

FCC Test Report

| | |
|--------------|-------------|
| Product Name | WiFi module |
| Model No | WL960E5 |
| FCC ID. | RK9-WL960E5 |

| | |
|-----------|--|
| Applicant | CastleNet Technology Inc. |
| Address | No.64, Chung-Shan Rd. Tu-Cheng District, New Taipei City, Taiwan |

| | |
|-----------------|--------------------|
| Date of Receipt | Aug. 29, 2013 |
| Issue Date | Oct. 11, 2013 |
| Report No. | 139073R-RFUSP42V01 |
| Report Version | V1.0 |



The test results relate only to the samples tested.

The test report shall not be reproduced except in full without the written approval of QuietTek Corporation.
This report must not be used to claim product endorsement by TAF or any agency of the U.S. Government

Test Report Certification

Issue Date: Oct. 11, 2013

Report No.: 139073R-RFUSP42V01



| | |
|---------------------|---|
| Product Name | WiFi module |
| Applicant | CastleNet Technology Inc. |
| Address | No.64, Chung-Shan Rd. Tu-Cheng District, New Taipei City, Taiwan |
| Manufacturer | CastleNet Technology Inc. |
| Model No. | WL960E5 |
| EUT Rated Voltage | DC3.3V (via Mini-PCI Express slot) |
| EUT Test Voltage | AC 120V/60Hz |
| Trade Name | CastleNet |
| Applicable Standard | FCC CFR Title 47 Part 15 Subpart C: 2012 ANSI C63.4: 2003, ANSI C63.10: 2009, FCC KDB 558074 |
| Test Result | Complied |

The test results relate only to the samples tested.

The test report shall not be reproduced except in full without the written approval of Quietek Corporation.

This report must not be used to claim product endorsement by TAF or any agency of the U.S. Government

Documented By :

A handwritten signature in blue ink that appears to read "Joanne Lin".
(Senior Adm. Specialist / Joanne Lin)

Tested By :

A handwritten signature in blue ink that appears to read "Jack Hsu".
(Engineer / Jack Hsu)

Approved By :

A handwritten signature in blue ink that appears to read "Vincent Lin".
(Manager / Vincent Lin)

TABLE OF CONTENTS

| Description | Page |
|--|-----------|
| 1. GENERAL INFORMATION | 5 |
| 1.1. EUT Description..... | 5 |
| 1.2. Operational Description | 7 |
| 1.3. Tested System Details..... | 8 |
| 1.4. Configuration of Tested System | 8 |
| 1.5. EUT Exercise Software | 8 |
| 1.6. Test Facility | 9 |
| 2. Conducted Emission..... | 10 |
| 2.1. Test Equipment..... | 10 |
| 2.2. Test Setup | 10 |
| 2.3. Limits | 11 |
| 2.4. Test Procedure | 11 |
| 2.5. Uncertainty | 11 |
| 2.6. Test Result of Conducted Emission..... | 12 |
| 3. Peak Power Output | 16 |
| 3.1. Test Equipment..... | 16 |
| 3.2. Test Setup | 16 |
| 3.3. Limits | 16 |
| 3.4. Test Procedure | 16 |
| 3.5. Uncertainty | 16 |
| 3.6. Test Result of Peak Power Output..... | 17 |
| 4. Radiated Emission..... | 24 |
| 4.1. Test Equipment..... | 24 |
| 4.2. Test Setup | 25 |
| 4.3. Limits | 26 |
| 4.4. Test Procedure | 27 |
| 4.5. Uncertainty | 27 |
| 4.6. Test Result of Radiated Emission..... | 28 |
| 5. RF antenna conducted test..... | 50 |
| 5.1. Test Equipment..... | 50 |
| 5.2. Test Setup | 50 |
| 5.3. Limits | 50 |
| 5.4. Test Procedure | 50 |
| 5.5. Uncertainty | 51 |
| 5.6. Test Result of RF antenna conducted test..... | 52 |
| 6. Band Edge | 70 |
| 6.1. Test Equipment..... | 70 |
| 6.2. Test Setup | 70 |
| 6.3. Limits | 70 |
| 6.4. Test Procedure | 71 |
| 6.5. Uncertainty | 71 |
| 6.6. Test Result of Band Edge | 72 |

| | | |
|-----------|---|------------|
| 7. | Occupied Bandwidth | 72 |
| 7.1. | Test Equipment..... | 86 |
| 7.2. | Test Setup | 86 |
| 7.3. | Limits | 86 |
| 7.4. | Test Procedure | 86 |
| 7.5. | Uncertainty | 86 |
| 7.6. | Test Result of Occupied Bandwidth | 86 |
| 8. | Power Density | 105 |
| 8.1. | Test Equipment..... | 105 |
| 8.2. | Test Setup | 105 |
| 8.3. | Limits | 105 |
| 8.4. | Test Procedure | 105 |
| 8.5. | Uncertainty | 105 |
| 8.6. | Test Result of Power Density | 106 |
| 9. | EMI Reduction Method During Compliance Testing | 118 |

Attachment 1: EUT Test Photographs

Attachment 2: EUT Detailed Photographs

1. GENERAL INFORMATION

1.1. EUT Description

| | |
|--------------------|--|
| Product Name | WiFi module |
| Trade Name | CastleNet |
| Model No. | WL960E5 |
| FCC ID. | RK9-WL960E5 |
| Frequency Range | 802.11a/n-20MHz:5745-5825MHz ,802.11n-40MHz:5755-5795MHz |
| Number of Channels | 802.11a/n-20MHz: 5, n-40MHz: 2 |
| Data Speed | 802.11b: 1-11Mbps, 802.11a/g: 6-54Mbps, 802.11n: up to 450Mbps |
| Channel separation | 802.11b/g/n-20MHz: 5 MHz, 802.11a/n-20MHz: 20MHz 802.11n-40MHz: 40MHz |
| Type of Modulation | 802.11b:DSSS, DBPSK, DQPSK, CCK 802.11a/g/n: OFDM, BPSK, QPSK, 16QAM, 64QAM |
| Antenna Type | Dipole / PIFA |
| Antenna Gain | Refer to the table "Antenna List" |
| Channel Control | Auto |

Antenna List

| No. | Manufacturer | Part No. | Antenna Type | Peak Gain |
|-----|--------------|--------------------------------------|--------------|--------------------|
| 1. | Master Wave | 98619PIPF013 (TX1)(TX2)(TX3) | Dipole | 5725-5850MHz:4.17 |
| 2. | Master Wave | 98619PIPF014 (TX1)(TX2)(TX3) | Dipole | 5725-5850MHz:4.20 |
| 3 | Master Wave | 98619PIPF015 (TX1)(TX2)(TX3) | Dipole | 5725-5850MHz: 4.21 |
| 4 | Taiwan Anjie | AP11I-0001 (TX1)(TX2)(TX3) | PIFA | 5725-5850MHz:5.65 |
| 5 | Taiwan Anjie | AD11I-0003 (TX1)(TX2)(TX3) | Dipole | 5725-5850MHz:3.63 |
| 6 | Taiwan Anjie | AD11I-0004 (TX1)(TX2)(TX3) | Dipole | 5725-5850MHz:3.63 |
| 7 | Taiwan Anjie | AD11I-0005 (TX1)(TX2)(TX3) | Dipole | 5725-5850MHz:3.63 |
| 8 | Aristotle | RFA-52-P171-TF-1 (TX1)(TX2)(TX3) | Dipole | 5725-5850MHz:3.60 |
| 9 | Aristotle | RFA-52-T42-TF-200 (TX1)(TX2)(TX3) | Dipole | 5725-5850MHz:2.00 |
| 10 | Taiwan Anjie | AP11I-00003 (TX1)(TX2)(TX3) | Dipole | 5725-5850MHz:3.16 |

Note: 1.The antenna of EUT is conform to FCC 15.203

2.Only the higher gain antenna was tested and recorded in this report.

802.11a/n-20MHz Center Working Frequency of Each Channel:

| Channel | Frequency | Channel | Frequency | Channel | Frequency | Channel | Frequency |
|--------------|-----------|--------------|-----------|--------------|-----------|--------------|-----------|
| Channel 149: | 5745 MHz | Channel 153: | 5765 MHz | Channel 157: | 5785 MHz | Channel 161: | 5805 MHz |
| Channel 165: | 5825 MHz | | | | | | |

802.11n-40MHz (5G Band) Center Working Frequency of Each Channel:

| Channel | Frequency | Channel | Frequency |
|--------------|-----------|--------------|-----------|
| Channel 151: | 5755 MHz | Channel 159: | 5795 MHz |

Note:

1. This device is a WiFi module with a built-in 5GHz WLAN transceiver.
2. Regarding to the operation frequency, the lowest, middle and highest frequency are selected to perform the test.
3. At result of pretests, module supports three-channel transmission, only the worst case is shown in the report. (802.11a is chain A 、 802.11n is chain A+ chain B +chain C)
4. 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 、 802.11n(20M-BW) is 21.7Mbps and 、 802.11n(40M-BW) is 45Mbps).
5. These tests are conducted on a sample for the purpose of demonstrating compliance of 802.11a/b/g/n transmitter with Part 15 Subpart C Paragraph 15.247 of spread spectrum devices.

| | |
|-----------|---|
| Test Mode | Mode 1: Transmit (802.11b 1Mbps) |
| | Mode 2: Transmit (802.11g 6Mbps) |
| | Mode 3: Transmit - 802.11a 6Mbps |
| | Mode 4: Transmit - 802.11n-20BW_21.7Mbps(5G Band) |
| | Mode 5: Transmit - 802.11n-40BW_45Mbps(5G Band) |

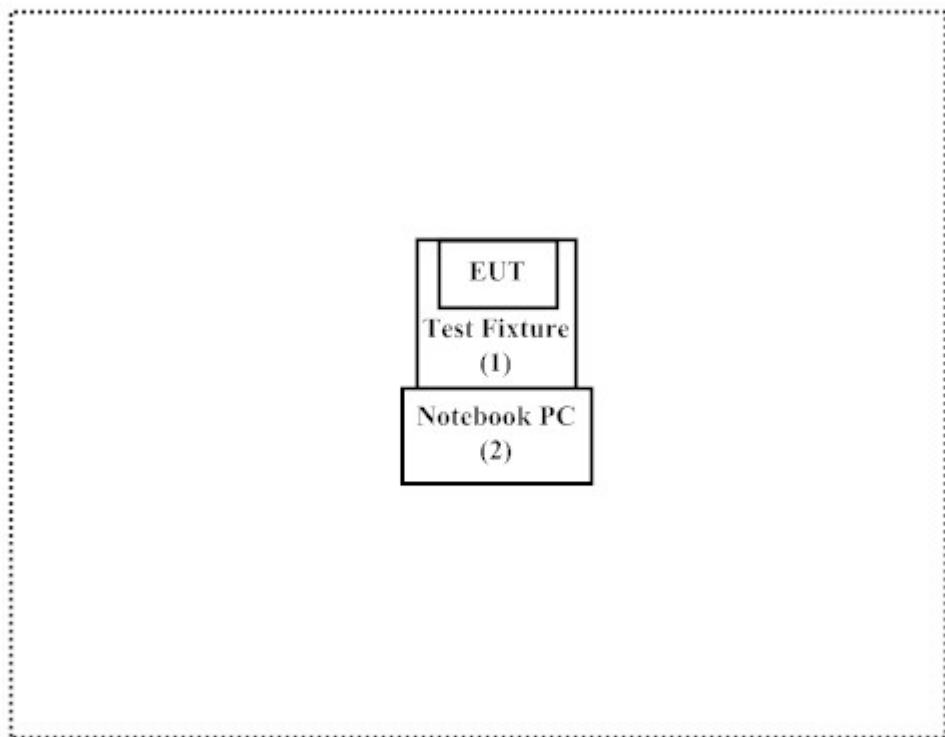
1.3. Tested System Details

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

| Product | | Manufacturer | Model No. | Serial No. | Power Cord |
|---------|--------------|--------------|-----------|------------|------------|
| 1 | Test Fixture | N/A | N/A | N/A | N/A |
| 2 | Notebook PC | N/A | N/A | N/A | N/A |

| Signal Cable Type | Signal cable Description |
|-------------------|--------------------------|
| | N/A |

1.4. Configuration of Tested System



1.5. EUT Exercise Software

- (1) Setup the EUT as shown in Section 1.4
- (2) Execute program "Mtool v6.30.130.0" on the Notebook PC.
- (3) Configure the test mode, the test channel, and the data rate.
- (4) Start transmits continually.
- (5) 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 : <http://www.quietek.com/tw/ctg/cts/accreditations.htm>

The address and introduction of QuieTek Corporation's laboratories can be founded in our Web site : <http://www.quietek.com/>

Site Description: File on
Federal Communications Commission
FCC Engineering Laboratory
7435 Oakland Mills Road
Columbia, MD 21046
Registration Number: 92195

Site Name: Quietek Corporation
Site Address: No. 5-22, Rueishu Keng, Linkou Dist.,
New Taipei City 24451, Taiwan, R.O.C.
TEL: 886-2-8601-3788 / FAX : 886-2-8601-3789
E-Mail : service@quietek.com

FCC Accreditation Number: TW1014

2. Conducted Emission

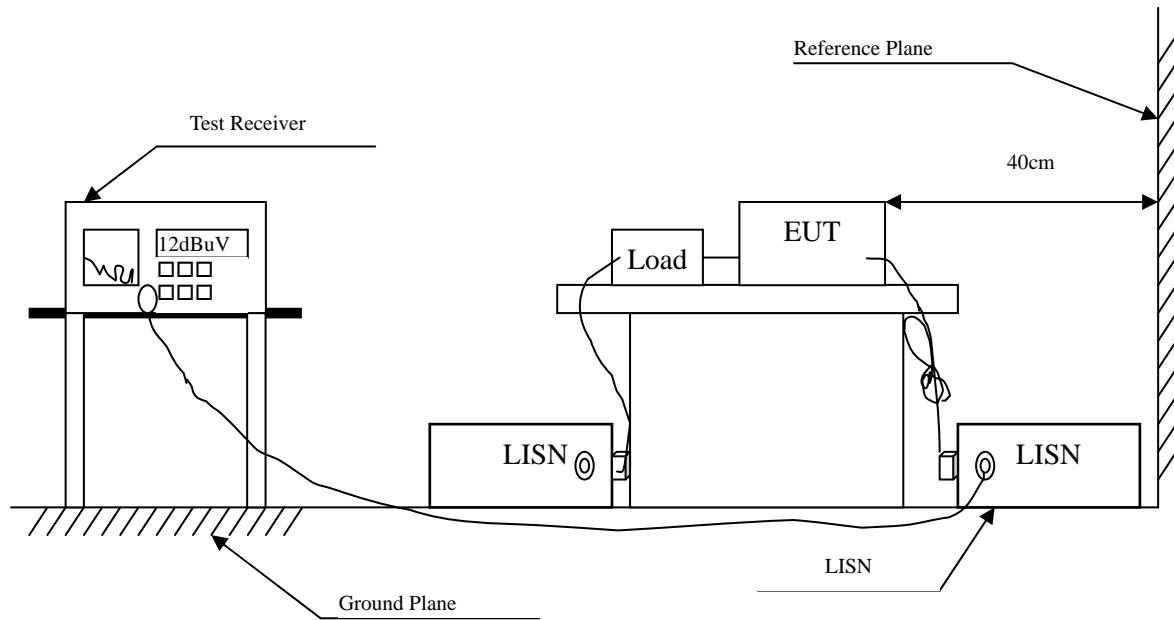
2.1. Test Equipment

| | Equipment | Manufacturer | Model No. / Serial No. | Last Cal. | Remark |
|---|--------------------------|--------------|------------------------|------------|-------------|
| X | Test Receiver | R & S | ESCS 30 / 825442/018 | Sep., 2013 | |
| X | Artificial Mains Network | R & S | ENV4200 / 848411/10 | Feb., 2013 | Peripherals |
| X | LISN | R & S | ESH3-Z5 / 825562/002 | Feb., 2013 | EUT |
| | DC LISN | Schwarzbeck | 8226 / 176 | Mar., 2013 | EUT |
| X | Pulse Limiter | R & S | ESH3-Z2 / 357.8810.52 | Feb., 2013 | |
| | No.1 Shielded Room | | | | |

Note:

1. All equipments are calibrated every one year.
2. The test instruments marked by “X” are used to measure the final test results.

2.2. Test Setup



2.3. Limits

| FCC Part 15 Subpart C Paragraph 15.207 (dBuV) Limit | | |
|--|--------|-------|
| Frequency MHz | Limits | |
| | 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 C63.10: 2009 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 : WiFi module
 Test Item : Conducted Emission Test
 Power Line : Line 1
 Test Mode : Mode 5: Transmit - 802.11n-40BW_45Mbps(5G Band) (5755MHz)_Dipole

| Frequency | Correct Factor | Reading Level | Measurement Level | Margin | Limit |
|-------------------|----------------|---------------|-------------------|---------|--------|
| MHz | dB | dBuV | dBuV | dB | dBuV |
| Line 1 | | | | | |
| Quasi-Peak | | | | | |
| 0.677 | 9.720 | 34.650 | 44.370 | -11.630 | 56.000 |
| 1.416 | 9.764 | 23.910 | 33.674 | -22.326 | 56.000 |
| 2.568 | 9.810 | 19.340 | 29.150 | -26.850 | 56.000 |
| 3.931 | 9.820 | 24.130 | 33.950 | -22.050 | 56.000 |
| 7.193 | 9.850 | 28.330 | 38.180 | -21.820 | 60.000 |
| 16.111 | 9.900 | 44.430 | 54.330 | -5.670 | 60.000 |
| Average | | | | | |
| 0.677 | 9.720 | 33.730 | 43.450 | -2.550 | 46.000 |
| 1.416 | 9.764 | 17.180 | 26.944 | -19.056 | 46.000 |
| 2.568 | 9.810 | 11.790 | 21.600 | -24.400 | 46.000 |
| 3.931 | 9.820 | 19.370 | 29.190 | -16.810 | 46.000 |
| 7.193 | 9.850 | 23.210 | 33.060 | -16.940 | 50.000 |
| 16.111 | 9.900 | 38.080 | 47.980 | -2.020 | 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 : WiFi module
 Test Item : Conducted Emission Test
 Power Line : Line 2
 Test Mode : Mode 5: Transmit - 802.11n-40BW_45Mbps(5G Band) (5755MHz)_Dipole

| Frequency | Correct Factor | Reading Level | Measurement Level | Margin | Limit |
|-------------------|----------------|---------------|-------------------|---------|--------|
| MHz | dB | dBuV | dBuV | dB | dBuV |
| Line 2 | | | | | |
| Quasi-Peak | | | | | |
| 0.681 | 9.701 | 32.680 | 42.381 | -13.619 | 56.000 |
| 0.826 | 9.717 | 22.980 | 32.697 | -23.303 | 56.000 |
| 1.634 | 9.764 | 21.560 | 31.324 | -24.676 | 56.000 |
| 3.943 | 9.810 | 24.040 | 33.850 | -22.150 | 56.000 |
| 7.045 | 9.850 | 27.690 | 37.540 | -22.460 | 60.000 |
| 17.326 | 9.990 | 44.840 | 54.830 | -5.170 | 60.000 |
| Average | | | | | |
| 0.681 | 9.701 | 26.750 | 36.451 | -9.549 | 46.000 |
| 0.826 | 9.717 | 21.480 | 31.197 | -14.803 | 46.000 |
| 1.634 | 9.764 | 17.140 | 26.904 | -19.096 | 46.000 |
| 3.943 | 9.810 | 18.940 | 28.750 | -17.250 | 46.000 |
| 7.045 | 9.850 | 21.750 | 31.600 | -18.400 | 50.000 |
| 17.326 | 9.990 | 36.990 | 46.980 | -3.020 | 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 : WiFi module
 Test Item : Conducted Emission Test
 Power Line : Line 1
 Test Mode : Mode 5: Transmit - 802.11n-40BW_45Mbps(5G Band) (5755MHz)_PIFA

| Frequency | Correct Factor | Reading Level | Measurement Level | Margin | Limit |
|-------------------|----------------|---------------|-------------------|---------|--------|
| MHz | dB | dBuV | dBuV | dB | dBuV |
| Line 1 | | | | | |
| Quasi-Peak | | | | | |
| 0.380 | 9.707 | 37.100 | 46.807 | -12.622 | 59.429 |
| 0.927 | 9.732 | 29.020 | 38.752 | -17.248 | 56.000 |
| 1.623 | 9.773 | 24.230 | 34.003 | -21.997 | 56.000 |
| 2.052 | 9.803 | 19.330 | 29.133 | -26.867 | 56.000 |
| 3.646 | 9.820 | 26.270 | 36.090 | -19.910 | 56.000 |
| 15.662 | 9.900 | 44.130 | 54.030 | -5.970 | 60.000 |
| Average | | | | | |
| 0.380 | 9.707 | 35.100 | 44.807 | -4.622 | 49.429 |
| 0.927 | 9.732 | 23.060 | 32.792 | -13.208 | 46.000 |
| 1.623 | 9.773 | 17.500 | 27.273 | -18.727 | 46.000 |
| 2.052 | 9.803 | 13.130 | 22.933 | -23.067 | 46.000 |
| 3.646 | 9.820 | 21.300 | 31.120 | -14.880 | 46.000 |
| 15.662 | 9.900 | 36.440 | 46.340 | -3.660 | 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 : WiFi module
 Test Item : Conducted Emission Test
 Power Line : Line 2
 Test Mode : Mode 5: Transmit - 802.11n-40BW_45Mbps(5G Band) (5755MHz)_PIFA

| Frequency | Correct Factor | Reading Level | Measurement Level | Margin | Limit |
|-------------------|----------------|---------------|-------------------|---------|--------|
| MHz | dB | dBuV | dBuV | dB | dBuV |
| Line 2 | | | | | |
| Quasi-Peak | | | | | |
| 0.380 | 9.687 | 40.040 | 49.727 | -9.702 | 59.429 |
| 0.677 | 9.700 | 35.900 | 45.600 | -10.400 | 56.000 |
| 0.943 | 9.722 | 29.100 | 38.822 | -17.178 | 56.000 |
| 1.224 | 9.735 | 27.240 | 36.975 | -19.025 | 56.000 |
| 3.873 | 9.810 | 25.670 | 35.480 | -20.520 | 56.000 |
| 16.720 | 9.980 | 46.870 | 56.850 | -3.150 | 60.000 |
| Average | | | | | |
| 0.380 | 9.687 | 36.100 | 45.787 | -3.642 | 49.429 |
| 0.677 | 9.700 | 31.960 | 41.660 | -4.340 | 46.000 |
| 0.943 | 9.722 | 24.210 | 33.932 | -12.068 | 46.000 |
| 1.224 | 9.735 | 23.120 | 32.855 | -13.145 | 46.000 |
| 3.873 | 9.810 | 20.540 | 30.350 | -15.650 | 46.000 |
| 16.720 | 9.980 | 36.260 | 46.240 | -3.760 | 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

3. Peak Power Output

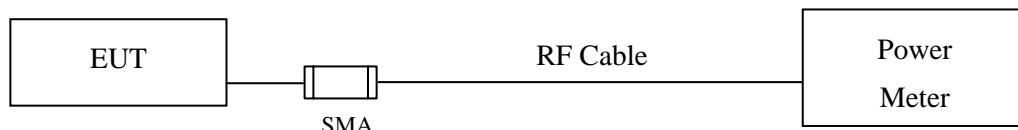
3.1. Test Equipment

| Equipment | Manufacturer | Model No./Serial No. | Last Cal. |
|----------------|--------------|----------------------|------------|
| X Power Meter | Anritsu | ML2495A/6K00003357 | May, 2013 |
| X Power Sensor | Anritsu | MA2411B/0738448 | Jun., 2013 |

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.

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 KDB 558074 for compliance to FCC 47CFR 15.247 requirements. The maximum peak conducted output power using KDB 558074 section 9.1.3 PKPM1 Peak power meter method.

3.5. Uncertainty

± 1.27 dB

3.6. Test Result of Peak Power Output

Product : WiFi module
 Test Item : Peak Power Output Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit - 802.11a 6Mbps

CHAIN A

| Channel No | Frequency (MHz) | Average Power For different Data Rate (Mbps) | | | | | | | | Peak Power | Required Limit | Result |
|------------|--------------------|---|-------|-------|-------|-------|-------|-------|------|---------------|-------------------|--------|
| | | 6 | 9 | 12 | 18 | 24 | 36 | 48 | 54 | | | |
| | | Measurement Level (dBm) | | | | | | | | | | |
| 149 | 5745 | 11.92 | -- | -- | -- | -- | -- | -- | -- | 21.44 | <30dBm | Pass |
| 157 | 5785 | 11.88 | 11.88 | 11.86 | 11.84 | 11.81 | 11.79 | 11.72 | 11.7 | 21.37 | <30dBm | Pass |
| 165 | 5825 | 11.86 | -- | -- | -- | -- | -- | -- | -- | 21.41 | <30dBm | Pass |

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

CHAIN B

| Channel No | Frequency (MHz) | Average Power For different Data Rate (Mbps) | | | | | | | | Peak Power | Required Limit | Result |
|------------|--------------------|---|------|-------|------|------|-------|-------|-------|---------------|-------------------|--------|
| | | 6 | 9 | 12 | 18 | 24 | 36 | 48 | 54 | | | |
| | | Measurement Level (dBm) | | | | | | | | | | |
| 149 | 5745 | 11.42 | -- | -- | -- | -- | -- | -- | -- | 21.21 | <30dBm | Pass |
| 157 | 5785 | 11.30 | 11.3 | 11.28 | 11.3 | 11.3 | 11.27 | 11.27 | 11.26 | 21.11 | <30dBm | Pass |
| 165 | 5825 | 11.36 | -- | -- | -- | -- | -- | -- | -- | 21.23 | <30dBm | Pass |

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

CHAIN C

| Channel No | Frequency (MHz) | Average Power For different Data Rate (Mbps) | | | | | | | | Peak Power | Required Limit | Result |
|------------|--------------------|---|-------|-------|------|-------|------|-------|-------|---------------|-------------------|--------|
| | | 6 | 9 | 12 | 18 | 24 | 36 | 48 | 54 | | | |
| | | Measurement Level (dBm) | | | | | | | | | | |
| 149 | 5745 | 11.41 | -- | -- | -- | -- | -- | -- | -- | 21.23 | <30dBm | Pass |
| 157 | 5785 | 11.42 | 11.42 | 11.41 | 11.4 | 11.41 | 11.4 | 11.39 | 11.38 | 21.20 | <30dBm | Pass |
| 165 | 5825 | 11.23 | -- | -- | -- | -- | -- | -- | -- | 21.26 | <30dBm | Pass |

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

Product : WiFi module
 Test Item : Peak Power Output Data
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit - 802.11n-20BW_21.7Mbps(5G Band)

CHAIN A

| Channel No | Frequency (MHz) | Average Power For different Data Rate (Mbps) | | | | | | | | Peak Power |
|------------|--------------------|---|------|------|------|------|-------|------|-------|---------------|
| | | 21.7 | 43.3 | 65 | 86.7 | 130 | 173.3 | 195 | 216.7 | |
| | | Measurement Level (dBm) | | | | | | | | |
| 149 | 5745 | 6.92 | -- | -- | -- | -- | -- | -- | -- | 18.54 |
| 157 | 5785 | 6.94 | 6.94 | 6.92 | 6.88 | 6.87 | 6.86 | 6.83 | 6.81 | 18.11 |
| 165 | 5825 | 6.88 | -- | -- | -- | -- | -- | -- | -- | 17.79 |

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

CHAIN B

| Channel No | Frequency (MHz) | Average Power For different Data Rate (Mbps) | | | | | | | | Peak Power |
|------------|--------------------|---|------|------|------|------|-------|------|-------|---------------|
| | | 21.7 | 43.3 | 65 | 86.7 | 130 | 173.3 | 195 | 216.7 | |
| | | Measurement Level (dBm) | | | | | | | | |
| 149 | 5745 | 6.93 | -- | -- | -- | -- | -- | -- | -- | 17.79 |
| 157 | 5785 | 6.83 | 6.82 | 6.82 | 6.8 | 6.79 | 6.77 | 6.75 | 6.75 | 17.21 |
| 165 | 5825 | 7.03 | -- | -- | -- | -- | -- | -- | -- | 17.81 |

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

CHAIN C

| Channel No | Frequency (MHz) | Average Power For different Data Rate (Mbps) | | | | | | | | Peak Power |
|------------|--------------------|---|------|------|------|-----|-------|------|-------|---------------|
| | | 21.7 | 43.3 | 65 | 86.7 | 130 | 173.3 | 195 | 216.7 | |
| | | Measurement Level (dBm) | | | | | | | | |
| 149 | 5745 | 6.72 | -- | -- | -- | -- | -- | -- | -- | 17.58 |
| 157 | 5785 | 6.93 | 6.93 | 6.92 | 6.92 | 6.9 | 6.88 | 6.86 | 6.86 | 17.71 |
| 165 | 5825 | 6.61 | -- | -- | -- | -- | -- | -- | -- | 17.21 |

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

CHAIN A+B+C

| Channel | Frequency (MHz) | Data Rate (Mbps) | Chain A Power (dBm) | Chain B Power (dBm) | Chain C Power (dBm) | Chain A+B+C Power (dBm) | Limit (dBm) | Result |
|---------|--------------------|---------------------|---------------------------|---------------------------|---------------------------|-------------------------------|----------------|--------|
| 149 | 5745 | 21.7 | 18.54 | 17.79 | 17.58 | 22.76 | <30dBm | Pass |
| 157 | 5785 | 21.7 | 18.11 | 17.21 | 17.71 | 22.46 | <30dBm | Pass |
| 165 | 5825 | 21.7 | 17.79 | 17.81 | 17.21 | 22.38 | <30dBm | Pass |

Note: Peak Power Output Value (dBm) = $10 * \text{LOG} (\text{Chain A (mW)} + \text{Chain B (mW)} + \text{Chain C (mW)})$

Product : WiFi module
 Test Item : Peak Power Output Data
 Test Site : No.3 OATS
 Test Mode : Mode 5: Transmit - 802.11n-40BW_45Mbps(5G Band)

CHAIN A

| Channel No | Frequency (MHz) | Average Power For different Data Rate (Mbps) | | | | | | | | Peak Power |
|------------|--------------------|---|-----|------|------|------|------|------|------|---------------|
| | | 45 | 90 | 135 | 180 | 270 | 360 | 405 | 450 | |
| | | Measurement Level (dBm) | | | | | | | | |
| 151 | 5755 | 7.02 | -- | -- | -- | -- | -- | -- | -- | 18.51 |
| 159 | 5795 | 6.92 | 6.9 | 6.87 | 6.86 | 6.83 | 6.83 | 6.81 | 6.79 | 18.27 |

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

CHAIN B

| Channel No | Frequency (MHz) | Average Power For different Data Rate (Mbps) | | | | | | | | Peak Power |
|------------|--------------------|---|------|------|------|------|------|------|-----|---------------|
| | | 45 | 90 | 135 | 180 | 270 | 360 | 405 | 450 | |
| | | Measurement Level (dBm) | | | | | | | | |
| 151 | 5755 | 6.93 | -- | -- | -- | -- | -- | -- | -- | 18.71 |
| 159 | 5795 | 6.94 | 6.94 | 6.93 | 6.94 | 6.93 | 6.93 | 6.92 | 6.9 | 18.66 |

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

CHAIN C

| Channel No | Frequency (MHz) | Average Power For different Data Rate (Mbps) | | | | | | | | Peak Power |
|------------|--------------------|---|------|------|------|------|------|------|------|---------------|
| | | 45 | 90 | 135 | 180 | 270 | 360 | 405 | 450 | |
| | | Measurement Level (dBm) | | | | | | | | |
| 151 | 5755 | 6.83 | -- | -- | -- | -- | -- | -- | -- | 17.97 |
| 159 | 5795 | 6.72 | 6.71 | 6.71 | 6.68 | 6.68 | 6.67 | 6.65 | 6.65 | 17.68 |

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

CHAIN A+B+C

| Channel | Frequency (MHz) | Data Rate (Mbps) | Chain A Power (dBm) | Chain B Power (dBm) | Chain C Power (dBm) | Chain A+B+C Power (dBm) | Limit (dBm) | Result |
|---------|--------------------|---------------------|---------------------------|---------------------------|---------------------------|-------------------------------|----------------|--------|
| 151 | 5755 | 45 | 18.51 | 18.71 | 17.97 | 23.18 | <30dBm | Pass |
| 159 | 5795 | HT16 | 18.27 | 18.66 | 17.68 | 22.99 | <30dBm | Pass |

Note: Peak Power Output Value (dBm) = $10 * \text{LOG} (\text{Chain A (mW)} + \text{Chain B (mW)} + \text{Chain C (mW)})$

4. Radiated Emission

4.1. Test Equipment

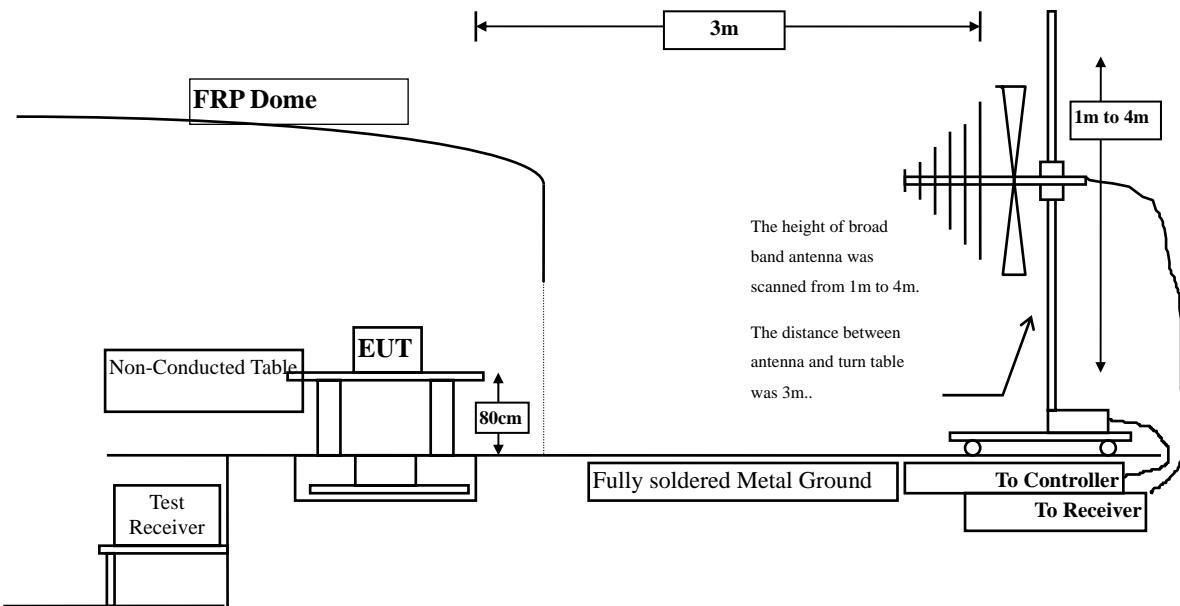
The following test equipment are used during the radiated emission test:

| Test Site | Equipment | | Manufacturer | Model No./Serial No. | Last Cal. |
|------------|-----------|-------------------|-----------------|----------------------------|------------|
| ☒ Site # 3 | X | Loop Antenna | Teseq | HLA6120 / 26739 | Jul., 2013 |
| | X | Bilog Antenna | Schaffner Chase | CBL6112B/2673 | Sep., 2013 |
| | X | Horn Antenna | Schwarzbeck | BBHA9120D/D305 | Sep., 2013 |
| | X | Horn Antenna | Schwarzbeck | BBHA9170/208 | Jul., 2013 |
| | X | Pre-Amplifier | QTK | QTK-AMP-03 / 0003 | May, 2013 |
| | X | Pre-Amplifier | QTK | AP-180C / CHM_0906076 | Sep., 2013 |
| | X | Pre-Amplifier | MITEQ | AMF-4D-180400-45-6P/925975 | Mar. 2013 |
| | X | Spectrum Analyzer | Agilent | E4407B / US39440758 | May, 2013 |
| | X | Test Receiver | R & S | ESCS 30/ 825442/018 | Sep., 2013 |
| | X | Coaxial Cable | QuieTek | QTK-CABLE/ CAB5 | Feb., 2013 |
| | X | Controller | QuieTek | QTK-CONTROLLER/ CTRL3 | N/A |
| | X | Coaxial Switch | Anritsu | MP59B/6200265729 | N/A |

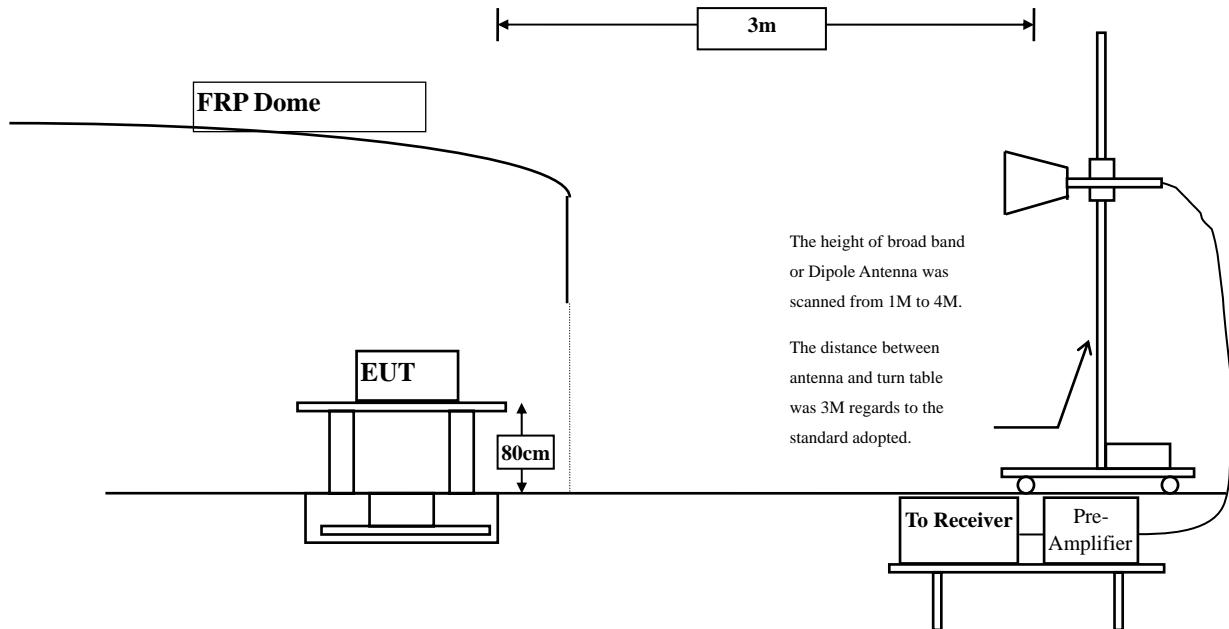
Note: 1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
2. The test instruments marked with "X" are used to measure the final test results.

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 | Field strength (microvolts/meter) | Measurement distance (meter) |
| 0.009-0.490 | 2400/F(kHz) | 300 |
| 0.490-1.705 | 24000/F(kHz) | 30 |
| 1.705-30 | 30 | 30 |
| 30-88 | 100 | 3 |
| 88-216 | 150 | 3 |
| 216-960 | 200 | 3 |
| Above 960 | 500 | 3 |

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

4.4. Test Procedure

The EUT was setup according to ANSI C63.10, 2009 and tested according to DTS test procedure of 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 C63.10:2009 on radiated measurement.

The resolution bandwidth below 30MHz setting on the field strength meter is 9kHz and 30MHz~1GHz is 120kHz and above 1GHz is 1MHz.

Radiated emission measurements below 30MHz are made using Loop Antenna and 30MHz~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 measurement frequency range from 9kHz - 10th Harmonic of fundamental was investigated.

4.5. Uncertainty

± 3.9 dB above 1GHz

± 3.8 dB below 1GHz

4.6. Test Result of Radiated Emission

Product : WiFi module
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit - 802.11a 6Mbps (5745 MHz)_Dipole

| Frequency | Correct Factor | Reading Level | Measurement Level | Margin | Limit |
|-----------|----------------|---------------|-------------------|--------|--------|
| MHz | dB | dBuV | dBuV/m | dB | dBuV/m |

Horizontal

Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 11490.000 | 15.004 | 36.153 | 51.157 | -22.843 | 74.000 |
|-----------|--------|--------|--------|---------|--------|

Average

Detector:

--

Vertical

Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 11490.000 | 16.520 | 37.260 | 53.780 | -20.220 | 74.000 |
|-----------|--------|--------|--------|---------|--------|

Average

Detector:

--

Note:

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 : WiFi module
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit - 802.11a 6Mbps (5785 MHz) _Dipole

| Frequency | Correct Factor | Reading Level | Measurement Level | Margin | Limit |
|-----------|----------------|---------------|-------------------|--------|--------|
| MHz | dB | dBuV | dBuV/m | dB | dBuV/m |

Horizontal

Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 11570.000 | 15.207 | 36.150 | 51.357 | -22.643 | 74.000 |
|-----------|--------|--------|--------|---------|--------|

Average

Detector:

--

Vertical

Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 11570.000 | 16.573 | 37.140 | 53.712 | -20.288 | 74.000 |
|-----------|--------|--------|--------|---------|--------|

Average

Detector:

--

Note:

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 : WiFi module
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit - 802.11a 6Mbps (5825MHz)_Dipole

| Frequency | Correct Factor | Reading Level | Measurement Level | Margin | Limit |
|-----------|----------------|---------------|-------------------|--------|--------|
| MHz | dB | dBuV | dBuV/m | dB | dBuV/m |

Horizontal

Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 11650.000 | 13.504 | 36.470 | 49.974 | -24.026 | 74.000 |
|-----------|--------|--------|--------|---------|--------|

Average

Detector:

--

Vertical

Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 11650.000 | 14.959 | 37.140 | 52.099 | -21.901 | 74.000 |
|-----------|--------|--------|--------|---------|--------|

Average

Detector:

--

Note:

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 : WiFi module
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit - 802.11n-20BW_21.7Mbps(5G Band) (5745MHz)_Dipole

| Frequency | Correct Factor | Reading Level | Measurement Level | Margin | Limit |
|-----------|----------------|---------------|-------------------|--------|--------|
| MHz | dB | dBuV | dBuV/m | dB | dBuV/m |

Horizontal

Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 11490.000 | 15.004 | 36.140 | 51.144 | -22.856 | 74.000 |
|-----------|--------|--------|--------|---------|--------|

Average

Detector:

--

Vertical

Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 11490.000 | 16.520 | 37.140 | 53.660 | -20.340 | 74.000 |
|-----------|--------|--------|--------|---------|--------|

Average

Detector:

--

Note:

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 : WiFi module
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit - 802.11n-20BW_21.7Mbps(5G Band) (5785MHz)_Dipole

| Frequency | Correct Factor | Reading Level | Measurement Level | Margin | Limit |
|-----------|----------------|---------------|-------------------|--------|--------|
| MHz | dB | dBuV | dBuV/m | dB | dBuV/m |

Horizontal

Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 11570.000 | 15.207 | 36.170 | 51.377 | -22.623 | 74.000 |
|-----------|--------|--------|--------|---------|--------|

Average

Detector:

--

Vertical

Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 11570.000 | 16.573 | 36.670 | 53.242 | -20.758 | 74.000 |
|-----------|--------|--------|--------|---------|--------|

Average

Detector:

--

Note:

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 : WiFi module
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit - 802.11n-20BW_21.7Mbps(5G Band) (5825 MHz)_Dipole

| Frequency | Correct Factor | Reading Level | Measurement Level | Margin | Limit |
|-----------|----------------|---------------|-------------------|--------|--------|
| MHz | dB | dBuV | dBuV/m | dB | dBuV/m |

Horizontal

Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 11650.000 | 13.504 | 36.490 | 49.994 | -24.006 | 74.000 |
|-----------|--------|--------|--------|---------|--------|

Average

Detector:

--

Vertical

Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 11650.000 | 14.959 | 36.890 | 51.849 | -22.151 | 74.000 |
|-----------|--------|--------|--------|---------|--------|

Average

Detector:

--

Note:

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 : WiFi module
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 5: Transmit - 802.11n-40BW_45Mbps(5G Band) (5755MHz)_Dipole

| Frequency | Correct Factor | Reading Level | Measurement Level | Margin | Limit |
|-----------|----------------|---------------|-------------------|--------|--------|
| MHz | dB | dBuV | dBuV/m | dB | dBuV/m |

Horizontal

Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 11510.000 | 15.044 | 37.010 | 52.053 | -21.947 | 74.000 |
|-----------|--------|--------|--------|---------|--------|

Average

Detector:

--

Vertical

Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 11510.000 | 16.536 | 36.890 | 53.426 | -20.574 | 74.000 |
|-----------|--------|--------|--------|---------|--------|

Average

Detector:

--

Note:

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 : WiFi module
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 5: Transmit - 802.11n-40BW_45Mbps(5G Band) (5795MHz)_Dipole

| Frequency | Correct Factor | Reading Level | Measurement Level | Margin | Limit |
|-----------|----------------|---------------|-------------------|--------|--------|
| MHz | dB | dBuV | dBuV/m | dB | dBuV/m |

Horizontal

Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 11590.000 | 15.364 | 36.890 | 52.254 | -21.746 | 74.000 |
|-----------|--------|--------|--------|---------|--------|

Average

Detector:

--

Vertical

Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 11590.000 | 16.687 | 36.890 | 53.577 | -20.423 | 74.000 |
|-----------|--------|--------|--------|---------|--------|

Average

Detector:

--

Note:

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 : WiFi module
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit - 802.11a 6Mbps (5745 MHz)_PIFA

| Frequency | Correct Factor | Reading Level | Measurement Level | Margin | Limit |
|-----------|----------------|---------------|-------------------|--------|--------|
| MHz | dB | dBuV | dBuV/m | dB | dBuV/m |

Horizontal

Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 11490.000 | 17.106 | 36.080 | 53.187 | -20.813 | 74.000 |
|-----------|--------|--------|--------|---------|--------|

Average

Detector:

--

Vertical

Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 11490.000 | 18.034 | 38.190 | 56.225 | -17.775 | 74.000 |
|-----------|--------|--------|--------|---------|--------|

Average

Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 11490.000 | 18.034 | 24.990 | 43.025 | -10.975 | 54.000 |
|-----------|--------|--------|--------|---------|--------|

Note:

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 : WiFi module
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit - 802.11a 6Mbps (5785MHz)_PIFA

| Frequency | Correct Factor | Reading Level | Measurement Level | Margin | Limit |
|-----------|----------------|---------------|-------------------|--------|--------|
| MHz | dB | dBuV | dBuV/m | dB | dBuV/m |

Horizontal

Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 11570.000 | 16.809 | 36.140 | 52.949 | -21.051 | 74.000 |
|-----------|--------|--------|--------|---------|--------|

Average

Detector:

--

Vertical

Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 11570.000 | 17.698 | 39.900 | 57.598 | -16.402 | 74.000 |
|-----------|--------|--------|--------|---------|--------|

Average

Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 11570.000 | 17.698 | 26.210 | 43.908 | -10.092 | 54.000 |
|-----------|--------|--------|--------|---------|--------|

Note:

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 : WiFi module
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit - 802.11a 6Mbps (5825MHz)_PIFA

| Frequency | Correct Factor | Reading Level | Measurement Level | Margin | Limit |
|-----------|----------------|---------------|-------------------|--------|--------|
| MHz | dB | dBuV | dBuV/m | dB | dBuV/m |

Horizontal

Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 11650.000 | 16.158 | 36.660 | 52.818 | -21.182 | 74.000 |
|-----------|--------|--------|--------|---------|--------|

Average

Detector:

--

Vertical

Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 11650.000 | 17.274 | 39.290 | 56.565 | -17.435 | 74.000 |
|-----------|--------|--------|--------|---------|--------|

Average

Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 11650.000 | 17.274 | 25.660 | 42.935 | -11.065 | 54.000 |
|-----------|--------|--------|--------|---------|--------|

Note:

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 : WiFi module
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit - 802.11n-20BW_21.7Mbps(5G Band) (5745MHz)_PIFA

| Frequency | Correct Factor | Reading Level | Measurement Level | Margin | Limit |
|-----------|----------------|---------------|-------------------|--------|--------|
| MHz | dB | dBuV | dBuV/m | dB | dBuV/m |

Horizontal

Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 11490.000 | 17.106 | 34.720 | 51.827 | -22.173 | 74.000 |
|-----------|--------|--------|--------|---------|--------|

Average

Detector:

--

Vertical

Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 11490.000 | 18.034 | 36.070 | 54.105 | -19.895 | 74.000 |
|-----------|--------|--------|--------|---------|--------|

Average

Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 11490.000 | 18.034 | 23.720 | 41.755 | -12.245 | 54.000 |
|-----------|--------|--------|--------|---------|--------|

Note:

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 : WiFi module
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit - 802.11n-20BW_21.7Mbps(5G Band) (5785MHz)_PIFA

| Frequency | Correct Factor | Reading Level | Measurement Level | Margin | Limit |
|-----------|----------------|---------------|-------------------|--------|--------|
| MHz | dB | dBuV | dBuV/m | dB | dBuV/m |

Horizontal

Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 11570.000 | 16.809 | 34.670 | 51.479 | -22.521 | 74.000 |
|-----------|--------|--------|--------|---------|--------|

Average

Detector:

--

Vertical

Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 11570.000 | 17.698 | 36.520 | 54.218 | -19.782 | 74.000 |
|-----------|--------|--------|--------|---------|--------|

Average

Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 11570.000 | 17.698 | 23.730 | 41.428 | -12.572 | 54.000 |
|-----------|--------|--------|--------|---------|--------|

Note:

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 : WiFi module
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit - 802.11n-20BW_21.7Mbps(5G Band) (5825MHz)_PIFA

| Frequency | Correct Factor | Reading Level | Measurement Level | Margin | Limit |
|-----------|----------------|---------------|-------------------|--------|--------|
| MHz | dB | dBuV | dBuV/m | dB | dBuV/m |

Horizontal

Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 11650.000 | 16.158 | 34.430 | 50.588 | -23.412 | 74.000 |
|-----------|--------|--------|--------|---------|--------|

Average

Detector:

--

Vertical

Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 11650.000 | 17.274 | 36.270 | 53.545 | -20.455 | 74.000 |
|-----------|--------|--------|--------|---------|--------|

Average

Detector:

--

Note:

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 : WiFi module
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 5: Transmit - 802.11n-40BW_45Mbps(5G Band) (5755MHz)_PIFA

| Frequency MHz | Correct Factor | Reading Level dB | Measurement Level dBuV/m | Margin dB | Limit dBuV/m |
|------------------|-------------------|------------------------|--------------------------------|--------------|-----------------|
|------------------|-------------------|------------------------|--------------------------------|--------------|-----------------|

Horizontal

Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 11510.000 | 17.124 | 35.060 | 52.184 | -21.816 | 74.000 |
|-----------|--------|--------|--------|---------|--------|

Average

Detector:

--

Vertical

Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 11510.000 | 18.081 | 35.880 | 53.961 | -20.039 | 74.000 |
|-----------|--------|--------|--------|---------|--------|

Average

Detector:

--

Note:

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 : WiFi module
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 5: Transmit - 802.11n-40BW_45Mbps(5G Band) (5795MHz)_PIFA

| Frequency | Correct Factor | Reading Level | Measurement Level | Margin | Limit |
|-----------|----------------|---------------|-------------------|--------|--------|
| MHz | dB | dBuV | dBuV/m | dB | dBuV/m |

Horizontal

Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 11590.000 | 16.701 | 35.510 | 52.210 | -21.790 | 74.000 |
|-----------|--------|--------|--------|---------|--------|

Average

Detector:

--

Vertical

Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 11590.000 | 17.567 | 37.650 | 55.216 | -18.784 | 74.000 |
|-----------|--------|--------|--------|---------|--------|

Average

Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 11590.000 | 17.567 | 22.630 | 40.196 | -13.804 | 54.000 |
|-----------|--------|--------|--------|---------|--------|

Note:

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 : WiFi module
 Test Item : General Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit - 802.11a 6Mbps (5785MHz) _Dipole

| Frequency | Correct Factor | Reading Level | Measurement Level | Margin | Limit |
|-------------------|----------------|---------------|-------------------|---------|--------|
| MHz | dB | dBuV | dBuV/m | dB | dBuV/m |
| Horizontal | | | | | |
| 99.840 | -9.873 | 43.521 | 33.648 | -9.852 | 43.500 |
| 191.020 | -9.679 | 50.186 | 40.507 | -2.993 | 43.500 |
| 398.600 | 0.879 | 40.230 | 41.109 | -4.891 | 46.000 |
| 598.420 | 3.524 | 29.688 | 33.212 | -12.788 | 46.000 |
| 792.420 | 6.391 | 30.253 | 36.644 | -9.356 | 46.000 |
| 961.200 | 6.810 | 24.695 | 31.505 | -22.495 | 54.000 |
| Vertical | | | | | |
| 78.500 | -5.604 | 37.341 | 31.737 | -8.263 | 40.000 |
| 144.460 | -5.503 | 42.027 | 36.524 | -6.976 | 43.500 |
| 264.740 | -5.071 | 40.277 | 35.207 | -10.793 | 46.000 |
| 398.600 | -2.371 | 40.230 | 37.859 | -8.141 | 46.000 |
| 530.520 | 1.192 | 28.417 | 29.609 | -16.391 | 46.000 |
| 676.020 | 0.451 | 33.019 | 33.471 | -12.529 | 46.000 |

Note:

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.
8. No emission found between lowest internal used/generated frequency to 30MHz.

Product : WiFi module
 Test Item : General Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit - 802.11n-20BW_21.7Mbps(5G Band) (5785MHz)_Dipole

| Frequency | Correct Factor | Reading Level | Measurement Level | Margin | Limit |
|-------------------|----------------|---------------|-------------------|---------|--------|
| MHz | dB | dBuV | dBuV/m | dB | dBuV/m |
| Horizontal | | | | | |
| 99.840 | -9.873 | 43.521 | 33.648 | -9.852 | 43.500 |
| 245.340 | -6.478 | 41.982 | 35.504 | -10.496 | 46.000 |
| 375.320 | 0.918 | 31.667 | 32.585 | -13.415 | 46.000 |
| 530.520 | 3.062 | 28.417 | 31.479 | -14.521 | 46.000 |
| 676.020 | 2.841 | 33.019 | 35.861 | -10.139 | 46.000 |
| 792.420 | 6.391 | 30.253 | 36.644 | -9.356 | 46.000 |
| Vertical | | | | | |
| 99.840 | -6.063 | 43.521 | 37.458 | -6.042 | 43.500 |
| 204.600 | -5.473 | 45.329 | 39.856 | -3.644 | 43.500 |
| 398.600 | -2.371 | 40.230 | 37.859 | -8.141 | 46.000 |
| 530.520 | 1.192 | 28.417 | 29.609 | -16.391 | 46.000 |
| 676.020 | 0.451 | 33.019 | 33.471 | -12.529 | 46.000 |
| 792.420 | 2.681 | 30.253 | 32.934 | -13.066 | 46.000 |

Note:

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.
8. No emission found between lowest internal used/generated frequency to 30MHz.

Product : WiFi module
 Test Item : General Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 5: Transmit - 802.11n-40BW_45Mbps(5G Band) (5795MHz)_Dipole

| Frequency | Correct | Reading | Measurement | Margin | Limit |
|-------------------|---------|---------|-------------|---------|--------|
| | Factor | Level | Level | dB | dBuV/m |
| MHz | dB | dBuV | dBuV/m | | |
| Horizontal | | | | | |
| 99.840 | -9.873 | 43.521 | 33.648 | -9.852 | 43.500 |
| 191.020 | -9.679 | 50.186 | 40.507 | -2.993 | 43.500 |
| 398.600 | 0.879 | 40.230 | 41.109 | -4.891 | 46.000 |
| 598.420 | 3.524 | 29.688 | 33.212 | -12.788 | 46.000 |
| 749.740 | 3.963 | 27.689 | 31.652 | -14.348 | 46.000 |
| 932.100 | 7.270 | 25.014 | 32.284 | -13.716 | 46.000 |
| Vertical | | | | | |
| 99.840 | -6.063 | 43.521 | 37.458 | -6.042 | 43.500 |
| 204.600 | -5.473 | 45.329 | 39.856 | -3.644 | 43.500 |
| 400.540 | -2.868 | 37.463 | 34.595 | -11.405 | 46.000 |
| 530.520 | 1.192 | 28.417 | 29.609 | -16.391 | 46.000 |
| 676.020 | 0.451 | 33.019 | 33.471 | -12.529 | 46.000 |
| 792.420 | 2.681 | 30.307 | 32.988 | -13.012 | 46.000 |

Note:

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.
8. No emission found between lowest internal used/generated frequency to 30MHz.

Product : WiFi module
 Test Item : General Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit - 802.11a 6Mbps (5785MHz) _PIFA

| Frequency | Correct Factor | Reading Level | Measurement Level | Margin | Limit |
|-------------------|----------------|---------------|-------------------|---------|--------|
| MHz | dB | dBuV | dBuV/m | dB | dBuV/m |
| Horizontal | | | | | |
| 171.620 | -10.242 | 41.640 | 31.398 | -12.102 | 43.500 |
| 249.220 | -6.014 | 41.892 | 35.878 | -10.122 | 46.000 |
| 664.380 | 2.062 | 29.784 | 31.846 | -14.154 | 46.000 |
| 745.860 | 3.308 | 27.596 | 30.904 | -15.096 | 46.000 |
| 800.180 | 5.141 | 25.635 | 30.776 | -15.224 | 46.000 |
| 901.060 | 5.591 | 26.417 | 32.008 | -13.992 | 46.000 |
| Vertical | | | | | |
| 99.840 | -0.021 | 34.578 | 34.557 | -8.943 | 43.500 |
| 152.220 | -6.215 | 40.293 | 34.078 | -9.422 | 43.500 |
| 691.540 | 2.421 | 31.719 | 34.140 | -11.860 | 46.000 |
| 769.140 | 2.923 | 27.059 | 29.982 | -16.018 | 46.000 |
| 934.040 | 5.792 | 26.441 | 32.233 | -13.767 | 46.000 |
| 963.140 | 7.604 | 28.515 | 36.119 | -17.881 | 54.000 |

Note:

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.
8. No emission found between lowest internal used/generated frequency to 30MHz.

Product : WiFi module
 Test Item : General Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit - 802.11n-20BW_21.7Mbps(5G Band) (5785 MHz)_PIFA

| Frequency | Correct Factor | Reading Level | Measurement Level | Margin | Limit |
|-------------------|----------------|---------------|-------------------|---------|--------|
| MHz | dB | dBuV | dBuV/m | dB | dBuV/m |
| Horizontal | | | | | |
| 173.560 | -9.954 | 40.698 | 30.745 | -12.755 | 43.500 |
| 262.800 | -5.013 | 41.216 | 36.203 | -9.797 | 46.000 |
| 664.380 | 2.062 | 29.377 | 31.439 | -14.561 | 46.000 |
| 745.860 | 3.308 | 26.808 | 30.116 | -15.884 | 46.000 |
| 800.180 | 5.141 | 24.507 | 29.648 | -16.352 | 46.000 |
| 901.060 | 5.591 | 27.977 | 33.568 | -12.432 | 46.000 |
| Vertical | | | | | |
| 152.220 | -6.215 | 39.562 | 33.347 | -10.153 | 43.500 |
| 499.480 | -0.852 | 29.460 | 28.608 | -17.392 | 46.000 |
| 689.600 | 2.538 | 27.963 | 30.501 | -15.499 | 46.000 |
| 769.140 | 2.923 | 27.043 | 29.966 | -16.034 | 46.000 |
| 887.480 | 2.544 | 26.325 | 28.869 | -17.131 | 46.000 |
| 968.960 | 8.191 | 25.887 | 34.078 | -19.922 | 54.000 |

Note:

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.
8. No emission found between lowest internal used/generated frequency to 30MHz.

Product : WiFi module
 Test Item : General Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 5: Transmit - 802.11n-40BW_45Mbps(5G Band) (5795MHz)_PIFA

| Frequency | Correct | Reading | Measurement | Margin | Limit |
|-------------------|---------|---------|-------------|---------|--------|
| | Factor | Level | Level | | |
| MHz | dB | dBuV | dBuV/m | dB | dBuV/m |
| Horizontal | | | | | |
| 173.560 | -9.954 | 40.728 | 30.775 | -12.725 | 43.500 |
| 262.800 | -5.013 | 41.204 | 36.191 | -9.809 | 46.000 |
| 612.000 | 3.819 | 24.915 | 28.734 | -17.266 | 46.000 |
| 745.860 | 3.308 | 26.051 | 29.359 | -16.641 | 46.000 |
| 901.060 | 5.591 | 26.942 | 32.533 | -13.467 | 46.000 |
| 968.960 | 6.981 | 23.314 | 30.295 | -23.705 | 54.000 |
| Vertical | | | | | |
| 152.220 | -6.215 | 40.503 | 34.288 | -9.212 | 43.500 |
| 499.480 | -0.852 | 28.065 | 27.213 | -18.787 | 46.000 |
| 689.600 | 2.538 | 26.923 | 29.461 | -16.539 | 46.000 |
| 769.140 | 2.923 | 27.904 | 30.827 | -15.173 | 46.000 |
| 866.140 | 0.656 | 27.665 | 28.321 | -17.679 | 46.000 |
| 939.860 | 6.450 | 28.879 | 35.329 | -10.671 | 46.000 |

Note:

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.
8. No emission found between lowest internal used/generated frequency to 30MHz.

5. RF antenna conducted test

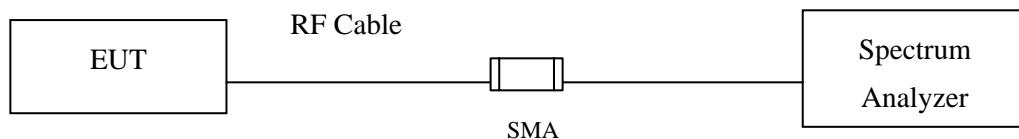
5.1. Test Equipment

| | Equipment | Manufacturer | Model No./Serial No. | Last Cal. |
|---|-------------------|--------------|----------------------|------------|
| X | Spectrum Analyzer | R&S | FSP40 / 100170 | Jun., 2013 |
| | Spectrum Analyzer | Agilent | E4407B / US39440758 | Jun., 2013 |
| | Spectrum Analyzer | Agilent | N9010A / MY48030495 | Apr., 2013 |

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 KDB558074 for compliance to FCC 47CFR 15.247 requirements.

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

5.5. Uncertainty

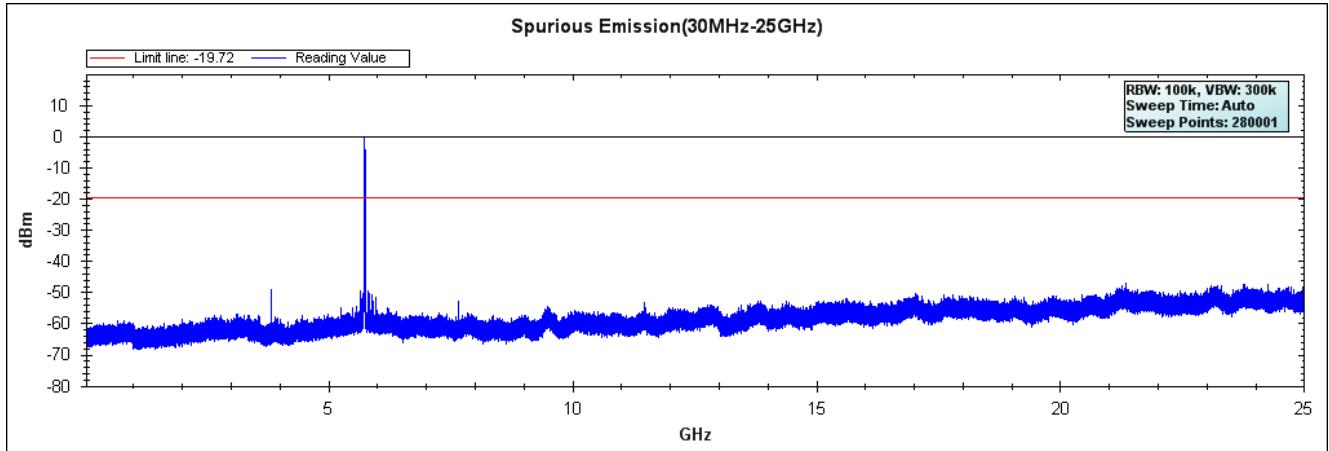
The measurement uncertainty

Conducted is defined as $\pm 1.27\text{dB}$

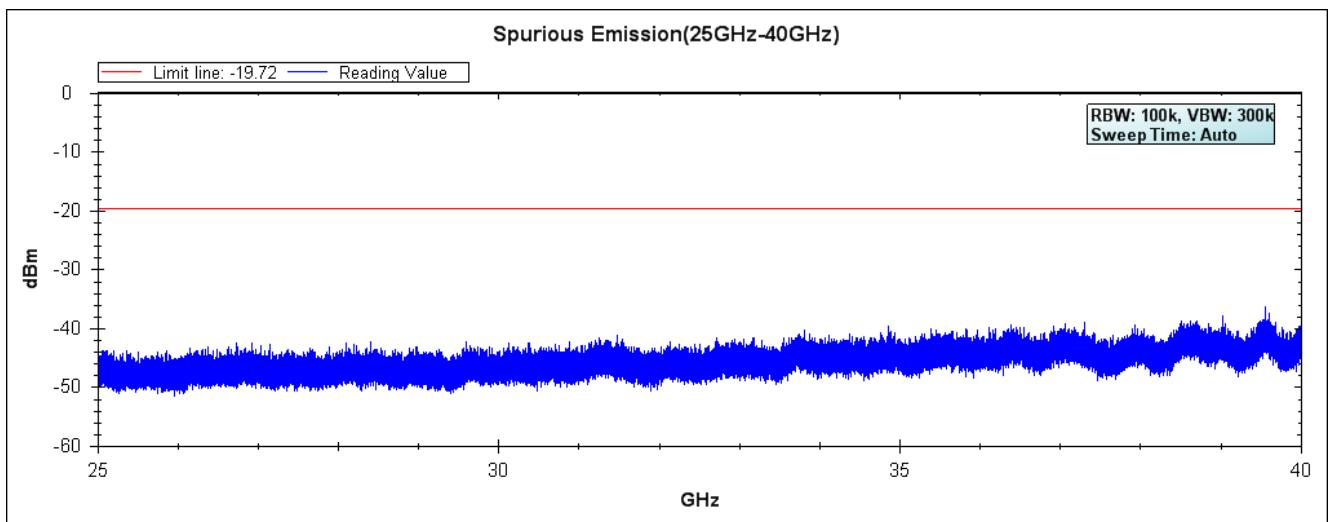
5.6. Test Result of RF antenna conducted test

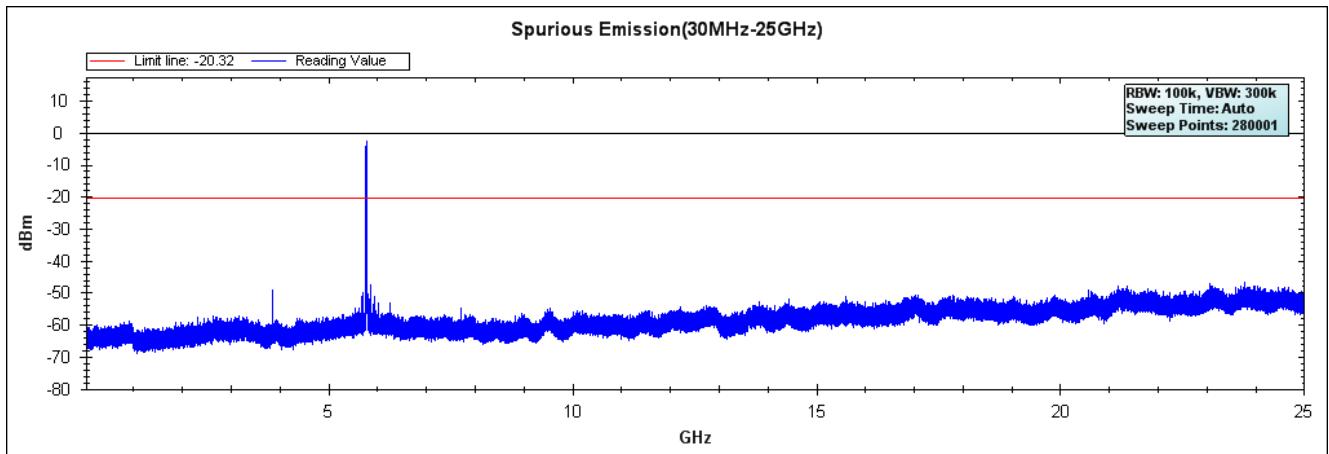
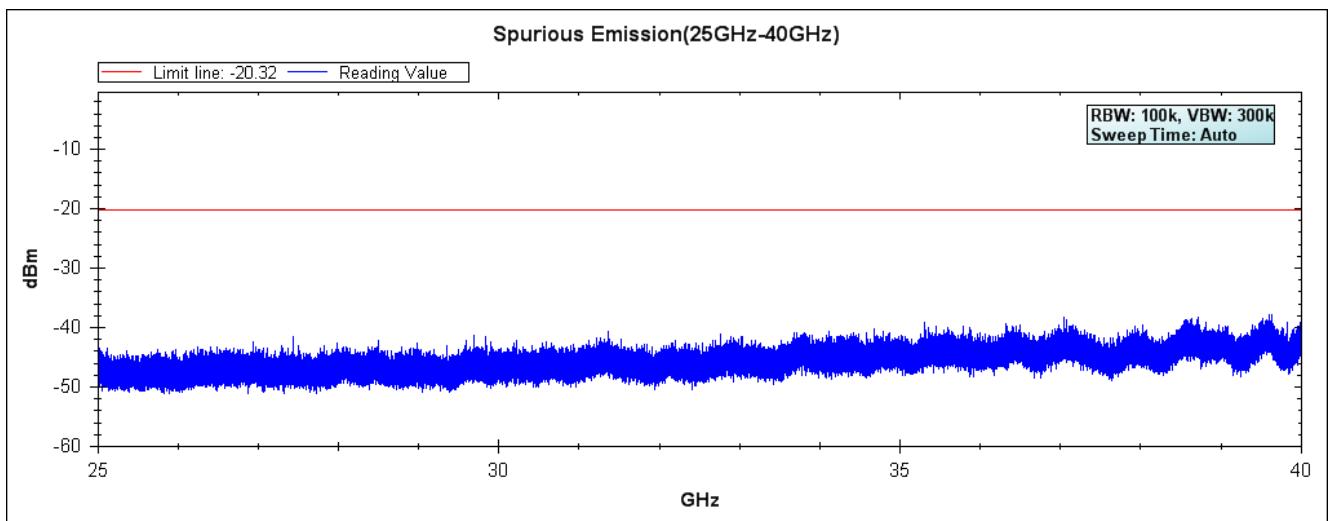
Product : WiFi module
Test Item : RF Antenna Conducted Spurious
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit - 802.11a 6Mbps

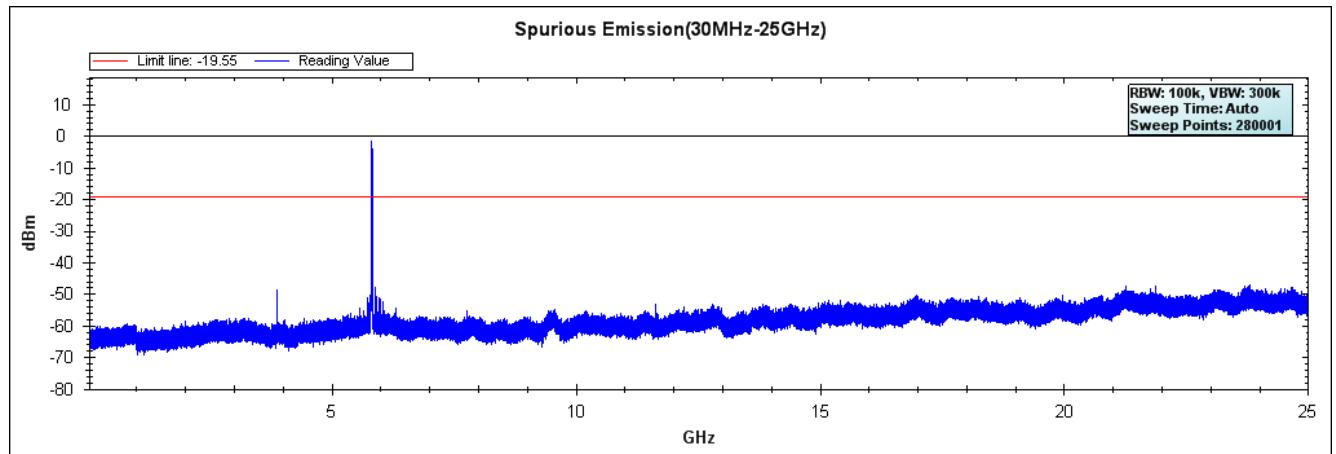
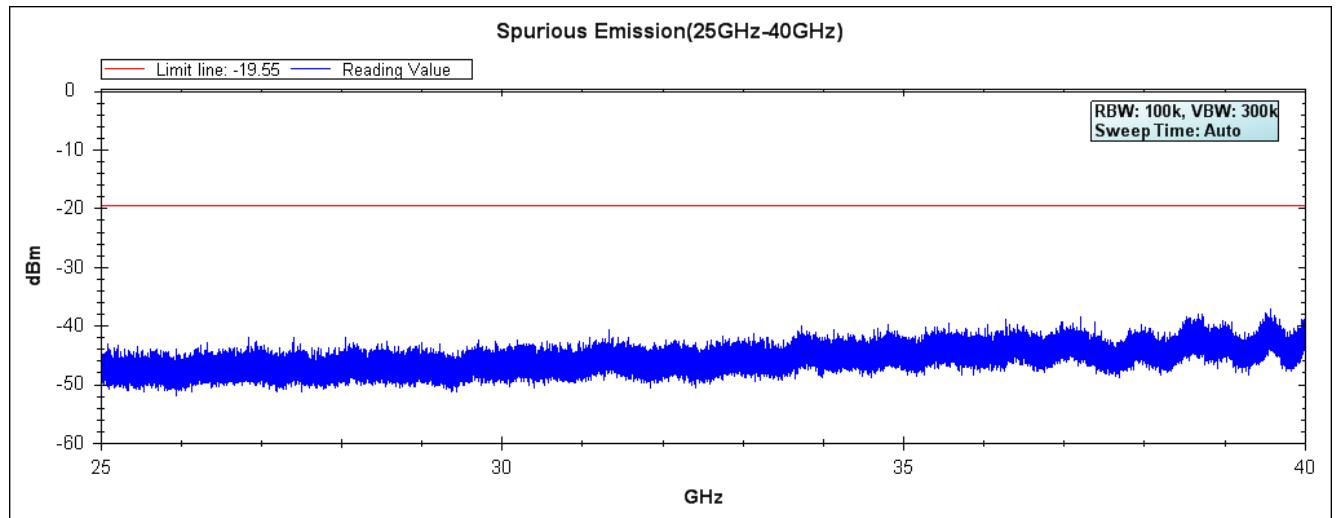
Channel 149 (5745MHz) 30MHz -25GHz-Chain A



Channel 149 (5745MHz) 25GHz -40GHz-Chain A

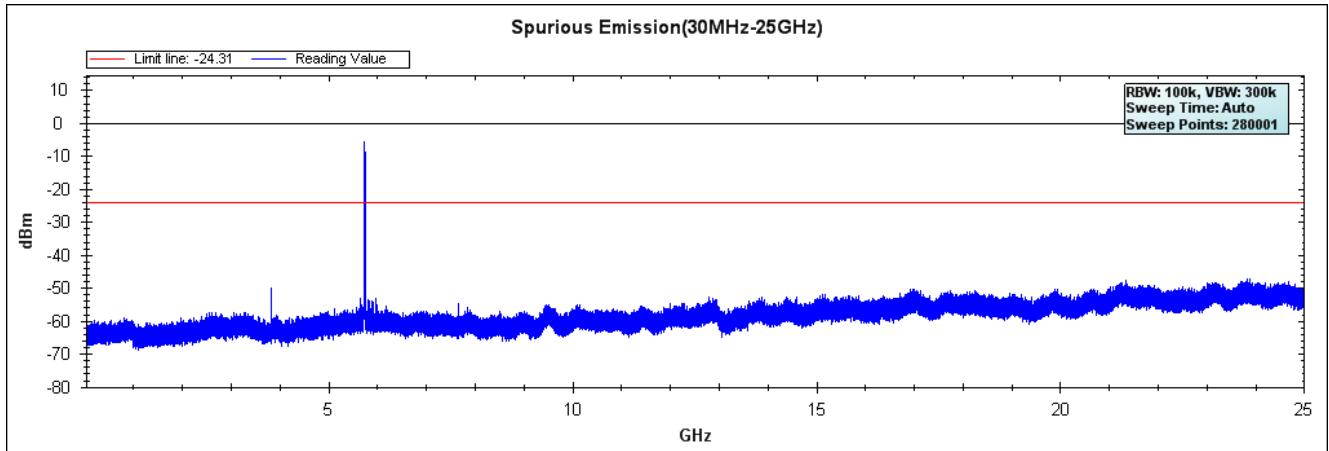


Channel 157 (5785MHz) 30MHz -25GHz-Chain A**Channel 157 (5785MHz) 25GHz -40GHz-Chain A**

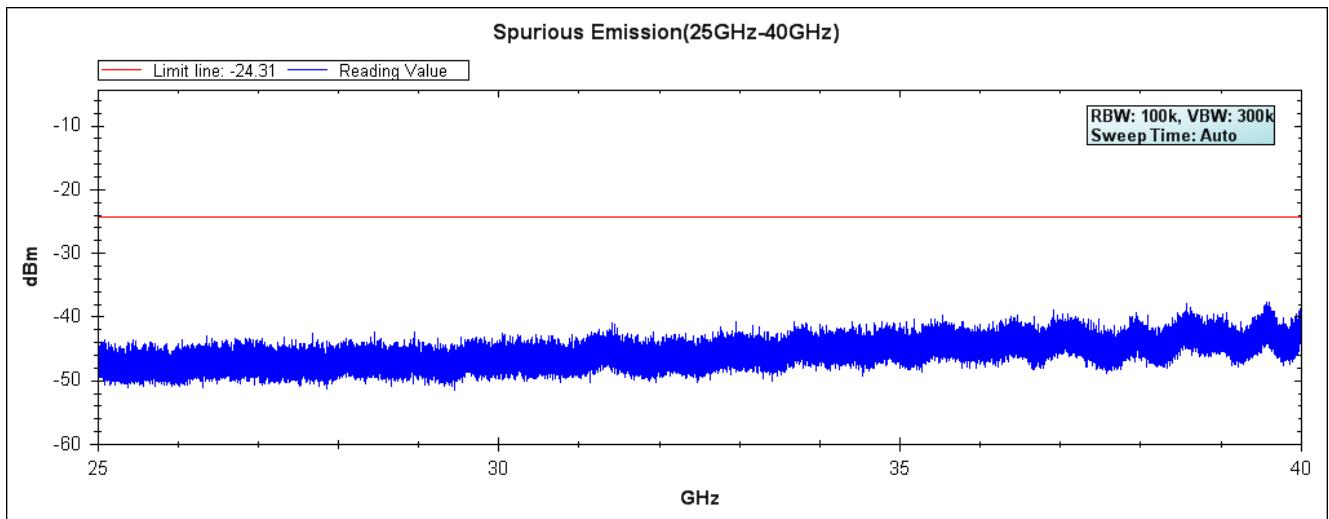
Channel 165 (5825MHz) 30MHz -25GHz-Chain A**Channel 165 (5825MHz) 25GHz -40GHz-Chain A**

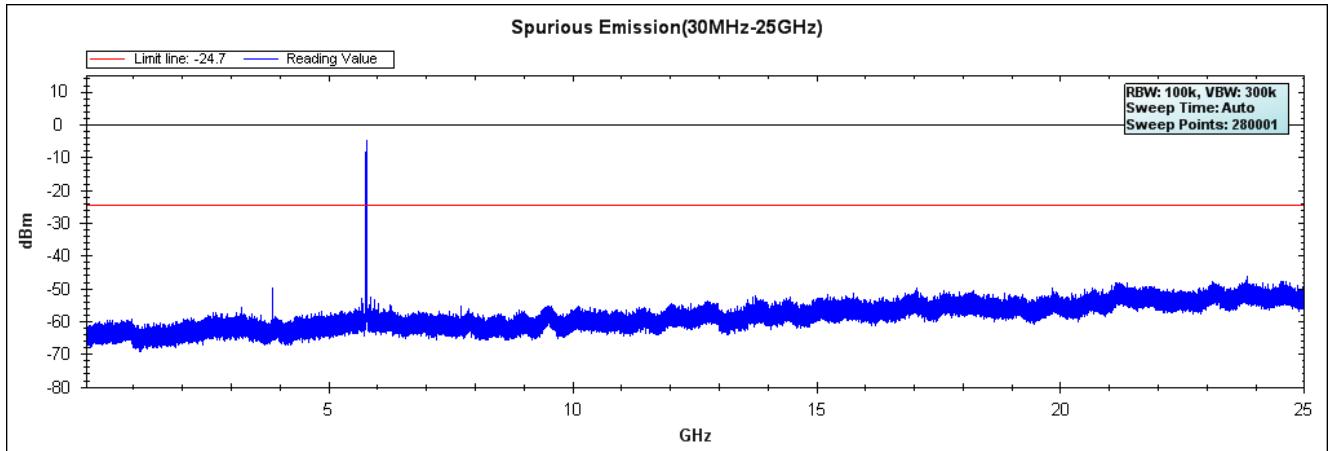
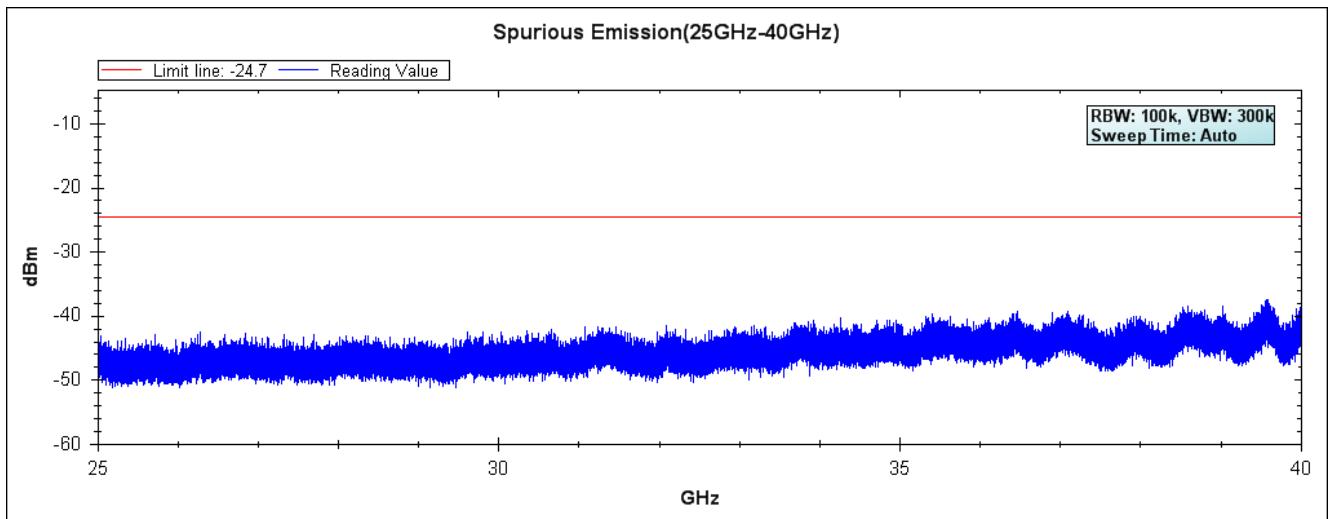
Product : WiFi module
Test Item : RF Antenna Conducted Spurious
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit - 802.11n-20BW_21.7Mbps(5G Band)

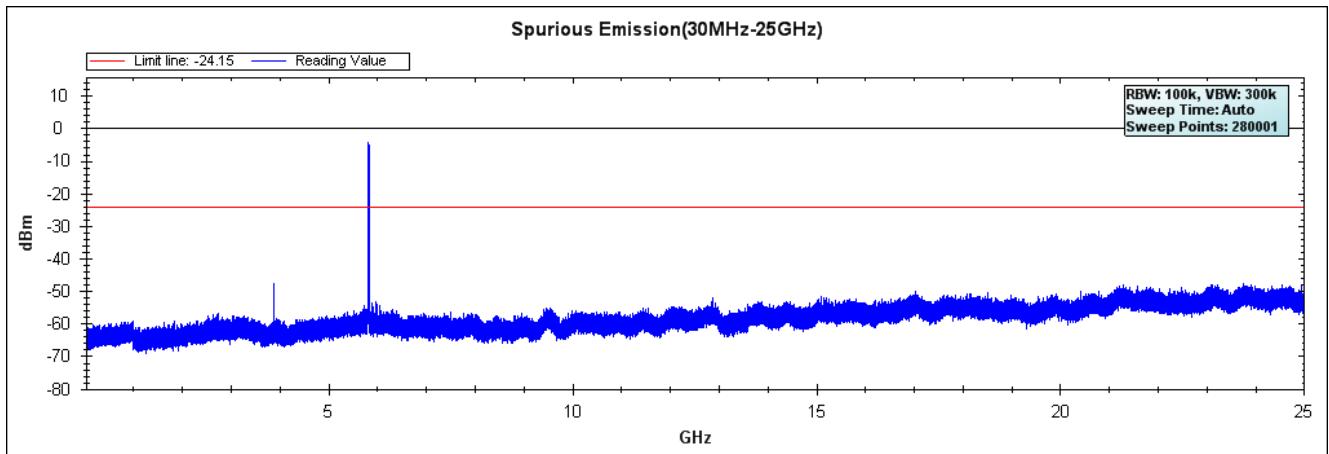
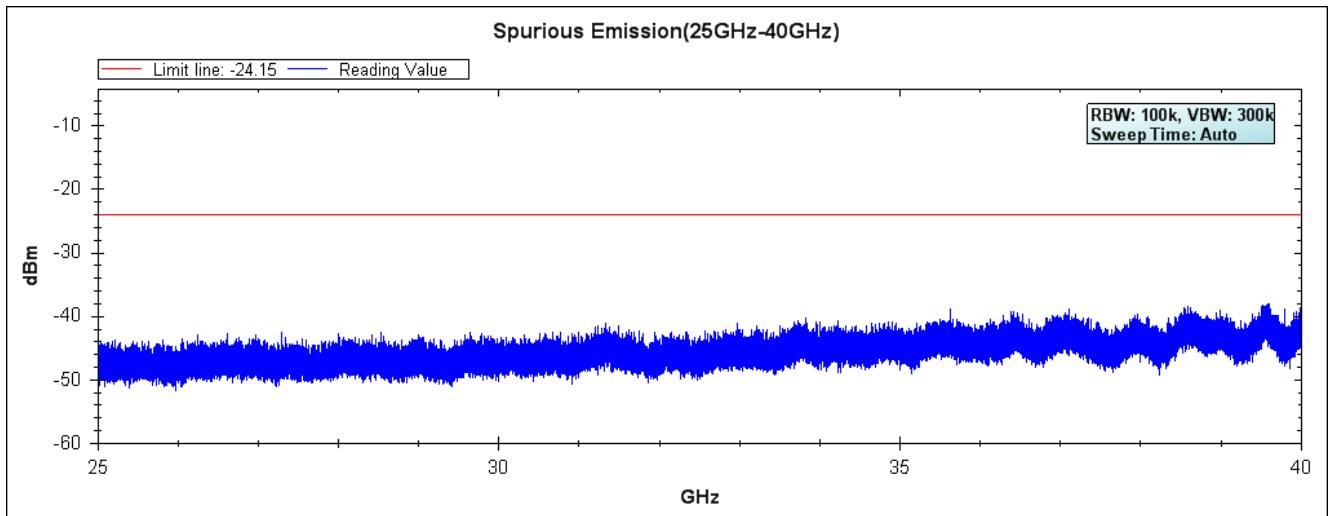
Channel 149 (5745MHz) 30MHz -25GHz-Chain A

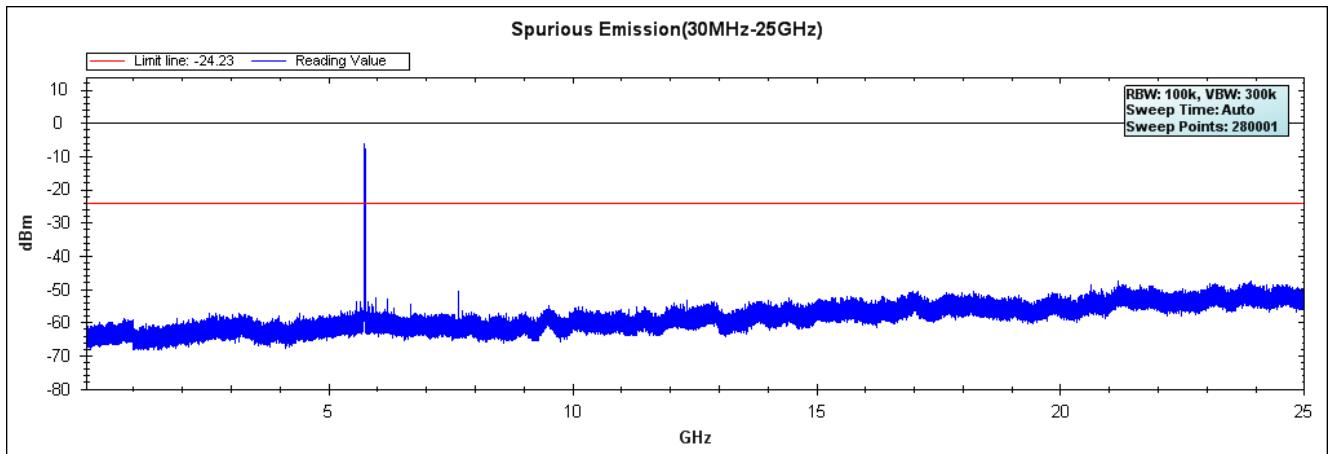
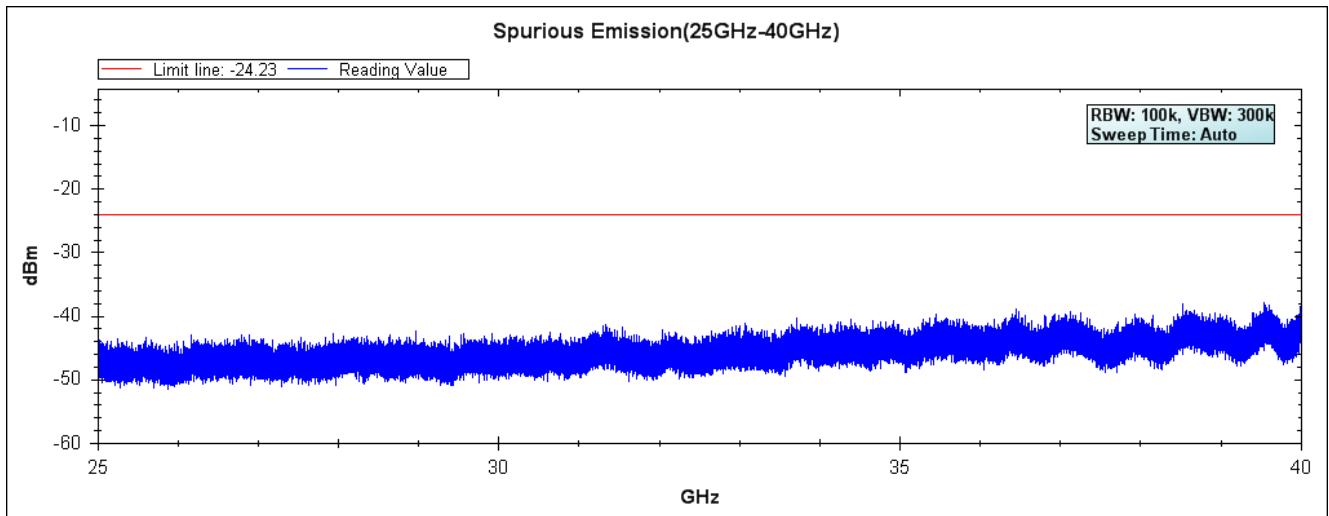


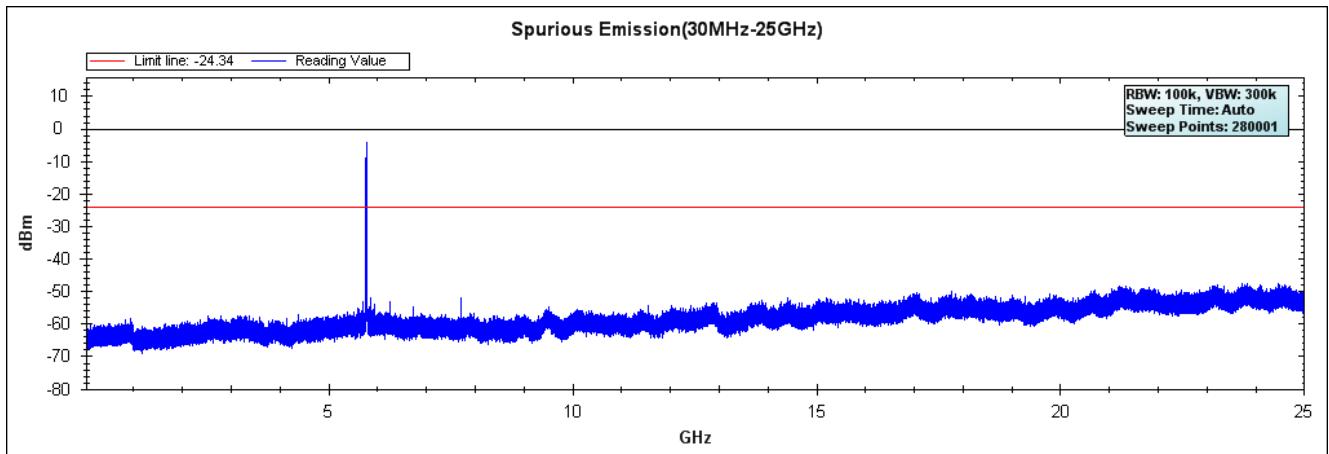
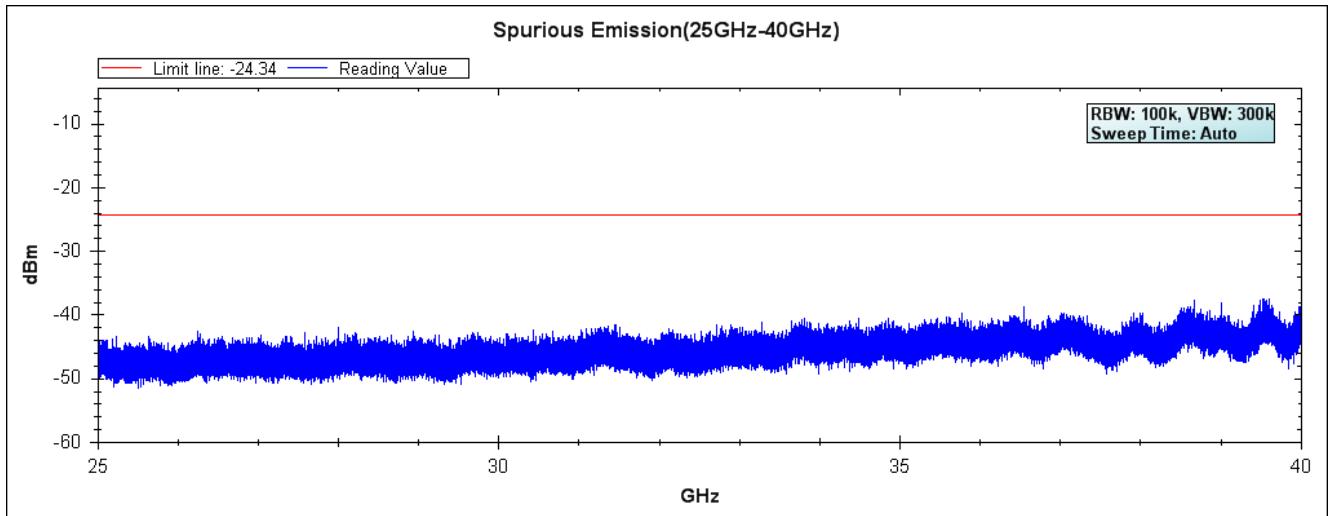
Channel 149 (5745MHz) 25GHz -40GHz-Chain A

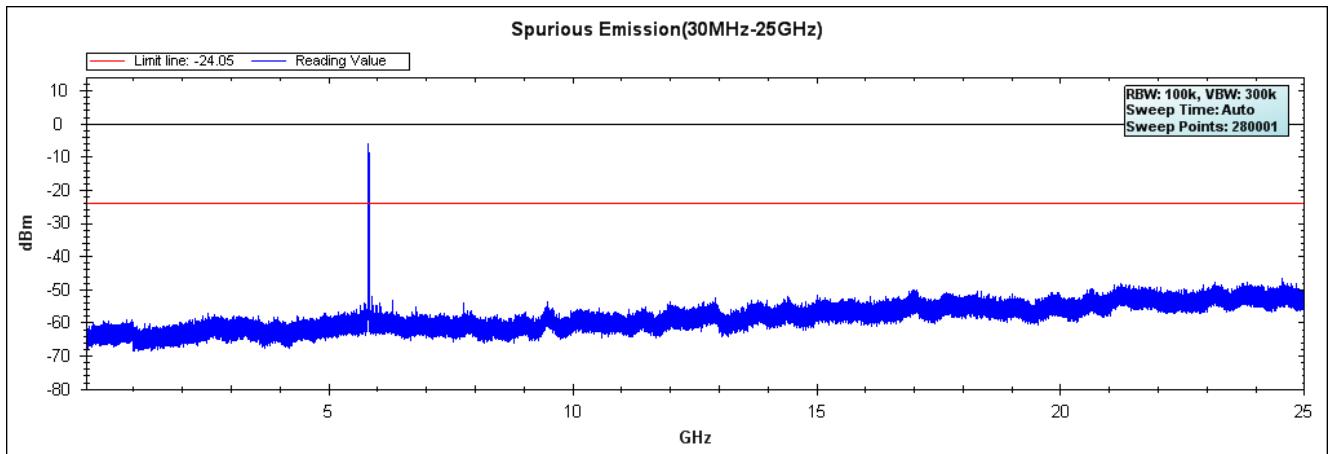
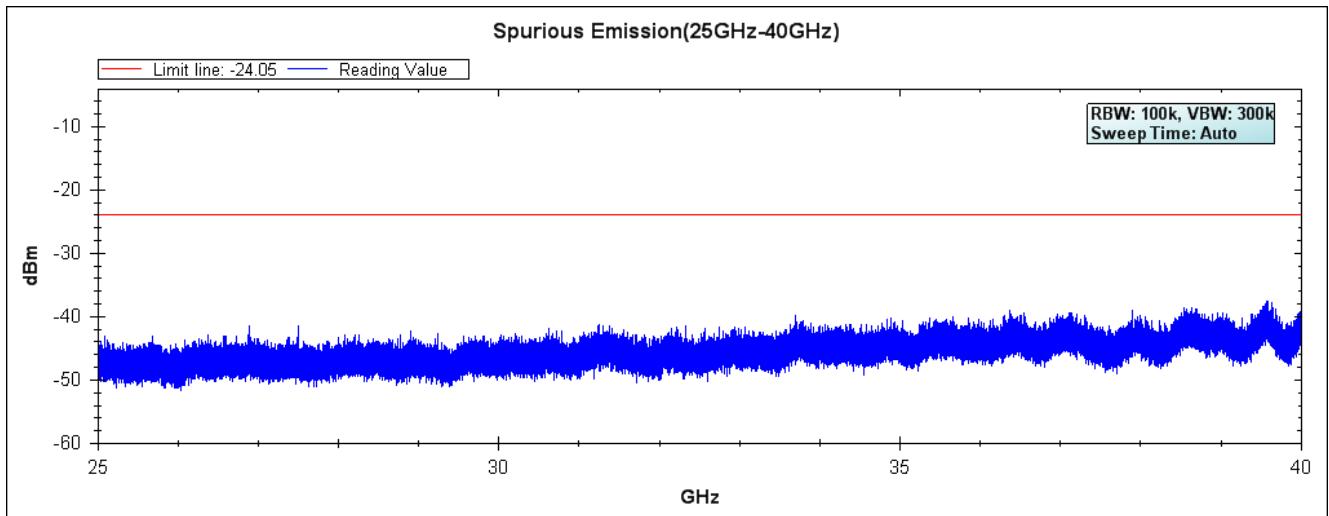


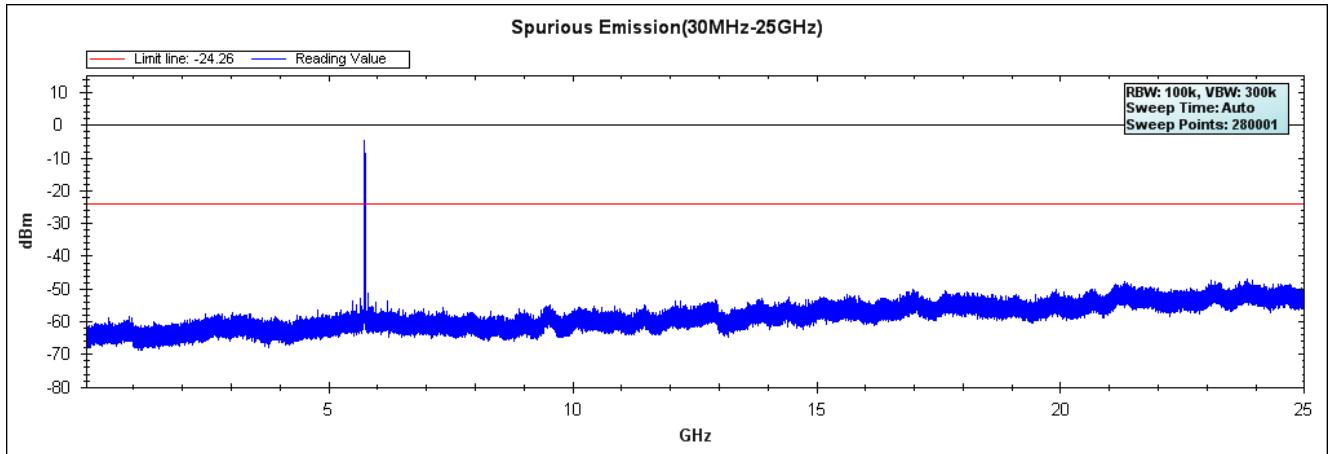
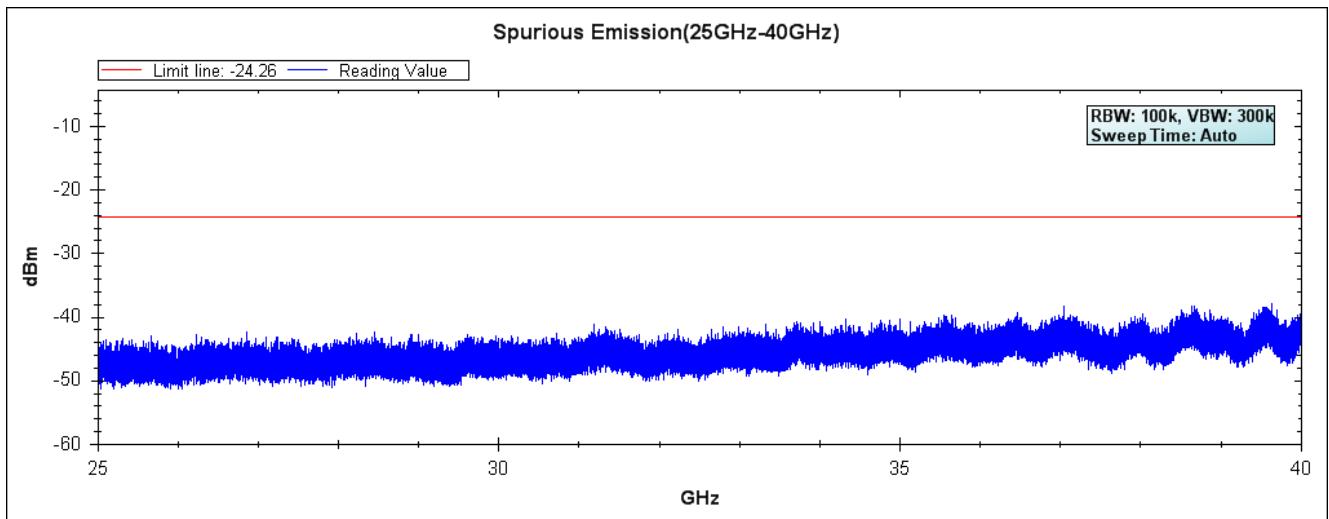
Channel 157 (5785MHz) 30MHz -25GHz-Chain A**Channel 157 (5785MHz) 25GHz -40GHz-Chain A**

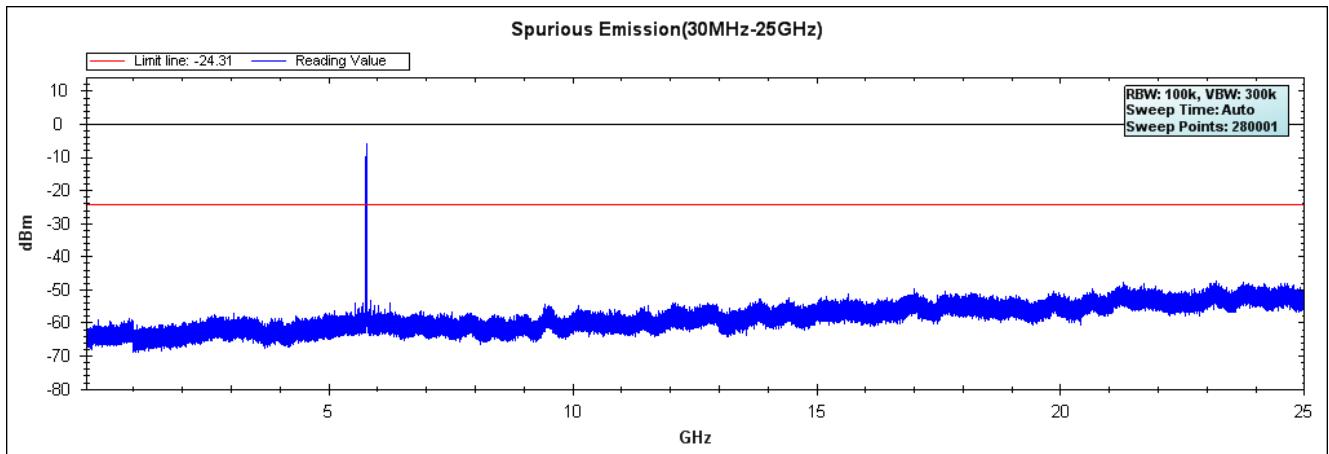
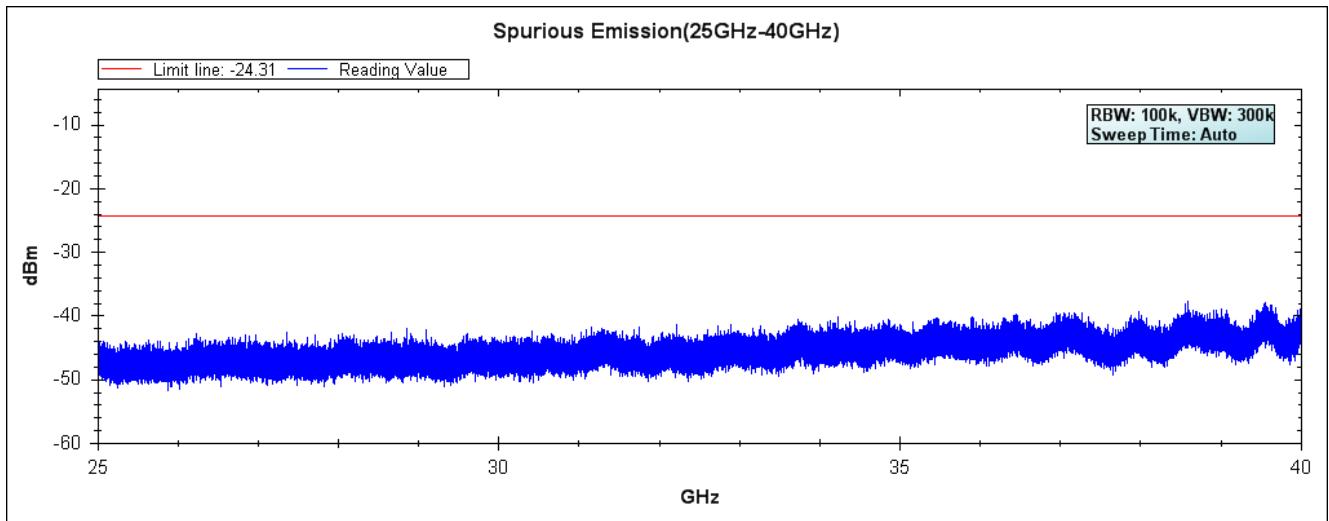
Channel 165 (5825MHz) 30MHz -25GHz-Chain A**Channel 165 (5825MHz) 25GHz -40GHz-Chain A**

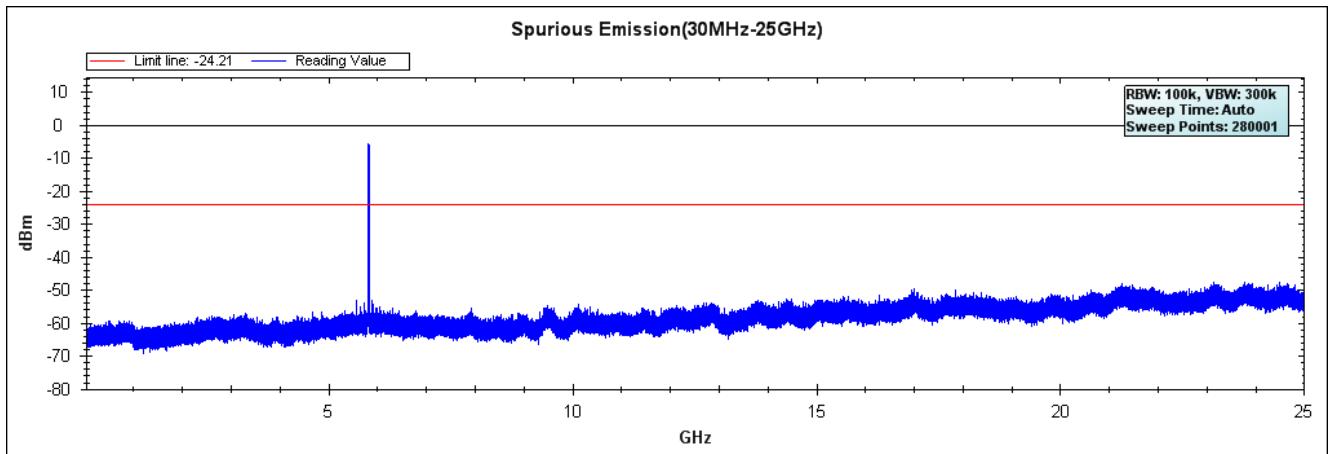
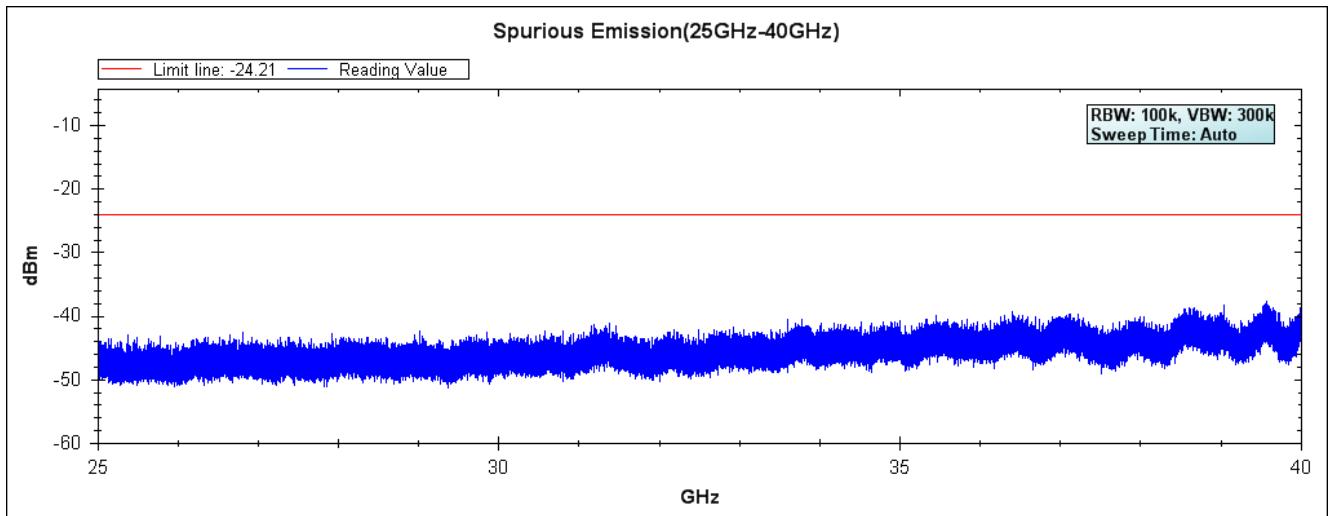
Channel 49 (5745MHz) 30MHz -25GHz-Chain B**Channel 49 (5745MHz) 25GHz -40GHz-Chain B**

Channel 157 (5785MHz) 30MHz -25GHz-Chain B**Channel 157 (5785MHz) 25GHz -40GHz-Chain B**

Channel 165 (5825MHz) 30MHz -25GHz-Chain B**Channel 165 (5825MHz) 25GHz -40GHz-Chain B**

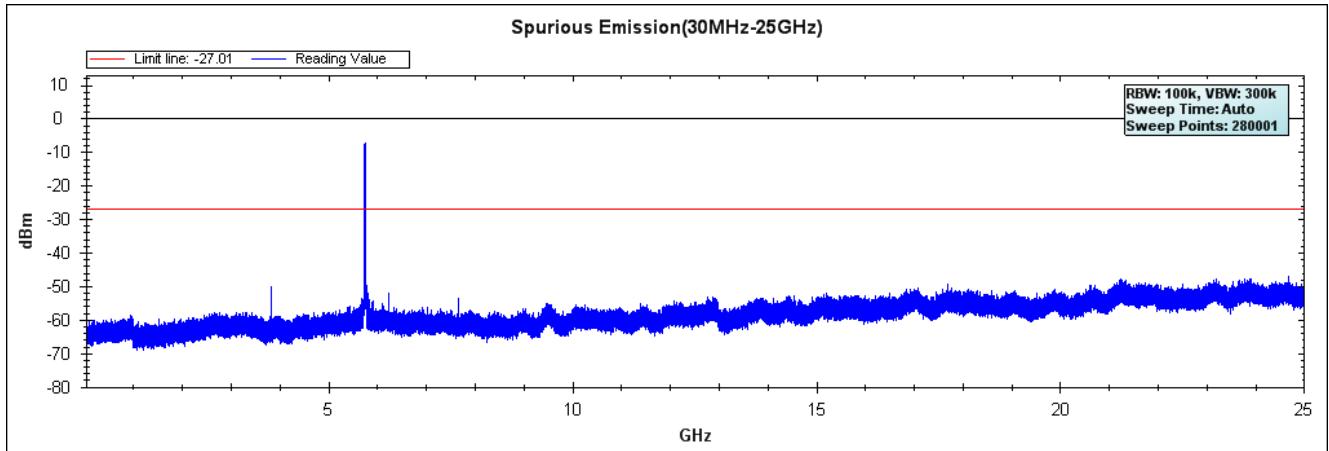
Channel 49 (5745MHz) 30MHz -25GHz-Chain C**Channel 49 (5745MHz) 25GHz -40GHz-Chain C**

Channel 157 (5785MHz) 30MHz -25GHz-Chain C**Channel 157 (5785MHz) 25Hz -40GHz-Chain C**

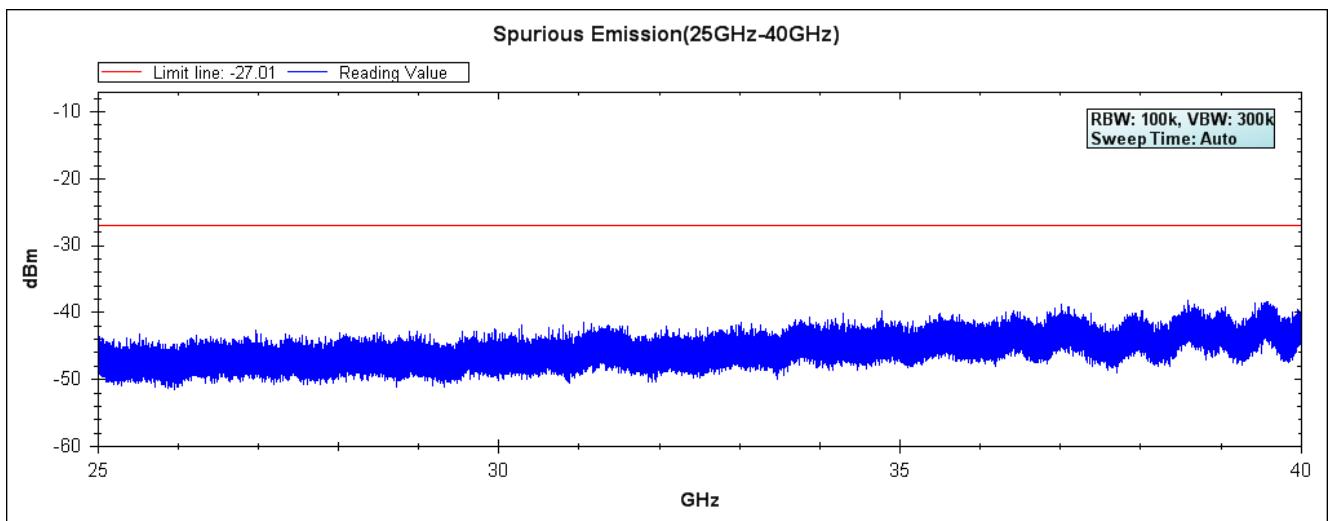
Channel 165 (5825MHz) 30MHz -25GHz-Chain C**Channel 165 (5825MHz) 25GHz -40GHz-Chain C**

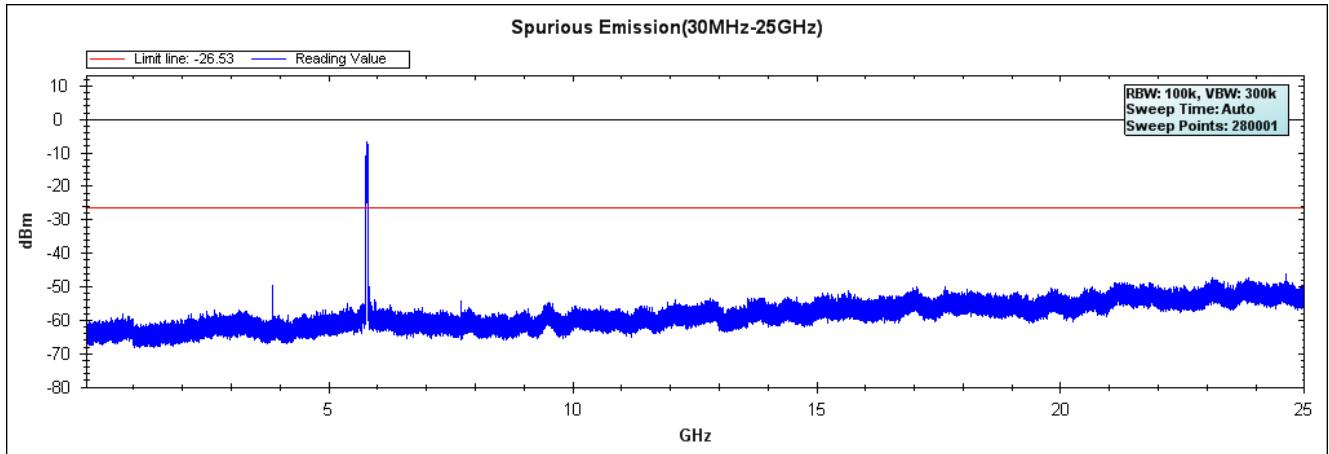
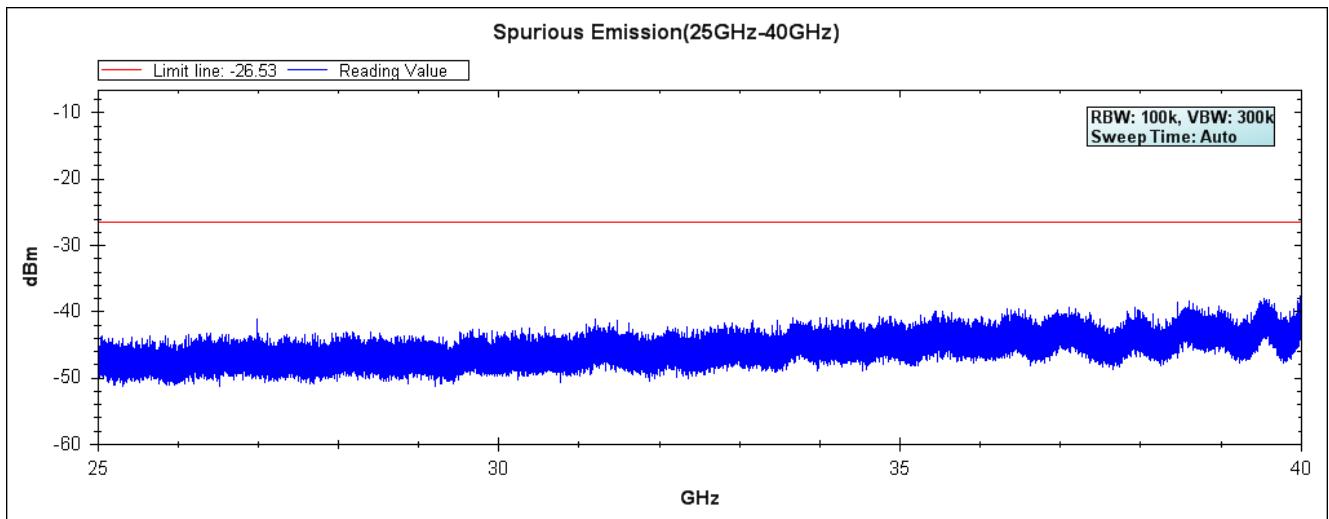
Product : WiFi module
Test Item : RF Antenna Conducted Spurious
Test Site : No.3 OATS
Test Mode : Mode 5: Transmit - 802.11n-40BW_45Mbps(5G Band)

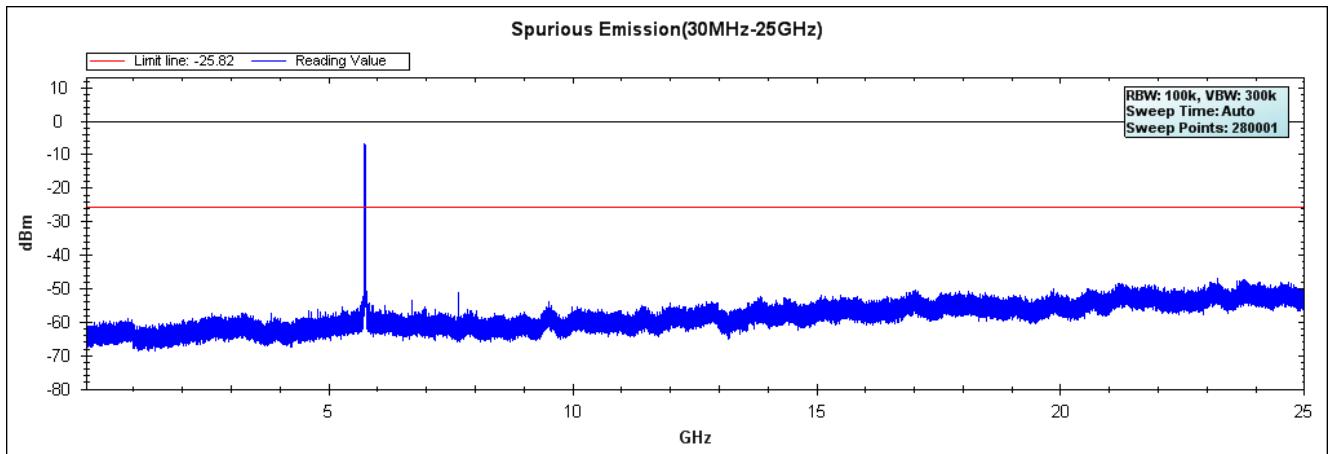
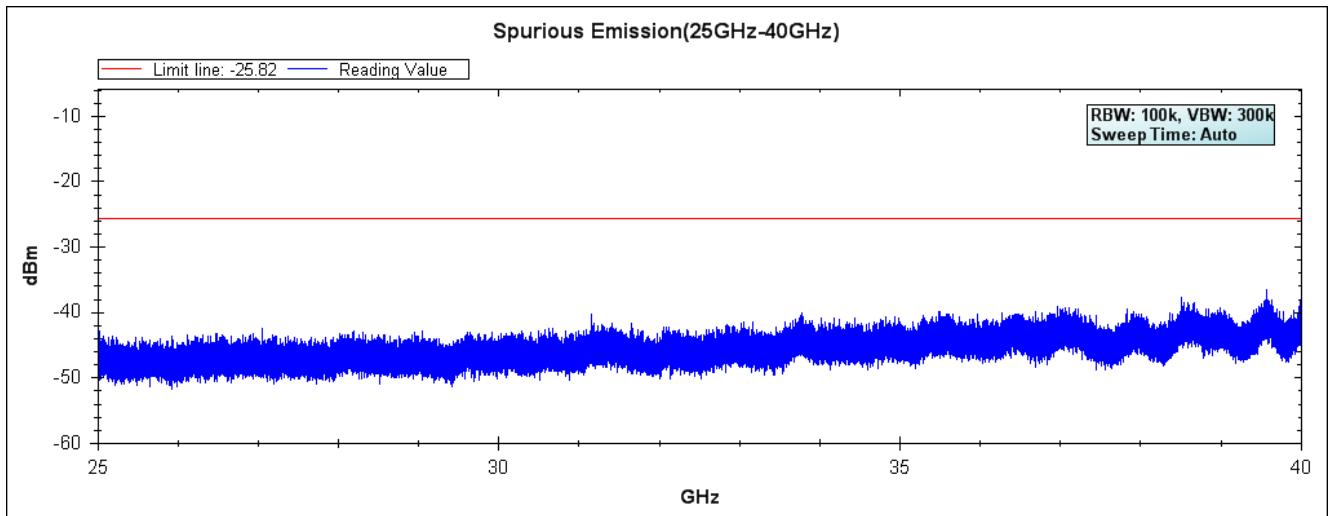
Channel 151 (5755MHz) 30MHz -25GHz-Chain A

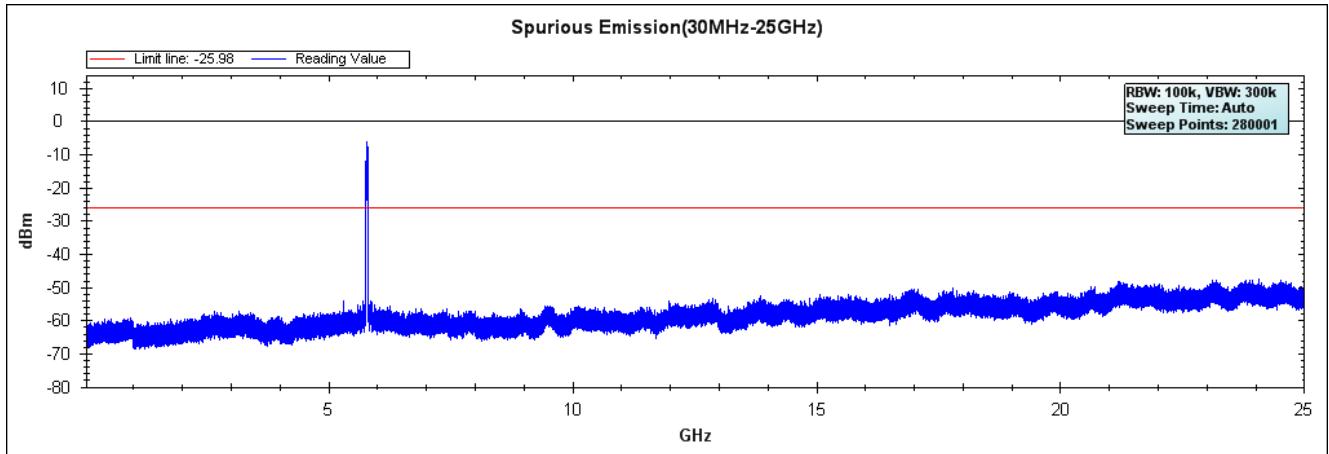
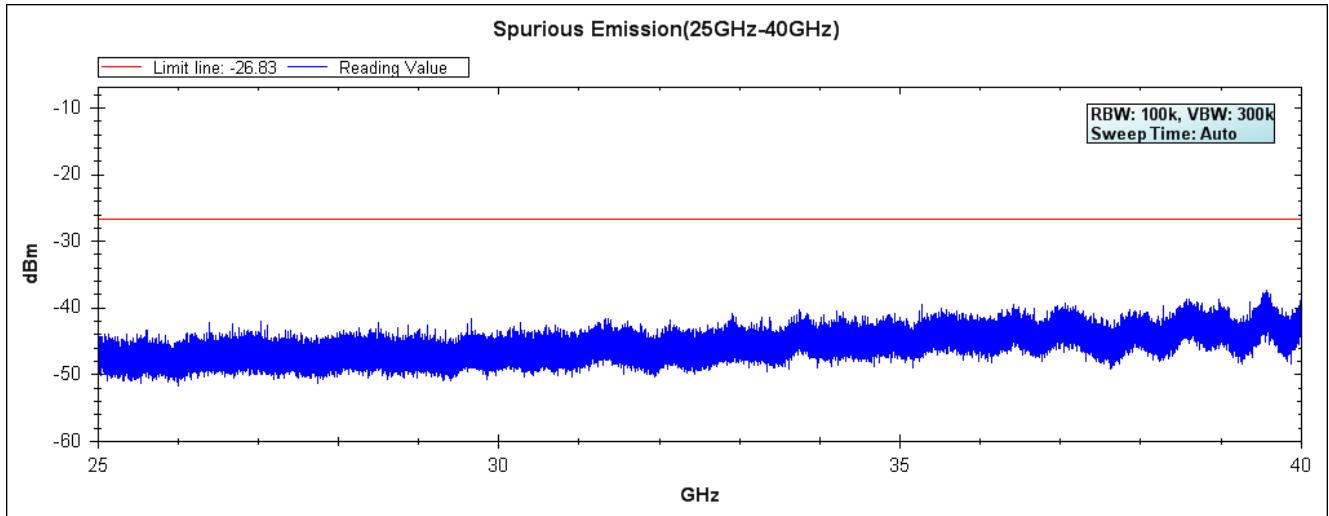


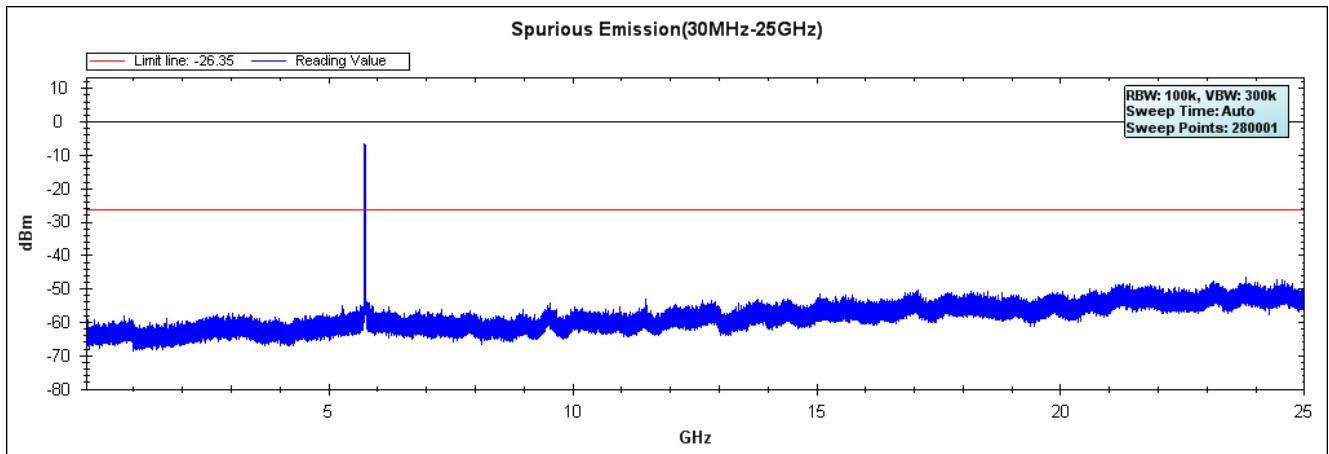
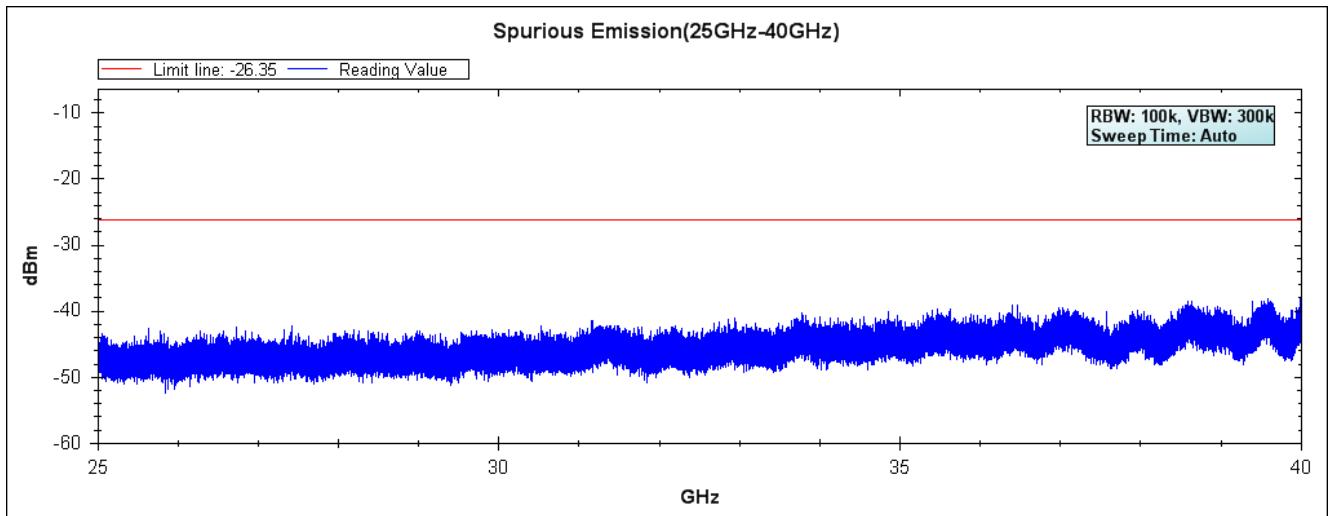
Channel 151 (5755MHz) 25GHz -40GHz-Chain A

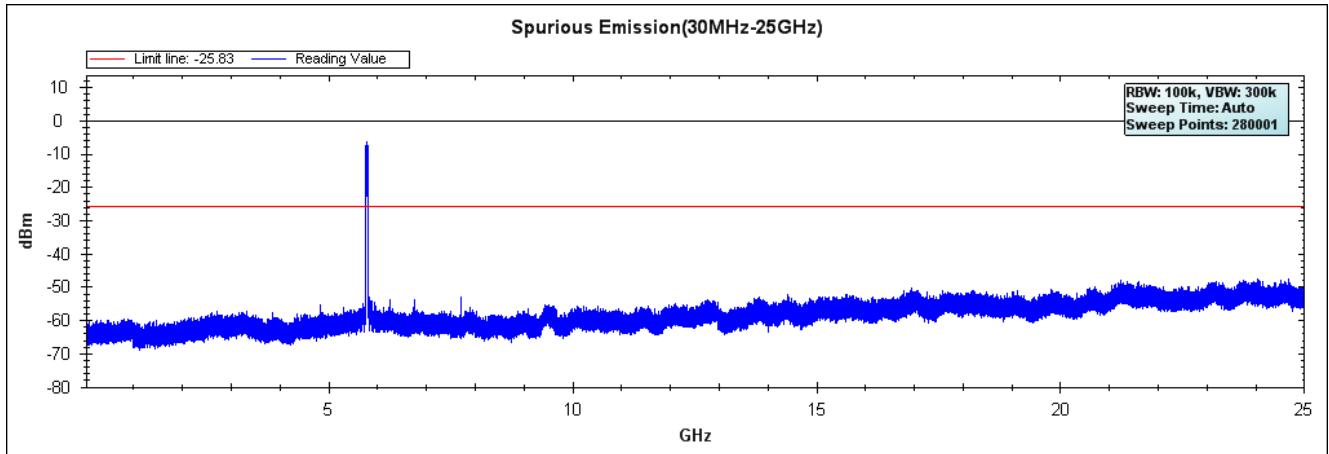
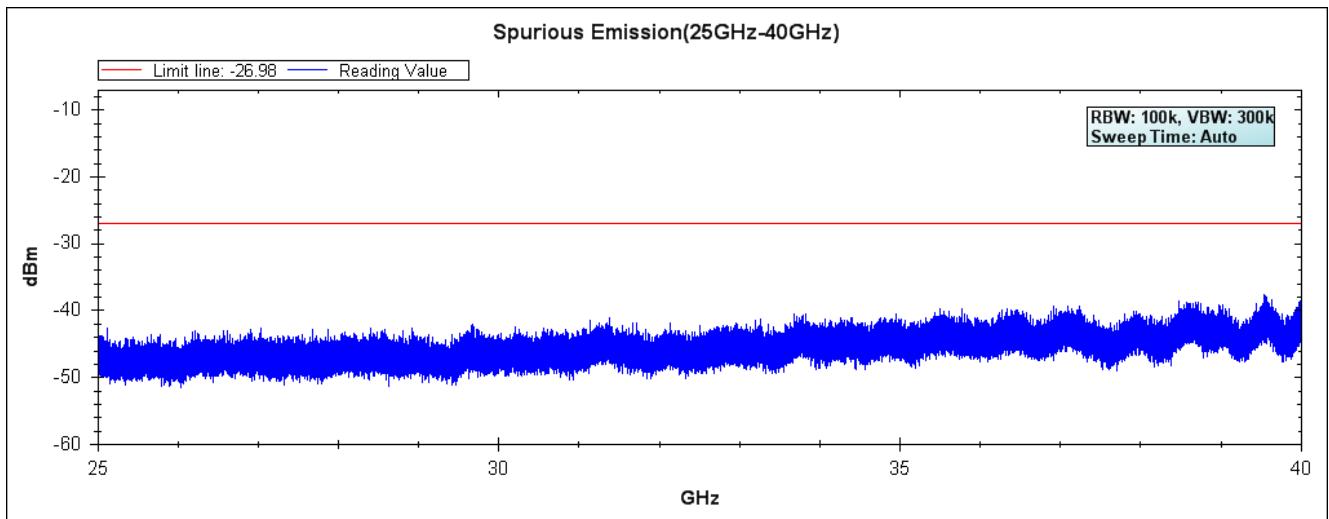


Channel 159 (5795MHz) 30MHz -25GHz-Chain A**Channel 159 (5795MHz) 25GHz -40GHz-Chain A**

Channel 151 (5755MHz) 30MHz -25GHz-Chain B**Channel 151 (5755MHz) 25Hz -40GHz-Chain B**

159 (5795MHz) 30MHz -25GHz-Chain B**159 (5795MHz) 25GHz -40GHz-Chain B**

Channel 151 (5755MHz) 30MHz -25GHz-Chain C**Channel 151 (5755MHz) 25GHz -40GHz-Chain C**

Channel 159 (5795MHz) 30MHz -25GHz-Chain C**Channel 159 (5795MHz) 25GHz -40GHz-Chain C**

6. Band Edge

6.1. Test Equipment

RF Conducted Measurement

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

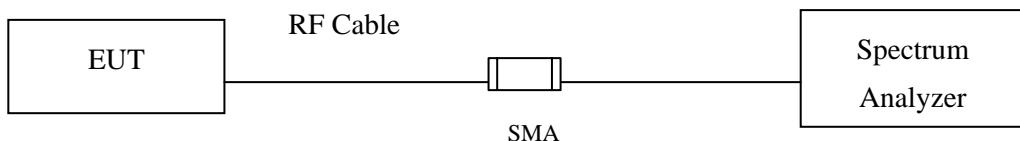
| Equipment | Manufacturer | Model No./Serial No. | Last Cal. |
|---------------------|--------------|----------------------|------------|
| Spectrum Analyzer | R&S | FSP40 / 100170 | Jun., 2013 |
| Spectrum Analyzer | Agilent | E4407B / US39440758 | Jun., 2013 |
| X Spectrum Analyzer | Agilent | N9010A / MY48030495 | Apr., 2013 |

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.

6.2. Test Setup

RF Conducted 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 C63.10, 2009 and tested according to DTS test procedure of 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 C63.10:2009 on radiated measurement.

6.5. Uncertainty

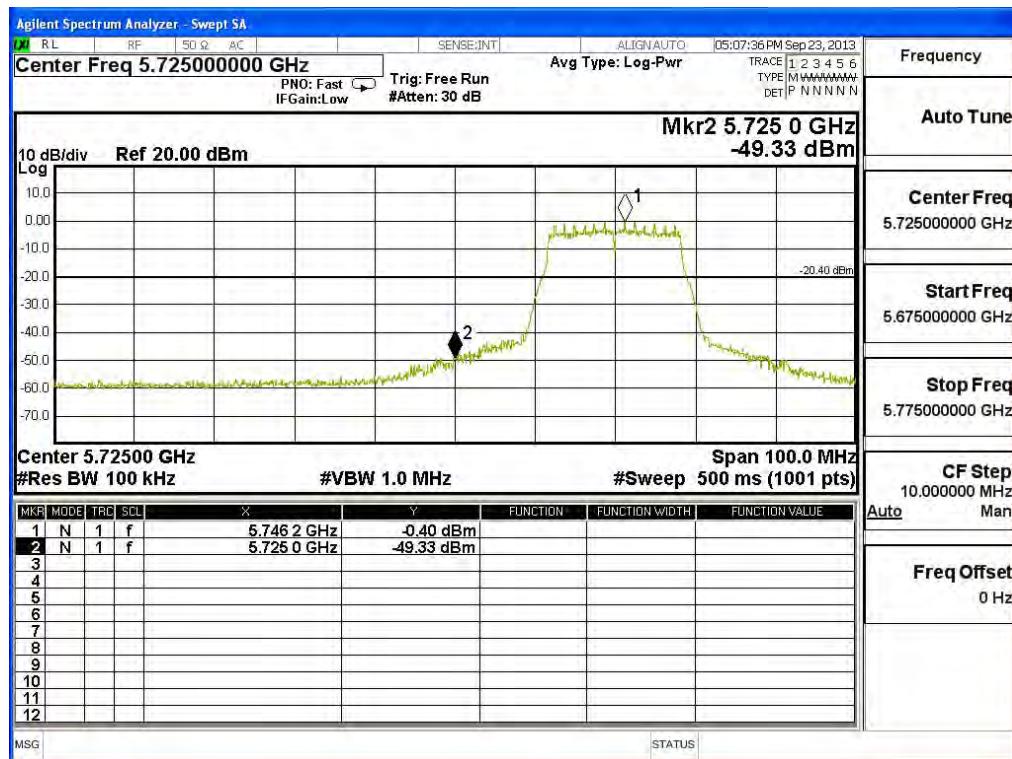
± 3.9 dB above 1GHz

± 3.8 dB below 1GHz

6.6. Test Result of Band Edge

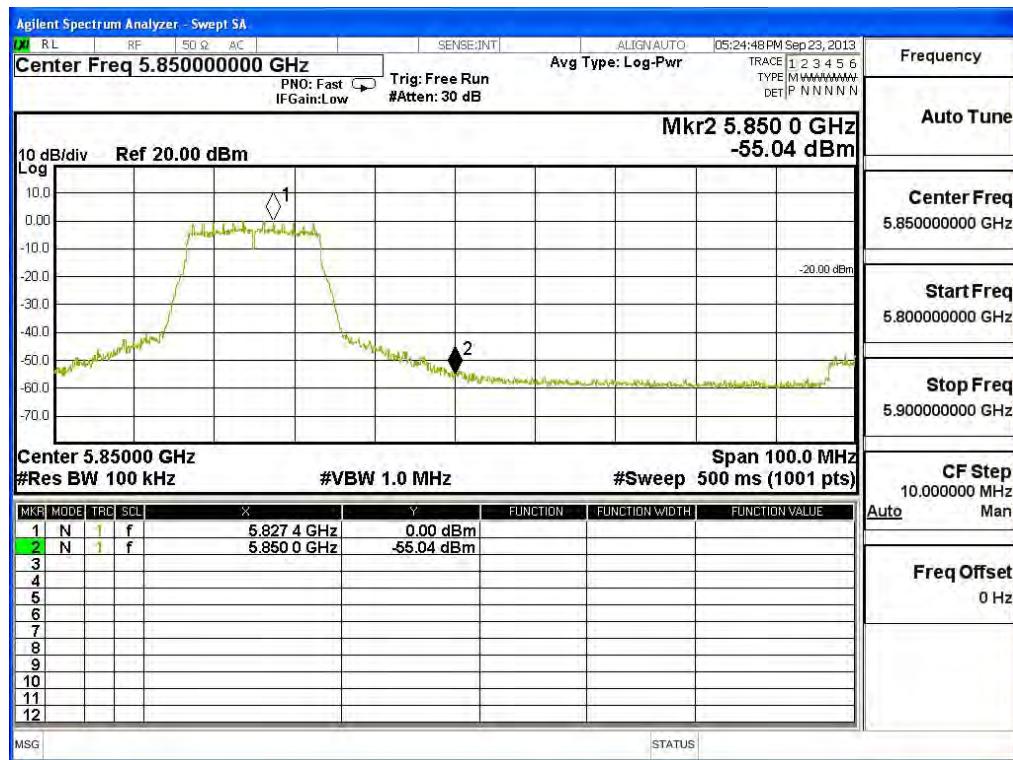
Product : WiFi module
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit - 802.11a 6Mbps

| Test Frequency (MHz) | Measurement Level Δ (dB) | Limit Δ (dB) | Result |
|----------------------|--------------------------|--------------|--------|
| 5745 | 48.93 | >20 | PASS |



Product : WiFi module
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit - 802.11a 6Mbps

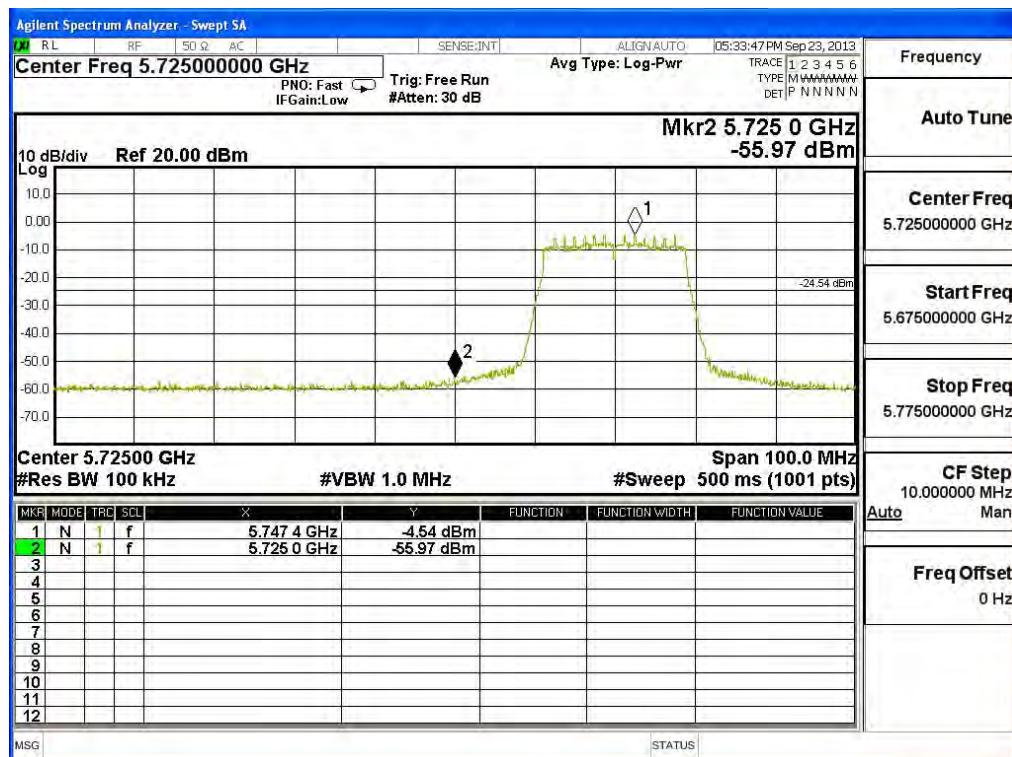
| Test Frequency (MHz) | Measurement Level Δ (dB) | Limit Δ (dB) | Result |
|----------------------|---------------------------------|---------------------|--------|
| 5825 | 55.04 | >20 | PASS |



Product : WiFi module
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit - 802.11n-20BW_21.7Mbps(5G Band)

Chain A

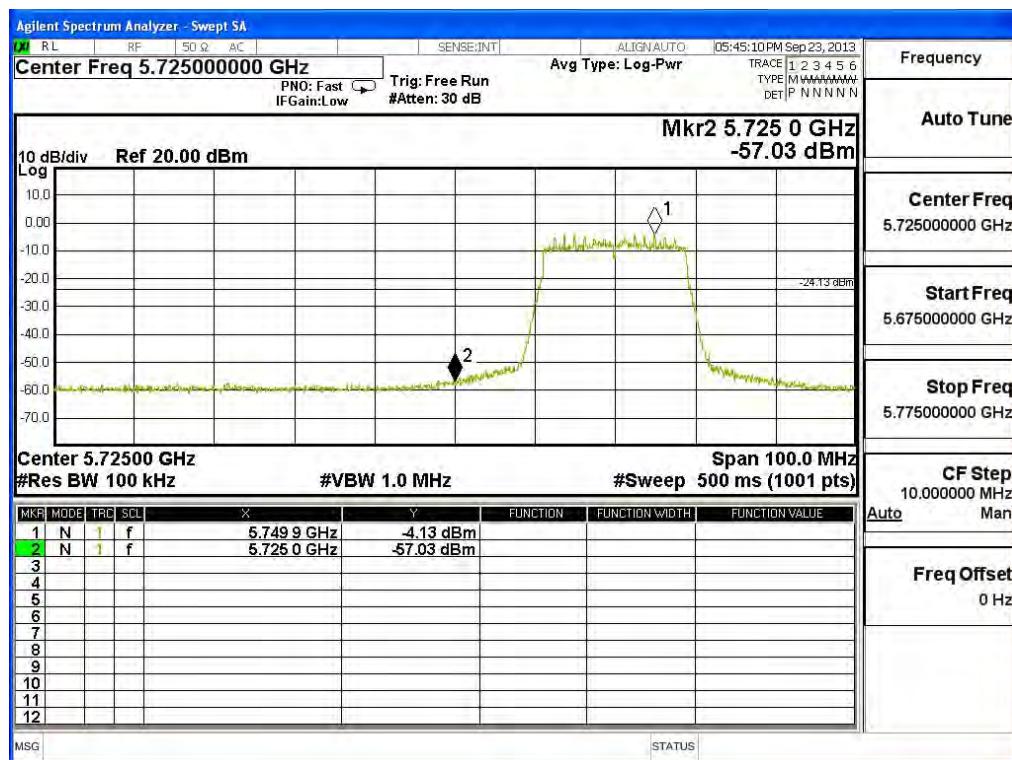
| Test Frequency (MHz) | Measurement Level Δ (dB) | Limit Δ (dB) | Result |
|-------------------------|------------------------------------|------------------------|--------|
| 5745 | 51.43 | >20 | PASS |



Product : WiFi module
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit - 802.11n-20BW_21.7Mbps(5G Band)

Chain B

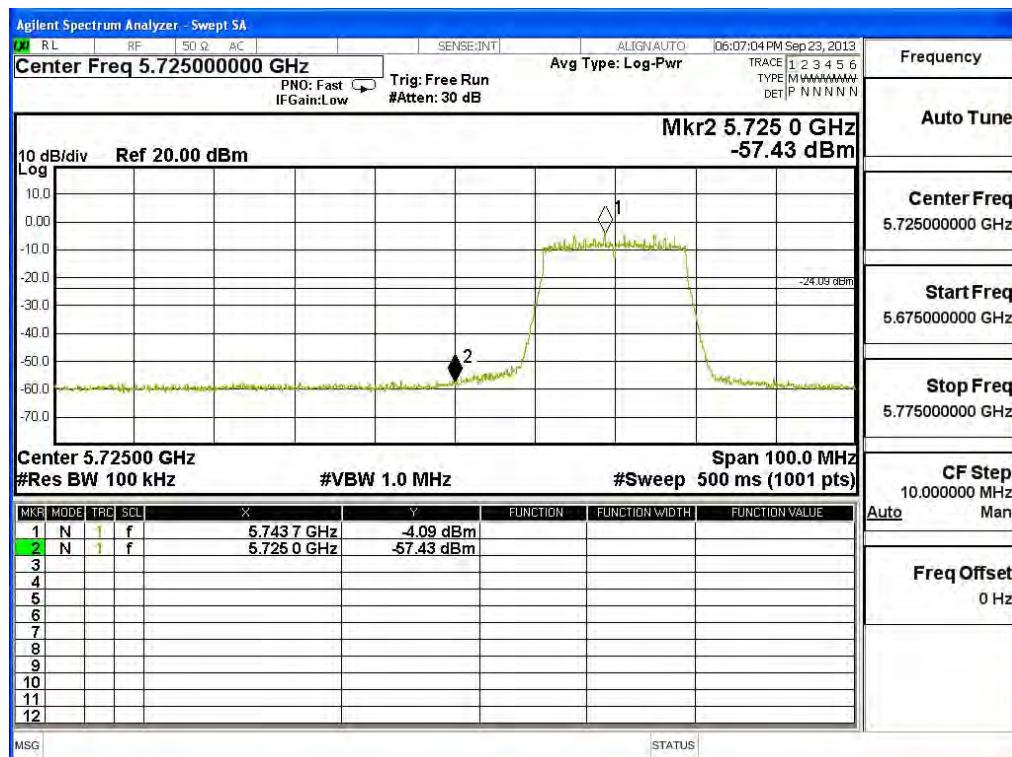
| Test Frequency (MHz) | Measurement Level Δ (dB) | Limit Δ (dB) | Result |
|-------------------------|------------------------------------|------------------------|--------|
| 5745 | 52.9 | >20 | PASS |



Product : WiFi module
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit - 802.11n-20BW_21.7Mbps(5G Band)

Chain C

| Test Frequency (MHz) | Measurement Level Δ (dB) | Limit Δ (dB) | Result |
|-------------------------|------------------------------------|------------------------|--------|
| 5745 | 53.34 | >20 | PASS |



Product : WiFi module

Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit - 802.11n-20BW_21.7Mbps(5G Band)

Chain A

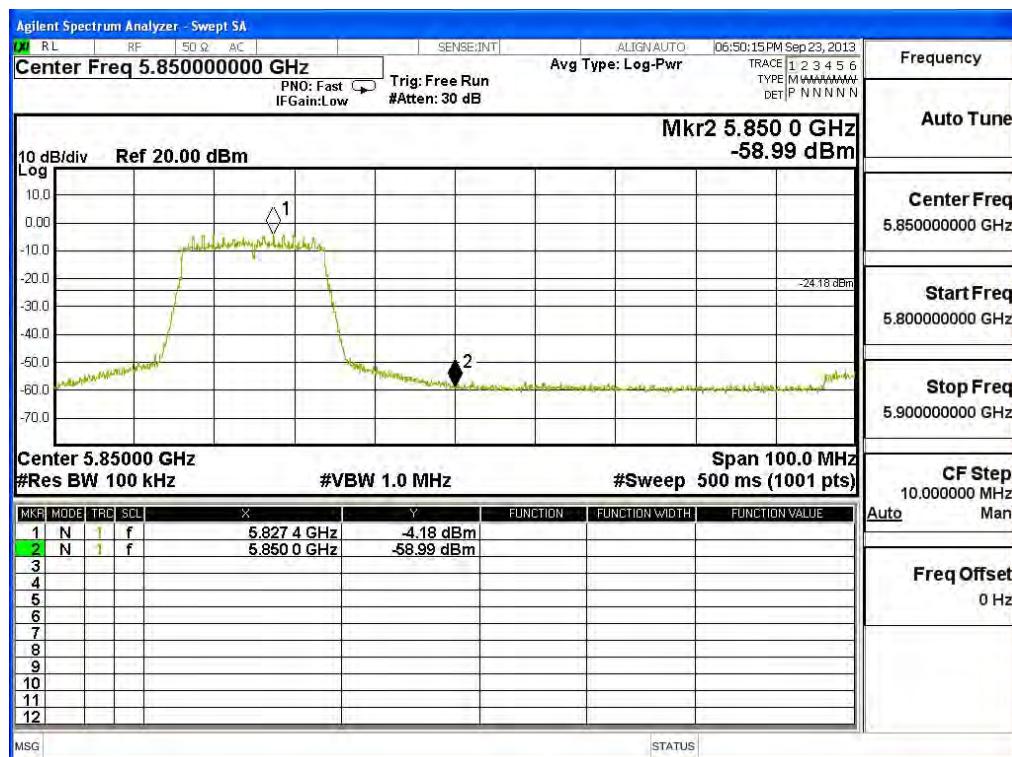
| Test Frequency (MHz) | Measurement Level Δ (dB) | Limit Δ (dB) | Result |
|-------------------------|------------------------------------|------------------------|--------|
| 5825 | 54.85 | >20 | PASS |



Product : WiFi module
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit - 802.11n-20BW_21.7Mbps(5G Band)

Chain B

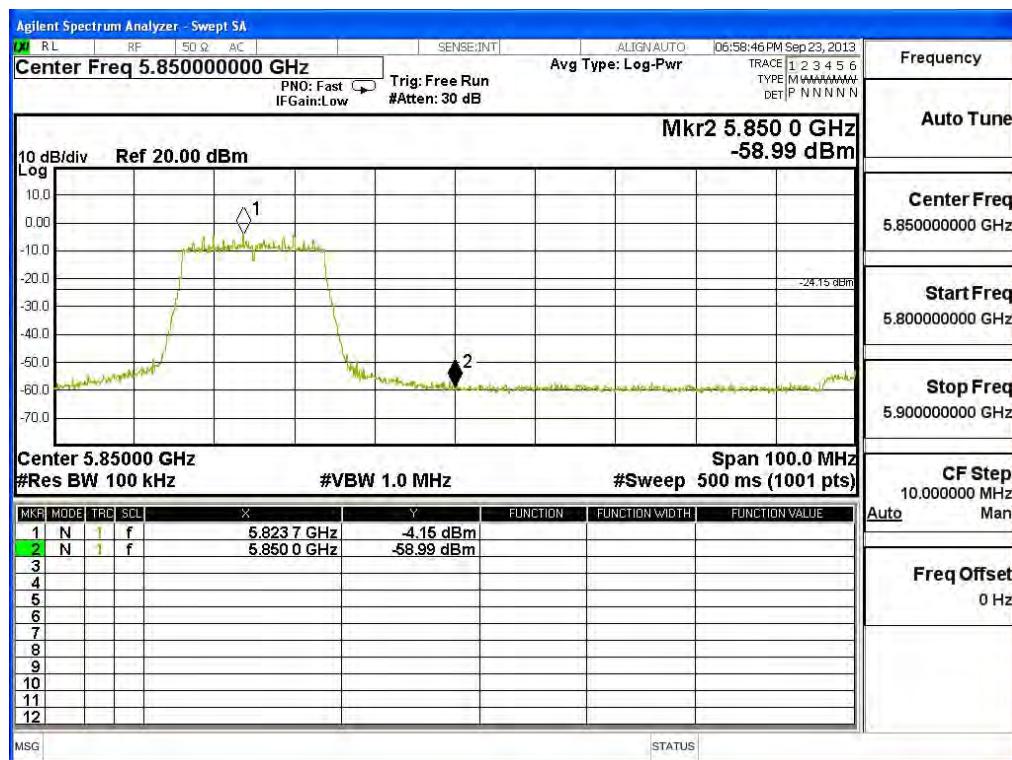
| Test Frequency (MHz) | Measurement Level Δ (dB) | Limit Δ (dB) | Result |
|-------------------------|------------------------------------|------------------------|--------|
| 5825 | 54.81 | >20 | PASS |



Product : WiFi module
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit - 802.11n-20BW_21.7Mbps(5G Band)

Chain C

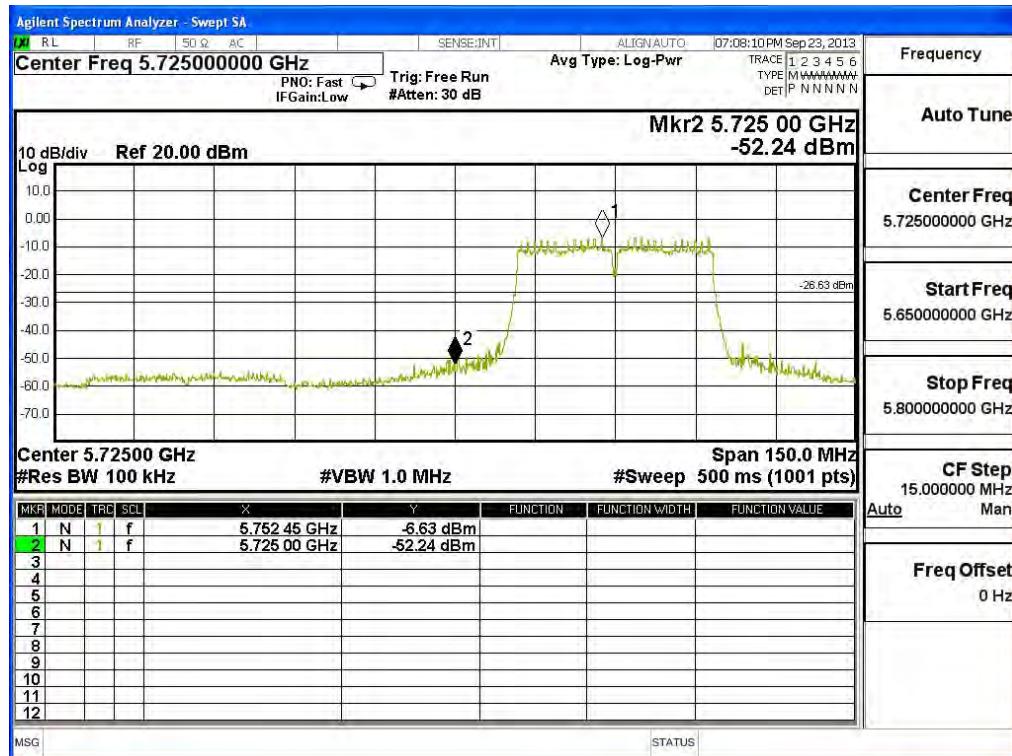
| Test Frequency (MHz) | Measurement Level Δ (dB) | Limit Δ (dB) | Result |
|-------------------------|------------------------------------|------------------------|--------|
| 5825 | 54.84 | >20 | PASS |



Product : WiFi module
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 5: Transmit - 802.11n-40BW_45Mbps(5G Band)

Chain A

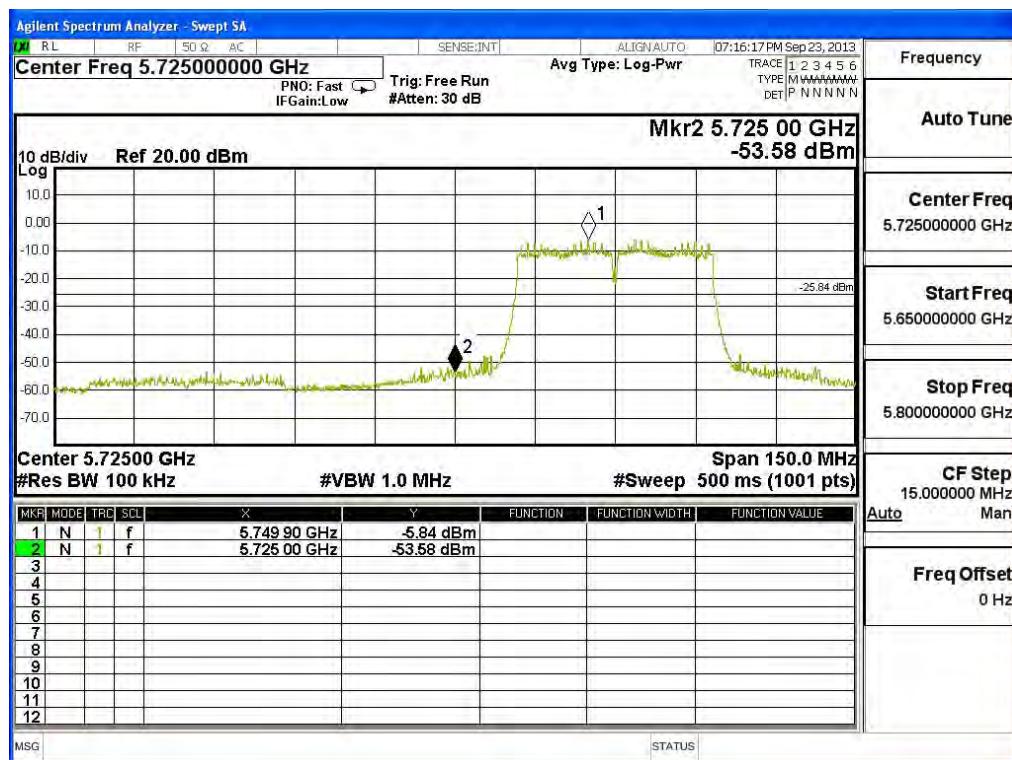
| Test Frequency (MHz) | Measurement Level Δ (dB) | Limit Δ (dB) | Result |
|-------------------------|------------------------------------|------------------------|--------|
| 5755 | 45.61 | >20 | PASS |



Product : WiFi module
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 5: Transmit - 802.11n-40BW_45Mbps(5G Band)

Chain B

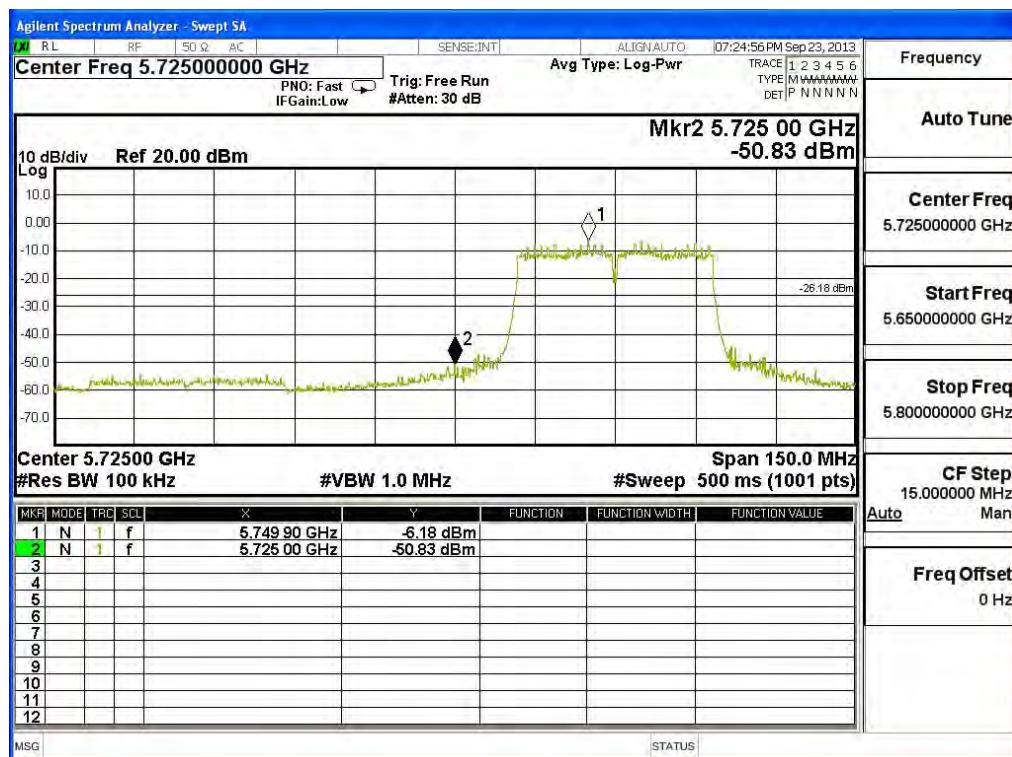
| Test Frequency (MHz) | Measurement Level Δ (dB) | Limit Δ (dB) | Result |
|-------------------------|------------------------------------|------------------------|--------|
| 5755 | 47.74 | >20 | PASS |



Product : WiFi module
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 5: Transmit - 802.11n-40BW_45Mbps(5G Band)

Chain C

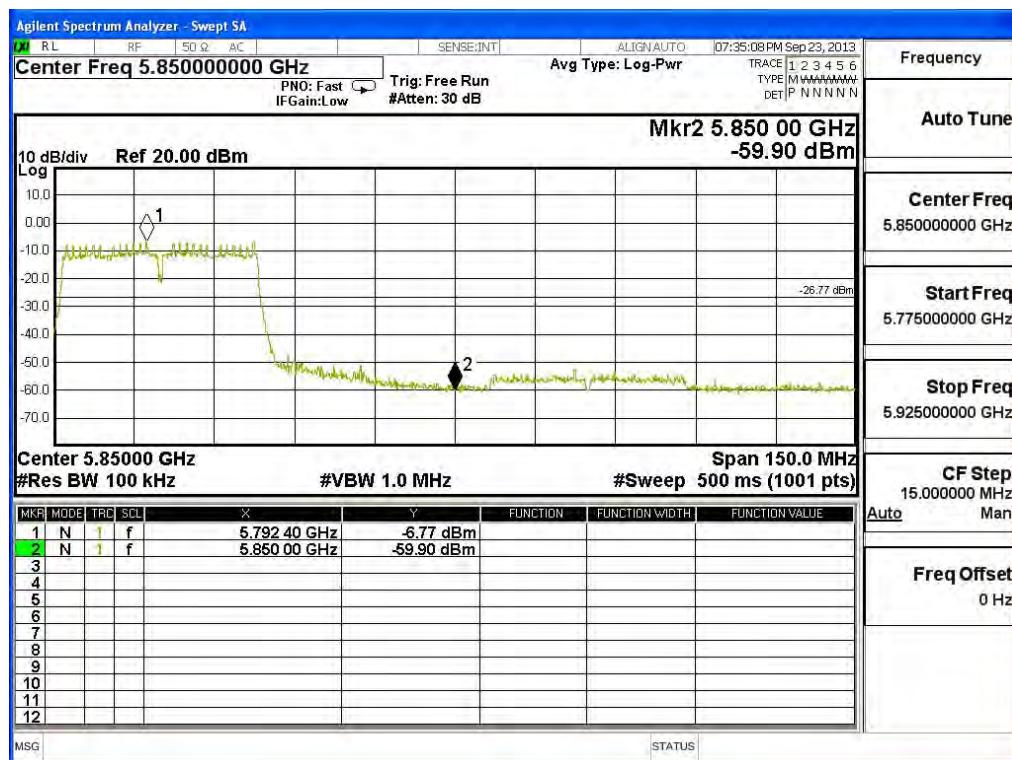
| Test Frequency (MHz) | Measurement Level Δ (dB) | Limit Δ (dB) | Result |
|-------------------------|------------------------------------|------------------------|--------|
| 5755 | 44.65 | >20 | PASS |



Product : WiFi module
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 5: Transmit - 802.11n-40BW_45Mbps(5G Band)

Chain A

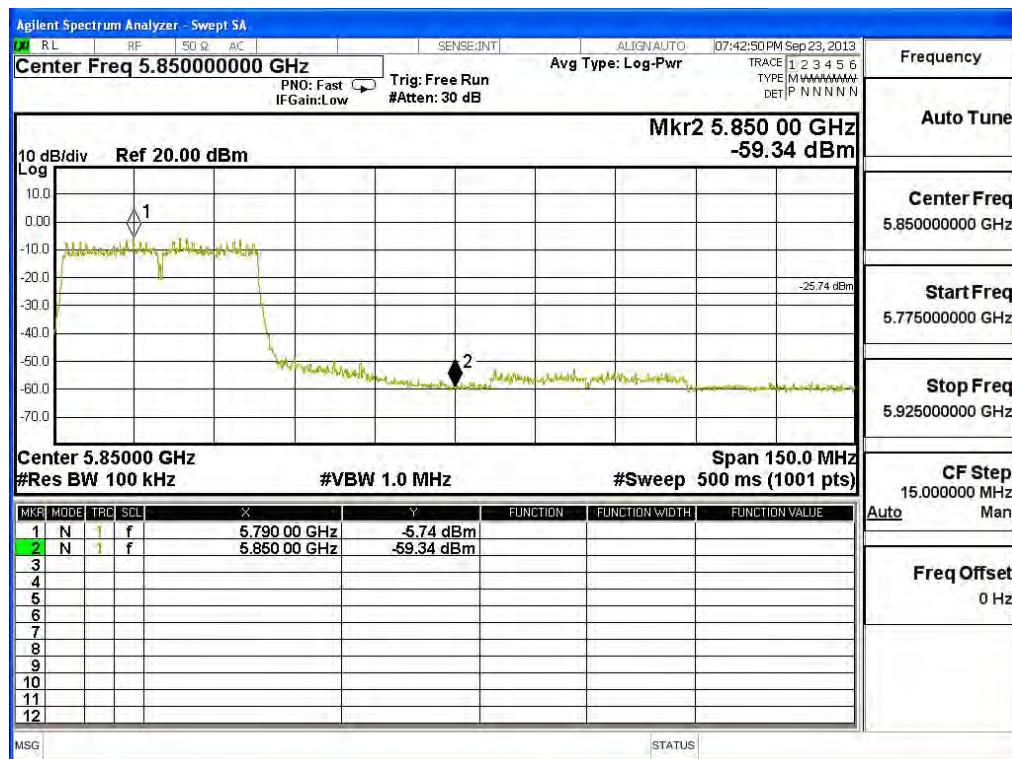
| Test Frequency (MHz) | Measurement Level Δ (dB) | Limit Δ (dB) | Result |
|-------------------------|------------------------------------|------------------------|--------|
| 5795 | 53.13 | >20 | PASS |



Product : WiFi module
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 5: Transmit - 802.11n-40BW_45Mbps(5G Band)

Chain B

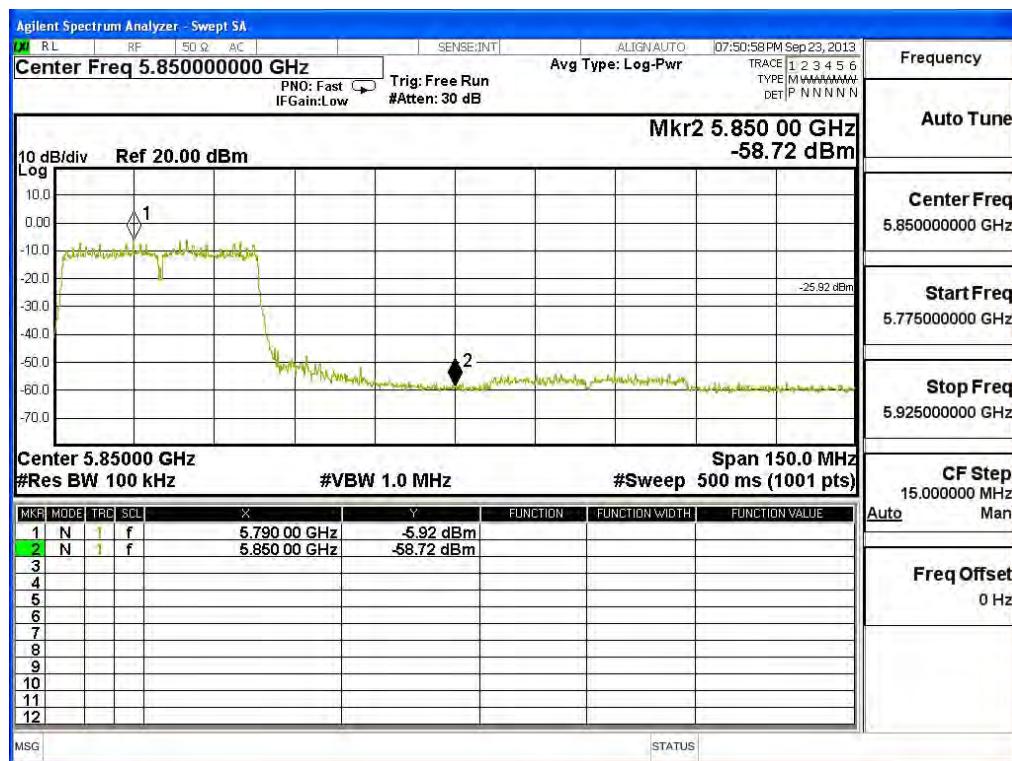
| Test Frequency (MHz) | Measurement Level Δ (dB) | Limit Δ (dB) | Result |
|-------------------------|------------------------------------|------------------------|--------|
| 5795 | 43.60 | >20 | PASS |



Product : WiFi module
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 5: Transmit - 802.11n-40BW_45Mbps(5G Band)

Chain C

| Test Frequency (MHz) | Measurement Level Δ (dB) | Limit Δ (dB) | Result |
|----------------------|---------------------------------|---------------------|--------|
| 5795 | 52.80 | >20 | PASS |



7. Occupied Bandwidth

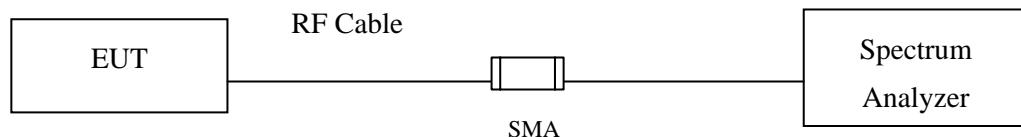
7.1. Test Equipment

| Equipment | Manufacturer | Model No./Serial No. | Last Cal. |
|---------------------|--------------|----------------------|------------|
| Spectrum Analyzer | R&S | FSP40 / 100170 | Jun., 2013 |
| Spectrum Analyzer | Agilent | E4407B / US39440758 | Jun., 2013 |
| X Spectrum Analyzer | Agilent | N9010A / MY48030495 | Apr., 2013 |

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 C63.10, 2009; tested according to DTS test procedure of KDB558074 for compliance to FCC 47CFR 15.247 requirements.

7.5. Uncertainty

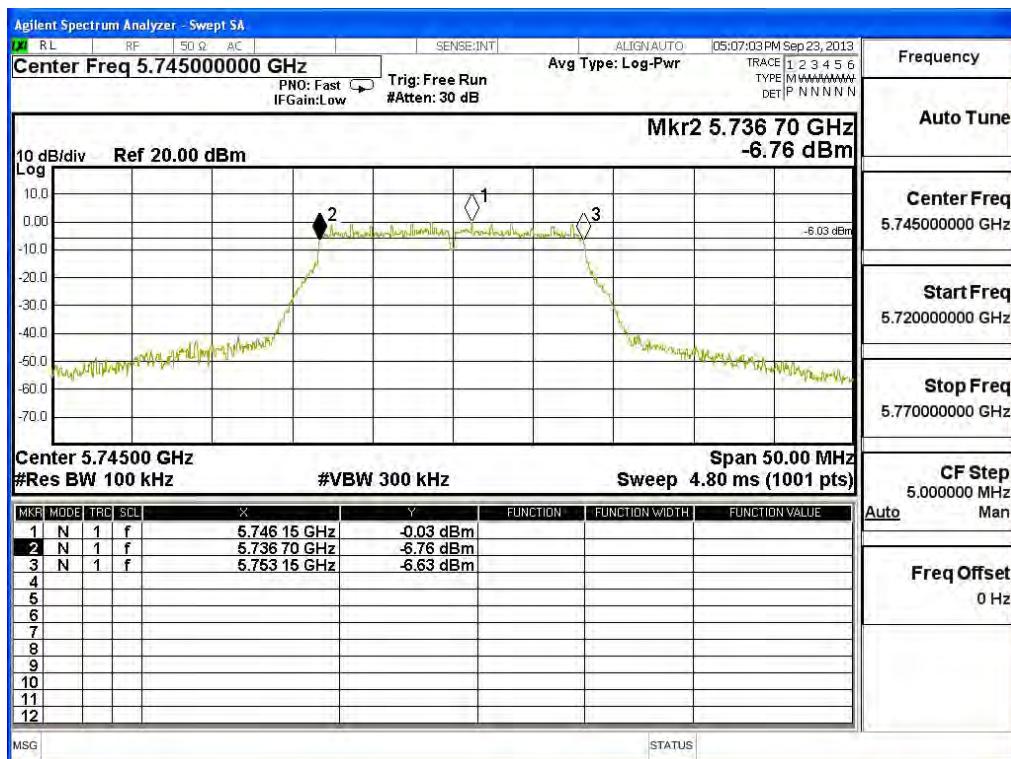
± 150Hz

7.6. Test Result of Occupied Bandwidth

Product : WiFi module
 Test Item : Occupied Bandwidth Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit - 802.11a 6Mbps (5745MHz)

| Channel No. | Frequency (MHz) | Measurement Level (kHz) | Required Limit (kHz) | Result |
|-------------|-----------------|-------------------------|----------------------|--------|
| 149 | 5745.00 | 16450 | >500 | Pass |

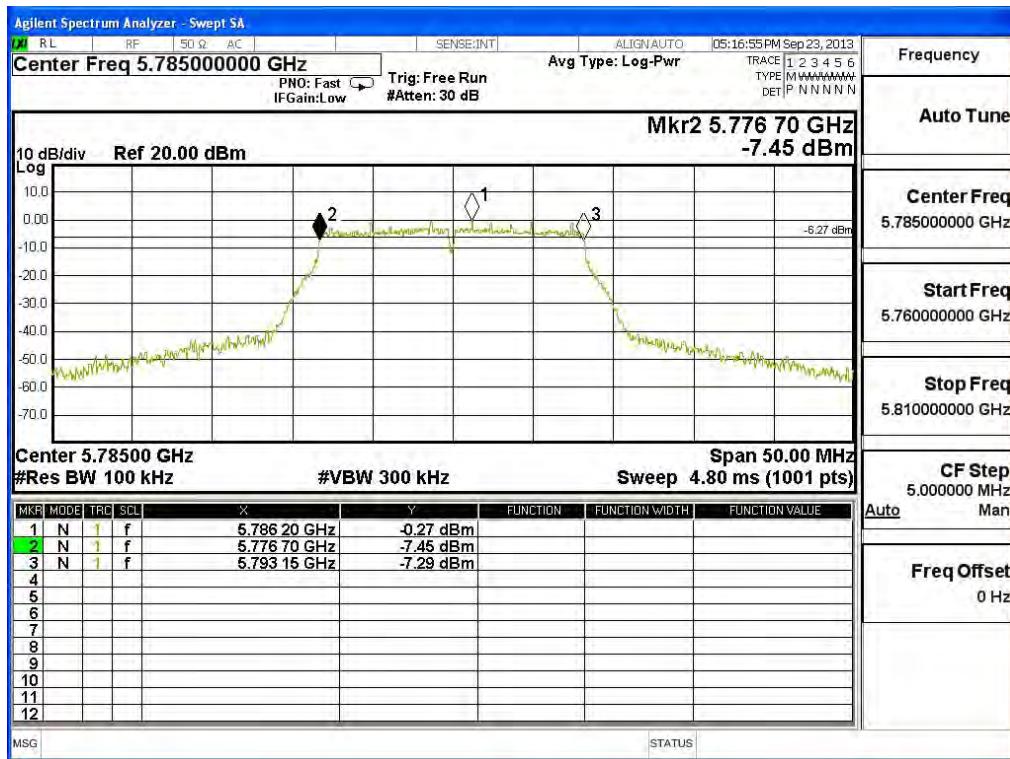
Figure Channel 149:



Product : WiFi module
 Test Item : Occupied Bandwidth Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit - 802.11a 6Mbps (5785MHz)

| Channel No. | Frequency (MHz) | Measurement Level (kHz) | Required Limit (kHz) | Result |
|-------------|-----------------|-------------------------|----------------------|--------|
| 157 | 5785.00 | 16450 | >500 | Pass |

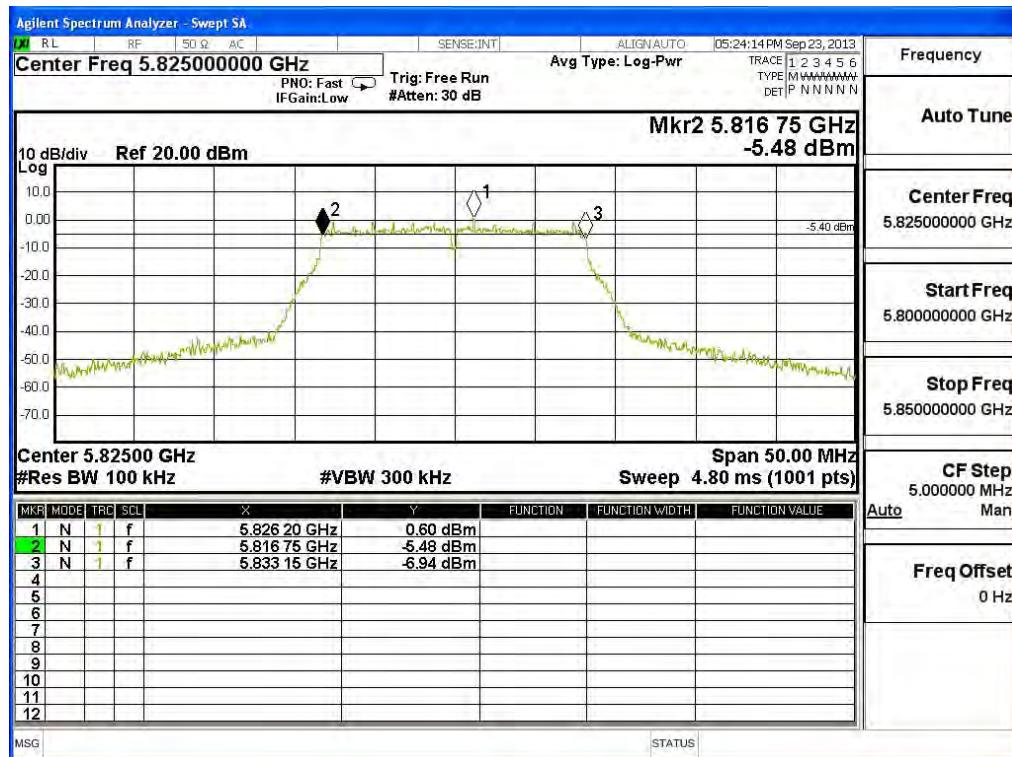
Figure Channel 157:



Product : WiFi module
Test Item : Occupied Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit - 802.11a 6Mbps (5825MHz)

| Channel No. | Frequency (MHz) | Measurement Level (kHz) | Required Limit (kHz) | Result |
|-------------|-----------------|-------------------------|----------------------|--------|
| 165 | 5825.00 | 16400 | >500 | Pass |

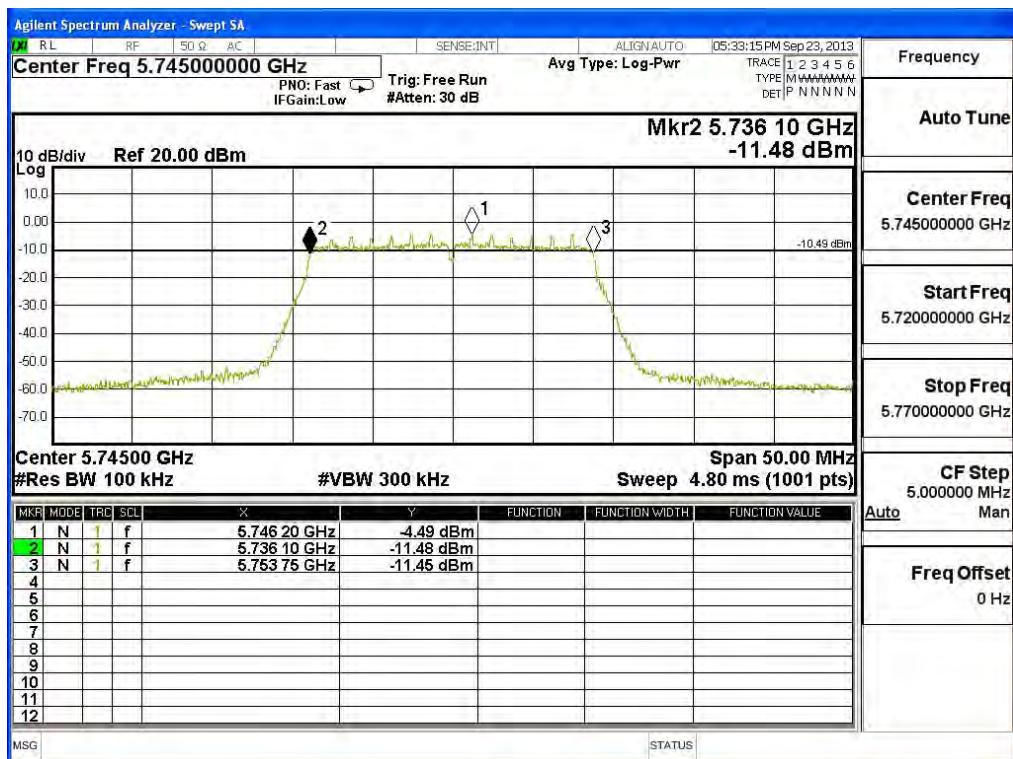
Figure Channel 165:



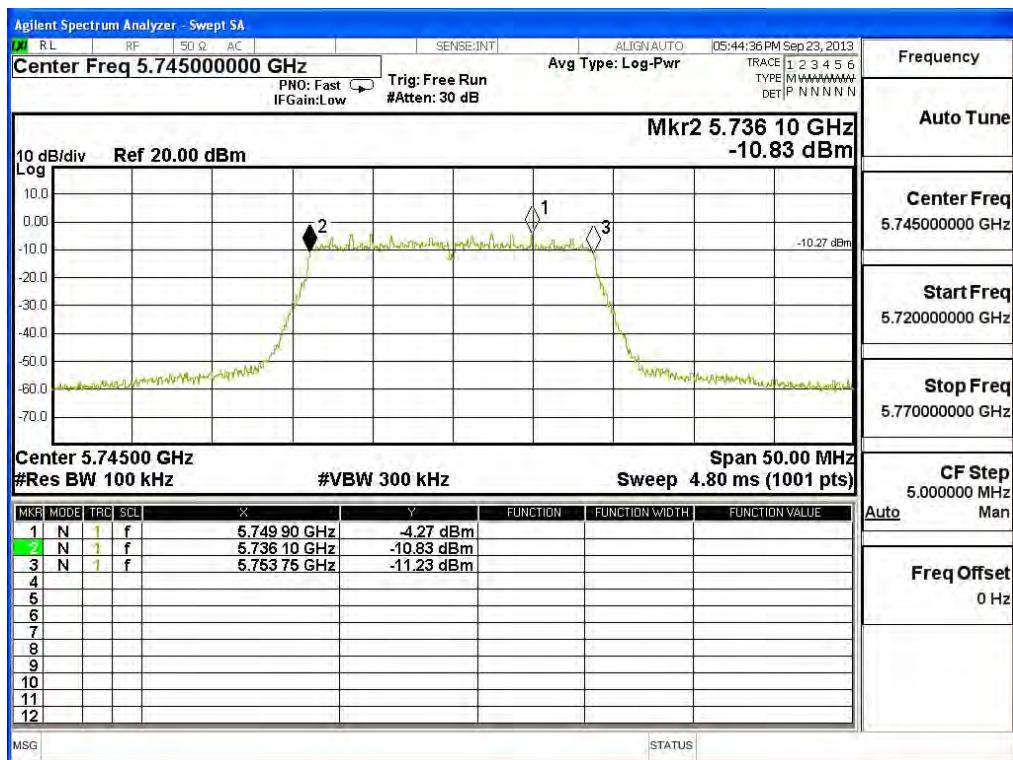
Product : WiFi module
 Test Item : Occupied Bandwidth Data
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit - 802.11n-20BW_21.7Mbps(5G Band) (5745MHz)

| Channel No. | Frequency (MHz) | Measurement Level (kHz) | Required Limit (kHz) | Result |
|-------------|-----------------|-------------------------|----------------------|--------|
| 149 | 5745.00 | 17650 | >500 | Pass |

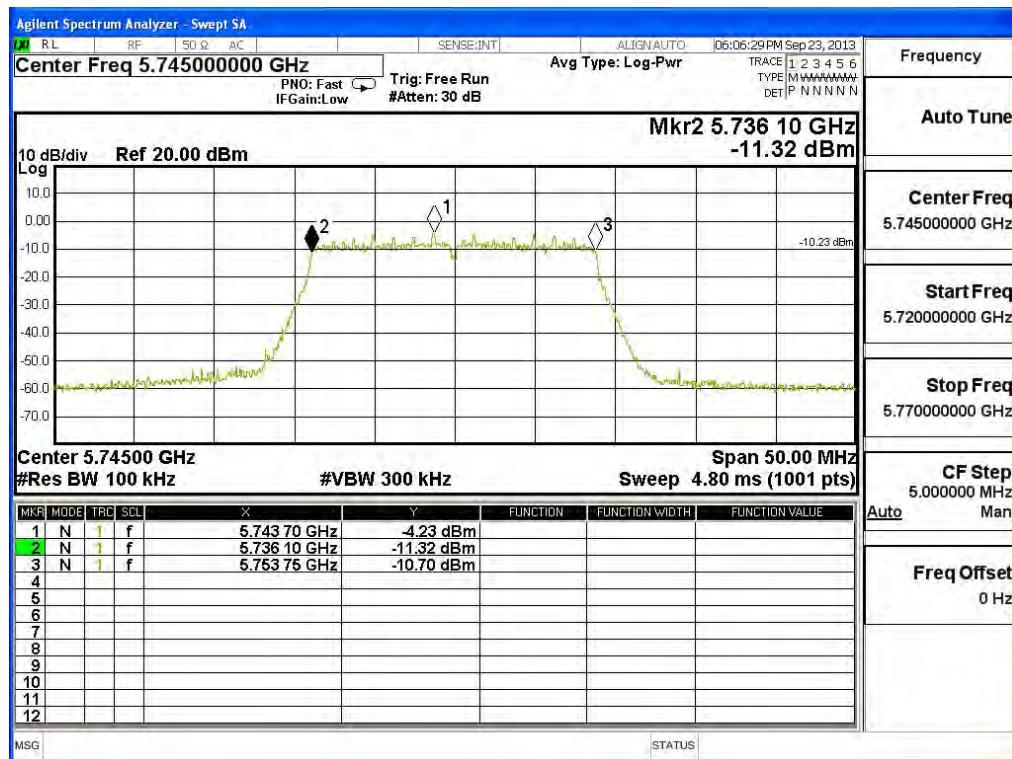
Figure Channel 149: (Chain A)



| Channel No. | Frequency (MHz) | Measurement Level (kHz) | Required Limit (kHz) | Result |
|-------------|-----------------|-------------------------|----------------------|--------|
| 149 | 5745.00 | 17650 | >500 | Pass |

Figure Channel 149: (Chain B)


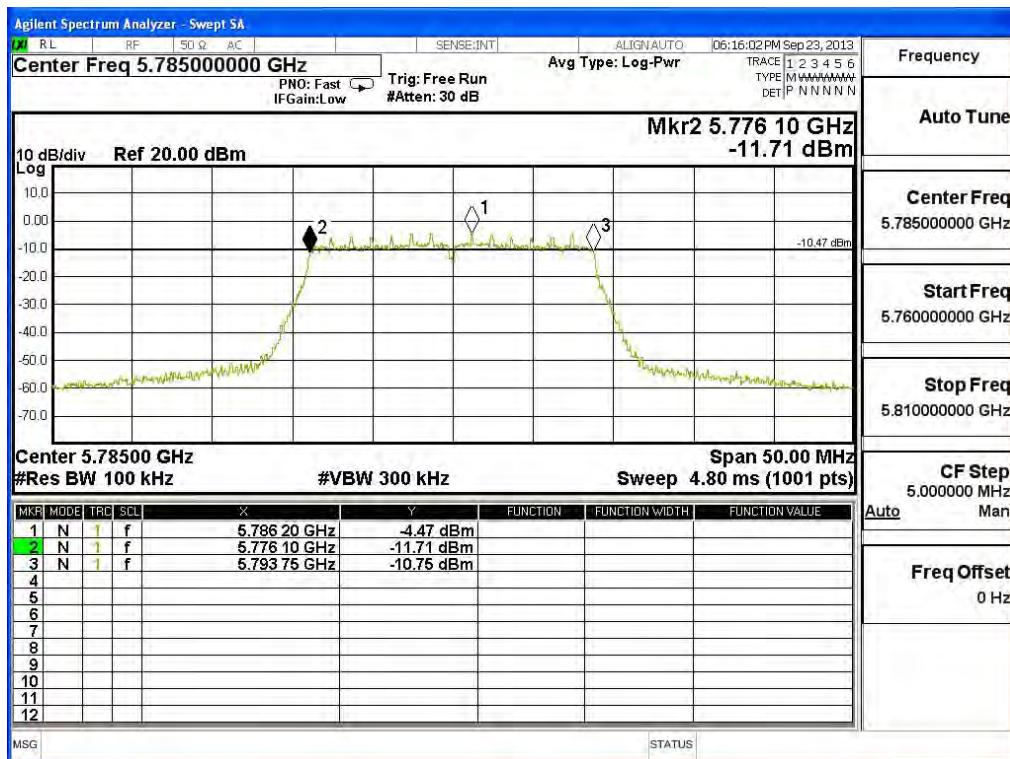
| Channel No. | Frequency (MHz) | Measurement Level (kHz) | Required Limit (kHz) | Result |
|-------------|-----------------|-------------------------|----------------------|--------|
| 149 | 5745.00 | 17650 | >500 | Pass |

Figure Channel 149: (Chain C)


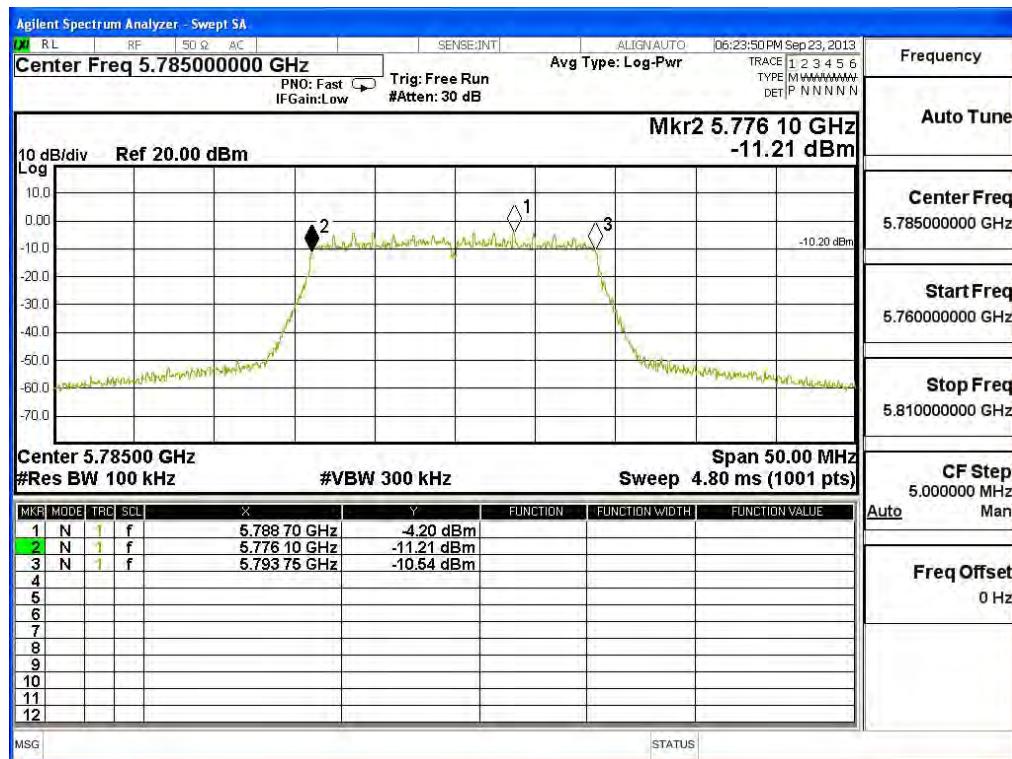
Product : WiFi module
 Test Item : Occupied Bandwidth Data
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit - 802.11n-20BW_21.7Mbps(5G Band) (5785MHz)

| Channel No. | Frequency (MHz) | Measurement Level (kHz) | Required Limit (kHz) | Result |
|-------------|-----------------|-------------------------|----------------------|--------|
| 157 | 5785.00 | 17650 | >500 | Pass |

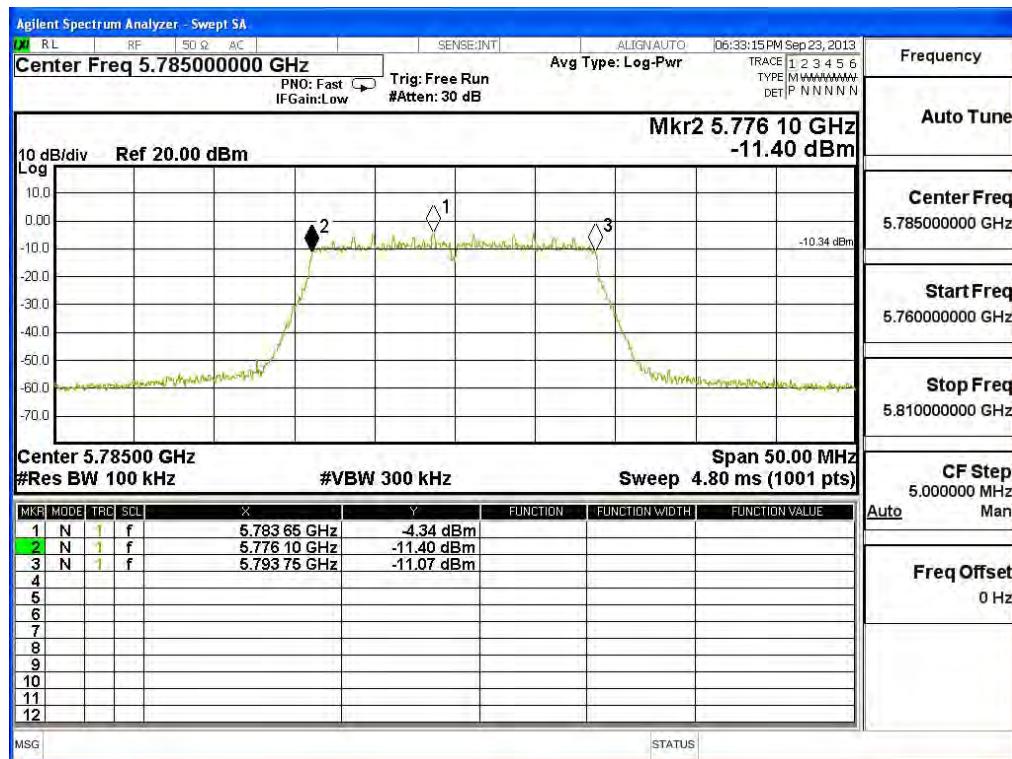
Figure Channel 157: (Chain A)



| Channel No. | Frequency (MHz) | Measurement Level (kHz) | Required Limit (kHz) | Result |
|-------------|-----------------|-------------------------|----------------------|--------|
| 157 | 5785.00 | 17650 | >500 | Pass |

Figure Channel 157: (Chain B)


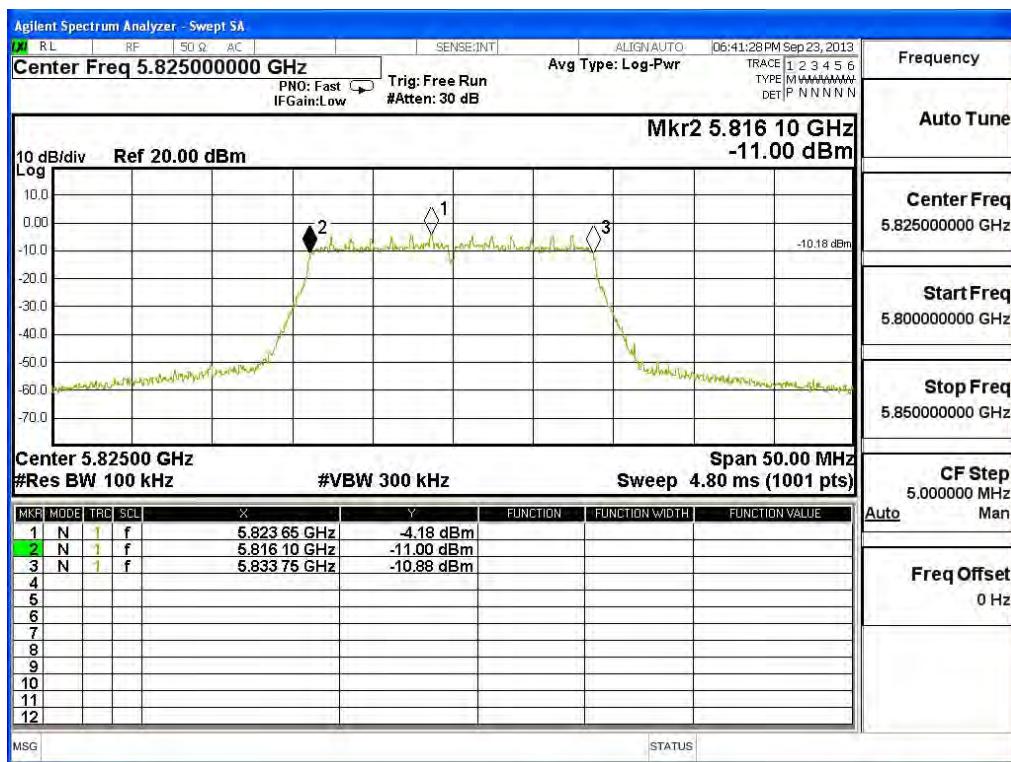
| Channel No. | Frequency (MHz) | Measurement Level (kHz) | Required Limit (kHz) | Result |
|-------------|-----------------|-------------------------|----------------------|--------|
| 157 | 5785.00 | 17650 | >500 | Pass |

Figure Channel 157: (Chain C)


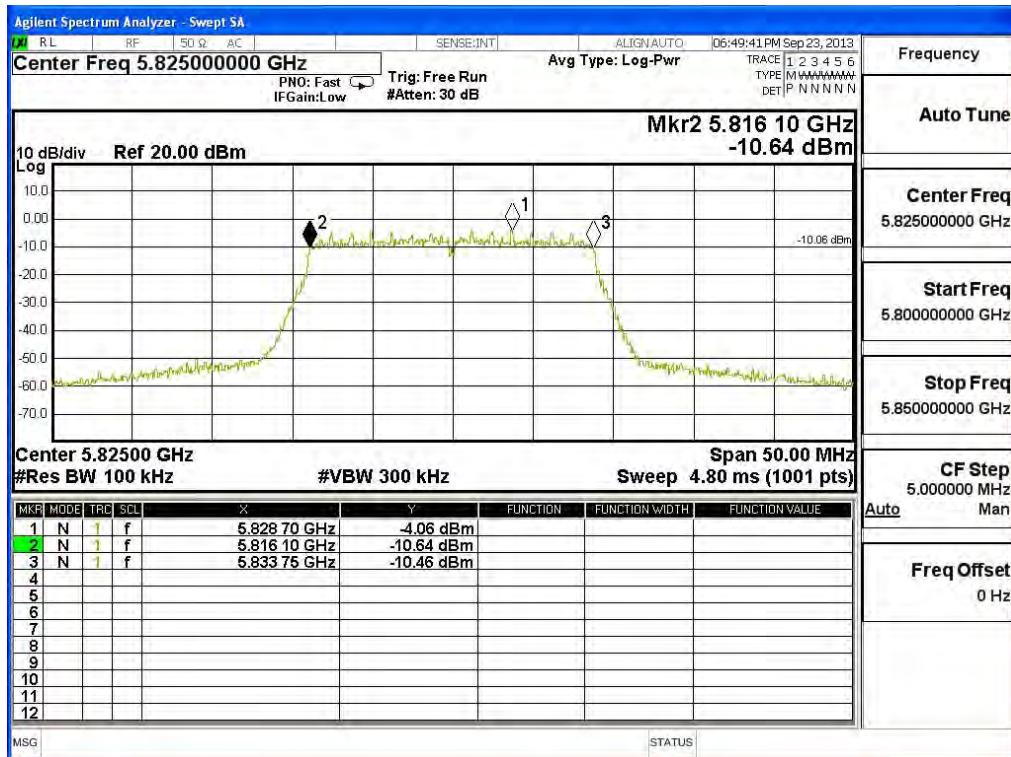
Product : WiFi module
 Test Item : Occupied Bandwidth Data
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit - 802.11n-20BW_21.7Mbps(5G Band) (5825MHz)

| Channel No. | Frequency (MHz) | Measurement Level (kHz) | Required Limit (kHz) | Result |
|-------------|-----------------|-------------------------|----------------------|--------|
| 165 | 5825.00 | 17650 | >500 | Pass |

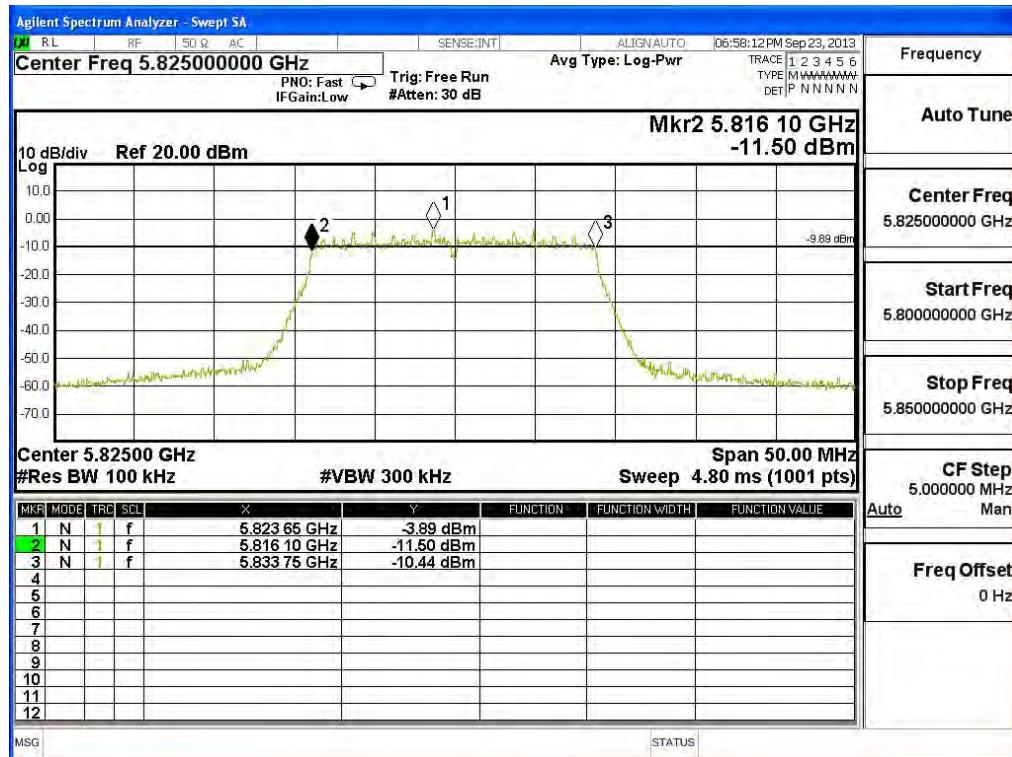
Figure Channel 165: (Chain A)



| Channel No. | Frequency (MHz) | Measurement Level (kHz) | Required Limit (kHz) | Result |
|-------------|-----------------|-------------------------|----------------------|--------|
| 165 | 5825.00 | 17650 | >500 | Pass |

Figure Channel 165: (Chain B)


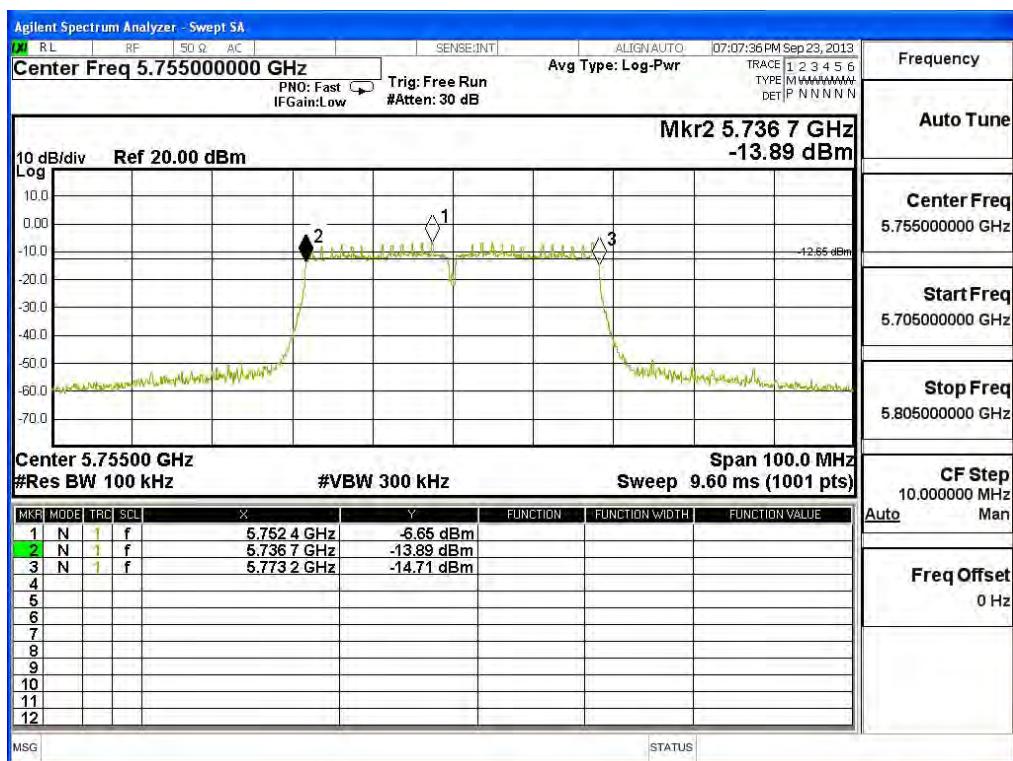
| Channel No. | Frequency (MHz) | Measurement Level (kHz) | Required Limit (kHz) | Result |
|-------------|-----------------|-------------------------|----------------------|--------|
| 165 | 5825.00 | 17650 | >500 | Pass |

Figure Channel 165: (Chain C)


Product : WiFi module
 Test Item : Occupied Bandwidth Data
 Test Site : No.3 OATS
 Test Mode : Mode 5: Transmit - 802.11n-40BW_45Mbps(5G Band) (5755MHz)

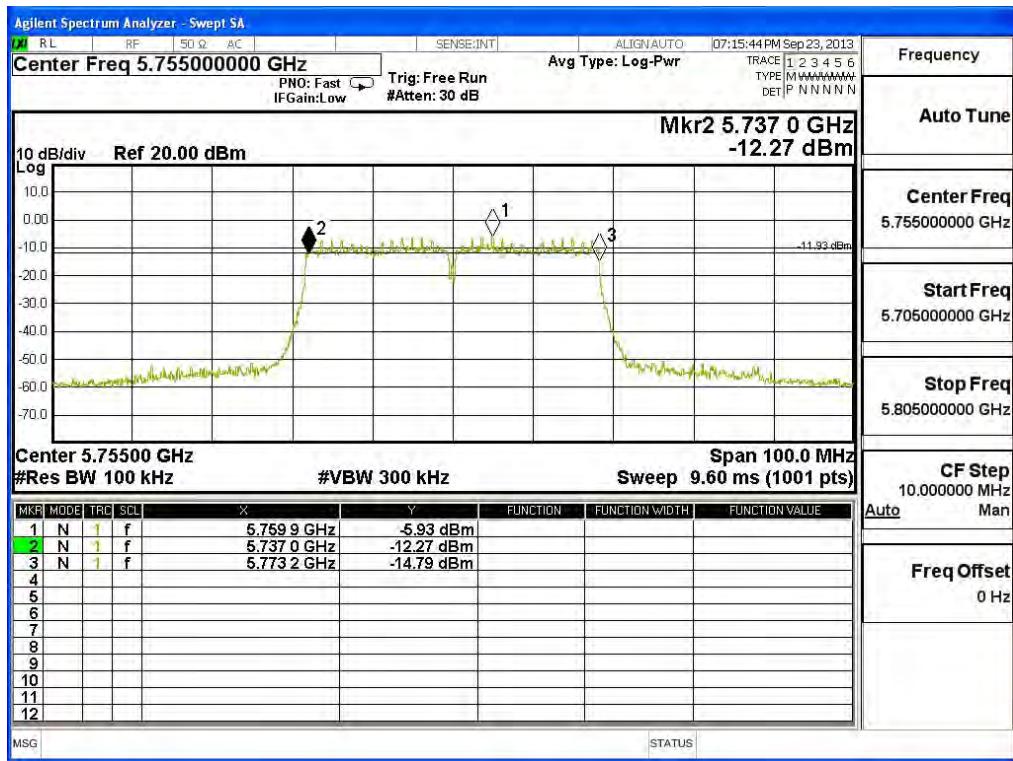
| Channel No. | Frequency (MHz) | Measurement Level (kHz) | Required Limit (kHz) | Result |
|-------------|-----------------|-------------------------|----------------------|--------|
| 151 | 5755.00 | 36500 | >500 | Pass |

Figure Channel 151: (Chain A)



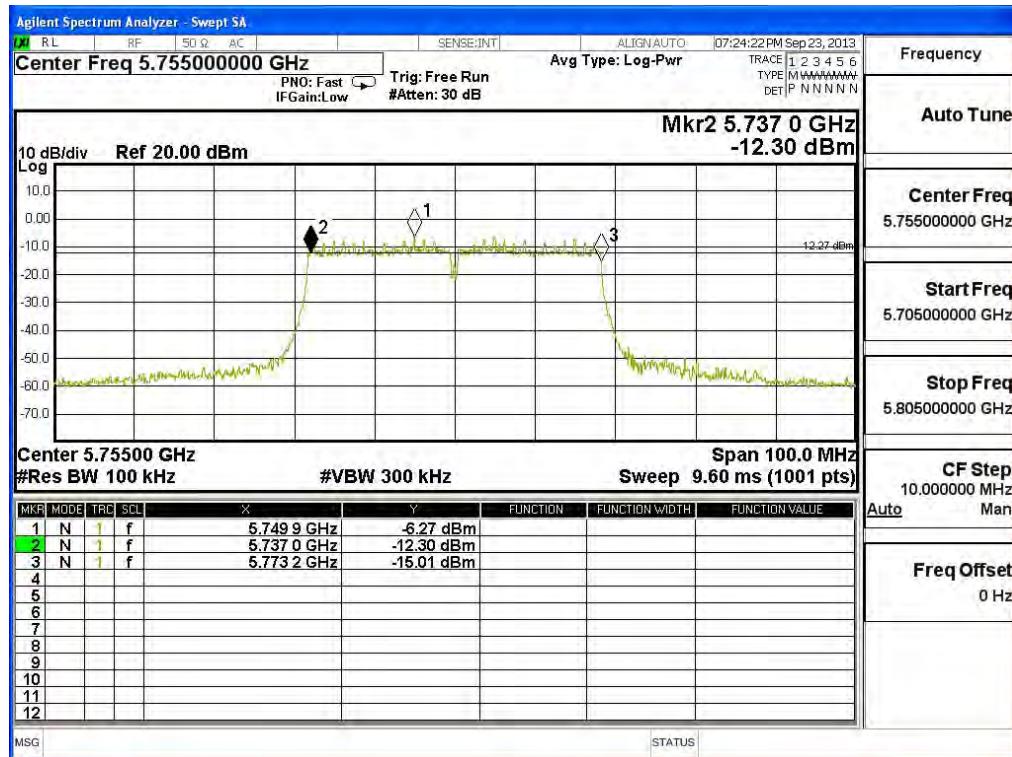
| Channel No. | Frequency (MHz) | Measurement Level (kHz) | Required Limit (kHz) | Result |
|-------------|-----------------|-------------------------|----------------------|--------|
| 151 | 5755.00 | 36200 | >500 | Pass |

Figure Channel 151: (Chain B)



| Channel No. | Frequency (MHz) | Measurement Level (kHz) | Required Limit (kHz) | Result |
|-------------|-----------------|-------------------------|----------------------|--------|
| 151 | 5755.00 | 36200 | >500 | Pass |

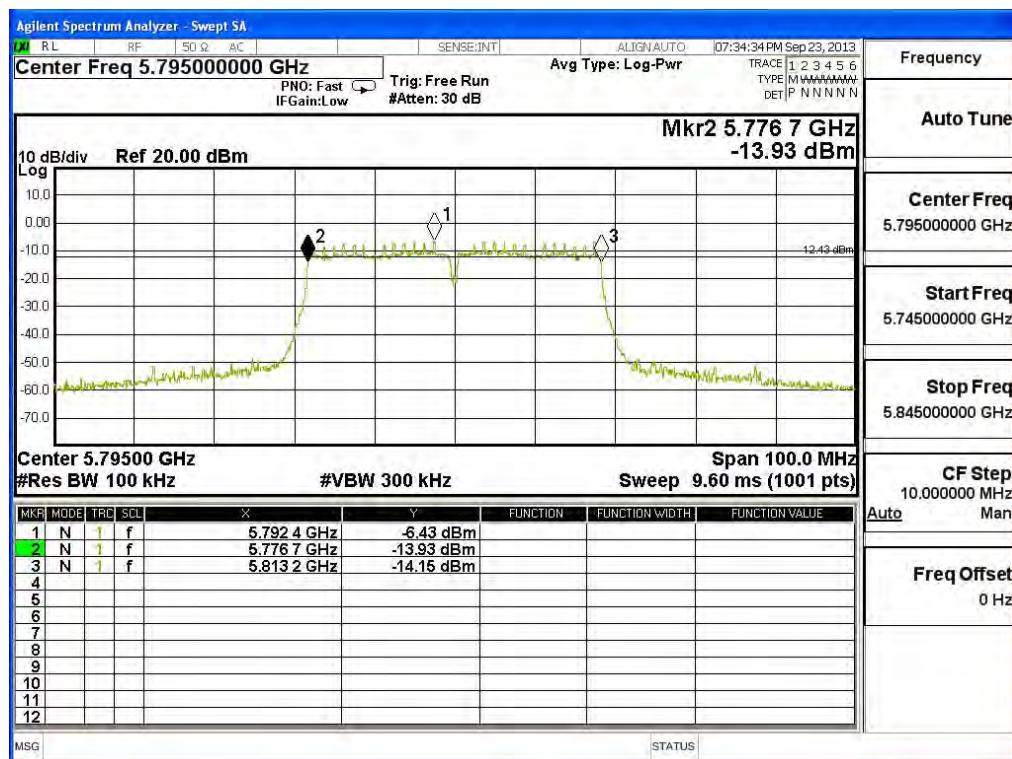
Figure Channel 151: (Chain C)



Product : WiFi module
 Test Item : Occupied Bandwidth Data
 Test Site : No.3 OATS
 Test Mode : Mode 5: Transmit - 802.11n-40BW_45Mbps(5G Band) (5795MHz)

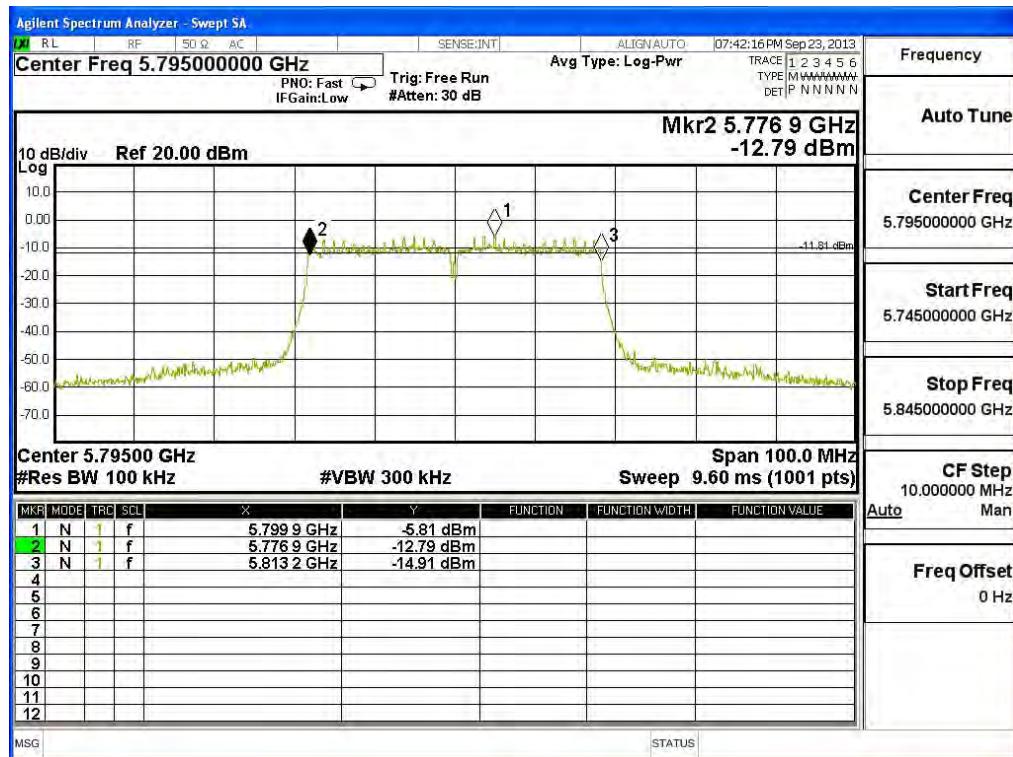
| Channel No. | Frequency (MHz) | Measurement Level (kHz) | Required Limit (kHz) | Result |
|-------------|-----------------|-------------------------|----------------------|--------|
| 159 | 5795.00 | 36500 | >500 | Pass |

Figure Channel 159: (Chain A)



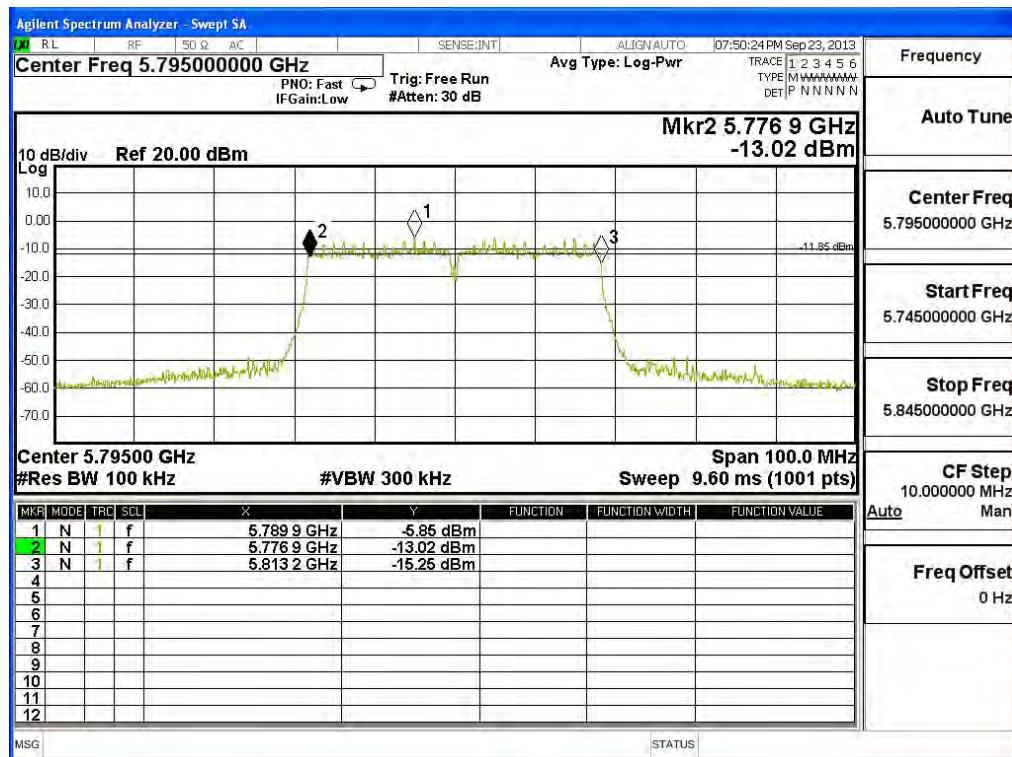
| Channel No. | Frequency (MHz) | Measurement Level (kHz) | Required Limit (kHz) | Result |
|-------------|-----------------|-------------------------|----------------------|--------|
| 159 | 5795.00 | 36300 | >500 | Pass |

Figure Channel 159: (Chain B)



| Channel No. | Frequency (MHz) | Measurement Level (kHz) | Required Limit (kHz) | Result |
|-------------|-----------------|-------------------------|----------------------|--------|
| 159 | 5795.00 | 36300 | >500 | Pass |

Figure Channel 159: (Chain C)



8. Power Density

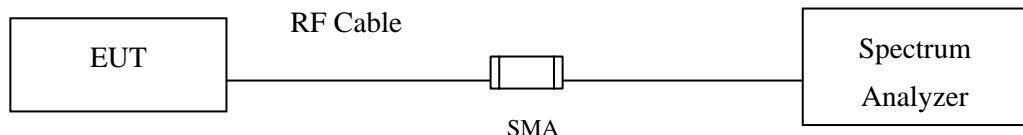
8.1. Test Equipment

| Equipment | Manufacturer | Model No./Serial No. | Last Cal. |
|---------------------|--------------|----------------------|------------|
| Spectrum Analyzer | R&S | FSP40 / 100170 | Jun., 2013 |
| Spectrum Analyzer | Agilent | E4407B / US39440758 | Jun., 2013 |
| X Spectrum Analyzer | Agilent | N9010A / MY48030495 | Apr., 2013 |

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 C63.10, 2009; tested according to DTS test procedure of KDB 558074 for compliance to FCC 47CFR 15.247 requirements.

The maximum power spectral density using KDB 558074 section 10.2 PKPSD (peak PSD) method.

8.5. Uncertainty

± 1.27 dB

8.6. Test Result of Power Density

Product : WiFi module
 Test Item : Power Density Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit - 802.11a 6Mbps (5745MHz)

| Channel No. | Frequency (MHz) | Measure Level (dBm) | Limit (dBm) | Result |
|-------------|-----------------|---------------------|-------------|--------|
| 149 | 5745.000 | 0.28 | < 8dBm | Pass |
| 157 | 5785.000 | -0.32 | < 8dBm | Pass |
| 165 | 5825.000 | 0.45 | < 8dBm | Pass |

Figure Channel 149:

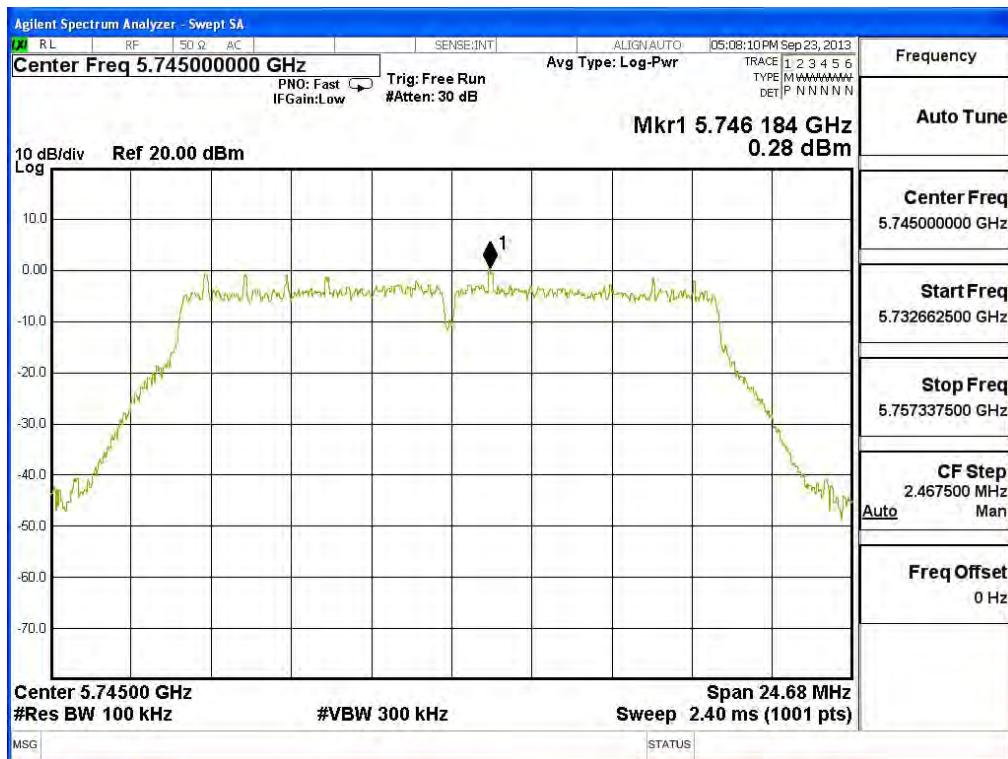
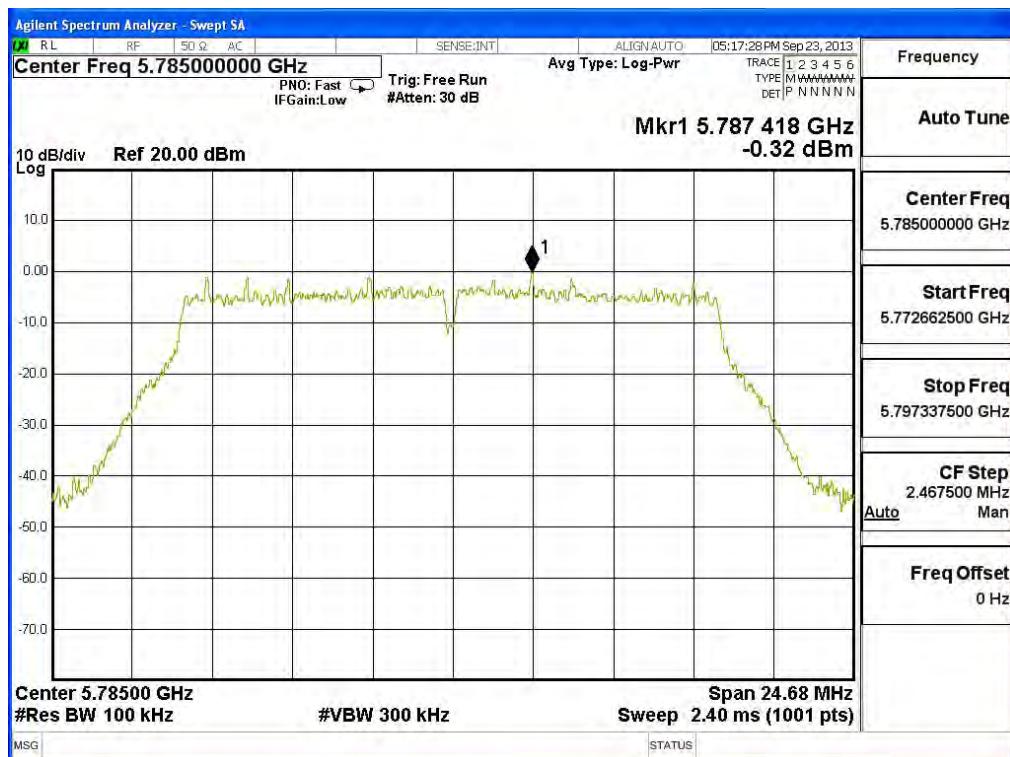
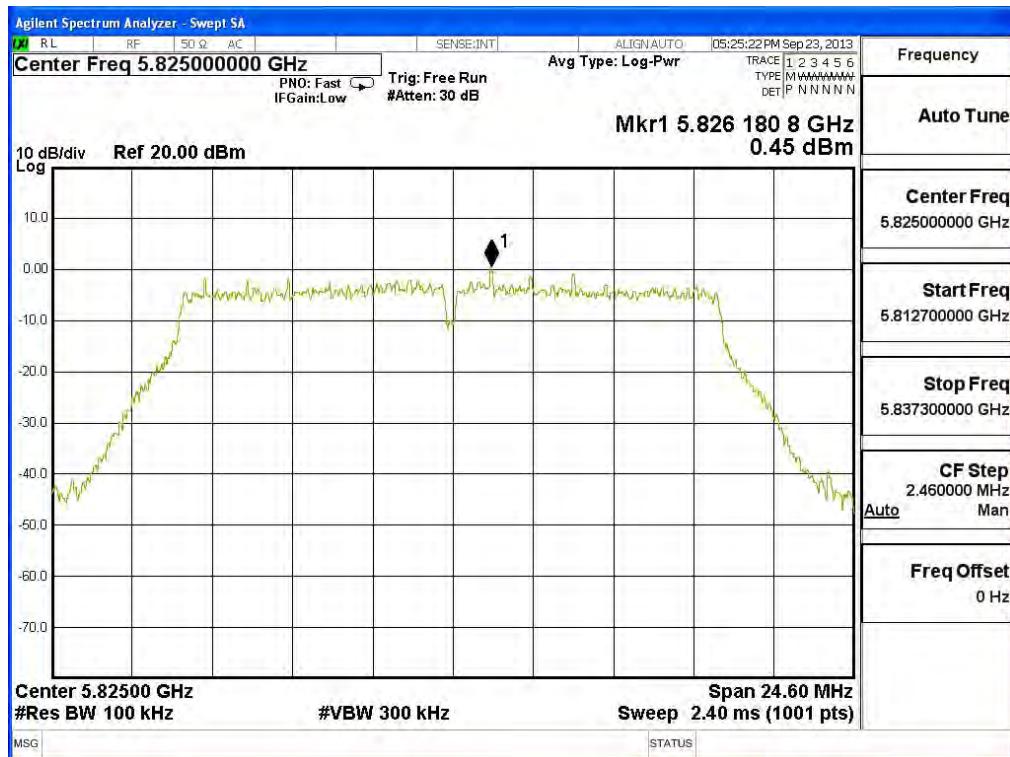


Figure Channel 157:

Figure Channel 165:


Product : WiFi module
 Test Item : Power Density Data
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit - 802.11n-20BW_21.7Mbps(5G Band) (5745MHz)

| Channel No. | Frequency (MHz) | Chain (dBm) | PPSD/MHz (dBm) | Total PPSD/MHz (dBm) | Limit (dBm) | Result |
|-------------|-----------------|-------------|----------------|----------------------|-------------|--------|
| 149 | 5745 | A | -4.310 | 0.460 | < 8dBm | Pass |
| | | B | -4.230 | 0.540 | < 8dBm | Pass |
| | | C | -4.260 | 0.510 | < 8dBm | Pass |

Note 1: The quantity $10 \log 3$ (three antennas) is added to the spectrum peak value according to document 662911 D01.

Figure Channel 149: (Chain A)

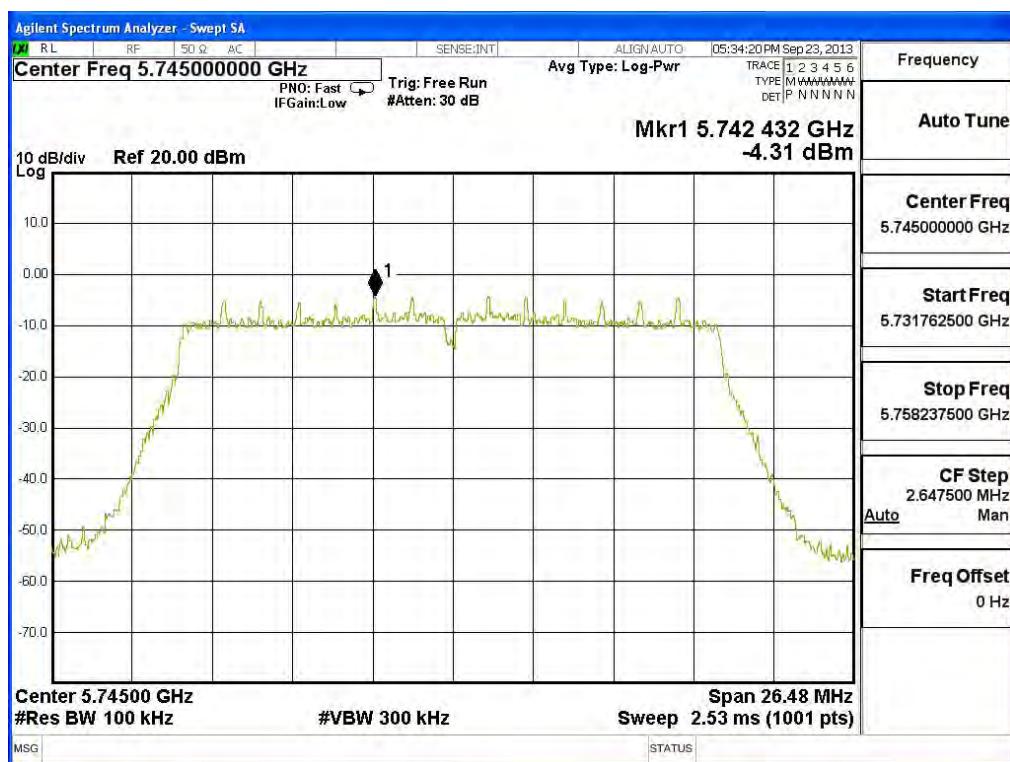


Figure Channel 149: (Chain B)

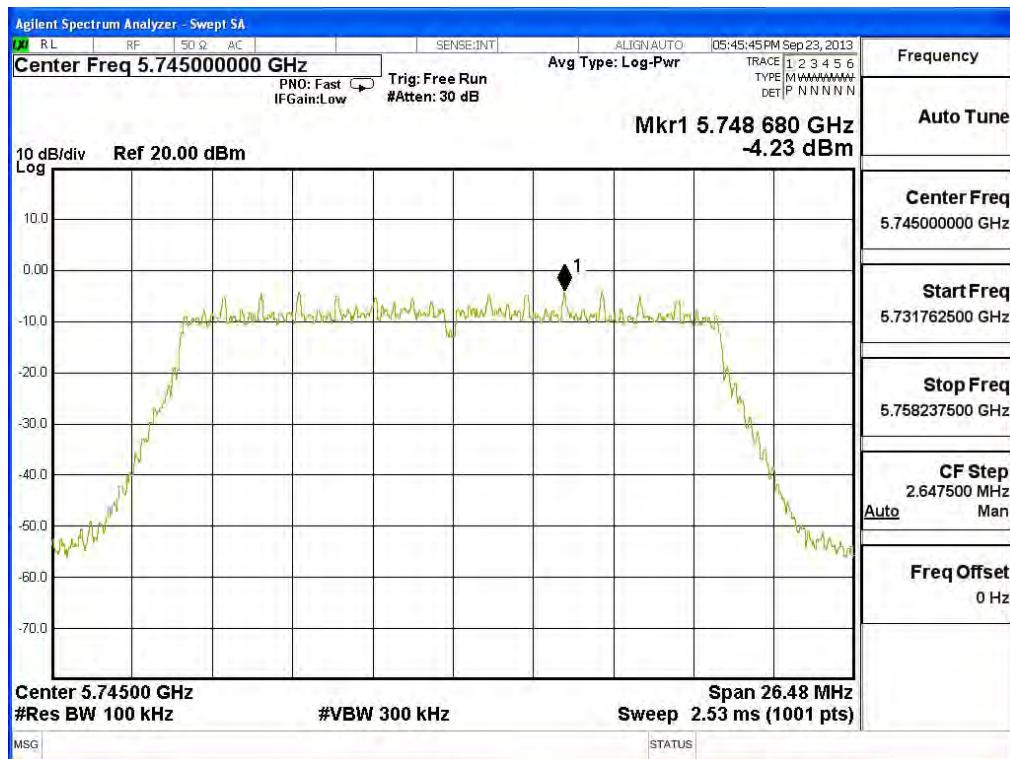
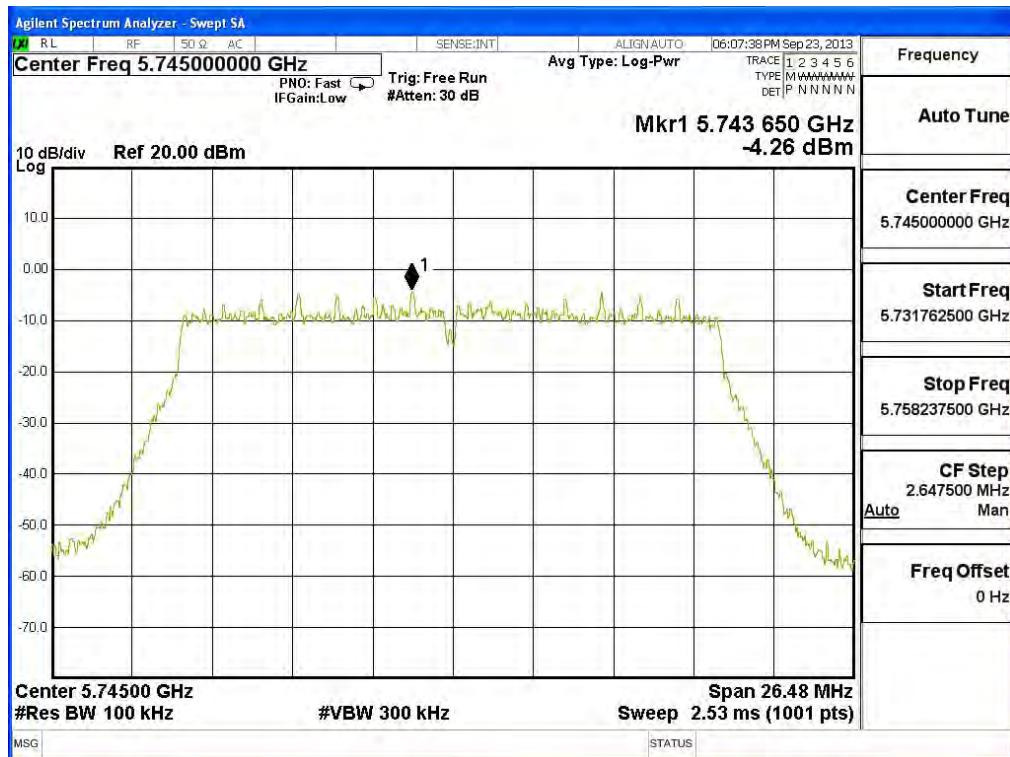


Figure Channel 149: (Chain C)



Product : WiFi module
 Test Item : Power Density Data
 Test Site : No.3OATS
 Test Mode : Mode 4: Transmit - 802.11n-20BW_21.7Mbps(5G Band) (5785MHz)

| Channel No. | Frequency (MHz) | Chain (dBm) | PPSD/MHz (dBm) | Total PPSD/MHz (dBm) | Limit (dBm) | Result |
|-------------|-----------------|-------------|----------------|----------------------|-------------|--------|
| 157 | 5785 | A | -4.700 | 0.070 | < 8dBm | Pass |
| | | B | -4.340 | 0.430 | < 8dBm | Pass |
| | | C | -4.310 | 0.460 | < 8dBm | Pass |

Note 1: The quantity $10 \log 3$ (three antennas) is added to the spectrum peak value according to document 662911 D01.

Figure Channel 157: (Chain A)

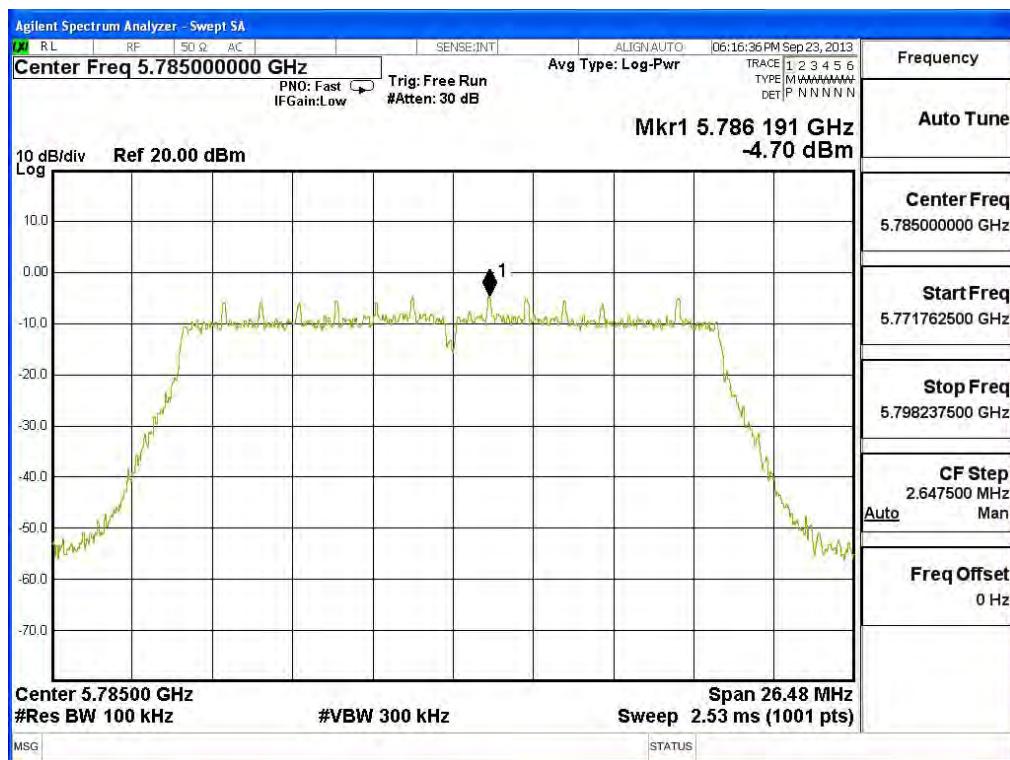


Figure Channel 157: (Chain B)

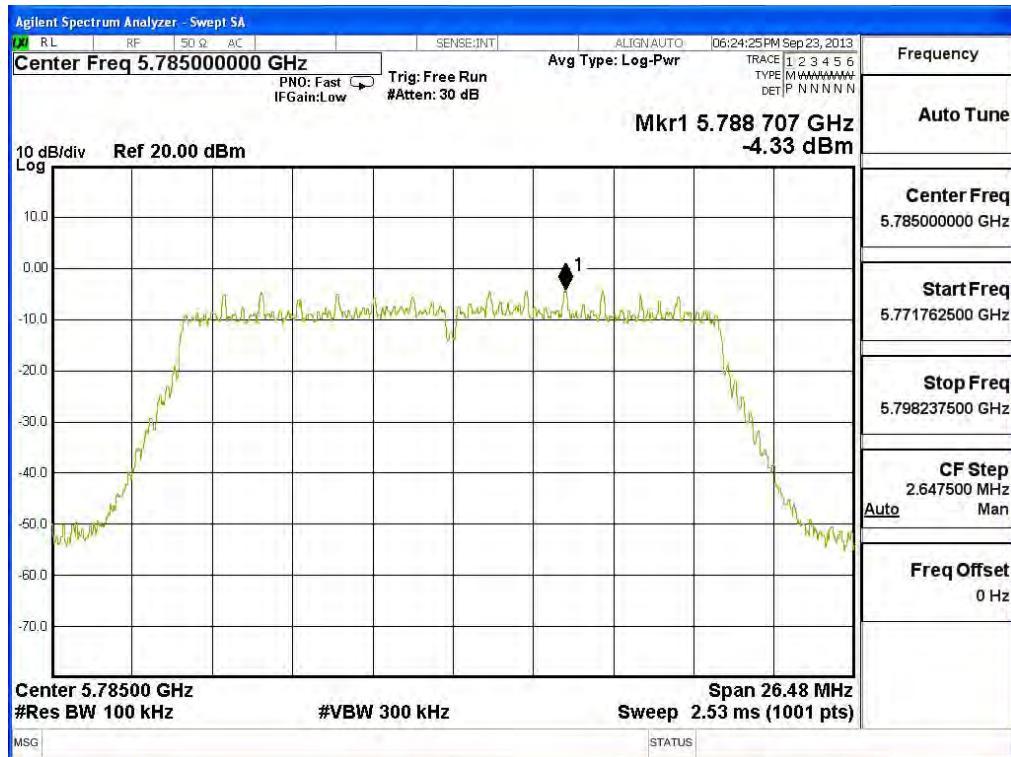
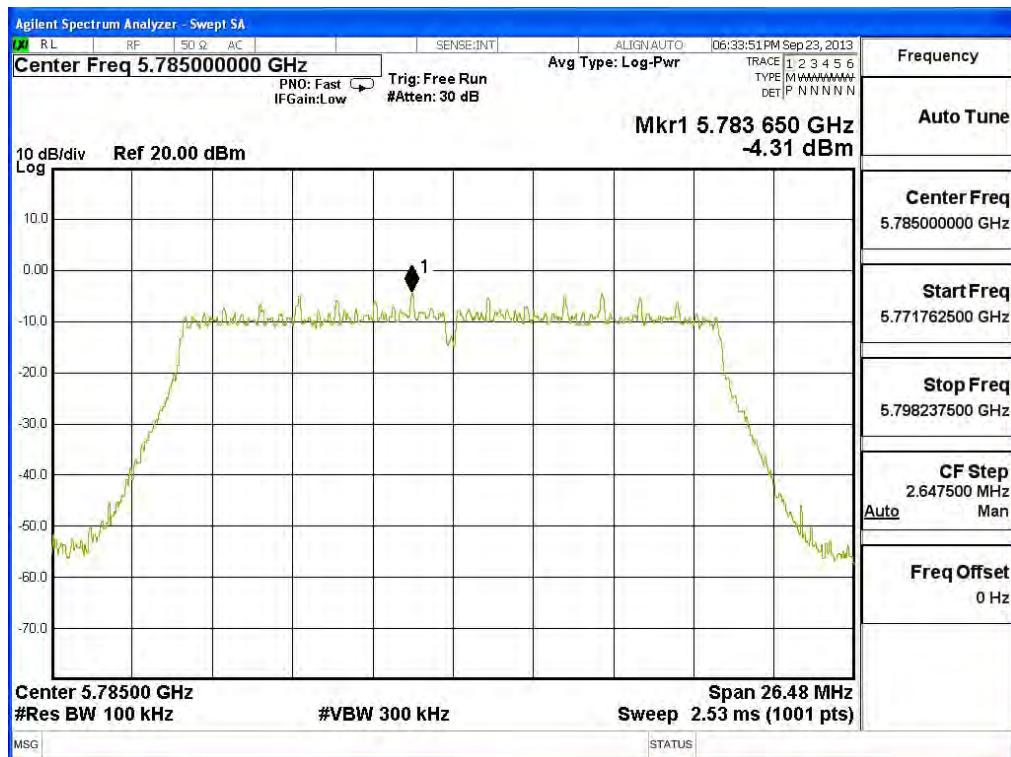


Figure Channel 157: (Chain C)



Product : WiFi module
 Test Item : Power Density Data
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit - 802.11n-20BW_21.7Mbps(5G Band) (5825MHz)

| Channel No. | Frequency (MHz) | Chain (dBm) | PPSD/MHz (dBm) | Total PPSD/MHz (dBm) | Limit (dBm) | Result |
|-------------|-----------------|-------------|----------------|----------------------|-------------|--------|
| 165 | 5825 | A | -4.150 | 0.620 | < 8dBm | Pass |
| | | B | -4.050 | 0.720 | < 8dBm | Pass |
| | | C | -4.210 | 0.560 | < 8dBm | Pass |

Note 1: The quantity $10 \log 3$ (three antennas) is added to the spectrum peak value according to document 662911 D01.

Figure Channel 165: (Chain A)

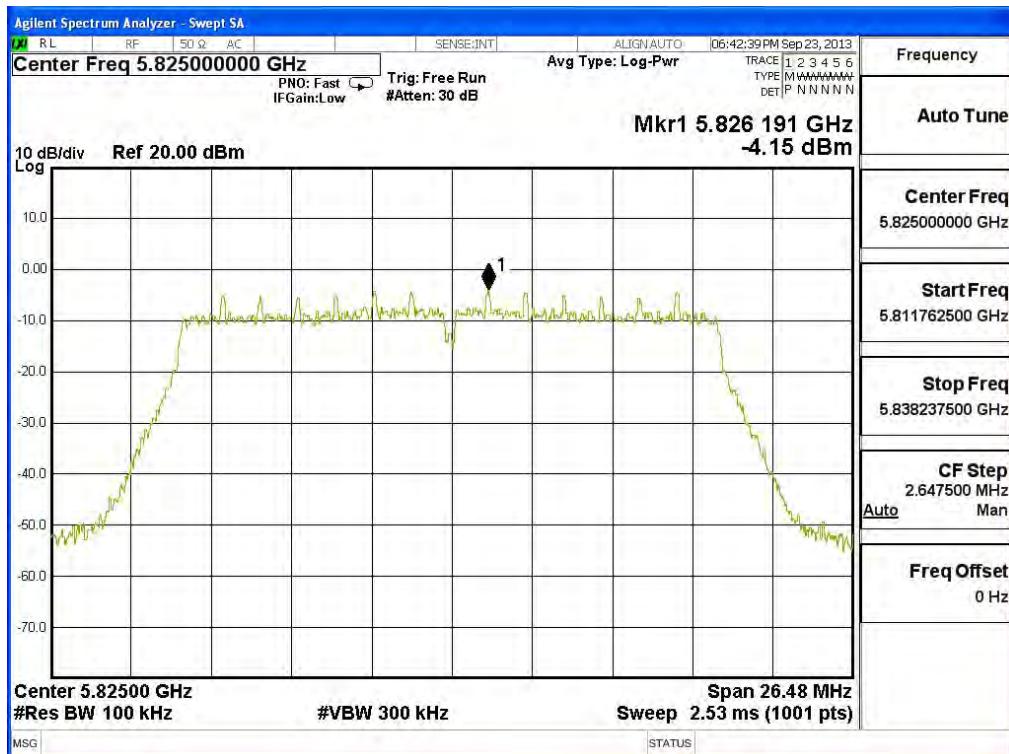
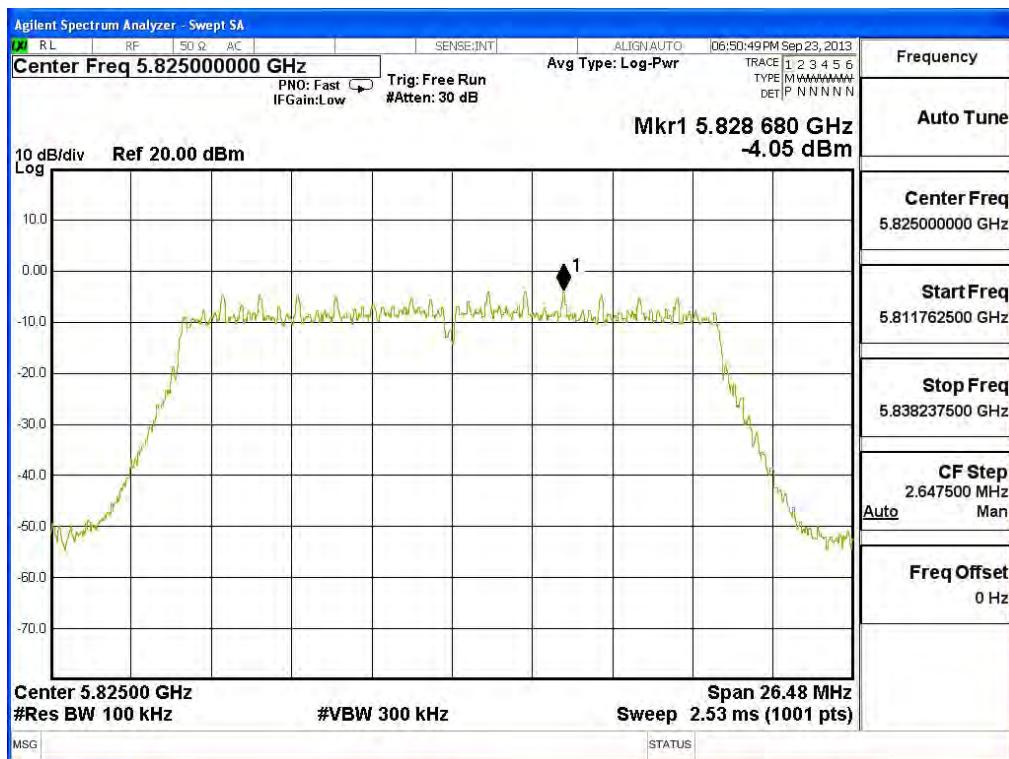
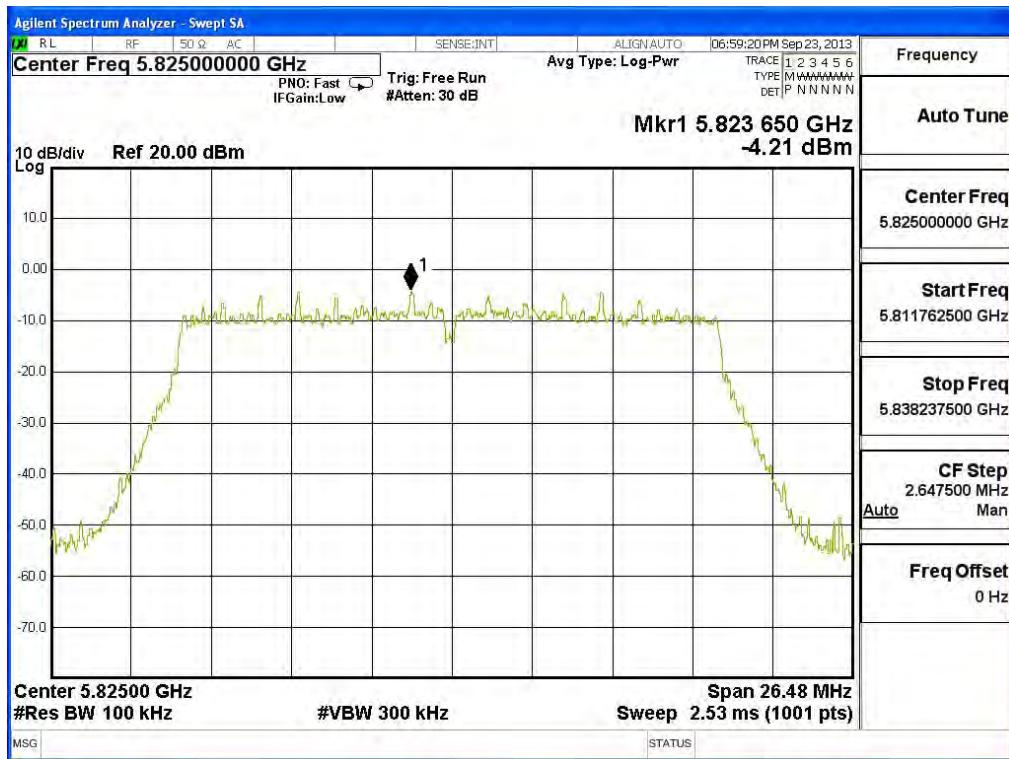


Figure Channel 165: (Chain B)

Figure Channel 165: (Chain C)


Product : WiFi module
 Test Item : Power Density Data
 Test Site : No.3 OATS
 Test Mode : Mode 5: Transmit - 802.11n-40BW_45Mbps(5G Band) (5755MHz)

| Channel No. | Frequency (MHz) | Chain (dBm) | PPSD/MHz (dBm) | Total PPSD/MHz (dBm) | Limit (dBm) | Result |
|-------------|-----------------|-------------|----------------|----------------------|-------------|--------|
| 151 | 5755 | A | -7.010 | -2.240 | < 8dBm | Pass |
| | | B | -5.820 | -1.050 | < 8dBm | Pass |
| | | C | -6.350 | -1.580 | < 8dBm | Pass |

Note 1: The quantity $10 \log 3$ (three antennas) is added to the spectrum peak value according to document 662911 D01.

Figure Channel 151: (Chain A)

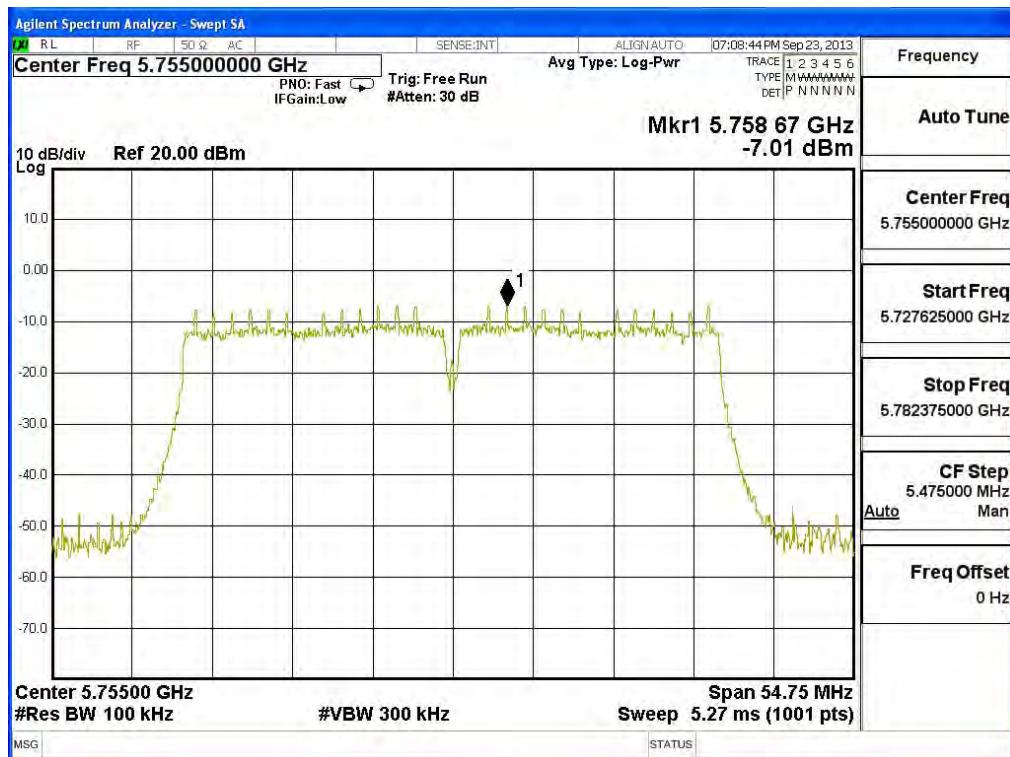


Figure Channel 151: (Chain B)

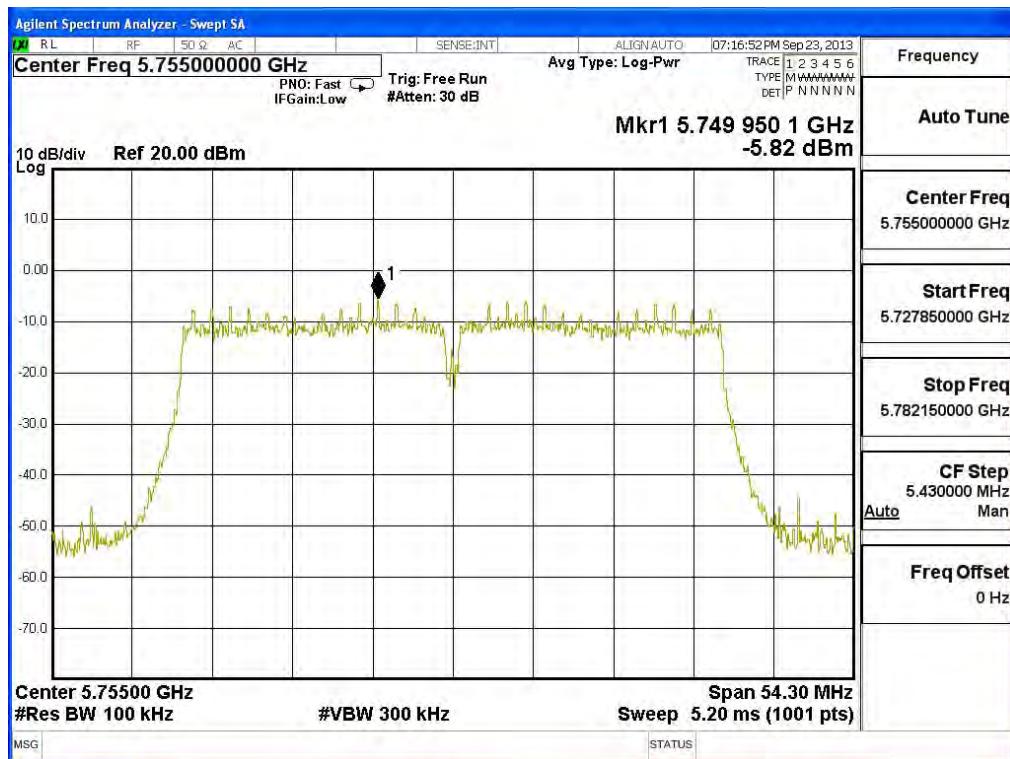


Figure Channel 151: (Chain C)



Product : WiFi module
 Test Item : Power Density Data
 Test Site : No.3OATS
 Test Mode : Mode 5: Transmit - 802.11n-40BW_45Mbps(5G Band) (5795MHz)

| Channel No. | Frequency (MHz) | Chain (dBm) | PPSD/MHz (dBm) | Total PPSD/MHz (dBm) | Limit (dBm) | Result |
|-------------|-----------------|-------------|----------------|----------------------|-------------|--------|
| 159 | 5795 | A | -6.530 | -1.760 | < 8dBm | Pass |
| | | B | -5.830 | -1.060 | < 8dBm | Pass |
| | | C | -5.980 | -1.210 | < 8dBm | Pass |

Note 1: The quantity $10 \log 3$ (three antennas) is added to the spectrum peak value according to document 662911 D01.

Figure Channel 159: (Chain A)

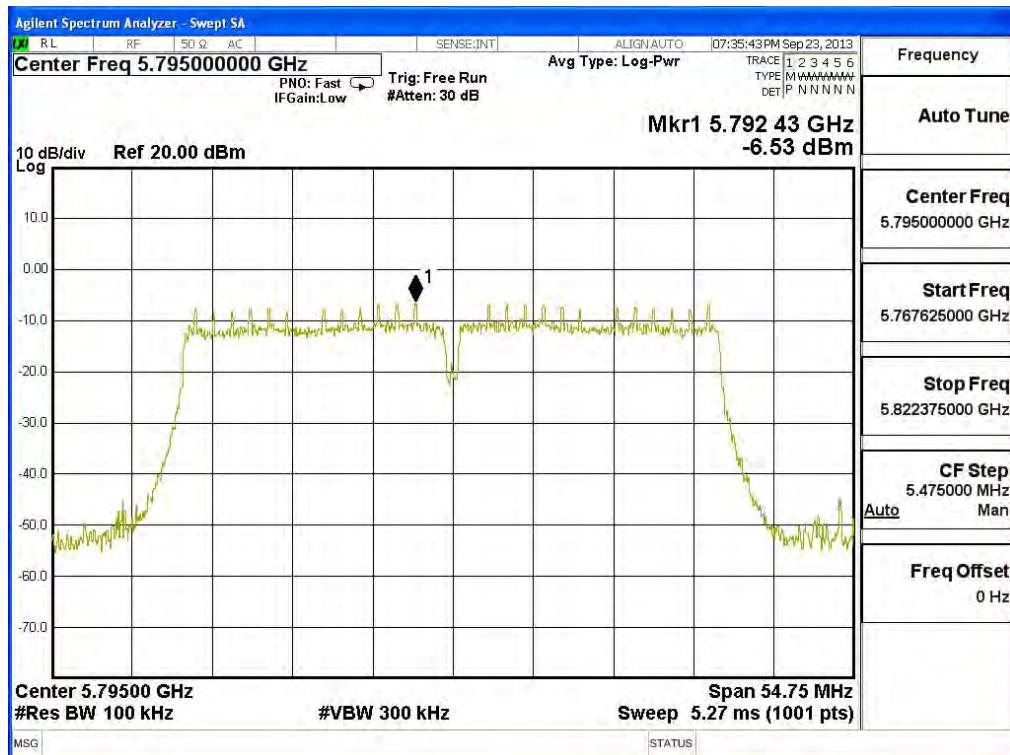
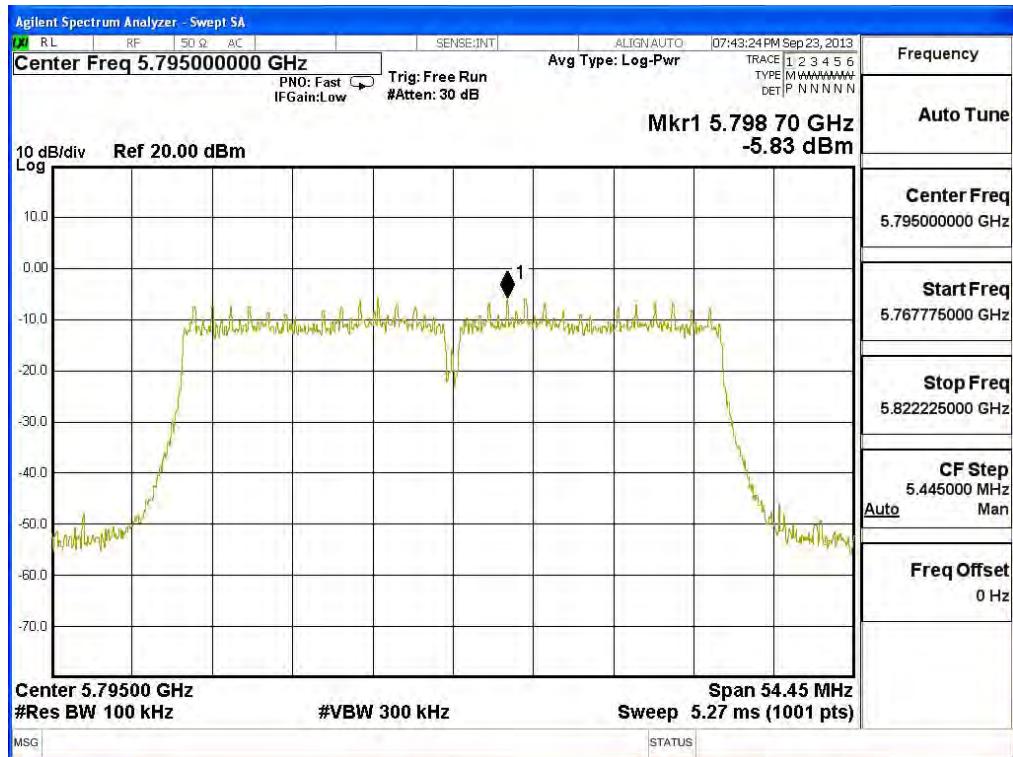
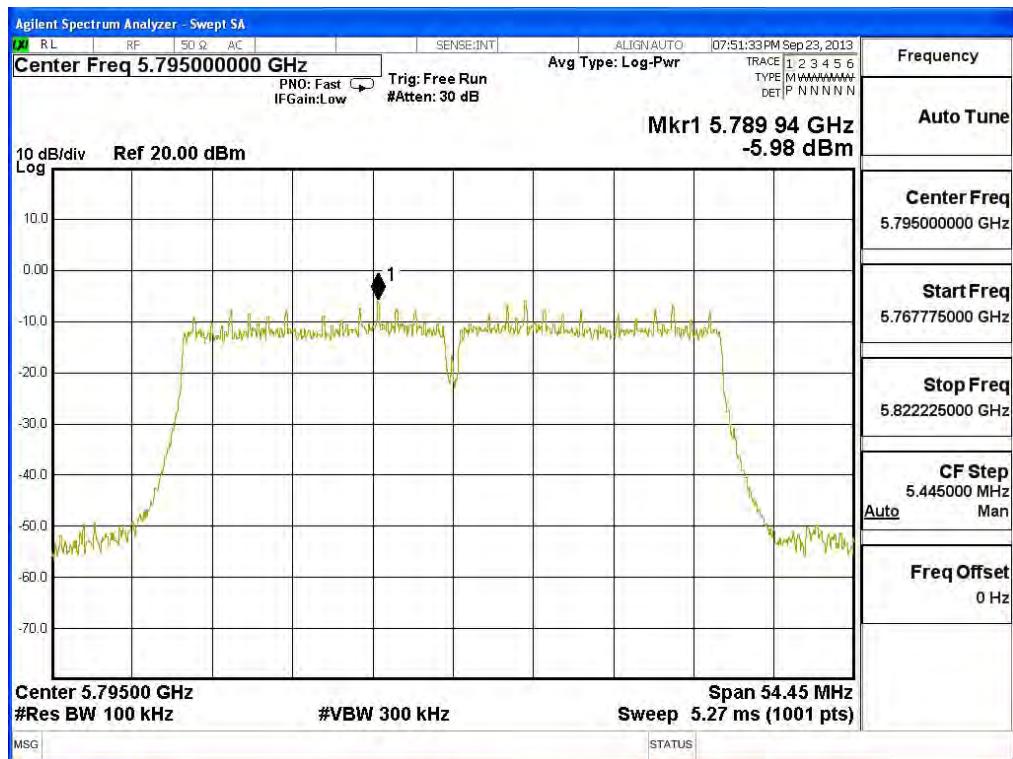


Figure Channel 159: (Chain B)

Figure Channel 159: (Chain C)


9. EMI Reduction Method During Compliance Testing

No modification was made during testing.