



| Product Name | PREMIUM SPEAKER DOCK |
|--------------|----------------------|
| Model No | MS7000 |
| FCC ID. | PPQ-MS7000 |

| Applicant | Lite-On Technology Corp. |
|-----------|--|
| Address | 4F,90,Chien 1 Road,Chung-Ho,Taipei Hsien |
| | 235,Taiwan,R.O.C. |

| Date of Receipt | Apr, 25, 2012 |
|-----------------|--------------------|
| Issue Date | Aug. 14, 2012 |
| Report No. | 124518R-RFUSP42V01 |
| Report Version | V1.0 |



The test results relate only to the samples tested.

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Test Report Certification

Issue Date: Aug. 14, 2012 Report No.: 124518R-RFUSP42V01



| Product Name | PREMIUM SPEAKER DOCK | | | |
|---------------------|--|--|--|--|
| Applicant | Lite-On Technology Corp. | | | |
| Address | 4F,90,Chien 1 Road,Chung-Ho,Taipei Hsien 235,Taiwan,R.O.C. | | | |
| Manufacturer | DONG GUAN G-COM COMPUTER CO., LTD | | | |
| Model No. | MS7000 | | | |
| FCC ID. | PPQ-MS7000 | | | |
| EUT Rated Voltage | AC 120V, 60Hz | | | |
| EUT Test Voltage | AC 120V/60Hz | | | |
| Trade Name | marantz | | | |
| Applicable Standard | FCC CFR Title 47 Part 15 Subpart C: 2010 | | | |
| | ANSI C63.4: 2003 | | | |
| Test Result | Complied | | | |

The test results relate only to the samples tested.

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Approved By

(Manager / Vincent Lin)

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- Attachment 1: EUT Test Photographs
- Attachment 2: EUT Detailed Photographs

1. GENERAL INFORMATION

1.1. EUT Description

| Product Name | PREMIUM SPEAKER DOCK | |
|--------------------|---|--|
| Trade Name | marantz | |
| Model No. | MS7000 | |
| FCC ID. | PPQ-MS7000 | |
| Frequency Range | 2412-2462MHz for 802.11b/g | |
| Number of Channels | 802.11b/g: 11 | |
| Data Speed | 802.11b: 1-11Mbps, 802.11g: 6-54Mbps | |
| Type of Modulation | 802.11b:DSSS (DBPSK, DQPSK, CCK) | |
| | 802.11g:OFDM (BPSK, QPSK, 16QAM, 64QAM) | |
| Antenna Type | PIFA Antenna | |
| Antenna Gain | Refer to the table "Antenna List" | |
| Channel Control | Auto | |
| RJ45 Cable | Shielded, 3.0m | |

Antenna List

| No. | Manufacturer | Model No. | Peak Gain | |
|-----|--------------|-------------------|---------------------|--|
| 1 | MAGLAYERS | MSA-3810-25GC1-A4 | 6.41 dBi for 2.4GHz | |
| | | MSA-3810-25GC1-A5 | | |

Note: The antenna of EUT is conform to FCC 15.203.

802.11b/g Center Frequency of Each Channel:

| Channel | Frequency | Channel | Frequency | Channel | Frequency | Channel | Frequency |
|-------------|-----------|-------------|-----------|-------------|-----------|-------------|-----------|
| Channel 01: | 2412 MHz | Channel 02: | 2417 MHz | Channel 03: | 2422 MHz | Channel 04: | 2427 MHz |
| Channel 05: | 2432 MHz | Channel 06: | 2437 MHz | Channel 07: | 2442 MHz | Channel 08: | 2447 MHz |
| Channel 09: | 2452 MHz | Channel 10: | 2457 MHz | Channel 11: | 2462 MHz | | |

- 1. The EUT is a PREMIUM SPEAKER DOCK with a built-in 2.4GHz WLAN transceiver.
- 2. Regarding to the operation frequency, the lowest, middle and highest frequency are selected to perform the test.
- 3. Lowest and highest data rates are tested in each mode. Only worst case is shown in the report. (802.11b is 1Mbps > 802.11g is 6Mbps)
- 4. These tests are conducted on a sample for the purpose of demonstrating compliance of 802.11b/g transmitter with Part 15 Subpart C Paragraph 15.247 of spread spectrum devices.
- 5. The different of the each model is shown as below:

| Module | SDRAM brand | Note |
|--------|-------------|--|
| #1 | Winbond | Two modules are different at SDRAM brand, the |
| #2 | ESMT | other components and PCB layout are identical. |

- 6. The SDRAM are digital circuits function and not part of RF circuits.
- 7. The test item conducted emission and 30MHz 1GHz radiated emission are tested at two WLAN modules which describe in above note.
- 8. After tested conducted emission and 30MHz 1GHz radiated emission, the worst case are system include WLAN module #1. The worst case are tested all test item.

| Test Mode: | Mode 1: Transmit (802.11b 1Mbps) |
|------------|----------------------------------|
| | Mode 2: Transmit (802.11g 6Mbps) |

1.3. Tested System Details

The types for all equipment, plus descriptions of all cables used in the tested system (including inserted cards) are:

| Pro | duct | Manufacturer | Model No. | Serial No. | Power Cord |
|-----|----------------|--------------|-----------|-------------|------------|
| 1 | Iphone 3GS | APPLE | MS637TA | 84029A7JEDG | N/A |
| 2 | IPod nano | Apple | A1199 | YM706LSCVQ5 | N/A |
| 3 | Remote Control | Lite-On | N/A | N/A | N/A |

| Signal Cable Type | | Signal cable Description |
|-------------------|-------------|--------------------------|
| Α | Audio Cable | Non-Shielded, 1.8m |
| В | RJ45 Cable | Non-Shielded, 3.0m |

1.4. Configuration of Tested System



1.5. EUT Exercise Software

- (1) Connect EUT and Notebook via test fixture.
- (2) Execute program on the Notebook
- (3) Configure the test mode, the test channel, and the data rate.
- (4) Press "OK" to start the continuous transmission.
- (5) Remove notebook and test fixture, Setup the EUT as shown in Section 1.4
- (6) Verify that the EUT works properly.

1.6. Test Facility

Ambient conditions in the laboratory:

| Items | Required (IEC 68-1) | Actual |
|----------------------------|---------------------|----------|
| Temperature (°C) | 15-35 | 20-35 |
| Humidity (%RH) | 25-75 | 50-65 |
| Barometric pressure (mbar) | 860-1060 | 950-1000 |

The related certificate for our laboratories about the test site and management system can be downloaded from

QuieTek Corporation's Web Site: <u>http://www.quietek.com/tw/ctg/cts/accreditations.htm</u> The address and introduction of QuieTek Corporation's laboratories can be founded in our Web site: <u>http://www.quietek.com/</u>

| Site Description: | File on | | |
|-------------------|--|--|--|
| | Federal Communications Commission | | |
| | FCC Engineering Laboratory | | |
| | 7435 Oakland Mills Road | | |
| | Columbia, MD 21046 | | |
| | Registration Number: 92195 | | |
| | Accreditation on NVLAP | | |
| | NVLAP Lab Code: 200533-0 | | |
| Site Name: | Quietek Corporation | | |
| Site Address: | No.5-22, Ruishukeng, | | |
| | Linkou Dist. New Taipei City 24451, | | |
| | Taiwan, R.O.C. | | |
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| | E-Mail : <u>service@quietek.com</u> | | |

FCC Accreditation Number: TW1014

2. Conducted Emission

2.1. Test Equipment

The following test equipment are used during the conducted emission test:

| Item | Instrument | Manufacturer | Type No./Serial No | Last Cal. | Remark |
|------|--------------------|--------------|--------------------|-----------|-------------|
| 1 | Test Receiver | R & S | ESCS 30/825442/17 | May, 2012 | |
| 2 | L.I.S.N. | R & S | ESH3-Z5/825016/6 | May, 2012 | EUT |
| 3 | L.I.S.N. | Kyoritsu | KNW-407/8-1420-3 | May, 2012 | Peripherals |
| 4 | Pulse Limiter | R & S | ESH3-Z2 | May, 2012 | |
| 5 | No.1 Shielded Roor | n | | N/A | |

Note: All instruments are calibrated every one year.

2.2. Test Setup



2.3. Limits

| FCC Part 15 Subpart C Paragraph 15.207 (dBuV) Limit | | | | |
|---|--------|-------|--|--|
| Frequency | Limits | | | |
| MHz | QP | AVG | | |
| 0.15 - 0.50 | 66-56 | 56-46 | | |
| 0.50-5.0 | 56 | 46 | | |
| 5.0 - 30 | 60 | 50 | | |

2.4. Test Procedure

The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm /50uH coupling impedance with 50ohm termination. (Please refers to the block diagram of the test setup and photographs.)

Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4: 2003 on conducted measurement.

Conducted emissions were invested over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9kHz.

2.5. Uncertainty

± 2.26 dB

2.6. Test Result of Conducted Emission

| Product | : | PREMIUM SPEAKER DOCK |
|------------|---|---|
| Test Item | : | Conducted Emission Test |
| Power Line | : | Line 1 |
| Test Mode | : | Mode 2: Transmit (802.11g 6Mbps) (2437MHz) (ESMT) |

| Frequency | Correct | Reading | Measurement | Margin | Limit |
|------------|---------|---------|-------------|---------|--------|
| | Factor | Level | Level | | |
| MHz | dB | dBuV | dBuV | dB | dBuV |
| Line 1 | | | | | |
| Quasi-Peak | | | | | |
| 0.166 | 9.710 | 31.630 | 41.340 | -24.203 | 65.543 |
| 0.236 | 9.662 | 23.410 | 33.072 | -30.471 | 63.543 |
| 0.334 | 9.640 | 13.610 | 23.250 | -37.493 | 60.743 |
| 0.505 | 9.640 | 17.890 | 27.530 | -28.470 | 56.000 |
| 1.455 | 9.670 | 14.840 | 24.510 | -31.490 | 56.000 |
| 24.002 | 9.950 | 32.820 | 42.770 | -17.230 | 60.000 |
| | | | | | |
| Average | | | | | |
| 0.166 | 9.710 | 17.000 | 26.710 | -28.833 | 55.543 |
| 0.236 | 9.662 | 9.530 | 19.192 | -34.351 | 53.543 |
| 0.334 | 9.640 | 3.710 | 13.350 | -37.393 | 50.743 |
| 0.505 | 9.640 | 10.500 | 20.140 | -25.860 | 46.000 |
| 1.455 | 9.670 | 8.360 | 18.030 | -27.970 | 46.000 |
| 24.002 | 9.950 | 29.180 | 39.130 | -10.870 | 50.000 |

Note:

1. All Reading Levels are Quasi-Peak and average value.

2. " " means the worst emission level.

3. Measurement Level = Reading Level + Correct Factor

| Product | : PREMIUM SPEAKER DOCK | | | | | |
|------------|---------------------------|-----------------|------------------|---------|--------|--|
| Test Item | : Conducted Emission Test | | | | | |
| Power Line | : Line 2 | | | | | |
| Test Mode | : Mode 2: Tr | ansmit (802.11g | 6Mbps) (2437MHz) | (ESMT) | | |
| | | | | | | |
| Frequency | Correct | Reading | Measurement | Margin | Limit | |
| | Factor | Level | Level | | | |
| MHz | dB | dBuV | dBuV | dB | dBuV | |
| Line 2 | | | | | | |
| Quasi-Peak | | | | | | |
| 0.177 | 9.706 | 29.660 | 39.366 | -25.863 | 65.229 | |
| 0.220 | 9.673 | 24.900 | 34.573 | -29.427 | 64.000 | |
| 0.349 | 9.650 | 17.170 | 26.820 | -33.494 | 60.314 | |
| 0.783 | 9.680 | 8.310 | 17.990 | -38.010 | 56.000 | |
| 2.740 | 9.700 | 12.460 | 22.160 | -33.840 | 56.000 | |
| 24.002 | 10.160 | 32.800 | 42.960 | -17.040 | 60.000 | |
| | | | | | | |
| Average | | | | | | |
| 0.177 | 9.706 | 12.540 | 22.246 | -32.983 | 55.229 | |
| 0.220 | 9.673 | 12.620 | 22.293 | -31.707 | 54.000 | |
| 0.349 | 9.650 | 14.120 | 23.770 | -26.544 | 50.314 | |
| 0.783 | 9.680 | 1.630 | 11.310 | -34.690 | 46.000 | |
| 2.740 | 9.700 | 6.480 | 16.180 | -29.820 | 46.000 | |
| 24.002 | 10.160 | 29.030 | 39.190 | -10.810 | 50.000 | |

- 1. All Reading Levels are Quasi-Peak and average value.
- 2. "means the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor

| Product | : PREMIUM SPEAKER DOCK | | | | | |
|------------|---------------------------|------------------|-------------------|--------------|--------|--|
| Test Item | : Conducted Emission Test | | | | | |
| Power Line | : Line 1 | | | | | |
| Test Mode | : Mode 2: T | Transmit (802.11 | g 6Mbps) (2437MHz | z) (Winbond) | | |
| | | | | | | |
| Frequency | Correct | Reading | Measurement | Margin | Limit | |
| | Factor | Level | Level | | | |
| MHz | dB | dBuV | dBuV | dB | dBuV | |
| Line 1 | | | | | | |
| Quasi-Peak | | | | | | |
| 0.166 | 9.710 | 31.410 | 41.120 | -24.423 | 65.543 | |
| 0.228 | 9.668 | 23.440 | 33.108 | -30.663 | 63.771 | |
| 0.349 | 9.640 | 18.810 | 28.450 | -31.864 | 60.314 | |
| 0.701 | 9.640 | 15.580 | 25.220 | -30.780 | 56.000 | |
| 1.408 | 9.670 | 13.020 | 22.690 | -33.310 | 56.000 | |
| 24.002 | 9.950 | 32.580 | 42.530 | -17.470 | 60.000 | |
| | | | | | | |
| Average | | | | | | |
| 0.166 | 9.710 | 18.860 | 28.570 | -26.973 | 55.543 | |
| 0.228 | 9.668 | 9.030 | 18.698 | -35.073 | 53.771 | |
| 0.349 | 9.640 | 15.680 | 25.320 | -24.994 | 50.314 | |
| 0.701 | 9.640 | 11.840 | 21.480 | -24.520 | 46.000 | |
| 1.408 | 9.670 | 6.620 | 16.290 | -29.710 | 46.000 | |
| 24.002 | 9.950 | 29.030 | 38.980 | -11.020 | 50.000 | |

- 1. All Reading Levels are Quasi-Peak and average value.
- 2. "means the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor

| Product | Product : PREMIUM SPEAKER DOCK | | | | | |
|------------|--------------------------------|------------------|--------------------|--------------|--------|--|
| Test Item | : Conducted Emission Test | | | | | |
| Power Line | r Line : Line 2 | | | | | |
| Test Mode | : Mode 2: T | Transmit (802.11 | lg 6Mbps) (2437MHz | z) (Winbond) | | |
| | | | | | | |
| Frequency | Correct | Reading | Measurement | Margin | Limit | |
| | Factor | Level | Level | | | |
| MHz | dB | dBuV | dBuV | dB | dBuV | |
| Line 2 | | | | | | |
| Quasi-Peak | | | | | | |
| 0.166 | 9.718 | 31.230 | 40.948 | -24.595 | 65.543 | |
| 0.209 | 9.681 | 25.330 | 35.011 | -29.303 | 64.314 | |
| 0.252 | 9.656 | 20.870 | 30.526 | -32.560 | 63.086 | |
| 0.705 | 9.652 | 14.240 | 23.892 | -32.108 | 56.000 | |
| 2.736 | 9.700 | 15.870 | 25.570 | -30.430 | 56.000 | |
| 19.045 | 10.080 | 23.390 | 33.470 | -26.530 | 60.000 | |
| | | | | | | |
| Average | | | | | | |
| 0.166 | 9.718 | 18.430 | 28.148 | -27.395 | 55.543 | |
| 0.209 | 9.681 | 12.020 | 21.701 | -32.613 | 54.314 | |
| 0.252 | 9.656 | 6.450 | 16.106 | -36.980 | 53.086 | |
| 0.705 | 9.652 | 11.220 | 20.872 | -25.128 | 46.000 | |
| 2.736 | 9.700 | 8.840 | 18.540 | -27.460 | 46.000 | |
| 19.045 | 10.080 | 17.370 | 27.450 | -22.550 | 50.000 | |

- 1. All Reading Levels are Quasi-Peak and average value.
- 2. "means the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor

3. Peak Power Output

3.1. Test Equipment

| | Equipment | Manufacturer | Model No./Serial No. | Last Cal. | |
|-------|--|----------------------|----------------------------------|---------------------------|--|
| Х | Power Meter | Anritsu | ML2495A/6K00003357 | May, 2012 | |
| Х | Power Sensor | Anritsu | MA2411B/0738448 | Jun, 2012 | |
| Note: | | | | | |
| 1. | All equipments are | calibrated with trac | eable calibrations. Each calibra | ation is traceable to the | |
| | national or internati | onal standards. | | | |
| 2. | The test instruments marked with "X" are used to measure the final test results. | | | | |

3.2. Test Setup



3.3. Limits

The maximum peak power shall be less 1 Watt.

3.4. Test Procedure

The EUT was tested according to DTS test procedure of Jan. 2012 KDB558074 for compliance to FCC 47CFR 15.247 requirements.

3.5. Uncertainty

 \pm 1.27 dB

3.6. Test Result of Peak Power Output

| Product | : | PREMIUM SPEAKER DOCK |
|-----------|---|----------------------------------|
| Test Item | : | Peak Power Output Data |
| Test Site | : | No.3 OATS |
| Test Mode | : | Mode 1: Transmit (802.11b 1Mbps) |

| Channal No. | Frequency | For d | Average PowerPeakFor different Data Rate (Mbps)Power | | | | | Pogult |
|-------------|-----------|-------|--|-----------|-----------|-------|--------|--------|
| Channel No | (MHz) | 1 | 2 | 5.5 | 11 | 1 | Limit | Kesuit |
| | | | Measur | ement Lev | vel (dBm) | | | |
| 01 | 2412 | 17.88 | | | | 20.25 | <30dBm | Pass |
| 06 | 2437 | 17.79 | 17.65 | 17.58 | 17.43 | 20.13 | <30dBm | Pass |
| 11 | 2462 | 15 | | | | 17.52 | <30dBm | Pass |

Note: Peak Power Output Value =Reading value on power meter + cable loss

| Product | : | PREMIUM SPEAKER DOCK |
|-----------|---|----------------------------------|
| Test Item | : | Peak Power Output Data |
| Test Site | : | No.3 OATS |
| Test Mode | : | Mode 2: Transmit (802.11g 6Mbps) |

| | | | г | lor diffe | Average | e Powe | r Mhr | a) | | Peak | | |
|------------|--------------------|-------|-------------------------|-----------|---------|--------|----------|-------|-------|---------|-------------------|--------|
| Channel No | Frequency (MHz) | 6 | 9 | 12 | 18 | 24 | 36 | 48 | 54 | 6 Power | Required Limit | Result |
| | | | Measurement Level (dBm) | | | | | | | | | |
| 01 | 2412 | 13.41 | | | | | | | | 22.67 | <30dBm | Pass |
| 06 | 2437 | 16.43 | 16.35 | 16.25 | 16.17 | 16.03 | 15.95 | 15.87 | 15.71 | 24.04 | <30dBm | Pass |
| 11 | 2462 | 13.33 | | | | | | | | 22.7 | <30dBm | Pass |

Note: Peak Power Output Value =Reading value on power meter + cable loss

4. Radiated Emission

4.1. Test Equipment

The following test equipment are used during the radiated emission test:

| Test Site | | Equipment | Manufacturer | Model No./Serial No. | Last Cal. |
|-----------|---|-------------------|-----------------|-----------------------|------------|
| Site # 3 | Х | Bilog Antenna | Schaffner Chase | CBL6112B/2673 | Sep., 2011 |
| | Х | Horn Antenna | Schwarzbeck | BBHA9120D/D305 | Sep., 2011 |
| | Х | Horn Antenna | Schwarzbeck | BBHA9170/208 | Jul., 2012 |
| | Х | Pre-Amplifier | Agilent | 8447D/2944A09549 | Sep., 2011 |
| | Х | Spectrum Analyzer | Agilent | E4407B / US39440758 | May, 2012 |
| | Х | Test Receiver | R & S | ESCS 30/ 825442/018 | Sep., 2011 |
| | Х | Coaxial Cable | QuieTek | QTK-CABLE/ CAB5 | Feb., 2012 |
| | Х | Controller | QuieTek | QTK-CONTROLLER/ CTRL3 | N/A |
| | Χ | Coaxial Switch | Anritsu | MP59B/6200265729 | N/A |

Note: 1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

2. The test instruments marked with "X" are used to measure the final test results.

4.2. Test Setup

Radiated Emission Below 1GHz



Radiated Emission Above 1GHz



4.3. Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

| FCC Part 15 Subpart C Paragraph 15.209(a) Limits | | | | | | | | |
|--|---------|-----------|--|--|--|--|--|--|
| Frequency MHz | uV/m@3m | dBuV/m@3m | | | | | | |
| 30-88 | 100 | 40 | | | | | | |
| 88-216 | 150 | 43.5 | | | | | | |
| 216-960 | 200 | 46 | | | | | | |
| Above 960 | 500 | 54 | | | | | | |

Remarks: E field strength $(dBuV/m) = 20 \log E$ field strength (uV/m)

4.4. Test Procedure

The EUT was setup according to ANSI C63.4, 2003 and tested according to DTS test procedure of Jan. 2012 KDB558074 for compliance to FCC 47CFR 15.247 requirements.

The EUT is placed on a turn table which is 0.8 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna is scanned between 1 meter and 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.4:2003 on radiated measurement.

The resolution bandwidth below 1GHz setting on the field strength meter is 120 kHz and above 1GHz is 1MHz.

Radiated emission measurements below 1GHz are made using broadband Bilog antenna and above 1GHz are made using Horn Antennas.

The measurement is divided into the Preliminary Measurement and the Final Measurement. The suspected frequencies are searched for in Preliminary Measurement with the measurement antenna kept pointed at the source of the emission both in azimuth and elevation, with the polarization of the antenna oriented for maximum response. The antenna is pointed at an angle towards the source of the emission, and the EUT is rotated in both height and polarization to maximize the measured emission. The emission is kept within the illumination area of the 3 dB bandwidth of the antenna. The worst radiated emission is measured in the Open Area Test Site on the Final Measurement. The frequency range from 30MHz to 10th harminics is checked.

4.5. Uncertainty

- ± 3.9 dB above 1GHz
- ± 3.8 dB below 1GHz

4.6. Test Result of Radiated Emission

| Product | : | PREMIUM SPEAKER DOCK |
|-----------|---|--|
| Test Item | : | Harmonic Radiated Emission Data |
| Test Site | : | No.3 OATS |
| Test Mode | : | Mode 1: Transmit (802.11b 1Mbps) (2412MHz) |

| Frequency | Correct | Reading | Measurement | Margin | Limit |
|-----------------------|---------|---------|-------------|---------|--------|
| | Factor | Level | Level | | |
| MHz | dB | dBuV | dBuV/m | dB | dBuV/m |
| Horizontal | | | | | |
| Peak Detector: | | | | | |
| 4824.000 | 3.261 | 37.870 | 41.131 | -32.869 | 74.000 |
| 7236.000 | 10.650 | 36.290 | 46.940 | -27.060 | 74.000 |
| 9648.000 | 13.337 | 35.760 | 49.096 | -24.904 | 74.000 |
| Average Detector: | | | | | |
| | | | | | |
| Vertical | | | | | |
| Peak Detector: | | | | | |
| 4824.000 | 6.421 | 37.110 | 43.531 | -30.469 | 74.000 |
| 7236.000 | 11.495 | 36.840 | 48.335 | -25.665 | 74.000 |
| 9648.000 | 13.807 | 37.340 | 51.146 | -22.854 | 74.000 |
| | | | | | |

Average Detector:

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- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

| Product | : PREMIUM SPEAKER DOCK | | | | | | |
|-----------------------|-----------------------------------|------------------|-------------------|---------|--------|--|--|
| Test Item | : Harmonic Radiated Emission Data | | | | | | |
| Test Site | : No.3 OATS | | | | | | |
| Test Mode | : Mode 1: | Transmit (802.11 | b 1Mbps) (2437 MH | z) | | | |
| Frequency | Correct | Reading | Measurement | Margin | Limit | | |
| | Factor | Level | Level | | | | |
| MHz | dB | dBuV | dBuV/m | dB | dBuV/m | | |
| Horizontal | | | | | | | |
| Peak Detector: | | | | | | | |
| 4874.000 | 3.038 | 36.830 | 39.867 | -34.133 | 74.000 | | |
| 7311.000 | 11.795 | 36.020 | 47.814 | -26.186 | 74.000 | | |
| 9748.000 | 12.635 | 37.220 | 49.855 | -24.145 | 74.000 | | |
| Average Detector: | | | | | | | |
| Vertical | | | | | | | |
| Peak Detector: | | | | | | | |
| 4874.000 | 5.812 | 36.830 | 42.641 | -31.359 | 74.000 | | |
| 7311.000 | 12.630 | 35.220 | 47.849 | -26.151 | 74.000 | | |
| 9748.000 | 13.126 | 36.740 | 49.866 | -24.134 | 74.000 | | |

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

| Product | : PREMIUM SPEAKER DOCK | | | | | | | |
|-----------------------|-----------------------------------|------------------|--------------------|---------|--------|--|--|--|
| Test Item | : Harmonic Radiated Emission Data | | | | | | | |
| Test Site | : No.3 OATS | | | | | | | |
| Test Mode | : Mode 1: | Transmit (802.11 | lb 1Mbps) (2462 MH | z) | | | | |
| Frequency | Correct | Reading | Measurement | Margin | Limit | | | |
| 1 5 | Factor | Level | Level | C | | | | |
| MHz | dB | dBuV | dBuV/m | dB | dBuV/m | | | |
| Horizontal | | | | | | | | |
| Peak Detector: | | | | | | | | |
| 4924.000 | 2.858 | 37.490 | 40.347 | -33.653 | 74.000 | | | |
| 7386.000 | 12.127 | 35.660 | 47.788 | -26.212 | 74.000 | | | |
| 9848.000 | 12.852 | 36.970 | 49.823 | -24.177 | 74.000 | | | |
| Average Detector: | | | | | | | | |
| | | | | | | | | |
| Vertical | | | | | | | | |
| Peak Detector: | | | | | | | | |
| 4924.000 | 5.521 | 36.500 | 42.020 | -31.980 | 74.000 | | | |
| 7386.000 | 13.254 | 35.530 | 48.784 | -25.216 | 74.000 | | | |
| 9848.000 | 13.367 | 36.520 | 49.887 | -24.113 | 74.000 | | | |

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

| Product | Product : PREMIUM SPEAKER DOCK | | | | | | | |
|-----------------------|-----------------------------------|------------------|--------------------|---------|--------|--|--|--|
| Test Item | : Harmonic Radiated Emission Data | | | | | | | |
| Test Site | Test Site : No.3 OATS | | | | | | | |
| Test Mode | : Mode 2: | Transmit (802.11 | lg 6Mbps) (2412MHz | z) | | | | |
| | | | | | | | | |
| Frequency | Correct | Reading | Measurement | Margin | Limit | | | |
| | Factor | Level | Level | | | | | |
| MHz | dB | dBuV | dBuV/m | dB | dBuV/m | | | |
| Horizontal | | | | | | | | |
| Peak Detector: | | | | | | | | |
| 4824.000 | 3.261 | 38.810 | 42.071 | -31.929 | 74.000 | | | |
| 7236.000 | 10.650 | 36.420 | 47.070 | -26.930 | 74.000 | | | |
| 9648.000 | 13.337 | 36.120 | 49.456 | -24.544 | 74.000 | | | |
| Average Detector. | | | | | | | | |
| Average Detector. | | | | | | | | |
| | | | | | | | | |
| Vertical | | | | | | | | |
| Peak Detector: | | | | | | | | |
| 4824.000 | 6.421 | 37.130 | 43.551 | -30.449 | 74.000 | | | |
| 7236.000 | 11.495 | 36.340 | 47.835 | -26.165 | 74.000 | | | |
| 9648.000 | 13.807 | 36.780 | 50.586 | -23.414 | 74.000 | | | |

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

| Product | : PREMIUM SPEAKER DOCK | | | | | | | |
|-----------------------|-----------------------------------|------------------|--------------------|---------|--------|--|--|--|
| Test Item | : Harmonic Radiated Emission Data | | | | | | | |
| Test Site | Test Site : No.3 OATS | | | | | | | |
| Test Mode | : Mode 2: | Transmit (802.11 | lg 6Mbps) (2437 MH | z) | | | | |
| Frequency | Correct | Reading | Measurement | Margin | Limit | | | |
| | Factor | Level | Level | | | | | |
| MHz | dB | dBuV | dBuV/m | dB | dBuV/m | | | |
| Horizontal | | | | | | | | |
| Peak Detector: | | | | | | | | |
| 4874.000 | 3.038 | 38.310 | 41.347 | -32.653 | 74.000 | | | |
| 7311.000 | 11.795 | 35.870 | 47.664 | -26.336 | 74.000 | | | |
| 9748.000 | 12.635 | 36.560 | 49.195 | -24.805 | 74.000 | | | |
| Average Detector: | | | | | | | | |
| | | | | | | | | |
| Peak Detector: | | | | | | | | |
| 4874.000 | 5.812 | 36.680 | 42.491 | -31.509 | 74.000 | | | |
| 7311.000 | 12.630 | 35.050 | 47.679 | -26.321 | 74.000 | | | |
| 9748.000 | 13.126 | 36.480 | 49.606 | -24.394 | 74.000 | | | |

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- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

| Product | : PREMIUM SPEAKER DOCK | | | | | | | |
|-----------------------|-----------------------------------|------------------|-------------------|---------|--------|--|--|--|
| Test Item | : Harmonic Radiated Emission Data | | | | | | | |
| Test Site | : No.3 OATS | | | | | | | |
| Test Mode | : Mode 2: | Transmit (802.11 | g 6Mbps) (2462 MH | z) | | | | |
| Frequency | Correct | Reading | Measurement | Margin | Limit | | | |
| | Factor | Level | Level | | | | | |
| MHz | dB | dBuV | dBuV/m | dB | dBuV/m | | | |
| Horizontal | | | | | | | | |
| Peak Detector: | | | | | | | | |
| 4924.000 | 2.858 | 37.040 | 39.897 | -34.103 | 74.000 | | | |
| 7386.000 | 12.127 | 35.230 | 47.358 | -26.642 | 74.000 | | | |
| 9848.000 | 12.852 | 36.440 | 49.293 | -24.707 | 74.000 | | | |
| Average Detector: | | | | | | | | |
| | | | | | | | | |
| Vertical | | | | | | | | |
| Peak Detector: | | | | | | | | |
| 4924.000 | 5.521 | 41.700 | 47.220 | -26.780 | 74.000 | | | |
| 7386.000 | 13.254 | 35.430 | 48.684 | -25.316 | 74.000 | | | |
| 9848.000 | 13.367 | 37.010 | 50.377 | -23.623 | 74.000 | | | |

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- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

| Product | : PREMIUM SPEAKER DOCK | | | | | | | | | |
|------------|---|---------|-------------|---------|--------|--|--|--|--|--|
| Test Item | : General Radiated Emission Data | | | | | | | | | |
| Test Site | : No.3 OATS | | | | | | | | | |
| Test Mode | : Mode 1: Transmit (802.11b 1Mbps)(2437 MHz) (ESMT) | | | | | | | | | |
| | | | | | | | | | | |
| Frequency | Correct | Reading | Measurement | Margin | Limit | | | | | |
| | Factor | Level | Level | | | | | | | |
| MHz | dB | dBuV | dBuV/m | dB | dBuV/m | | | | | |
| Horizontal | | | | | | | | | | |
| 119.240 | -7.291 | 43.999 | 36.709 | -6.791 | 43.500 | | | | | |
| 375.320 | 0.918 | 37.731 | 38.649 | -7.351 | 46.000 | | | | | |
| 474.260 | 2.294 | 33.071 | 35.365 | -10.635 | 46.000 | | | | | |
| 610.060 | 3.657 | 32.832 | 36.489 | -9.511 | 46.000 | | | | | |
| 745.860 | 3.906 | 34.331 | 38.237 | -7.763 | 46.000 | | | | | |
| 875.840 | 5.816 | 32.337 | 38.153 | -7.847 | 46.000 | | | | | |
| | | | | | | | | | | |
| Vertical | | | | | | | | | | |
| 47.460 | -11.425 | 46.566 | 35.141 | -4.859 | 40.000 | | | | | |
| 134.760 | -4.093 | 38.034 | 33.941 | -9.559 | 43.500 | | | | | |
| 338.460 | -1.640 | 41.006 | 39.365 | -6.635 | 46.000 | | | | | |
| 480.080 | -3.390 | 37.157 | 33.767 | -12.233 | 46.000 | | | | | |
| 610.060 | 2.087 | 32.485 | 34.572 | -11.428 | 46.000 | | | | | |
| 745.860 | 1.316 | 38.316 | 39.632 | -6.368 | 46.000 | | | | | |
| | | | | | | | | | | |

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

| Product | : PREMIUM SPEAKER DOCK | | | | | | | | | |
|------------|---|---------|-------------|---------|--------|--|--|--|--|--|
| Test Item | : General Radiated Emission Data | | | | | | | | | |
| Test Site | : No.3 OATS | | | | | | | | | |
| Test Mode | : Mode 2: Transmit (802.11g 6Mbps)(2437 MHz) (ESMT) | | | | | | | | | |
| | | | | | | | | | | |
| Frequency | Correct | Reading | Measurement | Margin | Limit | | | | | |
| | Factor | Level | Level | | | | | | | |
| MHz | dB | dBuV | dBuV/m | dB | dBuV/m | | | | | |
| Horizontal | | | | | | | | | | |
| 119.240 | -7.291 | 43.453 | 36.163 | -7.337 | 43.500 | | | | | |
| 313.240 | -4.640 | 43.249 | 38.609 | -7.391 | 46.000 | | | | | |
| 400.540 | 0.942 | 39.720 | 40.662 | -5.338 | 46.000 | | | | | |
| 474.260 | 2.294 | 33.243 | 35.537 | -10.463 | 46.000 | | | | | |
| 654.680 | 1.893 | 35.248 | 37.141 | -8.859 | 46.000 | | | | | |
| 829.280 | 7.376 | 29.435 | 36.811 | -9.189 | 46.000 | | | | | |
| | | | | | | | | | | |
| Vertical | | | | | | | | | | |
| 119.240 | -3.571 | 37.425 | 33.855 | -9.645 | 43.500 | | | | | |
| 177.440 | -1.248 | 36.048 | 34.800 | -8.700 | 43.500 | | | | | |
| 406.360 | -4.472 | 40.804 | 36.333 | -9.667 | 46.000 | | | | | |
| 610.060 | 2.087 | 34.651 | 36.738 | -9.262 | 46.000 | | | | | |
| 745.860 | 1.316 | 37.527 | 38.843 | -7.157 | 46.000 | | | | | |
| 949.560 | 3.156 | 34.979 | 38.135 | -7.865 | 46.000 | | | | | |

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- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

| Product | : PREMIUM SPEAKER DOCK | | | | | | | | | |
|------------|--|---------|-------------|---------|--------|--|--|--|--|--|
| Test Item | : General Radiated Emission Data | | | | | | | | | |
| Test Site | : No.3 OATS | | | | | | | | | |
| Test Mode | : Mode 1: Transmit (802.11b 1Mbps)(2437 MHz) (Winbond) | | | | | | | | | |
| | | | | | | | | | | |
| Frequency | Correct | Reading | Measurement | Margin | Limit | | | | | |
| | Factor | Level | Level | | | | | | | |
| MHz | dB | dBuV | dBuV/m | dB | dBuV/m | | | | | |
| Horizontal | | | | | | | | | | |
| 119.240 | -7.291 | 45.725 | 38.435 | -5.065 | 43.500 | | | | | |
| 255.040 | -5.409 | 44.449 | 39.040 | -6.960 | 46.000 | | | | | |
| 350.100 | -1.298 | 39.635 | 38.337 | -7.663 | 46.000 | | | | | |
| 480.080 | 1.870 | 39.435 | 41.305 | -4.695 | 46.000 | | | | | |
| 542.160 | 3.925 | 35.978 | 39.903 | -6.097 | 46.000 | | | | | |
| 833.160 | 6.616 | 33.504 | 40.120 | -5.880 | 46.000 | | | | | |
| | | | | | | | | | | |
| Vertical | | | | | | | | | | |
| 95.960 | -6.836 | 40.293 | 33.457 | -10.043 | 43.500 | | | | | |
| 134.760 | -4.093 | 38.377 | 34.284 | -9.216 | 43.500 | | | | | |
| 264.740 | -5.071 | 40.887 | 35.817 | -10.183 | 46.000 | | | | | |
| 406.360 | -4.472 | 39.328 | 34.857 | -11.143 | 46.000 | | | | | |
| 654.680 | -3.047 | 39.208 | 36.161 | -9.839 | 46.000 | | | | | |
| 951.500 | 3.083 | 38.319 | 41.402 | -4.598 | 46.000 | | | | | |

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

| Product Test Item | : PREMIUM SPEAKER DOCK General Radiated Emission Data | | | | | | | | | |
|----------------------|--|---------|-------------|---------|--------|--|--|--|--|--|
| Test Site | : No.3 OATS | | | | | | | | | |
| Test Mode | Mode 2: Transmit (802.11g 6Mbps)(2437 MHz) (Winbond) | | | | | | | | | |
| | | | 8 |)() | | | | | | |
| Frequency | Correct | Reading | Measurement | Margin | Limit | | | | | |
| | Factor | Level | Level | | | | | | | |
| MHz | dB | dBuV | dBuV/m | dB | dBuV/m | | | | | |
| Horizontal | | | | | | | | | | |
| 222.060 | -10.124 | 47.292 | 37.167 | -8.833 | 46.000 | | | | | |
| 350.100 | -1.298 | 40.211 | 38.913 | -7.087 | 46.000 | | | | | |
| 429.640 | 0.630 | 35.968 | 36.597 | -9.403 | 46.000 | | | | | |
| 542.160 | 3.925 | 33.822 | 37.747 | -8.253 | 46.000 | | | | | |
| 654.680 | 1.893 | 36.607 | 38.500 | -7.500 | 46.000 | | | | | |
| 947.620 | 6.971 | 31.450 | 38.421 | -7.579 | 46.000 | | | | | |
| | | | | | | | | | | |
| Vertical | | | | | | | | | | |
| 95.960 | -6.836 | 42.215 | 35.379 | -8.121 | 43.500 | | | | | |
| 245.340 | -5.908 | 44.453 | 38.545 | -7.455 | 46.000 | | | | | |
| 361.740 | -0.646 | 35.478 | 34.831 | -11.169 | 46.000 | | | | | |
| 542.160 | 1.855 | 31.692 | 33.547 | -12.453 | 46.000 | | | | | |
| 654.680 | -3.047 | 39.429 | 36.382 | -9.618 | 46.000 | | | | | |
| 949.560 | 3.156 | 34.788 | 37.944 | -8.056 | 46.000 | | | | | |

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

5. **RF** antenna conducted test

5.1. Test Equipment

| | Equipment | Manufacturer | Model No./Serial No. | Last Cal. |
|---|-------------------|--------------|----------------------|------------|
| | Spectrum Analyzer | R&S | FSP40 / 100170 | Jun, 2012 |
| | Spectrum Analyzer | Agilent | E4407B / US39440758 | Jun, 2012 |
| Х | Spectrum Analyzer | Agilent | N9010A / MY48030495 | Apr., 2012 |

Note: 1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

2. The test instruments marked with "X" are used to measure the final test results.

5.2. Test Setup

RF antenna Conducted Measurement:



5.3. Limits

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, 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) (see Section 15.205(c)).

5.4. Test Procedure

The EUT was tested according to DTS test procedure of Jan. 2012 KDB558074 for compliance to FCC 47CFR 15.247 requirements.

Set RBW = 100 kHz, Set VBW> RBW, scan up through 10th harmonic.

5.5. Uncertainty

The measurement uncertainty Conducted is defined as \pm 1.27dB

5.6. Test Result of RF antenna conducted test

| Product | : | PREMIUM SPEAKER DOCK |
|-----------|---|----------------------------------|
| Test Item | : | RF antenna conducted test |
| Test Site | : | No.3 OATS |
| Test Mode | : | Mode 1: Transmit (802.11b 1Mbps) |

Channel 01 (2412MHz)

| Agilen | t Spectri | ım Analyze | er - Swept | SA | | | | | | | | |
|--------|-----------------------|------------|---------------|---------------|------------------|----------------------------------|--|--|-----------|--------------------------|------------------------|----------------|
| IXI RI | | RF | 50 Ω / | | | SEI | NSE:INT | Aug Tung | ALIGNAUT | 0 06:45:34 | PM Jul 25, 2012 | Frequency |
| Cen | ter Fr | eq 51 | 5.0000 | UU IVIH Pi | IZ NO: Fast 🗔 | Trig: Free | Run | UAR INC | . LUg-r w | TY | | |
| | | | | IFO | Gain:Low | #Atten: 30 | dB | | | DI | א אוא אוא אודי | |
| | | | | | | | | | М | kr1 817.2 | 52 MHz | Autorune |
| 10 dE | 3/div | Ref 20 | .00 dB | m | | | | | | -55. | 06 dBm | |
| 209 | | | | | | | | | | | | Contor From |
| 10.0 | | | | | | | | | | | | 515 000000 MH |
| | | | | | | | | | | | | 515.000000 WH2 |
| 0.00 | | | | | | | | | | | | |
| 816.9 | | | | | | | | | | | | Start Freq |
| -10.0 | | | | | | | | | | | | 30.000000 MHz |
| 3 | | | | | | | | | | | -15.48 dBm | |
| -20.0 | | | | | | | 3 | | | | | 04 E |
| 111111 | | | | | | | | | | | | Stop Freq |
| -30.0 | | | | | | | | | | | | 1.00000000 GH2 |
| | | | | | | | | | | | | |
| -40.0 | | | _ | | | - | | - | | | | CF Step |
| | | | | | | | | | | | | Auto Man |
| -50.0 | | _ | | | í | - | | - | | 1 | | |
| | 1.5 | | | | | 1.1.1 | A CONTRACTOR | | 11.16 | Control of Baseline J. 1 | . J. A.J. Hall second | |
| -60.0 | Property and a second | | Debail solves | | | and a standard particular stands | angelagi sentenana Angelagi sentenana | na ng manya ng kanan Ng mang kanang kanan | | and the second second | andra B. A Bilder tark | FreqOffset |
| | | | | | and the second | | | | | | | 0 HZ |
| -70.0 | | - | | | | | - | | | | | |
| | | | | | | | | | | | | |
| Star | t 30 0 | ЛЦу | | | | | | | | Stop 1 (| | |
| #Res | s BW | 100 kHz | 2 | | #VBW | 1.0 MHz | | | Sweep | 90.0 ms (1 | 0001 pts) | |
| MSG 🤇 |)File < | Image n | na> save | d | | | | | STA | TUS | Consistent Frank | |

| Agilent Spectrum Analyzer - Swept SA | | | | | | | | | | |
|--------------------------------------|-----------------------|--------------------------------|------------------|---------|----------|-----------------------------------|--------------------------|---|---|--|
| Center Fi | RF 50 Ω req 6.5000 | AC 00000 GHz PN0: Fast (| SE Trig: Free | NSE:INT | Avg Type | ALIGNAUTO : Log-Pwr | 06:45:031 TRAC TYP | PM Jul 25, 2012 E 1 2 3 4 5 6 PE MWWWWW | Frequency | |
| 10 dB/div | Ref 20.00 (| IFGain:Low | #Atten: 30 |) dB | | Mk | ته 1 2.413 r1 a.4 | 3 5 GHz 52 dBm | Auto Tune | |
| 10.0 | 1 | | | | | | | | Center Freq 6.50000000 GHz | |
| 0.00 | | | | | | | | | Start Freq | |
| -20.0 | | | | | | | | -15.48 dBm | Stap From | |
| -30.0 | | | | | | | | | 12.000000000 GHz | |
| -40.0 | | | | | | | | | CF Step 1.10000000 GHz <u>Auto</u> Man | |
| -60.0 | | | | | | in the second state of the second | | an a | Freq Offset | |
| -70.0 | | | | | | | | | | |
| Start 1.00 #Res BW | 0 GHz 100 kHz | #VB | W 1.0 MHz | | | Sweep | Stop 12 1.02 s (1 | .000 GHz 0001 pts) | | |
| мsg 🗼 Point | s changed; all | traces cleared | | | | STATU | S | | | |

| Agiler | it Spectru | m Analyzer - Sw | rept SA | | 100 | | 299 | | | | |
|--------------|-------------------|------------------------|-----------|----------|---------------------------|---------|----------|-----------------------------|-------------------------|--|---------------------------------------|
| Cen | ter Fr | RF 50 Ω eq 18.500 | AC 000000 | | SEI | NSE:INT | Avg Type | ALIGNAUTO : Log-Pwr | 06:46:04 TRAC TYF | PM Jul 25, 2012 E 1 2 3 4 5 6 PE M WWWWW | Frequency |
| 10 di Log | 3/div | Ref 20.00 | dBm | Gain:Low | #Atten: 30 |) dB | | Mkr | 1 23.62 -41. | B 5 GHz 13 dBm | Auto Tune |
| 10.0 | | | | | | | | | | | Center Freq 18.50000000 GHz |
| 0.00 | | | | | | | | | | | Start Freq 12.000000000 GHz |
| -20.0 | | | | | | | | | | -15.48 dBm | Stop Freq |
| -30.0 | | | | | | | | | | 1 | CF Step |
| -50.0 | | | | | Calcolar Hales Department | houldon | | an la participa de la Cargo | | | 1.300000000 GHz <u>Auto</u> Man |
| -60.0 | a an lles si h | | | | | | | | | | Freq Offset 0 Hz |
| -70.0 | | | | | | | | | | | |
| Star #Re | t 12.00 s BW 1 | 0 GHz 00 kHz | | #VBW | 1.0 MHz | | | Sweep | Stop 25 1.20 s (1 | .000 GHz 0001 pts) | |
| MSG 🤇 | ₽File < | mage.png> s | aved | | | | | STATU | s | | |


| Agilent | Spectrum | Analyzer - Sw | ept SA | 95 | | | | | | | |
|---------|--|---|----------|-----------------------|----------------------------|---------------------------------------|--|--|--|-----------------------|----------------|
| LXI RL | | RF 50 Ω | AC | | SEI | VSE:INT | | ALIGN AUTO | 06:49:07 | PM Jul 25, 2012 | Erequency |
| Cent | ter Frec | 1 515.00 | 0000 M | Hz | | - | Avg Type | : Log-Pwr | TRAC | E123456 | Frequency |
| | | | | PNO: Fast 😱 | #Atton: 30 | Run | | | DE | | |
| | | | 22 | FGain:Low | #Atten. ot | | | | 101 21010 10 | | |
| | | | | | | | | Mk | r1 960.0 | 36 MHz | Autorune |
| 10 dB | div R | ef 20.00 | dBm | | | | | | -55. | 05 dBm | |
| Log | | | 1 | T T | | | 1 | 1 | | | |
| | | | | | | | | | | | Center Freq |
| 10.0 | | | | | | | | | | | 545 000000 MU |
| 10.0 | | | | | | · · · · · · · · · · · · · · · · · · · | | | | | 515.000000 MHZ |
| | | | | | | | | | | | |
| 0.00 | | | - | 6 | | | - | | | | |
| | | | | | | | | | | | Start Freq |
| 10.0 | | | | | | | | | | | 30.000000 MHz |
| 510.0 | | | | | | | | | | -14.12 dBm | |
| | | | | | | | | | | | |
| -20.0 | | | | | | - | | | | | Stop Fred |
| | | | | | | | | | | | diop11cq |
| -30.0 | | | | | | | | | | | 1.00000000 GHz |
| -00.0 | | | | | | | | | | | |
| | | | | | | | | | | | OE Oton |
| -40.0 | | | - | | | | - | | - | | |
| | | | | | | | | | | | 97.000000 MH2 |
| 50.0 | | | | | | | | | | | Auto Mari |
| -30.01 | | | | | | | | | | ●' | |
| | a la come re | I beine ate | a second | and the second second | demand to meet have | a line of the | a struck by abdaes | a selection de Miller | والأندع ومسرة فكرار المأس | Level and evel | Eron Offset |
| -60.0 | and the set of a set of | A REAL POLY AND A REAL PROPERTY OF A REAL PROPERTY | | | and the state of the state | in the territory of the | an a | Providence in the second s | and the second | han instituti (1. op. | Trequise |
| | | | | | | 254 425 | | | | | 0 Hz |
| 70.0 | | | | | | | | | | | |
| -70.0 | | | | | | | | | | | |
| | | | | | | | | | | | |
| Ctorf | 20.0 84 | | 1 | 1 1 | | | 1 | 1 | Stop 1 (| | |
| Sidri | DW 40 | 12 0 kUz | | #\/D\A/ | 4 0 844- | | | Sucon (| 0.0 mo. /1 | 0000 GHZ | |
| #Res | | | | #VDVV | 1.0 19162 | | | oweep s | 1) 2111 U.U | 0001 pts) | |
| MSG 🤇 | File <im< td=""><td>age.png> s</td><td>aved</td><td></td><td></td><td></td><td></td><td>STATU</td><td>JS</td><td></td><td></td></im<> | age.png> s | aved | | | | | STATU | JS | | |

Channel 06 (2437MHz)

| Agiler | it Spectrum A | nalyzer - Swe | pt SA | | | | | | | | |
|----------------|------------------|----------------|----------------------|------------------------|--------------------------|--|----------|---------|---|-------------------|--|
| Con | ter Fred | F 50 Ω | | U-7 | SEI | ISE:INT | Ava Type | Log-Pwr | 06:48:36 TRAC | PM Jul 25, 2012 | Frequency |
| 10 dl | 3/div R e | f 20.00 d | 10000 G PI IFO | NO: Fast 😱 Gain:Low | Trig: Free #Atten: 30 | Run dB | | Mk | r1 2.434 5.5 | 4 4 GHz 88 dBm | Auto Tune |
| 10.0 | | • ¹ | | | | 5 | | | | | Center Freq 6.50000000 GHz |
| 0.00 -10.0 | | | | | | | | | | -14.12 dBm | Start Freq 1.000000000 GHz |
| -20.0 -30.0 | | | | | | | | | | | Stop Freq 12.000000000 GHz |
| -40.0 -50.0 | | | | | | | | | | | CF Step 1.10000000 GHz <u>Auto</u> Man |
| -60.0 | | il Rimon | | | | an a | | | _{Dist} er Staffensfelfer angeselfette techter | | Freq Offset 0 Hz |
| -70.0 | t 1 000 C | 47 | | | | | | | Stop 12 | 000 GH- | |
| #Re | s BW 100 | kHz | | #VBW | 1.0 MHz | | | Sweep | 1.02 s (1 | 0001 pts) | |
| MSG 🤇 | Points ch | anged; all t | races clear | red | | | | STATU | 5 | | |

| Agilen | t Spectrum | Analyzer - Sw | rept SA | - | 98 | | 286 | | | | |
|------------------------|---|-------------------|-------------------------------------|--|-------------------|---------|----------------------------|------------------------|-------------------------|---|--|
| Cen | ter Fred | RF 50 S 18.500 | 2 AC 10000000 (PI | GHz 10: Fast 😱 | SEr Trig: Free | NSE:INT | Avg Type | ALIGNAUTO : Log-Pwr | 06:49:38 TRAC TYI | PM Jul 25, 2012 E 1 2 3 4 5 6 PE MWWWWW | Frequency |
| 10 dE | 3/div R | ef 20.00 | dBm | Gain:Low | #Atten: 30 | dB | | Mkr | 1 23.64 -40. | 4 1 GHz 81 dBm | Auto Tune |
| 10.0 | | | | | | | | | | | Center Freq 18.50000000 GHz |
| 0.00 -10.0 | | | | | | | | | | -14.12 dBm | Start Freq 12.000000000 GHz |
| -20.0 | | | | | | | | | | | Stop Freq 25.00000000 GHz |
| -40.0 | | | | and the line line line line line line line lin | en ster filmslite | | (14) Jacquer 2003 (14) 787 | la de la como | | | CF Step 1.30000000 GHz <u>Auto</u> Man |
| -60.0 | ana da belinay partificia dinan | | y a y felden si fa din, me a dinan, | n fan skie men and de Willie fer fan s | | | | | | | Freq Offset 0 Hz |
| -70.0 Start #Res | t 12.000 s BW 10 | GHz 0 kHz | | #VBW | 1.0 MHz | | | Sweep | Stop 25 1.20 s (1 | .000 GHz 0001 pts) | |
| MSG 🤇 | File <im< td=""><td>age.png> s</td><td>aved</td><td></td><td></td><td></td><td></td><td>STATU</td><td>S</td><td></td><td></td></im<> | age.png> s | aved | | | | | STATU | S | | |



| Agilent S | pectrum | Analyzer - | Swept SA | | -02 | | | | | | |
|------------------|---|--------------------|--|------------|-----------|--------------------|----------|------------------------|-----------------------|---|---|
| Cente | er Free | r⊧ ∣s q 515. | 0 Ω AC | MHz | SE | NSE:INT | Avg Type | ALIGNAUTO : Log-Pwr | 06:57:16 F TRACE | M Jul 25, 2012 | Frequency |
| 10 dB/c | div R | tef 20.0 | 0 dBm | IFGain:Low | #Atten: 3 | 0 dB | | Mkr | ₀ 1 858.5 -55.1 | 74 MHz 10 dBm | Auto Tune |
| 10.0 | | | | | | | | | | | Center Freq 515.000000 MHz |
| 0.00 - | | | | | | | | | | -15.60 dBm | Start Freq 30.000000 MHz |
| -20.0 | | | | | | | | | | | Stop Freq 1.000000000 GHz |
| -40.0 | | | | | | | | | 1- | | CF Step 97.000000 MHz <u>Auto</u> Man |
| -60.0 | ing belanding and a possible of | line e all address | delana (temperi se Red Matematikana (temperi se Red Matematikana (temperi se Red | | | lashiyyida ata ing | | | la de la destada | l athall a landa da an Anna ann an Cantair | Freq Offset 0 Hz |
| -70.0 Start : | 30.0 M BW 10 | Hz 0 kHz | | #VR | W 1.0 MHz | | | Sweep 9 | Stop 1.0 | 000 GHz | |
| MSG | File <im< td=""><td>age.png</td><td>> saved</td><td></td><td></td><td></td><td></td><td>STATU</td><td>s</td><td></td><td></td></im<> | age.png | > saved | | | | | STATU | s | | |

Channel 11 (2462MHz)



| Agilen | Agilent Spectrum Analyzer - Swept SA | | | | | | | | | | | |
|----------------|---|-----------------|------|--------------------------------|--|-------------|-------------------------|------------------------|-------------------------|---|---|--|
| Cen | ter Fr | RF 50 G | | GHz | | | Avg Type | ALIGNAUTO : Log-Pwr | 06:57:47 TRAC TYF | PM Jul 25, 2012 E 1 2 3 4 5 6 PE MWWWWW | Frequency | |
| 10 di | 3/div | Ref 20.00 | dBm | Gain:Low | #Atten: 30 |) dB | | Mkr | ⊓ 1 23.65 -41.3 | 9 7 GHz 20 dBm | Auto Tune | |
| 10.0 | | | | | | | | | | | Center Freq 18.50000000 GHz | |
| 0.00 | | | | | | | | | | | Start Freq 12.000000000 GHz | |
| -20.0 | | | | | | | | | | -15.60 dBm | Stop Freq | |
| -30.0 | | | | | | | | | | .1 | 25.00000000 GHz | |
| -40.0 -50.0 | | | | | المرواط والماري | hladhaghach | and the print frequency | lagenet al accepted at | | | CF Step 1.300000000 GHz <u>Auto</u> Man | |
| -60.0 | u (L) proved sy like Samuel Mary Kilow | | | n for an a second state of the | un ander Mersener ander en en andere en en andere en | | | | | | Freq Offset 0 Hz | |
| -70.0 | | | | | | | | | | | | |
| Star #Re: | t 12.00 s BW 1 | 0 GHz 00 kHz | | #VBW | 1.0 MHz | | 1 | Sweep | Stop 25 1.20 s (1 | .000 GHz 0001 pts) | | |
| MSG 🤇 | File < | mage.png> s | aved | | | | | STATU | S | | | |

| : | PREMIUM SPEAKER DOCK |
|---|----------------------------------|
| : | RF Antenna Conducted Spurious |
| : | No.3 OATS |
| : | Mode 2: Transmit (802.11g 6Mbps) |
| | : : : : |

Channel 01 (2412MHz)

| Agilent | Spectrum Ar | ialyzer - Sv | vept SA | | | | | | | | |
|------------------------|--|--------------|---------|------------------------|----------------------------|---------------|--------------------|------------------|-------------------------|---|---|
| (XI RL | RF or Frog | 50 S | | | SEf | NSE:INT | Ava Type | ALIGNAUT | 0 07:23:38 r TRA | PM Jul 25, 2012 | Frequency |
| 10 dB/ | div Re | f 20.00 | dBm | NO: Fast ၞ Gain:Low | ┘ Trig: Free #Atten: 30 | e Run) dB | | М | ™⊅ kr1 875.2 -55. | 258 MHz 24 dBm | Auto Tune |
| 10.0 - | | | - | · | | | | | | | Center Freq 515.000000 MHz |
| 0.00 - -10.0 - | | | | | | | | | | | Start Freq 30.000000 MHz |
| -20.0 = -30.0 = | | | | | | | | | | -20.85 dBm | Stop Freq 1.000000000 GHz |
| -40.0 - | | | | | | | | | 1 | | CF Step 97.000000 MHz <u>Auto</u> Man |
| -60.0 | lasti data da seconda e | | | | ang ng kipatal | | the suddread boost | a bijestada bije | | l e se la contra pel de tara. Les se | Freq Offset 0 Hz |
| -70.0 Start #Res | 30.0 MH BW 100 | z kHz | | #VBW | 1.0 MHz | | | Sweep | Stop 1.0 90.0 ms (1 | 0000 GHz | |
| MSG 🤳 | File <imag< td=""><td>ge.png> s</td><td>aved</td><td></td><td></td><td></td><td></td><td>STA</td><td>TUS</td><td></td><td></td></imag<> | ge.png> s | aved | | | | | STA | TUS | | |

Page: 42 of 75

| Agilen | t Spectru | m Analyzer - | Swept SA | | | | | | | | |
|----------------|--|--------------|----------------|---------------------------|------------|---------|----------|---|----------------------|--|---------------------------------------|
| Cen | ter Fr | RF 5 | DΩ AC | GHz | SEI | NSE:INT | Avg Type | ALIGNAUTO : Log-Pwr | 07:23:08 TRAC | PM Jul 25, 2012 E 1 2 3 4 5 6 | Frequency |
| 10 dE | 3/div | Ref 20.0 | 0 dBm | PNO: Fast 🖵 IFGain:Low | #Atten: 30 | dB | | Mk | r1 2.40 | 5 8 GHz 85 dBm | Auto Tune |
| 10.0 | | 1 | | | | | | | | | Center Freq 6.50000000 GHz |
| 0.00 -10.0 | | | | | | | | | | | Start Freq 1.000000000 GHz |
| -20.0 | | | | | | | | | | -20.85.dBm | Stop Freq 12.000000000 GHz |
| -40.0 | | | | | | | | | | | CF Step 1.10000000 GHz Auto Man |
| -50.0 -60.0 | a an | | | | | | | anda da yang kanang pang Pangang pang pang kanang pang pang pang pang pang pang pang | | n je jezen bywielski od podriana za podri ^{bij} ka | Freq Offset 0 Hz |
| -70.0 | | | | | | | | | | | |
| star #Res | s BW 1 | I GHZ | | #VBW | 1.0 MHz | | | Sweep | Stop 12 1.02 s (1 | .000 GHz 0001 pts) | |
| MSG 🤇 | Points | changed; | all traces cle | ared | | | | STATU | s | | |

| Agilent Spectrum Analyzer - Sw | ept SA | | | | |
|--|---|-----------------------------|------------------------------|--|--|
| ⊠ RL RF 50 Ω Center Freq 18.500 | AC 000000 GHz Trig: | SENSE:INT Av Free Run | ALIGNAUTO g Type: Log-Pwr | 07:24:09 PM Jul 25, 2012 TRACE 1 2 3 4 5 6 TYPE MWWWWW | Frequency |
| 10 dB/div Ref 20.00 | IFGain:Low #Atte | n: 30 dB | Mkr | DET P NNNN I 23.632 4 GHz -41.23 dBm | Auto Tune |
| 10.0 | | | | | Center Freq 18.50000000 GHz |
| -10.0 | | | | | Start Freq 12.00000000 GHz |
| -20.0 | | | | -20.85.dBm | Stop Freq 25.00000000 GHz |
| -40.0 | | | | 1 | CF Step 1.30000000 GHz <u>Auto</u> Man |
| -60.0 | n provenski klasticke i provi site. En prelifika i konstanti site | | | | Freq Offset 0 Hz |
| -70.0 | | | | Stop 25 000 GHz | |
| #Res BW 100 kHz | #VBW 1.0 I | IHz | Sweep Status | 1.20 s (10001 pts) | |



| Agilen | Agilent Spectrum Analyzer - Swept SA | | | | | | | | | | | |
|----------------|--------------------------------------|----------------------|-------------------|-------------|------------------|-------------------|---|------------------------|-----------------------------------|------------------|---|--|
| Cen | ter Fr | req 515.0 | ος ac D00000 M | Hz | SE | | Avg Type | ALIGNAUTO : Log-Pwr | 07:27:28 F | PM Jul 25, 2012 | Frequency | |
| 10 dE | 3/div | Ref 20.0 | ı 0 dBm | PNO: Fast C | #Atten: 30 | dB | | Mkr | ^{DE} 1 953.8 -55.0 | 28 MHz 03 dBm | Auto Tune | |
| 10.0 | | | | | | | | | | | Center Freq 515.000000 MHz | |
| 0.00 -10.0 | | | | | | | | | | Sale of Persons | Start Freq 30.000000 MHz | |
| -20.0 -30.0 | | | | 8 | | | | | | -17.87 dBm | Stop Freq 1.000000000 GHz | |
| -40.0 | | | | | | | | | | .1 | CF Step 97.000000 MHz <u>Auto</u> Man | |
| -60.0 | de la la ser | (bern 1) state belge | No. of Marian | | nada ola et da e | haday have been | ningalan kelenan pelapat Ana ang ang ang ang ang ang ang ang ang a | hanner frigdet set | te and spatter to ensure | | Freq Offset 0 Hz | |
| -70.0 Star | t 30.0 | MHz 100 kHz | | #\/B1A/ | 1.0 MHz | | | Sween 9 | Stop 1.0 | 0000 GHz | | |
| MSG 🤇 | File < | Image.png | saved | | 114 141112 | | | STATUS | sie ins (1 | , pro) | | |

Channel 06 (2437MHz)



| Agilent Spectrum Analyzer - Swept SA | | | | | | | | | | | |
|--------------------------------------|---|-----------------|--------------|--|------------|---------|---------------------|------------------------|--------------------------|---|--|
| Cen | ter Fro | eq 18.500 | 2 AC | GHz | SEI | NSE:INT | Avg Type | ALIGNAUTO : Log-Pwr | 07:27:591 TRAC TYP | PM Jul 25, 2012 E 1 2 3 4 5 6 E M WWWWW | Frequency |
| 10 di | 3/div | Ref 20.00 | dBm | Gain:Low | #Atten: 30 | dB | | Mkr | ₀ 1 23.670 -41. | 6 GHz 14 dBm | Auto Tune |
| 10.0 | | | - | | | | | | | | Center Freq 18.50000000 GHz |
| 0.00 -10.0 | | | | | | | | | | Sam (1995)art | Start Freq 12.000000000 GHz |
| -20.0 | | | | | | | | | | -17.87 dBm | Stop Freq 25.00000000 GHz |
| -40.0 -50.0 | | | - Hubbertowe | must see the station of the | | | den halfe di tarife | and differences | | 1 | CF Step 1.30000000 GHz <u>Auto</u> Man |
| -60.0 | ta pitika kaj sitaka Kaj sitaka polisia | | | i ti de se | | | | | | | Freq Offset 0 Hz |
| -70.0 Star #Re | t 12.00 s BW 1 | 0 GHz 00 kHz | | #VBW | 1.0 MHz | | | Sweep | Stop 25 1.20 s (1 | .000 GHz 0001 pts) | |
| MSG 🤇 | ₽File <i< td=""><td>mage.png> s</td><td>aved</td><td></td><td></td><td></td><td></td><td>STATU</td><td>s</td><td></td><td></td></i<> | mage.png> s | aved | | | | | STATU | s | | |



| Agilen | Agilent Spectrum Analyzer - Swept SA | | | | | | | | | | | |
|----------------|--------------------------------------|-------------------------------|------------------------|------------------------|--|------------------|----------|------------------------|-------------------|------------------|---|--|
| Cen | ter Fr | RF 50 eq 515.0 | Ω AC 00000 MH | łz | SE | | Avg Type | ALIGNAUTO : Log-Pwr | 07:39:421 TRAC | PM Jul 25, 2012 | Frequency | |
| 10 dE | 3/div | Ref 20.00 | P IF dBm | NO: Fast 🖵 Gain:Low | #Atten: 30 |) dB | | Mkr | 1 968.8 -54.8 | 63 MHz 83 dBm | Auto Tune | |
| 10.0 | | | | | | | | | | | Center Freq 515.000000 MHz | |
| 0.00 | | | | | | | | | | | Start Freq 30.000000 MHz | |
| -20.0 | | | | | | | | | | -18.28 dBm | Stop Freq 1.000000000 GHz | |
| -40.0 | | | | | | | | | | | CF Step 97.000000 MHz <u>Auto</u> Man | |
| -50.0 -60.0 | a da a populationa | | all a flowering to for | | er Balling belle for the second s | albel () Longoro | | gannet og kladen. | | 1- | Freq Offset 0 Hz | |
| -70.0 Star | t 30.0 | MHz | | | | | | | Stop 1.0 | 0000 GHz | | |
| #Re: | s BW ′ Pile < | I 00 kHz Image.png> | saved | #VBW | 1.0 MHz | | | Sweep 9 | 0.0 ms (1 | 0001 pts) | | |

Channel 11 (2462MHz)



| Agilent Spectrum Analyzer - Swept SA | | | | | | | | |
|--------------------------------------|---------------------|---------------|---|--|---|--|--|--|
| Center Freq 18.500 | 2 AC 0000000 GHz | SENSE:INT | ALIGNAUTO Avg Type: Log-Pwr | 07:40:13 PM Jul 25, 2012 TRACE 1 2 3 4 5 6 TYPE MWWWWW | Frequency | | | |
| 10 dB/div Ref 20.00 | IFGain:Low | #Atten: 30 dB | Mkr | DET ^P NNNNN 1 23.752 0 GHz -40.41 dBm | Auto Tune | | | |
| 10.0 | | | | | Center Freq 18.50000000 GHz | | | |
| -10.0 | | | | | Start Freq 12.00000000 GHz | | | |
| -20.0 | | | | -18.28 dBm | Stop Freq 25.000000000 GHz | | | |
| -40.0 | | | and the state of the | 1 | CF Step 1.30000000 GHz <u>Auto</u> Man | | | |
| -50.0 | | | | | Freq Offset 0 Hz | | | |
| Start 12.000 GHz #Res BW 100 kHz | #VBW | 1.0 MHz | Sweep | Stop 25.000 GHz 1.20 s (10001 pts) | | | | |

6. Band Edge

6.1. Test Equipment

RF Conducted Measurement

The following test equipments are used during the band edge tests:

| | Equipment | Manufacturer | Model No./Serial No. | Last Cal. |
|---|-------------------|--------------|----------------------|------------|
| | Spectrum Analyzer | R&S | FSP40 / 100170 | Jun, 2012 |
| | Spectrum Analyzer | Agilent | E4407B / US39440758 | Jun, 2012 |
| Х | Spectrum Analyzer | Agilent | N9010A / MY48030495 | Apr., 2012 |

Note:

- 1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
- 2. The test instruments marked with "X" are used to measure the final test results.

RF Radiated Measurement:

The following test equipments are used during the band edge tests:

| Test Site | | Equipment | Manufacturer | Model No./Serial No. | Last Cal. |
|-----------|-----------------|-------------------|-----------------|-----------------------|------------|
| Site # 3 | Bilog Antenna | | Schaffner Chase | CBL6112B/2673 | Sep., 2011 |
| | Х | Horn Antenna | Schwarzbeck | BBHA9120D/D305 | Sep., 2011 |
| | | Horn Antenna | Schwarzbeck | BBHA9170/208 | Jul., 2012 |
| | X Pre-Amplifier | | Agilent | 8447D/2944A09549 | Sep., 2011 |
| | Х | Spectrum Analyzer | Agilent | E4407B / US39440758 | May, 2012 |
| | | Test Receiver | R & S | ESCS 30/ 825442/018 | Sep., 2011 |
| | Х | Coaxial Cable | QuieTek | QTK-CABLE/ CAB5 | Feb., 2012 |
| | Х | Controller | QuieTek | QTK-CONTROLLER/ CTRL3 | N/A |
| | Χ | Coaxial Switch | Anritsu | MP59B/6200265729 | N/A |

Note:

1. All instruments are calibrated every one year.

2. The test instruments marked by "X" are used to measure the final test results.

6.2. Test Setup

RF Conducted Measurement:



RF Radiated Measurement:



6.3. Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

6.4. Test Procedure

The EUT was setup according to ANSI C63.4, 2003 and tested according to DTS test procedure of Jan. 2012 KDB558074 for compliance to FCC 47CFR 15.247 requirements.

The EUT is placed on a turn table which is 0.8 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna is scanned from 1 meter to 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.4:2003 on radiated measurement.

6.5. Uncertainty

- ± 3.9 dB above 1GHz
- ± 3.8 dB below 1GHz

6.6. Test Result of Band Edge

| Product | : | PREMIUM SPEAKER DOCK |
|-----------|---|----------------------------------|
| Test Item | : | Band Edge Data |
| Test Site | : | No.3 OATS |
| Test Mode | : | Mode 1: Transmit (802.11b 1Mbps) |

RF Radiated Measurement (Horizontal):

| | Frequency | Correct Factor | Reading Level | Emission Level | Peak Limit | Arerage Limit | Dogult |
|--------------|-----------|----------------|---------------|-----------------------|------------|---------------|--------|
| Channel No. | (MHz) | (dB) | (dBuV) | (dBuV/m) | (dBuV/m) | (dBuV/m) | Result |
| 01 (Peak) | 2384.800 | 31.489 | 30.059 | 61.548 | 74.00 | 54.00 | Pass |
| 01 (Peak) | 2390.000 | 31.509 | 28.086 | 59.595 | 74.00 | 54.00 | Pass |
| 01 (Peak) | 2413.000 | 31.646 | 78.392 | 110.038 | | | Pass |
| 01 (Average) | 2387.000 | 31.497 | 21.865 | 53.362 | 74.00 | 54.00 | Pass |
| 01 (Average) | 2390.000 | 31.509 | 18.137 | 49.646 | 74.00 | 54.00 | Pass |
| 01 (Average) | 2411.400 | 31.634 | 74.606 | 106.240 | | | Pass |

Figure Channel 01:







Horizontal (Average)



Note:

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

| Product | : | PREMIUM SPEAKER DOCK |
|-----------|---|----------------------------------|
| Test Item | : | Band Edge Data |
| Test Site | : | No.3 OATS |
| Test Mode | : | Mode 1: Transmit (802.11b 1Mbps) |

RF Radiated Measurement (VERTICAL):

| | Frequency | Correct Factor | Reading Level | Emission Level | Peak Limit | Arerage Limit | Dogult |
|--------------|-----------|----------------|---------------|-----------------------|------------|---------------|--------|
| Channel No. | (MHz) | (dB) | (dBuV) | (dBuV/m) | (dBuV/m) | (dBuV/m) | Result |
| 01 (Peak) | 2386.000 | 30.934 | 26.363 | 57.297 | 74.00 | 54.00 | Pass |
| 01 (Peak) | 2390.000 | 30.915 | 24.460 | 55.375 | 74.00 | 54.00 | Pass |
| 01 (Peak) | 2413.000 | 30.956 | 70.553 | 101.509 | | | Pass |
| 01 (Average) | 2386.800 | 30.930 | 15.494 | 46.424 | 74.00 | 54.00 | Pass |
| 01 (Average) | 2390.000 | 30.915 | 13.591 | 44.506 | 74.00 | 54.00 | Pass |
| 01 (Average) | 2414.800 | 30.968 | 66.774 | 97.742 | | | Pass |

Figure Channel 01:

VERTICAL (Peak)



Figure Channel 01:

VERTICAL (Average)



Note:

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

| Product | : | PREMIUM SPEAKER DOCK |
|-----------|---|----------------------------------|
| Test Item | : | Band Edge Data |
| Test Site | : | No.3 OATS |
| Test Mode | : | Mode 1: Transmit (802.11b 1Mbps) |

Fundamental Filed Strength

| Antenna | Frequency | Correction Factor | Reading Level [dBuV] | Emission Level | Detector |
|------------|-----------|-------------------|----------------------|----------------|----------|
| role | | [ub/m] | | [ави у/т] | |
| Horizontal | 2462 | 31.892 | 75.944 | 107.836 | Peak |
| Horizontal | 2462 | 31.892 | 72.216 | 104.108 | Average |
| Vertical | 2462 | 30.48 | 66.546 | 97.026 | Peak |
| Vertical | 2462 | 30.48 | 62.698 | 93.178 | Average |

Note: 1:Spectrum Analyzer setting:

Peak detector: RBW=1MHz, VBW=1MHz

Average detector: RBW=1MHz, VBW=10Hz

Band Edge Test Data

| Antenna Pole | Test Frequency (MHz) | Fundamental (dBuV/m) | Δ (dB) | Band Edge Field Strength (dBuV/m) | Limit (dBuV/m) | Detector |
|-----------------|----------------------------|-------------------------|--------|---|-------------------|----------|
| Horizontal | 2490.4 | 107.836 | 48.679 | 59.157 | 74.000 | Peak |
| Horizontal | 2490.4 | 104.108 | 58.042 | 46.066 | 54.000 | Average |
| Vertical | 2490.4 | 97.026 | 48.679 | 48.347 | 74.000 | Peak |
| Vertical | 2490.4 | 93.178 | 58.042 | 35.136 | 54.000 | Average |

Note:

The Band Edge Field Strength was calculated using the Fundamental and Conducted Band Edge

measurements per the Marker-Delta Method with the following formula:

Band Edge field Strength = $F - \Delta$

F = Fundamental field Strength (Peak or Average)

 Δ = Conducted Band Edge Delta (Peak or Average)

| Agiler | nt Spec | strum A | nalyzer - Sw | ept SA | - | 100 | 10 | 200 | | | | |
|--|------------------|----------------|-------------------|---------------------------------------|--|---|----|--------|--------------------------|---------------------|-----------------------------|-------------------------------------|
| ⊯ Cer | nter | Freq | ^{ε 50 Ω} | AC 00000 G | Hz | S Tria: Era | | Avg Ty | ALIGNAUTO pe: Log-Pwr | 12:28:23 PI TRAC | Aug 13, 2012 | Frequency |
| PNO: Fast C The rise current avgridid. do not ret PNNNNN IFGain: Low #Atten: 30 dB Mkr4 2.490 4 GHz | | | | | | | | | Auto Tune | | | |
| 10 d Log 10.0 0.00 | B/div | | ef 20.00 | | | | | | | -41.7 | | Center Freq 2.497500000 GHz |
| -20.0 -30.0 -40.0 | 7 | | | | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | 4 | 3 | | n file and the file | magingerman | الم الم الم الم الم الم الم | Start Freq 2.447500000 GHz |
| -60.0 -70.0 | | | | | | | | | | | | Stop Freq 2.547500000 GHz |
| Cer #Re | ter 2 s BV | 2.497 N 1.0 | 50 GHz MHz | | #VBI | W 1.0 MH | z | | #Sweep | Span 1 500 ms (| 00.0 MHz 1001 pts) | CF Step 10.000000 MHz |
| 1 2 3 4 5 6 7 8 9 10 11 12 | N N N N | | | × 2.461 2.483 2.500 2.490 | 0 GHz 5 GHz 0 GHz 4 GHz | 45.012 c 415.012 c 41.160 c 41.720 c | | | FUNCTION WIDTH | | IN VALUE | Freq Offset 0 Hz |
| MSG | 10 | | 34 | | 24. | | | | STATU | S | | |

Peak Detector of conducted Band Edge Delta

Average Detector of conducted Band Edge Delta

| Agilent Spectrum | Analyzer - Swept SA | L | | | | | | | |
|---|---------------------------|--|--|-----------------------|----------|--------------|---------------------|-----------------------|-------------------------------------|
| w Center Fre | RF 50 Ω AC q 2.4975000 | 00 GHz | SEN | BE:INT | Avg Type | ALIGNAUTO | 12:28:44 PM TRAC | Aug 13, 2012 | Frequency |
| 10 dB/div | Ref 20.00 dBm | PNO: Fast (IFGain:Low | #Atten: 30 | dB | | Mk | r1 2.461 4.2 | 2 GHz 51 dBm | Auto Tune |
| 10.0 0.00 -10.0 | | | | | | | | | Center Freq 2.497500000 GHz |
| -20.0 -30.0 -40.0 | | hm | <u>∧4</u> | | | | | | Start Freq 2.447500000 GHz |
| -50.0 | | | | <u>2</u> ~ | | <u> </u> | ~~ | | Stop Freq 2.547500000 GHz |
| Center 2.49 #Res BW 1. | 750 GH2 0 MHz | #VB | W 10 Hz | | | Sweep | Span 1 7.80 s (′ | 00.0 MHz 1001 pts) | CF Step 10.000000 MHz |
| MKR MODE TRG 1 N 1 2 N 1 3 N 1 4 N 1 5 6 - 7 - - 9 - - 10 - - | SCL ;; | 2.461 2 GHz 2.483 5 GHz 2.500 0 GHz 2.490 4 GHz | 4.251 dB -56.445 dB -55.907 dB -53.791 dB | m m m m m | | NCTION WIDTH | FUNCTIO | | Auto Man Freq Offset 0 Hz |
| 11 12 MSG | | | | | | STATUS | | | |

| Product | : | PREMIUM SPEAKER DOCK |
|-----------|---|----------------------------------|
| Test Item | : | Band Edge Data |
| Test Site | : | No.3 OATS |
| Test Mode | : | Mode 2: Transmit (802.11g 6Mbps) |

Fundamental Filed Strength

| Antenna Pole | Frequency [MHz] | Correction Factor [dB/m] | Reading Level [dBuV] | Emission Level [dBuV/m] | Detector |
|-----------------|--------------------|-----------------------------|----------------------|----------------------------|----------|
| Horizontal | 2412 | 31.771 | 79.97 | 111.742 | Peak |
| Horizontal | 2412 | 31.771 | 63.26 | 95.032 | Average |
| Vertical | 2412 | 30.248 | 72.304 | 102.553 | Peak |
| Vertical | 2412 | 30.248 | 58.582 | 88.831 | Average |

Note: 1:Spectrum Analyzer setting:

Peak detector: RBW=1MHz, VBW=1MHz

Average detector: RBW=1MHz, VBW=10Hz

Band Edge Test Data

| Antenna Pole | Test Frequency (MHz) | Fundamental (dBuV/m) | Δ (dB) | Band Edge Field Strength (dBuV/m) | Limit (dBuV/m) | Detector |
|-----------------|----------------------------|-------------------------|--------|---|-------------------|----------|
| Horizontal | 2388.6 | 111.742 | 39.98 | 71.762 | 74.000 | Peak |
| Horizontal | 2353.7 | 95.032 | 42.248 | 52.784 | 54.000 | Average |
| Vertical | 2388.6 | 102.553 | 39.98 | 62.573 | 74.000 | Peak |
| Vertical | 2353.7 | 88.831 | 42.248 | 46.583 | 54.000 | Average |

Note:

The Band Edge Field Strength was calculated using the Fundamental and Conducted Band Edge

measurements per the Marker-Delta Method with the following formula:

Band Edge field Strength = $F - \Delta$

F = Fundamental field Strength (Peak or Average)

 Δ = Conducted Band Edge Delta (Peak or Average)



| Agile | nt Spe | ectru | m An | alyzer - Swe | ept SA | | | | | | | | |
|-------------------------|--------------|------------|-------------|----------------|-------------------------|-------------------------|------------------------------------|----------------|-----------------|----------------|---------------------|----------------------------------|-------------------------------------|
| Cer | nter | Fre | RF Pq | 50 Ω 2.3900 | AC 00000 GI | Ηz | SE | NSE:INT | Avg Ty | pe: Log-Pwr | 11:31:29 TRAC | AM Jul 26, 2012 E 1 2 3 4 5 6 | Frequency |
| | | | | | PN IFG | IO: Fast ⊂ iain:Low | #Atten: 3 | ≥Run OdB | | Mk | r1 2.41: | | Auto Tune |
| 10 c | B/div | / | Ref | 20.00 c | lBm | | | | | | 11. | 38 dBm | |
| 10.0 0.00 | | | | | | | | | / month | | | | Center Freq 2.390000000 GHz |
| -20.0 -30.0 -40.0 | | - | | 3 | hora and a | W. WERELE | . Blander and the | 22 hulls | nt [/] | | man | The ageneira | Start Freq 2.340000000 GHz |
| -50.0 -60.0 -70.0 |))) | | | | | | | | | | | | Stop Freq 2.440000000 GHz |
| Cer #Re | nter es B | 2.3 W 1 | 900 .0 r | 0 GHz /IHz | | #VB | W 1.0 MHz | | | Sweep | Span 1 1.00 ms (| 00.0 MHz 1001 pts) | CF Step 10.000000 MHz |
| MKR 1 | MODE N | TRC 1 | f | | × 2.413 | 5 GHz | Y 11.38 d | Bm | NCTION | FUNCTION WIDTH | FUNCTIO | IN VALUE | <u>Auto</u> Man |
| 2 3 4 5 6 | N N N | 1 1 | f f | | 2.390 2.353 2.388 | 0 GHz 7 GHz 3 GHz | -28.528 d -35.496 d -28.60 d | Bm Bm Bm | | | | | Freq Offset 0 Hz |
| 7 8 9 10 11 | | | | | | | | | | | | | |
| 12 MSG | | | | | | | | | | STATUS | 5 | | |

Peak Detector of conducted Band Edge Delta

Average Detector of conducted Band Edge Delta

| Agilent Spectrum Analyzer - S | wept SA | | | | |
|---|--|---|--------------------------------|---|-------------------------------------|
| Center Freq 2.390 | Ω AC 000000 GHz | SENSE:INT | ALIGNAUTO Avg Type: Log-Pwr | 11:32:55 AM Jul 26, 2012 TRACE 1 2 3 4 5 6 | Frequency |
| 10 dB/div Ref 20.00 | PNO: Fast C IFGain:Low | #Atten: 30 dB | Mk | r1 2.409 4 GHz -4.257 dBm | Auto Tune |
| 10.0 0.00 -10.0 | | | 1 | | Center Freq 2.39000000 GHz |
| -20.0 -30.0 -40.0 | | 12 12 | | | Start Freq 2.340000000 GHz |
| -60.0 | | | | | Stop Freq 2.440000000 GHz |
| Center 2.39000 GHz #Res BW 1.0 MHz | #VB | W 10 Hz | Sweep | Span 100.0 MHz 7.80 s (1001 pts) | CF Step 10.000000 MHz |
| Instruction Instruction | 2.409 4 GHz 2.390 0 GHz 2.353 7 GHz 2.388 6 GHz | -4.257 dBm -48.302 dBm -46.505 dBm -48.888 dBm | | | Freq Offset 0 Hz |

QuieTer

| Product | : | PREMIUM SPEAKER DOCK |
|-----------|---|----------------------------------|
| Test Item | : | Band Edge Data |
| Test Site | : | No.3 OATS |
| Test Mode | : | Mode 2: Transmit (802.11g 6Mbps) |

Fundamental Filed Strength

| Antenna Pole | Frequency [MHz] | Correction Factor [dB/m] | Reading Level [dBuV] | Emission Level [dBuV/m] | Detector |
|-----------------|--------------------|-----------------------------|----------------------|----------------------------|----------|
| Horizontal | 2462 | 31.892 | 79.74 | 111.632 | Peak |
| Horizontal | 2462 | 31.892 | 61.78 | 93.672 | Average |
| Vertical | 2462 | 30.48 | 71.515 | 101.995 | Peak |
| Vertical | 2462 | 30.48 | 58.021 | 88.501 | Average |

Note: 1:Spectrum Analyzer setting:

Peak detector: RBW=1MHz, VBW=1MHz

Average detector: RBW=1MHz, VBW=10Hz

Band Edge Test Data

| Antenna Pole | Test Frequency (MHz) | Fundamental (dBuV/m) | Δ (dB) | Band Edge Field Strength (dBuV/m) | Limit (dBuV/m) | Detector |
|-----------------|----------------------------|-------------------------|--------|---|-------------------|----------|
| Horizontal | 2483.5 | 111.632 | 38.553 | 73.079 | 74.000 | Peak |
| Horizontal | 2483.5 | 93.672 | 40.614 | 53.058 | 54.000 | Average |
| Vertical | 2483.5 | 101.995 | 38.553 | 63.442 | 74.000 | Peak |
| Vertical | 2483.5 | 88.501 | 40.614 | 47.887 | 54.000 | Average |

Note:

The Band Edge Field Strength was calculated using the Fundamental and Conducted Band Edge measurements per the Marker-Delta Method with the following formula:

Band Edge field Strength = $F - \Delta$

F = Fundamental field Strength (Peak or Average)

 Δ = Conducted Band Edge Delta (Peak or Average)

| Agilen | it Spec | ctrun | n Ana | alyzer - Sv | wept SA | 1 | | | | | | | | | | | | |
|---|-------------------------|---------------------|-------------|------------------|--------------|---|--|--------|--|----------------|-------------|-------|-----------------------|-----------------------|---------------|-------------------------------|---------------------|--------------------------------------|
| Cen | ter | Fre | RF q | 50 s | Ω AC 5000 | 00 G | iHz | _ | SE Trig: Free | NSE:INT | r | Avg | Type | ALIGNAUTO | 11: | 28:23 Al TRACE | M Jul 26, 2012 | Frequency |
| 10 dl | B/div | . 1 | Ref | 20.00 | dBm | ים ורי ו | NO: Fast Gain:Lov | / / | #Atten: 30 |) dB | | | | Mł | (r1 2. | ^{DET} 455 11.9 | 7 GHz 1 dBm | Auto Tune |
| Log 10.0 0.00 -10.0 | | | | | 1000 | 1 100-10-10-00-00-00-00-00-00-00-00-00-00- | an a | 1 | | | | | | | | | | Center Freq 2.483500000 GHz |
| -20.0 -30.0 -40.0 | July Mark | phol ^{tor} | Anor | nut and a second | | | | 4 | Mark-dury | 2 | - Altowarth | huppy | ⊘ ³ | and the second second | on the state | marite | mont | Start Freq 2.433500000 GHz |
| -50.0 -60.0 -70.0 | | | | | | | | | | | | | | | | | | Stop Freq 2.533500000 GHz |
| Cen #Re | ter 2 s B\ Minima | 2.48 N 1. | 835 .0 N | 0 GHz /IHz | | × | #V | BW | 1.0 MHz | | FUNC | | EIN | Sweep | Spa 1.00 r | an 10 ns (1 | 0.0 MHz 001 pts) | CF Step 10.000000 MHz Auto Man |
| 1 2 3 4 5 6 7 8 9 10 11 12 | N N N | 1 | f f | | | 2.455 2.483 2.500 | 7 GHz 5 GHz 0 GHz | | <u>11.910 d</u> <u>-26.643 dl</u> -39.926 dl | Bm 3m 3m | | | | | | | | Freq Offset 0 Hz |
| MSG | | | | | | | | | | | | | | STATU | s | | | |

Peak Detector of conducted Band Edge Delta

Average Detector of conducted Band Edge Delta

| Agilent Spectrum | Analyzer - Swept 9 | SA | | | | | | |
|---|-------------------------|--|--|-------------|------------|--------------------|----------------------------------|-------------------------------------|
| 🚧 Center Fre | rf 50 Ω A q 2.483500 | 000 GHz | SENSE: | INT Avg Typ | e: Log-Pwr | 11:29:43 TRAC | AM Jul 26, 2012 E 1 2 3 4 5 6 | Frequency |
| 10 dB/div F | Ref 20.00 dBi | PNO: Fast (IFGain:Low | *Atten: 30 dE | 3 | Mk | r1 2.459 -4.3 | 9 6 GHz 93 dBm | Auto Tune |
| Log 10.0 0.00 -10.0 | | 1 | | | | | | Center Freq 2.483500000 GHz |
| -20.0 -30.0 -40.0 | | | 2 | | | | | Start Freq 2.433500000 GHz |
| -50.0 -60.0 -70.0 | | | | | | | | Stop Freq 2.533500000 GHz |
| Center 2.48 #Res BW 1. | 350 GHz 0 MHz | #VE | SW 10 Hz | | Sweep | Span 1 7.80 s (| 00.0 MHz 1001 pts) | CF Step 10.000000 MHz |
| Much and Description Much and | | × 2.459 6 GHz 2.483 5 GHz 2.500 0 GHz | 4.393 dBm 45.007 dBm -53.508 dBm | | | FUNCTIO | | Freq Offset 0 Hz |
| MSG | | | | | STATUS | | | |

QuieTer

7. Occupied Bandwidth

7.1. Test Equipment

| | Equipment | Manufacturer | Model No./Serial No. | Last Cal. |
|---|-------------------|--------------|----------------------|------------|
| | Spectrum Analyzer | R&S | FSP40 / 100170 | Jun, 2012 |
| | Spectrum Analyzer | Agilent | E4407B / US39440758 | Jun, 2012 |
| Х | Spectrum Analyzer | Agilent | N9010A / MY48030495 | Apr., 2012 |

Note:

- 1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
- 2. The test instruments marked with "X" are used to measure the final test results.

7.2. Test Setup



7.3. Limits

The minimum bandwidth shall be at least 500 kHz.

7.4. Test Procedure

The EUT was setup according to ANSI C63.4, 2003; tested according to DTS test procedure of Jan. 2012 KDB558074 for compliance to FCC 47CFR 15.247 requirements. Set RBW = 1-5% of the emission bandwidth, VBW \geq 3*RBW

7.5. Uncertainty

 \pm 150Hz

7.6. Test Result of Occupied Bandwidth

| Product | : | PREMIUM SPEAKER DOCK |
|-----------|---|--|
| Test Item | : | Occupied Bandwidth Data |
| Test Site | : | No.3 OATS |
| Test Mode | : | Mode 1: Transmit (802.11b 1Mbps) (2412MHz) |
| | | |

| Channel No. | Frequency (MHz) | Measurement Level (kHz) | Required Limit (kHz) | Result |
|-------------|--------------------|----------------------------|-------------------------|--------|
| 1 | 2412 | 12750 | >500 | Pass |

Figure Channel 1:

| Agilen | it Spec | ctrun | а Апа | alyzer - Sw | ept SA | | | | | | | | | | | | |
|---|---------------|-------------|----------|--------------|----------|-------|----------------------------|--------|------------------------|---------------|-----|---------|------|--------------|-------------------|-----------------------------|-------------------------------------|
| LXI R | L | Ero | RF | 50 Ω | AC | | 1- | | SE | NSE:IN | IT | Ava T | Type | ALIGNAUTO | 06:43:19 TRA | PM Jul 25, 2012 | Frequency |
| Ceri | ler | rie | q | 2.4120 | 00000 | PN | 12 10: Fast iain:Lov | v v | Trig: Fre #Atten: 3 | e Run 0 dB | Î | | | . 209 1 11 | TY | PE MWWWWW ET P N N N N N | |
| 10 d | B/div | | Ref | 20.00 | dBm | | | | | | | | | Mkr | 2 2.405 1. | 85 GHz 57 dBm | Auto Tune |
| Log 10.0 0.00 -10.0 | | | | | | | - Contra | | www | A1 | www | Jan San | V.4 | | | 2.84 dBm | Center Freq 2.412000000 GHz |
| -20.0 -30.0 -40.0 | MAN | L. | 44 | , Jorn W | A MINIPA | alv. | <i>f</i> | | | | | | 2 | Alexan | bog . way |) Multhur | Start Freq 2.387000000 GHz |
| -50.0 -60.0 -70.0 | _ | | | | | | | | | | | | | | | | Stop Freq 2.437000000 GHz |
| Cen #Re | ter 2 s BV | 2.41 N 3 | 20 00 | 0 GHz kHz | | | #V | ΒW | 1.0 MHz | | | | | Sweep | Span : 1.00 ms | 50.00 MHz (1001 pts) | CF Step 5.000000 MHz |
| MKE 1 | N | TRC 1 | sci f | (0) | × 2.4 | 12 50 | D GHz | (0) | 8.84 d | Bm | FUN | CTION | FUN | ICTION WIDTH | FUNCT | ON VALUE | <u>Auto</u> Man |
| 3 4 5 6 7 8 9 10 11 12 | N | 1 | f | | 2.4 | 18 60 | DGHZ | | 2.37 d | Bm | | | | | | | Freq Offset 0 Hz |
| MSG | 100 | | | | | | | | | 101 | | | | STATU | 5 | | |

| Product | : | PREMIUM SPEAKER DOCK |
|-----------|---|--|
| Test Item | : | Occupied Bandwidth Data |
| Test Site | : | No.3 OATS |
| Test Mode | : | Mode 1: Transmit (802.11b 1Mbps) (2437MHz) |

| Channel No. | Frequency (MHz) | Measurement Level (kHz) | Required Limit (kHz) | Result |
|-------------|--------------------|----------------------------|-------------------------|--------|
| 6 | 2437 | 10300 | >500 | Pass |

Figure Channel 6:

| Mark RF S0.9 AC SENSE:INT ALIGNAUTO 06:48:03 PM J425, 2012 Frequency Center Freq 2.437000000 GHz Avg Type: Log-Pwr TRACE I 2.345.6 Frequency PN0: Fast Trig: Free Run #Atten: 30 dB Mkr2 2.431 85 GHz Auto Tur 10 dB/div Ref 20.00 dBm 3.42 dBm 3.42 dBm Center Fre 100 2 1 3 3.99 dbm Center Fre 2.412000000 GF 2.412000000 GF 2.412000000 GF C412000000 GF C412000000 GF | | |
|--|---|-------------------------------------|
| IFGain:Low #Atten: 30 dB DET/F NNNN Auto Tur 10 dB/div Ref 20.00 dBm 3.42 dBm Center Fre 100 2 1 3 399 dBm Center Fre 100 2 1 3 399 dBm Center Fre 100 2 1 3 24 dBm Center Fre 200 300 399 dBm Start Fre 2.41200000 GF 400 400 400 500 Fre Start Fre | SENSE:INT ALIGN AUTO 06:48:03 PM Jul 2 Avg Type: Log-Pwr TRACE 1 2 Trig: Free Run TYPE | 5 6 Frequency |
| Log 10.0 000 10.0 2.43700000 GH 2.43700000 GH 2.43700000 GH 2.43700000 GH 2.41200000 GH 2.41200000 GH 2.41200000 GH 2.41200000 GH 3.00 40.0 40 | #Atten: 30 dB Del(* M Mkr2 2.431 85 0 3.42 c | Hz Auto Tune |
| -20.0 -30.0 -40.0 -60.0 -2 | | Center Freq 2.437000000 GHz |
| -50.0 Stop Fre | - Alladon porond Mal | Start Freq 2.412000000 GHz |
| -70.0 2.46200000 GH | | Stop Freq 2.462000000 GHz |
| Center 2.43700 GHz Span 50.00 MHz CF Ste #Res BW 300 kHz #VBW 1.0 MHz Sweep 1.00 ms (1001 pts) 5.000000 MH | Span 50.00 1.0 MHz Sweep 1.00 ms (1001 | Hz CF Step 5.000000 MHz |
| MKE MADE FIG Set X Y FUNCTION FUNCTION VALUE Auto Mat 1 N 1 f 2.437 50 GHz 9.99 dBm | Y Function Function width Function value 9.99 dBm 3.42 dBm 3.42 dBm 3.76 dBm - 3.76 dBm - - - - - | Freq Offset |

| Product | : | PREMIUM SPEAKER DOCK |
|-----------|---|--|
| Test Item | : | Occupied Bandwidth Data |
| Test Site | : | No.3 OATS |
| Test Mode | : | Mode 1: Transmit (802.11b 1Mbps) (2462MHz) |

| Channel No. | Frequency (MHz) | Measurement Level (kHz) | Required Limit (kHz) | Result |
|-------------|--------------------|----------------------------|-------------------------|--------|
| 11 | 2462 | 12700 | >500 | Pass |

Figure Channel 11:

| gilent | t Spec | ctrum | Апа | alyzer - | Swe | pt S/ | ١ | | | | | 10 | | | | | | 9 | | | | | | | | |
|---------------------------|---------------|--------------|----------------|-------------|--|--------|-------------------|-----|--------------|-------------|------------|-----------|--------------|----------|------|------|-----|------|----------------------------|------------------------|-----------|----------------------|------------|----------------|---------------|----------------------------------|
| l RL | ter | Fre | RF q | 2.46 | ^{50 Ω} | AC | 00 | Gł | -Iz | inst (| _ |] Tria | SE : Free | NSE:I | nt n | | Avg | Туре | ALIGN Contractions: Log | iauto -Pwr | 0 | 06:55:0) TRA T | 7 PM | 1 2 3 M WWW | 2012 4 5 6 | Frequency |
| 10 dB | 3/div | F | Ref | 20.0 | 0 d | Bm | <u> </u> | IFG | ain: | Low | • | #Att | en: 30 | D dB | | | | | | Mkr | 2 2 | .455 1. | 0ET | 5 G 3 d | iHz 3m | Auto Tui |
| og 10.0 0.00 | | | | | | | | | 5 | MAN | 2 | ww | m | 1 | ww | ni | A3 | N. | | | | | | 2.4 | 5 dBm | Center Fro 2.462000000 GI |
| 0.0 0.0 0.0 | | Nµ M | m, | Jur of | hanger and the second s | ل والم | VA. | ł | <u></u> | | | | | | | | | Ŋ | W | nd for | L. | , My | - | M A | <u>J</u> | Start Fr 2.437000000 G |
| 0.0 0.0 0.0 | <u>ч</u> / | | | | | | | | | | | | | | | | | | | | | | 4. | | | Stop Fr 2.487000000 GI |
| ent Res | ter 2 s BV | 2.46 N 30 | 20 | 0 GH kHz | z | | | | į | #VB | w | 1.0 I | ٧Hz | | | | | | Sw | eep | S 1.00 | pan :) ms | 50. (10 | .00 M 1001 | ИHz pts) | CF Ste 5.000000 MI |
| E M 1 2 | N N N | 1 1 | f f | (Δ) | | | × 2.46 2.45 | 150 |) GI 5 GI | Hz Hz (Z | <u>(</u>) | 8. 1. | 45 d 48 d | Bm Bm | F | UNCT | ION | FUI | NCTION | I WIDTH | | FUNCT | ION | VALUE | | uto Ma |
| 4 5 6 | | - | - | | | | 2.40 | | | | <u>v</u> | | .41 0 | Din | | | | | | | | | | | _ | |
| 7 8 9 0 | | | | | | | | | | | | | | | | | | | | | | | | | _ | |
| 1 | | | | | | | | | | 21 | _ | | | 12 | | | | | | | | | _ | | | |

| Product | : | PREMIUM SPEAKER DOCK |
|-----------|---|--|
| Test Item | : | Occupied Bandwidth Data |
| Test Site | : | No.3 OATS |
| Test Mode | : | Mode 2: Transmit (802.11g 6Mbps) (2412MHz) |

| Channel No. | Frequency (MHz) | Measurement Level (kHz) | Required Limit (kHz) | Result |
|-------------|--------------------|----------------------------|-------------------------|--------|
| 1 | 2412 | 16450 | >500 | Pass |

Figure Channel 1:

| Agilent Spectrum Analyzer - Swept SA | | | | |
|--|---|--|--|--------------------------------|
| XI RF 50Ω AC Center Freq 2.412000000 (| GHz Trig: Free Bur | AVG Type: Log-Pwr | 07:21:24 PM Jul 25, 2012 TRACE 1 2 3 4 5 6 TYPE MWWWWW | Frequency |
| 10 dB/div Ref 20.00 dBm | FGain:Low #Atten: 30 dB | Mkr | 2 2.403 75 GHz -1.71 dBm | Auto Tune |
| Log 10.0 .000 | | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | 0.11 dBm | Center Fred 2.412000000 GHz |
| 20.0 -30.0 -40.0 | | - Warne | Janen marin mark for the | Start Fred 2.387000000 GH: |
| -50.0 | | | | Stop Fred 2.437000000 GH: |
| Center 2.41200 GHz #Res BW 300 kHz | #VBW 1.0 MHz | Sweep | Span 50.00 MHz 1.00 ms (1001 pts) | CF Step 5.000000 MH; |
| MKR MODE TRC SCL X | Y | FUNCTION FUNCTION WIDTH | FUNCTION VALUE | <u>Auto</u> Mar |
| $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$ | /5 GHz 6.11 dBm 75 GHz (Δ) -1.71 dBm 20 GHz (Δ) -0.08 dBm | | | Freq Offse 0 Ha |
| 7 8 9 10 11 | | | | |
| 12 //sg | | STATU | | |

| : | PREMIUM SPEAKER DOCK |
|---|--|
| : | Occupied Bandwidth Data |
| : | No.3 OATS |
| : | Mode 2: Transmit (802.11g 6Mbps) (2437MHz) |
| | :: |

| Channel No. | Frequency (MHz) | Measurement Level (kHz) | Required Limit (kHz) | Result |
|-------------|--------------------|----------------------------|-------------------------|--------|
| 6 | 2437 | 16500 | >500 | Pass |

Figure Channel 6:

| Agilent Spectrum Analyzer - Swept S | БА | |
|---|--|--|
| Center Freq 2.4370000 | OOO GHZ | ALIGNAUTO 07:26:24 PM Jul 25, 2012 Avg Type: Log-Pwr TRACE 1 2 3 4 5 6 Frequency |
| 10 dB/div Ref 20.00 dBr | PNO: Fast C High Free Run IFGain:Low #Atten: 30 dB | Mkr2 2.428 75 GHz 1.93 dBm |
| 10.0 | 2 | Center Freq 2.32 dBm 2.437000000 GHz |
| -20.0 -30.0 -40.0 | | Start Freq 2.412000000 GHz |
| -50.0 | | Stop Freq 2.462000000 GHz |
| Center 2.43700 GHz #Res BW 300 kHz | #VBW 1.0 MHz | Span 50.00 MHz Sweep 1.00 ms (1001 pts) 5.000000 MHz |
| MKR MODE TRC SCL | 2 439 10 GHz 8 32 dBm | CTION FUNCTION WIDTH FUNCTION VALUE Auto Man |
| $\begin{array}{c ccccccccccccccccccccccccccccccccccc$ | 2.428 75 GHz (Δ) 1.93 dBm 2.445 25 GHz (Δ) 1.84 dBm | Freq Offset |
| 7 8 9 10 11 | | |
| 12 MSG | | STATUS |

| Product | : | PREMIUM SPEAKER DOCK |
|-----------|---|--|
| Test Item | : | Occupied Bandwidth Data |
| Test Site | : | No.3 OATS |
| Test Mode | : | Mode 2: Transmit (802.11g 6Mbps) (2462MHz) |

| Channel No. | Frequency (MHz) | Measurement Level (kHz) | Required Limit (kHz) | Result |
|-------------|--------------------|----------------------------|-------------------------|--------|
| 11 | 2462 | 16550 | >500 | Pass |

Figure Channel 11:

| gilent Spectrum Analyzer - | Swept SA | | | | | | |
|--|--------------------------------------|----------------------|--------------|--|---------------------------------------|-----------------|-----------------------------------|
| enter Freq 2.46 | ο Ω AC 2000000 GHz | SENSE:INT | Avg Type | ALIGNAUTO : Log-Pwr | 07:37:33 PM Ju TRACE 1 2 TYPE M | 2 3 4 5 6 | Frequency |
| 0 dB/div Ref 20.0 | IFGain:Low | #Atten: 30 dB | | Mkr | DET P 1 2 2.453 70 0.72 | GHz dBm | Auto Tune |
| og 10.0 0.00 | 2 | man and | 1 | | | 2.09 dBm | Center Free 2.462000000 GH: |
| 20.0 30.0 MAYOCANDON CLAND | after and a service of the | | | have the south and a south a s | want was also all way | D. Martevyle | Start Free 2.437000000 GH |
| 0.0 | | | | | | | Stop Fre 2.487000000 GH |
| enter 2.46200 GH Res BW 300 kHz | z #VBW | (1.0 MHz | | Sweep ′ | Span 50.0 1.00 ms (100 | 0 MHz 1 pts) | CF Ster 5.000000 MH |
| R MODE TRC SCL | × 2 464 25 GHz | 8.09 dBm | FUNCTION FUN | ICTION WIDTH | FUNCTION VA | | <u>Auto</u> Mar |
| 2 N 1 f (Δ) 3 N 1 f (Δ) 4 5 5 6 | 2.453 70 GHz (Δ) 2.470 25 GHz (Δ) | 0.72 dBm 1.31 dBm | | | | | Freq Offse 0 H |
| 7 8 9 0 1 | | | | | | | |
| 2 G | | 2 | | STATUS | 3 | | |

8. **Power Density**

8.1. Test Equipment

| | Equipment | Manufacturer | Model No./Serial No. | Last Cal. |
|---|-------------------|--------------|----------------------|------------|
| | Spectrum Analyzer | R&S | FSP40 / 100170 | Jun, 2012 |
| | Spectrum Analyzer | Agilent | E4407B / US39440758 | Jun, 2012 |
| Х | Spectrum Analyzer | Agilent | N9010A / MY48030495 | Apr., 2012 |

Note:

- 1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
- 2. The test instruments marked with "X" are used to measure the final test results.

8.2. Test Setup



8.3. Limits

The transmitted power density averaged over any 1 second interval shall not be greater +8dBm in any 3kHz bandwidth.

8.4. Test Procedure

The EUT was setup according to ANSI C63.4, 2003; tested according to DTS test procedure of Jan. 2012 KDB558074 for compliance to FCC 47CFR 15.247 requirements. Set RBW= 100 kHz, VBW \geq 300KHz, SPAN to 5-30 % greater than the EBW, Scale the observed power level to an equivalent value in 3 kHz by adjusting (reducing) the measured power by a bandwidth correction factor (BWCF) where BWCF = 10log (3 kHz/100 kHz = -15.2 dB).

8.5. Uncertainty

 \pm 1.27 dB

8.6. Test Result of Power Density

| Product | : | PREMIUM SPEAKER DOCK |
|-----------|---|--|
| Test Item | : | Power Density Data |
| Test Site | : | No.3 OATS |
| Test Mode | : | Mode 1: Transmit (802.11b 1Mbps) (2412MHz) |

| Cha | annel No. | Frequency (MHz) | Measure Level (dBm) | Limit (dBm) | Result |
|-----|-----------|--------------------|------------------------|----------------|--------|
| | 1 | 2412 | -8.549 | < 8dBm | Pass |

Figure Channel 1:



| Product | : | PREMIUM SPEAKER DOCK |
|-----------|---|--|
| Test Item | : | Power Density Data |
| Test Site | : | No.3OATS |
| Test Mode | : | Mode 1: Transmit (802.11b 1Mbps) (2437MHz) |

| Channel No. | Frequency (MHz) | Measurement Level (dBm) | Required Limit (dBm) | Result |
|-------------|--------------------|----------------------------|-------------------------|--------|
| 6 | 2437 | -6.839 | < 8dBm | Pass |

Figure Channel 6:

| Agilent Spectrum Ar | nalyzer - Swept SA | | | | | | | | |
|------------------------------------|---|---------------------------|--------------------------|---------------|-----------|-----------------|---------------------|-----------------------|--|
| RL RF | F 50Ω AC | | SEI | VSE:INT | Δυσ Τνοο | ALIGNAUTO | 06:50:10 | PM Jul 25, 2012 | Frequency |
| zenter Freq Ref 10 dB/div Re | 2.437000000 f Offset -15.2 dB if 4.80 dBm | PNO: Fast 😱 IFGain:Low | Trig: Free #Atten: 30 | e Run) dB | Avg Hold: | -100/100 Mkr | 1 2.436 -6.8 | 00 GHz 39 dBm | Auto Tune |
| -5.20 | | 1 prode | 1 why | m | mm | I MA | | | Center Fred 2.437000000 GHz |
| -15.2 -25.2 | m | | | <u>}</u> | | | | | Start Fred 2.427000000 GHz |
| -35.2 | | | | | | | | - V | Stop Fred 2.447000000 GHz |
| -55.2 | | | 5 | | | | | | CF Step 2.000000 MH: <u>Auto</u> Mar |
| 75.2 | | | | | | | | | Freq Offse 0 H: |
| -85.2 | | | | | | | | | |
| Center 2.4370 #Res BW 100 | 00 GHz kHz | #VBW | 300 kHz | | | Sweep ' | Span 2 1.93 ms (| 0.00 MHz 1001 pts) | |
| ISG | | | | | | STATUS | 6 | | |

| Product | : | PREMIUM SPEAKER DOCK |
|-----------|---|--|
| Test Item | : | Power Density Data |
| Test Site | : | No.3 OATS |
| Test Mode | : | Mode 1: Transmit (802.11b 1Mbps) (2462MHz) |

| Channel No. | Frequency (MHz) | Measurement Level (dBm) | Required Limit (dBm) | Result |
|-------------|--------------------|----------------------------|-------------------------|--------|
| 11 | 2462 | -7.302 | < 8dBm | Pass |

Figure Channel 11:

| Agilent | t Spectrum A | nalyzer - Swe | ept SA | - | 105 | | 200 | | | | |
|---------|--------------|---------------|---------|----------------|------------|------------|-------------------|-----------|-----------|-----------------|-----------------|
| KXI RL | R | F 50 Ω | AC | | SE | NSE:INT | A.u.a. Tum o | | 06:58:18 | M Jul 25, 2012 | Frequency |
| Cen | ter Freq | 2.4620 | 00000 G | HZ NO: Fast | Trig: Free | Run | Avg Hold: | >100/100 | TYP | EMWWWW | |
| | | | IF | Gain:Low | #Atten: 30 | dB | | | DE | TPNNNNN | |
| | Re | f Offset -15 | 2 dB | | | | | Mkr | 1 2.462 | 98 GHz | Auto I une |
| 10 dE | Sidiv Re | f 4.80 dE | 3m | | | | | | -7.3 | 02 dBm | |
| Log | | | | | | | | | | | 0 |
| E 20 | | | | | | 1 | | | | | Center Freq |
| -0.20 | | | | 1 | | Â. | | | | | 2.462000000 GHz |
| 15.0 | | | 1 ANTWO | Mar hand | www | 1 Mar Winn | $w \sim w \sim w$ | Un Anna | | | |
| -13.2 | ň | 10 hora | l r | | 7 | r | | · \ / | wn walnet | | Start Freq |
| 25.2 | 1v | w. | 1 | | | | | \bigvee | * h.d | L. | 2.452000000 GHz |
| 52J.Z | no | | | | | - | | | | γ | |
| 35.2 | fr | | | | | | | | | ^W V(| |
| -30.2 | V | | | | | | | | | 2 | Stop Freq |
| 45.0 | | | | | | | | | | | 2.472000000 GHz |
| -4J.2 | | | | | | | | | | | |
| 65 Q | | | | | | | | | | 5 | CF Step |
| ~55.2 | | | | | | | | | | | 2.000000 MHz |
| -65.2 | | | | | | | | | | | <u>Auto</u> Man |
| 00.2 | | | | | | | | | | | |
| .75.2 | | | | | | | | | | | Freq Offset |
| 10.2 | | | | | | | | | | | 0 Hz |
| -85.2 | | | | | | | | | | | |
| 00.2 | | | | | | | | | | | |
| | | | | | | | | | | | |
| Cent | ter 2.4620 | 00 GHz | | | | | | _ | Span 2 | 0.00 MHz | |
| #Res | S BW 100 | KHZ | | #VBW | 300 KHz | | | sweep | 1.93 ms (| 1001 pts) | |
| MSG | | | | | | | | STATUS | 5 | | |

| Product | : | PREMIUM SPEAKER DOCK |
|-----------|---|--|
| Test Item | : | Power Density Data |
| Test Site | : | No.3 OATS |
| Test Mode | : | Mode 2: Transmit (802.11g 6Mbps) (2412MHz) |
| | | |

| Channel No. | Frequency (MHz) | Measure Level (dBm) | Limit (dBm) | Result |
|-------------|--------------------|------------------------|----------------|--------|
| 1 | 2412 | -10.578 | < 8dBm | Pass |

Figure Channel 1:

| Agilent Spectrum Analyzer - Swept SA | | | | |
|--|-----------------------------------|-------------------|--------------------------------------|------------------|
| (X) RL RF 50Ω AC | SENSE:INT | ALIGN AUTO | 07:24:41 PM Jul 25, 2012 | Frequency |
| Center Freq 2.412000000 GHZ PNO: Fast G IFGain:Low | ┘ Trig: Free Run #Atten: 30 dB | Avg Hold:>100/100 | DET P N N N N | Auto Tupo |
| Ref Offset -15.2 dB 10 dB/div Ref 4.80 dBm | | Mkı | 1 2.406 98 GHz -10.578 dBm | |
| | | | | Center Freq |
| -5.20 | | | | 2.412000000 GHz |
| -15.2 partitution and how marked with the second | white have been | mburnthurn | Marin Day | Start Freg |
| -25.2 | ψV | | | 2.402000000 GHz |
| 25.2 | | | VI WALL | |
| -35.2 | | | U.V. | Stop Freq |
| -45.2 | | | | 2.422000000 0112 |
| -55.2 | | | | CF Step |
| .65.2 | | | | Auto Man |
| | | | | Eren Offcet |
| -75.2 | | | | 0 Hz |
| -85.2 | | | | |
| | | | | |
| Center 2.41200 GHz #Res BW 100 kHz #VBW | 300 kHz | Sweep | Span 20.00 MHz 1.93 ms (1001 pts) | |
| MSG | | STATU | IS | |

| Product | : | PREMIUM SPEAKER DOCK |
|-----------|---|--|
| Test Item | : | Power Density Data |
| Test Site | : | No.3OATS |
| Test Mode | : | Mode 2: Transmit (802.11g 6Mbps) (2437MHz) |

| Channel No. | Frequency (MHz) | Measurement Level (dBm) | Required Limit (dBm) | Result |
|-------------|--------------------|----------------------------|-------------------------|--------|
| 6 | 2437 | -9.954 | < 8dBm | Pass |

Figure Channel 6:

| Agilent Spectrum A | nalyzer - Swept SA | | | | | | | | |
|--------------------|---------------------------------|------------------------------------|--------------------------|-------------|-----------------------|-----------------------|-----------------|---|------------------------|
| XIRL R | F 50 Ω AC | | SEI | VSE:INT | | ALIGNAUTO | 07:28:32 | PM Jul 25, 2012 | Frequency |
| Center Freq | 2.437000000 |) GHz PNO: Fast 😱 IFGain:Low | Trig: Free #Atten: 30 | Run I dB | Avg Type Avg Hold: | : Log-Pwr >100/100 | TYF DE | 2E 1 2 3 4 5 6 PE MWWWWWW T P N N N N N | |
| Re 10 dB/div Re | f Offset -15.2 dB f 4.80 dBm | | | | | Mkr | 1 2.438 -9.9 | 24 GHz 54 dBm | Auto Tune |
| | | | | | | | | | Center Fred |
| -5.20 | л Л Л | D 0. | n | 1- | 0 0 | A | 0 n | | 2.437000000 GH; |
| -15.2 | ~ mm part | | Wall Wagen | mand had | and from More the | างประการ | Marth | 7 | Start Free |
| -25.2 | | | | | | | | 4 | 2.427000000 GH |
| Mar And | | | | | | | | Win. | |
| -35.2 ** | | | | | | | | V1. | Stop Free |
| -45.2 | | | | - | | | | | 2.447000000 GH |
| -55.2 | | | | | | | | | CF Step |
| | | | | | | | | | 2.000000 MH Auto Ma |
| 65.2 | | | | | | | | | |
| -75.2 | | | | 1 | | | | | Freq Offse |
| | | | | | | | | | ОН |
| -85.2 | | | | | | | | | |
| Center 2.4370 | 0 GHz | | | | | | Span 2 | 0.00 MHz | |
| #Res BW 100 | kHz | #VBW | 300 kHz | | | Sweep | 1.93 ms (| 1001 pts) | |
| ASG | | | | | | STATUS | S | | |

| Product | : | PREMIUM SPEAKER DOCK |
|-----------|---|--|
| Test Item | : | Power Density Data |
| Test Site | : | No.3 OATS |
| Test Mode | : | Mode 2: Transmit (802.11g 6Mbps) (2462MHz) |

| Channel No. | Frequency (MHz) | Measurement Level (dBm) | Required Limit (dBm) | Result |
|-------------|--------------------|----------------------------|-------------------------|--------|
| 11 | 2462 | -9.832 | < 8dBm | Pass |

Figure Channel 11:

| Agilen | t Spectrum Ar | alyzer - Swe | pt SA | | - | | | | | | |
|--------------|---|-------------------------|-------------|---------------------------------------|--------------------------|-------------|-----------------------|------------------------|--|---|-------------------------------|
| LXI RI | - RF | = 50 Ω | AC | | SEI | VSE:INT | | ALIGN AUTO | 07:40:45 | PM Jul 25, 2012 | Erequency |
| Cen | ter Freq | 2.46200 | 00000 G | GHZ PNO: Fast 😱 Gain:Low | Trig: Free #Atten: 30 | Run I dB | Avg Type Avg Hold: | :: Log-Pwr >100/100 | TRAC TYF DE | E 1 2 3 4 5 6 E M WWWWW T P N N N N N | requeitcy |
| 10 dE Log | Ref 3/div Re | Offset -15 f 4.80 dB | .2 dB Sm | | | | 1 | Mkr | 1 2.463 -9.8 | 26 GHz 32 dBm | Auto Tune |
| -5.20 | | | | | | 1- | | | | | Center Freq |
| -15.2 | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | m | w.Am | Marna | walking | month | Mann | unnmm | mant | | |
| 25.2 | | | | | V | V | | | | | Start Freq 2.452000000 GHz |
| -20.2 | apart for a series | | | | | | | | | h. | |
| -30.2 | | | | | | | | | | v | Stop Freq 2.472000000 GHz |
| -45.2 | | | | | | | | | | | CESten |
| -55.2 | | | | | | | | | | | 2.000000 MHz Auto Man |
| -65.2 | | | | | | - | | | | | |
| -75.2 | | | | | | | | | | - | Freq Offset 0 Hz |
| -85.2 | | | | | | | | | | | |
| Cen #Bo | ter 2.4620 | 0 GHz | | #\/B\M | 200 642 | | | Swaan | Span 2 | 0.00 MHz | |
| MSG | 5 044 100 | N112 | | # V 13 V V | JUU MIZ | | | STATU | is is in the second sec | iou i hrs) | |

9. EMI Reduction Method During Compliance Testing

No modification was made during testing.