# TEST REPORT

**Report Number. :** 13211873-E15V1

| | | |
|---|---|---|
| **Applicant** | : | Samsung Electronics Co., Ltd.<br>129 Samsung-Ro, Yeongtong-Gu,<br>Suwon-Si, Gyeonggi-Do, 16677, Korea |
| **Model** | : | SM-A715W |
| **FCC ID** | : | A3LSMA715W |
| **IC** | : | 649E-SMA715W |
| **EUT Description** | : | GSM/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,<br>ICES-003 ISSUE 6<br>RSS-GEN ISSUE |

**Date Of Issue:**
FEBRUARY 26, 2020

**Prepared by:**
UL Verification Services Inc.
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NVLAP TESTING ilac-MRA
NVLAP Lab code: 200065-0

Revision History

| Rev. | Issue Date | Revisions | Revised By |
|---|---|---|---|
| V1 | 2/26/2020 | Initial Review | -- |

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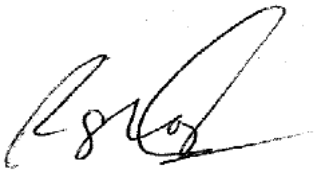
# 1. ATTESTATION OF TEST RESULTS

| | |
|---|---|
| Applicant Name and Address | SAMSUNG ELECTRONICS CO., LTD.<br>129 SAMSUNG-RO, YEONGTONG-GU,<br>SUWON-SI, GYEONGGI-DO, 16677, KOREA |
| Model | SM-A715W |
| FCC ID | A3LSMA715W |
| IC | 649E-SMA715W |
| EUT Description | GSM/WCDMA/LTE PHABLET WITH BT/BLE,DTS/UNII A/B/G/N/AC, NFC AND ANT+ |
| Serial Number | RADIATED: R38N108PG2D, R38N108PFHB, R38N108PGNH |
| Date Tested | FEBRUARY 17, 2020 to FEBRUARY 20, 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<br>Operations Leader<br>UL Verification Services Inc. | Steven Tran<br>Project Engineer<br>UL Verification Services Inc. | Rolly Alegre<br>Test Engineer<br>UL Verification Services Inc. |

# 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

# 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.

# 5. EQUIPMENT UNDER TEST

## 5.1. DESCRIPTION OF EUT

The EUT is a GSM/WCDMA/LTE Phablet with BT/BLE,DTS/UNII a/b/g/n/ac, NFC and ANT+. The model SM-A715W 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 71 | Communicating with Callbox Simulator (CMW500) |

## 5.3. WORST-CASE CONFIGURATION AND MODE

For LTE B5, LTE B12, LTE B13 and LTE B71, the spurious emissions were investigated in three orthogonal orientations X, Y and Z. It was determined that X orientation was worst-case orientation.

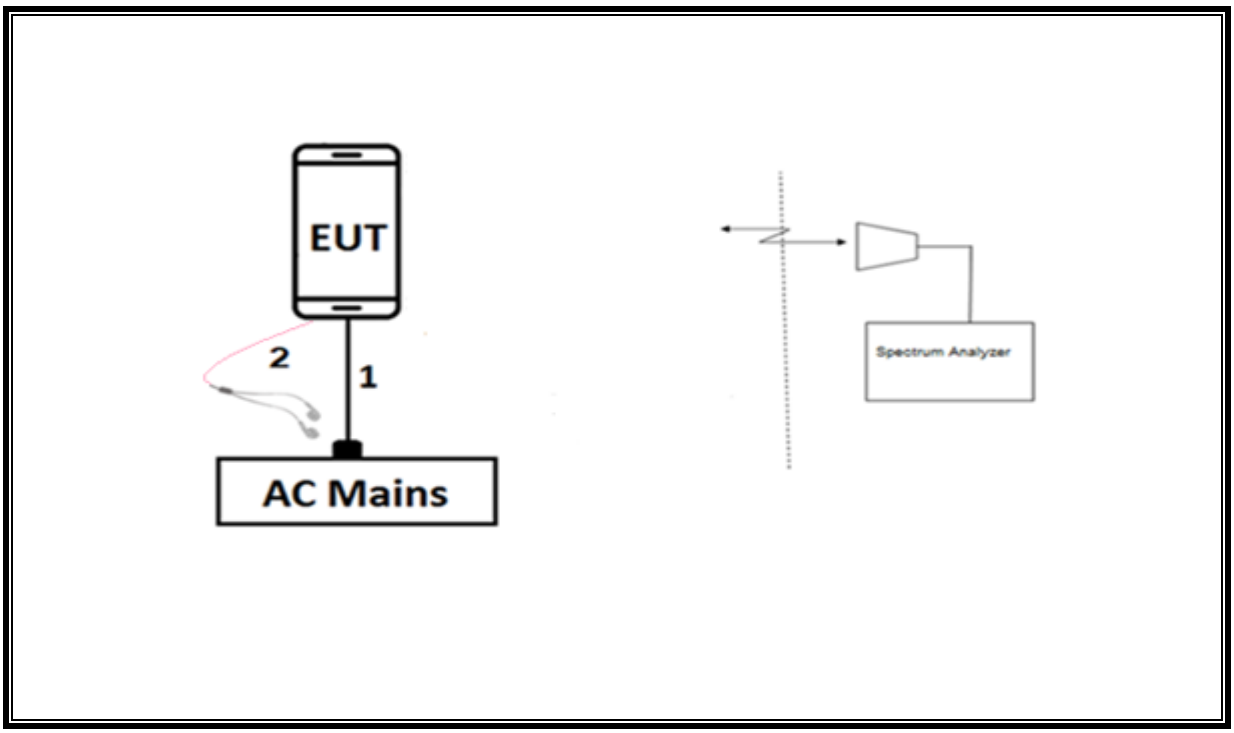
Note: The EUT is continuously communicated with the call box during the test. Also attached with travel adapter for the worst case condition.

## 5.4. DESCRIPTION OF TEST SETUP

| SUPPORT TEST EQUIPMENT | | | | |
|---|---|---|---|---|
| **Description** | **Manufacturer** | **Model** | **Serial Number** | **FCC ID/ DoC** |
| AC Adapter | Samsung | EP-TA800 | R37N16T8DH7DK3 | 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 |

**RADIATED 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** | **ID Num** | **Cal Due** | **Last Cal** |
| Antenna, Horn 1-18GHz | ETS-Lindgren | 3117 | T862 | 06/05/2020 | 06/05/2019 |
| Antenna, Horn 1-18GHz | ETS-Lindgren | 3117 | T344 | 05/07/2020 | 05/07/2019 |
| Antenna, Horn 1-18GHz | ETS-Lindgren | 3117 | EMC4294 | 06/14/2020 | 06/14/2019 |
| Hybrid Antenna | SunAR rf motion | JB3 | T899 | 08/23/2020 | 08/23/2019 |
| Hybrid Antenna | SunAR rf motion | JB3 | PRE0181574 | 10/14/2020 | 10/14/2019 |
| RF Amplifier | MITEQ | AFS42-00101800-25-S-42 | 171460 | 08/24/2020 | 08/24/2019 |
| RF Amplifier | AMPLICAL | AMP1G18-35 | T1569 | 01/30/2021 | 01/30/2020 |
| RF Amplifier | AMPLICAL | AMP1G18-35 | T1571 | 05/28/2020 | 05/28/2019 |
| RF Amplifier | SONOMA INSTR | 310 | PRE0186650 | 01/23/2021 | 01/23/2020 |
| Wideband Communication Test Set, Call Box | R&S | CMW500 | T376 | 02/21/2020 | 02/21/2019 |
| Wideband Communication Test Set, Call Box | R&S | CMW500 | T260 | 02/20/2021 | 02/20/2020 |
| Wideband Communication Test Set, Call Box | R&S | CMW500 | T1871 | 02/18/2020 | 02/18/2019 |
| EMI TEST RECEIVER | Rohde & Schwarz | ESW44 | PRE0179372 | 02/16/2020 | 02/16/2019 |
| EMI TEST RECEIVER | Rohde & Schwarz | ESW44 | PRE0179367 | 05/16/2020 | 05/16/2019 |
| **UL AUTOMATION SOFTWARE** | | | | | |
| Radiated test software | UL | UL RF | Ver 9.5 June 15, 2019 | | |

**NOTES:**

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

# 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. | |

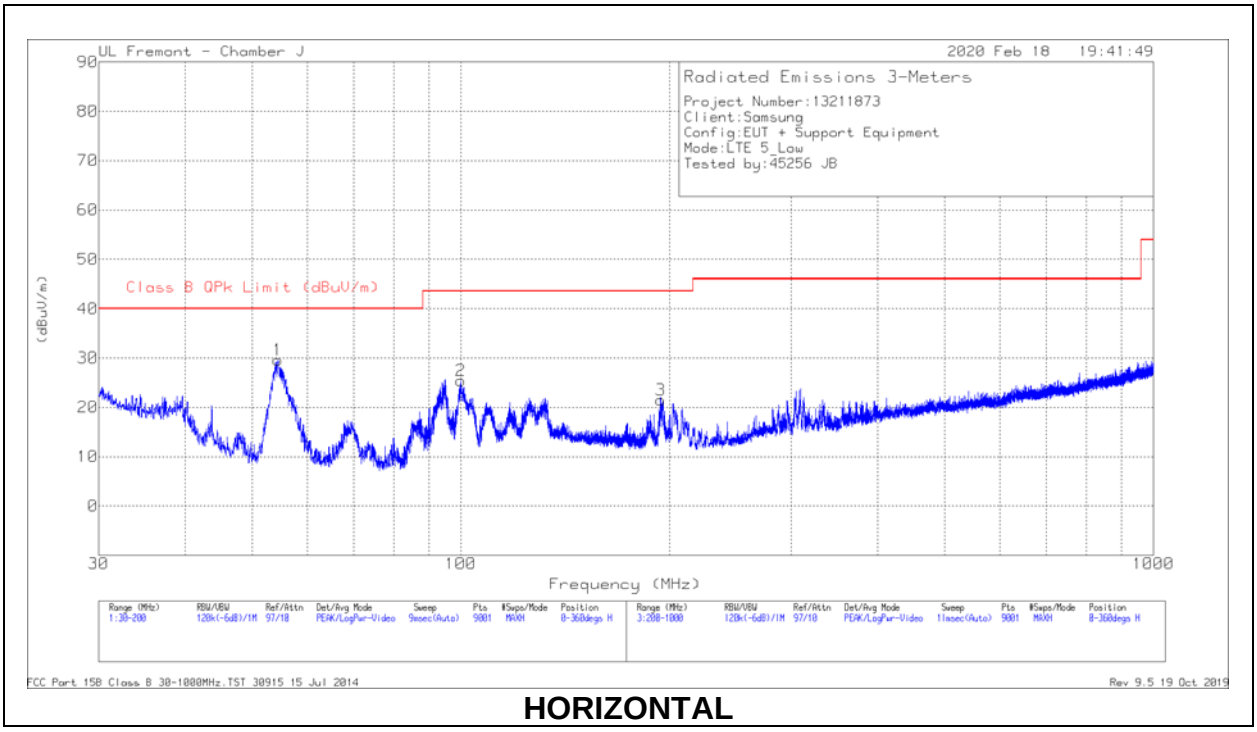
**RESULTS**

# 8. DATA FOR 15B RECEIVER MODE

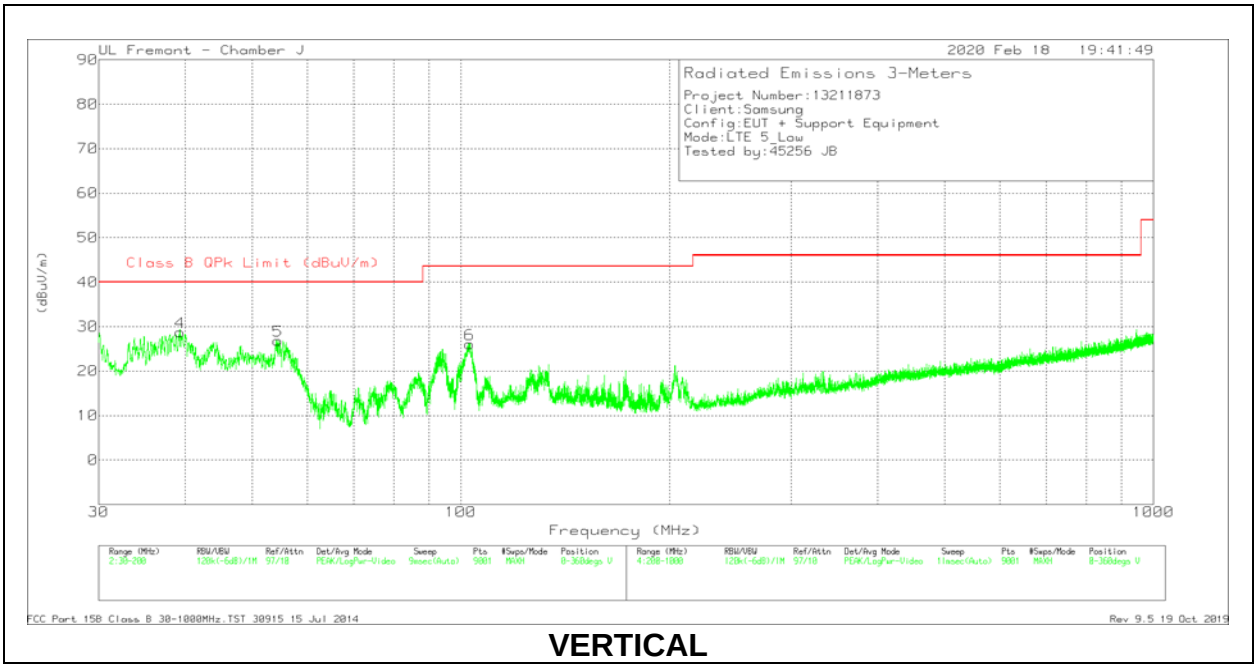
## 8.1. LTE Band 5

### 8.1.1. BELOW 1GHz

**LOW CHANNEL**




**HORIZONTAL**




**VERTICAL**

## RADIATED EMISSIONS

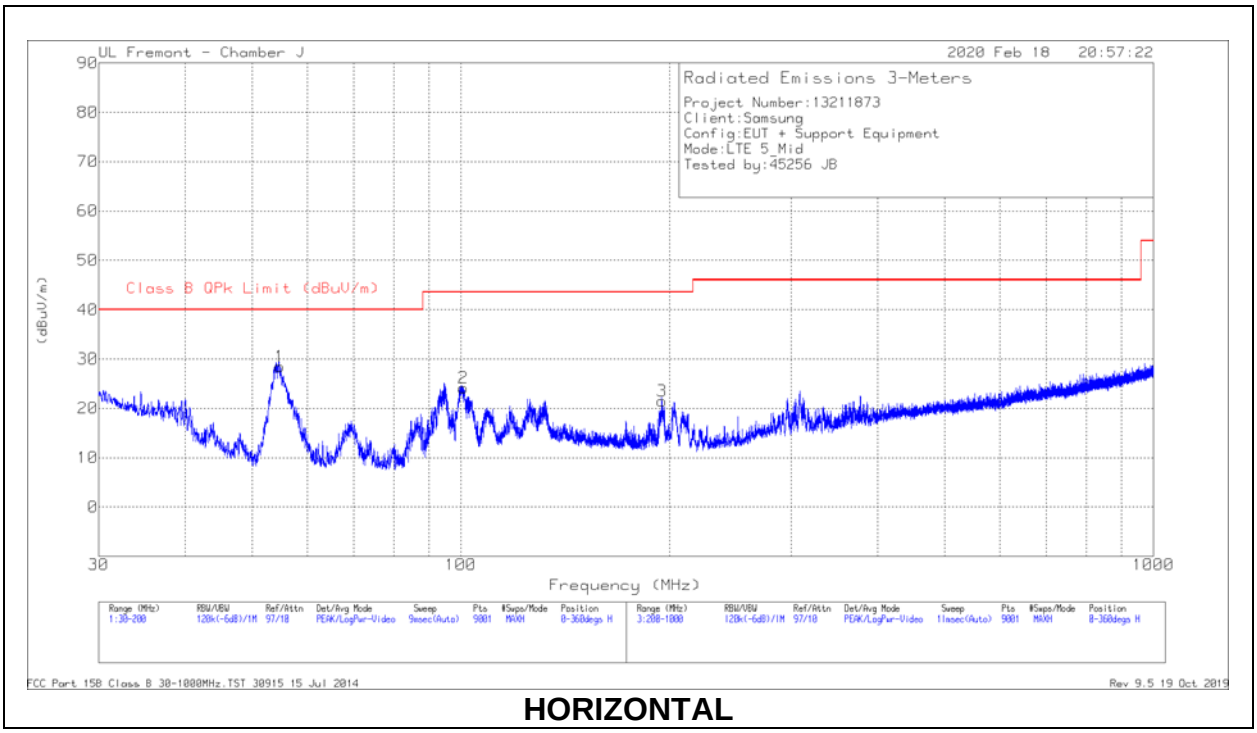
| Marker | Frequency (MHz) | Meter Reading (dBuV) | Det | AF T899 (dB/m) | Amp Cbl (dB) | Corrected Reading (dBuV/m) | Class B QPk Limit (dBuV/m) | Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 54.4613 | 48.12 | Pk | 12.9 | -31.4 | 29.62 | 40 | -10.38 | 0-360 | 388 | H |
| 2 | 99.9649 | 40.25 | Pk | 16.2 | -31 | 25.45 | 43.52 | -18.07 | 0-360 | 196 | H |
| 3 | 194.4854 | 34.16 | Pk | 17.8 | -30.5 | 21.46 | 43.52 | -22.06 | 0-360 | 196 | H |
| 4 | 39.3123 | 39.45 | Pk | 20.8 | -31.5 | 28.75 | 40 | -11.25 | 0-360 | 101 | V |
| 5 | 54.4613 | 45.34 | Pk | 12.9 | -31.4 | 26.84 | 40 | -13.16 | 0-360 | 101 | V |
| 6 | 103.0627 | 40.02 | Pk | 17 | -31 | 26.02 | 43.52 | -17.5 | 0-360 | 101 | V |

Pk - Peak detector

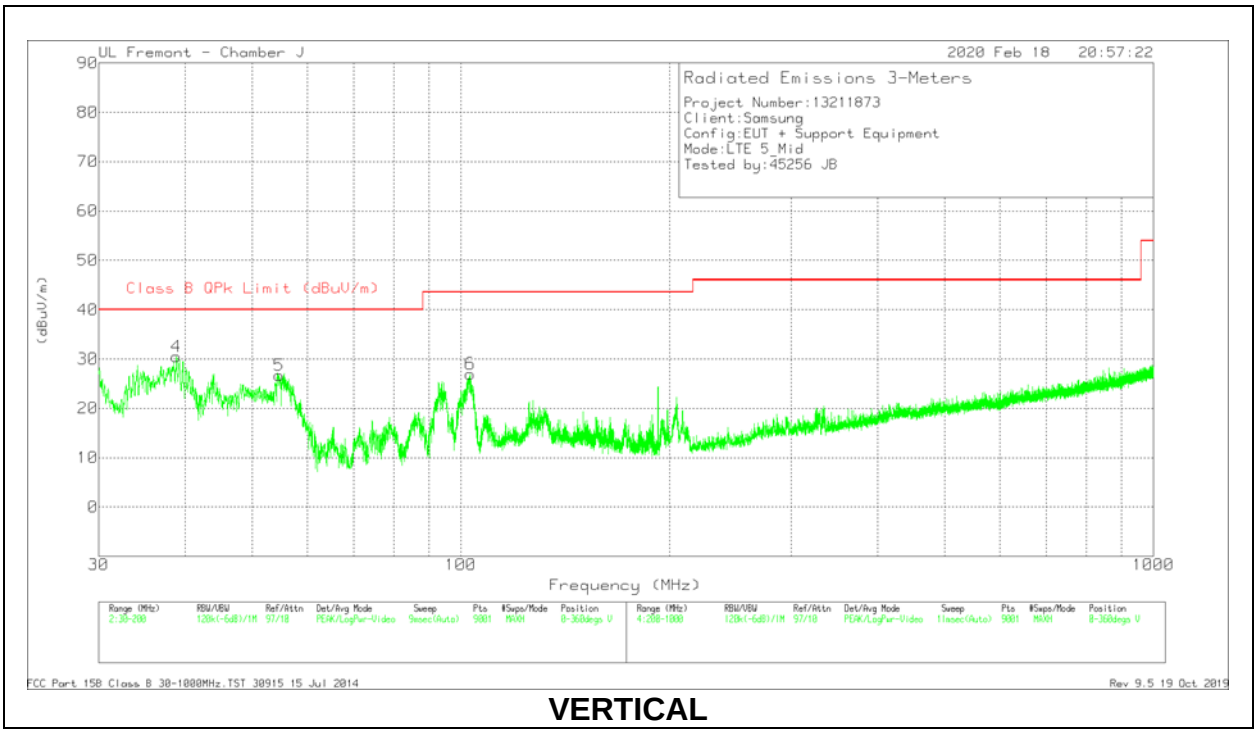
| Frequency (MHz) | Meter Reading (dBuV) | Det | AF T899 (dB/m) | Amp Cbl (dB) | Corrected Reading (dBuV/m) | Class B QPk Limit (dBuV/m) | Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|
| 54.293 | 48.92 | Pk | 12.9 | -31.4 | 30.42 | 40 | -9.58 | 45 | 369 | H |
| 54.293 | 45.06 | Qp | 12.9 | -31.4 | 26.56 | 40 | -13.44 | 45 | 369 | H |

Pk - Peak detector
Qp - Quasi-Peak detector

**MID CHANNEL**




**HORIZONTAL**




**VERTICAL**

## RADIATED EMISSIONS

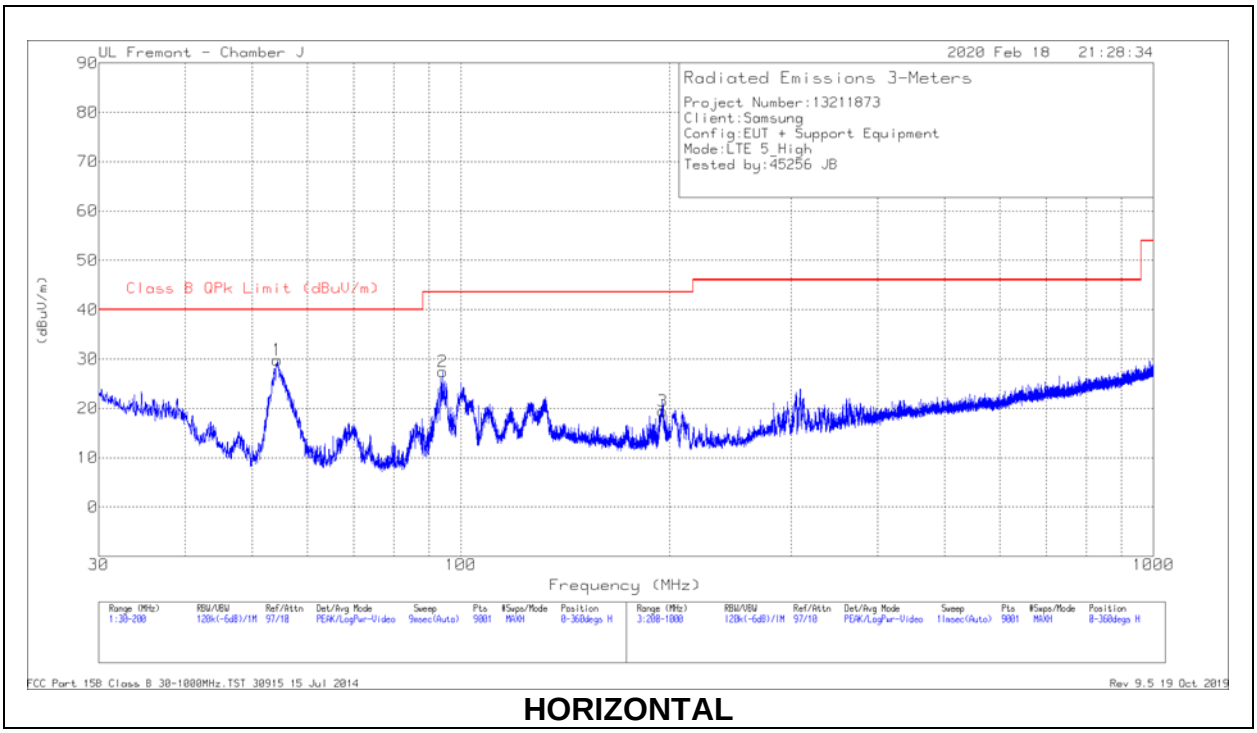
| Marker | Frequency (MHz) | Meter Reading (dBuV) | Det | AF T899 (dB/m) | Amp Cbl (dB) | Corrected Reading (dBuV/m) | Class B QPk Limit (dBuV/m) | Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 54.7824 | 46.84 | Pk | 13 | -31.4 | 28.44 | 40 | -11.56 | 0-360 | 388 | H |
| 2 | 100.7582 | 38.76 | Pk | 16.4 | -31 | 24.16 | 43.52 | -19.36 | 0-360 | 195 | H |
| 3 | 195.3071 | 34.07 | Pk | 17.9 | -30.5 | 21.47 | 43.52 | -22.05 | 0-360 | 101 | H |
| 4 | 38.8589 | 40.86 | Pk | 21.1 | -31.5 | 30.46 | 40 | -9.54 | 0-360 | 101 | V |
| 5 | 54.6313 | 45.11 | Pk | 13 | -31.4 | 26.71 | 40 | -13.29 | 0-360 | 101 | V |
| 6 | 103.2138 | 40.91 | Pk | 17.1 | -31 | 27.01 | 43.52 | -16.51 | 0-360 | 101 | V |

Pk - Peak detector

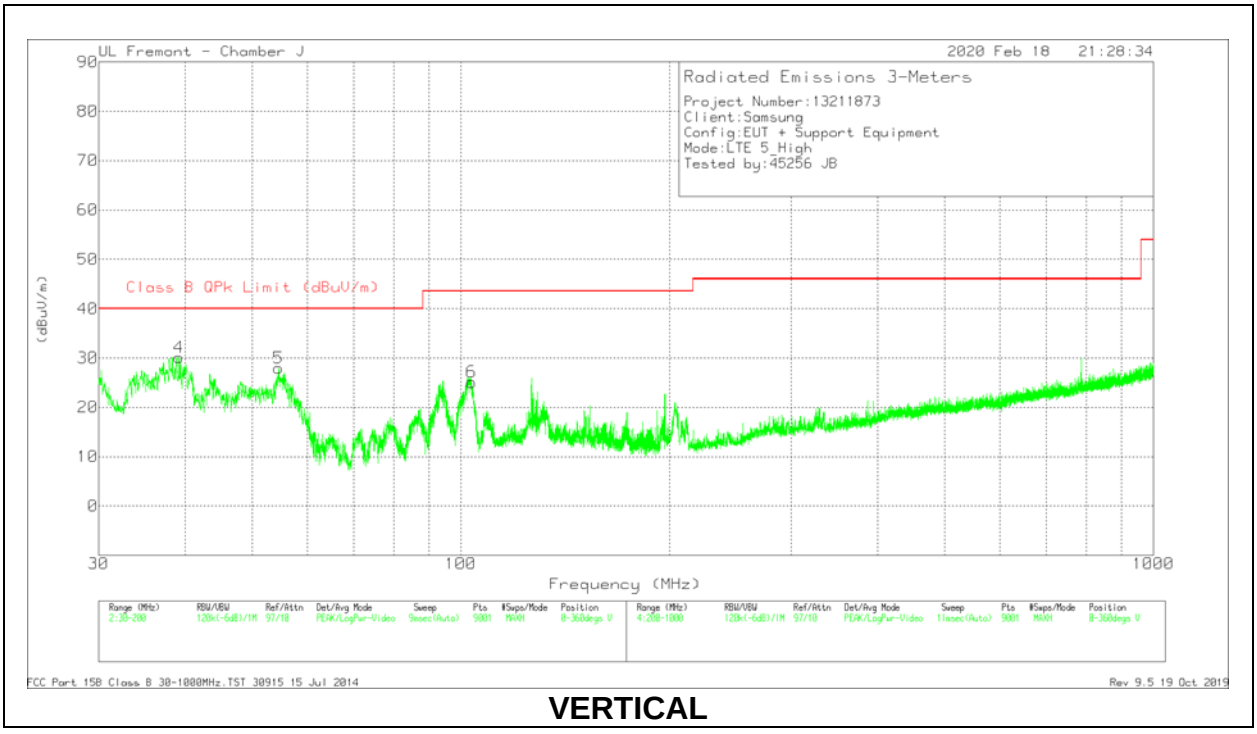
| Frequency (MHz) | Meter Reading (dBuV) | Det | AF T899 (dB/m) | Amp Cbl (dB) | Corrected Reading (dBuV/m) | Class B QPk Limit (dBuV/m) | Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|
| 39.0397 | 39.68 | Pk | 21 | -31.5 | 29.18 | 40 | -10.82 | 120 | 116 | V |
| 39.0397 | 33.08 | Qp | 21 | -31.5 | 22.58 | 40 | -17.42 | 120 | 116 | V |

Pk - Peak detector
Qp - Quasi-Peak detector

**HIGH CHANNEL**




**HORIZONTAL**




**VERTICAL**

## 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 | 54.329 | 48.3 | Pk | 12.9 | -31.4 | 29.8 | 40 | -10.2 | 0-360 | 388 | H |
| 2 | 94.147 | 43.98 | Pk | 14.5 | -31 | 27.48 | 43.52 | -16.04 | 0-360 | 195 | H |
| 3 | 195.581 | 31.95 | Pk | 18 | -30.5 | 19.45 | 43.52 | -24.07 | 0-360 | 195 | H |
| 4 | 39.1801 | 40.67 | Pk | 20.9 | -31.5 | 30.07 | 40 | -9.93 | 0-360 | 101 | V |
| 5 | 54.5557 | 46.42 | Pk | 13 | -31.4 | 28.02 | 40 | -11.98 | 0-360 | 101 | V |
| 6 | 103.6482 | 38.91 | Pk | 17.2 | -31 | 25.11 | 43.52 | -18.41 | 0-360 | 101 | V |

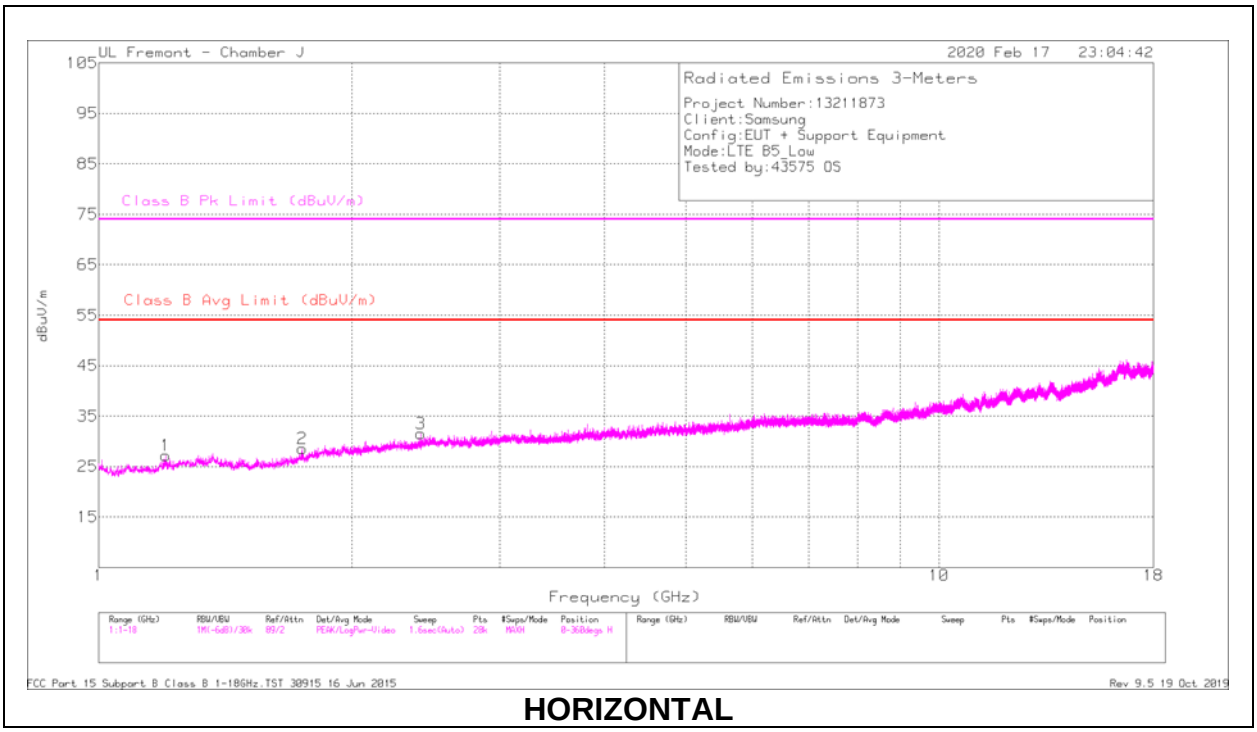
Pk - Peak detector

| 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 |
|---|---|---|---|---|---|---|---|---|---|---|
| 39.2319 | 40.61 | Pk | 20.8 | -31.5 | 29.91 | 40 | -10.09 | 130 | 104 | V |
| 39.2319 | 35.65 | Qp | 20.8 | -31.5 | 24.95 | 40 | -15.05 | 130 | 104 | V |

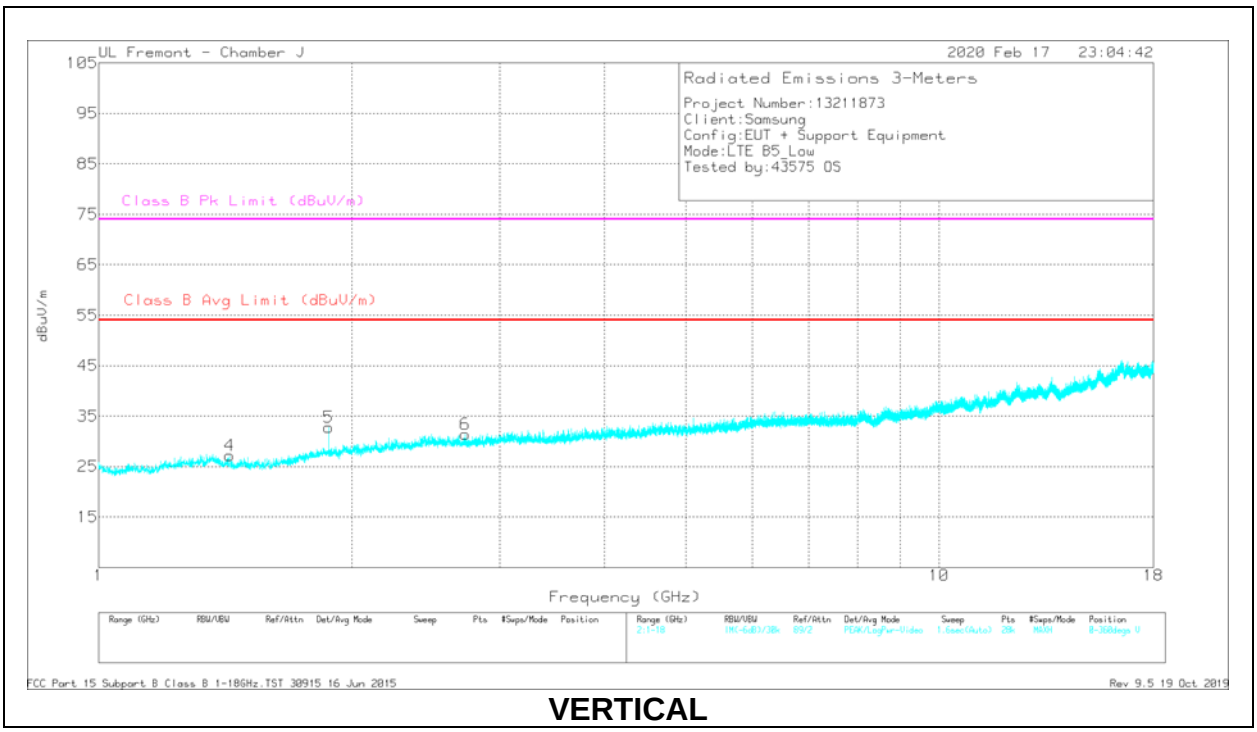
Pk - Peak detector
Qp - Quasi-Peak detector

## 8.1.2. ABOVE 1GHz

**LOW CHANNEL**




**HORIZONTAL**



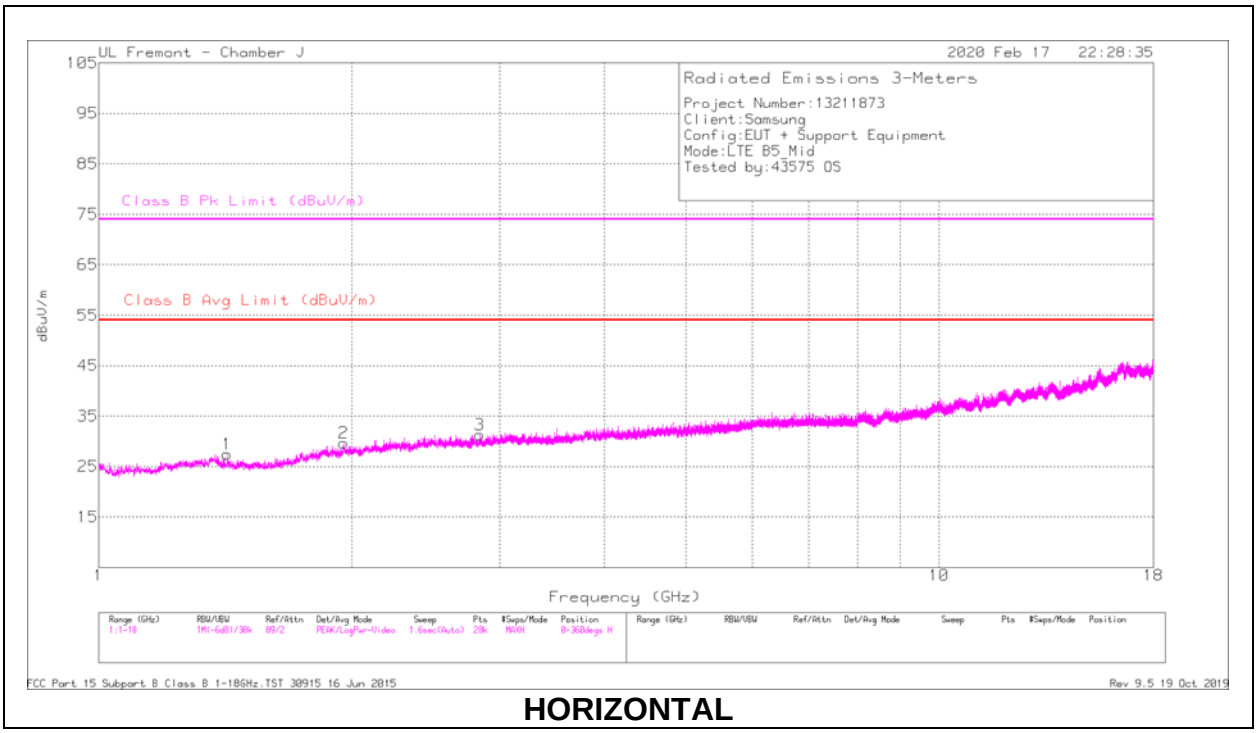

**VERTICAL**

## RADIATED EMISSIONS

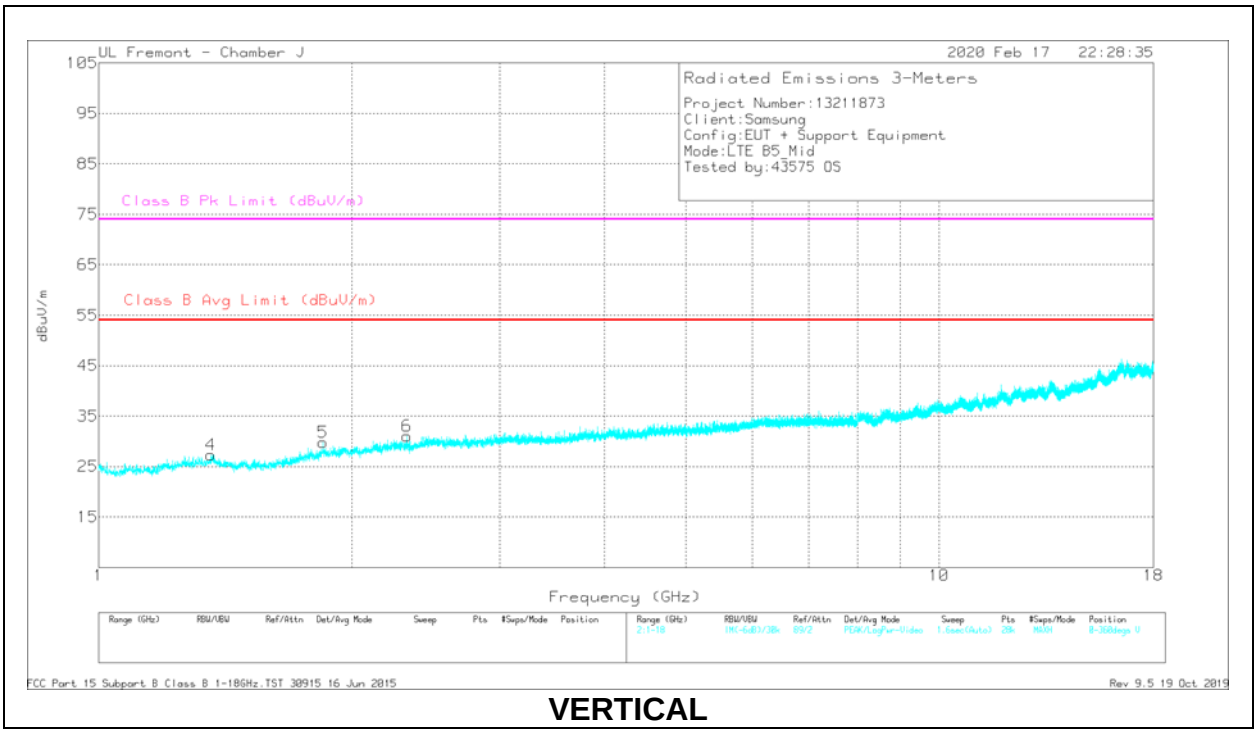
| Markers | Frequency (GHz) | Meter Reading (dBuV) | Det | AF EMC4294 (dB/m) | Amp/Cbl (dB) | Corrected Reading dBuV/m | Class B Avg Limit (dBuV/m) | Margin (dB) | Class B Pk Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.20217 | 34.01 | Pk | 28.3 | -35.8 | 26.51 | - | - | 74 | -47.49 | 39 | 119 | H |
| | 1.20217 | 20.77 | Av | 28.3 | -35.8 | 13.27 | 54 | -40.73 | - | - | 39 | 119 | H |
| 2 | 1.7461 | 34.31 | Pk | 29.6 | -35.8 | 28.11 | - | - | 74 | -45.89 | 360 | 121 | H |
| | 1.7461 | 20.93 | Av | 29.6 | -35.8 | 14.73 | 54 | -39.27 | - | - | 360 | 121 | H |
| 3 | 2.41651 | 33.78 | Pk | 32.1 | -35.5 | 30.38 | - | - | 74 | -43.62 | 32 | 105 | H |
| | 2.41627 | 20.81 | Av | 32.1 | -35.5 | 17.41 | 54 | -36.59 | - | - | 32 | 105 | H |
| 4 | 1.43248 | 43.4 | Pk | 28.2 | -35.9 | 35.7 | - | - | 74 | -38.3 | 120 | 113 | V |
| | 1.43248 | 30.29 | Av | 28.2 | -35.9 | 22.59 | 54 | -31.41 | - | - | 120 | 113 | V |
| 5 | 1.87737 | 43.03 | Pk | 30.7 | -35.8 | 37.93 | - | - | 74 | -36.07 | 115 | 117 | V |
| | 1.87737 | 29.73 | Av | 30.7 | -35.8 | 24.63 | 54 | -29.37 | - | - | 115 | 117 | V |
| 6 | 2.73079 | 43.36 | Pk | 32.2 | -35.2 | 40.36 | - | - | 74 | -33.64 | 34 | 135 | V |
| | 2.73079 | 29.92 | Av | 32.2 | -35.2 | 26.92 | 54 | -27.08 | - | - | 34 | 135 | V |

Pk - Peak detector
Av - Average detection

**MID CHANNEL**




**HORIZONTAL**



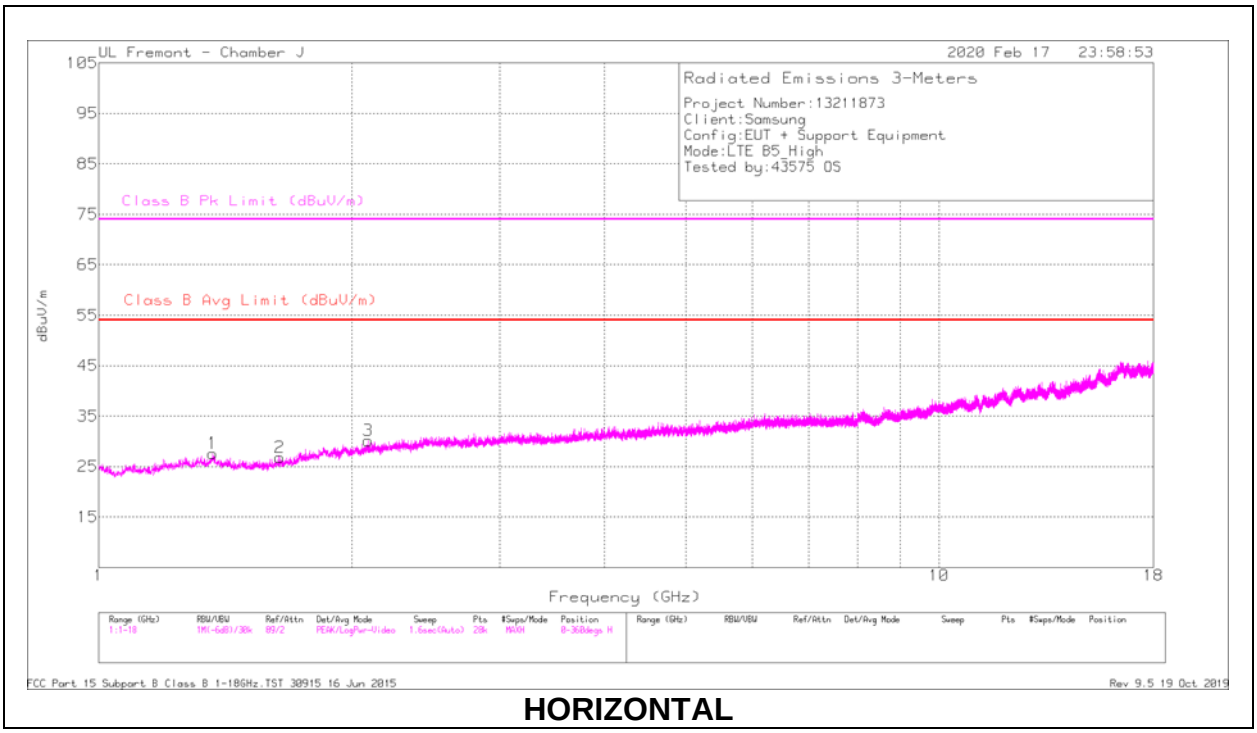

**VERTICAL**

## RADIATED EMISSIONS

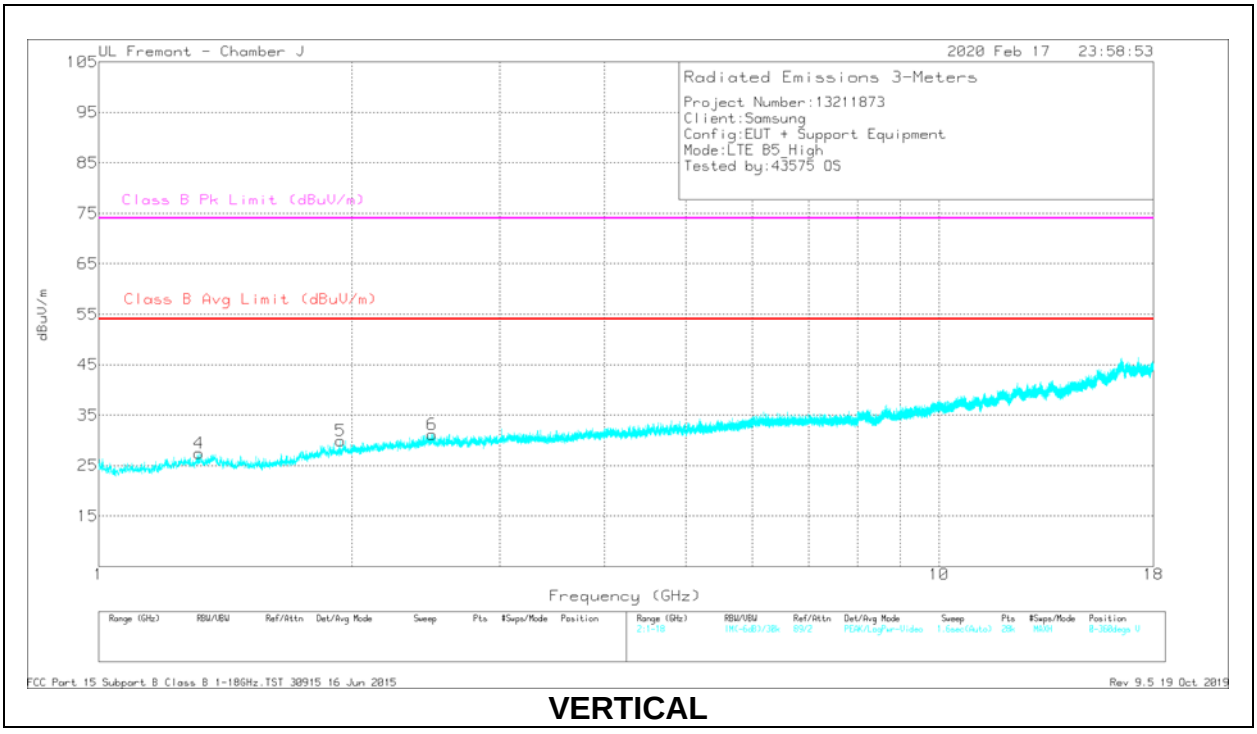
| Markers | Frequency (GHz) | Meter Reading (dBuV) | Det | AF EMC4294 (dB/m) | Amp/Cbl (dB) | Corrected Reading dBuV/m | Class B Avg Limit (dBuV/m) | Margin (dB) | Class B Pk Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.42271 | 33.53 | Pk | 28.3 | -35.8 | 26.03 | - | - | 74 | -47.97 | 79 | 315 | H |
| | 1.42271 | 21.01 | Av | 28.3 | -35.8 | 13.51 | 54 | -40.49 | - | - | 79 | 315 | H |
| 2 | 1.95552 | 33.74 | Pk | 31 | -35.7 | 29.04 | - | - | 74 | -44.96 | 233 | 125 | H |
| | 1.95552 | 20.93 | Av | 31 | -35.7 | 16.23 | 54 | -37.77 | - | - | 233 | 125 | H |
| 3 | 2.84039 | 33.97 | Pk | 32.2 | -35.2 | 30.97 | - | - | 74 | -43.03 | 123 | 337 | H |
| | 2.84039 | 20.8 | Av | 32.2 | -35.2 | 17.8 | 54 | -36.2 | - | - | 123 | 337 | H |
| 4 | 1.35894 | 43.16 | Pk | 29.3 | -35.9 | 36.56 | - | - | 74 | -37.44 | 284 | 115 | V |
| | 1.35894 | 29.87 | Av | 29.3 | -35.9 | 23.27 | 54 | -30.73 | - | - | 284 | 115 | V |
| 5 | 1.84821 | 44.33 | Pk | 30.5 | -35.8 | 39.03 | - | - | 74 | -34.97 | 193 | 140 | V |
| | 1.84821 | 30.24 | Av | 30.5 | -35.8 | 24.94 | 54 | -29.06 | - | - | 193 | 140 | V |
| 6 | 2.32734 | 44.08 | Pk | 31.6 | -35.6 | 40.08 | - | - | 74 | -33.92 | 102 | 156 | V |
| | 2.32734 | 30.08 | Av | 31.6 | -35.6 | 26.08 | 54 | -27.92 | - | - | 102 | 156 | V |

Pk - Peak detector
Av - Average detection

**HIGH CHANNEL**




**HORIZONTAL**




**VERTICAL**

## RADIATED EMISSIONS

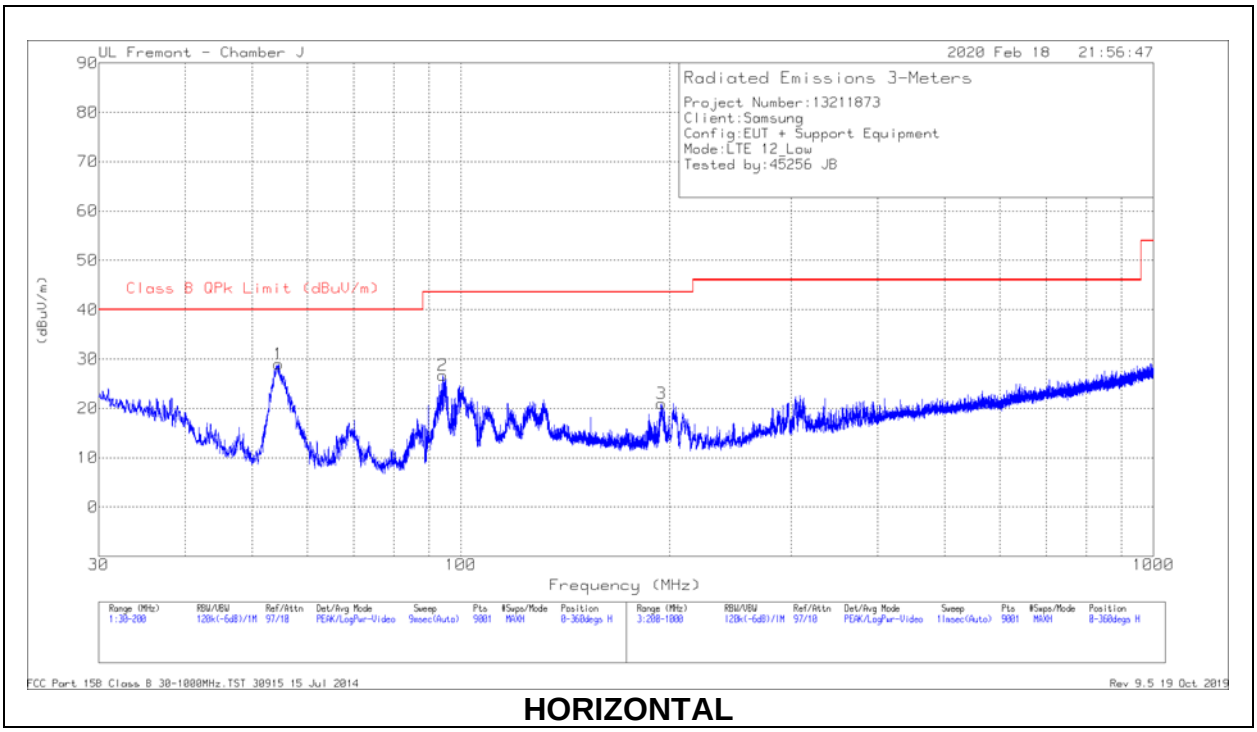
| Markers | Frequency (GHz) | Meter Reading (dBuV) | Det | AF EMC4294 (dB/m) | Amp/Cbl (dB) | Corrected Reading dBuV/m | Class B Avg Limit (dBuV/m) | Margin (dB) | Class B Pk Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.36686 | 33.2 | Pk | 29.4 | -35.8 | 26.8 | - | - | 74 | -47.2 | 281 | 103 | H |
| | 1.36686 | 20.76 | Av | 29.4 | -35.8 | 14.36 | 54 | -39.64 | - | - | 281 | 103 | H |
| 2 | 1.64349 | 33.45 | Pk | 28.5 | -35.8 | 26.15 | - | - | 74 | -47.85 | 52 | 228 | H |
| | 1.64349 | 20.8 | Av | 28.5 | -35.8 | 13.5 | 54 | -40.5 | - | - | 52 | 228 | H |
| 3 | 2.09113 | 33.08 | Pk | 31.1 | -35.6 | 28.58 | - | - | 74 | -45.42 | 338 | 341 | H |
| | 2.09113 | 20.6 | Av | 31.1 | -35.6 | 16.1 | 54 | -37.9 | - | - | 338 | 341 | H |
| 4 | 1.31881 | 43.66 | Pk | 28.7 | -35.8 | 36.56 | - | - | 74 | -37.44 | 24 | 117 | V |
| | 1.31881 | 30.11 | Av | 28.7 | -35.8 | 23.01 | 54 | -30.99 | - | - | 24 | 117 | V |
| 5 | 1.94076 | 42.89 | Pk | 30.8 | -35.7 | 37.99 | - | - | 74 | -36.01 | 290 | 113 | V |
| | 1.94076 | 29.75 | Av | 30.8 | -35.7 | 24.85 | 54 | -29.15 | - | - | 290 | 113 | V |
| 6 | 2.49318 | 43.41 | Pk | 32.3 | -35.5 | 40.21 | - | - | 74 | -33.79 | 86 | 303 | V |
| | 2.49318 | 30.06 | Av | 32.3 | -35.5 | 26.86 | 54 | -27.14 | - | - | 86 | 303 | V |

Pk - Peak detector
Av - Average detection

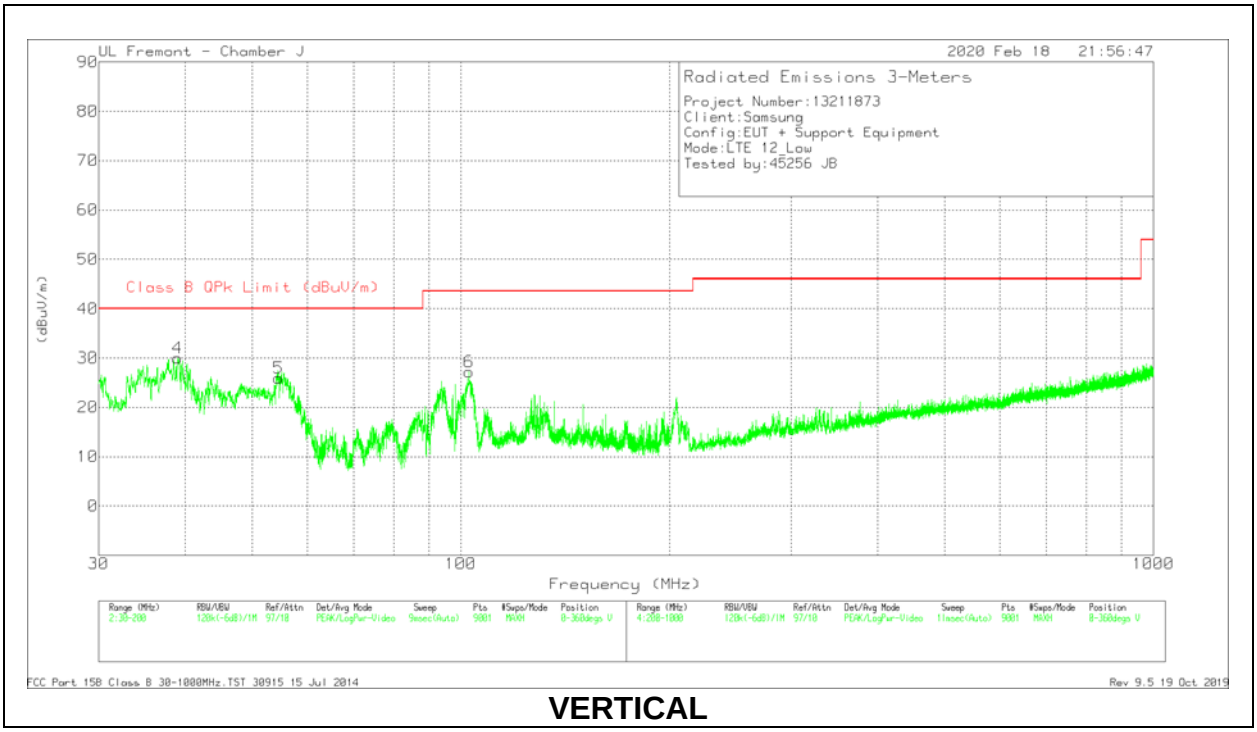
## 8.2. LTE Band 12

### 8.2.1. BELOW 1GHz

**LOW CHANNEL**




**HORIZONTAL**




**VERTICAL**

## RADIATED EMISSIONS

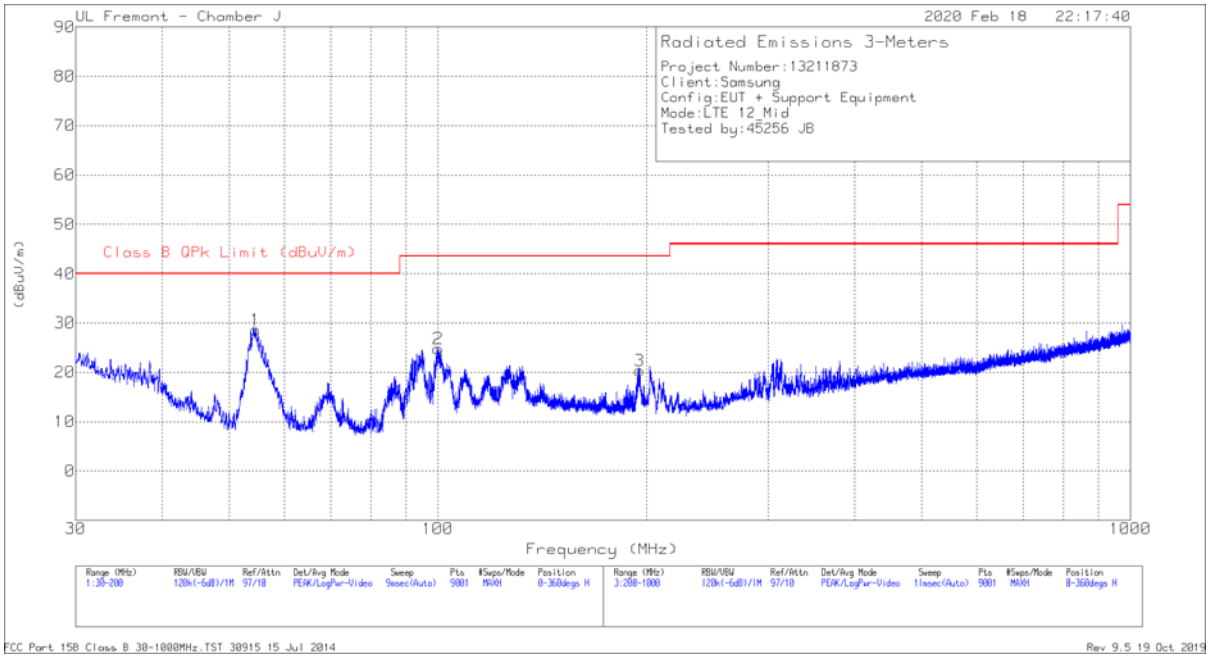
| Marker | Frequency (MHz) | Meter Reading (dBuV) | Det | AF T899 (dB/m) | Amp Cbl (dB) | Corrected Reading (dBuV/m) | Class B QPk Limit (dBuV/m) | Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 54.5085 | 47.39 | Pk | 13 | -31.4 | 28.99 | 40 | -11.01 | 0-360 | 292 | H |
| 2 | 94.2415 | 43.1 | Pk | 14.6 | -31 | 26.7 | 43.52 | -16.82 | 0-360 | 195 | H |
| 3 | 194.7499 | 33.7 | Pk | 17.8 | -30.5 | 21 | 43.52 | -22.52 | 0-360 | 292 | H |
| 4 | 39.0101 | 40.54 | Pk | 21 | -31.5 | 30.04 | 40 | -9.96 | 0-360 | 101 | V |
| 5 | 54.5935 | 44.33 | Pk | 13 | -31.4 | 25.93 | 40 | -14.07 | 0-360 | 101 | V |
| 6 | 102.7604 | 41.26 | Pk | 16.9 | -31 | 27.16 | 43.52 | -16.36 | 0-360 | 101 | V |

Pk - Peak detector

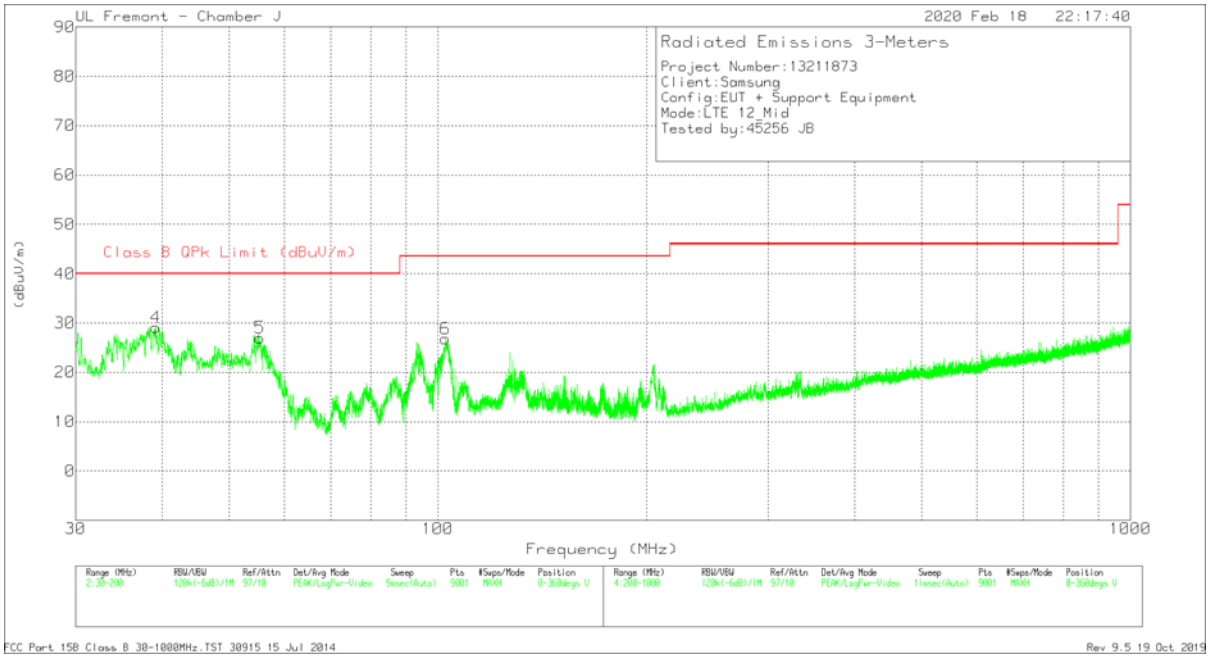
| Frequency (MHz) | Meter Reading (dBuV) | Det | AF T899 (dB/m) | Amp Cbl (dB) | Corrected Reading (dBuV/m) | Class B QPk Limit (dBuV/m) | Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|
| 39.0734 | 39.64 | Pk | 20.9 | -31.5 | 29.04 | 40 | -10.96 | 70 | 115 | V |
| 39.0734 | 33.22 | Qp | 20.9 | -31.5 | 22.62 | 40 | -17.38 | 70 | 115 | V |

Pk - Peak detector
Qp - Quasi-Peak detector

**MID CHANNEL**




**HORIZONTAL**




**VERTICAL**

## RADIATED EMISSIONS

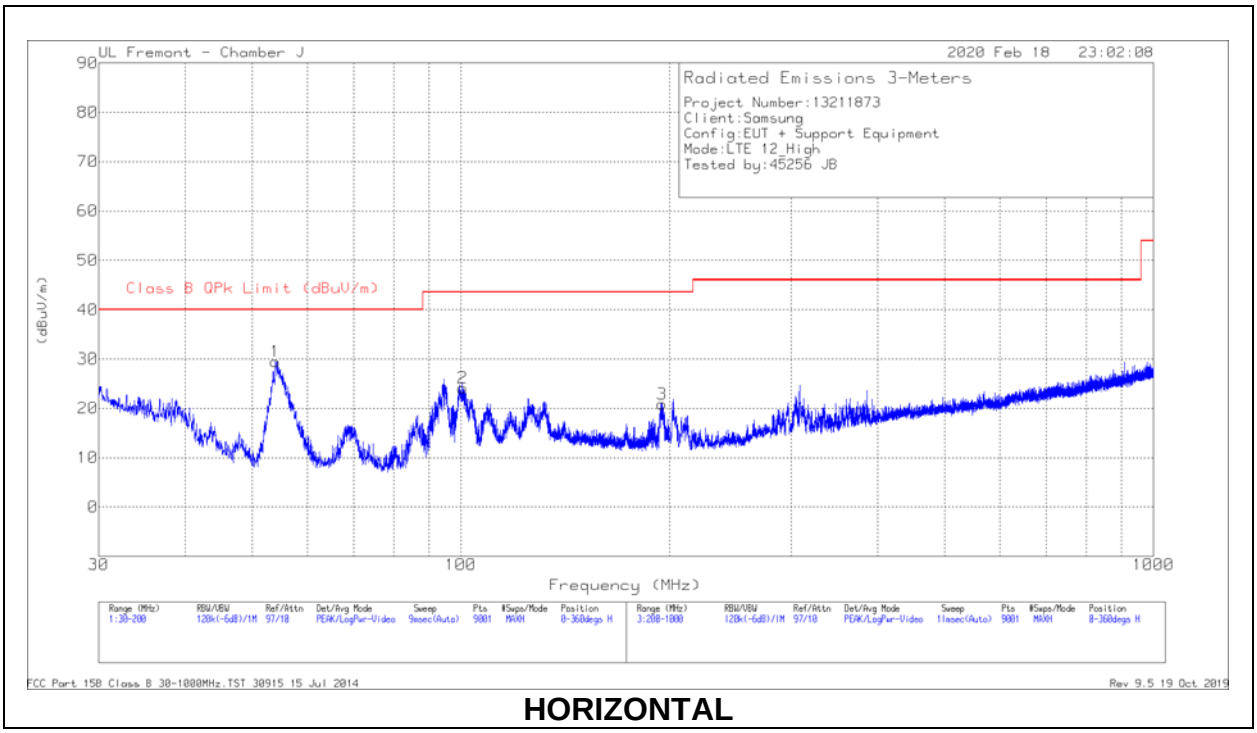
| Marker | Frequency (MHz) | Meter Reading (dBuV) | Det | AF T899 (dB/m) | Amp Cbl (dB) | Corrected Reading (dBuV/m) | Class B QPk Limit (dBuV/m) | Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 54.5557 | 46.94 | Pk | 13 | -31.4 | 28.54 | 40 | -11.46 | 0-360 | 292 | H |
| 2 | 100.116 | 39.54 | Pk | 16.2 | -31 | 24.74 | 43.52 | -18.78 | 0-360 | 195 | H |
| 3 | 195.5432 | 32.87 | Pk | 18 | -30.5 | 20.37 | 43.52 | -23.15 | 0-360 | 195 | H |
| 4 | 39.1423 | 39.71 | Pk | 20.9 | -31.5 | 29.11 | 40 | -10.89 | 0-360 | 101 | V |
| 5 | 55.349 | 45.31 | Pk | 13.1 | -31.4 | 27.01 | 40 | -12.99 | 0-360 | 101 | V |
| 6 | 102.6093 | 40.9 | Pk | 16.9 | -31 | 26.8 | 43.52 | -16.72 | 0-360 | 101 | V |

Pk - Peak detector

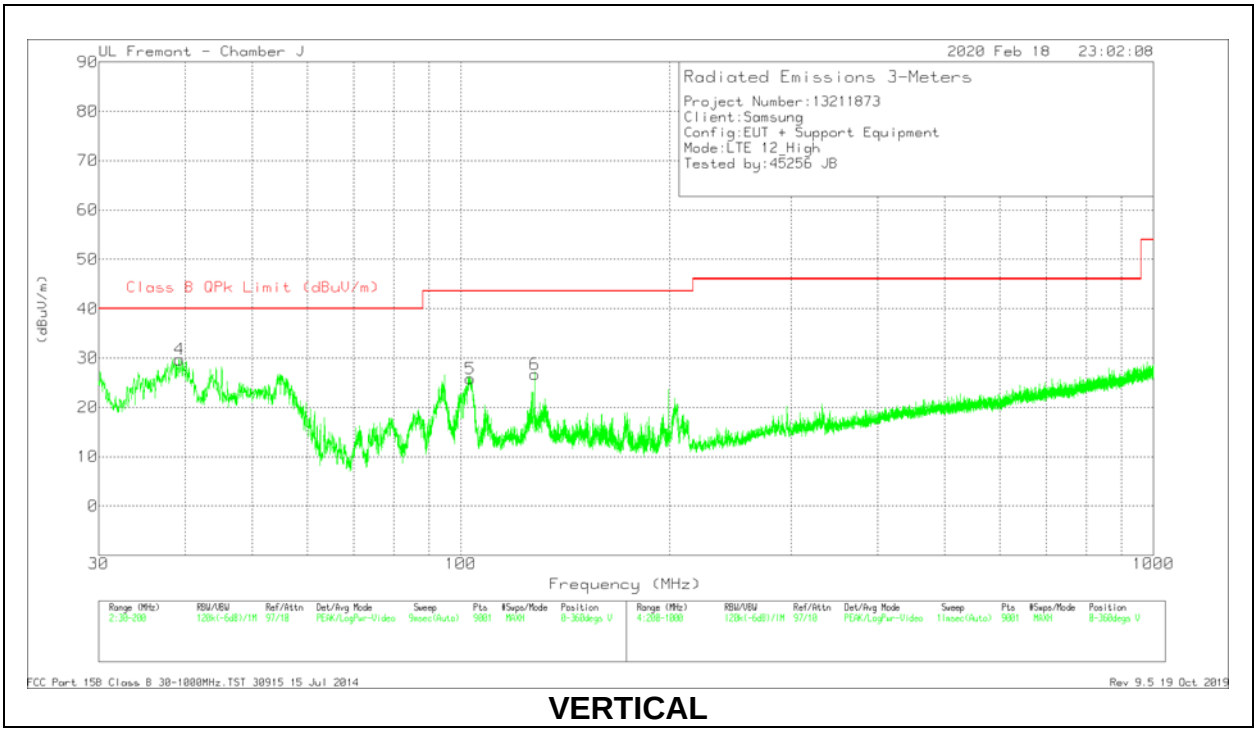
| Frequency (MHz) | Meter Reading (dBuV) | Det | AF T899 (dB/m) | Amp Cbl (dB) | Corrected Reading (dBuV/m) | Class B QPk Limit (dBuV/m) | Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|
| 38.9682 | 40.41 | Pk | 21 | -31.5 | 29.91 | 40 | -10.09 | 127 | 117 | V |
| 38.9682 | 37.17 | Qp | 21 | -31.5 | 26.67 | 40 | -13.33 | 127 | 117 | V |

Pk - Peak detector
Qp - Quasi-Peak detector

**HIGH CHANNEL**




**HORIZONTAL**




**VERTICAL**

## 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 | 54.0079 | 48.04 | Pk | 12.9 | -31.4 | 29.54 | 40 | -10.46 | 0-360 | 388 | H |
| 2 | 100.5882 | 38.81 | Pk | 16.4 | -31 | 24.21 | 43.52 | -19.31 | 0-360 | 195 | H |
| 3 | 195.241 | 33.46 | Pk | 17.9 | -30.5 | 20.86 | 43.52 | -22.66 | 0-360 | 101 | H |
| 4 | 39.2178 | 40.38 | Pk | 20.8 | -31.5 | 29.68 | 40 | -10.32 | 0-360 | 101 | V |
| 5 | 103.2515 | 39.66 | Pk | 17.1 | -31 | 25.76 | 43.52 | -17.76 | 0-360 | 101 | V |
| 6 | 127.8639 | 38.01 | Pk | 19.6 | -30.9 | 26.71 | 43.52 | -16.81 | 0-360 | 101 | V |

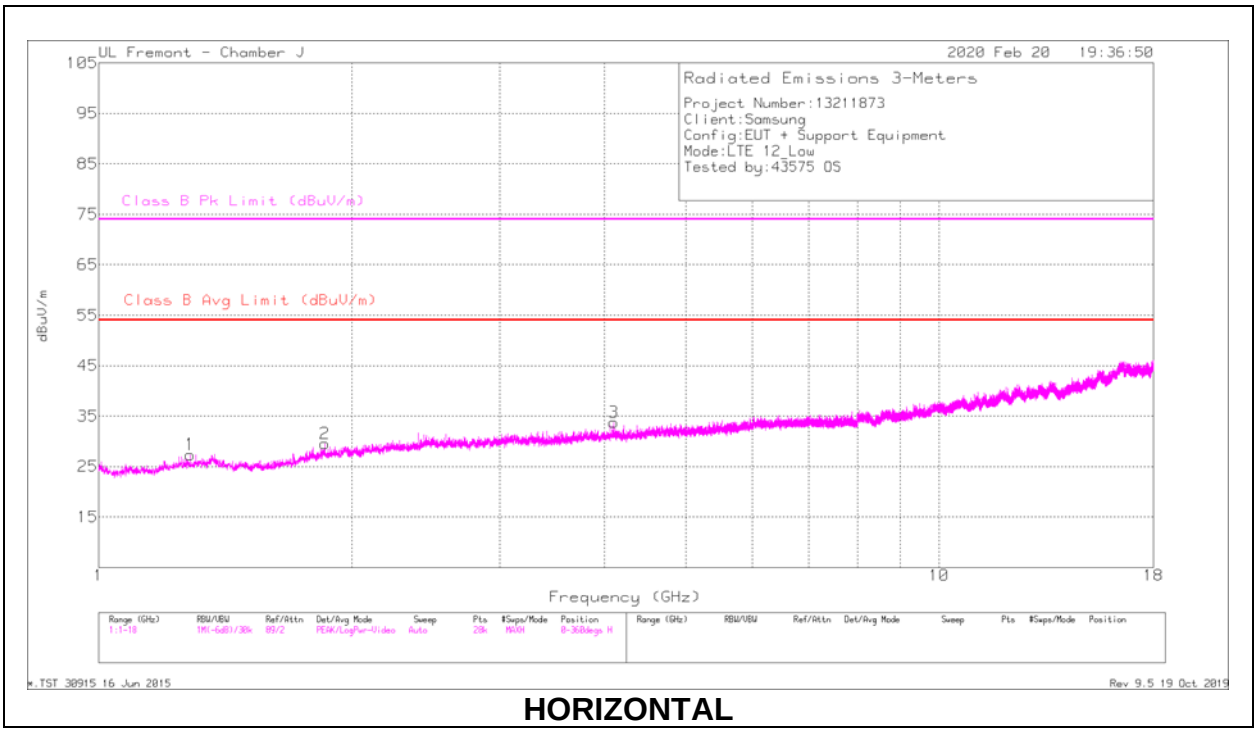
Pk - Peak detector

| 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 |
|---|---|---|---|---|---|---|---|---|---|---|
| 39.0011 | 39.12 | Pk | 21 | -31.5 | 28.62 | 40 | -11.38 | 58 | 138 | V |
| 39.0011 | 31.72 | Qp | 21 | -31.5 | 21.22 | 40 | -18.78 | 58 | 138 | V |

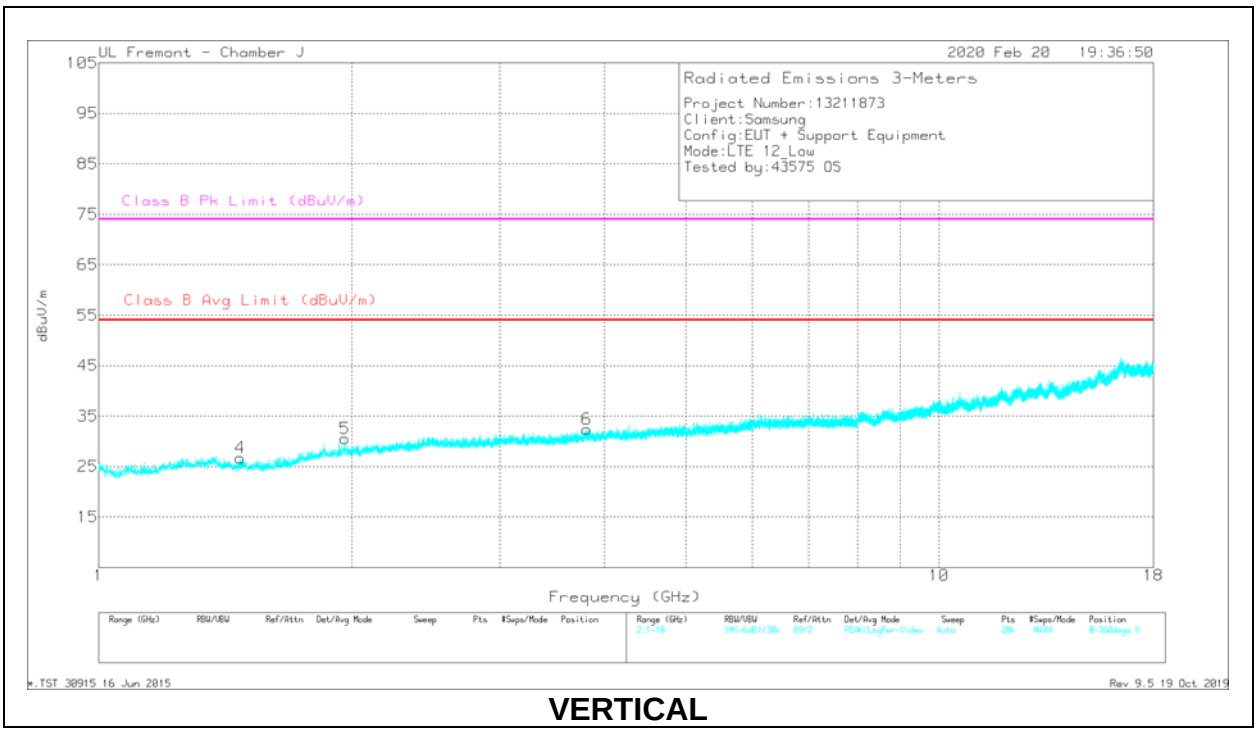
Pk - Peak detector
Qp - Quasi-Peak detector

## 8.2.2. ABOVE 1GHz

**LOW CHANNEL**




**HORIZONTAL**



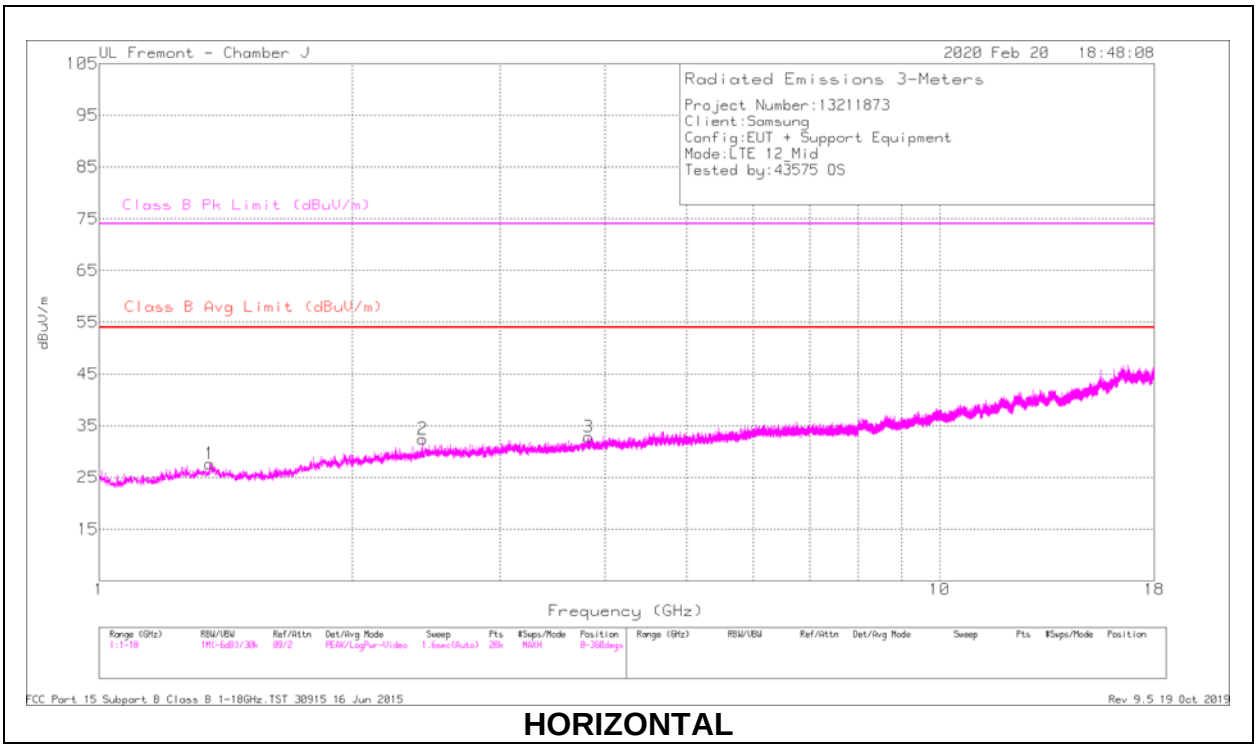

**VERTICAL**

## RADIATED EMISSIONS

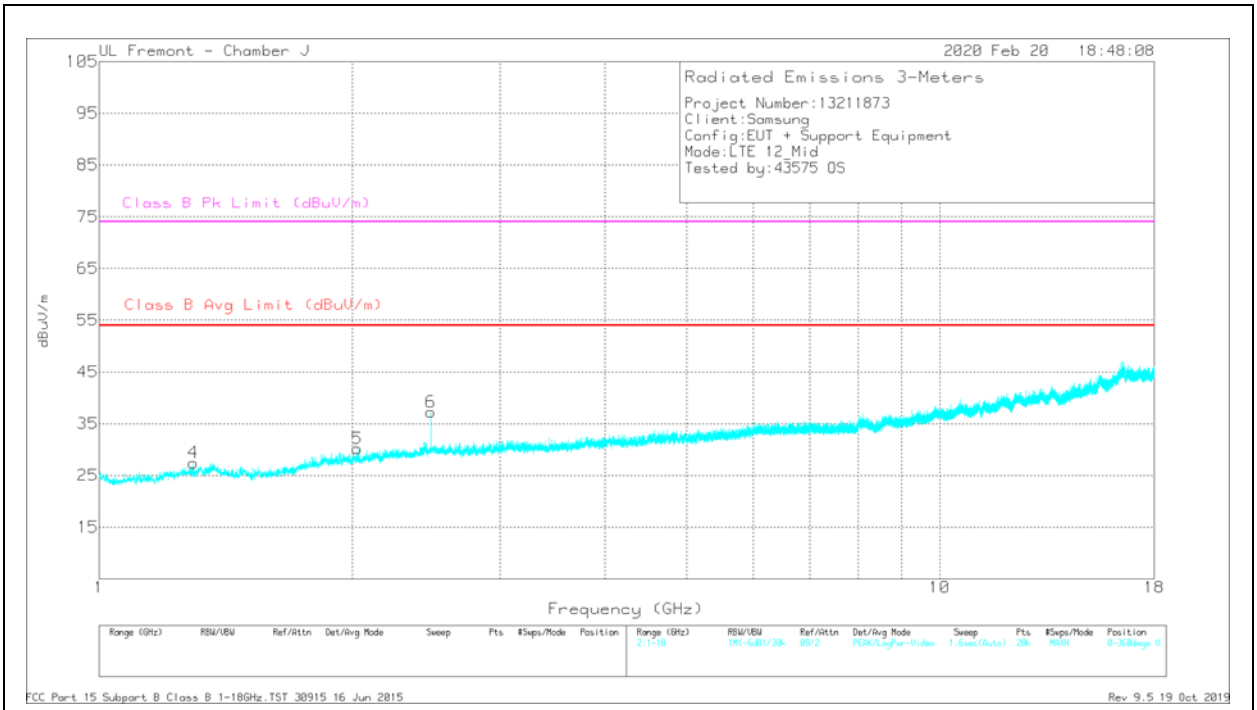
| Markers | Frequency (GHz) | Meter Reading (dBuV) | Det | AF EMC4294 (dB/m) | Amp/Cbl (dB) | Corrected Reading dBuV/m | Class B Avg Limit (dBuV/m) | Margin (dB) | Class B Pk Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.28484 | 33.53 | Pk | 28.8 | -35.8 | 26.53 | - | - | 74 | -47.47 | 24 | 122 | H |
| | 1.28484 | 20.28 | Av | 28.8 | -35.8 | 13.28 | 54 | -40.72 | - | - | 24 | 122 | H |
| 2 | 1.85848 | 34.88 | Pk | 30.5 | -35.8 | 29.58 | - | - | 74 | -44.42 | 215 | 198 | H |
| | 1.85848 | 20.61 | Av | 30.5 | -35.8 | 15.31 | 54 | -38.69 | - | - | 215 | 198 | H |
| 3 | 4.10354 | 30.28 | Pk | 33.7 | -32.3 | 31.68 | - | - | 74 | -42.32 | 209 | 157 | H |
| | 4.10354 | 17.92 | Av | 33.7 | -32.3 | 19.32 | 54 | -34.68 | - | - | 209 | 157 | H |
| 4 | 1.47371 | 43.62 | Pk | 28.2 | -35.9 | 35.92 | - | - | 74 | -38.08 | 132 | 195 | V |
| | 1.47371 | 30.01 | Av | 28.2 | -35.9 | 22.31 | 54 | -31.69 | - | - | 132 | 195 | V |
| 5 | 1.96342 | 43.42 | Pk | 31 | -35.7 | 38.72 | - | - | 74 | -35.28 | 166 | 211 | V |
| | 1.96342 | 30.08 | Av | 31 | -35.7 | 25.38 | 54 | -28.62 | - | - | 166 | 211 | V |
| 6 | 3.81016 | 41.41 | Pk | 33.5 | -33.1 | 41.81 | - | - | 74 | -32.19 | 81 | 112 | V |
| | 3.81016 | 28.91 | Pk | 33.5 | -33.1 | 29.31 | 54 | -24.69 | - | - | 81 | 112 | V |

Pk - Peak detector
Av - Average detection

**MID CHANNEL**




**HORIZONTAL**



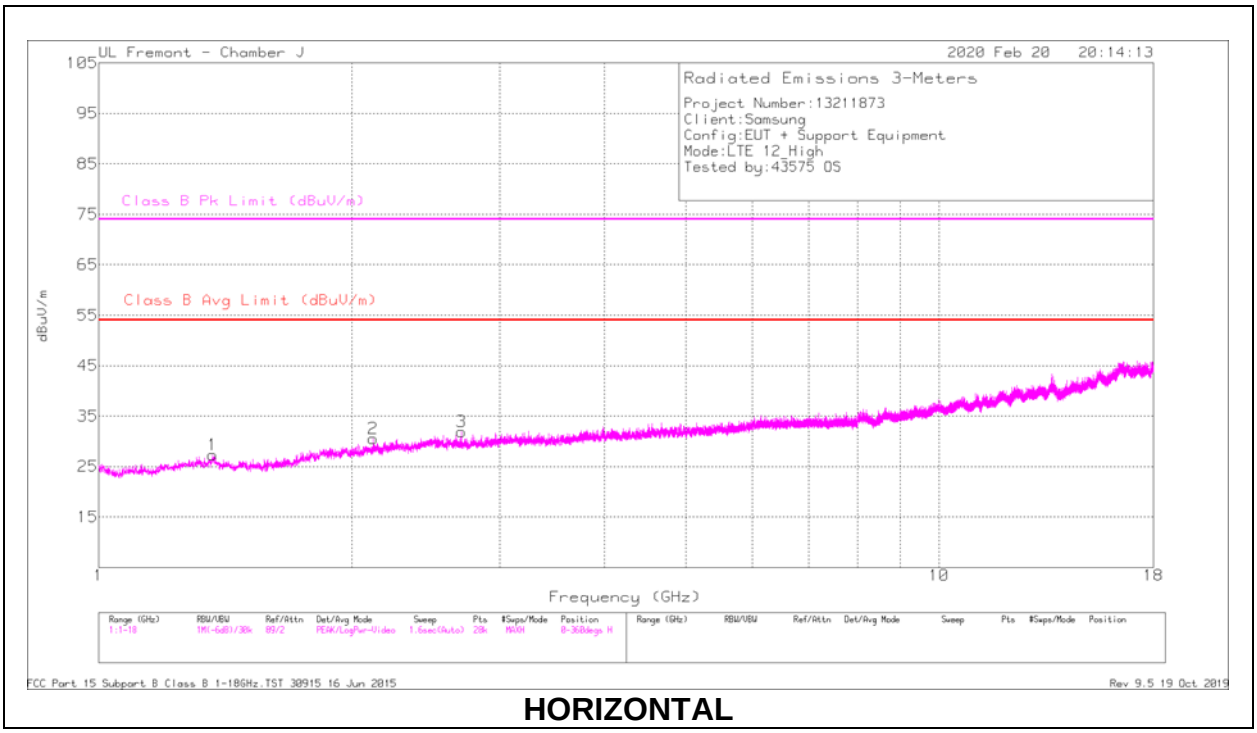

**VERTICAL**

## RADIATED EMISSIONS

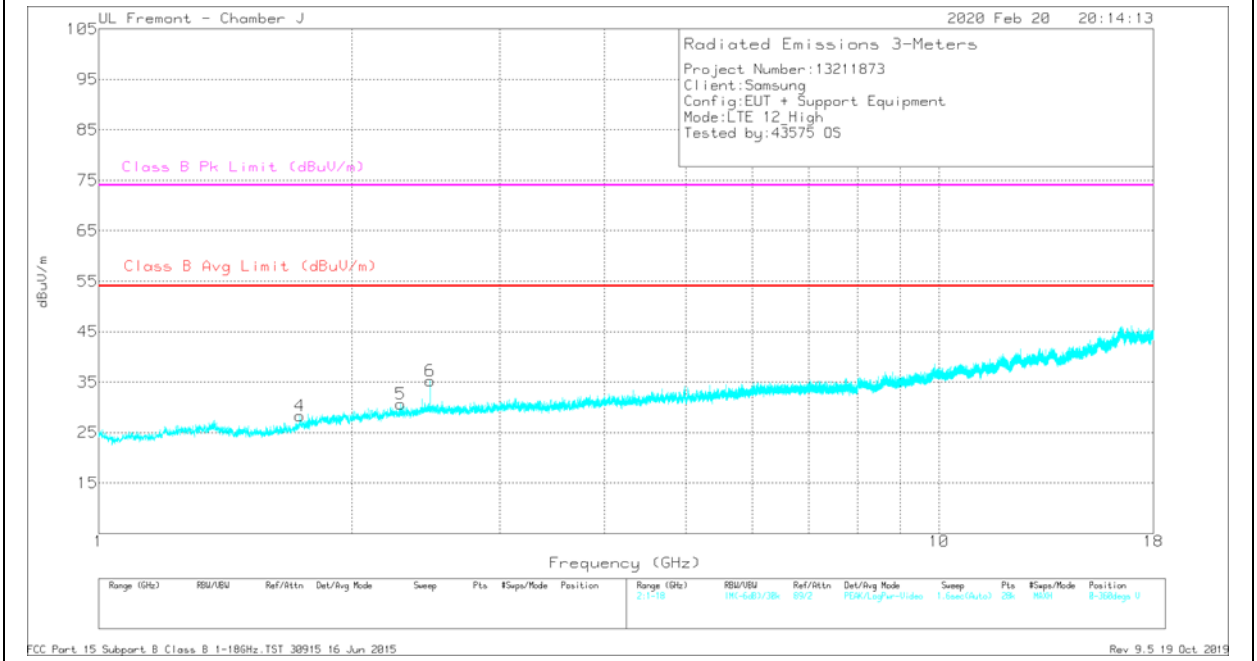
| Markers | Frequency (GHz) | Meter Reading (dBuV) | Det | AF EMC4294 (dB/m) | Amp/Cbl (dB) | Corrected Reading dBuV/m | Class B Avg Limit (dBuV/m) | Margin (dB) | Class B Pk Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.35341 | 33.44 | Pk | 29.3 | -35.8 | 26.94 | - | - | 74 | -47.06 | 122 | 383 | H |
| | 1.35341 | 20.44 | Av | 29.3 | -35.8 | 13.94 | 54 | -40.06 | - | - | 122 | 383 | H |
| 2 | 2.42577 | 34.64 | Pk | 32.2 | -35.5 | 31.34 | - | - | 74 | -42.66 | 257 | 103 | H |
| | 2.42577 | 20.84 | Av | 32.2 | -35.5 | 17.54 | 54 | -36.46 | - | - | 257 | 103 | H |
| 3 | 3.82156 | 29.28 | Pk | 33.5 | -33 | 29.78 | - | - | 74 | -44.22 | 220 | 115 | H |
| | 3.82156 | 18.42 | Av | 33.5 | -33 | 18.92 | 54 | -35.08 | - | - | 220 | 115 | H |
| 4 | 1.29653 | 43.53 | Pk | 28.7 | -35.8 | 36.43 | - | - | 74 | -37.57 | 128 | 353 | V |
| | 1.29653 | 29.52 | Av | 28.7 | -35.8 | 22.42 | 54 | -31.58 | - | - | 128 | 353 | V |
| 5 | 2.02655 | 43.95 | Pk | 30.9 | -35.7 | 39.15 | - | - | 74 | -34.85 | 323 | 251 | V |
| | 2.02655 | 29.88 | Av | 30.9 | -35.7 | 25.08 | 54 | -28.92 | - | - | 323 | 251 | V |
| 6 | 2.48006 | 44.65 | Pk | 32.4 | -35.5 | 41.55 | - | - | 74 | -32.45 | 131 | 213 | V |
| | 2.48006 | 30.01 | Av | 32.4 | -35.5 | 26.91 | 54 | -27.09 | - | - | 131 | 213 | V |

Pk - Peak detector
Av - Average detection

**HIGH CHANNEL**




**HORIZONTAL**




**VERTICAL**

## RADIATED EMISSIONS

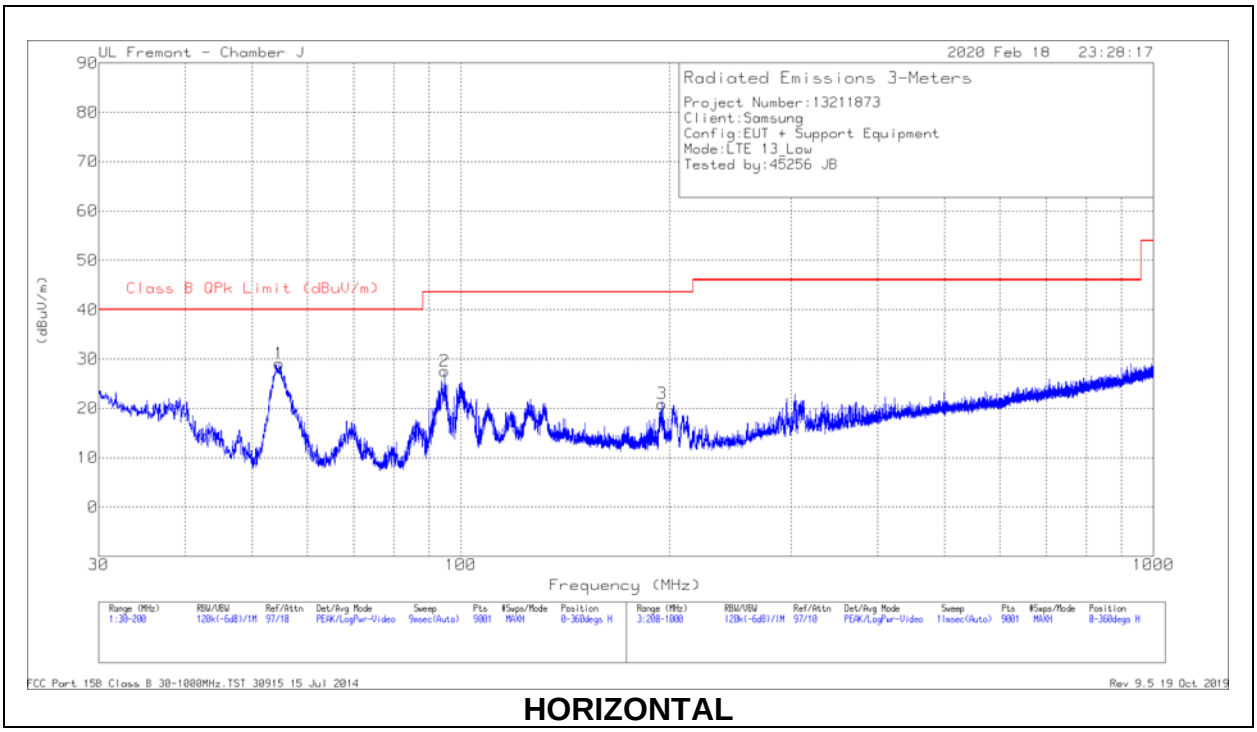
| Markers | Frequency (GHz) | Meter Reading (dBuV) | Det | AF EMC4294 (dB/m) | Amp/Cbl (dB) | Corrected Reading dBuV/m | Class B Avg Limit (dBuV/m) | Margin (dB) | Class B Pk Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.36736 | 33.27 | Pk | 29.4 | -35.8 | 26.87 | - | - | 74 | -47.13 | 75 | 103 | H |
| | 1.36736 | 20.65 | Av | 29.4 | -35.8 | 14.25 | 54 | -39.75 | - | - | 75 | 103 | H |
| 2 | 2.12253 | 33.58 | Pk | 31.3 | -35.6 | 29.28 | - | - | 74 | -44.72 | 154 | 104 | H |
| | 2.12253 | 20.65 | Av | 31.3 | -35.6 | 16.35 | 54 | -37.65 | - | - | 154 | 104 | H |
| 3 | 2.70075 | 32.42 | Pk | 32.2 | -35.2 | 29.42 | - | - | 74 | -44.58 | 347 | 171 | H |
| | 2.70075 | 20.16 | Av | 32.2 | -35.2 | 17.16 | 54 | -36.84 | - | - | 347 | 171 | H |
| 4 | 1.73691 | 43.85 | Pk | 29.5 | -35.7 | 37.65 | - | - | 74 | -36.35 | 109 | 113 | V |
| | 1.73691 | 30.01 | Av | 29.5 | -35.7 | 23.81 | 54 | -30.19 | - | - | 109 | 113 | V |
| 5 | 2.29006 | 43 | Pk | 31.8 | -35.6 | 39.2 | - | - | 74 | -34.8 | 243 | 322 | V |
| | 2.29006 | 29.82 | Av | 31.8 | -35.6 | 26.02 | 54 | -27.98 | - | - | 243 | 322 | V |
| 6 | 2.48039 | 45.56 | Pk | 32.4 | -35.5 | 42.46 | - | - | 74 | -31.54 | 77 | 198 | V |
| | 2.48039 | 29.98 | Av | 32.4 | -35.5 | 26.88 | 54 | -27.12 | - | - | 77 | 198 | V |

Pk - Peak detector
Av - Average detection

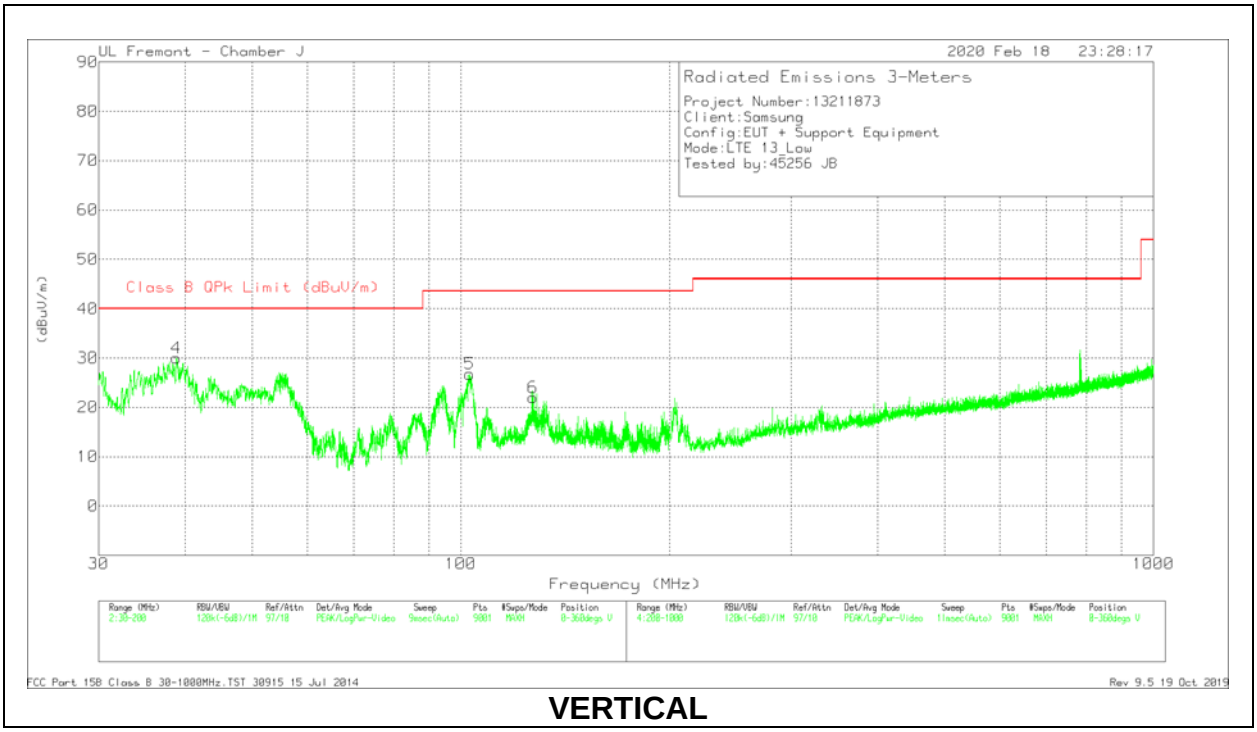
## 8.3. LTE Band 13

### 8.3.1. BELOW 1GHz

**LOW CHANNEL**




**HORIZONTAL**




**VERTICAL**

## RADIATED EMISSIONS

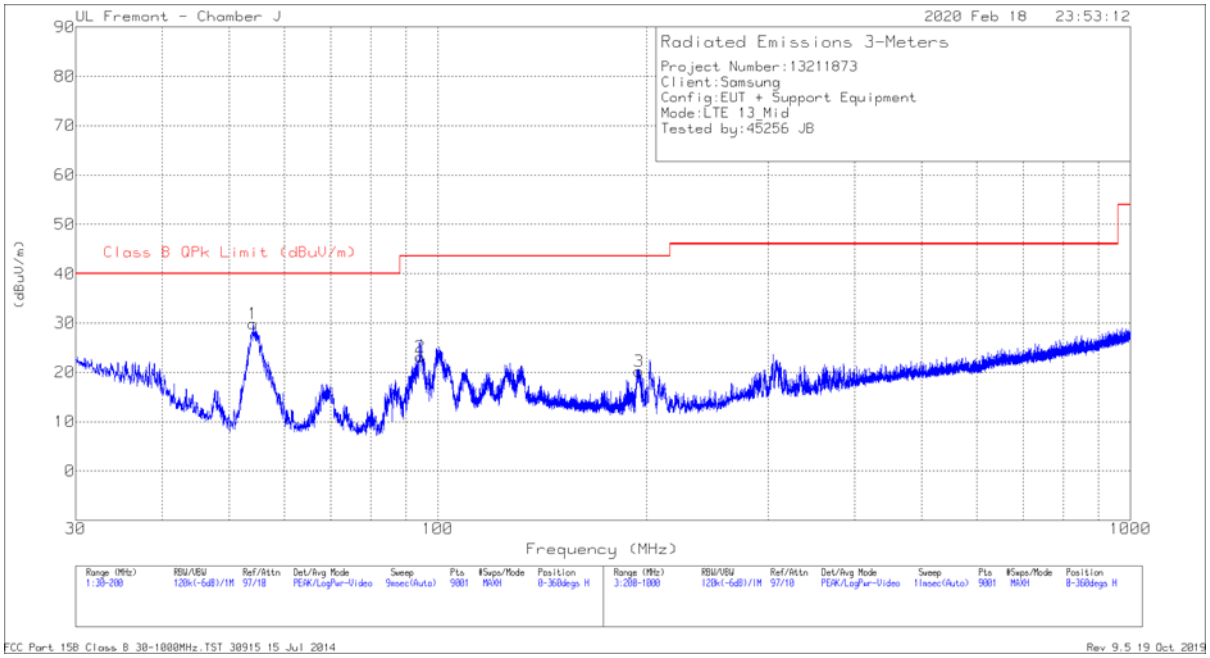
| Marker | Frequency (MHz) | Meter Reading (dBuV) | Det | AF T899 (dB/m) | Amp Cbl (dB) | Corrected Reading (dBuV/m) | Class B QPk Limit (dBuV/m) | Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 54.6879 | 47.53 | Pk | 13 | -31.4 | 29.13 | 40 | -10.87 | 0-360 | 388 | H |
| 2 | 94.6948 | 43.92 | Pk | 14.7 | -31 | 27.62 | 43.52 | -15.9 | 0-360 | 292 | H |
| 3 | 195.1276 | 33.52 | Pk | 17.9 | -30.5 | 20.92 | 43.52 | -22.6 | 0-360 | 101 | H |
| 4 | 38.8589 | 40.39 | Pk | 21.1 | -31.5 | 29.99 | 40 | -10.01 | 0-360 | 101 | V |
| 5 | 103.006 | 40.76 | Pk | 17 | -31 | 26.76 | 43.52 | -16.76 | 0-360 | 101 | V |
| 6 | 127.1461 | 33.32 | Pk | 19.6 | -30.9 | 22.02 | 43.52 | -21.5 | 0-360 | 101 | V |

Pk - Peak detector

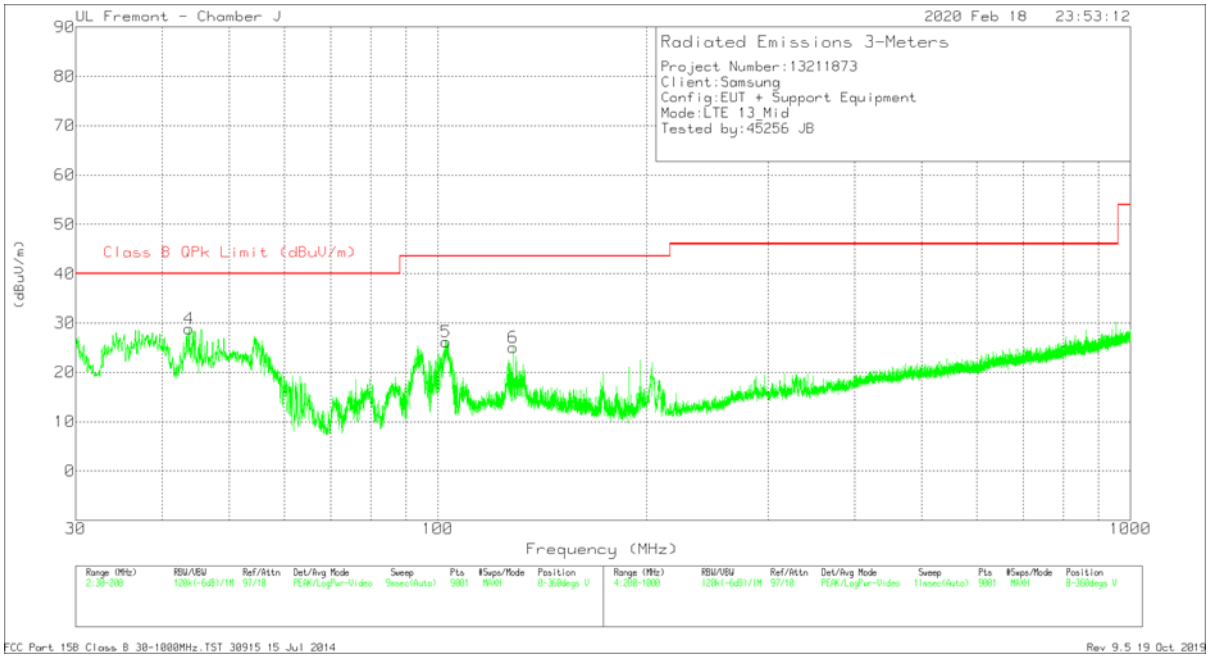
| Frequency (MHz) | Meter Reading (dBuV) | Det | AF T899 (dB/m) | Amp Cbl (dB) | Corrected Reading (dBuV/m) | Class B QPk Limit (dBuV/m) | Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|
| 38.9495 | 41.52 | Pk | 21 | -31.5 | 31.02 | 40 | -8.98 | 125 | 120 | V |
| 38.9495 | 34.77 | Qp | 21 | -31.5 | 24.27 | 40 | -15.73 | 125 | 120 | V |

Pk - Peak detector
Qp - Quasi-Peak detector

**MID CHANNEL**




**HORIZONTAL**




**VERTICAL**

## RADIATED EMISSIONS

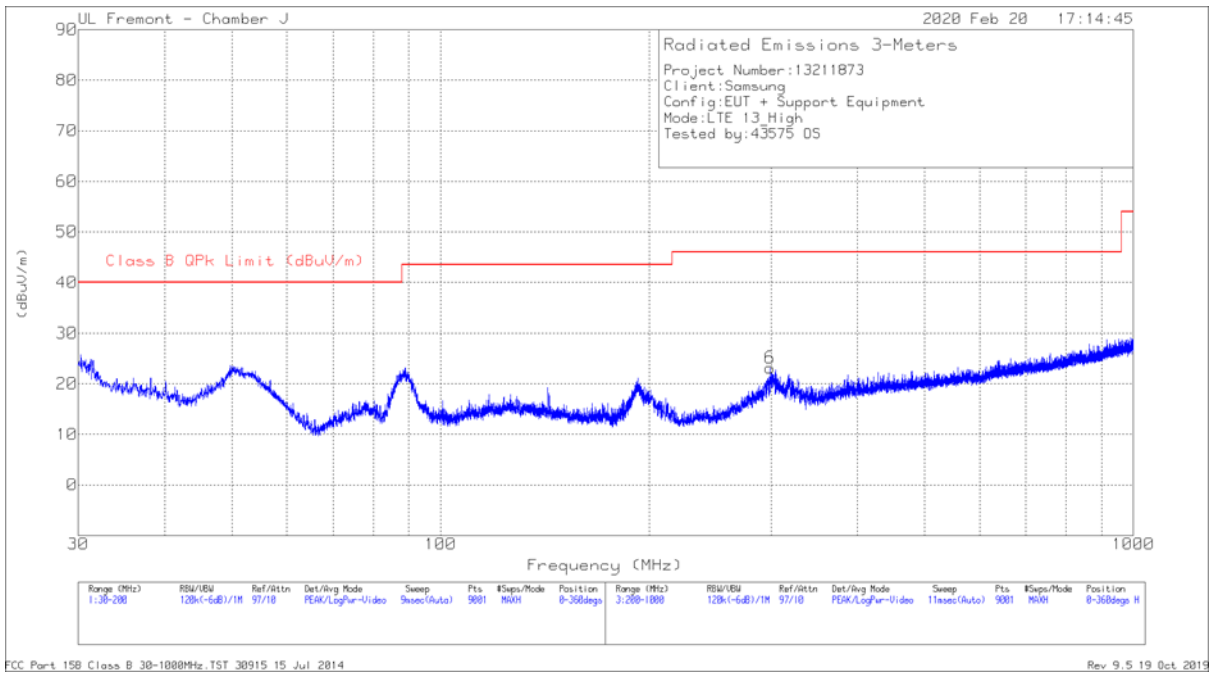
| Marker | Frequency (MHz) | Meter Reading (dBuV) | Det | AF T899 (dB/m) | Amp Cbl (dB) | Corrected Reading (dBuV/m) | Class B QPk Limit (dBuV/m) | Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 54.1213 | 48.4 | Pk | 12.9 | -31.4 | 29.9 | 40 | -10.1 | 0-360 | 389 | H |
| 2 | 94.3737 | 39.49 | Pk | 14.6 | -31 | 23.09 | 43.52 | -20.43 | 0-360 | 389 | H |
| 3 | 195.3165 | 32.78 | Pk | 17.9 | -30.5 | 20.18 | 43.52 | -23.34 | 0-360 | 195 | H |
| 4 | 43.7701 | 43.01 | Pk | 17.3 | -31.5 | 28.81 | 40 | -11.19 | 0-360 | 101 | V |
| 5 | 102.666 | 40.27 | Pk | 16.9 | -31 | 26.17 | 43.52 | -17.35 | 0-360 | 101 | V |
| 6 | 128.4117 | 36.35 | Pk | 19.6 | -30.9 | 25.05 | 43.52 | -18.47 | 0-360 | 101 | V |

Pk - Peak detector

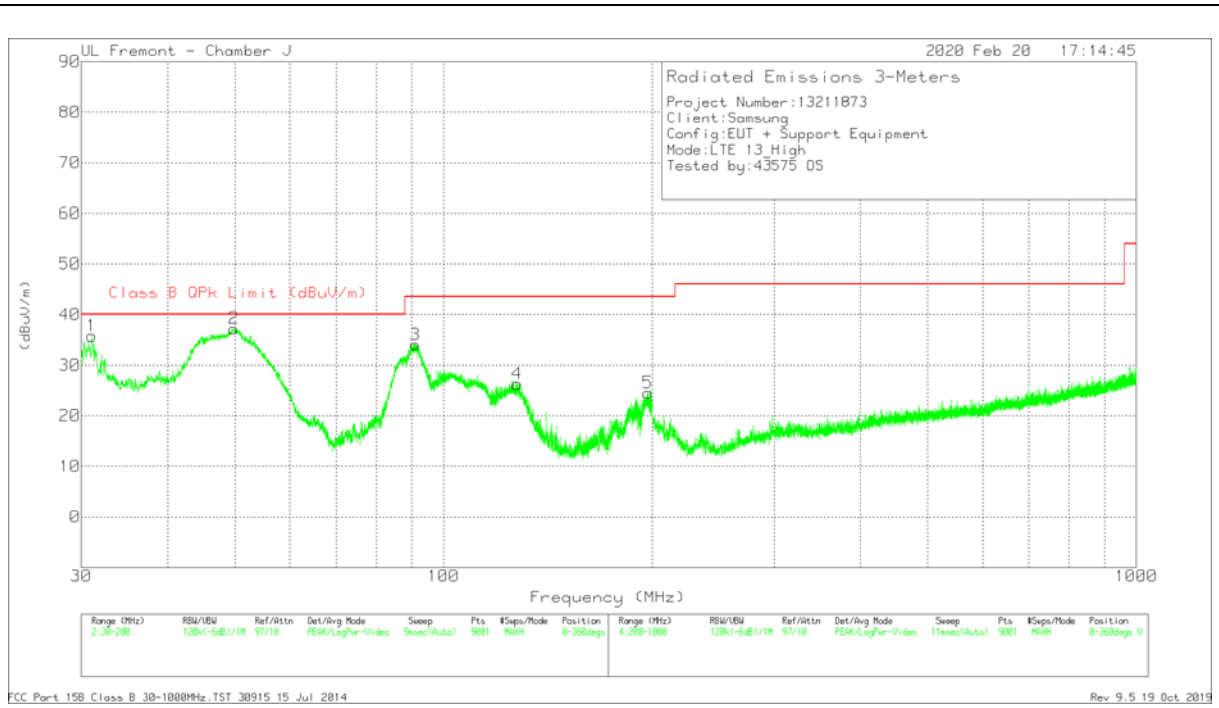
| Frequency (MHz) | Meter Reading (dBuV) | Det | AF T899 (dB/m) | Amp Cbl (dB) | Corrected Reading (dBuV/m) | Class B QPk Limit (dBuV/m) | Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|
| 54.3174 | 48.77 | Pk | 12.9 | -31.4 | 30.27 | 40 | -9.73 | 52 | 376 | H |
| 54.3174 | 44.23 | Qp | 12.9 | -31.4 | 25.73 | 40 | -14.27 | 52 | 376 | H |

Pk - Peak detector
Qp - Quasi-Peak detector

**HIGH CHANNEL**




**HORIZONTAL**




**VERTICAL**

## 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 | 31.0578 | 40.88 | Pk | 26.5 | -31.6 | 35.78 | 40 | -4.22 | 0-360 | 101 | V |
| 2 | 49.8146 | 55.05 | Pk | 13.6 | -31.4 | 37.25 | 40 | -2.75 | 0-360 | 101 | V |
| 3 | 91.0681 | 51.37 | Pk | 13.8 | -31.1 | 34.07 | 43.52 | -9.45 | 0-360 | 101 | V |
| 4 | 127.7222 | 37.6 | Pk | 19.6 | -30.9 | 26.3 | 43.52 | -17.22 | 0-360 | 101 | V |
| 5 | 197.2054 | 36.71 | Pk | 18.2 | -30.4 | 24.51 | 43.52 | -19.01 | 0-360 | 101 | V |
| 6 | 299.1112 | 33.94 | Pk | 19.2 | -30 | 23.14 | 46.02 | -22.88 | 0-360 | 101 | H |

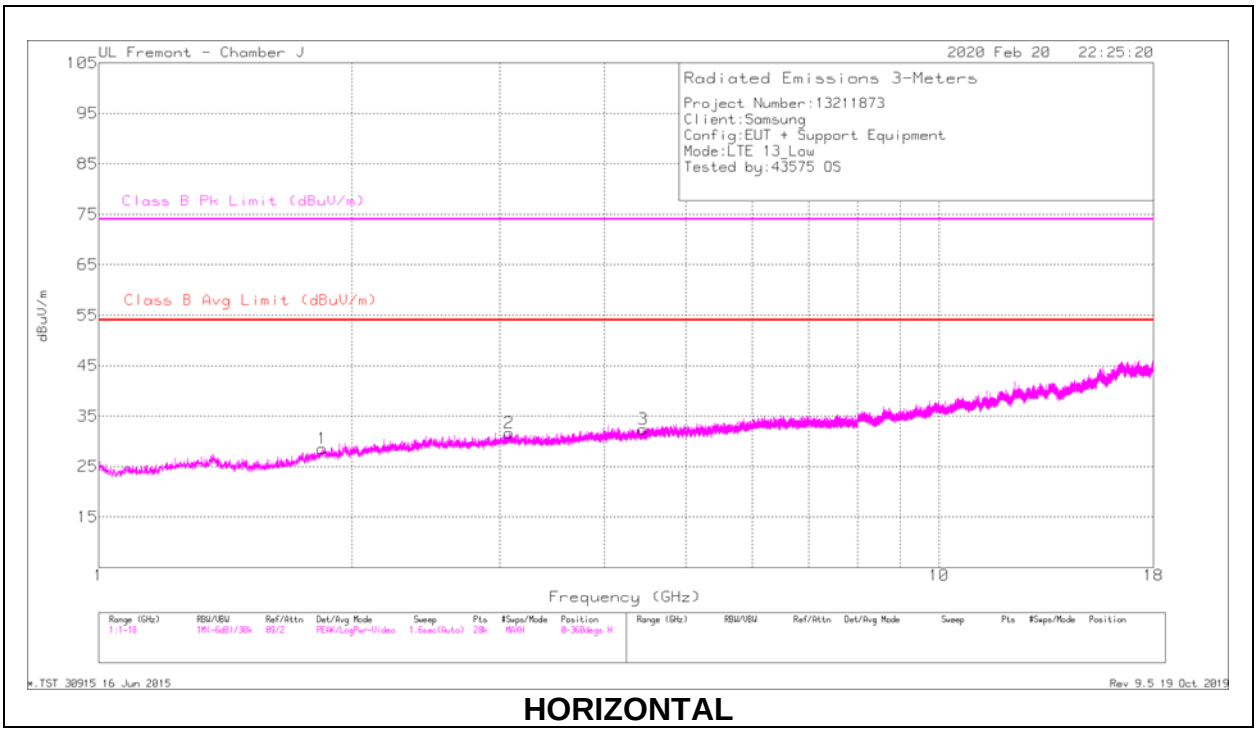
Pk - Peak detector

| 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 |
|---|---|---|---|---|---|---|---|---|---|---|
| 31.2482 | 39.51 | Pk | 26.4 | -31.6 | 34.31 | 40 | -5.69 | 286 | 101 | V |
| 31.2482 | 29.14 | Qp | 26.4 | -31.6 | 23.94 | 40 | -16.06 | 286 | 101 | V |
| 50.0515 | 42.45 | Pk | 13.5 | -31.4 | 24.55 | 40 | -15.45 | 2 | 286 | V |
| 50.0515 | 43.34 | Qp | 13.5 | -31.4 | 25.44 | 40 | -14.56 | 2 | 286 | V |

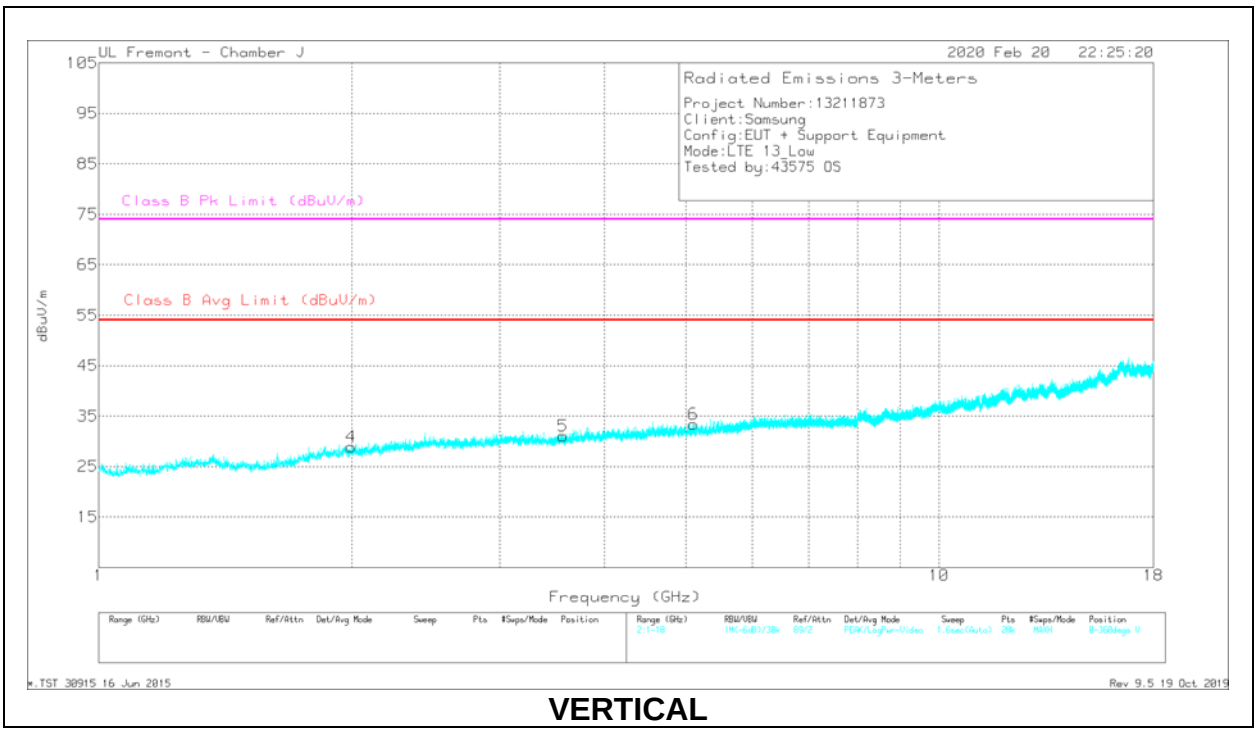
Pk - Peak detector
Qp - Quasi-Peak detector

## 8.3.2. ABOVE 1GHz

**LOW CHANNEL**




**HORIZONTAL**



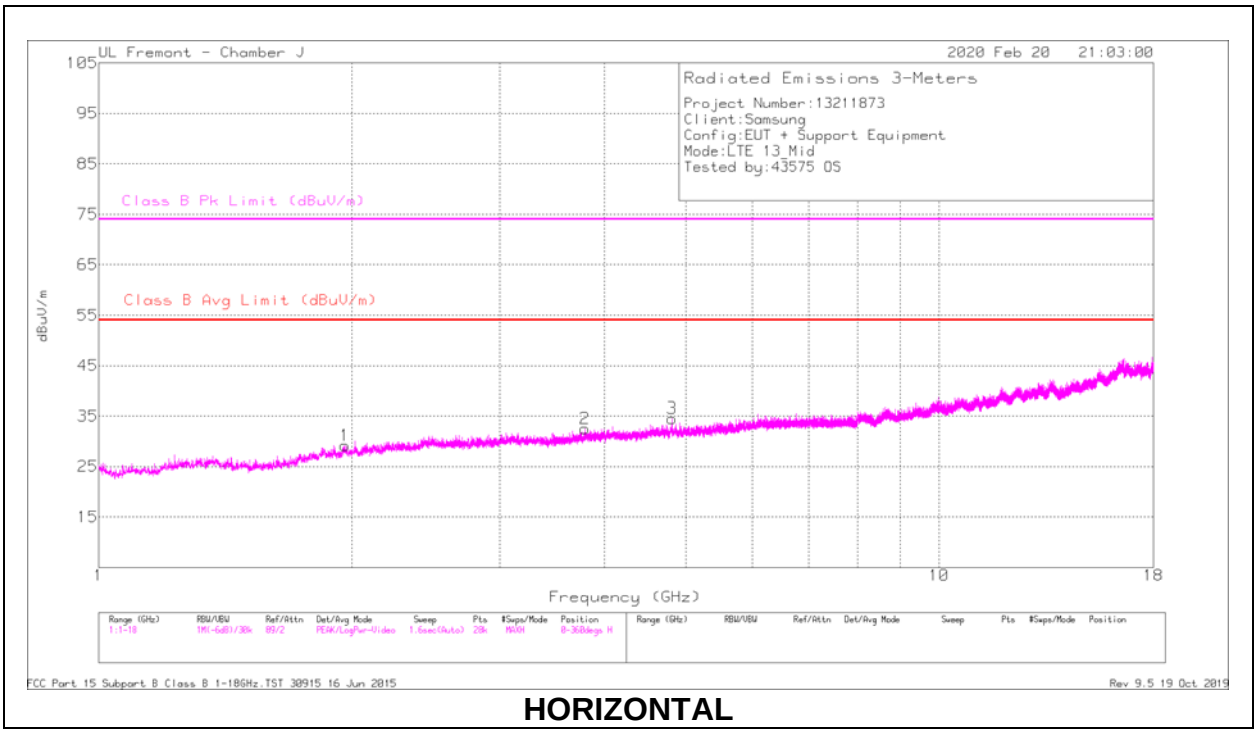

**VERTICAL**

## RADIATED EMISSIONS

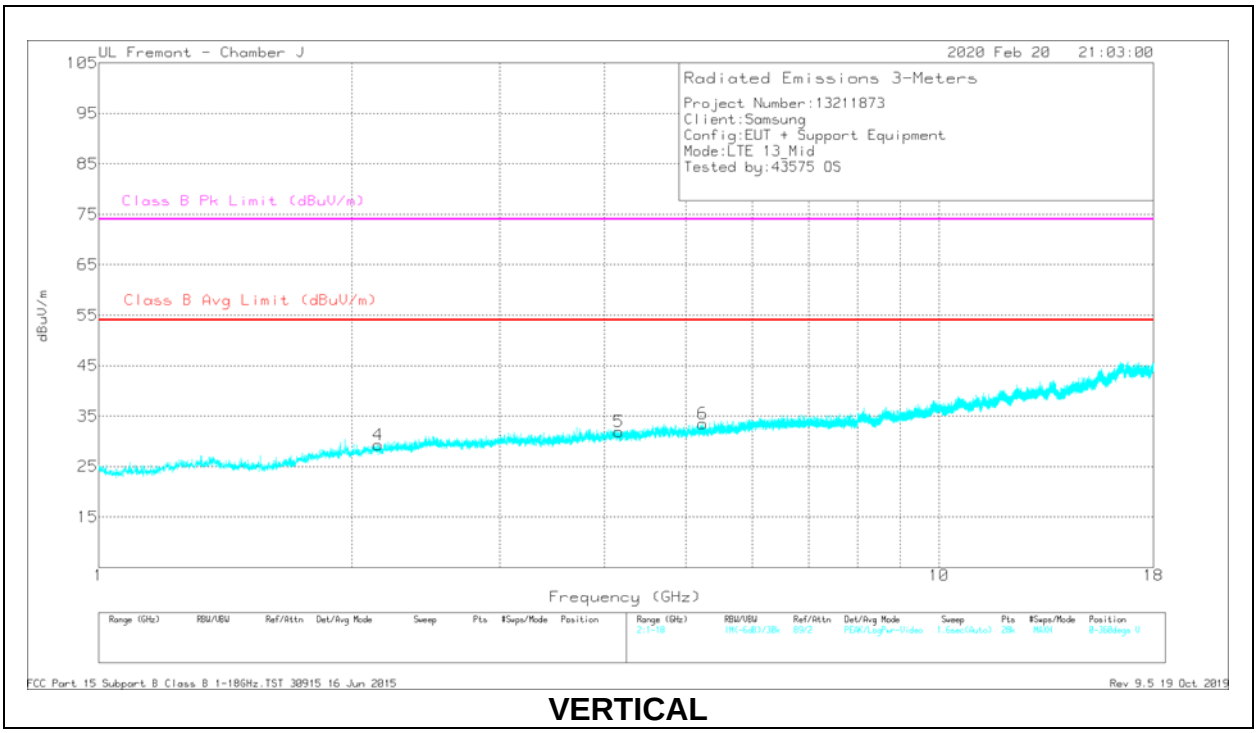
| Markers | Frequency (GHz) | Meter Reading (dBuV) | Det | AF T344 (dB/m) | Amp/Cbl (dB) | Corrected Reading dBuV/m | Class B Avg Limit (dBuV/m) | Margin (dB) | Class B Pk Limit (dBuV/m) | Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.84564 | 34.2 | Pk | 30.5 | -35.8 | 28.9 | - | - | 74 | -45.1 | 30 | 331 | H |
| | 1.84564 | 20.88 | Av | 30.5 | -35.8 | 15.58 | 54 | -38.42 | - | - | 30 | 331 | H |
| 2 | 3.07956 | 32.5 | Pk | 33 | -34.9 | 30.6 | - | - | 74 | -43.4 | 215 | 140 | H |
| | 3.07956 | 20.38 | Av | 33 | -34.9 | 18.48 | 54 | -35.52 | - | - | 215 | 140 | H |
| 3 | 4.44812 | 29.87 | Pk | 33.6 | -31.6 | 31.87 | - | - | 74 | -42.13 | 161 | 198 | H |
| | 4.44812 | 17.35 | Av | 33.6 | -31.6 | 19.35 | 54 | -34.65 | - | - | 161 | 198 | H |
| 4 | 1.99975 | 43.62 | Pk | 30.9 | -35.7 | 38.82 | - | - | 74 | -35.18 | 222 | 115 | V |
| | 1.99975 | 29.54 | Av | 30.9 | -35.7 | 24.74 | 54 | -29.26 | - | - | 222 | 115 | V |
| 5 | 3.56503 | 42.15 | Pk | 32.9 | -33.9 | 41.15 | - | - | 74 | -32.85 | 322 | 334 | V |
| | 3.56503 | 28.51 | Av | 32.9 | -33.9 | 27.51 | 54 | -26.49 | - | - | 322 | 334 | V |
| 6 | 5.10396 | 39.34 | Pk | 34.2 | -31 | 42.54 | - | - | 74 | -31.46 | 356 | 171 | V |
| | 5.10396 | 26.06 | Av | 34.2 | -31 | 29.26 | 54 | -24.74 | - | - | 356 | 171 | V |

Pk - Peak detector
Av - Average detection

**MID CHANNEL**




**HORIZONTAL**



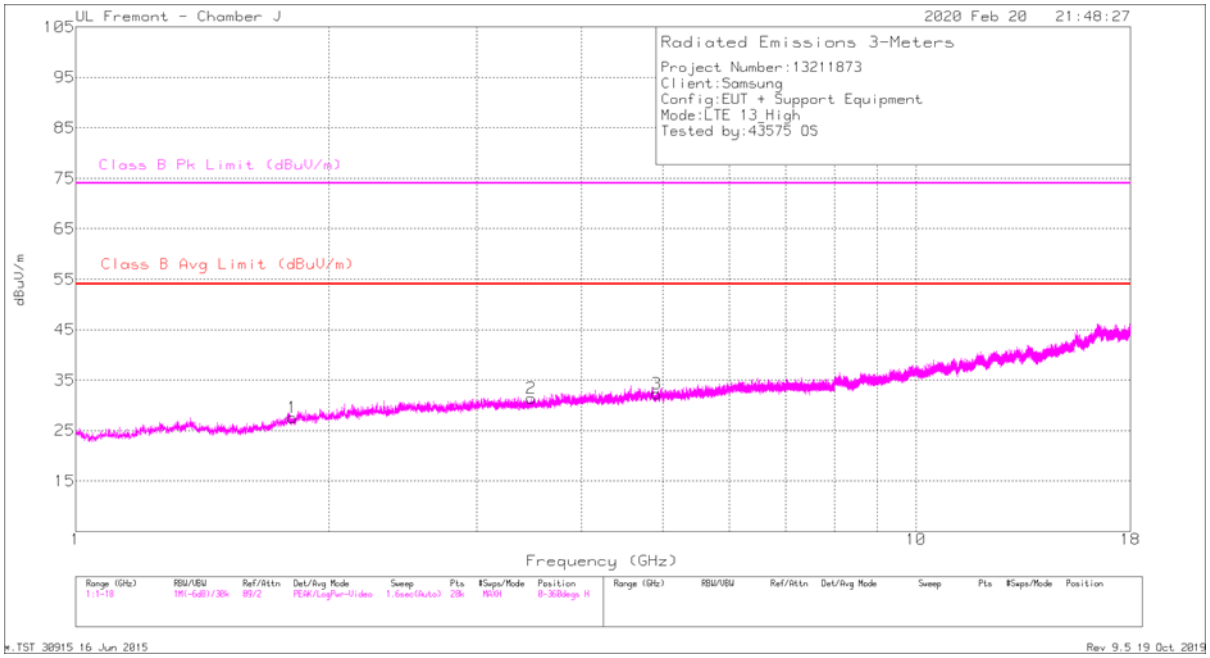

**VERTICAL**

## RADIATED EMISSIONS

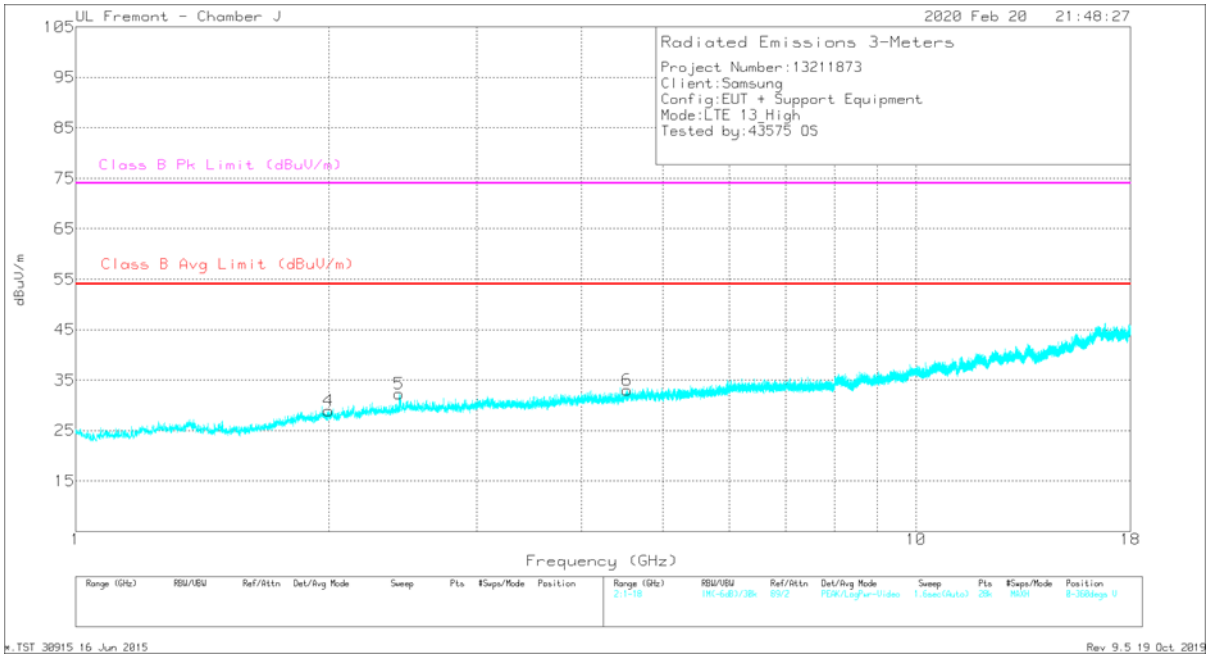
| Markers | Frequency (GHz) | Meter Reading (dBuV) | Det | AF T344 (dB/m) | Amp/Cbl (dB) | Corrected Reading dBuV/m | Class B Avg Limit (dBuV/m) | Margin (dB) | Class B Pk Limit (dBuV/m) | Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.96372 | 33.11 | Pk | 31 | -35.7 | 28.41 | - | - | 74 | -45.59 | 327 | 347 | H |
| | 1.96372 | 20.78 | Av | 31 | -35.7 | 16.08 | 54 | -37.92 | - | - | 327 | 347 | H |
| 2 | 3.78884 | 30.66 | Pk | 33.5 | -33.1 | 31.06 | - | - | 74 | -42.94 | 156 | 250 | H |
| | 3.78884 | 18.54 | Av | 33.5 | -33.1 | 18.94 | 54 | -35.06 | - | - | 156 | 250 | H |
| 3 | 4.80967 | 29.42 | Pk | 34.2 | -31.2 | 32.42 | - | - | 74 | -41.58 | 4 | 114 | H |
| | 4.80967 | 17.06 | Av | 34.2 | -31.2 | 20.06 | 54 | -33.94 | - | - | 4 | 114 | H |
| 4 | 2.14869 | 43.21 | Pk | 31.4 | -35.6 | 39.01 | - | - | 74 | -34.99 | 32 | 327 | V |
| | 2.14869 | 29.76 | Av | 31.4 | -35.6 | 25.56 | 54 | -28.44 | - | - | 32 | 327 | V |
| 5 | 4.15621 | 39.85 | Pk | 33.6 | -32.1 | 41.35 | - | - | 74 | -32.65 | 181 | 190 | V |
| | 4.15621 | 26.96 | Av | 33.6 | -32.1 | 28.46 | 54 | -25.54 | - | - | 181 | 190 | V |
| 6 | 5.23356 | 38.85 | Pk | 34.3 | -30.8 | 42.35 | - | - | 74 | -31.65 | 346 | 140 | V |
| | 5.23356 | 25.72 | Av | 34.3 | -30.8 | 29.22 | 54 | -24.78 | - | - | 346 | 140 | V |

Pk - Peak detector
Av - Average detection

**HIGH CHANNEL**




**HORIZONTAL**




**VERTICAL**

## RADIATED EMISSIONS

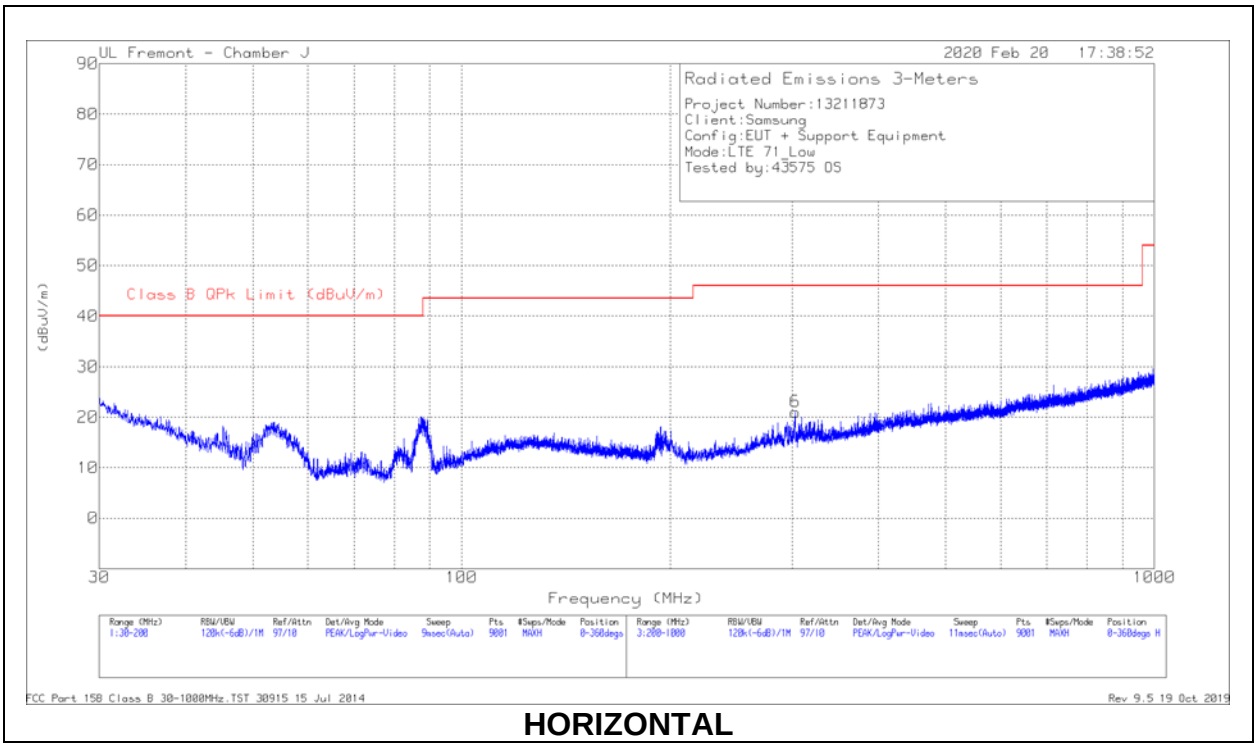
| Markers | Frequency (GHz) | Meter Reading (dBuV) | Det | AF T344 (dB/m) | Amp/Cbl (dB) | Corrected Reading dBuV/m | Class B Avg Limit (dBuV/m) | Margin (dB) | Class B Pk Limit (dBuV/m) | Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.81225 | 33.36 | Pk | 30.1 | -35.8 | 27.66 | - | - | 74 | -46.34 | 165 | 331 | H |
| | 1.81225 | 20.58 | Av | 30.1 | -35.8 | 14.88 | 54 | -39.12 | - | - | 165 | 331 | H |
| 2 | 3.48493 | 31.87 | Pk | 32.6 | -34 | 30.47 | - | - | 74 | -43.53 | 170 | 344 | H |
| | 3.48493 | 19.31 | Av | 32.6 | -34 | 17.91 | 54 | -36.09 | - | - | 170 | 344 | H |
| 3 | 4.91024 | 29.92 | Pk | 34.1 | -31.4 | 32.62 | - | - | 74 | -41.38 | 44 | 128 | H |
| | 4.91024 | 17.19 | Av | 34.1 | -31.4 | 19.89 | 54 | -34.11 | - | - | 44 | 128 | H |
| 4 | 1.99804 | 42.64 | Pk | 30.9 | -35.7 | 37.84 | - | - | 74 | -36.16 | 249 | 262 | V |
| | 1.99804 | 29.46 | Av | 30.9 | -35.7 | 24.66 | 54 | -29.34 | - | - | 249 | 262 | V |
| 5 | 2.42544 | 44.06 | Pk | 32.2 | -35.5 | 40.76 | - | - | 74 | -33.24 | 119 | 147 | V |
| | 2.42544 | 29.91 | Av | 32.2 | -35.5 | 26.61 | 54 | -27.39 | - | - | 119 | 147 | V |
| 6 | 4.52866 | 39.17 | Pk | 34.1 | -31.6 | 41.67 | - | - | 74 | -32.33 | 26 | 277 | V |
| | 4.52866 | 26.15 | Av | 34.1 | -31.6 | 28.65 | 54 | -25.35 | - | - | 26 | 277 | V |

Pk - Peak detector
Av - Average detection

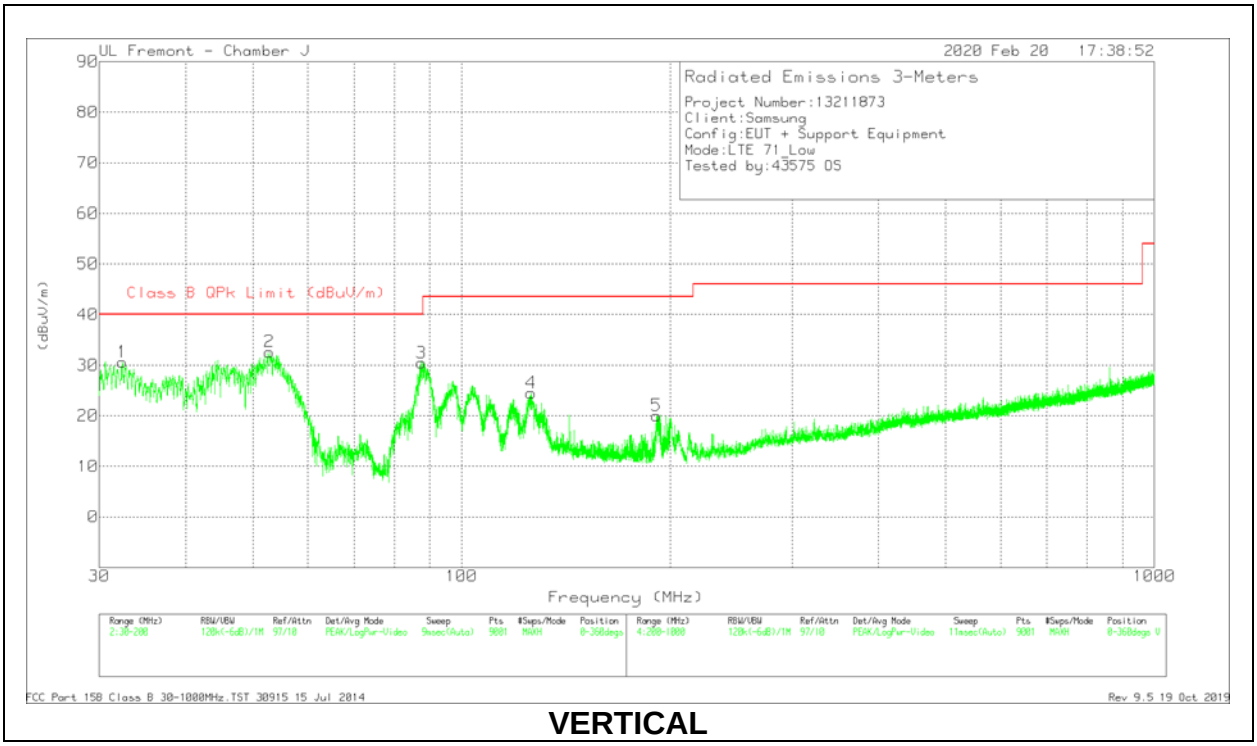
## 8.4. LTE Band 71

### 8.4.1. BELOW 1GHz

**LOW CHANNEL**




**HORIZONTAL**




**VERTICAL**

## RADIATED EMISSIONS

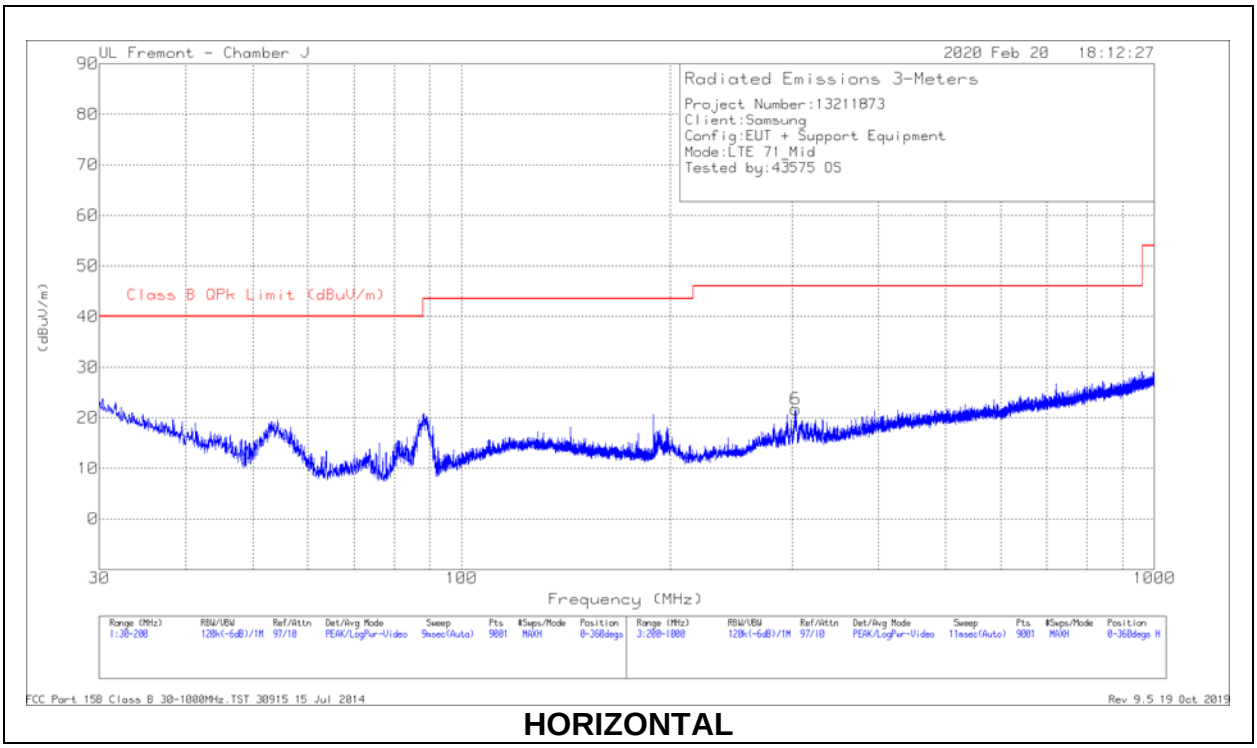
| Marker | Frequency (MHz) | Meter Reading (dBuV) | Det | AF T899 (dB/m) | Amp Cbl (dB) | Corrected Reading (dBuV/m) | Class B QPk Limit (dBuV/m) | Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 32.3989 | 36.59 | Pk | 25.6 | -31.6 | 30.59 | 40 | -9.41 | 0-360 | 101 | V |
| 2 | 52.7896 | 51.14 | Pk | 12.9 | -31.4 | 32.64 | 40 | -7.36 | 0-360 | 101 | V |
| 3 | 87.5548 | 48.25 | Pk | 13.3 | -31.1 | 30.45 | 40 | -9.55 | 0-360 | 101 | V |
| 4 | 126.0695 | 35.8 | Pk | 19.6 | -30.9 | 24.5 | 43.52 | -19.02 | 0-360 | 101 | V |
| 5 | 191.2365 | 33.13 | Pk | 17.4 | -30.5 | 20.03 | 43.52 | -23.49 | 0-360 | 101 | V |
| 6 | 303.289 | 31.86 | Pk | 19.3 | -30.1 | 21.06 | 46.02 | -24.96 | 0-360 | 101 | H |

Pk - Peak detector

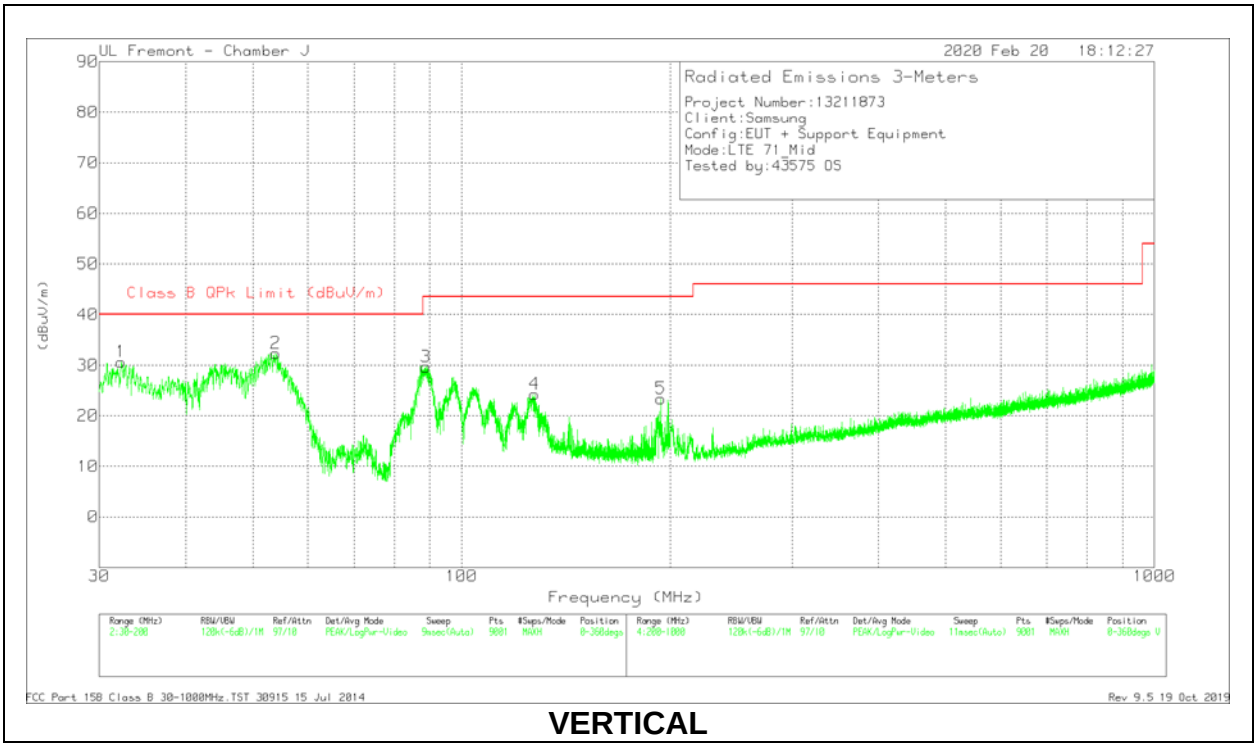
| Frequency (MHz) | Meter Reading (dBuV) | Det | AF T899 (dB/m) | Amp Cbl (dB) | Corrected Reading (dBuV/m) | Class B QPk Limit (dBuV/m) | Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|
| 52.7158 | 50.61 | Pk | 12.9 | -31.4 | 32.11 | 40 | -7.89 | 82 | 140 | V |
| 52.7158 | 46.77 | Qp | 12.9 | -31.4 | 28.27 | 40 | -11.73 | 82 | 140 | V |

Pk - Peak detector
Qp - Quasi-Peak detector

**MID CHANNEL**




**HORIZONTAL**




**VERTICAL**

## RADIATED EMISSIONS

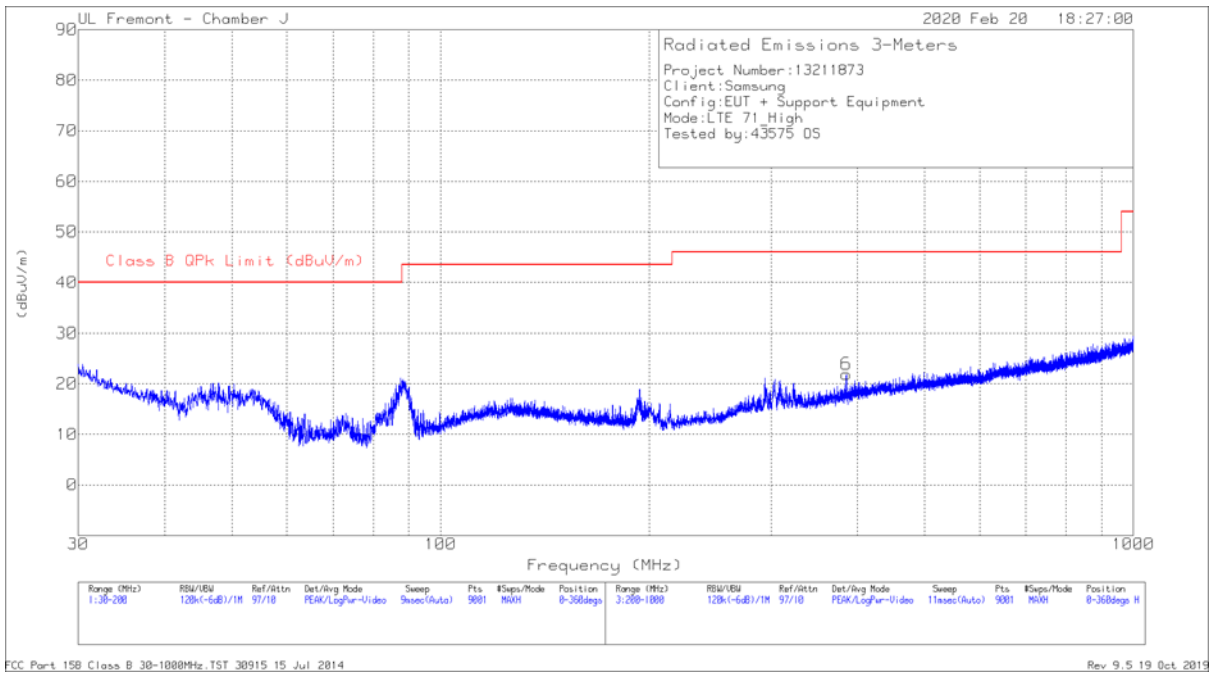
| Marker | Frequency (MHz) | Meter Reading (dBuV) | Det | AF T899 (dB/m) | Amp Cbl (dB) | Corrected Reading (dBuV/m) | Class B QPk Limit (dBuV/m) | Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 32.2478 | 36.55 | Pk | 25.7 | -31.6 | 30.65 | 40 | -9.35 | 0-360 | 101 | V |
| 2 | 53.9701 | 50.85 | Pk | 12.9 | -31.4 | 32.35 | 40 | -7.65 | 0-360 | 101 | V |
| 3 | 88.7826 | 47.37 | Pk | 13.4 | -31.1 | 29.67 | 43.52 | -13.85 | 0-360 | 101 | V |
| 4 | 127.5995 | 35.58 | Pk | 19.6 | -30.9 | 24.28 | 43.52 | -19.24 | 0-360 | 101 | V |
| 5 | 194.0132 | 36.21 | Pk | 17.7 | -30.5 | 23.41 | 43.52 | -20.11 | 0-360 | 101 | V |
| 6 | 303.6446 | 32.4 | Pk | 19.4 | -30.1 | 21.7 | 46.02 | -24.32 | 0-360 | 98 | H |

Pk - Peak detector

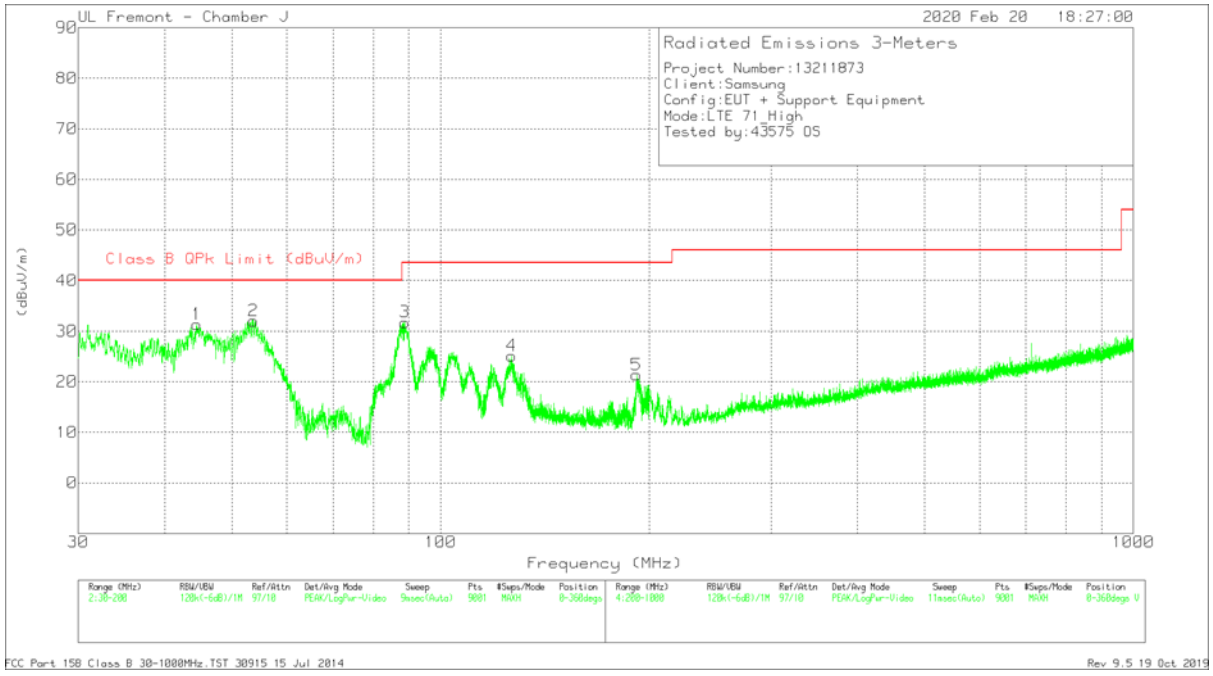
| Frequency (MHz) | Meter Reading (dBuV) | Det | AF T899 (dB/m) | Amp Cbl (dB) | Corrected Reading (dBuV/m) | Class B QPk Limit (dBuV/m) | Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|
| 53.9169 | 51.27 | Pk | 12.9 | -31.4 | 32.77 | 40 | -7.23 | 76 | 101 | V |
| 53.9169 | 47.17 | Qp | 12.9 | -31.4 | 28.67 | 40 | -11.33 | 76 | 101 | V |

Pk - Peak detector
Qp - Quasi-Peak detector

**HIGH CHANNEL**




**HORIZONTAL**




**VERTICAL**

## 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 | 44.4784 | 46.04 | Pk | 16.8 | -31.5 | 31.34 | 40 | -8.66 | 0-360 | 101 | V |
| 2 | 53.6679 | 50.53 | Pk | 12.9 | -31.4 | 32.03 | 40 | -7.97 | 0-360 | 101 | V |
| 3 | 88.8392 | 49.46 | Pk | 13.4 | -31.1 | 31.76 | 43.52 | -11.76 | 0-360 | 101 | V |
| 4 | 126.7872 | 36.43 | Pk | 19.6 | -30.9 | 25.13 | 43.52 | -18.39 | 0-360 | 101 | V |
| 5 | 191.8221 | 34.45 | Pk | 17.4 | -30.5 | 21.35 | 43.52 | -22.17 | 0-360 | 101 | V |
| 6 | 385.3336 | 30.81 | Pk | 20.9 | -29.8 | 21.91 | 46.02 | -24.11 | 0-360 | 101 | H |

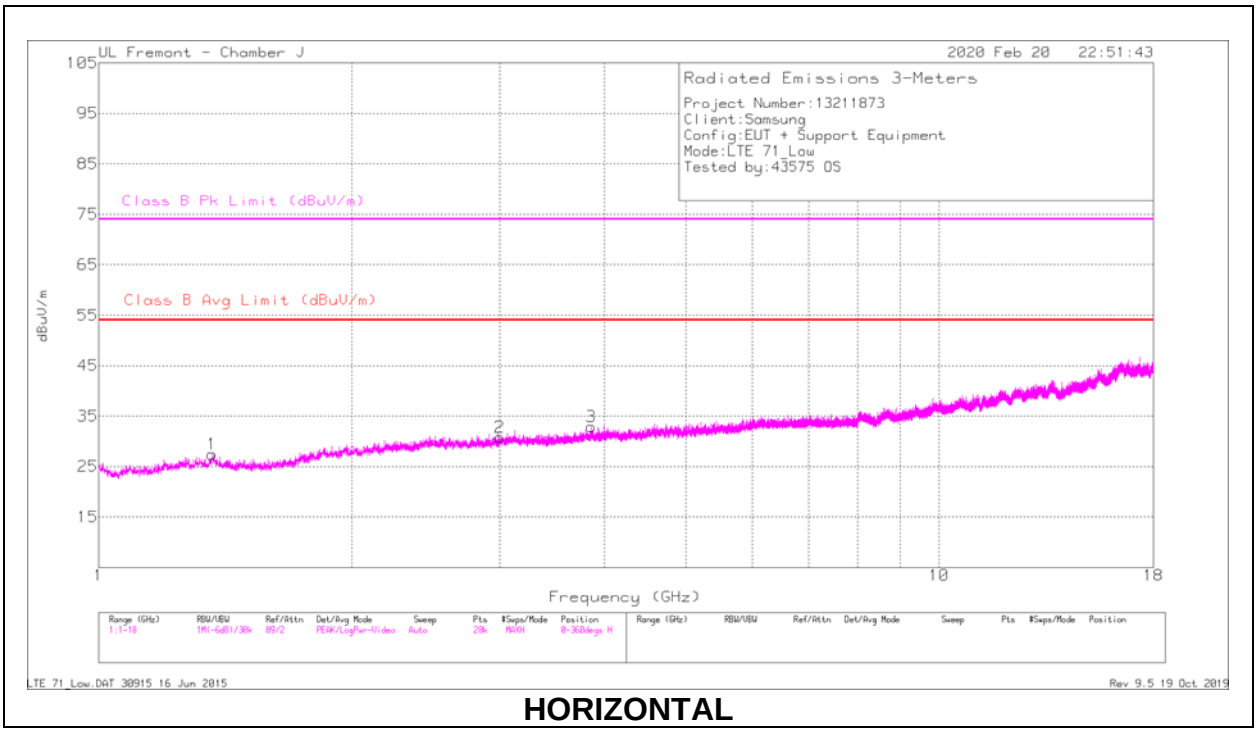
Pk - Peak detector

| 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 |
|---|---|---|---|---|---|---|---|---|---|---|
| 53.4444 | 51.65 | Pk | 12.9 | -31.4 | 33.15 | 40 | -6.85 | 94 | 102 | V |
| 53.4444 | 47.53 | Qp | 12.9 | -31.4 | 29.03 | 40 | -10.97 | 94 | 102 | V |

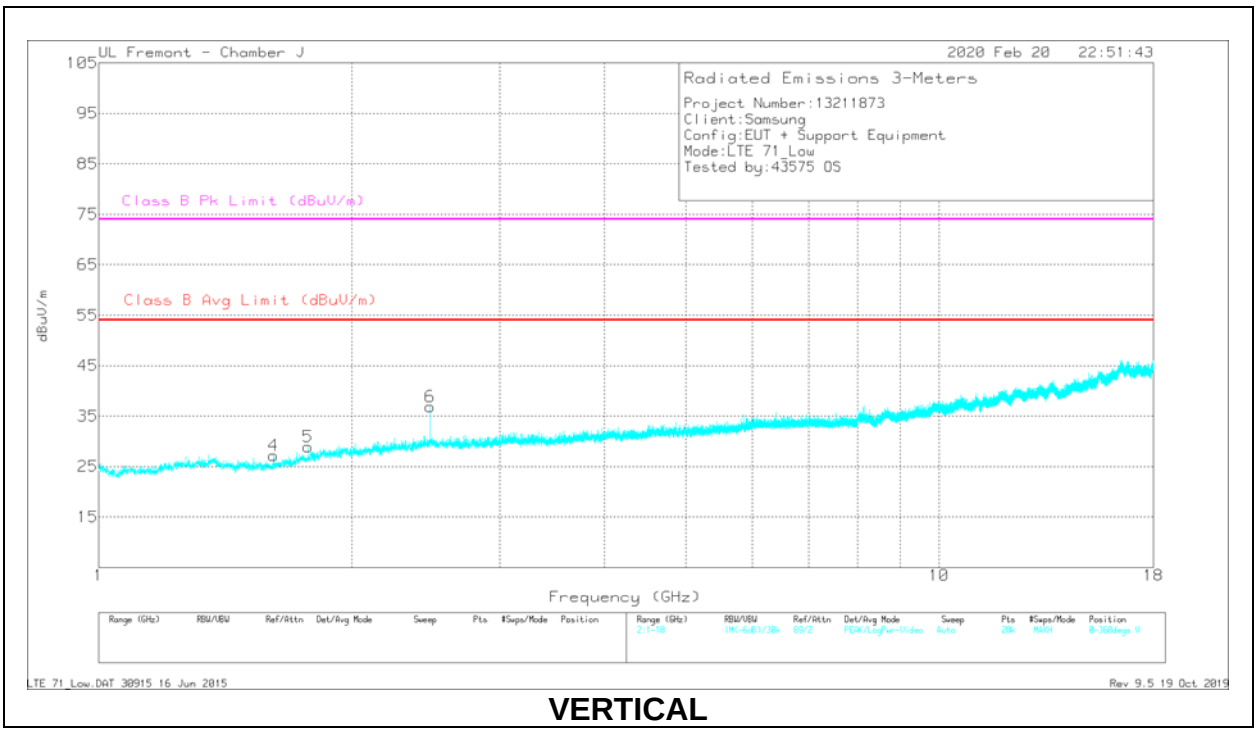
Pk - Peak detector
Qp - Quasi-Peak detector

## 8.4.2. ABOVE 1GHz

**LOW CHANNEL**




**HORIZONTAL**



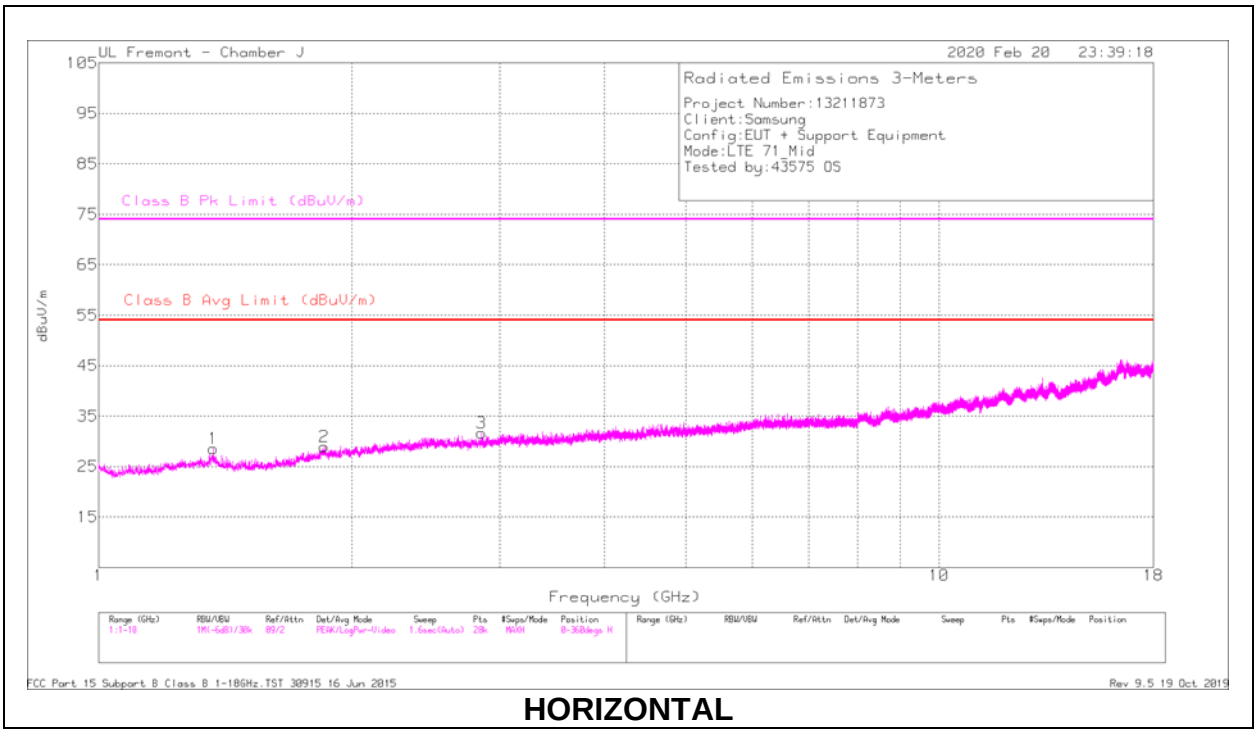

**VERTICAL**

## RADIATED EMISSIONS

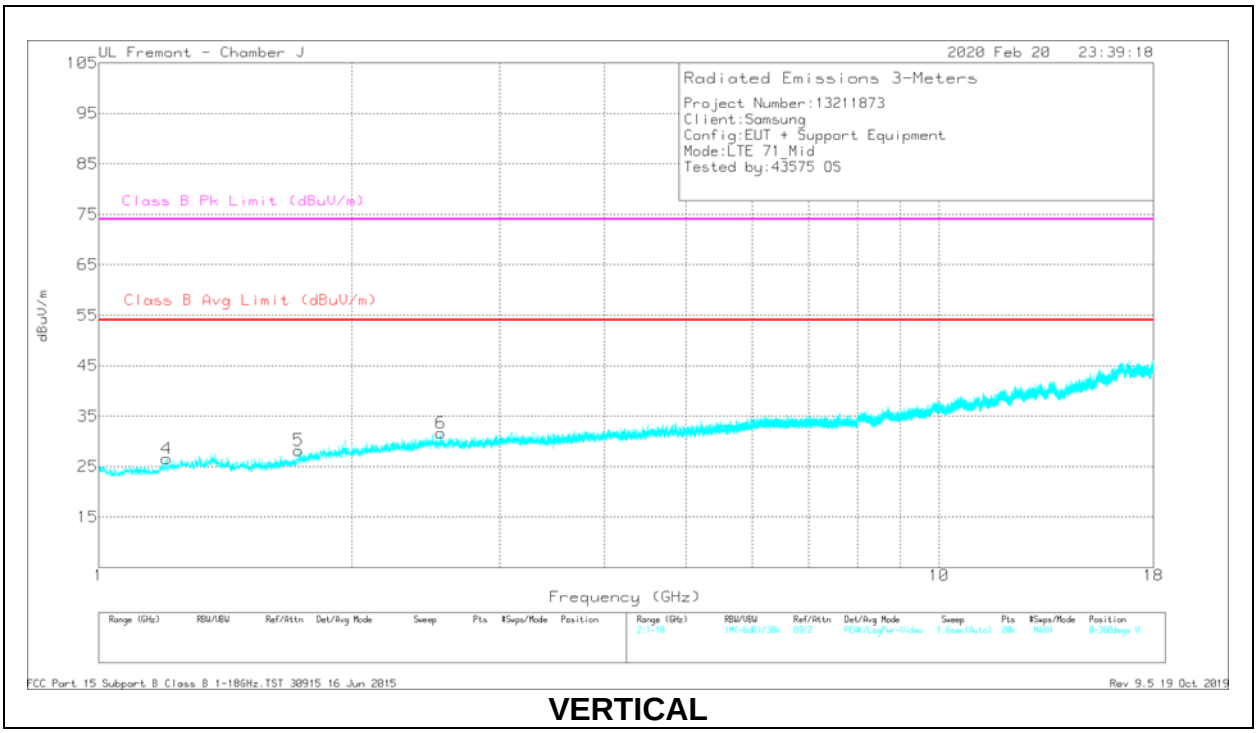
| Markers | Frequency (GHz) | Meter Reading (dBuV) | Det | AF T344 (dB/m) | Amp/Cbl (dB) | Corrected Reading dBuV/m | Class B Avg Limit (dBuV/m) | Margin (dB) | Class B Pk Limit (dBuV/m) | Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.36387 | 33.27 | Pk | 29.4 | -35.8 | 26.87 | - | - | 74 | -47.13 | 83 | 245 | H |
| | 1.36387 | 20.48 | Av | 29.4 | -35.8 | 14.08 | 54 | -39.92 | - | - | 83 | 245 | H |
| 2 | 2.99892 | 32.3 | Pk | 32.8 | -35 | 30.1 | - | - | 74 | -43.9 | 133 | 252 | H |
| | 2.99892 | 19.93 | Av | 32.8 | -35 | 17.73 | 54 | -36.27 | - | - | 133 | 252 | H |
| 3 | 3.85781 | 30.84 | Pk | 33.6 | -33.1 | 31.34 | - | - | 74 | -42.66 | 333 | 341 | H |
| | 3.85781 | 18.28 | Av | 33.6 | -33.1 | 18.78 | 54 | -35.22 | - | - | 333 | 341 | H |
| 4 | 1.61596 | 43.88 | Pk | 28.2 | -35.8 | 36.28 | - | - | 74 | -37.72 | 111 | 127 | V |
| | 1.61596 | 29.93 | Av | 28.2 | -35.8 | 22.33 | 54 | -31.67 | - | - | 111 | 127 | V |
| 5 | 1.77266 | 43.2 | Pk | 29.7 | -35.8 | 37.1 | - | - | 74 | -36.9 | 279 | 127 | V |
| | 1.77266 | 29.63 | Av | 29.7 | -35.8 | 23.53 | 54 | -30.47 | - | - | 279 | 127 | V |
| 6 | 2.47982 | 44.16 | Pk | 32.4 | -35.5 | 41.06 | - | - | 74 | -32.94 | 115 | 152 | V |
| | 2.47782 | 29.78 | Av | 32.3 | -35.5 | 26.58 | 54 | -27.42 | - | - | 115 | 152 | V |

Pk - Peak detector
Avg - Video bandwidth < Resolution bandwidth

**MID CHANNEL**




**HORIZONTAL**



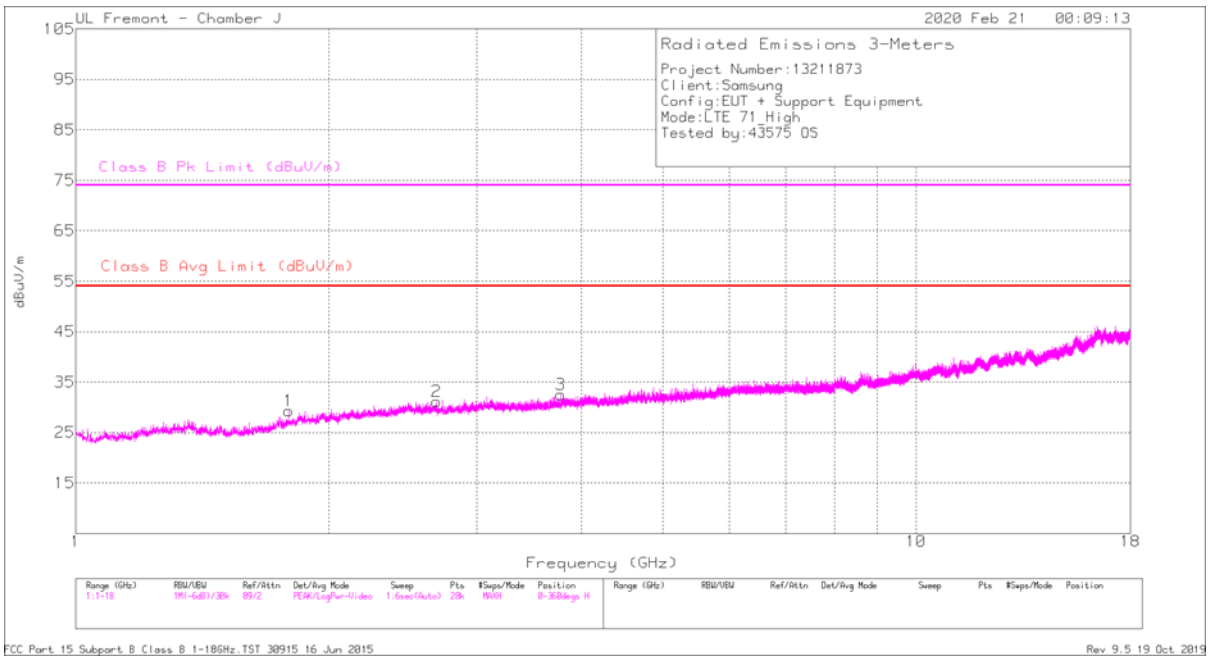

**VERTICAL**

## RADIATED EMISSIONS

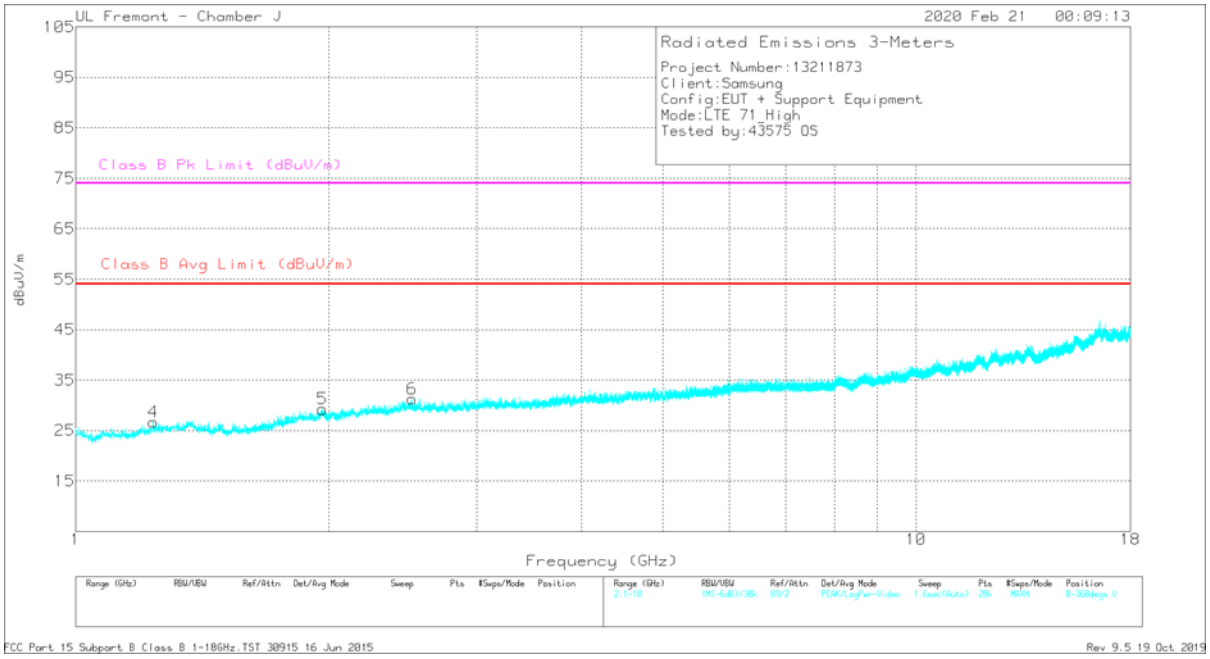
| Markers | Frequency (GHz) | Meter Reading (dBuV) | Det | AF T344 (dB/m) | Amp/Cbl (dB) | Corrected Reading dBuV/m | Class B Avg Limit (dBuV/m) | Margin (dB) | Class B Pk Limit (dBuV/m) | Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.36926 | 33.11 | Pk | 29.4 | -35.9 | 26.61 | - | - | 74 | -47.39 | 99 | 309 | H |
| | 1.36926 | 20.62 | Av | 29.4 | -35.9 | 14.12 | 54 | -39.88 | - | - | 99 | 309 | H |
| 2 | 1.85506 | 34.15 | Pk | 30.6 | -35.8 | 28.95 | - | - | 74 | -45.05 | 29 | 248 | H |
| | 1.85506 | 20.73 | Av | 30.6 | -35.8 | 15.53 | 54 | -38.47 | - | - | 29 | 248 | H |
| 3 | 2.85462 | 32.79 | Pk | 32.3 | -35.2 | 29.89 | - | - | 74 | -44.11 | 17 | 145 | H |
| | 2.85462 | 20.45 | Av | 32.3 | -35.2 | 17.55 | 54 | -36.45 | - | - | 17 | 145 | H |
| 4 | 1.20451 | 43.31 | Pk | 28.2 | -35.8 | 35.71 | - | - | 74 | -38.29 | 89 | 321 | V |
| | 1.20451 | 29.75 | Av | 28.2 | -35.8 | 22.15 | 54 | -31.85 | - | - | 89 | 321 | V |
| 5 | 1.7273 | 43.36 | Pk | 29.2 | -35.8 | 36.76 | - | - | 74 | -37.24 | 93 | 115 | V |
| | 1.7273 | 29.94 | Av | 29.2 | -35.8 | 23.34 | 54 | -30.66 | - | - | 93 | 115 | V |
| 6 | 2.55167 | 43.23 | Pk | 32.3 | -35.3 | 40.23 | - | - | 74 | -33.77 | 17 | 156 | V |
| | 2.55167 | 29.76 | Av | 32.3 | -35.3 | 26.76 | 54 | -27.24 | - | - | 17 | 156 | V |

Pk - Peak detector
Av - Average detection

**HIGH CHANNEL**




**HORIZONTAL**




**VERTICAL**

## RADIATED EMISSIONS

| Markers | 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 | 1.7921 | 33.51 | Pk | 29.9 | -35.8 | 27.61 | - | - | 74 | -46.39 | 310 | 339 | H |
| | 1.7921 | 20.87 | Av | 29.9 | -35.8 | 14.97 | 54 | -39.03 | - | - | 310 | 339 | H |
| 2 | 2.68852 | 33.56 | Pk | 32.3 | -35.2 | 30.66 | - | - | 74 | -43.34 | 230 | 257 | H |
| | 2.68852 | 20.25 | Av | 32.3 | -35.2 | 17.35 | 54 | -36.65 | - | - | 230 | 257 | H |
| 3 | 3.77815 | 30.74 | Pk | 33.4 | -33.2 | 30.94 | - | - | 74 | -43.06 | 287 | 204 | H |
| | 3.77815 | 18.43 | Av | 33.4 | -33.2 | 18.63 | 54 | -35.37 | - | - | 287 | 204 | H |
| 4 | 1.23583 | 42.73 | Pk | 28.6 | -35.8 | 35.53 | - | - | 74 | -38.47 | 138 | 340 | V |
| | 1.23583 | 29.41 | Av | 28.6 | -35.8 | 22.21 | 54 | -31.79 | - | - | 138 | 340 | V |
| 5 | 1.96761 | 43.64 | Pk | 31 | -35.7 | 38.94 | - | - | 74 | -35.06 | 42 | 114 | V |
| | 1.96761 | 29.94 | Av | 31 | -35.7 | 25.24 | 54 | -28.76 | - | - | 42 | 114 | V |
| 6 | 2.51204 | 43.57 | Pk | 32.4 | -35.5 | 40.47 | - | - | 74 | -33.53 | 271 | 342 | V |
| | 2.51204 | 29.7 | Av | 32.4 | -35.5 | 26.6 | 54 | -27.4 | - | - | 271 | 342 | V |

Pk - Peak detector
Av - Average detection