)	Corrected Reading (dB(uVolts))	CFR 47 FCC PART 15 Class B QP	Margin (dB)	CFR 47 FCC PART 15 Class B AV	Margin (dB)
1	.153	42.63	Pk	9.8	.1	52.53	65.84	-13.31	-	-
2	.153	27.62	Av	9.8	.1	37.52	-	-	55.84	-18.32
3	.231	32.13	Pk	9.7	.2	42.03	62.41	-20.38	-	-
4	.249	18.14	Av	9.6	.2	27.94	-	-	51.79	-23.85
5	.324	28.05	Pk	9.7	.2	37.95	59.6	-21.65	-	-
6	.306	14.24	Av	9.7	.2	24.14	-	-	50.08	-25.94
7	.468	24.63	Pk	9.9	.2	34.73	56.55	-21.82	-	-
8	.459	7.4	Av	9.9	.2	17.5	-	-	46.71	-29.21
9	2.352	29.35	Pk	9.7	.3	39.35	56	-16.65	-	-
10	2.352	7.38	Av	9.7	.3	17.38	-	-	46	-28.62
11	11.127	34.36	Pk	9.9	.3	44.56	60	-15.44	-	-
12	11.124	14.6	Av	9.9	.3	24.8	-	-	50	-25.2

Pk - Peak detector
Av - Average detection

6 WORST EMISSIONS(GSM850 + Rear camera on)

Line-L2 .15 – 30 MHz

LINE 2 RESULTS



Trace Markers

Range 2: Phase N .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	101836_With EX_N[dB]	CABLELOSS(dB)	Corrected Reading (dB(uVolts))	CFR 47 FCC PART 15 Class B QP	Margin (dB)	CFR 47 FCC PART 15 Class B AV	Margin (dB)
13	.159	39.87	Pk	9.8	.1	49.77	65.52	-15.75	-	-
14	.153	25.5	Av	9.8	.1	35.4	-	-	55.84	-20.44
15	.228	32.29	Pk	9.7	.2	42.19	62.52	-20.33	-	-
16	.228	18.6	Av	9.7	.2	28.5	-	-	52.52	-24.02
17	.309	29.26	Pk	9.7	.2	39.16	60	-20.84	-	-
18	.306	12.62	Av	9.7	.2	22.52	-	-	50.08	-27.56
19	.414	27.86	Pk	9.8	.2	37.86	57.57	-19.71	-	-
20	.405	9.11	Av	9.8	.2	19.11	-	-	47.75	-28.64
21	4.116	25.93	Pk	9.7	.3	35.93	56	-20.07	-	-
22	4.092	7.78	Av	9.7	.3	17.78	-	-	46	-28.22
23	11.457	29.57	Pk	9.9	.3	39.77	60	-20.23	-	-
24	11.442	15.15	Av	9.9	.3	25.35	-	-	50	-24.65

Pk - Peak detector
Av - Average detection

END OF TEST REPORT

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