CERTIFICATION TEST REPORT

Report Number. : 4791083081-E1V2

Applicant	:	SAMSUNG ELECTRONICS CO., LTD. 129 SAMSUNG-RO, YEONGTONG-GU, SUWON-SI, GYEONGGI-DO, 16677, KOREA
Model	:	SC-53E, SCG27
FCC ID	:	A3LSMA556JPN
EUT Description	:	GSM/WCDMA/LTE/5G NR Phone + BT/BLE, DTS/UNII a/b/g/n/ac/ax, and NFC.
Test Standard(s)	:	FCC 47 CFR PART 15 SUBPART B

Date Of Issue:
2024-02-01

Prepared by:
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IAS ACCREDITED
Testing Laboratory
TL-637

Revision History

Rev.	Issue Date	Revisions	Revised By
V1	2024-01-30	Initial issue	Yeonhee Lim
V2	2024-02-01	Updated to address TCB's question	Yeonhee Lim

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME:	SAMSUNG ELECTRONICS CO., LTD.
EUT DESCRIPTION:	GSM/WCDMA/LTE/5G NR Phone + BT/BLE, DTS/UNII /b/g/n/ac/ax, and NFC.
MODEL NUMBER:	SC-53E, SCG27
SERIAL NUMBER:	R3CWC03BRHJ (RADIATED)
DATE TESTED:	2023-12-26 ~ 2024-01-17;

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
FCC PART 15B	Complies

UL KOREA LTD. tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by UL KOREA LTD. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL KOREA LTD. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL KOREA LTD. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by IAS, any agency of the Federal Government, or any agency of any government.

Approved & Released For
UL KOREA LTD. By:

Steven(SangYun) Kim
Suwon Lab Engineer
UL KOREA LTD.

Tested By:

Yeonhee Lim
Suwon Lab Engineer
UL KOREA LTD.

2. TEST METHODOLOGY

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

1. FCC 47 CFR Part 2.
2. FCC 47 CFR 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(3m semi-anechoic chamber)
☒ Chamber 2(3m semi-anechoic chamber)
☐ Chamber 3(3m semi-anechoic chamber)
☐ Chamber 4(3m Full-anechoic chamber)
☐ Chamber 5(3m Full-anechoic chamber)

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

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

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

4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB)
28.9 dBuV/m = 36.5 dBuV + 18.7 dB/m + 0.6 dB – 26.9 dB

Corrected Reading (dBuV) = Meter Reading (dBuV) + External Cable (dB) + Cableloss (dB)
46.62 dBuV + 9.8 dB + 0.1 dB = 56.52 dBuV

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	2.80 dB
Radiated Disturbance, 30 MHz to 1 GHz	3.92 dB
Radiated Disturbance, 1 GHz to 18 GHz	5.06 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 115:2021.

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5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is a GSM/WCDMA/LTE/5G NR Phone + BT/BLE, DTS/UNII a/b/g/n/ac/ax, and NFC. This test report addresses the WWAN Receiver mode.

Representative model	Difference	Derivative model
		SCG27
SC-53E	Hardware	Same as SC-53E
	Software	Different UI

The model SC-53E was used for final testing and is representative of the test results in this report.

5.2. TEST MODE

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

5.3. WORST-CASE ORIENTATION AND MODE

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

- **Worst Axis Condition**

Band	Worst Case		
	X	Y	Z
GSM 850	-	-	O
WCDMA B5	-	-	O
LTE B5	-	-	O
LTE B12	-	-	O

WCDMA Band 5
WCDMA Band 5(Rx Frequncy range: 871.4-891.6 MHz) is covered by GSM 850(Rx Frequency range: 869-894 MHz) due to same frequency range and maximum tune-up limit is higher than WCDMA Band5. Therefore, only Mid channel was checked.

5G NR Band n5
5G NR BAND n5 (Rx Frequncy range: 869-894 MHz) is covered by LTE B5(Rx Frequency range: 869-894 MHz) due to same frequency range and 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	Manufacture	Model	Serial Number	FCC ID
Charger	SAMSUNG	EP-TA800	R37W61WENTASEA	N/A
Data Cable	SAMSUNG	EP-DN980	GH39-02117A	N/A

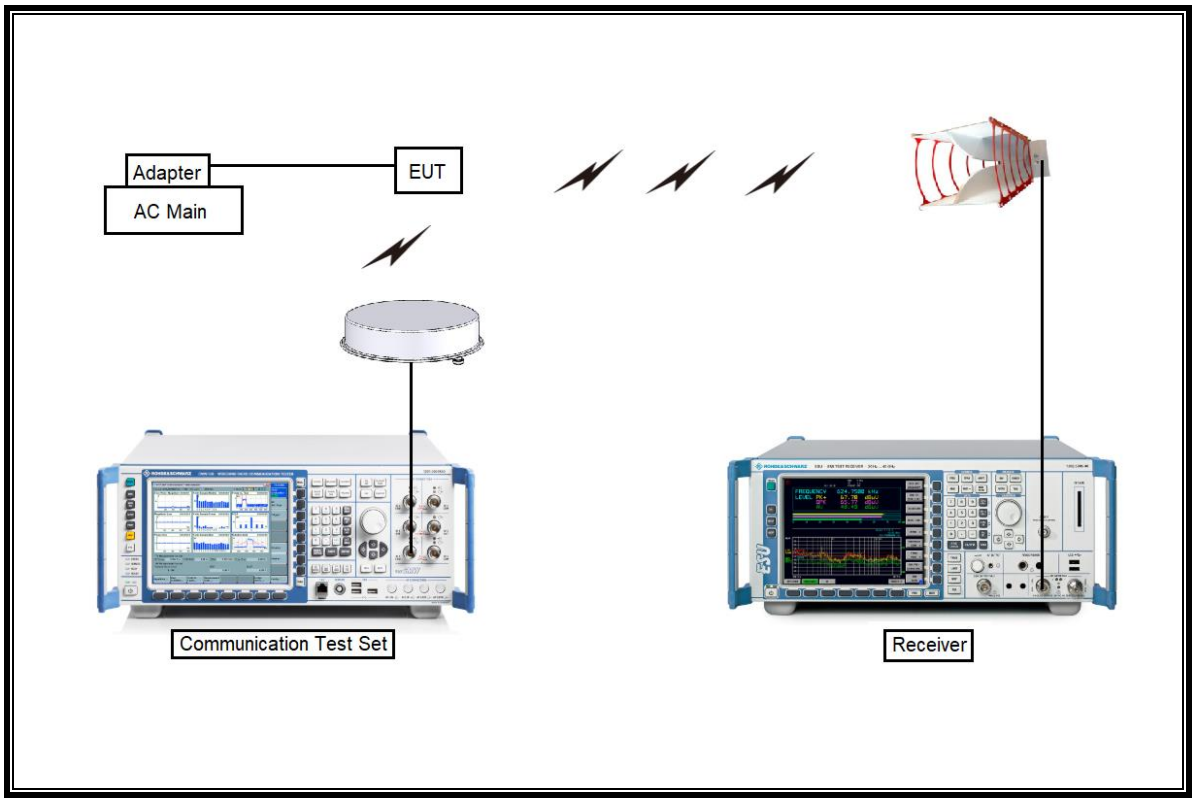
I/O CABLE

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

TEST SETUP

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

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	2025-01-17
Antenna, Horn, 40 GHz	ETS	3116C	00166155	2024-08-02
Antenna, Horn, 40 GHz	ETS	3116C	00168645	2025-10-05
Preamplifier	ETS	3115-PA	00167475	2024-07-25
Preamplifier	ETS	3116C-PA	00168841	2024-07-25
Antenna, Bilog, 30MHz-1GHz	SCHWARZBECK	VULB9163	750	2024-08-15
Antenna, Bilog, 30MHz-1GHz	SCHWARZBECK	VULB9163	845	2024-08-15
Antenna, Bilog, 30MHz-1GHz	SCHWARZBECK	VULB9163	749	2024-08-15
Communications Test Set	R&S	CMW500	169797	2024-07-23
Preamplifier, 1000 MHz	Sonoma	310N	341282	2024-07-24
Preamplifier, 1000 MHz	Sonoma	310N	370599	2024-07-24
Preamplifier, 1000 MHz	Sonoma	310N	351741	2024-07-24
Preamplifier, 18 GHz	Miteq	AFS42-00101800-25-S-42	2029169	2024-07-24
Preamplifier, 18 GHz	Miteq	AFS42-00101800-25-S-42	1896138	2024-07-25
EMI Test Receive, 40 GHz	R&S	ESU40	100439	2024-07-23
EMI Test Receive, 40 GHz	R&S	ESU40	100457	2024-07-24
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	2024-07-23
High Pass Filter 1.2GHz	Micro-Tronics	HPM50108-02	G006	2024-07-23
High Pass Filter 2.8GHz	Micro-Tronics	HPM50111-02	010	2024-07-24
High Pass Filter 2.8GHz	Micro-Tronics	HPM50111-02	011	2024-07-24
High Pass Filter 4GHz	Micro-Tronics	HPM50118-02	G001	2024-07-23
High Pass Filter 4GHz	Micro-Tronics	HPM50118-02	G002	2024-07-24
Attenuator	PASTERNACK	PE7087-10	A009	2024-07-24
Attenuator	PASTERNACK	PE7087-10	A001	2024-07-24
Attenuator	PASTERNACK	PE7087-10	A008	2024-07-27
Attenuator	PASTERNACK	PE7004-10	2	2024-07-23
Attenuator	PASTERNACK	PE7395-10	A011	2024-07-25
EMI Test Receive, 3 GHz	R&S	ESR3	101832	2024-07-23
LISN	R&S	ENV-216	101836	2024-07-23
LISN	R&S	ENV-216	101837	2024-07-23

UL Software			
Description	**Manufacturer**	**Model**	**Version**
Radiated software	UL	UL EMC	Ver 9.5
AC Line Conducted software	UL	UL EMC	Ver 9.5

7. APPLICABLE LIMITS AND TEST RESULTS

7.1. RADIATED EMISSIONS

TEST PROCEDURE

ANSI C63.4-2014

LIMIT

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

Limits for radiated disturbance of Class B ITE at measuring distance of 3 m	
Frequency range (MHz)	Quasi-peak limits (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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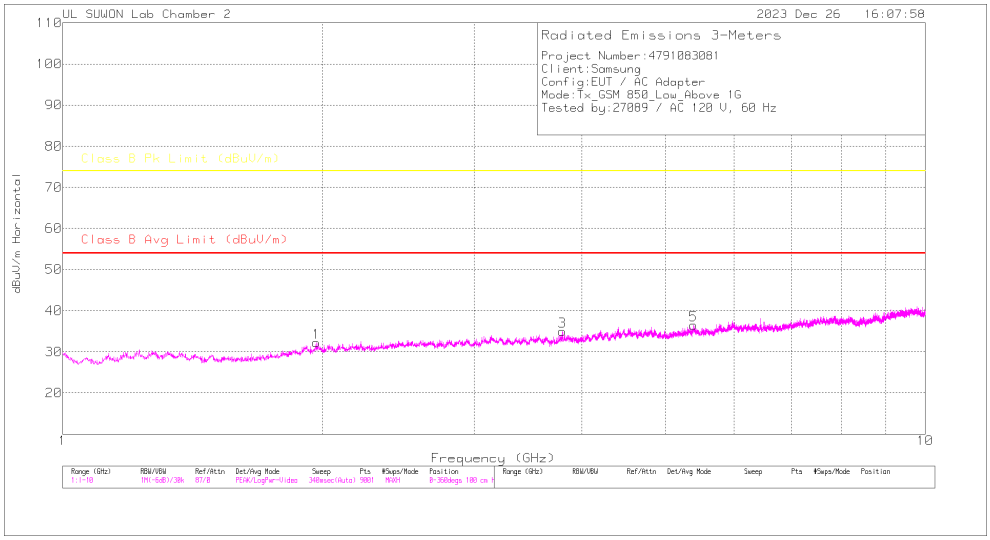
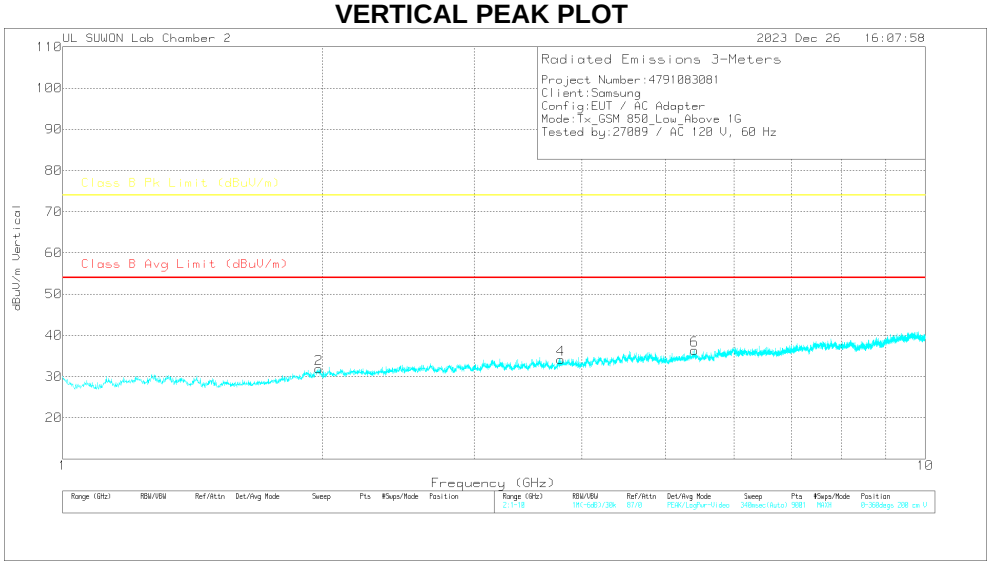
7.1.1. Above 1 GHz in the GSM850

LOW CHANNEL(869.2 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

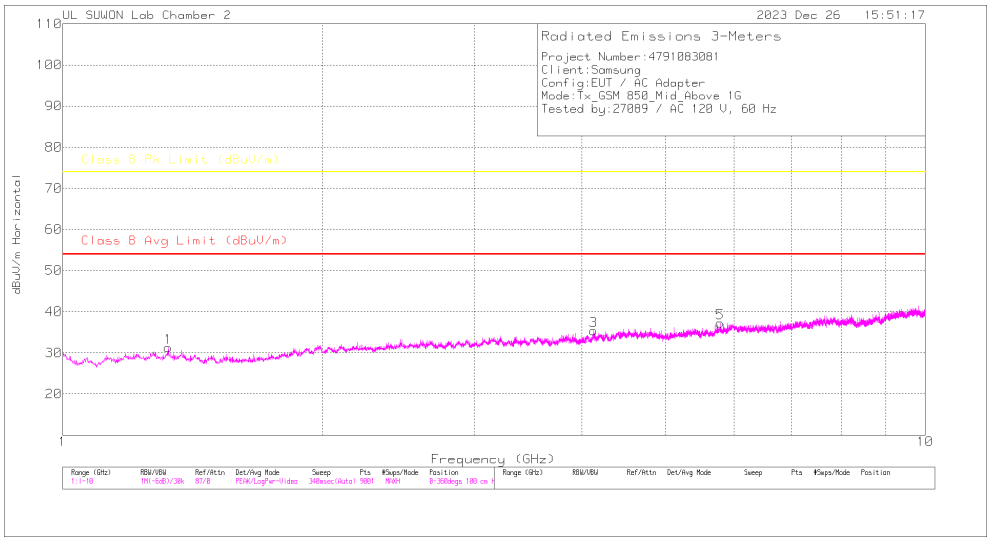
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	Antenna Correction Factor(dB/m)	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
1.967	37.87	Pk	31.1	-29.9	.6	39.67	-	-	74	-34.33	0	100	H
1.967	24.85	Ca	31.1	-29.9	.6	26.65	54	-27.35	-	-	0	100	H
1.981	36.56	Pk	31.2	-29.9	.6	38.46	-	-	74	-35.54	0	100	V
1.981	25.05	Ca	31.2	-29.9	.6	26.95	54	-27.05	-	-	0	100	V
3.798	36.36	Pk	33.1	-28.1	.5	41.86	-	-	74	-32.14	0	100	H
3.798	23.99	Ca	33.1	-28.1	.5	29.49	54	-24.51	-	-	0	100	H
3.779	36.78	Pk	33.1	-28.2	.5	42.18	-	-	74	-31.82	0	100	V
3.779	24.18	Ca	33.1	-28.2	.5	29.58	54	-24.42	-	-	0	100	V
5.39	35.24	Pk	34.4	-26.8	.4	43.24	-	-	74	-30.76	0	100	H
5.39	23.59	Ca	34.4	-26.8	.4	31.59	54	-22.41	-	-	0	100	H
5.402	35.41	Pk	34.4	-26.8	.4	43.41	-	-	74	-30.59	0	100	V
5.402	23.43	Ca	34.4	-26.8	.4	31.43	54	-22.57	-	-	0	100	V

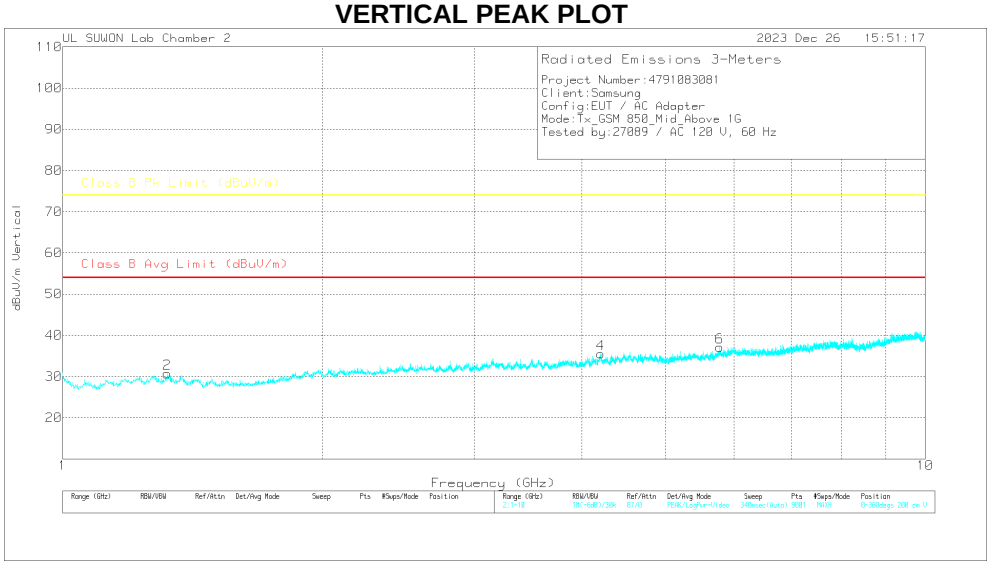
Pk - Peak detector
Ca - CISPR average detection

MID CHANNEL(881.6 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

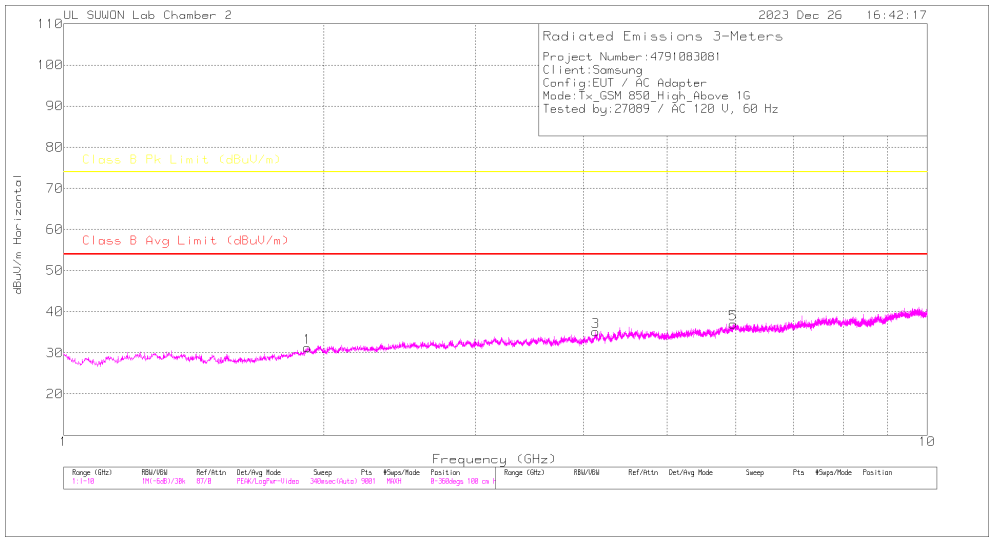
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	Antenna Correction Factor(dB/m)	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
1.326	38.2	Pk	29.5	-30.7	.8	37.8	-	-	74	-36.2	0	100	H
1.326	25.97	Ca	29.5	-30.7	.8	25.57	54	-28.43	-	-	0	100	H
1.321	37.26	Pk	29.5	-30.8	.8	36.76	-	-	74	-37.24	0	100	V
1.321	25.9	Ca	29.5	-30.8	.8	25.4	54	-28.6	-	-	0	100	V
4.126	35.85	Pk	33.2	-27.2	.5	42.35	-	-	74	-31.65	0	100	H
4.126	24.15	Ca	33.2	-27.2	.5	30.65	54	-23.35	-	-	0	100	H
4.207	35.67	Pk	33.3	-27.1	.4	42.27	-	-	74	-31.73	0	100	V
4.207	23.96	Ca	33.3	-27.1	.4	30.56	54	-23.44	-	-	0	100	V
5.785	34.97	Pk	34.6	-25.9	.6	44.27	-	-	74	-29.73	0	100	H
5.785	22.96	Ca	34.6	-25.9	.6	32.26	54	-21.74	-	-	0	100	H
5.777	35.95	Pk	34.6	-25.9	.6	45.25	-	-	74	-28.75	0	100	V
5.777	23.13	Ca	34.6	-25.9	.6	32.43	54	-21.57	-	-	0	100	V

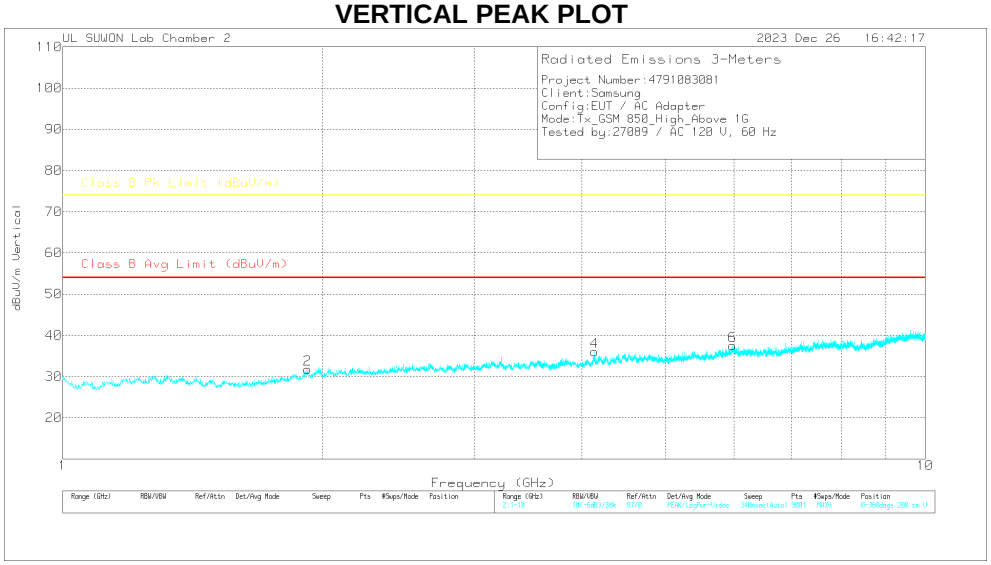
Pk - Peak detector
Ca - CISPR average detection

HIGH CHANNEL(893.8 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

Radiated Emissions

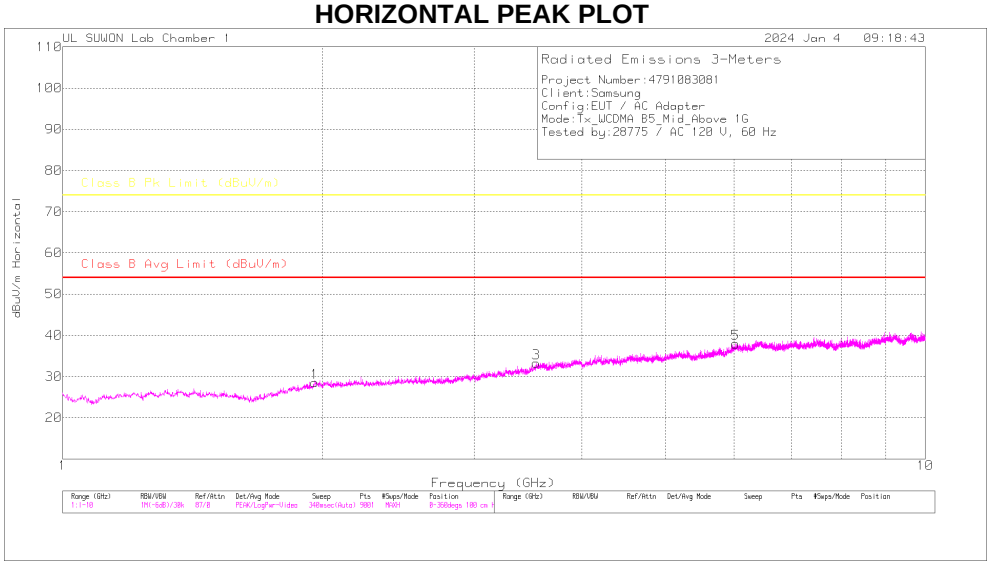
Frequency (GHz)	Meter Reading (dBuV)	Det	Antenna Correction Factor(dB/m)	1-18GHz(dB)	1GHz_HP[dB]	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Av(CISPR)Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.914	37.72	Pk	30.8	-29.9	.7	39.32	-	-	74	-34.68	1	100	H
1.914	25.14	Ca	30.8	-29.9	.7	26.74	54	-27.26	-	-	1	100	H
1.924	37.18	Pk	30.9	-29.9	.7	38.88	-	-	74	-35.12	1	100	V
1.924	24.92	Ca	30.9	-29.9	.7	26.62	54	-27.38	-	-	1	100	V
4.129	36.46	Pk	33.2	-27.3	.5	42.86	-	-	74	-31.14	1	100	H
4.129	24.15	Ca	33.2	-27.3	.5	30.55	54	-23.45	-	-	1	100	H
4.136	35.7	Pk	33.2	-27.3	.5	42.1	-	-	74	-31.9	1	100	V
4.136	24.08	Ca	33.2	-27.3	.5	30.48	54	-23.52	-	-	1	100	V
5.965	35.86	Pk	35	-26.3	.6	45.16	-	-	74	-28.84	1	100	H
5.965	23.32	Ca	35	-26.3	.6	32.62	54	-21.38	-	-	1	100	H
5.98	36.03	Pk	35	-26.3	.6	45.33	-	-	74	-28.67	1	100	V
5.98	23.53	Ca	35	-26.3	.6	32.83	54	-21.17	-	-	1	100	V

Pk - Peak detector
Ca - CISPR average detection

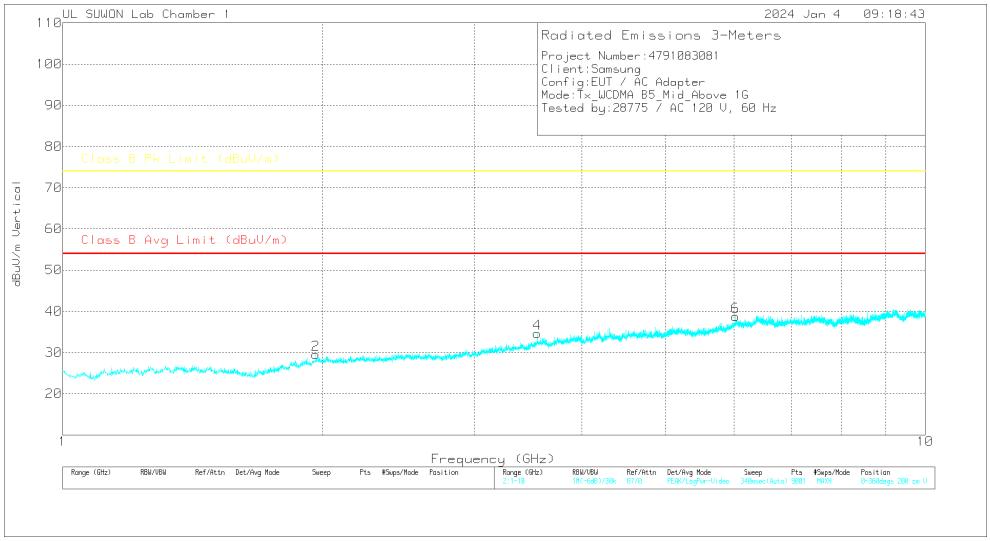
7.1.2. Above 1 GHz in the WCDMA Band 5

MID CHANNEL(881.6 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

Radiated Emissions

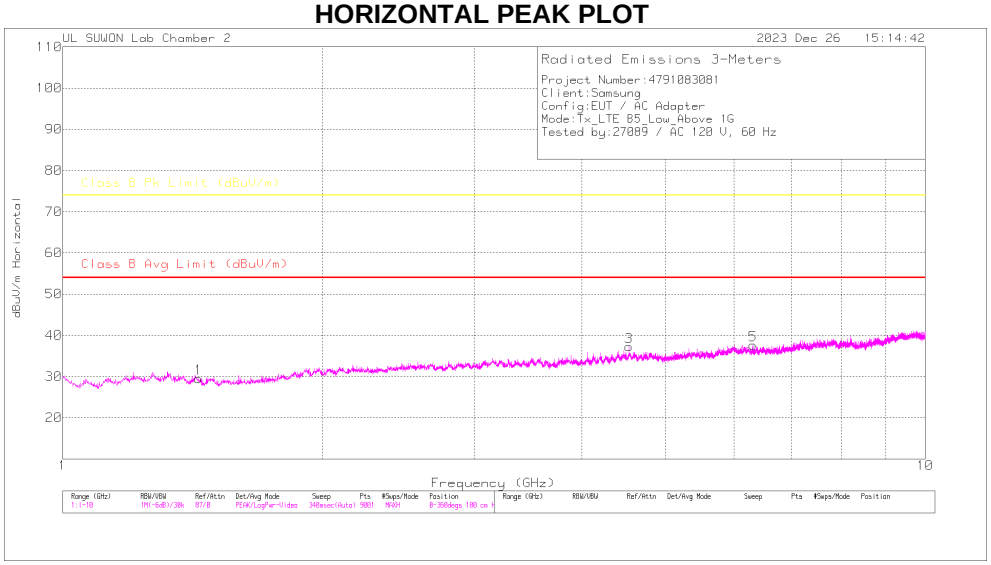
Frequency (GHz)	Meter Reading (dBuV)	Det	Antenna Correction Factor(dB/m)	1-18GHz(dB)	1G HPF[dB]	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Av(CISPR)Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.959	42.6	Pk	31.2	-38.5	.9	36.2	-	-	74	-37.8	0	100	H
1.959	30.3	Ca	31.2	-38.5	.9	23.9	54	-30.1	-	-	0	100	H
1.966	42.61	Pk	31.2	-38.5	.9	36.21	-	-	74	-37.79	0	100	V
1.966	30.42	Ca	31.2	-38.5	.9	24.02	54	-29.98	-	-	0	100	V
3.542	41.16	Pk	33.3	-35.3	.9	40.06	-	-	74	-33.94	0	100	H
3.542	29.02	Ca	33.3	-35.3	.9	27.92	54	-26.08	-	-	0	100	H
3.55	40.9	Pk	33.3	-35.2	.9	39.9	-	-	74	-34.1	0	100	V
3.55	29.14	Ca	33.3	-35.2	.9	28.14	54	-25.86	-	-	0	100	V
6.025	40.84	Pk	35.2	-31.4	.7	45.34	-	-	74	-28.66	0	100	H
6.025	28.78	Ca	35.2	-31.4	.7	33.28	54	-20.72	-	-	0	100	H
6.028	40.66	Pk	35.2	-31.4	.7	45.16	-	-	74	-28.84	0	100	V
6.028	28.77	Ca	35.2	-31.4	.7	33.27	54	-20.73	-	-	0	100	V

Pk - Peak detector
Ca - CISPR average detection

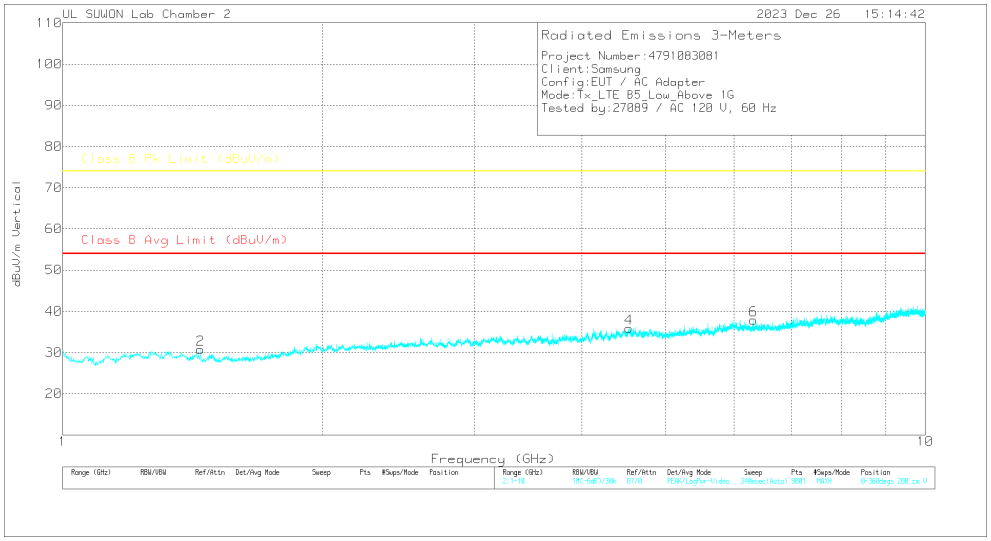
7.1.3. Above 1 GHz in the LTE Band 5

LOW CHANNEL(874.0 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

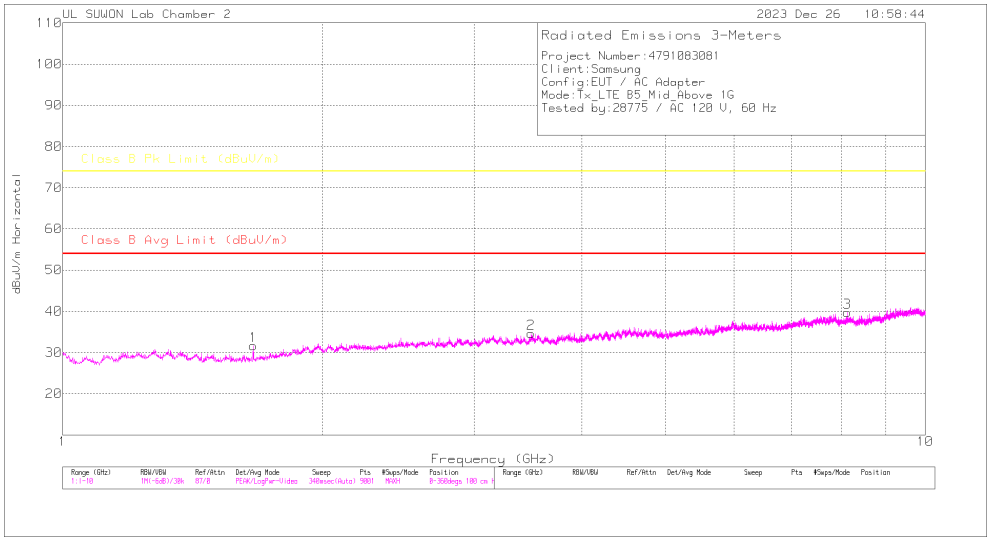
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	Antenna Correction Factor(dB/m)	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
1.437	37.96	Pk	28.8	-30.6	.8	36.96	-	-	74	-37.04	0	100	H
1.437	25.7	Ca	28.8	-30.6	.8	24.7	54	-29.3	-	-	0	100	H
1.445	38.01	Pk	28.7	-30.6	.8	36.91	-	-	74	-37.09	0	100	V
1.445	25.66	Ca	28.7	-30.6	.8	24.56	54	-29.44	-	-	0	100	V
4.534	36.66	Pk	33.9	-27.4	.5	43.66	-	-	74	-30.34	0	100	H
4.534	24.28	Ca	33.9	-27.4	.5	31.28	54	-22.72	-	-	0	100	H
4.537	36.05	Pk	33.9	-27.4	.5	43.05	-	-	74	-30.95	0	100	V
4.537	24.24	Ca	33.9	-27.4	.5	31.24	54	-22.76	-	-	0	100	V
6.312	34.62	Pk	35.3	-26.1	.4	44.22	-	-	74	-29.78	0	100	H
6.312	23.1	Ca	35.3	-26.1	.4	32.7	54	-21.3	-	-	0	100	H
6.319	35.2	Pk	35.3	-26.1	.4	44.8	-	-	74	-29.2	0	100	V
6.319	23.01	Ca	35.3	-26.1	.4	32.61	54	-21.39	-	-	0	100	V

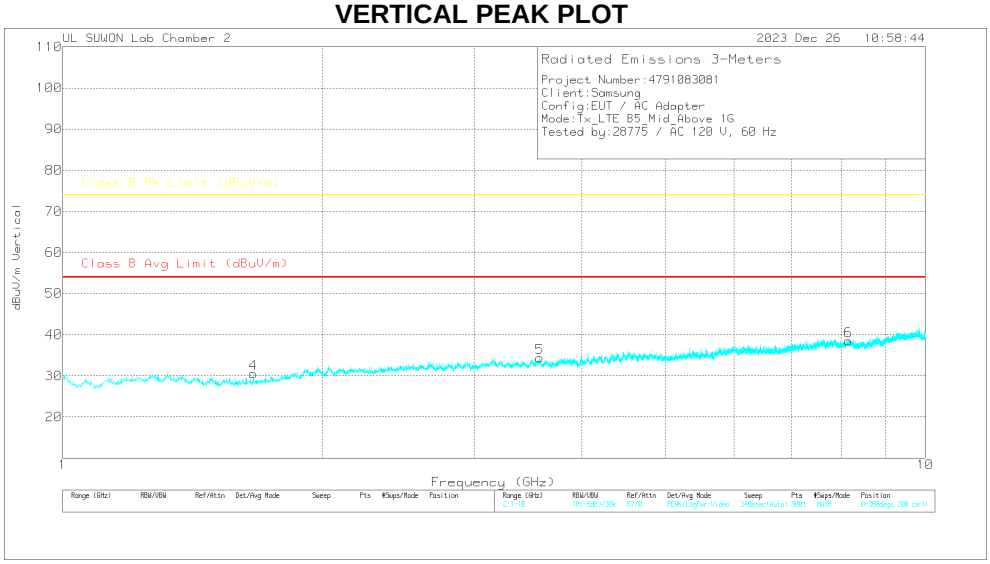
Pk - Peak detector
Ca - CISPR average detection

MID CHANNEL(881.5 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

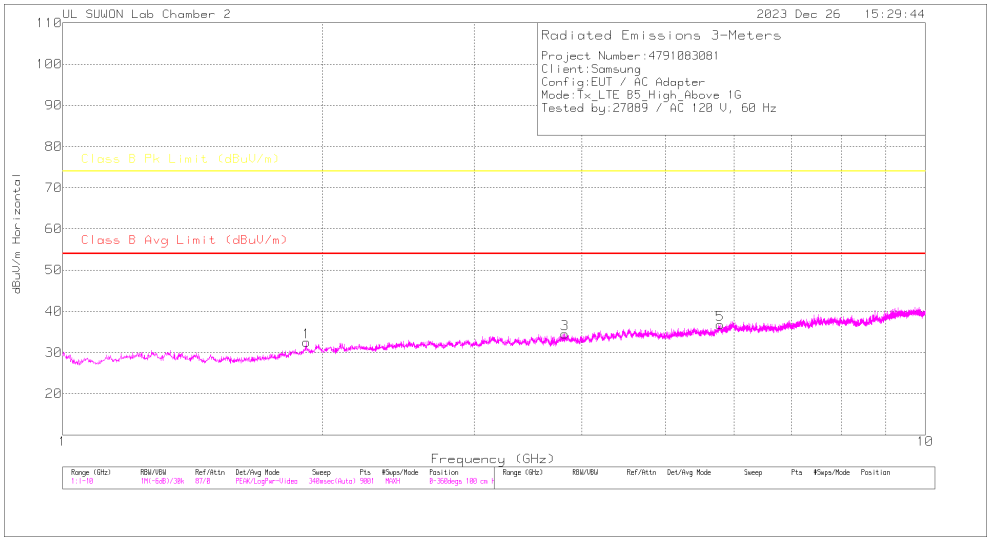
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	Antenna Correction Factor(dB/m)	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
1.664	38.94	Pk	28.4	-30.3	.8	37.84	-	-	74	-36.16	0	100	H
1.664	27.3	Ca	28.4	-30.3	.8	26.2	54	-27.8	-	-	0	100	H
3.491	35.59	Pk	32.7	-27.7	.5	41.09	-	-	74	-32.91	0	100	H
3.491	23.65	Ca	32.7	-27.7	.5	29.15	54	-24.85	-	-	0	100	H
8.12	33.69	Pk	35.9	-23.2	.5	46.89	-	-	74	-27.11	0	100	H
8.12	21.69	Ca	35.9	-23.2	.5	34.89	54	-19.11	-	-	0	100	H
1.664	38.12	Pk	28.4	-30.3	.8	37.02	-	-	74	-36.98	0	100	V
1.664	26.13	Ca	28.4	-30.3	.8	25.03	54	-28.97	-	-	0	100	V
3.572	35.74	Pk	32.7	-28.1	.6	40.94	-	-	74	-33.06	0	100	V
3.572	23.99	Ca	32.7	-28.1	.6	29.19	54	-24.81	-	-	0	100	V
8.141	33.7	Pk	35.9	-23.4	.5	46.7	-	-	74	-27.3	0	100	V
8.141	21.67	Ca	35.9	-23.4	.5	34.67	54	-19.33	-	-	0	100	V

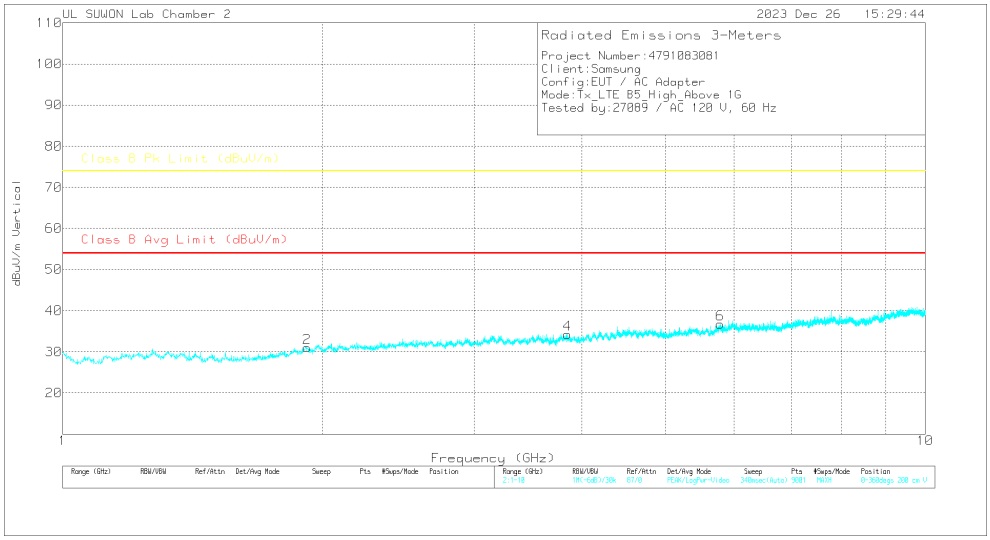
Pk - Peak detector
Ca - CISPR average detection

HIGH CHANNEL(889.0 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

Radiated Emissions

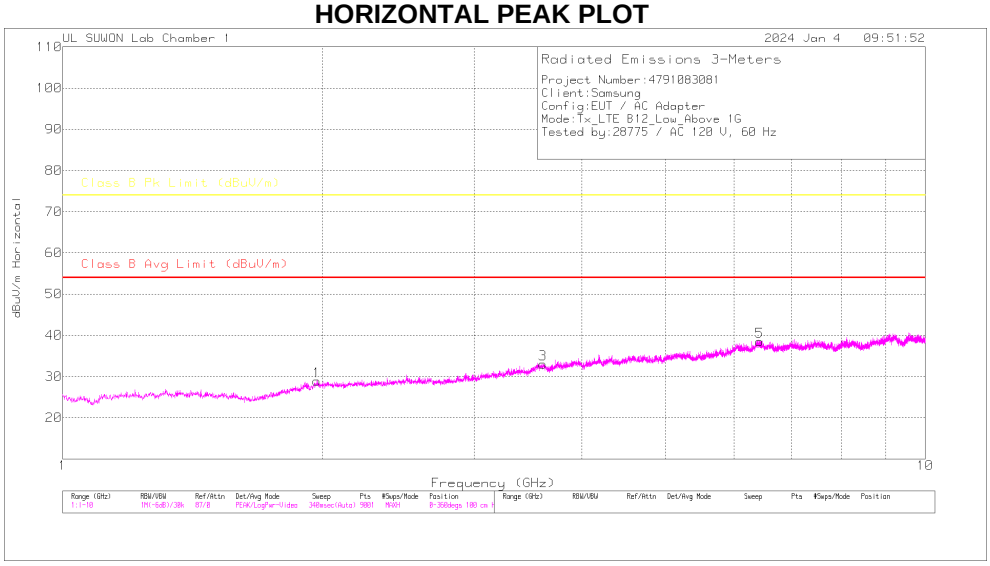
Frequency (GHz)	Meter Reading (dBuV)	Det	Antenna Correction Factor(dB/m)	1-18GHz(dB)	1GHz_HP[dB]	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Av(CISPR)Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.917	36.81	Pk	30.8	-29.9	.7	38.41	-	-	74	-35.59	0	100	H
1.917	25.15	Ca	30.8	-29.9	.7	26.75	54	-27.25	-	-	0	100	H
1.921	36.96	Pk	30.9	-29.9	.7	38.66	-	-	74	-35.34	0	100	V
1.921	25.1	Ca	30.9	-29.9	.7	26.8	54	-27.2	-	-	0	100	V
3.823	36.09	Pk	33.1	-28	.6	41.79	-	-	74	-32.21	0	100	H
3.823	23.9	Ca	33.1	-28	.6	29.6	54	-24.4	-	-	0	100	H
3.848	35.95	Pk	33.2	-28.1	.6	41.65	-	-	74	-32.35	0	100	V
3.848	24.04	Ca	33.2	-28.1	.6	29.74	54	-24.26	-	-	0	100	V
5.782	35.22	Pk	34.6	-25.9	.6	44.52	-	-	74	-29.48	0	100	H
5.782	23.07	Ca	34.6	-25.9	.6	32.37	54	-21.63	-	-	0	100	H
5.784	35.56	Pk	34.6	-25.9	.6	44.86	-	-	74	-29.14	0	100	V
5.784	23.06	Ca	34.6	-25.9	.6	32.36	54	-21.64	-	-	0	100	V

Pk - Peak detector
Ca - CISPR average detection

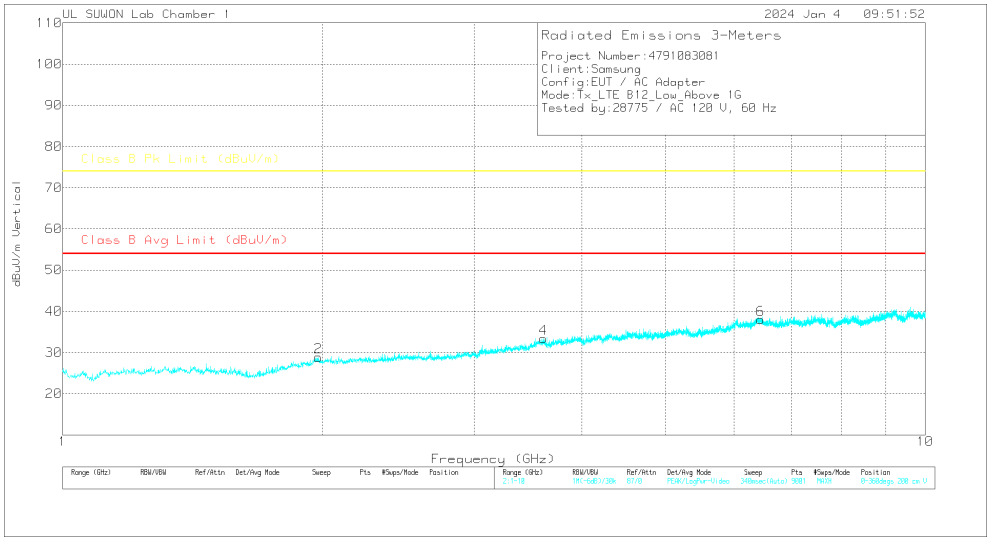
7.1.4. Above 1 GHz in the LTE Band 12

LOW CHANNEL(734.0 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

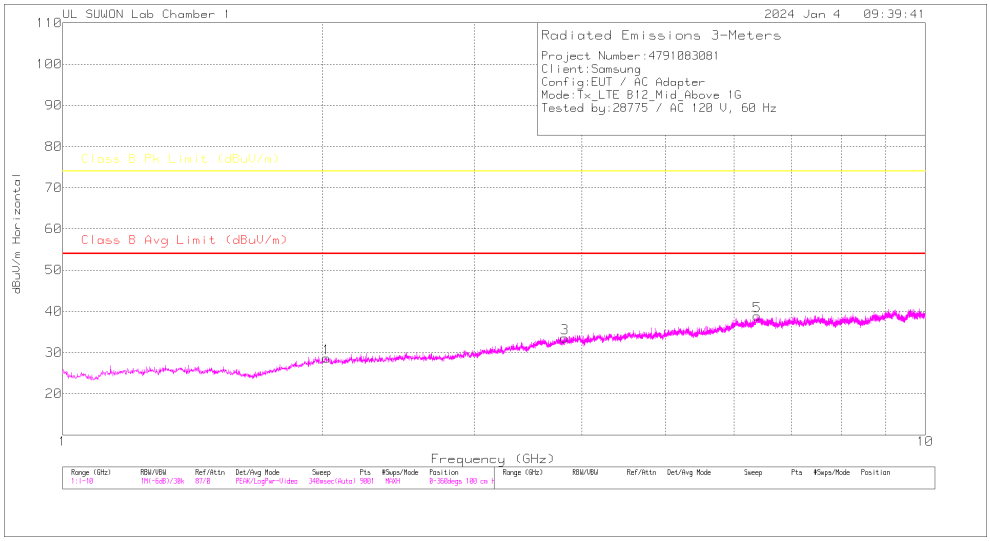
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	Antenna Correction Factor(dB/m)	1-18GHz(dB)	1G HPF[dB]	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Av(CISPR)Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.971	43.36	Pk	31.2	-38.5	.9	36.96	-	-	74	-37.04	0	100	H
1.971	30.22	Ca	31.2	-38.5	.9	23.82	54	-30.18	-	-	0	100	H
1.978	42.26	Pk	31.3	-38.5	.9	35.96	-	-	74	-38.04	0	100	V
1.978	30.2	Ca	31.3	-38.5	.9	23.9	54	-30.1	-	-	0	100	V
3.605	41.86	Pk	33.7	-35.1	.7	41.16	-	-	74	-32.84	0	100	H
3.605	29.39	Ca	33.7	-35.1	.7	28.69	54	-25.31	-	-	0	100	H
3.608	41.57	Pk	33.7	-35.2	.7	40.77	-	-	74	-33.23	0	100	V
3.608	29.43	Ca	33.7	-35.2	.7	28.63	54	-25.37	-	-	0	100	V
6.427	40.09	Pk	35.3	-30.9	.8	45.29	-	-	74	-28.71	0	100	H
6.427	28.4	Ca	35.3	-30.9	.8	33.6	54	-20.4	-	-	0	100	H
6.448	41.15	Pk	35.3	-31	.8	46.25	-	-	74	-27.75	0	100	V
6.448	28.58	Ca	35.3	-31	.8	33.68	54	-20.32	-	-	0	100	V

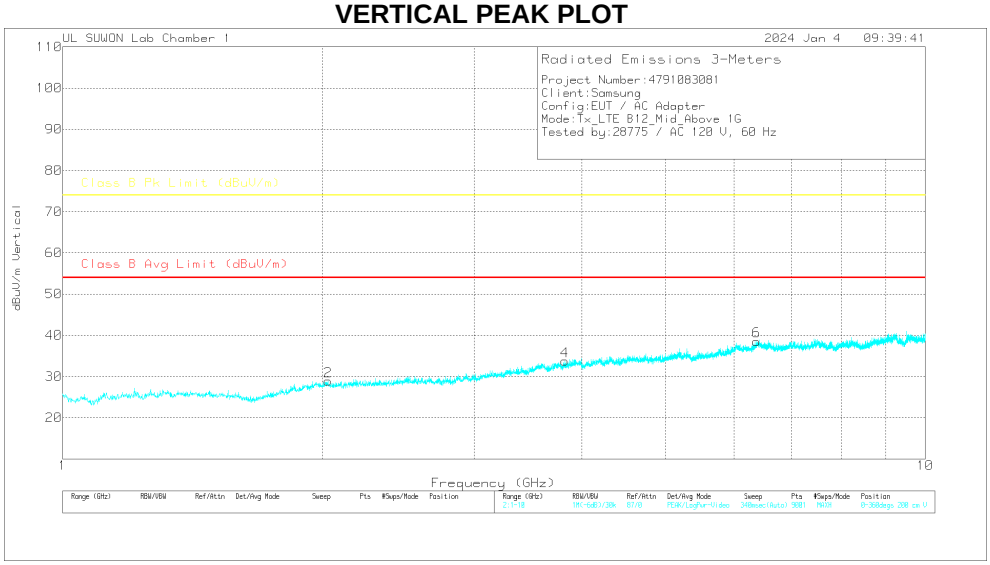
Pk - Peak detector
Ca - CISPR average detection

MID CHANNEL(737.5 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

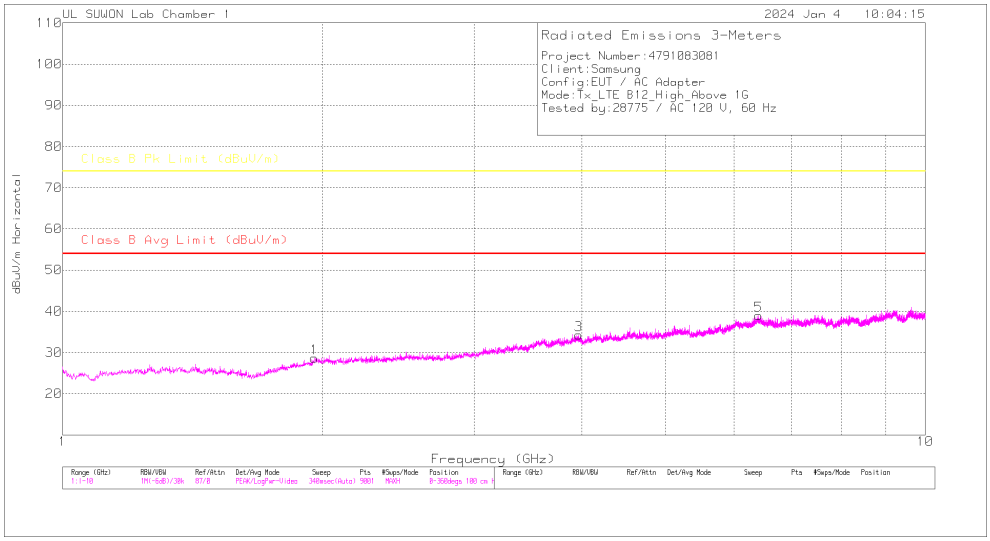
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	Antenna Correction Factor(dB/m)	1-18GHz(dB)	1G HPF[dB]	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Av(CISPR)Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2.022	42.85	Pk	31.4	-38.5	.9	36.65	-	-	74	-37.35	0	100	H
2.022	30.12	Ca	31.4	-38.5	.9	23.92	54	-30.08	-	-	0	100	H
2.031	42.7	Pk	31.4	-38.5	.9	36.5	-	-	74	-37.5	0	100	V
2.031	30.17	Ca	31.4	-38.5	.9	23.97	54	-30.03	-	-	0	100	V
3.821	41.43	Pk	33.8	-34.6	.8	41.43	-	-	74	-32.57	0	100	H
3.821	29.23	Ca	33.8	-34.6	.8	29.23	54	-24.77	-	-	0	100	H
3.821	41.54	Pk	33.8	-34.6	.8	41.54	-	-	74	-32.46	0	100	V
3.821	29.22	Ca	33.8	-34.6	.8	29.22	54	-24.78	-	-	0	100	V
6.387	40.84	Pk	35.3	-30.9	.8	46.04	-	-	74	-27.96	0	100	H
6.387	28.36	Ca	35.3	-30.9	.8	33.56	54	-20.44	-	-	0	100	H
6.378	39.87	Pk	35.3	-31	.8	44.97	-	-	74	-29.03	0	100	V
6.378	28.21	Ca	35.3	-31	.8	33.31	54	-20.69	-	-	0	100	V

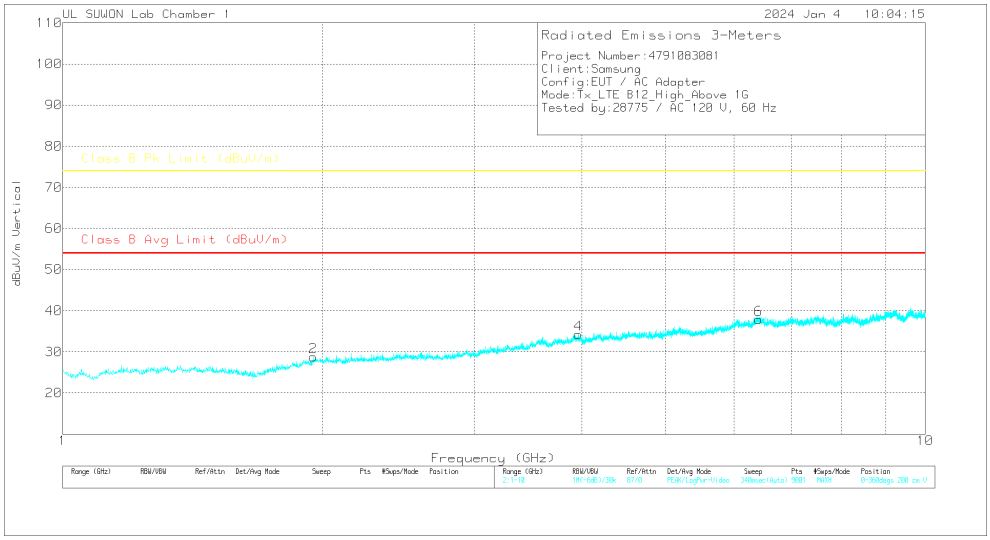
Pk - Peak detector
Ca - CISPR average detection

HIGH CHANNEL(741.0 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

Radiated Emissions

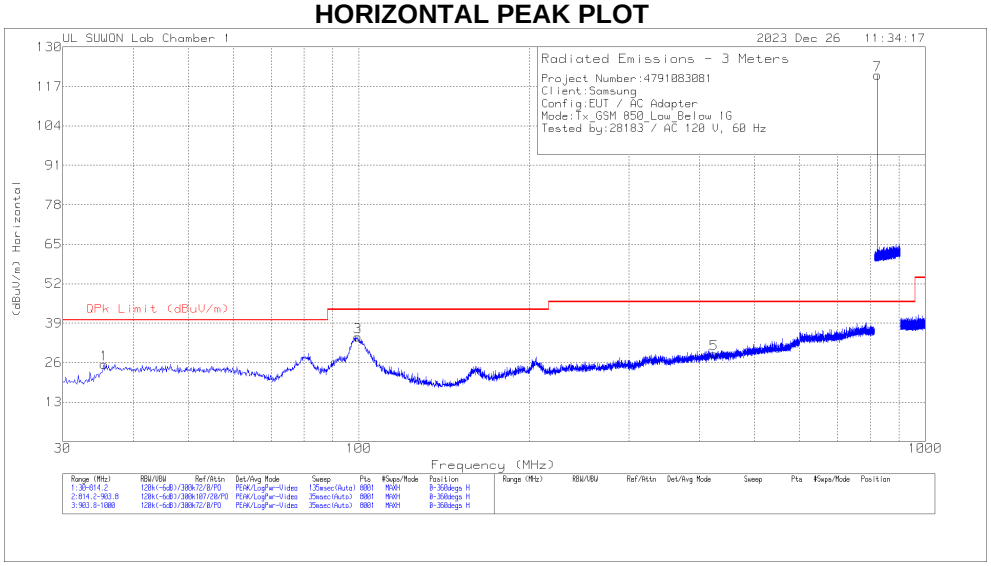
Frequency (GHz)	Meter Reading (dBuV)	Det	Antenna Correction Factor(dB/m)	1-18GHz(dB)	1G HPF[dB]	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Av(CISPR)Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.957	42.47	Pk	31.2	-38.6	.9	35.97	-	-	74	-38.03	0	100	H
1.957	30.12	Ca	31.2	-38.6	.9	23.62	54	-30.38	-	-	0	100	H
1.953	42.16	Pk	31.2	-38.6	.9	35.66	-	-	74	-38.34	0	100	V
1.953	29.99	Ca	31.2	-38.6	.9	23.49	54	-30.51	-	-	0	100	V
3.968	40.5	Pk	34	-34.3	.8	41	-	-	74	-33	0	100	H
3.968	28.49	Ca	34	-34.3	.8	28.99	54	-25.01	-	-	0	100	H
3.959	40.48	Pk	34	-34.3	.7	40.88	-	-	74	-33.12	0	100	V
3.959	28.52	Ca	34	-34.3	.7	28.92	54	-25.08	-	-	0	100	V
6.413	39.99	Pk	35.3	-30.9	.8	45.19	-	-	74	-28.81	0	100	H
6.413	28.35	Ca	35.3	-30.9	.8	33.55	54	-20.45	-	-	0	100	H
6.408	40.36	Pk	35.3	-30.9	.8	45.56	-	-	74	-28.44	0	100	V
6.408	28.26	Ca	35.3	-30.9	.8	33.46	54	-20.54	-	-	0	100	V

Pk - Peak detector
Ca - CISPR average detection

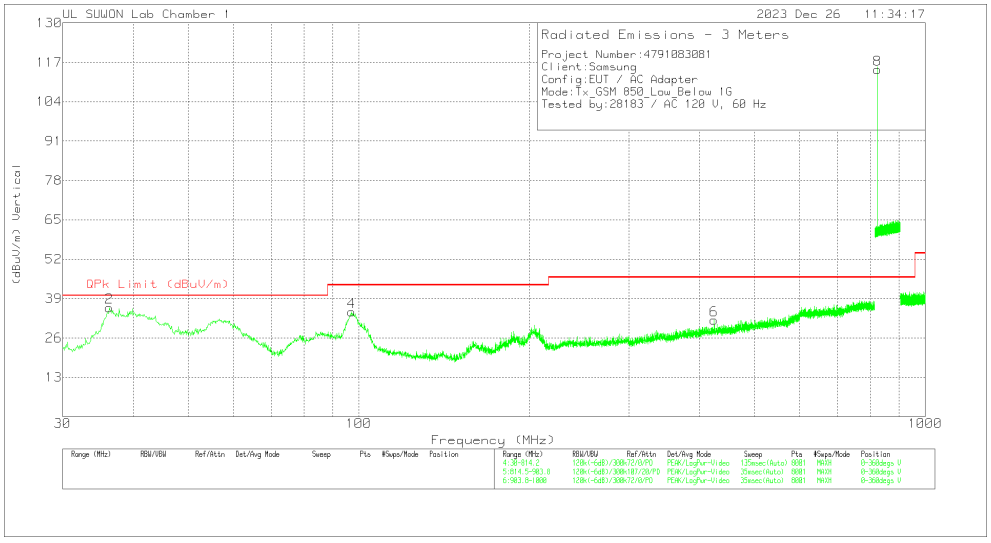
7.1.5. Below 1 GHz in the GSM850

LOW CHANNEL(869.2 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Antenna Correction Factor(dB/m)	Below_1G_Bypass (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	35.4894	7.45	Pk	16.7	1.3	25.45	40	-14.55	0-360	200	H
2	36.2736	17.78	Pk	17	1.3	36.08	40	-3.92	0-360	200	V
3	99.5978	15.28	Pk	17.1	2.1	34.48	43.52	-9.04	0-360	200	H
4	97.1471	15.56	Pk	16.9	2.1	34.56	43.52	-8.96	0-360	200	V
5	423.3743	3.12	Pk	21.4	4.4	28.92	46.02	-17.1	0-360	100	H
6	424.0605	6.16	Pk	21.4	4.4	31.96	46.02	-14.06	0-360	200	V
7	824.2072	88.55	Pk	26.1	6	120.65	**46.02**	**74.63**	0-360	200	H
8	824.2118	82.49	Pk	26.1	6	114.59	**46.02**	**68.57**	0-360	100	V

Pk - Peak detector

Radiated Emissions

Frequency (MHz)	Meter Reading (dBuV)	Det	Antenna Correction Factor(dB/m)	Below_1G_Bypass(dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
36.2736	12.32	Qp	17	1.3	30.62	40	-9.38	143	100	V

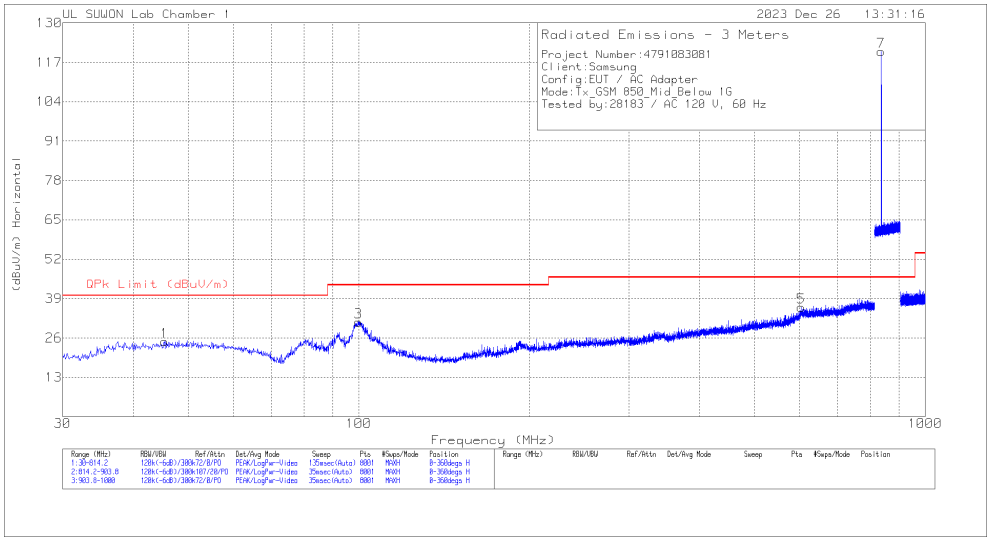
Qp - Quasi-Peak detector

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

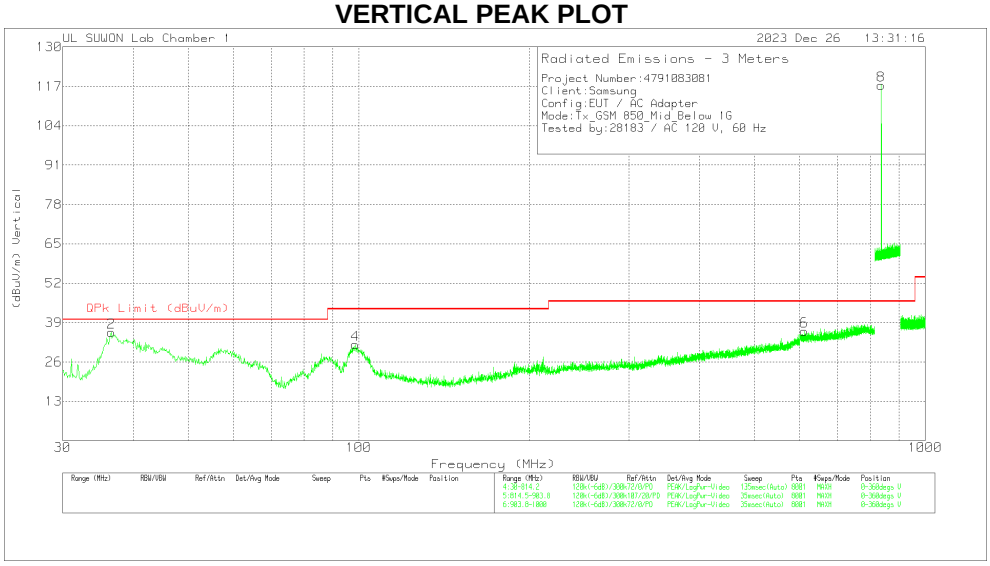
UL KOREA LTD. Suwon Laboratory FORM ID: FCC_15B(05)
218 Maeyeong-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16675, Korea TEL: (031) 337-9902 FAX: (031) 213-5433

MID CHANNEL(881.6 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Antenna Correction Factor(dB/m)	Below_1G_Bypass (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	45.3899	3.85	Pk	19.5	1.4	24.75	40	-15.25	0-360	200	H
2	36.5677	17.25	Pk	17.2	1.3	35.75	40	-4.25	0-360	200	V
3	99.7938	11.99	Pk	17.1	2.1	31.19	43.52	-12.33	0-360	200	H
4	98.5195	12.6	Pk	17	2.1	31.7	43.52	-11.82	0-360	200	V
5	603.4463	6.67	Pk	24.3	5.2	36.17	46.02	-9.85	0-360	300	H
6	611.7784	6.64	Pk	24.4	5.2	36.24	46.02	-9.78	0-360	300	V
7	836.6	88.12	Pk	26.3	6.1	120.52	**46.02**	**74.5**	0-360	200	H
8	836.6027	85.01	Pk	26.3	6.1	117.41	**46.02**	**71.39**	0-360	100	V

Pk - Peak detector

Radiated Emissions

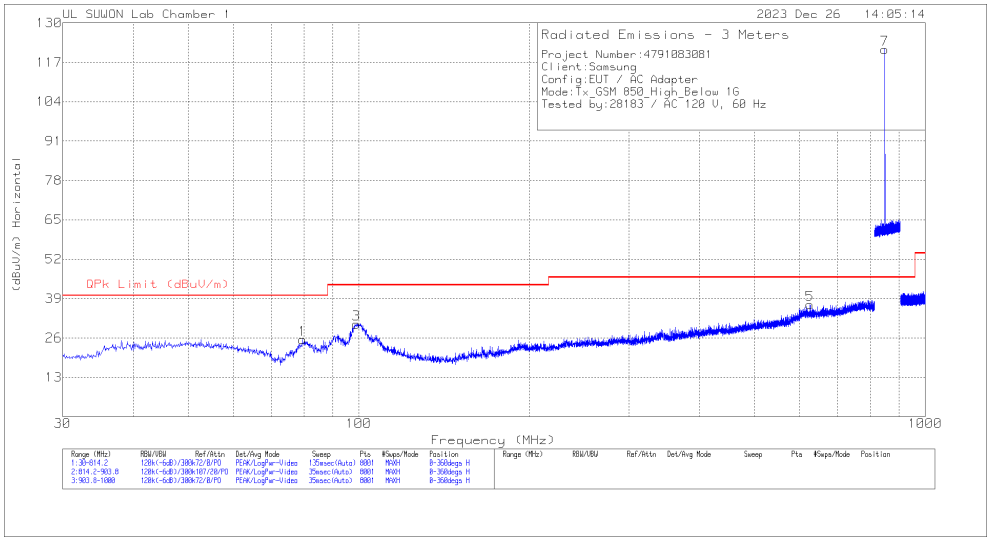
Frequency (MHz)	Meter Reading (dBuV)	Det	Antenna Correction Factor(dB/m)	Below_1G_Bypass(dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
36.5677	11.67	Qp	17.2	1.3	30.17	40	-9.83	172	100	V

Qp - Quasi-Peak detector

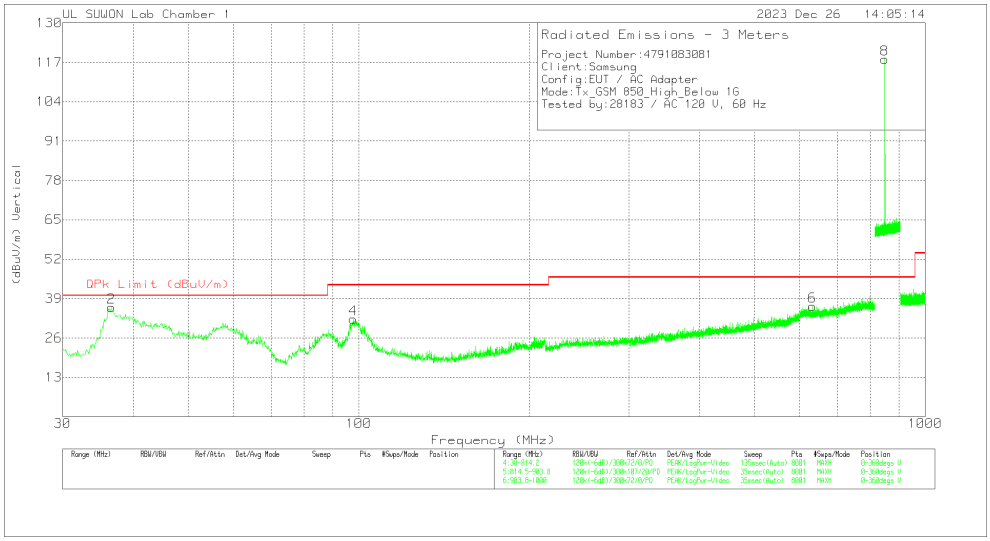
Note: Unwanted emissions captured from 824MHz to 849MHz and from 869MHz to 894MHz were the TX and RX signals generated from the call-simulator.

HIGH CHANNEL(893.8 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Antenna Correction Factor(dB/m)	Below_1G_Bypass (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	79.5026	11.12	Pk	12.5	1.9	25.52	40	-14.48	0-360	100	H
2	36.5677	17.63	Pk	17.2	1.3	36.13	40	-3.87	0-360	200	V
3	98.9116	11.5	Pk	17	2.1	30.6	43.52	-12.92	0-360	100	H
4	97.7353	13.21	Pk	17	2.1	32.31	43.52	-11.21	0-360	200	V
5	626.09	7.5	Pk	24.2	5.3	37	46.02	-9.02	0-360	100	H
6	632.3636	6.85	Pk	24.3	5.3	36.45	46.02	-9.57	0-360	200	V
7	848.808	88.7	Pk	26.5	6.1	121.3	**46.02**	**75.28**	0-360	200	H
8	848.8039	85.36	Pk	26.5	6.1	117.96	**46.02**	**71.94**	0-360	100	V

Pk - Peak detector

Radiated Emissions

Frequency (MHz)	Meter Reading (dBuV)	Det	Antenna Correction Factor(dB/m)	Below_1G_Bypass(dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
36.5677	11.84	Qp	17.2	1.3	30.34	40	-9.66	167	100	V

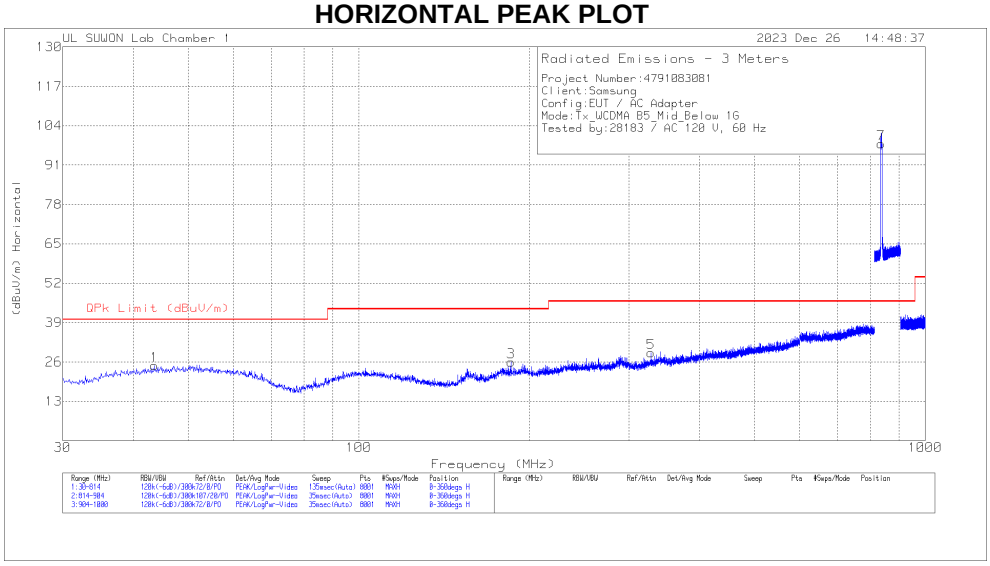
Qp - Quasi-Peak detector

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

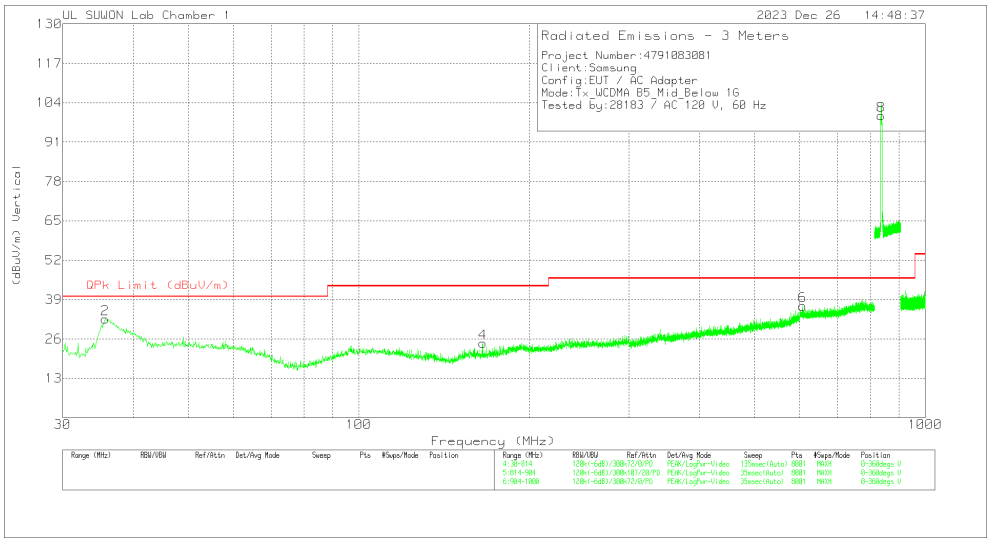
7.1.6. Below 1 GHz in the WCDMA Band 5

MID CHANNEL(881.6 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Antenna Correction Factor(dB/m)	Below_1G_Bypass (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	43.524	4.16	Pk	19.3	1.4	24.86	40	-15.14	0-360	100	H
2	35.684	14.45	Pk	16.8	1.3	32.55	40	-7.45	0-360	200	V
3	185.526	7.33	Pk	15.8	2.9	26.03	43.52	-17.49	0-360	100	H
4	165.436	7.52	Pk	14.4	2.7	24.62	43.52	-18.9	0-360	200	V
5	328.116	5.76	Pk	19.5	3.8	29.06	46.02	-16.96	0-360	100	H
6	607.906	7.33	Pk	24.4	5.2	36.93	46.02	-9.09	0-360	400	V
7	836.6013	65.67	Pk	26.3	6.1	98.07	**46.02**	**52.05**	0-360	200	H
8	836.6013	67.24	Pk	26.3	6.1	99.64	**46.02**	**53.62**	0-360	100	V

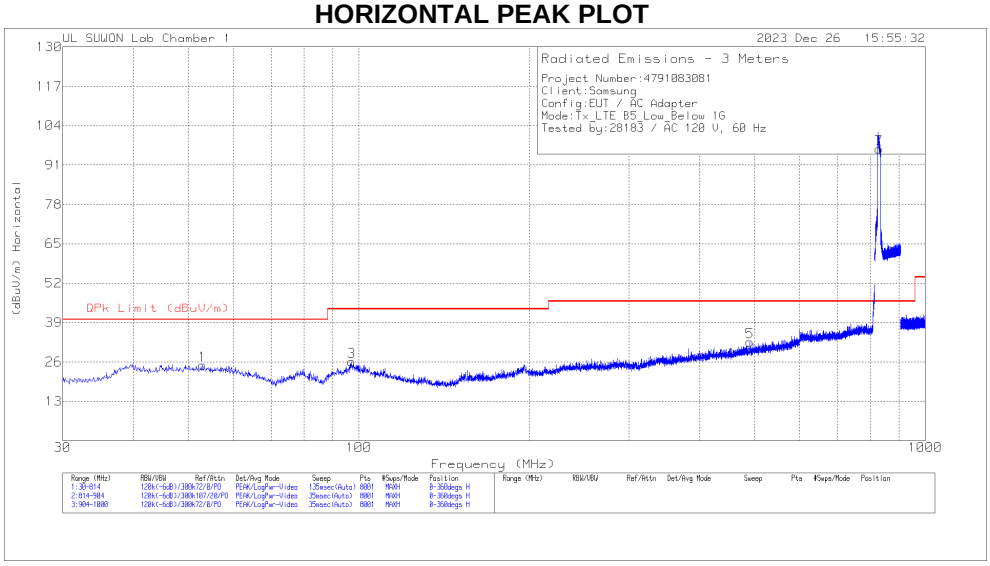
Pk - Peak detector

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

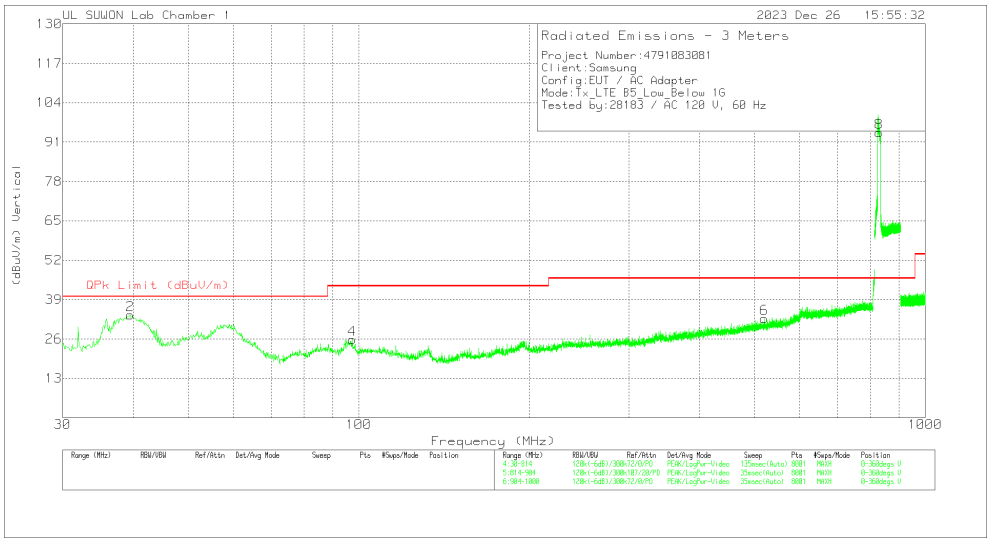
7.1.7. Below 1 GHz in the LTE Band 5

LOW CHANNEL(874.0 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Antenna Correction Factor(dB/m)	Below_1G_Bypass (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	52.932	4.1	Pk	19.4	1.5	25	40	-15	0-360	300	H
2	39.506	14.33	Pk	18.3	1.3	33.93	40	-6.07	0-360	200	V
3	97.13	7.1	Pk	16.9	2.1	26.1	43.52	-17.42	0-360	100	H
4	97.326	6.78	Pk	16.9	2.1	25.78	43.52	-17.74	0-360	300	V
5	490.796	5.67	Pk	22.2	4.7	32.57	46.02	-13.45	0-360	100	H
6	519.314	5.25	Pk	22.7	4.8	32.75	46.02	-13.27	0-360	300	V
7	829.0413	64.13	Pk	26.2	6	96.33	**46.02**	**50.31**	0-360	200	H
8	829.0413	61.89	Pk	26.2	6	94.09	**46.02**	**48.07**	0-360	100	V

Pk - Peak detector

Radiated Emissions

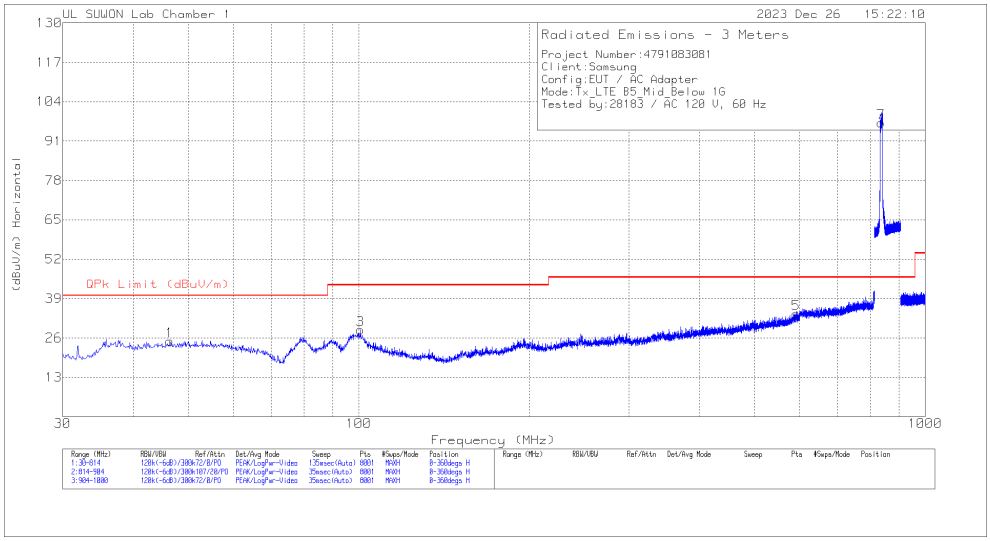
Frequency (MHz)	Meter Reading (dBuV)	Det	Antenna Correction Factor(dB/m)	Below_1G_Bypass(dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
39.506	11.07	Qp	18.3	1.3	30.67	40	-9.33	150	101	V

Qp - Quasi-Peak detector

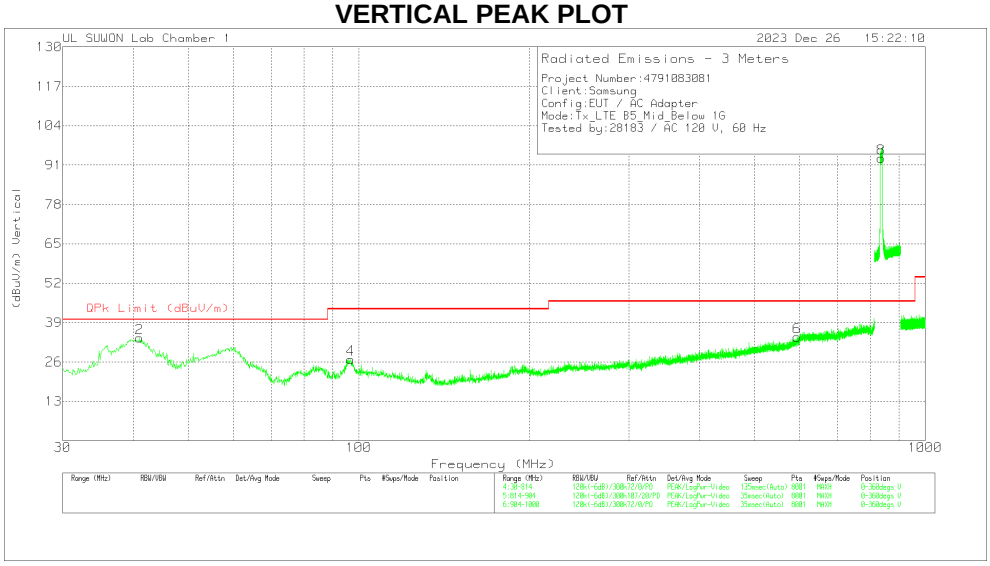
Note: Unwanted emissions captured from 824MHz to 849MHz and from 869MHz to 894MHz were the TX and RX signals generated from the call-simulator.

MID CHANNEL(881.5 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Antenna Correction Factor(dB/m)	Below_1G_Bypass(dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	46.366	3.93	Pk	19.6	1.4	24.93	40	-15.07	0-360	200	H
2	40.976	13.91	Pk	18.7	1.3	33.91	40	-6.09	0-360	200	V
3	100.658	9.34	Pk	17.2	2.1	28.64	43.52	-14.88	0-360	100	H
4	96.64	7.92	Pk	16.9	2.1	26.92	43.52	-16.6	0-360	200	V
5	590.952	4.57	Pk	24.3	5.1	33.97	46.02	-12.05	0-360	200	H
6	594.088	4.72	Pk	24.4	5.1	34.22	46.02	-11.8	0-360	400	V
7	836.5	64.64	Pk	26.3	6.1	97.04	**46.02**	**51.02**	0-360	200	H
8	836.5	60.81	Pk	26.3	6.1	93.21	**46.02**	**47.19**	0-360	100	V

Pk - Peak detector

Radiated Emissions

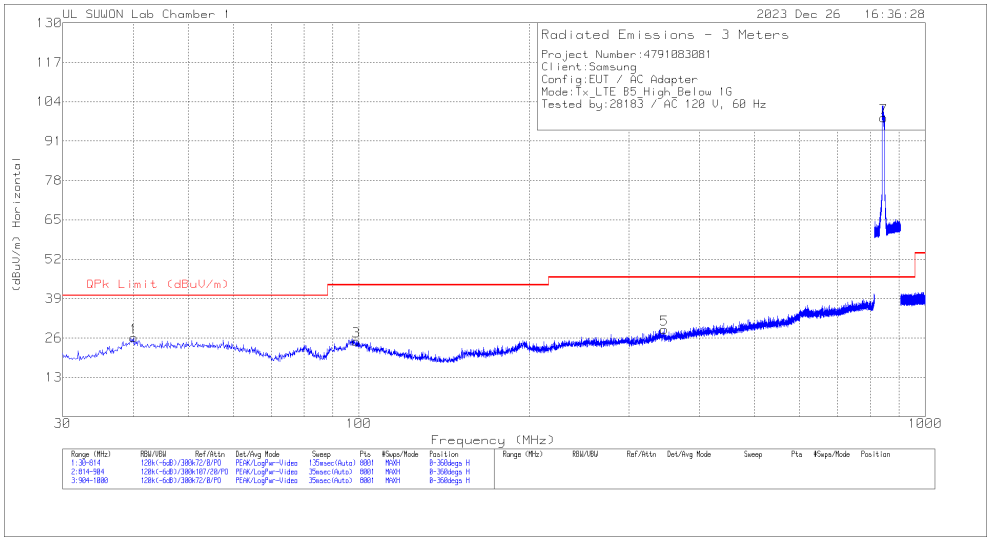
Frequency (MHz)	Meter Reading (dBuV)	Det	Antenna Correction Factor(dB/m)	Below_1G_Bypass(dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
40.976	9.29	Qp	18.7	1.3	29.29	40	-10.71	178	100	V

Qp - Quasi-Peak detector

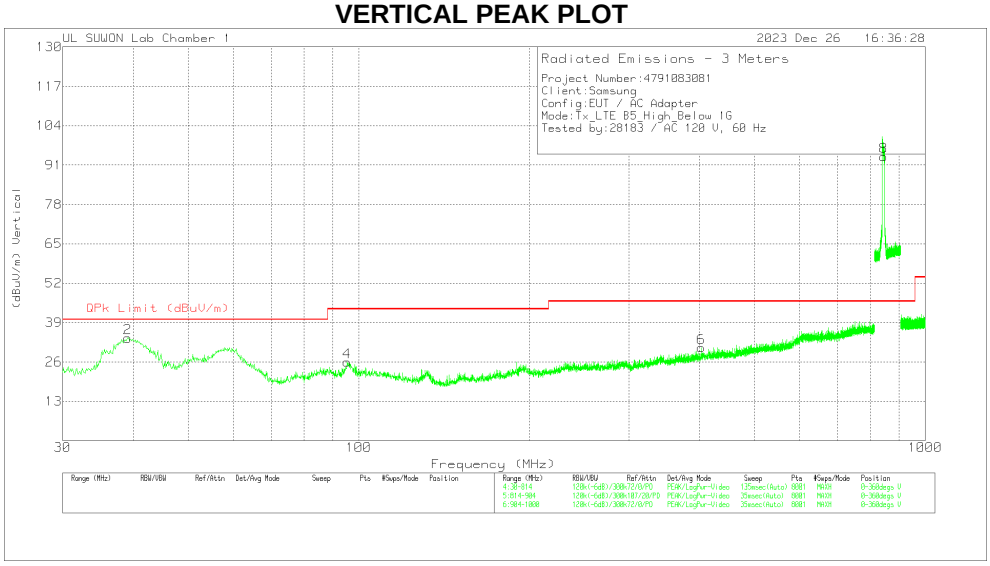
Note: Unwanted emissions captured from 824MHz to 849MHz and from 869MHz to 894MHz were the TX and RX signals generated from the call-simulator.

HIGH CHANNEL(889.0 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Antenna Correction Factor(dB/m)	Below_1G_Bypass (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	40.094	6.42	Pk	18.4	1.3	26.12	40	-13.88	0-360	200	H
2	39.114	14.38	Pk	18.2	1.3	33.88	40	-6.12	0-360	200	V
3	98.992	5.83	Pk	17	2.1	24.93	43.52	-18.59	0-360	100	H
4	95.268	7.26	Pk	16.7	2.1	26.06	43.52	-17.46	0-360	200	V
5	346.148	4.73	Pk	20.1	4	28.83	46.02	-17.19	0-360	200	H
6	402.302	5.3	Pk	21.1	4.3	30.7	46.02	-15.32	0-360	300	V
7	844.0713	66.13	Pk	26.4	6.1	98.63	**46.02**	**52.61**	0-360	200	H
8	844.0713	61.29	Pk	26.4	6.1	93.79	**46.02**	**47.77**	0-360	100	V

Pk - Peak detector

Radiated Emissions

Frequency (MHz)	Meter Reading (dBuV)	Det	Antenna Correction Factor(dB/m)	Below_1G_Bypass(dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
39.114	10.76	Qp	18.2	1.3	30.26	40	-9.74	133	100	V

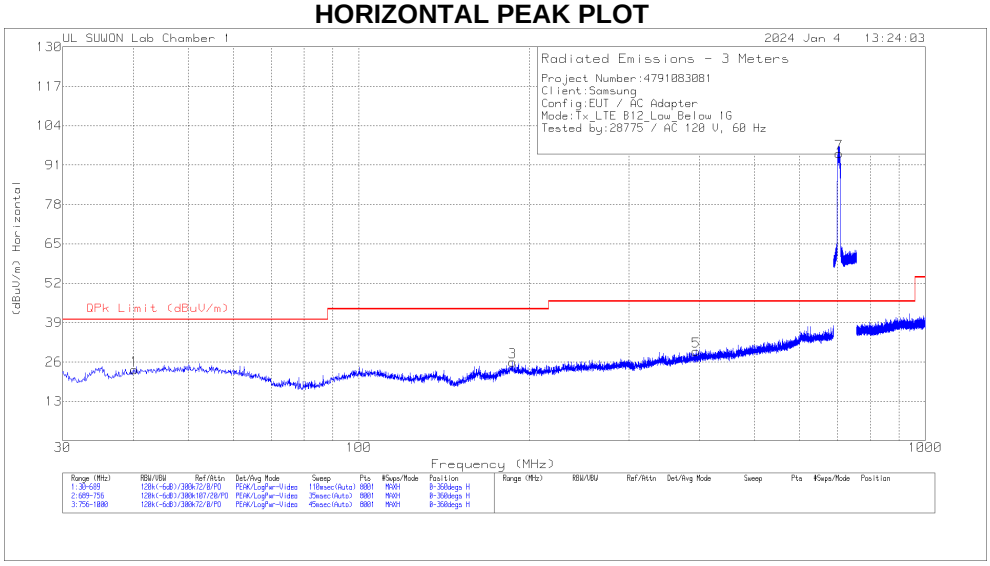
Qp - Quasi-Peak detector

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

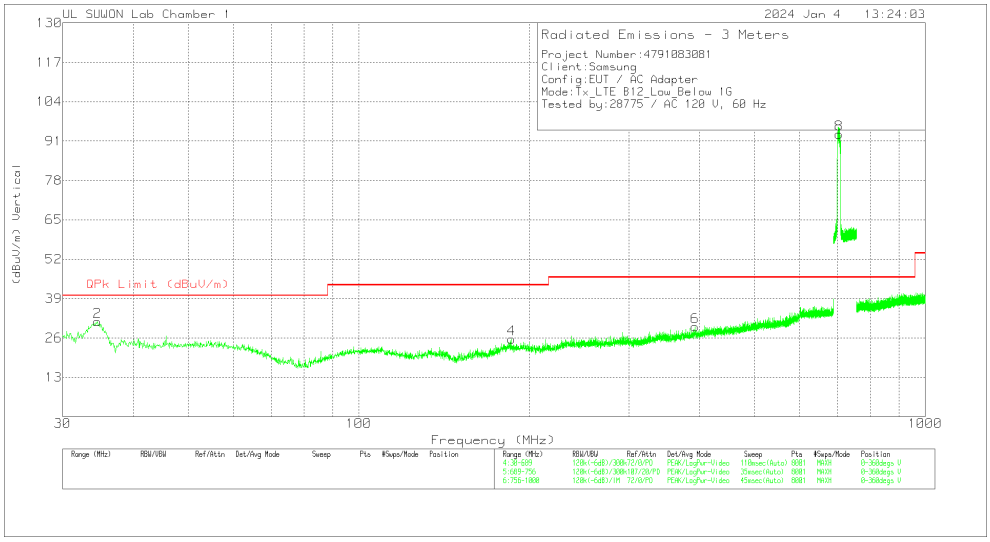
7.1.1. Below 1 GHz in the LTE Band 12

LOW CHANNEL(734.0 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

Trace Markers

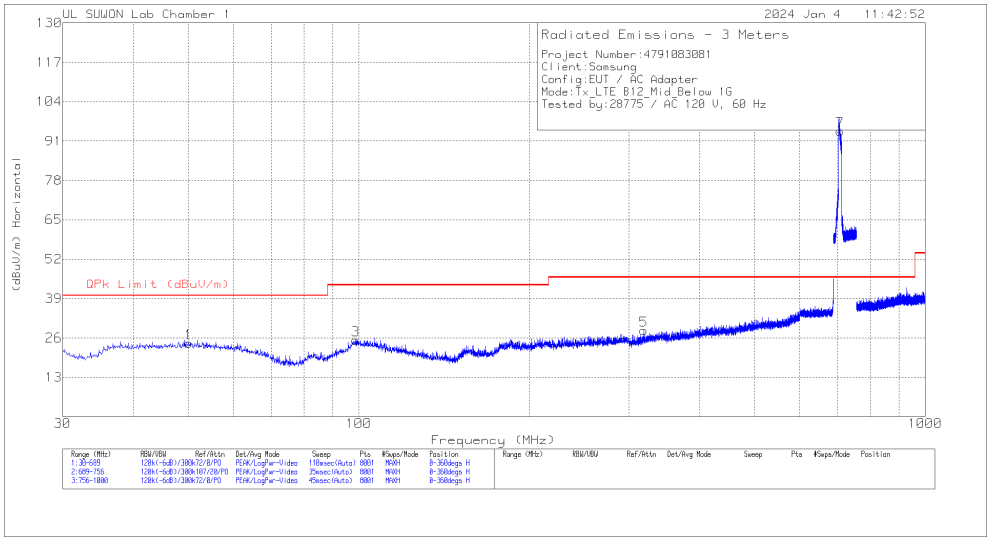
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Antenna Correction Factor(dB/m)	Below_1G_Bypass (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	40.1321	3.8	Pk	18.4	1.3	23.5	40	-16.5	0-360	200	H
3	186.6773	7.15	Pk	15.9	2.9	25.95	43.52	-17.57	0-360	100	H
5	393.8504	4.28	Pk	21	4.2	29.48	46.02	-16.54	0-360	100	H
7	704.0666	64.55	Pk	24.7	5.6	94.85	**46.02**	**48.83**	0-360	200	H
2	34.5306	13.92	Pk	16.3	1.2	31.42	40	-8.58	0-360	200	V
4	186.0183	6.97	Pk	15.8	2.9	25.67	43.52	-17.85	0-360	200	V
6	392.2853	4.59	Pk	20.9	4.2	29.69	46.02	-16.33	0-360	400	V
8	704.0666	63.02	Pk	24.7	5.6	93.32	**46.02**	**47.3**	0-360	100	V

Pk - Peak detector

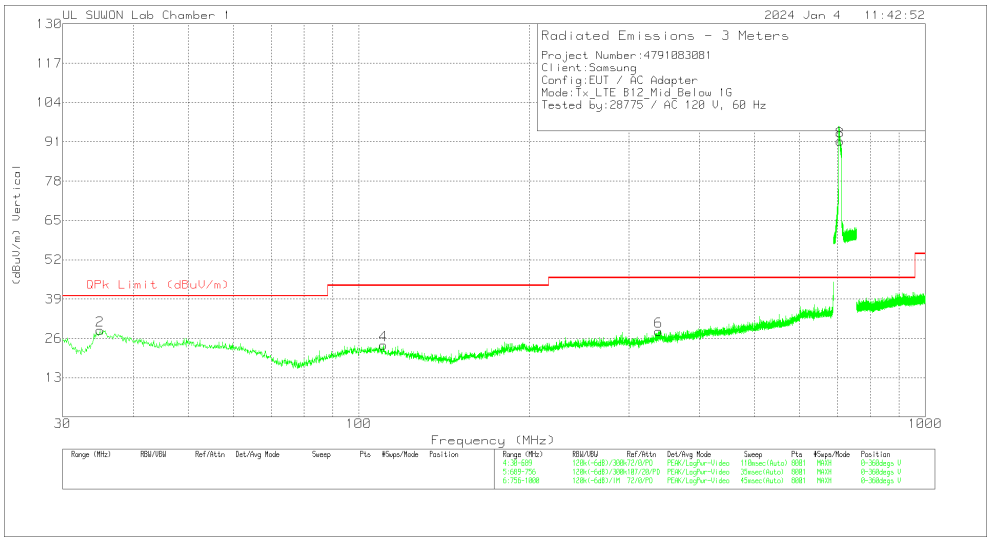
Note: Unwanted emissions captured from 699MHz to 716MHz and from 729MHz to 746MHz were the TX and RX signals generated from the call-simulator.

MID CHANNEL(737.5 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

Trace Markers

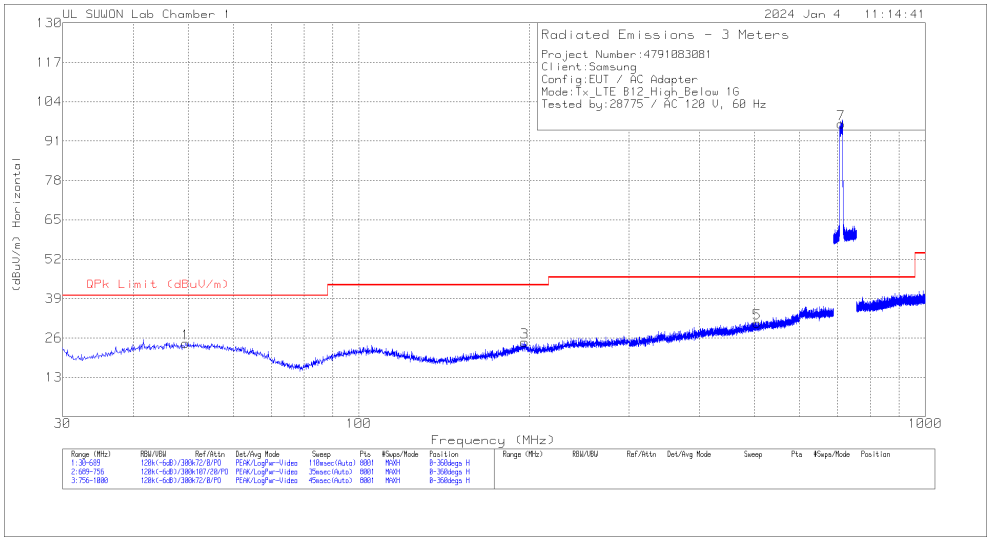
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Antenna Correction Factor(dB/m)	Below_1G_Bypass (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	50.0995	3.22	Pk	19.6	1.5	24.32	40	-15.68	0-360	300	H
3	98.7008	6.28	Pk	17	2.1	25.38	43.52	-18.14	0-360	200	H
5	318.4773	5.61	Pk	19.1	3.8	28.51	46.02	-17.51	0-360	100	H
7	707.4836	63.94	Pk	24.7	5.6	94.24	**46.02**	**48.22**	0-360	200	H
2	34.9425	10.98	Pk	16.5	1.2	28.68	40	-11.32	0-360	200	V
4	110.4804	4.67	Pk	17	2.2	23.87	43.52	-19.65	0-360	200	V
6	338.0825	4.37	Pk	20.1	3.9	28.37	46.02	-17.65	0-360	400	V
8	707.4836	60.9	Pk	24.7	5.6	91.2	**46.02**	**45.18**	0-360	100	V

Pk - Peak detector

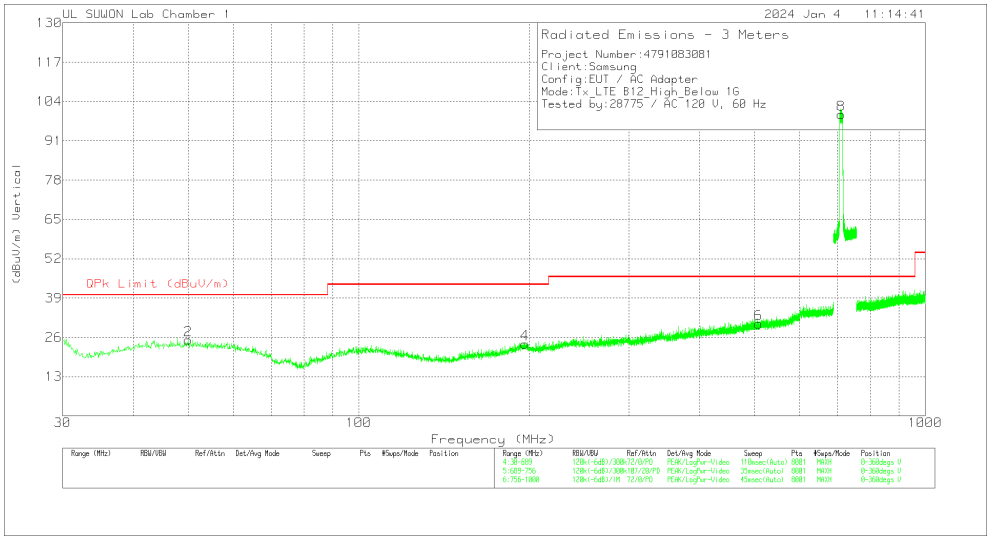
Note: Unwanted emissions captured from 699MHz to 716MHz and from 729MHz to 746MHz were the TX and RX signals generated from the call-simulator.

HIGH CHANNEL(741.0 MHz)

HORIZONTAL PEAK PLOT



VERTICAL PEAK PLOT



DATA

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Antenna Correction Factor(dB/m)	Below_1G_Bypass (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	49.4405	3.25	Pk	19.6	1.5	24.35	40	-15.65	0-360	100	H
3	196.2328	4.62	Pk	17	3	24.62	43.52	-18.9	0-360	300	H
5	504.7271	3.58	Pk	22.5	4.8	30.88	46.02	-15.14	0-360	100	H
7	711.1016	66.42	Pk	24.7	5.6	96.72	**46.02**	**50.7**	0-360	200	H
2	49.9348	4.01	Pk	19.6	1.5	25.11	40	-14.89	0-360	400	V
4	196.3975	3.97	Pk	16.9	3	23.87	43.52	-19.65	0-360	200	V
6	508.1869	3.09	Pk	22.6	4.8	30.49	46.02	-15.53	0-360	400	V
8	711.0933	69.43	Pk	24.7	5.6	99.73	**46.02**	**53.71**	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.

UL KOREA LTD. Suwon Laboratory FORM ID: FCC_15B(05)
218 Maeyeong-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16675, Korea TEL: (031) 337-9902 FAX: (031) 213-5433

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.		

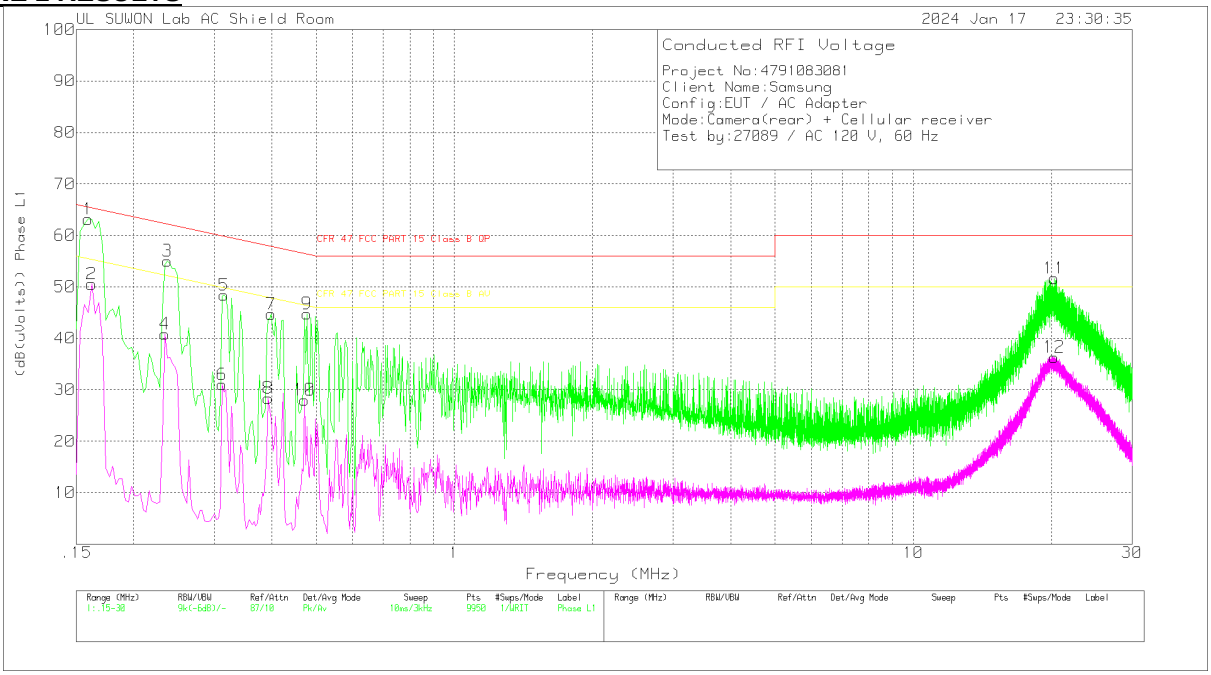
UL KOREA LTD. Suwon Laboratory FORM ID: FCC_15B(05)
218 Maeyeong-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16675, Korea TEL: (031) 337-9902 FAX: (031) 213-5433

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_AUTO_With EX_L1[dB]	CABLELOSS[dB]	Corrected Reading (dB(uVolts))	47 CFR FCC PART 15 Class B QP (dB(uVolts))	Margin (dB)	47 CFR FCC PART 15 Class B AV (dB(uVolts))	Margin (dB)
1	.159	53.54	Pk	9.5	.1	63.14	65.52	-2.38	-	-
2	.162	40.95	Av	9.5	.1	50.55	-	-	55.36	-4.81
3	.237	45.3	Pk	9.5	.2	55	62.2	-7.2	-	-
4	.234	31.12	Av	9.5	.2	40.82	-	-	52.31	-11.49
5	.315	38.69	Pk	9.5	.2	48.39	59.84	-11.45	-	-
6	.312	21.32	Av	9.5	.2	31.02	-	-	49.92	-18.9
7	.399	34.99	Pk	9.5	.2	44.69	57.87	-13.18	-	-
8	.393	18.65	Av	9.5	.2	28.35	-	-	48	-19.65
9	.477	35.05	Pk	9.5	.2	44.75	56.39	-11.64	-	-
10	.471	18.32	Av	9.5	.2	28.02	-	-	46.5	-18.48
11	20.274	41.64	Pk	9.6	.4	51.64	60	-8.36	-	-
12	20.286	26.32	Av	9.6	.4	36.32	-	-	50	-13.68

Pk - Peak detector
Av - Average detection

Quasi-Peak Emissions

Range 1: Phase L1 .15 - 30MHz

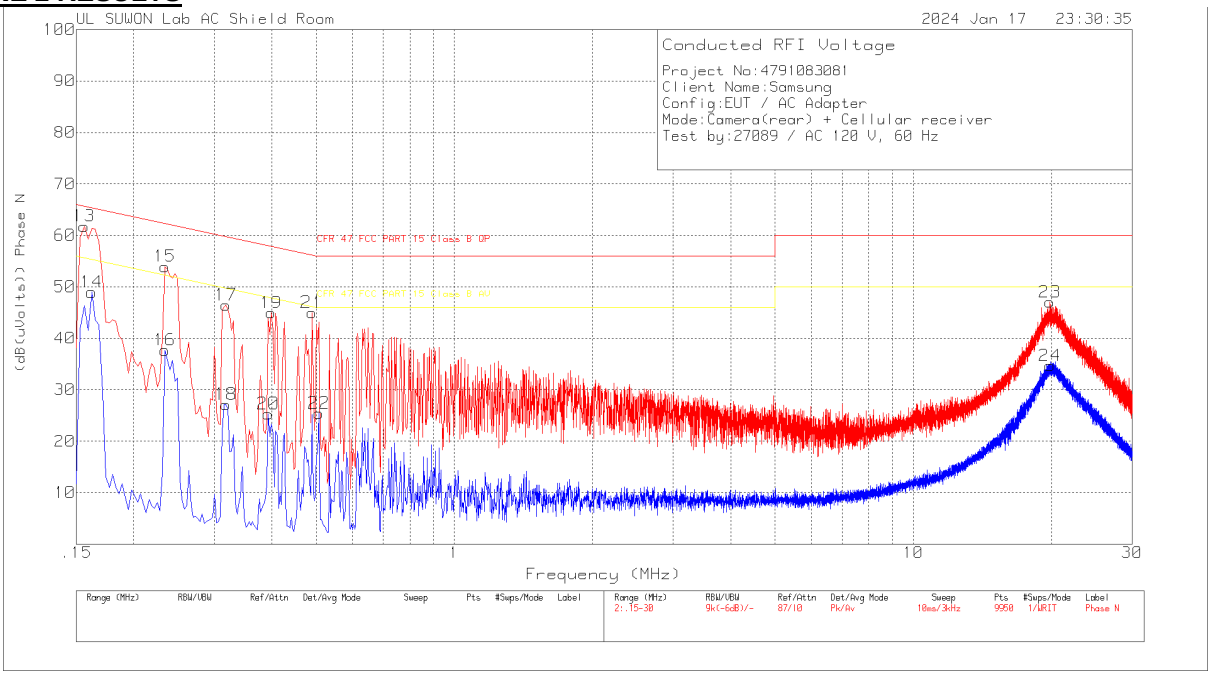
Frequency (MHz)	Meter Reading (dBuV)	Det	101836_AUTO_With EX_L1[dB]	CABLELOSS[dB]	Corrected Reading (dB(uVolts))	47 CFR FCC PART 15 Class B QP (dB(uVolts))	Margin (dB)	47 CFR FCC PART 15 Class B AV (dB(uVolts))	Margin (dB)
.15825	45.64	Qp	9.5	.1	55.24	65.56	-10.32	-	-
.16125	45.5	Qp	9.5	.1	55.1	65.4	-10.3	-	-
.23625	38.72	Qp	9.5	.2	48.42	62.23	-13.81	-	-
20.2748	32.46	Qp	9.6	.4	42.46	60	-17.54	-	-

Qp - Quasi-Peak detector

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_AUTO_With EX_N[dB]	CABLELOSS[dB]	Corrected Reading (dB(uVolts))	47 CFR FCC PART 15 Class B QP (dB(uVolts))	Margin (dB)	47 CFR FCC PART 15 Class B AV (dB(uVolts))	Margin (dB)
13	.156	52.18	Pk	9.5	.1	61.78	65.67	-3.89	-	-
14	.162	39.36	Av	9.5	.1	48.96	-	-	55.36	-6.4
15	.234	44.25	Pk	9.5	.2	53.95	62.31	-8.36	-	-
16	.234	28	Av	9.5	.2	37.7	-	-	52.31	-14.61
17	.318	36.78	Pk	9.5	.2	46.48	59.76	-13.28	-	-
18	.318	17.44	Av	9.5	.2	27.14	-	-	49.76	-22.62
19	.399	35.27	Pk	9.5	.2	44.97	57.87	-12.9	-	-
20	.393	15.63	Av	9.5	.2	25.33	-	-	48	-22.67
21	.489	35.28	Pk	9.5	.2	44.98	56.18	-11.2	-	-
22	.507	15.63	Av	9.6	.2	25.43	-	-	46	-20.57
23	19.854	37.05	Pk	9.6	.4	47.05	60	-12.95	-	-
24	19.866	24.68	Av	9.6	.4	34.68	-	-	50	-15.32

Pk - Peak detector
Av - Average detection

Quasi-Peak Emissions

Range 2: Phase N .15 - 30MHz

Frequency (MHz)	Meter Reading (dBuV)	Det	101836_AUTO_With EX_N[dB]	CABLELOSS[dB]	Corrected Reading (dB(uVolts))	47 CFR FCC PART 15 Class B QP (dB(uVolts))	Margin (dB)	47 CFR FCC PART 15 Class B AV (dB(uVolts))	Margin (dB)
.15675	45.56	Qp	9.5	.1	55.16	65.63	-10.47	-	-
.16125	45.46	Qp	9.5	.1	55.06	65.4	-10.34	-	-
.23325	39.05	Qp	9.5	.2	48.75	62.33	-13.58	-	-

Qp - Quasi-Peak detector

END OF TEST REPORT