CERTIFICATION TEST REPORT

Report Number. : 4790047196-E1V2

Applicant	:	SAMSUNG ELECTRONICS CO., LTD. 129 SAMSUNG-RO, YEONGTONG-GU, SUWON-SI, GYEONGGI-DO, 16677, KOREA
Model	:	SM-G780G/DSM, SM-G780G/DS, SM-G780G
FCC ID	:	A3LSMG780G1
EUT Description	:	GSM/WCDMA/LTE Phone + BT/BLE, DTS/UNII a/b/g/n/ac/ax, WPT and NFC
Test Standard(s)	:	FCC 47 CFR PART 15 SUBPART B

Date Of Issue:
2021-08-24

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
FAX: (031) 213-5433

IAS ACCREDITED
Testing Laboratory
TL-637

REPORT REVISION HISTORY

Rev.	Issue Date	Revisions	Revised By
V1	2021-08-18	Initial issue	Yeonhee Lim
V21	2021-08-24	Updated to address TCB's question	Yeonhee Lim

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UL Korea, Ltd. Suwon Laboratory FORM ID: FCC_15B(04)
218 Maeyeong-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16675, Korea TEL: (031) 337-9902 FAX: (031) 213-5433

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, WPT and NFC
MODEL NUMBER:	SM-G780G/DSM, SM-G780G/DS, SM-G780G
SERIAL NUMBER:	R38R301JPTN, R38R301JQQM(RADIATED);
DATE TESTED:	2021-08-09 ~ 2021-08-11;

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:

Yeonhee Lim
Suwon Lab Technician
UL Korea, Ltd.

2. TEST METHODOLOGY

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

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

3. FACILITIES AND ACCREDITATION

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

218 Maeyeong-ro
☐ Chamber 1
☒ Chamber 2
☐ Chamber 3

UL Korea, Ltd. is accredited by IAS, Laboratory Code TL-637. The full scope of accreditation can be viewed at https://www.iasonline.org/wp-content/uploads/2017/05/TL-637-cert-New.pdf.

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

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

4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

EIRP = 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
Radiated Disturbance, 30 MHz to 1 GHz	4.26 dB
Radiated Disturbance, 1 GHz to 18 GHz	5.90 dB

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

4.4. DECISION RULE

Decision rule for statement(s) of conformity is based on Procedure 2, Clause 4.4.3 in IEC Guide 115:2007.

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218 Maeyeong-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16675, Korea TEL: (031) 337-9902 FAX: (031) 213-5433

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, WPT and NFC.
This test report addresses the WWAN operational mode.

This report covers the Samsung models SM-G780G/DSM, SM-G780G/DS and SM-G780G.
These models are identical in hardware except SM-G780G/DSM is supported MST and SMG780G/DS has dual SIM tray and SM-G780G has single SIM tray.
All series model was same hardware thus, SM-G780G/DS(Dual SIM tray) was set for final test.

5.2. TEST MODE

Mode	Description
GSM850	Communicating with Call simulator(CMW500)
	Communicating with Call simulator(CMW500) + Camera(Rear)
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

- Worst Axis condition

Band	X	Y	Z
GSM850	-	-	O
WCDMA B5	-	-	O
LTE B5	-	-	O
LTE B12	O	-	-
LTE B13	O	-	-
LTE B26	-	-	O

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.
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5.4. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	**Manufacture**	**Model**	**Serial Number**	**FCC ID**
Charger	SAMSUNG	EP-TA200	R37M194G2J1SE3	N/A
Data Cable	SAMSUNG	EP- DG980	N/A	N/A

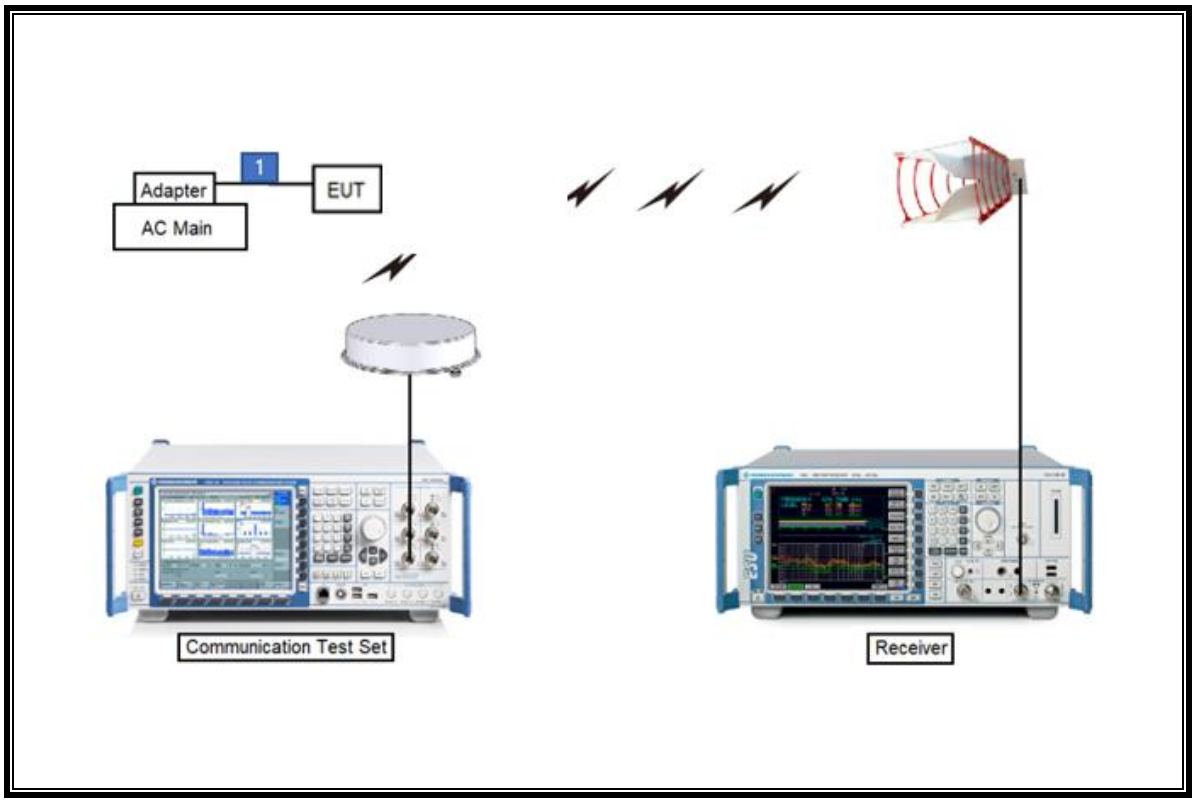
I/O CABLE

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	0.7 m	N/A

TEST SETUP

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

SETUP DIAGRAM FOR TESTS (RADIATED TEST SETUP)



6. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

Test Equipment List				
Description	**Manufacturer**	**Model**	**S/N**	**Cal Due**
Antenna, Tuned Dipole 400~1000 MHz	ETS	3121D DB4	00164753	2023/02/08
Antenna, Horn, 40 GHz	ETS	3116C	00166155	2022/08/04
Antenna, Horn, 40 GHz	ETS	3116C	00168645	2022/08/04
Preamplifier	ETS	3116C-PA	00168841	2022/08/04
Antenna, Bilog, 30MHz-1GHz	SCHWARZBECK	VULB9163	750	2022/08/19
Antenna, Bilog, 30MHz-1GHz	SCHWARZBECK	VULB9163	845	2022/08/13
Antenna, Bilog, 30MHz-1GHz	SCHWARZBECK	VULB9163	749	2022/08/13
Antenna, Horn, 18 GHz	ETS	3115	00167211	2022/07/27
Antenna, Horn, 18 GHz	ETS	3115	00161451	2022/08/15
Antenna, Horn, 18 GHz	ETS	3117	00168724	2022/07/27
Antenna, Horn, 18 GHz	ETS	3117	00168717	2022/08/15
Communications Test Set	R&S	CMW500	169796	2022/01/27
Preamplifier, 1000 MHz	Sonoma	310N	341282	2022/08/02
Preamplifier, 1000 MHz	Sonoma	310N	370599	2022/08/02
Preamplifier, 1000 MHz	Sonoma	310N	351741	2022/08/02
Preamplifier, 18 GHz	Miteq	AFS42-00101800-25-S-42	1876511	2022/08/02
Preamplifier, 18 GHz	Miteq	AFS42-00101800-25-S-42	2029168	2022/08/02
Preamplifier, 18 GHz	Miteq	AFS42-00101800-25-S-42	1896138	2022/08/02
EMI Test Receive, 40 GHz	R&S	ESU40	100439	2022/08/02
EMI Test Receive, 40 GHz	R&S	ESU40	100457	2022/08/02
Directional Antenna	Cobham	FPA3-0.8-6.0R/1329	80108-0004	N/A
Directional Antenna	Cobham	FPA3-0.8-6.0R/1329	110367-0003	N/A
High Pass Filter 1.2GHz	Micro-Tronics	HPM50108-02	G005	2022/08/03
High Pass Filter 1.2GHz	Micro-Tronics	HPM50108-02	G006	2022/08/02
High Pass Filter 2.8GHz	Micro-Tronics	HPM50111-02	010	2022/08/03
High Pass Filter 2.8GHz	Micro-Tronics	HPM50111-02	011	2022/08/02
High Pass Filter 4GHz	Micro-Tronics	HPM50118-02	G001	2022/08/03
High Pass Filter 4GHz	Micro-Tronics	HPM50118-02	G002	2022/08/02
Attenuator	PASTERNACK	PE7087-10	A009	2022/08/03
Attenuator	PASTERNACK	PE7087-10	A001	2022/08/03
Attenuator	PASTERNACK	PE7087-10	A008	2022/08/03
Attenuator	PASTERNACK	PE7004-10	2	2022/08/02
Attenuator	PASTERNACK	PE7395-10	A011	2022/08/03
EMI Test Receive, 3 GHz	R&S	ESR3	101832	2022/08/02
LISN	R&S	ENV-216	101836	2022/08/05
LISN	R&S	ENV-216	101837	2022/08/05
UL Software				
Description	**Manufacturer**	**Model**	**Version**	
Radiated software	UL	UL EMC	Ver 9.5	
AC Line Conducted software	UL	UL EMC	Ver 9.5	

7. APPLICABLE LIMIYS AND TEST RESULTS

7.1. RADIATED EMISSIONS

TEST PROCEDURE

ANSI C63.4: 2014

LIMIT

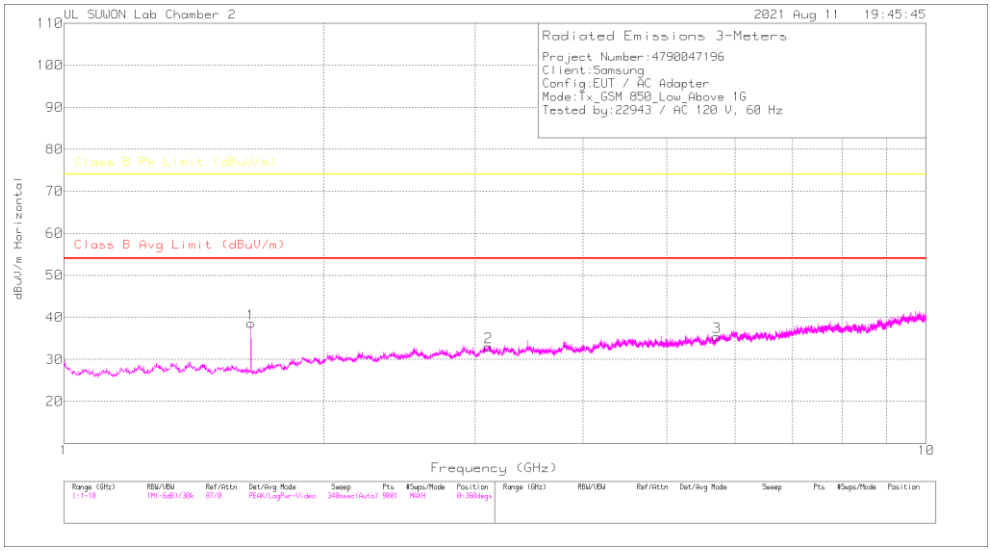
§15.109 (a) Except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

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

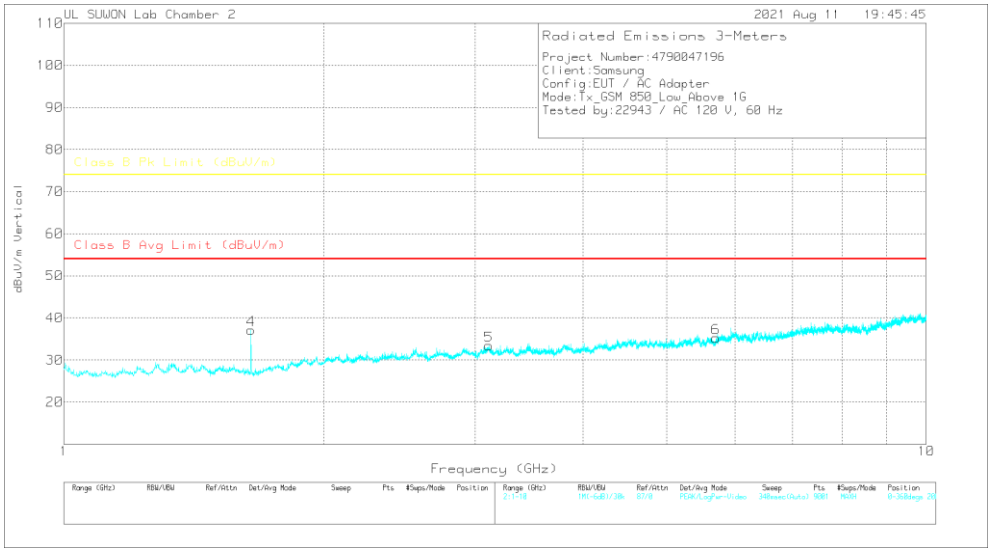
7.1.1 Above 1 GHz in the GSM850

LOW CHANNEL(869.2 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

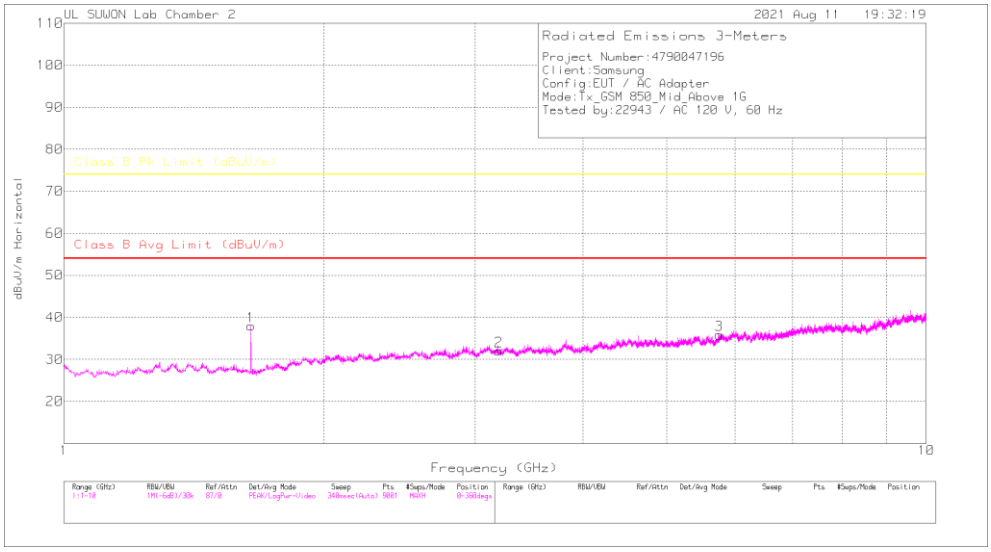
Trace Markers

Marker	Frequency (GHz)	Meter Reading (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	40.66	PK	28.6	-31.4	.7	38.56	-	-	74	-35.44	0-360	200	H
2	3.107	28.77	PK	32.9	-29.4	.7	32.97	-	-	74	-41.03	0-360	200	H
3	5.717	27.54	PK	34.7	-27.3	.5	35.44	-	-	74	-38.56	0-360	100	H
4	1.648	39.23	PK	28.6	-31.4	.7	37.13	-	-	74	-36.87	0-360	200	V
5	3.11	29.11	PK	32.9	-29.3	.7	33.41	-	-	74	-40.59	0-360	100	V
6	5.702	27.53	PK	34.7	-27.5	.5	35.23	-	-	74	-38.77	0-360	100	V

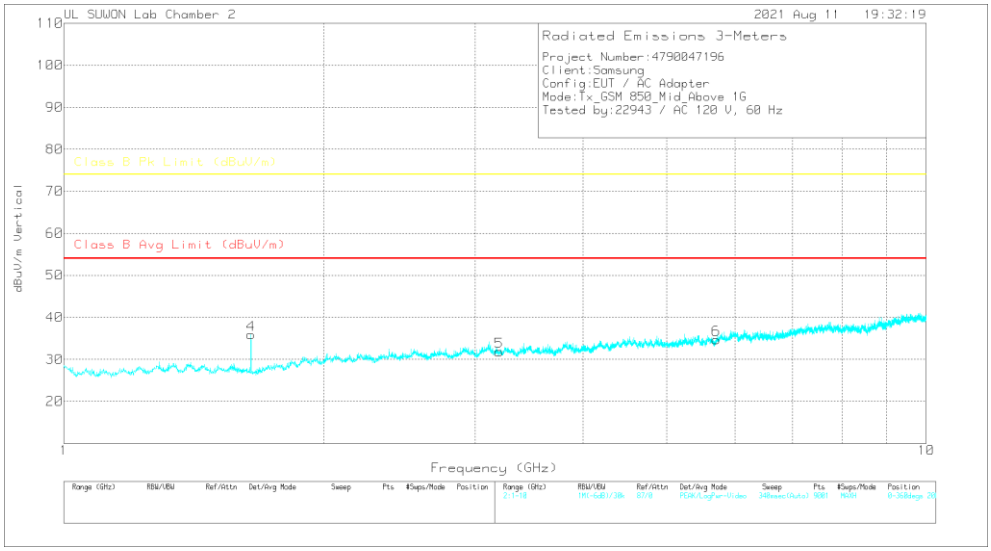
PK-Peak Detector

MID CHANNEL(881.6 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

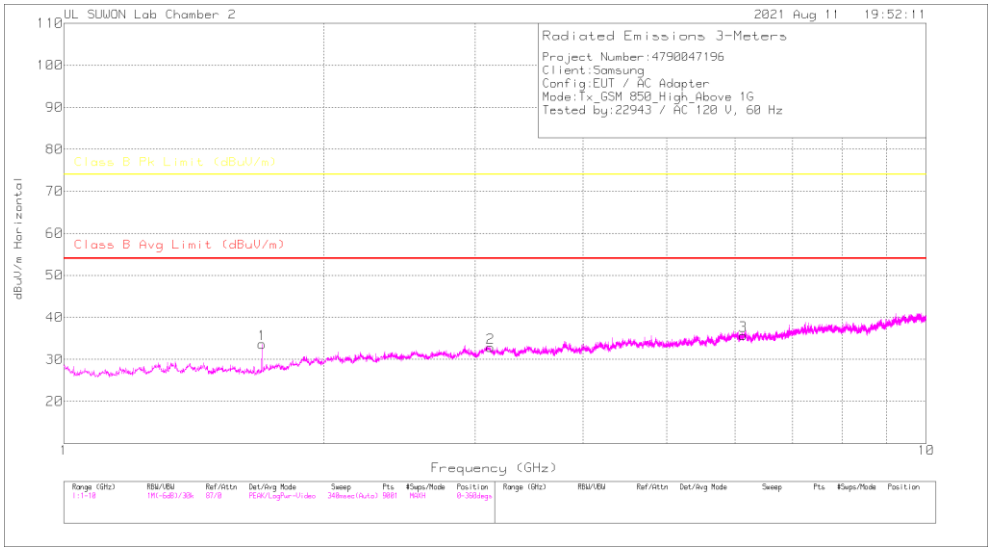
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	1-18GHz[dB]	1GHz_HP[dB]	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Av(CISPR)Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.648	40.06	PK	28.6	-31.4	.7	37.96	-	-	74	-36.04	0-360	100	H
2	3.194	27.91	PK	33	-29.6	.7	32.01	-	-	74	-41.99	0-360	200	H
3	5.755	27.76	PK	34.7	-27.1	.5	35.86	-	-	74	-38.14	0-360	100	H
4	1.648	37.97	PK	28.6	-31.4	.7	35.87	-	-	74	-38.13	0-360	100	V
5	3.197	27.72	PK	33	-29.6	.7	31.82	-	-	74	-42.18	0-360	100	V
6	5.709	26.92	PK	34.7	-27.4	.5	34.72	-	-	74	-39.28	0-360	200	V

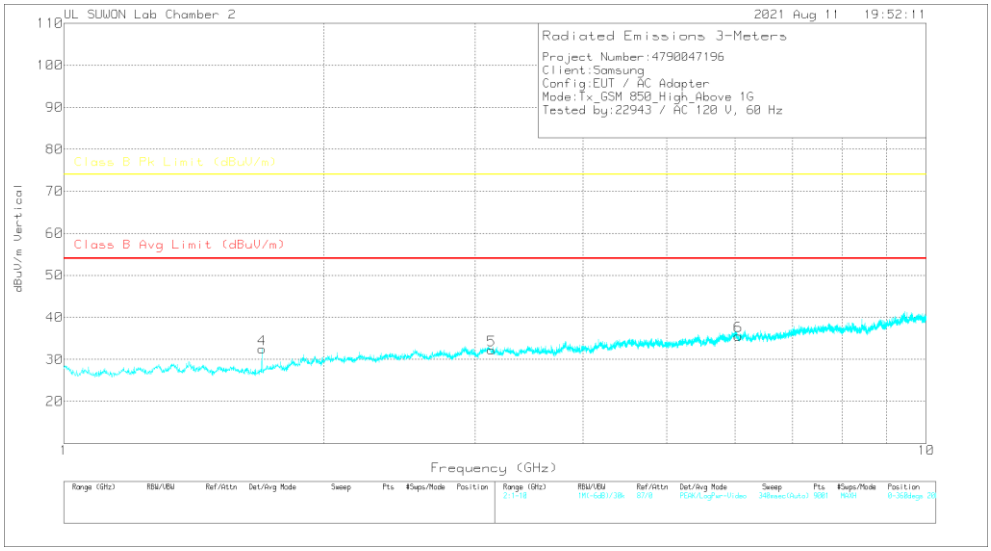
PK – Peak Detector

HIGH CHANNEL(893.8 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

Trace Markers

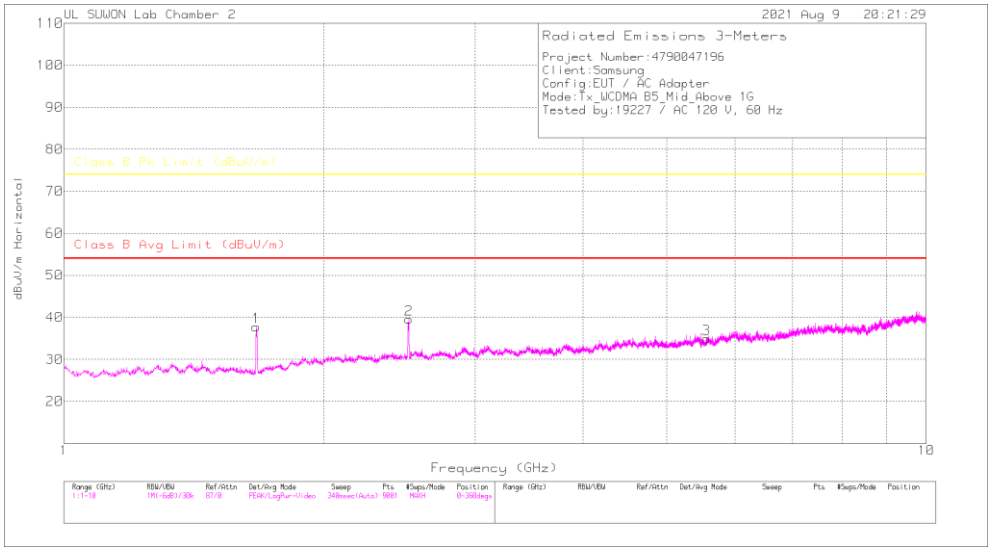
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	1-18GHz[dB]	1GHz_HP[dB]	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Av(CISPR)Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.697	35.44	PK	28.7	-31.2	.7	33.64	-	-	74	-40.36	0-360	200	H
2	3.125	28.74	PK	33	-29.6	.7	32.84	-	-	74	-41.16	0-360	200	H
3	6.138	26.47	PK	35.3	-26.6	.5	35.67	-	-	74	-38.33	0-360	100	H
4	1.697	34.25	PK	28.7	-31.2	.7	32.45	-	-	74	-41.55	0-360	100	V
5	3.134	28.35	PK	33	-29.8	.7	32.25	-	-	74	-41.75	0-360	100	V
6	6.056	26.98	PK	35.2	-27.1	.5	35.58	-	-	74	-38.42	0-360	100	V

PK – Peak Detector

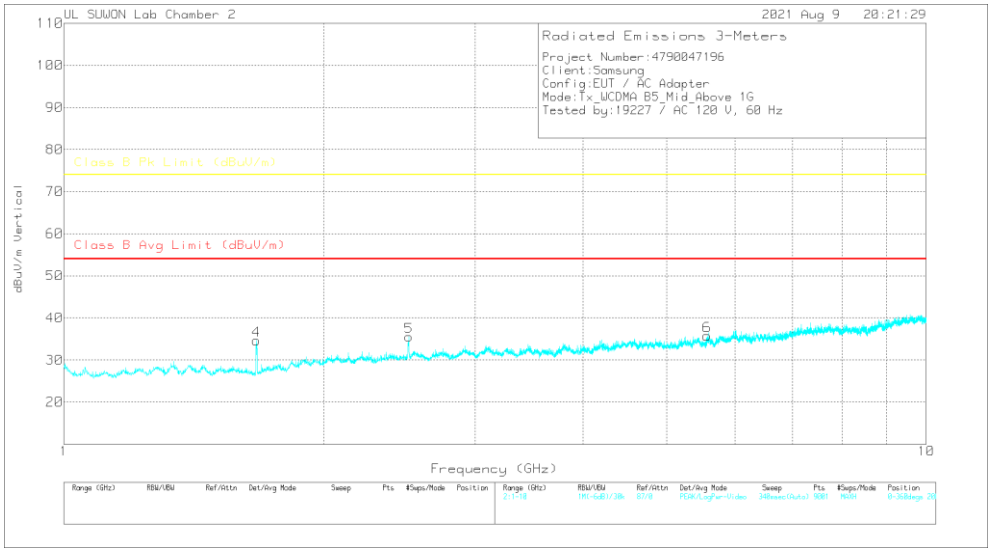
7.1.2 Above 1 GHz in the WCDMA Band 5

MID CHANNEL(881.6 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

Trace Markers

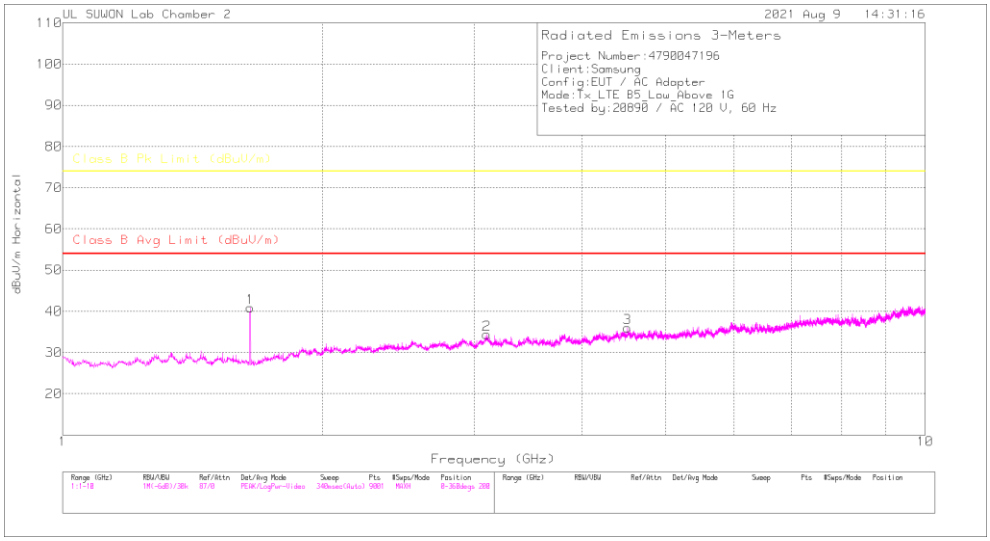
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	1-18GHz[dB]	1GHz_HP[dB]	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Av(CISPR)Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.671	39.74	PK	28.6	-31.3	.7	37.74	-	-	74	-36.26	0-360	200	H
2	2.513	36.76	PK	32.1	-30	.7	39.56	-	-	74	-34.44	0-360	100	H
3	5.561	27.42	PK	34.6	-27.6	.5	34.92	-	-	74	-39.08	0-360	100	H
4	1.672	36.64	PK	28.6	-31.3	.7	34.64	-	-	74	-39.36	0-360	200	V
5	2.513	32.72	PK	32.1	-30	.7	35.52	-	-	74	-38.48	0-360	200	V
6	5.571	28.04	PK	34.6	-27.4	.5	35.74	-	-	74	-38.26	0-360	200	V

PK – Peak Detector

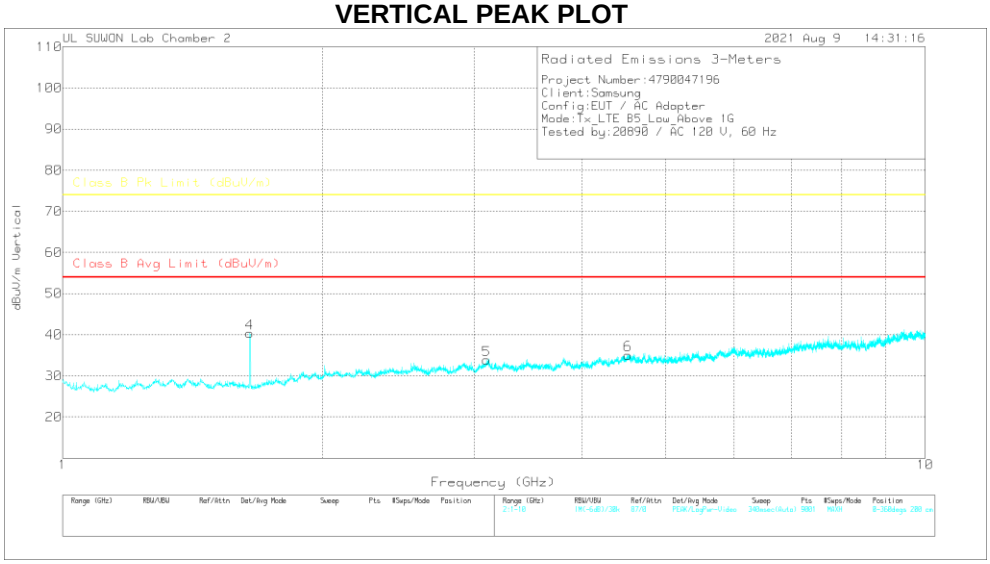
7.1.3 Above 1 GHz in the LTE Band 5

LOW CHANNEL(870.5MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

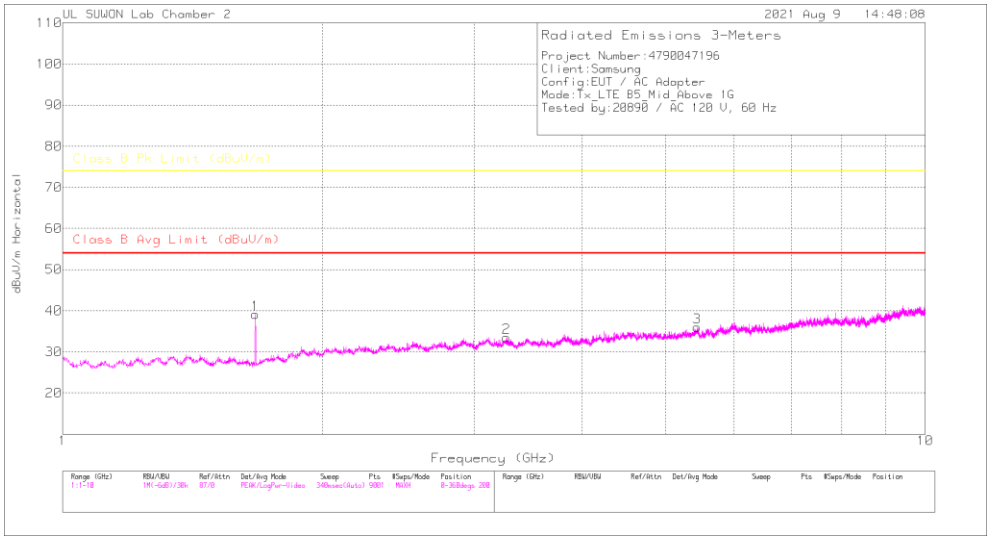
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	1-18GHz[dB]	1GHz_HP[dB]	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Av(CISPR)Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.649	42.96	PK	28.6	-31.4	.7	40.86	-	-	74	-33.14	0-360	200	H
2	3.102	30.27	PK	32.9	-29.5	.7	34.37	-	-	74	-39.63	0-360	100	H
3	4.518	29.72	PK	34	-28.2	.5	36.02	-	-	74	-37.98	0-360	200	H
4	1.648	42.46	PK	28.6	-31.4	.7	40.36	-	-	74	-33.64	0-360	200	V
5	3.098	29.89	PK	32.9	-29.6	.7	33.89	-	-	74	-40.11	0-360	200	V
6	4.52	28.77	PK	34.1	-28.3	.5	35.07	-	-	74	-38.93	0-360	100	V

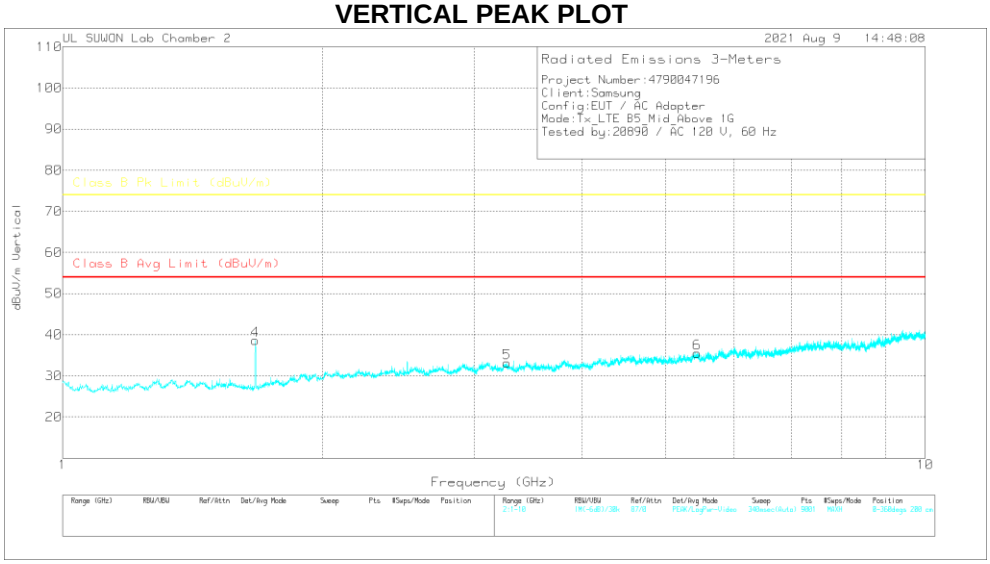
PK – Peak Detector

MID CHANNEL(881.5MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

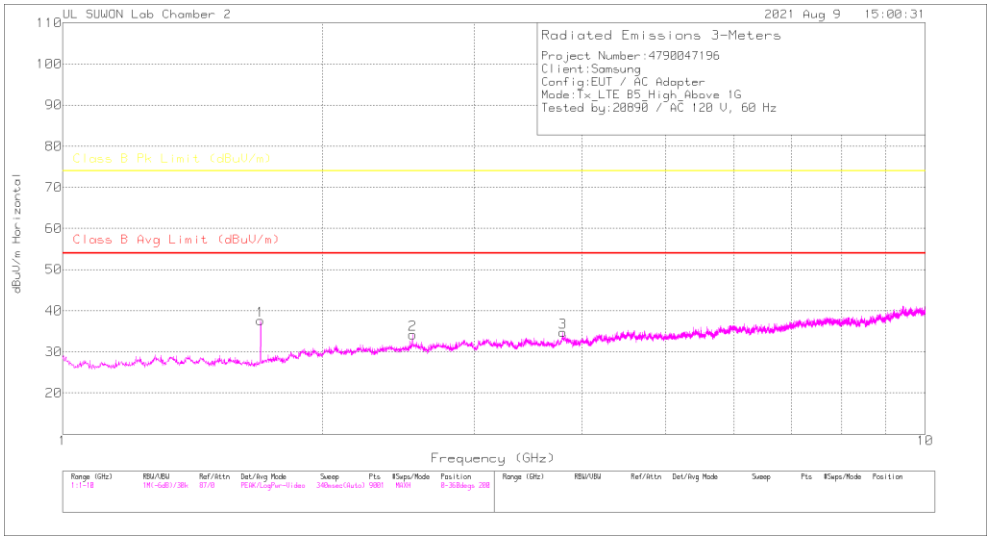
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	1-18GHz[dB]	1GHz_HP[dB]	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Av(CISPR)Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.673	41.15	PK	28.6	-31.3	.7	39.15	-	-	74	-34.85	0-360	200	H
2	3.27	29.73	PK	32.9	-29.8	.7	33.53	-	-	74	-40.47	0-360	100	H
3	5.44	28.5	PK	34.6	-27.6	.5	36	-	-	74	-38	0-360	200	H
4	1.673	40.65	PK	28.6	-31.3	.7	38.65	-	-	74	-35.35	0-360	200	V
5	3.275	29.34	PK	32.9	-29.8	.7	33.14	-	-	74	-40.86	0-360	100	V
6	5.443	27.85	PK	34.6	-27.5	.5	35.45	-	-	74	-38.55	0-360	100	V

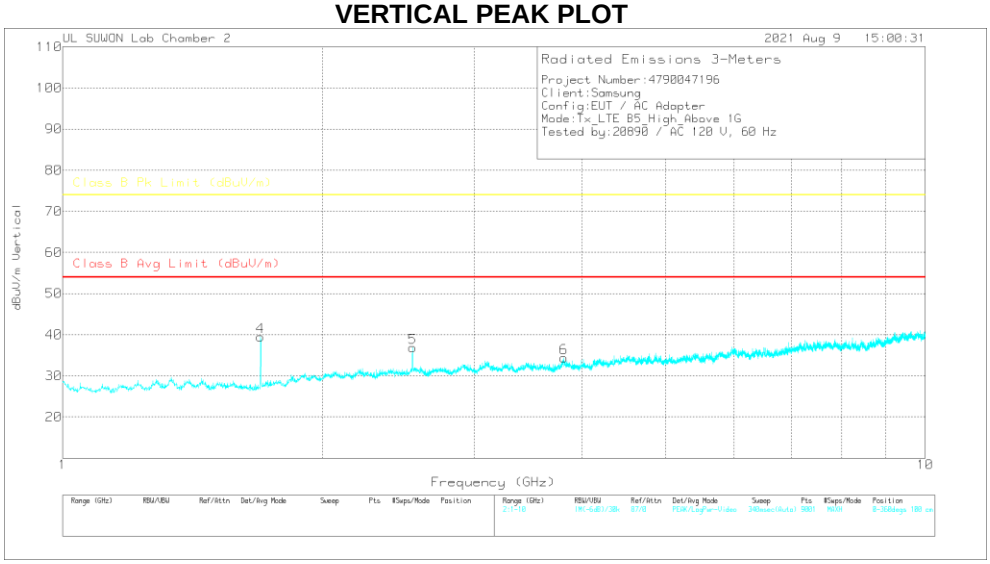
PK – Peak Detector

HIGH CHANNEL(892.5MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

Trace Markers

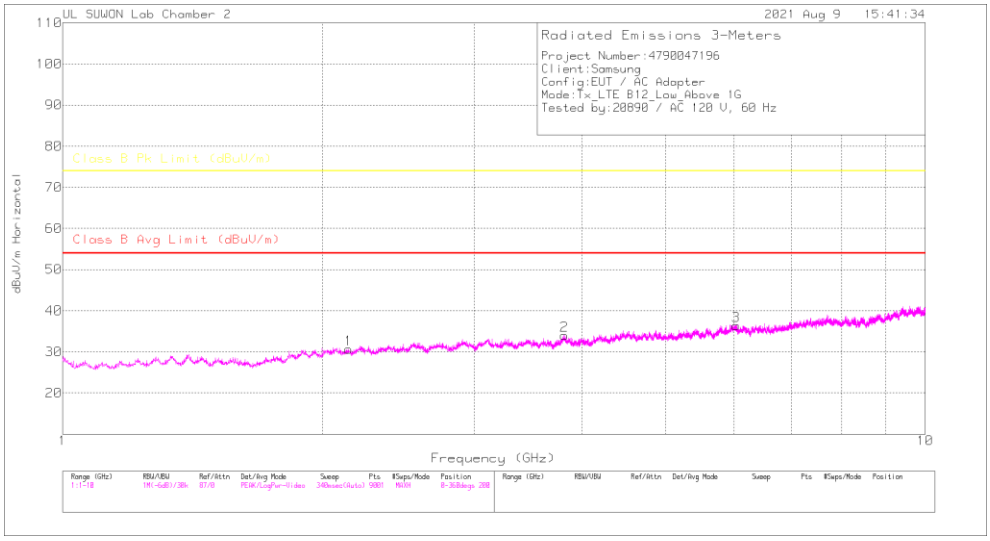
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	1-18GHz[dB]	1GHz_HP[dB]	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Av(CISPR)Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.696	39.44	PK	28.7	-31.2	.7	37.64	-	-	74	-36.36	0-360	200	H
2	2.545	31.3	PK	32.1	-29.9	.7	34.2	-	-	74	-39.8	0-360	100	H
3	3.799	29.71	PK	33.3	-28.8	.6	34.81	-	-	74	-39.19	0-360	100	H
4	1.696	41.32	PK	28.7	-31.2	.7	39.52	-	-	74	-34.48	0-360	200	V
5	2.545	34.03	PK	32.1	-29.9	.7	36.93	-	-	74	-37.07	0-360	100	V
6	3.81	29.31	PK	33.3	-28.8	.6	34.41	-	-	74	-39.59	0-360	200	V

PK – Peak Detector

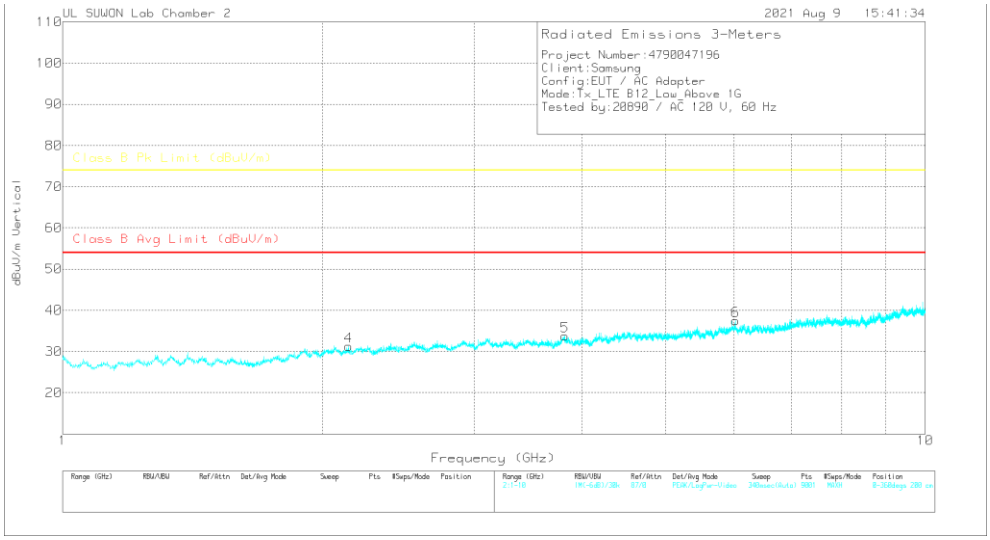
7.1.4 Above 1 GHz in the LTE Band 12

LOW CHANNEL(730.5 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

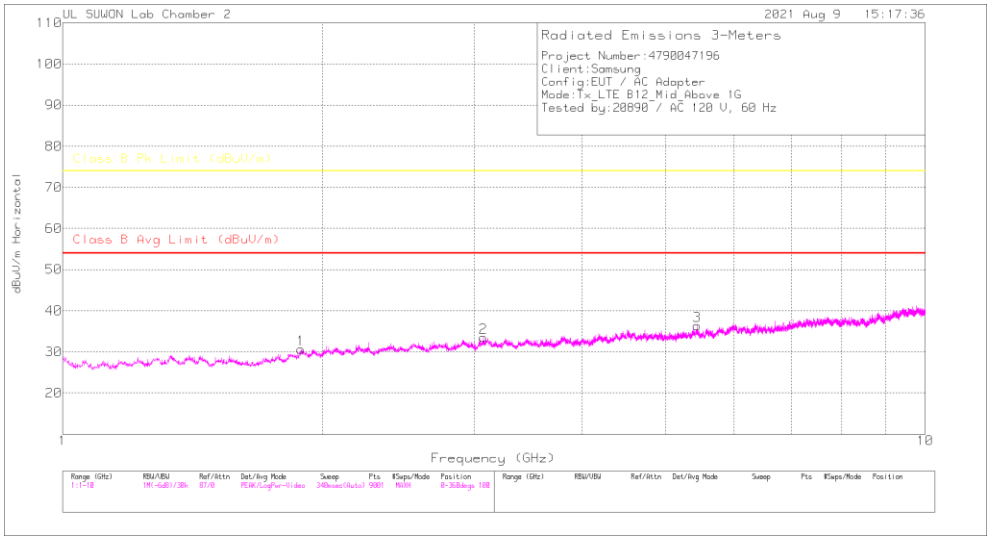
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	1-18GHz[dB]	1GHz_HP[dB]	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Av(CISPR)Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	2.144	28.79	PK	31.7	-30.5	.7	30.69	-	-	74	-43.31	0-360	200	H
2	3.817	28.86	PK	33.3	-28.7	.6	34.06	-	-	74	-39.94	0-360	200	H
3	6.034	27.78	PK	35.2	-27.1	.5	36.38	-	-	74	-37.62	0-360	200	H
4	2.144	29.41	PK	31.7	-30.5	.7	31.31	-	-	74	-42.69	0-360	100	V
5	3.821	28.39	PK	33.4	-28.6	.6	33.79	-	-	74	-40.21	0-360	200	V
6	6.027	28.9	PK	35.2	-27.1	.5	37.5	-	-	74	-36.5	0-360	100	V

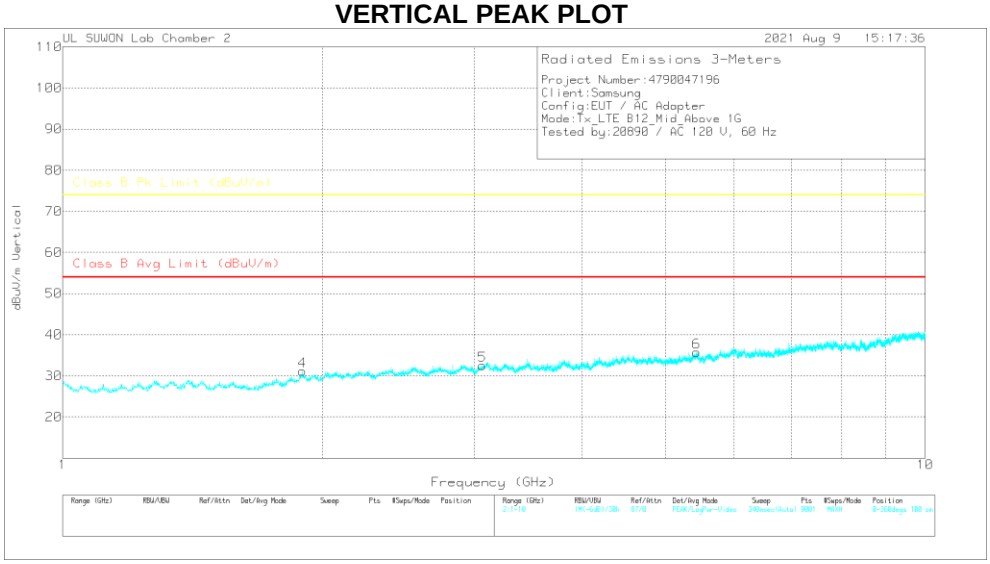
PK – Peak Detector

MID CHANNEL(737.5 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

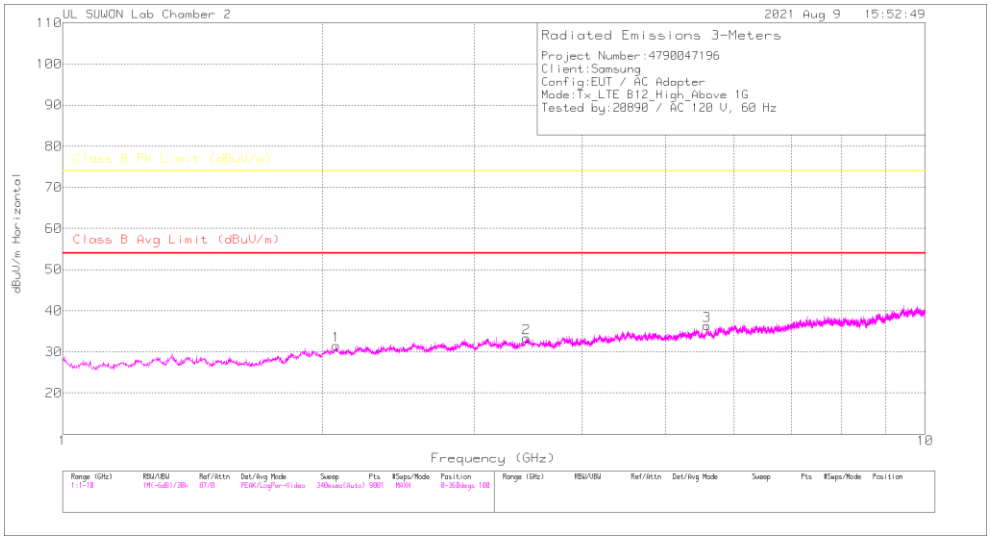
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	1-18GHz[dB]	1GHz_HP[dB]	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Av(CISPR)Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.89	30.2	PK	30.7	-30.9	.7	30.7	-	-	74	-43.3	0-360	200	H
2	3.075	30.01	PK	32.8	-30	.7	33.51	-	-	74	-40.49	0-360	200	H
3	5.439	28.89	PK	34.6	-27.6	.5	36.39	-	-	74	-37.61	0-360	100	H
4	1.897	30.69	PK	30.7	-30.9	.6	31.09	-	-	74	-42.91	0-360	100	V
5	3.067	29.13	PK	32.8	-30.1	.7	32.53	-	-	74	-41.47	0-360	100	V
6	5.429	28.26	PK	34.6	-27.6	.5	35.76	-	-	74	-38.24	0-360	100	V

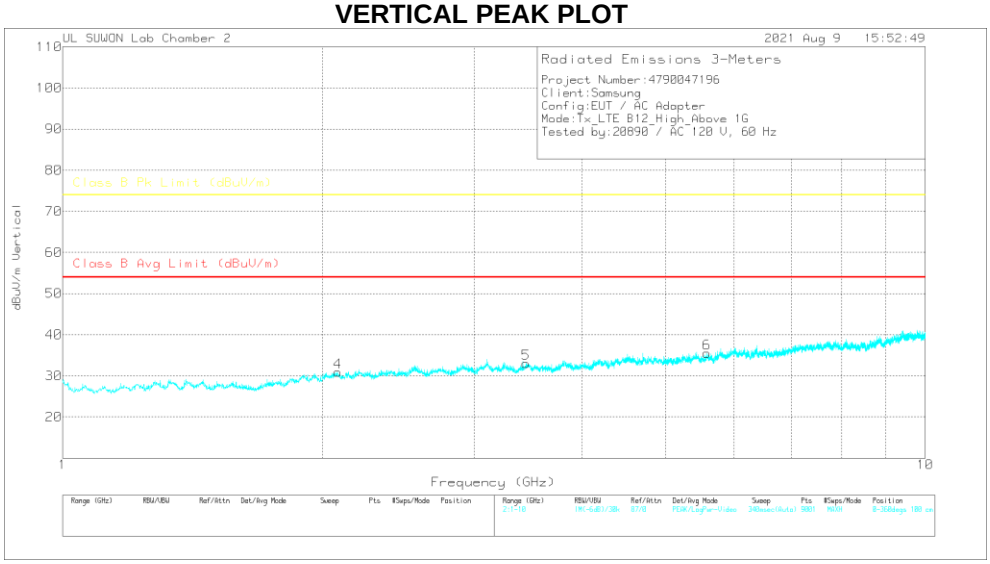
PK – Peak Detector

HIGH CHANNEL(744.5 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

Trace Markers

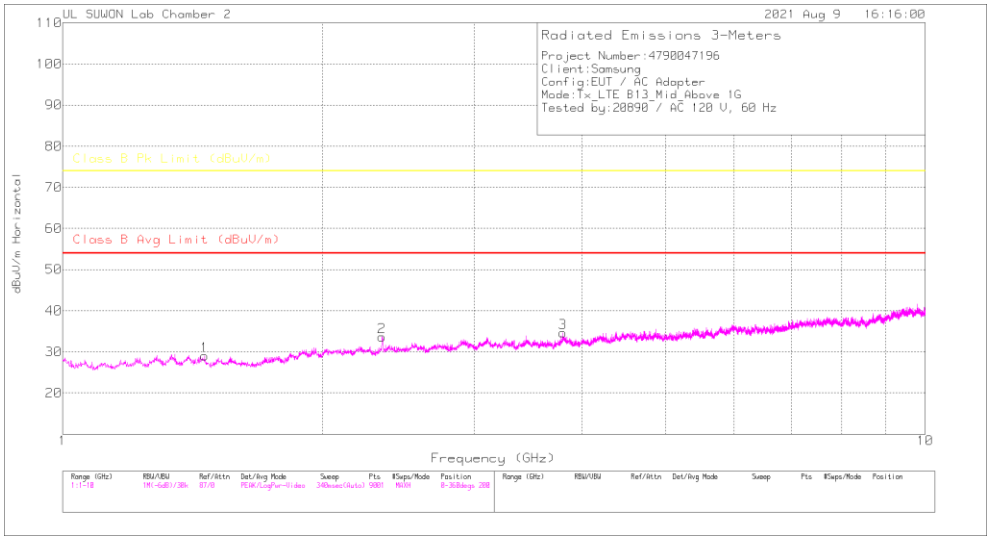
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	1-18GHz[dB]	1GHz_HP[dB]	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Av(CISPR)Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	2.077	30	PK	31.5	-30.6	.6	31.5	-	-	74	-42.5	0-360	200	H
2	3.447	28.58	PK	32.8	-28.6	.6	33.38	-	-	74	-40.62	0-360	100	H
3	5.584	28.63	PK	34.6	-27.4	.5	36.33	-	-	74	-37.67	0-360	200	H
4	2.084	29.42	PK	31.6	-30.7	.6	30.92	-	-	74	-43.08	0-360	100	V
5	3.443	28.31	PK	32.8	-28.7	.6	33.01	-	-	74	-40.99	0-360	100	V
6	5.586	27.85	PK	34.6	-27.5	.5	35.45	-	-	74	-38.55	0-360	100	V

PK – Peak Detector

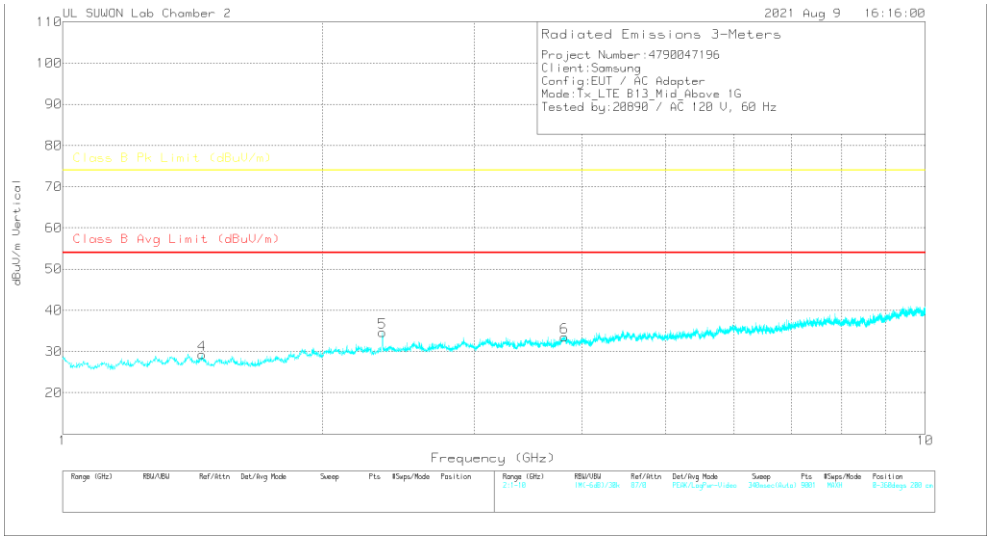
7.1.5 Above 1 GHz in the LTE Band 13

MID CHANNEL(751.0 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

Trace Markers

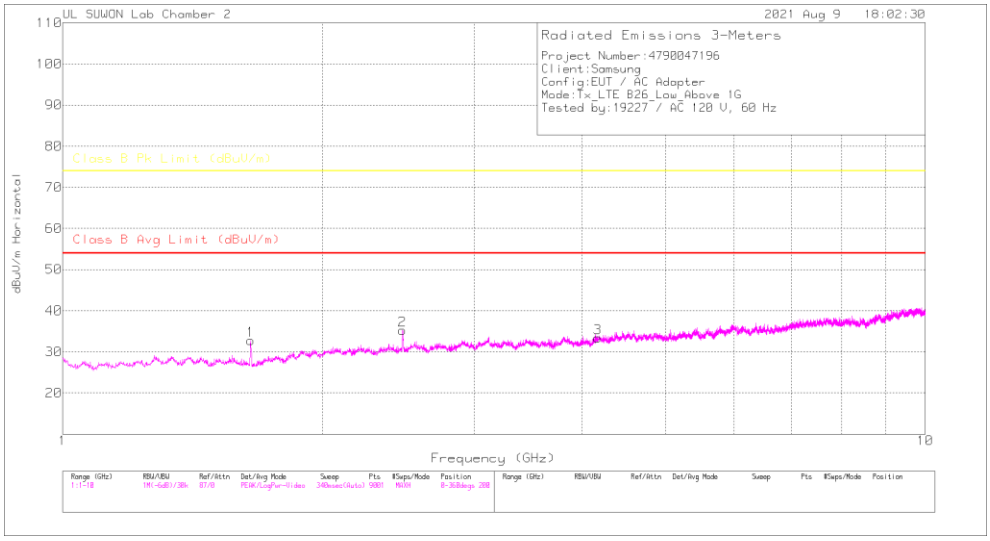
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	1-18GHz[dB]	1GHz_HP[dB]	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Av(CISPR)Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.461	30.62	PK	29.2	-31.5	.7	29.02	-	-	74	-44.98	0-360	100	H
2	2.346	31.65	PK	31.8	-30.5	.7	33.65	-	-	74	-40.35	0-360	100	H
3	3.801	29.58	PK	33.3	-28.8	.6	34.68	-	-	74	-39.32	0-360	200	H
4	1.451	31.11	PK	29.2	-31.7	.7	29.31	-	-	74	-44.69	0-360	100	V
5	2.348	32.79	PK	31.8	-30.6	.7	34.69	-	-	74	-39.31	0-360	200	V
6	3.815	28.25	PK	33.3	-28.6	.6	33.55	-	-	74	-40.45	0-360	100	V

PK – Peak Dector

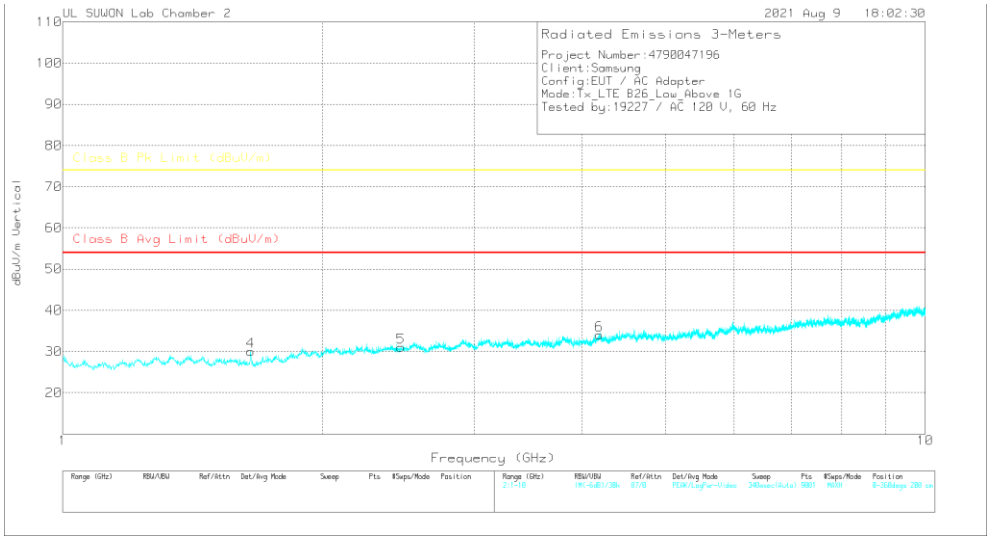
7.1.6 Above 1 GHz in the LTE Band 26

LOW CHANNEL(860.5 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

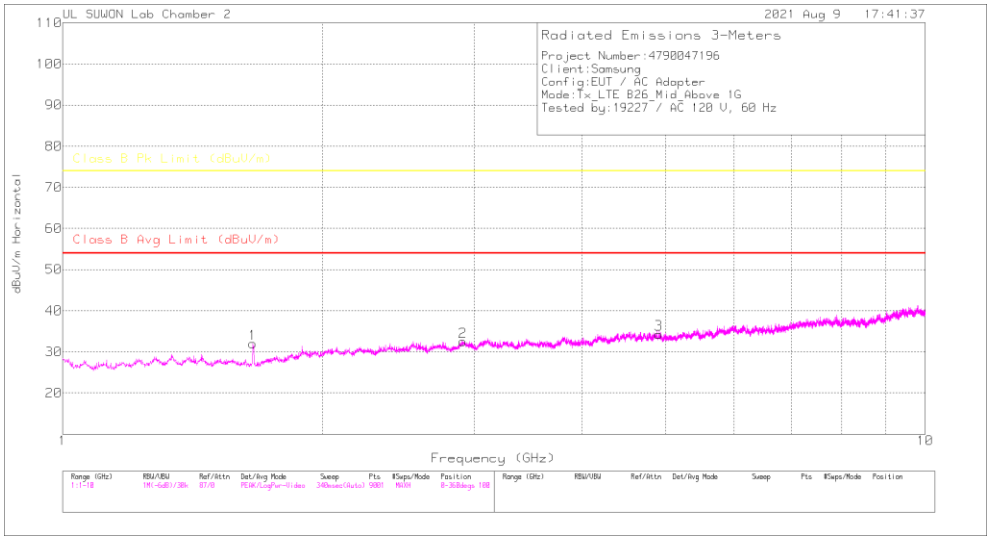
Trace Markers

Marker	Frequency (GHz)	Meter Reading (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	1.651	34.81	PK	28.6	-31.4	.7	32.71	-	-	74	-41.29	0-360	200	H
2	2.478	32.57	PK	32	-30	.7	35.27	-	-	74	-38.73	0-360	100	H
3	4.169	27.51	PK	33.4	-28	.5	33.41	-	-	74	-40.59	0-360	200	H
4	1.652	32.04	PK	28.6	-31.3	.7	30.04	-	-	74	-43.96	0-360	200	V
5	2.468	28.27	PK	32	-29.9	.7	31.07	-	-	74	-42.93	0-360	200	V
6	4.186	28.26	PK	33.4	-28.1	.5	34.06	-	-	74	-39.94	0-360	100	V

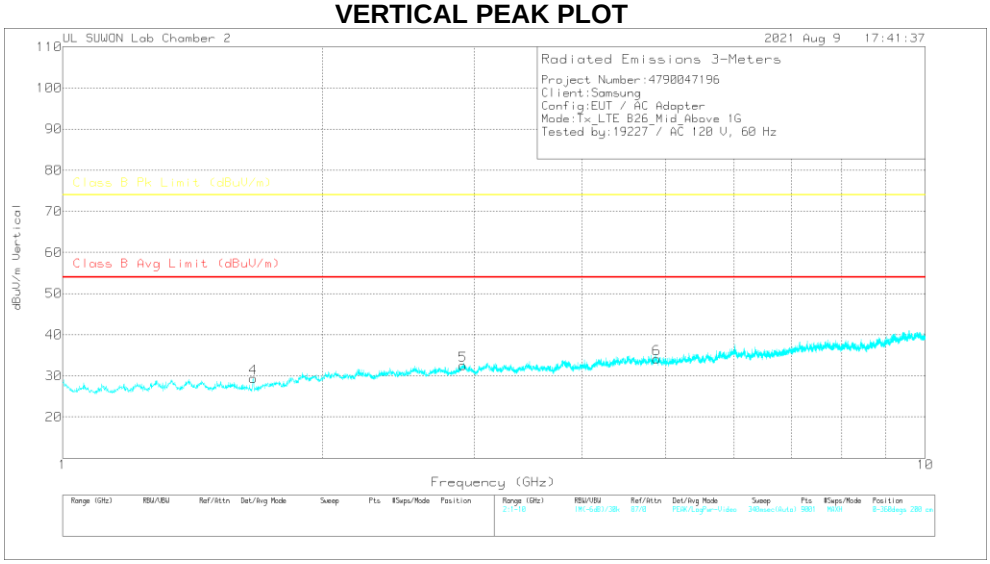
Pk - Peak detector

MID CHANNEL(876.5 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

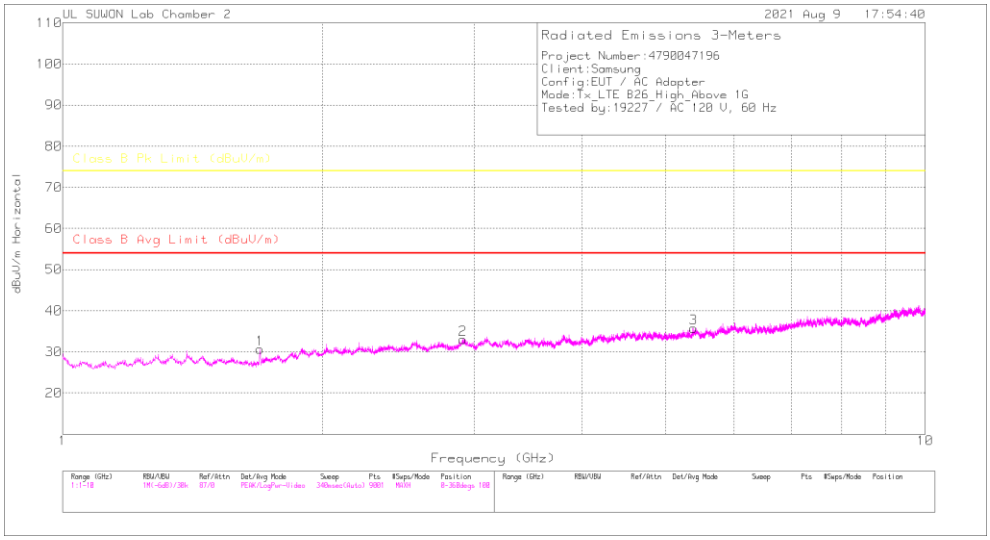
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	1-18GHz[dB]	1GHz_HP[dB]	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Av(CISPR)Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.662	34.07	PK	28.6	-31.3	.7	32.07	-	-	74	-41.93	0-360	200	H
2	2.909	29.17	PK	32.3	-29.6	.7	32.57	-	-	74	-41.43	0-360	200	H
3	4.909	27.82	PK	34.1	-28.1	.5	34.32	-	-	74	-39.68	0-360	100	H
4	1.663	31.37	PK	28.6	-31.3	.7	29.37	-	-	74	-44.63	0-360	200	V
5	2.911	29.17	PK	32.3	-29.7	.7	32.47	-	-	74	-41.53	0-360	200	V
6	4.884	27.28	PK	34.1	-27.7	.5	34.18	-	-	74	-39.82	0-360	200	V

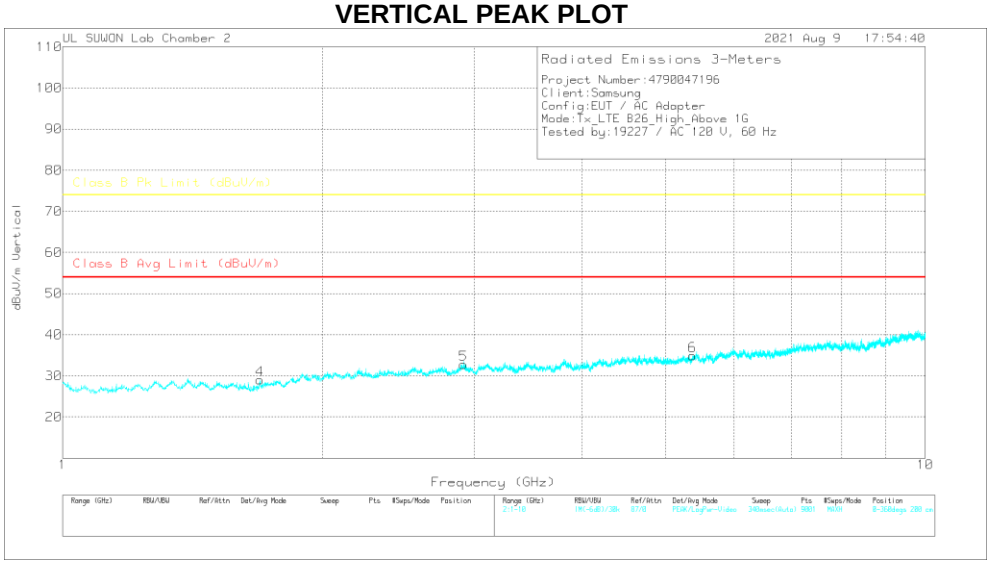
PK – Peak Detector

HIGH CHANNEL(892.5 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

Trace Markers

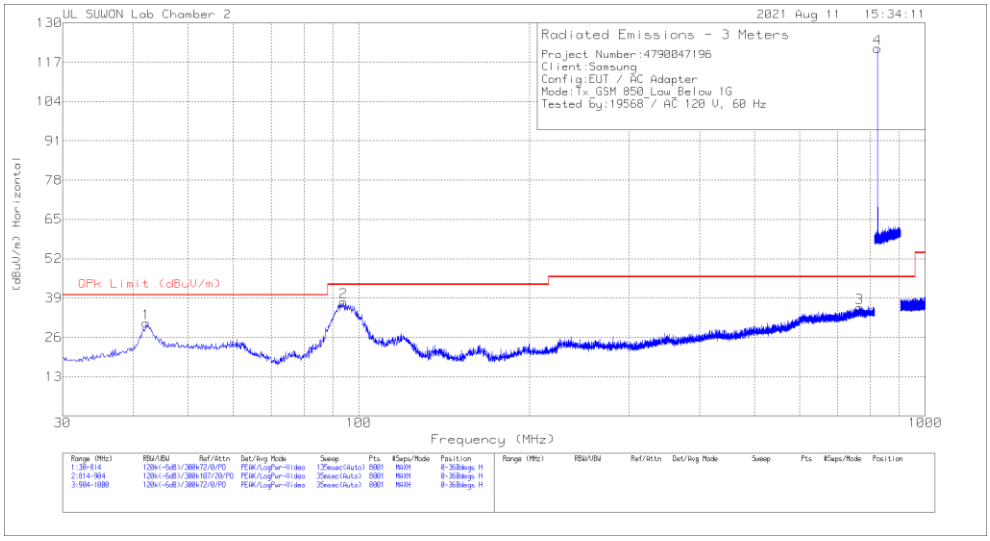
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	1-18GHz[dB]	1GHz_HP[dB]	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Av(CISPR)Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.693	32.41	PK	28.7	-31.2	.7	30.61	-	-	74	-43.39	0-360	200	H
2	2.91	29.74	PK	32.3	-29.7	.7	33.04	-	-	74	-40.96	0-360	200	H
3	5.39	28.6	PK	34.5	-27.9	.5	35.7	-	-	74	-38.3	0-360	200	H
4	1.6935	30.77	PK	28.7	-31.2	.7	28.97	-	-	74	-45.03	0-360	200	V
5	2.915	29.31	PK	32.4	-29.6	.7	32.81	-	-	74	-41.19	0-360	100	V
6	5.371	27.79	PK	34.5	-27.9	.5	34.89	-	-	74	-39.11	0-360	200	V

PK – Peak Detector

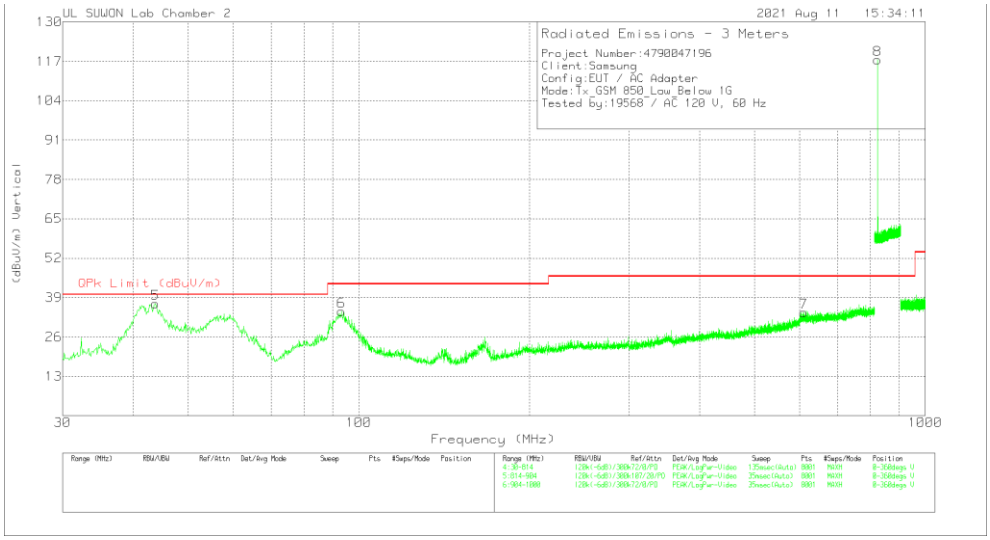
7.1.7 Below 1 GHz in the GSM850

LOW CHANNEL(869.2 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Below_1G_Bypass [dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	42.152	10.97	Pk	19.1	.7	30.77	40	-9.23	0-360	200	H
2	93.896	20.22	Pk	16.4	1.1	37.72	43.52	-5.8	0-360	300	H
3	765.784	6.27	Pk	26.6	3	35.87	46.02	-10.15	0-360	400	H
4	824.125	91.55	Pk	26.7	3.3	121.55	**46.02**	**75.53**	0-360	100	H
5	43.72	17.06	Pk	19.4	.6	37.06	40	-2.94	0-360	100	V
6	93.112	17.24	Pk	16.2	1	34.44	43.52	-9.08	0-360	100	V
7	610.846	6.18	Pk	25.3	2.7	34.18	46.02	-11.84	0-360	200	V
8	824.1475	87.5	Pk	26.7	3.3	117.5	**46.02**	**71.48**	0-360	100	V

Pk - Peak detector

Radiated Emissions

Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Below_1G_Bypass[dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
43.72	11.83	Qp	19.4	.6	31.83	40	-8.17	260	100	V

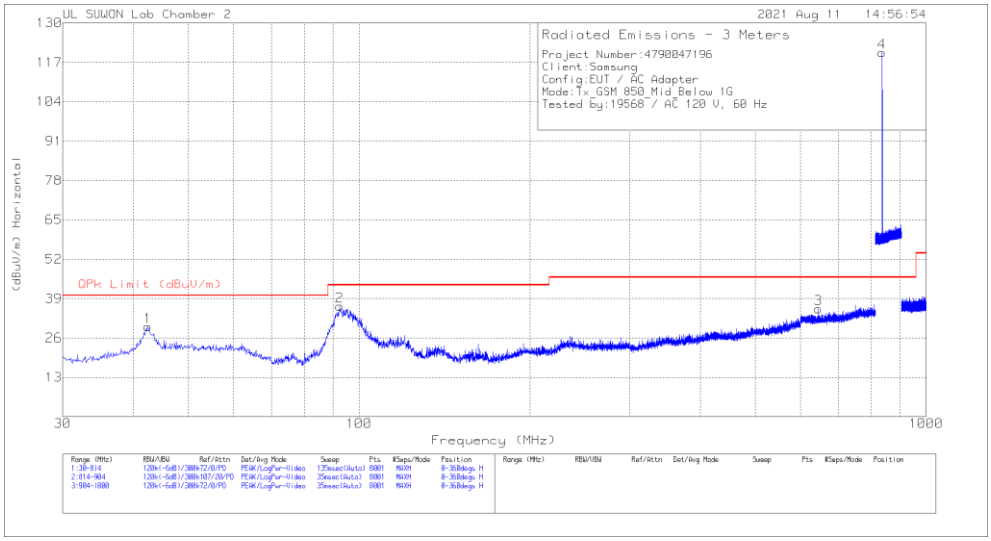
Qp - Quasi-Peak detector

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

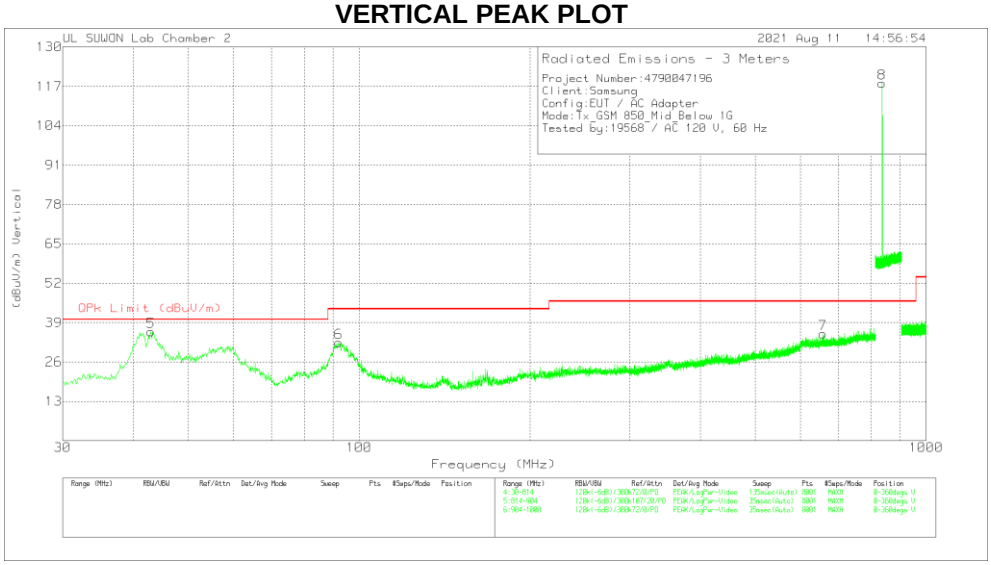
UL Korea, Ltd. Suwon Laboratory FORM ID: FCC_15B(04)
218 Maeyeong-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16675, Korea TEL: (031) 337-9902 FAX: (031) 213-5433

MID CHANNEL(881.6 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Below_1G_Bypass[dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	42.348	9.65	Pk	19.2	.8	29.65	40	-10.35	0-360	300	H
2	92.328	19.26	Pk	16.1	1.1	36.46	43.52	-7.06	0-360	300	H
3	645.342	7.77	Pk	25.1	2.8	35.67	46.02	-10.35	0-360	200	H
4	836.59	90.14	Pk	26.9	3.2	120.24	**46.02**	**74.22**	0-360	100	H
5	42.936	15.92	Pk	19.3	.7	35.92	40	-4.08	0-360	100	V
6	92.034	15.5	Pk	16	1	32.5	43.52	-11.02	0-360	100	V
7	657.984	7.14	Pk	25.2	2.9	35.24	46.02	-10.78	0-360	100	V
8	836.545	87.87	Pk	26.9	3.3	118.07	**46.02**	**72.05**	0-360	100	V

Pk - Peak detector

Radiated Emissions

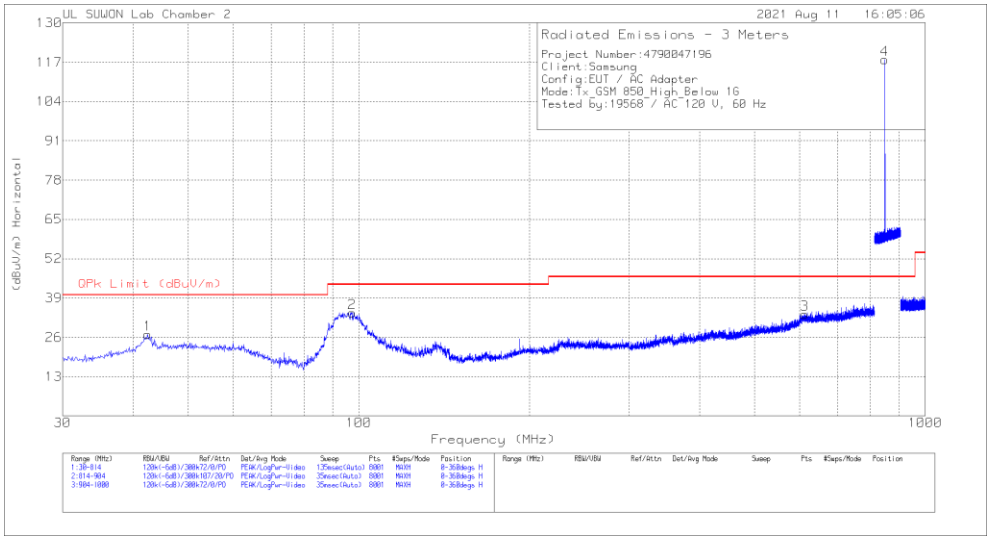
Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Below_1G_Bypass[dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
42.936	10.67	Qp	19.3	.7	30.67	40	-9.33	236	108	V

Qp - Quasi-Peak detector

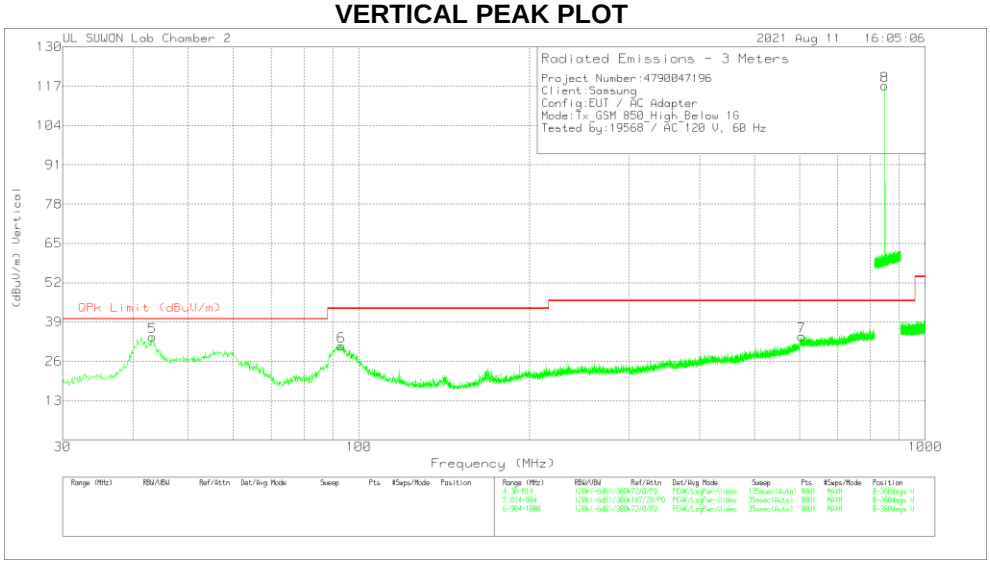
Note: Unwanted emissions captured from 824MHz to 849MHz and from 869MHz to 894MHz were the TX and RX signals generated from the call-simulator.

HIGH CHANNEL(893.8 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Below_1G_Bypass [dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	42.348	7.02	Pk	19.2	.8	27.02	40	-12.98	0-360	200	H
2	97.326	15.87	Pk	17.1	1.2	34.17	43.52	-9.35	0-360	300	H
3	613.198	5.58	Pk	25.2	2.8	33.58	46.02	-12.44	0-360	400	H
4	848.8188	87.32	Pk	27.3	3.3	117.92	**46.02**	**71.9**	0-360	100	H
5	43.23	14.2	Pk	19.3	.7	34.2	40	-5.8	0-360	100	V
6	93.21	13.57	Pk	16.2	1.3	31.07	43.52	-12.45	0-360	100	V
7	605.162	6.36	Pk	25.1	2.8	34.26	46.02	-11.76	0-360	100	V
8	848.8525	86.59	Pk	27.3	3.3	117.19	**46.02**	**71.17**	0-360	100	V

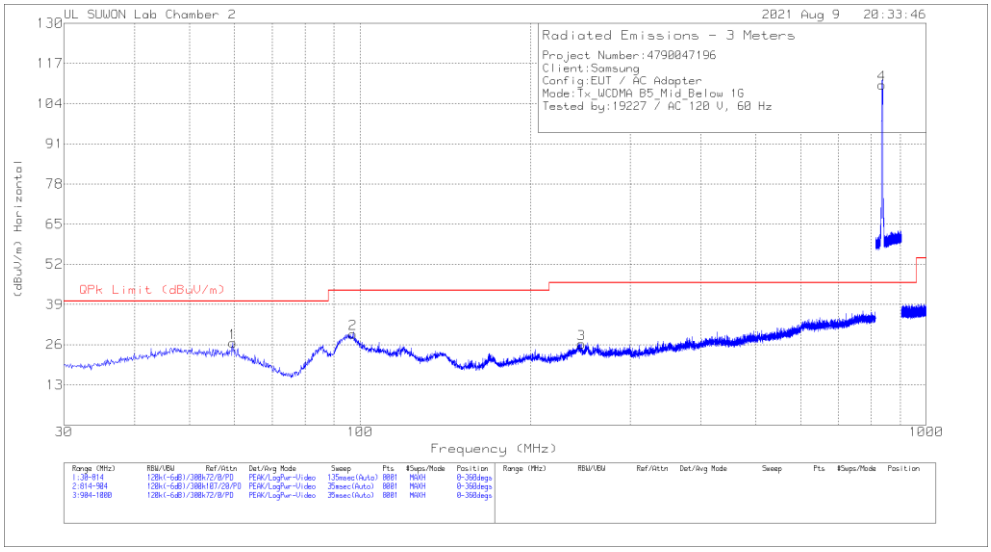
Pk - Peak detector

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

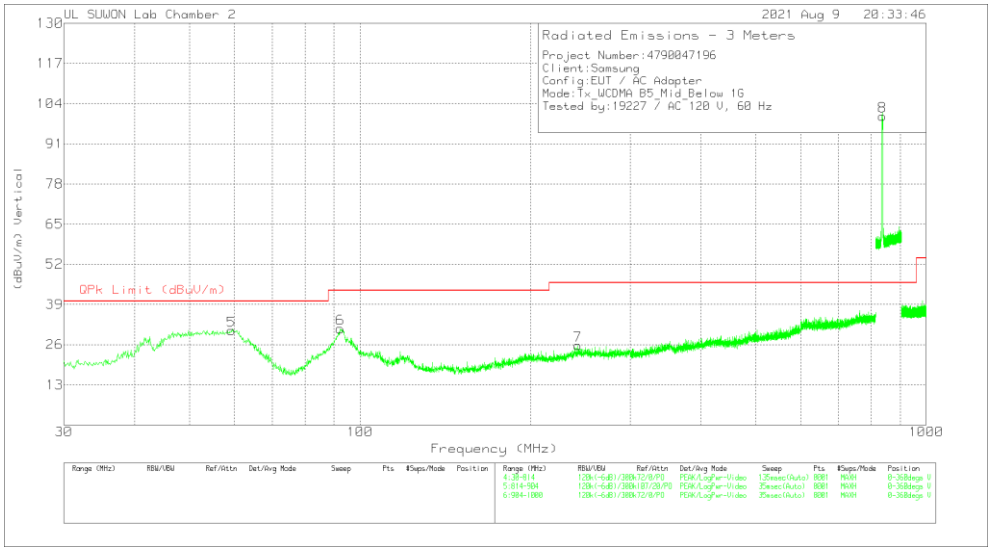
7.1.8 Below 1 GHz in the WCDMA Band 5

MID CHANNEL(881.6 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Below_1G_Bypass [dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	59.596	7.14	Pk	18.6	.8	26.54	40	-13.46	0-360	400	H
2	97.228	11.38	Pk	17	1.1	29.48	43.52	-14.04	0-360	300	H
3	246.09	5.99	Pk	18.4	1.8	26.19	46.02	-19.83	0-360	100	H
4	835.3638	80.01	Pk	26.9	3.2	110.11	**46.02**	**64.09**	0-360	100	H
5	59.302	11.05	Pk	18.6	.9	30.55	40	-9.45	0-360	100	V
6	92.328	13.96	Pk	16.1	1.1	31.16	43.52	-12.36	0-360	100	V
7	242.758	5.61	Pk	18.3	1.8	25.71	46.02	-20.31	0-360	100	V
8	837.0963	69.71	Pk	26.9	3.3	99.91	**46.02**	**53.89**	0-360	300	V

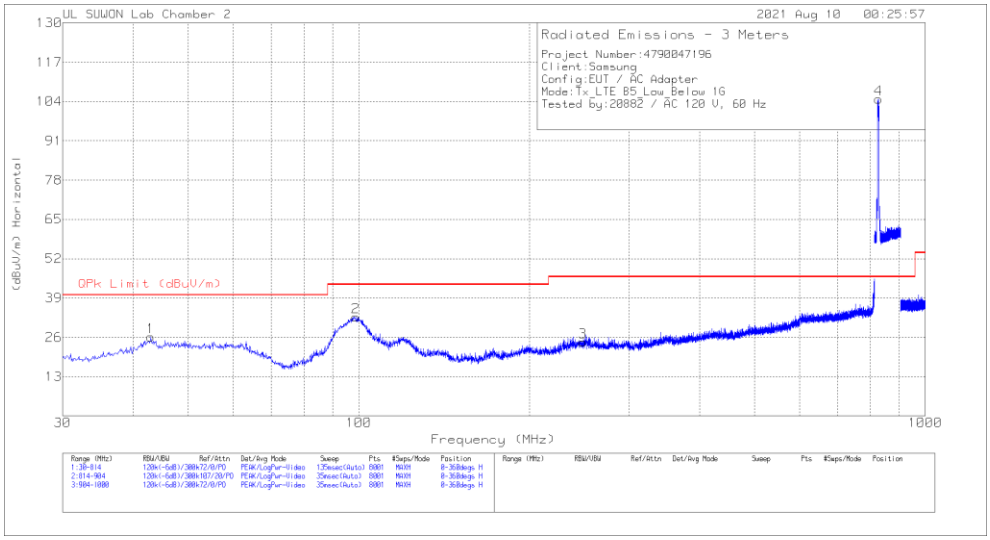
Pk - Peak detector

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

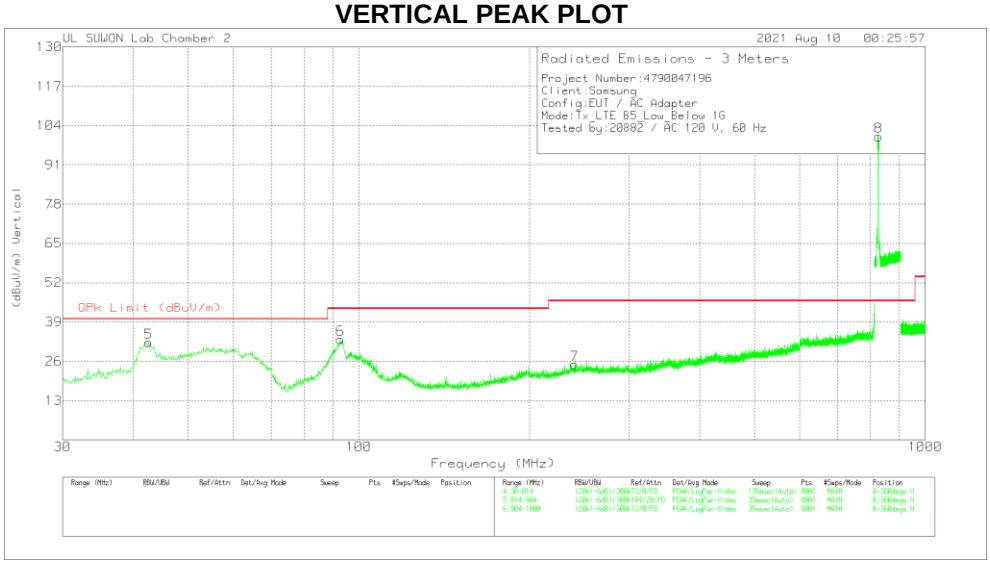
7.1.9 Below 1 GHz in the LTE Band 5

LOW CHANNEL(871.4MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

Trace Markers

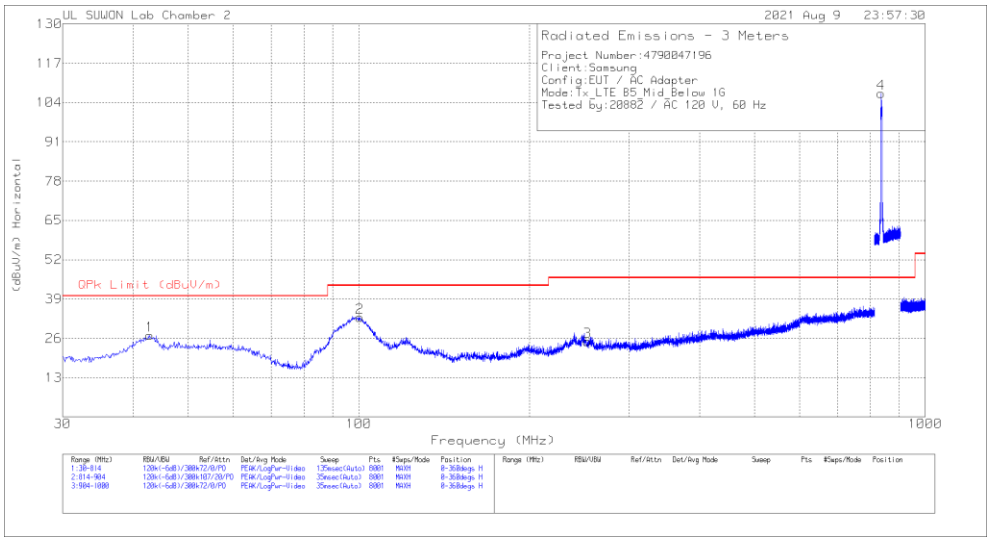
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Below_1G_Bypass [dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	42.936	6.16	Pk	19.3	.7	26.16	40	-13.84	0-360	300	H
2	98.698	14.26	Pk	17.3	1.2	32.76	43.52	-10.76	0-360	300	H
3	248.834	4.33	Pk	18.4	1.7	24.43	46.02	-21.59	0-360	400	H
4	826.3975	74.96	Pk	26.7	3.2	104.86	**46.02**	**58.84**	0-360	100	H
5	42.544	12.34	Pk	19.2	.8	32.34	40	-7.66	0-360	100	V
6	92.72	16.05	Pk	16.1	1.1	33.25	43.52	-10.27	0-360	100	V
7	240.602	5	Pk	18.2	1.7	24.9	46.02	-21.12	0-360	300	V
8	826.4763	70.41	Pk	26.7	3.2	100.31	**46.02**	**54.29**	0-360	200	V

Pk - Peak detector

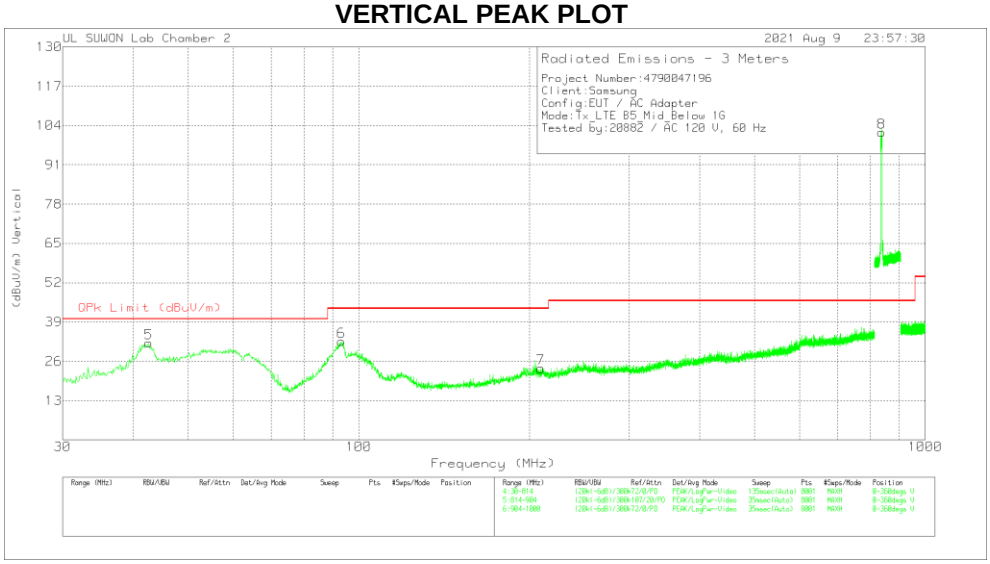
Note: Unwanted emissions captured from 824MHz to 849MHz and from 869MHz to 894MHz were the TX and RX signals generated from the call-simulator.

MID CHANNEL(881.6MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

Trace Markers

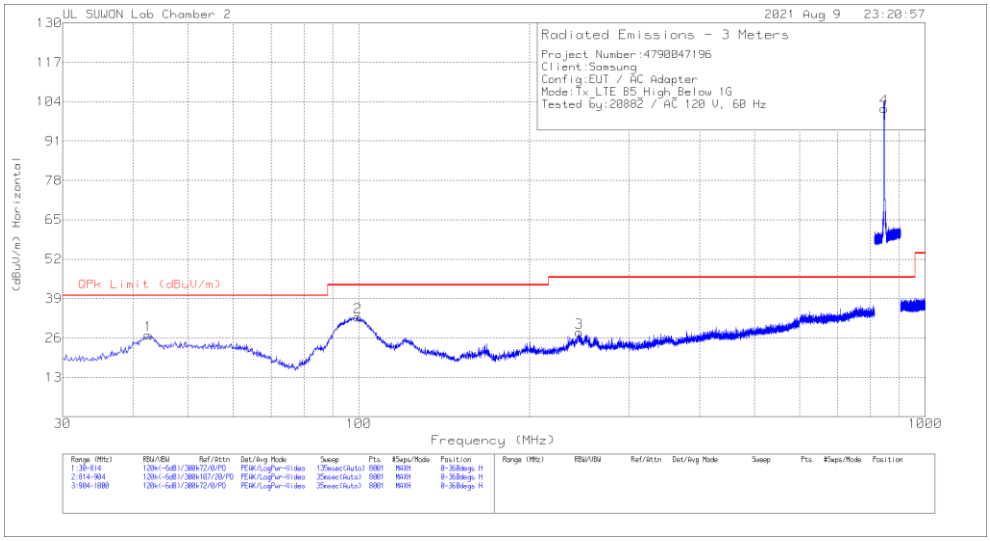
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Below_1G_Bypass [dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	42.74	7.21	Pk	19.2	.6	27.01	40	-12.99	0-360	300	H
2	100.364	14.39	Pk	17.4	1.1	32.89	43.52	-10.63	0-360	300	H
3	253.146	4.8	Pk	18.4	1.7	24.9	46.02	-21.12	0-360	300	H
4	836.1738	76.86	Pk	26.9	3.3	107.06	**46.02**	**61.04**	0-360	100	H
5	42.544	12.1	Pk	19.2	.8	32.1	40	-7.9	0-360	100	V
6	93.112	15.47	Pk	16.2	1	32.67	43.52	-10.85	0-360	100	V
7	209.536	5.51	Pk	16.6	1.6	23.71	43.52	-19.81	0-360	100	V
8	836.8263	71.54	Pk	26.9	3.3	101.74	**46.02**	**55.72**	0-360	200	V

Pk - Peak detector

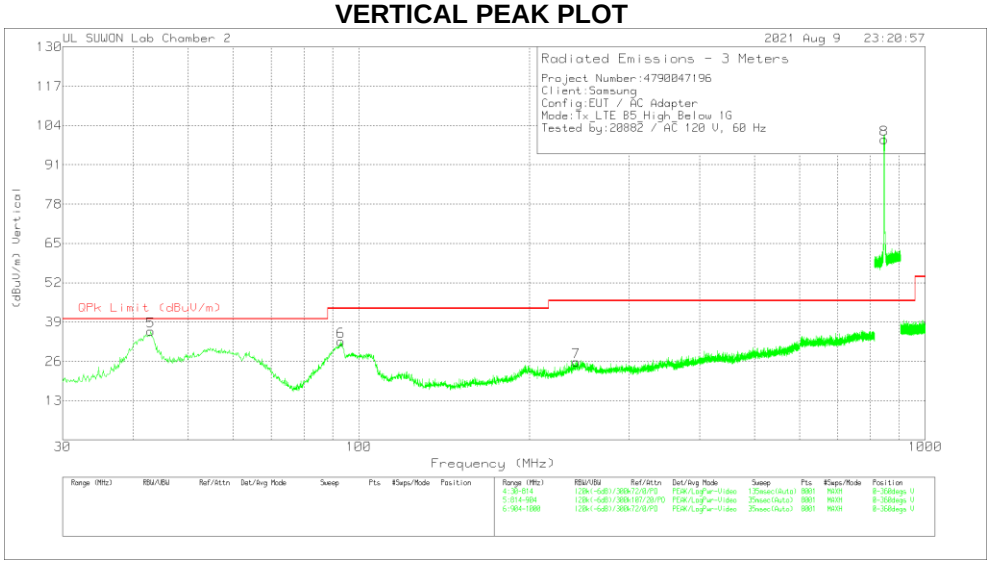
Note: Unwanted emissions captured from 824MHz to 849MHz and from 869MHz to 894MHz were the TX and RX signals generated from the call-simulator.

HIGH CHANNEL(891.6MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Below_1G_Bypass[dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	42.446	7.06	Pk	19.2	.7	26.96	40	-13.04	0-360	300	H
2	99.58	14.39	Pk	17.4	1.1	32.89	43.52	-10.63	0-360	300	H
3	244.914	7.63	Pk	18.4	1.8	27.83	46.02	-18.19	0-360	100	H
4	846.6363	71.19	Pk	27.2	3.3	101.69	**46.02**	**55.67**	0-360	100	H
5	42.936	15.96	Pk	19.3	.7	35.96	40	-4.04	0-360	100	V
6	92.916	15.23	Pk	16.2	1.1	32.53	43.52	-10.99	0-360	100	V
7	241.778	5.77	Pk	18.3	1.7	25.77	46.02	-20.25	0-360	200	V
8	846.625	68.91	Pk	27.2	3.2	99.31	**46.02**	**53.29**	0-360	200	V

Pk - Peak detector

Radiated Emissions

Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Below_1G_Bypass[dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
42.936	10.98	Qp	19.3	.7	30.98	40	-9.02	145	100	V

Qp - Quasi-Peak detector

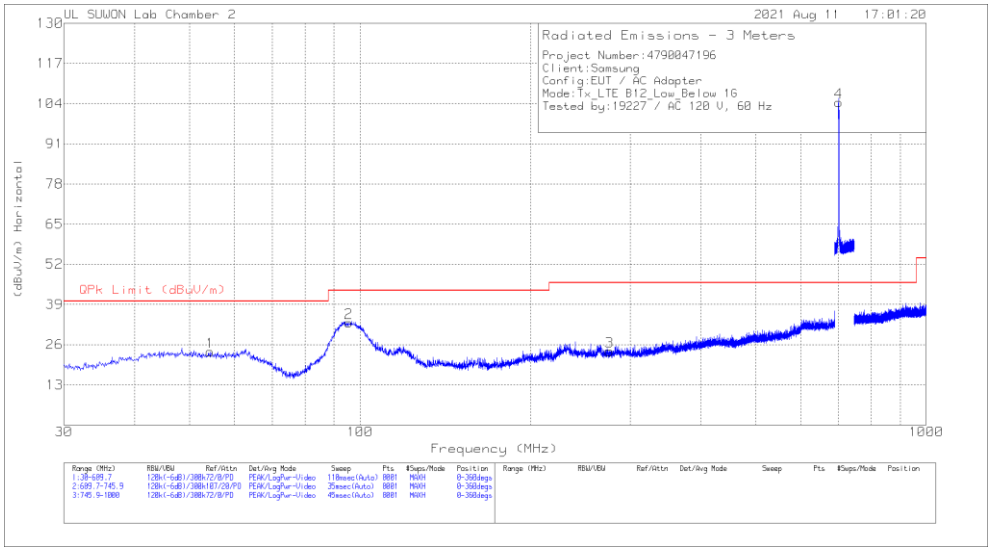
Note: Unwanted emissions captured from 824MHz to 849MHz and from 869MHz to 894MHz were the TX and RX signals generated from the call-simulator.

UL Korea, Ltd. Suwon Laboratory FORM ID: FCC_15B(04)
218 Maeyeong-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16675, Korea TEL: (031) 337-9902 FAX: (031) 213-5433

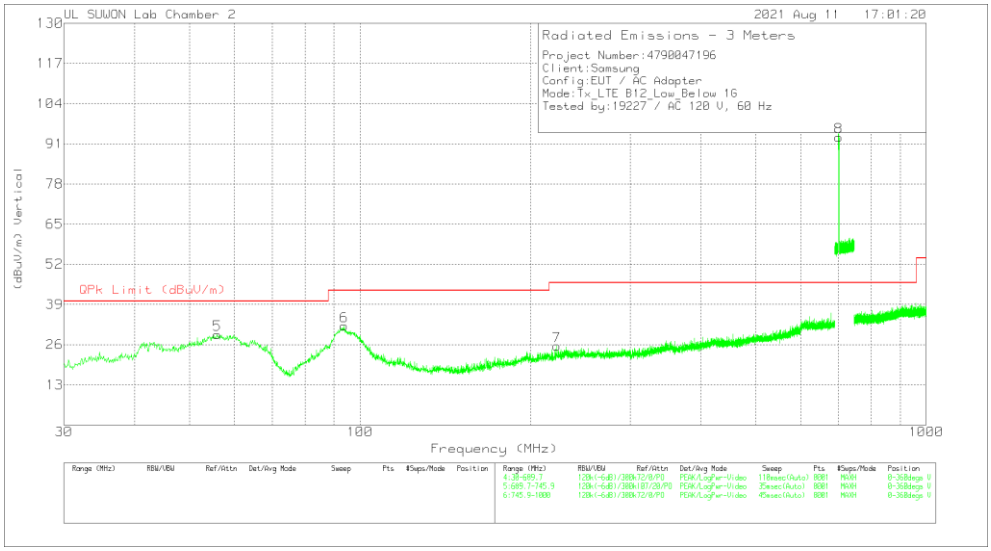
7.1.10 Below 1 GHz in the LTE Band 12

LOW CHANNEL(730.5 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

Trace Markers

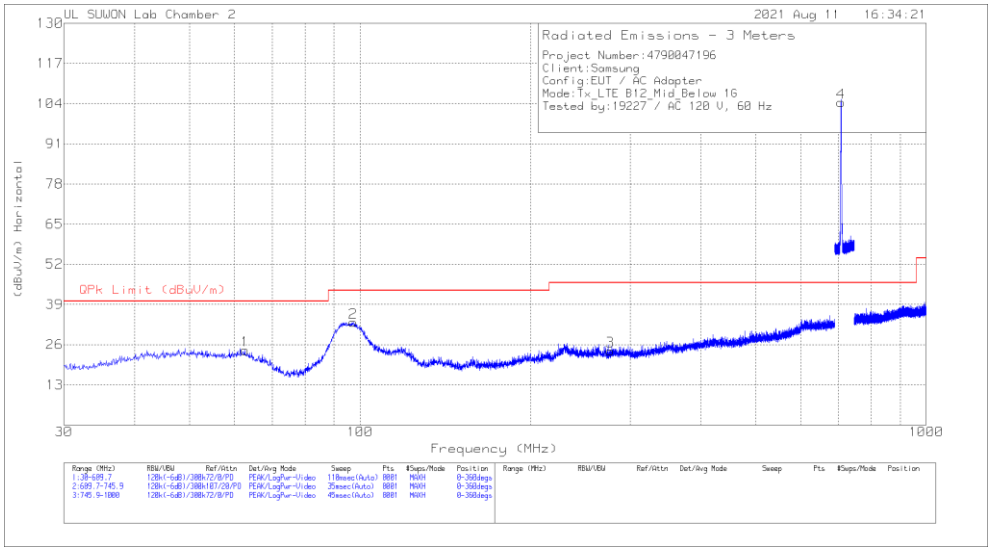
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Below_1G_Bypass [dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	54.409	3.28	Pk	19.4	1	23.68	40	-16.32	0-360	400	H
2	95.6405	15.32	Pk	16.7	1.1	33.12	43.52	-10.4	0-360	300	H
3	275.9047	3.46	Pk	18.6	1.8	23.86	46.02	-22.16	0-360	400	H
4	701.2913	76.02	Pk	25.4	3	104.42	**46.02**	**58.4**	0-360	100	H
5	55.9758	9.07	Pk	19.2	1	29.27	40	-10.73	0-360	100	V
6	93.7439	14.63	Pk	16.3	1.1	32.03	43.52	-11.49	0-360	100	V
7	222.6336	6.67	Pk	17.2	1.7	25.57	46.02	-20.45	0-360	100	V
8	700.645	64.76	Pk	25.4	3	93.16	**46.02**	**47.14**	0-360	100	V

Pk - Peak detector

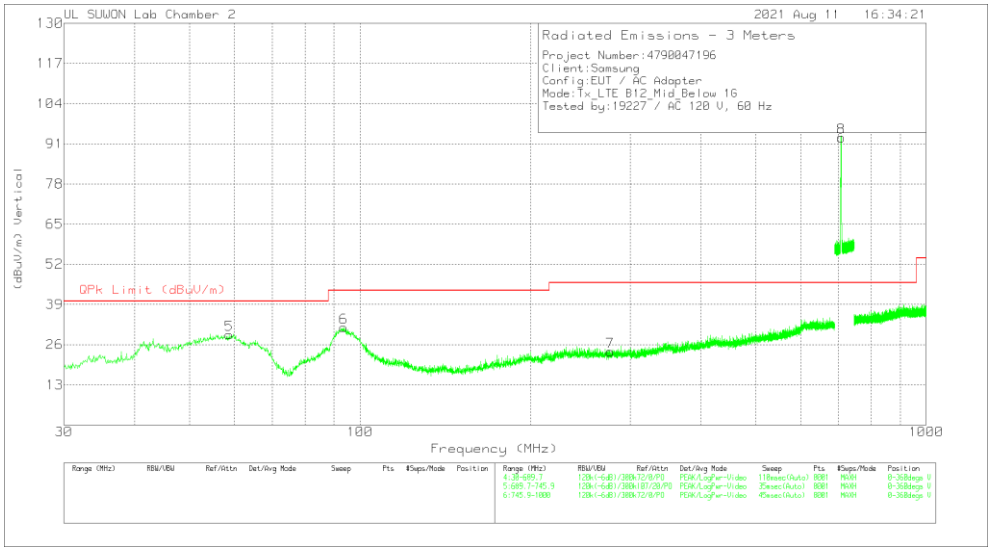
Note: Unwanted emissions captured from 699MHz to 716MHz and from 729MHz to 746MHz were the TX and RX signals generated from the call-simulator.

MID CHANNEL(737.5 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

Trace Markers

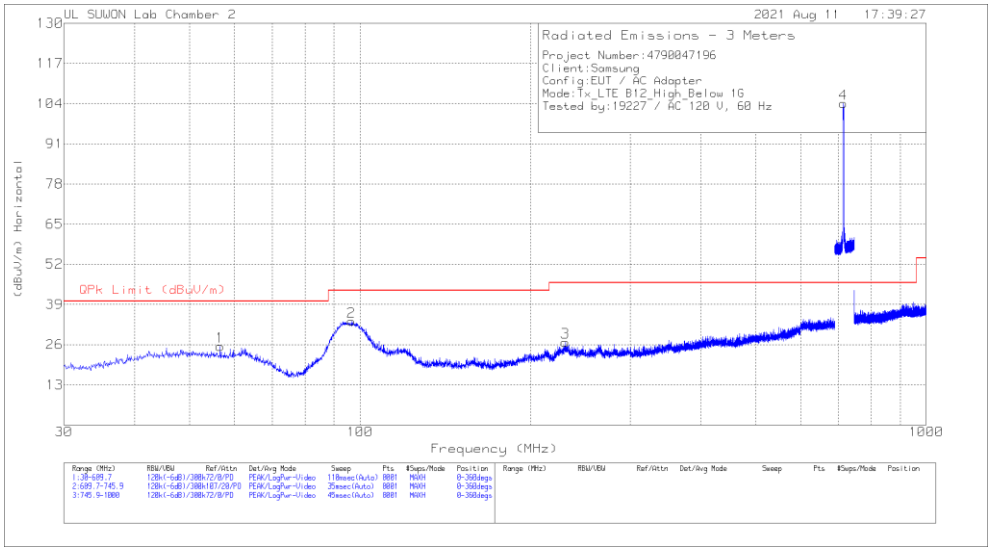
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Below_1G_Bypass [dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	62.6553	5.6	Pk	17.8	.8	24.2	40	-15.8	0-360	400	H
2	97.2898	14.89	Pk	17.1	1.2	33.19	43.52	-10.33	0-360	300	H
3	276.8942	3.57	Pk	18.6	1.8	23.97	46.02	-22.05	0-360	300	H
4	707.5786	75.78	Pk	25.6	3	104.38	**46.02**	**58.36**	0-360	100	H
5	58.7796	9.74	Pk	18.7	.8	29.24	40	-10.76	0-360	100	V
6	93.579	14.23	Pk	16.3	1	31.53	43.52	-11.99	0-360	100	V
7	276.8942	3.28	Pk	18.6	1.8	23.68	46.02	-22.34	0-360	200	V
8	708.0493	64.41	Pk	25.6	3	93.01	**46.02**	**46.99**	0-360	100	V

Pk - Peak detector

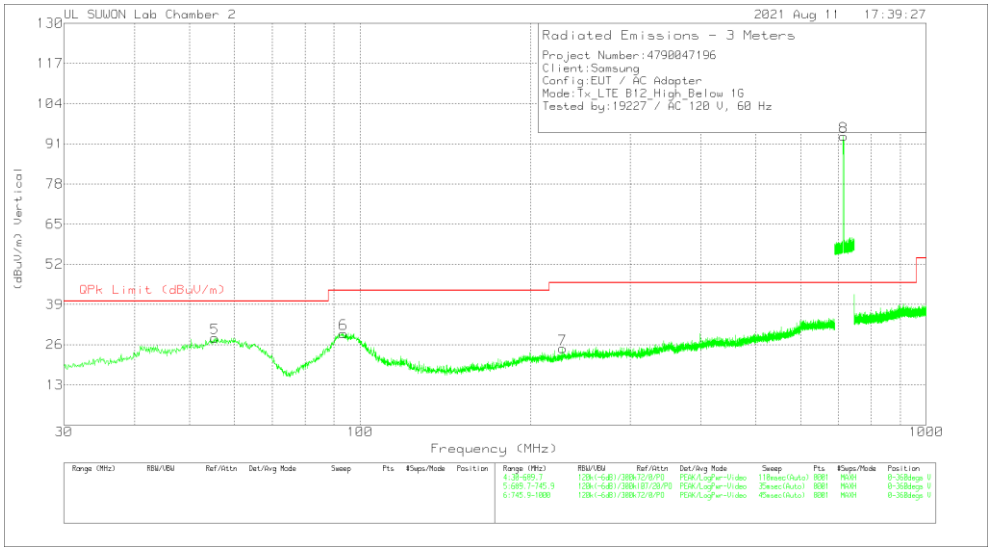
Note: Unwanted emissions captured from 699MHz to 716MHz and from 729MHz to 746MHz were the TX and RX signals generated from the call-simulator.

HIGH CHANNEL(744.5 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Below_1G_Bypass [dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	56.6355	5.55	Pk	19.1	.8	25.45	40	-14.55	0-360	100	H
2	96.6301	15.55	Pk	16.9	1.1	33.55	43.52	-9.97	0-360	300	H
3	230.55	7.51	Pk	17.6	1.7	26.81	46.02	-19.21	0-360	100	H
4	714.5615	75.45	Pk	25.6	3	104.05	**46.02**	**58.03**	0-360	100	H
5	55.3986	7.9	Pk	19.3	1	28.2	40	-11.8	0-360	200	V
6	93.4965	12.18	Pk	16.3	1.1	29.58	43.52	-13.94	0-360	200	V
7	228.0761	5.62	Pk	17.5	1.6	24.72	46.02	-21.3	0-360	200	V
8	714.8987	64.72	Pk	25.6	3.1	93.42	**46.02**	**47.4**	0-360	100	V

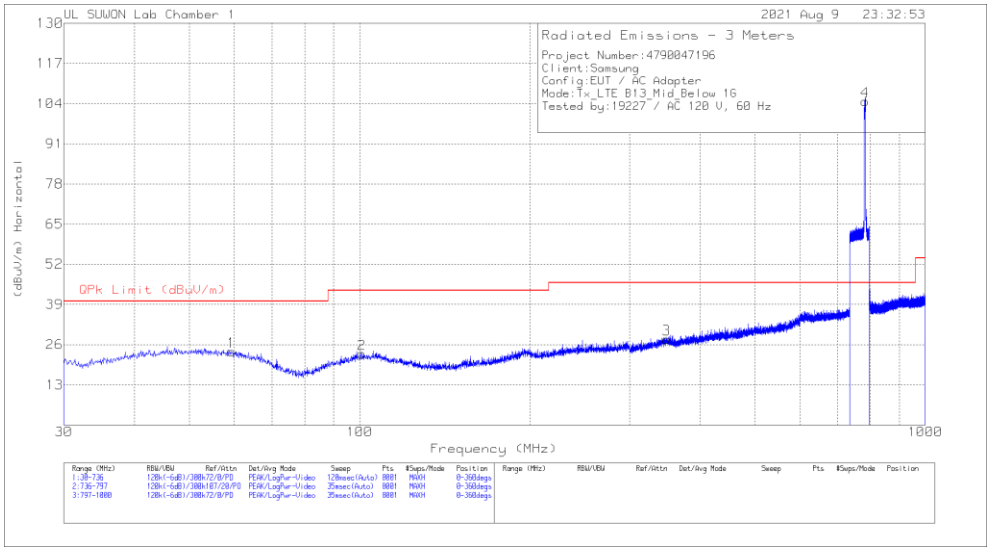
Pk - Peak detector

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

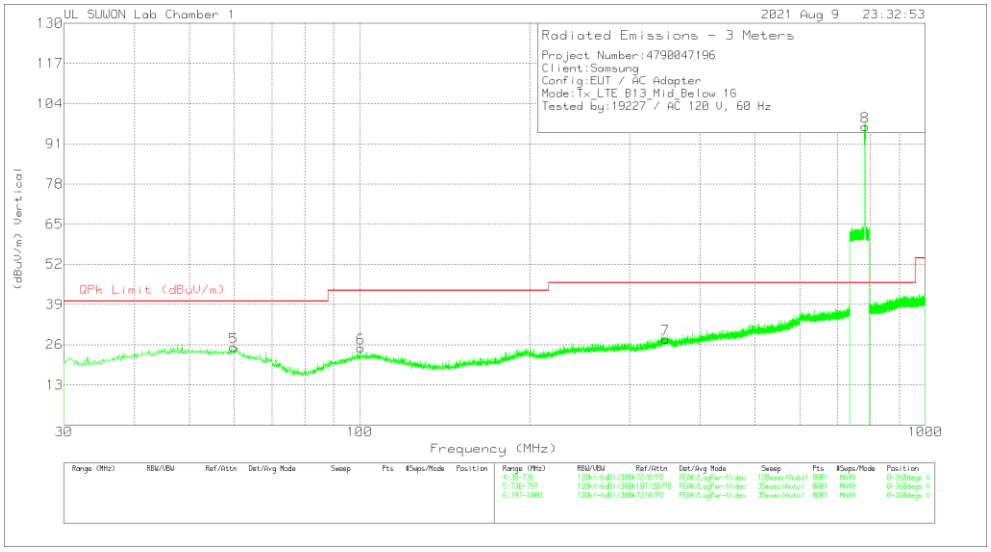
7.1.11 Below 1 GHz in the LTE Band 13

MID CHANNEL(751.0 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

Trace Markers

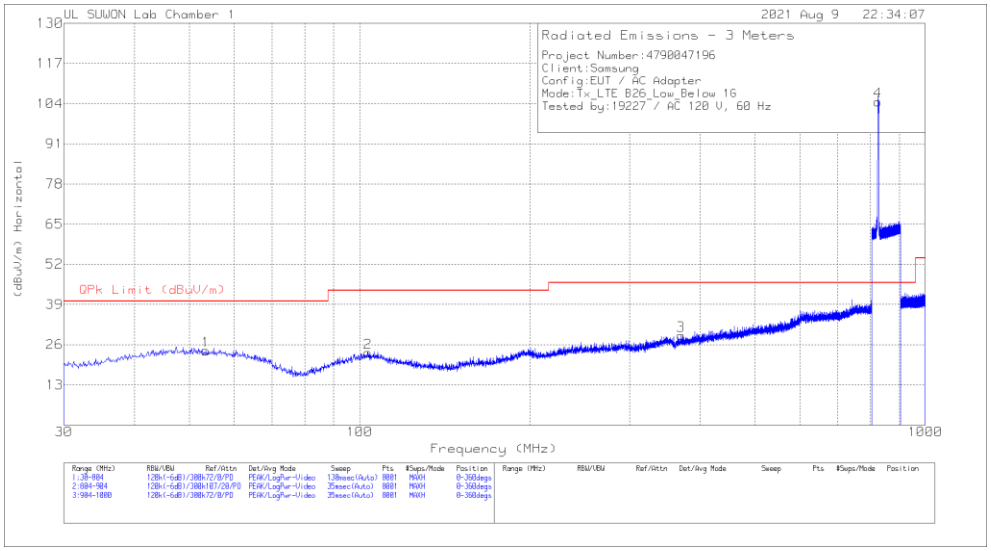
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_750	Below_1G_Bypass [dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	59.3873	3.41	Pk	18.7	1.7	23.81	40	-16.19	0-360	100	H
2	100.953	3.24	Pk	17.7	2.1	23.04	43.52	-20.48	0-360	200	H
3	349.112	2.88	Pk	21	3.9	27.78	46.02	-18.24	0-360	100	H
4	783.3741	72.36	Pk	26.6	5.8	104.76	**46.02**	**58.74**	0-360	100	H
5	59.9168	4.87	Pk	18.6	1.7	25.17	40	-14.83	0-360	100	V
6	100.4235	5.23	Pk	17.6	2.1	24.93	43.52	-18.59	0-360	100	V
7	347.6118	2.96	Pk	20.9	3.9	27.76	46.02	-18.26	0-360	200	V
8	783.5724	64.2	Pk	26.6	5.8	96.6	**46.02**	**50.58**	0-360	100	V

Pk - Peak detector

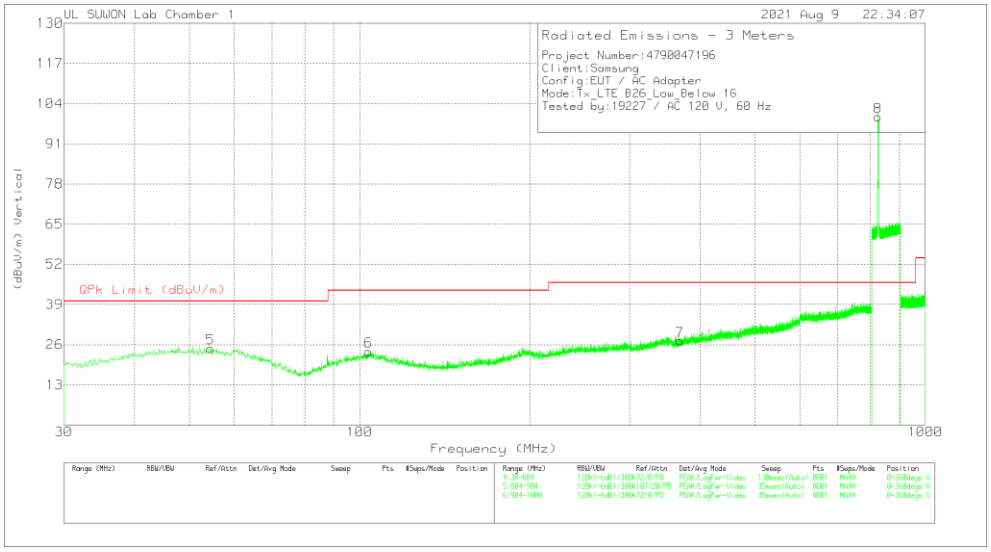
7.1.12 Below 1 GHz in the LTE Band 26

LOW CHANNEL(860.5 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

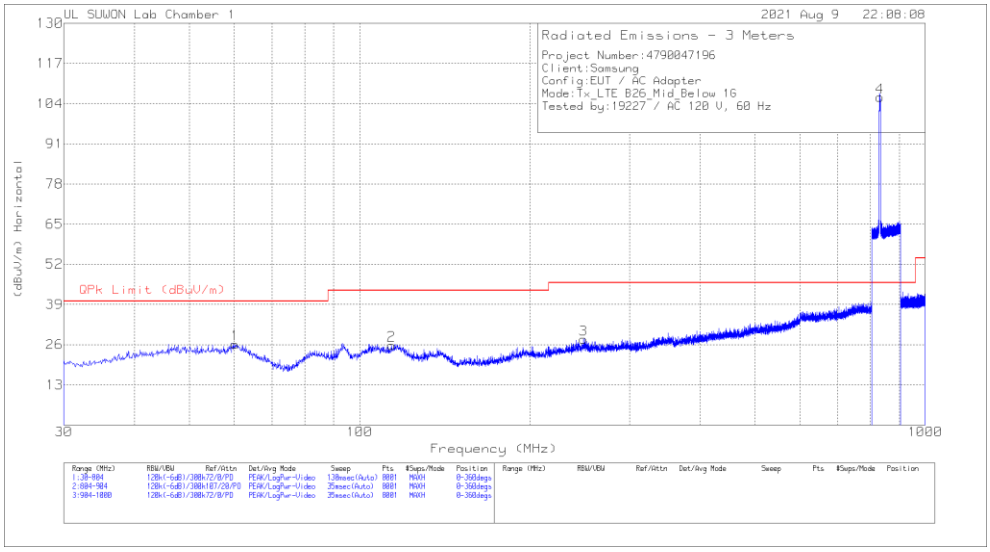
Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_750	Below_1G_Bypass[dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	53.5103	2.94	Pk	19.5	1.6	24.04	40	-15.96	0-360	400	H
2	103.4333	3.52	Pk	17.7	2.2	23.42	43.52	-20.1	0-360	300	H
3	370.173	4.25	Pk	20.7	4	28.95	46.02	-17.07	0-360	100	H
4	825.5375	71.53	Pk	27.1	6	104.63	**46.02**	**58.61**	0-360	100	H
5	54.4778	3.74	Pk	19.5	1.6	24.84	40	-15.16	0-360	200	V
6	103.6268	3.93	Pk	17.7	2.2	23.83	43.52	-19.69	0-360	100	V
7	368.4315	2.65	Pk	20.6	4	27.25	46.02	-18.77	0-360	400	V
8	825.4125	66.6	Pk	27.1	6	99.7	**46.02**	**53.68**	0-360	200	V

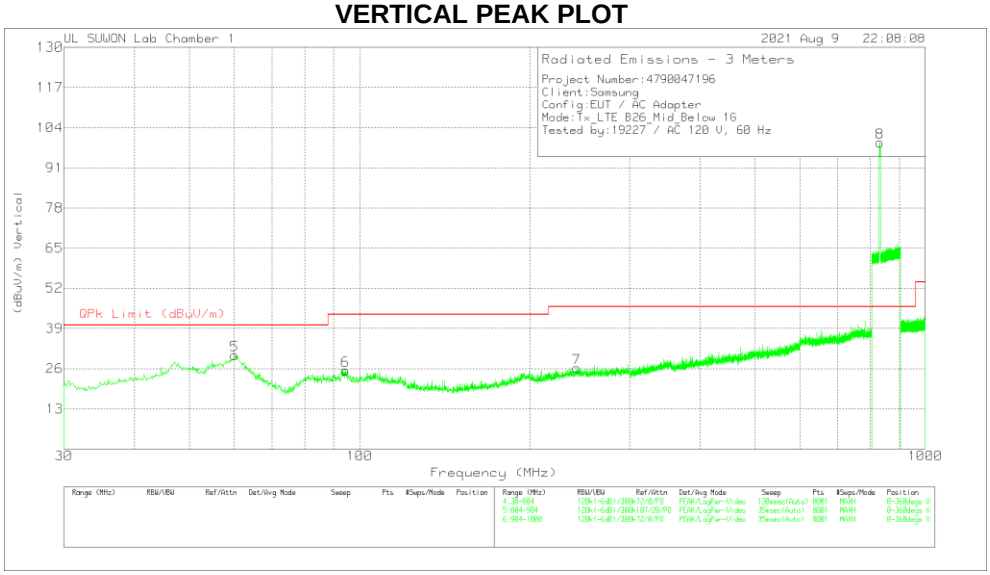
Pk - Peak detector

MID CHANNEL(876.5 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

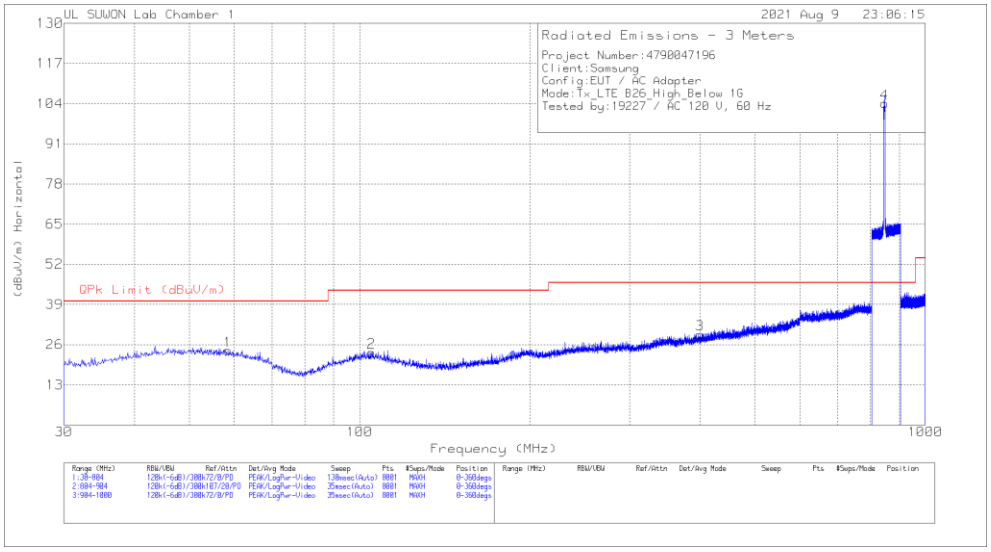
Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_750	Below_1G_Bypass [dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	60.2828	5.95	Pk	18.5	1.7	26.15	40	-13.85	0-360	400	H
2	113.979	7.21	Pk	16.3	2.3	25.81	43.52	-17.71	0-360	300	H
3	248.7518	5.91	Pk	18.5	3.3	27.71	46.02	-18.31	0-360	100	H
4	831.8875	73	Pk	27	6	106	**46.02**	**59.98**	0-360	100	H
5	60.0893	10.05	Pk	18.6	1.7	30.35	40	-9.65	0-360	300	V
6	94.3388	6.77	Pk	16.5	2.1	25.37	43.52	-18.15	0-360	200	V
7	241.9793	4.6	Pk	18.3	3.3	26.2	46.02	-19.82	0-360	200	V
8	831.3125	66.16	Pk	27	6	99.16	**46.02**	**53.14**	0-360	100	V

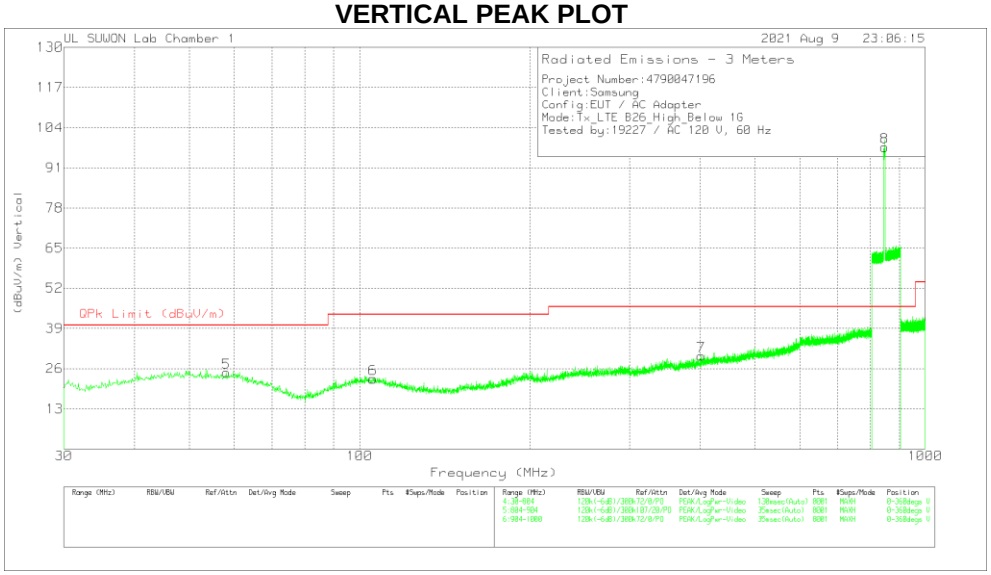
Pk - Peak detector

HIGH CHANNEL(892.5 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_750	Below_1G_Bypass [dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	58.5413	3.57	Pk	18.9	1.6	24.07	40	-15.93	0-360	300	H
2	105.078	3.59	Pk	17.7	2.2	23.49	43.52	-20.03	0-360	200	H
3	399.6818	3.71	Pk	21.4	4.2	29.31	46.02	-16.71	0-360	200	H
4	847.675	70.65	Pk	27.4	6	104.05	**46.02**	**58.03**	0-360	100	H
5	58.1543	4.12	Pk	19	1.6	24.72	40	-15.28	0-360	300	V
6	105.5618	2.81	Pk	17.7	2.2	22.71	43.52	-20.81	0-360	200	V
7	401.8103	4.4	Pk	21.5	4.2	30.1	46.02	-15.92	0-360	200	V
8	847.4875	64.37	Pk	27.3	6	97.67	**46.02**	**51.65**	0-360	100	V

Pk - Peak detector

7.2. CONDUCTED EMISSIONS

TEST PROCEDURE

ANSI C63.4-2014

LIMIT

§15.107 (a) Except for Class A digital devices, for equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50 μH/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the band edges.

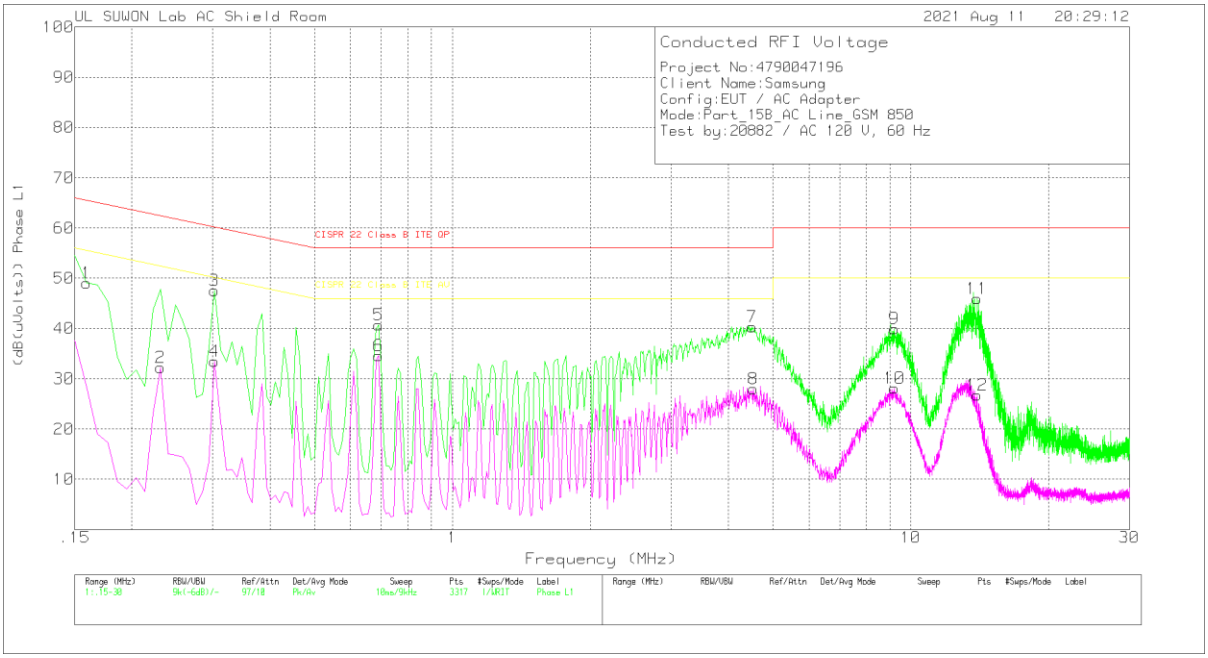
Frequency range (MHz)	Limits (dBμV)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56	56 to 46
0.50 to 5	56	46
5 to 30	60	50
Notes: 1. The lower limit shall apply at the transition frequencies 2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz.		

7.2.1 CONDUCTED EMISSIONS

6 WORST EMISSIONS(GSM850 + Rear camera on)

Line-L1 .15 – 30 MHz

LINE 1 RESULTS



Trace Markers

Range 1: Phase L1 .15 - 30MHz

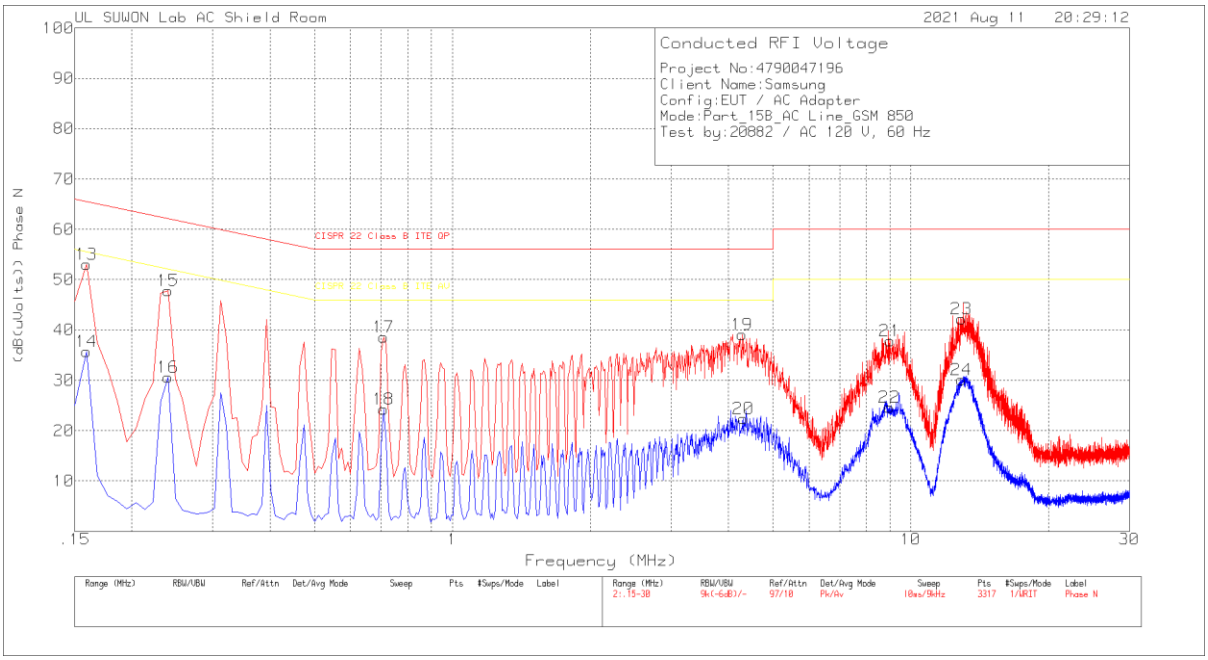
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	101836_Wit h EX_L1[dB]	CABLELOS S(dB)	Corrected Reading (dB(uVolts))	CISPR 22 Class B ITE QP	Margin (dB)	CISPR 22 Class B ITE AV	Margin (dB)
1	.159	39.03	Pk	9.9	.1	49.03	65.52	-16.49	-	-
2	.231	22.19	Av	9.8	.2	32.19	-	-	52.41	-20.22
3	.303	37.59	Pk	9.8	.2	47.59	60.16	-12.57	-	-
4	.303	23.49	Av	9.8	.2	33.49	-	-	50.16	-16.67
5	.69	30.61	Pk	9.9	.2	40.71	56	-15.29	-	-
6	.69	24.51	Av	9.9	.2	34.61	-	-	46	-11.39
7	4.506	30.25	Pk	9.8	.3	40.35	56	-15.65	-	-
8	4.542	17.91	Av	9.8	.3	28.01	-	-	46	-17.99
9	9.204	29.7	Pk	9.9	.4	40	60	-20	-	-
10	9.204	17.82	Av	9.9	.4	28.12	-	-	50	-21.88
11	13.947	35.49	Pk	10	.4	45.89	60	-14.11	-	-
12	13.938	16.35	Av	10	.4	26.75	-	-	50	-23.25

Pk - Peak detector
Av - Average detection

6 WORST EMISSIONS(GSM850 + Rear camera on)

Line-L2 .15 – 30 MHz

LINE 2 RESULTS



Trace Markers

Range 2: Phase N .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	101836_With EX_N[dB]	CABLELOSS(dB)	Corrected Reading (dB(uVolts))	CISPR 22 Class B ITE QP	Margin (dB)	CISPR 22 Class B ITE AV	Margin (dB)
13	.159	43.06	Pk	9.9	.1	53.06	65.52	-12.46	-	-
14	.159	25.68	Av	9.9	.1	35.68	-	-	55.52	-19.84
15	.24	37.97	Pk	9.7	.2	47.87	62.1	-14.23	-	-
16	.24	20.69	Av	9.7	.2	30.59	-	-	52.1	-21.51
17	.708	28.48	Pk	9.9	.2	38.58	56	-17.42	-	-
18	.708	14.17	Av	9.9	.2	24.27	-	-	46	-21.73
19	4.29	29.02	Pk	9.8	.3	39.12	56	-16.88	-	-
20	4.308	12.26	Av	9.8	.3	22.36	-	-	46	-23.64
21	9.006	27.59	Pk	9.9	.4	37.89	60	-22.11	-	-
22	8.979	14.37	Av	9.9	.4	24.67	-	-	50	-25.33
23	12.894	31.77	Pk	10	.4	42.17	60	-17.83	-	-
24	12.894	19.76	Av	10	.4	30.16	-	-	50	-19.84

Pk - Peak detector
Av - Average detection

END OF TEST REPORT

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