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| | |
|---|---|
| **Test Report Num** | 25E11339-1b |
| **Quotation** | Q24-2009-1 |
| **Prepared For** | Digital Rehabilitation Limited |
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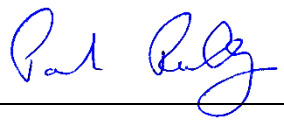
| **Prepared By** | Compliance Engineering Ireland |
| **Test Lab Address** | Clonross Lane, Derrockstown, Dunshaughlin, Co. Meath, Ireland |
| **Tested By** | Michael Kirby / Joy Dalayap |
| **Test Report By** | Michael Kirby |
| **FCC Test Firm Registration** | IE0002 |
| **Date** | 24th Apr 2025 |
| **EUT Description** | Head Sensor |
| **FCC ID** | 2BNLD-VG01 |
| **Authorised by** | **Paul Reilly** |
| **Authorised Signature:** |  |

This report supersedes 25E11339-1a

## TEST SUMMARY

The equipment complies with the requirements according to the following standards.

| FCC 15.247 Section | RSS-247 Section | TEST PARAMETERS | Test Result |
|---|---|---|---|
| 15.247 (a)2 | RSS-247 5.2a | 6dB bandwidth | Pass |
| 15.247 (e) | RSS-247 5.2b | Power Spectral Density | Pass |
| 15.247 (b)3 | RSS-247 5.4d | Output power Conducted | Pass |
| 15.247 (d) | RSS-247 5.5 | Conducted Spurious Emissions | Pass |
| 15.205<br>15.209 | RSS Gen 8.9<br>RSS Gen 8.10 | Radiated Spurious Emissions | Pass |
| | RSS Gen 6.7 | 99% bandwidth | Pass |

RSS 247 Issue 3 Aug 2023
RSS-Gen Issue 5 Apr 2018 + Amd1 Mar 2019 + Amd2 Feb 2021

# Exhibit A – Technical Report

Table of Contents

## 1.0 EUT Description

| | |
|---|---|
| **FCC ID** | 2BNLD-VG01 |
| **Type:** | Head sensor |
| **Type of radio:** | Stand-alone |
| **Transmitter Type:** | BLE |
| **Operating Frequency Range(s):** | 2.402 GHz - 2.480GHz |
| **Number of Channels:** | 40 |
| **Power configuration:** | 3.7v Battery. |
| **Ports:** | USB port ( for battery charging only) |
| **Classification:** | DTS |
| **BLE Antenna Type :** | Chip antenna |
| **BLE Antenna Gain Max:** | 1.5 dBi |
| **Antenna Impedance:** | 50 ohms |
| **Test Standards:** | 15.247 RSS-247 |
| **Test Methodology:** | Measurements performed according to the procedures in ANSI C63.10-2013 |

The EUT was a battery powered head sensor that transmits data over a custom BLE link. The device samples motion data in 3 axis and transmits the captured data to a mobile device via the BLE link

### Software used to control the EUT

The CSR uEnergy Tools version 2.6.2 from Qualcomm, running on a standard Windows laptop was used control the EUT during test,
This application is downloadable from Qualcomm for the purposes of testing the nRF radio interface.

The worst case results are reported here.

### 1.1 EUT Operation

**Operating Conditions during Test:**

Conducted measurements were carried out on a sample (Sample #001) where the antenna was replaced by cable and SMA. The EUT was powered from a dc adapter (Apple model A1399) for all conducted tests

The EUT was operated in test mode where the channel and modulation was set via USB connection from the EUT to a laptop.

Radiated measurements were performed on a sample (Sample #004) with standard internal antenna and powered from its internal battery which was fully charged prior to testing.

The firmware setting for output power was setting 4 for all tests.

## Environmental conditions

| | Temperature | Relative Humidity |
|---|---|---|
| **Test** | °C | % |
| Conducted Emissions | 21.2 | 49 |
| Radiated Emissions <1GHz | 18 | 42 |
| Radiated Emissions >1GHz | 19 | 47 |

### 1.2 Modifications

No modifications were required in order to pass the test specifications.

### 1.3 Date of Test

The tests were carried out on 17th,18th and 22nd of Apr 2025.

## 1.4 Description of Test modes

Channel List

| Channel | Channel | Freq MHz |
|---|---|---|
| Low | 1 | 2402 |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| Mid | 19 | 2440 |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| High | 39 | 2480 |

All tests were performed with the EUT on the low mid and high channels.

# 2 Emissions Measurements

## 2.1 Conducted Emissions Measurements

Radio Conducted measurements were carried out on the EUT as per section 1.1 above.

All results were measured as conducted on the antenna except radiated spurious emissions.

## 2.2 Radiated Emissions Measurements

Radiated Power measurements were made at the Compliance Engineering Ireland Ltd anechoic chamber located in Dunshaughlin, Co. Meath, Ireland to determine the radio noise radiated from the EUT. A "Description of Measurement Facilities" has been submitted to the FCC and approved pursuant to Section 2.948 of CFR 47 of the FCC rules.
The EUT was centred on a motorized turntable, which allows 360 degree rotation.

Emissions below 1GHz were measured using a test antenna positioned at a distance of 3 metres from the EUT (as measured from the closest point of the EUT). The radiated emissions were maximised by configuring the EUT, by rotating the EUT, and by raising and lowering the antenna from 1 to 4 metres. In this case the resolution bandwidth was 100kHz.

Emissions in the 1GHz-18GHz range were measured using a horn antenna located at 3 metres distance from the EUT in a fully anechoic chamber.
The radiated emissions were maximised by configuring the EUT and by rotating the EUT, and by raising and lowering the test antenna from 1 to 4 metres.
Emissions above 18GHz were measured using a horn antenna located at 1 metre distance from the EUT in a fully anechoic chamber. The radiated emissions peaks where detected were maximised by configuring the EUT and by rotating the EUT and raising the test and antenna from 1 to 4 metres.
In this case the resolution bandwidth was 1MHz and video bandwidth was 3 MHz. for peak measurements. The Video bandwidth was changed to 10Hz for Average measurements (as per ANSI 63.10 2013 Section 4.1.4.2.3)

A pre-scan was performed to determine the worst case EUT orientation for the radiated measurements.
All radiated tests were performed with the EUT in orientation O2 for Horizontal polarization measurements and with the EUT in orientation O1 for Vertical polarisation measurements.
Ref Appendix E for orientations.

## 3.0 Results for Conducted emissions on the mains

The EUT was powered from the mains through a LISN and an off the shelf mains to 5V DC adapter (Apple model A1399) .

Limit as per 15.207

| Detector | Frequency | Reading | Margin | Phase |
|---|---|---|---|---|
| QP/ Ave | MHz | dBuV | dB | L/N |
| Average | 0.3300 | 31.67 | -19.19 | Live |
| Quasi-Peak | 0.3390 | 36.78 | -23.82 | Live |
| Average | 0.4065 | 31.06 | -17.61 | Live |
| Average | 0.4988 | 35.65 | -10.39 | Live |
| Average | 0.580 | 38.47 | -7.53 | Live |
| Average | 0.767 | 44.19 | -1.81 | Live |
| Quasi-Peak | 0.769 | 49.83 | -6.17 | Live |
| Average | 2.366 | 31.88 | -14.12 | Live |

| Detector | Frequency | Reading | Margin | Phase |
|---|---|---|---|---|
| QP/ Ave | MHz | dBuV | dB | L/N |
| Average | 0.3300 | 26.91 | -23.95 | Neutral |
| Quasi-Peak | 0.3390 | 33.11 | -27.49 | Neutral |
| Average | 0.4065 | 26.28 | -22.39 | Neutral |
| Average | 0.4988 | 30.84 | -15.2 | Neutral |
| Average | 0.5798 | 33.34 | -12.66 | Neutral |
| Average | 0.7665 | 39.40 | -6.6 | Neutral |
| Quasi-Peak | 0.7688 | 45.56 | -10.44 | Neutral |
| Average | 2.3663 | 27.91 | -18.09 | Neutral |

**Test Result: Pass**

# 4. Conducted Measurements

## 4.1 Bandwidth

### 4.1.1 6dB bandwidth

Test Method
As per Ansi 63.10 Section 11.8.2

Ansi63.10 Section **11.8.2 Option 2**
The automatic bandwidth measurement capability of an instrument may be employed using the *X* dB bandwidth mode with *X* set to 6 dB, if the functionality described in 11.8.1 (i.e., RBW = 100 kHz, VBW ≥ 3 × RBW, and peak detector with maximum hold) is implemented by the instrumentation function. When using this capability, care shall be taken so that the bandwidth measurement is not influenced by any intermediate power nulls in the fundamental emission that might be ≥6 dB.

Limit for 6dB Bandwidth = 500KHz min

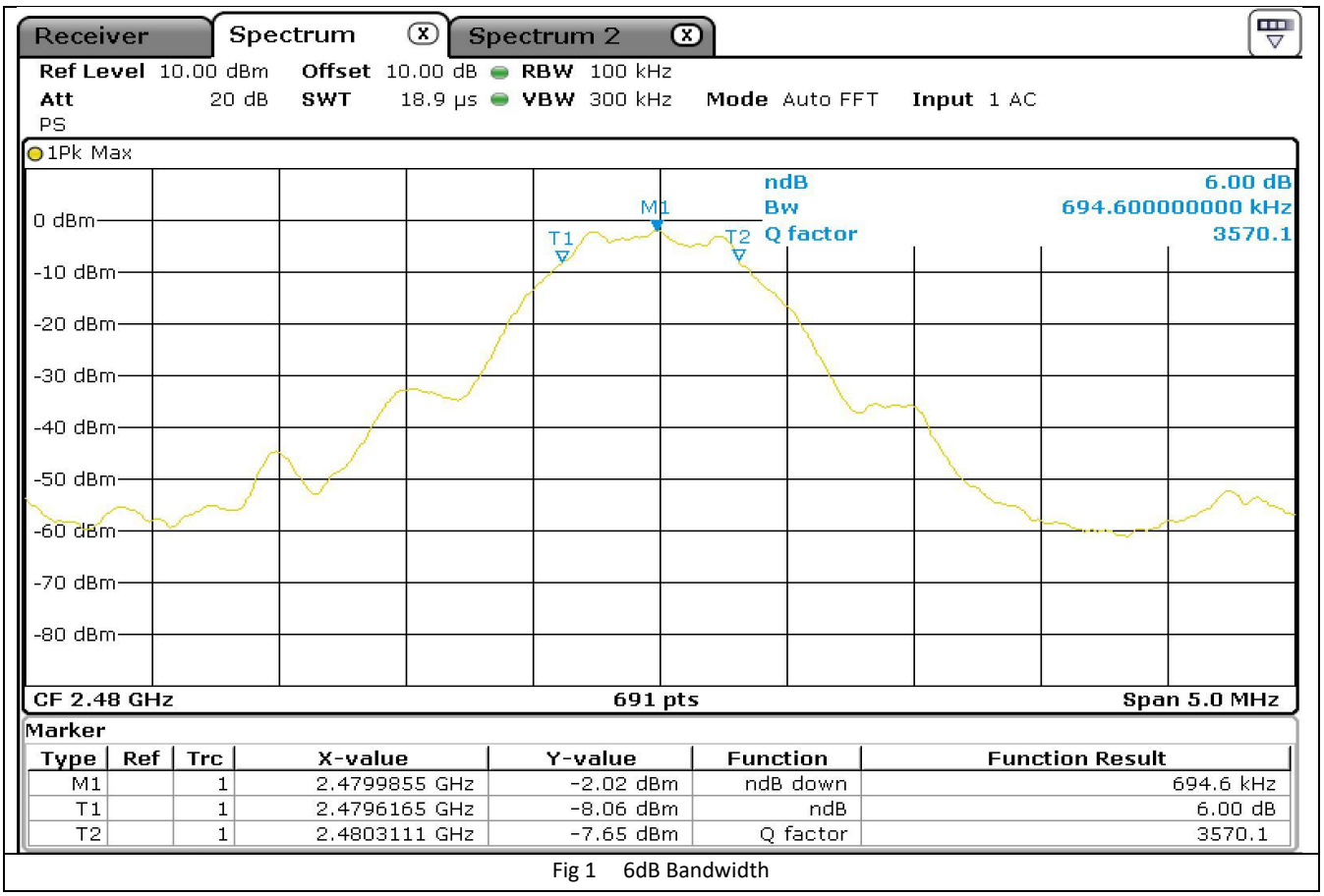



Fig 1 6dB Bandwidth

| Frequency | 6dB Bandwidth | Limit Min | Margin |
|---|---|---|---|
| MHz | kHz | kHz | kHz |
| 2402 | 694.6 | 500 | 194.6 |
| 2440 | 694.6 | 500 | 194.6 |
| 2480 | 694.6 | 500 | 194.6 |

**Result :- Pass**

## 4.1.2 99% bandwidth

Test Method
As per Ansi 63.10 Section 6.9.3

Ansi63.10 Section **6.9.3 Occupied bandwidth—power bandwidth (99%) measurement procedure**
The occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers are each equal to 0.5% of the total mean power of the given emission.
The following procedure shall be used for measuring 99% power bandwidth:
a) The instrument center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be between 1.5 times and 5.0 times the OBW.
b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW, and VBW shall be approximately three times the RBW, unless otherwise specified by the applicable requirement.
c) Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than [10 log (OBW/RBW)] below the reference level. Specific guidance is given in 4.1.5.2.
d) Step a) through step c) might require iteration to adjust within the specified range.
e) Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.
f) Use the 99% power bandwidth function of the instrument (if available) and report the measured bandwidth.
g) If the instrument does not have a 99% power bandwidth function, then the trace data points are recovered and directly summed in linear power terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5% of the total is reached; that frequency is recorded as the upper frequency. The 99% power bandwidth is the difference between these two frequencies.
h) The occupied bandwidth shall be reported by providing plot(s) of the measuring instrument display; the plot axes and the scale units per division shall be clearly labeled. Tabular data may be reported in addition to the plot(s).

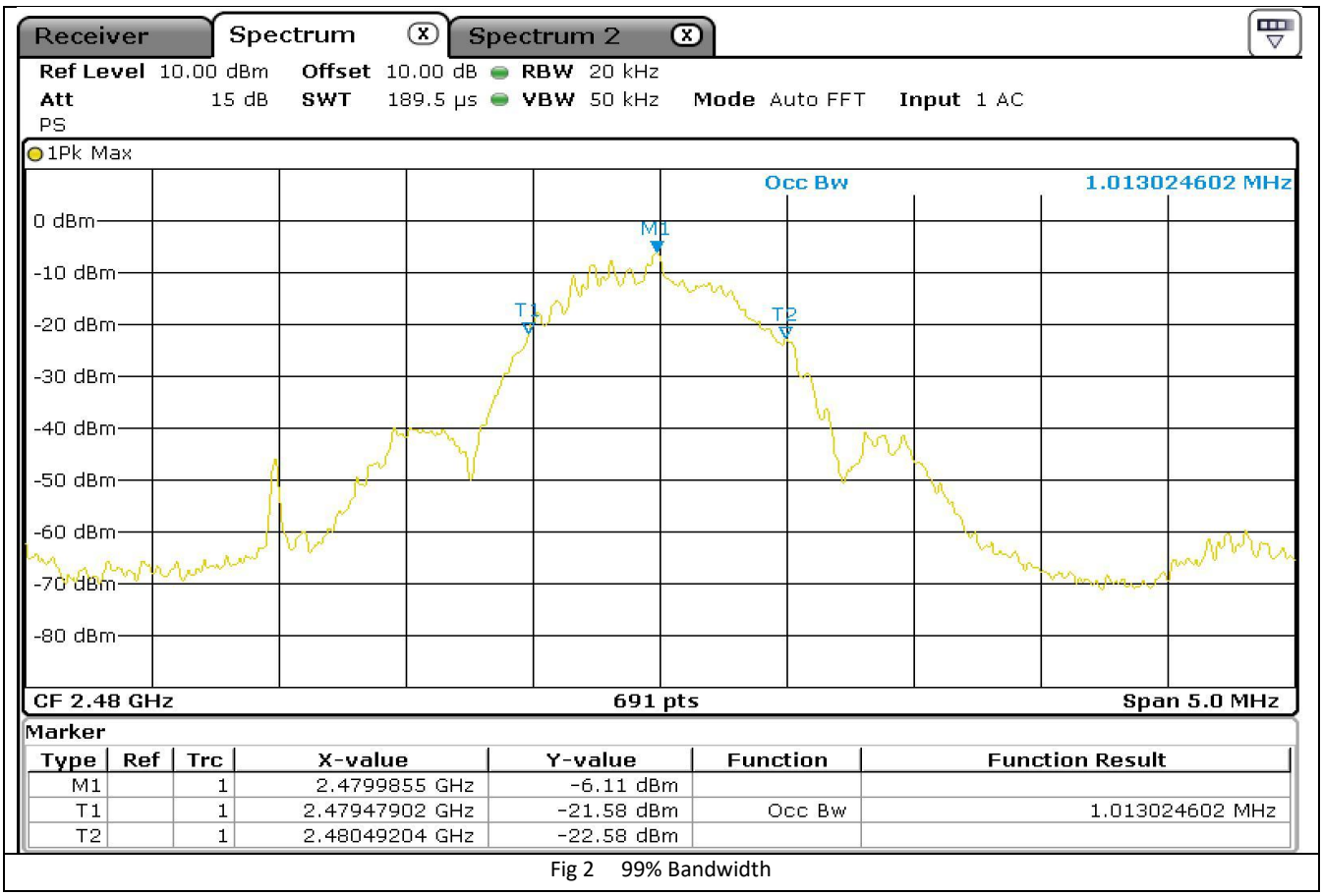



Fig 2 99% Bandwidth

| Frequency | 99% Bandwidth |
|---|---|
| GHz | MHz |
| 2.402 | 1.013 |
| 2.440 | 1.013 |
| 2.48 | 1.013 |

**Result :- Pass**

## 4.2 Duty Cycle

Test Method
As per Ansi 63.10 Section 11.6 zero span measurement method

Ansi63.10 Section **11.6 Duty cycle (*D*), transmission duration (*T*), and maximum power control level**
Preferably, all measurements of maximum conducted (average) output power will be performed with the EUT transmitting continuously (i.e., with a duty cycle of greater than or equal to 98%). When continuous operation cannot be realized, then the use of sweep triggering/signal gating techniques can be used to ensure that measurements are made only during transmissions at the maximum power control level. Such sweep triggering/signal gating techniques will require knowledge of the minimum transmission duration (*T*) over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation. Sweep triggering/signal gating techniques can then be used if the measurement/sweep time of the analyzer can be set such that it does not exceed *T* at any time that data are being acquired (i.e., no transmitter OFF-time is to be considered).

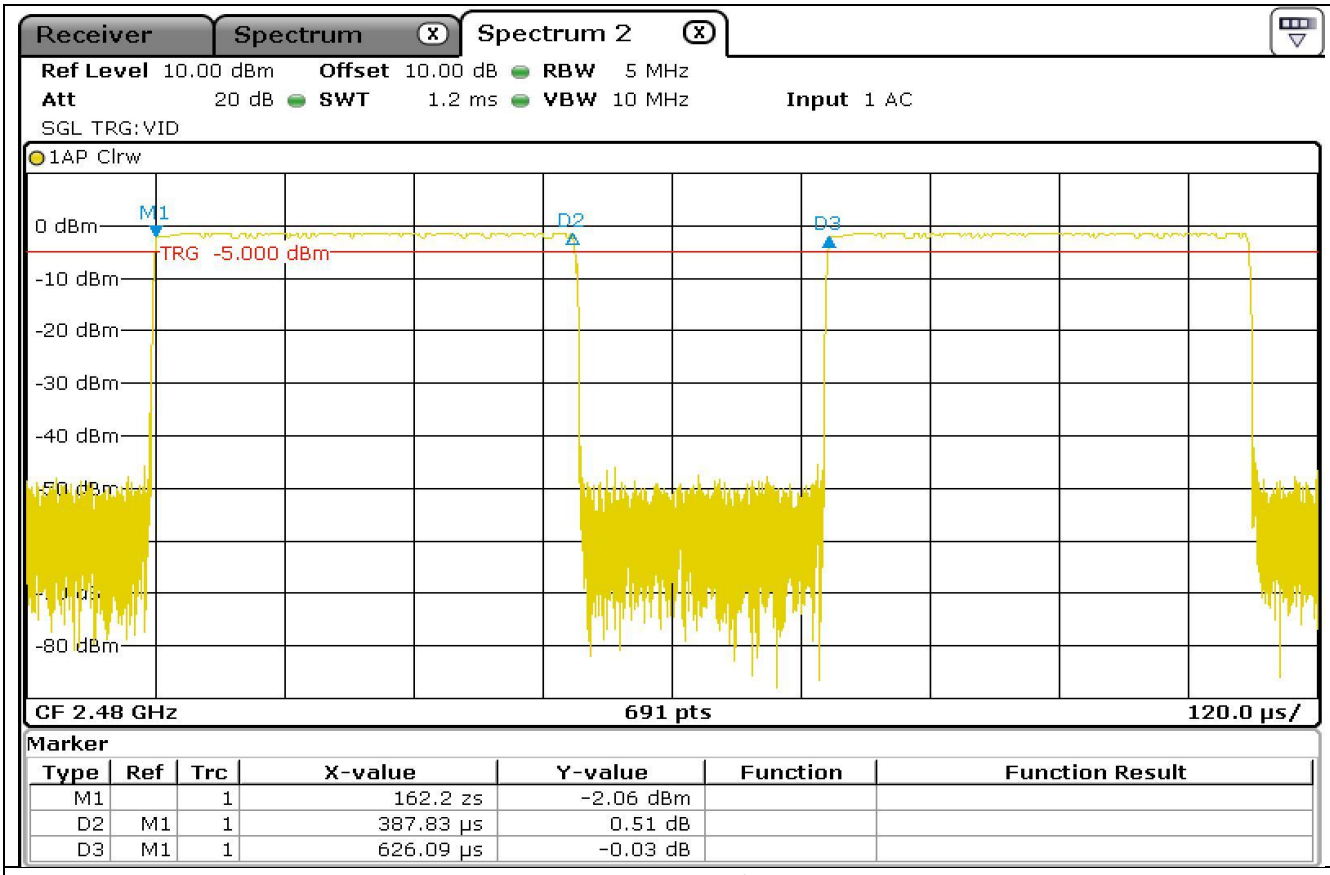



Fig 3 Duty Cycle

Duty Cycle
Note the duty cycle results above shows how the sample operated during testing.
Duty cycle (d) =Ton/Tperiod =387.83/626.09 =61.94%

## 4.3 Power Spectral Density

Test Method
As per Ansi 63.10 Section 11.10.2

Ansi63.10 Section **Section 11.10.2 Method PKPSD (peak PSD)**
The following procedure shall be used if maximum peak conducted output power was used to determine compliance, and it is optional if the maximum conducted (average) output power was used to determine compliance:
a) Set analyzer center frequency to DTS channel center frequency.
b) Set the span to 1.5 times the DTS bandwidth.
c) Set the RBW to 3 kHz ≤ RBW ≤ 100 kHz.
d) Set the VBW ≥ [3 × RBW].
e) Detector = peak.
f) Sweep time = auto couple.
g) Trace mode = max hold.
h) Allow trace to fully stabilize.
i) Use the peak marker function to determine the maximum amplitude level within the RBW.
j) If measured value exceeds requirement, then reduce RBW (but no less than 3 kHz) and repeat.

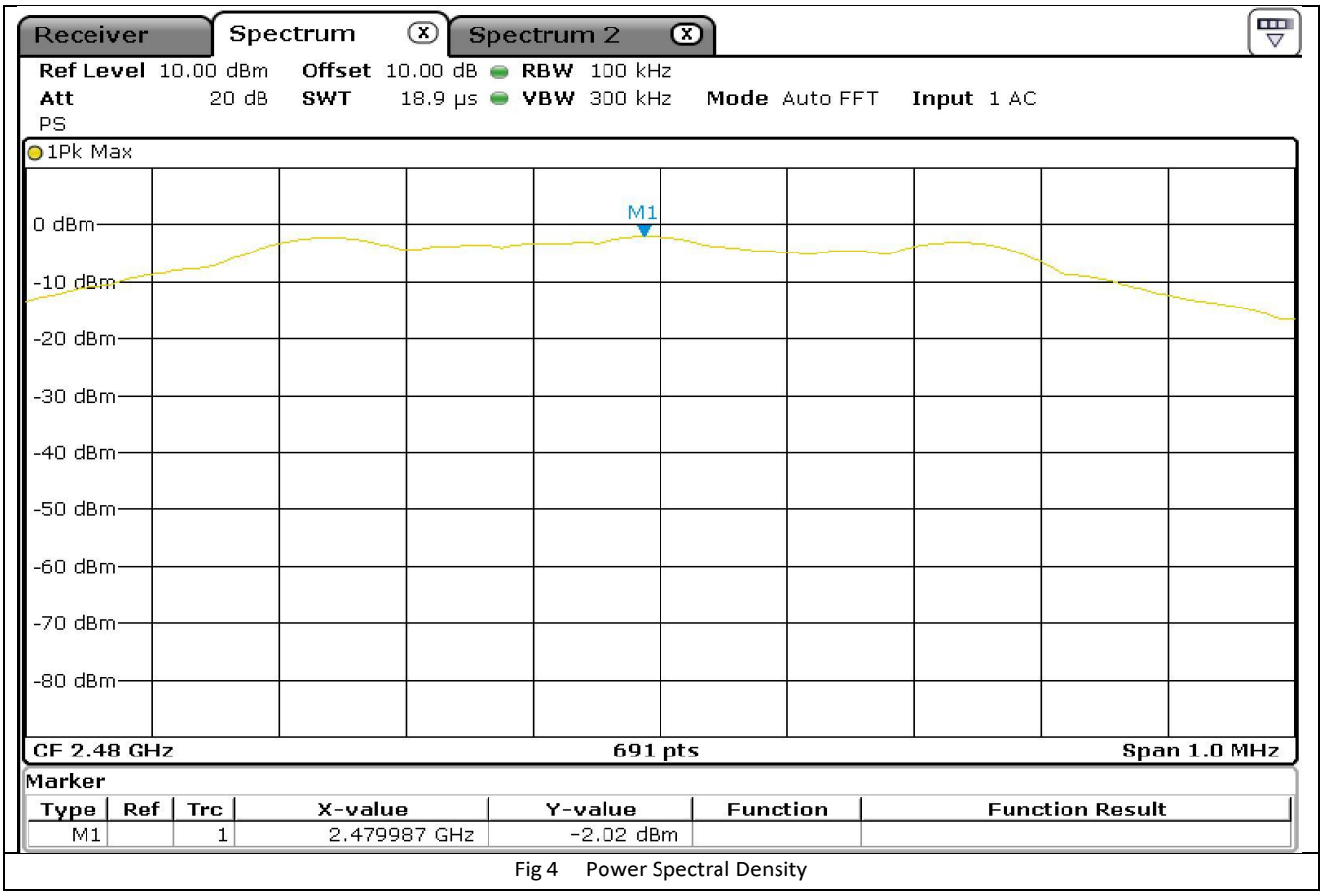



Fig 4 Power Spectral Density

| Frequency | Measurement Conducted Peak | Limit | Margin |
|---|---|---|---|
| GHz | dBm | dBm | dB |
| 2402 | -2.41 | 8 | 10.41 |
| 2440 | -2.27 | 8 | 10.27 |
| 2480 | -2.2 | 8 | 10.2 |

**Result :- Pass**

## 4.4 Output power Conducted

### 4.4.1 Test Method

As per Ansi 63.10 Section 11.9..1.1

Ansi63.10 Section **11.9.1.1 RBW ≥ DTS bandwidth**
The following procedure shall be used when an instrument with a resolution bandwidth that is greater than the DTS bandwidth is available to perform the measurement:
a) Set the RBW ≥ DTS bandwidth.
b) Set VBW ≥ [3 × RBW].
c) Set span ≥ [3 × RBW].
d) Sweep time = auto couple.
e) Detector = peak.
f) Trace mode = max hold.
g) Allow trace to fully stabilize.
h) Use peak marker function to determine the peak amplitude level.

### 4.4.2 Results

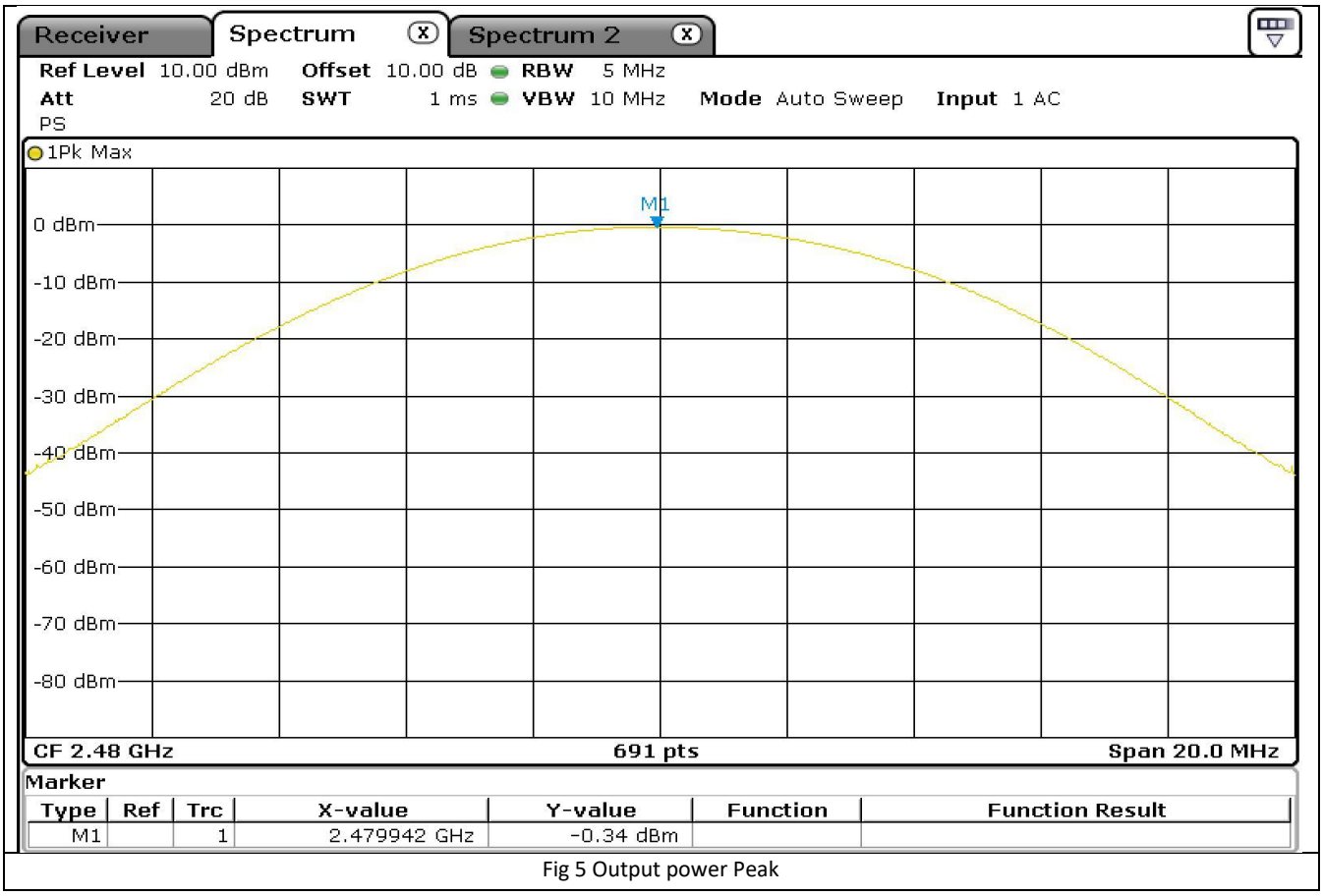



Fig 5 Output power Peak

| Frequency | Measurement Conducted Peak | Limit | Margin |
|---|---|---|---|
| MHz | dBm | dBm | dB |
| 2402 | -2.86 | 30 | 33.8 |
| 2440 | -1.34 | 30 | 32.24 |
| 2480 | -0.34 | 30 | 31.1 |

**Test Result :- Pass**

# 5. Spurious Emissions Measurements

## 5.1 Conducted Spurious Emissions

5.1.1 Test Method
As per Ansi63.10 Section 11.11.1 and 6.10.4

Ansi63.10 Section **11.11.1 General**
Typical regulatory requirements specify that in any 100 kHz bandwidth outside of the authorized frequency band, the power shall be attenuated according to the following conditions89:
a) If the maximum peak conducted output power procedure was used to determine compliance as described in 11.9.1, then the peak output power measured in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz (i.e., 20 dBc).

Ansi63.10 Section **6.10.4 Authorized-band band-edge measurements (relative method)**
These procedures are applicable for determining compliance at authorized-band band-edges where the requirements are expressed as a value relative to the in-band signal level. Procedures for determining compliance with field strength limits at or close to the band-edges are given in 6.10.6 (see also Table A.2).

### 5.1.2 Results

| Frequency | Peak 100 kHz RBW | dBc Limit Min | Margin | Result |
|---|---|---|---|---|
| MHz | dBm | dB | dB | P/F |
| 2402 | -4.43 | 20 | - | - |
| 4804 | -60.5 | 20 | 36.07 | Pass |
| 7206 | -64.3 | 20 | 39.87 | Pass |

| Frequency | Peak 100 kHz RBW | dBc Limit Min | Margin | Result |
|---|---|---|---|---|
| MHz | dBm | dB | dB | P/F |
| 2440 | -2.24 | 20 | - | - |
| 4880 | -59.2 | 20 | 36.96 | Pass |
| 7320 | -62.5 | 20 | 40.26 | Pass |

| Frequency | Peak 100 kHz RBW | dBc Limit Min | Margin | Result |
|---|---|---|---|---|
| MHz | dBm | dB | dB | P/F |
| 2480 | -1.86 | 20 | - | - |
| 4960 | -58.15 | 20 | 36.29 | Pass |
| 7440 | -65.55 | 20 | 43.69 | Pass |

Ref Appendix A for Scans

Test Result: - Pass

## 5.2 Radiated Spurious Emissions in Restricted bands

5.2.1 Test Method
As per Ansi63.10 Section 11.12.1 and 6.10.5

Ansi63.10 Section **11.12.1 Radiated emission measurements**
Because the typical emission requirements are specified in terms of radiated field strength levels, measurements performed to determine compliance have traditionally relied on a radiated test configuration.92 Radiated measurements remain the principal method for determining compliance to the specified requirements; however antenna-port conducted measurements are also now acceptable to determine compliance (see 11.12.2 for details). When radiated measurements are utilized, test site requirements and procedures for maximizing and measuring radiated emissions that are described in 6.3, 6.5, and 6.6 shall be followed

**6.10.5 Restricted-band band-edge measurements**
These procedures are applicable for determining compliance at band edges of restricted bands.
**6.10.5.1 Test setup**
Restricted-band band-edge tests shall be performed as radiated measurements, on a test site meeting the specifications in 5.2 at the measurement distances specified in 5.3.57
The instrumentation shall meet the requirements in 4.1.1 using the bandwidths and detectors specified in 4.1.4.2. Considering the requirements of 5.8, the antenna(s) shall be connected to the antenna ports. When performing radiated measurements, the measurement antenna(s) shall meet the specifications in 4.3. The EUT shall be connected to an antenna and operated at the highest power settings following procedures in 6.3, and the relevant procedure in 6.4, 6.5, or 6.6

As per Ansi 63.10 Section 11.12.2.5.2

### 5.2.2 Results Low Channel

| Frequency | Reading Peak | EUT Orientation | Antenna Polarity | Antenna Factor | Preamp Gain | Cable loss | Final Field Strength Peak | Average Limit | Margin for Peak v Average Limit +20dB | Result |
|---|---|---|---|---|---|---|---|---|---|---|
| GHz | dBuV/m | | V/H | dB | dB | dB | dBuV/m | dBuV/m | dB | P/F |
| 4.804 | 45.9 | O1 | Vertical | 33.1 | 39.3 | 7.8 | 47.5 | 54.0 | 26.5 | Pass |
| 12.010 | 41.0 | O1 | Vertical | 39.2 | 37.3 | 10.9 | 53.8 | 54.0 | 20.2 | Pass |
| 4.804 | 45.0 | O2 | Horizontal | 33.1 | 39.3 | 7.8 | 46.6 | 54.0 | 27.4 | Pass |
| 12.010 | 40.8 | O2 | Horizontal | 39.2 | 37.3 | 10.9 | 53.6 | 54.0 | 20.4 | Pass |

**Final Field Strength Peak (dBuV/m) =Reading Peak (dBuV/m) + Antenna Factor (dB)- Pre-amp Gain (dB) +Cable Loss (dB)**
Calculation Example **47.5 = 45.9 + 33.1 - 39.3 + 7.8**

**Test Result Pass**

### 5.2.3 Results Mid Channel

| Frequency | Reading Peak | EUT Orientation | Antenna Polarity | Antenna Factor | Preamp Gain | Cable loss | Final Field Strength Peak | Average Limit | Margin for Peak v Average Limit +20dB | Result |
|---|---|---|---|---|---|---|---|---|---|---|
| GHz | dBuV/m | | V/H | dB | dB | dB | dBuV/m | dBuV/m | dB | P/F |
| 4.880 | 44.0 | O1 | Vertical | 33.2 | 39 | 7.8 | 46.0 | 54.0 | 28.0 | Pass |
| 7.320 | 45.4 | O1 | Vertical | 36.4 | 40.6 | 10.1 | 51.3 | 54.0 | 22.7 | Pass |
| 12.200 | 40.4 | O1 | Vertical | 39 | 36.8 | 10.8 | 53.4 | 54.0 | 20.6 | Pass |
| 4.880 | 46.1 | O2 | Horizontal | 33.2 | 39 | 7.8 | 48.1 | 54.0 | 25.9 | Pass |
| 7.320 | 45.3 | O2 | Horizontal | 36.4 | 40.6 | 10.1 | 51.2 | 54.0 | 22.8 | Pass |
| 12.200 | 40.7 | O2 | Horizontal | 39 | 36.8 | 10.8 | 53.7 | 54.0 | 20.3 | Pass |

**Final Field Strength Peak (dBuV/m) =Reading Peak (dBuV/m) + Antenna Factor (dB)- Pre-amp Gain (dB) +Cable Loss (dB)**
Calculation Example **46 = 44 + 33.2 - 39 + 7.8**

**Test Result Pass**

### 5.2.4 Results High Channel

| Frequency | Reading Peak | EUT Orientation | Antenna Polarity | Antenna Factor | Preamp Gain | Cable loss | Final Field Strength Peak | Average Limit | Margin for Peak v Average Limit +20dB | Result |
|---|---|---|---|---|---|---|---|---|---|---|
| GHz | dBuV/m | | V/H | dB | dB | dB | dBuV/m | dBuV/m | dB | P/F |
| 4.960 | 45.4 | O1 | Vertical | 33.5 | 39.2 | 8 | 47.7 | 54.0 | 26.3 | Pass |
| 7.440 | 44.9 | O1 | Vertical | 36.6 | 40.8 | 10.4 | 51.1 | 54.0 | 22.9 | Pass |
| 12.400 | 39.8 | O1 | Vertical | 39 | 37.1 | 11.3 | 53.0 | 54.0 | 21.0 | Pass |
| 4.960 | 45.9 | O2 | Horizontal | 33.5 | 39.2 | 8 | 48.2 | 54.0 | 25.8 | Pass |
| 7.440 | 46.5 | O2 | Horizontal | 36.6 | 40.8 | 10.4 | 52.7 | 54.0 | 21.3 | Pass |
| 12.400 | 40.4 | O2 | Horizontal | 39 | 37.1 | 11.3 | 53.6 | 54.0 | 20.4 | Pass |

**Final Field Strength Peak (dBuV/m) =Reading Peak (dBuV/m) + Antenna Factor (dB)- Pre-amp Gain (dB) +Cable Loss (dB)**
Calculation Example **47.7 = 45.4 + 33.5 - 39.2 + 8**

**Test Result Pass**
Average measurements not performed where the Final Peak level is below the Average limit of 54dBuV/m.

## 5.3 Radiated Band Edge / Restricted band Measurements

**11.13.3.2 Peak detection**

When using a peak detector to measure unwanted emissions at or near the band edge (within 2 MHz of the authorized band), the following integration procedure can be used:

a) Set instrument center frequency to the frequency of the emission to be measured (must be within 2 MHz of the authorized band edge).
b) Set span to 2 MHz.
c) RBW = 100 kHz.
d) VBW ≥ [3 × RBW].
e) Detector = peak.
f) Sweep time = auto.
g) Trace mode = max hold.
h) Allow sweep to continue until the trace stabilizes (required measurement time may increase for low-duty-cycle applications).
i) Compute the power by integrating the spectrum over 1 MHz using the analyzer's band power measurement function with band limits set equal to the emission frequency ($f_{emission}$) ± 0.5 MHz. If the instrument does not have a band power function, then sum the amplitude levels (in power units) at 100 kHz intervals extending across the 1 MHz spectrum defined by $f_{emission}$ ± 0.5 MHz.

**11.12.2.5.2** Trace averaging across ON and OFF times of the EUT transmissions followed by duty cycle correction

If continuous transmission of the EUT (D ≥ 98%) cannot be achieved and the duty cycle is constant (duty cycle variations are less than ±2%), then the following procedure shall be used:

a) The EUT shall be configured to operate at the maximum achievable duty cycle.
b) Measure the duty cycle D of the transmitter output signal as described in 11.6.
c) RBW = 1 MHz (unless otherwise specified).
d) VBW ≥ [3 × RBW].
e) Detector = RMS (power averaging), if [span / (# of points in sweep)] ≤ (RBW / 2). Satisfying this condition may require increasing the number of points in the sweep or reducing the span. If this condition cannot be satisfied, then the detector mode shall be set to peak.
f) Averaging type = power (i.e., rms):
1) As an alternative, the detector and averaging type may be set for linear voltage averaging.
2) Some instruments require linear display mode to use linear voltage averaging. Log or dB averaging shall not be used.
g) Sweep time = auto.
h) Perform a trace average of at least 100 traces.
i) A correction factor shall be added to the measurement results prior to comparing with the emission limit to compute the emission level that would have been measured had the test been performed at 100% duty cycle.

The correction factor is computed as follows:

1) If power averaging (rms) mode was used in step f), then the applicable correction factor is [10 log (1 / D)], where D is the duty cycle.
2) If linear voltage averaging mode was used in step f), then the applicable correction factor is [20 log (1 / D)], where D is the duty cycle.
3) If a specific emission is demonstrated to be continuous (D ≥ 98%) rather than turning ON and OFF with the transmit cycle, then no duty cycle correction is required for that emission.

## 5.3.1 Result Radiated Restricted Band and band edge near 2.4 GHz band

From section 4.2
Duty cycle (d) =Ton/Tperiod =387.83/626.09 =61.94%
Power averaging method used => Duty cycle correction factor =10*log (1/d) = 2.08 dB

Ref Appendix B for scans

| Frequency | Reading Peak | EUT Orientation | Antenna Polarity | Antenna Factor | Preamp Gain | Cable loss | Final Field Strength Peak | Average Limit | Margin for Peak v Average Limit +20dB | Result |
|---|---|---|---|---|---|---|---|---|---|---|
| GHz | dBuV/m | | V/H | dB | dB | dB | dBuV/m | dBuV/m | dB | P/F |
| 2.390 | 21.5 | O1 | Vertical | 28.4 | 0 | 4.8 | 54.7 | 54.0 | 19.3 | Pass |
| 2.344 | 21.7 | O1 | Vertical | 28 | 0 | 4.7 | 54.4 | 54.0 | 19.6 | Pass |
| 2.389 | 20.5 | O2 | Horizontal | 28.4 | 0 | 4.8 | 53.7 | 54.0 | 20.3 | Pass |
| 2.344 | 21.2 | O2 | Horizontal | 28 | 0 | 4.7 | 53.9 | 54.0 | 20.1 | Pass |

**Final Field Strength Peak (dBuV/m) =Reading Peak (dBuV/m) + Antenna Factor (dB)- Pre-amp Gain (dB) +Cable Loss (dB)**
Calculation Example **53.7 = 20.5 + 28.4 - 0 + 4.8**

| Frequency | Reading Average | EUT Orientation | Antenna Polarity | Antenna Factor | Preamp Gain | Cable loss | Duty Cycle correction | Final Field Strength Average | Average Limit | Margin | Result |
|---|---|---|---|---|---|---|---|---|---|---|---|
| GHz | dBuV/m | | V/H | dB | dB | dB | dB | dBuV/m | dBuV/m | dB | P/F |
| 2.390 | 14.7 | O1 | Vertical | 28.4 | 0 | 4.8 | 2.08 | 49.9 | 54.0 | 4.0 | Pass |
| 2.344 | 18.1 | O1 | Vertical | 28 | 0 | 4.7 | 2.08 | 52.9 | 54.0 | 1.1 | Pass |
| 2.390 | 14.6 | O1 | Horizontal | 28.4 | 0 | 4.8 | 2.08 | 49.8 | 54.0 | 4.2 | Pass |
| 2.344 | 17.8 | O1 | Horizontal | 28 | 0 | 4.7 | 2.08 | 52.6 | 54.0 | 1.4 | Pass |

**Final Field Strength Average (dBuV/m) =Reading Average (dBuV/m) + Antenna Factor (dB)- Pre-amp Gain (dB) +Cable Loss (dB) +Duty Cycle correction (dB)**
Calculation Example **49.9 = 14.7 + 28.4 - 0 + 4.8 + 2.08**

| Frequency | Reading Peak | EUT Orientation | Antenna Polarity | Antenna Factor | Preamp Gain | Cable loss | Final Field Strength Peak | Average Limit | Margin for Peak v Average Limit +20dB | Result |
|---|---|---|---|---|---|---|---|---|---|---|
| GHz | dBuV/m | | V/H | dB | dB | dB | dBuV/m | dBuV/m | dB | P/F |
| 2.4385 | 20.0 | O1 | Vertical | 28.6 | 0 | 4.8 | 53.4 | 54.0 | 20.6 | Pass |
| 2.500 | 19.7 | O1 | Vertical | 28.8 | 0 | 4.9 | 53.4 | 54.0 | 20.6 | Pass |
| 2.4385 | 19.9 | O2 | Horizontal | 28.6 | 0 | 4.8 | 53.3 | 54.0 | 20.7 | Pass |
| 2.500 | 20.3 | O2 | Horizontal | 28.8 | 0 | 4.9 | 54.0 | 54.0 | 20.0 | Pass |

**Final Field Strength Peak (dBuV/m) =Reading Peak (dBuV/m) + Antenna Factor (dB)- Pre-amp Gain (dB) +Cable Loss (dB)**
Calculation Example **50.5 = 21.5 + 28.4 - 0 + 4.8 + -4.2**

| Frequency | Reading Average | EUT Orientation | Antenna Polarity | Antenna Factor | Preamp Gain | Cable loss | Duty Cycle correction | Final Field Strength Average | Average Limit | Margin | Result |
|---|---|---|---|---|---|---|---|---|---|---|---|
| GHz | dBuV/m | | V/H | dB | dB | dB | dB | dBuV/m | dBuV/m | dB | P/F |
| 2.4385 | 13.8 | O1 | Vertical | 28.6 | 0 | 4.8 | 2.08 | 49.3 | 54.0 | 4.7 | Pass |
| 2.500 | 13.6 | O1 | Vertical | 28.8 | 0 | 4.9 | 2.08 | 49.4 | 54.0 | 4.6 | Pass |
| 2.4385 | 14.2 | O2 | Horizontal | 28.6 | 0 | 4.8 | 2.08 | 47.6 | 54.0 | 6.3 | Pass |
| 2.500 | 13.4 | O2 | Horizontal | 28.8 | 0 | 4.9 | 2.08 | 47.1 | 54.0 | 6.8 | Pass |

**Final Field Strength Average (dBuV/m) =Reading Average (dBuV/m) + Antenna Factor (dB)- Pre-amp Gain (dB) +Cable Loss (dB) +Duty Cycle correction (dB)**
Calculation Example **49.3 = 13.8 + 28.6 - 0 + 4.8 + 2.08**

## Test Result: - Pass

## 5.4 Radiated Power at fundamental

| Frequency | Reading Peak | EUT Orientation | Antenna Polarity | Antenna Factor | Preamp Gain | Cable loss | Final Field Strength Peak | Transmitted Power | Limit | Margin | Result |
|---|---|---|---|---|---|---|---|---|---|---|---|
| GHz | dBuV/m | | V/H | dB | dB | dB | dBuV/m | dBm | dBm | dB | P/F |
| 2.402 | 61.6 | O1 | Vertical | 28.6 | 0 | 4.8 | 95.0 | -0.2 | 36.0 | 36.2 | Pass |
| 2.402 | 61.5 | O2 | Horizontal | 28.6 | 0 | 4.8 | 94.9 | -0.3 | 36.0 | 36.3 | Pass |
| 2.440 | 63.2 | O1 | Vertical | 28.6 | 0 | 4.8 | 96.6 | 1.4 | 36.0 | 34.6 | Pass |
| 2.440 | 62.7 | O2 | Horizontal | 28.6 | 0 | 4.8 | 96.1 | 0.9 | 36.0 | 35.1 | Pass |
| 2.480 | 64.2 | O1 | Vertical | 28.6 | 0 | 4.9 | 97.7 | 2.5 | 36.0 | 33.5 | Pass |
| 2.480 | 63.2 | O2 | Horizontal | 28.6 | 0 | 4.9 | 96.7 | 1.5 | 36.0 | 34.5 | Pass |

**Final Field Strength Peak (dBuV/m) =Reading Peak (dBuV/m) + Antenna Factor (dB)- Pre-amp Gain (dB) +Cable Loss (dB)**
Calculation Example **96.7 = 63.2 + 28.6 - 0 + 4.9**

**Transmitted power (dBm) = Final Field Strength Peak (dBuV/m) -95.2 dB**
Calculation Example **1.5 = 96.7 - 95.2**

Note the Radiated field strength was measured at 3 metres and
the conversion formula below was used to determine the EIRP in dBm

$$EIRP\ (dBm) = E_{3m}\ (dBuV/m) - 95.2$$

Test Result Pass

# 6 List of Test Equipment

| Instrument | Manufacturer | Model | Serial Num | CEI Ref | Cal Date | Cal Interval Months |
|---|---|---|---|---|---|---|
| Microwave Preamplifier | Hewlett Packard | 83017A | 3123A00175 | 805 | 29-Jul-24 | 12 |
| Spectrum Analyser 30Hz-40GHz | Rohde & Schwarz | FSP40 | 100053 | 850 | 09-Jan-25 | 36 |
| Test Receiver 3.6GHz | Rohde & Schwarz | ESR | 1316.3003k03-101625-s | 869 | 23-May-23 | 36 |
| Receiver N9038A EMI 3Hz - 8.4 GHz | Keysight | MXE N9038A | MX60320104 | 1204 | 27-Feb-23 | 36 |
| Antenna Horn | EMCO | 3115 | 2363 | 1100 | 21-Feb-23 | 36 |
| Fully Anechoic Chamber | CEI | FAR 3M | 906 | 906 | 29-Jul-22 | 36 |
| Anechoic Chamber | CEI | SAR 10M | 845 | 845 | 12-Sept-22 | 36 |
| Antenna Biconical | EMCO | | 3110B | 847 | 30-Oct-24 | 36 |
| Antenna Log Periodic | Chase | UPA6108 | 1072 | 609 | 05-Nov-24 | 36 |
| Antenna Horn Standard Gain 18-26.5GHz | A-Info | LB-42-25-C-KF | J2021091103028 | 877 | 02-Aug-24 | 12 |
| Cable 20m | | | | 1213 | 29-Jul-24 | 12 |
| Cable purple Ktype 1.8m | | | | 917 | 29-Jul-24 | 12 |
| Cable HF Ktype 1.5m | | | | 705 | 29-Jul-24 | 12 |
| LISN | Rohde & Schwarz | ESH3-Z5 | 825460/003 | 604 | 31-Oct-24 | 36 |

## 7 Measurement Uncertainties

| Measurement | Uncertainty |
|---|---|
| Radio Frequency | +/- $5x10^{-7}$ |
| Maximum Frequency Deviation | +/- 1.7 % |
| Conducted Emissions | +/- 1 dB |
| Radiated Emission 30MHz-100MHz | +/- 5.3 dB |
| Radiated Emission 100MHz-300MHz | +/- 4.7 dB |
| Radiated Emission 300MHz-1GHz | +/- 3.9 dB |
| Radiated Emission 1GHz-40GHz | +/- 3.8 dB |
| Modulation bandwidth | +/- $5x10^{-7}$ |
| Duty Cycle | +/- 5 % |
| Power supply | ±0.1 VDC |
| Temperature | ±0.2 °C |
| Frequency | ±0.01 ppm |

The measurement uncertainties stated were calculated with a k=2 for a confidence level of over 95% as per ETS TR100 028.

The test data can be compared directly to the specification limit to determine compliance, as the calculated measurement uncertainty meets the requirements of the applicable specification.

## Appendix A Conducted Measurements on the Antenna Port

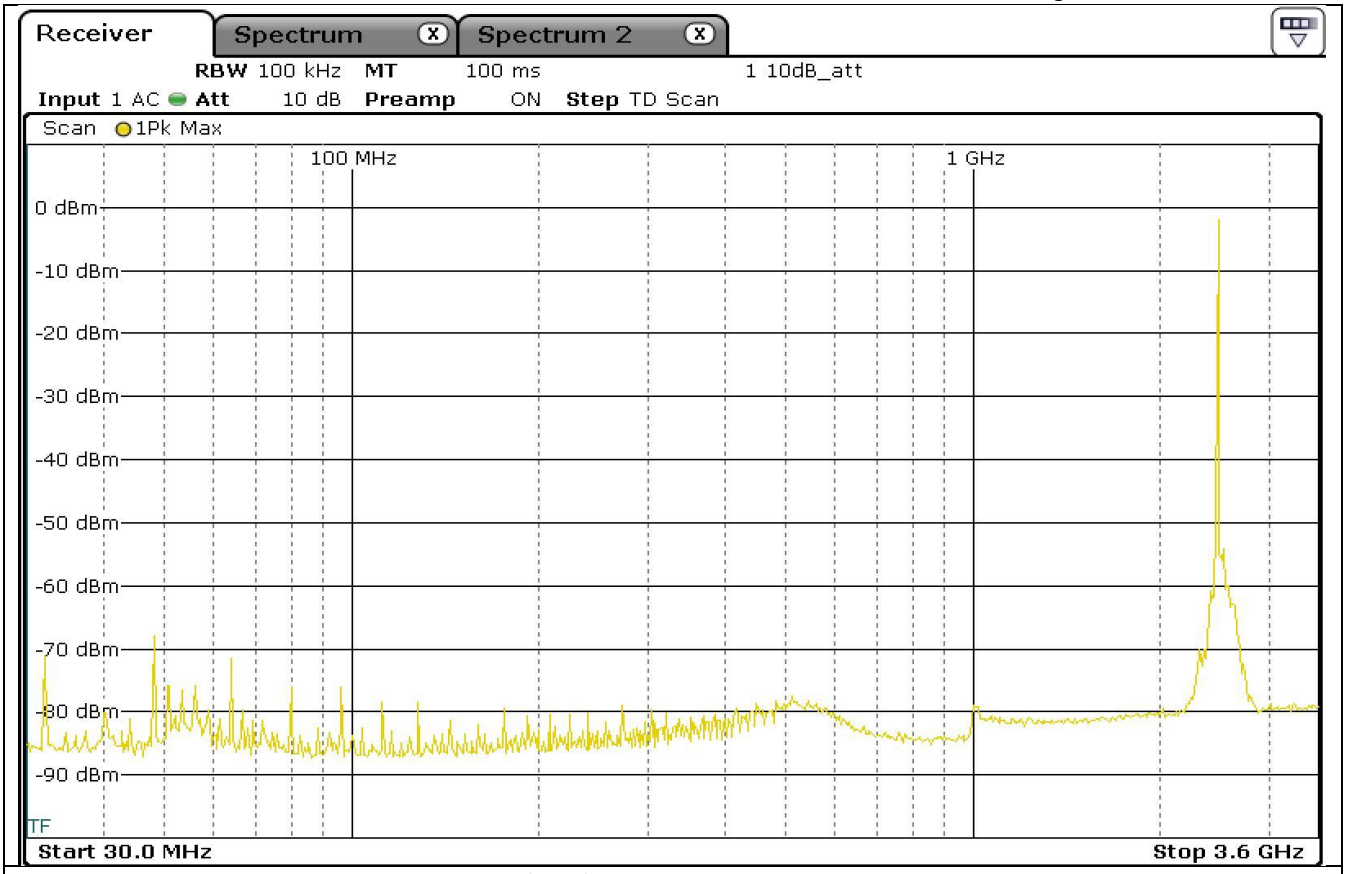
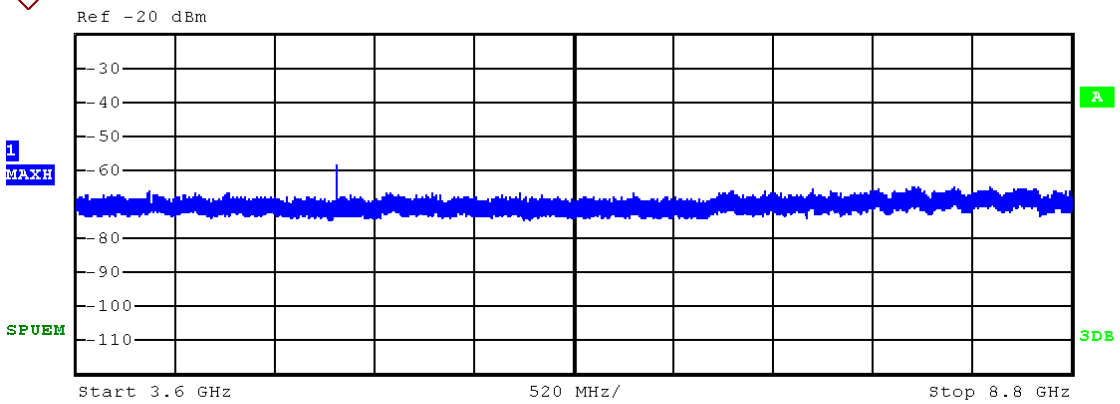
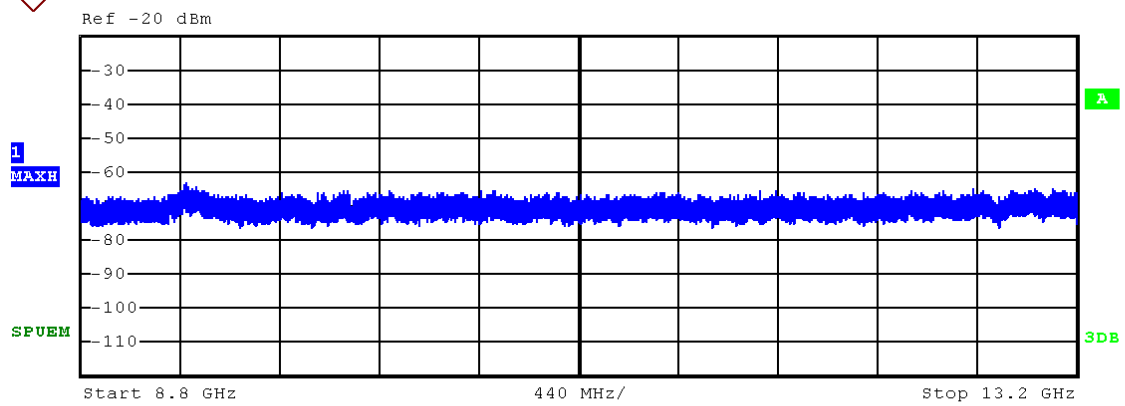



Fig A1 Conducted Spurious Emissions 30MHz -3.6GHz



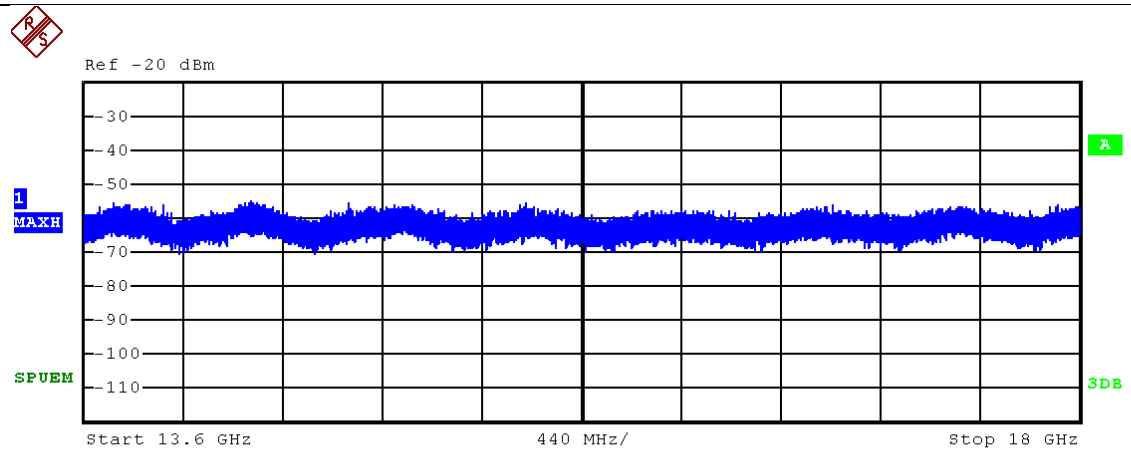

| Start [Hz] | Stop [Hz] | RBW [Hz] | Freq [Hz] | PwrAbs [dBm] | ΔLimit [dB] |
|---|---|---|---|---|---|
| 3.600 G | 4.000 G | 100.00 k | 3.987550 G | -66.19 | -200.00 |
| 4.000 G | 4.800 G | 100.00 k | 4.227600 G | -66.24 | -200.00 |
| 4.800 G | 5.200 G | 100.00 k | 4.959450 G | -58.15 | -200.00 |
| 5.200 G | 5.600 G | 100.00 k | 5.219650 G | -66.47 | -200.00 |
| 5.600 G | 6.000 G | 100.00 k | 5.920200 G | -66.35 | -200.00 |
| 6.000 G | 6.400 G | 100.00 k | 6.034750 G | -67.28 | -200.00 |
| 6.400 G | 6.800 G | 100.00 k | 6.513900 G | -66.20 | -200.00 |
| 6.800 G | 7.200 G | 100.00 k | 7.021650 G | -65.96 | -200.00 |
| 7.200 G | 7.600 G | 100.00 k | 7.444250 G | -65.55 | -200.00 |
| 7.600 G | 8.000 G | 100.00 k | 7.966100 G | -64.89 | -200.00 |
| 8.000 G | 8.400 G | 100.00 k | 8.182050 G | -64.46 | -200.00 |
| 8.400 G | 8.800 G | 100.00 k | 8.524950 G | -65.08 | -200.00 |

Fig A2 Conducted Spurious Emissions 3.6GHz-8.8GHz



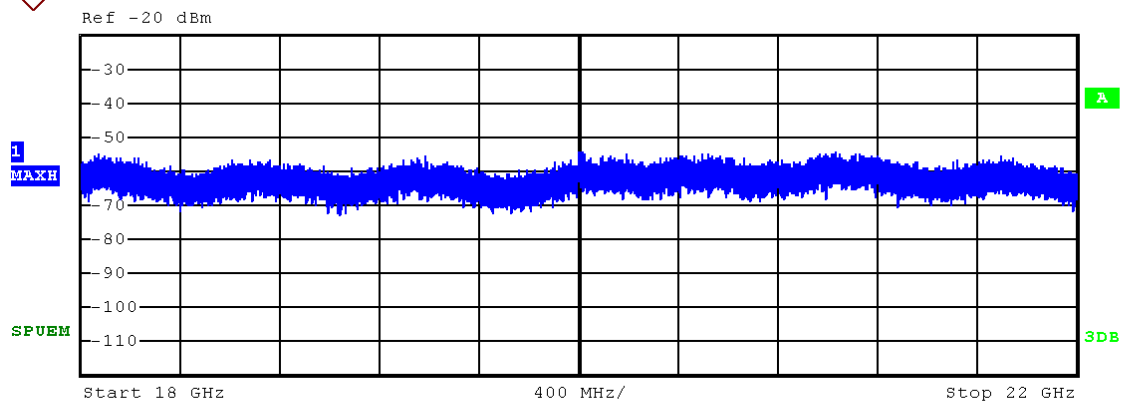

| Start [Hz] | Stop [Hz] | RBW [Hz] | Freq [Hz] | PwrAbs [dBm] | ΔLimit [dB] |
|---|---|---|---|---|---|
| 8.800 G | 9.200 G | 100.00 k | 9.196600 G | -66.28 | -200.00 |
| 9.200 G | 9.600 G | 100.00 k | 9.263200 G | -62.73 | -200.00 |
| 9.600 G | 10.000 G | 100.00 k | 9.981800 G | -65.50 | -200.00 |
| 10.000 G | 10.400 G | 100.00 k | 10.159650 G | -65.09 | -200.00 |
| 10.400 G | 10.800 G | 100.00 k | 10.568950 G | -65.19 | -200.00 |
| 10.800 G | 11.200 G | 100.00 k | 10.863000 G | -65.96 | -200.00 |
| 11.200 G | 11.600 G | 100.00 k | 11.344550 G | -65.64 | -200.00 |
| 11.600 G | 12.000 G | 100.00 k | 11.871300 G | -65.51 | -200.00 |
| 12.000 G | 12.400 G | 100.00 k | 12.345550 G | -65.69 | -200.00 |
| 12.400 G | 12.800 G | 100.00 k | 12.742200 G | -64.59 | -200.00 |
| 12.800 G | 13.200 G | 100.00 k | 13.091350 G | -64.72 | -200.00 |

Fig A3 Conducted Spurious Emissions 8.8GHz-13.2GHz



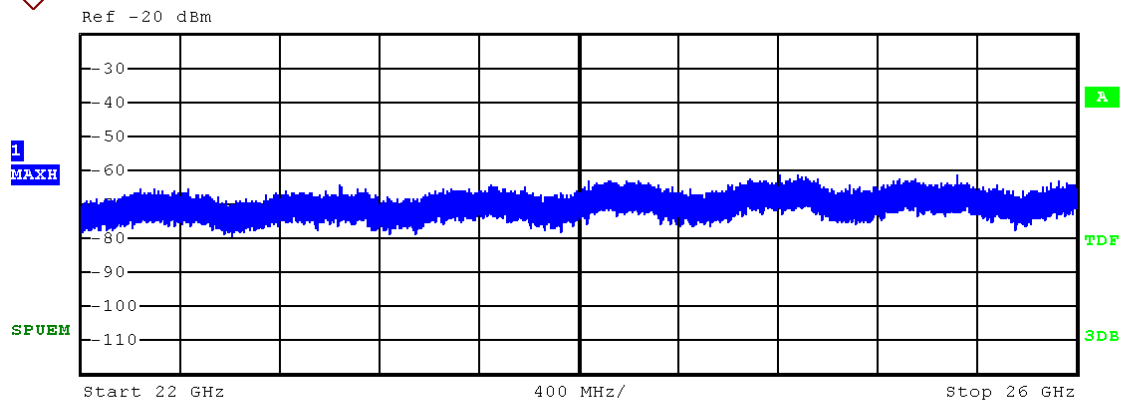

| Start [Hz] | Stop [Hz] | RBW [Hz] | Freq [Hz] | PwrAbs [dBm] | ΔLimit [dB] |
|---|---|---|---|---|---|
| 13.600 G | 14.000 G | 100.00 k | 13.734550 G | -55.56 | -200.00 |
| 14.000 G | 14.400 G | 100.00 k | 14.337550 G | -54.91 | -200.00 |
| 14.400 G | 14.800 G | 100.00 k | 14.774500 G | -55.46 | -200.00 |
| 14.800 G | 15.200 G | 100.00 k | 14.976850 G | -55.80 | -200.00 |
| 15.200 G | 15.600 G | 100.00 k | 15.557100 G | -55.22 | -200.00 |
| 15.600 G | 16.000 G | 100.00 k | 15.606750 G | -57.22 | -200.00 |
| 16.000 G | 16.400 G | 100.00 k | 16.297050 G | -57.43 | -200.00 |
| 16.400 G | 16.800 G | 100.00 k | 16.773800 G | -57.11 | -200.00 |
| 16.800 G | 17.200 G | 100.00 k | 16.912500 G | -55.96 | -200.00 |
| 17.200 G | 17.600 G | 100.00 k | 17.497600 G | -56.29 | -200.00 |
| 17.600 G | 18.000 G | 100.00 k | 17.905500 G | -56.02 | -200.00 |

Fig A4 Conducted Spurious Emissions 13.2GHz -18GHz




| Start [Hz] | Stop [Hz] | RBW [Hz] | Freq [Hz] | PwrAbs [dBm] | ΔLimit [dB] |
|---|---|---|---|---|---|
| 18.000 G | 18.400 G | 100.00 k | 18.069750 G | -54.72 | -200.00 |
| 18.400 G | 18.800 G | 100.00 k | 18.678750 G | -56.34 | -200.00 |
| 18.800 G | 19.200 G | 100.00 k | 18.813050 G | -57.56 | -200.00 |
| 19.200 G | 19.600 G | 100.00 k | 19.385600 G | -55.32 | -200.00 |
| 19.600 G | 20.000 G | 100.00 k | 19.967050 G | -56.66 | -200.00 |
| 20.000 G | 20.400 G | 100.00 k | 20.002000 G | -54.29 | -200.00 |
| 20.400 G | 20.800 G | 100.00 k | 20.522650 G | -54.75 | -200.00 |
| 20.800 G | 21.200 G | 100.00 k | 21.032650 G | -54.44 | -200.00 |
| 21.200 G | 21.600 G | 100.00 k | 21.203900 G | -55.30 | -200.00 |
| 21.600 G | 22.000 G | 100.00 k | 21.694850 G | -55.31 | -200.00 |

Fig A5 Conducted Spurious Emissions 18GHz -22GHz




| Start [Hz] | Stop [Hz] | RBW [Hz] | Freq [Hz] | PwrAbs [dBm] | ΔLimit [dB] |
|---|---|---|---|---|---|
| 22.000 G | 22.400 G | 100.00 k | 22.239150 G | -65.40 | -200.00 |
| 22.400 G | 22.800 G | 100.00 k | 22.432400 G | -65.31 | -200.00 |
| 22.800 G | 23.200 G | 100.00 k | 23.038750 G | -64.30 | -200.00 |
| 23.200 G | 23.600 G | 100.00 k | 23.556250 G | -65.20 | -200.00 |
| 23.600 G | 24.000 G | 100.00 k | 23.650250 G | -64.16 | -200.00 |
| 24.000 G | 24.400 G | 100.00 k | 24.237500 G | -62.73 | -200.00 |
| 24.400 G | 24.800 G | 100.00 k | 24.691500 G | -62.68 | -200.00 |
| 24.800 G | 25.200 G | 100.00 k | 24.881550 G | -61.27 | -200.00 |
| 25.200 G | 25.600 G | 100.00 k | 25.516250 G | -61.32 | -200.00 |
| 25.600 G | 26.000 G | 100.00 k | 25.928450 G | -62.91 | -200.00 |

Fig A6 Conducted Spurious Emissions 22GHz -26GHz

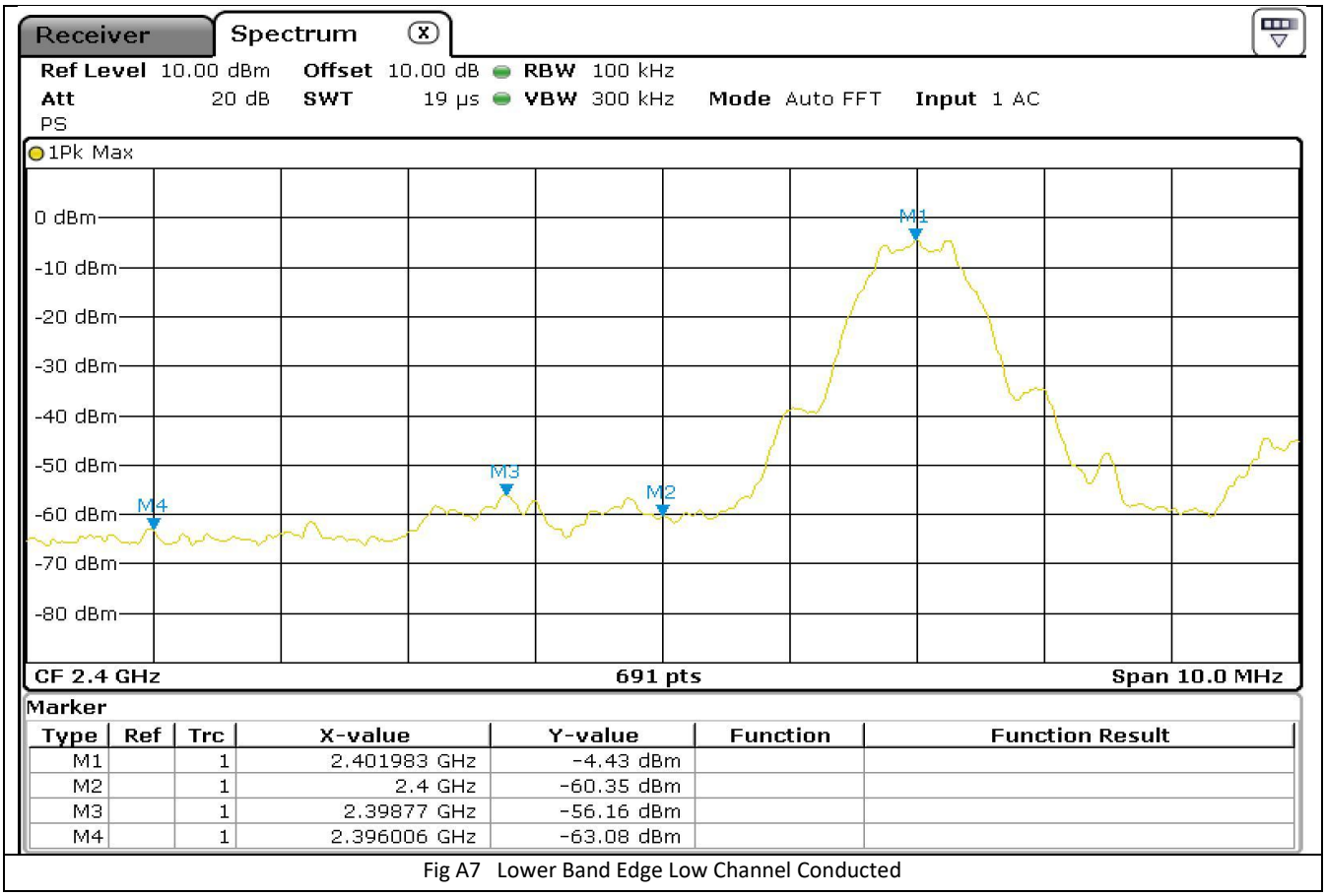



Fig A7 Lower Band Edge Low Channel Conducted

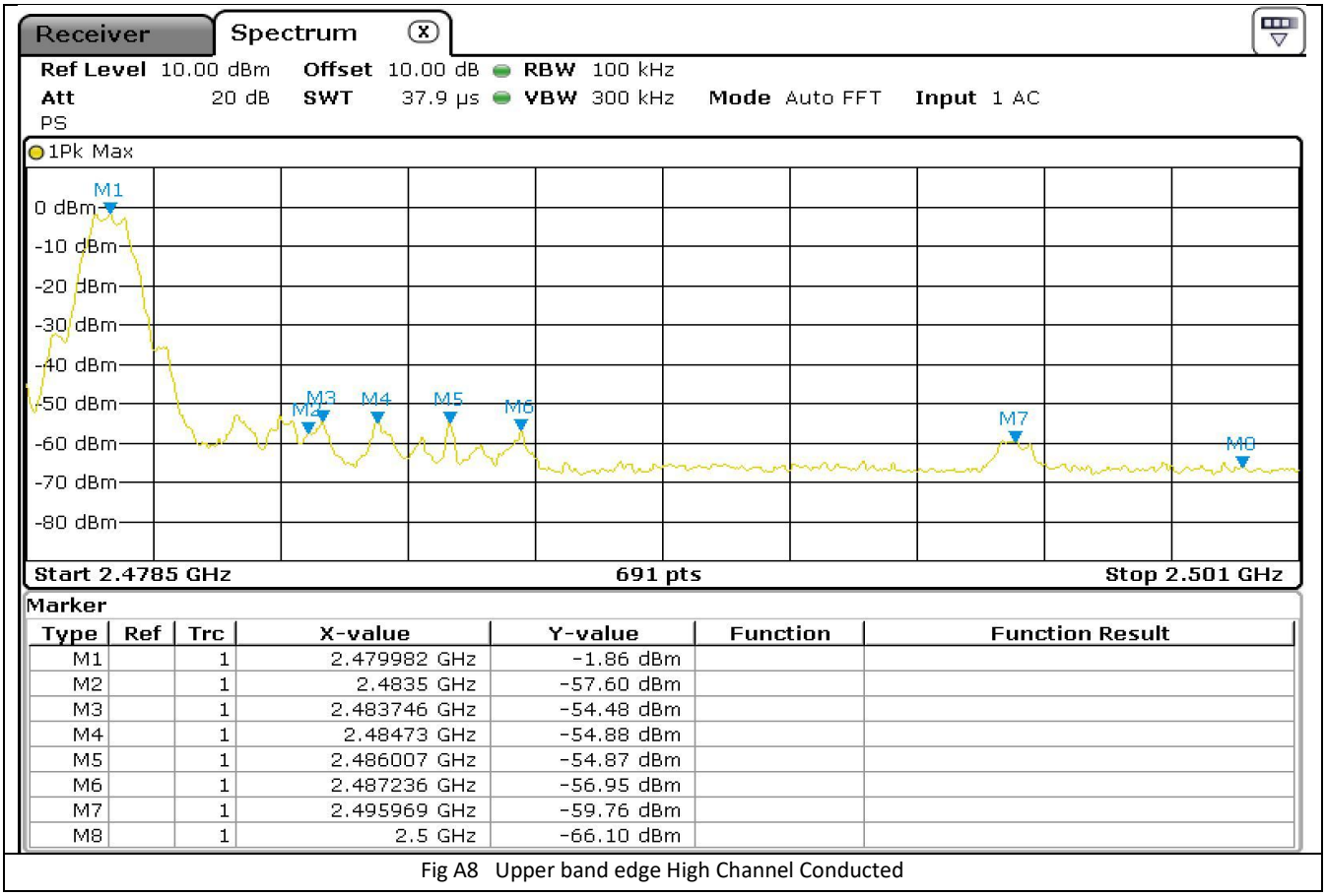
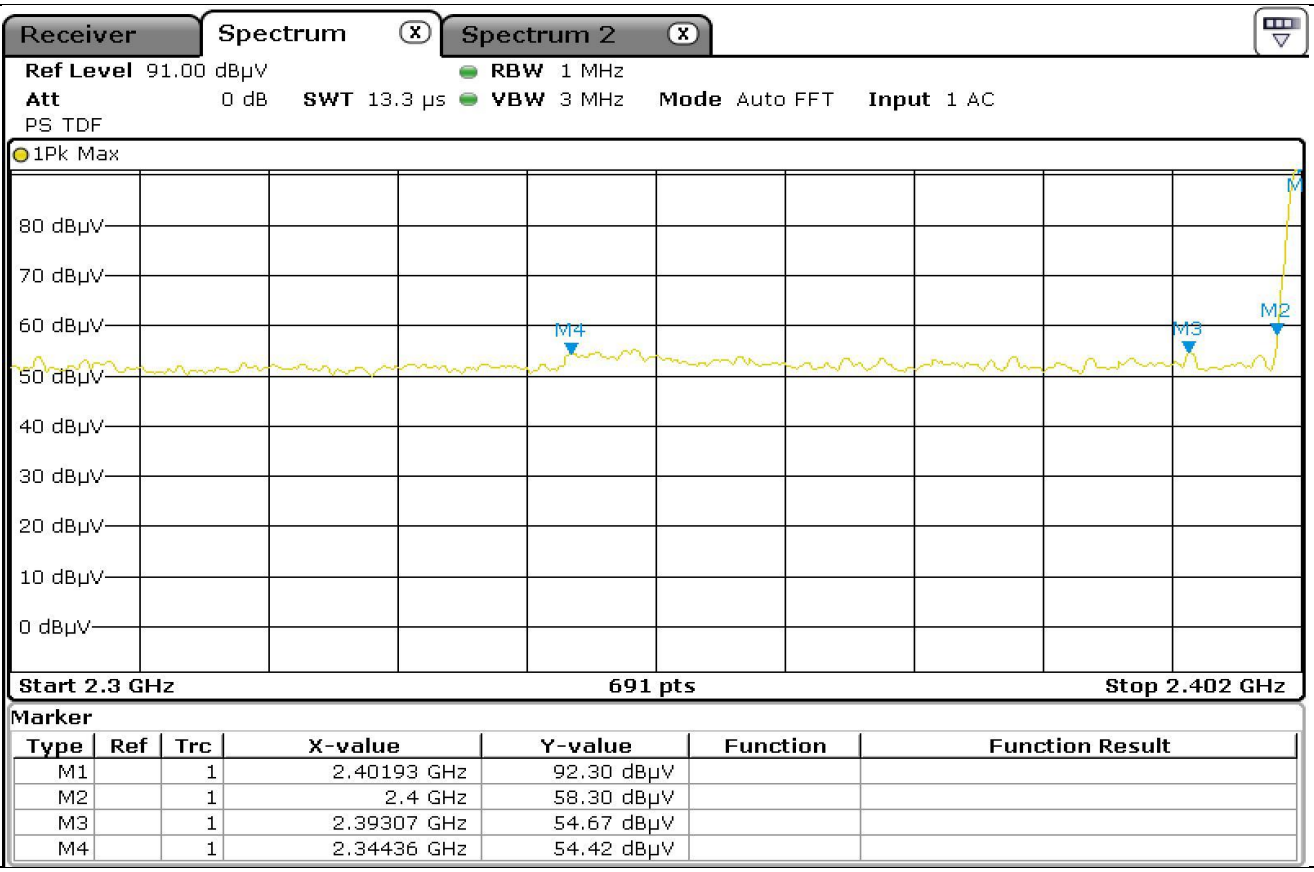



Fig A8 Upper band edge High Channel Conducted

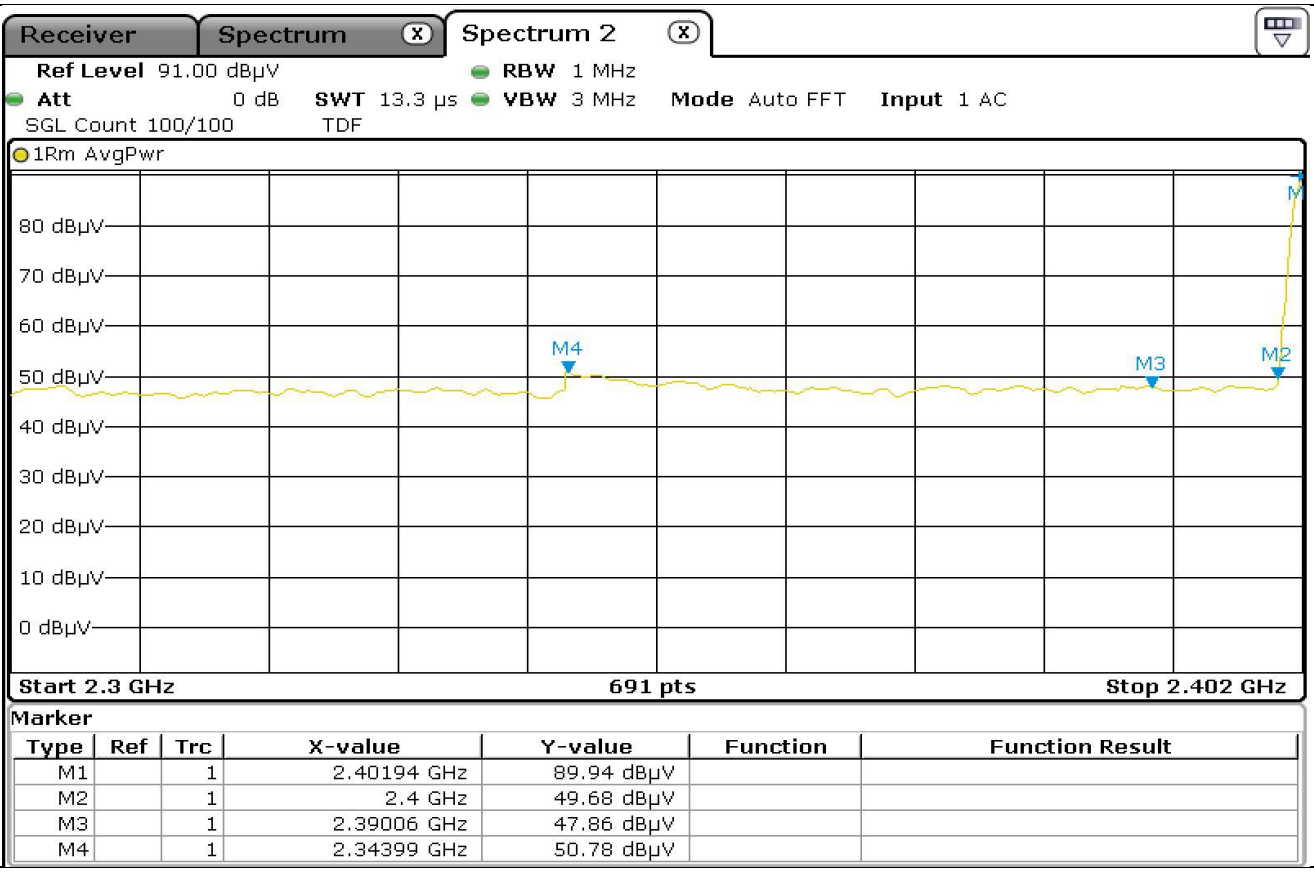
## Appendix B Radiated tests for Band Edges /Restricted band




Marker

| Type | Ref | Trc | X-value | Y-value | Function | Function Result |
|---|---|---|---|---|---|---|
| M1 | | 1 | 2.40193 GHz | 92.30 dBµV | | |
| M2 | | 1 | 2.4 GHz | 58.30 dBµV | | |
| M3 | | 1 | 2.39307 GHz | 54.67 dBµV | | |
| M4 | | 1 | 2.34436 GHz | 54.42 dBµV | | |

Fig B1 Low Channel Restricted Band /Band Edge Vertical Peak at 3 metres




Marker

| Type | Ref | Trc | X-value | Y-value | Function | Function Result |
|---|---|---|---|---|---|---|
| M1 | | 1 | 2.40194 GHz | 89.94 dBµV | | |
| M2 | | 1 | 2.4 GHz | 49.68 dBµV | | |
| M3 | | 1 | 2.39006 GHz | 47.86 dBµV | | |
| M4 | | 1 | 2.34399 GHz | 50.78 dBµV | | |

Fig B2 Low Channel Restricted Band /Band Edge Vertical Average at 3 metres

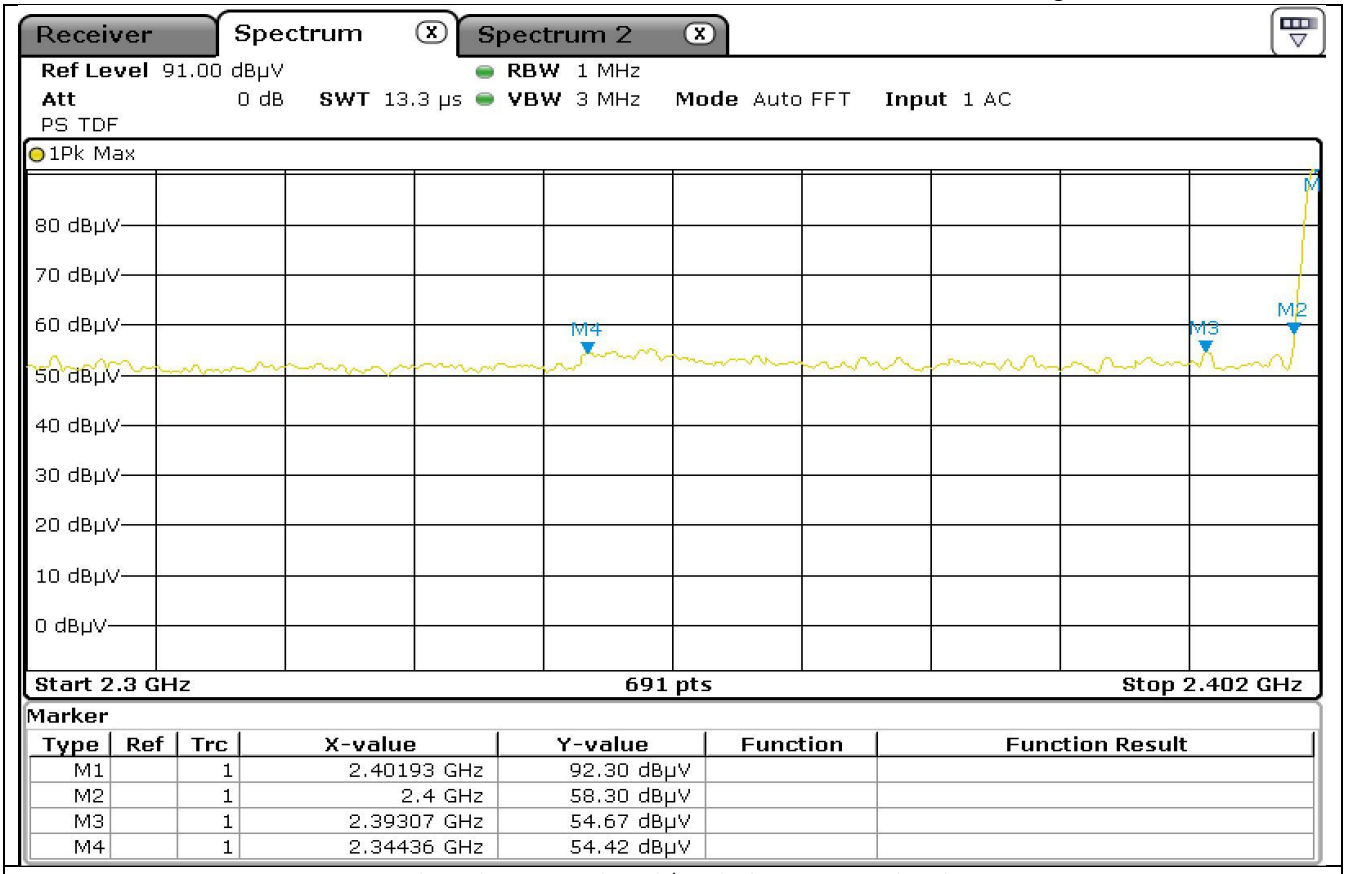



Fig B3 Low Channel Restricted Band /Band Edge Horizontal Peak at 3 metres

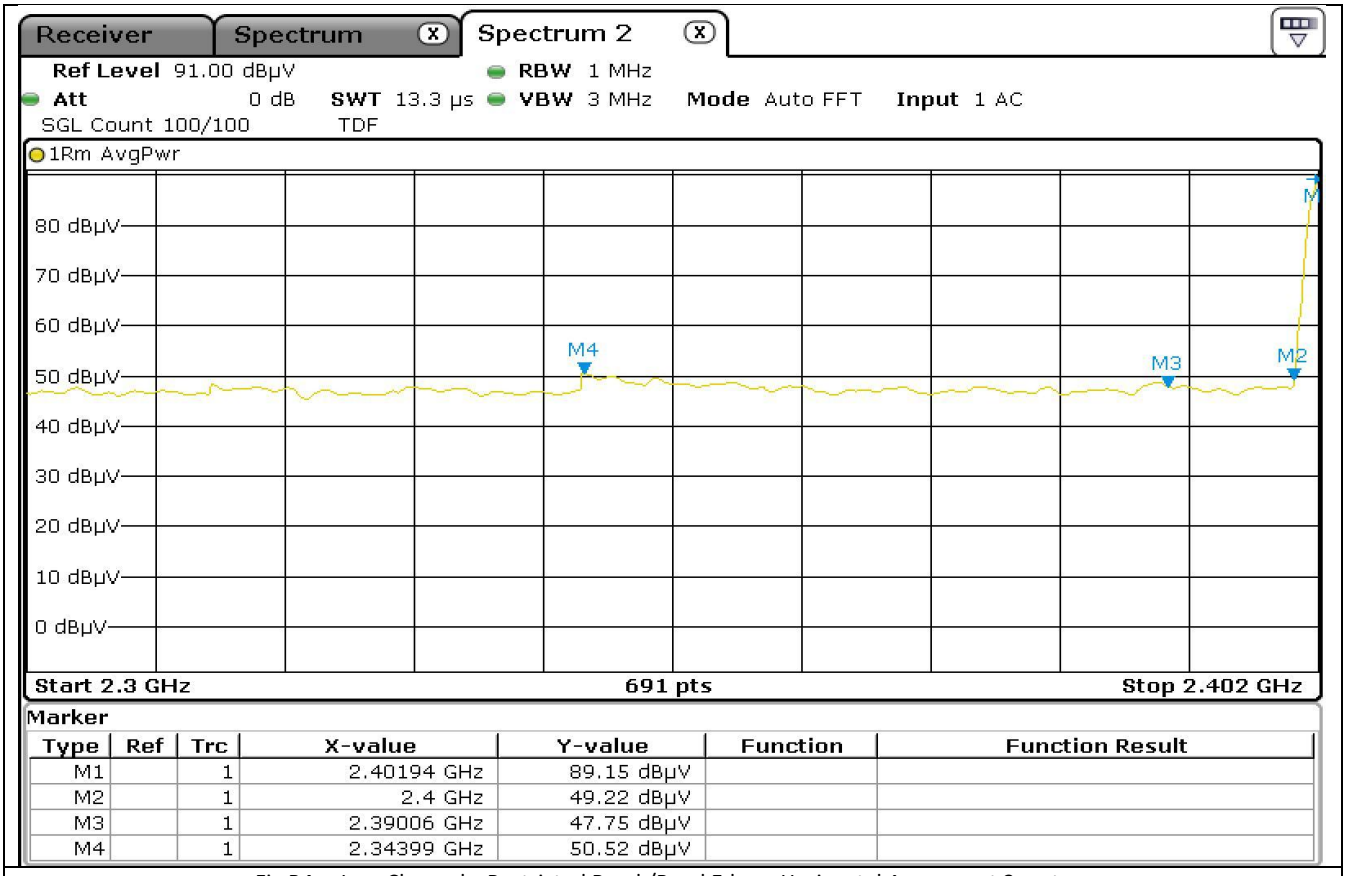



Fig B4 Low Channel Restricted Band /Band Edge Horizontal Average at 3 metres

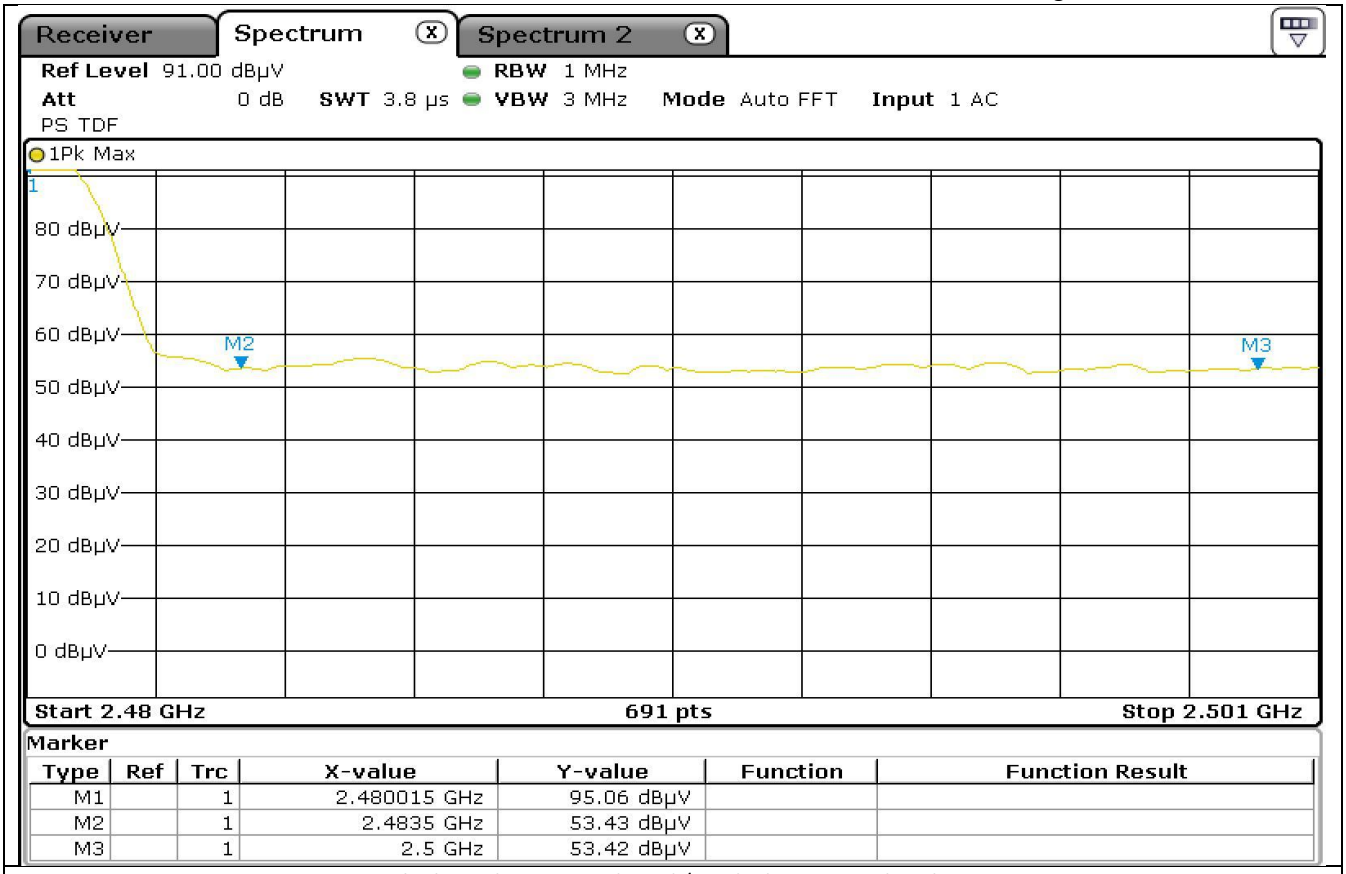



Fig B5 High Channel Restricted Band /Band Edge Vertical Peak at 3 metres

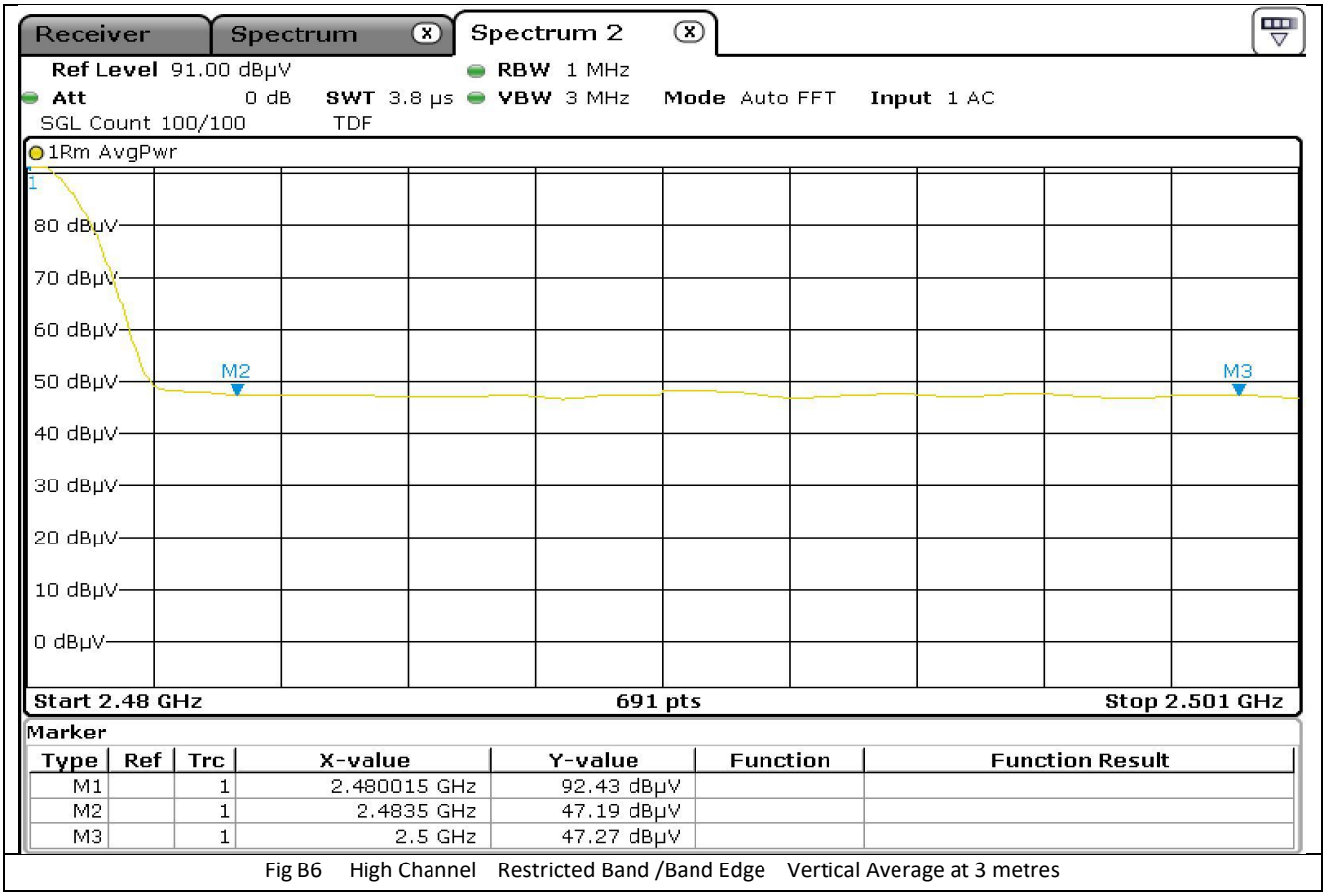



Fig B6 High Channel Restricted Band /Band Edge Vertical Average at 3 metres

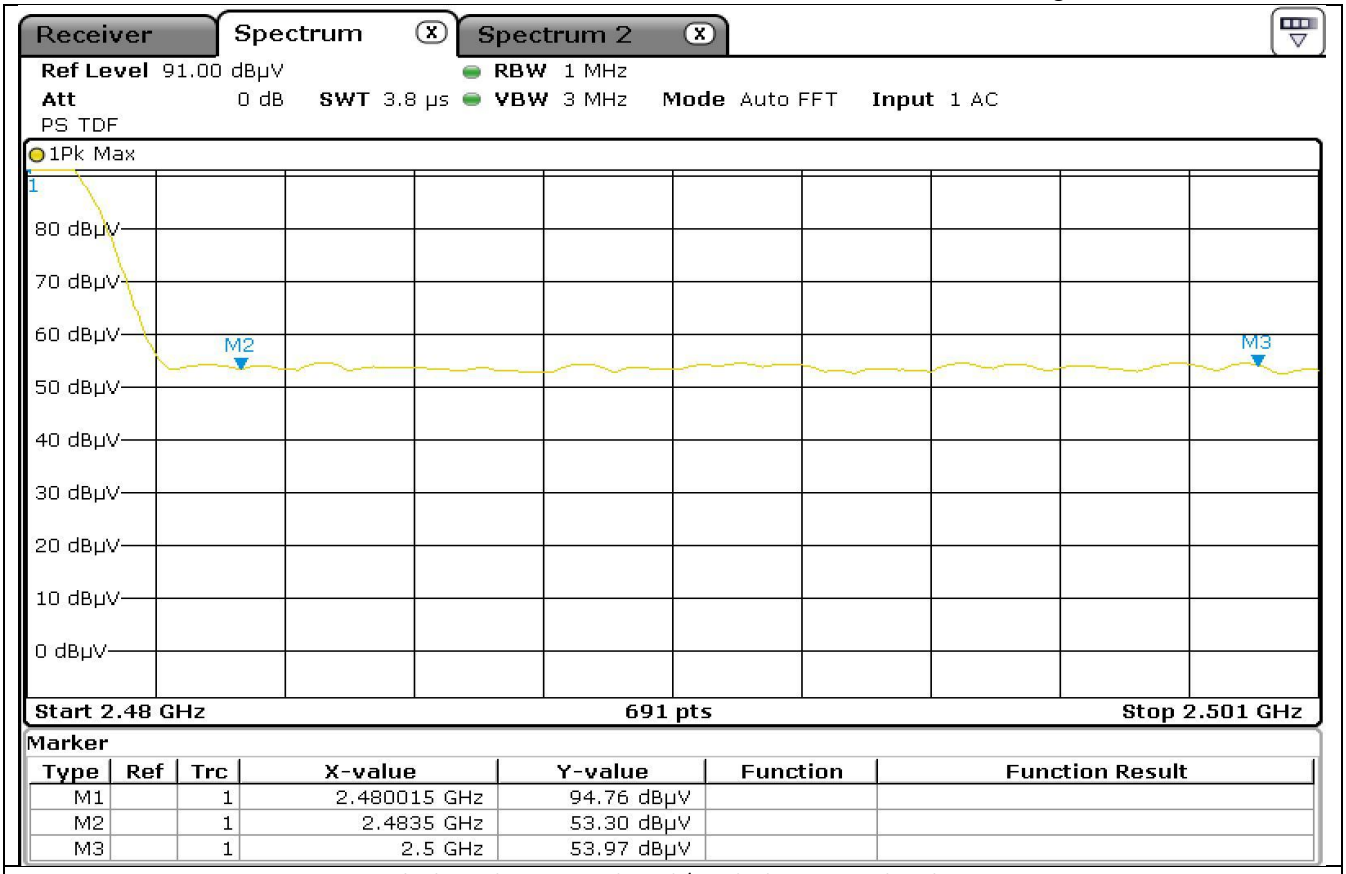



Fig B7 High Channel Restricted Band /Band Edge Vertical Peak at 3 metres

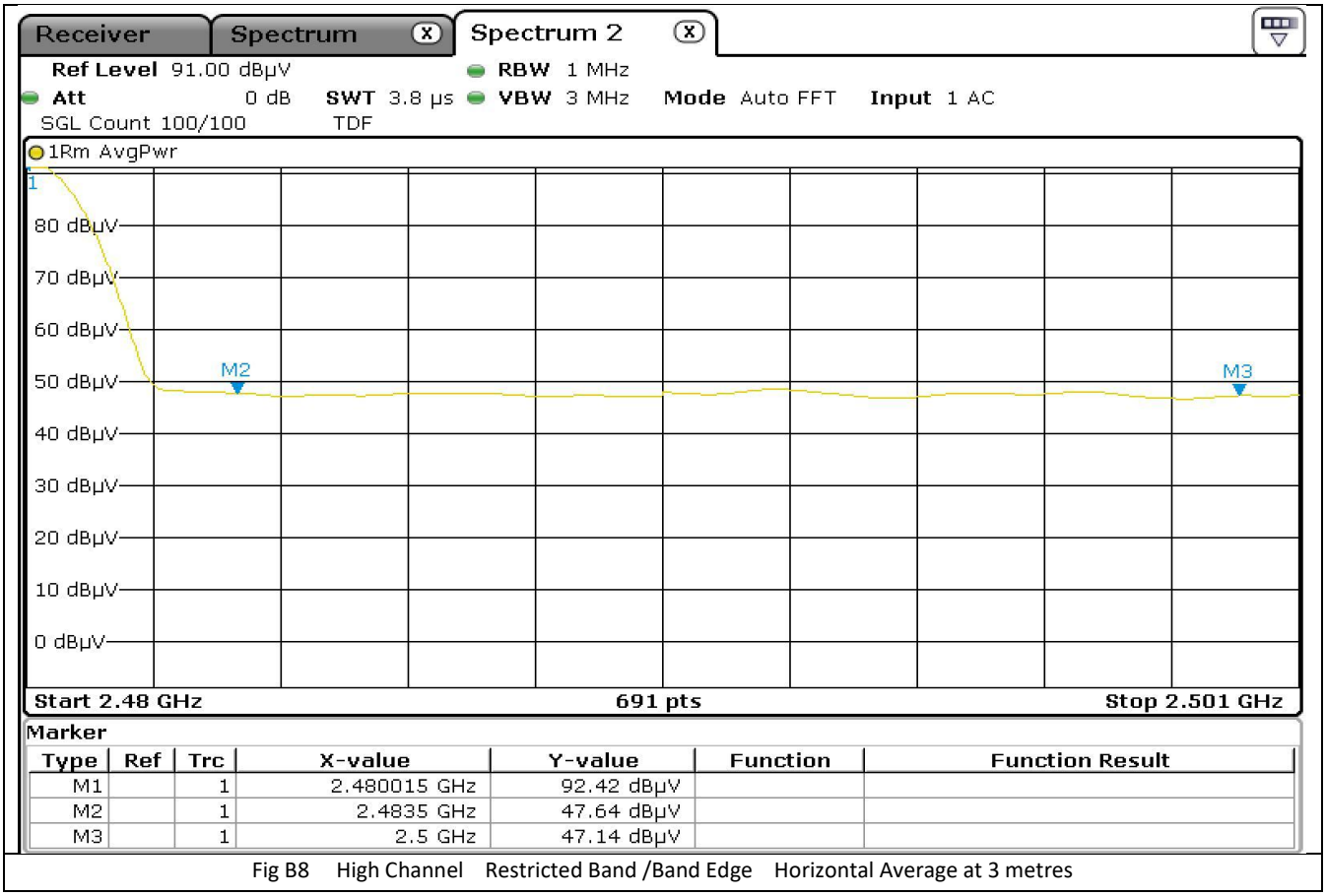



Fig B8 High Channel Restricted Band /Band Edge Horizontal Average at 3 metres

## Appendix C Radiated Spurious Emissions

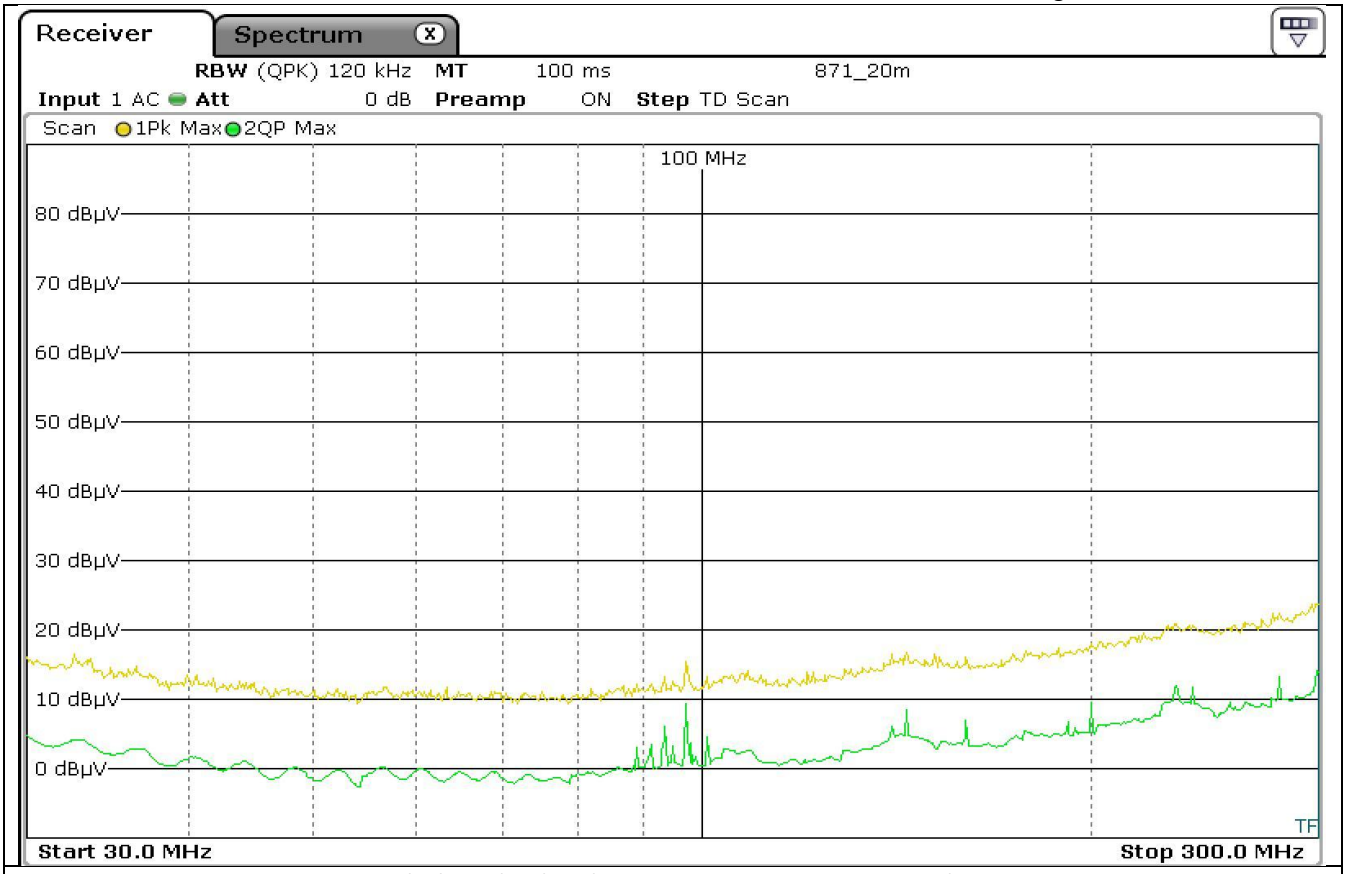



Fig C1 High Channel Radiated Emissions 30MHz -300MHz Vertical 3metres

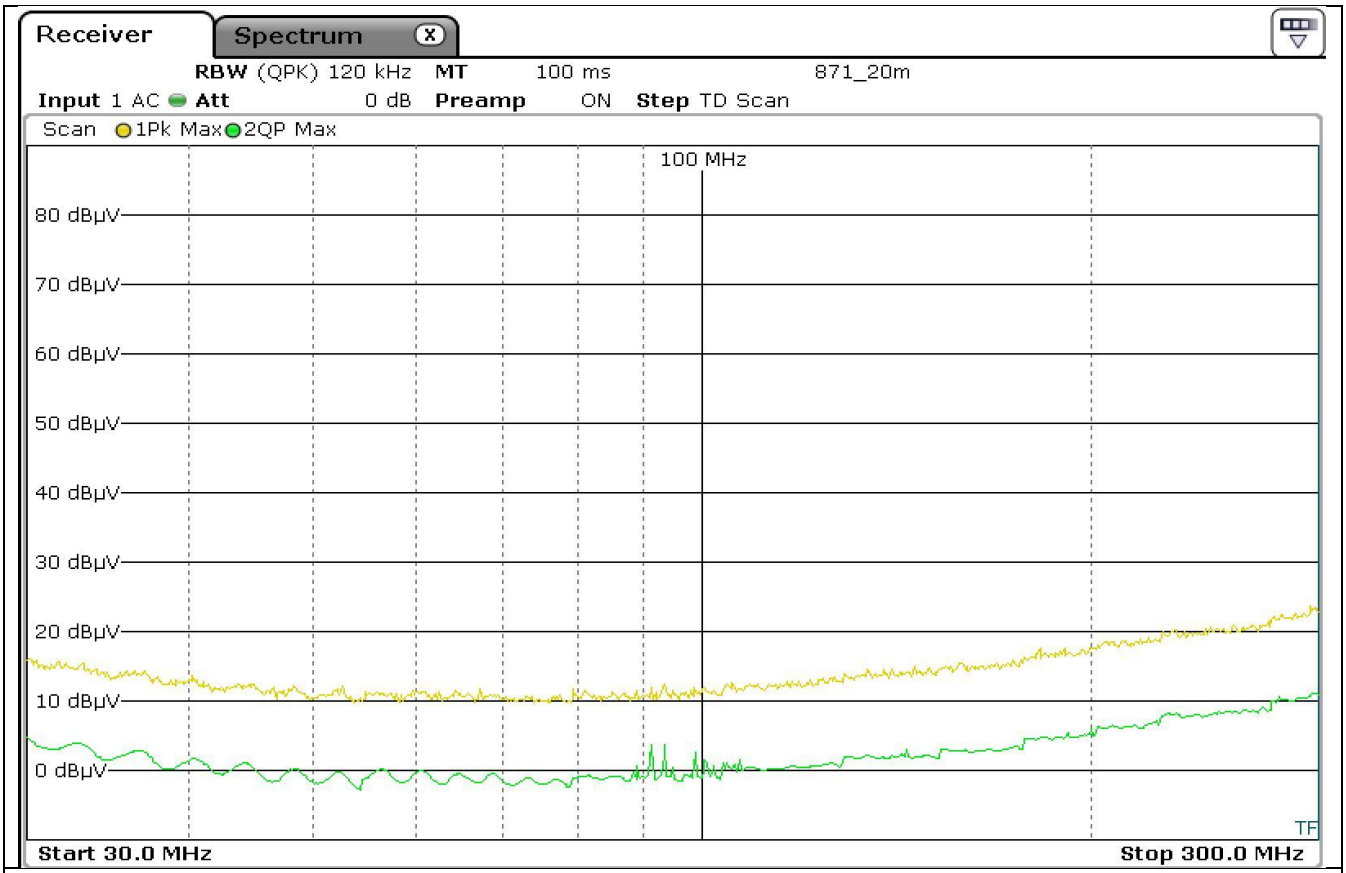



Fig C2 High Channel Radiated Emissions 30MHz -300MHz Horizontal 3metres

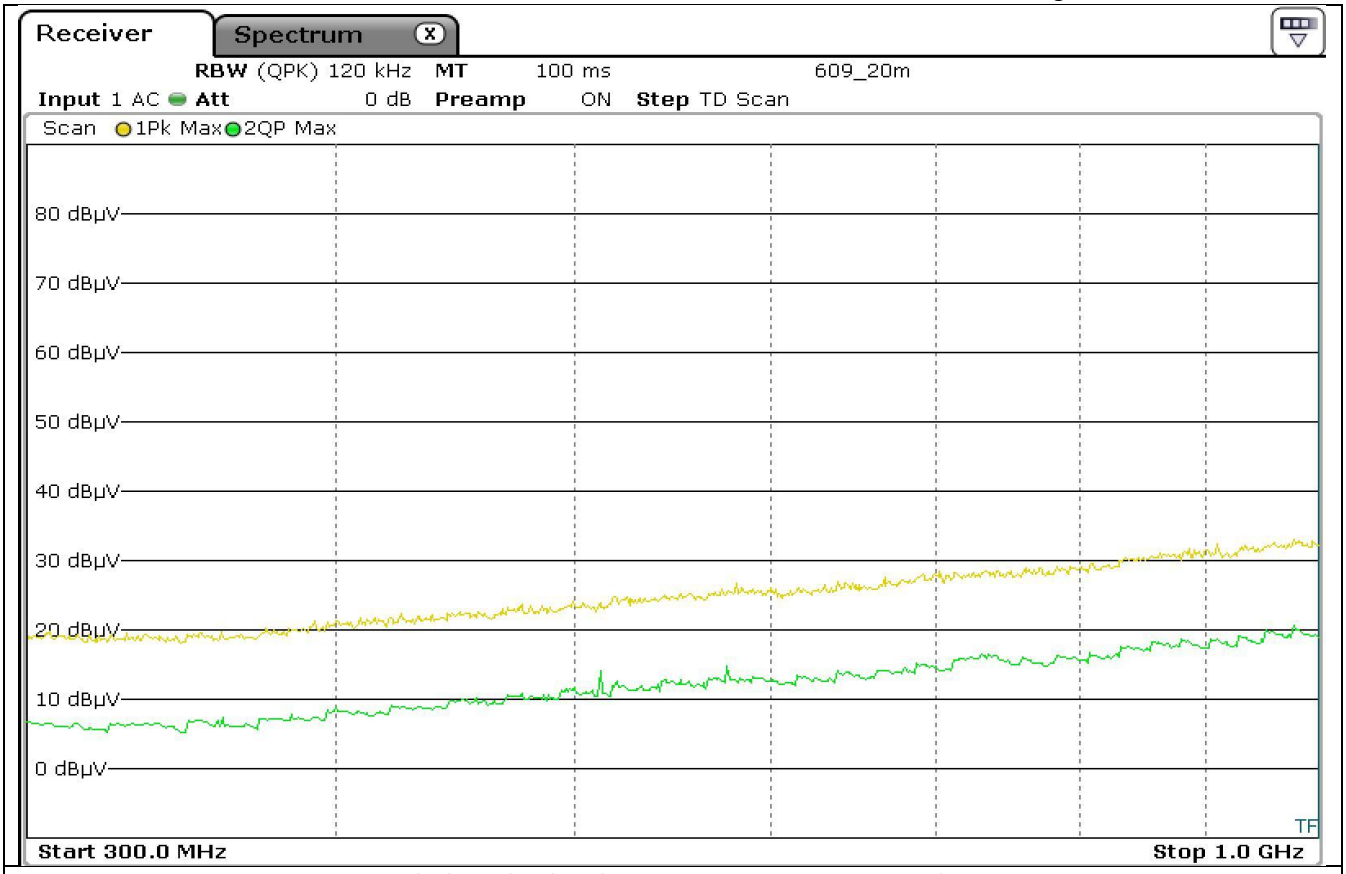



Fig C3 High Channel Radiated Emissions 300MHz -1GHz Vertical 3metres

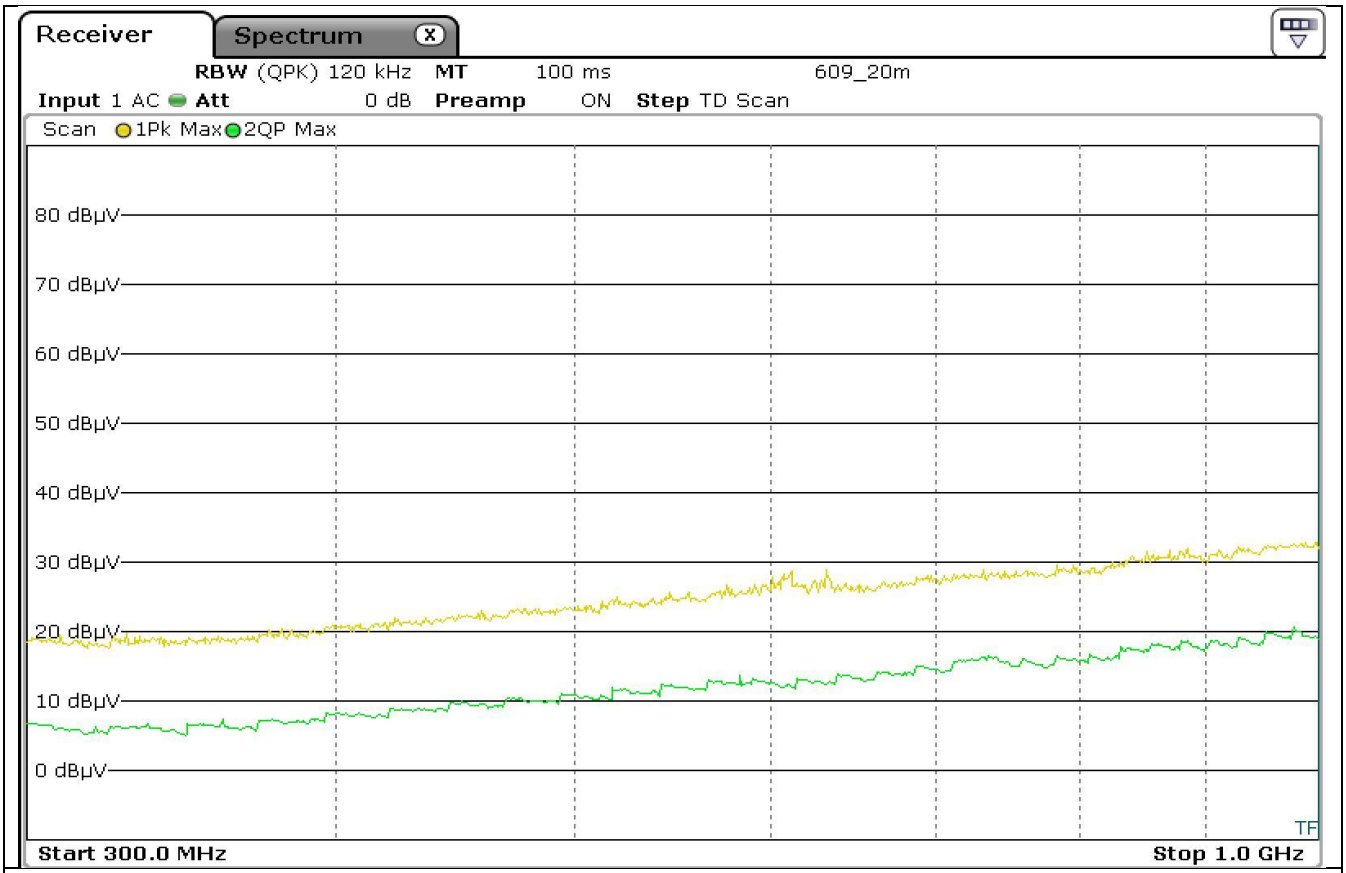



Fig C4 High Channel Radiated Emissions 300MHz -1GHz Horizontal 3metres

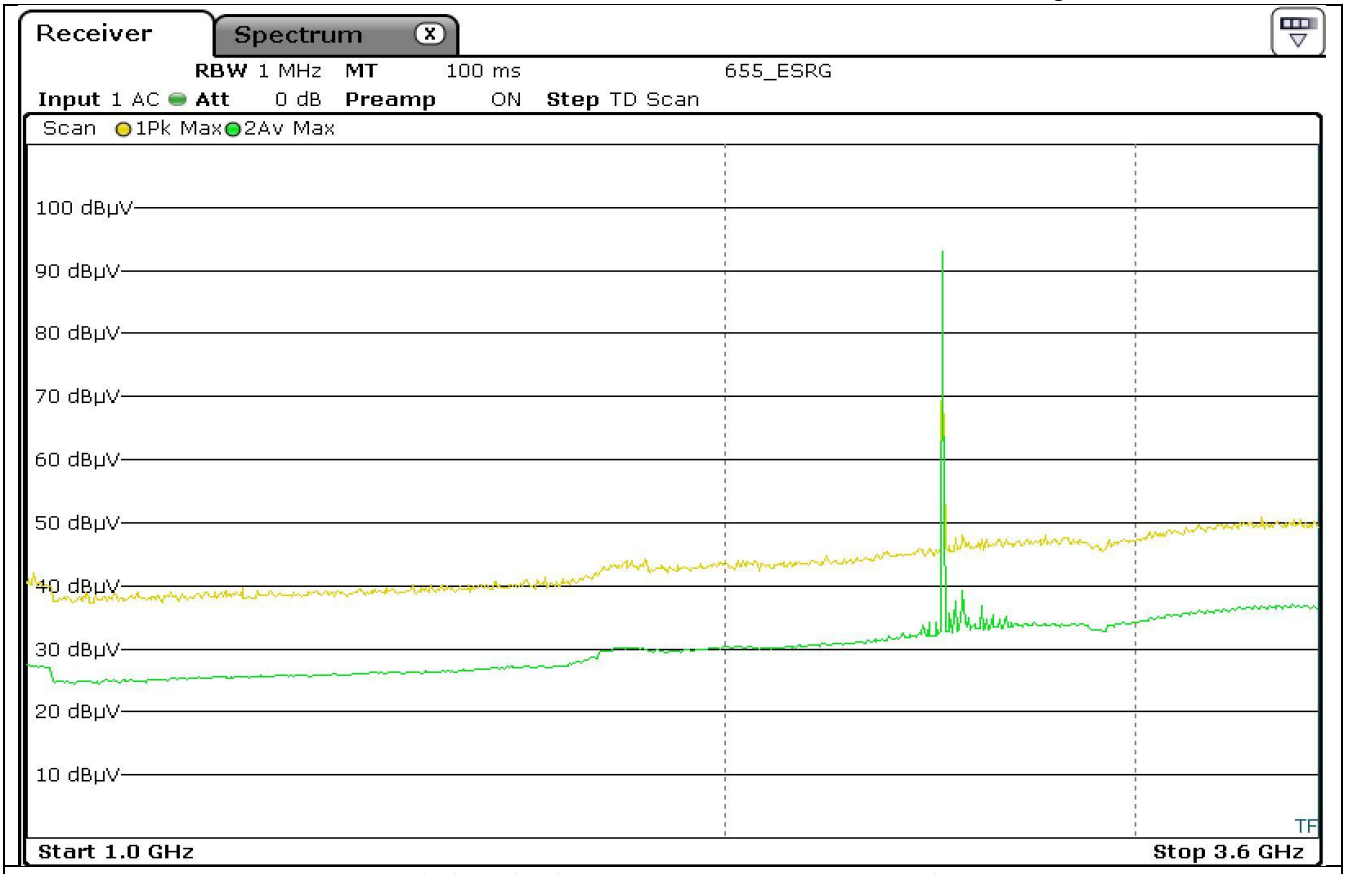



Fig C5 High Channel Radiated Emissions 1GHz -3.6GHz Vertical 3metres

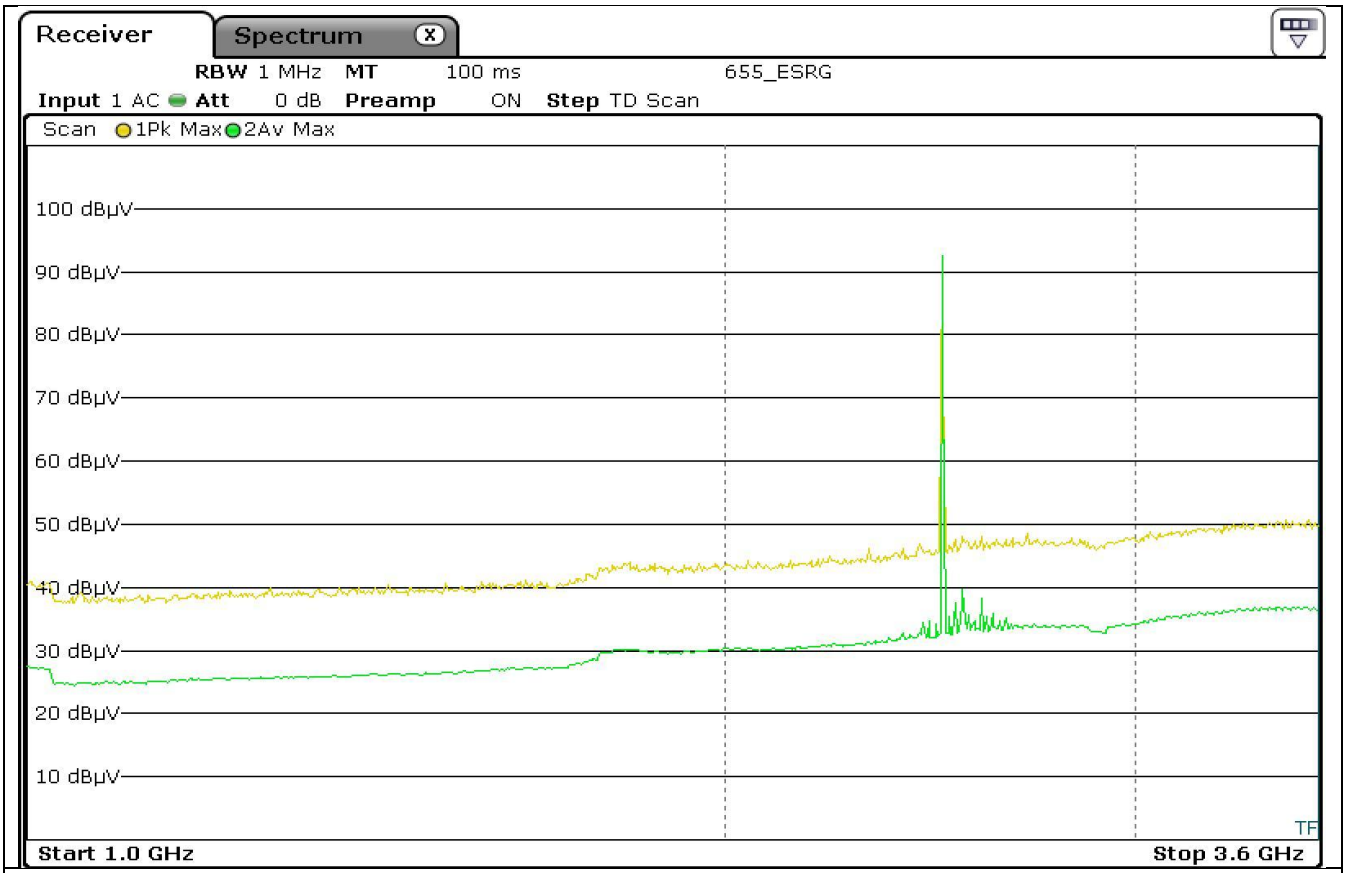
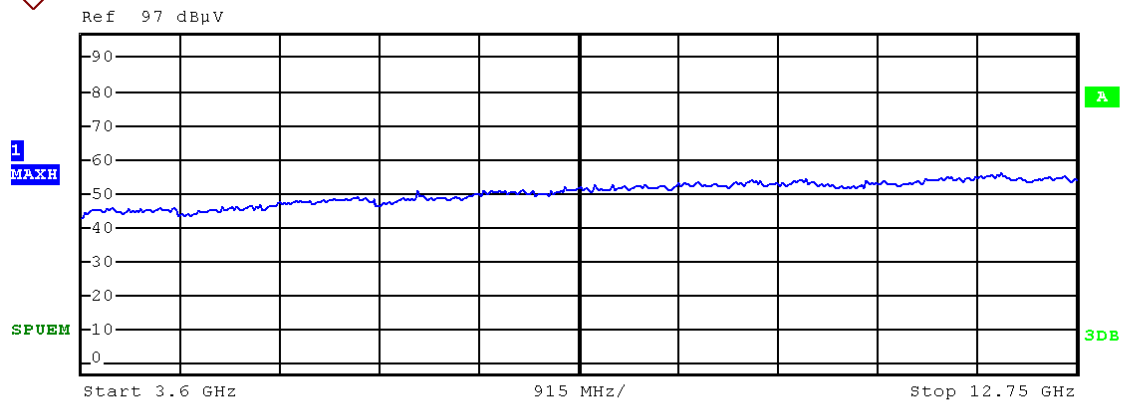
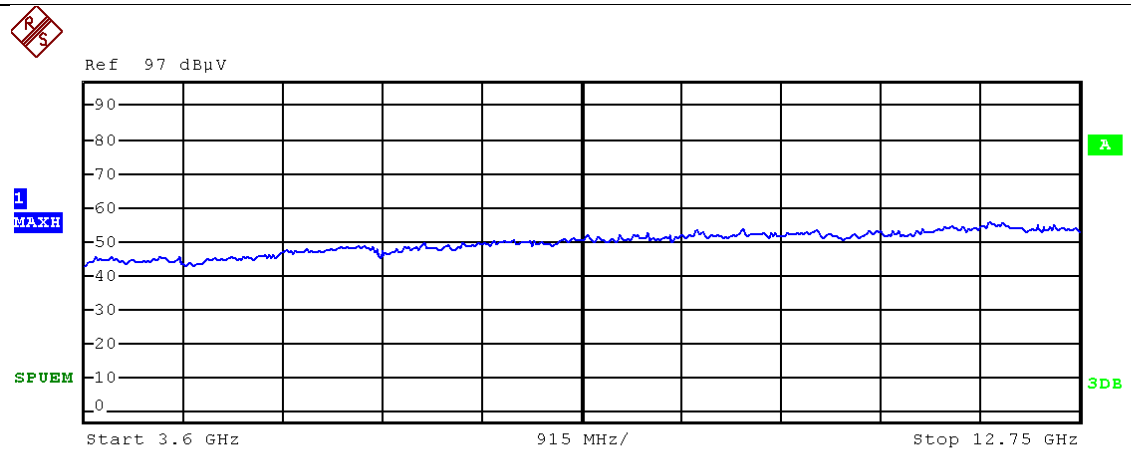



Fig C6 High Channel Radiated Emissions 1GHz -3.6GHz Horizontal 3metres



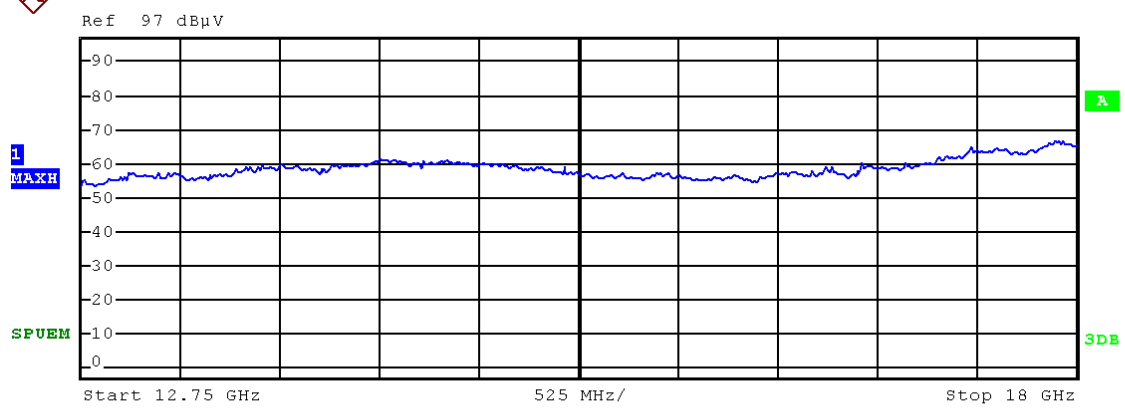

| Start [Hz] | Stop [Hz] | RBW [Hz] | Freq [Hz] | PwrAbs [dBm] | ΔLimit [dB] |
|---|---|---|---|---|---|
| 3.600 G | 4.500 G | 1.00 M | 3.879113 G | -61.07 | -200.00 |
| 4.500 G | 5.400 G | 1.00 M | 5.241600 G | -60.17 | -200.00 |
| 5.400 G | 6.300 G | 1.00 M | 6.144638 G | -57.78 | -200.00 |
| 6.300 G | 7.200 G | 1.00 M | 6.686662 G | -56.07 | -200.00 |
| 7.200 G | 8.100 G | 1.00 M | 8.055787 G | -54.86 | -200.00 |
| 8.100 G | 9.000 G | 1.00 M | 8.776013 G | -54.15 | -200.00 |
| 9.000 G | 9.900 G | 1.00 M | 9.795037 G | -52.81 | -200.00 |
| 9.900 G | 10.800 G | 1.00 M | 10.269788 G | -52.33 | -200.00 |
| 10.800 G | 11.700 G | 1.00 M | 11.564213 G | -51.97 | -200.00 |
| 11.700 G | 12.750 G | 1.00 M | 12.058313 G | -50.89 | -200.00 |

Fig C7 High Channel Radiated Emissions 3.6GHz -12.75GHz Vertical 3metres



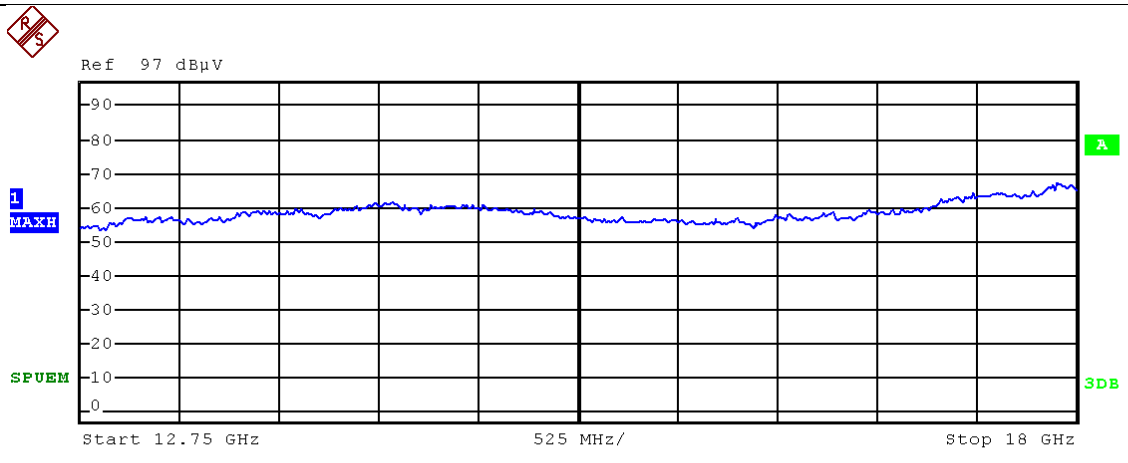

| Start [Hz] | Stop [Hz] | RBW [Hz] | Freq [Hz] | PwrAbs [dBm] | ΔLimit [dB] |
|---|---|---|---|---|---|
| 3.600 G | 4.500 G | 1.00 M | 3.709687 G | -60.90 | -200.00 |
| 4.500 G | 5.400 G | 1.00 M | 5.260725 G | -60.32 | -200.00 |
| 5.400 G | 6.300 G | 1.00 M | 6.130800 G | -58.21 | -200.00 |
| 6.300 G | 7.200 G | 1.00 M | 6.729300 G | -57.20 | -200.00 |
| 7.200 G | 8.100 G | 1.00 M | 8.012925 G | -56.08 | -200.00 |
| 8.100 G | 9.000 G | 1.00 M | 8.779500 G | -54.04 | -200.00 |
| 9.000 G | 9.900 G | 1.00 M | 9.658575 G | -53.22 | -200.00 |
| 9.900 G | 10.800 G | 1.00 M | 10.339313 G | -53.29 | -200.00 |
| 10.800 G | 11.700 G | 1.00 M | 11.668275 G | -52.12 | -200.00 |
| 11.700 G | 12.750 G | 1.00 M | 11.903831 G | -50.94 | -200.00 |

Fig C8 High Channel Radiated Emissions 3.6GHz -12.75GHz Horizontal 3metres



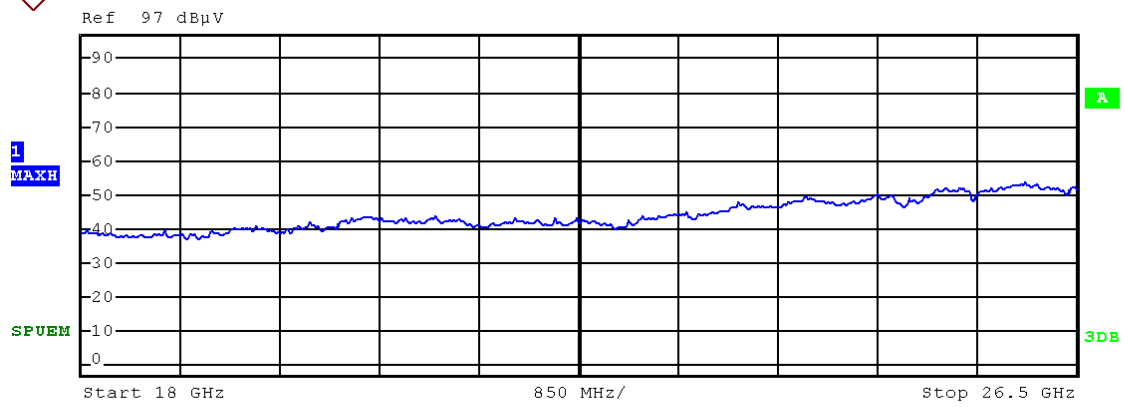

| Start [Hz] | Stop [Hz] | RBW [Hz] | Freq [Hz] | PwrAbs [dBm] | ΔLimit [dB] |
|---|---|---|---|---|---|
| 12.750 G | 13.650 G | 1.00 M | 13.644150 G | -47.76 | -200.00 |
| 13.650 G | 14.550 G | 1.00 M | 14.320050 G | -45.51 | -200.00 |
| 14.550 G | 15.450 G | 1.00 M | 14.670600 G | -45.68 | -200.00 |
| 15.450 G | 16.350 G | 1.00 M | 15.604350 G | -49.28 | -200.00 |
| 16.350 G | 18.000 G | 1.00 M | 17.909250 G | -39.97 | -200.00 |

Fig C9 High Channel Radiated Emissions 12.75GHz -18GHz Vertical 3metres



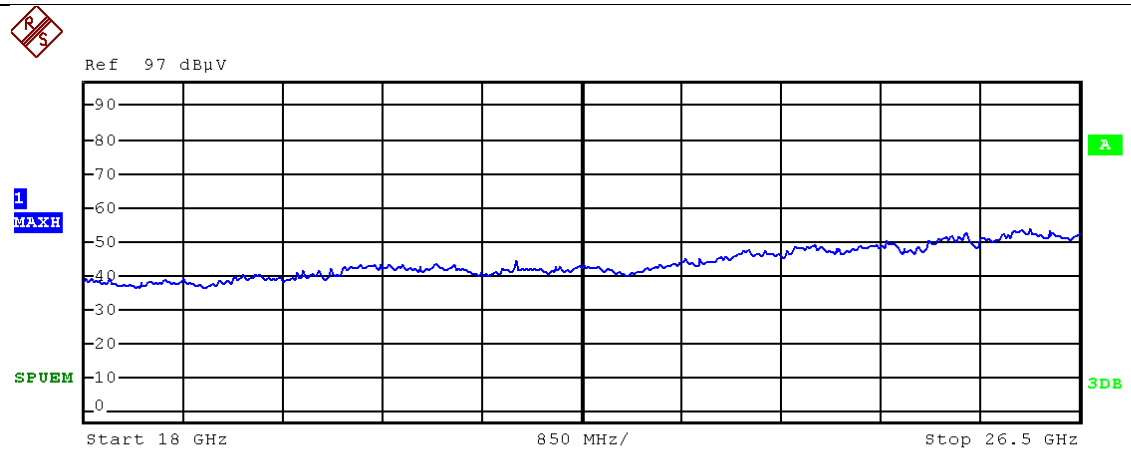

| Start [Hz] | Stop [Hz] | RBW [Hz] | Freq [Hz] | PwrAbs [dBm] | ΔLimit [dB] |
|---|---|---|---|---|---|
| 12.750 G | 13.650 G | 1.00 M | 13.606013 G | -48.14 | -200.00 |
| 13.650 G | 14.550 G | 1.00 M | 14.397000 G | -45.12 | -200.00 |
| 14.550 G | 15.450 G | 1.00 M | 14.868600 G | -45.91 | -200.00 |
| 15.450 G | 16.350 G | 1.00 M | 15.603450 G | -49.52 | -200.00 |
| 16.350 G | 18.000 G | 1.00 M | 17.896875 G | -39.75 | -200.00 |

Fig C10 High Channel Radiated Emissions 12.75GHz -18GHz Horizontal 3metres




| Start [Hz] | Stop [Hz] | RBW [Hz] | Freq [Hz] | PwrAbs [dBm] | ΔLimit [dB] |
|---|---|---|---|---|---|
| 18.000 G | 18.850 G | 1.00 M | 18.717294 G | -67.04 | -200.00 |
| 18.850 G | 19.700 G | 1.00 M | 19.497062 G | -65.97 | -200.00 |
| 19.700 G | 20.550 G | 1.00 M | 20.439181 G | -63.22 | -200.00 |
| 20.550 G | 21.400 G | 1.00 M | 21.032162 G | -62.94 | -200.00 |
| 21.400 G | 22.250 G | 1.00 M | 22.243094 G | -63.49 | -200.00 |
| 22.250 G | 23.100 G | 1.00 M | 23.058669 G | -62.48 | -200.00 |
| 23.100 G | 23.950 G | 1.00 M | 23.603944 G | -58.57 | -200.00 |
| 23.950 G | 25.650 G | 1.00 M | 25.527388 G | -54.59 | -200.00 |
| 25.650 G | 26.500 G | 1.00 M | 26.049925 G | -52.91 | -200.00 |

Fig C11 High Channel Radiated Emissions 18GHz -26.5GHz Vertical 1metre




| Start [Hz] | Stop [Hz] | RBW [Hz] | Freq [Hz] | PwrAbs [dBm] | ΔLimit [dB] |
|---|---|---|---|---|---|
| 18.000 G | 18.850 G | 1.00 M | 18.214200 G | -67.44 | -200.00 |
| 18.850 G | 19.700 G | 1.00 M | 19.466675 G | -66.50 | -200.00 |
| 19.700 G | 20.550 G | 1.00 M | 20.476369 G | -63.44 | -200.00 |
| 20.550 G | 21.400 G | 1.00 M | 21.155731 G | -63.33 | -200.00 |
| 21.400 G | 22.250 G | 1.00 M | 21.683581 G | -62.59 | -200.00 |
| 22.250 G | 23.100 G | 1.00 M | 23.075988 G | -63.09 | -200.00 |
| 23.100 G | 23.950 G | 1.00 M | 23.659938 G | -59.25 | -200.00 |
| 23.950 G | 25.650 G | 1.00 M | 25.538438 G | -54.18 | -200.00 |
| 25.650 G | 26.500 G | 1.00 M | 26.067775 G | -52.93 | -200.00 |

Fig C12 High Channel Radiated Emissions 18GHz -26.5GHz Horizontal 1metre

## Appendix D Conducted Emissions on the Mains

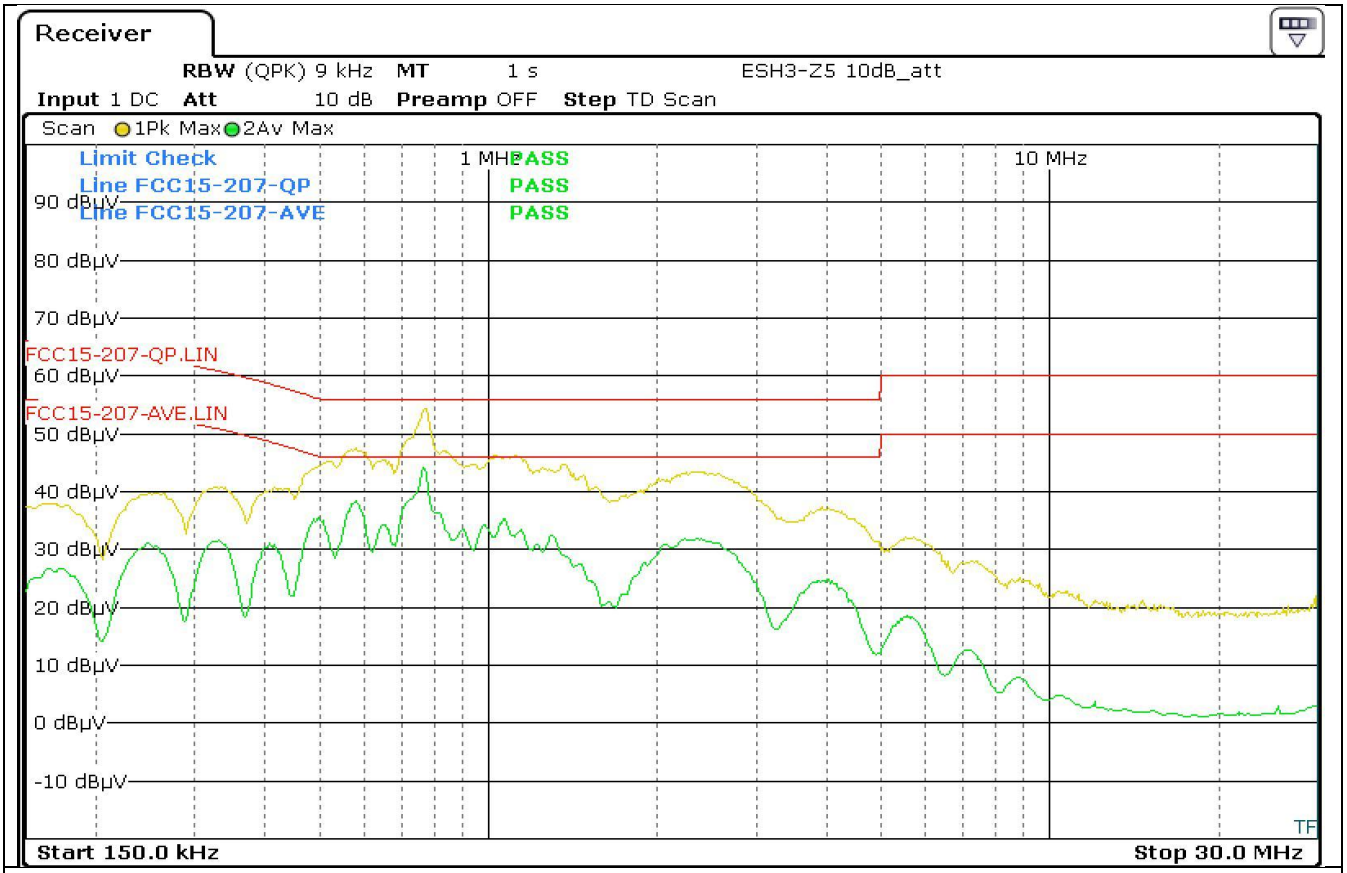



Fig D1 Conducted Emissions on the mains Live

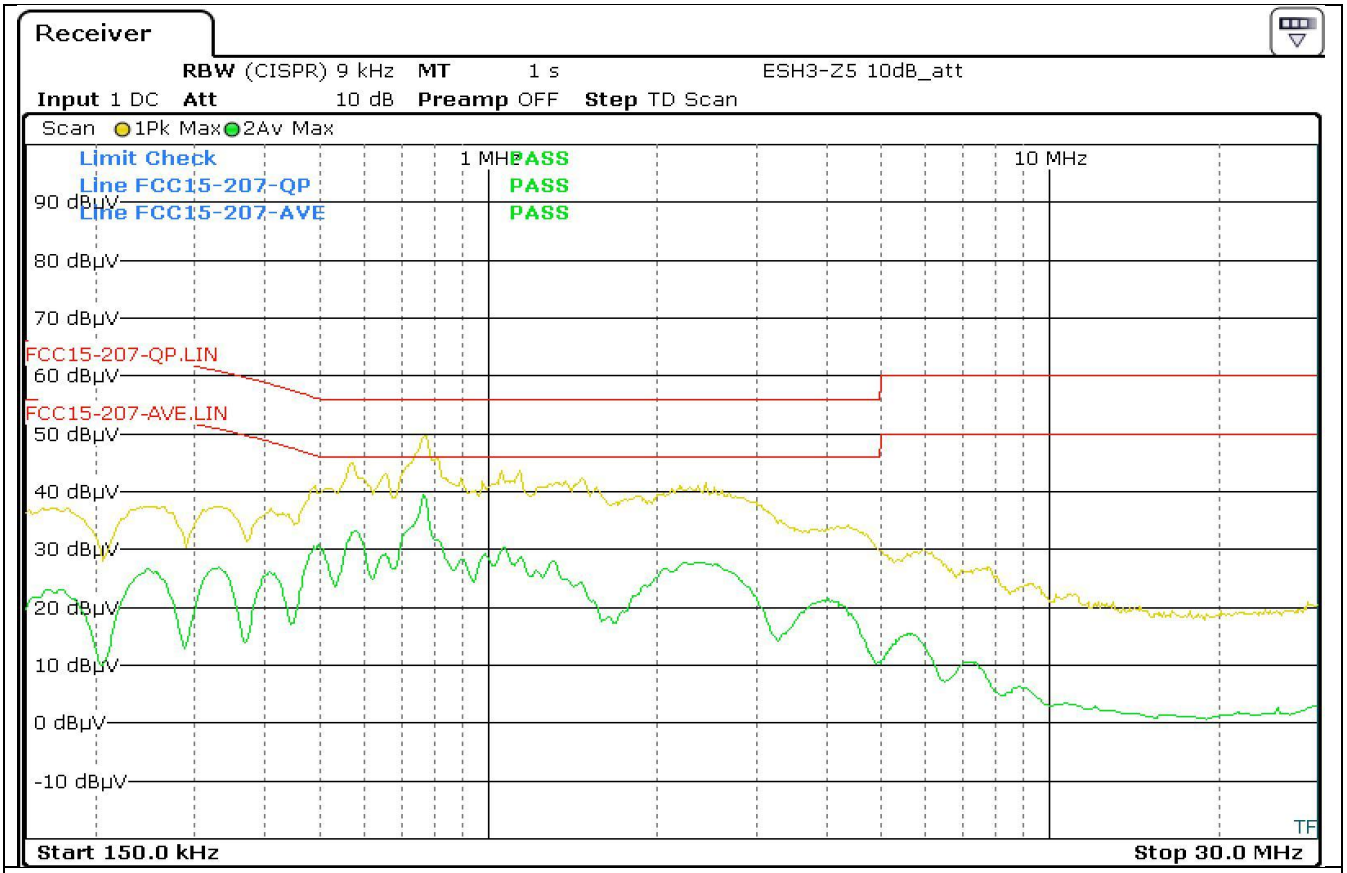



Fig D2 Conducted Emissions on the mains Neutral

## Appendix E  EUT Orientations for Radiated Emissions

Fig E1: EUT Orientation O1

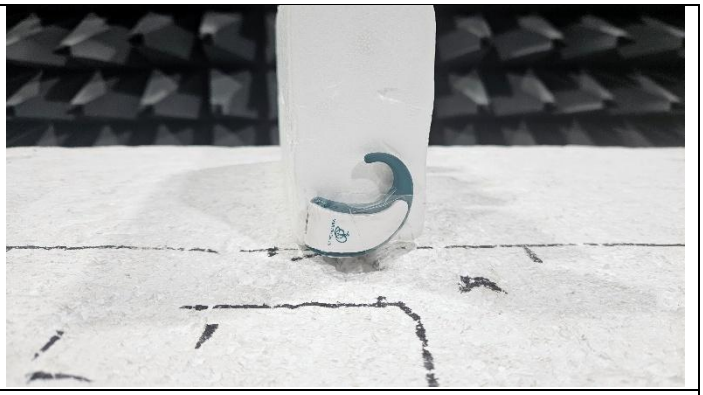


Fig E2: EUT Orientation O2

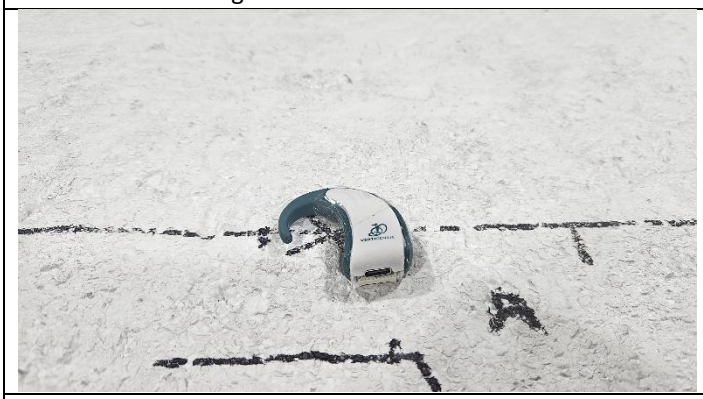
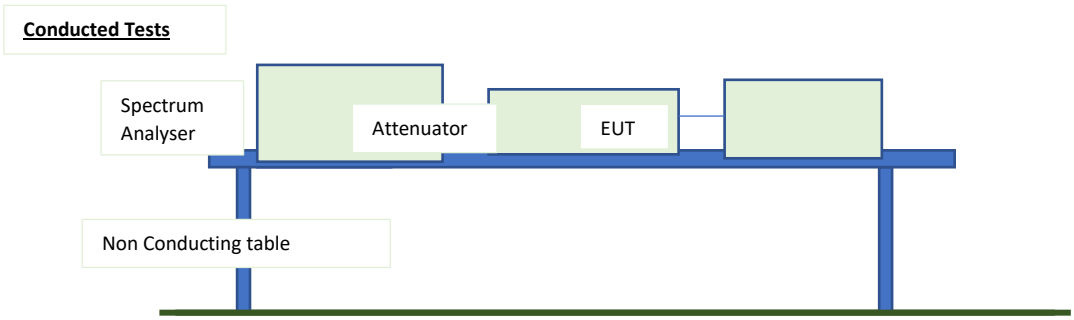
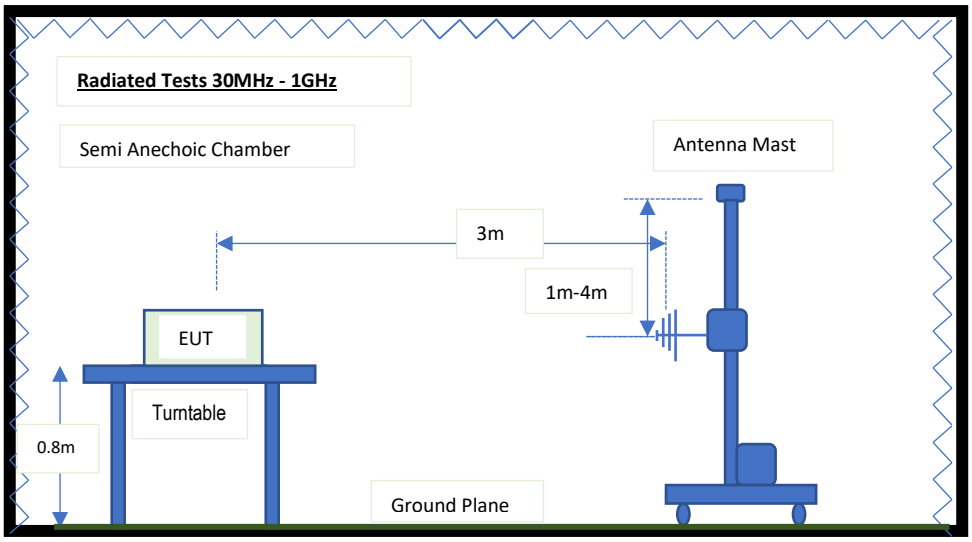
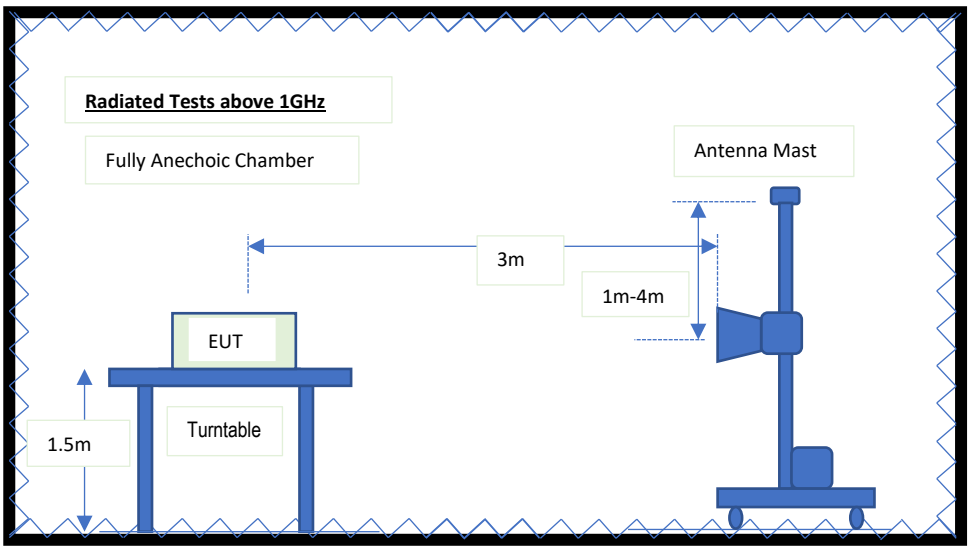


Fig E3: EUT Orientation O3

# Appendix G Block Diagrams of test set up




End of Report