



# **CERTIFICATION TEST REPORT**

**Report Number. :** 12229692-E2V2

**Applicant :** MASIMO CORPORATION  
52 Discovery  
Irvine, CA 92618-1604 USA

**Model :** Radical-7

**FCC ID :** VKF-RAD7B

**IC :** 7362A-RAD7B

**EUT Description :** Pulse CO-Oximeter

**Test Standard(s) :** FCC 47 CFR PART 15 SUBPART C  
ISED RSS-247 ISSUE 2  
ISED RSS-GEN ISSUE 5

**Date Of Issue:**  
February 24, 2019

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## REPORT REVISION HISTORY

| Rev. | Issue Date | Revisions                           | Revised By |
|------|------------|-------------------------------------|------------|
| V1   | 5/2/2018   | Initial Issue                       |            |
| V2   | 2/25/2019  | Updated per TCB reviewer's comments | Vien Tran  |

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## 1. ATTESTATION OF TEST RESULTS

**COMPANY NAME:** MASIMO CORPORATION  
52 Discovery  
Irvine, CA 92618-1604 USA

**EUT DESCRIPTION:** Pulse CO-Oximeter

**MODEL:** Radical-7

**SERIAL NUMBER:** 1000117295 (Radiated) & 1000117068 (Conducted)

**DATE TESTED:** April 09 –April 27, 2018

| APPLICABLE STANDARDS     |              |
|--------------------------|--------------|
| STANDARD                 | TEST RESULTS |
| CFR 47 Part 15 Subpart C | Complies     |
| ISED RSS-247 Issue 2     | Complies     |
| ISED RSS-GEN Issue 5     | Complies     |

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

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

This document may not be altered or revised in any way unless done so by UL Verification Services Inc. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Verification Services Inc. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of the U.S. government.

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Prepared By:



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CONSUMER TECHNOLOGY DIVISION  
TEST ENGINEER  
UL Verification Services Inc.

## 2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with FCC CFR 47 Part 2, FCC CFR 47 Part 15, ANSI C63.10-2013, KDB 558074 D01 15.247 Meas Guidance v05, and RSS-GEN Issue 5, and RSS-247 Issue 2.

## 3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 and 47266 Benicia Street, Fremont, California, USA. Line conducted emissions are measured only at the 47173 address. The following table identifies which facilities were utilized for radiated emission measurements documented in this report. Specific facilities are also identified in the test results sections.

| 47173 Benicia Street                                         | 47266 Benicia Street                              |
|--------------------------------------------------------------|---------------------------------------------------|
| <input checked="" type="checkbox"/> Chamber A (ISED:2324B-1) | <input type="checkbox"/> Chamber D (ISED:22541-1) |
| <input checked="" type="checkbox"/> Chamber B (ISED:2324B-2) | <input type="checkbox"/> Chamber E (ISED:22541-2) |
| <input type="checkbox"/> Chamber C (ISED:2324B-3)            | <input type="checkbox"/> Chamber F (ISED:22541-3) |
|                                                              | <input type="checkbox"/> Chamber G (ISED:22541-4) |
|                                                              | <input type="checkbox"/> Chamber H (ISED:22541-5) |

The above test sites and facilities are covered under FCC Test Firm Registration # 208313. Chambers A through C are covered under ISED company address code 2324B with site numbers 2324B -1 through 2324B-3, respectively. Chambers D through H are covered under ISED company address code 22541 with site numbers 22541 -1 through 22541-5, respectively.

UL Verification Services Inc. is accredited by NVLAP, Laboratory Code 200065-0. The full scope of accreditation can be viewed at <http://nist.gov/standards/scopes/2000650.htm>.

## 4. CALIBRATION AND UNCERTAINTY

### 4.1. MEASURING INSTRUMENT CALIBRATION

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

### 4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

$$\begin{aligned} \text{Field Strength (dBuV/m)} &= \text{Measured Voltage (dBuV)} + \text{Antenna Factor (dB/m)} + \\ &\text{Cable Loss (dB)} - \text{Preamp Gain (dB)} \\ 36.5 \text{ dBuV} + 18.7 \text{ dB/m} + 0.6 \text{ dB} - 26.9 \text{ dB} &= 28.9 \text{ dBuV/m} \end{aligned}$$

### 4.3. MEASUREMENT UNCERTAINTY

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

| PARAMETER                                           | UNCERTAINTY |
|-----------------------------------------------------|-------------|
| Worst Case Conducted Disturbance, 9KHz to 0.15 MHz  | 3.84 dB     |
| Worst Case Conducted Disturbance, 0.15 to 30 MHz    | 3.65 dB     |
| Worst Case Radiated Disturbance, 9KHz to 30 MHz     | 3.15 dB     |
| Worst Case Radiated Disturbance, 30 to 1000 MHz     | 5.36 dB     |
| Worst Case Radiated Disturbance, 1000 to 18000 MHz  | 4.32 dB     |
| Worst Case Radiated Disturbance, 18000 to 26000 MHz | 4.45 dB     |
| Worst Case Radiated Disturbance, 26000 to 40000 MHz | 5.24 dB     |

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

## 5. EQUIPMENT UNDER TEST

### 5.1. EUT DESCRIPTION

The EUT is a pulse CO-Oximeter

### 5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum conducted output power as follows:

| Frequency Range (MHz) | Mode         | Output Power (dBm) | Output Power (mW) |
|-----------------------|--------------|--------------------|-------------------|
| 2412 - 2472           | 802.11b      | 16.83              | 48.19             |
| 2412 - 2472           | 802.11g      | 15.32              | 34.04             |
| 2412 - 2472           | 802.11n HT20 | 13.68              | 23.33             |
| 2422 - 2452           | 802.11n HT40 | 13.12              | 20.51             |

### 5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes an Ethertronics (P/N- 18046) with gain as specified in table below:

| Frequency      | Peak Gain |
|----------------|-----------|
| 2.390-2.490GHz | 2dB       |
| 5.150-5.350GHz | 5dB       |
| 5.35-5.90GHz   | 6dB       |

### 5.4. SOFTWARE AND FIRMWARE

The test utility software used during testing was the following: iMX: E0847, MCU: 1064, MX: 7e23, WiFi: 7.45.100.7, Bluetooth:003.001.025.0143.0000.

## 5.5. WORST-CASE CONFIGURATION AND MODE

Radiated emissions below 1GHz, above 18GHz, and power line conducted emission were performed with the EUT set to transmit at the channel with highest output power as worst-case scenario.

Band edge and radiated emissions between 1GHz and 18GHz were performed with the EUT set to transmit at the highest power on low, middle and high channels.

The fundamental of the EUT was investigated in three orthogonal orientations X,Y,Z, it was determined that Y orientation was worst-case orientation; therefore, all final radiated testing was performed with the EUT in Y orientation.

Worst-case data rates as provided by the client were:

802.11b mode: 1 Mbps

802.11g mode: 6 Mbps

802.11n HT20mode: MCS0

802.11n HT40mode: MCS0

## 5.6. DESCRIPTION OF TEST SETUP

### SUPPORT EQUIPMENT

| Support Equipment List |              |             |                     |        |
|------------------------|--------------|-------------|---------------------|--------|
| Description            | Manufacturer | Model       | Serial Number       | FCC ID |
| Chaging Base           | Masimo       | RDS-1       | 291175              | N/A    |
| Debug Board            | Masinmo      | 82444 REV A | 1447700018          | N/A    |
| Laptop                 | Lenovo       | T460        | PC0C3DUA            | N/A    |
| AC Adaptor             | Lenovo       | ADLX65NCCZA | 11S45N0263ZS9957G6W | N/A    |

### I/O CABLES

| I/O Cable List |         |                      |                |            |                  |                      |
|----------------|---------|----------------------|----------------|------------|------------------|----------------------|
| Cable No       | Port    | # of identical ports | Connector Type | Cable Type | Cable Length (m) | Remarks              |
| 1              | AC      | 1                    | AC             | AC         | 0.3              |                      |
| 2              | AC      | 1                    | AC             | AC         | 0.8              |                      |
| 3              | USB     | 1                    | USB            | unshielded | 1.0              |                      |
| 4              | Antenna | 1                    | RF             | Shielded   | 0.5              | To spectrum Analyzer |

### TEST SETUP

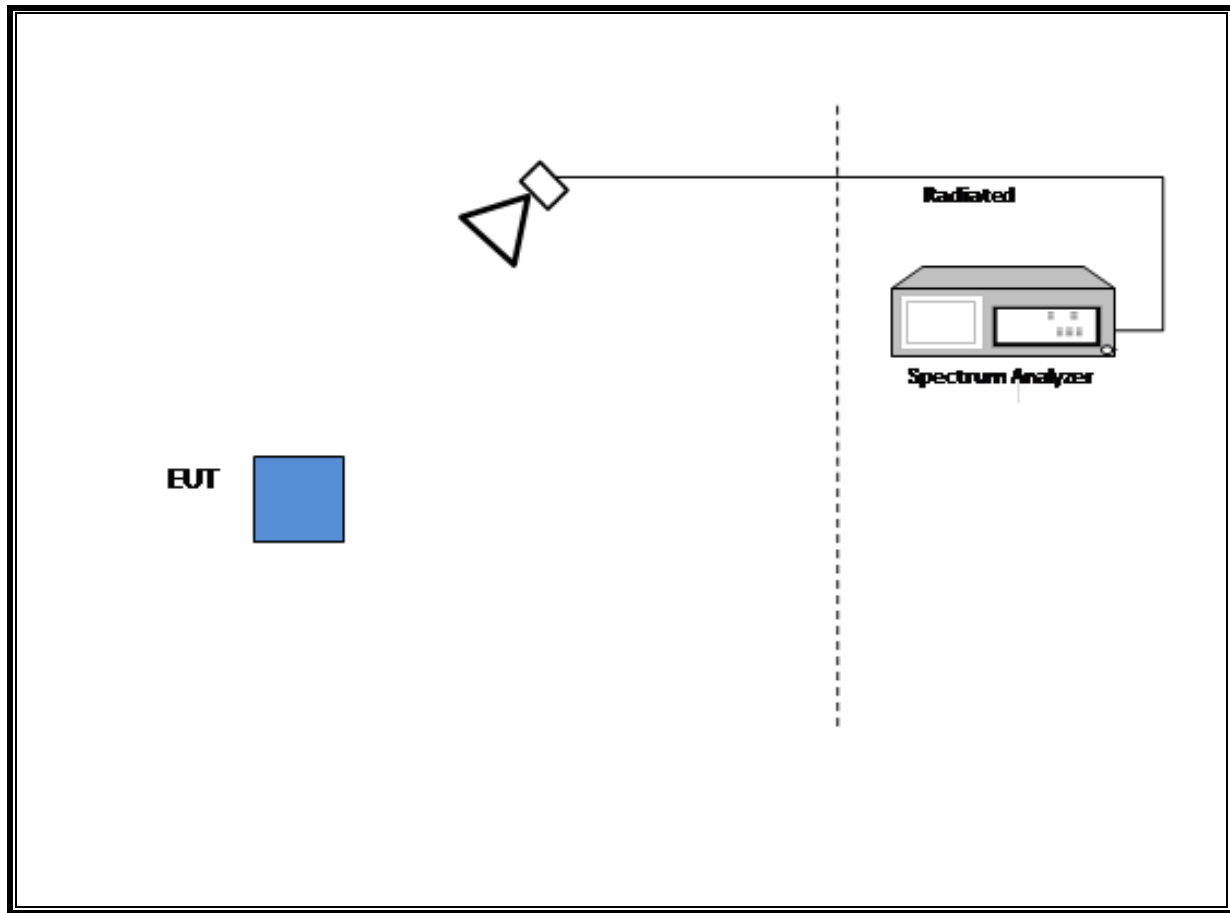
For conducted and AC Line tests: the EUT was docked on the charging base and connected to a host laptop via an USB cable, and a debug board for parameter setting purpose such as channel, output power...etc.

For radiated tests: All support equipment (charging base, host laptop, USB cable, and debug board) were removed after the EUT programmed.

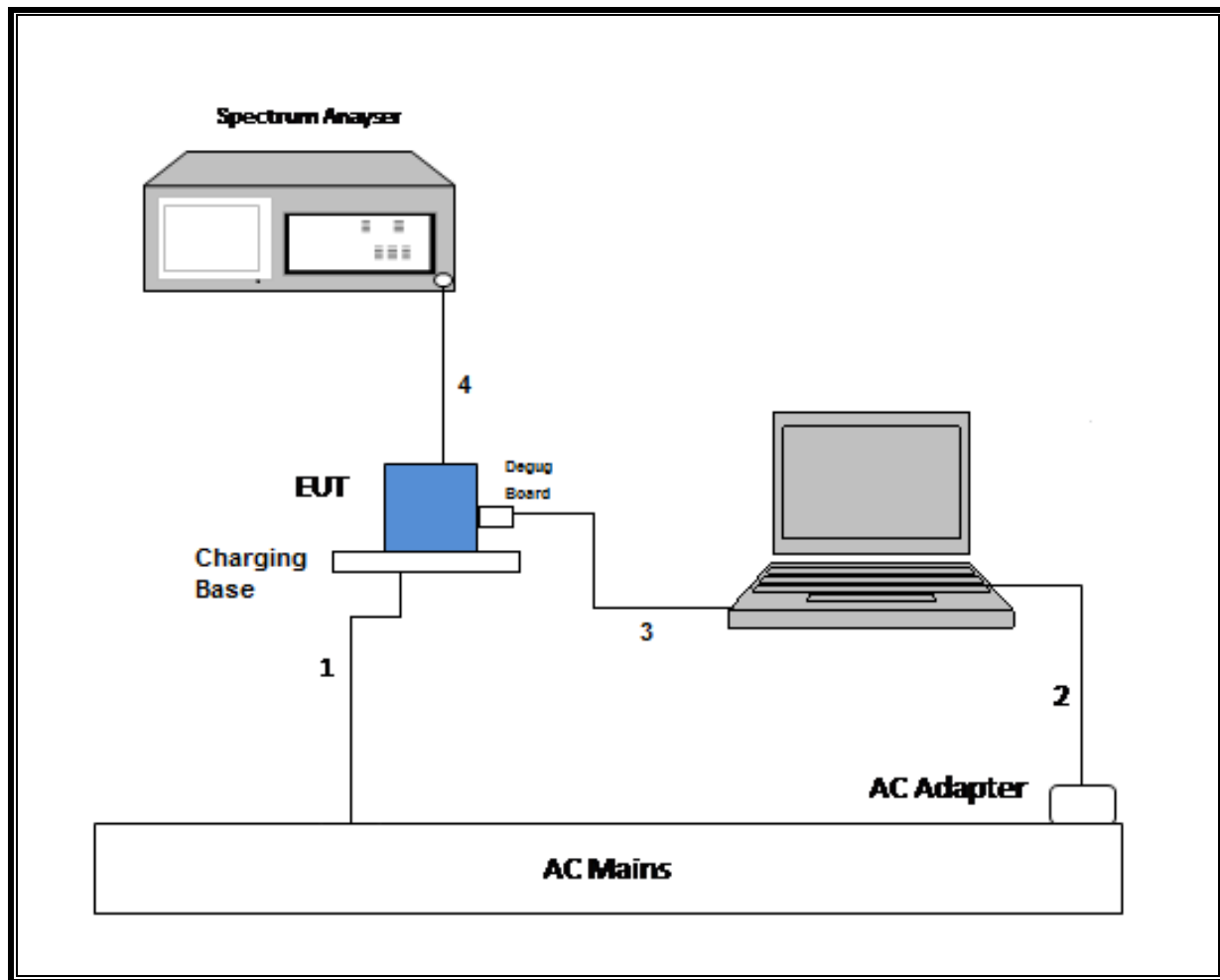
The EUT was operated as stand-alone unit by 3.7VDC battery pack.

The test software exercises the radio.

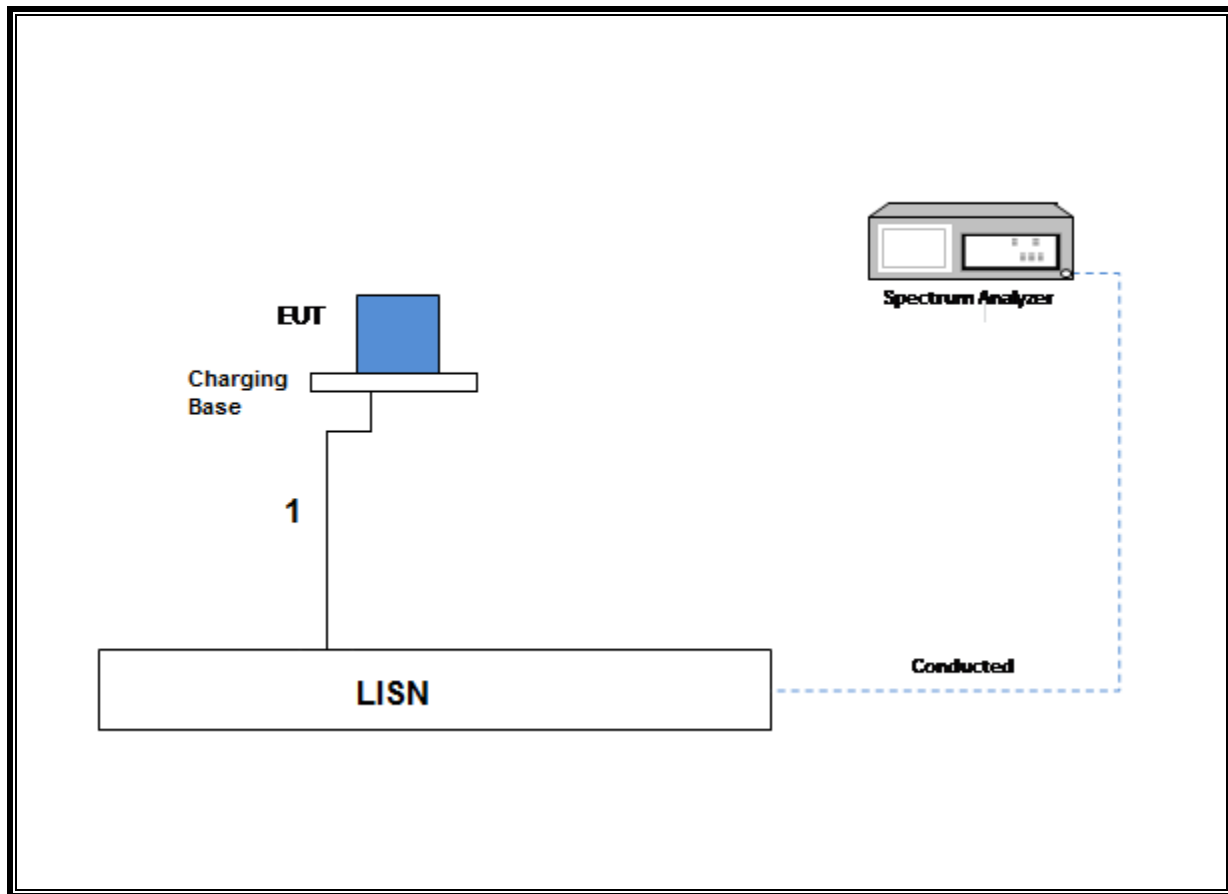
**SETUP DIAGRAM FOR RADIATED**



**SETUP DIAGRAM FOR CONDUCTED TESTS**



**SETUP DIAGRAM FOR AC LC TESTS**



## 6. MEASUREMENT METHOD

On Time and Duty Cycle: ANSI C63.10 Subclause -11.6

6 dB BW: ANSI C63.10 Subclause -11.8.1     $RBW \geq DTS \text{ BW}$

99% BW: ANSI C63.10-2013, Section 6.9.3.

Output Power: ANSI C63.10 Subclause -11.9.2.3.2 Method AVGPM-G (Measurement using a gated RF average-reading power meter)

PSD: ANSI C63.10 Subclause -11.10.3    Method AVGPS-1

Radiated emissions non-restricted frequency bands: ANSI C63.10 Subclause -11.11

Radiated emissions restricted frequency bands: ANSI C63.10 Subclause -11.12.1

Conducted emissions in restricted frequency bands: ANSI C63.10 Subclause -11.12.2

Band-edge: ANSI C63.10 Subclause -11.13.3.2    Integration method -Peak detection

Band-edge: ANSI C63.10 Subclause -11.13.3.4    Integration method -Trace averaging across  
ON and OFF times DC correction

AC Power Line Conducted Emissions: ANSI C63.10-2013, Section 6.2.

## 7. TEST AND MEASUREMENT EQUIPMENT

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

| TEST EQUIPMENT LIST                         |                                 |                        |                       |            |
|---------------------------------------------|---------------------------------|------------------------|-----------------------|------------|
| Description                                 | Manufacturer                    | Model                  | Asset                 | Cal Due    |
| Amplifier, 10KHz to 1GHz, 32dB              | Agilent (Keysight) Technologies | 8447D                  | T15                   | 08/14/2018 |
| Amplifier, 1 - 18GHz                        | MITEQ                           | AFS42-00101800-25-S-42 | T931                  | 09/20/2018 |
| RF Preamplifier, 1 - 26GHz                  | Agilent                         | 8449B                  | T404                  | 07/23/2018 |
| Antenna, Broadband Hybrid, 30MHz to 2000MHz | Sunol Sciences Corp.            | JB3                    | T130                  | 06/15/2018 |
| Antenna, Horn 1-18GHz                       | ETS-Lindgren                    | 3117                   | T863                  | 06/09/2018 |
| Antenna Horn, 18 to 26GHz                   | ARA                             | MWH-1826/B             | T449                  | 06/12/2018 |
| Power Meter, P-series single channel        | Keysight                        | N1912A                 | T1245                 | 05/12/2018 |
| Power Sensor                                | Keysight                        | N1921A                 | T413                  | 06/22/2018 |
| Spectrum Analyzer, PXA, 3Hz to 44GHz        | Agilent (Keysight) Technologies | N9030A                 | T1466                 | 04/16/2019 |
| Spectrum Analyzer, PXA, 3Hz to 44GHz        | Agilent (Keysight) Technologies | N9030A                 | T1454                 | 01/08/2019 |
| Spectrum Analyzer, PXA, 3Hz to 44GHz        | Agilent (Keysight) Technologies | N9030A                 | T1113                 | 12/21/2018 |
| AC Line Conducted                           |                                 |                        |                       |            |
| EMI Test Receiver 9KHz-7GHz                 | Rohde & Schwarz                 | ESC17                  | T1124                 | 11/07/2018 |
| LISN for Conducted Emissions CISPR-16       | Fischer                         | 50/250-25-2-01         | T1310                 | 06/15/2018 |
| Power Cable, Line Conducted Emissions       | UL                              | PG1                    | T861                  | 08/31/2018 |
| UL AUTOMATION SOFTWARE                      |                                 |                        |                       |            |
| Radiated Software                           | UL                              | UL EMC                 | Ver 9.5, Dec 01, 2016 |            |
| Antenna Port Software                       | UL                              | UL EMC                 | Ver 7.9, Jan 24, 2018 |            |
| AC Line Conducted Software                  | UL                              | UL EMC                 | Ver 9.5, May 26, 2015 |            |

### NOTES:

1. Equipment listed above that calibrated during the testing period was set for test after the calibration.
2. Equipment listed above that has a calibration due date during the testing period, the testing is completed before equipment expiration date.

## 8. ANTENNA PORT TEST RESULTS

### 8.1. ON TIME AND DUTY CYCLE

#### LIMITS

None; for reporting purposes only.

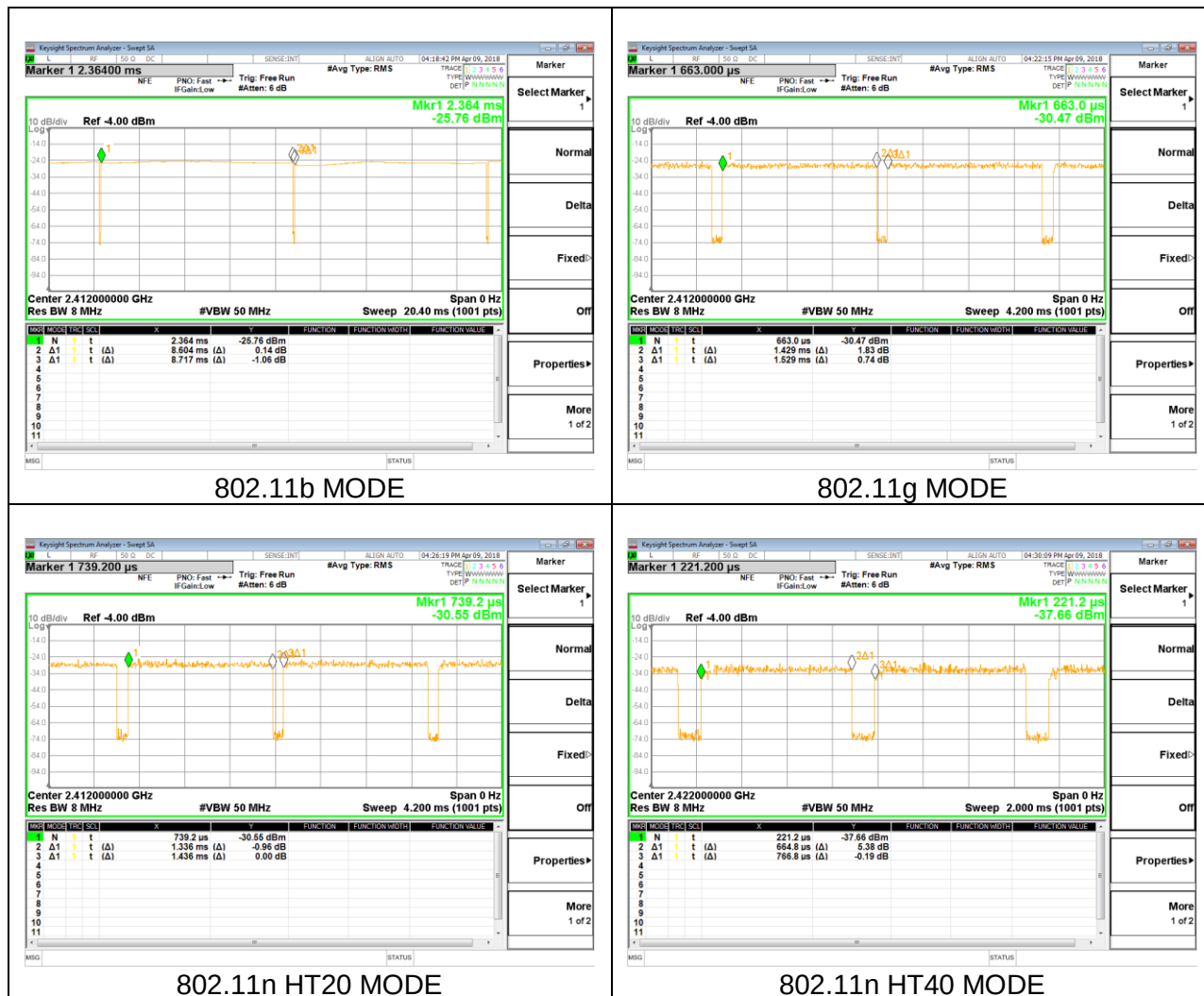
#### PROCEDURE

ANSI C63.10, Section 11.6 : Zero-Span Spectrum Analyzer Method.

#### ON TIME AND DUTY CYCLE RESULTS

| Mode               | ON Time<br>B<br>(msec) | Period<br>(msec) | Duty Cycle<br>x<br>(linear) | Duty<br>Cycle<br>(%) | Duty Cycle<br>Correction Factor<br>(dB) | 1/B<br>Minimum VBW<br>(kHz) |
|--------------------|------------------------|------------------|-----------------------------|----------------------|-----------------------------------------|-----------------------------|
| <b>2.4GHz Band</b> |                        |                  |                             |                      |                                         |                             |
| 802.11b 1TX        | 8.604                  | 8.717            | 0.987                       | 98.70%               | 0.00                                    | 0.010                       |
| 802.11g 1TX        | 1.429                  | 1.529            | 0.935                       | 93.46%               | 0.29                                    | 0.700                       |
| 802.11n HT20 1TX   | 1.336                  | 1.436            | 0.930                       | 93.04%               | 0.31                                    | 0.749                       |
| 802.11n HT40 1TX   | 0.665                  | 0.767            | 0.867                       | 86.70%               | 0.62                                    | 1.504                       |

## DUTY CYCLE PLOTS



## 8.2. 99% BANDWIDTH

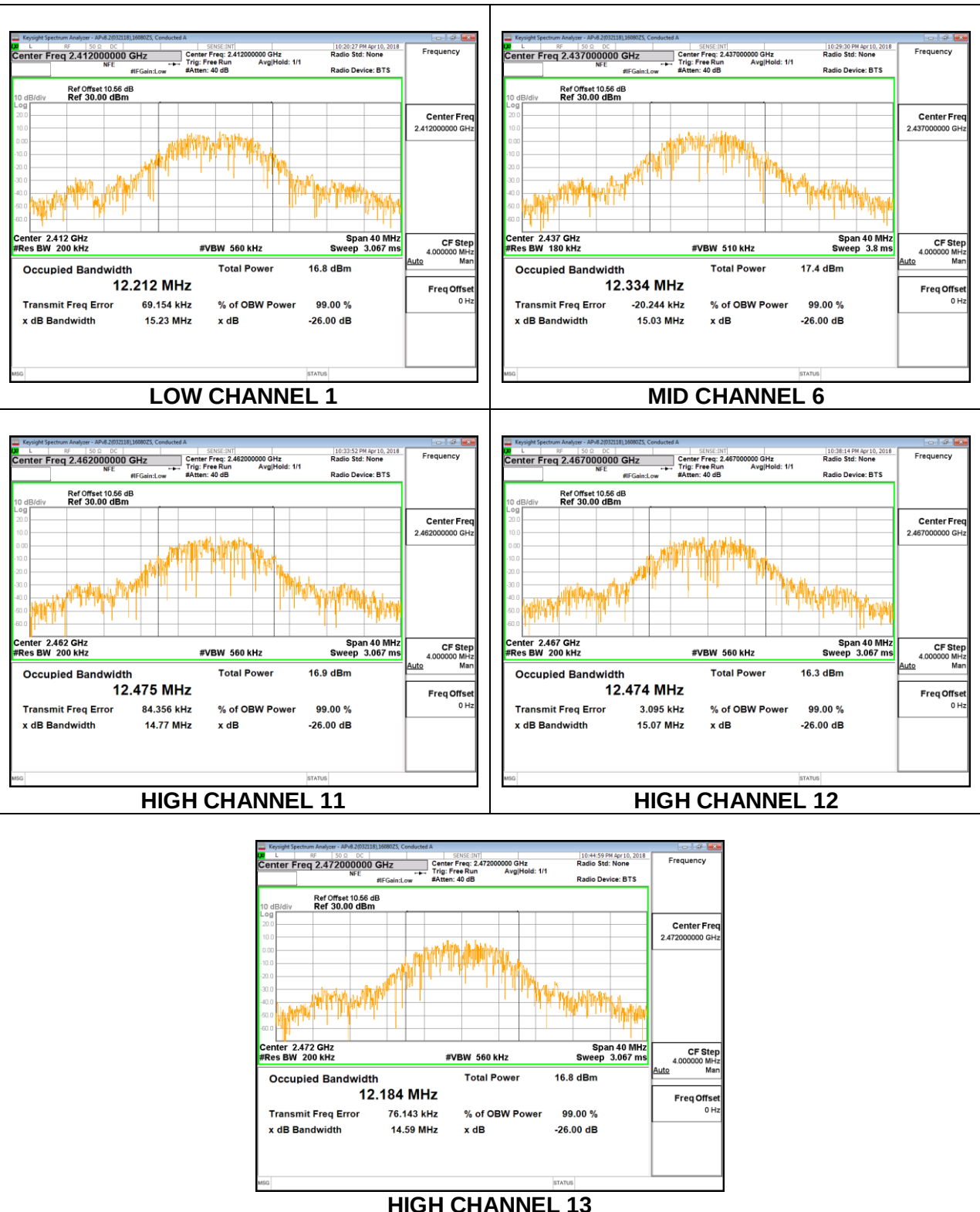
### LIMITS

None; for reporting purposes only.

### RESULTS

### 8.2.1. 802.11b MODE

| Channel | Frequency<br>(MHz) | 99% Bandwidth<br>(MHz) |
|---------|--------------------|------------------------|
| Low 1   | 2412               | 12.212                 |
| Mid 6   | 2437               | 12.334                 |
| High 11 | 2462               | 12.475                 |
| High 12 | 2467               | 12.474                 |
| High 13 | 2472               | 12.184                 |



### 8.2.2. 802.11g MODE

| Channel | Frequency<br>(MHz) | 99% Bandwidth<br>(MHz) |
|---------|--------------------|------------------------|
| Low 1   | 2412               | 16.367                 |
| Mid 6   | 2437               | 16.377                 |
| High 11 | 2462               | 16.349                 |
| High 12 | 2467               | 16.390                 |
| High 13 | 2472               | 16.396                 |



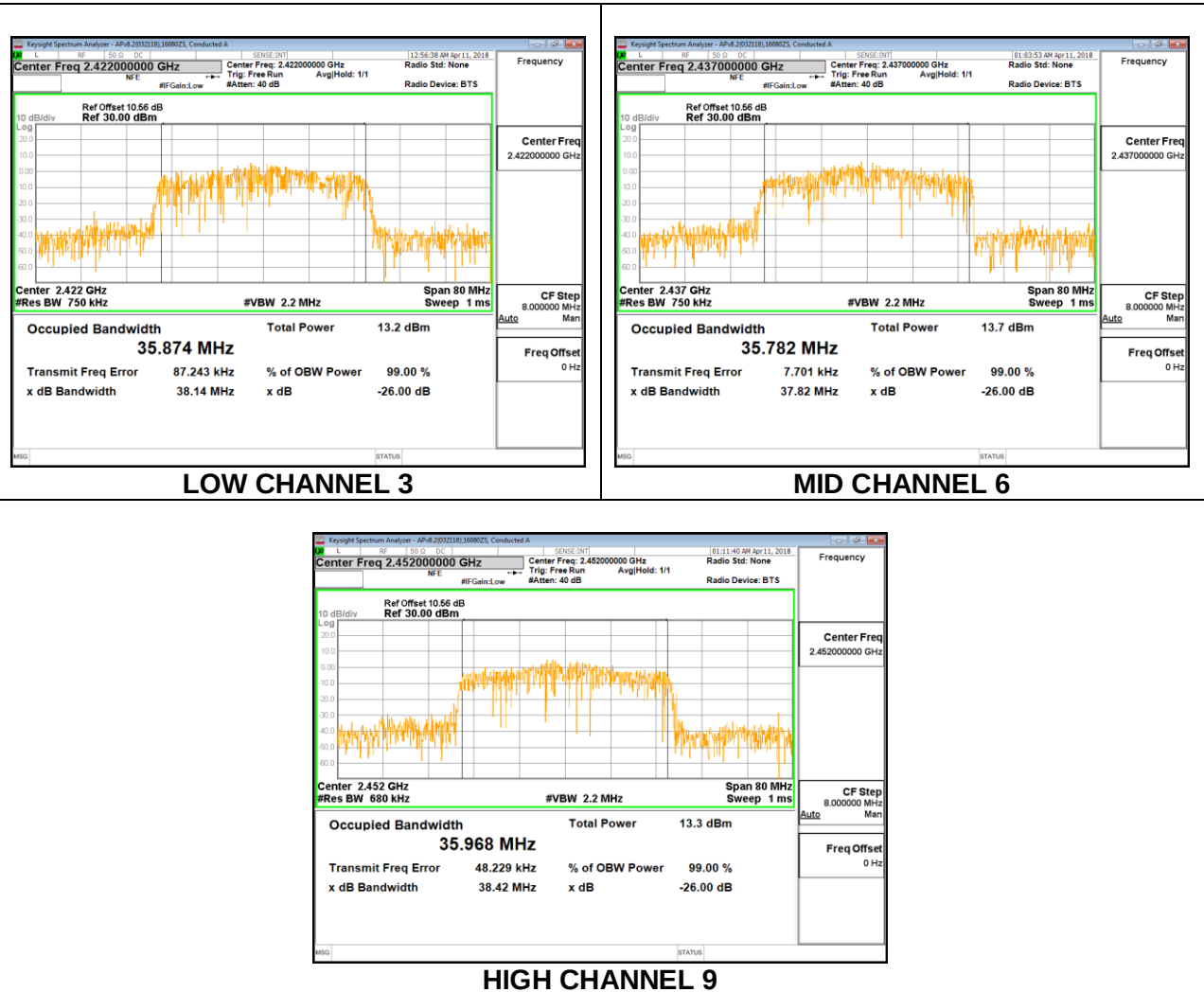
### 8.2.3. 802.11n HT20 MODE

| Channel | Frequency<br>(MHz) | 99% Bandwidth<br>(MHz) |
|---------|--------------------|------------------------|
| Low 1   | 2412               | 17.638                 |
| Mid 6   | 2437               | 17.569                 |
| High 11 | 2462               | 17.685                 |
| High 12 | 2467               | 17.526                 |
| High 13 | 2472               | 17.564                 |



#### 8.2.4. 802.11n HT40 MODE

| Channel | Frequency<br>(MHz) | 99% Bandwidth<br>(MHz) |
|---------|--------------------|------------------------|
| Low 3   | 2422               | 35.874                 |
| Mid 6   | 2437               | 35.782                 |
| High 9  | 2452               | 35.968                 |



### 8.3. 6 dB BANDWIDTH

#### **LIMITS**

FCC §15.247 (a) (2)

RSS-247 5.2 (a)

The minimum 6 dB bandwidth shall be at least 500 kHz.

#### **RESULTS**

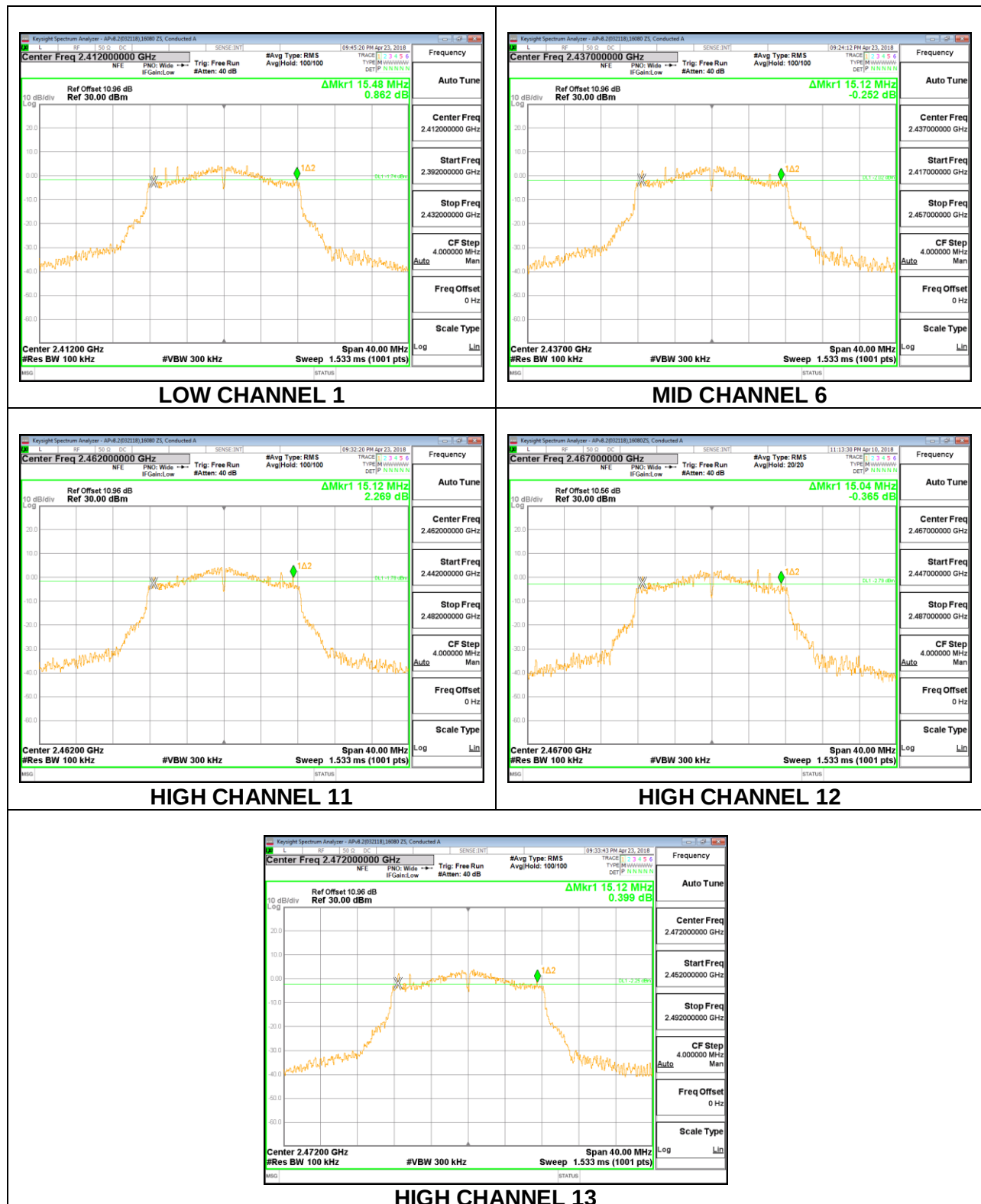
### 8.3.1. 802.11b MODE

| Channel | Frequency<br>(MHz) | 6 dB Bandwidth<br>(MHz) | Minimum Limit<br>(MHz) |
|---------|--------------------|-------------------------|------------------------|
| Low 1   | 2412               | 6.80                    | 0.5                    |
| Mid 6   | 2437               | 7.16                    | 0.5                    |
| High 11 | 2462               | 8.56                    | 0.5                    |
| High 12 | 2467               | 7.92                    | 0.5                    |
| High 13 | 2472               | 7.64                    | 0.5                    |



### 8.3.2. 802.11g MODE

| Channel | Frequency<br>(MHz) | 6 dB Bandwidth<br>(MHz) | Minimum Limit<br>(MHz) |
|---------|--------------------|-------------------------|------------------------|
| Low 1   | 2412               | 15.48                   | 0.5                    |
| Mid 6   | 2437               | 15.12                   | 0.5                    |
| High 11 | 2462               | 15.12                   | 0.5                    |
| High 12 | 2467               | 15.04                   | 0.5                    |
| High 13 | 2472               | 15.12                   | 0.5                    |



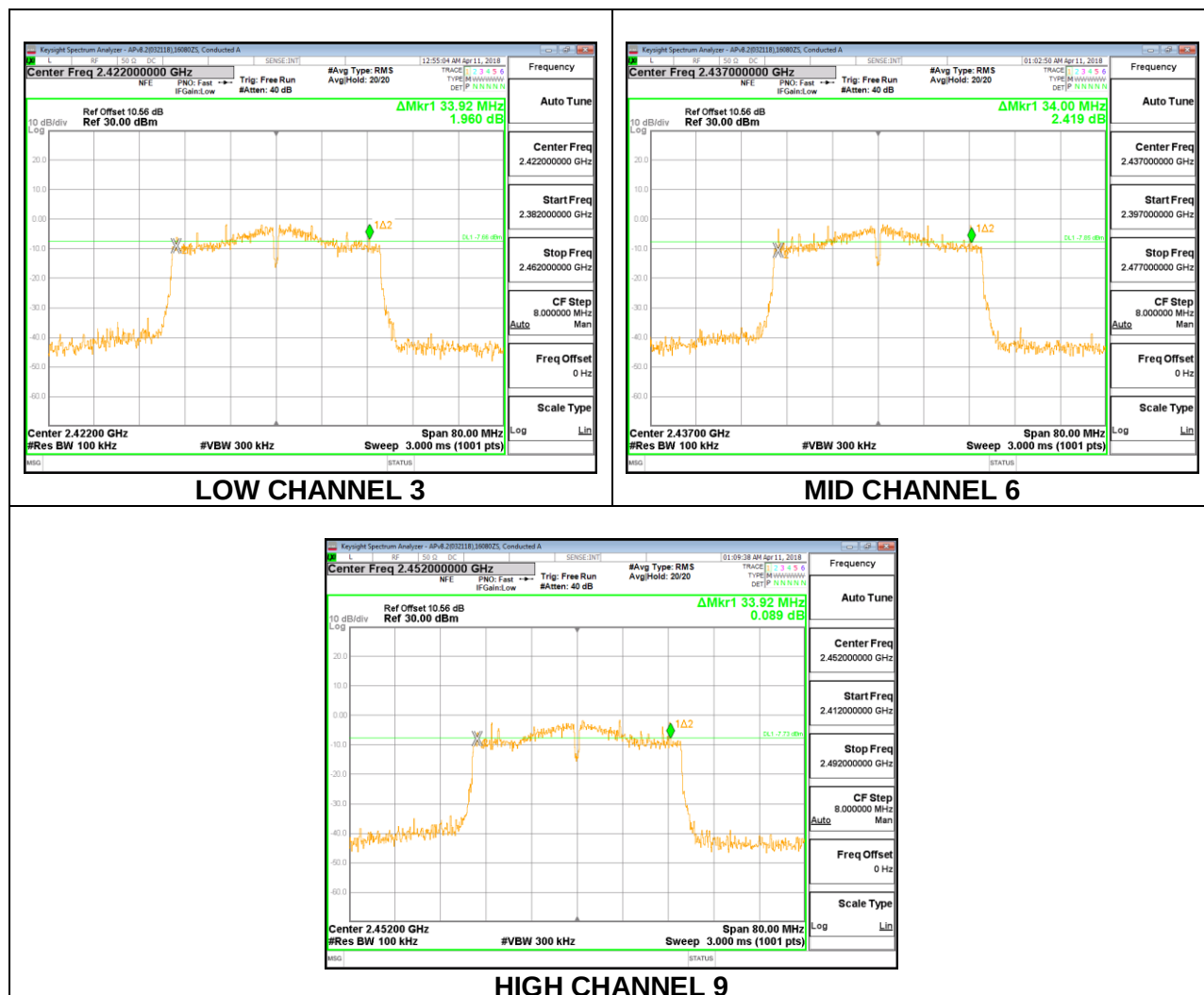
### 8.3.3. 802.11n HT20 MODE

| Channel | Frequency<br>(MHz) | 6 dB Bandwidth<br>(MHz) | Minimum Limit<br>(MHz) |
|---------|--------------------|-------------------------|------------------------|
| Low 1   | 2412               | 15.1600                 | 0.5                    |
| Mid 6   | 2437               | 15.2000                 | 0.5                    |
| High 11 | 2462               | 15.1600                 | 0.5                    |
| High 12 | 2467               | 15.9200                 | 0.5                    |
| High 13 | 2472               | 15.3600                 | 0.5                    |



### 8.3.4. 802.11n HT40 MODE

| Channel | Frequency<br>(MHz) | 6 dB Bandwidth<br>(MHz) | Minimum Limit<br>(MHz) |
|---------|--------------------|-------------------------|------------------------|
| Low 3   | 2422               | 33.92                   | 0.5                    |
| Mid 6   | 2437               | 34.00                   | 0.5                    |
| High 9  | 2452               | 33.92                   | 0.5                    |



## 8.4. OUTPUT POWER

### LIMITS

FCC §15.247 (b) (3)

RSS-247 5.4 (d)

For systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt, based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

### TEST PROCEDURE

The transmitter output is connected to a power meter.

The cable assembly insertion loss of 10.96 dB (including 10 dB pad and 0.96 dB cable) was entered as an offset in the power meter to allow for a gated average reading of power.

### RESULTS

### 8.4.1. 802.11b MODE

#### Limits

| Channel | Frequency<br>(MHz) | Directional<br>Gain<br>(dBi) | FCC<br>Power<br>Limit<br>(dBm) | ISED<br>Power<br>Limit<br>(dBm) | ISED<br>EIRP<br>Limit<br>(dBm) | Max<br>Power<br>(dBm) |
|---------|--------------------|------------------------------|--------------------------------|---------------------------------|--------------------------------|-----------------------|
| Low 1   | 2412               | 2.00                         | 30.00                          | 30                              | 36                             | 30.00                 |
| Mid 6   | 2437               | 2.00                         | 30.00                          | 30                              | 36                             | 30.00                 |
| High 11 | 2462               | 2.00                         | 30.00                          | 30                              | 36                             | 30.00                 |
| High 12 | 2467               | 2.00                         | 30.00                          | 30                              | 36                             | 30.00                 |
| High 13 | 2472               | 2.00                         | 30.00                          | 30                              | 36                             | 30.00                 |

#### Results

| Channel | Frequency<br>(MHz) | Meas<br>Power<br>(dBm) | Total<br>Corr'd<br>Power<br>(dBm) | Power<br>Limit<br>(dBm) | Margin<br>(dB) |
|---------|--------------------|------------------------|-----------------------------------|-------------------------|----------------|
| Low 1   | 2412               | 16.81                  | 16.81                             | 30.00                   | -13.19         |
| Mid 6   | 2437               | 16.83                  | 16.83                             | 30.00                   | -13.17         |
| High 11 | 2462               | 16.67                  | 16.67                             | 30.00                   | -13.33         |
| High 12 | 2467               | 16.47                  | 16.47                             | 30.00                   | -13.53         |
| High 13 | 2472               | 15.66                  | 15.66                             | 30.00                   | -14.34         |

## 8.4.2. 802.11g MODE

### Limits

| Channel | Frequency<br>(MHz) | Directional<br>Gain<br>(dBi) | FCC<br>Power<br>Limit<br>(dBm) | ISED<br>Power<br>Limit<br>(dBm) | ISED<br>EIRP<br>Limit<br>(dBm) | Max<br>Power<br>(dBm) |
|---------|--------------------|------------------------------|--------------------------------|---------------------------------|--------------------------------|-----------------------|
| Low 1   | 2412               | 2.00                         | 30.00                          | 30                              | 36                             | 30.00                 |
| Mid 6   | 2437               | 2.00                         | 30.00                          | 30                              | 36                             | 30.00                 |
| High 11 | 2462               | 2.00                         | 30.00                          | 30                              | 36                             | 30.00                 |
| High 12 | 2467               | 2.00                         | 30.00                          | 30                              | 36                             | 30.00                 |
| High 13 | 2472               | 2.00                         | 30.00                          | 30                              | 36                             | 30.00                 |

### Results

| Channel | Frequency<br>(MHz) | Meas<br>Power<br>(dBm) | Total<br>Corr'd<br>Power<br>(dBm) | Power<br>Limit<br>(dBm) | Margin<br>(dB) |
|---------|--------------------|------------------------|-----------------------------------|-------------------------|----------------|
| Low 1   | 2412               | 15.32                  | 15.32                             | 30.00                   | -14.68         |
| Mid 6   | 2437               | 15.17                  | 15.17                             | 30.00                   | -14.83         |
| High 11 | 2462               | 15.07                  | 15.07                             | 30.00                   | -14.93         |
| High 12 | 2467               | 14.88                  | 14.88                             | 30.00                   | -15.12         |
| High 13 | 2472               | 14.16                  | 14.16                             | 30.00                   | -15.84         |

### 8.4.3. 802.11n HT20 MODE

#### Limits

| Channel | Frequency<br>(MHz) | Directional<br>Gain<br>(dBi) | FCC<br>Power<br>Limit<br>(dBm) | ISED<br>Power<br>Limit<br>(dBm) | ISED<br>EIRP<br>Limit<br>(dBm) | Max<br>Power<br>(dBm) |
|---------|--------------------|------------------------------|--------------------------------|---------------------------------|--------------------------------|-----------------------|
| Low 1   | 2412               | 2.00                         | 30.00                          | 30                              | 36                             | 30.00                 |
| Mid 6   | 2437               | 2.00                         | 30.00                          | 30                              | 36                             | 30.00                 |
| High 11 | 2462               | 2.00                         | 30.00                          | 30                              | 36                             | 30.00                 |
| High 12 | 2467               | 2.00                         | 30.00                          | 30                              | 36                             | 30.00                 |
| High 13 | 2472               | 2.00                         | 30.00                          | 30                              | 36                             | 30.00                 |

#### Results

| Channel | Frequency<br>(MHz) | Meas<br>Power<br>(dBm) | Total<br>Corr'd<br>Power<br>(dBm) | Power<br>Limit<br>(dBm) | Margin<br>(dB) |
|---------|--------------------|------------------------|-----------------------------------|-------------------------|----------------|
| Low 1   | 2412               | 13.68                  | 13.68                             | 30.00                   | -16.32         |
| Mid 6   | 2437               | 13.56                  | 13.56                             | 30.00                   | -16.44         |
| High 11 | 2462               | 13.37                  | 13.37                             | 30.00                   | -16.63         |
| High 12 | 2467               | 13.49                  | 13.49                             | 30.00                   | -16.51         |
| High 13 | 2472               | 13.38                  | 13.38                             | 30.00                   | -16.62         |

#### 8.4.4. 802.11n HT40 MODE

##### Limits

| Channel | Frequency<br>(MHz) | Directional<br>Gain<br>(dBi) | FCC<br>Power<br>Limit<br>(dBm) | ISED<br>Power<br>Limit<br>(dBm) | ISED<br>EIRP<br>Limit<br>(dBm) | Max<br>Power<br>(dBm) |
|---------|--------------------|------------------------------|--------------------------------|---------------------------------|--------------------------------|-----------------------|
| Low 3   | 2422               | 2.00                         | 30.00                          | 30                              | 36                             | 30.00                 |
| Mid 6   | 2437               | 2.00                         | 30.00                          | 30                              | 36                             | 30.00                 |
| High 9  | 2452               | 2.00                         | 30.00                          | 30                              | 36                             | 30.00                 |

##### Results

| Channel | Frequency<br>(MHz) | Meas<br>Power<br>(dBm) | Total<br>Corr'd<br>Power<br>(dBm) | Power<br>Limit<br>(dBm) | Margin<br>(dB) |
|---------|--------------------|------------------------|-----------------------------------|-------------------------|----------------|
| Low 3   | 2422               | 12.88                  | 12.88                             | 30.00                   | -17.12         |
| Mid 6   | 2437               | 13.12                  | 13.12                             | 30.00                   | -16.88         |
| High 9  | 2452               | 12.82                  | 12.82                             | 30.00                   | -17.18         |