FCC Part 15C Test Report

FCC ID: 2AK3TINSIGHTRX

Product Name:	Full HD Digital Transmission System
Trademark:	N/A
Model Name :	Insight rx, Insight tx.
Prepared For : Address :	Argus Technology (Shenzhen) Co., Ltd NO.5-6A, ZhongYan Business Building, Fuyong street, FuHai Road, Baoan, Shenzhen, China.
Prepared By : Address :	Shenzhen BCTC Technology Co., Ltd. No.101,Yousong Road,Longhua New District, Shenzhen,China
Test Date:	Dec. 14 - Dec. 21, 2016
Date of Report :	Dec. 30, 2016
Report No.:	BCTC-FY161206471E

VERIFICATION OF COMPLIANCE

Applicant's name.....	Argus Technology (Shenzhen) Co., Ltd
Address	NO.5-6A, ZhongYan Business Building, Fuyong street, FuHai Road, Baoan, Shenzhen, China.
Manufacture's Name	Argus Technology (Shenzhen) Co., Ltd
Address	NO.5-6A, ZhongYan Business Building, Fuyong street, FuHai Road, Baoan, Shenzhen, China.

Product description

Product name..... :	Full HD Digital Transmission System
Trademark ..... :	N/A
Model Name ..... :	Insight rx, Insight tx.
Test procedure ..... :	FCC Part15.407
	ANSI C63.10-2013
Standards	KDB789033 D02 General UNII Test Procedures New Rules v01r02

This device described above has been tested by BCTC, and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

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Test Result **Pass**

Testing Engineer : Eric Yang

Eric Yang

Reviewer (Supervisor) : Simon Wang

Simon Wang

Approved & Authorized Signer(Manager) : Carson Zhang

Carson Zhang

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1.TEST SUMMARY

Test Items	Test Requirement	Result
Conducted Emissions	RSS-GEN 15.207	PASS
Radiated Emissions	RSS-GEN 15.407(b), 15.209	PASS
26dB bandwidth and 99%dB Bandwidth	RSS-247 15.403(i) 15.407(e)	PASS
Minimum 6 dB bandwidth	15.407(e)	PASS
Power density	RSS-247 15.407 (a)	PASS
Maximum Peak Output Power	RSS-247 15.407 (a)	PASS
Emissions from out of band	RSS-247 15.407 (b)	PASS
Transmission in case of Absence of Information	RSS-247 15.407(c)	PASS
Frequency Stability	RSS-247 15.407(g)	PASS
Antenna Requirement	15.203	PASS

Note: N/A means not applicable.

2.GENERAL PRODUCT INFORMATION

2.1. Product Function

Refer to Technical Construction Form and User Manual.

2.2. Description of Device (EUT)

Product Name:	Full HD Digital Transmission System
Model No.:	Insight rx, Insight tx.
Trade Name:	N/A
Operation Frequency:	5180-5240, 5745-5825MHz(802.11a/n(HT20))
Channel numbers:	See channel list
Modulation technology:	64QAM, 16QAM, QPSK, BPSK for OFDM
Data speed (IEEE 802.11a):	6Mbps, 9Mbps, 12Mbps, 18Mbps, 24Mbps, 36Mbps, 48Mbps,54Mbps
Data speed (IEEE 802.11n):	Up to 300Mbps
Antenna Type:	Permanent Connection External antenna*2
Antenna gain:	5.0dBi
Power supply:	DC 5V

Channel List for 802.11a/n(20)			
Channel	Frequency (MHz)	Channel	Frequency (MHz)
36	5180	44	5220
40	5200	48	5240

Channel List for 802.11a/n(20)			
Channel	Frequency (MHz)	Channel	Frequency (MHz)
149	5745	161	5805
153	5765	165	5825
157	5785		

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	NOTE
1	N/A	N/A	Permanent Connection External antenna	N/A	5.0	
2	N/A	N/A	Permanent Connection External antenna	N/A	5.0	

Note1: Directional Gain=5.0dBi+10log(2)=8dBi

Note2: The EUT 802.11n(20) is support MIMO mode, 802.11a is support SISO mode.

2.3. Test Supporting System

None.

2.4. Independent Operation Modes

The basic operation modes are:

These is Digital Transmission system (DTS) and have modulation OFDM, DSSS, DBPSK, DQPSK, CCK, 16QAM, 64QAM. According exploratory test, EUT will have maximum output power in those data rate (802.11a/n20: 6Mbps,), so those data rate were used for all test. The equipment enables high-speed access without wires to network assets. This adapter uses the IEEE 802.11 protocol to enable wireless communications between the host and Wireless rooter.

802.11a/n(20)

Frequency	Band 1	Band 4
Low	5180MHz	5745MHz
Middle	5200MHz	5785MHz
High	5240MHz	5825MHz

Note: for conducted emission test, we pretest all mode, the worst mode was 802.11a channel 36.

for radiated emissions test, we pretest all mode, the worst mode was 802.11a/n20

The worst mode's data was recording and show in the test report.

Software power setting

Channel	Frequency	Setting
802.11a	5180MHz	14
	5200MHz	14
	5240MHz	14
	5745MHz	15
	5785MHz	15
	5825MHz	15
802.11n20	5180MHz	13
	5200MHz	13
	5240MHz	13
	5745MHz	14
	5785MHz	14
	5825MHz	14

2.5. Test Sites

2.5.1. Test Facilities

Lab Qualifications : FCC Registration No.:187086
IC Registered No.:12655A

2.6. List of Test and Measurement Instruments

Conduction test equipment

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	Test Receiver 9KHz-3GHz	R&S	ESCI	1166.5950K03-101165-ha	2016.07.06	2017.07.05	1 year
2	LISN	R&S	NSLK8126	8126466	2016.08.24	2017.08.23	1 year
3	LISN	R&S	NSLK8126	8126487	2016.08.24	2017.08.23	1 year
4	50Ω Coaxial Switch	Anritsu	MP59B	6200264417	2016.07.06	2017.07.05	1 year
5	RF cables	R&S	R204	R20X	2016.07.06	2017.07.05	1 year

Radiation test, Band-edge test and 6db bandwidth test equipment

Item	Kind of equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	Spectrum Analyzer 9kHz-26.5GHz	Agilent	E4407B	MY45108040	2016.07.06	2017.07.05	1 year
2	Test Receiver 9kHz-7GHz	R&S	ESPI	101318	2016.07.06	2017.07.05	1 year
3	Bilog Antenna 30MHz-1GMz	R&S	VULB 9168	VULB9168-438	2016.07.06	2017.07.05	1 year
4	50Ω Coaxial Switch	Anritsu	MP59B	6200264416	2016.07.06	2017.07.05	1 year
5	Spectrum Analyzer 9KHz-3GHz	ADVANTEST	R3132	150900201	2016.07.06	2017.07.05	1 year
6	Horn Antenna 1GHz-18GHz	SCHWARZBECK	BBHA9120D	1201	2016.07.06	2017.07.05	1 year
7	Horn Antenna 14GHz-40GHz	SCHWARZBECK	BBHA 9170	9170-181	2016.07.06	2017.07.05	1 year
8	Amplifier 9KHz-6GHz	SCHWARZBECK	BBV9744	9744-0037	2016.08.24	2017.08.23	1 year
9	Amplifier 1GHz-18GHz	SCHWARZBECK	BBV9718	9718-309	2016.08.24	2017.08.23	1 year
10	Amplifier 18GHz-40GHz	SCHWARZBECK	BBV 9721	9721-205	2016.08.24	2017.08.23	1 year
11	Loop Antenna 9KHz-30MHz	SCHWARZBECK	FMZB1519B	00014	2016.07.06	2017.07.05	1 year
12	RF cables1 9kHz-1GHz	R&S	R203	R20X	2016.07.06	2017.07.05	1 year
13	RF cables2 1GHz-40GHz	R&S	R204	R21X	2016.07.06	2017.07.05	1 year
14	Antenna connector	Florida RFLabs	Lab-Fle	RF 01#	2016.07.06	2017.07.05	1 year
15	Power Metter	ANRITSU	ML2487A	6K00001568	2016.07.06	2017.07.05	1 year
16	Power Sensor (AV)	ANRITSU	ML2491A	030989	2016.07.06	2017.07.05	1 year
17	Signal Analyzer 9kHz-26.5GHz	Agilent	N9010A	MY48030494	2016.07.06	2017.07.05	1 year
18	Test Receiver 20kHz-40GHz	R&S	ESU 40	100376	2016.07.06	2017.07.05	1 year

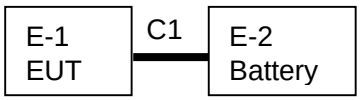
3. TEST SET-UP AND OPERATION MODES

3.1. Principle of Configuration Selection

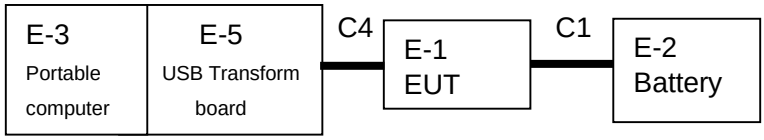
Emission: The equipment under test (EUT) was configured to measure its highest possible radiation level. The test modes were adapted accordingly in reference to the Operating Instructions.

3.2. Block Diagram of Test Set-up

Radiated Spurious Emission Test



RF Test Set-up

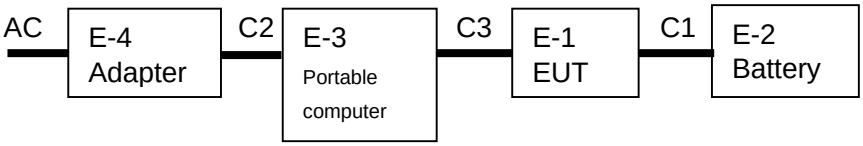


Note:

1. The EUT was programmed to be in continuously transmitting mode with fully-charged battery and the transmit duty cycle is not less than 98%.

2. Using the notebook and the transform board to control the fixed transmitting frequency and other test mode. After finishing the test setting, the portable computer and the transform board will be removed during measurements.

Conducted Emission Test



(EUT: Full HD Digital Transmission System)

3.3. Auxiliary Equipment

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.	Note
E-1	Full HD Digital Transmission System	N/A	Insight rx	N/A	EUT
E-2	Battery	GDLITE	GD-545	N/A	Peripheral
E-3	Portable computer	N/A	X550C	N/A	Peripheral
E-4	Adapter	N/A	AD887520	N/A	Peripheral
E-5	USB Transform board	N/A	N/A	N/A	Peripheral

Item	Shielded Type	Ferrite Core	Length	Note
C1	No	No	0.3m	DC cable unshielded
C2	No	No	1.5m	DC cable unshielded
C3	No	No	0.8m	HDMI cable shielded
C4	No	No	0.1m	3P Ribbon cable

3.4. Countermeasures to Achieve EMC Compliance

None.

4. EMISSION TEST RESULTS

4.1. Conducted Emission Measurement

POWER LINE CONDUCTED EMISSION Limits (Frequency Range 150KHz-30MHz)

FREQUENCY (MHz)	Limit (dBuV)		Standard
	Quasi -peak	Average	
0.15 -0.5	66 - 56 *	56 - 46 *	FCC
0.50 -5.0	56.00	46.00	FCC
5.0 -30.0	60.00	50.00	FCC

Note:

(1) The tighter limit applies at the band edges.

(2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

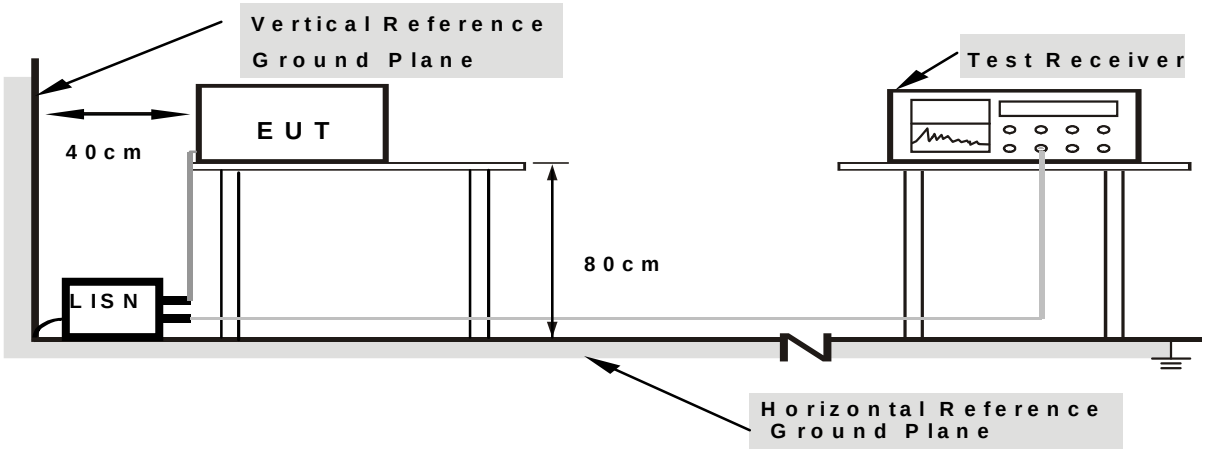
4.1.1. TEST PROCEDURE

a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
d. LISN at least 80 cm from nearest part of EUT chassis.
e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

4.1.2. DEVIATION FROM TEST STANDARD

No deviation

4.1.3. TEST SETUP



Note: 1.Support units were connected to second LISN.
2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

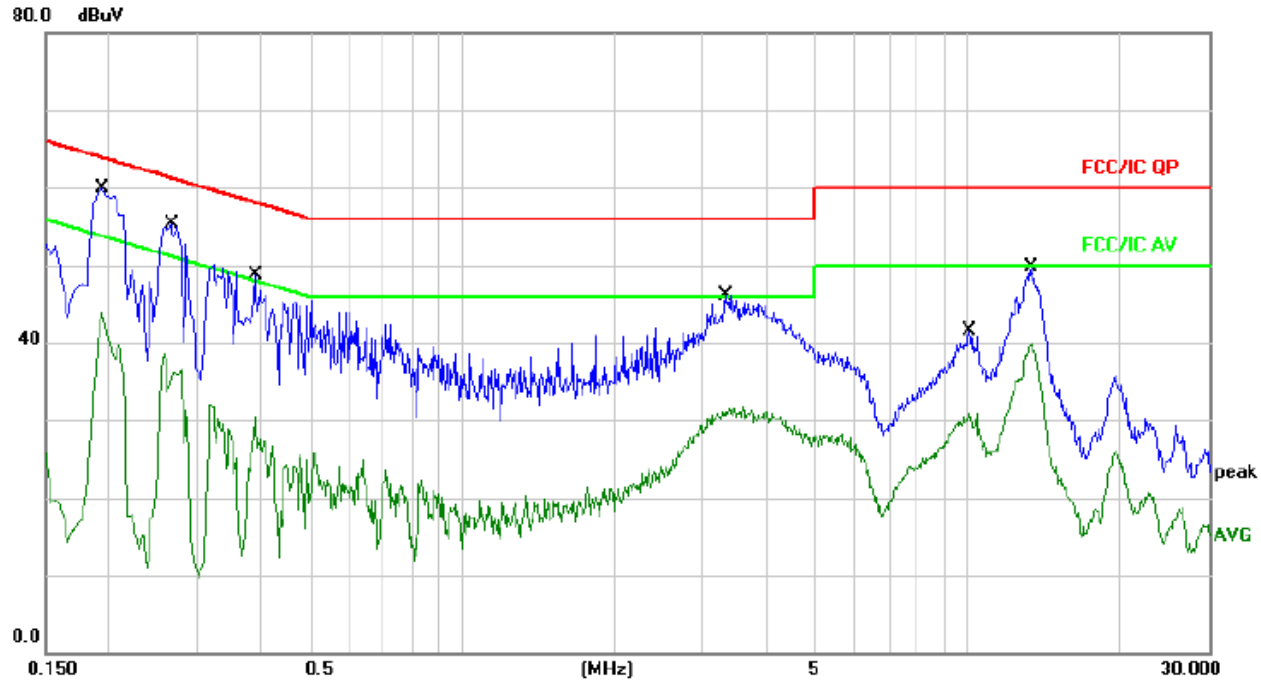
4.1.4. EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical fashion (as a customer would normally use it).
The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.
We pretest all adapter's emission, only the adapter 1's data was worst and the data was recording in the report.
The data only show the worst mode.
If peak level comply with Quasi-Peak limit, then the Quasi-Peak level is deemed to comply with Quasi-Peak limit.

We pretest AC 120V and AC 240V, the worst voltage was AC 120V and the data recording in the report

4.1.5. TEST RESULTS

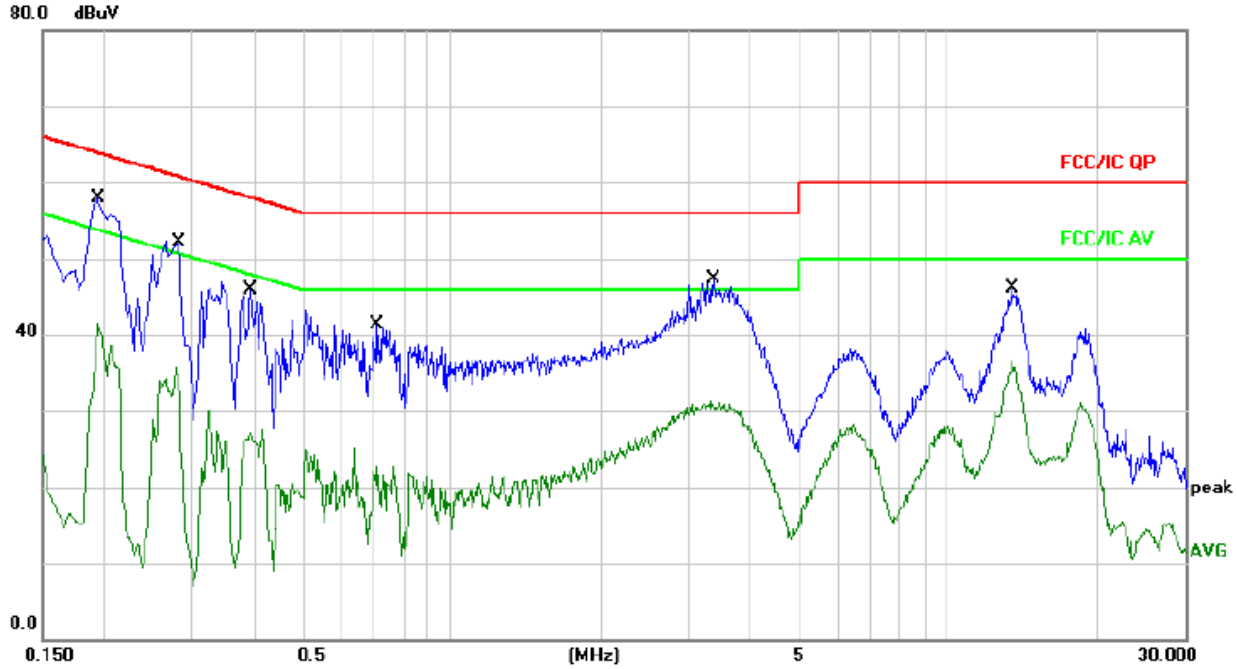
Temperature：	25 ℃	Relative Humidity：	54%
Pressure：	1010hPa	Phase：	L
Test Voltage ：	AC 120V/60Hz	Test Mode：	Link



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

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1940	50.29	9.65	59.94	63.86	-3.92	QP	
2		0.1940	34.26	9.65	43.91	53.86	-9.95	AVG	
3		0.2660	45.57	9.66	55.23	61.24	-6.01	QP	
4		0.2660	28.87	9.66	38.53	51.24	-12.71	AVG	
5		0.3899	39.04	9.67	48.71	58.06	-9.35	QP	
6		0.3899	20.76	9.67	30.43	48.06	-17.63	AVG	
7		3.3220	36.40	9.72	46.12	56.00	-9.88	QP	
8		3.3220	21.85	9.72	31.57	46.00	-14.43	AVG	
9		10.1100	31.59	9.83	41.42	60.00	-18.58	QP	
10		10.1100	21.10	9.83	30.93	50.00	-19.07	AVG	
11		13.3900	39.83	9.84	49.67	60.00	-10.33	QP	
12		13.3900	29.96	9.84	39.80	50.00	-10.20	AVG	

Temperature：	25 ℃	Relative Humidity：	54%
Pressure：	1010hPa	Phase：	N
Test Voltage ：	AC 120V/60Hz	Test Mode：	Link



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

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1940	48.20	9.65	57.85	63.86	-6.01	QP	
2		0.1940	31.82	9.65	41.47	53.86	-12.39	AVG	
3		0.2819	42.42	9.66	52.08	60.76	-8.68	QP	
4		0.2819	25.96	9.66	35.62	50.76	-15.14	AVG	
5		0.3940	36.32	9.67	45.99	57.98	-11.99	QP	
6		0.3940	17.76	9.67	27.43	47.98	-20.55	AVG	
7		0.7100	31.72	9.68	41.40	56.00	-14.60	QP	
8		0.7100	13.06	9.68	22.74	46.00	-23.26	AVG	
9		3.3740	37.51	9.72	47.23	56.00	-8.77	QP	
10		3.3740	21.52	9.72	31.24	46.00	-14.76	AVG	
11		13.5060	36.33	9.84	46.17	60.00	-13.83	QP	
12		13.5060	26.57	9.84	36.41	50.00	-13.59	AVG	

4.2. Radiated Emission Measurement

4.2.1. Radiated Emission Limits (Frequency Range 9kHz-1000MHz)

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

Frequencies (MHz)	Field Strength (micorvolts/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

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

FREQUENCY (MHz)	Limit (dBuV/m) (at 3M)	
	PEAK	AVERAGE
Above 1000	74	54

Notes:

(1) The limit for radiated test was performed according to FCC PART 15C.

(2) The tighter limit applies at the band edges.

(3) Emission level (dBuV/m)=20log Emission level (uV/m).

FREQUENCY RANGE OF RADIATED MEASUREMENT (For unintentional radiators)

Highest frequency generated or Upper frequency of measurement used in the device or on which the device operates or tunes (MHz)	Range (MHz)
Below 1.705	30
1.705 – 108	1000
108 – 500	2000
500 – 1000	5000
Above 1000	5th harmonic of the highest frequency or 40 GHz, whichever is lower

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RB / VB (emission in restricted band)	1 MHz / 1 MHz for Peak, 1 MHz / 10Hz for Average

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

4.2.2. TEST PROCEDURE

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic camber. The table was rotated 360 degrees to determine the position of the highest radiation.
b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
c. The antenna 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 polarizations of the antenna are set to make the measurement.
d. 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 (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
f. If the emission level of the EUT in peak mode was 10dB 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 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

Above 1GHz test procedure as below:

g. Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber and change form table 0.8 meter to 1.5 meter.
h Test the EUT in the lowest channel ,the middle channel ,the Highest channel

Note:

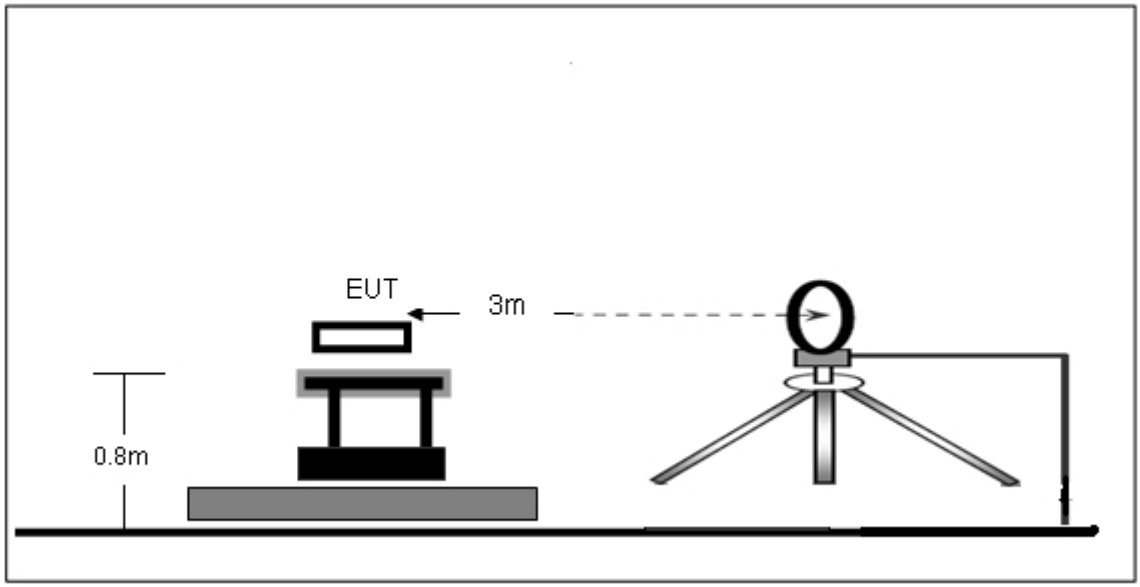
Both horizontal and vertical antenna polarities were tested
and performed pretest to three orthogonal axis. The worst case emissions were reported

4.2.3. DEVIATION FROM TEST STANDARD

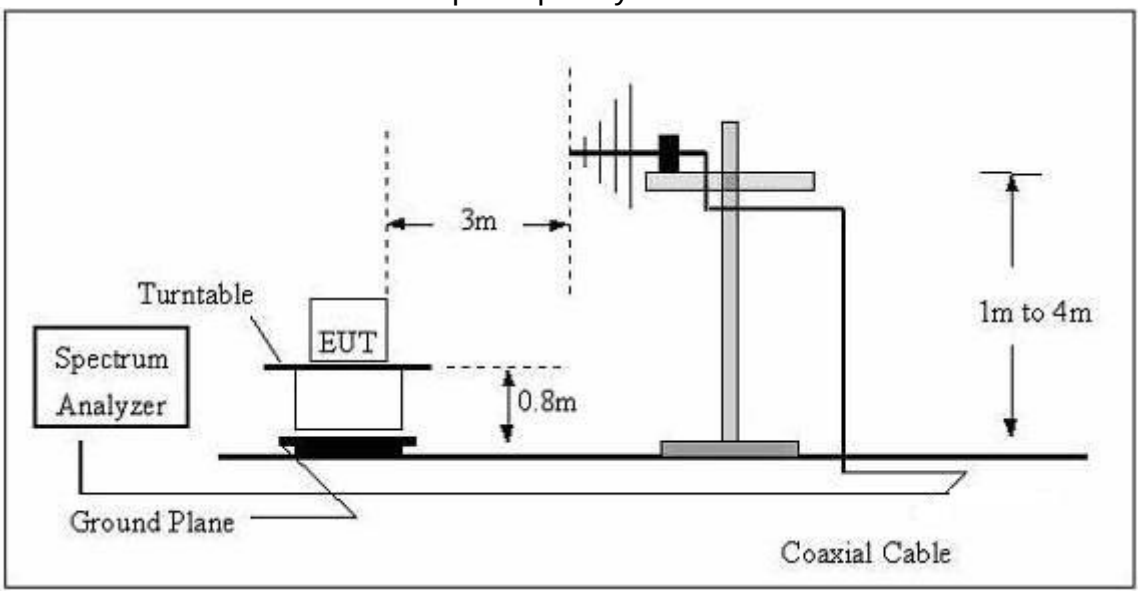
No deviation

4.2.4. TEST SETUP

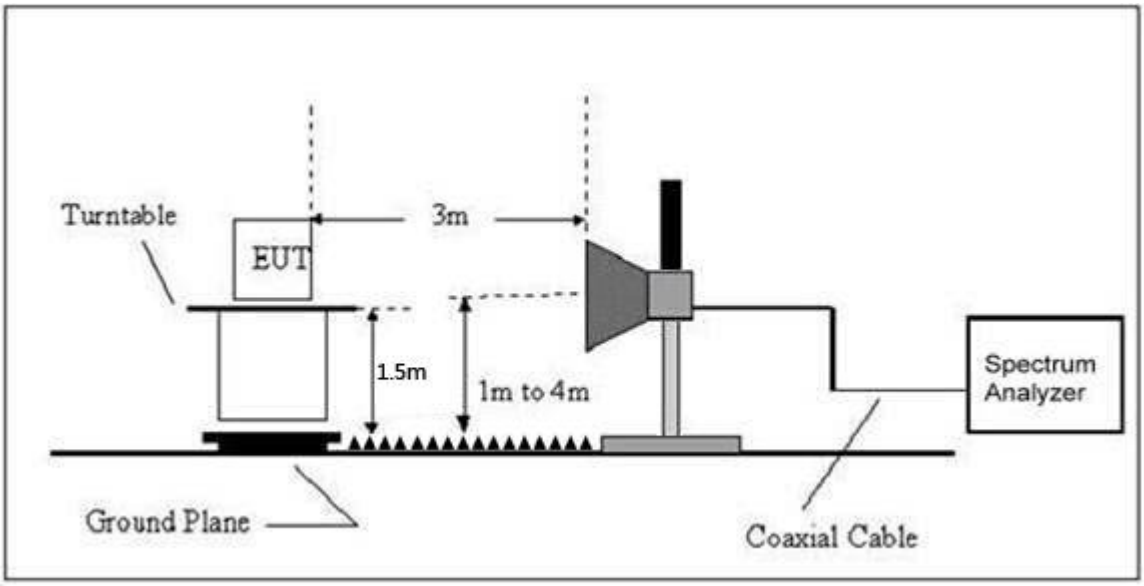
（A）Radiated Emission Test-Up Frequency Below 30MHz



（B）Radiated Emission Test-Up Frequency 30MHz~1GHz



（C）Radiated Emission Test-Up Frequency Above 1GHz



4.2.5. EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

We pretest all adapter's emission, only the adapter 1's data was worst and the data was recording in the report.

The data only show the worst mode.

Radiated Spurious Emission (Below 30MHz)

EUT：	Full HD Digital Transmission System	Model Name ：	Insight rx
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Polarization :	---
Test Voltage ：	DC 5V		
Test Mode ：	TX		

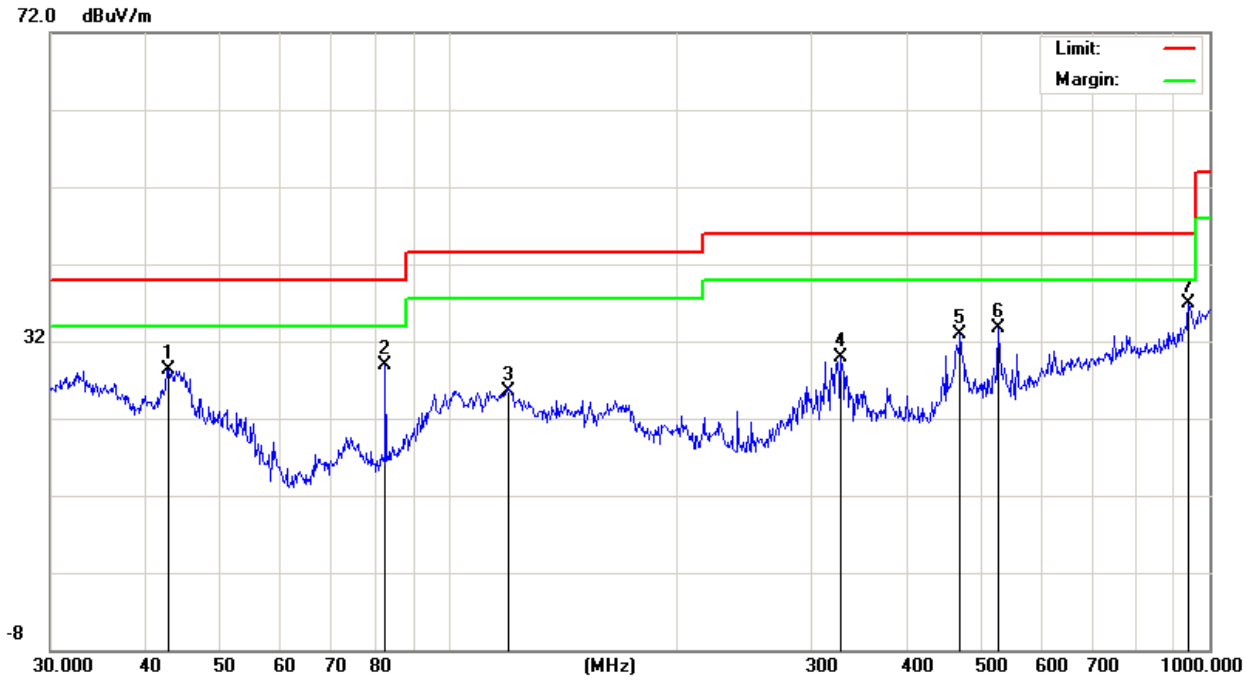
Freq.	Reading	Limit	Margin	State
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	P/F
--	--	--	--	PASS
--	--	--	--	PASS

Note:
The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
Distance extrapolation factor =40 log (specific distance/test distance)(dB);
Limit line = specific limits(dBuv) + distance extrapolation factor.

Radiated Spurious Emission (Between 30MHz – 1GHz)

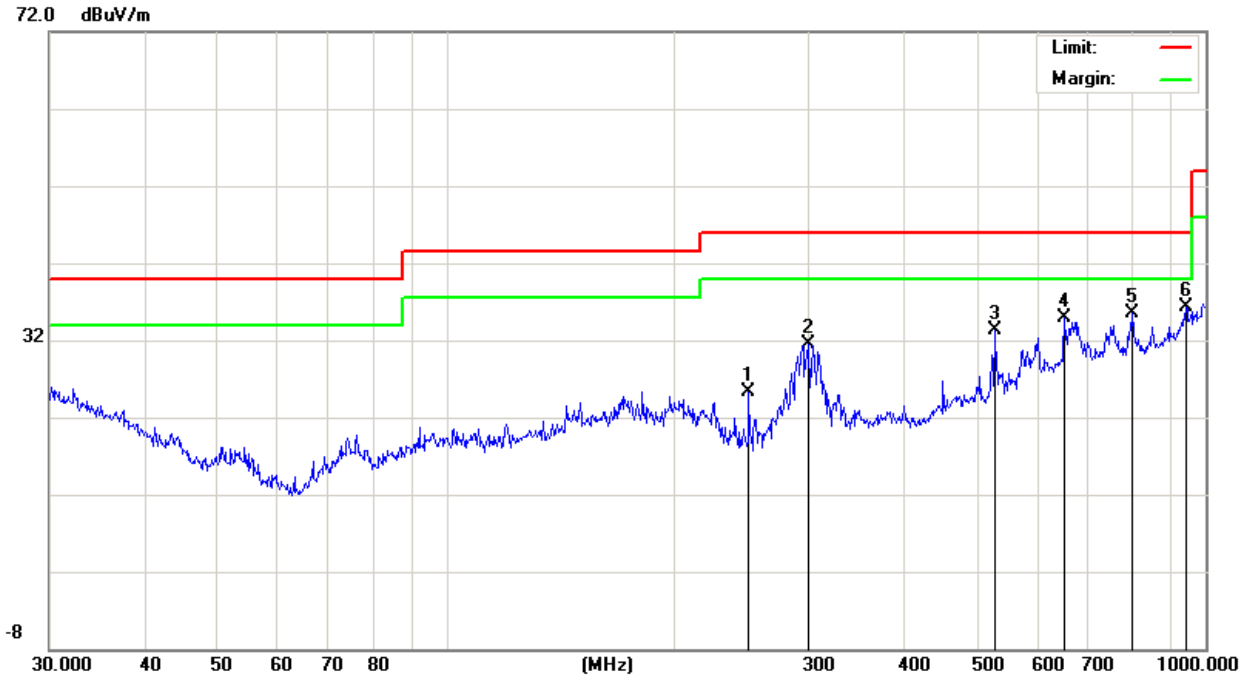
Temperature：	26 ℃	Relative Humidity：	54%
Pressure：	1010 hPa	Polarization：	Horizontal
Test Voltage ：	DC 5V		
Test Mode ： (Worst)	Link Mode		

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
V	42.8997	14.58	13.79	28.37	40.00	-11.63	QP
V	82.6482	18.74	10.08	28.82	40.00	-11.18	QP
V	119.4361	14.02	11.57	25.59	43.50	-17.91	QP
V	327.8873	14.99	14.83	29.82	46.00	-16.18	QP
V	470.5230	15.16	17.73	32.89	46.00	-13.11	QP
V	528.2458	14.83	18.86	33.69	46.00	-12.31	QP
V	938.8324	9.39	27.44	36.83	46.00	-9.17	QP
Remark: Absolute Level= ReadingLevel+ Factor, Margin= Absolute Level - Limit							



Temperature：	26 ℃	Relative Humidity：	54%
Pressure：	1010 hPa	Polarization：	Vertical
Test Voltage ：	DC 5V		
Test Mode ： (Worst)	Link Mode		

Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
H	250.3010	13.11	12.12	25.23	46.00	-20.77	QP
H	299.3158	17.66	13.82	31.48	46.00	-14.52	QP
H	528.2458	14.48	18.86	33.34	46.00	-12.66	QP
H	651.9417	13.31	21.63	34.94	46.00	-11.06	QP
H	801.7862	11.38	24.04	35.42	46.00	-10.58	QP
H	942.1304	8.82	27.55	36.37	46.00	-9.63	QP
Remark: Absolute Level= ReadingLevel+ Factor, Margin= Absolute Level - Limit							



Radiated Spurious Emission (Above 1GHz)

802.11a band 1

	Freq.	Receiver Reading	Detector	Polar	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limit	Result
	(MHz)	(dBμV)	(PK/QP/Ave)	(H/V)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	
Lower Channel 5180MHz	10360.00	57.82	PK	H	33.36	6.20	29.10	59.76	74.00	Pass
	10360.00	47.79	Ave	H	33.36	6.20	29.10	49.73	54.00	Pass
	15540.00	59.47	PK	H	34.40	6.55	26.50	58.12	74.00	Pass
	15540.00	48.76	Ave	H	34.40	6.55	26.50	47.41	54.00	Pass
	10360.00	57.67	PK	V	33.36	6.20	29.10	59.61	74.00	Pass
	10360.00	48.61	Ave	V	33.45	6.20	29.10	50.46	54.00	Pass
	15540.00	58.89	PK	V	34.40	6.55	26.50	57.54	74.00	Pass
	15540.00	48.97	Ave	V	34.40	6.55	26.50	47.62	54.00	Pass
Middle Channel 5200MHz	10400.00	56.52	PK	H	33.65	6.45	29.36	58.68	74.00	Pass
	10400.00	47.53	Ave	H	33.65	6.45	29.36	49.69	54.00	Pass
	15600.00	59.03	PK	H	34.72	6.84	26.68	57.83	74.00	Pass
	15600.00	47.54	Ave	H	34.72	6.84	26.68	46.34	54.00	Pass
	10400.00	57.32	PK	V	33.65	6.45	29.36	59.48	74.00	Pass
	10400.00	48.51	Ave	V	33.65	6.45	29.36	50.67	54.00	Pass
	15600.00	58.78	PK	V	34.72	6.84	26.68	57.58	74.00	Pass
	15600.00	47.83	Ave	V	34.72	6.84	26.38	46.33	54.00	Pass
Upper Channel 5240MHz	10480.00	56.7	PK	H	33.89	6.82	30.55	60.18	74.00	Pass
	10480.00	46.35	Ave	H	33.89	6.82	30.55	49.83	54.00	Pass
	15720.00	58.95	PK	H	35.12	6.95	27.85	58.63	74.00	Pass
	15720.00	47.84	Ave	H	35.12	6.95	27.85	47.52	54.00	Pass
	10480.00	57.71	PK	V	33.89	6.82	30.55	61.19	74.00	Pass
	10480.00	47.16	Ave	V	33.89	6.82	30.55	50.64	54.00	Pass
	15720.00	59.06	PK	V	35.12	6.95	27.85	58.74	74.00	Pass
	15720.00	47.99	Ave	V	35.12	6.95	27.85	47.67	54.00	Pass

Remark:
Emission Level = Receiver Reading + Antenna Factor + Cable Loss – Pre-amplifier.
Margin = Emission Level - Limit
Other harmonics emissions are lower than 20dB below the allowable limit.

802.11a band 4

	Freq.	Receiver Reading	Detector	Polar	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limit	Result
	(MHz)	(dBμV)	(PK/QP/Ave)	(H/V)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	
Lower Channel 5745MHz	11490.00	56.84	PK	H	34.25	6.48	29.46	58.53	74.00	Pass
	11490.00	47.81	Ave	H	33.25	6.48	29.46	50.5	54.00	Pass
	17235.00	58.52	PK	H	34.83	6.96	26.88	57.53	74.00	Pass
	17235.00	47.75	Ave	H	34.83	6.96	26.88	46.76	54.00	Pass
	11490.00	56.5	PK	V	34.25	6.48	29.46	58.19	74.00	Pass
	11490.00	47.64	Ave	V	33.25	6.48	29.46	50.33	54.00	Pass
	17235.00	58.76	PK	V	34.83	6.96	26.88	57.77	74.00	Pass
	17235.00	47.95	Ave	V	34.83	6.96	26.88	46.96	54.00	Pass
Middle Channel 5785MHz	11570.00	57.51	PK	H	33.95	6.89	29.36	59.81	74.00	Pass
	11570.00	48.05	Ave	H	33.95	6.89	29.36	50.35	54.00	Pass
	17355.00	58.12	PK	H	35.25	7.10	27.22	57.19	74.00	Pass
	17355.00	48.52	Ave	H	35.25	7.10	27.22	47.59	54.00	Pass
	11570.00	57.44	PK	V	33.95	6.89	29.36	59.74	74.00	Pass
	11570.00	47.83	Ave	V	33.95	6.89	29.36	50.13	54.00	Pass
	17355.00	59.01	PK	V	35.25	7.10	27.22	58.08	74.00	Pass
	17355.00	47.57	Ave	V	35.25	7.10	27.22	46.64	54.00	Pass
Upper Channel 5825MHz	11650.00	57.12	PK	H	34.35	7.15	30.15	60.07	57.12	Pass
	11650.00	46.04	Ave	H	34.35	7.15	30.15	48.99	46.04	Pass
	17475.00	59.77	PK	H	35.75	7.45	28.54	60.01	59.77	Pass
	17475.00	48.12	Ave	H	35.75	7.45	28.54	48.36	48.12	Pass
	11650.00	58.43	PK	V	34.35	7.15	30.15	61.38	58.43	Pass
	11650.00	46.91	Ave	V	34.35	7.15	30.15	49.86	46.91	Pass
	17475.00	59.21	PK	V	35.75	7.45	28.54	59.45	59.21	Pass
	17475.00	48.24	Ave	V	35.75	7.45	28.54	48.48	48.24	Pass

Remark:
Emission Level = Receiver Reading + Antenna Factor + Cable Loss – Pre-amplifier.
Margin = Emission Level - Limit
Other harmonics emissions are lower than 20dB below the allowable limit.

802.11n20 band 1

	Freq.	Receiver Reading	Detector	Polar	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limit	Result
	(MHz)	(dBμV)	(PK/QP/Ave)	(H/V)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	
Lower Channel 5180MHz	10360.00	57.81	PK	H	33.36	6.20	29.10	59.75	74.00	Pass
	10360.00	47.78	Ave	H	33.36	6.20	29.10	49.72	54.00	Pass
	15540.00	59.46	PK	H	34.40	6.55	26.50	58.11	74.00	Pass
	15540.00	48.75	Ave	H	34.40	6.55	26.50	47.40	54.00	Pass
	10360.00	57.65	PK	V	33.36	6.20	29.10	59.59	74.00	Pass
	10360.00	48.05	Ave	V	33.45	6.20	29.10	49.90	54.00	Pass
	15540.00	58.87	PK	V	34.40	6.55	26.50	57.52	74.00	Pass
	15540.00	48.96	Ave	V	34.40	6.55	26.50	47.61	54.00	Pass
Middle Channel 5200MHz	10400.00	56.50	PK	H	33.65	6.45	29.36	58.66	74.00	Pass
	10400.00	47.52	Ave	H	33.65	6.45	29.36	49.68	54.00	Pass
	15600.00	59.01	PK	H	34.72	6.84	26.68	57.81	74.00	Pass
	15600.00	47.53	Ave	H	34.72	6.84	26.68	46.33	54.00	Pass
	10400.00	57.31	PK	V	33.65	6.45	29.36	59.47	74.00	Pass
	10400.00	47.76	Ave	V	33.65	6.45	29.36	49.92	54.00	Pass
	15600.00	58.77	PK	V	34.72	6.84	26.68	57.57	74.00	Pass
	15600.00	47.82	Ave	V	34.72	6.84	26.38	46.32	54.00	Pass
Upper Channel 5240MHz	10480.00	56.69	PK	H	33.89	6.82	30.55	60.17	74.00	Pass
	10480.00	46.94	Ave	H	33.89	6.82	30.55	50.42	54.00	Pass
	15720.00	59.00	PK	H	35.12	6.95	27.85	58.68	74.00	Pass
	15720.00	47.83	Ave	H	35.12	6.95	27.85	47.51	54.00	Pass
	10480.00	57.69	PK	V	33.89	6.82	30.55	61.17	74.00	Pass
	10480.00	45.85	Ave	V	33.89	6.82	30.55	49.33	54.00	Pass
	15720.00	59.05	PK	V	35.12	6.95	27.85	58.73	74.00	Pass
	15720.00	47.98	Ave	V	35.12	6.95	27.85	47.66	54.00	Pass

Remark:
Emission Level = Receiver Reading+ Antenna Factor + Cable Loss – Pre-amplifier.
Margin = Emission Level - Limit
Other harmonics emissions are lower than 20dB below the allowable limit.

802.11n20 band 4

	Freq.	Receiver Reading	Detector	Polar	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limit	Result
	(MHz)	(dBμV)	(PK/QP/Ave)	(H/V)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	
Lower Channel 5745MHz	11490.00	56.97	PK	H	34.26	6.45	29.23	58.39	74.00	Pass
	11490.00	47.47	Ave	H	33.26	6.45	29.23	49.89	54.00	Pass
	17235.00	58.68	PK	H	34.83	6.96	26.88	57.69	74.00	Pass
	17235.00	47.88	Ave	H	34.83	6.96	26.88	46.89	54.00	Pass
	11490.00	56.65	PK	V	34.25	6.48	29.46	58.34	74.00	Pass
	11490.00	46.35	Ave	V	33.25	6.48	29.46	49.04	54.00	Pass
	17235.00	58.92	PK	V	34.83	6.96	26.88	57.93	74.00	Pass
	17235.00	48.07	Ave	V	34.83	6.96	26.88	47.08	54.00	Pass
Middle Channel 5785MHz	11570.00	57.67	PK	H	33.95	6.89	29.36	59.97	74.00	Pass
	11570.00	46.91	Ave	H	33.95	6.89	29.36	49.21	54.00	Pass
	17355.00	58.28	PK	H	35.25	7.10	27.22	57.35	74.00	Pass
	17355.00	48.65	Ave	H	35.25	7.10	27.22	47.72	54.00	Pass
	11570.00	57.6	PK	V	33.95	6.89	29.36	59.9	74.00	Pass
	11570.00	47.46	Ave	V	33.95	6.89	29.36	49.76	54.00	Pass
	17355.00	59.17	PK	V	35.25	7.10	27.22	58.24	74.00	Pass
	17355.00	47.7	Ave	V	35.25	7.10	27.22	46.77	54.00	Pass
Upper Channel 5825MHz	11650.00	58.26	PK	H	34.35	7.15	30.15	61.21	57.12	Pass
	11650.00	46.84	Ave	H	34.35	7.15	30.15	49.79	46.04	Pass
	17475.00	59.93	PK	H	35.75	7.45	28.54	60.17	59.77	Pass
	17475.00	48.12	Ave	H	35.75	7.45	28.54	48.36	48.12	Pass
	11650.00	58.56	PK	V	34.35	7.15	30.15	61.51	58.43	Pass
	11650.00	47.02	Ave	V	34.35	7.15	30.15	49.97	46.91	Pass
	17475.00	59.37	PK	V	35.75	7.45	28.54	59.61	59.21	Pass
	17475.00	48.37	Ave	V	35.75	7.45	28.54	48.61	48.24	Pass

Remark:
Emission Level = Receiver Reading + Antenna Factor + Cable Loss – Pre-amplifier.
Margin = Emission Level - Limit
Other harmonics emissions are lower than 20dB below the allowable limit.

18G~40GHz

802.11a band 1

	Freq.	Receiver Reading	Detector	Polar	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limit	Result
	(MHz)	(dBμV)	(PK/QP/Ave)	(H/V)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	
Lower Channel 5180MHz	20720.00	43.22	PK	H	36.36	10.20	27.10	44.16	74.00	Pass
	25900.00	42.45	PK	H	36.50	10.55	27.50	44.00	74.00	Pass
	31080.00	41.61	PK	H	37.65	11.15	28.75	43.86	74.00	Pass
	20720.00	43.52	PK	V	36.36	10.20	27.10	44.46	74.00	Pass
	25900.00	42.85	PK	V	36.50	10.55	27.50	44.40	74.00	Pass
	31080.00	42.41	PK	V	37.65	11.15	28.75	44.66	74.00	Pass
Middle Channel 5200MHz	20800.00	43.87	PK	H	36.36	10.20	27.10	44.81	74.00	Pass
	26000.00	43.63	PK	H	36.50	10.55	27.50	45.18	74.00	Pass
	31200.00	42.22	PK	H	37.65	11.15	28.75	44.47	74.00	Pass
	20800.00	42.46	PK	V	36.36	10.20	27.10	43.40	74.00	Pass
	26000.00	42.75	PK	V	36.50	10.55	27.50	44.30	74.00	Pass
	31200.00	42.69	PK	V	37.65	11.15	28.75	44.94	74.00	Pass
Upper Channel 5240MHz	20960.00	42.73	PK	H	36.37	10.22	27.12	43.70	74.00	Pass
	26200.00	43.61	PK	H	36.57	10.57	27.51	45.12	74.00	Pass
	31440.00	42.46	PK	H	37.66	11.16	28.76	44.72	74.00	Pass
	20960.00	43.45	PK	V	36.37	10.22	27.12	44.42	74.00	Pass
	26200.00	41.89	PK	V	36.57	10.57	27.51	43.40	74.00	Pass
	31440.00	42.55	PK	V	37.66	11.16	28.76	44.81	74.00	Pass

Remark:
Emission Level = Receiver Reading + Antenna Factor + Cable Loss – Pre-amplifier.
Margin = Emission Level - Limit
Other harmonics emissions are lower than 20dB below the allowable limit.
If the PK measured levels comply with average limit, then the average level were deemed to comply with average limit.

802.11a band 4

	Freq.	Receiver Reading	Detector	Polar	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limit	Result
	(MHz)	(dBμV)	(PK/QP/Ave)	(H/V)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	
Lower Channel 5745MHz	22980.00	43.36	PK	H	37.15	10.55	28.12	44.88	74.00	Pass
	28725.00	42.42	PK	H	37.15	10.82	28.42	44.51	74.00	Pass
	34470.00	41.48	PK	H	37.68	11.18	28.78	43.76	74.00	Pass
	22980.00	43.25	PK	V	37.15	10.55	28.12	44.77	74.00	Pass
	28725.00	42.36	PK	V	37.15	10.82	28.42	44.45	74.00	Pass
	34470.00	42.14	PK	V	37.68	11.18	28.78	44.42	74.00	Pass
Middle Channel 5785MHz	23140.00	43.28	PK	H	37.15	10.55	28.12	44.80	74.00	Pass
	28925.00	42.36	PK	H	37.15	10.82	28.42	44.45	74.00	Pass
	34710.00	42.42	PK	H	37.68	11.18	28.78	44.70	74.00	Pass
	23140.00	42.25	PK	V	37.15	10.55	28.12	43.77	74.00	Pass
	28925.00	42.31	PK	V	37.15	10.82	28.42	44.40	74.00	Pass
	34710.00	42.27	PK	V	37.68	11.18	28.78	44.55	74.00	Pass
Upper Channel 5825MHz	23300.00	42.85	PK	H	37.15	10.55	28.12	44.37	74.00	Pass
	29125.00	42.67	PK	H	37.15	10.82	28.42	44.76	74.00	Pass
	34950.00	42.48	PK	H	37.68	11.18	28.78	44.76	74.00	Pass
	23300.00	43.39	PK	V	37.15	10.55	28.12	44.91	74.00	Pass
	29125.00	41.97	PK	V	37.15	10.82	28.42	44.06	74.00	Pass
	34950.00	42.26	PK	V	37.68	11.18	28.78	44.54	74.00	Pass

Remark:
Emission Level = Receiver Reading + Antenna Factor + Cable Loss – Pre-amplifier.
Margin = Emission Level - Limit
Other harmonics emissions are lower than 20dB below the allowable limit.
If the PK measured levels comply with average limit, then the average level were deemed to comply with average limit.

802.11n20 band 1

	Freq.	Receiver Reading	Detector	Polar	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limit	Result
	(MHz)	(dBμV)	(PK/QP/Ave)	(H/V)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	
Lower Channel 5180MHz	20720.00	42.36	PK	H	36.36	10.20	27.10	43.30	74.00	Pass
	25900.00	42.42	PK	H	36.50	10.55	27.50	43.97	74.00	Pass
	31080.00	42.18	PK	H	37.65	11.15	28.75	44.43	74.00	Pass
	20720.00	43.25	PK	V	36.36	10.20	27.10	44.19	74.00	Pass
	25900.00	43.33	PK	V	36.50	10.55	27.50	44.88	74.00	Pass
	31080.00	42.36	PK	V	37.65	11.15	28.75	44.61	74.00	Pass
Middle Channel 5200MHz	20800.00	42.76	PK	H	36.36	10.20	27.10	43.70	74.00	Pass
	26000.00	43.05	PK	H	36.50	10.55	27.50	44.60	74.00	Pass
	31200.00	42.24	PK	H	37.65	11.15	28.75	44.49	74.00	Pass
	20800.00	42.47	PK	V	36.36	10.20	27.10	43.41	74.00	Pass
	26000.00	42.65	PK	V	36.50	10.55	27.50	44.20	74.00	Pass
	31200.00	42.77	PK	V	37.65	11.15	28.75	45.02	74.00	Pass
Upper Channel 5240MHz	20960.00	43.09	PK	H	36.37	10.22	27.12	44.06	74.00	Pass
	26200.00	43.19	PK	H	36.57	10.57	27.51	44.70	74.00	Pass
	31440.00	42.24	PK	H	37.66	11.16	28.76	44.50	74.00	Pass
	20960.00	43.74	PK	V	36.37	10.22	27.12	44.71	74.00	Pass
	26200.00	41.12	PK	V	36.57	10.57	27.51	42.63	74.00	Pass
	31440.00	42.23	PK	V	37.66	11.16	28.76	44.49	74.00	Pass

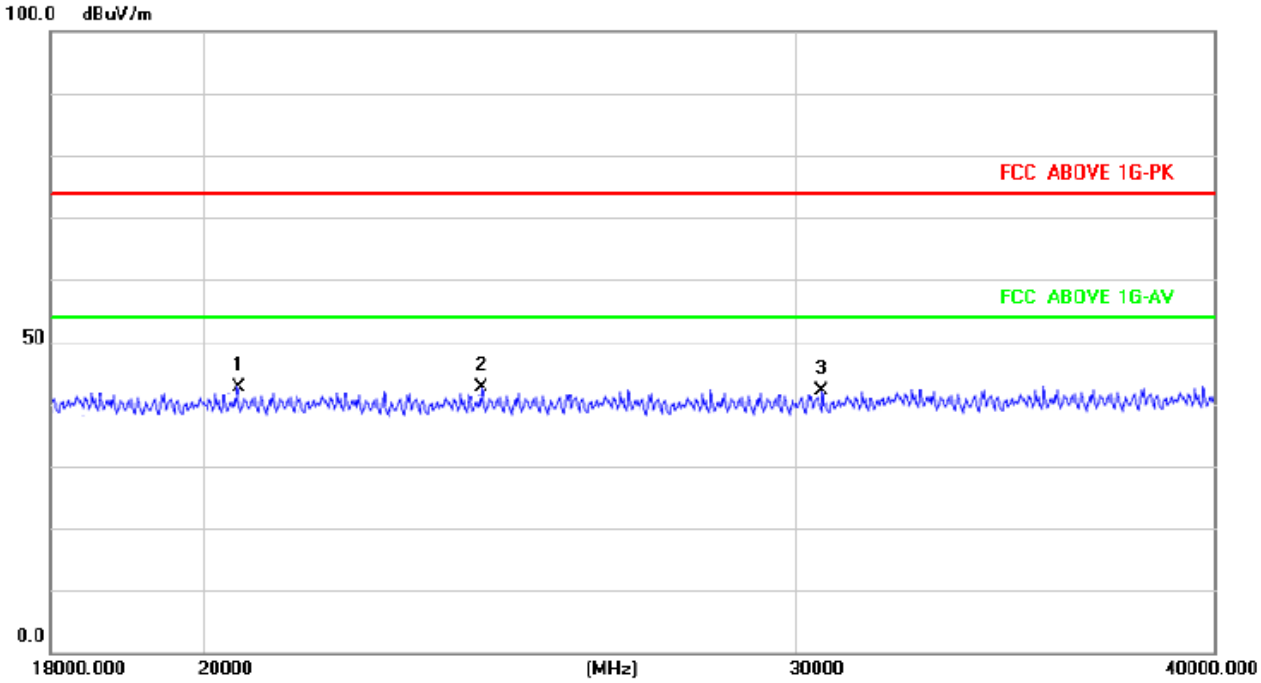
Remark:
Emission Level = Receiver Reading + Antenna Factor + Cable Loss – Pre-amplifier.
Margin = Emission Level - Limit
Other harmonics emissions are lower than 20dB below the allowable limit.
If the PK measured levels comply with average limit, then the average level were deemed to comply with average limit.

802.11n20 band 4

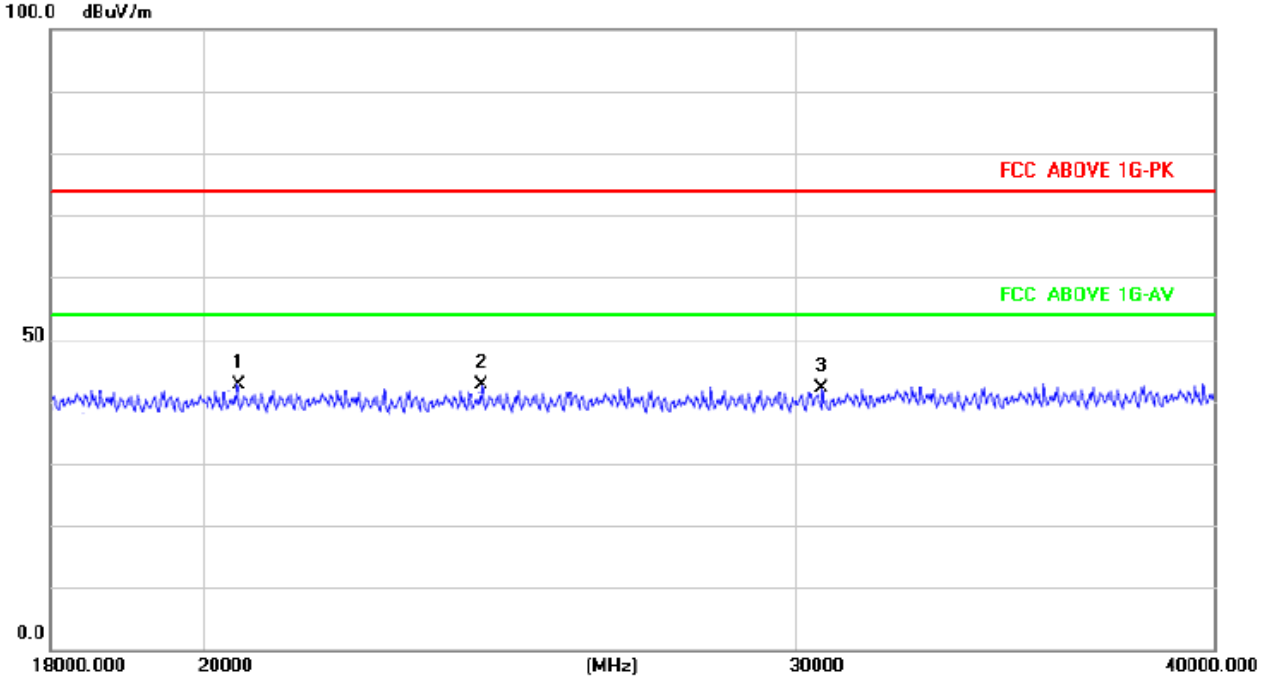
	Freq.	Receiver Reading	Detector	Polar	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limit	Result
	(MHz)	(dBμV)	(PK/QP/Ave)	(H/V)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	
Lower Channel 5745MHz	22980.00	42.14	PK	H	37.15	10.55	28.12	43.66	74.00	Pass
	28725.00	41.89	PK	H	37.15	10.82	28.42	43.98	74.00	Pass
	34470.00	42.26	PK	H	37.68	11.18	28.78	44.54	74.00	Pass
	22980.00	43.22	PK	V	37.15	10.55	28.12	44.74	74.00	Pass
	28725.00	43.11	PK	V	37.15	10.82	28.42	45.20	74.00	Pass
	34470.00	42.36	PK	V	37.68	11.18	28.78	44.64	74.00	Pass
Middle Channel 5785MHz	23140.00	42.79	PK	H	37.15	10.55	28.12	44.31	74.00	Pass
	28925.00	43.34	PK	H	37.15	10.82	28.42	45.43	74.00	Pass
	34710.00	42.82	PK	H	37.68	11.18	28.78	45.10	74.00	Pass
	23140.00	42.88	PK	V	37.15	10.55	28.12	44.40	74.00	Pass
	28925.00	42.79	PK	V	37.15	10.82	28.42	44.88	74.00	Pass
	34710.00	43.17	PK	V	37.68	11.18	28.78	45.45	74.00	Pass
Upper Channel 5825MHz	23300.00	43.34	PK	H	37.15	10.55	28.12	44.86	74.00	Pass
	29125.00	43.28	PK	H	37.15	10.82	28.42	45.37	74.00	Pass
	34950.00	42.29	PK	H	37.68	11.18	28.78	44.57	74.00	Pass
	23300.00	43.74	PK	V	37.15	10.55	28.12	45.26	74.00	Pass
	29125.00	42.87	PK	V	37.15	10.82	28.42	44.96	74.00	Pass
	34950.00	43.02	PK	V	37.68	11.18	28.78	45.30	74.00	Pass

Remark:
Emission Level = Receiver Reading + Antenna Factor + Cable Loss – Pre-amplifier.
Margin = Emission Level - Limit
Other harmonics emissions are lower than 20dB below the allowable limit.
If the PK measured levels comply with average limit, then the average level were deemed to comply with average limit.

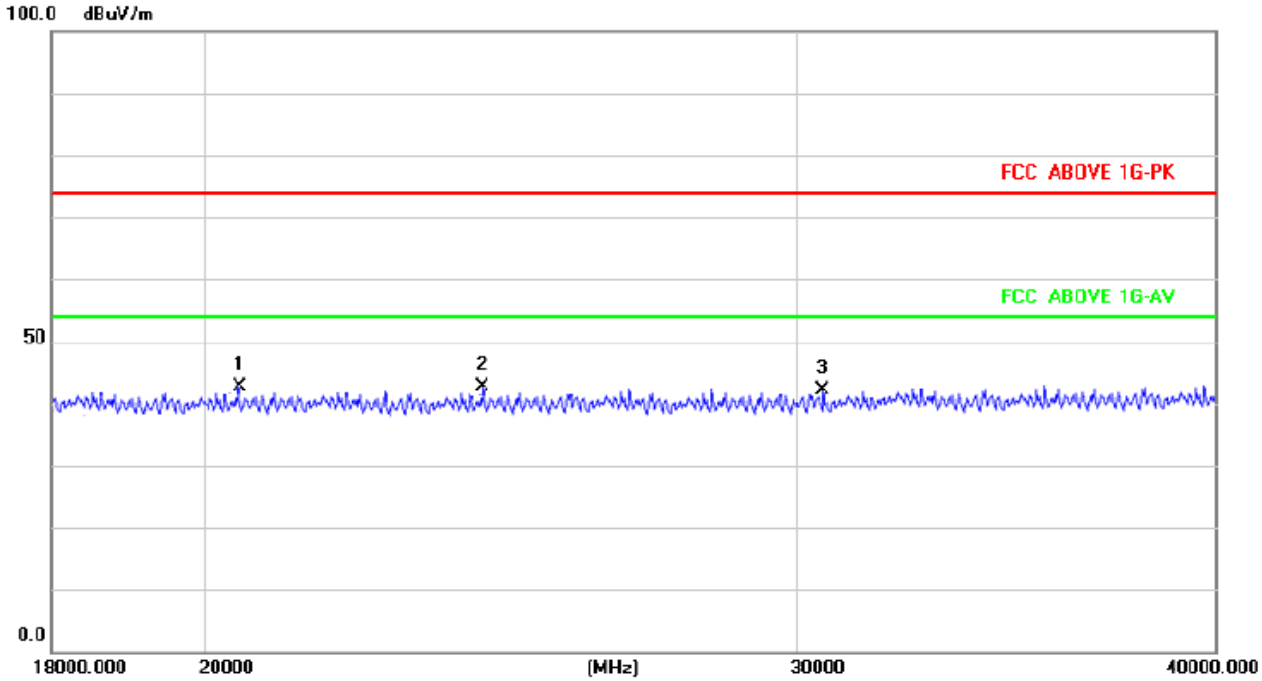
802.11a band 1
5180MHz Horizontal



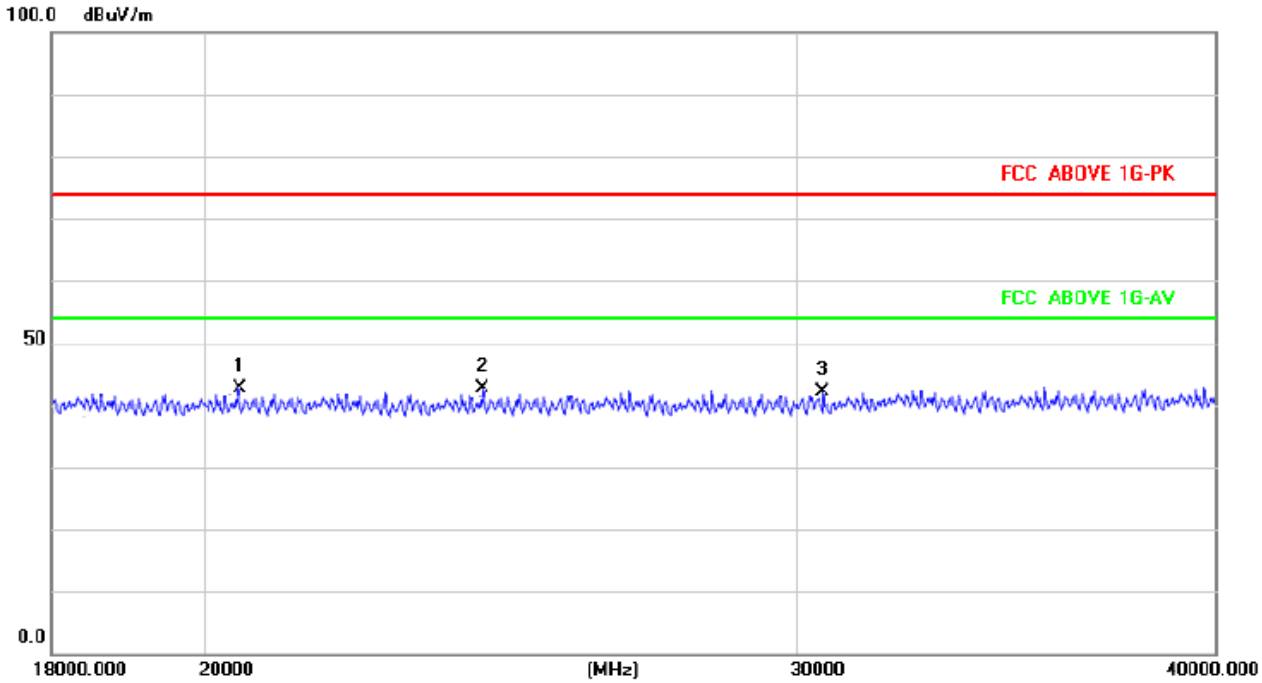
5180MHz Vertical



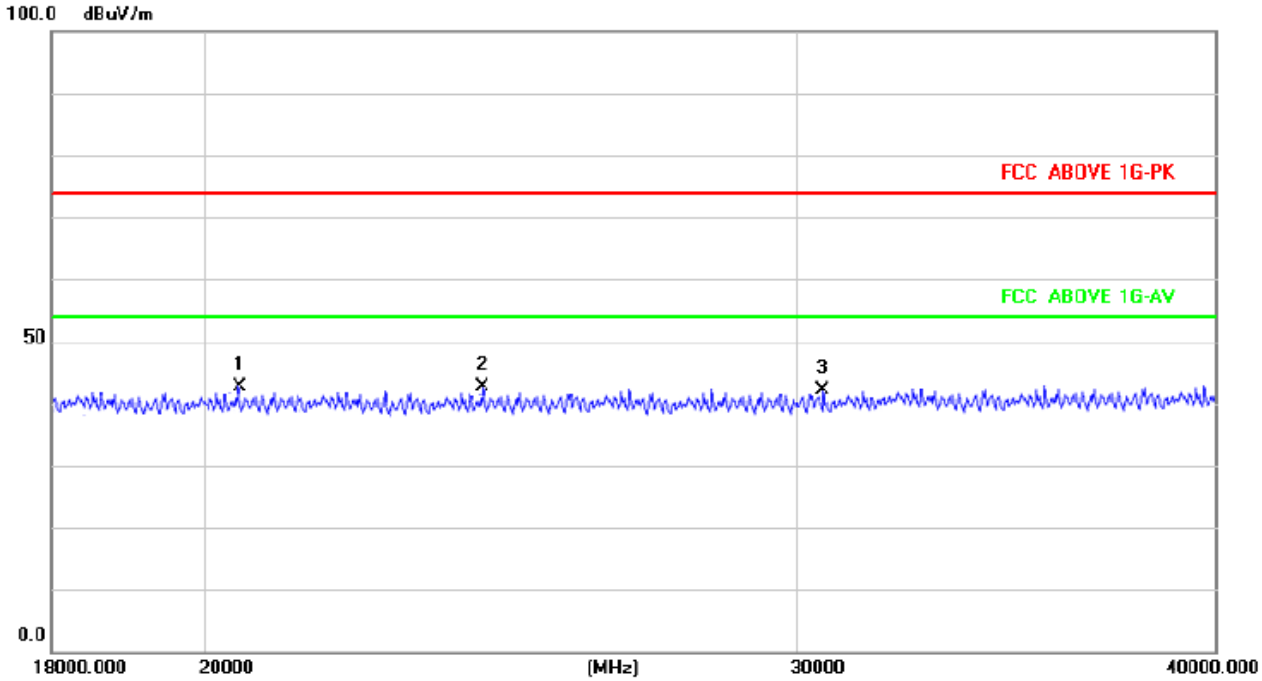
5200MHz Horizontal



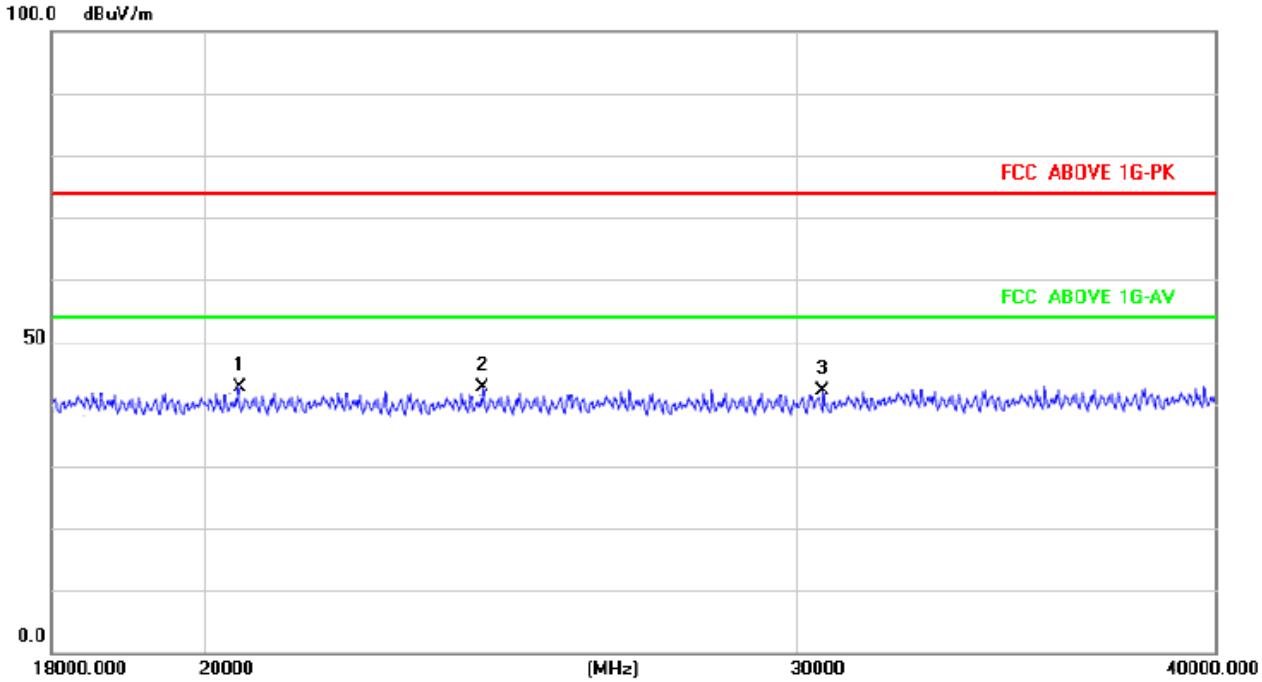
5200MHz Vertical



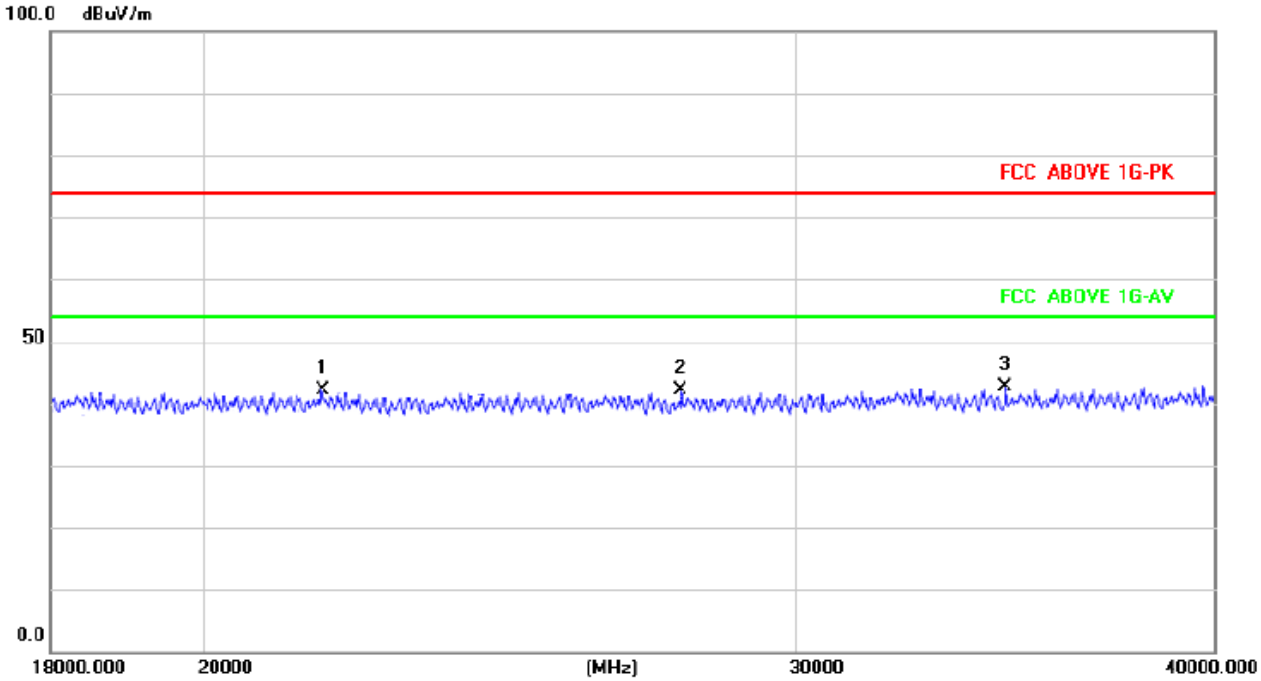
5240MHz Horizontal



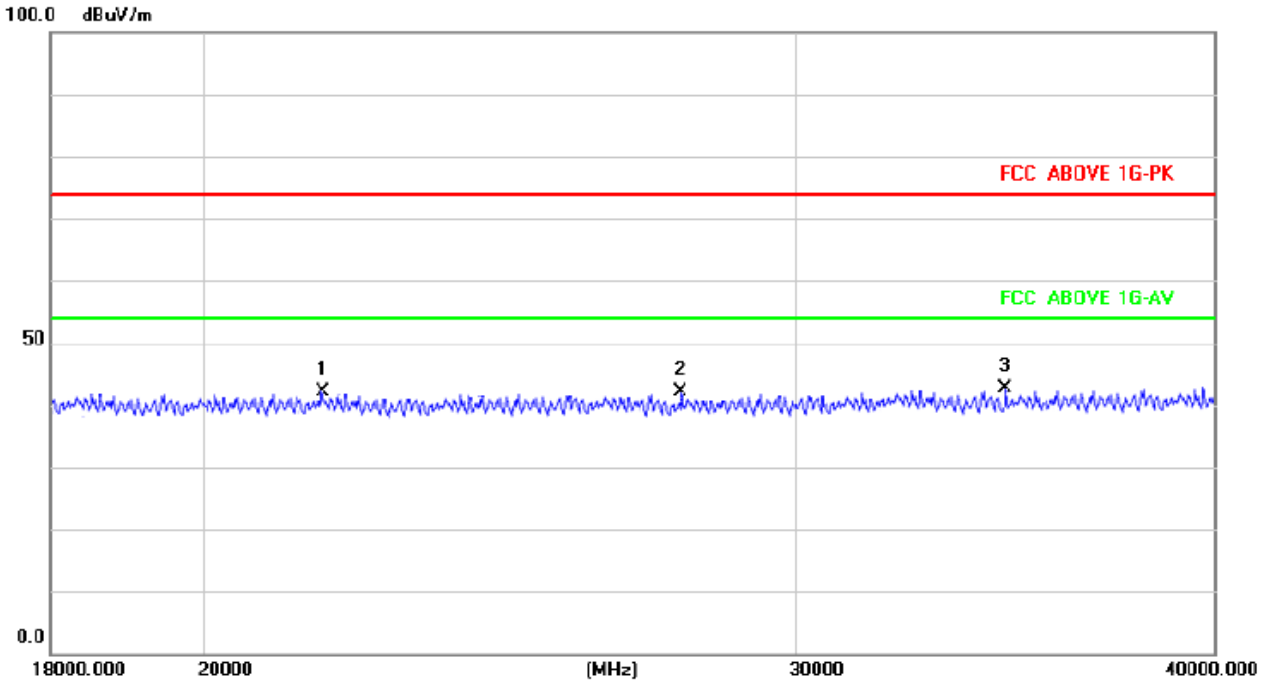
5240MHz Vertical



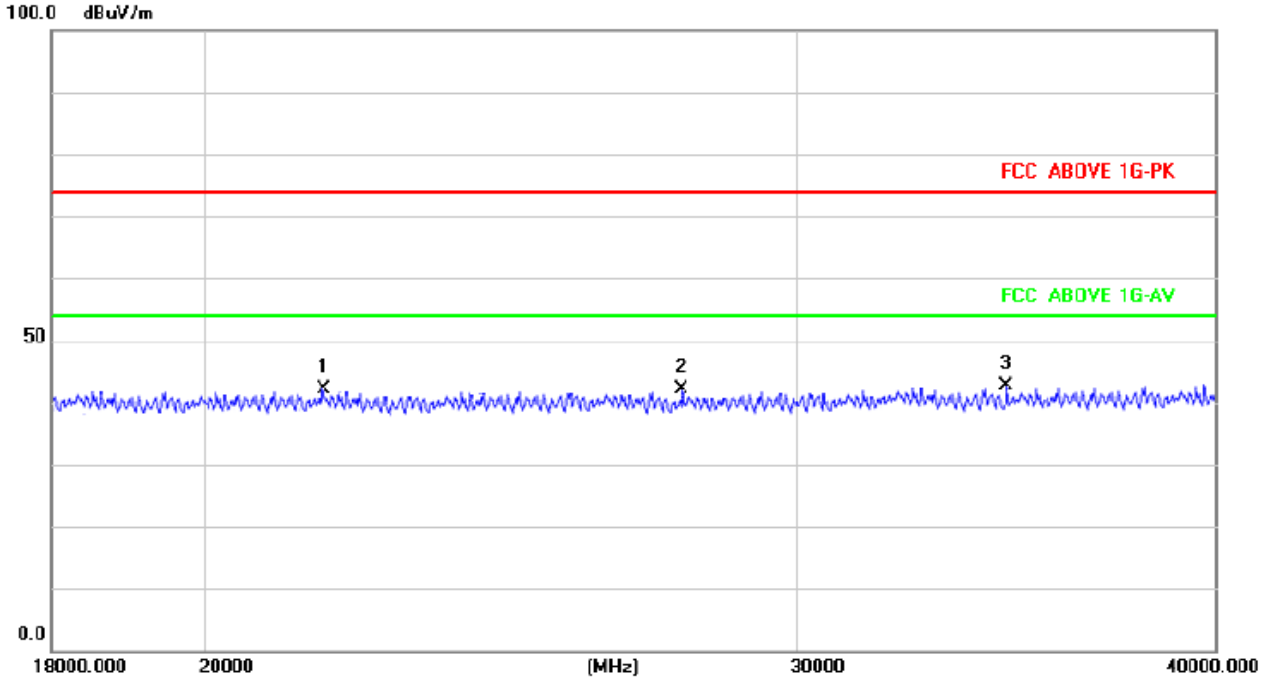
802.11n20 band 4
5745MHz Horizontal



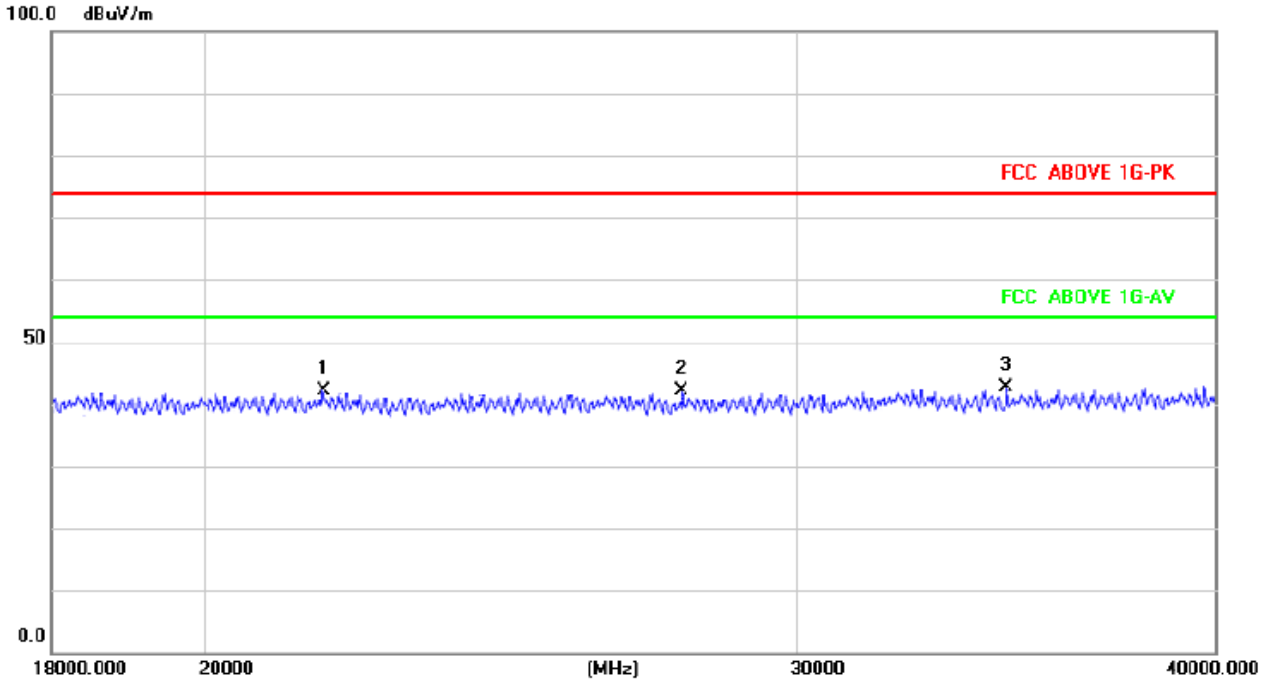
5745MHz Vertical



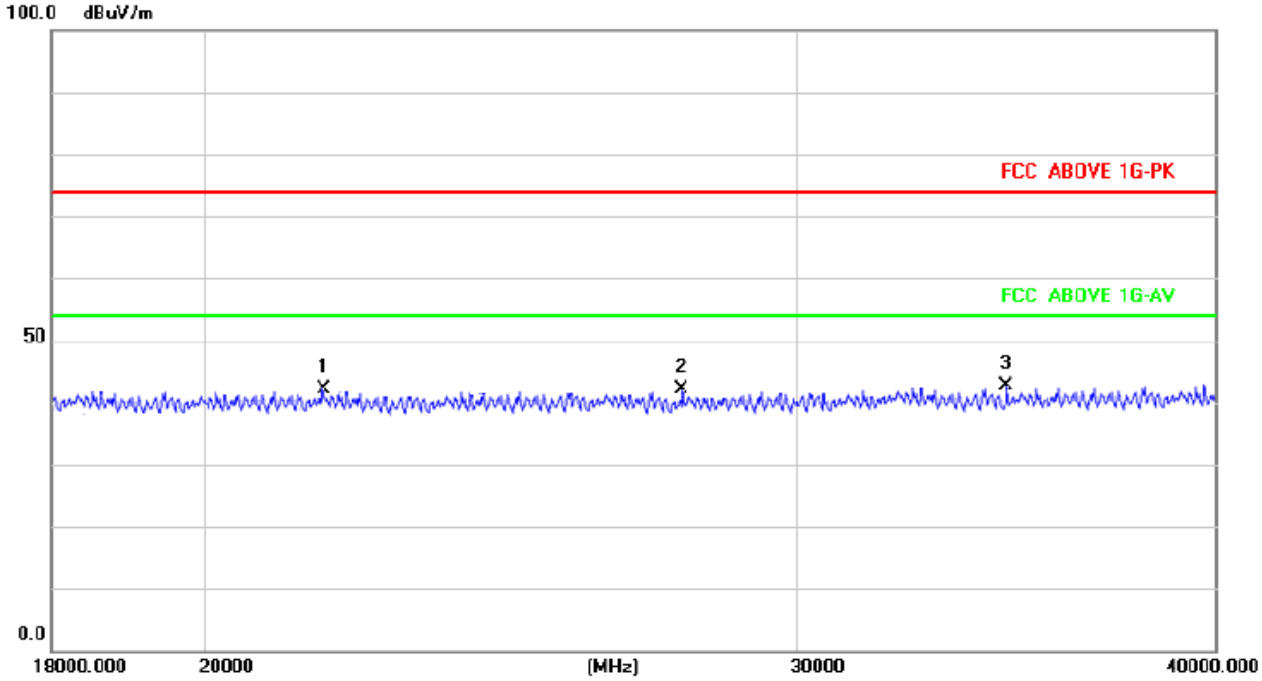
5785MHz Horizontal



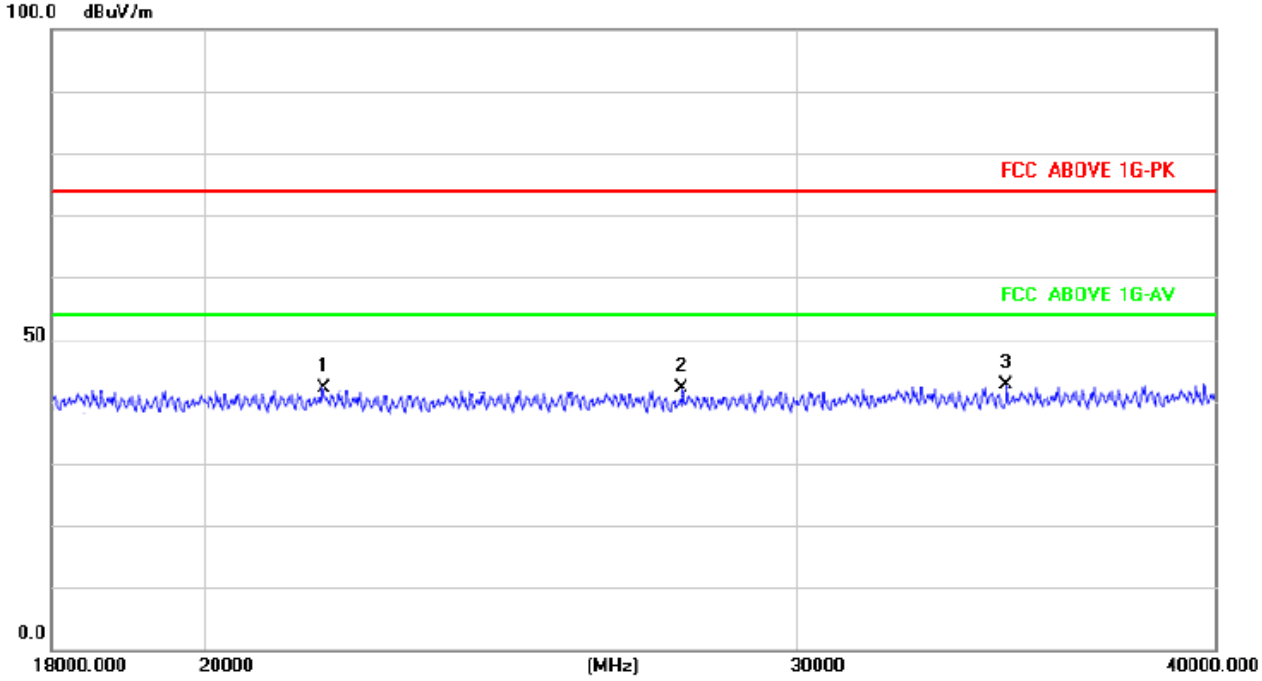
5785MHz Vertical



5825MHz Horizontal



5825MHz Vertical



NOTE: We pretest All the modulation modes, the worst data recording in the report.

5. BAND EDGE COMPLIANCE TEST

5.1. Limits

(1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(4) For transmitters operating in the 5.725-5.85 GHz band: All emissions shall be limited to a level of −27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

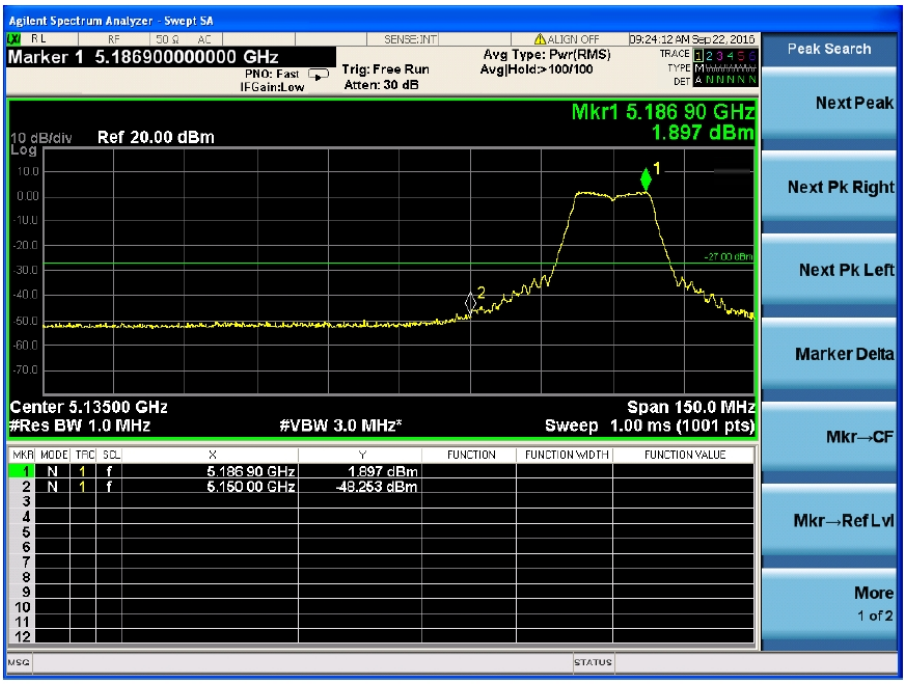
5.2. TEST PROCEDURE

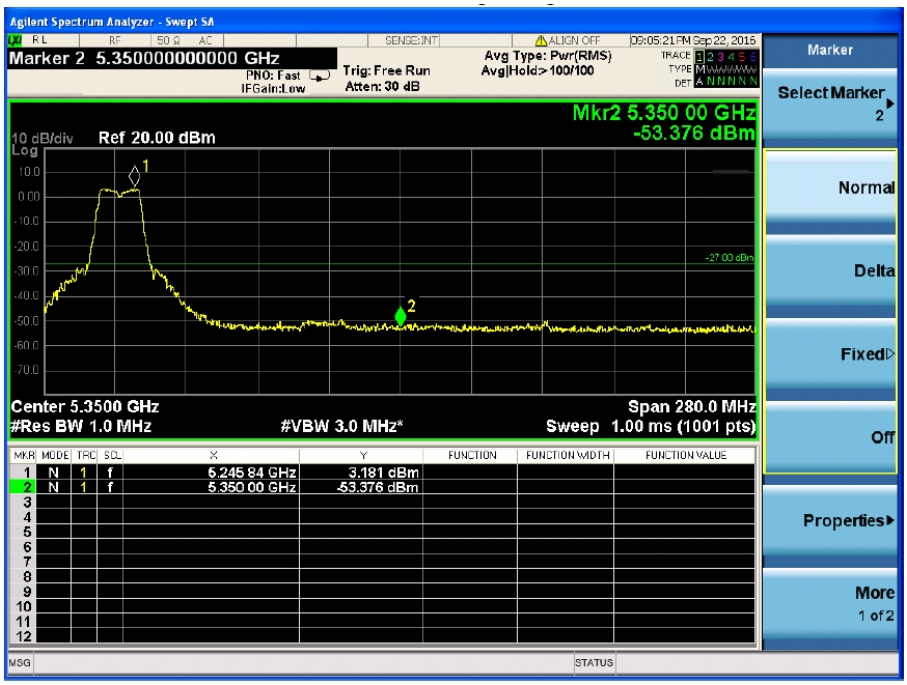
1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range.
3. Set RBW of spectrum analyzer to 1 MHz with a convenient frequency span.
4. Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.
5. Repeat above procedures until all measured frequencies were complete.

5.3. Test Data

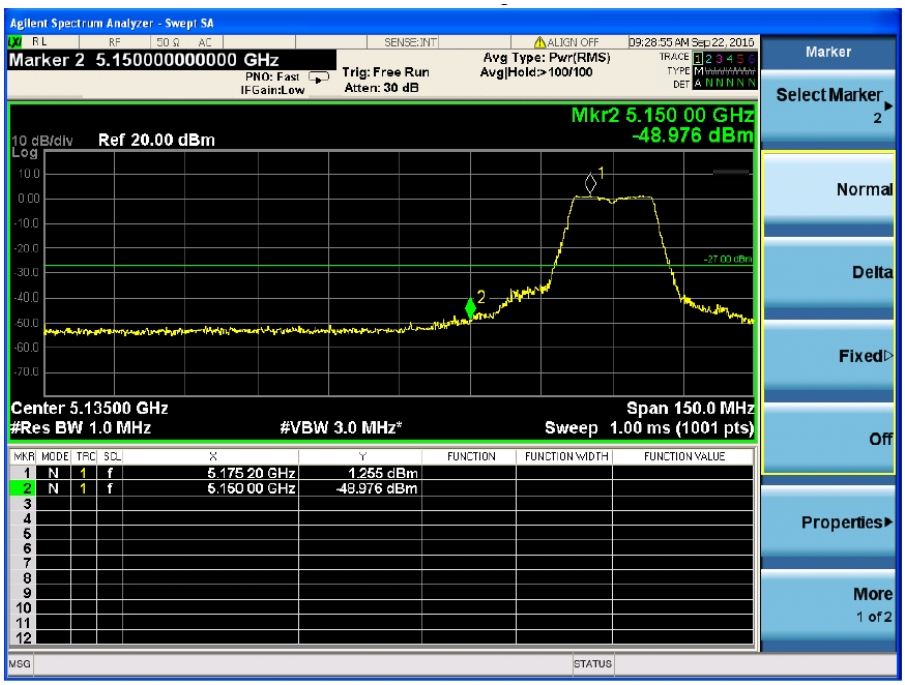
Please see data as below:

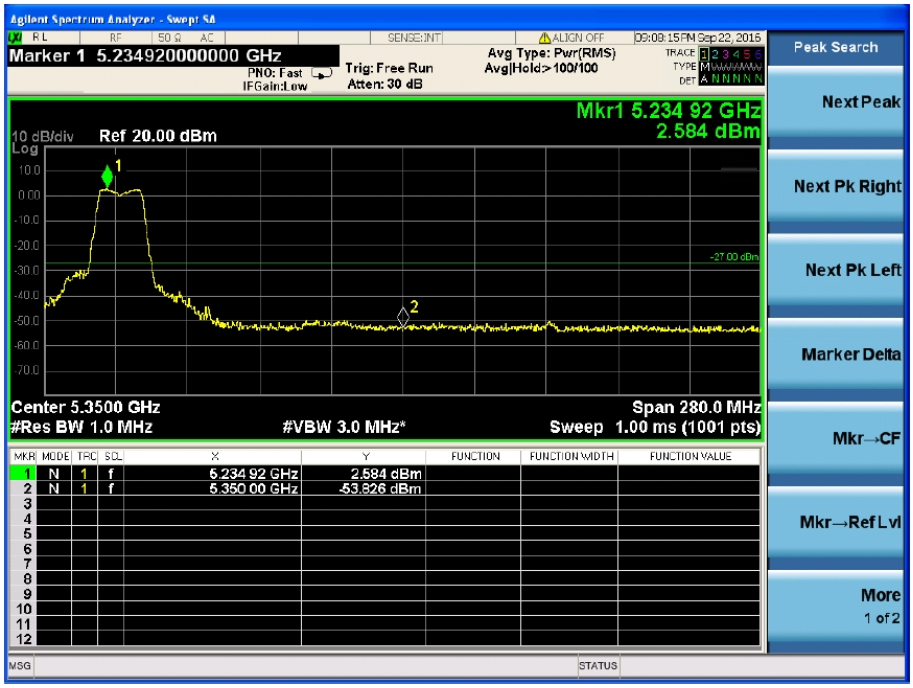
Ant1 Band 1
802.11a



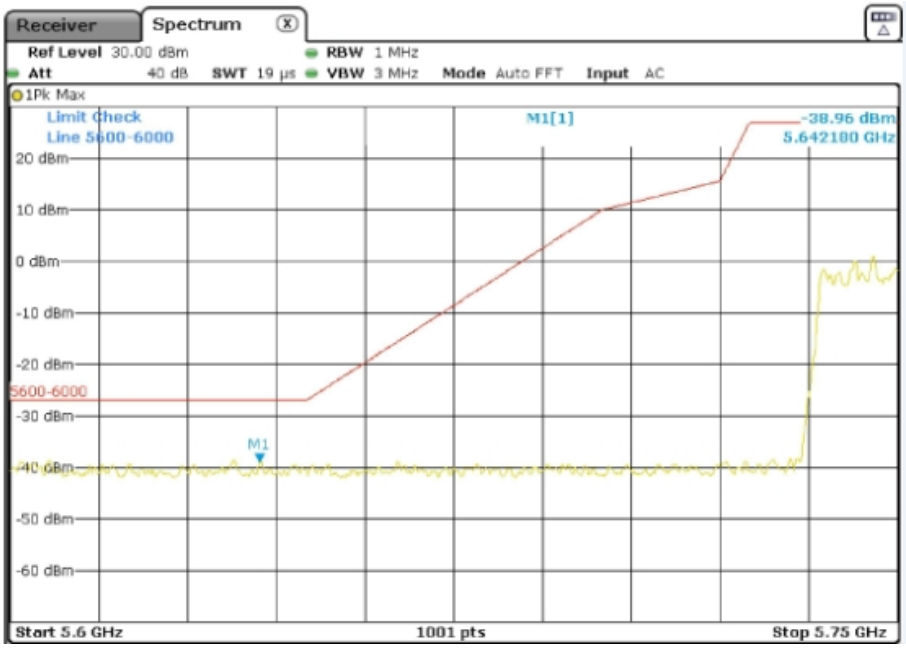


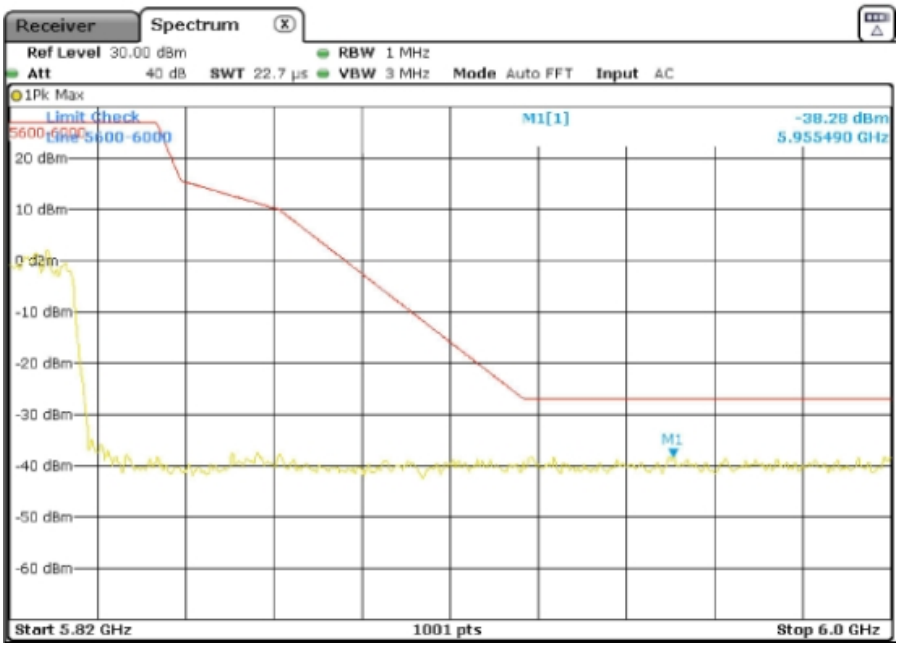
802.11n20


Agilent Spectrum Analyzer - Swept SA
Marker 2 5.150000000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Pwr(RMS)
Avg|Hold:>100/100
09:28:55 AM Sep 22, 2015
Mkr2 5.150 00 GHz
-48.976 dBm
10 dB/div
Log
Ref 20.00 dBm
-27.00 dBm
Center 5.13500 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Span 150.0 MHz
Sweep 1.00 ms (1001 pts)
1 N 1 f 5.175 20 GHz 1.255 dBm
2 N 1 f 5.150 00 GHz -48.976 dBm
Marker
Select Marker
Normal
Delta
Fixed
Off
Properties
More
1 of 2
MSG
STATUS

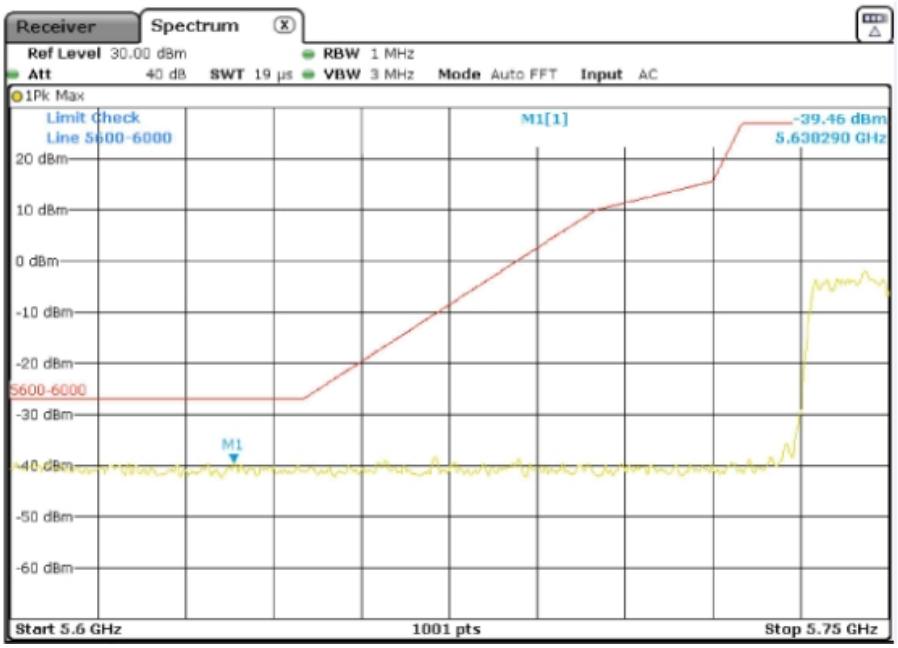

Agilent Spectrum Analyzer - Swept SA
Marker 1 5.234920000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Pwr(RMS)
Avg|Hold:>100/100
09:09:15 PM Sep 22, 2015
Mkr1 5.234 92 GHz
2.584 dBm
10 dB/div
Log
Ref 20.00 dBm
-27.00 dBm
Center 5.3500 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Span 280.0 MHz
Sweep 1.00 ms (1001 pts)
1 N 1 f 5.234 92 GHz 2.584 dBm
2 N 1 f 5.350 00 GHz -53.826 dBm
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2
MSG
STATUS

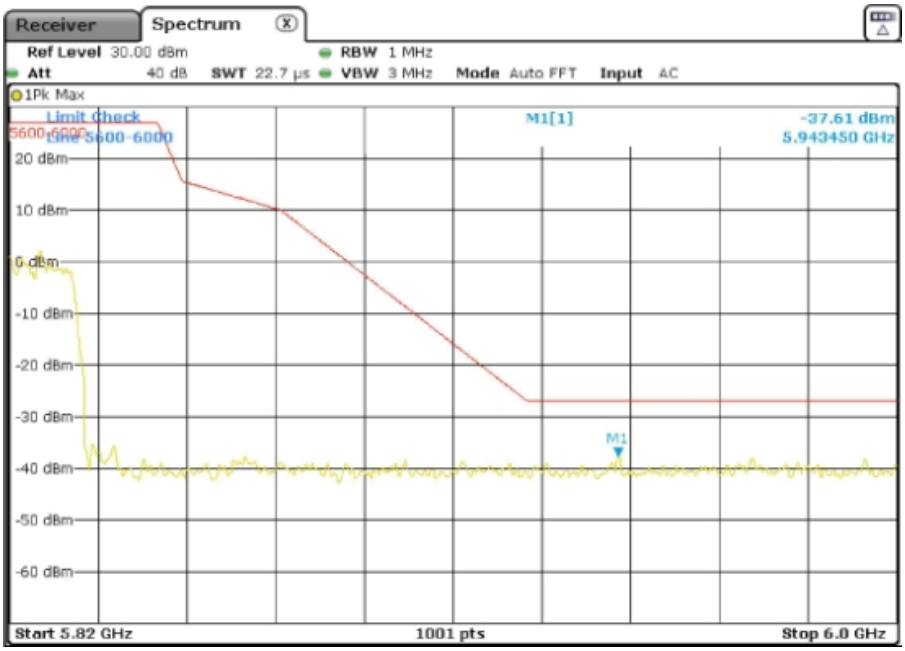
Ant1 Band 4
802.11a



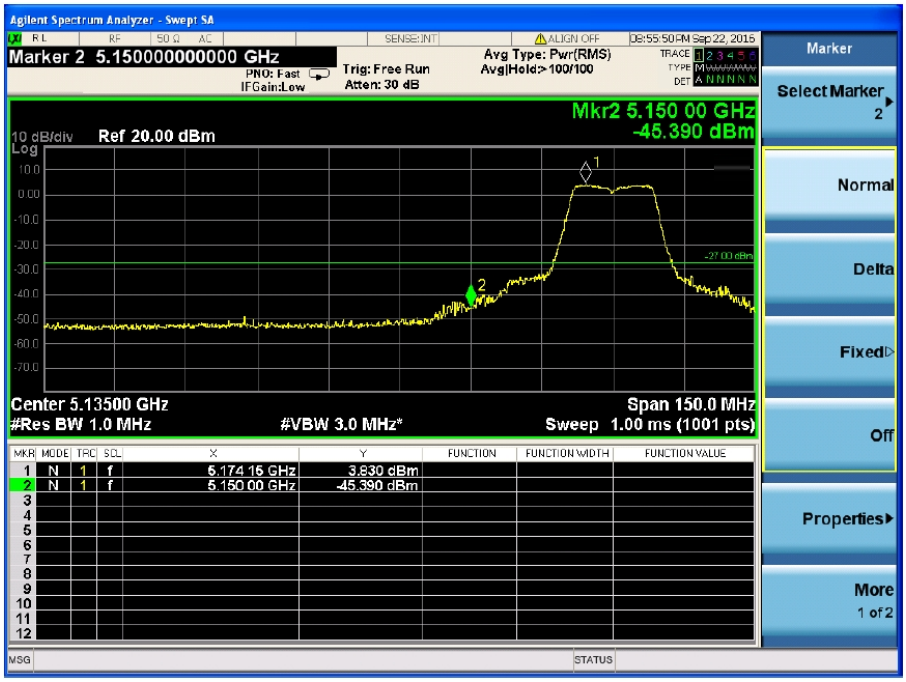


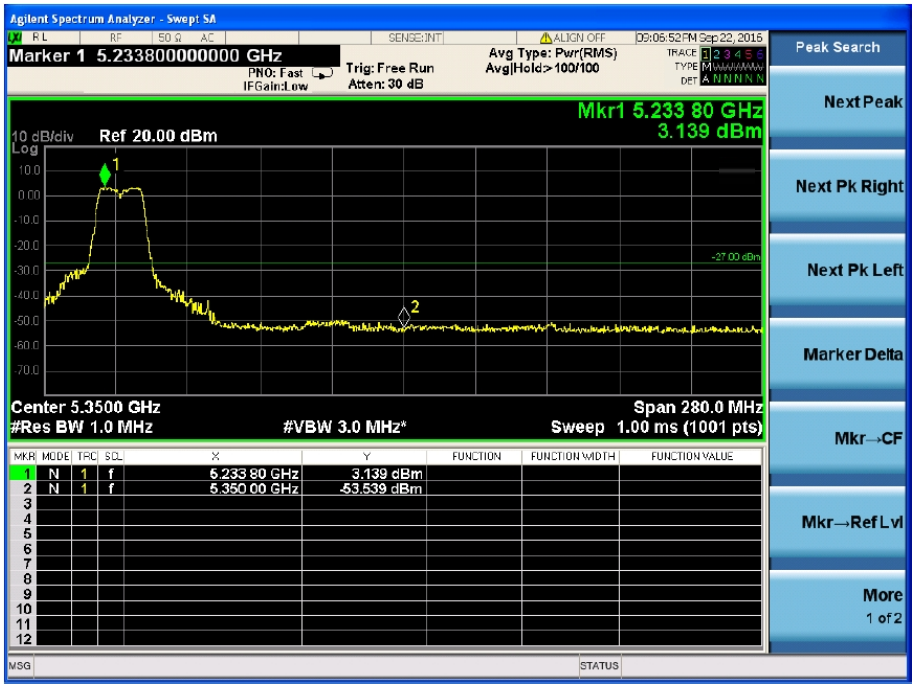
802.11n20


Receiver
Spectrum
Ref Level 30.00 dBm
RBW 1 MHz
Att 40 dB SWT 19 µs VBW 3 MHz Mode Auto FFT Input AC
1Pk Max
Limit Check
Line 5600-6000
M1[1]
-39.46 dBm
5.630290 GHz
20 dBm
10 dBm
0 dBm
-10 dBm
-20 dBm
5600-6000
-30 dBm
M1
-40 dBm
-50 dBm
-60 dBm
Start 5.6 GHz
1001 pts
Stop 5.75 GHz

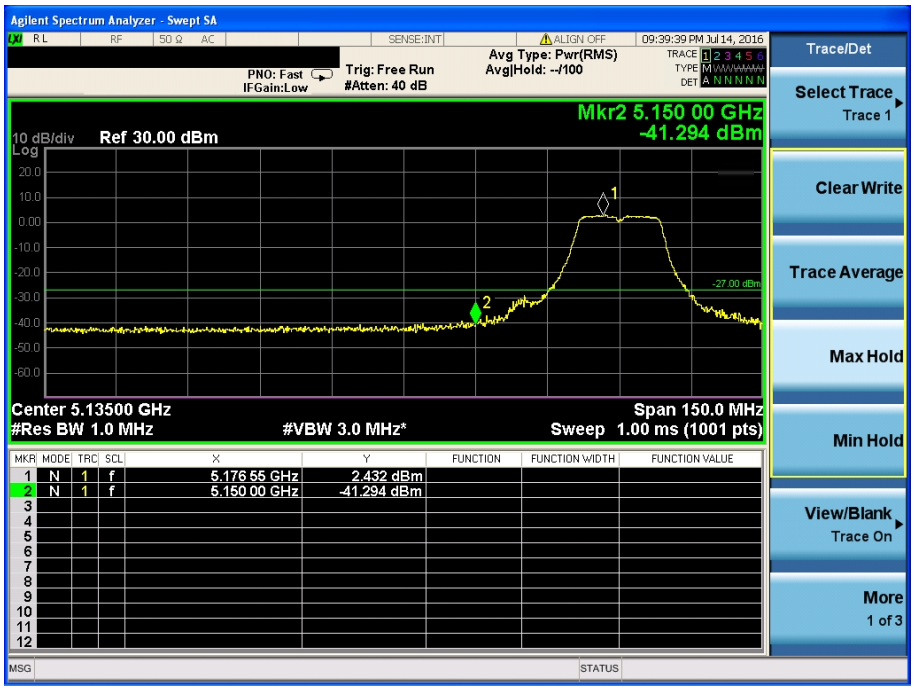

Receiver
Spectrum
Ref Level 30.00 dBm
RBW 1 MHz
Att 40 dB SWT 22.7 µs VBW 3 MHz Mode Auto FFT Input AC
1Pk Max
Limit Check
5600-6000
Line 5600-6000
M1[1]
-37.61 dBm
5.943450 GHz
20 dBm
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
M1
-40 dBm
-50 dBm
-60 dBm
Start 5.82 GHz
1001 pts
Stop 6.0 GHz

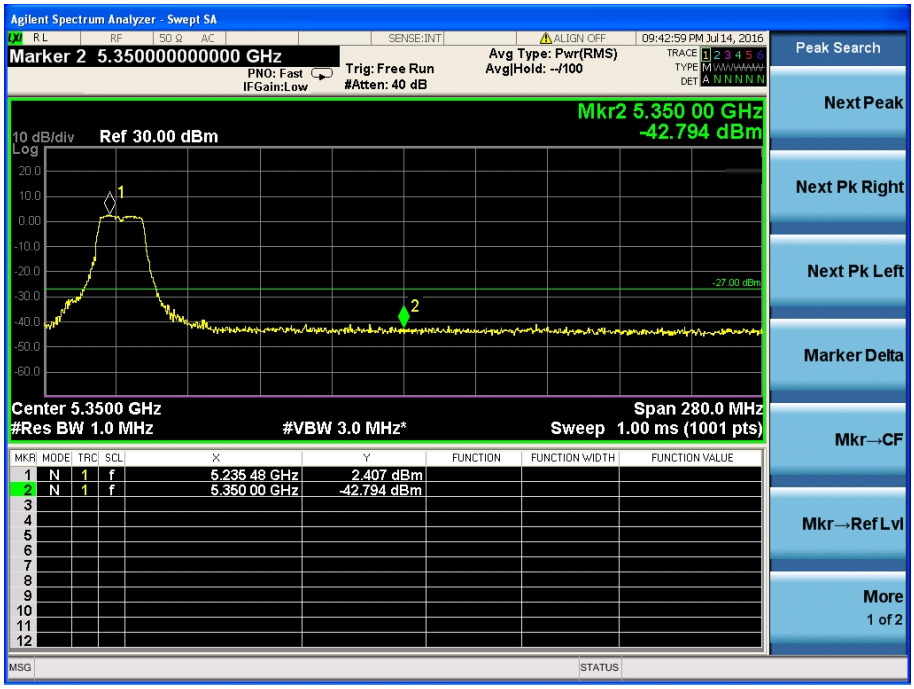
Ant2 Band 1
802.11a



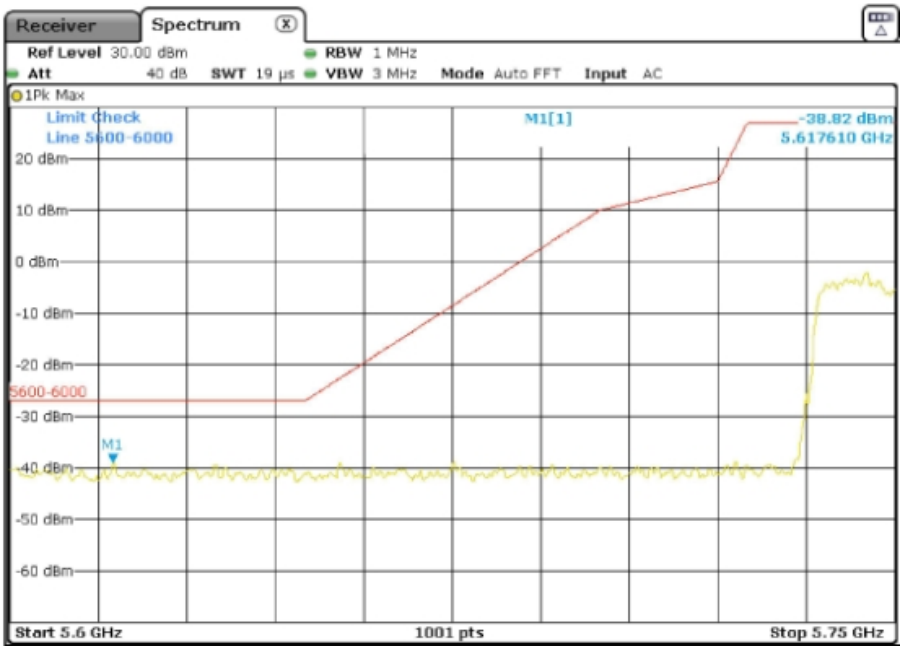


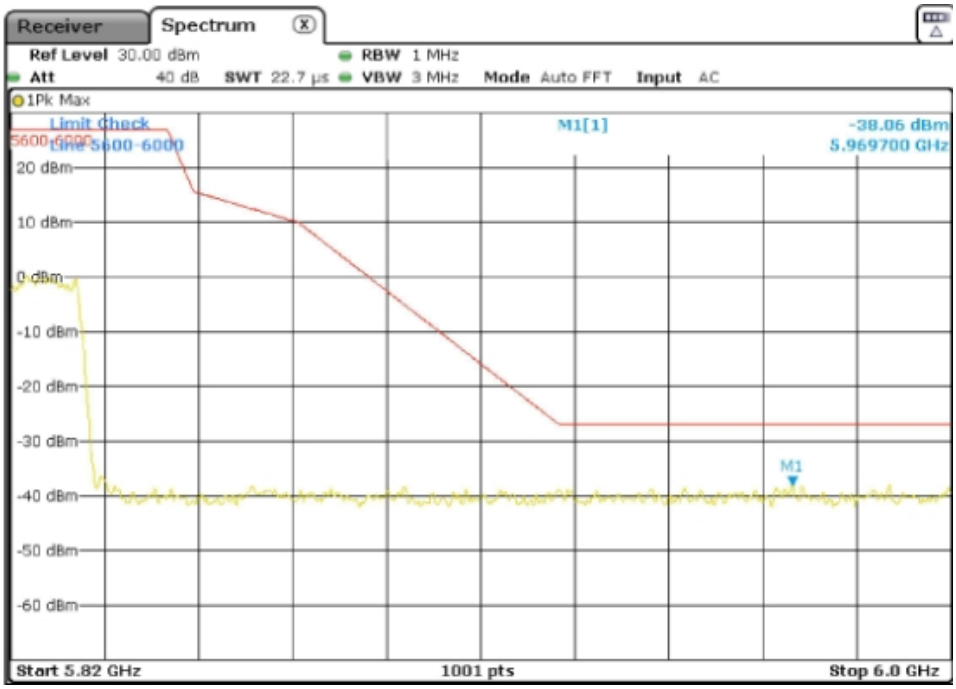
802.11n20


Agilent Spectrum Analyzer - Swept SA
09:39:39 PM Jul 14, 2016
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: Pwr(RMS)
Avg|Hold: --/100
Mkr2 5.150 00 GHz
-41.294 dBm
10 dB/div
Ref 30.00 dBm
Log
-27.00 dBm
Center 5.13500 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Span 150.0 MHz
Sweep 1.00 ms (1001 pts)
1 N 1 f 5.176 55 GHz 2.432 dBm
2 N 1 f 5.150 00 GHz -41.294 dBm
Trace/Det
Select Trace
Trace 1
Clear Write
Trace Average
Max Hold
Min Hold
View/Blank
Trace On
More
1 of 3

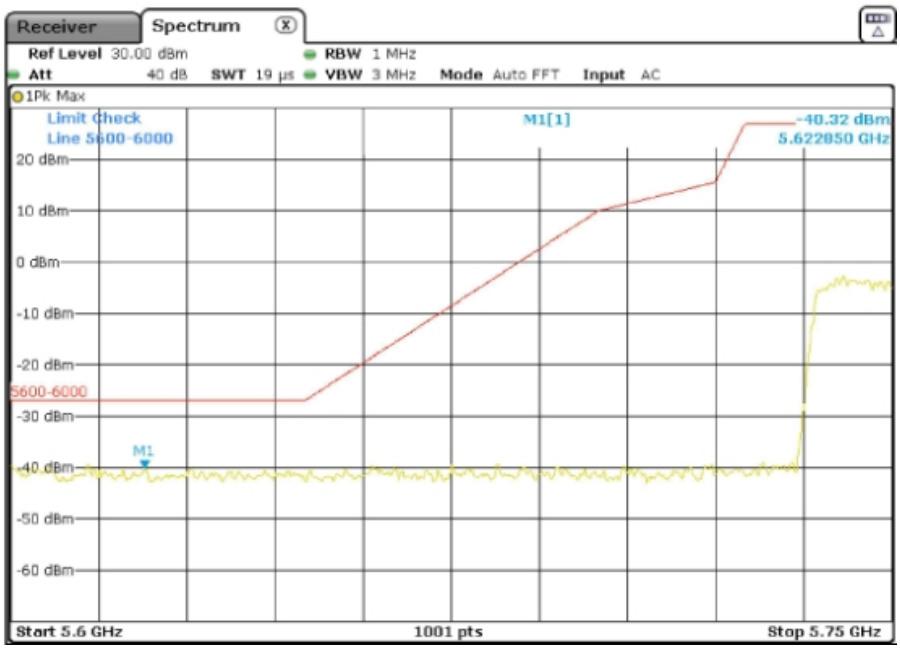

Agilent Spectrum Analyzer - Swept SA
09:42:59 PM Jul 14, 2016
Marker 2 5.350000000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: Pwr(RMS)
Avg|Hold: --/100
Mkr2 5.350 00 GHz
-42.794 dBm
10 dB/div
Ref 30.00 dBm
Log
-27.00 dBm
Center 5.3500 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Span 280.0 MHz
Sweep 1.00 ms (1001 pts)
1 N 1 f 5.235 48 GHz 2.407 dBm
2 N 1 f 5.350 00 GHz -42.794 dBm
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2

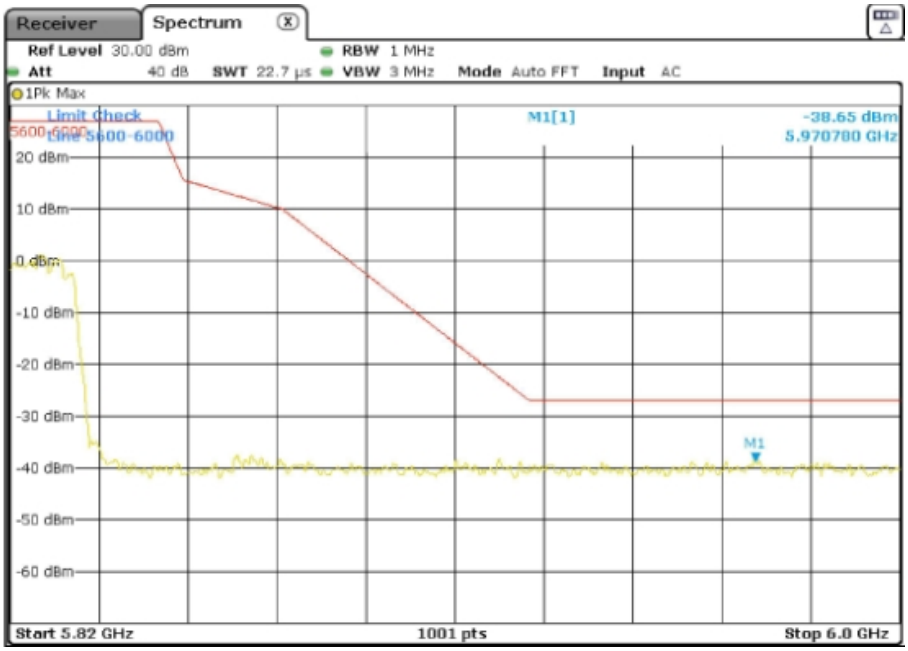
Ant2 Band 4
802.11a





802.11n20


Receiver
Spectrum
Ref Level 30.00 dBm
RBW 1 MHz
Att 40 dB
SWT 19 µs
VBW 3 MHz
Mode Auto FFT
Input AC
1Pk Max
Limit Check
Line 5600-6000
M1[1]
-40.32 dBm
5.622850 GHz
20 dBm
10 dBm
0 dBm
-10 dBm
-20 dBm
5600-6000
-30 dBm
M1
-40 dBm
-50 dBm
-60 dBm
Start 5.6 GHz
1001 pts
Stop 5.75 GHz


Receiver
Spectrum
Ref Level 30.00 dBm
RBW 1 MHz
Att 40 dB
SWT 22.7 µs
VBW 3 MHz
Mode Auto FFT
Input AC
1Pk Max
Limit Check
Line 5600-6000
M1[1]
-38.65 dBm
5.970780 GHz
20 dBm
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
M1
-40 dBm
-50 dBm
-60 dBm
Start 5.82 GHz
1001 pts
Stop 6.0 GHz

6. 26DB AND 99% BANDWIDTH TEST

6.1. Measurement Procedure

The bandwidth at 26 dB down from the highest in-band spectral density is measured with a spectrum analyzer connected to the antenna terminal while the EUT is operating at its maximum power control level, as defined in KDB 789033, at the appropriate frequencies. The spectrum analyzer's bandwidth measurement function is configured to measure the 26 dB bandwidth.

The 26 dB bandwidth is used to determine the conducted power limits.

There is no limit bandwidth for U-NII-1, U-NII-2-A and U-NII-2-C.

The minimum of 6dB Bandwidth measurement is 0.5 MHz for U-NII-3

26dB bandwidth

	Frequency (MHz)	26dB Bandwidth (MHz)		99% Bandwidth (MHz)	
		Ant 1	Ant 2	Ant 1	Ant 2
802.11a	5180	16.789	16.648	21.11	21.06
	5200	16.774	16.569	21.00	21.00
	5240	16.754	16.699	20.95	20.86
802.11n (HT20)	5180	17.840	17.674	21.79	21.74
	5200	17.829	17.784	21.82	21.81
	5240	17.824	17.816	21.73	21.75

Ant 1

802.11a 5180MHz

802.11a 5200MHz

802.11a 5240MHz

802.11n(HT20) 5180MHz

802.11n(HT20) 5200MHz

802.11n(HT20) 5240MHz