# Test Report

Curtis-Straus LLC, *a wholly owned subsidiary of BV CPS*

| | |
|---|---|
| Report No | EQ1060-1 |
| Client | Udisense Inc. DBA: Nanit |
| Address | 244 Fifth Avenue<br>Suite 2702<br>New York, NY 10001 |
| Phone | (917)-397-6528 |
| Items tested | Smart Baby Monitor |
| FCC ID | 2AIWVN101 |
| IC | 21649-N101 |
| Model / HVIN | N101 |
| Equipment Type | Digital Transmission System |
| Equipment Code | DTS |
| Emission Designator | 36M2D1D |
| FCC/IC Rule Parts | CFR Title 47 FCC Part 15.247<br>ISED Canada Radio Standards Specification RSS-247 Issue 1 |
| Test Dates | Jul 14, 18-22, Aug 10, 16, 18, 26, 29, 2016 |
| Results | As detailed within this report |
| Prepared by | Yunus Fazilioglu – Sr. EMC Engineer |
| Authorized by | Christopher Reynolds – EMC Supervisor |
| Issue Date | 10/20/2016 |
| Conditions of Issue | This Test Report is issued subject to the conditions stated in the '*Conditions of Testing*' section on page 44 of this report. |

## *Contents*



Form Final Report REV 7-20-07 (DW)

## *Summary*

This test report supports an application for certification of a transmitter operating pursuant to CFR Title 47 FCC Part 15.247 and ISED Canada Radio Standards Specification RSS-247 Issue 1. The product is the "Smart Baby Monitor" (Model: N101). It is a digitally modulated transmitter that operates in the following frequency ranges:
2412MHz – 2462MHz for 802.11b/g/n(HT20)
2422MHz – 2452MHz for 802.11n(HT40)
It has an internal patch antenna with 4dBi gain in the 2.4GHz band.

The product has Bluetooth Low Energy (BLE) and 802.11abgn capabilities as described in EUT Configuration section on page 5. The product is not capable of simultaneous transmission of different signals as they all have to be transmitted over the same antenna. Transmissions from different modes can only occur one at a time. This report lists the results from the 2.4GHz 802.11 modes only.

We found that the product met the above requirements without modification. Test samples were received in good condition.

Release Control Record

| Issue No. | Reason for change | Date Issued |
|---|---|---|
| 1 | Original Release | October 20, 2016 |

## *Test Methodology*

All testing was performed according to the following rules/standards/procedures/documents;

CFR Title 47 FCC Part 15.247

ISED Canada Radio Standards Specification RSS-247 Issue 1

ISED Canada Radio Standards Specification RSS-Gen Issue 4

FCC KDB 558074 D01 DTS Measurement Guidance v03r05

ANSI C63.10-2013.

Radiated emissions were maximized by rotating the device around 3 orthogonal planes (X, Y and Z) as well as varying the test antenna's height and polarity. Only worst case results are presented in this report. EUT has an internal antenna that cannot be maximized separately.

RF conducted measurements were performed at the antenna port on 3 channels as follows:

- 2412 MHz: Low Channel (1) for 802.11b/g/n(HT20)
- 2422 MHz: Low Channel (3) for 802.11n(HT40)
- 2437 MHz: Mid Channel (6) for 802.11b/g/n(HT20)/n(HT40)
- 2452 MHz: High Channel (9) for 802.11n(HT40)
- 2462 MHz: High Channel (11) for 802.11b/g/n(HT20)

EUT is supplied with an external power supply

Brand Name: nanit

Model: S010WU0500200

Input: 100-240VAC 50/60Hz, 400mA

Output: 5VDC, 2000mA

Accordingly AC line conducted emissions testing was performed.

Following bandwidths were used during AC line conducted and radiated spurious emissions tests:

| Frequency | RBW | VBW |
|---|---|---|
| 150kHz-30MHz | 9kHz | 30kHz |
| 30-1000MHz | 120kHz | 1MHz |
| 1-25GHz | 1MHz | 3MHz |

## *Product Tested - Configuration Documentation*

| EUT Configuration | | | |
|---|---|---|---|
| **Work Order:** | Q1060 | | |
| **Company:** | Udisense Inc. DBA: Nanit | | |
| **Company Address:** | 244 Fifth Avenue Suite 2702 | | |
| | New York, NY 10001 | | |
| | | | |
| **Contact:** | *Amnon Karni* | | |
| | | | |
| | **MN** | **SN** | **For** |
| **EUT:** | N101 | N101AU2616004 | Radiated and AC line conducted testing |
| | N101 | N101AU2616008 | Conducted antenna port testing |
| **EUT Description:** | Smart Baby Monitor | | |
| **EUT Max Frequency:** | 800MHz (associated digital circuitry) | | |
| **EUT Min Frequency:** | 32.768kHz (associated digital circuitry) | | |
| **EUT TX Frequency:** | 802.11bgn(HT20) : 2412MHz - 2462MHz, 802.11n(HT40) : 2422MHz - 2452MHz<br>802.11an(HT20) : 5180MHz - 5240MHz, 5260MHz - 5320MHz, 5500MHz - 5700MHz, 5745MHz - 5825MHz<br>802.11n(HT40) : 5190MHz - 5230MHz, 5270MHz - 5310MHz, 5510MHz - 5670MHz, 5755MHz - 5795MHz<br>Bluetooth Low Energy : 2402MHz - 2480MHz | | |

| **Support Equipment** | **MN** | **SN** |
|---|---|---|
| Lenovo Laptop | ThinkPad Edge E550 | PF0C8YN0 |
| TP-LINK AC1750 Dual Band Wireless Router | Archer C7 (US) | 2163130004184 |

| **Port Label** | **Port Type** | **# ports** | **# populated** | **cable type** | **shielded** | **ferrites** | **length (m)** | **in/out** | **under test** | **comment** |
|---|---|---|---|---|---|---|---|---|---|---|
| Power | USB Type-C | 1 | 1 | USB Type-C to USB Type-A | Yes | No | 2m | in | yes | Used for power during radiated and AC line conducted testing. Used for power and test mode setup for conducted antenna port testing. |

**Software Operating Mode Description:**

For 802.11b/g/n(HT20): EUT is set to transmit at Low (2412MHz), Middle (2437MHz) and High (2462MHz) channels.
For 802.11n(HT40): EUT is set to transmit at Low (2422MHz), Middle (2437MHz) and High (2452MHz) channels.

### *Statement of Conformity*

EUT has shown compliance to the following:

| RSS-GEN | RSP-100 | RSS 247 | Part 15 | Comments |
|---|---|---|---|---|
| 6.3 | | | 15.15(b) | There are no controls accessible to the user that varies the output power to operate in violation of the regulatory requirements. |
| | 3.1 | | 15.19 | The label is shown in the label exhibit. |
| | 4 | | 15.21 | Information to the user is shown in the instruction manual exhibit. |
| | | | 15.27 | No special accessories are required for compliance. |
| 3, 6.1 | | | 15.31 | The EUT was tested in accordance with the measurement standards in this section. |
| 6.13 | | | 15.33 | Frequency range was investigated according to this section, unless noted in specific rule section under which the equipment operates. |
| 8.1 | | | 15.35 | The EUT emissions were measured using the measurement detector and bandwidth specified in this section, unless noted in specific rule section under which the equipment operates. |
| 8.3 | | | 15.203 | EUT has a patch antenna internal to the device (4dBi gain in the 2.4GHz band). The antenna is connected to the PCB via an AMC (Amphenol Micro Coaxial) connector which is considered unique. |
| 8.10 | | | 15.205<br>15.209 | The fundamental is not in a Restricted band and the spurious and harmonic emissions in the Restricted bands comply with the general emission limits of 15.209 or RSS-Gen as applicable |
| 8.8 | | | 15.207 | The unit complies with the requirements of 15.207 |
| | | | 15.247 | The unit complies with the requirements of 15.247 |
| | | RSS 247 | | The unit complies with the requirements of RSS-247 |
| 6.6 | | | | Occupied Bandwidth measurements performed. |

# *Test Results*

## DTS Bandwidth

*Limit: The minimum 6 dB bandwidth shall be at least 500 kHz.* [15.247(a)(2)]

## MEASUREMENTS / RESULTS

**6dB Bandwidth**

**Date:** Jul-18-2016, Jul-19-2016 **Company:** Udisense Inc. DBA: Nanit **Work Order:** Q1060
**Engineer:** Yunus Faziloglu **EUT:** Smart Baby Monitor (Model: N101) **EUT Operating Voltage/Frequency:** 5VDC
Jul 18 2016 **Temp:** 23.9°C **Humidity:** 45% **Pressure:** 1005mbar
Jul 19 2016 **Temp:** 24.5°C **Humidity:** 46% **Pressure:** 1002mbar
**Frequency Range:** 2412-2462 MHz **Measurement Type:** Conducted
**Notes:** Powered from support laptop USB port **Measurement Method:** FCC KDB 558074 D01 DTS Meas Guidance v03r05 Section 8.1
All data rates measured for each 802.11 mode. Only the highest readings are reported.

| Mode | Data Rate Mbps | Frequency (MHz) | Reading (MHz) | Limit (MHz) | Result (Pass/Fail) |
|---|---|---|---|---|---|
| 802.11b | 11 | 2412.0 | 7.794 | ≥ 0.5 | Pass |
| | | 2437.0 | **8.612** | ≥ 0.5 | Pass |
| | | 2462.0 | 7.796 | ≥ 0.5 | Pass |
| 802.11g | 54 | 2412.0 | 16.313 | ≥ 0.5 | Pass |
| | | 2437.0 | 16.325 | ≥ 0.5 | Pass |
| | | 2462.0 | **16.378** | ≥ 0.5 | Pass |
| 802.11n (HT20) | 65 | 2412.0 | 17.595 | ≥ 0.5 | Pass |
| | | 2437.0 | 17.601 | ≥ 0.5 | Pass |
| | | 2462.0 | **17.603** | ≥ 0.5 | Pass |
| 802.11n (HT40) | 135 | 2422.0 | 35.090 | ≥ 0.5 | Pass |
| | | 2437.0 | 35.090 | ≥ 0.5 | Pass |
| | | 2452.0 | **35.092** | ≥ 0.5 | Pass |

**Test Site:** Wireless Test Room **Cable 1:** UFL to SMA adapter **Attenuator** A2121
**Analyzer:** A2200



Rev. 7/4/2016

| Spectrum Analyzers / Receivers /Preselectors | Range | MN | Mfr | SN | Asset | Cat | Calibration Due | Calibrated on |
|---|---|---|---|---|---|---|---|---|
| FSV40 Signal/Spectrum Analyzer | 10Hz-40GHz | FSV40 | R&S | 101551 | 2200 | I | 6/1/2017 | 6/1/2016 |

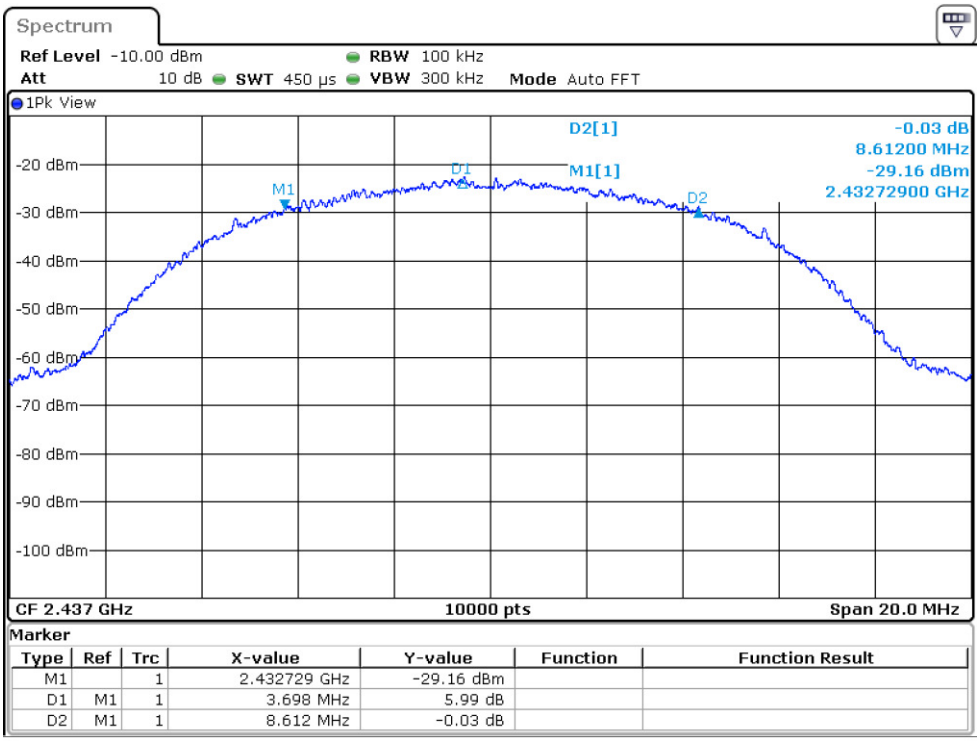
| Preamps /Couplers Attenuators / Filters | Range | MN | Mfr | SN | Asset | Cat | Calibration Due | Calibrated on |
|---|---|---|---|---|---|---|---|---|
| API - 30dB 20W Attenuator | 9KHz-40GHz | 89-30-11 | API Weinschel | 703 | 2121 | I | 2/10/2017 | 2/10/2016 |

| Meteorological Meters | MN | Mfr | SN | Asset | Cat | Calibration Due | Calibrated on |
|---|---|---|---|---|---|---|---|
| Weather Clock (Pressure Only) | BA928 | Oregon Scientific | C3166-1 | 831 | I | 4/28/2018 | 4/28/2016 |
| TH A#2085 | HTC-1 | HDE | | 2085 | II | 4/5/2017 | 4/5/2016 |

All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.

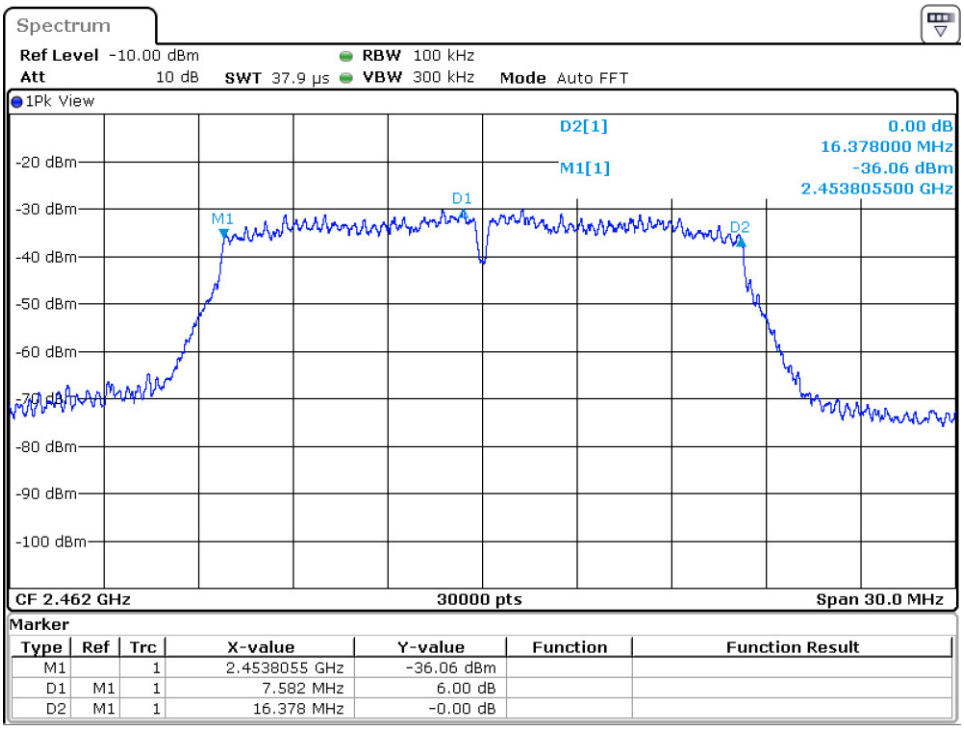
## Plots

Continued on next page.



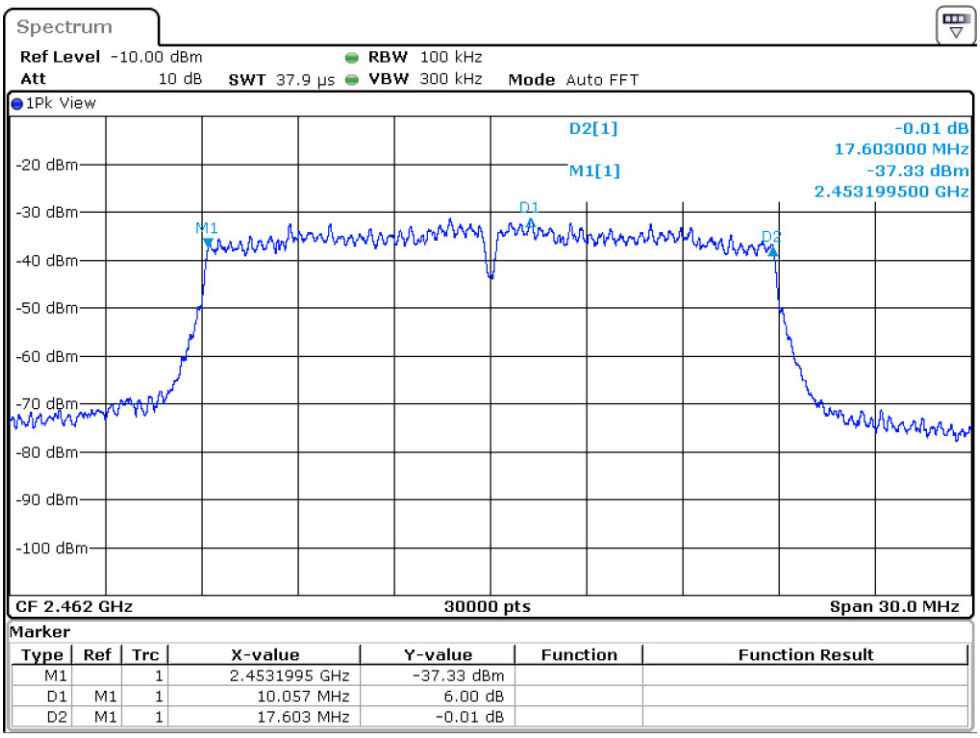

Date: 18.JUL.2016 11:56:10

6dB Bandwidth 802.11b 11Mbps 2437MHz



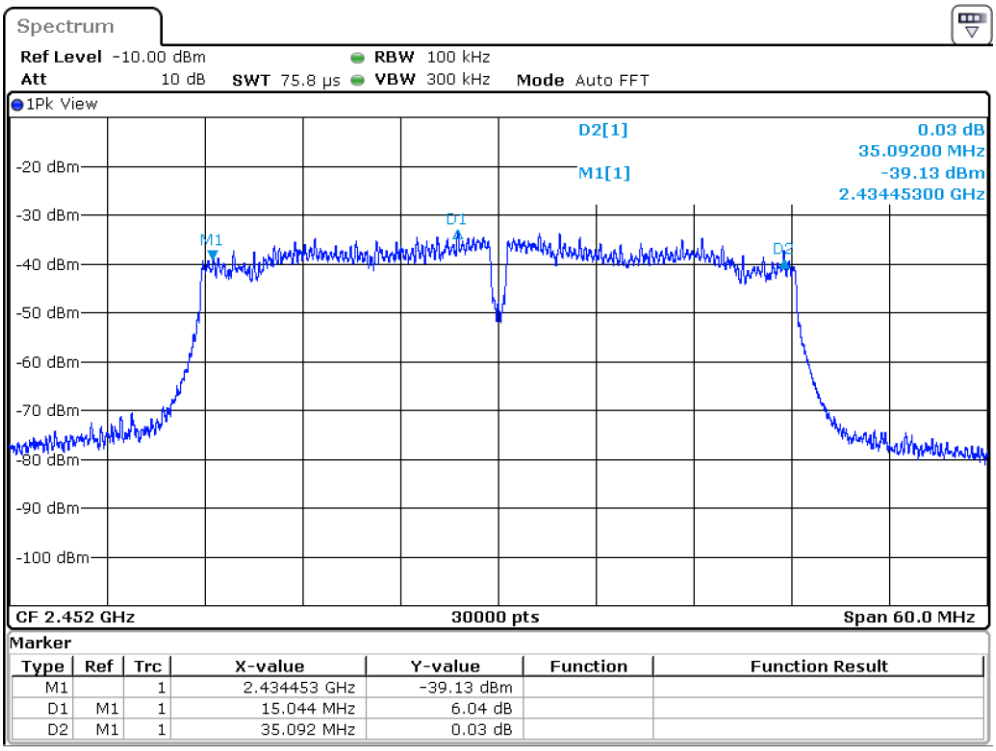

Date: 19.JUL.2016 12:07:31

6dB Bandwidth 802.11g 54Mbps 2462MHz




Date: 19.JUL.2016 14:37:50

6dB Bandwidth 802.11n (HT20) 65Mbps 2462MHz




Date: 19.JUL.2016 15:48:02

6dB Bandwidth 802.11n (HT40) 135Mbps 2452MHz

## Output Power

Limit: 1 Watt Peak Conducted Output Power [15.247(b)(3)]

Per 558074 D01 DTS Measurement Guidance v03r05 Section 9.1.2 (Peak Power Meter Method). VBW on the power sensor is larger than DTS (6dB) bandwidth of the product.

## MEASUREMENTS / RESULTS

**Peak Output Power**

**Date:** Jul-14-2016, Jul-21-2016 **Company:** Udisense Inc. DBA: Nanit **Work Order:** Q1060
**Engineer:** Yunus Faziloglu **EUT:** Smart Baby Monitor (Model: N101) **EUT Operating Voltage/Frequency:** 5VDC
Jul 14 2016 **Temp:** 23.8°C **Humidity:** 44% **Pressure:** 1004mbar
Jul 21 2016 **Temp:** 24°C **Humidity:** 46% **Pressure:** 1002mbar
**Frequency Range:** 2412-2462 MHz **Measurement Type:** Conducted
**Notes:** Powered from support laptop USB port **Measurement Method:** FCC KDB 558074 D01 DTS Meas Guidance v03r05 Section 9.1.2

| Mode | Data Rate | Frequency | Peak Reading | Cable Loss | Attenuator Loss | Peak Output Power | Limit | Margin | Result |
|---|---|---|---|---|---|---|---|---|---|
| | Mbps | (MHz) | (dBm) | (dB) | (dB) | (dBm) | (dBm) | (dB) | (Pass/Fail) |
| 802.11b | 1 | 2412.0 | -12.34 | 1.0 | 29.5 | 18.16 | 30.0 | -11.84 | Pass |
| | | 2437.0 | -12.46 | 1.0 | 29.5 | 18.04 | 30.0 | -11.96 | Pass |
| | | 2462.0 | -12.48 | 1.0 | 29.5 | 18.02 | 30.0 | -11.98 | Pass |
| | 2 | 2412.0 | -12.39 | 1.0 | 29.5 | 18.11 | 30.0 | -11.89 | Pass |
| | | 2437.0 | -12.32 | 1.0 | 29.5 | 18.18 | 30.0 | -11.82 | Pass |
| | | 2462.0 | -12.37 | 1.0 | 29.5 | 18.13 | 30.0 | -11.87 | Pass |
| | 5.5 | 2412.0 | -12.43 | 1.0 | 29.5 | 18.07 | 30.0 | -11.93 | Pass |
| | | 2437.0 | -12.40 | 1.0 | 29.5 | 18.10 | 30.0 | -11.90 | Pass |
| | | 2462.0 | -12.32 | 1.0 | 29.5 | 18.18 | 30.0 | -11.82 | Pass |
| | 11 | 2412.0 | -12.28 | 1.0 | 29.5 | 18.22 | 30.0 | -11.78 | Pass |
| | | 2437.0 | -12.29 | 1.0 | 29.5 | 18.21 | 30.0 | -11.79 | Pass |
| | | 2462.0 | -12.17 | 1.0 | 29.5 | **18.33** | 30.0 | -11.67 | Pass |
| 802.11g | 6 | 2412.0 | -7.47 | 1.0 | 29.5 | 23.03 | 30.0 | -6.97 | Pass |
| | | 2437.0 | -7.46 | 1.0 | 29.5 | **23.04** | 30.0 | -6.96 | Pass |
| | | 2462.0 | -7.60 | 1.0 | 29.5 | 22.90 | 30.0 | -7.10 | Pass |
| | 9 | 2412.0 | -7.53 | 1.0 | 29.5 | 22.97 | 30.0 | -7.03 | Pass |
| | | 2437.0 | -7.51 | 1.0 | 29.5 | 22.99 | 30.0 | -7.01 | Pass |
| | | 2462.0 | -7.54 | 1.0 | 29.5 | 22.96 | 30.0 | -7.04 | Pass |
| | 12 | 2412.0 | -7.85 | 1.0 | 29.5 | 22.65 | 30.0 | -7.35 | Pass |
| | | 2437.0 | -7.90 | 1.0 | 29.5 | 22.60 | 30.0 | -7.40 | Pass |
| | | 2462.0 | -8.08 | 1.0 | 29.5 | 22.42 | 30.0 | -7.58 | Pass |
| | 18 | 2412.0 | -7.88 | 1.0 | 29.5 | 22.62 | 30.0 | -7.38 | Pass |
| | | 2437.0 | -8.20 | 1.0 | 29.5 | 22.30 | 30.0 | -7.70 | Pass |
| | | 2462.0 | -8.12 | 1.0 | 29.5 | 22.38 | 30.0 | -7.62 | Pass |
| | 24 | 2412.0 | -8.05 | 1.0 | 29.5 | 22.45 | 30.0 | -7.55 | Pass |
| | | 2437.0 | -7.97 | 1.0 | 29.5 | 22.54 | 30.0 | -7.47 | Pass |
| | | 2462.0 | -8.20 | 1.0 | 29.5 | 22.30 | 30.0 | -7.70 | Pass |
| | 36 | 2412.0 | -8.00 | 1.0 | 29.5 | 22.50 | 30.0 | -7.50 | Pass |
| | | 2437.0 | -7.97 | 1.0 | 29.5 | 22.53 | 30.0 | -7.47 | Pass |
| | | 2462.0 | -8.12 | 1.0 | 29.5 | 22.38 | 30.0 | -7.62 | Pass |
| | 48 | 2412.0 | -8.10 | 1.0 | 29.5 | 22.40 | 30.0 | -7.60 | Pass |
| | | 2437.0 | -7.99 | 1.0 | 29.5 | 22.51 | 30.0 | -7.49 | Pass |
| | | 2462.0 | -8.28 | 1.0 | 29.5 | 22.22 | 30.0 | -7.78 | Pass |
| | 54 | 2412.0 | -7.89 | 1.0 | 29.5 | 22.61 | 30.0 | -7.39 | Pass |
| | | 2437.0 | -8.01 | 1.0 | 29.5 | 22.49 | 30.0 | -7.51 | Pass |
| | | 2462.0 | -8.13 | 1.0 | 29.5 | 22.37 | 30.0 | -7.63 | Pass |

**Test Site:** Wireless Test Room **Cable** UFL to SMA adapter **Power Sensor** Boonton A#2108
Peak Output Power (dBm) = Peak Reading (dBm) + Cable Loss (dB) + Attenuator Loss (dB) **Attenuator** A2121

## Peak Output Power

**Date:** Jul-21-2016 **Company:** Udisense Inc. DBA: Nanit **Work Order:** Q1060
**Engineer:** Yunus Faziloglu **EUT:** Smart Baby Monitor (Model: N101) **EUT Operating Voltage/Frequency:** 5VDC
**Temp:** 24°C **Humidity:** 46% **Pressure:** 1002 mBar
**Frequency Range:** 2412-2462 MHz **Measurement Type:** Conducted
**Notes:** Powered from support laptop USB port **Measurement Method:** FCC KDB 558074 D01 DTS Meas Guidance v03r05 Section 9.1.2

| Mode | Data Rate | Frequency | Peak Reading | Cable Loss | Attenuator Loss | Peak Output Power | Limit | Margin | Result |
|---|---|---|---|---|---|---|---|---|---|
| | Mbps | (MHz) | (dBm) | (dB) | (dB) | (dBm) | (dBm) | (dB) | (Pass/Fail) |
| 802.11n (HT20) | 6.5 | 2412.0 | -8.07 | 1.0 | 29.5 | **22.43** | 30.0 | -7.57 | Pass |
| | | 2437.0 | -8.16 | 1.0 | 29.5 | 22.34 | 30.0 | -7.66 | Pass |
| | | 2462.0 | -8.22 | 1.0 | 29.5 | 22.28 | 30.0 | -7.72 | Pass |
| | 13 | 2412.0 | -8.49 | 1.0 | 29.5 | 22.01 | 30.0 | -7.99 | Pass |
| | | 2437.0 | -8.54 | 1.0 | 29.5 | 21.96 | 30.0 | -8.04 | Pass |
| | | 2462.0 | -8.86 | 1.0 | 29.5 | 21.64 | 30.0 | -8.36 | Pass |
| | 19.5 | 2412.0 | -8.40 | 1.0 | 29.5 | 22.10 | 30.0 | -7.90 | Pass |
| | | 2437.0 | -8.48 | 1.0 | 29.5 | 22.02 | 30.0 | -7.98 | Pass |
| | | 2462.0 | -8.72 | 1.0 | 29.5 | 21.78 | 30.0 | -8.22 | Pass |
| | 26 | 2412.0 | -8.56 | 1.0 | 29.5 | 21.95 | 30.0 | -8.06 | Pass |
| | | 2437.0 | -8.60 | 1.0 | 29.5 | 21.90 | 30.0 | -8.10 | Pass |
| | | 2462.0 | -8.78 | 1.0 | 29.5 | 21.72 | 30.0 | -8.28 | Pass |
| | 39 | 2412.0 | -8.34 | 1.0 | 29.5 | 22.16 | 30.0 | -7.84 | Pass |
| | | 2437.0 | -8.54 | 1.0 | 29.5 | 21.96 | 30.0 | -8.04 | Pass |
| | | 2462.0 | -8.72 | 1.0 | 29.5 | 21.78 | 30.0 | -8.22 | Pass |
| | 52 | 2412.0 | -8.22 | 1.0 | 29.5 | 22.28 | 30.0 | -7.72 | Pass |
| | | 2437.0 | -8.28 | 1.0 | 29.5 | 22.22 | 30.0 | -7.78 | Pass |
| | | 2462.0 | -8.46 | 1.0 | 29.5 | 22.04 | 30.0 | -7.96 | Pass |
| | 58.5 | 2412.0 | -8.42 | 1.0 | 29.5 | 22.08 | 30.0 | -7.92 | Pass |
| | | 2437.0 | -8.38 | 1.0 | 29.5 | 22.13 | 30.0 | -7.88 | Pass |
| | | 2462.0 | -8.51 | 1.0 | 29.5 | 21.99 | 30.0 | -8.01 | Pass |
| | 65 | 2412.0 | -8.43 | 1.0 | 29.5 | 22.07 | 30.0 | -7.93 | Pass |
| | | 2437.0 | -8.49 | 1.0 | 29.5 | 22.01 | 30.0 | -7.99 | Pass |
| | | 2462.0 | -8.64 | 1.0 | 29.5 | 21.86 | 30.0 | -8.14 | Pass |
| 802.11n (HT40) | 13.5 | 2422.0 | -8.10 | 1.0 | 29.5 | 22.40 | 30.0 | -7.60 | Pass |
| | | 2437.0 | -8.27 | 1.0 | 29.5 | 22.23 | 30.0 | -7.77 | Pass |
| | | 2452.0 | -8.36 | 1.0 | 29.5 | 22.14 | 30.0 | -7.86 | Pass |
| | 27 | 2422.0 | -8.07 | 1.0 | 29.5 | 22.43 | 30.0 | -7.57 | Pass |
| | | 2437.0 | -8.09 | 1.0 | 29.5 | 22.41 | 30.0 | -7.59 | Pass |
| | | 2452.0 | -8.16 | 1.0 | 29.5 | 22.34 | 30.0 | -7.66 | Pass |
| | 40.5 | 2422.0 | -8.29 | 1.0 | 29.5 | 22.21 | 30.0 | -7.79 | Pass |
| | | 2437.0 | -8.22 | 1.0 | 29.5 | 22.28 | 30.0 | -7.72 | Pass |
| | | 2452.0 | -8.24 | 1.0 | 29.5 | 22.26 | 30.0 | -7.74 | Pass |
| | 54 | 2422.0 | -8.00 | 1.0 | 29.5 | 22.50 | 30.0 | -7.50 | Pass |
| | | 2437.0 | -7.98 | 1.0 | 29.5 | **22.52** | 30.0 | -7.48 | Pass |
| | | 2452.0 | -8.08 | 1.0 | 29.5 | 22.42 | 30.0 | -7.58 | Pass |
| | 81 | 2422.0 | -8.18 | 1.0 | 29.5 | 22.32 | 30.0 | -7.68 | Pass |
| | | 2437.0 | -8.30 | 1.0 | 29.5 | 22.20 | 30.0 | -7.80 | Pass |
| | | 2452.0 | -8.50 | 1.0 | 29.5 | 22.00 | 30.0 | -8.00 | Pass |
| | 108 | 2422.0 | -8.23 | 1.0 | 29.5 | 22.27 | 30.0 | -7.73 | Pass |
| | | 2437.0 | -8.27 | 1.0 | 29.5 | 22.23 | 30.0 | -7.77 | Pass |
| | | 2452.0 | -8.31 | 1.0 | 29.5 | 22.19 | 30.0 | -7.81 | Pass |
| | 121.5 | 2422.0 | -8.50 | 1.0 | 29.5 | 22.00 | 30.0 | -8.00 | Pass |
| | | 2437.0 | -8.52 | 1.0 | 29.5 | 21.98 | 30.0 | -8.02 | Pass |
| | | 2452.0 | -8.49 | 1.0 | 29.5 | 22.01 | 30.0 | -7.99 | Pass |
| | 135 | 2422.0 | -8.30 | 1.0 | 29.5 | 22.20 | 30.0 | -7.80 | Pass |
| | | 2437.0 | -8.28 | 1.0 | 29.5 | 22.23 | 30.0 | -7.78 | Pass |
| | | 2452.0 | -8.36 | 1.0 | 29.5 | 22.14 | 30.0 | -7.86 | Pass |

**Test Site:** Wireless Test Room **Cable** UFL to SMA adapter **Power Sensor** Boonton A#2108
Peak Output Power (dBm) = Peak Reading (dBm) + Cable Loss (dB) + Attenuator Loss (dB) **Attenuator** A2121

Rev. 7/4/2016

| Preamps /Couplers Attenuators / Filters | Range | MN | Mfr | SN | Asset | Cat | Calibration Due | Calibrated on |
|---|---|---|---|---|---|---|---|---|
| API - 30dB 20W Attenuator | 9KHz-40GHz | 89-30-11 | API Weinschel | 703 | 2121 | I | 2/10/2017 | 2/10/2016 |
| **Meteorological Meters** | | **MN** | **Mfr** | **SN** | **Asset** | **Cat** | **Calibration Due** | **Calibrated on** |
| Weather Clock (Pressure Only) | | BA928 | Oregon Scientific | C3166-1 | 831 | I | 4/28/2018 | 4/28/2016 |
| TH A#2085 | | HTC-1 | HDE | | 2085 | II | 4/5/2017 | 4/5/2016 |
| **Power/Noise Meters** | | **MN** | **Mfr** | **SN** | **Asset** | **Cat** | **Calibration Due** | **Calibrated on** |
| 2108 Power sensor | | 55006 | Boonton | 9529 | 2108 | I | 12/8/2016 | 12/8/2015 |

All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.

## Radiated Spurious Emissions

### LIMITS

*Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).*
[15.247(d)]

Radiated emissions were maximized by rotating the device around 3 orthogonal planes (X, Y and Z) and worst case emissions observed in Z orientation. All the results below are for the worst case orientation.

No harmonics detected. Emissions found were not transmitter related and therefore they were not channel dependent.

### MEASUREMENTS / RESULTS

**Radiated Emissions Table**

**Date:** 26-Aug-16 **Company:** Udisense Inc. DBA: Nanit **Work Order:** Q1060
**Engineer:** Chris Bramley **EUT Desc:** Smart Baby Monitor (Model: N101) **EUT Operating Voltage/Frequency:** 120V/60Hz
**Temp:** 26.2°C **Humidity:** 46% **Pressure:** 1000mBar
**Frequency Range:** 30-1000MHz **Measurement Distance:** 3 m
**Notes:** 802.11g 6Mbps (worst-case) **EUT Max Freq:** 5825MHz

| Antenna Polarization (H / V) | Frequency (MHz) | Reading (dBµV) | Preamp Factor (dB) | Antenna Factor (dB/m) | Cable Factor (dB) | Adjusted Reading (dBµV/m) | | | | FCC Class B Limit (dBµV/m) | FCC Class B Margin (dB) | FCC Class B Result (Pass/Fail) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| v | 32.3 | 36.7 | 25.2 | 19.7 | 0.4 | 31.6 | | | | 40.0 | -8.4 | Pass |
| v | 73.4 | 49.0 | 25.3 | 8.2 | 0.6 | 32.5 | | | | 40.0 | -7.5 | Pass |
| v | 111.4 | 49.7 | 25.2 | 12.9 | 0.8 | 38.2 | | | | 43.5 | -5.3 | Pass |
| v | 163.0 | 48.6 | 25.0 | 12.1 | 1.0 | 36.7 | | | | 43.5 | -6.8 | Pass |
| v | 225.0 | 49.1 | 25.3 | 10.9 | 1.1 | 35.8 | | | | 46.0 | -10.2 | Pass |
| h | 336.0 | 54.6 | 25.2 | 14.0 | 1.4 | 44.8 | | | | 46.0 | -1.2 | Pass |
| v | 550.0 | 40.6 | 25.3 | 18.1 | 1.8 | 35.2 | | | | 46.0 | -10.8 | Pass |
| h | 650.0 | 45.0 | 24.8 | 20.1 | 1.8 | 42.1 | | | | 46.0 | -3.9 | Pass |
| h | 705.3 | 39.9 | 24.8 | 20.3 | 1.9 | 37.3 | | | | 46.0 | -8.7 | Pass |
| h | 750.0 | 38.2 | 24.8 | 20.9 | 2.0 | 36.3 | | | | 46.0 | -9.7 | Pass |
| h | 780.0 | 36.8 | 24.8 | 21.5 | 2.1 | 35.6 | | | | 46.0 | -10.4 | Pass |

***Table Result:*** Pass by -1.2 dB ***Worst Freq:*** 336.0 MHz

**Test Site:** EMI Chamber 1 **Cable 1:** Asset #2051 **Cable 2:** Asset #1784
**Analyzer:** Rental SA#2 **Preamp:** Blue-Blk **Antenna:** Red-Brown
CSsoft Radiated Emissions Calculator v 1.017.169

Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor

Rev. 8/21/2016

| Spectrum Analyzers / Receivers /Preselectors | Range | MN | Mfr | SN | Asset | Cat | Calibration Due | Calibrated on |
|---|---|---|---|---|---|---|---|---|
| SA #2 (1860) | 9kHz-26.5 GHz | E7405A | Agilent | MY45104916 | 1860 | I | 12/23/2016 | 12/23/2015 |

| Radiated Emissions Sites | FCC Code | IC Code | VCCI Code | Range | | Cat | Calibration Due | Calibrated on |
|---|---|---|---|---|---|---|---|---|
| EMI Chamber 1 | 719150 | 2762A-6 | A-0015 | 30-1000MHz | | II | 3/21/2017 | 3/21/2015 |

| Preamps /Couplers Attenuators / Filters | Range | MN | Mfr | SN | Asset | Cat | Calibration Due | Calibrated on |
|---|---|---|---|---|---|---|---|---|
| Blue-Black | 0.009-2000MHz | ZFL-1000-LN | CS | N/A | 800 | II | 12/27/2016 | 12/27/2015 |

| Antennas | Range | MN | Mfr | SN | Asset | Cat | Calibration Due | Calibrated on |
|---|---|---|---|---|---|---|---|---|
| Red-Brown Bilog | 30-2000MHz | JB1 | Sunol | A0032406 | 1218 | I | 12/4/2016 | 12/4/2014 |

| Meteorological Meters | | MN | Mfr | SN | Asset | Cat | Calibration Due | Calibrated on |
|---|---|---|---|---|---|---|---|---|
| Weather Clock (Pressure Only) | | BA928 | Oregon Scientific | C3166-1 | 831 | I | 4/28/2018 | 4/28/2016 |
| TH A#2080 | | HTC-1 | HDE | | 2080 | II | 4/5/2017 | 4/5/2016 |

| Cables | Range | Mfr | | | Cat | Calibration Due | Calibrated on |
|---|---|---|---|---|---|---|---|
| Asset #1784 | 9kHz - 18GHz | Florida RF | | | II | 3/7/2017 | 3/7/2016 |
| Asset #2051 | 9kHz - 18GHz | Florida RF | | | II | 3/2/2017 | 3/2/2016 |

All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.

## Radiated Emissions Table

**Date:** 10-Aug-16 **Company:** Udisense Inc. DBA: Nanit **Work Order:** Q1060
**Engineer:** Chris Bramley **EUT Desc:** Smart Baby Monitor (Model:N101) **EUT Operating Voltage/Frequency:** 120V/60Hz
**Temp:** 25.8°C **Humidity:** 47% **Pressure:** 1010mBar
**Frequency Range:** 1-6GHz **Measurement Distance:** 3 m
**Notes:** 802.11b 11Mbps (worst case) **EUT Max Freq:** 5825MHz
3 channels: 2412MHz, 2437MHz, 2462MHz

| Antenna Polarization (H / V) | Frequency (MHz) | Peak Reading (dBµV) | Average Reading (dBµV) | Preamp Factor (dB) | Antenna Factor (dB/m) | Cable Factor (dB) | Adjusted Peak Reading (dBµV/m) | Adjusted Avg Reading (dBµV/m) | FCC Class B High Frequency - Peak | | | FCC Class B High Frequency - Average | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Limit (dBµV/m) | Margin (dB) | Result (Pass/Fail) | Limit (dBµV/m) | Margin (dB) | Result (Pass/Fail) |
| v | 1350.0 | 39.86 | 34.6 | 19.1 | 28.9 | 2.6 | 52.3 | 47.0 | 74.0 | -21.7 | Pass | 54.0 | -7.0 | Pass |
| v, bandedge | 2390.0 | 38.92 | 26.5 | 19.0 | 32.3 | 4.4 | 56.6 | 44.2 | 74.0 | -17.4 | Pass | 54.0 | -9.8 | Pass |
| v | 4824.0 | 38.47 | 28.4 | 16.9 | 34.4 | 5.9 | 61.9 | 51.8 | 74.0 | -12.1 | Pass | 54.0 | -2.2 | Pass |
| v | 4874.0 | 37.91 | 27.9 | 16.8 | 34.4 | 5.9 | 61.4 | 51.4 | 74.0 | -12.6 | Pass | 54.0 | -2.6 | Pass |
| v, bandedge | 2483.5 | 39.29 | 25.1 | 18.9 | 32.4 | 4.3 | 57.1 | 42.9 | 74.0 | -16.9 | Pass | 54.0 | -11.1 | Pass |
| v | 4924.0 | 39.06 | 29.1 | 16.7 | 34.4 | 6.1 | 62.9 | 52.9 | 74.0 | -11.1 | Pass | 54.0 | -1.1 | Pass |

***Table Result:*** Pass by -1.1 dB ***Worst Freq:*** 4924.0 MHz

**Test Site:** EMI Chamber 1 **Cable 1:** Asset #2051 **Cable 2:** Asset #1784
**Analyzer:** Gold **Preamp:** Brown **Antenna:** Blue Horn
CSsoft Radiated Emissions Calculator v 1.017.167

Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor

## Radiated Emissions Table

**Date:** 10-Aug-16 **Company:** Udisense Inc. DBA: Nanit **Work Order:** Q1060
**Engineer:** Chris Bramley **EUT Desc:** Smart Baby Monitor (Model:N101) **EUT Operating Voltage/Frequency:** 120V/60Hz
**Temp:** 25.8°C **Humidity:** 47% **Pressure:** 1010mBar
**Frequency Range:** 6-18GHz **Measurement Distance:** 1 m
**Notes:** 802.11b 11Mbps (worst case) **EUT Max Freq:** 5825MHz
3 channels: 2412MHz, 2437MHz, 2462MHz

| Antenna Polarization (H / V) | Frequency (MHz) | Peak Reading (dBµV) | Average Reading (dBµV) | Preamp Factor (dB) | Antenna Factor (dB/m) | Cable Factor (dB) | Adjusted Peak Reading (dBµV/m) | Adjusted Avg Reading (dBµV/m) | FCC Class B High Frequency - Peak | | | FCC Class B High Frequency - Average | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Limit (dBµV/m) | Margin (dB) | Result (Pass/Fail) | Limit (dBµV/m) | Margin (dB) | Result (Pass/Fail) |
| v | 7236.0 | 36.39 | 23.7 | 16.7 | 35.9 | 8.0 | 63.6 | 50.9 | 83.5 | -19.9 | Pass | 63.5 | -12.6 | Pass |
| v | 7311.0 | 36.23 | 23.8 | 17.0 | 35.9 | 7.7 | 62.8 | 50.4 | 83.5 | -20.7 | Pass | 63.5 | -13.1 | Pass |
| v | 7386.0 | 36.34 | 23.1 | 17.2 | 36.0 | 7.7 | 62.8 | 49.6 | 83.5 | -20.7 | Pass | 63.5 | -13.9 | Pass |

***Table Result:*** Pass by -12.6 dB ***Worst Freq:*** 7236.0 MHz

**Test Site:** EMI Chamber 1 **Cable 1:** Asset #2051 **Cable 2:** Asset #1784
**Analyzer:** Gold **Preamp:** Asset #1517 **Antenna:** Blue Horn
CSsoft Radiated Emissions Calculator v 1.017.167

Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor

## Radiated Emissions Table

**Date:** 10-Aug-16 **Company:** Udisense Inc. DBA: Nanit **Work Order:** Q1060
**Engineer:** Chris Bramley **EUT Desc:** Smart Baby Monitor (Model:N101) **EUT Operating Voltage/Frequency:** 120V/60Hz
**Temp:** 24.9°C **Humidity:** 39% **Pressure:** 1013mBar
**Frequency Range:** 1-6GHz **Measurement Distance:** 3 m
**Notes:** 802.11g 6Mbps (worst case) **EUT Max Freq:** 5825MHz
3 channels: 2412MHz, 2437MHz, 2462MHz

| Antenna Polarization (H / V) | Frequency (MHz) | Peak Reading (dBµV) | Average Reading (dBµV) | Preamp Factor (dB) | Antenna Factor (dB/m) | Cable Factor (dB) | Adjusted Peak Reading (dBµV/m) | Adjusted Avg Reading (dBµV/m) | FCC Class B High Frequency - Peak | | | FCC Class B High Frequency - Average | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Limit (dBµV/m) | Margin (dB) | Result (Pass/Fail) | Limit (dBµV/m) | Margin (dB) | Result (Pass/Fail) |
| v | 1350.0 | 39.86 | 34.6 | 19.1 | 28.9 | 2.6 | 52.3 | 47.0 | 74.0 | -21.7 | Pass | 54.0 | -7.0 | Pass |
| v, bandedge | 2390.0 | 53.6 | 33.1 | 19.0 | 32.3 | 4.4 | 71.3 | 50.8 | 74.0 | -2.7 | Pass | 54.0 | -3.2 | Pass |
| v | 4824.0 | 36.16 | 21.9 | 16.9 | 34.4 | 5.9 | 59.6 | 45.3 | 74.0 | -14.4 | Pass | 54.0 | -8.7 | Pass |
| v | 4874.0 | 36.73 | 21.7 | 16.8 | 34.4 | 5.9 | 60.2 | 45.2 | 74.0 | -13.8 | Pass | 54.0 | -8.8 | Pass |
| v, bandedge | 2483.5 | 51.43 | 29.8 | 18.9 | 32.4 | 4.3 | 69.2 | 47.6 | 74.0 | -4.8 | Pass | 54.0 | -6.4 | Pass |
| v | 4924.0 | 35.28 | 22.0 | 16.7 | 34.4 | 6.1 | 59.1 | 45.8 | 74.0 | -14.9 | Pass | 54.0 | -8.2 | Pass |

***Table Result:*** Pass by -2.7 dB ***Worst Freq:*** 2390.0 MHz

**Test Site:** EMI Chamber 1 **Cable 1:** Asset #2051 **Cable 2:** Asset #1784
**Analyzer:** Gold **Preamp:** Brown **Antenna:** Blue Horn
CSsoft Radiated Emissions Calculator v 1.017.166

Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor

## Radiated Emissions Table

**Date:** 10-Aug-16 **Company:** Udisense Inc. DBA: Nanit **Work Order:** Q1060
**Engineer:** Chris Bramley **EUT Desc:** Smart Baby Monitor (Model:N101) **EUT Operating Voltage/Frequency:** 120V/60Hz
**Temp:** 25.8°C **Humidity:** 47% **Pressure:** 1010mBar
**Frequency Range:** 6-18GHz **Measurement Distance:** 1 m
**Notes:** 802.11g 6Mbps (worst case) **EUT Max Freq:** 5825MHz

| Antenna Polarization (H / V) | Frequency (MHz) | Peak Reading (dBµV) | Average Reading (dBµV) | Preamp Factor (dB) | Antenna Factor (dB/m) | Cable Factor (dB) | Adjusted Peak Reading (dBµV/m) | Adjusted Avg Reading (dBµV/m) | FCC Class B High Frequency - Peak | | | FCC Class B High Frequency - Average | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Limit (dBµV/m) | Margin (dB) | Result (Pass/Fail) | Limit (dBµV/m) | Margin (dB) | Result (Pass/Fail) |
| No emissions found | | | | | | | | | | | | | | |

***Table Result:*** --- by --- dB ***Worst Freq:*** --- MHz

**Test Site:** EMI Chamber 1 **Cable 1:** Asset #2051 **Cable 2:** Asset #1784
**Analyzer:** Gold **Preamp:** Asset #1517 **Antenna:** Blue Horn
CSsoft Radiated Emissions Calculator v 1.017.167

Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor

## Radiated Emissions Table

**Date:** 10-Aug-16 **Company:** Udisense Inc. DBA: Nanit **Work Order:** Q1060
**Engineer:** Chris Bramley **EUT Desc:** Smart Baby Monitor (Model:N101) **EUT Operating Voltage/Frequency:** 120V/60Hz
**Temp:** 25.8°C **Humidity:** 47% **Pressure:** 1010mBar
**Frequency Range:** 1-6GHz **Measurement Distance:** 3 m
**Notes:** 802.11n(HT20) 6.5Mbps (worst case) **EUT Max Freq:** 5825MHz
3 channels: 2412MHz, 2437MHz, 2462MHz

| Antenna Polarization (H / V) | Frequency (MHz) | Peak Reading (dBµV) | Average Reading (dBµV) | Preamp Factor (dB) | Antenna Factor (dB/m) | Cable Factor (dB) | Adjusted Peak Reading (dBµV/m) | Adjusted Avg Reading (dBµV/m) | FCC Class B High Frequency - Peak | | | FCC Class B High Frequency - Average | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Limit (dBµV/m) | Margin (dB) | Result (Pass/Fail) | Limit (dBµV/m) | Margin (dB) | Result (Pass/Fail) |
| v | 1350.0 | 39.86 | 34.6 | 19.1 | 28.9 | 2.6 | 52.3 | 47.0 | 74.0 | -21.7 | Pass | 54.0 | -7.0 | Pass |
| v, bandedge | 2390.0 | 53.25 | 28.9 | 19.0 | 32.3 | 4.4 | 71.0 | 46.6 | 74.0 | -3.0 | Pass | 54.0 | -7.4 | Pass |
| v | 4824.0 | 34.6 | 21.8 | 16.9 | 34.4 | 5.9 | 58.0 | 45.2 | 74.0 | -16.0 | Pass | 54.0 | -8.8 | Pass |
| v | 4874.0 | 33.52 | 21.3 | 16.8 | 34.4 | 5.9 | 57.0 | 44.8 | 74.0 | -17.0 | Pass | 54.0 | -9.2 | Pass |
| v, bandedge | 2483.5 | 50.51 | 28.1 | 18.9 | 32.4 | 4.3 | 68.3 | 45.9 | 74.0 | -5.7 | Pass | 54.0 | -8.1 | Pass |
| v | 4924.0 | 33.37 | 21.3 | 16.7 | 34.4 | 6.1 | 57.2 | 45.1 | 74.0 | -16.8 | Pass | 54.0 | -8.9 | Pass |

***Table Result:*** Pass by -3.0 dB ***Worst Freq:*** 2390.0 MHz

**Test Site:** EMI Chamber 1 **Cable 1:** Asset #2051 **Cable 2:** Asset #1784
**Analyzer:** Gold **Preamp:** Brown **Antenna:** Blue Horn
CSsoft Radiated Emissions Calculator v 1.017.167

Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor

## Radiated Emissions Table

**Date:** 10-Aug-16 **Company:** Udisense Inc. DBA: Nanit **Work Order:** Q1060
**Engineer:** Chris Bramley **EUT Desc:** Smart Baby Monitor (Model:N101) **EUT Operating Voltage/Frequency:** 120V/60Hz
**Temp:** 25.8°C **Humidity:** 47% **Pressure:** 1010mBar
**Frequency Range:** 6-18GHz **Measurement Distance:** 1 m
**Notes:** 802.11n(HT20) 6.5Mbps (worst case) **EUT Max Freq:** 5825MHz

| Antenna Polarization (H / V) | Frequency (MHz) | Peak Reading (dBµV) | Average Reading (dBµV) | Preamp Factor (dB) | Antenna Factor (dB/m) | Cable Factor (dB) | Adjusted Peak Reading (dBµV/m) | Adjusted Avg Reading (dBµV/m) | FCC Class B High Frequency - Peak | | | FCC Class B High Frequency - Average | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Limit (dBµV/m) | Margin (dB) | Result (Pass/Fail) | Limit (dBµV/m) | Margin (dB) | Result (Pass/Fail) |
| No emissions found | | | | | | | | | | | | | | |

***Table Result:*** --- by --- dB ***Worst Freq:*** --- MHz

**Test Site:** EMI Chamber 1 **Cable 1:** Asset #2051 **Cable 2:** Asset #1784
**Analyzer:** Gold **Preamp:** Asset #1517 **Antenna:** Blue Horn
CSsoft Radiated Emissions Calculator v 1.017.167

Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor

## Radiated Emissions Table

**Date:** Aug-16-2016 **Company:** Udisense Inc. DBA: Nanit **Work Order:** Q1060
**Engineer:** Yunus Faziloglu **EUT Desc:** Smart Baby Monitor (Model:N101) **EUT Operating Voltage/Frequency:** 120V/60Hz
**Temp:** 24.9C **Humidity:** 46% **Pressure:** 1009mbar
**Frequency Range:** Bandedge **Measurement Distance:** 1 m
**Notes:** 802.11n(HT40) 54Mbps (worst case) **EUT Max Freq:** 5825MHz

| Antenna Polarization (H / V) | Frequency (MHz) | Peak Reading (dBµV) | Average Reading (dBµV) | Preamp Factor (dB) | Antenna Factor (dB/m) | Cable Factor (dB) | Adjusted Peak Reading (dBµV/m) | Adjusted Avg Reading (dBµV/m) | FCC Class B High Frequency - Peak | | | FCC Class B High Frequency - Average | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Limit (dBµV/m) | Margin (dB) | Result (Pass/Fail) | Limit (dBµV/m) | Margin (dB) | Result (Pass/Fail) |
| V | 2483.5 | 39.5 | 28.0 | 0.0 | 32.4 | 1.7 | 73.6 | 62.1 | 83.5 | -9.9 | Pass | 63.5 | -1.4 | Pass |
| H | 2483.5 | 36.1 | 24.6 | 0.0 | 32.4 | 1.7 | 70.2 | 58.7 | 83.5 | -13.3 | Pass | 63.5 | -4.8 | Pass |
| V | 2390.0 | 36.7 | 22.1 | 0.0 | 32.3 | 1.6 | 70.6 | 56.0 | 83.5 | -12.9 | Pass | 63.5 | -7.5 | Pass |
| H | 2390.0 | 39.3 | 24.0 | 0.0 | 32.3 | 1.6 | 73.2 | 57.9 | 83.5 | -10.3 | Pass | 63.5 | -5.6 | Pass |

***Table Result:*** Pass by -1.4 dB ***Worst Freq:*** 2483.5 MHz

**Test Site:** EMI Chamber 1 **Cable 1:** EMIR-HIGH-06 **Cable 2:** --- **Cable 3:** ---
**Analyzer:** A2093 **Preamp:** none **Antenna:** Blue Horn **Preselector:** ---
CSsoft Radiated Emissions Calculator v 1.017.167

Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor

## Radiated Emissions Table

**Date:** 26-Aug-16 **Company:** Nanit **Work Order:** Q1060
**Engineer:** Yunus Faziloglu **EUT Desc:** Baby Monitor **EUT Operating Voltage/Frequency:** 5VDC
**Temp:** 25.5C **Humidity:** 49% **Pressure:** 1005mbar
**Frequency Range:** 1-4GHz **Measurement Distance:** 3 m
**Notes:** 802.11n(HT40) 54Mbps (worst case) **EUT Max Freq:**

| Antenna Polarization (H / V) | Frequency (MHz) | Peak Reading (dBµV) | Average Reading (dBµV) | Preamp Factor (dB) | Antenna Factor (dB/m) | Cable Factor (dB) | Adjusted Peak Reading (dBµV/m) | Adjusted Avg Reading (dBµV/m) | FCC Class B High Frequency - Peak Limit (dBµV/m) | Margin (dB) | Result (Pass/Fail) | FCC Class B High Frequency - Average Limit (dBµV/m) | Margin (dB) | Result (Pass/Fail) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V | 1350.0 | 25.6 | 16.9 | 0.0 | 28.9 | 2.6 | 57.1 | 48.4 | 74.0 | -16.9 | Pass | 54.0 | -5.6 | Pass |

***Table Result:*** Pass by -5.6 dB ***Worst Freq:*** 1350.0 MHz

**Test Site:** EMI Chamber 1 **Cable 1:** Asset #1784 **Cable 2:** Asset #2051 **Cable 3:** ---
**Analyzer:** A2093 **Preamp:** none **Antenna:** Blue Horn **Preselector:** ---
CSsoft Radiated Emissions Calculator v 1.017.169

Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor

## Radiated Emissions Table

**Date:** Aug-18-2016 **Company:** Udisense Inc. DBA: Nanit **Work Order:** Q1060
**Engineer:** YF **EUT Desc:** Smart Baby Monitor (Model:N101) **EUT Operating Voltage/Frequency:** 120V/60Hz
**Temp:** 23.8C **Humidity:** 47% **Pressure:** 1005mbar
**Frequency Range:** 4-18GHz **Measurement Distance:** 1 m
**Notes:** 802.11n(HT40) 54Mbps (worst case) **EUT Max Freq:** 5825MHz
3 channels: 2422MHz, 2437MHz, 2452MHz

| Antenna Polarization (H / V) | Frequency (MHz) | Peak Reading (dBµV) | Average Reading (dBµV) | Preamp Factor (dB) | Antenna Factor (dB/m) | Cable Factor (dB) | Adjusted Peak Reading (dBµV/m) | Adjusted Avg Reading (dBµV/m) | FCC Class B High Frequency - Peak Limit (dBµV/m) | Margin (dB) | Result (Pass/Fail) | FCC Class B High Frequency - Average Limit (dBµV/m) | Margin (dB) | Result (Pass/Fail) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V | 4874.0 | 28.6 | 18.4 | 0.0 | 34.4 | 2.7 | 65.7 | 55.5 | 83.5 | -17.8 | Pass | 63.5 | -8.0 | Pass |
| H | 4874.0 | 26.4 | 16.8 | 0.0 | 34.4 | 2.7 | 63.5 | 53.9 | 83.5 | -20.0 | Pass | 63.5 | -9.6 | Pass |
| V | 4844.0 | 27.7 | 17.4 | 0.0 | 34.4 | 2.7 | 64.8 | 54.5 | 83.5 | -18.7 | Pass | 63.5 | -9.0 | Pass |
| H | 4844.0 | 28.3 | 18.0 | 0.0 | 34.4 | 2.7 | 65.4 | 55.1 | 83.5 | -18.1 | Pass | 63.5 | -8.4 | Pass |
| V | 4904.0 | 28.9 | 18.6 | 0.0 | 34.4 | 2.7 | 66.0 | 55.7 | 83.5 | -17.5 | Pass | 63.5 | -7.8 | Pass |
| H | 4904.0 | 26.2 | 16.6 | 0.0 | 34.4 | 2.7 | 63.3 | 53.7 | 83.5 | -20.2 | Pass | 63.5 | -9.8 | Pass |

***Table Result:*** Pass by -7.8 dB ***Worst Freq:*** 4904.0 MHz

**Test Site:** EMI Chamber 1 **Cable 1:** EMIR-HIGH-06 **Cable 2:** --- **Cable 3:** ---
**Analyzer:** A2093 **Preamp:** none **Antenna:** Blue Horn **Preselector:** ---
CSsoft Radiated Emissions Calculator v 1.017.168

Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor

Rev. 8/7/2016

| Spectrum Analyzers / Receivers /Preselectors | Range | MN | Mfr | SN | Asset | Cat | Calibration Due | Calibrated on |
|---|---|---|---|---|---|---|---|---|
| Gold | 100Hz-26.5 GHz | E4407B | Agilent | MY45113816 | 1284 | I | 1/13/2017 | 1/13/2016 |
| MXE EMI Receiver | 20Hz-26.5GHz | N9038A | Agilent | MY51210181 | 2093 | I | 8/9/2017 | 8/9/2016 |

| Radiated Emissions Sites | FCC Code | IC Code | VCCI Code | Range | Cat | Calibration Due | Calibrated on |
|---|---|---|---|---|---|---|---|
| EMI Chamber 1 | 719150 | 2762A-6 | A-0015 | 30-1000MHz | II | 3/21/2017 | 3/21/2015 |

| Preamps /Couplers Attenuators / Filters | Range | MN | Mfr | SN | Asset | Cat | Calibration Due | Calibrated on |
|---|---|---|---|---|---|---|---|---|
| Brown | 1-10GHz | CS | CS | N/A | 1523 | II | 10/8/2016 | 10/8/2015 |

| Antennas | Range | MN | Mfr | SN | Asset | Cat | Calibration Due | Calibrated on |
|---|---|---|---|---|---|---|---|---|
| Blue Horn | 1-18Ghz | 3117 | ETS | 157647 | 1861 | I | 2/8/2017 | 2/8/2015 |

| Meteorological Meters | MN | Mfr | SN | Asset | Cat | Calibration Due | Calibrated on |
|---|---|---|---|---|---|---|---|
| Weather Clock (Pressure Only) | BA928 | Oregon Scientific | C3166-1 | 831 | I | 4/28/2018 | 4/28/2016 |
| TH A#2080 | HTC-1 | HDE | | 2080 | II | 4/5/2017 | 4/5/2016 |

| Cables | Range | Mfr | Cat | Calibration Due | Calibrated on |
|---|---|---|---|---|---|
| Asset #1784 | 9kHz - 18GHz | Florida RF | II | 3/7/2017 | 3/7/2016 |
| Asset #2051 | 9kHz - 18GHz | Florida RF | II | 3/2/2017 | 3/2/2016 |
| REMI-High-06 | 1 - 26.5GHz | U-21B0707-1 TRU | II | 8/14/2017 | 8/14/2016 |

All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.

## Radiated Emissions Table

**Date:** 29-Aug-16 **Company:** Udisense Inc. DBA: Nanit **Work Order:** Q1060
**Engineer:** Zac Johnson **EUT Desc:** Smart Baby Monitor (Model:N101) **EUT Operating Voltage/Frequency:** 120V/60Hz
**Temp:** 23.8C **Humidity:** 45% **Pressure:** 1010mbar
**Frequency Range:** 18-25GHz **Measurement Distance:** 0.1m
**Notes:** 802.11g 6Mbps (worst case) **EUT Max Freq:** 5825MHz

| Antenna Polarization (H / V) | Frequency (MHz) | Peak Reading (dBµV) | Average Reading (dBµV) | Preamp Factor (dB) | Antenna Factor (dB/m) | Cable Factor (dB) | Adjusted Peak Reading (dBµV/m) | Adjusted Avg Reading (dBµV/m) | FCC Class A High Frequency - Peak Limit (dBµV/m) | Margin (dB) | Result (Pass/Fail) | FCC Class A High Frequency - Average Limit (dBµV/m) | Margin (dB) | Result (Pass/Fail) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| No Emissions Found | | | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |

***Table Result:*** --- by --- dB ***Worst Freq:*** --- MHz

**Test Site:** EMI Chamber 1 **Cable 1:** EMIR-06 **Cable 2:** EMIR-07 **Cable 3:** ---
**Analyzer:** Gold **Preamp:** 18-26.5GHz **Antenna:** 18-26.5GHz Horn **Preselector:** ---
CSsoft Radiated Emissions Calculator v 1.017.169

Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor

Rev. 8/29/2016

| Spectrum Analyzers / Receivers /Preselectors | Range | MN | Mfr | SN | Asset | Cat | Calibration Due | Calibrated on |
|---|---|---|---|---|---|---|---|---|
| Gold | 100Hz-26.5 GHz | E4407B | Agilent | MY45113816 | 1284 | I | 1/13/2017 | 1/13/2016 |
| **Radiated Emissions Sites** | **FCC Code** | **IC Code** | **VCCI Code** | **Range** | | **Cat** | **Calibration Due** | **Calibrated on** |
| EMI Chamber 1 | 719150 | 2762A-6 | A-0015 | 1-18GHz | | I | 5/23/2017 | 5/23/2015 |
| **Preamps /Couplers Attenuators / Filters** | **Range** | **MN** | **Mfr** | **SN** | **Asset** | **Cat** | **Calibration Due** | **Calibrated on** |
| HF (Yellow) | 18-26.5GHz | AFS4-18002650-60-8P-4 | CS | 467559 | 1266 | II | 3/8/2017 | 3/8/2016 |
| **Antennas** | **Range** | **MN** | **Mfr** | **SN** | **Asset** | **Cat** | **Calibration Due** | **Calibrated on** |
| HF (White) Horn | 18-26.5GHz | 801-WLM | Waveline | 758 | 758 | III | Verify before Use | date of test |
| **Meteorological Meters** | | **MN** | **Mfr** | **SN** | **Asset** | **Cat** | **Calibration Due** | **Calibrated on** |
| Weather Clock (Pressure Only) | | BA928 | Oregon Scientific | C3166-1 | 831 | I | 4/28/2018 | 4/28/2016 |
| TH A#2080 | | HTC-1 | HDE | | 2080 | II | 4/5/2017 | 4/5/2016 |
| **Cables** | **Range** | | **Mfr** | | | **Cat** | **Calibration Due** | **Calibrated on** |
| REMI-High-06 | 1 - 26.5GHz | TRU-21B0707-120 | TRU | | | II | 8/14/2017 | 8/14/2016 |

All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.

## Conducted Spurious Emissions

### LIMITS

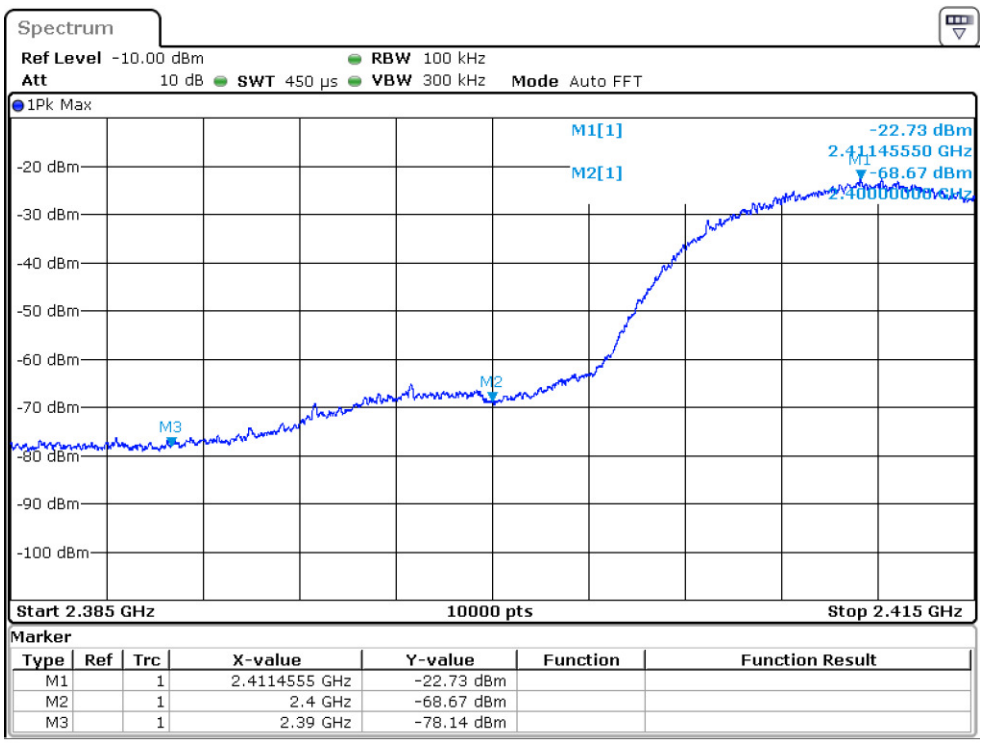
*In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth that contains the highest level of desired power based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB …*
[15.247(d)]

### MEASUREMENTS / RESULTS

Measurements performed for all 802.11 modes and data rates. Only worst case results are shown below.

### Conducted Band Edge Plots

Continued on next page.

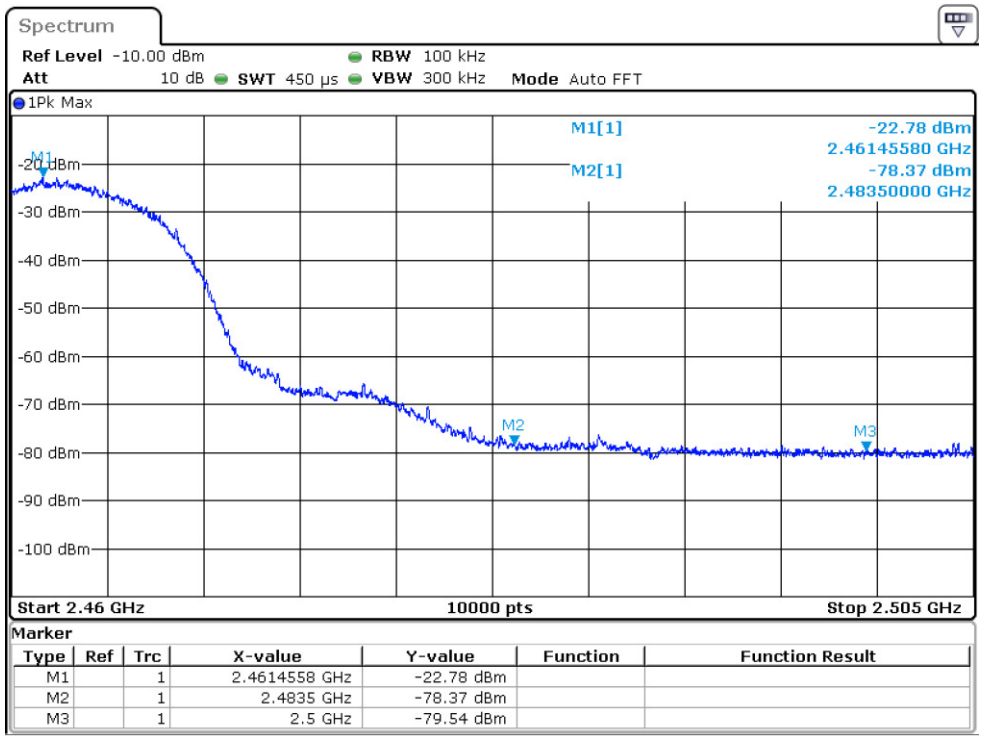



Marker

| Type | Ref | Trc | X-value | Y-value | Function | Function Result |
|---|---|---|---|---|---|---|
| M1 | | 1 | 2.4114555 GHz | -22.73 dBm | | |
| M2 | | 1 | 2.4 GHz | -68.67 dBm | | |
| M3 | | 1 | 2.39 GHz | -78.14 dBm | | |

Date: 18.JUL.2016 10:24:26

Conducted Band Edge – 802.11b 11Mbps 2412MHz

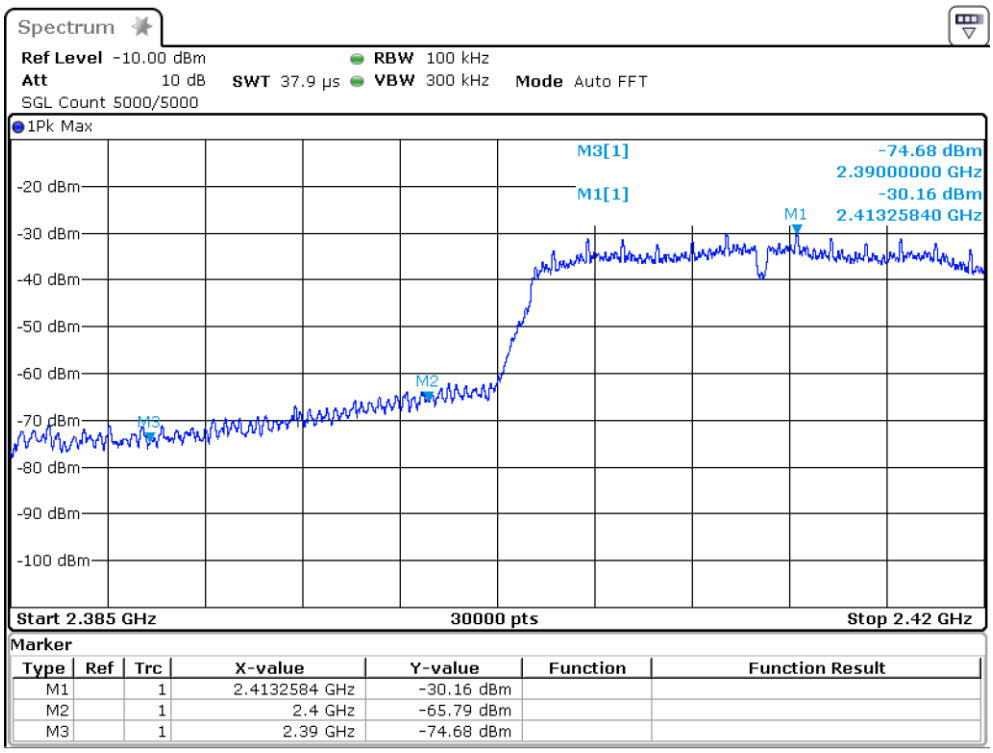



Marker

| Type | Ref | Trc | X-value | Y-value | Function | Function Result |
|---|---|---|---|---|---|---|
| M1 | | 1 | 2.4614558 GHz | -22.78 dBm | | |
| M2 | | 1 | 2.4835 GHz | -78.37 dBm | | |
| M3 | | 1 | 2.5 GHz | -79.54 dBm | | |

Date: 18.JUL.2016 10:33:54

Conducted Band Edge – 802.11b 11Mbps 2462MHz

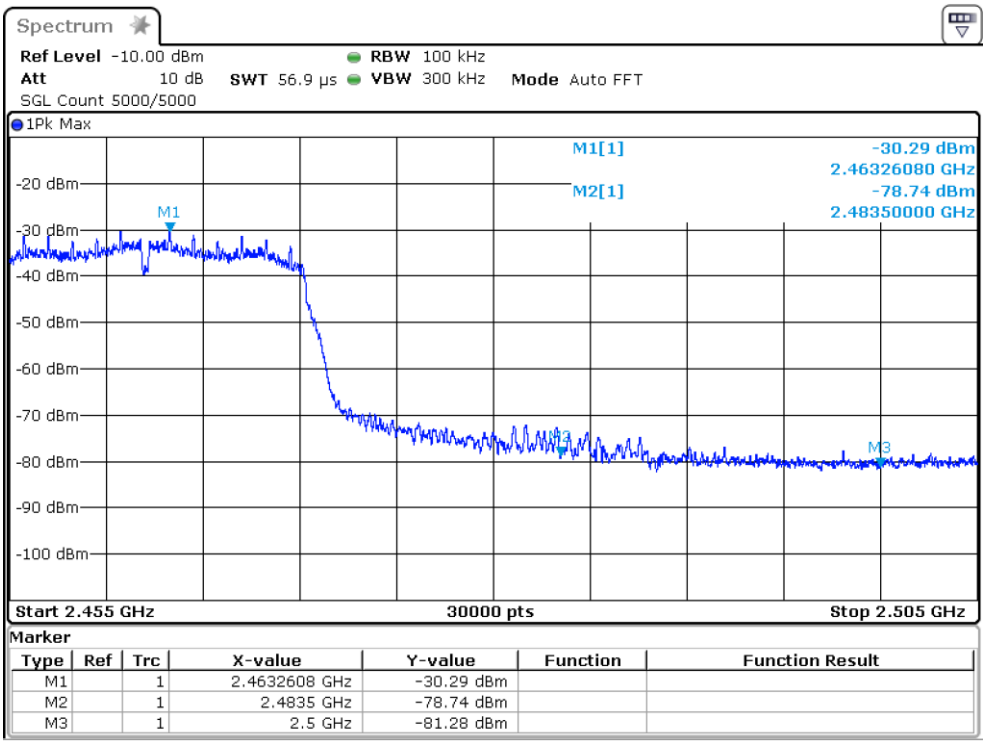



Marker

| Type | Ref | Trc | X-value | Y-value | Function | Function Result |
|---|---|---|---|---|---|---|
| M1 | | 1 | 2.4132584 GHz | -30.16 dBm | | |
| M2 | | 1 | 2.4 GHz | -65.79 dBm | | |
| M3 | | 1 | 2.39 GHz | -74.68 dBm | | |

Date: 20.JUL.2016 15:49:47

Conducted Band Edge – 802.11g 6Mbps 2412MHz

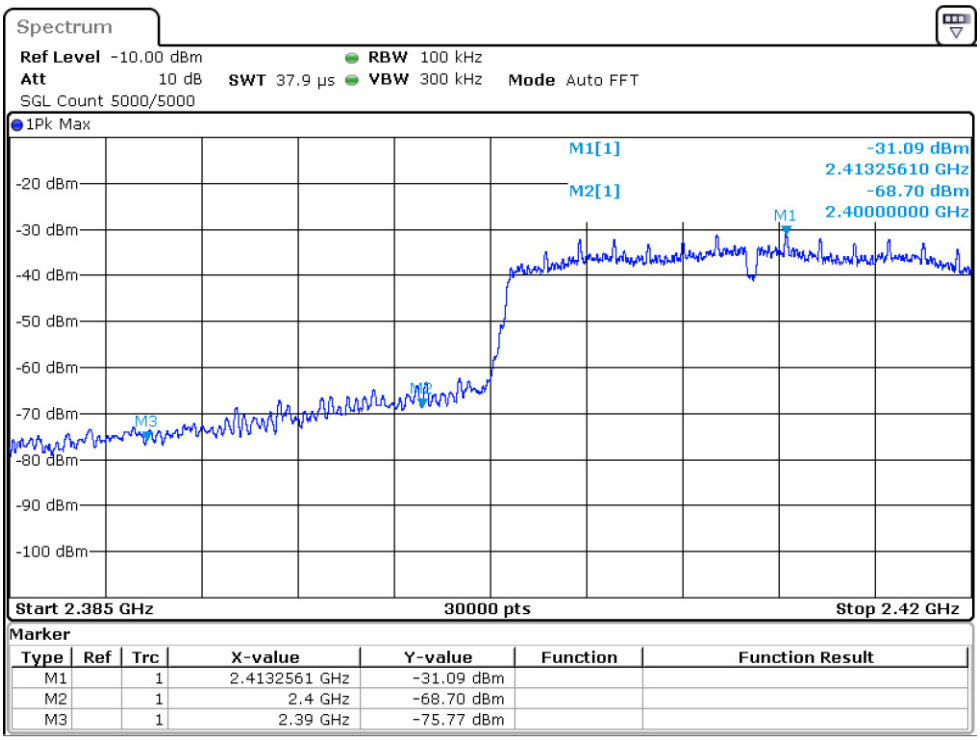



Marker

| Type | Ref | Trc | X-value | Y-value | Function | Function Result |
|---|---|---|---|---|---|---|
| M1 | | 1 | 2.4632608 GHz | -30.29 dBm | | |
| M2 | | 1 | 2.4835 GHz | -78.74 dBm | | |
| M3 | | 1 | 2.5 GHz | -81.28 dBm | | |

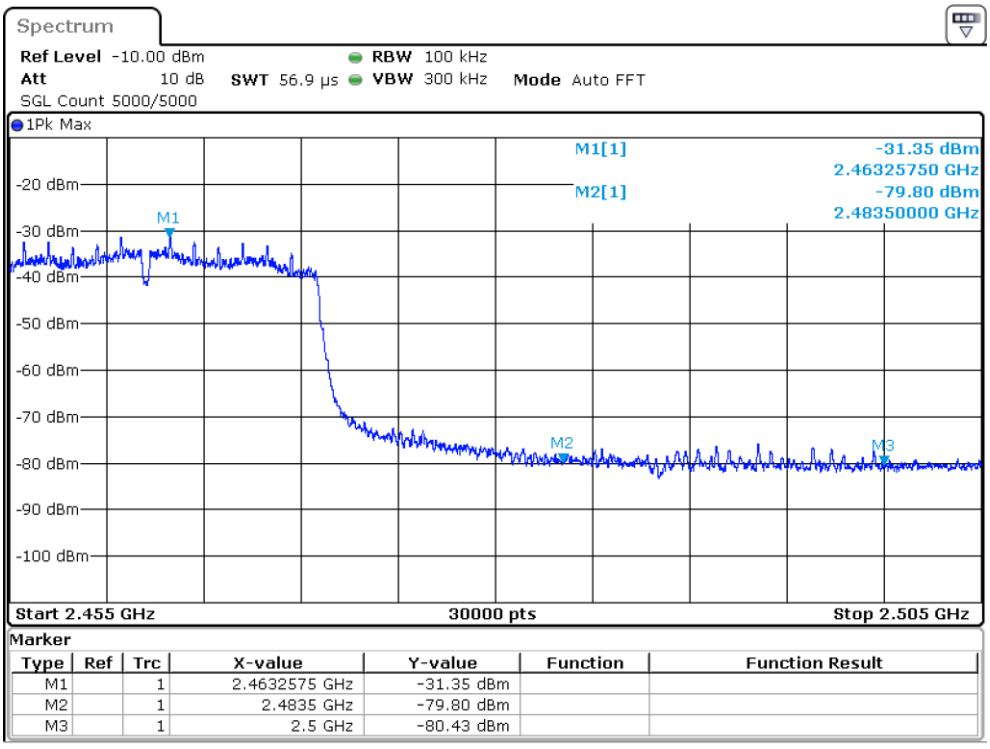
Date: 20.JUL.2016 16:06:10

Conducted Band Edge – 802.11g 6Mbps 2462MHz



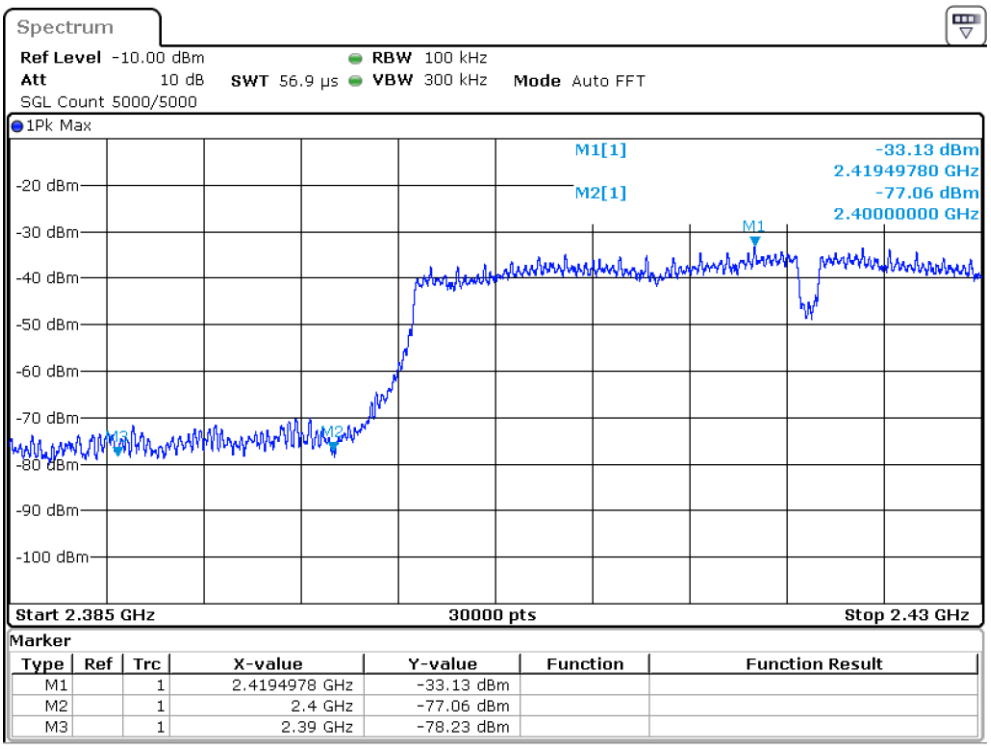

Date: 21.JUL.2016 09:29:03

Conducted Band Edge – 802.11n (HT20) 6.5Mbps 2412MHz




Date: 20.JUL.2016 16:22:39

Conducted Band Edge – 802.11n (HT20) 6.5Mbps 2462MHz

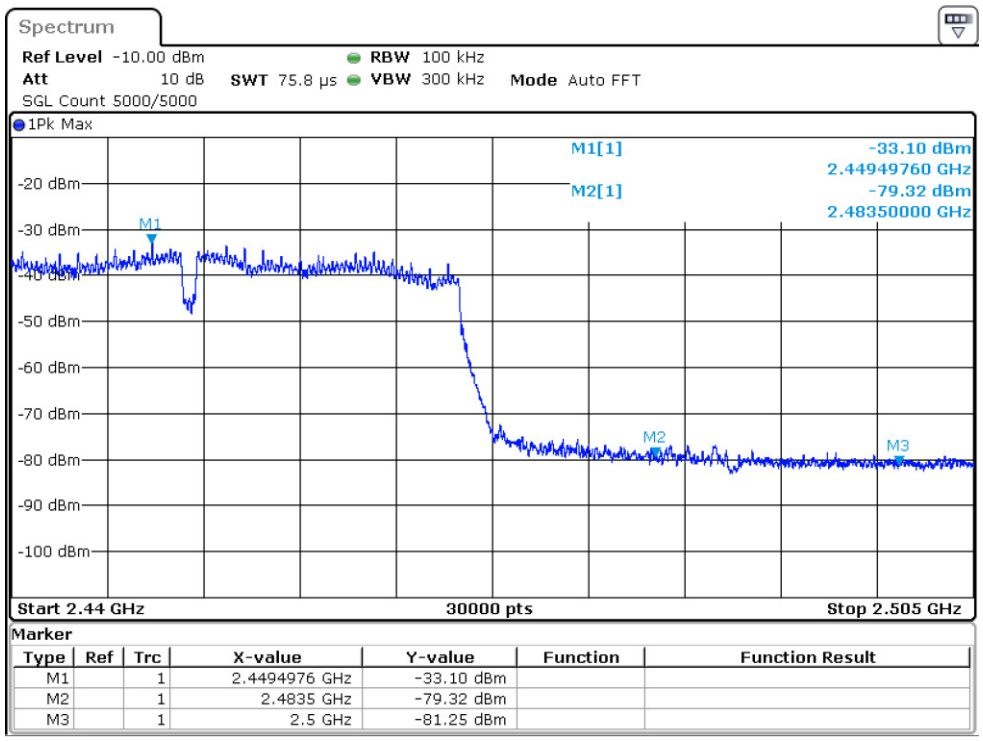



Marker

| Type | Ref | Trc | X-value | Y-value | Function | Function Result |
|---|---|---|---|---|---|---|
| M1 | | 1 | 2.4194978 GHz | -33.13 dBm | | |
| M2 | | 1 | 2.4 GHz | -77.06 dBm | | |
| M3 | | 1 | 2.39 GHz | -78.23 dBm | | |

Date: 21.JUL.2016 10:23:54

Conducted Band Edge – 802.11n (HT40) 54Mbps 2422MHz




Marker

| Type | Ref | Trc | X-value | Y-value | Function | Function Result |
|---|---|---|---|---|---|---|
| M1 | | 1 | 2.4494976 GHz | -33.10 dBm | | |
| M2 | | 1 | 2.4835 GHz | -79.32 dBm | | |
| M3 | | 1 | 2.5 GHz | -81.25 dBm | | |

Date: 21.JUL.2016 10:44:29

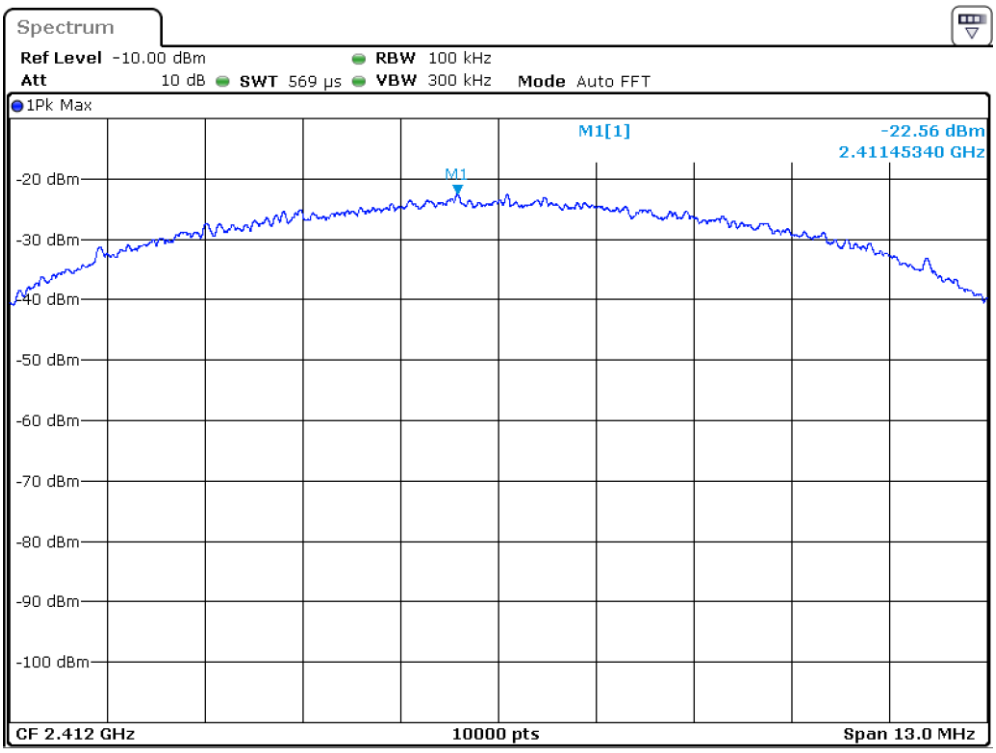
Conducted Band Edge – 802.11n (HT40) 54Mbps 2452MHz

**Conducted Spurious Emission**

**Note:** 9 kHz - 25 GHz frequency range was investigated for all 802.11 modes and data rates. No emissions detected.

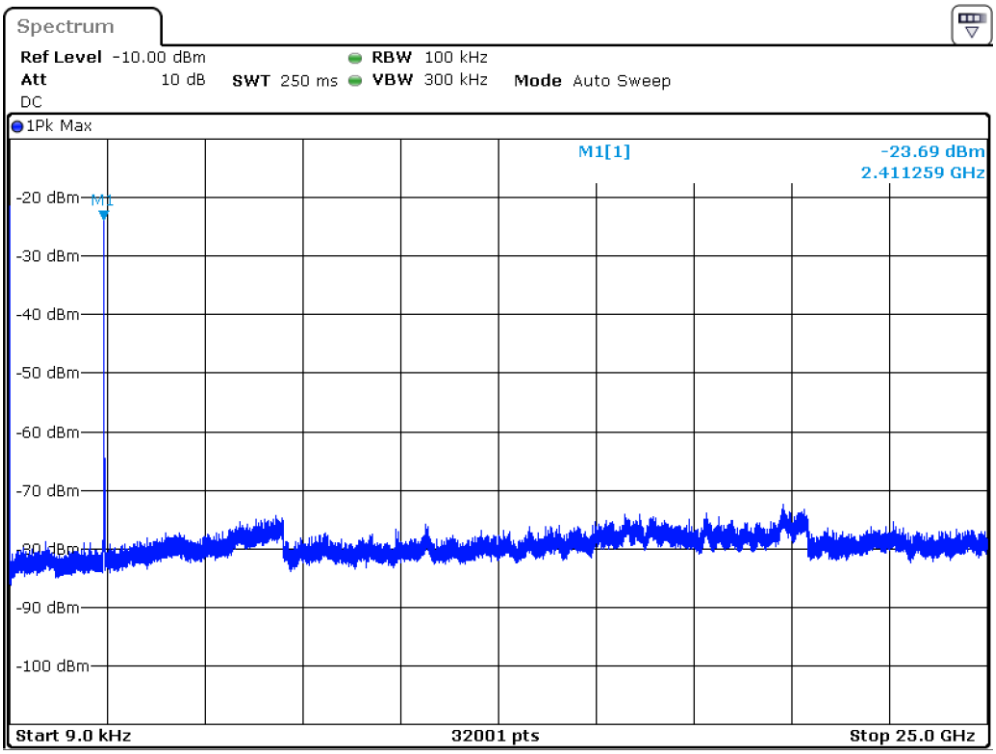
**MEASUREMENTS / RESULTS**

Continued on next page.



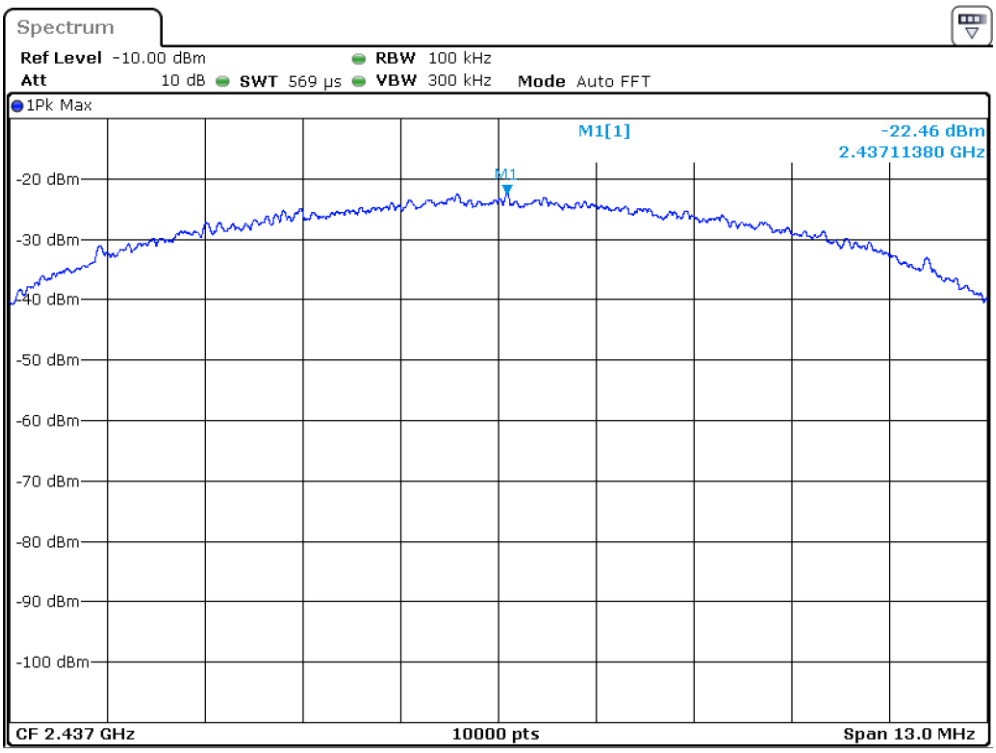

Date: 18.JUL.2016 15:34:48

Fundamental – 802.11b 11Mbps 2412MHz



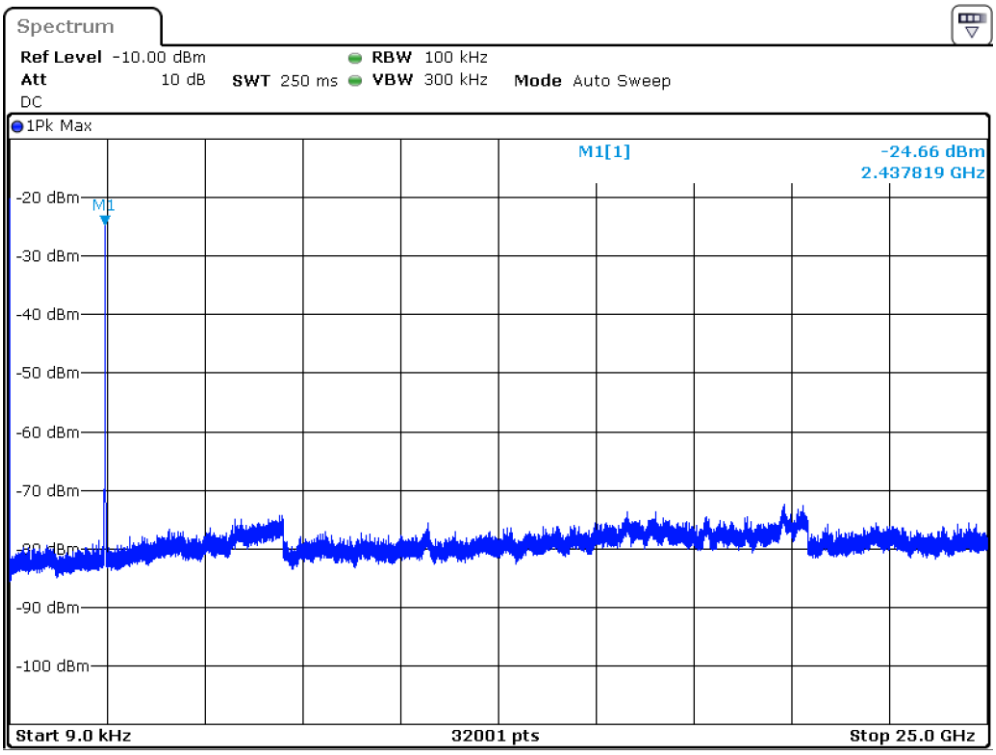

Date: 18.JUL.2016 16:01:55

Conducted Spurious – 802.11b 11Mbps 2412MHz



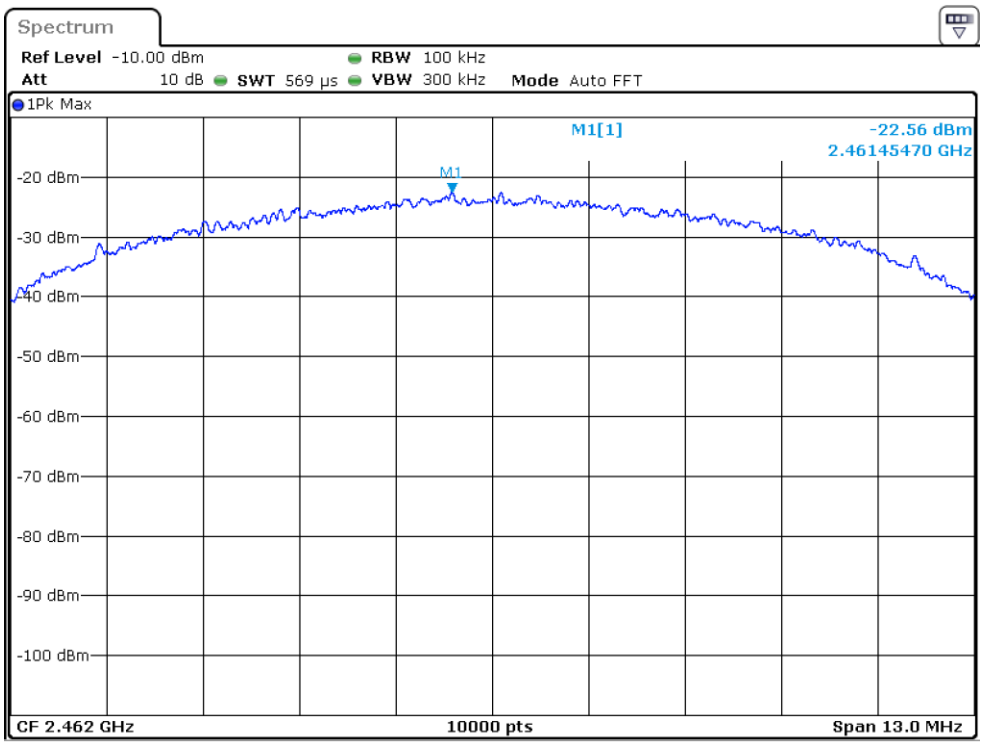

Date: 18.JUL.2016 15:40:49

Fundamental – 802.11b 11Mbps 2437MHz



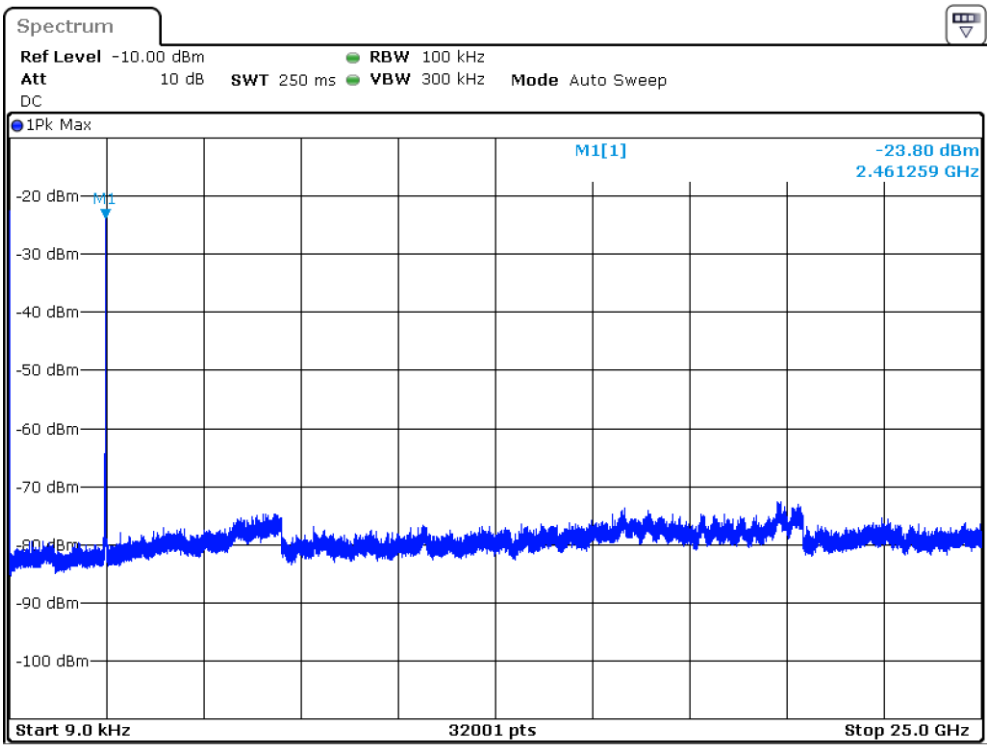

Date: 18.JUL.2016 16:14:48

Conducted Spurious – 802.11b 11Mbps 2437MHz



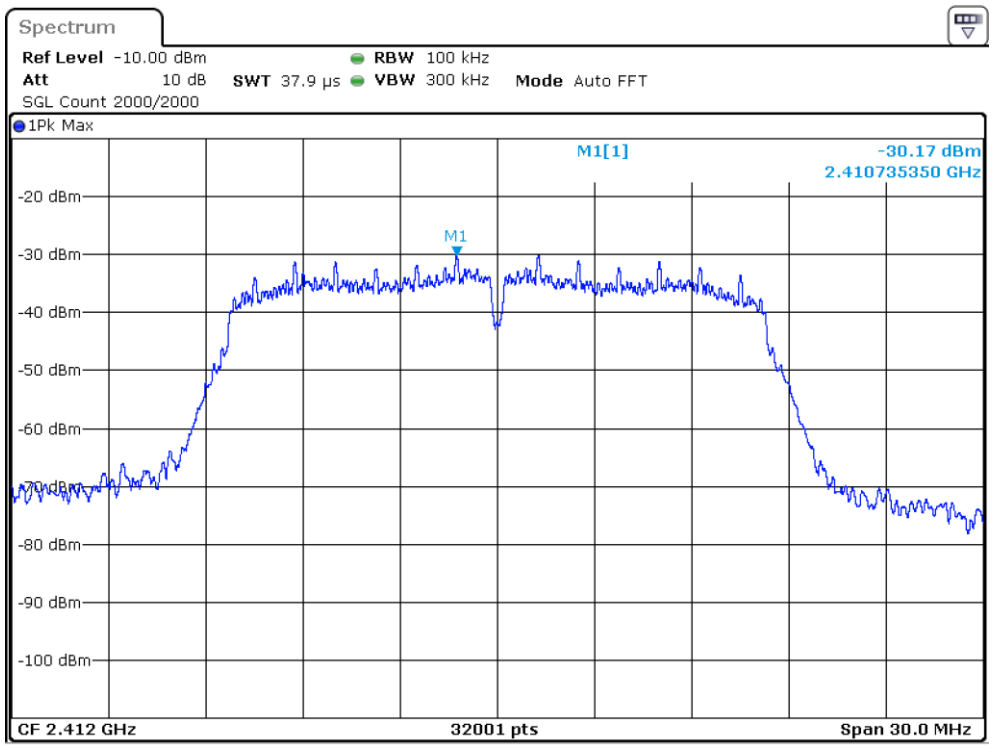

Date: 18.JUL.2016 15:46:51

Fundamental – 802.11b 11Mbps 2462MHz



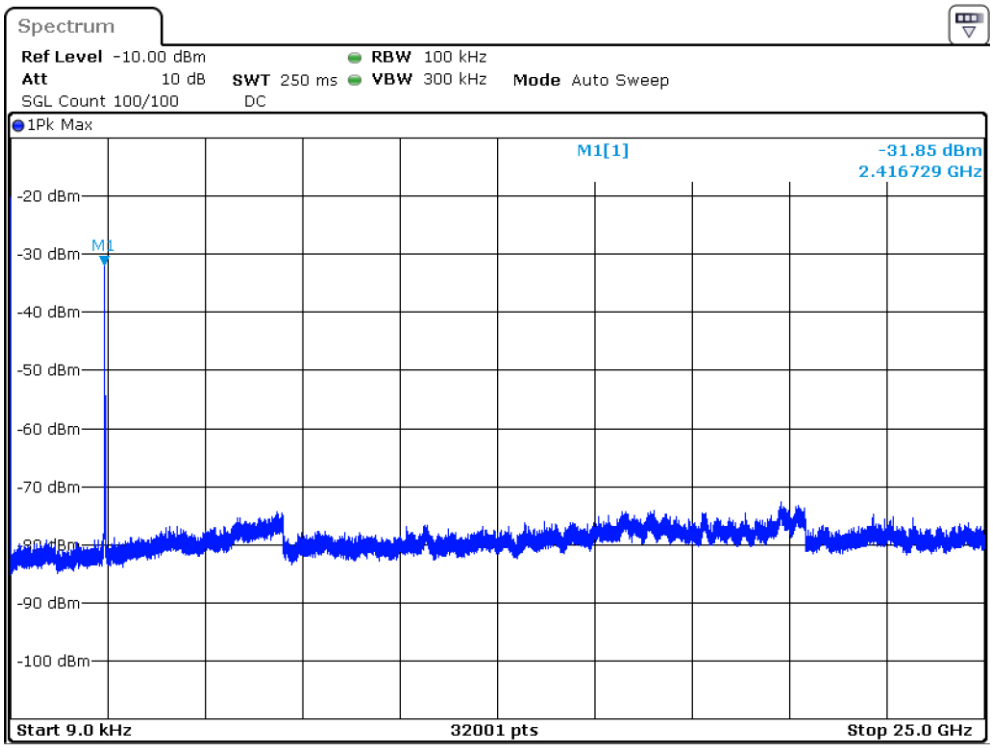

Date: 18.JUL.2016 16:24:01

Conducted Spurious – 802.11b 11Mbps 2462MHz



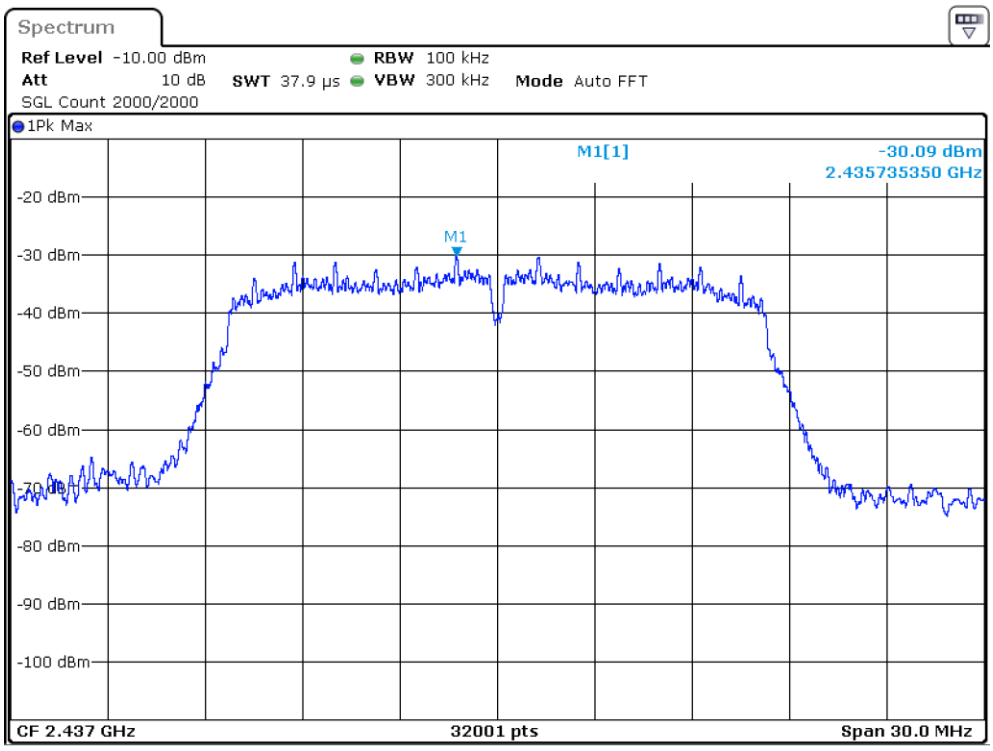

Date: 22.JUL.2016 10:37:27

Fundamental – 802.11g 6Mbps 2412MHz



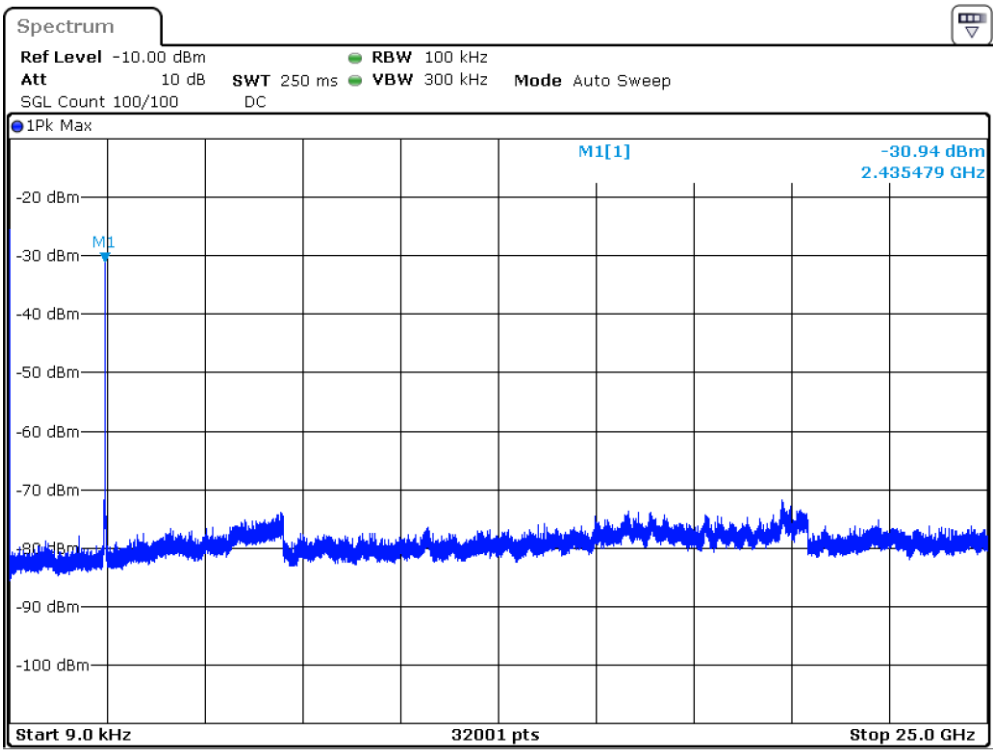

Date: 22.JUL.2016 11:17:22

Conducted Spurious – 802.11g 6Mbps 2412MHz



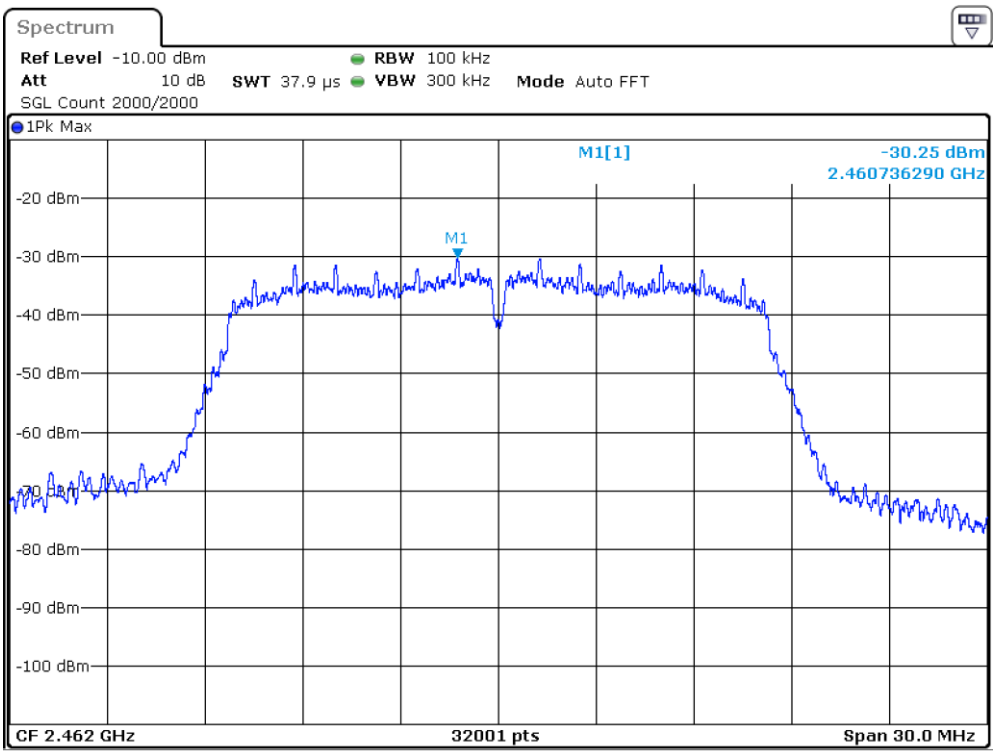

Date: 22.JUL.2016 10:39:50

Fundamental – 802.11g 6Mbps 2437MHz



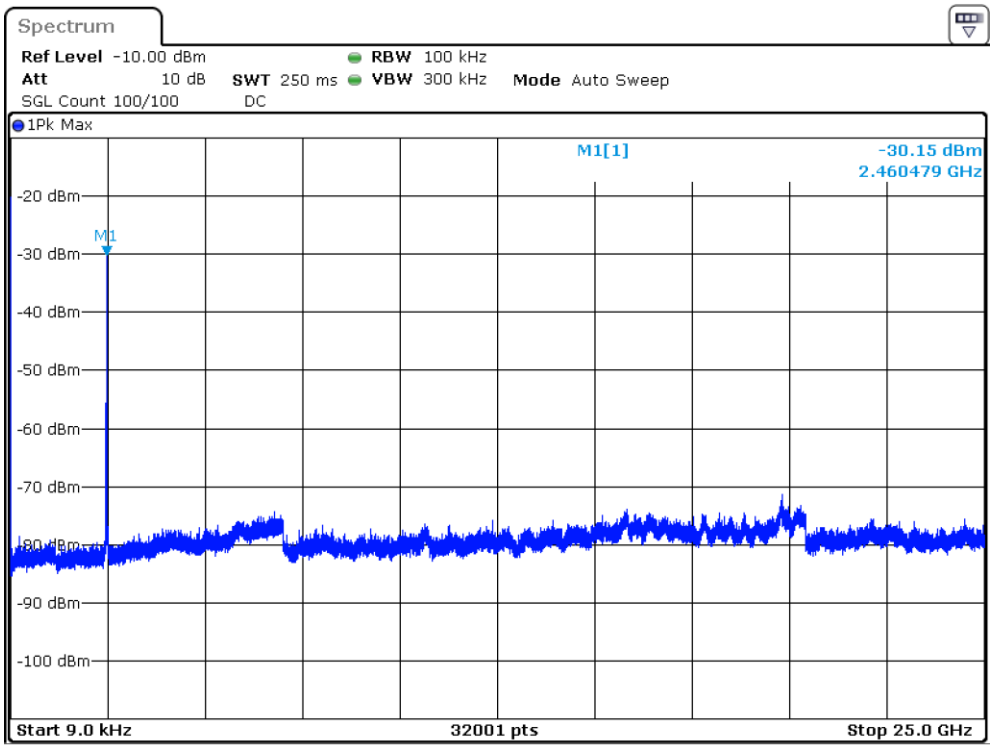

Date: 22.JUL.2016 11:14:21

Conducted Spurious – 802.11g 6Mbps 2437MHz



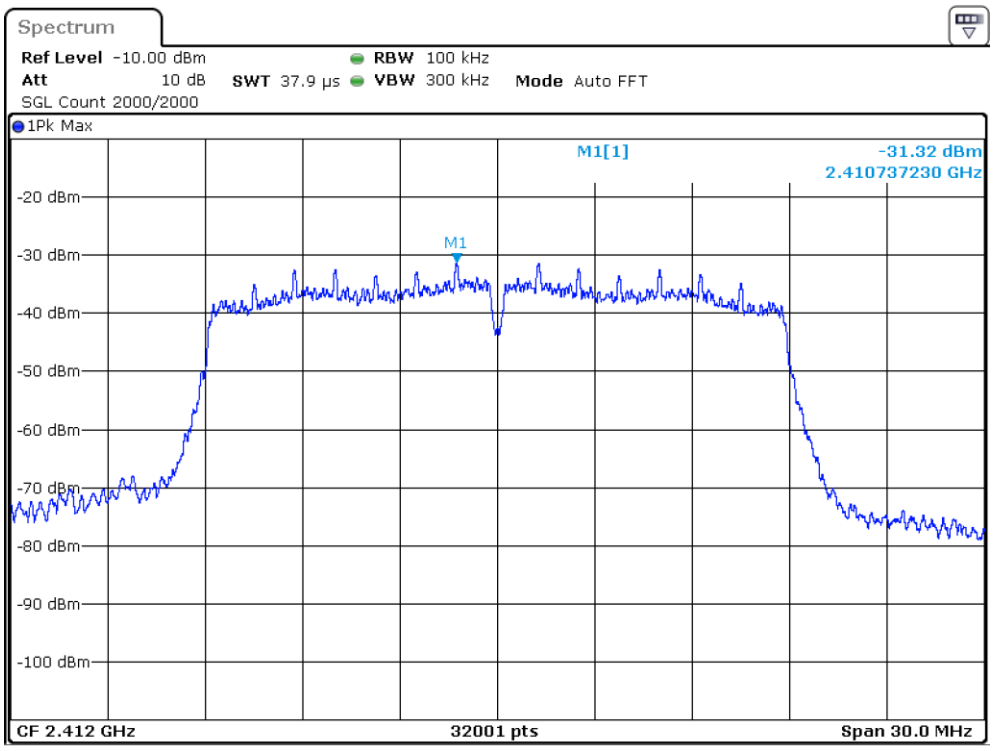

Date: 22.JUL.2016 10:41:17

Fundamental – 802.11g 6Mbps 2462MHz



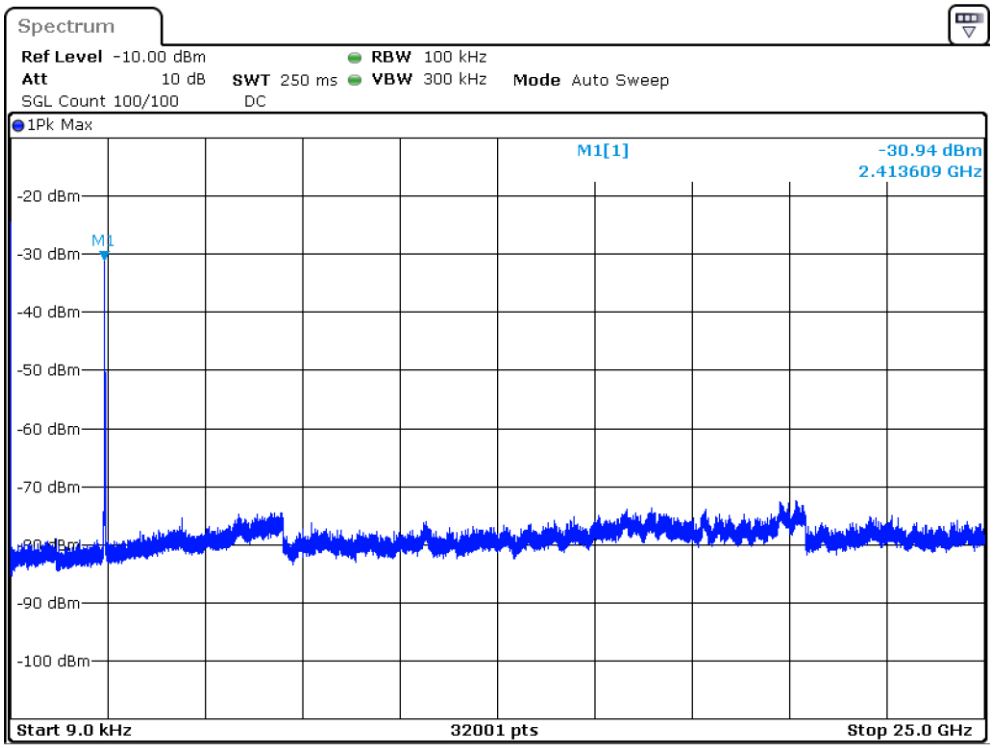

Date: 22.JUL.2016 11:19:53

Conducted Spurious – 802.11g 6Mbps 2462MHz



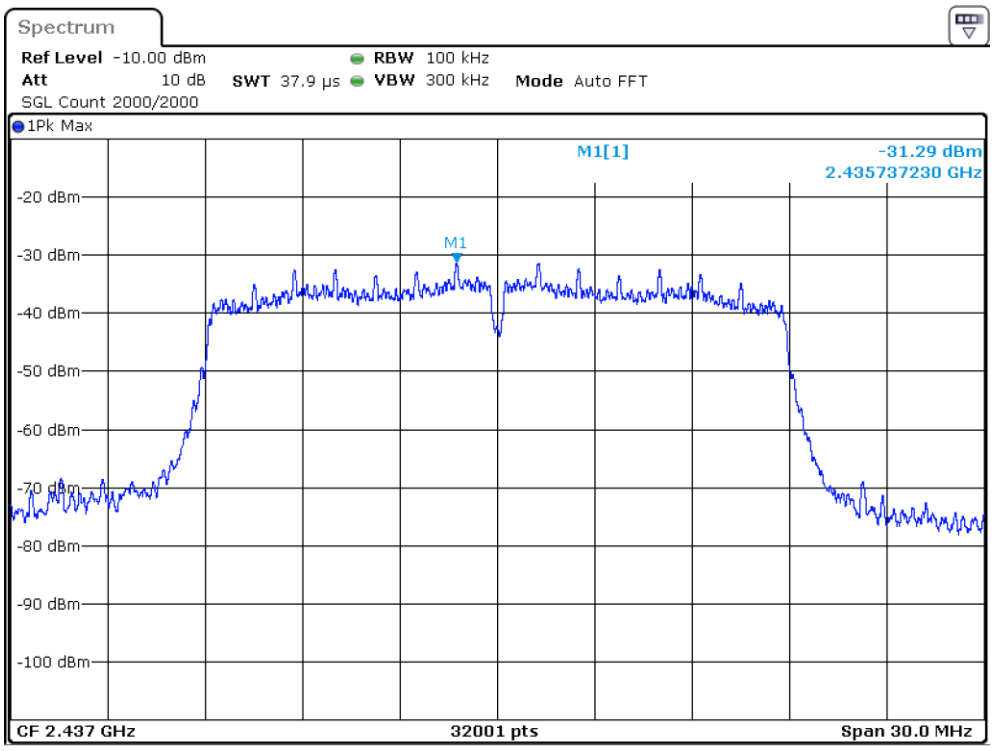

Date: 22.JUL.2016 10:22:58

Fundamental – 802.11n (HT20) 6.5Mbps 2412MHz



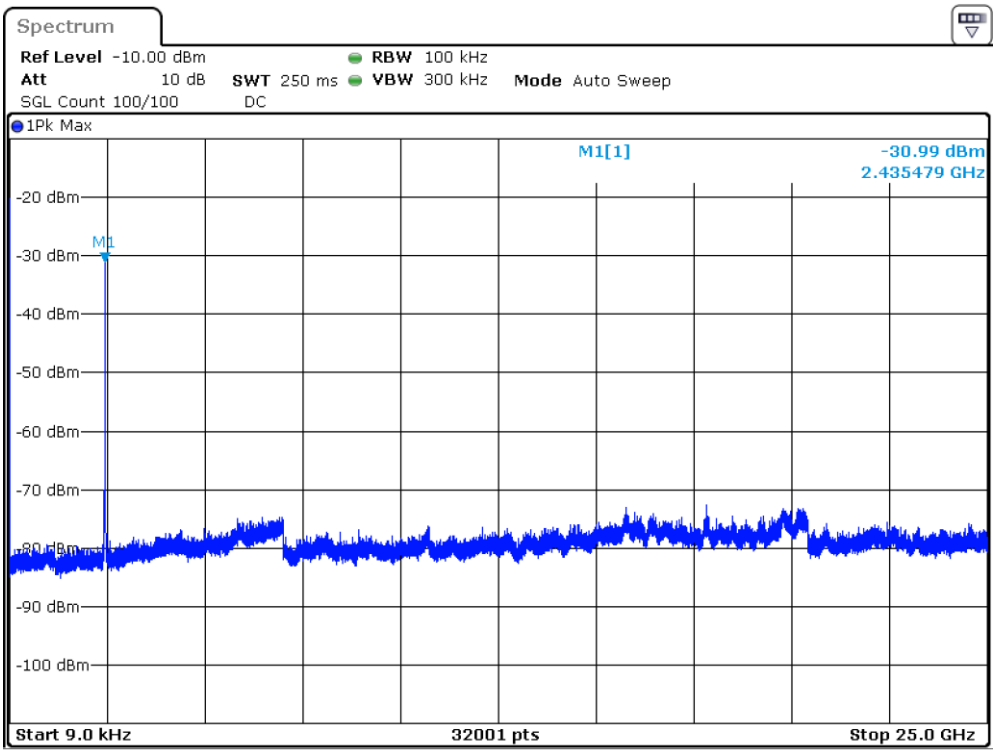

Date: 22.JUL.2016 10:04:59

Conducted Spurious – 802.11n (HT20) 6.5Mbps 2412MHz



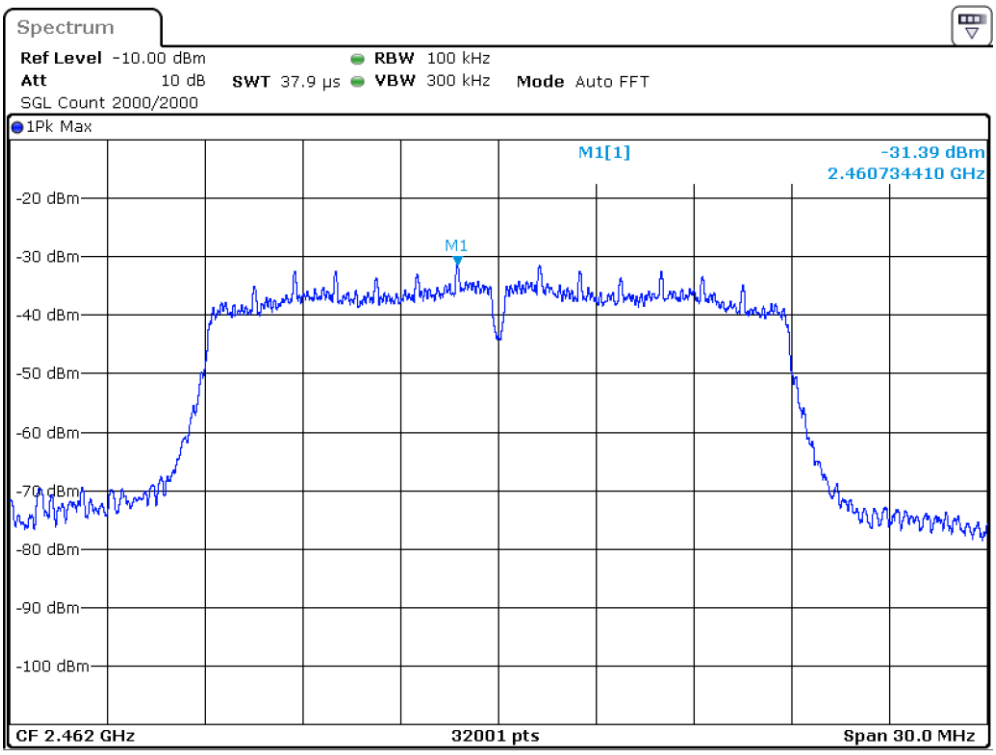

Date: 21.JUL.2016 11:46:56

Fundamental – 802.11n (HT20) 6.5Mbps 2437MHz



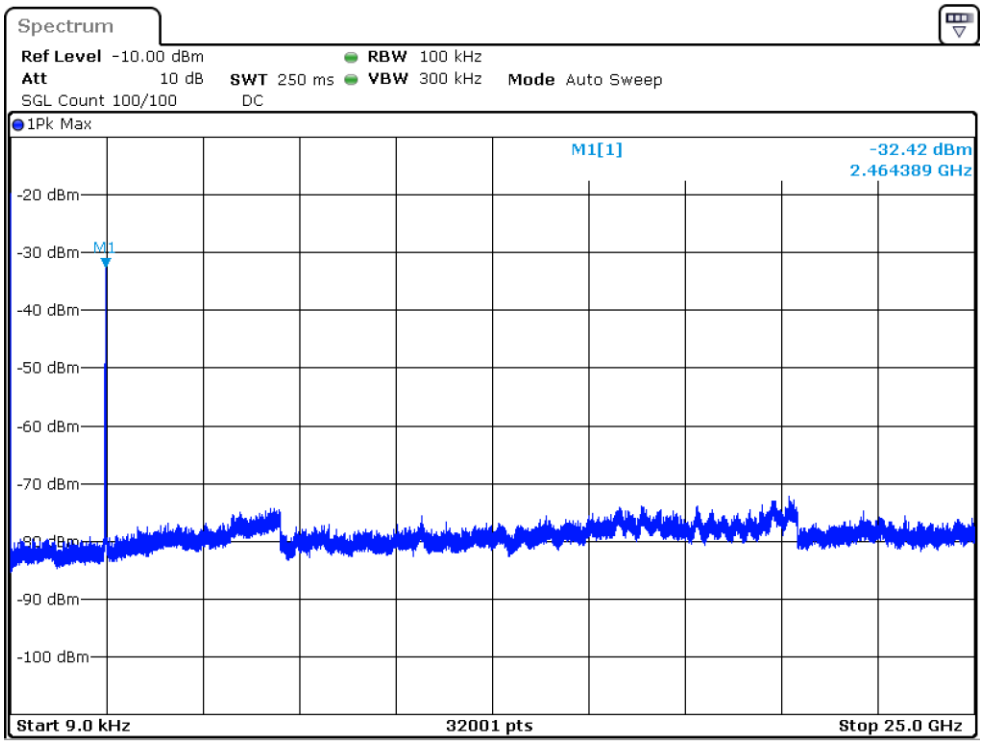

Date: 21.JUL.2016 14:02:42

Conducted Spurious – 802.11n (HT20) 6.5Mbps 2437MHz



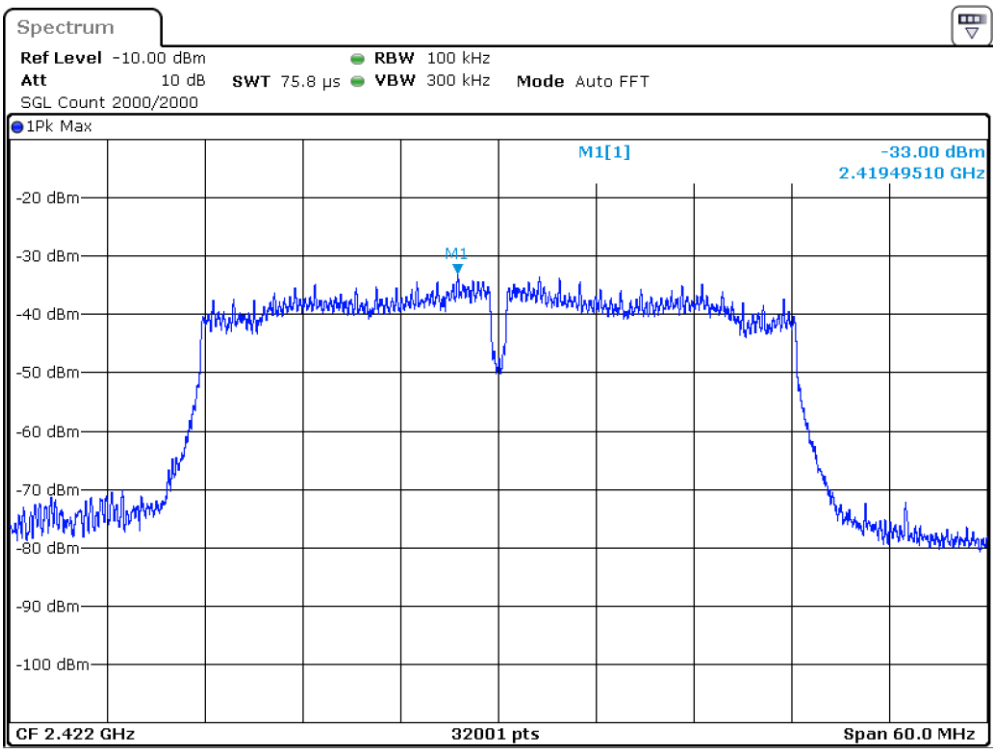

Date: 22.JUL.2016 10:25:23

Fundamental – 802.11n (HT20) 6.5Mbps 2462MHz



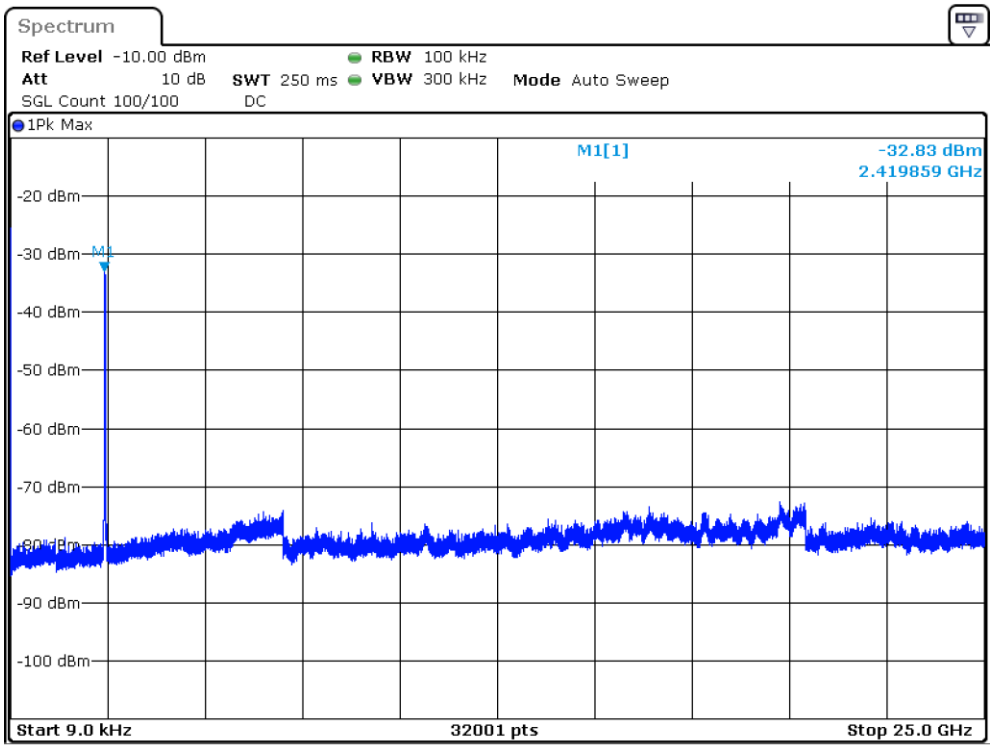

Date: 22.JUL.2016 10:08:36

Conducted Spurious – 802.11n (HT20) 6.5Mbps 2462MHz



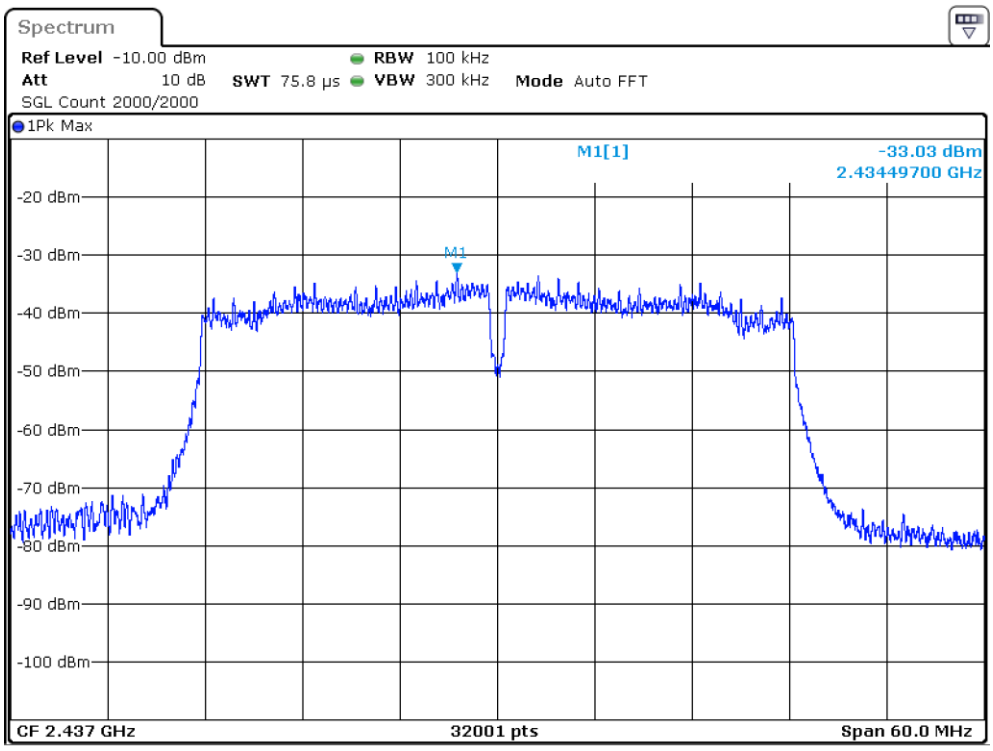

Date: 22.JUL.2016 10:20:07

Fundamental – 802.11n (HT40) 54Mbps 2422MHz



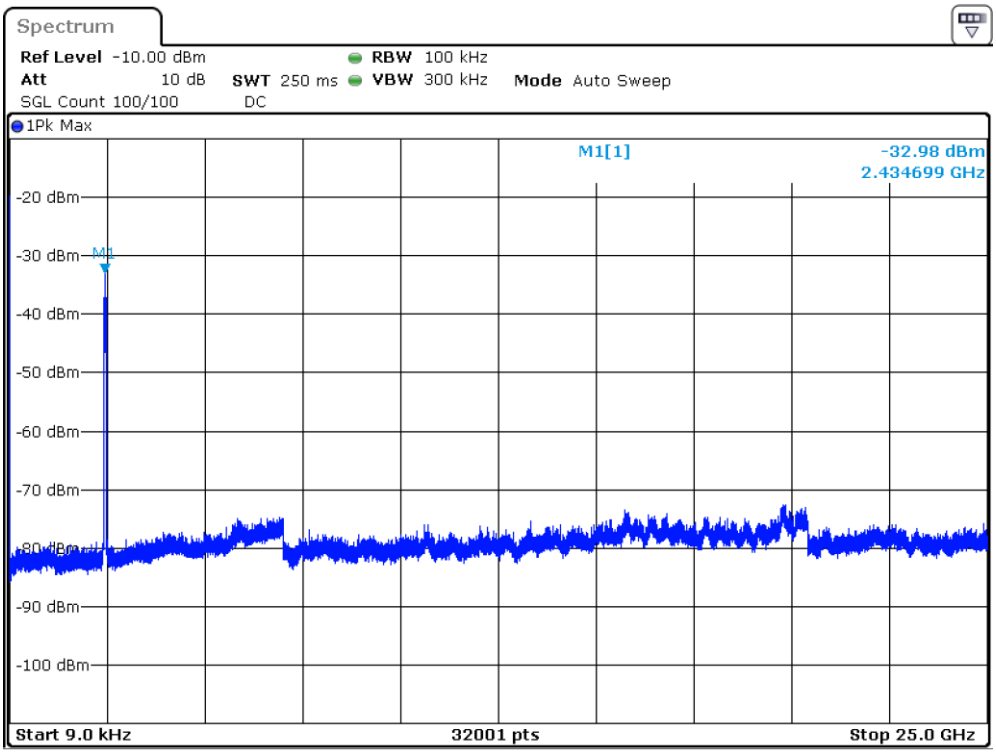

Date: 22.JUL.2016 10:12:03

Conducted Spurious – 802.11n (HT40) 54Mbps 2422MHz



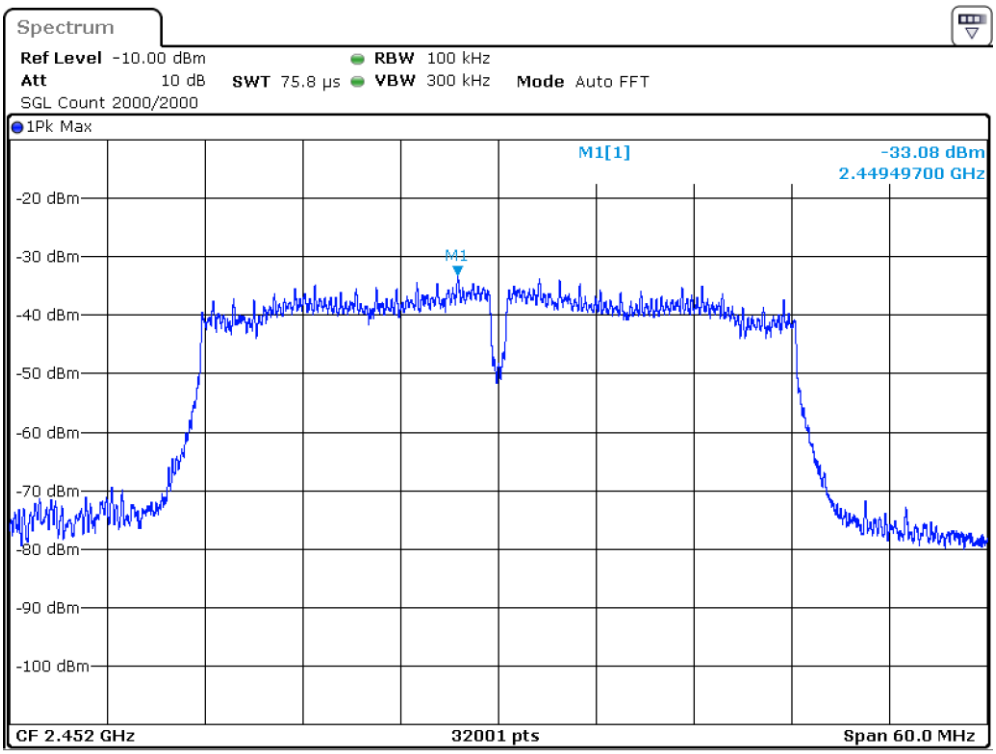

Date: 21.JUL.2016 12:49:27

Fundamental – 802.11n (HT40) 54Mbps 2437MHz



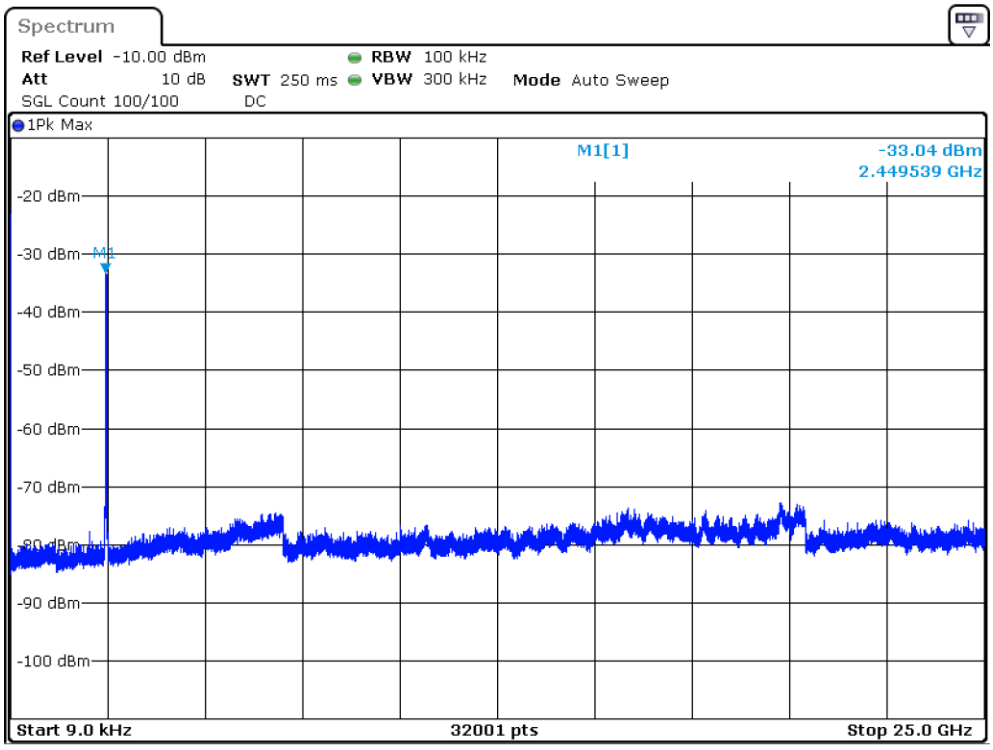

Date: 21.JUL.2016 13:48:13

Conducted Spurious – 802.11n (HT40) 54Mbps 2437MHz




Date: 22.JUL.2016 10:18:15

Fundamental – 802.11n (HT40) 54Mbps 2452MHz




Date: 22.JUL.2016 10:15:02

Conducted Spurious – 802.11n (HT40) 54Mbps 2452MHz

## Power Spectral Density

*Limit: Power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8dBm in any 3 kHz band during any time interval of continuous transmission.* [15.247(e)]

Per 558074 D01 DTS Measurement Guidance v03r05 Section 10.2 (Peak PSD)

### MEASUREMENTS / RESULTS

**Peak Power Spectral Density**

**Date:** Jul-18-2016, Jul-20-2016 **Company:** Udisense Inc. DBA: Nanit **Work Order:** Q1060
**Engineer:** Yunus Faziloglu **EUT:** Smart Baby Monitor (Model: N101) **EUT Operating Voltage/Frequency:** 5VDC
Jul 18 2016 **Temp:** 23.9°C **Humidity:** 45% **Pressure:** 1005 mBar
Jul 20 2016 **Temp:** 23.9°C **Humidity:** 45% **Pressure:** 1005 mBar
**Frequency Range:** 2412-2462 MHz **Measurement Type:** Conducted
**Notes:** Powered from support laptop USB port **Measurement Method:** FCC KDB 558074 D01 DTS Meas Guidance v03r05 Section 10.2
All data rates measured for each 802.11 mode. Only the highest readings are reported.

| Mode | Data Rate | Frequency | Peak Reading | Cable Loss | Attenuator Loss | Peak PSD | Limit | Margin | Result |
|---|---|---|---|---|---|---|---|---|---|
| | Mbps | (MHz) | (dBm) | (dB) | (dB) | (dBm) | (dBm) | (dB) | |
| 802.11b | 2 | 2412.0 | -30.25 | 1.0 | 29.5 | **0.25** | 8.0 | -7.75 | Pass |
| | | 2437.0 | -30.51 | 1.0 | 29.5 | -0.01 | 8.0 | -8.01 | Pass |
| | | 2462.0 | -30.34 | 1.0 | 29.5 | 0.16 | 8.0 | -7.84 | Pass |
| 802.11g | 54 | 2412.0 | -37.02 | 1.0 | 29.5 | -6.52 | 8.0 | -14.52 | Pass |
| | | 2437.0 | -36.8 | 1.0 | 29.5 | -6.30 | 8.0 | -14.30 | Pass |
| | | 2462.0 | -36.7 | 1.0 | 29.5 | **-6.20** | 8.0 | -14.20 | Pass |
| 802.11n(HT20) | 39 | 2412.0 | -38.64 | 1.0 | 29.5 | -8.14 | 8.0 | -16.14 | Pass |
| | | 2437.0 | -38.57 | 1.0 | 29.5 | **-8.07** | 8.0 | -16.07 | Pass |
| | | 2462.0 | -39.24 | 1.0 | 29.5 | -8.74 | 8.0 | -16.74 | Pass |
| 802.11n(HT40) | 13.5 | 2422.0 | -39.72 | 1.0 | 29.5 | **-9.22** | 8.0 | -17.22 | Pass |
| | | 2437.0 | -40.15 | 1.0 | 29.5 | -9.65 | 8.0 | -17.65 | Pass |
| | | 2452.0 | -39.84 | 1.0 | 29.5 | -9.34 | 8.0 | -17.34 | Pass |

**Test Site:** Wireless Test Room **Cable 1:** UFL to SMA adapter **Attenuator** A2121
**Analyzer:** A2200

**Peak PSD(dBm) = Peak Reading (dBm) + Cable Loss (dB) + Attenuator Loss (dB)**

Rev. 7/4/2016

| Spectrum Analyzers / Receivers /Preselectors | Range | MN | Mfr | SN | Asset | Cat | Calibration Due | Calibrated on |
|---|---|---|---|---|---|---|---|---|
| FSV40 Signal/Spectrum Analyzer | 10Hz-40GHz | FSV40 | R&S | 101551 | 2200 | I | 6/1/2017 | 6/1/2016 |

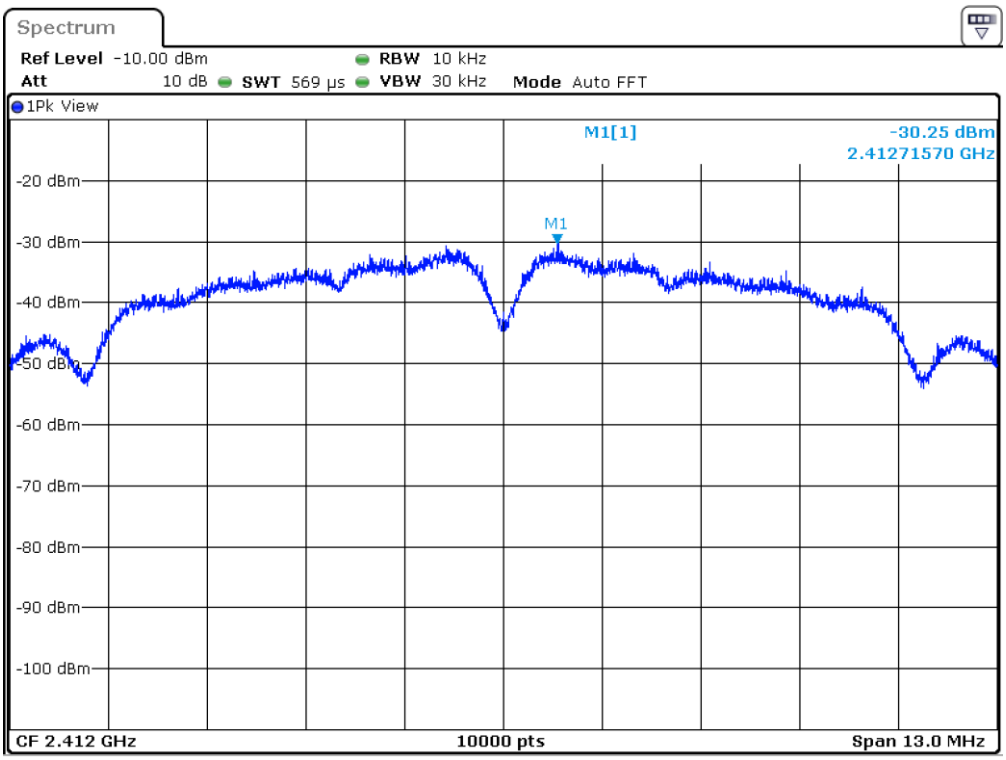
| Preamps /Couplers Attenuators / Filters | Range | MN | Mfr | SN | Asset | Cat | Calibration Due | Calibrated on |
|---|---|---|---|---|---|---|---|---|
| API - 30dB 20W Attenuator | 9KHz-40GHz | 89-30-11 | API Weinschel | 703 | 2121 | I | 2/10/2017 | 2/10/2016 |

| Meteorological Meters | MN | Mfr | SN | Asset | Cat | Calibration Due | Calibrated on |
|---|---|---|---|---|---|---|---|
| Weather Clock (Pressure Only) | BA928 | Oregon Scientific | C3166-1 | 831 | I | 4/28/2018 | 4/28/2016 |
| TH A#2085 | HTC-1 | HDE | | 2085 | II | 4/5/2017 | 4/5/2016 |

All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.

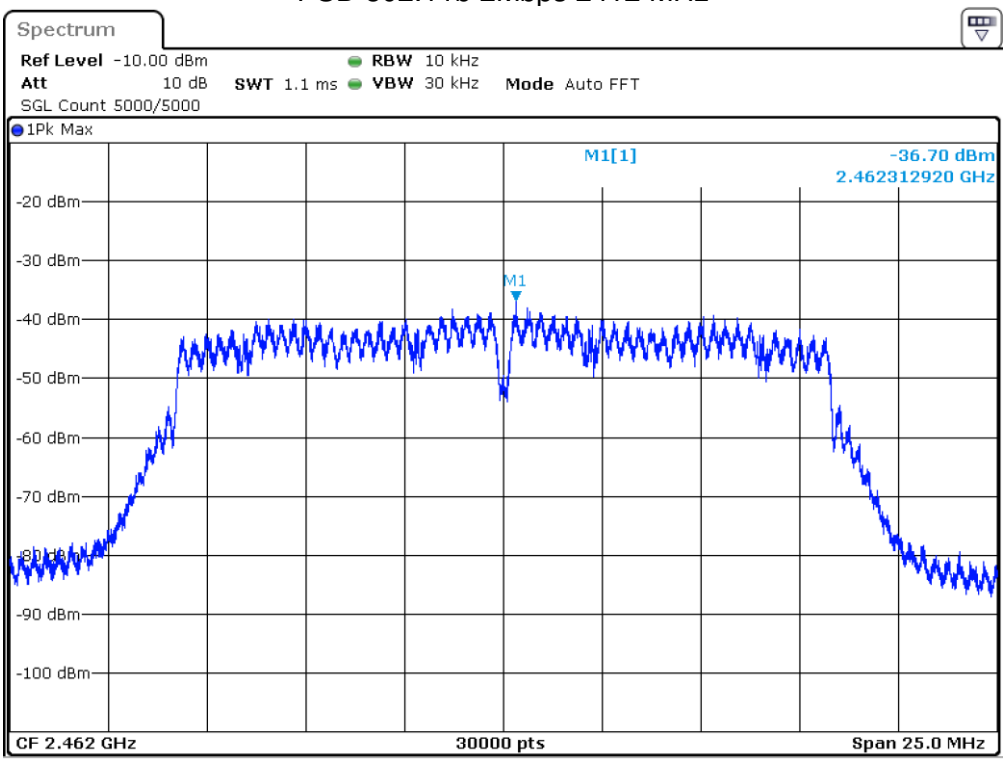
### PLOTS

Continued on next page.



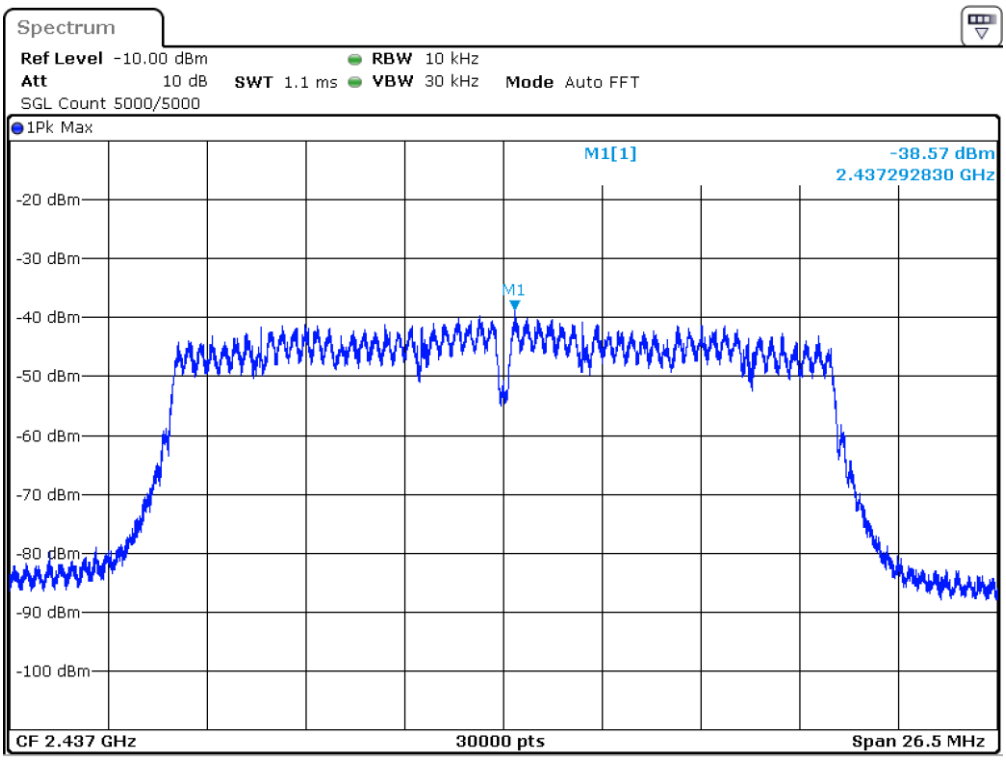

Date: 18.JUL.2016 13:57:14

PSD 802.11b 2Mbps 2412 MHz



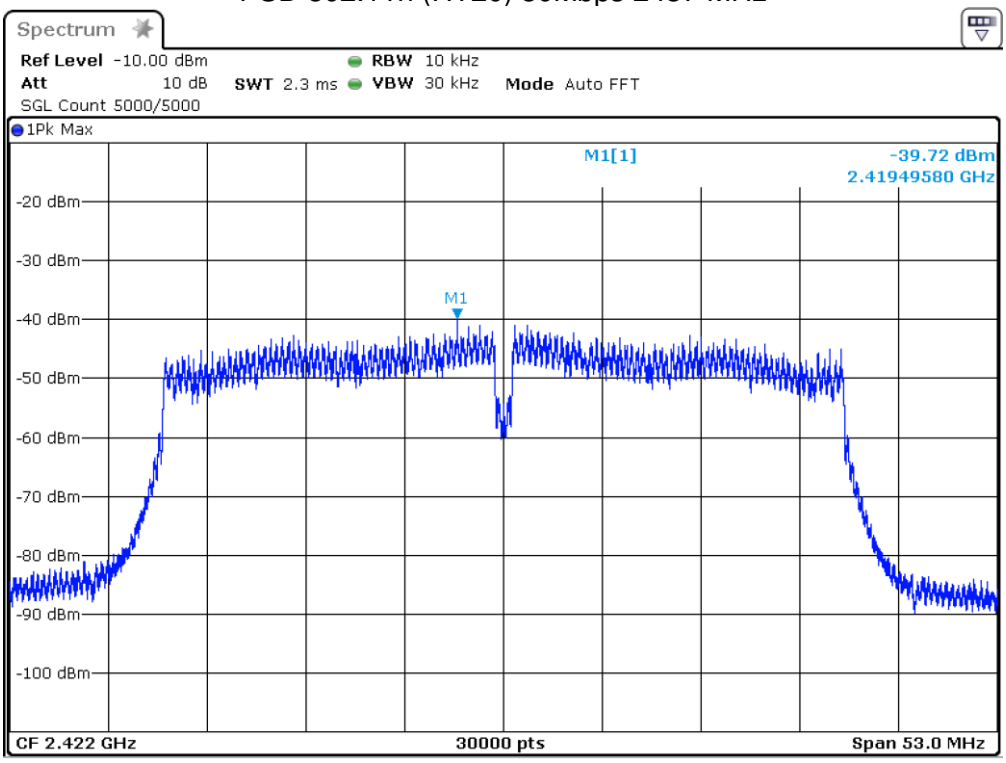

Date: 20.JUL.2016 14:19:59

PSD 802.11g 54Mbps 2462 MHz




Date: 20.JUL.2016 14:47:58

PSD 802.11n (HT20) 39Mbps 2437 MHz




Date: 20.JUL.2016 15:31:46

PSD 802.11n (HT40) 13.5Mbps 2422 MHz

# AC Line Conducted Emissions

## LIMITS

| Frequency of emission (MHz) | Quasi-peak limit (dBµV) | Average limit (dBµV) |
|---|---|---|
| 0.15-0.5 | 66 to 56* | 56 to 46* |
| 0.5-5 | 56 | 46 |
| 5-30 | 60 | 50 |

*Decreases with the logarithm of the frequency.

[47 CFR 15.207(a)]

## MEASUREMENTS / RESULTS

**AC Conducted Emissions Data Table**

**Date:** 29-Aug-16 **Company:** Udisense Inc. DBA: Nanit **Work Order:** Q1060
**Engineer:** Yunus Faziloglu **EUT Desc:** Smart Baby Monitor (Model: N101)
**Temp:** 24.0 °C **Humidity:** 45% **Pressure:** 1010mbar
**Notes:** 802.11g 6Mbps (worst case)

**Frequency Range:** 0.15-30MHz **EUT Input Voltage/Frequency:** 120V/60Hz

| | Quasi-Peak Readings | | Average Readings | | LISN Factors | | Cable | ATTN | FCC/CISPR Class B | | | FCC/CISPR Class B | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Frequency | QP1 | QP2 | AVG1 | AVG2 | L1 | L2 | Factor | Factor | QP Limit | Margin | Result | AVG Limit | Margin | Result |
| (MHz) | (dBµV) | (dBµV) | (dBµV) | (dBµV) | (dB) | (dB) | (dB) | (dB) | (dBµV) | (dB) | (Pass/Fail) | (dBµV) | (dB) | (Pass/Fail) |
| 9.11 | 26.7 | 26.9 | 13.5 | 9.1 | 0.0 | -0.1 | -0.1 | -20.3 | 60.0 | -12.6 | Pass | 50.0 | -16.0 | Pass |
| 9.63 | 28.5 | 28.0 | 15.2 | 11.3 | -0.1 | -0.1 | -0.1 | -20.3 | 60.0 | -11.0 | Pass | 50.0 | -14.3 | Pass |
| 10.15 | 28.0 | 27.6 | 17.1 | 13.8 | -0.1 | -0.1 | -0.1 | -20.3 | 60.0 | -11.5 | Pass | 50.0 | -12.4 | Pass |
| 10.67 | 27.3 | 30.3 | 18.4 | 15.0 | -0.1 | -0.1 | -0.1 | -20.3 | 60.0 | -9.2 | Pass | 50.0 | -11.1 | Pass |
| 11.19 | 21.7 | 22.1 | 14.9 | 13.3 | -0.1 | -0.1 | -0.1 | -20.3 | 60.0 | -17.4 | Pass | 50.0 | -14.6 | Pass |
| 11.71 | 16.3 | 14.8 | 9.2 | 6.5 | -0.1 | -0.1 | -0.1 | -20.3 | 60.0 | -23.2 | Pass | 50.0 | -20.3 | Pass |

***Result:*** Pass ***Worst Margin:*** -9.2 dB ***Frequency:*** 10.670 MHz

**Measurement Device:** LISN ASSET 1726(Line 1) LISN ASSET 1727(Line 2) **Cable:** CEMI-02 **Spectrum Analyzer:** Gold
**Attenuator:** 20dB Atten-4 **Site:** CEMI 5

*C-S CEMI Calculator Version 3.0.14* *Equipment Factor Sheet rev: 8/24/2016*
Adjusted Reading = Raw Reading + LISN Insertion Loss + Cable Loss + Attenuation

Rev. 8/29/2016

| LISNs/Measurement Probes | Range | MN | Mfr | SN | Asset | Cat | Calibration Due | Calibrated on |
|---|---|---|---|---|---|---|---|---|
| LISN Asset 1726 | 150kHz-30MHz | LI-150A | Com-Power | 201092 | 1726 | I | 2/4/2017 | 2/4/2016 |
| LISN Asset 1727 | 150kHz-30MHz | LI-150A | Com-Power | 201093 | 1727 | I | 2/4/2017 | 2/4/2016 |

| Cables | Range | Mfr | Cat | Calibration Due | Calibrated on |
|---|---|---|---|---|---|
| CEMI-02 | 9kHz - 2GHz | C-S | II | 4/10/2017 | 4/10/2016 |

| Attenuators | Range | MN | Mfr | SN | Asset | Cat | Calibration Due | Calibrated on |
|---|---|---|---|---|---|---|---|---|
| 20dB Attenuator-04 | 9kHz-2GHz | | | N/A | | II | 9/7/2017 | 8/7/2016 |

| Spectrum Analyzers / Receivers /Preselectors | Range | MN | Mfr | SN | Asset | Cat | Calibration Due | Calibrated on |
|---|---|---|---|---|---|---|---|---|
| Gold | 100Hz-26.5 GHz | E4407B | Agilent | MY45113816 | 1284 | I | 1/13/2017 | 1/13/2016 |

| Meteorological Meters | MN | Mfr | SN | Asset | Cat | Calibration Due | Calibrated on |
|---|---|---|---|---|---|---|---|
| Weather Clock (Pressure Only) | BA928 | Oregon Scientific | C3166-1 | 831 | I | 4/28/2018 | 4/28/2016 |
| TH A#2085 | HTC-1 | HDE | | 2085 | II | 4/5/2017 | 4/5/2016 |

All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.

## Occupied Bandwidth

*Requirement: When an occupied bandwidth is not specified in the applicable RSS, the transmitted signal bandwidth to be reported is to be its 99% emission bandwidth, as calculated or measured.* [RSS-GEN 6.6]

### MEASUREMENTS / RESULTS

**99% Occupied Bandwidth**

**Date:** Jul-20-2016 **Company:** Udisense Inc. DBA: Nanit **Work Order:** Q1060
**Engineer:** Yunus Faziloglu **EUT:** Smart Baby Monitor (Model: N101) **EUT Operating Voltage/Frequency:** 5VDC
**Temp:** 23.9°C **Humidity:** 45% **Pressure:** 1005 mBar
**Frequency Range:** 2412-2462 MHz **Measurement Type:** Conducted
**Notes:** Powered from support laptop USB port **Measurement Method:** RSS-Gen Issue 4 Section 6.6
All data rates measured for each 802.11 mode. Only the highest readings are reported.

| Mode | Data Rate Mbps | Frequency (MHz) | Reading (MHz) |
|---|---|---|---|
| 802.11b | 2 | 2412.0 | **12.096** |
| | | 2437.0 | 12.092 |
| | | 2462.0 | 12.083 |
| 802.11g | 36 | 2412.0 | 16.471 |
| | | 2437.0 | 16.503 |
| | | 2462.0 | **16.512** |
| 802.11n(HT20) | 52 | 2412.0 | 17.556 |
| | | 2437.0 | **17.576** |
| | | 2462.0 | 17.543 |
| 802.11n(HT40) | 13.5 | 2422.0 | 36.016 |
| | | 2437.0 | **36.200** |
| | | 2452.0 | 36.054 |

**Test Site:** Wireless Test Room **Cable 1:** UFL to SMA adapter **Attenuator** A2121
**Analyzer:** A2200



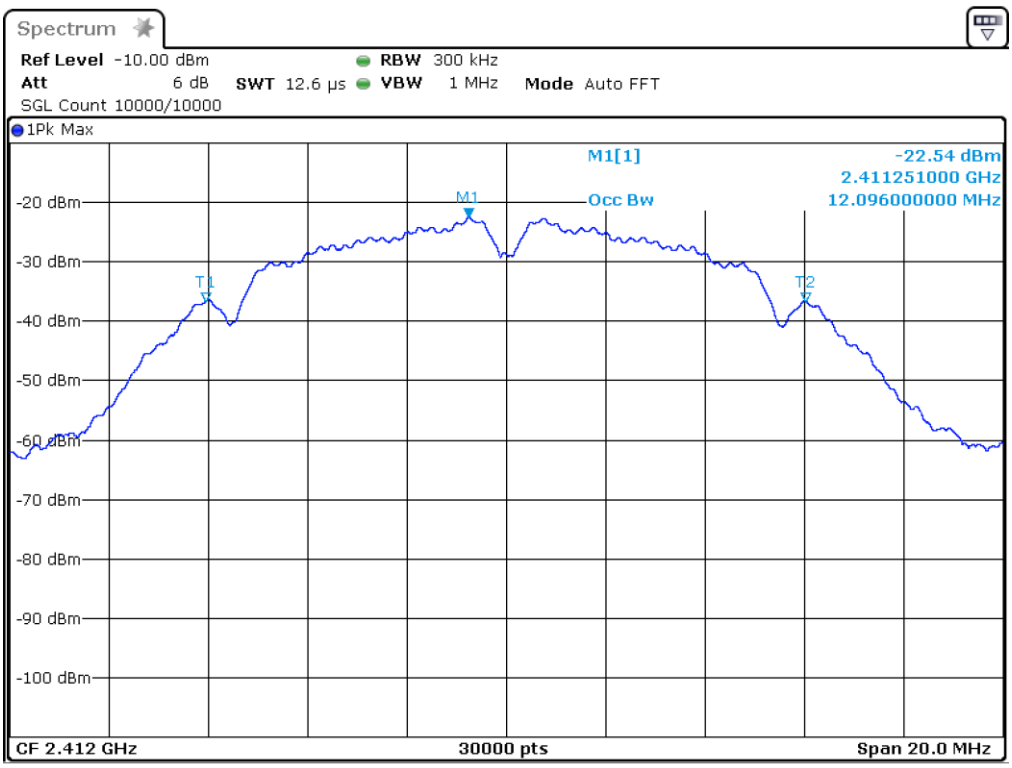
Rev. 7/4/2016

| Spectrum Analyzers / Receivers /Preselectors | Range | MN | Mfr | SN | Asset | Cat | Calibration Due | Calibrated on |
|---|---|---|---|---|---|---|---|---|
| FSV40 Signal/Spectrum Analyzer | 10Hz-40GHz | FSV40 | R&S | 101551 | 2200 | I | 6/1/2017 | 6/1/2016 |
| **Preamps /Couplers Attenuators / Filters** | **Range** | **MN** | **Mfr** | **SN** | **Asset** | **Cat** | **Calibration Due** | **Calibrated on** |
| API - 30dB 20W Attenuator | 9KHz-40GHz | 89-30-11 | API Weinschel | 703 | 2121 | I | 2/10/2017 | 2/10/2016 |
| **Meteorological Meters** | | **MN** | **Mfr** | **SN** | **Asset** | **Cat** | **Calibration Due** | **Calibrated on** |
| Weather Clock (Pressure Only) | | BA928 | Oregon Scientific | C3166-1 | 831 | I | 4/28/2018 | 4/28/2016 |
| TH A#2085 | | HTC-1 | HDE | | 2085 | II | 4/5/2017 | 4/5/2016 |

All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.

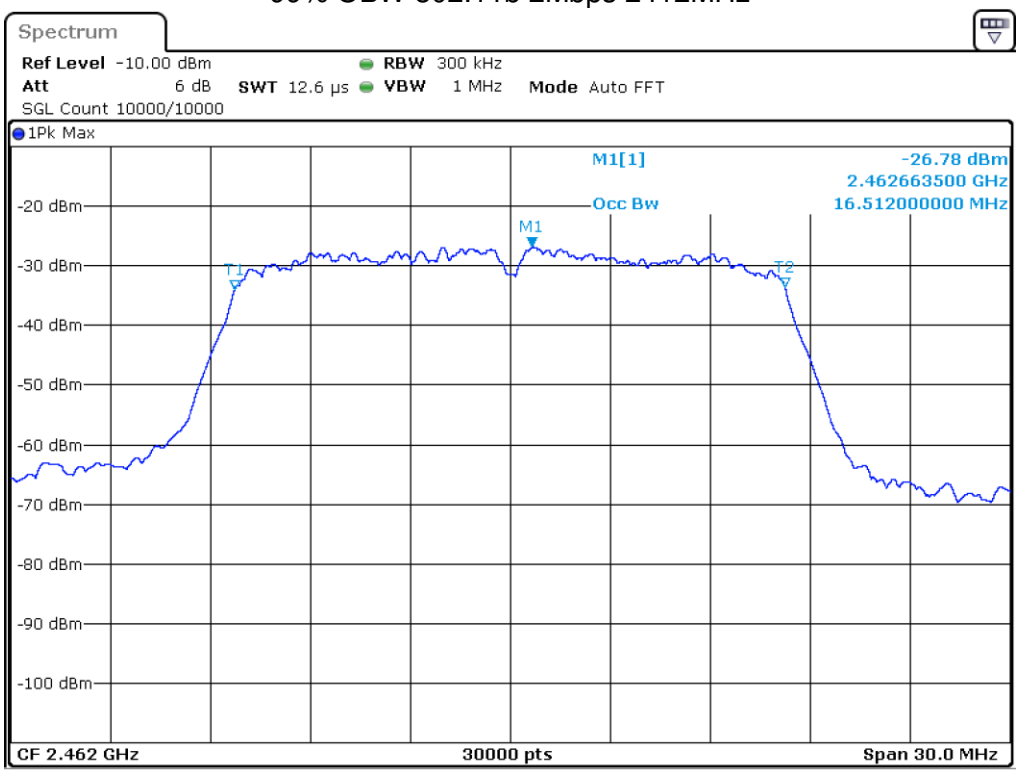
### Plots

Continued on next page



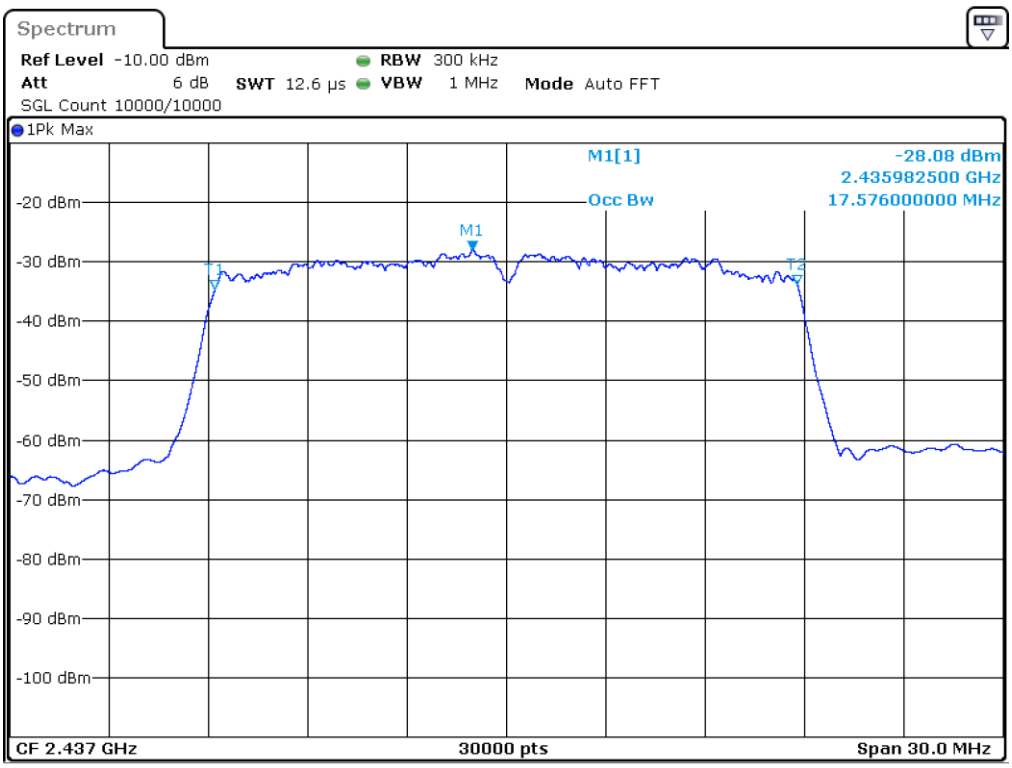

Date: 20.JUL.2016 09:47:58

99% OBW 802.11b 2Mbps 2412MHz



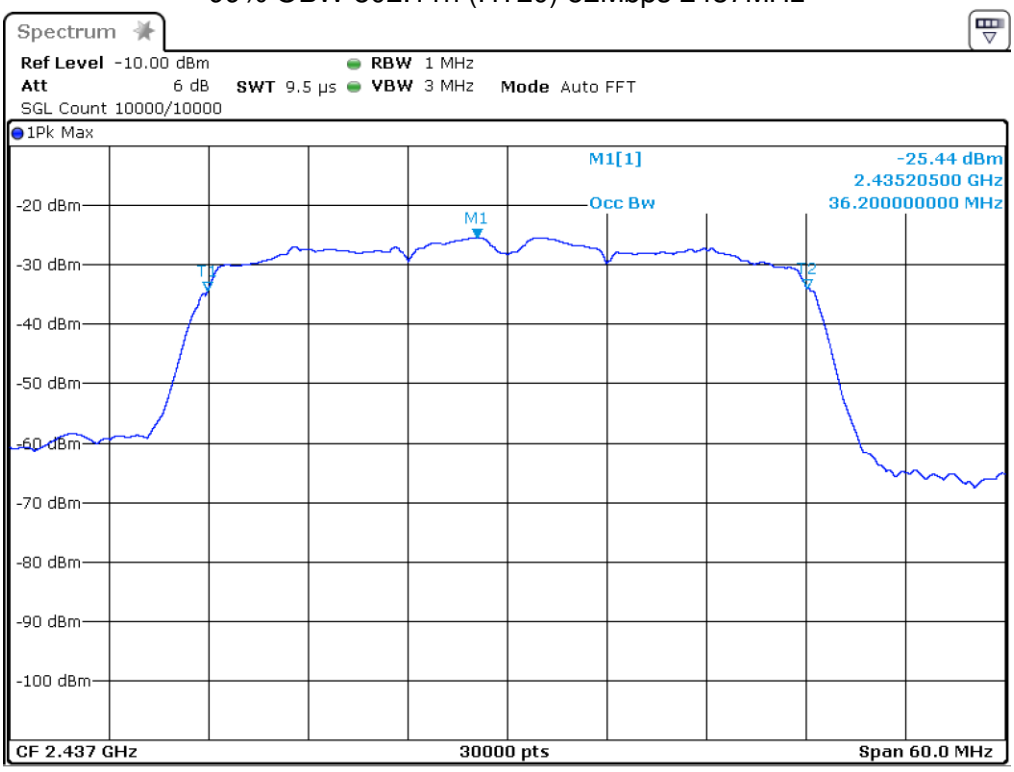

Date: 20.JUL.2016 09:26:04

99% OBW 802.11g 36Mbps 2462MHz




Date: 20.JUL.2016 10:29:31

99% OBW 802.11n (HT20) 52Mbps 2437MHz




Date: 20.JUL.2016 10:47:26

99% OBW 802.11n (HT40) 13.5Mbps 2437MHz

## *Measurement Uncertainty*

The listed uncertainties are the worst case uncertainty for the entire range of measurement. Please note that the uncertainty values are provided for informational purposes only and are not used in determining the PASS/FAIL results.

| Measurement | Expanded Uncertainty k=2 | Maximum allowable uncertainty |
|---|---|---|
| Radiated Emissions (30-1000MHz)<br>NIST<br>CISPR | <br>5.6dB<br>4.6dB | <br>N/A<br>5.2dB (Ucispr) |
| Radiated Emissions (1-26.5GHz) | 4.6dB | N/A |
| Radiated Emissions (above 26.5GHz) | 4.9dB | N/A |
| Magnetic Radiated Emissions | 5.6dB | N/A |
| Conducted Emissions<br>NIST<br>CISPR | <br>3.9dB<br>3.6dB | <br>N/A<br>3.6dB (Ucispr) |
| Telco Conducted Emissions (Current) | 2.9dB | N/A |
| Telco Conducted Emissions (Voltage) | 4.4dB | N/A |
| Electrostatic Discharge | 11.5% | N/A |
| Radiated RF Immunity (Uniform Field) | 1.6dB | N/A |
| Electrical Fast Transients | 23.1% | N/A |
| Surge | 23.1% | N/A |
| Conducted RF Immunity | 3dB | N/A |
| Magnetic Immunity | 12.8% | N/A |
| Dips and Interrupts | 2.3V | N/A |
| Harmonics | 3.5% | N/A |
| Flicker | 3.5% | N/A |
| Radio frequency (@ 2.4GHz) | $3.23 \times 10^{-8}$ | $1 \times 10^{-7}$ |
| RF power, conducted | 0.40dB | 0.75dB |
| Maximum frequency deviation:<br>• Within 300Hz and 6kHz of audio frequency / Within 6kHz and 25kHz of audio frequency | <br>3.4%<br>0.3dB | <br>5%<br>3dB |
| Adjacent channel power | 1.9dB | 3dB |
| Conducted spurious emission of transmitter, valid up to 12.75GHz | 2.39dB | 3dB |
| Conducted emission of receivers | 1.3dB | 3dB |
| Radiated emission of transmitter, valid up to 26.5GHz | 3.9dB | 6dB |
| Radiated emission of transmitter, valid up to 80GHz | 3.3dB | 6dB |
| Radiated emission of receiver, valid up to 26.5GHz | 3.9dB | 6dB |
| Radiated emission of receiver, valid up to 80GHz | 3.3dB | 6dB |
| Humidity | 2.37% | 5% |
| Temperature | 0.7°C | 1.0°C |
| Time | 4.1% | 10% |
| RF Power Density, Conducted | 0.4dB | 3dB |
| DC and low frequency voltages | 1.3% | 3% |
| Voltage (AC, <10kHz) | 1.3% | 2% |
| Voltage (DC) | 0.62% | 1% |
| The above reflects a 95% confidence level | | |

## *Conditions Of Testing*

**[Bureau Veritas Consumer Products Services, Inc., a Massachusetts corporation],** and/or its affiliates (collectively, the "Company") will conduct, at the request of the Submitter ("Client"), the tests specified on the submitted Test Request Form or equivalent in accordance with, and subject to, the following terms and conditions (collectively, "Conditions"):

1. All orders for tests are subject to acceptance by the Company, and no order will constitute a binding commitment of the Company unless and until such order is accepted by it, as evidenced by the issuance of a written report ("Test Report") by the Company. The Test Report is issued solely by the Company, is intended for the exclusive use of Client and shall not be published, used for advertising purposes, copied or replicated for distribution to any other person or entity or otherwise publicly disclosed without the prior written consent of the Company. By submitting a request for services to the Company, Client consents to the disclosure to accreditation bodies of those records of Client relevant to the accreditation body's assessment of the Company's competence and compliance with relevant accreditation criteria. The Company shall not be liable for any loss or damage whatsoever resulting from the failure of the Company to provide its services within any time period for completion estimated by the Company. If Client anticipates using the Test Report in any legal proceeding, arbitration, dispute resolution forum or other proceeding, it shall so notify the Company prior to submitting the Test Report in such proceeding. The Company has no obligation to provide a fact or expert witness at such proceeding unless the Company agrees in advance to do so for a separate and additional fee.
2. The Test Report will set forth the findings of the Company solely with respect to the test samples identified therein. Unless specifically and expressly indicated in the Test Report, the results set forth in such Test Report are not intended to be indicative or representative of the quality or characteristics of the lot from which a test sample is taken, and Client shall not rely upon the Test Report as being so indicative or representative of the lot or of the tested product in general. The Test Report will reflect the findings of the Company at the time of testing only, and the Company shall have no obligation to update the Test Report after its issuance. The Test Report will set forth the results of the tests performed by the Company based upon the written information provided to the Company. The Test Report will be based solely on the samples and written information submitted to the Company by Client, and the Company shall not be obligated to conduct any independent investigation or inquiry with respect thereto.
3. The Company may, in its sole discretion, destroy samples which have been furnished to the Company for testing and which have not been destroyed in the course of testing. The Company may delegate the performance of all or a portion of the services contemplated hereunder to an affiliate, agent or subcontractor of the Company, and Client consents to such delegation.
4. These Conditions and the Test Report represent the entire understanding of the parties hereto with respect to the subject matter hereof and of the Test Report, and no modification, variance or extrapolation with respect thereto shall be permitted without the prior written consent of the Company.
5. The names, service marks, trademarks and copyrights of the Company and its affiliates, including the names "**BUREAU VERITAS," "BUREAU VERITAS CONSUMER PRODUCTS SERVICES," "BVCPS", "MTL", "ACTS", "MTL-ACTS" and CURTIS-STRAUS** (collectively, the "Marks") are and shall remain the sole property of the Company or its affiliates and shall not be used by Client except solely to the extent that Client obtains the prior written approval of the Company and then only in the manner prescribed by the Company. Client shall not contest the validity of the Marks or take any action that might impair the value or goodwill associated with the Marks or the image or reputation of the Company or its affiliates.
6. Payment in full shall be due 30 days after the date of invoice. Interest shall be due on overdue amounts from the due date until paid at an interest rate of 1.5% per month or, if less, the maximum rate permitted by law. The Company reserves the right, at any time and from time to time, to revoke any credit extended to Client. Client shall reimburse the Company for any costs it incurs in collecting past due amounts, including court costs and fees and expenses of attorneys and collection agencies. The Test Report may not be used or relied upon by Client if and for so long as Client fails to pay when due any invoice issued by the Company or any affiliate of it to Client or any affiliate or subsidiary of Client together with interest and penalties, if any, accrued thereon.
7. The Company disclaims any and all responsibility or liability arising out of or in connection with e-mail transmissions of such information.
8. Client understands and agrees that the Company is neither an insurer nor a guarantor, that the Company does not take the place of Client or any designer, manufacturer, agent, buyer, distributor or transportation or shipping company, and that the Company disclaims all liability in such capacities. Client further understands that if it seeks assurance against loss or damage, it should obtain appropriate insurance.
9. Client agrees that the Company, by providing the services, does not take the place of Client nor any third party, nor does the Company release them from any of their obligations, nor does the Company otherwise assume, abridge, abrogate or undertake to discharge any duty of any third party to Client or any duty of Client or any third party to any other third party, and Client will not release any third party from its obligations and duties with respect to the tested goods.
10. Client shall, on a timely basis, (a) provide adequate instructions to the Company in order to enable the Company to perform properly its services, (b) provide, or cause Client's suppliers and contractors to provide, the Company with all documents necessary to enable the Company to perform its services, (c) furnish the Company with all relevant information regarding Client's intended use and purposes of the tested goods, (d) advise the Company of essential dates and deadlines relevant to the tested goods and (e) fully exercise all rights and remedies available to Client against third parties in respect of the tested goods.
11. The Company shall undertake due care and ordinary skill in the performance of its services to Client, and the Company shall accept responsibility only were such skill has not been exercised and, even in such event, only to the extent of the limitation of liability set forth herein.
12. If Client desires to assert a claim arising from or relating to (i) the performance, purported performance or non-performance of any services by the Company or (ii) the sale, resale, manufacture, distribution or use of any tested goods, it must submit that claim to the Company in a writing that sets forth with particularity the basis for such claim within 60 days from discovery of the potential claim and not more than six months after the date of issuance of the Test Report to Client. Client waives any and all such claims including, without limitation, claims that the Test Report is inaccurate, incomplete or misleading or that additional or different testing is required, unless and then only to the extent that Client submits a written claim to the Company within both such time periods.
13. CLIENT SHALL, EXCEPT TO THE EXTENT OF COMPANY'S LIABILITY TO CLIENT HEREUNDER (WHICH IN NO EVENT SHALL EXCEED THE LIMITATION OF LIABILITY HEREIN), HOLD HARMLESS AND INDEMNIFY THE COMPANY, ITS AFFILIATES AND THEIR RESPECTIVE DIRECTORS, OFFICERS, EMPLOYEES, AGENTS AND SUBCONTRACTORS AGAINST ALL ACTUAL OR ALLEGED THIRD PARTY CLAIMS FOR LOSS, DAMAGE OR EXPENSE OF WHATSOEVER NATURE AND HOWSOEVER ARISING FROM OR RELATING TO (i) THE PERFORMANCE, PURPORTED PERFORMANCE OR NON-PERFORMANCE OF ANY SERVICES BY THE COMPANY OR (ii) THE SALE, RESALE, MANUFACTURE, DISTRIBUTION OR USE OF ANY TESTED GOODS.
14. EXCEPT AS MAY OTHERWISE BE EXPRESSLY AGREED TO IN WRITING BY THE COMPANY AND NOTWITHSTANDING ANY PROVISION TO THE CONTRARY CONTAINED HEREIN OR IN ANY TEST REPORT, NO WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE, IS MADE.

15. (A) IN NO EVENT WHATSOEVER SHALL THE COMPANY BE LIABLE FOR ANY CONSEQUENTIAL, SPECIAL, INCIDENTAL, EXEMPLARY OR PUNITIVE DAMAGES IN CONNECTION WITH, RELATING TO OR ARISING OUT OF THE TEST REPORT OR THE SERVICES PROVIDED BY THE COMPANY HEREUNDER, INCLUDING WITHOUT LIMITATION LOSS OF OR DAMAGE TO PROPERTY; LOSS OF INCOME, PROFIT OR USE; OR ANY CLAIMS OR DEMANDS MADE AGAINST CLIENT OR ANY OTHER PERSON BY ANY THIRD PARTY IN CONNECTION WITH, RELATING TO OR ARISING OUT OF THE SERVICES PROVIDED BY THE COMPANY HEREUNDER.

(B)NOTWITHSTANDING ANY PROVISION TO THE CONTRARY CONTAINED HEREIN, AND IN RECOGNITION OF THE RELATIVE RISKS AND BENEFITS TO CLIENT AND THE COMPANY ASSOCIATED WITH THE TESTING SERVICES CONTEMPLATED HEREBY, THE RISKS HAVE BEEN ALLOCATED SUCH THAT UNDER NO CIRCUMSTANCES WHATSOEVER SHALL THE LIABILITY OF THE COMPANY TO CLIENT OR ANY THIRD PARTY IN RESPECT OF ANY CLAIM FOR LOSS, DAMAGE OR EXPENSE, OF WHATSOEVER NATURE OR MAGNITUDE, AND HOWSOEVER ARISING, EXCEED AN AMOUNT EQUAL TO FIVE (5) TIMES THE AMOUNT OF THE FEES PAID TO THE COMPANY FOR THE SPECIFIC SERVICES WHICH GAVE RISE TO SUCH CLAIM OR U.S.$10,000, WHICHEVER IS THE LESSER AMOUNT.

16. The Company shall not be liable for any loss or damage resulting from any delay or failure in performance of its obligations hereunder resulting directly or indirectly from any event of force majeure or any event outside the control of the Company. If any such event occurs, the Company may immediately cancel or suspend its performance hereunder without incurring any liability whatsoever to Client.

17. Company's services, including these Conditions, shall be governed by, and construed in accordance with, the local laws of the country where the Company performs the tests or, in the case of tests performed in the United States of America, the laws of Massachusetts without regard to conflicts of laws principles. If any aspect(s) of these Conditions is found to be illegal or unenforceable, the validity, legality and enforceability of all remaining aspects of these Conditions shall not in any way be affected or impaired thereby. Any proceeding related to the subject matter hereof shall be brought, if at all, in the courts of the country where the Company performs the tests or, in the case of tests performed in the United States of America, in the courts of Massachusetts. Client waives the right to interpose any counterclaim or setoffs of any nature in any litigation arising hereunder.

The complete list of the Approved Subcontractors Curtis-Straus may use to delegate the performance of work can be provided upon request.
Rev.160009121(2)_#684340 v14CS