



TEST REPORT

Report Reference No...... : **TRE1702011101** R/C.....: 25030
FCC ID..... : **2ALAVU800**
Applicant's name..... : **Haier International Business Corporation Limited**
 Address..... : Room 1602, 16th Floor, Tower A, No. 1 Ke Yuan Wei Yi Road, Lao Shan District, Qingdao, Shandong, China
 Manufacturer..... : Haier International Business Corporation Limited
 Address..... : Room 1602, 16th Floor, Tower A, No. 1 Ke Yuan Wei Yi Road, Lao Shan District, Qingdao, Shandong, China
Test item description : **Tablet PC**
 Trade Mark : Ceibal,Ibirapita
 Model/Type reference..... : U800
 Listed Model(s)..... : -
Standard : **FCC CFR Title 47 Part 15 Subpart E Section 15.407**
 Date of receipt of test sample..... : Feb. 23, 2017
 Date of testing..... : Feb. 23, 2017 - Mar. 13, 2017
 Date of issue..... : Mar. 13, 2017
Result..... : **PASS**

Compiled by
 (position+printedname+signature)....: File administrators Becky Liang

Becky Liang

Supervised by
 (position+printedname+signature).....: Project Engineer Lion Cai

Lion Cai

Approved by
 (position+printedname+signature).....: RF Manager Hans Hu

Hans Hu

Testing Laboratory Name : **Shenzhen Huatongwei International Inspection Co., Ltd.**
 Address..... : 1/F, Bldg 3, Hongfa Hi-tech Industrial Park, Genyu Road, Tianliao, Gongming, Shenzhen, China

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1. Test standards and Report version

1.1. Applicable Standards

The tests were performed according to following standards:

[FCC Rules Part 15.407](#): General technical requirements.

[ANSI C63.10-2013](#): American National Standard for Testing Unlicensed Wireless Devices

[KDB789033 D02 V01R02](#): GUIDELINES FOR COMPLIANCE TESTING OF UNLICENSED NATIONAL INFORMATION INFRASTRUCTURE (U-NII) DEVICES PART 15, SUBPART E

1.2. Report version

Version No.	Date of issue	Description
00	Mar. 13, 2017	Original

2. Test Description

ReportSection	Test Item	FCC Rule	Result
4.1	Antenna Requirement	15.203	Pass
4.2	Line Conducted Emission (AC Main)	15.207	Pass
4.3	Maximum Conducted Output Power	15.407 (a.1)(a.2)(a.3)	Pass
4.4	Maximum Power Spectral Density	15.407 (a.1)(a.2)(a.3)	Pass
4.5	99% Occupied Bandwidth	Part 2.1049	Pass
4.6	26dB Bandwidth	15.407(a.5)	Pass
4.7	Radiated Emissions & Bandedge	15.407(b.1)(b.2)(b.4)	Pass
4.8	Frequency Stability	15.407(g)	Pass
4.9	TPC and DFS	15.407(h)	Pass

Remark: 1.The measurement uncertainty is not included in the test result.

2.The EUT is a client device without radar detection.a TPC mechanism is not required for systems with an e.i.r.p. of less than 500mW.

3. SUMMARY

3.1. Client Information

Applicant:	Haier International Business Corporation Limited
Address:	Room 1602, 16th Floor, Tower A, No. 1 Ke Yuan Wei Yi Road, Lao Shan District, Qingdao, Shandong, China
Manufacturer:	Haier International Business Corporation Limited
Address:	Room 1602, 16th Floor, Tower A, No. 1 Ke Yuan Wei Yi Road, Lao Shan District, Qingdao, Shandong, China

3.2. Product Description

Name of EUT	Tablet PC
Trade Mark:	Ceibal,Ibirapita
Model No.:	U800
Listed Model(s):	-
Power supply:	DC 3.8V From internal battery
Adapter information:	Input: 100-240Va.c., 50/60Hz, 0.4A Output: 5.0Vd.c., 2.0A
Hardware version:	EM_T8880A_V6.0/U800_8160_V1.1
Software version:	Ceibal.PadU800.GM20170305.SV1.041/Ibirapita.PadU800.GM20170303.SV1.04
5G WIFI	
Supported type:	802.11a/802.11n
Modulation:	BPSK /QPSK /16QAM /64QAM
Operation frequency:	Band 1: 5150MHz-5250MHz Band 2A: 5250MHz-5350MHz(Client device) Band 2C: 5470MHz-5725MHz(Client device) Band 3: 5725MHz-5850MHz
Channel Bandwidth	802.11a/n(H20): 20MHz 802.11n(H40): 40MHz
Channel separation:	5MHz
Antenna type:	Integral antenna
Antenna gain:	1.56 dBi

3.3. Operation state

◆ Test frequency list

According to section 15.31(m), regards to the operating frequency range over 10 MHz, must select three channel which were tested. the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, please see the above gray bottom.

20MHz				40MHz			
Band	Test Channel	Channel	Frequency (MHz)	Band	Test Channel	Channel	Frequency (MHz)
Band 1	Low	36	5180	Band 1	Low	38	5190
	Mid	44	5220		High	46	5230
	High	48	5240	Band 2B	Low	54	5270
Band 2A	Low	52	5260		High	62	5310
	Mid	60	5300	Band 2C	Low	102	5510
	High	64	5320		Mid	118	5590
Band 2C	Low	100	5500	Band 3	High	134	5670
	Mid	120	5600		Low	151	5755
	High	140	5700	High	159	5795	
Band 3	Low	149	5745				
	Mid	157	5785				
	High	165	5825				

◆ Data Rated

Preliminary tests were performed in different data rate, and found which the below bit rate is worst case mode, so only show data which it is a worst case mode.

Mode	datarate (worst mode)
802.11a	6Mbps
802.11n(H20)	MCS0
802.11n(H40)	MCS0

◆ Test mode

For RF test items:

the engineering test program was provided and enabled to make EUT continuous transmit/receive. The EUT was programmed to be in continuously transmitting mode and the transmit duty cycle is not less than 98%.

For AC power line conducted emissions:

the EUT was set to connect with the WLAN AP under large package sizes transmission.

3.4. EUT configuration

The following peripheral devices and interface cables were connected during the measurement:

● - supplied by the manufacturer

○ - supplied by the lab

<input type="radio"/>	Wireless Router	Manufacturer :	Aruba Networks, Inc.
		FCCID:	Q9DAPINR15515P
		Model No. :	APIN0114

3.5. Modifications

No modifications were implemented to meet testing criteria.

4. TEST ENVIRONMENT

4.1. Address of the test laboratory

Laboratory: Shenzhen Huatongwei International Inspection Co., Ltd.

Address: 1/F, Bldg 3, Hongfa Hi-tech Industrial Park, Genyu Road, Tianliao, Gongming, Shenzhen, China

Phone: 86-755-26748019 Fax: 86-755-26748089

4.2. Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

CNAS-Lab Code: L1225

Shenzhen Huatongwei International Inspection Co., Ltd. has been assessed and proved to be in compliance with CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC17025: 2005 General Requirements) for the Competence of Testing and Calibration Laboratories, Date of Registration: February 28, 2015. Valid time is until February 27, 2018.

A2LA-Lab Cert. No. 3902.01

Shenzhen Huatongwei International Inspection Co., Ltd. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2005 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing. Valid time is until February 27, 2018.

FCC-Registration No.: 317478

Shenzhen Huatongwei International Inspection Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files. Registration 317478, Renewal date Jul. 18, 2014, valid time is until Jul. 18, 2017.

IC-Registration No.: 5377B

Two 3m Alternate Test Site of Shenzhen Huatongwei International Inspection Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for the performance of radiated measurements with Registration No. 5377B on Dec. 03, 2014, valid time is until Dec. 03, 2017.

ACA

Shenzhen Huatongwei International Inspection Co., Ltd. EMC Laboratory can also perform testing for the Australian C-Tick mark as a result of our A2LA accreditation.

4.3. Equipments Used during the Test

Radiated Emission					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal
1	Ultra-Broadband Antenna	ShwarzBeck	VULB9163	538	2016/11/13
2	EMI TEST RECEIVER	Rohde&Schwarz	ESI 26	100009	2016/11/13
3	EMI TEST Software	Audix	E3	N/A	N/A
4	TURNTABLE	ETS	2088	2149	N/A
5	ANTENNA MAST	ETS	2075	2346	N/A
6	EMI TEST Software	Rohde&Schwarz	ESK1	N/A	N/A
7	HORNANTENNA	ShwarzBeck	9120D	1011	2016/11/13
8	Amplifer	Sonoma	310N	E009-13	2016/11/13
9	JS amplifer	Rohde&Schwarz	JS4-00101800-28-5A	F201504	2016/11/13
10	High pass filter	Compliance Direction systems	BSU-6	34202	2016/11/13
11	HORNANTENNA	ShwarzBeck	9120D	1012	2016/11/13
12	Amplifer	Compliance Direction systems	PAP1-4060	120	2016/11/13
13	Loop Antenna	Rohde&Schwarz	HFH2-Z2	100020	2016/11/13
14	TURNTABLE	MATURO	TT2.0	----	N/A
15	ANTENNA MAST	MATURO	TAM-4.0-P	----	N/A
16	Horn Antenna	SCHWARZBECK	BBHA9170	25841	2016/11/13
17	ULTRA-BROADBAND ANTENNA	Rohde&Schwarz	HL562	100015	2016/11/13

Conducted test					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal
1	Spectrum Analyzer	Rohde&Schwarz	FSV40	100048	2016/11/13
2	OSP	Rohde&Schwarz	OSP120	101317	2016/11/13
3	OSP	Rohde&Schwarz	OSP-B157	100890	2016/11/13
4	Signal generator	Rohde&Schwarz	SMB100A	177956	2016/11/13
5	Vector signal generator	Rohde&Schwarz	SMBV100A	260790	2016/11/13
6	EXA Signal Analyzer	Agilent	N9010A	184247	2016/11/13

The Cal.Interval was one year

4.4. Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature:	15~35°C
Relative Humidity:	30~60 %
Air Pressure:	950~1050mba

4.5. Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report according to TR-100028-01 "Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics; Part 1" and TR-100028-02 "Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics; Part 2" and is documented in the Shenzhen Huatongwei International Inspection Co., Ltd quality system according to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Hereafter the best measurement capability for Shenzhen Huatongwei laboratory is reported:

Test Items	Measurement Uncertainty	Notes
Transmitter power conducted	0.57 dB	(1)
Transmitter power Radiated	2.20 dB	(1)
Conducted spurious emission 9KHz-40 GHz	1.60 dB	(1)
Radiated spurious emission 9KHz-40 GHz	2.20 dB	(1)
Conducted Emission 9KHz-30MHz	3.39 dB	(1)
Radiated Emission 30~1000MHz	4.24 dB	(1)
Radiated Emission 1~18GHz	5.16 dB	(1)
Radiated Emission 18-40GHz	5.54 dB	(1)
Occupied Bandwidth	-----	(1)

(1) This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=1.96$.

5. TEST CONDITIONS AND RESULTS

5.1. Antenna requirement

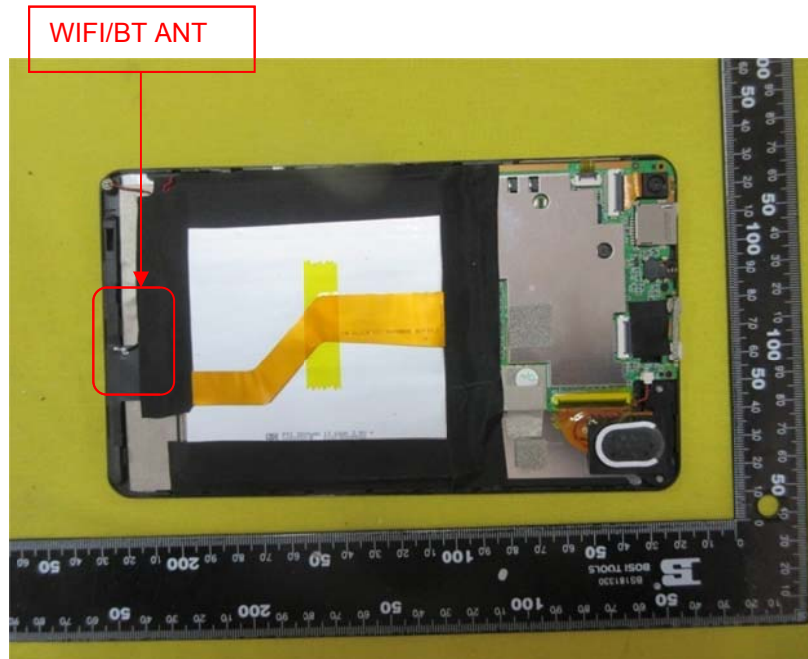
Requirement

FCC CFR Title 47 Part 15 Subpart C Section 15.203:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

Test Result:

The antenna is integral antenna, the best case gain of the antenna is 2.3dBi.



5.2. Conducted Emission (AC Main)

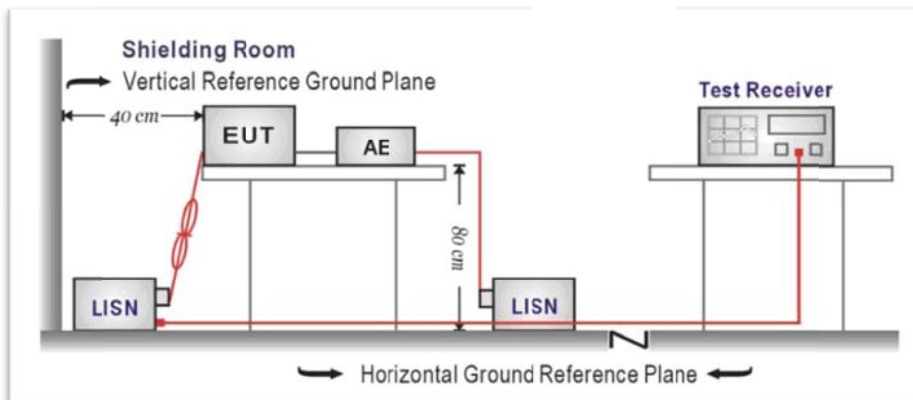
LIMIT

FCC CFR Title 47 Part 15 Subpart C Section 15.207

Frequency range (MHz)	Limit (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

* Decreases with the logarithm of the frequency.

TEST CONFIGURATION

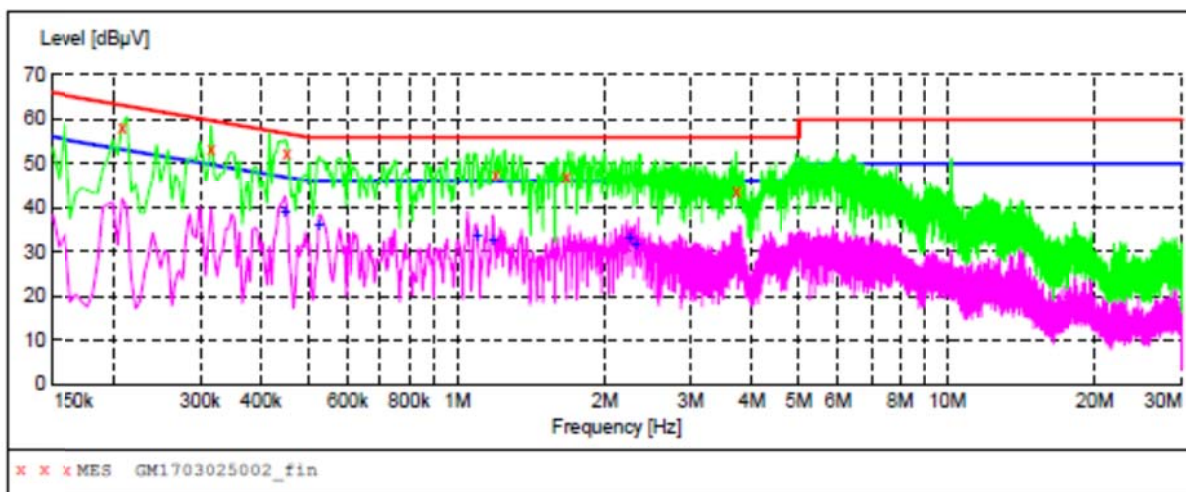


TEST PROCEDURE

1. The EUT was setup and tested according to ANSI C63.10:2013 for compliance to FCC 47CFR 15.247 requirements.
2. The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 80 cm from any other grounded conducting surface.
3. The EUT and simulators are connected to the main power through a line impedance stabilization network (LISN). The LISN provides a 50 ohm /50uH coupling impedance for the measuring equipment.
4. The peripheral devices are also connected to the main power through a LISN. (Please refer to the block diagram of the test setup and photographs)
5. Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor, was individually connected through a LISN to the input power source.
6. The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length.
7. Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.

TEST RESULTS

Test mode:AC 120V	5G WIFI	Polarization	L
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MEASUREMENT RESULT: "GM1703025002_fin"

3/2/2017 9:35AM

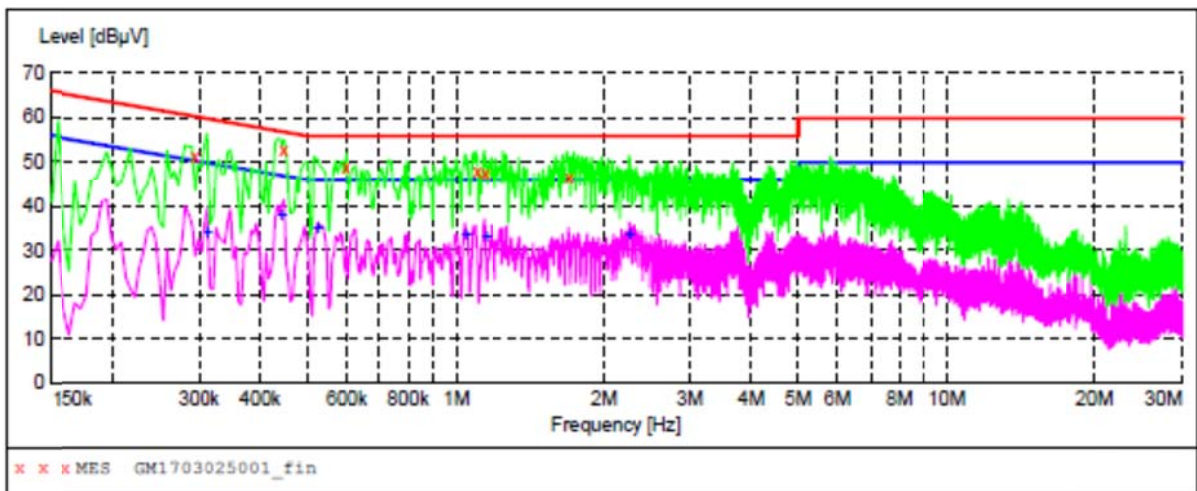
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.208500	58.30	10.3	63	5.0	QP	L1	GND
0.316500	53.20	10.2	60	6.6	QP	L1	GND
0.451500	52.60	10.2	57	4.2	QP	L1	GND
1.203000	47.50	10.2	56	8.5	QP	L1	GND
1.675500	47.10	10.2	56	8.9	QP	L1	GND
3.732000	43.50	10.3	56	12.5	QP	L1	GND

MEASUREMENT RESULT: "GM1703025002_fin2"

3/2/2017 9:35AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.447000	39.10	10.2	47	7.8	AV	L1	GND
0.523500	36.20	10.2	46	9.8	AV	L1	GND
1.095000	33.80	10.2	46	12.2	AV	L1	GND
1.180500	32.70	10.2	46	13.3	AV	L1	GND
2.242500	33.30	10.2	46	12.7	AV	L1	GND
2.310000	32.00	10.2	46	14.0	AV	L1	GND

Test mode: AC 120V	5G WIFI	Polarization	N
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MEASUREMENT RESULT: "GM1703025001_fin"

3/2/2017 9:32AM

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.294000	51.60	10.2	60	8.8	QP	N	GND
0.447000	53.00	10.2	57	3.9	QP	N	GND
0.600000	48.90	10.2	56	7.1	QP	N	GND
1.104000	47.80	10.2	56	8.2	QP	N	GND
1.144500	47.60	10.2	56	8.4	QP	N	GND
1.702500	46.70	10.2	56	9.3	QP	N	GND

MEASUREMENT RESULT: "GM1703025001_fin2"

3/2/2017 9:32AM

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.312000	34.30	10.2	50	15.6	AV	N	GND
0.442500	38.10	10.2	47	8.9	AV	N	GND
0.523500	35.20	10.2	46	10.8	AV	N	GND
1.045500	33.90	10.2	46	12.1	AV	N	GND
1.149000	33.20	10.2	46	12.8	AV	N	GND
2.256000	33.70	10.2	46	12.3	AV	N	GND

Remark: Transd=Cable lose+ PULSE LIMITER factor+ ARTIFICIAL MAINS factor; Margin= Limit -Level

5.3. Maximum Conducted Output Power

LIMIT

FCC CFR Title 47 Part 15 Subpart E Section 15.407:

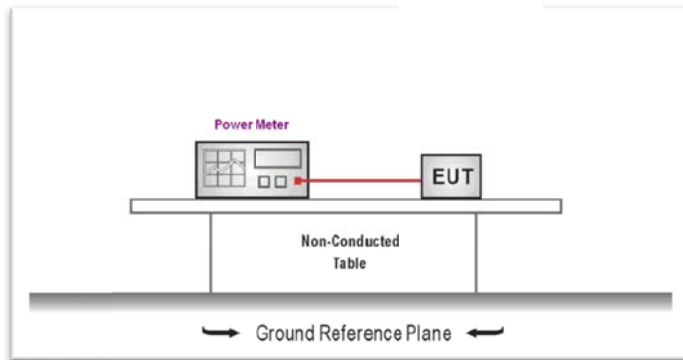
In the 5.15 – 5.25GHz band, the maximum permissible conducted output power is 250mW (23.98dBm)

In the 5.25 – 5.35GHz band, the maximum permissible conducted output power is the lesser of 250mW (23.98dBm) and $11 \text{ dBm} + 10\log_{10}(26\text{dB BW}) = 11 \text{ dBm} + 10\log_{10}(18.87) = 23.76\text{dBm}$.

In the 5.47 – 5.725GHz band, the maximum permissible conducted output power is the lesser of 250mW (23.98dBm) and $11 \text{ dBm} + 10\log_{10}(26\text{dB BW}) = 11 \text{ dBm} + 10\log_{10}(18.82) = 23.75\text{dBm}$.

In the 5.725 – 5.850GHz band, the maximum permissible conducted output power is 1W (30dBm).

TEST CONFIGURATION



TEST PROCEDURE

1. The EUT was tested according to KDB789033 D02 V01R02 requirements.
2. The maximum conducted output power may be measured using a broadband AVG RF power meter.
3. Average power measurements were performed only when the EUT was transmitting at its maximum power control level using a broadband power meter with a pulse sensor. The power meter implemented triggering and gating capabilities which were set up such that power measurements were recorded only during the ON time of the transmitter. The trace was averaged over 100 traces to obtain the final measured average power.
4. Record the measurement data.

TEST RESULTS

	Type	Channel	Output power (dBm)	Limit (dBm)	Result
Band 1 5150-5250MHz	802.11a	Low	14.48	24.00	Pass
		Mid	14.15		
		High	14.25		
	802.11n(H20)	Low	14.45	24.00	Pass
		Mid	14.04		
		High	14.06		
	802.11n(H40)	Low	14.19	24.00	Pass
High		13.69			

	Type	Channel	Output power (dBm)	Limit (dBm)	Result
Band 2A 5250-5350MHz	802.11a	Low	13.90	24.00	Pass
		Mid	13.70		
		High	13.46		
	802.11n(H20)	Low	13.80	24.00	Pass
		Mid	13.88		
		High	14.01		
	802.11n(H40)	Low	13.51	24.00	Pass
High		13.31			

	Type	Channel	Output power (dBm)	Limit (dBm)	Result
Band 2C 5470-5725MHz	802.11a	Low	15.66	24.00	Pass
		Mid	16.20		
		High	14.99		
	802.11n(H20)	Low	14.92	24.00	Pass
		Mid	15.24		
		High	14.37		
	802.11n(H40)	Low	15.96	24.00	Pass
High		15.23			

	Type	Channel	Output power (dBm)	Limit (dBm)	Result
Band 3 5725-5850MHz	802.11a	Low	12.62	30.00	Pass
		Mid	12.22		
		High	10.33		
	802.11n(H20)	Low	12.50	30.00	Pass
		Mid	12.33		
		High	10.90		
	802.11n(H40)	Low	13.53	30.00	Pass
High		12.63			

5.4. Maximum Power Spectral Density

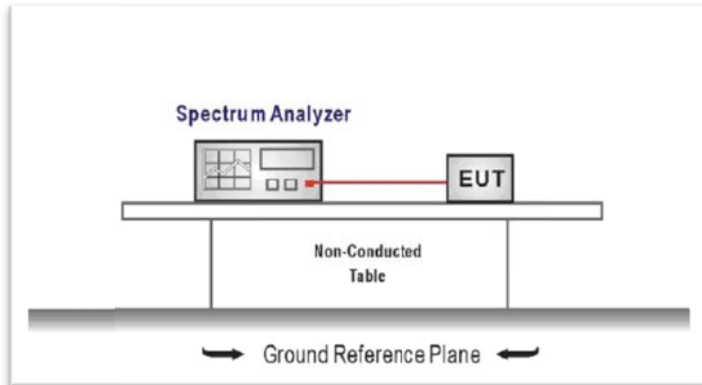
LIMIT

FCC CFR Title 47 Part 15 Subpart E Section 15.407:

In the 5.15 – 5.25GHz, 5.25 – 5.35GHz, 5.47 – 5.725GHz bands, the maximum permissible power spectral density is 11dBm/MHz.

In the 5.725 – 5.850GHz band, the maximum permissible power spectral density is 30dBm/500kHz.

TEST CONFIGURATION



TEST PROCEDURE

According KDB 789033 D02 v01r02 - Section F

1. Analyzer was set to the center frequency of the UNII channel under investigation
2. Span was set to encompass the entire emission bandwidth of the signal
3. RBW = 1MHz, 4. VBW = 3MHz
7. Number of sweep points > 2 x (span/RBW)
8. Sweep time = auto
6. Detector = power averaging (RMS)
7. Trigger was set to free run for all modes
8. Trace was averaged over 100 sweeps
9. The peak search function of the spectrum analyzer was used to find the peak of the spectrum.

TEST RESULTS

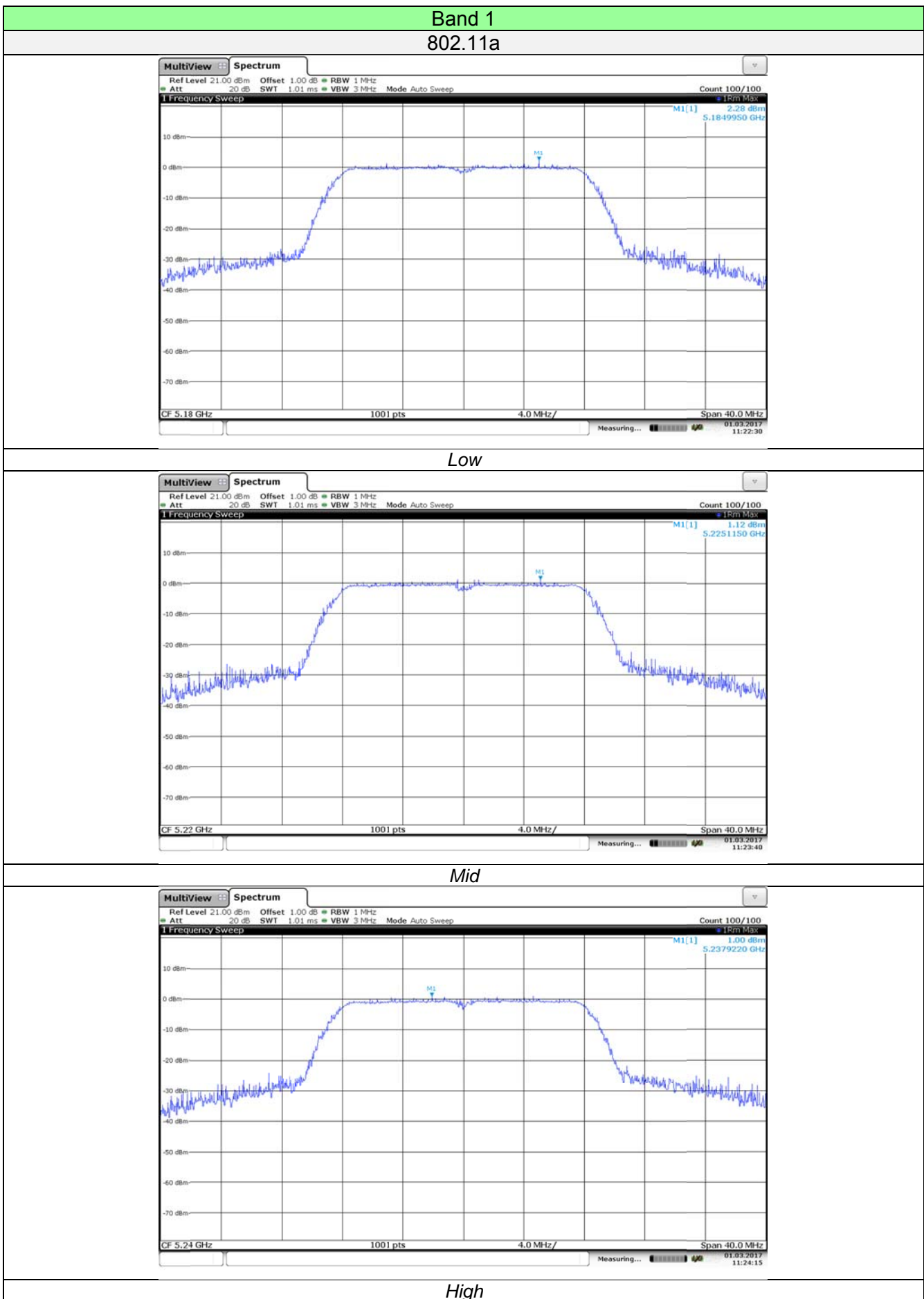
	Type	Channel	PSD (dBm/MHz)	Limit (dBm/MHz)	Result
Band 1 5150-5250MHz	802.11a	Low	2.28	11.00	Pass
		Mid	1.12		
		High	1.00		
	802.11n(H20)	Low	4.12	11.00	Pass
		Mid	4.60		
		High	3.95		
	802.11n(H40)	Low	0.86	11.00	Pass
		High	0.94		

	Type	Channel	PSD (dBm/MHz)	Limit (dBm/MHz)	Result
Band 2A 5250-5350MHz	802.11a	Low	0.42	11.00	Pass
		Mid	0.04		
		High	0.46		
	802.11n(H20)	Low	3.83	11.00	Pass
		Mid	3.12		
		High	2.51		
	802.11n(H40)	Low	0.10	11.00	Pass
		High	-0.40		

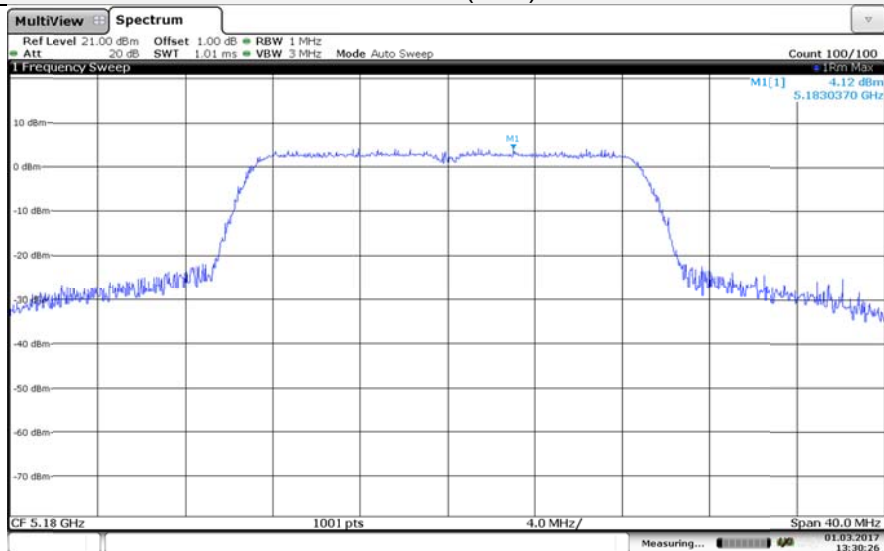
	Type	Channel	PSD (dBm/MHz)	Limit (dBm/MHz)	Result
Band 2C 5470-5725MHz	802.11a	Low	1.30	11.00	Pass
		Mid	0.45		
		High	-2.07		
	802.11n(H20)	Low	0.90	11.00	Pass
		Mid	0.05		
		High	-2.24		
	802.11n(H40)	Low	-2.17	11.00	Pass
		High	-5.04		

	Type	Channel	PSD (dBm/500KHz)	Limit (dBm/500KHz)	Result
Band 3 5725-5850MHz	802.11a	Low	-6.00	30.00	Pass
		Mid	-5.84		
		High	-7.12		
	802.11n(H20)	Low	-6.05	30.00	Pass
		Mid	-6.25		
		High	-7.77		
	802.11n(H40)	Low	-9.64	30.00	Pass
		High	-9.61		

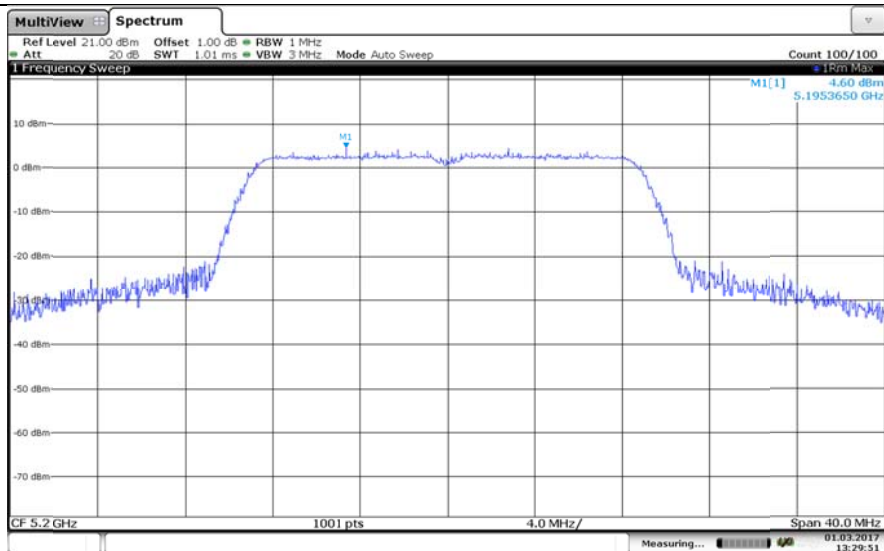
Test plot as follows:



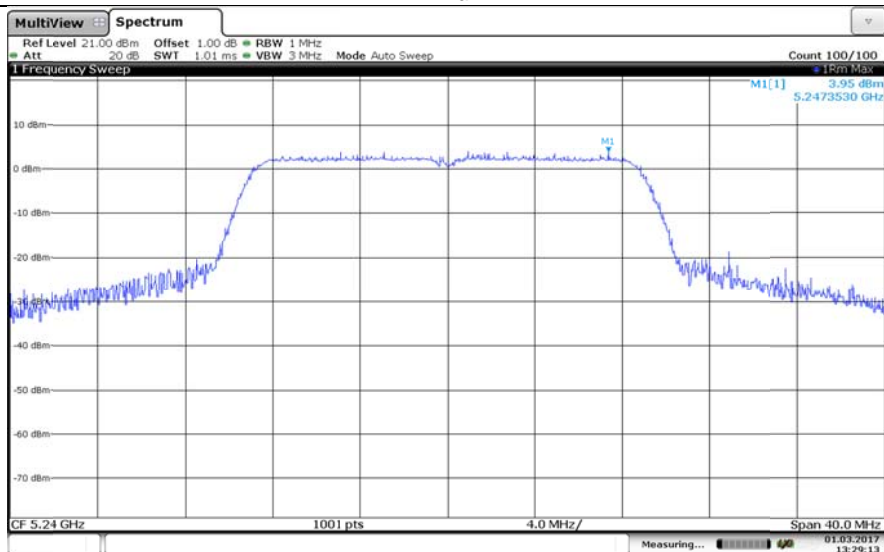
802.11n(H20)



Low

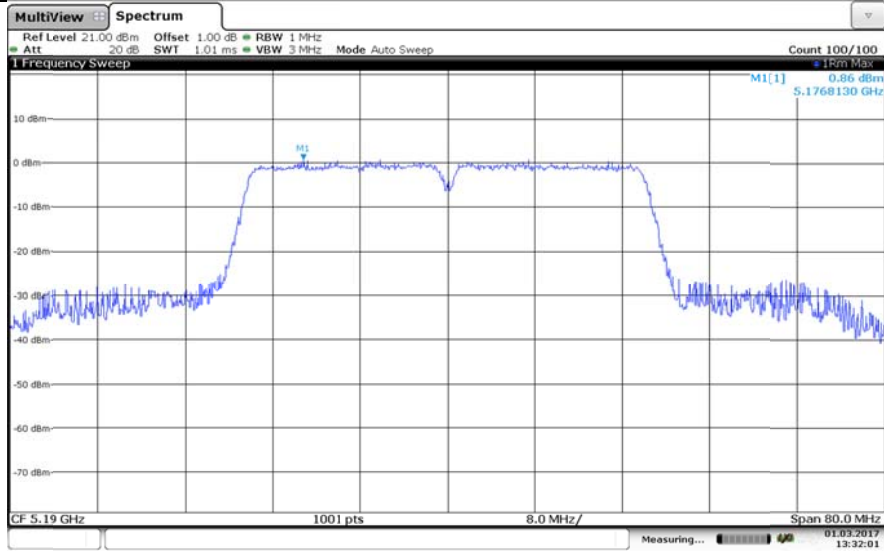


Mid

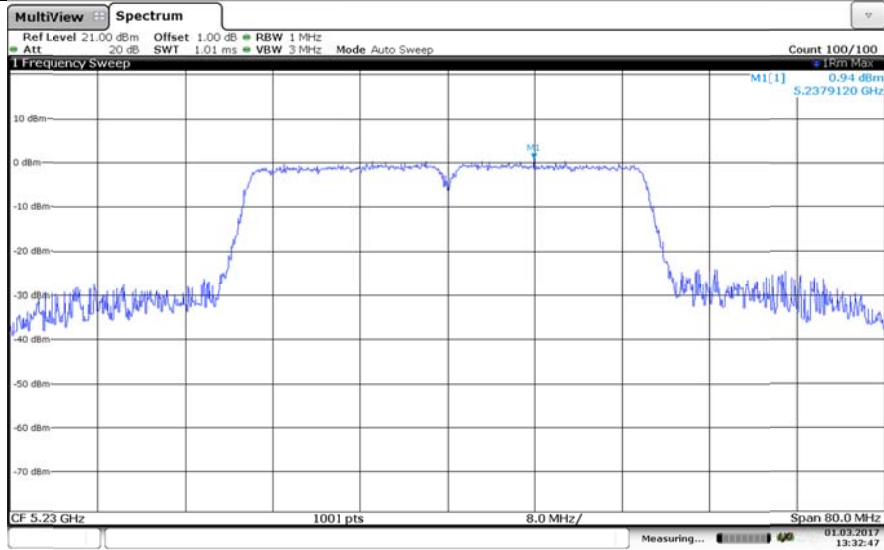


High

802.11n(H40)

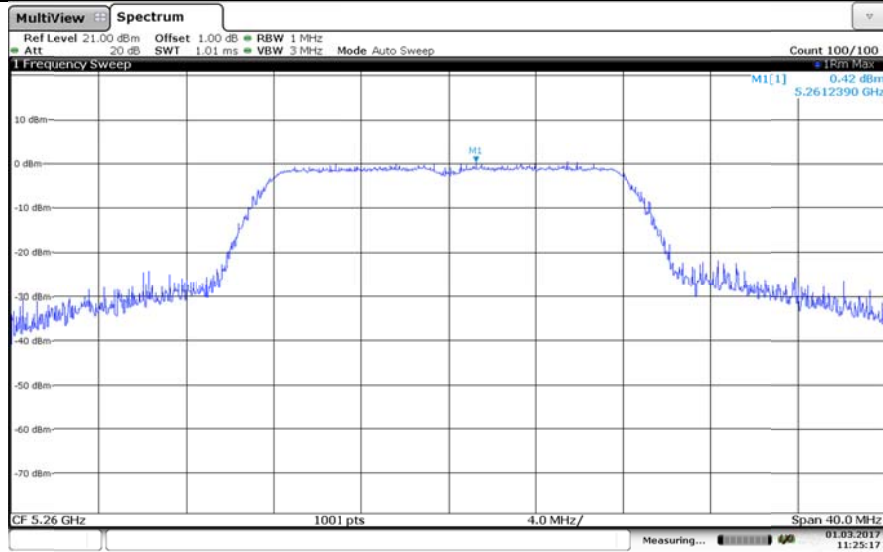


Low

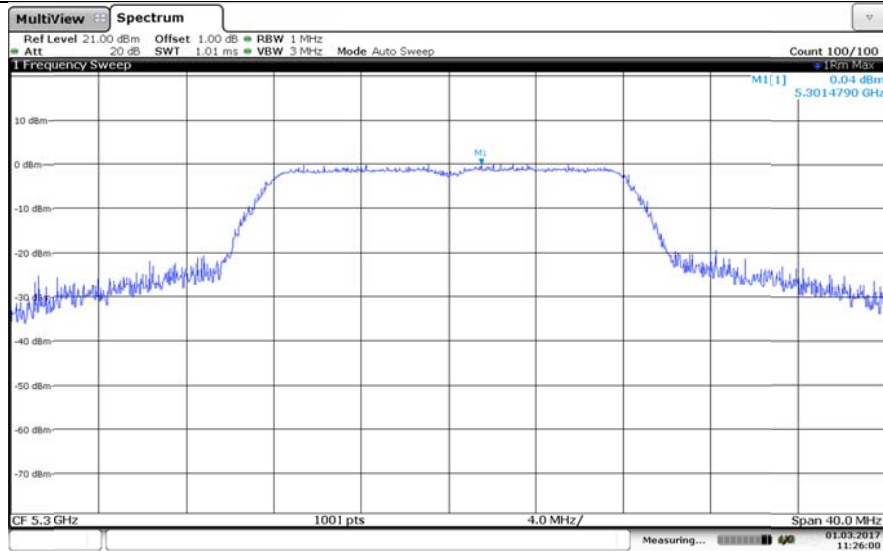


High

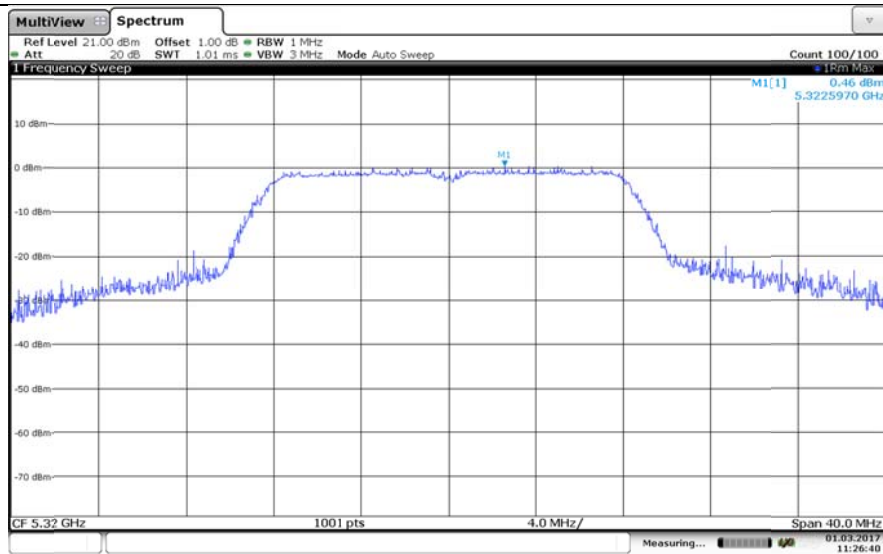
Band 2A
802.11a



Low

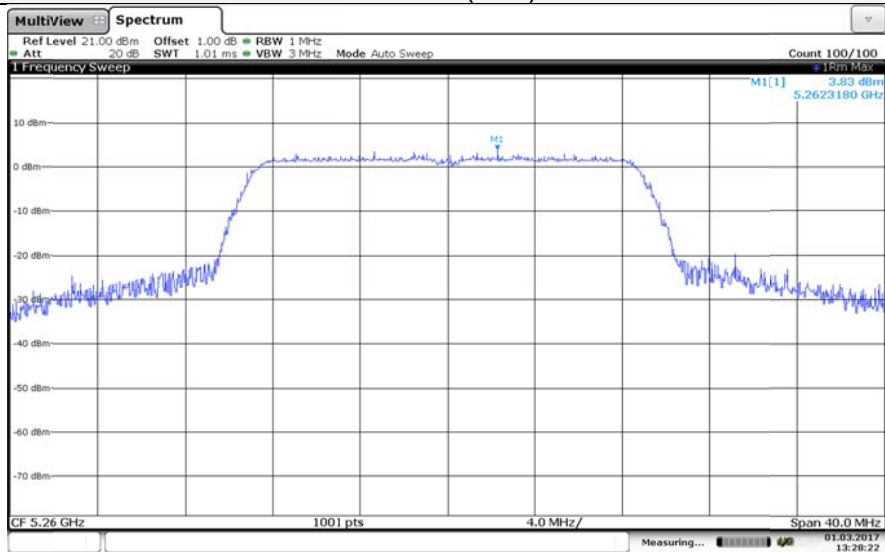


Mid

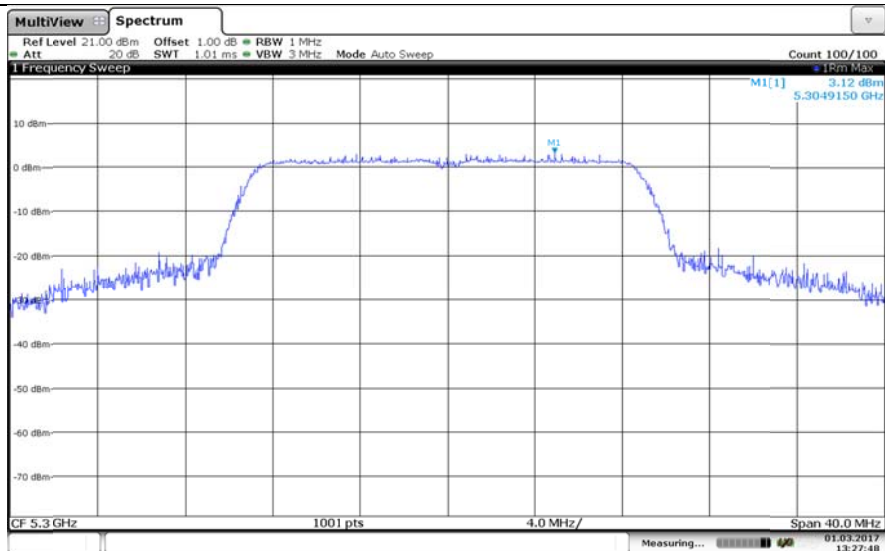


High

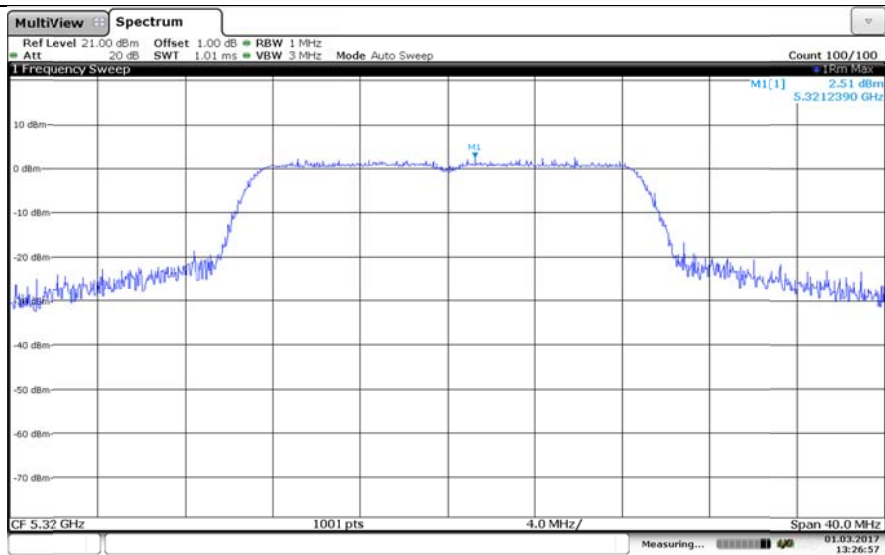
802.11n(H20)



Low

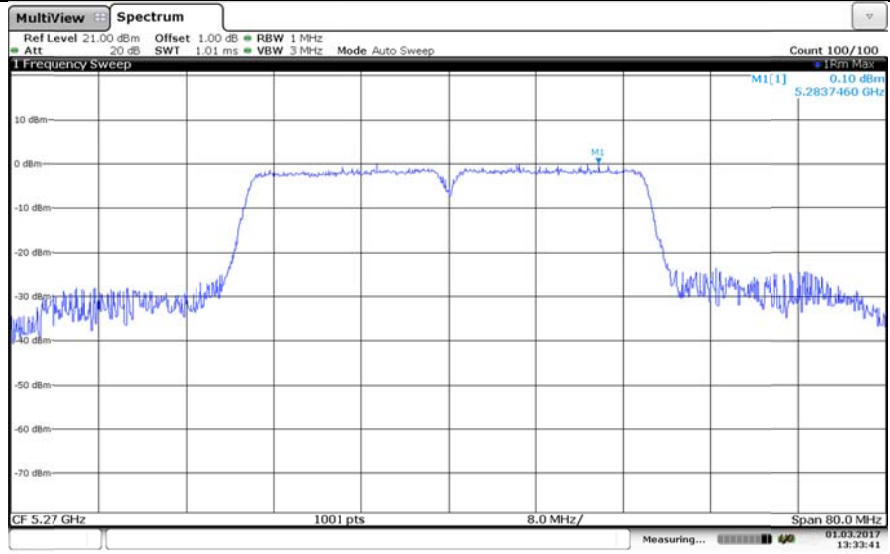


Mid

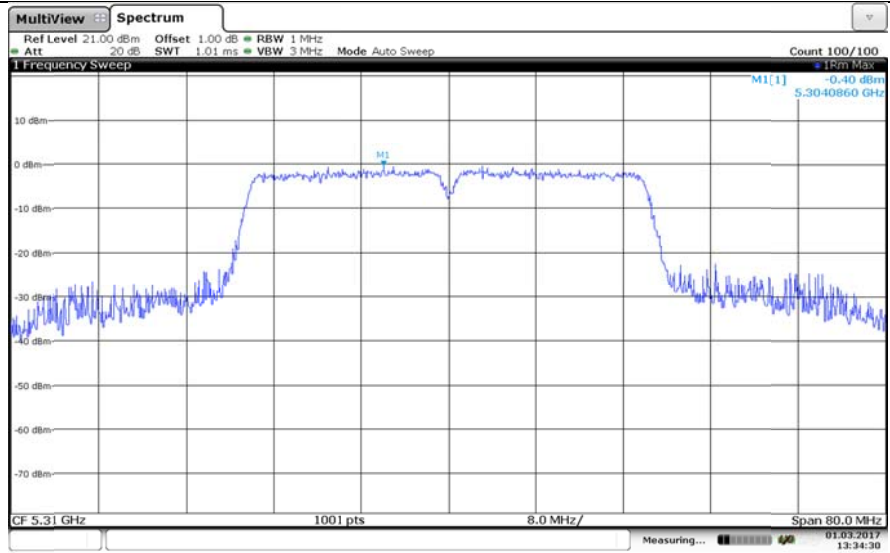


High

802.11n(H40)



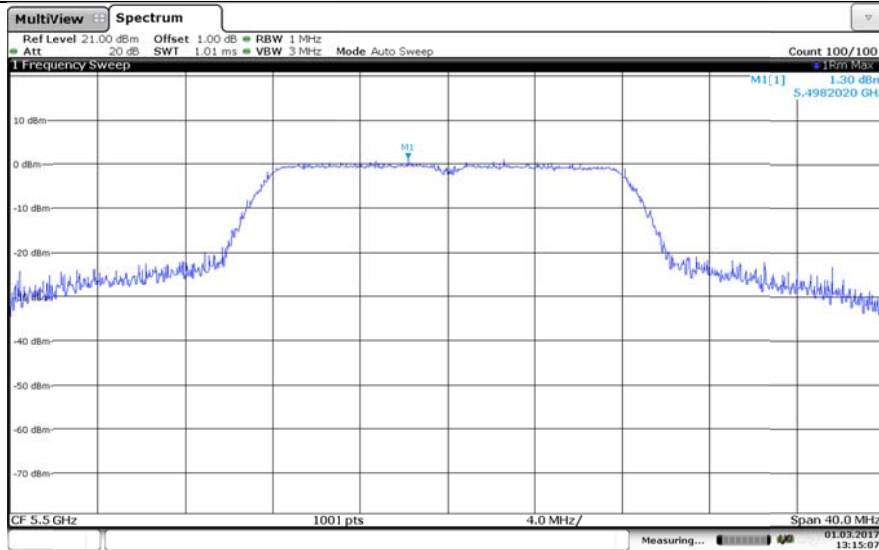
Low



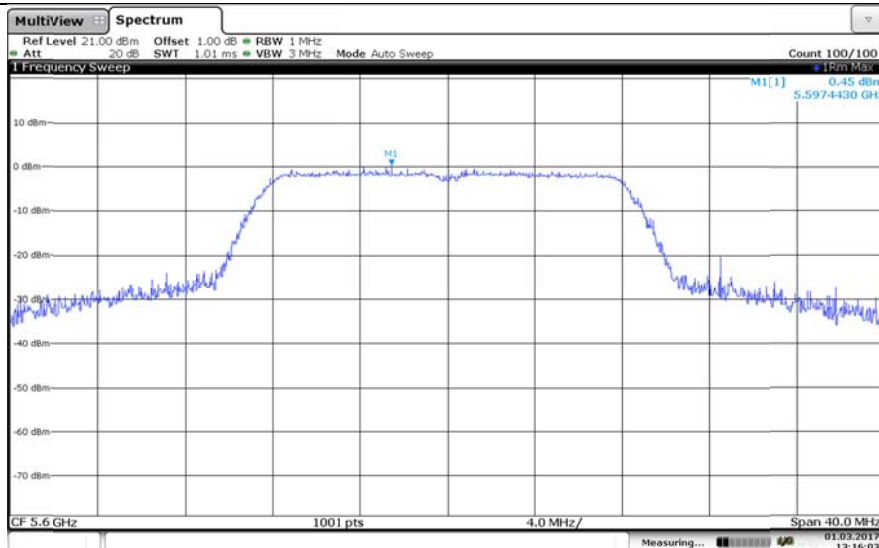
High

Band 2C

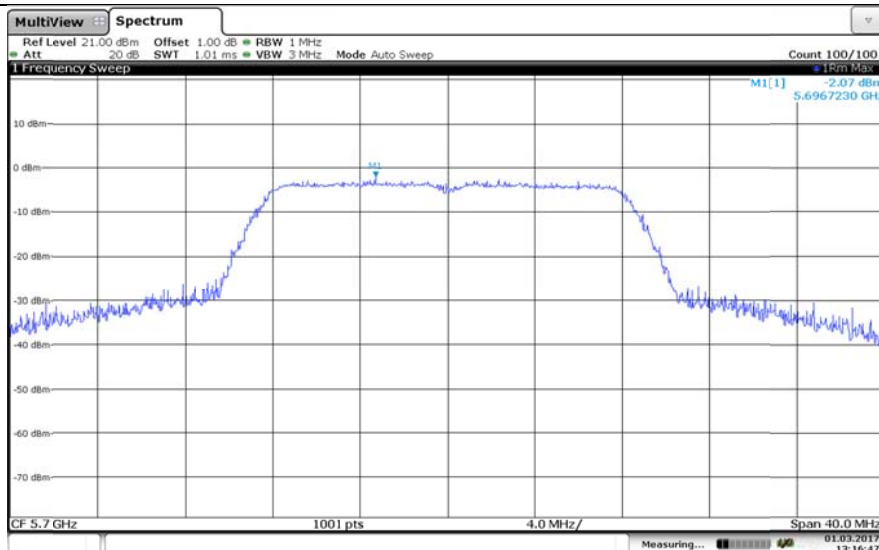
802.11a



Low

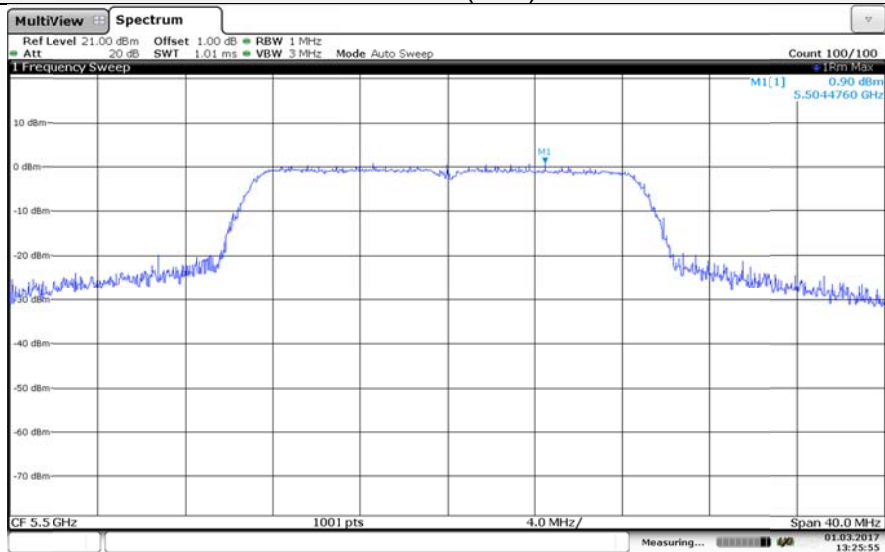


Mid

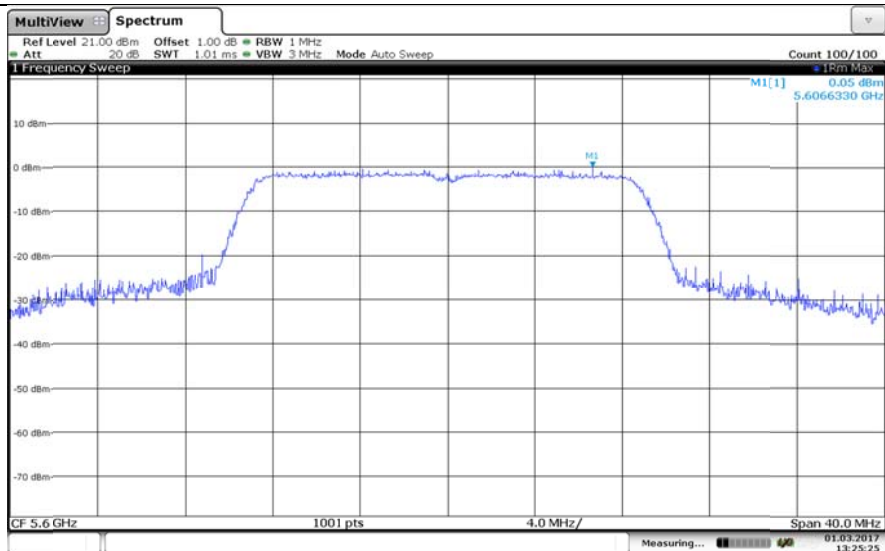


High

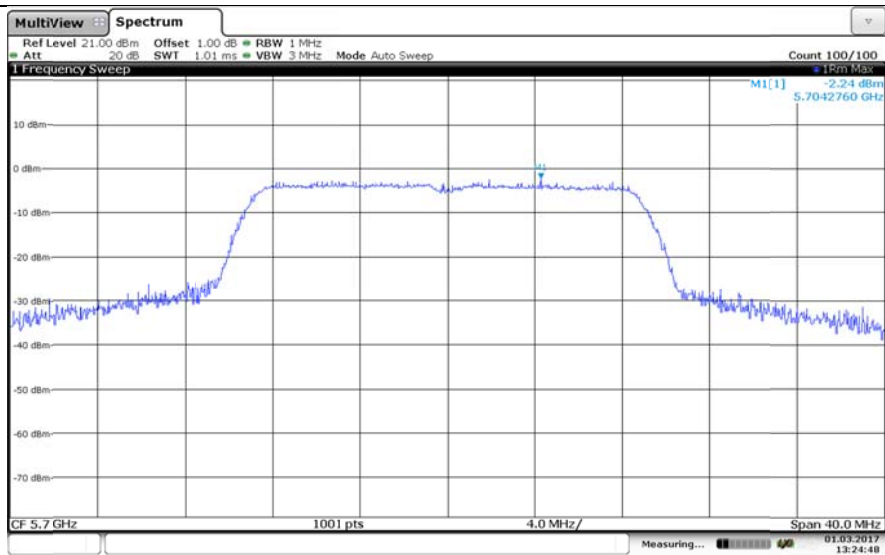
802.11n(H20)



Low

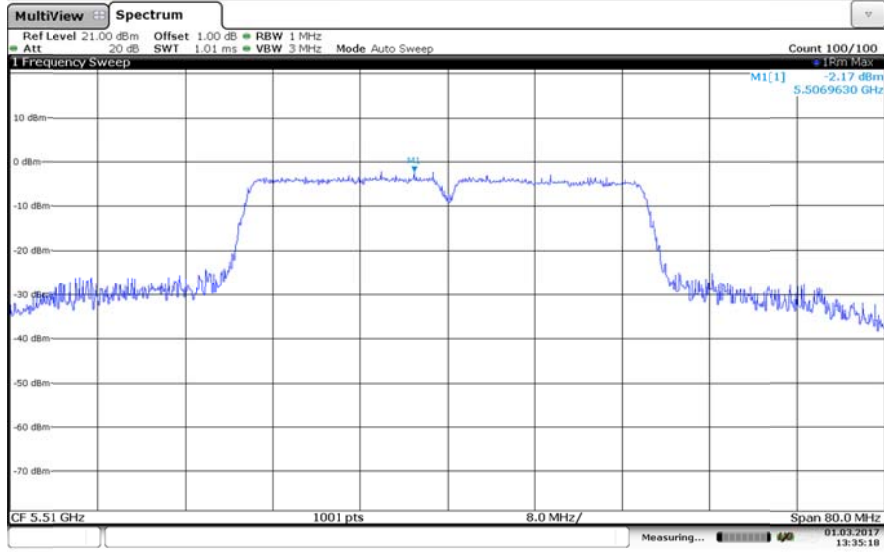


Mid

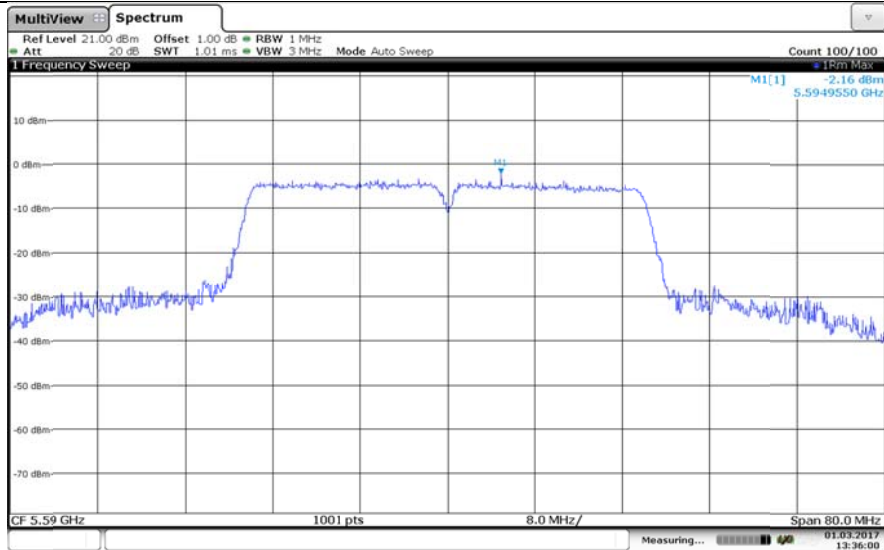


High

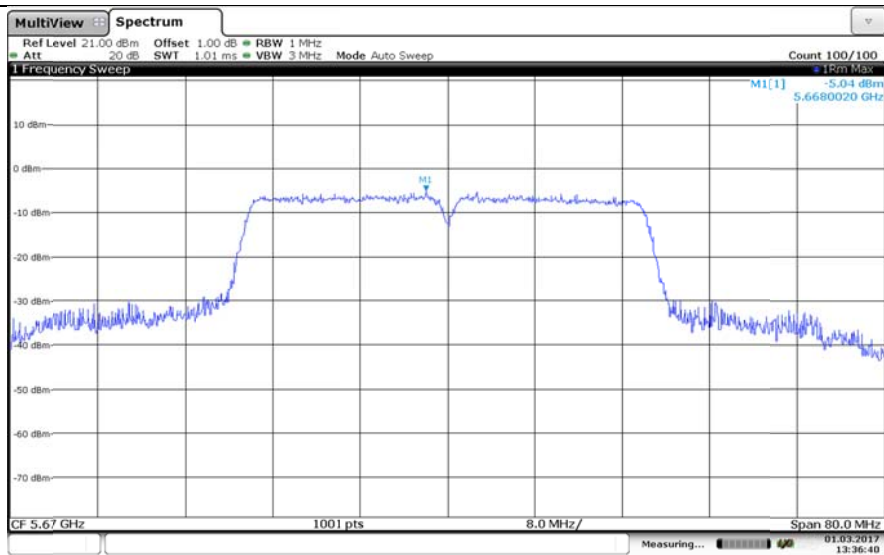
802.11n(H40)



Low

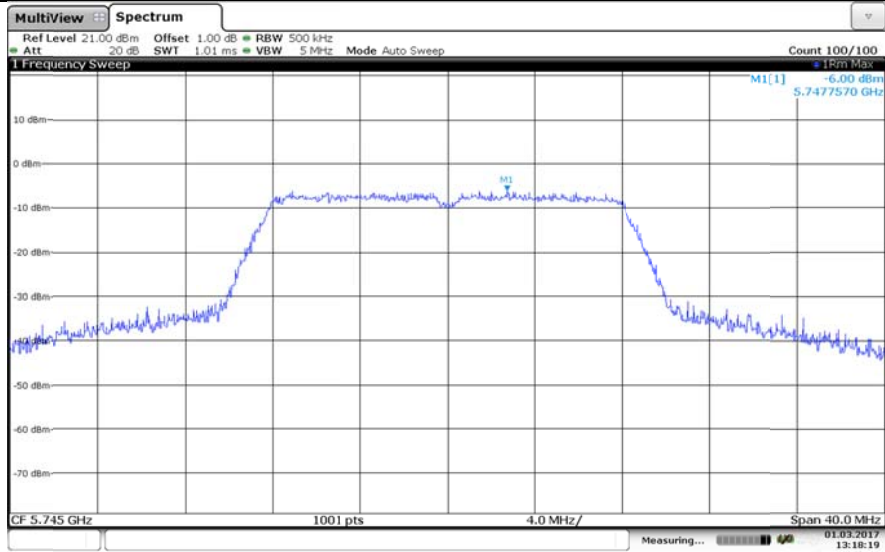


Mid

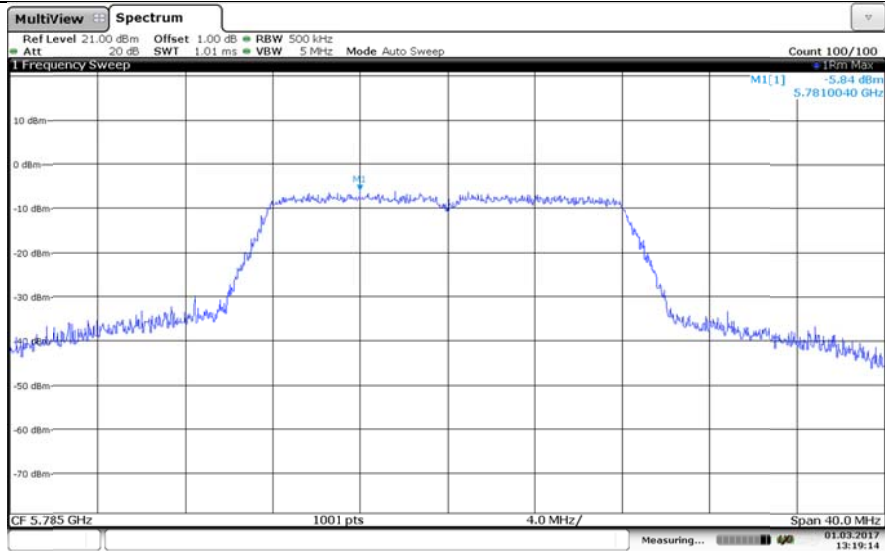


High

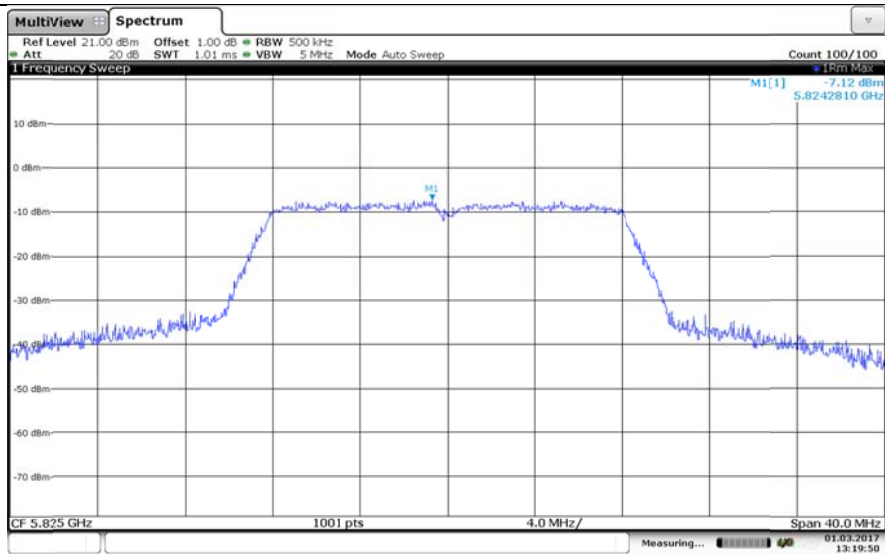
Band 3
802.11a



Low

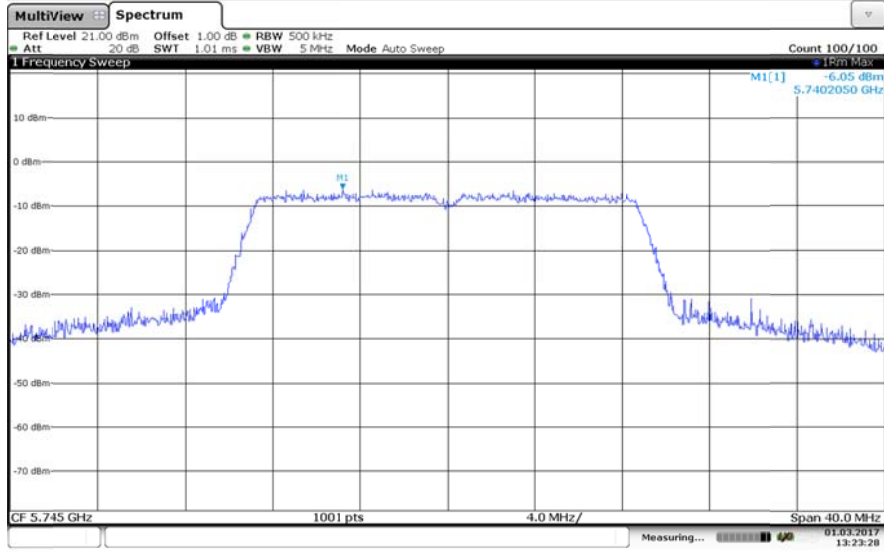


Mid

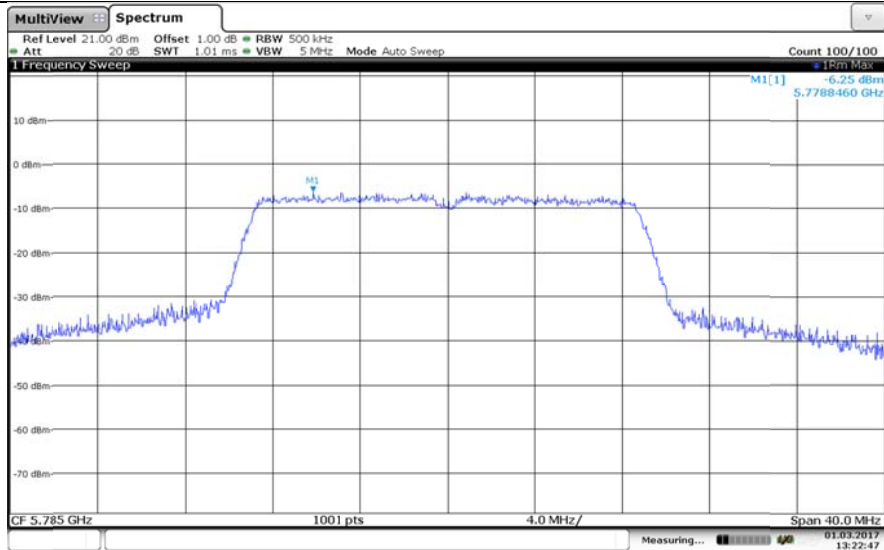


High

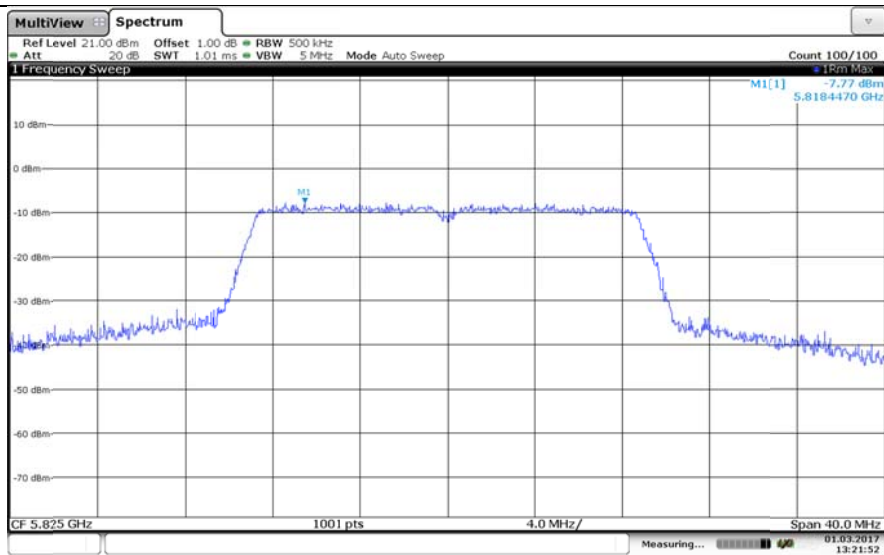
802.11n(H20)



Low

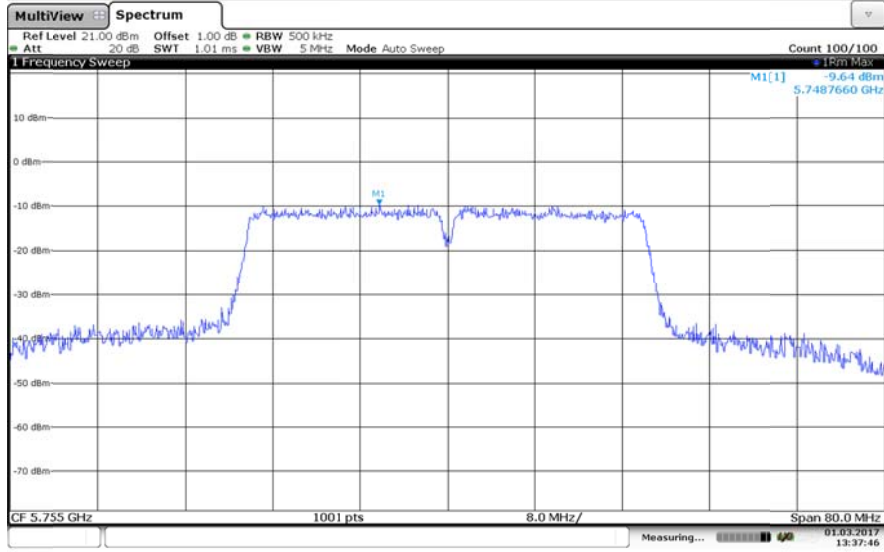


Mid

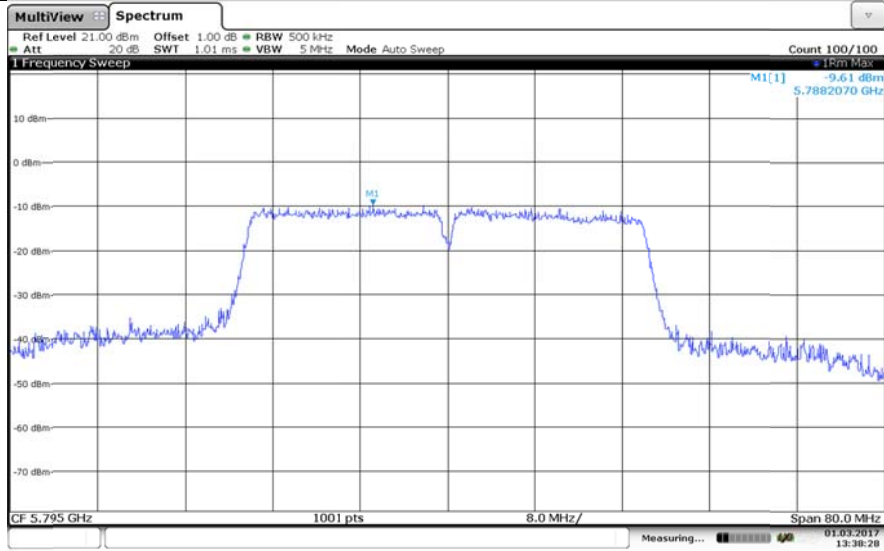


High

802.11n(H40)



Low



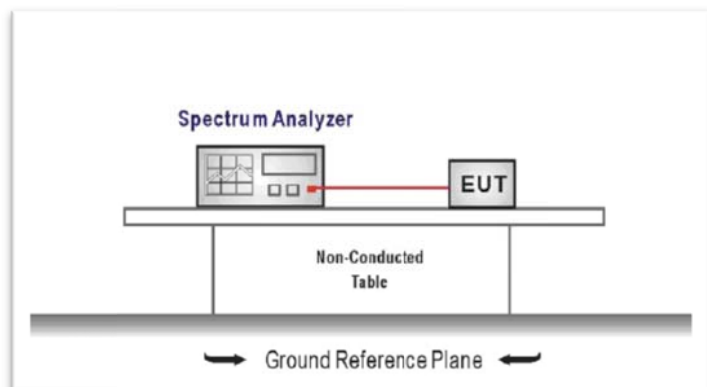
High

5.5. 99% Occupied Bandwidth

LIMIT

N/A

TEST CONFIGURATION



TEST PROCEDURE

According KDB 789033 D02 v01r02 - Section D

1. Set center frequency to the nominal EUT channel center frequency
2. Set span = 1.5 times to 5.0 times the OBW.
3. Set RBW = 1 % to 5 % of the OBW
4. Set VBW $\geq 3 \cdot$ RBW
5. peak detection and max hold mode (until the trace stabilizes)
6. Use the 99 % power bandwidth function of the instrument

TEST MODE:

Please refer to the clause 3.3

TEST RESULTS

Passed Not Applicable

	Type	Channel	99% Occupied Bandwidth(MHz)	Limit	Result
Band 1 5150-5250MHz	802.11a	Low	17.02	-	Pass
		Mid	17.06		
		High	17.14		
	802.11n(H20)	Low	17.98	-	Pass
		Mid	17.98		
		High	17.98		
	802.11n(H40)	Low	36.52	-	Pass
High		36.60			

	Type	Channel	99% Occupied Bandwidth(MHz)	Limit	Result
Band 2A 5250-5350MHz	802.11a	Low	17.14	-	Pass
		Mid	17.18		
		High	17.26		
	802.11n(H20)	Low	17.94	-	Pass
		Mid	18.02		
		High	18.06		
	802.11n(H40)	Low	36.92	-	Pass
High		36.92			

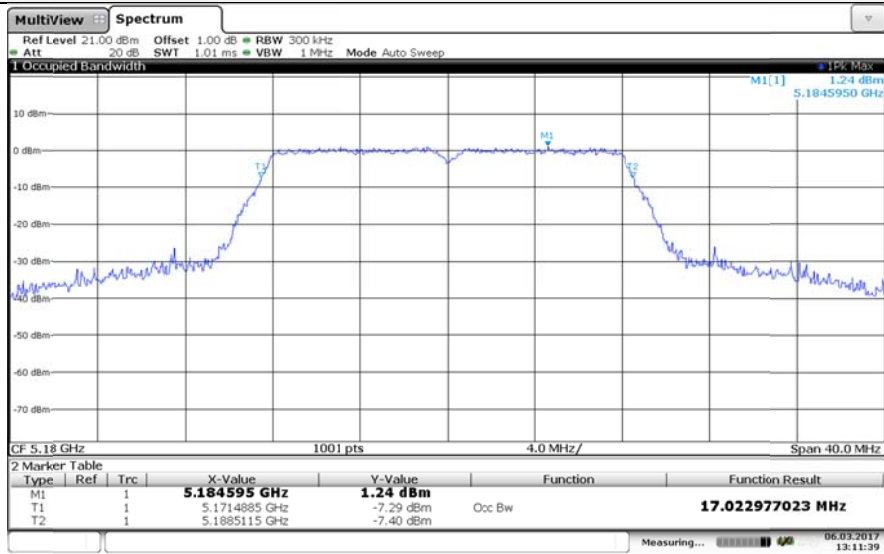
	Type	Channel	99% Occupied Bandwidth(MHz)	Limit	Result
Band 2C 5470-5725MHz	802.11a	Low	17.18	-	Pass
		Mid	17.10		
		High	17.10		
	802.11n(H20)	Low	18.02	-	Pass
		Mid	18.02		
		High	17.98		
	802.11n(H40)	Low	36.60	-	Pass
High		36.76			

	Type	Channel	99% Occupied Bandwidth(MHz)	Limit	Result
Band 3 5725-5850MHz	802.11a	Low	17.14	-	Pass
		Mid	17.06		
		High	17.06		
	802.11n(H20)	Low	17.98	-	Pass
		Mid	17.98		
		High	17.98		
	802.11n(H40)	Low	36.60	-	Pass
High		36.68			

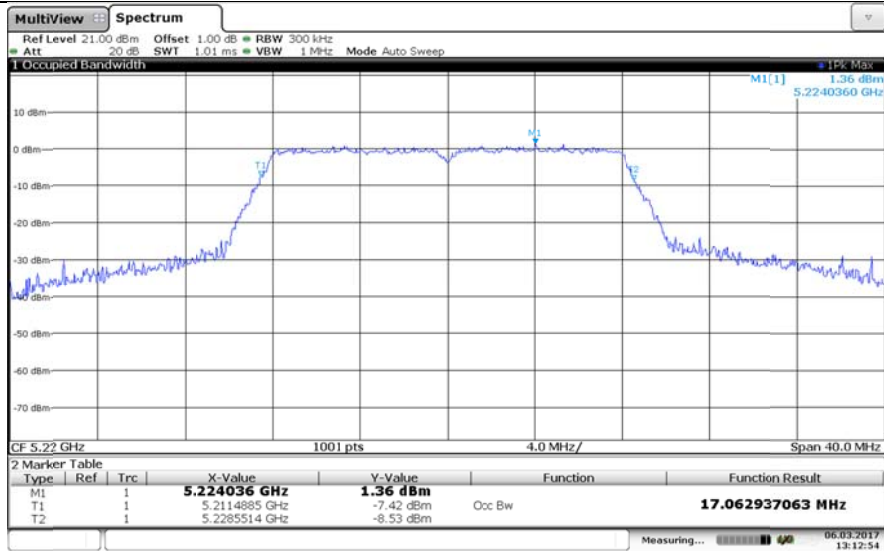
Test plot as follows:

Band 1

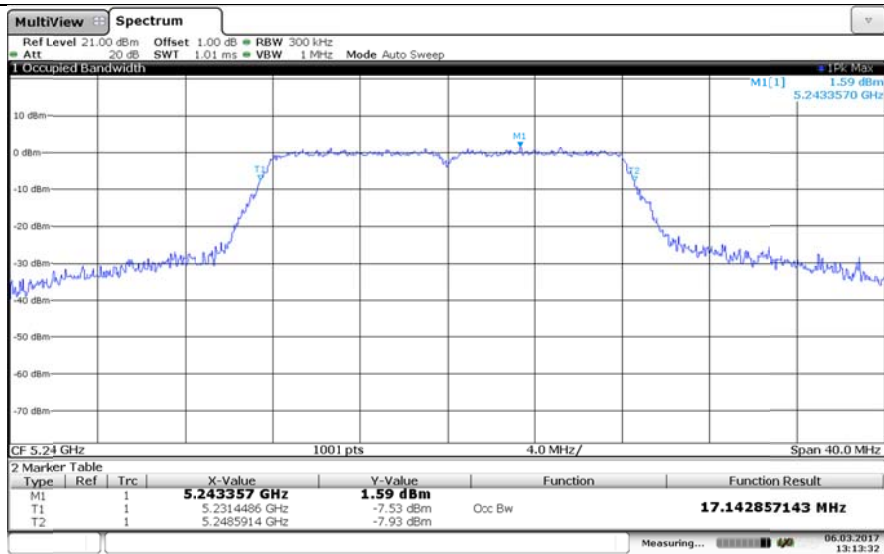
802.11a



Low

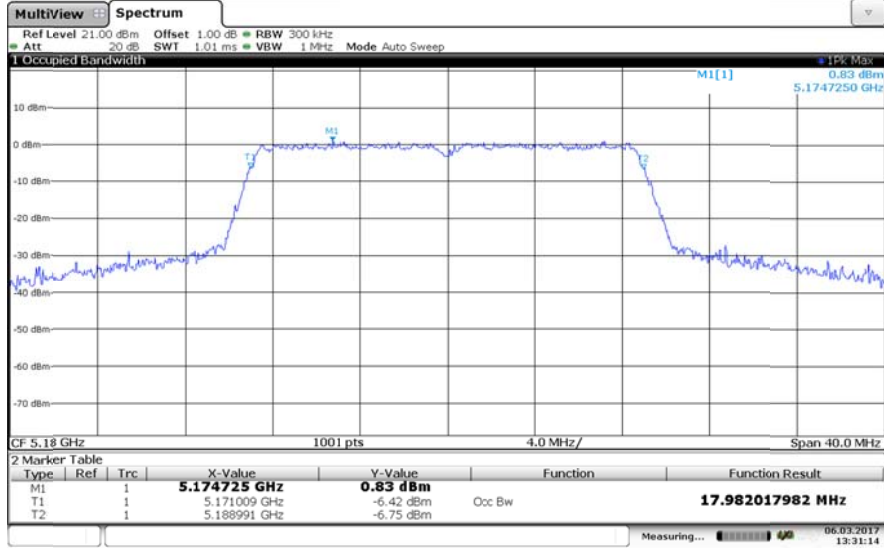


Mid

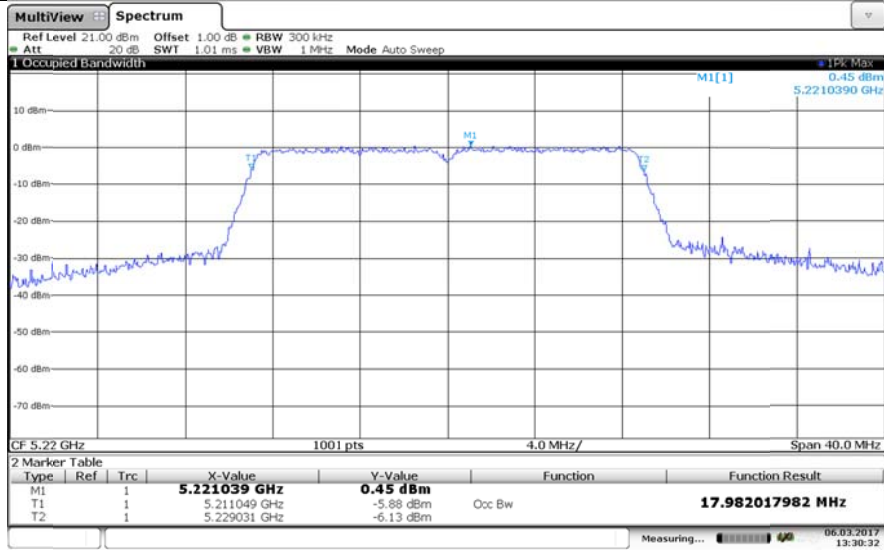


High

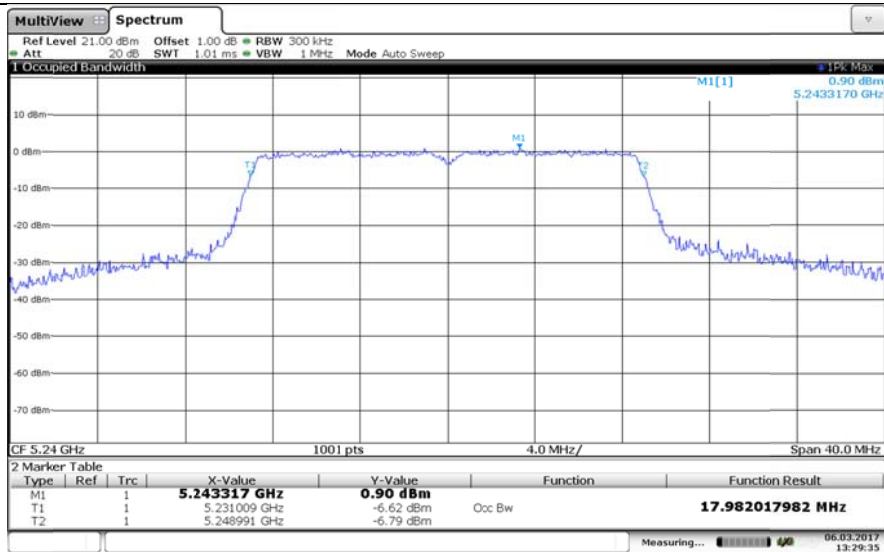
802.11n(H20)



Low

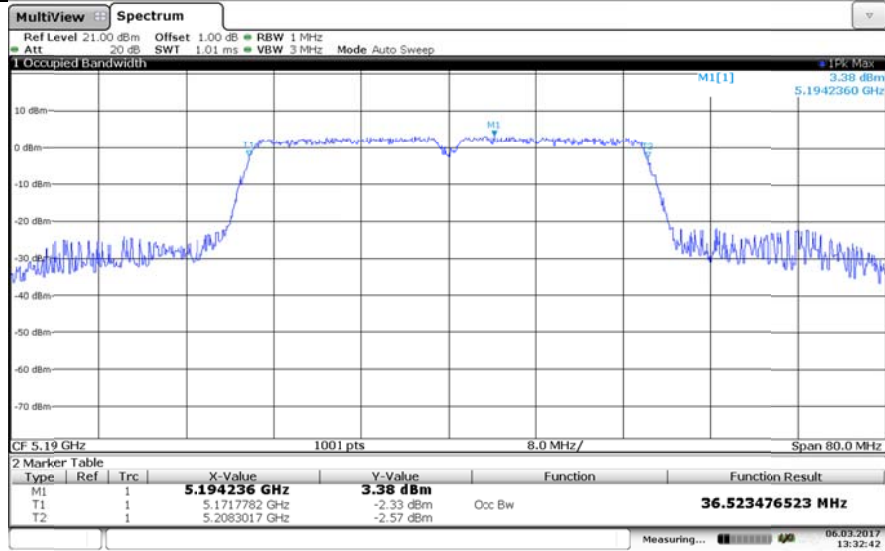


Mid

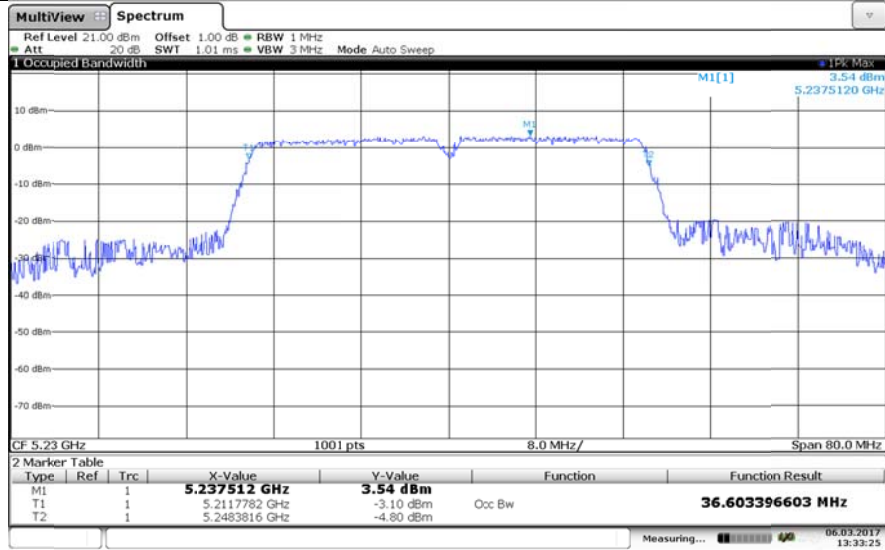


High

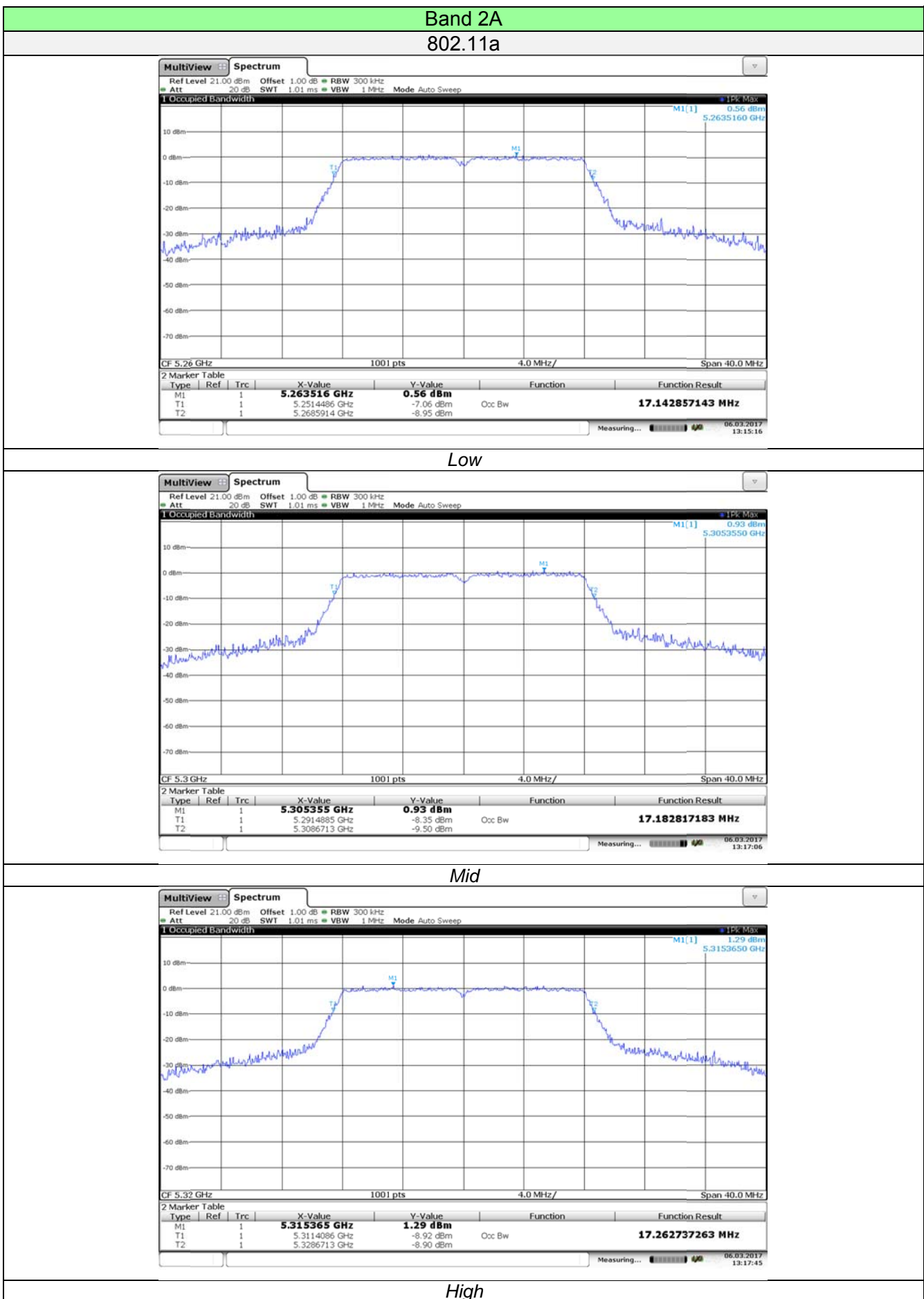
802.11n(H40)



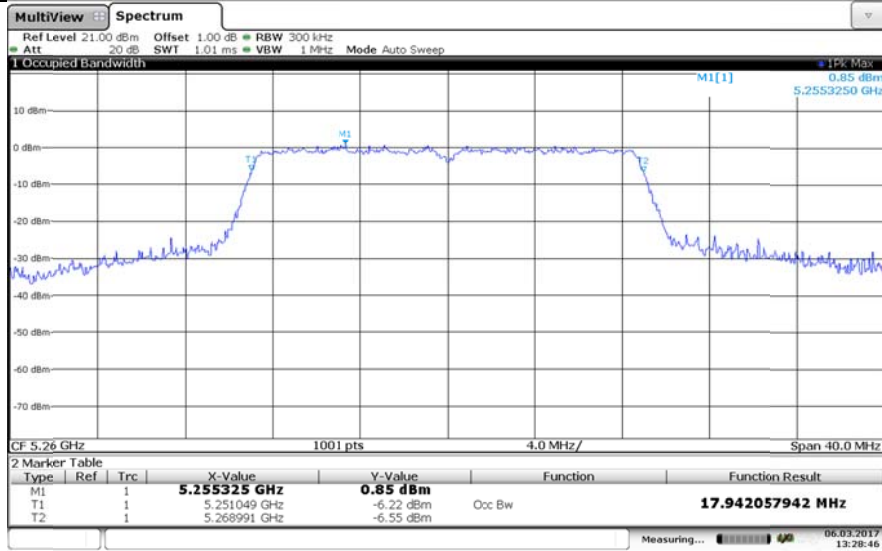
Low



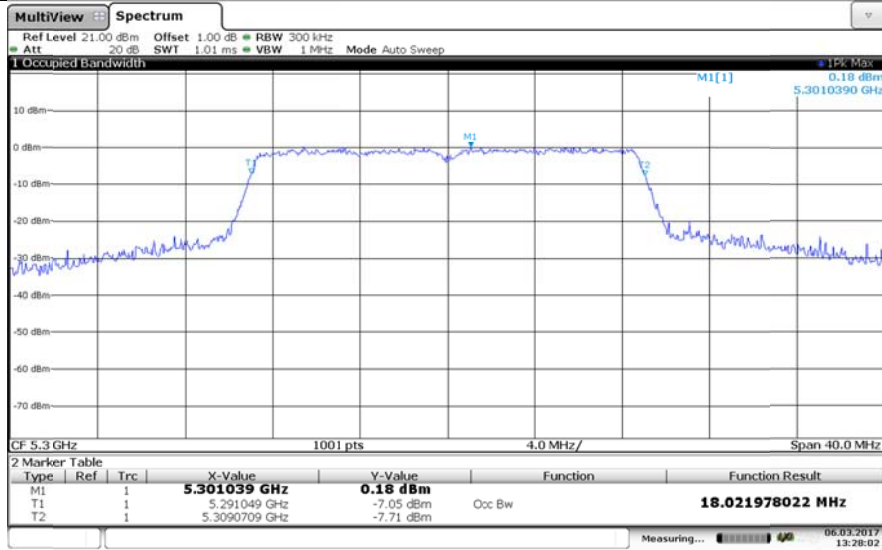
High



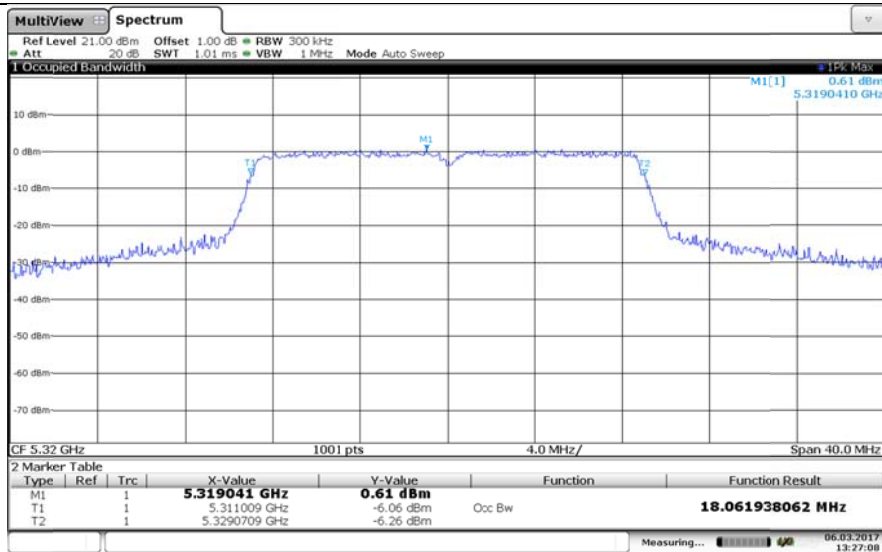
802.11n(H20)



Low

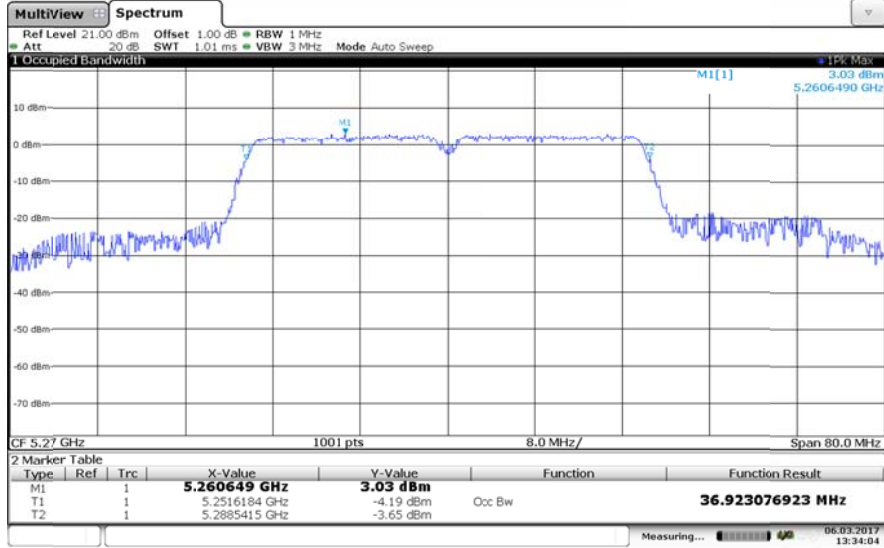


Mid

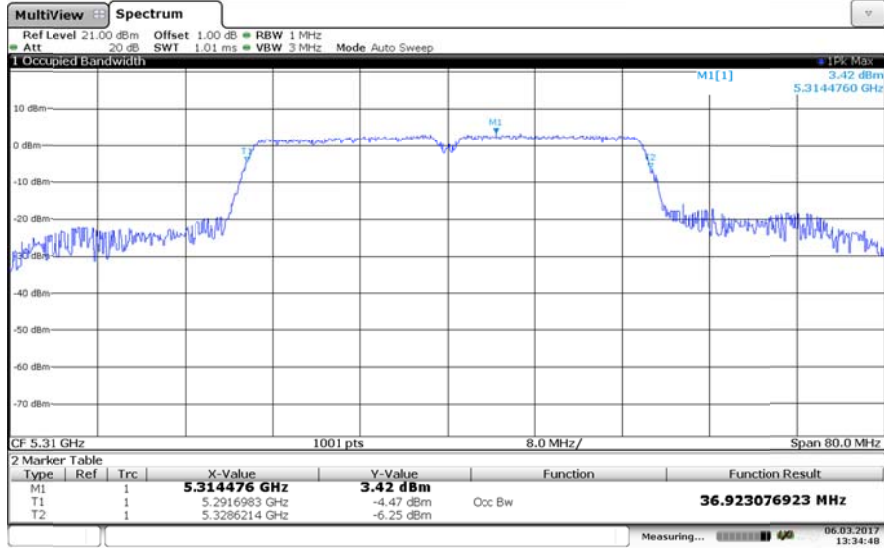


High

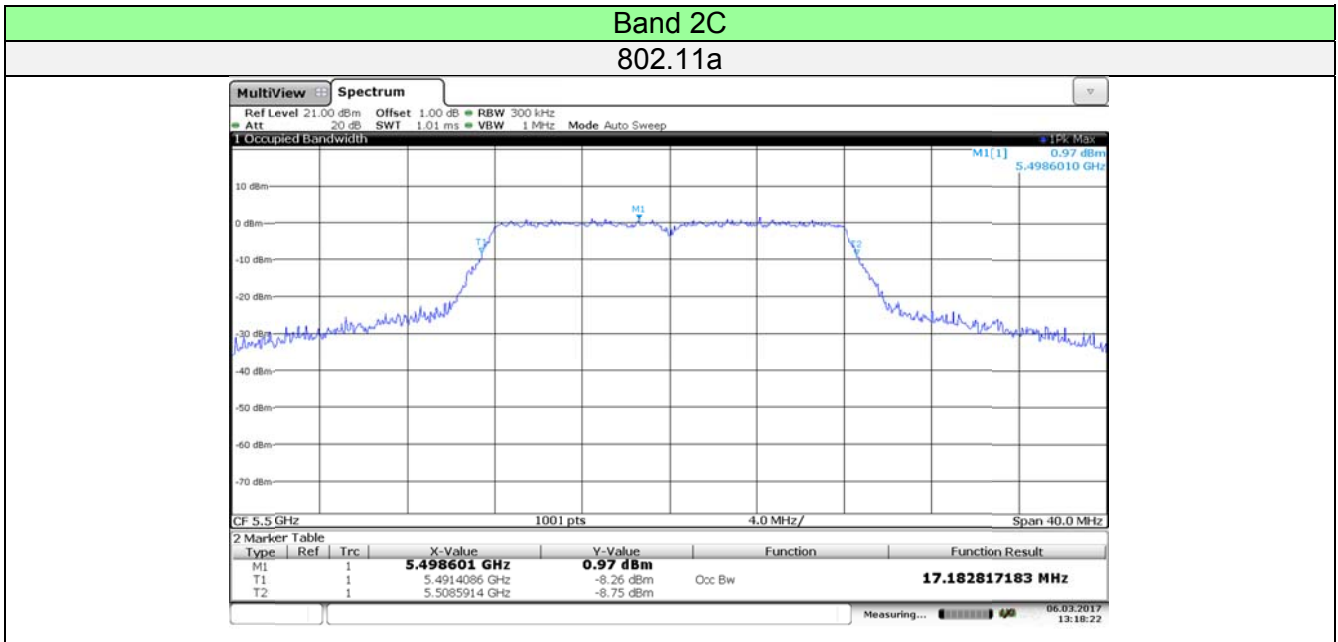
802.11n(H40)



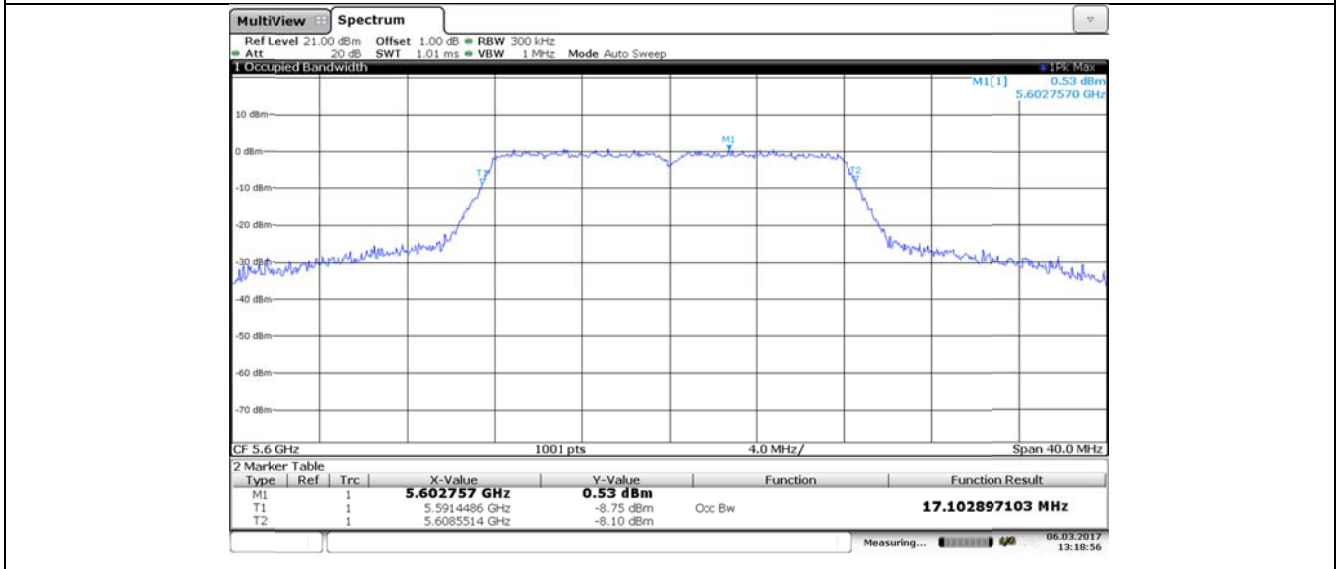
Low



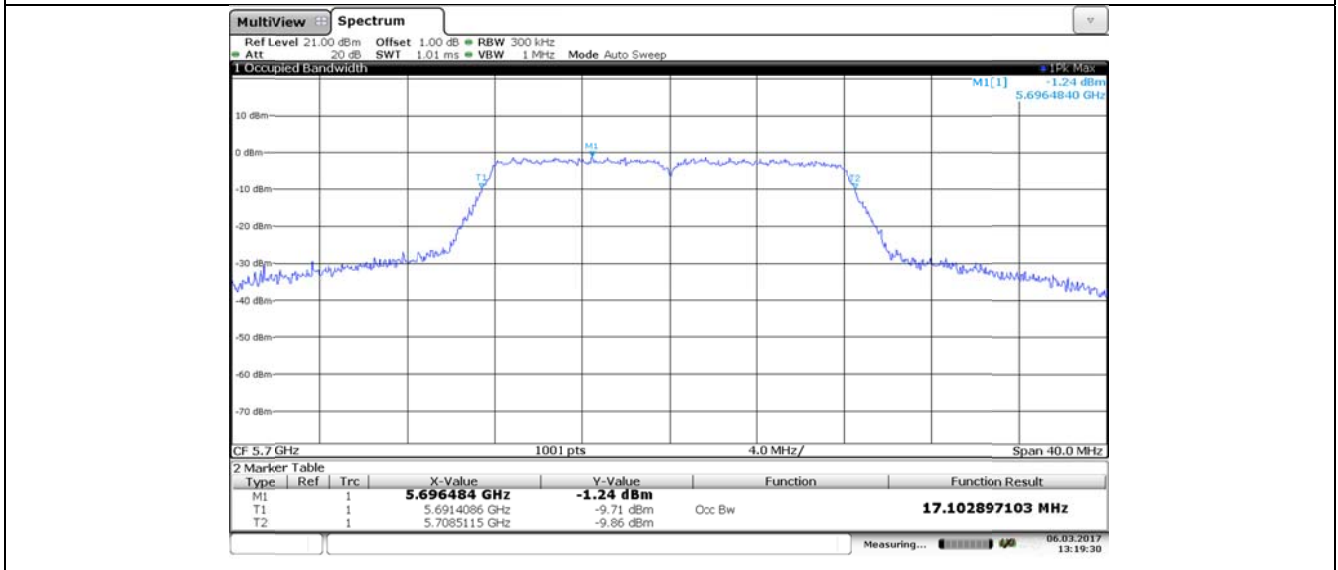
High



Low

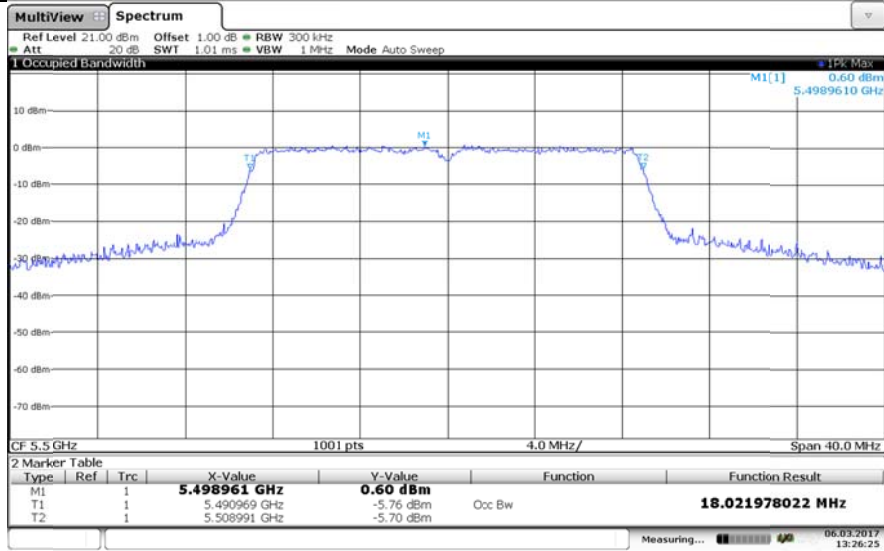


Mid

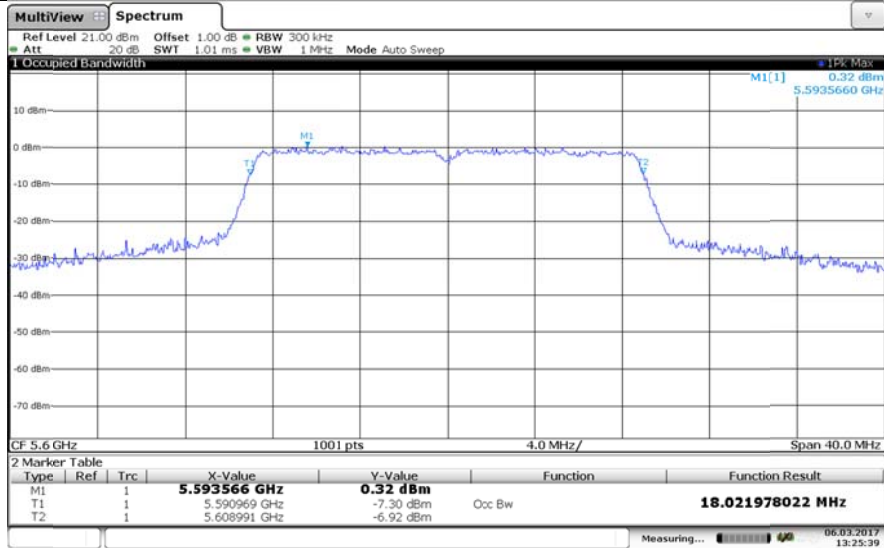


High

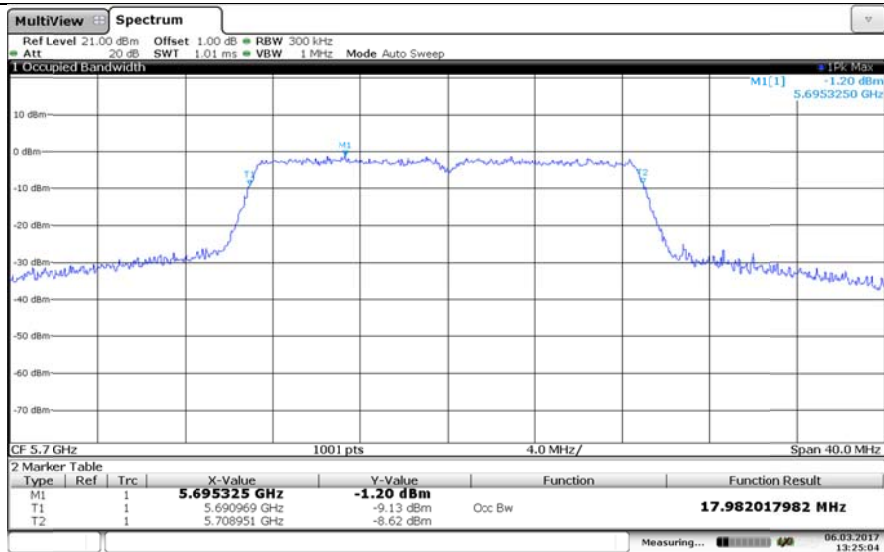
802.11n(H20)



Low

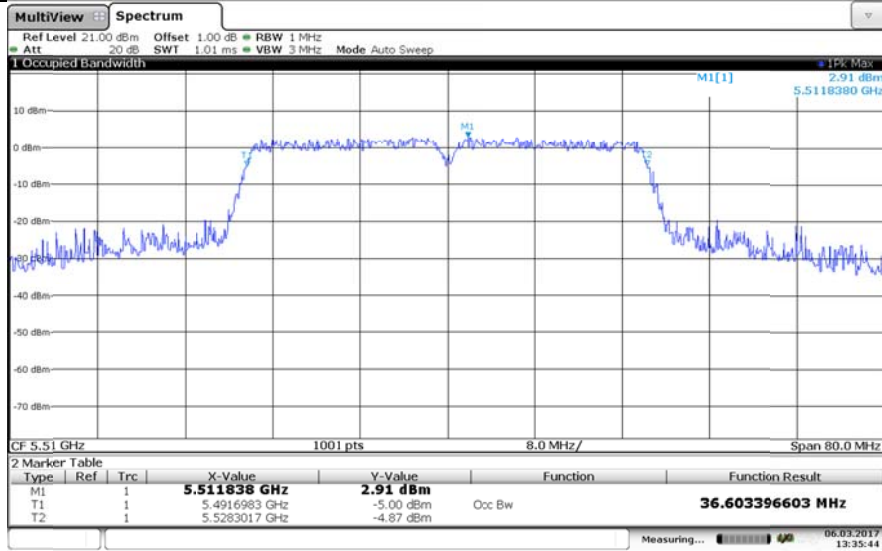


Mid

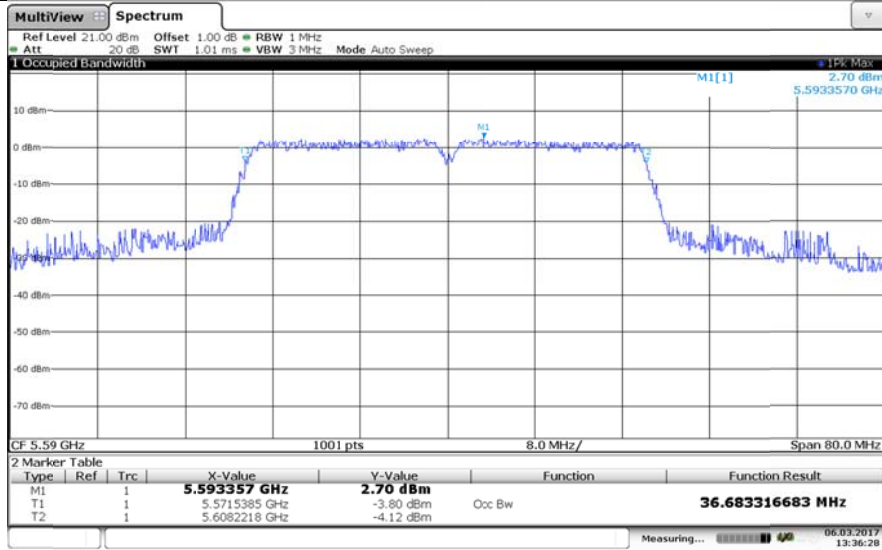


High

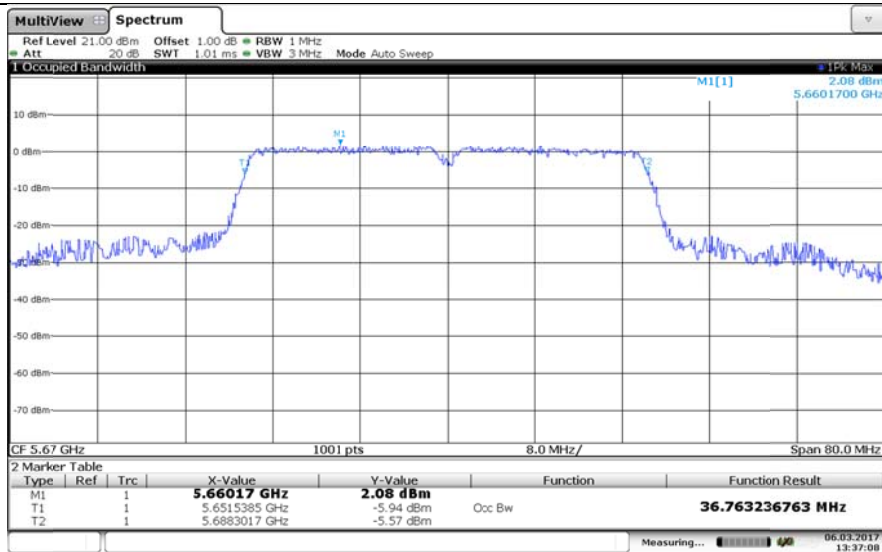
802.11n(H40)



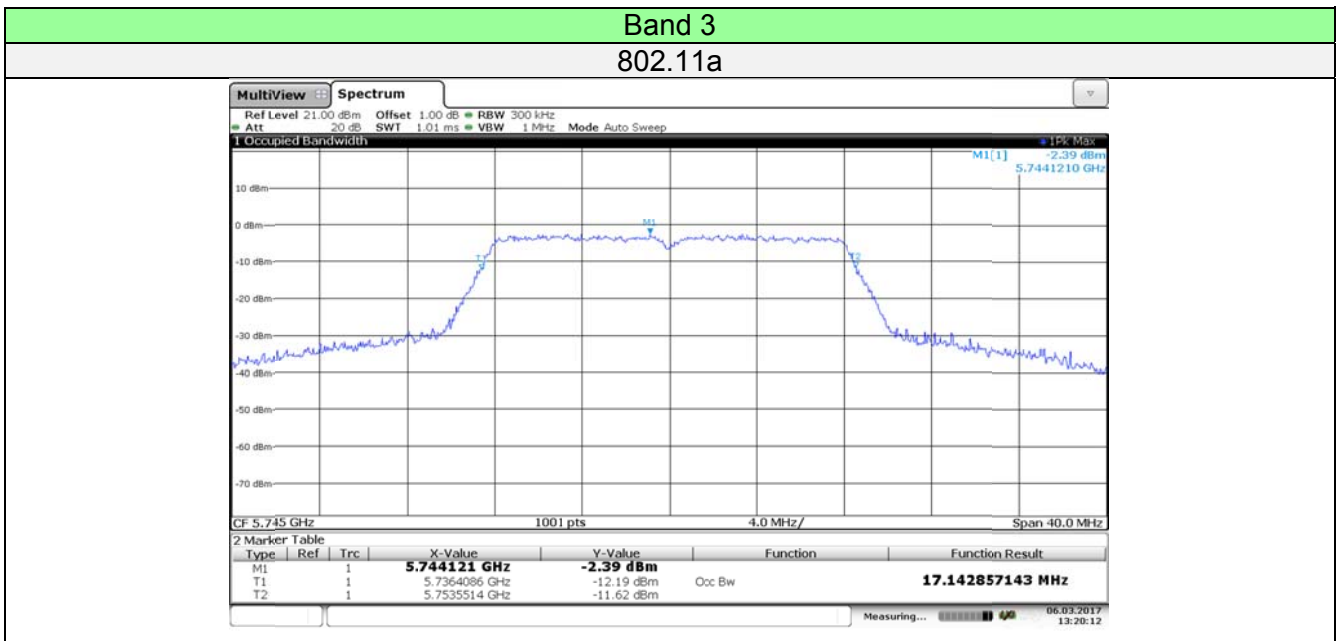
Low



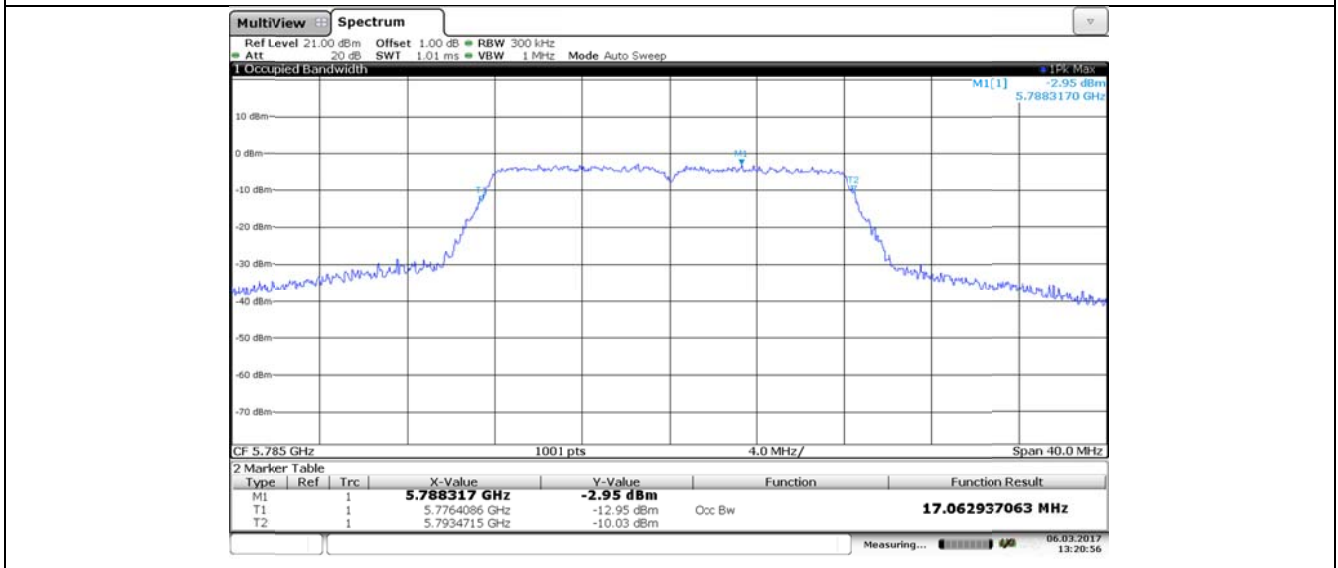
Mid



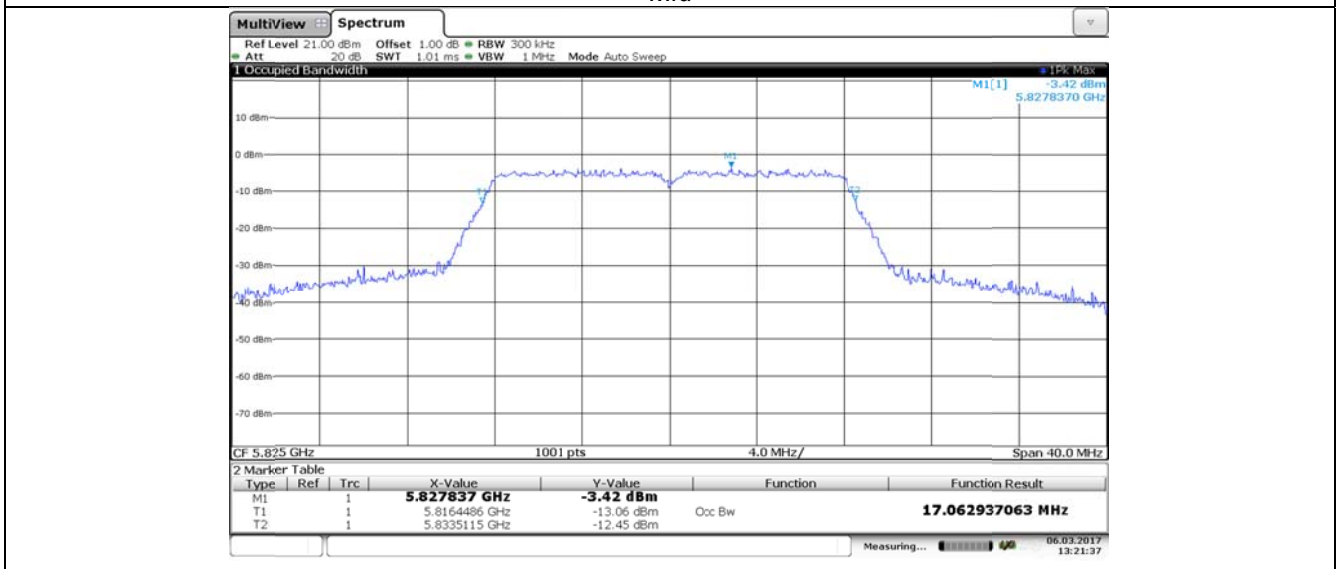
High



Low

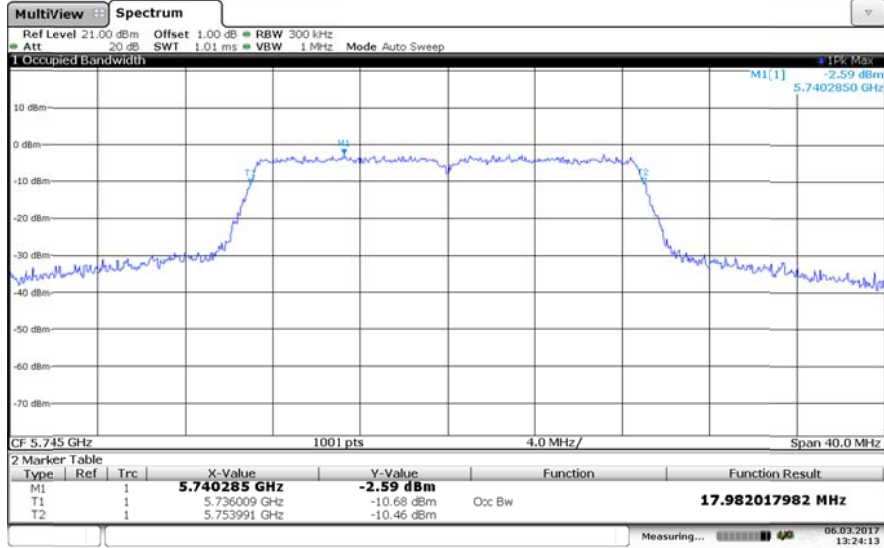


Mid

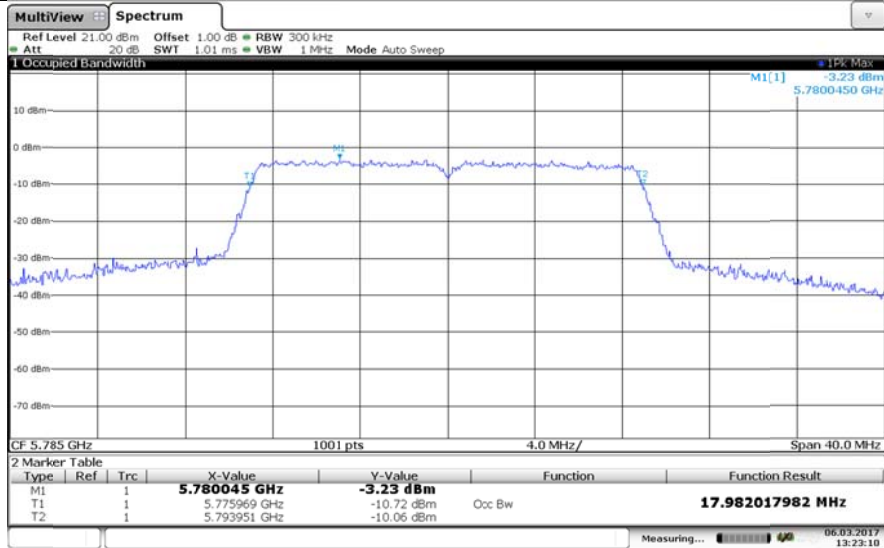


High

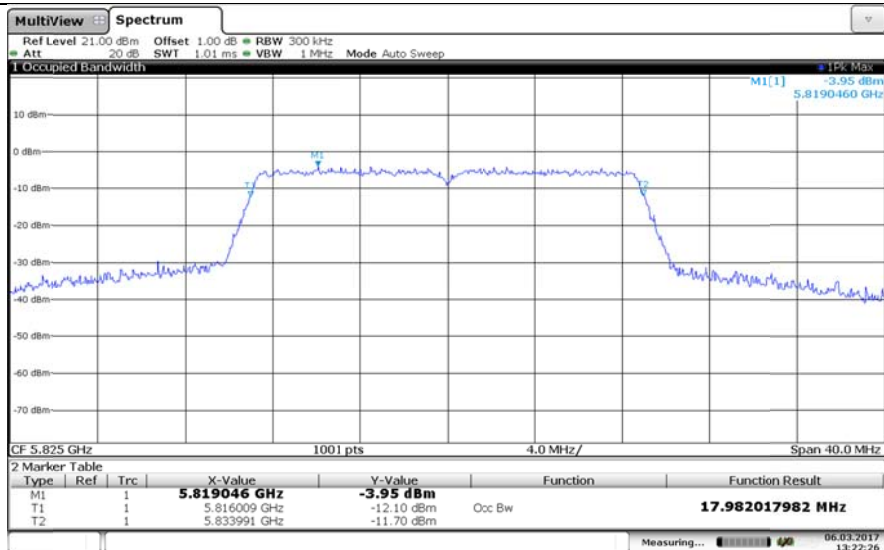
802.11n(H20)



Low

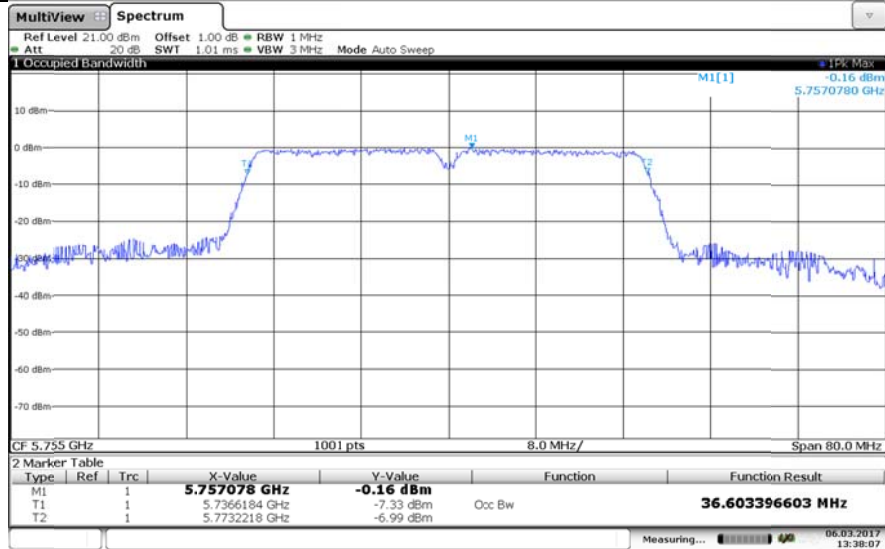


Mid

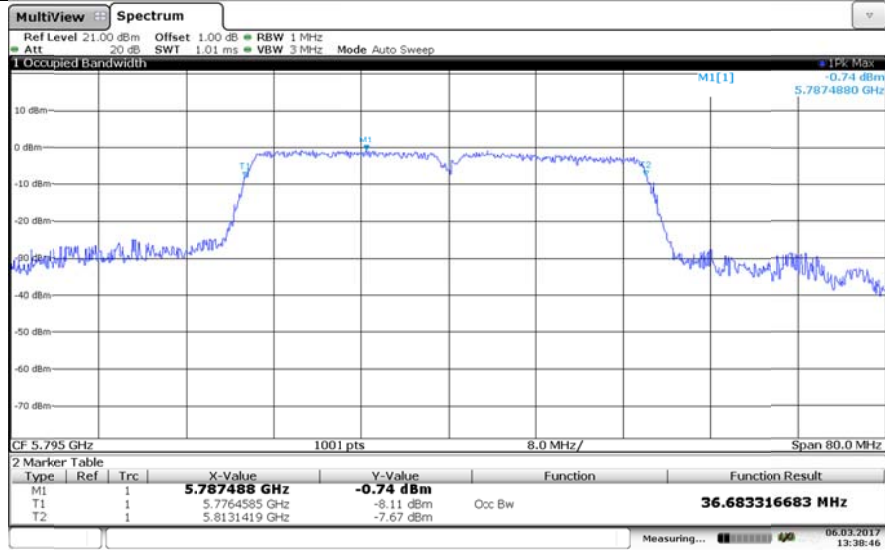


High

802.11n(H40)



Low



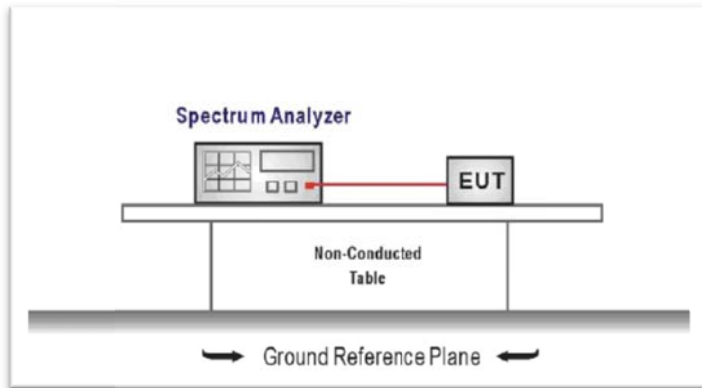
High

5.6. 6dB&26dB bandwidth

LIMIT

The bandwidth at 26dB 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 duty cycle, at its maximum power control level, as defined in KDB 789033 D02 v01r02, and at the appropriate frequencies. The spectrum analyzer's bandwidth measurement function is configured to measure the 26dB bandwidth.

TEST CONFIGURATION



TEST PROCEDURE

According KDB 789033 D02 v01r02 - Section C

1. The signal analyzers' automatic bandwidth measurement capability was used to perform the 26dB bandwidth measurement. The "X" dB bandwidth parameter was set to $X = 26$. The automatic bandwidth measurement function also has the capability of simultaneously measuring the 99% occupied bandwidth. The bandwidth measurement was not influenced by any intermediate power nulls in the fundamental emission.
2. RBW = approximately 1% of the emission bandwidth
3. VBW > 3 x RBW
4. Detector = Peak
5. Trace mode = max hold

TEST RESULTS

Band 1 5150-5250MHz	Type	Channel	26dB Bandwidth (MHz)	Limit	Result
	802.11a		Low	20.031	-
Mid			19.907		
High			19.993		
802.11n(H20)		Low	20.179	-	Pass
		Mid	20.247		
		High	20.303		
802.11n(H40)		Low	40.044	-	Pass
		High	40.088		

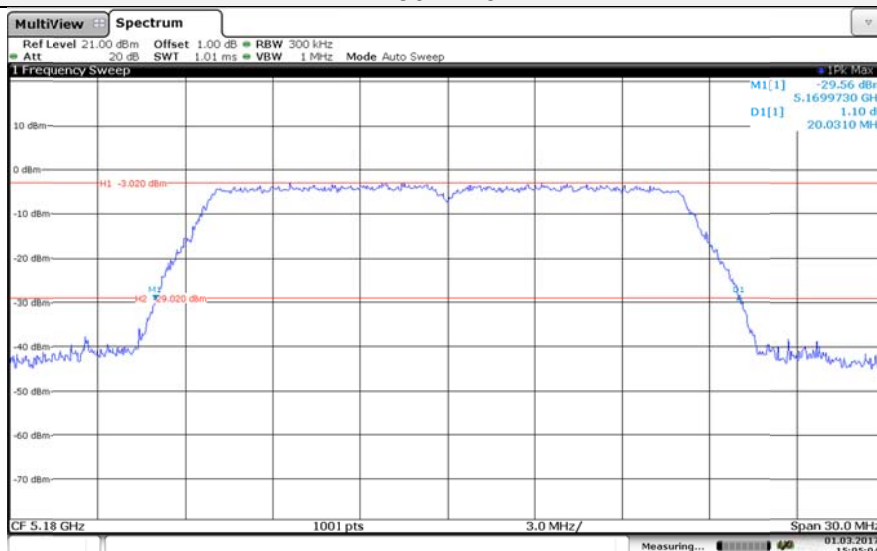
Band 2A 5250-5350MHz	Type	Channel	26dB Bandwidth (MHz))	Limit	Result
	802.11a		Low	19.983	-
Mid			19.993		
High			19.941		
802.11n(H20)		Low	20.355	-	Pass
		Mid	20.277		
		High	20.257		
802.11n(H40)		Low	40.289	-	Pass
		High	40.290		

Band 2C 5470-5725MHz	Type	Channel	26dB Bandwidth (MHz))	Limit	Result
	802.11a		Low	20.118	-
Mid			19.971		
High			19.933		
802.11n(H20)		Low	20.303	-	Pass
		Mid	20.233		
		High	20.178		
802.11n(H40)		Low	39.953	-	Pass
		Mid	20.118		
		High	39.995		

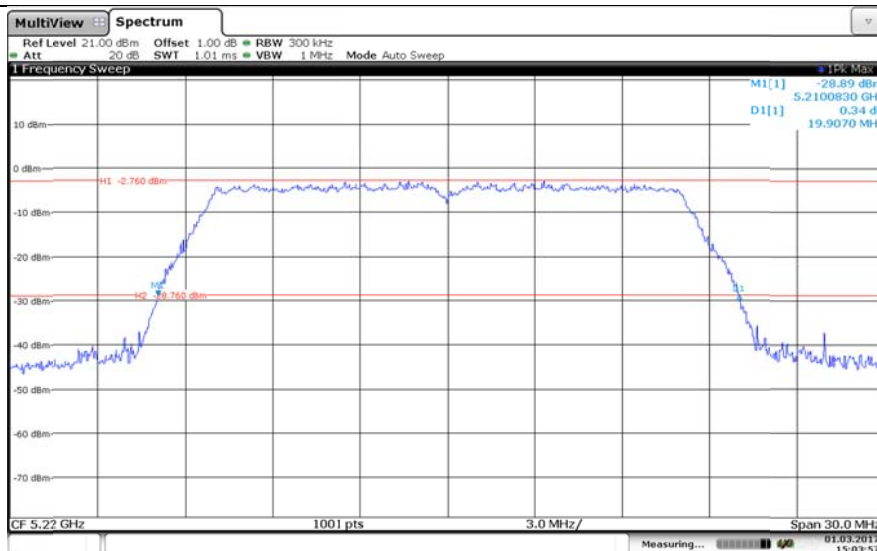
Band 3 5720-5850MHz	Type	Channel	6dB Bandwidth (MHz))	Limit (MHz)	Result
	802.11a		Low	16.359	0.5
Mid			16.368		
High			16.360		
802.11n(H20)		Low	17.619	0.5	Pass
		Mid	17.567		
		High	17.610		
802.11n(H40)		Low	36.281	0.5	Pass
		High	36.059		

Test plot as follows:

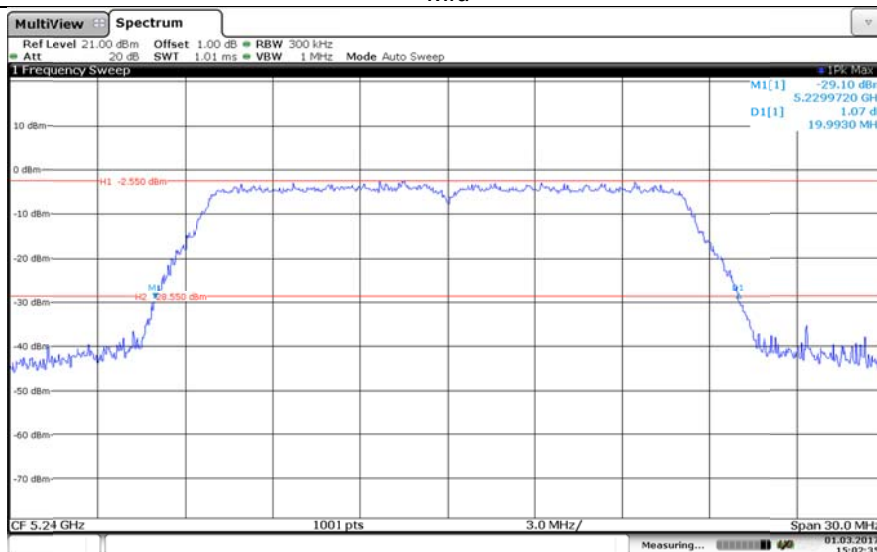
Band 1 802.11a



Low



Mid



High