CERTIFICATION TEST REPORT

Report Number. : 4789247752-E1V1

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

Model : SM-G980F/DS, SM-G980FB

FCC ID : A3LSMG980F

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

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

Date Of Issue:
January 07, 2020

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

Suwon Test Site: UL Korea, Ltd. Suwon Laboratory
218 Maeyeong-ro, Yeongtong-gu,
Suwon-si, Gyeonggi-do, 16675, Korea
TEL: (031) 337-9902
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IAS ACCREDITED
Testing Laboratory
TL-637

Revision History

Rev.	Issue Date	Revisions	Revised By
V1	01/07/20	Initial issue	Seokhwan Hong

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME:	SAMSUNG ELECTRONICS CO., LTD.
EUT DESCRIPTION:	GSM/WCDMA/LTE Phone + BT/BLE, DTS/UNII a/b/g/n/ac/ax, ANT+, NFC and WPT
MODEL NUMBER:	SM-G980F/DS, SM-G980F
SERIAL NUMBER:	R38MB2AHJNE, R38MB0AHJQN, R38MB0AHJRL (RADIATED);
DATE TESTED:	NOV 29, 2019 – DEC 09, 2019;

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:

Seokhwan Hong
Suwon Lab Engineer
UL Korea, Ltd.

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2. TEST METHODOLOGY

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

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

3. FACILITIES AND ACCREDITATION

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

218 Maeyeong-ro
☒ Chamber 1
☒ Chamber 2
☐ 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.

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4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

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

4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

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

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

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

4.3. MEASUREMENT UNCERTAINTY

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

PARAMETER	UNCERTAINTY
Conducted Disturbance, 0.15 to 30 MHz	2.35 dB
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.

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5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

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

This report covers the Samsung models SM-G980F/DS and SM-G980F.
These models are identical in hardware except SM-G980F has single SIM tray.
With some pre-scan, model SM-G980F/DS was set for final test.

5.2. TEST MODE

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

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5.3. WORST-CASE ORIENTATION AND MODE

For GSM850 / WCDMA B5 / LTE Band 13 / LTE Band 26, EUT was investigated in three orthogonal orientations X, Y and Z it was determined that Z orientation was worst-case orientation.

For LTE Band 12, EUT was investigated in three orthogonal orientations X, Y and Z it was determined that X 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 (Frequency range: 824-849 MHz) is covered by GSM 850 (Frequency range: 824-849 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 (Frequency range: 824-849 MHz) is covered by LTE Band 26 (Frequency range: 814-849 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.

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5.4. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	**Manufacturer**	**Model**	**Serial Number**	**FCC ID**
Charger	SAMSUNG	EP-TA800	R37M5WSB411SE3	N/A
Data Cable	SAMSUNG	EP-DG977	N/A	N/A

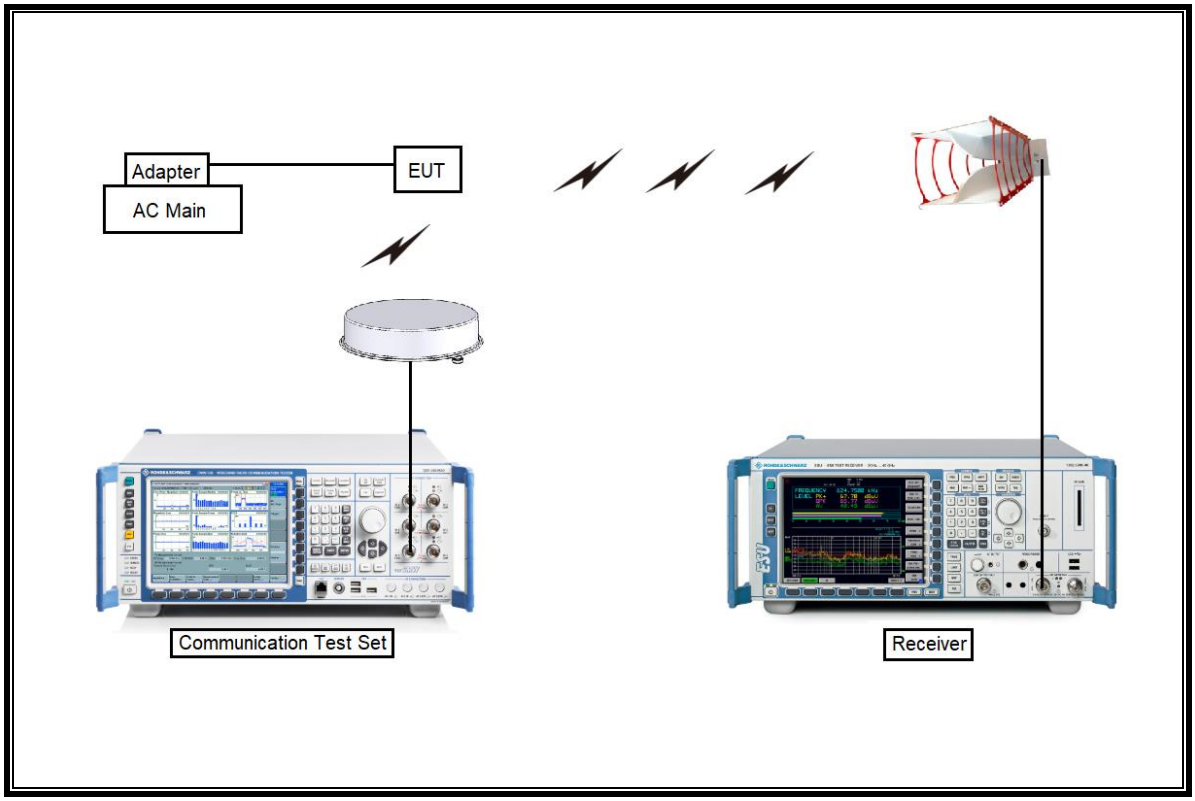
I/O CABLE

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)



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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	PASTERNACK	PE7087-10	A009	08-08-20
Attenuator	PASTERNACK	PE7087-10	A001	08-08-20
Attenuator	PASTERNACK	PE7087-10	A008	08-08-20
Attenuator	PASTERNACK	PE7087-10	2	08-08-20
Attenuator	PASTERNACK	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	

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7. APPLICABLE LIMIYS 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 (dBµV/m)
30 to 88	40
88 to 216	43.5
216 to 960	46
Above 960 MHz	54
Note: The lower limit shall apply at the transition frequency.	

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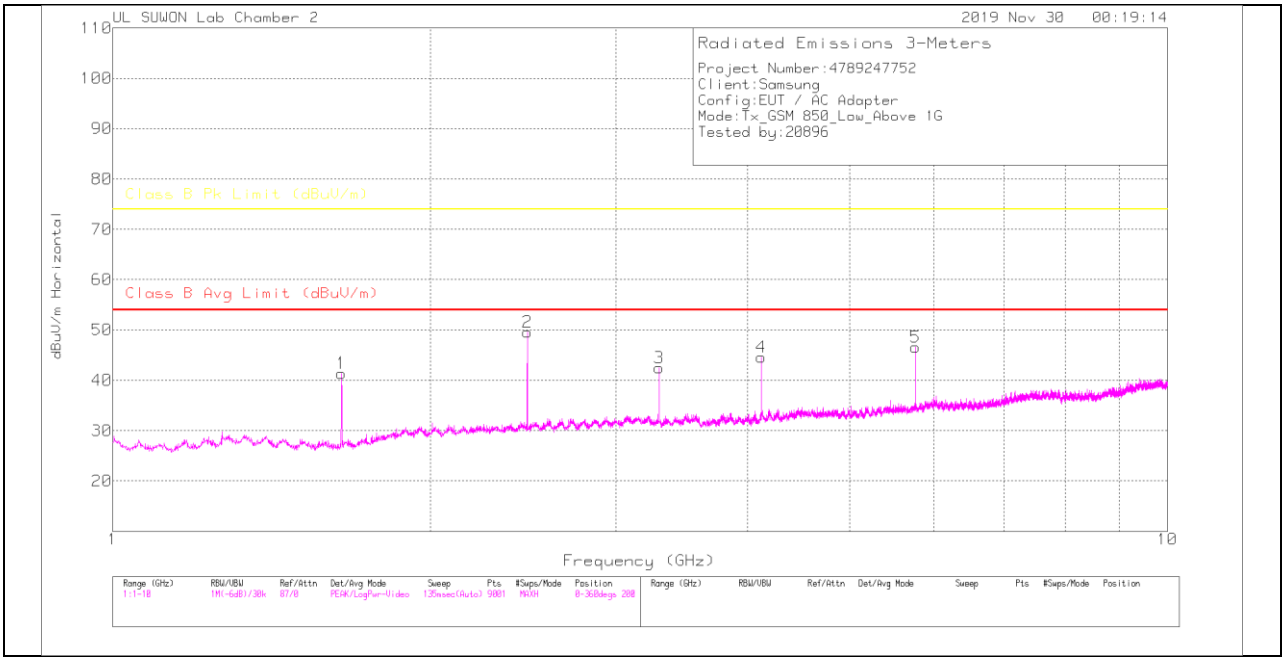
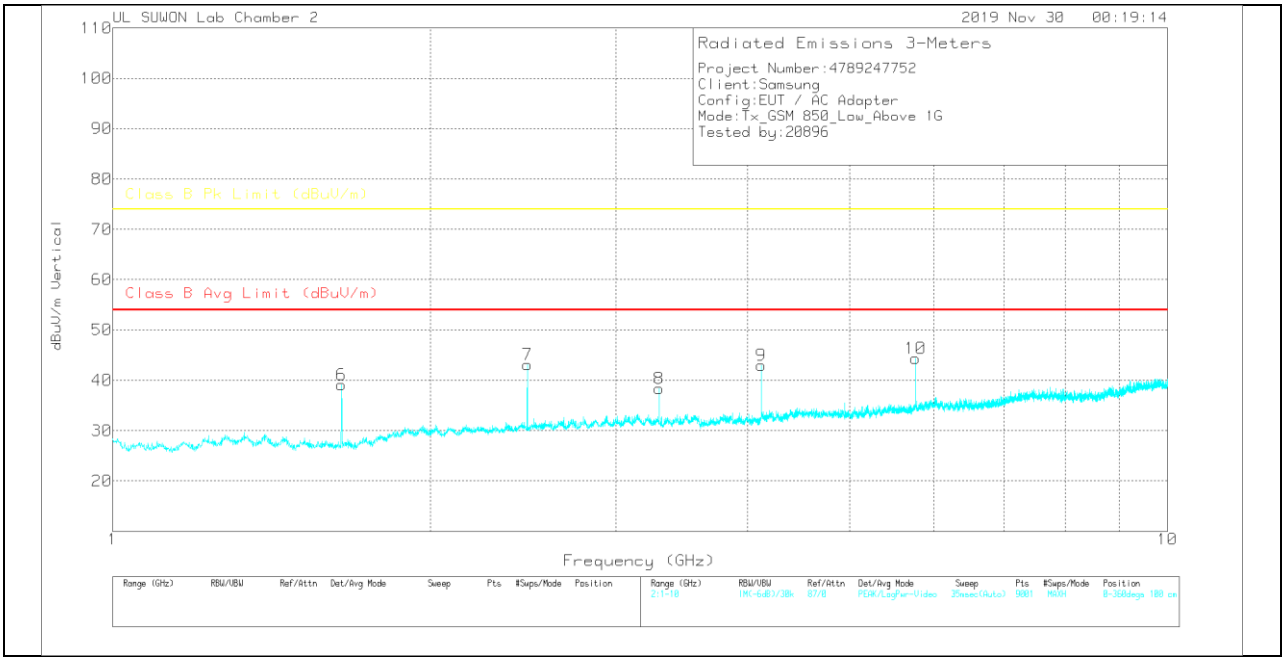
7.1. Above 1 GHz in the GSM850

LOW CHANNEL(869.2MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



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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	1.648	43.82	PK	28.3	-31.4	.7	41.42	-	-	74	-32.58	0-360	200	H
2	2.472	47.08	PK	31.8	-30	.7	49.58	-	-	74	-24.42	0-360	200	H
3	3.297	39.03	PK	32.6	-29.9	.7	42.43	-	-	74	-31.57	0-360	100	H
4	4.12	39.19	PK	33.4	-28.5	.5	44.59	-	-	74	-29.41	0-360	200	H
5	5.77	38.58	PK	34.7	-27.2	.5	46.58	-	-	74	-27.42	0-360	100	H
6	1.648	41.54	PK	28.3	-31.4	.7	39.14	-	-	74	-34.86	0-360	100	V
7	2.472	40.65	PK	31.8	-30	.7	43.15	-	-	74	-30.85	0-360	100	V
8	3.297	34.98	PK	32.6	-29.9	.7	38.38	-	-	74	-35.62	0-360	200	V
9	4.121	37.59	PK	33.4	-28.5	.5	42.99	-	-	74	-31.01	0-360	100	V
10	5.77	36.33	PK	34.7	-27.2	.5	44.33	-	-	74	-29.67	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.

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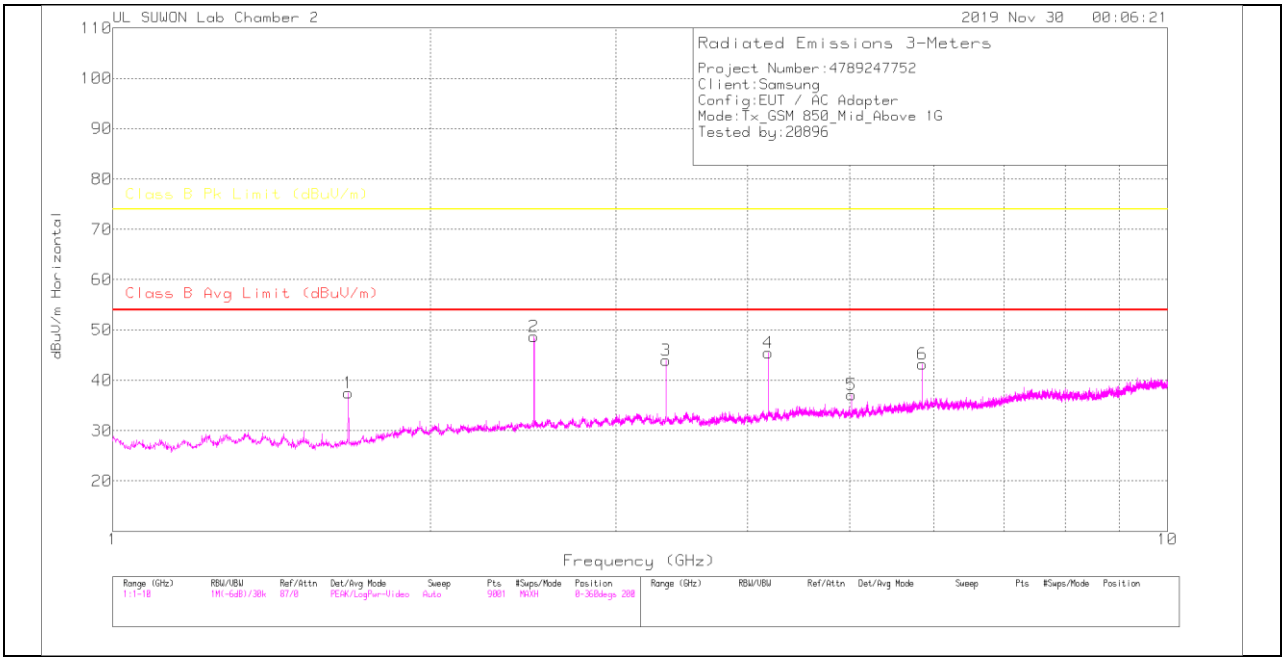
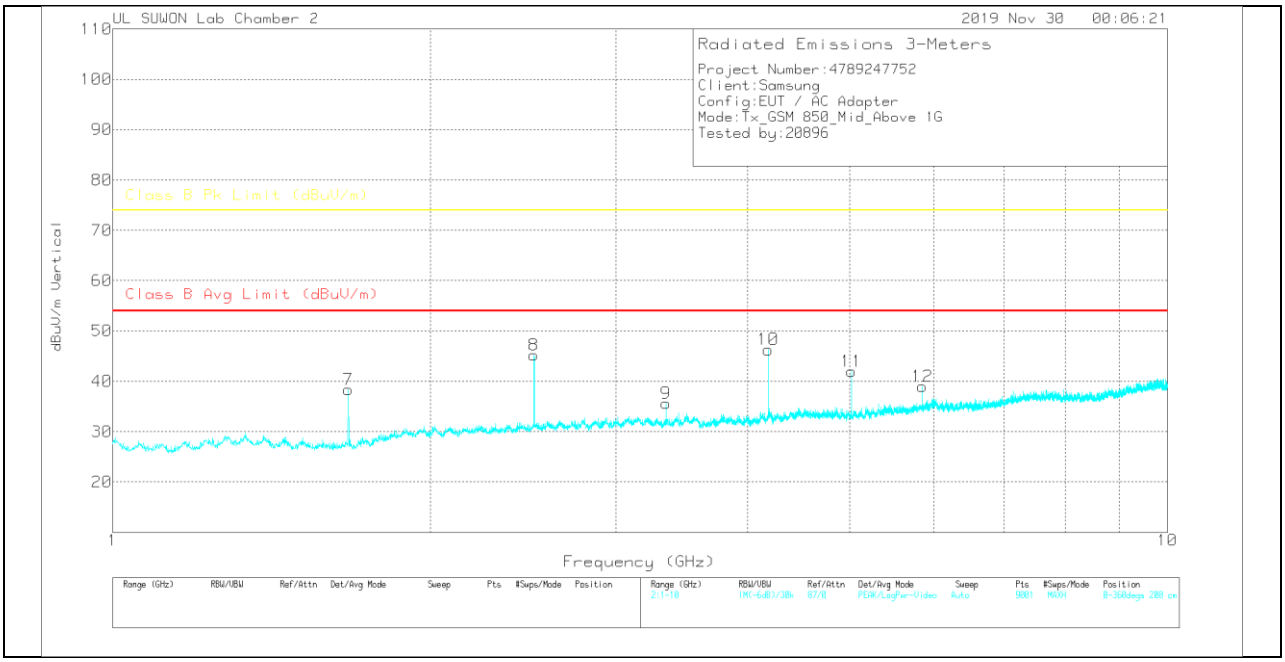
MID CHANNEL(881.6MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



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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	1.673	39.57	PK	28.5	-31.3	.7	37.47	-	-	74	-36.53	0-360	200	H
2	2.509	46.18	PK	31.9	-30.1	.7	48.68	-	-	74	-25.32	0-360	200	H
3	3.346	40.46	PK	32.6	-29.8	.7	43.96	-	-	74	-30.04	0-360	100	H
4	4.183	39.68	PK	33.4	-28.1	.5	45.48	-	-	74	-28.52	0-360	100	H
5	5.02	30.67	PK	34.1	-28.2	.5	37.07	-	-	74	-36.93	0-360	200	H
6	5.857	35.02	PK	34.9	-27.2	.5	43.22	-	-	74	-30.78	0-360	100	H
7	1.673	40.43	PK	28.5	-31.3	.7	38.33	-	-	74	-35.67	0-360	100	V
8	2.509	42.77	PK	31.9	-30.1	.7	45.27	-	-	74	-28.73	0-360	200	V
9	3.346	32.13	PK	32.6	-29.8	.7	35.63	-	-	74	-38.37	0-360	200	V
10	4.183	40.49	PK	33.4	-28.1	.5	46.29	-	-	74	-27.71	0-360	100	V
11	5.02	35.54	PK	34.1	-28.2	.5	41.94	-	-	74	-32.06	0-360	100	V
12	5.857	30.78	PK	34.9	-27.2	.5	38.98	-	-	74	-35.02	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.

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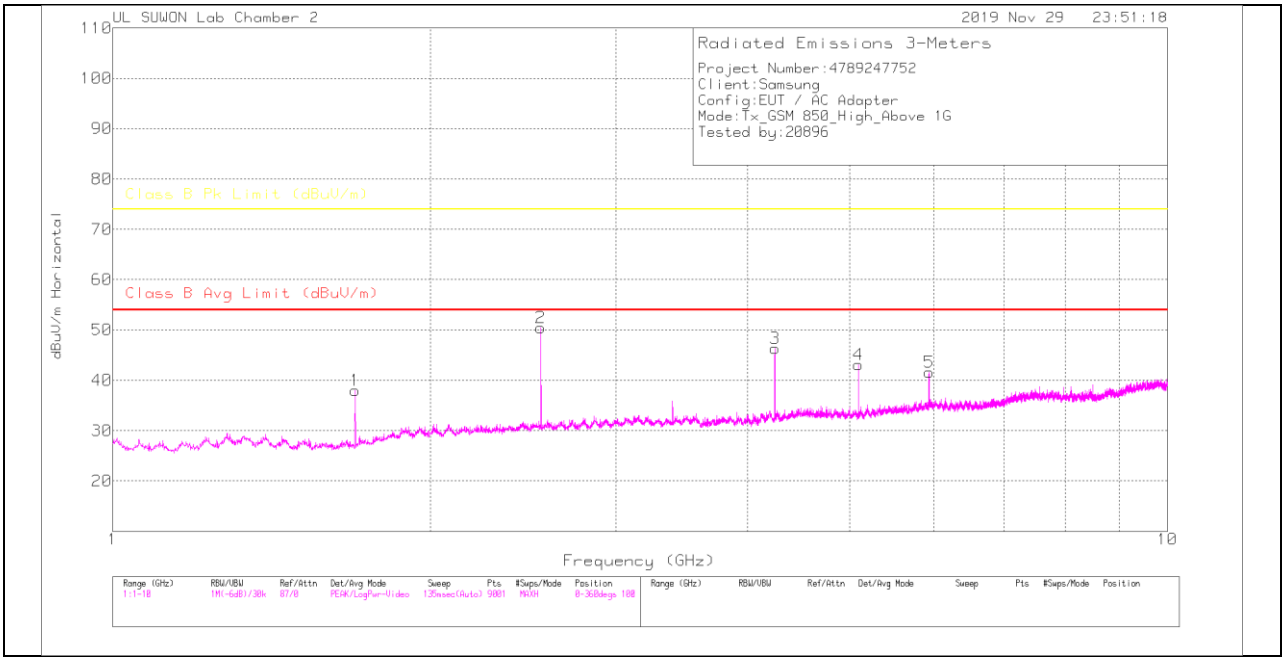
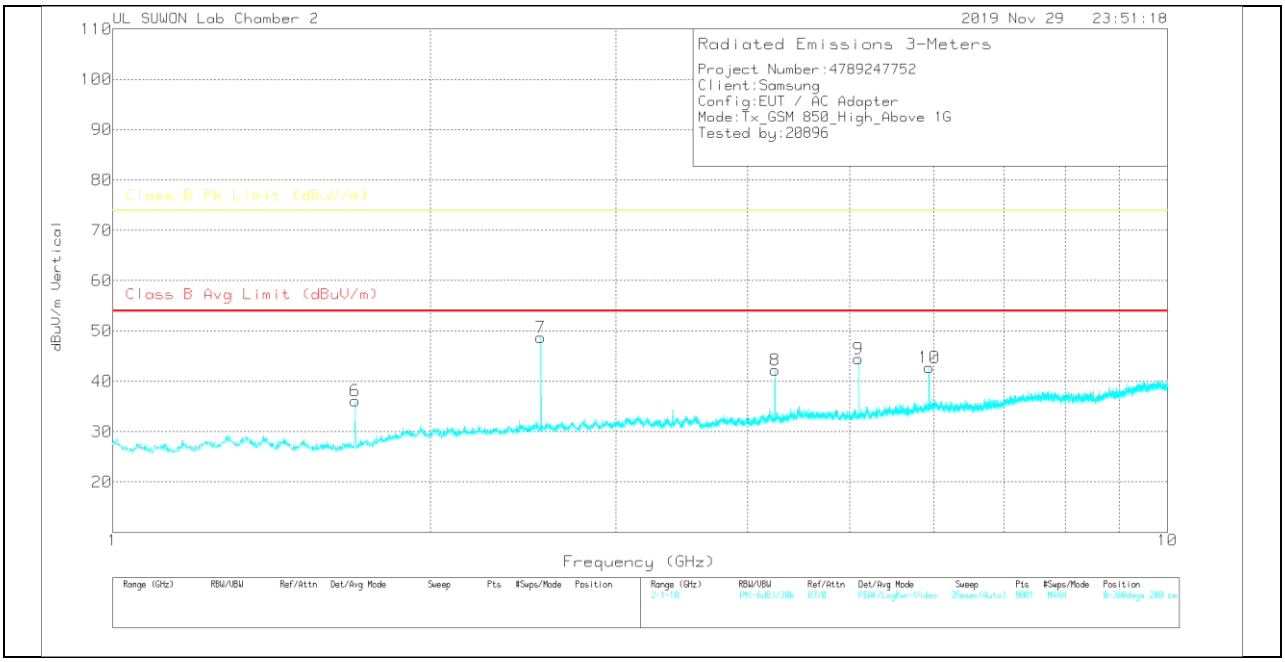
HIGH CHANNEL(893.8MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



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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	1.697	39.91	PK	28.6	-31.2	.7	38.01	-	-	74	-35.99	0-360	100	H
2	2.546	47.89	PK	32	-30.1	.7	50.49	-	-	74	-23.51	0-360	100	H
3	4.244	40.93	PK	33.4	-28.5	.5	46.33	-	-	74	-27.67	0-360	100	H
4	5.093	36.38	PK	34.2	-28	.5	43.08	-	-	74	-30.92	0-360	100	H
5	5.942	33.49	PK	35	-27.4	.5	41.59	-	-	74	-32.41	0-360	200	H
6	1.697	38.07	PK	28.6	-31.2	.7	36.17	-	-	74	-37.83	0-360	100	V
7	2.546	46.1	PK	32	-30.1	.7	48.7	-	-	74	-25.3	0-360	100	V
8	4.244	36.88	PK	33.4	-28.5	.5	42.28	-	-	74	-31.72	0-360	200	V
9	5.093	37.81	PK	34.2	-28	.5	44.51	-	-	74	-29.49	0-360	100	V
10	5.942	34.63	PK	35	-27.4	.5	42.73	-	-	74	-31.27	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.

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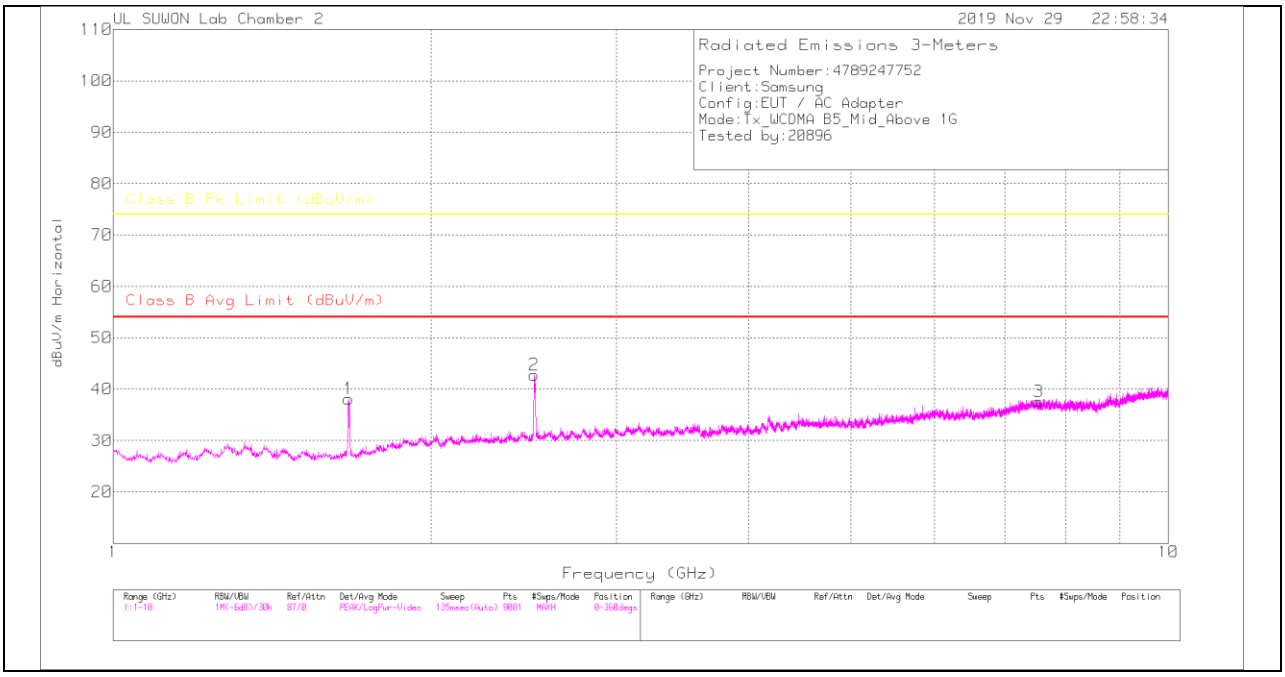
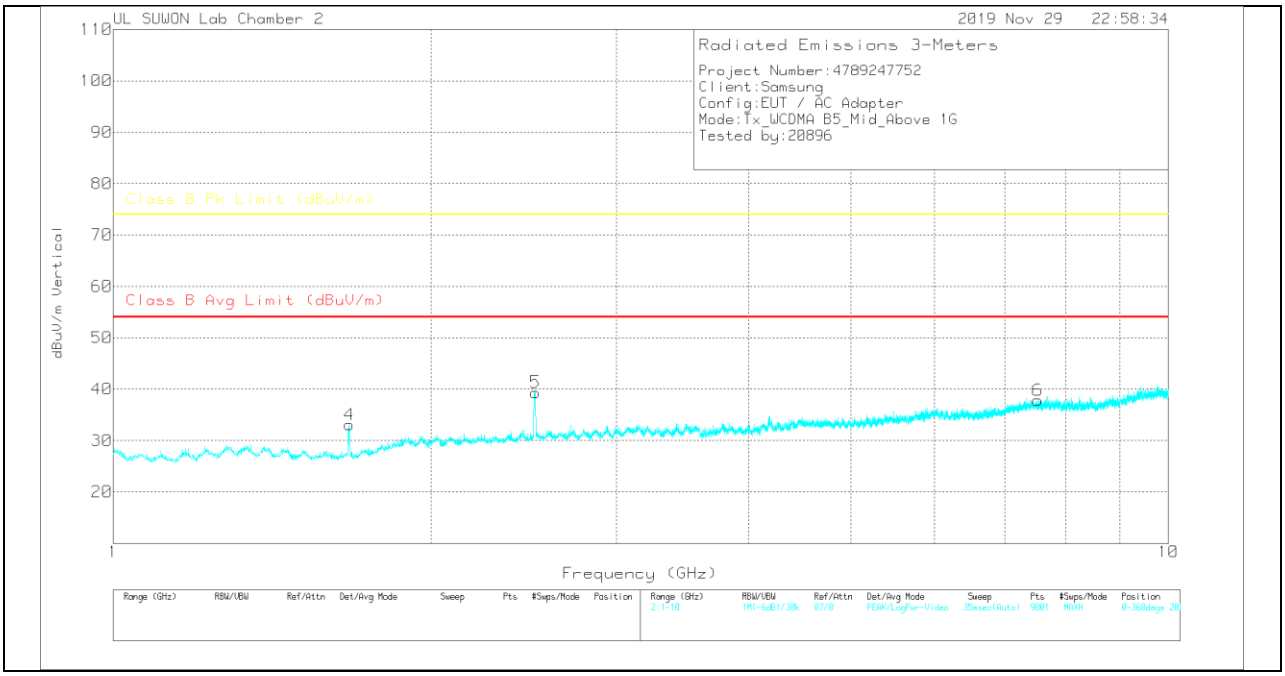
7.2. Above 1 GHz in the WCDMA Band 5

MID CHANNEL(881.6MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



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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	1.671	40.2	PK	28.5	-31.3	.7	38.1	-	-	74	-35.9	0-360	200	H
2	2.507	40.36	PK	31.9	-30.2	.7	42.76	-	-	74	-31.24	0-360	100	H
3	7.535	25.89	PK	36.1	-25	.6	37.59	-	-	74	-36.41	0-360	100	H
4	1.674	35.16	PK	28.5	-31.3	.7	33.06	-	-	74	-40.94	0-360	200	V
5	2.512	36.84	PK	31.9	-30.1	.7	39.34	-	-	74	-34.66	0-360	200	V
6	7.523	26.12	PK	36.1	-25	.6	37.82	-	-	74	-36.18	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.

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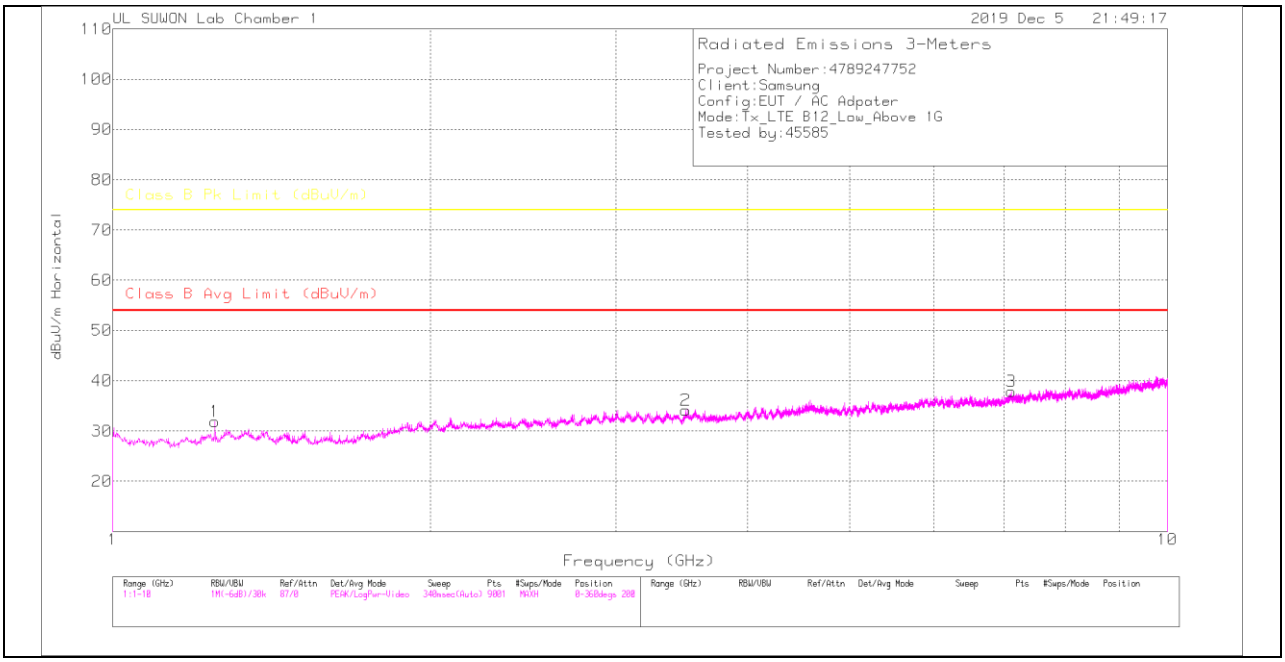
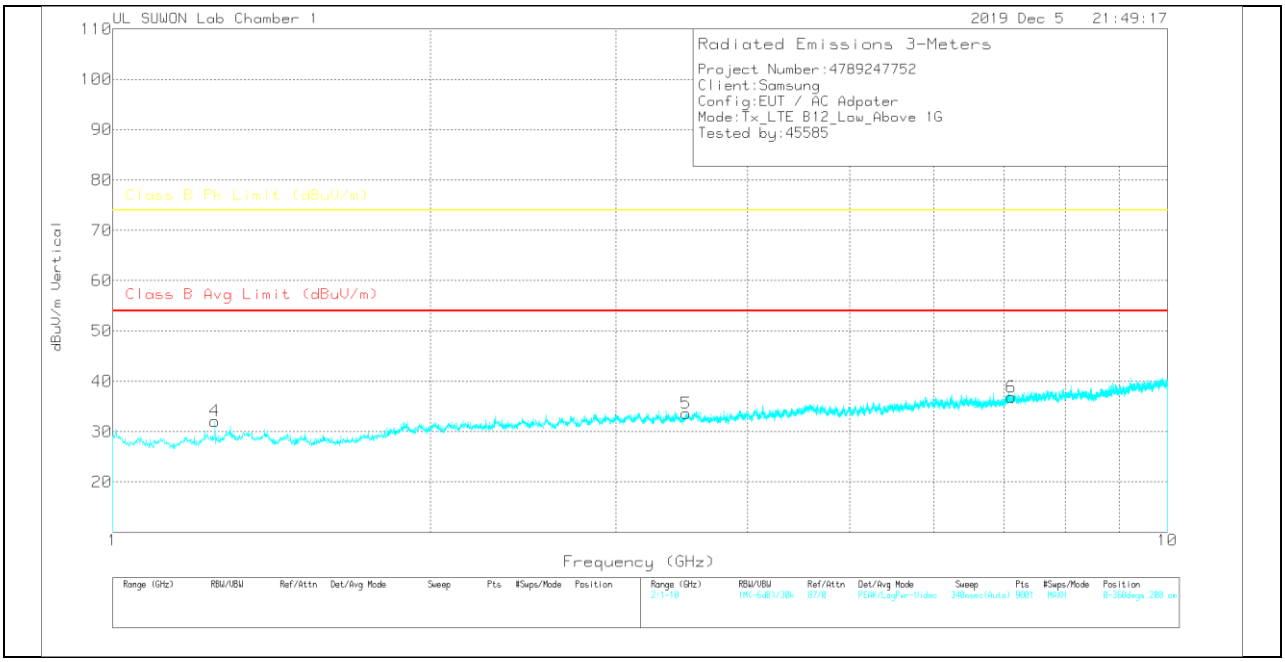
7.3. Above 1 GHz in the LTE Band 12

LOW CHANNEL(730.5MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



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Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	1-18GHz[dB]	1GHz_HPF	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	1.25	39	PK	29.2	-37	.7	31.9	-	-	74	-42.1	0-360	200	H
2	3.494	33.88	PK	32.8	-33.1	.5	34.08	-	-	74	-39.92	0-360	100	H
3	7.116	29.81	PK	35.8	-28.2	.5	37.91	-	-	74	-36.09	0-360	200	H
4	1.25	39.18	PK	29.2	-37	.7	32.08	-	-	74	-41.92	0-360	200	V
5	3.495	33.38	PK	32.8	-33.1	.5	33.58	-	-	74	-40.42	0-360	100	V
6	7.117	28.78	PK	35.8	-28.2	.5	36.88	-	-	74	-37.12	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.

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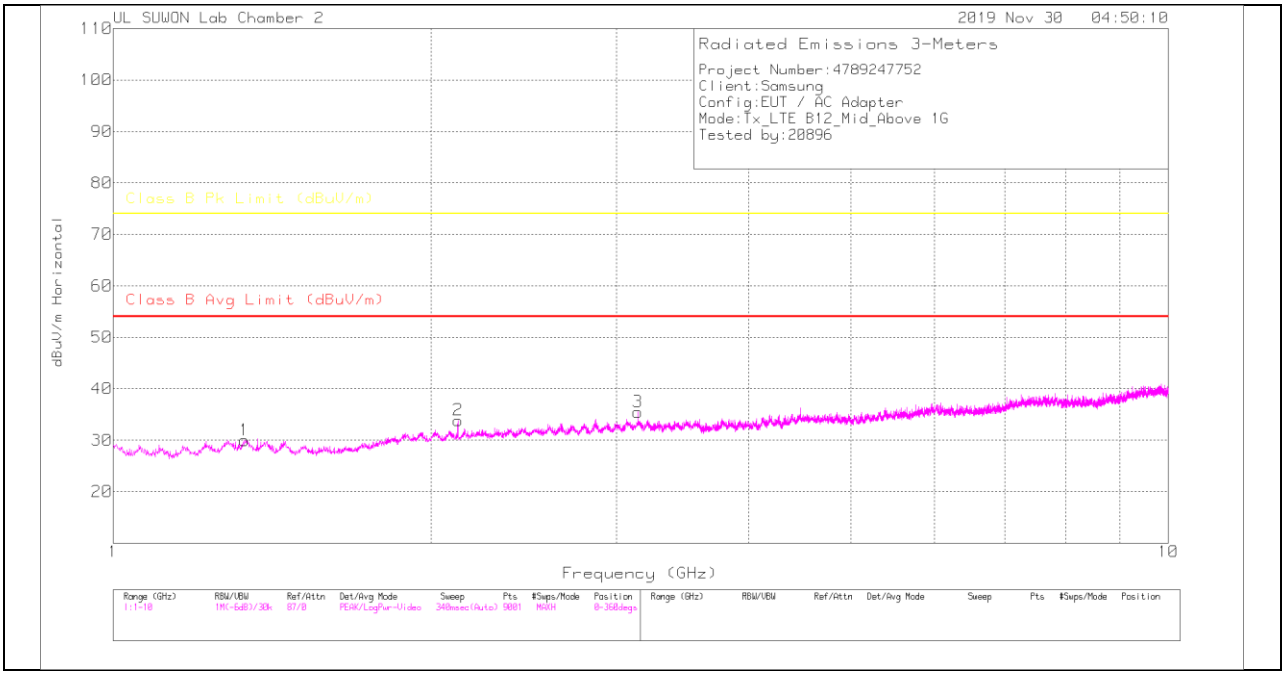
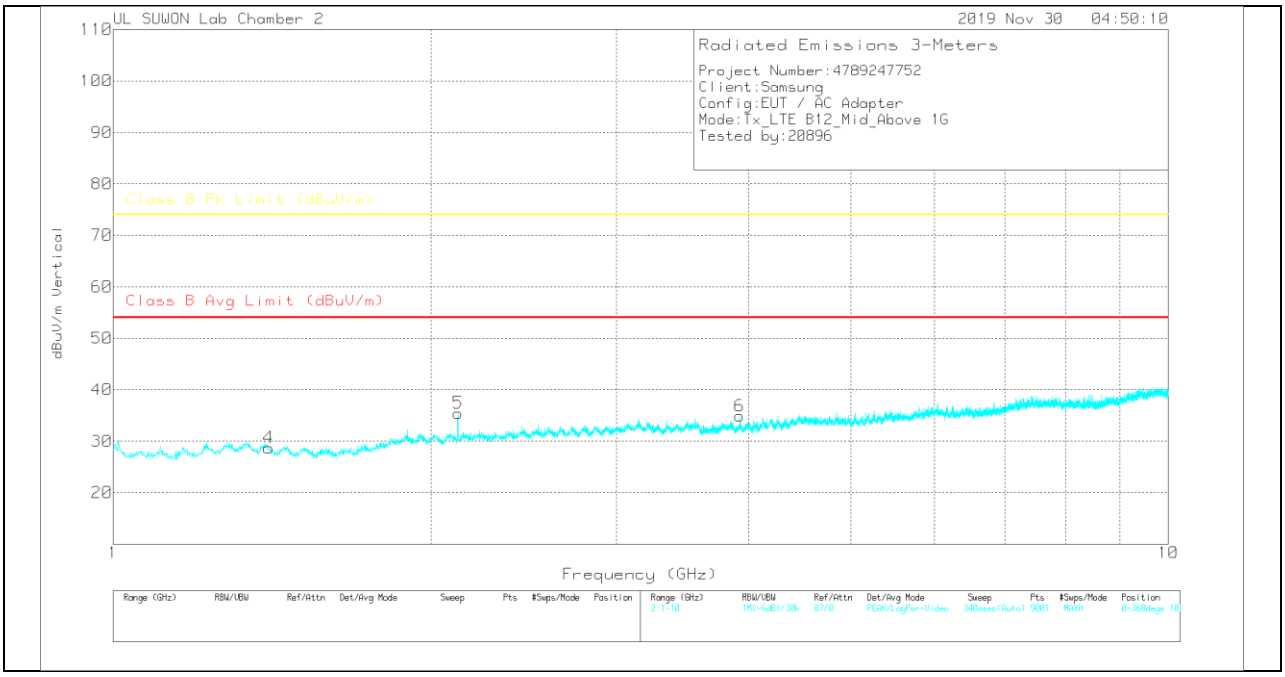
MID CHANNEL(737.5MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



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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	1.331	31.38	PK	29.7	-31.8	.7	29.98	-	-	74	-44.02	0-360	100	H
2	2.122	32.38	PK	31.3	-30.5	.7	33.88	-	-	74	-40.12	0-360	200	H
3	3.143	31.48	PK	32.9	-29.6	.7	35.48	-	-	74	-38.52	0-360	100	H
4	1.404	30.19	PK	29.4	-31.6	.7	28.69	-	-	74	-45.31	0-360	200	V
5	2.122	33.95	PK	31.3	-30.5	.7	35.45	-	-	74	-38.55	0-360	100	V
6	3.923	30.42	PK	33.4	-29.4	.5	34.92	-	-	74	-39.08	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.

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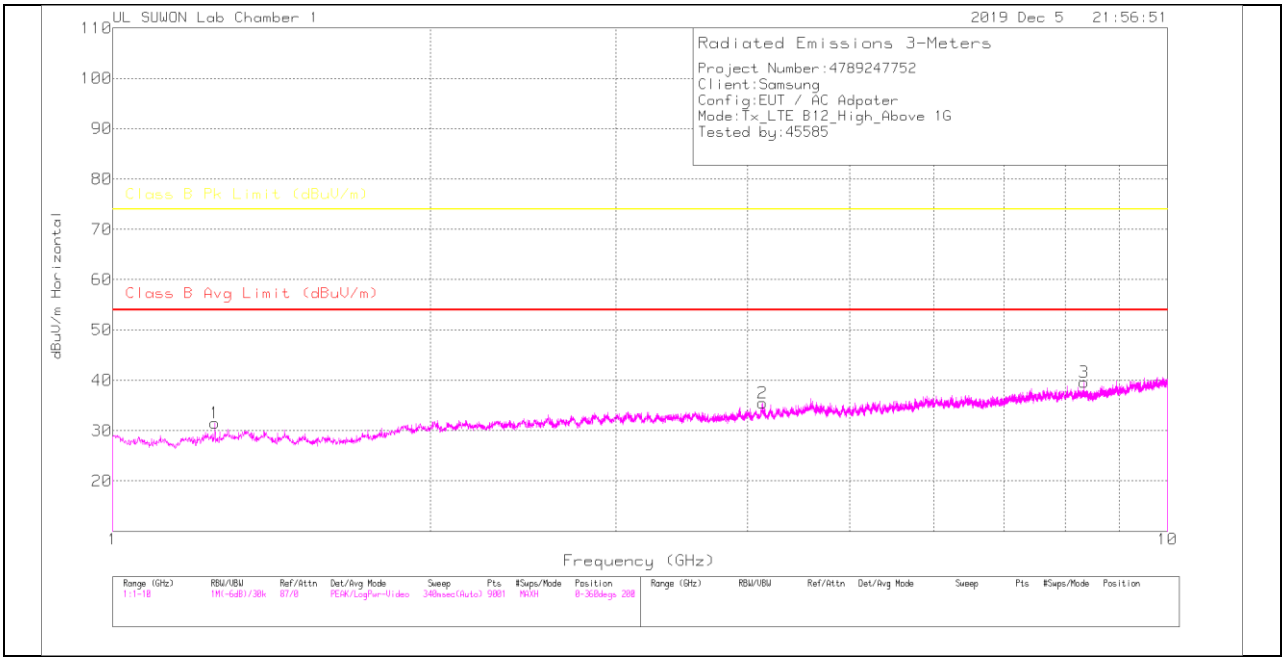
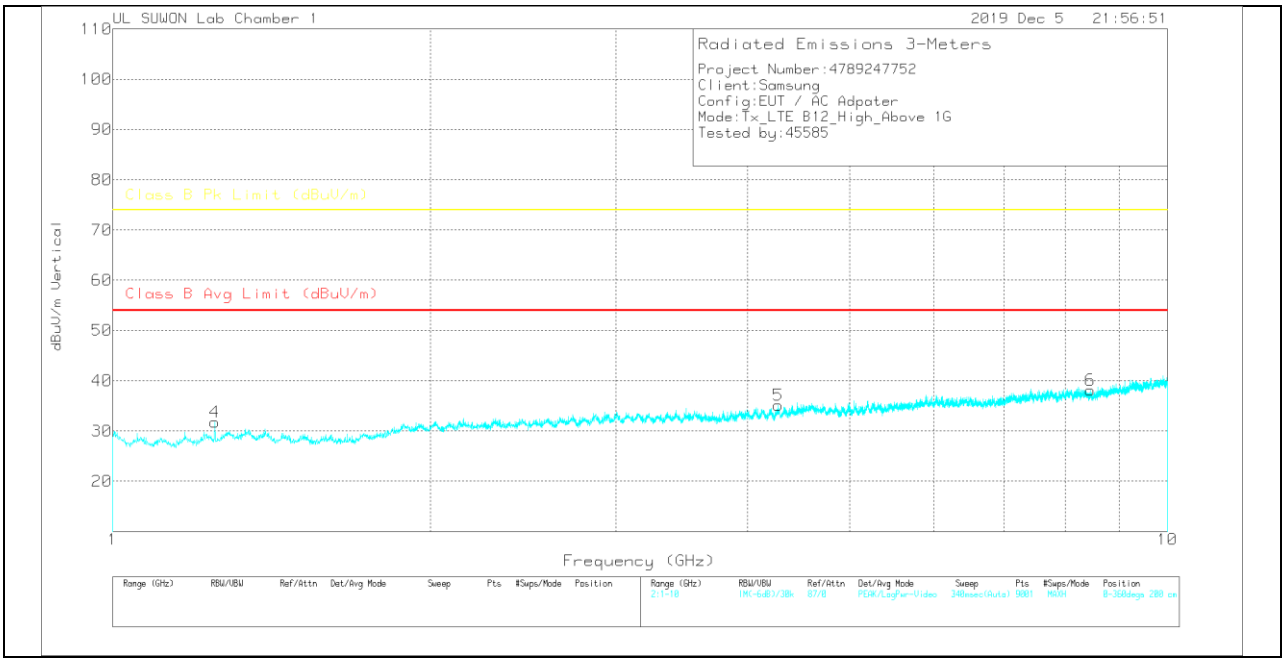
HIGH CHANNEL(744.5MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



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Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	1-18GHz[dB]	1GHz_HPF	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	1.25	38.67	PK	29.2	-37	.7	31.57	-	-	74	-42.43	0-360	200	H
2	4.134	34.04	PK	33.6	-32.5	.4	35.54	-	-	74	-38.46	0-360	100	H
3	8.332	29.05	PK	36.3	-26.3	.6	39.65	-	-	74	-34.35	0-360	200	H
4	1.25	38.86	PK	29.2	-37	.7	31.76	-	-	74	-42.24	0-360	200	V
5	4.277	33.37	PK	33.8	-32.4	.4	35.17	-	-	74	-38.83	0-360	200	V
6	8.449	27.18	PK	36.3	-26	.6	38.08	-	-	74	-35.92	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.

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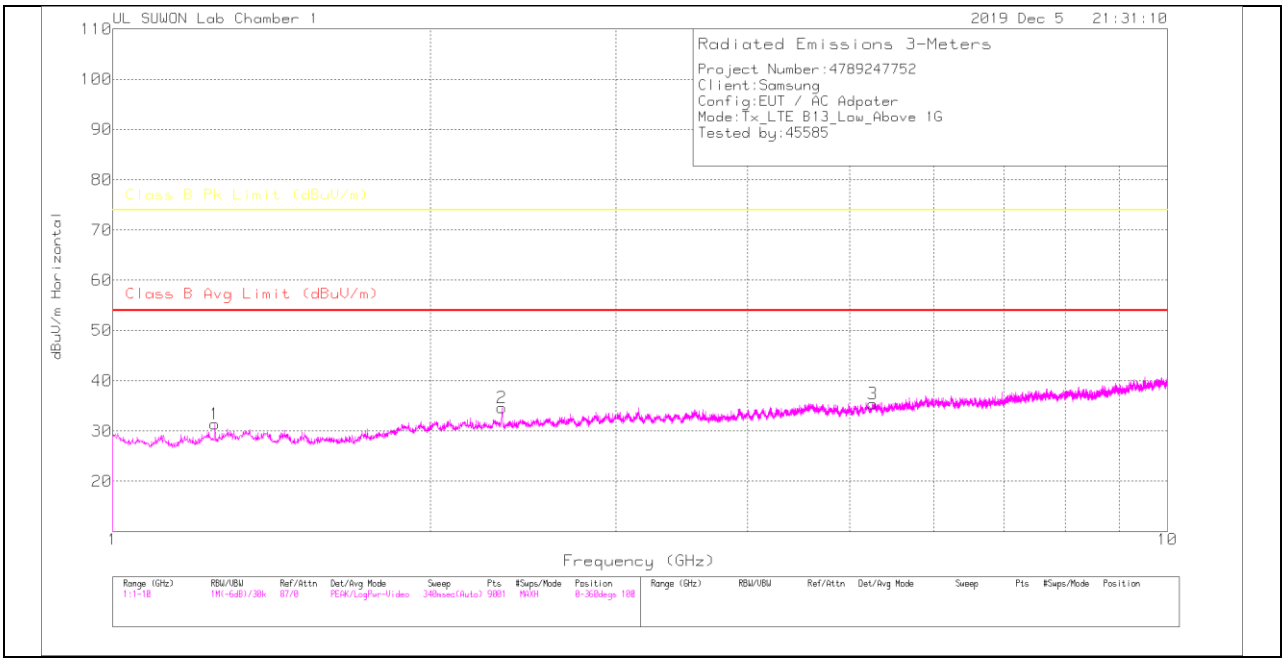
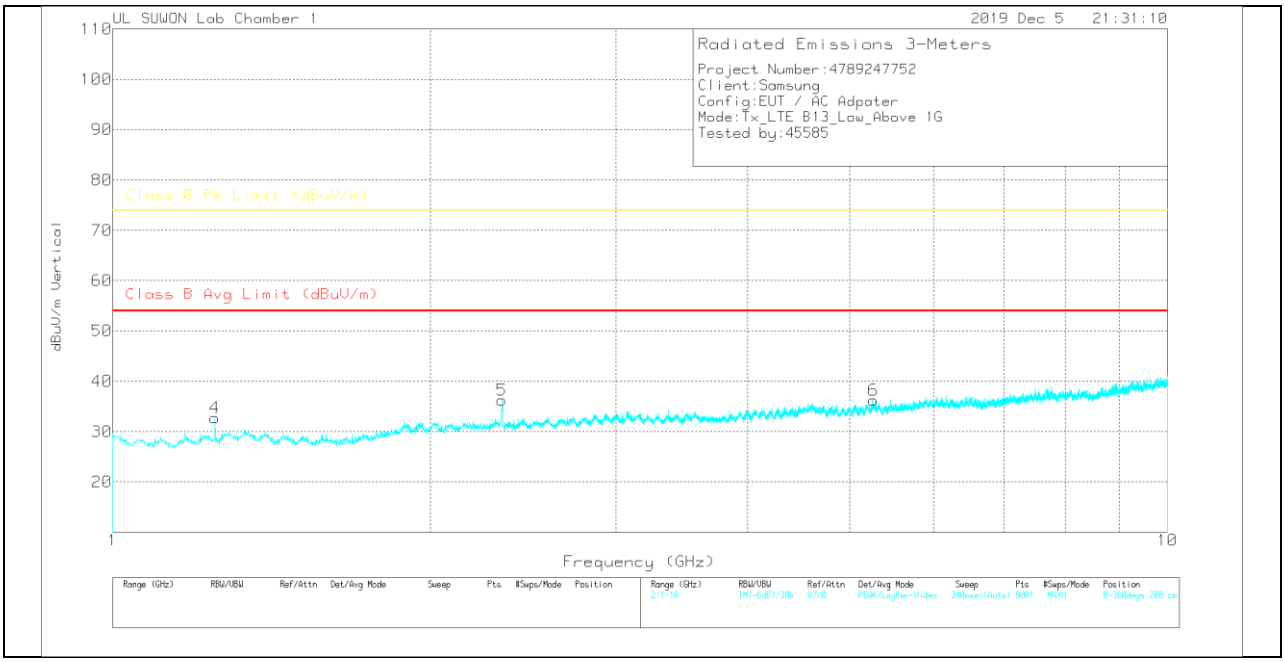
7.4. Above 1 GHz in the LTE Band 13

LOW CHANNEL(748.5MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



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DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	1-18GHz[dB]	1GHz_HPF	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	1.25	38.47	PK	29.2	-37	.7	31.37	-	-	74	-42.63	0-360	200	H
2	2.34	37.51	PK	31.5	-35	.6	34.61	-	-	74	-39.39	0-360	100	H
3	5.254	31.84	PK	34.6	-31.4	.4	35.44	-	-	74	-38.56	0-360	200	H
4	1.25	39.91	PK	29.2	-37	.7	32.81	-	-	74	-41.19	0-360	200	V
5	2.339	39.14	PK	31.5	-35	.6	36.24	-	-	74	-37.76	0-360	200	V
6	5.266	32.7	PK	34.6	-31.4	.4	36.3	-	-	74	-37.7	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.

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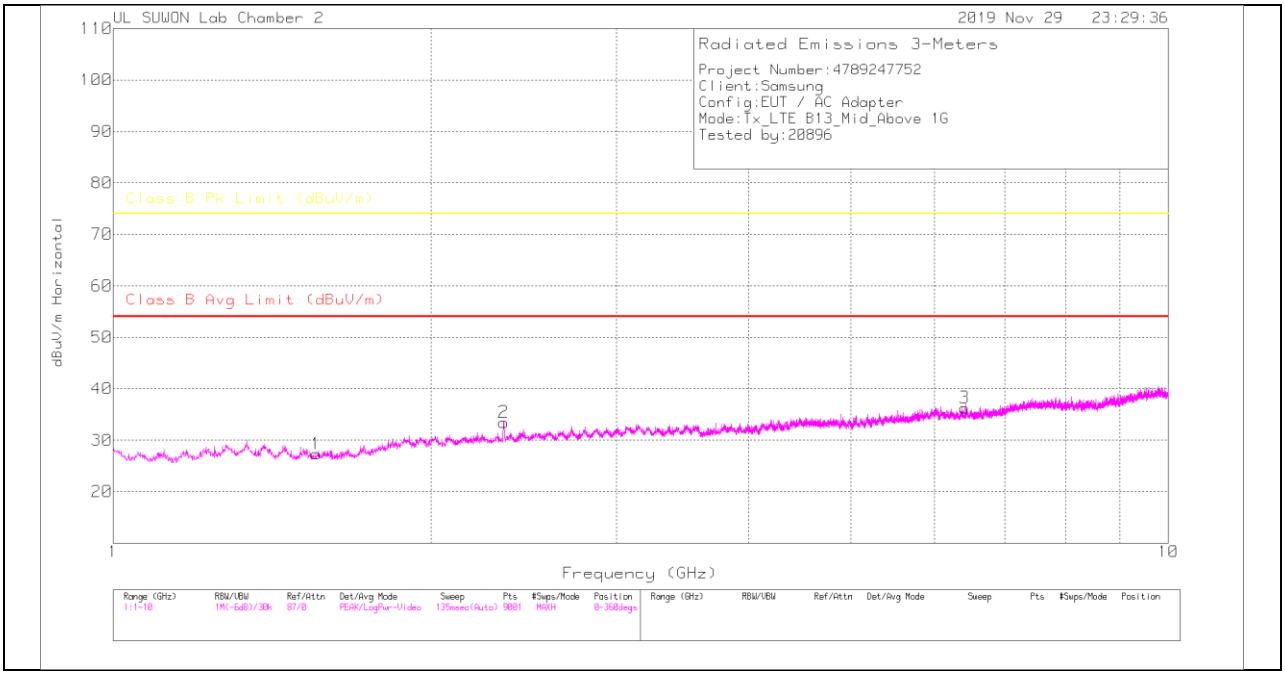
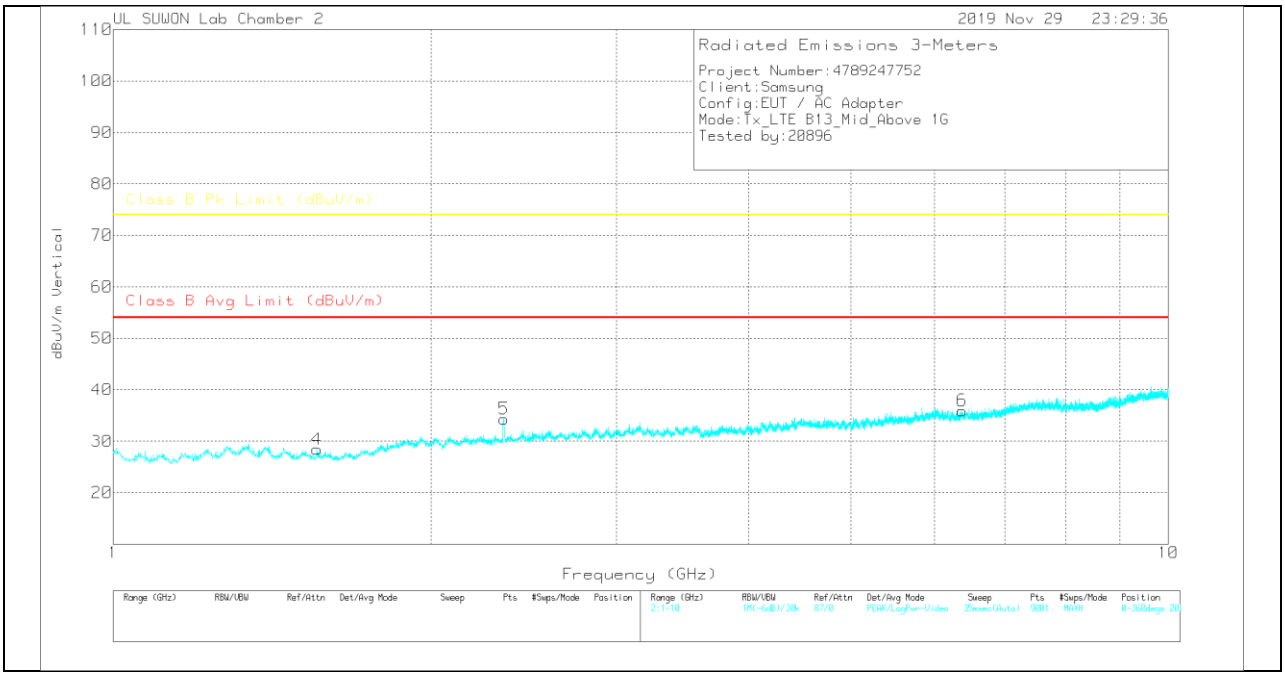
MID CHANNEL(751.0MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



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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	1.558	29.62	PK	28.3	-31.3	.7	27.32	-	-	74	-46.68	0-360	200	H
2	2.345	31.79	PK	31.6	-30.6	.7	33.49	-	-	74	-40.51	0-360	100	H
3	6.41	27.2	PK	35.2	-26.6	.5	36.3	-	-	74	-37.7	0-360	100	H
4	1.56	30.72	PK	28.3	-31.3	.7	28.42	-	-	74	-45.58	0-360	100	V
5	2.346	32.53	PK	31.6	-30.5	.7	34.33	-	-	74	-39.67	0-360	100	V
6	6.376	26.94	PK	35.2	-26.7	.5	35.94	-	-	74	-38.06	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.

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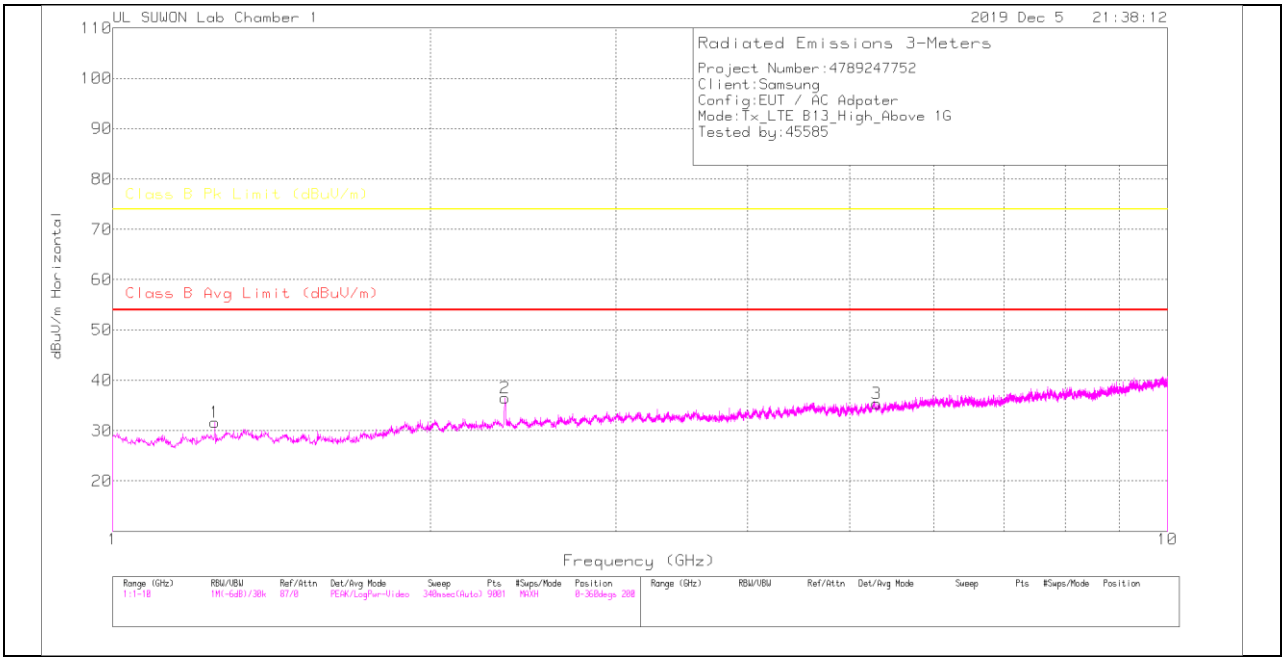
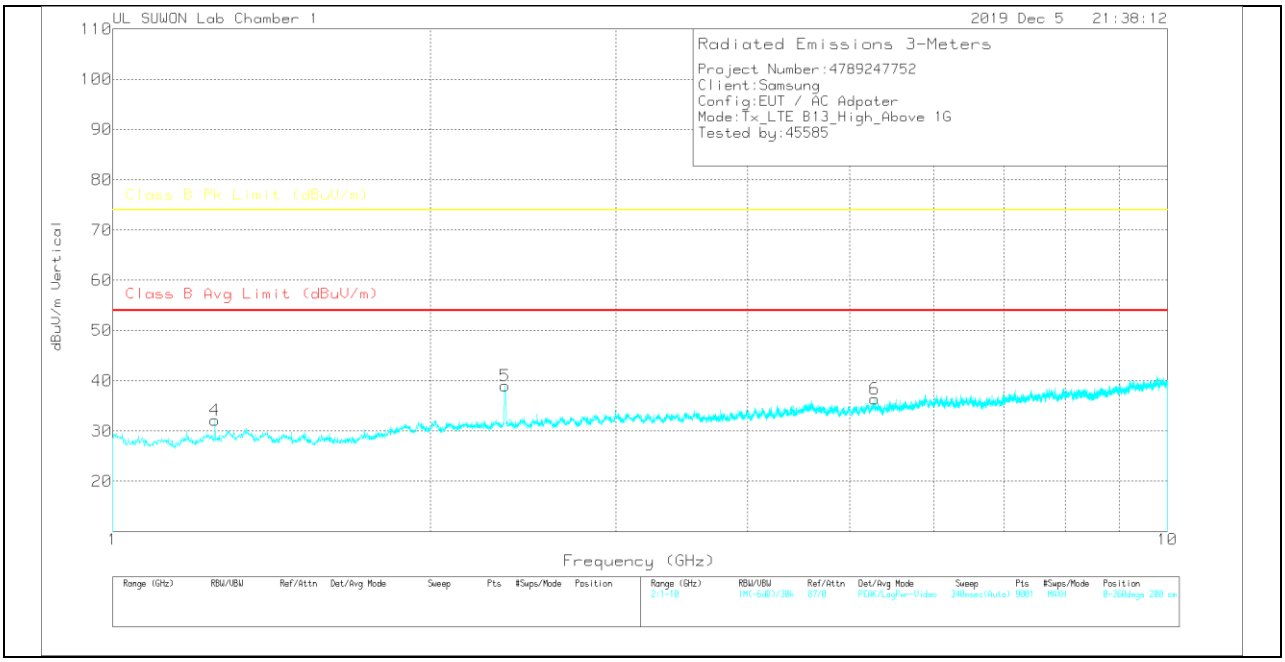
HIGH CHANNEL(753.5MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



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Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	1-18GHz[dB]	1GHz_HPF	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	1.25	38.76	PK	29.2	-37	.7	31.66	-	-	74	-42.34	0-360	200	H
2	2.354	39.5	PK	31.6	-35.1	.5	36.5	-	-	74	-37.5	0-360	100	H
3	5.299	31.88	PK	34.6	-31.5	.4	35.38	-	-	74	-38.62	0-360	100	H
4	1.25	39.21	PK	29.2	-37	.7	32.11	-	-	74	-41.89	0-360	200	V
5	2.353	41.93	PK	31.6	-35	.5	39.03	-	-	74	-34.97	0-360	100	V
6	5.279	32.83	PK	34.6	-31.5	.4	36.33	-	-	74	-37.67	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.

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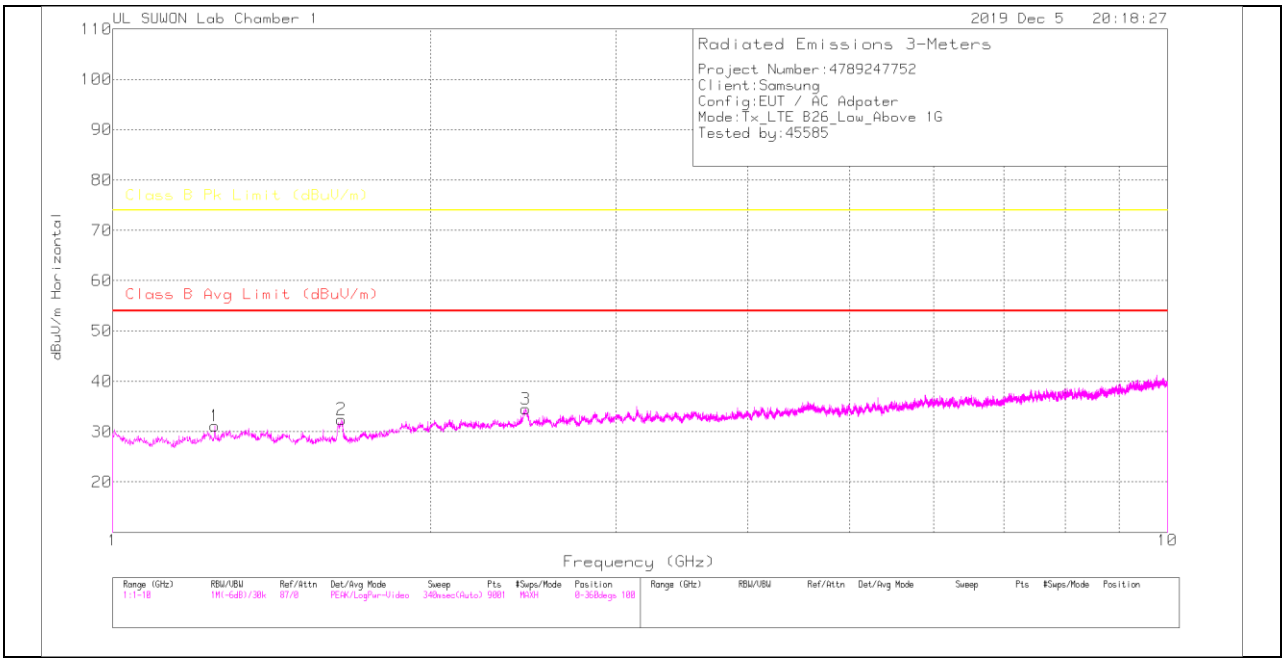
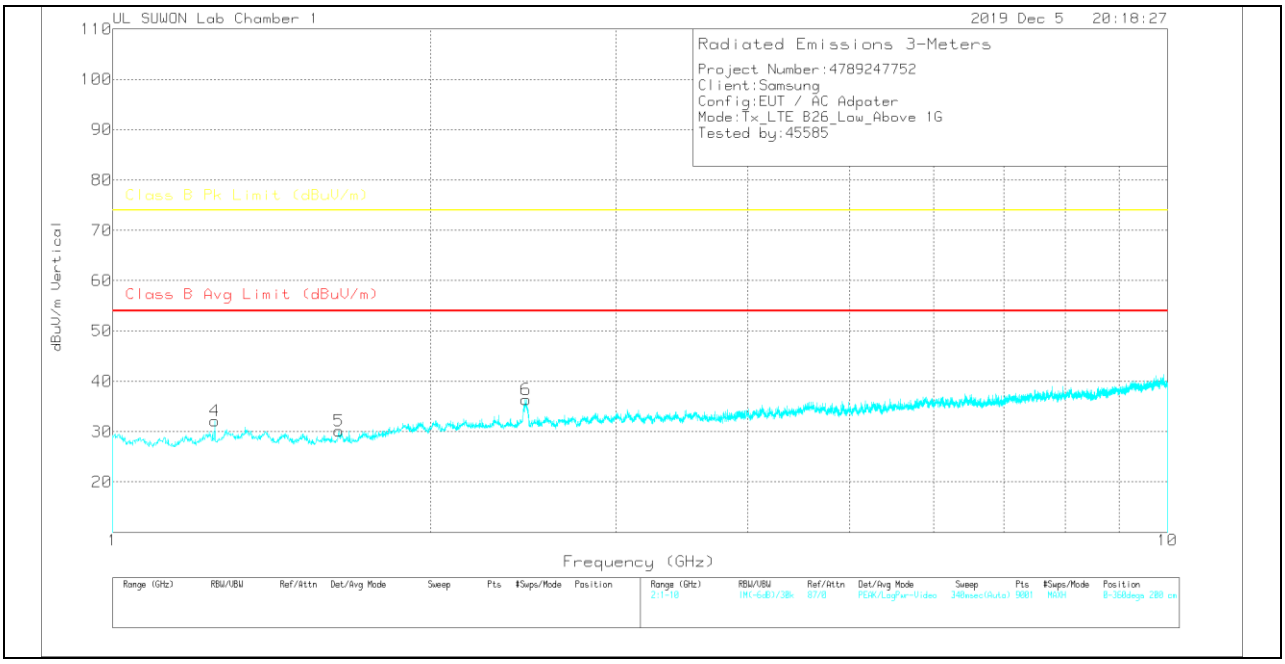
7.5. Above 1 GHz in the LTE Band 26

LOW CHANNEL(860.5MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



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Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	1-18GHz[dB]	1GHz_HPF	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	1.249	38.27	PK	29.2	-37	.7	31.17	-	-	74	-42.83	0-360	200	H
2	1.647	39.75	PK	28.3	-36.2	.6	32.45	-	-	74	-41.55	0-360	200	H
3	2.463	36.56	PK	31.9	-34.7	.8	34.56	-	-	74	-39.44	0-360	200	H
4	1.25	39.23	PK	29.2	-37	.7	32.13	-	-	74	-41.87	0-360	200	V
5	1.638	37.34	PK	28.3	-36.2	.7	30.14	-	-	74	-43.86	0-360	100	V
6	2.465	38.5	PK	31.9	-34.7	.7	36.4	-	-	74	-37.6	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.

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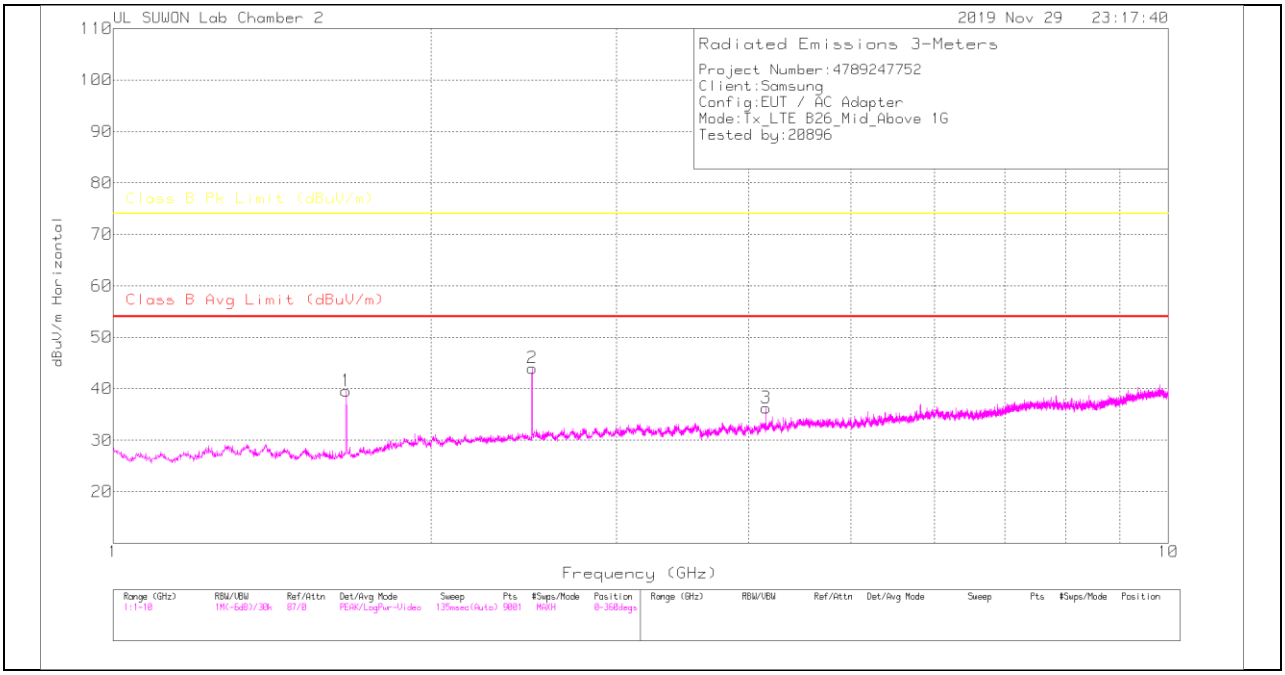
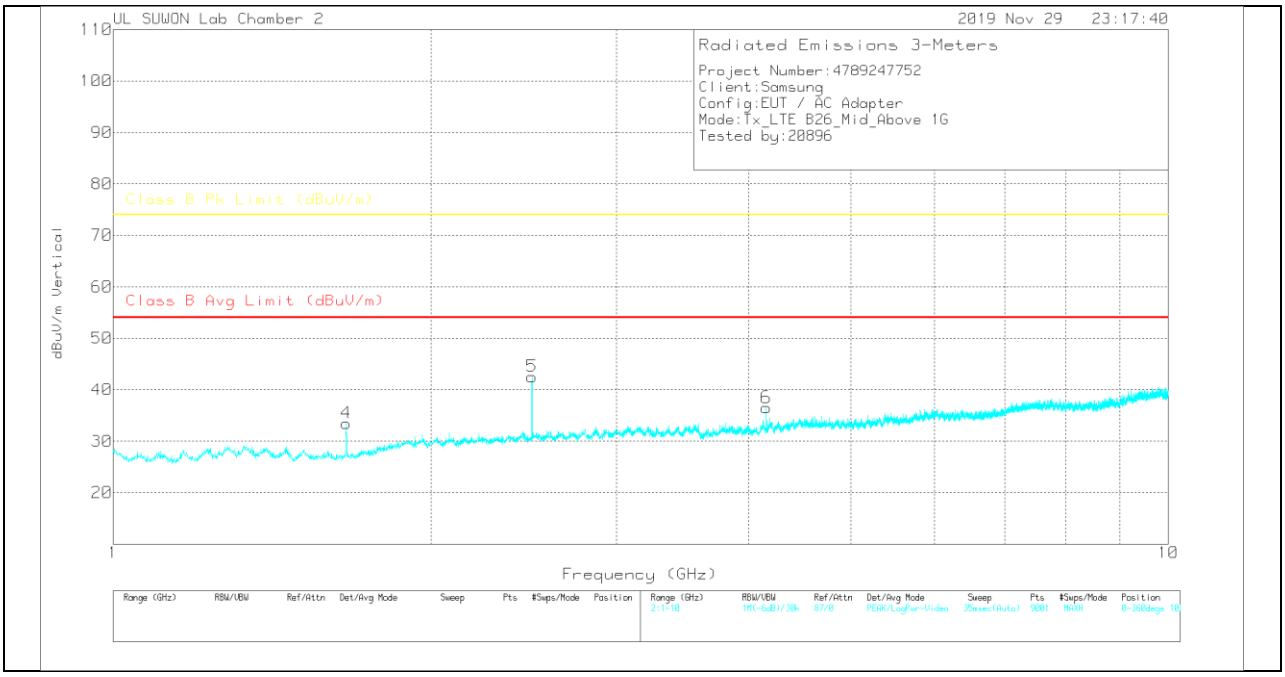
MID CHANNEL(876.5MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



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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	1.662	41.81	PK	28.4	-31.3	.7	39.61	-	-	74	-34.39	0-360	200	H
2	2.495	41.42	PK	31.9	-30	.7	44.02	-	-	74	-29.98	0-360	100	H
3	4.157	30.71	PK	33.4	-28.3	.5	36.31	-	-	74	-37.69	0-360	100	H
4	1.663	35.81	PK	28.4	-31.4	.7	33.51	-	-	74	-40.49	0-360	100	V
5	2.494	40.06	PK	31.9	-30.1	.7	42.56	-	-	74	-31.44	0-360	100	V
6	4.159	30.93	PK	33.4	-28.3	.5	36.53	-	-	74	-37.47	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.

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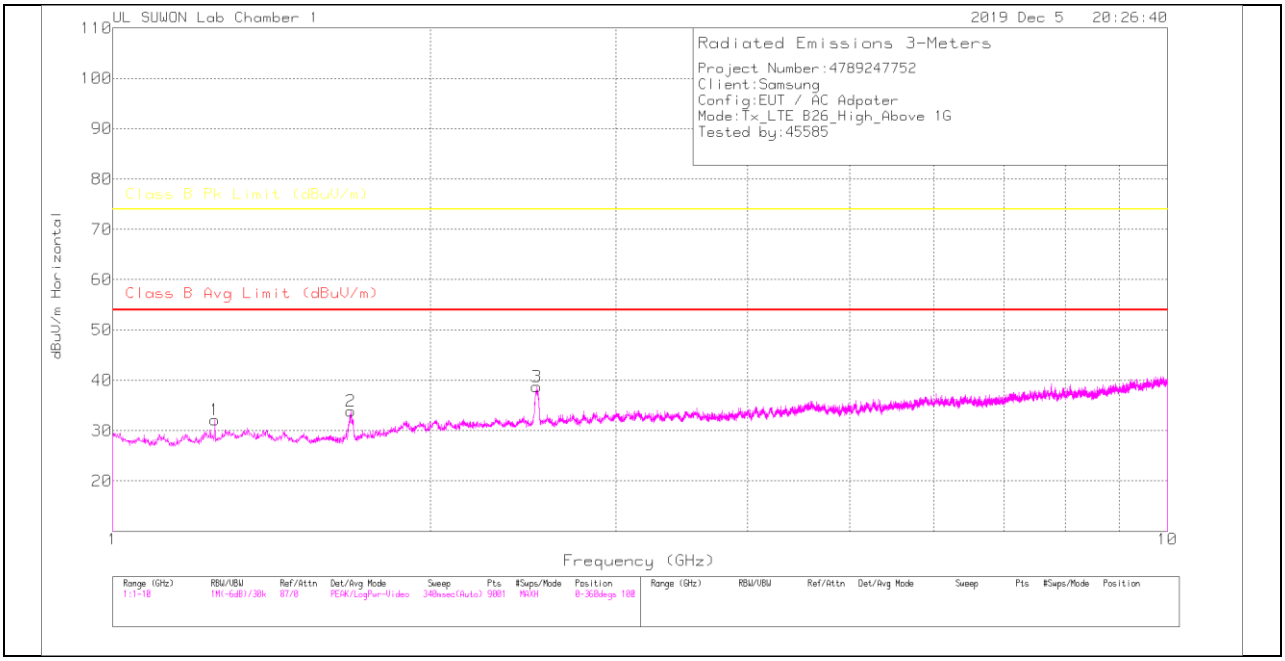
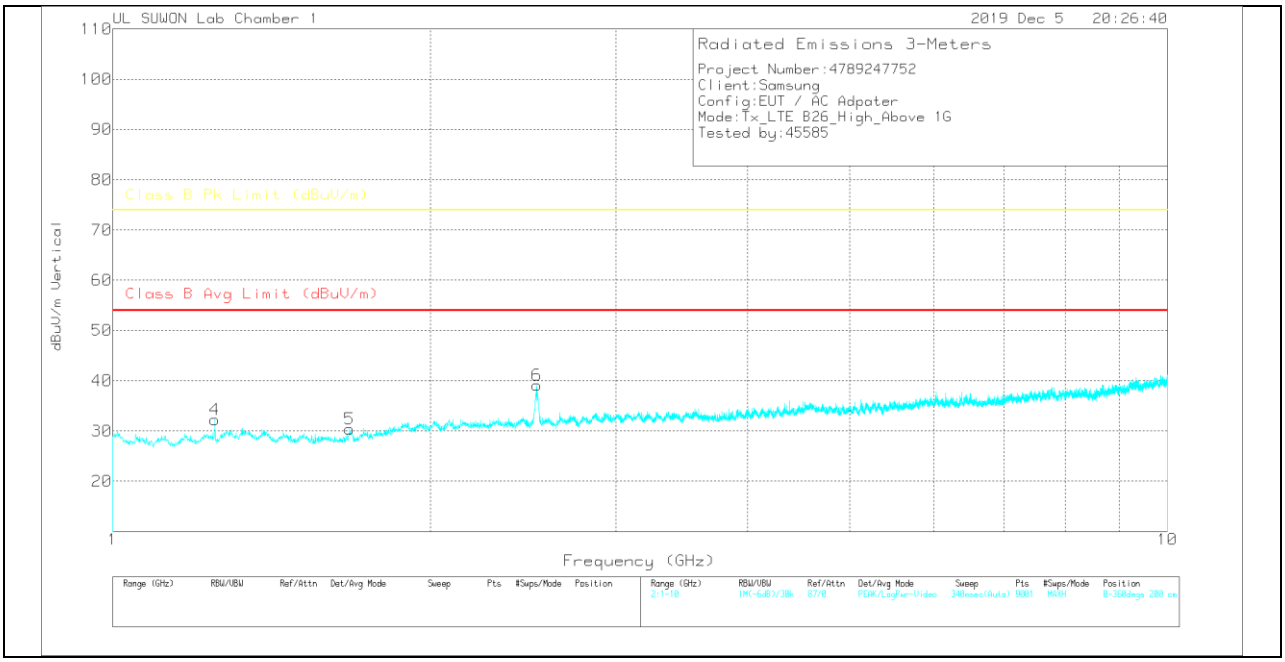
HIGH CHANNEL(892.5MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



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DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	1-18GHz[dB]	1GHz_HPF	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	1.25	39.23	PK	29.2	-37	.7	32.13	-	-	74	-41.87	0-360	200	H
2	1.682	41.01	PK	28.5	-36.1	.5	33.91	-	-	74	-40.09	0-360	200	H
3	2.523	40.71	PK	32	-34.6	.6	38.71	-	-	74	-35.29	0-360	200	H
4	1.25	39.33	PK	29.2	-37	.7	32.23	-	-	74	-41.77	0-360	200	V
5	1.677	37.46	PK	28.5	-36.1	.5	30.36	-	-	74	-43.64	0-360	200	V
6	2.524	40.98	PK	32	-34.5	.6	39.08	-	-	74	-34.92	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.

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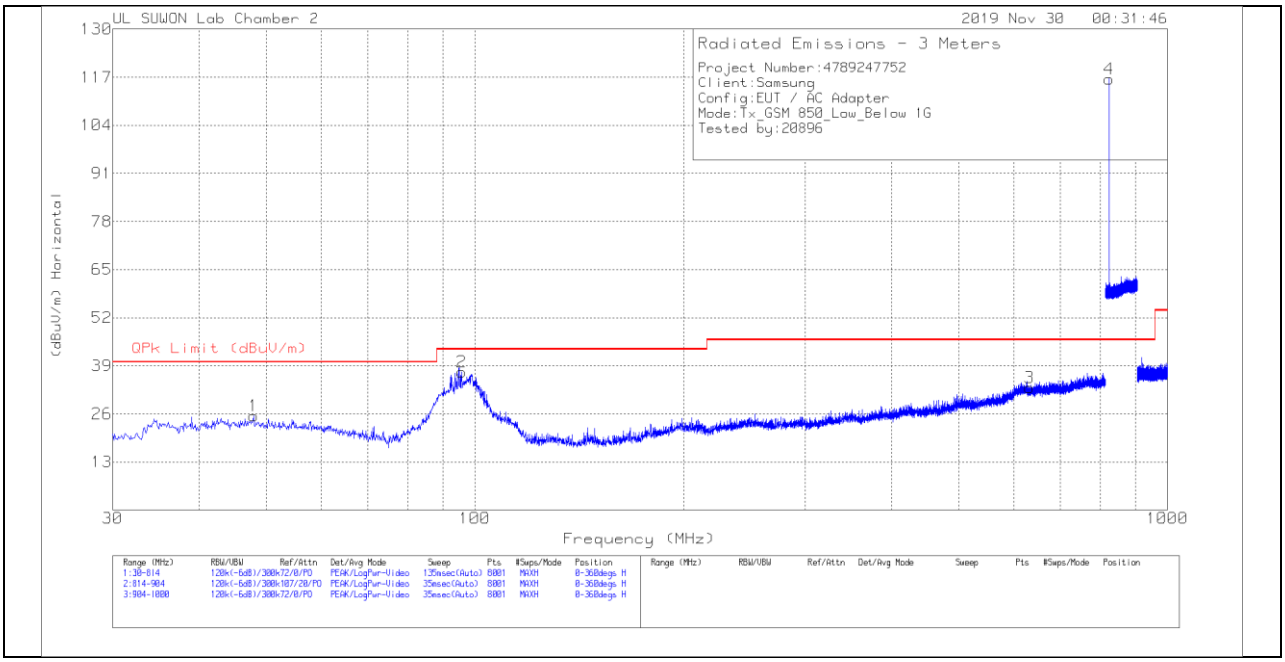
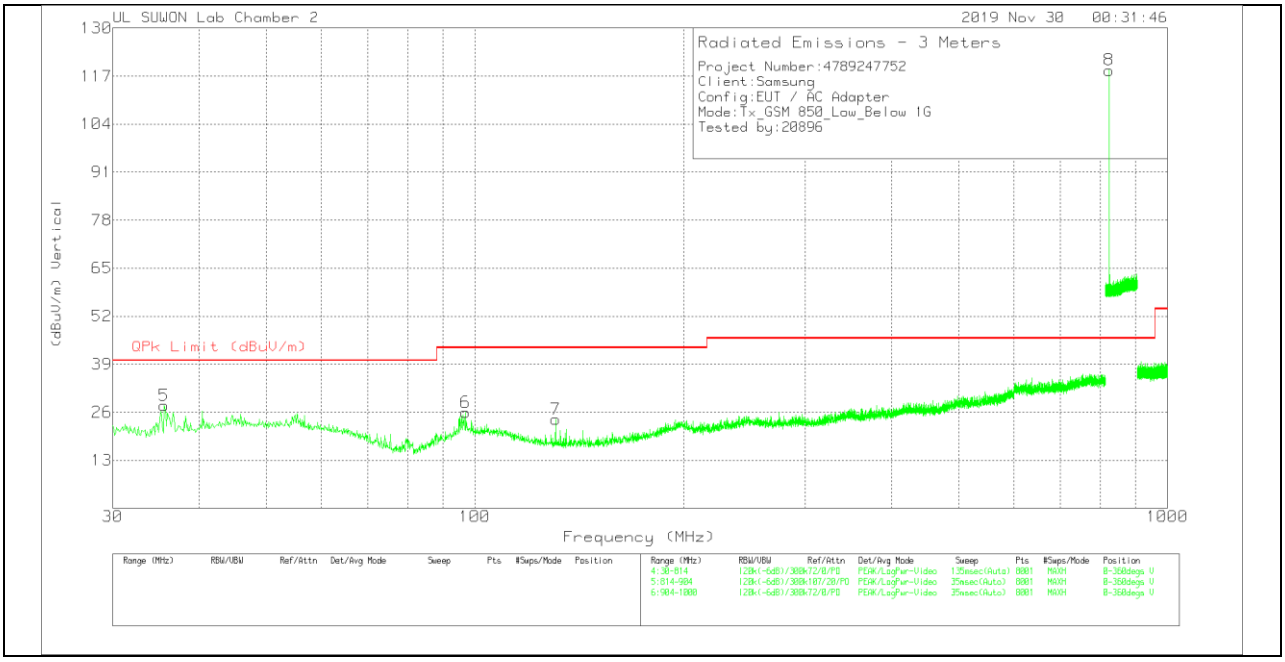
7.6. Below 1 GHz in the GSM850

LOW CHANNEL(869.2MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



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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	47.934	4.89	Pk	19.8	.8	25.49	40	-14.51	0-360	400	H
2	95.66	18.95	Pk	17.3	1.1	37.35	43.52	-6.17	0-360	200	H
3	632.7	5.28	Pk	25.1	2.8	33.18	46.02	-12.84	0-360	400	H
4	824.1925	86.45	Pk	26.9	3.2	116.55	**46.02**	**70.53**	0-360	200	H
5	35.586	10.2	Pk	16.9	.7	27.8	40	-12.2	0-360	100	V
6	96.934	7.5	Pk	17.4	1.1	26	43.52	-17.52	0-360	100	V
7	130.744	8.68	Pk	14.2	1.3	24.18	43.52	-19.34	0-360	100	V
8	824.2488	88.51	Pk	26.9	3.2	118.61	**46.02**	**72.59**	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.

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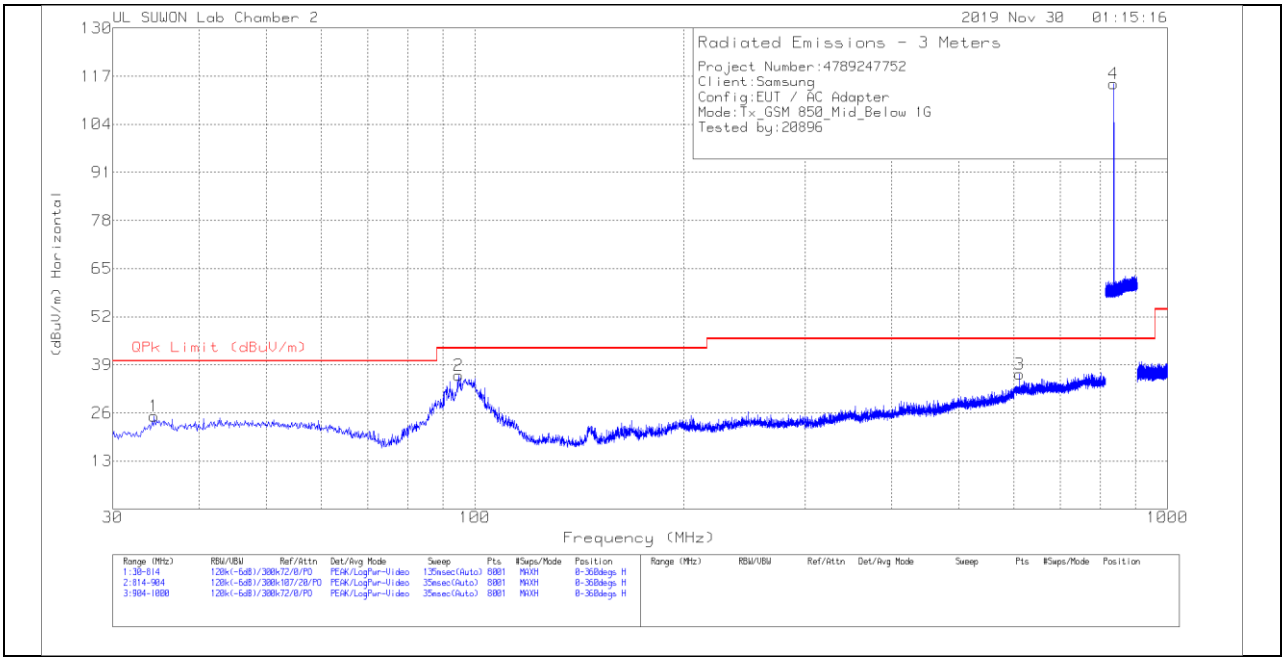
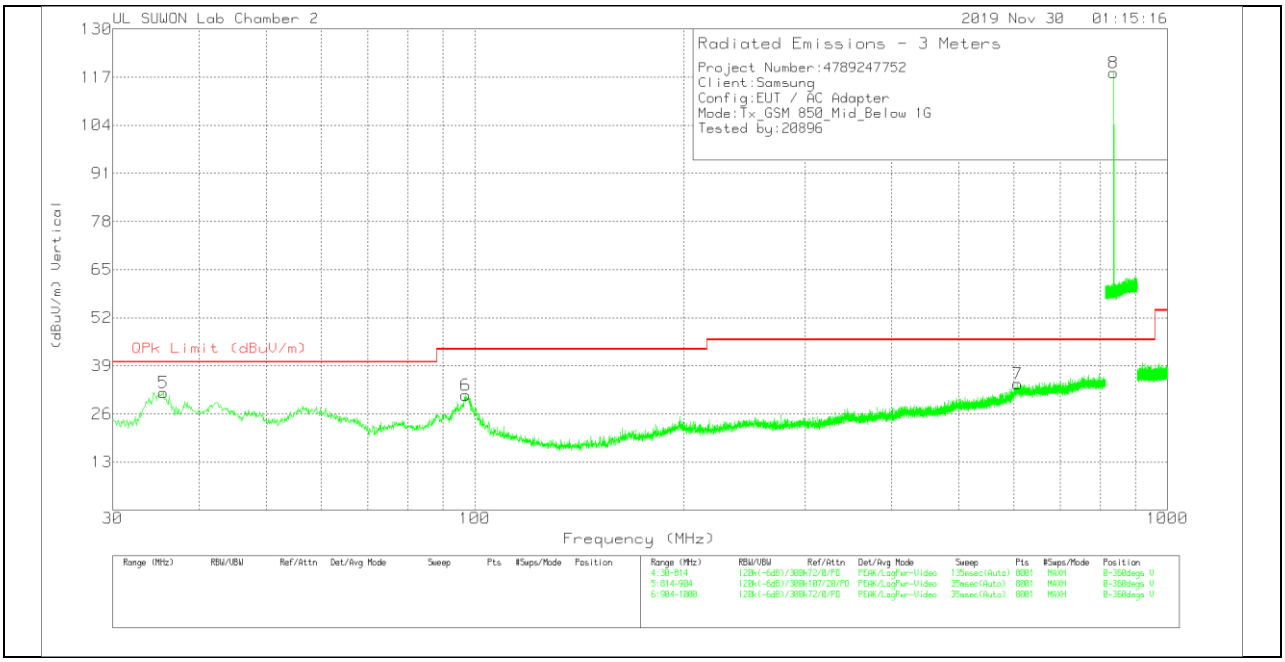
MID CHANNEL(881.6MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



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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	34.41	8.21	Pk	16.3	.7	25.21	40	-14.79	0-360	300	H
2	94.778	17.98	Pk	17.1	1.1	36.18	43.52	-7.34	0-360	300	H
3	611.63	8.4	Pk	25.3	2.8	36.5	46.02	-9.52	0-360	400	H
4	836.6125	84.53	Pk	27.1	3.3	114.93	**46.02**	**68.91**	0-360	300	H
5	35.488	14.2	Pk	16.9	.7	31.8	40	-8.2	0-360	200	V
6	97.032	12.56	Pk	17.4	1.1	31.06	43.52	-12.46	0-360	200	V
7	607.71	6.05	Pk	25.3	2.8	34.15	46.02	-11.87	0-360	300	V
8	836.545	87.82	Pk	27.1	3.3	118.22	**46.02**	**72.2**	0-360	100	V

Pk - Peak detector

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

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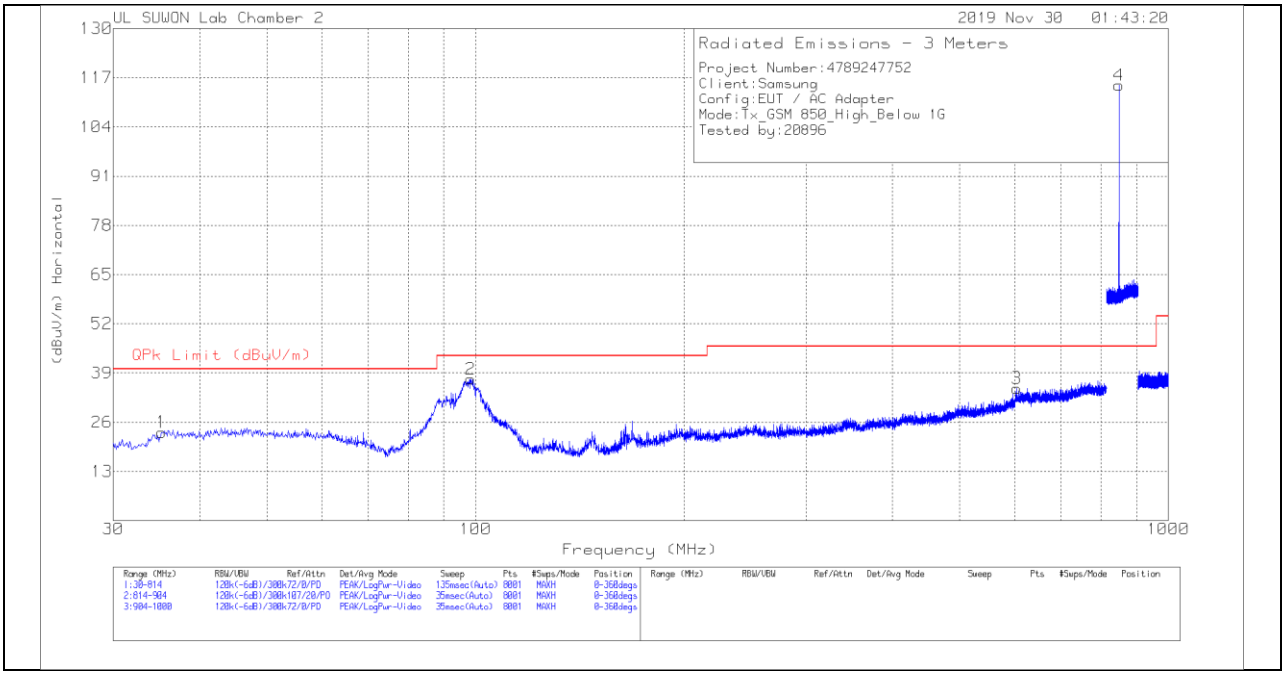
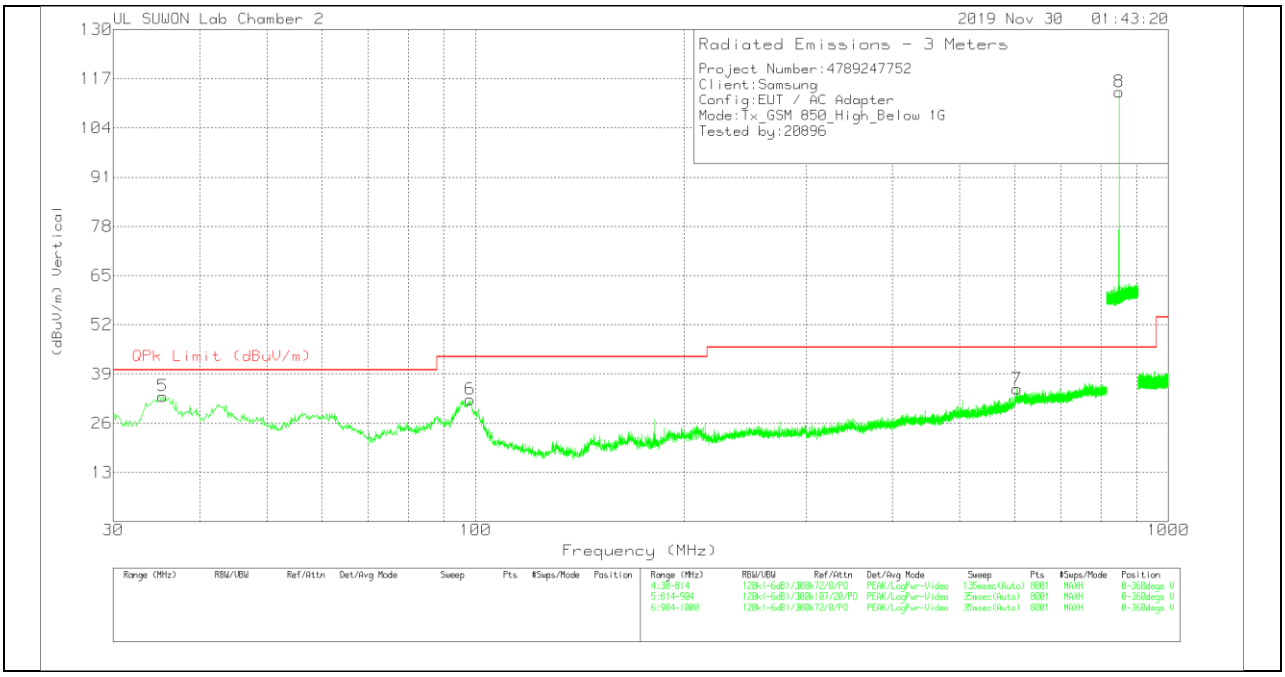
HIGH CHANNEL(893.8MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



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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	35.243	5.82	Pk	16.8	.7	23.32	40	-16.68	0-360	400	H
2	98.404	18.65	Pk	17.6	1.1	37.35	43.52	-6.17	0-360	300	H
3	604.378	6.8	Pk	25.3	2.8	34.9	46.02	-11.12	0-360	400	H
4	848.785	84.3	Pk	27.4	3.3	115	**46.02**	**68.98**	0-360	200	H
5	35.39	15.65	Pk	16.8	.7	33.15	40	-6.85	0-360	100	V
6	98.208	13.61	Pk	17.6	1.1	32.31	43.52	-11.21	0-360	100	V
7	604.868	6.96	Pk	25.3	2.8	35.06	46.02	-10.96	0-360	400	V
8	848.8638	82.87	Pk	27.4	3.3	113.57	**46.02**	**67.55**	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.

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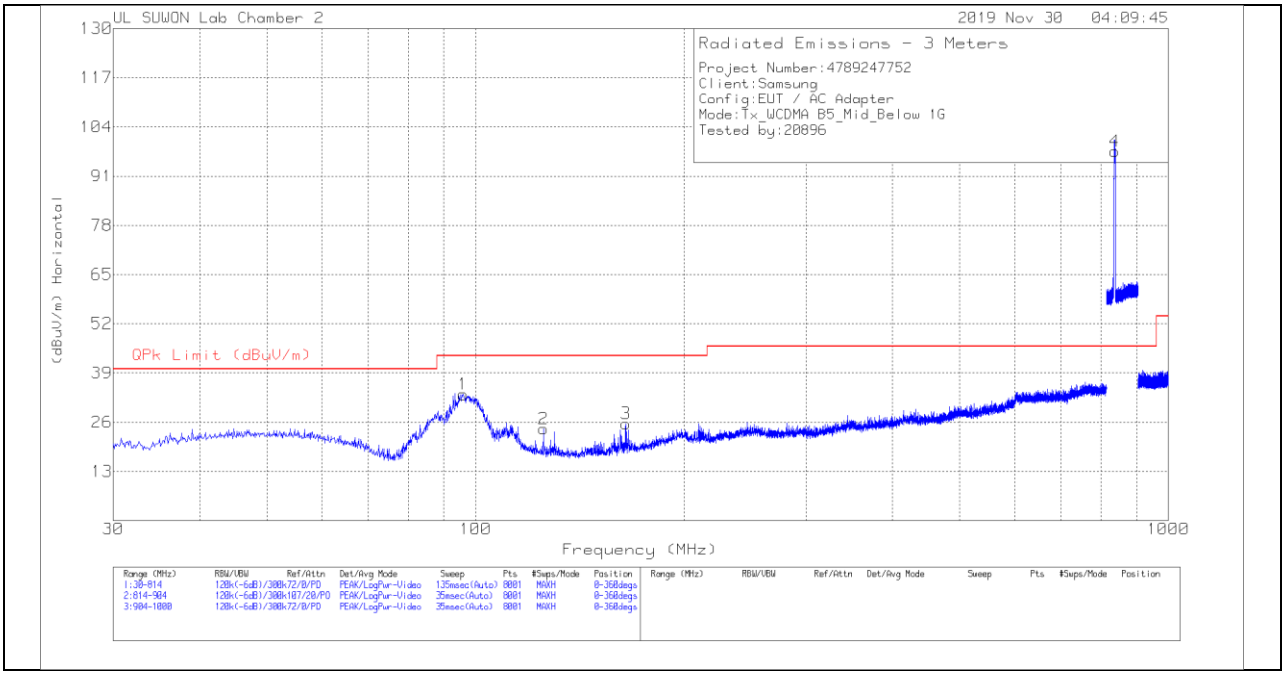
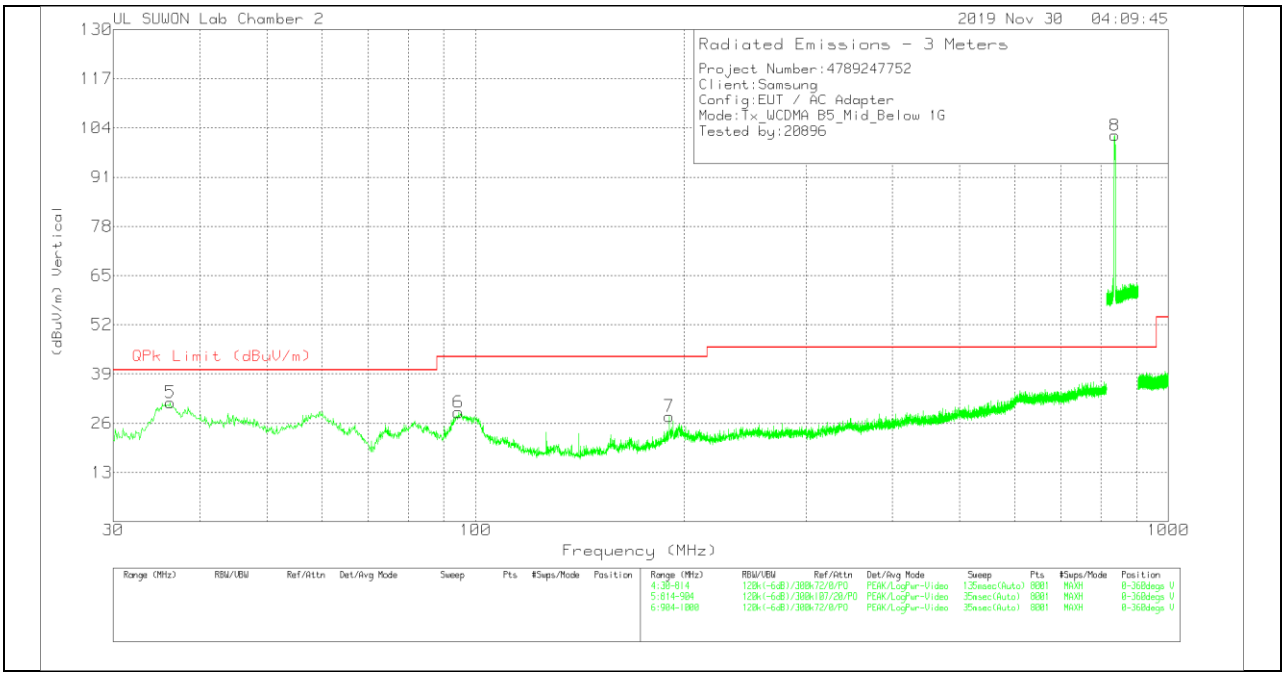
7.7. Below 1 GHz in the WCDMA Band 5

MID CHANNEL(881.6MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



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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	96.052	14.84	Pk	17.4	1.1	33.34	43.52	-10.18	0-360	300	H
2	125.354	8.33	Pk	14.6	1.3	24.23	43.52	-19.29	0-360	200	H
3	164.946	9.41	Pk	14.8	1.4	25.61	43.52	-17.91	0-360	100	H
4	837.0625	67.17	Pk	27.1	3.3	97.57	**46.02**	**51.55**	0-360	300	H
5	36.272	13.56	Pk	17.2	.7	31.46	40	-8.54	0-360	100	V
6	94.484	10.64	Pk	17.1	1.1	28.84	43.52	-14.68	0-360	100	V
7	190.426	8.96	Pk	17.2	1.6	27.76	43.52	-15.76	0-360	100	V
8	837.2763	71.64	Pk	27.1	3.3	102.04	**46.02**	**56.02**	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.

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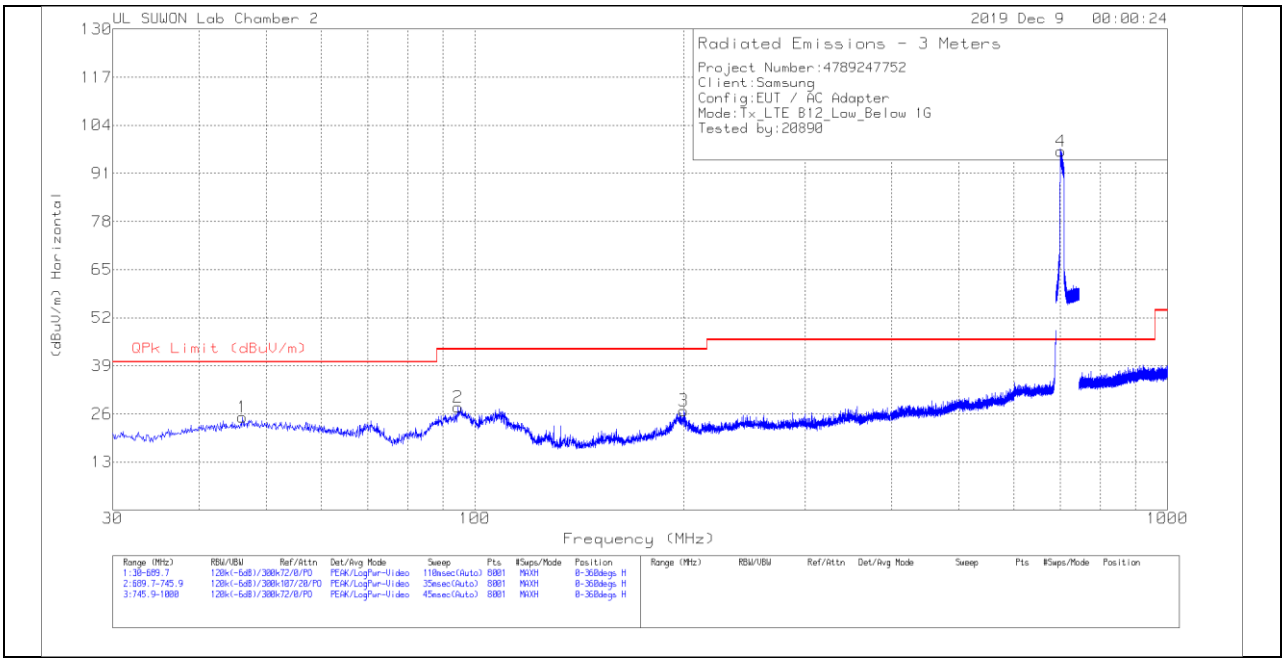
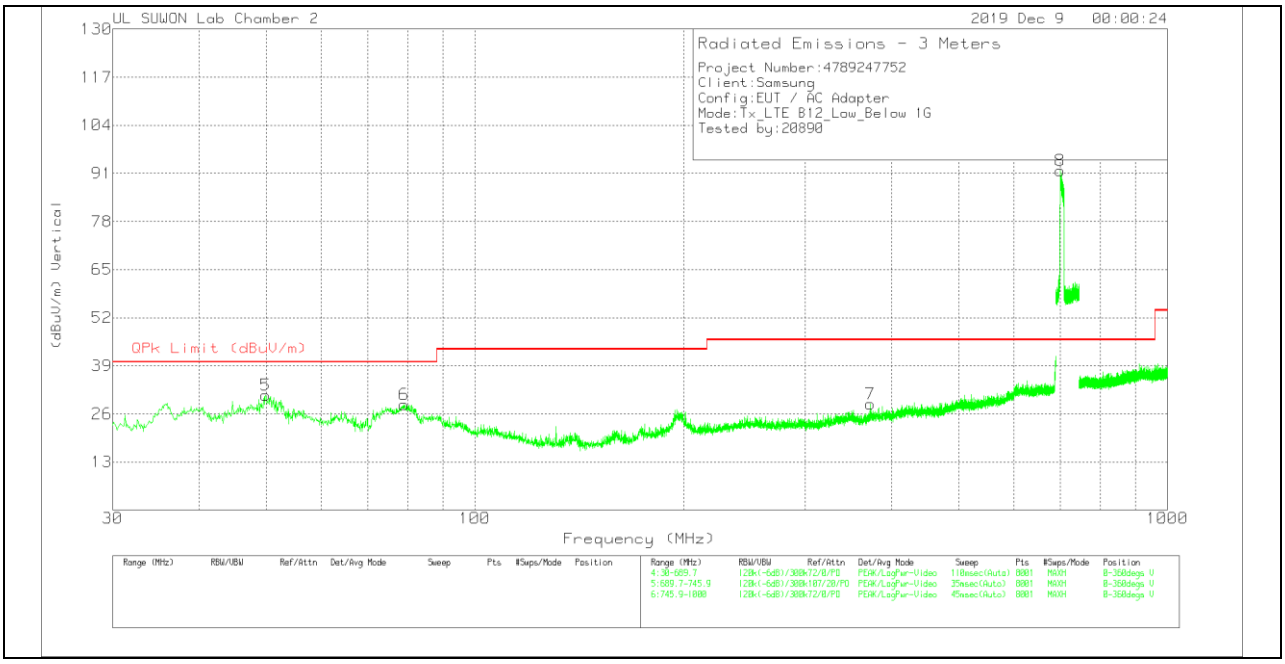
7.8. Below 1 GHz in the LTE Band 12

LOW CHANNEL(730.5MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



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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	46.1627	4.61	Pk	19.7	.8	25.11	40	-14.89	0-360	100	H
2	94.5685	9.64	Pk	17.1	1.1	27.84	43.52	-15.68	0-360	300	H
3	200.0387	7.32	Pk	18	1.6	26.92	43.52	-16.6	0-360	100	H
4	701.502	68.38	Pk	25.6	3	96.98	**46.02**	**50.96**	0-360	100	H
5	49.8736	10.62	Pk	19.7	.8	31.12	40	-8.88	0-360	100	V
6	79.0655	14.91	Pk	12.6	1	28.51	40	-11.49	0-360	100	V
7	372.7987	5.64	Pk	20.8	2.2	28.64	46.02	-17.38	0-360	400	V
8	700.5888	63.15	Pk	25.6	3	91.75	**46.02**	**45.73**	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.

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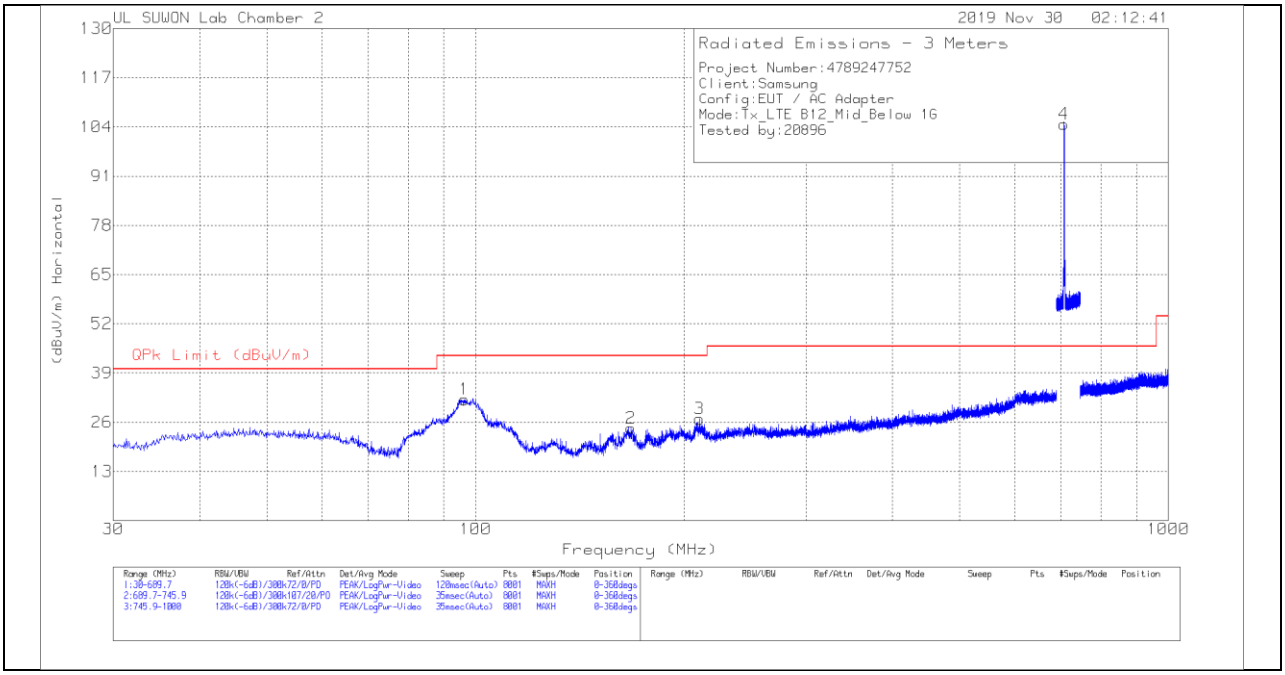
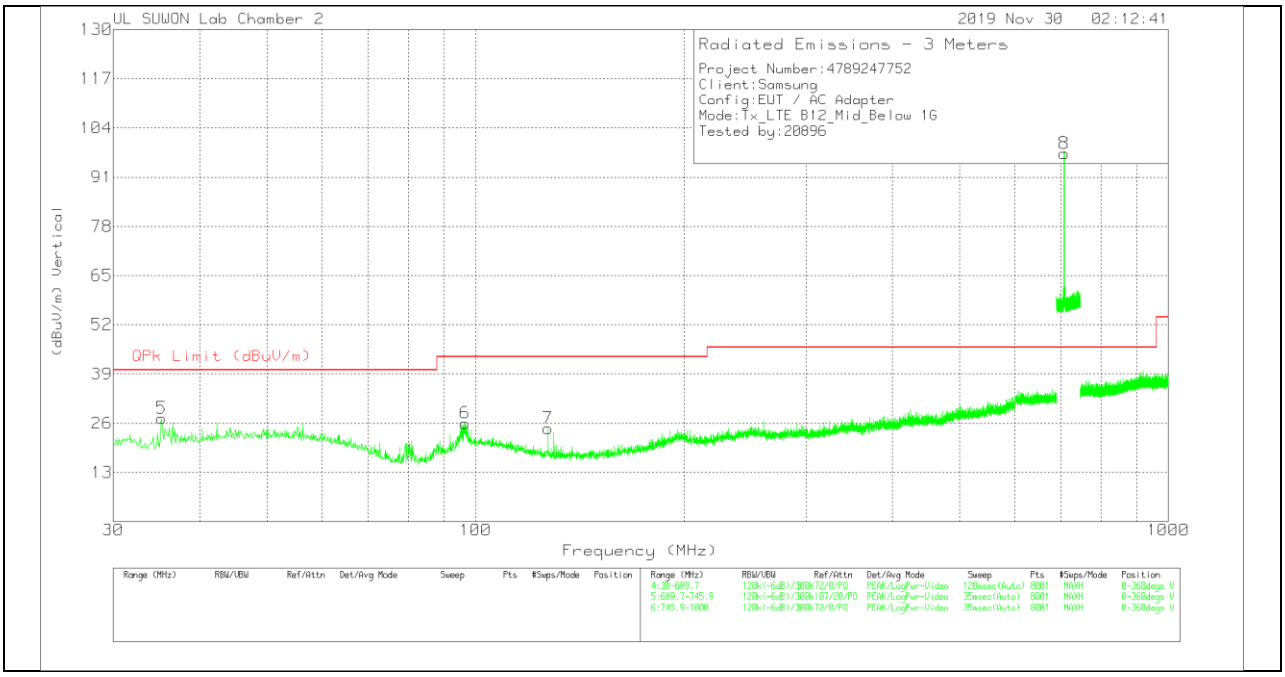
MID CHANNEL(737.5MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



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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	96.3827	13.49	Pk	17.4	1.1	31.99	43.52	-11.53	0-360	300	H
2	167.6307	8	Pk	14.9	1.5	24.4	43.52	-19.12	0-360	100	H
3	210.3466	8.25	Pk	17	1.6	26.85	43.52	-16.67	0-360	100	H
4	707.1642	76.23	Pk	25.5	3	104.73	**46.02**	**58.71**	0-360	100	H
5	35.1952	9.88	Pk	16.7	.7	27.28	40	-12.72	0-360	100	V
6	96.5476	7.49	Pk	17.4	1.1	25.99	43.52	-17.53	0-360	100	V
7	127.2239	8.87	Pk	14.5	1.3	24.67	43.52	-18.85	0-360	100	V
8	707.4943	68.77	Pk	25.5	3	97.27	**46.02**	**51.25**	0-360	200	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.

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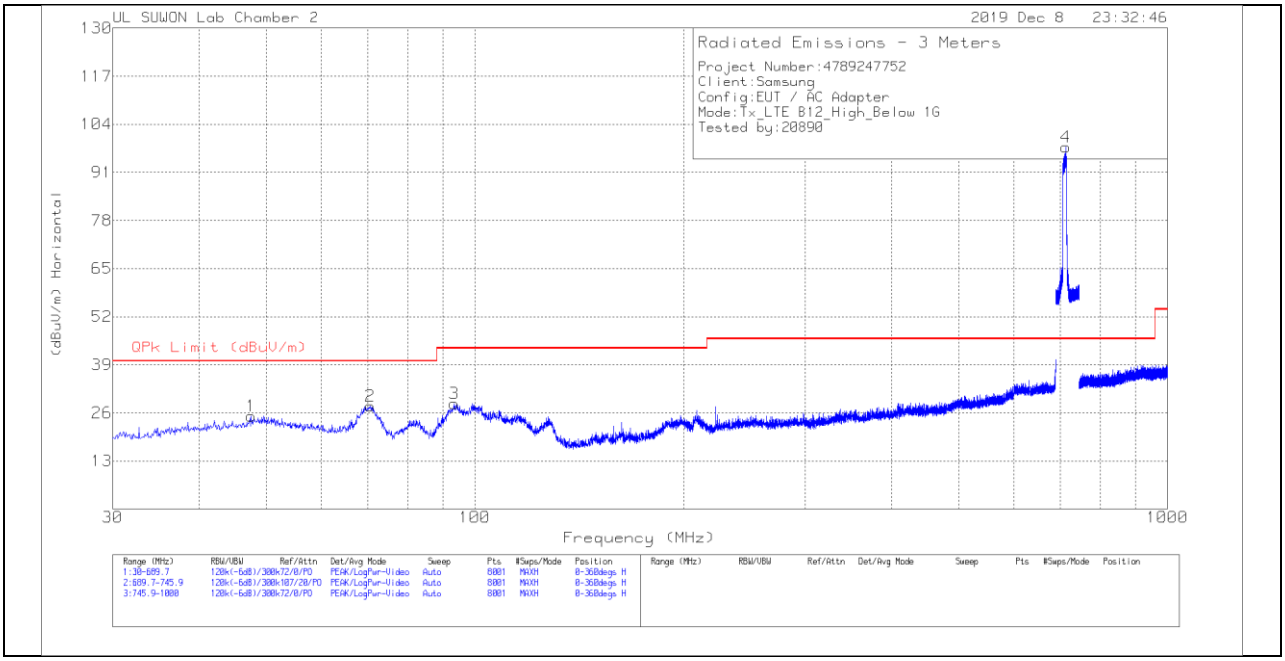
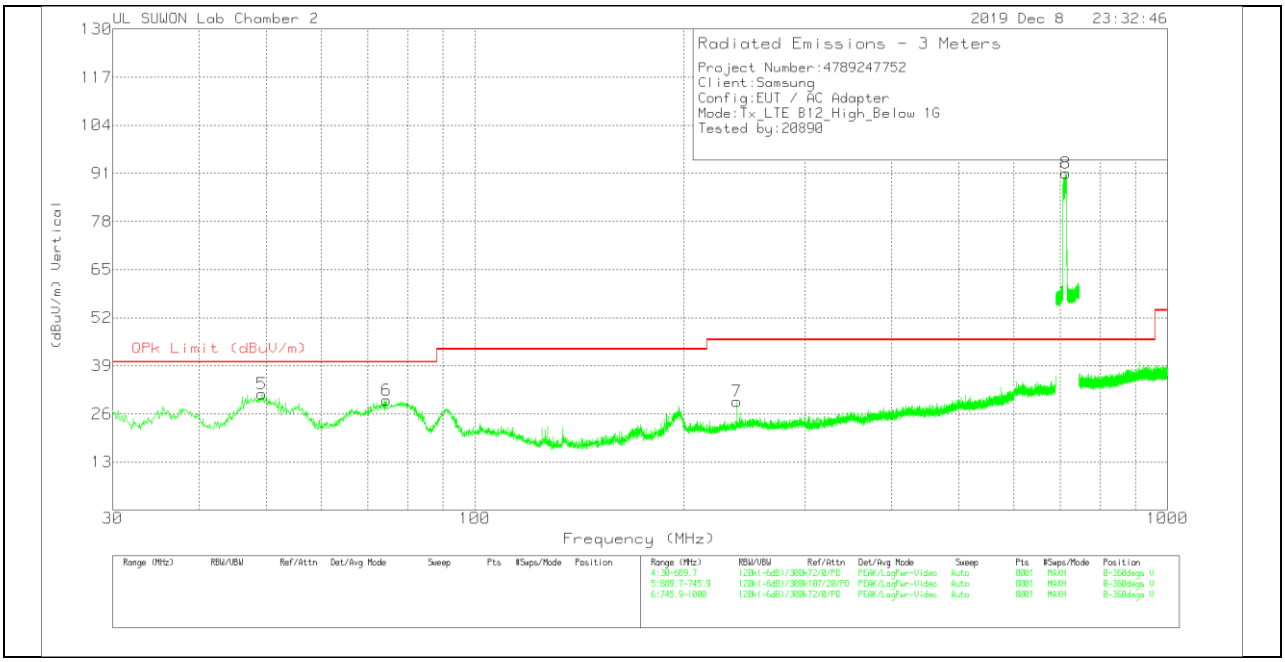
HIGH CHANNEL(744.5MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



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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	47.5646	4.5	Pk	19.8	.8	25.1	40	-14.9	0-360	200	H
2	70.6543	11.78	Pk	15.2	.9	27.88	40	-12.12	0-360	400	H
3	93.414	10.67	Pk	16.8	1.1	28.57	43.52	-14.95	0-360	300	H
4	714.147	69.28	Pk	25.6	3	97.88	**46.02**	**51.86**	0-360	100	H
5	49.2963	10.91	Pk	19.7	.8	31.41	40	-8.59	0-360	100	V
6	74.6125	15.09	Pk	13.7	1	29.79	40	-10.21	0-360	100	V
7	238.9612	9.21	Pk	18.5	1.7	29.41	46.02	-16.61	0-360	100	V
8	713.7115	62.4	Pk	25.6	3	91	**46.02**	**44.98**	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.

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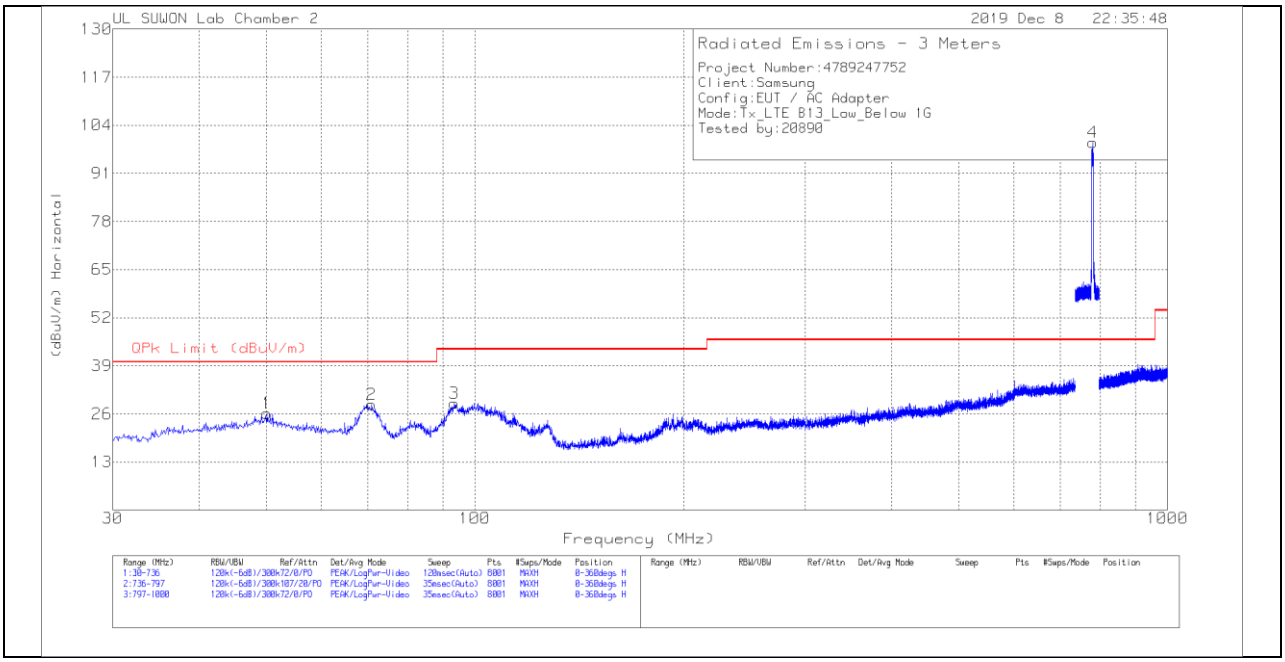
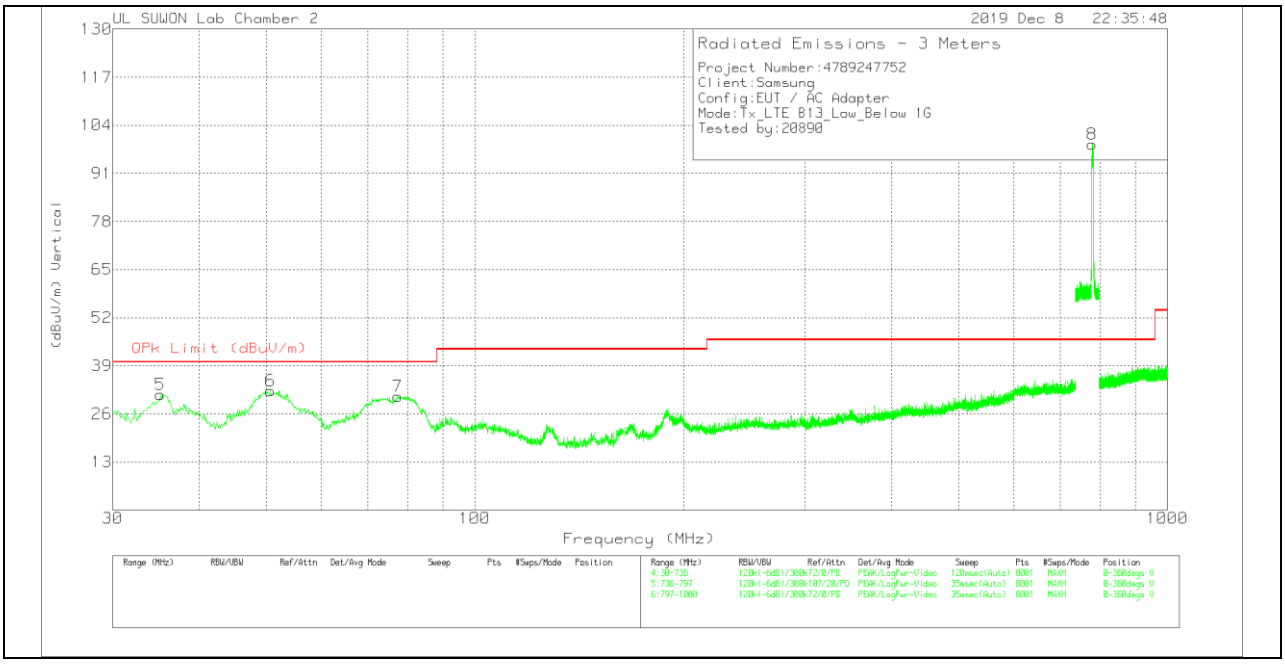
7.9. Below 1 GHz in the LTE Band 13

LOW CHANNEL(748.5MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



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DATA

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Below_1G_Bypass [dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	50.121	5.61	Pk	19.7	.8	26.11	40	-13.89	0-360	300	H
2	70.948	12.51	Pk	15.1	.9	28.51	40	-11.49	0-360	300	H
3	93.3635	11.02	Pk	16.8	1.1	28.92	43.52	-14.6	0-360	200	H
4	779.7751	69.51	Pk	26.7	3.2	99.41	**46.02**	**53.39**	0-360	100	H
5	35.1185	13.85	Pk	16.7	.7	31.25	40	-8.75	0-360	100	V
6	50.7388	11.78	Pk	19.7	.8	32.28	40	-7.72	0-360	100	V
7	77.4785	16.91	Pk	12.8	1	30.71	40	-9.29	0-360	100	V
8	779.4854	69.07	Pk	26.7	3.1	98.87	**46.02**	**52.85**	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.

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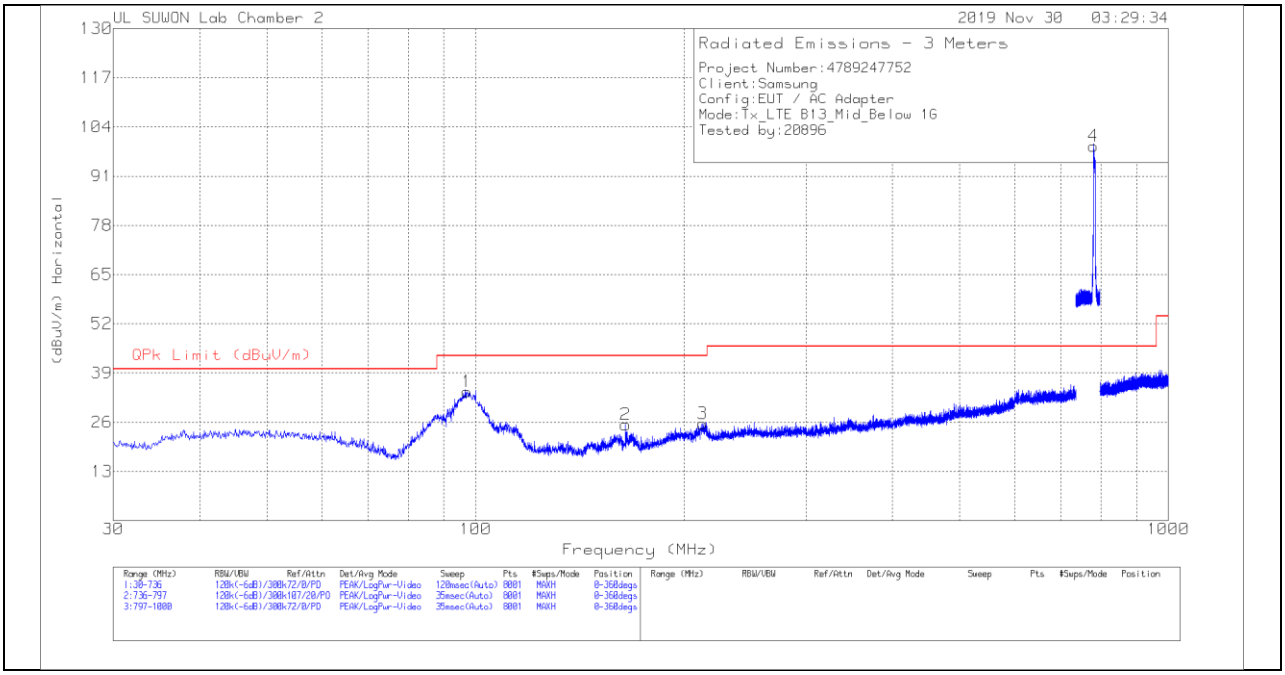
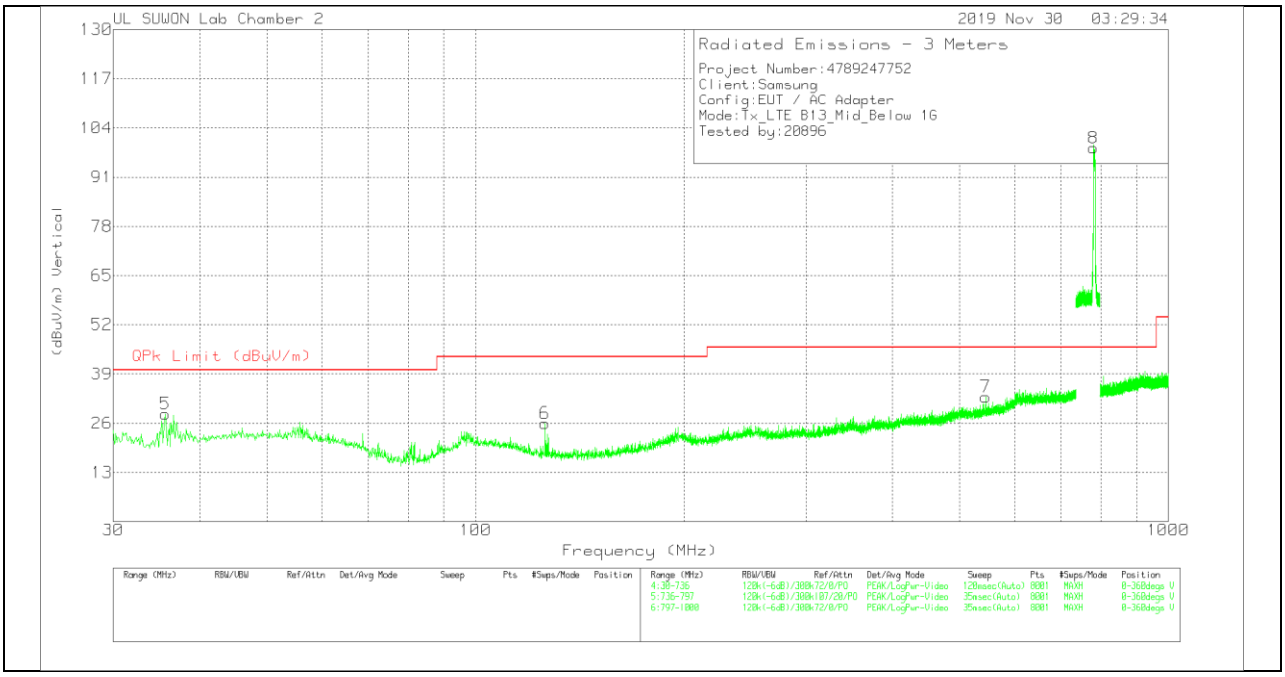
MID CHANNEL(751.0MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



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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	97.1583	15.57	Pk	17.4	1.1	34.07	43.52	-9.45	0-360	200	H
2	164.6695	9.16	Pk	14.8	1.4	25.36	43.52	-18.16	0-360	200	H
3	212.854	6.94	Pk	17.1	1.6	25.64	43.52	-17.88	0-360	100	H
4	779.92	69.12	Pk	26.7	3.1	98.92	**46.02**	**52.9**	0-360	200	H
5	35.648	10.84	Pk	16.9	.7	28.44	40	-11.56	0-360	100	V
6	126.016	10.03	Pk	14.6	1.3	25.93	43.52	-17.59	0-360	100	V
7	545.1153	6.66	Pk	23.7	2.6	32.96	46.02	-13.06	0-360	200	V
8	779.9734	68.92	Pk	26.7	3.1	98.72	**46.02**	**52.7**	0-360	100	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.

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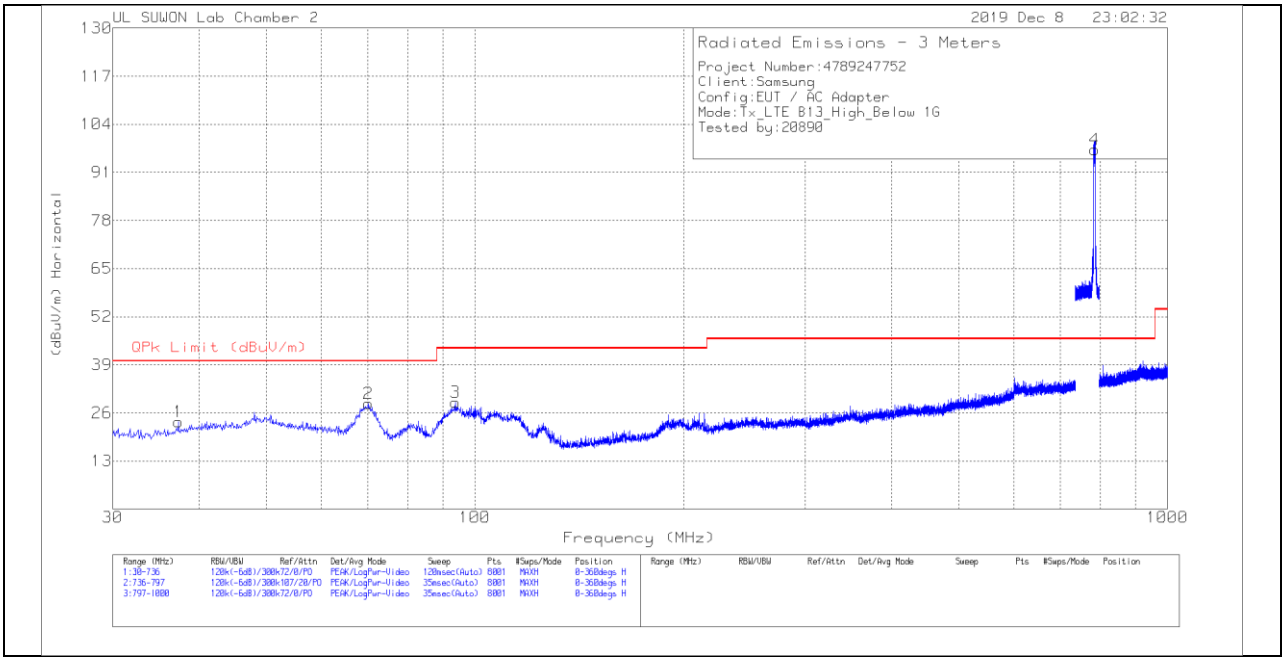
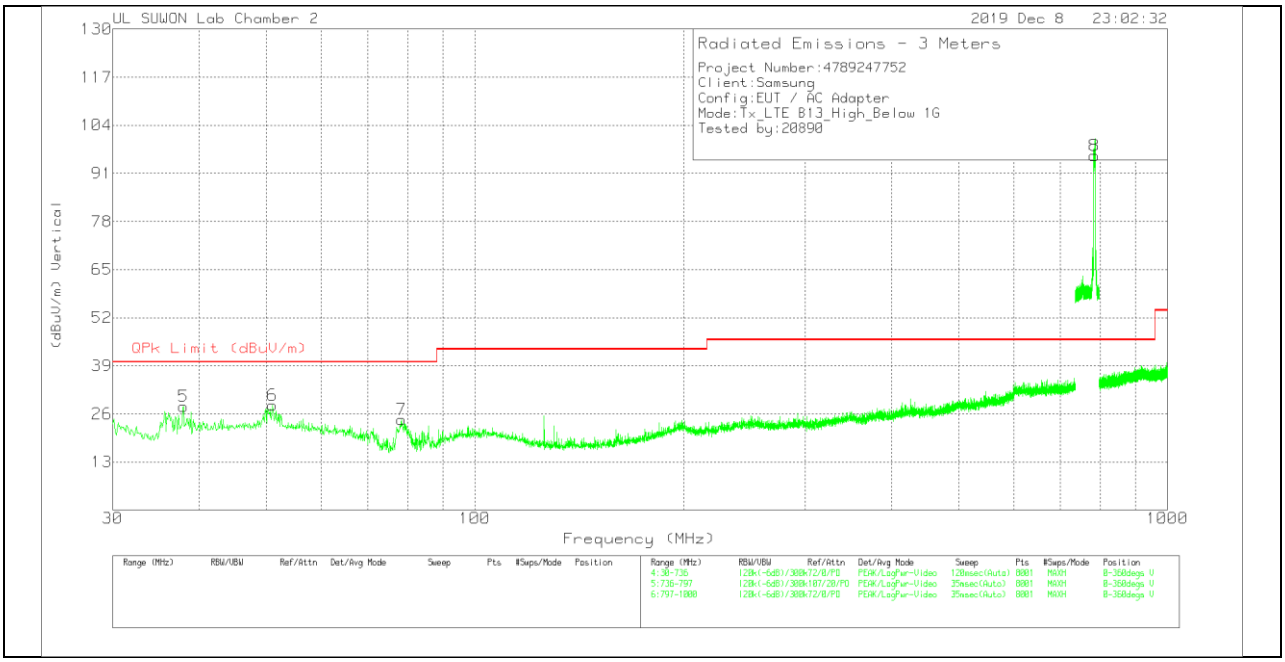
HIGH CHANNEL(753.5MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



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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	37.3248	5.28	Pk	17.6	.7	23.58	40	-16.42	0-360	200	H
2	70.1538	12.21	Pk	15.4	.9	28.51	40	-11.49	0-360	400	H
3	93.7165	10.84	Pk	16.9	1.1	28.84	43.52	-14.68	0-360	200	H
4	784.4874	67.29	Pk	26.7	3.2	97.19	**46.02**	**51.17**	0-360	100	H
5	37.9425	9.49	Pk	17.9	.7	28.09	40	-11.91	0-360	100	V
6	51.0035	7.85	Pk	19.7	.8	28.35	40	-11.65	0-360	100	V
7	78.361	10.84	Pk	12.6	1	24.44	40	-15.56	0-360	200	V
8	784.4188	65.85	Pk	26.7	3.2	95.75	**46.02**	**49.73**	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.

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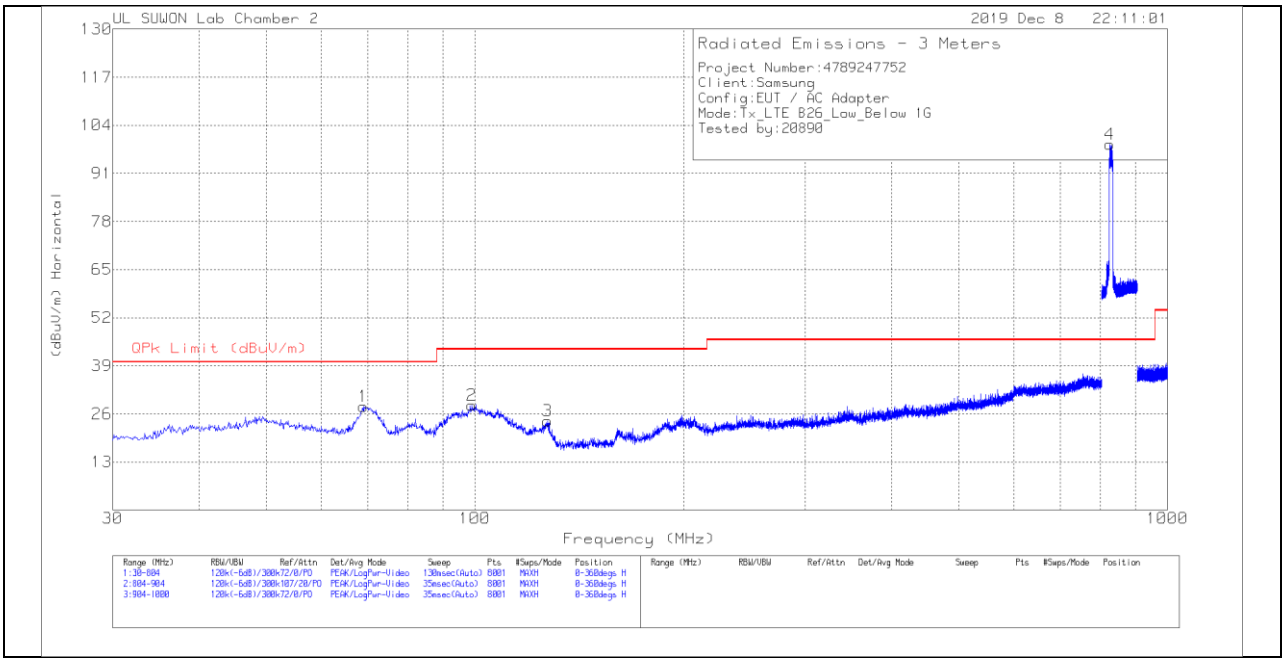
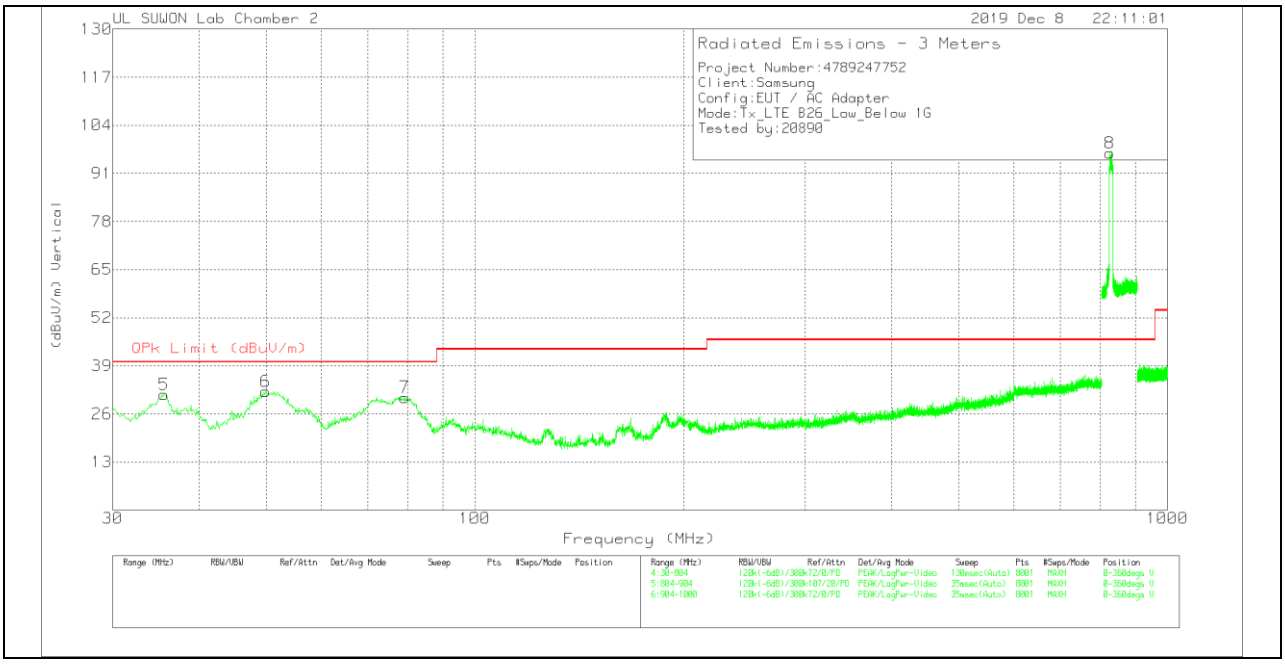
7.10. Below 1 GHz in the LTE Band 26

LOW CHANNEL(860.5MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



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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	69.087	11.32	Pk	15.8	.9	28.02	40	-11.98	0-360	400	H
2	98.9828	9.52	Pk	17.7	1.1	28.32	43.52	-15.2	0-360	300	H
3	127.3305	8.4	Pk	14.5	1.3	24.2	43.52	-19.32	0-360	200	H
4	826.1875	68.67	Pk	27	3.2	98.87	**46.02**	**52.85**	0-360	100	H
5	35.6115	13.68	Pk	16.9	.7	31.28	40	-8.72	0-360	100	V
6	49.8338	11.64	Pk	19.7	.8	32.14	40	-7.86	0-360	100	V
7	79.149	16.88	Pk	12.6	1	30.48	40	-9.52	0-360	100	V
8	825.3125	66.33	Pk	26.9	3.2	96.43	**46.02**	**50.41**	0-360	100	V

Pk - Peak detector

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

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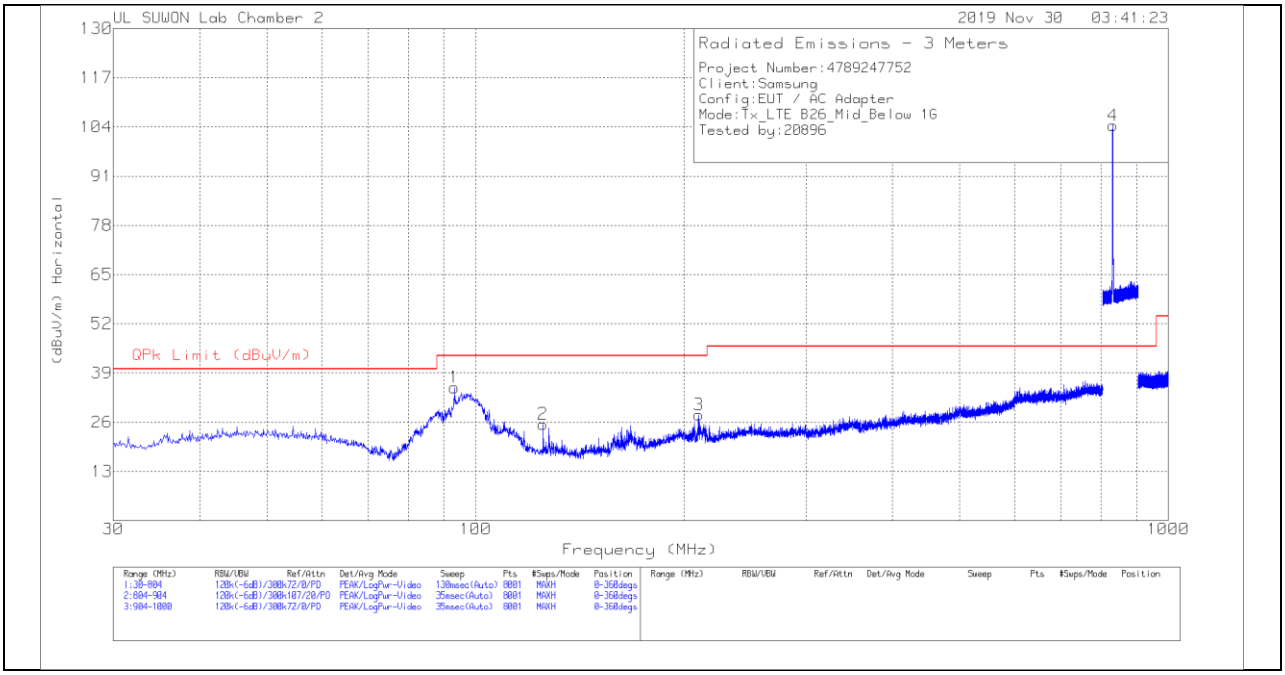
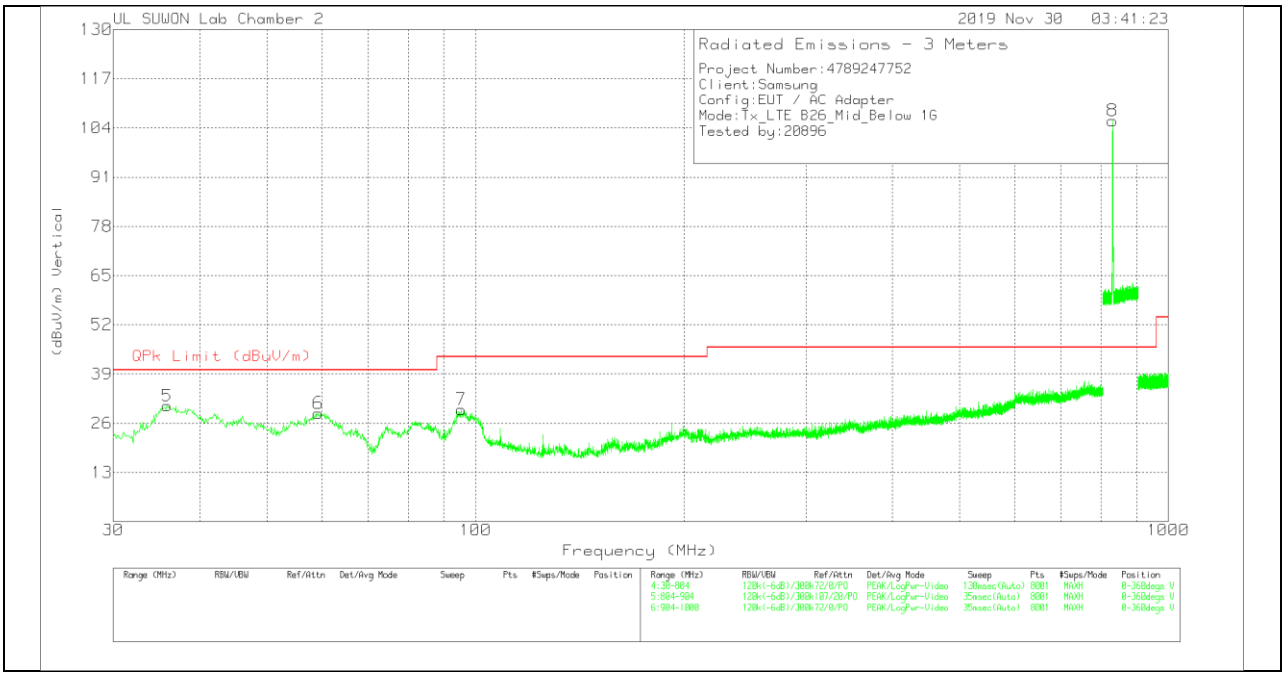
MID CHANNEL(876.5MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



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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	93.2745	17.25	Pk	16.8	1.1	35.15	43.52	-8.37	0-360	200	H
2	125.202	9.46	Pk	14.7	1.3	25.46	43.52	-18.06	0-360	300	H
3	210.0518	9.32	Pk	17	1.6	27.92	43.52	-15.6	0-360	100	H
4	831.5125	73.95	Pk	27.1	3.3	104.35	**46.02**	**58.33**	0-360	200	H
5	35.9018	12.73	Pk	17.1	.7	30.53	40	-9.47	0-360	100	V
6	59.3153	9.09	Pk	18.6	.9	28.59	40	-11.41	0-360	100	V
7	95.403	11.24	Pk	17.3	1.1	29.64	43.52	-13.88	0-360	100	V
8	831.0625	75.52	Pk	27.1	3.3	105.92	**46.02**	**59.9**	0-360	100	V

Pk - Peak detector

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

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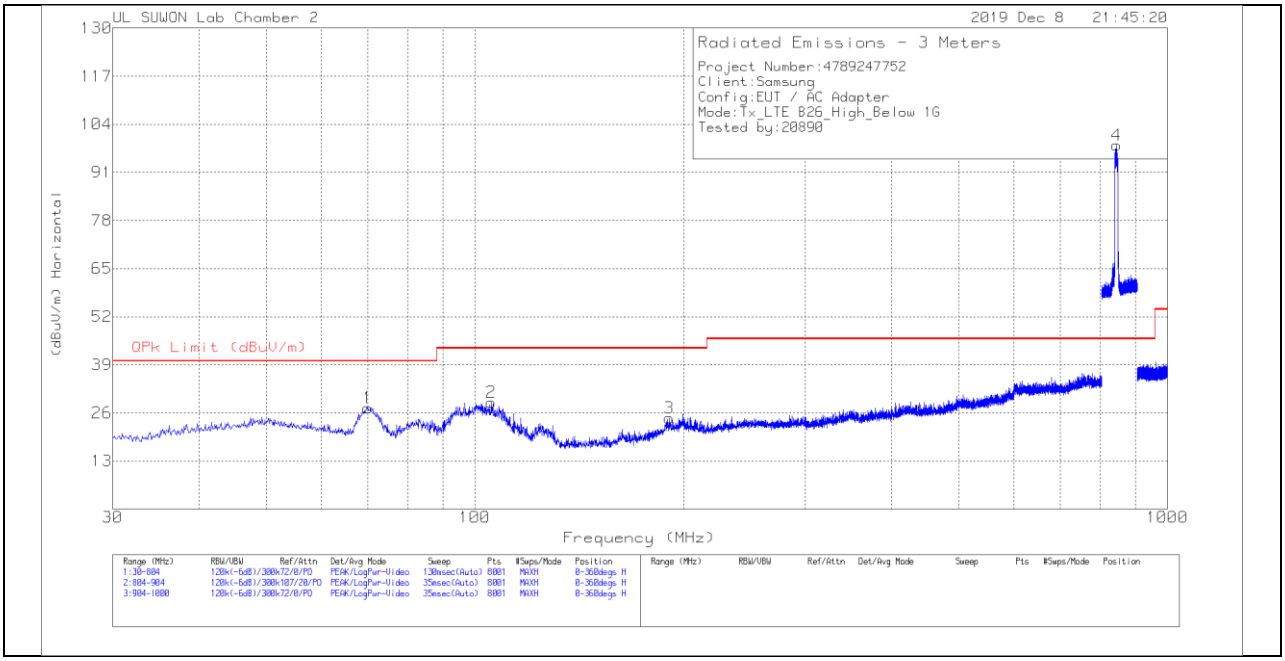
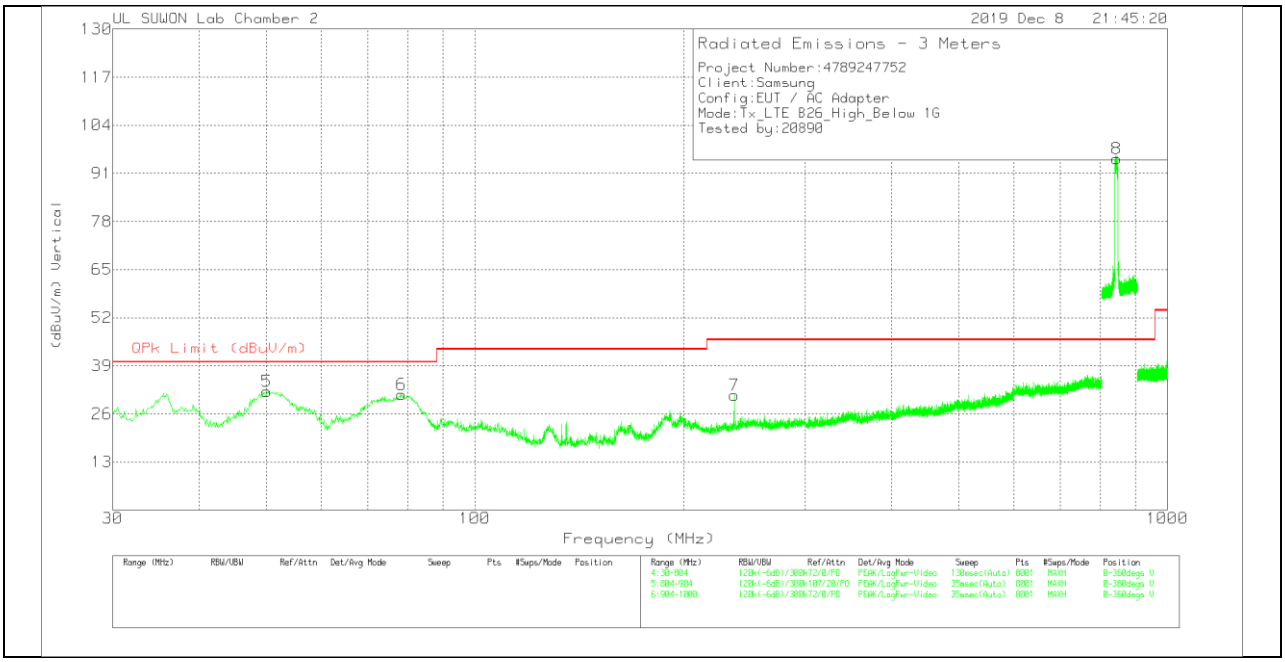
HIGH CHANNEL(892.5MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



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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	70.0545	11.01	Pk	15.5	.9	27.41	40	-12.59	0-360	300	H
2	105.6585	10.07	Pk	17.6	1.2	28.87	43.52	-14.65	0-360	300	H
3	190.8953	5.72	Pk	17.3	1.6	24.62	43.52	-18.9	0-360	200	H
4	844.5875	67.84	Pk	27.2	3.3	98.34	**46.02**	**52.32**	0-360	100	H
5	50.124	11.54	Pk	19.7	.8	32.04	40	-7.96	0-360	100	V
6	78.375	17.69	Pk	12.6	1	31.29	40	-8.71	0-360	100	V
7	236.7548	11.01	Pk	18.3	1.7	31.01	46.02	-15.01	0-360	100	V
8	844.125	64.5	Pk	27.2	3.3	95	**46.02**	**48.98**	0-360	100	V

Pk - Peak detector

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

END OF REPORT

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