COMPLIANCE ENGINEERING IRELAND LTD

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Project Number: 16E6009-1c

Prepared for:

**Tekelek Europe Ltd.**

By

Compliance Engineering Ireland Ltd

Clonross Lane

Derrockstown

Dunshaughlin

Co. Meath

**FCC Site Registration: 92592**

FCC ID: S6T750

**Date**

15th Nov 2016

FCC EQUIPMENT AUTHORISATION

Test Report

**EUT Description**

**SRD Liquid level Gauge**

| | |
|---|---|
| **Authorised :** | |
| **John McAuley** | |

**TEST SUMMARY**

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

| FCC Part Section(s) | TEST PARAMETERS | Test Result |
|---|---|---|
| 15.247a 2 | 6dB bandwidth | Pass |
| 15.247e | Power Spectral Density | Pass |
| 15.247(b)1 | Output power Conducted | Pass |
| 15.247(d)1 | Conducted Spurious Emissions | Pass |
| 15.209 | Radiated Spurious Emissions | Pass |
| 15.247a | 99% bandwidth | Pass |

THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF COMPLIANCE ENGINEERING IRELAND LTD

# Exhibit A – Technical Report

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## 1.0 EUT Description

| | |
|---|---|
| **Model:** | TEK 750<br><br>TEK750EXT |
| **Type:** | SRD Liquid level gauge |
| **FCC ID:** | S6T750 |
| **Company:** | Tekelek Europe Ltd |
| **Contact** | Martin Callinan |
| **Address:** | Unit 118<br>Shannon<br>Co Clare<br>Ireland |
| **Phone:** | +353 61 471511 |
| **e-mail:** | Martin.callinan@tekelek.ie |
| **Test Standards:** | 47 CFR, Part 15.247 |
| **Type of radio:** | Stand-alone |
| **Transmitter Type:** | 802.11b, g, n |
| **Operating Frequency Range(s):** | 2.412 GHz- 2.462GHz |
| **Number of Channels:** | 11 |
| **Antenna:** | Integral |
| **Power configuration:** | 3.6 v Battery. |
| **Ports:** | None |
| **Oper. Temp Range:** | -40° C to +85° C |
| **Classification:** | DTS |
| **Test Methodology:** | Measurements performed according to the procedures in ANSI C63.10-2013 |

The TEK 750 is a tank monitor product with WiFi connectivity. The unit is battery powered, wakes up periodically and performs an ullage measurement and also periodically (once per day) connects to a remote server via a WiFi connection using Channels 1 to 11 to report the measurements.

There are two models
a)TEK750 with internal pcb antenna connection and
b)TEK750EXT with external antenna connection (max gain of 7dBi**)**.
Both models use the same artwork and firmware and changing the location of one capacitor switches between internal and external antenna connections.
Note the EUT case is made of plastic.

## 1.1 EUT Operation

**Operating Conditions during Test:**

The EUT was operated in test mode where the channel and modulation was set via USB connection to a laptop.
The EUT was powered from a bench PSU set to 3.6Vdc.
The tests were carried out on 2 samples of EUT
-one EUT (TEK750EXT) sample for conducted tests on the antenna port . The antenna port on this unit was terminated for radiated emissions testing.
and another sample TEK750 (where internal antenna was connected) for radiated tests.

**Environmental conditions**

During the measurement the environmental conditions were within the listed ranges:

☒ Normal

| | |
|---|---|
| Temperature: | +15 to +35 ° C |
| Humidity: | 20-75 % |

## 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 4th ,16th of March and 20th May ; 24th and 25th Oct 2016.

## 1.4 Electromagnetic Emissions Testing

The guidelines of CISPR 16-4 were used for all uncertainty calculations, estimates and expressions thereof for EMC testing. A copy of Compliance Engineering Ireland Ltd's policy for EMC Measurement Uncertainty is available on request.

### 1.4.1 Measurement Uncertainty

The measurement uncertainty (with a 95% confidence level) for the conducted emissions test was ±3.5 dB.

The measurement uncertainty (with a 95% confidence level) for the radiated emissions test was ±5.3 dB (from 30 to 100 MHz), ±4.7 dB (from 100 to 300 MHz), ±3.9 dB (from 300 to 1000 MHz) and ±3.8 dB (from 1 GHz to 40 GHz).

## 1.5. Description of Test modes

Channel List

| Channel | Freq MHz | Channel | Freq MHz |
|---|---|---|---|
| 1 | 2412 | 7 | 2442 |
| 2 | 2417 | 8 | 2447 |
| 3 | 2422 | 9 | 2452 |
| 4 | 2427 | 10 | 2457 |
| 5 | 2432 | 11 | 2462 |
| 6 | 2437 | | |

Available Data Rates

| 802.11 B | 802.11 G | 802.11 N |
|---|---|---|
| MB/s | MB/s | MB/s |
| 1,2,5.5,11 | 6,9,12,18,24,36,48,54 | 6.5,13,19.5,26,39,52,58.5,65 |
| 1,2,5.5,11 | 6,9,12,18,24,36,48,54 | 6.5,13,19.5,26,39,52,58.5,65 |
| 1,2,5.5,11 | 6,9,12,18,24,36,48,54 | 6.5,13,19.5,26,39,52,58.5,65 |

Evaluation test for max power test carried out on the following

| Channel | Freq | B | G | N |
|---|---|---|---|---|
| | MHz | MB/s | MB/s | MB/s |
| 1 | 2412 | 1,2,5.5,11 | 6,9,12,18,24,36,48,54 | 6.5,13,19.5,26,39,52,58.5,65 |
| 6 | 2437 | 1,2,5.5,11 | 6,9,12,18,24,36,48,54 | 6.5,13,19.5,26,39,52,58.5,65 |
| 11 | 2462 | 1,2,5.5,11 | 6,9,12,18,24,36,48,54 | 6.5,13,19.5,26,39,52,58.5,65 |

Complete test was carried out on the worst cases for Ch1 B/G/N Ch6 B/G/N and Ch11 B/G/N

It was found that the highest output levels were recorded on the 802.11B modulation

# 2 Emissions Measurements

## 2.1 Conducted Emissions Measurements

The EUT artwork allowed the placement of a connector for conducted antenna measurements and changing the location of a capacitor removed the printed antenna from the circuit and permitted the conducted signal for the antenna to be routed to the antenna connector .

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 bi-log 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 above 1GHz 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 In this case the resolution bandwidth was 1MHz and video bandwidth was 1MHz. 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) .

## 2.3 Antenna Requirements

### According to FCC 47 CFR 15.203:

*"An intentional radiator antenna shall be designed to ensure that no antenna other than that furnished by the responsible party can be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section."*

The Internal antenna complies with this requirement.

The option for external antenna has a reverse polarity SMA connector and thereby meets this requirement.

*The E.U.T Complies with the requirement of 15.203

## 3.0 Results for Conducted emissions on the mains

Test not performed as EUT is battery powered only and battery cannot be recharged while in the unit.

# 4. Conducted Measurements

## 4.1 Bandwidth

### 4.1.1 6dB bandwidth

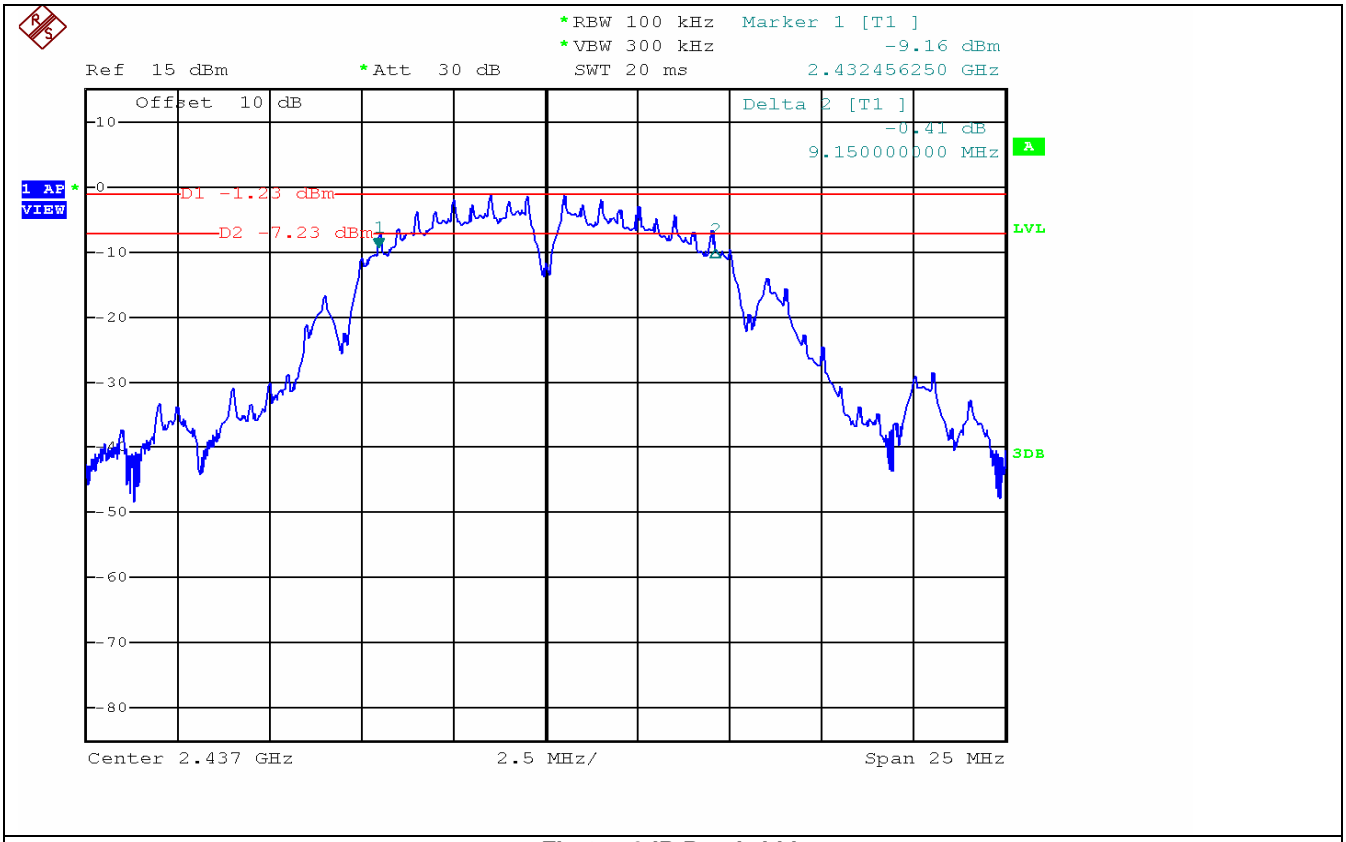



**Fig 1 6dB Bandwidth**

### 4.1.2 99% bandwidth

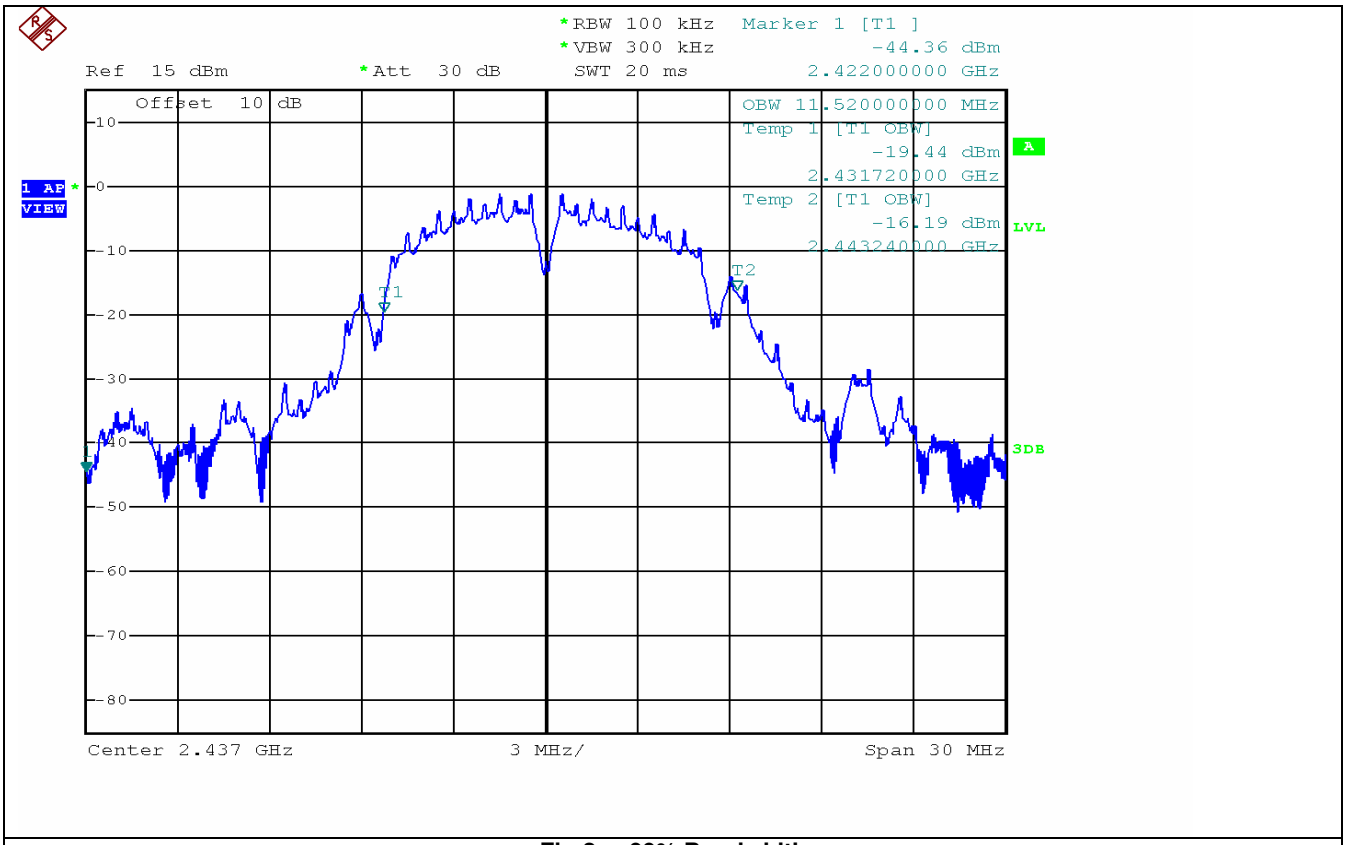



**Fig 2 99% Bandwidth**

### Bandwidth

| Channel | 802.11 | Frequency | 6dB Bandwidth | 99% Bandwidth |
|---|---|---|---|---|
| | | GHz | MHz | MHz |
| Low | B | 2.412 | 9.038 | 11.388 |
| Mid | B | 2.437 | 9.15 | 11.520 |
| High | B | 2.462 | 9.16 | 11.574 |
| Low | G | 2.412 | 16.662 | 20.316 |
| Mid | G | 2.437 | 16.662 | 17.64 |
| High | G | 2.462 | 16.752 | 19.128 |
| Low | N | 2.412 | 17.898 | 20.196 |
| Mid | N | 2.437 | 17.976 | 19.08 |
| High | N | 2.462 | 17.916 | 18.818 |

Limit for 6dB Bandwidth = 500KHz min

**Result :- Pass**

## 4.2 Power Spectral Density

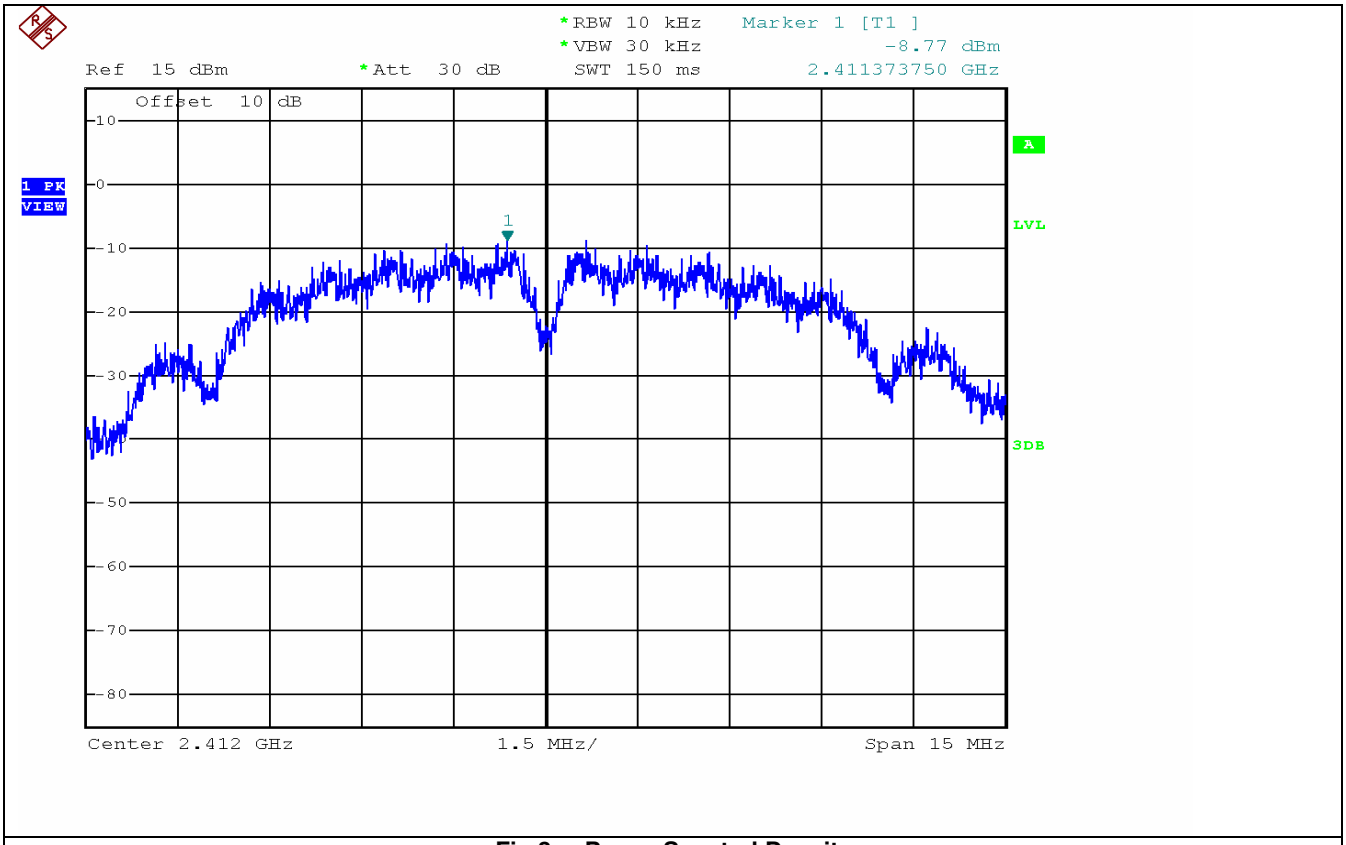



**Fig 3 Power Spectral Density**

| Channel | 802.11 | Frequency | Power Spectral Density | Limit |
|---|---|---|---|---|
| | | GHz | dBm | dBm |
| Low | B | 2.412 | -8.77 | 8 |
| Mid | B | 2.437 | -8.95 | 8 |
| High | B | 2.462 | -9.03 | 8 |
| Low | G | 2.412 | -10.31 | 8 |
| Mid | G | 2.437 | -11.79 | 8 |
| High | G | 2.462 | -11.83 | 8 |
| Low | N | 2.412 | -10.23 | 8 |
| Mid | N | 2.437 | -10.75 | 8 |
| High | N | 2.462 | -10.51 | 8 |

**Result :- Pass**

## 4.3 Output power Conducted

| Channel | 802.11 | Frequency | Output Power Peak | Antenna Gain | Eirp | Limit | Margin |
|---|---|---|---|---|---|---|---|
| | | GHz | dBm | dBi | dBm | dBm | dB |
| Low | B | 2.412 | 12.9 | 7 | 19.9 | 29 | 9.1 |
| Mid | B | 2.437 | 12.4 | 7 | 19.4 | 29 | 9.6 |
| High | B | 2.462 | 11.8 | 7 | 18.8 | 29 | 10.2 |
| Low | G | 2.412 | 12.3 | 7 | 19.3 | 29 | 9.7 |
| Mid | G | 2.437 | 11.9 | 7 | 18.9 | 29 | 10.1 |
| High | G | 2.462 | 11.6 | 7 | 18.6 | 29 | 10.4 |
| Low | N | 2.412 | 12.3 | 7 | 19.3 | 29 | 9.7 |
| Mid | N | 2.437 | 11.8 | 7 | 18.8 | 29 | 10.2 |
| High | N | 2.462 | 11.5 | 7 | 18.5 | 29 | 10.5 |

Measured using peak power meter connected to the antenna port

Test Result :- Pass

# 5. Radiated Emissions

## 5.1 Output Power Radiated Results Internal Antenna

| Channel | 802.11 | Frequency | Radiated Field Strength | Output Power | Limit |
|---|---|---|---|---|---|
| | | GHz | dBuV/m | dBm | dBm |
| Low | B | 2.412 | 98.40 | 3.17 | 30 |
| Mid | B | 2.437 | 97.80 | 2.57 | 30 |
| High | B | 2.462 | 97.10 | 1.87 | 30 |
| Low | G | 2.412 | 97.60 | 2.37 | 30 |
| Mid | G | 2.437 | 97.20 | 1.97 | 30 |
| High | G | 2.462 | 97.20 | 1.97 | 30 |
| Low | N | 2.412 | 97.70 | 2.47 | 30 |
| Mid | N | 2.437 | 97.40 | 2.17 | 30 |
| High | N | 2.462 | 97.00 | 1.77 | 30 |

Radiated Field Strength measured at 3 metres measured using peak power meter.

Output power calculated using

eirp = pt x gt = (E x d)2 /30

As per eq 1 KDB 412172 D01 Determining ERP and EIRP v01r01

Test Result :- Pass

## 5..2 Radiated Spurious Emissions Measurements (1GHz – 26 GHz)

### 5.2.1 Internal Antenna

| Frequency GHz | Peak Level dBuV/m | Antenna Factor dB | Preamp Gain dB | Cable Loss | Antenna Polarity | Final Peak Level dBuV/m | Average Limit +20dB dBuV/m | Margin dB |
|---|---|---|---|---|---|---|---|---|
| 4.824 | 57.2 | 32.5 | 38.6 | 6.6 | Vertical | 57.7 | 74.0 | 16.3 |
| 4.824 | 55.2 | 32.5 | 38.6 | 6.6 | Horizontal | 55.7 | 74.0 | 18.3 |
| 7.236 | 50.4 | 35.5 | 39 | 8.0 | Vertical | 54.9 | 74.0 | 19.1 |
| 7.236 | 45.6 | 35.5 | 39 | 8.0 | Horizontal | 50.1 | 74.0 | 23.8 |
| 4.874 | 56.4 | 32.5 | 38.6 | 6.6 | Vertical | 56.9 | 74.0 | 17.1 |
| 4.874 | 53.5 | 32.5 | 38.6 | 6.6 | Horizontal | 54.0 | 74.0 | 20.0 |
| 7.311 | 49.3 | 35.5 | 39 | 8.0 | Vertical | 53.8 | 74.0 | 20.2 |
| 7.311 | 50.7 | 35.5 | 39 | 8.0 | Horizontal | 55.2 | 74.0 | 18.8 |
| 4.924 | 57.8 | 32.5 | 38.6 | 6.6 | Vertical | 58.3 | 74.0 | 15.7 |
| 4.924 | 55.8 | 32.5 | 38.6 | 6.6 | Horizontal | 56.3 | 74.0 | 17.7 |
| 7.386 | 50.7 | 35.5 | 39 | 8.0 | Vertical | 55.2 | 74.0 | 18.7 |
| 7.386 | 50.3 | 35.5 | 39 | 8.0 | Horizontal | 54.8 | 74.0 | 19.2 |

| Frequency GHz | Average Level dBuV/m | Antenna Factor dB | Preamp Gain dB | Cable Loss | Antenna Polarity | Final Average Level dBuV/m | Average Limit dBuV/m | Margin dB |
|---|---|---|---|---|---|---|---|---|
| 4.824 | 52.7 | 32.5 | 38.6 | 6.6 | Vertical | 53.2 | 54.0 | 0.8 |
| 4.824 | 49.6 | 32.5 | 38.6 | 6.6 | Horizontal | 50.1 | 54.0 | 3.9 |
| 7.236 | 36.1 | 35.5 | 39 | 8.0 | Vertical | 40.6 | 54.0 | 13.4 |
| 7.236 | 36.2 | 35.5 | 39 | 8.0 | Horizontal | 40.7 | 54.0 | 13.3 |
| 4.874 | 53.0 | 32.5 | 38.6 | 6.6 | Vertical | 53.5 | 54.0 | 0.5 |
| 4.874 | 48.2 | 32.5 | 38.6 | 6.6 | Horizontal | 48.7 | 54.0 | 5.3 |
| 7.311 | 36.4 | 35.5 | 39 | 8.0 | Vertical | 40.9 | 54.0 | 13.1 |
| 7.311 | 36.3 | 35.5 | 39 | 8.0 | Horizontal | 40.8 | 54.0 | 13.2 |
| 4.924 | 52.8 | 32.5 | 38.6 | 6.6 | Vertical | 53.3 | 54.0 | 0.7 |
| 4.924 | 50.7 | 32.5 | 38.6 | 6.6 | Horizontal | 51.2 | 54.0 | 2.7 |
| 7.386 | 36.7 | 35.5 | 39 | 8.0 | Vertical | 41.2 | 54.0 | 12.8 |
| 7.386 | 36.6 | 35.5 | 39 | 8.0 | Horizontal | 41.1 | 54.0 | 12.8 |

Peak measurement performed with Resolution Bandwidth set to 1MHz as per ANSI C63.10-2013 Section 4.1.4.2.2

Average measurement performed with Video Bandwidth set to 10Hz as per ANSI C63.10-2013 Section 4.1.4.2.3

Test Result :- Pass

## 5.3 Spurious Emissions in Restricted bands

### 5.3.1 Antenna-port conducted measurements

As per KDB 558074 section 12.2

| Freq | Peak | Antenna Gain | EIRP | 20log(D) | Conversion factor | Max Ground Reflection | **E** | Limit | Margin | Pass/Fail |
|---|---|---|---|---|---|---|---|---|---|---|
| GHz | dBm | dBi | dBm | dB | | dB | dBuV/m | dBuV/m | | |
| 4.824 | **-67.6** | **7** | **-60.6** | **-9.54** | **104.80** | **0.0** | 34.66 | 74 | 39.34 | Pass |
| 7.236 | **-74.3** | **7** | **-67.3** | **-9.54** | **104.80** | **0.0** | 27.96 | 74 | 46.04 | Pass |
| 12.06 | **-73.3** | **7** | **-66.3** | **-9.54** | **104.80** | **0.0** | 28.96 | 74 | 45.04 | Pass |
| 4.874 | **-72.1** | **7** | **-65.1** | **-9.54** | **104.80** | **0.0** | 30.16 | 74 | 43.84 | Pass |
| 7.311 | **-76.1** | **7** | **-69.1** | **-9.54** | **104.80** | **0.0** | 26.16 | 74 | 47.84 | Pass |
| 12.185 | **-76.6** | **7** | **-69.6** | **-9.54** | **104.80** | **0.0** | 25.66 | 74 | 48.34 | Pass |
| 4.924 | **-72.6** | **7** | **-65.6** | **-9.54** | **104.80** | **0.0** | 29.66 | 74 | 44.34 | Pass |
| 7.386 | **-76.1** | **7** | **-69.1** | **-9.54** | **104.80** | **0.0** | 26.16 | 74 | 47.84 | Pass |
| 12.31 | **-76.2** | **7** | **-69.2** | **-9.54** | **104.80** | **0.0** | 26.06 | 74 | 47.94 | Pass |

### 5.3.2 Radiated Emissions with antenna port terminated

| Frequency GHz | Peak Level dBuV/m | Antenna Factor dB | Preamp Gain dB | Cable Loss | Antenna Polarity | EUT Orientation | Final Peak Level dBuV/m | Average Limit +20dB dBuV/m | Margin dB |
|---|---|---|---|---|---|---|---|---|---|
| 4.824 | 57.7 | 32.5 | 38.6 | 6.6 | Vertical | O1 | 58.2 | 74.0 | 15.8 |
| 4.824 | 56.4 | 32.5 | 38.6 | 6.6 | Horizontal | O1 | 56.9 | 74.0 | 17.0 |
| 7.236 | 40.1 | 35.5 | 39 | 8.0 | Vertical | O1 | 44.6 | 74.0 | 29.4 |
| 7.236 | 35.3 | 35.5 | 39 | 8.0 | Horizontal | O1 | 39.8 | 74.0 | 34.1 |
| 4.874 | 58.7 | 32.5 | 38.6 | 6.6 | Vertical | O1 | 59.2 | 74.0 | 14.8 |
| 4.874 | 57.5 | 32.5 | 38.6 | 6.6 | Horizontal | O1 | 58.0 | 74.0 | 15.9 |
| 7.311 | 40.8 | 35.5 | 39 | 8.0 | Vertical | O1 | 45.3 | 74.0 | 28.7 |
| 7.311 | 40.3 | 35.5 | 39 | 8.0 | Horizontal | O1 | 44.8 | 74.0 | 29.1 |
| 4.924 | 50.9 | 32.5 | 38.6 | 6.6 | Vertical | O1 | 51.4 | 74.0 | 22.6 |
| 4.924 | 49.8 | 32.5 | 38.6 | 6.6 | Horizontal | O1 | 50.3 | 74.0 | 23.7 |
| 7.386 | 40.1 | 35.5 | 39 | 8.0 | Vertical | O1 | 44.6 | 74.0 | 29.4 |
| 7.386 | 39.5 | 35.5 | 39 | 8.0 | Horizontal | O1 | 44.0 | 74.0 | 29.9 |

| Frequency GHz | Average Level dBuV/m | Antenna Factor dB | Preamp Gain dB | Cable Loss | Antenna Polarity | EUT Orientation | Final Average Level dBuV/m | Average Limit dBuV/m | Margin dB |
|---|---|---|---|---|---|---|---|---|---|
| 4.824 | 50.8 | 32.5 | 38.6 | 6.6 | Vertical | O1 | 51.3 | 54.0 | 2.7 |
| 4.824 | 50.8 | 32.5 | 38.6 | 6.6 | Horizontal | O1 | 51.3 | 54.0 | 2.7 |
| 7.236 | 29.4 | 35.5 | 39 | 8.0 | Vertical | O1 | 33.9 | 54.0 | 20.1 |
| 7.236 | 24.8 | 35.5 | 39 | 8.0 | Horizontal | O1 | 29.3 | 54.0 | 24.7 |
| 4.874 | 52.8 | 32.5 | 38.6 | 6.6 | Vertical | O1 | 53.3 | 54.0 | 0.7 |
| 4.874 | 51.4 | 32.5 | 38.6 | 6.6 | Horizontal | O1 | 51.9 | 54.0 | 2.1 |
| 7.311 | 30.4 | 35.5 | 39 | 8.0 | Vertical | O1 | 34.9 | 54.0 | 19.1 |
| 7.311 | 31.1 | 35.5 | 39 | 8.0 | Horizontal | O1 | 35.6 | 54.0 | 18.4 |
| 4.924 | 50.9 | 32.5 | 38.6 | 6.6 | Vertical | O1 | 51.4 | 54.0 | 2.6 |
| 4.924 | 49.8 | 32.5 | 38.6 | 6.6 | Horizontal | O1 | 50.3 | 54.0 | 3.7 |
| 7.386 | 30.3 | 35.5 | 39 | 8.0 | Vertical | O1 | 34.8 | 54.0 | 19.2 |
| 7.386 | 30.2 | 35.5 | 39 | 8.0 | Horizontal | O1 | 34.7 | 54.0 | 19.3 |

Peak measurement performed with Resolution Bandwidth set to 1MHz as per ANSI C63.10-2013 Section 4.1.4.2.2

Average measurement performed with Video Bandwidth set to 10Hz as per ANSI C63.10-2013 Section 4.1.4.2.3

Test Result :- Pass

## List of Test Equipment

| Instrument | Manufacturer | Model | Serial Num | CEI Ref | Cal Due Date | Cal Interval Months |
|---|---|---|---|---|---|---|
| Microwave Preamplifier | Hewlett Packard | 83017A | 3123A00175 | 805 | 19/09/2017 | 12 |
| Spectrum Analyser 30Hz-40GHz | Rohde& Schwarz | FSP40 | 100053 | 850 | 09/11/2018 | 36 |
| Antenna Horn | EMCO | 3115 | 9905-5809 | 655 | 03/11/2017 | 24 |
| Fully Anechoic Chamber | CEI | FAR 3M | 906 | 906 | 22/03/2018 | 36 |
| Antenna Horn | AH Systems | SAS-200/571 | 373 | 839 | 20/11/2017 | 36 |
| Power Meter USB | Dare | Radipower 3600 | 14I00889SNO05 | 913 | 12/05/2017 | 12 |

**Appendix A**

# Additional Test Results

# For

# Conducted Measurements on the Antenna Port

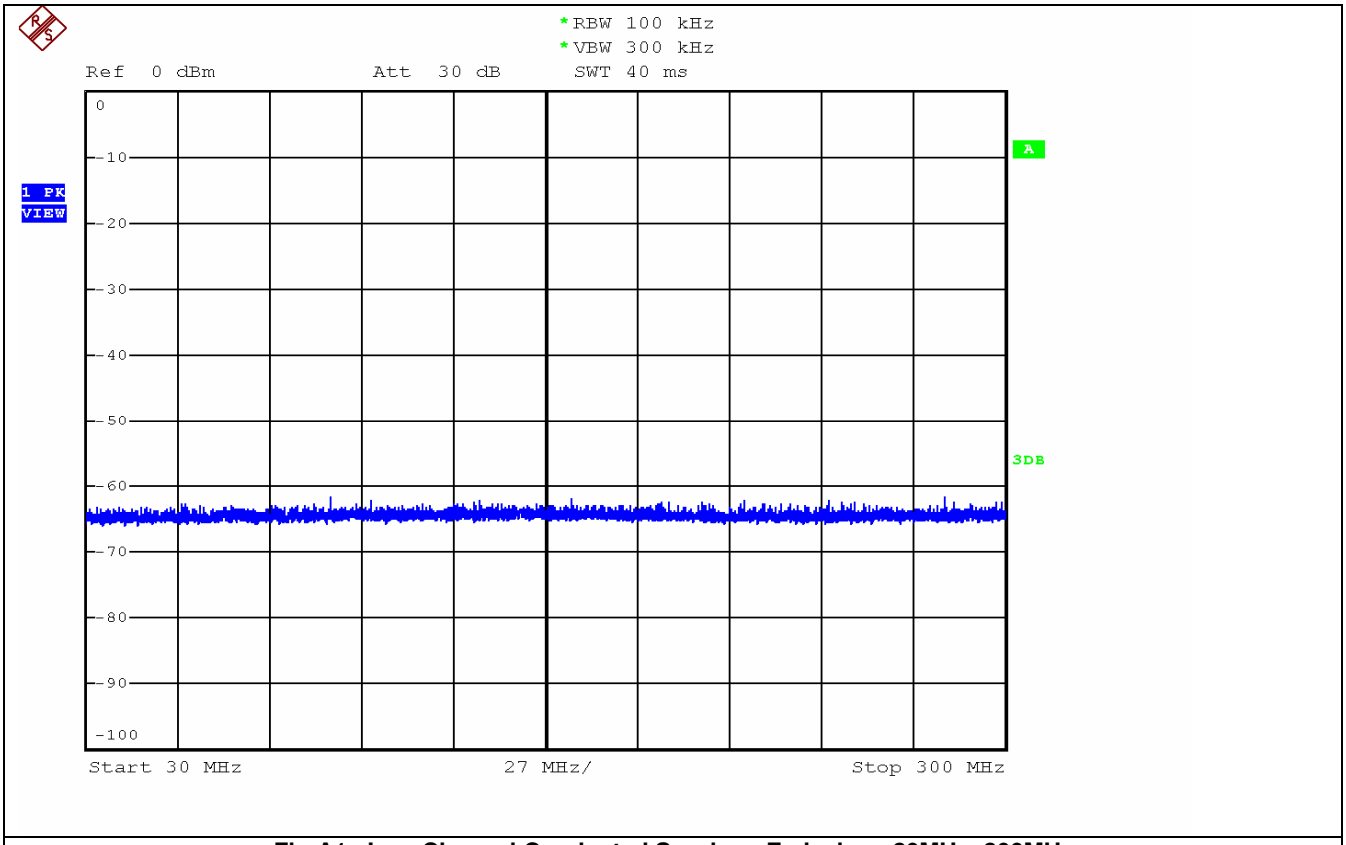



**Fig A1 Low Channel Conducted Spurious Emissions 30MHz -300MHz**

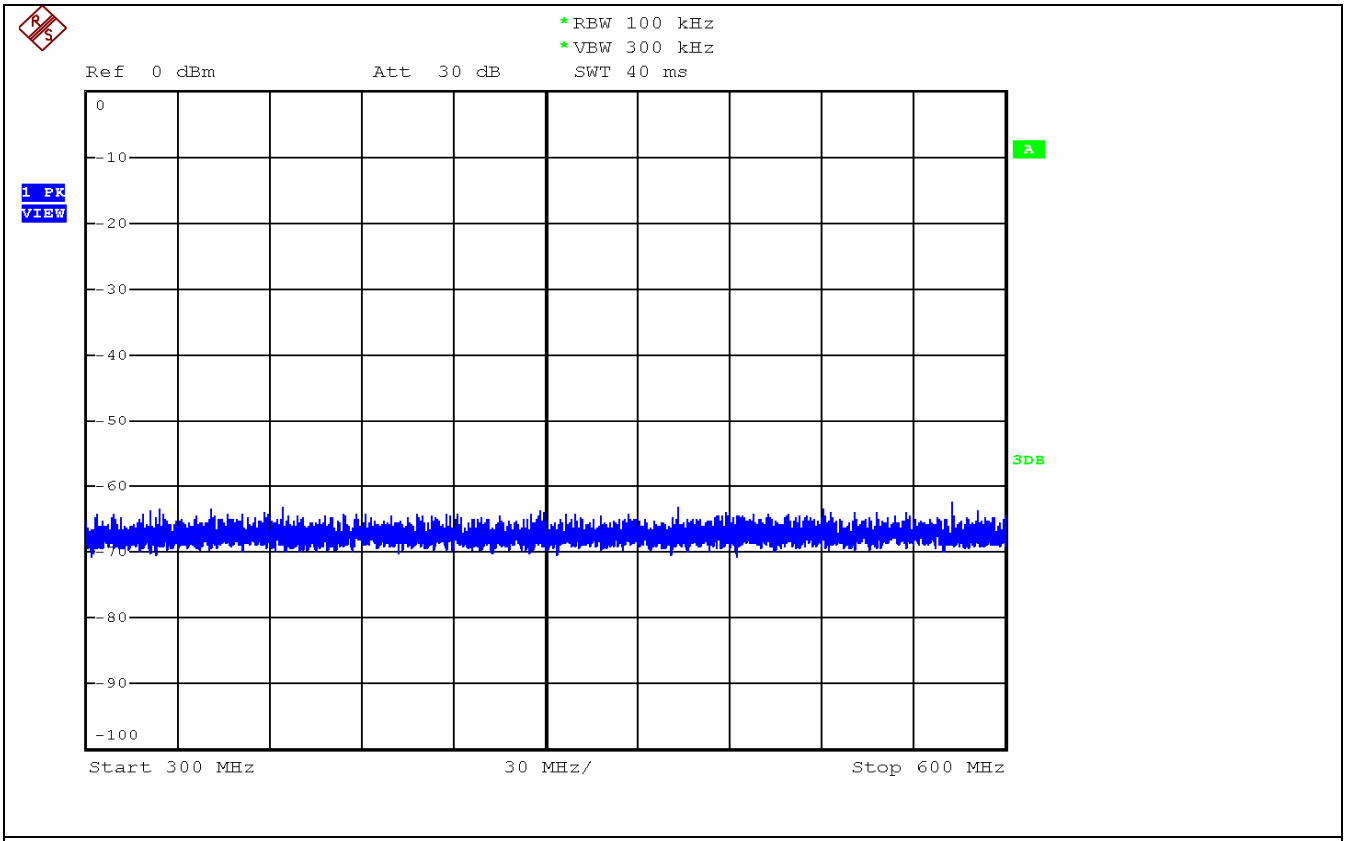



**Fig A2 Low Channel Conducted Spurious Emissions 300MHz -600MHz**

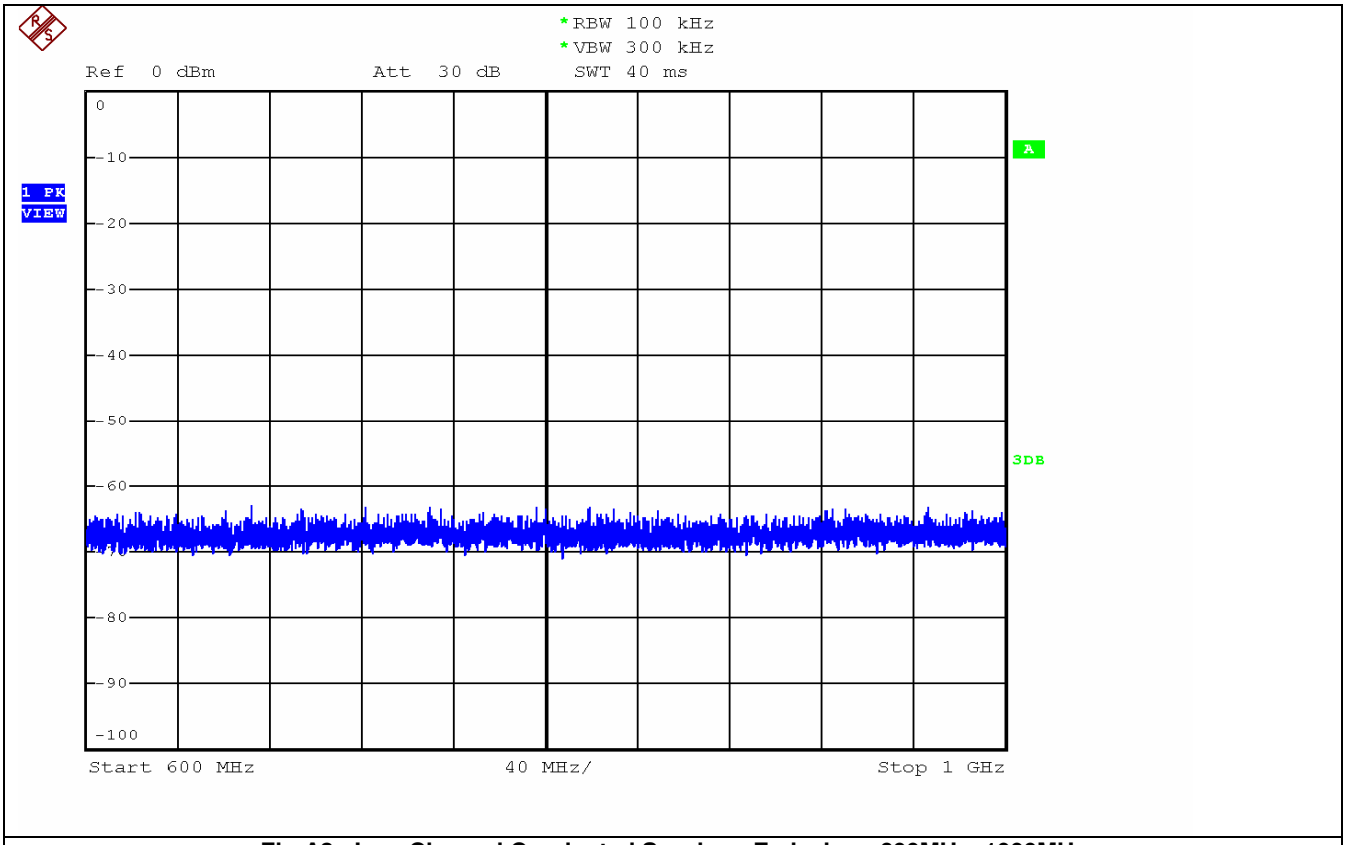



**Fig A3 Low Channel Conducted Spurious Emissions 600MHz -1000MHz**

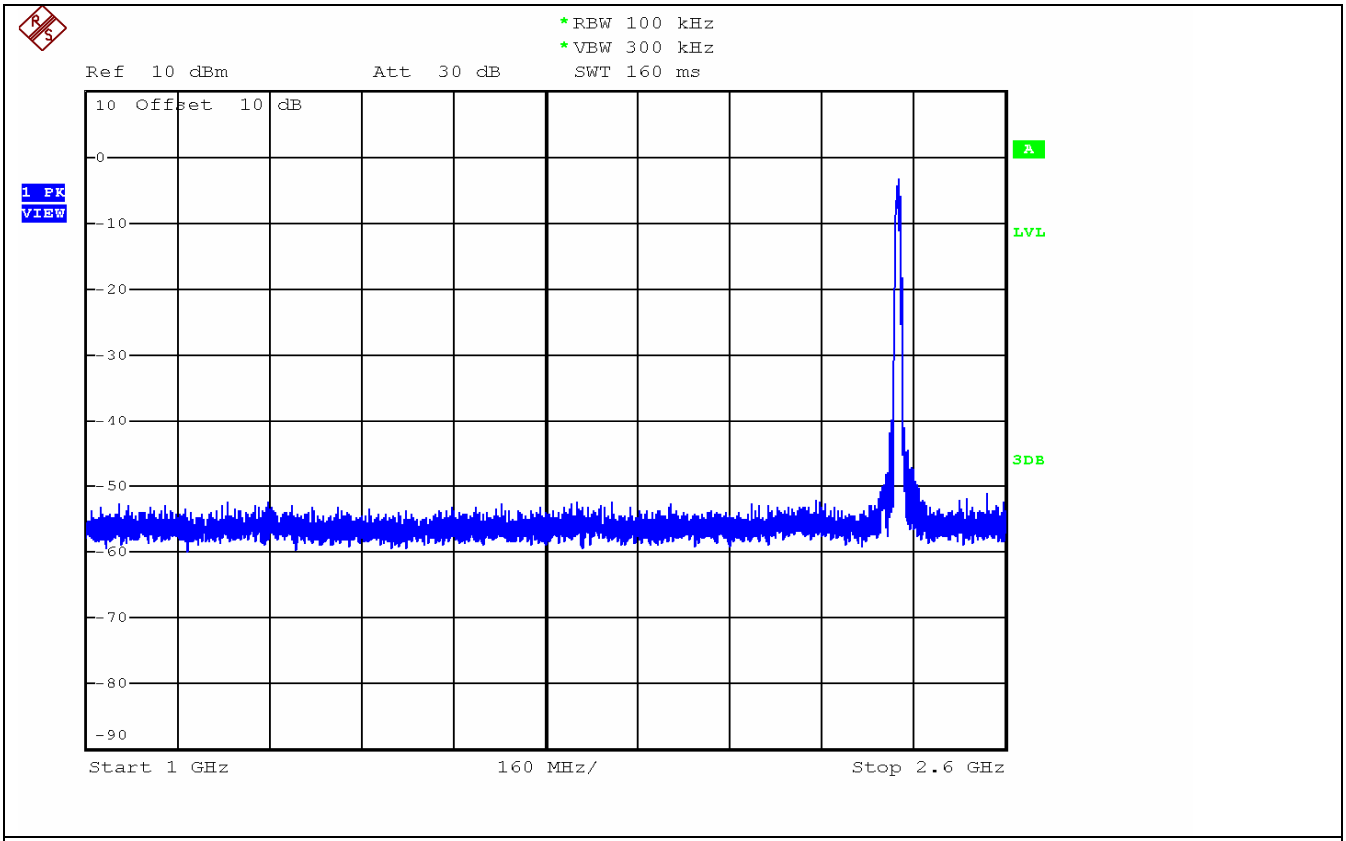
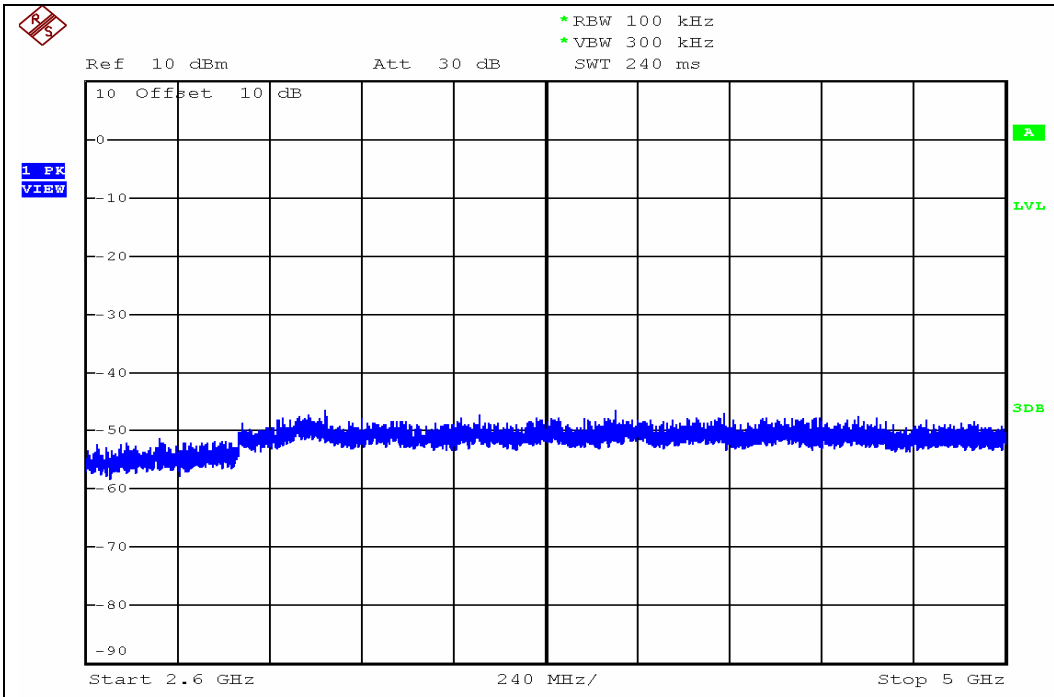



**Fig A4 Low Channel Conducted Spurious Emissions 1GHz -2.6 GHz**




Date: 4.MAR.2016 18:27:46

**Fig A5 Low Channel Conducted Spurious Emissions 2.6 GHz -5GHz**

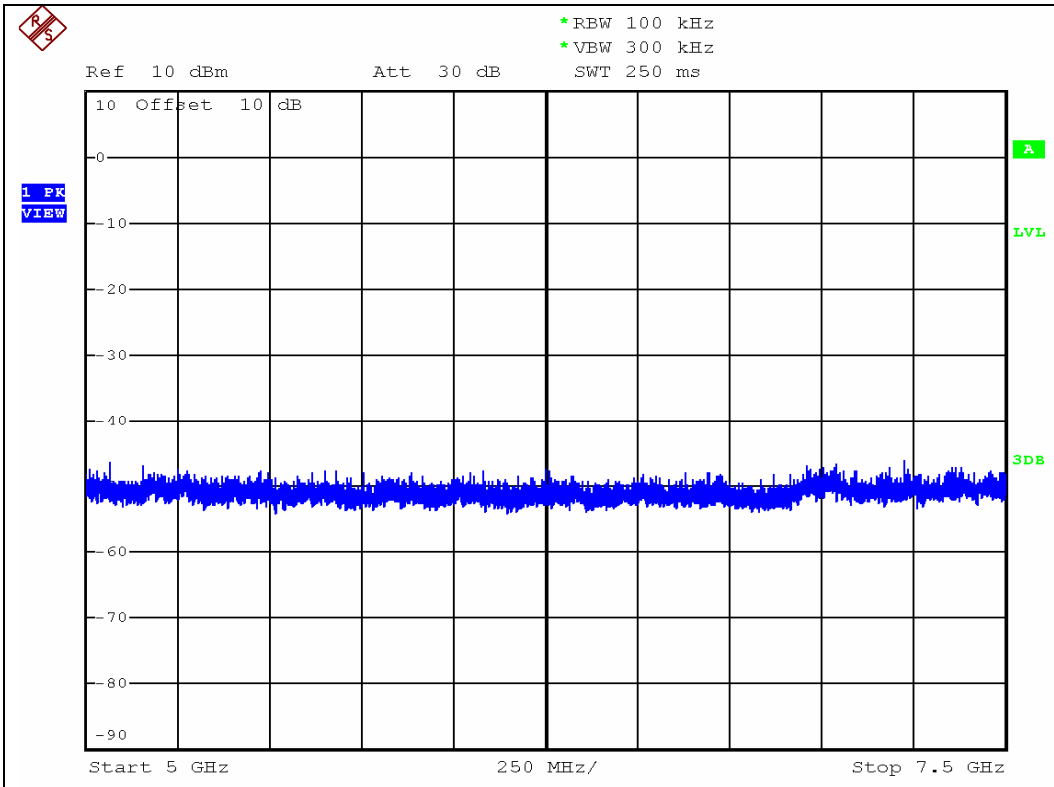



**Fig A6 Low Channel Conducted Spurious Emissions 5GHz -7.5GHz**

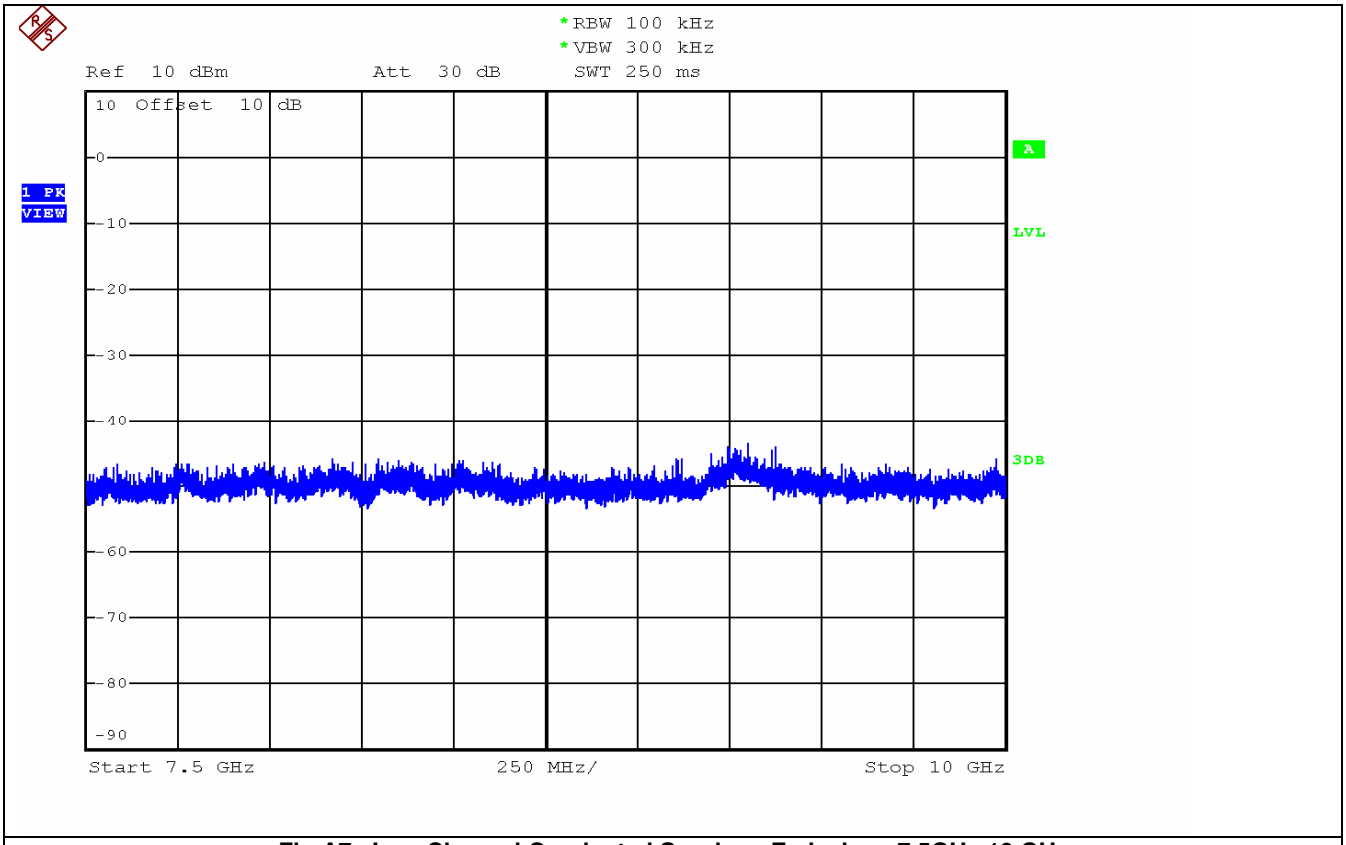



**Fig A7 Low Channel Conducted Spurious Emissions 7.5GHz-10 GHz**

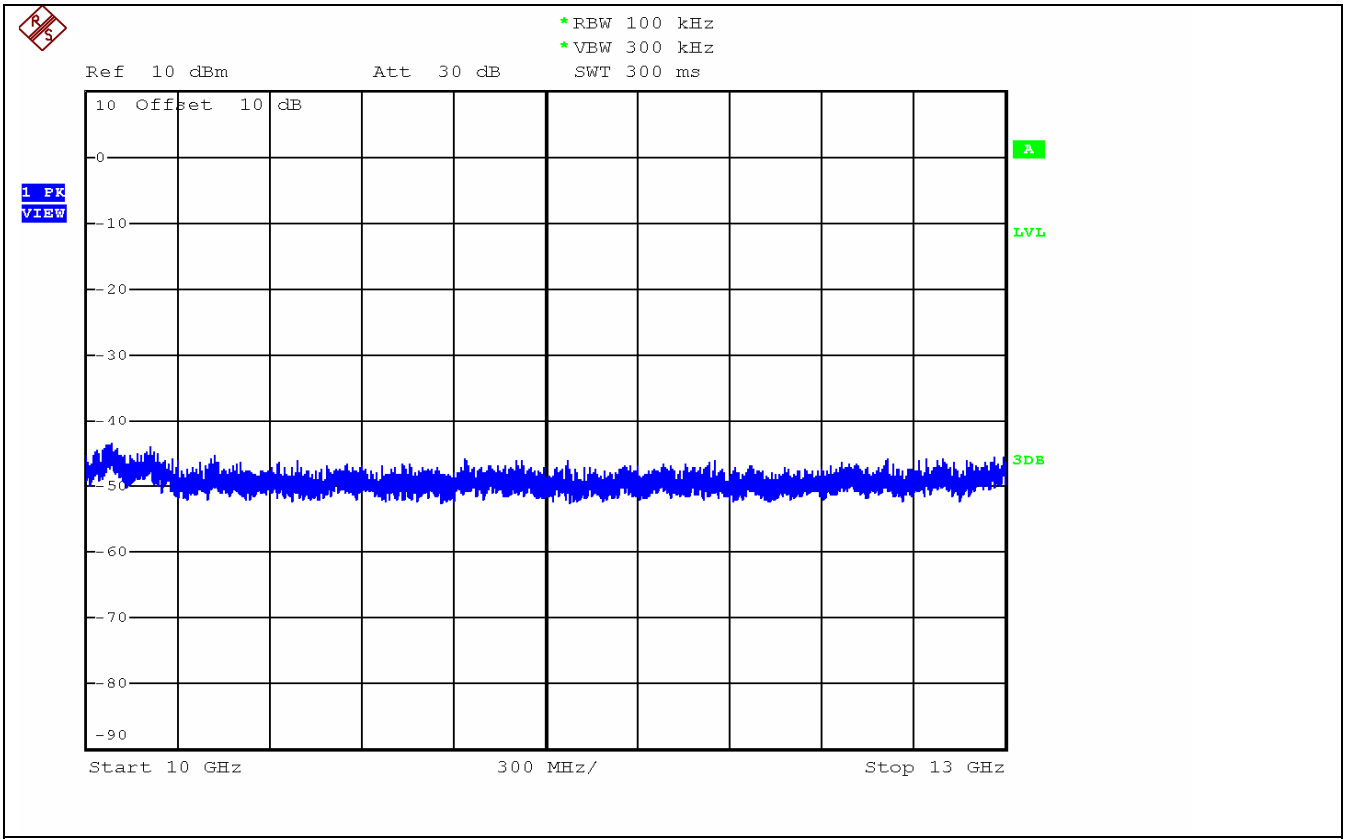



**Fig A8 Low Channel Conducted Spurious Emissions 10 GHz -13GHz**

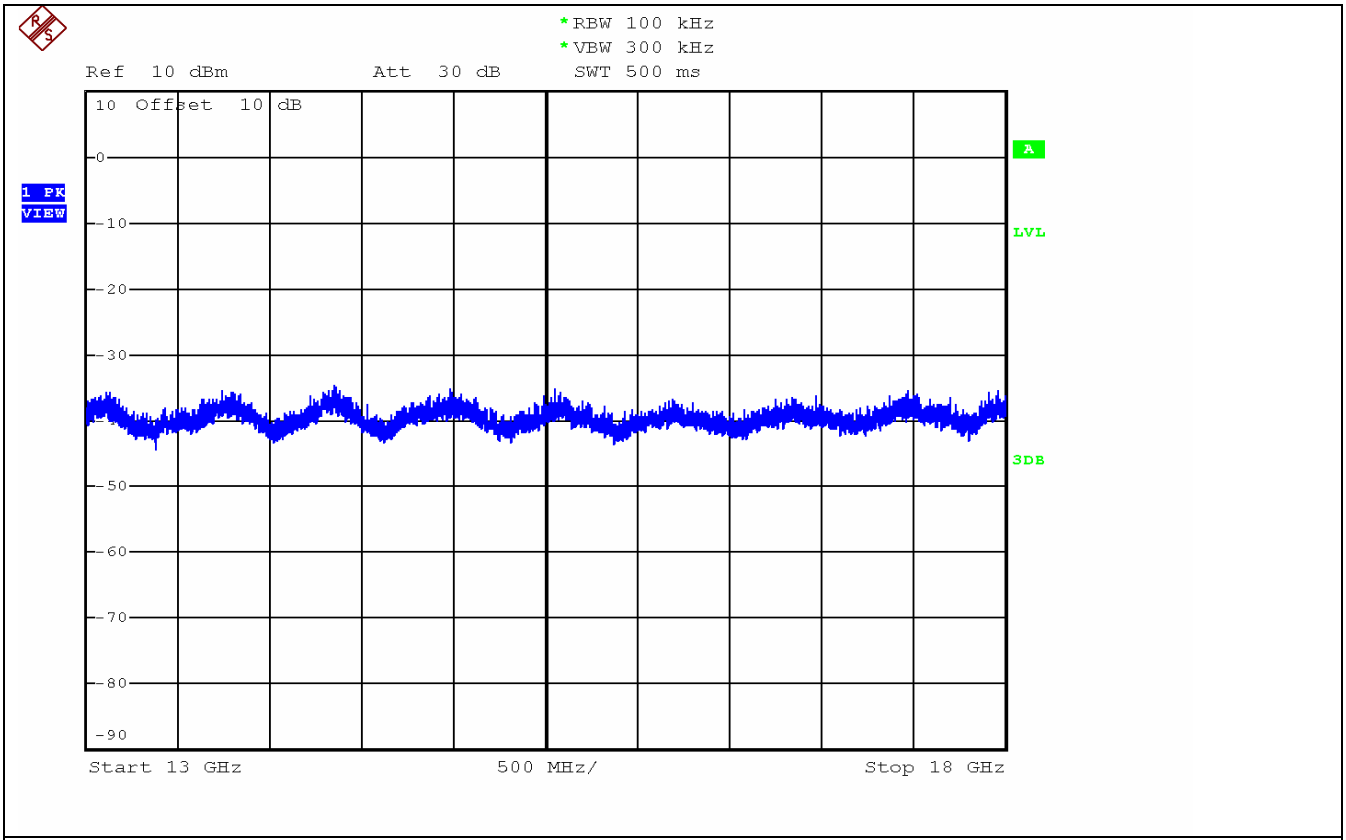



**Fig A9 Low Channel Conducted Spurious Emissions 13GHz -18 GHz**

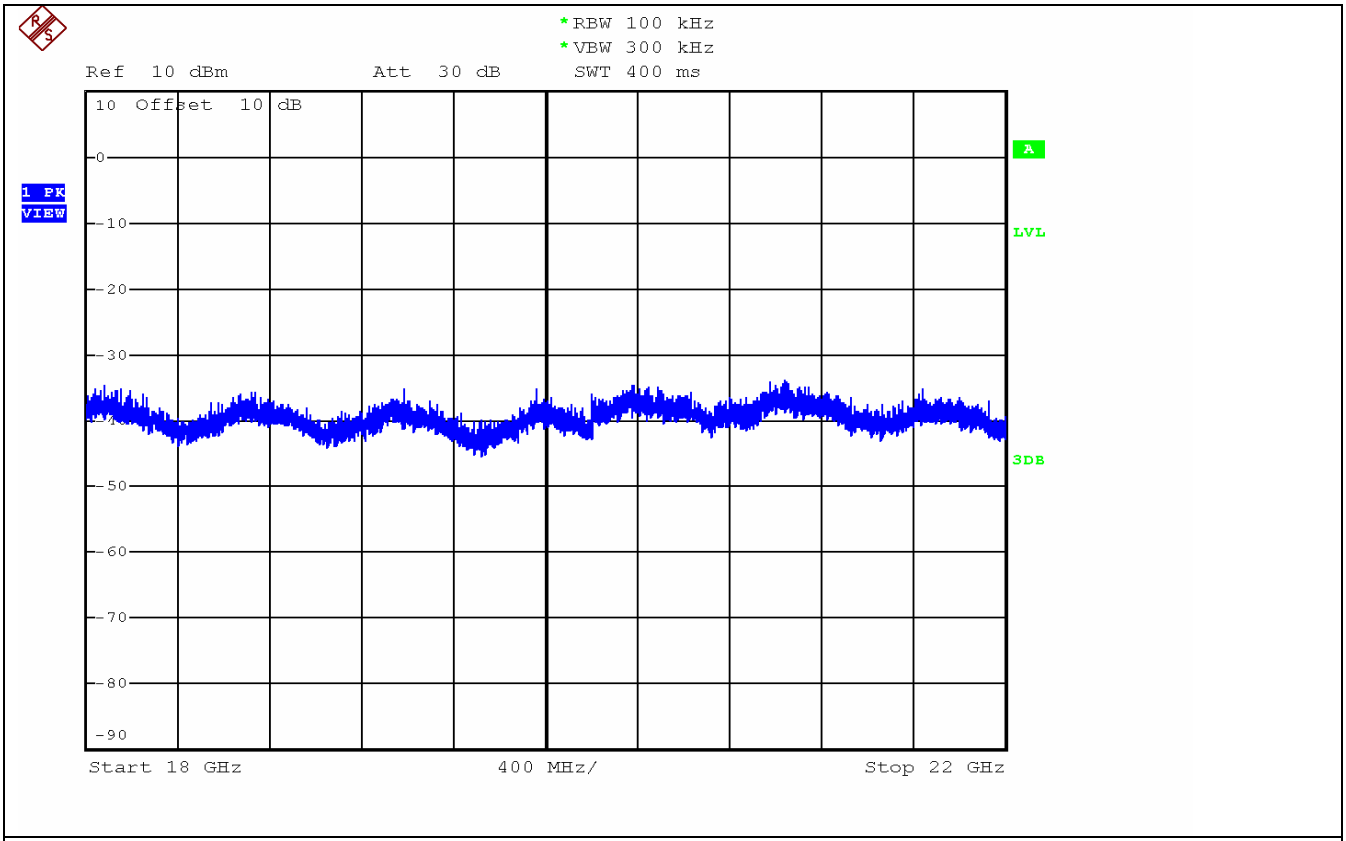



**Fig A10 Low Channel Conducted Spurious Emissions 18GHz -22GHz**

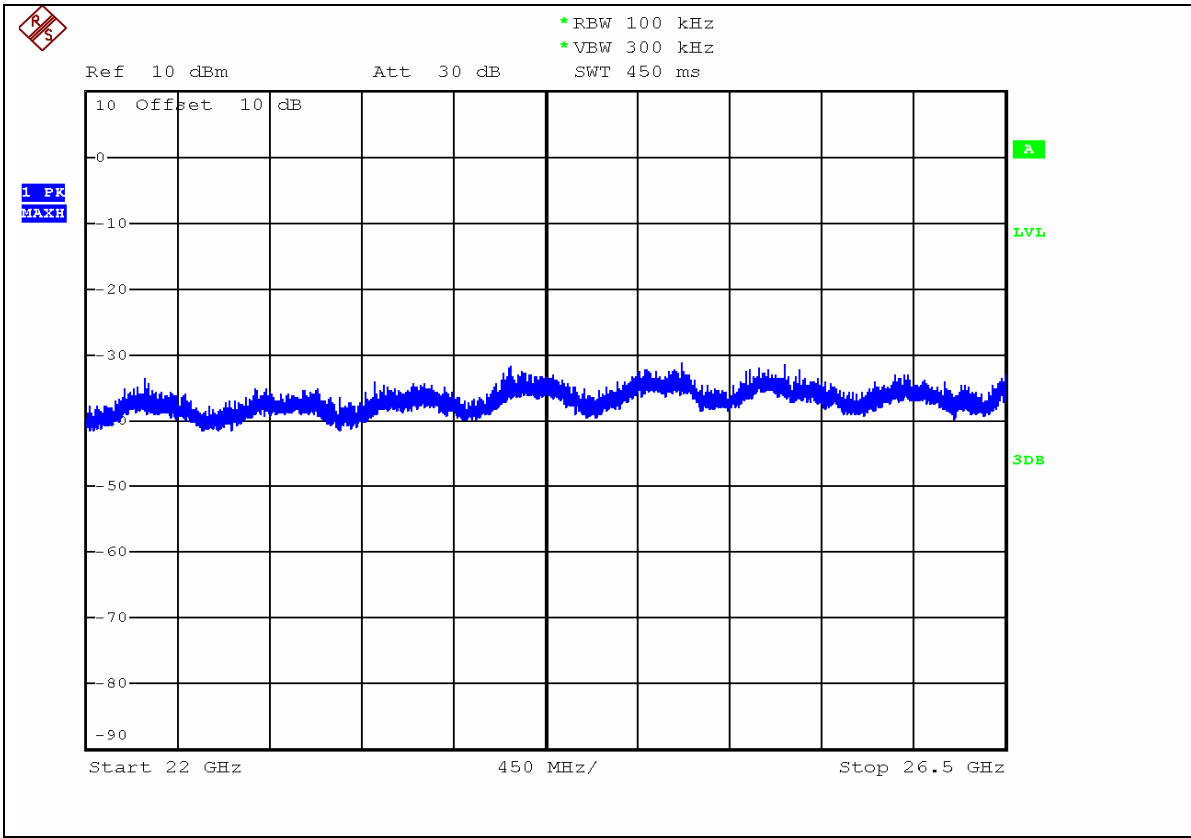



**Fig A11 Low Channel Conducted Spurious Emissions 22GHz-26.5GHz**

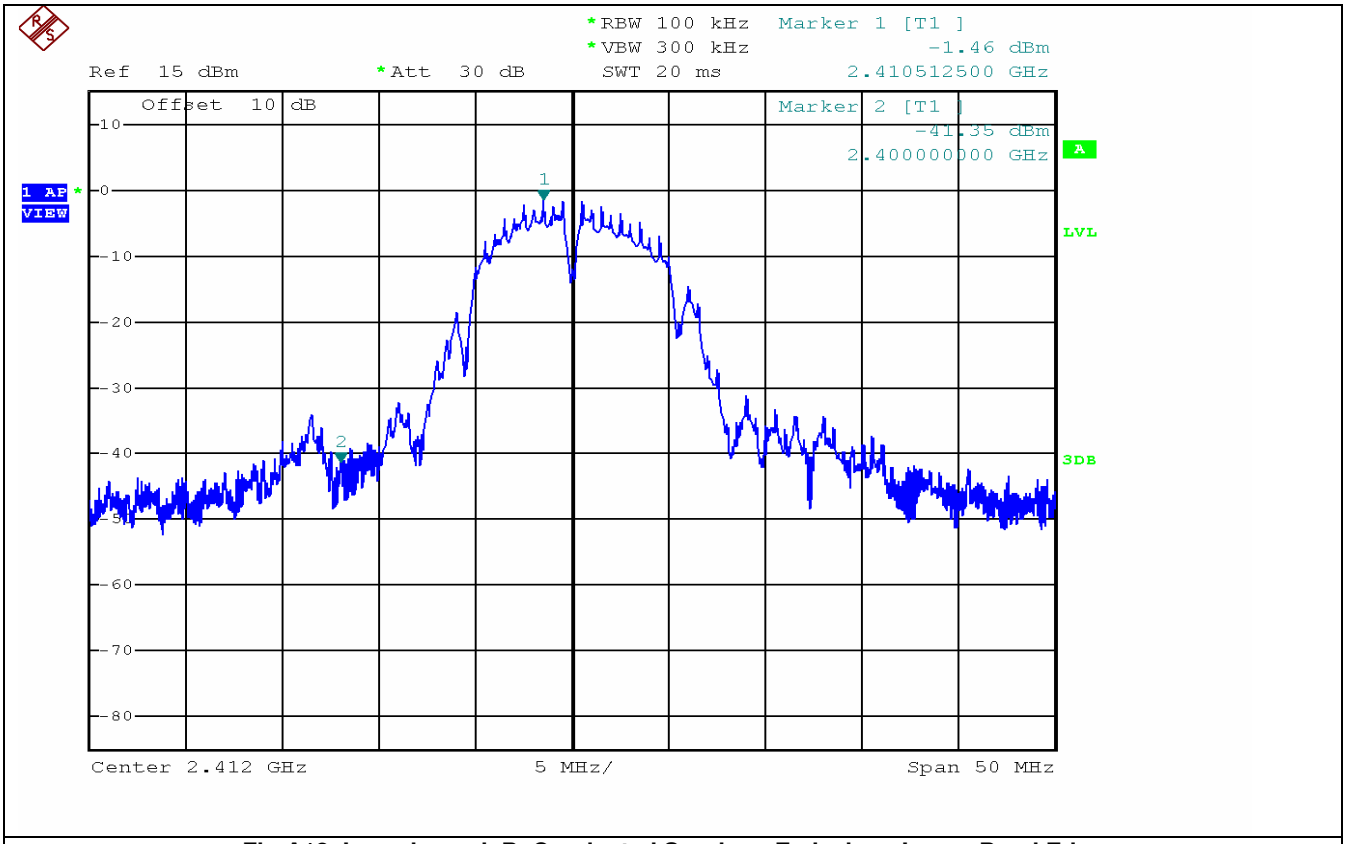



**Fig A12 Low channel B Conducted Spurious Emissions Lower Band Edge**

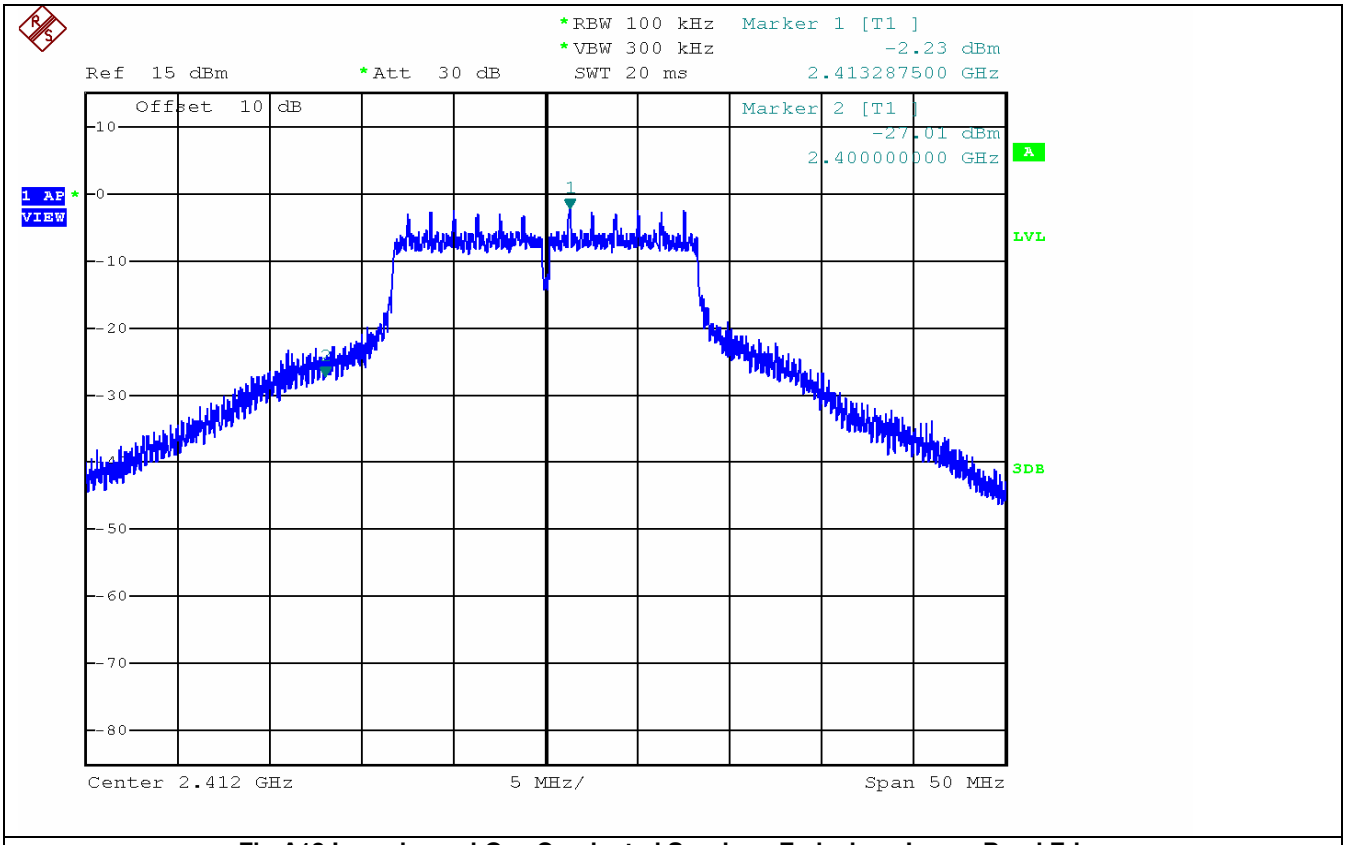



**Fig A13 Low channel G Conducted Spurious Emissions Lower Band Edge**

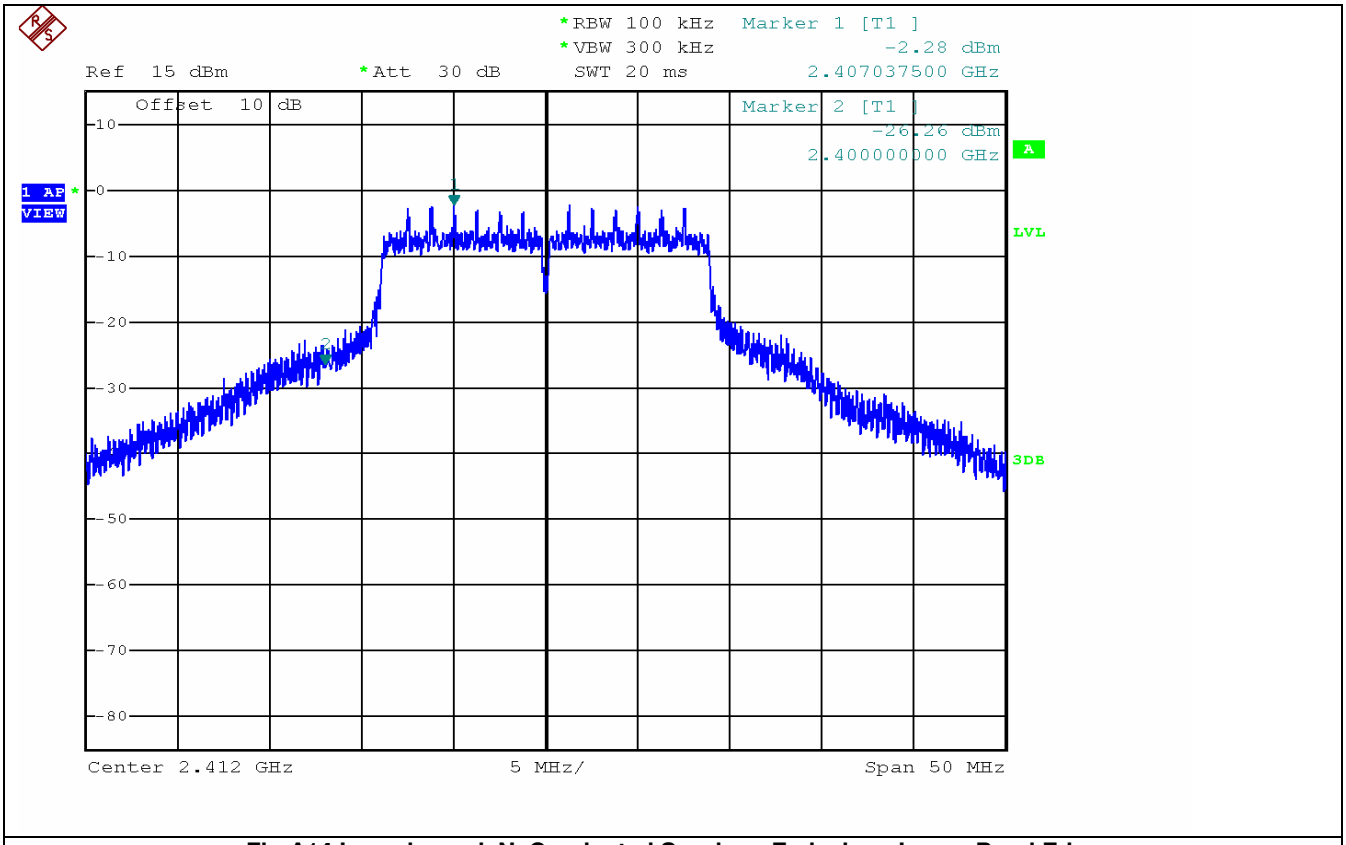



**Fig A14 Low channel N Conducted Spurious Emissions Lower Band Edge**

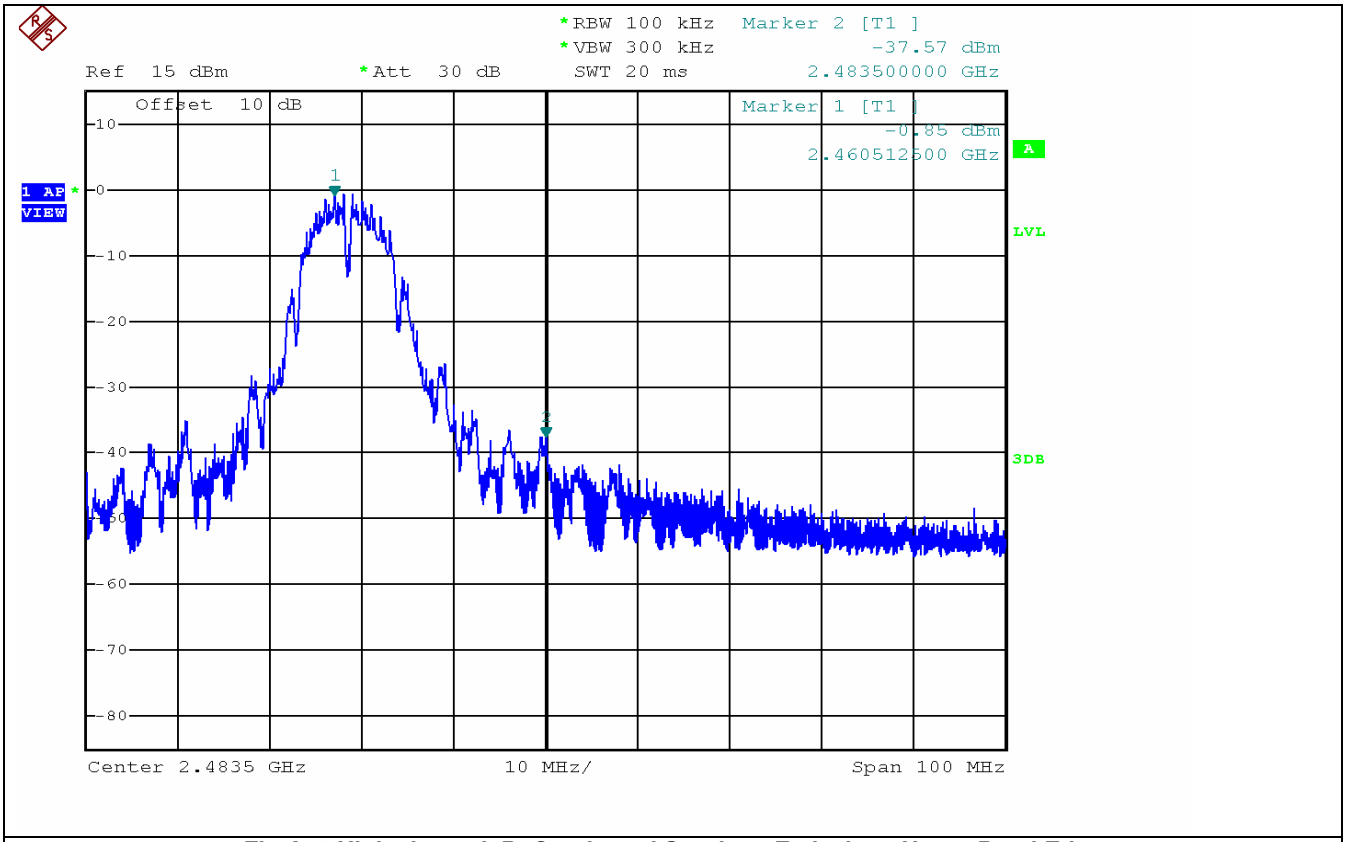



**Fig A15 High channel B Conducted Spurious Emissions Upper Band Edge**

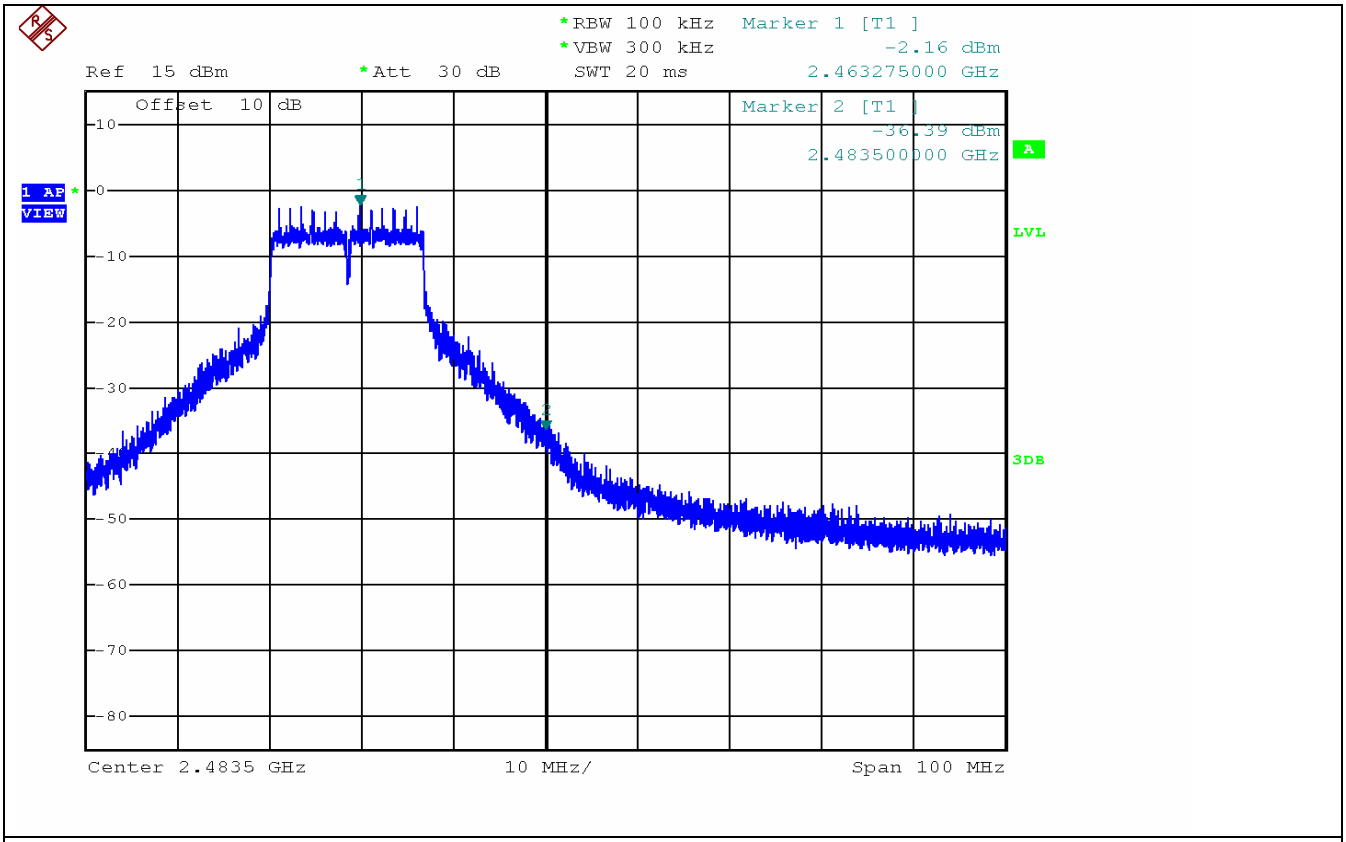



**Fig A16 High channel G Conducted Spurious Emissions Upper Band Edge**

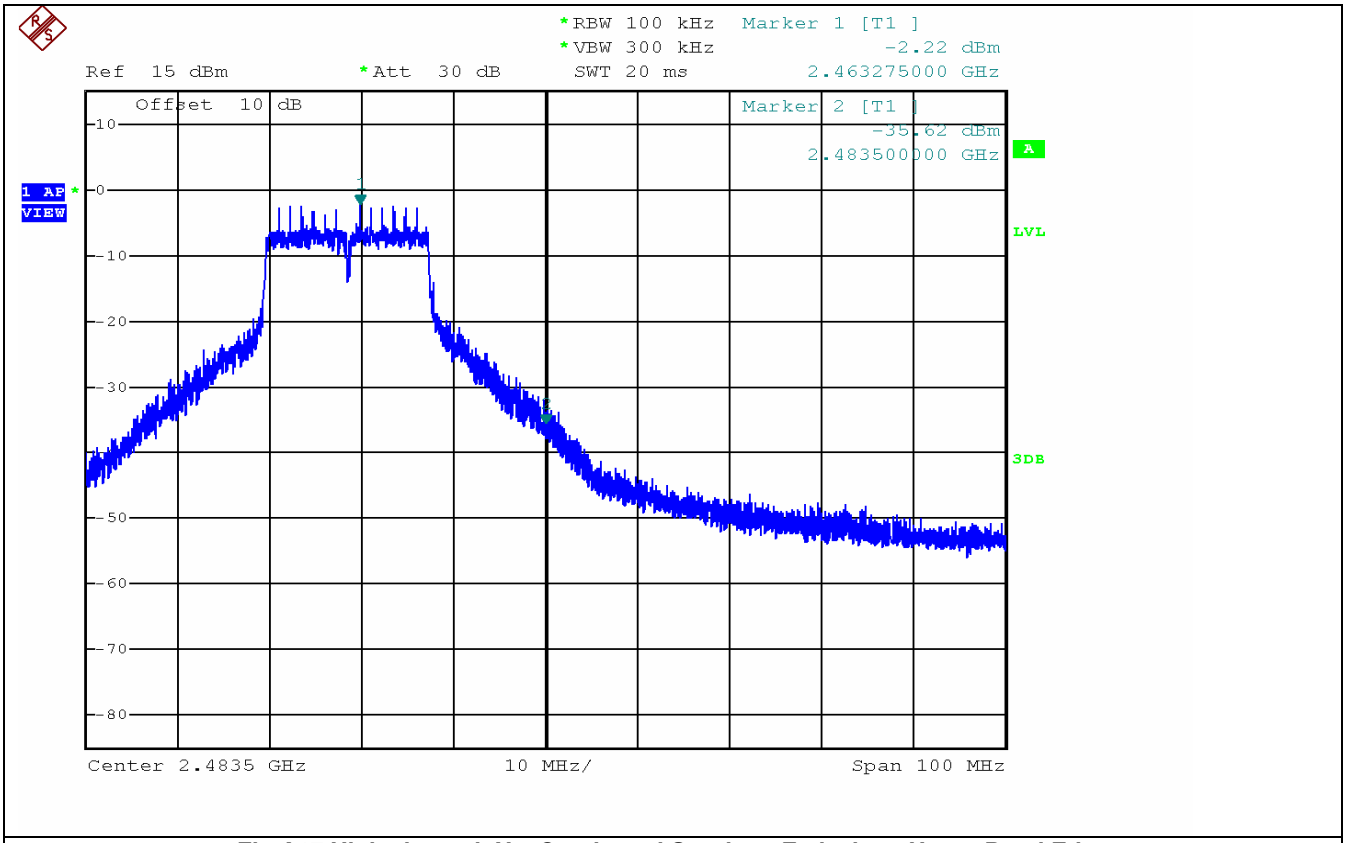



**Fig A17 High channel N Conducted Spurious Emissions Upper Band Edge**

**Appendix B**

## Radiated tests for Band Edges /Restricted band

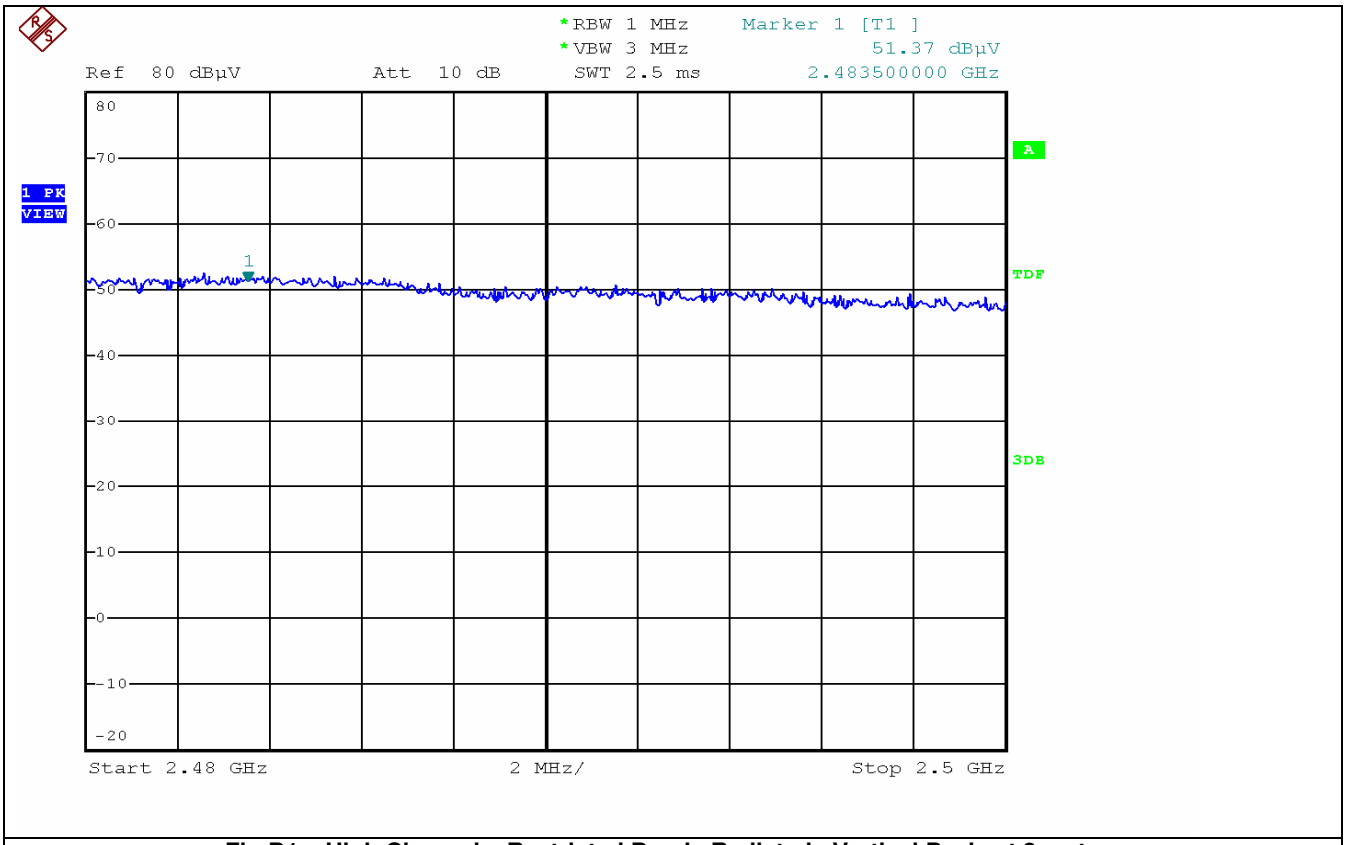



**Fig B1 High Channel Restricted Band Radiated Vertical Peak at 3 metres**

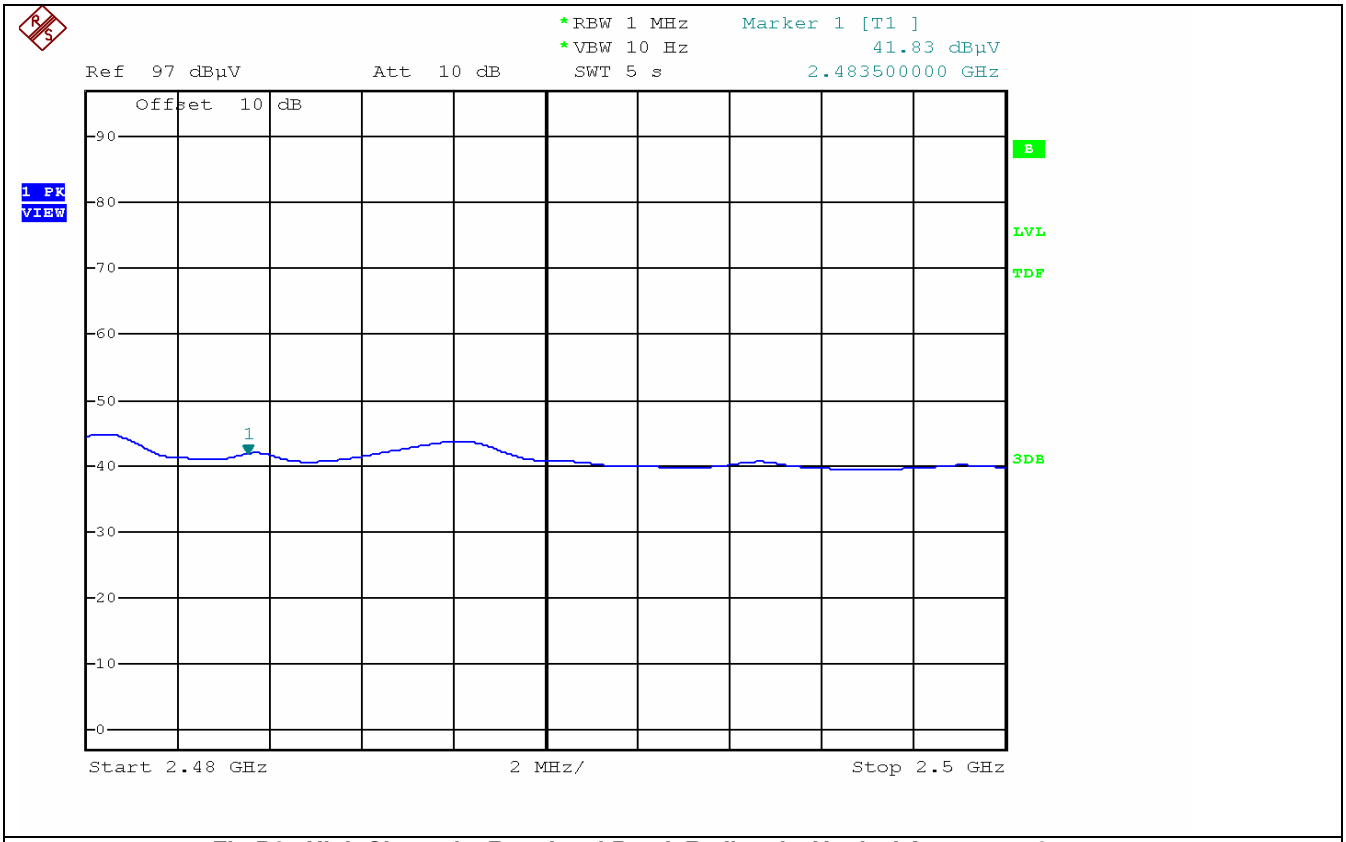



**Fig B2 High Channel Restricted Band Radiated Vertical Average at 3 metres**

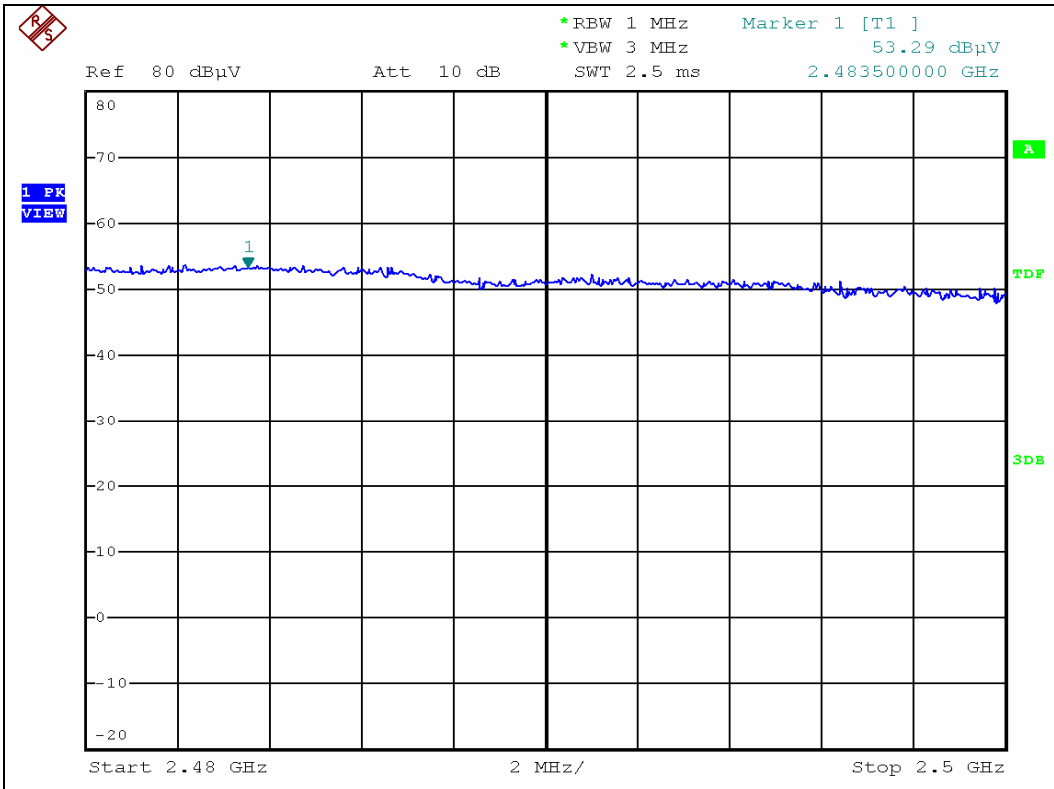



**Fig B3 High Channel Restricted Band Radiated Horizontal Peak at 3 metres**

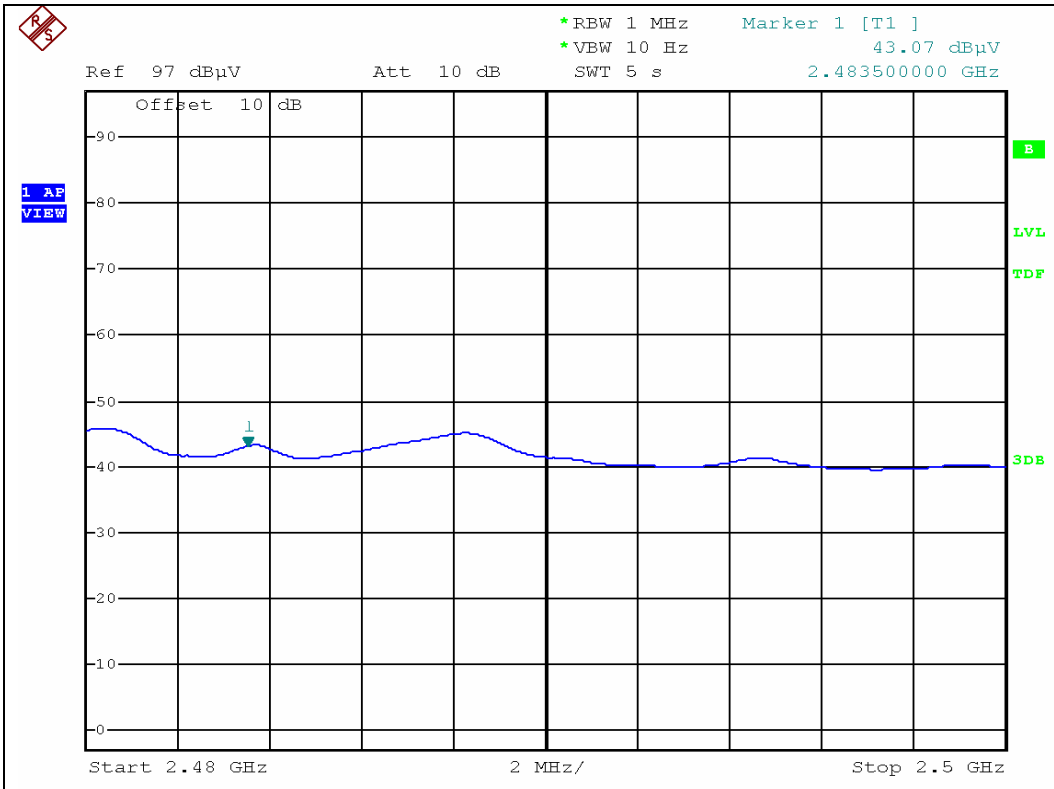



**Fig B4 High Channel Restricted Band Radiated Horizontal Average at 3 metres**

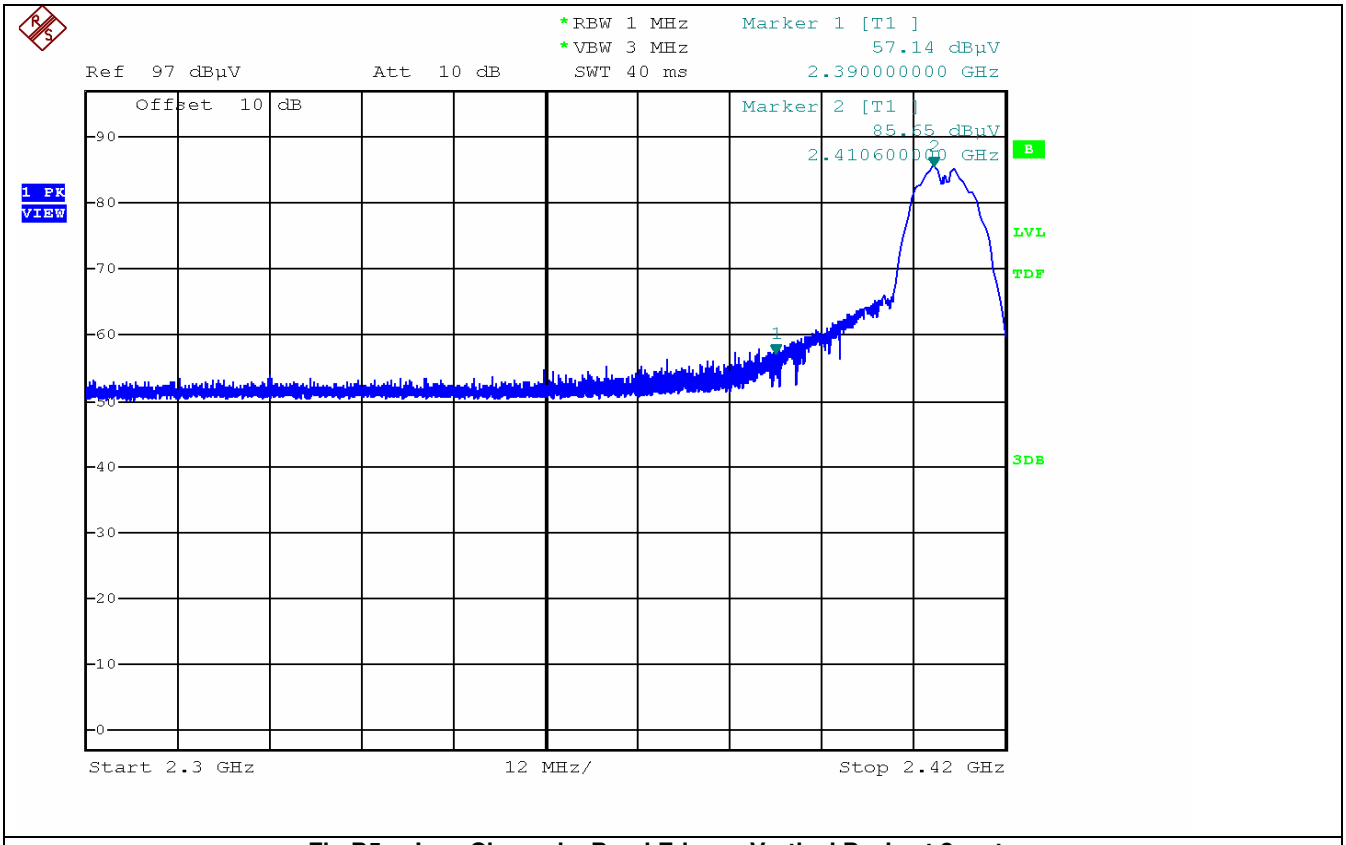



**Fig B5 Low Channel Band Edge Vertical Peak at 3 metres**

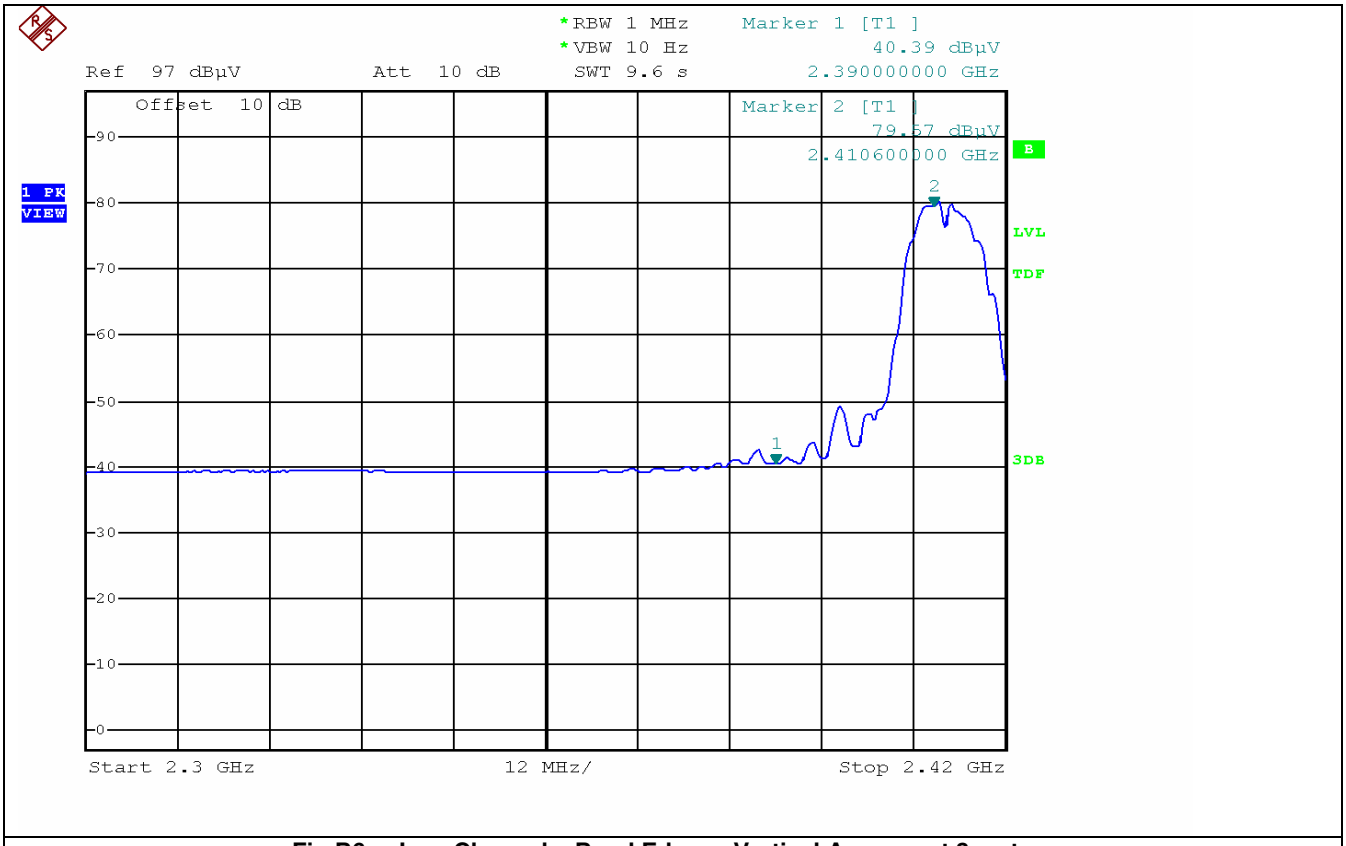



**Fig B6 Low Channel Band Edge Vertical Average at 3 metres**

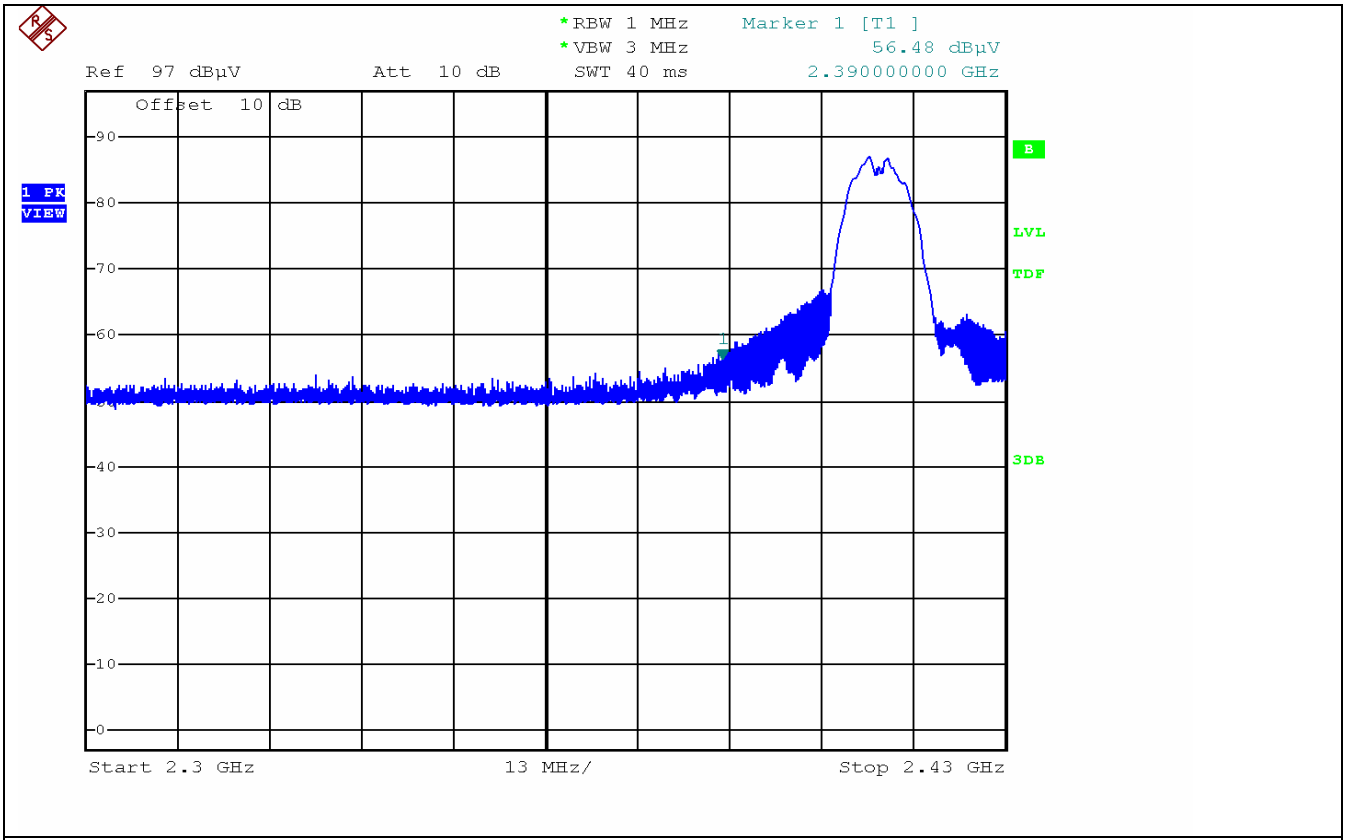



**Fig B7 Low Channel Band Edge Horizontal Peak at 3 metres**

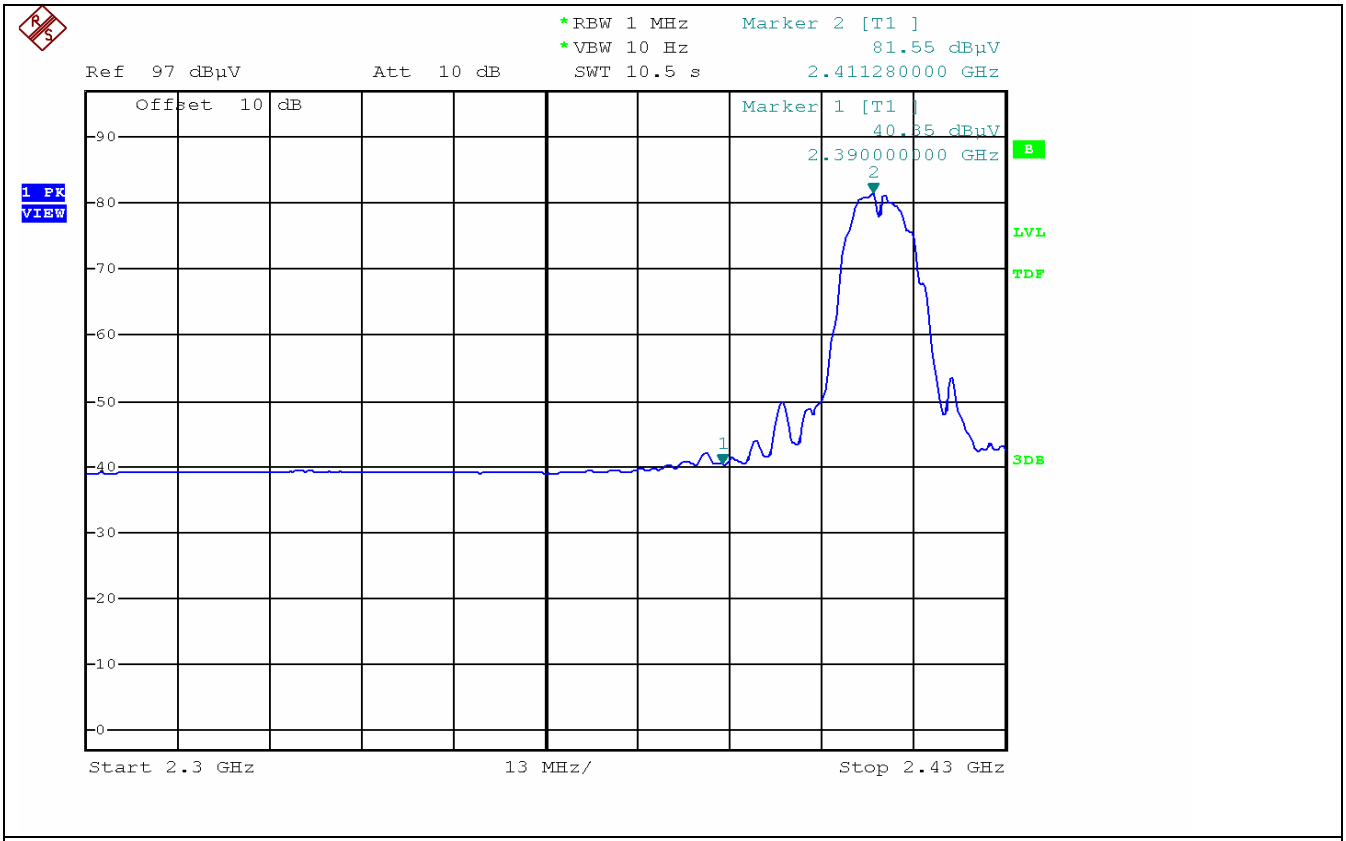



**Fig B8 Low Channel Band Edge Horizontal Average at 3 metres**

**Appendix C**

## Radiated Spurious Emissions

## Conducted sample with antenna port terminated

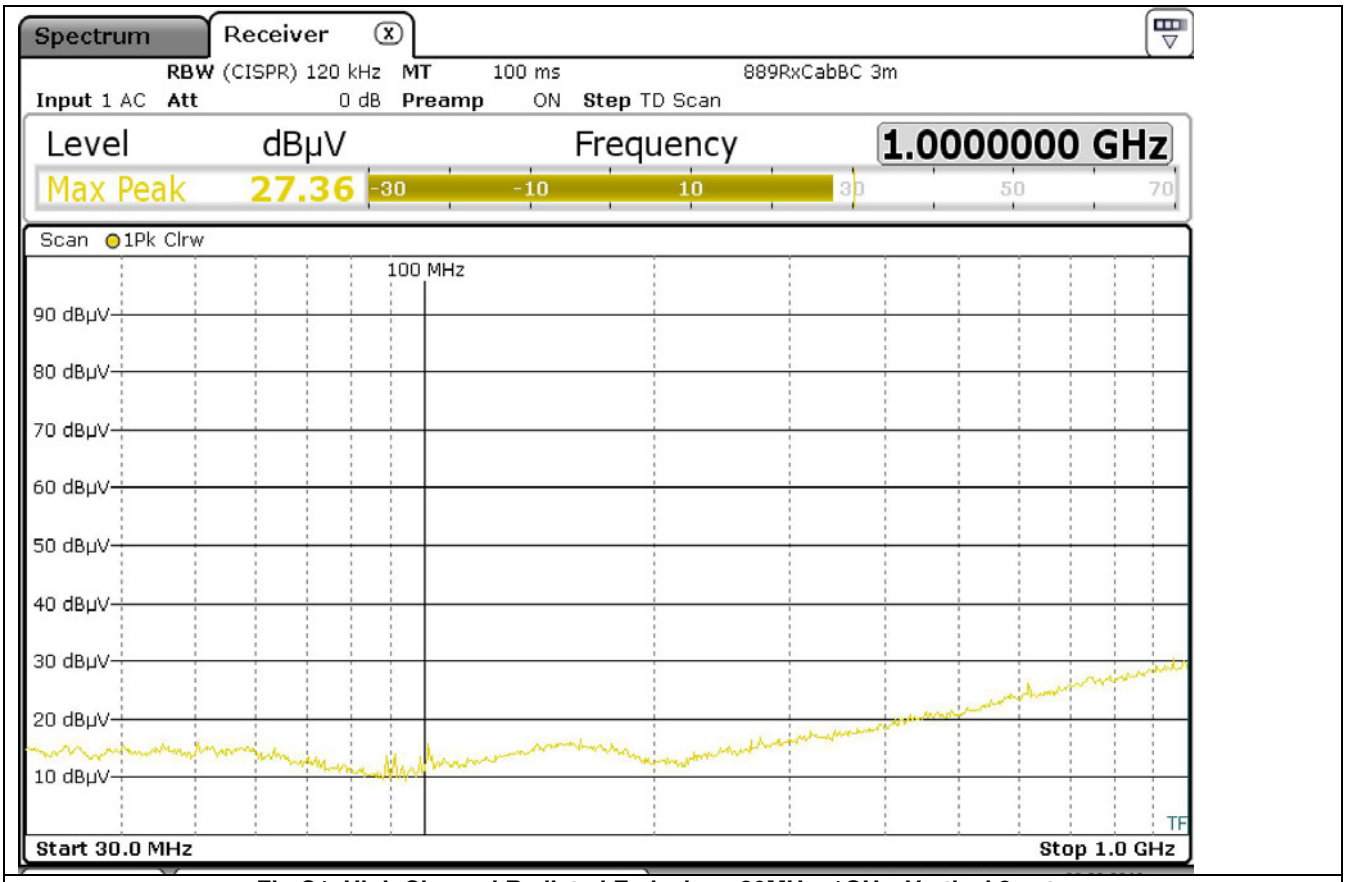



**Fig C1 High Channel Radiated Emissions 30MHz -1GHz Vertical 3metres**

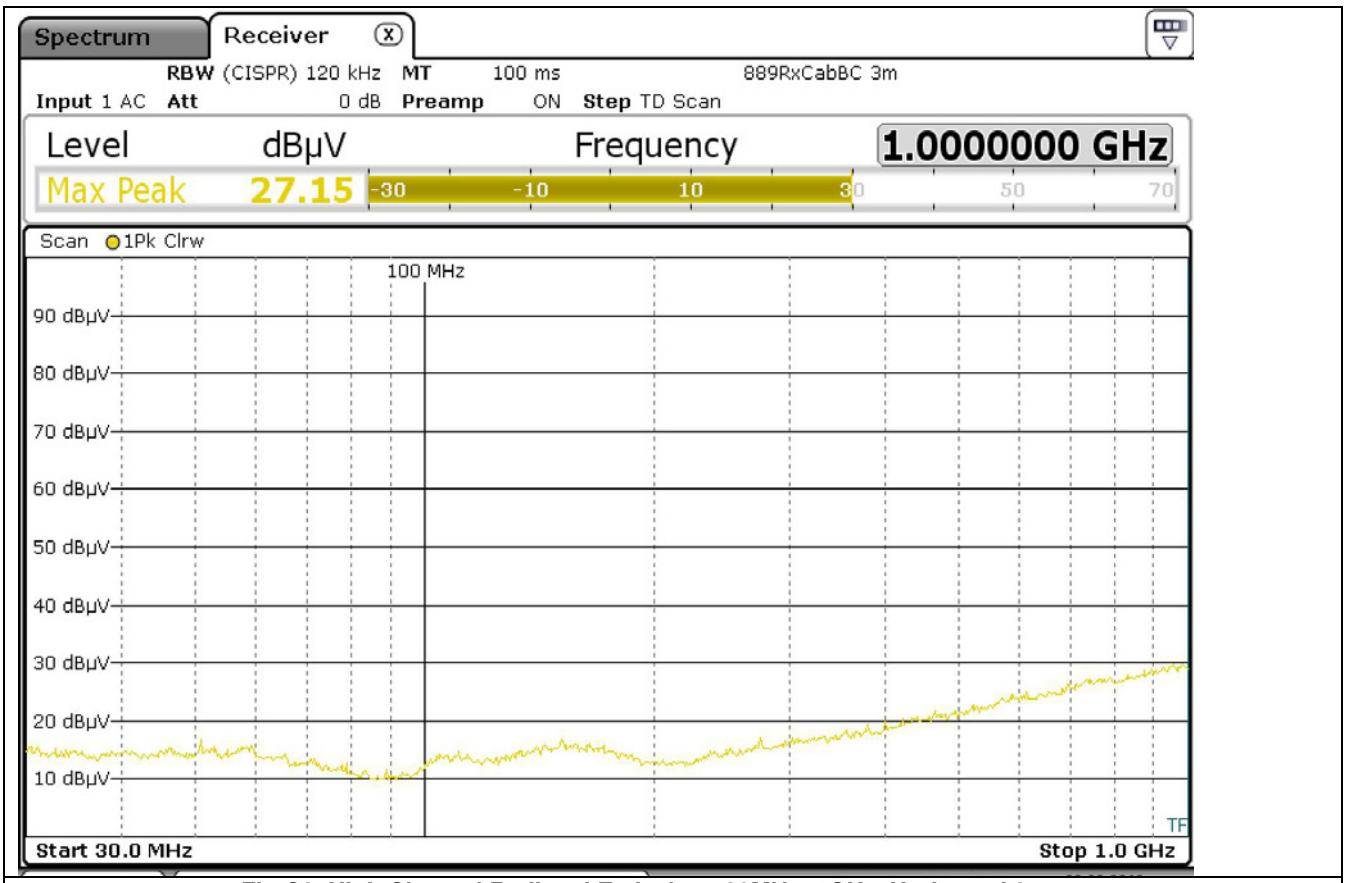



**Fig C2 High Channel Radiated Emissions 30MHz -1GHz Horizontal 3metres**

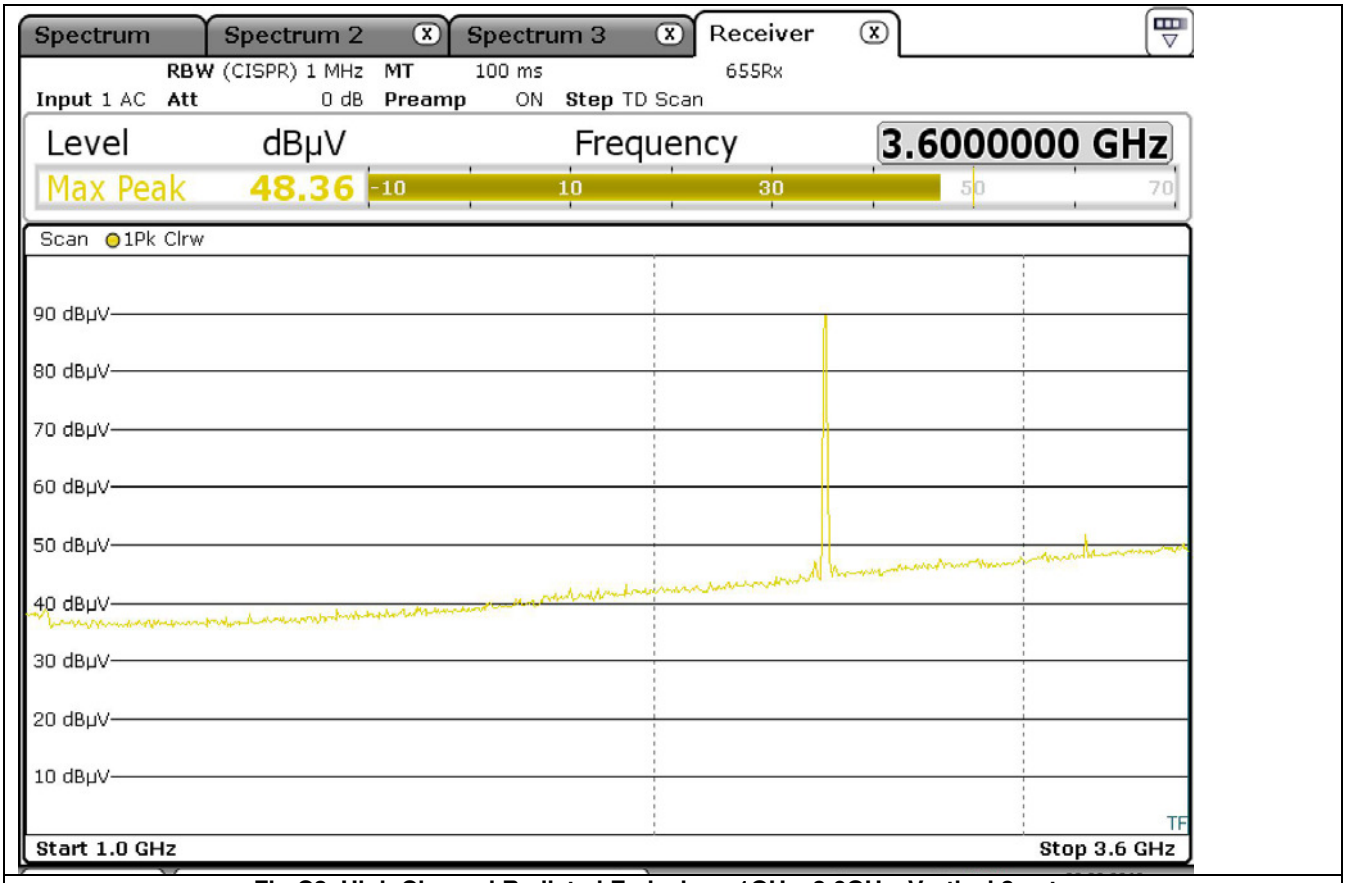



**Fig C3 High Channel Radiated Emissions 1GHz -3.6GHz Vertical 3metres**

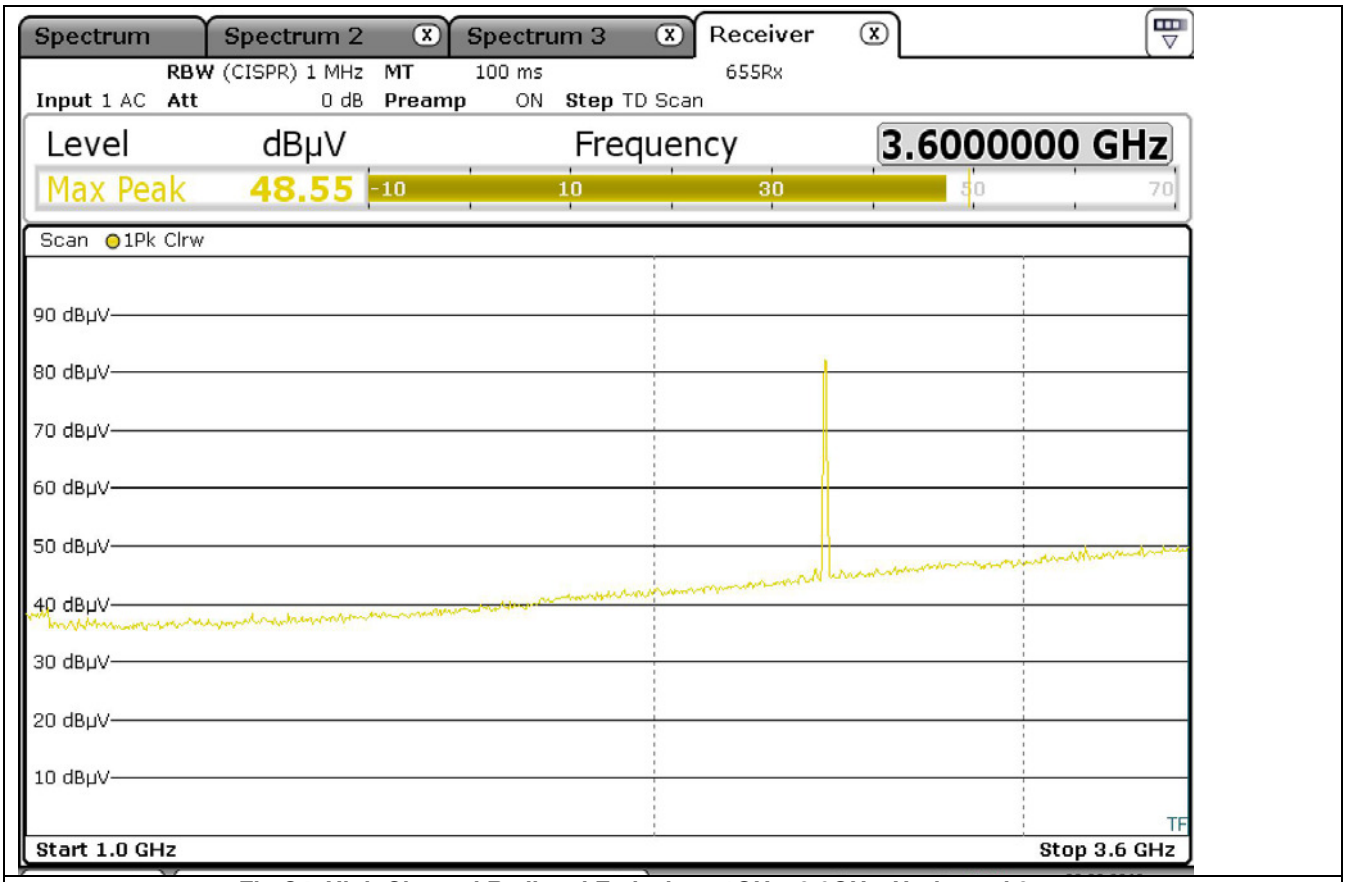



**Fig C4 High Channel Radiated Emissions 1GHz -3.6GHz Horizontal 3metres**

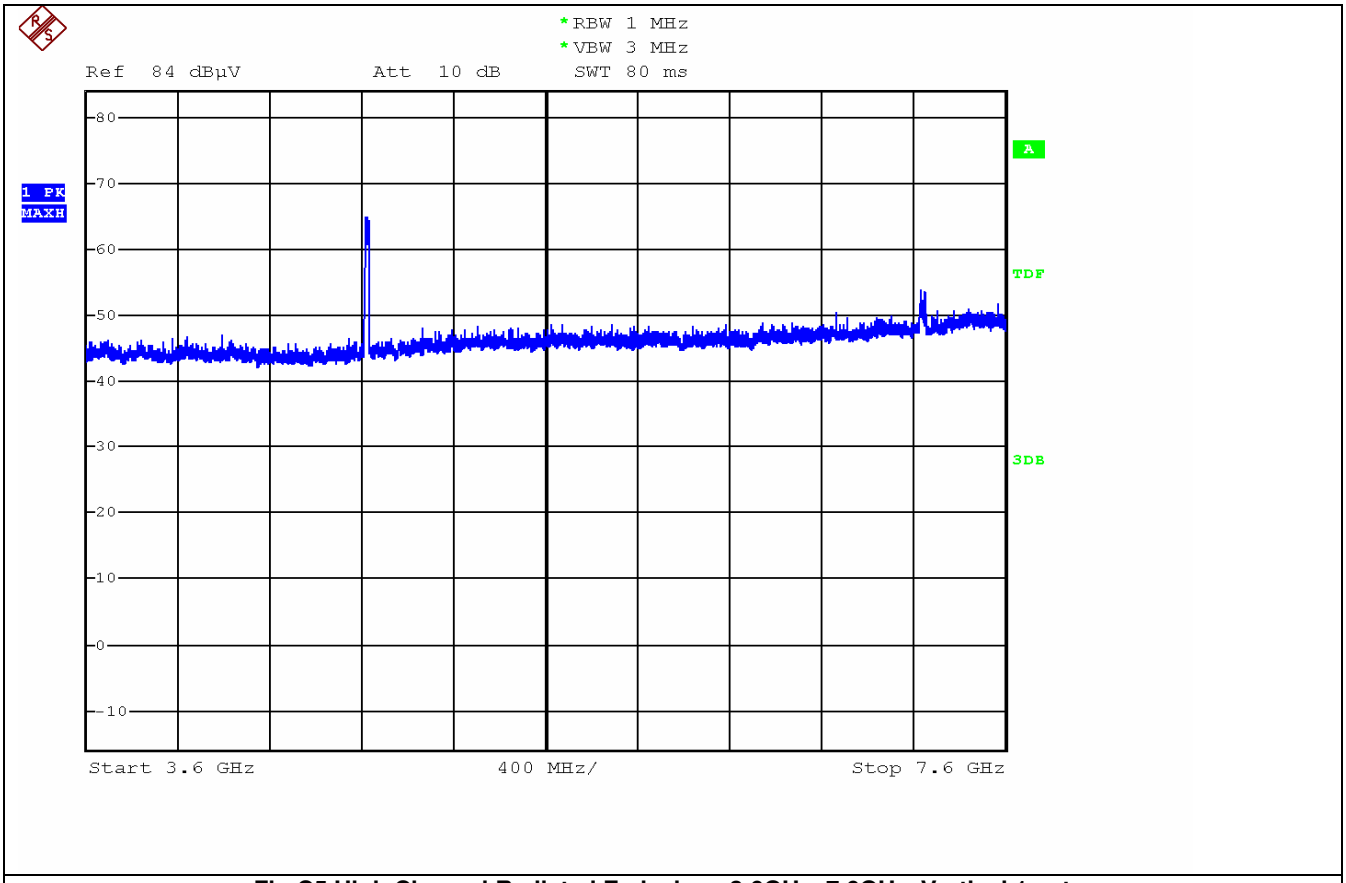



**Fig C5 High Channel Radiated Emissions 3.6GHz -7.6GHz Vertical 1metre**

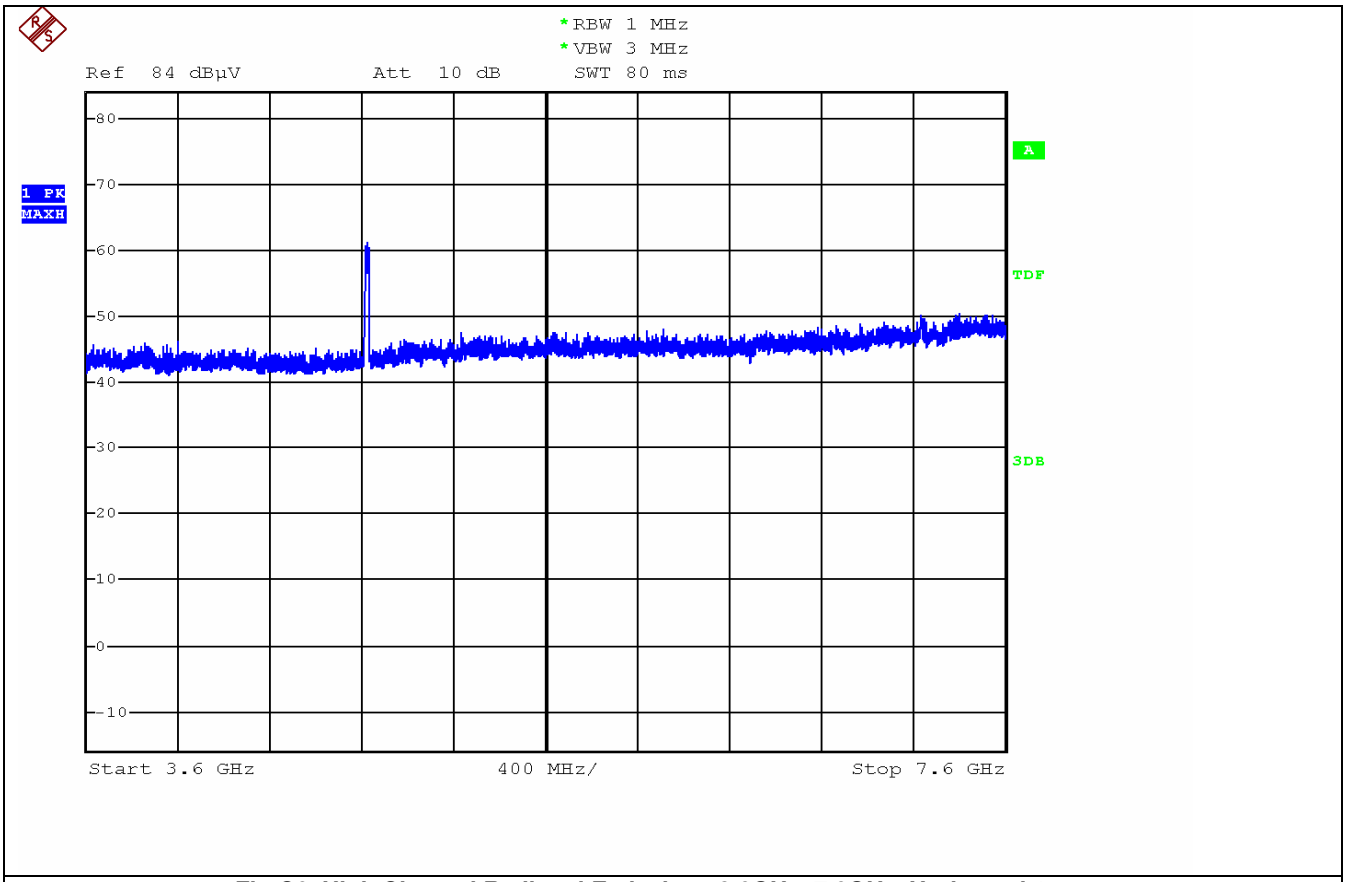



**Fig C6 High Channel Radiated Emissions 3.6GHz -7.6GHz Horizontal 1metre**

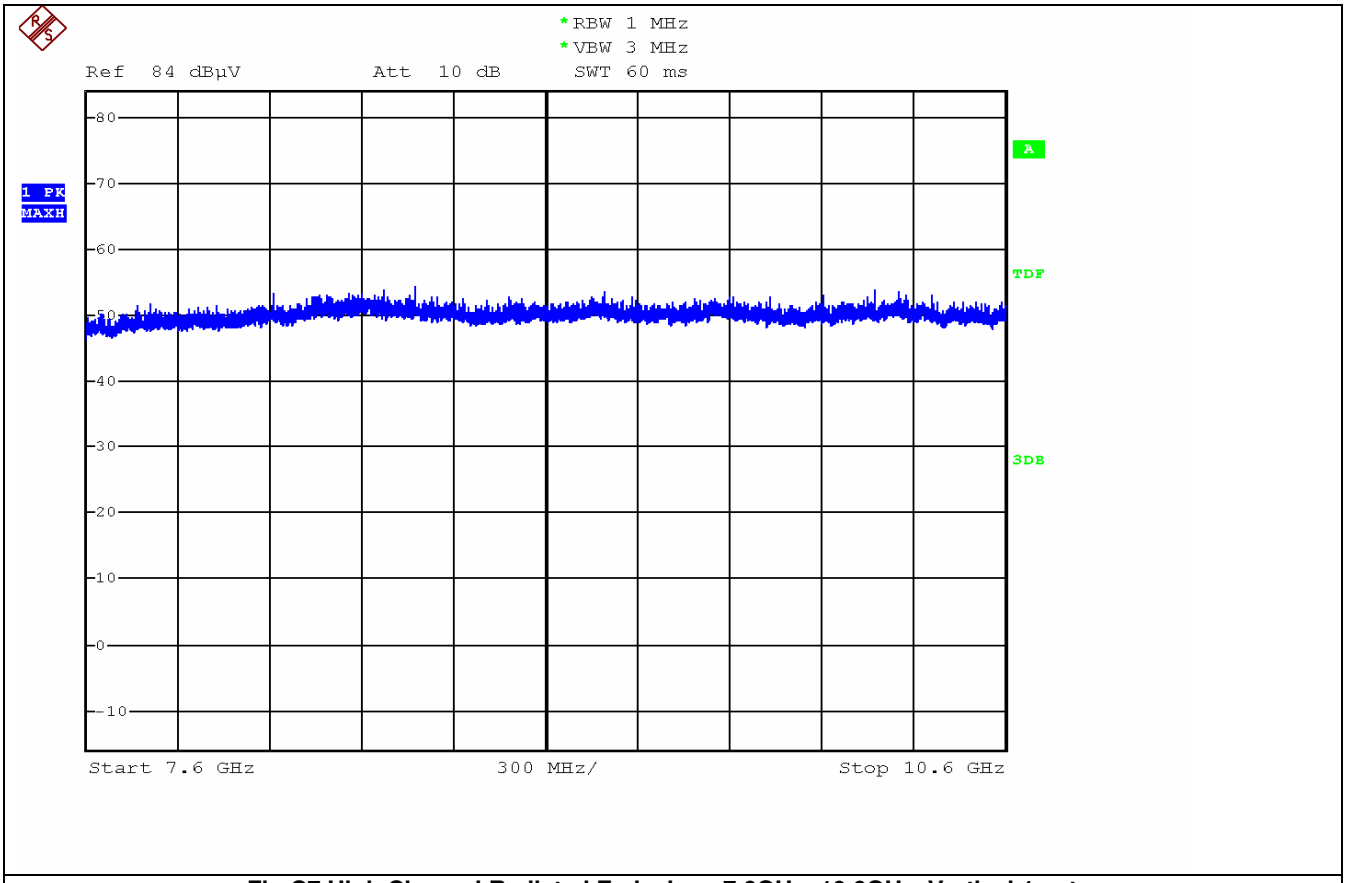



**Fig C7 High Channel Radiated Emissions 7.6GHz -10.6GHz Vertical 1metre**

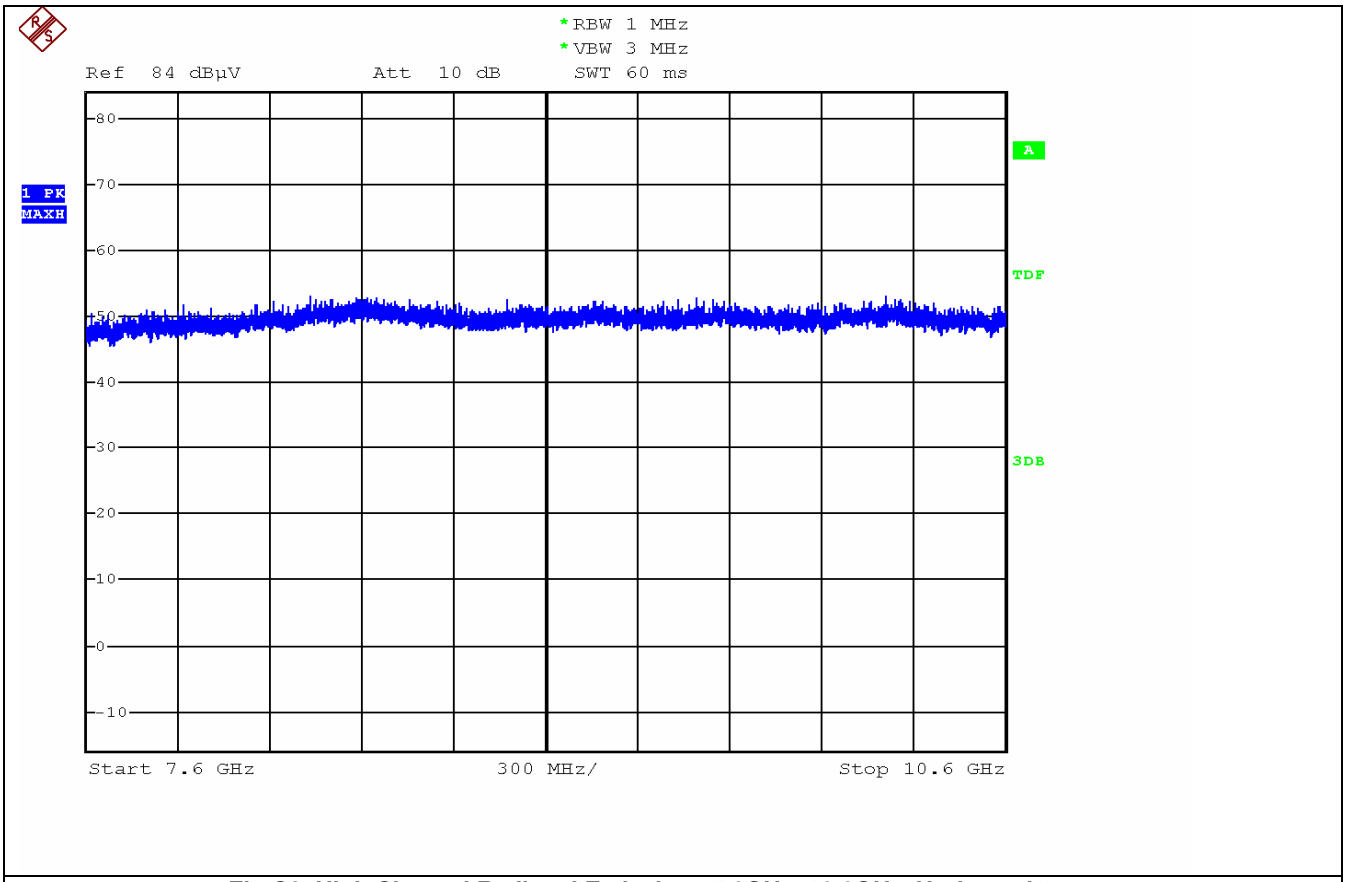



**Fig C8 High Channel Radiated Emissions 7.6GHz -10.6GHz Horizontal 1metre**

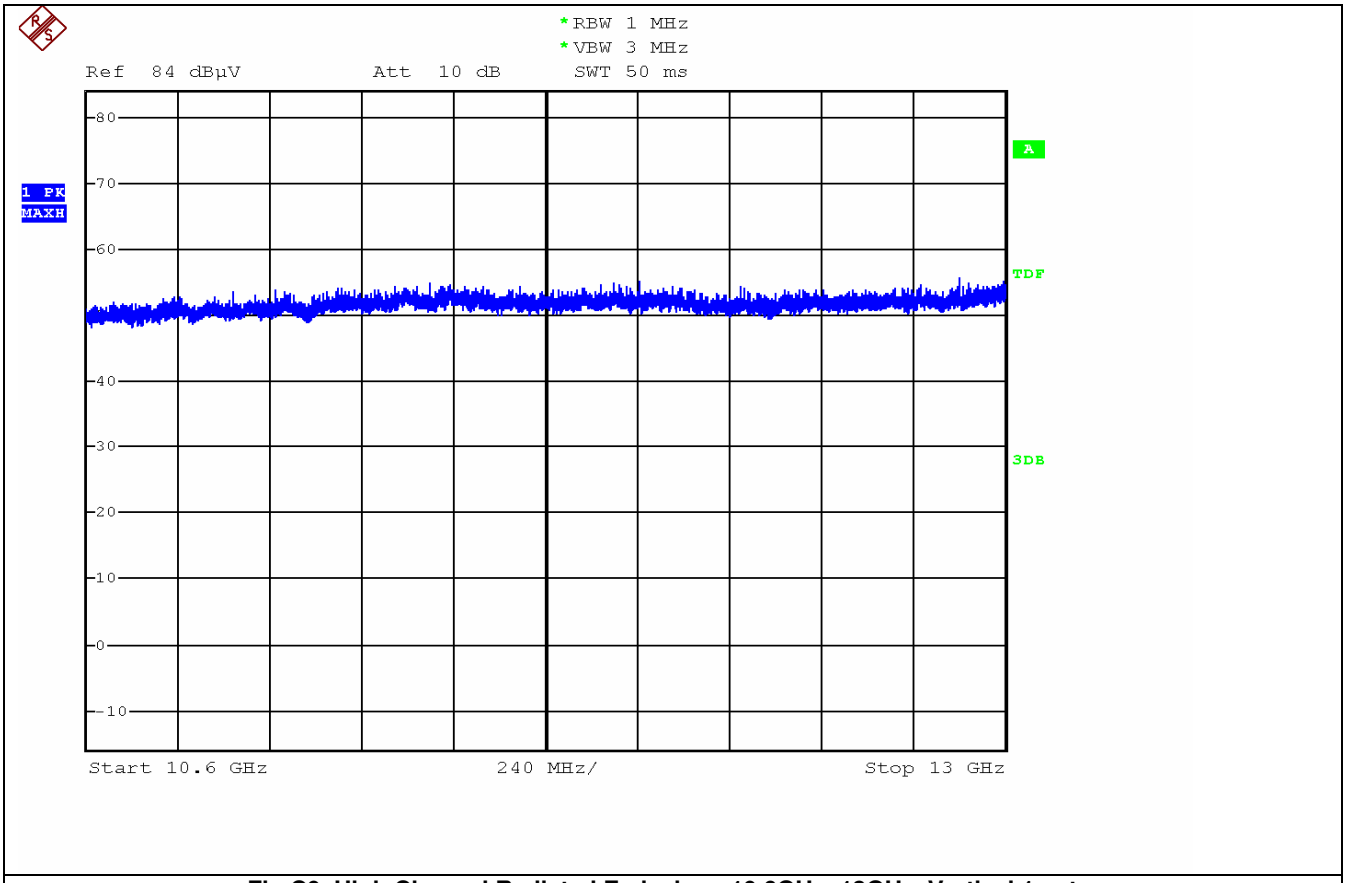



**Fig C9 High Channel Radiated Emissions 10.6GHz -13GHz Vertical 1metre**

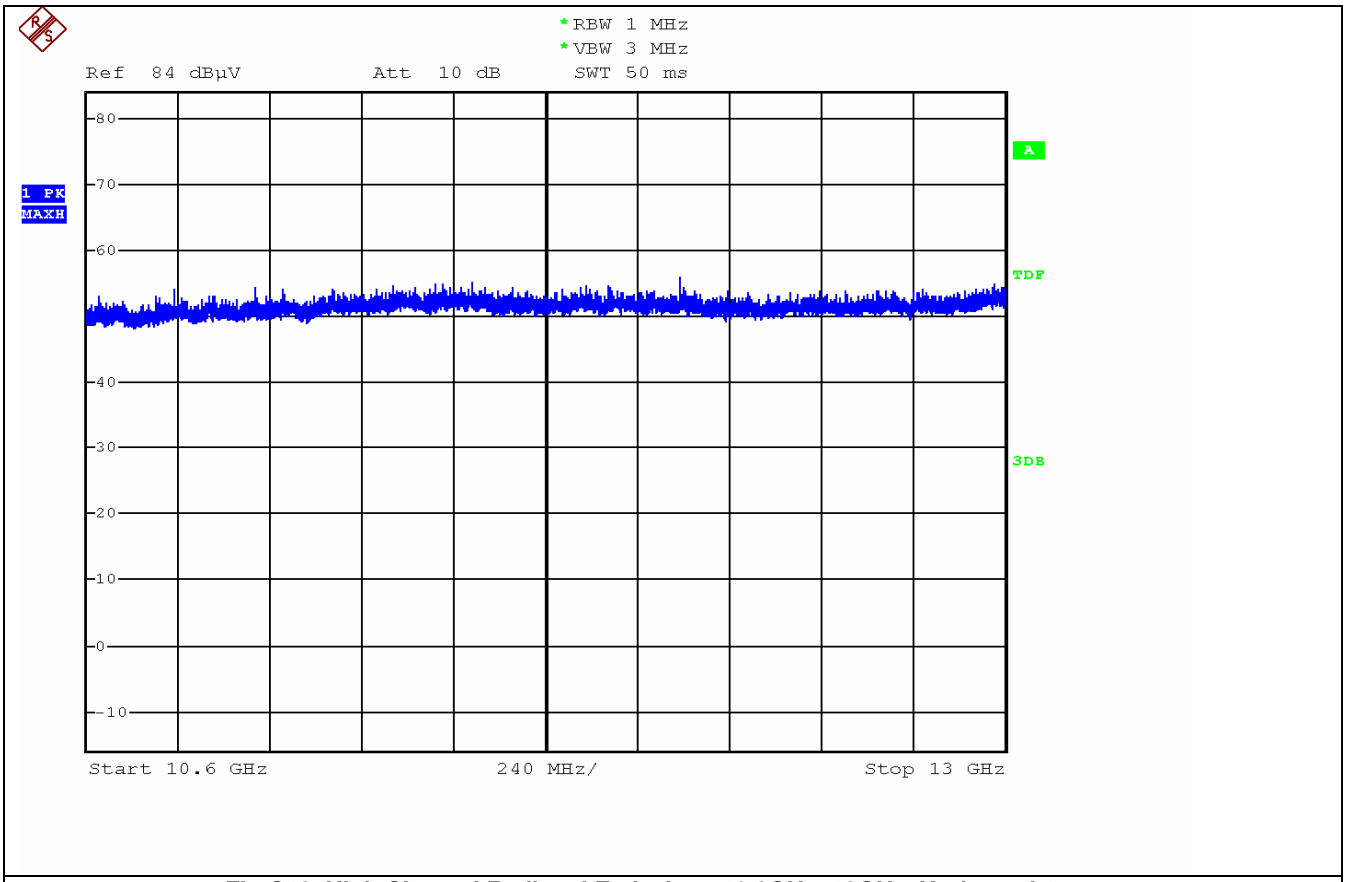



**Fig C10 High Channel Radiated Emissions 10.6GHz -13GHz Horizontal 1metre**

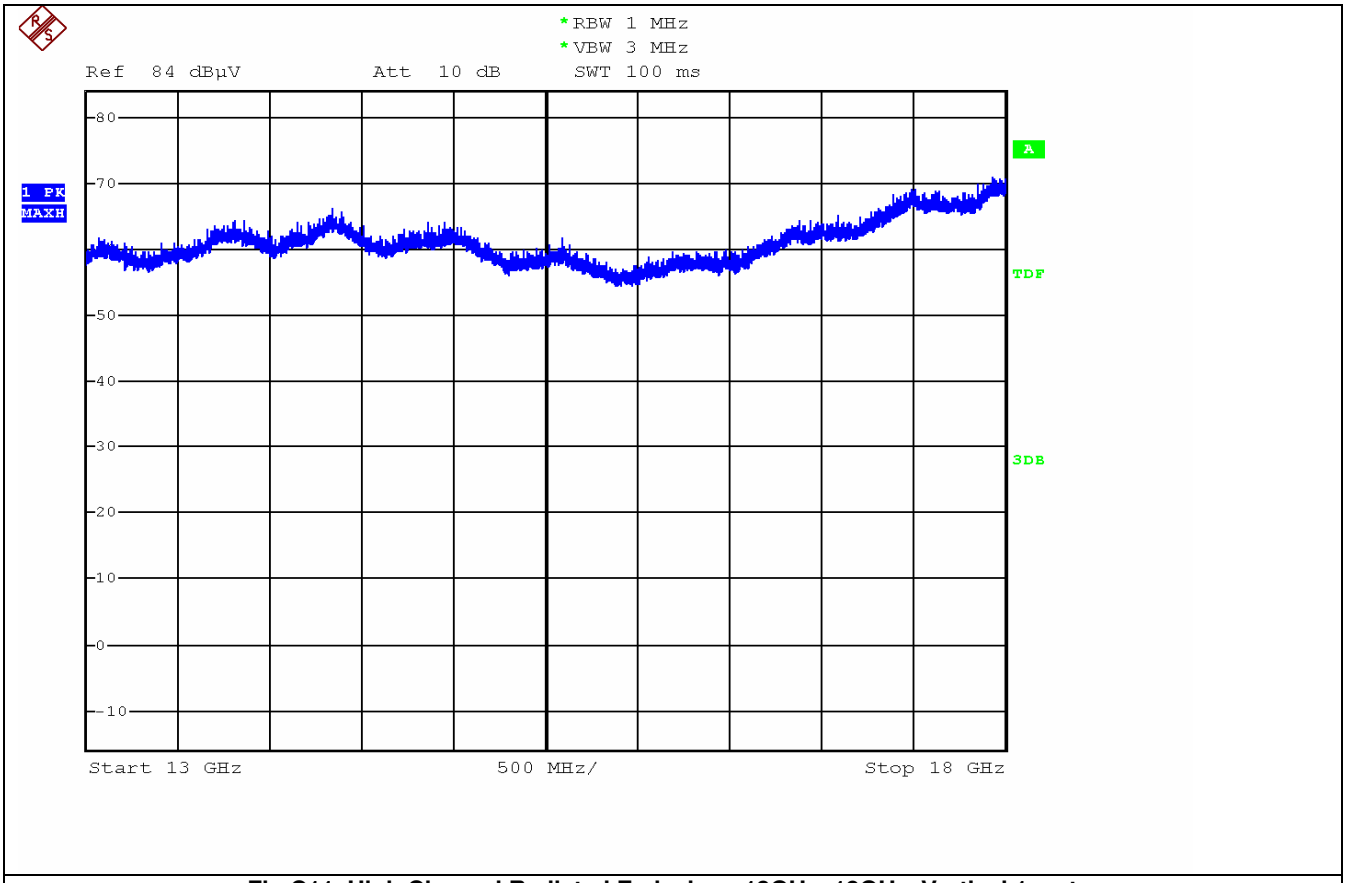



**Fig C11 High Channel Radiated Emissions 13GHz -18GHz Vertical 1 metre**

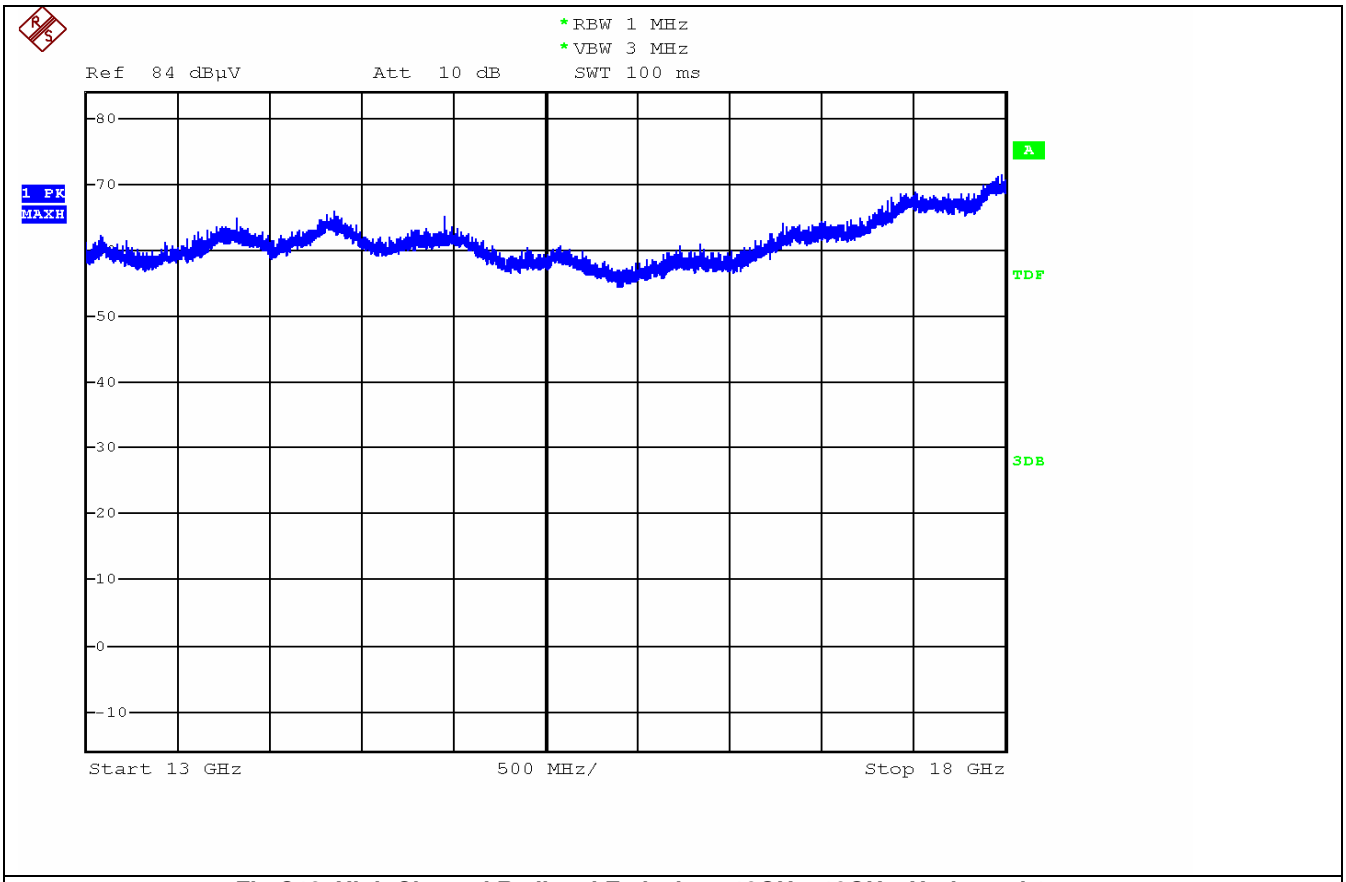



**Fig C12 High Channel Radiated Emissions 13GHz -18GHz Horizontal 1metre**

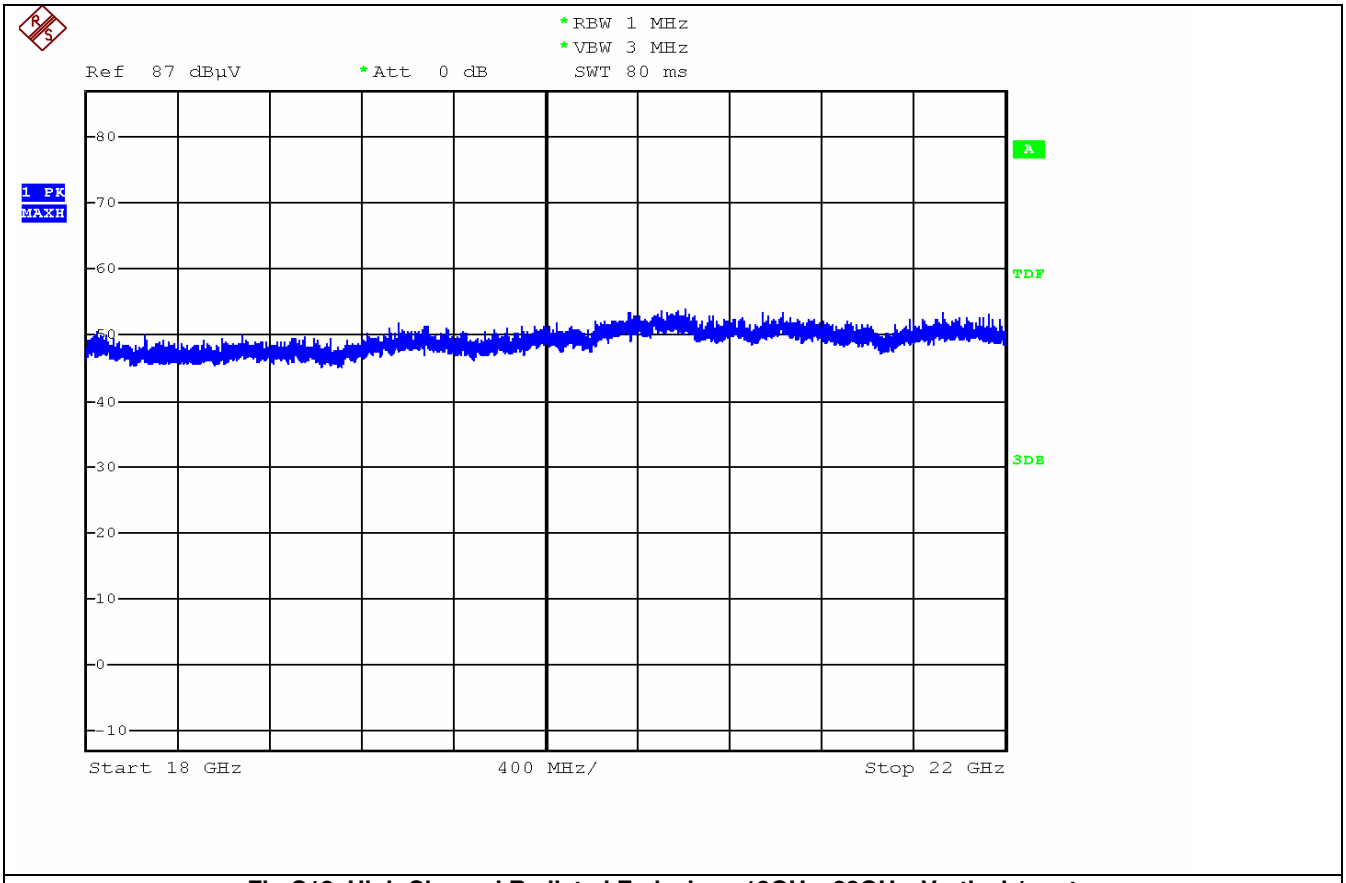



**Fig C13 High Channel Radiated Emissions 18GHz -22GHz Vertical 1 metre**

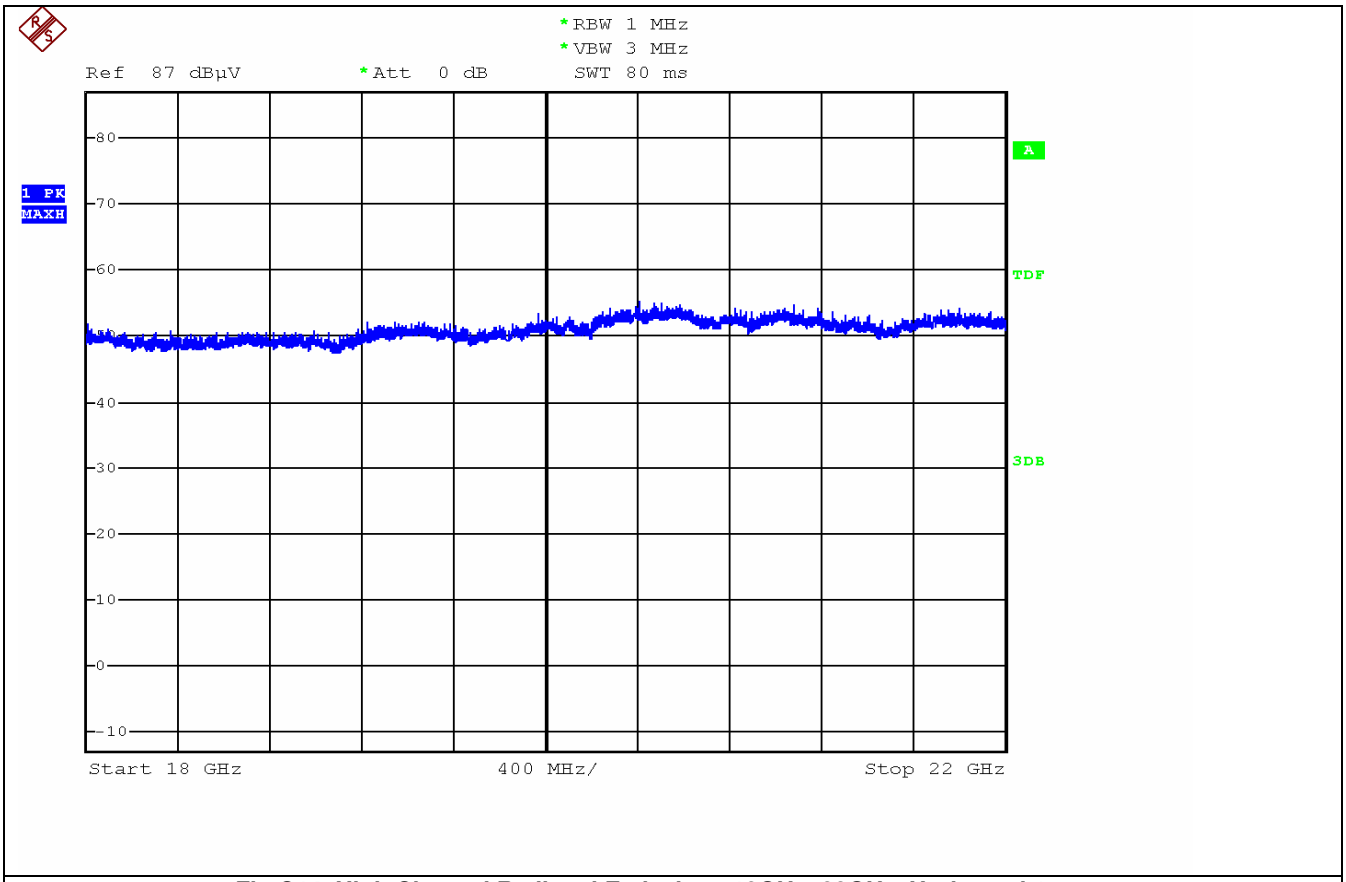



**Fig C14 High Channel Radiated Emissions 18GHz -22GHz Horizontal 1metre**

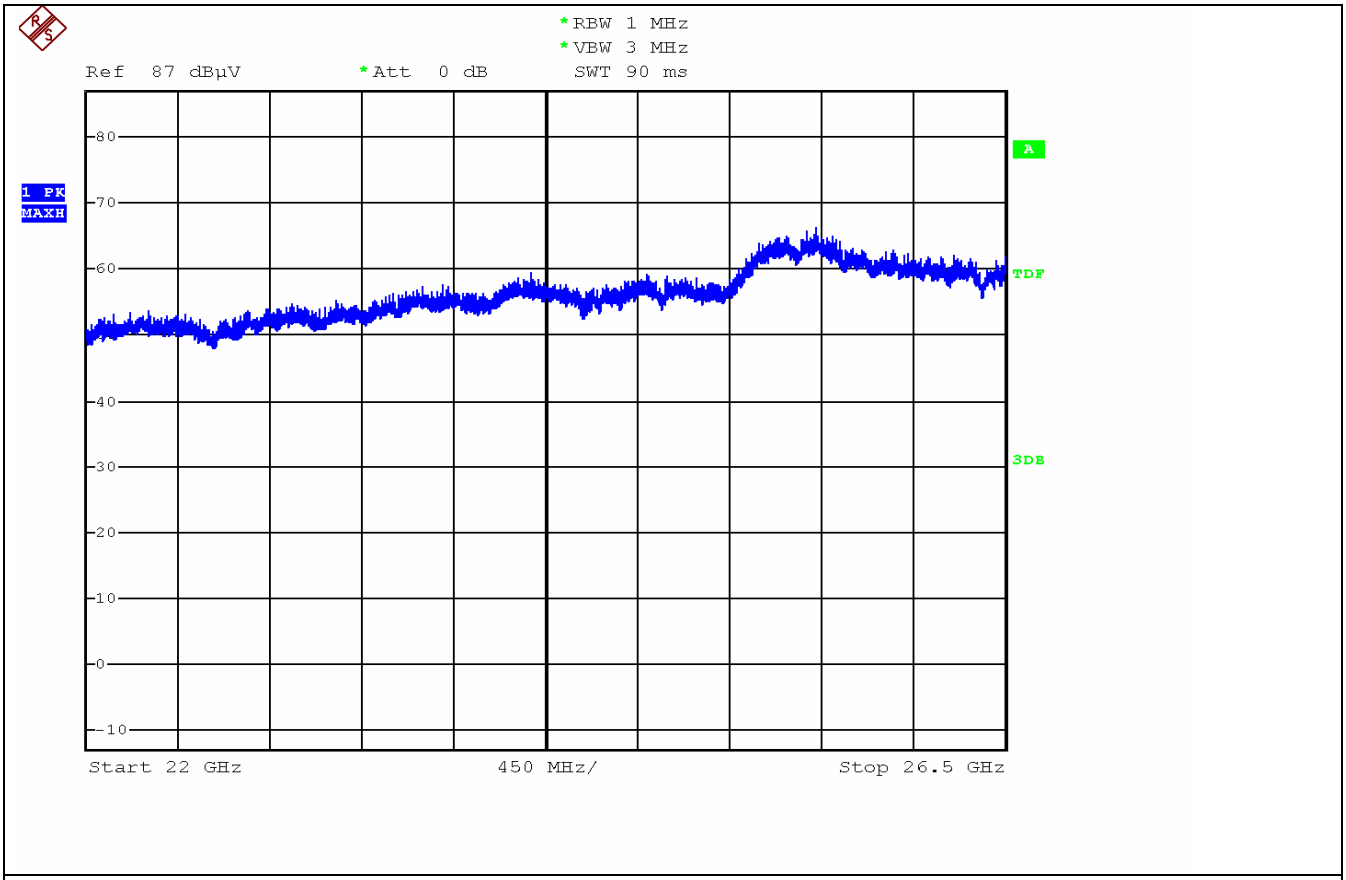



**Fig C15 High Channel Radiated Emissions 22GHz -26.5GHz Vertical 1 metre**

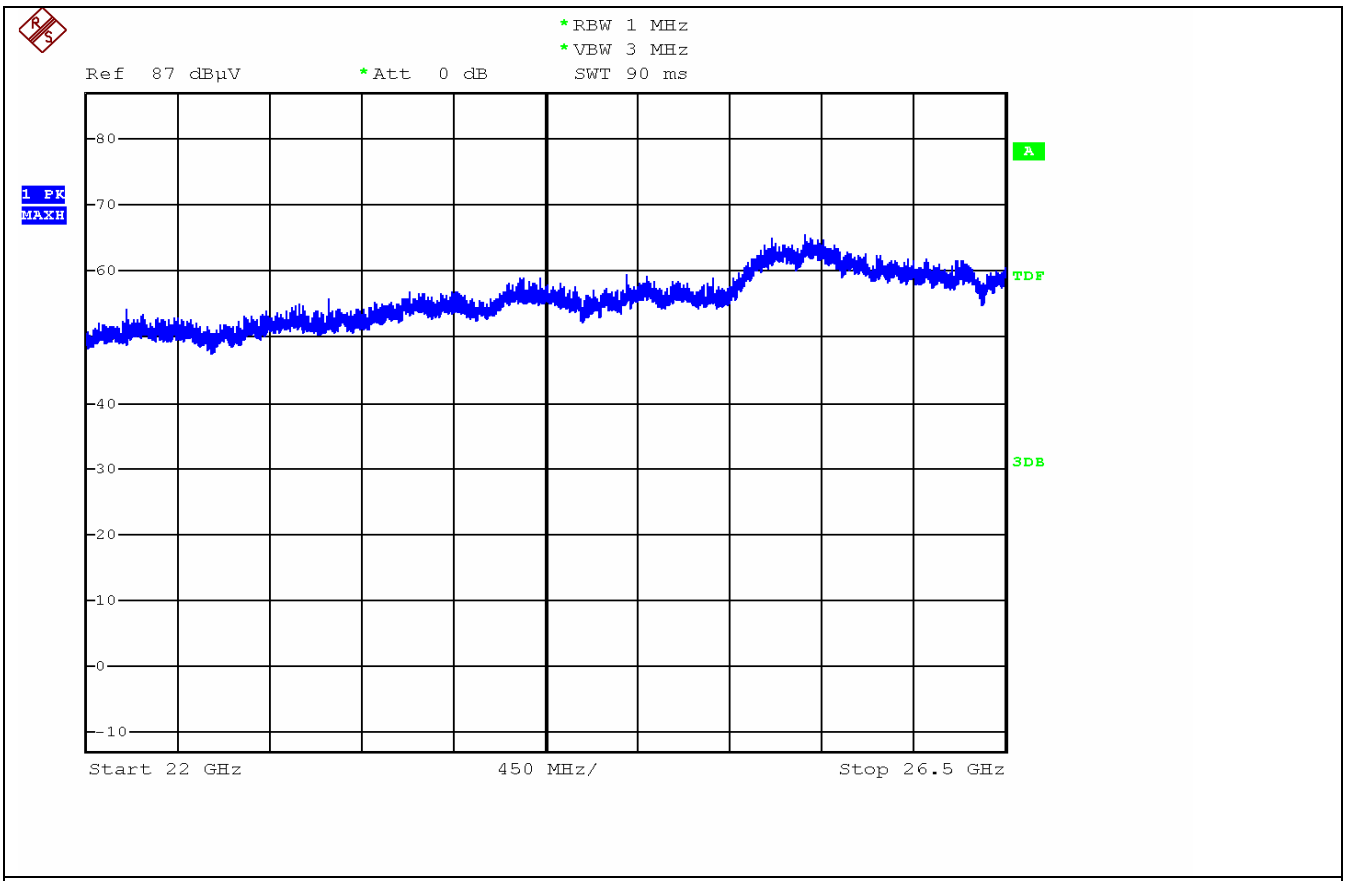



**Fig C16 High Channel Radiated Emissions 22GHz -26.5GHz Horizontal 1metre**

**End of Report**