



# **CERTIFICATION TEST REPORT**

**Report Number.** : 4789219881-E1V1

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

**Model** : SM-G770U1

**FCC ID** : A3LSMG770U

**EUT Description** : GSM/CDMA/WCDMA/LTE Phone + BT/BLE, DTS/UNII a/b/g/n/ac,  
ANT+ and NFC

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

**Date Of Issue:**

March 03, 2020

**Prepared by:**

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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	03/03/20	Initial issue	Sangyun Kim

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# 1. ATTESTATION OF TEST RESULTS

**COMPANY NAME:** SAMSUNG ELECTRONICS CO., LTD.  
**EUT DESCRIPTION:** GSM/CDMA/WCDMA/LTE Phone + BT/BLE, DTS/UNII a/b/g/n/ac, ANT+ and NFC  
**MODEL NUMBER:** SM-G770U1  
**SERIAL NUMBER:** R38MC0CE7XM, R38MC0CE7RW  
**DATE TESTED:** FEB 17, 2020 – FEB 20, 2020;

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC PART 15B	Pass

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:



Junwhan Lee  
Suwon Lab Engineer  
UL Korea, Ltd.

Tested By:



Sangyun Kim  
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
<input checked="" type="checkbox"/>	Chamber 2
<input type="checkbox"/>	Chamber 3

UL Korea, Ltd. is accredited by IAS, Laboratory Code TL-637. The full scope of accreditation can be viewed at <http://www.iasonline.org/wp-content/uploads/2017/05/TL-637.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
Radiated Disturbance, 30 MHz to 1 GHz	3.49 dB
Radiated Disturbance, 1 GHz to 18 GHz	5.82 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 1, Clause 4.4.2 in IEC Guide 115:2007.

## 5. EQUIPMENT UNDER TEST

### 5.1. DESCRIPTION OF EUT

GSM/CDMA/WCDMA/LTE Phone + BT/BLE, DTS/UNII a/b/g/n/ac, ANT+ and NFC.  
This test report addresses the WWAN operational mode.

### 5.2. TEST MODE

Mode	Description
CDMA BC0	Communicating with Call simulator(CMW500)
CDMA BC10	Communicating with Call simulator(CMW500)
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 14	Communicating with Call simulator(CMW500)
LTE BAND 26	Communicating with Call simulator(CMW500)
LTE BAND 71	Communicating with Call simulator(CMW500)

### **5.3. WORST-CASE ORIENTATION AND MODE**

For CDMA BC10 / LTE B12 / LTE Band 26 and LTE Band 71, EUT was investigated in three orthogonal orientations X, Y and Z it was determined that X orientation was worst-case orientation.

For CDMA BC0 / GSM850 / WCDMA B5 / LTE Band 13 and LTE Band 14, EUT was investigated in three orthogonal orientations X, Y and Z it was determined that Z orientation was worst-case orientation.

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

#### **WCDMA Band 5**

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 Band 5. 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.



## 5.4. DESCRIPTION OF TEST SETUP

### SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
Charger	SAMSUNG	EP-TA800	R37MAYF19B7DK3	N/A
Data Cable	SAMSUNG	EP-DA705BBE	N/A	N/A

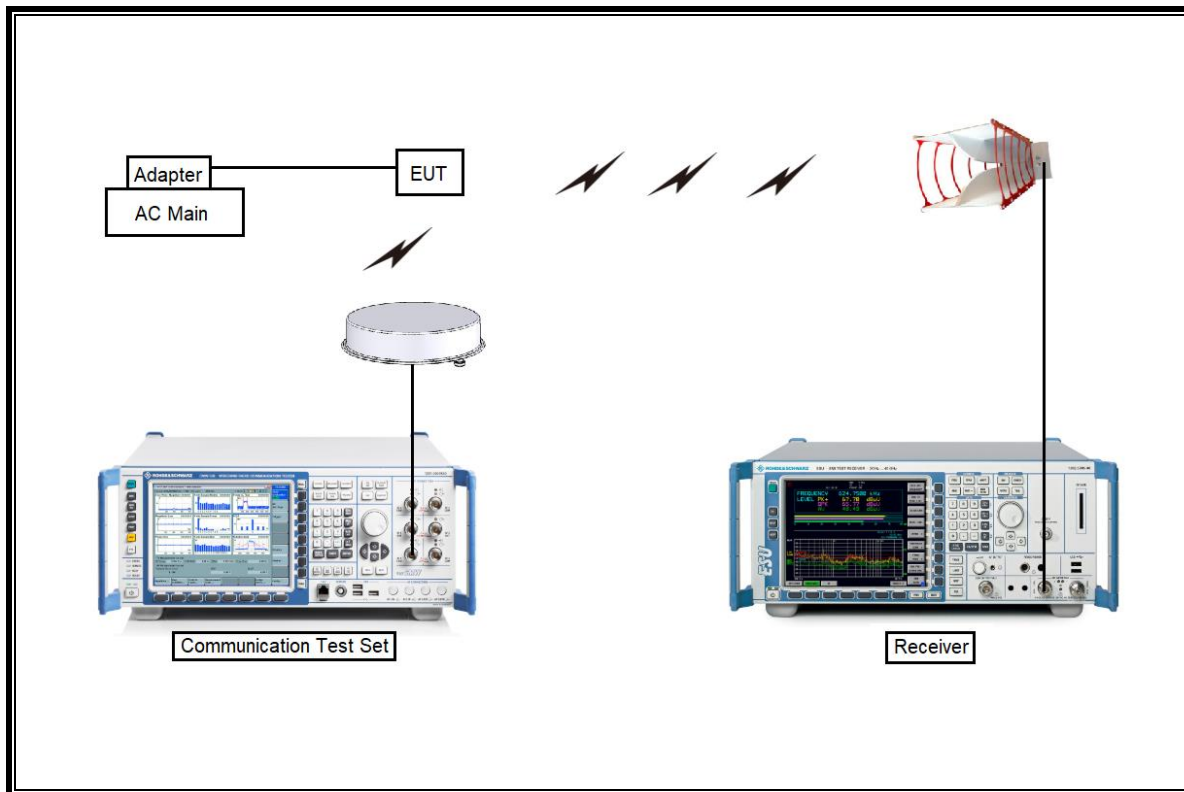
### I/O CABLE

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	1.0m	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	01-30-21
Antenna, Horn, 40 GHz	ETS	3116C	00166155	08-13-20
Preamplifier	ETS	3116C-PA	00168841	08-08-20
Antenna, Horn, 40 GHz	ETS	3116C	00168645	10-02-21
Antenna, Bilog, 30MHz-1GHz	SCHWARZBECK	VULB9163	750	08-04-20
Antenna, Bilog, 30MHz-1GHz	SCHWARZBECK	VULB9163	845	08-04-20
Antenna, Bilog, 30MHz-1GHz	SCHWARZBECK	VULB9163	749	08-04-20
Antenna, Horn, 18 GHz	ETS	3115	00167211	08-04-20
Antenna, Horn, 18 GHz	ETS	3115	00161451	08-04-20
Antenna, Horn, 18 GHz	ETS	3117	00168724	08-04-20
Antenna, Horn, 18 GHz	ETS	3117	00205959	08-04-20
Antenna, Horn, 18 GHz	ETS	3117	00168717	08-04-20
Communications Test Set	R&S	CMW500	115331	08-05-20
Preamplifier, 1000 MHz	Sonoma	310N	341282	08-05-20
Preamplifier, 1000 MHz	Sonoma	310N	370599	08-05-20
Preamplifier, 1000 MHz	Sonoma	310N	351741	08-05-20
Preamplifier, 18 GHz	Miteq	AFS42-00101800-25-S-42	1876511	08-06-20
Preamplifier, 18 GHz	Miteq	AFS42-00101800-25-S-42	2029169	08-06-20
Preamplifier, 18 GHz	Miteq	AFS42-00101800-25-S-42	1896138	08-05-20
EMI Test Receive, 44 GHz	R&S	ESW40	101590	08-06-20
EMI Test Receive, 40 GHz	R&S	ESU40	100439	08-06-20
EMI Test Receive, 40 GHz	R&S	ESU40	100457	08-06-20
Directional Antenna	Cobham	FPA3-0.8-6.0R/1329	80108-0004	N/A
High Pass Filter 1.2GHz	Micro-Tronics	HPM50108-02	G005	08-05-20
High Pass Filter 1.2GHz	Micro-Tronics	HPM50108-02	G006	08-05-20
High Pass Filter 2.8GHz	Micro-Tronics	HPM50111-02	010	08-05-20
High Pass Filter 2.8GHz	Micro-Tronics	HPM50111-02	011	08-05-20
High Pass Filter 4GHz	Micro-Tronics	HPM50118-02	G001	08-05-20
High Pass Filter 4GHz	Micro-Tronics	HPM50118-02	G002	08-05-20
Attenuator	PASTERNAK	PE7087-10	A009	08-08-20
Attenuator	PASTERNAK	PE7087-10	A001	08-08-20
Attenuator	PASTERNAK	PE7087-10	A008	08-08-20
Attenuator	PASTERNAK	PE7087-10	2	08-08-20
Attenuator	PASTERNAK	PE7395-10	A011	08-08-20
Antenna, Loop, 9kHz-30MHz	R&S	HFH2-Z2	100418	10-02-21
UL Software				
Description	Manufacturer	Model	Version	
Radiated software	UL	UL EMC	Ver 9.5	

## 7. APPLICABLE LIMITS AND TEST RESULTS

### 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:

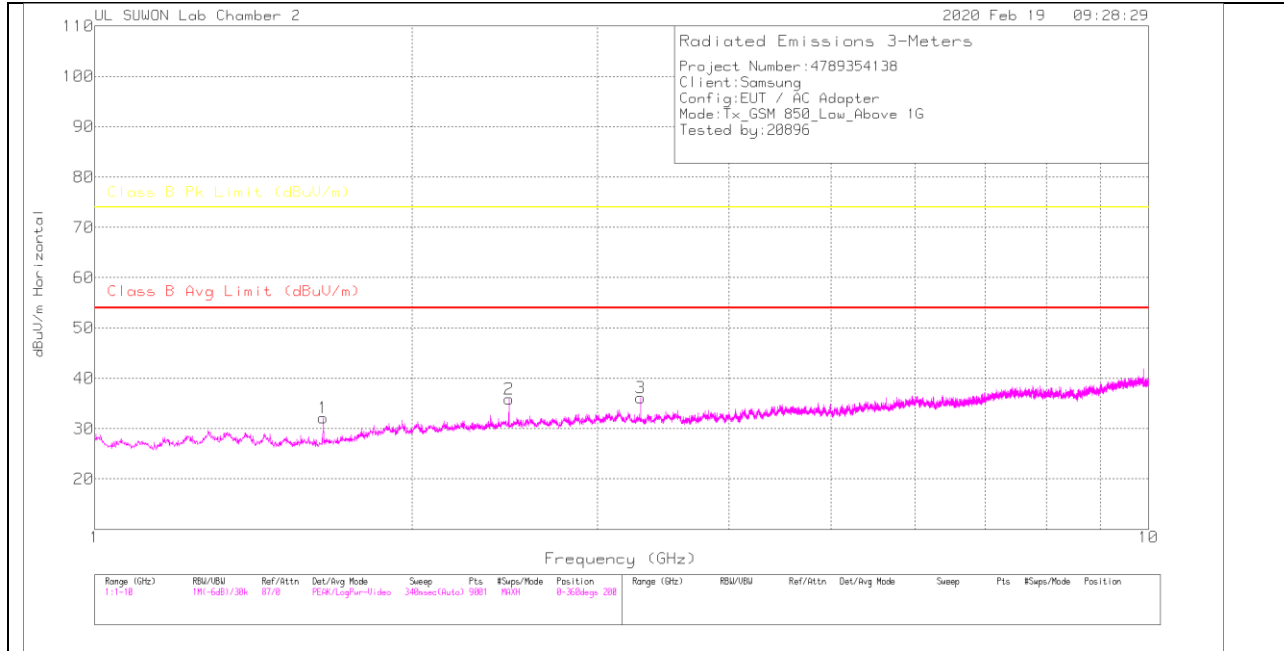
Limits for radiated disturbance of Class B ITE at measuring distance of 3 m	
Frequency range (MHz)	Quasi-peak limits (dB $\mu$ V/m)
30 to 88	40
88 to 216	43.5
216 to 960	46
Above 960 MHz	54

Note: The lower limit shall apply at the transition frequency.

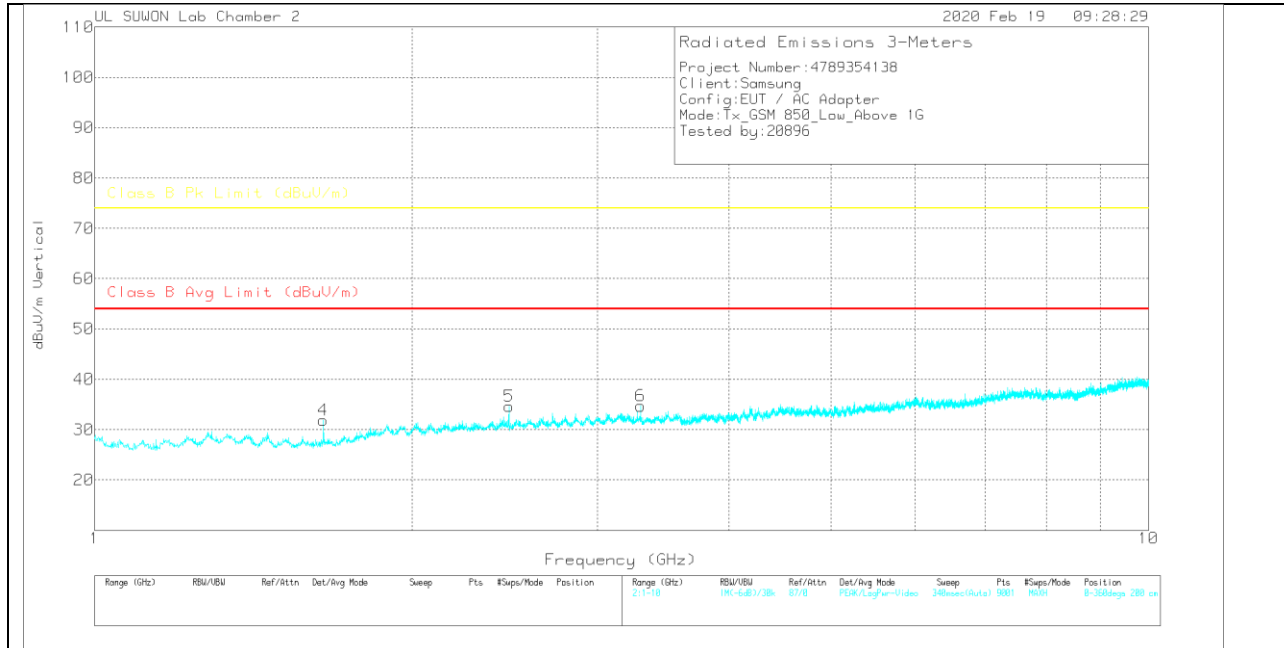
### 7.1. Above 1 GHz in the GSM850

#### LOW CHANNEL(869.2 MHz)

#### HORIZONTAL PEAK PLOT



#### VERTICAL PEAK PLOT



**DATA**

Trace Markers

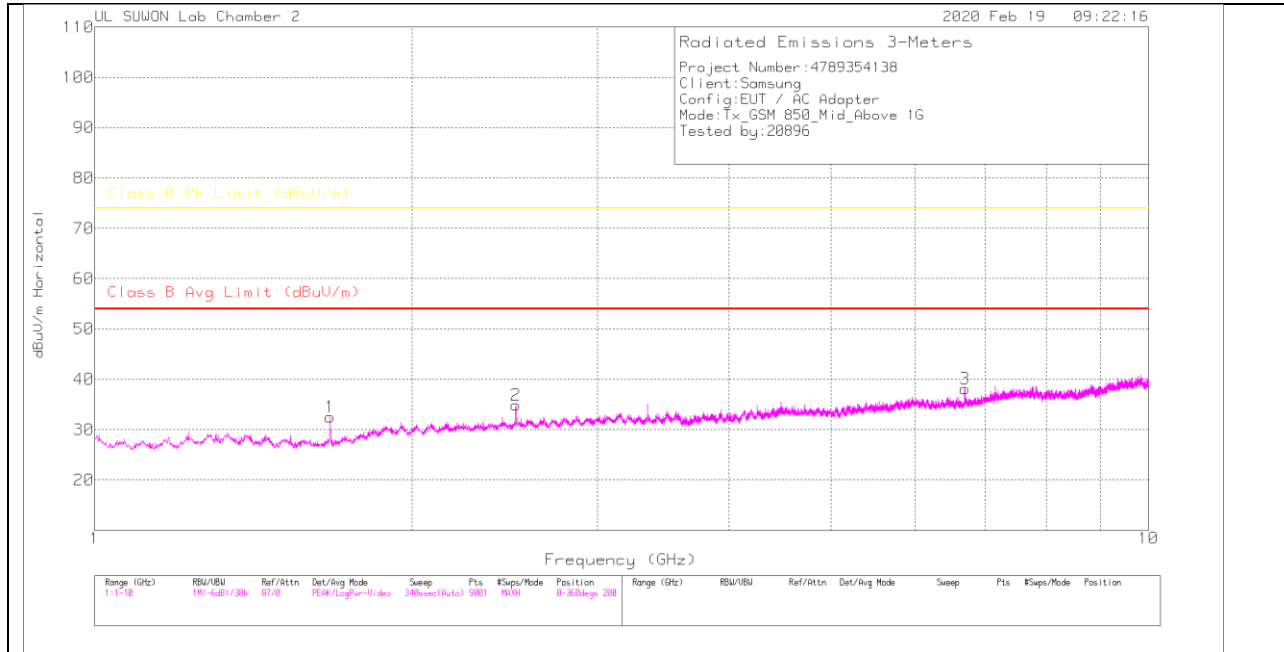
Marker	Frequency (GHz)	Meter Reading (dBu)	Det	3117_00168724	1-18GHz[dB]	1GHz_HP[dB]	Corrected Reading dBu/m	Class B Avg Limit (dBu/m)	Av(CISPR)Margin (dB)	Class B Pk Limit (dBu/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.648	34.56	PK	28.3	-31.4	.7	32.16	-	-	74	-41.84	0-360	200	H
2	2.472	33.34	PK	31.8	-30	.7	35.84	-	-	74	-38.16	0-360	200	H
3	3.296	32.7	PK	32.6	-29.9	.7	36.1	-	-	74	-37.9	0-360	200	H
4	1.648	34.28	PK	28.3	-31.4	.7	31.88	-	-	74	-42.12	0-360	100	V
5	2.472	32.1	PK	31.8	-30	.7	34.6	-	-	74	-39.4	0-360	100	V
6	3.296	31.3	PK	32.6	-29.9	.7	34.7	-	-	74	-39.3	0-360	200	V

PK – Peak Detector

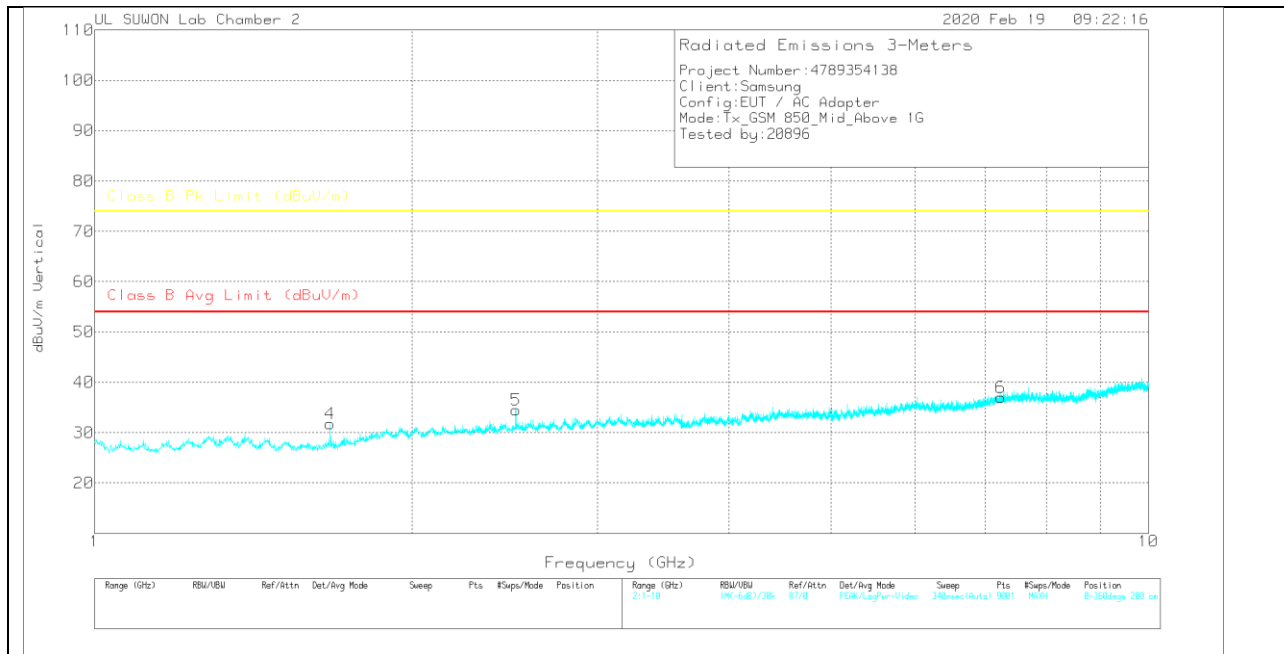
Note: Unwanted emissions on the harmonic frequency were generated from the call-simulator with the TX and RX signals.

**MID CHANNEL(881.6 MHz)**

**HORIZONTAL PEAK PLOT**



**VERTICAL PEAK PLOT**



DATA

Trace Markers

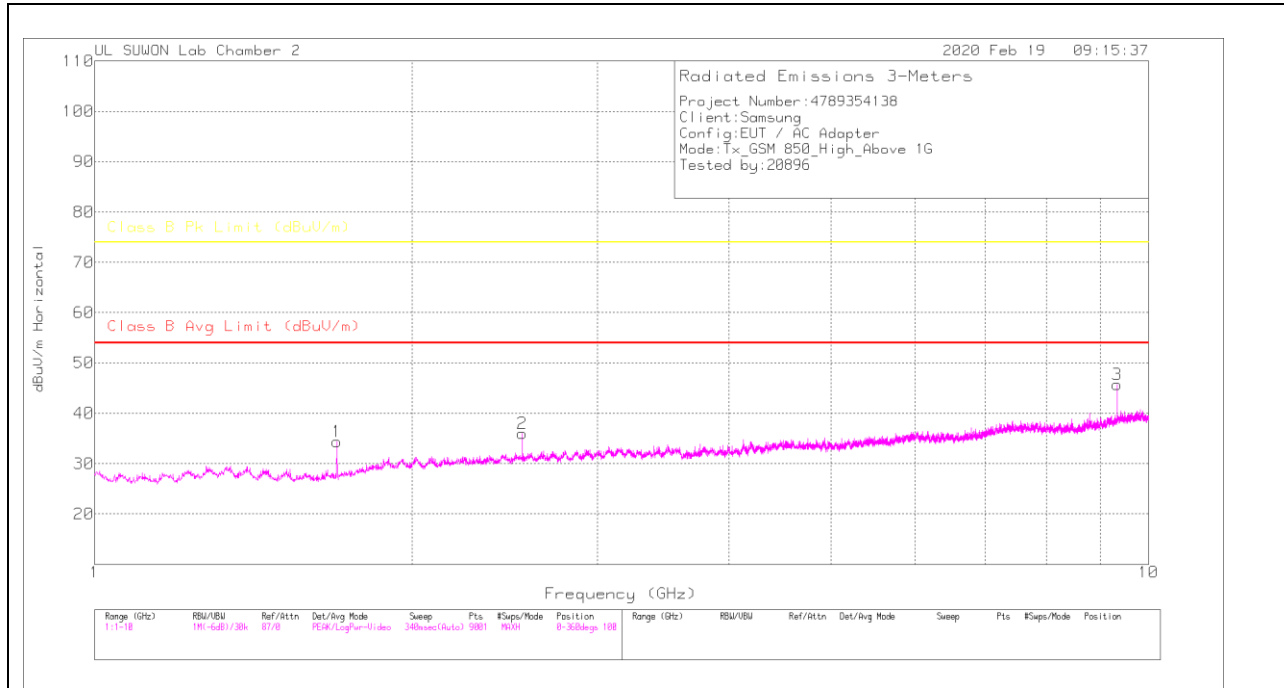
Marker	Frequency (GHz)	Meter Reading (dBu)	Det	3117_00168724	1-18GHz[dB]	1GHz_HP[dB]	Corrected Reading dBu/m	Class B Avg Limit (dBu/m)	Av(CISPR)Margin (dB)	Class B Pk Limit (dBu/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.673	34.56	PK	28.5	-31.3	.7	32.46	-	-	74	-41.54	0-360	200	H
2	2.51	32.4	PK	31.9	-30.1	.7	34.9	-	-	74	-39.1	0-360	100	H
3	6.694	28.52	PK	35.4	-26.3	.5	38.12	-	-	74	-35.88	0-360	200	H
4	1.673	33.85	PK	28.5	-31.3	.7	31.75	-	-	74	-42.25	0-360	100	V
5	2.51	32.06	PK	31.9	-30.1	.7	34.56	-	-	74	-39.44	0-360	100	V
6	7.238	26.31	PK	36.1	-25.9	.5	37.01	-	-	74	-36.99	0-360	200	V

PK – Peak Detector

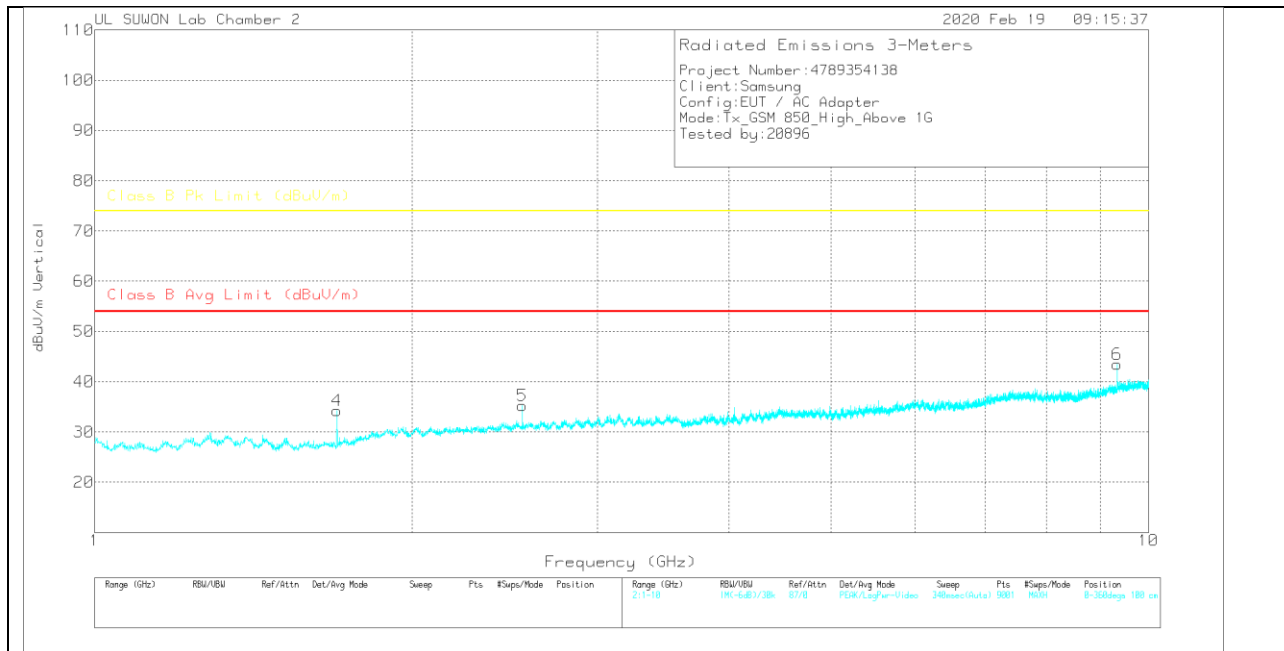
Note: Unwanted emissions on the harmonic frequency were generated from the call-simulator with the TX and RX signals.

**HIGH CHANNEL(893.8 MHz)**

**HORIZONTAL PEAK PLOT**



**VERTICAL PEAK PLOT**





**DATA**

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBu)	Det	3117_00168724	1-18GHz[dB]	1GHz_HP[dB]	Corrected Reading dBu/m	Class B Avg Limit (dBu/m)	Av(CISPR)Margin (dB)	Class B Pk Limit (dBu/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.697	36.27	PK	28.6	-31.2	.7	34.37	-	-	74	-39.63	0-360	200	H
2	2.546	33.4	PK	32	-30.1	.7	36	-	-	74	-38	0-360	100	H
3	9.337	31.18	PK	36.7	-22.8	.7	45.78	-	-	74	-28.22	0-360	200	H
4	1.697	36.21	PK	28.6	-31.2	.7	34.31	-	-	74	-39.69	0-360	200	V
5	2.546	32.6	PK	32	-30.1	.7	35.2	-	-	74	-38.8	0-360	100	V
6	9.338	28.98	PK	36.7	-22.9	.7	43.48	-	-	74	-30.52	0-360	200	V

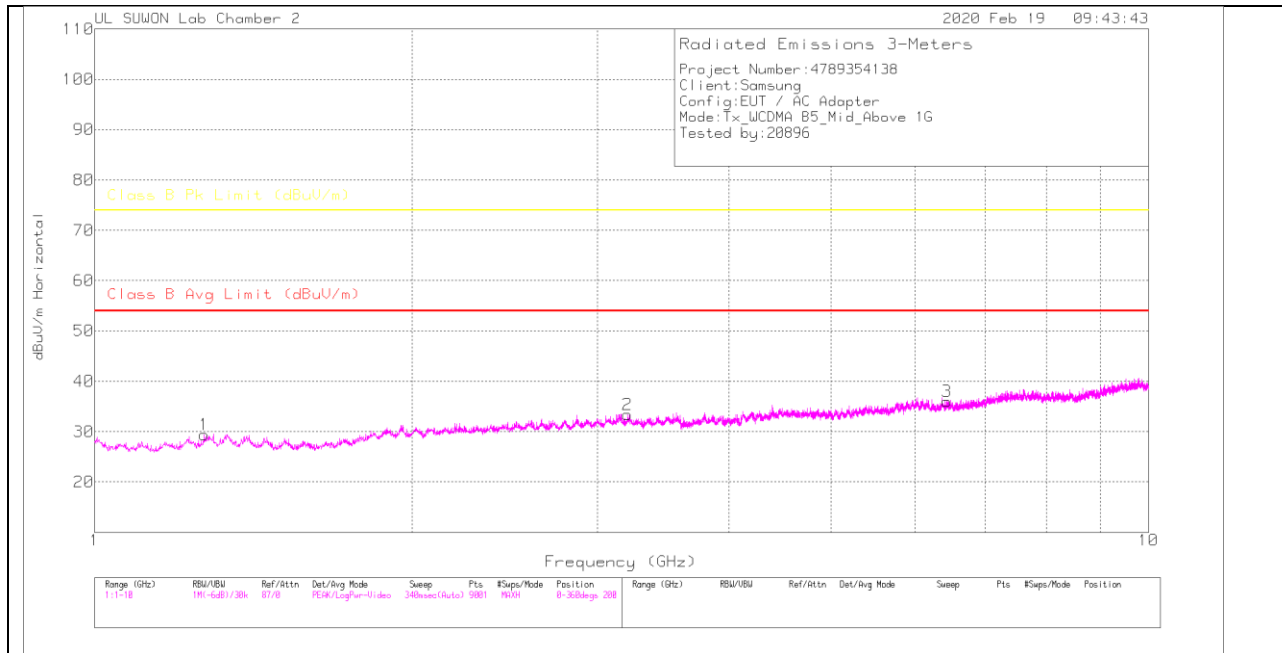
PK – Peak Detector

Note: Unwanted emissions on the harmonic frequency were generated from the call-simulator with the TX and RX signals.

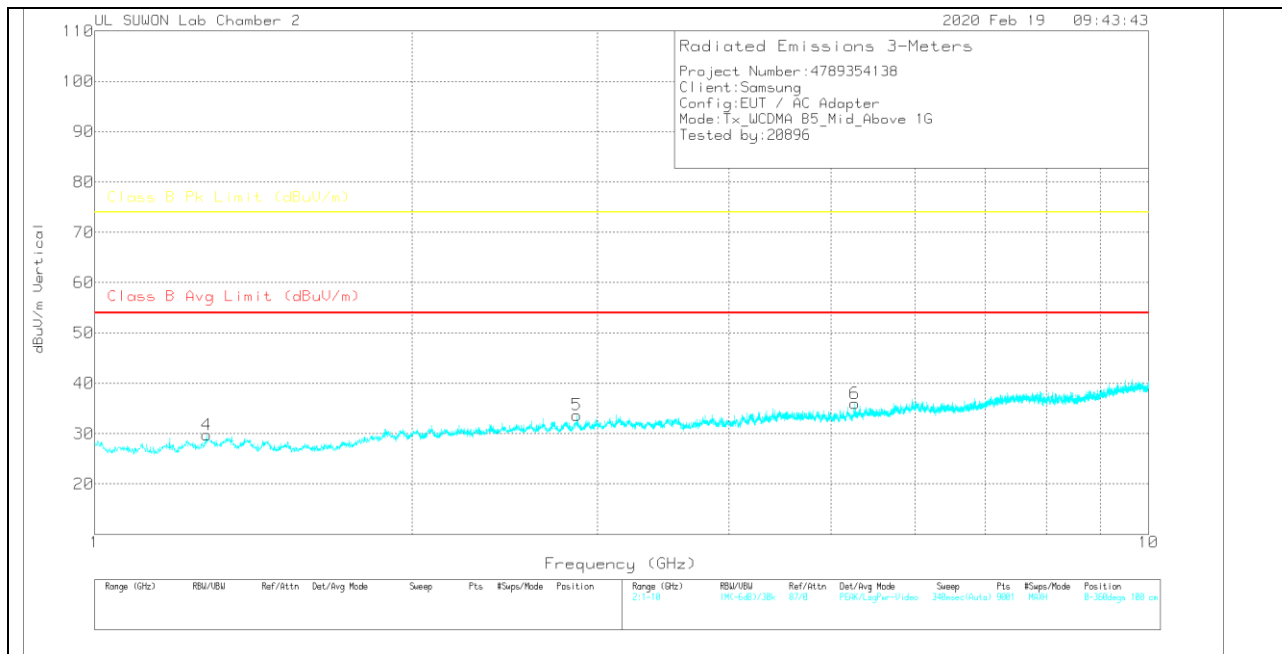
## 7.2. Above 1 GHz in the WCDMA Band 5

### MID CHANNEL(881.6 MHz)

#### HORIZONTAL PEAK PLOT



#### VERTICAL PEAK PLOT



DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBu)	Det	3117_00168724	1-18GHz[dB]	1GHz_HP[dB]	Corrected Reading dBu/m	Class B Avg Limit (dBu/m)	Av(CISPR)Margin (dB)	Class B Pk Limit (dBu/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.271	30.99	PK	29.5	-31.9	.8	29.39	-	-	74	-44.61	0-360	200	H
2	3.205	29.38	PK	32.9	-29.6	.7	33.38	-	-	74	-40.62	0-360	100	H
3	6.44	26.67	PK	35.3	-26.5	.5	35.97	-	-	74	-38.03	0-360	200	H
4	1.277	31.32	PK	29.5	-31.8	.8	29.82	-	-	74	-44.18	0-360	200	V
5	2.869	30.7	PK	32.1	-29.8	.7	33.7	-	-	74	-40.3	0-360	100	V
6	5.267	29.26	PK	34.4	-28.2	.5	35.96	-	-	74	-38.04	0-360	200	V

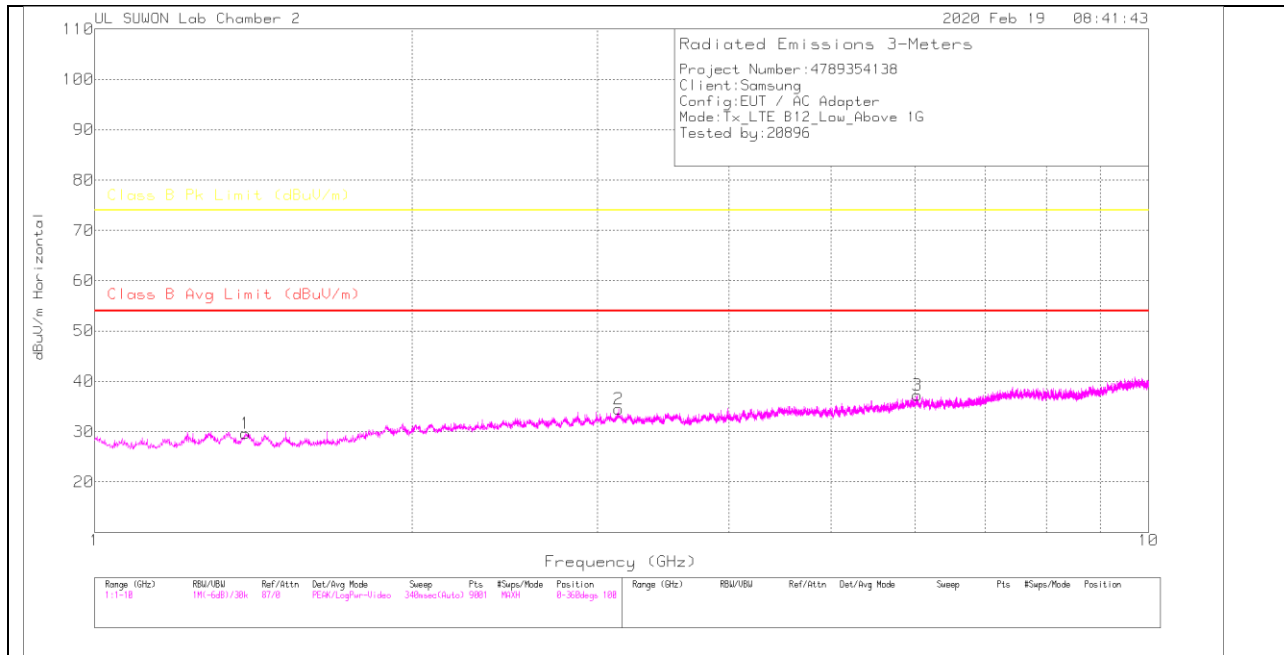
PK – Peak Detector

Note: Unwanted emissions on the harmonic frequency were generated from the call-simulator with the TX and RX signals.

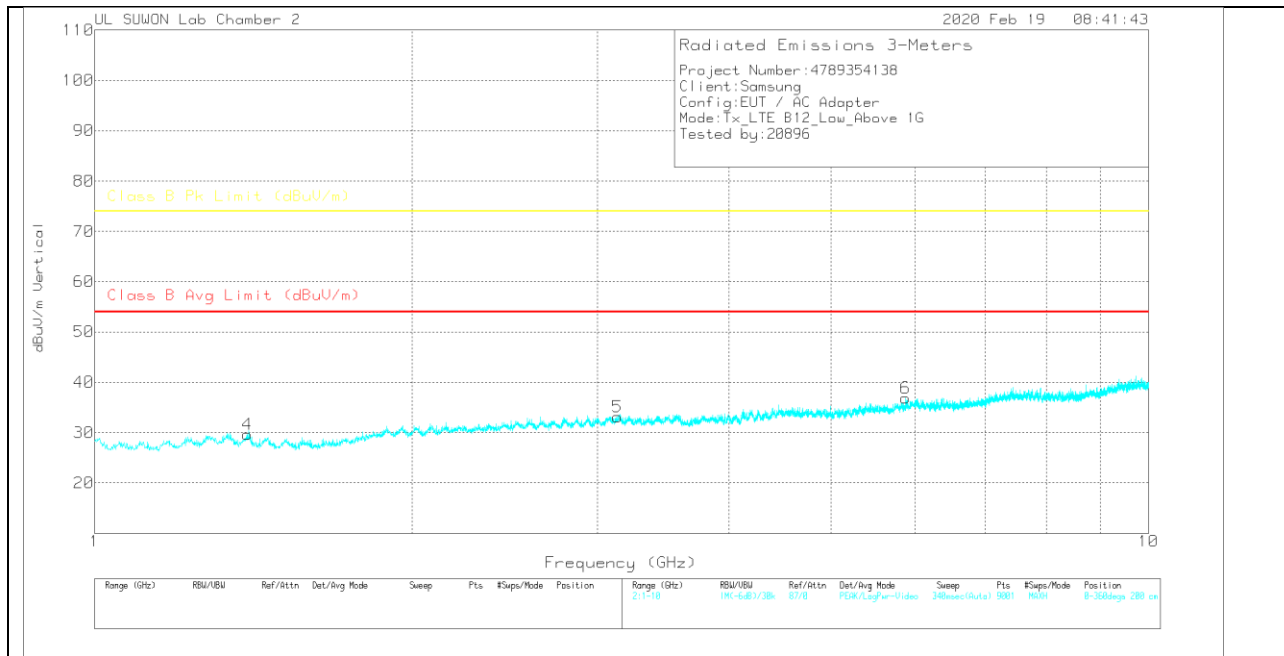
### 7.3. Above 1 GHz in the LTE Band 12

#### LOW CHANNEL(730.5 MHz)

#### HORIZONTAL PEAK PLOT



#### VERTICAL PEAK PLOT



**DATA**

Trace Markers

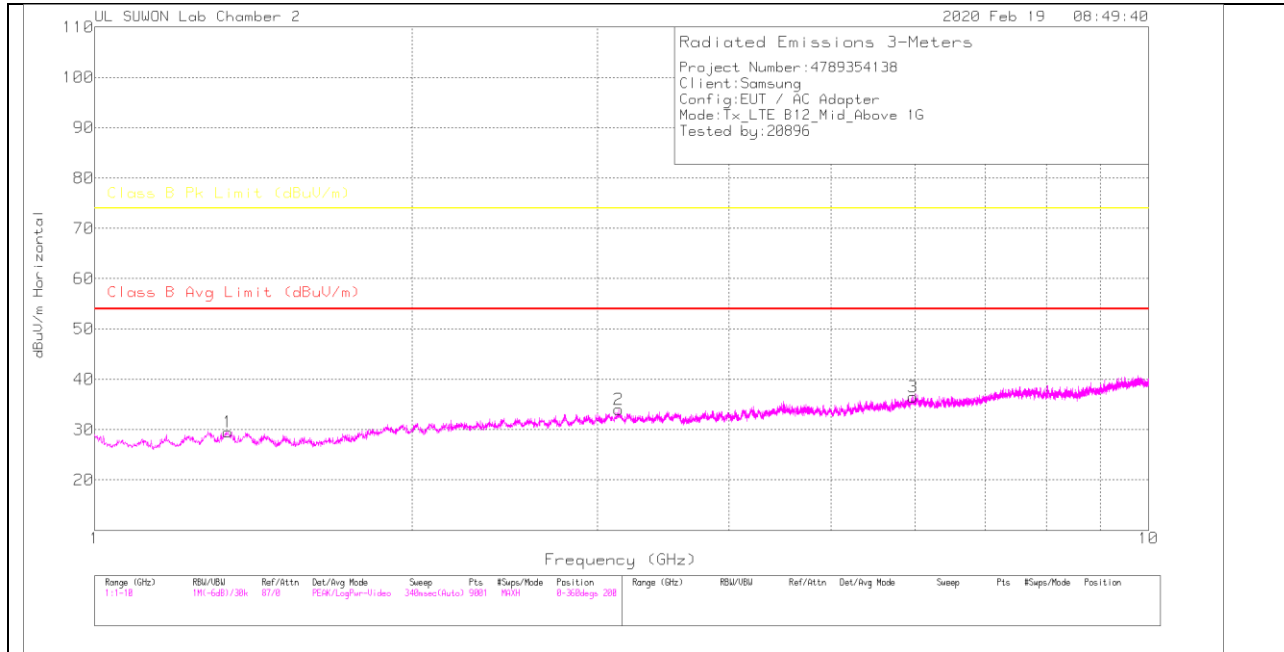
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	1-18GHz[dB]	1GHz_HP[dB]	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Av(CISPR)Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.391	31.14	PK	29.5	-31.7	.7	29.64	-	-	74	-44.36	0-360	100	H
2	3.141	30.6	PK	32.9	-29.7	.7	34.5	-	-	74	-39.5	0-360	100	H
3	6.034	29.05	PK	35	-27.3	.5	37.25	-	-	74	-36.75	0-360	100	H
4	1.397	31.27	PK	29.4	-31.7	.7	29.67	-	-	74	-44.33	0-360	200	V
5	3.136	29.23	PK	32.9	-29.7	.7	33.13	-	-	74	-40.87	0-360	100	V
6	5.884	28.79	PK	34.9	-27.3	.5	36.89	-	-	74	-37.11	0-360	100	V

PK – Peak Detector

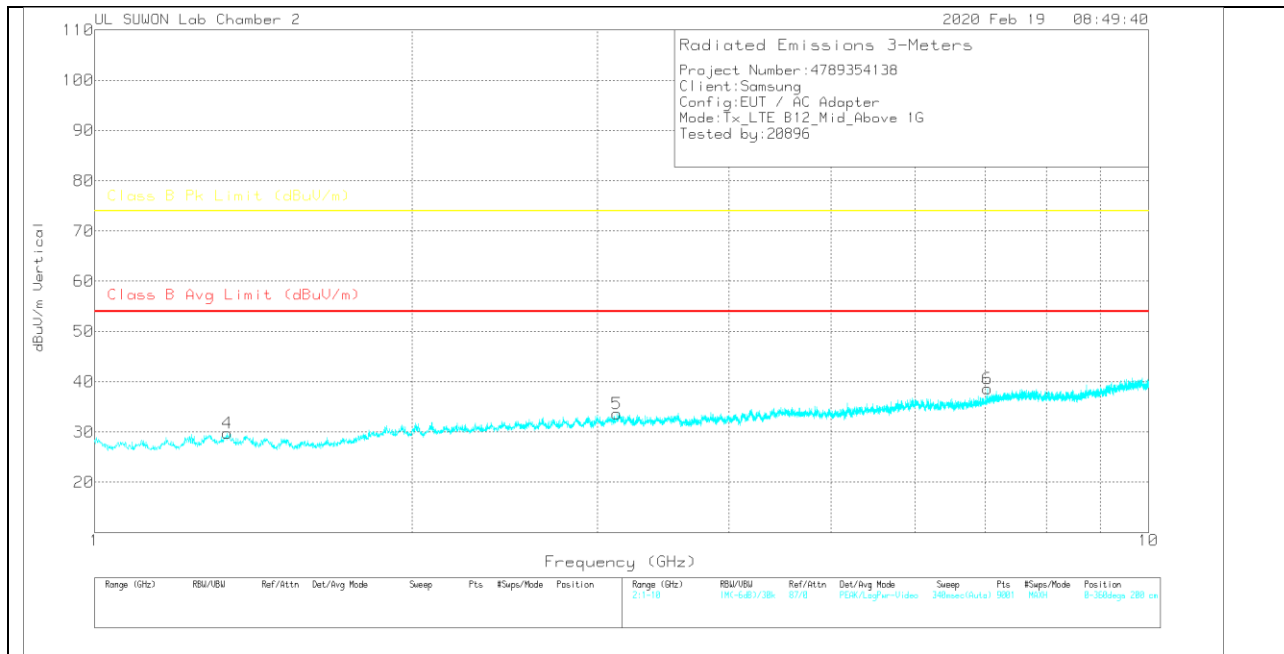
Note: Unwanted emissions on the harmonic frequency were generated from the call-simulator with the TX and RX signals.

**MID CHANNEL(737.5 MHz)**

**HORIZONTAL PEAK PLOT**



**VERTICAL PEAK PLOT**



**DATA**

Trace Markers

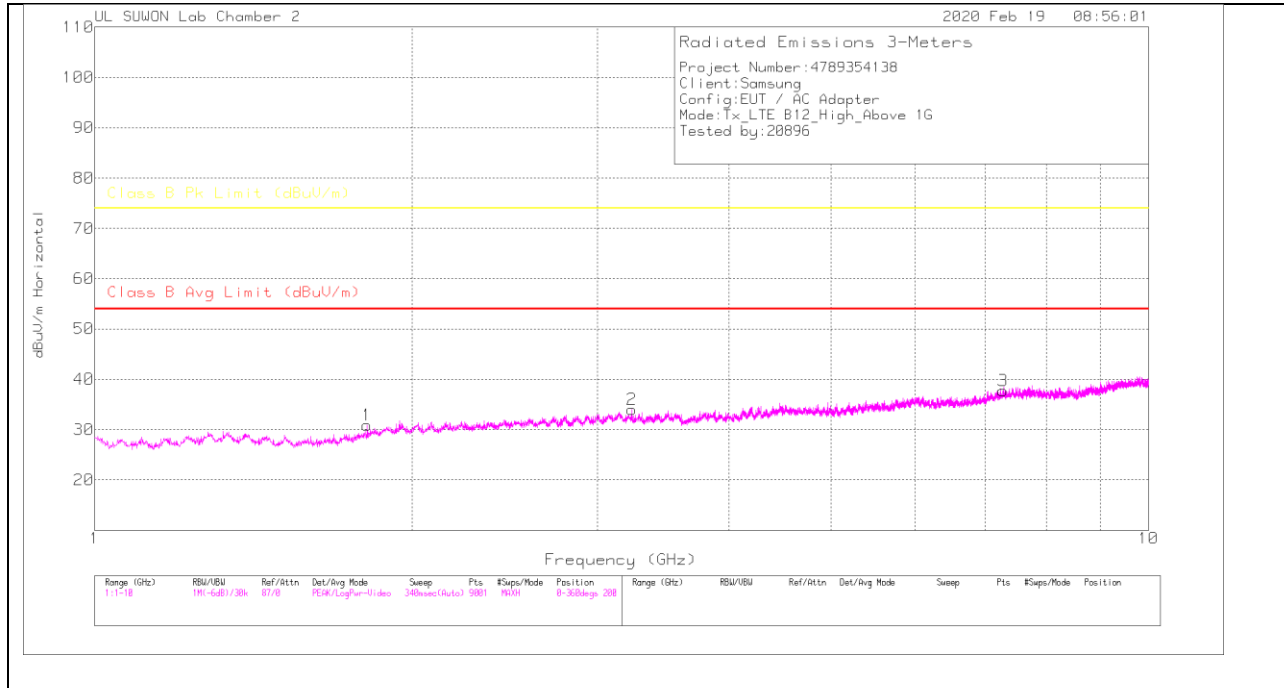
Marker	Frequency (GHz)	Meter Reading (dBu)	Det	3117_00168724	1-18GHz[dB]	1GHz_HP[dB]	Corrected Reading dBu/m	Class B Avg Limit (dBu/m)	Av(CISPR)Margin (dB)	Class B Pk Limit (dBu/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.338	30.82	PK	29.7	-31.7	.7	29.52	-	-	74	-44.48	0-360	100	H
2	3.143	30.05	PK	32.9	-29.6	.7	34.05	-	-	74	-39.95	0-360	100	H
3	5.976	28.54	PK	35	-27.5	.5	36.54	-	-	74	-37.46	0-360	100	H
4	1.336	31.04	PK	29.7	-31.7	.7	29.74	-	-	74	-44.26	0-360	200	V
5	3.13	29.63	PK	32.9	-29.6	.7	33.63	-	-	74	-40.37	0-360	100	V
6	7.032	27.9	PK	35.9	-25.7	.5	38.6	-	-	74	-35.4	0-360	200	V

PK – Peak Detector

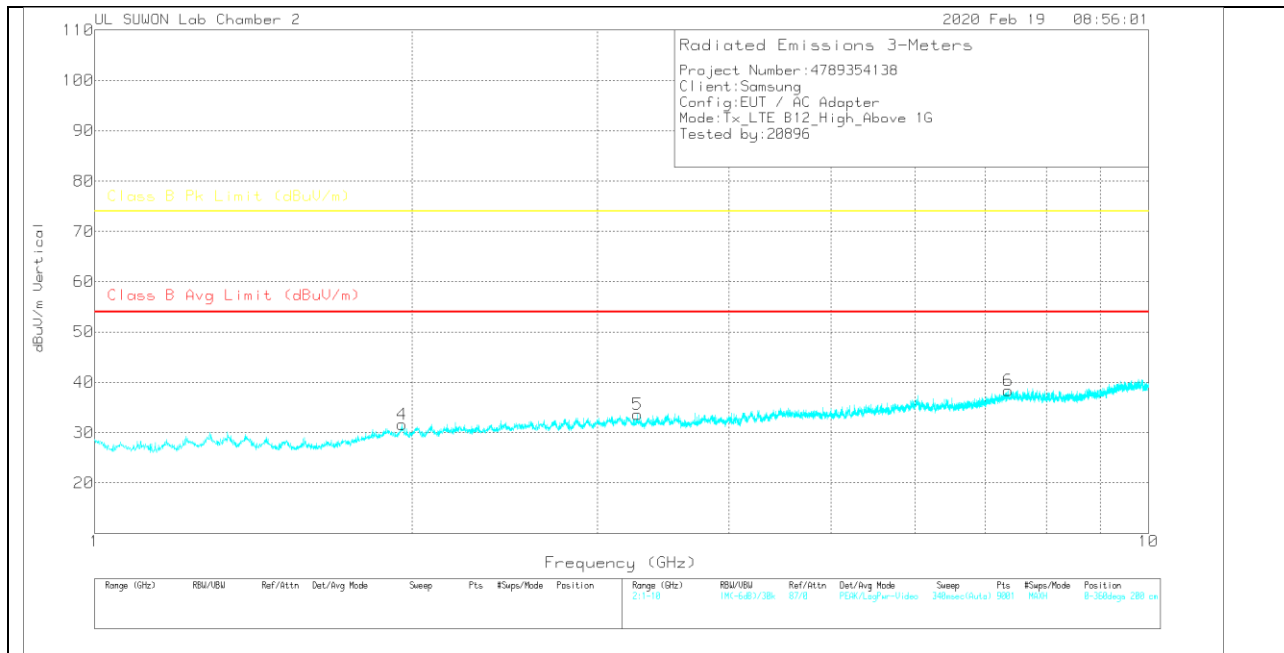
Note: Unwanted emissions on the harmonic frequency were generated from the call-simulator with the TX and RX signals.

**HIGH CHANNEL(744.5 MHz)**

**HORIZONTAL PEAK PLOT**



**VERTICAL PEAK PLOT**





**DATA**

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBu)	Det	3117_00168724	1-18GHz[dB]	1GHz_HP[dB]	Corrected Reading dBu/m	Class B Avg Limit (dBu/m)	Av(CISPR)Margin (dB)	Class B Pk Limit (dBu/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.814	31.39	PK	29.9	-31.1	.7	30.89	-	-	74	-43.11	0-360	100	H
2	3.236	30.07	PK	32.9	-29.7	.7	33.97	-	-	74	-40.03	0-360	100	H
3	7.275	26.97	PK	36.2	-25.9	.5	37.77	-	-	74	-36.23	0-360	100	H
4	1.957	30.85	PK	31.1	-30.9	.6	31.65	-	-	74	-42.35	0-360	200	V
5	3.274	30.05	PK	32.7	-29.8	.7	33.65	-	-	74	-40.35	0-360	100	V
6	7.357	27.12	PK	36.2	-25.5	.5	38.32	-	-	74	-35.68	0-360	100	V

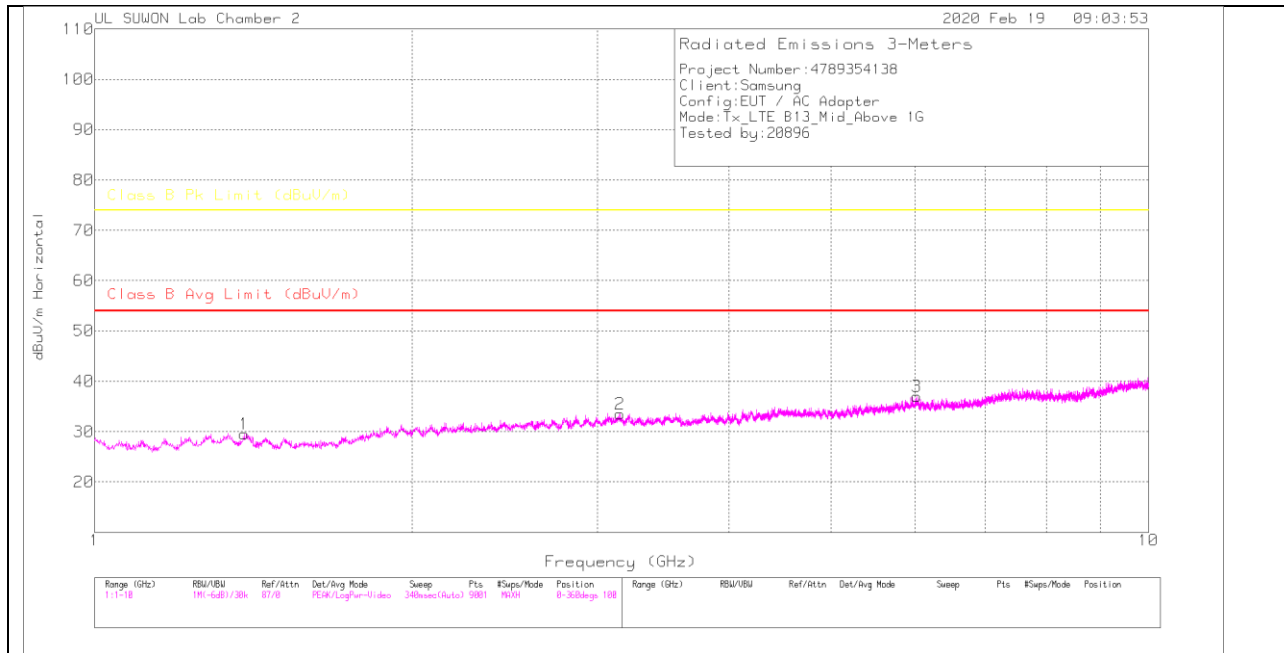
PK – Peak Detector

Note: Unwanted emissions on the harmonic frequency were generated from the call-simulator with the TX and RX signals.

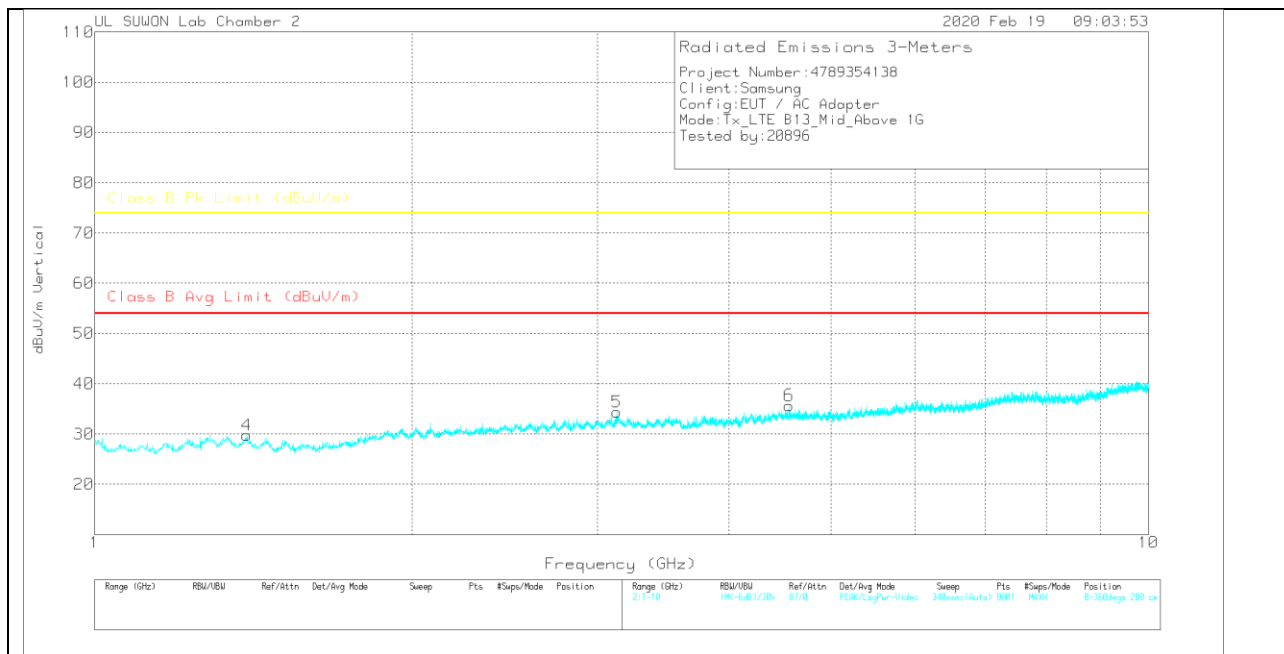
### 7.4. Above 1 GHz in the LTE Band 13

#### MID CHANNEL(751.0 MHz)

#### HORIZONTAL PEAK PLOT



#### VERTICAL PEAK PLOT



DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBu)	Det	3117_00168724	1-18GHz[dB]	1GHz_HP[dB]	Corrected Reading dBu/m	Class B Avg Limit (dBu/m)	Av(CISPR)Margin (dB)	Class B Pk Limit (dBu/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.387	31	PK	29.5	-31.7	.7	29.5	-	-	74	-44.5	0-360	200	H
2	3.152	29.53	PK	32.9	-29.6	.7	33.53	-	-	74	-40.47	0-360	200	H
3	6.029	28.85	PK	35	-27.3	.5	37.05	-	-	74	-36.95	0-360	200	H
4	1.394	31.32	PK	29.5	-31.7	.7	29.82	-	-	74	-44.18	0-360	100	V
5	3.128	30.47	PK	32.8	-29.6	.7	34.37	-	-	74	-39.63	0-360	200	V
6	4.561	29.89	PK	33.9	-28.6	.5	35.69	-	-	74	-38.31	0-360	200	V

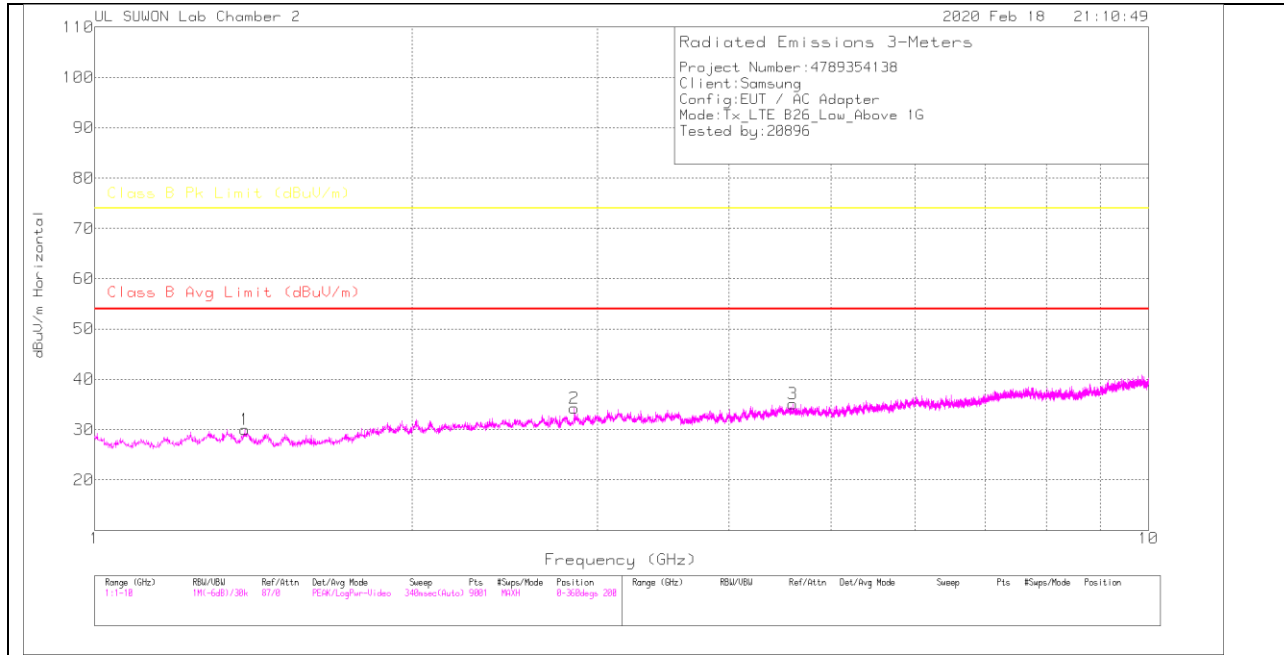
PK – Peak Detector

Note: Unwanted emissions on the harmonic frequency were generated from the call-simulator with the TX and RX signals.

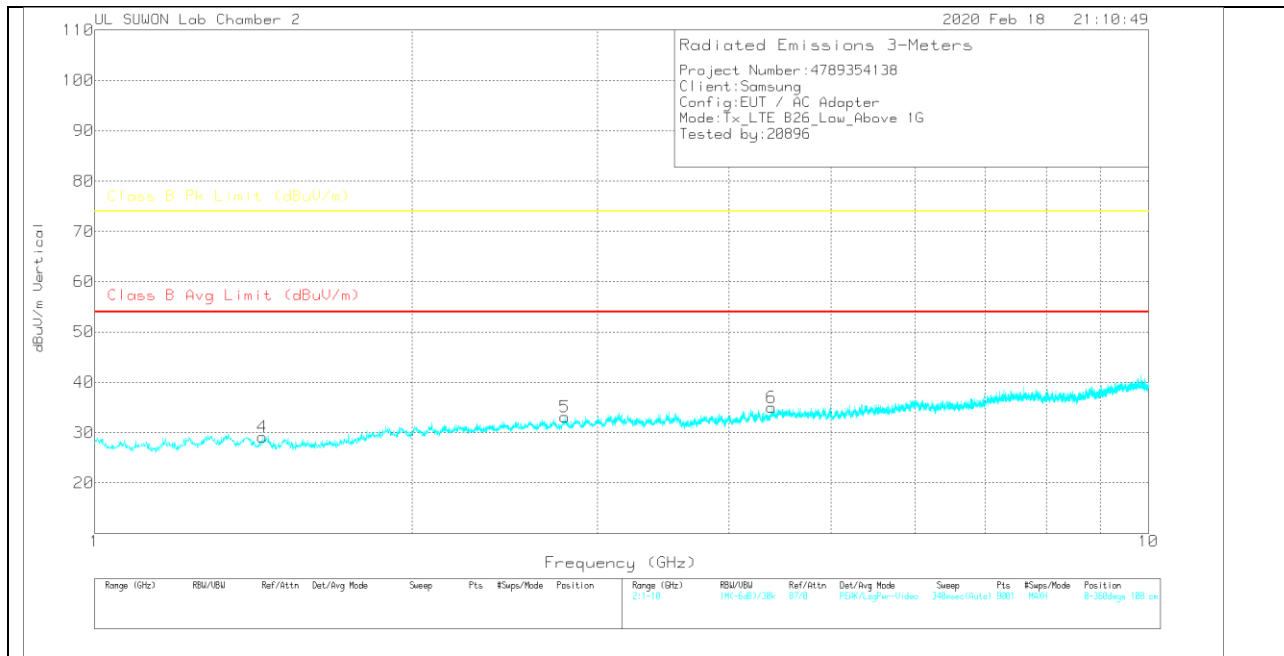
### 7.5. Above 1 GHz in the LTE Band 26

#### LOW CHANNEL(860.5 MHz)

#### HORIZONTAL PEAK PLOT



#### VERTICAL PEAK PLOT



DATA

Trace Markers

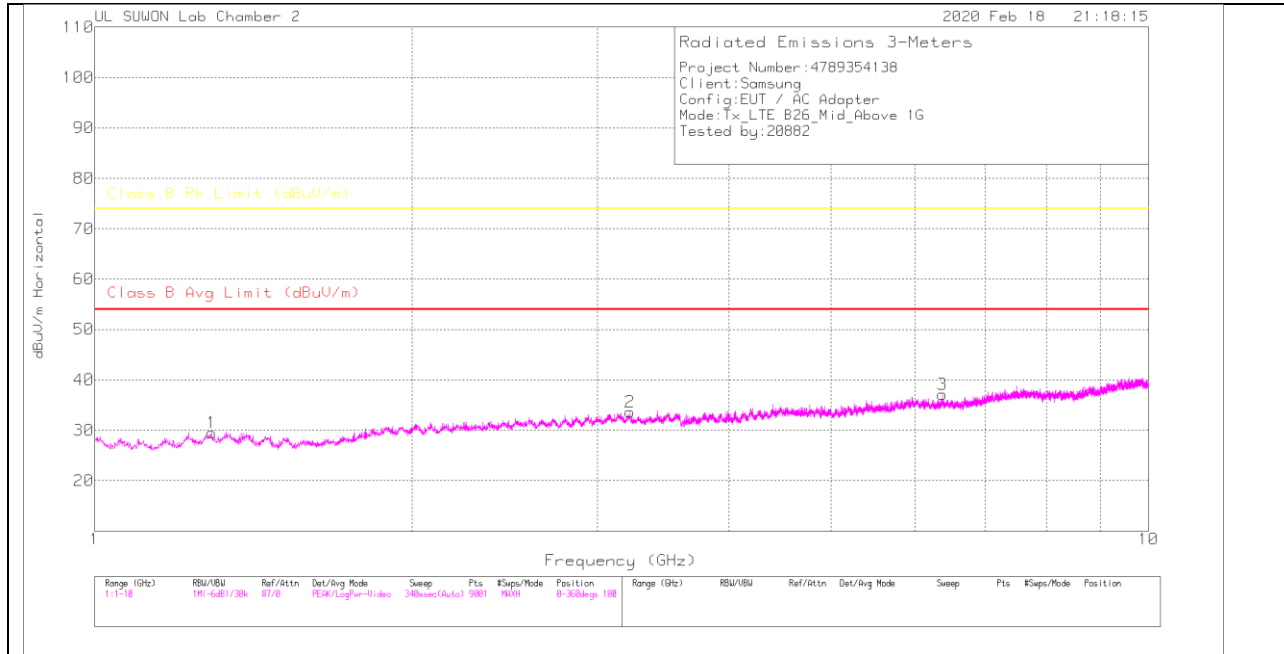
Marker	Frequency (GHz)	Meter Reading (dBu)	Det	3117_00168724	1-18GHz[dB]	1GHz_HP[dB]	Corrected Reading dBu/m	Class B Avg Limit (dBu/m)	Av(CISPR)Margin (dB)	Class B Pk Limit (dBu/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.388	31.49	PK	29.5	-31.7	.7	29.99	-	-	74	-44.01	0-360	200	H
2	2.851	31.11	PK	32.1	-29.7	.8	34.31	-	-	74	-39.69	0-360	200	H
3	4.599	29.51	PK	33.9	-28.8	.5	35.11	-	-	74	-38.89	0-360	200	H
4	1.443	30.94	PK	29.1	-31.6	.7	29.14	-	-	74	-44.86	0-360	200	V
5	2.795	30.22	PK	32	-29.8	.7	33.12	-	-	74	-40.88	0-360	200	V
6	4.386	29.44	PK	33.7	-28.6	.5	35.04	-	-	74	-38.96	0-360	100	V

PK – Peak Detector

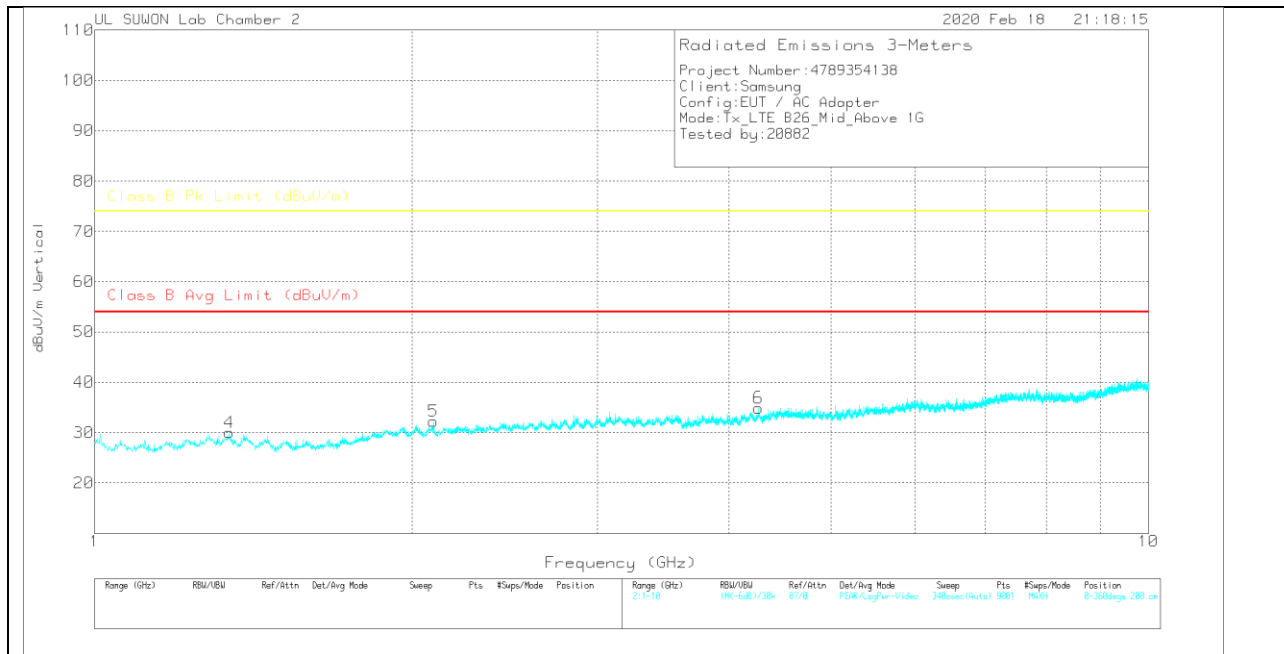
Note: Unwanted emissions on the harmonic frequency were generated from the call-simulator with the TX and RX signals.

**MID CHANNEL(876.5 MHz)**

**HORIZONTAL PEAK PLOT**



**VERTICAL PEAK PLOT**



DATA

Trace Markers

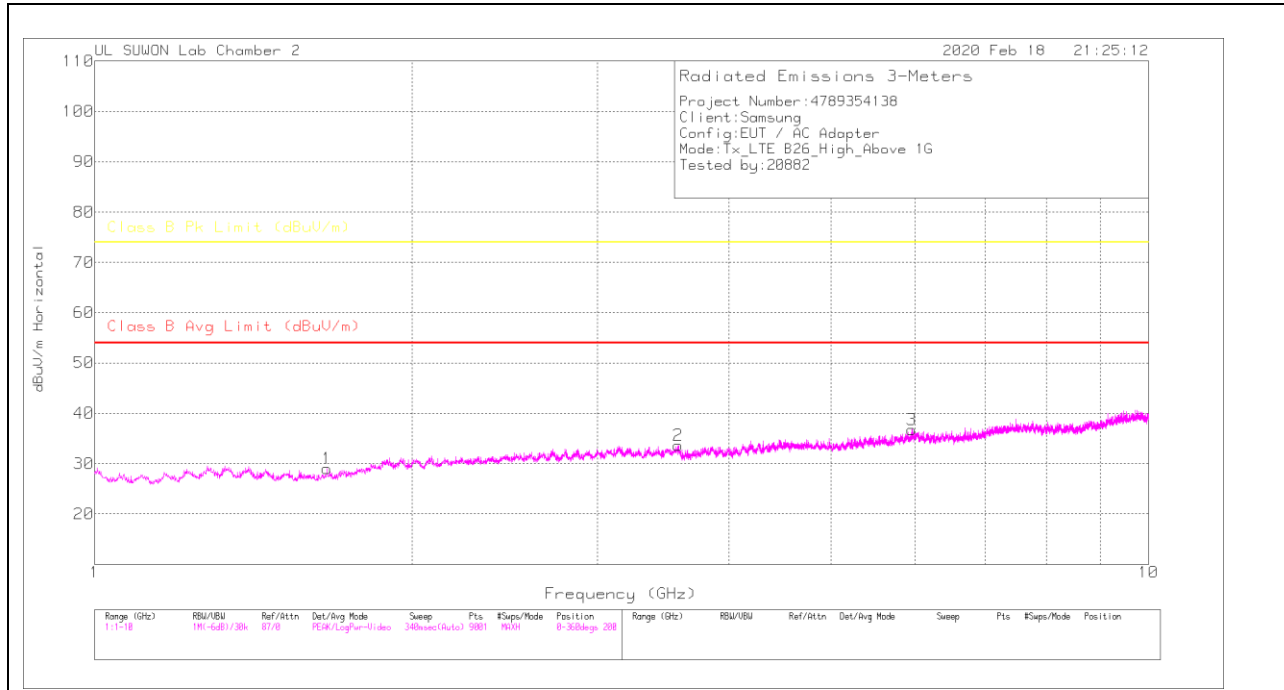
Marker	Frequency (GHz)	Meter Reading (dBu)	Det	3117_00168724	1-18GHz[dB]	1GHz_HP[dB]	Corrected Reading dBu/m	Class B Avg Limit (dBu/m)	Av(CISPR)Margin (dB)	Class B Pk Limit (dBu/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.291	31.03	PK	29.6	-31.9	.8	29.53	-	-	74	-44.47	0-360	200	H
2	3.221	29.71	PK	32.9	-29.7	.7	33.61	-	-	74	-40.39	0-360	100	H
3	6.372	28.14	PK	35.2	-26.7	.5	37.14	-	-	74	-36.86	0-360	100	H
4	1.341	31.3	PK	29.7	-31.7	.7	30	-	-	74	-44	0-360	100	V
5	2.097	31.01	PK	31.3	-30.7	.6	32.21	-	-	74	-41.79	0-360	200	V
6	4.265	29.54	PK	33.5	-28.6	.5	34.94	-	-	74	-39.06	0-360	200	V

PK – Peak Detector

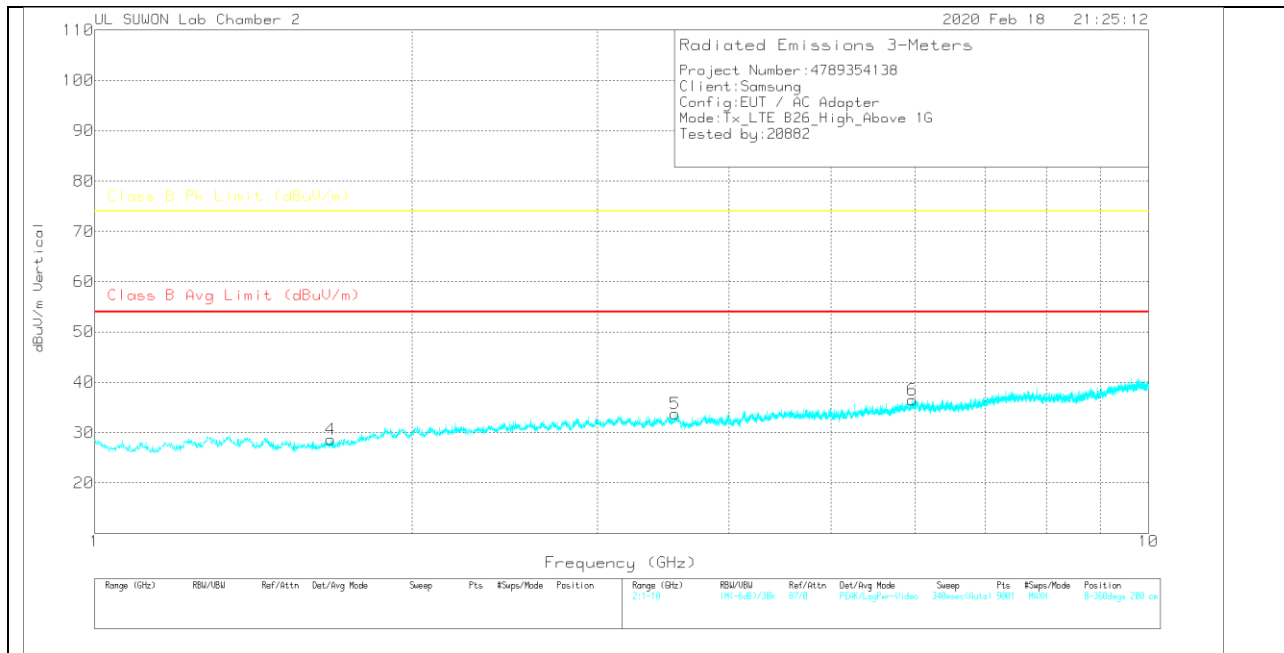
Note: Unwanted emissions on the harmonic frequency were generated from the call-simulator with the TX and RX signals.

**HIGH CHANNEL(892.5 MHz)**

**HORIZONTAL PEAK PLOT**



**VERTICAL PEAK PLOT**





**DATA**

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBu)	Det	3117_00168724	1-18GHz[dB]	1GHz_HP[dB]	Corrected Reading dBu/m	Class B Avg Limit (dBu/m)	Av(CISPR)Margin (dB)	Class B Pk Limit (dBu/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.661	31.31	PK	28.4	-31.4	.7	29.01	-	-	74	-44.99	0-360	200	H
2	3.577	29.69	PK	32.7	-29.3	.6	33.69	-	-	74	-40.31	0-360	200	H
3	5.958	28.62	PK	35	-27.4	.5	36.72	-	-	74	-37.28	0-360	200	H
4	1.674	30.74	PK	28.5	-31.3	.7	28.64	-	-	74	-45.36	0-360	200	V
5	3.553	29.41	PK	32.7	-29	.6	33.71	-	-	74	-40.29	0-360	100	V
6	5.972	28.41	PK	35	-27.4	.5	36.51	-	-	74	-37.49	0-360	200	V

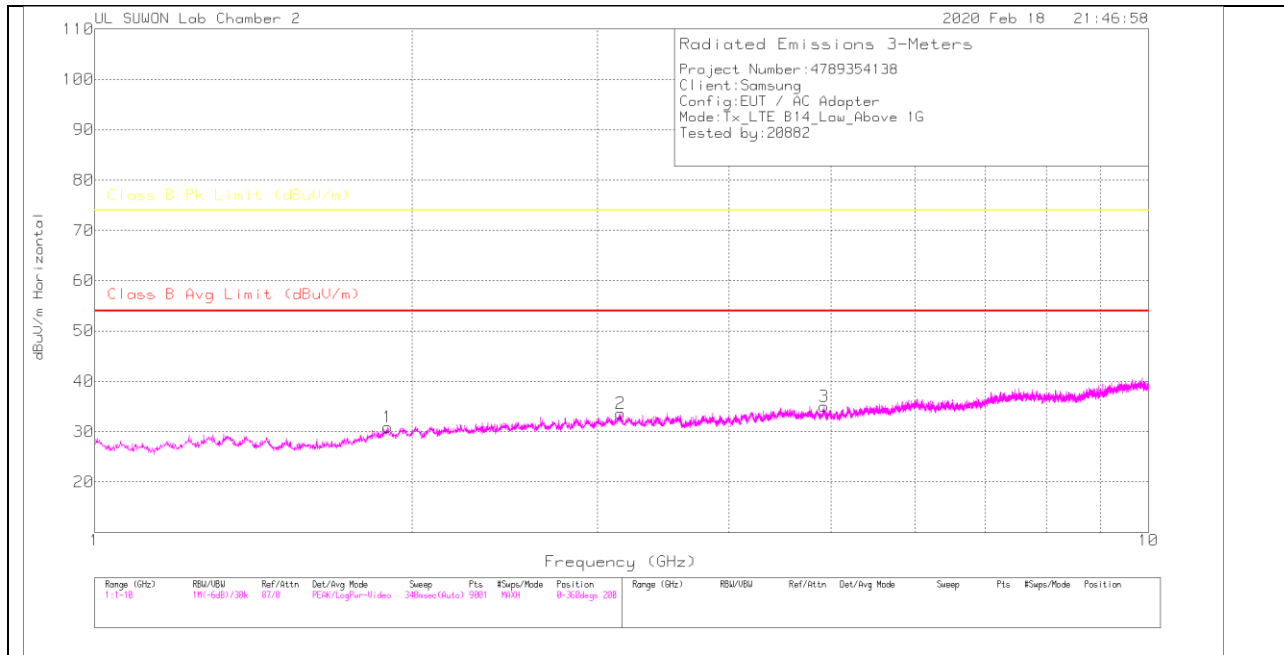
PK – Peak Detector

Note: Unwanted emissions on the harmonic frequency were generated from the call-simulator with the TX and RX signals.

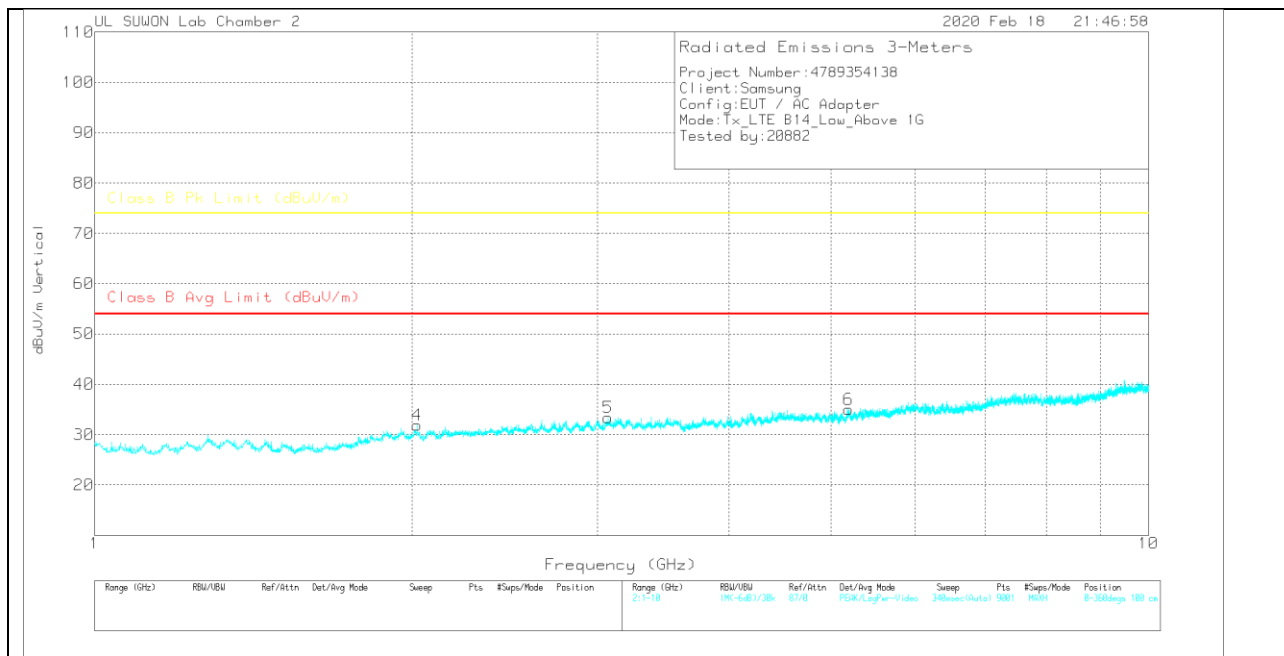
### 7.6. Above 1 GHz in the LTE Band 14

#### LOW CHANNEL(759.8 MHz)

#### HORIZONTAL PEAK PLOT



#### VERTICAL PEAK PLOT



**DATA**

Trace Markers

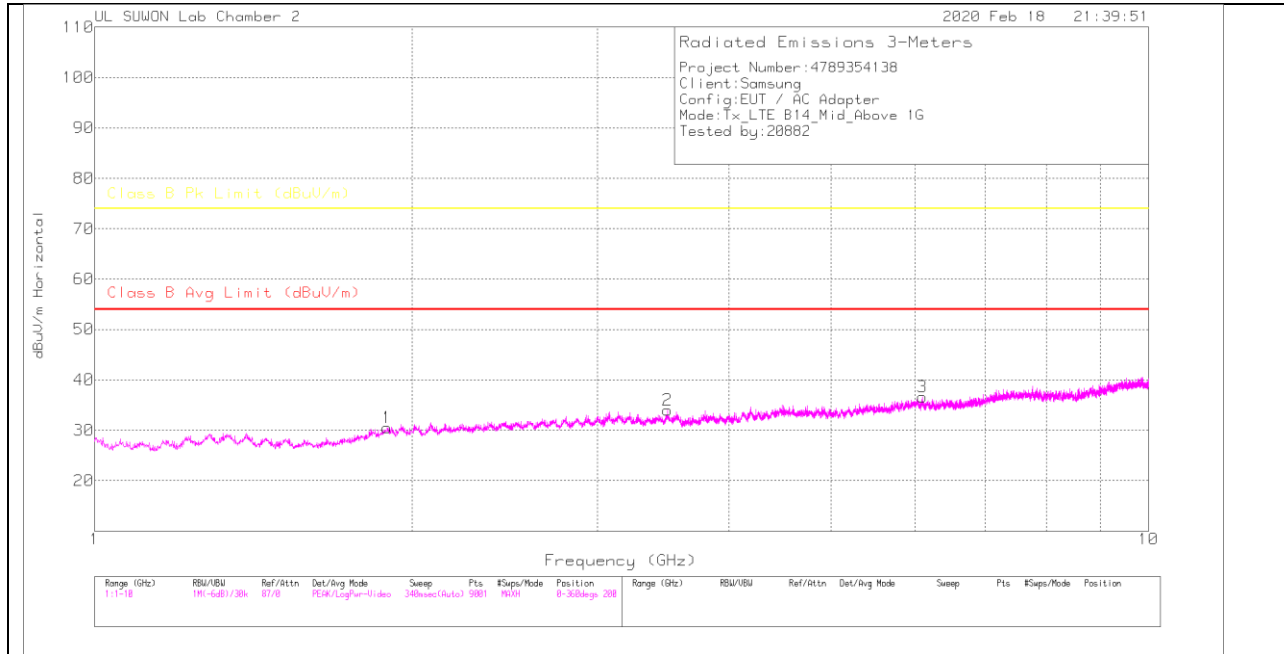
Marker	Frequency (GHz)	Meter Reading (dBu)	Det	3117_00168724	1-18GHz[dB]	1GHz_HP[dB]	Corrected Reading dBu/m	Class B Avg Limit (dBu/m)	Av(CISPR)Margin (dB)	Class B Pk Limit (dBu/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.898	30.34	PK	30.8	-30.9	.6	30.84	-	-	74	-43.16	0-360	100	H
2	3.157	29.66	PK	32.9	-29.6	.7	33.66	-	-	74	-40.34	0-360	200	H
3	4.921	28.81	PK	34	-28.3	.5	35.01	-	-	74	-38.99	0-360	100	H
4	2.023	30.9	PK	31.2	-30.8	.6	31.9	-	-	74	-42.1	0-360	200	V
5	3.071	29.94	PK	32.7	-30	.7	33.34	-	-	74	-40.66	0-360	100	V
6	5.189	27.89	PK	34.3	-27.7	.5	34.99	-	-	74	-39.01	0-360	200	V

PK – Peak Detector

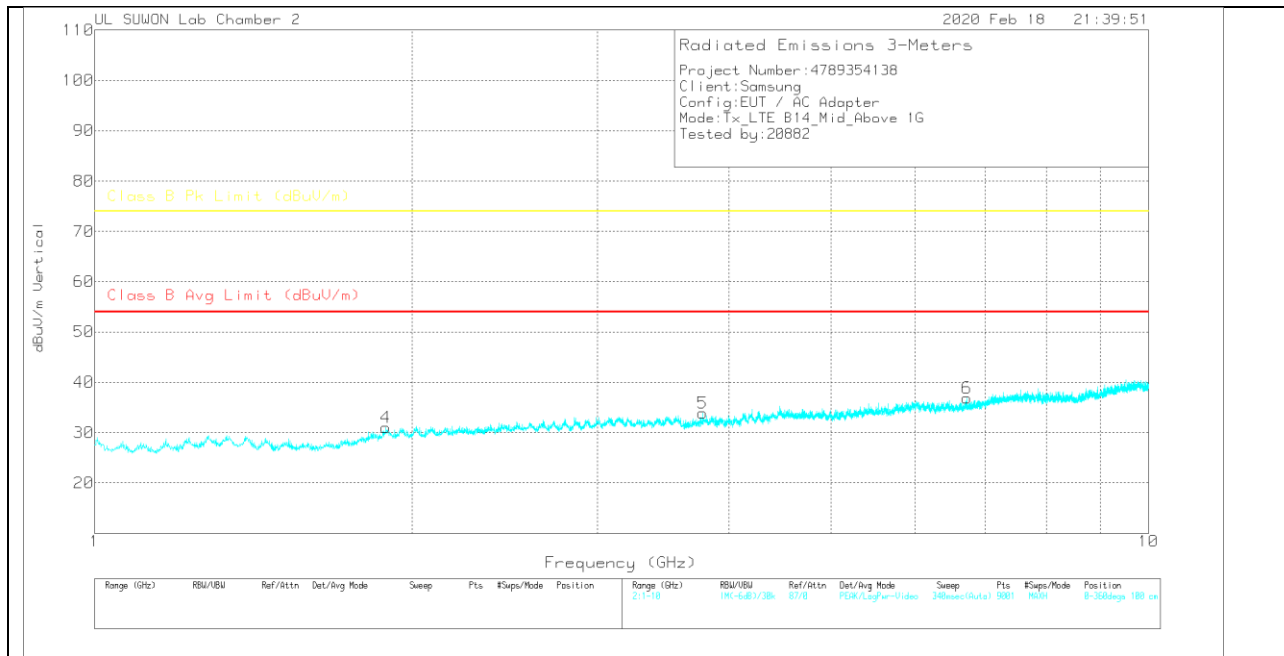
Note: Unwanted emissions on the harmonic frequency were generated from the call-simulator with the TX and RX signals.

**MID CHANNEL(763 MHz)**

**HORIZONTAL PEAK PLOT**



**VERTICAL PEAK PLOT**



DATA

Trace Markers

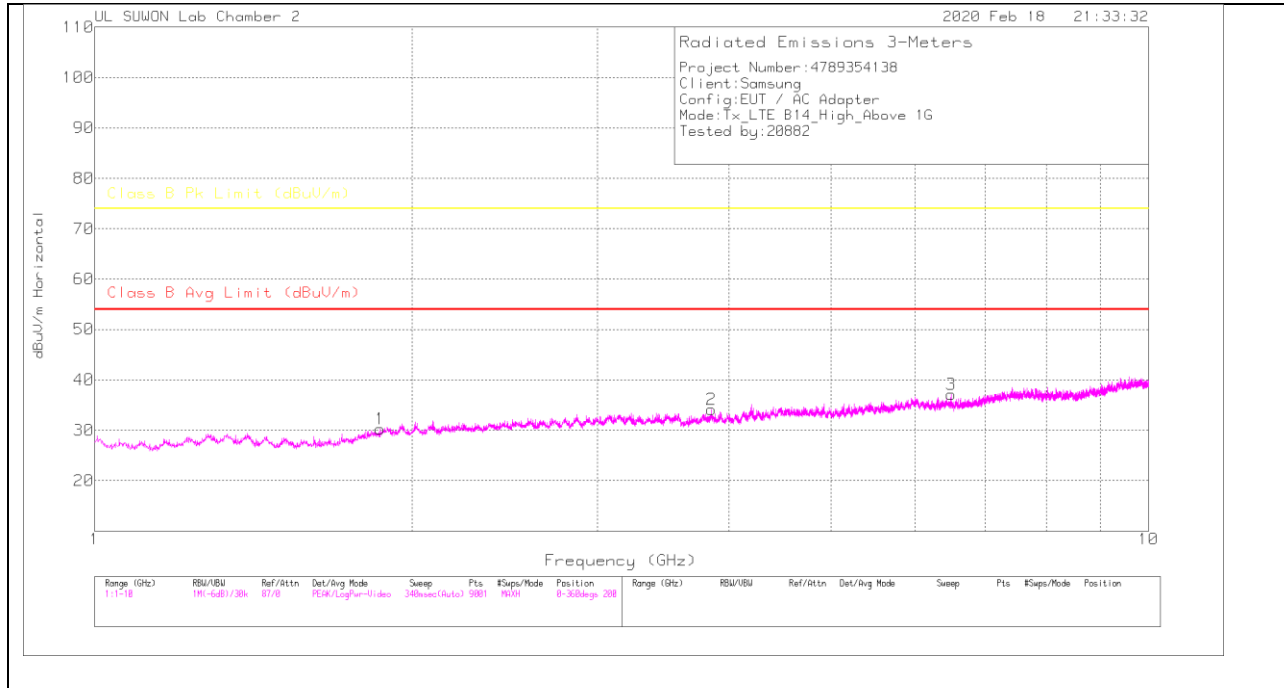
Marker	Frequency (GHz)	Meter Reading (dBu)	Det	3117_00168724	1-18GHz[dB]	1GHz_HP[dB]	Corrected Reading dBu/m	Class B Avg Limit (dBu/m)	Av(CISPR)Margin (dB)	Class B Pk Limit (dBu/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.894	29.96	PK	30.8	-30.9	.7	30.56	-	-	74	-43.44	0-360	100	H
2	3.497	29.57	PK	32.7	-28.9	.6	33.97	-	-	74	-40.03	0-360	100	H
3	6.106	28	PK	35.1	-27	.5	36.6	-	-	74	-37.4	0-360	100	H
4	1.889	30.56	PK	30.7	-30.9	.7	31.06	-	-	74	-42.94	0-360	200	V
5	3.776	29.16	PK	33.2	-29.1	.6	33.86	-	-	74	-40.14	0-360	200	V
6	6.721	26.99	PK	35.4	-26	.5	36.89	-	-	74	-37.11	0-360	100	V

PK – Peak Detector

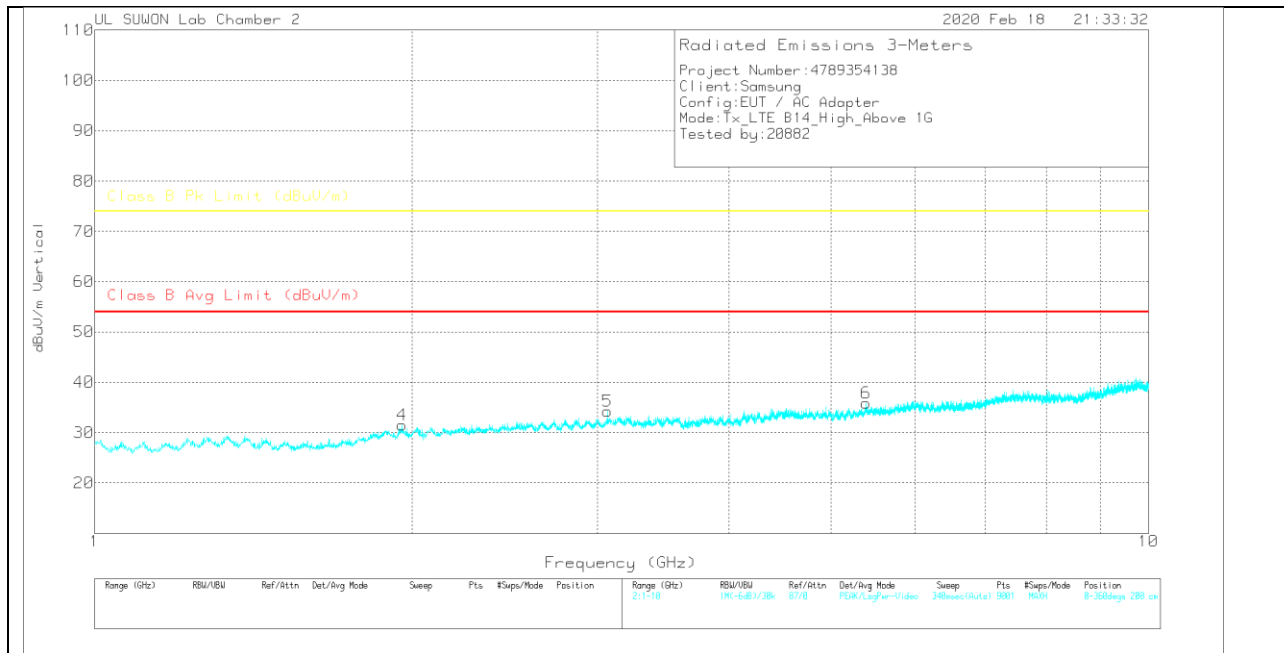
Note: Unwanted emissions on the harmonic frequency were generated from the call-simulator with the TX and RX signals.

**HIGH CHANNEL(766.2 MHz)**

**HORIZONTAL PEAK PLOT**



**VERTICAL PEAK PLOT**



**DATA**

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBu)	Det	3117_00168724	1-18GHz[dB]	1GHz_HP[dB]	Corrected Reading dBu/m	Class B Avg Limit (dBu/m)	Av(CISPR)Margin (dB)	Class B Pk Limit (dBu/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.866	30.16	PK	30.5	-31.1	.7	30.26	-	-	74	-43.74	0-360	200	H
2	3.849	29.21	PK	33.3	-28.9	.5	34.11	-	-	74	-39.89	0-360	100	H
3	6.497	27.78	PK	35.3	-26.4	.5	37.18	-	-	74	-36.82	0-360	100	H
4	1.958	30.74	PK	31.1	-30.9	.6	31.54	-	-	74	-42.46	0-360	200	V
5	3.067	30.73	PK	32.7	-29.9	.7	34.23	-	-	74	-39.77	0-360	100	V
6	5.393	28.86	PK	34.5	-28	.5	35.86	-	-	74	-38.14	0-360	100	V

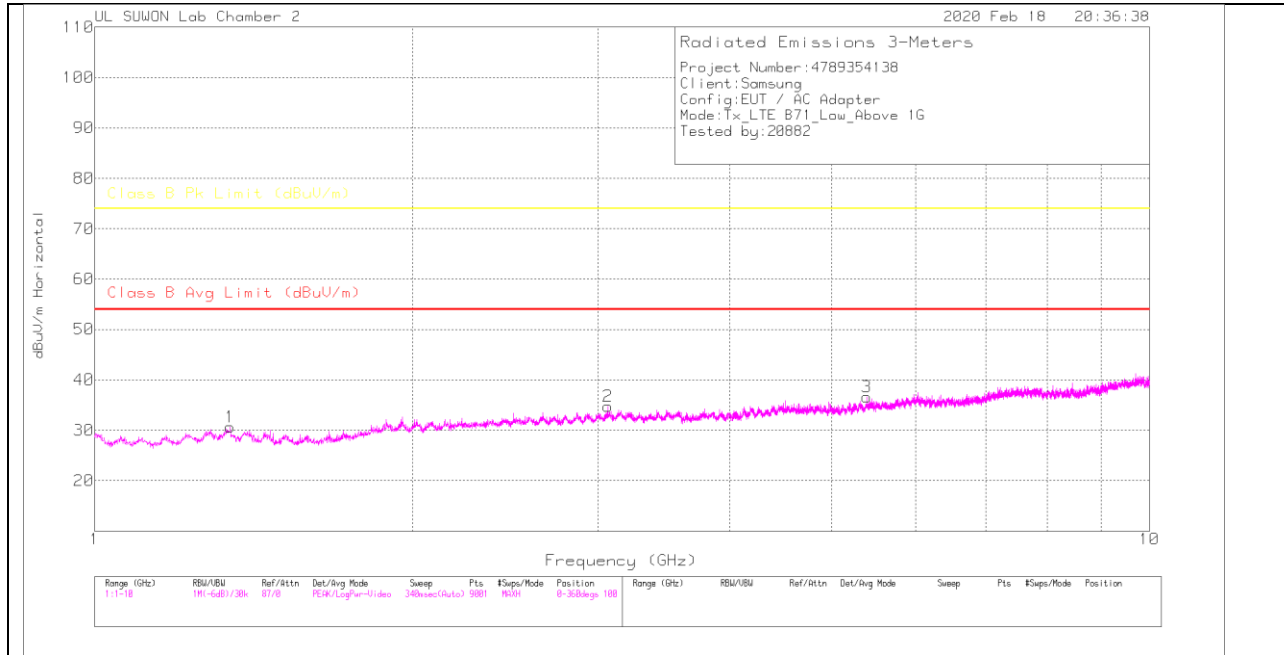
PK – Peak Detector

Note: Unwanted emissions on the harmonic frequency were generated from the call-simulator with the TX and RX signals.

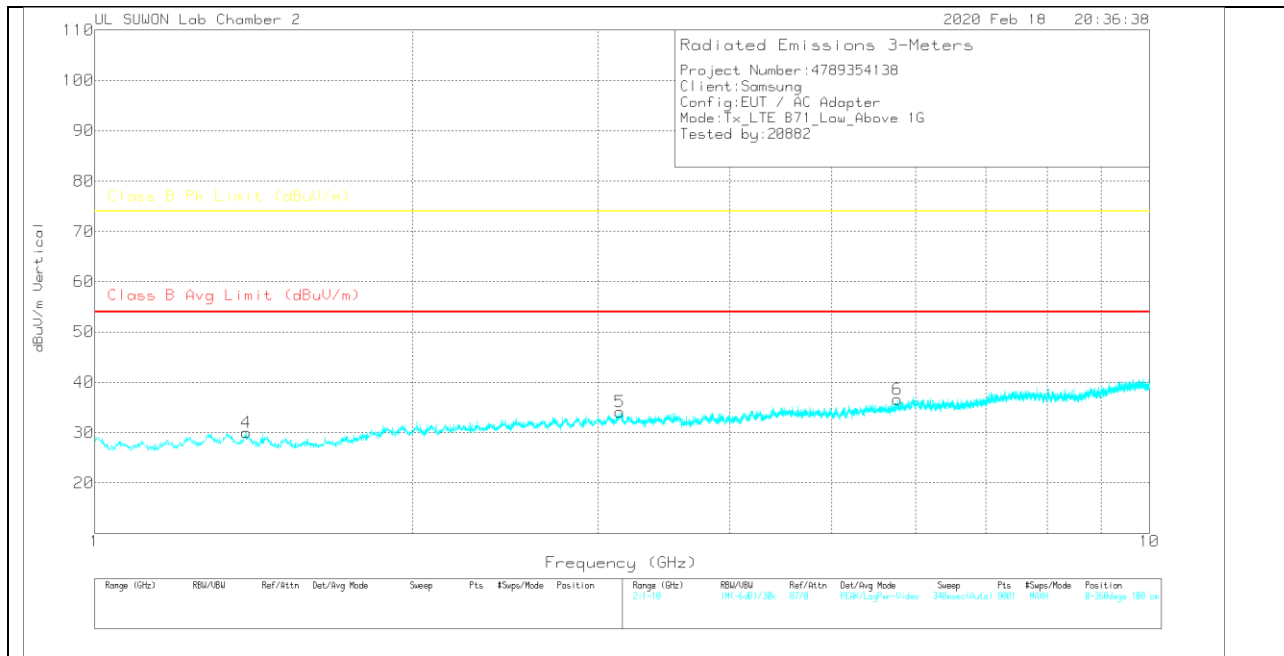
### 7.7. Above 1 GHz in the LTE Band 71

#### LOW CHANNEL(618.8 MHz)

#### HORIZONTAL PEAK PLOT



#### VERTICAL PEAK PLOT





DATA

Trace Markers

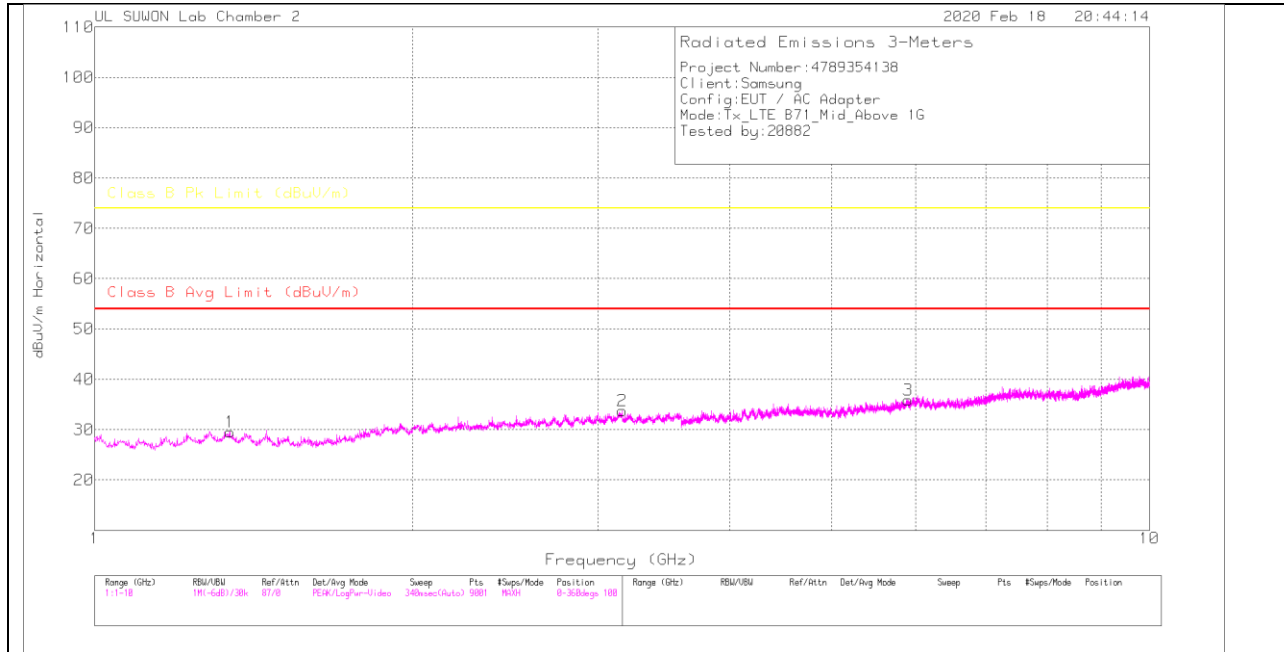
Marker	Frequency (GHz)	Meter Reading (dBu)	Det	3117_00168724	1-18GHz[dB]	1GHz_HP[dB]	Corrected Reading dBu/m	Class B Avg Limit (dBu/m)	Av(CISPR)Margin (dB)	Class B Pk Limit (dBu/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.344	31.99	PK	29.7	-31.7	.7	30.69	-	-	74	-43.31	0-360	100	H
2	3.066	31.36	PK	32.7	-30	.7	34.76	-	-	74	-39.24	0-360	100	H
3	5.396	29.62	PK	34.5	-28	.5	36.62	-	-	74	-37.38	0-360	100	H
4	1.392	31.51	PK	29.5	-31.7	.7	30.01	-	-	74	-43.99	0-360	200	V
5	3.146	30.13	PK	32.9	-29.6	.7	34.13	-	-	74	-39.87	0-360	200	V
6	5.767	28.62	PK	34.7	-27.2	.5	36.62	-	-	74	-37.38	0-360	100	V

PK – Peak Detector

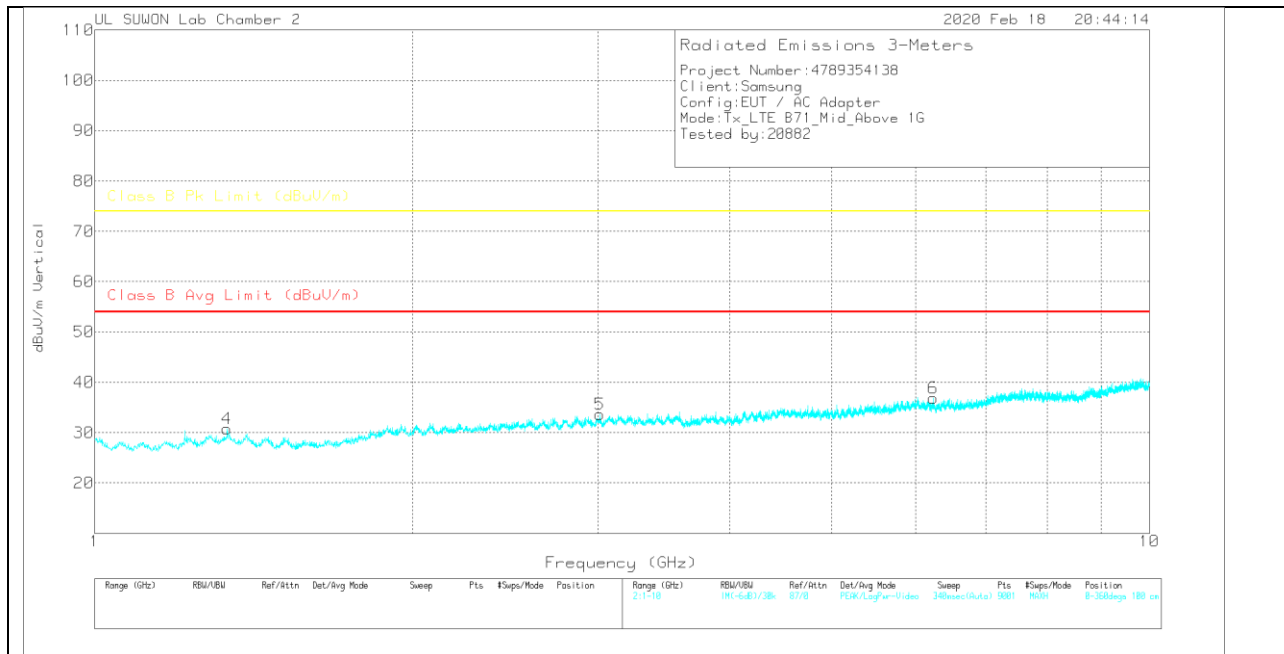
Note: Unwanted emissions on the harmonic frequency were generated from the call-simulator with the TX and RX signals.

**MID CHANNEL(634.5 MHz)**

**HORIZONTAL PEAK PLOT**



**VERTICAL PEAK PLOT**



**DATA**

Trace Markers

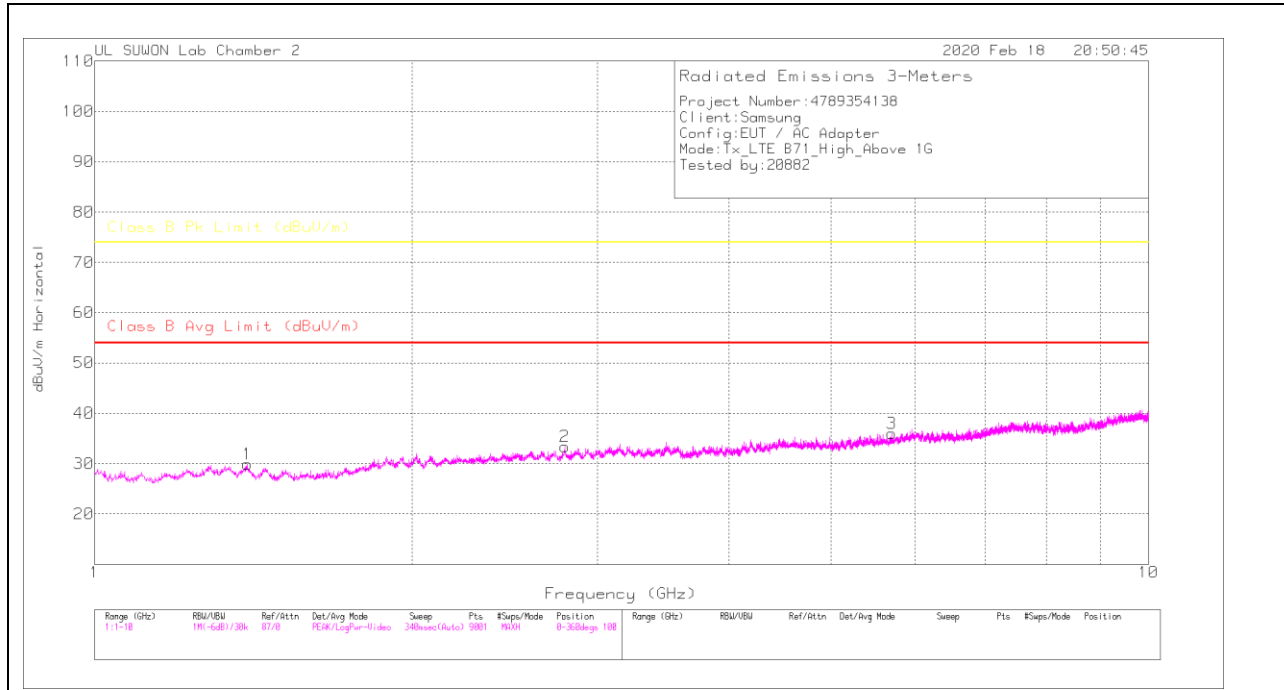
Marker	Frequency (GHz)	Meter Reading (dBu)	Det	3117_00168724	1-18GHz[dB]	1GHz_HP[dB]	Corrected Reading dBu/m	Class B Avg Limit (dBu/m)	Av(CISPR)Margin (dB)	Class B Pk Limit (dBu/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.343	30.77	PK	29.7	-31.7	.7	29.47	-	-	74	-44.53	0-360	200	H
2	3.163	29.83	PK	32.9	-29.7	.7	33.73	-	-	74	-40.27	0-360	200	H
3	5.902	27.9	PK	34.9	-27.4	.5	35.9	-	-	74	-38.1	0-360	100	H
4	1.335	32.03	PK	29.7	-31.7	.7	30.73	-	-	74	-43.27	0-360	200	V
5	3.012	30.68	PK	32.5	-30.2	.7	33.68	-	-	74	-40.32	0-360	100	V
6	6.239	28.11	PK	35.2	-26.9	.5	36.91	-	-	74	-37.09	0-360	100	V

PK – Peak Detector

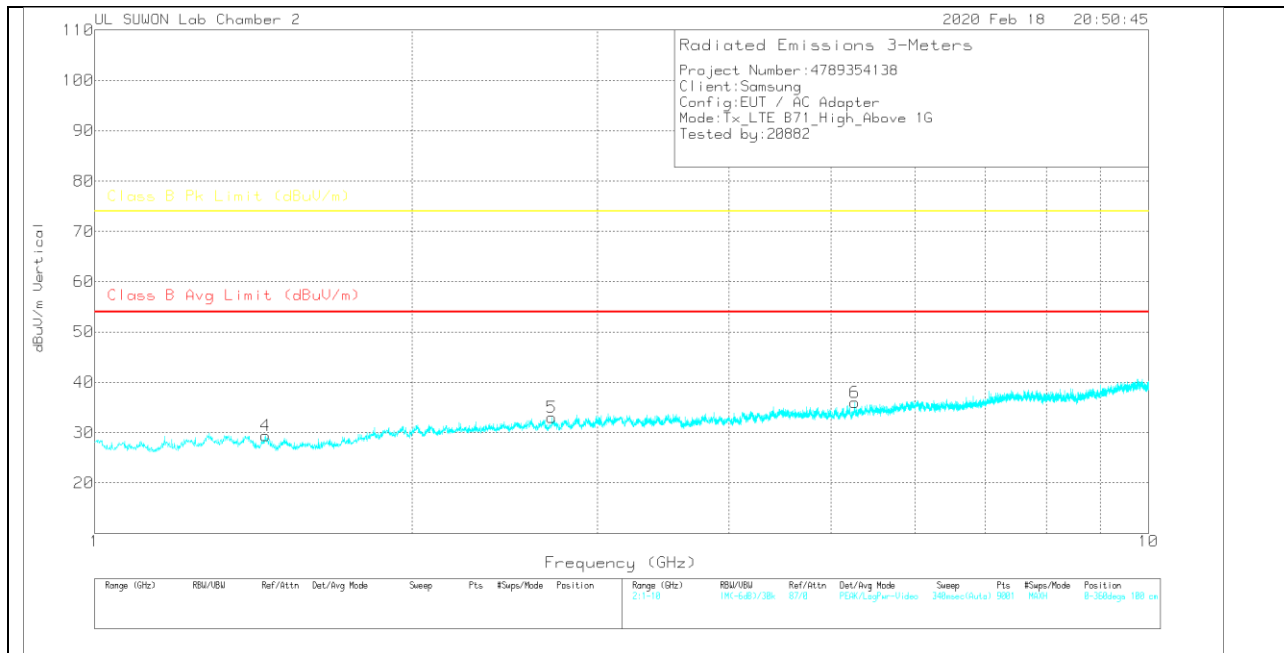
Note: Unwanted emissions on the harmonic frequency were generated from the call-simulator with the TX and RX signals.

**HIGH CHANNEL(650.2 MHz)**

**HORIZONTAL PEAK PLOT**



**VERTICAL PEAK PLOT**



DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBu)	Det	3117_00168724	1-18GHz(dB)	1GHz_HP(dB)	Corrected Reading dBu/m	Class B Avg Limit (dBu/m)	Av(CISPR)Margin (dB)	Class B Pk Limit (dBu/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.396	31.45	PK	29.4	-31.7	.7	29.85	-	-	74	-44.15	0-360	200	H
2	2.793	30.51	PK	32	-29.8	.7	33.41	-	-	74	-40.59	0-360	200	H
3	5.703	28.55	PK	34.7	-27.7	.5	36.05	-	-	74	-37.95	0-360	200	H
4	1.453	31.35	PK	29	-31.6	.7	29.45	-	-	74	-44.55	0-360	100	V
5	2.715	30.26	PK	32.1	-30.2	.8	32.96	-	-	74	-41.04	0-360	100	V
6	5.264	29.36	PK	34.4	-28.2	.5	36.06	-	-	74	-37.94	0-360	100	V

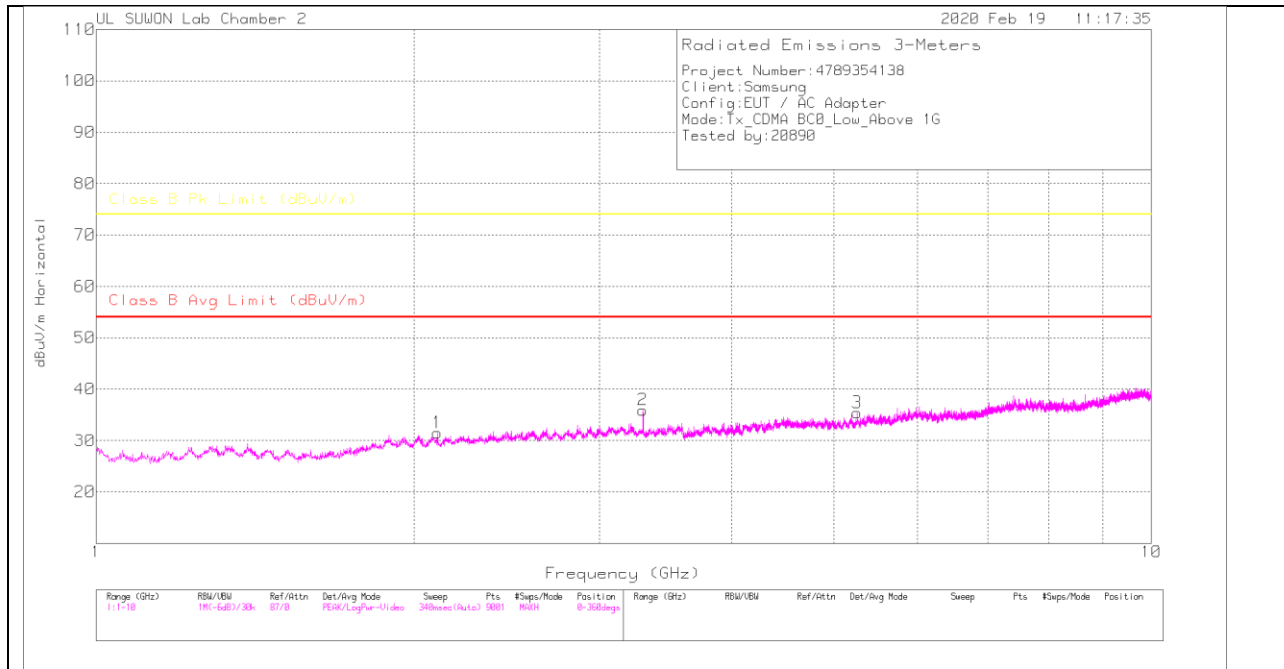
PK – Peak Detector

Note: Unwanted emissions on the harmonic frequency were generated from the call-simulator with the TX and RX signals.

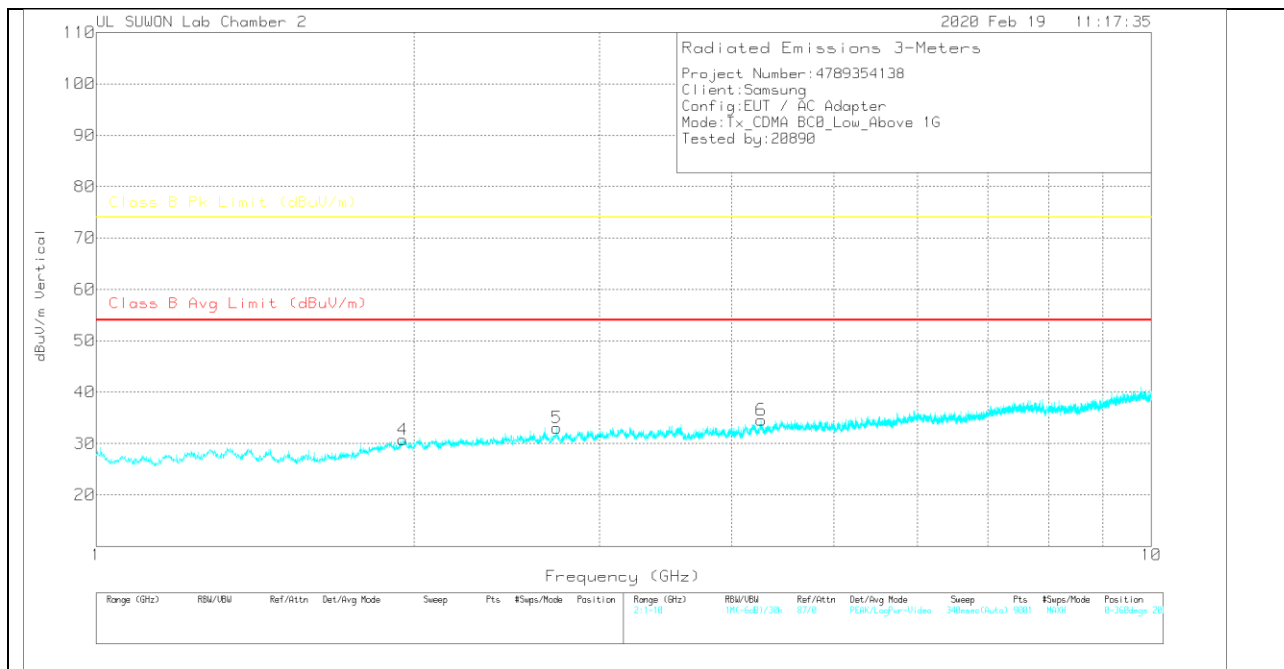
### 7.8. Above 1 GHz in the CDMA BC0

#### LOW CHANNEL(860 MHz)

#### HORIZONTAL PEAK PLOT



#### VERTICAL PEAK PLOT



**DATA**

Trace Markers

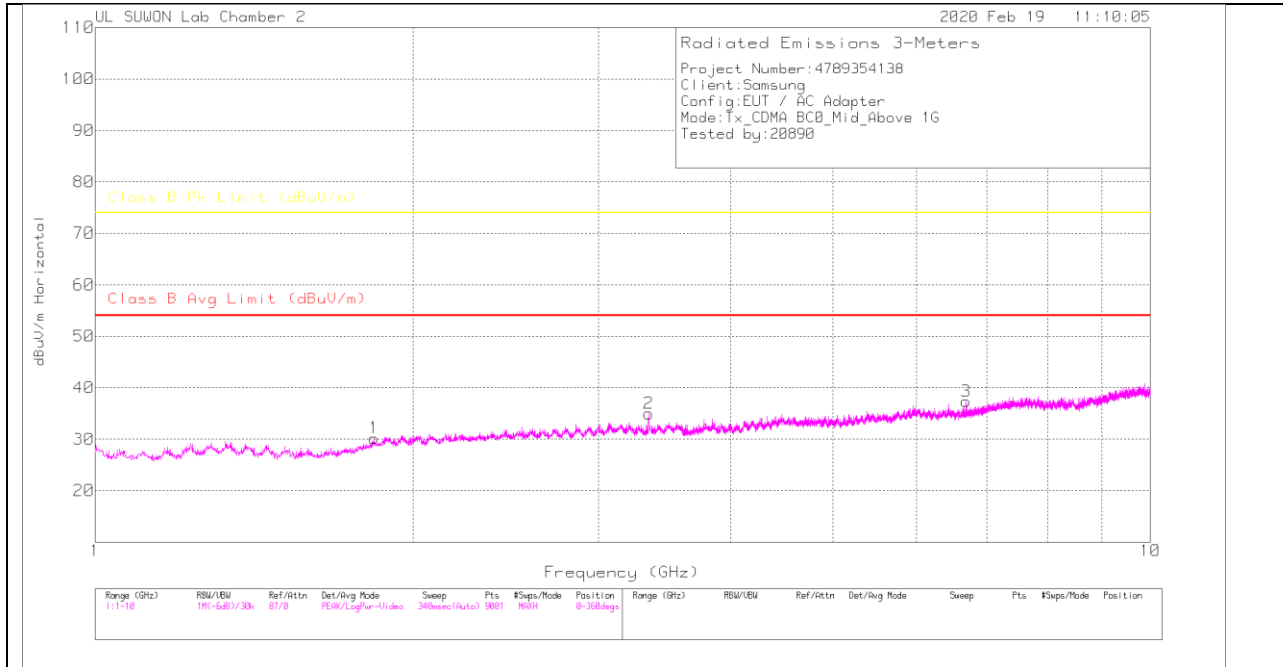
Marker	Frequency (GHz)	Meter Reading (dBu)	Det	3117_00168724	1-18GHz[dB]	1GHz_HP[dB]	Corrected Reading dBu/m	Class B Avg Limit (dBu/m)	Av(CISPR)Margin (dB)	Class B Pk Limit (dBu/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	2.106	30.13	PK	31.3	-30.6	.7	31.53	-	-	74	-42.47	0-360	200	H
2	3.298	32.56	PK	32.6	-29.9	.7	35.96	-	-	74	-38.04	0-360	200	H
3	5.282	28.62	PK	34.4	-28.1	.5	35.42	-	-	74	-38.58	0-360	200	H
4	1.953	29.94	PK	31.1	-30.9	.6	30.74	-	-	74	-43.26	0-360	100	V
5	2.732	30.25	PK	32.1	-30.1	.8	33.05	-	-	74	-40.95	0-360	200	V
6	4.269	29.16	PK	33.5	-28.6	.5	34.56	-	-	74	-39.44	0-360	100	V

PK – Peak Detector

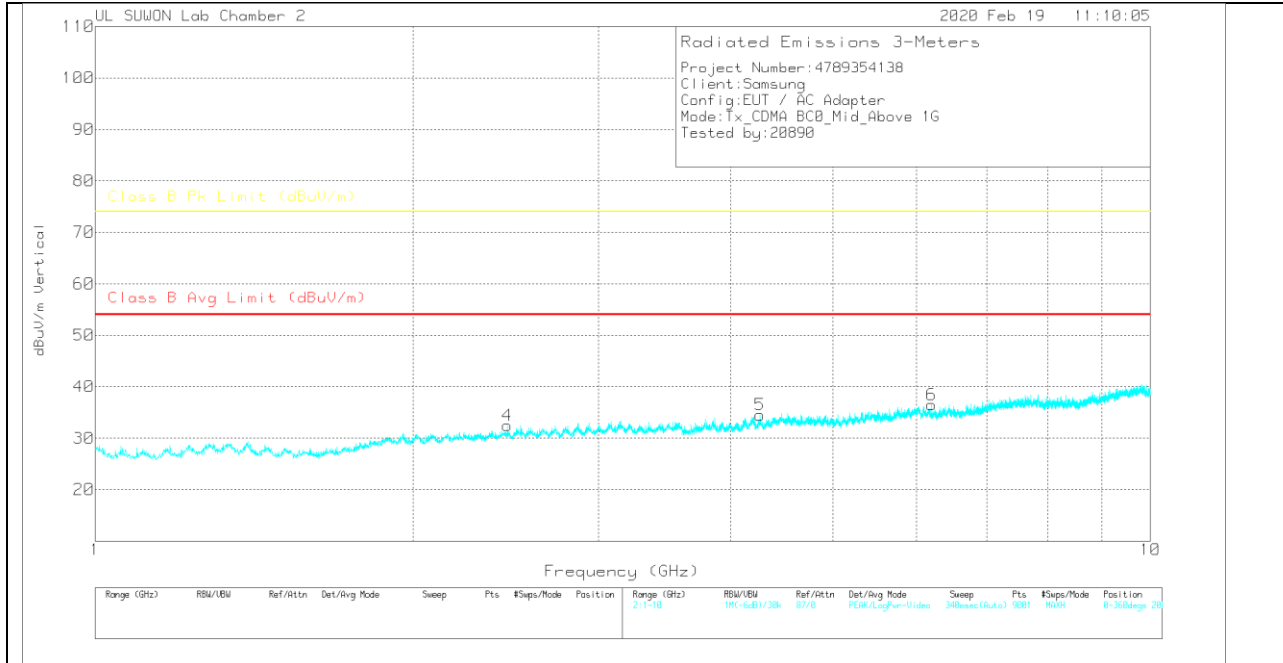
Note: Unwanted emissions on the harmonic frequency were generated from the call-simulator with the TX and RX signals.

**MID CHANNEL(877 MHz)**

**HORIZONTAL PEAK PLOT**



**VERTICAL PEAK PLOT**





**DATA**

Trace Markers

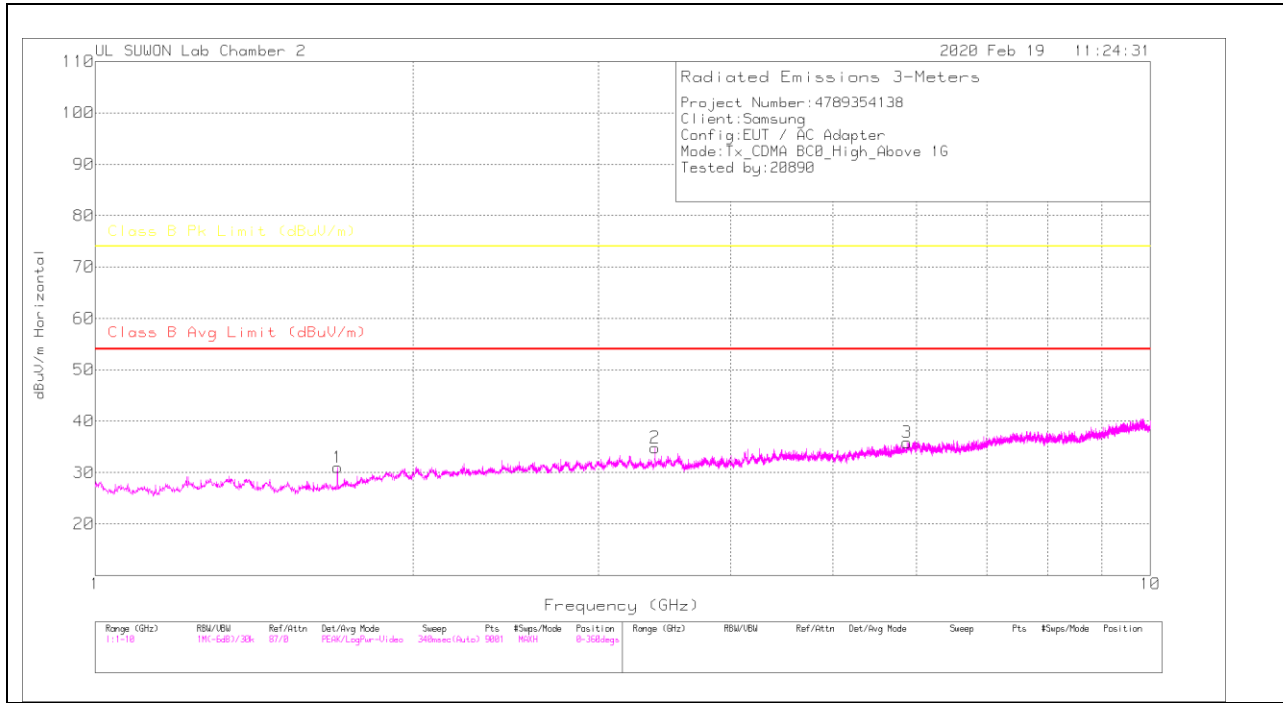
Marker	Frequency (GHz)	Meter Reading (dBu)	Det	3117_00168724	1-18GHz[dB]	1GHz_HP[dB]	Corrected Reading dBu/m	Class B Avg Limit (dBu/m)	Av(CISPR)Margin (dB)	Class B Pk Limit (dBu/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.838	30.31	PK	30.2	-31	.7	30.21	-	-	74	-43.79	0-360	200	H
2	3.346	31.49	PK	32.6	-29.8	.7	34.99	-	-	74	-39.01	0-360	200	H
3	6.692	27.86	PK	35.4	-26.4	.5	37.36	-	-	74	-36.64	0-360	200	H
4	2.459	30.15	PK	31.8	-30.2	.7	32.45	-	-	74	-41.55	0-360	200	V
5	4.267	29.1	PK	33.5	-28.6	.5	34.5	-	-	74	-39.5	0-360	100	V
6	6.203	27.58	PK	35.2	-26.8	.5	36.48	-	-	74	-37.52	0-360	200	V

PK – Peak Detector

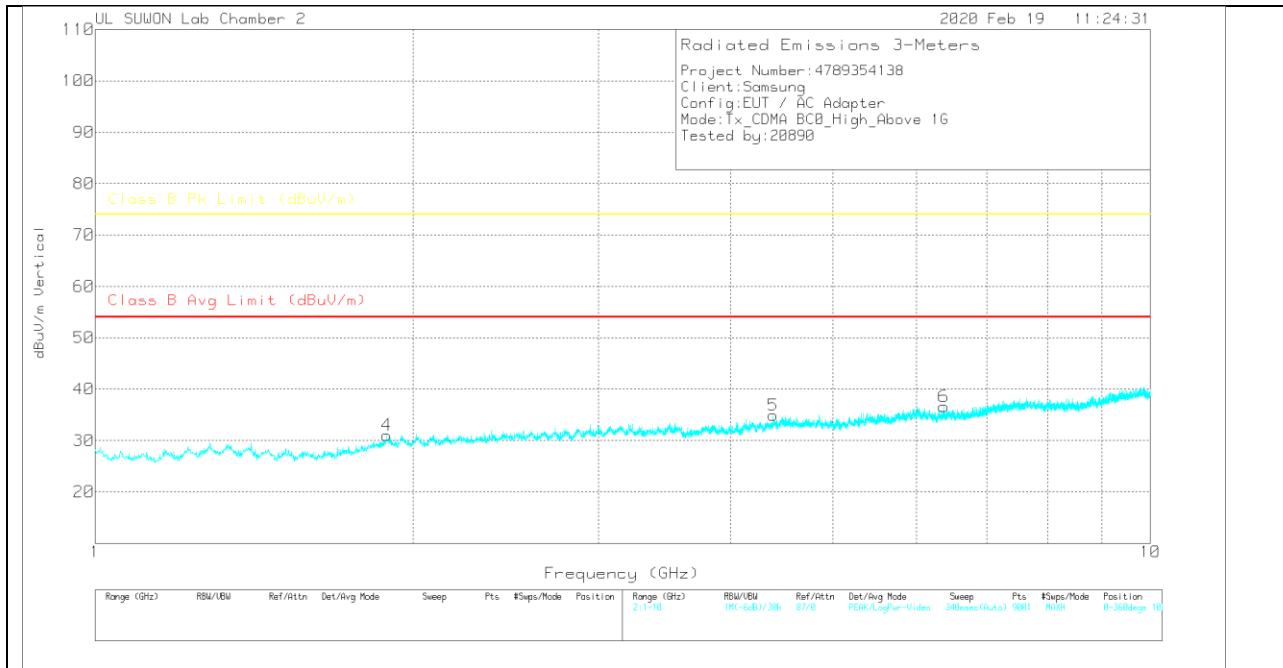
Note: Unwanted emissions on the harmonic frequency were generated from the call-simulator with the TX and RX signals.

**HIGH CHANNEL(894 MHz)**

**HORIZONTAL PEAK PLOT**



**VERTICAL PEAK PLOT**



DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBu)	Det	3117_00168724	1-18GHz[dB]	1GHz_HP[dB]	Corrected Reading dBu/m	Class B Avg Limit (dBu/m)	Av(CISPR)Margin (dB)	Class B Pk Limit (dBu/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.697	32.88	PK	28.6	-31.2	.7	30.98	-	-	74	-43.02	0-360	200	H
2	3.394	30.74	PK	32.6	-29.2	.7	34.84	-	-	74	-39.16	0-360	200	H
3	5.88	27.75	PK	34.9	-27.3	.5	35.85	-	-	74	-38.15	0-360	200	H
4	1.889	30.51	PK	30.7	-30.9	.7	31.01	-	-	74	-42.99	0-360	100	V
5	4.393	29.31	PK	33.7	-28.6	.5	34.91	-	-	74	-39.09	0-360	200	V
6	6.373	27.5	PK	35.2	-26.6	.5	36.6	-	-	74	-37.4	0-360	100	V

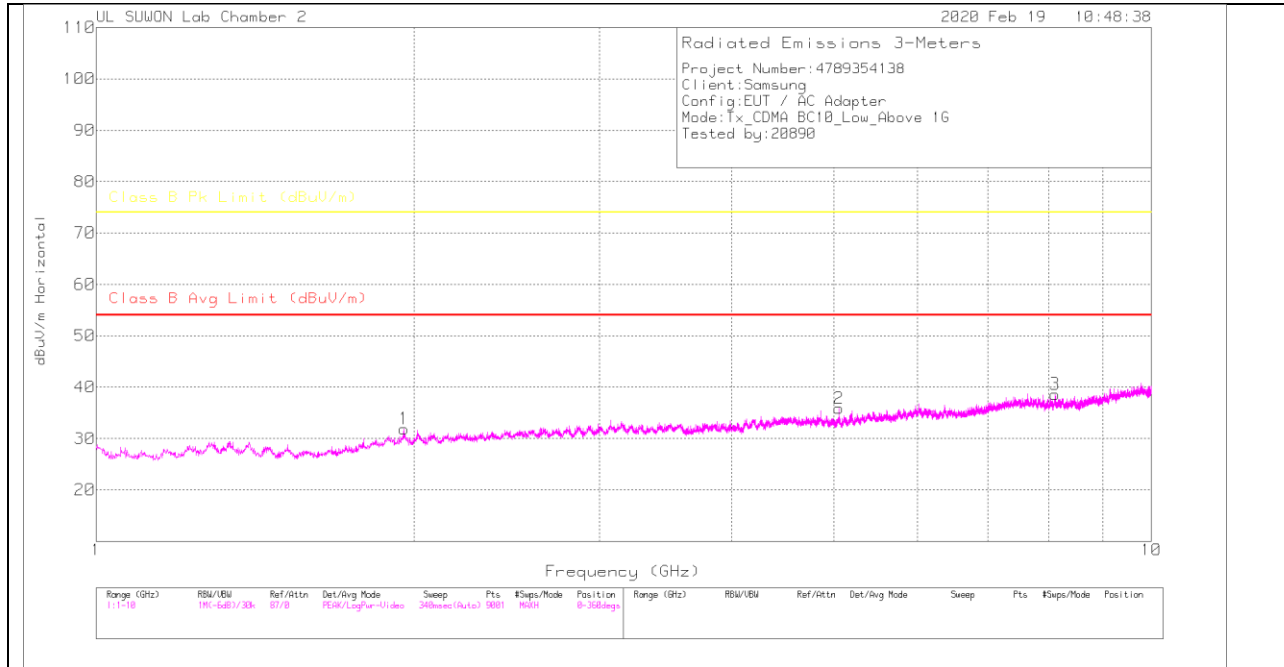
PK – Peak Detector

Note: Unwanted emissions on the harmonic frequency were generated from the call-simulator with the TX and RX signals.

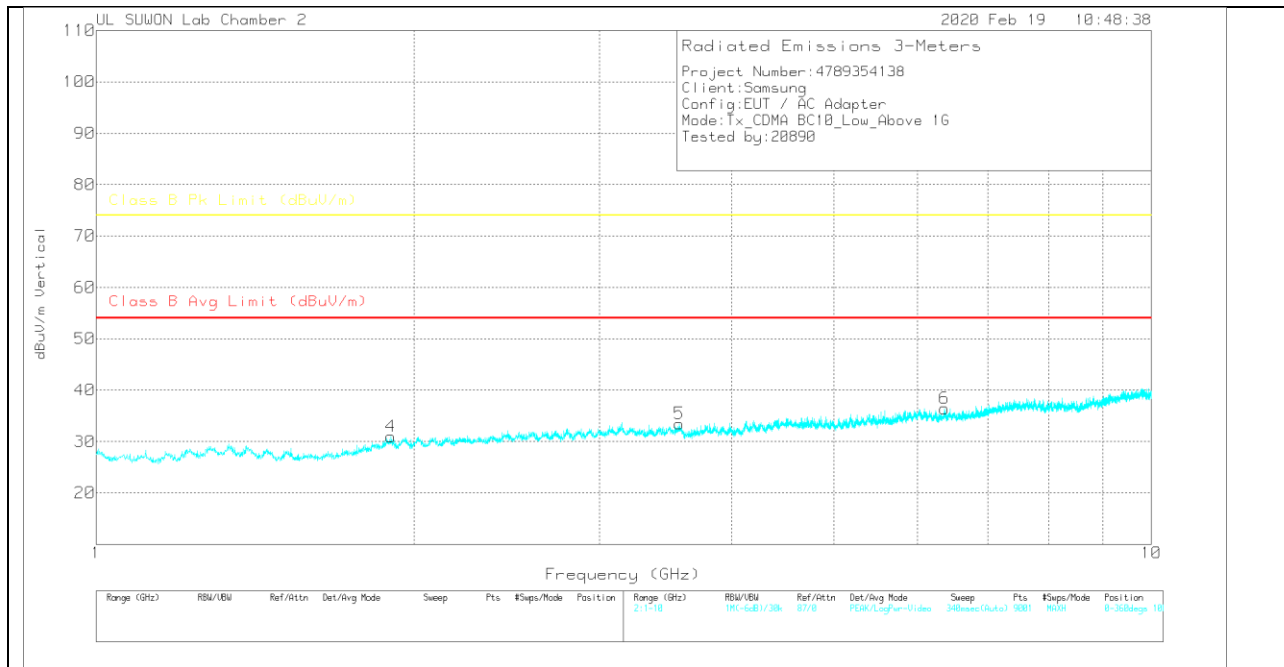
### 7.9. Above 1 GHz in the CDMA BC10

#### LOW CHANNEL(851 MHz)

#### HORIZONTAL PEAK PLOT



#### VERTICAL PEAK PLOT



**DATA**

Trace Markers

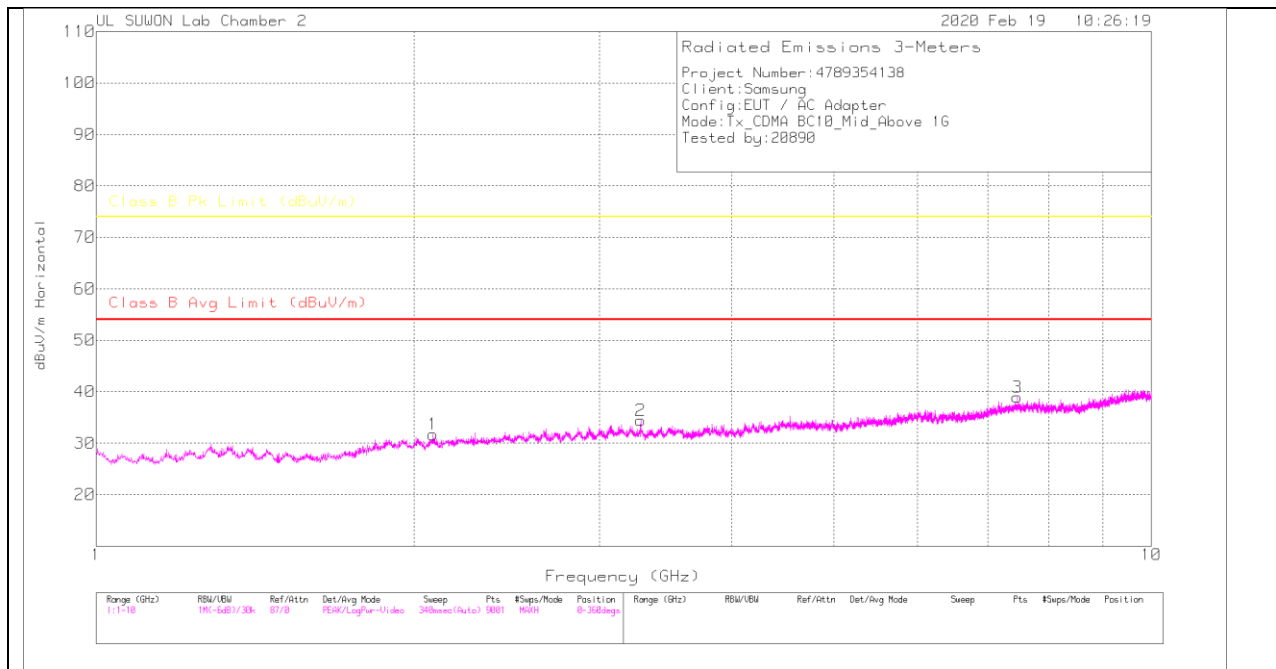
Marker	Frequency (GHz)	Meter Reading (dBu)	Det	3117_00168724	1-18GHz[dB]	1GHz_HP[dB]	Corrected Reading dBu/m	Class B Avg Limit (dBu/m)	Av(CISPR)Margin (dB)	Class B Pk Limit (dBu/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.957	31.09	PK	31.1	-30.9	.6	31.89	-	-	74	-42.11	0-360	200	H
2	5.056	29.29	PK	34.2	-28.1	.5	35.89	-	-	74	-38.11	0-360	200	H
3	8.108	26.21	PK	35.9	-24.2	.7	38.61	-	-	74	-35.39	0-360	200	H
4	1.903	30.36	PK	30.9	-30.9	.6	30.96	-	-	74	-43.04	0-360	200	V
5	3.571	29.37	PK	32.7	-29.2	.6	33.47	-	-	74	-40.53	0-360	200	V
6	6.37	27.45	PK	35.2	-26.7	.5	36.45	-	-	74	-37.55	0-360	100	V

PK – Peak Detector

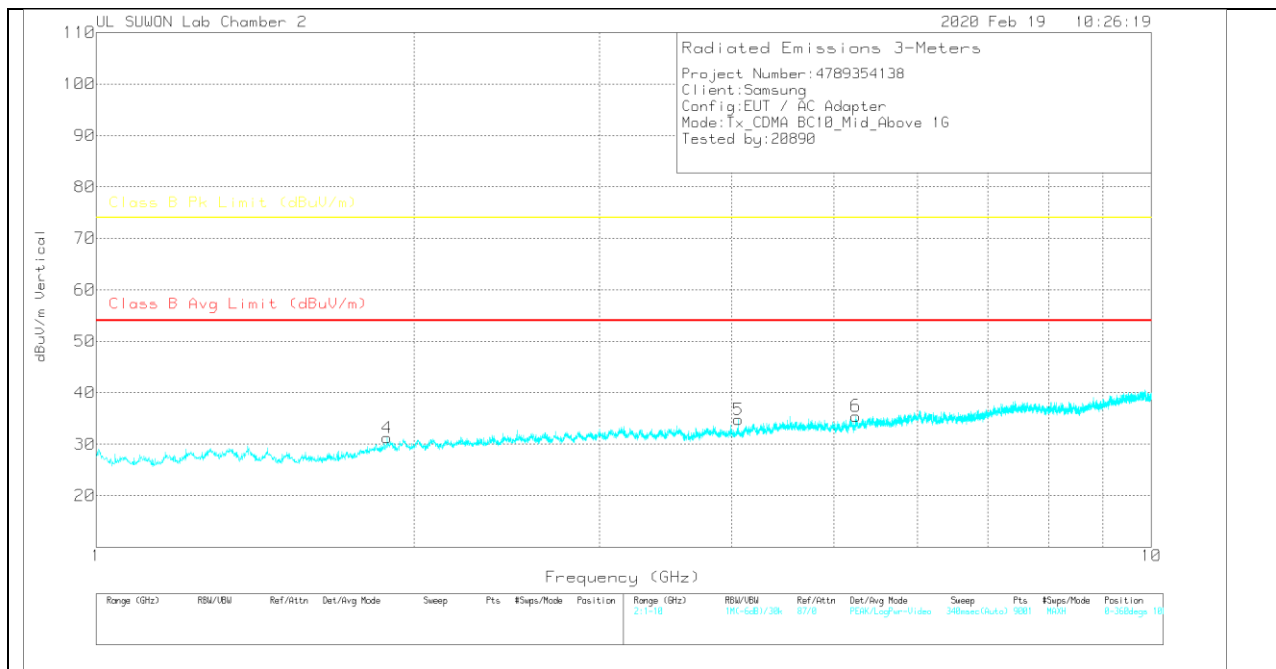
Note: Unwanted emissions on the harmonic frequency were generated from the call-simulator with the TX and RX signals.

**MID CHANNEL(895.5 MHz)**

**HORIZONTAL PEAK PLOT**



**VERTICAL PEAK PLOT**



DATA

Trace Markers

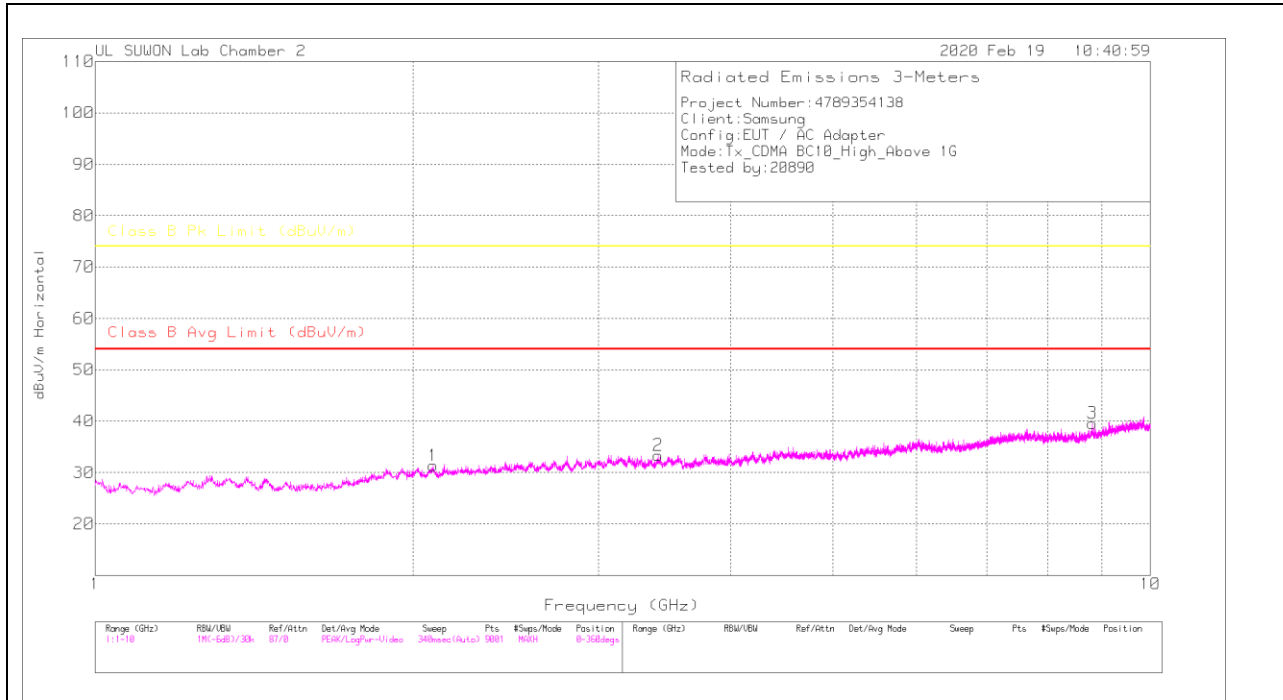
Marker	Frequency (GHz)	Meter Reading (dBu)	Det	3117_00168724	1-18GHz[dB]	1GHz_HP[dB]	Corrected Reading dBu/m	Class B Avg Limit (dBu/m)	Av(CISPR)Margin (dB)	Class B Pk Limit (dBu/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	2.086	30.49	PK	31.3	-30.7	.6	31.69	-	-	74	-42.31	0-360	100	H
2	3.281	30.91	PK	32.7	-29.9	.7	34.41	-	-	74	-39.59	0-360	200	H
3	7.462	26.94	PK	36.2	-24.8	.6	38.94	-	-	74	-35.06	0-360	100	H
4	1.887	30.73	PK	30.7	-30.9	.7	31.23	-	-	74	-42.77	0-360	100	V
5	4.059	29.79	PK	33.4	-28.9	.5	34.79	-	-	74	-39.21	0-360	100	V
6	5.248	28.54	PK	34.4	-28	.5	35.44	-	-	74	-38.56	0-360	100	V

PK – Peak Detector

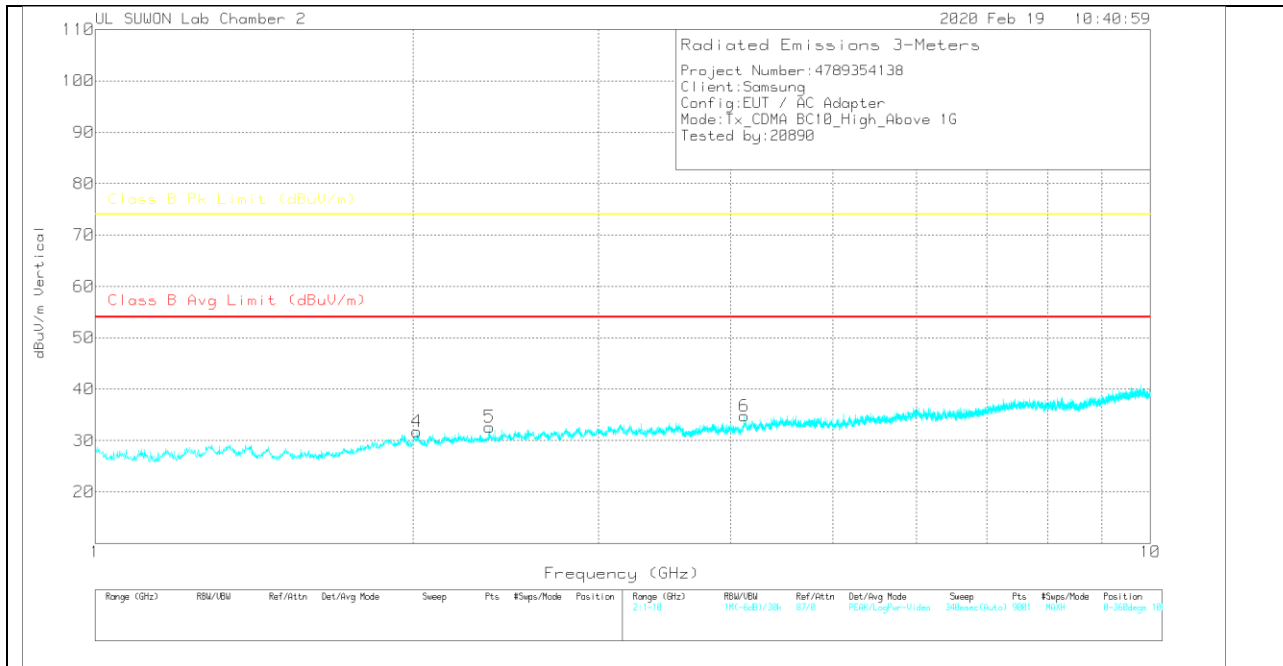
Note: Unwanted emissions on the harmonic frequency were generated from the call-simulator with the TX and RX signals.

**HIGH CHANNEL(940 MHz)**

**HORIZONTAL PEAK PLOT**



**VERTICAL PEAK PLOT**





**DATA**

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBu)	Det	3117_00168724	1-18GHz(dB)	1GHz_HP[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	2.091	30.14	PK	31.3	-30.7	.6	31.34	-	-	74	-42.66	0-360	200	H
2	3.415	29.25	PK	32.6	-29.2	.7	33.35	-	-	74	-40.65	0-360	100	H
3	8.815	25.71	PK	36.3	-23.1	.7	39.61	-	-	74	-34.39	0-360	100	H
4	2.018	30.87	PK	31.2	-30.9	.6	31.77	-	-	74	-42.23	0-360	200	V
5	2.364	30.94	PK	31.6	-30.6	.7	32.64	-	-	74	-41.36	0-360	200	V
6	4.124	29.38	PK	33.4	-28.5	.5	34.78	-	-	74	-39.22	0-360	100	V

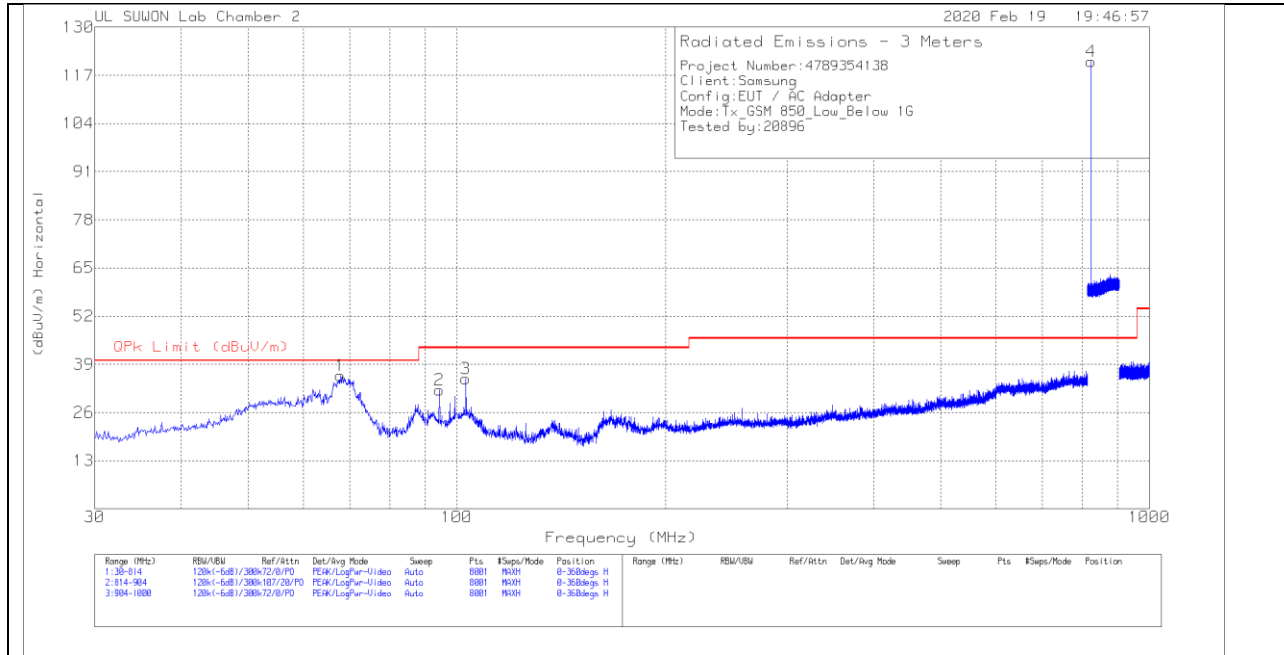
PK – Peak Detector

Note: Unwanted emissions on the harmonic frequency were generated from the call-simulator with the TX and RX signals.

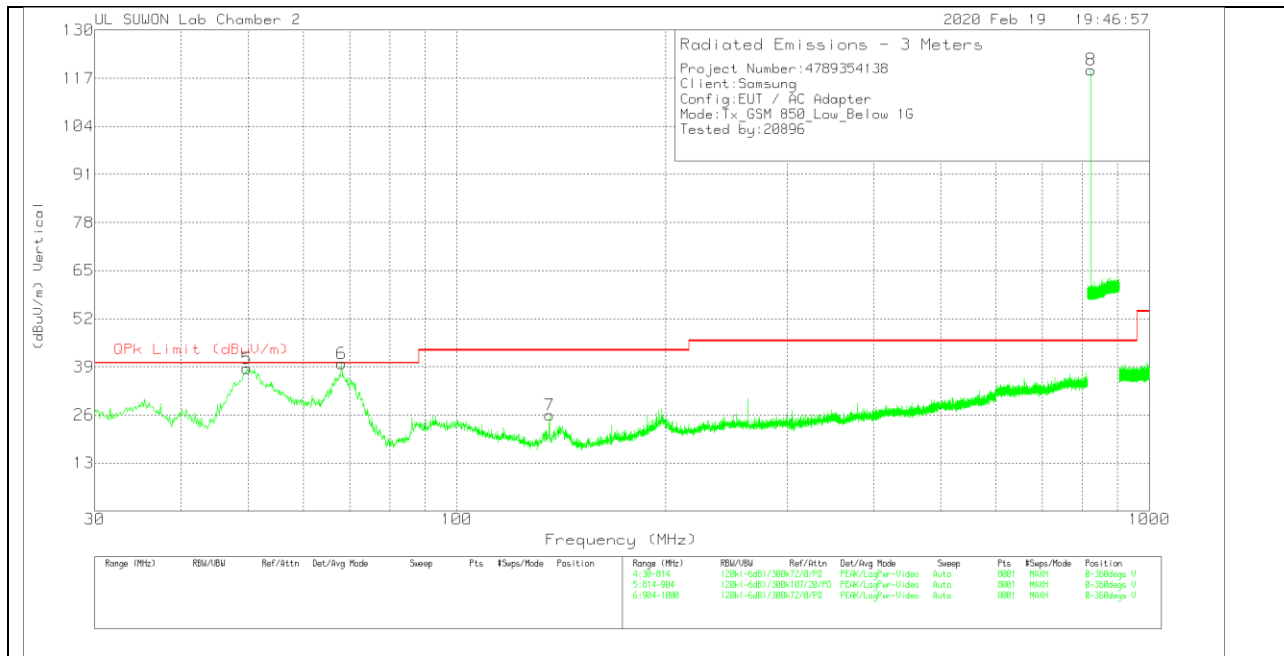
### 7.10. Below 1 GHz in the GSM850

#### 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	67.828	18.78	Pk	16.3	.9	35.98	40	-4.02	0-360	400	H
2	94.386	14.03	Pk	17	1.1	32.13	43.52	-11.39	0-360	200	H
3	103.01	16.3	Pk	17.7	1.1	35.1	43.52	-8.42	0-360	100	H
4	824.26	90.59	Pk	26.9	3.2	120.69	46.02	74.67	0-360	100	H
5	49.796	18.09	Pk	19.7	.8	38.59	40	-1.41	0-360	100	V
6	68.22	22.79	Pk	16.2	.9	39.89	40	-.11	0-360	200	V
7	136.036	10.62	Pk	14	1.3	25.92	43.52	-17.6	0-360	100	V
8	824.215	89.18	Pk	26.9	3.2	119.28	46.02	73.26	0-360	100	V

Pk - Peak detector

Radiated Emissions

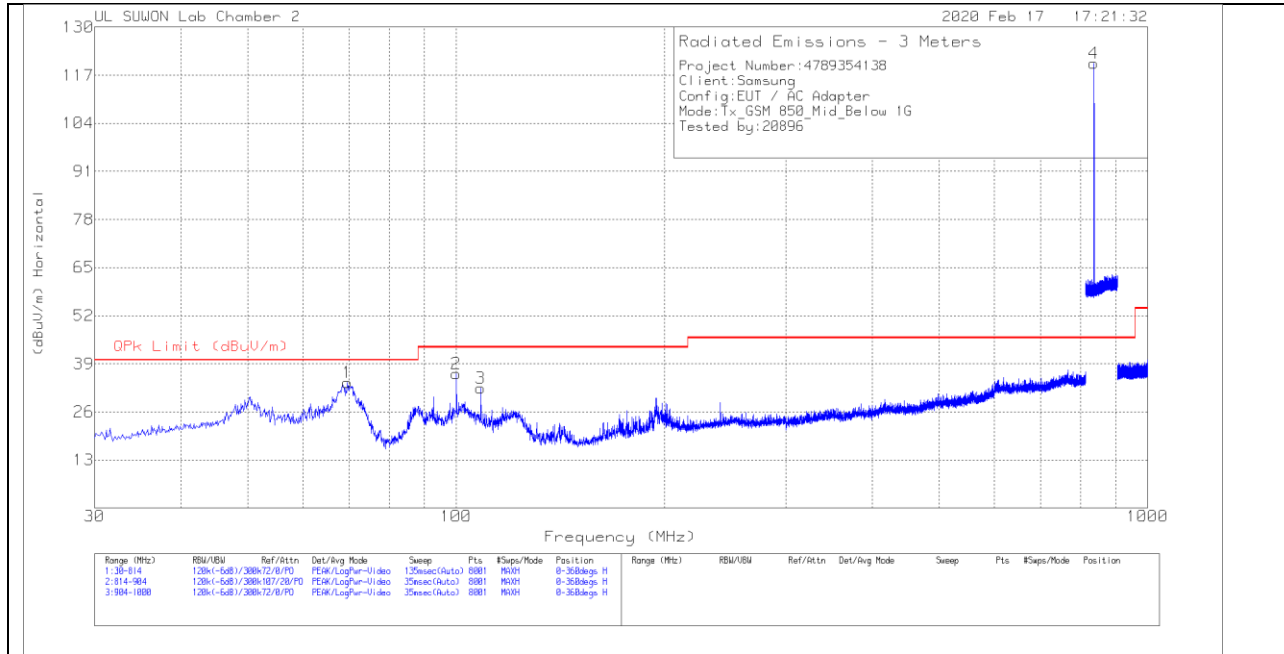
Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Below_1G_Bypass[dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
67.828	15.67	Qp	16.3	.9	32.87	40	-7.13	141	210	H
49.796	12.88	Qp	19.7	.8	33.38	40	-6.62	223	102	V
68.22	11.46	Qp	16.2	.9	28.56	40	-11.44	117	102	V

Qp - Quasi-Peak detector

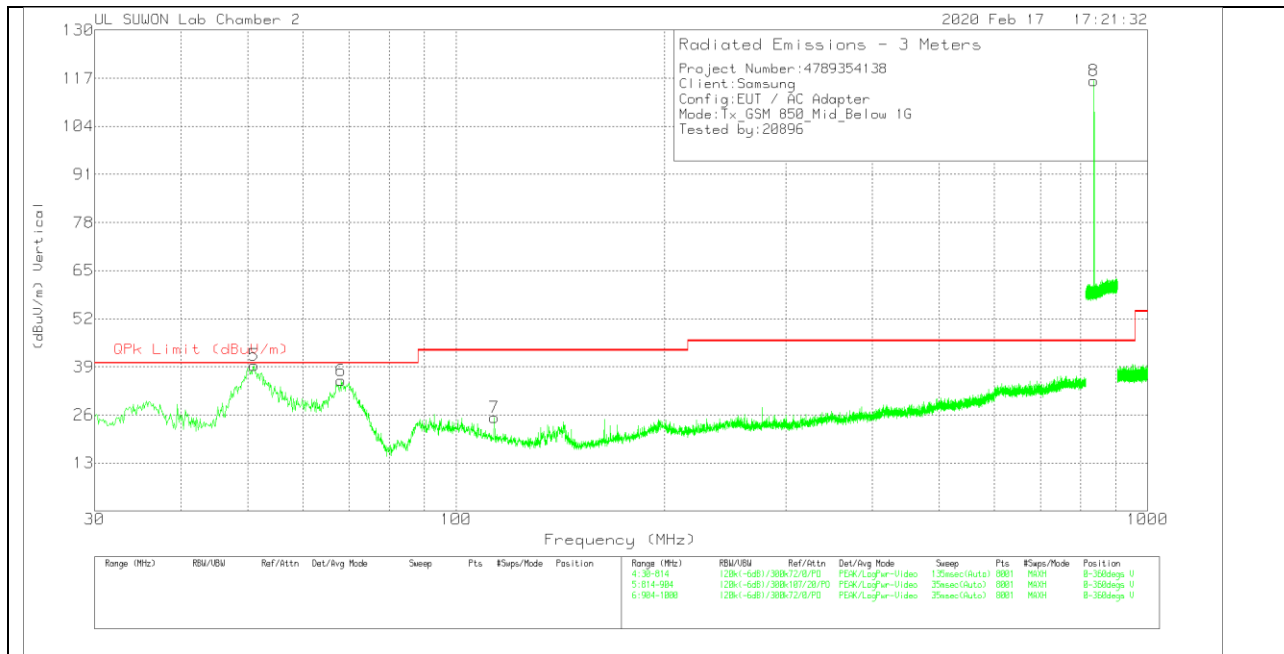
Note: Unwanted emissions captured from 824MHz to 849MHz and from 869MHz to 894MHz were the TX and RX signals generated from the call-simulator.

**MID CHANNEL(881.6 MHz)**

**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	69.592	17.47	Pk	15.6	.9	33.97	40	-6.03	0-360	100	H
2	100.07	17.57	Pk	17.7	1.1	36.37	43.52	-7.15	0-360	400	H
3	108.498	14.01	Pk	17.3	1.2	32.51	43.52	-11.01	0-360	100	H
4	836.6688	89.86	Pk	27.1	3.3	120.26	46.02	74.24	0-360	100	H
5	50.972	18.96	Pk	19.7	.8	39.46	40	-.54	0-360	100	V
6	68.22	18.21	Pk	16.2	.9	35.31	40	-4.69	0-360	100	V
7	113.496	7.58	Pk	16.5	1.2	25.28	43.52	-18.24	0-360	300	V
8	836.635	85.89	Pk	27.1	3.3	116.29	46.02	70.27	0-360	100	V

Pk - Peak detector

Radiated Emissions

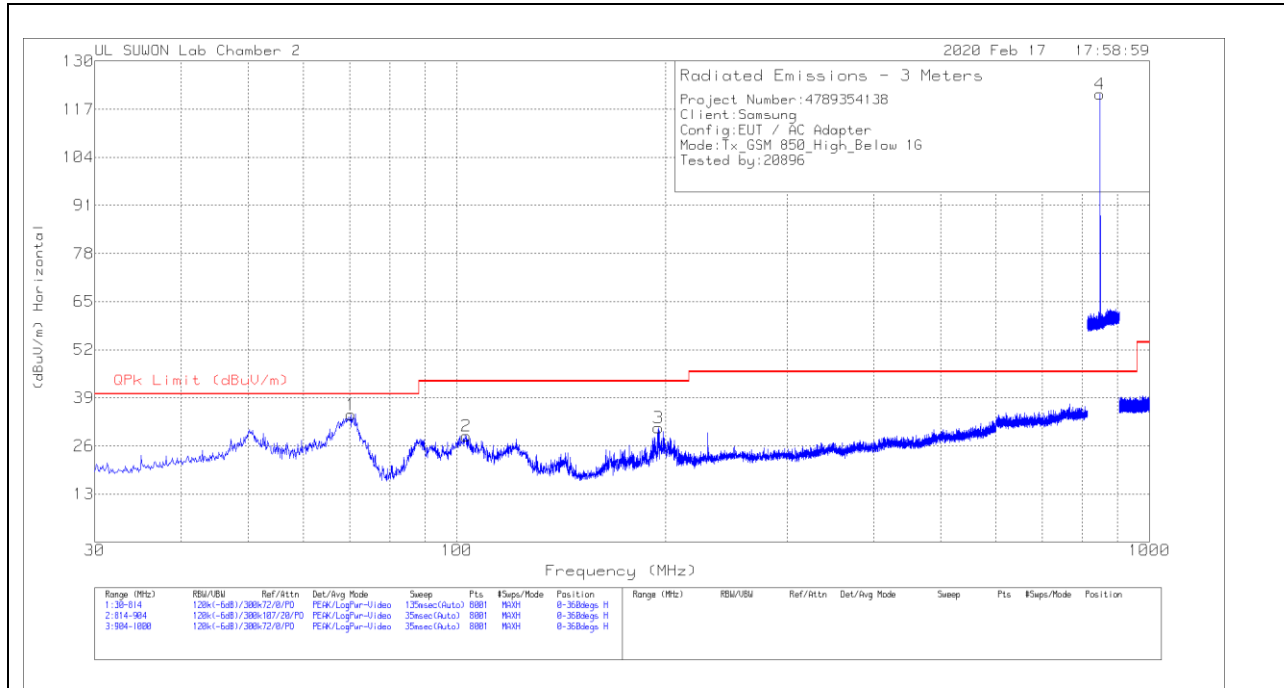
Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Below_1G_Bypass[dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
50.972	13.78	Qp	19.7	.8	34.28	40	-5.72	205	113	V
68.22	12.9	Qp	16.2	.9	30	40	-10	115	101	V

Qp - Quasi-Peak detector

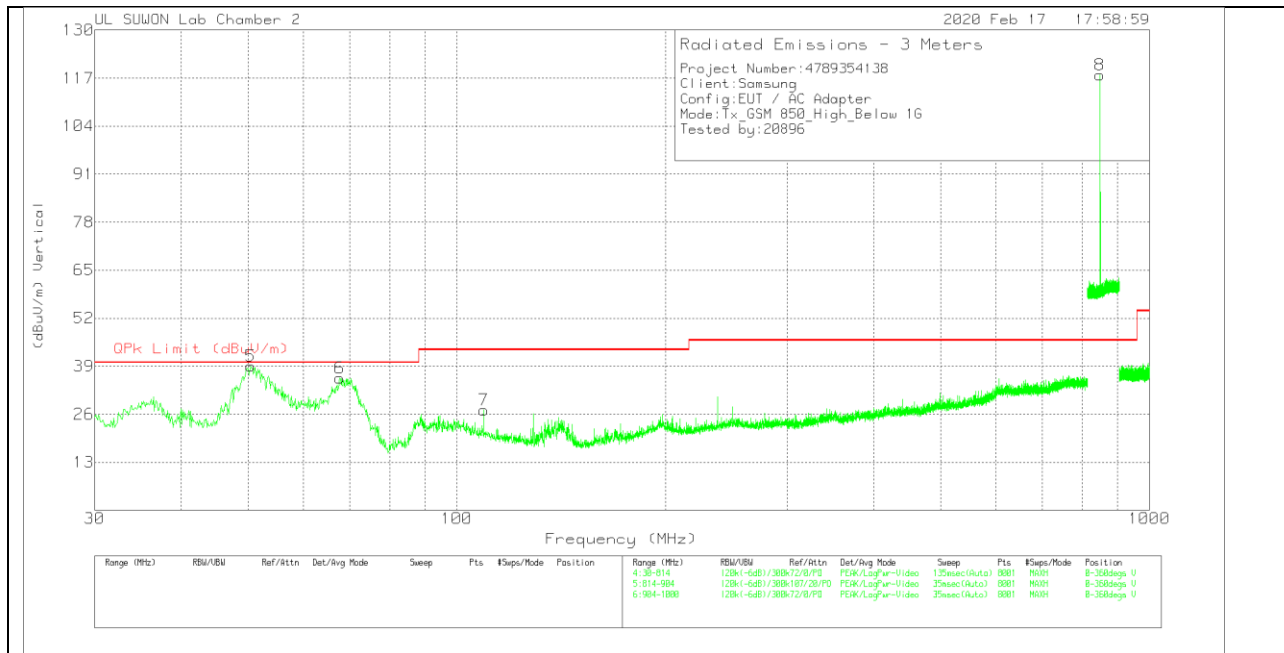
Note: Unwanted emissions captured from 824MHz to 849MHz and from 869MHz to 894MHz were the TX and RX signals generated from the call-simulator.

**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	70.278	18.13	Pk	15.4	.9	34.43	40	-5.57	0-360	300	H
2	103.108	9.87	Pk	17.7	1.1	28.67	43.52	-14.85	0-360	300	H
3	195.424	11.25	Pk	18.1	1.6	30.95	43.52	-12.57	0-360	100	H
4	848.7963	90.4	Pk	27.4	3.3	121.1	46.02	75.08	0-360	100	H
5	50.384	18.51	Pk	19.7	.8	39.01	40	-.99	0-360	100	V
6	67.73	18.66	Pk	16.3	.9	35.86	40	-4.14	0-360	100	V
7	109.38	8.79	Pk	17.2	1.2	27.19	43.52	-16.33	0-360	300	V
8	848.8075	87.22	Pk	27.4	3.3	117.92	46.02	71.9	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
50.384	12.21	Qp	19.7	.8	32.71	40	-7.29	268	103	V
67.73	12.2	Qp	16.3	.9	29.4	40	-10.6	102	175	V

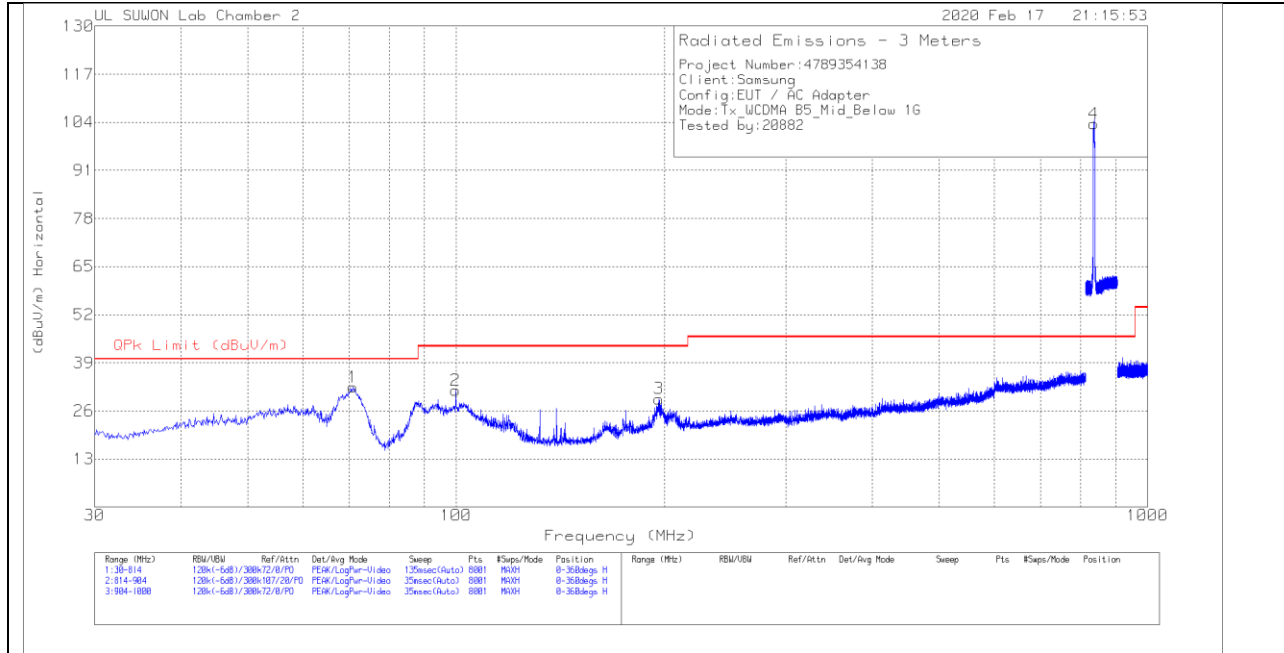
Qp - Quasi-Peak detector

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

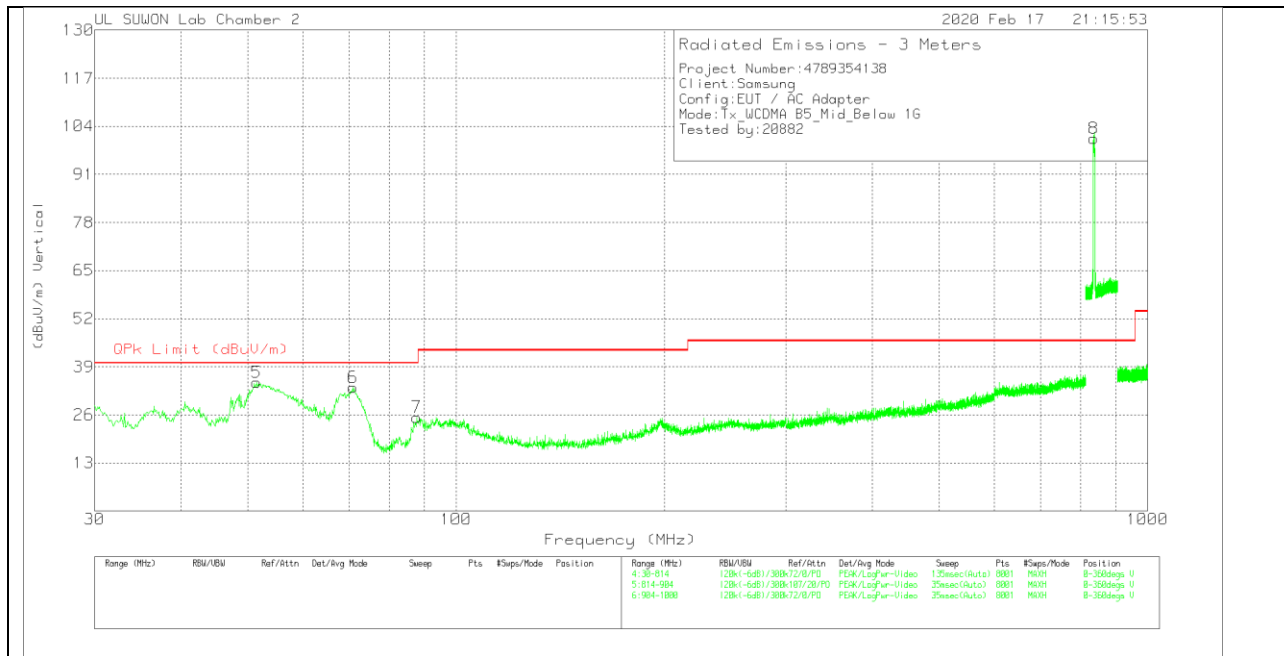
### 7.11. Below 1 GHz in the WCDMA Band 5

#### 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	70.964	16.36	Pk	15.1	.9	32.36	40	-7.64	0-360	300	H
2	99.874	12.81	Pk	17.7	1.1	31.61	43.52	-11.91	0-360	200	H
3	196.404	9.5	Pk	18.2	1.6	29.3	43.52	-14.22	0-360	100	H
4	836.5338	73.24	Pk	27.1	3.3	103.64	46.02	57.62	0-360	100	H
5	51.462	14.32	Pk	19.7	.8	34.82	40	-5.18	0-360	100	V
6	70.866	17.44	Pk	15.1	.9	33.44	40	-6.56	0-360	100	V
7	87.624	9.7	Pk	14.6	1.1	25.4	40	-14.6	0-360	100	V
8	836.6125	70.38	Pk	27.1	3.3	100.78	46.02	54.76	0-360	100	V

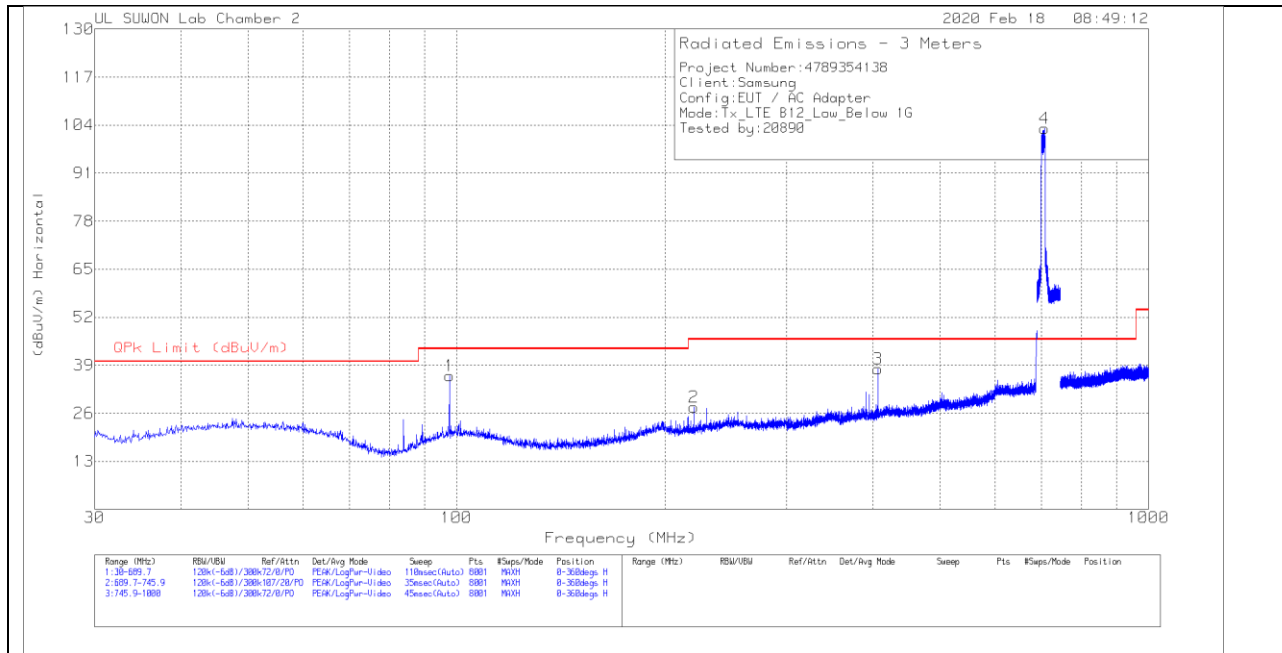
Pk - Peak detector

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

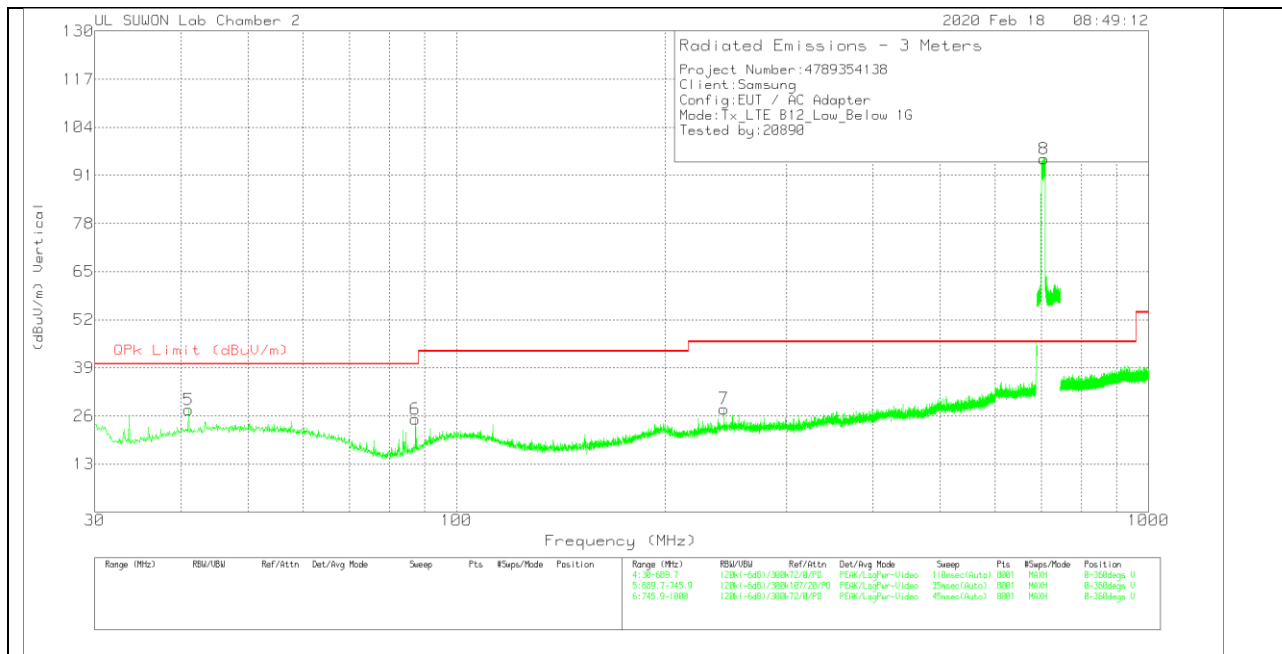
### 7.12. Below 1 GHz in the LTE Band 12

#### LOW CHANNEL(730.5 MHz)

#### HORIZONTAL PEAK PLOT



#### VERTICAL PEAK PLOT



**DATA**

Trace Markers

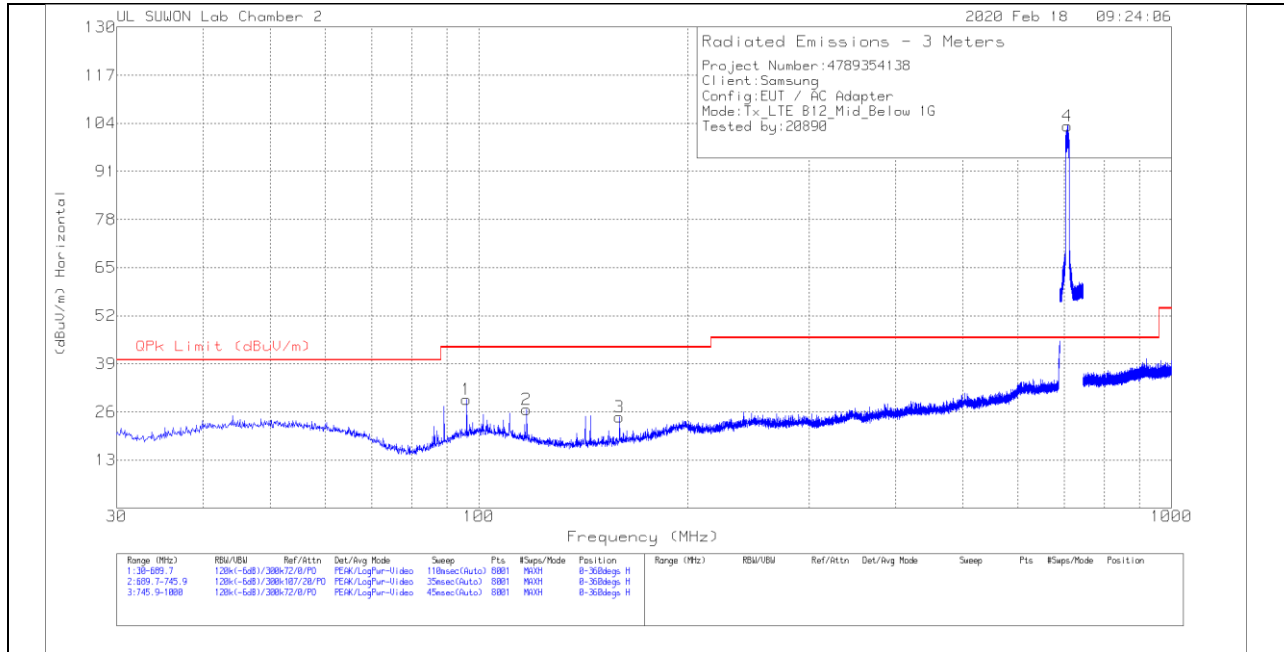
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Below_1G_Bypass [dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	97.7021	17.59	Pk	17.5	1.1	36.19	43.52	-7.33	0-360	200	H
2	220.3246	8.63	Pk	17.3	1.7	27.63	46.02	-18.39	0-360	100	H
3	406.2787	14.26	Pk	21.5	2.3	38.06	46.02	-7.96	0-360	100	H
4	707.7332	74.66	Pk	25.5	3	103.16	<b>46.02</b>	<b>57.14</b>	0-360	100	H
5	40.9676	7.98	Pk	19	.7	27.68	40	-12.32	0-360	100	V
6	87.2293	9.57	Pk	14.5	1.1	25.17	40	-14.83	0-360	300	V
7	243.3318	7.44	Pk	18.7	1.8	27.94	46.02	-18.08	0-360	300	V
8	705.5835	66.94	Pk	25.5	3	95.44	<b>46.02</b>	<b>49.42</b>	0-360	100	V

Pk - Peak detector

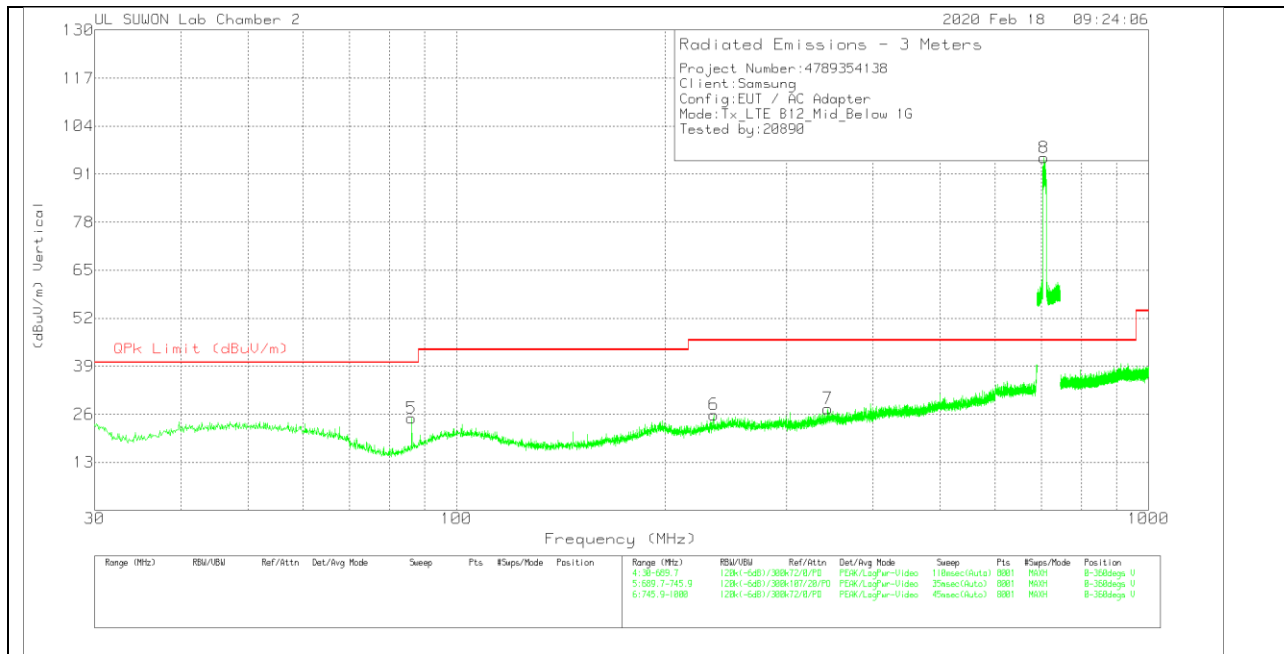
Note: Unwanted emissions captured from 699MHz to 716MHz and from 729MHz to 746MHz were the TX and RX signals generated from the call-simulator.

**MID CHANNEL(737.5 MHz)**

**HORIZONTAL PEAK PLOT**



**VERTICAL PEAK PLOT**



**DATA**

Trace Markers

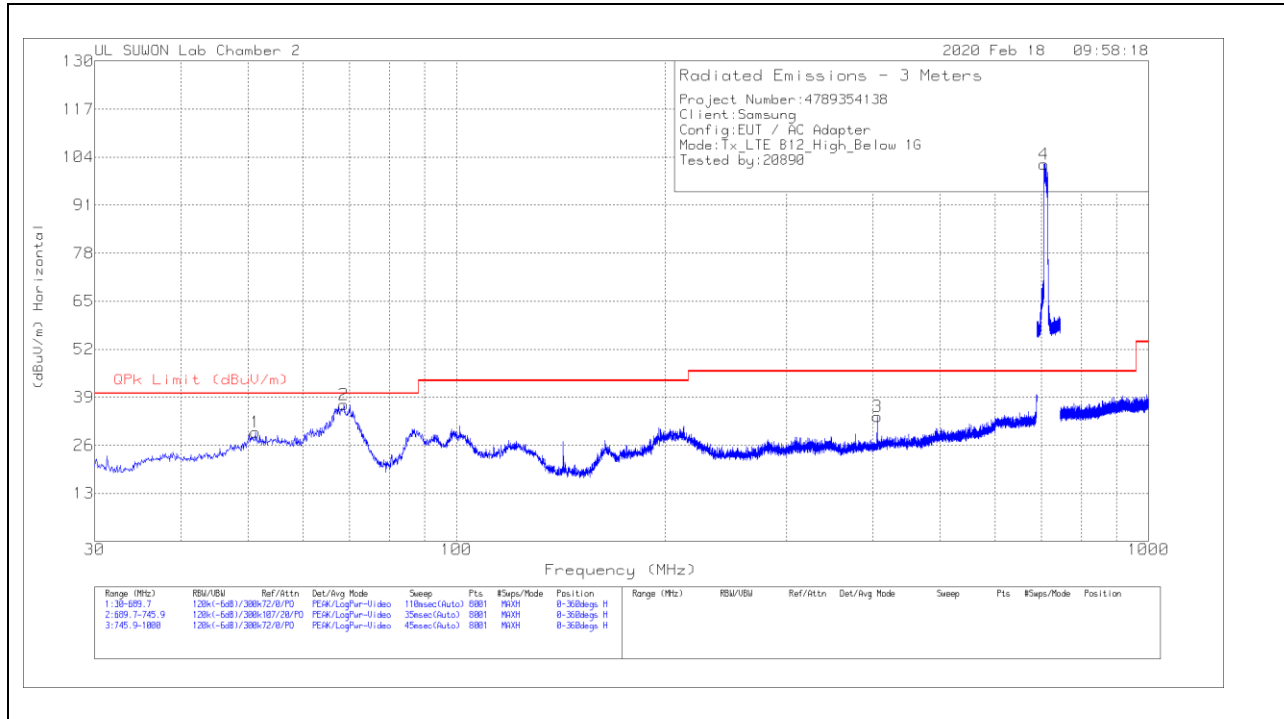
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Below_1G_Bypass[dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	95.9704	10.96	Pk	17.4	1.1	29.46	43.52	-14.06	0-360	400	H
2	117.2459	9.63	Pk	15.8	1.2	26.63	43.52	-16.89	0-360	300	H
3	159.6318	8.61	Pk	14.6	1.4	24.61	43.52	-18.91	0-360	100	H
4	707.8737	74.82	Pk	25.5	3	103.32	<b>46.02</b>	<b>57.3</b>	0-360	100	H
5	86.1573	9.9	Pk	14	1	24.9	40	-15.1	0-360	300	V
6	235.2504	6.01	Pk	18.2	1.7	25.91	46.02	-20.11	0-360	100	V
7	343.8542	4.7	Pk	20.8	2.1	27.6	46.02	-18.42	0-360	400	V
8	706.6443	66.91	Pk	25.5	3	95.41	<b>46.02</b>	<b>49.39</b>	0-360	100	V

Pk - Peak detector

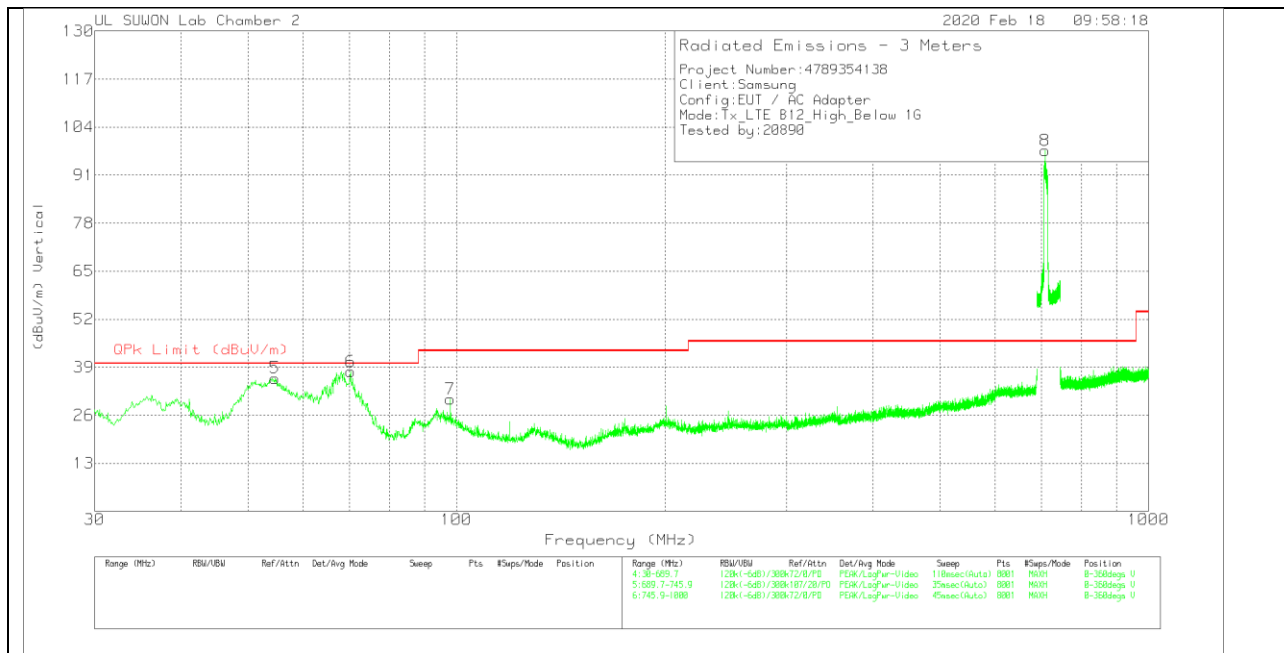
Note: Unwanted emissions captured from 699MHz to 716MHz and from 729MHz to 746MHz were the TX and RX signals generated from the call-simulator.

**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	51.193	9.07	Pk	19.7	.8	29.57	40	-10.43	0-360	200	H
2	68.7576	20.09	Pk	16	.9	36.99	40	-3.01	0-360	100	H
3	405.2891	10.03	Pk	21.5	2.3	33.83	46.02	-12.19	0-360	100	H
4	706.6865	73.59	Pk	25.5	3	102.09	46.02	56.07	0-360	100	H
5	54.6564	15.88	Pk	19.4	.8	36.08	40	-3.92	0-360	100	V
6	70.3244	21.57	Pk	15.4	.9	37.87	40	-2.13	0-360	100	V
7	97.9495	11.64	Pk	17.6	1.1	30.34	43.52	-13.18	0-360	100	V
8	708.8783	69.19	Pk	25.5	3	97.69	46.02	51.67	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
68.7576	7.41	Qp	16	.9	24.31	40	-15.69	146	254	H
54.6564	5.37	Qp	19.4	.8	25.57	40	-14.43	269	102	V
70.3244	8.85	Qp	15.4	.9	25.15	40	-14.85	44	229	V

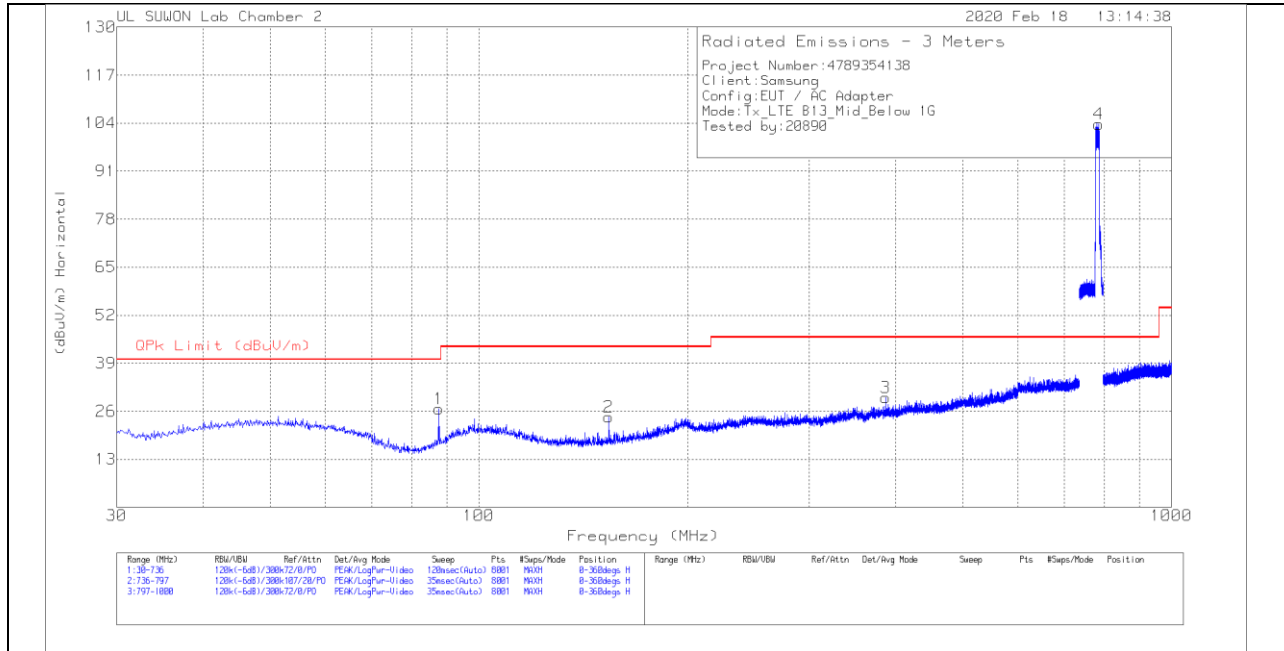
Qp - Quasi-Peak detector

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

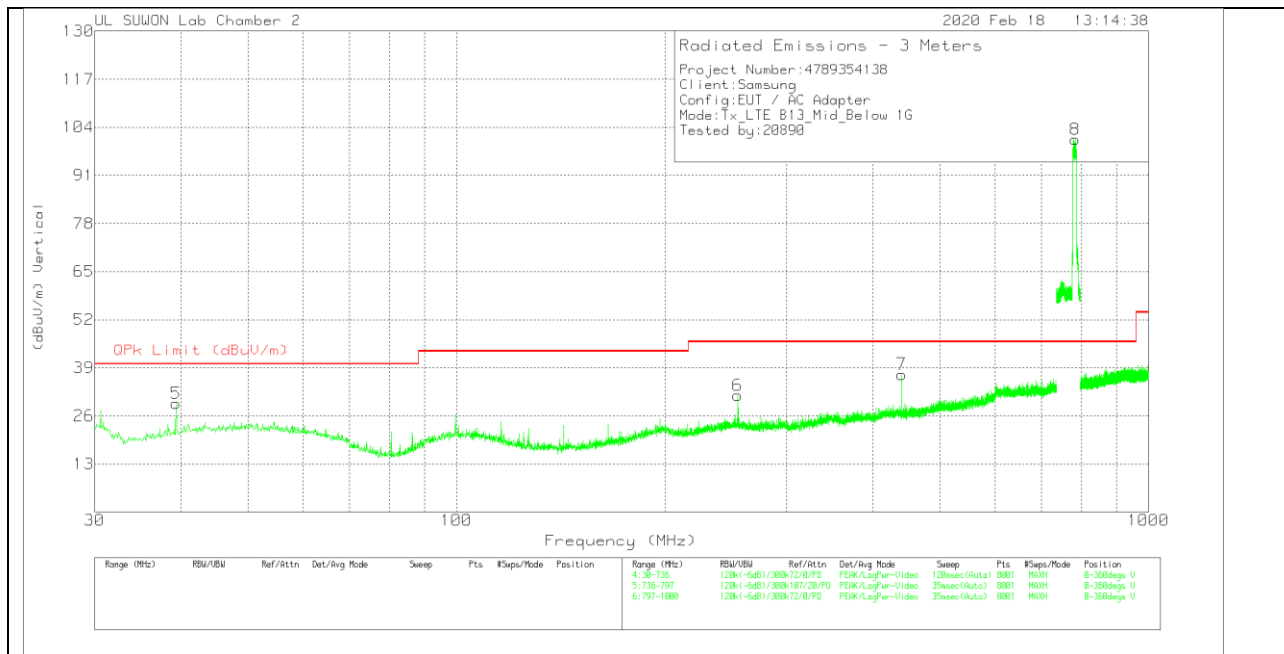
### 7.13. Below 1 GHz in the LTE Band 13

#### 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	87.539	10.97	Pk	14.6	1.1	26.67	40	-13.33	0-360	400	H
2	154.0795	8.92	Pk	14.2	1.4	24.52	43.52	-19	0-360	200	H
3	386.883	6.33	Pk	21.2	2.2	29.73	46.02	-16.29	0-360	100	H
4	785.0821	73.8	Pk	26.7	3.2	103.7	46.02	57.68	0-360	100	H
5	39.3545	10.24	Pk	18.5	.7	29.44	40	-10.56	0-360	100	V
6	255.1258	10.57	Pk	19.2	1.8	31.57	46.02	-14.45	0-360	100	V
7	439.7448	12.86	Pk	22	2.4	37.26	46.02	-8.76	0-360	100	V
8	783.8393	70.76	Pk	26.7	3.2	100.66	46.02	54.64	0-360	200	V

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.