FCC CFR47 PART 15 SUBPART B

WWAN

CELLULAR RECEIVER MODE TEST REPORT

FOR

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

MODEL NUMBER : SM-N976B

FCC ID: A3LSMN976B

REPORT NUMBER: 4789009800-E1V4

ISSUE DATE: JUN 26, 2019

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

Prepared by
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ACCREDITED
Testing Laboratory

TL-637

Revision History

Rev.	Issue Date	Revisions	Revised By
V1	06/17/19	Initial issue	Junwhan Lee
V2	06/19/19	Updated to address TCB's question	Junwhan Lee
V3	06/20/19	Updated to address TCB's question	Junwhan Lee
V4	06/26/19	Updated to address TCB's question	Junwhan Lee

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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-N976B

SERIAL NUMBER: R3CM503RJ4R, R3CM503RHXX, R3CM40CW58E, R3CM506NLK, R3CM506Q9KN, R3CM506Q9BW;

DATE TESTED: MAY 24, 2019 – JUN 15, 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:

SungGil Park
Suwon Lab Engineer
UL Korea, Ltd.

Tested By:

Junwhan Lee
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/PDF/TL/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	2.32 dB
Radiated Disturbance, 30 MHz to 1 GHz	3.86 dB
Radiated Disturbance, 1 GHz to 18 GHz	5.97 dB
Radiated Disturbance, 18 GHz to 40 GHz	5.57 dB

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

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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.

5.2. TEST MODE

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

5.3. WORST-CASE ORIENTATION AND MODE

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

For WCDMA B5 / LTE B5 / LTE B12 / LTE B26, 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.

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	R37M4PW4FW1SE3	N/A
Data Cable	SAMSUNG	EP-DG977	N/A	N/A

I/O CABLE

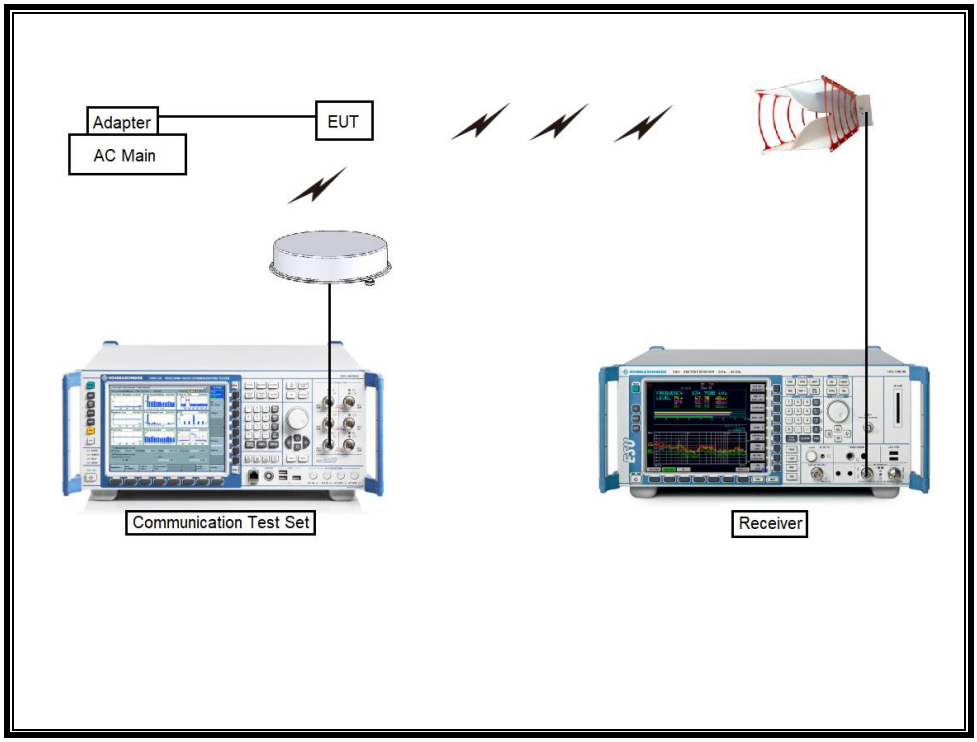
I/O Cable List						
Cable No	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	DC Power	1	C Type	Shielded	1.0m	N/A

TEST SETUP

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

This EUT is able to equipped with S-pen on the inside. Spot check were performed both inserted and removed condition. Because there is no deviation between the two data, all tests were performed under equipped with the S-pen.

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	06-30-19
Antenna, Horn, 40 GHz	ETS	3116C	00166155	08-14-20
Preamplifier	ETS	3116C-PA	00168841	08-09-19
Antenna, Horn, 40 GHz	ETS	3116C	00168645	12-04-19
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	08-07-19
Preamplifier, 1000 MHz	Sonoma	310N	341282	08-07-19
Preamplifier, 1000 MHz	Sonoma	310N	370599	08-06-19
Preamplifier, 1000 MHz	Sonoma	310N	351741	08-07-19
Preamplifier, 18 GHz	Miteq	AFS42-00101800-25-S-42	1876511	08-07-19
Preamplifier, 18 GHz	Miteq	AFS42-00101800-25-S-42	2029169	08-07-19
Preamplifier, 18 GHz	Miteq	AFS42-00101800-25-S-42	1896138	08-07-19
EMI Test Receive, 40 GHz	R&S	ESU40	100439	08-06-19
EMI Test Receive, 40 GHz	R&S	ESU40	100457	08-06-19
EMI Test Receive, 44 GHz	R&S	ESW40	101590	08-06-19
Directional Antenna	Cobham	FPA3-0.8-6.0R/1329	80108-0004	N/A
High Pass Filter 1.2GHz	Micro-Tronics	HPM50108-02	G005	08-08-19
High Pass Filter 1.2GHz	Micro-Tronics	HPM50108-02	G006	08-08-19
High Pass Filter 2.8GHz	Micro-Tronics	HPM50111-02	010	08-08-19
High Pass Filter 2.8GHz	Micro-Tronics	HPM50111-02	011	08-08-19
High Pass Filter 4GHz	Micro-Tronics	HPM50118-02	G001	08-08-19
High Pass Filter 4GHz	Micro-Tronics	HPM50118-02	G002	08-08-19
Attenuator	PASTERNACK	PE7087-10	A009	08-08-19
Attenuator	PASTERNACK	PE7087-10	A001	08-08-19
Attenuator	PASTERNACK	PE7087-10	A008	08-08-19
Attenuator	PASTERNACK	PE7087-10	2	08-07-19
Attenuator	PASTERNACK	PE7395-10	A011	08-08-19
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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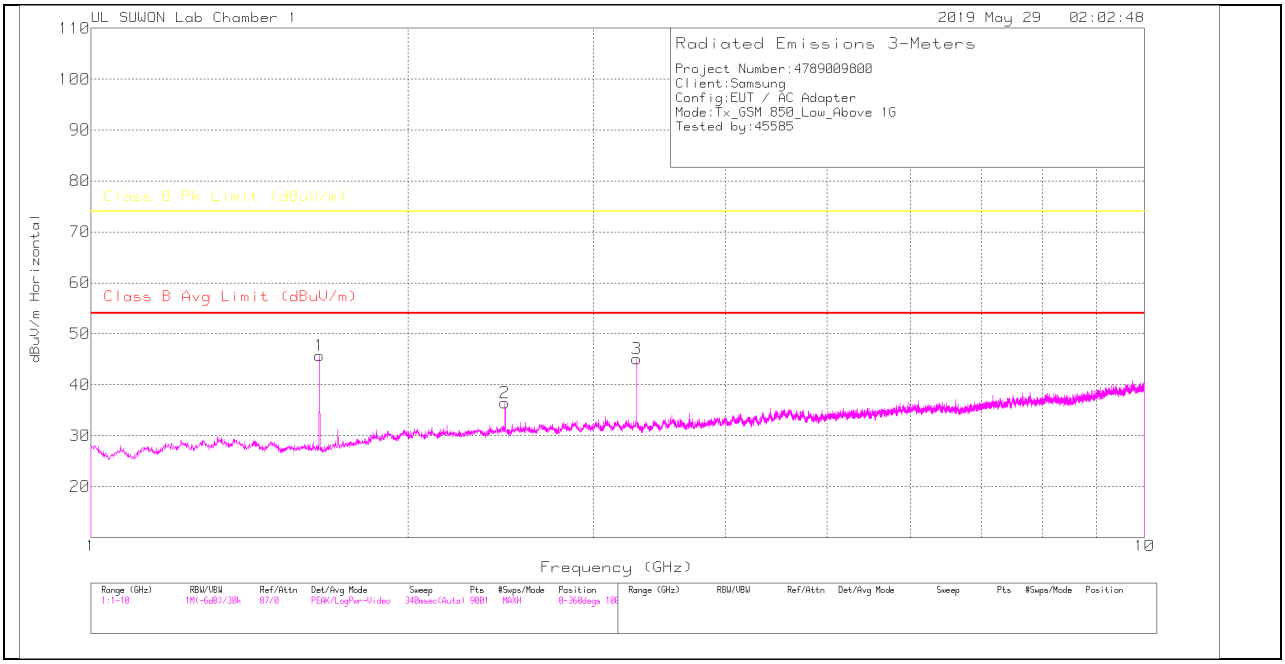
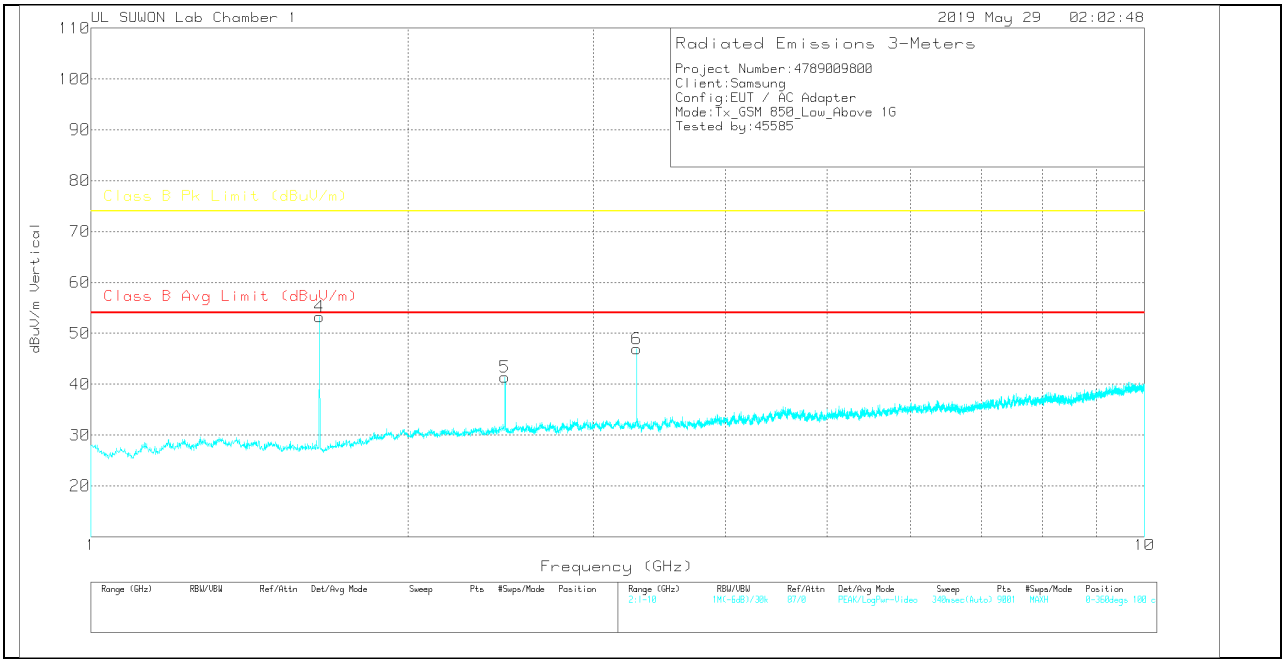
7.1. Above 1 GHz in the GSM850

LOW CHANNEL(869.2MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



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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	1.648	53.11	PK	28.3	-36.3	.6	45.71	-	-	74	-28.29	0-360	100	H
2	2.472	38.51	PK	31.9	-34.7	.7	36.41	-	-	74	-37.59	0-360	200	H
3	3.296	45.4	PK	32.7	-33.7	.7	45.1	-	-	74	-28.9	0-360	200	H
4	1.648	60.64	PK	28.3	-36.3	.6	53.24	-	-	74	-20.76	0-360	200	V
5	2.472	43.45	PK	31.9	-34.7	.7	41.35	-	-	74	-32.65	0-360	200	V
6	3.297	47.27	PK	32.7	-33.7	.7	46.97	-	-	74	-27.03	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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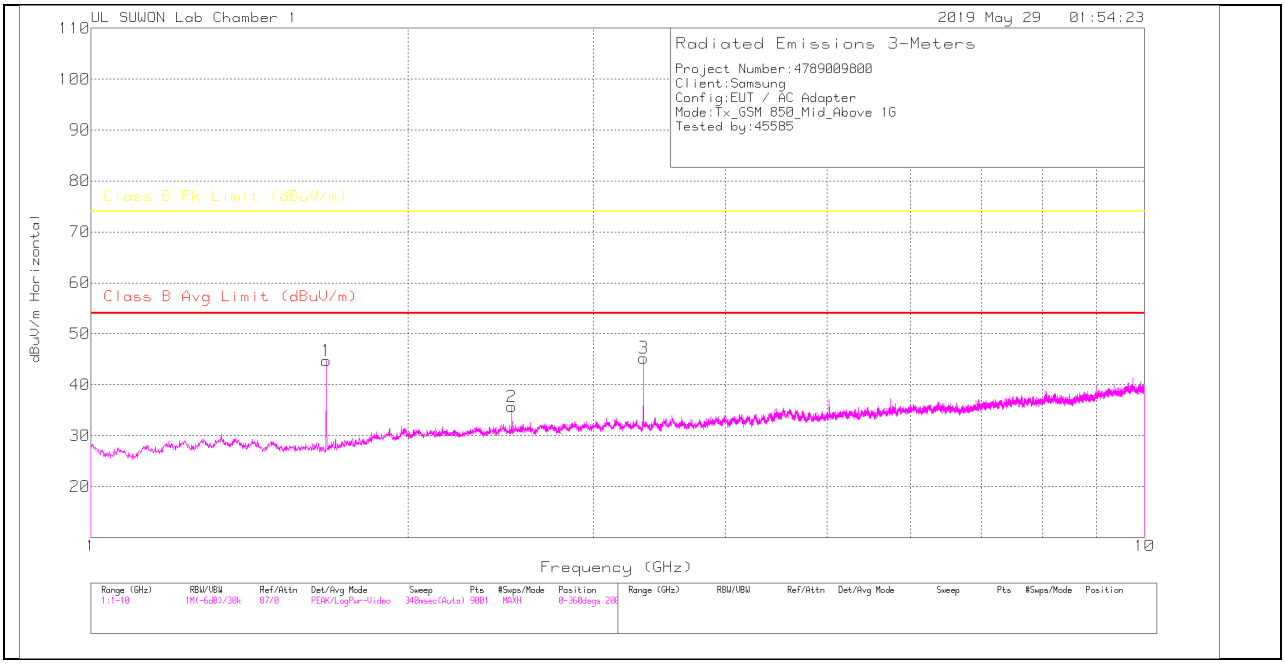
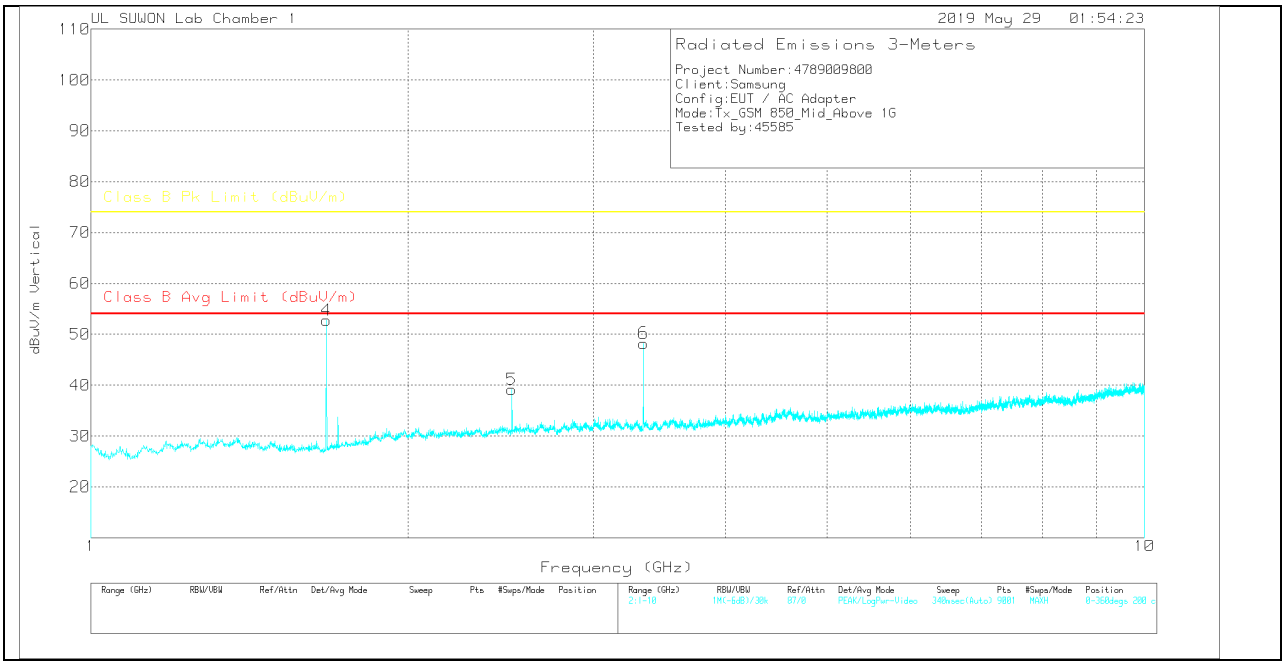
MID CHANNEL(881.6MHz)

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	1.673	52.07	PK	28.4	-36.2	.5	44.77	-	-	74	-29.23	0-360	100	H
2	2.509	37.74	PK	32	-34.5	.5	35.74	-	-	74	-38.26	0-360	200	H
3	3.346	45.58	PK	32.6	-33.4	.5	45.28	-	-	74	-28.72	0-360	200	H
4	1.673	60.06	PK	28.4	-36.2	.5	52.76	-	-	74	-21.24	0-360	200	V
5	2.509	41.14	PK	32	-34.5	.5	39.14	-	-	74	-34.86	0-360	100	V
6	3.346	48.55	PK	32.6	-33.4	.5	48.25	-	-	74	-25.75	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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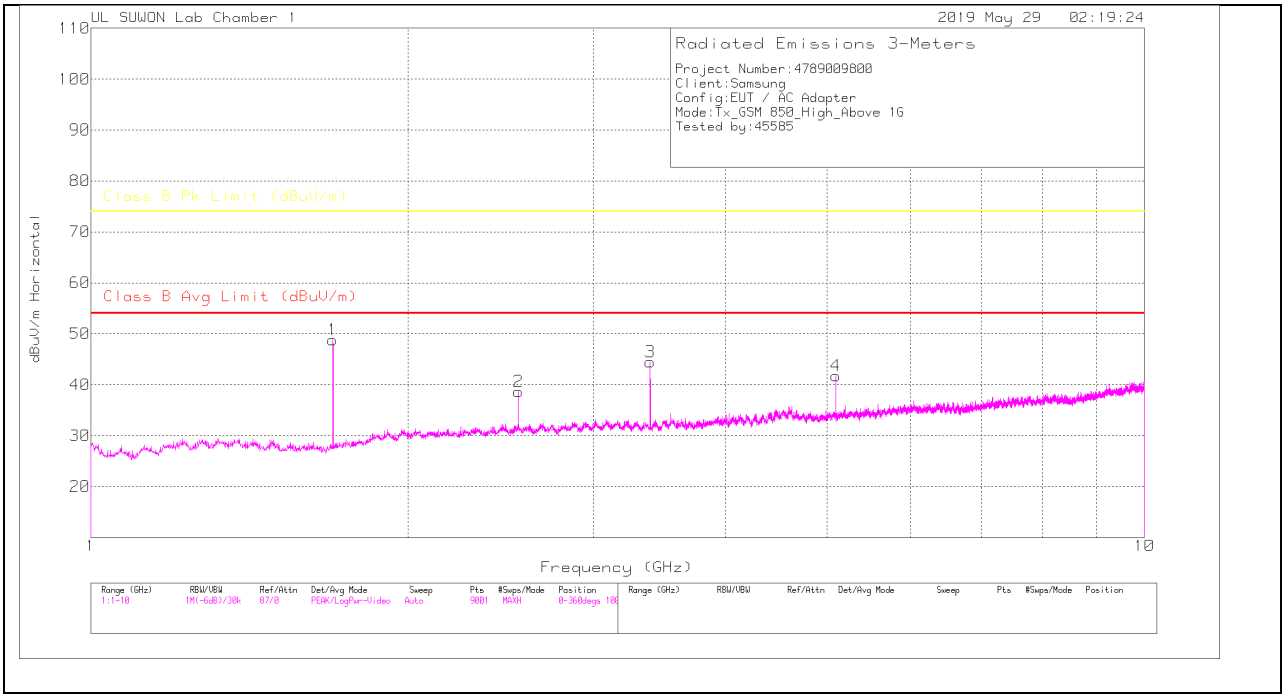
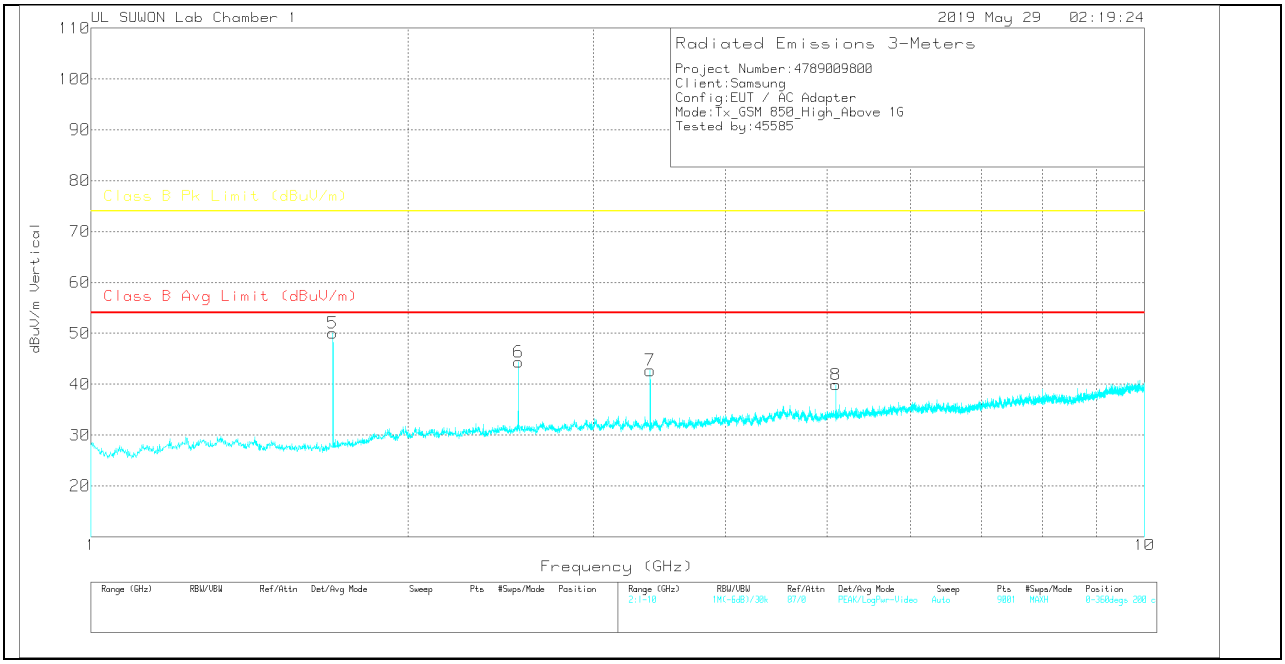
HIGH CHANNEL(893.8MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



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Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_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	1.697	55.66	PK	28.6	-36.1	.6	48.76	-	-	74	-25.24	0-360	100	H
2	2.546	40.58	PK	32	-34.6	.7	38.68	-	-	74	-35.32	0-360	100	H
3	3.395	44.35	PK	32.7	-33.3	.7	44.45	-	-	74	-29.55	0-360	200	H
4	5.093	38.68	PK	34.4	-31.7	.4	41.78	-	-	74	-32.22	0-360	200	H
5	1.697	56.9	PK	28.6	-36.1	.6	50	-	-	74	-24	0-360	100	V
6	2.546	46.28	PK	32	-34.6	.7	44.38	-	-	74	-29.62	0-360	100	V
7	3.395	42.59	PK	32.7	-33.3	.7	42.69	-	-	74	-31.31	0-360	100	V
8	5.093	36.83	PK	34.4	-31.7	.4	39.93	-	-	74	-34.07	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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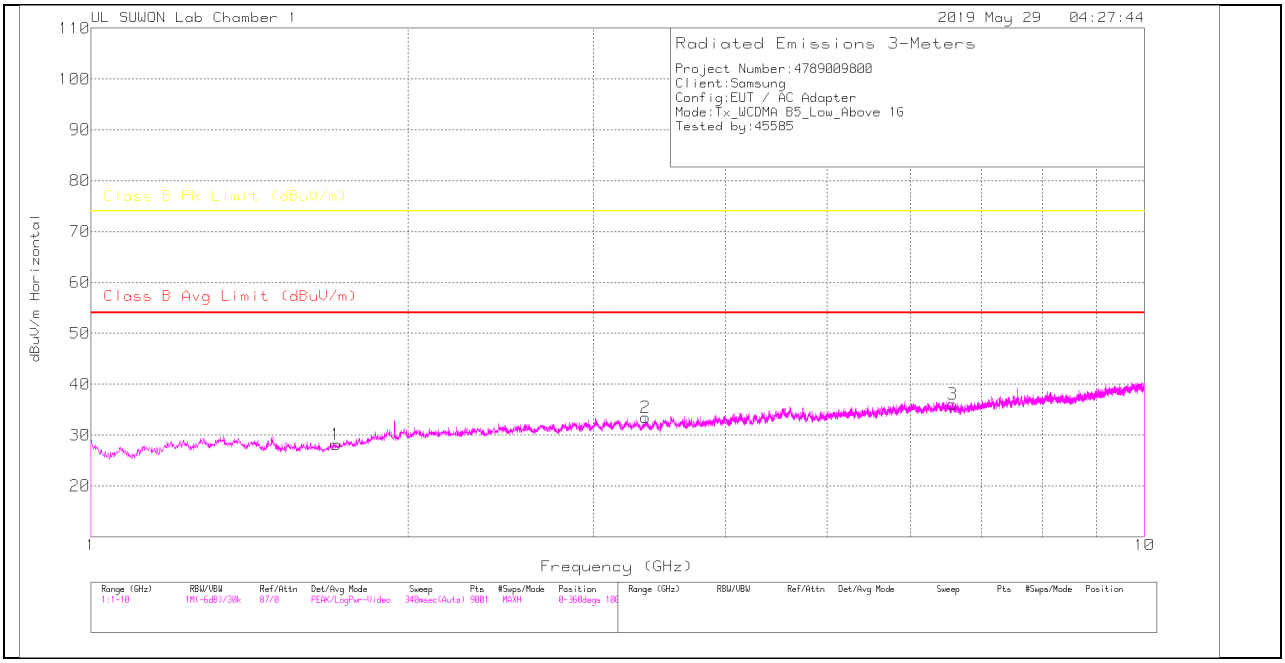
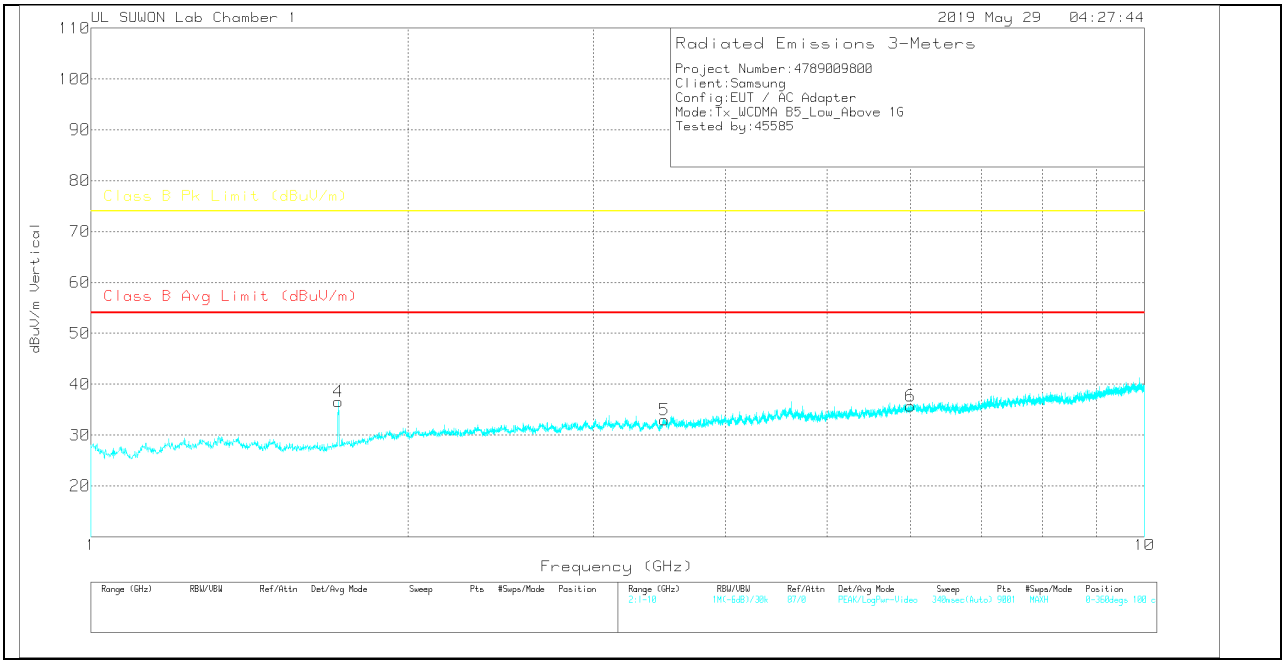
7.2. Above 1 GHz in the WCDMA Band 5

LOW CHANNEL(871.4MHz)

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	1.709	34.82	PK	28.7	-36.1	.7	28.12	-	-	74	-45.88	0-360	200	H
2	3.361	33.8	PK	32.6	-33.4	.5	33.5	-	-	74	-40.5	0-360	200	H
3	6.578	29.72	PK	35.4	-29.4	.4	36.12	-	-	74	-37.88	0-360	200	H
4	1.718	43.04	PK	28.7	-36	.8	36.54	-	-	74	-37.46	0-360	100	V
5	3.503	32.68	PK	32.8	-33.1	.6	32.98	-	-	74	-41.02	0-360	200	V
6	5.994	30.79	PK	35.1	-30.6	.4	35.69	-	-	74	-38.31	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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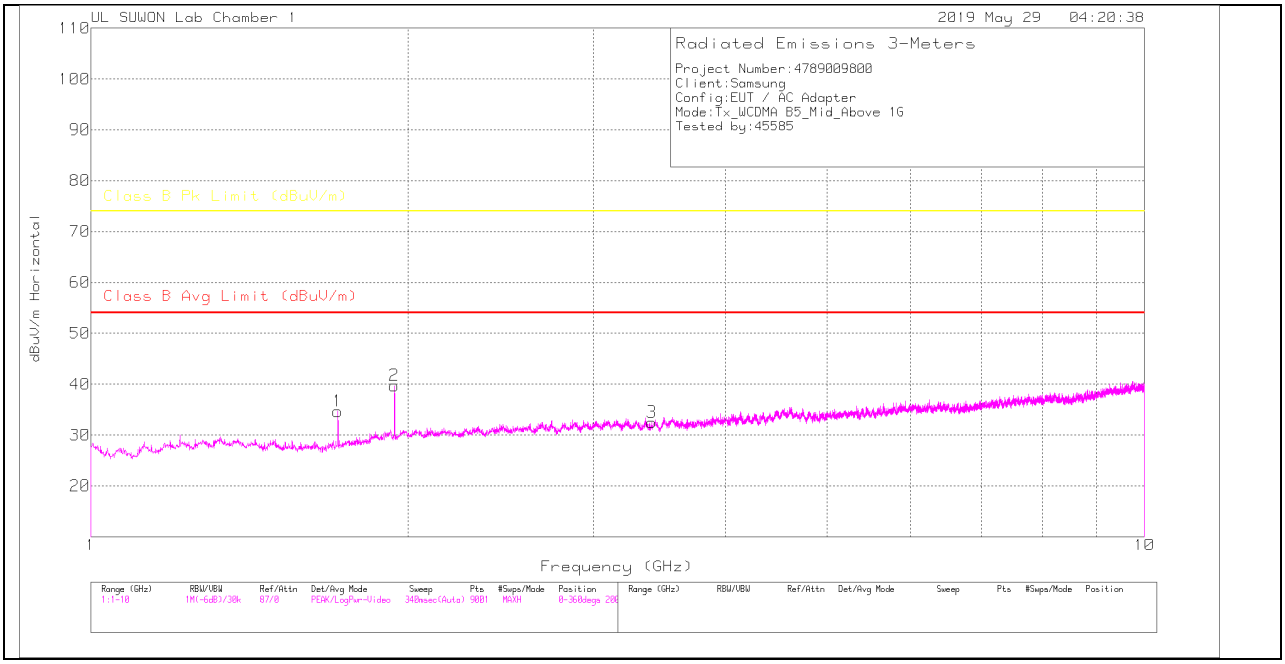
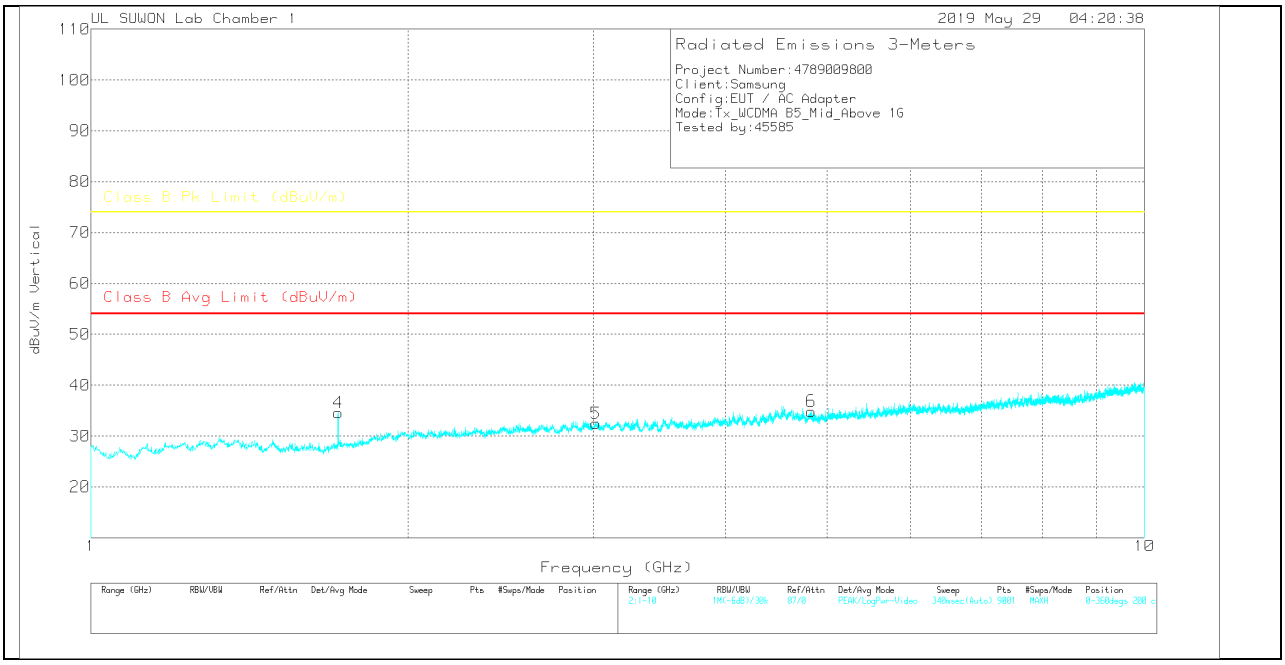
MID CHANNEL(881.6MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



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Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_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	1.716	41.25	PK	28.7	-36.1	.8	34.65	-	-	74	-39.35	0-360	100	H
2	1.941	43.82	PK	31	-35.6	.5	39.72	-	-	74	-34.28	0-360	200	H
3	3.407	32.44	PK	32.7	-33.3	.7	32.54	-	-	74	-41.46	0-360	200	H
4	1.717	41.15	PK	28.7	-36.1	.8	34.55	-	-	74	-39.45	0-360	100	V
5	3.016	33.15	PK	32.5	-33.9	.7	32.45	-	-	74	-41.55	0-360	200	V
6	4.828	32.19	PK	34.2	-31.9	.4	34.89	-	-	74	-39.11	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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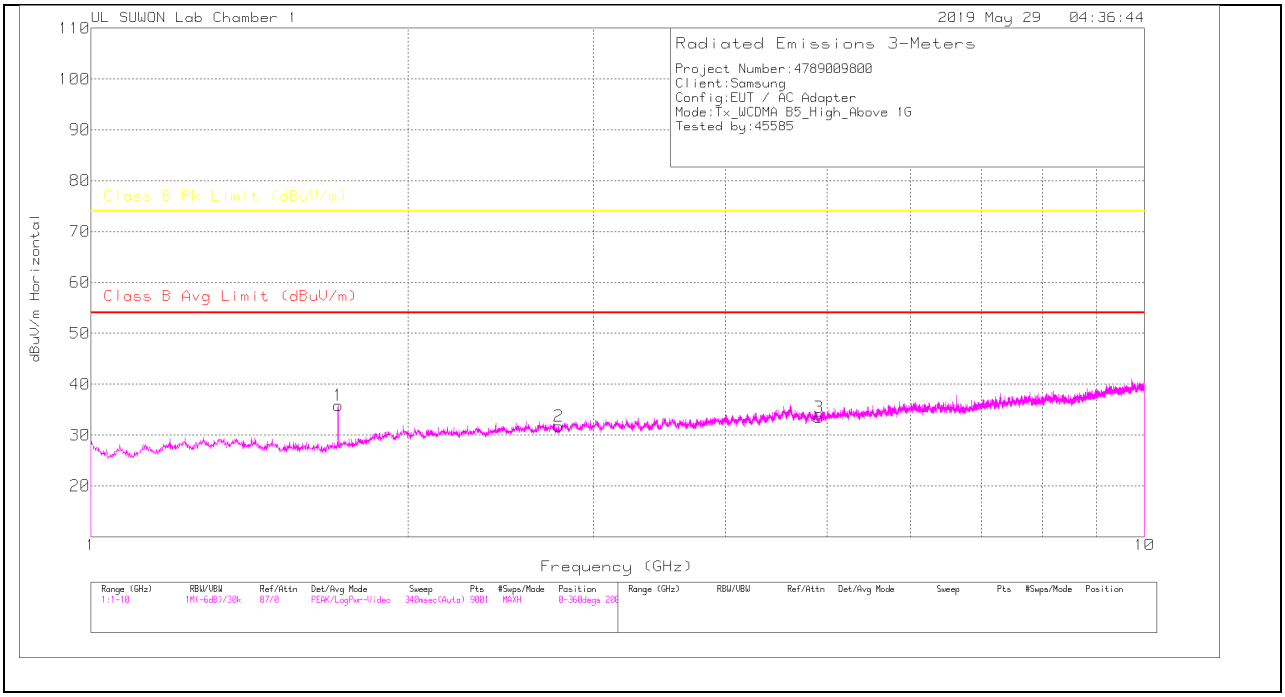
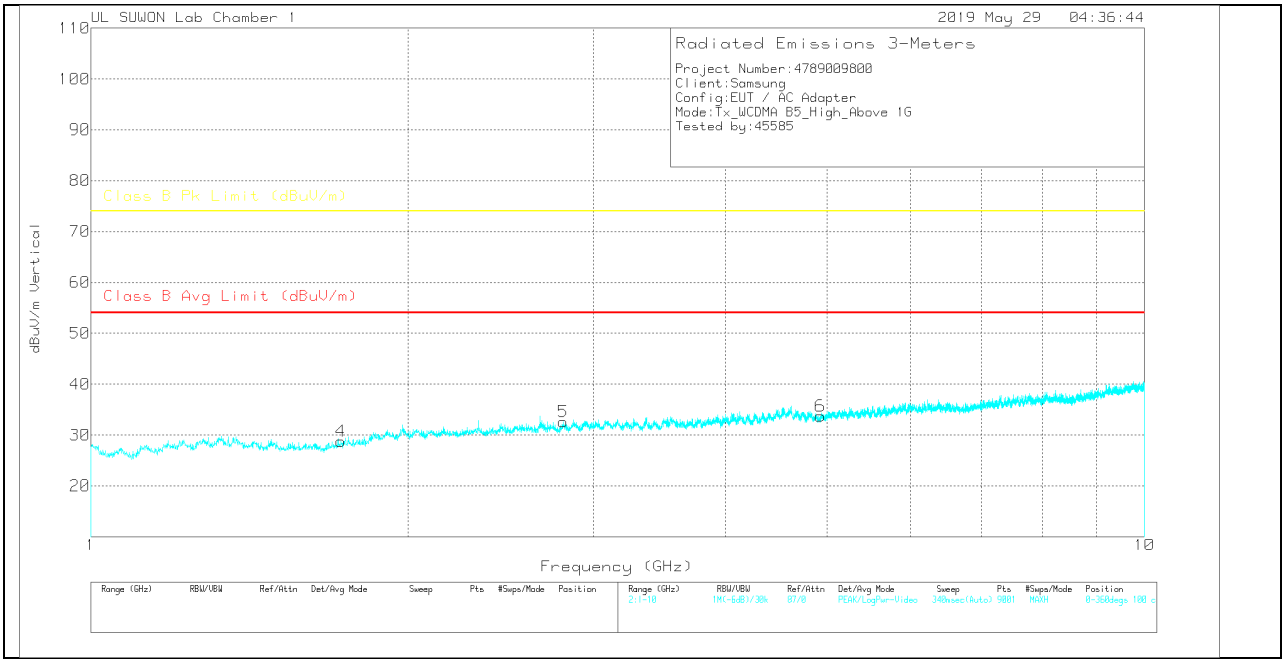
HIGH CHANNEL(891.6MHz)

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	1.717	42.47	PK	28.7	-36.1	.8	35.87	-	-	74	-38.13	0-360	100	H
2	2.78	33.25	PK	32.2	-34.1	.4	31.75	-	-	74	-42.25	0-360	200	H
3	4.911	30.58	PK	34.2	-31.7	.4	33.48	-	-	74	-40.52	0-360	200	H
4	1.726	35.15	PK	28.8	-36	.8	28.75	-	-	74	-45.25	0-360	100	V
5	2.806	33.85	PK	32.2	-34.1	.6	32.55	-	-	74	-41.45	0-360	200	V
6	4.925	30.59	PK	34.2	-31.5	.4	33.69	-	-	74	-40.31	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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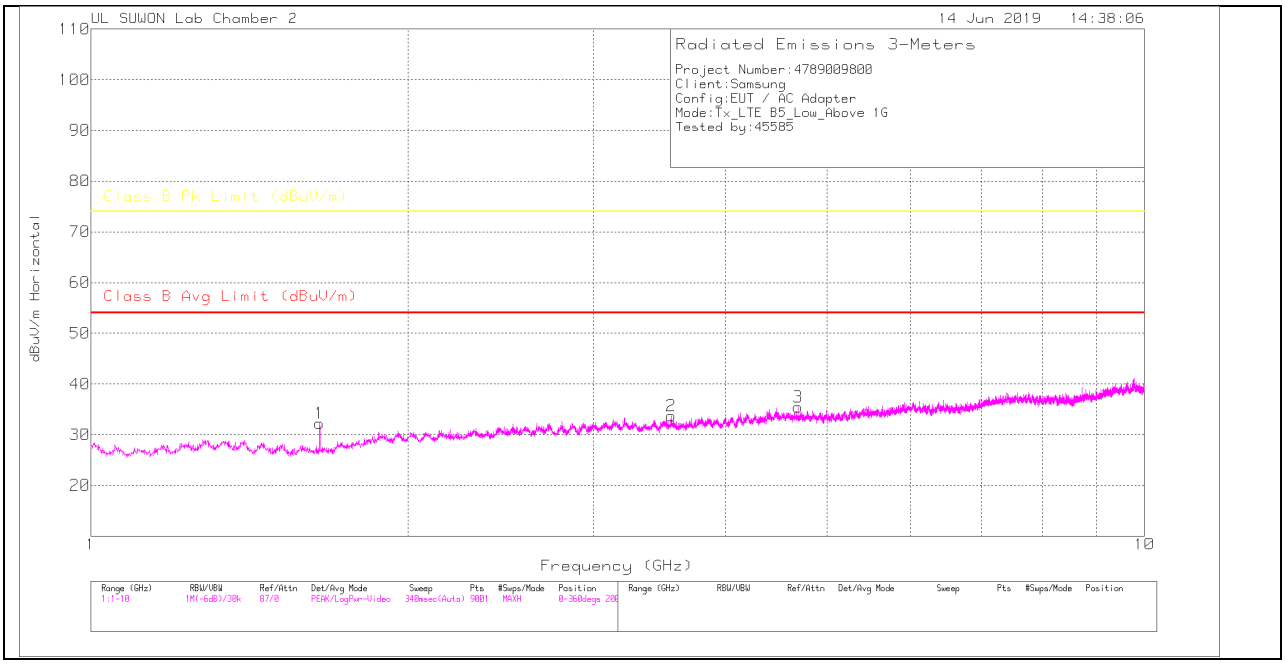
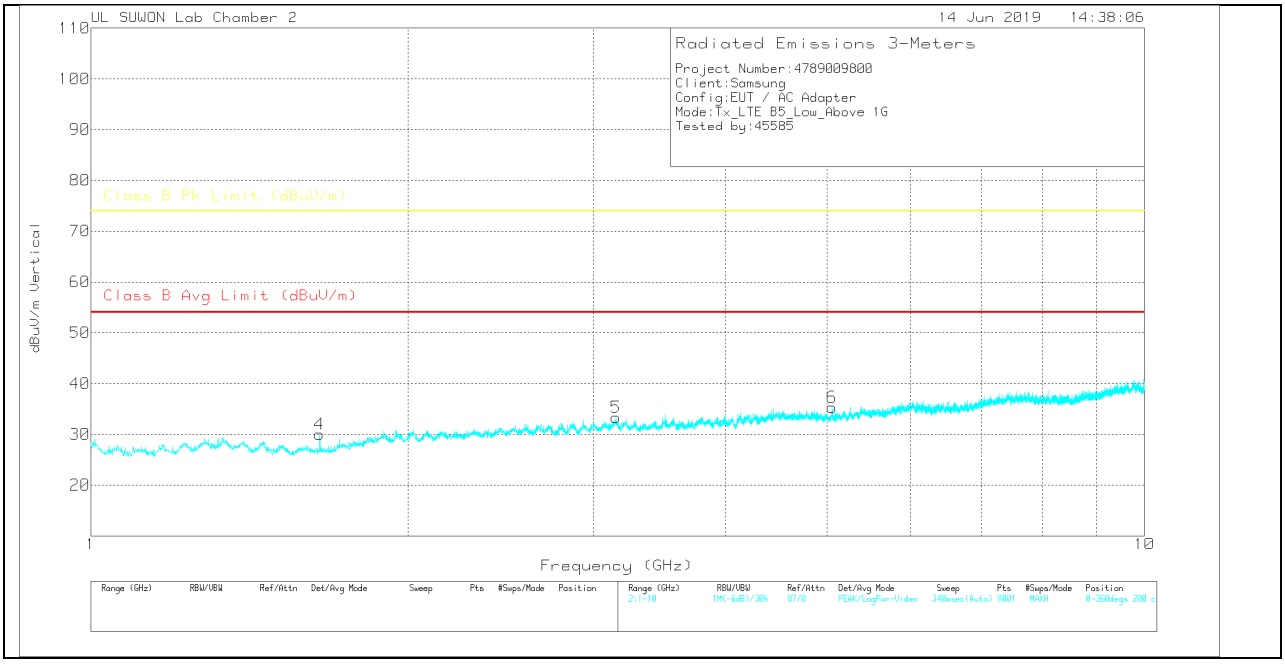
7.3. Above 1 GHz in the LTE Band 5

LOW CHANNEL(870.5MHz)

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_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	1.649	34.75	PK	28.3	-31.4	.6	32.25	-	-	74	-41.75	0-360	200	H
2	3.553	29.57	PK	32.7	-29.1	.6	33.77	-	-	74	-40.23	0-360	100	H
3	4.692	30.06	PK	34	-29	.4	35.46	-	-	74	-38.54	0-360	200	H
4	1.649	32.49	PK	28.3	-31.4	.6	29.99	-	-	74	-44.01	0-360	100	V
5	3.149	29.46	PK	32.9	-29.7	.7	33.36	-	-	74	-40.64	0-360	100	V
6	5.053	28.8	PK	34.2	-28.1	.4	35.3	-	-	74	-38.7	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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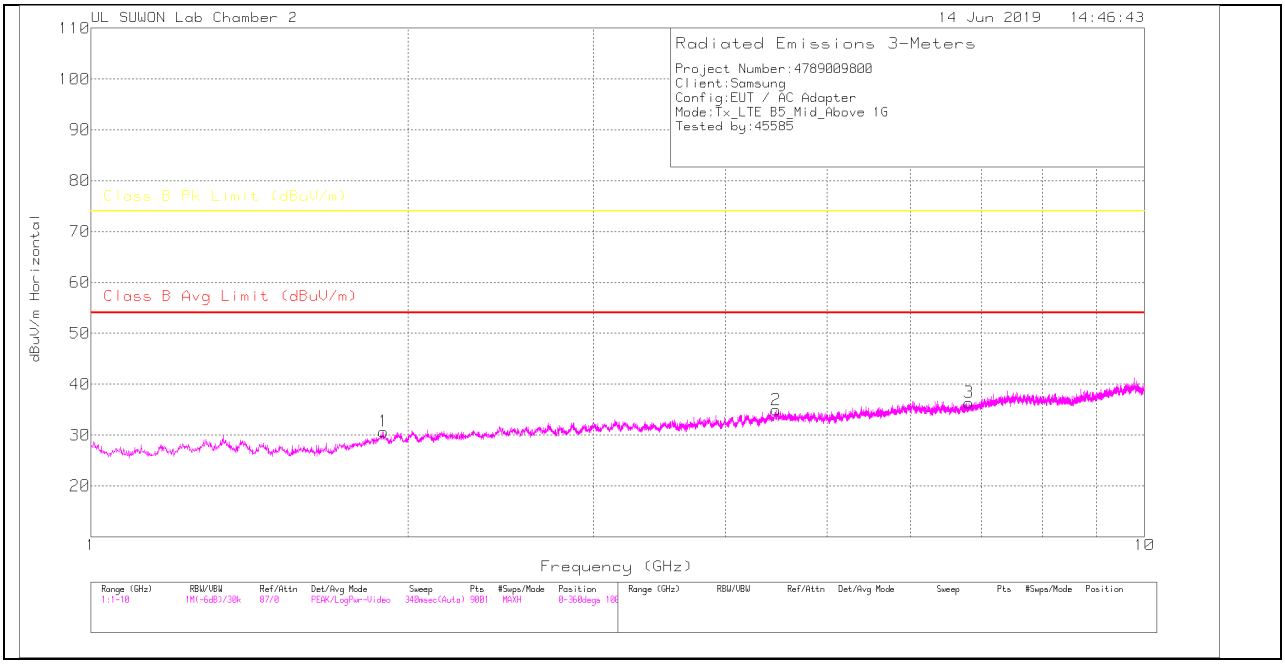
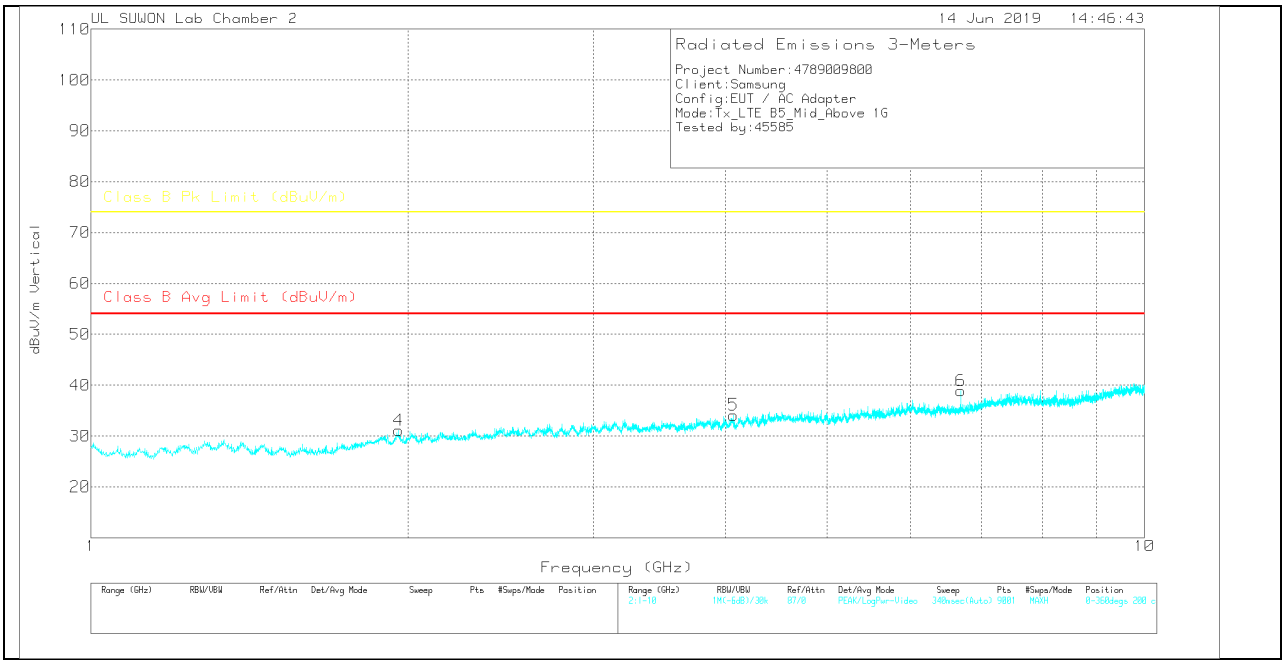
MID CHANNEL(881.5MHz)

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_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	1.895	30.29	PK	30.8	-31.1	.7	30.69	-	-	74	-43.31	0-360	200	H
2	4.471	29.16	PK	33.8	-28.4	.4	34.96	-	-	74	-39.04	0-360	100	H
3	6.814	26.28	PK	35.6	-25.9	.4	36.38	-	-	74	-37.62	0-360	100	H
4	1.96	30.49	PK	31.1	-31	.5	31.09	-	-	74	-42.91	0-360	100	V
5	4.074	29.15	PK	33.4	-28.8	.4	34.15	-	-	74	-39.85	0-360	100	V
6	6.692	29.62	PK	35.4	-26.4	.3	38.92	-	-	74	-35.08	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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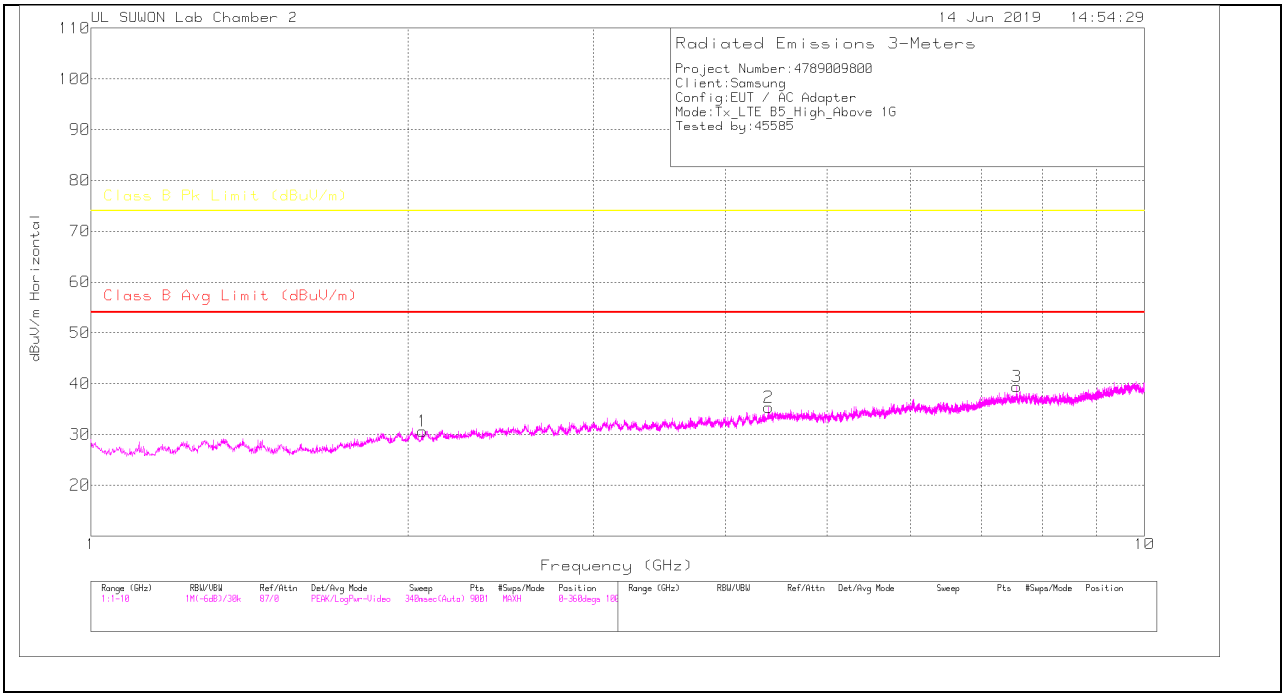
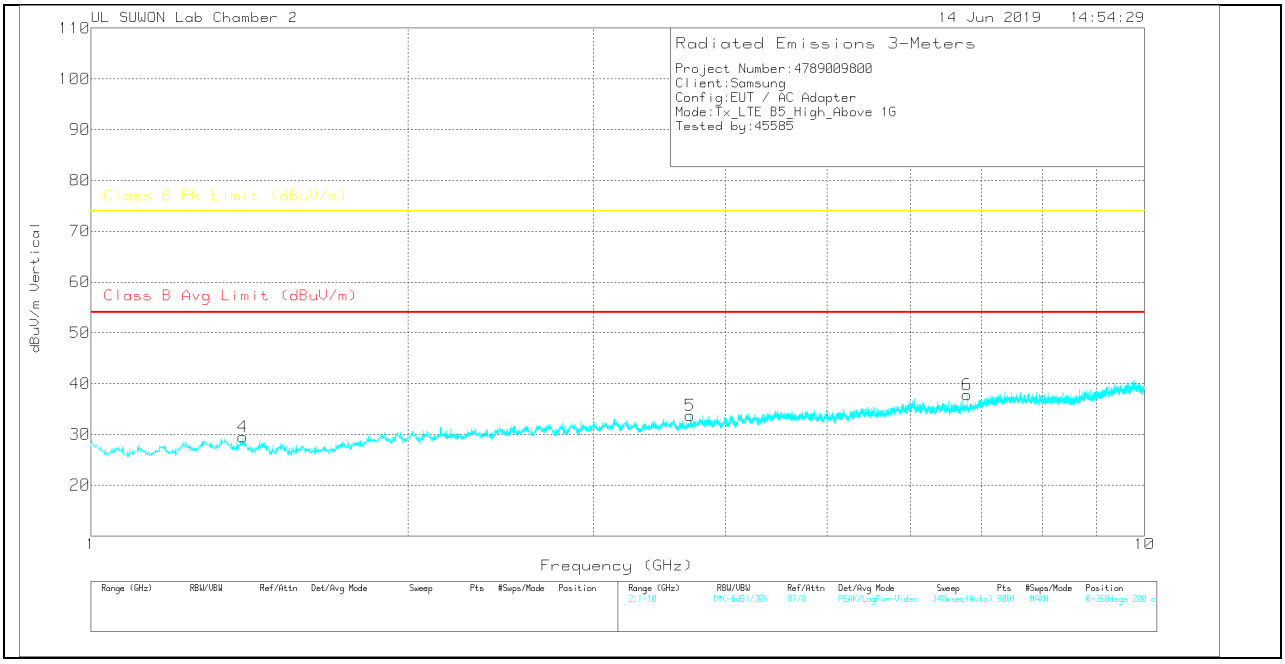
HIGH CHANNEL(892.5MHz)

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_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	2.063	29.58	PK	31.3	-30.8	.5	30.58	-	-	74	-43.42	0-360	100	H
2	4.398	29.78	PK	33.7	-28.6	.4	35.28	-	-	74	-38.72	0-360	100	H
3	7.561	27.71	PK	36.1	-25.1	.7	39.41	-	-	74	-34.59	0-360	100	H
4	1.393	31.17	PK	29.5	-31.7	.6	29.57	-	-	74	-44.43	0-360	100	V
5	3.705	29.97	PK	33	-29.7	.5	33.77	-	-	74	-40.23	0-360	100	V
6	6.786	27.66	PK	35.5	-25.8	.4	37.76	-	-	74	-36.24	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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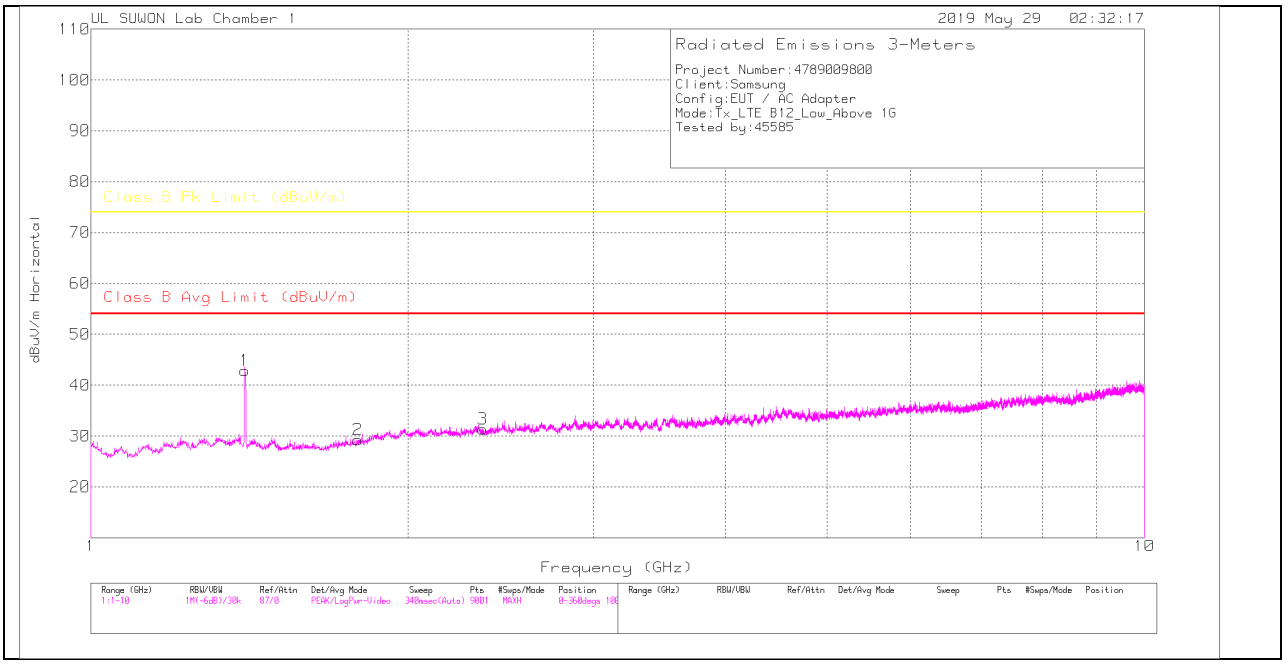
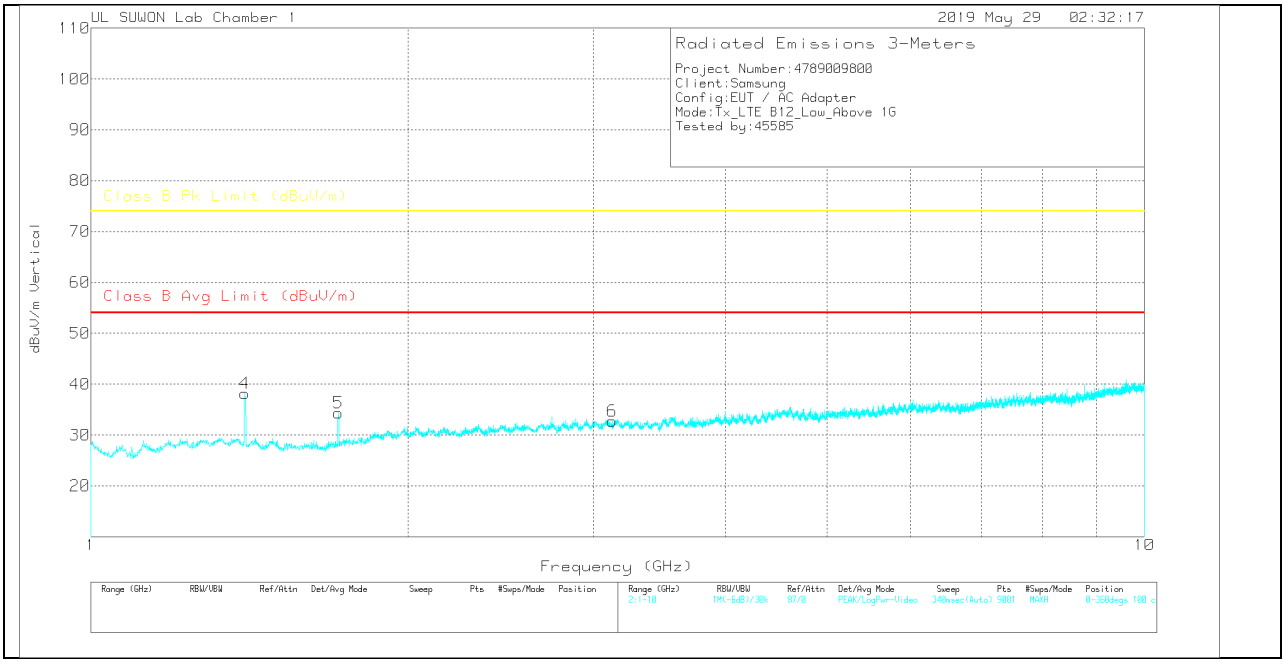
7.4. Above 1 GHz in the LTE Band 12

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	1.399	49.45	PK	29.4	-36.6	.6	42.85	-	-	74	-31.15	0-360	100	H
2	1.793	35.25	PK	29.5	-36	.5	29.25	-	-	74	-44.75	0-360	200	H
3	2.356	34.39	PK	31.6	-35	.4	31.39	-	-	74	-42.61	0-360	200	H
4	1.4	44.81	PK	29.4	-36.6	.6	38.21	-	-	74	-35.79	0-360	100	V
5	1.718	40.81	PK	28.7	-36	.8	34.31	-	-	74	-39.69	0-360	100	V
6	3.123	32.97	PK	32.7	-33.6	.7	32.77	-	-	74	-41.23	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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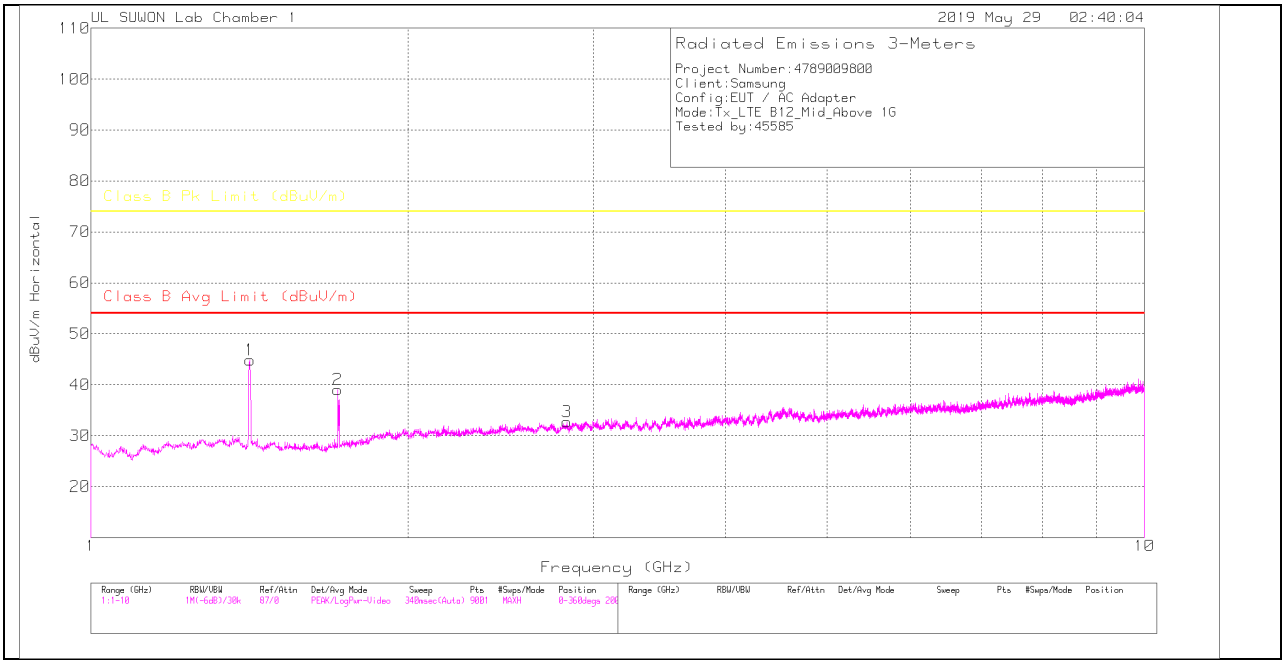
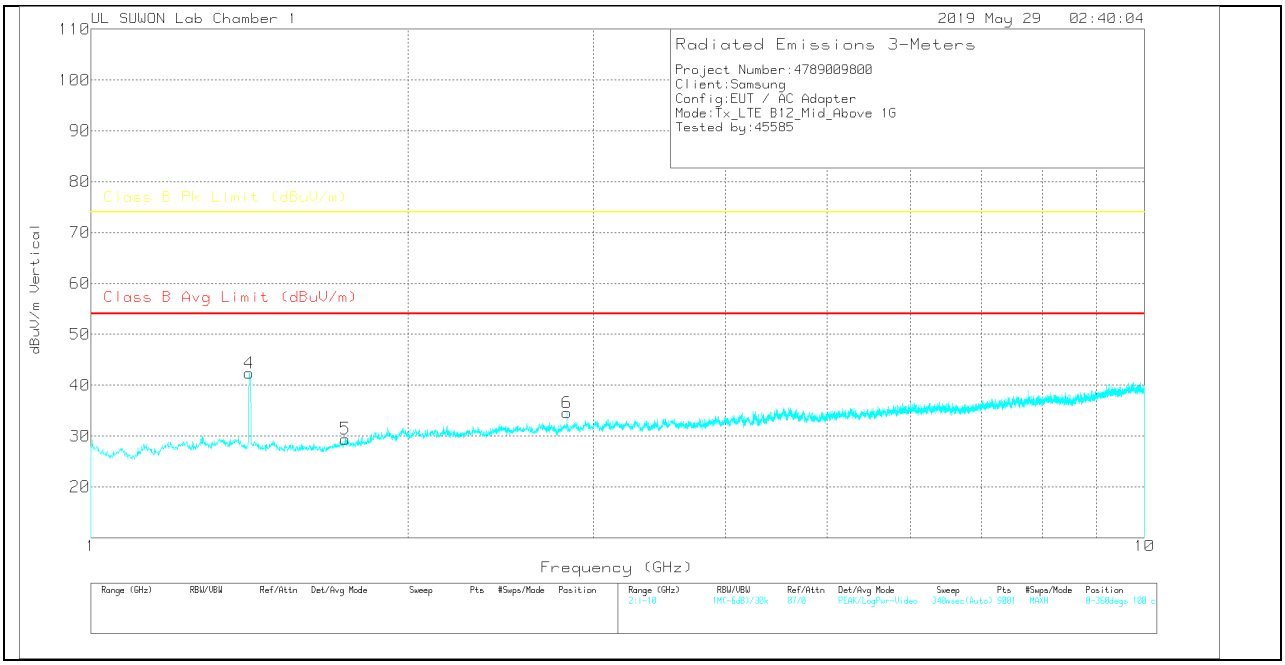
MID CHANNEL(737.5MHz)

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	1.416	51.64	PK	29.2	-36.6	.6	44.84	-	-	74	-29.16	0-360	100	H
2	1.716	45.64	PK	28.7	-36.1	.8	39.04	-	-	74	-34.96	0-360	200	H
3	2.83	33.68	PK	32.2	-33.9	.8	32.78	-	-	74	-41.22	0-360	100	H
4	1.414	49.15	PK	29.2	-36.6	.6	42.35	-	-	74	-31.65	0-360	100	V
5	1.743	35.75	PK	28.9	-36	.8	29.45	-	-	74	-44.55	0-360	100	V
6	2.83	35.5	PK	32.2	-33.9	.8	34.6	-	-	74	-39.4	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.

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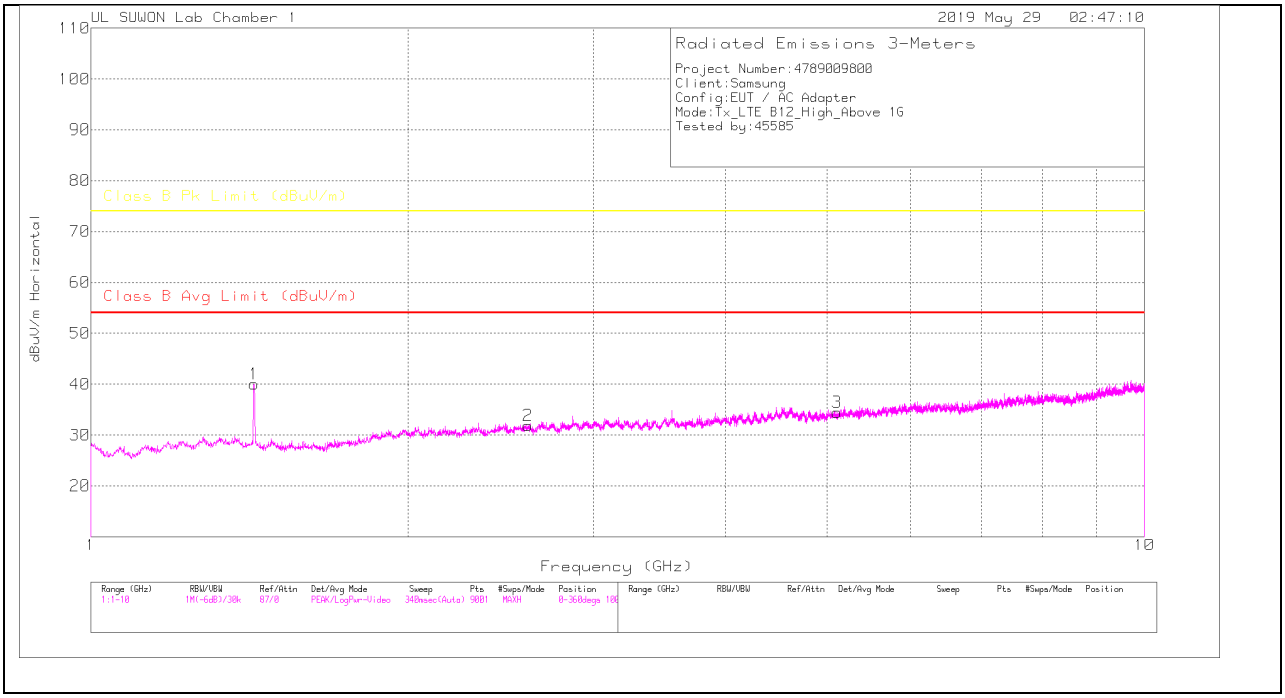
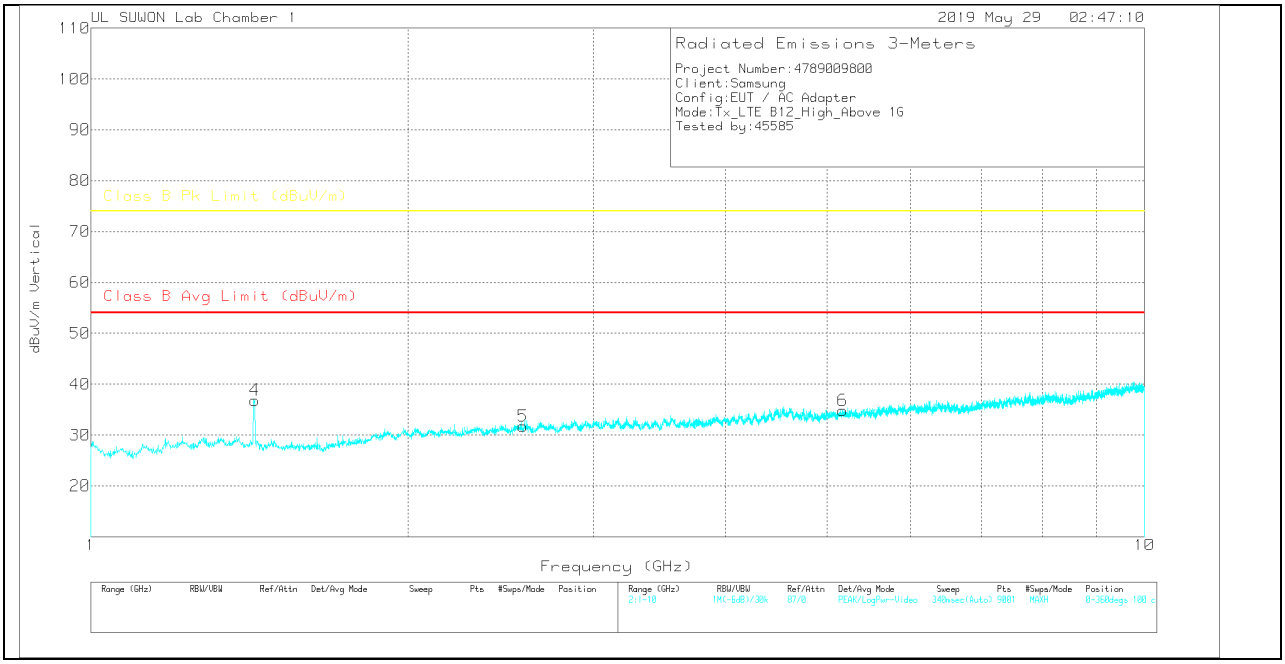
HIGH CHANNEL(744.5MHz)

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	1.428	46.88	PK	29.1	-36.6	.6	39.98	-	-	74	-34.02	0-360	100	H
2	2.599	33.74	PK	32.1	-34.6	.6	31.84	-	-	74	-42.16	0-360	100	H
3	5.11	31.38	PK	34.4	-31.7	.4	34.48	-	-	74	-39.52	0-360	100	H
4	1.43	43.77	PK	29.1	-36.6	.6	36.87	-	-	74	-37.13	0-360	100	V
5	2.572	33.54	PK	32	-34.5	.7	31.74	-	-	74	-42.26	0-360	100	V
6	5.17	31.36	PK	34.5	-31.4	.4	34.86	-	-	74	-39.14	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.

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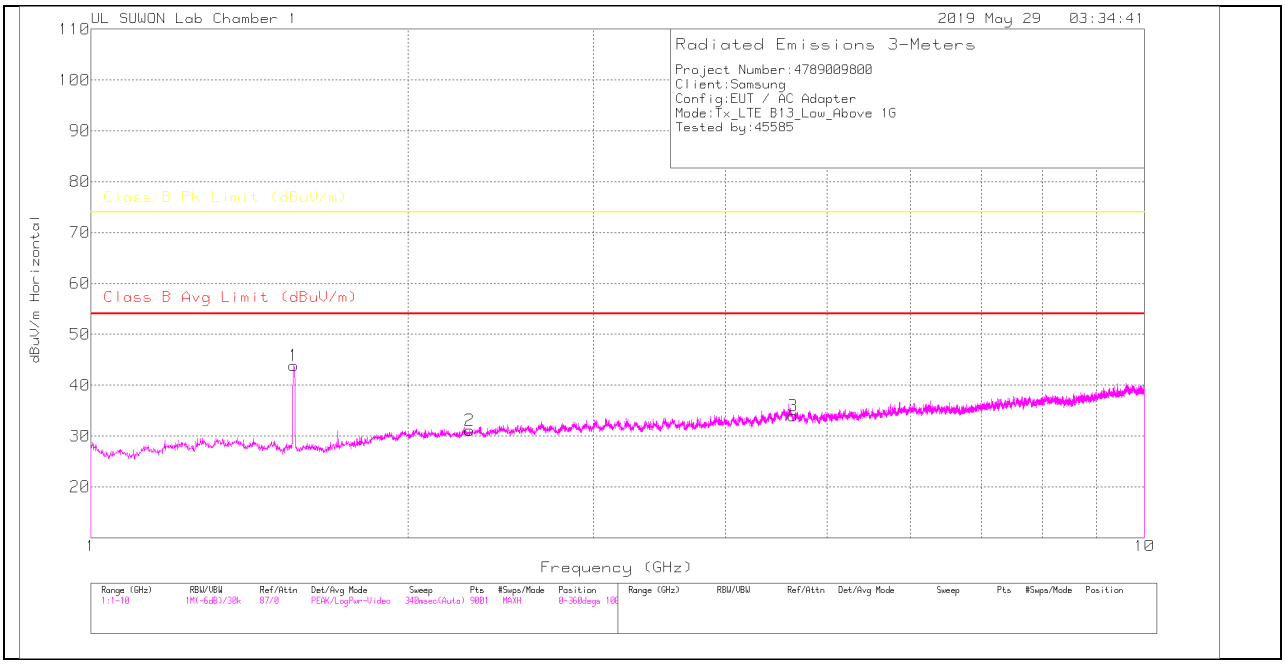
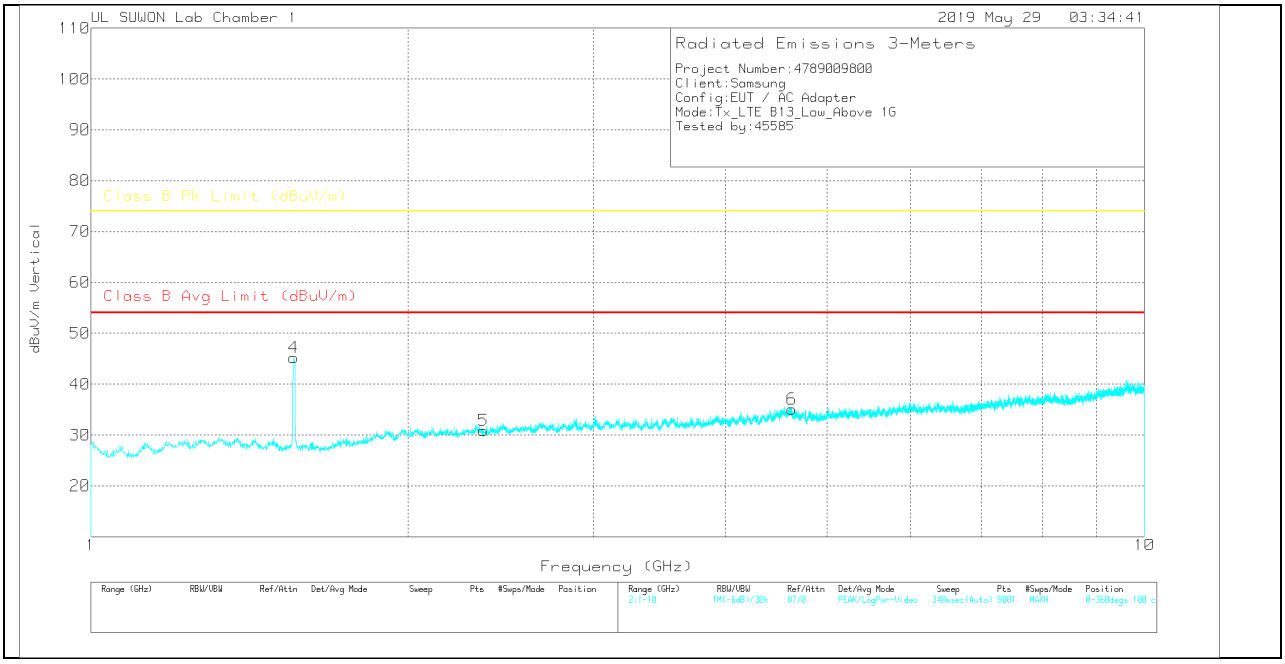
7.5. Above 1 GHz in the LTE Band 13

LOW CHANNEL(748.5MHz)

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	1.558	51.11	PK	28.3	-36.2	.6	43.81	-	-	74	-30.19	0-360	100	H
2	2.289	34.14	PK	31.4	-35.2	.8	31.14	-	-	74	-42.86	0-360	100	H
3	4.639	31.22	PK	34.2	-31.9	.4	33.92	-	-	74	-40.08	0-360	100	H
4	1.558	52.54	PK	28.3	-36.2	.6	45.24	-	-	74	-28.76	0-360	100	V
5	2.357	33.9	PK	31.6	-35	.4	30.9	-	-	74	-43.1	0-360	100	V
6	4.624	32.33	PK	34.2	-31.9	.4	35.03	-	-	74	-38.97	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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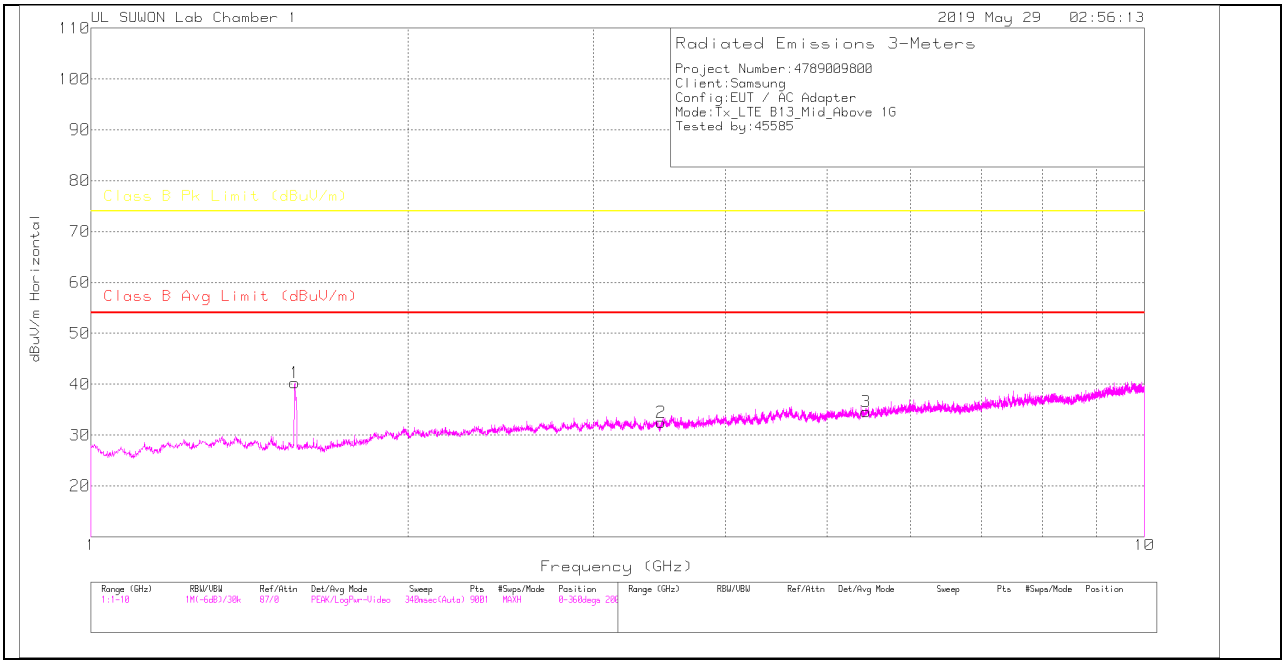
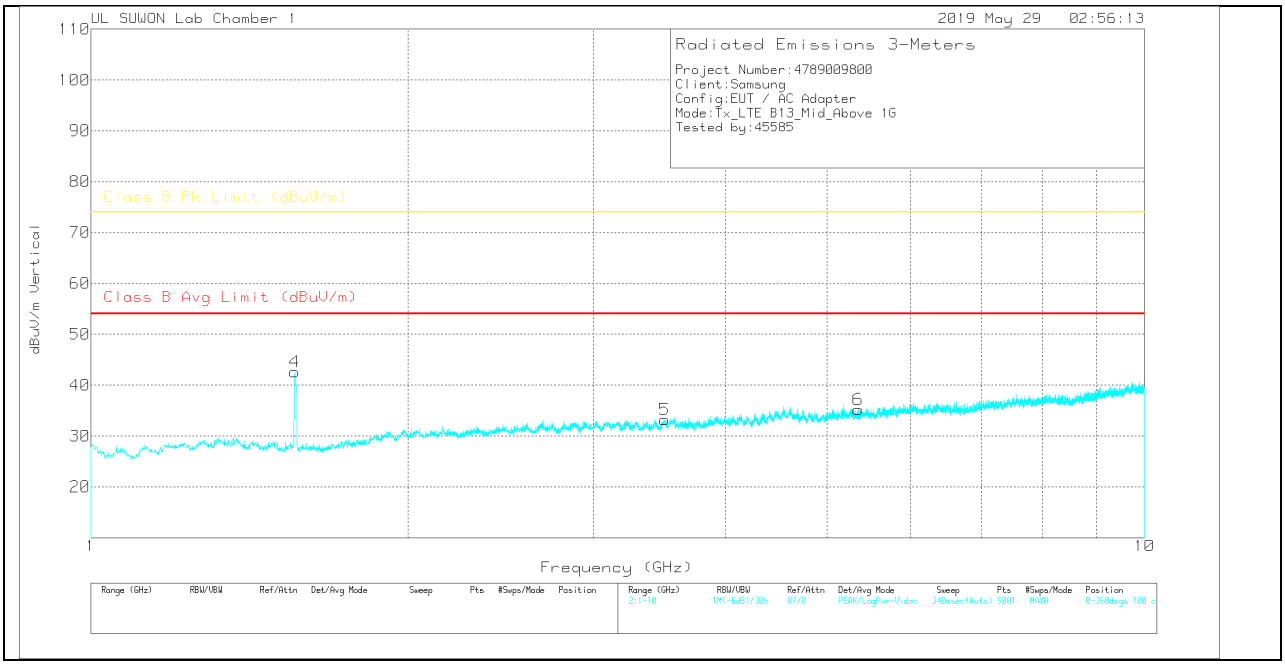
MID CHANNEL(751.0MHz)

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	1.561	47.53	PK	28.3	-36.2	.6	40.23	-	-	74	-33.77	0-360	100	H
2	3.479	32.24	PK	32.8	-33.1	.5	32.44	-	-	74	-41.56	0-360	200	H
3	5.442	30.88	PK	34.7	-31.4	.4	34.58	-	-	74	-39.42	0-360	100	H
4	1.561	49.89	PK	28.3	-36.2	.6	42.59	-	-	74	-31.41	0-360	100	V
5	3.504	32.93	PK	32.8	-33.1	.6	33.23	-	-	74	-40.77	0-360	100	V
6	5.348	31.61	PK	34.7	-31.5	.4	35.21	-	-	74	-38.79	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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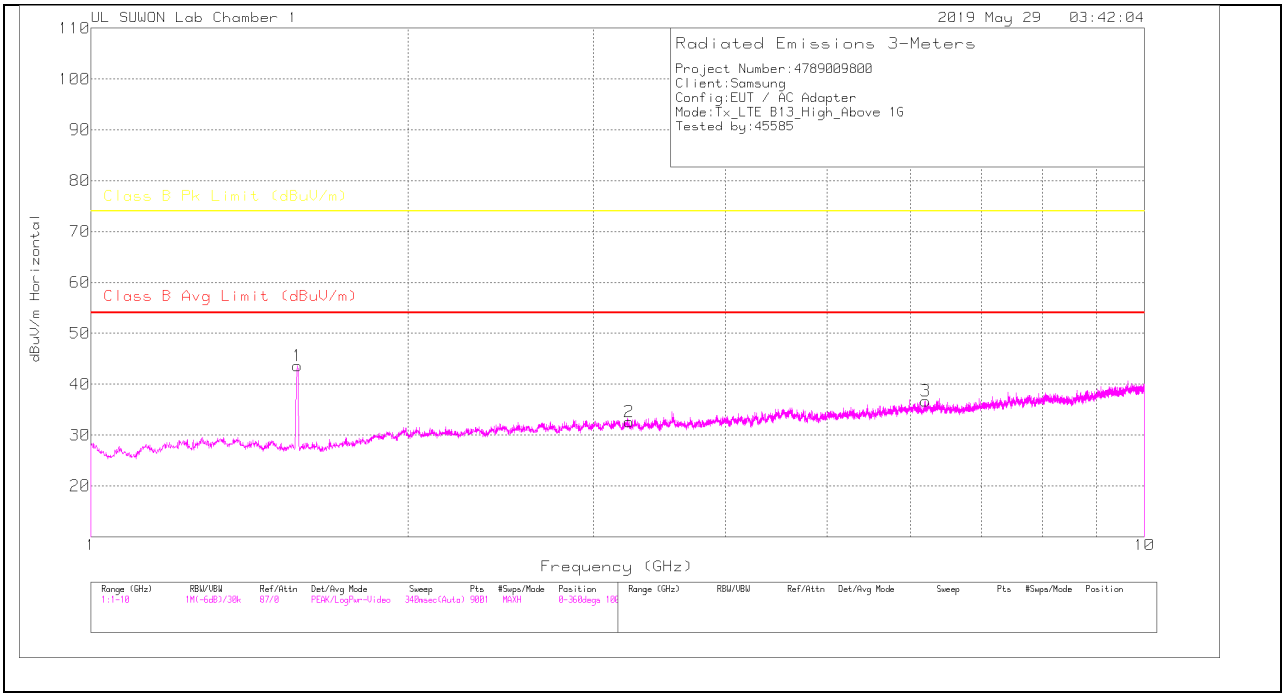
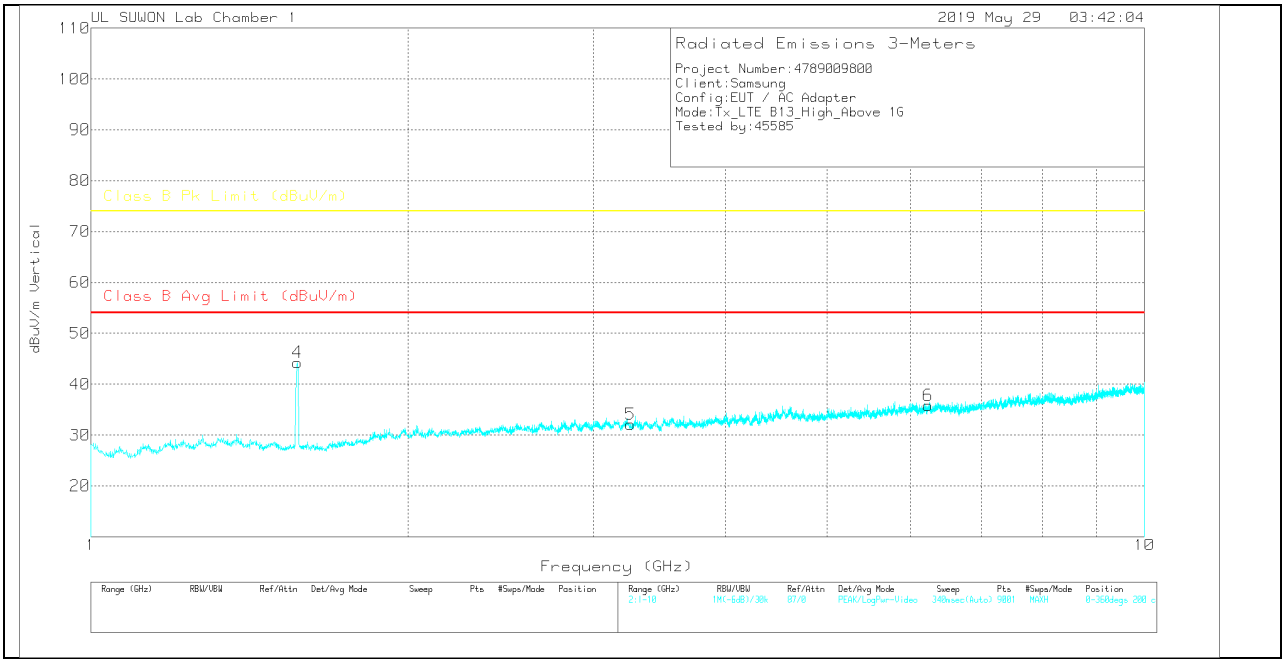
HIGH CHANNEL(753.5MHz)

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	1.571	50.97	PK	28.3	-36.3	.6	43.57	-	-	74	-30.43	0-360	100	H
2	3.243	33.06	PK	32.7	-33.8	.7	32.66	-	-	74	-41.34	0-360	200	H
3	6.195	31	PK	35.3	-30	.4	36.7	-	-	74	-37.3	0-360	200	H
4	1.571	51.69	PK	28.3	-36.3	.6	44.29	-	-	74	-29.71	0-360	100	V
5	3.252	32.43	PK	32.7	-33.7	.7	32.13	-	-	74	-41.87	0-360	100	V
6	6.236	29.95	PK	35.3	-29.9	.5	35.85	-	-	74	-38.15	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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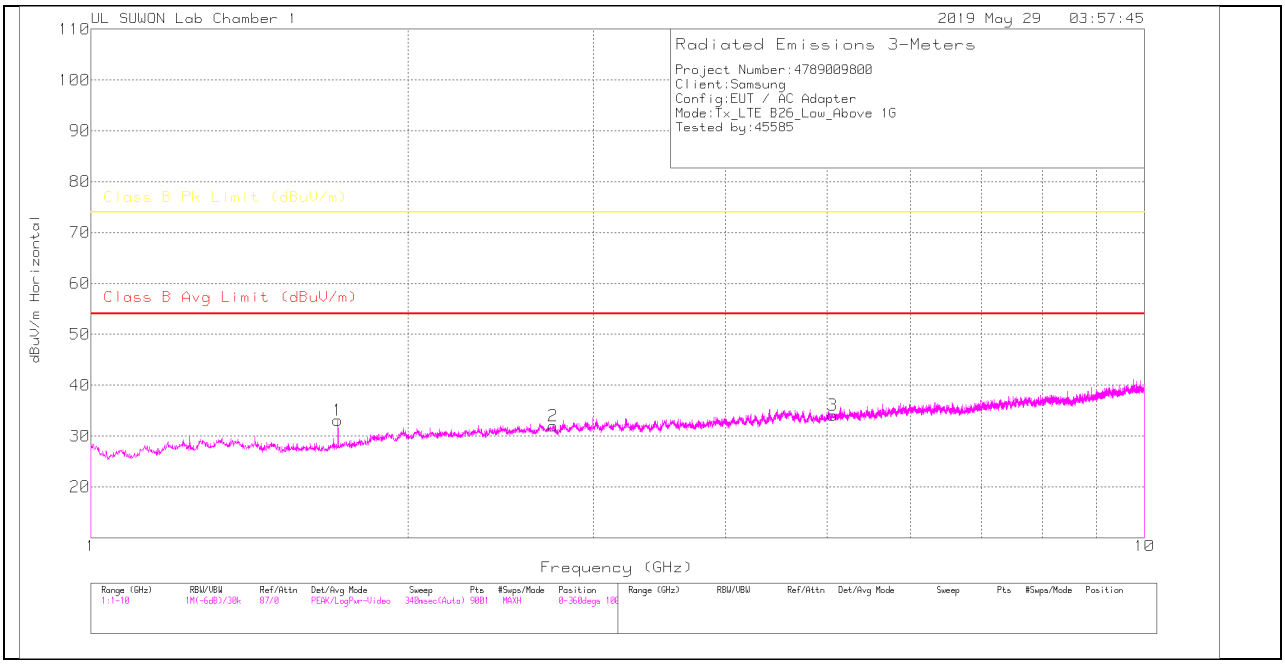
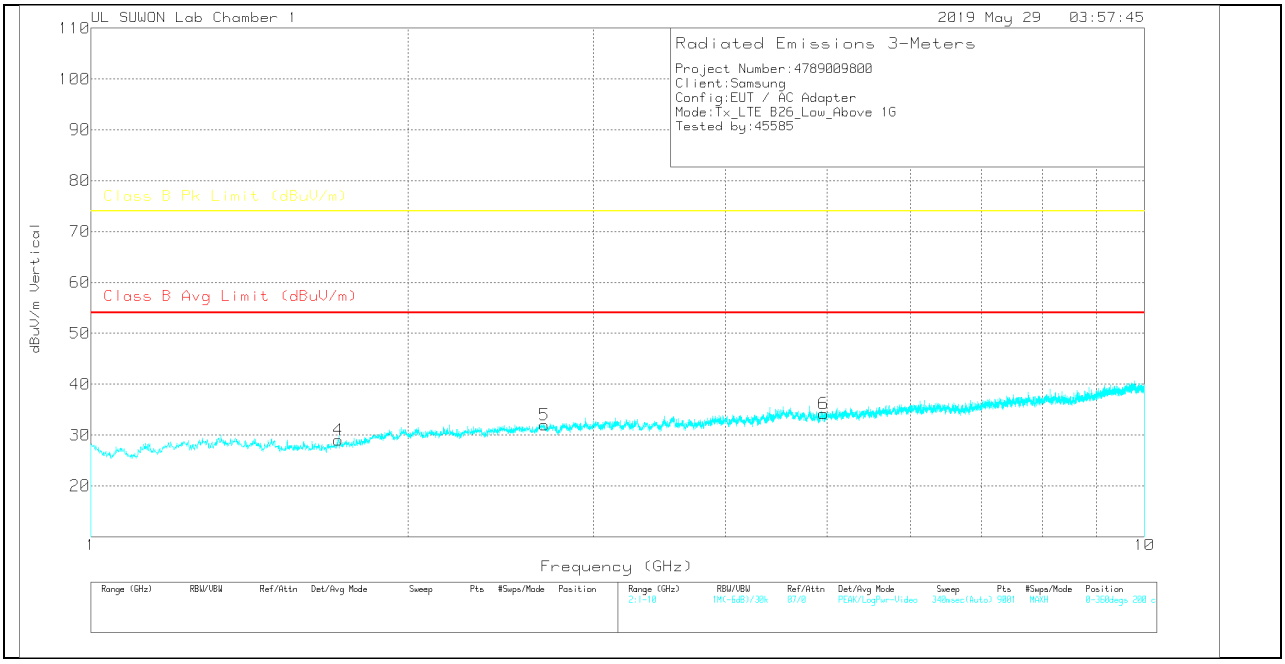
7.6. Above 1 GHz in the LTE Band 26

LOW CHANNEL(860.5MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



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DATA

Trace Markers

Marker	Frequency (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	1.716	39.7	PK	28.7	-36.1	.8	33.1	-	-	74	-40.9	0-360	200	H
2	2.745	33.4	PK	32.1	-34.1	.6	32	-	-	74	-42	0-360	200	H
3	5.057	31.02	PK	34.3	-31.6	.4	34.12	-	-	74	-39.88	0-360	200	H
4	1.717	35.6	PK	28.7	-36.1	.8	29	-	-	74	-45	0-360	100	V
5	2.693	33.34	PK	32.1	-34.3	.9	32.04	-	-	74	-41.96	0-360	100	V
6	4.959	31.04	PK	34.2	-31.4	.4	34.24	-	-	74	-39.76	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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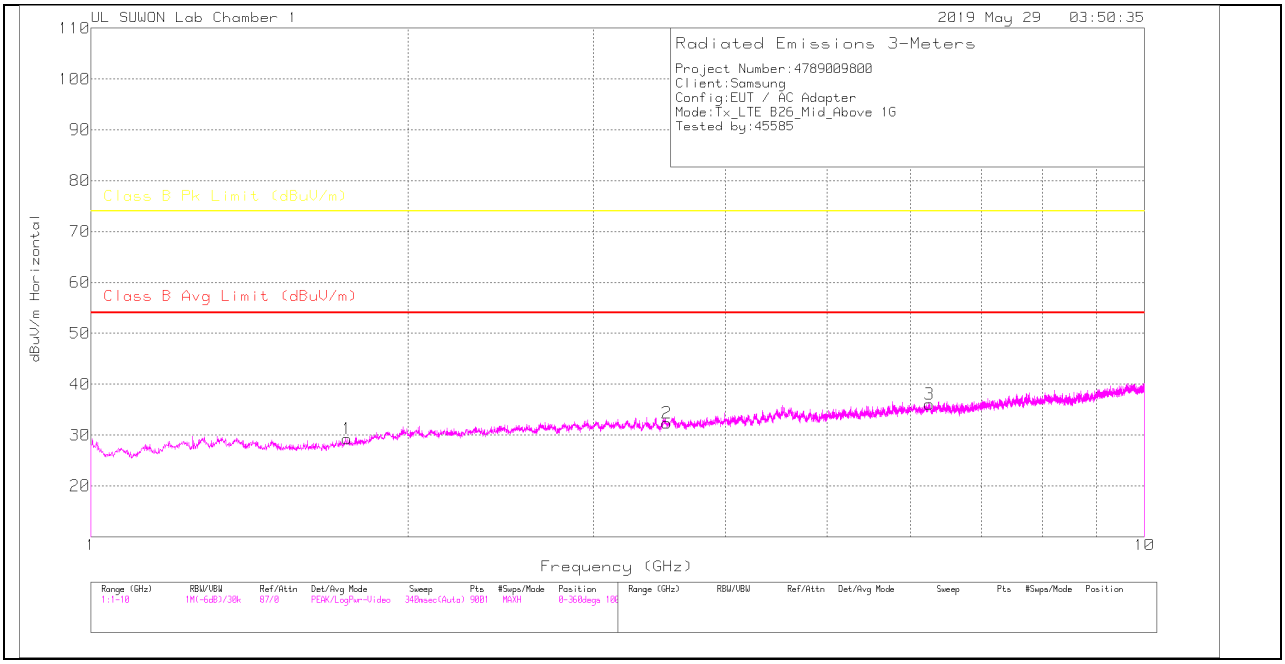
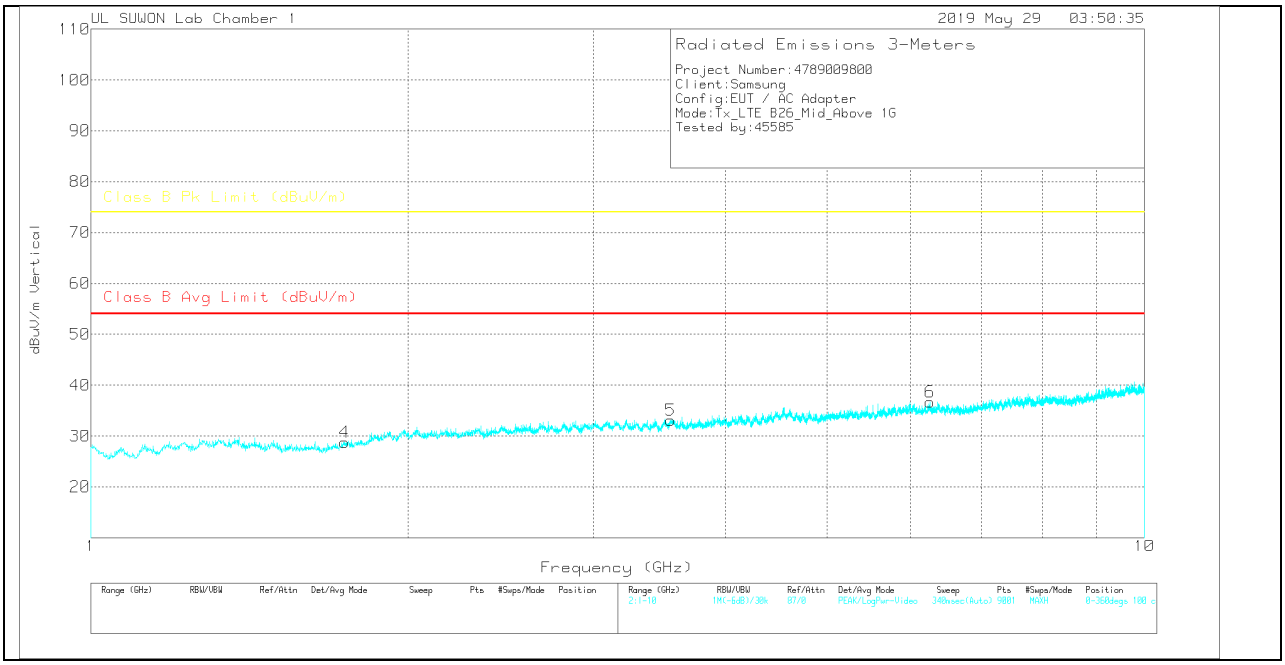
MID CHANNEL(876.5MHz)

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	1.75	35.47	PK	29	-36	.8	29.27	-	-	74	-44.73	0-360	200	H
2	3.519	31.96	PK	32.9	-33.1	.6	32.36	-	-	74	-41.64	0-360	100	H
3	6.25	30.18	PK	35.3	-29.9	.5	36.08	-	-	74	-37.92	0-360	200	H
4	1.742	35.07	PK	28.9	-36	.8	28.77	-	-	74	-45.23	0-360	100	V
5	3.55	32.71	PK	33	-33.2	.6	33.11	-	-	74	-40.89	0-360	100	V
6	6.259	30.88	PK	35.3	-30	.5	36.68	-	-	74	-37.32	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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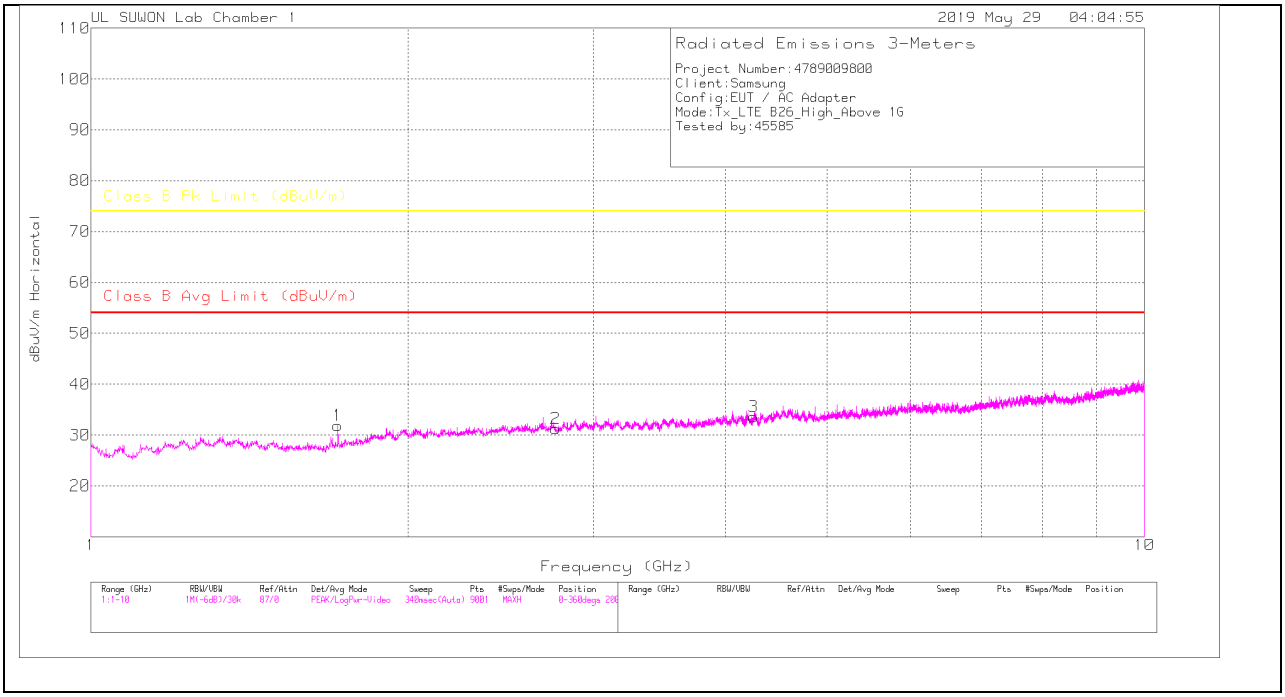
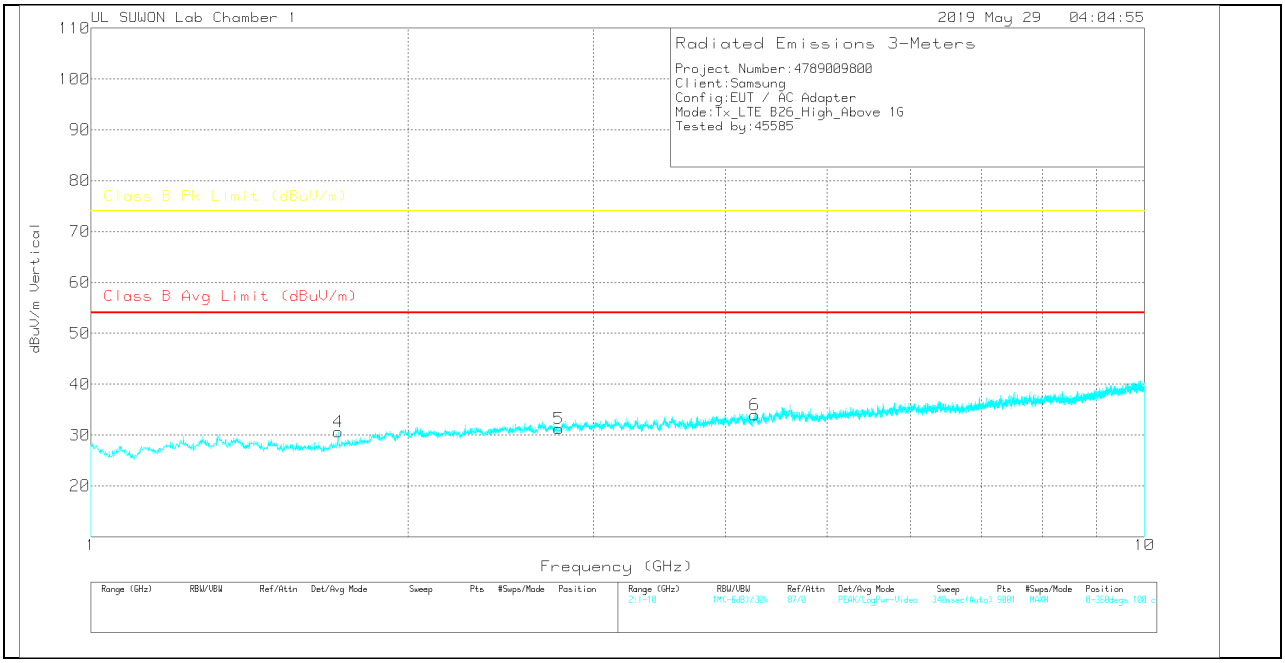
HIGH CHANNEL(892.5MHz)

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	1.716	38.47	PK	28.7	-36.1	.8	31.87	-	-	74	-42.13	0-360	100	H
2	2.761	32.69	PK	32.1	-33.9	.4	31.29	-	-	74	-42.71	0-360	100	H
3	4.258	31.74	PK	33.8	-32.4	.4	33.54	-	-	74	-40.46	0-360	200	H
4	1.717	37.25	PK	28.7	-36.1	.8	30.65	-	-	74	-43.35	0-360	200	V
5	2.78	32.72	PK	32.2	-34.1	.4	31.22	-	-	74	-42.78	0-360	100	V
6	4.266	32.2	PK	33.8	-32.4	.4	34	-	-	74	-40	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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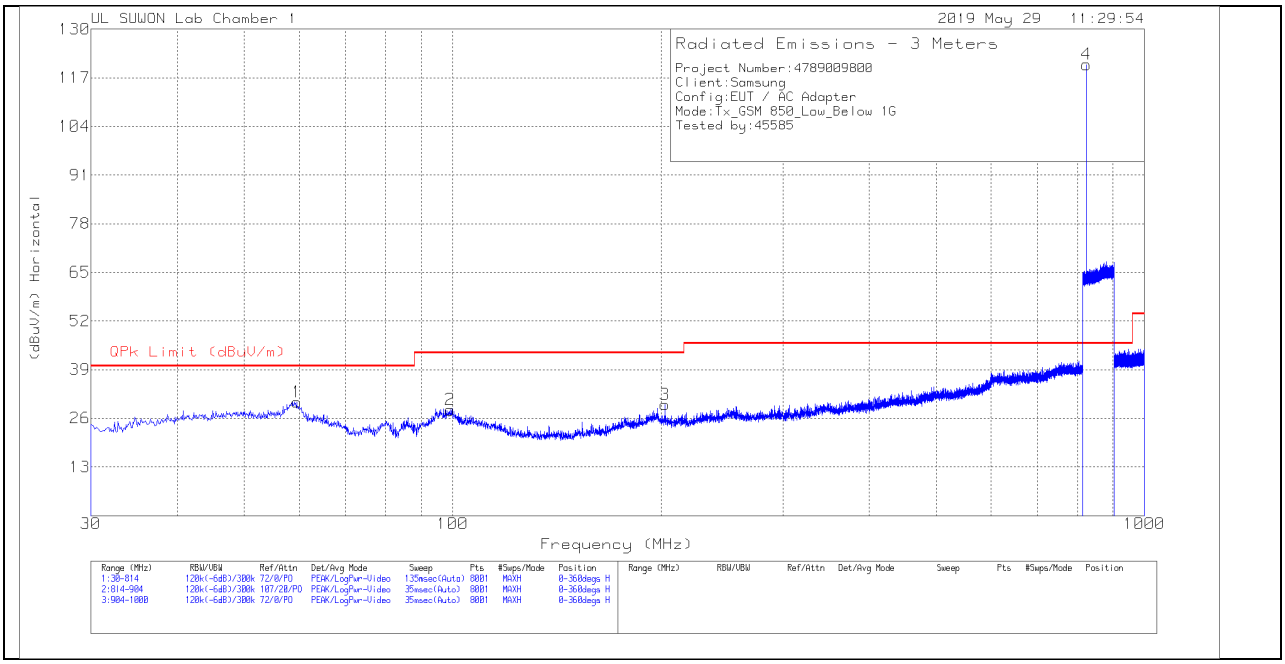
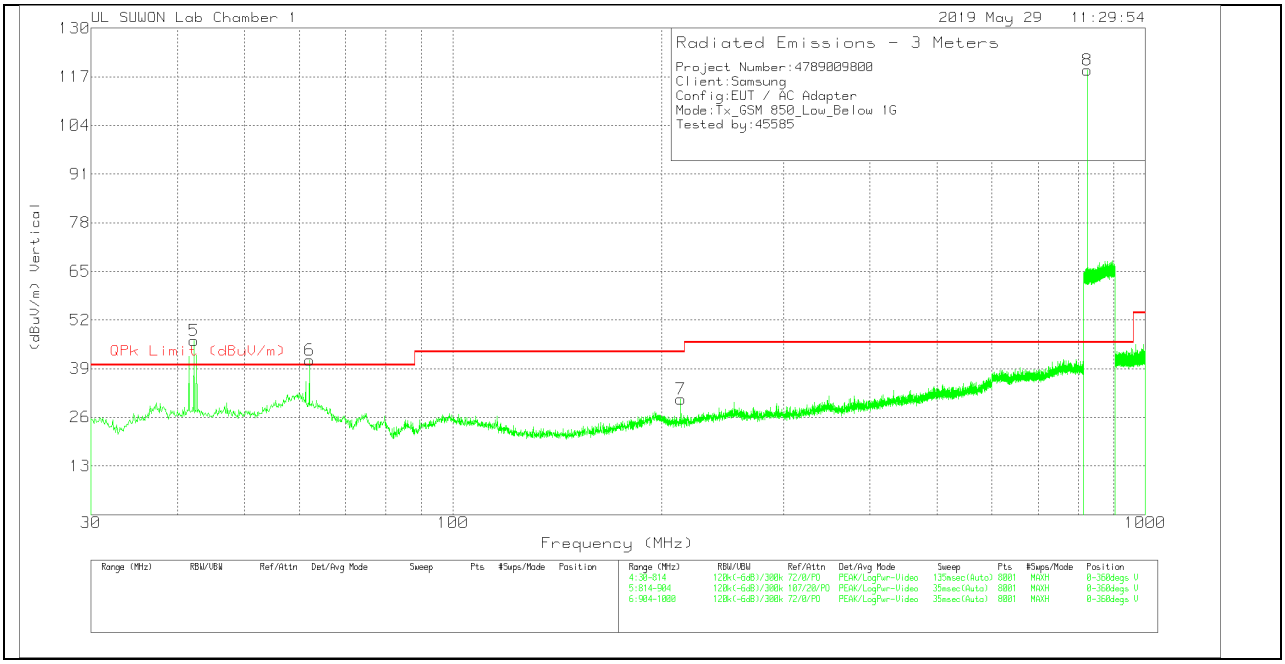
7.7. Below 1 GHz in the GSM850

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_750	Bypass_Below_1G[dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	59.498	7.12	Pk	18.6	4.7	30.42	40	-9.58	0-360	400	H
2	99.188	5.75	Pk	17.8	4.7	28.25	43.52	-15.27	0-360	300	H
3	202.676	7.5	Pk	17.3	4.8	29.6	43.52	-13.92	0-360	100	H
4	824.1925	85.85	Pk	27	7.7	120.55	**46.02**	**74.53**	0-360	100	H
5	42.25	22.89	Pk	19.2	4.4	46.49	**40**	**6.49**	0-360	400	V
6	62.046	18.78	Pk	18.1	4.4	41.28	**40**	**1.28**	0-360	400	V
7	213.358	9.05	Pk	17	4.8	30.85	43.52	-12.67	0-360	100	V
8	824.2713	84.15	Pk	27	7.7	118.85	**46.02**	**72.83**	0-360	100	V

Pk - Peak detector

Radiated Emissions

Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_750	Bypass_Below_1G[dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
42.25	-.34	Qp	19.2	4.4	23.26	40	-16.74	277	100	V
60.6508	4.28	Qp	18.4	4.6	27.28	40	-12.72	0	106	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.

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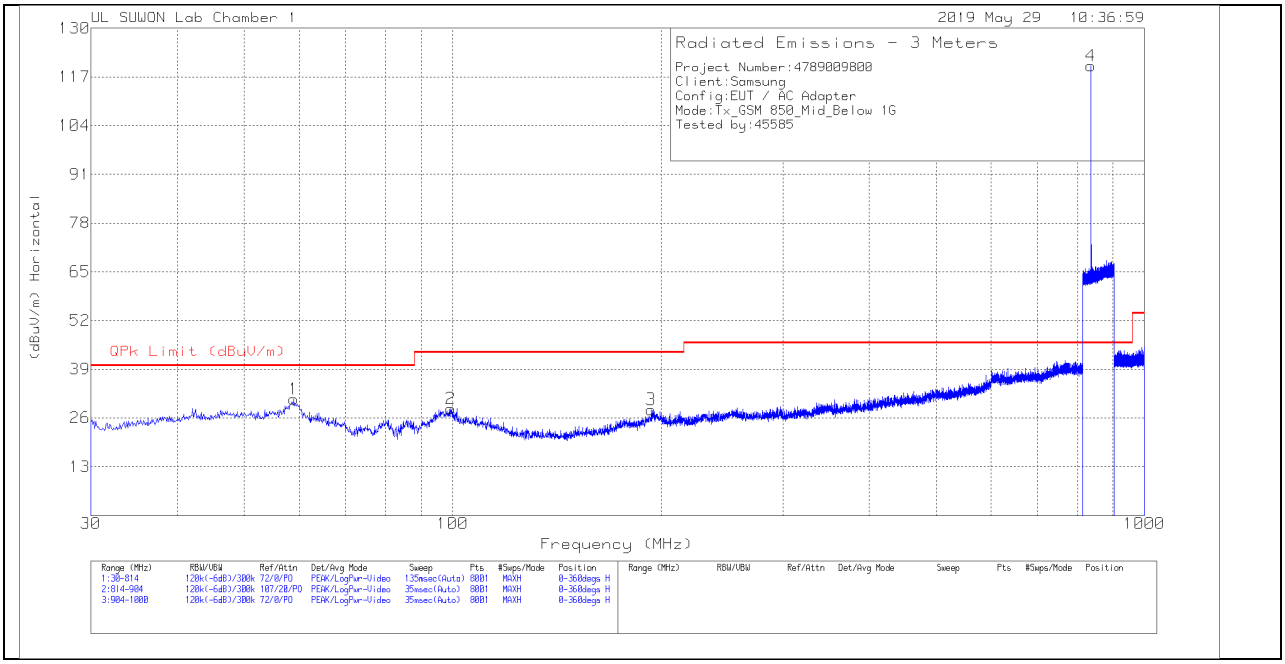
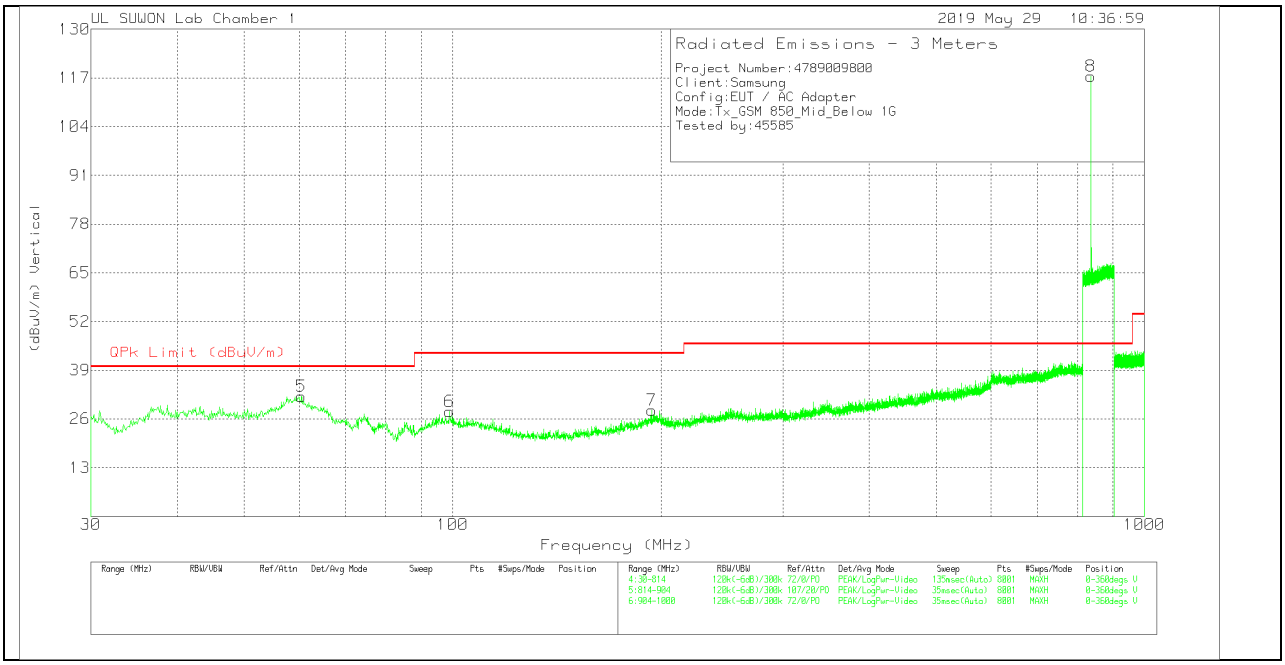
MID CHANNEL(881.6MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



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DATA

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_750	Bypass_Below_1 G[dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	58.91	7.52	Pk	18.8	4.7	31.02	40	-8.98	0-360	400	H
2	99.286	6.04	Pk	17.8	4.6	28.44	43.52	-15.08	0-360	300	H
3	193.758	5.64	Pk	17.8	4.8	28.24	43.52	-15.28	0-360	100	H
4	836.995	85.01	Pk	27.2	7.8	120.01	**46.02**	**73.99**	0-360	100	H
5	60.478	8.98	Pk	18.4	4.7	32.08	40	-7.92	0-360	100	V
6	98.894	5.58	Pk	17.8	4.6	27.98	43.52	-15.54	0-360	300	V
7	193.856	5.78	Pk	17.8	4.8	28.38	43.52	-15.14	0-360	300	V
8	836.995	82.4	Pk	27.2	7.8	117.4	**46.02**	**71.38**	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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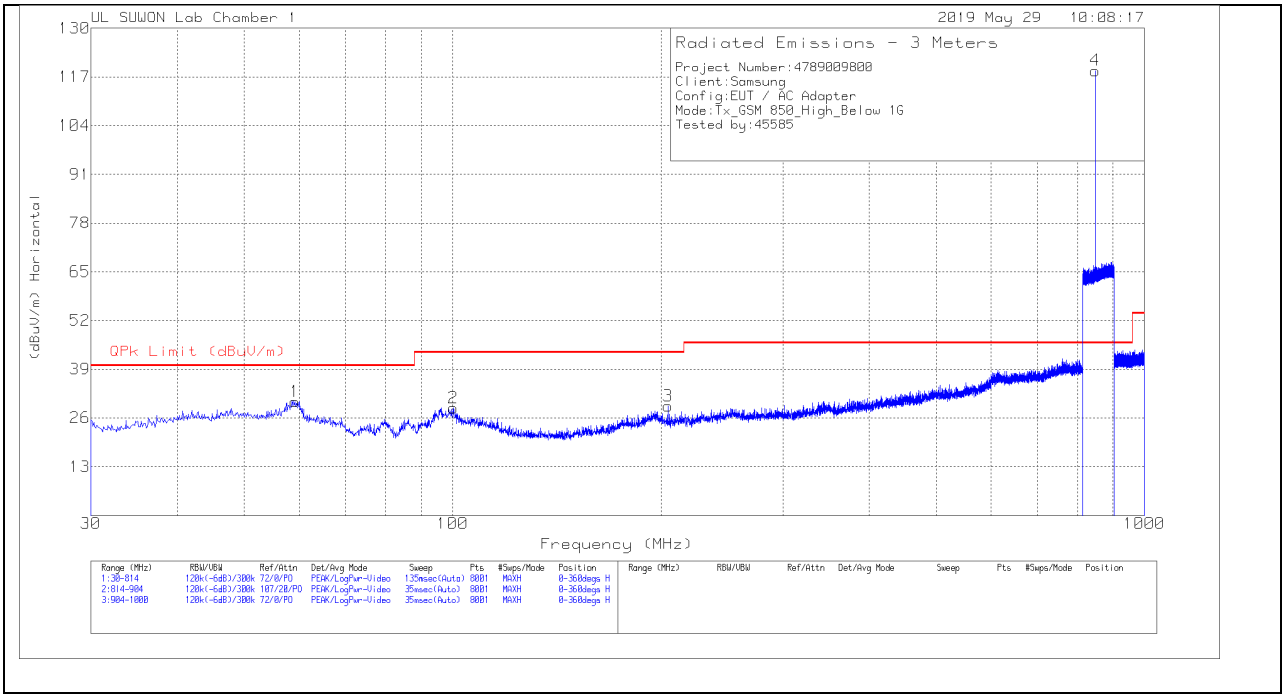
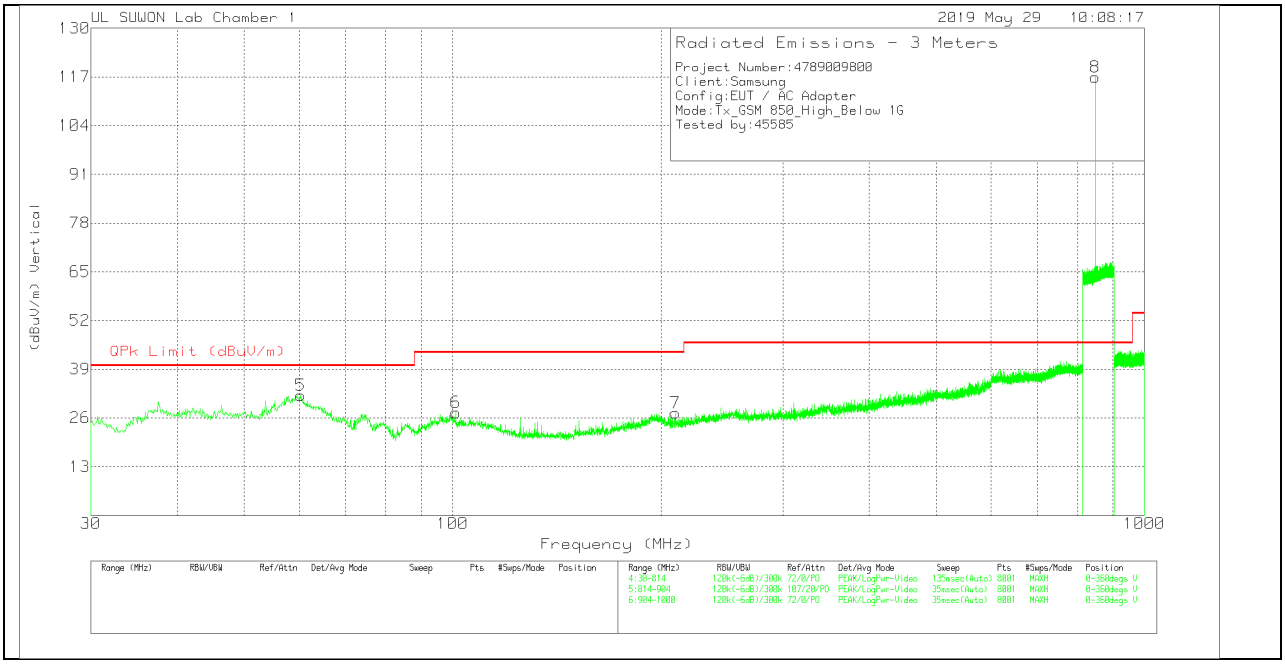
HIGH CHANNEL(893.8MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



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DATA

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_750	Bypass_Below_1 G[dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	59.204	6.93	Pk	18.7	4.7	30.33	40	-9.67	0-360	400	H
2	100.266	6.21	Pk	17.8	4.6	28.61	43.52	-14.91	0-360	300	H
3	204.636	7.38	Pk	17	4.8	29.18	43.52	-14.34	0-360	100	H
4	848.8075	83.4	Pk	27.5	7.8	118.7	**46.02**	**72.68**	0-360	100	H
5	60.282	8.86	Pk	18.5	4.7	32.06	40	-7.94	0-360	100	V
6	101.05	5.01	Pk	17.9	4.5	27.41	43.52	-16.11	0-360	100	V
7	209.83	5.65	Pk	16.9	4.8	27.35	43.52	-16.17	0-360	200	V
8	848.7794	81.67	Pk	27.5	7.8	116.97	**46.02**	**70.95**	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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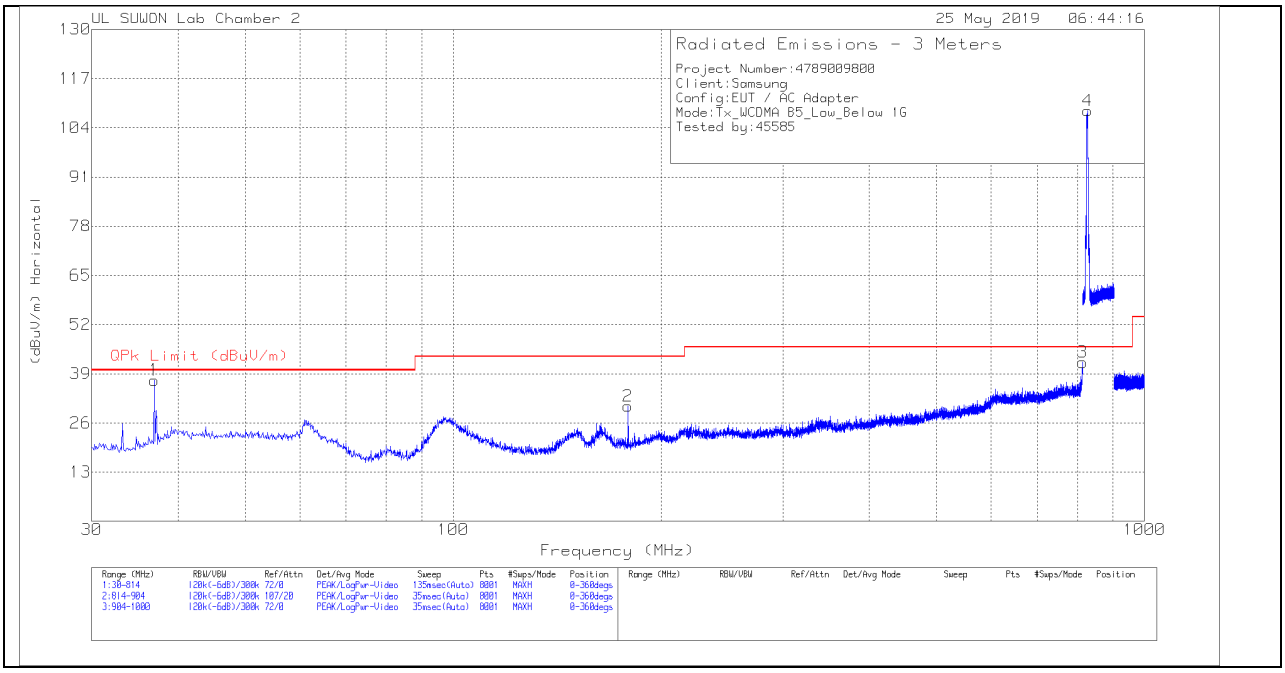
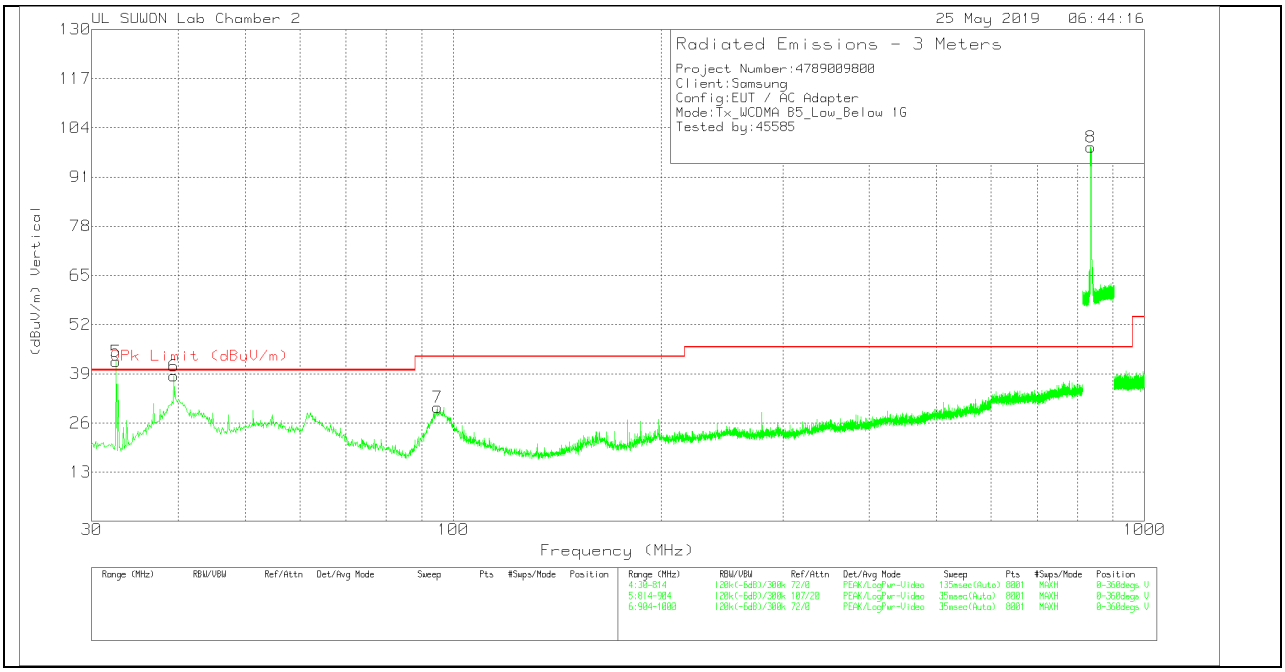
7.8. Below 1 GHz in the WCDMA Band 5

LOW CHANNEL(871.4MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



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DATA

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Bypass_Below_1G[dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	36.958	19.23	Pk	17.4	.7	37.33	40	-2.67	0-360	100	H
2	179.058	13.41	Pk	15.6	1.4	30.41	43.52	-13.11	0-360	200	H
3	814	11.91	Pk	27	3.1	42.01	46.02	-4.01	0-360	100	H
4	827.3031	78.42	Pk	27	3.1	108.52	**46.02**	**62.5**	0-360	100	H
5	32.548	26.16	Pk	15.5	.6	42.26	**40**	**2.26**	0-360	400	V
6	39.408	19.23	Pk	18.5	.7	38.43	40	-1.57	0-360	300	V
7	94.876	11.8	Pk	17.2	1.1	30.1	43.52	-13.42	0-360	100	V
8	836.815	68.53	Pk	27.1	3.2	98.83	**46.02**	**52.81**	0-360	200	V

Pk - Peak detector

Radiated Emissions

Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Bypass_Below_1G [dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
813.88	9.35	Qp	27	3.1	39.45	46.02	-6.57	293	100	H
36.958	-2.17	Qp	17.4	.7	15.93	40	-24.07	67	104	H
32.548	-.61	Qp	15.5	.6	15.49	40	-24.51	249	100	V
39.408	-1.97	Qp	18.5	.7	17.23	40	-22.77	67	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.

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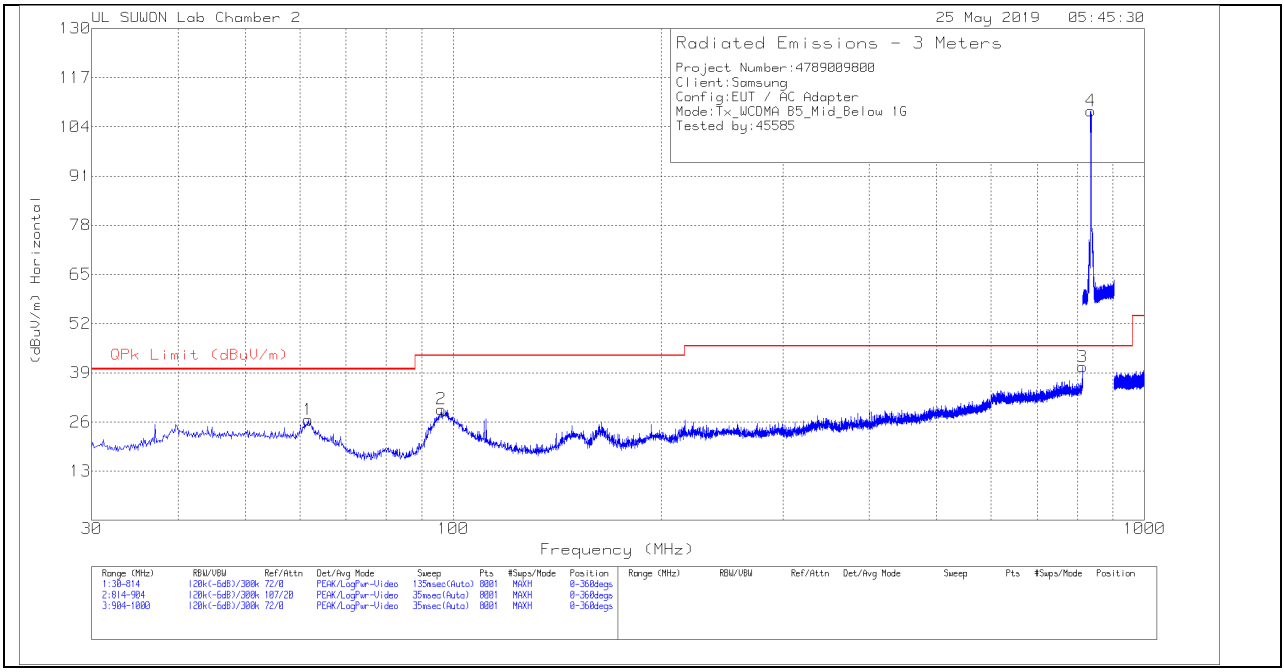
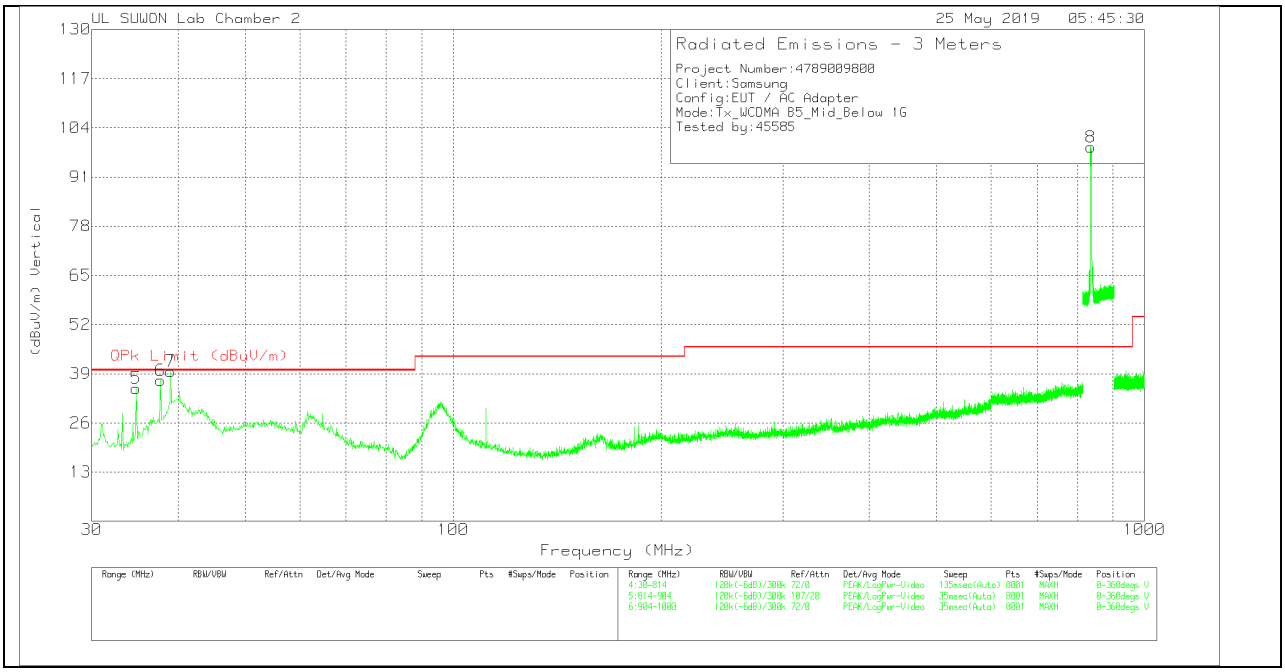
MID CHANNEL(881.6MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



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DATA

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Bypass_Below_1G[dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	61.654	7.66	Pk	18.1	.8	26.56	40	-13.44	0-360	400	H
2	96.15	10.87	Pk	17.4	1.1	29.37	43.52	-14.15	0-360	300	H
3	813.804	10.49	Pk	27	3.1	40.59	46.02	-5.43	0-360	100	H
4	835.7125	78.02	Pk	27.1	3.1	108.22	**46.02**	**62.2**	0-360	100	H
5	34.802	18.06	Pk	16.5	.6	35.16	40	-4.84	0-360	200	V
6	37.742	18.76	Pk	17.8	.7	37.26	40	-2.74	0-360	400	V
7	39.016	20.52	Pk	18.4	.7	39.62	40	-.38	0-360	100	V
8	836.815	68.53	Pk	27.1	3.2	98.83	**46.02**	**52.81**	0-360	200	V

Pk - Peak detector

Radiated Emissions

Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Bypass_Below_1G [dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
34.802	.98	Qp	16.5	.6	18.08	40	-21.92	66	101	V
37.742	2.5	Qp	17.8	.7	21	40	-19	2	102	V
39.016	9.58	Qp	18.4	.7	28.68	40	-11.32	207	100	V

Qp - Quasi-Peak detector

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

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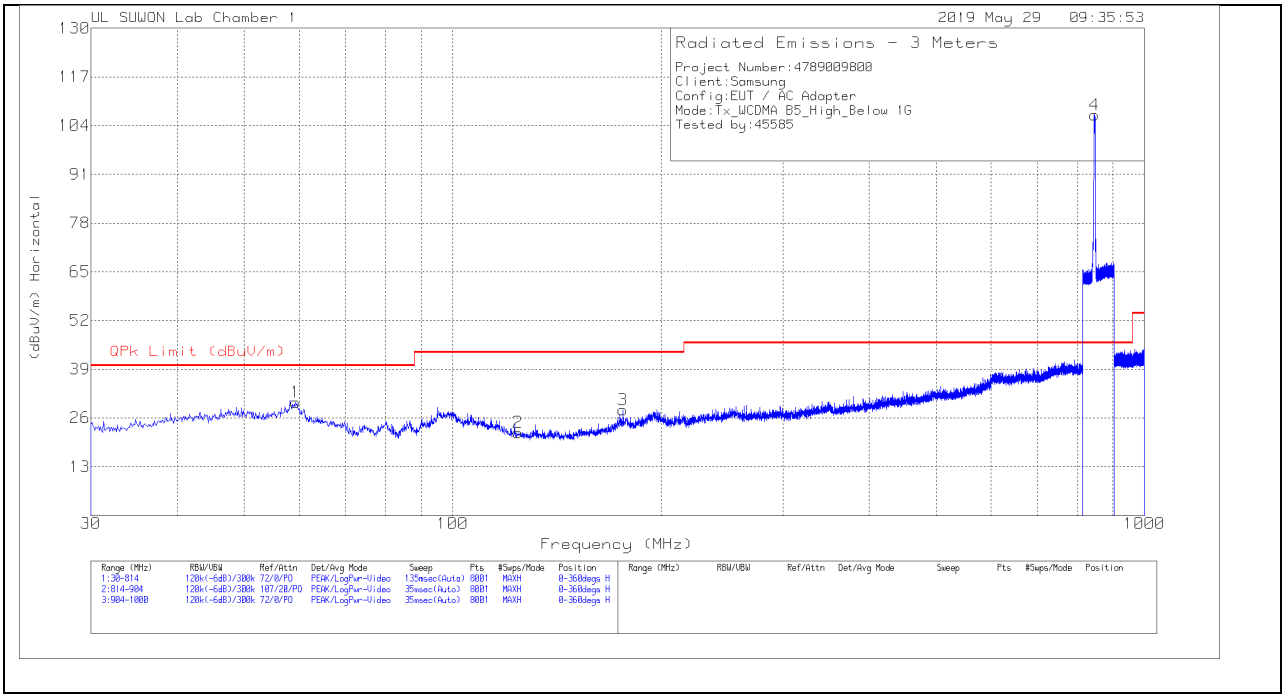
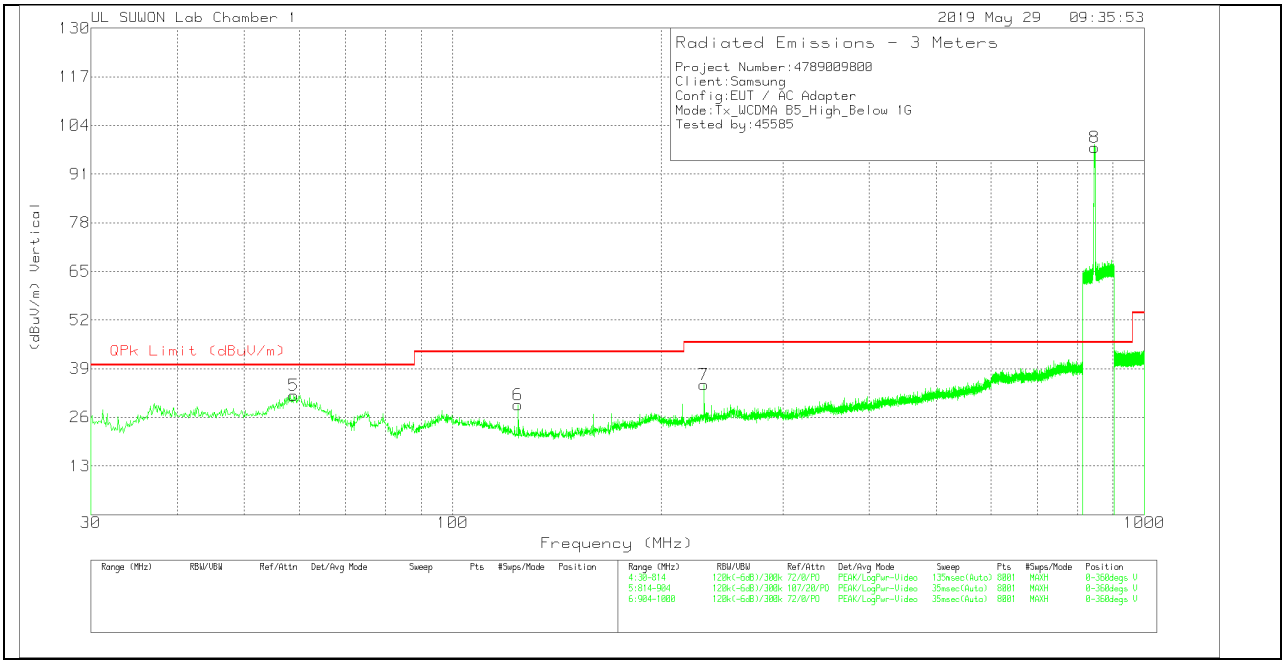
HIGH CHANNEL(891.6MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



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Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_750	Bypass_Below_1G[dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	59.302	6.72	Pk	18.7	4.7	30.12	40	-9.88	0-360	400	H
2	124.374	2.81	Pk	14.7	4.6	22.11	43.52	-21.41	0-360	100	H
3	176.314	8.01	Pk	15.1	5	28.11	43.52	-15.41	0-360	100	H
4	846.94	71.58	Pk	27.4	7.8	106.78	**46.02**	**60.76**	0-360	100	H
5	58.91	8.33	Pk	18.8	4.7	31.83	40	-8.17	0-360	100	V
6	124.374	10.06	Pk	14.7	4.6	29.36	43.52	-14.16	0-360	100	V
7	230.9	11.7	Pk	18.3	4.7	34.7	46.02	-11.32	0-360	200	V
8	846.4113	62.9	Pk	27.4	7.8	98.1	**46.02**	**52.08**	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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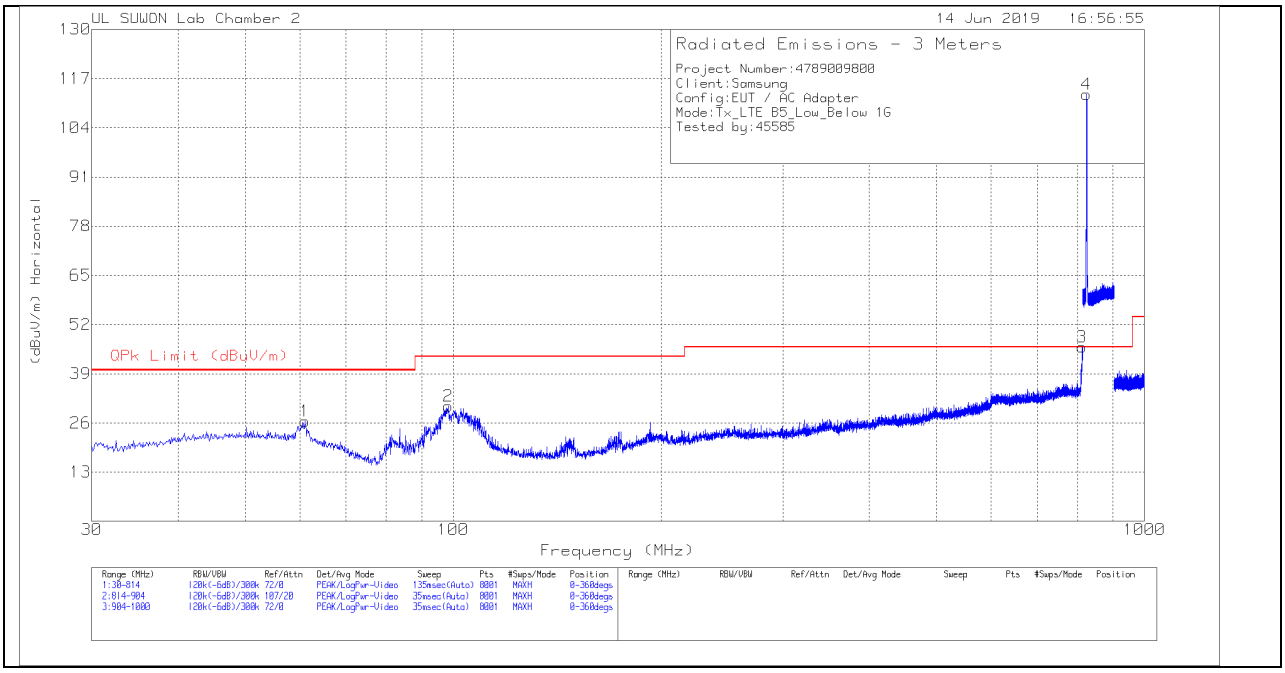
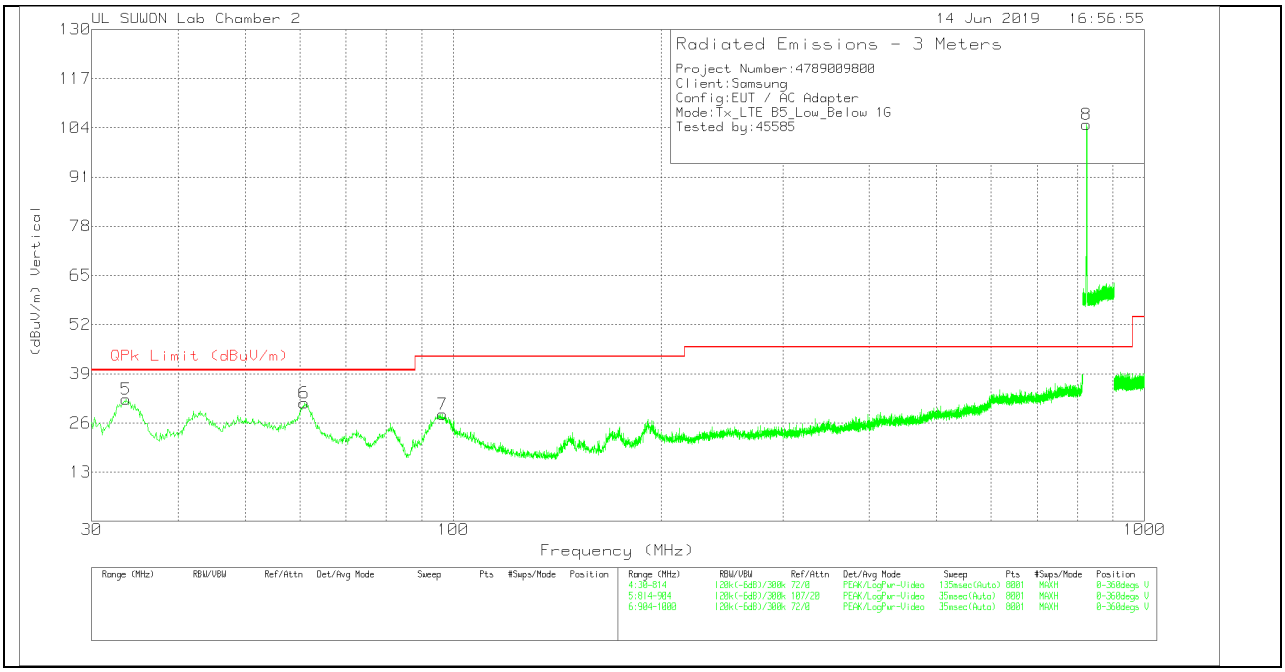
7.9. Below 1 GHz in the LTE Band 5

LOW CHANNEL(870.5MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



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DATA

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Bypass_Below_1G[dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	61.066	7.38	Pk	18.3	.8	26.48	40	-13.52	0-360	300	H
2	98.404	11.75	Pk	17.6	1.1	30.45	43.52	-13.07	0-360	300	H
3	812.824	15.92	Pk	27	3.1	46.02	**46.02**	**0**	0-360	100	H
4	824.6988	82.8	Pk	26.9	3.1	112.8	**46.02**	**66.78**	0-360	100	H
5	33.626	15.73	Pk	15.9	.6	32.23	40	-7.77	0-360	100	V
6	60.87	12.19	Pk	18.3	.8	31.29	40	-8.71	0-360	100	V
7	96.542	9.75	Pk	17.4	1.1	28.25	43.52	-15.27	0-360	100	V
8	824.9463	74.84	Pk	26.9	3.1	104.84	**46.02**	**58.82**	0-360	100	V

Pk - Peak detector

Radiated Emissions

Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Bypass_Below_1G [dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
812.824	12.79	Qp	27	3.1	42.89	46.02	-3.13	281	102	H

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.

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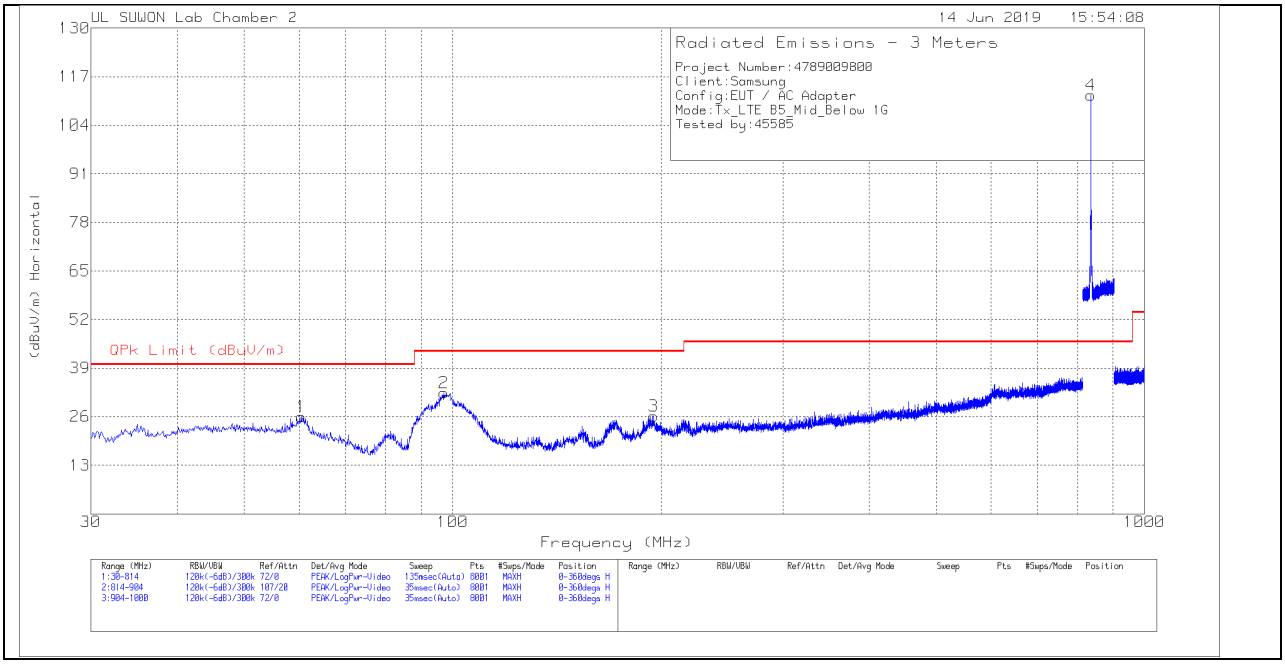
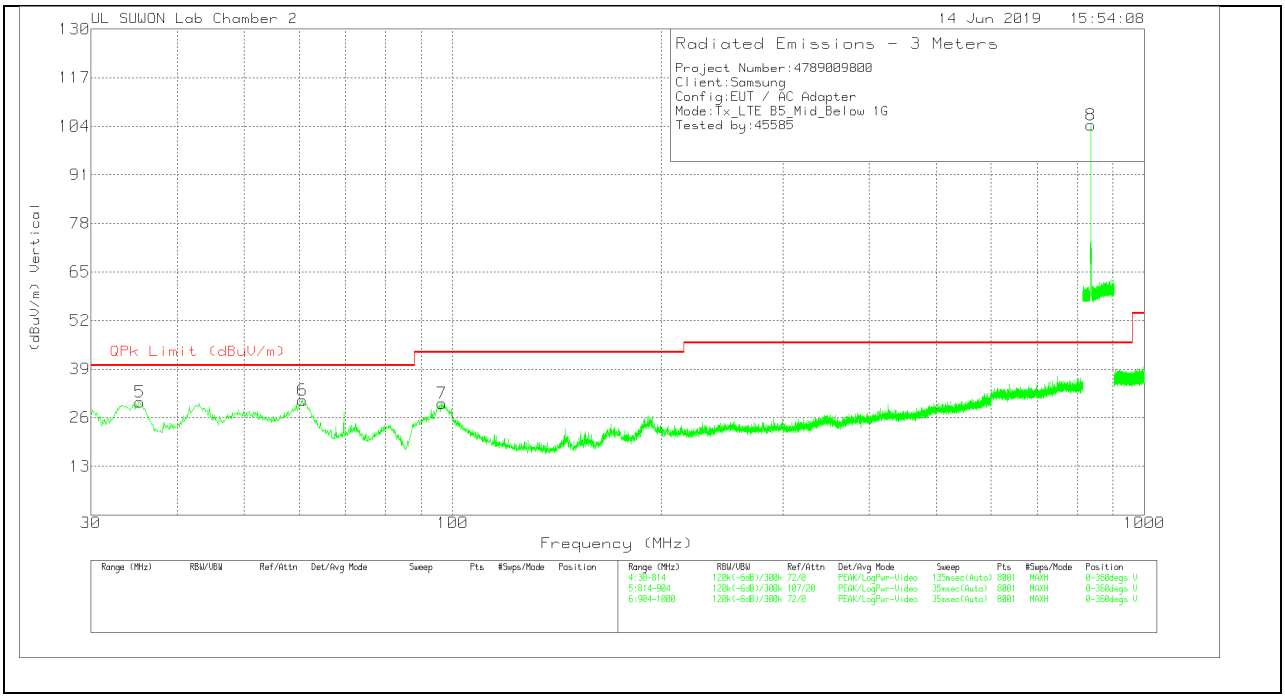
MID CHANNEL(881.5MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



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Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Bypass_Below_1G[dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	60.478	6.76	Pk	18.4	.8	25.96	40	-14.04	0-360	400	H
2	97.032	13.93	Pk	17.4	1	32.33	43.52	-11.19	0-360	300	H
3	195.13	6.69	Pk	18	1.5	26.19	43.52	-17.33	0-360	100	H
4	836.7925	81.81	Pk	27.1	3.1	112.01	**46.02**	**65.99**	0-360	100	H
5	35.292	12.62	Pk	16.8	.7	30.12	40	-9.88	0-360	100	V
6	60.674	11.41	Pk	18.4	.8	30.61	40	-9.39	0-360	100	V
7	96.444	11.41	Pk	17.4	1.1	29.91	43.52	-13.61	0-360	100	V
8	836.6125	74.06	Pk	27.1	3.1	104.26	**46.02**	**58.24**	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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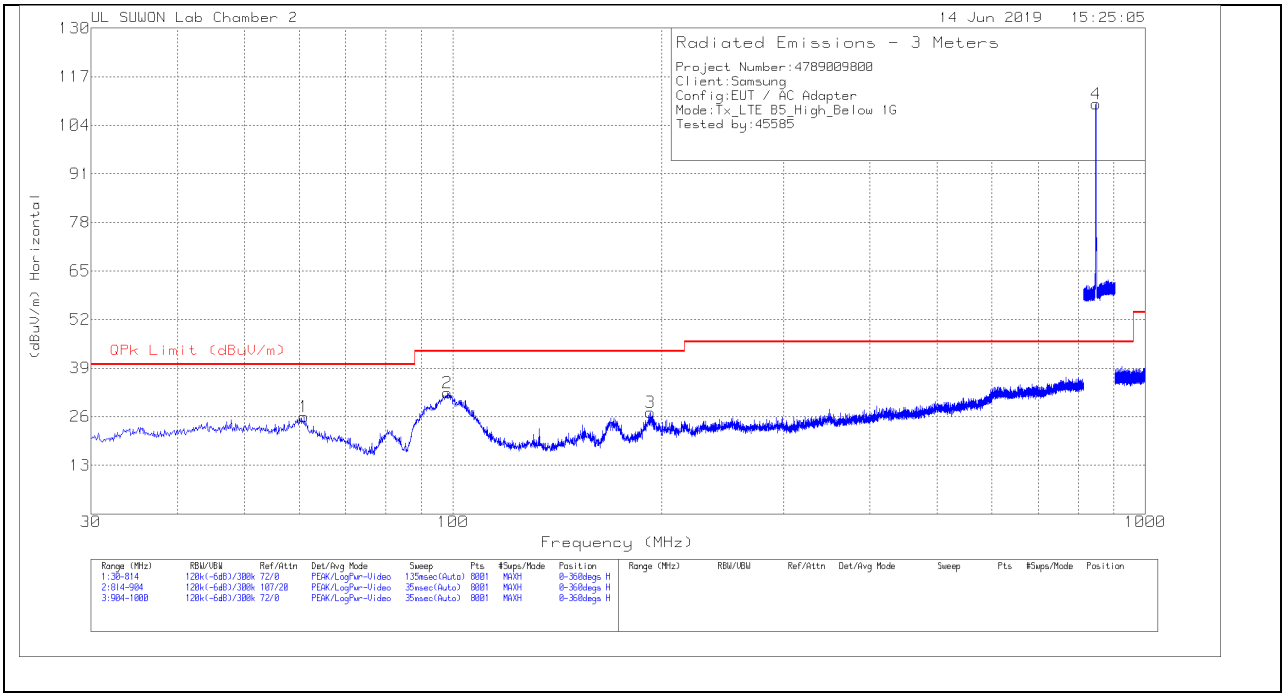
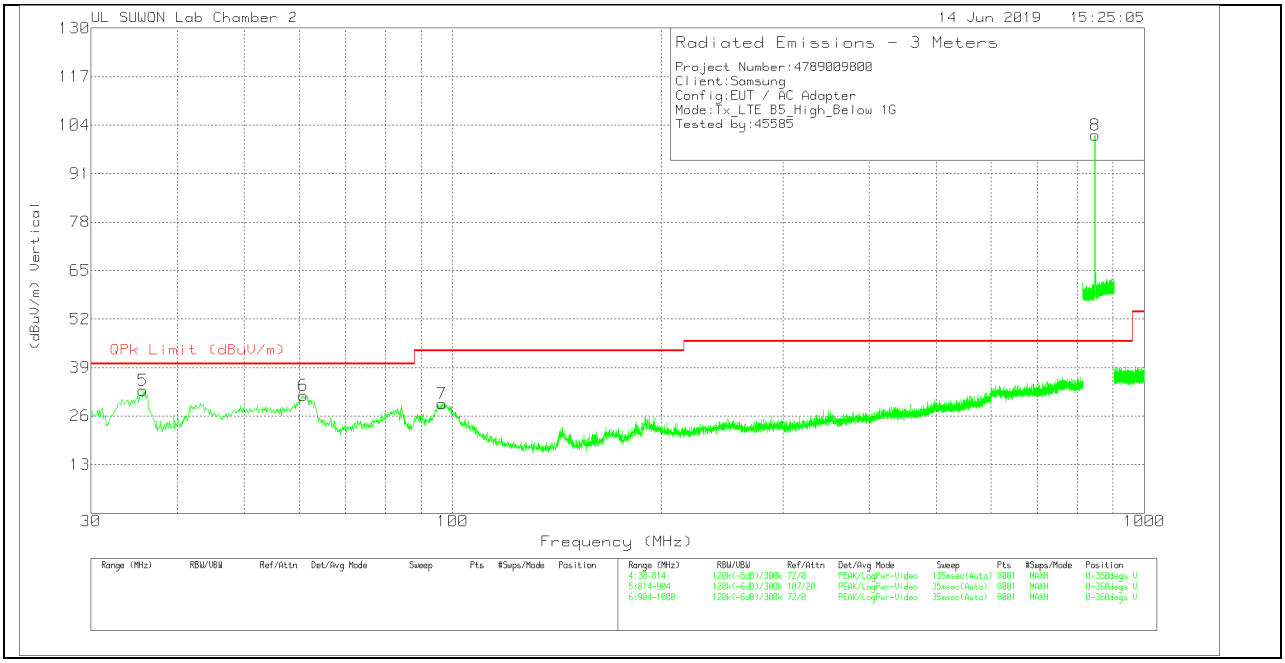
HIGH CHANNEL(892.5MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



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Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Bypass_Below_1G[dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	60.968	6.86	Pk	18.3	.8	25.96	40	-14.04	0-360	100	H
2	98.208	13.68	Pk	17.6	1.1	32.38	43.52	-11.14	0-360	300	H
3	192.778	8.1	Pk	17.6	1.5	27.2	43.52	-16.32	0-360	200	H
4	848.155	79.09	Pk	27.4	3.2	109.69	**46.02**	**63.67**	0-360	100	H
5	35.684	15.24	Pk	17	.6	32.84	40	-7.16	0-360	100	V
6	60.772	12.49	Pk	18.3	.8	31.59	40	-8.41	0-360	100	V
7	96.542	10.89	Pk	17.4	1.1	29.39	43.52	-14.13	0-360	100	V
8	848.6725	70.71	Pk	27.4	3.2	101.31	**46.02**	**55.29**	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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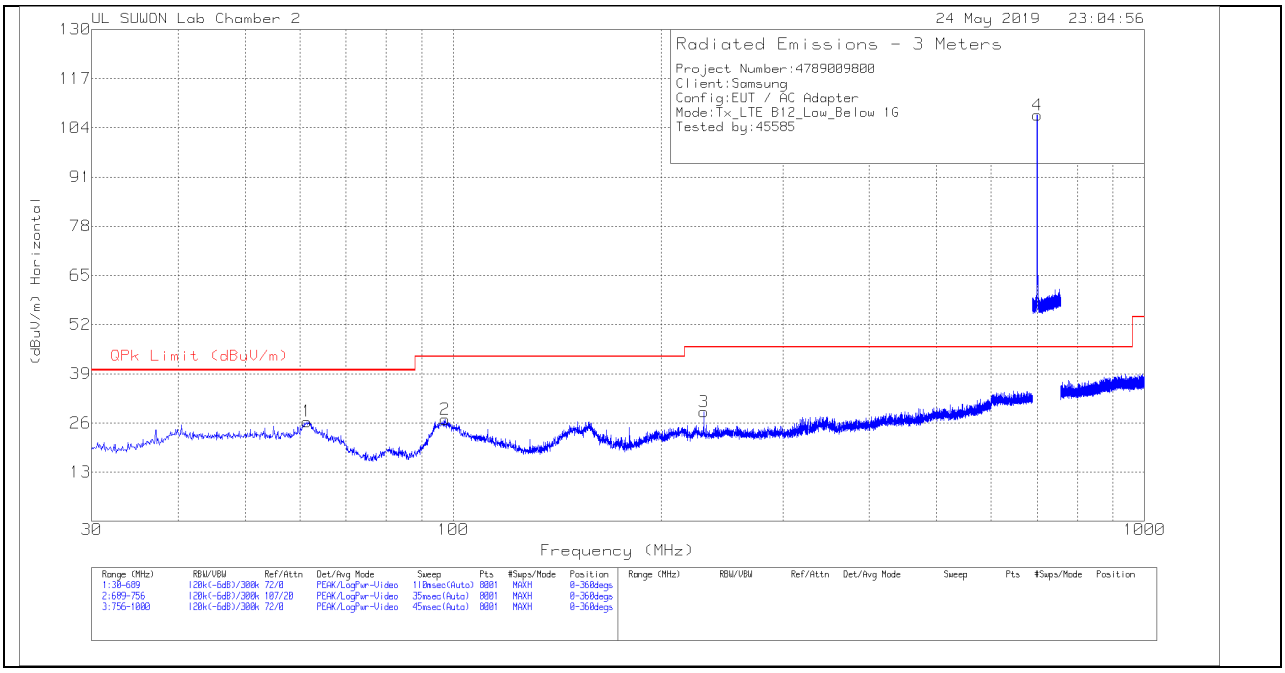
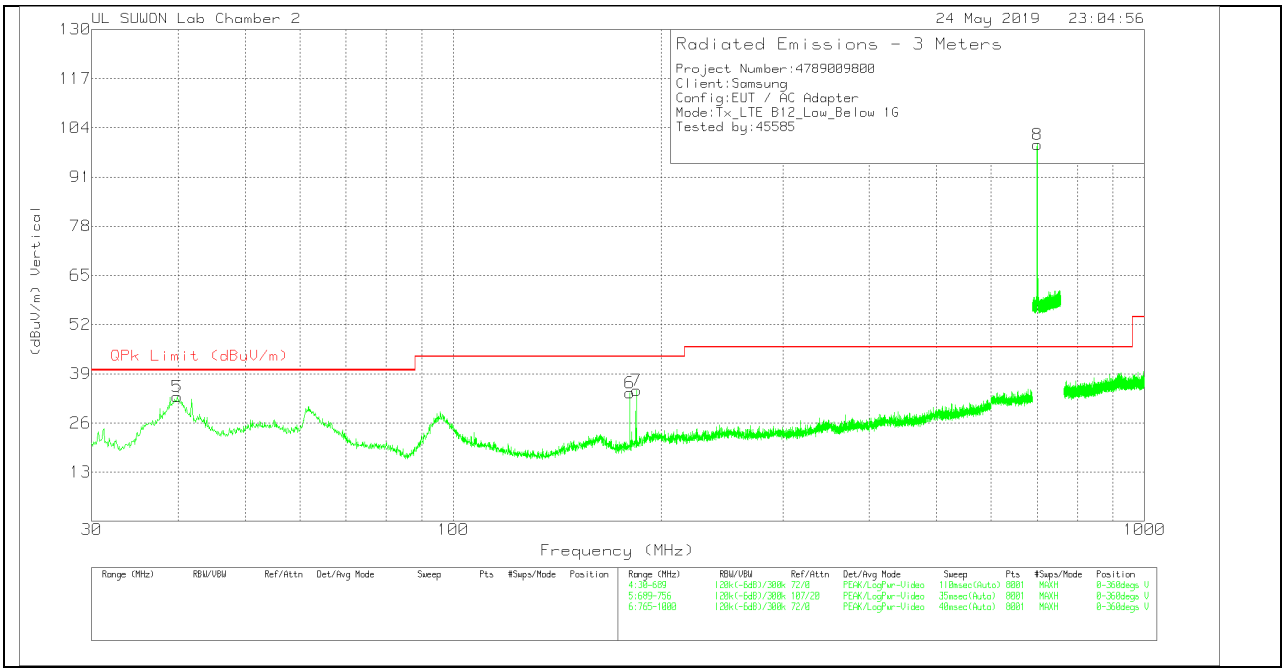
7.10. Below 1 GHz in the LTE Band 12

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	Bypass_Below_1G[dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	61.4673	7.38	Pk	18.2	.8	26.38	40	-13.62	0-360	400	H
2	97.3828	8.38	Pk	17.5	1.1	26.98	43.52	-16.54	0-360	300	H
3	230.5008	8.97	Pk	18.4	1.6	28.97	46.02	-17.05	0-360	100	H
4	699.5525	78.88	Pk	25.6	2.9	107.38	**46.02**	**61.36**	0-360	100	H
5	39.885	13.49	Pk	18.7	.7	32.89	40	-7.11	0-360	100	V
6	180.0049	16.85	Pk	15.7	1.4	33.95	43.52	-9.57	0-360	100	V
7	184.2884	16.82	Pk	16.3	1.5	34.62	43.52	-8.9	0-360	100	V
8	699.7284	71.05	Pk	25.6	2.9	99.55	**46.02**	**53.53**	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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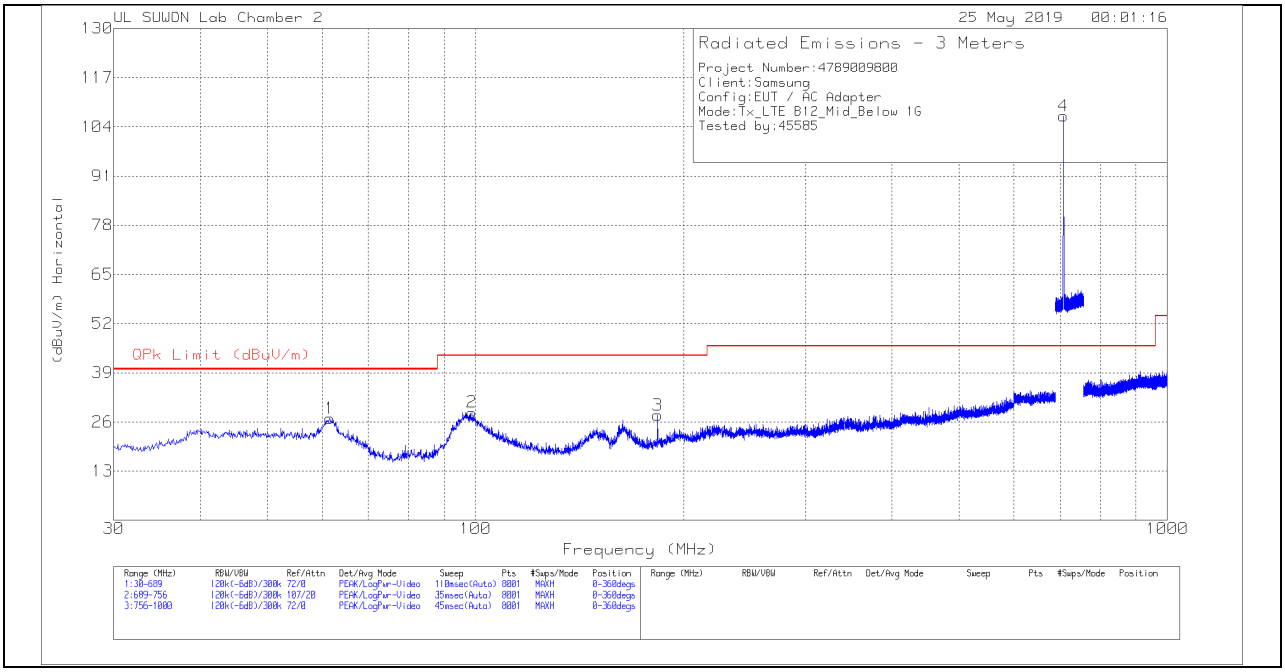
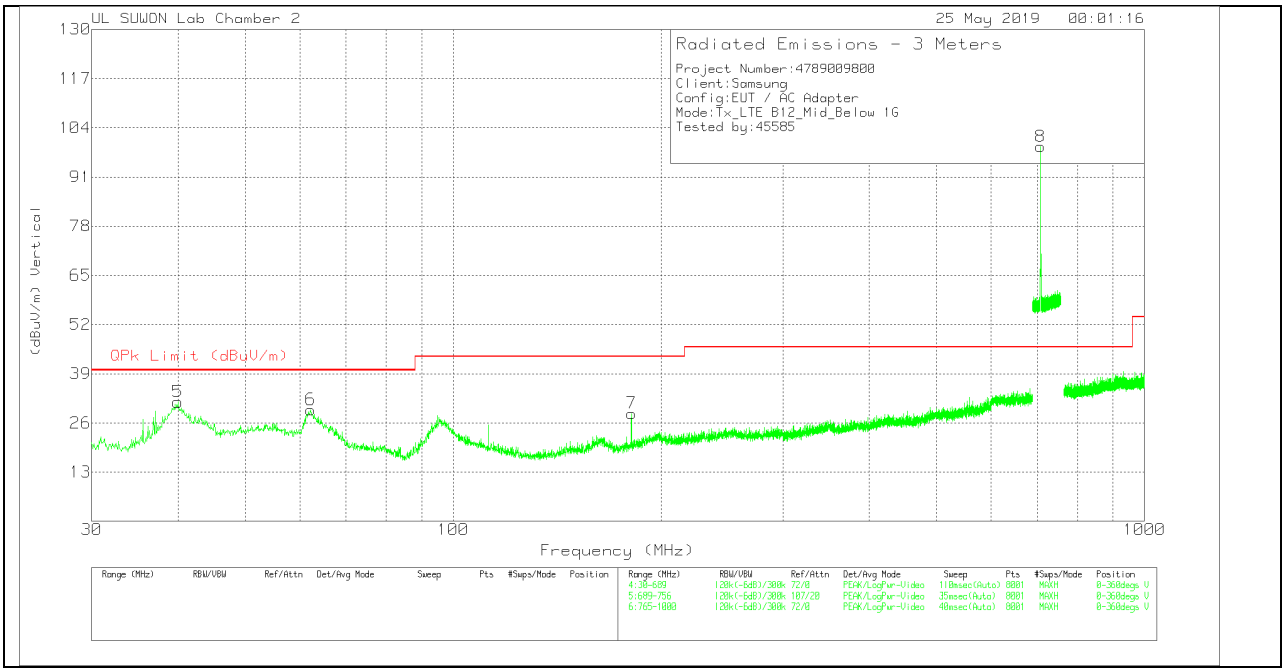
MID CHANNEL(737.5MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



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Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Bypass_Below_1G[dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	61.5496	8.03	Pk	18.1	.8	26.93	40	-13.07	0-360	400	H
2	98.7831	9.74	Pk	17.7	1.1	28.54	43.52	-14.98	0-360	300	H
3	183.2999	10.06	Pk	16.2	1.5	27.76	43.52	-15.76	0-360	100	H
4	707.5758	78.44	Pk	25.5	2.9	106.84	**46.02**	**60.82**	0-360	100	H
5	39.9674	12.14	Pk	18.7	.7	31.54	40	-8.46	0-360	200	V
6	62.2086	10.62	Pk	18	.9	29.52	40	-10.48	0-360	100	V
7	181.1581	11.13	Pk	15.9	1.5	28.53	43.52	-14.99	0-360	400	V
8	707.1821	70.61	Pk	25.5	2.9	99.01	**46.02**	**52.99**	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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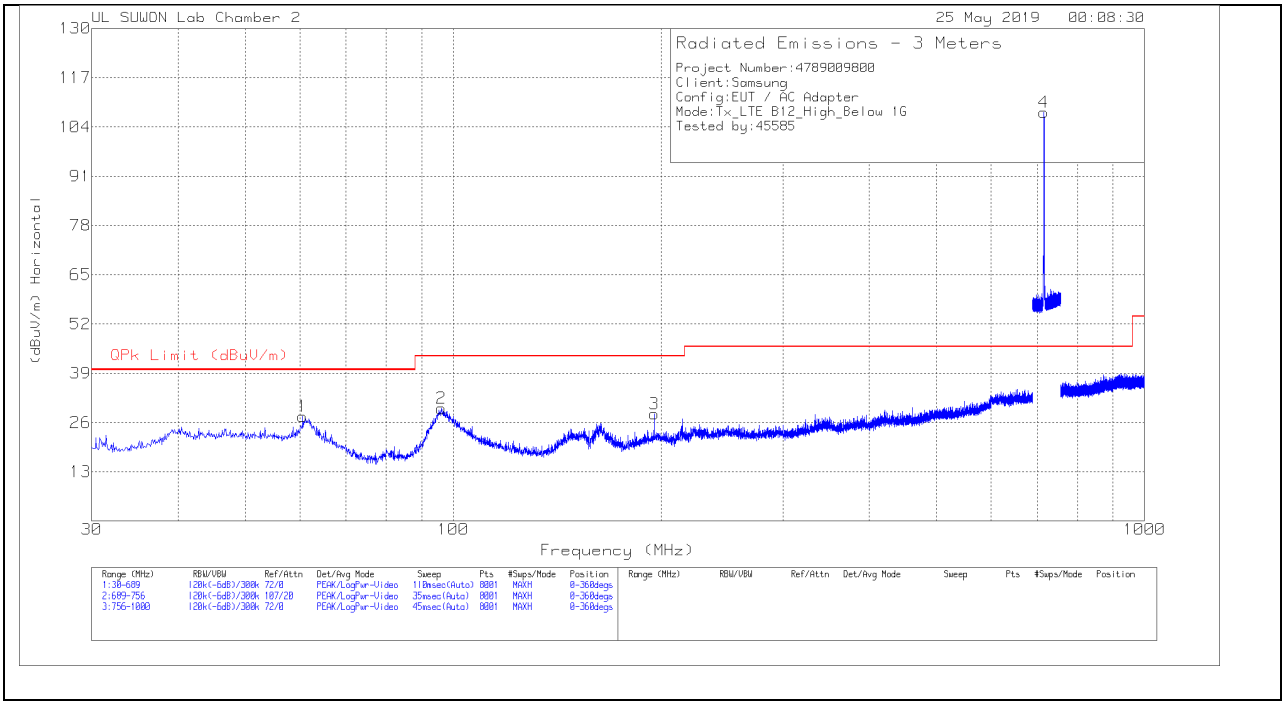
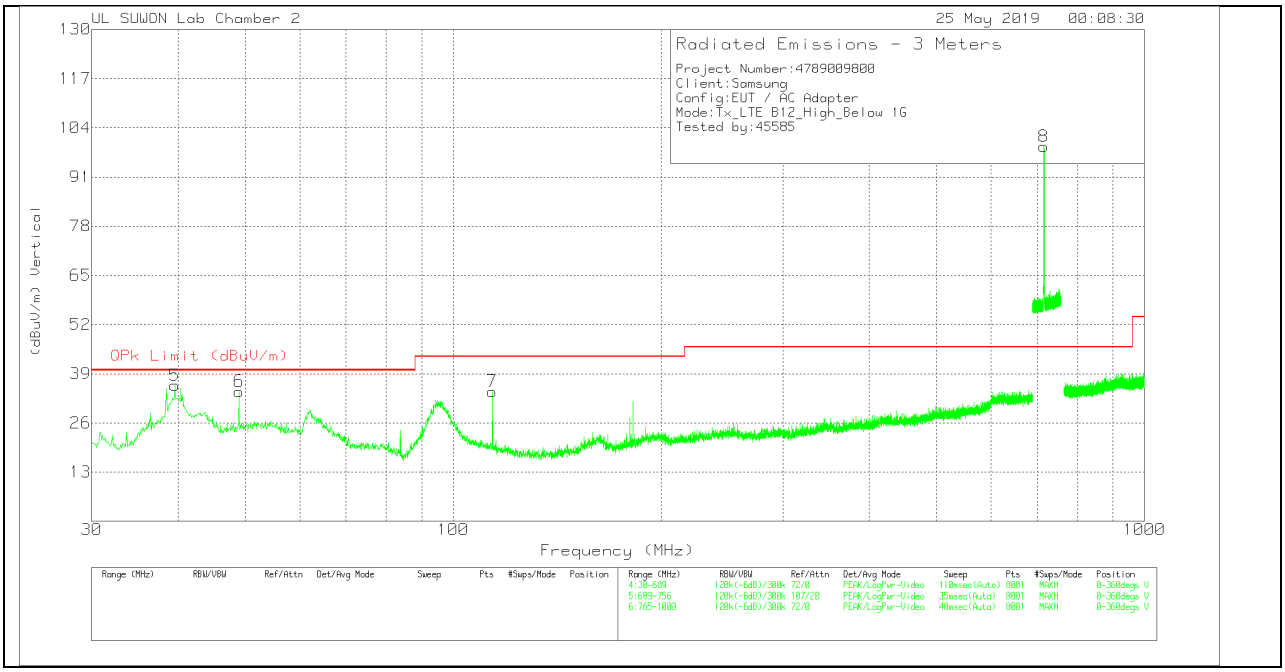
HIGH CHANNEL(744.5MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



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DATA

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Bypass_Below_1G[dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	60.5611	8.45	Pk	18.4	.8	27.65	40	-12.35	0-360	400	H
2	96.0648	11.31	Pk	17.4	1	29.71	43.52	-13.81	0-360	300	H
3	195.3266	8.69	Pk	18.1	1.5	28.29	43.52	-15.23	0-360	200	H
4	715.1216	79.26	Pk	25.7	2.9	107.86	**46.02**	**61.84**	0-360	100	H
5	39.5555	16.64	Pk	18.6	.7	35.94	40	-4.06	0-360	100	V
6	49.0286	13.73	Pk	19.8	.8	34.33	40	-5.67	0-360	200	V
7	113.9401	16.8	Pk	16.4	1.1	34.3	43.52	-9.22	0-360	100	V
8	715.4483	70.48	Pk	25.7	2.9	99.08	**46.02**	**53.06**	0-360	100	V

Pk - Peak detector

Radiated Emissions

Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Bypass_Below_1G [dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
39.5555	10.57	Qp	18.6	.7	29.87	40	-10.13	248	100	V

Qp - Quasi-Peak detector

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

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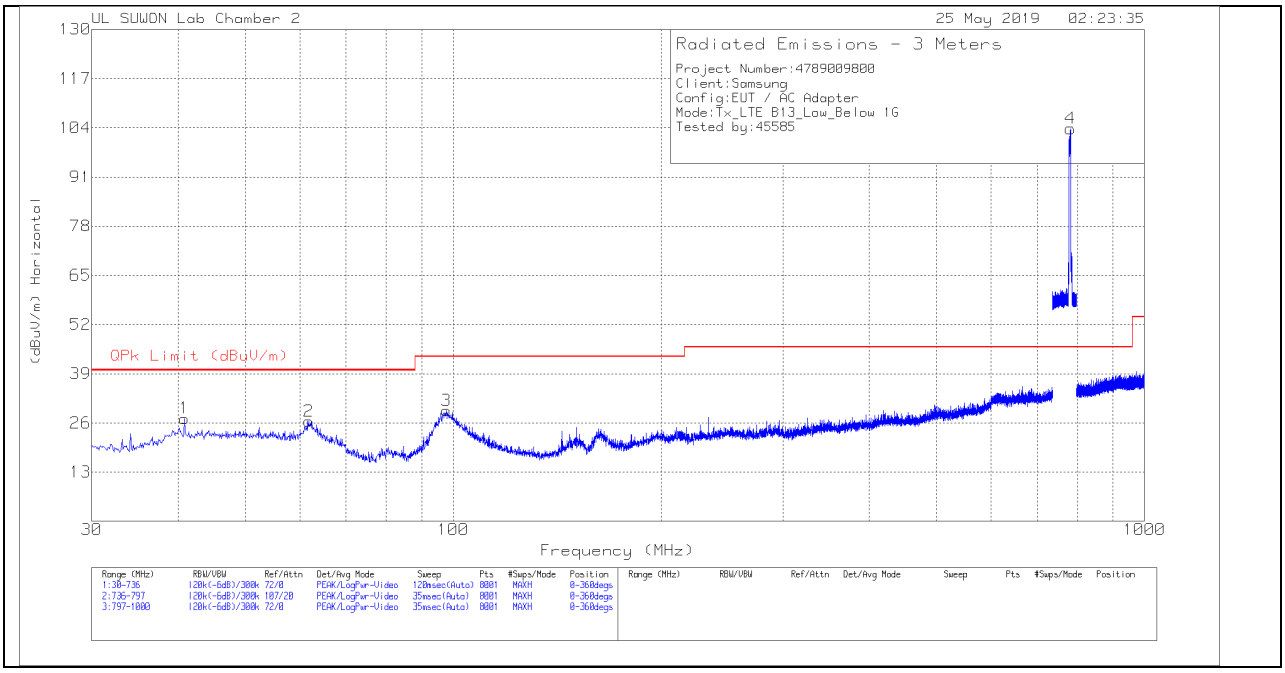
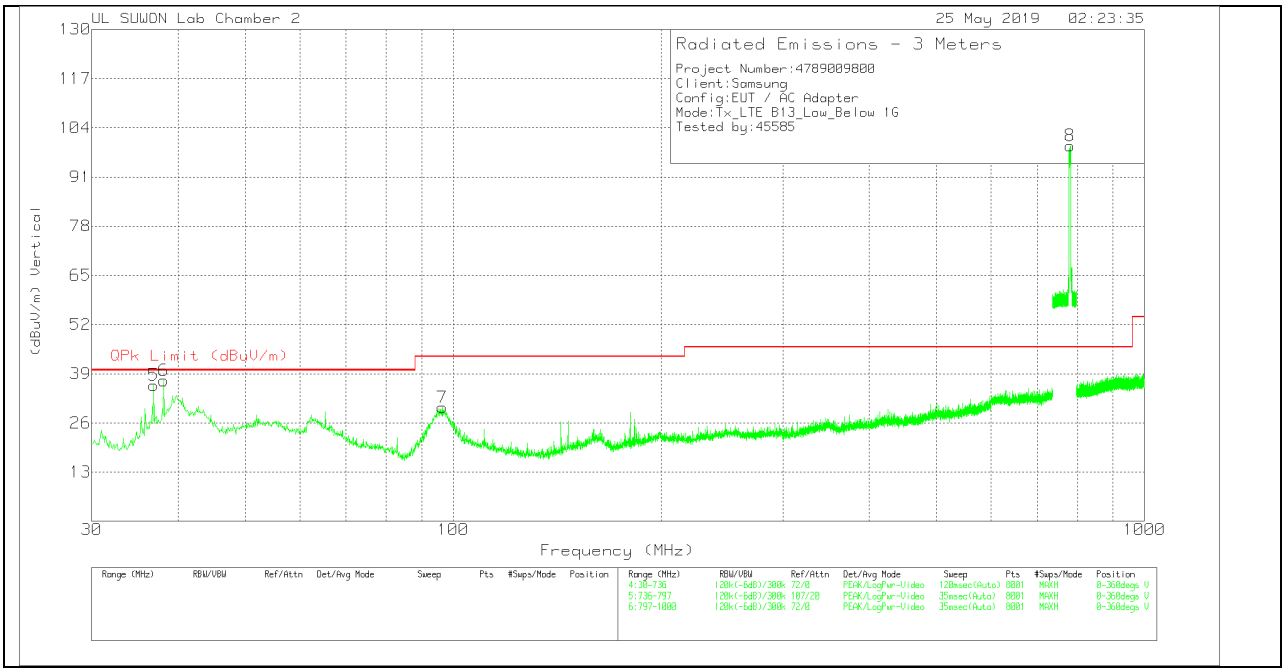
7.11. Below 1 GHz in the LTE Band 13

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	Bypass_Below_1G[dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	40.8548	7.5	Pk	19	.7	27.2	40	-12.8	0-360	400	H
2	61.77	7.55	Pk	18.1	.8	26.45	40	-13.55	0-360	400	H
3	97.776	10.55	Pk	17.6	1.1	29.25	43.52	-14.27	0-360	300	H
4	781.5136	74.09	Pk	26.7	3	103.79	**46.02**	**57.77**	0-360	100	H
5	36.8835	17.89	Pk	17.4	.7	35.99	40	-4.01	0-360	100	V
6	38.119	18.6	Pk	17.9	.7	37.2	40	-2.8	0-360	100	V
7	96.4523	11.58	Pk	17.4	1.1	30.08	43.52	-13.44	0-360	100	V
8	780.408	69.56	Pk	26.7	3	99.26	**46.02**	**53.24**	0-360	200	V

Pk - Peak detector

Radiated Emissions

Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Bypass_Below_1G [dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
36.8835	4.92	Qp	17.4	.7	23.02	40	-16.98	248	100	V
38.119	6.34	Qp	17.9	.7	24.94	40	-15.06	224	100	V

Qp - Quasi-Peak detector

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

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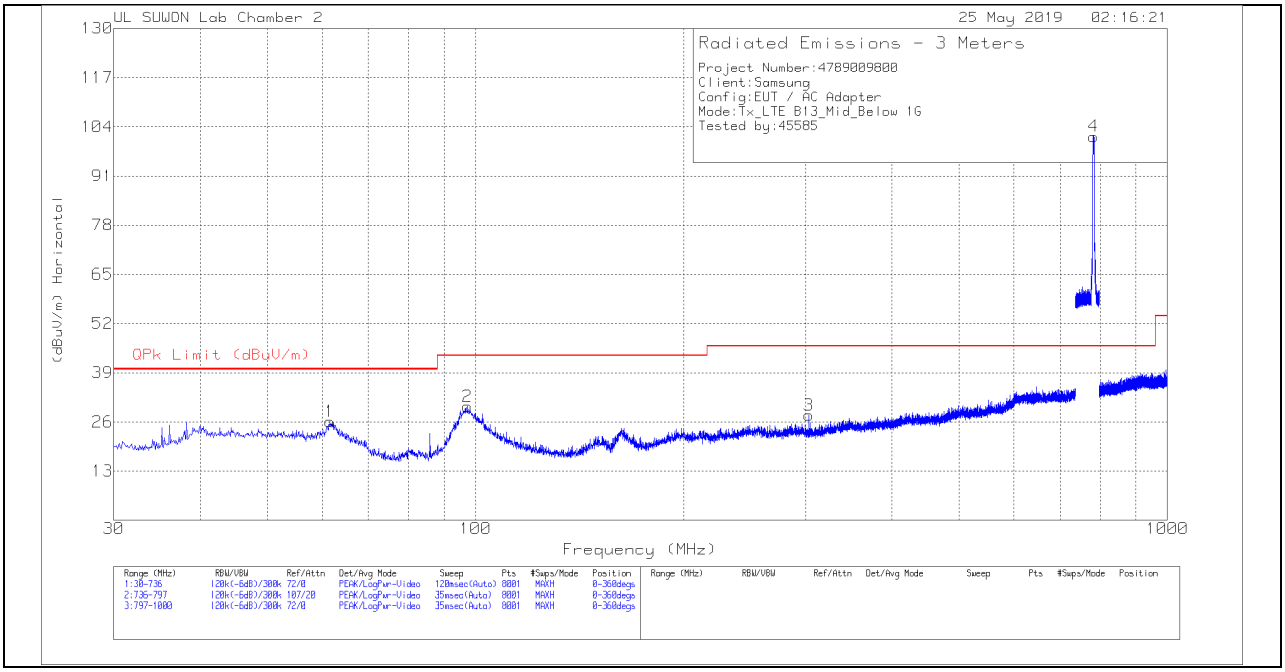
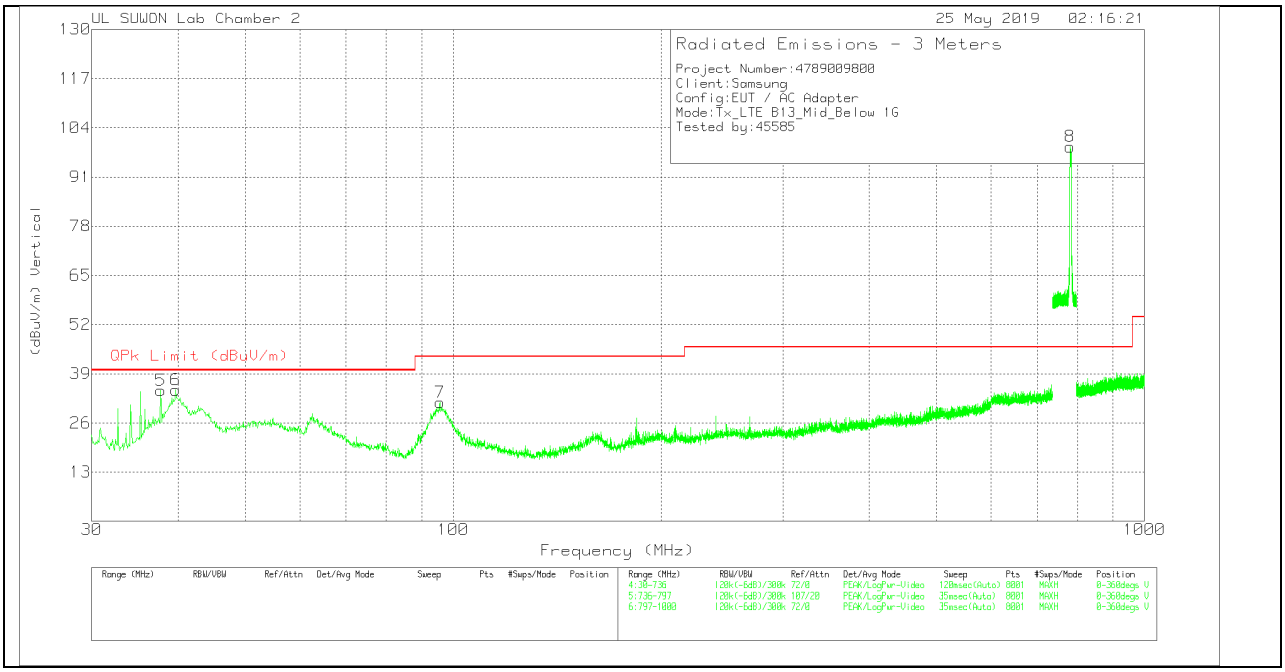
MID CHANNEL(751.0MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



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DATA

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Bypass_Below_1G[dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	61.5935	7.25	Pk	18.1	.8	26.15	40	-13.85	0-360	400	H
2	97.3348	11.5	Pk	17.5	1.1	30.1	43.52	-13.42	0-360	300	H
3	302.9573	6.62	Pk	19.3	1.9	27.82	46.02	-18.2	0-360	200	H
4	782.848	71.75	Pk	26.7	3	101.45	**46.02**	**55.43**	0-360	100	H
5	37.766	16.1	Pk	17.8	.7	34.6	40	-5.4	0-360	200	V
6	39.7075	15.41	Pk	18.6	.7	34.71	40	-5.29	0-360	100	V
7	95.658	13.15	Pk	17.3	1	31.45	43.52	-12.07	0-360	100	V
8	781.2773	69.28	Pk	26.7	3	98.98	**46.02**	**52.96**	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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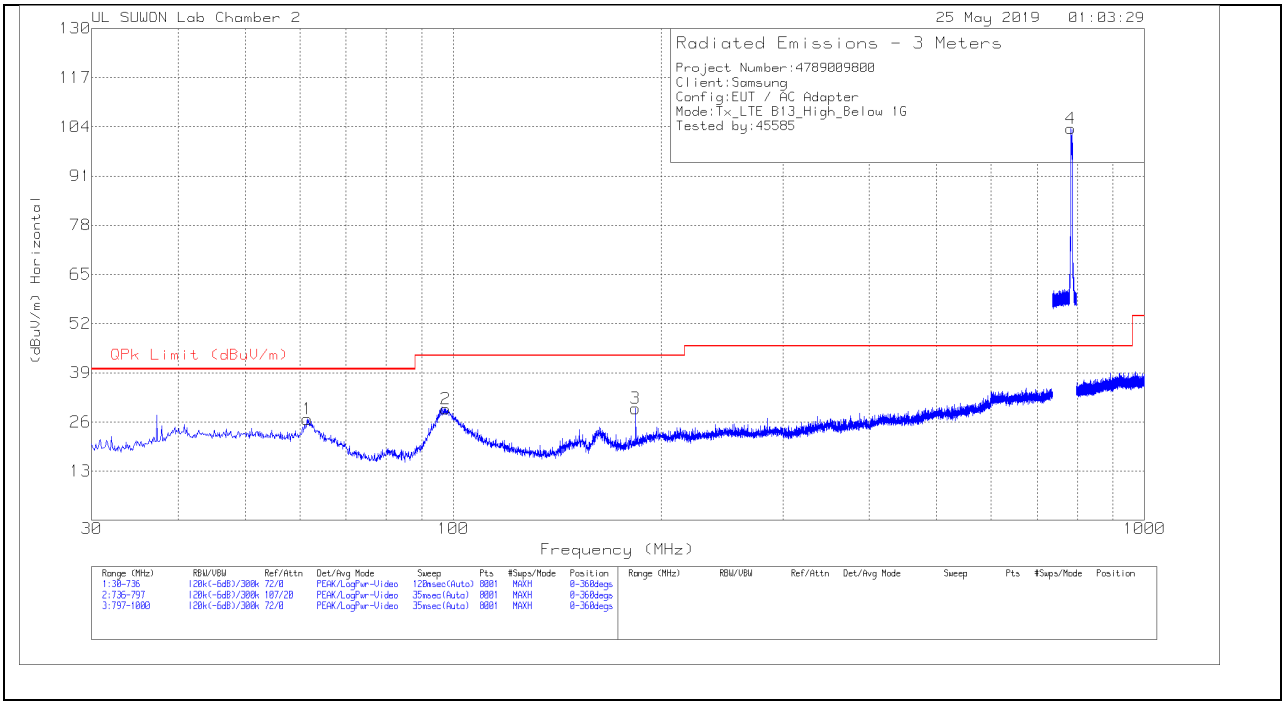
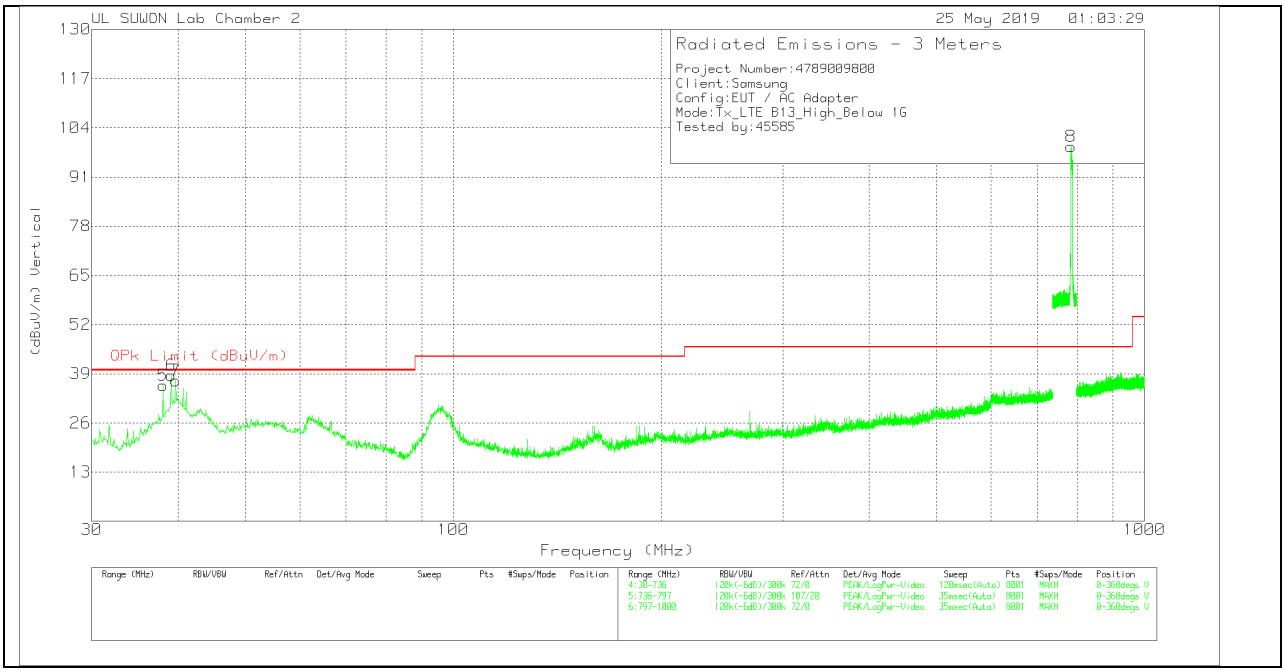
HIGH CHANNEL(753.5MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



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DATA

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Bypass_Below_1G[dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	61.5053	7.82	Pk	18.1	.8	26.72	40	-13.28	0-360	400	H
2	97.5995	10.96	Pk	17.5	1	29.46	43.52	-14.06	0-360	300	H
3	183.555	11.96	Pk	16.2	1.4	29.56	43.52	-13.96	0-360	200	H
4	782.8328	73.78	Pk	26.7	3	103.48	**46.02**	**57.46**	0-360	100	H
5	38.0308	17.31	Pk	17.9	.7	35.91	40	-4.09	0-360	200	V
6	39.0898	19.51	Pk	18.4	.7	38.61	40	-1.39	0-360	100	V
7	39.7075	17.9	Pk	18.6	.7	37.2	40	-2.8	0-360	100	V
8	783.1073	69.31	Pk	26.7	3	99.01	**46.02**	**52.99**	0-360	200	V

Pk - Peak detector

Radiated Emissions

Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Bypass_Below_1G [dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
38.0308	6.52	Qp	17.9	.7	25.12	40	-14.88	272	100	V
39.0898	9.39	Qp	18.4	.7	28.49	40	-11.51	215	100	V
39.7075	10.59	Qp	18.6	.7	29.89	40	-10.11	259	100	V

Qp - Quasi-Peak detector

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

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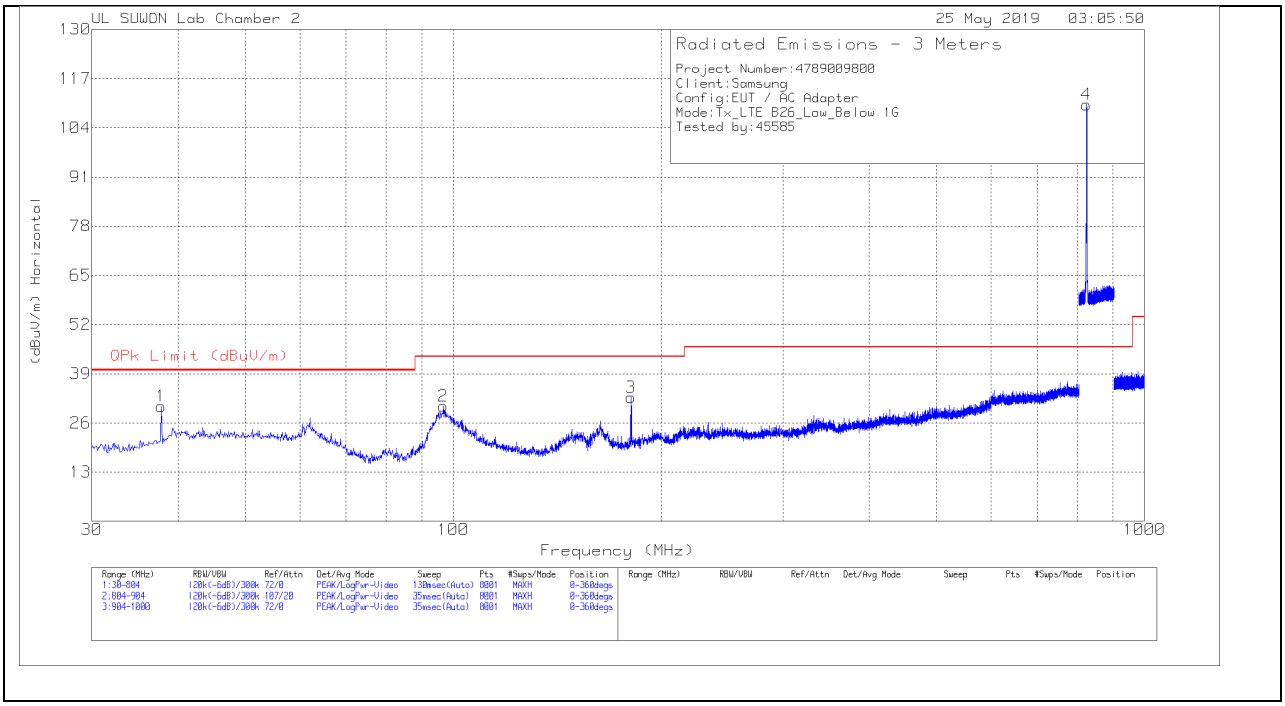
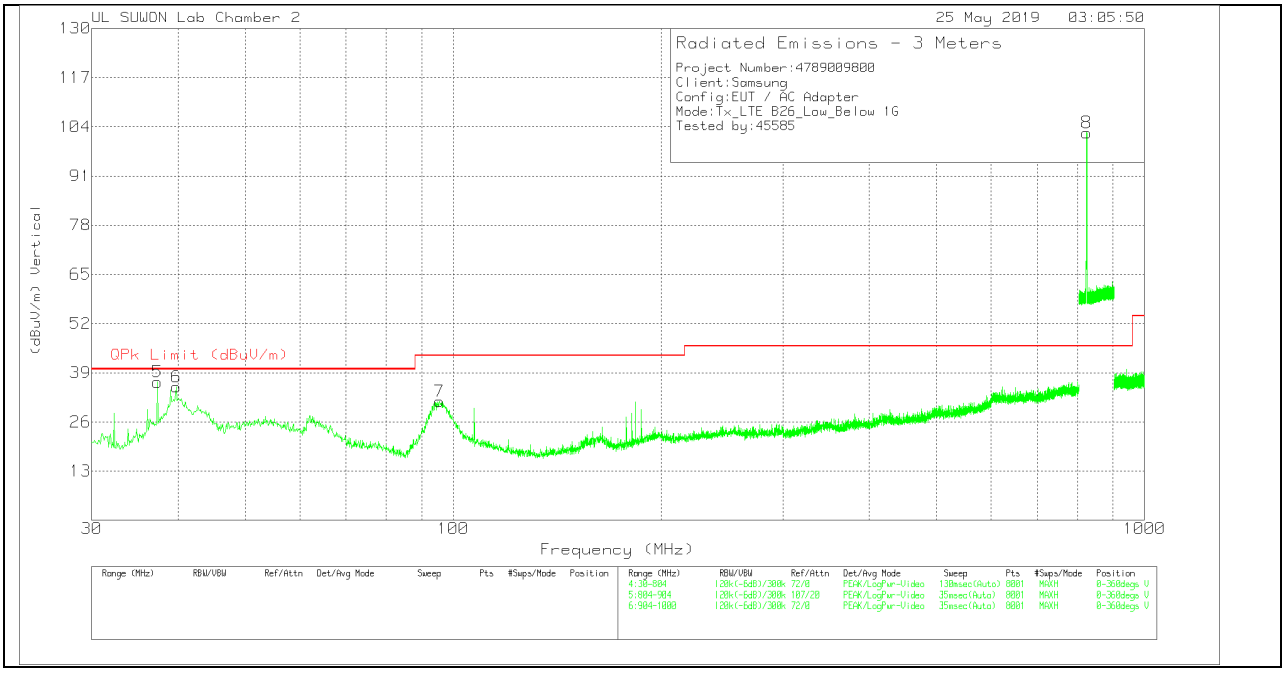
7.12. Below 1 GHz in the LTE Band 26

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	Bypass_Below_1G[dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	37.8368	11.87	Pk	17.8	.7	30.37	40	-9.63	0-360	100	H
2	96.7575	11.97	Pk	17.4	1.1	30.47	43.52	-13.05	0-360	300	H
3	180.93	15.58	Pk	15.8	1.4	32.78	43.52	-10.74	0-360	100	H
4	824.8	80.1	Pk	26.9	3.1	110.1	**46.02**	**64.08**	0-360	100	H
5	37.353	18.32	Pk	17.6	.6	36.52	40	-3.48	0-360	300	V
6	39.7718	15.91	Pk	18.6	.7	35.21	40	-4.79	0-360	300	V
7	95.4998	13.05	Pk	17.3	1.1	31.45	43.52	-12.07	0-360	100	V
8	825.1125	72.42	Pk	26.9	3.1	102.42	**46.02**	**56.4**	0-360	200	V

Pk - Peak detector

Radiated Emissions

Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Bypass_Below_1G [dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
37.353	4.85	Qp	17.6	.6	23.05	40	-16.95	245	100	V
39.7718	10.91	Qp	18.6	.7	30.21	40	-9.79	248	100	V

Qp - Quasi-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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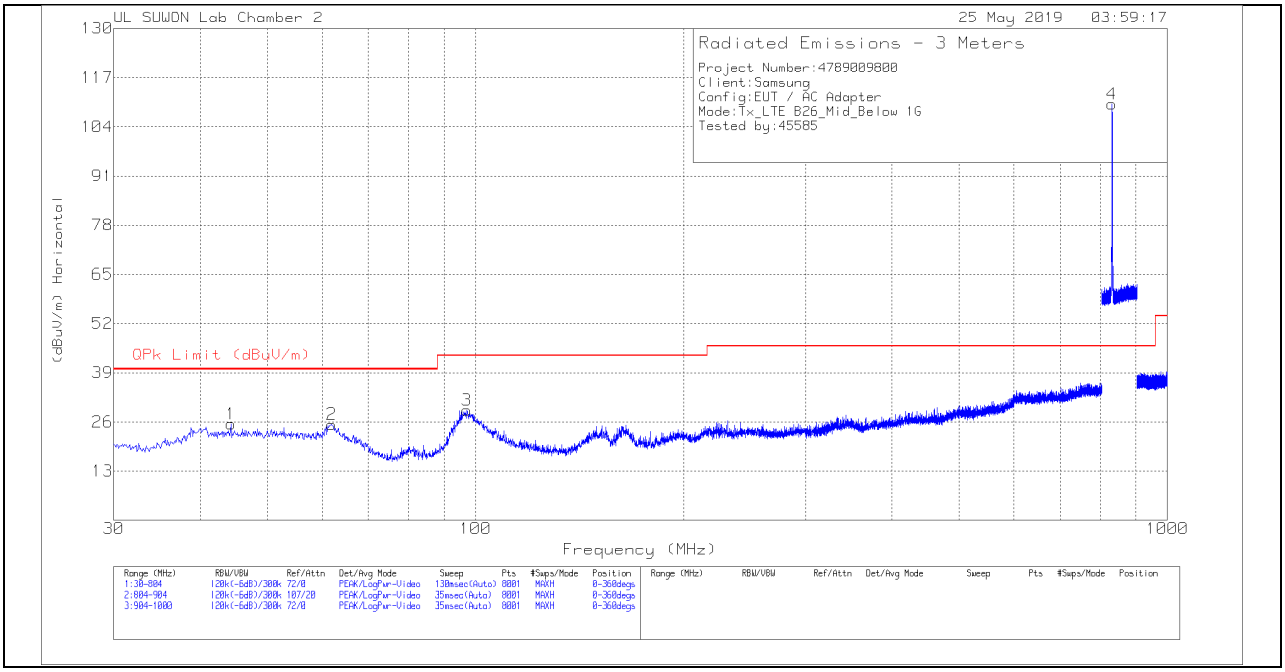
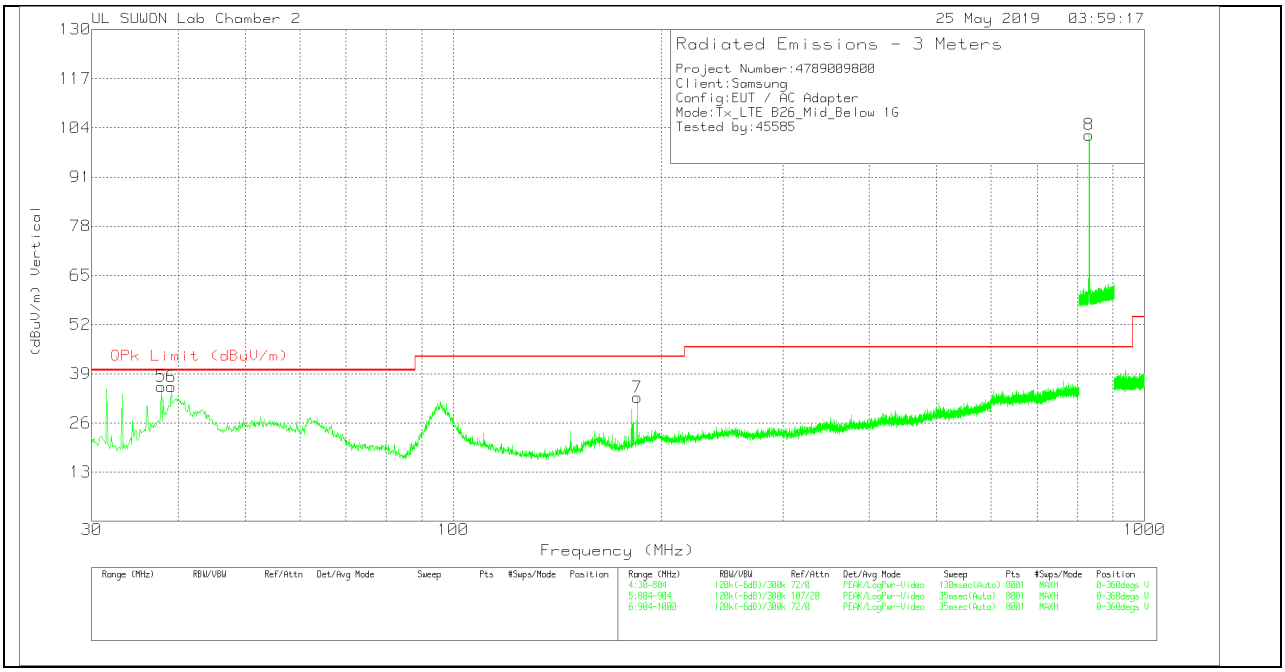
MID CHANNEL(876.5MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



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DATA

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Bypass_Below_1G[dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	44.319	5.07	Pk	19.7	.7	25.47	40	-14.53	0-360	300	H
2	61.9275	6.54	Pk	18	.8	25.34	40	-14.66	0-360	300	H
3	97.1445	10.67	Pk	17.4	1	29.07	43.52	-14.45	0-360	300	H
4	831.1	79.78	Pk	27.1	3.1	109.98	**46.02**	**63.96**	0-360	100	H
5	37.8368	17.16	Pk	17.8	.7	35.66	40	-4.34	0-360	100	V
6	39.0945	16.5	Pk	18.4	.7	35.6	40	-4.4	0-360	200	V
7	184.5098	14.94	Pk	16.3	1.5	32.74	43.52	-10.78	0-360	100	V
8	831.25	71.92	Pk	27.1	3.1	102.12	**46.02**	**56.1**	0-360	200	V

Pk - Peak detector

Radiated Emissions

Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Bypass_Below_1G [dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
37.8368	5.59	Qp	17.8	.7	24.09	40	-15.91	289	101	V
39.0945	9.8	Qp	18.4	.7	28.9	40	-11.1	226	101	V

Qp - Quasi-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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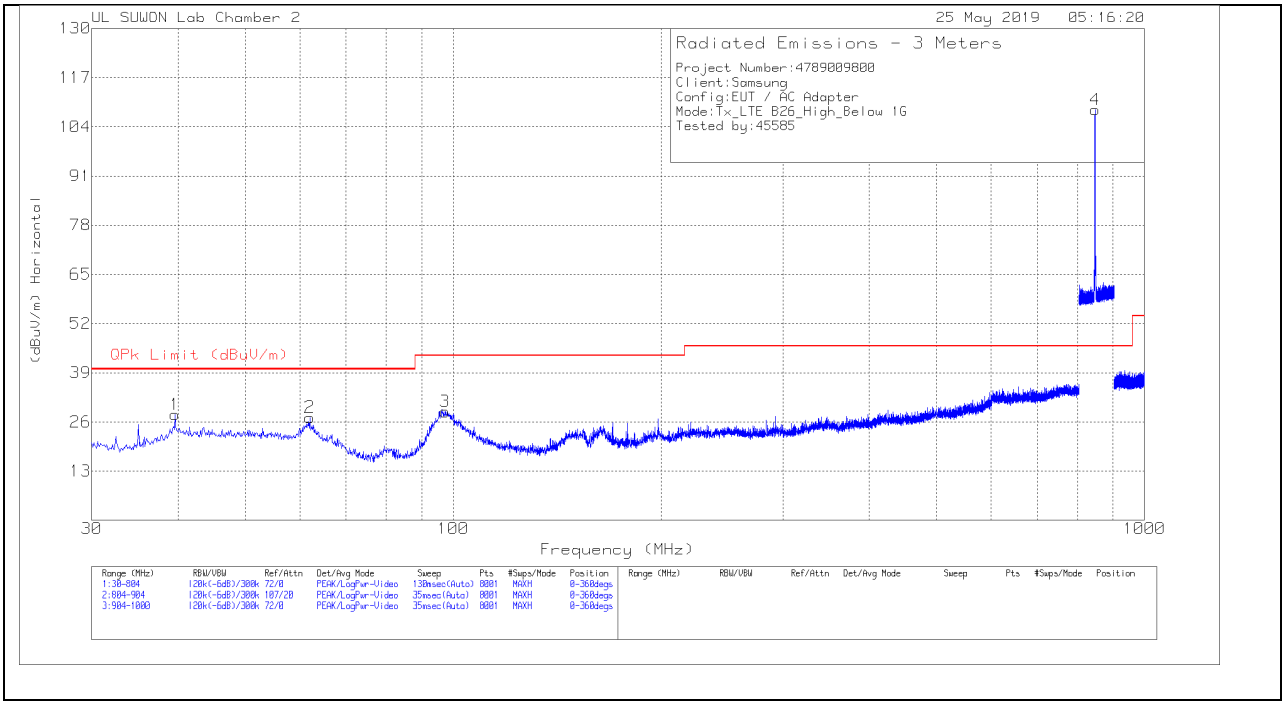
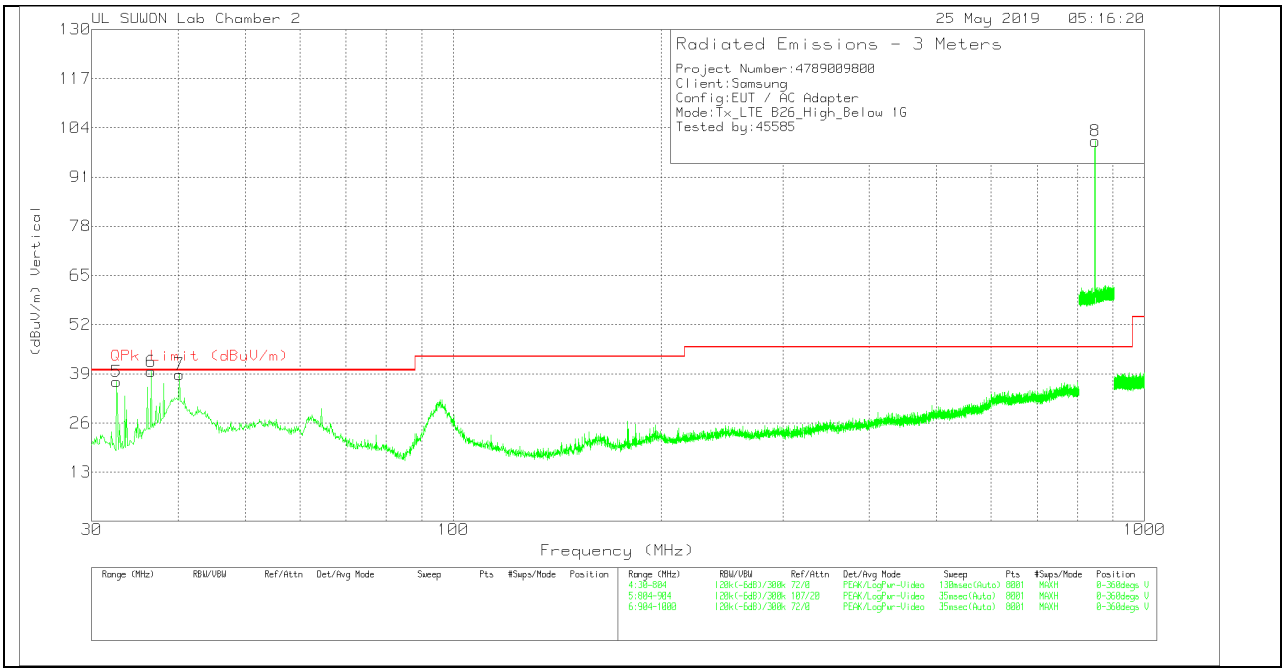
HIGH CHANNEL(892.5MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



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DATA

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Bypass_Below_1G[dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	39.5783	8.62	Pk	18.6	.7	27.92	40	-12.08	0-360	300	H
2	62.0243	8.29	Pk	18	.9	27.19	40	-12.81	0-360	400	H
3	97.338	10.12	Pk	17.5	1.1	28.72	43.52	-14.8	0-360	300	H
4	848.2875	77.88	Pk	27.4	3.2	108.48	**46.02**	**62.46**	0-360	100	H
5	32.6123	20.81	Pk	15.5	.6	36.91	40	-3.09	0-360	300	V
6	36.579	21.7	Pk	17.3	.6	39.6	40	-.4	0-360	100	V
7	40.1588	19.41	Pk	18.7	.7	38.81	40	-1.19	0-360	100	V
8	848.3625	69.88	Pk	27.4	3.2	100.48	**46.02**	**54.46**	0-360	200	V

Pk - Peak detector

Radiated Emissions

Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Bypass_Below_1G [dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
32.6123	-.7	Qp	15.5	.6	15.4	40	-24.6	66	100	V
36.579	4.41	Qp	17.3	.6	22.31	40	-17.69	248	100	V
40.1588	10.19	Qp	18.7	.7	29.59	40	-10.41	244	100	V

Qp - Quasi-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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