



# CERTIFICATION TEST REPORT

**Report Number.** : 4790357232-E1V1

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

**Model** : SM-F721B

**FCC ID** : A3LSMF721B

**EUT Description** : GSM/WCDMA/LTE/5G NR Phone + BT/BLE, DTS/UNII a/b/g/n/ac/ax,  
NFC and WPT.

**Test Standard(s)** : FCC 47 CFR PART 15 SUBPART B

**Date Of Issue:**

2022-06-14

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ACCREDITED

**Testing Laboratory**

**TL-637**

Revision History

<u>Rev.</u>	<u>Issue Date</u>	<u>Revisions</u>	<u>Revised By</u>
V1	2022-06-14	Initial issue	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 and WPT  
**MODEL NUMBER:** SM-F721B  
**SERIAL NUMBER:** R3CT40DGE6E (RADIATED)  
**DATE TESTED:** 2022-05-02 ~ 2022-05-18;

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	
<input type="checkbox"/>	Chamber 1(3m semi-anechoic chamber)
<input checked="" type="checkbox"/>	Chamber 2(3m semi-anechoic chamber)
<input type="checkbox"/>	Chamber 3(3m semi-anechoic chamber)
<input type="checkbox"/>	Chamber 4(3m Full-anechoic chamber)
<input type="checkbox"/>	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:

$EIRP = \text{PSA reading with EUT worst orientation (dBm)} + \text{Path loss (dB)} - \text{cable loss (between the SG and substitution antenna)} + \text{Substitution Antenna Factor (dBi)}$

$ERP = \text{PSA reading with EUT worst orientation (dBm)} + \text{Path loss (dB)} - \text{cable loss (between the SG and substitution antenna)}$

(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 and WPT. This test report addresses the WWAN operational mode.

### 5.2. TEST MODE

Mode	Description
GSM850	Communicating with Call simulator(CMW500)
WCDMA 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

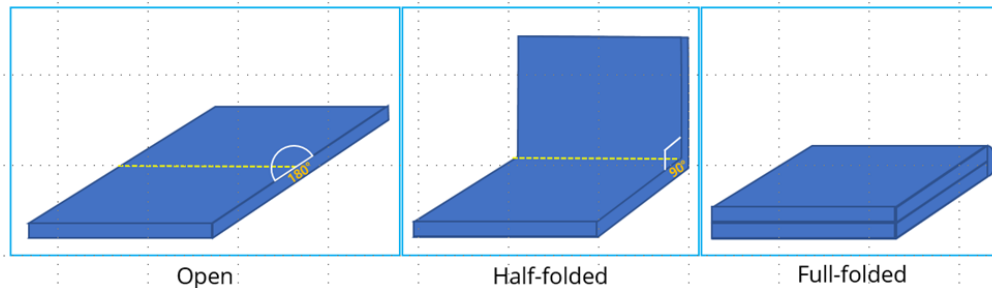
The fundamental and radiated spurious emission were investigated in three orthogonal orientations X and Y, it was determined that below orientation was worst-case orientation for each band.

i. Worst Axis Condition

Band	Worst Case		
	X	Y	Z
GSM 850	-	-	Half-folded
WCDMA B5	-	-	Open
LTE B12	-	-	Open
LTE B13	-	-	Open
LTE B26	-	-	Open

ii. Fordable Condition

The Fundamental of the EUT was investigated three foldarble conditions(Open, Half-folded, Full-folded).



**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 5**

LTE Band 5(Rx Frequency range: 869-894 MHz) is covered by LTE Band 26(Rx Frequency range: 859-894 MHz) due to overlapping frequency range, same maximum tune-up limit and same channel bandwidth.

**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.

**5G NR Band n12**

5G NR BAND n12 (Rx Frequency range: 729-746 MHz) is covered by LTE Band 12(Rx Frequency range: 729-746 MHz) due to same frequency range and maximum tune-up limit is higher than 5G NR BAND n12

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	R37R38J49R8SE3	N/A
Data Cable	SAMSUNG	EP-DN980	GH39-02111ABBE	N/A

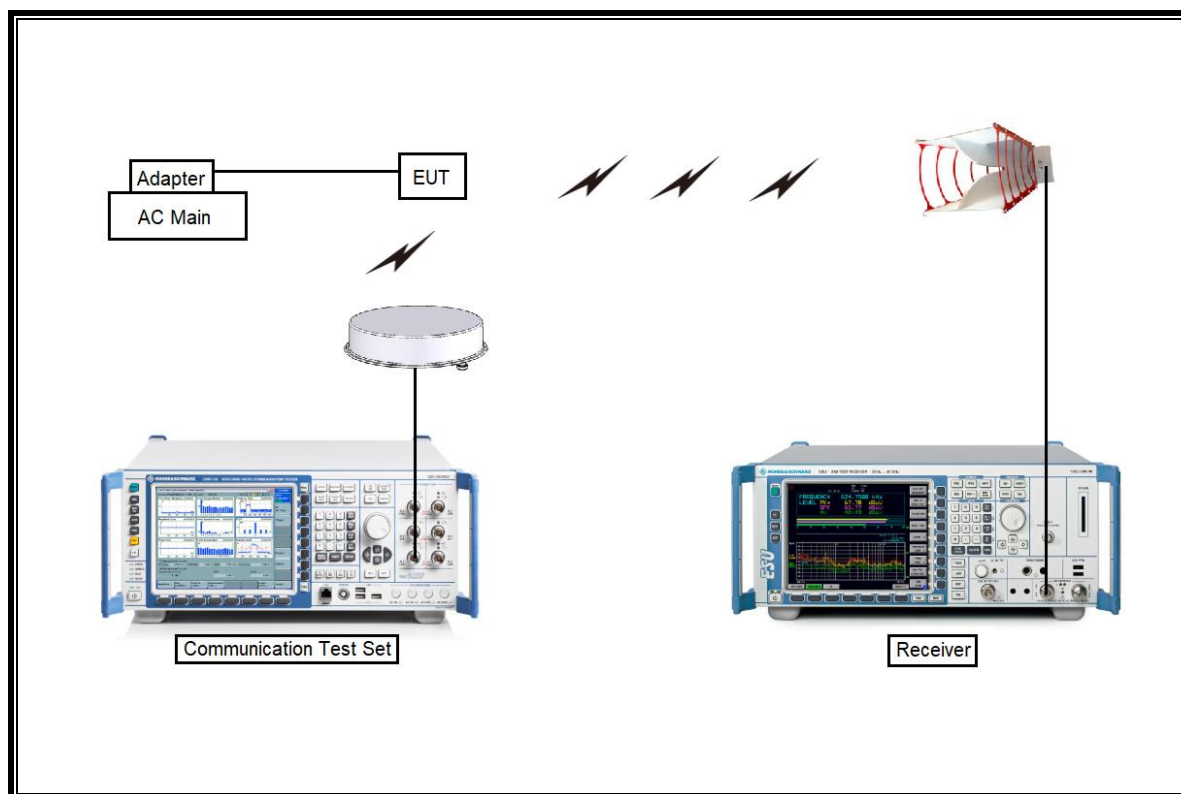
### I/O CABLE

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	2022-08-04
Antenna, Bilog, 30MHz-1GHz	SCHWARZBECK	VULB9163	750	2022-08-19
Antenna, Bilog, 30MHz-1GHz	SCHWARZBECK	VULB9163	845	2022-08-13
Antenna, Bilog, 30MHz-1GHz	SCHWARZBECK	VULB9163	749	2022-08-13
Antenna, Horn, 18 GHz	ETS	3115	00167211	2022-07-27
Antenna, Horn, 18 GHz	ETS	3115	00161451	2022-08-15
Antenna, Horn, 18 GHz	ETS	3117	00168724	2022-07-27
Antenna, Horn, 18 GHz	ETS	3117	00168717	2022-08-15
Communications Test Set	R&S	CMW500	169796	2023-01-07
Preamplifier, 1000 MHz	Sonoma	310N	341282	2022-08-02
Preamplifier, 1000 MHz	Sonoma	310N	370599	2022-08-02
Preamplifier, 1000 MHz	Sonoma	310N	351741	2022-08-02
Preamplifier, 18 GHz	Miteq	AFS42-00101800-25-S-42	1876511	2022-08-02
Preamplifier, 18 GHz	Miteq	AFS42-00101800-25-S-42	2029168	2022-08-02
Preamplifier, 18 GHz	Miteq	AFS42-00101800-25-S-42	1896138	2022-08-02
EMI Test Receive, 40 GHz	R&S	ESU40	100439	2022-08-02
EMI Test Receive, 40 GHz	R&S	ESU40	100457	2022-08-02
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	2022-08-03
High Pass Filter 1.2GHz	Micro-Tronics	HPM50108-02	G006	2022-08-02
High Pass Filter 2.8GHz	Micro-Tronics	HPM50111-02	010	2022-08-03
High Pass Filter 2.8GHz	Micro-Tronics	HPM50111-02	011	2022-08-02
High Pass Filter 4GHz	Micro-Tronics	HPM50118-02	G001	2022-08-03
High Pass Filter 4GHz	Micro-Tronics	HPM50118-02	G002	2022-08-02
Attenuator	PASTERNAK	PE7087-10	A009	2022-08-03
Attenuator	PASTERNAK	PE7087-10	A001	2022-08-03
Attenuator	PASTERNAK	PE7087-10	A008	2022-08-03
Attenuator	PASTERNAK	PE7004-10	2	2022-08-02
Attenuator	PASTERNAK	PE7395-10	A011	2022-08-03
EMI Test Receive, 3 GHz	R&S	ESR3	101832	2022-08-02
LISN	R&S	ENV-216	101836	2022-08-05
LISN	R&S	ENV-216	101837	2022-08-05
UXM 5G Wireless Test Platform	KEYSIGHT	E7515B	MY58120110	2023-01-07
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

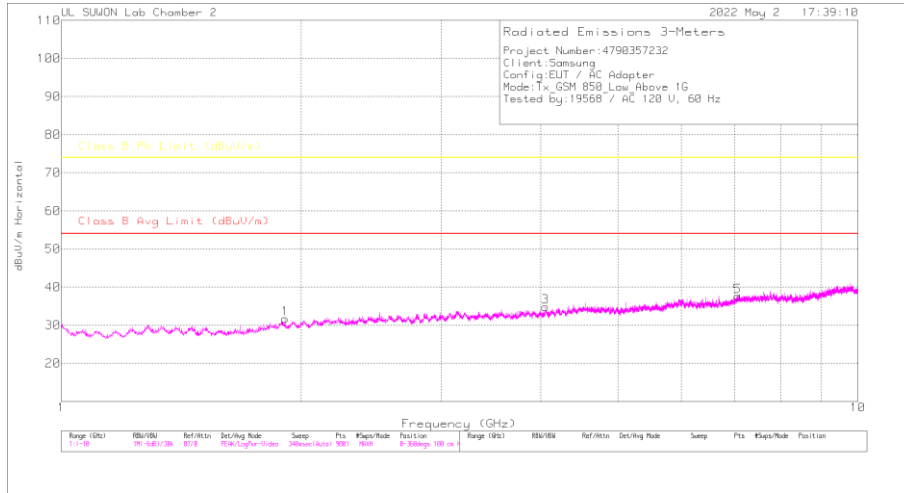
§15.109 (a) Except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

Limits for radiated disturbance of Class B ITE at measuring distance of 3 m	
Frequency range (MHz)	Quasi-peak limits (dB $\mu$ V/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.	

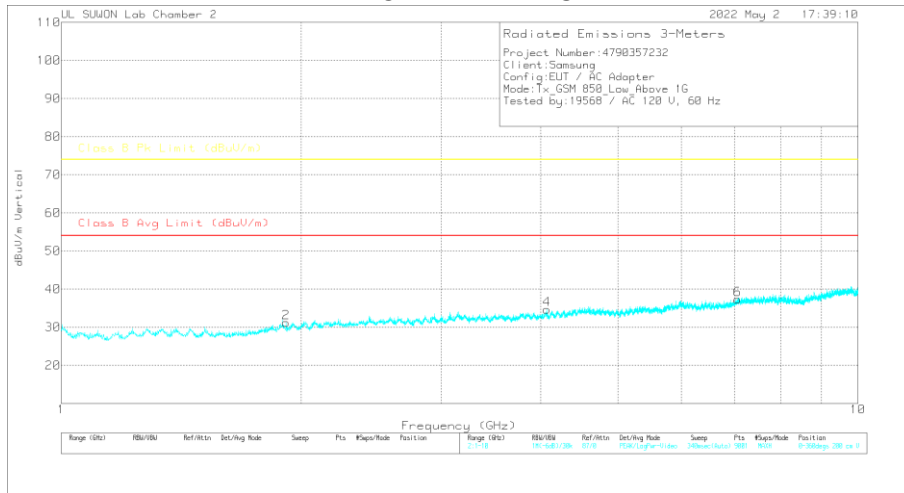
### 7.1.1. Above 1 GHz in the GSM850

#### LOW CHANNEL(869.2 MHz)

#### HORIZONTAL PEAK PLOT



#### VERTICAL PEAK PLOT



#### DATA

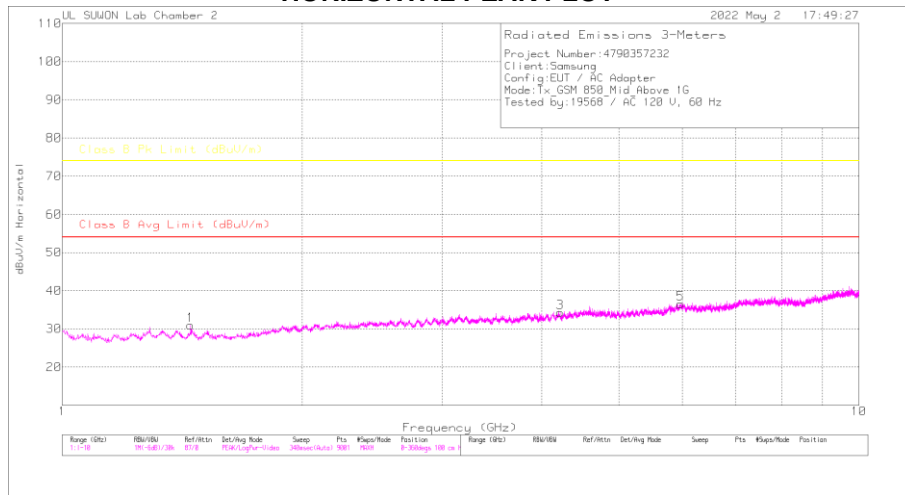
#### Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	3117_0016872_4	1-18GHz[dB]	1GHz 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
1.909	37.32	Pk	30.8	-30.7	.7	38.12	-	-	74	-35.88	0	100	H
1.909	25.04	Ca	30.8	-30.7	.7	25.84	54	-28.16	-	-	0	100	H
1.916	36.9	Pk	30.8	-30.8	.7	37.6	-	-	74	-36.4	0	100	V
1.916	24.72	Ca	30.8	-30.8	.7	25.42	54	-28.58	-	-	0	100	V
4.052	36.47	Pk	33.5	-29	.6	41.57	-	-	74	-32.43	0	100	H
4.052	24.36	Ca	33.5	-29	.6	29.46	54	-24.54	-	-	0	100	H
4.071	35.97	Pk	33.5	-28.8	.6	41.27	-	-	74	-32.73	0	100	V
4.071	24.16	Ca	33.5	-28.8	.6	29.46	54	-24.54	-	-	0	100	V
7.061	34.4	Pk	36	-25.6	.4	45.2	-	-	74	-28.8	0	100	H
7.061	22.23	Ca	36	-25.6	.4	33.03	54	-20.97	-	-	0	100	H
7.065	34.37	Pk	36	-25.5	.4	45.27	-	-	74	-28.73	0	100	V
7.065	22.21	Ca	36	-25.5	.4	33.11	54	-20.89	-	-	0	100	V

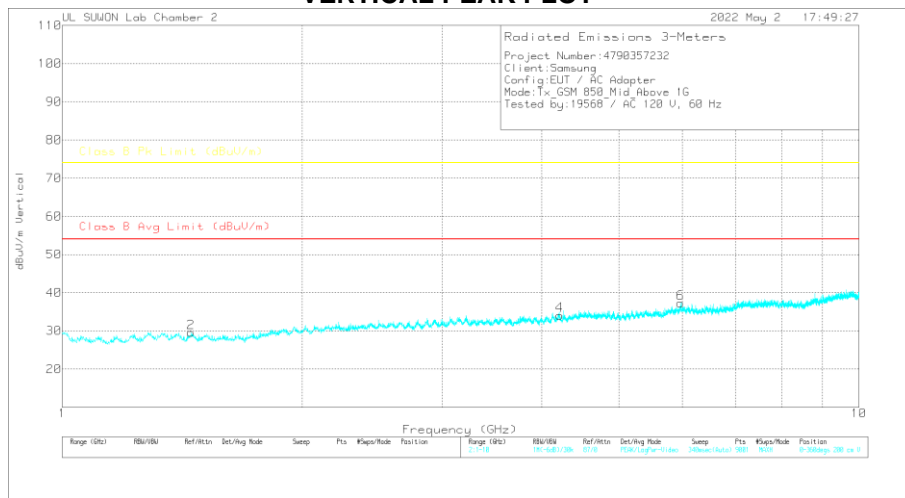
Pk - Peak detector  
 Ca - CISPR average detection

**MID CHANNEL(881.6 MHz)**

**HORIZONTAL PEAK PLOT**



**VERTICAL PEAK PLOT**



**DATA**

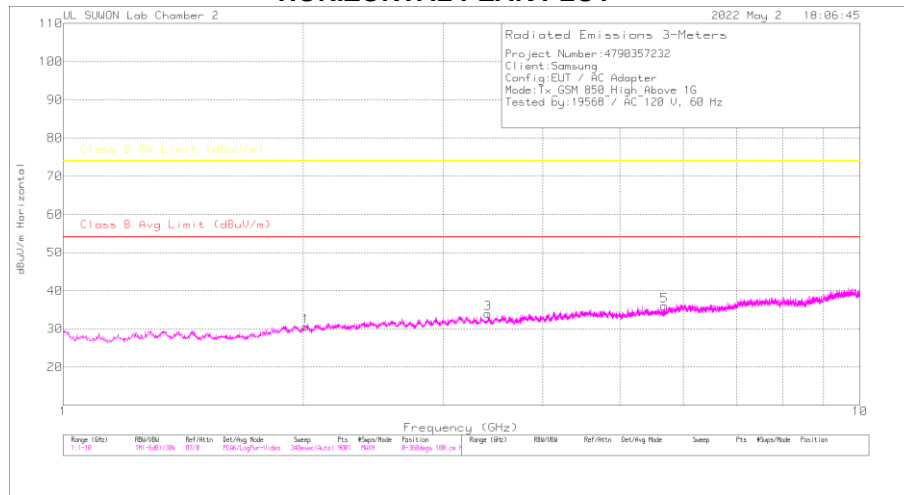
**Radiated Emissions**

Frequency (GHz)	Meter Reading (dBuV)	Det	3117_0016872 4	1-18GHz[dB]	1GHz 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
1.449	37.76	Pk	29.2	-31.4	.8	36.36	-	-	74	-37.64	0	100	H
1.449	25.92	Ca	29.2	-31.4	.8	24.52	54	-29.48	-	-	0	100	H
1.451	38.15	Pk	29.2	-31.3	.8	36.85	-	-	74	-37.15	0	100	V
1.451	26.03	Ca	29.2	-31.3	.8	24.73	54	-29.27	-	-	0	100	V
4.216	36.04	Pk	33.4	-28.4	.4	41.44	-	-	74	-32.56	0	100	H
4.216	24.08	Ca	33.4	-28.4	.4	29.48	54	-24.52	-	-	0	100	H
4.214	36.43	Pk	33.4	-28.4	.4	41.83	-	-	74	-32.17	0	100	V
4.214	24.16	Ca	33.4	-28.4	.4	29.56	54	-24.44	-	-	0	100	V
5.967	36	Pk	35.1	-27.4	.6	44.3	-	-	74	-29.7	0	100	H
5.967	23.98	Ca	35.1	-27.4	.6	32.28	54	-21.72	-	-	0	100	H
5.971	35.84	Pk	35.1	-27.5	.6	44.04	-	-	74	-29.96	0	100	V
5.971	23.94	Ca	35.1	-27.5	.6	32.14	54	-21.86	-	-	0	100	V

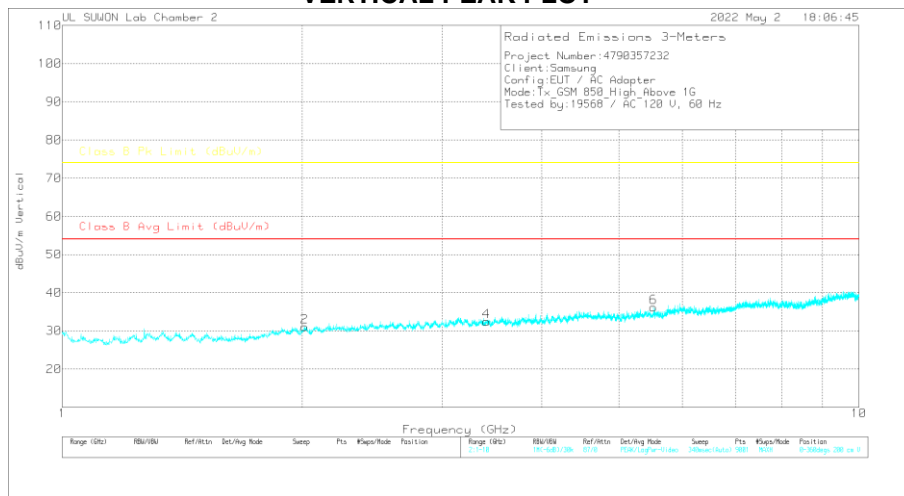
Pk - Peak detector  
 Ca - CISPR average detection

**HIGH CHANNEL(893.8 MHz)**

**HORIZONTAL PEAK PLOT**



**VERTICAL PEAK PLOT**



**DATA**

**Radiated Emissions**

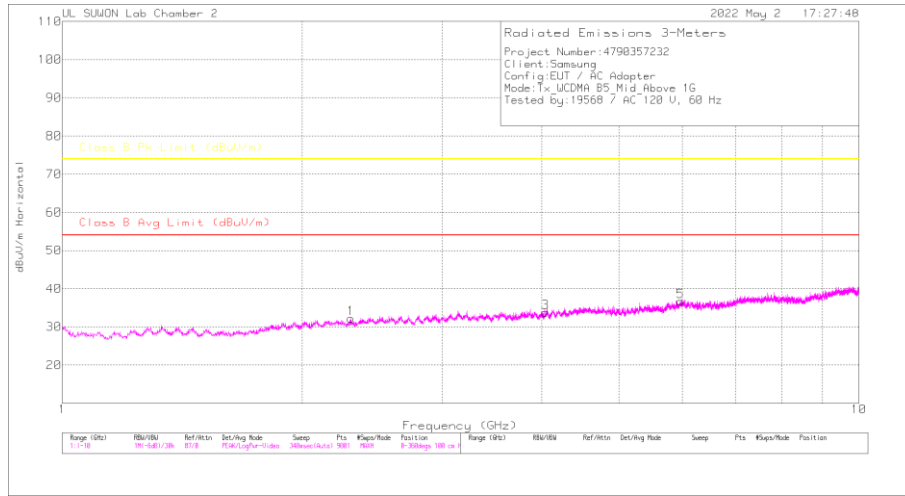
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_0016872 4	1-18GHz[dB]	1GHz HPF[dB]	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Av(CISPR)Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2.018	37.16	Pk	31.3	-30.7	.5	38.26	-	-	74	-35.74	0	100	H
2.018	25.24	Ca	31.3	-30.7	.5	26.34	54	-27.66	-	-	0	100	H
2.014	37.31	Pk	31.3	-30.7	.5	38.41	-	-	74	-35.59	0	100	V
2.014	25.2	Ca	31.3	-30.7	.5	26.3	54	-27.7	-	-	0	100	V
3.413	35.93	Pk	32.7	-29.1	.6	40.13	-	-	74	-33.87	0	100	H
3.413	23.99	Ca	32.7	-29.1	.6	28.19	54	-25.81	-	-	0	100	H
3.409	35.95	Pk	32.7	-29.2	.6	40.05	-	-	74	-33.95	0	100	V
3.409	23.94	Ca	32.7	-29.2	.6	28.04	54	-25.96	-	-	0	100	V
5.683	35.52	Pk	34.6	-27.9	.4	42.62	-	-	74	-31.38	0	100	H
5.683	23.91	Ca	34.6	-27.9	.4	31.01	54	-22.99	-	-	0	100	H
5.524	35.97	Pk	34.5	-27.8	.5	43.17	-	-	74	-30.83	0	100	V
5.524	23.88	Ca	34.5	-27.8	.5	31.08	54	-22.92	-	-	0	100	V

Pk - Peak detector  
 Ca - CISPR average detection

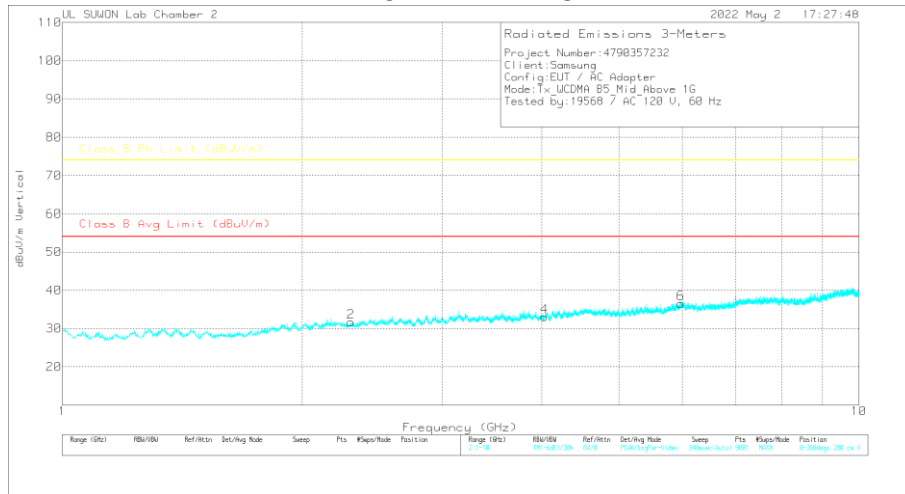
### 7.1.2. Above 1 GHz in the WCDMA Band 5

#### MID CHANNEL(881.6 MHz)

#### HORIZONTAL PEAK PLOT



#### VERTICAL PEAK PLOT



#### DATA

#### Radiated Emissions

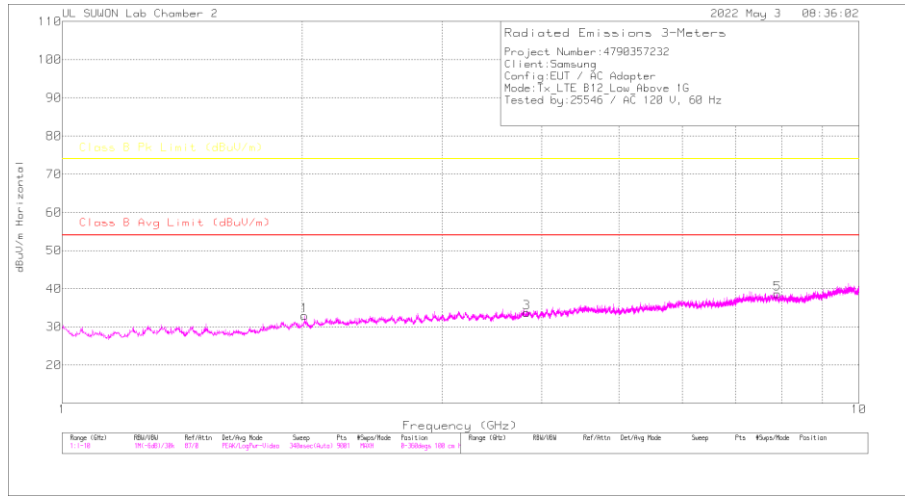
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_0016872_4	1-18GHz[dB]	1GHz HPF[dB]	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Av(CISPR)Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2.305	37.11	Pk	31.7	-30.6	.6	38.81	-	-	74	-35.19	0	100	H
2.305	25.1	Ca	31.7	-30.6	.6	26.8	54	-27.2	-	-	0	100	H
2.303	37.41	Pk	31.7	-30.6	.6	39.11	-	-	74	-34.89	0	100	V
2.303	25.08	Ca	31.7	-30.6	.6	26.78	54	-27.22	-	-	0	100	V
4.042	35.78	Pk	33.5	-29	.5	40.78	-	-	74	-33.22	0	100	H
4.042	23.99	Ca	33.5	-29	.5	28.99	54	-25.01	-	-	0	100	H
4.029	37.27	Pk	33.5	-29.1	.5	42.17	-	-	74	-31.83	0	100	V
4.029	23.79	Ca	33.5	-29.1	.5	28.69	54	-25.31	-	-	0	100	V
5.967	36.08	Pk	35.1	-27.4	.6	44.38	-	-	74	-29.62	0	100	H
5.967	24.05	Ca	35.1	-27.4	.6	32.35	54	-21.65	-	-	0	100	H
5.979	37.07	Pk	35.1	-27.5	.6	45.27	-	-	74	-28.73	0	100	V
5.979	24.08	Ca	35.1	-27.5	.6	32.28	54	-21.72	-	-	0	100	V

Pk - Peak detector  
 Ca - CISPR average detection

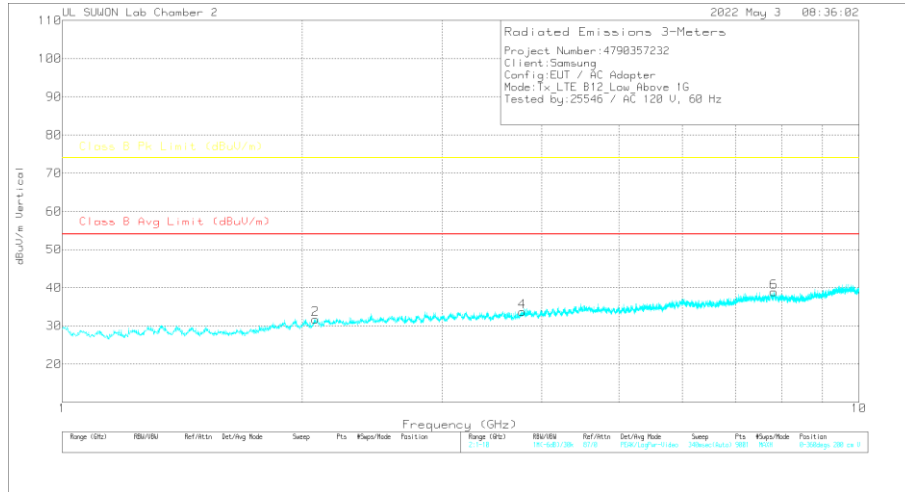
### 7.1.3. Above 1 GHz in the LTE Band 12

#### LOW CHANNEL(730.5 MHz)

#### HORIZONTAL PEAK PLOT



#### VERTICAL PEAK PLOT



#### DATA

#### Radiated Emissions

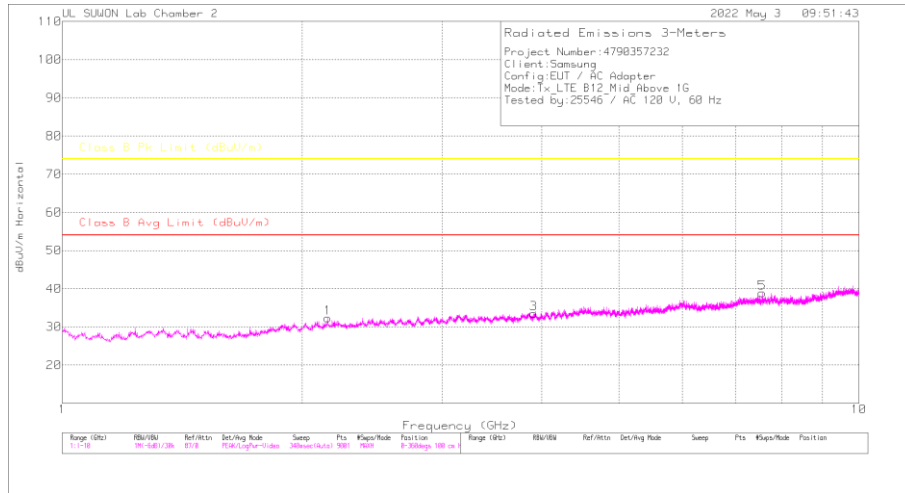
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_0016872_4	1-18GHz[dB]	1GHz HPF[dB]	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Av(CISPR)Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2.015	38.08	Pk	31.3	-30.7	.5	39.18	-	-	74	-34.82	0	100	H
2.015	25.34	Ca	31.3	-30.7	.5	26.44	54	-27.56	-	-	0	100	H
2.078	37.67	Pk	31.5	-30.6	.6	39.17	-	-	74	-34.83	0	100	V
2.078	25.04	Ca	31.5	-30.6	.6	26.54	54	-27.46	-	-	0	100	V
3.827	36.39	Pk	33.4	-29.1	.6	41.29	-	-	74	-32.71	0	100	H
3.827	24.06	Ca	33.4	-29.1	.6	28.96	54	-25.04	-	-	0	100	H
3.782	36.27	Pk	33.3	-29.2	.5	40.87	-	-	74	-33.13	0	100	V
3.782	24.67	Ca	33.3	-29.2	.5	29.27	54	-24.73	-	-	0	100	V
7.898	34.03	Pk	36	-24.7	.5	45.83	-	-	74	-28.17	0	100	H
7.898	22.41	Ca	36	-24.7	.5	34.21	54	-19.79	-	-	0	100	H
7.822	33.66	Pk	36	-24.4	.5	45.76	-	-	74	-28.24	0	100	V
7.822	22	Ca	36	-24.4	.5	34.1	54	-19.9	-	-	0	100	V

Pk - Peak detector  
 Ca - CISPR average detection

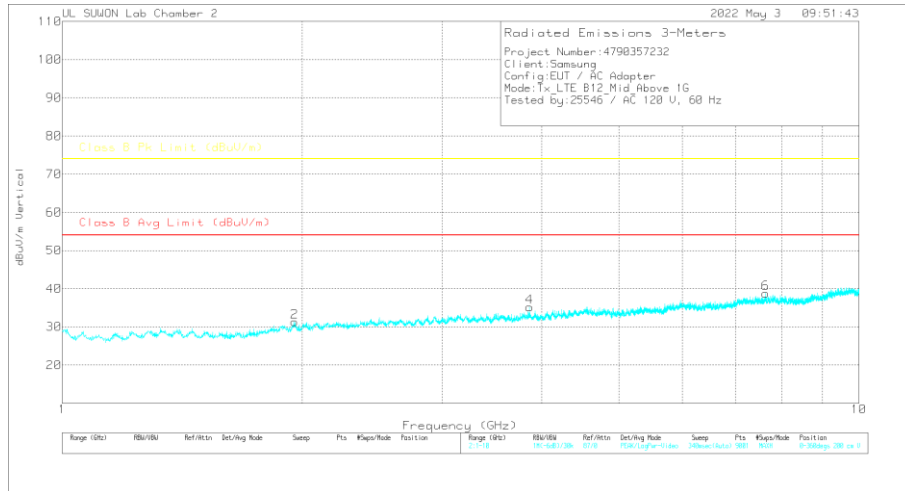


**MID CHANNEL(737.5 MHz)**

**HORIZONTAL PEAK PLOT**



**VERTICAL PEAK PLOT**



**DATA**

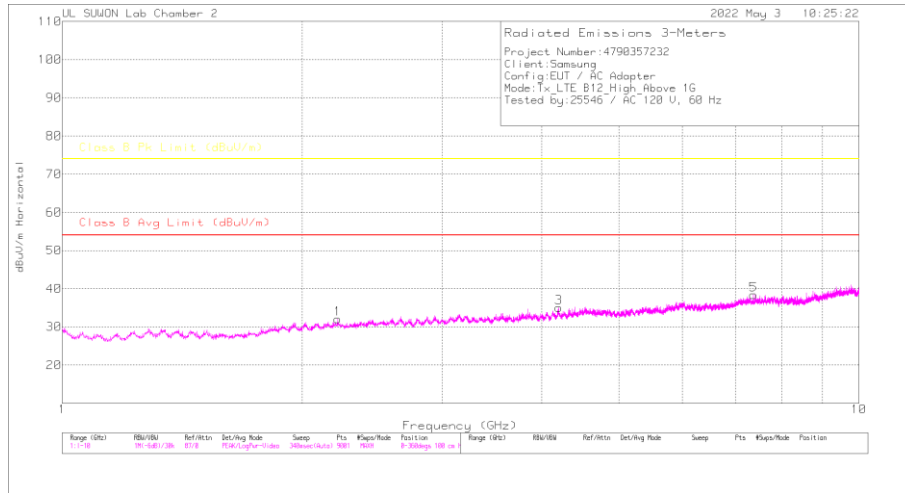
**Radiated Emissions**

Frequency (GHz)	Meter Reading (dBuV)	Det	3117_0016872 4	1-18GHz[dB]	1GHz 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
2.153	36.23	Pk	31.7	-30.5	.7	38.13	-	-	74	-35.87	0	100	H
2.153	24.63	Ca	31.7	-30.5	.7	26.53	54	-27.47	-	-	0	100	H
1.958	37.2	Pk	31	-30.8	.6	38	-	-	74	-36	0	100	V
1.958	25.25	Ca	31	-30.8	.6	26.05	54	-27.95	-	-	0	100	V
3.905	36.33	Pk	33.4	-29.5	.6	40.83	-	-	74	-33.17	0	100	H
3.905	23.96	Ca	33.4	-29.5	.6	28.46	54	-25.54	-	-	0	100	H
3.861	36.56	Pk	33.4	-29.2	.6	41.36	-	-	74	-32.64	0	100	V
3.861	24.35	Ca	33.4	-29.2	.6	29.15	54	-24.85	-	-	0	100	V
7.559	34.39	Pk	36	-25.2	.4	45.59	-	-	74	-28.41	0	100	H
7.559	22.27	Ca	36	-25.2	.4	33.47	54	-20.53	-	-	0	100	H
7.64	34.13	Pk	35.9	-25	.4	45.43	-	-	74	-28.57	0	100	V
7.64	21.99	Ca	35.9	-25	.4	33.29	54	-20.71	-	-	0	100	V

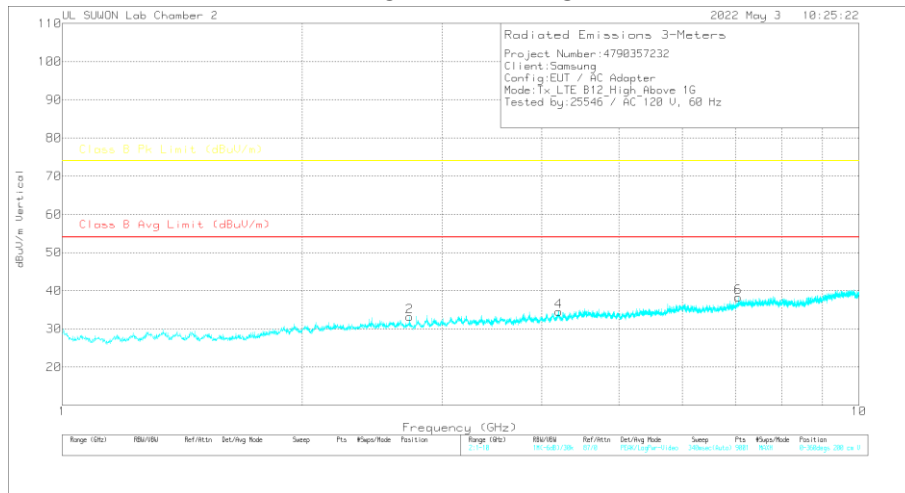
Pk - Peak detector  
 Ca - CISPR average detection

**HIGH CHANNEL(744.5 MHz)**

**HORIZONTAL PEAK PLOT**



**VERTICAL PEAK PLOT**



**DATA**

**Radiated Emissions**

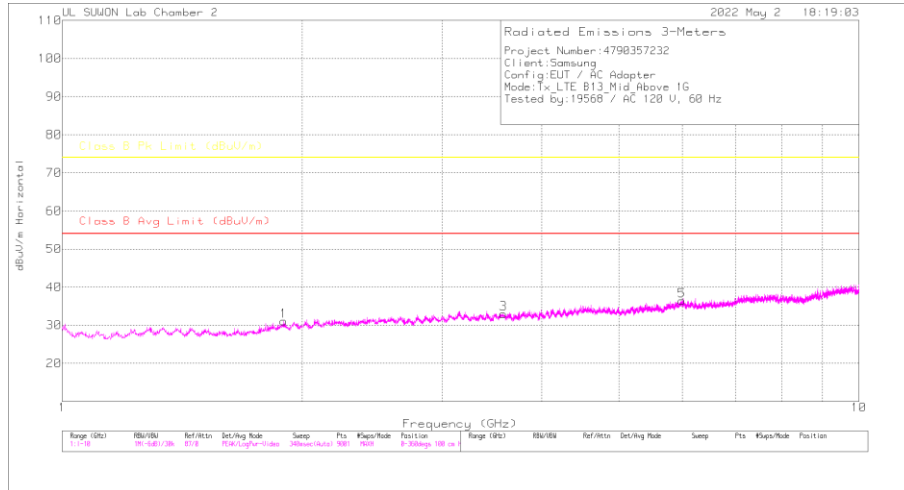
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_0016872_4	1-18GHz[dB]	1GHz HPF[dB]	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Av(CISPR)Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2.217	36.56	Pk	31.7	-30.5	.7	38.46	-	-	74	-35.54	0	100	H
2.217	24.59	Ca	31.7	-30.5	.7	26.49	54	-27.51	-	-	0	100	H
2.728	35.95	Pk	32.2	-30.2	.6	38.55	-	-	74	-35.45	0	100	V
2.728	24.42	Ca	32.2	-30.2	.6	27.02	54	-26.98	-	-	0	100	V
4.201	37.01	Pk	33.4	-28.3	.4	42.51	-	-	74	-31.49	0	100	H
4.201	24.4	Ca	33.4	-28.3	.4	29.9	54	-24.1	-	-	0	100	H
4.2	37.16	Pk	33.4	-28.3	.4	42.66	-	-	74	-31.34	0	100	V
4.2	24.36	Ca	33.4	-28.3	.4	29.86	54	-24.14	-	-	0	100	V
7.375	34.1	Pk	36.1	-25.5	.4	45.1	-	-	74	-28.9	0	100	H
7.375	22.47	Ca	36.1	-25.5	.4	33.47	54	-20.53	-	-	0	100	H
7.053	34.44	Pk	36	-25.6	.4	45.24	-	-	74	-28.76	0	100	V
7.053	22.18	Ca	36	-25.6	.4	32.98	54	-21.02	-	-	0	100	V

Pk - Peak detector  
 Ca - CISPR average detection

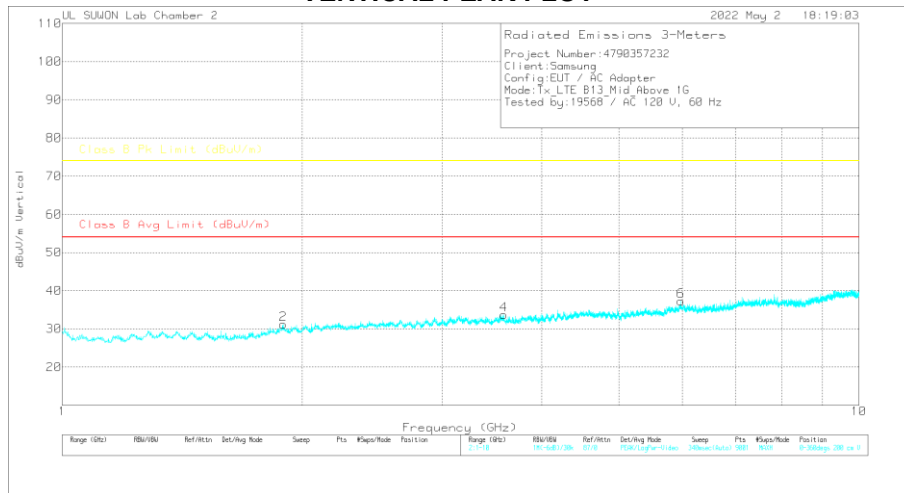
### 7.1.4. Above 1 GHz in the LTE Band 13

#### MID CHANNEL(751.0 MHz)

#### HORIZONTAL PEAK PLOT



#### VERTICAL PEAK PLOT



#### DATA

#### Radiated Emissions

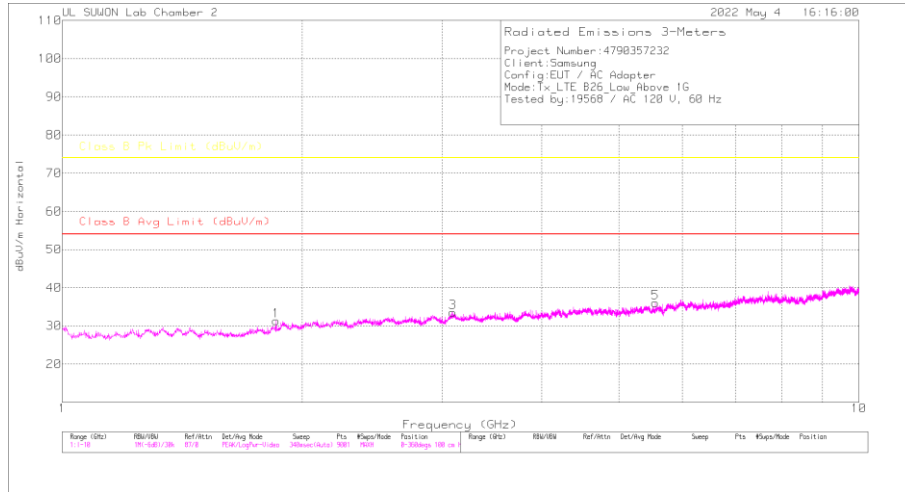
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_0016872_4	1-18GHz[dB]	1GHz HPF[dB]	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Av(CISPR)Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.896	37.64	Pk	30.7	-30.8	.7	38.24	-	-	74	-35.76	0	100	H
1.896	25.26	Ca	30.7	-30.8	.7	25.86	54	-28.14	-	-	0	100	H
1.893	37.24	Pk	30.7	-30.8	.7	37.84	-	-	74	-36.16	0	100	V
1.893	25.35	Ca	30.7	-30.8	.7	25.95	54	-28.05	-	-	0	100	V
3.579	35.94	Pk	32.8	-29.2	.6	40.14	-	-	74	-33.86	0	100	H
3.579	24.08	Ca	32.8	-29.2	.6	28.28	54	-25.72	-	-	0	100	H
3.585	36.91	Pk	32.8	-29.3	.6	41.01	-	-	74	-32.99	0	100	V
3.585	24.06	Ca	32.8	-29.3	.6	28.16	54	-25.84	-	-	0	100	V
5.992	35.6	Pk	35.1	-27.5	.5	43.7	-	-	74	-30.3	0	100	H
5.992	23.62	Ca	35.1	-27.5	.5	31.72	54	-22.28	-	-	0	100	H
5.981	35.36	Pk	35.1	-27.5	.6	43.56	-	-	74	-30.44	0	100	V
5.981	23.77	Ca	35.1	-27.5	.6	31.97	54	-22.03	-	-	0	100	V

Pk - Peak detector  
 Ca - CISPR average detection

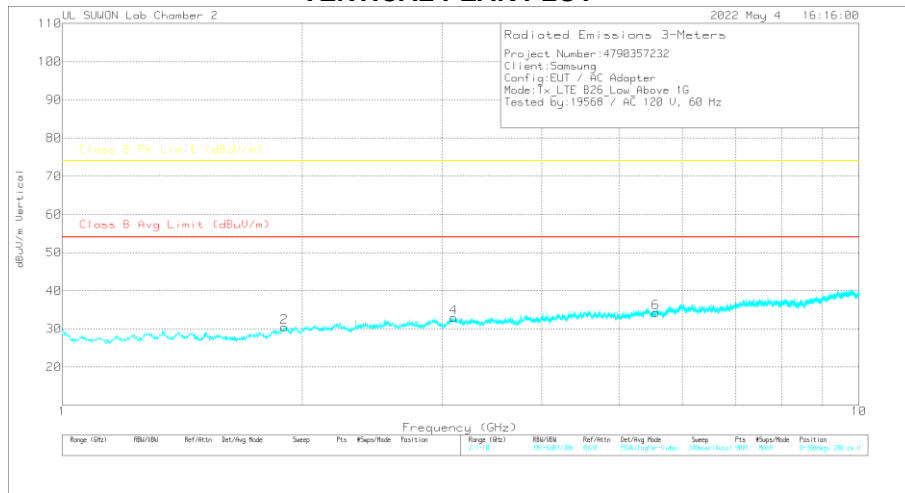
### 7.1.5. Above 1 GHz in the LTE Band 26

#### LOW CHANNEL(860.5 MHz)

#### HORIZONTAL PEAK PLOT



#### VERTICAL PEAK PLOT



#### DATA

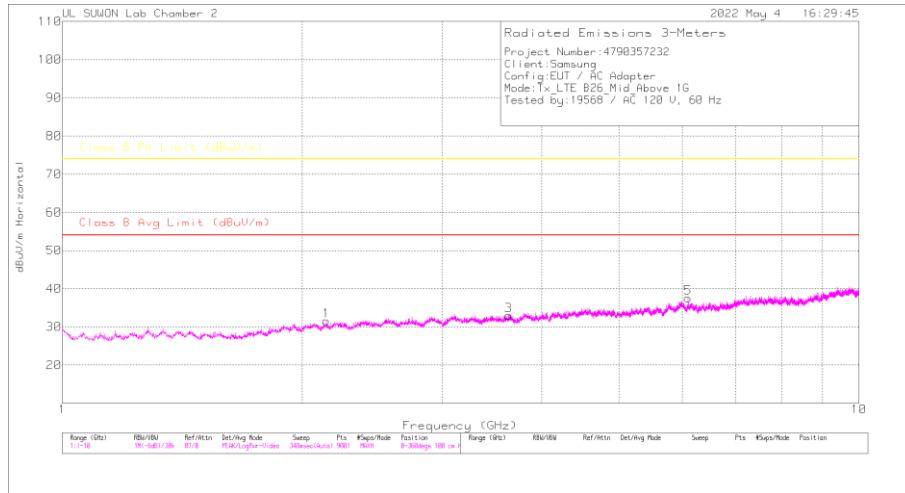
#### Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	3117_0016872_4	1-18GHz[dB]	1GHz HPFF[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
1.856	36.73	Pk	30.4	-30.8	.6	36.93	-	-	74	-37.07	0	100	H
1.856	24.6	Ca	30.4	-30.8	.6	24.8	-	-29.2	-	-	0	100	H
1.9	37.49	Pk	30.8	-30.8	.7	38.19	-	-	74	-35.81	0	100	V
1.9	25.26	Ca	30.8	-30.8	.7	25.96	-	-28.04	-	-	0	100	V
3.093	37.26	Pk	32.9	-29.8	.6	40.96	-	-	74	-33.04	0	100	H
3.093	24.45	Ca	32.9	-29.8	.6	28.15	-	-25.85	-	-	0	100	H
3.099	36.81	Pk	32.9	-29.7	.6	40.61	-	-	74	-33.39	0	100	V
3.099	24.4	Ca	32.9	-29.7	.6	28.2	-	-25.8	-	-	0	100	V
5.554	35.05	Pk	34.6	-27.8	.5	42.35	-	-	74	-31.65	0	100	H
5.554	23.18	Ca	34.6	-27.8	.5	30.48	-	-23.52	-	-	0	100	H
5.559	34.91	Pk	34.6	-27.8	.5	42.21	-	-	74	-31.79	0	100	V
5.559	23.21	Ca	34.6	-27.8	.5	30.51	-	-23.49	-	-	0	100	V

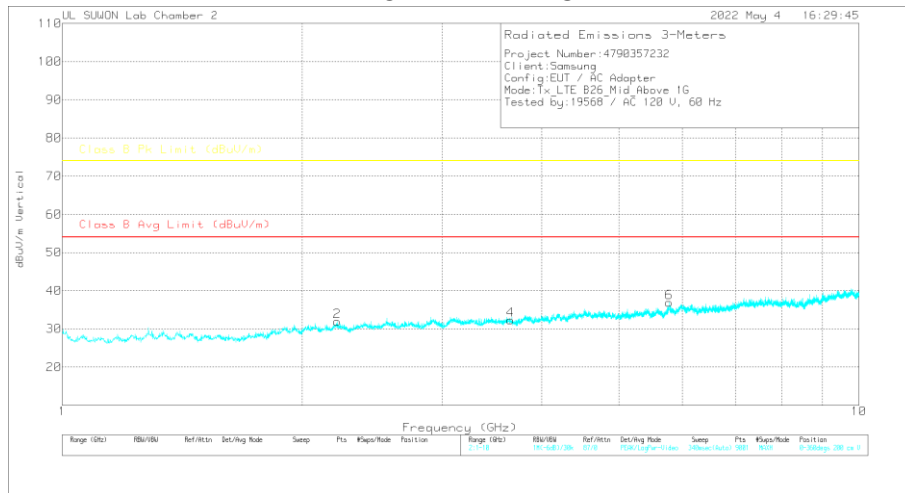
Pk - Peak detector  
 Ca - CISPR average detection

**MID CHANNEL(876.5 MHz)**

**HORIZONTAL PEAK PLOT**



**VERTICAL PEAK PLOT**



**DATA**

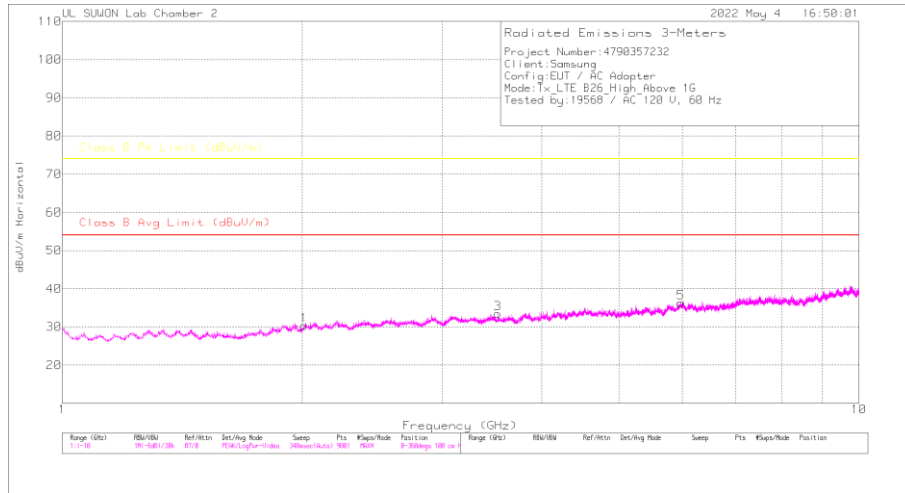
**Radiated Emissions**

Frequency (GHz)	Meter Reading (dBuV)	Det	3117_0016872_4	1-18GHz[dB]	1GHz 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
2.146	36.03	Pk	31.7	-30.4	.7	38.03	-	-	74	-35.97	0	100	H
2.146	24.13	Ca	31.7	-30.4	.7	26.13	54	-27.87	-	-	0	100	H
2.215	38.15	Pk	31.7	-30.4	.7	40.15	-	-	74	-33.85	0	100	V
2.215	24.71	Ca	31.7	-30.4	.7	26.71	54	-27.29	-	-	0	100	V
3.632	36.37	Pk	32.8	-29.5	.7	40.37	-	-	74	-33.63	0	100	H
3.632	24.29	Ca	32.8	-29.5	.7	28.29	54	-25.71	-	-	0	100	H
3.653	36.4	Pk	32.9	-29.6	.6	40.3	-	-	74	-33.7	0	100	V
3.653	24.49	Ca	32.9	-29.6	.6	28.39	54	-25.61	-	-	0	100	V
6.106	35.71	Pk	35.3	-27	.4	44.41	-	-	74	-29.59	0	100	H
6.106	23.44	Ca	35.3	-27	.4	32.14	54	-21.86	-	-	0	100	H
5.775	35.97	Pk	34.8	-27.2	.5	44.07	-	-	74	-29.93	0	100	V
5.775	23.5	Ca	34.8	-27.2	.5	31.6	54	-22.4	-	-	0	100	V

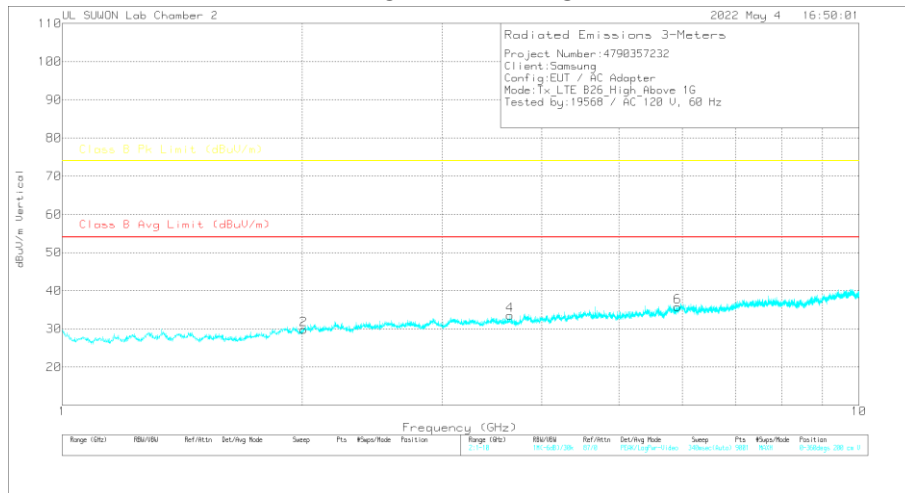
Pk - Peak detector  
 Ca - CISPR average detection

**HIGH CHANNEL(892.5 MHz)**

**HORIZONTAL PEAK PLOT**



**VERTICAL PEAK PLOT**



**DATA**

**Radiated Emissions**

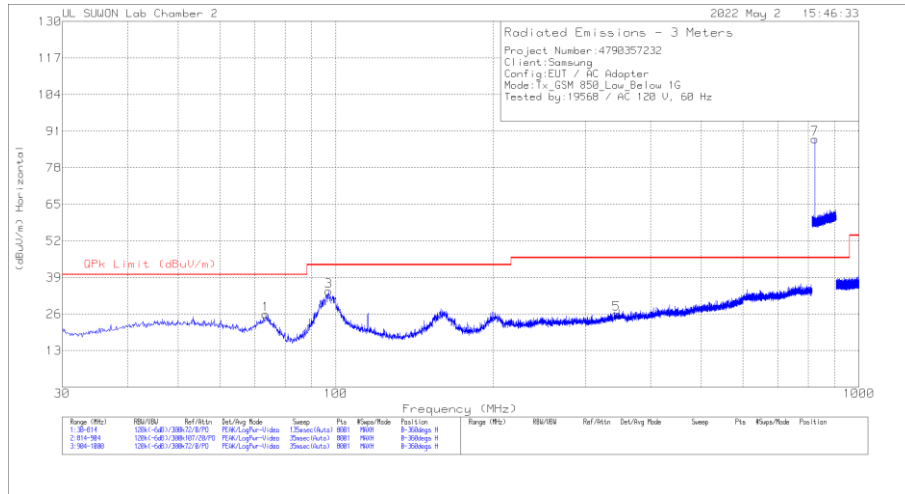
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_0016872_4	1-18GHz[dB]	1GHz HPF[dB]	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Av(CISPR)Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2.013	36.85	Pk	31.3	-30.7	.5	37.95	-	-	74	-36.05	0	100	H
2.013	24.59	Ca	31.3	-30.7	.5	25.69	54	-28.31	-	-	0	100	H
2.01	36.45	Pk	31.3	-30.7	.5	37.55	-	-	74	-36.45	0	100	V
2.01	24.41	Ca	31.3	-30.7	.5	25.51	54	-28.49	-	-	0	100	V
3.521	35.79	Pk	32.8	-29	.5	40.09	-	-	74	-33.91	0	100	H
3.521	23.23	Ca	32.8	-29	.5	27.53	54	-26.47	-	-	0	100	H
3.648	36.84	Pk	32.9	-29.6	.6	40.74	-	-	74	-33.26	0	100	V
3.648	24.47	Ca	32.9	-29.6	.6	28.37	54	-25.63	-	-	0	100	V
5.976	36.3	Pk	35.1	-27.5	.6	44.5	-	-	74	-29.5	0	100	H
5.976	23.87	Ca	35.1	-27.5	.6	32.07	54	-21.93	-	-	0	100	H
5.922	35.7	Pk	35	-27.3	.5	43.9	-	-	74	-30.1	0	100	V
5.922	23.2	Ca	35	-27.3	.5	31.4	54	-22.6	-	-	0	100	V

Pk - Peak detector  
 Ca - CISPR average detection

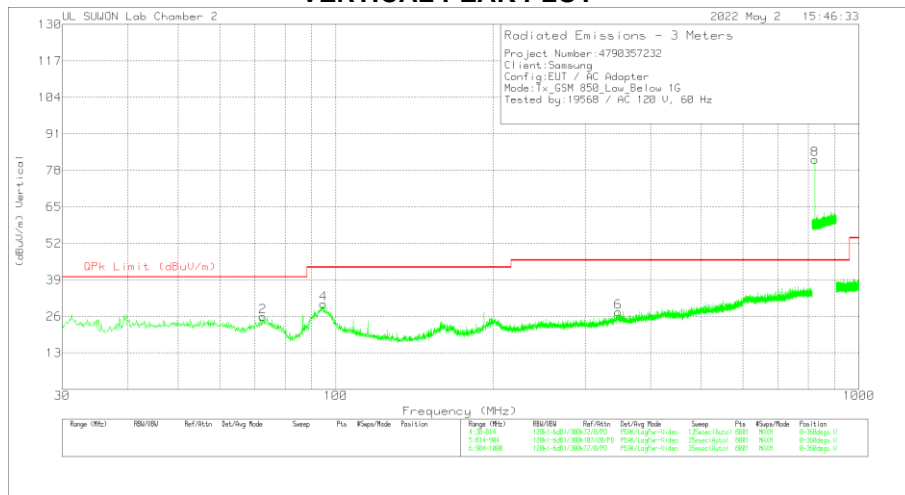
### 7.1.6. Below 1 GHz in the GSM850

#### LOW CHANNEL(869.2 MHz)

#### HORIZONTAL PEAK PLOT



#### VERTICAL PEAK PLOT



#### DATA

##### Trace Markers

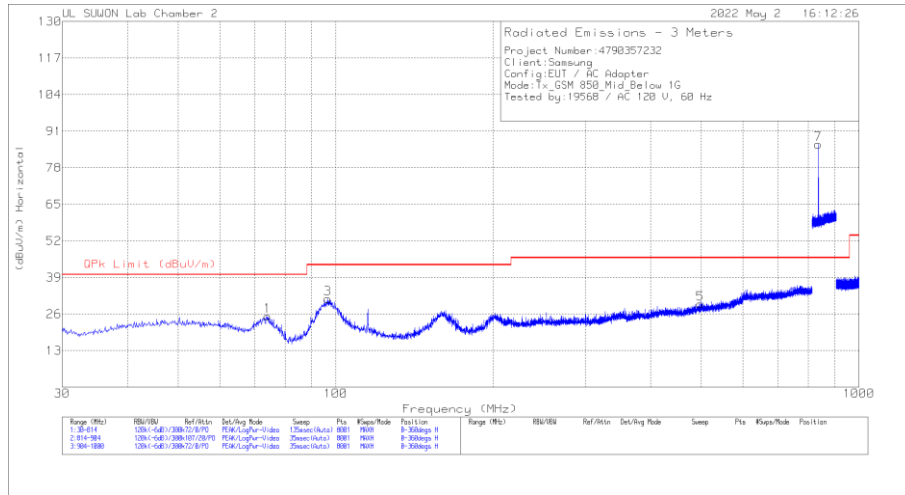
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Below 1G_Bypass[dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	73.512	11.07	Pk	13.8	1	25.87	40	-14.13	0-360	200	H
3	96.934	16.01	Pk	17	1.1	34.11	43.52	-9.41	0-360	200	H
5	343.796	3.35	Pk	20.6	2.1	26.05	46.02	-19.97	0-360	100	H
7	824.2263	58.27	Pk	26.7	3.3	88.27	46.02	42.25	0-360	200	H
2	72.532	10.76	Pk	14.2	1	25.96	40	-14.04	0-360	200	V
4	94.68	12.89	Pk	16.5	1.1	30.49	43.52	-13.03	0-360	200	V
6	347.226	4.74	Pk	20.8	2.1	27.64	46.02	-18.38	0-360	400	V
8	824.2375	51.89	Pk	26.7	3.3	81.89	46.02	35.87	0-360	100	V

Pk - Peak detector

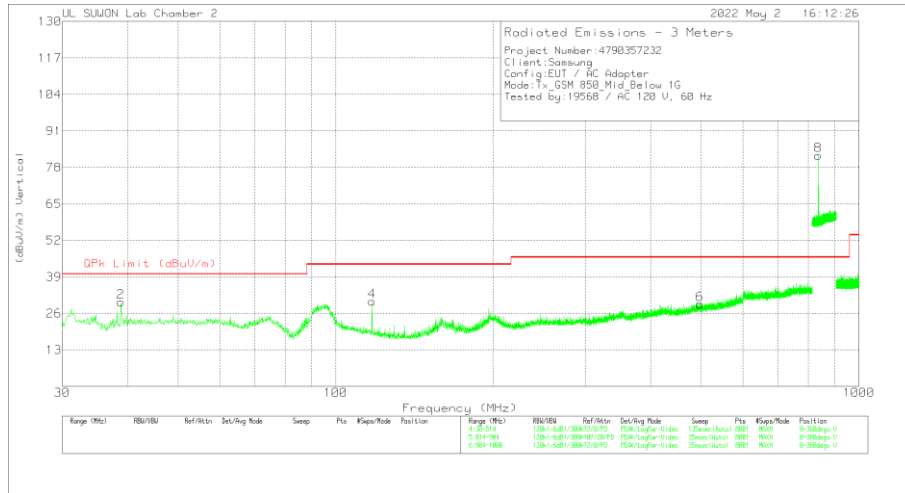
Note: Unwanted emissions captured from 824MHz to 849MHz and from 869MHz to 894MHz were the TX and RX signals generated from the call-simulator.

**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	74.1	10.71	Pk	13.6	1	25.31	40	-14.69	0-360	200	H
3	96.444	13.4	Pk	16.9	1.1	31.4	43.52	-12.12	0-360	200	H
5	497.068	4.04	Pk	23	2.5	29.54	46.02	-16.48	0-360	100	H
7	836.68	56.17	Pk	26.9	3.3	86.37	46.02	40.35	0-360	200	H
2	38.82	11.27	Pk	18.2	.7	30.17	40	-9.83	0-360	200	V
4	117.318	13.27	Pk	15.8	1.2	30.27	43.52	-13.25	0-360	200	V
6	496.284	3.79	Pk	23	2.5	29.29	46.02	-16.73	0-360	400	V
8	836.6688	52.09	Pk	26.9	3.3	82.29	46.02	36.27	0-360	100	V

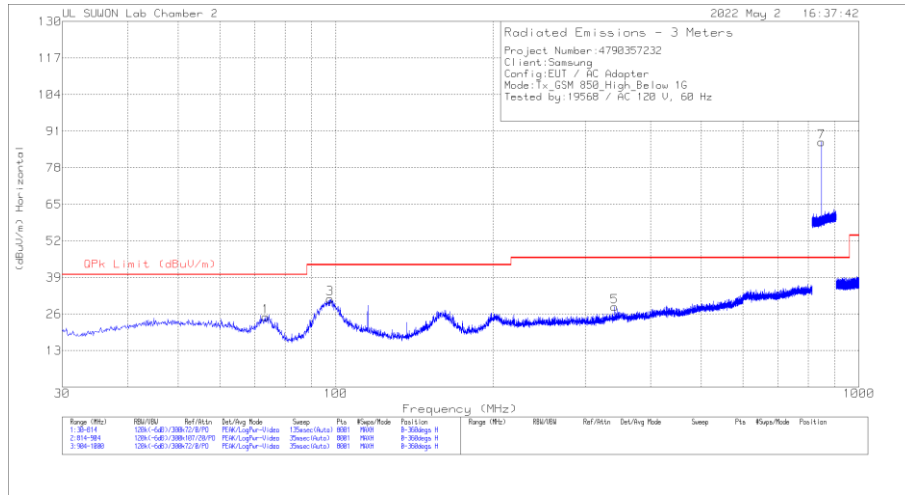
Pk - Peak detector

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

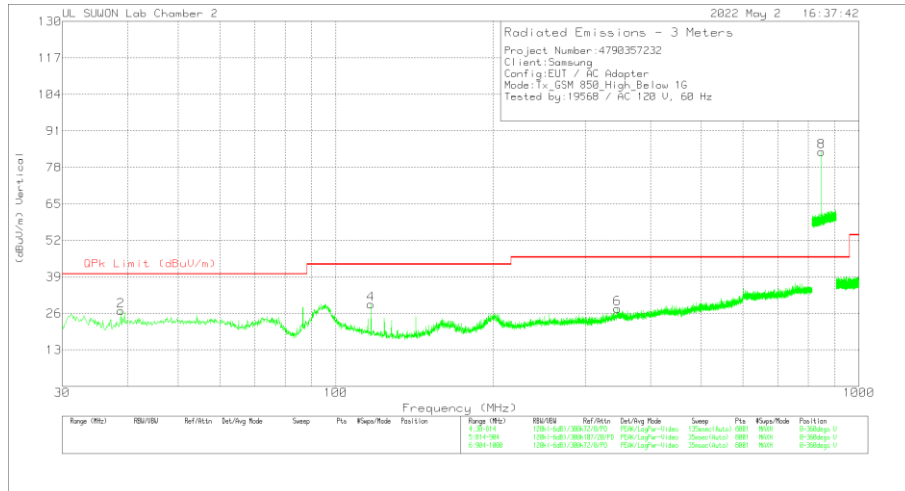


**HIGH CHANNEL(893.8 MHz)**

**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	73.414	10.28	Pk	13.8	1	25.08	40	-14.92	0-360	200	H
3	97.62	13.19	Pk	17.1	1.1	31.39	43.52	-12.13	0-360	200	H
5	341.248	6.02	Pk	20.5	2.1	28.62	46.02	-17.4	0-360	100	H
7	848.785	56.52	Pk	27.3	3.3	87.12	46.02	41.1	0-360	200	H
2	38.82	7.97	Pk	18.2	.7	26.87	40	-13.13	0-360	200	V
4	116.73	12.25	Pk	15.9	1.2	29.35	43.52	-14.17	0-360	200	V
6	345.854	4.9	Pk	20.8	2.1	27.8	46.02	-18.22	0-360	400	V
8	848.8075	53.04	PK	27.3	3.3	83.64	46.02	37.62	0-360	100	V

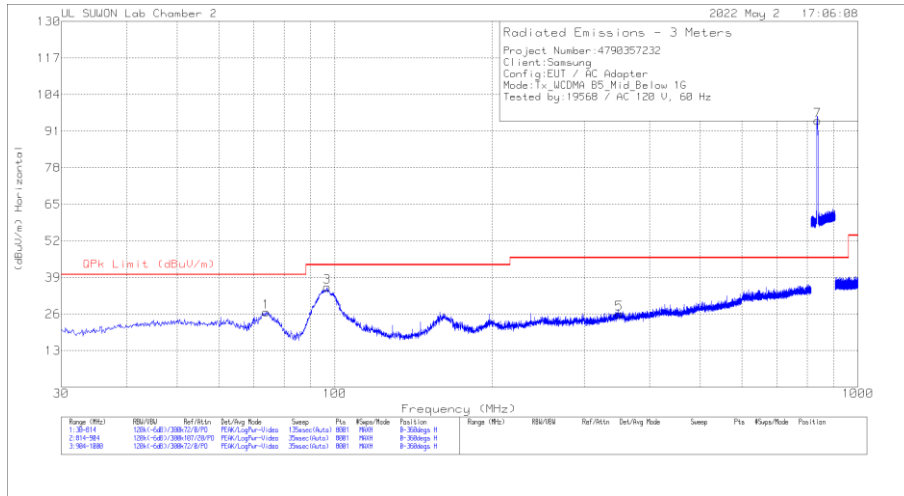
Pk - Peak detector

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

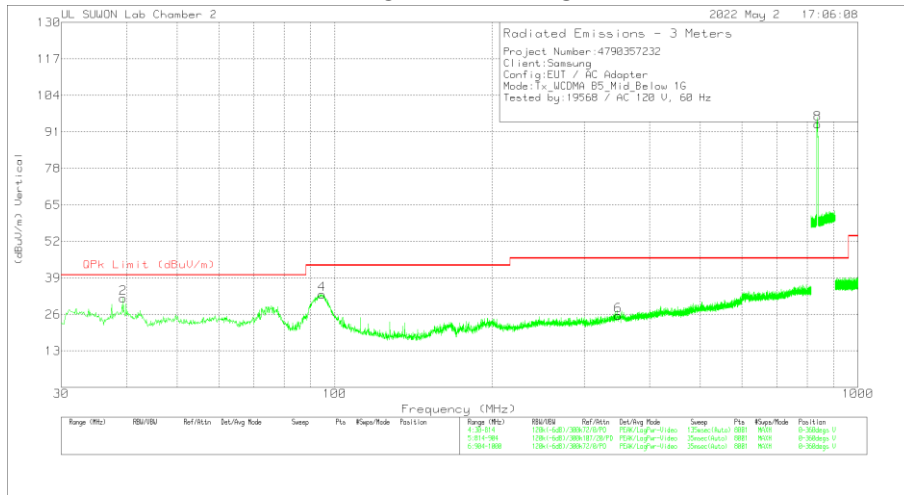
### 7.1.7. Below 1 GHz in the WCDMA Band 5

#### 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	74.002	12.16	Pk	13.6	1	26.76	40	-13.24	0-360	200	H
3	96.64	17.61	Pk	16.9	1.1	35.61	43.52	-7.91	0-360	200	H
5	349.578	3.05	Pk	21	2.1	26.15	46.02	-19.87	0-360	100	H
7	836.815	64.51	Pk	26.9	3.3	94.71	46.02	48.69	0-360	200	H
2	39.408	12.65	Pk	18.4	.7	31.75	40	-8.25	0-360	200	V
4	94.484	15.65	Pk	16.4	1.1	33.15	43.52	-10.37	0-360	200	V
6	348.304	2.59	Pk	20.9	2.1	25.59	46.02	-20.43	0-360	400	V
8	836.8713	63.64	Pk	26.9	3.3	93.84	46.02	47.82	0-360	100	V

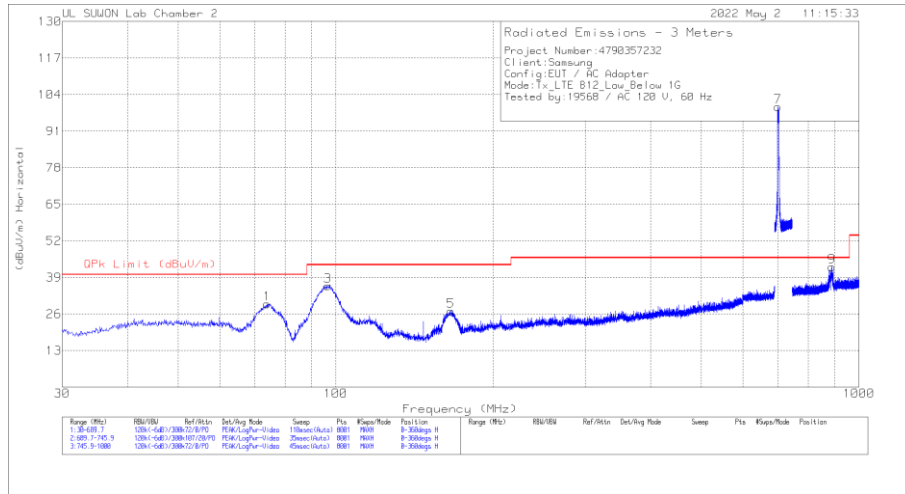
Pk - Peak detector

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

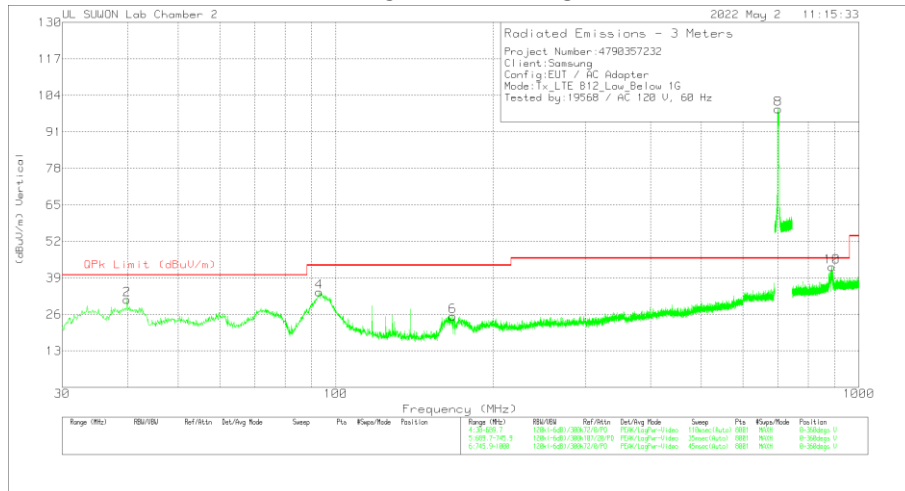
### 7.1.8. Below 1 GHz in the LTE Band 12

#### 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	73.8703	14.86	Pk	13.7	1	29.56	40	-10.44	0-360	100	H
3	96.5476	18.07	Pk	16.9	1.1	36.07	43.52	-7.45	0-360	200	H
5	165.9815	11.21	Pk	14.4	1.5	27.11	43.52	-16.41	0-360	100	H
7	700.2445	71.22	Pk	25.4	3	99.62	46.02	53.6	0-360	200	H
9	888.103	11.65	Pk	27.8	3.4	42.85	46.02	-3.17	0-360	200	H
2	39.8956	12.01	Pk	18.6	.7	31.31	40	-8.69	0-360	300	V
4	93.0017	16.67	Pk	16.2	1.1	33.97	43.52	-9.55	0-360	200	V
6	167.3834	9.45	Pk	14.5	1.5	25.45	43.52	-18.07	0-360	200	V
8	700.94	70.81	Pk	25.4	3	99.21	46.02	53.19	0-360	100	V
10	887.9759	11.73	Pk	27.8	3.4	42.93	46.02	-3.09	0-360	300	V

Pk - Peak detector

### Radiated Emissions

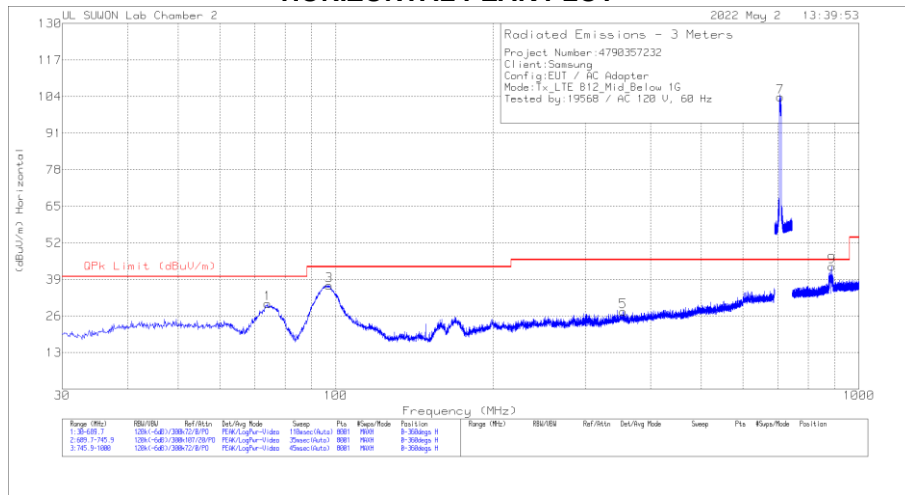
Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_74 9	Below 1G_Bypass[dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
888.103	5.74	Qp	27.8	3.4	36.94	46.02	-9.08	0	203	H
887.9759	9.75	Qp	27.8	3.4	40.95	46.02	-5.07	10	282	V

Qp - Quasi-Peak detector

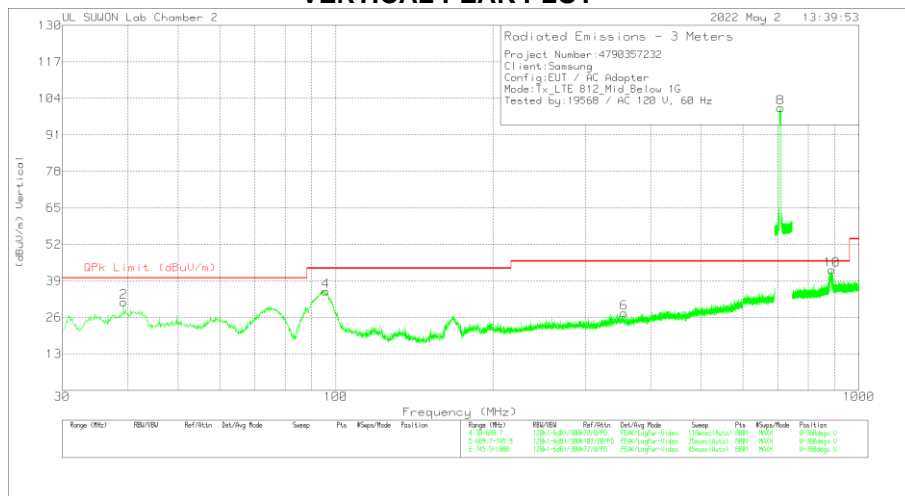
Note: Unwanted emissions captured from 699MHz to 716MHz and from 729MHz to 746MHz were the TX and RX signals generated from the call-simulator.

**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	74.1177	15.79	Pk	13.6	1	30.39	40	-9.61	0-360	200	H
3	97.2073	18.85	Pk	17	1.1	36.95	43.52	-6.57	0-360	200	H
5	354.4919	4.57	Pk	21	2.1	27.67	46.02	-18.35	0-360	100	H
7	707.8175	75.27	Pk	25.6	3	103.87	46.02	57.85	0-360	200	H
9	887.9759	12.4	Pk	27.8	3.4	43.6	46.02	-2.42	0-360	300	H
2	39.3183	12.37	Pk	18.4	.7	31.47	40	-8.53	0-360	200	V
4	95.8055	17.61	Pk	16.7	1.1	35.41	43.52	-8.11	0-360	200	V
6	355.6464	4.46	Pk	20.9	2.2	27.56	46.02	-18.46	0-360	200	V
8	708.2952	72.03	Pk	25.6	3	100.63	46.02	54.61	0-360	100	V
10	887.9759	11.76	Pk	27.8	3.4	42.96	46.02	-3.06	0-360	400	V

Pk - Peak detector

Radiated Emissions

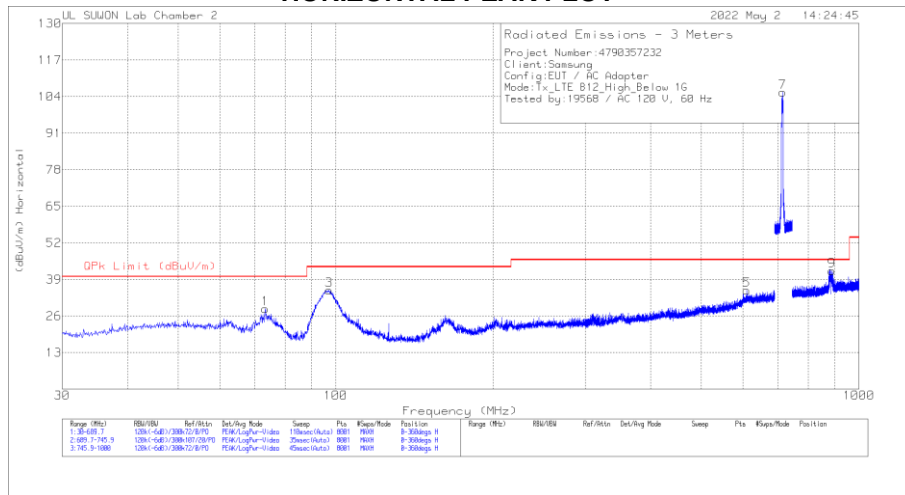
Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_74 9	Below 1G_Bypass[dB ]	Corrected Reading (dBuV/m)	QPK Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
97.2073	14.96	Qp	17	1.1	33.06	43.52	-10.46	325	300	H
887.9759	9.49	Qp	27.8	3.4	40.69	46.02	-5.33	355	109	H
887.9759	8.68	Qp	27.8	3.4	39.88	46.02	-6.14	357	289	V

Qp - Quasi-Peak detector

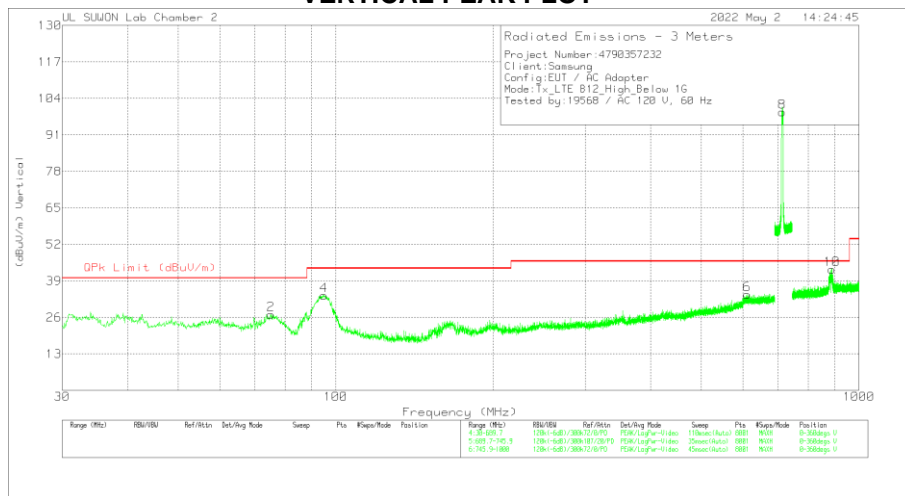
Note: Unwanted emissions captured from 699MHz to 716MHz and from 729MHz to 746MHz were the TX and RX signals generated from the call-simulator.

**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	73.3755	13.77	Pk	13.8	1	28.57	40	-11.43	0-360	400	H
3	97.2073	17.16	Pk	17	1.1	35.26	43.52	-8.26	0-360	400	H
5	609.9623	7.01	Pk	25.3	2.8	35.11	46.02	-10.91	0-360	200	H
7	714.428	76.93	Pk	25.6	3	105.53	46.02	59.51	0-360	100	H
9	887.8806	10.98	Pk	27.8	3.4	42.18	46.02	-3.84	0-360	200	H
2	75.1073	12.94	Pk	13.2	1	27.14	40	-12.86	0-360	100	V
4	94.9808	16.18	Pk	16.5	1.1	33.78	43.52	-9.74	0-360	100	V
6	611.1992	6.03	Pk	25.3	2.8	34.13	46.02	-11.89	0-360	300	V
8	713.7044	70.54	Pk	25.6	3	99.14	46.02	53.12	0-360	200	V
10	888.0712	11.87	Pk	27.8	3.4	43.07	46.02	-2.95	0-360	100	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
887.8806	3.88	Qp	27.8	3.4	35.08	46.02	-10.94	276	298	H
888.0712	6.83	Qp	27.8	3.4	38.03	46.02	-7.99	233	126	V

Qp - Quasi-Peak detector

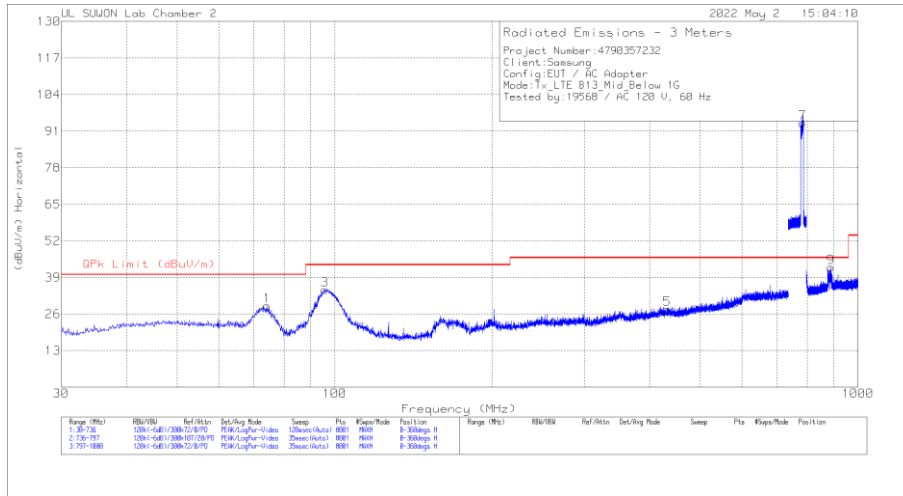
Note: Unwanted emissions captured from 699MHz to 716MHz and from 729MHz to 746MHz were the TX and RX signals generated from the call-simulator.



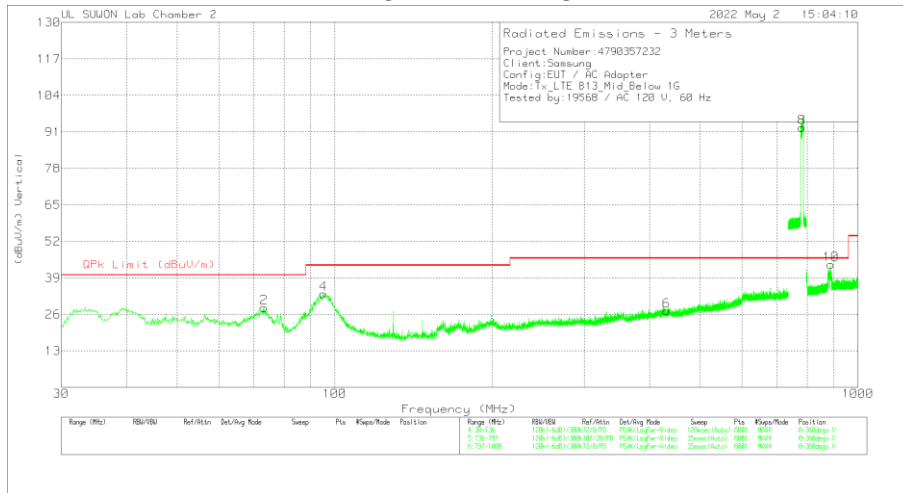
**7.1.9. Below 1 GHz in the LTE Band 13**

**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	74.2133	14.42	Pk	13.5	1	28.92	40	-11.08	0-360	300	H
3	95.7463	16.84	Pk	16.7	1.1	34.64	43.52	-8.88	0-360	100	H
5	431.5375	3.22	PK	22.1	2.4	27.72	46.02	-18.3	0-360	200	H
7	783.6791	64.29	Pk	26.5	3.2	93.99	46.02	47.97	0-360	300	H
9	888.0201	11.4	Pk	27.8	3.4	42.6	46.02	-3.42	0-360	300	H
2	73.2425	13.57	Pk	13.9	1	28.47	40	-11.53	0-360	300	V
4	95.1285	15.8	PK	16.5	1.1	33.4	43.52	-10.12	0-360	200	V
6	430.4785	2.72	PK	22.1	2.4	27.22	46.02	-18.8	0-360	400	V
8	782.1084	62.81	Pk	26.5	3.2	92.51	46.02	46.49	0-360	100	V
10	888.0201	12.62	Pk	27.8	3.4	43.82	46.02	-2.2	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
888.0201	8.45	Qp	27.8	3.4	39.65	46.02	-6.37	120	263	H
888.0201	9.64	Qp	27.8	3.4	40.84	46.02	-5.18	195	220	V

Qp - Quasi-Peak detector

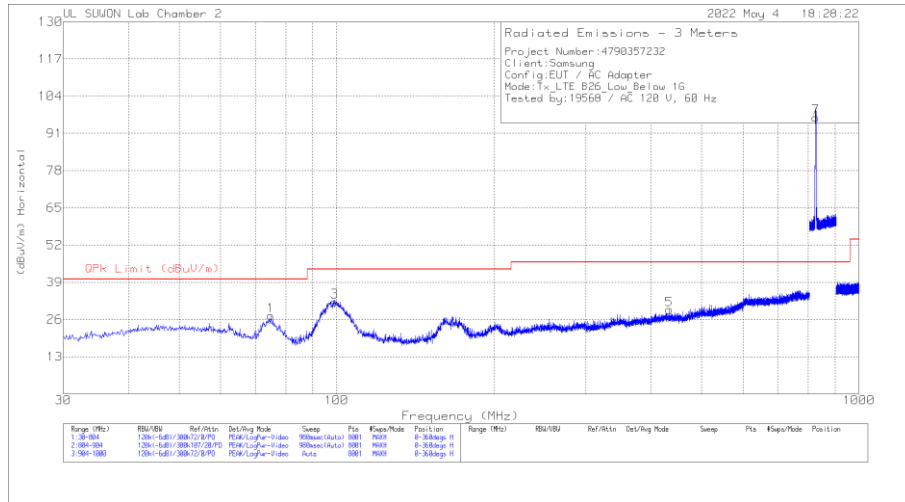
Pk - Peak detector

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

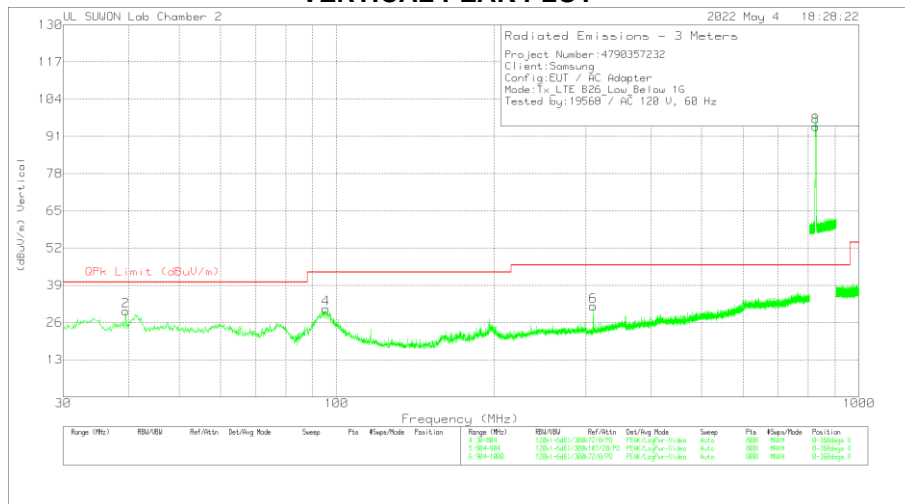
### 7.1.10. Below 1 GHz in the LTE Band 26

#### LOW CHANNEL(860.5 MHz)

#### HORIZONTAL PEAK PLOT



#### VERTICAL PEAK PLOT



#### DATA

##### Trace Markers

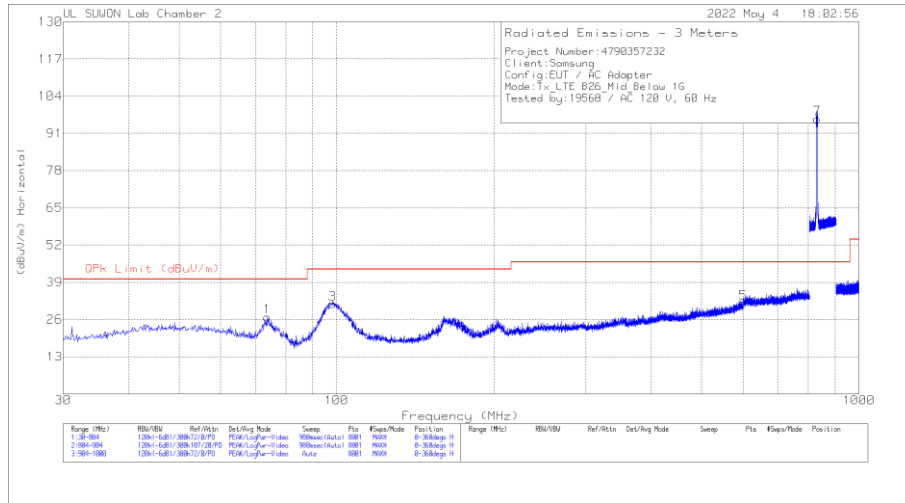
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Below 1G_Bypass[dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	74.892	13.08	Pk	13.2	1	27.28	40	-12.72	0-360	200	H
3	99.273	13.78	Pk	17.3	1.1	32.18	43.52	-11.34	0-360	200	H
5	433.7378	4.92	Pk	22.1	2.4	29.42	46.02	-16.6	0-360	100	H
7	826.55	66.58	Pk	26.7	3.3	96.58	46.02	50.56	0-360	200	H
2	39.4815	10.95	Pk	18.4	.7	30.05	40	-9.95	0-360	300	V
4	95.4998	13.11	Pk	16.6	1.1	30.81	43.52	-12.71	0-360	200	V
6	310.0913	10.51	Pk	19.2	2	31.71	46.02	-14.31	0-360	200	V
8	826.575	64.39	Pk	26.7	3.3	94.39	46.02	48.37	0-360	100	V

Pk - Peak detector

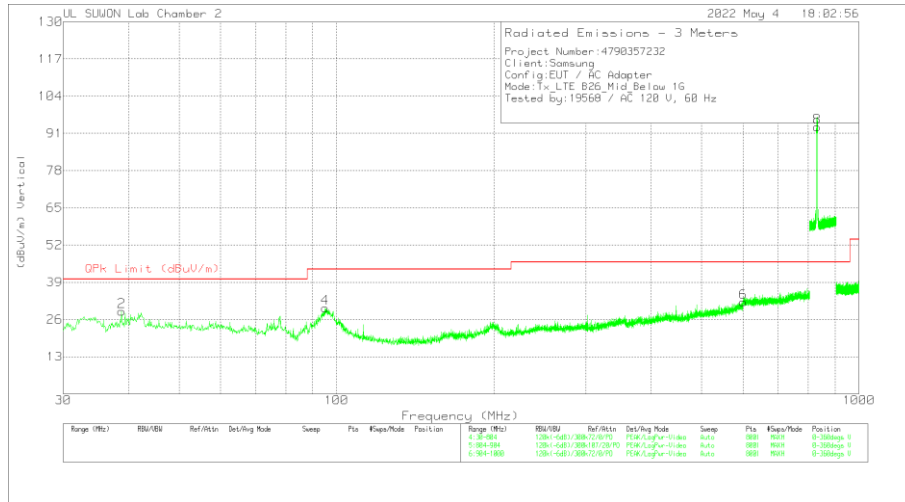
Note: Unwanted emissions captured from 814MHz to 849MHz and from 849MHz to 859MHz were the TX and RX signals generated from the call-simulator.

**MID CHANNEL(876.5 MHz)**

**HORIZONTAL PEAK PLOT**



**VERTICAL PEAK PLOT**



**DATA**

**Trace Markers**

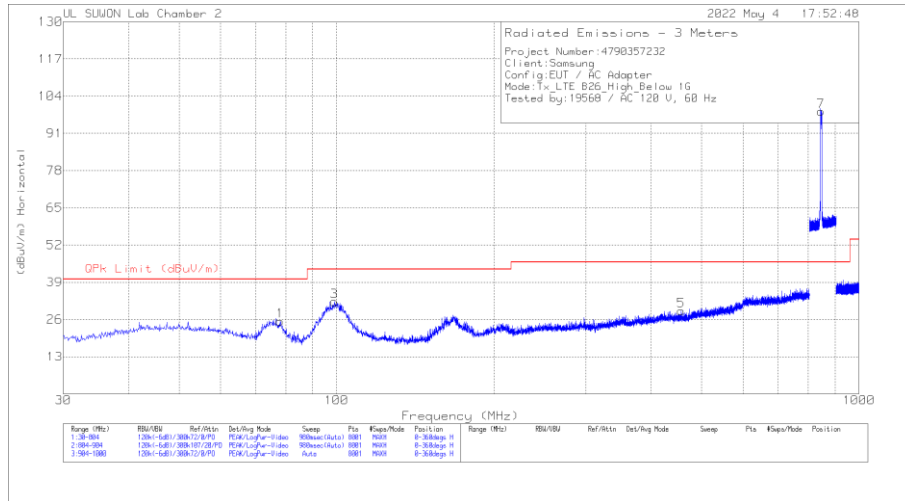
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Below 1G_Bypass[dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	73.8278	12.2	Pk	13.7	1	26.9	40	-13.1	0-360	300	H
3	98.3055	13.13	Pk	17.2	1.1	31.43	43.52	-12.09	0-360	200	H
5	600.7283	3.91	Pk	25	2.8	31.71	46.02	-14.31	0-360	100	H
7	831.5375	65.98	Pk	26.8	3.3	96.08	46.02	50.06	0-360	200	H
2	38.8043	9.93	Pk	18.2	.7	28.83	40	-11.17	0-360	200	V
4	95.2095	12.31	Pk	16.6	1.1	30.01	43.52	-13.51	0-360	200	V
6	600.5348	4.31	Pk	25	2.8	32.11	46.02	-13.91	0-360	400	V
8	831.5375	63.14	Pk	26.8	3.3	93.24	46.02	47.22	0-360	100	V

Pk - Peak detector

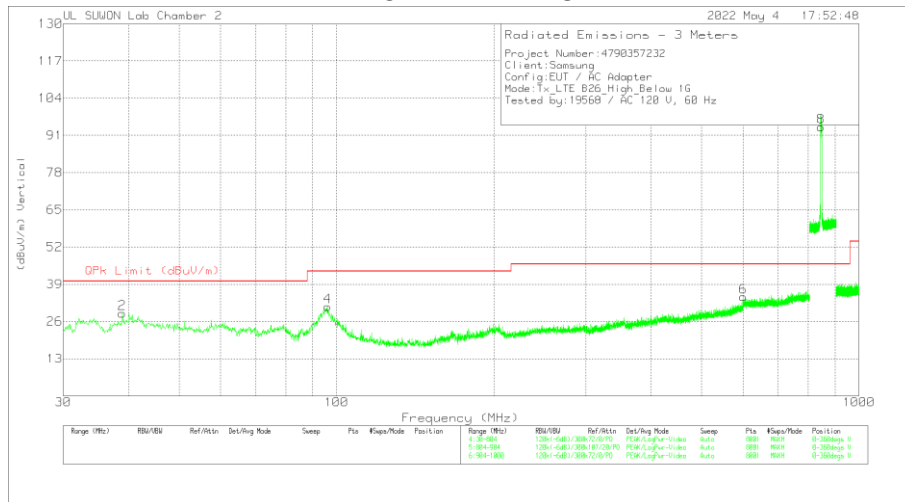
Note: Unwanted emissions captured from 814MHz to 849MHz and from 849MHz to 859MHz were the TX and RX signals generated from the call-simulator.

**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	77.988	11.91	PK	12.5	1	25.41	40	-14.59	0-360	100	H
3	98.9828	13.82	PK	17.3	1.1	32.22	43.52	-11.3	0-360	200	H
5	456.6675	4.62	PK	22	2.4	29.02	46.02	-17	0-360	200	H
7	846.5125	68.16	PK	27.2	3.3	98.66	46.02	52.64	0-360	200	H
2	38.901	9.87	PK	18.3	.7	28.87	40	-11.13	0-360	400	V
4	96.177	13.28	PK	16.8	1.1	31.18	43.52	-12.34	0-360	200	V
6	600.6315	6.77	PK	25	2.8	34.57	46.02	-11.45	0-360	400	V
8	846.5125	63.46	PK	27.2	3.3	93.96	46.02	47.94	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.

## 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  $\mu$ 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 $\mu$ 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

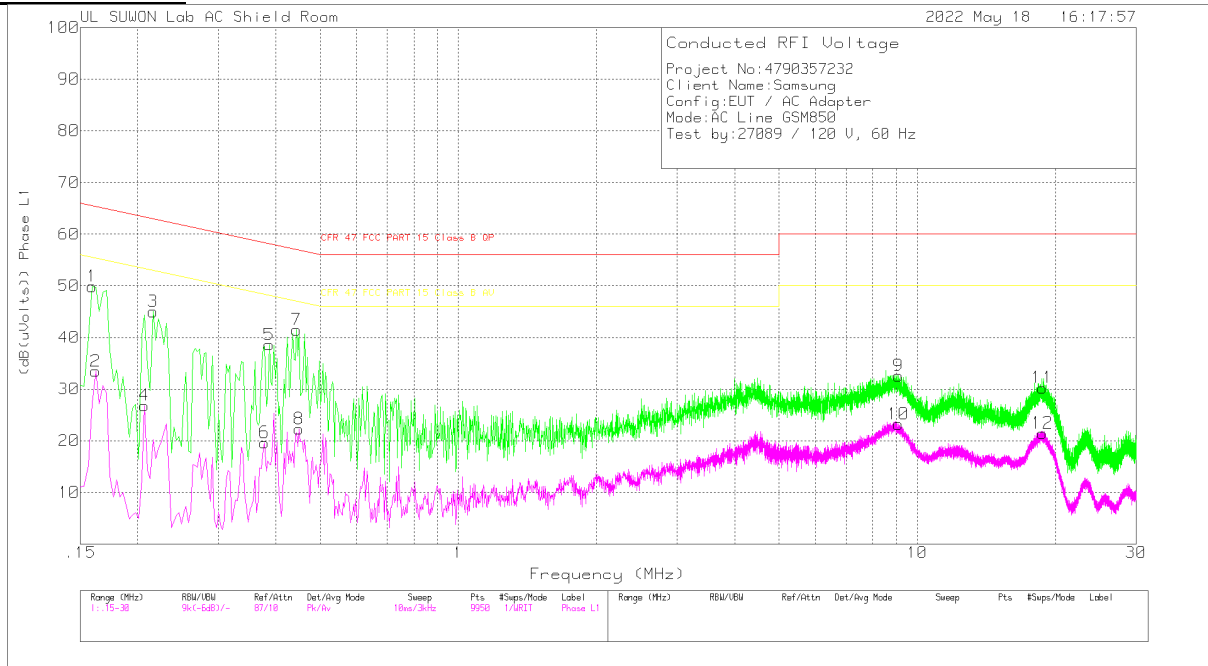
Notes:  
 1. The lower limit shall apply at the transition frequencies  
 2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz.

### 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

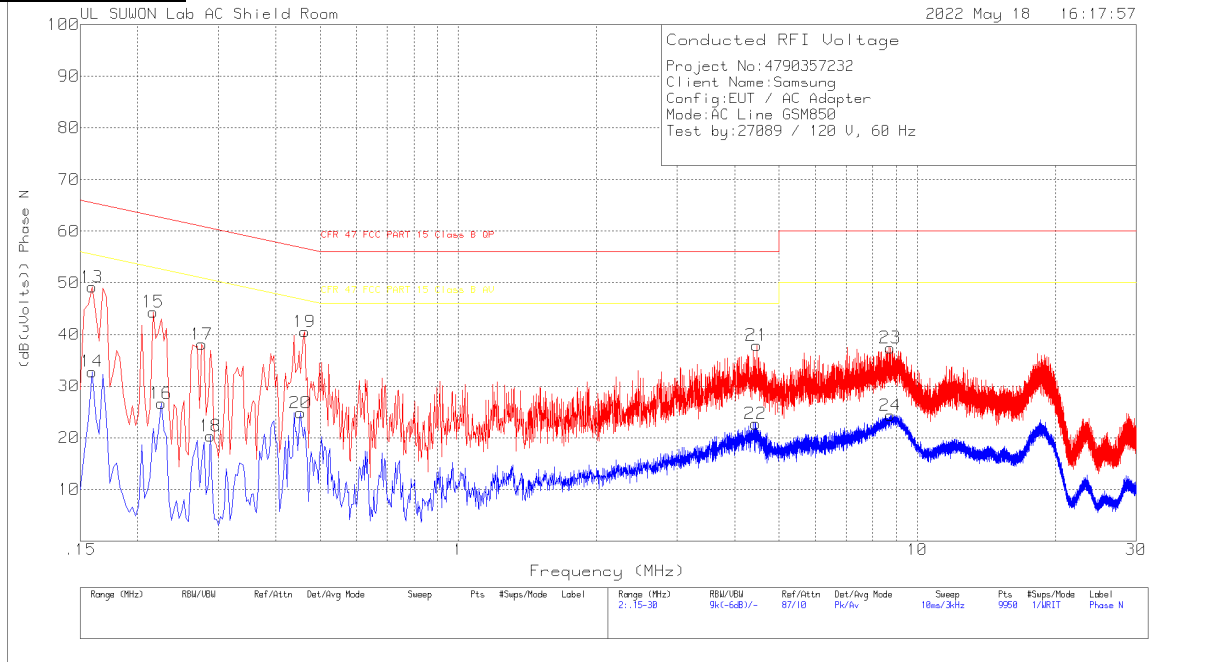
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	101836_Wit h EX_L1[dB]	CABLELOSS S(dB)	Corrected Reading (dB(uVolts))	CFR 47 FCC PART 15 Class B QP	Margin (dB)	CFR 47 FCC PART 15 Class B AV	Margin (dB)
1	.159	39.97	Pk	9.8	.1	49.87	65.52	-15.65	-	-
2	.162	23.47	Av	9.9	.1	33.47	-	-	55.36	-21.89
3	.216	35.01	Pk	9.8	.2	45.01	62.97	-17.96	-	-
4	.207	16.84	Av	9.8	.2	26.84	-	-	53.32	-26.48
5	.387	28.58	Pk	9.8	.2	38.58	58.13	-19.55	-	-
6	.378	9.64	Av	9.8	.2	19.64	-	-	48.32	-28.68
7	.444	31.48	Pk	9.8	.2	41.48	56.99	-15.51	-	-
8	.45	12.18	Av	9.9	.2	22.28	-	-	46.88	-24.6
9	9.099	22.39	Pk	9.8	.4	32.59	60	-27.41	-	-
10	9.099	13	Av	9.8	.4	23.2	-	-	50	-26.8
11	18.723	19.75	Pk	10.1	.4	30.25	60	-29.75	-	-
12	18.732	10.95	Av	10.1	.4	21.45	-	-	50	-28.55

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	39.27	Pk	9.8	.1	49.17	65.52	-16.35	-	-
14	.159	22.91	Av	9.8	.1	32.81	-	-	55.52	-22.71
15	.216	34.34	Pk	9.8	.2	44.34	62.97	-18.63	-	-
16	.225	16.76	Av	9.7	.2	26.66	-	-	52.63	-25.97
17	.276	28.19	Pk	9.7	.2	38.09	60.94	-22.85	-	-
18	.288	10.43	Av	9.7	.2	20.33	-	-	50.58	-30.25
19	.462	30.42	Pk	9.9	.2	40.52	56.66	-16.14	-	-
20	.453	14.7	Av	9.9	.2	24.8	-	-	46.82	-22.02
21	4.467	27.91	Pk	9.7	.3	37.91	56	-18.09	-	-
22	4.44	12.72	Av	9.7	.3	22.72	-	-	46	-23.28
23	8.727	27.22	Pk	9.8	.4	37.42	60	-22.58	-	-
24	8.736	14.13	Av	9.8	.4	24.33	-	-	50	-25.67

Pk - Peak detector  
 Av - Average detection

**END OF TEST REPORT**