



CERTIFICATION TEST REPORT

Report Number. : 4790541052-E1V3

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

Model : SM-S918B/DS, SM-S918B

FCC ID : A3LSMS918B

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:

2022-11-10

Prepared by:

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Revision History

Rev.	Issue Date	Revisions	Revised By
V1	2022-10-28	Initial issue	Yeonhee Lim
V2	2022-11-09	Updated to address TCB's Question	Yeonhee Lim
V3	2022-11-10	Updated to address TCB's Question	Yeonhee Lim

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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-S918B/DS, SM-S918B

SERIAL NUMBER: R3CT7081XXP (RADIATED)

DATE TESTED: 2022-09-15 ~ 2022-10-12;

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:

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

$$\begin{aligned} \text{Corrected Reading (dBuV)} &= \text{Meter Reading (dBuV)} + \text{External Cable (dB)} + \\ &\text{Cableloss (dB)} \\ 46.62 \text{ dBuV} + 9.8 \text{ dB} + 0.1 \text{ dB} &= 56.52 \text{ dBuV} \end{aligned}$$

4.3. MEASUREMENT UNCERTAINTY

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

PARAMETER	UNCERTAINTY
Conducted Disturbance, 0.15 to 30 MHz	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-S918B/DS and SM-S918B. These models are identical in hardware except SM-S918B has single SIM tray. With some pre-scan, model SM-S918B/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)

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 Frequency 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 Frequency 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.

CONDUCTED EMISSION

Conducted emission testing was GSM 850, WCDMA B5, LTE B5, LTE B12, B13, B26. It was determined that the GSM 850 was the worst-case. therefore conducted emission testing reported GSM 850.

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

5.4. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacture	Model	Serial Number	FCC ID
Charger	SAMSUNG	EP-TA800	R37R38J4A28SE3	N/A
Data Cable	SAMSUNG	EP-DN980	GH39-02111ABBE	N/A

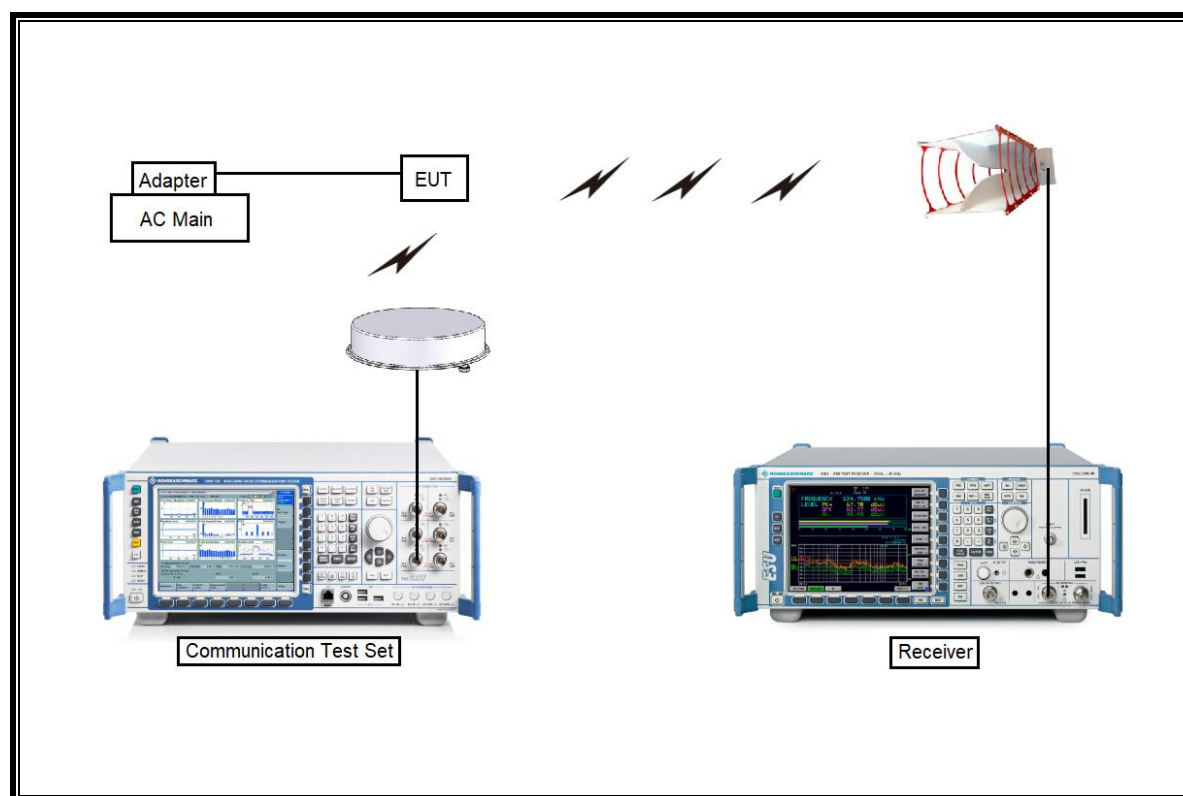
I/O CABLE

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	PASTERNAK	PE7087-10	A009	2023-08-03
Attenuator	PASTERNAK	PE7087-10	A001	2023-08-03
Attenuator	PASTERNAK	PE7087-10	A008	2023-08-03
Attenuator	PASTERNAK	PE7004-10	2	2023-08-01
Attenuator	PASTERNAK	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

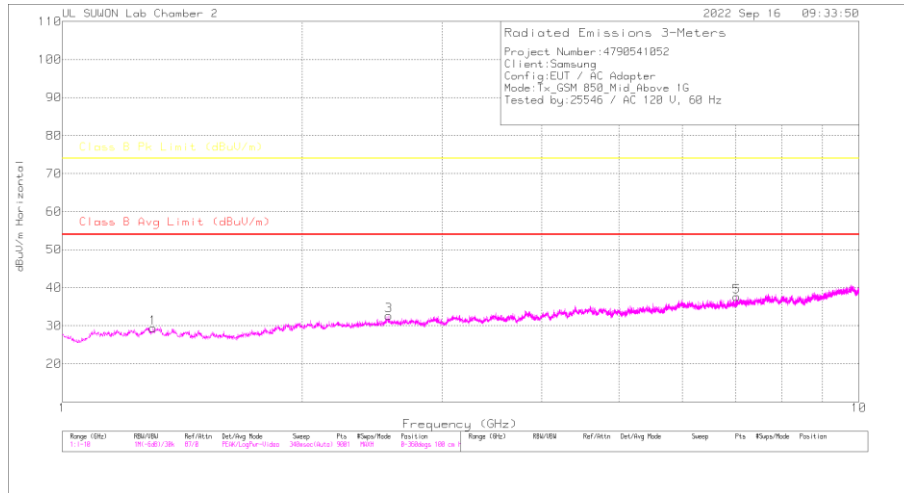
LIMIT

§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:

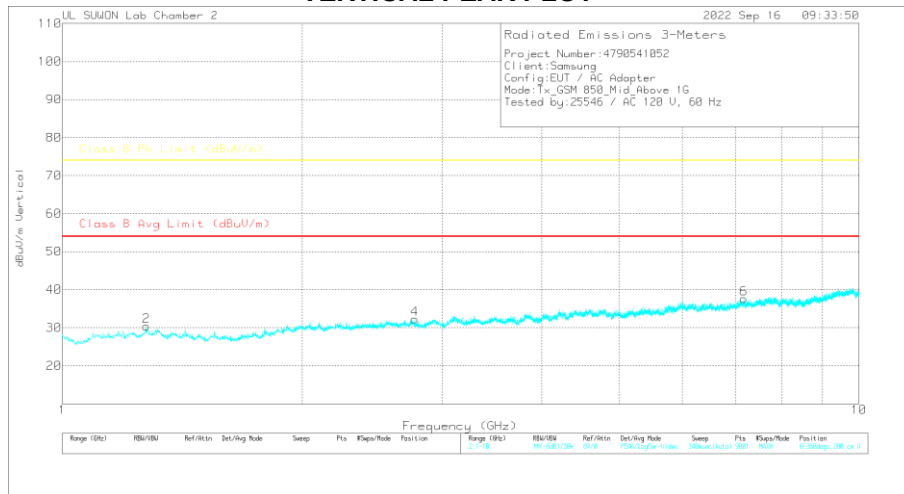
Limits for radiated disturbance of Class B ITE at measuring distance of 3 m	
Frequency range (MHz)	Quasi-peak limits (dBμV/m)
30 to 88	40
88 to 216	43.5
216 to 960	46
Above 960 MHz	54
Note: The lower limit shall apply at the transition frequency.	

MID CHANNEL(881.6 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

Radiated Emissions

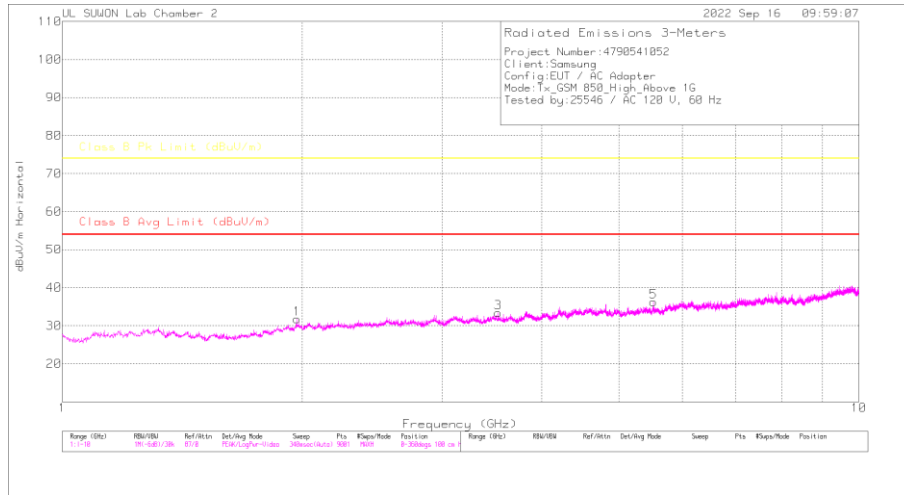
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_0016872 4	1-18GHz[dB]	1G HPF[dB]	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Av(CISPR)Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.301	38.28	Pk	29.5	-31.6	1	37.18	-	-	74	-36.82	0	100	H
1.301	25.26	Ca	29.5	-31.6	1	24.16	54	-29.84	-	-	0	100	H
1.275	37.89	Pk	29.5	-31.6	1	36.79	-	-	74	-37.21	0	100	V
1.275	25.98	Ca	29.5	-31.6	1	24.88	54	-29.12	-	-	0	100	V
2.571	36.51	Pk	32	-30.1	.6	39.01	-	-	74	-34.99	0	100	H
2.571	24.32	Ca	32	-30.1	.6	26.82	54	-27.18	-	-	0	100	H
7.03	34.75	Pk	35.6	-25.8	.4	44.95	-	-	74	-29.05	0	100	H
7.03	22.04	Ca	35.6	-25.8	.4	32.24	54	-21.76	-	-	0	100	H
7.175	34.3	Pk	35.6	-25.5	.4	44.8	-	-	74	-29.2	0	100	V
7.175	22.31	Ca	35.6	-25.5	.4	32.81	54	-21.19	-	-	0	100	V

Pk - Peak detector

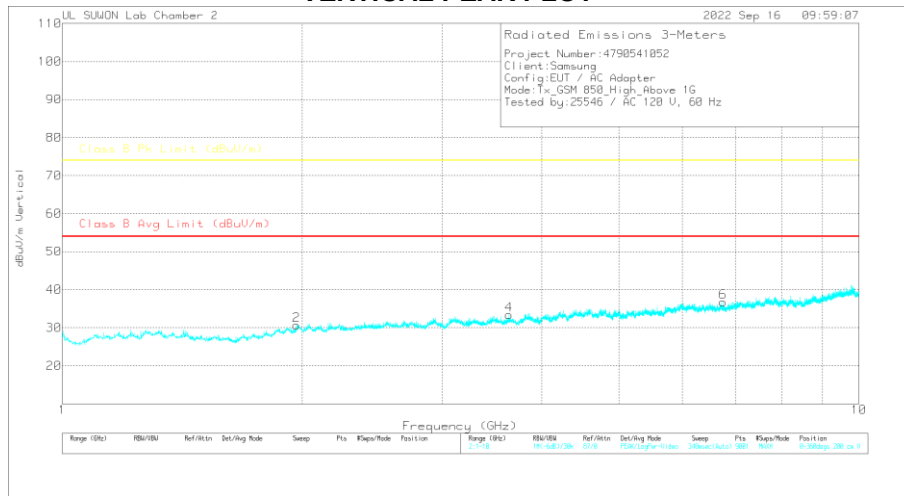
Ca - CISPR average detection

HIGH CHANNEL(893.8 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

Radiated Emissions

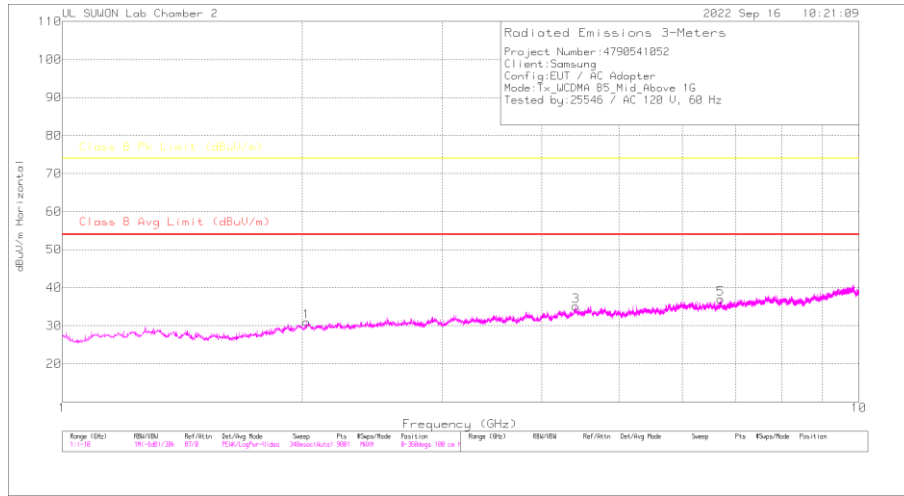
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_0016872 4	1-18GHz[dB]	1G HPF[dB]	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Av(CISPR)Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.971	36.33	Pk	31.2	-30.7	.6	37.43	-	-	74	-36.57	0	100	H
1.971	24.69	Ca	31.2	-30.7	.6	25.79	54	-28.21	-	-	0	100	H
1.969	36.81	Pk	31.2	-30.7	.6	37.91	-	-	74	-36.09	0	100	V
1.969	24.42	Ca	31.2	-30.7	.6	25.52	54	-28.48	-	-	0	100	V
3.523	35.57	Pk	32.7	-29	.5	39.77	-	-	74	-34.23	0	100	H
3.523	23.21	Ca	32.7	-29	.5	27.41	54	-26.59	-	-	0	100	H
3.637	36.19	Pk	32.8	-29.5	.5	39.99	-	-	74	-34.01	0	100	V
3.637	24.16	Ca	32.8	-29.5	.5	27.96	54	-26.04	-	-	0	100	V
5.523	35.4	Pk	34.4	-27.8	.5	42.5	-	-	74	-31.5	0	100	H
5.523	23.65	Ca	34.4	-27.8	.5	30.75	54	-23.25	-	-	0	100	H
6.755	34.39	Pk	35.4	-26	.4	44.19	-	-	74	-29.81	0	100	V
6.755	22.05	Ca	35.4	-26	.4	31.85	54	-22.15	-	-	0	100	V

Pk - Peak detector
Ca - CISPR average detection

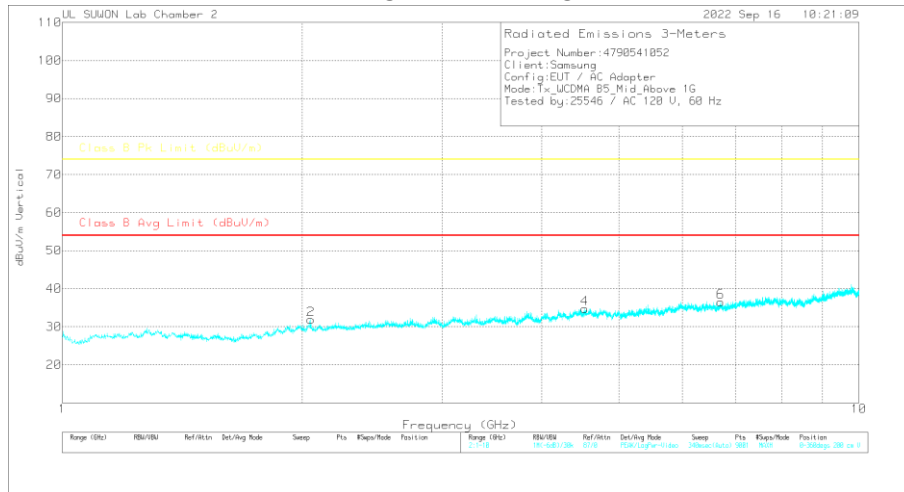
7.1.2. Above 1 GHz in the WCDMA Band 5

MID CHANNEL(881.6 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

Radiated Emissions

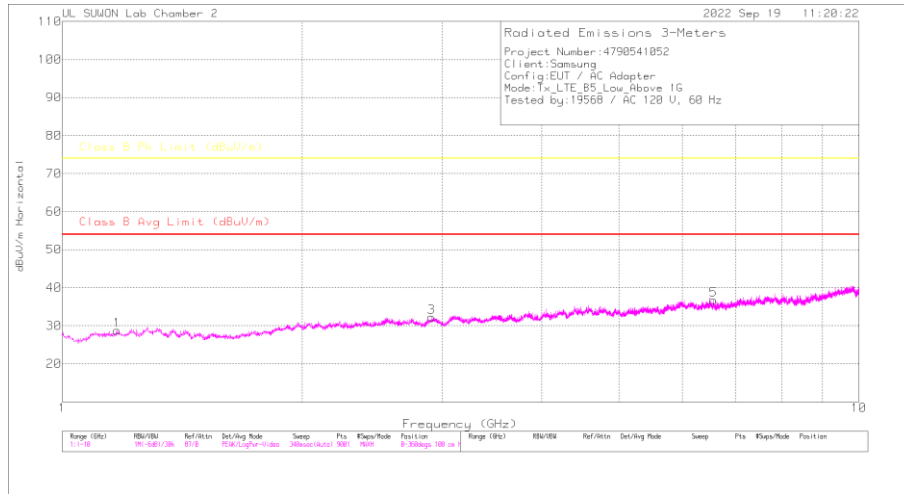
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_0016872 4	1-18GHz[dB]	1G HPF[dB]	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Av(CISPR)Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2.025	35.88	Pk	31.3	-30.7	.6	37.08	54	-	74	-36.92	0	100	H
2.025	24.33	Ca	31.3	-30.7	.6	25.53	54	-28.47	-	-	0	100	H
2.052	36.63	Pk	31.4	-30.6	.6	38.03	54	-	74	-35.97	0	100	V
2.052	24.3	Ca	31.4	-30.6	.6	25.7	54	-28.3	-	-	0	100	V
4.41	36.43	Pk	33.6	-28.6	.5	41.93	54	-	74	-32.07	0	100	H
4.41	24.34	Ca	33.6	-28.6	.5	29.84	54	-24.16	-	-	0	100	H
4.528	35.67	Pk	33.9	-28.5	.6	41.67	54	-	74	-32.33	0	100	V
4.528	23.58	Ca	33.9	-28.5	.6	29.58	54	-24.42	-	-	0	100	V
6.71	35.02	Pk	35.4	-26.2	.6	44.82	54	-	74	-29.18	0	100	H
6.71	22.49	Ca	35.4	-26.2	.6	32.29	54	-21.71	-	-	0	100	H
6.708	35.08	Pk	35.4	-26.2	.6	44.88	54	-	74	-29.12	0	100	V
6.708	22.49	Ca	35.4	-26.2	.6	32.29	54	-21.71	-	-	0	100	V

Pk - Peak detector
Ca - CISPR average detection

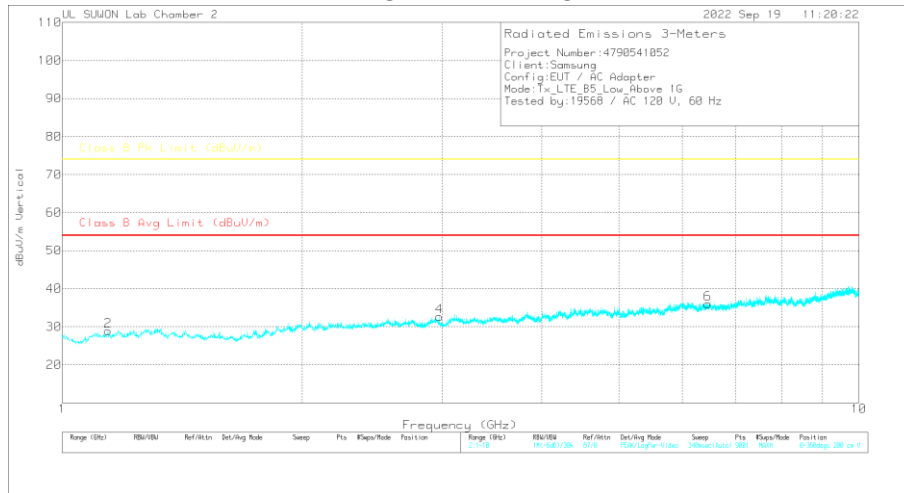
7.1.3. Above 1 GHz in the LTE Band 5

LOW CHANNEL(874.0 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

Radiated Emissions

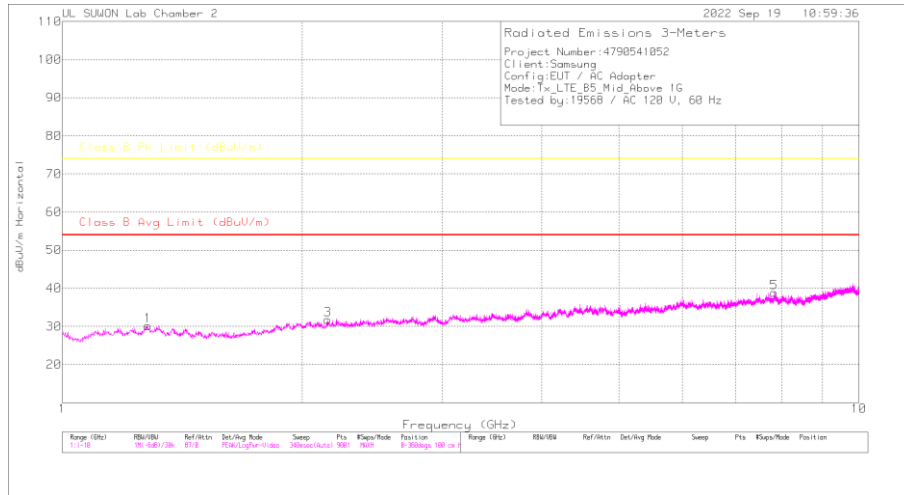
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_0016872_4	1-18GHz[dB]	1G HPF[dB]	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Av(CISPR)Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.172	37.84	Pk	28.7	-31.9	1.2	35.84	-	-	74	-38.16	0	100	H
1.172	25.97	Ca	28.7	-31.9	1.2	23.97	54	-30.03	-	-	0	100	H
1.142	38.43	Pk	28.3	-31.9	1.3	36.13	-	-	74	-37.87	0	100	V
1.142	25.93	Ca	28.3	-31.9	1.3	23.63	54	-30.37	-	-	0	100	V
2.907	36.72	Pk	32.1	-29.9	.7	39.62	-	-	74	-34.38	0	100	H
2.907	24.31	Ca	32.1	-29.9	.7	27.21	54	-26.79	-	-	0	100	H
2.975	36.15	Pk	32.4	-30.1	.5	38.95	-	-	74	-35.05	0	100	V
2.975	23.93	Ca	32.4	-30.1	.5	26.73	54	-27.27	-	-	0	100	V
6.569	34.62	Pk	35.4	-26.6	.6	44.02	-	-	74	-29.98	0	100	H
6.569	22.57	Ca	35.4	-26.6	.6	31.97	54	-22.03	-	-	0	100	H
6.46	34.79	Pk	35.4	-26.6	.6	44.19	-	-	74	-29.81	0	100	V
6.46	22.51	Ca	35.4	-26.6	.6	31.91	54	-22.09	-	-	0	100	V

Pk - Peak detector

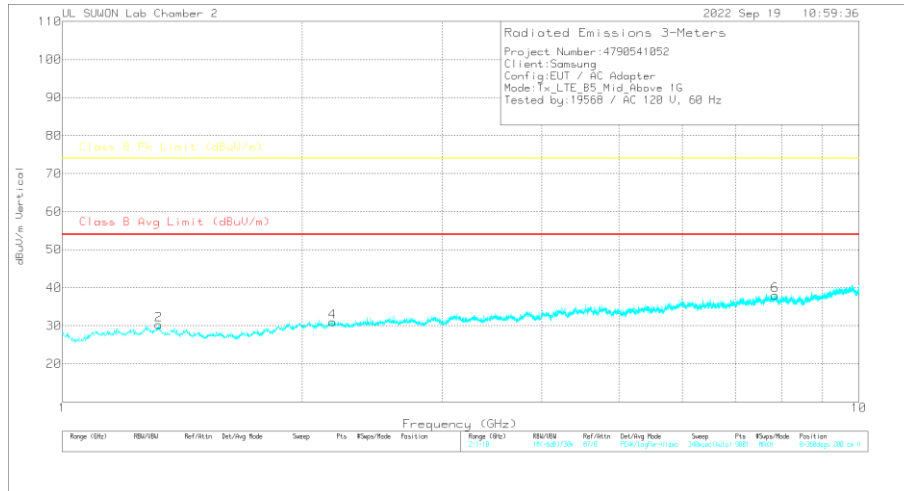
Ca - CISPR average detection

MID CHANNEL(881.5 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

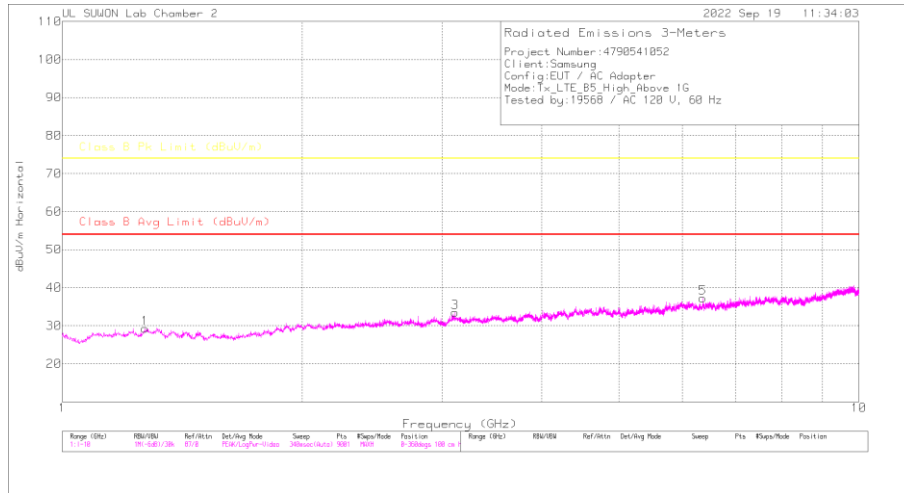
Radiated Emissions

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)Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.28	38.56	Pk	29.5	-31.6	1	37.46	-	-	74	-36.54	0	100	H
1.28	26.01	Ca	29.5	-31.6	1	24.91	54	-29.09	-	-	0	100	H
1.321	38.32	Pk	29.5	-31.6	.9	37.12	-	-	74	-36.88	0	100	V
1.321	26.04	Ca	29.5	-31.6	.9	24.84	54	-29.16	-	-	0	100	V
2.155	36.3	Pk	31.4	-30.4	.6	37.9	-	-	74	-36.1	0	100	H
2.155	24.36	Ca	31.4	-30.4	.6	25.96	54	-28.04	-	-	0	100	H
2.183	36.5	Pk	31.5	-30.4	.6	38.2	-	-	74	-35.8	0	100	V
2.183	24.4	Ca	31.5	-30.4	.6	26.1	54	-27.9	-	-	0	100	V
7.831	34.33	Pk	35.9	-24.4	.4	46.23	-	-	74	-27.77	0	100	H
7.831	21.85	Ca	35.9	-24.4	.4	33.75	54	-20.25	-	-	0	100	H
7.853	33.46	Pk	35.9	-24.4	.4	45.36	-	-	74	-28.64	0	100	V
7.853	21.94	Ca	35.9	-24.4	.4	33.84	54	-20.16	-	-	0	100	V

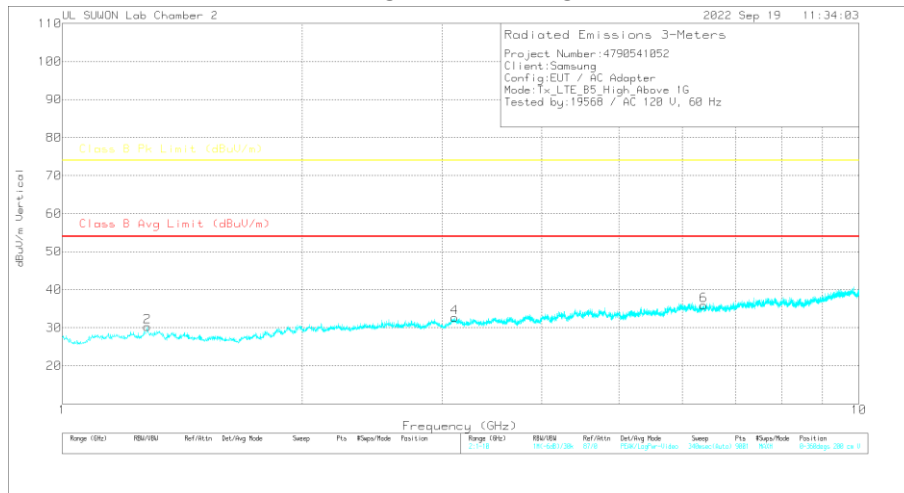
Pk - Peak detector
Ca - CISPR average detection

HIGH CHANNEL(889.0 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)Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.271	38.13	Pk	29.5	-31.6	1	37.03	-	-	74	-36.97	0	100	H
1.271	25.71	Ca	29.5	-31.6	1	24.61	54	-29.39	-	-	0	100	H
1.279	37.45	Pk	29.5	-31.6	1	36.35	-	-	74	-37.65	0	100	V
1.279	25.74	Ca	29.5	-31.6	1	24.64	54	-29.36	-	-	0	100	V
3.112	36.3	Pk	32.7	-29.6	.6	40	-	-	74	-34	0	100	H
3.112	24.13	Ca	32.7	-29.6	.6	27.83	54	-26.17	-	-	0	100	H
3.107	36.77	Pk	32.7	-29.7	.6	40.37	-	-	74	-33.63	0	100	V
3.107	24.13	Ca	32.7	-29.7	.6	27.73	54	-26.27	-	-	0	100	V
6.368	35.73	Pk	35.3	-26.9	.5	44.63	-	-	74	-29.37	0	100	H
6.368	22.89	Ca	35.3	-26.9	.5	31.79	54	-22.21	-	-	0	100	H
6.382	35.62	Pk	35.3	-26.8	.5	44.62	-	-	74	-29.38	0	100	V
6.382	22.83	Ca	35.3	-26.8	.5	31.83	54	-22.17	-	-	0	100	V

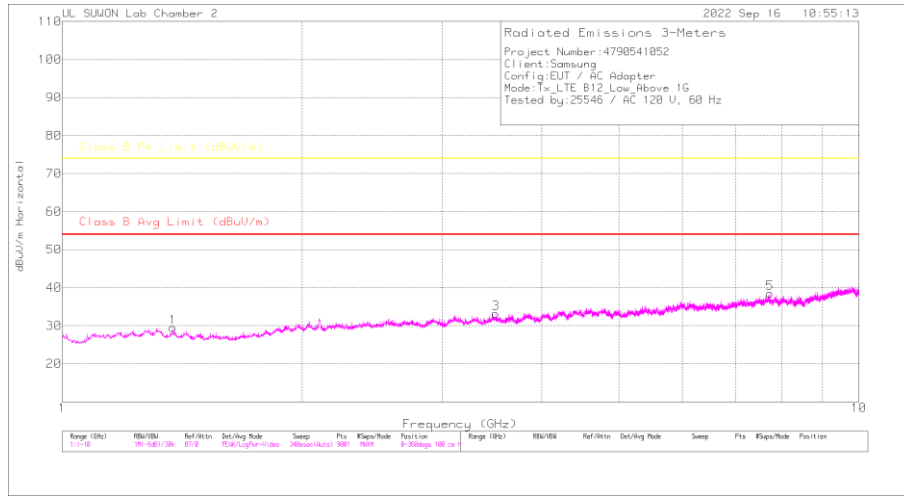
Pk - Peak detector

Ca - CISPR average detection

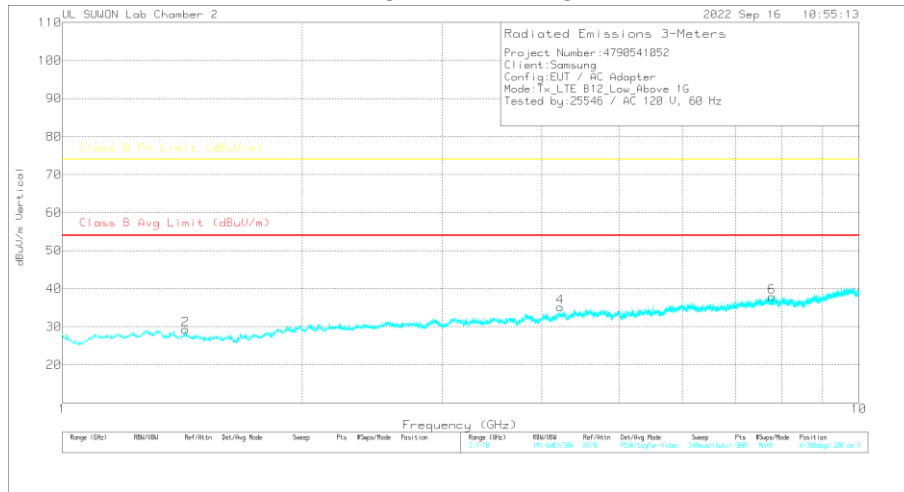
7.1.4. Above 1 GHz in the LTE Band 12

LOW CHANNEL(730.5 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

Radiated Emissions

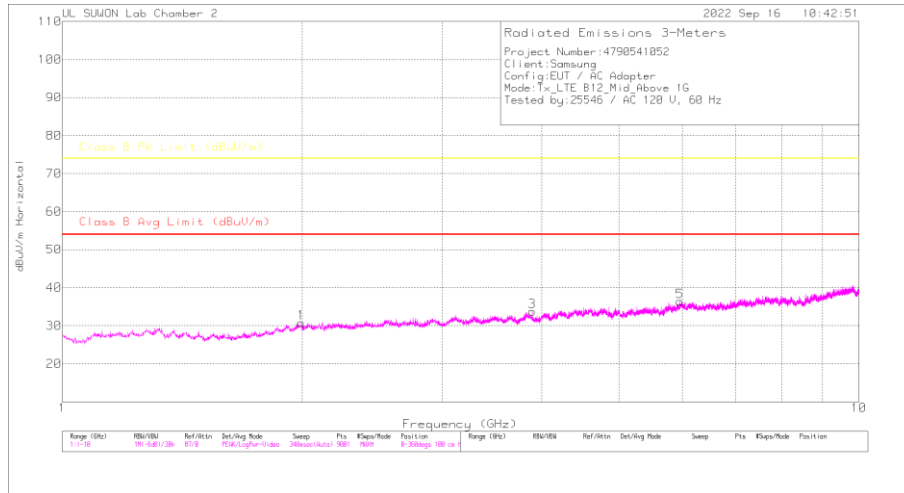
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_0016872 4	1-18GHz[dB]	1G HPF[dB]	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Av(CISPR)Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.378	37.54	Pk	29.2	-31.6	.8	35.94	54	-	74	-38.06	0	100	H
1.378	25.5	Ca	29.2	-31.6	.8	23.9	54	-30.1	-	-	0	100	H
1.428	37.19	Pk	28.9	-31.4	.8	35.49	54	-	74	-38.51	0	100	V
1.428	25.5	Ca	28.9	-31.4	.8	23.8	54	-30.2	-	-	0	100	V
3.502	35.2	Pk	32.7	-28.9	.5	39.5	54	-	74	-34.5	0	100	H
3.502	23.31	Ca	32.7	-28.9	.5	27.61	54	-26.39	-	-	0	100	H
4.217	35.95	Pk	33.3	-28.4	.5	41.35	54	-	74	-32.65	0	100	V
4.217	24.11	Ca	33.3	-28.4	.5	29.51	54	-24.49	-	-	0	100	V
7.736	33.06	Pk	35.9	-24.4	.5	45.06	54	-	74	-28.94	0	100	H
7.736	21.27	Ca	35.9	-24.4	.5	33.27	54	-20.73	-	-	0	100	H
7.777	33.46	Pk	35.9	-24.3	.4	45.46	54	-	74	-28.54	0	100	V
7.777	21.28	Ca	35.9	-24.3	.4	33.28	54	-20.72	-	-	0	100	V

Pk - Peak detector

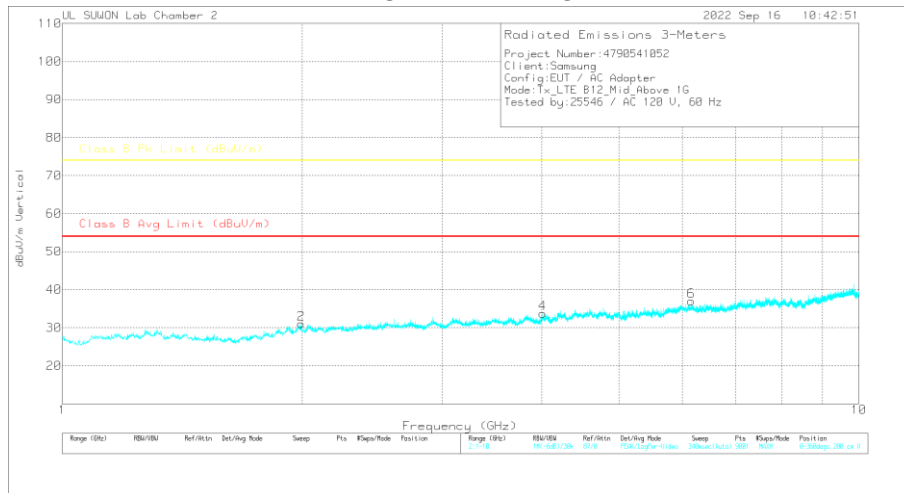
Ca - CISPR average detection

MID CHANNEL(737.5 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

Radiated Emissions

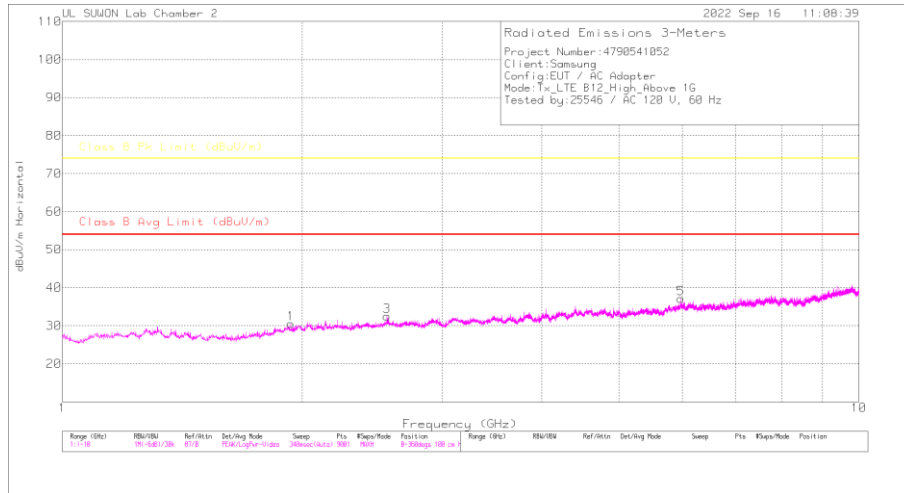
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_0016872_4	1-18GHz[dB]	1G HPF[dB]	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Av(CISPR)Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.996	36.67	Pk	31.3	-30.7	.6	37.87	-	-	74	-36.13	0	100	H
1.996	24.19	Ca	31.3	-30.7	.6	25.39	54	-28.61	-	-	0	100	H
1.995	36.62	Pk	31.3	-30.7	.6	37.82	-	-	74	-36.18	0	100	V
1.995	24.42	Ca	31.3	-30.7	.6	25.62	54	-28.38	-	-	0	100	V
3.89	36.29	Pk	33.2	-29.4	.6	40.69	-	-	74	-33.31	0	100	H
3.89	23.86	Ca	33.2	-29.4	.6	28.26	54	-25.74	-	-	0	100	H
4.011	35.82	Pk	33.2	-29.2	.5	40.32	-	-	74	-33.68	0	100	V
4.011	23.92	Ca	33.2	-29.2	.5	28.42	54	-25.58	-	-	0	100	V
5.96	35.83	Pk	35	-27.5	.6	43.93	-	-	74	-30.07	0	100	H
5.96	23.29	Ca	35	-27.5	.6	31.39	54	-22.61	-	-	0	100	H
6.163	35.2	Pk	35.2	-26.7	.6	44.3	-	-	74	-29.7	0	100	V
6.163	22.93	Ca	35.2	-26.7	.6	32.03	54	-21.97	-	-	0	100	V

Pk - Peak detector

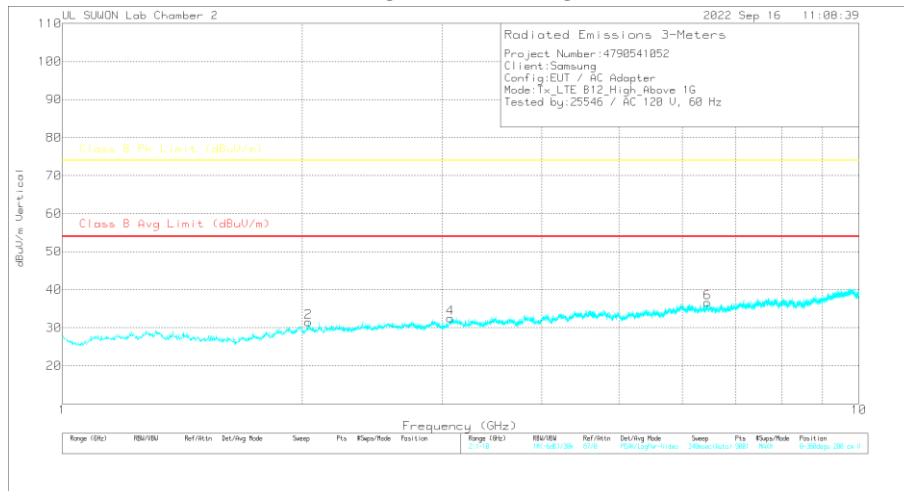
Ca - CISPR average detection

HIGH CHANNEL(744.5 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	3117_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
1.936	36.21	Pk	31	-30.9	.5	36.81	-	-	74	-37.19	0	100	H
1.936	24.08	Ca	31	-30.9	.5	24.68	54	-29.32	-	-	0	100	H
2.038	36.15	Pk	31.4	-30.6	.6	37.55	-	-	74	-36.45	0	100	V
2.038	24.46	Ca	31.4	-30.6	.6	25.86	54	-28.14	-	-	0	100	V
2.557	36.18	Pk	32	-29.8	.6	38.98	-	-	74	-35.02	0	100	H
2.557	23.95	Ca	32	-29.8	.6	26.75	54	-27.25	-	-	0	100	H
3.071	36.1	Pk	32.6	-29.9	.5	39.3	-	-	74	-34.7	0	100	V
3.071	23.78	Ca	32.6	-29.9	.5	26.98	54	-27.02	-	-	0	100	V
5.975	35.64	Pk	35	-27.4	.6	43.84	-	-	74	-30.16	0	100	H
5.975	23.49	Ca	35	-27.4	.6	31.69	54	-22.31	-	-	0	100	H
6.45	34.59	Pk	35.4	-26.6	.6	43.99	-	-	74	-30.01	0	100	V
6.45	22.52	Ca	35.4	-26.6	.6	31.92	54	-22.08	-	-	0	100	V

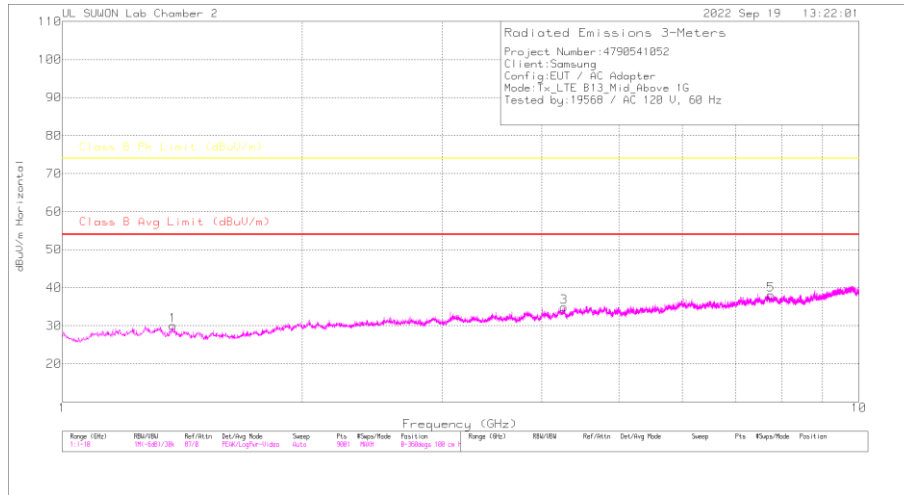
Pk - Peak detector

Ca - CISPR average detection

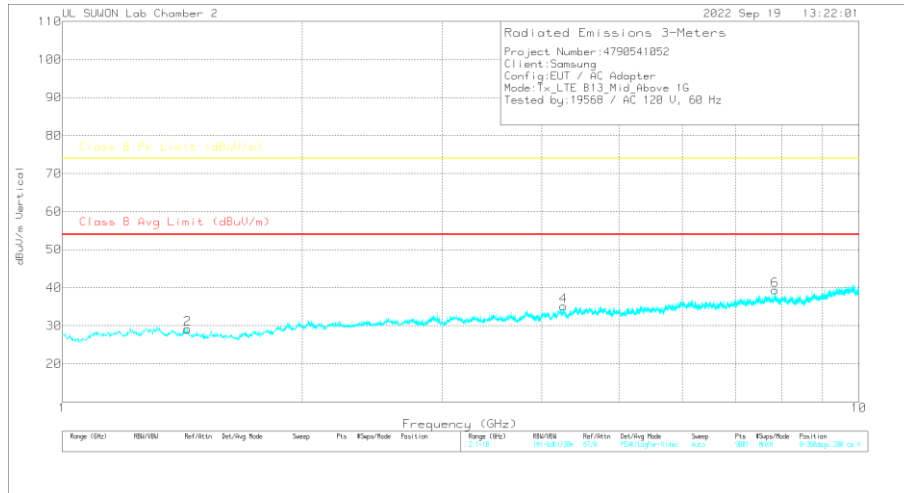
7.1.5. Above 1 GHz in the LTE Band 13

MID CHANNEL(751.0 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

Radiated Emissions

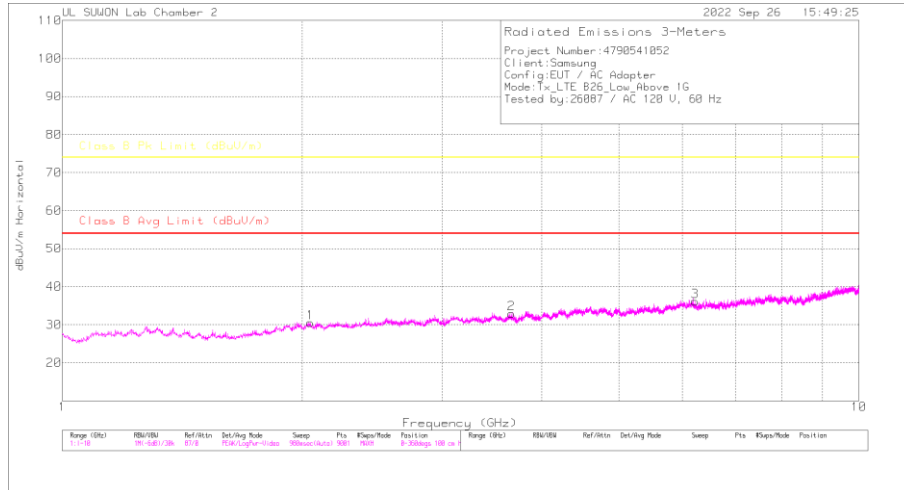
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_0016872_4	1-18GHz[dB]	1G HPF[dB]	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Av(CISPR)Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.378	37.73	Pk	29.2	-31.6	.8	36.13	-	-29.73	74	-37.87	0	100	H
1.378	25.87	Ca	29.2	-31.6	.8	24.27	54	-	-	-	0	100	H
1.436	37.9	Pk	28.8	-31.4	.8	36.1	-	-	74	-37.9	0	100	V
1.436	25.7	Ca	28.8	-31.4	.8	23.9	54	-30.1	-	-	0	100	V
4.263	36.55	Pk	33.4	-28.7	.7	41.95	-	-	74	-32.05	0	100	H
4.263	24.46	Ca	33.4	-28.7	.7	29.86	54	-24.14	-	-	0	100	H
4.258	36.22	Pk	33.3	-28.7	.6	41.42	-	-	74	-32.58	0	100	V
4.258	24.39	Ca	33.3	-28.7	.6	29.59	54	-24.41	-	-	0	100	V
7.753	33.82	Pk	35.9	-24.3	.4	45.82	-	-	74	-28.18	0	100	H
7.753	21.5	Ca	35.9	-24.3	.4	33.5	54	-20.5	-	-	0	100	H
7.851	33.54	Pk	35.9	-24.4	.4	45.44	-	-	74	-28.56	0	100	V
7.851	21.9	Ca	35.9	-24.4	.4	33.8	54	-20.2	-	-	0	100	V

Pk - Peak detector
Ca - CISPR average detection

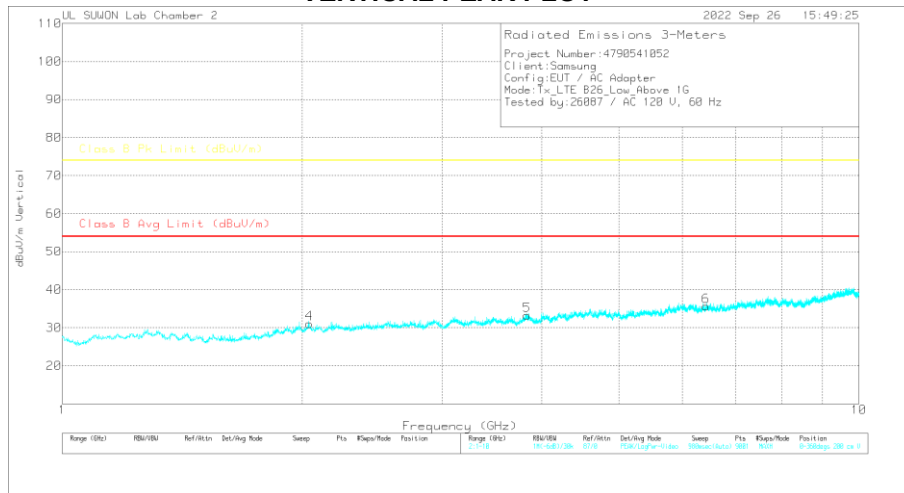
7.1.6. Above 1 GHz in the LTE Band 26

LOW CHANNEL(860.5 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

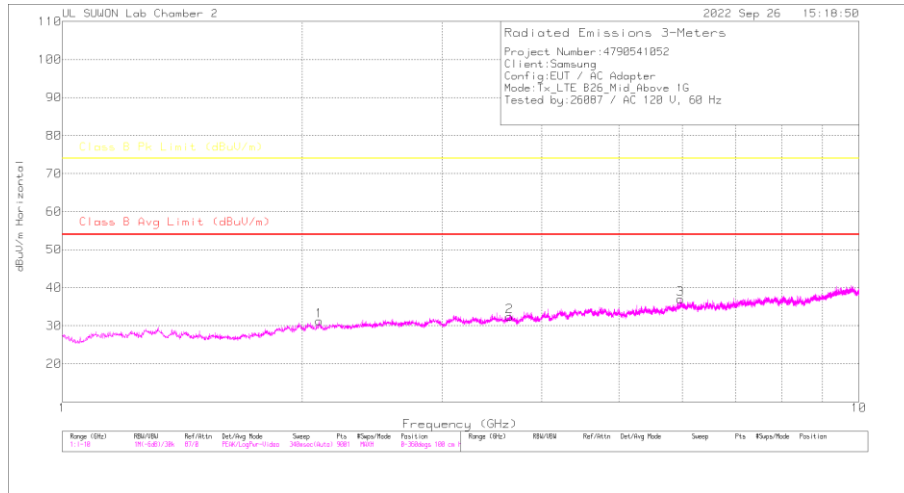
Radiated Emissions

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)Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2.047	36.94	Pk	31.4	-30.5	.6	38.44	-	-	74	-35.56	360	100	H
2.047	24.45	Ca	31.4	-30.5	.6	25.95	54	-28.05	-	-	360	100	H
2.041	36.29	Pk	31.4	-30.5	.6	37.79	-	-	74	-36.21	360	100	V
2.041	24.54	Ca	31.4	-30.5	.6	26.04	54	-27.96	-	-	360	100	V
3.662	36.75	Pk	32.8	-29.7	.5	40.35	-	-	74	-33.65	360	100	H
3.662	24.36	Ca	32.8	-29.7	.5	27.96	54	-26.04	-	-	360	100	H
3.833	36.59	Pk	33.1	-29.2	.7	41.19	-	-	74	-32.81	360	100	V
3.833	24.17	Ca	33.1	-29.2	.7	28.77	54	-25.23	-	-	360	100	V
6.231	34.49	Pk	35.3	-27	.7	43.49	-	-	74	-30.51	360	100	H
6.231	22.93	Ca	35.3	-27	.7	31.93	54	-22.07	-	-	360	100	H
6.427	34.53	Pk	35.4	-26.6	.6	43.93	-	-	74	-30.07	360	100	V
6.427	22.43	Ca	35.4	-26.6	.6	31.83	54	-22.17	-	-	360	100	V

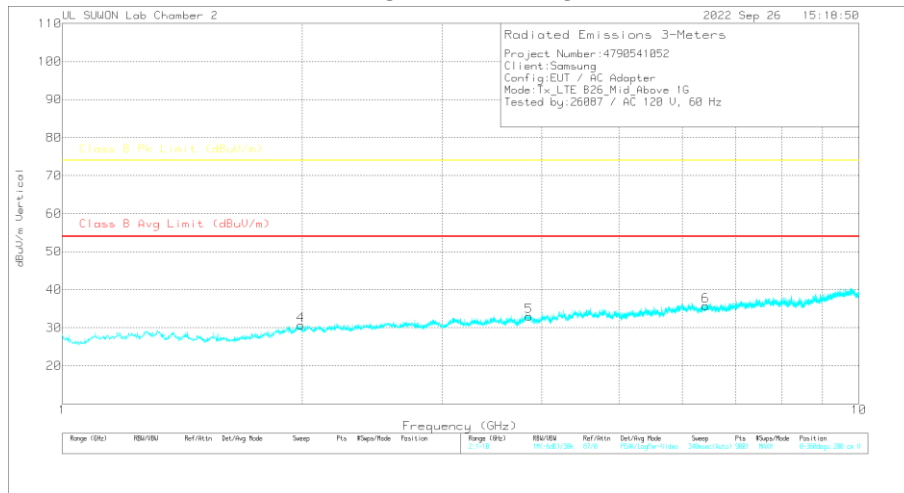
Pk - Peak detector
Ca - CISPR average detection

MID CHANNEL(876.5 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

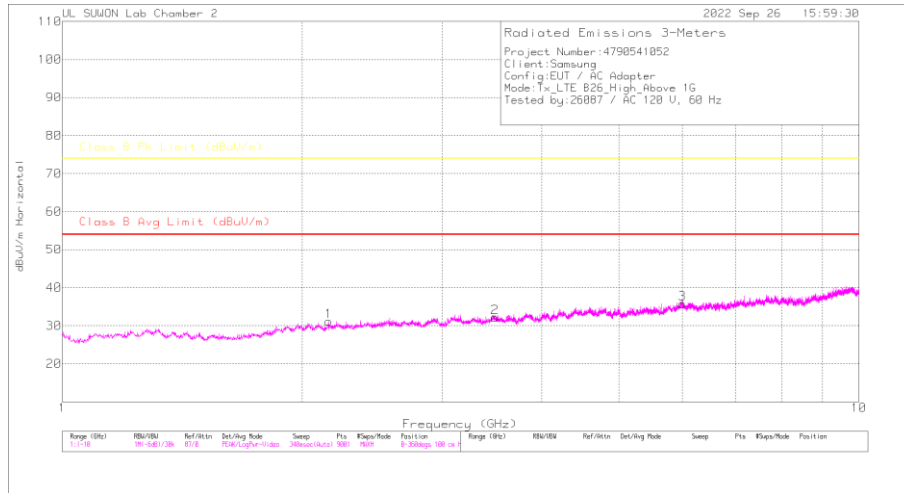
Radiated Emissions

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)Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2.101	37.7	Pk	31.4	-30.5	.5	39.1	-	-	74	-34.9	0	100	H
2.101	24.34	Ca	31.4	-30.5	.5	25.74	54	-28.26	-	-	0	100	H
1.992	36.3	Pk	31.3	-30.7	.6	37.5	-	-	74	-36.5	0	100	V
1.992	24.44	Ca	31.3	-30.7	.6	25.64	54	-28.36	-	-	0	100	V
3.642	37.58	Pk	32.8	-29.5	.5	41.38	-	-	74	-32.62	0	100	H
3.642	24.23	Ca	32.8	-29.5	.5	28.03	54	-25.97	-	-	0	100	H
3.854	36.07	Pk	33.2	-29.2	.6	40.67	-	-	74	-33.33	0	100	V
3.854	24.07	Ca	33.2	-29.2	.6	28.67	54	-25.33	-	-	0	100	V
5.966	35.69	Pk	35	-27.4	.6	43.89	-	-	74	-30.11	0	100	H
5.966	23.4	Ca	35	-27.4	.6	31.6	54	-22.4	-	-	0	100	H
6.423	34.75	Pk	35.3	-26.7	.6	43.95	-	-	74	-30.05	0	100	V
6.423	22.4	Ca	35.3	-26.7	.6	31.6	54	-22.4	-	-	0	100	V

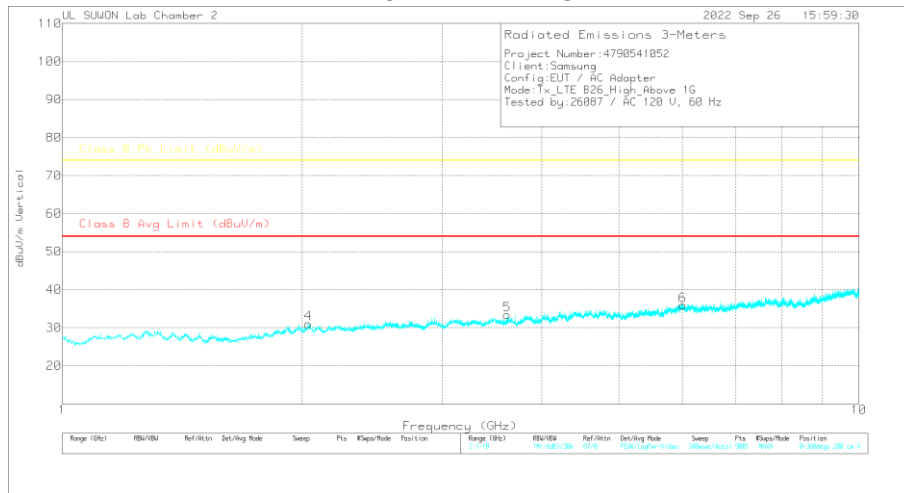
Pk - Peak detector
Ca - CISPR average detection

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)Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2.159	36.25	Pk	31.4	-30.5	.6	37.75	-	-	74	-36.25	0	100	H
2.159	24.11	Ca	31.4	-30.5	.6	25.61	54	-28.39	-	-	0	100	H
2.038	37.33	Pk	31.4	-30.6	.6	38.73	-	-	74	-35.27	0	100	V
2.038	24.61	Ca	31.4	-30.6	.6	26.01	54	-27.99	-	-	0	100	V
3.494	35.25	Pk	32.7	-28.9	.5	39.55	-	-	74	-34.45	0	100	H
3.494	23.46	Ca	32.7	-28.9	.5	27.76	54	-26.24	-	-	0	100	H
3.62	36.22	Pk	32.8	-29.4	.5	40.12	-	-	74	-33.88	0	100	V
3.62	24.01	Ca	32.8	-29.4	.5	27.91	54	-26.09	-	-	0	100	V
6.003	35.31	Pk	35	-27.4	.6	43.51	-	-	74	-30.49	0	100	H
6.003	23.44	Ca	35	-27.4	.6	31.64	54	-22.36	-	-	0	100	H
6.011	35.3	Pk	35	-27.4	.5	43.4	-	-	74	-30.6	0	100	V
6.011	23.39	Ca	35	-27.4	.5	31.49	54	-22.51	-	-	0	100	V

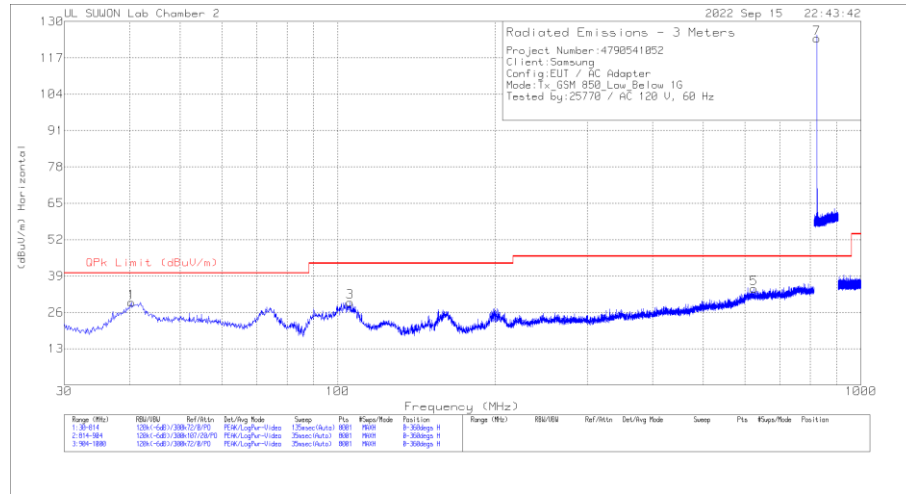
Pk - Peak detector

Ca - CISPR average detection

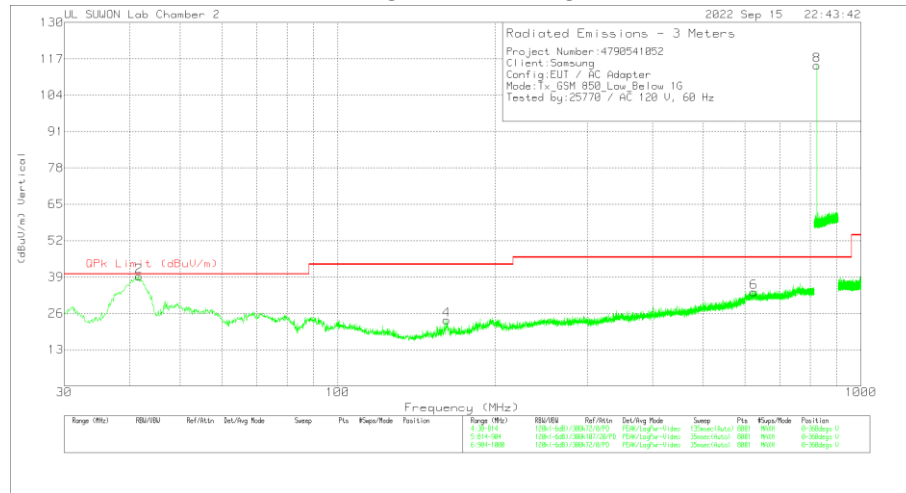
7.1.7. Below 1 GHz in the GSM850

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	40.29	10.11	Pk	18.8	.7	29.61	40	-10.39	0-360	200	H
3	105.558	10.84	Pk	17.6	1.2	29.64	43.52	-13.88	0-360	200	H
5	624.174	6.64	Pk	25	2.8	34.44	46.02	-11.58	0-360	100	H
7	824.2038	94.12	Pk	26.5	3.3	123.92	46.02	77.9	0-360	200	H
2	41.662	19.38	Pk	19.2	.7	39.28	40	-7.2	0-360	100	V
4	161.614	7.78	Pk	14.4	1.5	23.68	43.52	-19.84	0-360	100	V
6	624.174	5.89	Pk	25	2.8	33.69	46.02	-12.33	0-360	200	V
8	824.2038	84.81	Pk	26.5	3.3	114.61	46.02	68.59	0-360	100	V

Pk - Peak detector

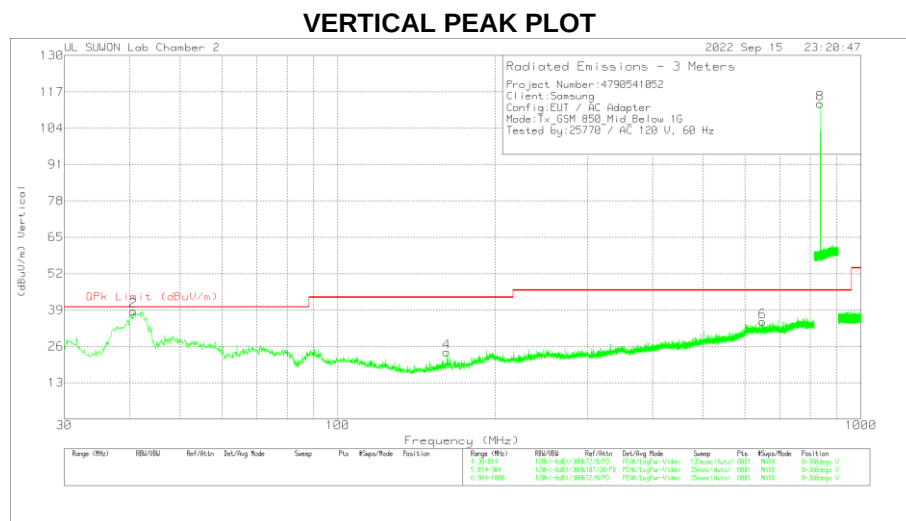
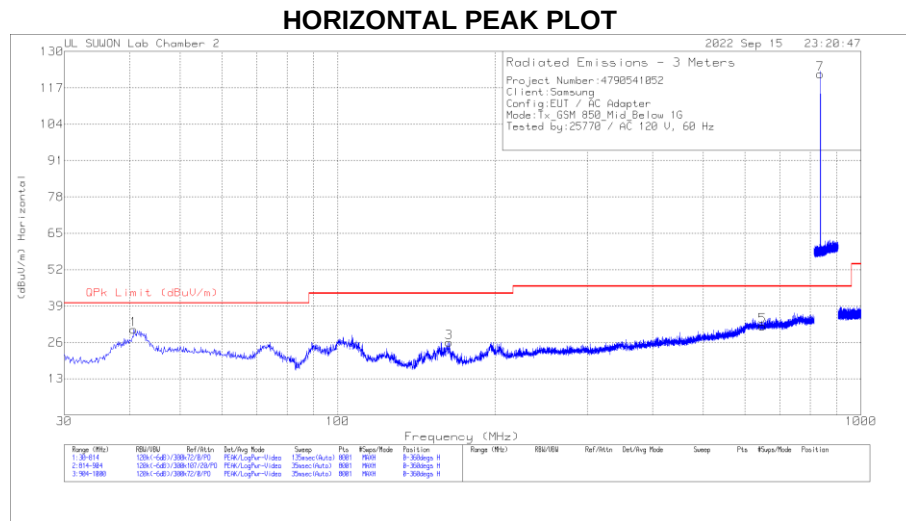
Radiated Emissions

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
41.662	13.59	Qp	19.2	.7	33.49	40	-6.51	301	100	V

Qp - Quasi-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.

MID CHANNEL(881.6 MHz)



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	40.78	10.93	Pk	18.9	.7	30.53	40	-9.47	0-360	200	H
3	163.182	10.02	Pk	14.5	1.5	26.02	43.52	-17.5	0-360	100	H
5	648.184	4.14	Pk	24.8	2.9	31.84	46.02	-14.18	0-360	100	H
7	836.6013	91.98	Pk	26.6	3.3	121.88	46.02	75.86	0-360	200	H
2	40.682	19.02	Pk	18.9	.7	38.62	40	-1.38	0-360	200	V
4	161.516	8.09	Pk	14.4	1.5	23.99	43.52	-19.53	0-360	300	V
6	648.184	7.17	Pk	24.8	2.9	34.87	46.02	-11.15	0-360	200	V
8	836.6013	82.79	Pk	26.6	3.3	112.69	46.02	66.67	0-360	100	V

Pk - Peak detector

Radiated Emissions

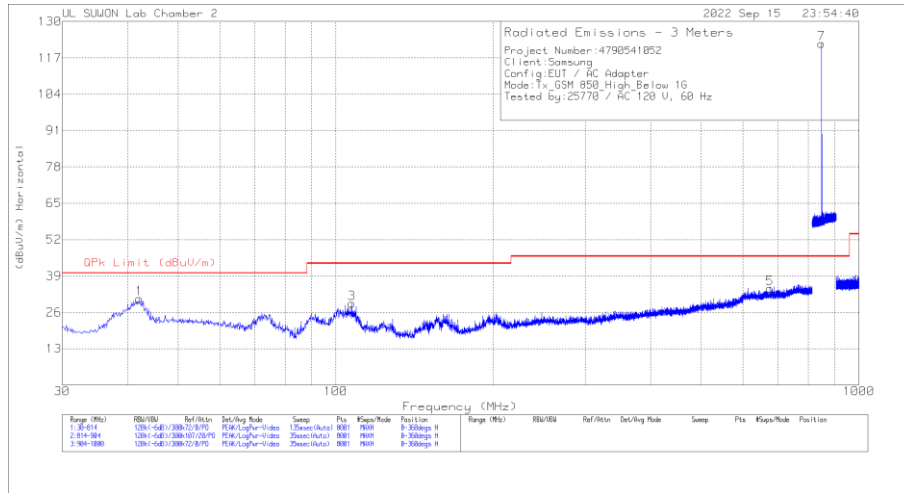
Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Below 1G_Bypass[dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
40.682	14.25	Qp	18.9	.7	33.85	40	-6.15	282	100	V

Qp - Quasi-Peak detector

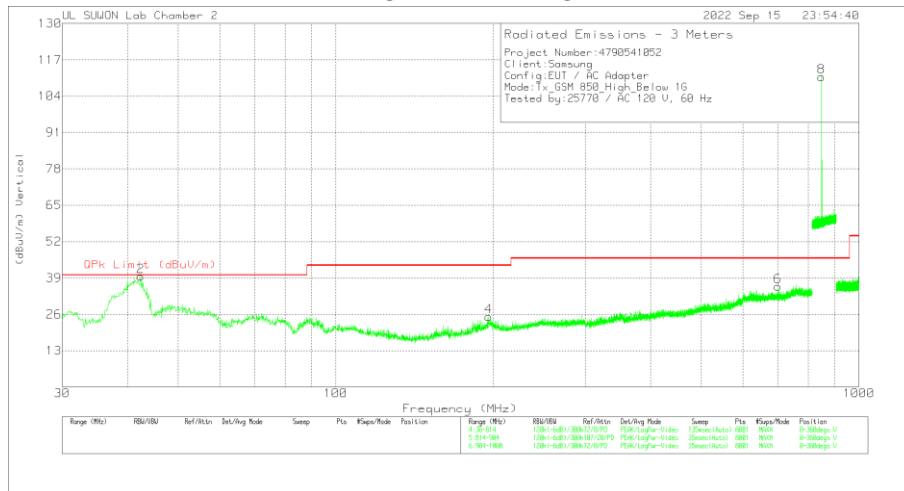
Note: Unwanted emissions captured from 824MHz to 849MHz and from 869MHz to 894MHz were the TX and RX signals generated from the call-simulator.

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	42.152	10.76	Pk	19.3	.8	30.86	40	-9.14	0-360	300	H
3	107.322	10.36	Pk	17.6	1.2	29.16	43.52	-14.36	0-360	200	H
5	676.506	6.23	Pk	25.2	3	34.43	46.02	-11.59	0-360	300	H
7	848.8075	91.92	Pk	26.9	3.3	122.12	46.02	76.1	0-360	200	H
2	42.348	19.42	Pk	19.4	.8	39.62	40	-.38	0-360	200	V
4	196.208	5.72	Pk	17.8	1.6	25.12	43.52	-18.4	0-360	200	V
6	699.634	7.74	Pk	25.3	3	36.04	46.02	-9.98	0-360	300	V
8	848.8075	80.66	Pk	26.9	3.3	110.86	46.02	64.84	0-360	100	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
42.348	13.61	Qp	19.4	.8	33.81	40	-6.19	290	100	V

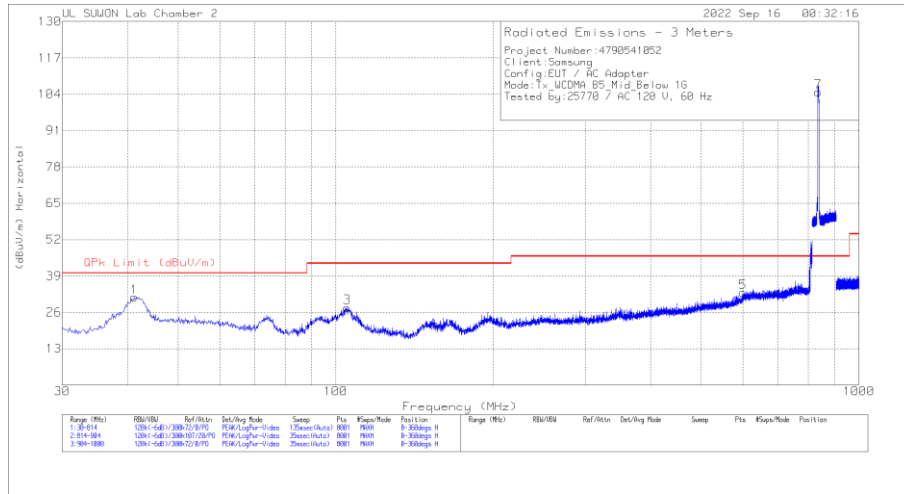
Qp - Quasi-Peak detector

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

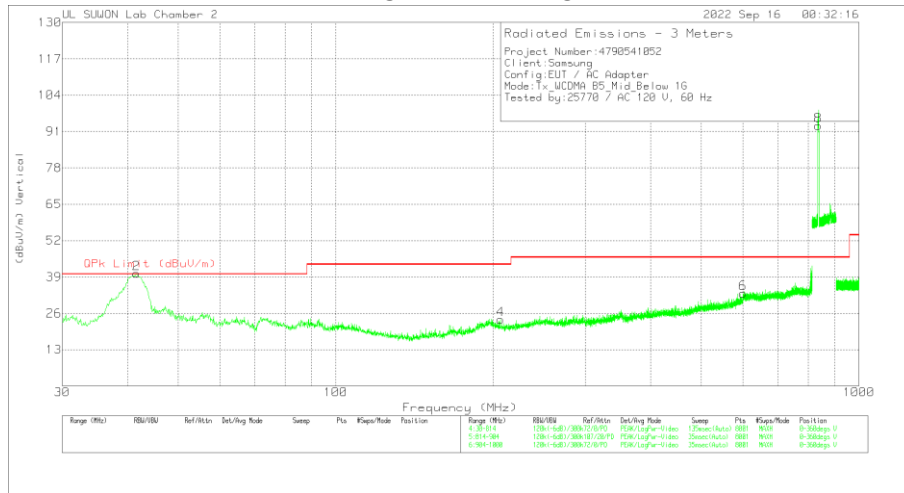
7.1.8. Below 1 GHz in the WCDMA Band 5

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	41.172	11.66	Pk	19.1	.7	31.46	40	-8.54	0-360	200	H
3	105.166	8.97	Pk	17.6	1.2	27.77	43.52	-15.75	0-360	200	H
5	600.556	5.43	Pk	24.9	2.8	33.13	46.02	-12.89	0-360	100	H
7	836.6013	74.92	Pk	26.6	3.3	104.82	46.02	58.8	0-360	200	H
2	41.564	20.35	Pk	19.2	.7	40.25	40	.25	0-360	200	V
4	206.4	5.34	Pk	16.8	1.6	23.74	43.52	-19.78	0-360	200	V
6	600.262	5.48	Pk	24.9	2.8	33.18	46.02	-12.84	0-360	400	V
8	836.6013	63.15	Pk	26.6	3.3	93.05	46.02	47.03	0-360	100	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
41.564	17.02	Qp	19.2	.7	36.92	40	-3.08	288	100	V

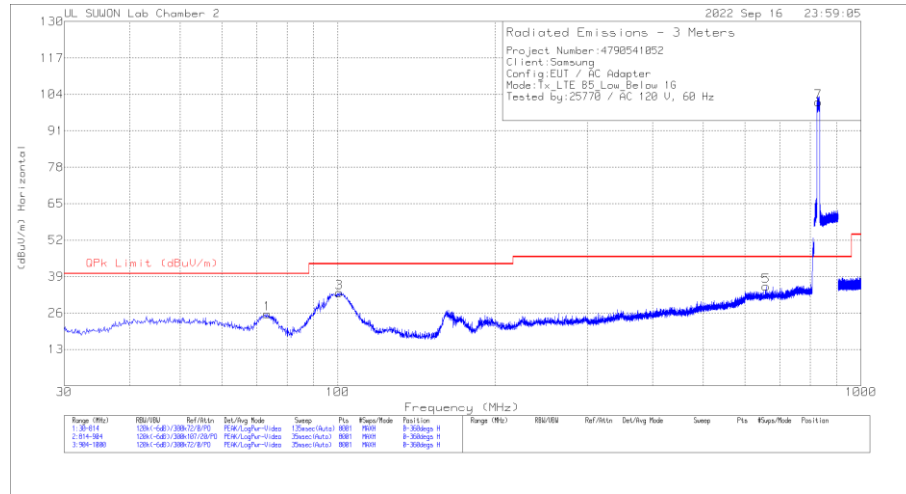
Qp - Quasi-Peak detector

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

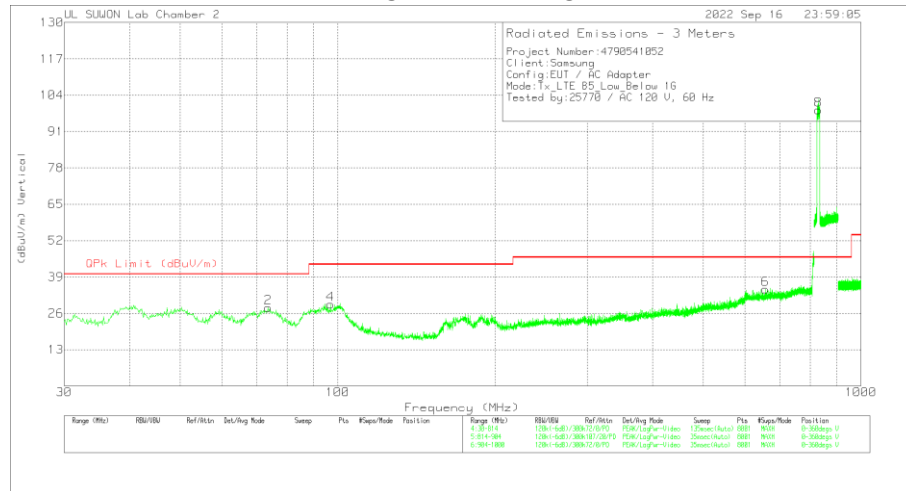
7.1.9. Below 1 GHz in the LTE Band 5

LOW CHANNEL(874.0 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

Trace Markers

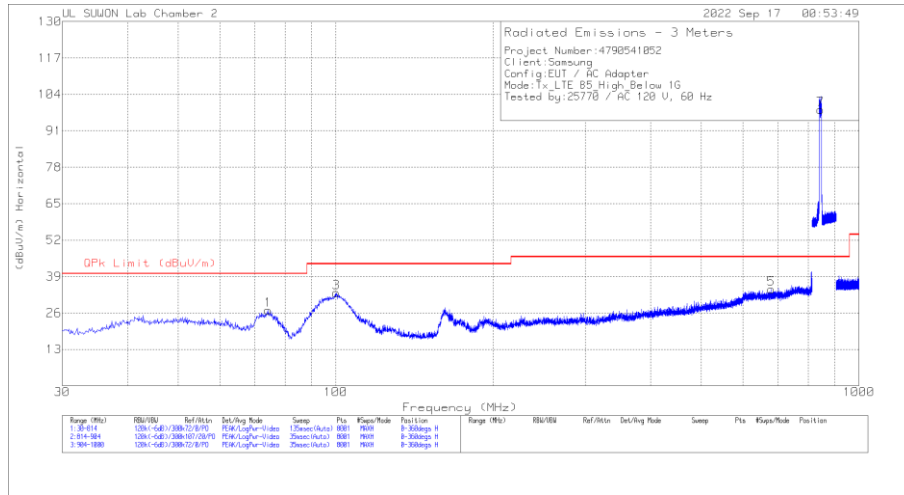
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Below 1G_Bypass[dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degr)	Height (cm)	Polarity
1	73.316	10.34	Pk	14.3	1	25.64	40	-14.36	0-360	100	H
3	100.56	14.5	Pk	17.5	1.2	33.2	43.52	-10.32	0-360	100	H
5	658.474	7.52	Pk	25	2.9	35.42	46.02	-10.6	0-360	300	H
7	829.0075	71.32	Pk	26.6	3.3	101.22	46.02	55.2	0-360	200	H
2	73.61	12.8	Pk	14.2	1	28	40	-12	0-360	200	V
4	96.836	11.28	Pk	16.9	1.1	29.28	43.52	-14.24	0-360	200	V
6	657.004	6.91	Pk	24.9	2.9	34.71	46.02	-11.31	0-360	300	V
8	829.0075	68.86	Pk	26.6	3.3	98.76	46.02	52.74	0-360	100	V

Pk - Peak detector

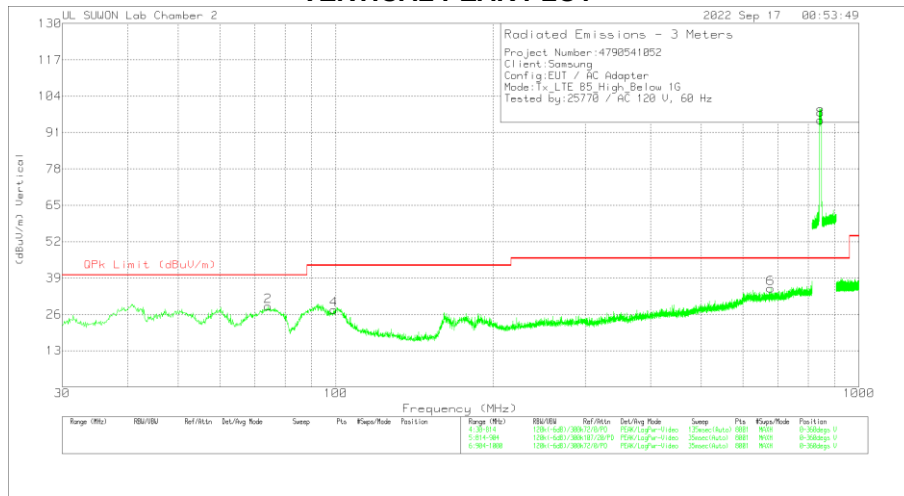
Note: Unwanted emissions captured from 824MHz to 849MHz and from 869MHz to 894MHz were the TX and RX signals generated from the call-simulator.

HIGH CHANNEL(889.0 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	74.296	12.06	Pk	13.9	1	26.96	40	-13.04	0-360	200	H
3	100.266	14.6	Pk	17.4	1.2	33.2	43.52	-10.32	0-360	200	H
5	680.328	6.19	Pk	25.2	3	34.39	46.02	-11.63	0-360	200	H
7	844.0038	68.47	Pk	26.8	3.3	98.57	46.02	52.55	0-360	200	H
2	74.296	14.04	Pk	13.9	1	28.94	40	-11.06	0-360	300	V
4	99.188	9.31	Pk	17.3	1.1	27.71	43.52	-15.81	0-360	200	V
6	677.976	7.15	Pk	25.2	3	35.35	46.02	-10.67	0-360	400	V
8	844.0038	65.35	Pk	26.8	3.3	95.45	46.02	49.43	0-360	100	V

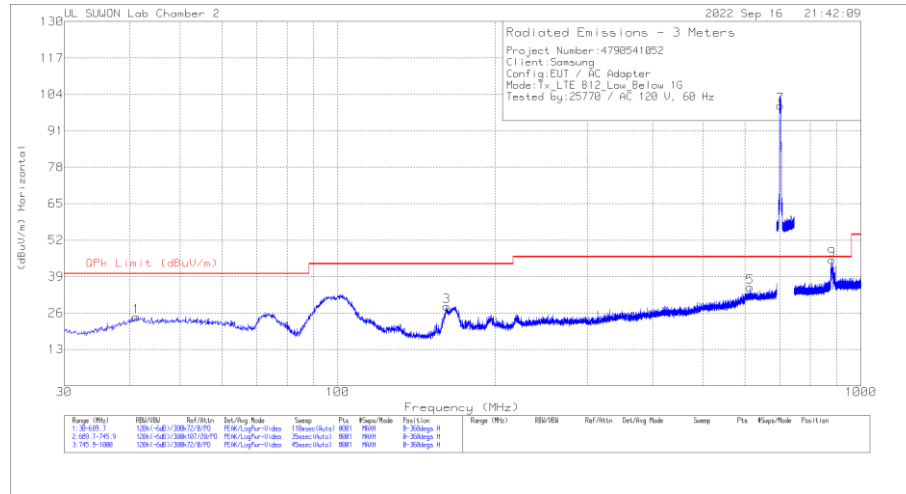
Pk - Peak detector

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

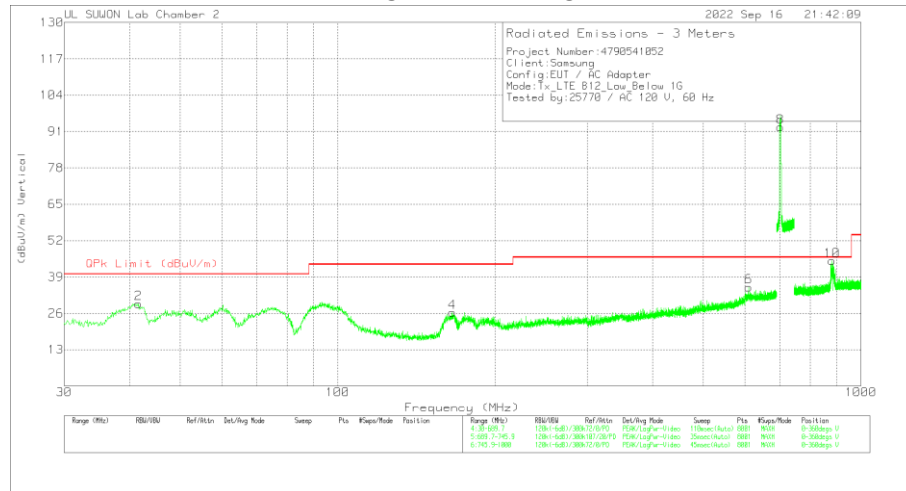
7.1.10.Below 1 GHz in the LTE Band 12

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	41.215	4.9	Pk	19.1	.7	24.7	40	-15.3	0-360	100	H
3	161.6109	12.41	Pk	14.4	1.5	28.31	43.52	-15.21	0-360	100	H
5	614.1679	7.42	Pk	24.9	2.8	35.12	46.02	-10.9	0-360	300	H
7	701.509	71.81	Pk	25.3	3	100.11	46.02	54.09	0-360	200	H
9	880.8292	14.16	Pk	27.4	3.4	44.96	46.02	-1.06	0-360	100	H
2	41.6273	9.57	Pk	19.2	.7	29.47	40	-10.53	0-360	200	V
4	165.4867	10.39	Pk	14.5	1.5	26.39	43.52	-17.13	0-360	300	V
6	609.6324	7.7	Pk	24.9	2.8	35.4	46.02	-10.62	0-360	300	V
8	701.509	64.22	Pk	25.3	3	92.52	46.02	46.5	0-360	100	V
10	881.1786	14.03	Pk	27.4	3.4	44.83	46.02	-1.19	0-360	400	V

Pk - Peak detector

Radiated Emissions

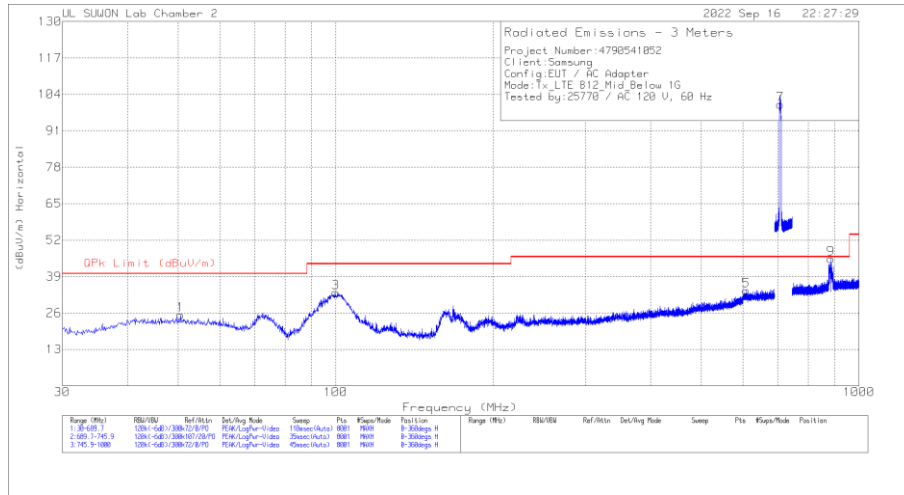
Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_74 9	Below 1G_Bypass[dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
880.8292	6.58	Qp	27.4	3.4	37.38	46.02	-8.64	237	343	H
881.1786	7.04	Qp	27.4	3.4	37.84	46.02	-8.18	302	125	V

Qp - Quasi-Peak detector

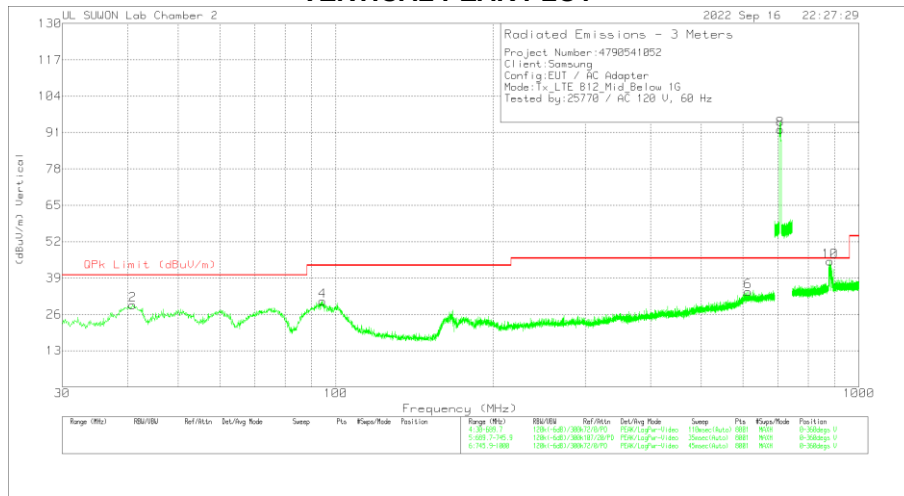
Note: Unwanted emissions captured from 699MHz to 716MHz and from 729MHz to 746MHz were the TX and RX signals generated from the call-simulator.

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	50.5333	4.55	Pk	20	.8	25.35	40	-14.65	0-360	300	H
3	100.0111	14.61	Pk	17.4	1.2	33.21	43.52	-10.31	0-360	200	H
5	609.2201	6.25	Pk	24.9	2.8	33.95	46.02	-12.07	0-360	100	H
7	707.5014	72.21	Pk	25.2	3	100.41	46.02	54.39	0-360	200	H
9	884.7996	14.54	Pk	27.4	3.4	45.34	46.02	-.68	0-360	100	H
2	40.8851	9.62	Pk	19	.7	29.32	40	-10.68	0-360	200	V
4	94.3211	13.13	Pk	16.5	1.1	30.73	43.52	-12.79	0-360	200	V
6	613.838	6.42	Pk	24.9	2.8	34.12	46.02	-11.9	0-360	200	V
8	707.5014	63.91	Pk	25.2	3	92.11	46.02	46.09	0-360	100	V
10	880.7975	14.23	Pk	27.4	3.4	45.03	46.02	-.99	0-360	300	V

Pk - Peak detector

Radiated Emissions

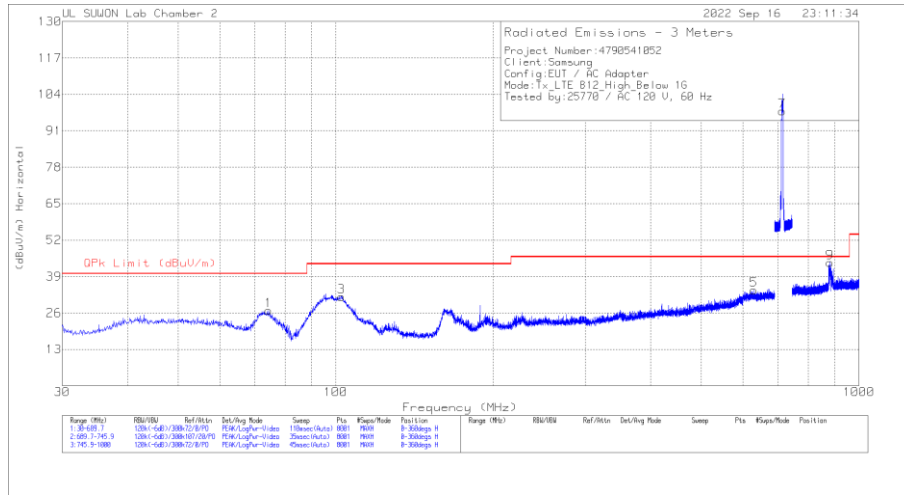
Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_74 9	Below 1G_Bypass[dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
884.7996	7.79	Qp	27.4	3.4	38.59	46.02	-7.43	351	261	H
880.7975	6.84	Qp	27.4	3.4	37.64	46.02	-8.38	266	300	V

Qp - Quasi-Peak detector

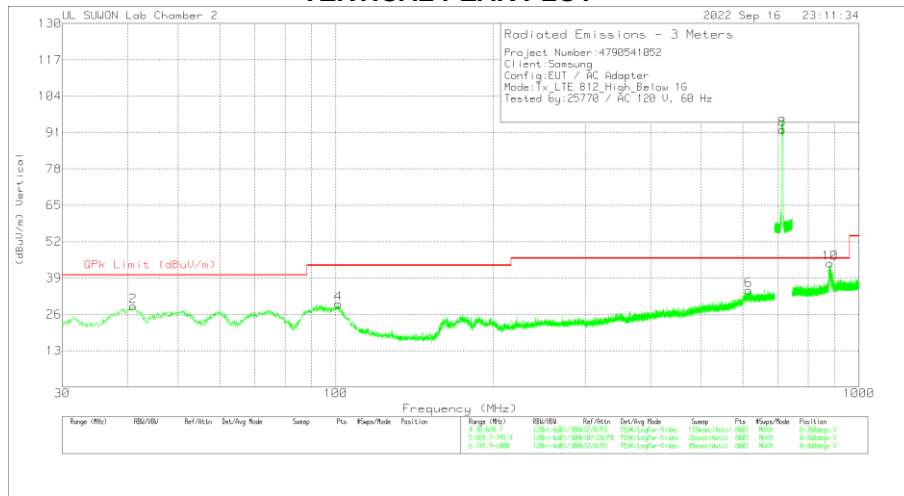
Note: Unwanted emissions captured from 699MHz to 716MHz and from 729MHz to 746MHz were the TX and RX signals generated from the call-simulator.

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	74.4476	12.1	Pk	13.8	1	26.9	40	-13.1	0-360	100	H
3	102.485	12.95	Pk	17.6	1.2	31.75	43.52	-11.77	0-360	200	H
5	629.506	6.36	Pk	24.9	2.9	34.16	46.02	-11.86	0-360	100	H
7	713.5007	69.77	Pk	25.2	3	97.97	46.02	51.95	0-360	200	H
9	881.2739	13.2	Pk	27.4	3.4	44	46.02	-2.02	0-360	100	H
2	40.9676	9.22	Pk	19	.7	28.92	40	-11.08	0-360	200	V
4	101.1656	11.08	Pk	17.5	1.2	29.78	43.52	-13.74	0-360	200	V
6	614.9925	7.01	Pk	24.9	2.8	34.71	46.02	-11.31	0-360	400	V
8	713.5007	63.93	Pk	25.2	3	92.13	46.02	46.11	0-360	100	V
10	881.1469	13.52	Pk	27.4	3.4	44.32	46.02	-1.7	0-360	200	V

Pk - Peak detector

Radiated Emissions

Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_74 9	Below 1G_Bypass[dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
881.2739	7.96	Qp	27.4	3.4	38.76	46.02	-7.26	31	381	H
881.1469	7.35	Qp	27.4	3.4	38.15	46.02	-7.87	256	379	V

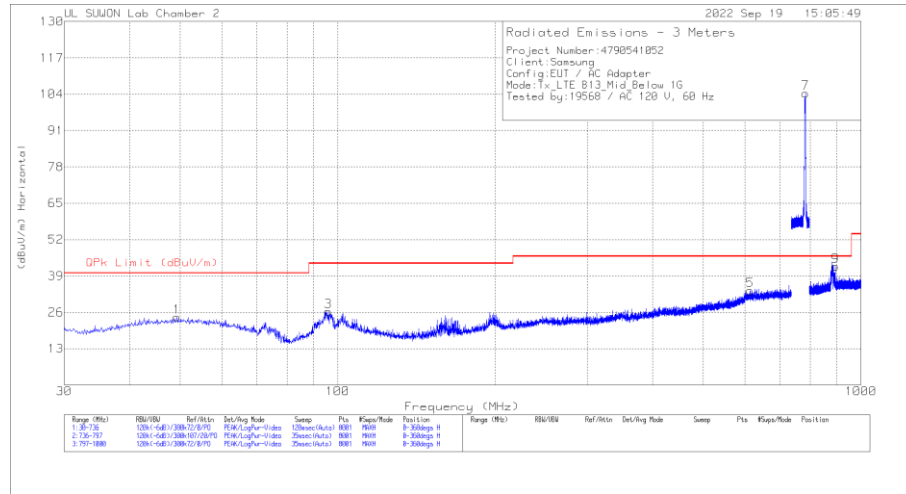
Qp - Quasi-Peak detector

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

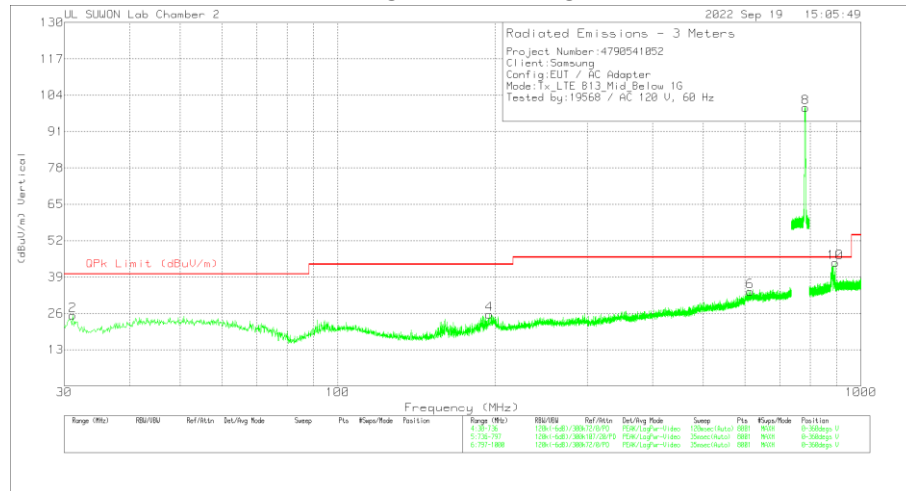
7.1.11.Below 1 GHz in the LTE Band 13

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	49.2385	3.4	Pk	20.1	.8	24.3	40	-15.7	0-360	100	H
3	96.011	8.41	Pk	16.8	1.1	26.31	43.52	-17.21	0-360	200	H
5	614.4798	6.01	Pk	24.9	2.8	33.71	46.02	-12.31	0-360	300	H
7	783.7478	74.97	Pk	26.2	3.2	104.37	46.02	58.35	0-360	200	H
9	893.1205	11.52	Pk	27.5	3.4	42.42	46.02	-3.6	0-360	300	H
2	31.1473	9.06	Pk	15.6	.6	25.26	40	-14.74	0-360	200	V
4	194.851	6.69	Pk	17.4	1.6	25.69	43.52	-17.83	0-360	200	V
6	614.3033	6.16	Pk	24.9	2.8	33.86	46.02	-12.16	0-360	400	V
8	783.3589	70.1	Pk	26.2	3.2	99.5	46.02	53.48	0-360	100	V
10	893.0698	13.3	Pk	27.5	3.4	44.2	46.02	-1.82	0-360	300	V

Pk - Peak detector

Radiated Emissions

Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_74 9	Below 1G_Bypass[dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
893.1205	4.16	Qp	27.5	3.4	35.06	46.02	-10.96	155	358	H
893.0698	6.04	Qp	27.5	3.4	36.94	46.02	-9.08	191	288	V

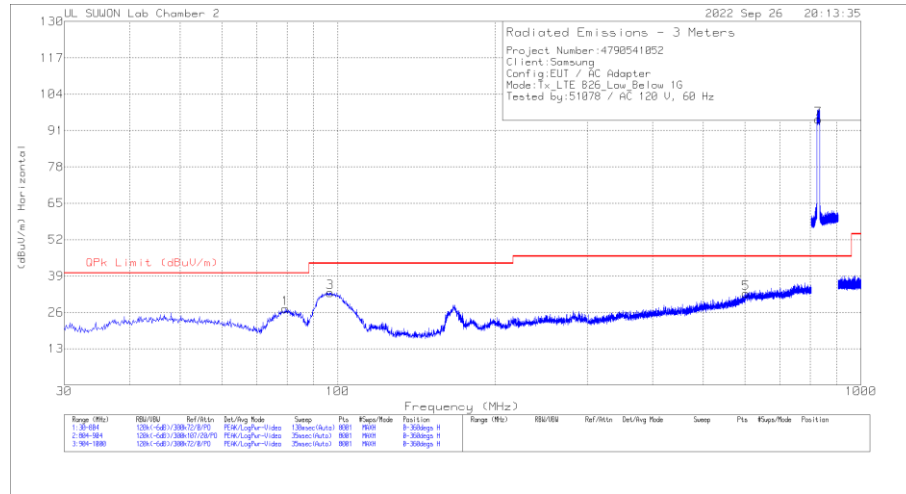
Qp - Quasi-Peak detector

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

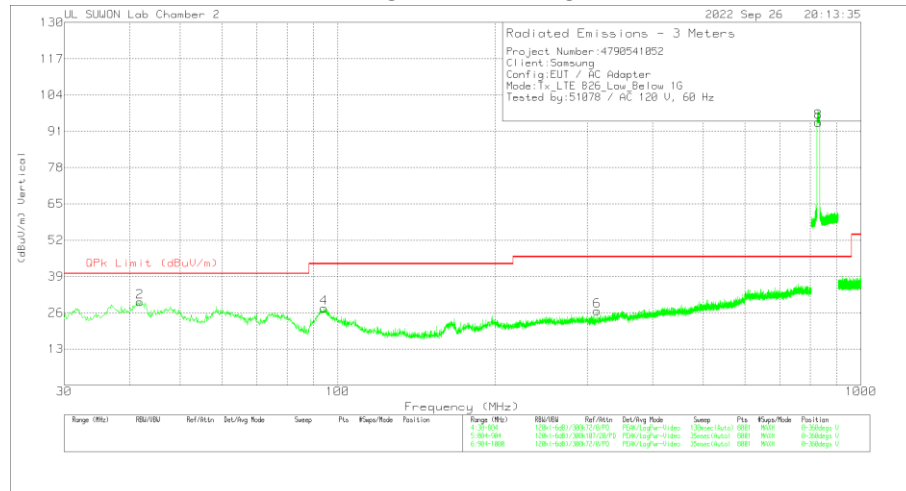
7.1.12.Below 1 GHz in the LTE Band 26

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	79.3425	13.54	Pk	12.8	1	27.34	40	-12.66	0-360	100	H
3	96.6608	15.03	Pk	16.9	1.1	33.03	43.52	-10.49	0-360	200	H
5	602.4698	5.09	Pk	24.9	2.8	32.79	46.02	-13.23	0-360	100	H
7	829	65.04	Pk	26.6	3.3	94.94	46.02	48.92	0-360	200	H
2	41.9003	9.82	Pk	19.3	.8	29.92	40	-10.08	0-360	200	V
4	94.1453	10.23	Pk	16.4	1.1	27.73	43.52	-15.79	0-360	200	V
6	313.0905	5.39	Pk	19.3	2	26.69	46.02	-19.33	0-360	300	V
8	829.05	64.31	Pk	26.6	3.3	94.21	46.02	48.19	0-360	100	V

Pk - Peak detector

Note: Unwanted emissions captured from 814MHz to 849MHz and from 859MHz to 894MHz were the TX and RX signals generated from the call-simulator.

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 μ H/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 (dB μ V)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56	56 to 46
0.50 to 5	56	46
5 to 30	60	50

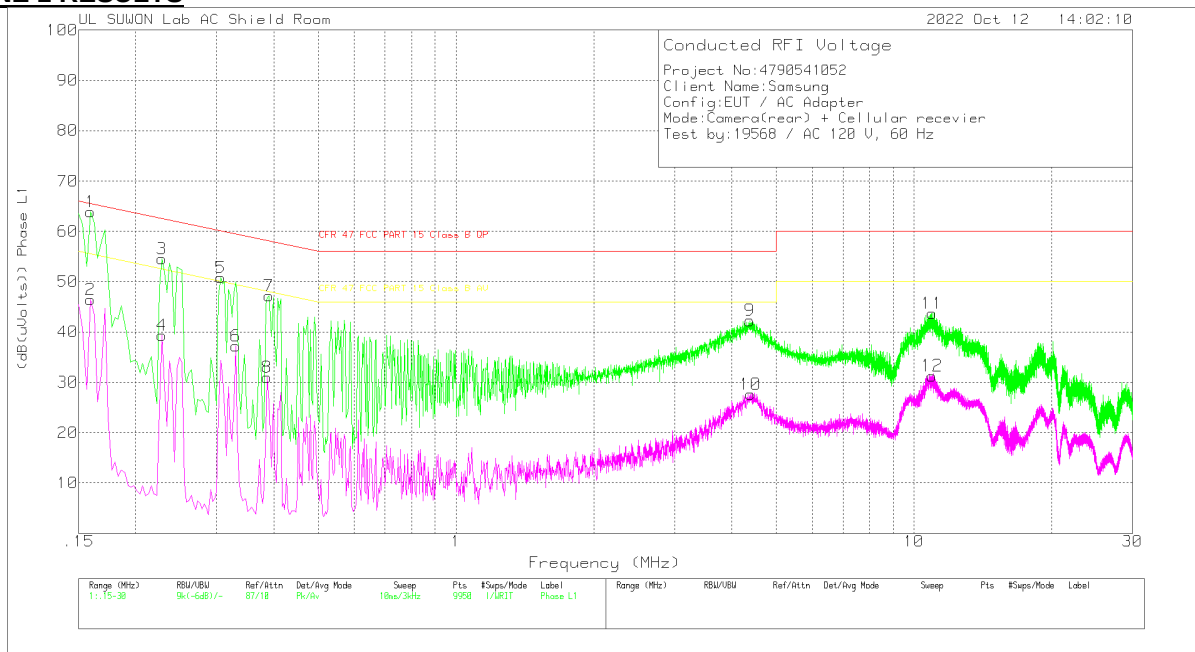
Notes:
1. The lower limit shall apply at the transition frequencies
2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz.

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]	CABLELOS S(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	.159	53.99	Pk	9.8	.1	63.89	65.52	-1.63	-	-
2	.159	36.49	Av	9.8	.1	46.39	-	-	55.52	-9.13
3	.228	44.6	Pk	9.7	.2	54.5	62.52	-8.02	-	-
4	.228	29.42	Av	9.7	.2	39.32	-	-	52.52	-13.2
5	.306	40.88	Pk	9.7	.2	50.78	60.08	-9.3	-	-
6	.33	27.26	Av	9.8	.2	37.26	-	-	49.45	-12.19
7	.39	37.18	Pk	9.8	.2	47.18	58.06	-10.88	-	-
8	.387	20.94	Av	9.8	.2	30.94	-	-	48.13	-17.19
9	4.38	32.27	Pk	9.7	.3	42.27	56	-13.73	-	-
10	4.392	17.64	Av	9.7	.3	27.64	-	-	46	-18.36
11	10.965	33.52	Pk	9.9	.3	43.72	60	-16.28	-	-
12	10.962	21.1	Av	9.9	.3	31.3	-	-	50	-18.7

Pk - Peak detector

Av - Average detection

Quasi-Peak Emissions

Range 1: Phase L1 .15 - 30MHz

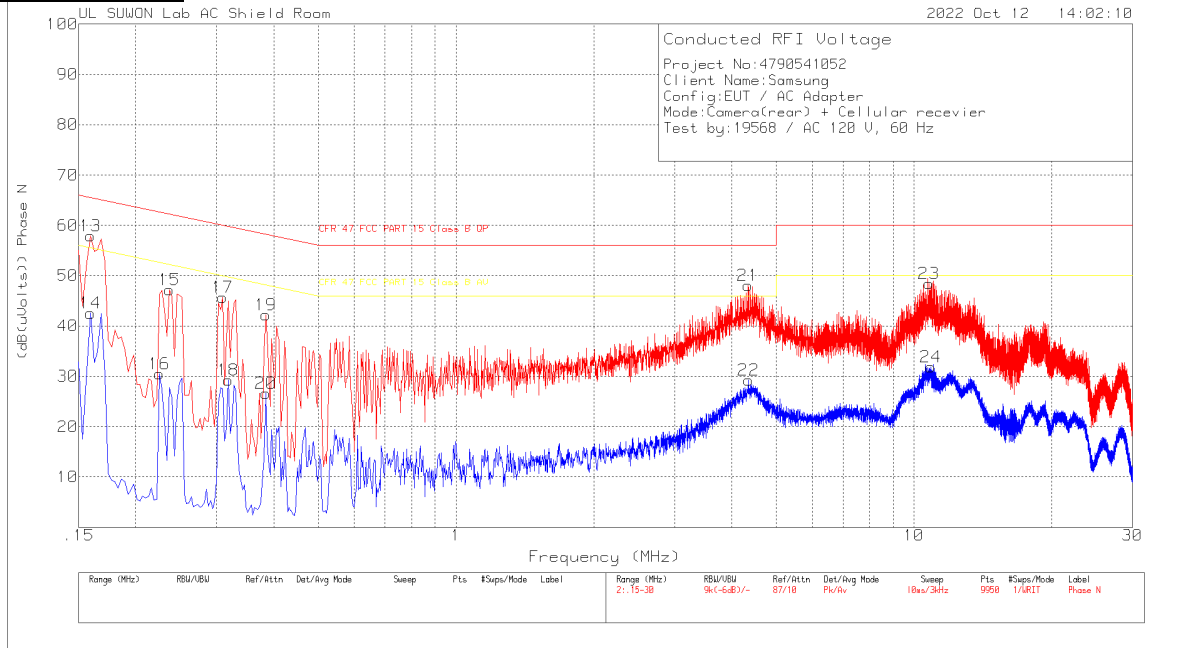
Frequency (MHz)	Meter Reading (dBuV)	Det	101836_With EX_L1[dB]	CABLELOS S(dB)	Corrected Reading (dB(uVolts))	CFR 47 FCC PART 15 Class B QP	Margin (dB)	CFR 47 FCC PART 15 Class B AV	Margin (dB)
.15825	44.6	Qp	9.8	.1	54.5	65.56	-11.06	-	-
.22875	33.49	Qp	9.7	.2	43.39	62.49	-19.1	-	-
.30525	30.56	Qp	9.7	.2	40.46	60.1	-19.64	-	-

Qp - Quasi-Peak detector

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]	CABLELOS S(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	47.98	Pk	9.8	.1	57.88	65.52	-7.64	-	-
14	.159	32.62	Av	9.8	.1	42.52	-	-	55.52	-13
15	.237	37.26	Pk	9.7	.2	47.16	62.2	-15.04	-	-
16	.225	20.62	Av	9.7	.2	30.52	-	-	52.63	-22.11
17	.309	35.83	Pk	9.7	.2	45.73	60	-14.27	-	-
18	.318	19.29	Av	9.7	.2	29.19	-	-	49.76	-20.57
19	.384	32.22	Pk	9.8	.2	42.22	58.19	-15.97	-	-
20	.384	16.65	Av	9.8	.2	26.65	-	-	48.19	-21.54
21	4.335	38.06	Pk	9.7	.3	48.06	56	-7.94	-	-
22	4.356	19.22	Av	9.7	.3	29.22	-	-	46	-16.78
23	10.794	38.28	Pk	9.9	.3	48.48	60	-11.52	-	-
24	10.896	21.63	Av	9.9	.3	31.83	-	-	50	-18.17

Pk - Peak detector

Av - Average detection

Quasi-Peak Emissions

Range 2: Phase N .15 - 30MHz

Frequency (MHz)	Meter Reading (dBuV)	Det	101836_With EX_N[dB]	CABLELOS S(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)
.15825	41.98	Qp	9.8	.1	51.88	65.56	-13.68	-	-
4.33575	28.94	Qp	9.7	.3	38.94	56	-17.06	-	-

Qp - Quasi-Peak detector

END OF TEST REPORT

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