TEST REPORT

Report Number. : 13171837-E12V2

Applicant : Samsung Electronics Co., Ltd.
129 Samsung-Ro, Yeongtong-Gu,
Suwon-Si, Gyeonggi-Do, 16677, Korea

Model : SM-A515U, SM-A515U1, SM-A515W, and SM-S515DL

FCC ID : A3LSMA515U

IC : 649E-SMA515W

EUT Description : GSM/CDMA/WCDMA/LTE PHABLET WITH BT/BLE,DTS/UNII A/B/G/N/AC, NFC AND ANT+

Test Standard(s) : FCC CFR47 PART 15 SUBPART B,
ICES-003 ISSUE 6
RSS-GEN ISSUE 5

Date Of Issue:
MARCH 04, 2020

Prepared by:
UL Verification Services Inc.
47173 Benicia Street
Fremont, CA 94538, U.S.A.
TEL: (510) 319-4000
FAX: (510) 661-0888

NVLAP TESTING
NVLAP Lab code: 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
V1	2/26/2020	Initial Review	--
V2	3/4/2020	Updated Plots for Section 8	Steven Tran

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1. ATTESTATION OF TEST RESULTS

Applicant Name and Address	SAMSUNG ELECTRONICS CO., LTD. 129 SAMSUNG-RO, YEONGTONG-GU, SUWON-SI, GYEONGGI-DO, 16677, KOREA
Model	SM-A515U, SM-A515U1, SM-A515W, AND SM-S515DL
FCC ID	A3LSMA515U
IC	649E-SMA515W
EUT Description	GSM/CDMA/WCDMA/LTE PHABLET WITH BT/BLE,DTS/UNII A/B/G/N/AC, NFC AND ANT+
Serial Number	RADIATED: IMEI 353327110220894, 353327110231552, SN R38MC0AMTHP
Date Tested	DECEMBER 27, 2019 to JANUARY 30, 2020
Applicable Standards	PART 15 SUBPART B, ICES-003 ISSUE 6 and RSS-GEN ISSUE 5
Test Results	COMPLIES

UL Verification Services Inc. tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. All samples tested were in good operating condition throughout the entire test program. Measurement Uncertainties are published for informational purposes only and were not taken into account unless noted otherwise.

This document may not be altered or revised in any way unless done so by UL Verification Services Inc. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Verification Services Inc. 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 NVLAP, NIST, any agency of the Federal Government, or any agency of the U.S. government.

Approved & Released By:	Reviewed By:	Prepared By:
Dan Coronia Operations Leader UL Verification Services Inc.	Steven Tran Project Engineer UL Verification Services Inc.	Rolly Alegre Test Engineer UL Verification Services Inc.

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2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with the following:

- FCC CFR 47 Part 2,
- FCC CFR 47 Part 15B
- ICES-003 ISSUE 6
- RSS-GEN ISSUE 5
- ANSI C63.4:2014

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 and 47266 Benicia Street, and 47658 Kato Road, Fremont, California, USA. 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.

47173 Benicia Street	47266 Benicia Street	47658 Kato Road
☐ Chamber A	☐ Chamber D	☐ Chamber I
☐ Chamber B	☐ Chamber E	☒ Chamber J
☐ Chamber C	☐ Chamber F	☒ Chamber K
	☐ Chamber G	☐ Chamber L
	☐ Chamber H	☐ Chamber M

The above test sites and facilities are covered under FCC Test Firm Registration # 208313. Chambers above are covered under Industry Canada company address and respective code: 2324A.

UL Verification Services Inc. is accredited by NVLAP, Laboratory Code 200065-0

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4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

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

4.2. SAMPLE CALCULATION

RADIATED EMISSIONS

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)
36.5 dBuV + 18.7 dB/m + 0.6 dB – 26.9 dB = 28.9 dBuV/m

4.3. MEASUREMENT UNCERTAINTY

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

PARAMETER	UNCERTAINTY
Conducted Disturbance, 9KHz to 0.15 MHz	3.39 dB
Conducted Disturbance, 0.15 to 30 MHz	3.07 dB
Radiated Disturbance, 9KHz to 30 MHz	2.52 dB
Radiated Disturbance, 30 to 1000 MHz	4.88 dB
Radiated Disturbance,1000 to 18000 MHz	4.24 dB
Radiated Disturbance,18000 to 26000 MHz	4.37 dB
Radiated Disturbance, 26000 to 40000 MHz	5.17 dB
Occupied Channel Bandwidth	±0.39 %
Temperature	±0.9 °C
Supply voltages	±0.45 %
Time	±0.02 %

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

4.4. DECISION RULE

Decision rule for statement(s) of conformity is based on Procedure 1, Clause 4.4.2 in IEC Guide 115:2007.

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5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is a GSM/CDMA/WCDMA/LTE Phablet with BT/BLE,DTS/UNII a/b/g/n/ac, NFC and ANT+. The model SM-A515U was used for final testing and is representative of the test results in this report.

5.2. TEST MODE

Mode	Description
LTE Band 5	Communicating with Callbox Simulator (CMW500)
LTE Band 12	Communicating with Callbox Simulator (CMW500)
LTE Band 13	Communicating with Callbox Simulator (CMW500)
LTE Band 26	Communicating with Callbox Simulator (CMW500)

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5.3. WORST-CASE CONFIGURATION AND MODE

For LTE B5, LTE B12, LTE B13 and LTE B26, the spurious emissions was investigated in three orthogonal orientations X, Y and Z. It was determined that X orientation was worst-case orientation.

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

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5.4. DESCRIPTION OF TEST SETUP

SUPPORT TEST EQUIPMENT				
Description	Manufacturer	Model	Serial Number	FCC ID/ DoC
AC Adapter	Samsung	EP-TA200	R37KBKLF1W1DK3	N/A
Earphone	Samsung	N/A	N/A	N/A

I/O CABLES (RF RADIATED TEST)						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	USB	1	AC Adapter	Shielded	1	No
2	Earphone	1	USB	Un-shielded	1	No
3	RF In/out	1	Communication Test Set	Un-shielded	2	No

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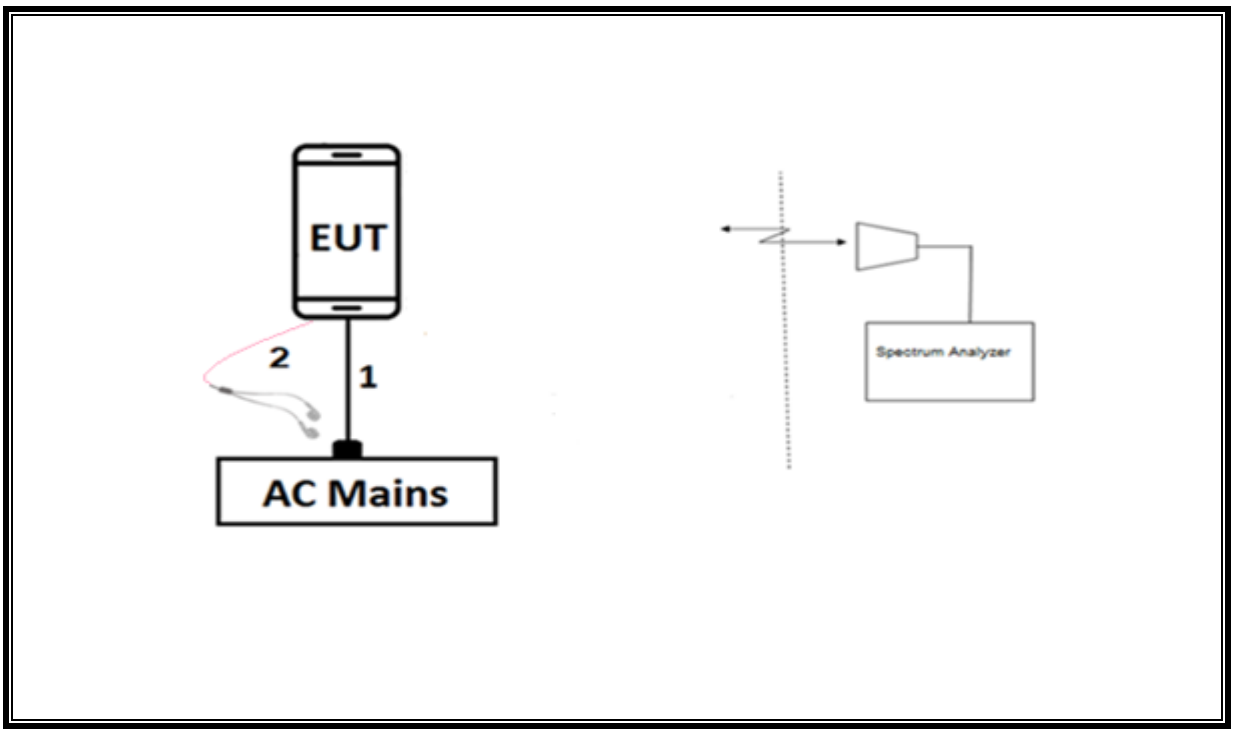
RADIATED SETUP



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6. TEST AND MEASUREMENT EQUIPMENT

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

TEST EQUIPMENT LIST					
Description	**Manufacturer**	**Model**	**ID Num**	**Cal Due**	**Last Cal**
Highpass Filter, 2.7 GHz	Micro-Circuits	H2G518G6	T772	12/31/2020	12/31/2019
Highpass Filter, 1.5 GHz	Micro-Tronics	HPM50114	T1852	07/20/2020	08/20/2019
Highpass Filter, 4GHz	Micro-Tronics	HPM13351	T1240	05/22/2020	06/22/2019
Antenna, Horn 1-18GHz	ETS-Lindgren	3117	T862	06/05/2020	06/05/2019
Ant., Horn 18 - 26.5 GHz	ARA	MWH-1826/B	T448	03/26/2020	03/26/2019
Antenna, Horn 1-18GHz	ETS-Lindgren	3117	T344	05/07/2020	05/07/2019
Hybrid Antenna	SunAR rf motion	JB3	T899	08/23/2020	08/23/2019
RF Amplifier	MITEQ	AFS42-00101800-25-S-42	171460	08/24/2020	08/24/2019
RF Amplifier	AMPLICAL	AMP1G18-35	T1571	05/28/2020	05/28/2019
Pre-Amp 1-26.5 GHz	Agilent	8449B	T404	03/23/2020	03/23/2019
RF Amplifier 9KHz – 1GHz	SONOMA INSTR	310	PRE0180175	05/29/2020	05/29/2019
RF Amplifier 9KHz – 1GHz	SONOMA INSTR	310	PRE0180174	06/01/2020	06/01/2019
Directional Coupler	Mini-Circuits	ZUDC10-183+	PRE0181619	07/21/2020	08/21/2019
Wideband Communication Test Set, Call Box	R&S	CMW500	T375	02/18/2020	02/18/2019
Wideband Communication Test Set, Call Box	R&S	CMW500	T948	02/18/2020	02/18/2019
Wideband Communication Test Set, Call Box	R&S	CMW500	T959	02/16/2020	02/16/2019
Spectrum Analyzer	Agilent (Keysight) Technologies	E4440A	T200	01/28/2020	01/28/2019
Spectrum Analyzer, PXA, 3Hz to 44GHz	Agilent	N9030A	T917	01/24/2020	01/24/2019
Spectrum Analyzer, PSA, 3Hz to 44GHz	Keysight	E4446A	T146	01/28/2020	01/28/2019
Spectrum Analyzer, PXA, 3Hz to 44GHz	Agilent	N9030A	T1450	01/23/2020	01/23/2019
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	PRE0179376	02/14/2020	02/14/2019
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	PRE0179367	05/16/2020	05/16/2019
Spectrum Analyzer	Agilent (Keysight) Technologies	E4440A	T200	01/24/2021	01/24/2020
DC power supply, 8 V @ 3 A or 15 V @ 2 A	Agilent / HP	E3610A	None	CNR	CNR
DC power supply 15V	Sorensen	XT15-4	T465	CNR	CNR
UL AUTOMATION SOFTWARE					
Radiated test software	UL	UL RF	Ver 9.5 June 15, 2019		

NOTES:

*Equipment listed above that has a calibration due date during the testing period, the testing is completed before equipment expiration date.

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7. RADIATED TEST RESULTS

7.1. APPLICABLE LIMITS AND TEST RESULTS

TEST PROCEDURE

ANSI C63.4: 2014

LIMIT

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

Limit for radiated disturbance of Class B ITE at measuring distance of 3 meter	
Frequency Range (MHz)	**Quasi-Peak limit (dBuV/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.	

RESULTS

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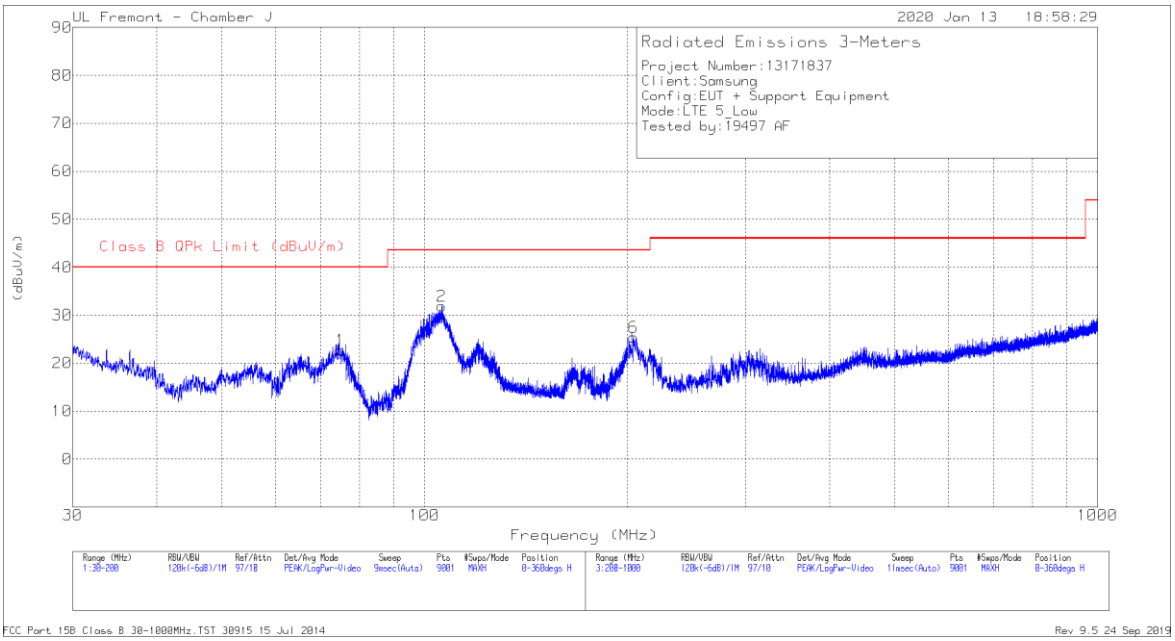
8. DATA FOR 15B RECEIVER MODE

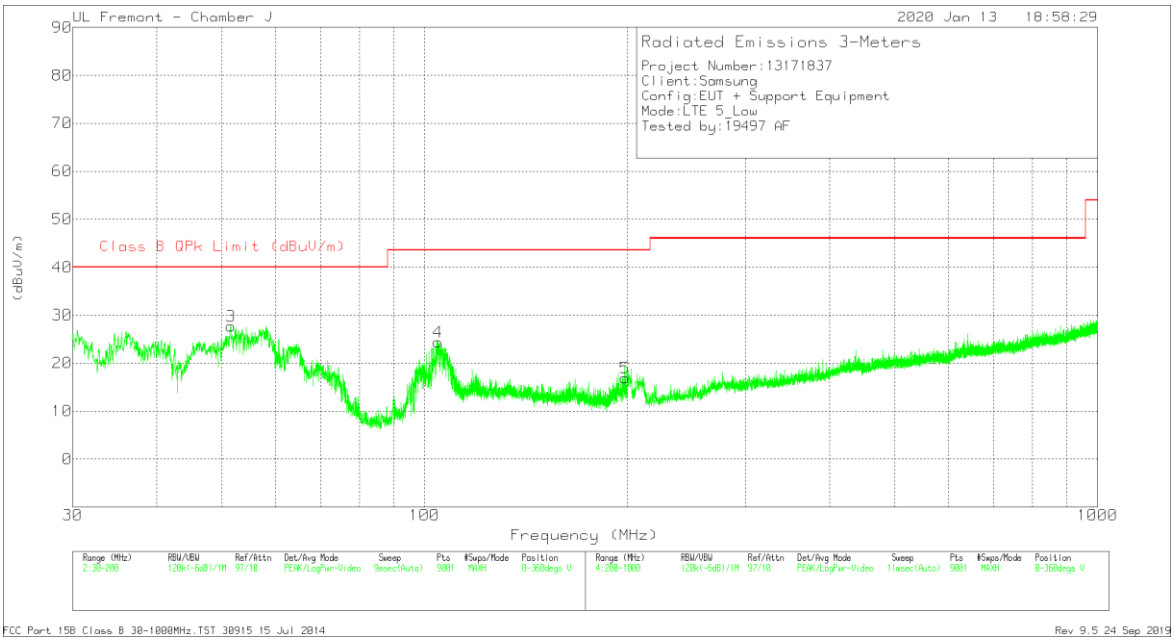
8.1. LTE Band 5

8.1.1. BELOW 1GHz

LOW CHANNEL



HORIZONTAL



VERTICAL

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RADIATED EMISSIONS

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T899 (dB/m)	Amp Cbl (dB)	Corrected Reading (dBuV/m)	Class B QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	75.0314	40.3	Pk	13.7	-31.2	22.8	40	-17.2	0-360	198	H
2	106.1227	45.08	Pk	17.8	-31	31.88	43.52	-11.64	0-360	198	H
3	51.5712	46	Pk	13.1	-31.4	27.7	40	-12.3	0-360	101	V
4	104.6493	37.99	Pk	17.4	-31	24.39	43.52	-19.13	0-360	101	V
5	198.4332	28.94	Pk	18.4	-30.4	16.94	43.52	-26.58	0-360	101	V
6	204.1778	38.87	Pk	17	-30.5	25.37	43.52	-18.15	0-360	101	H

Pk - Peak detector

Frequency (MHz)	Meter Reading (dBuV)	Det	AF T899 (dB/m)	Amp Cbl (dB)	Corrected Reading (dBuV/m)	Class B QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
106.1577	40.91	Pk	17.8	-31	27.71	43.52	-15.81	359	213	H
106.1577	37.6	Qp	17.8	-31	24.4	43.52	-19.12	359	213	H

Pk - Peak detector
Qp - Quasi-Peak detector

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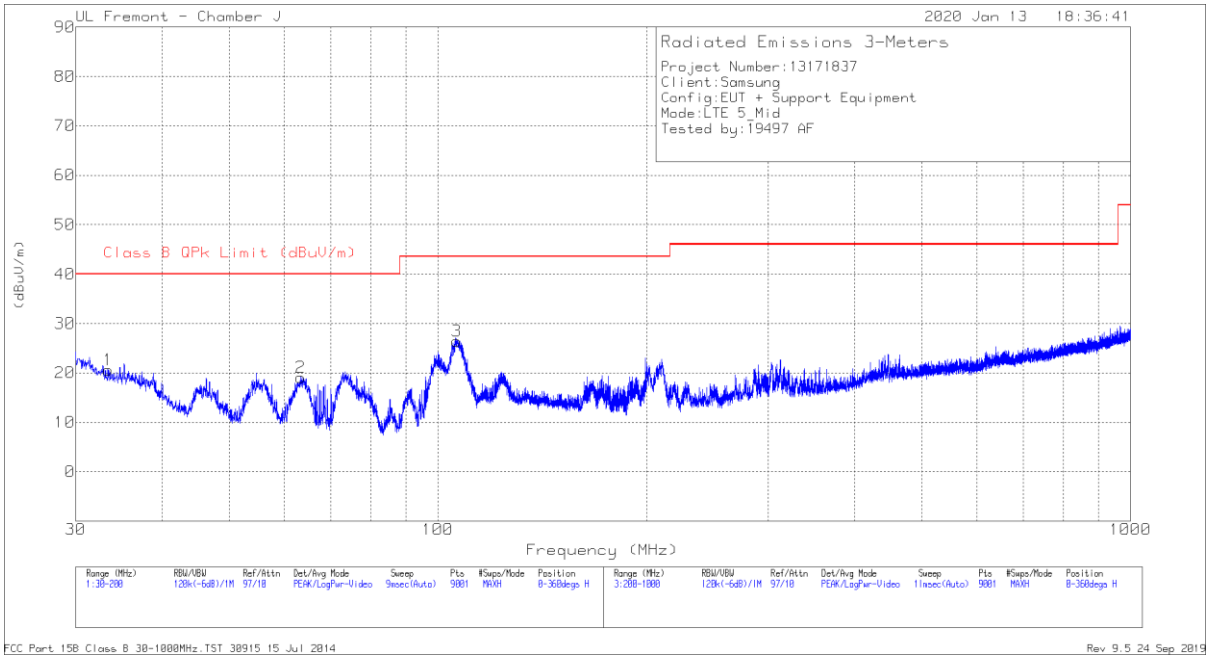
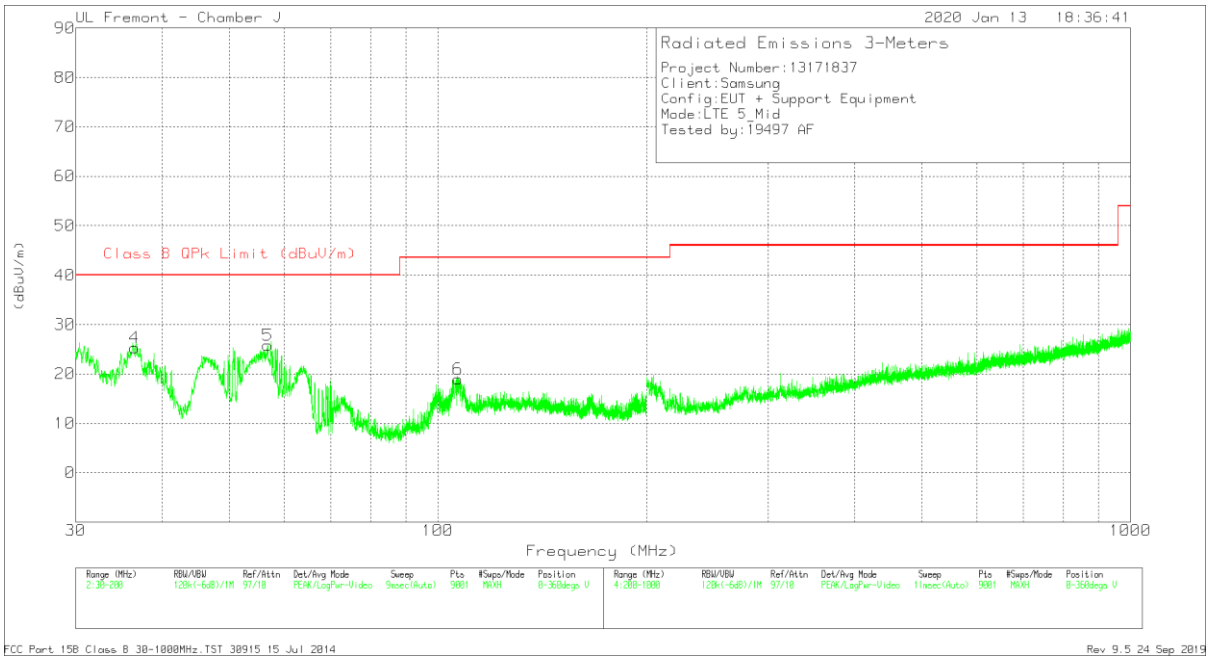
MID CHANNEL



HORIZONTAL



VERTICAL

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RADIATED EMISSIONS

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T899 (dB/m)	Amp Cbl (dB)	Corrected Reading (dBuV/m)	Class B QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	33.4567	27.27	Pk	24.9	-31.6	20.57	40	-19.43	0-360	398	H
2	63.3391	36.35	Pk	14	-31.3	19.05	40	-20.95	0-360	198	H
3	106.5571	39.52	Pk	17.9	-31	26.42	43.52	-17.1	0-360	198	H
4	36.5167	34.03	Pk	22.8	-31.5	25.33	40	-14.67	0-360	101	V
5	56.8035	43.9	Pk	13.3	-31.4	25.8	40	-14.2	0-360	101	V
6	106.8405	32.01	Pk	17.9	-31	18.91	43.52	-24.61	0-360	101	V

Pk - Peak detector

Frequency (MHz)	Meter Reading (dBuV)	Det	AF T899 (dB/m)	Amp Cbl (dB)	Corrected Reading (dBuV/m)	Class B QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
56.6242	45.54	Pk	13.3	-31.4	27.44	40	-12.56	253	232	V
56.6242	36.35	Qp	13.3	-31.4	18.25	40	-21.75	253	232	V

Pk - Peak detector
Qp - Quasi-Peak detector

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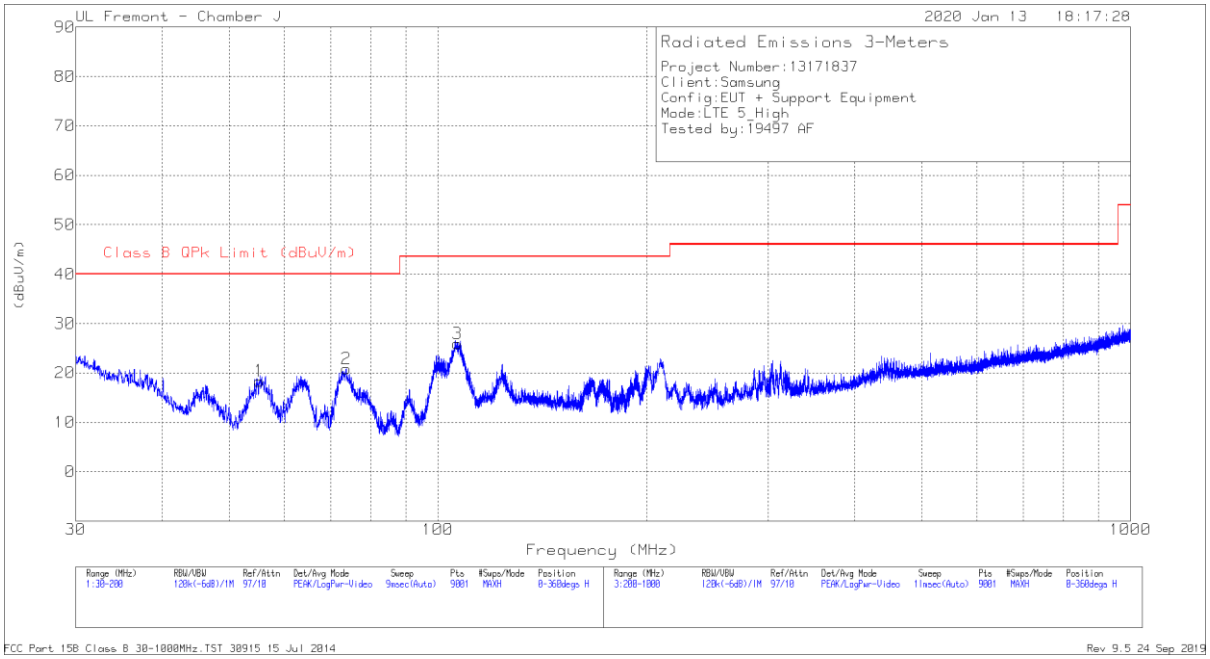
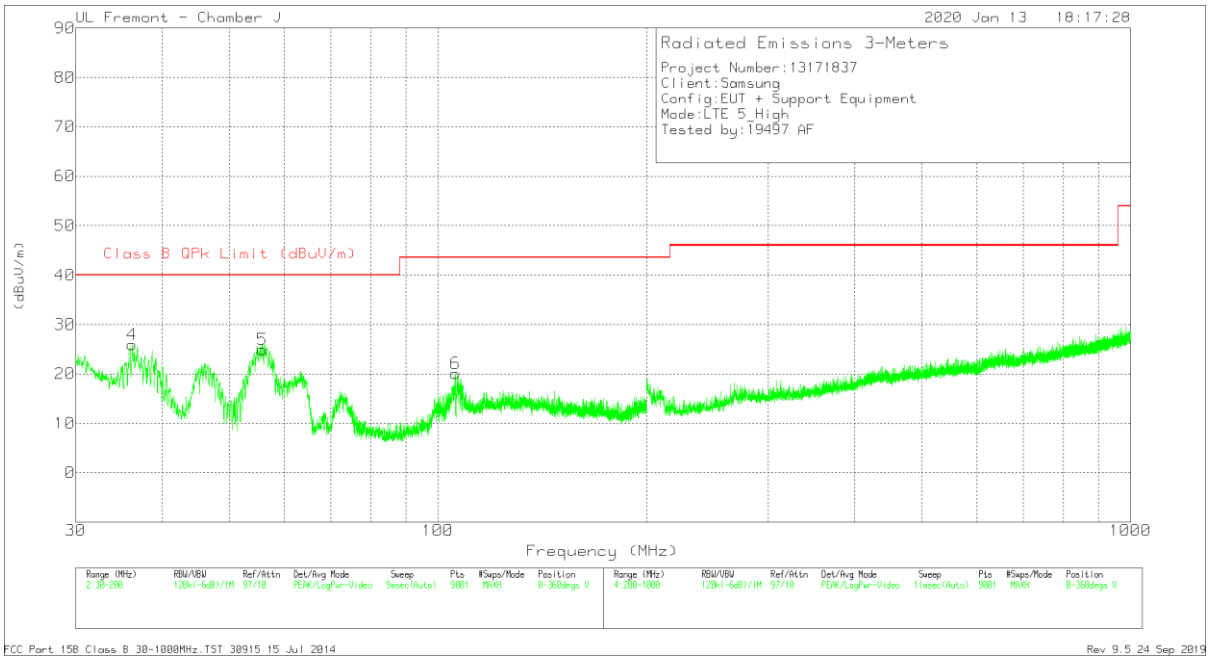
HIGH CHANNEL



HORIZONTAL



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RADIATED EMISSIONS

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T899 (dB/m)	Amp Cbl (dB)	Corrected Reading (dBuV/m)	Class B QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	55.179	36.78	Pk	13	-31.4	18.38	40	-21.62	0-360	398	H
2	73.7091	38.23	Pk	13.8	-31.2	20.83	40	-19.17	0-360	198	H
3	106.6893	39.05	Pk	17.9	-31	25.95	43.52	-17.57	0-360	299	H
4	36.2145	34.44	Pk	23	-31.5	25.94	40	-14.06	0-360	101	V
5	55.8402	43.1	Pk	13.2	-31.4	24.9	40	-15.1	0-360	101	V
6	106.0093	33.27	Pk	17.8	-31	20.07	43.52	-23.45	0-360	101	V

Pk - Peak detector

Frequency (MHz)	Meter Reading (dBuV)	Det	AF T899 (dB/m)	Amp Cbl (dB)	Corrected Reading (dBuV/m)	Class B QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
36.2951	36.99	Pk	23	-31.5	28.49	40	-11.51	214	172	V
36.2951	31.26	Qp	23	-31.5	22.76	40	-17.24	214	172	V

Pk - Peak detector
Qp - Quasi-Peak detector

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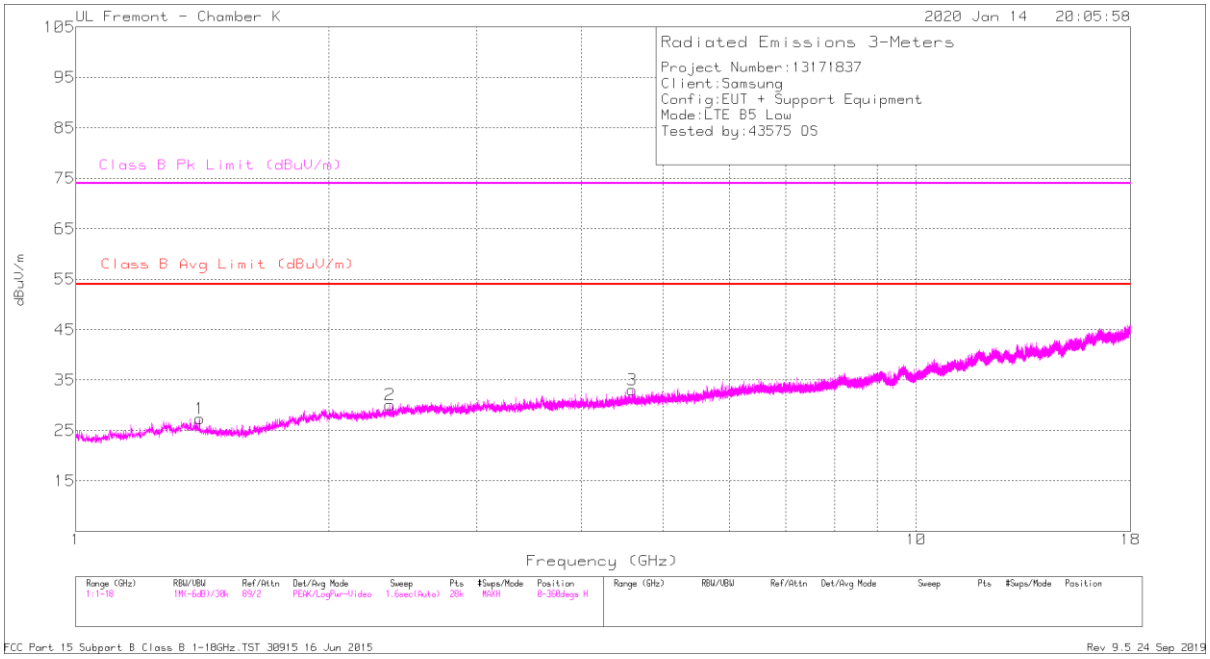
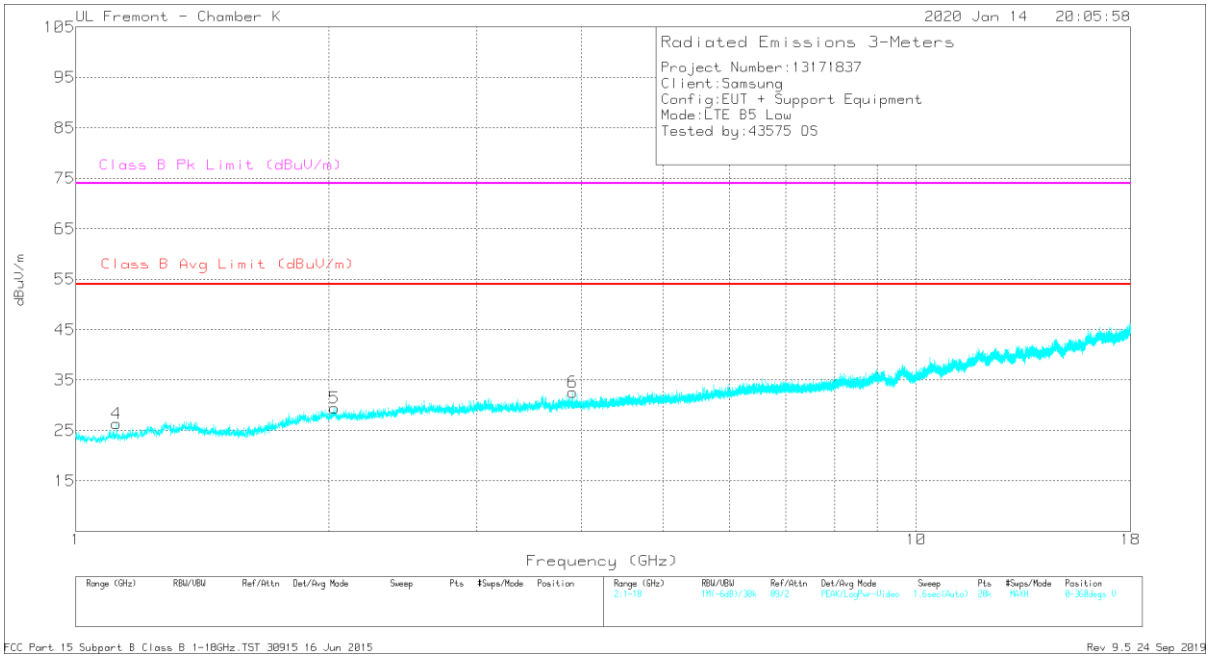
8.1.2. ABOVE 1GHz

LOW CHANNEL



HORIZONTAL



VERTICAL

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RADIATED EMISSIONS

Markers	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EMC4294 (dB/m)	Amp/Cbl (dB)	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Margin (dB)	Class B Pk Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.40449	32	Pk	28.8	-35.4	25.4	-	-	74	-48.6	28	313	H
	1.40449	19.58	Av	28.8	-35.4	12.98	54	-41.02	-	-	28	313	H
2	2.36629	32.4	Pk	31.8	-35.3	28.9	-	-	74	-45.1	65	103	H
	2.36629	19.64	Av	31.8	-35.3	16.14	54	-37.86	-	-	65	103	H
3	4.59441	29.26	Pk	33.9	-31.1	32.06	-	-	74	-41.94	130	350	H
	4.59441	15.7	Av	33.9	-31.1	18.5	54	-35.5	-	-	130	350	H
4	1.11996	41.48	Pk	27.6	-35.2	33.88	-	-	74	-40.12	328	191	V
	1.11996	28.43	Av	27.6	-35.2	20.83	54	-33.17	-	-	328	191	V
5	2.03392	42.79	Pk	31.4	-35.4	38.79	-	-	74	-35.21	246	380	V
	2.03392	29.13	Av	31.4	-35.4	25.13	54	-28.87	-	-	246	380	V
6	3.90216	39.38	Pk	33.4	-32.1	40.68	-	-	74	-33.32	267	341	V
	3.90216	25.95	Av	33.4	-32.1	27.25	54	-26.75	-	-	267	341	V

Pk - Peak detector
Av - Average detection

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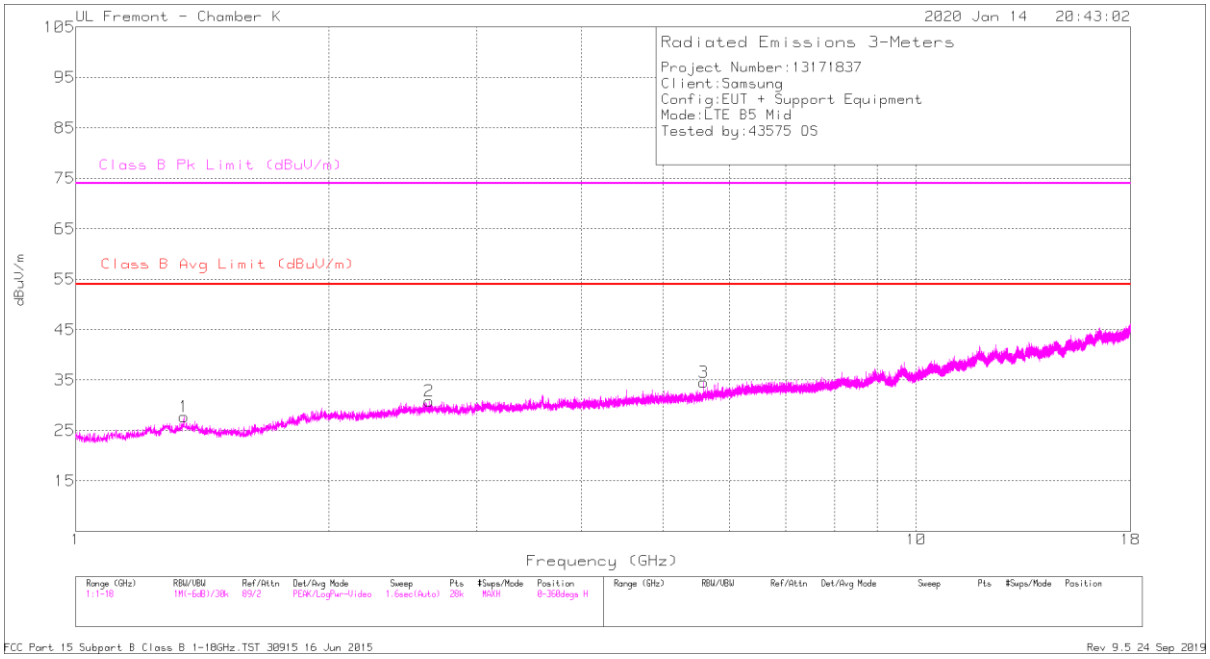
MID CHANNEL



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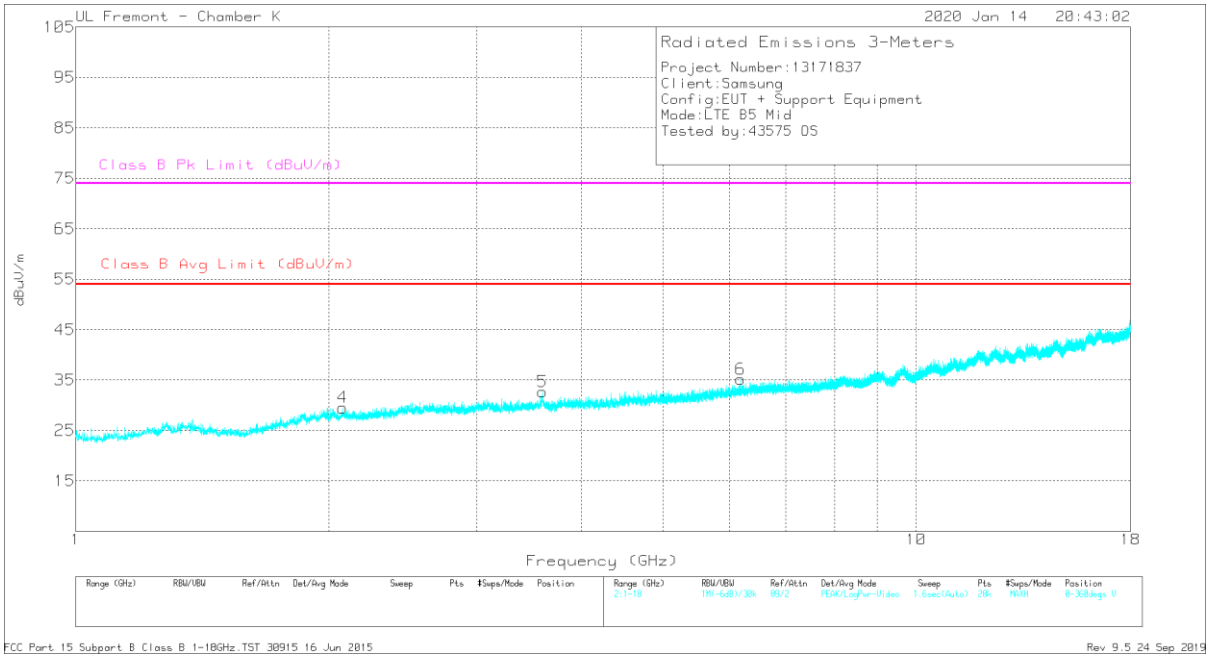

VERTICAL

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RADIATED EMISSIONS

Markers	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EMC4294 (dB/m)	Amp/Cbl (dB)	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Margin (dB)	Class B Pk Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.34493	32.85	Pk	29.4	-35.4	26.85	-	-	74	-47.15	126	237	H
	1.34493	19.67	Av	29.4	-35.4	13.67	54	-40.33	-	-	126	237	H
2	2.63372	33.32	Pk	32.7	-35.3	30.72	-	-	74	-43.28	221	200	H
	2.63372	19.51	Av	32.7	-35.3	16.91	54	-37.09	-	-	221	200	H
3	5.5896	28.46	Pk	34.7	-29.6	33.56	-	-	74	-40.44	249	214	H
	5.5896	14.76	Av	34.7	-29.6	19.86	54	-34.14	-	-	249	214	H
4	2.07813	42.49	Pk	31.4	-35.4	38.49	-	-	74	-35.51	152	368	V
	2.07813	29.13	Av	31.4	-35.4	25.13	54	-28.87	-	-	152	368	V
5	3.59412	40.4	Pk	33.9	-33	41.3	-	-	74	-32.7	39	263	V
	3.59412	27.05	Av	33.9	-33	27.95	54	-26.05	-	-	39	263	V
6	6.18539	36.45	Pk	35.6	-28.5	43.55	-	-	74	-30.45	115	405	V
	6.18539	22.66	Av	35.6	-28.5	29.76	54	-24.24	-	-	115	405	V

Pk - Peak detector
Av - Average detection

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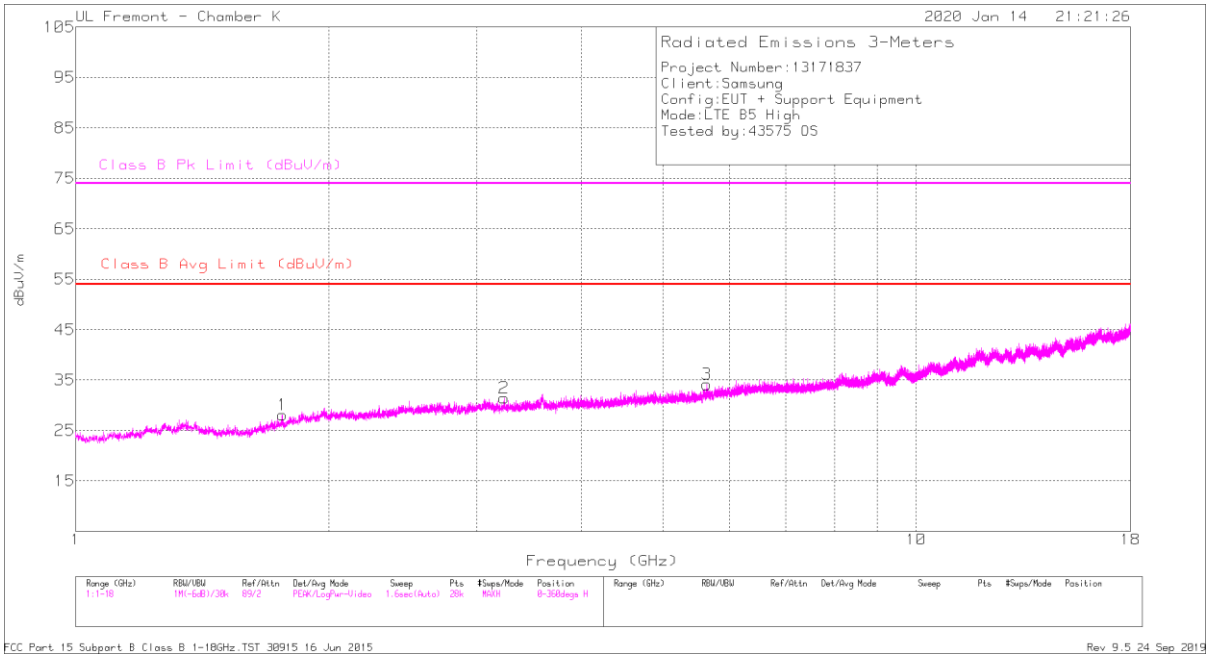
HIGH CHANNEL



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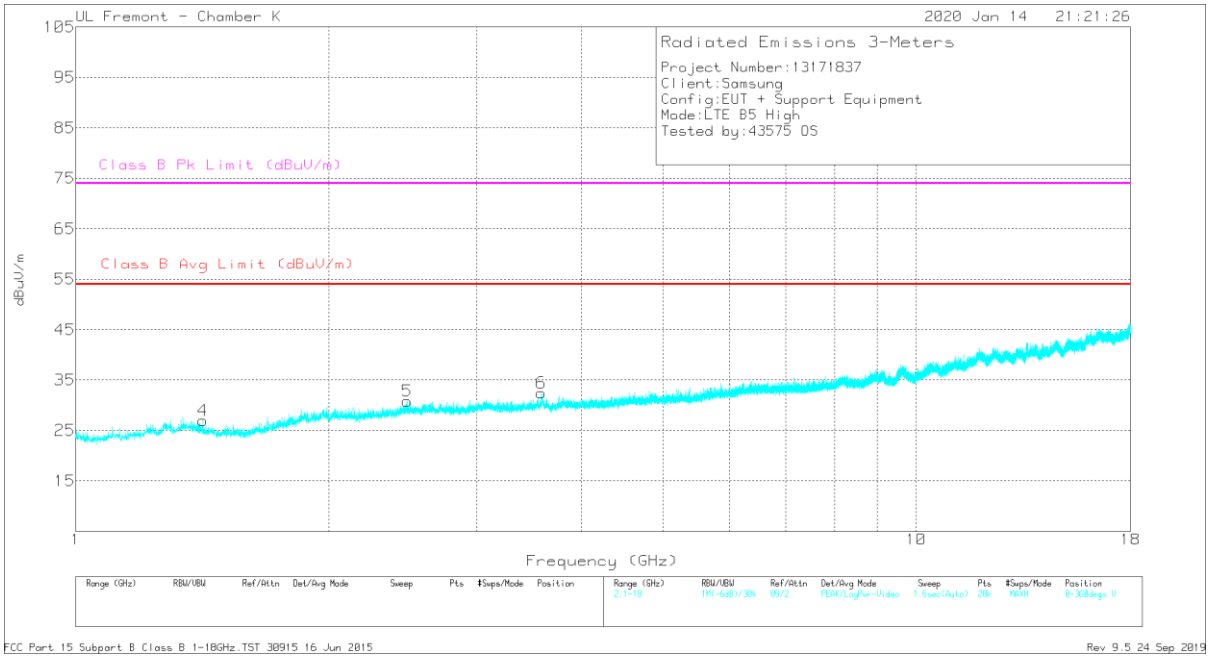

VERTICAL

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RADIATED EMISSIONS

Markers	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EMC4294 (dB/m)	Amp/Cbl (dB)	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Margin (dB)	Class B Pk Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.76373	32.13	Pk	29.8	-35.5	26.43	-	-	74	-47.57	268	373	H
	1.76373	19.74	Av	29.8	-35.5	14.04	54	-39.96	-	-	268	373	H
2	3.2341	30.7	Pk	32.8	-33.8	29.7	-	-	74	-44.3	0	158	H
	3.2341	18.46	Av	32.8	-33.8	17.46	54	-36.54	-	-	0	158	H
3	5.64031	27.14	Pk	34.8	-29.4	32.54	-	-	74	-41.46	21	95	H
	5.64031	14.59	Av	34.8	-29.4	19.99	54	-34.01	-	-	21	95	H
4	1.41775	42.49	Pk	28.7	-35.3	35.89	-	-	74	-38.11	253	214	V
	1.41775	28.54	Av	28.7	-35.3	21.94	54	-32.06	-	-	253	214	V
5	2.48022	42.26	Pk	32.5	-35.4	39.36	-	-	74	-34.64	300	252	V
	2.48022	28.94	Av	32.5	-35.4	26.04	54	-27.96	-	-	300	252	V
6	3.581	40.29	Pk	33.6	-33.1	40.79	-	-	74	-33.21	200	339	V
	3.581	26.83	Av	33.6	-33.1	27.33	54	-26.67	-	-	200	339	V

Pk - Peak detector
Av - Average detection

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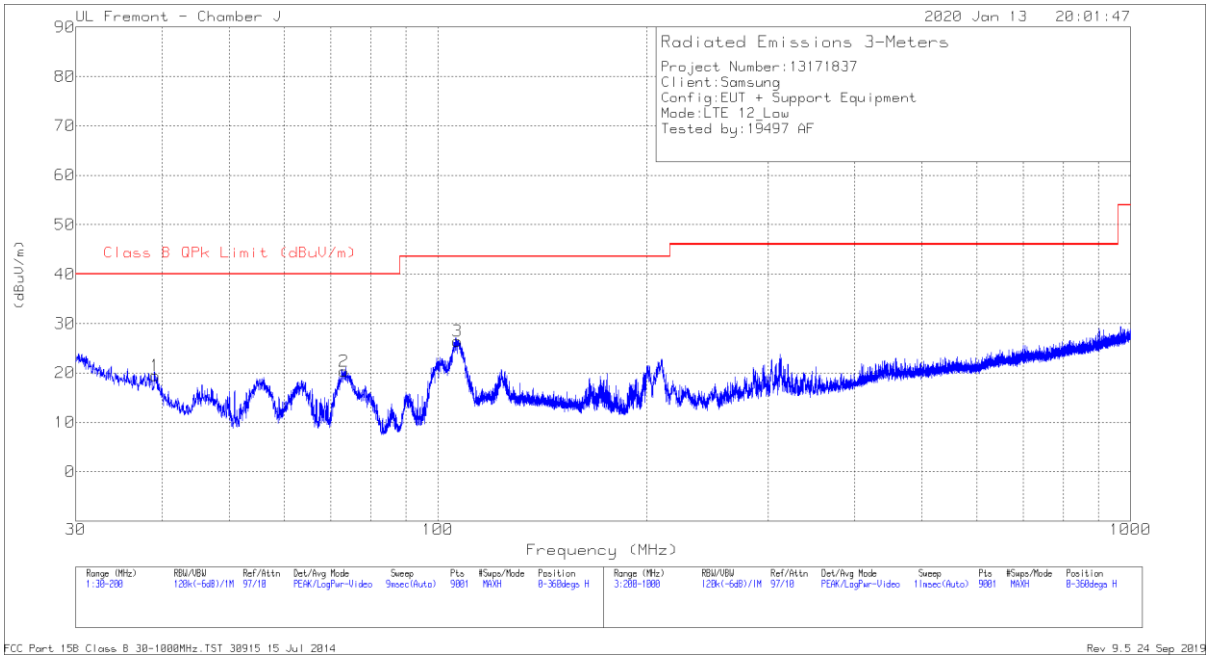
8.2. LTE Band 12

8.2.1. BELOW 1GHz

LOW CHANNEL



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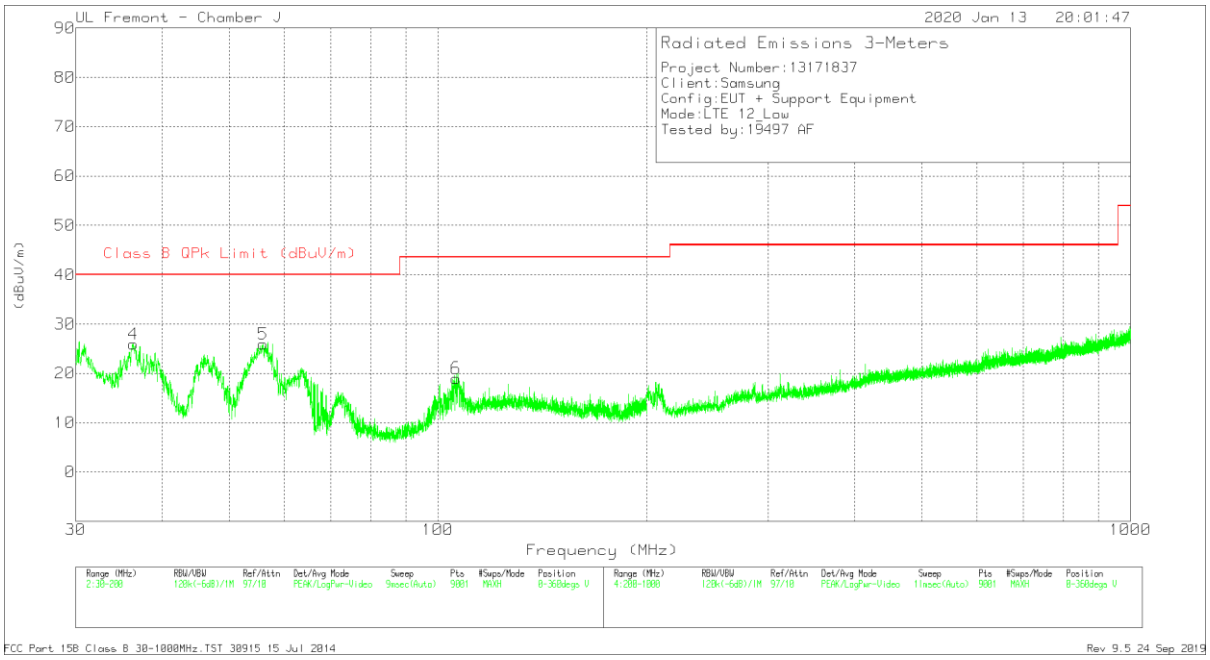

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RADIATED EMISSIONS

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T899 (dB/m)	Amp Cbl (dB)	Corrected Reading (dBuV/m)	Class B QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	39.0667	30.09	Pk	20.9	-31.5	19.49	40	-20.51	0-360	299	H
2	73.218	37.7	Pk	13.9	-31.2	20.4	40	-19.6	0-360	199	H
3	106.7649	39.56	Pk	17.9	-31	26.46	43.52	-17.06	0-360	199	H
4	36.3467	34.46	Pk	23	-31.5	25.96	40	-14.04	0-360	101	V
5	55.8968	44.17	Pk	13.2	-31.4	25.97	40	-14.03	0-360	101	V
6	106.2738	32.21	Pk	17.8	-31	19.01	43.52	-24.51	0-360	101	V

Pk - Peak detector

Frequency (MHz)	Meter Reading (dBuV)	Det	AF T899 (dB/m)	Amp Cbl (dB)	Corrected Reading (dBuV/m)	Class B QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
55.8527	46.67	Pk	13.2	-31.4	28.47	40	-11.53	150	161	V
55.8527	40.15	Qp	13.2	-31.4	21.95	40	-18.05	150	161	V

Pk - Peak detector
Qp - Quasi-Peak detector

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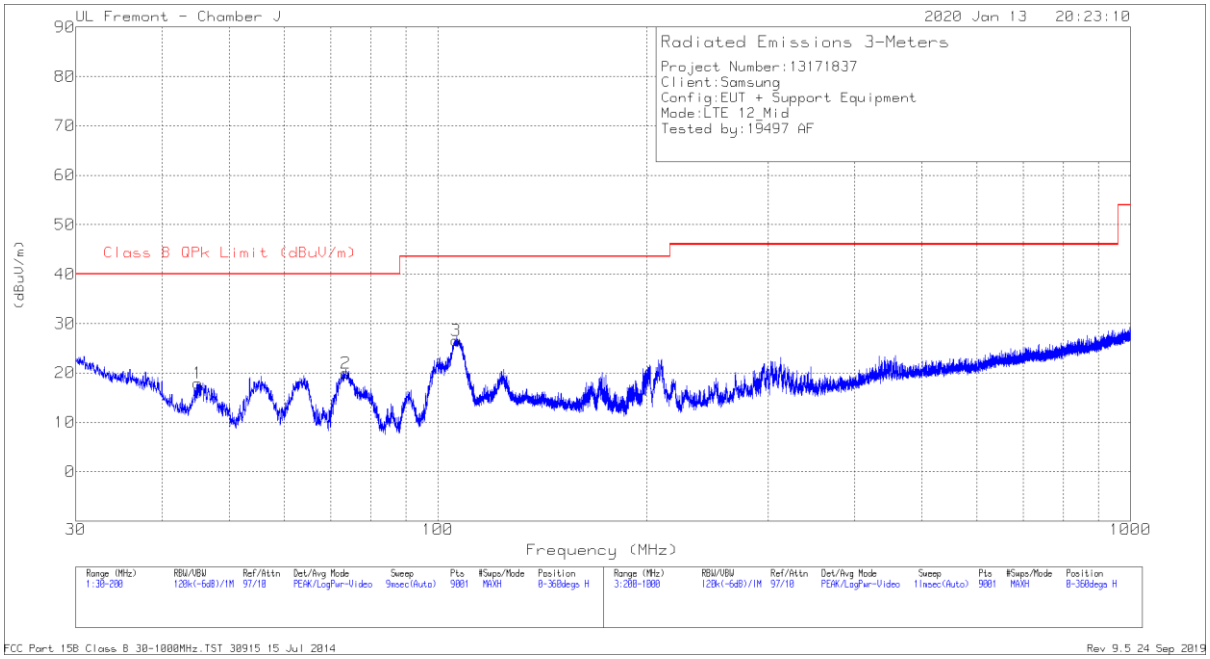
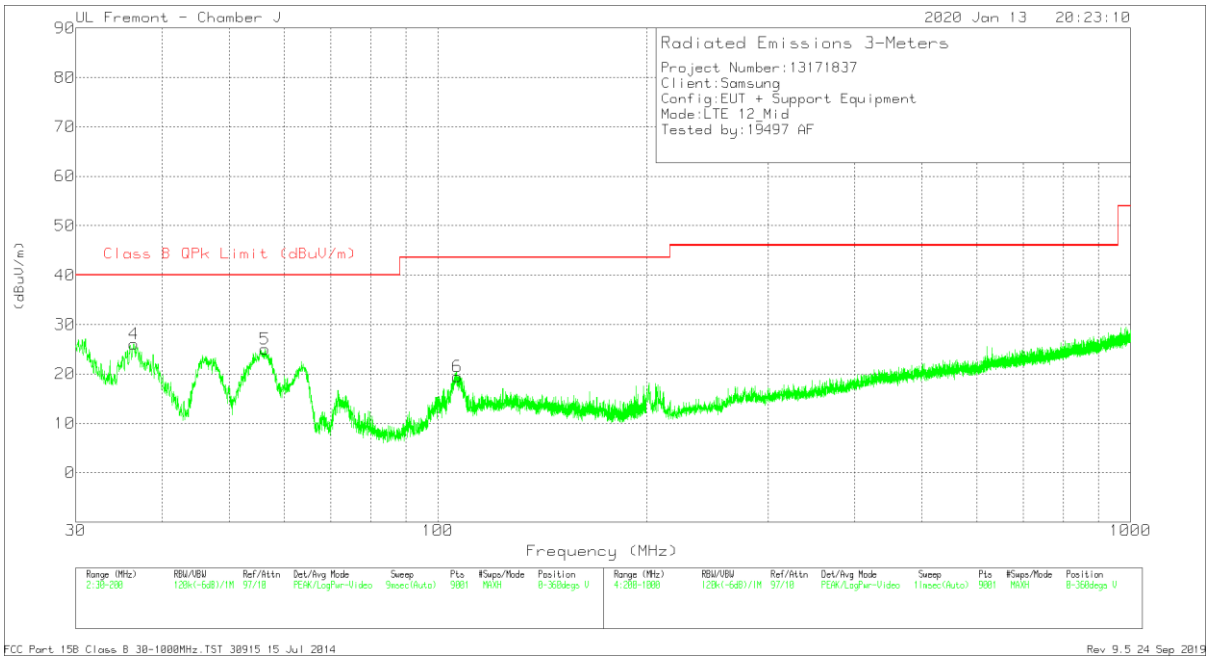
MID CHANNEL



HORIZONTAL



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RADIATED EMISSIONS

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T899 (dB/m)	Amp Cbl (dB)	Corrected Reading (dBuV/m)	Class B QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	45.0545	33.08	Pk	16.4	-31.5	17.98	40	-22.02	0-360	399	H
2	73.6903	37.37	Pk	13.8	-31.2	19.97	40	-20.03	0-360	298	H
3	106.3399	39.82	Pk	17.8	-31	26.62	43.52	-16.9	0-360	198	H
4	36.3845	34.7	Pk	22.9	-31.5	26.1	40	-13.9	0-360	101	V
5	56.2368	43.21	Pk	13.2	-31.4	25.01	40	-14.99	0-360	101	V
6	106.7649	32.53	Pk	17.9	-31	19.43	43.52	-24.09	0-360	101	V

Pk - Peak detector

Frequency (MHz)	Meter Reading (dBuV)	Det	AF T899 (dB/m)	Amp Cbl (dB)	Corrected Reading (dBuV/m)	Class B QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
36.6084	36.85	Pk	22.8	-31.5	28.15	40	-11.85	199	107	V
36.6084	28.59	Qp	22.8	-31.5	19.89	40	-20.11	199	107	V

Pk - Peak detector
Qp - Quasi-Peak detector

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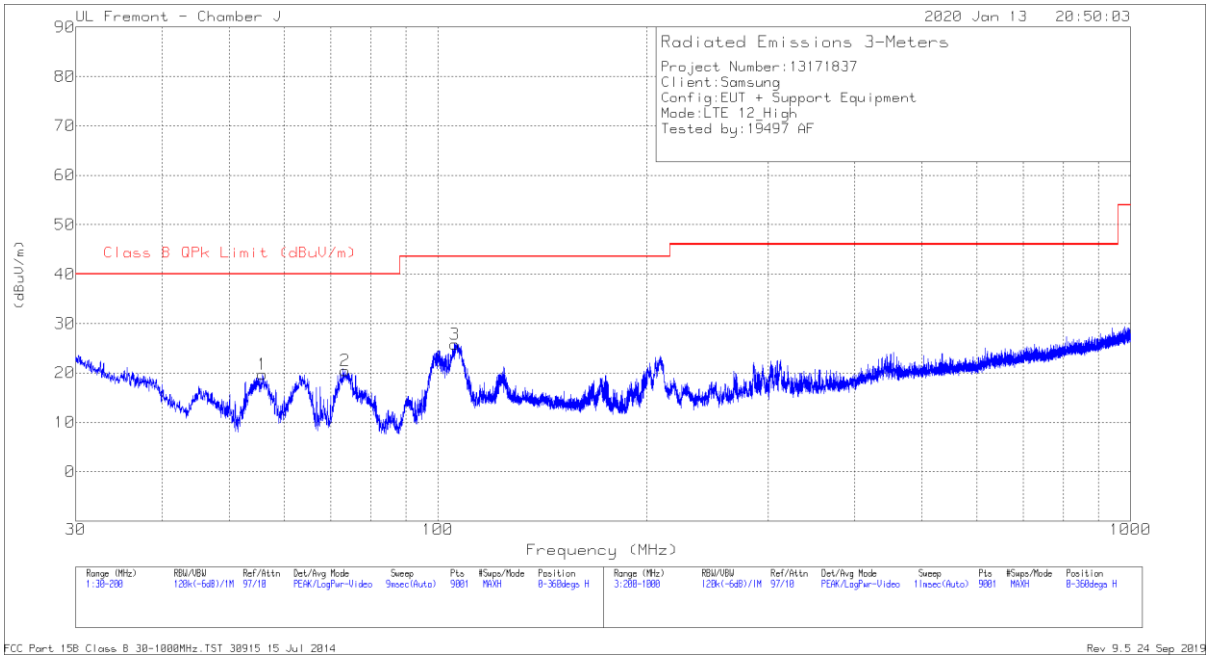
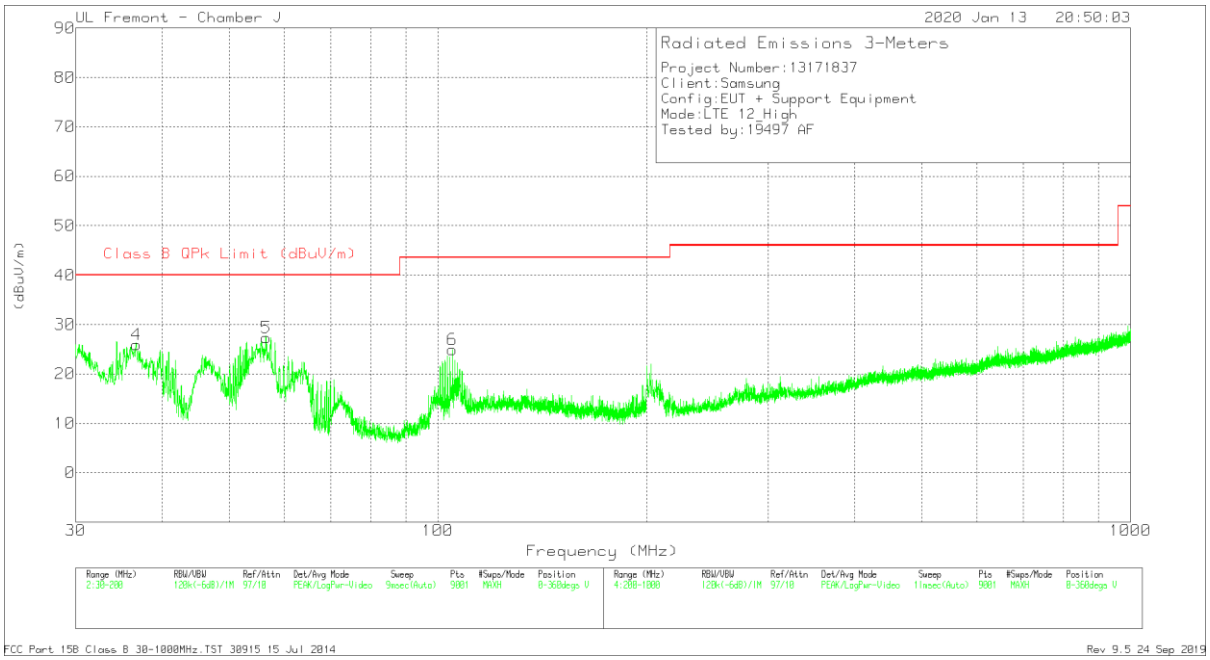
HIGH CHANNEL



HORIZONTAL



VERTICAL

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RADIATED EMISSIONS

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T899 (dB/m)	Amp Cbl (dB)	Corrected Reading (dBuV/m)	Class B QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	55.8402	37.97	Pk	13.2	-31.4	19.77	40	-20.23	0-360	398	H
2	73.5014	37.91	Pk	13.8	-31.2	20.51	40	-19.49	0-360	298	H
3	105.7638	39.15	Pk	17.7	-31	25.85	43.52	-17.67	0-360	198	H
4	36.6867	34.79	Pk	22.7	-31.5	25.99	40	-14.01	0-360	101	V
5	56.539	45.38	Pk	13.3	-31.4	27.28	40	-12.72	0-360	101	V
6	104.9327	38.45	Pk	17.5	-31	24.95	43.52	-18.57	0-360	101	V

Pk - Peak detector

Frequency (MHz)	Meter Reading (dBuV)	Det	AF T899 (dB/m)	Amp Cbl (dB)	Corrected Reading (dBuV/m)	Class B QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
56.4939	45.87	Pk	13.2	-31.4	27.67	40	-12.33	166	117	V
56.4939	39.62	Qp	13.2	-31.4	21.42	40	-18.58	166	117	V

Pk - Peak detector
Qp - Quasi-Peak detector

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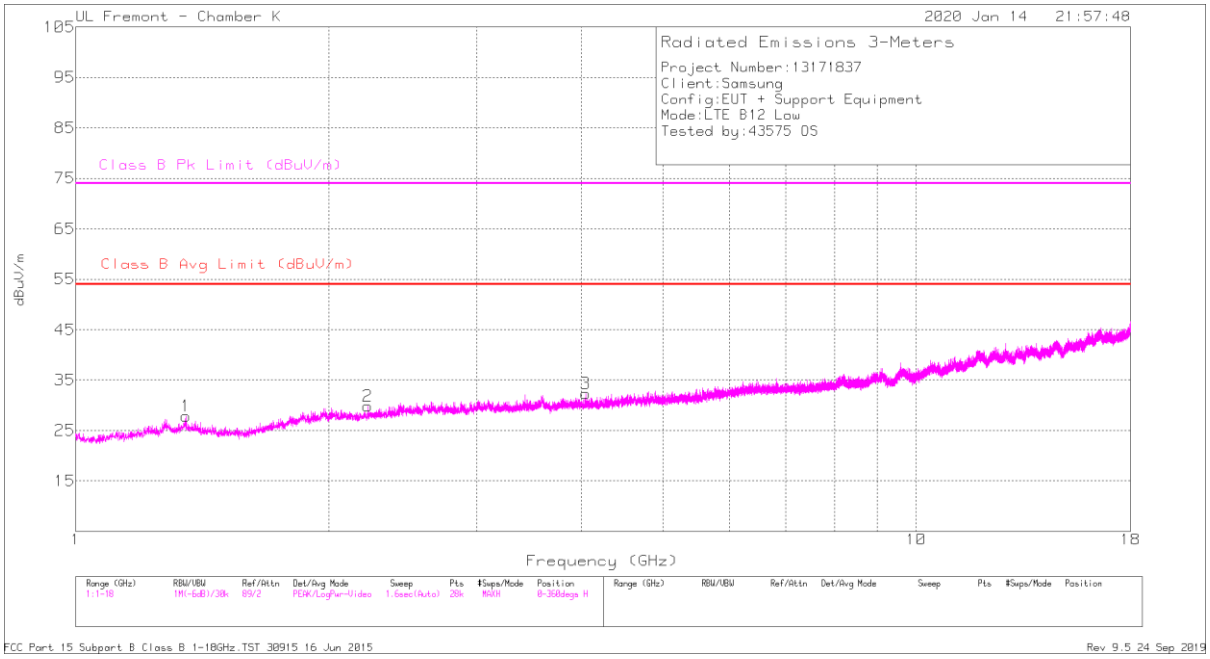
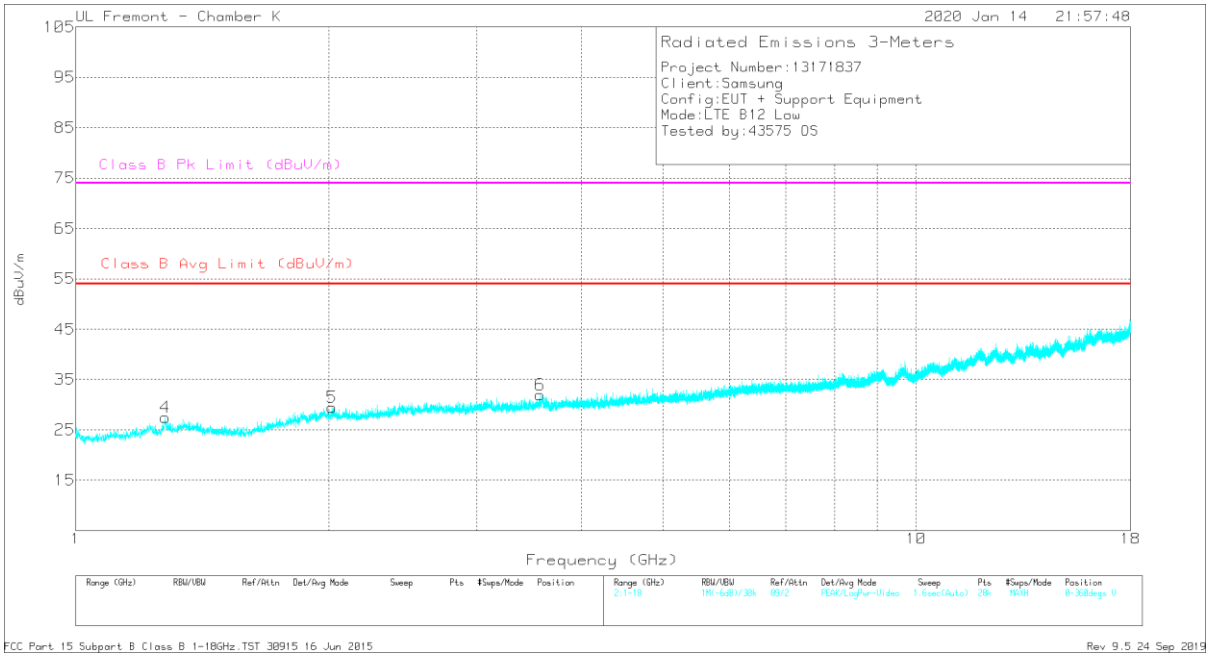
8.2.2. ABOVE 1GHz

LOW CHANNEL



HORIZONTAL



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RADIATED EMISSIONS

Markers	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EMC4294 (dB/m)	Amp/Cbl (dB)	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Margin (dB)	Class B Pk Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.35213	32.53	Pk	29.6	-35.4	26.73	-	-	74	-47.27	16	156	H
	1.35213	19.38	Av	29.6	-35.4	13.58	54	-40.42	-	-	16	156	H
2	2.22683	32.48	Pk	31.5	-35.4	28.58	-	-	74	-45.42	287	267	H
	2.22683	19.67	Av	31.5	-35.4	15.77	54	-38.23	-	-	287	267	H
3	4.04627	29.55	Pk	33.4	-31.6	31.35	-	-	74	-42.65	278	318	H
	4.04627	16.42	Av	33.4	-31.6	18.22	54	-35.78	-	-	278	318	H
4	1.27865	42.2	Pk	29.4	-35.4	36.2	-	-	74	-37.8	329	320	V
	1.27865	28.89	Av	29.4	-35.4	22.89	54	-31.11	-	-	329	320	V
5	2.01936	42.53	Pk	31.4	-35.3	38.63	-	-	74	-35.37	50	381	V
	2.01936	29.01	Av	31.4	-35.3	25.11	54	-28.89	-	-	50	381	V
6	3.57018	40.06	Pk	33.3	-33.1	40.26	-	-	74	-33.74	303	193	V
	3.57018	26.8	Av	33.3	-33.1	27	54	-27	-	-	303	193	V

Pk - Peak detector
Av - Average detection

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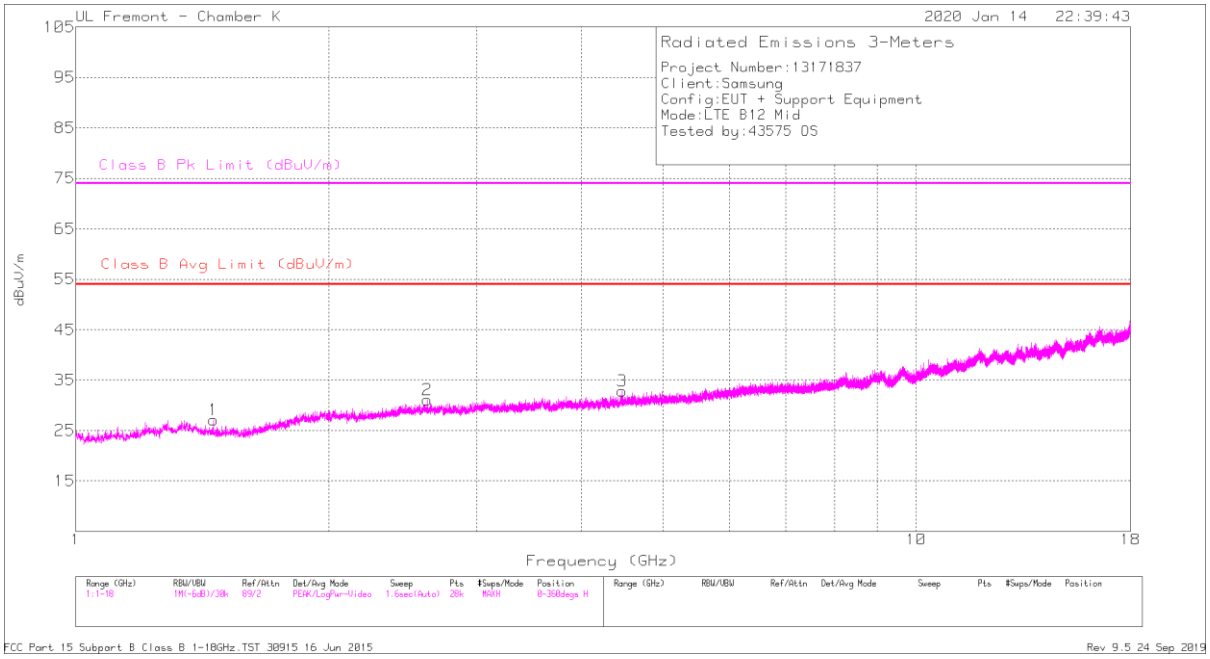
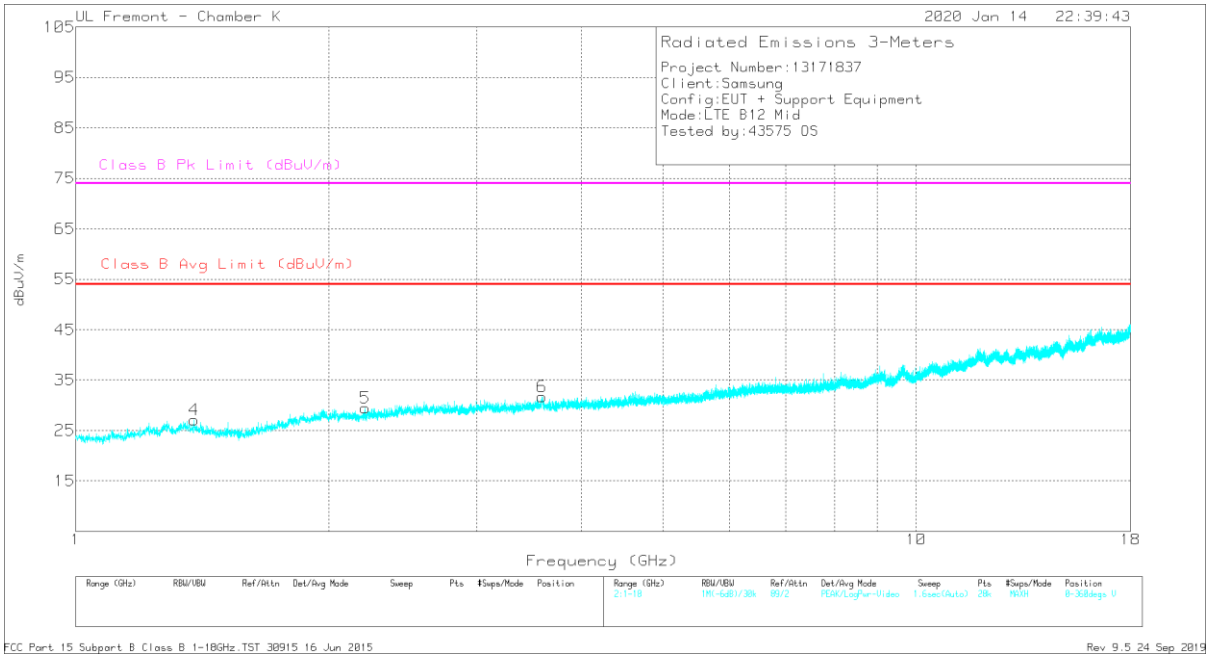
MID CHANNEL



HORIZONTAL



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RADIATED EMISSIONS

Markers	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EMC4294 (dB/m)	Amp/Cbl (dB)	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Margin (dB)	Class B Pk Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.45913	32.6	Pk	28.3	-35.5	25.4	-	-	74	-48.6	280	159	H
	1.45913	19.66	Av	28.3	-35.5	12.46	54	-41.54	-	-	280	159	H
2	2.62095	32.27	Pk	32.6	-35.3	29.57	-	-	74	-44.43	314	251	H
	2.62095	19.66	Av	32.6	-35.3	16.96	54	-37.04	-	-	314	251	H
3	4.46819	28.94	Pk	33.6	-31.5	31.04	-	-	74	-42.96	217	144	H
	4.46819	16.2	Av	33.6	-31.5	18.3	54	-35.7	-	-	217	144	H
4	1.38107	42.13	Pk	29.2	-35.5	35.83	-	-	74	-38.17	36	151	V
	1.38107	28.69	Av	29.2	-35.5	22.39	54	-31.61	-	-	36	151	V
5	2.20897	42.93	Pk	31.3	-35.5	38.73	-	-	74	-35.27	258	318	V
	2.20897	28.96	Av	31.3	-35.5	24.76	54	-29.24	-	-	258	318	V
6	3.58639	40.23	Pk	34.1	-33	41.33	-	-	74	-32.67	284	293	V
	3.58639	26.93	Av	34.1	-33	28.03	54	-25.97	-	-	284	293	V

Pk - Peak detector
Av - Average detection

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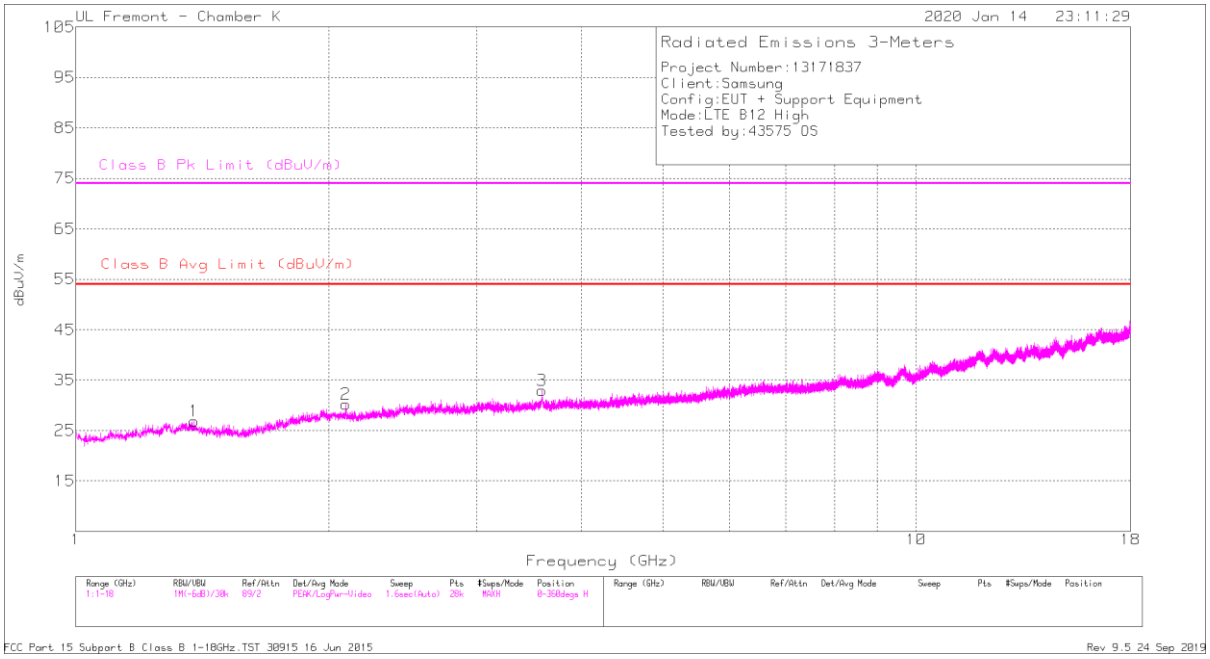
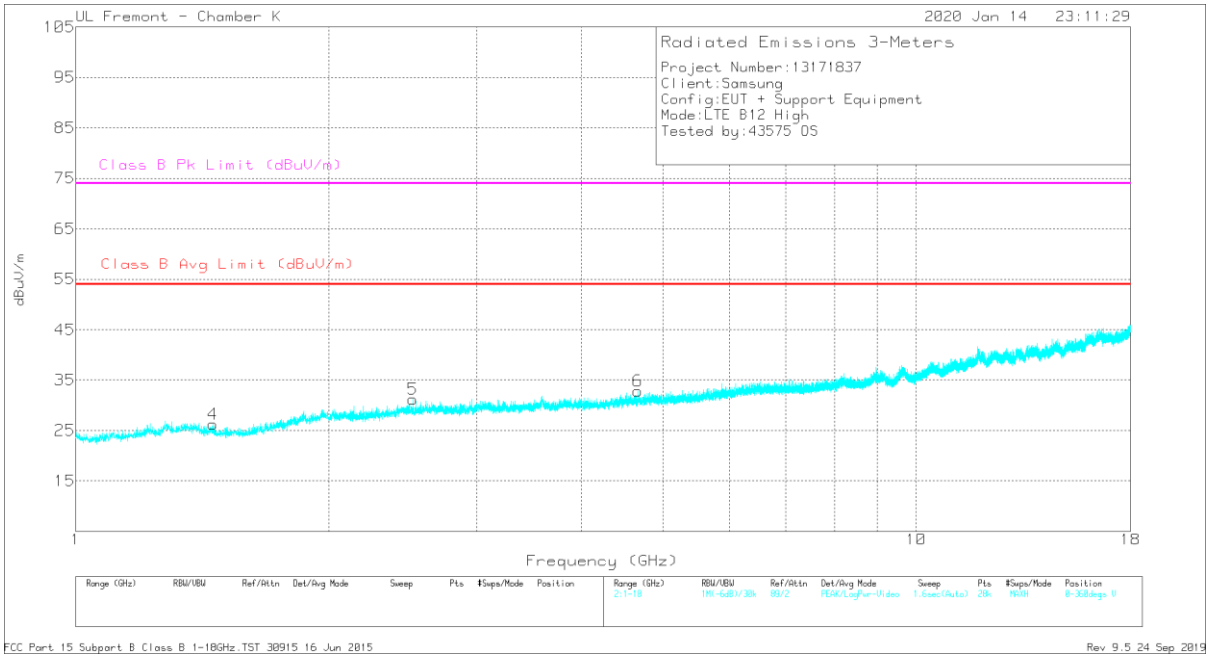
HIGH CHANNEL



HORIZONTAL



VERTICAL

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RADIATED EMISSIONS

Markers	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EMC4294 (dB/m)	Amp/Cbl (dB)	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Margin (dB)	Class B Pk Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.38456	33.03	Pk	29.2	-35.5	26.73	-	-	74	-47.27	164	227	H
	1.38456	19.54	Av	29.2	-35.5	13.24	54	-40.76	-	-	164	227	H
2	2.09688	32.59	Pk	31.4	-35.4	28.59	-	-	74	-45.41	115	118	H
	2.09688	19.76	Av	31.4	-35.4	15.76	54	-38.24	-	-	115	118	H
3	3.58632	30.49	Pk	34.1	-33	31.59	-	-	74	-42.41	335	324	H
	3.58632	17.67	Av	34.1	-33	18.77	54	-35.23	-	-	335	324	H
4	1.45495	42.22	Pk	28.4	-35.5	35.12	-	-	74	-38.88	52	203	V
	1.45495	28.98	Av	28.4	-35.5	21.88	54	-32.12	-	-	52	203	V
5	2.51845	42	Pk	32.4	-35.4	39	-	-	74	-35	142	367	V
	2.51845	28.69	Av	32.4	-35.4	25.69	54	-28.31	-	-	142	367	V
6	4.66269	38.61	Pk	33.9	-31	41.51	-	-	74	-32.49	283	293	V
	4.66269	24.8	Av	33.9	-31	27.7	54	-26.3	-	-	283	293	V

Pk - Peak detector
Av - Average detection

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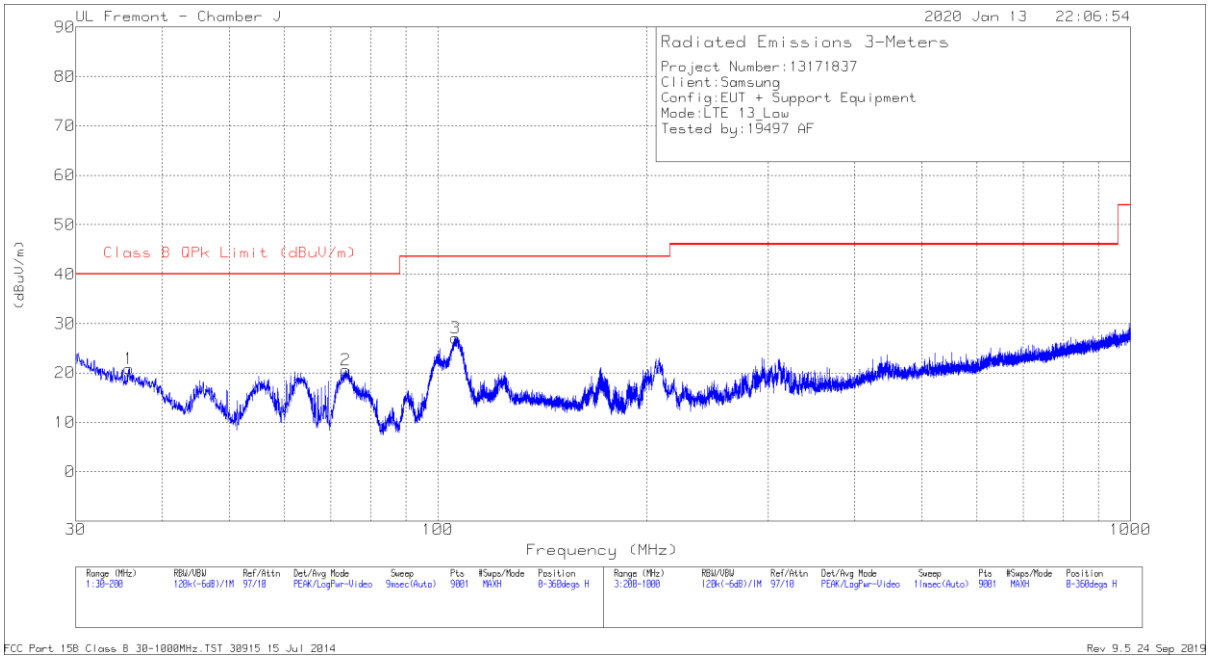
8.3. LTE Band 13

8.3.1. BELOW 1GHz

LOW CHANNEL



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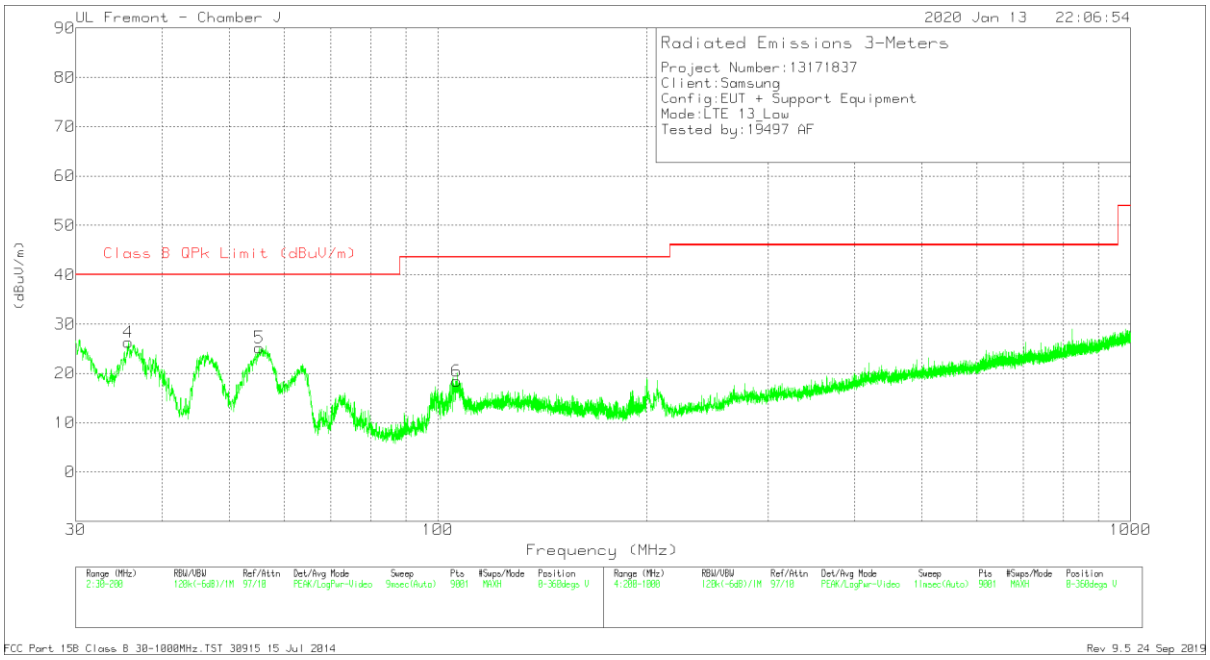

VERTICAL

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RADIATED EMISSIONS

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T899 (dB/m)	Amp Cbl (dB)	Corrected Reading (dBuV/m)	Class B QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	35.78	28.94	Pk	23.4	-31.5	20.84	40	-19.16	0-360	298	H
2	73.6147	38	Pk	13.8	-31.2	20.6	40	-19.4	0-360	298	H
3	105.9716	40.24	Pk	17.8	-31	27.04	43.52	-16.48	0-360	198	H
4	35.7517	34.36	Pk	23.4	-31.5	26.26	40	-13.74	0-360	101	V
5	55.1979	43.63	Pk	13	-31.4	25.23	40	-14.77	0-360	101	V
6	106.5382	31.51	Pk	17.9	-31	18.41	43.52	-25.11	0-360	101	V

Pk - Peak detector

Frequency (MHz)	Meter Reading (dBuV)	Det	AF T899 (dB/m)	Amp Cbl (dB)	Corrected Reading (dBuV/m)	Class B QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
35.9493	36.69	Pk	23.2	-31.5	28.39	40	-11.61	170	106	V
35.9493	29	Qp	23.2	-31.5	20.7	40	-19.3	170	106	V

Pk - Peak detector
Qp - Quasi-Peak detector

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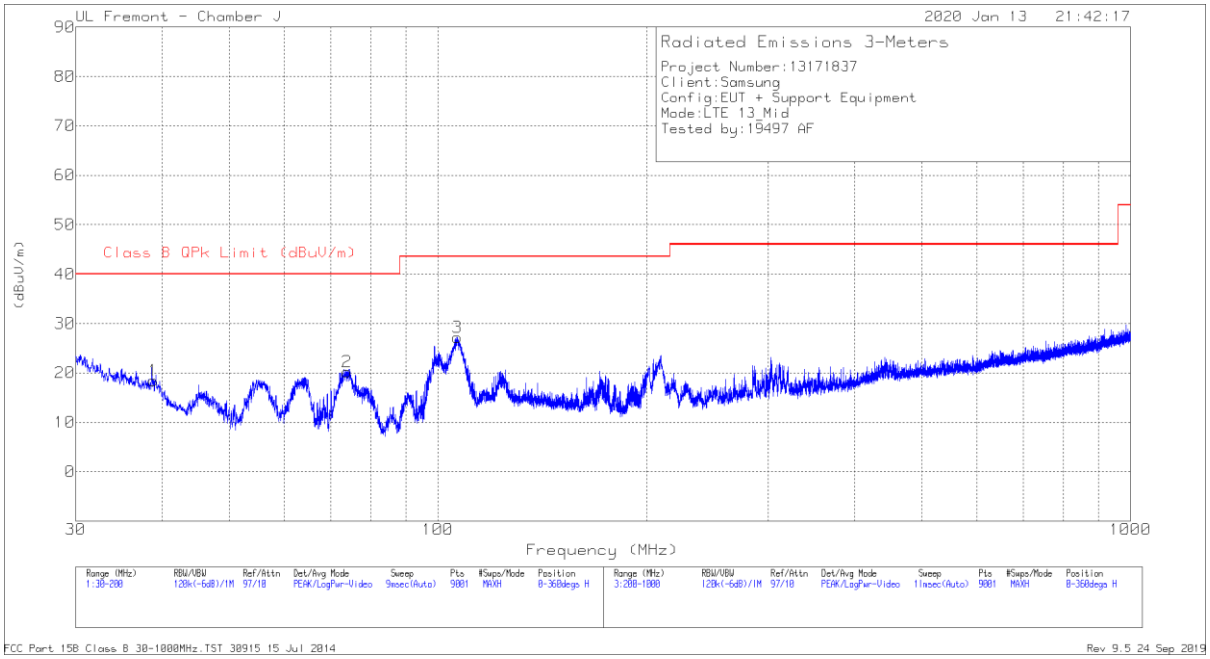
MID CHANNEL



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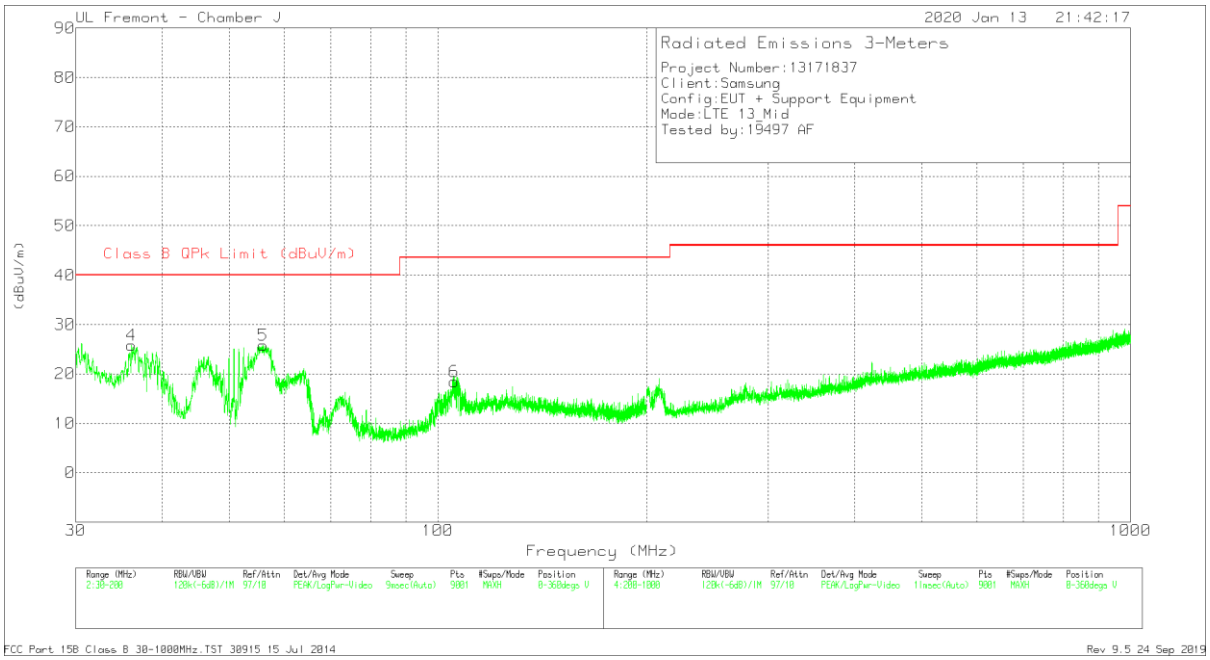

VERTICAL

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RADIATED EMISSIONS

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T899 (dB/m)	Amp Cbl (dB)	Corrected Reading (dBuV/m)	Class B QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	38.8212	28.8	Pk	21.1	-31.5	18.4	40	-21.6	0-360	399	H
2	73.8791	37.61	Pk	13.8	-31.2	20.21	40	-19.79	0-360	199	H
3	106.6893	40.3	Pk	17.9	-31	27.2	43.52	-16.32	0-360	199	H
4	36.12	34.17	Pk	23.1	-31.5	25.77	40	-14.23	0-360	101	V
5	55.8968	44.04	Pk	13.2	-31.4	25.84	40	-14.16	0-360	101	V
6	105.6127	31.78	Pk	17.7	-31	18.48	43.52	-25.04	0-360	101	V

Pk - Peak detector

Frequency (MHz)	Meter Reading (dBuV)	Det	AF T899 (dB/m)	Amp Cbl (dB)	Corrected Reading (dBuV/m)	Class B QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
55.8393	45.16	Pk	13.2	-31.4	26.96	40	-13.04	192	165	V
55.8393	40.77	Qp	13.2	-31.4	22.57	40	-17.43	192	165	V

Pk - Peak detector
Qp - Quasi-Peak detector

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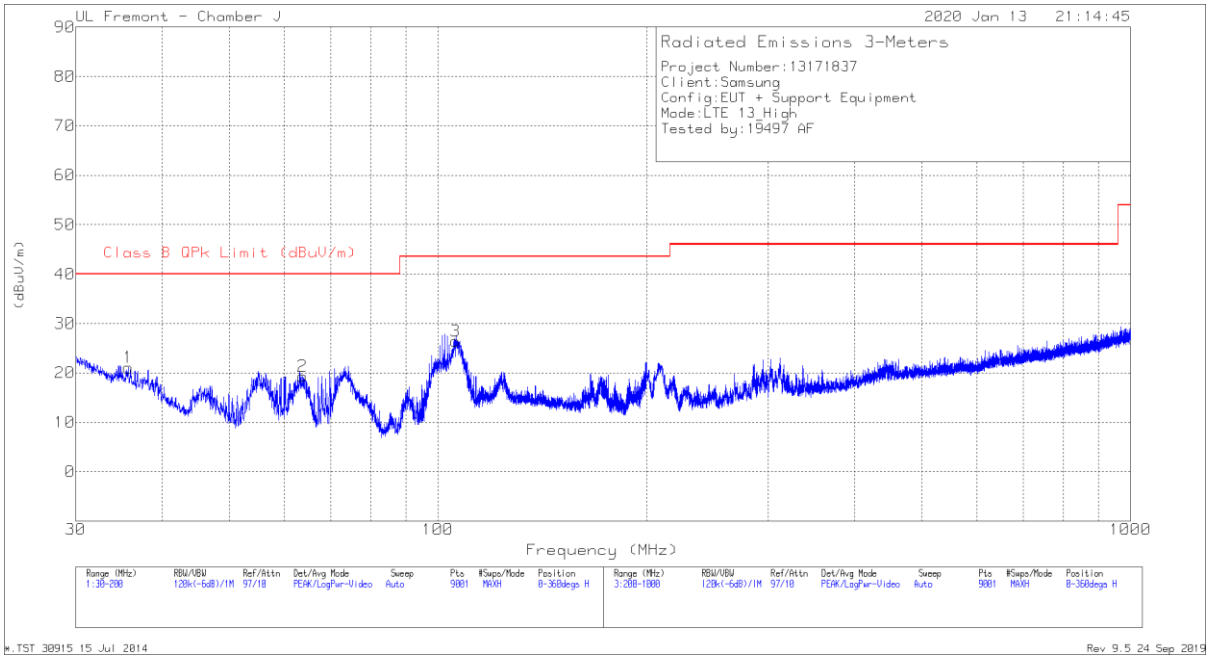
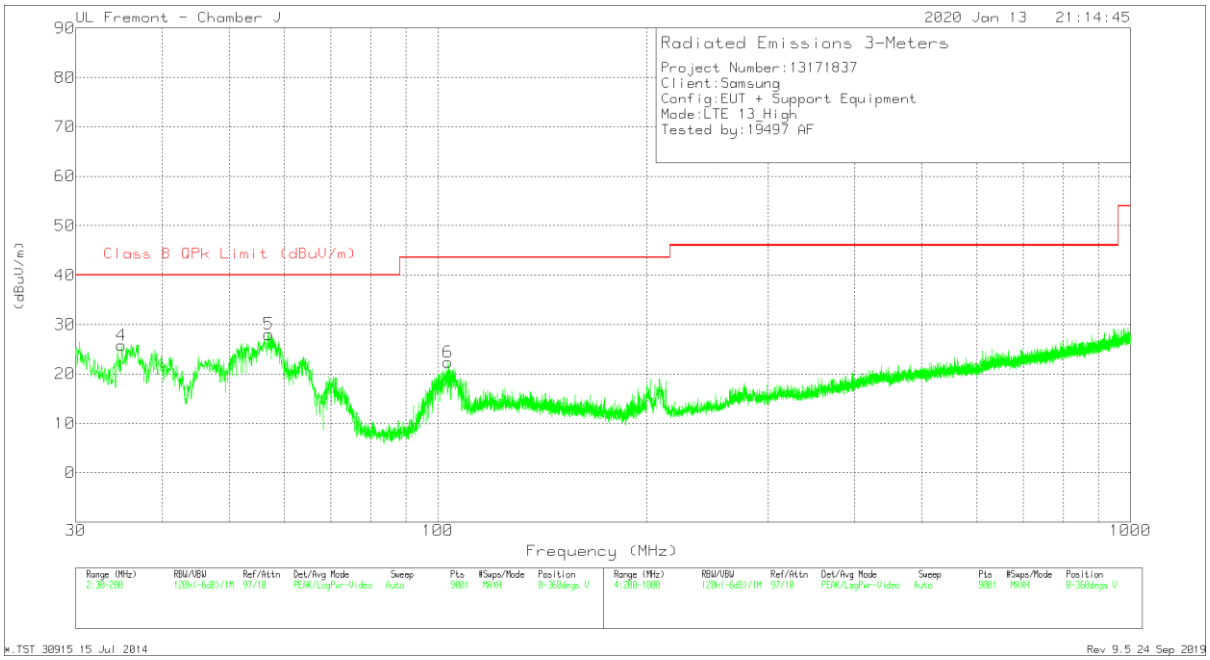
HIGH CHANNEL



HORIZONTAL



VERTICAL

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RADIATED EMISSIONS

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T899 (dB/m)	Amp Cbl (dB)	Corrected Reading (dBuV/m)	Class B QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	35.7234	29.15	Pk	23.4	-31.5	21.05	40	-18.95	0-360	101	H
2	63.8302	36.49	Pk	14	-31.2	19.29	40	-20.71	0-360	198	H
3	106.0755	39.6	Pk	17.8	-31	26.4	43.52	-17.12	0-360	198	H
4	34.93	33.31	Pk	24	-31.5	25.81	40	-14.19	0-360	101	V
5	56.9546	46.13	Pk	13.3	-31.4	28.03	40	-11.97	0-360	101	V
6	103.4782	36.27	Pk	17.1	-31	22.37	43.52	-21.15	0-360	101	V

Pk - Peak detector

Frequency (MHz)	Meter Reading (dBuV)	Det	AF T899 (dB/m)	Amp Cbl (dB)	Corrected Reading (dBuV/m)	Class B QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
56.9297	43.21	Pk	13.3	-31.4	25.11	40	-14.89	12	115	V
56.9297	38.73	Qp	13.3	-31.4	20.63	40	-19.37	12	115	V

Pk - Peak detector
Qp - Quasi-Peak detector

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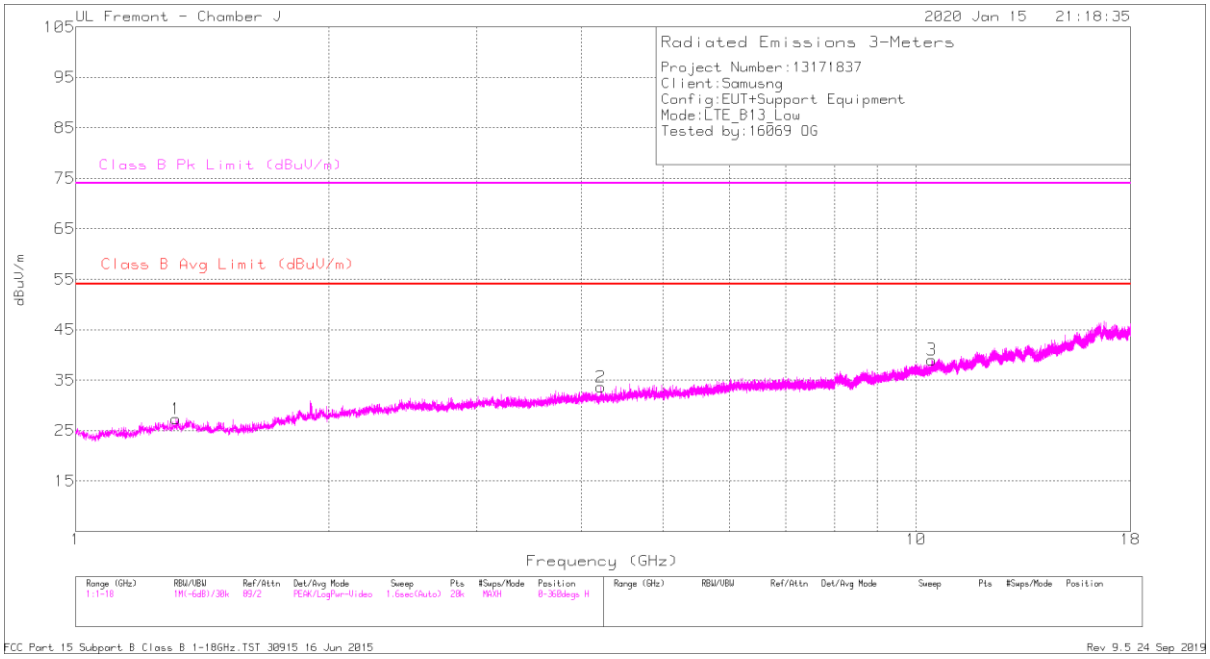
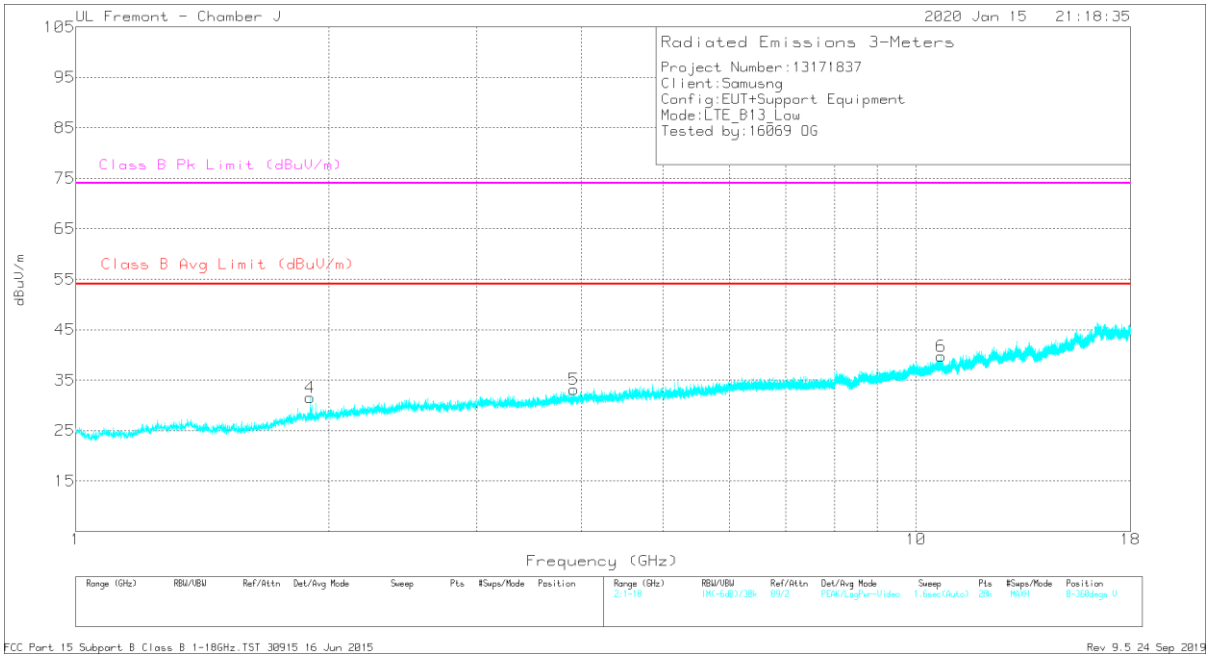
8.3.2. ABOVE 1GHz

LOW CHANNEL



HORIZONTAL



VERTICAL

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RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl (dB)	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.31645	34.59	Pk	28.7	-35.8	27.49			74	-46.51	12	175	H
1.31622	20.98	Av	28.7	-35.8	13.88	54	-40.12	-	-	12	175	H
4.2144	30.82	Pk	33.5	-32	32.32			74	-41.68	332	381	H
4.21404	17.76	Av	33.5	-32	19.26	54	-34.74	-	-	332	381	H
10.4415	25.02	Pk	37.6	-25.3	37.32			74	-36.68	315	337	H
10.44189	12.23	Av	37.6	-25.3	24.53	54	-29.47	-	-	315	337	H
1.90146	46.84	Pk	30.5	-35.8	41.54			74	-32.46	201	111	V
1.90148	30.01	Av	30.5	-35.8	24.71	54	-29.29	-	-	201	111	V
3.91526	40.71	Pk	33.5	-32.9	41.31			74	-32.69	17	164	V
3.91485	27.62	Av	33.5	-32.9	28.22	54	-25.78	-	-	17	164	V
10.71721	35.08	Pk	38	-24.8	48.28			74	-25.72	277	286	V
10.71872	21.46	Av	38	-24.7	34.76	54	-19.24	-	-	277	286	V

Pk - Peak detector
Av - Average detection

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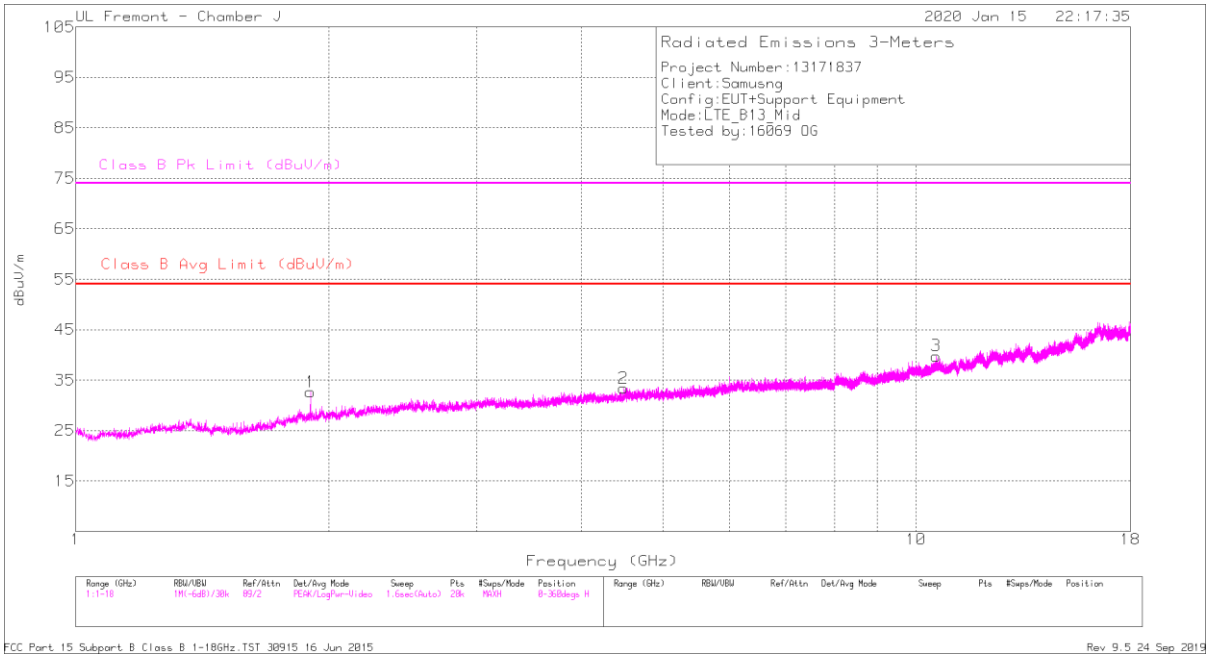
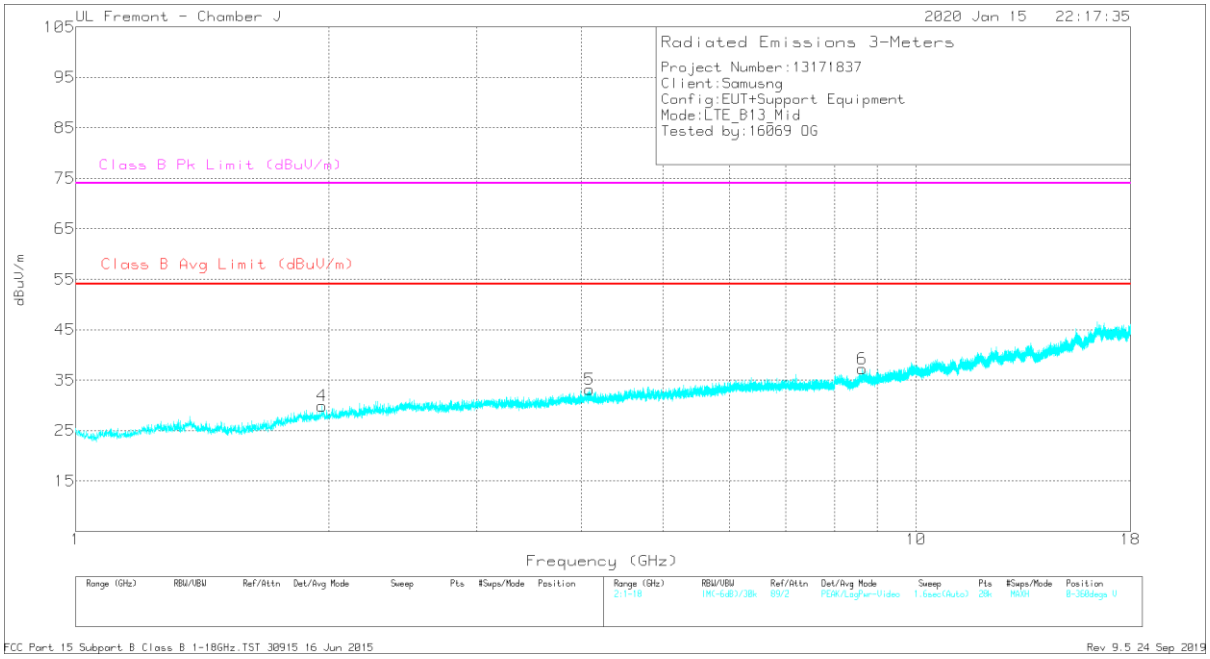
MID CHANNEL



HORIZONTAL



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RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl (dB)	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.90208	35.39	Pk	30.5	-35.8	30.09			74	-43.91	33	386	H
1.9021	20.9	Av	30.5	-35.8	15.6	54	-38.4	-	-	33	386	H
4.48724	30.2	Pk	33.9	-31.7	32.4			74	-41.6	160	259	H
4.48753	17.26	Av	33.9	-31.7	19.46	54	-34.54	-	-	160	259	H
10.56028	25.57	Pk	37.7	-25.1	38.17			74	-35.83	3	128	H
10.56003	12.71	Av	37.7	-25.1	25.31	54	-28.69	-	-	3	128	H
1.96401	44.56	Pk	31	-35.7	39.86			74	-34.14	251	139	V
1.9643	31.13	Av	31	-35.7	26.43	54	-27.57	-	-	251	139	V
4.09268	41.26	Pk	33.6	-32.3	42.56			74	-31.44	204	339	V
4.0921	27.42	Av	33.6	-32.3	28.72	54	-25.28	-	-	204	339	V
8.62945	35.6	Pk	36	-26	45.6			74	-28.4	283	220	V
8.63262	22.03	Av	35.9	-26	31.93	54	-22.07	-	-	283	220	V

Pk - Peak detector
Av - Average detection

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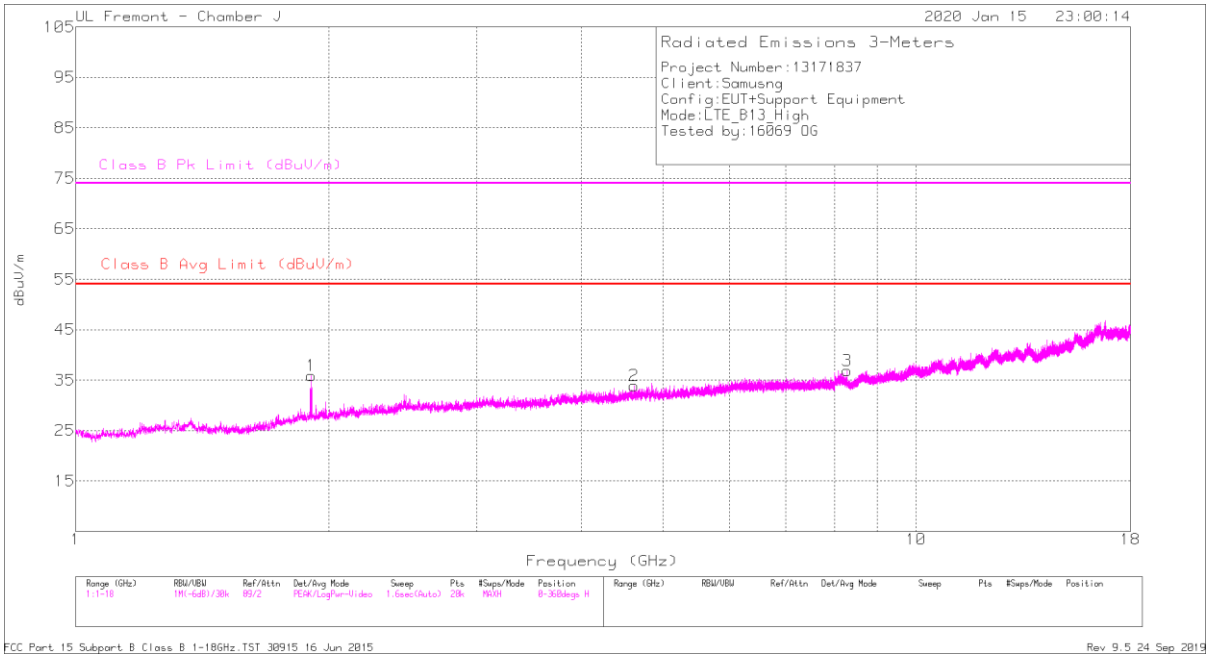
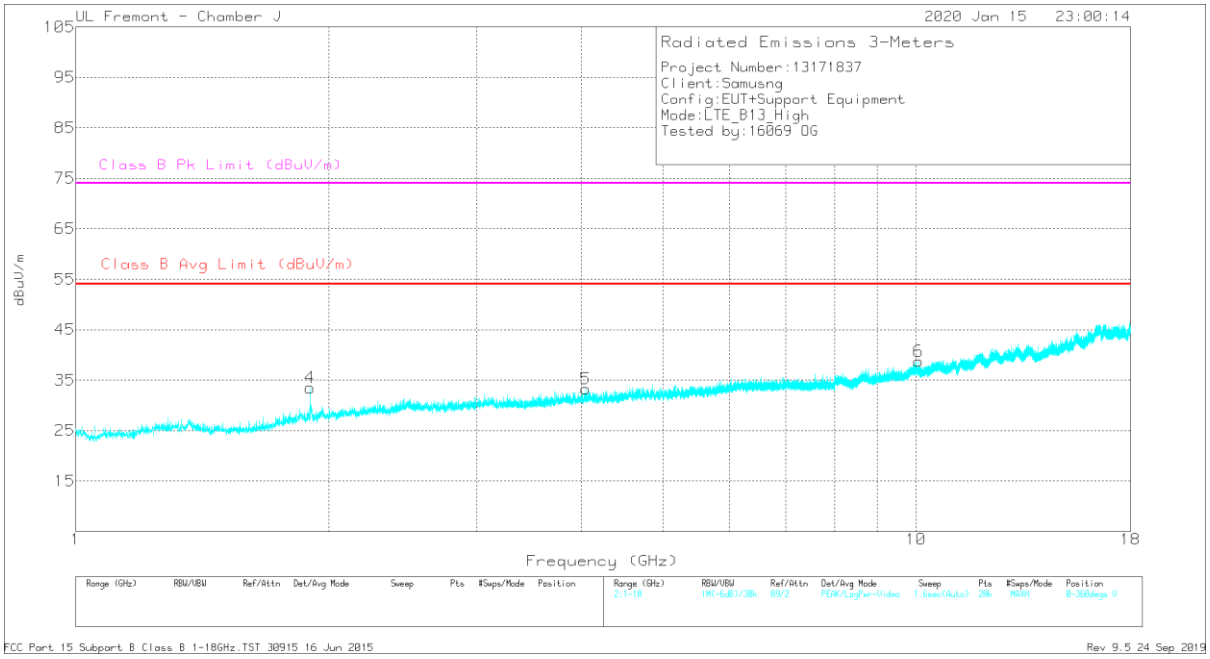
HIGH CHANNEL



HORIZONTAL



VERTICAL

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RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl (dB)	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.90831	34.4	Pk	30.6	-35.8	29.2			74	-44.8	357	251	H
1.90842	21.87	Av	30.6	-35.8	16.67	54	-37.33	-	-	357	251	H
4.62207	30.8	Pk	34.2	-31.7	33.3			74	-40.7	178	128	H
4.62228	17.74	Av	34.2	-31.7	20.24	54	-33.76	-	-	178	128	H
8.27766	27.44	Pk	35.8	-26.8	36.44			74	-37.56	270	200	H
8.27782	13.78	Av	35.8	-26.8	22.78	54	-31.22	-	-	270	200	H
1.90114	43.76	Pk	30.5	-35.8	38.46			74	-35.54	127	111	V
1.90168	30.36	Av	30.5	-35.8	25.06	54	-28.94	-	-	127	111	V
4.04676	40.92	Pk	33.5	-32.6	41.82			74	-32.18	167	120	V
4.04676	27.71	Av	33.5	-32.6	28.61	54	-25.39	-	-	167	120	V
10.06665	35.22	Pk	37.2	-25.2	47.22			74	-26.78	66	359	V
10.06428	21.99	Av	37.2	-25.2	33.99	54	-20.01	-	-	66	359	V

Pk - Peak detector
Av - Average detection

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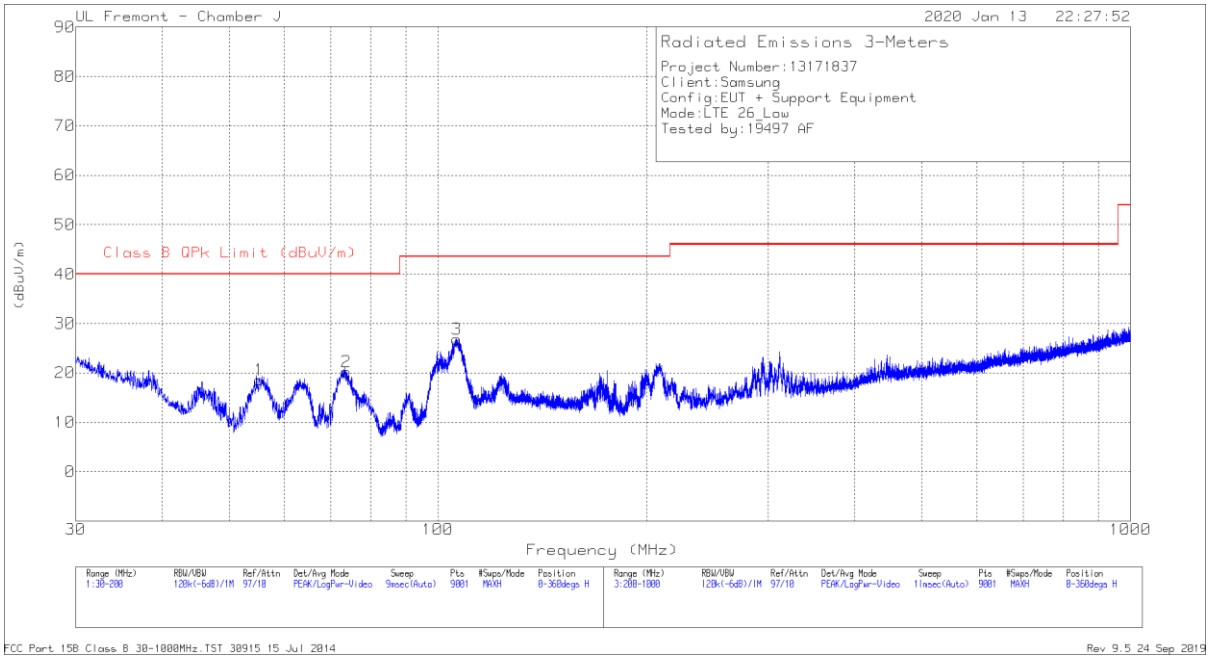
8.4. LTE Band 26

8.4.1. BELOW 1GHz

LOW CHANNEL



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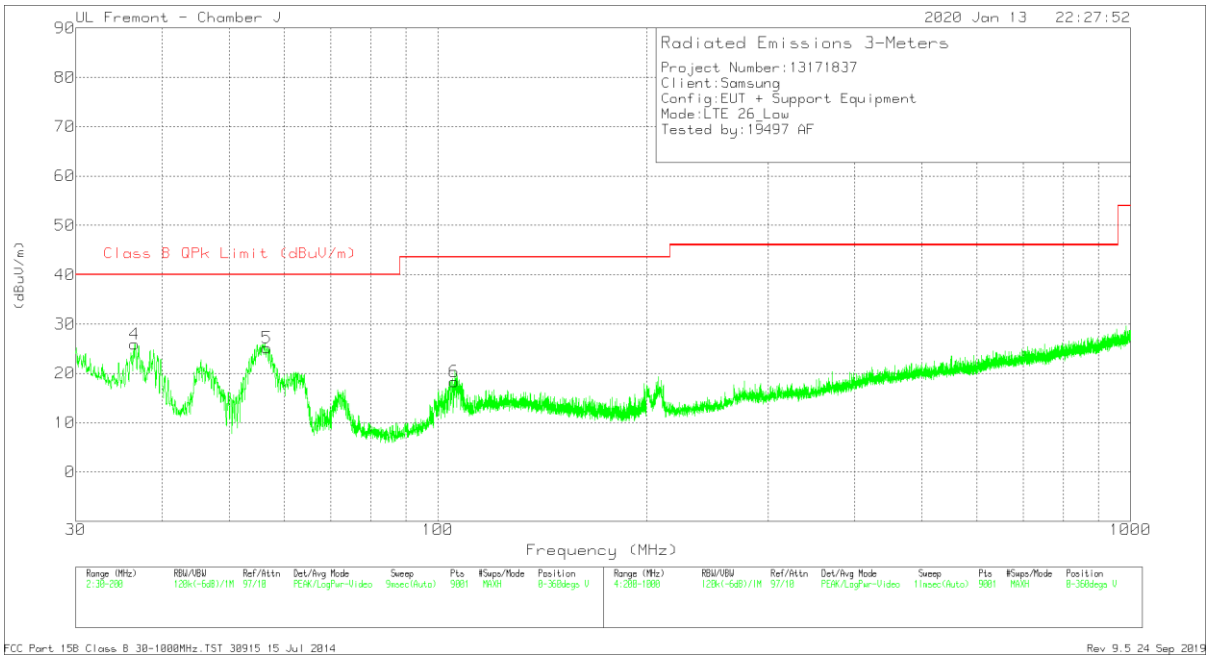

VERTICAL

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RADIATED EMISSIONS

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T899 (dB/m)	Amp Cbl (dB)	Corrected Reading (dBuV/m)	Class B QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	55.2546	36.92	Pk	13.1	-31.4	18.62	40	-21.38	0-360	399	H
2	73.8036	37.59	Pk	13.8	-31.2	20.19	40	-19.81	0-360	198	H
3	106.3588	40.05	Pk	17.8	-31	26.85	43.52	-16.67	0-360	198	H
4	36.5167	34.65	Pk	22.8	-31.5	25.95	40	-14.05	0-360	101	V
5	56.5957	43.31	Pk	13.3	-31.4	25.21	40	-14.79	0-360	101	V
6	105.5088	31.61	Pk	17.7	-31	18.31	43.52	-25.21	0-360	101	V

Pk - Peak detector

Frequency (MHz)	Meter Reading (dBuV)	Det	AF T899 (dB/m)	Amp Cbl (dB)	Corrected Reading (dBuV/m)	Class B QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
36.5867	36.94	Pk	22.8	-31.5	28.24	40	-11.76	184	102	V
36.5867	30.29	Qp	22.8	-31.5	21.59	40	-18.41	184	102	V

Pk - Peak detector
Qp - Quasi-Peak detector

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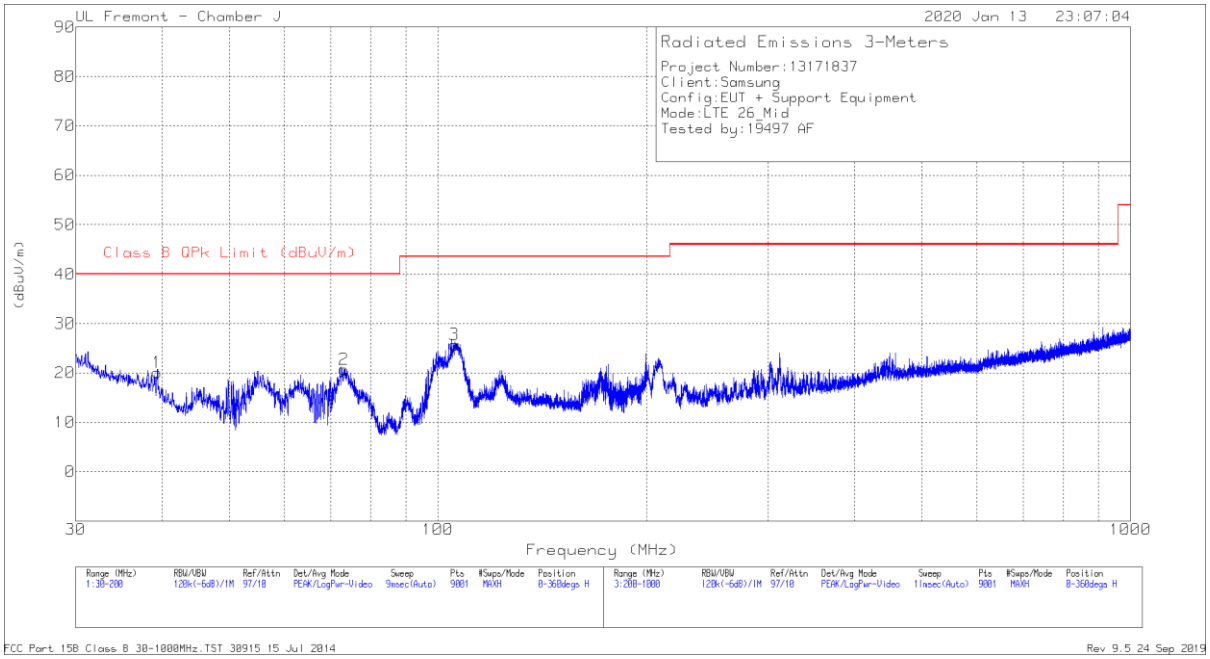
MID CHANNEL



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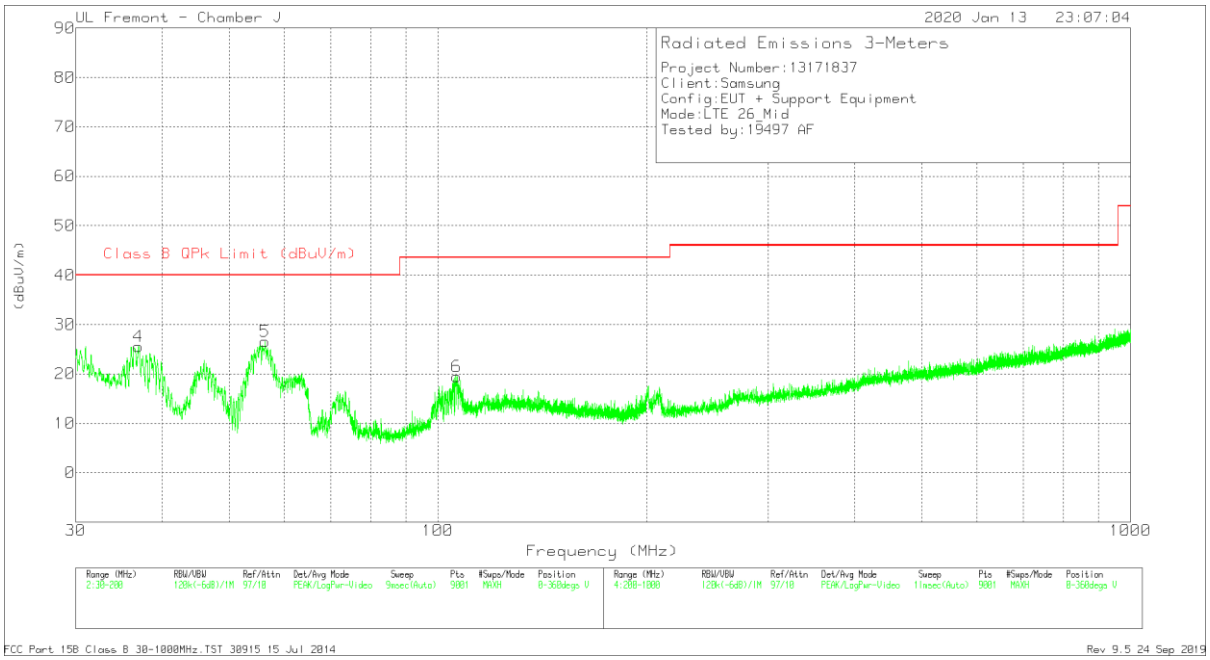

VERTICAL

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RADIATED EMISSIONS

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T899 (dB/m)	Amp Cbl (dB)	Corrected Reading (dBuV/m)	Class B QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	39.3312	30.89	Pk	20.7	-31.5	20.09	40	-19.91	0-360	398	H
2	73.1991	38.02	Pk	13.9	-31.2	20.72	40	-19.28	0-360	198	H
3	105.6504	39.04	Pk	17.7	-31	25.74	43.52	-17.78	0-360	198	H
4	36.97	34.51	Pk	22.5	-31.5	25.51	40	-14.49	0-360	101	V
5	56.2557	44.77	Pk	13.2	-31.4	26.57	40	-13.43	0-360	101	V
6	106.5571	32.51	Pk	17.9	-31	19.41	43.52	-24.11	0-360	101	V

Pk - Peak detector

Frequency (MHz)	Meter Reading (dBuV)	Det	AF T899 (dB/m)	Amp Cbl (dB)	Corrected Reading (dBuV/m)	Class B QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
56.3315	45.73	Pk	13.2	-31.4	27.53	40	-12.47	195	103	V
56.3315	40.75	Qp	13.2	-31.4	22.55	40	-17.45	195	103	V

Pk - Peak detector
Qp - Quasi-Peak detector

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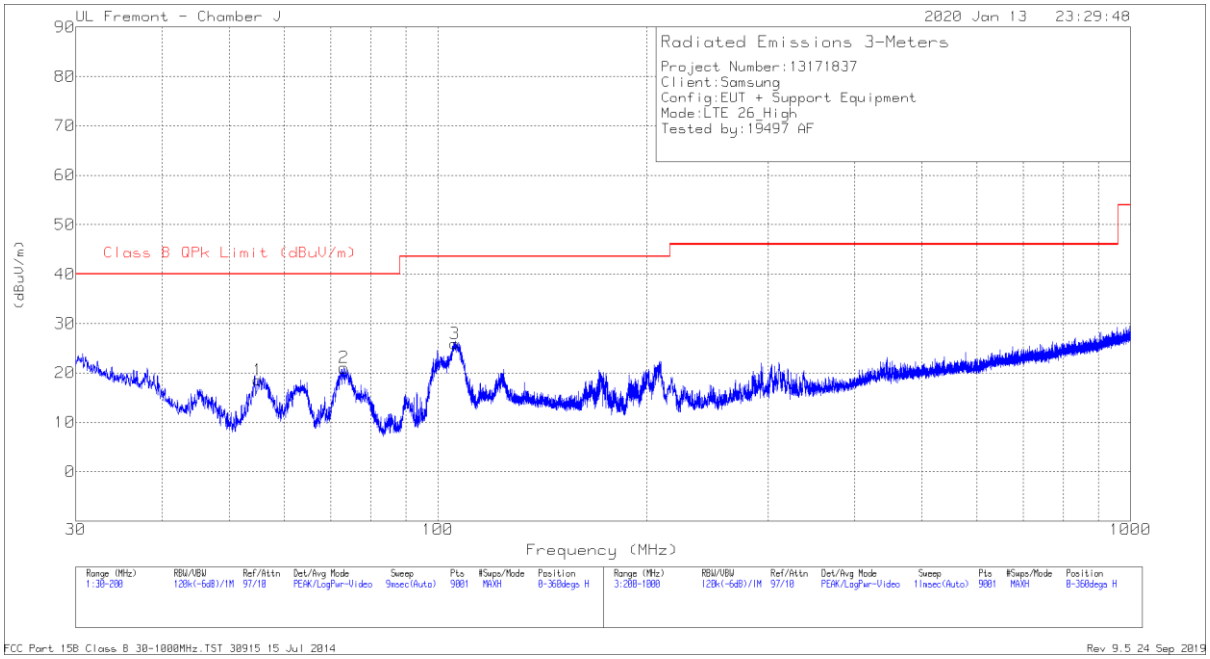
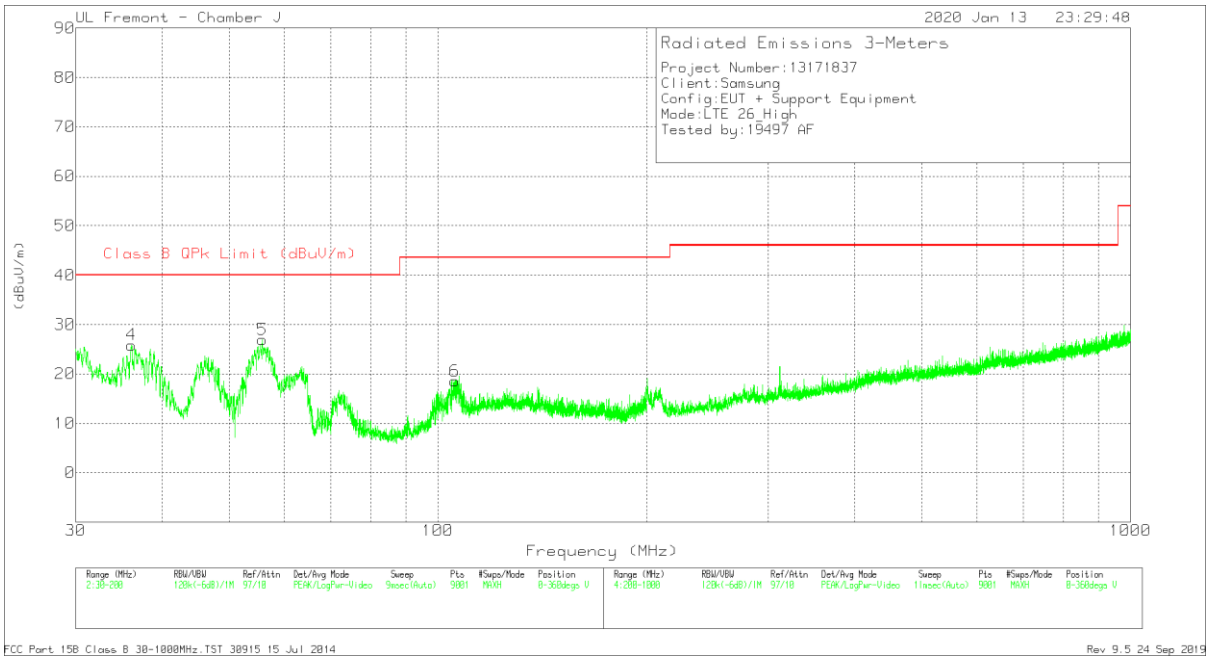
HIGH CHANNEL



HORIZONTAL



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RADIATED EMISSIONS

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T899 (dB/m)	Amp Cbl (dB)	Corrected Reading (dBuV/m)	Class B QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	54.9713	36.97	Pk	13	-31.4	18.57	40	-21.43	0-360	199	H
2	73.2369	38.35	Pk	13.9	-31.2	21.05	40	-18.95	0-360	199	H
3	105.8204	39.24	Pk	17.7	-31	25.94	43.52	-17.58	0-360	298	H
4	36.1389	34.27	Pk	23.1	-31.5	25.87	40	-14.13	0-360	101	V
5	55.7835	45.13	Pk	13.2	-31.4	26.93	40	-13.07	0-360	101	V
6	105.896	31.72	Pk	17.8	-31	18.52	43.52	-25	0-360	101	V

Pk - Peak detector

Frequency (MHz)	Meter Reading (dBuV)	Det	AF T899 (dB/m)	Amp Cbl (dB)	Corrected Reading (dBuV/m)	Class B QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
55.9019	44.42	Pk	13.2	-31.4	26.22	40	-13.78	187	201	V
55.9019	40.65	Qp	13.2	-31.4	22.45	40	-17.55	187	201	V

Pk - Peak detector
Qp - Quasi-Peak detector

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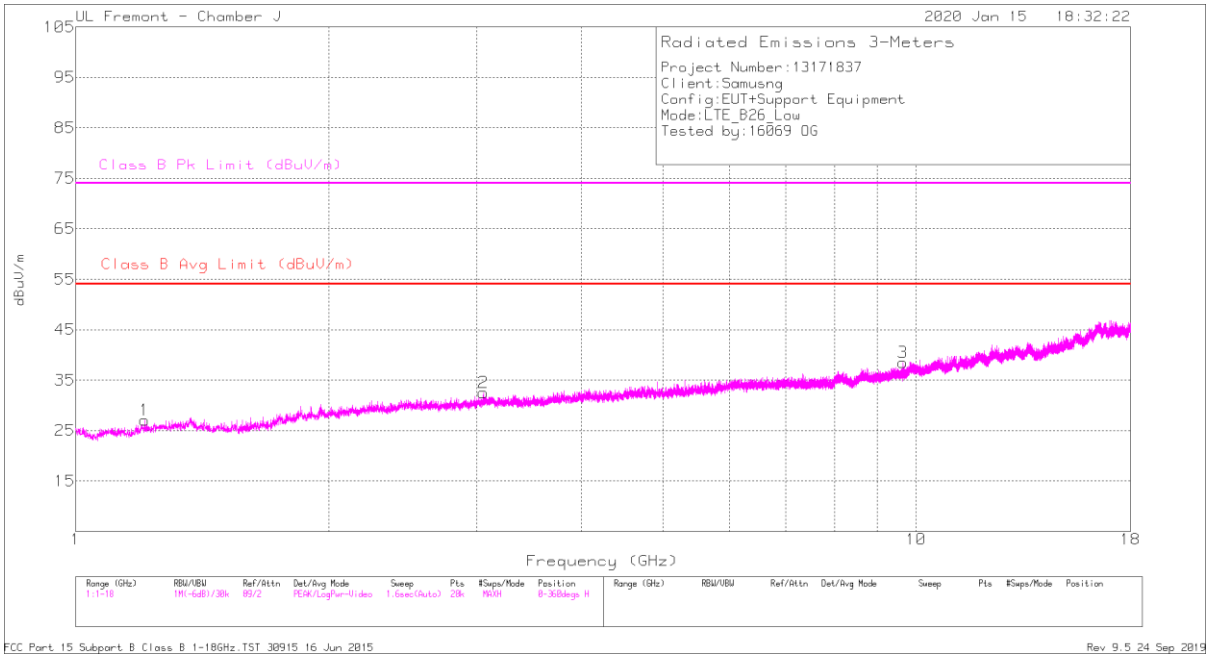
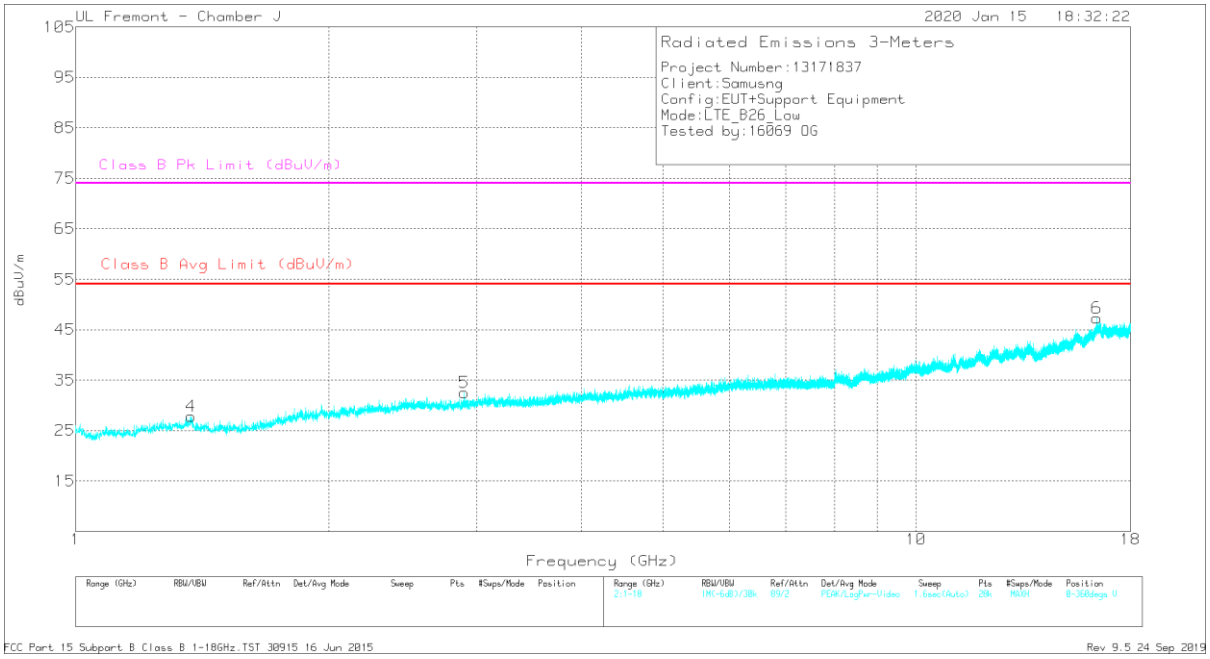
8.4.2. ABOVE 1GHz

LOW CHANNEL



HORIZONTAL



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RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl (dB)	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.20802	33.58	Pk	28.2	-35.8	25.98			74	-48.02	52	179	H
1.20807	20.81	Av	28.2	-35.8	13.21	54	-40.79	-	-	52	179	H
3.05561	33.25	Pk	32.9	-34.9	31.25			74	-42.75	272	115	H
3.05555	20.58	Av	32.9	-34.9	18.58	54	-35.42	-	-	272	115	H
9.65399	25.09	Pk	36.9	-25	36.99			74	-37.01	254	185	H
9.65444	12.6	Av	36.9	-25	24.5	54	-29.5	-	-	254	185	H
1.3738	43.5	Pk	29.2	-35.8	36.9			74	-37.1	300	110	V
1.37317	30.15	Av	29.2	-35.9	23.45	54	-30.55	-	-	300	110	V
2.89975	43.27	Pk	32.5	-35	40.77			74	-33.23	186	270	V
2.90031	29.89	Av	32.5	-35	27.39	54	-26.61	-	-	186	270	V
16.4176	23.41	Pk	41.8	-19.6	45.61			74	-28.39	92	153	V
16.41727	19.65	Av	41.8	-19.6	41.85	54	-12.15	-	-	92	153	V

Pk - Peak detector
Avg - Video bandwidth < Resolution bandwidth

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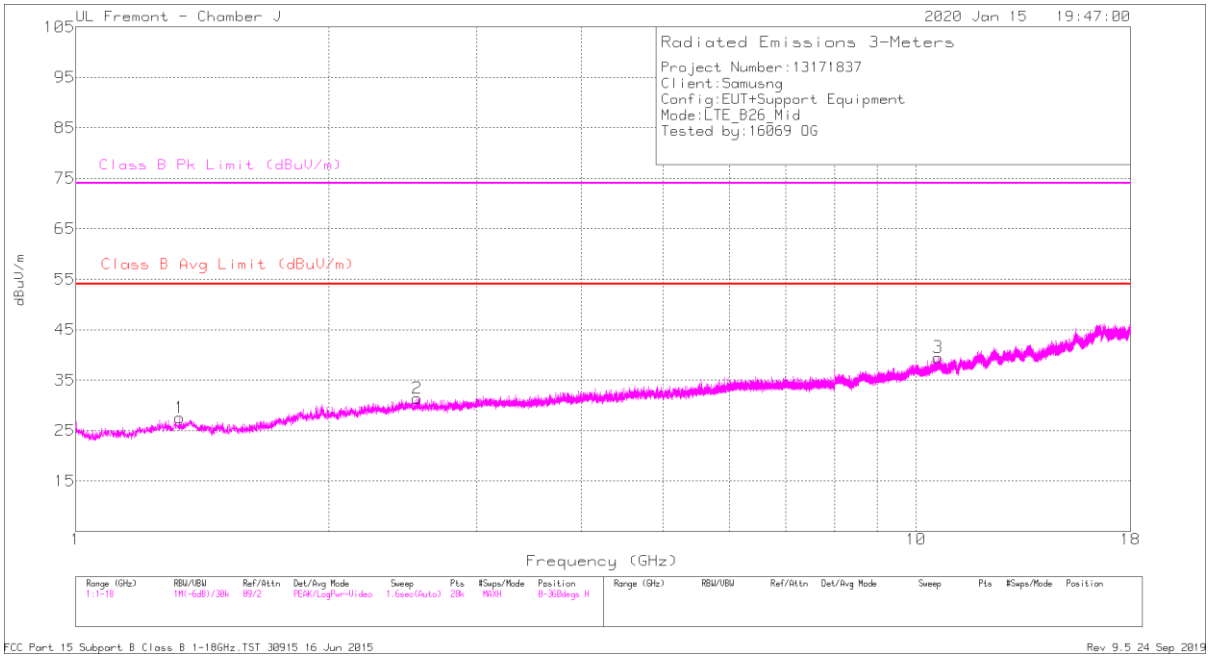
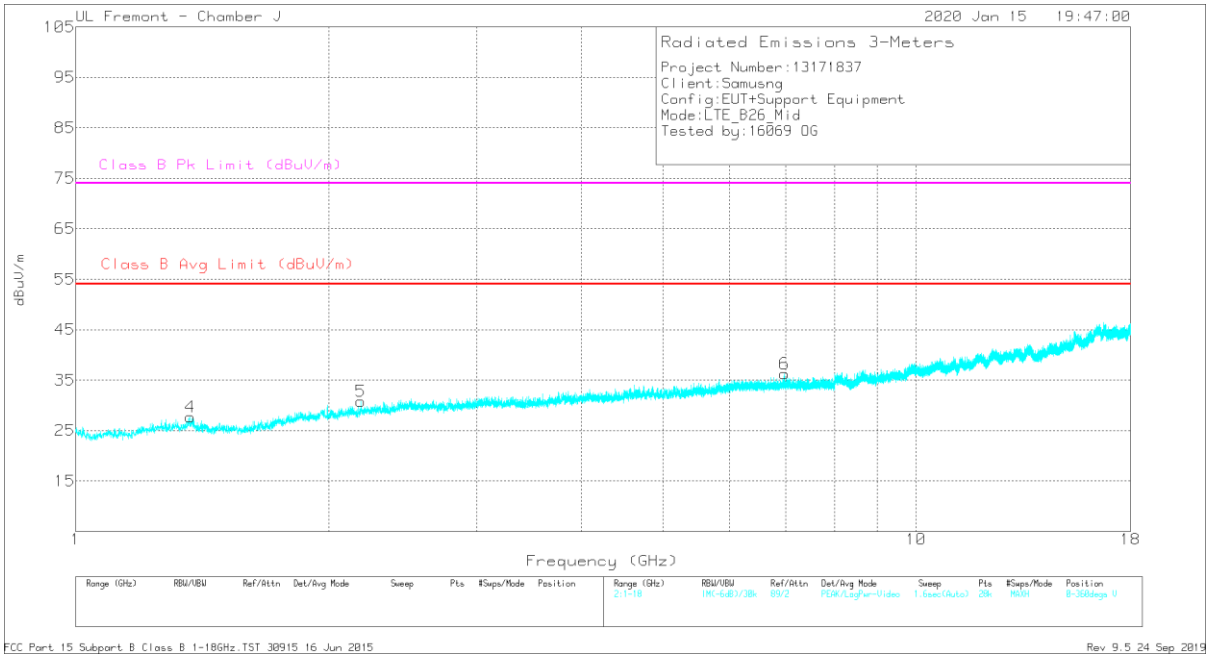
MID CHANNEL



HORIZONTAL



VERTICAL

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RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl (dB)	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.32904	33.68	Pk	28.7	-35.8	26.58			74	-47.42	127	342	H
1.329	20.69	Av	28.7	-35.8	13.59	54	-40.41	-	-	127	342	H
2.54745	34.24	Pk	32.3	-35.3	31.24			74	-42.76	11	174	H
2.54777	20.84	Av	32.3	-35.3	17.84	54	-36.16	-	-	11	174	H
10.62324	25.55	Pk	37.9	-24.8	38.65			74	-35.35	49	200	H
10.62331	12.83	Av	37.9	-24.8	25.93	54	-28.07	-	-	49	200	H
1.36836	43.74	Pk	29.4	-35.8	37.34			74	-36.66	202	119	V
1.37038	30.12	Av	29.4	-35.9	23.62	54	-30.38	-	-	202	119	V
2.18454	43.39	Pk	31.4	-35.6	39.19			74	-34.81	111	137	V
2.18504	30.07	Av	31.4	-35.6	25.87	54	-28.13	-	-	111	137	V
6.97111	37.07	Pk	35.7	-28	44.77			74	-29.23	107	151	V
6.97005	23.52	Av	35.7	-28	31.22	54	-22.78	-	-	107	151	V

Pk - Peak detector
Av - Average detection

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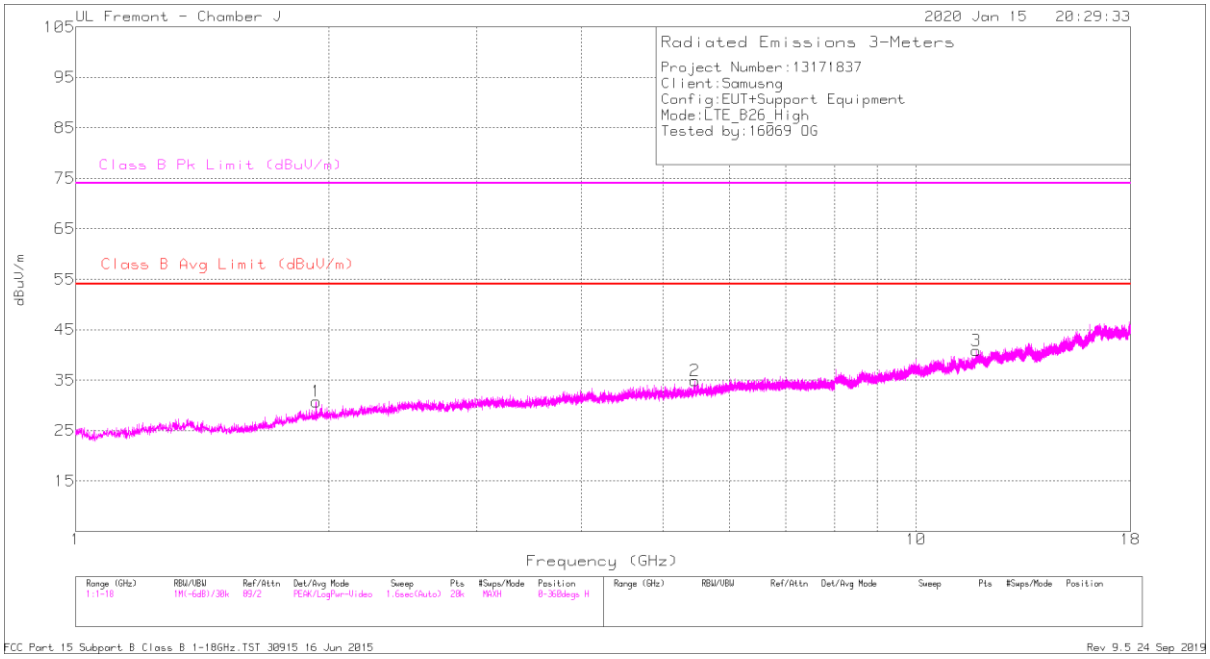
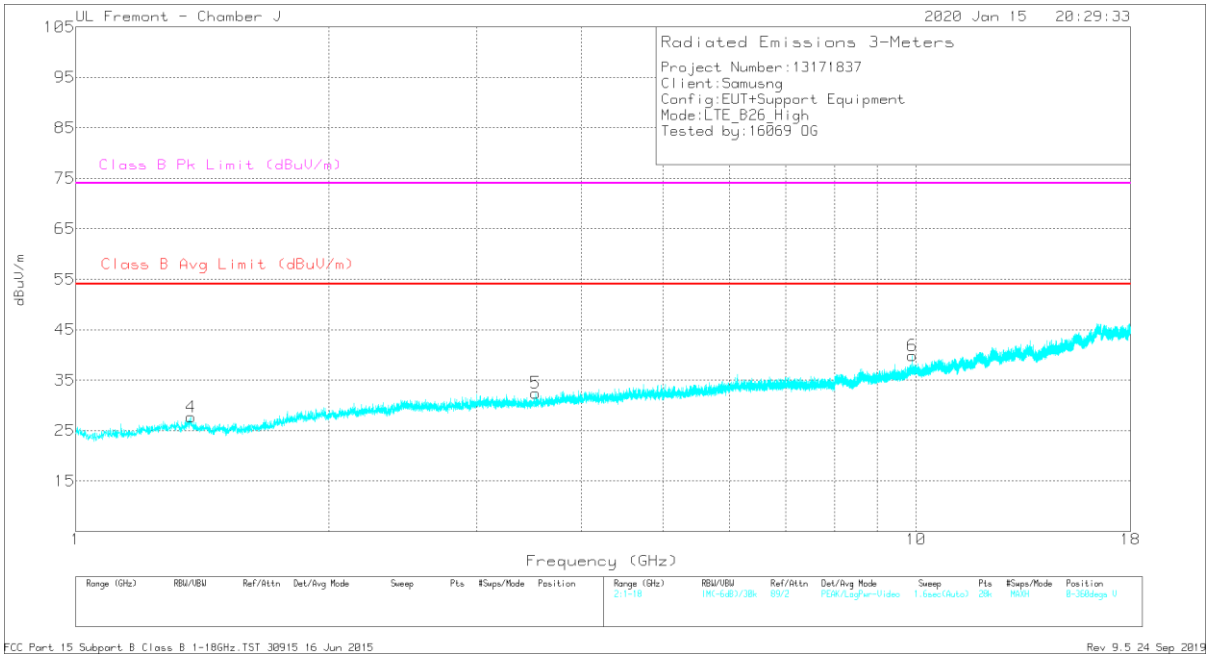
HIGH CHANNEL



HORIZONTAL



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RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl (dB)	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.93337	35.64	Pk	30.6	-35.7	30.54			74	-43.46	248	218	H
1.9334	23.36	Av	30.6	-35.7	18.26	54	-35.74	-	-	248	218	H
5.45533	29.34	Pk	34.6	-30.4	33.54			74	-40.46	115	300	H
5.45543	16.72	Av	34.6	-30.4	20.92	54	-33.08	-	-	115	300	H
11.80028	24.49	Pk	38.5	-23.2	39.79			74	-34.21	186	194	H
11.80046	11.05	Av	38.5	-23.2	26.35	54	-27.65	-	-	186	194	H
1.37185	43.98	Pk	29.3	-35.9	37.38			74	-36.62	46	335	V
1.37015	30.14	Av	29.4	-35.9	23.64	54	-30.36	-	-	46	335	V
3.52554	42.05	Pk	32.8	-33.8	41.05			74	-32.95	217	235	V
3.5256	28.55	Av	32.8	-33.8	27.55	54	-26.45	-	-	217	235	V
9.90376	36.18	Pk	37	-25.3	47.88			74	-26.12	12	275	V
9.90006	21.77	Av	37	-25.3	33.47	54	-20.53	-	-	12	275	V

Pk - Peak detector
Av - Average detection

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