# FCC 47 CFR PART 15 SUBPART E AND ANSI C63.10:2009 TEST REPORT

For

#### Computer

**Trade Name: ADVANTECH** 

#### Issued for

#### Advantech Co. Ltd.

No.1, Alley 20, Lane 26, Rueiguang Road, Neihu District, Taipei 114, Taiwan, R.O.C.

#### Issued by

Compliance Certification Services Inc. Hsinchu Lab.

NO. 989-1 Wen Shan Rd., Shang Shan Village, Qionglin Shiang Hsinchu County 30741, Taiwan, R.O.C

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## **Revision History**

Rev.	Issue Date	Revisions	Effect Page	Revised By
00	03/11/2015	Initial Issue	All Page 143	Dola Hsieh

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#### 1. TEST REPORT CERTIFICATION

**Applicant** : Advantech Co. Ltd.

Address : No.1, Alley 20, Lane 26, Rueiguang Road, Neihu District,

Taipei 114, Taiwan, R.O.C.

**Equipment Under Test**: Computer

(where "X" may be any alphanumeric character, "-" or blank)

Trade Name : ADVANTECH

**Tested Date** : September 11 ~ December 02, 2014

APPLICABLE STANDARD		
Standard	Test Result	
FCC Part 15 Subpart E AND ANSI C63.10:2009	PASS	

WE HEREBY CERTIFY THAT: The above equipment has been tested by Compliance Certification Services Inc., and found compliance with the requirements set forth in the technical standards mentioned above. The results of testing in this report apply only to the product/system, which was tested. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

Approved by:

Sb. Lu

Sr. Engineer

Reviewed by:

Gundam Lin Sr. Engineer Report No.: T140911L12-A-RP1-2

## 2. EUT DESCRIPTION

Product Name	Computer	
Model Number	TREK-572 ; TREK-572XXXXXXXXXXXXXXXX	
Woder Number	(where "X" may be any alphanumeric character , "-" or blank)	
Identify Number	T140911L12-A	
Received Date	September 11, 2014	
	UNII Band 1:	
	IEEE 802.11a, 802.11an HT20 : 5180MHz ~ 5240MHz	
	IEEE 802.11an HT40 : 5190MHz ~ 5230MHz	
	UNII Band 2A:	
	IEEE 802.11a, 802.11an HT20 : 5260MHz ~ 5320MHz	
Fraguency Bongo	IEEE 802.11an HT40 : 5270MHz ~ 5310MHz	
Frequency Range	UNII Band 2C:	
	IEEE 802.11a, 802.11an HT20 : 5500MHz ~ 5700MHz	
	IEEE 802.11an HT40 : 5510MHz ~ 5670MHz	
	UNII Band 3:	
	IEEE 802.11a, 802.11an HT20 : 5745MHz ~ 5825MHz	
	IEEE 802.11an HT40 : 5755MHz ~ 5795MHz	
	UNII Band 1:	
	IEEE 802.11a : 21.10dBm (0.1288W)	
	IEEE 802.11an HT20 : 21.03dBm (0.1268W)	
	IEEE 802.11an HT40 : 20.64dBm (0.1159W)	
	UNII Band 2A:	
	IEEE 802.11a : 20.82dBm (0.1208W)	
	IEEE 802.11an HT20 : 20.86dBm (0.1219W)	
Transmit Power	IEEE 802.11an HT40 : 20.06dBm (0.1014W)	
Transmit Power	UNII Band 2C:	
	IEEE 802.11a : 20.83dBm (0.1211W)	
	IEEE 802.11an HT20 : 20.77dBm (0.1194W)	
	IEEE 802.11an HT40 : 20.42dBm (0.1102W)	
	UNII Band 3:	
	IEEE 802.11a : 20.34dBm (0.1081W)	
	IEEE 802.11an HT20 : 20.35dBm (0.1084W)	
	IEEE 802.11an HT40 : 20.50dBm (0.1122W)	



Channel Spacing	IEEE 802.11a, 802.11an HT20 : 20MHz	
	IEEE 802.11an HT40 : 40MHz	
	IEEE 802.11a, 802.11an HT20 :	
	5150MHz ~ 5250MHz : 4 Channels	
	5250MHz ~ 5350MHz : 4 Channels	
	5470MHz ~ 5725MHz : 8 Channels	
<b>Channel Number</b>	5725MHz ~ 5850MHz : 5 Channels	
	IEEE 802.11an HT40 : 5150MHz ~ 5250MHz : 2 Channels	
	5250MHz ~ 5350MHz : 2 Channels	
	5470MHz ~ 5725MHz : 3 Channels	
	5725MHz ~ 5850MHz : 2 Channels	
	IEEE 802.11a : up to 54 Mbps	
	IEEE 802.11an (VHT20,800ns GI) : up to 65.00 Mbps	
Transmit Data Rate	IEEE 802.11an (VHT20,400ns GI) : up to 72.20 Mbps	
	IEEE 802.11an (VHT40,800ns GI) : up to 135.00 Mbps	
	IEEE 802.11an (VHT40,400ns GI) : up to 150.00 Mbps	
	IEEE 802.11a : OFDM (64QAM, 16QAM, QPSK, BPSK)	
Type of Modulation	IEEE 802.11an HT20/40 : OFDM (64QAM, 16QAM, QPSK,	
	BPSK)	
Antenna Type	PIFA Antenna , Antenna Gain : 2.75 dBi	
Power Rating	9-32Vdc	
Test Voltage	120Vac, 60Hz	
DC Power Cable Type	Non-shielded cable, 1.5m × 1 (Detachable)	
I/O Port	EUT : RJ-45 Port × 1, USB Port × 1, Power Port × 1, VGA Port × 1, Signal Port × 1, Audio Port × 2	
	Panel : Signal Port × 1, USB Port × 1	
Signal Cable	Shielded signal cable, 2m × 1 (Detachable), with two ferrite core	

#### The difference of the series model

Model Number	Difference
TREK-572	1. For marketing purpose only. 2. where "X" may be any alphanumeric character "-" or blank
TREK-572XXXXXXXXXXXXXXXXXX	

#### Remark:

- 1. The sample selected for test was engineering sample that approximated to production product and was provided by manufacturer.
- 2. For more details, please refer to the User's manual of the EUT.
- 3. The model TREK-572 was considered the main model for testing.
- This submittal(s) (test report) is intended for FCC ID: M82-TREK572LTE filing to comply with Section 15.207, 15.209 and 15.407 of the FCC Part 15, Subpart E Rules.

#### 3. DESCRIPTION OF TEST MODES

The EUT is an 802.11n transceiver in Computer form factor.

For IEEE 802.11a, 802.11an HT20/HT40 mode: 1TX / 1RX.

#### Conducted Emission / Radiated Emission Test (Below 1 GHz)

1. The following test modes were scanned during the preliminary test:

No.	Pre-Test Mode
1	TX Mode

2. After the preliminary scan, the following test mode was found to produce the highest emission level.

Final Test I	Mode	
Emission	Radiated Emission	TX Mode
EIIIISSIOII	Conducted Emission	N/A

**Remark**: Then, the above highest emission mode of the configuration of the EUT and cable was chosen for all final test items.

#### Conducted / Radiated Emission Test (Above 1 GHz)

#### IEEE 802.11a, 802.11an HT20 mode

The EUT had been tested under operating condition.

There are three channels have been tested as following:

#### **UNII Band 1:**

Channel	Frequency (MHz)
Low	5180
Middle	5220
High	5240

#### **UNII Band 2A:**

Channel	Frequency (MHz)
Low	5260
Middle	5280
High	5320

#### **UNII Band 2C:**

Channel	Frequency (MHz)
Low	5500
Middle	5580
High	5700

#### **UNII Band 3:**

Channel	Frequency (MHz)
Low	5745
Middle	5785
High	5825

IEEE 802.11a mode: 6Mbps data rate (worst case) were chosen for full testing.

IEEE 802.11an HT20 mode: 6.5Mbps data rate (worst case) were chosen for full testing.

#### IEEE 802.11an HT40 mode

The EUT had been tested under operating condition.

There are two or three channels have been tested as following:

#### **UNII Band 1:**

Channel	Frequency (MHz)
Low	5190
High	5230

#### **UNII Band 2A:**

Channel	Frequency (MHz)
Low	5270
High	5310

#### **UNII Band 2C:**

Channel	Frequency (MHz)
Low	5510
Moddle	5550
High	5670

#### **UNII Band 3:**

Channel	Frequency (MHz)
Low	5755
High	5795

IEEE 802.11an HT40 mode: 13.5Mbps data rate (worst case) were chosen for full testing. Remark: The field strength of spurious emission was measured in the following position: EUT stand-up position(X axis), lie-down position(X, Y axis). The worst emission was found in stand-up position(Z axis) and the worst case was recorded.

#### 4. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.10: 2009 and FCC CFR 47, 15.207, 15.209 and 15. 407.

#### 5. FACILITIES AND ACCREDITATION

#### 5.1 FACILITIES

All measurement facilities used to collect the measurement data are located at

NO. 989-1 Wen Shan Rd., Shang Shan Village, Qionglin Shiang Hsinchu County 30741, Taiwan, R.O.C

The sites are constructed in conformance with the requirements of ANSI C63.10:2009 and CISPR 22. All receiving equipment conforms to CISPR 16-1-1, CISPR 16-1-2, CISPR 16-1-3, CISPR 16-1-4, CISPR 16-1-5.

#### 5.2 ACCREDITATIONS

Our laboratories are accredited and approved by the following approval agencies according to ISO/IEC 17025.

Taiwan TAF

The measuring facility of laboratories has been authorized or registered by the following approval agencies.

Canada INDUSTRY CANADA

Japan VCCI

Taiwan BSMI

USA FCC MRA

Copies of granted accreditation certificates are available for downloading from our web site, http:///www.ccsrf.com

#### **5.3 MEASUREMENT UNCERTAINTY**

The following table is for the measurement uncertainty, which is calculated as per the document CISPR 16-4-2.

PARAMETER	UNCERTAINTY
Semi Anechoic Chamber (966 Chamber_B) / Radiated Emission, 30 to 1000 MHz	+/- 3.97
Semi Anechoic Chamber (966 Chamber_B) / Radiated Emission, 1 to 18GHz	+/- 3.58
Semi Anechoic Chamber (966 Chamber_B) / Radiated Emission, 18 to 26 GHz	+/- 3.59
Semi Anechoic Chamber (966 Chamber_B) / Radiated Emission, 26 to 40 GHz	+/- 3.81
Conducted Emission (Mains Terminals), 9kHz to 30MHz	+/- 2.48

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

Consistent with industry standard (e.g. CISPR 22, clause 11, Measurement Uncertainty) determining compliance with the limits shall be base on the results of the compliance measurement. Consequently the measure emissions being less than the maximum allowed emission result in this be a compliant test or passing test.

The acceptable measurement uncertainty value without requiring revision of the compliance statement is base on conducted and radiated emissions being less than  $U_{\text{CISPR}}$  which is 3.6dB and 5.2dB respectively. CCS values (called  $U_{\text{Lab}}$  in CISPR 16-4-2) is less than  $U_{\text{CISPR}}$  as shown in the table above. Therefore, MU need not be considered for compliance.

#### 6. SETUP OF EQUIPMENT UNDER TEST

#### SUPPORT EQUIPMENT

No.	Product	Manufacturer	Model No.	Serial No.
1	Notebook PC	HP	ProBook 4421s	CNF03242PJ
2	DC Power Supply	Rohde & Schwarz	NGSM 32/10	100232

No.	Signal Cable Description
1	Non-shielded RJ-45 cable, 12m × 1

#### **SETUP DIAGRAM FOR TESTS**

EUT & peripherals setup diagram is shown in appendix setup photos.

#### **EUT OPERATING CONDITION**

- 1. EUT & peripherals setup diagram is shown in appendix setup photos.
- 2. TX Mode:
  - ⇒ **Tx Data Rate:** 6Mbps Bandwidth 20 (IEEE 802.11a mode)

6.5Mbps Bandwidth 20 (IEEE 802.11an HT20 mode)

13.5Mbps Bandwidth 40 (IEEE 802.11an HT40 mode)

#### **⇒** Power control

IEEE 802.11a Channel Low (5180MHz) Power set 20

IEEE 802.11a Channel Mid (5220MHz) Power set 25

IEEE 802.11a Channel High (5240MHz) Power set 25

IEEE 802.11an HT20 Channel Low (5180MHz) Power set 20

IEEE 802.11an HT20 Channel Mid (5220MHz) Power set 25

IEEE 802.11an HT20 Channel High (5240MHz) Power set 25

IEEE 802.11an HT40 Channel Low (5190MHz) Power set 15

IEEE 802.11an HT40 Channel High (5230MHz) Power set 24

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FCC ID : M82-TREK572LTE Report No. : T140911L12-A-RP1-2

IEEE 802.11a Channel Low (5260MHz) Power set 25

IEEE 802.11a Channel Mid (5280MHz) Power set 25

IEEE 802.11a Channel High (5320MHz) Power set 20

IEEE 802.11an HT20 Channel Low (5260MHz) Power set 25

IEEE 802.11an HT20 Channel Mid (5280MHz) Power set 25

IEEE 802.11an HT20 Channel High (5320MHz) Power set 19.5

IEEE 802.11an HT40 Channel Low (5270MHz) Power set 24

IEEE 802.11an HT40 Channel High (5310MHz) Power set 15.5

IEEE 802.11a Channel Low (5500MHz) Power set 23

IEEE 802.11a Channel Mid (5580MHz) Power set 25

IEEE 802.11a Channel High (5700MHz) Power set 25

IEEE 802.11an HT20 Channel Low (5500MHz) Power set 22.5

IEEE 802.11an HT20 Channel Mid (5580MHz) Power set 25

IEEE 802.11an HT20 Channel High (5700MHz) Power set 25

IEEE 802.11an HT40 Channel Low (5510MHz) Power set 18.5

IEEE 802.11an HT40 Channel Mid (5550MHz) Power set 25

IEEE 802.11an HT40 Channel High (5670MHz) Chain0/Chain1 Power set 25

IEEE 802.11a Channel Low (5745MHz) Power set 25

IEEE 802.11a Channel Mid (5785MHz) Power set 25

IEEE 802.11a Channel High (5825MHz) Power set 25

IEEE 802.11an HT20 Channel Low (5745MHz) Power set 25

IEEE 802.11an HT20 Channel Mid (5785MHz) Power set 25

IEEE 802.11an HT20 Channel High (5825MHz) Power set 25

IEEE 802.11an HT40 Channel Low (5755MHz) Power set 25

IEEE 802.11an HT40 Channel High (5795MHz) Power set 25

- 3. All of the functions are under run.
- 4. Start test.

#### 7. FCC PART 15.407 REQUIREMENTS

#### 7.1 26dB BANDWIDTH

#### **LIMITS**

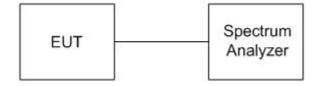
§ 15.303 (c), For purposes of this subpart, the emission bandwidth shall be determined by measuring the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, that are 26 dB down relative to the maximum level of the modulated carrier. Determination of the emissions bandwidth is based on the use of measurement instrumentation employing a peak detector function with an instrument resolutions bandwidth approximately equal to 1.0 percent of the emission bandwidth of the device under measurement.

#### **TEST EQUIPMENT**

Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	E4446A	MY43360132	06/10/2015

Remark: Each piece of equipment is scheduled for calibration once a year.

#### **TEST SETUP**



#### **TEST PROCEDURE**

- 1. Set RBW = approximately 1% of the emission bandwidth.
- 2. Set the VBW > RBW.
- 3. Detector = Peak.
- 4. Trace mode = max hold.
- 5. Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

### **TEST RESULTS**

#### **IEEE 802.11a Mode**

U-NII	Channel	Channel Frequency (MHz)	26dB Bandwidth (MHz)
	Low	5260	47.47
Band 2A	Middle	5280	46.32
	High	5320	38.07
	Low	5500	43.67
Band 2C	Middle	5580	45.94
	High	5700	49.89

#### IEEE 802.11an HT20 Mode

U-NII	Channel	Channel Frequency (MHz)	26dB Bandwidth (MHz)
	Low	5260	47.81
Band 2A	Middle	5280	50.05
	High	5320	50.07
	Low	5500	44.35
Band 2C	Middle	5580	48.93
	High	5700	55.01



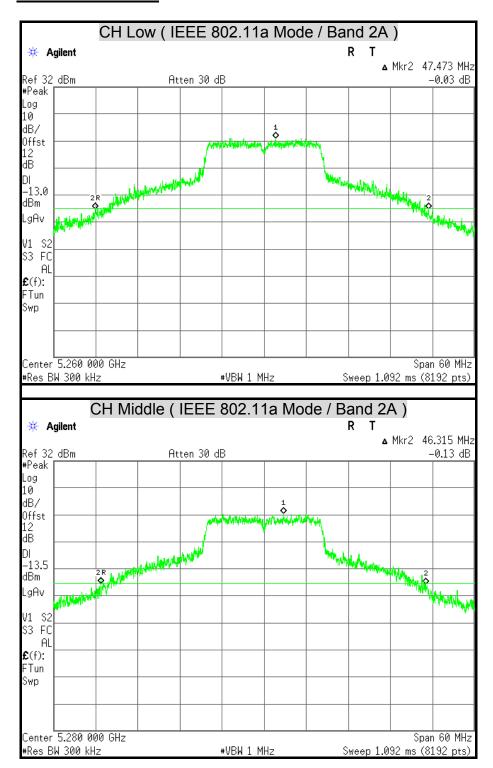
Report No.: T140911L12-A-RP1-2

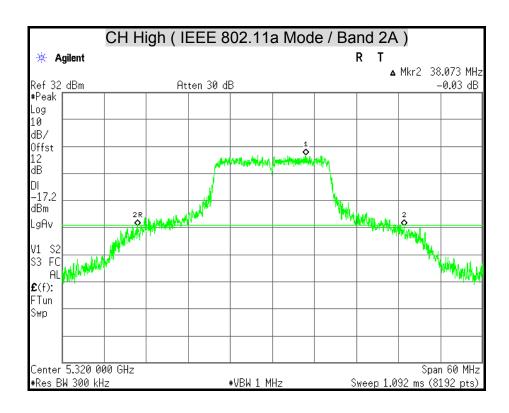
#### IEEE 802.11an HT40 Mode

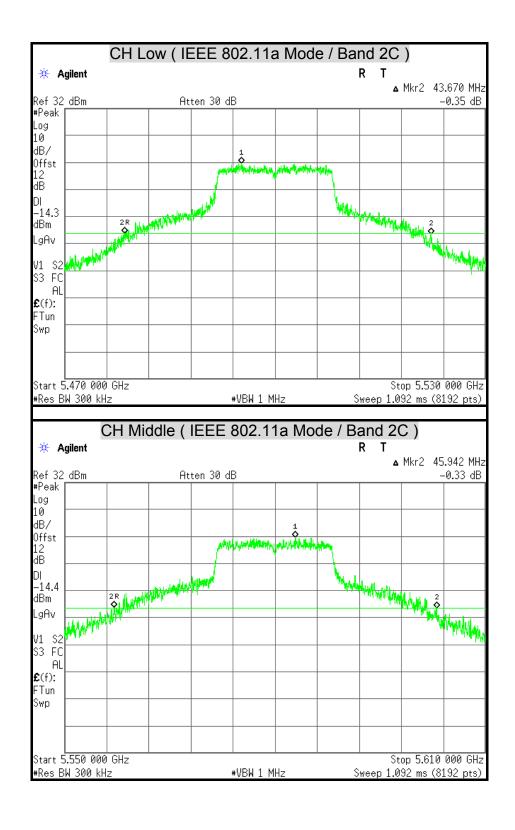
U-NII	Channel	Channel Frequency (MHz)	26dB Bandwidth (MHz)
Band 2A	Low	5270	91.21
Dallu ZA	High	5310	43.51
	Low	5510	66.07
Band 2C	Middle	5550	94.19
	High	5670	93.30

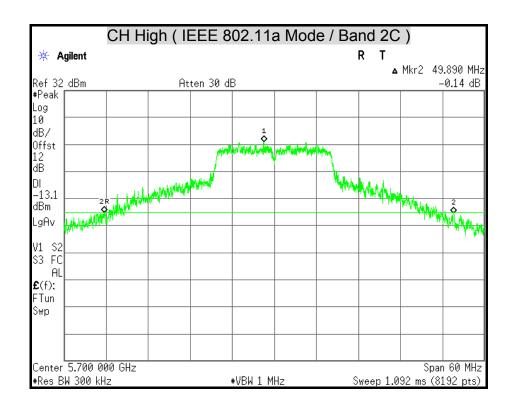
Report No.: T140911L12-A-RP1-2

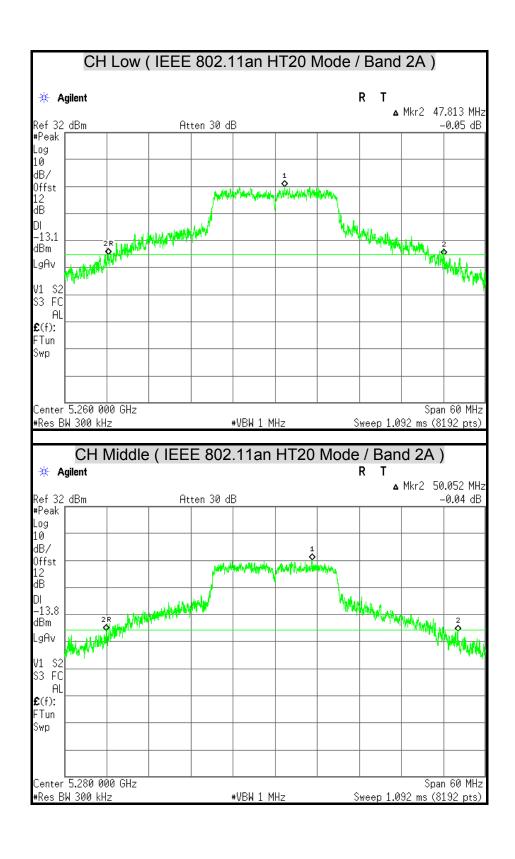
**26dB BANDWIDTH** 

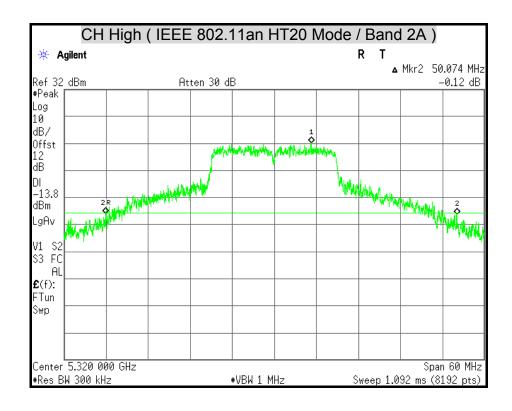


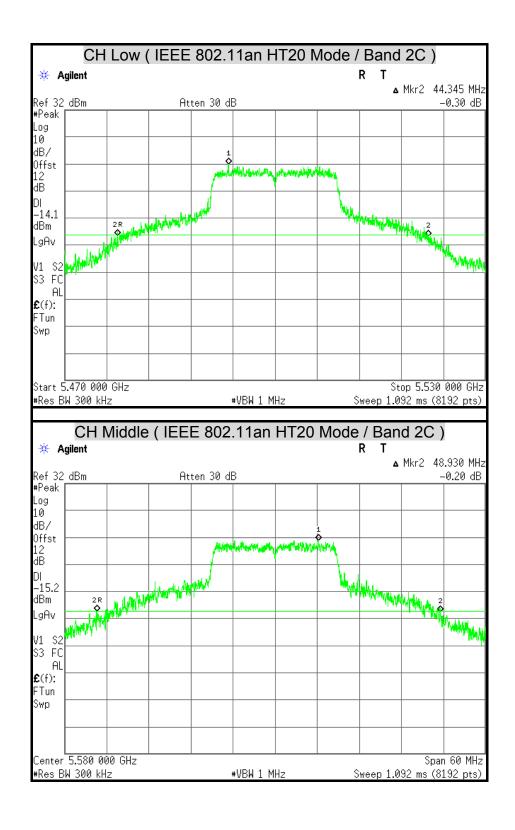


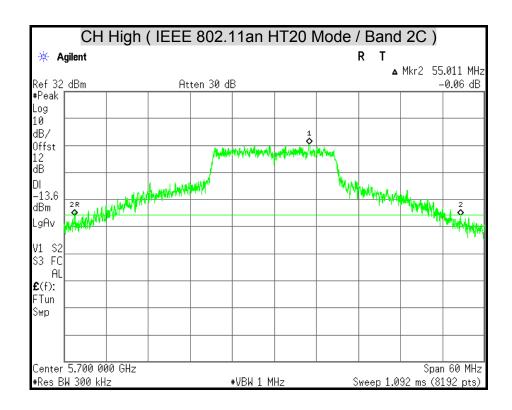


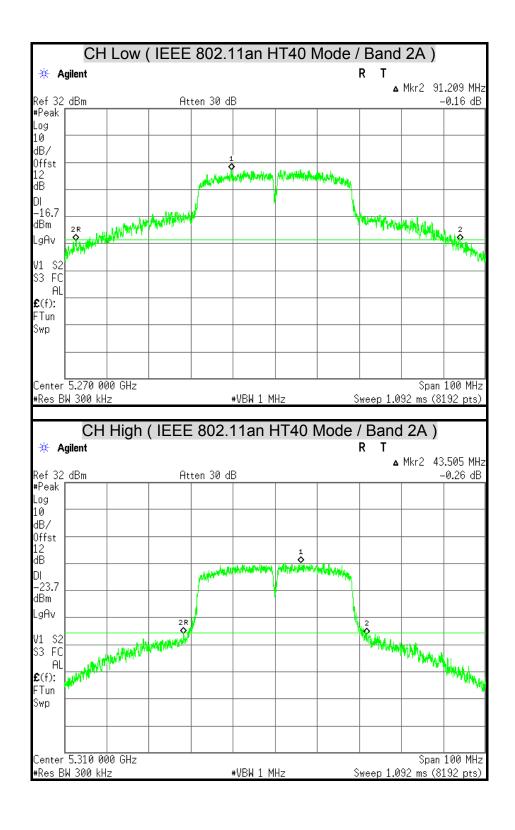


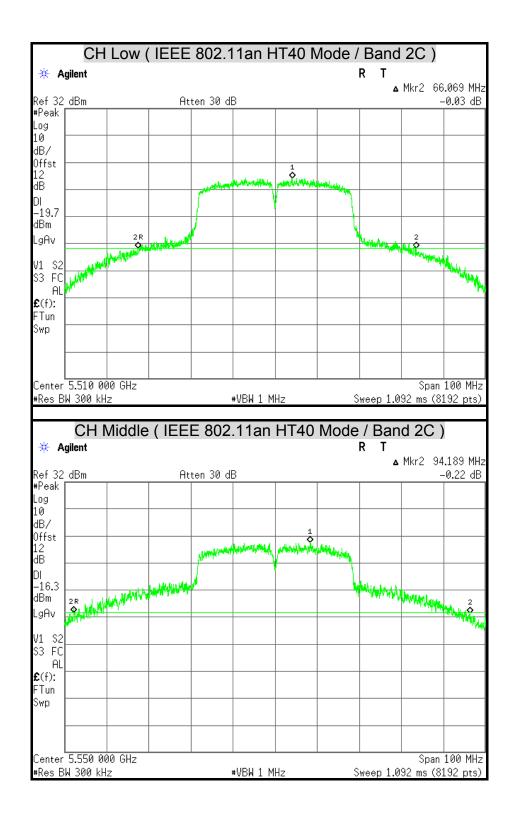


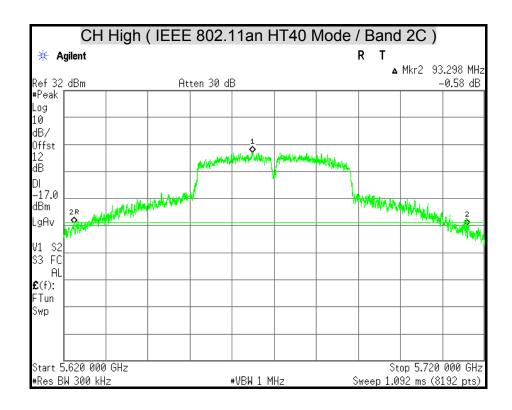












#### 7.2 6dB BANDWIDTH

#### **LIMITS**

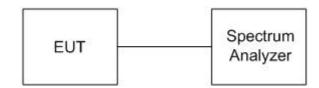
According to \$15.407 (e), within the 5.725-5.85 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

#### **TEST EQUIPMENT**

Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	E4446A	MY43360132	06/10/2015

Remark: Each piece of equipment is scheduled for calibration once a year.

#### **TEST SETUP**



#### **TEST PROCEDURE**

- 1. Place the EUT on the table and set it in the transmitting mode.
- 2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
- 3. Set the spectrum analyzer as RBW = 100kHz, VBW = 300kHz, Sweep = auto.
- 4. Mark the peak frequency and -6dB (upper and lower) frequency.
- 5. Repeat until all the rest channels are investigated.

#### **TEST RESULTS**

#### **IEEE 802.11a Mode**

U-NII	Channel	Channel Frequency (MHz)	6dB Bandwidth (MHz)
	Low	5745	16.33
Band 3	Middle	5785	16.45
	High	5825	16.30

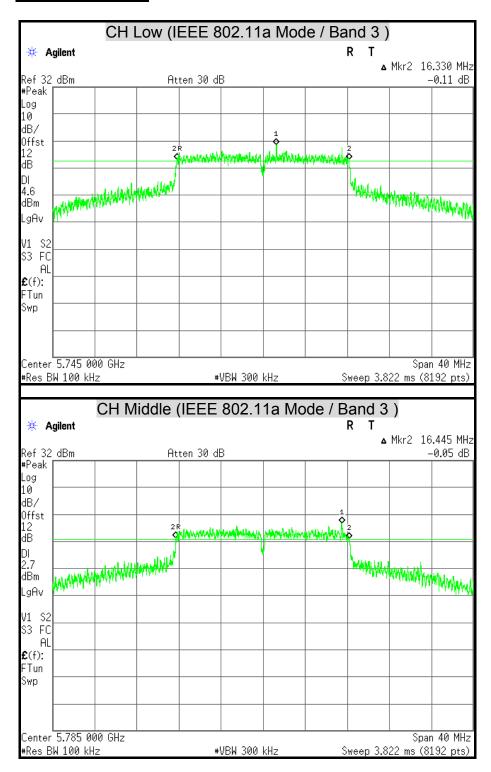
#### IEEE 802.11an HT20 Mode

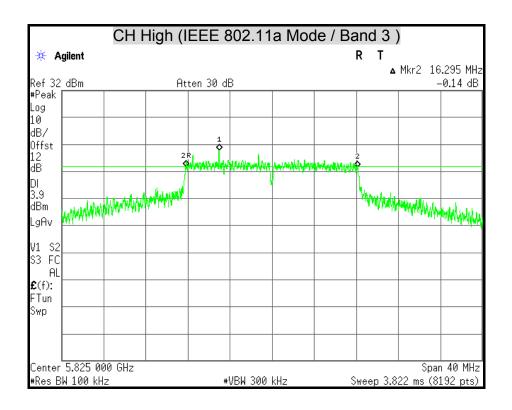
U-NII	Channel	Channel Frequency (MHz)	6dB Bandwidth (MHz)
Band 3	Low	5745	17.60
	Middle	5785	17.59
	High	5825	17.05

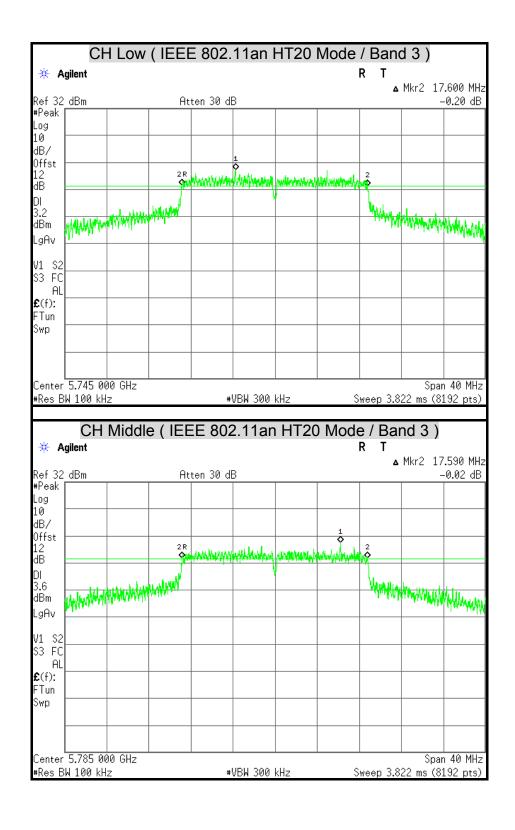
#### IEEE 802.11an HT40 Mode

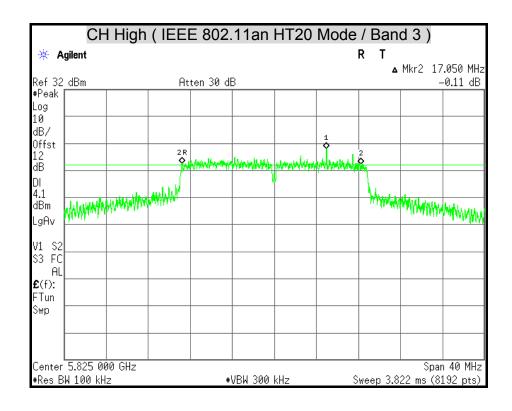
U-NII	Channel	Channel Frequency (MHz)	6dB Bandwidth (MHz)
Band 3	Low	5755	32.60
	High	5795	31.56

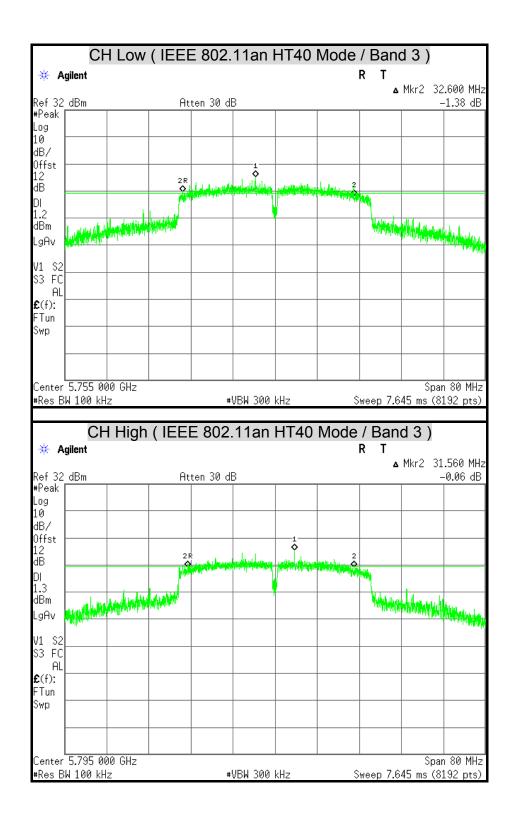
#### **6dB BANDWIDTH**











#### 7.3 MAXIMUM CONDUCTED OUTPUT POWER

#### **LIMITS**

§ 15.407(a)

- (1) For the band 5.15-5.25 GHz,
  - (I) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).
  - (II)For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.
  - (III) For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.



(IV) For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

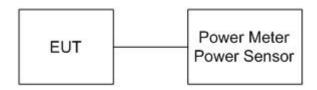
- (2) For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm 10 log B, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
- (3) For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

# **TEST EQUIPMENT**

Name of Equipment Manufacturer		Model	Serial Number	Calibration Due
Power Meter	ANRITSU	ML2495A	1149001	12/06/2014
Power Sensor	ANRITSU	MA2411B	1126148	12/06/2014

Remark: Each piece of equipment is scheduled for calibration once a year.

# **TEST SETUP**



# **TEST PROCEDURE**

The transmitter output is connected to the Power Meter. The Power Meter is set to the power detection.

# **TEST RESULTS**

The power shall not exceeded the limit as follows:

# IEEE 802.11a Mode / UNII Band 2A

Channel	Channel Frequency (MHz)	26dB Bandwidth (B) (MHz)	10 Log B (dB)	11dBm + 10 Log B (dBm)	Maximum Conducted Output Power Limit (dBm)
Low	5260	47.47	16.76447	27.76447	24
Middle	5280	46.32	16.65722	27.65722	24
High	5320	38.07	15.80617	26.80617	24

# IEEE 802.11a Mode / UNII Band 2C

Channel	Channel Frequency (MHz)	26dB Bandwidth (B) (MHz)	10 Log B (dB)	11dBm + 10 Log B (dBm)	Maximum Conducted Output Power Limit (dBm)
Low	5500	43.67	16.40183	27.40183	24
Middle	5580	45.94	16.62210	27.62210	24
High	5700	49.89	16.98014	27.98014	24

# IEEE 802.11an HT20 Mode/ UNII Band 2A

Channel	Channel Frequency (MHz)	26dB Bandwidth (B) (MHz)	10 Log B (dB)	11dBm + 10 Log B (dBm)	Maximum Conducted Output Power Limit (dBm)
Low	5260	47.81	16.79546	27.79546	24
Middle	5280	50.05	16.99421	27.99421	24
High	5320	50.07	16.99612	27.99612	24

# IEEE 802.11an HT20 Mode/ UNII Band 2C

Channel	Channel Frequency (MHz)	26dB Bandwidth (B) (MHz)	10 Log B (dB)	11dBm + 10 Log B (dBm)	Maximum Conducted Output Power Limit (dBm)
Low	5500	44.35	16.46845	27.46845	24
Middle	5580	48.93	16.89575	27.89575	24
High	5700	55.01	17.40450	28.40450	24

# IEEE 802.11an HT40 Mode/ UNII Band 2A

Channel	Channel Frequency (MHz)	26dB Bandwidth (B) (MHz)	10 Log B (dB)	11dBm + 10 Log B (dBm)	Maximum Conducted Output Power Limit (dBm)
Low	5270	91.21	19.60038	30.60038	24
High	5310	43.51	16.38539	27.38539	24

# IEEE 802.11an HT40 Mode/ UNII Band 2C

Channel	Channel Frequency (MHz)	26dB Bandwidth (B) (MHz)	10 Log B (dB)	11dBm + 10 Log B (dBm)	Maximum Conducted Output Power Limit (dBm)
Low	5510	66.07	18.19998	29.19998	24
Middle	5550	94.19	19.74000	30.74000	24
High	5670	93.30	19.69872	30.69872	24

## IEEE 802.11a Mode / UNII Band 1

Channel	Channel Frequency	Power (dBm)		Power Limit		Pass / Fail
	(MHz)	(dBm)	(W)	(dBm)	(W)	1 000 / 1 0
Low	5180	17.32	0.0540	24	0.2512	PASS
Middle	5220	21.05	0.1274	24	0.2512	PASS
High	5240	21.10	0.1288	24	0.2512	PASS

#### Remark:

- 1. At finial test to get the worst-case emission at 6Mbps.
- 2. The cable assembly insertion loss of 12dB (including 10 dB pad and 2dB cable) was Entered as an offset in the power meter to allow for direct reading of power.

# IEEE 802.11an HT20 Mode / UNII Band 1

Channel	Channel Frequency	/alE	Power (dBm)		Power Limit	
	(MHz)	(dBm)	(W)	(dBm)	(W)	Pass / Fail
Low	5180	17.29	0.0536	24	0.2512	PASS
Middle	5220	21.03	0.1268	24	0.2512	PASS
High	5240	20.94	0.1242	24	0.2512	PASS

- 1. At finial test to get the worst-case emission at 6.5Mbps.
- 2. The cable assembly insertion loss of 12dB (including 10 dB pad and 2dB cable) was Entered as an offset in the power meter to allow for direct reading of power.

# IEEE 802.11an HT40 Mode / UNII Band 1

Channel	Channel Frequency	Power (dBm)		Power Limit		Pass / Fail
Onamici	(MHz)	(dBm)	(W) (dBm) (W)		(W)	1 455 / 1 411
Low	5190	13.02	0.0200	24	0.2512	PASS
High	5230	20.64	0.1159	24	0.2512	PASS

- 1. At finial test to get the worst-case emission at 13.5Mbps.
- 2. The cable assembly insertion loss of 12dB (including 10 dB pad and 2dB cable) was Entered as an offset in the power meter to allow for direct reading of power.

## IEEE 802.11a Mode / UNII Band 2A

Channel	Channel Frequency	/ <b>4</b> F	Power (dBm)		Power Limit	
	(MHz)	(dBm)	(W)	(dBm)	(W)	Pass / Fail
Low	5260	20.82	0.1208	24	0.2512	PASS
Middle	5280	20.60	0.1148	24	0.2512	PASS
High	5320	17.67	0.0585	24	0.2512	PASS

#### Remark:

- 1. At finial test to get the worst-case emission at 6Mbps.
- 2. The cable assembly insertion loss of 12dB (including 10 dB pad and 2dB cable) was Entered as an offset in the power meter to allow for direct reading of power.

#### IEEE 802.11an HT20 Mode / UNII Band 2A

Channel	Channel Frequency	/.dF	Power (dBm)		Power Limit	
	(MHz)	(dBm)	(W)	(dBm)	(W)	Pass / Fail
Low	5260	20.86	0.1219	24	0.2512	PASS
Middle	5280	20.60	0.1148	24	0.2512	PASS
High	5320	17.24	0.0530	24	0.2512	PASS

- 1. At finial test to get the worst-case emission at 6.5Mbps.
- 2. The cable assembly insertion loss of 12dB (including 10 dB pad and 2dB cable) was Entered as an offset in the power meter to allow for direct reading of power.

# IEEE 802.11an HT40 Mode / UNII Band 2A

Channel	Channel Frequency	/alE	wer Bm)	Power	Pass / Fail	
Onamici	(MHz)	(dBm) (W)		(dBm)	(W)	1 455 / 1 411
Low	5270	20.06	0.1014	24	0.2512	PASS
High	5310	13.65	0.0232	24	0.2512	PASS

- 1. At finial test to get the worst-case emission at 13.5Mbps.
- 2. The cable assembly insertion loss of 12dB (including 10 dB pad and 2dB cable) was Entered as an offset in the power meter to allow for direct reading of power.

### IEEE 802.11a Mode / UNII Band 2C

Channel	Channel Frequency	Power (dBm)		Power Limit		Pass / Fail
- Cridinior	(MHz)	(dBm)	(W)	(dBm)	(W)	1 400 / 1 4
Low	5500	19.98	0.0995	24	0.2512	PASS
Middle	5580	19.83	0.0962	24	0.2512	PASS
High	5700	20.83	0.1211	24	0.2512	PASS

## Remark:

- 1. At finial test to get the worst-case emission at 6Mbps.
- 2. The cable assembly insertion loss of 12dB (including 10 dB pad and 2dB cable) was Entered as an offset in the power meter to allow for direct reading of power.

## IEEE 802.11an HT20 Mode / UNII Band 2C

Channel	Channel Frequency	Power (dBm)		Power Limit		Pass / Fail
	(MHz)	(dBm)	(W)	(dBm)	(W)	1 400 / 1 4
Low	5500	19.73	0.0940	24	0.2512	PASS
Middle	5580	19.84	0.0964	24	0.2512	PASS
High	5700	20.77	0.1194	24	0.2512	PASS

- 1. At finial test to get the worst-case emission at 6.5Mbps.
- 2. The cable assembly insertion loss of 12dB (including 10 dB pad and 2dB cable) was Entered as an offset in the power meter to allow for direct reading of power.

# IEEE 802.11an HT40 Mode / UNII Band 2C

Channel Frequency		Power (dBm)		Power	Pass / Fail	
	(MHz)	(dBm)	(W)	(dBm)	(W)	1 400 / 1 4
Low	5510	17.10	0.0513	24	0.2512	PASS
Middle	5550	20.42	0.1102	24	0.2512	PASS
High	5670	20.14	0.1033	24	0.2512	PASS

- 1. At finial test to get the worst-case emission at 13.5Mbps.
- 2. The cable assembly insertion loss of 12dB (including 10 dB pad and 2dB cable) was Entered as an offset in the power meter to allow for direct reading of power.

### IEEE 802.11a Mode / UNII Band 3

Channel	Channel		(aD \		Limit	Pass / Fail
	(MHz)	(dBm)	(W)	(dBm)	(W)	1 000 / 1 0
Low	5745	20.34	0.1081	30	1	PASS
Middle	5785	20.14	0.1033	30	1	PASS
High	5825	19.29	0.0849	30	1	PASS

## Remark:

- 1. At finial test to get the worst-case emission at 6Mbps.
- 2. The cable assembly insertion loss of 12dB (including 10 dB pad and 2dB cable) was Entered as an offset in the power meter to allow for direct reading of power.

## IEEE 802.11an HT20 Mode / UNII Band 3

Channel Frequency		Power (dBm)		Power Limit		Pass / Fail
	(MHz)	(dBm)	(W)	(dBm)	(W)	1 000 / 1 0
Low	5745	20.35	0.1084	30	1	PASS
Middle	5785	20.08	0.1019	30	1	PASS
High	5825	19.28	0.0847	30	1	PASS

- 1. At finial test to get the worst-case emission at 6.5Mbps.
- 2. The cable assembly insertion loss of 12dB (including 10 dB pad and 2dB cable) was Entered as an offset in the power meter to allow for direct reading of power.

# IEEE 802.11an HT40 Mode / UNII Band 3

Channel	Channel Frequency	/ <sub>4</sub> F	wer Bm)	Power Limit		Pass / Fail
Onamici	(MHz)	(dBm) (W)		(dBm)	(W)	1 455 / 1 411
Low	5755	20.50	0.1122	30	1	PASS
High	5795	20.04	0.1009	30	1	PASS

- 1. At finial test to get the worst-case emission at 13.5Mbps.
- 2. The cable assembly insertion loss of 12dB (including 10 dB pad and 2dB cable) was Entered as an offset in the power meter to allow for direct reading of power.

# 7.4 PEAK POWER SPECTRAL DENSITY

## **LIMITS**

§ 15.407 (a)

- (1) For the band 5.15-5.25 GHz
  - (I) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).
  - (II) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.
  - (IV) For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

- (2) For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm 10 log B, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
- (3) For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

#### TEST EQUIPMENT

Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	E4446A	MY43360132	06/10/2015

**Remark:** Each piece of equipment is scheduled for calibration once a year.

#### TEST SETUP



# **TEST PROCEDURE**

- Place the EUT on the table and set it in transmitting mode.
   Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
- 2. Set the spectrum analyzer as RBW = 1MHz, VBW = 3MHz, Span = Sweep= AUTO
- 3. Record the max. reading.
- 4. Repeat the above procedure until the measurements for all frequencies are completed.

# **TEST RESULTS**

# **IEEE 802.11a Mode**

U-NII	Channel	Channel Frequency (MHz)	PPSD (dBm)	Minimum Limit (dBm/MHz)	Pass / Fail
	Low	5180	6.50	11	PASS
Band 1	Middle	5220	9.99	11	PASS
	High	5240	9.88	11	PASS
	Low	5260	9.88	11	PASS
Band 2A	Middle	5280	9.69	11	PASS
	High	5320	6.58	11	PASS
	Low	5500	8.87	11	PASS
Band 2C	Middle	5580	9.21	11	PASS
	High	5700	9.86	11	PASS

- 1. At finial test to get the worst-case emission at 6Mbps.
- 2. The cable assembly insertion loss of 12 dB (including 10 dB pad and 2 dB cable) was Entered as an offset in the spectrum analyzer to allow for direct reading of power.

# IEEE 802.11an HT20 Mode

U-NII	Channel	Channel Frequency (MHz)	PPSD (dBm)	Minimum Limit (dBm/MHz)	Pass / Fail
	Low	5180	6.08	11	PASS
Band 1	Middle	5220	9.74	11	PASS
	High	5240	9.71	11	PASS
	Low	5260	9.74	11	PASS
Band 2A	Middle	5280	9.47	11	PASS
	High	5320	6.16	11	PASS
	Low	5500	8.37	11	PASS
Band 2C	Middle	5580	8.86	11	PASS
	High	5700	9.57	11	PASS

- 1. At finial test to get the worst-case emission at 6.5Mbps.
- 2. The cable assembly insertion loss of 12 dB (including 10 dB pad and 2 dB cable) was Entered as an offset in the spectrum analyzer to allow for direct reading of power.

# IEEE 802.11n HT40 Mode

U-NII	Channel	Channel Frequency (MHz)	PPSD (dBm)	Minimum Limit (dBm/MHz)	Pass / Fail
Band 1	Low	5190	-0.57	11	PASS
Danu i	High	5230	6.92	11	PASS
Band 2A	Low	5270	6.88	11	PASS
Dallu ZA	High	5310	-0.06	11	PASS
	Low	5510	3.21	11	PASS
Band 2C	Middle	5550	6.72	11	PASS
	High	5670	7.27	11	PASS

- 1. At finial test to get the worst-case emission at 13.5Mbps.
- 2. The cable assembly insertion loss of 12 dB (including 10 dB pad and 2 dB cable) was Entered as an offset in the spectrum analyzer to allow for direct reading of power.

### **IEEE 802.11a Mode**

U-NII	Channel	Channel Frequency (MHz)	PPSD (dBm)	Minimum Limit (dBm/500kHz )	Pass / Fail
	Low	5745	7.06	30	PASS
Band 3	Middle	5785	6.60	30	PASS
	High	5825	6.10	30	PASS

### Remark:

- 1. At finial test to get the worst-case emission at 6Mbps.
- 2. The cable assembly insertion loss of 12 dB (including 10 dB pad and 2 dB cable) was Entered as an offset in the spectrum analyzer to allow for direct reading of power.

#### IEEE 802.11an HT20 Mode

U-NII	Channel	Channel Frequency (MHz)	PPSD (dBm)	Minimum Limit (dBm/500kHz )	Pass / Fail
Band 3	Low	5745	6.82	30	PASS
	Middle	5785	6.31	30	PASS
	High	5825	5.85	30	PASS

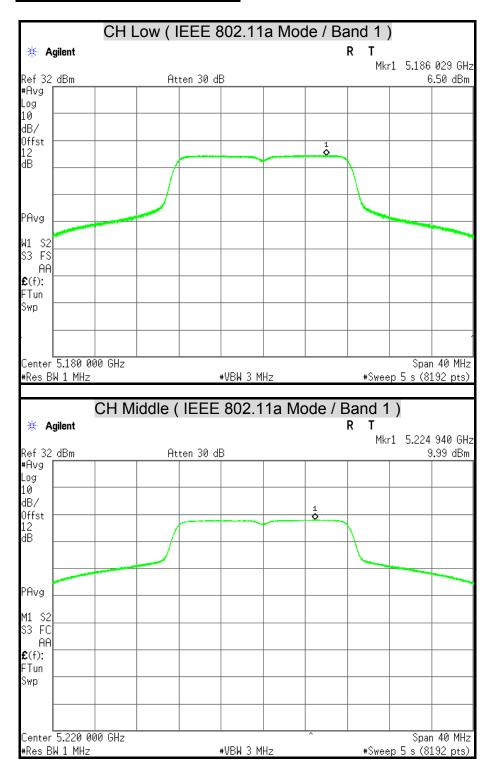
- 1. At finial test to get the worst-case emission at 6.5Mbps.
- 2. The cable assembly insertion loss of 12 dB (including 10 dB pad and 2 dB cable) was Entered as an offset in the spectrum analyzer to allow for direct reading of power.

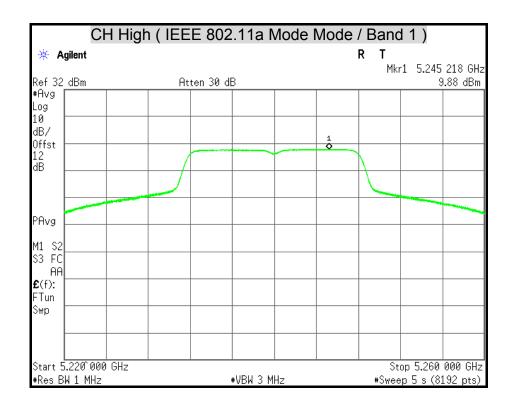
## IEEE 802.11an HT40 Mode

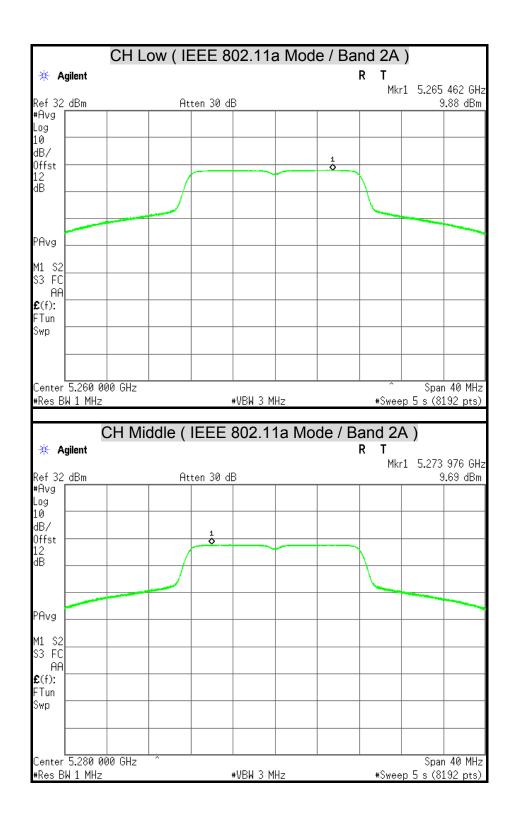
U-NII	Channel	Channel Frequency (MHz)	PPSD (dBm)	Minimum Limit (dBm/500kHz )	Pass / Fail
Band 3	Low	5755	4.36	30	PASS
	High	5795	3.73	30	PASS

- 1. At finial test to get the worst-case emission at 13.5Mbps.
- 2. The cable assembly insertion loss of 12 dB (including 10 dB pad and 2 dB cable) was Entered as an offset in the spectrum analyzer to allow for direct reading of power.

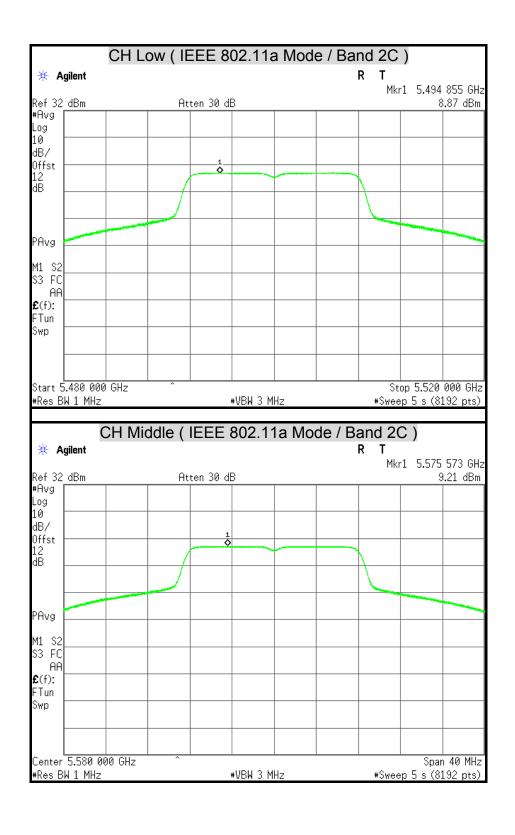
## **POWER SPECTRAL DENSITY**



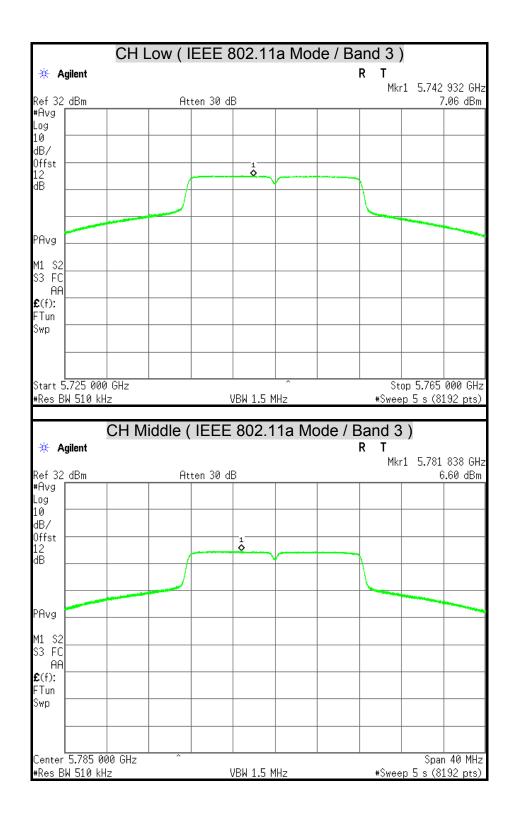


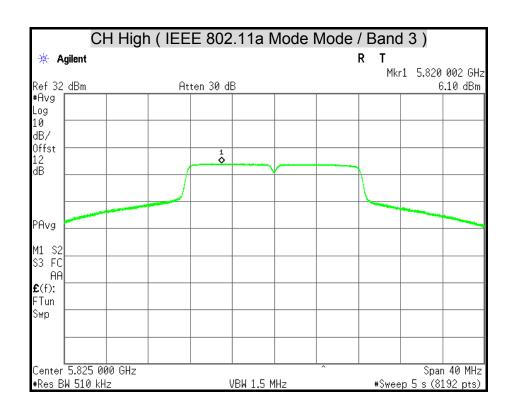


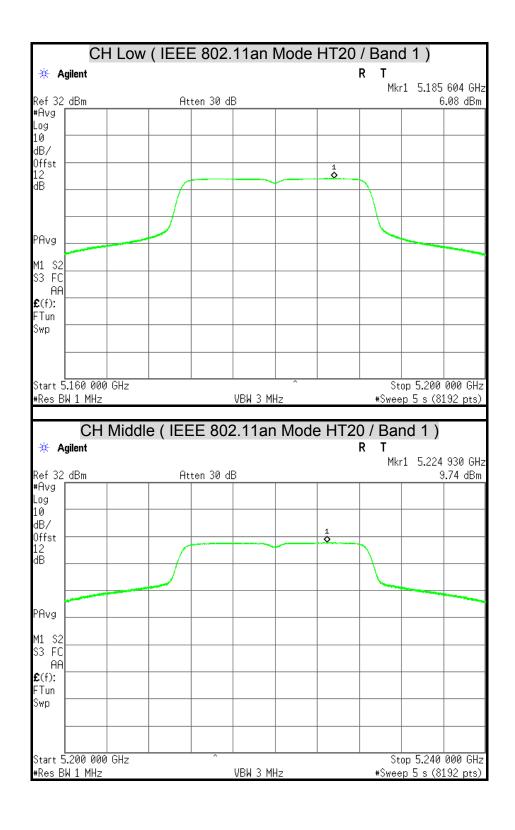
CH High ( IEEE 802.11a Mode Mode / Band 2A ) \* Agilent Mkr1 5.325 521 GHz Ref 32 dBm Atten 30 dB 6.58 dBm #Avg Log 10 dB/ Offst 1 **◊** 12 dB PAvg M1 S2 S3 FC AΑ **£**(f): FTun Swp Stop 5.340 000 GHz Start 5.300 000 GHz #VBW 3 MHz #Sweep 5 s (8192 pts) #Res BW 1 MHz

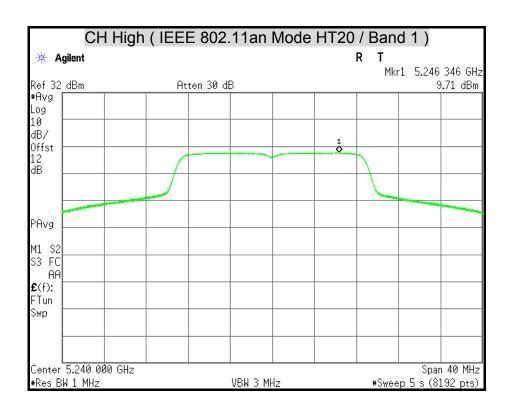


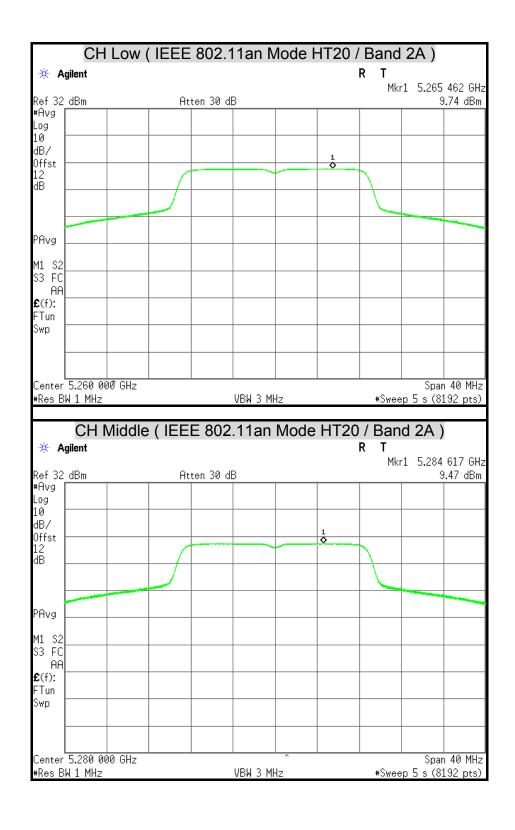
CH High ( IEEE 802.11a Mode Mode / Band 2C ) \* Agilent Mkr1 5.696 648 GHz Ref 32 dBm Atten 30 dB 9.86 dBm #Avg Log 10 dB/ Offst 12 dB PAvg M1 S2 S3 FC AΑ **£**(f): FTun Swp Center 5.700 000 GHz Span 40 MHz #Res BW 1 MHz #VBW 3 MHz #Sweep 5 s (8192 pts)











Center 5.320 000 GHz

#Res BW 1 MHz

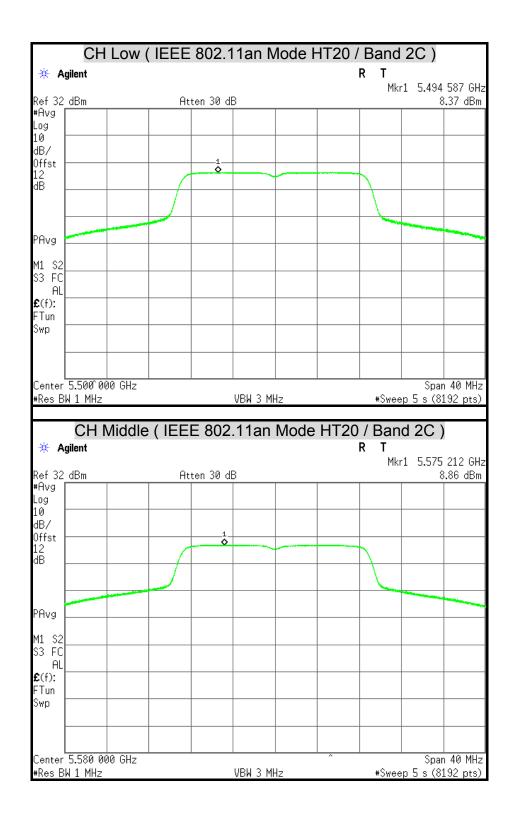
Report No.: T140911L12-A-RP1-2

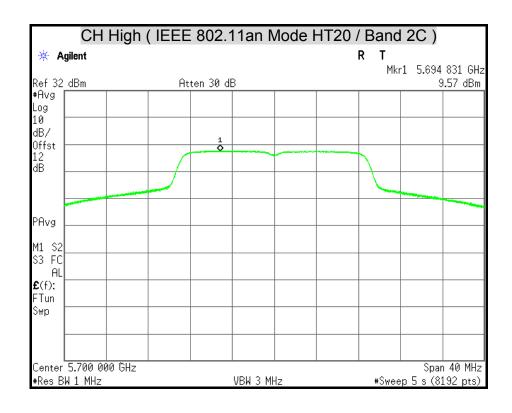
Span 40 MHz

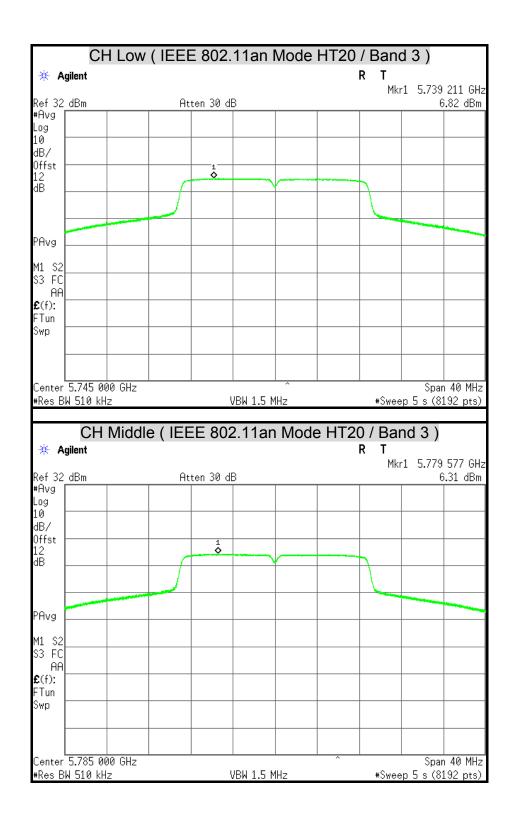
#Sweep 5 s (8192 pts)

CH High ( IEEE 802.11an Mode HT20 / Band 2A ) \* Agilent Mkr1 5.324 588 GHz Ref 32 dBm Atten 30 dB 6.16 dBm #Avg Log 10 dB/ Offst 12 dB PAvg M1 S2 S3 FC **£**(f): FTun Swp

VBW 3 MHz







Center 5.825 000 GHz

#Res BW 510 kHz

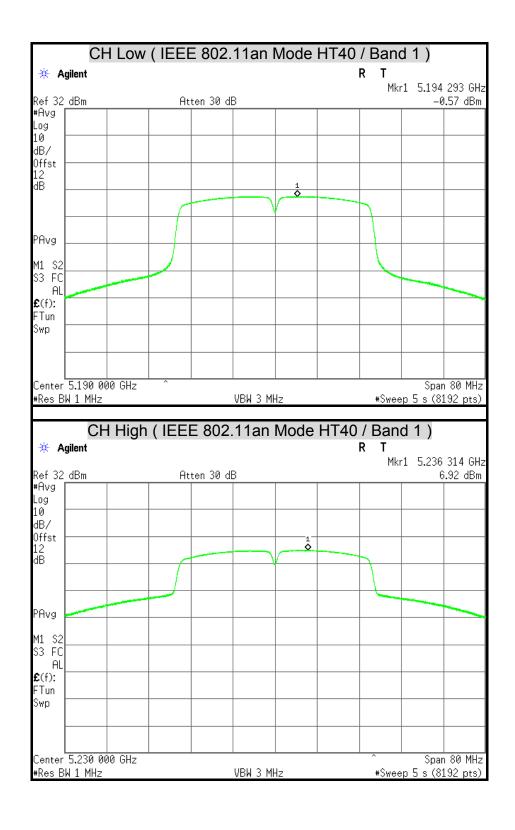
Report No.: T140911L12-A-RP1-2

Span 40 MHz

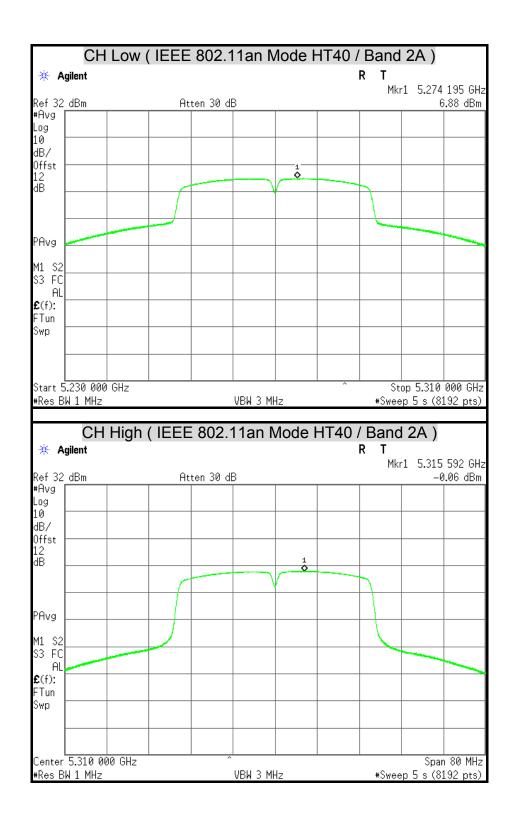
#Sweep 5 s (8192 pts)

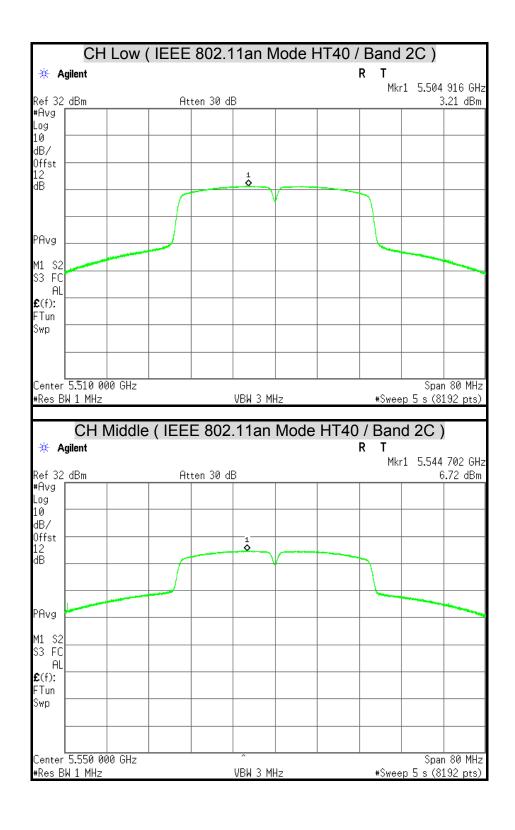
CH High ( IEEE 802.11an Mode HT20 / Band 3 ) \* Agilent Mkr1 5.819 601 GHz Atten 30 dB 5.85 dBm Ref 32 dBm #Avg Log 10 dB/ Offst 12 dB PAvg M1 S2 S3 FC AΑ **£**(f): FTun Swp

VBW 1.5 MHz

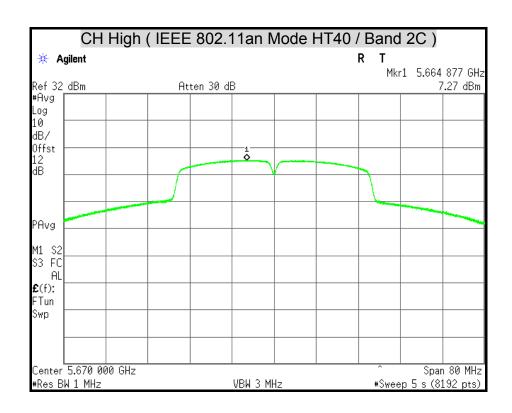


Report No.: T140911L12-A-RP1-2

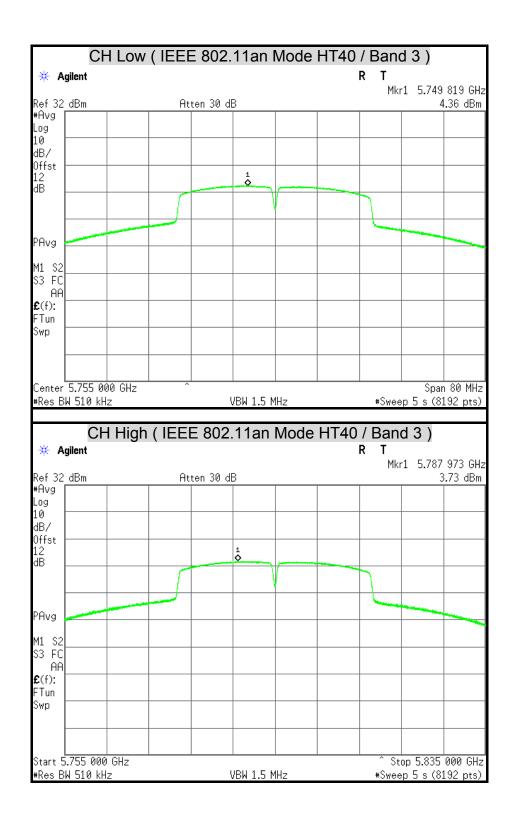




Report No.: T140911L12-A-RP1-2



Report No.: T140911L12-A-RP1-2



# 7.5 RADIATED EMISSION

# **LIMITS**

(1) According to § 15.205 (a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

Report No.: T140911L12-A-RP1-2

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
<sup>1</sup> 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 -1710	10.6 -12.7
6.26775 - 6.26825	108 -121.94	1718.8 - 1722.2	13.25 -13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 – 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 -16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2655 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3338	36.43 - 36.5
12.57675 - 12.57725	322 -335.4	3600 - 4400	( <sup>2</sup> )
13.36 - 13.41			

### Remark:

(2) According to § 15.205 (b) Except as provided in paragraphs (d) and (e) of this section, the field strength of emissions appearing within these frequency bands shall not exceed the limits shown in §15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in §15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in §15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in §15.35 apply to these measurements.

<sup>1. 1</sup> Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.

<sup>2. &</sup>lt;sup>2</sup> Above 38.6

(3) According to § 15.209 (a) Except as provided elsewhere in this Subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table :

Report No.: T140911L12-A-RP1-2

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 - 0.490	2400/F(KHz)	300
0.490 – 1.705	24000/F(KHz)	30
1.705 – 30.0	30	30
30 - 88	100 **	3
88 - 216	150 **	3
216 - 960	200 **	3
Above 960	500	3

**Remark:** \*\*Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g., Sections 15.231 and 15.241.

(4) According to § 15.209 (b) In the emission table above, the tighter limit applies at the band edges.

# **TEST EQUIPMENT**

Radiated Emission / 966Chamber\_B

Name of Equipment	Manufacture	Model	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	E4446A	MY46180323	04/15/2015
EMI Test Receiver	ROHDE & SCHWARZ	ESCS 30	835418/008	10/14/2015
Bi-log Antenna	SCHWARZBECK	VULB 9168	9168-250	08/21/2015
Broad-Band Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-778	08/19/2015
Double-Ridged Waveguide Horn	ETS-LINDGREN	3117	00078733	12/05/2014
Horn Antenna	COM-POWER	AH-840	03077	12/18/2014
Pre-Amplifier	Agilent	8447D	2944A10052	07/15/2015
Pre-Amplifier	Agilent	8449B	3008A01916	07/15/2015
LOOP Antenna	EMCO	6502	8905-2356	09/23/2015
Notch Filters Band Reject	I MICTO- I TODICS		026	N.C.R.
Band Reject Filter	Micro-Tronics	BRC50703-01	004	N.C.R.
Band Reject Filter	Micro-Tronics	BRC50704-01	004	N.C.R.
Band Reject Filter	Micro-Tronics	BRC50705-01	007	N.C.R.

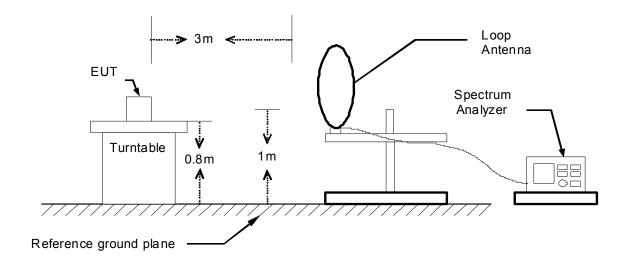
Remark: 1. Each piece of equipment is scheduled for calibration once a year.

2. N.C.R = No Calibration Request.

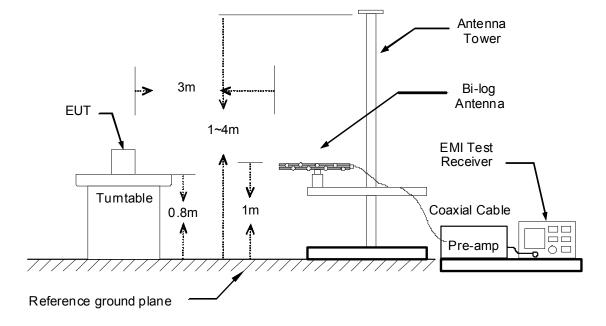
# **TEST SETUP**

The diagram below shows the test setup that is utilized to make the measurements for emission below 1GHz.

# 9kHz ~ 30MHz

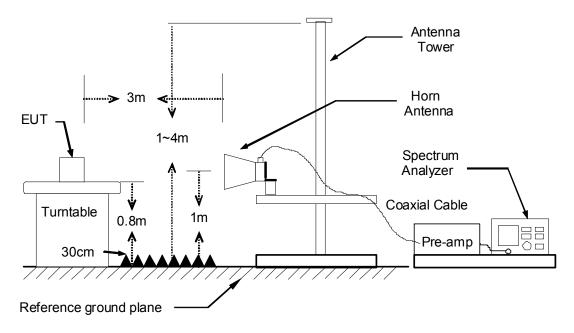


# 30MHz ~ 1GHz



The diagram below shows the test setup that is utilized to make the measurements for emission above 1GHz.

Report No.: T140911L12-A-RP1-2



# **TEST PROCEDURE**

- 1. The EUT was placed on the top of a rotating table 0.8 meters above the ground. The table was rotated 360 degrees to determine the position of the highest radiation.
- 2. While measuring the radiated emission below 1GHz, the EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. While measuring the radiated emission above 1GHz, the EUT was set 3 meters away from the interference-receiving antenna.
- 3. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarization of the antenna are set to make the measurement.
- 4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the table was turned from 0 degrees to 360 degrees to find the maximum reading.
- 5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- 6. If the emission level of the EUT in peak mode was 10 dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10 dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

# Remark:

- 1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 KHz for Peak detection (PK) and Quasi-peak detection (QP) at frequency below 1GHz.
- 2. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz for Peak detection and frequency above 1GHz.
- 3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 10 Hz for Average detection (AV) at frequency above 1GHz.

# **TEST RESULTS**

# Below 1 GHz (9kHz ~ 30MHz)

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

# Below 1 GHz (30MHz ~ 1GHz)

<b>Product Name</b>	Computer	Test By	Waternil Guan
Test Model	TREK-572	Test Date	2014/10/30
Test Mode	TX Mode	Temp. & Humidity	27°C, 54%

OCC Chambay D at Officiar / Havingstol									
966 Chamber_B at 3Meter / Horizontal									
Frequency (MHz)	Reading (dBµV)	Correction Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Remark			
70.74	42.98	-16.53	26.45	40.00	-13.55	Peak			
106.63	43.67	-17.79	25.88	43.50	-17.62	Peak			
159.01	37.00	-13.43	23.58	43.50	-19.92	Peak			
250.19	39.97	-13.71	26.26	46.00	-19.74	Peak			
389.87	39.55	-10.12	29.43	46.00	-16.57	Peak			
474.26	37.36	-8.53	28.83	46.00	-17.17	Peak			
685.72	33.90	-5.02	28.88	46.00	-17.12	Peak			
833.16	38.06	-2.45	35.62	46.00	-10.38	Peak			
		966 Chamb	er_B at 3Met	ter / Vertical					
Frequency (MHz)	Reading (dBµV)	Correction Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Remark			
34.85	51.66	-15.08	36.58	40.00	-3.42	Peak			
73.65	49.47	-17.20	32.27	40.00	-7.73	Peak			
106.63	44.14	-17.79	26.35	43.50	-17.15	Peak			
151.25	32.96	-13.63	19.32	43.50	-24.18	Peak			
250.19	36.67	-13.71	22.96	46.00	-23.04	Peak			
277.35	36.14	-12.47	23.68	46.00	-22.32	Peak			
396.66	35.58	-9.99	25.59	46.00	-20.41	Peak			
837.04	33.99	-2.37	31.62	46.00	-14.38	Peak			

### Remark:

- 1. Quasi-peak test would be performed if the peak result were greater than the quasi-peak limit.
- 2. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 3. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB) PreAmp.Gain (dB)
- 4. Result (dBuV/m) = Reading (dBuV) + Correction Factor (dB/m)
- 5. Margin (dB) = Remark result (dBuV/m) Quasi-peak limit (dBuV/m).

# **Above 1 GHz**

Product Name	Computer	Test By	Rex Chiu
Test Model	TREK-572	Test Date	2014/11/25
Test Mode	UNII Band 1/ IEEE 802.11a TX / CH Low	Temp. & Humidity	22°C, 56%

	966 Chamber_B at 3Meter / Horizontal								
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
3075.00	43.05		4.92	47.96		74.00	54.00	-6.04	Peak
3845.00	42.85		6.13	48.98		74.00	54.00	-5.02	Peak
5450.00	40.63		10.40	51.03		74.00	54.00	-2.97	Peak
6096.00	38.21		12.73	50.94		74.00	54.00	-3.06	Peak
7704.00	38.91		13.34	52.25		74.00	54.00	-1.75	Peak
9012.00	37.06		15.17	52.23		74.00	54.00	-1.77	Peak
					3Meter / V	ertical			·
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
3235.00	43.21		5.18	48.40		74.00	54.00	-5.60	Peak
3905.00	42.90		6.21	49.12		74.00	54.00	-4.88	Peak
5460.00	41.86		10.44	52.30		74.00	54.00	-1.70	Peak
6132.00	38.14		12.71	50.86		74.00	54.00	-3.14	Peak
7344.00	38.04		13.16	51.20		74.00	54.00	-2.80	Peak

## Remark:

8928.00

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Average test would be performed if the peak result were greater than the average limit.

15.20

3. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

74.00

54.00

-2.30

Peak

51.70

- 4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 5. Result = Reading + Correction Factor

36.49

Margin = Result - Limit

 $Remark\ Peak = Result(PK) - Limit(AV)$ 

Product Name Computer		Test By	Rex Chiu
Test Model	TREK-572	Test Date	2014/11/25
Test Mode	UNII Band 1/ IEEE 802.11a TX / CH Middle	Temp. & Humidity	22°C, 56%

	966 Chamber_B at 3Meter / Horizontal								
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)		Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
3200.00	43.33		5.13	48.46		74.00	54.00	-5.54	Peak
4700.00	42.35		8.75	51.10		74.00	54.00	-2.90	Peak
5425.00	40.75		10.30	51.05		74.00	54.00	-2.95	Peak
6300.00	38.95		12.64	51.59		74.00	54.00	-2.41	Peak
7620.00	38.17		13.10	51.27		74.00	54.00	-2.73	Peak
8952.00	36.77		15.19	51.96		74.00	54.00	-2.04	Peak
		9	66 Chaml	ber_B at 3	3Meter / V	ertical			
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)		Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
3735.00	43.20		5.97	49.17		74.00	54.00	-4.83	Peak
5150.00	46.71	36.94	9.21	55.91	46.15	74.00	54.00	-7.85	AVG
5355.00	41.49		10.02	51.51		74.00	54.00	-2.49	Peak
6216.00	38.20		12.67	50.88		74.00	54.00	-3.12	Peak

## Remark:

7704.00

9072.00

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Average test would be performed if the peak result were greater than the average limit.

13.34

15.27

3. Data of measurement within this frequency range shown "---" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

74.00

74.00

54.00

54.00

-3.08

-1.48

Peak

Peak

50.92

52.52

- 4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 5. Result = Reading + Correction Factor

37.58

37.26

Margin = Result - Limit

Remark Peak = Result(PK) - Limit(AV)

-2.67

-2.05

Peak

Peak

54.00

54.00

74.00

74.00

<b>Product Name</b>	Computer	Test By	Rex Chiu
Test Model	TREK-572	Test Date	2014/11/25
Test Mode	UNII Band 1/ IEEE 802.11a TX / CH High	Temp. & Humidity	22°C, 56%

	966 Chamber_B at 3Meter / Horizontal								
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
3170.00	43.23		5.08	48.30		74.00	54.00	-5.70	Peak
4505.00	42.32		8.85	51.16		74.00	54.00	-2.84	Peak
5440.00	40.16		10.36	50.52		74.00	54.00	-3.48	Peak
6132.00	38.13		12.71	50.84		74.00	54.00	-3.16	Peak
7392.00	38.12		13.04	51.16		74.00	54.00	-2.84	Peak
8952.00	37.18		15.19	52.37		74.00	54.00	-1.63	Peak
		9	66 Cham	ber_B at :	3Meter / V	ertical			
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
3130.00	42.48		5.01	47.49		74.00	54.00	-6.51	Peak
4615.00	42.54		8.79	51.33		74.00	54.00	-2.67	Peak
5450.00	40.86		10.40	51.26		74.00	54.00	-2.74	Peak
6144.00	38.56		12.71	51.26		74.00	54.00	-2.74	Peak

## Remark:

7884.00

9036.00

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Average test would be performed if the peak result were greater than the average limit.

13.86

15.21

3. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

51.33

51.95

- 4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 5. Result = Reading + Correction Factor

37.47

36.74

Margin = Result - Limit

Remark Peak = Result(PK) - Limit(AV)

Product Name Computer		Test By	Rex Chiu
Test Model	TREK-572	Test Date	2014/11/25
Test Mode	UNII Band 1/ IEEE 802.11an HT20 TX / CH Low	Temp. & Humidity	22°C, 56%

	966 Chamber_B at 3Meter / Horizontal								
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
3210.00	43.72		5.14	48.86		74.00	54.00	-5.14	Peak
3790.00	42.79		6.05	48.84		74.00	54.00	-5.16	Peak
5445.00	40.96		10.38	51.34		74.00	54.00	-2.66	Peak
6048.00	38.68		12.75	51.43		74.00	54.00	-2.57	Peak
7392.00	38.01		13.04	51.04		74.00	54.00	-2.96	Peak
9024.00	36.24		15.19	51.42		74.00	54.00	-2.58	Peak
					3Meter / V	ertical			
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
2415.00	43.19		3.44	46.63		74.00	54.00	-7.37	Peak
3175.00	43.76		5.08	48.84		74.00	54.00	-5.16	Peak
5410.00	40.21		10.24	50.45		74.00	54.00	-3.55	Peak
6216.00	38.14		12.67	50.82		74.00	54.00	-3.18	Peak
7620.00	38.42		13.10	51.52		74.00	54.00	-2.48	Peak

## Remark:

8988.00

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Average test would be performed if the peak result were greater than the average limit.

15.16

3. Data of measurement within this frequency range shown "---" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

74.00

54.00

Peak

-2.16

51.84

- 4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 5. Result = Reading + Correction Factor

36.68

Margin = Result - Limit

Remark Peak = Result(PK) - Limit(AV)

<b>Product Name</b>	Computer	Test By	Rex Chiu
Test Model	TREK-572	Test Date	2014/11/25
Test Mode	UNII Band 1/ IEEE 802.11an HT20 TX / CH Middle	Temp. & Humidity	22°C, 56%

	966 Chamber_B at 3Meter / Horizontal								
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
3750.00	43.05		5.99	49.04		74.00	54.00	-4.96	Peak
5150.00	47.12	37.56	9.21	56.33	46.77	74.00	54.00	-7.23	AVG
5460.00	40.90		10.44	51.34		74.00	54.00	-2.66	Peak
6108.00	38.02		12.72	50.74		74.00	54.00	-3.26	Peak
7452.00	37.93		12.88	50.81		74.00	54.00	-3.19	Peak
9132.00	36.44		15.36	51.81		74.00	54.00	-2.19	Peak
		9	66 Chaml	ber_B at 3	3Meter / V	ertical			
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)		Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
3670.00	43.00		5.87	48.87		74.00	54.00	-5.13	Peak
5150.00	48.83	38.97	9.21	58.04	48.18	74.00	54.00	-5.82	AVG
5385.00	40.10		10.14	50.24		74.00	54.00	-3.76	Peak
6096.00	38.54		12.73	51.27		74.00	54.00	-2.73	Peak
7512.00	38.19		12.78	50.98		74.00	54.00	-3.02	Peak

### Remark.

8856.00

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Average test would be performed if the peak result were greater than the average limit.

15.26

3. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

52.31

74.00

54.00

-1.69

Peak

- 4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 5. Result = Reading + Correction Factor

37.05

Margin = Result - Limit

Remark Peak = Result(PK) - Limit(AV)

Product Name Computer		Test By	Rex Chiu
Test Model	TREK-572	Test Date	2014/11/25
Test Mode	UNII Band 1/ IEEE 802.11an HT20 TX / CH High	Temp. & Humidity	22°C, 56%

	966 Chamber_B at 3Meter / Horizontal								
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
3125.00	43.69		5.00	48.69		74.00	54.00	-5.31	Peak
4705.00	42.99		8.75	51.74		74.00	54.00	-2.26	Peak
5445.00	39.51		10.38	49.89		74.00	54.00	-4.11	Peak
6036.00	38.18		12.75	50.94		74.00	54.00	-3.06	Peak
7476.00	37.89		12.81	50.71		74.00	54.00	-3.29	Peak
8940.00	36.85		15.20	52.05		74.00	54.00	-1.95	Peak
		9	66 Chaml	ber_B at 3	BMeter / V	ertical			
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)		Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
3785.00	43.02		6.04	49.06		74.00	54.00	-4.94	Peak
4625.00	41.92		8.79	50.71		74.00	54.00	-3.29	Peak
5450.00	41.27		10.40	51.67		74.00	54.00	-2.33	Peak
6012.00	38.06		12.76	50.83		74.00	54.00	-3.17	Peak
7452.00	37.96		12.88	50.83		74.00	54.00	-3.17	Peak

### Remark:

9036.00

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Average test would be performed if the peak result were greater than the average limit.

15.21

3. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

74.00

54.00

-2.24

Peak

51.76

- 4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 5. Result = Reading + Correction Factor Margin = Result – Limit

36.55

Remark Peak = Result(PK) - Limit(AV)

<b>Product Name</b>	Product Name Computer		Rex Chiu
Test Model	TREK-572	Test Date	2014/11/25
Test Mode	UNII Band 1/ IEEE 802.11an HT40 TX / CH Low	Temp. & Humidity	22°C, 56%

	966 Chamber_B at 3Meter / Horizontal								
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
3180.00	44.03		5.09	49.12		74.00	54.00	-4.88	Peak
3830.00	43.04		6.11	49.14		74.00	54.00	-4.86	Peak
5405.00	40.56		10.22	50.78		74.00	54.00	-3.22	Peak
6048.00	38.61		12.75	51.36		74.00	54.00	-2.64	Peak
7404.00	38.11		13.00	51.11		74.00	54.00	-2.89	Peak
8832.00	37.15		15.28	52.42		74.00	54.00	-1.58	Peak
		9	66 Chaml	ber_B at 3	BMeter / V	ertical			
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
3275.00	43.70		5.25	48.95		74.00	54.00	-5.05	Peak
3870.00	43.20		6.16	49.37		74.00	54.00	-4.63	Peak
5460.00	41.07		10.44	51.51		74.00	54.00	-2.49	Peak
6048.00	38.85		12.75	51.60		74.00	54.00	-2.40	Peak
7728.00	38.85		13.41	52.26		74.00	54.00	-1.74	Peak

### Remark:

9072.00

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Average test would be performed if the peak result were greater than the average limit.

15.27

3. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

74.00

54.00

-1.78

Peak

52.22

- 4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 5. Result = Reading + Correction Factor Margin = Result – Limit

36.95

Remark Peak = Result(PK) - Limit(AV)

<b>Product Name</b>	Computer	Test By	Rex Chiu
Test Model	TREK-572	Test Date	2014/11/25
Test Mode	UNII Band 1/ IEEE 802.11an HT40 TX / CH High	Temp. & Humidity	22°C, 56%

966 Chamber_B at 3Meter / Horizontal									
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)		Margin (dB)	Remark
3335.00	42.58		5.35	47.93		74.00	54.00	-6.07	Peak
5150.00	48.52	38.76	9.21	57.73	47.97	74.00	54.00	-6.03	AVG
5350.00	40.70		10.00	50.70		74.00	54.00	-3.30	Peak
6048.00	39.19		12.75	51.94		74.00	54.00	-2.06	Peak
7584.00	37.79		12.99	50.79		74.00	54.00	-3.21	Peak
8928.00	37.00		15.20	52.20		74.00	54.00	-1.80	Peak
966 Chamber_B at 3Meter / Vertical									
		9	66 Chaml	ber_B at 3	3Met <u>er / V</u>	erti <u>cal</u>			
Frequency (MHz)	Reading- PK (dBuV)		Correction	. – – ,		ertical Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
Frequency	PK	Reading- AV	Correction Factor	Result-PK	Result-AV	Limit-PK			Remark Peak
(MHz)	PK (dBuV)	Reading- AV	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV	Limit-PK (dBuV/m)	(dBuV/m)	(dB)	<u> </u>
(MHz) 3755.00	PK (dBuV) 42.83	Reading- AV (dBuV)	Correction Factor (dB/m) 6.00	Result-PK (dBuV/m) 48.82	Result-AV (dBuV/m)	Limit-PK (dBuV/m) 74.00	(dBuV/m) 54.00	(dB) -5.18	Peak
(MHz) 3755.00 5150.00	PK (dBuV) 42.83 55.68	Reading- AV (dBuV)  44.28	Correction Factor (dB/m) 6.00 9.21	Result-PK (dBuV/m) 48.82 64.89	Result-AV (dBuV/m)	Limit-PK (dBuV/m) 74.00 74.00	(dBuV/m) 54.00 54.00	-5.18 -0.51	Peak AVG

### Remark:

9060.00

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Average test would be performed if the peak result were greater than the average limit.

15.25

3. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

74.00

54.00

-1.56

Peak

52.44

- 4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 5. Result = Reading + Correction Factor Margin = Result – Limit

37.19

Remark Peak = Result(PK) - Limit(AV)

<b>Product Name</b>	Computer	Test By	Rex Chiu
Test Model	TREK-572	Test Date	2014/11/25
Test Mode	UNII Band 2A / IEEE 802.11a TX / CH Low	Temp. & Humidity	22°C, 56%

	966 Chamber_B at 3Meter / Horizontal								
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
3225.00	43.20		5.17	48.37		74.00	54.00	-5.63	Peak
4710.00	41.85		8.75	50.60		74.00	54.00	-3.40	Peak
5425.00	41.26		10.30	51.56		74.00	54.00	-2.44	Peak
6132.00	38.41		12.71	51.12		74.00	54.00	-2.88	Peak
7752.00	38.27		13.48	51.75		74.00	54.00	-2.25	Peak
8868.00	36.42		15.25	51.67		74.00	54.00	-2.33	Peak
		9	66 Chaml	per_B at 3	3Meter / V	ertical			
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
3205.00	43.82		5.13	48.96		74.00	54.00	-5.04	Peak
4785.00	42.60		8.71	51.31		74.00	54.00	-2.69	Peak
5455.00	40.23		10.42	50.65		74.00	54.00	-3.35	Peak
6060.00	37.55		12.74	50.29		74.00	54.00	-3.71	Peak
7368.00	38.44		13.10	51.54		74.00	54.00	-2.46	Peak

## Remark:

8976.00

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Average test would be performed if the peak result were greater than the average limit.

15.17

3. Data of measurement within this frequency range shown "---" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

74.00

54.00

-2.84

Peak

51.16

- 4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 5. Result = Reading + Correction Factor

35.99

Margin = Result - Limit

Remark Peak = Result(PK) - Limit(AV)

<b>Product Name</b>	Product Name Computer		Rex Chiu
Test Model	TREK-572	Test Date	2014/11/25
Test Mode	UNII Band 2A / IEEE 802.11a TX / CH Middle	Temp. & Humidity	22°C, 56%

	966 Chamber_B at 3Meter / Horizontal								
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
3100.00	43.48		4.96	48.44		74.00	54.00	-5.56	Peak
4530.00	41.92		8.84	50.75		74.00	54.00	-3.25	Peak
5375.00	41.42		10.10	51.52		74.00	54.00	-2.48	Peak
6096.00	37.94		12.73	50.67		74.00	54.00	-3.33	Peak
7368.00	37.63		13.10	50.73		74.00	54.00	-3.27	Peak
8844.00	36.63		15.27	51.90		74.00	54.00	-2.10	Peak
		9	66 Chaml	ber_B at 3	3Meter / V	ertical			
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)		Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
3850.00	43.17		6.13	49.30		74.00	54.00	-4.70	Peak
4635.00	42.74		8.79	51.52		74.00	54.00	-2.48	Peak
5455.00	40.99		10.42	51.41		74.00	54.00	-2.59	Peak
6012.00	37.99		12.76	50.76		74.00	54.00	-3.24	Peak
7296.00	38.51		13.29	51.80		74.00	54.00	-2.20	Peak

## Remark:

8232.00

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Average test would be performed if the peak result were greater than the average limit.

14.82

3. Data of measurement within this frequency range shown "---" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

74.00

54.00

-2.43

Peak

51.57

- 4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 5. Result = Reading + Correction Factor

36.75

Margin = Result - Limit

Remark Peak = Result(PK) - Limit(AV)

Product Name Computer		Test By	Rex Chiu
Test Model	TREK-572	Test Date	2014/11/25
Test Mode	UNII Band 2A / IEEE 802.11a TX / CH High	Temp. & Humidity	22°C, 56%

	966 Chamber_B at 3Meter / Horizontal								
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)		Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
2520.00	43.29		3.66	46.95		74.00	54.00	-7.05	Peak
3270.00	43.45		5.24	48.69		74.00	54.00	-5.31	Peak
4635.00	42.48		8.79	51.27		74.00	54.00	-2.73	Peak
6096.00	37.98		12.73	50.71		74.00	54.00	-3.29	Peak
7680.00	38.17		13.27	51.44		74.00	54.00	-2.56	Peak
8892.00	35.87		15.23	51.11		74.00	54.00	-2.89	Peak
		9	66 Chaml	ber_B at 3	3Meter / V	ertical			
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)		Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
2000.00	42.52		2.63	45.15		74.00	54.00	-8.85	Peak
3150.00	43.68		5.04	48.72		74.00	54.00	-5.28	Peak
4570.00	41.55		8.82	50.37		74.00	54.00	-3.63	Peak
6192.00	37.43		12.69	50.11		74.00	54.00	-3.89	Peak

## Remark:

7608.00

9000.00

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Average test would be performed if the peak result were greater than the average limit.

13.06

15.15

3. Data of measurement within this frequency range shown "---" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

74.00

74.00

54.00

54.00

-3.29

-1.83

Peak

Peak

50.71

52.17

- 4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 5. Result = Reading + Correction Factor

37.65

37.02

Margin = Result - Limit

Remark Peak = Result(PK) - Limit(AV)

<b>Product Name</b>	Computer	Test By	Rex Chiu
Test Model	TREK-572	Test Date	2014/11/25
Test Mode	UNII Band 2A / IEEE 802.11an HT20 TX / CH Low	Temp. & Humidity	22°C, 56%

	966 Chamber_B at 3Meter / Horizontal								
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
3320.00	43.33		5.33	48.66		74.00	54.00	-5.34	Peak
4600.00	41.89		8.80	50.69		74.00	54.00	-3.31	Peak
5450.00	40.39		10.40	50.79		74.00	54.00	-3.21	Peak
6144.00	38.18		12.71	50.89		74.00	54.00	-3.11	Peak
7416.00	38.21		12.97	51.18		74.00	54.00	-2.82	Peak
8892.00	37.28		15.23	52.51		74.00	54.00	-1.49	Peak
		9	66 Chaml	ber_B at 3	BMeter / V	ertical			
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
3915.00	42.89		6.23	49.12		74.00	54.00	-4.88	Peak
4625.00	42.37		8.79	51.16		74.00	54.00	-2.84	Peak
5425.00	42.84	32.96	10.30	53.14	43.26	74.00	54.00	-10.74	AVG
6288.00	38.36		12.64	51.00		74.00	54.00	-3.00	Peak
7548.00	37.49		12.89	50.38		74.00	54.00	-3.62	Peak

# Remark:

9024.00

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Average test would be performed if the peak result were greater than the average limit.

15.19

3. Data of measurement within this frequency range shown "---" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

74.00

54.00

-2.07

Peak

51.93

- 4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 5. Result = Reading + Correction Factor

36.74

Margin = Result - Limit

Remark Peak = Result(PK) - Limit(AV)

Product Name Computer		Test By	Rex Chiu
Test Model	TREK-572	Test Date	2014/11/25
Test Mode	UNII Band 2A / IEEE 802.11an HT20 TX / CH Middle	Temp. & Humidity	22°C, 56%

		96	6 Chambe	er_B at 3N	Meter / Ho	rizontal			
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
3785.00	43.87		6.04	49.91		74.00	54.00	-4.09	Peak
4685.00	42.00		8.76	50.76		74.00	54.00	-3.24	Peak
5360.00	40.65		10.04	50.69		74.00	54.00	-3.31	Peak
6180.00	38.37		12.69	51.06		74.00	54.00	-2.94	Peak
7920.00	37.20		13.97	51.17		74.00	54.00	-2.83	Peak
9120.00	36.66		15.34	52.01		74.00	54.00	-1.99	Peak
		9	66 Chaml	ber_B at 3	3Meter / V	ertical			
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
3905.00	43.13		6.21	49.34		74.00	54.00	-4.66	Peak
4745.00	42.73		8.73	51.46		74.00	54.00	-2.54	Peak
5355.00	44.58	34.78	10.02	54.61	44.80	74.00	54.00	-9.20	AVG
6156.00	38.37		12.70	51.08		74.00	54.00	-2.92	Peak
7524.00	38.06		12.82	50.88		74.00	54.00	-3.12	Peak

### Remark:

8976.00

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Average test would be performed if the peak result were greater than the average limit.

15.17

3. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

51.84

74.00

54.00

-2.16

Peak

- 4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 5. Result = Reading + Correction Factor

36.68

Margin = Result - Limit

 $Remark\ Peak = Result(PK) - Limit(AV)$ 

Product Name Computer		Test By	Rex Chiu
Test Model	TREK-572	Test Date	2014/11/25
Test Mode	UNII Band 2A / IEEE 802.11an HT20 TX / CH High	Temp. & Humidity	22°C, 56%

		96	6 Chambe	er_B at 3N	Meter / Ho	rizontal			
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
3205.00	43.71		5.13	48.85		74.00	54.00	-5.15	Peak
3885.00	43.36		6.18	49.54		74.00	54.00	-4.46	Peak
4760.00	42.36		8.73	51.09		74.00	54.00	-2.91	Peak
6084.00	39.33		12.73	52.06		74.00	54.00	-1.94	Peak
7716.00	37.84		13.38	51.21		74.00	54.00	-2.79	Peak
9036.00	36.70		15.21	51.91		74.00	54.00	-2.09	Peak
		9	66 Chaml	ber_B at 3	3Meter / V	ertical			
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
3185.00	43.62		5.10	48.72		74.00	54.00	-5.28	Peak
3905.00	43.33		6.21	49.55		74.00	54.00	-4.45	Peak
4665.00	41.99		8.77	50.76		74.00	54.00	-3.24	Peak
6048.00	38.82		12.75	51.57		74.00	54.00	-2.43	Peak
7584.00	38.87		12.99	51.86		74.00	54.00	-2.14	Peak

### Remark:

9120.00

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Average test would be performed if the peak result were greater than the average limit.

15.34

3. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

74.00

54.00

52.36

Peak

-1.64

- 4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 5. Result = Reading + Correction Factor Margin = Result – Limit

37.02

Remark Peak = Result(PK) - Limit(AV)

Product Name Computer		Test By	Rex Chiu
Test Model	TREK-572	Test Date	2014/11/25
Test Mode	UNII Band 2A / IEEE 802.11an HT40 TX / CH Low	Temp. & Humidity	22°C, 56%

		96	6 Chambe	er_B at 3N	/leter / Ho	rizontal			
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
3250.00	43.72		5.21	48.93		74.00	54.00	-5.07	Peak
4640.00	42.77		8.78	51.55		74.00	54.00	-2.45	Peak
5350.00	50.97	38.16	10.00	60.98	48.16	74.00	54.00	-5.84	AVG
6252.00	39.37		12.66	52.03		74.00	54.00	-1.97	Peak
7752.00	38.54		13.48	52.02		74.00	54.00	-1.98	Peak
9096.00	37.04		15.31	52.34		74.00	54.00	-1.66	Peak
		9	66 Chaml	ber_B at 3	3Meter / V	ertical			
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)		Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
3810.00	43.28		6.08	49.35		74.00	54.00	-4.65	Peak
5150.00	45.61	35.79	9.21	54.82	45.00	74.00	54.00	-9.00	AVG
5350.00	57.06	42.70	10.00	67.07	52.70	74.00	54.00	-1.30	AVG
6120.00	38.78		12.72	51.50		74.00	54.00	-2.50	Peak
7428.00	38.50		12.94	51.44		74.00	54.00	-2.56	Peak

9012.00

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Average test would be performed if the peak result were greater than the average limit.

15.17

3. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

74.00

54.00

-1.88

Peak

52.12

- 4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 5. Result = Reading + Correction Factor Margin = Result - Limit

36.95

Remark Peak = Result(PK) - Limit(AV)

Product Name Computer		Test By	Rex Chiu
Test Model	TREK-572	Test Date	2014/11/25
Test Mode	UNII Band 2A / IEEE 802.11an HT40 TX / CH High	Temp. & Humidity	22°C, 56%

	966 Chamber_B at 3Meter / Horizontal									
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark	
3195.00	43.92		5.12	49.04		74.00	54.00	-4.96	Peak	
3780.00	43.07		6.03	49.10		74.00	54.00	-4.90	Peak	
4615.00	42.78		8.79	51.58		74.00	54.00	-2.42	Peak	
6156.00	38.43		12.70	51.13		74.00	54.00	-2.87	Peak	
7464.00	38.62		12.85	51.46		74.00	54.00	-2.54	Peak	
9072.00	36.35		15.27	51.62		74.00	54.00	-2.38	Peak	
		9	66 Chaml	ber_B at 3	3Meter / V	ertical				
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark	
3255.00	43.20		5.22	48.42		74.00	54.00	-5.58	Peak	
3955.00	43.06		6.29	49.35		74.00	54.00	-4.65	Peak	
4685.00	42.24		8.76	51.00		74.00	54.00	-3.00	Peak	
6120.00	38.02		12.72	50.74		74.00	54.00	-3.26	Peak	

### Remark:

7872.00

8976.00

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Average test would be performed if the peak result were greater than the average limit.

13.83

15.17

3. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

74.00

74.00

54.00

54.00

-2.42

-2.79

Peak

Peak

51.58

51.21

- 4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 5. Result = Reading + Correction Factor

37.76

36.04

Margin = Result - Limit

Remark Peak = Result(PK) - Limit(AV)

<b>Product Name</b>	Computer	Test By	Rex Chiu
Test Model	TREK-572	Test Date	2014/11/24
Test Mode	UNII Band 2C / IEEE 802.11a TX / CH Low	Temp. & Humidity	24°C, 56%

	966 Chamber_B at 3Meter / Horizontal								
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1160.00	48.03		-2.05	45.98		74.00	54.00	-8.02	Peak
3165.00	44.45		5.07	49.51		74.00	54.00	-4.49	Peak
4630.00	41.52		8.79	50.30		74.00	54.00	-3.70	Peak
6108.00	39.07		12.72	51.80		74.00	54.00	-2.20	Peak
7452.00	38.10		12.88	50.98		74.00	54.00	-3.02	Peak
9132.00	36.61		15.36	51.97		74.00	54.00	-2.03	Peak
					BMeter / V	ertical			·
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
2325.00	43.11		3.27	46.38		74.00	54.00	-7.62	Peak
3165.00	44.18		5.07	49.25		74.00	54.00	-4.75	Peak
4595.00	41.71		8.80	50.51		74.00	54.00	-3.49	Peak
6108.00	38.60		12.72	51.32		74.00	54.00	-2.68	Peak
7620.00	38.49		13.10	51.59		74.00	54.00	-2.41	Peak

# Remark:

8880.00

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Average test would be performed if the peak result were greater than the average limit.

15.24

3. Data of measurement within this frequency range shown "---" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

74.00

54.00

Peak

-1.51

52.49

- 4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 5. Result = Reading + Correction Factor

37.24

Margin = Result - Limit

Remark Peak = Result(PK) - Limit(AV)

74.00

74.00

74.00

54.00

54.00

54.00

-2.53

-2.51

-1.70

Peak

Peak

Peak

<b>Product Name</b>	Computer	Test By	Rex Chiu
Test Model	TREK-572	Test Date	2014/11/24
Test Mode	UNII Band 2C / IEEE 802.11a TX / CH Middle	Temp. & Humidity	24°C, 56%

	966 Chamber_B at 3Meter / Horizontal									
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark	
3090.00	43.00		4.94	47.94		74.00	54.00	-6.06	Peak	
4630.00	42.33		8.79	51.12		74.00	54.00	-2.88	Peak	
5355.00	40.14		10.02	50.16		74.00	54.00	-3.84	Peak	
6108.00	39.43		12.72	52.15		74.00	54.00	-1.85	Peak	
7728.00	38.13		13.41	51.54		74.00	54.00	-2.46	Peak	
8988.00	36.90		15.16	52.06		74.00	54.00	-1.94	Peak	
		9	66 Chaml	ber_B at 3	3Meter / V	ertical				
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark	
3780.00	43.25		6.03	49.29		74.00	54.00	-4.71	Peak	
4580.00	41.64		8.81	50.46		74.00	54.00	-3.54	Peak	
5440.00	41.40		10.36	51.77		74.00	54.00	-2.23	Peak	

## Remark:

6036.00

7740.00

9180.00

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Average test would be performed if the peak result were greater than the average limit.

12.75

13.45

15.44

3. Data of measurement within this frequency range shown "---" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

51.47

51.49

52.30

- 4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 5. Result = Reading + Correction Factor

38.72

38.05

36.86

Margin = Result - Limit

Remark Peak = Result(PK) - Limit(AV)

74.00

74.00

74.00

74.00

74.00

54.00

54.00

54.00

54.00

54.00

Peak

Peak

Peak

Peak

Peak

-2.43

-3.25

-1.83

-2.70

-2.00

Product Name	Computer	Test By	Rex Chiu
Test Model	TREK-572	Test Date	2014/11/24
Test Mode	UNII Band 2C / IEEE 802.11a TX / CH High	Temp. & Humidity	24°C, 56%

	966 Chamber_B at 3Meter / Horizontal									
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)		Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark	
3080.00	43.94		4.92	48.87		74.00	54.00	-5.13	Peak	
4660.00	42.72		8.77	51.49		74.00	54.00	-2.51	Peak	
5455.00	40.66		10.42	51.08		74.00	54.00	-2.92	Peak	
6120.00	38.50		12.72	51.21		74.00	54.00	-2.79	Peak	
7788.00	38.07		13.59	51.65		74.00	54.00	-2.35	Peak	
8952.00	36.79		15.19	51.97		74.00	54.00	-2.03	Peak	
	966 Chamber_B at 3Meter / Vertical									
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark	
3295.00	43.40		5.29	48.68		74.00	54.00	-5.32	Peak	

51.57

50.75

52.17

51.30

52.00

## Remark:

4730.00

5445.00

6132.00

7776.00

9120.00

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Average test would be performed if the peak result were greater than the average limit.

8.74

10.38

12.71

13.55

15.34

- 3. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 5. Result = Reading + Correction Factor

42.83

40.37

39.46

37.75

36.66

Margin = Result - Limit

 $Remark\ Peak = Result(PK) - Limit(AV)$ 

Product Name	Computer	Test By	Rex Chiu
Test Model	TREK-572	Test Date	2014/11/24
Test Mode	UNII Band 2C / IEEE 802.11an HT20 TX / CH Low	Temp. & Humidity	24°C, 56%

966 Chamber_B at 3Meter / Horizontal									
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1100.00	48.88		-2.06	46.82		74.00	54.00	-7.18	Peak
3660.00	42.93		5.86	48.79		74.00	54.00	-5.21	Peak
4700.00	41.99		8.75	50.74		74.00	54.00	-3.26	Peak
6204.00	38.59		12.68	51.27		74.00	54.00	-2.73	Peak
7596.00	38.12		13.03	51.15		74.00	54.00	-2.85	Peak
9108.00	35.89		15.32	51.21		74.00	54.00	-2.79	Peak
		9	66 Chaml	ber_B at 3	3Meter / V	ertical			
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
3175.00	43.21		5.08	48.29		74.00	54.00	-5.71	Peak
3945.00	43.25		6.27	49.53		74.00	54.00	-4.47	Peak
4590.00	41.65		8.81	50.46		74.00	54.00	-3.54	Peak
6324.00	39.84		12.63	52.46		74.00	54.00	-1.54	Peak
7632.00	38.18		13.13	51.31		74.00	54.00	-2.69	Peak

## Remark:

9156.00

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Average test would be performed if the peak result were greater than the average limit.

15.40

3. Data of measurement within this frequency range shown "---" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

74.00

54.00

-1.67

Peak

52.33

- 4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 5. Result = Reading + Correction Factor

36.92

Margin = Result - Limit

Remark Peak = Result(PK) - Limit(AV)

<b>Product Name</b>	Computer	Test By	Rex Chiu
Test Model	TREK-572	Test Date	2014/11/24
Test Mode	UNII Band 2C / IEEE 802.11an HT20 TX / CH Middle	Temp. & Humidity	24°C, 56%

Report No.: T140911L12-A-RP1-2

		960	6 Chambe	er_B at 3N	Meter / Ho	rizontal			
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
3155.00	43.24		5.05	48.29		74.00	54.00	-5.71	Peak
4650.00	41.21		8.78	49.99		74.00	54.00	-4.01	Peak
5415.00	40.64		10.26	50.90		74.00	54.00	-3.10	Peak
6132.00	38.15		12.71	50.86		74.00	54.00	-3.14	Peak
7440.00	38.63		12.91	51.54		74.00	54.00	-2.46	Peak
8976.00	36.15		15.17	51.32		74.00	54.00	-2.68	Peak
		9	66 Chaml	ber_B at 3	3Meter / V	ertical			
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)		Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
4010.00	43.29		6.40	49.69		74.00	54.00	-4.31	Peak
4590.00	42.41		8.81	51.22		74.00	54.00	-2.78	Peak
5405.00	41.33		10.22	51.55		74.00	54.00	-2.45	Peak
6312.00	38.08		12.63	50.72		74.00	54.00	-3.28	Peak
7620.00	38.84		13.10	51.93		74.00	54.00	-2.07	Peak

8892.00

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Average test would be performed if the peak result were greater than the average limit.

15.23

3. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

74.00

54.00

-1.68

Peak

52.32

- 4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 5. Result = Reading + Correction Factor

37.09

Margin = Result - Limit

Remark Peak = Result(PK) - Limit(AV)

74.00

74.00

74.00

54.00

54.00

54.00

-2.89

-3.20

-2.26

Peak

Peak Peak

<b>Product Name</b>	Computer	Test By	Rex Chiu
Test Model	TREK-572	Test Date	2014/11/24
Test Mode	UNII Band 2C / IEEE 802.11an HT20 TX / CH High	Temp. & Humidity	24°C, 56%

	966 Chamber_B at 3Meter / Horizontal										
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark		
3205.00	43.59		5.13	48.72		74.00	54.00	-5.28	Peak		
4745.00	42.10		8.73	50.84		74.00	54.00	-3.16	Peak		
5395.00	39.73		10.18	49.91		74.00	54.00	-4.09	Peak		
6048.00	38.49		12.75	51.24		74.00	54.00	-2.76	Peak		
7440.00	39.18		12.91	52.09		74.00	54.00	-1.91	Peak		
9060.00	37.09		15.25	52.34		74.00	54.00	-1.66	Peak		
		9	66 Chaml	per_B at 3	BMeter / V	ertical					
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark		
3165.00	43.50		5.07	48.56		74.00	54.00	-5.44	Peak		
4655.00	42.38		8.78	51.16		74.00	54.00	-2.84	Peak		
5375.00	40.68		10.10	50.79		74.00	54.00	-3.21	Peak		

### Remark.

6132.00

7404.00

8256.00

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Average test would be performed if the peak result were greater than the average limit.

12.71

13.00

14.88

3. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

51.11

50.80

51.74

- 4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 5. Result = Reading + Correction Factor

38.39

37.79

36.86

Margin = Result - Limit

Remark Peak = Result(PK) - Limit(AV)

<b>Product Name</b>	Computer	Test By	Rex Chiu
Test Model	TREK-572	Test Date	2014/11/24
Test Mode	UNII Band 2C / IEEE 802.11an HT40 TX / CH Low	Temp. & Humidity	24°C, 56%

	966 Chamber_B at 3Meter / Horizontal										
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark		
1200.00	52.28		-2.05	50.24		74.00	54.00	-3.76	Peak		
3880.00	43.75		6.18	49.92		74.00	54.00	-4.08	Peak		
4695.00	41.57		8.76	50.33		74.00	54.00	-3.67	Peak		
6168.00	37.92		12.70	50.61		74.00	54.00	-3.39	Peak		
7752.00	38.46		13.48	51.94		74.00	54.00	-2.06	Peak		
9048.00	37.08		15.23	52.31		74.00	54.00	-1.69	Peak		
		9	66 Chaml	ber_B at 3	3Meter / V	ertical					
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark		
3160.00	42.94		5.06	47.99		74.00	54.00	-6.01	Peak		
3840.00	42.66		6.12	48.78		74.00	54.00	-5.22	Peak		
4670.00	42.17		8.77	50.94		74.00	54.00	-3.06	Peak		
6132.00	38.52		12.71	51.24		74.00	54.00	-2.76	Peak		
					l -		l				

### Remark.

7404.00

8940.00

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Average test would be performed if the peak result were greater than the average limit.

13.00

15.20

3. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

74.00

74.00

54.00

54.00

-2.86

-1.53

Peak

Peak

51.14

52.47

- 4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 5. Result = Reading + Correction Factor

38.14

37.27

Margin = Result - Limit

Remark Peak = Result(PK) - Limit(AV)

Product Name Computer		Test By	Rex Chiu
Test Model	TREK-572	Test Date	2014/11/24
Test Mode	UNII Band 2C / IEEE 802.11an HT40 TX / CH Middle	Temp. & Humidity	24°C, 56%

		96	6 Chambe	 er_B at 3N	/leter / Ho	rizontal			
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
3825.00	43.27		6.10	49.37		74.00	54.00	-4.63	Peak
4690.00	42.10		8.76	50.86		74.00	54.00	-3.14	Peak
5460.00	51.43	36.52	10.44	61.87	46.96	74.00	54.00	-7.04	AVG
6144.00	38.78		12.71	51.49		74.00	54.00	-2.51	Peak
7764.00	37.67		13.52	51.19		74.00	54.00	-2.81	Peak
9012.00	37.21		15.17	52.38		74.00	54.00	-1.62	Peak
		9	66 Chaml	per_B at 3	BMeter / Vo	ertical			
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV	Correction Factor	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
	(abav)	(dBuV)	(dB/m)	( ,	(dbd v/iii)	(dbd v/iii)	(aba viiii)	(ub)	
3300.00	43.03		(dB/m) 5.29	48.32		74.00	54.00	-5.68	Peak
3300.00 4665.00	,	 	, ,	, ,		, ,	,	` ′	
	43.03	(dBuV)   41.72	5.29	48.32	 52.16	74.00	54.00	-5.68	Peak
4665.00	43.03 41.93		5.29 8.77	48.32 50.70		74.00 74.00	54.00 54.00	-5.68 -3.30	Peak Peak
4665.00 5460.00	43.03 41.93 56.88		5.29 8.77 10.44	48.32 50.70 67.32		74.00 74.00 74.00	54.00 54.00 54.00	-5.68 -3.30 -1.84	Peak Peak AVG

## Remark:

8988.00

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Average test would be performed if the peak result were greater than the average limit.

15.16

3. Data of measurement within this frequency range shown "---" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

74.00

54.00

-1.66

Peak

52.34

- 4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 5. Result = Reading + Correction Factor

37.18

Margin = Result - Limit

Remark Peak = Result(PK) - Limit(AV)

74.00

74.00

74.00

74.00

54.00

54.00

54.00

54.00

-3.14

-3.27

-2.78

-2.10

Peak

Peak

Peak Peak

<b>Product Name</b>	Computer	Test By	Rex Chiu		
Test Model	TREK-572	K-572 Test Date			
Test Mode	UNII Band 2C / IEEE 802.11an HT40 TX / CH High	Temp. & Humidity	24°C, 56%		

	966 Chamber_B at 3Meter / Horizontal										
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark		
3080.00	43.87		4.92	48.79		74.00	54.00	-5.21	Peak		
4690.00	41.66		8.76	50.42		74.00	54.00	-3.58	Peak		
5435.00	40.54		10.34	50.88		74.00	54.00	-3.12	Peak		
6012.00	38.39		12.76	51.16		74.00	54.00	-2.84	Peak		
7776.00	37.72		13.55	51.27		74.00	54.00	-2.73	Peak		
8892.00	37.12		15.23	52.35		74.00	54.00	-1.65	Peak		
		9	66 Chaml	ber_B at 3	3Meter / V	ertical					
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark		
3840.00	43.27		6.12	49.39		74.00	54.00	-4.61	Peak		
4665.00	42.25		8.77	51.02		74.00	54.00	-2.98	Peak		
	1	1	1	1	1	1	1	1	1		

### Remark:

5440.00

6276.00

7668.00

8964.00

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Average test would be performed if the peak result were greater than the average limit.

10.36

12.65

13.24

15.18

3. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

50.86

50.73

51.22

51.90

- 4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 5. Result = Reading + Correction Factor

40.50

38.08

37.99

36.73

Margin = Result - Limit

Remark Peak = Result(PK) - Limit(AV)

<b>Product Name</b>	Computer	Test By	Rex Chiu
Test Model	TREK-572	Test Date	2014/11/24
Test Mode	UNII Band 3 / IEEE 802.11a TX / CH Low	Temp. & Humidity	24°C, 56%

	966 Chamber_B at 3Meter / Horizontal											
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark			
3155.00	43.24		5.05	48.29		74.00	54.00	-5.71	Peak			
4615.00	41.95		8.79	50.75		74.00	54.00	-3.25	Peak			
5370.00	40.38		10.08	50.47		74.00	54.00	-3.53	Peak			
6060.00	38.12		12.74	50.86		74.00	54.00	-3.14	Peak			
7752.00	38.47		13.48	51.95		74.00	54.00	-2.05	Peak			
9060.00	37.25		15.25	52.50		74.00	54.00	-1.50	Peak			

	966 Chamber_B at 3Meter / Vertical												
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK			Limit-AV (dBuV/m)	Margin (dB)	Remark				
3230.00	43.63		5.18	48.81		74.00	54.00	-5.19	Peak				
4660.00	42.45		8.77	51.22		74.00	54.00	-2.78	Peak				
5370.00	41.03		10.08	51.11	-	74.00	54.00	-2.89	Peak				
6036.00	38.15		12.75	50.91	-	74.00	54.00	-3.09	Peak				
7728.00	37.70		13.41	51.11	-	74.00	54.00	-2.89	Peak				
9072.00	37.30		15.27	52.57		74.00	54.00	-1.43	Peak				

### Remark

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Average test would be performed if the peak result were greater than the average limit.
- 3. Data of measurement within this frequency range shown "---" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 5. Result = Reading + Correction Factor

Margin = Result - Limit

 $Remark\ Peak = Result(PK) - Limit(AV)$ 

Product Name	Computer	Test By	Rex Chiu
Test Model	TREK-572	Test Date	2014/11/24
Test Mode	UNII Band 3 / IEEE 802.11a TX / CH Middle	Temp. & Humidity	24°C, 56%

		96	6 Chambe	er_B at 3N	Meter / Ho	rizontal			
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
3145.00	43.85		5.03	48.89		74.00	54.00	-5.11	Peak
4590.00	42.16		8.81	50.97		74.00	54.00	-3.03	Peak
5440.00	40.90		10.36	51.26		74.00	54.00	-2.74	Peak
6084.00	39.57		12.73	52.31		74.00	54.00	-1.69	Peak
7452.00	38.41		12.88	51.28		74.00	54.00	-2.72	Peak
8952.00	36.00		15.19	51.18		74.00	54.00	-2.82	Peak
		9	66 Chaml	ber_B at 3	3Meter / V	ertical			
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
3820.00	42.58		6.09	48.67		74.00	54.00	-5.33	Peak
4670.00	42.07		8.77	50.84		74.00	54.00	-3.16	Peak
5450.00	40.69		10.40	51.09		74.00	54.00	-2.91	Peak
6240.00	38.27		12.66	50.93		74.00	54.00	-3.07	Peak

## Remark:

7716.00

9228.00

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Average test would be performed if the peak result were greater than the average limit.

13.38

15.52

3. Data of measurement within this frequency range shown "---" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

74.00

74.00

54.00

54.00

-2.67

-1.67

Peak

Peak

51.33

52.33

- 4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 5. Result = Reading + Correction Factor

37.95

36.81

Margin = Result - Limit

Remark Peak = Result(PK) - Limit(AV)

Product Name Computer		Test By	Rex Chiu
Test Model	TREK-572	Test Date	2014/11/24
Test Mode	UNII Band 3 / IEEE 802.11a TX / CH High	Temp. & Humidity	24°C, 56%

966 Chamber_B at 3Meter / Horizontal										
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark	
3815.00	42.64		6.08	48.72		74.00	54.00	-5.28	Peak	
4700.00	41.96		8.75	50.71		74.00	54.00	-3.29	Peak	
5350.00	41.19		10.00	51.19		74.00	54.00	-2.81	Peak	
6276.00	38.70		12.65	51.34		74.00	54.00	-2.66	Peak	
7740.00	38.21		13.45	51.66		74.00	54.00	-2.34	Peak	
9084.00	36.64		15.29	51.92		74.00	54.00	-2.08	Peak	
		9	66 Chaml	ber_B at 3	3Meter / V	ertical				
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark	
3235.00	43.68		5.18	48.87		74.00	54.00	-5.13	Peak	
4510.00	42.50		8.85	51.34		74.00	54.00	-2.66	Peak	
5375.00	41.49		10.10	51.59		74.00	54.00	-2.41	Peak	
6192.00	38.16		12.69	50.84		74.00	54.00	-3.16	Peak	

#### Remark:

7440.00

8916.00

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Average test would be performed if the peak result were greater than the average limit.

12.91

15.21

3. Data of measurement within this frequency range shown "---" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

74.00

74.00

54.00

54.00

-3.13

-2.24

Peak

Peak

50.87

51.76

- 4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 5. Result = Reading + Correction Factor

37.96

36.55

Margin = Result - Limit

Remark Peak = Result(PK) - Limit(AV)

Product Name Computer		Test By	Rex Chiu
Test Model	TREK-572	Test Date	2014/11/24
Test Mode	UNII Band 3 / IEEE 802.11an HT20 TX / CH Low	Temp. & Humidity	24°C, 56%

966 Chamber_B at 3Meter / Horizontal									
Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark	
42.59		6.10	48.69		74.00	54.00	-5.31	Peak	
41.81		8.79	50.60		74.00	54.00	-3.40	Peak	
40.53		10.22	50.75		74.00	54.00	-3.25	Peak	
38.40		12.74	51.14		74.00	54.00	-2.86	Peak	
38.02		14.18	52.20		74.00	54.00	-1.80	Peak	
35.43		15.18	50.60		74.00	54.00	-3.40	Peak	
					ertical				
Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark	
43.20		5.12	48.32		74.00	54.00	-5.68	Peak	
42.45		8.76	51.22		74.00	54.00	-2.78	Peak	
40.47		10.26	50.73		74.00	54.00	-3.27	Peak	
38.84		12.72	51.56		74.00	54.00	-2.44	Peak	
	PK (dBuV) 42.59 41.81 40.53 38.40 38.02 35.43  Reading-PK (dBuV) 43.20 42.45 40.47	Reading- Reading- AV (dBuV) (dBuV) 42.59 41.81 38.40 35.43 9  Reading- Reading- Reading- AV (dBuV) (dBuV) 43.20 42.45 40.47	Reading-PK AV (dBuV) (dBuV) (dB/m)           42.59         6.10           41.81         8.79           40.53         10.22           38.40         12.74           38.02         14.18           35.43         15.18           Reading-PK AV (dBuV) (dBuV) (dB/m)           43.20         5.12           42.45         8.76           40.47         10.26	Reading-PK (dBuV) (dBuV) (dBuV)         Correction Factor (dBuV/m)         Result-PK (dBuV/m)           42.59          6.10         48.69           41.81          8.79         50.60           40.53          10.22         50.75           38.40          12.74         51.14           38.02          14.18         52.20           35.43          15.18         50.60           PK AV (dBuV) (dBuV) (dBuV) (dB/m)         Result-PK (dBuV/m)           43.20          5.12         48.32           42.45          8.76         51.22           40.47          10.26         50.73	Reading- PK (dBuV)         Reading- AV (dBuV)         Correction Factor (dB/m)         Result-PK (dBuV/m)         Result-AV (dBuV/m)           42.59          6.10         48.69            41.81          8.79         50.60            40.53          10.22         50.75            38.40          12.74         51.14            38.02          14.18         52.20            35.43          15.18         50.60            PK (dBuV) (dBuV) (dBuV) (dB/m)         Result-PK (dBuV/m) (dBuV/m)         Result-AV (dBuV/m)           43.20          5.12         48.32            42.45          8.76         51.22            40.47          10.26         50.73	Reading-PK (dBuV)         Reading-AV (dBuV)         Correction Factor (dB/m)         Result-PK (dBuV/m)         Result-AV (dBuV/m)         Limit-PK (dBuV/m)           42.59          6.10         48.69          74.00           41.81          8.79         50.60          74.00           40.53          10.22         50.75          74.00           38.40          12.74         51.14          74.00           38.02          14.18         52.20          74.00           35.43          15.18         50.60          74.00           Reading-PK (dBuV) (dBuV) (dBuV) (dBuV) (dBm)         Result-PK (dBuV/m) (dBuV/m)         Limit-PK (dBuV/m)           43.20          5.12         48.32          74.00           42.45          8.76         51.22          74.00           40.47          10.26         50.73          74.00	Reading-PK (dBuV)         Reading-PK (dBuV)         Correction Factor (dB/m)         Result-PK (dBuV/m)         Result-AV (dBuV/m)         Limit-PK (dBuV/m)         Limit-AV (dBuV/m)           42.59          6.10         48.69          74.00         54.00           41.81          8.79         50.60          74.00         54.00           40.53          10.22         50.75          74.00         54.00           38.40          12.74         51.14          74.00         54.00           38.02          14.18         52.20          74.00         54.00           35.43          15.18         50.60          74.00         54.00           **Reading-PK (dBuV)         Result-PK (dBuV/m)         Result-AV (dBuV/m)         Limit-PK (dBuV/m)         Limit-AV (dBuV/m)           43.20          5.12         48.32          74.00         54.00           42.45          8.76         51.22          74.00         54.00           40.47          10.26         50.73          74.00         54	Reading-PK (dBuV)         Reading-PK (dBuV)         Correction Factor (dBuV/m)         Result-PK (dBuV/m)         Result-AV (dBuV/m)         Limit-PK (dBuV/m)         Limit-AV (dBuV/m)         Margin (dBuV/m)           42.59          6.10         48.69          74.00         54.00         -5.31           41.81          8.79         50.60          74.00         54.00         -3.40           40.53          10.22         50.75          74.00         54.00         -3.25           38.40          12.74         51.14          74.00         54.00         -2.86           38.02          14.18         52.20          74.00         54.00         -3.40           **Beading-PK (dBuV)         Result-PK (dBuV)         Result-AV (dBuV/m)         Limit-PK (dBuV/m)         Limit-AV (dBuV/m)         Margin (dB)           43.20          5.12         48.32          74.00         54.00         -5.68           42.45          8.76         51.22          74.00         54.00         -2.78           40.47          10.26         50.73 <td< td=""></td<>	

#### Remark:

7440.00

8964.00

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Average test would be performed if the peak result were greater than the average limit.

12.91

15.18

3. Data of measurement within this frequency range shown "---" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

74.00

74.00

54.00

54.00

-3.27

-1.96

Peak

Peak

50.73

52.04

- 4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 5. Result = Reading + Correction Factor

37.82

36.86

Margin = Result - Limit

Remark Peak = Result(PK) - Limit(AV)

Product Name Computer		Test By	Rex Chiu
Test Model	TREK-572	Test Date	2014/11/24
Test Mode	UNII Band 3 / IEEE 802.11an HT20 TX / CH Middle	Temp. & Humidity	24°C, 56%

		96	6 Chambe	er_B at 3N	/leter / Ho	rizontal			
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
3835.00	43.01		6.11	49.12		74.00	54.00	-4.88	Peak
4700.00	41.71		8.75	50.46		74.00	54.00	-3.54	Peak
5385.00	41.05		10.14	51.19		74.00	54.00	-2.81	Peak
6228.00	38.19		12.67	50.86		74.00	54.00	-3.14	Peak
7380.00	38.03		13.07	51.10		74.00	54.00	-2.90	Peak
9096.00	36.61		15.31	51.92		74.00	54.00	-2.08	Peak
		9	66 Chaml	ber_B at 3	3Meter / V	ertical			
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
3915.00	43.18		6.23	49.41		74.00	54.00	-4.59	Peak
4745.00	41.28		8.73	50.01		74.00	54.00	-3.99	Peak
5455.00	40.31		10.42	50.73		74.00	54.00	-3.27	Peak
6144.00	38.16		12.71	50.86		74.00	54.00	-3.14	Peak
7908.00	38.11		13.93	52.05		74.00	54.00	-1.95	Peak

#### Remark:

8976.00

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Average test would be performed if the peak result were greater than the average limit.

15.17

3. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

74.00

54.00

-2.10

Peak

51.90

- 4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 5. Result = Reading + Correction Factor Margin = Result – Limit

36.73

Remark Peak = Result(PK) - Limit(AV)

Product Name Computer		Test By	Rex Chiu
Test Model	TREK-572	Test Date	2014/11/24
Test Mode	UNII Band 3 / IEEE 802.11an HT20 TX / CH High	Temp. & Humidity	24°C, 56%

966 Chamber_B at 3Meter / Horizontal										
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)		Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark	
3240.00	42.91		5.19	48.11		74.00	54.00	-5.89	Peak	
4790.00	42.03		8.71	50.74		74.00	54.00	-3.26	Peak	
5395.00	40.23		10.18	50.41		74.00	54.00	-3.59	Peak	
6204.00	37.54		12.68	50.22		74.00	54.00	-3.78	Peak	
7764.00	37.81		13.52	51.33		74.00	54.00	-2.67	Peak	
8904.00	37.10		15.22	52.33		74.00	54.00	-1.67	Peak	
		9	66 Chaml	ber_B at 3	3Meter / V	ertical				
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark	
3220.00	43.55		5.16	48.71		74.00	54.00	-5.29	Peak	
4650.00	41.52		8.78	50.30		74.00	54.00	-3.70	Peak	
5405.00	40.48		10.22	50.70		74.00	54.00	-3.30	Peak	
6192.00	38.17		12.69	50.86		74.00	54.00	-3.14	Peak	

#### Remark:

7776.00

8988.00

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Average test would be performed if the peak result were greater than the average limit.

13.55

15.16

3. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

74.00

74.00

54.00

54.00

-2.37

-2.33

Peak

Peak

51.63

51.67

- 4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 5. Result = Reading + Correction Factor

38.07

36.51

Margin = Result - Limit

Remark Peak = Result(PK) - Limit(AV)

Product Name Computer		Test By	Rex Chiu
Test Model	TREK-572	Test Date	2014/11/24
Test Mode	UNII Band 3 / IEEE 802.11an HT40 TX / CH Low	Temp. & Humidity	24°C, 56%

		96	6 Chambe	er_B at 3N	/leter / Ho	rizontal			
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
3255.00	43.09		5.22	48.31		74.00	54.00	-5.69	Peak
4630.00	42.14		8.79	50.93		74.00	54.00	-3.07	Peak
5390.00	40.15		10.16	50.31		74.00	54.00	-3.69	Peak
6060.00	39.07		12.74	51.81		74.00	54.00	-2.19	Peak
7752.00	37.74		13.48	51.23		74.00	54.00	-2.77	Peak
9036.00	36.35		15.21	51.55		74.00	54.00	-2.45	Peak
		9	66 Chaml	ber_B at 3	3Meter / V	ertical			
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)		Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
3255.00	43.09		5.22	48.31		74.00	54.00	-5.69	Peak
4675.00	41.62		8.77	50.39		74.00	54.00	-3.61	Peak
5435.00	40.88		10.34	51.22		74.00	54.00	-2.78	Peak
6240.00	38.51		12.66	51.18		74.00	54.00	-2.82	Peak
8100.00	37.90		14.47	52.37		74.00	54.00	-1.63	Peak

#### Remark:

9132.00

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Average test would be performed if the peak result were greater than the average limit.

15.36

3. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

74.00

54.00

52.22

Peak

-1.78

- 4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 5. Result = Reading + Correction Factor Margin = Result – Limit

36.86

Remark Peak = Result(PK) - Limit(AV)

Product Name Computer		Test By	Rex Chiu
Test Model	TREK-572	Test Date	2014/11/24
Test Mode	UNII Band 3 / IEEE 802.11an HT40 TX / CH High	Temp. & Humidity	24°C, 56%

		96	6 Chambe	er_B at 3N	/leter / Ho	rizontal			
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
3865.00	43.66		6.16	49.81		74.00	54.00	-4.19	Peak
4630.00	41.55		8.79	50.33		74.00	54.00	-3.67	Peak
5420.00	40.60		10.28	50.88		74.00	54.00	-3.12	Peak
6144.00	38.51		12.71	51.22		74.00	54.00	-2.78	Peak
7548.00	38.73		12.89	51.62		74.00	54.00	-2.38	Peak
9108.00	37.08		15.32	52.41		74.00	54.00	-1.59	Peak
		9	66 Chaml	ber_B at 3	3Meter / V	ertical			
Frequency (MHz)	Reading- PK (dBuV)	Reading- AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)		Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
3210.00	43.20		5.14	48.35		74.00	54.00	-5.65	Peak
4650.00	41.87		8.78	50.65		74.00	54.00	-3.35	Peak
5385.00	40.86		10.14	51.01		74.00	54.00	-2.99	Peak
6120.00	38.75		12.72	51.46		74.00	54.00	-2.54	Peak
7800.00	37.88		13.62	51.50		74.00	54.00	-2.50	Peak

9036.00

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Average test would be performed if the peak result were greater than the average limit.

15.21

3. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

51.99

74.00

54.00

Peak

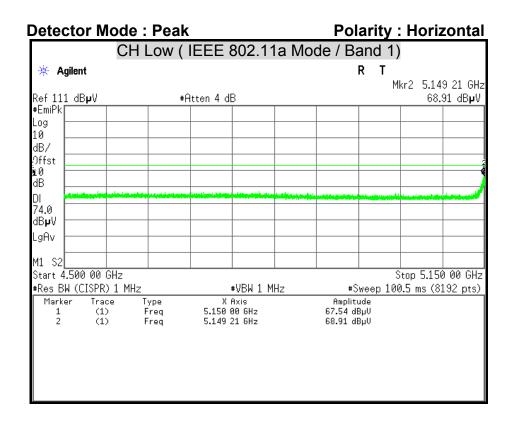
-2.01

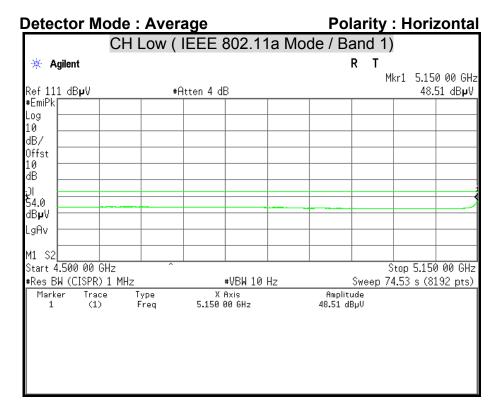
- 4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 5. Result = Reading + Correction Factor Margin = Result - Limit

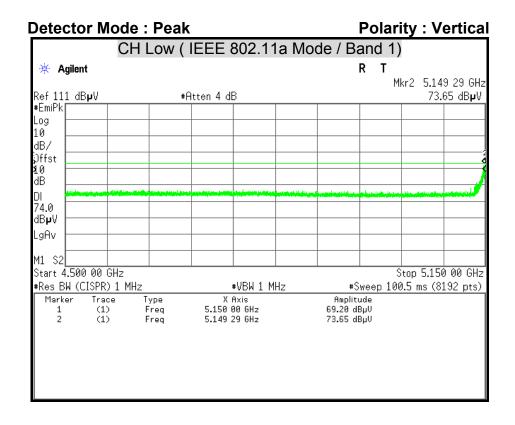
36.78

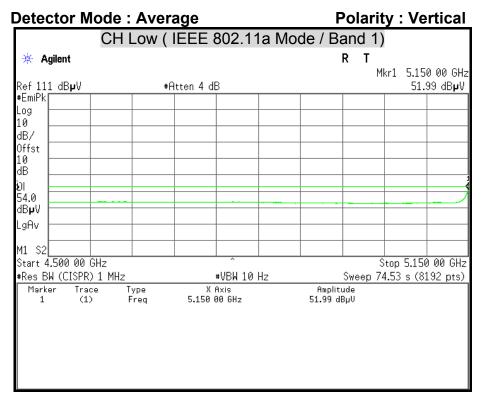
Remark Peak = Result(PK) - Limit(AV)

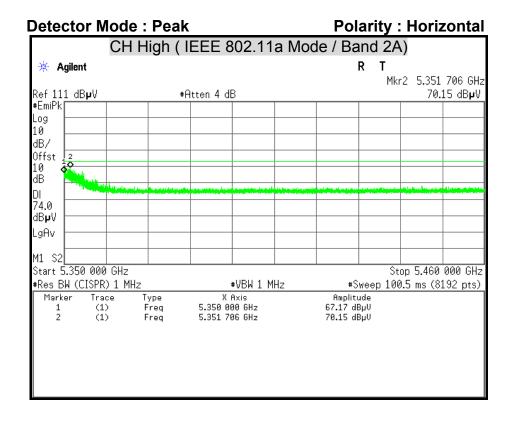
#### **Restricted Band Edges**

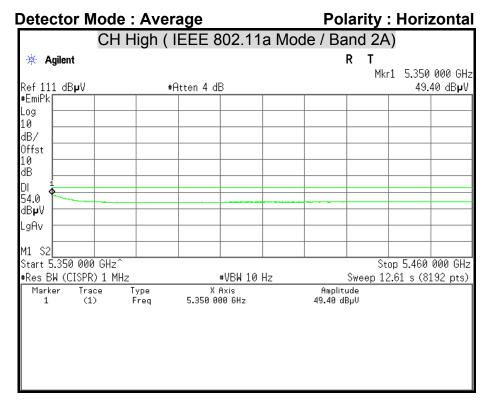


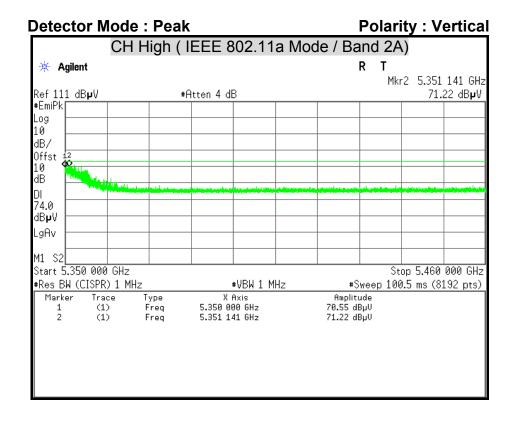


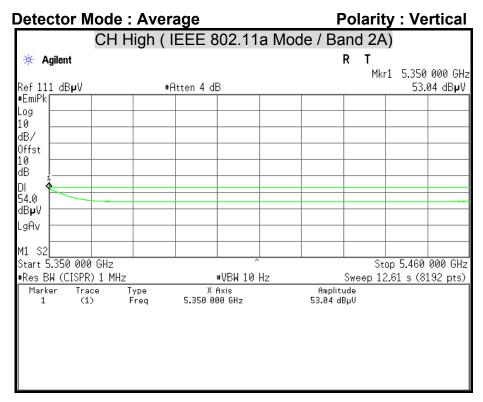






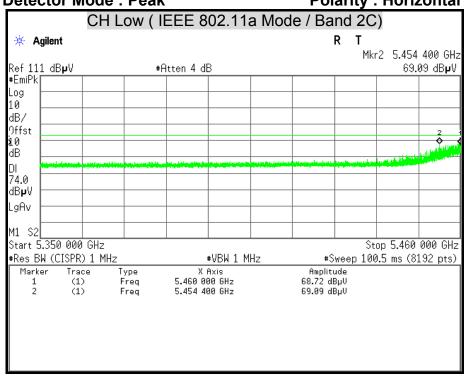




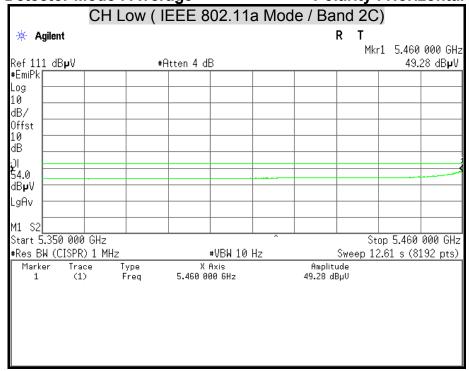


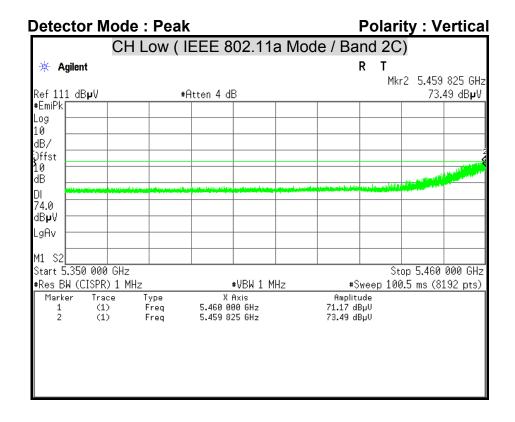
Detector Mode : Peak Polarity : Horizontal

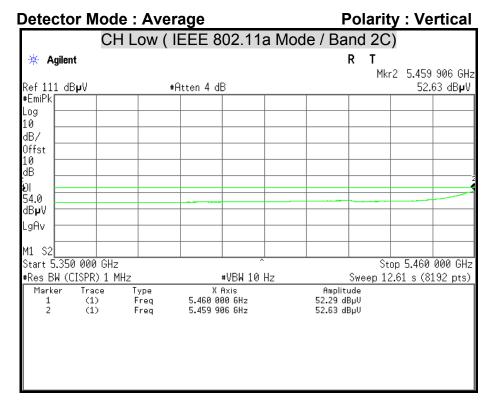
Report No.: T140911L12-A-RP1-2

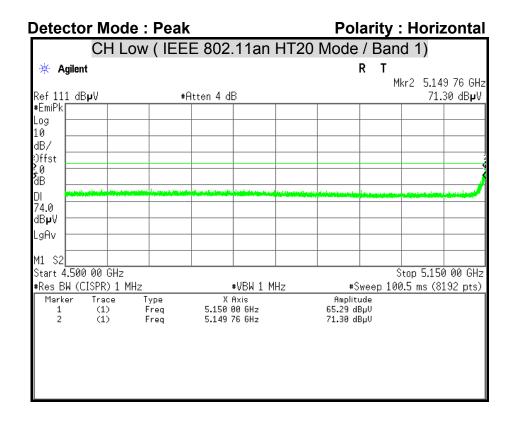


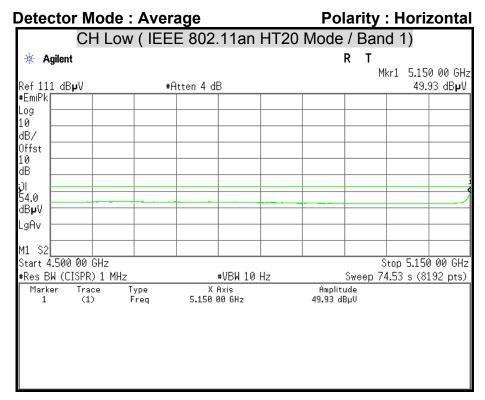
Detector Mode : Average Polarity : Horizontal

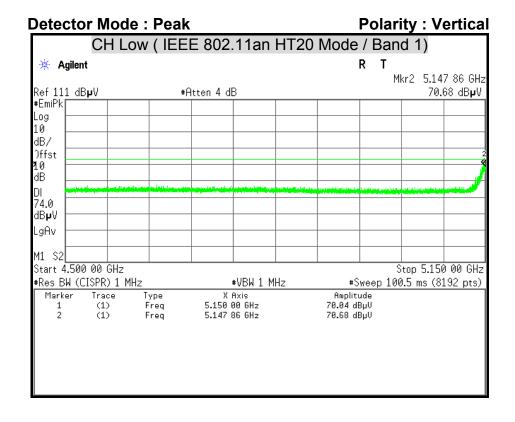


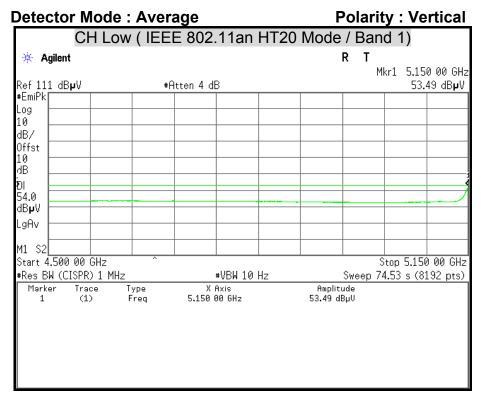




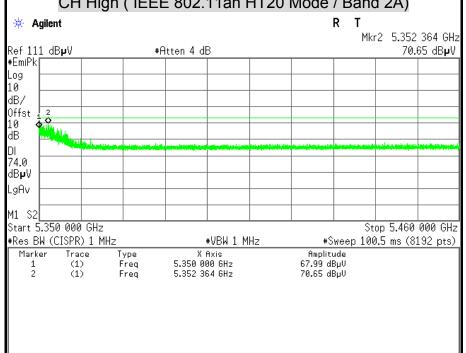




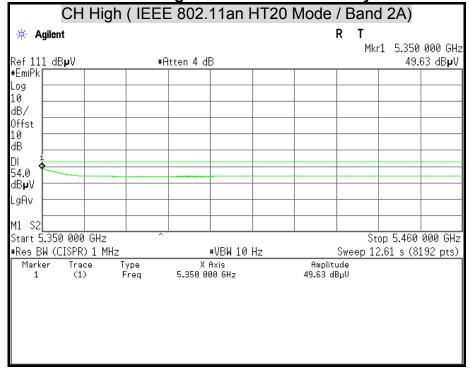


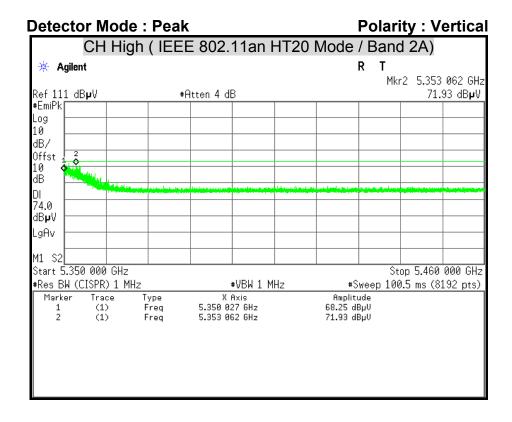


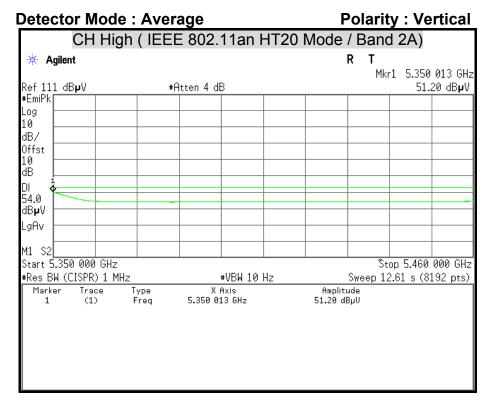
Detector Mode: Peak Polarity: Horizontal
CH High (IEEE 802.11an HT20 Mode / Band 2A)

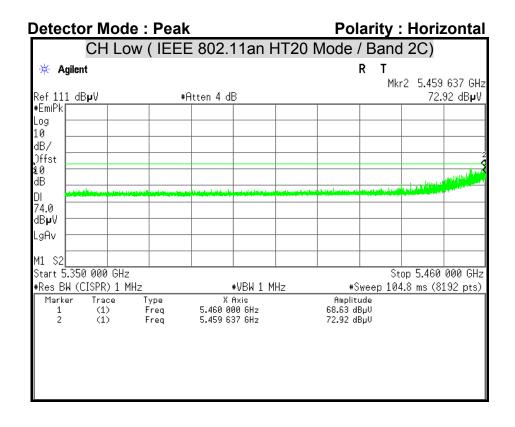


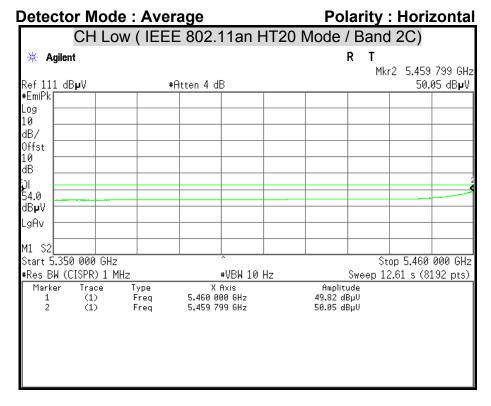
Detector Mode : Average Polarity : Horizontal

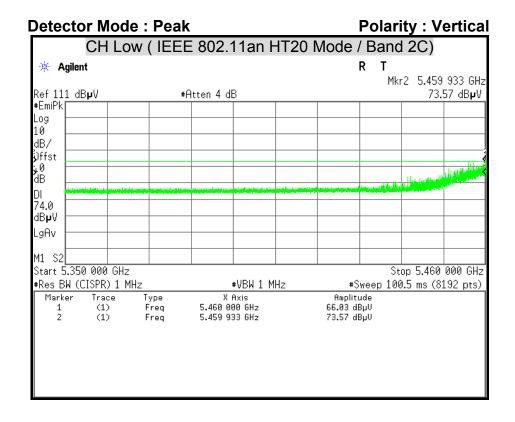


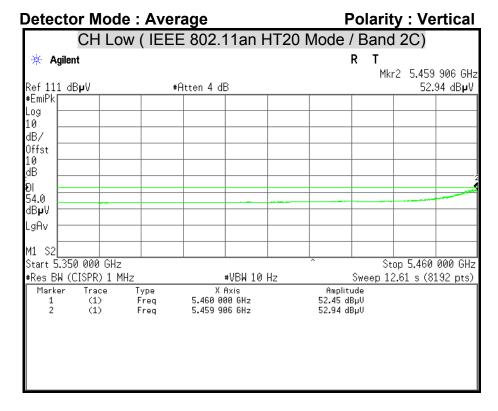


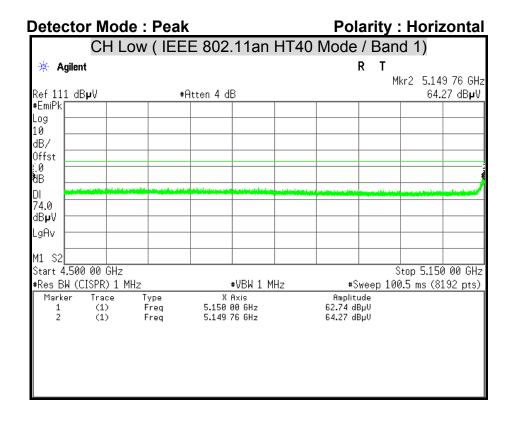


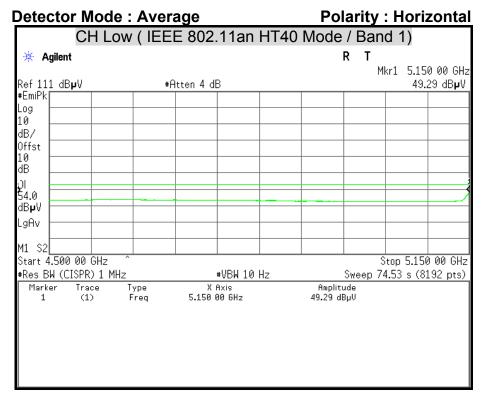


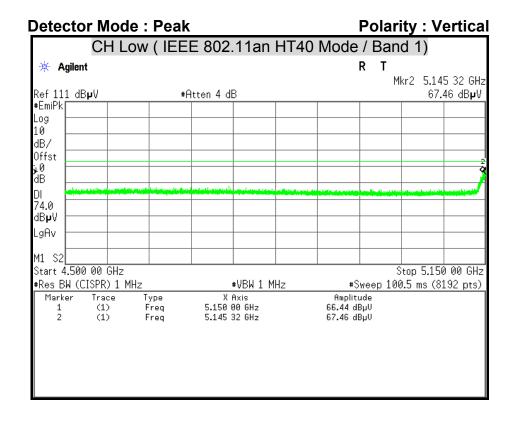


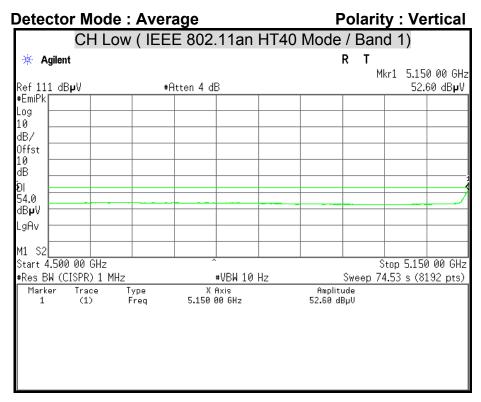


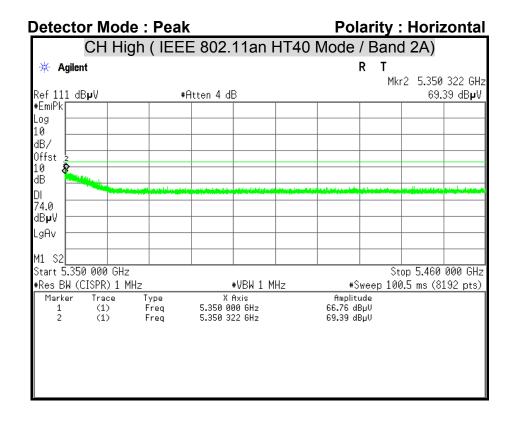


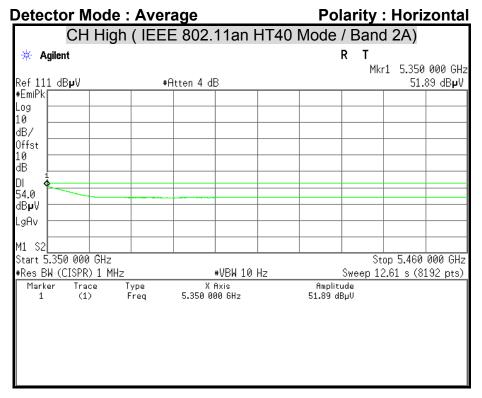


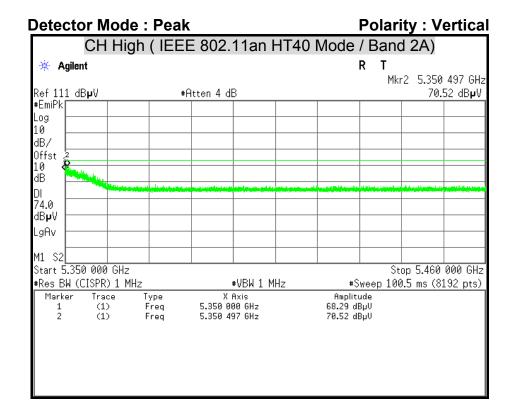


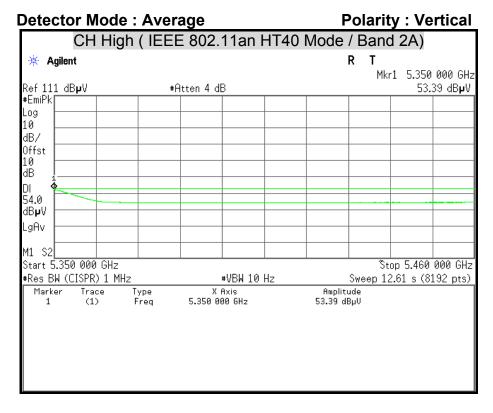


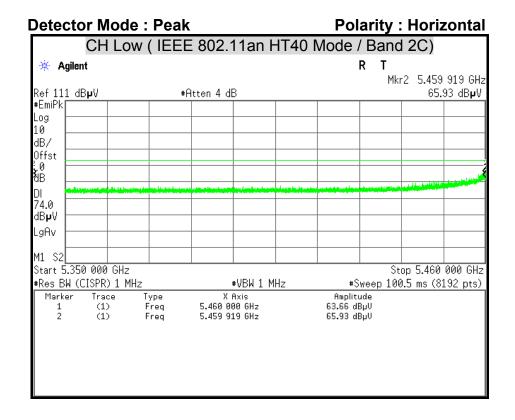


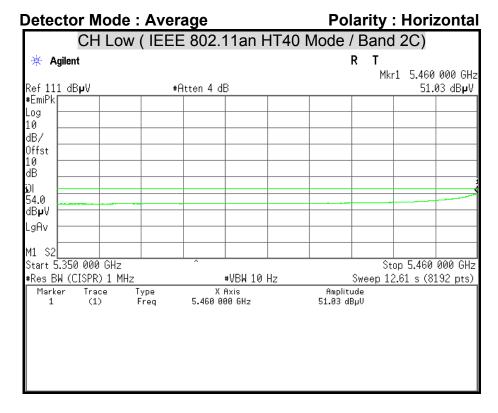


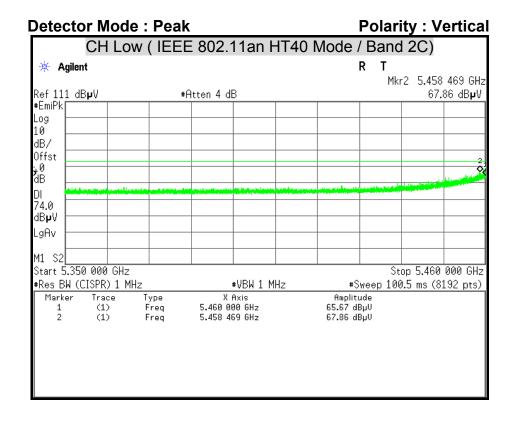


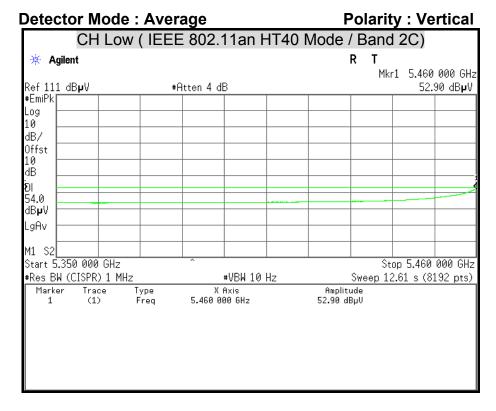












## 7.6 CONDUCTED EMISSION

## **LIMITS**

§ 15.207 (a) Except as shown in paragraph (b) and (c) this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50  $\mu$ H/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequency ranges.

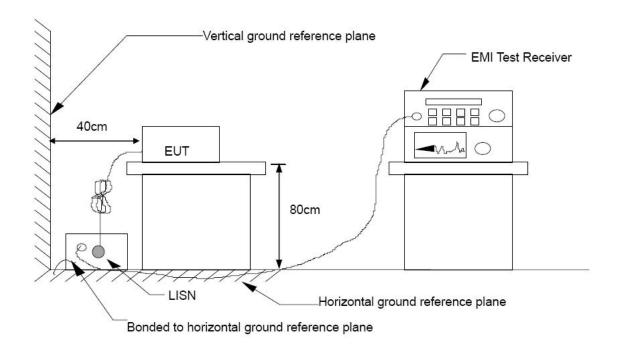
Frequency Range	Conducted Limit (dΒμν)				
(MHz)	Quasi-peak	Average			
0.15 - 0.50	66 to 56	56 to 46			
0.50 - 5.00	56	46			
5.00 - 30.0	60	50			

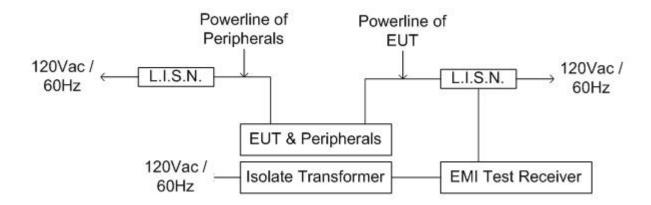
#### **TEST EQUIPMENT**

Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
L.I.S.N	SCHWARZBECK	NSLK 8127	8127-465	08/06/2015
L.I.S.N	SCHWARZBECK	NSLK 8127	8127-473	03/10/2015
EMI Receiver	ROHDE & SCHWARZ	ESCS 30	835418/008	11/02/2015
Pulse Limiter	ROHDE & SCHWARZ	ESH3-Z2	100111	06/30/2015

Remark: Each piece of equipment is scheduled for calibration once a year.

## **TEST SETUP**





## **TEST PROCEDURE**

The basic test procedure was in accordance with ANSI C63.10:2009.

The test procedure is performed in a 4m × 3m × 2.4m (L×W×H) shielded room.

The EUT along with its peripherals were placed on a 1.0 m (W) × 1.5 m (L) and 0.8 m in height wooden table and the EUT was adjusted to maintain a 0.4 meter space from a vertical reference plane.

The EUT was connected to power mains through a line impedance stabilization network (LISN) which provides 50 ohm coupling impedance for measuring instrument and the chassis ground was bounded to the horizontal ground plane of shielded room. All peripherals were connected to the second LISN and the chassis ground also bounded to the horizontal ground plane of shielded room.

The EUT was located so that the distance between the boundary of the EUT and the closest surface of the LISN is 0.8 m. Where a mains flexible cord was provided by the manufacturer shall be 1 m long, or if in excess of 1 m, the excess cable was folded back and forth as far as possible so as to form a bundle not exceeding 0.4 m in length.

## **TEST RESULTS**

Since the EUT is powered by DC Source, this test item is not applicable.

# 7.7 FREQUENCY STABILITY

#### **LIMITS**

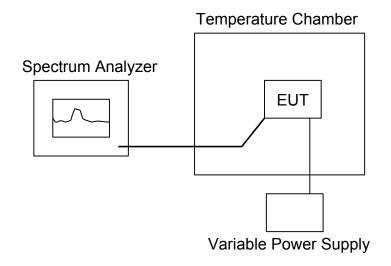
§ 15.407 (g) manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

## **TEST EQUIPMENT**

Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	E4446A	MY43360132	06/10/2015
Temp. & Humid. Chamber	TERCHY	MHC-120L	960424	09/09/2015

Remark: Each piece of equipment is scheduled for calibration once a year.

#### **TEST SETUP**





## **TEST PROCEDURE**

- 1. Place the EUT on the table and set it in the transmitting mode.
- 2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
- 3. Set the environment into appropriate environment.
- 4. Set the spectrum analyzer as RBW=1kHz, VBW = RBW, Span = 200kHz, Sweep = auto.
- 5. Mark the peak frequency and measure the frequency tolerance using frequency counter function
- 6. Repeat until all the results are investigated.

# **TEST RESULTS**

## **IEEE 802.11a mode**

ILLE GOL.	11a mode					
U-NII	Channel	Channel Frequency (MHz)	Measured Frequency (MHz)	Delta Frequency (kHz)	20 ppm Limit (kHz)	Margin (kHz)
	Low	5180	5180.003700	3.70	103.60	-99.90
Band 1	Middle	5220	5220.002800	2.80	104.40	-101.60
	High	5240	5240.042900	42.90	104.80	-61.90
Band 2A	Low	5260	5260.001200	1.20	105.20	-104.00
	Middle	5280	5280.026400	26.40	105.60	-79.20
	High	5320	5320.002700	2.70	106.40	-103.70
	Low	5500	5500.023100	23.10	110.00	-86.90
Band 2C	Middle	5580	5580.024600	24.60	111.60	-87.00
	High	5700	5700.012200	12.20	114.00	-101.80
Band 3	Low	5745	5745.005800	5.80	114.90	-109.10
	Middle	5785	5785.006700	6.70	115.70	-109.00
	High	5825	5825.004000	4.00	116.50	-112.50

# IEEE 802.11an HT20 Mode

U-NII	Channel	Channel Frequency (MHz)	Measured Frequency (MHz)	Delta Frequency (kHz)	20 ppm Limit (kHz)	Margin (kHz)
	Low	5180	5180.001200	1.20	103.60	-102.40
Band 1	Middle	5220	5220.022600	22.60	104.40	-81.80
	High	5240	5240.032200	32.20	104.80	-72.60
Band 2A	Low	5260	5260.020600	20.60	105.20	-84.60
	Middle	5280	5280.012700	12.70	105.60	-92.90
	High	5320	5320.006800	6.80	106.40	-99.60
	Low	5500	5500.020600	20.60	110.00	-89.40
Band 2C	Middle	5580	5580.003400	3.40	111.60	-108.20
	High	5700	5700.021200	21.20	114.00	-92.80
Band 3	Low	5745	5745.031000	31.00	114.90	-83.90
	Middle	5785	5785.026000	26.00	115.70	-89.70
	High	5825	5825.002700	2.70	116.50	-113.80



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#### IEEE 802.11an HT40 Mode

U-NII	Channel	Channel Frequency (MHz)	Measured Frequency (MHz)	Delta Frequency (kHz)	20 ppm Limit (kHz)	Margin (kHz)
Band1	Low	5190	5190.022000	22.00	103.80	-81.80
Danui	High	5230	5230.011100	11.10	104.60	-93.50
Band 2A	Low	5270	5270.036500	36.50	105.40	-68.90
	High	5310	5310.030000	30.00	106.20	-76.20
Band 2C	Low	5510	5510.022800	22.80	110.20	-87.40
	Middle	5550	5550.007600	7.60	111.00	-103.40
	High	5670	5670.010800	10.80	113.40	-102.60
Band 3	Low	5755	5755.005500	5.50	115.10	-109.60
	High	5795	5795.006400	6.40	115.90	-109.50