

CFR 47 FCC Part 15.407

TEST REPORT

Product : **IEEE 802.11a/b/g miniPCI module**
Trade Name : MOXA
Model Number : WAPA003
FCC ID : SLE-WAPA003

Prepared for

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Prepared by

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Remark :

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The test results in the report only to the tested sample.

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Statement of Compliance

Applicant: MOXA Inc.
Manufacturer: MOXA Inc.
Product: IEEE 802.11a/b/g miniPCI module
Model No.: WAPA003
Tested Power Supply: 120V/60Hz
Date of Final Test: Jun. 16, 2009

Configuration of Measurements and Standards Used :

FCC Rules and Regulations Part 15 Subpart E

I HEREBY CERTIFY THAT: The data shown in this report were made in accordance with the procedures given in ANSI C63.4, and the energy emitted by the device was founded to be within the limits applicable. I assume full responsibility for accuracy and completeness of these data.

- Note:** 1. The result of the testing report relate only to the item tested.
2. The testing report shall not be reproduced expect in full, without the written approval of IETC

Report Issued: 2009/06/30

Project Engineer: Anya Lee
Anya Lee

Approved: Jerry Liu
Jerry Liu

1 General Information

1.1 Description of Equipment Under Test

- Product** : IEEE 802.11a/b/g miniPCI module
- Model Number** : WAPA003
- Applicant** : **MOXA Inc.**
Fl.4, No.135, Lane 235, Pao-Chiao Rd., Shing Tien City, Taipei, R.O.C.
- Manufacturer** : **MOXA Inc.**
Fl.4, No.135, Lane 235, Pao-Chiao Rd., Shing Tien City, Taipei, R.O.C.
- Operating Frequency** : 5180MHz~5240MHz; 5260MHz~5320MHz; 5500MHz~5700MHz
- Channel Number** : Refer to section 1.2
- Type of Modulation** : OFDM
- Antenna Description** : The product contains 3 sets of antenna. One set antenna only support 2.4GHz band others antenna contain dual band (2.4GHz and 5GHz). Those antenna information as below.

| Model No. | Frequency Band | Antenna Type | Antenna Gain |
|----------------------|----------------|--------------|--------------|
| SMA-Male-RP | 2.4GHz / 5GHz | Dipole | 2dBi |
| ANT-WSB-ANM-05 Black | 2.4GHz | Dipole | 5dBi |
| ANT-WDB-ANM-0609 | 2.4GHz / 5GHz | Dipole | 6dBi / 9dBi |

When the device equipped with single band antenna (2.4GHz band only), then the 5GHz band function will be disabled.

- Sample Receive date** : May 14, 2009
- Date of Test** : May 20 ~ Jun. 16, 2009
- Additional Description** : 1.) The EUT is **IEEE 802.11a/b/g miniPCI module**.
2.) The test model is "**WAPA003**" and included in this report.
3.) For more detail specification about EUT, please refer to the user's manual.

1.2 Table for Carrier Frequencies

802.11a

| | | | | | | | | |
|----------|------|------|------|------|------|------|------|------|
| CH No. | 36 | 40 | 44 | 48 | 52 | 56 | 60 | 64 |
| CF (MHz) | 5180 | 5200 | 5220 | 5240 | 5260 | 5280 | 5300 | 5320 |

| | | | | | | | | | | | |
|----------|------|------|------|------|------|------|------|------|------|------|------|
| CH No. | 100 | 104 | 108 | 112 | 116 | 120 | 124 | 128 | 132 | 136 | 140 |
| CF (MHz) | 5500 | 5520 | 5540 | 5560 | 5580 | 5600 | 5620 | 5640 | 5660 | 5680 | 5700 |

Turbo Mode 802.11a

| | | |
|----------|------|------|
| CH No. | 42 | 58 |
| CF (MHz) | 5210 | 5290 |

1.3 Test Facility

- Site Description** : ☑RF Test Room ☑Conduction 2 ☑OATS 2
- Name of Firm** : Interocean EMC Technology Corp.
- Company web** : <http://www.ietc.com.tw>
- Site 1, 2 Location** : No.5-2, Lin 1, Tin-Fu Tsun, Lin-Kou Hsiang, Taipei County, Taiwan, R.O.C.
- Site 3, 4 Location** : No. 12, Ruei-Shu Valley, Ruei-Ping Tsun, Lin-Kou Hsiang, Taipei County, Taiwan, R.O.C.
- Site Filing** :
- Federal Communication Commissions – USA
Registration No.: 96399 (OATS 1 & 2)
Registration No.: 518958 (OATS 3 & 4)
Designation No.: TW1020
 - Voluntary Control Council for Interference by Information Technology Equipment (VCCI) – Japan
Member No.: 1349
Registration No. (Conducted Room): C-1094
Registration No. (Conducted Room): T-1562
Registration No. (OATS 1): R-1040
Registration No. (OATS 2): R-1041
 - Industry Canada (IC)
OUR FILE: 46405-4437 Submission: 130946
Registration No. (OATS 1): 4437A-1
Registration No. (OATS 2): 4437A-2
Registration No. (OATS 3): 4437A-3
Registration No. (OATS 4): 4437A-4
 - Japan Electrical Safety & Environment Technology Laboratories (JET)
Registration No.: 04S03-01
- Site Accreditation** :
- Bureau of Standards and Metrology and Inspection (BSMI) – Taiwan, R.O.C.
Accreditation No.:
SL2-IN-E-0026 for CNS13438 / CISPR22
SL2-R1-E-0026 for CNS13439 / CISPR13
SL2-R2-E-0026 for CNS13439 / CISPR13
SL2-A1-E-0026 for CNS13783-1 / CISPR14-1
 - Taiwan Accreditation Foundation (TAF)
Accreditation No.: 1113
 - TÜV NORD
Certificate No: TNTW0801R-01



1.4 Test Equipment

| Instrument | Manufacturer | Model | Serial No. | Next Cal. Date |
|-------------------------|---------------------|-----------------|-------------------|-----------------------|
| Spectrum Analyzer | R&S | FSP40 | 100478 | 2010/04/15 |
| Preamplifier | Agilent | 8449B | 3008A01434 | 2010/04/01 |
| Preamplifier | Agilent | 83050A | 3950A00225 | 2009/08/10 |
| Preamplifier | SCHAFFNER | CA30100 | 2 | 2009/10/20 |
| Horn Antenna | COM-POWER | AH-118 | 10081 | 2010/05/12 |
| Horn Antenna | Schwarzbeck | BBHA 9120 | 9120D-583 | 2011/02/09 |
| Horn Antenna | Schwarzbeck | BBHA 9170 | 213 | 2010/06/08 |
| Wide Bandwidth Sensor | Anritsu | MA2491A | 728133 | 2009/10/16 |
| Power Meter | Anritsu | ML2495A | 736010 | 2009/10/16 |
| Temp & Humidity chamber | GIAN FORCE | GTH-150-40-2P-U | MAA0305-012 | 2011/05/07 |

Note: The above equipments are within the valid calibration period.

1.5 Summary of Measurement

| Report Clause | Test Parameter | Reference Document CFR47 Part15 | Results |
|----------------------|---|--|----------------|
| 2 | 26dB Bandwidth | §15.407 (a) | Pass |
| 3 | Peak output power test | §15.407 (a) | Pass |
| 4 | Power test of Data Rate | §15.407(a) | Pass |
| 5 | Power Spectrum Density test | §15.407 (a) | Pass |
| 6 | Peak excursion to average ratio test | §15.407(a)(6) | Pass |
| 7 | Radiated spurious emission test | §15.407(b), 15.209, 15.205 | Pass |
| 8 | Band edge test | §15.209, 15.205 | Pass |
| 9 | RF antenna conducted spurious emission test | §15.407(b) | Pass |
| 10 | AC Power Line Conducted Emission test | §15.407(b)(6), 15.207 | Pass |

1.6 Justification

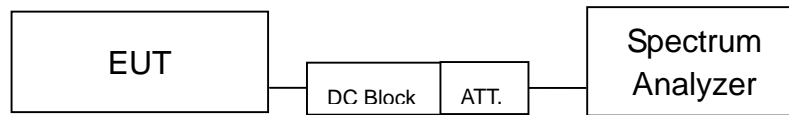
The test of radiated measurements according to FCC Part15 Section 15.33(a) had been conducted and the field strength of the frequency band were all reach limit requirement, thus we evaluate the EUT pass the specified test.

2 26dB bandwidth

2.1 Limits

No regulation limit, for reference purpose.

2.2 Configuration of Measurement



2.3 Test Procedure

The EUT was setup to ANSI C63.4, 2003; tested to UNII test procedure of Oct 2002 DA 02-2138 for compliance to FCC 47CFR 15.407 requirements.

2.4 Test Result

The final test data is shown on as following pages.

26dB Bandwidth

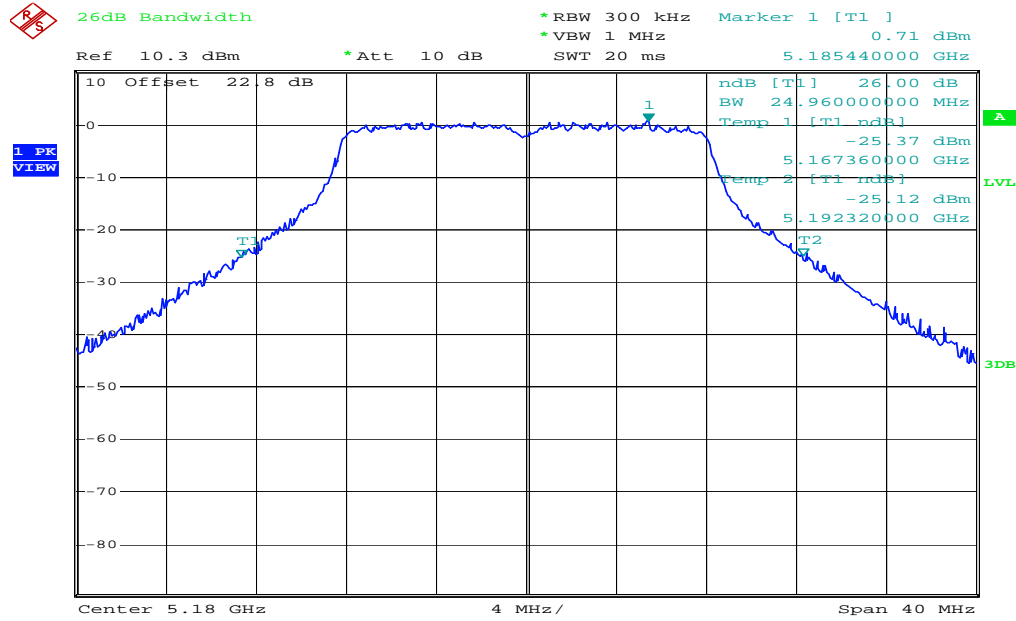
| Test Mode : 802.11a | | |
|---------------------|-------------|----------------------|
| Test CH | | 26dB Bandwidth (MHz) |
| CH No. | Freq. (MHz) | |
| 36 | 5180 | 24.96 |
| 40 | 5200 | 24.80 |
| 48 | 5240 | 24.88 |
| 52 | 5260 | 26.08 |
| 60 | 5300 | 24.88 |
| 64 | 5320 | 26.08 |
| 100 | 5500 | 25.20 |
| 120 | 5600 | 25.28 |
| 140 | 5700 | 25.20 |

Turbo Mode

| Test Mode : 802.11a | | |
|---------------------|-------------|----------------------|
| Test CH | | 26dB Bandwidth (MHz) |
| CH No. | Freq. (MHz) | |
| 42 | 5210 | 43.32 |
| 58 | 5290 | 45.60 |

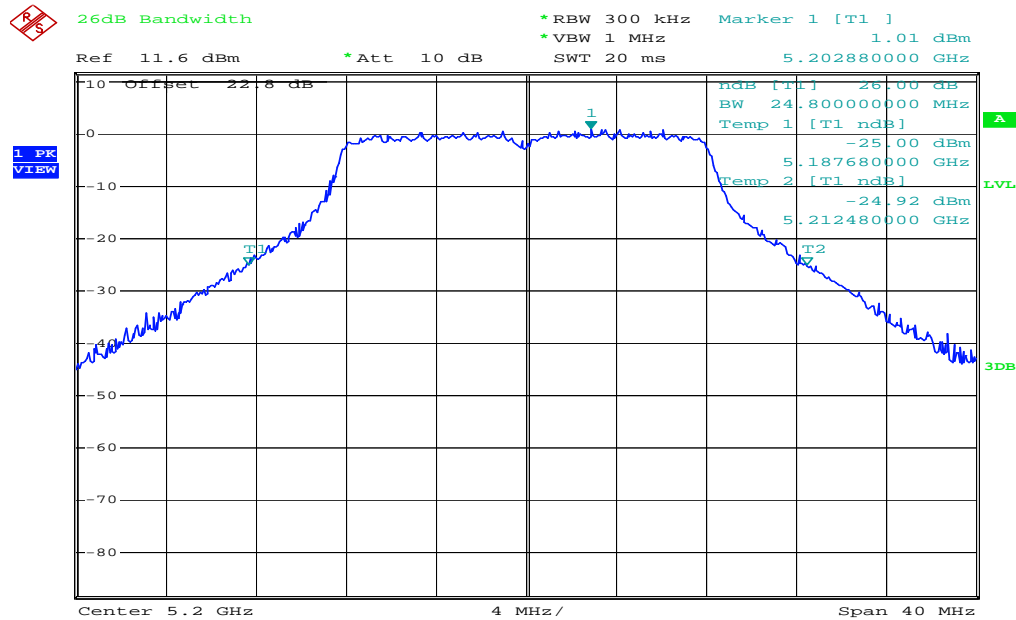
26dB Bandwidth

802.11a CH36 5180MHz



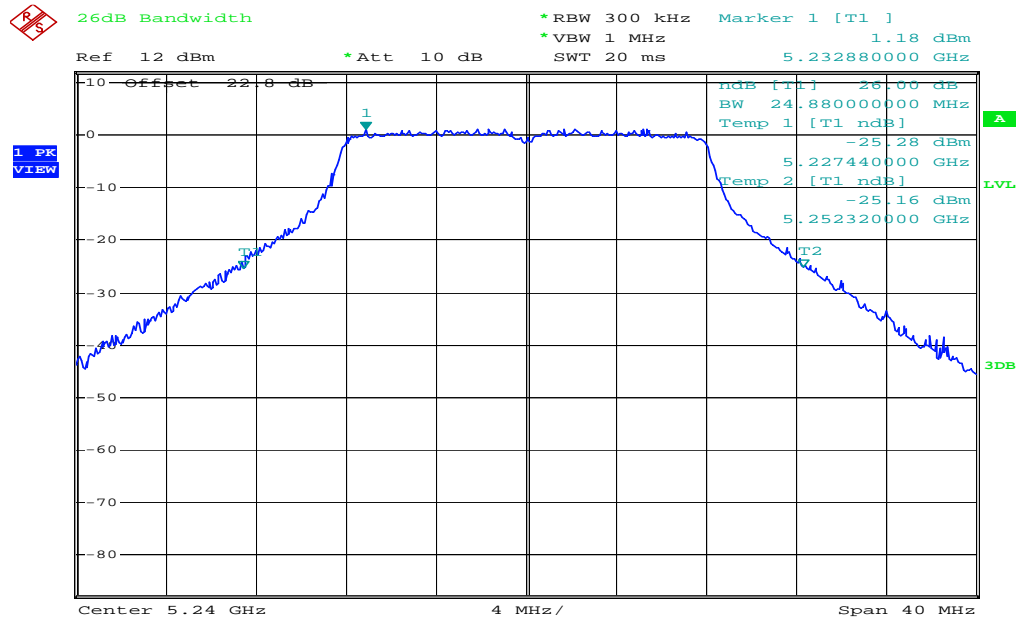
802.11a 5180MHz
Date: 10.JUN.2009 10:48:47

802.11a CH40 5200MHz



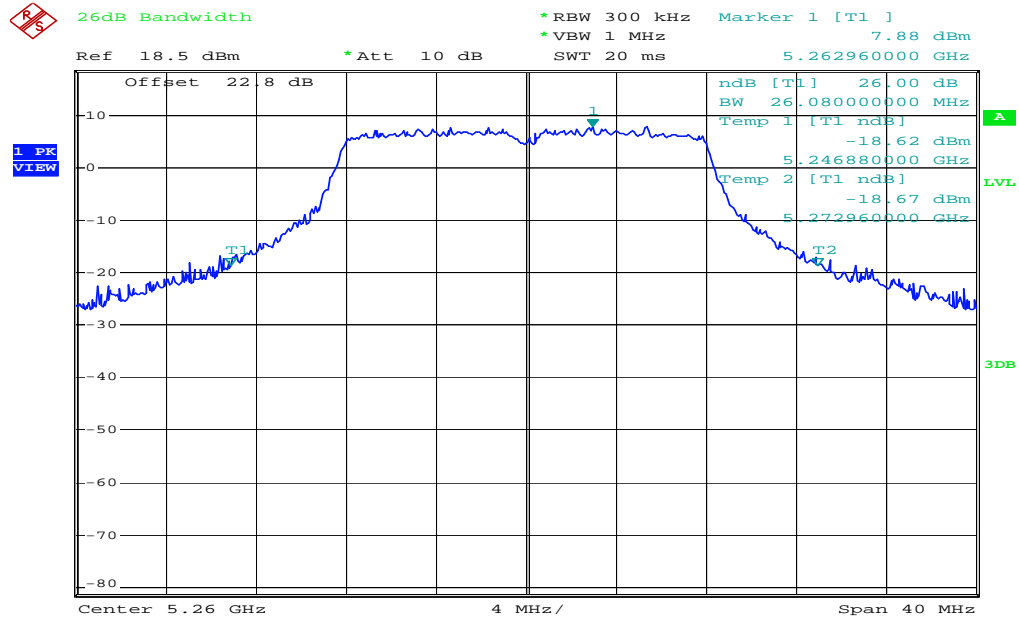
802.11a 5200MHz
Date: 10.JUN.2009 10:52:27

802.11a CH48 5240MHz



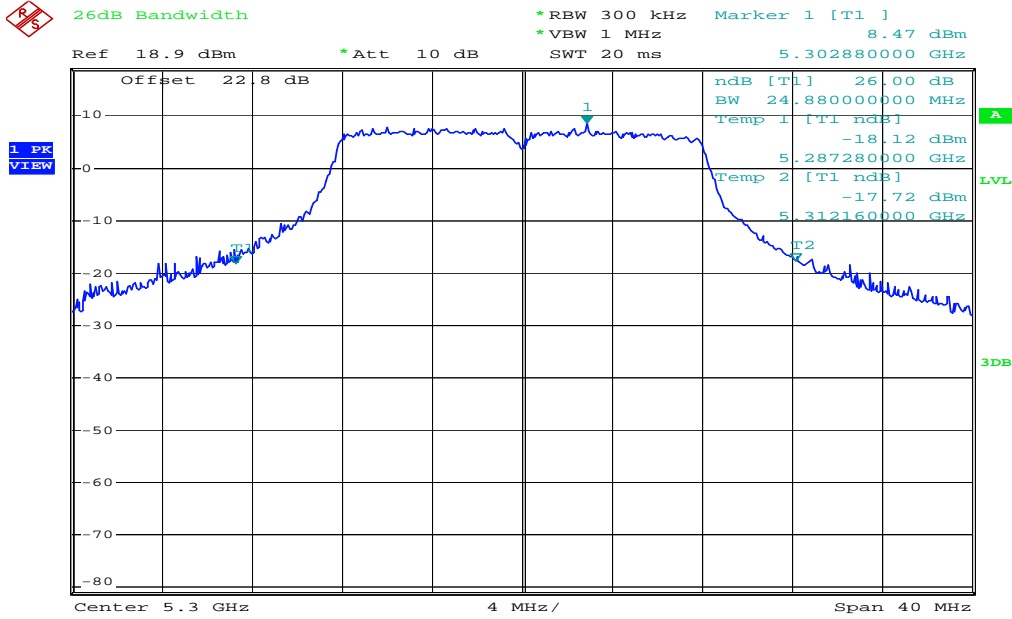
802.11a 5240MHz
 Date: 10.JUN.2009 11:00:10

802.11a CH52 5260MHz



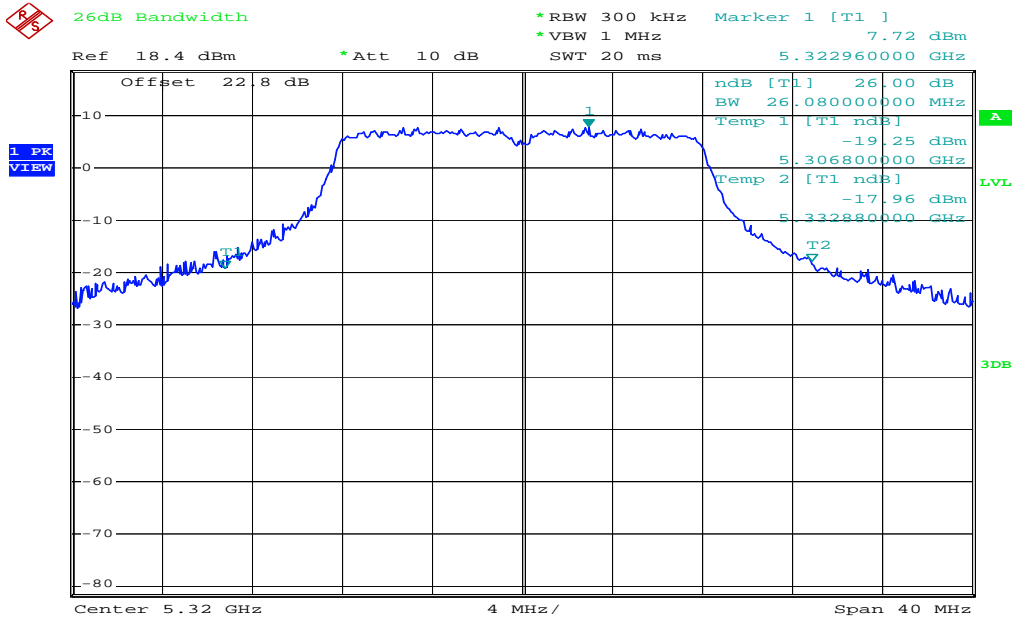
802.11a 5260MHz
 Date: 10.JUN.2009 11:38:54

802.11a CH60 5300MHz



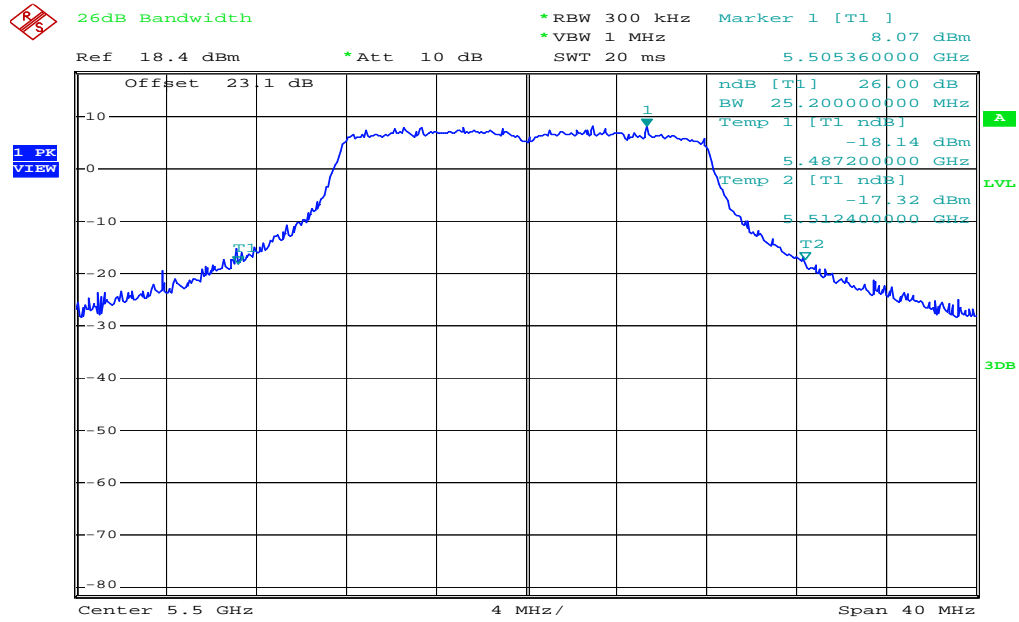
802.11a 5300MHz
Date: 10.JUN.2009 11:42:12

802.11a CH64 5320MHz



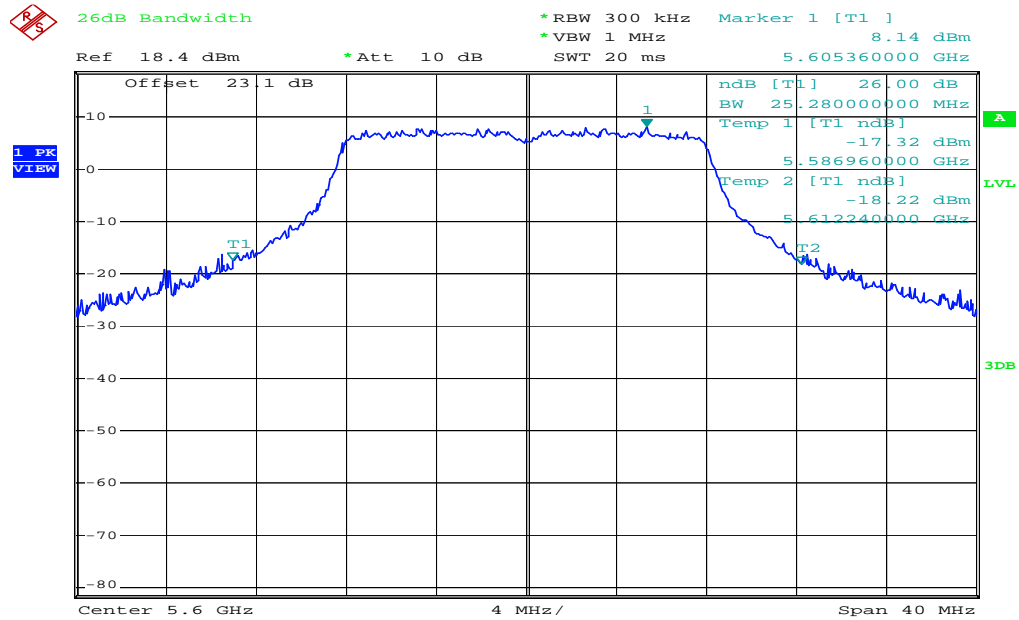
802.11a 5320MHz
Date: 10.JUN.2009 11:45:25

802.11a CH100 5500MHz



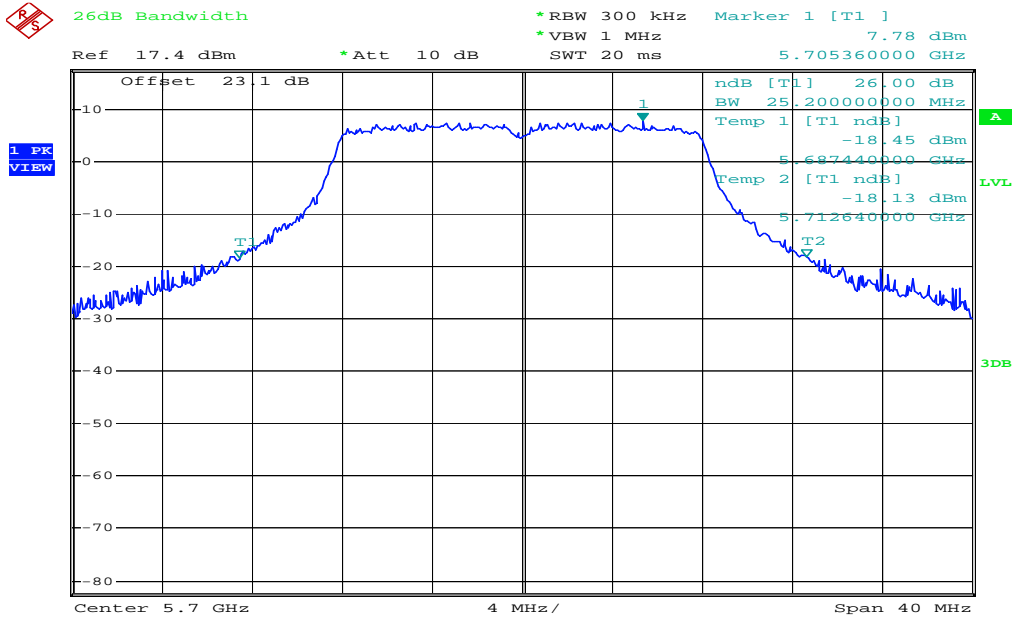
802.11a 5500MHz
Date: 10.JUN.2009 11:51:11

802.11a CH120 5600MHz



802.11a 5600MHz
Date: 10.JUN.2009 11:54:21

802.11a CH140 5700MHz

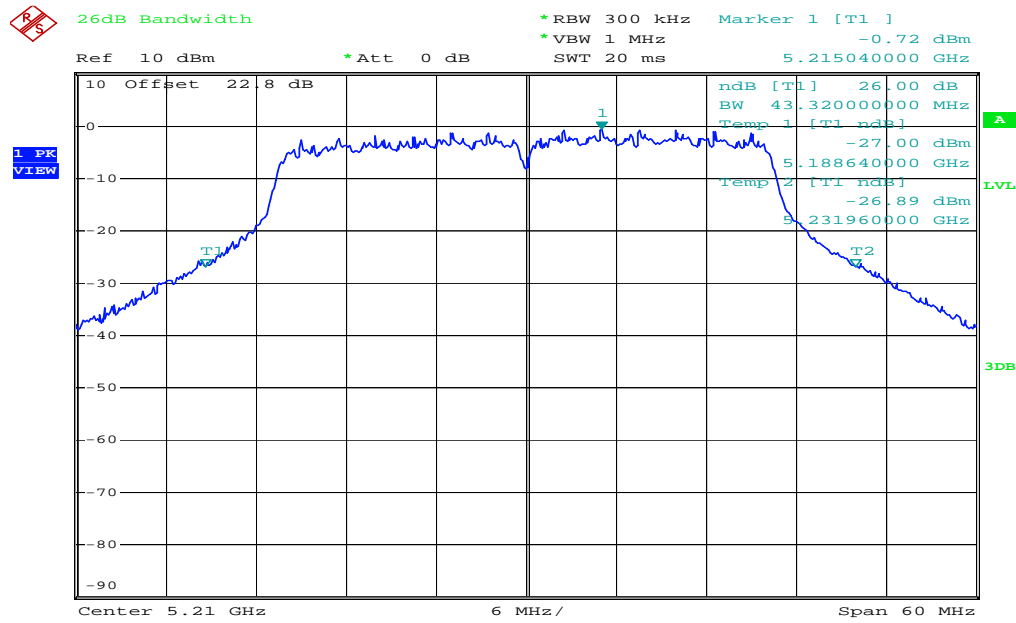


802.11a 5700MHz

Date: 10.JUN.2009 12:00:45

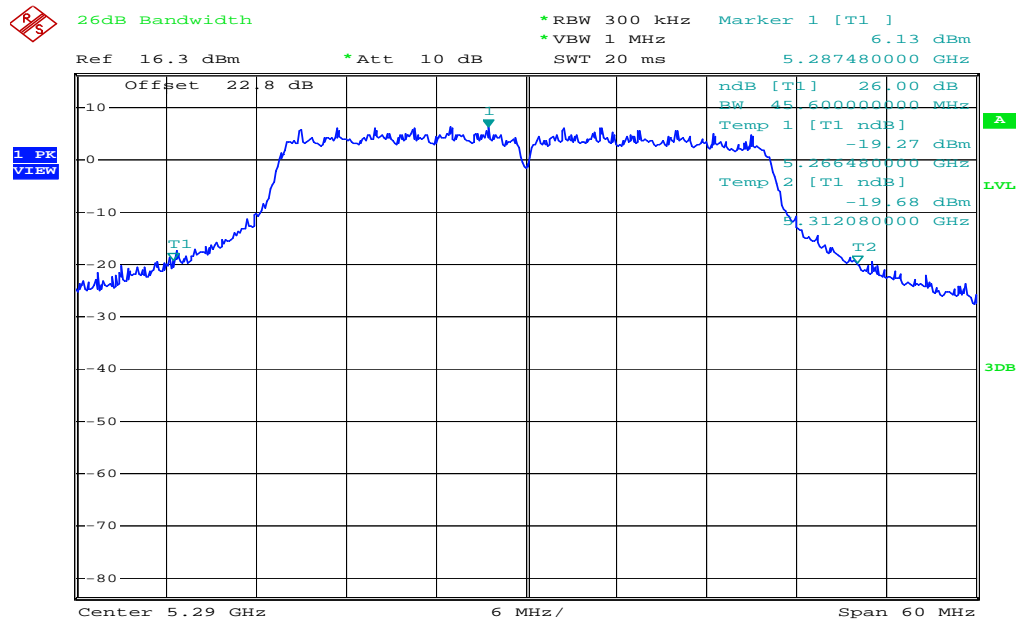
Turbo Mode

802.11a CH42 5210MHz



802.11a 5210MHz (Turbo mode)
Date: 10.JUN.2009 11:07:01

802.11a CH58 5290MHz



802.11a 5290MHz (Turbo mode)
Date: 10.JUN.2009 11:20:21

99% Occupied bandwidth

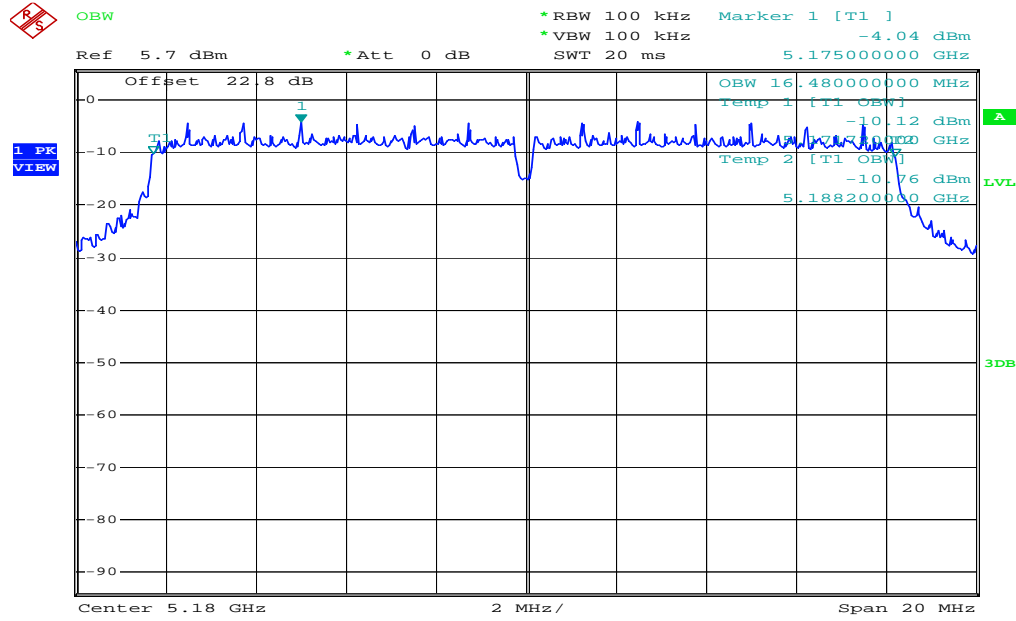
| Test Mode : 802.11a | | |
|----------------------------|--------------------|---------------------------------|
| Test CH | | Occupied Bandwidth (MHz) |
| CH No. | Freq. (MHz) | |
| 36 | 5180 | 16.48 |
| 40 | 5200 | 16.52 |
| 48 | 5240 | 16.56 |
| 52 | 5260 | 16.52 |
| 60 | 5300 | 16.48 |
| 64 | 5320 | 16.52 |
| 100 | 5500 | 16.52 |
| 120 | 5600 | 16.52 |
| 140 | 5700 | 16.52 |

Turbo Mode

| Test Mode : 802.11a | | |
|----------------------------|--------------------|---------------------------------|
| Test CH | | Occupied Bandwidth (MHz) |
| CH No. | Freq. (MHz) | |
| 42 | 5210 | 32.80 |
| 58 | 5290 | 32.80 |

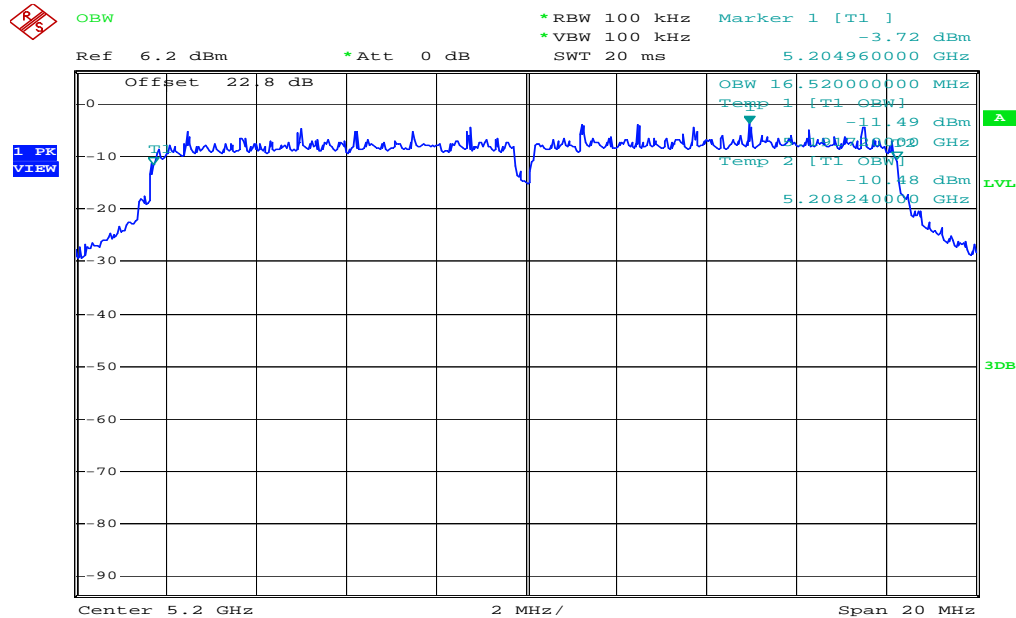
99% Occupied bandwidth

802.11a CH36 5180MHz



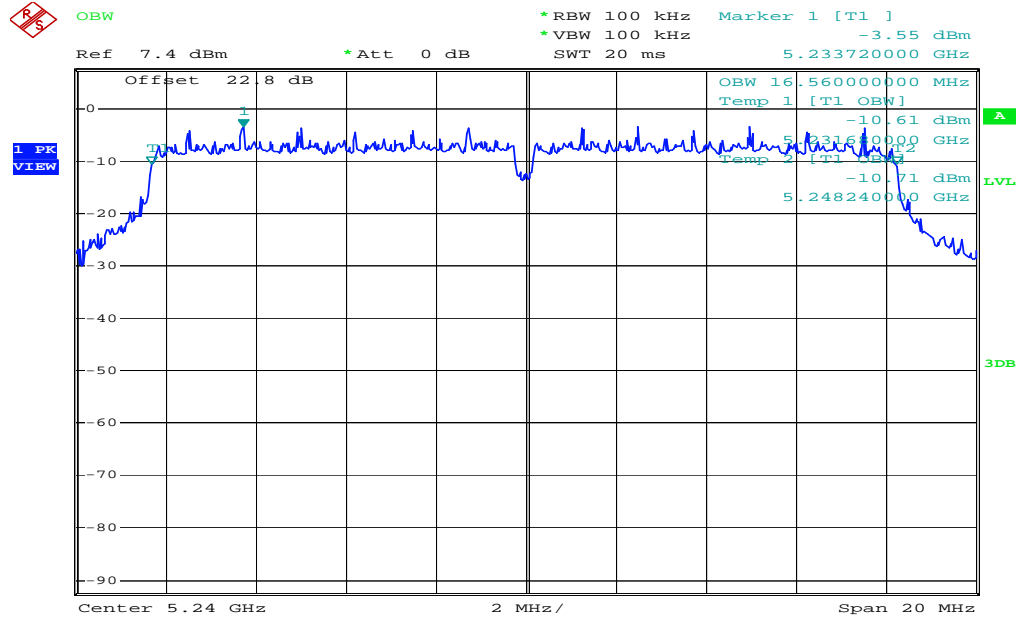
802.11a 5180MHz
Date: 10.JUN.2009 10:51:37

802.11a CH40 5200MHz



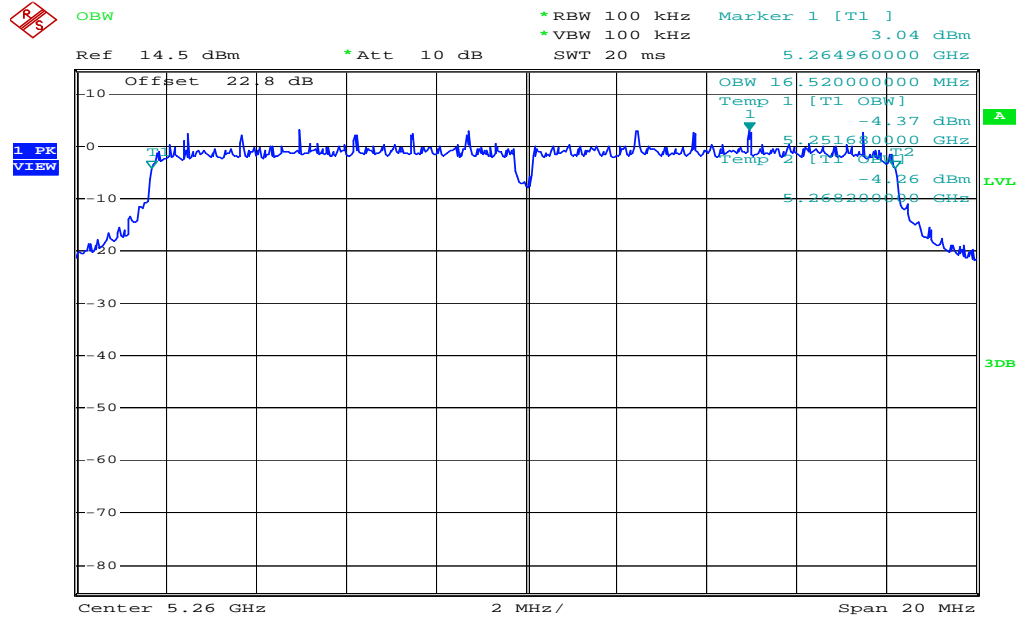
802.11a 5200MHz
Date: 10.JUN.2009 10:54:46

802.11a CH48 5240MHz



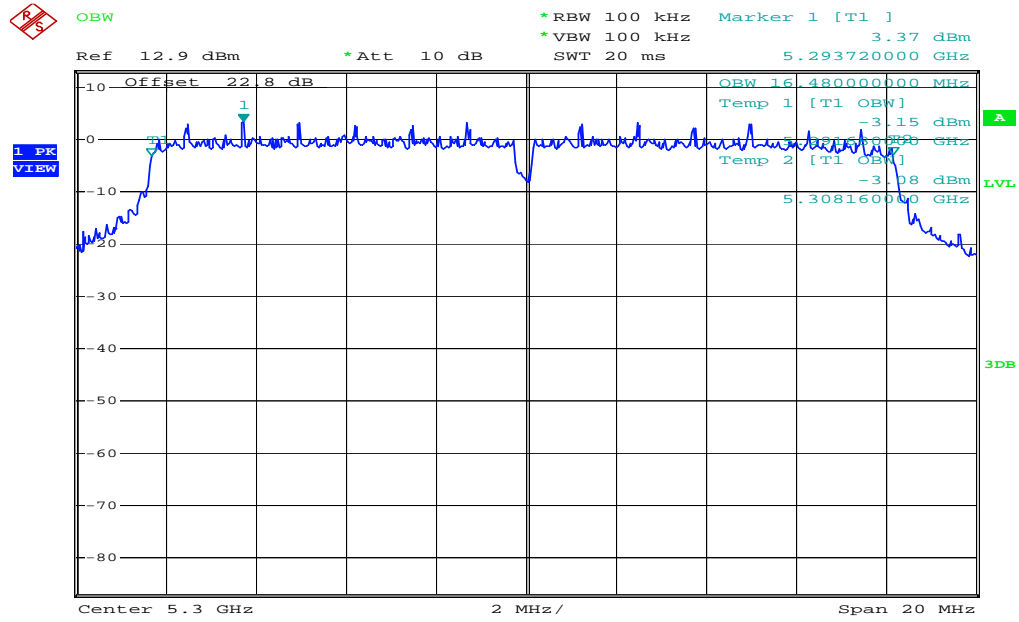
802.11a 5240MHz
Date: 10.JUN.2009 11:02:29

802.11a CH52 5260MHz



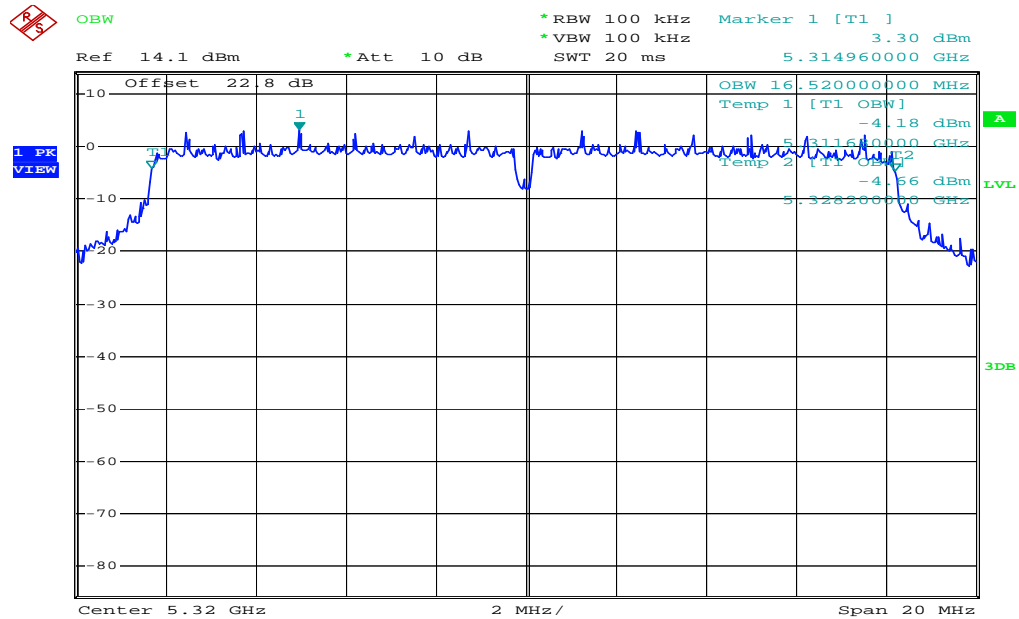
802.11a 5260MHz
Date: 15.JUN.2009 11:12:50

802.11a CH60 5300MHz



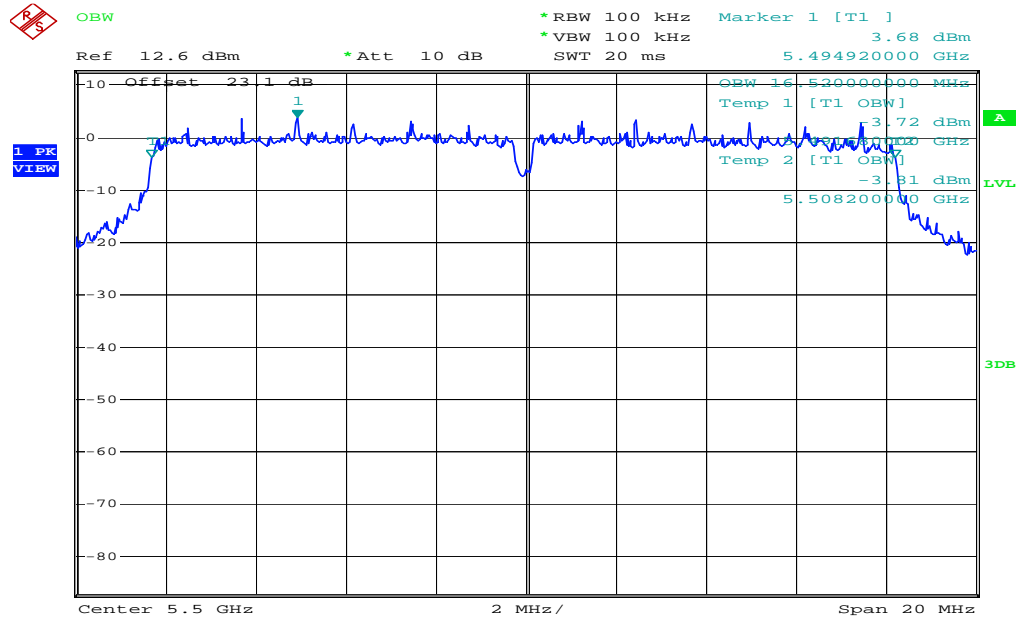
802.11a 5300MHz
Date: 15.JUN.2009 11:16:28

802.11a CH64 5320MHz



802.11a 5320MHz
Date: 15.JUN.2009 11:18:04

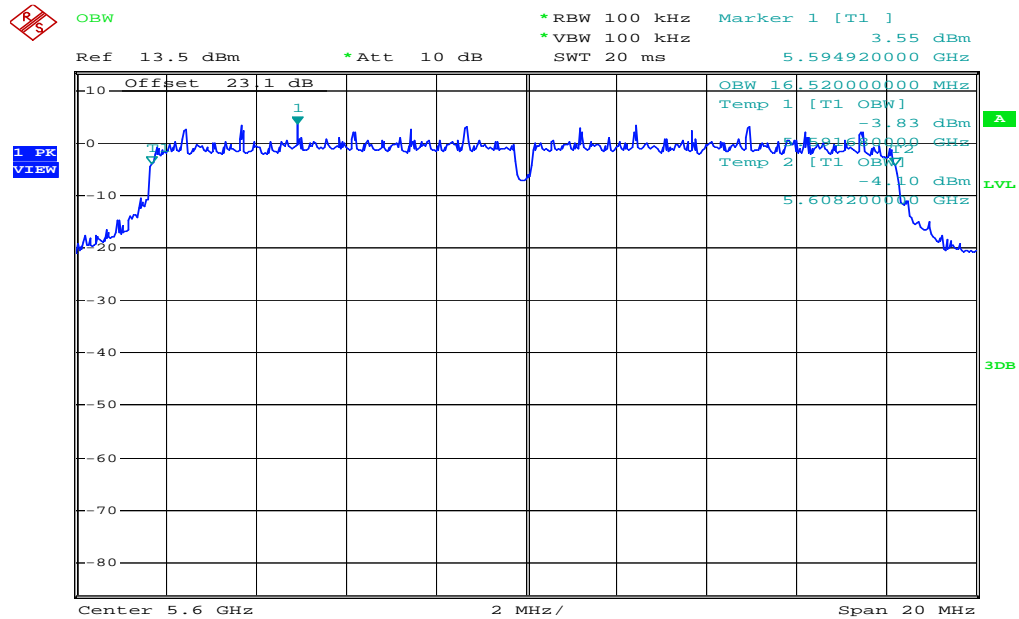
802.11a CH100 5500MHz



802.11a 5500MHz

Date: 15.JUN.2009 11:20:38

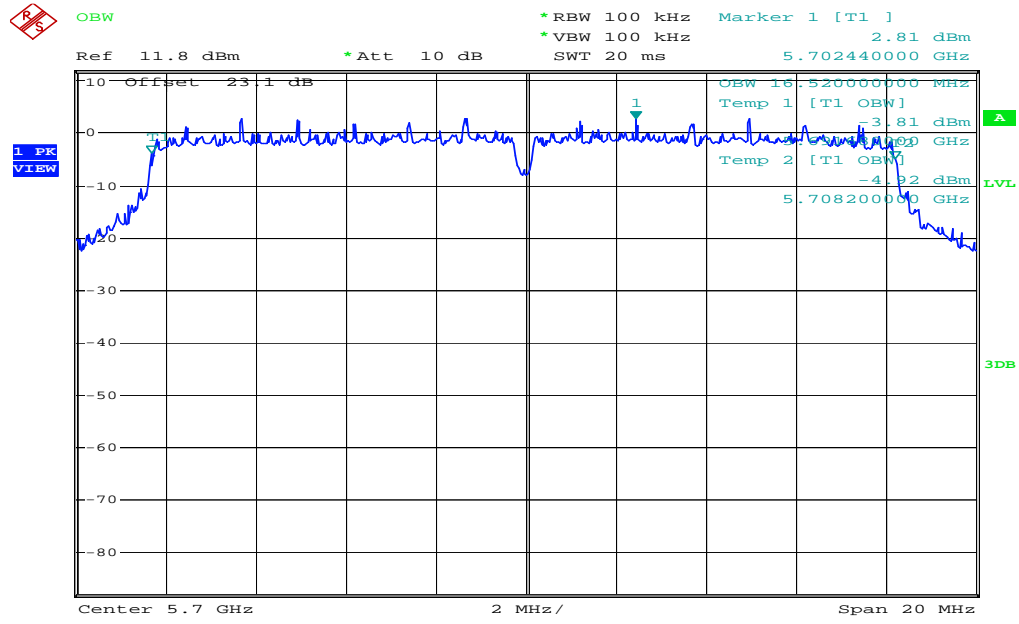
802.11a CH120 5600MHz



802.11a 5600MHz

Date: 15.JUN.2009 11:22:21

802.11a CH140 5700MHz

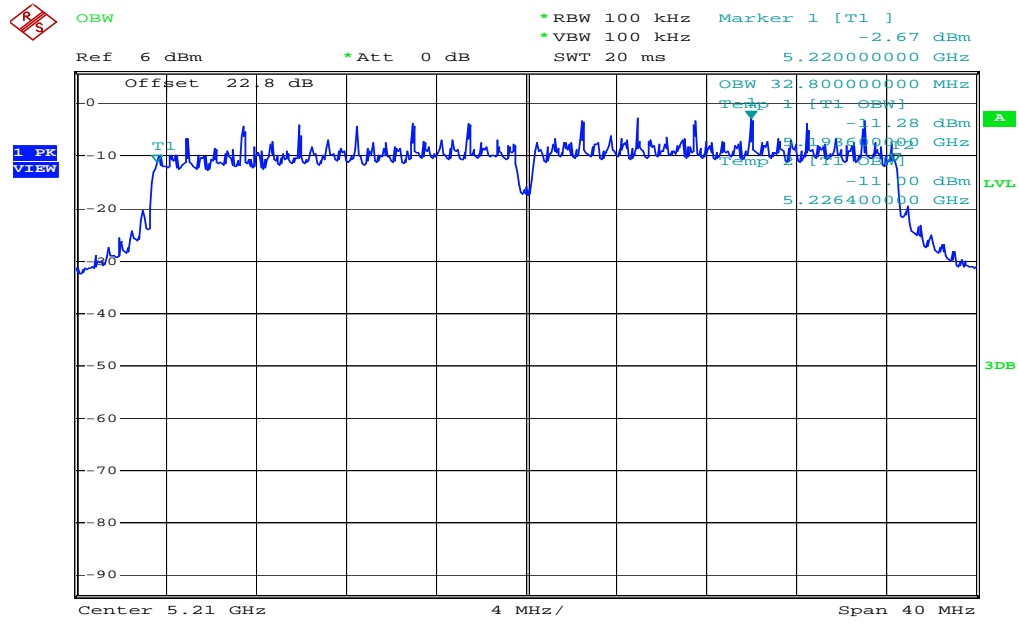


802.11a 5700MHz

Date: 15.JUN.2009 11:23:51

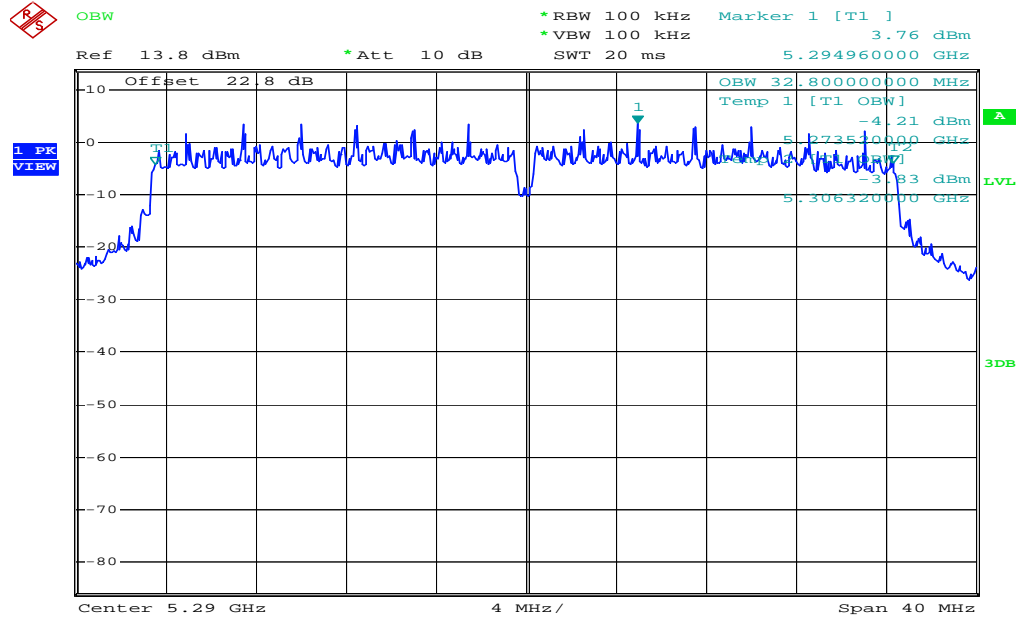
Turbo Mode

802.11a CH42 5120MHz



802.11a 5210MHz (Turbo mode)
Date: 10.JUN.2009 11:10:44

802.11a CH58 5290MHz



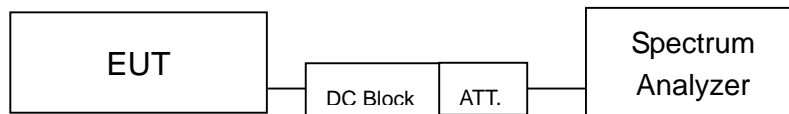
802.11a 5290MHz (Turbo mode)
Date: 15.JUN.2009 11:04:29

3 Peak output power test

3.1 Limits

| Operating Frequency (MHz) | Output power limit |
|---------------------------|---------------------------------|
| 5150~5250 | < 50mW (17dBm) or 4dBm+10logB |
| 5250~5350, 5470~5725 | < 250mW (24dBm) or 11dBm+10logB |
| 5725~5825 | < 1W (30dBm) or 17dBm+10logB |

3.2 Configuration of Measurement



3.3 Test Procedure

The EUT was setup to ANSI C63.4, 2003; tested to UNII test procedure of Oct 2002 DA 02-2138 for compliance to FCC 47CFR 15.407 requirements.

3.4 Test Result

PASS.

The final test data is shown on as following pages.

Maximum output power

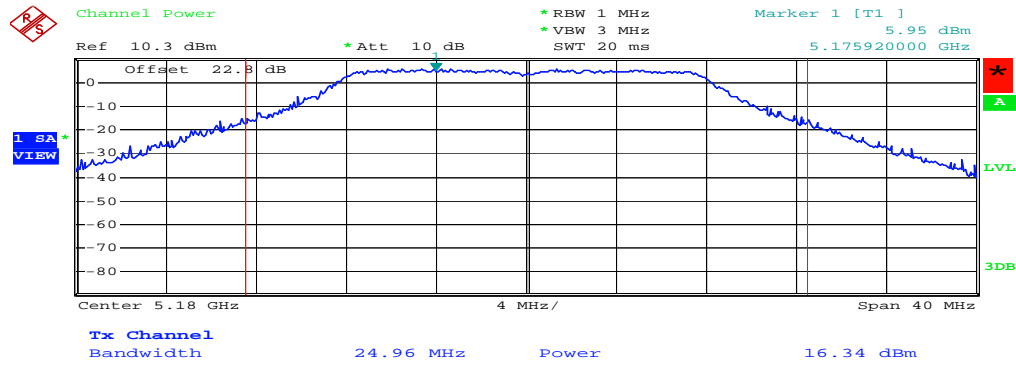
| Mode : 802.11 a | | | | | |
|-----------------|----------------|------------------------|---------|----------------|----------------|
| CH | Freq. (MHz) | Maximum transmit power | | Limit (dBm) | Margin (dB) |
| | | (dBm) | (watts) | | |
| 36 | 5180 | 16.34 | 0.0431 | 17 | -0.66 |
| 40 | 5200 | 16.24 | 0.0421 | 17 | -0.76 |
| 48 | 5240 | 16.41 | 0.0438 | 17 | -0.59 |
| 52 | 5260 | 23.31 | 0.2143 | 24 | -0.69 |
| 60 | 5300 | 23.31 | 0.2143 | 24 | -0.69 |
| 64 | 5320 | 23.13 | 0.2056 | 24 | -0.87 |
| 100 | 5500 | 23.33 | 0.2153 | 24 | -0.67 |
| 120 | 5600 | 23.32 | 0.2148 | 24 | -0.68 |
| 140 | 5700 | 23.21 | 0.2094 | 24 | -0.79 |

Turbo Mode

| Mode : 802.11 a | | | | | |
|-----------------|----------------|------------------------|---------|----------------|----------------|
| CH | Freq. (MHz) | Maximum transmit power | | Limit (dBm) | Margin (dB) |
| | | (dBm) | (watts) | | |
| 42 | 5210 | 15.94 | 0.0393 | 17 | -1.06 |
| 58 | 5290 | 22.88 | 0.1941 | 24 | -1.12 |

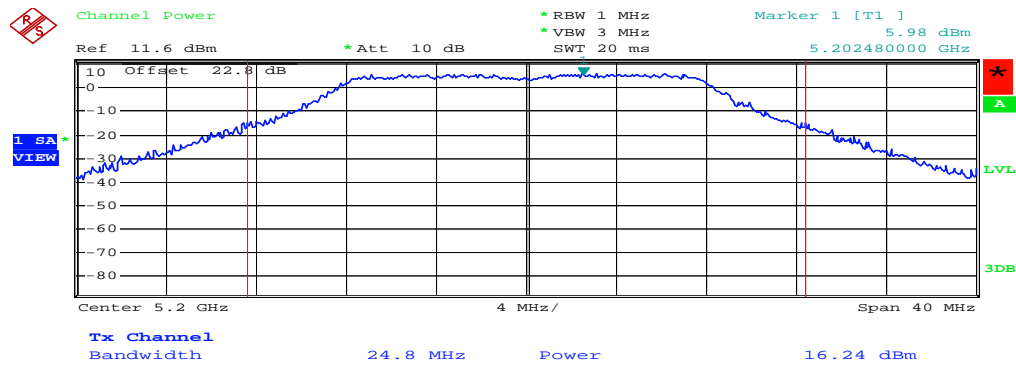
Peak output power test

802.11a CH36 5180MHz



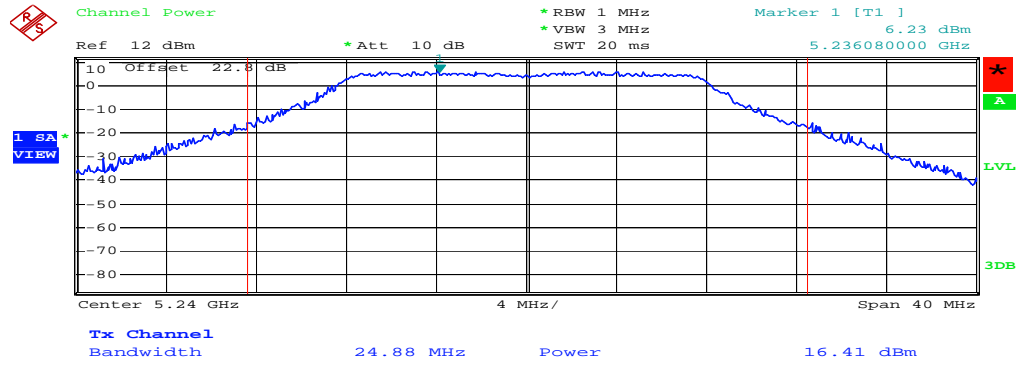
802.11a 5180MHz Limit:16.989700
Date: 10.JUN.2009 10:49:53

802.11 a CH40 5200MHz



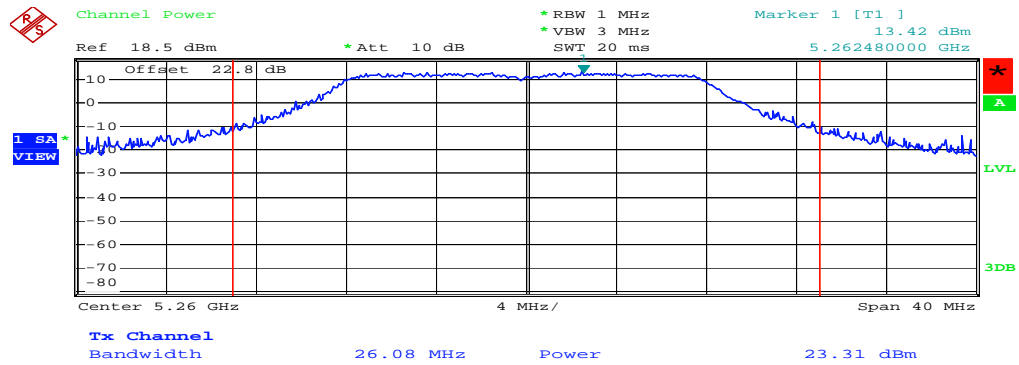
802.11a 5200MHz Limit:16.989700
Date: 10.JUN.2009 10:53:33

802.11 a CH48 5240MHz



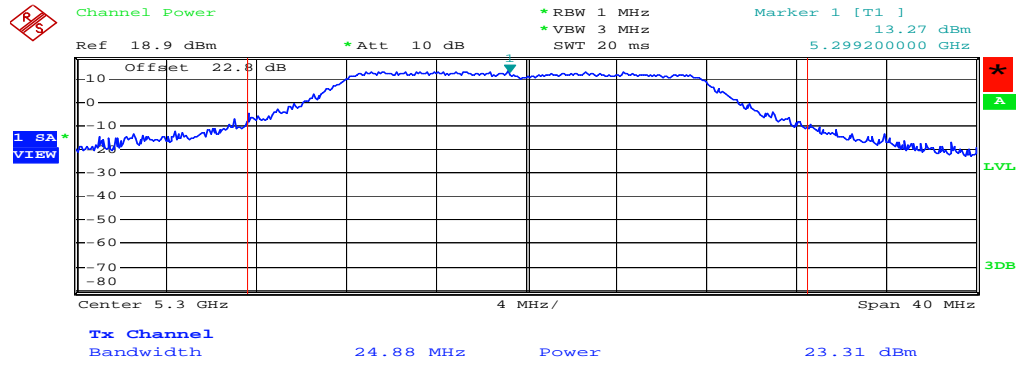
802.11a 5240MHz Limit:16.989700
Date: 10.JUN.2009 11:01:16

802.11a CH52 5260MHz



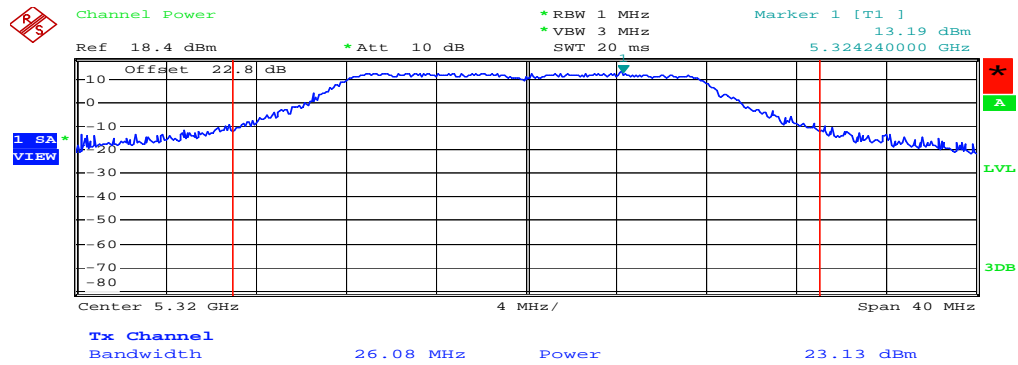
802.11a 5260MHz Limit:23.979400
Date: 10.JUN.2009 11:40:00

802.11 a CH60 5300MHz



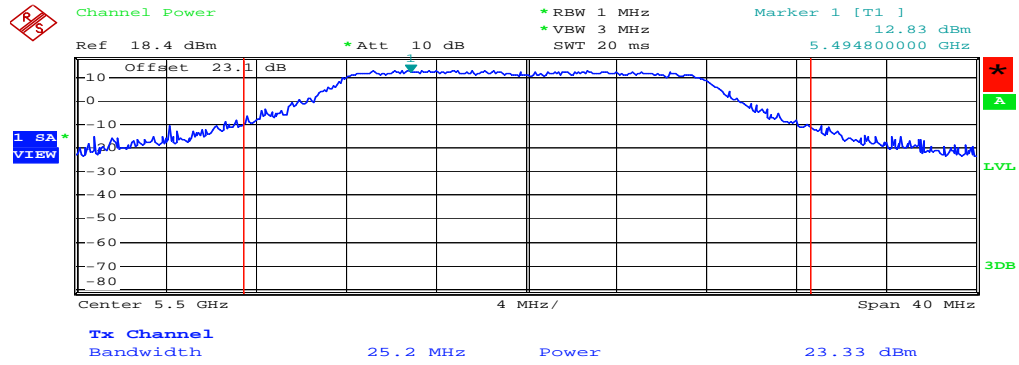
802.11a 5300MHz Limit:23.979400
Date: 10.JUN.2009 11:43:18

802.11 a CH64 5320MHz



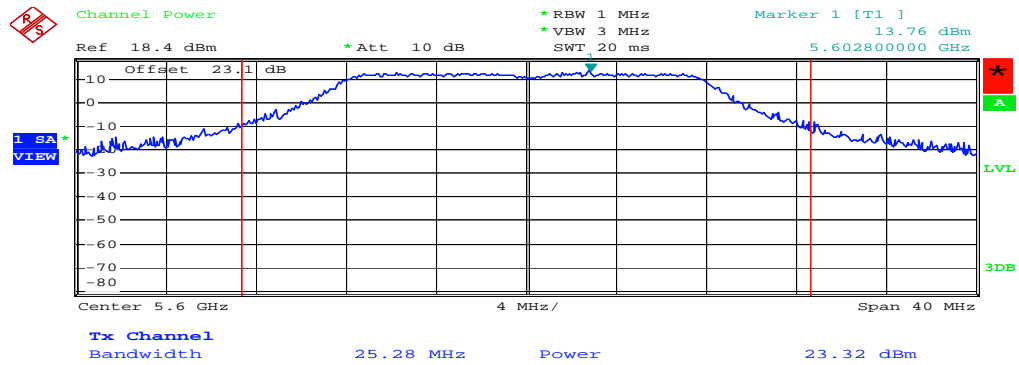
802.11a 5320MHz Limit:23.979400
Date: 10.JUN.2009 11:46:31

802.11 a CH100 5500MHz



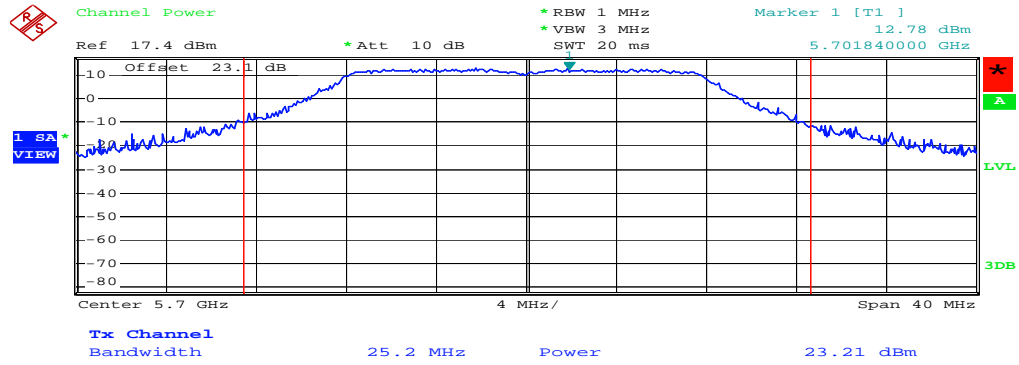
802.11a 5500MHz Limit:23.979400
Date: 10.JUN.2009 11:52:17

802.11 a CH120 5600MHz



802.11a 5600MHz Limit:23.979400
Date: 10.JUN.2009 11:55:27

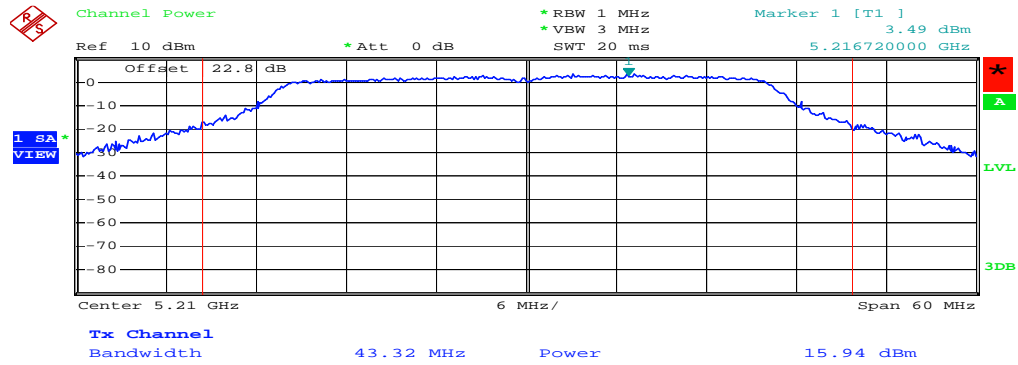
802.11 a CH140 5700MHz



802.11a 5700MHz Limit:23.979400
Date: 10.JUN.2009 12:01:52

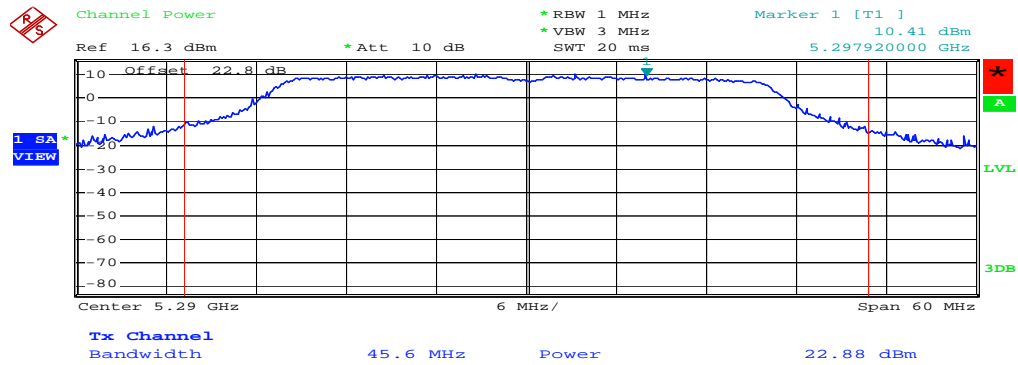
Turbo Mode

802.11 a CH42 5120MHz



802.11a 5210MHz (Turbo mode) Limit:16.989700
Date: 10.JUN.2009 11:08:07

802.11 a CH58 5290MHz



802.11a 5290MHz (Turbo mode) Limit:23.979400
Date: 10.JUN.2009 11:21:27

4 Power test of Data Rate

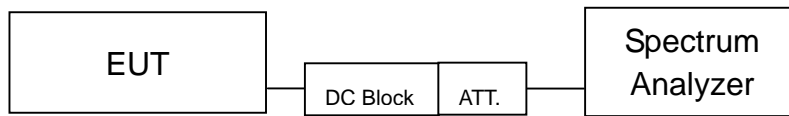
| Mode | Bandwidth (MHz) | Channel | Data Rate | Output Power | |
|-------------------------|-----------------|---------|-----------|--------------|---------|
| | | | | (dBm) | (watts) |
| 802.11a | 20 | 40 | 6 | 16.24 | 0.0421 |
| | | | 36 | 15.49 | 0.0354 |
| | | | 54 | 15.09 | 0.0323 |
| 802.11a | 20 | 120 | 6 | 23.32 | 0.2148 |
| | | | 36 | 23.16 | 0.2070 |
| | | | 54 | 23.13 | 0.2056 |
| 802.11a (Turbo mode) | 40 | 42 | 12 | 15.94 | 0.0393 |
| | | | 72 | 15.75 | 0.0376 |
| | | | 108 | 15.54 | 0.0358 |
| 802.11a (Turbo mode) | 40 | 58 | 12 | 22.88 | 0.1941 |
| | | | 72 | 22.52 | 0.1786 |
| | | | 108 | 22.50 | 0.1778 |

5 Power Spectrum Density test

5.1 Limits

| Operating Frequency (MHz) | Power density limit |
|---------------------------|---------------------|
| 5150~5250 | < 4dBm/MHz |
| 5250~5350, 5470~5725 | < 11dBm/MHz |
| 5725~5825 | < 17dBm/MHz |

5.2 Configuration of Measurement



5.3 Test Procedure

The EUT was setup to ANSI C63.4, 2003; tested to UNII test procedure of Oct 2002 DA 02-2138 for compliance to FCC 47CFR 15.407 requirements.

5.4 Test Result

PASS.

The final test data is shown on as following pages.

Power spectral density

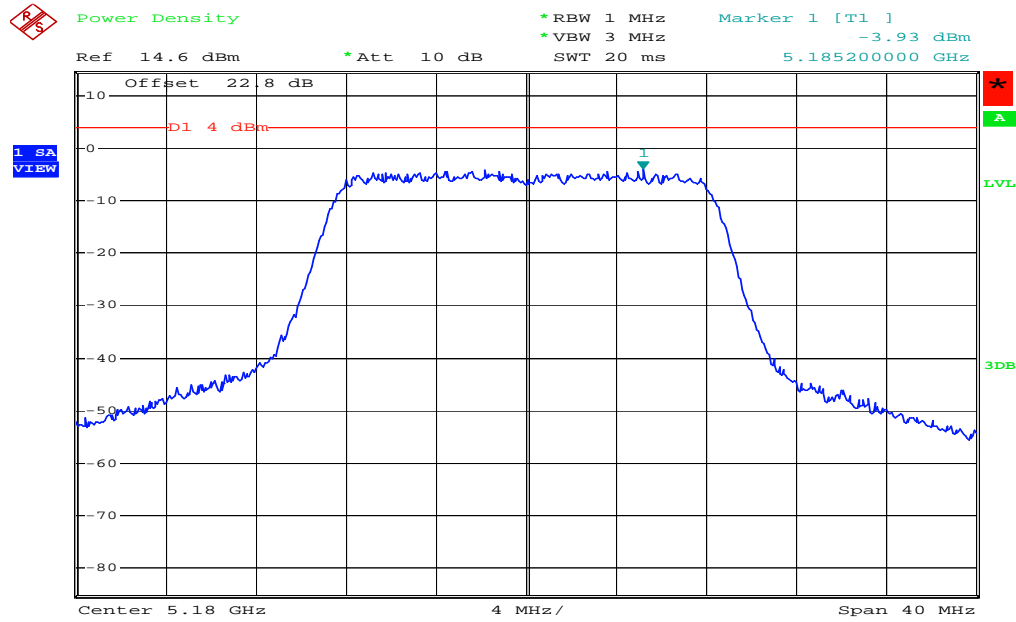
| 802.11a | | | | |
|----------------|--------------------|-------------------------------------|--------------------|--------------------|
| CH | Freq. (MHz) | Power Spectral Density (dBm) | Limit (dBm) | Margin (dB) |
| 36 | 5180 | -3.93 | 4 | -7.93 |
| 40 | 5200 | -4.33 | 4 | -8.33 |
| 48 | 5240 | -3.63 | 4 | -7.63 |
| 52 | 5260 | 2.67 | 11 | -8.33 |
| 60 | 5300 | 2.41 | 11 | -8.59 |
| 64 | 5320 | 2.50 | 11 | -8.50 |
| 100 | 5500 | 2.81 | 11 | -8.19 |
| 120 | 5600 | 2.73 | 11 | -8.27 |
| 140 | 5700 | 2.26 | 11 | -8.74 |

Turbo Mode

| 802.11a | | | | |
|----------------|--------------------|-------------------------------------|--------------------|--------------------|
| CH | Freq. (MHz) | Power Spectral Density (dBm) | Limit (dBm) | Margin (dB) |
| 42 | 5210 | -6.26 | 4 | -10.26 |
| 58 | 5290 | 0.20 | 11 | -10.80 |

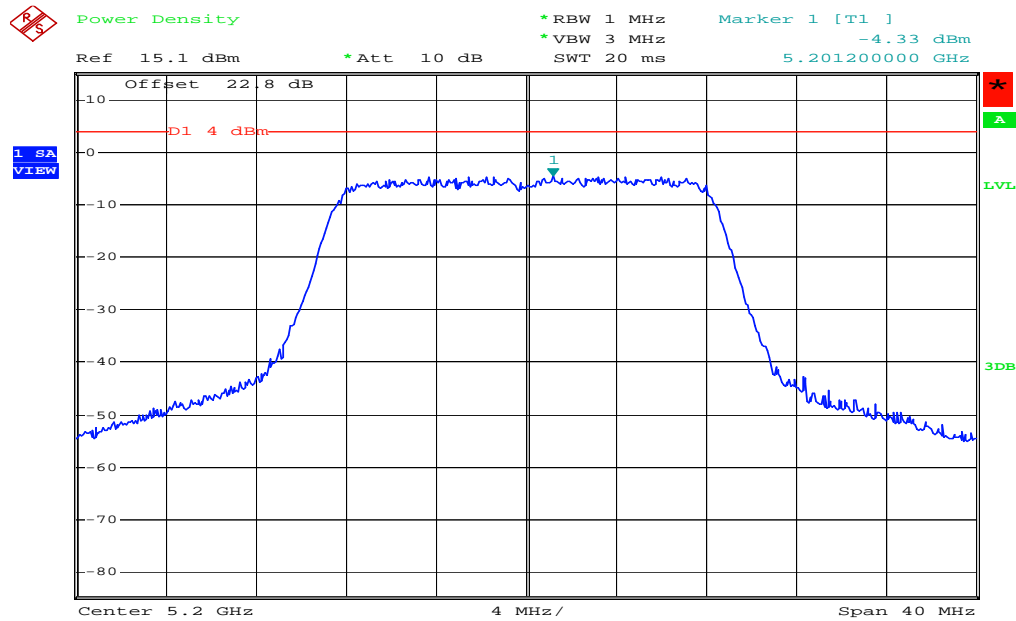
Power spectral density

802.11a CH36 5180MHz



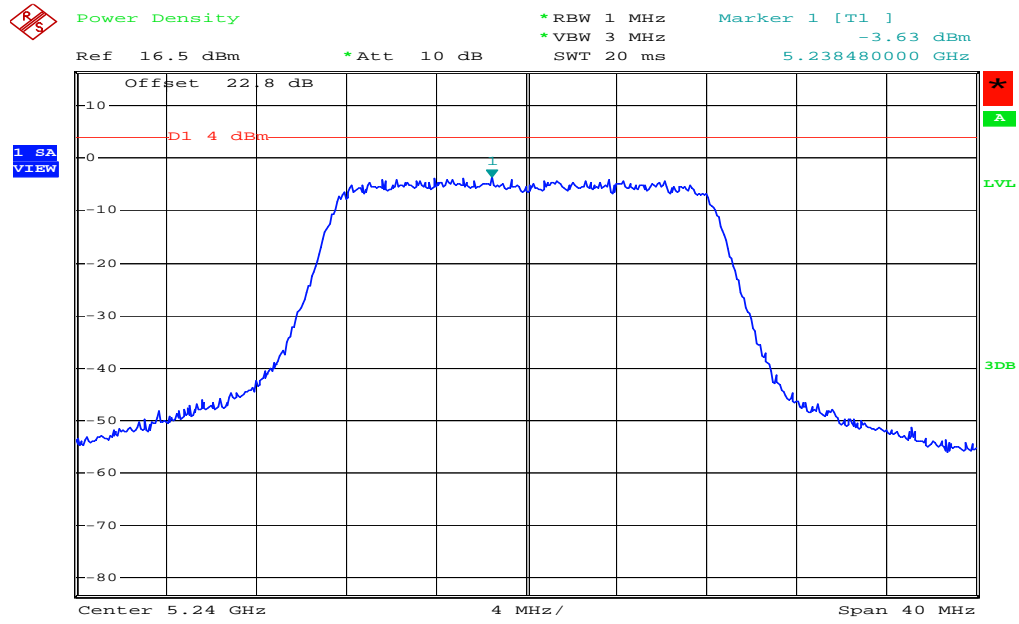
802.11a 5180MHz
Date: 10.JUN.2009 10:51:18

802.11a CH40 5200MHz



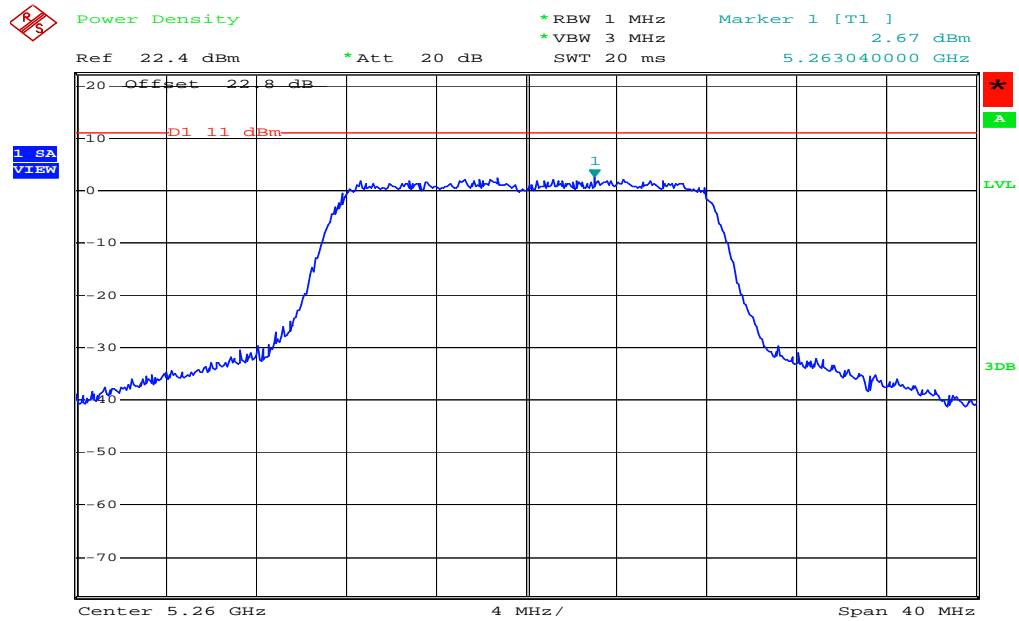
802.11a 5200MHz
Date: 10.JUN.2009 10:54:26

802.11a CH48 5240MHz



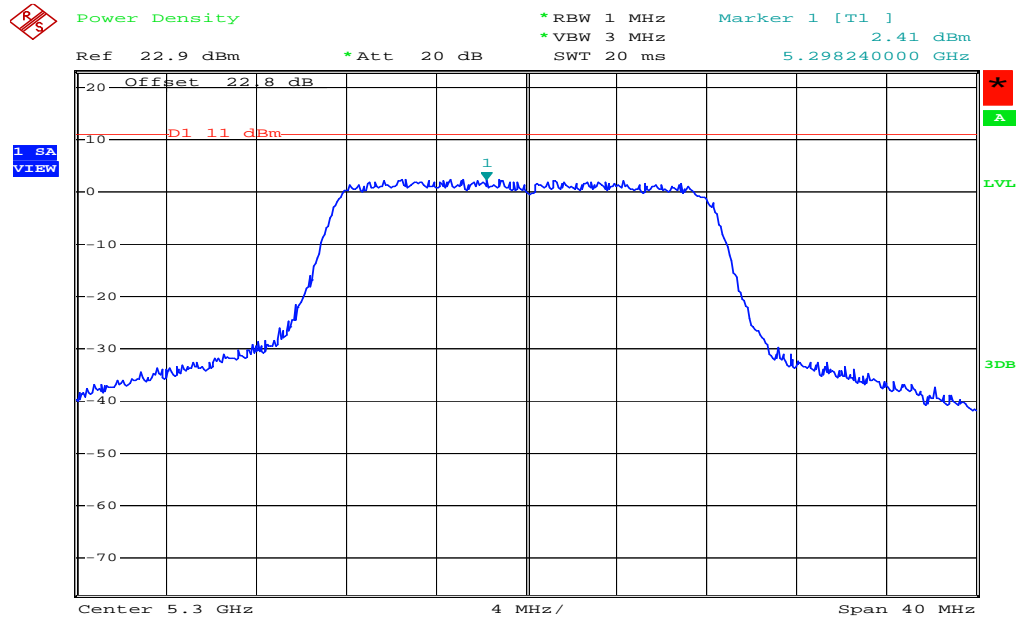
802.11a 5240MHz
Date: 10.JUN.2009 11:02:09

802.11a CH52 5260MHz



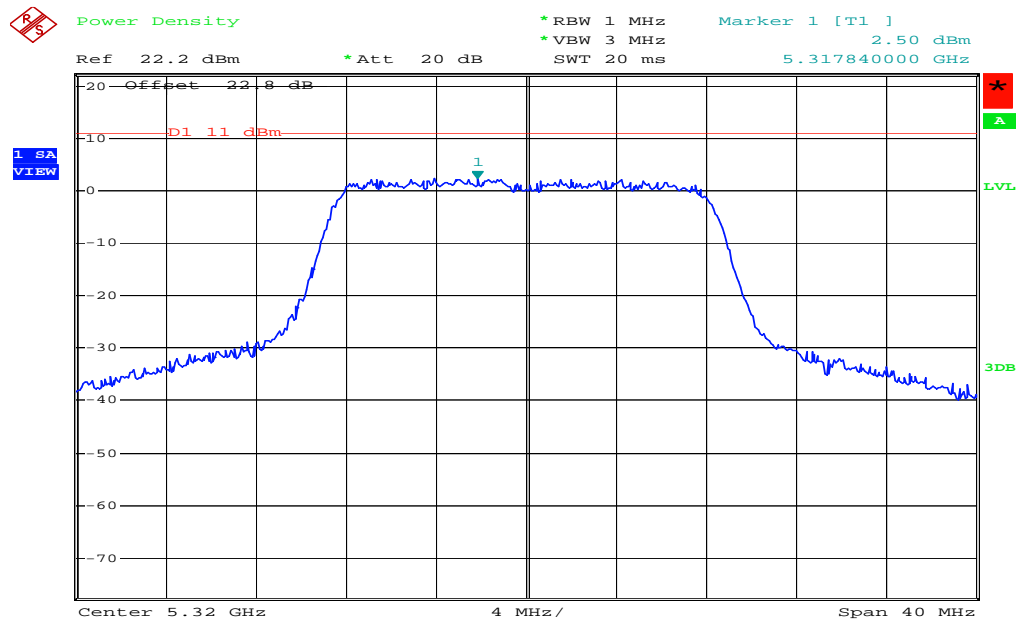
802.11a 5260MHz
Date: 15.JUN.2009 11:12:28

802.11a CH60 5300MHz



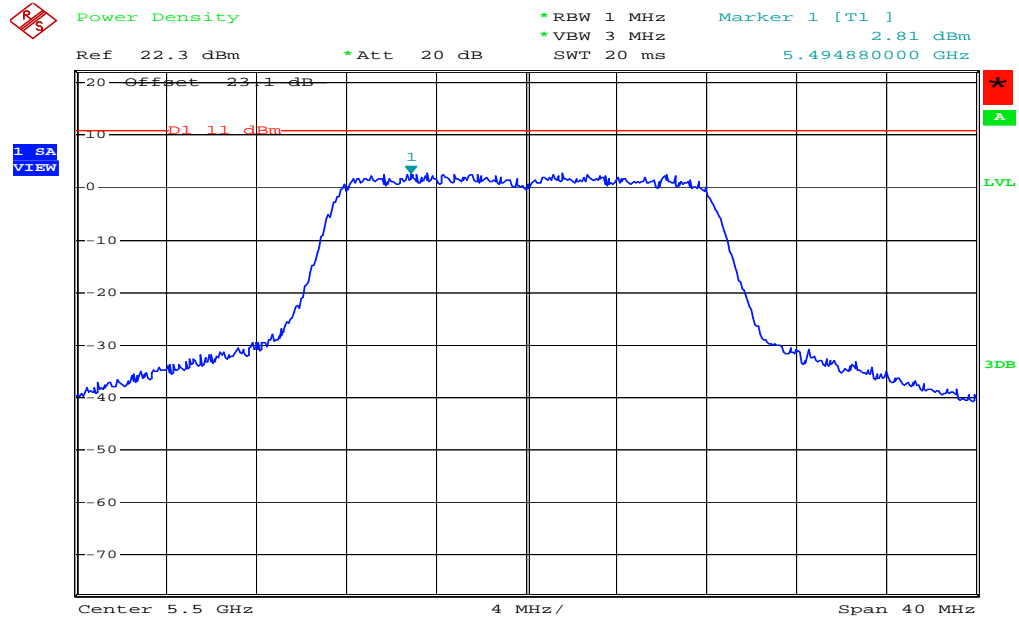
802.11a 5300MHz
Date: 15.JUN.2009 11:16:10

802.11a CH64 5320MHz



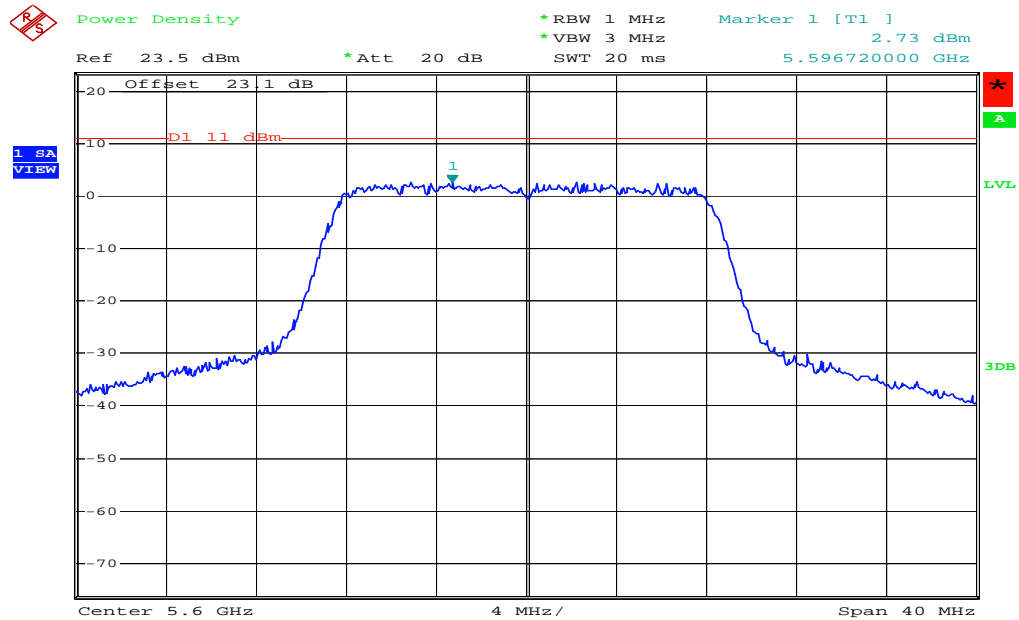
802.11a 5320MHz
Date: 15.JUN.2009 11:17:44

802.11a CH100 5500MHz



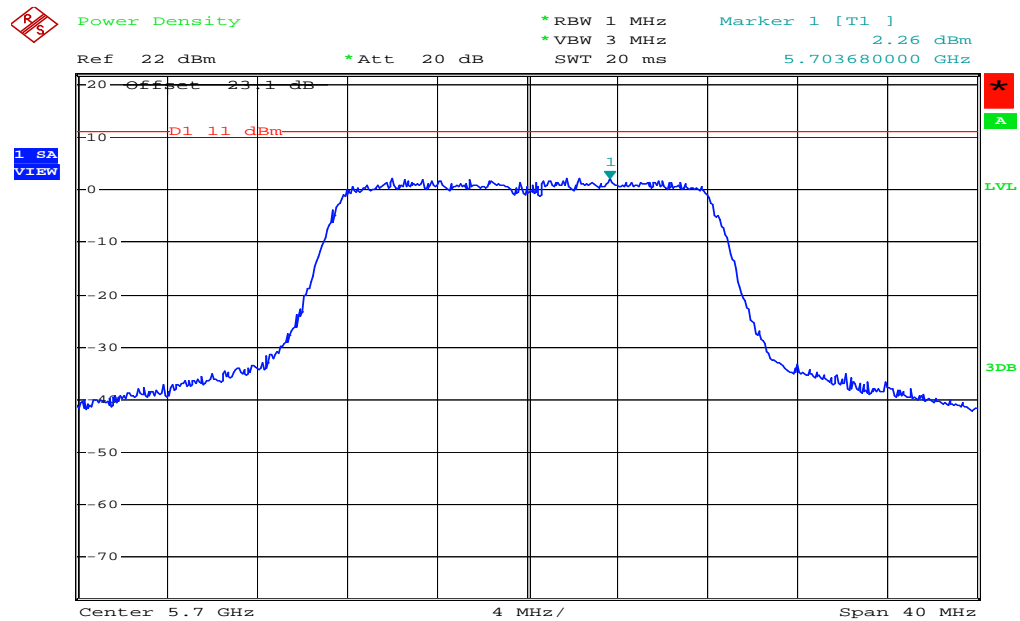
802.11a 5500MHz
Date: 15.JUN.2009 11:20:19

802.11a CH120 5600MHz



802.11a 5600MHz
Date: 15.JUN.2009 11:22:03

802.11a CH140 5700MHz

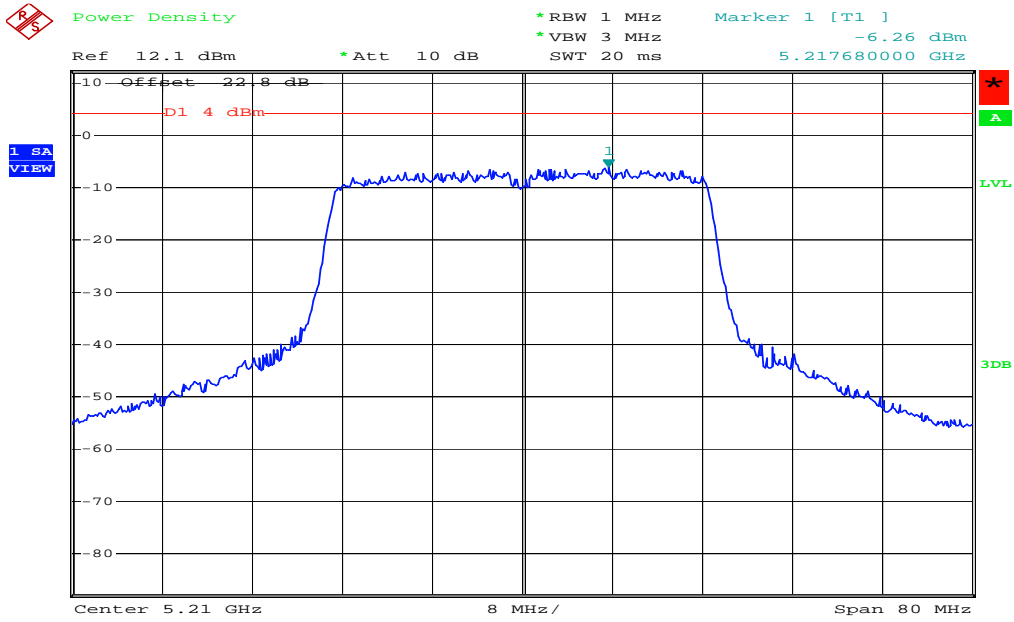


802.11a 5700MHz

Date: 15.JUN.2009 11:23:31

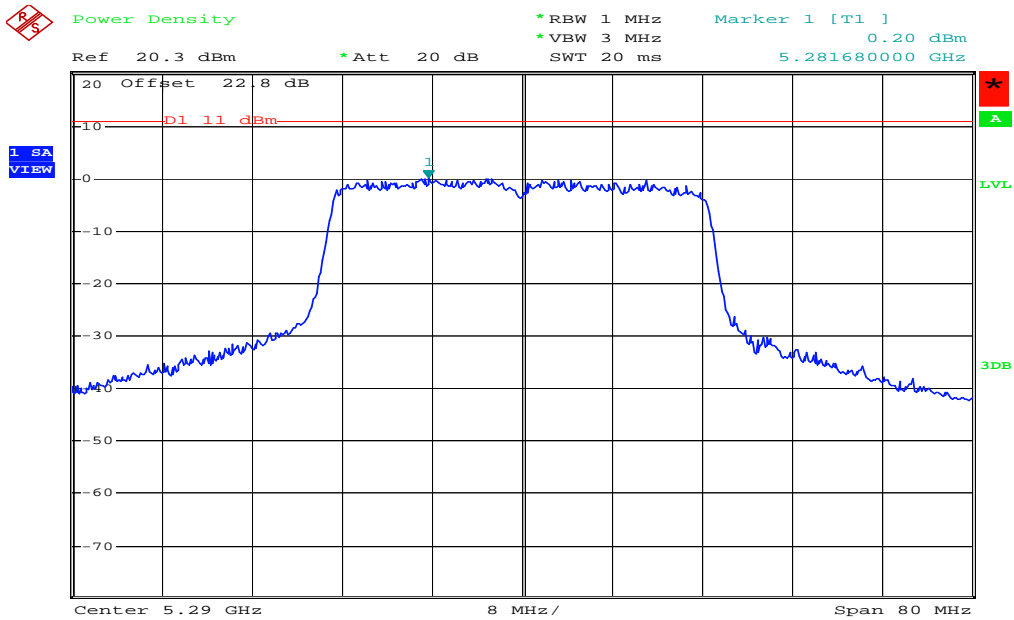
Turbo Mode

802.11a CH42 5210MHz



802.11a 5210MHz (Turbo mode)
Date: 10.JUN.2009 11:10:26

802.11a CH58 5290MHz



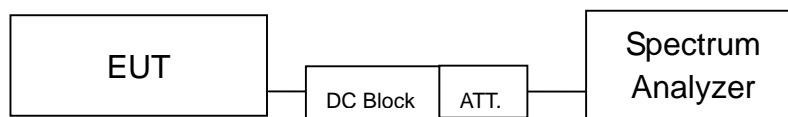
802.11a 5290MHz (Turbo mode)
Date: 15.JUN.2009 11:04:10

6 Peak excursion to average ratio test

6.1 Limits

| Operating Frequency (MHz) | Peak excursion to average ratio limit |
|---------------------------|---------------------------------------|
| 5150~5250 | <13dB |
| 5250~5350 | <13dB |
| 5725~5825 | <13dB |

6.2 Configuration of Measurement



6.3 Test Procedure

The EUT was setup to ANSI C63.4, 2003; tested to UNII test procedure of Oct 2002 DA 02-2138 for compliance to FCC 47CFR 15.407 requirements.

The transmitter output operates continuously therefore 2nd trace of method#3 is used.

Peak excursion to average ratio was measured from the antenna port of the EUT.

Using a 50ohm spectrum analyzer with the RBW=VBW=1MHz for peak measurement and RBW=1MHz, VBW=10kHz for average measurement. Peak excursion to average ratio was read directly.

6.4 Test Result

PASS.

The final test data is shown on as following pages.

Peak excursion to Average ratio

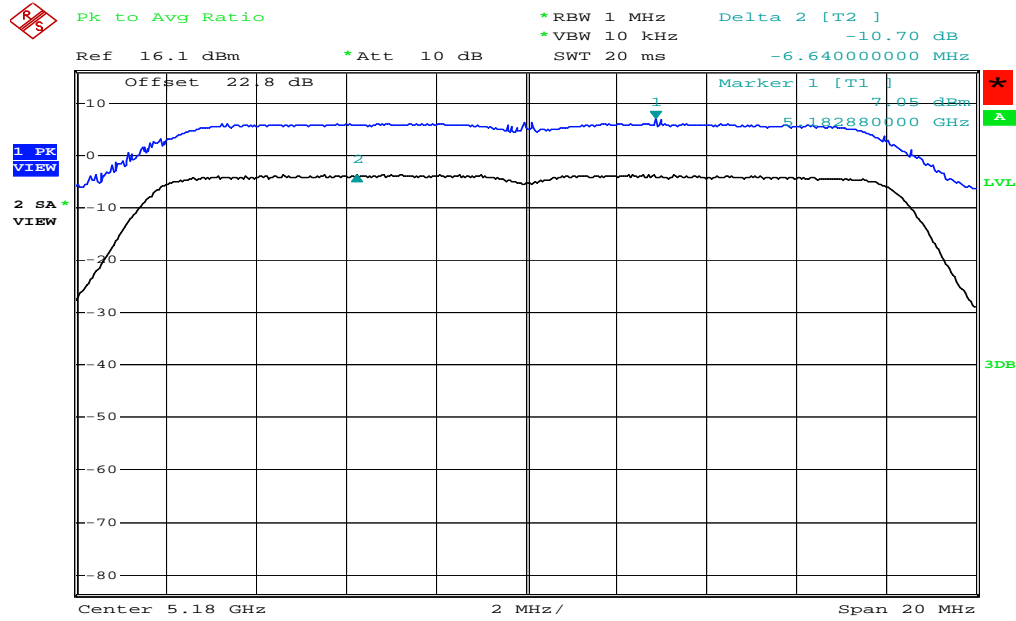
| Test Mode : 802.11a | | | |
|---------------------|-------------|------------------------------------|---------------|
| Test CH | | PK excursion to Avg. ratio (dB) | Limit (dB) |
| CH No. | Freq. (MHz) | | |
| 36 | 5180 | 10.70 | 13 |
| 40 | 5200 | 10.57 | 13 |
| 48 | 5240 | 10.03 | 13 |
| 52 | 5260 | 9.99 | 13 |
| 60 | 5300 | 9.73 | 13 |
| 64 | 5320 | 10.12 | 13 |
| 100 | 5500 | 9.75 | 13 |
| 120 | 5600 | 10.34 | 13 |
| 140 | 5700 | 10.18 | 13 |

Turbo Mode

| Test Mode : 802.11a | | | |
|---------------------|-------------|------------------------------------|---------------|
| Test CH | | PK excursion to Avg. ratio (dB) | Limit (dB) |
| CH No. | Freq. (MHz) | | |
| 42 | 5210 | 9.97 | 13 |
| 58 | 5290 | 9.24 | 13 |

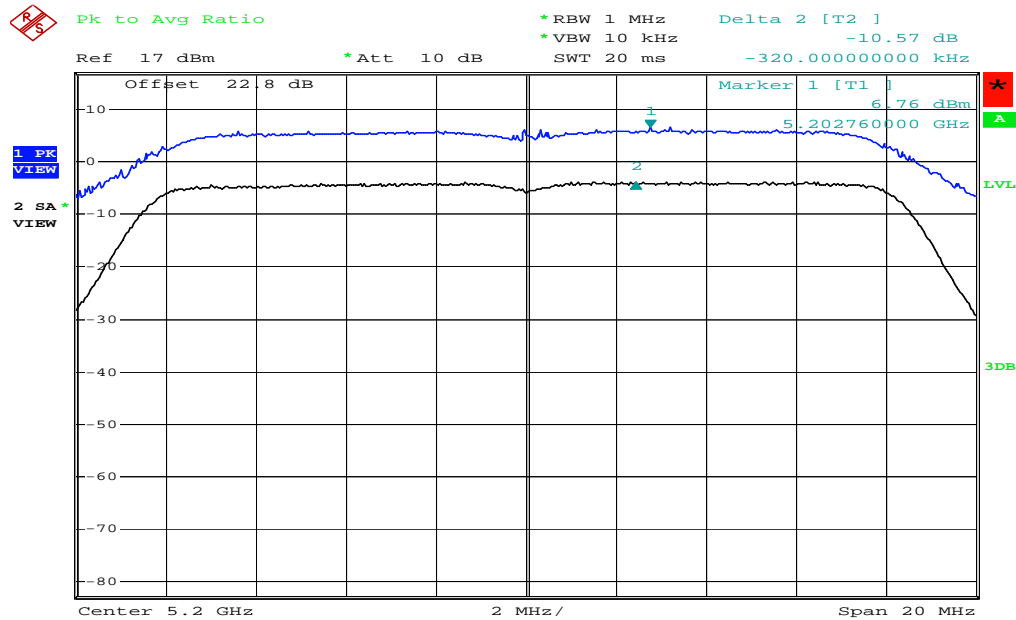
Peak excursion to Average ratio

802.11a CH36 5180MHz PK to AV Ratio



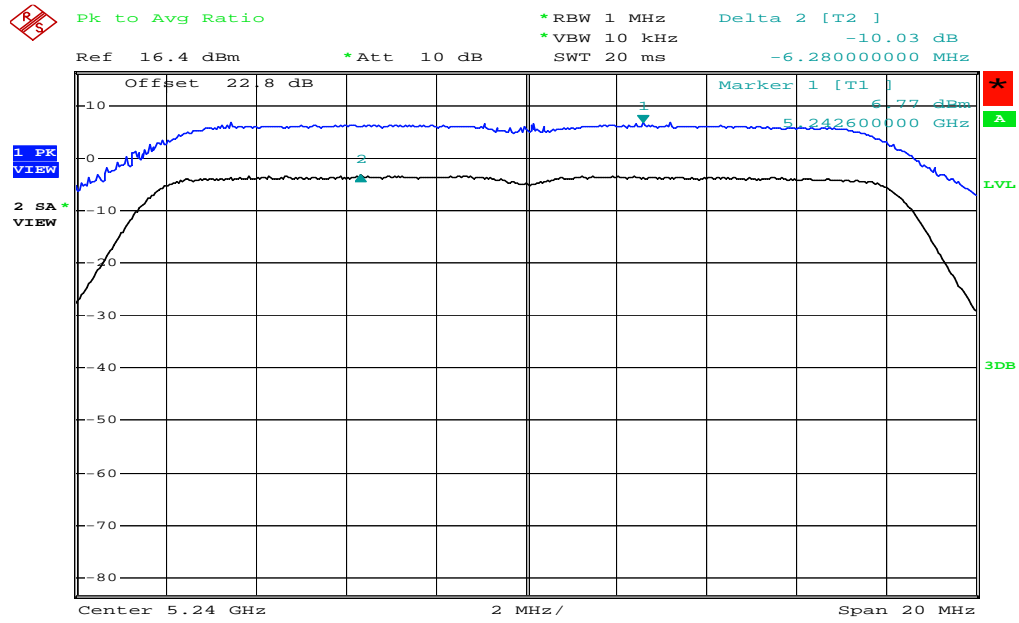
802.11a 5180MHz
Date: 10.JUN.2009 10:50:55

802.11a CH40 5200MHz PK to AV Ratio



802.11a 5200MHz
Date: 10.JUN.2009 10:54:03

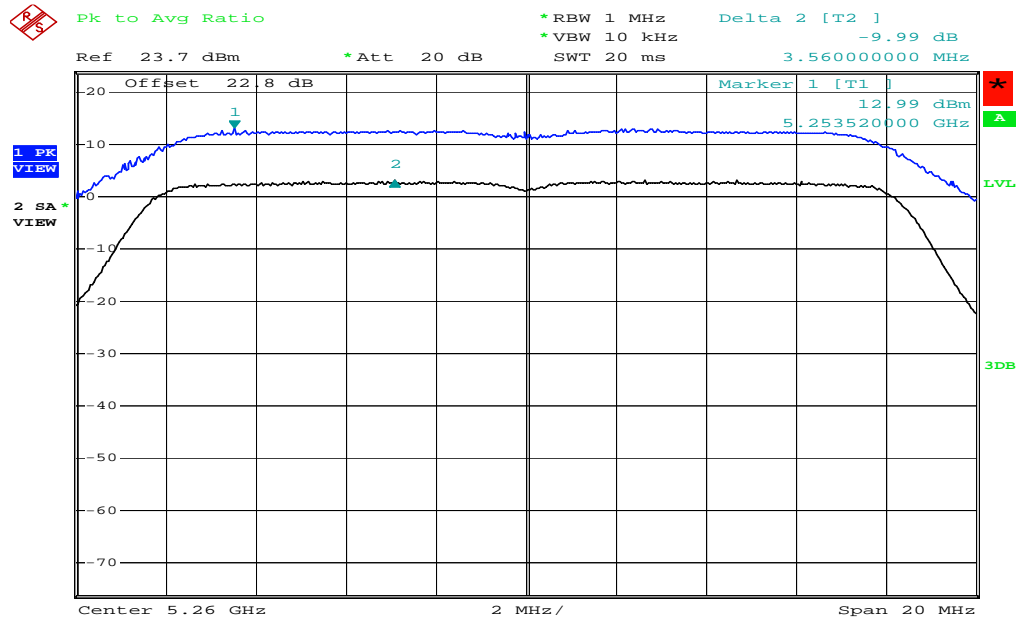
802.11a CH48 5240MHz PK to AV Ratio



802.11a 5240MHz

Date: 10.JUN.2009 11:01:44

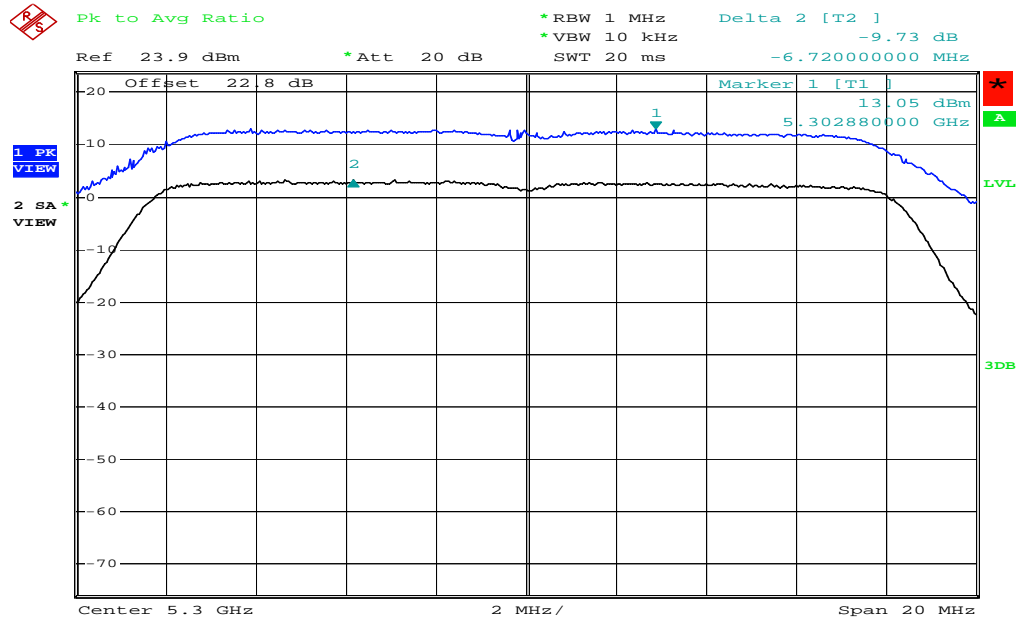
802.11a CH52 5260MHz PK to AV Ratio



802.11a 5260MHz

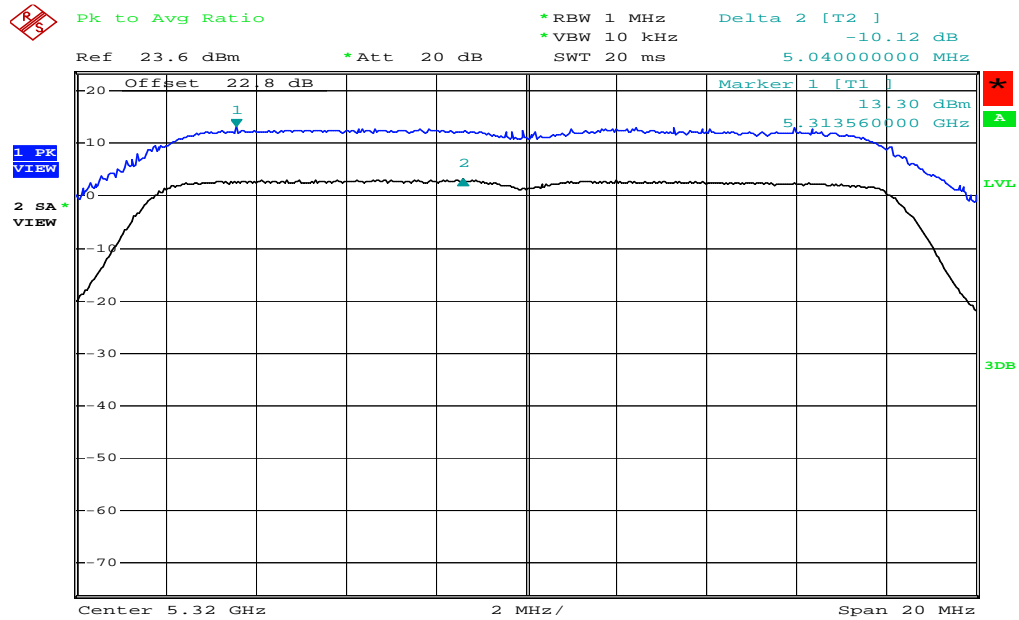
Date: 15.JUN.2009 11:14:11

802.11a CH60 5300MHz PK to AV Ratio



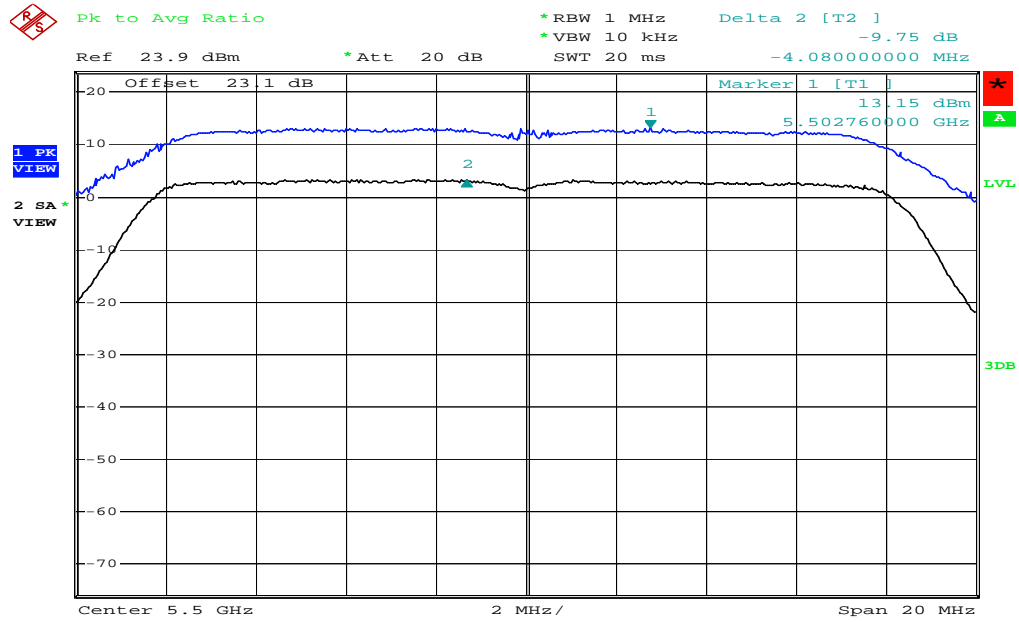
802.11a 5300MHz
Date: 15.JUN.2009 11:17:03

802.11a CH64 5320MHz PK to AV Ratio



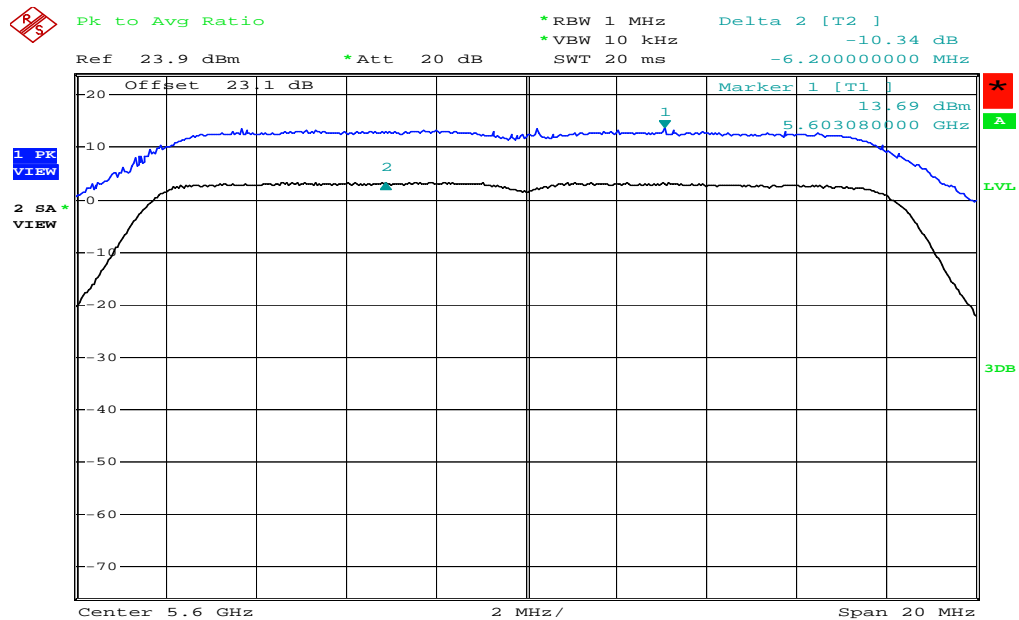
802.11a 5320MHz
Date: 15.JUN.2009 11:18:40

802.11a CH100 5500MHz PK to AV Ratio



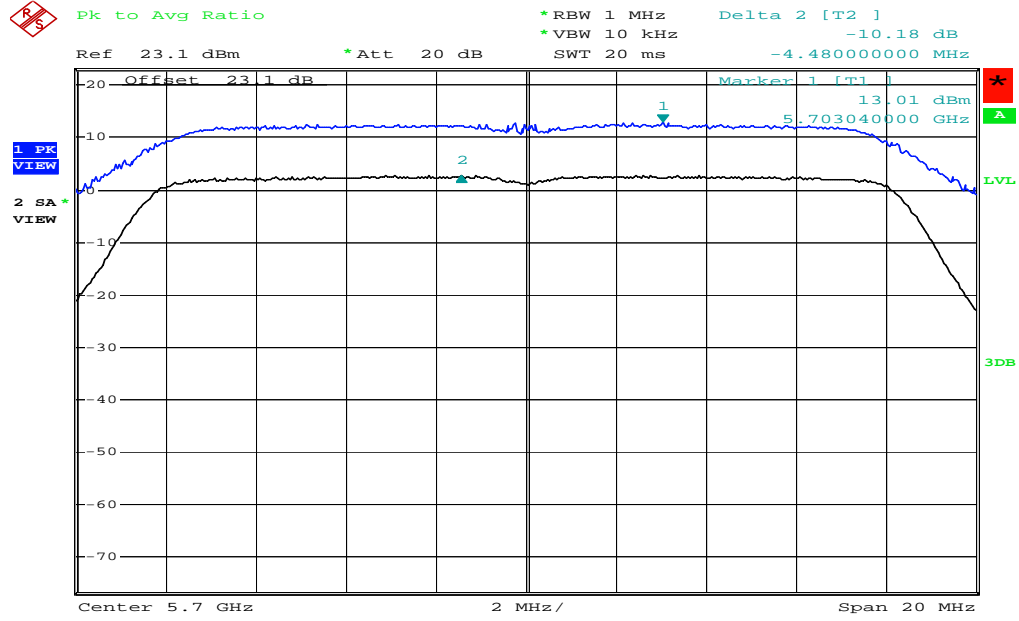
802.11a 5500MHz
Date: 15.JUN.2009 11:19:55

802.11a CH120 5600MHz PK to AV Ratio



802.11a 5600MHz
Date: 15.JUN.2009 11:21:38

802.11a CH140 5700MHz PK to AV Ratio

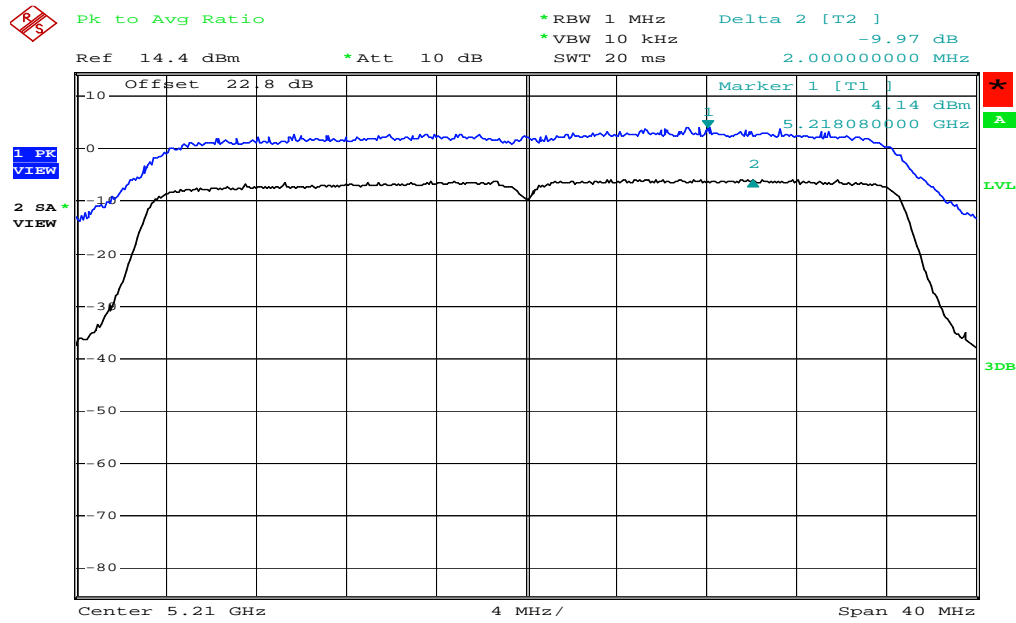


802.11a 5700MHz

Date: 15.JUN.2009 11:23:06

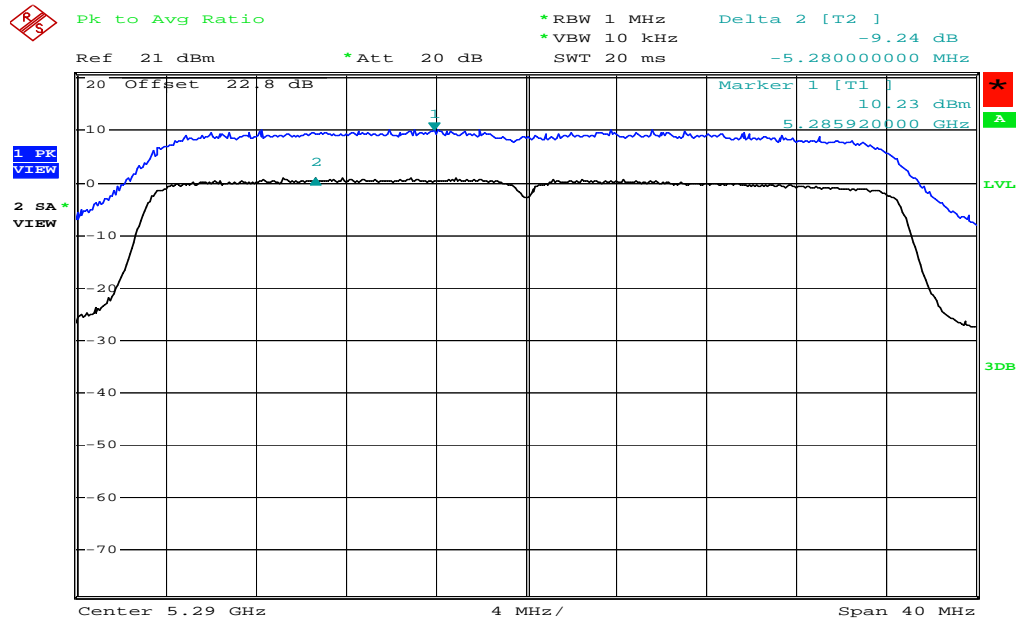
Turbo Mode

802.11a CH42 5210MHz PK to AV Ratio



802.11a 5210MHz (Turbo mode)
Date: 10.JUN.2009 11:10:02

802.11a CH58 5290MHz PK to AV Ratio



802.11a 5290MHz (Turbo mode)
Date: 15.JUN.2009 11:03:45

7 Radiated spurious emission test

7.1 Limits

According to FCC 15.407(b)(1) requirement, the radiated emission shall comply with the following limits.

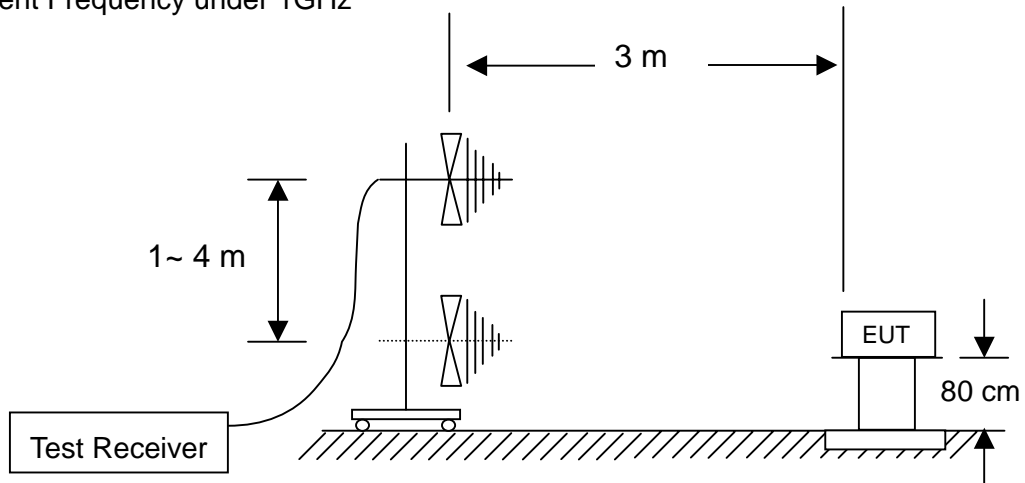
| Operating Frequency (MHz) | Limit of Spurious Emissions | |
|---------------------------|--|--------------|
| | dBm / MHz EIRP | dB(μV/m) @3m |
| 5150~5250 | -27 | 68.3 |
| 5250~5350 | -27 | 68.3 |
| 5725~5825 | -27 | 68.3 |
| | -17 (on ±10MHz range of Subscriber transmit channel block) | 78.3 |

The radiated emission shall comply with §15.209(a).

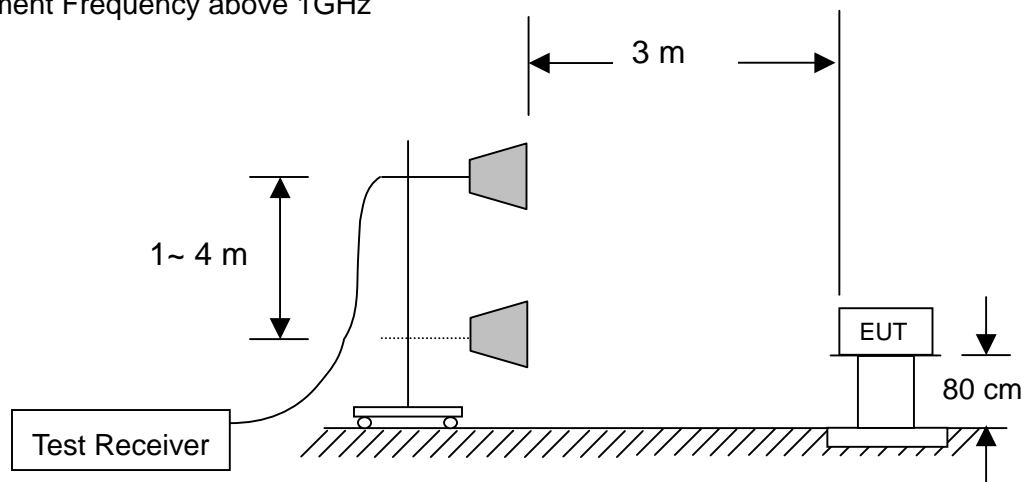
| Frequency (MHz) | Field strength dB(μV/m) | Measurement distance (meters) |
|-----------------|-------------------------|-------------------------------|
| 1.705~30.0 | 29.5 | 30 |
| 30 ~ 88 | 40 | 3 |
| 88~216 | 43.5 | 3 |
| 216~960 | 46 | 3 |
| Above 960 | 54 | 3 |

7.2 Configuration of Measurement

Measurement Frequency under 1GHz



Measurement Frequency above 1GHz



7.3 Test Procedure

Radiated emission measurements were performed from 30MHz to 40GHz. Spectrum Analyzer Resolution Bandwidth is 100kHz or greater for frequencies 30MHz to 1GHz, 1MHz for frequencies above 1GHz.

The EUT for testing is arranged on a wooden turntable. If some peripherals apply to the EUT, the peripherals will be connected to EUT and the whole system. During the test, all cables were arranged to produce worst-case emissions. The signal is maximized through rotation. The height of antenna and polarization is changing constantly for exploring for maximum signal level. The height of antenna can be up to 4 meter and down to 1 meter.

7.4 Test Result

PASS.

The final test data is shown on as following pages.

Radiated spurious emission

Test Environment

Ambient temperature : 26.0°C

Relative humidity : 45%

Radiated Emission below 1GHz

After verifying 802.11a (CH36/CH40/CH48/CH52/CH60/CH64/CH100/CH120/CH140), the worst case was found at CH48.

| EUT Equip By SMA-Male-RP Antenna | | | | | | | | |
|----------------------------------|----------------------|----------------------|-------------|--------------------------|--------------------------------|-----------------------|-------------|-----------|
| Worst case: CH48 | | | | | | | | |
| Frequency (MHz) | Antenna Polarization | Reading (dB μ V) | Preamp (dB) | Correction Factor (dB/m) | Corrected Level (dB μ V/m) | Limits (dB μ V/m) | Margin (dB) | Det. Mode |
| 168.878 | H | 57.10 | 33.42 | 16.91 | 40.59 | 43.50 | -2.91 | QP |
| 205.810 | H | 53.84 | 33.18 | 17.68 | 38.34 | 43.50 | -5.16 | QP |
| 235.595 | H | 54.76 | 33.00 | 18.40 | 40.16 | 46.00 | -5.84 | QP |
| 480.025 | H | 51.60 | 34.30 | 19.00 | 36.30 | 46.00 | -9.70 | QP |
| 675.835 | H | 47.85 | 33.24 | 22.01 | 36.62 | 46.00 | -9.38 | QP |
| 795.360 | H | 49.77 | 31.89 | 23.17 | 41.05 | 46.00 | -4.95 | QP |
| 136.740 | V | 54.97 | 33.67 | 15.32 | 36.62 | 43.50 | -6.88 | QP |
| 153.670 | V | 57.86 | 33.66 | 16.33 | 40.53 | 46.00 | -5.47 | QP |
| 161.530 | V | 53.92 | 33.57 | 16.76 | 37.11 | 46.00 | -8.89 | QP |
| 400.910 | V | 56.03 | 33.81 | 17.59 | 39.81 | 46.00 | -6.19 | QP |
| 480.008 | V | 50.27 | 34.30 | 19.00 | 34.97 | 46.00 | -11.03 | QP |
| 677.650 | V | 52.36 | 33.22 | 22.03 | 41.17 | 46.00 | -4.83 | QP |

Remark : Corrected Level = Reading + Correction Factor – Preamp

Correction Factor = Antenna Factor + Cable Loss

The present spurious only show those points are above noise level and the frequency range test from 30MHz to 1GHz.

| EUT Equip By ANT-WDB-ANM-0609 Antenna | | | | | | | | |
|--|----------------------|----------------------|-------------|--------------------------|--------------------------------|-----------------------|-------------|-----------|
| Worst case: CH48 | | | | | | | | |
| Frequency (MHz) | Antenna Polarization | Reading (dB μ V) | Preamp (dB) | Correction Factor (dB/m) | Corrected Level (dB μ V/m) | Limits (dB μ V/m) | Margin (dB) | Det. Mode |
| 168.800 | H | 55.74 | 33.42 | 16.91 | 39.23 | 43.50 | -4.27 | QP |
| 206.100 | H | 53.90 | 33.18 | 17.68 | 38.40 | 43.50 | -5.10 | QP |
| 235.595 | H | 54.95 | 33.00 | 18.40 | 40.35 | 46.00 | -5.65 | QP |
| 480.062 | H | 51.10 | 34.30 | 19.00 | 35.80 | 46.00 | -10.20 | QP |
| 675.000 | H | 49.54 | 33.24 | 22.01 | 38.31 | 46.00 | -7.69 | QP |
| 795.390 | H | 49.10 | 31.89 | 23.17 | 40.38 | 46.00 | -5.62 | QP |
| 153.660 | V | 58.40 | 33.66 | 16.33 | 41.07 | 46.00 | -4.93 | QP |
| 168.900 | V | 54.65 | 33.42 | 16.91 | 38.14 | 43.50 | -5.36 | QP |
| 234.990 | V | 54.40 | 33.01 | 18.41 | 39.80 | 46.00 | -6.20 | QP |
| 400.900 | V | 56.69 | 33.81 | 17.59 | 40.47 | 46.00 | -5.53 | QP |
| 480.100 | V | 50.94 | 34.30 | 19.00 | 35.64 | 46.00 | -10.36 | QP |
| 677.600 | V | 53.40 | 33.22 | 22.03 | 42.21 | 46.00 | -3.79 | QP |

Remark : Corrected Level = Reading + Correction Factor – Preamp

Correction Factor = Antenna Factor + Cable Loss

The present spurious only show those points are above noise level and the frequency range test from 30MHz to 1GHz.

Radiated spurious emission

Radiated Emission above 1GHz

| EUT Equip By SMA-Male-RP Antenna | | | | | | | | |
|----------------------------------|-------------------------|-------------------|----------------|-------------------------------|--------------------------------|--------------------|----------------|-------------|
| 802.11a CH36 | | | | | | | | |
| Frequency (MHz) | Antenna Polarization | Reading (dBμV) | Preamp (dB) | Corrected Factor (dB/m) | Corrected Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Det Mode |
| 6907 | H | 49.60 | 36.50 | 42.13 | 55.23 | 74.0 | -18.77 | PK |
| 6907 | H | 41.46 | 36.50 | 42.13 | 47.09 | 54.0 | -6.91 | AV |
| 10360 | H | 45.30 | 36.57 | 47.30 | 56.03 | 74.0 | -17.97 | PK |
| 10360 | H | 31.94 | 36.57 | 47.30 | 42.67 | 54.0 | -11.33 | AV |
| *15540 | H | 53.14 | 62.20 | 46.87 | 37.81 | 54.0 | -16.19 | PK |
| *20720 | H | 55.97 | 59.23 | 43.83 | 40.57 | 54.0 | -13.43 | PK |
| *25900 | H | 56.17 | 51.79 | 46.44 | 50.82 | 54.0 | -3.18 | PK |
| *31080 | H | 26.54 | 25.64 | 47.88 | 48.78 | 54.0 | -5.22 | PK |
| *36260 | H | 33.17 | 24.74 | 49.46 | 57.89 | 74.0 | -16.11 | PK |
| *36260 | H | 20.17 | 24.74 | 49.46 | 44.89 | 54.0 | -9.11 | AV |
| 6907 | V | 50.39 | 36.50 | 42.13 | 56.02 | 74.0 | -17.98 | PK |
| 6907 | V | 45.61 | 36.50 | 42.13 | 51.24 | 54.0 | -2.76 | AV |
| 10360 | V | 46.11 | 36.57 | 47.30 | 56.84 | 74.0 | -17.16 | PK |
| 10360 | V | 31.64 | 36.57 | 47.30 | 42.37 | 54.0 | -11.63 | AV |
| *15540 | V | 53.17 | 62.20 | 46.87 | 37.84 | 54.0 | -16.16 | PK |
| *20720 | V | 56.47 | 59.23 | 43.83 | 41.07 | 54.0 | -12.93 | PK |
| *25900 | V | 56.44 | 51.79 | 46.44 | 51.09 | 54.0 | -2.91 | PK |
| *31080 | V | 27.48 | 25.64 | 47.88 | 49.72 | 54.0 | -4.28 | PK |
| *36260 | V | 33.28 | 24.74 | 49.46 | 58.00 | 74.0 | -16.00 | PK |
| *36260 | V | 20.58 | 24.74 | 49.46 | 45.30 | 54.0 | -8.70 | AV |

Remark : Corrected Level = Reading + Correction Factor – Preamp
 Correction Factor = Antenna Factor + Cable Loss
 * Mark indicated background noise level.

| EUT Equip By SMA-Male-RP Antenna | | | | | | | | |
|----------------------------------|-------------------------|-------------------|----------------|-------------------------------|--------------------------------|--------------------|----------------|-------------|
| 802.11a CH40 | | | | | | | | |
| Frequency (MHz) | Antenna Polarization | Reading (dBμV) | Preamp (dB) | Corrected Factor (dB/m) | Corrected Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Det Mode |
| 6933 | H | 47.49 | 36.50 | 42.21 | 53.20 | 54.0 | -0.80 | PK |
| 10400 | H | 45.99 | 36.52 | 47.41 | 56.88 | 74.0 | -17.12 | PK |
| 10400 | H | 32.42 | 36.52 | 47.41 | 43.31 | 54.0 | -10.69 | AV |
| *15600 | H | 53.47 | 62.19 | 46.96 | 38.24 | 54.0 | -15.76 | PK |
| *20800 | H | 52.94 | 59.00 | 44.07 | 38.01 | 54.0 | -15.99 | PK |
| *26000 | H | 54.35 | 51.25 | 46.38 | 49.48 | 54.0 | -4.52 | PK |
| *31200 | H | 31.47 | 25.54 | 47.86 | 53.79 | 74.0 | -20.21 | PK |
| *31200 | H | 19.95 | 25.54 | 47.86 | 42.27 | 54.0 | -11.73 | AV |
| *36400 | H | 33.28 | 24.54 | 49.66 | 58.40 | 74.0 | -15.60 | PK |
| *36400 | H | 20.41 | 24.54 | 49.66 | 45.53 | 54.0 | -8.47 | AV |
| 6933 | V | 49.91 | 36.50 | 42.21 | 55.62 | 74.0 | -18.38 | PK |
| 6933 | V | 45.00 | 36.50 | 42.21 | 50.71 | 54.0 | -3.29 | AV |
| 10400 | V | 45.25 | 36.52 | 47.41 | 56.14 | 74.0 | -17.86 | PK |
| 10400 | V | 31.71 | 36.52 | 47.41 | 42.60 | 54.0 | -11.40 | AV |
| *15600 | V | 53.68 | 62.19 | 46.96 | 38.45 | 54.0 | -15.55 | PK |
| *20800 | V | 53.94 | 59.00 | 44.07 | 39.01 | 54.0 | -14.99 | PK |
| *26000 | V | 54.47 | 51.25 | 46.38 | 49.60 | 54.0 | -4.40 | PK |
| *31200 | V | 31.58 | 25.54 | 47.86 | 53.90 | 74.0 | -20.10 | PK |
| *31200 | V | 19.36 | 25.54 | 47.86 | 41.68 | 54.0 | -12.32 | AV |
| *36400 | V | 33.58 | 24.54 | 49.66 | 58.70 | 74.0 | -15.30 | PK |
| *36400 | V | 20.94 | 24.54 | 49.66 | 46.06 | 54.0 | -7.94 | AV |

Remark : Corrected Level = Reading + Correction Factor – Preamp
 Correction Factor = Antenna Factor + Cable Loss
 * Mark indicated background noise level.

| EUT Equip By SMA-Male-RP Antenna | | | | | | | | |
|---|-------------------------|-------------------|----------------|-------------------------------|--------------------------------|--------------------|----------------|-------------|
| 802.11a CH48 | | | | | | | | |
| Frequency (MHz) | Antenna Polarization | Reading (dBμV) | Preamp (dB) | Corrected Factor (dB/m) | Corrected Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Det Mode |
| 6987 | H | 48.04 | 36.50 | 42.35 | 53.89 | 74.0 | -20.11 | PK |
| 6987 | H | 40.08 | 36.50 | 42.35 | 45.93 | 54.0 | -8.07 | AV |
| 10480 | H | 45.76 | 36.42 | 47.60 | 56.94 | 74.0 | -17.06 | PK |
| 10480 | H | 32.72 | 36.42 | 47.60 | 43.90 | 54.0 | -10.10 | AV |
| *15720 | H | 53.57 | 62.15 | 47.15 | 38.57 | 54.0 | -15.43 | PK |
| *20960 | H | 54.91 | 51.79 | 46.44 | 49.56 | 54.0 | -4.44 | PK |
| *26200 | H | 31.40 | 24.92 | 46.36 | 52.84 | 54.0 | -1.16 | PK |
| *31440 | H | 30.74 | 25.35 | 47.81 | 53.20 | 74.0 | -20.80 | PK |
| *31440 | H | 18.28 | 25.35 | 47.81 | 40.74 | 54.0 | -13.26 | AV |
| *36680 | H | 34.28 | 24.15 | 49.62 | 59.75 | 74.0 | -14.25 | PK |
| *36680 | H | 20.47 | 24.15 | 49.62 | 45.94 | 54.0 | -8.06 | AV |
| 6987 | V | 50.01 | 36.50 | 42.35 | 55.86 | 74.0 | -18.14 | PK |
| 6987 | V | 42.71 | 36.50 | 42.35 | 48.56 | 54.0 | -5.44 | AV |
| 10480 | V | 45.61 | 36.42 | 47.60 | 56.79 | 74.0 | -17.21 | PK |
| 10480 | V | 31.92 | 36.42 | 47.60 | 43.10 | 54.0 | -10.90 | AV |
| *15720 | V | 53.69 | 62.15 | 47.15 | 38.69 | 54.0 | -15.31 | PK |
| *20960 | V | 55.17 | 51.79 | 46.44 | 49.82 | 54.0 | -4.18 | PK |
| *26200 | V | 55.38 | 51.25 | 47.81 | 51.94 | 54.0 | -2.06 | PK |
| *31440 | V | 31.84 | 25.35 | 47.81 | 54.30 | 74.0 | -19.70 | PK |
| *31440 | V | 19.62 | 25.35 | 47.81 | 42.08 | 54.0 | -11.92 | AV |
| *36680 | V | 34.44 | 24.15 | 49.62 | 59.91 | 74.0 | -14.09 | PK |
| *36680 | V | 20.64 | 24.15 | 49.62 | 46.11 | 54.0 | -7.89 | AV |

Remark : Corrected Level = Reading + Correction Factor – Preamp
 Correction Factor = Antenna Factor + Cable Loss
 * Mark indicated background noise level.

| EUT Equip By SMA-Male-RP Antenna | | | | | | | | |
|----------------------------------|-------------------------|-------------------|----------------|-------------------------------|--------------------------------|--------------------|----------------|-------------|
| 802.11a CH52 | | | | | | | | |
| Frequency (MHz) | Antenna Polarization | Reading (dBμV) | Preamp (dB) | Corrected Factor (dB/m) | Corrected Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Det Mode |
| 7013 | H | 49.41 | 36.50 | 42.42 | 55.33 | 74.0 | -18.67 | PK |
| 7013 | H | 42.23 | 36.50 | 42.42 | 48.15 | 54.0 | -5.85 | AV |
| 10520 | H | 52.62 | 36.39 | 47.67 | 63.90 | 74.0 | -10.10 | PK |
| 10520 | H | 36.65 | 36.39 | 47.67 | 47.93 | 54.0 | -6.07 | AV |
| *15780 | H | 54.88 | 62.14 | 48.41 | 41.15 | 54.0 | -12.85 | PK |
| *21040 | H | 55.22 | 58.74 | 50.24 | 46.72 | 54.0 | -7.28 | PK |
| *26300 | H | 33.30 | 24.88 | 46.34 | 54.76 | 74.0 | -19.24 | PK |
| *26300 | H | 20.78 | 24.88 | 46.34 | 42.24 | 54.0 | -11.76 | AV |
| *31560 | H | 33.95 | 25.28 | 47.80 | 56.47 | 74.0 | -17.53 | PK |
| *31560 | H | 23.25 | 25.28 | 47.80 | 45.77 | 54.0 | -8.23 | AV |
| *36820 | H | 34.44 | 23.95 | 49.48 | 59.97 | 74.0 | -14.03 | PK |
| *36820 | H | 24.56 | 23.95 | 49.48 | 50.09 | 54.0 | -3.91 | AV |
| 7013 | V | 50.19 | 36.50 | 42.42 | 56.11 | 74.0 | -17.89 | PK |
| 7013 | V | 44.49 | 36.50 | 42.42 | 50.41 | 54.0 | -3.59 | AV |
| 10520 | V | 49.42 | 36.39 | 47.67 | 60.70 | 74.0 | -13.30 | PK |
| 10520 | V | 34.69 | 36.39 | 47.67 | 45.97 | 54.0 | -8.03 | AV |
| *15780 | V | 55.00 | 62.14 | 48.41 | 41.27 | 54.0 | -12.73 | PK |
| *21040 | V | 55.65 | 58.74 | 50.24 | 47.15 | 54.0 | -6.85 | PK |
| *26300 | V | 33.41 | 24.88 | 46.34 | 54.87 | 74.0 | -19.13 | PK |
| *26300 | V | 20.70 | 24.88 | 46.34 | 42.16 | 54.0 | -11.84 | AV |
| *31560 | V | 34.10 | 25.28 | 47.80 | 56.62 | 74.0 | -17.38 | PK |
| *31560 | V | 23.44 | 25.28 | 47.80 | 45.96 | 54.0 | -8.04 | AV |
| *36820 | V | 32.41 | 23.95 | 49.48 | 57.94 | 74.0 | -16.06 | PK |
| *36820 | V | 23.54 | 23.95 | 49.48 | 49.07 | 54.0 | -4.93 | AV |

Remark : Corrected Level = Reading + Correction Factor – Preamp
 Correction Factor = Antenna Factor + Cable Loss
 * Mark indicated background noise level.

| EUT Equip By SMA-Male-RP Antenna | | | | | | | | |
|---|-------------------------|-------------------|----------------|-------------------------------|--------------------------------|--------------------|----------------|-------------|
| 802.11a CH60 | | | | | | | | |
| Frequency (MHz) | Antenna Polarization | Reading (dBμV) | Preamp (dB) | Corrected Factor (dB/m) | Corrected Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Det Mode |
| 7067 | H | 48.67 | 36.51 | 42.55 | 54.71 | 74.0 | -19.29 | PK |
| 7067 | H | 40.46 | 36.51 | 42.55 | 46.50 | 54.0 | -7.50 | AV |
| 10600 | H | 57.04 | 36.34 | 47.73 | 68.43 | 74.0 | -5.57 | PK |
| 10600 | H | 41.13 | 36.34 | 47.73 | 52.52 | 54.0 | -1.48 | AV |
| *15900 | H | 53.47 | 62.10 | 48.18 | 39.55 | 54.0 | -14.45 | PK |
| *21200 | H | 54.99 | 58.22 | 50.43 | 47.20 | 54.0 | -6.80 | PK |
| *26500 | H | 33.48 | 24.80 | 46.30 | 54.98 | 74.0 | -19.02 | PK |
| *26500 | H | 21.52 | 24.80 | 46.30 | 43.02 | 54.0 | -10.98 | AV |
| *31800 | H | 32.94 | 25.18 | 47.80 | 55.56 | 74.0 | -18.44 | PK |
| *31800 | H | 22.48 | 25.18 | 47.80 | 45.10 | 54.0 | -8.90 | AV |
| *37100 | H | 37.25 | 23.62 | 49.42 | 63.05 | 74.0 | -10.95 | PK |
| *37100 | H | 26.38 | 23.62 | 49.42 | 52.18 | 54.0 | -1.82 | AV |
| 7067 | V | 48.96 | 36.51 | 42.55 | 55.00 | 74.0 | -19.00 | PK |
| 7067 | V | 42.37 | 36.51 | 42.55 | 48.41 | 54.0 | -5.59 | AV |
| 10600 | V | 50.09 | 36.34 | 47.73 | 61.48 | 74.0 | -12.52 | PK |
| 10600 | V | 36.34 | 36.34 | 47.73 | 47.73 | 54.0 | -6.27 | AV |
| *15900 | V | 53.90 | 62.10 | 48.18 | 39.98 | 54.0 | -14.02 | PK |
| *21200 | V | 55.14 | 58.22 | 50.43 | 47.35 | 54.0 | -6.65 | PK |
| *26500 | V | 33.44 | 24.80 | 46.30 | 54.94 | 74.0 | -19.06 | PK |
| *26500 | V | 21.80 | 24.80 | 46.30 | 43.30 | 54.0 | -10.70 | AV |
| *31800 | V | 33.14 | 25.18 | 47.80 | 55.76 | 74.0 | -18.24 | PK |
| *31800 | V | 22.40 | 25.18 | 47.80 | 45.02 | 54.0 | -8.98 | AV |
| *37100 | V | 36.44 | 23.62 | 49.42 | 62.24 | 74.0 | -11.76 | PK |
| *37100 | V | 26.54 | 23.62 | 49.42 | 52.34 | 54.0 | -1.66 | AV |

Remark : Corrected Level = Reading + Correction Factor – Preamp
 Correction Factor = Antenna Factor + Cable Loss
 * Mark indicated background noise level.

| EUT Equip By SMA-Male-RP Antenna | | | | | | | | |
|---|-------------------------|-------------------|----------------|-------------------------------|--------------------------------|--------------------|----------------|-------------|
| 802.11a CH64 | | | | | | | | |
| Frequency (MHz) | Antenna Polarization | Reading (dBµV) | Preamp (dB) | Corrected Factor (dB/m) | Corrected Level (dBµV/m) | Limits (dBµV/m) | Margin (dB) | Det Mode |
| 7093 | H | 47.81 | 36.52 | 42.61 | 53.90 | 74.0 | -20.10 | PK |
| 7093 | H | 38.39 | 36.52 | 42.61 | 44.48 | 54.0 | -9.52 | AV |
| 10640 | H | 54.39 | 36.32 | 47.77 | 65.84 | 74.0 | -8.16 | PK |
| 10640 | H | 39.15 | 36.32 | 47.77 | 50.60 | 54.0 | -3.40 | AV |
| *15960 | H | 54.15 | 62.08 | 48.06 | 40.13 | 54.0 | -13.87 | PK |
| *21280 | H | 54.92 | 57.96 | 50.52 | 47.48 | 54.0 | -6.52 | PK |
| *26600 | H | 33.56 | 24.80 | 46.44 | 55.20 | 74.0 | -18.80 | PK |
| *26600 | H | 21.73 | 24.80 | 46.44 | 43.37 | 54.0 | -10.63 | AV |
| *31920 | H | 32.27 | 25.13 | 47.80 | 54.94 | 74.0 | -19.06 | PK |
| *31920 | H | 21.98 | 25.13 | 47.80 | 44.65 | 54.0 | -9.35 | AV |
| *37240 | H | 37.41 | 23.51 | 49.59 | 63.49 | 74.0 | -10.51 | PK |
| *37240 | H | 26.28 | 23.51 | 49.59 | 52.36 | 54.0 | -1.64 | AV |
| 7093 | V | 40.38 | 36.52 | 42.61 | 46.47 | 54.0 | -7.53 | PK |
| 10640 | V | 51.76 | 36.32 | 47.77 | 63.21 | 74.0 | -10.79 | PK |
| 10640 | V | 37.21 | 36.32 | 47.77 | 48.66 | 54.0 | -5.34 | AV |
| *15960 | V | 54.68 | 62.08 | 48.06 | 40.66 | 54.0 | -13.34 | PK |
| *21280 | V | 55.10 | 57.96 | 50.52 | 47.66 | 54.0 | -6.34 | PK |
| *26600 | V | 33.01 | 24.80 | 46.44 | 54.65 | 74.0 | -19.35 | PK |
| *26600 | V | 21.47 | 24.80 | 46.44 | 43.11 | 54.0 | -10.89 | AV |
| *31920 | V | 32.11 | 25.13 | 47.80 | 54.78 | 74.0 | -19.22 | PK |
| *31920 | V | 22.10 | 25.13 | 47.80 | 44.77 | 54.0 | -9.23 | AV |
| *37240 | V | 34.80 | 23.51 | 49.59 | 60.88 | 74.0 | -13.12 | PK |
| *37240 | V | 24.17 | 23.51 | 49.59 | 50.25 | 54.0 | -3.75 | AV |

Remark : Corrected Level = Reading + Correction Factor – Preamp

Correction Factor = Antenna Factor + Cable Loss

* Mark indicated background noise level.

| EUT Equip By SMA-Male-RP Antenna | | | | | | | | |
|---|-------------------------|-------------------|----------------|-------------------------------|--------------------------------|--------------------|----------------|-------------|
| 802.11a CH100 | | | | | | | | |
| Frequency (MHz) | Antenna Polarization | Reading (dBμV) | Preamp (dB) | Corrected Factor (dB/m) | Corrected Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Det Mode |
| 11000 | H | 56.29 | 36.10 | 48.06 | 68.25 | 74.0 | -5.75 | PK |
| 11000 | H | 41.31 | 36.10 | 48.06 | 53.27 | 54.0 | -0.73 | AV |
| *16500 | H | 54.34 | 61.75 | 49.35 | 41.94 | 54.0 | -12.06 | PK |
| *22000 | H | 53.57 | 57.80 | 50.97 | 46.74 | 54.0 | -7.26 | PK |
| *27500 | H | 32.91 | 24.90 | 46.80 | 54.81 | 74.0 | -19.19 | PK |
| *27500 | H | 20.43 | 24.90 | 46.80 | 42.33 | 54.0 | -11.67 | AV |
| *33000 | H | 34.43 | 26.50 | 48.00 | 55.93 | 74.0 | -18.07 | PK |
| *33000 | H | 24.46 | 26.50 | 48.00 | 45.96 | 54.0 | -8.04 | AV |
| *38500 | H | 37.05 | 23.90 | 51.10 | 64.25 | 74.0 | -9.75 | PK |
| *38500 | H | 25.69 | 23.90 | 51.10 | 52.89 | 54.0 | -1.11 | AV |
| 11000 | V | 55.00 | 36.10 | 48.06 | 66.96 | 74.0 | -7.04 | PK |
| 11000 | V | 41.05 | 36.10 | 48.06 | 53.01 | 54.0 | -0.99 | AV |
| *16500 | V | 54.94 | 61.75 | 49.34 | 42.53 | 54.0 | -11.47 | PK |
| *22000 | V | 53.44 | 57.80 | 50.97 | 46.61 | 54.0 | -7.39 | PK |
| *27500 | V | 32.70 | 24.90 | 46.80 | 54.60 | 74.0 | -19.40 | PK |
| *27500 | V | 20.11 | 24.90 | 46.80 | 42.01 | 54.0 | -11.99 | AV |
| *33000 | V | 33.50 | 26.50 | 48.00 | 55.00 | 74.0 | -19.00 | PK |
| *33000 | V | 23.54 | 26.50 | 48.00 | 45.04 | 54.0 | -8.96 | AV |
| *38500 | V | 36.84 | 23.90 | 51.10 | 64.04 | 74.0 | -9.96 | PK |
| *38500 | V | 25.14 | 23.90 | 51.10 | 52.34 | 54.0 | -1.66 | AV |

Remark : Corrected Level = Reading + Correction Factor – Preamp
 Correction Factor = Antenna Factor + Cable Loss
 * Mark indicated background noise level.

| EUT Equip By SMA-Male-RP Antenna | | | | | | | | |
|---|-------------------------|-------------------|----------------|-------------------------------|--------------------------------|--------------------|----------------|-------------|
| 802.11a CH120 | | | | | | | | |
| Frequency (MHz) | Antenna Polarization | Reading (dBμV) | Preamp (dB) | Corrected Factor (dB/m) | Corrected Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Det Mode |
| 11200 | H | 53.65 | 36.14 | 48.12 | 65.63 | 74.0 | -8.37 | PK |
| 11200 | H | 39.39 | 36.14 | 48.12 | 51.37 | 54.0 | -2.63 | AV |
| *16800 | H | 53.79 | 60.66 | 50.67 | 43.80 | 54.0 | -10.20 | PK |
| *22400 | H | 53.86 | 56.21 | 51.29 | 48.94 | 54.0 | -5.06 | PK |
| *28000 | H | 33.55 | 25.70 | 47.00 | 54.85 | 74.0 | -19.15 | PK |
| *28000 | H | 22.68 | 25.70 | 47.00 | 43.98 | 54.0 | -10.02 | AV |
| *33600 | H | 35.37 | 26.24 | 48.02 | 57.15 | 74.0 | -16.85 | PK |
| *33600 | H | 24.39 | 26.24 | 48.02 | 46.17 | 54.0 | -7.83 | AV |
| *39200 | H | 35.88 | 24.12 | 50.96 | 62.72 | 74.0 | -11.28 | PK |
| *39200 | H | 24.91 | 24.12 | 50.96 | 51.75 | 54.0 | -2.25 | AV |
| 11200 | V | 49.00 | 36.14 | 48.12 | 60.98 | 74.0 | -13.02 | PK |
| 11200 | V | 34.69 | 36.14 | 48.12 | 46.67 | 54.0 | -7.33 | AV |
| *16800 | V | 54.11 | 60.66 | 50.67 | 44.12 | 54.0 | -9.88 | PK |
| *22400 | V | 53.94 | 56.21 | 51.29 | 49.02 | 54.0 | -4.98 | PK |
| *28000 | V | 33.01 | 25.70 | 47.00 | 54.31 | 74.0 | -19.69 | PK |
| *28000 | V | 22.84 | 25.70 | 47.00 | 44.14 | 54.0 | -9.86 | AV |
| *33600 | V | 34.88 | 26.24 | 48.02 | 56.66 | 74.0 | -17.34 | PK |
| *33600 | V | 24.50 | 26.24 | 48.02 | 46.28 | 54.0 | -7.72 | AV |
| *39200 | V | 35.17 | 24.12 | 50.96 | 62.01 | 74.0 | -11.99 | PK |
| *39200 | V | 24.47 | 24.12 | 50.96 | 51.31 | 54.0 | -2.69 | AV |

Remark : Corrected Level = Reading + Correction Factor – Preamp
 Correction Factor = Antenna Factor + Cable Loss
 * Mark indicated background noise level.

| EUT Equip By SMA-Male-RP Antenna | | | | | | | | |
|---|-------------------------|-------------------|----------------|-------------------------------|--------------------------------|--------------------|----------------|-------------|
| 802.11a CH140 | | | | | | | | |
| Frequency (MHz) | Antenna Polarization | Reading (dBμV) | Preamp (dB) | Corrected Factor (dB/m) | Corrected Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Det Mode |
| 11400 | H | 54.27 | 36.18 | 48.17 | 66.26 | 74.0 | -7.74 | PK |
| 11400 | H | 39.35 | 36.18 | 48.17 | 51.34 | 54.0 | -2.66 | AV |
| *17100 | H | 54.32 | 60.01 | 52.17 | 46.48 | 54.0 | -7.52 | PK |
| *22800 | H | 54.12 | 56.09 | 51.42 | 49.45 | 54.0 | -4.55 | PK |
| *28500 | H | 39.05 | 25.70 | 47.20 | 60.55 | 74.0 | -13.45 | PK |
| *28500 | H | 27.32 | 25.70 | 47.20 | 48.82 | 54.0 | -5.18 | AV |
| *34200 | H | 35.46 | 26.48 | 48.06 | 57.04 | 74.0 | -16.96 | PK |
| *34200 | H | 24.48 | 26.48 | 48.06 | 46.06 | 54.0 | -7.94 | AV |
| *39900 | H | 36.30 | 24.40 | 51.30 | 63.20 | 74.0 | -10.80 | PK |
| *39900 | H | 25.28 | 24.40 | 51.30 | 52.18 | 54.0 | -1.82 | AV |
| 11400 | V | 54.52 | 36.18 | 48.17 | 66.51 | 74.0 | -7.49 | PK |
| 11400 | V | 40.04 | 36.18 | 48.17 | 52.03 | 54.0 | -1.97 | AV |
| *17100 | V | 54.87 | 60.01 | 52.17 | 47.03 | 54.0 | -6.97 | PK |
| *22800 | V | 54.10 | 56.09 | 51.42 | 49.43 | 54.0 | -4.57 | PK |
| *28500 | V | 39.47 | 25.70 | 47.20 | 60.97 | 74.0 | -13.03 | PK |
| *28500 | V | 27.01 | 25.70 | 47.20 | 48.51 | 54.0 | -5.49 | AV |
| *34200 | V | 35.70 | 26.48 | 48.06 | 57.28 | 74.0 | -16.72 | PK |
| *34200 | V | 25.10 | 26.48 | 48.06 | 46.68 | 54.0 | -7.32 | AV |
| *39900 | V | 36.54 | 24.40 | 51.30 | 63.44 | 74.0 | -10.56 | PK |
| *39900 | V | 25.28 | 24.40 | 51.30 | 52.18 | 54.0 | -1.82 | AV |

Remark : Corrected Level = Reading + Correction Factor – Preamp
 Correction Factor = Antenna Factor + Cable Loss
 * Mark indicated background noise level.

Turbo Mode

| EUT Equip By SMA-Male-RP Antenna | | | | | | | | |
|----------------------------------|-------------------------|-------------------|----------------|-------------------------------|--------------------------------|--------------------|----------------|-------------|
| 802.11a CH42 | | | | | | | | |
| Frequency (MHz) | Antenna Polarization | Reading (dBμV) | Preamp (dB) | Corrected Factor (dB/m) | Corrected Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Det Mode |
| 6946 | H | 47.69 | 36.50 | 42.25 | 53.44 | 74.0 | -20.56 | PK |
| 6946 | H | 37.78 | 36.50 | 42.25 | 43.53 | 54.0 | -10.47 | AV |
| 10420 | H | 45.98 | 36.50 | 47.46 | 56.94 | 74.0 | -17.06 | PK |
| 10420 | H | 32.30 | 36.50 | 47.46 | 43.26 | 54.0 | -10.74 | AV |
| *15630 | H | 53.69 | 62.18 | 47.01 | 38.52 | 54.0 | -15.48 | PK |
| *20840 | H | 52.68 | 59.10 | 44.14 | 37.72 | 54.0 | -16.28 | PK |
| *26050 | H | 30.58 | 24.98 | 46.39 | 51.99 | 54.0 | -2.01 | PK |
| *31260 | H | 36.03 | 25.49 | 47.85 | 58.39 | 74.0 | -15.61 | PK |
| *31260 | H | 23.16 | 25.49 | 47.85 | 45.52 | 54.0 | -8.48 | AV |
| *36470 | H | 34.51 | 24.44 | 49.76 | 59.83 | 74.0 | -14.17 | PK |
| *36470 | H | 23.13 | 24.44 | 49.76 | 48.45 | 54.0 | -5.55 | AV |
| 6946 | V | 48.76 | 36.50 | 42.25 | 54.51 | 74.0 | -19.49 | PK |
| 6946 | V | 41.96 | 36.50 | 42.25 | 47.71 | 54.0 | -6.29 | AV |
| 10420 | V | 45.79 | 36.50 | 47.46 | 56.75 | 74.0 | -17.25 | PK |
| 10420 | V | 32.77 | 36.50 | 47.46 | 43.73 | 54.0 | -10.27 | AV |
| *15630 | V | 54.17 | 62.18 | 47.01 | 39.00 | 54.0 | -15.00 | PK |
| *20840 | V | 52.47 | 59.10 | 44.14 | 37.51 | 54.0 | -16.49 | PK |
| *26050 | V | 30.98 | 24.98 | 46.39 | 52.39 | 54.0 | -1.61 | PK |
| *31260 | V | 35.94 | 25.49 | 47.85 | 58.30 | 74.0 | -15.70 | PK |
| *31260 | V | 23.00 | 25.49 | 47.85 | 45.36 | 54.0 | -8.64 | AV |
| *36470 | V | 34.61 | 24.44 | 49.76 | 59.93 | 74.0 | -14.07 | PK |
| *36470 | V | 23.58 | 24.44 | 49.76 | 48.90 | 54.0 | -5.10 | AV |

Remark : Corrected Level = Reading + Correction Factor – Preamp

Correction Factor = Antenna Factor + Cable Loss

* Mark indicated background noise level.

| EUT Equip By SMA-Male-RP Antenna | | | | | | | | |
|---|-------------------------|-------------------|----------------|-------------------------------|--------------------------------|--------------------|----------------|-------------|
| 802.11a CH58 | | | | | | | | |
| Frequency (MHz) | Antenna Polarization | Reading (dBμV) | Preamp (dB) | Corrected Factor (dB/m) | Corrected Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Det Mode |
| 7053 | H | 47.17 | 36.51 | 42.51 | 53.17 | 54.0 | -0.83 | PK |
| 10580 | H | 48.36 | 36.35 | 47.71 | 59.72 | 74.0 | -14.28 | PK |
| 10580 | H | 34.94 | 36.35 | 47.71 | 46.30 | 54.0 | -7.70 | AV |
| *15870 | H | 53.86 | 62.11 | 48.24 | 39.99 | 54.0 | -14.01 | PK |
| *21160 | H | 54.32 | 58.35 | 50.39 | 46.36 | 54.0 | -7.64 | PK |
| *26450 | H | 33.85 | 24.82 | 46.31 | 55.34 | 74.0 | -18.66 | PK |
| *26450 | H | 21.28 | 24.82 | 46.31 | 42.77 | 54.0 | -11.23 | AV |
| *31740 | H | 33.97 | 25.20 | 47.80 | 56.57 | 74.0 | -17.43 | PK |
| *31740 | H | 22.63 | 25.20 | 47.80 | 45.23 | 54.0 | -8.77 | AV |
| *37030 | H | 35.71 | 23.68 | 49.34 | 61.37 | 74.0 | -12.63 | PK |
| *37030 | H | 25.58 | 23.68 | 49.34 | 51.24 | 54.0 | -2.76 | AV |
| 7053 | V | 48.35 | 36.51 | 42.51 | 54.35 | 74.0 | -19.65 | PK |
| 7053 | V | 40.26 | 36.51 | 42.51 | 46.26 | 54.0 | -7.74 | AV |
| 10580 | V | 52.73 | 36.35 | 47.71 | 64.09 | 74.0 | -9.91 | PK |
| 10580 | V | 36.79 | 36.35 | 47.71 | 48.15 | 54.0 | -5.85 | AV |
| *15870 | V | 54.38 | 62.11 | 48.24 | 40.51 | 54.0 | -13.49 | PK |
| *21160 | V | 54.47 | 58.35 | 50.39 | 46.51 | 54.0 | -7.49 | PK |
| *26450 | V | 34.31 | 24.82 | 46.31 | 55.80 | 74.0 | -18.20 | PK |
| *26450 | V | 21.90 | 24.85 | 46.31 | 43.36 | 54.0 | -10.64 | AV |
| *31740 | V | 34.00 | 25.20 | 47.80 | 56.60 | 74.0 | -17.40 | PK |
| *31740 | V | 22.67 | 25.20 | 47.80 | 45.27 | 54.0 | -8.73 | AV |
| *37030 | V | 35.70 | 23.68 | 49.34 | 61.36 | 74.0 | -12.64 | PK |
| *37030 | V | 25.59 | 23.68 | 49.34 | 51.25 | 54.0 | -2.75 | AV |

Remark : Corrected Level = Reading + Correction Factor – Preamp
 Correction Factor = Antenna Factor + Cable Loss
 * Mark indicated background noise level.

| EUT Equip By ANT-WDB-ANM-0609 Antenna | | | | | | | | |
|--|-------------------------|-------------------|----------------|-------------------------------|--------------------------------|--------------------|----------------|-------------|
| 802.11a CH36 | | | | | | | | |
| Frequency (MHz) | Antenna Polarization | Reading (dBμV) | Preamp (dB) | Corrected Factor (dB/m) | Corrected Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Det Mode |
| 6907 | H | 46.79 | 36.50 | 42.13 | 52.42 | 54.0 | -1.58 | PK |
| 10360 | H | 45.28 | 36.57 | 47.30 | 56.01 | 74.0 | -17.99 | PK |
| 10360 | H | 33.14 | 36.57 | 47.30 | 43.87 | 54.0 | -10.13 | AV |
| *15540 | H | 53.14 | 62.20 | 46.87 | 37.81 | 54.0 | -16.19 | PK |
| *20720 | H | 56.47 | 59.23 | 43.83 | 41.07 | 54.0 | -12.93 | PK |
| *25900 | H | 56.65 | 51.79 | 46.44 | 51.30 | 54.0 | -2.70 | PK |
| *31080 | H | 27.85 | 25.64 | 47.88 | 50.09 | 54.0 | -3.91 | PK |
| *36260 | H | 33.10 | 24.74 | 49.46 | 57.82 | 74.0 | -16.18 | PK |
| *36260 | H | 20.40 | 24.74 | 49.46 | 45.12 | 54.0 | -8.88 | AV |
| 6907 | V | 53.57 | 36.50 | 42.13 | 59.20 | 74.0 | -14.80 | PK |
| 6907 | V | 47.58 | 36.50 | 42.13 | 53.21 | 54.0 | -0.79 | AV |
| 10360 | V | 46.12 | 36.57 | 47.30 | 56.85 | 74.0 | -17.15 | PK |
| 10360 | V | 33.20 | 36.57 | 47.30 | 43.93 | 54.0 | -10.07 | AV |
| *15540 | V | 53.44 | 62.20 | 46.87 | 38.11 | 54.0 | -15.89 | PK |
| *20720 | V | 56.84 | 59.23 | 43.83 | 41.44 | 54.0 | -12.56 | PK |
| *25900 | V | 56.39 | 51.79 | 46.44 | 51.04 | 54.0 | -2.96 | PK |
| *31080 | V | 27.51 | 25.64 | 47.88 | 49.75 | 54.0 | -4.25 | PK |
| *36260 | V | 33.19 | 24.74 | 49.46 | 57.91 | 74.0 | -16.09 | PK |
| *36260 | V | 20.47 | 24.74 | 49.46 | 45.19 | 54.0 | -8.81 | AV |

Remark : Corrected Level = Reading + Correction Factor – Preamp
 Correction Factor = Antenna Factor + Cable Loss
 * Mark indicated background noise level.

| EUT Equip By ANT-WDB-ANM-0609 Antenna | | | | | | | | |
|---------------------------------------|-------------------------|-------------------|----------------|-------------------------------|--------------------------------|--------------------|----------------|-------------|
| 802.11a CH40 | | | | | | | | |
| Frequency (MHz) | Antenna Polarization | Reading (dBµV) | Preamp (dB) | Corrected Factor (dB/m) | Corrected Level (dBµV/m) | Limits (dBµV/m) | Margin (dB) | Det Mode |
| 6933 | H | 46.51 | 36.50 | 42.21 | 52.22 | 54.0 | -1.78 | PK |
| 10400 | H | 46.21 | 36.52 | 47.41 | 57.10 | 74.0 | -16.90 | PK |
| 10400 | H | 31.87 | 36.52 | 47.41 | 42.76 | 54.0 | -11.24 | AV |
| *15600 | H | 54.10 | 62.19 | 46.96 | 38.87 | 54.0 | -15.13 | PK |
| *20800 | H | 52.61 | 59.00 | 44.07 | 37.68 | 54.0 | -16.32 | PK |
| *26000 | H | 54.38 | 51.25 | 46.38 | 49.51 | 54.0 | -4.49 | PK |
| *31200 | H | 31.40 | 25.54 | 47.86 | 53.72 | 74.0 | -20.28 | PK |
| *31200 | H | 19.32 | 25.54 | 47.86 | 41.64 | 54.0 | -12.36 | AV |
| *36400 | H | 33.01 | 24.54 | 49.66 | 58.13 | 74.0 | -15.87 | PK |
| *36400 | H | 20.24 | 24.54 | 49.66 | 45.36 | 54.0 | -8.64 | AV |
| 6933 | V | 51.63 | 36.50 | 42.21 | 57.34 | 74.0 | -16.66 | PK |
| 6933 | V | 47.67 | 36.50 | 42.21 | 53.38 | 54.0 | -0.62 | AV |
| 10400 | V | 46.04 | 36.52 | 47.41 | 56.93 | 74.0 | -17.07 | PK |
| 10400 | V | 32.51 | 36.52 | 47.41 | 43.40 | 54.0 | -10.60 | AV |
| *15600 | V | 53.69 | 62.19 | 46.96 | 38.46 | 54.0 | -15.54 | PK |
| *20800 | V | 53.98 | 59.00 | 44.07 | 39.05 | 54.0 | -14.95 | PK |
| *26000 | V | 54.58 | 51.25 | 46.38 | 49.71 | 54.0 | -4.29 | PK |
| *31200 | V | 31.01 | 25.54 | 47.86 | 53.33 | 74.0 | -20.67 | PK |
| *31200 | V | 19.58 | 25.54 | 47.86 | 41.90 | 54.0 | -12.10 | AV |
| *36400 | V | 33.08 | 24.54 | 49.66 | 58.20 | 74.0 | -15.80 | PK |
| *36400 | V | 20.97 | 24.54 | 49.66 | 46.09 | 54.0 | -7.91 | AV |

Remark : Corrected Level = Reading + Correction Factor – Preamp
 Correction Factor = Antenna Factor + Cable Loss
 * Mark indicated background noise level.

| EUT Equip By ANT-WDB-ANM-0609 Antenna | | | | | | | | |
|---------------------------------------|-------------------------|-------------------|----------------|-------------------------------|--------------------------------|--------------------|----------------|-------------|
| 802.11a CH48 | | | | | | | | |
| Frequency (MHz) | Antenna Polarization | Reading (dBµV) | Preamp (dB) | Corrected Factor (dB/m) | Corrected Level (dBµV/m) | Limits (dBµV/m) | Margin (dB) | Det Mode |
| 6987 | H | 46.23 | 36.50 | 42.35 | 52.08 | 54.0 | -1.92 | PK |
| 10480 | H | 45.68 | 36.42 | 47.60 | 56.86 | 74.0 | -17.14 | PK |
| 10480 | H | 32.20 | 36.42 | 47.60 | 43.38 | 54.0 | -10.62 | AV |
| *15720 | H | 53.98 | 62.15 | 47.15 | 38.98 | 54.0 | -15.02 | PK |
| *20960 | H | 54.18 | 51.79 | 46.44 | 48.83 | 54.0 | -5.17 | PK |
| *26200 | H | 31.40 | 24.92 | 46.36 | 52.84 | 54.0 | -1.16 | PK |
| *31440 | H | 30.28 | 25.35 | 47.81 | 52.74 | 74.0 | -21.26 | PK |
| *31440 | H | 18.85 | 25.35 | 47.81 | 41.31 | 54.0 | -12.69 | AV |
| *36680 | H | 33.74 | 24.15 | 49.62 | 59.21 | 74.0 | -14.79 | PK |
| *36680 | H | 20.81 | 24.15 | 49.62 | 46.28 | 54.0 | -7.72 | AV |
| 6987 | V | 50.97 | 36.50 | 42.35 | 56.82 | 74.0 | -17.18 | PK |
| 6987 | V | 46.05 | 36.50 | 42.35 | 51.90 | 54.0 | -2.10 | AV |
| 10480 | V | 47.02 | 36.42 | 47.60 | 58.20 | 74.0 | -15.80 | PK |
| 10480 | V | 32.28 | 36.42 | 47.60 | 43.46 | 54.0 | -10.54 | AV |
| *15720 | V | 54.40 | 62.15 | 47.15 | 39.40 | 54.0 | -14.60 | PK |
| *20960 | V | 55.60 | 51.79 | 46.44 | 50.25 | 54.0 | -3.75 | PK |
| *26200 | V | 55.30 | 51.25 | 47.81 | 51.86 | 54.0 | -2.14 | PK |
| *31440 | V | 31.25 | 25.35 | 47.81 | 53.71 | 74.0 | -20.29 | PK |
| *31440 | V | 19.90 | 25.35 | 47.81 | 42.36 | 54.0 | -11.64 | AV |
| *36680 | V | 33.85 | 24.15 | 49.62 | 59.32 | 74.0 | -14.68 | PK |
| *36680 | V | 21.50 | 24.15 | 49.62 | 46.97 | 54.0 | -7.03 | AV |

Remark : Corrected Level = Reading + Correction Factor – Preamp
 Correction Factor = Antenna Factor + Cable Loss
 * Mark indicated background noise level.

| EUT Equip By ANT-WDB-ANM-0609 Antenna | | | | | | | | |
|---------------------------------------|-------------------------|-------------------|----------------|-------------------------------|--------------------------------|--------------------|----------------|-------------|
| 802.11a CH52 | | | | | | | | |
| Frequency (MHz) | Antenna Polarization | Reading (dBµV) | Preamp (dB) | Corrected Factor (dB/m) | Corrected Level (dBµV/m) | Limits (dBµV/m) | Margin (dB) | Det Mode |
| 7013 | H | 47.59 | 36.50 | 42.42 | 53.51 | 54.0 | -0.49 | PK |
| 10520 | H | 46.62 | 36.39 | 47.67 | 57.90 | 74.0 | -16.10 | PK |
| 10520 | H | 33.58 | 36.39 | 47.67 | 44.86 | 54.0 | -9.14 | AV |
| *15780 | H | 54.68 | 62.14 | 48.41 | 40.95 | 54.0 | -13.05 | PK |
| *21040 | H | 54.87 | 58.74 | 50.24 | 46.37 | 54.0 | -7.63 | PK |
| *26300 | H | 33.24 | 24.88 | 46.34 | 54.70 | 74.0 | -19.30 | PK |
| *26300 | H | 20.47 | 24.88 | 46.34 | 41.93 | 54.0 | -12.07 | AV |
| *31560 | H | 33.84 | 25.28 | 47.80 | 56.36 | 74.0 | -17.64 | PK |
| *31560 | H | 23.14 | 25.28 | 47.80 | 45.66 | 54.0 | -8.34 | AV |
| *36820 | H | 34.54 | 23.95 | 49.48 | 60.07 | 74.0 | -13.93 | PK |
| *36820 | H | 24.68 | 23.95 | 49.48 | 50.21 | 54.0 | -3.79 | AV |
| 7013 | V | 53.10 | 36.50 | 42.42 | 59.02 | 74.0 | -14.98 | PK |
| 7013 | V | 47.47 | 36.50 | 42.42 | 53.39 | 54.0 | -0.61 | AV |
| 10520 | V | 49.14 | 36.39 | 47.67 | 60.42 | 74.0 | -13.58 | PK |
| 10520 | V | 35.04 | 36.39 | 47.67 | 46.32 | 54.0 | -7.68 | AV |
| *15780 | V | 54.94 | 62.14 | 48.41 | 41.21 | 54.0 | -12.79 | PK |
| *21040 | V | 55.68 | 58.74 | 50.24 | 47.18 | 54.0 | -6.82 | PK |
| *26300 | V | 33.17 | 24.88 | 46.34 | 54.63 | 74.0 | -19.37 | PK |
| *26300 | V | 20.17 | 24.88 | 46.34 | 41.63 | 54.0 | -12.37 | AV |
| *31560 | V | 34.20 | 25.28 | 47.80 | 56.72 | 74.0 | -17.28 | PK |
| *31560 | V | 23.17 | 25.28 | 47.80 | 45.69 | 54.0 | -8.31 | AV |
| *36820 | V | 32.40 | 23.95 | 49.48 | 57.93 | 74.0 | -16.07 | PK |
| *36820 | V | 23.17 | 23.95 | 49.48 | 48.70 | 54.0 | -5.30 | AV |

Remark : Corrected Level = Reading + Correction Factor – Preamp

Correction Factor = Antenna Factor + Cable Loss

* Mark indicated background noise level.

| EUT Equip By ANT-WDB-ANM-0609 Antenna | | | | | | | | |
|---------------------------------------|-------------------------|-------------------|----------------|-------------------------------|--------------------------------|--------------------|----------------|-------------|
| 802.11a CH60 | | | | | | | | |
| Frequency (MHz) | Antenna Polarization | Reading (dBμV) | Preamp (dB) | Corrected Factor (dB/m) | Corrected Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Det Mode |
| 7067 | H | 46.42 | 36.51 | 42.55 | 52.46 | 54.0 | -1.54 | PK |
| 10600 | H | 47.13 | 36.34 | 47.73 | 58.52 | 74.0 | -15.48 | PK |
| 10600 | H | 33.18 | 36.34 | 47.73 | 44.57 | 54.0 | -9.43 | AV |
| *15900 | H | 53.47 | 62.10 | 48.18 | 39.55 | 54.0 | -14.45 | PK |
| *21200 | H | 54.88 | 58.22 | 50.43 | 47.09 | 54.0 | -6.91 | PK |
| *26500 | H | 34.54 | 24.80 | 46.30 | 56.04 | 74.0 | -17.96 | PK |
| *26500 | H | 21.35 | 24.80 | 46.30 | 42.85 | 54.0 | -11.15 | AV |
| *31800 | H | 32.47 | 25.18 | 47.80 | 55.09 | 74.0 | -18.91 | PK |
| *31800 | H | 22.84 | 25.18 | 47.80 | 45.46 | 54.0 | -8.54 | AV |
| *37100 | H | 37.28 | 23.62 | 49.42 | 63.08 | 74.0 | -10.92 | PK |
| *37100 | H | 25.47 | 23.62 | 49.42 | 51.27 | 54.0 | -2.73 | AV |
| 7067 | V | 51.28 | 36.51 | 42.55 | 57.32 | 74.0 | -16.68 | PK |
| 7067 | V | 46.18 | 36.51 | 42.55 | 52.22 | 54.0 | -1.78 | AV |
| 10600 | V | 48.91 | 36.34 | 47.73 | 60.30 | 74.0 | -13.70 | PK |
| 10600 | V | 35.24 | 36.34 | 47.73 | 46.63 | 54.0 | -7.37 | AV |
| *15900 | V | 54.01 | 62.10 | 48.18 | 40.09 | 54.0 | -13.91 | PK |
| *21200 | V | 55.18 | 58.22 | 50.43 | 47.39 | 54.0 | -6.61 | PK |
| *26500 | V | 33.17 | 24.80 | 46.30 | 54.67 | 74.0 | -19.33 | PK |
| *26500 | V | 21.28 | 24.80 | 46.30 | 42.78 | 54.0 | -11.22 | AV |
| *31800 | V | 33.51 | 25.18 | 47.80 | 56.13 | 74.0 | -17.87 | PK |
| *31800 | V | 22.43 | 25.18 | 47.80 | 45.05 | 54.0 | -8.95 | AV |
| *37100 | V | 36.47 | 23.62 | 49.42 | 62.27 | 74.0 | -11.73 | PK |
| *37100 | V | 25.67 | 23.62 | 49.42 | 51.47 | 54.0 | -2.53 | AV |

Remark : Corrected Level = Reading + Correction Factor – Preamp

Correction Factor = Antenna Factor + Cable Loss

* Mark indicated background noise level.

| EUT Equip By ANT-WDB-ANM-0609 Antenna | | | | | | | | |
|---------------------------------------|-------------------------|-------------------|----------------|-------------------------------|--------------------------------|--------------------|----------------|-------------|
| 802.11a CH64 | | | | | | | | |
| Frequency (MHz) | Antenna Polarization | Reading (dBµV) | Preamp (dB) | Corrected Factor (dB/m) | Corrected Level (dBµV/m) | Limits (dBµV/m) | Margin (dB) | Det Mode |
| 7093 | H | 47.03 | 36.52 | 42.61 | 53.12 | 54.0 | -0.88 | PK |
| 10640 | H | 52.35 | 36.32 | 47.77 | 63.80 | 74.0 | -10.20 | PK |
| 10640 | H | 36.91 | 36.32 | 47.77 | 48.36 | 54.0 | -5.64 | AV |
| *15960 | H | 55.01 | 62.08 | 48.06 | 40.99 | 54.0 | -13.01 | PK |
| *21280 | H | 54.97 | 57.96 | 50.52 | 47.53 | 54.0 | -6.47 | PK |
| *26600 | H | 35.35 | 24.80 | 46.44 | 56.99 | 74.0 | -17.01 | PK |
| *26600 | H | 21.17 | 24.80 | 46.44 | 42.81 | 54.0 | -11.19 | AV |
| *31920 | H | 32.23 | 25.13 | 47.80 | 54.90 | 74.0 | -19.10 | PK |
| *31920 | H | 21.80 | 25.13 | 47.80 | 44.47 | 54.0 | -9.53 | AV |
| *37240 | H | 37.46 | 23.51 | 49.59 | 63.54 | 74.0 | -10.46 | PK |
| *37240 | H | 26.38 | 23.51 | 49.59 | 52.46 | 54.0 | -1.54 | AV |
| 7093 | V | 49.92 | 36.52 | 42.61 | 56.01 | 74.0 | -17.99 | PK |
| 7093 | V | 43.54 | 36.52 | 42.61 | 49.63 | 54.0 | -4.37 | AV |
| 10640 | V | 53.09 | 36.32 | 47.77 | 64.54 | 74.0 | -9.46 | PK |
| 10640 | V | 38.79 | 36.32 | 47.77 | 50.24 | 54.0 | -3.76 | AV |
| *15960 | V | 54.69 | 62.08 | 48.06 | 40.67 | 54.0 | -13.33 | PK |
| *21280 | V | 55.17 | 57.96 | 50.52 | 47.73 | 54.0 | -6.27 | PK |
| *26600 | V | 33.10 | 24.80 | 46.44 | 54.74 | 74.0 | -19.26 | PK |
| *26600 | V | 21.00 | 24.80 | 46.44 | 42.64 | 54.0 | -11.36 | AV |
| *31920 | V | 32.04 | 25.13 | 47.80 | 54.71 | 74.0 | -19.29 | PK |
| *31920 | V | 22.11 | 25.13 | 47.80 | 44.78 | 54.0 | -9.22 | AV |
| *37240 | V | 34.84 | 23.51 | 49.59 | 60.92 | 74.0 | -13.08 | PK |
| *37240 | V | 24.21 | 23.51 | 49.59 | 50.29 | 54.0 | -3.71 | AV |

Remark : Corrected Level = Reading + Correction Factor – Preamp

Correction Factor = Antenna Factor + Cable Loss

* Mark indicated background noise level.

| EUT Equip By ANT-WDB-ANM-0609 Antenna | | | | | | | | |
|--|-------------------------|-------------------|----------------|-------------------------------|--------------------------------|--------------------|----------------|-------------|
| 802.11a CH100 | | | | | | | | |
| Frequency (MHz) | Antenna Polarization | Reading (dBμV) | Preamp (dB) | Corrected Factor (dB/m) | Corrected Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Det Mode |
| 11000 | H | 46.02 | 36.10 | 48.06 | 57.98 | 74.0 | -16.02 | PK |
| 11000 | H | 33.31 | 36.10 | 48.06 | 45.27 | 54.0 | -8.73 | AV |
| *16500 | H | 54.36 | 61.75 | 49.35 | 41.96 | 54.0 | -12.04 | PK |
| *22000 | H | 53.64 | 57.80 | 50.97 | 46.81 | 54.0 | -7.19 | PK |
| *27500 | H | 32.90 | 24.90 | 46.80 | 54.80 | 74.0 | -19.20 | PK |
| *27500 | H | 20.44 | 24.90 | 46.80 | 42.34 | 54.0 | -11.66 | AV |
| *33000 | H | 34.39 | 26.50 | 48.00 | 55.89 | 74.0 | -18.11 | PK |
| *33000 | H | 24.50 | 26.50 | 48.00 | 46.00 | 54.0 | -8.00 | AV |
| *38500 | H | 37.01 | 23.90 | 51.10 | 64.21 | 74.0 | -9.79 | PK |
| *38500 | H | 25.39 | 23.90 | 51.10 | 52.59 | 54.0 | -1.41 | AV |
| 11000 | V | 53.68 | 36.10 | 48.06 | 65.64 | 74.0 | -8.36 | PK |
| 11000 | V | 38.99 | 36.10 | 48.06 | 50.95 | 54.0 | -3.05 | AV |
| *16500 | V | 55.01 | 61.75 | 49.34 | 42.60 | 54.0 | -11.40 | PK |
| *22000 | V | 53.69 | 57.80 | 50.97 | 46.86 | 54.0 | -7.14 | PK |
| *27500 | V | 32.71 | 24.90 | 46.80 | 54.61 | 74.0 | -19.39 | PK |
| *27500 | V | 20.39 | 24.90 | 46.80 | 42.29 | 54.0 | -11.71 | AV |
| *33000 | V | 33.59 | 26.50 | 48.00 | 55.09 | 74.0 | -18.91 | PK |
| *33000 | V | 23.64 | 26.50 | 48.00 | 45.14 | 54.0 | -8.86 | AV |
| *38500 | V | 36.47 | 23.90 | 51.10 | 63.67 | 74.0 | -10.33 | PK |
| *38500 | V | 25.17 | 23.90 | 51.10 | 52.37 | 54.0 | -1.63 | AV |

Remark : Corrected Level = Reading + Correction Factor – Preamp
 Correction Factor = Antenna Factor + Cable Loss
 * Mark indicated background noise level.

| EUT Equip By ANT-WDB-ANM-0609 Antenna | | | | | | | | |
|--|-------------------------|-------------------|----------------|-------------------------------|--------------------------------|--------------------|----------------|-------------|
| 802.11a CH120 | | | | | | | | |
| Frequency (MHz) | Antenna Polarization | Reading (dBμV) | Preamp (dB) | Corrected Factor (dB/m) | Corrected Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Det Mode |
| 11200 | H | 55.75 | 36.14 | 48.12 | 67.73 | 74.0 | -6.27 | PK |
| 11200 | H | 41.21 | 36.14 | 48.12 | 53.19 | 54.0 | -0.81 | AV |
| *16800 | H | 54.10 | 60.66 | 50.67 | 44.11 | 54.0 | -9.89 | PK |
| *22400 | H | 53.69 | 56.21 | 51.29 | 48.77 | 54.0 | -5.23 | PK |
| *28000 | H | 33.25 | 25.70 | 47.00 | 54.55 | 74.0 | -19.45 | PK |
| *28000 | H | 22.69 | 25.70 | 47.00 | 43.99 | 54.0 | -10.01 | AV |
| *33600 | H | 35.17 | 26.24 | 48.02 | 56.95 | 74.0 | -17.05 | PK |
| *33600 | H | 24.08 | 26.24 | 48.02 | 45.86 | 54.0 | -8.14 | AV |
| *39200 | H | 35.94 | 24.12 | 50.96 | 62.78 | 74.0 | -11.22 | PK |
| *39200 | H | 24.97 | 24.12 | 50.96 | 51.81 | 54.0 | -2.19 | AV |
| 11200 | V | 49.83 | 36.14 | 48.12 | 61.81 | 74.0 | -12.19 | PK |
| 11200 | V | 35.90 | 36.14 | 48.12 | 47.88 | 54.0 | -6.12 | AV |
| *16800 | V | 53.94 | 60.66 | 50.67 | 43.95 | 54.0 | -10.05 | PK |
| *22400 | V | 54.17 | 56.21 | 51.29 | 49.25 | 54.0 | -4.75 | PK |
| *28000 | V | 33.08 | 25.70 | 47.00 | 54.38 | 74.0 | -19.62 | PK |
| *28000 | V | 22.47 | 25.70 | 47.00 | 43.77 | 54.0 | -10.23 | AV |
| *33600 | V | 34.19 | 26.24 | 48.02 | 55.97 | 74.0 | -18.03 | PK |
| *33600 | V | 24.44 | 26.24 | 48.02 | 46.22 | 54.0 | -7.78 | AV |
| *39200 | V | 34.59 | 24.12 | 50.96 | 61.43 | 74.0 | -12.57 | PK |
| *39200 | V | 24.51 | 24.12 | 50.96 | 51.35 | 54.0 | -2.65 | AV |

Remark : Corrected Level = Reading + Correction Factor – Preamp
 Correction Factor = Antenna Factor + Cable Loss
 * Mark indicated background noise level.

| EUT Equip By ANT-WDB-ANM-0609 Antenna | | | | | | | | |
|--|-------------------------|-------------------|----------------|-------------------------------|--------------------------------|--------------------|----------------|-------------|
| 802.11a CH140 | | | | | | | | |
| Frequency (MHz) | Antenna Polarization | Reading (dBμV) | Preamp (dB) | Corrected Factor (dB/m) | Corrected Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Det Mode |
| 11400 | H | 54.79 | 36.18 | 48.17 | 66.78 | 74.0 | -7.22 | PK |
| 11400 | H | 39.82 | 36.18 | 48.17 | 51.81 | 54.0 | -2.19 | AV |
| *17100 | H | 54.17 | 60.01 | 52.17 | 46.33 | 54.0 | -7.67 | PK |
| *22800 | H | 54.10 | 56.09 | 51.42 | 49.43 | 54.0 | -4.57 | PK |
| *28500 | H | 39.51 | 25.70 | 47.20 | 61.01 | 74.0 | -12.99 | PK |
| *28500 | H | 27.41 | 25.70 | 47.20 | 48.91 | 54.0 | -5.09 | AV |
| *34200 | H | 35.61 | 26.48 | 48.06 | 57.19 | 74.0 | -16.81 | PK |
| *34200 | H | 24.30 | 26.48 | 48.06 | 45.88 | 54.0 | -8.12 | AV |
| *39900 | H | 36.31 | 24.40 | 51.30 | 63.21 | 74.0 | -10.79 | PK |
| *39900 | H | 25.45 | 24.40 | 51.30 | 52.35 | 54.0 | -1.65 | AV |
| 11400 | V | 50.47 | 36.18 | 48.17 | 62.46 | 74.0 | -11.54 | PK |
| 11400 | V | 36.07 | 36.18 | 48.17 | 48.06 | 54.0 | -5.94 | AV |
| *17100 | V | 54.88 | 60.01 | 52.17 | 47.04 | 54.0 | -6.96 | PK |
| *22800 | V | 54.11 | 56.09 | 51.42 | 49.44 | 54.0 | -4.56 | PK |
| *28500 | V | 39.61 | 25.70 | 47.20 | 61.11 | 74.0 | -12.89 | PK |
| *28500 | V | 27.14 | 25.70 | 47.20 | 48.64 | 54.0 | -5.36 | AV |
| *34200 | V | 35.72 | 26.48 | 48.06 | 57.30 | 74.0 | -16.70 | PK |
| *34200 | V | 25.11 | 26.48 | 48.06 | 46.69 | 54.0 | -7.31 | AV |
| *39900 | V | 36.54 | 24.40 | 51.30 | 63.44 | 74.0 | -10.56 | PK |
| *39900 | V | 25.29 | 24.40 | 51.30 | 52.19 | 54.0 | -1.81 | AV |

Remark : Corrected Level = Reading + Correction Factor – Preamp
 Correction Factor = Antenna Factor + Cable Loss
 * Mark indicated background noise level.

Turbo Mode

| EUT Equip By ANT-WDB-ANM-0609 Antenna | | | | | | | | |
|---------------------------------------|-------------------------|-------------------|----------------|-------------------------------|--------------------------------|--------------------|----------------|-------------|
| 802.11a CH42 | | | | | | | | |
| Frequency (MHz) | Antenna Polarization | Reading (dBµV) | Preamp (dB) | Corrected Factor (dB/m) | Corrected Level (dBµV/m) | Limits (dBµV/m) | Margin (dB) | Det Mode |
| 6946 | H | 53.62 | 36.50 | 42.25 | 59.37 | 74.0 | -14.63 | PK |
| 6946 | H | 47.29 | 36.50 | 42.25 | 53.04 | 54.0 | -0.96 | AV |
| 10420 | H | 46.10 | 36.50 | 47.46 | 57.06 | 74.0 | -16.94 | PK |
| 10420 | H | 32.14 | 36.50 | 47.46 | 43.10 | 54.0 | -10.90 | AV |
| *15630 | H | 53.98 | 62.18 | 47.01 | 38.81 | 54.0 | -15.19 | PK |
| *20840 | H | 52.69 | 59.10 | 44.14 | 37.73 | 54.0 | -16.27 | PK |
| *26050 | H | 31.01 | 24.98 | 46.39 | 52.42 | 54.0 | -1.58 | PK |
| *31260 | H | 36.17 | 25.49 | 47.85 | 58.53 | 74.0 | -15.47 | PK |
| *31260 | H | 23.15 | 25.49 | 47.85 | 45.51 | 54.0 | -8.49 | AV |
| *36470 | H | 34.62 | 24.44 | 49.76 | 59.94 | 74.0 | -14.06 | PK |
| *36470 | H | 23.41 | 24.44 | 49.76 | 48.73 | 54.0 | -5.27 | AV |
| 6946 | V | 52.28 | 36.50 | 42.25 | 58.03 | 74.0 | -15.97 | PK |
| 6946 | V | 47.30 | 36.50 | 42.25 | 53.05 | 54.0 | -0.95 | AV |
| 10420 | V | 45.64 | 36.50 | 47.46 | 56.60 | 74.0 | -17.40 | PK |
| 10420 | V | 32.05 | 36.50 | 47.46 | 43.01 | 54.0 | -10.99 | AV |
| *15630 | V | 55.01 | 62.18 | 47.01 | 39.84 | 54.0 | -14.16 | PK |
| *20840 | V | 52.69 | 59.10 | 44.14 | 37.73 | 54.0 | -16.27 | PK |
| *26050 | V | 31.01 | 24.98 | 46.39 | 52.42 | 54.0 | -1.58 | PK |
| *31260 | V | 35.47 | 25.49 | 47.85 | 57.83 | 74.0 | -16.17 | PK |
| *31260 | V | 23.25 | 25.49 | 47.85 | 45.61 | 54.0 | -8.39 | AV |
| *36470 | V | 34.62 | 24.44 | 49.76 | 59.94 | 74.0 | -14.06 | PK |
| *36470 | V | 23.47 | 24.44 | 49.76 | 48.79 | 54.0 | -5.21 | AV |

Remark : Corrected Level = Reading + Correction Factor – Preamp

Correction Factor = Antenna Factor + Cable Loss

* Mark indicated background noise level.

| EUT Equip By ANT-WDB-ANM-0609 Antenna | | | | | | | | |
|---------------------------------------|----------------------|----------------|-------------|-------------------------|--------------------------|-----------------|-------------|----------|
| 802.11a CH58 | | | | | | | | |
| Frequency (MHz) | Antenna Polarization | Reading (dBμV) | Preamp (dB) | Corrected Factor (dB/m) | Corrected Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Det Mode |
| 7053 | H | 53.43 | 36.51 | 42.51 | 59.43 | 74.0 | -14.57 | PK |
| 7053 | H | 46.98 | 36.51 | 42.51 | 52.98 | 54.0 | -1.02 | AV |
| 10580 | H | 46.05 | 36.35 | 47.71 | 57.41 | 74.0 | -16.59 | PK |
| 10580 | H | 32.62 | 36.35 | 47.71 | 43.98 | 54.0 | -10.02 | AV |
| *15870 | H | 54.01 | 62.11 | 48.24 | 40.14 | 54.0 | -13.86 | PK |
| *21160 | H | 54.35 | 58.35 | 50.39 | 46.39 | 54.0 | -7.61 | PK |
| *26450 | H | 33.58 | 24.82 | 46.31 | 55.07 | 74.0 | -18.93 | PK |
| *26450 | H | 21.44 | 24.82 | 46.31 | 42.93 | 54.0 | -11.07 | AV |
| *31740 | H | 33.90 | 25.20 | 47.80 | 56.50 | 74.0 | -17.50 | PK |
| *31740 | H | 23.64 | 25.20 | 47.80 | 46.24 | 54.0 | -7.76 | AV |
| *37030 | H | 35.28 | 23.68 | 49.34 | 60.94 | 74.0 | -13.06 | PK |
| *37030 | H | 25.47 | 23.68 | 49.34 | 51.13 | 54.0 | -2.87 | AV |
| 7053 | V | 51.17 | 36.51 | 42.51 | 57.17 | 74.0 | -16.83 | PK |
| 7053 | V | 46.77 | 36.51 | 42.51 | 52.77 | 54.0 | -1.23 | AV |
| 10580 | V | 49.42 | 36.35 | 47.71 | 60.78 | 74.0 | -13.22 | PK |
| 10580 | V | 34.98 | 36.35 | 47.71 | 46.34 | 54.0 | -7.66 | AV |
| *15870 | V | 54.77 | 62.11 | 48.24 | 40.90 | 54.0 | -13.10 | PK |
| *21160 | V | 54.67 | 58.35 | 50.39 | 46.71 | 54.0 | -7.29 | PK |
| *26450 | V | 34.28 | 24.82 | 46.31 | 55.77 | 74.0 | -18.23 | PK |
| *26450 | V | 21.78 | 24.85 | 46.31 | 43.24 | 54.0 | -10.76 | AV |
| *31740 | V | 34.07 | 25.20 | 47.80 | 56.67 | 74.0 | -17.33 | PK |
| *31740 | V | 22.65 | 25.20 | 47.80 | 45.25 | 54.0 | -8.75 | AV |
| *37030 | V | 35.72 | 23.68 | 49.34 | 61.38 | 74.0 | -12.62 | PK |
| *37030 | V | 25.60 | 23.68 | 49.34 | 51.26 | 54.0 | -2.74 | AV |

Remark : Corrected Level = Reading + Correction Factor – Preamp
 Correction Factor = Antenna Factor + Cable Loss
 * Mark indicated background noise level.

8 Band edge test

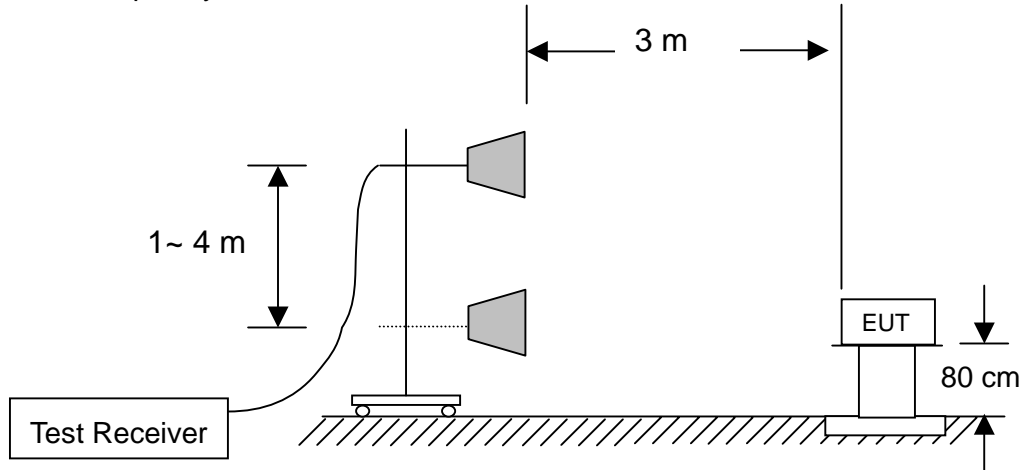
8.1 Limit

According to FCC Part 15.205 requirement :

Any radiated emission in the restricted bands shall be complied with the limits in 15.209.

8.2 Configuration of Measurement

Measurement Frequency above 1GHz



8.3 Test Procedure

Set RBW =1M, VBW= RBW for peak, and VBW=10Hz for average.

The EUT for testing is arranged on a wooden turntable. If some peripherals apply to the EUT, the peripherals will be connected to EUT and the whole system. During the test, all cables were arranged to present worst-case emissions. The signal is maximized through rotation. The height of antenna and polarization is changing constantly for exploring for maximum signal level. The height of antenna can be up to 4 meters and down to 1 meter.

8.4 Test Result

PASS.

The final test data is shown on as following pages.

Band edge test

| EUT Equip By SMA-Male-RP Antenna | | | | | |
|----------------------------------|-----------------------|------------------------------|-------------|-------------|---------------|
| 802.11a | | | | | |
| CH | Restricted Band (MHz) | Maximum Level (dB μ V/m) | Limit (dBm) | Margin (dB) | Detector Mode |
| 36 | 4500~5150 | 56.43 | 74 | -17.57 | PK |
| | | 43.94 | 54 | -10.06 | AV |
| 64 | 5350~5460 | 59.51 | 74 | -14.49 | PK |
| | | 45.21 | 54 | -8.79 | AV |
| 100 | 5350~5460 | 62.86 | 74 | -11.14 | PK |
| | | 46.46 | 54 | -7.54 | AV |

Turbo Mode

| EUT Equip By SMA-Male-RP Antenna | | | | | |
|----------------------------------|-----------------------|------------------------------|-------------|-------------|---------------|
| 802.11a | | | | | |
| CH | Restricted Band (MHz) | Maximum Level (dB μ V/m) | Limit (dBm) | Margin (dB) | Detector Mode |
| 42 | 4500-5150 | 56.09 | 74 | -17.91 | PK |
| | | 43.94 | 54 | -10.06 | AV |
| 58 | 5350-5460 | 57.66 | 74 | -16.34 | PK |
| | | 45.14 | 54 | -8.86 | AV |

| EUT Equip By ANT-WDB-ANM-0609 Antenna | | | | | |
|--|------------------------------|--|--------------------|--------------------|----------------------|
| 802.11a | | | | | |
| CH | Restricted Band (MHz) | Maximum Level (dB μ V/m) | Limit (dBm) | Margin (dB) | Detector Mode |
| 36 | 4500-5150 | 58.52 | 74 | -15.48 | PK |
| | | 45.55 | 54 | -8.45 | AV |
| 64 | 5350-5460 | 58.47 | 74 | -15.53 | PK |
| | | 45.81 | 54 | -8.19 | AV |
| 100 | 5350-5460 | 69.32 | 74 | -4.68 | PK |
| | | 51.23 | 54 | -2.77 | AV |

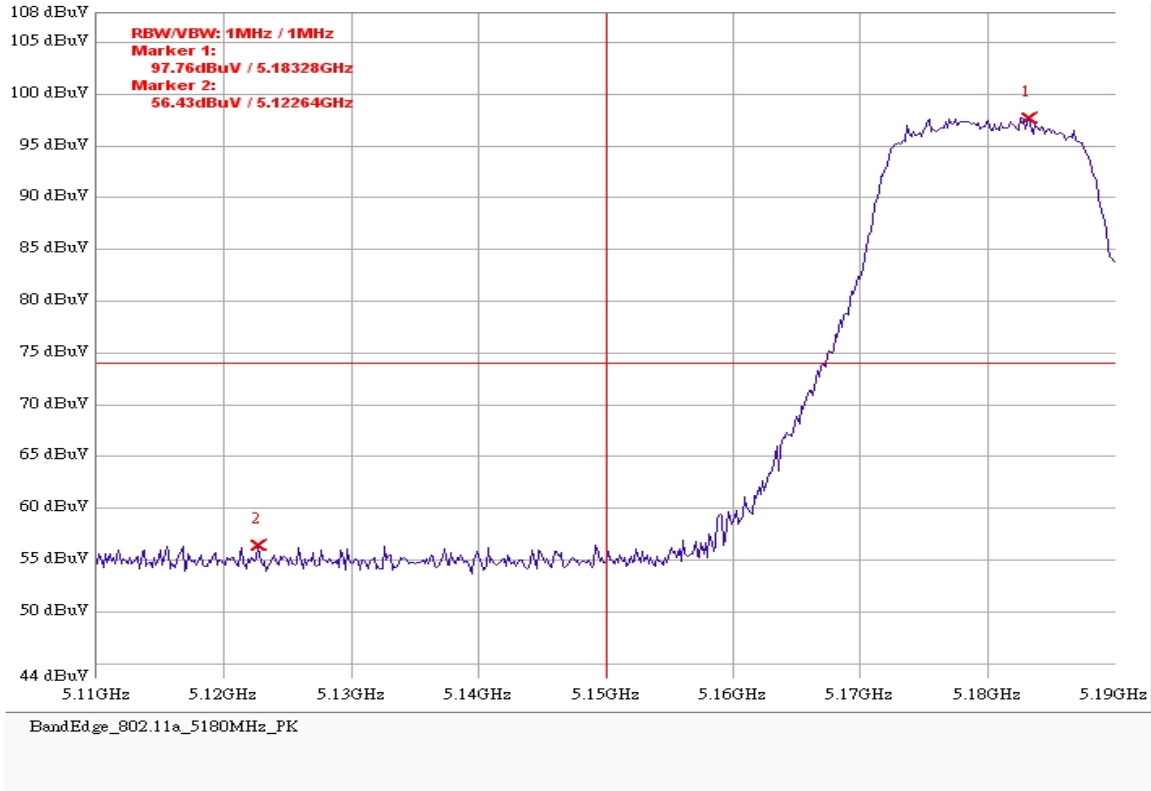
Turbo Mode

| EUT Equip By ANT-WDB-ANM-0609 Antenna | | | | | |
|--|------------------------------|--|--------------------|--------------------|----------------------|
| 802.11a | | | | | |
| CH | Restricted Band (MHz) | Maximum Level (dB μ V/m) | Limit (dBm) | Margin (dB) | Detector Mode |
| 42 | 4500-5150 | 56.96 | 74 | -17.04 | PK |
| | | 44.91 | 54 | -9.09 | AV |
| 58 | 5350-5460 | 63.56 | 74 | -10.44 | PK |
| | | 48.56 | 54 | -5.44 | AV |

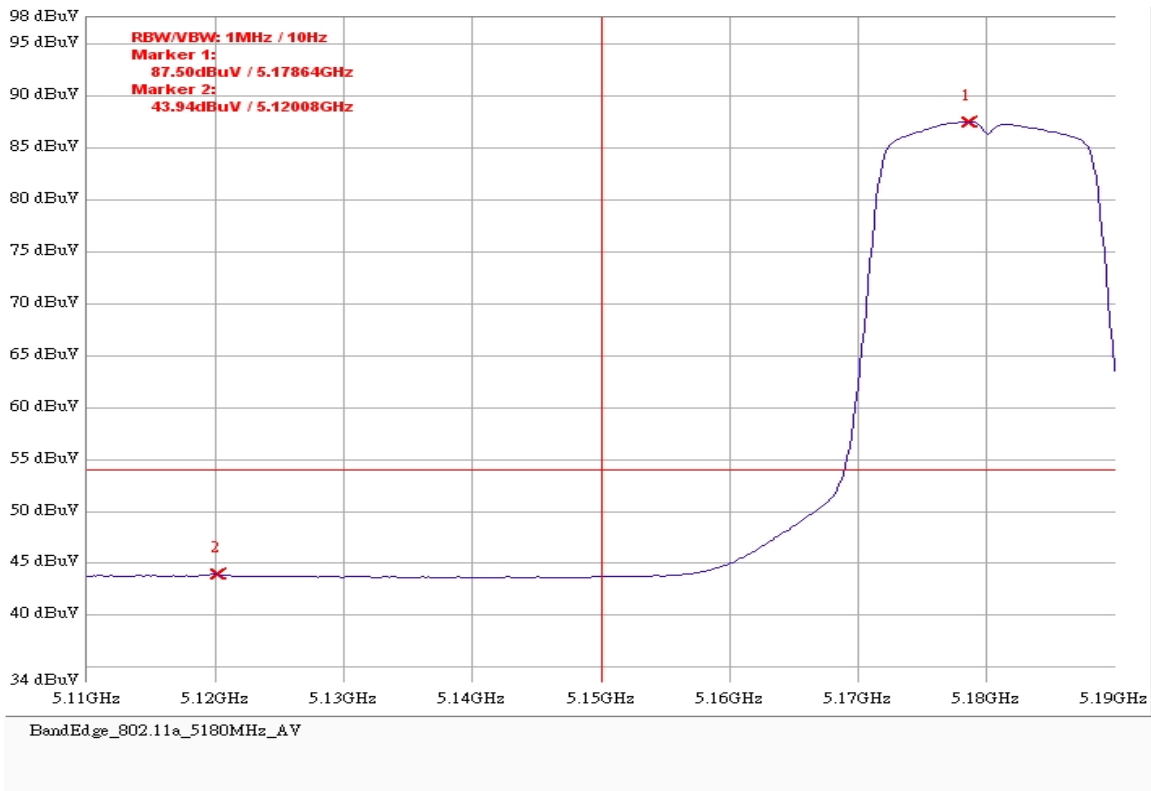
Band edge test

EUT Equip By SMA-Male-RP Antenna

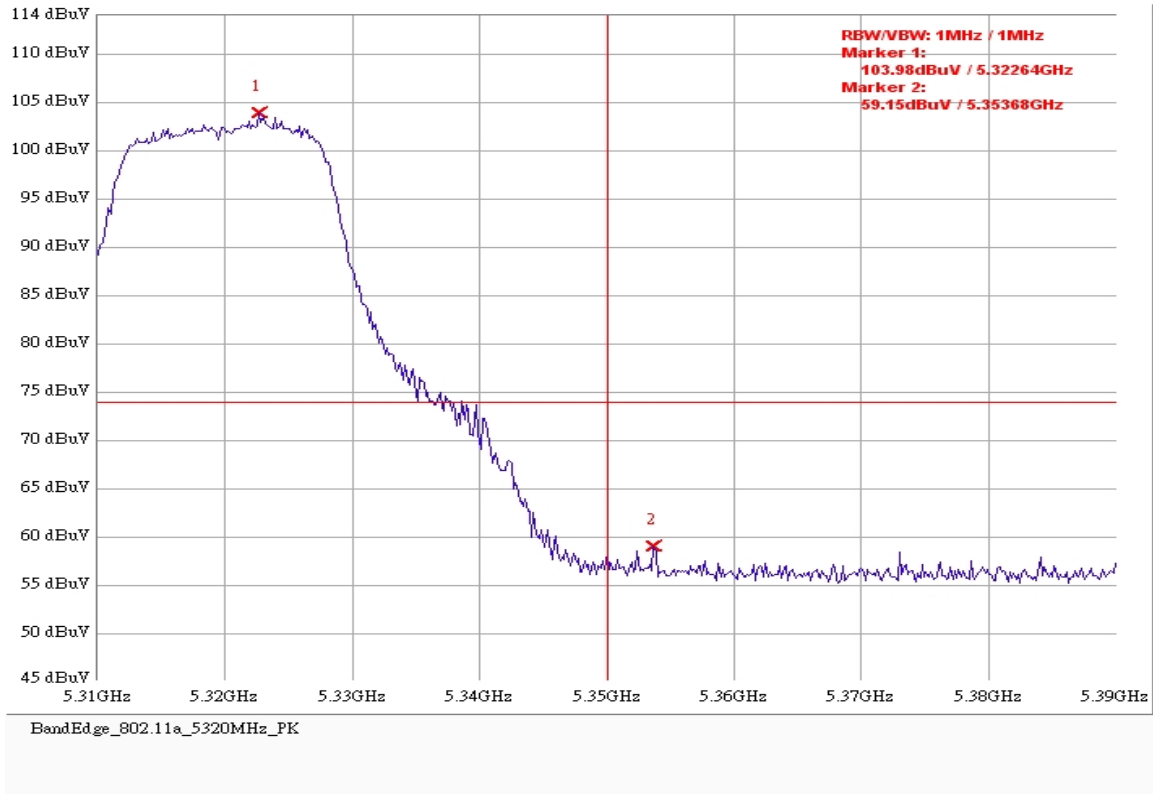
802.11a CH36 5180MHz PK



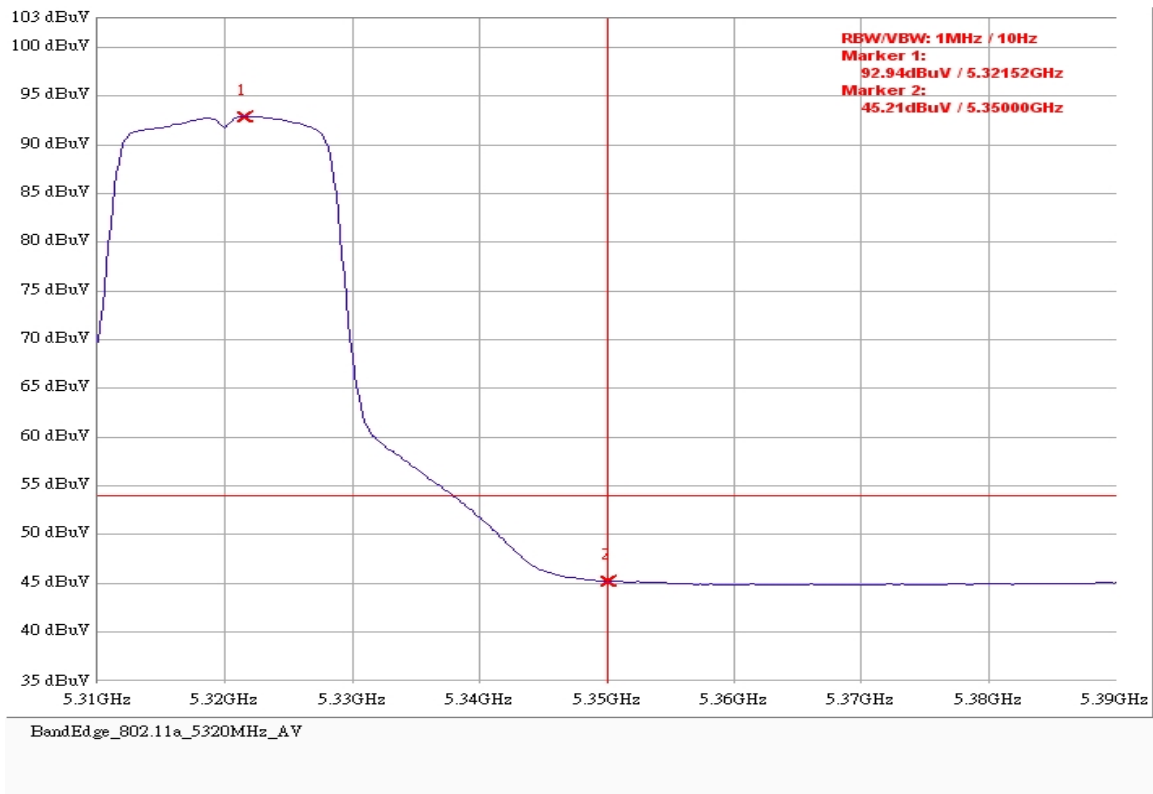
802.11a CH36 5180MHz AV



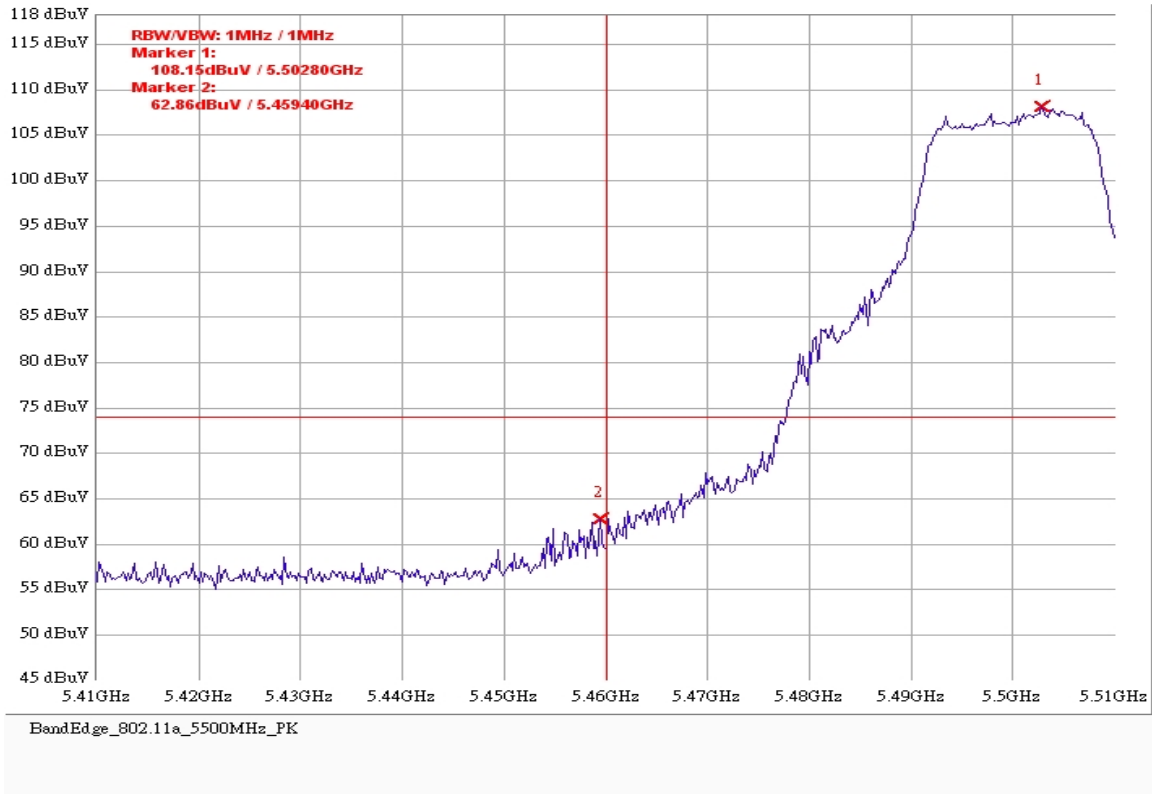
802.11a CH64 5320MHz PK



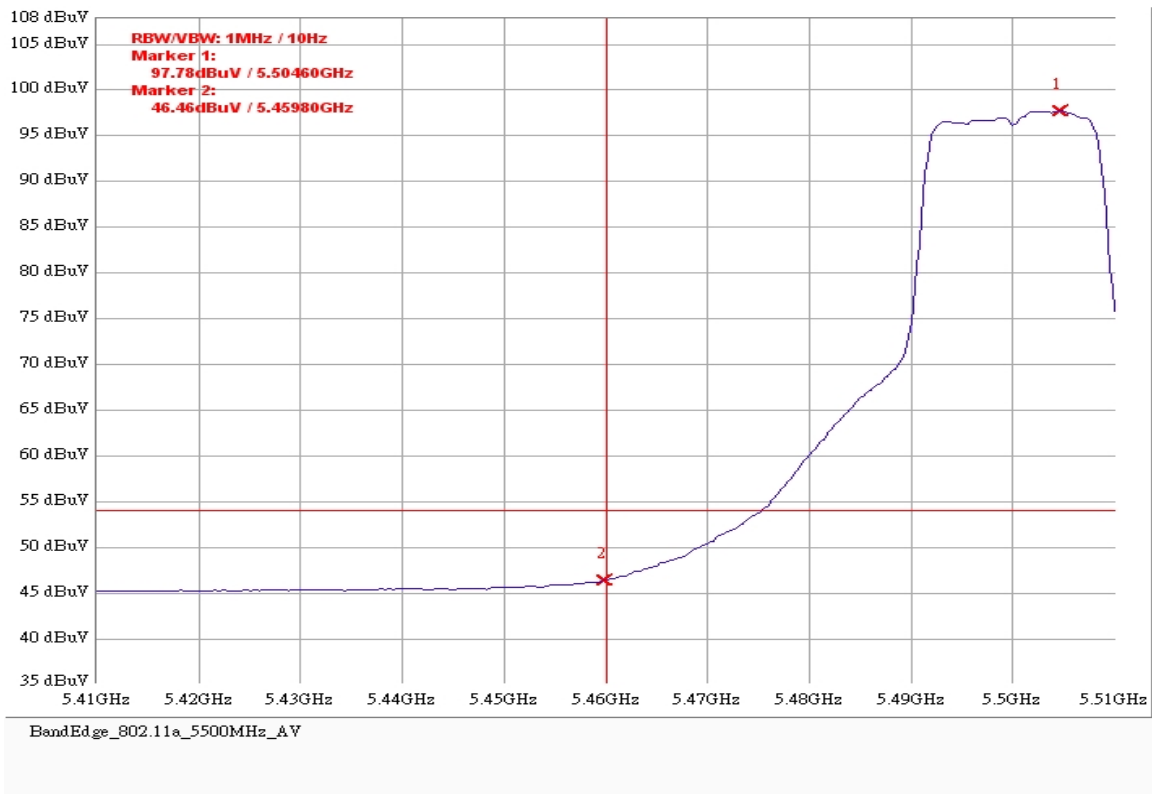
802.11a CH64 5320MHz AV



802.11a CH100 5500MHz PK

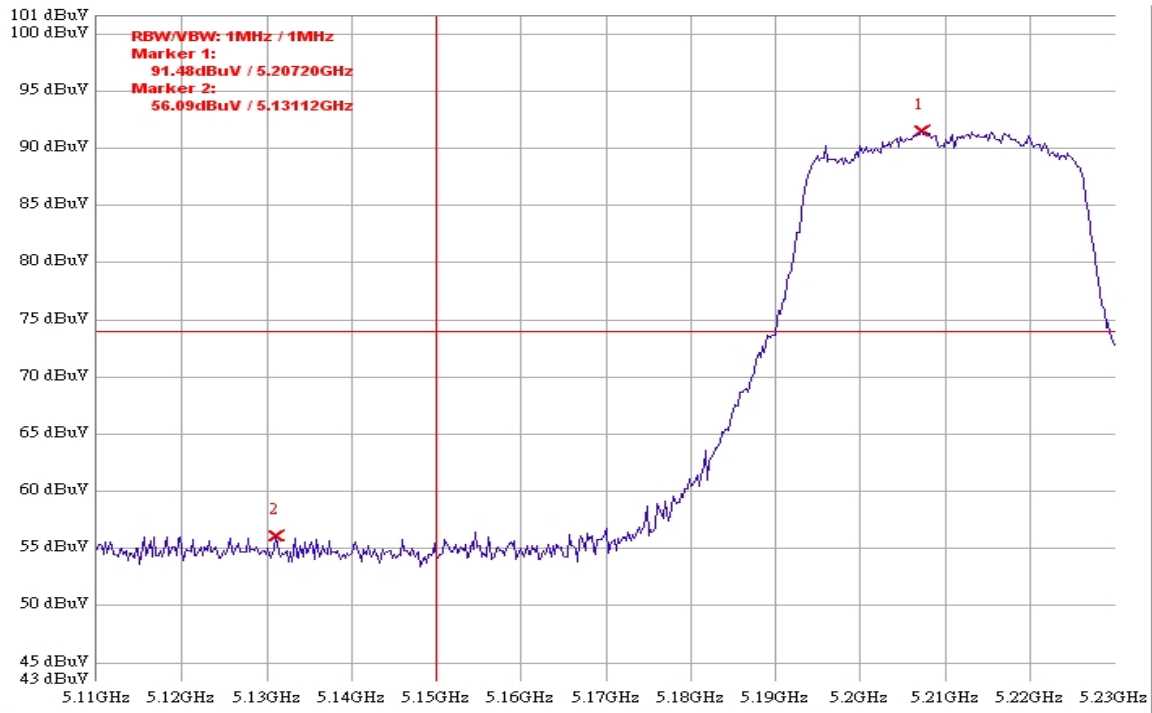


802.11a CH100 5500MHz AV



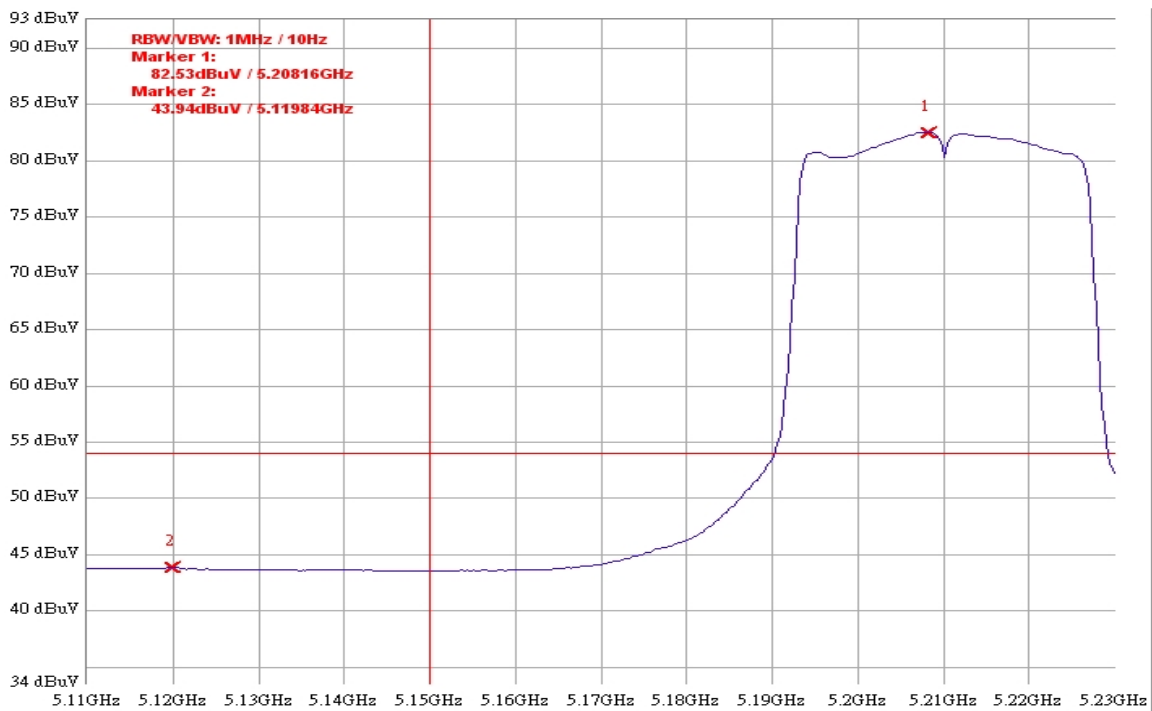
Turbo Mode

802.11a CH42 5210MHz PK



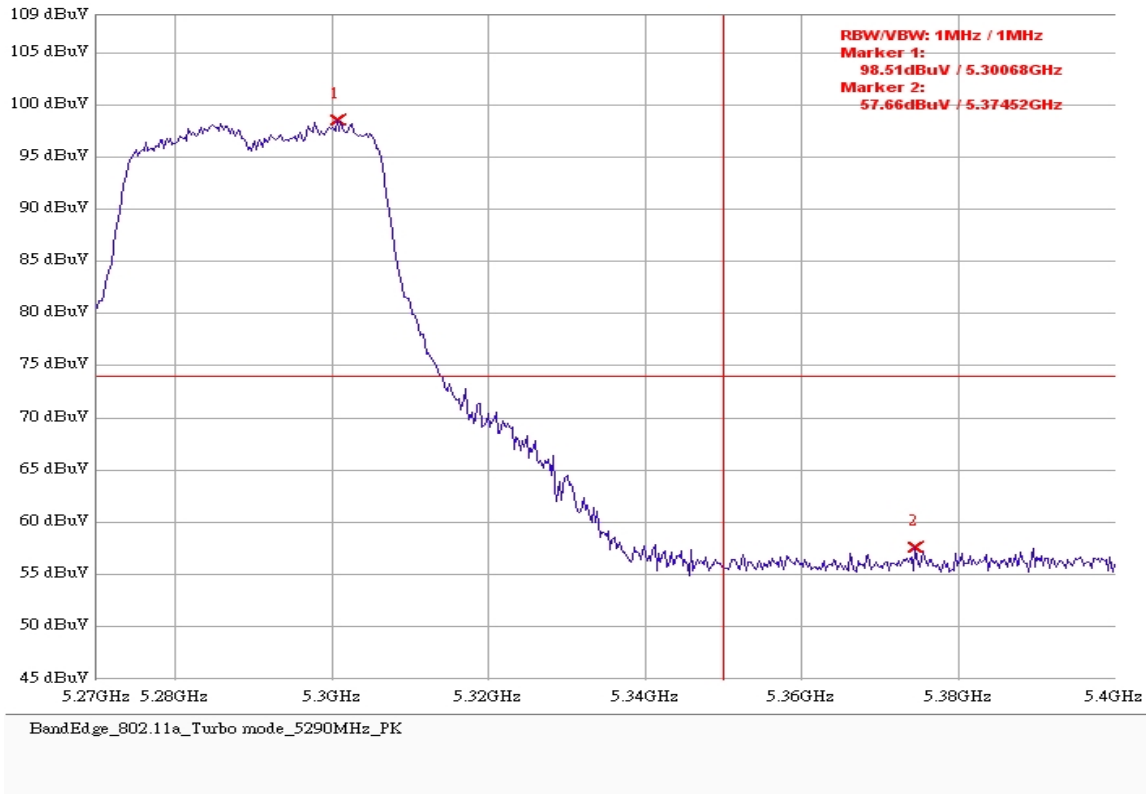
BandEdge_802.11a_Turbo mode_5210MHz_PK

802.11a CH42 5210MHz AV

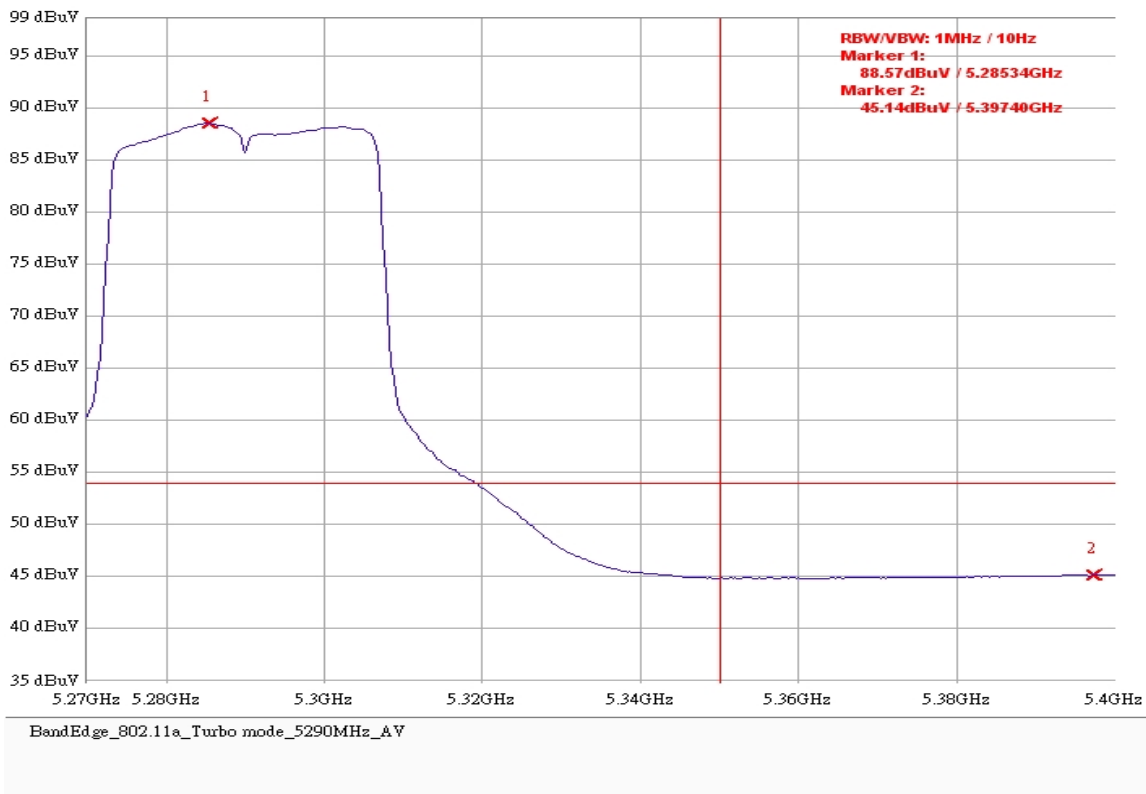


BandEdge_802.11a_Turbo mode_5210MHz_AV

802.11a CH58 5290MHz PK

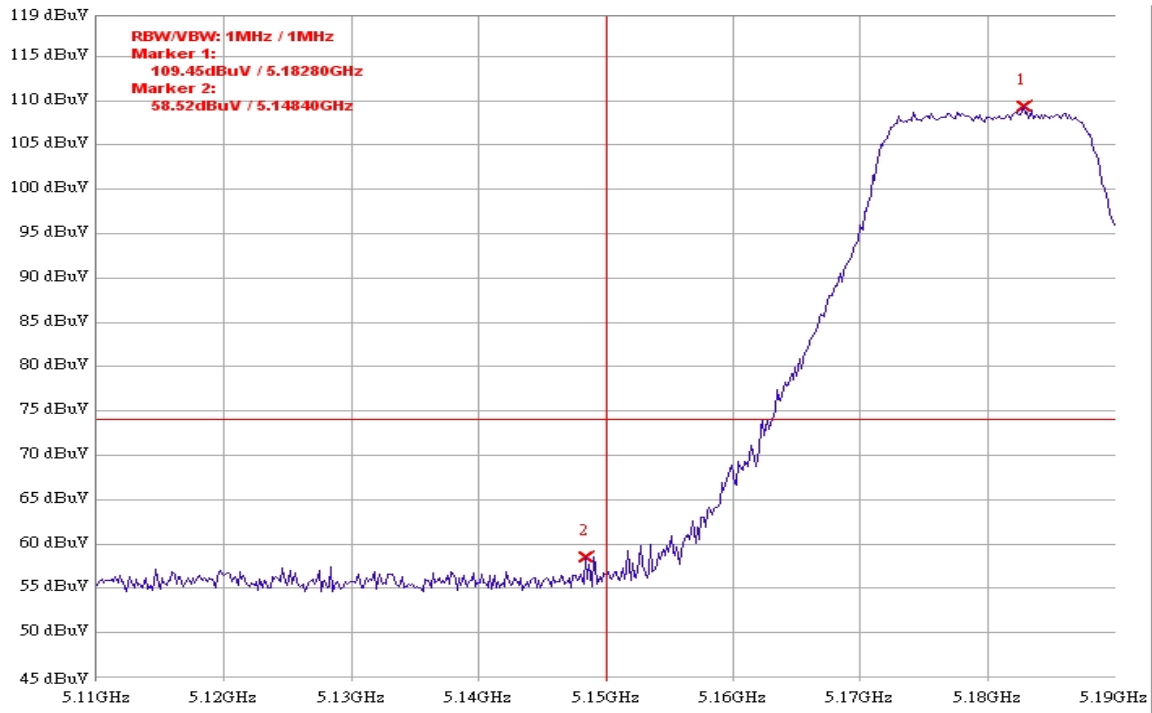


802.11a CH58 5290MHz AV



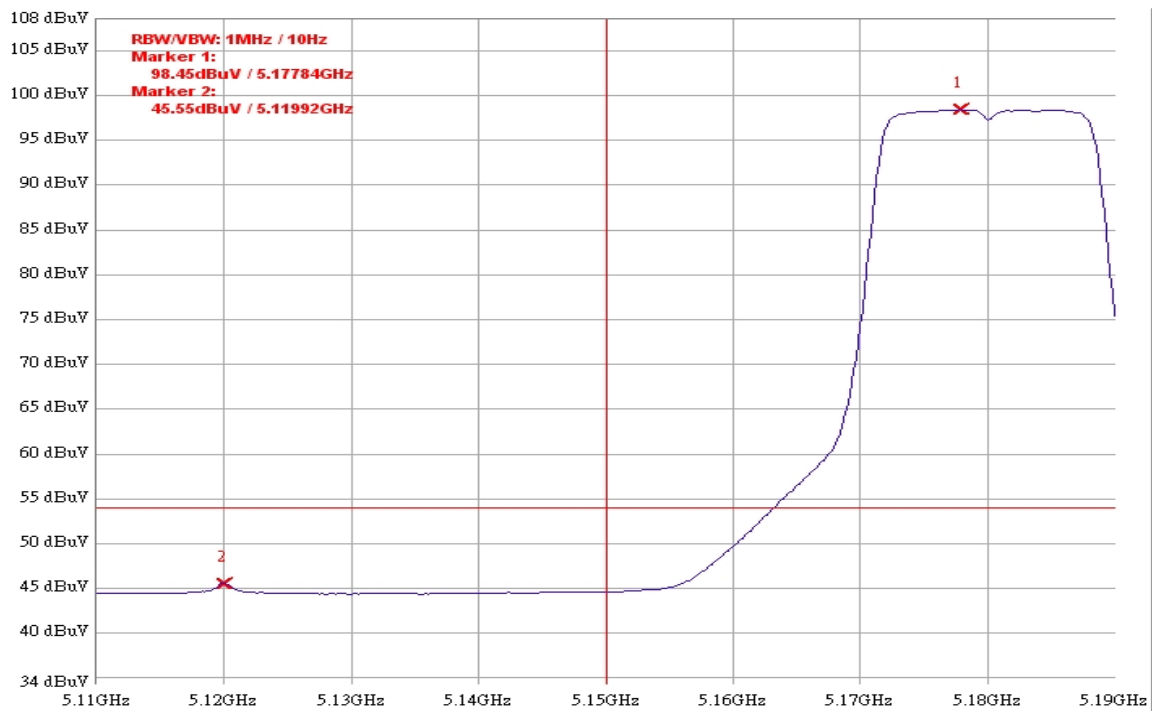
EUT Equip By ANT-WDB-ANM-0609 Antenna

802.11a CH36 5180MHz PK



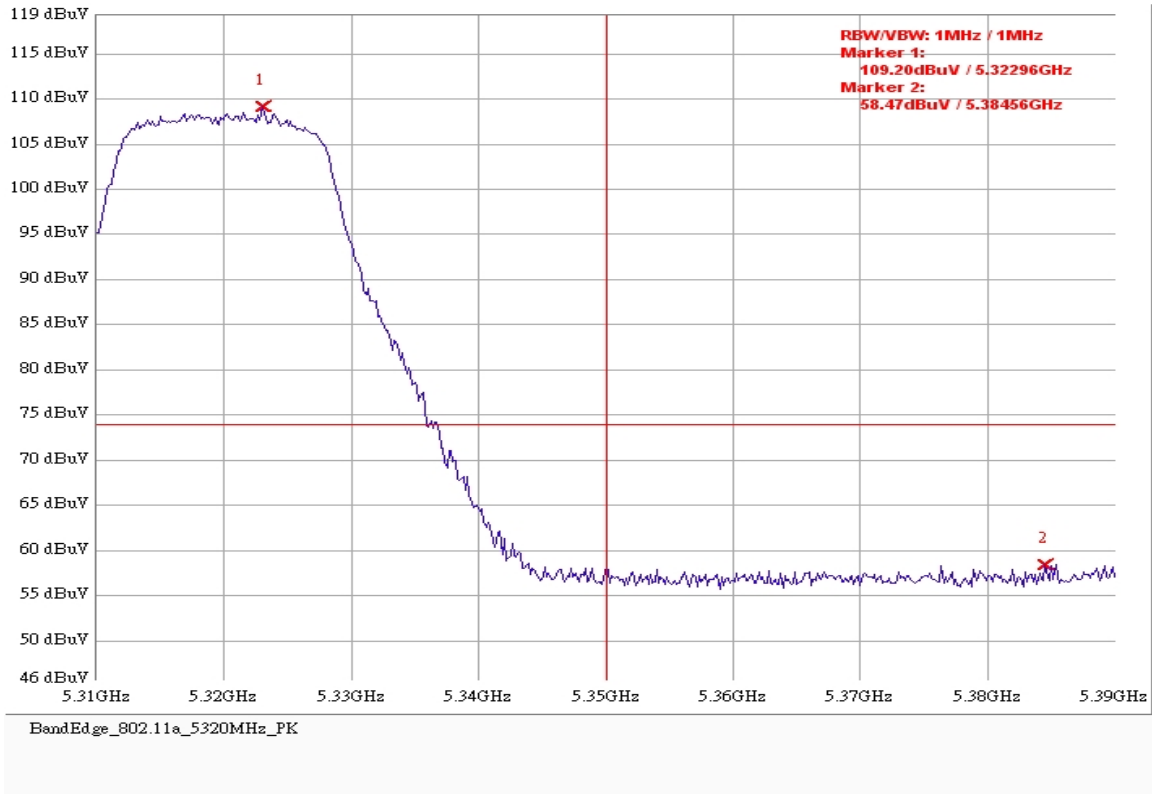
BandEdge_802.11a_5180MHz_PK

802.11a CH36 5180MHz AV

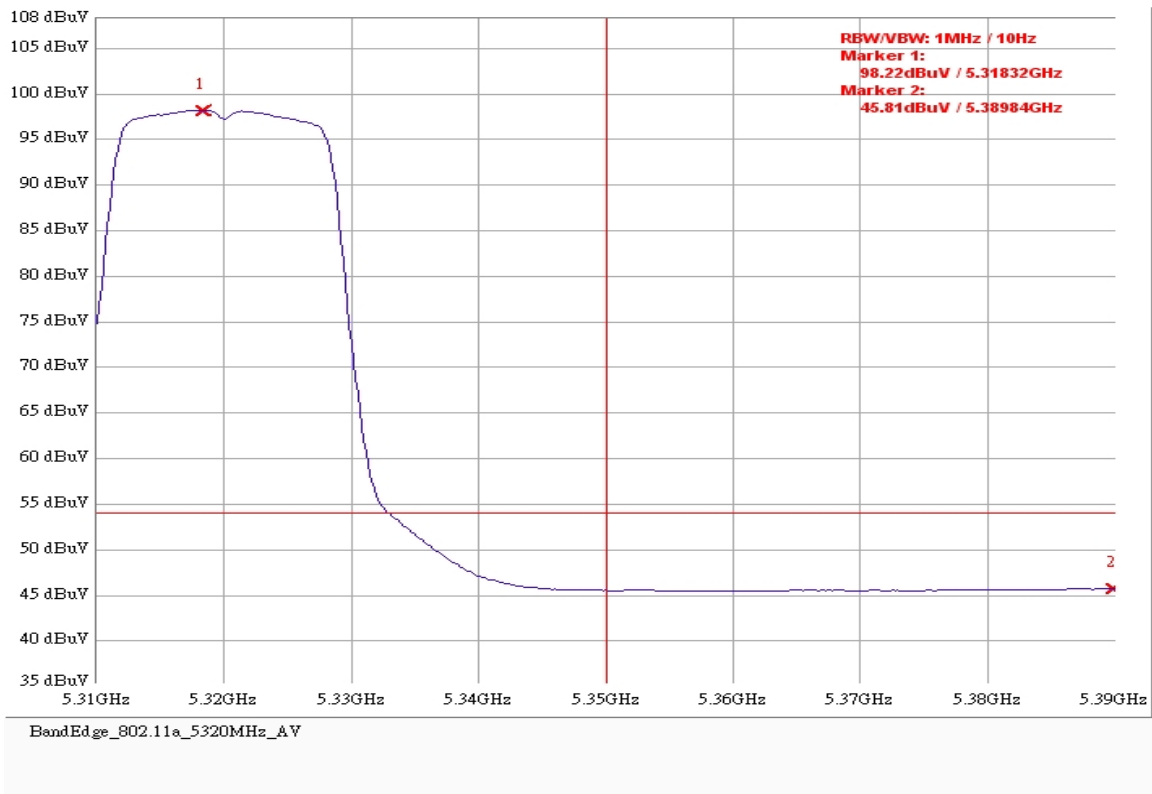


BandEdge_802.11a_5180MHz_AV

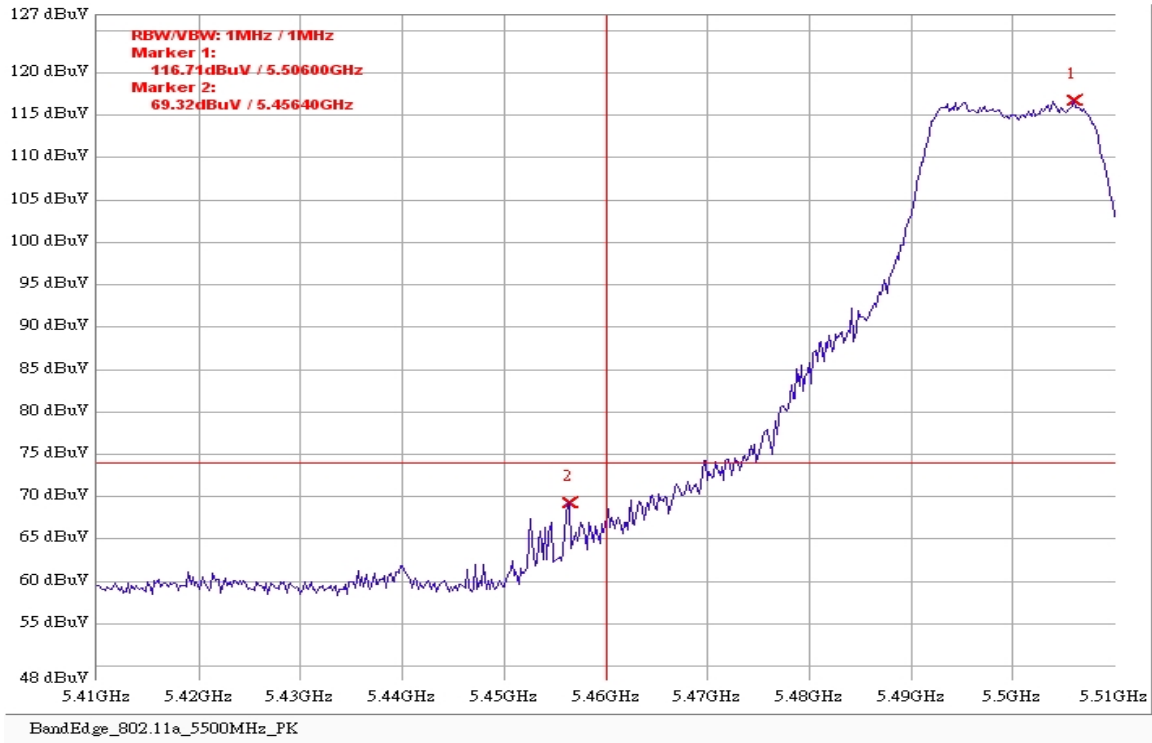
802.11a CH64 5320MHz PK



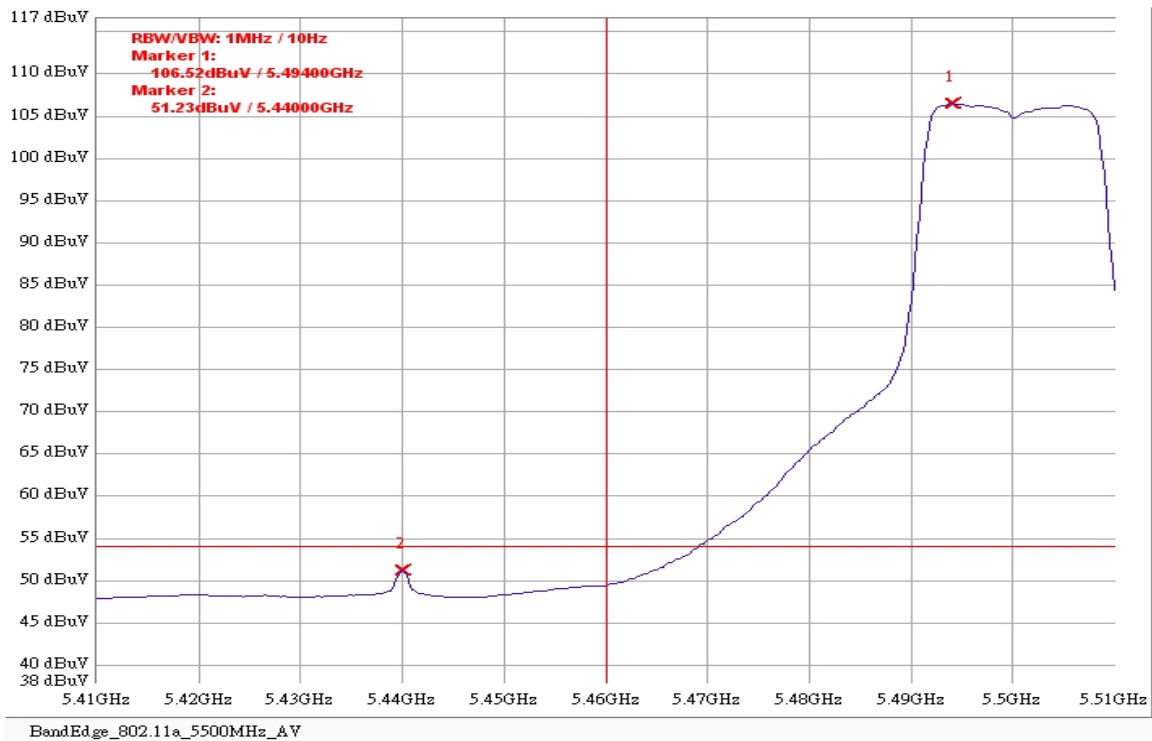
802.11a CH64 5320MHz AV



802.11a CH100 5500MHz PK

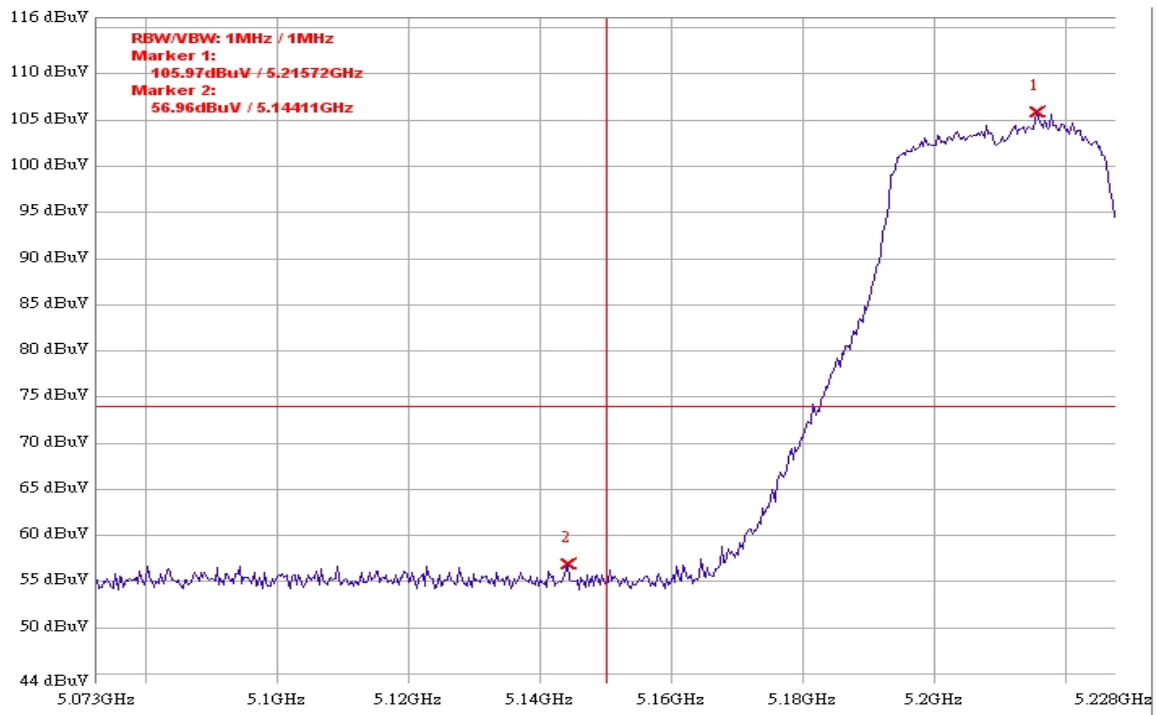


802.11a CH100 5500MHz AV



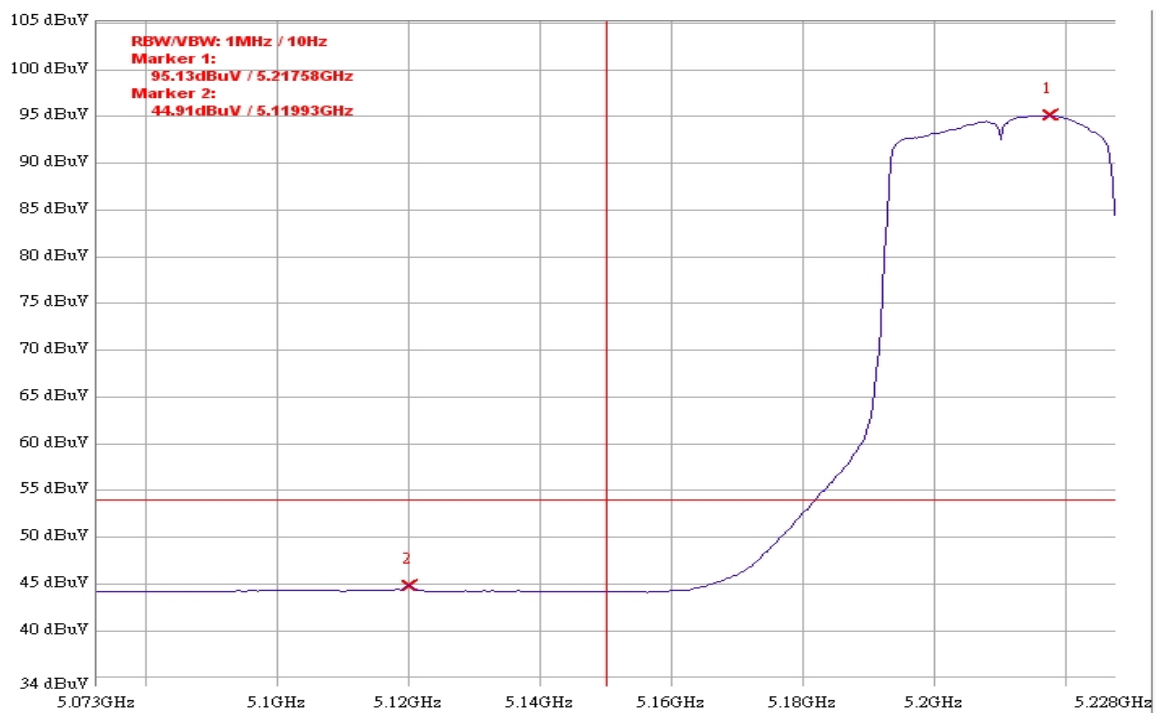
Turbo Mode

802.11a CH42 5210MHz PK



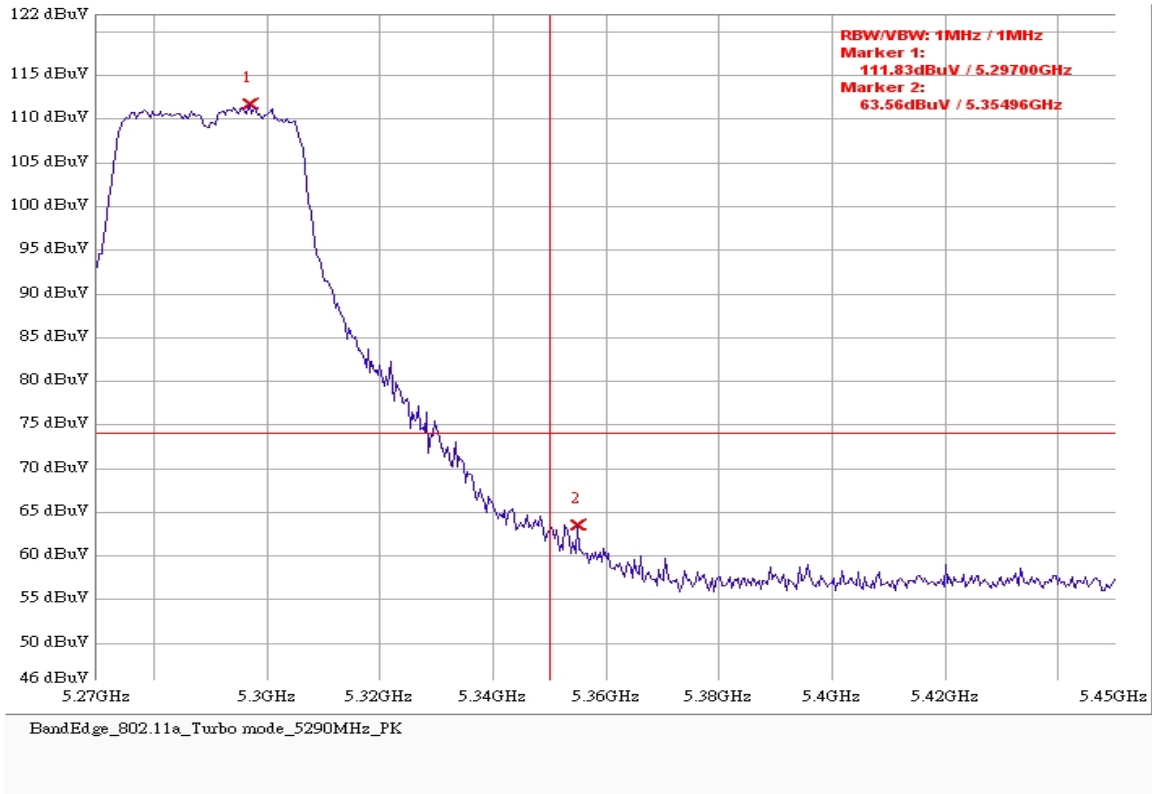
BandEdge_802.11a_Turbo mode_5210MHz_PK

802.11a CH42 5210MHz AV

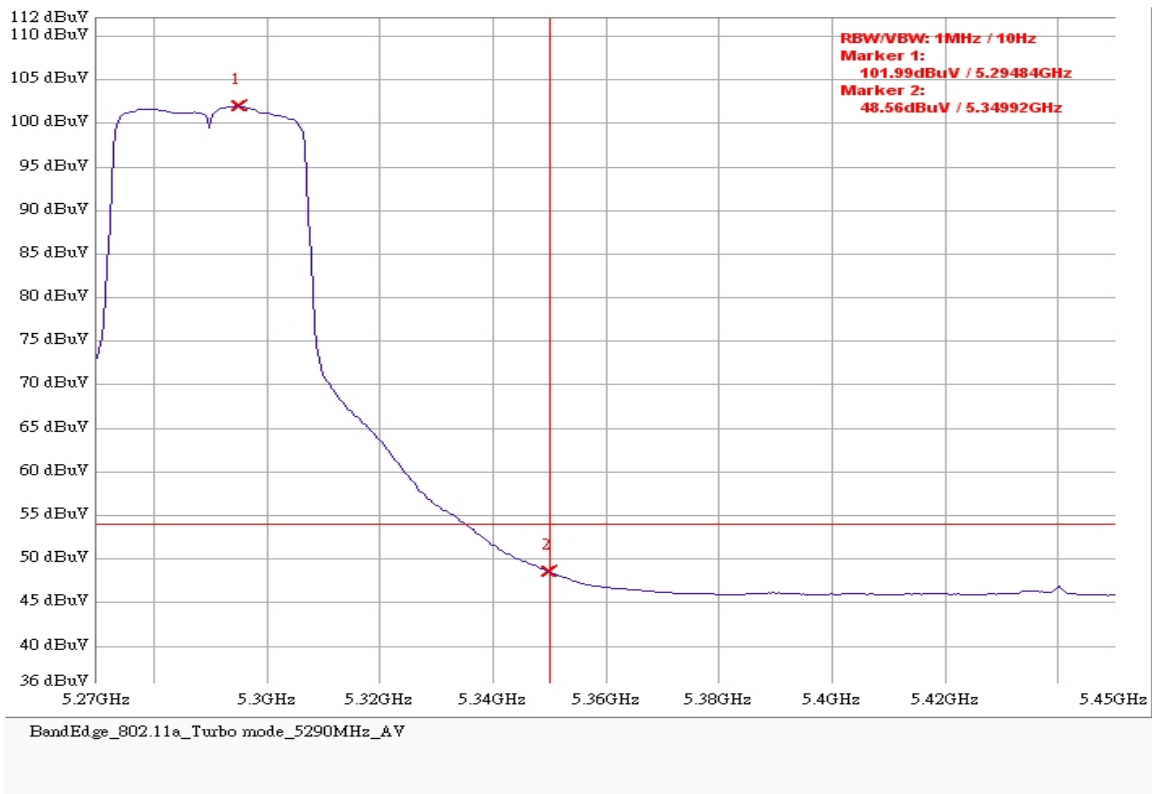


BandEdge_802.11a_Turbo mode_5210MHz_AV

802.11a CH58 5290MHz PK



802.11a CH58 5290MHz AV

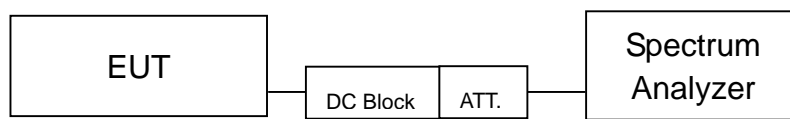


9 RF antenna conducted spurious emission test

9.1 Limits

| Operating Frequency (MHz) | Limit (dBm / MHz EIRP) |
|---------------------------|--|
| 5150~5250 | -27 |
| 5250~5350 | -27 |
| 5725~5825 | -27 (Subscriber transmit channel block -17dBm/MHz on ± 10 MHz range) |

9.2 Configuration of Measurement



9.3 Test Procedure

The measurements were performed from 30MHz to 10th harmonic or 40GHz. RF antenna conducted per 15.407(b) was measured from the EUT antenna port.

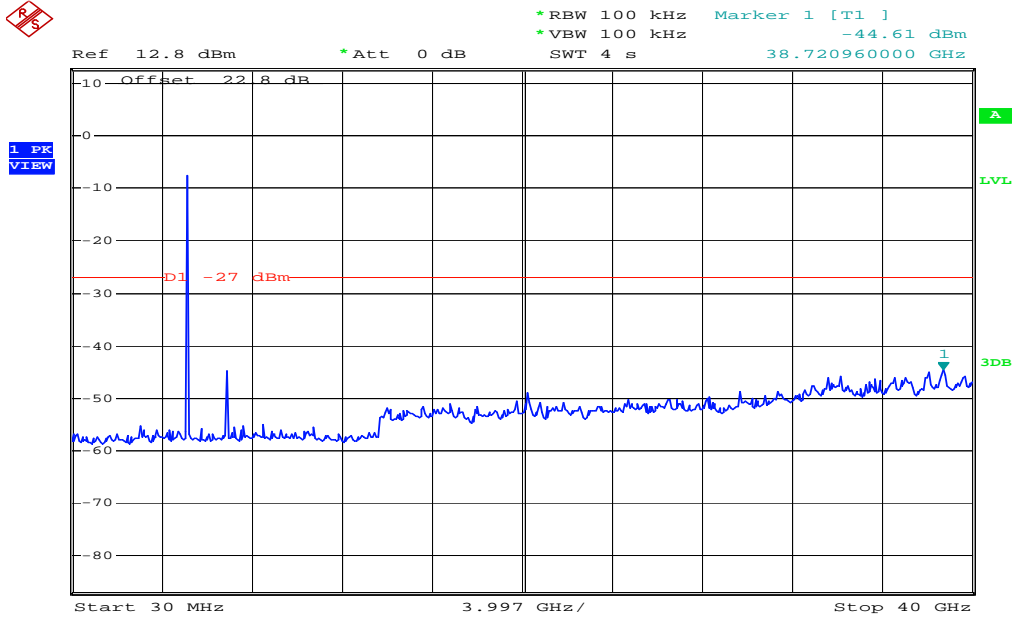
9.4 Test Result

PASS.

The final test data is shown on as following pages.

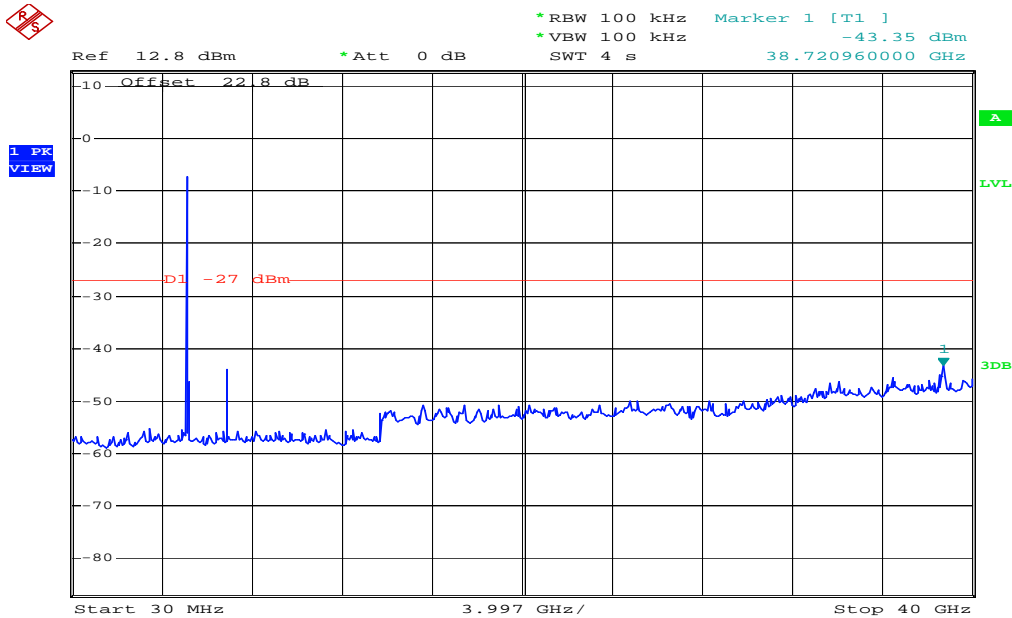
Conducted spurious emission

802.11a CH36 5180MHz



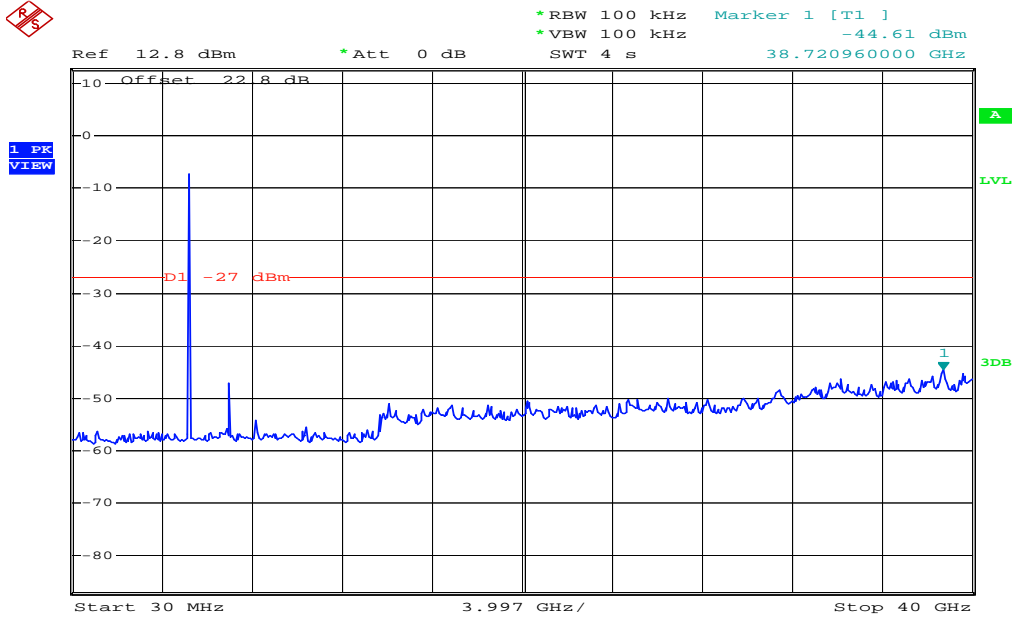
802.11a 5180MHz-Conducted Spurious
Date: 15.JUN.2009 11:57:12

802.11a CH40 5200MHz



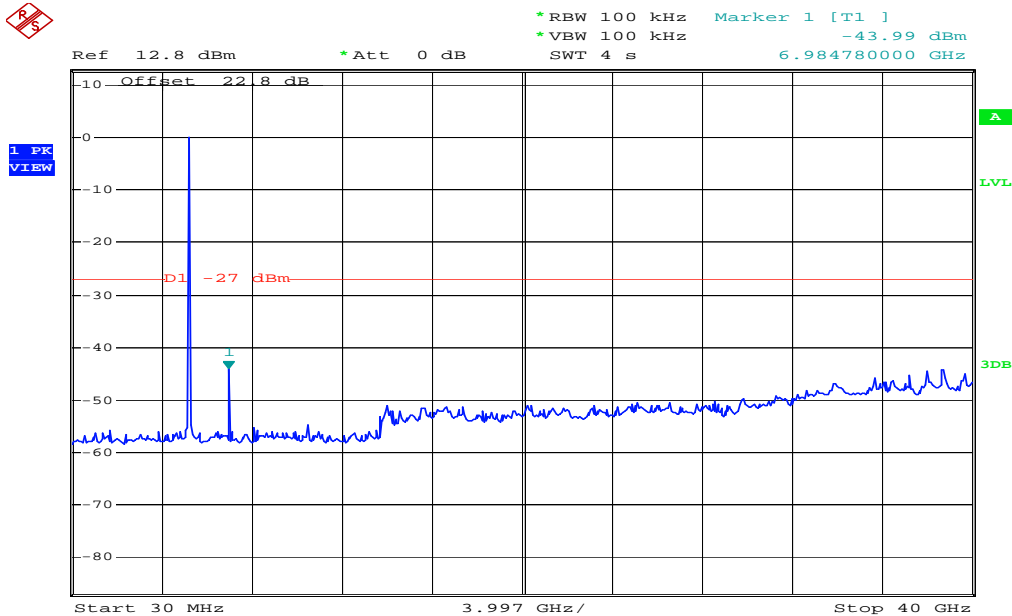
802.11a 5200MHz-Conducted Spurious
Date: 15.JUN.2009 11:56:11

802.11 a CH48 5240MHz



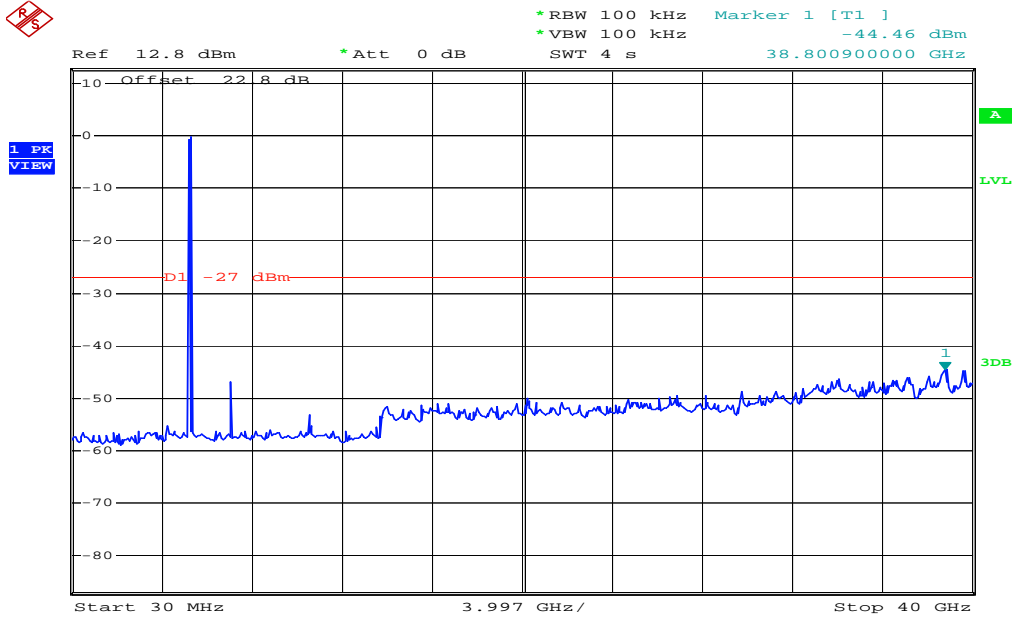
802.11a 5240MHz-Conducted Spurious
Date: 15.JUN.2009 11:55:13

802.11a CH52 5260MHz



802.11a 5260MHz-Conducted Spurious
Date: 15.JUN.2009 11:52:29

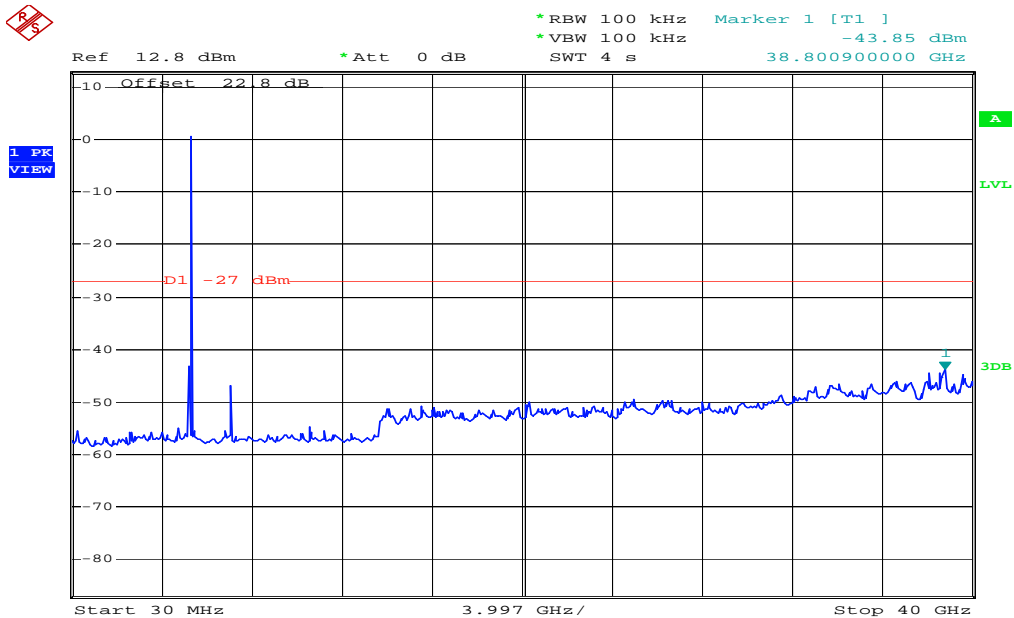
802.11a CH60 5300MHz



802.11a 5300MHz-Conducted Spurious

Date: 15.JUN.2009 11:51:33

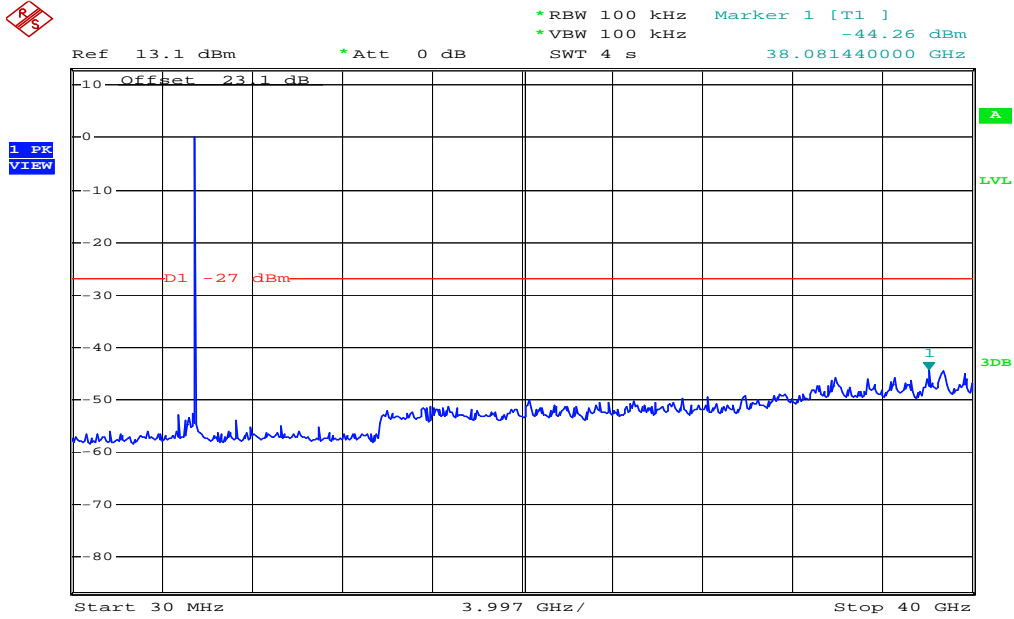
802.11 a CH64 5320MHz



802.11a 5320MHz-Conducted Spurious

Date: 15.JUN.2009 11:49:53

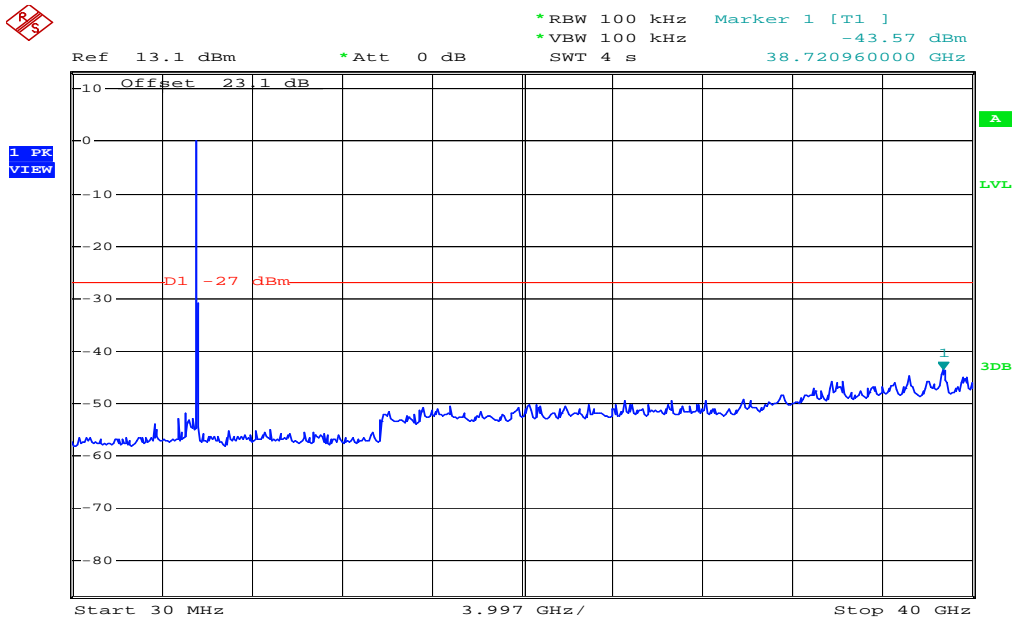
802.11 a CH100 5500MHz



802.11a 5500MHz-Conducted Spurious

Date: 15.JUN.2009 11:47:22

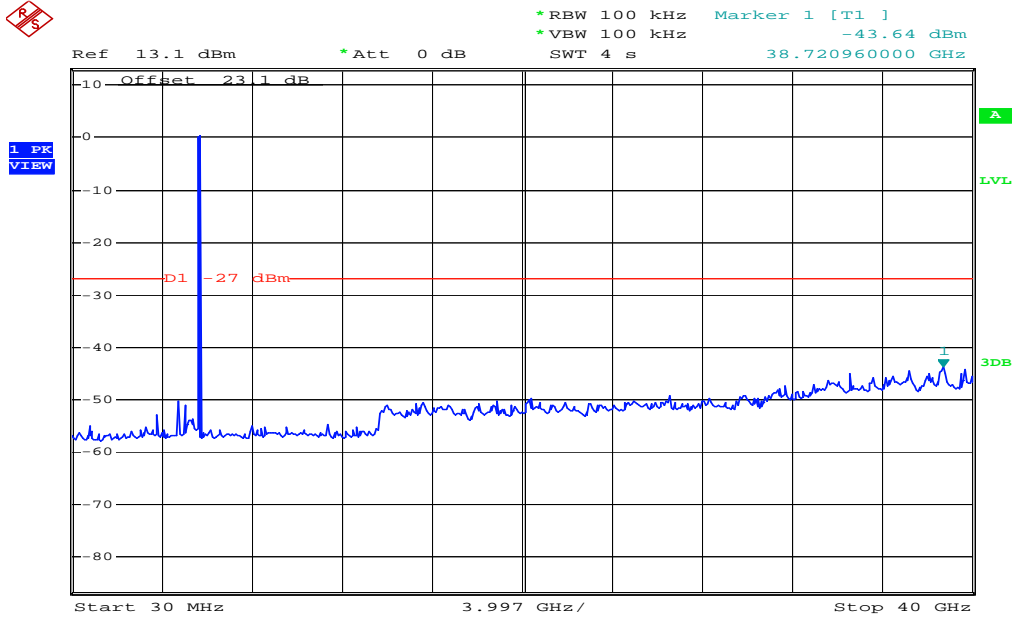
802.11 a CH120 5600MHz



802.11a 5600MHz-Conducted Spurious

Date: 15.JUN.2009 11:46:37

802.11 a CH140 5700MHz

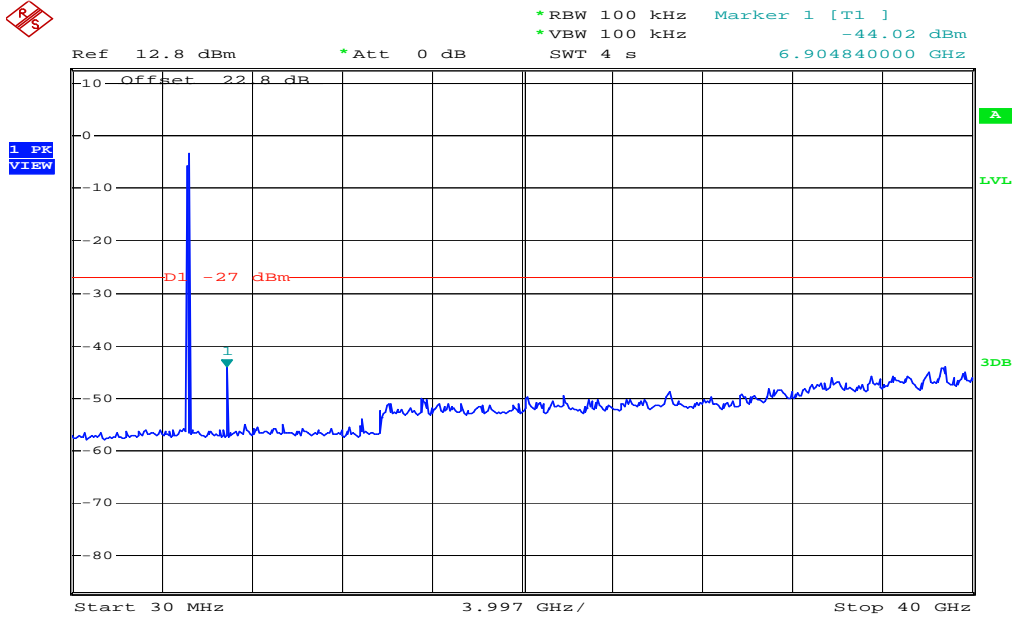


802.11a 5700MHz-Conducted Spurious

Date: 15.JUN.2009 11:44:52

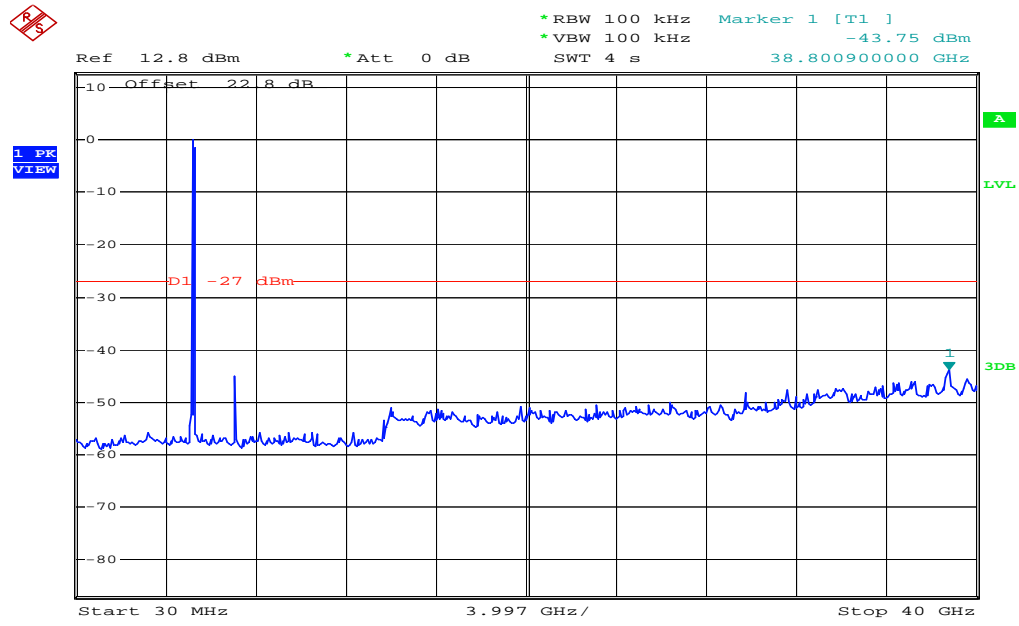
Turbo Mode

802.11 a CH2 5210MHz



802.11a 5210MHz (Turbo mode)-Conducted Spurious
Date: 15.JUN.2009 11:59:53

802.11 a CH58 5290MHz



802.11a 5290MHz (Turbo mode)-Conducted Spurious
Date: 15.JUN.2009 12:01:58

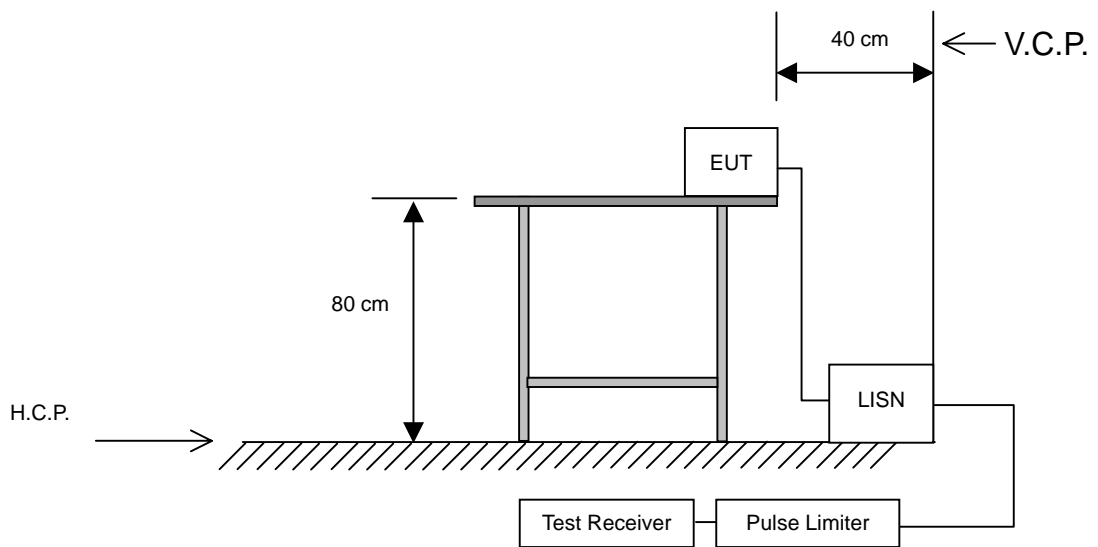
10 AC Power Line Conducted Emission test

10.1 Limits

| Frequency (MHz) | Quasi-Peak (dB μ V) | Average (dB μ V) |
|-----------------|-------------------------|----------------------|
| 0.15 to 0.5 | 66 to 56 | 56 to 46 |
| > 0.5 to 5 | 56 | 46 |
| > 5 to 30 | 60 | 50 |

NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz.

10.2 Configuration of Measurement



10.3 Test Procedures

- 10.3.1 The EUT was placed 80cm height above ground on a non-conductive table and vertical conducting plane located 40cm to the rear of the EUT.
- 10.3.2 The EUT was connected to the main power through Line Impedance Stabilization Networks (LISN). This setup provided a 50ohm/50mH coupling impedance for the measuring equipment. The auxiliary equipment will place in secondary LISN.
- 10.3.3 Both sides (Line and Neutral) of AC line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4/2003 on conducted measurement.

10.4 Test Result

PASS.

The final test data is shown on as following pages.

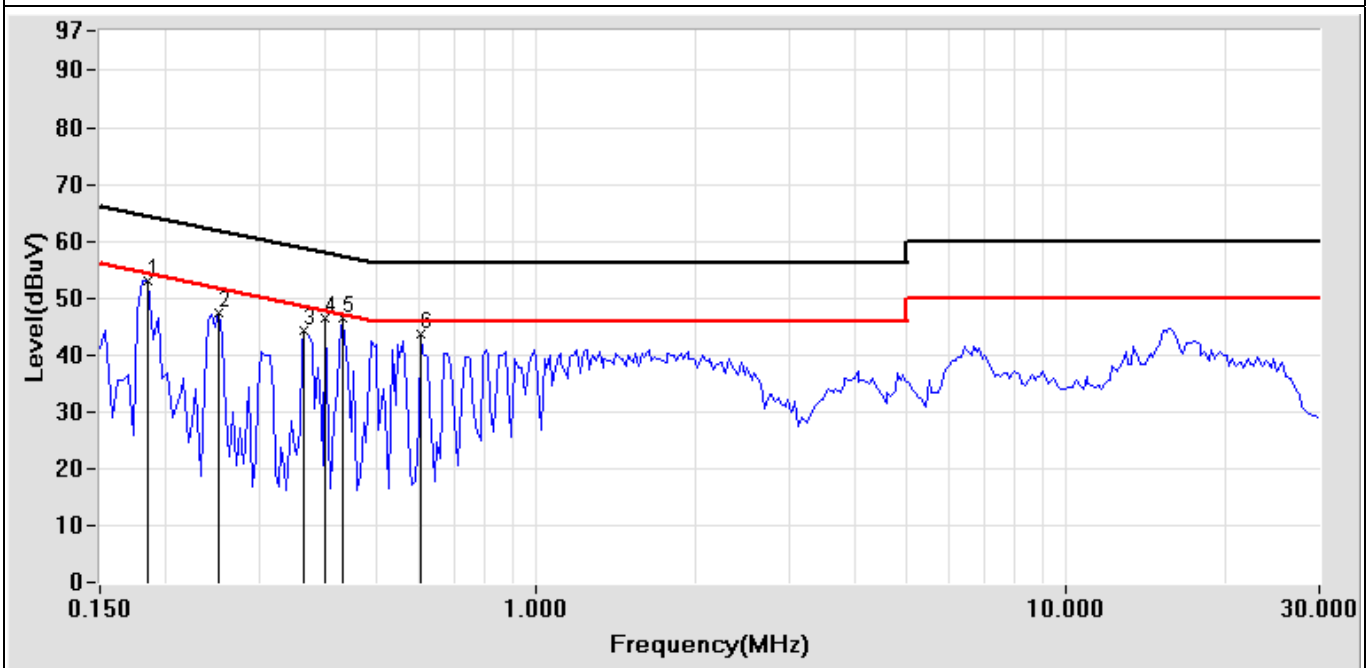
Power Line Conducted Test Data

| | |
|--|---|
| EUT: IEEE 802.11a/b/g miniPCI module CLIENT: MOXA Inc. MODEL: WAPA003 RATING: 120V/60Hz Temperature: 25.0 °C Humidity: 53 % | POLARITY: Line DISTANCE: Serial No.: FILE/DATA#: MOXA Inc.emi/15 OPERATOR: Anya TEST SITE: Conduction2 |
|--|---|

| Frequency (MHz) | Factor (dB) | Meter Reading (dBμV) | | Emission Level (dBμV) | | Limits (dBμV) | | Margin (dB) | |
|-----------------|-------------|----------------------|---------|-----------------------|---------|---------------|---------|-------------|---------|
| | | Quasi-Peak | Average | Quasi-Peak | Average | Quasi-Peak | Average | Quasi-Peak | Average |
| 0.185 | 0.17 | 51.08 | 45.17 | 51.25 | 45.34 | 64.26 | 54.26 | -13.01 | -8.92 |
| 0.252 | 0.15 | 45.70 | 36.53 | 45.85 | 36.68 | 61.69 | 51.69 | -15.84 | -15.01 |
| 0.365 | 0.12 | 43.42 | 38.65 | 43.54 | 38.77 | 58.61 | 48.61 | -15.07 | -9.84 |
| 0.400 | 0.12 | 27.85 | 10.11 | 27.97 | 10.23 | 57.85 | 47.85 | -29.88 | -37.62 |
| 0.431 | 0.12 | 39.46 | 32.98 | 39.58 | 33.10 | 57.23 | 47.23 | -17.65 | -14.13 |
| 0.603 | 0.10 | 34.29 | 26.27 | 34.39 | 26.37 | 56.00 | 46.00 | -21.61 | -19.63 |

Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.



Test Mode: Transmitter mode (Antenna: SMA-Male-PR)

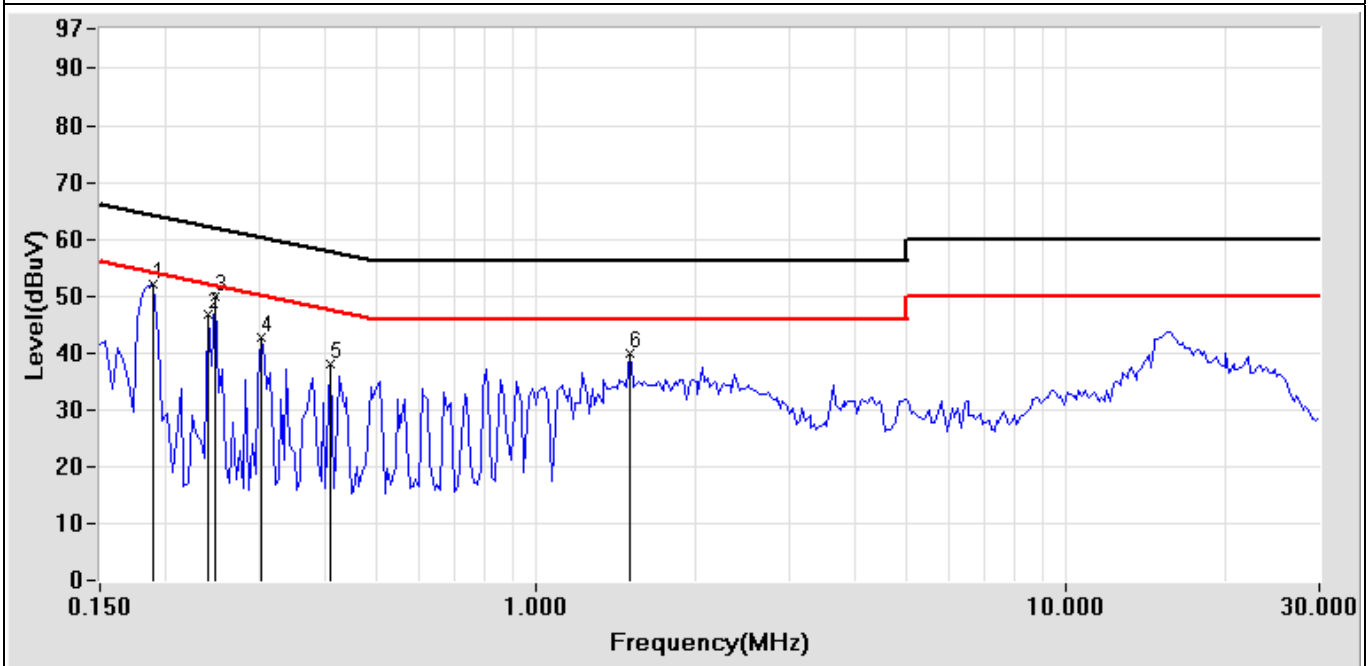
Power Line Conducted Test Data

| | |
|--|--|
| EUT: IEEE 802.11a/b/g miniPCI module CLIENT: MOXA Inc. MODEL: WAPA003 RATING: 120V/60Hz Temperature: 25.0 °C Humidity: 53 % | POLARITY: Neutral DISTANCE: Serial No.: FILE/DATA#: MOXA Inc.emi/16 OPERATOR: Anya TEST SITE: Conduction2 |
|--|--|

| Frequency (MHz) | Factor (dB) | Meter Reading (dBμV) | | Emission Level (dBμV) | | Limits (dBμV) | | Margin (dB) | |
|--------------------|----------------|----------------------|---------|-----------------------|---------|---------------|---------|-------------|---------|
| | | Quasi-Peak | Average | Quasi-Peak | Average | Quasi-Peak | Average | Quasi-Peak | Average |
| 0.189 | 0.18 | 50.39 | 38.95 | 50.57 | 39.13 | 64.08 | 54.08 | -13.51 | -14.95 |
| 0.240 | 0.16 | 45.64 | 34.03 | 45.80 | 34.19 | 62.10 | 52.10 | -16.30 | -17.91 |
| 0.248 | 0.16 | 43.61 | 37.25 | 43.77 | 37.41 | 61.82 | 51.82 | -18.05 | -14.41 |
| 0.302 | 0.14 | 40.33 | 32.57 | 40.47 | 32.71 | 60.19 | 50.19 | -19.72 | -17.48 |
| 0.408 | 0.13 | 35.87 | 13.61 | 36.00 | 13.74 | 57.69 | 47.69 | -21.69 | -33.95 |
| 1.502 | 0.08 | 32.52 | 18.54 | 32.60 | 18.62 | 56.00 | 46.00 | -23.40 | -27.38 |

Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.



Test Mode: Transmitter mode (Antenna: SMA-Male-PR)