FCC TEST REPORT
FCC ID: 2AVZV-H10-4

Product	:	POS SYSTEM
Model Name	:	H10-4,H10,H10-1,H10-3,H10-31,H10-32,H10-33,H10-34,H10-35,H10-41,H10-42,H10-43,H10-44,H10-45,V8, V8-1,V8-2,V8-3,V8-4,V8-5
Brand	:	**CITAQ**
Report No.	:	PTC21073003102E-FC04
Sample ID	:	PTC21073003102-2#

Prepared for

CITAQ CO., LTD

9F&13F, Chuangye Bldg, Keji Middle Road, Hi-Tech Zone, Shantou, Guangdong, China

Prepared by

Precise Testing & Certification Co., Ltd.

Building 1, No. 6, Tongxin Road, Dongcheng Street, Dongguan, Guangdong, China

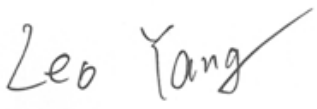
1 TEST RESULT CERTIFICATION

Applicant's name	:	CITAQ CO., LTD
Address	:	9F&13F, Chuangye Bldg, Keji Middle Road, Hi-Tech Zone, Shantou, Guangdong, China
Manufacture's name	:	CITAQ CO., LTD
Address	:	9F&13F, Chuangye Bldg, Keji Middle Road, Hi-Tech Zone, Shantou, Guangdong, China
Product name	:	POS SYSTEM
Model name	:	H10-4,H10,H10-1,H10-3,H10-31,H10-32,H10-33,H10-34,H10-35,H10-41, H10-42,H10-43,H10-44,H10-45,V8,V8-1,V8-2,V8-3,V8-4,V8-5
Standards	:	FCC CFR47 Part 15 Section 15.407
Test procedure	:	ANSI C63.10:2013
Test Date	:	Nov. 18, 2021 to Dec. 20, 2021
Date of Issue	:	Dec. 21, 2021
Test Result	:	Pass

This device described above has been tested by PTC, 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.

This report shall not be reproduced except in full, without the written approval of PTC, this document may be altered or revised by PTC, personal only, and shall be noted in the revision of the document.

Test Engineer:



Leo Yang / Engineer

Technical Manager:

Chris Du / Manager

1 Contents

Page

2 Test Summary

FCC Part15 (15.407)		
Test Item	FCC standard	Judgment
AC Conducted Emission	15.207	PASS
26dB/6dB Bandwidth	§ 15.407 (a) (26 dB) / § 15.407 (e) (6 dB)	PASS
Maximum Conducted Output Power	15.407(a)	PASS
Radiated Emission And (Unwanted Emissions) Measurement	15.407(b)& 15.209	PASS
Radiated Restricted Band Edge Measurement	15.407(b)& 15.205	PASS
Power Spectral Density	15.407(a)	PASS
Frequency Stability	15.407(g)	PASS
Automatically Discontinue Transmission	15.407(c)	PASS
Antenna Requirement	15.203	PASS
Note: Reference to the ANSI C63.10-2013, KDB 789033 D02v01r01, KDB 662911 D01v02r01 and KDB 644545 D03v01. " N/A" denotes test is not applicable in this Test Report.		

2.1 Test Site

Precise Testing & Certification Co., Ltd

Address: Building 1, No. 6, Tongxin Road, Dongcheng Street, Dongguan, Guangdong, China

FCC Registration Number: 790290

A2LA Certificate No.: 4408.01

IC Registration Number: 12191A-1

Designation Number：CN1219

3 General Information

3.1 General Description of EUT

EUT Name:	POS SYSTEM
Model No.:	H10-4,H10,H10-1,H10-3,H10-31,H10-32,H10-33,H10-34,H10-35,H10-41,H10-42,H10-43,H10-44,H10-45,V8,V8-1,V8-2,V8-3,V8-4,V8-5 (Note: The samples are the same except appearance and model number. So H10-4 was selected for full tested.)
Antenna Gain:	2dBi
Operation frequency:	For 802.11a/n-HT20/ac-VHT20: 5180~5240MHz, 5745~5825MHz For 802.11n-HT40/ac-VHT40: 5190~5230MHz, 5755~5795MHz For 802.11ac-VHT80: 5210MHz, 5775MHz
Modulation Type and Antenna Type:	802.11a/n/ac: OFDM FPCB antenna
Maximum Average Output Power with 5GHz	802.11a: 11.62dBm 802.11n-HT20: 11.85dBm 802.11n-HT40: 11.68dBm 802.11ac-VHT20: 11.46dBm 802.11ac-VHT40: 11.69dBm 802.11ac-VHT80: 6.68dBm
Power Supply:	DC 24V 2.5A 60W（Adapter: Model: K65S240250E1;Input： AC 100-240V，50/60Hz ,1.8A)
Hardware Version:	V1.2
Software Version:	Android 5.1

Channel List

Channel List for 802.11a/n-HT20/ac-VHT20

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
36	5180	40	5200	44	5220	--	--
48	5240	149	5745	153	5765	--	--
157	5785	161	5805	165	5825	--	--

Channel List for 802.11n-HT40/ac-VHT40

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
38	5190	46	5230	151	5755	159	5795

Channel List for 802.11ac-VHT80

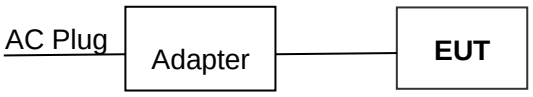
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
42	5210	155	5775	-	--	--	--

1. All the modulation modes were tested with both AC 120v 60Hz and AC230V 50Hz, the data of the worst mode with AC 120V 60Hz are recorded.

3.2 Description of Test conditions

(1) EUT was tested in normal configuration (Please See following Block diagram)

1. Block diagram of EUT configuration(TX Mode)



(2) E.U.T. test conditions:

15.31(e): For intentional radiators, measurements of the variation of the input power or the adiated signal level of the fundamental frequency component of the emission, as appropriate, shall be performed with the supply voltage varied between 85% and 115% of the nominalrated supply voltage. For battery operated equipment, the equipment tests shall be performed using a new battery.

(3) Test frequencies:

According to the 15.31(m) Measurements on intentional radiators or receivers, other than TV broadcast receivers, shall be performed and. If required reported for each band in which the device can be operated with the device operating at the number of frequencies in each band specified in the following table:

Frequency range over which device operates	Number of frequencies	Location in the range of operation
1 MHz or less	1	Middle
1 to 10 MHz	2	1 near top and 1 near bottom
More than 10 MHz	3	1 near top, 1 near middle and 1 near bottom

(4) Frequency range of radiated measurements:

According to the 15.33, The test range will be up to the tenth harmonic of the highest fundamental frequency.

(5) The EUT ‘s duty cycle is set to 100%

(6) The measurements are performed at all Bit Rate of Transmitter, For all tests the worst-case was selected as the table below, the data of the worst-case is shown in the report.

Test Mode	Mode 1: Transmit by 802.11a
	Mode 2: Transmit by 802.11n-HT20
	Mode 3: Transmit by 802.11n-HT40
	Mode 4: Transmit by 802.11ac-VHT20
	Mode 5: Transmit by 802.11ac-VHT40
	Mode 6: Transmit by 802.11ac-VHT80

4 Equipments List for All Test Items

RF Conducted Test

Name of Equipment	Manufacturer	Model	Serial No.	Last calibration	Calibration Due	Calibration period
MXA Signal Analyzer	Agilent	N9020A	MY56070279	Aug. 21, 2021	Aug. 20, 2022	1 year
Coaxial Cable	CDS	79254	46107086	Aug. 21, 2021	Aug. 20, 2022	1 year
Power Meter	Anritsu	ML2495A	0949003	Aug. 21, 2021	Aug. 20, 2022	1 year
Power Sensor	Anritsu	MA2411B	0917017	Aug. 21, 2021	Aug. 20, 2022	1 year
Spectrum Analyzer	Rohde&Schwarz	FSU26	1166.1660.26	Aug. 21, 2021	Aug. 20, 2022	1 year

Remark: The temporary antenna connector is soldered on the PCB board in order to perform conducted tests and this temporary antenna connector is listed in the equipment list.

Radiated Emissions

Name of Equipment	Manufacturer	Model	Serial No.	Last calibration	Calibration Due	Calibration period
EMI Test Receiver	Rohde&Schwarz	ESCI	101417	Aug. 21, 2021	Aug. 20, 2022	1 year
Loop Antenna	Schwarzbeck	FMZB 1519	012	Aug. 21, 2021	Aug. 20, 2022	1 year
Bilog Antenna	SCHWARZBECK	VULB9160	9160-3355	Aug. 21, 2021	Aug. 20, 2022	1 year
Preamplifier (low frequency)	SCHWARZBECK	BBV 9475	9745-0013	Aug. 21, 2021	Aug. 20, 2022	1 year
Cable	Schwarzbeck	PLF-100	549489	Aug. 21, 2021	Aug. 20, 2022	1 year
Spectrum Analyzer	Agilent	E4407B	MY45109572	Aug. 21, 2021	Aug. 20, 2022	1 year
Horn Antenna	SCHWARZBECK	9120D	9120D-1246	Aug. 21, 2021	Aug. 20, 2022	1 year
Power Amplifier	LUNAR EM	LNA1G18-40	J10100000081	Aug. 21, 2021	Aug. 20, 2022	1 year
Horn Antenna	SCHWARZBECK	BBHA 9170	9170-181	Aug. 21, 2021	Aug. 20, 2022	1 year

Amplifier	SCHWARZBECK	BBV 9721	9721-205	Aug. 21, 2021	Aug. 20, 2022	1 year
Cable	H+S	CBL-26	N/A	Aug. 21, 2021	Aug. 20, 2022	1 year
RF Cable	R&S	R204	R21X	Aug. 21, 2021	Aug. 20, 2022	1 year

Conducted Emissions

Name of Equipment	Manufacturer	Model	Serial No.	Last calibration	Calibration Due	Calibration period
EMI Test Receiver	Rohde&Schwarz	ESCI	101417	Aug. 21, 2021	Aug. 20, 2022	1 year
Artificial Mains Network	Rohde&Schwarz	L2-16B	000WX31025	Aug. 21, 2021	Aug. 20, 2022	1 year
Artificial Mains Network	Rohde&Schwarz	ENV216	101342	Aug. 21, 2021	Aug. 20, 2022	1 year

4.1 Measurement Uncertainty

Parameter	Uncertainty
RF output power, conducted	±1.0dB
Power Spectral Density, conducted	±2.2dB
Radio Frequency	± 1 x 10^{-6}
Bandwidth	± 1.5 x 10^{-6}
Time	±2%
Duty Cycle	±2%
Temperature	±1°C
Humidity	±5%
DC and low frequency voltages	±3%
Conducted Emissions (150kHz~30MHz)	±3.64dB
Radiated Emission(9KHz~30MHz)	±2.54dB
Radiated Emission(30MHz~1GHz)	±5.03dB
Radiated Emission(1GHz~25GHz)	±4.74dB
Remark: The coverage Factor (k=2), and measurement Uncertainty for a level of Confidence of 95%	

4.2 Description of Support Units

Equipment	Model No.	Series No.
-	-	-

5 Test Result

5.1 Conduction Emissions Measurement

5.1.1 Applied procedures / Limit

(Frequency Range 150KHz-30MHz)

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

0.15 -0.5	66 - 56 *	56 - 46 *	FCC
0.50 -5.0	56.00	46.00	
5.0 -30.0	60.00	50.00	

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

5.1.2 E.U.T. Operation

Operating Environment **:**

Temperature : 23.9 °C

Humidity : 51.4 % RH

Atmospheric Pressure : 101.21kPa

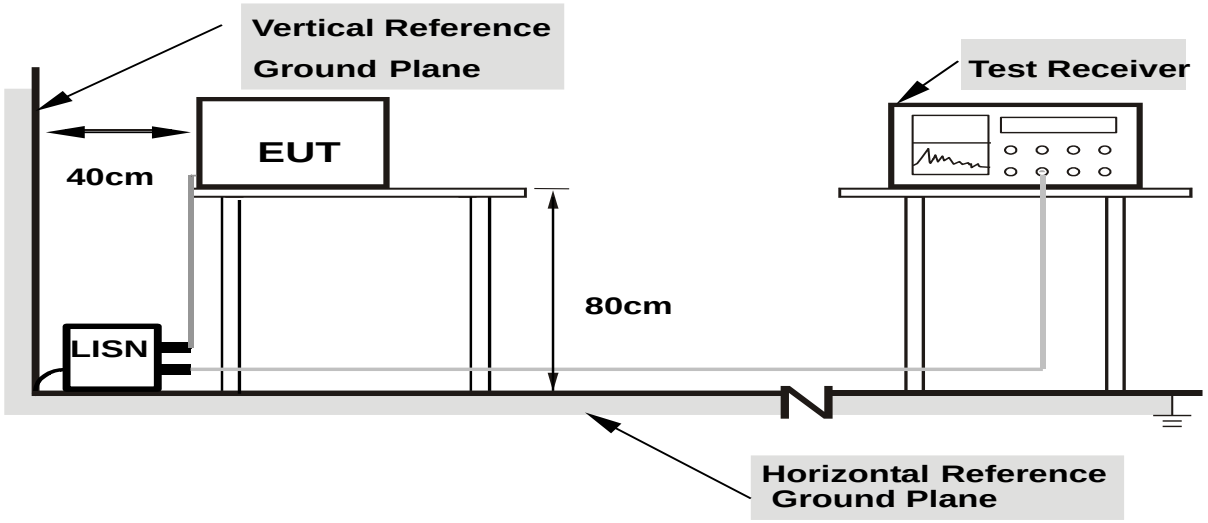
5.1.3 Test procedure

a. The EUT was placed 0.4 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

5.1.4 DEVIATION FROM TEST STANDARD

No deviation

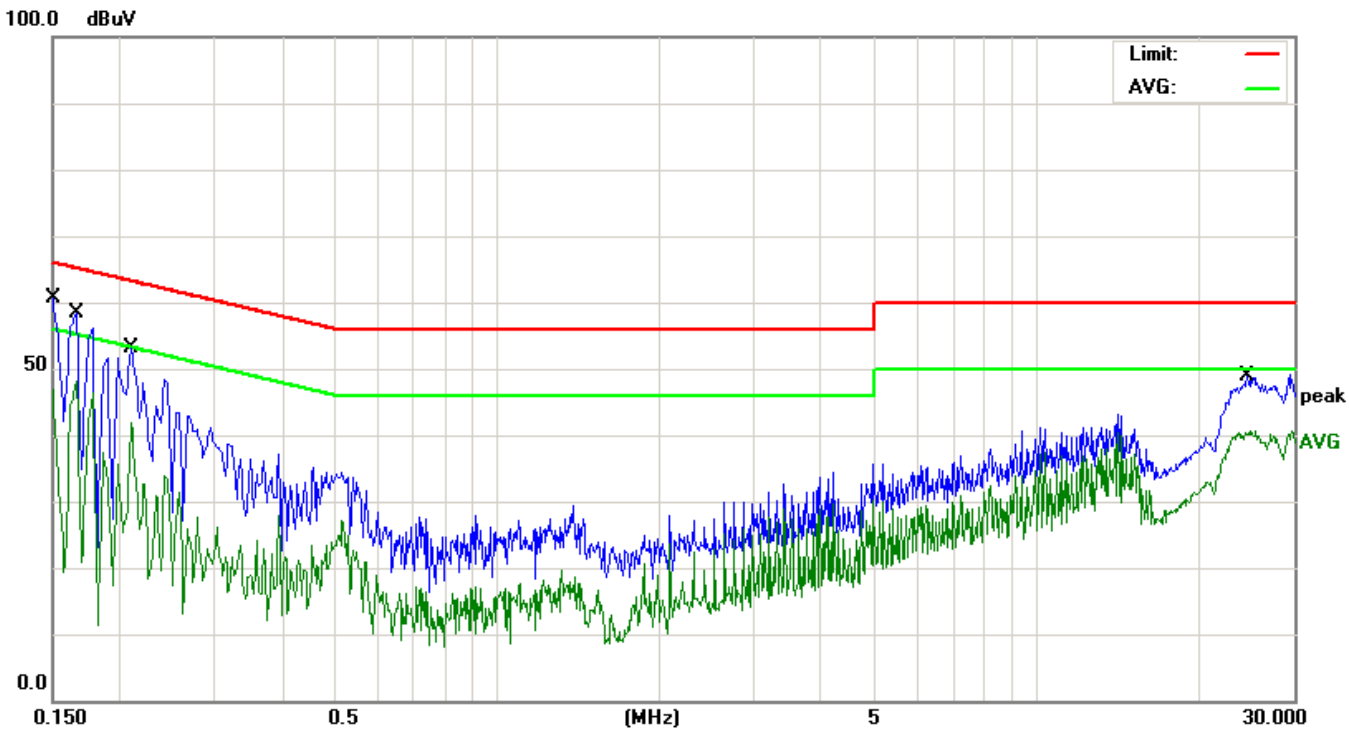
5.1.5 TEST SETUP



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

5.1.6 Test results

Line



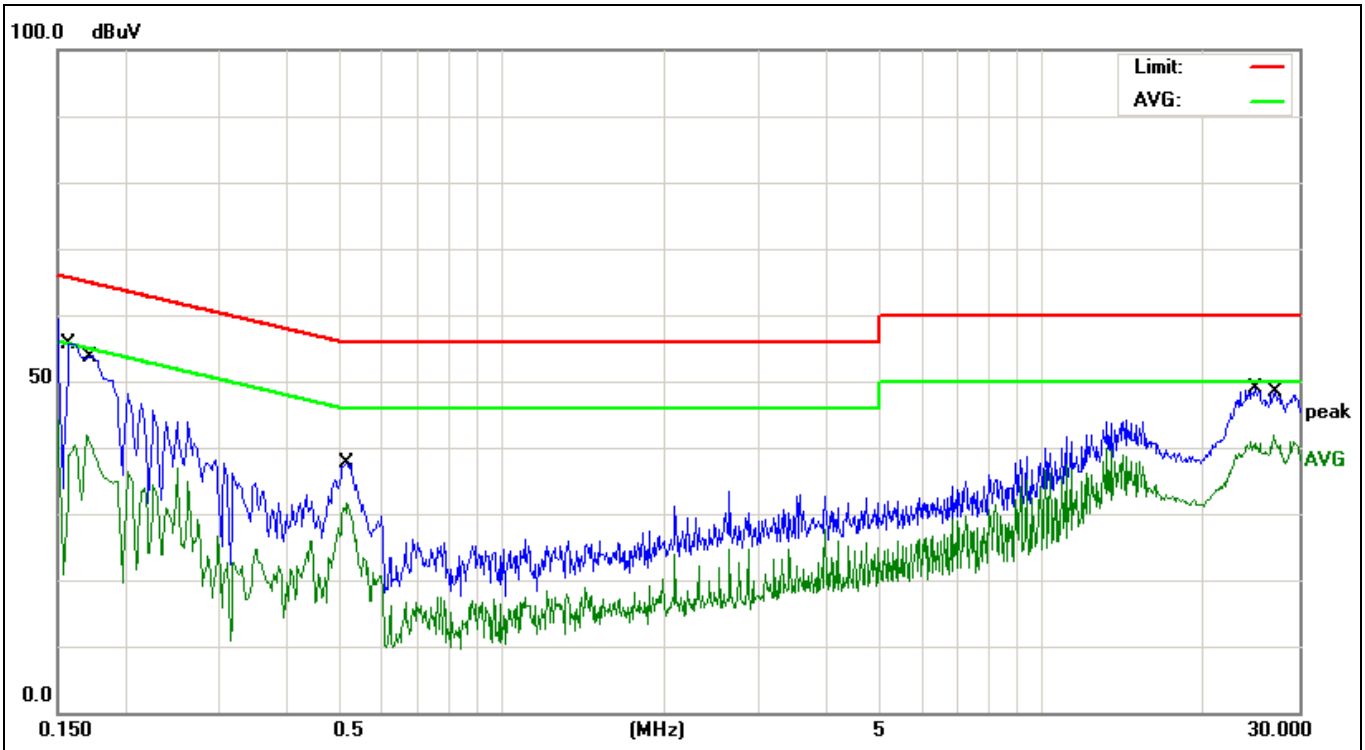
Remark: Factor = LISN factor + Cable Loss + Pulse limiter factor.

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector
1	*	0.1500	48.76	11.94	60.70	65.99	-5.29	QP
2		0.1660	36.47	11.61	48.08	55.15	-7.07	AVG
3		0.2100	41.98	11.06	53.04	63.20	-10.16	QP
4		0.2100	30.80	11.06	41.86	53.20	-11.34	AVG
5		24.5980	37.74	11.22	48.96	60.00	-11.04	QP
6		24.8260	29.45	11.23	40.68	50.00	-9.32	AVG

Note: Emission Level = Reading + AMN Factor+Cable Loss

Over limited=Emission Level - Limit

Neutre



Remark: Factor = LISN factor + Cable Loss + Pulse limiter factor.

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector
1		0.1580	43.99	11.75	55.74	65.56	-9.82	QP
2		0.1700	30.35	11.55	41.90	54.96	-13.06	AVG
3		0.5180	27.72	10.01	37.73	56.00	-18.27	QP
4		0.5180	21.56	10.01	31.57	46.00	-14.43	AVG
5		25.0180	37.57	11.23	48.80	60.00	-11.20	QP
6	*	26.8980	30.56	11.29	41.85	50.00	-8.15	AVG

Note: Emission Level = Reading + AMN Factor+Cable Loss

Over limited=Emission Level - Limit

5.2 Radiated Emissions Measurement

5.2.1 Applied procedures / Limit

Test Requirement: FCC Part15 section 15.407

Limits:

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 20 dB below the highest level of the desired power:

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 at 3M)

FREQUENCY (MHz)	PEAK (dBuV/m)	AVERAGE (dBuV/m)
Above 1000	74	54

Notes:

(1) The lower limit shall apply at the transition frequencies.

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

(3) For frequencies above 1000 MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20 dB under any condition of modulation.

Measurement Distance: 3m (Semi-Anechoic Chamber)

Frequency range: 9 kHz – 40 GHz for transmitting mode.

Test instrumentation resolution bandwidth
9 kHz (9 kHz - 30 MHz), 120 kHz (30 MHz - 1000 MHz), 1 MHz (1000 MHz – 40 GHz)

Detector: For PK and QP value:

RBW = 1 MHz for f ≥ 1 GHz, 100 kHz for f < 1 GHz

VBW ≥ RBW

Sweep = auto

Detector function = peak

Trace = max hold

For AV value:

RBW = 1 MHz for f ≥ 1 GHz,

VBW =10 Hz

Sweep = auto

Detector function = peak

Trace = max hold

Test Procedure:

1)9 kHz to 30 MHz emissions:

For testing performed with the loop antenna, testing was performed in accordance to ANSI C63.10. The centre of the loop was positioned 1 m above the ground and positioned with its plane vertical at the specified distance from the EUT, During testing the loop was rotated about its vertical axis for maximum response at each azimuth and also investigated with the loop positioned in the horizontal plane.

2)30 MHz to 1 GHz emissions:

For testing performed with the bi-log type antenna, testing was performed in accordance to ANSI C63.10. The measurement is performed with the EUT rotated 360º, the antenna height scanned between 1m and 4m, and the antenna rotated to repeat the measurement for both the horizontal and vertical antenna polarizations.

3)1 GHz to 40 GHz emissions:

Test site with RF absorbing material covering the ground plane that met the site validation criterion called out in CISPR 16-1-4:2007 was used to perform radiated emission test above 1 GHz.

For testing performed with the horn antenna, testing was performed in accordance to ANSI C63.10. The measurement is performed with the EUT rotated 360º, the antenna height scan between 1m and 4m, and the antenna rotated to repeat the measurement for both the horizontal and vertical antenna polarizations.

For the radiated emission test above 1GHz:

Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.

And according 15.35(a)

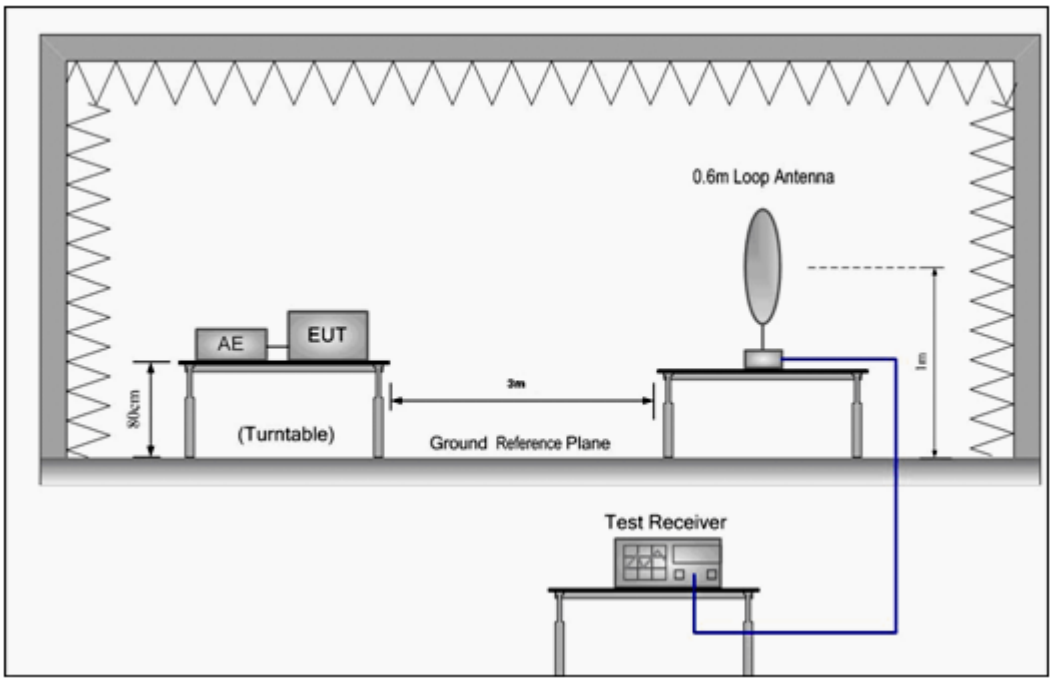
15.35(a) On any frequency or frequencies below or equal to 1000 MHz, the limits shown are based on measuring equipment employing a CISPR quasi-peak detector function and related measurement bandwidths, unless otherwise specified. The specifications for the measuring instrument using the CISPR quasi-peak detector can be found in Publication 16 of the International Special Committee on Radio Interference (CISPR) of the International Electro technical Commission. As an alternative to CISPR quasi-peak measurements, the responsible party, at its option, may demonstrate compliance with the emission limits using measuring equipment employing a peak detector function, properly adjusted for such factors as pulse desensitization, as long as the same bandwidths as indicated for CISPR quasi-peak measurements are employed.

Note: For pulse modulated devices with a pulse-repetition frequency of 20 Hz or less and for which CISPR quasi-peak measurements are specified, compliance with the regulations shall be demonstrated using measuring equipment employing a peak detector function, properly adjusted for such factors as pulse desensitization, using the same measurement bandwidths that are indicated for CISPR quasi-peak measurements.

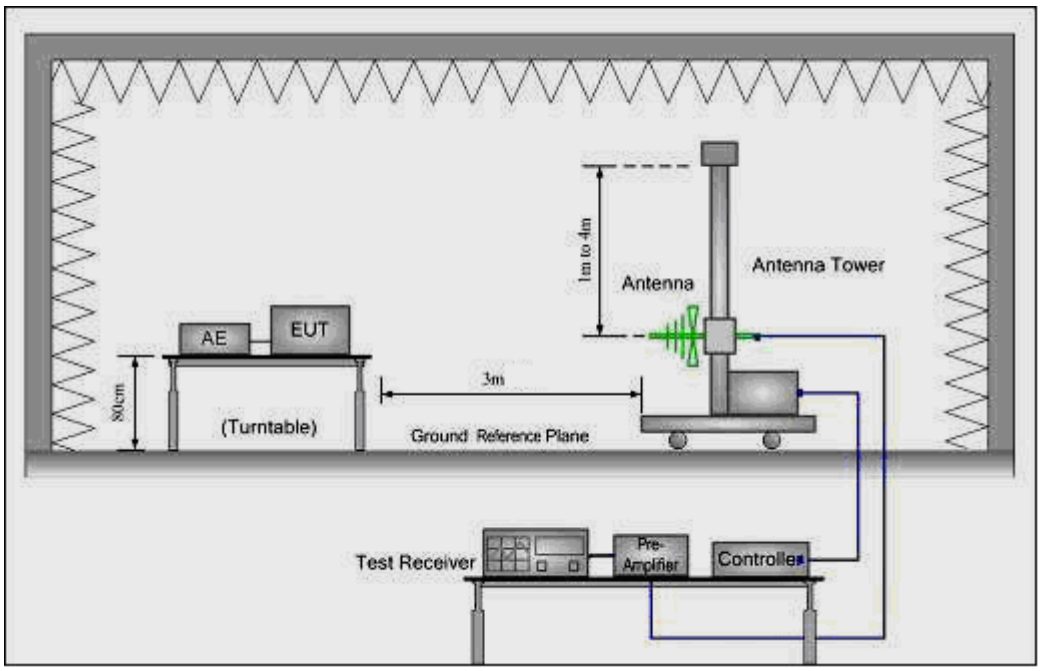
According to 15.35 (b) Unless otherwise specified, on any frequency or frequencies above 1000 MHz, the radiated emission limits are based on the use of measurement instrumentation employing an average detector function. Unless otherwise specified, measurements above 1000 MHz shall be performed using a minimum resolution bandwidth of 1 MHz. When average radiated emission measurements are specified in this part, including average emission measurements below 1000 MHz, there also is a limit on the peak level of the radio frequency emissions. Unless otherwise specified, e.g., see §§ 15.250, 15.252, 15.255, and 15.509-15.519 of this part, the limit on peak radio frequency emissions is 20 dB above the maximum permitted average emission limit applicable to the equipment under test. This peak limit applies to the total peak emission level radiated by the device, e.g., the total peak power level. Note that the use of a pulse desensitization correction factor may be needed to determine the total peak emission level. The instruction manual or application note for the measurement instrument should be consulted for determining pulse desensitization factors, as necessary.

Test Configuration:

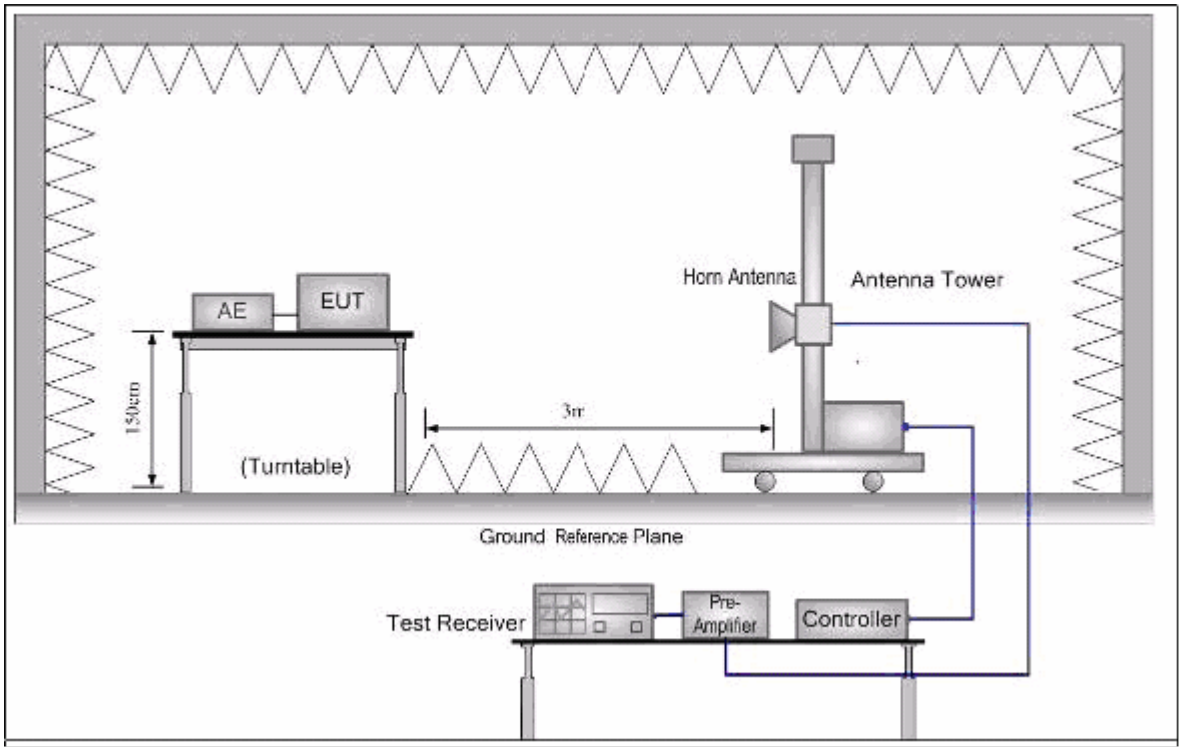
1) 9 kHz to 30 MHz emissions:



2) 30 MHz to 1 GHz emissions:



3) 1 GHz to 40 GHz emissions:



The field strength is calculated by adding the Antenna Factor, Cable Loss & Per-amplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading + Antenna, Factor + Cable Loss – Preamplifier Factor

5.2.2 E.U.T. Operation

Operating Environment **:**

Temperature	:	23.9 °C
Humidity	:	51.4 % RH
Atmospheric Pressure	:	101.21kPa

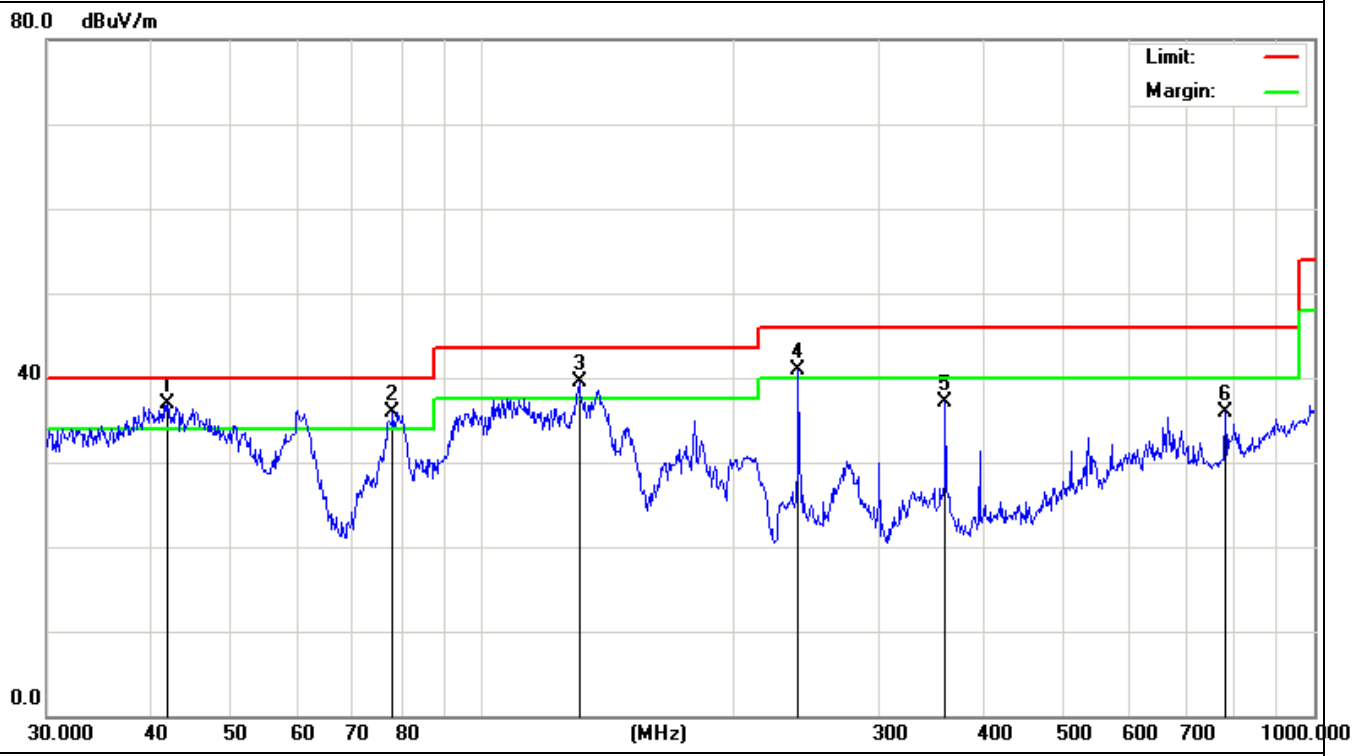
5.2.3 Radiated Emissions Test Data

9 kHz~30 MHz Field Strength of Unwanted Emissions. Quasi-Peak Measurement

The measurements with active loop antenna were greater than 20dB below the limit, so the test data were not recorded in the test report.

30 MHz~1 GHz Field Strength of Unwanted Emissions. Quasi-Peak Measurement

Vertical



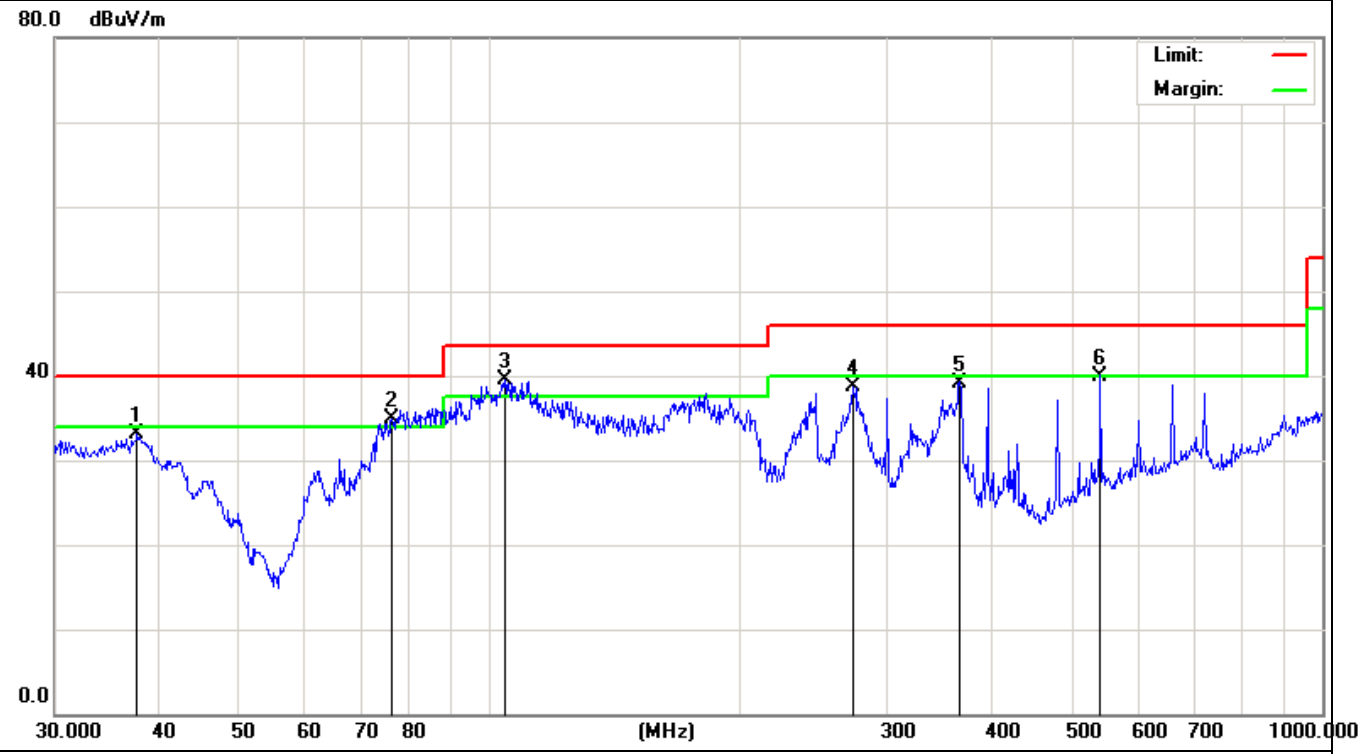
Measurement Level = Reading Level + Factor, Factor=Ant Factor + Cable Loss– Pre-amplifier.

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1	*	41.8596	53.96	-17.06	36.90	40.00	-3.10	QP
2	!	78.1389	55.11	-19.14	35.97	40.00	-4.03	QP
3	!	130.8369	54.40	-14.90	39.50	43.50	-4.00	QP
4	!	239.9874	54.94	-14.07	40.87	46.00	-5.13	QP
5		360.4476	44.65	-7.59	37.06	46.00	-8.94	QP
6		782.3452	35.73	0.18	35.91	46.00	-10.09	QP

Note: Emission Level = Reading + Antenna Factor + Cable Loss – Pre-amplifier

Over limit=Emission Level - limit

Horizontal



Measurement Level = Reading Level + Factor, Factor=Ant Factor + Cable Loss– Pre-amplifier.

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1		37.6798	47.53	-14.51	33.02	40.00	-6.98	QP
2	!	76.2442	53.78	-18.88	34.90	40.00	-5.10	QP
3	*	104.1701	55.13	-15.63	39.50	43.50	-4.00	QP
4		273.2341	50.88	-12.16	38.72	46.00	-7.28	QP
5		366.8231	46.77	-7.57	39.20	46.00	-6.80	QP
6		541.3723	44.14	-4.14	40.00	46.00	-6.00	QP

Note: Emission Level = Reading + Antenna Factor + Cable Loss – Pre-amplifier

Over limit=Emission Level - limit

1~40 GHz Field Strength of Fundamental & Field Strength of Unwanted Emissions. Peak & Average Measurement.

TX Mode:	Ant	Measurement Distance:	3 m
Test channel:	802.11a-5180MHz	Frequency Range:	1GHz to 40GHz
RBW/VBW:	Spurious emission: 1MHz/3MHz for Peak, 1MHz/10Hz for Average.		
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-40GHz, there is not show in the report.		

Vertical						
Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
10360.000	39.31	12.56	51.87	74.00	-22.13	PEAK
15540.000	37.85	16.45	54.30	74.00	-19.70	PEAK
Horizontal						
Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
10360.000	38.52	12.56	51.08	74.00	-22.92	PEAK
15540.000	36.49	16.45	52.94	74.00	-21.06	PEAK

The field strength is calculated by adding the Antenna Factor. Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading + Antenna Factor + Cable Factor –Preamplifier Factor.

Average measurement was not performed if peak level lower than average limit.

No any other emissions level which are attenuated less than 20dB below the limit.

According to 15.31(o), The amplitude of spurious emissions from intentional radiators and emissions from unintentional radiators which are attenuated more than 20 dB below the permissible value need not be reported unless specifically required elsewhere in this Part.

Hence there no other emissions have been reported.

TX Mode:	Ant	Measurement Distance:	3 m
Test channel:	802.11a-5220 MHz	Frequency Range:	1GHz to 40GHz
RBW/VBW:	Spurious emission: 1MHz/3MHz for Peak, 1MHz/10Hz for Average.		
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-40GHz, there is not show in the report.		

Vertical						
Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
10440.000	36.67	12.64	49.31	74.00	-24.69	PEAK
15660.000	35.54	16.53	52.07	74.00	-21.93	PEAK
Horizontal						
Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
10440.000	37.12	12.64	49.76	74.00	-24.24	PEAK
15660.000	35.36	16.53	51.89	74.00	-22.11	PEAK

The field strength is calculated by adding the Antenna Factor. Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading + Antenna Factor + Cable Factor –Preamplifier Factor.

Average measurement was not performed if peak level lower than average limit.

No any other emissions level which are attenuated less than 20dB below the limit.

According to 15.31(o), The amplitude of spurious emissions from intentional radiators and emissions from unintentional radiators which are attenuated more than 20 dB below the permissible value need not be reported unless specifically required elsewhere in this Part.

Hence there no other emissions have been reported.

TX Mode:	Ant	Measurement Distance:	3 m
Test channel:	802.11a-5240 MHz	Frequency Range:	1GHz to 40GHz
RBW/VBW:	Spurious emission: 1MHz/3MHz for Peak, 1MHz/10Hz for Average.		
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-40GHz, there is not show in the report.		

Vertical						
Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
10480.000	36.48	12.68	49.16	74.00	-24.84	PEAK
15720.000	34.75	16.54	51.29	74.00	-22.71	PEAK
Horizontal						
Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
10480.000	35.12	12.68	47.80	74.00	-26.20	PEAK
15720.000	34.37	16.54	50.91	74.00	-23.09	PEAK

The field strength is calculated by adding the Antenna Factor. Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading + Antenna Factor + Cable Factor –Preamplifier Factor.

Average measurement was not performed if peak level lower than average limit.

No any other emissions level which are attenuated less than 20dB below the limit.

According to 15.31(o), The amplitude of spurious emissions from intentional radiators and emissions from unintentional radiators which are attenuated more than 20 dB below the permissible value need not be reported unless specifically required elsewhere in this Part.

Hence there no other emissions have been reported.

TX Mode:	Ant	Measurement Distance:	3 m
Test channel:	802.11a-5745 MHz	Frequency Range:	1GHz to 40GHz
RBW/VBW:	Spurious emission: 1MHz/3MHz for Peak, 1MHz/10Hz for Average.		
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-40GHz, there is not show in the report.		

Vertical						
Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
11490.000	33.84	16.82	50.66	74.00	-23.34	PEAK
17235.000	35.72	22.93	58.65	74.00	-15.35	PEAK
Horizontal						
Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
11490.000	34.21	16.82	51.03	74.00	-22.97	PEAK
17235.000	35.58	22.93	58.51	74.00	-15.49	PEAK

The field strength is calculated by adding the Antenna Factor. Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading + Antenna Factor + Cable Factor –Preamplifier Factor.

Average measurement was not performed if peak level lower than average limit.

No any other emissions level which are attenuated less than 20dB below the limit.

According to 15.31(o), The amplitude of spurious emissions from intentional radiators and emissions from unintentional radiators which are attenuated more than 20 dB below the permissible value need not be reported unless specifically required elsewhere in this Part.

Hence there no other emissions have been reported.

TX Mode:	Ant	Measurement Distance:	3 m
Test channel:	802.11a-5785 MHz	Frequency Range:	1GHz to 40GHz
RBW/VBW:	Spurious emission: 1MHz/3MHz for Peak, 1MHz/10Hz for Average.		
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-40GHz, there is not show in the report.		

Vertical						
Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
11570.000	34.10	16.71	50.81	74.00	-23.19	PEAK
17355.000	36.79	24.37	61.16	74.00	-12.84	PEAK
Horizontal						
Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
11570.000	33.25	16.71	49.96	74.00	-24.04	PEAK
17355.000	35.58	24.37	59.95	74.00	-14.05	PEAK

The field strength is calculated by adding the Antenna Factor. Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading + Antenna Factor + Cable Factor –Preamplifier Factor.

Average measurement was not performed if peak level lower than average limit.

No any other emissions level which are attenuated less than 20dB below the limit.

According to 15.31(o), The amplitude of spurious emissions from intentional radiators and emissions from unintentional radiators which are attenuated more than 20 dB below the permissible value need not be reported unless specifically required elsewhere in this Part.

Hence there no other emissions have been reported.

TX Mode:	Ant	Measurement Distance:	3 m
Test channel:	802.11a-5825 MHz	Frequency Range:	1GHz to 40GHz
RBW/VBW:	Spurious emission: 1MHz/3MHz for Peak, 1MHz/10Hz for Average.		
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-40GHz, there is not show in the report.		

Vertical						
Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
11650.000	34.12	16.61	50.73	74.00	-23.27	PEAK
17475.000	29.38	25.01	54.39	74.00	-19.61	PEAK
Horizontal						
Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
11650.000	35.72	16.61	52.33	74.00	-21.67	PEAK
17475.000	28.82	25.01	53.83	74.00	-20.17	PEAK

The field strength is calculated by adding the Antenna Factor. Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading + Antenna Factor + Cable Factor –Preamplifier Factor.

Average measurement was not performed if peak level lower than average limit.

No any other emissions level which are attenuated less than 20dB below the limit.

According to 15.31(o), The amplitude of spurious emissions from intentional radiators and emissions from unintentional radiators which are attenuated more than 20 dB below the permissible value need not be reported unless specifically required elsewhere in this Part.

Hence there no other emissions have been reported.

TX Mode:	Ant	Measurement Distance:	3 m
Test channel:	802.11n HT20-5180MHz	Frequency Range:	1GHz to 40GHz
RBW/VBW:	Spurious emission: 1MHz/3MHz for Peak, 1MHz/10Hz for Average.		
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-40GHz, there is not show in the report.		

Vertical						
Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
10360.000	33.24	12.56	45.80	74.00	-28.20	PEAK
15540.000	35.37	16.45	51.82	74.00	-22.18	PEAK
Horizontal						
Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
10360.000	35.73	12.56	48.29	74.00	-25.71	PEAK
15540.000	36.15	16.45	52.60	74.00	-21.40	PEAK

The field strength is calculated by adding the Antenna Factor. Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading + Antenna Factor + Cable Factor –Preamplifier Factor.

Average measurement was not performed if peak level lower than average limit.

No any other emissions level which are attenuated less than 20dB below the limit.

According to 15.31(o), The amplitude of spurious emissions from intentional radiators and emissions from unintentional radiators which are attenuated more than 20 dB below the permissible value need not be reported unless specifically required elsewhere in this Part.

Hence there no other emissions have been reported.

TX Mode:	Ant	Measurement Distance:	3 m
Test channel:	802.11n HT20-5220MHz	Frequency Range:	1GHz to 40GHz
RBW/VBW:	Spurious emission: 1MHz/3MHz for Peak, 1MHz/10Hz for Average.		
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-40GHz, there is not show in the report.		

Vertical						
Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
10440.000	33.98	12.64	46.62	74.00	-27.38	PEAK
15660.000	29.44	16.53	45.97	74.00	-28.03	PEAK
Horizontal						
Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
10440.000	32.12	12.64	44.76	74.00	-29.24	PEAK
15660.000	28.91	16.53	45.44	74.00	-28.56	PEAK

The field strength is calculated by adding the Antenna Factor. Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading + Antenna Factor + Cable Factor –Preamplifier Factor.

Average measurement was not performed if peak level lower than average limit.

No any other emissions level which are attenuated less than 20dB below the limit.

According to 15.31(o), The amplitude of spurious emissions from intentional radiators and emissions from unintentional radiators which are attenuated more than 20 dB below the permissible value need not be reported unless specifically required elsewhere in this Part.

Hence there no other emissions have been reported.

TX Mode:	Ant	Measurement Distance:	3 m
Test channel:	802.11n HT20-5240MHz	Frequency Range:	1GHz to 40GHz
RBW/VBW:	Spurious emission: 1MHz/3MHz for Peak, 1MHz/10Hz for Average.		
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-40GHz, there is not show in the report.		

Vertical						
Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
10480.000	33.15	12.68	45.83	74.00	-28.17	PEAK
15720.000	29.36	16.54	45.90	74.00	-28.10	PEAK
Horizontal						
Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
10480.000	34.50	12.68	47.18	74.00	-26.82	PEAK
15720.000	28.83	16.54	45.37	74.00	-28.63	PEAK

The field strength is calculated by adding the Antenna Factor. Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading + Antenna Factor + Cable Factor –Preamplifier Factor.

Average measurement was not performed if peak level lower than average limit.

No any other emissions level which are attenuated less than 20dB below the limit.

According to 15.31(o), The amplitude of spurious emissions from intentional radiators and emissions from unintentional radiators which are attenuated more than 20 dB below the permissible value need not be reported unless specifically required elsewhere in this Part.

Hence there no other emissions have been reported.

TX Mode:	Ant	Measurement Distance:	3 m
Test channel:	802.11n HT20-5745MHz	Frequency Range:	1GHz to 40GHz
RBW/VBW:	Spurious emission: 1MHz/3MHz for Peak, 1MHz/10Hz for Average.		
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-40GHz, there is not show in the report.		

Vertical						
Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
11490.000	34.95	16.82	51.77	74.00	-22.23	PEAK
17235.000	29.91	22.93	52.84	74.00	-21.16	PEAK
Horizontal						
Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
11570.000	35.83	16.71	52.54	74.00	-21.46	PEAK
17235.000	28.42	22.93	51.35	74.00	-22.65	PEAK

The field strength is calculated by adding the Antenna Factor. Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading + Antenna Factor + Cable Factor –Preamplifier Factor.

Average measurement was not performed if peak level lower than average limit.

No any other emissions level which are attenuated less than 20dB below the limit.

According to 15.31(o), The amplitude of spurious emissions from intentional radiators and emissions from unintentional radiators which are attenuated more than 20 dB below the permissible value need not be reported unless specifically required elsewhere in this Part.

Hence there no other emissions have been reported.

TX Mode:	Ant	Measurement Distance:	3 m
Test channel:	802.11n HT20-5785MHz	Frequency Range:	1GHz to 40GHz
RBW/VBW:	Spurious emission: 1MHz/3MHz for Peak, 1MHz/10Hz for Average.		
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-40GHz, there is not show in the report.		

Vertical						
Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
11570.000	35.39	16.71	52.10	74.00	-21.90	PEAK
17355.000	28.72	24.37	53.09	74.00	-20.91	PEAK
Horizontal						
Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
11570.000	36.12	16.71	52.83	74.00	-21.17	PEAK
17355.000	29.48	24.37	53.85	74.00	-20.15	PEAK

The field strength is calculated by adding the Antenna Factor. Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading + Antenna Factor + Cable Factor –Preamplifier Factor.

Average measurement was not performed if peak level lower than average limit.

No any other emissions level which are attenuated less than 20dB below the limit.

According to 15.31(o), The amplitude of spurious emissions from intentional radiators and emissions from unintentional radiators which are attenuated more than 20 dB below the permissible value need not be reported unless specifically required elsewhere in this Part.

Hence there no other emissions have been reported.

TX Mode:	Ant	Measurement Distance:	3 m
Test channel:	802.11n HT20-5825MHz	Frequency Range:	1GHz to 40GHz
RBW/VBW:	Spurious emission: 1MHz/3MHz for Peak, 1MHz/10Hz for Average		
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-40GHz, there is not show in the report.		

Vertical						
Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
11650.000	33.56	16.61	50.17	74.00	-23.83	PEAK
17475.000	29.71	25.01	54.72	74.00	-19.28	PEAK
Horizontal						
Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
11650.000	34.82	16.61	51.43	74.00	-22.57	PEAK
17475.000	28.37	25.01	53.38	74.00	-20.62	PEAK

The field strength is calculated by adding the Antenna Factor. Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading + Antenna Factor + Cable Factor –Preamplifier Factor.

Average measurement was not performed if peak level lower than average limit.

No any other emissions level which are attenuated less than 20dB below the limit.

According to 15.31(o), The amplitude of spurious emissions from intentional radiators and emissions from unintentional radiators which are attenuated more than 20 dB below the permissible value need not be reported unless specifically required elsewhere in this Part.

Hence there no other emissions have been reported.

TX Mode:	Ant	Measurement Distance:	3 m
Test channel:	802.11n HT40-5190MHz	Frequency Range:	1GHz to 40GHz
RBW/VBW:	Spurious emission: 1MHz/3MHz for Peak, 1MHz/10Hz for Average.		
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-40GHz, there is not show in the report.		

Vertical						
Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
10380.000	39.13	12.58	51.71	74.00	-22.29	PEAK
15570.000	28.50	16.48	44.98	74.00	-29.02	PEAK
Horizontal						
Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
10380.000	38.30	12.58	50.88	74.00	-23.12	PEAK
15570.000	29.43	16.48	45.91	74.00	-28.09	PEAK

The field strength is calculated by adding the Antenna Factor. Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading + Antenna Factor + Cable Factor –Preamplifier Factor.

Average measurement was not performed if peak level lower than average limit.

No any other emissions level which are attenuated less than 20dB below the limit.

According to 15.31(o), The amplitude of spurious emissions from intentional radiators and emissions from unintentional radiators which are attenuated more than 20 dB below the permissible value need not be reported unless specifically required elsewhere in this Part.

Hence there no other emissions have been reported.

TX Mode:	Ant	Measurement Distance:	3 m
Test channel:	802.11n HT40-5230MHz	Frequency Range:	1GHz to 40GHz
RBW/VBW:	Spurious emission: 1MHz/3MHz for Peak, 1MHz/10Hz for Average.		
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-40GHz, there is not show in the report.		

Vertical						
Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
10460.000	37.40	12.66	50.06	74.00	-23.94	PEAK
15690.000	28.21	16.53	44.74	74.00	-29.26	PEAK
Horizontal						
Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
10460.000	36.23	12.66	48.89	74.00	-25.11	PEAK
15690.000	26.54	16.53	43.07	74.00	-30.93	PEAK

The field strength is calculated by adding the Antenna Factor. Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading + Antenna Factor + Cable Factor –Preamplifier Factor.

Average measurement was not performed if peak level lower than average limit.

No any other emissions level which are attenuated less than 20dB below the limit.

According to 15.31(o), The amplitude of spurious emissions from intentional radiators and emissions from unintentional radiators which are attenuated more than 20 dB below the permissible value need not be reported unless specifically required elsewhere in this Part.

Hence there no other emissions have been reported.

TX Mode:	Ant	Measurement Distance:	3 m
Test channel:	802.11n HT40-5755MHz	Frequency Range:	1GHz to 40GHz
RBW/VBW:	Spurious emission: 1MHz/3MHz for Peak, 1MHz/10Hz for Average.		
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-40GHz, there is not show in the report.		

Vertical						
Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
11510.000	34.59	16.78	51.37	74.00	-22.63	PEAK
17265.000	28.31	23.29	51.60	74.00	-22.40	PEAK
Horizontal						
Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
11510.000	35.12	16.78	51.90	74.00	-22.10	PEAK
17265.000	29.43	23.29	52.72	74.00	-21.28	PEAK

The field strength is calculated by adding the Antenna Factor. Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading + Antenna Factor + Cable Factor –Preamplifier Factor.

Average measurement was not performed if peak level lower than average limit.

No any other emissions level which are attenuated less than 20dB below the limit.

According to 15.31(o), The amplitude of spurious emissions from intentional radiators and emissions from unintentional radiators which are attenuated more than 20 dB below the permissible value need not be reported unless specifically required elsewhere in this Part.

Hence there no other emissions have been reported.

TX Mode:	Ant	Measurement Distance:	3 m
Test channel:	802.11n HT40-5795MHz	Frequency Range:	1GHz to 40GHz
RBW/VBW:	Spurious emission: 1MHz/3MHz for Peak, 1MHz/10Hz for Average.		
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-40GHz, there is not show in the report.		

Vertical						
Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
11590.000	36.31	16.69	53.00	74.00	-21.00	PEAK
17385.000	31.40	24.73	56.13	74.00	-17.87	PEAK
Horizontal						
Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
11590.000	34.87	16.69	51.56	74.00	-22.44	PEAK
17385.000	28.20	24.73	52.93	74.00	-21.07	PEAK

The field strength is calculated by adding the Antenna Factor. Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading + Antenna Factor + Cable Factor –Preamplifier Factor.

Average measurement was not performed if peak level lower than average limit.

No any other emissions level which are attenuated less than 20dB below the limit.

According to 15.31(o), The amplitude of spurious emissions from intentional radiators and emissions from unintentional radiators which are attenuated more than 20 dB below the permissible value need not be reported unless specifically required elsewhere in this Part.

Hence there no other emissions have been reported.

TX Mode:	Ant	Measurement Distance:	3 m
Test channel:	802.11ac HT20-5180MHz	Frequency Range:	1GHz to 40GHz
RBW/VBW:	Spurious emission: 1MHz/3MHz for Peak, 1MHz/10Hz for Average.		
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-40GHz, there is not show in the report.		

Vertical						
Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
10360.000	34.79	12.56	47.35	74.00	-26.65	PEAK
15540.000	30.48	16.45	46.93	74.00	-27.07	PEAK
Horizontal						
Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
10360.000	33.05	12.56	45.61	74.00	-28.39	PEAK
15540.000	29.34	16.45	45.79	74.00	-28.21	PEAK

The field strength is calculated by adding the Antenna Factor. Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading + Antenna Factor + Cable Factor –Preamplifier Factor.

Average measurement was not performed if peak level lower than average limit.

No any other emissions level which are attenuated less than 20dB below the limit.

According to 15.31(o), The amplitude of spurious emissions from intentional radiators and emissions from unintentional radiators which are attenuated more than 20 dB below the permissible value need not be reported unless specifically required elsewhere in this Part.

Hence there no other emissions have been reported.

TX Mode:	Ant	Measurement Distance:	3 m
Test channel:	802.11ac HT20-5220MHz	Frequency Range:	1GHz to 40GHz
RBW/VBW:	Spurious emission: 1MHz/3MHz for Peak, 1MHz/10Hz for Average.		
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-40GHz, there is not show in the report.		

Vertical						
Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
10440.000	34.87	12.64	47.51	74.00	-26.49	PEAK
15660.000	31.69	16.53	48.22	74.00	-25.78	PEAK
Horizontal						
Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
10440.000	33.66	12.64	46.30	74.00	-27.70	PEAK
15660.000	32.01	16.53	48.54	74.00	-25.46	PEAK

The field strength is calculated by adding the Antenna Factor. Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading + Antenna Factor + Cable Factor –Preamplifier Factor.

Average measurement was not performed if peak level lower than average limit.

No any other emissions level which are attenuated less than 20dB below the limit.

According to 15.31(o), The amplitude of spurious emissions from intentional radiators and emissions from unintentional radiators which are attenuated more than 20 dB below the permissible value need not be reported unless specifically required elsewhere in this Part.

Hence there no other emissions have been reported.

TX Mode:	Ant	Measurement Distance:	3 m
Test channel:	802.11ac HT20-5240MHz	Frequency Range:	1GHz to 40GHz
RBW/VBW:	Spurious emission: 1MHz/3MHz for Peak, 1MHz/10Hz for Average.		
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-40GHz, there is not show in the report.		

Vertical						
Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
10480.000	34.46	12.68	47.14	74.00	-26.86	PEAK
15720.000	32.93	16.54	49.47	74.00	-24.53	PEAK
Horizontal						
Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
10480.000	33.15	12.68	45.83	74.00	-28.17	PEAK
15720.000	34.79	16.54	51.33	74.00	-22.67	PEAK

The field strength is calculated by adding the Antenna Factor. Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading + Antenna Factor + Cable Factor –Preamplifier Factor.

Average measurement was not performed if peak level lower than average limit.

No any other emissions level which are attenuated less than 20dB below the limit.

According to 15.31(o), The amplitude of spurious emissions from intentional radiators and emissions from unintentional radiators which are attenuated more than 20 dB below the permissible value need not be reported unless specifically required elsewhere in this Part.

Hence there no other emissions have been reported.

TX Mode:	Ant	Measurement Distance:	3 m
Test channel:	802.11ac HT20-5745MHz	Frequency Range:	1GHz to 40GHz
RBW/VBW:	Spurious emission: 1MHz/3MHz for Peak, 1MHz/10Hz for Average.		
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-40GHz, there is not show in the report.		

Vertical						
Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
11490.000	34.93	16.82	51.75	74.00	-22.25	PEAK
17235.000	32.76	22.93	55.69	74.00	-18.31	PEAK
Horizontal						
Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
11490.000	36.17	16.82	52.99	74.00	-21.01	PEAK
17235.000	28.22	22.93	51.15	74.00	-22.85	PEAK

The field strength is calculated by adding the Antenna Factor. Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading + Antenna Factor + Cable Factor –Preamplifier Factor.

Average measurement was not performed if peak level lower than average limit.

No any other emissions level which are attenuated less than 20dB below the limit.

According to 15.31(o), The amplitude of spurious emissions from intentional radiators and emissions from unintentional radiators which are attenuated more than 20 dB below the permissible value need not be reported unless specifically required elsewhere in this Part.

Hence there no other emissions have been reported.

TX Mode:	Ant	Measurement Distance:	3 m
Test channel:	802.11ac HT20-5785MHz	Frequency Range:	1GHz to 40GHz
RBW/VBW:	Spurious emission: 1MHz/3MHz for Peak, 1MHz/10Hz for Average.		
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-40GHz, there is not show in the report.		

Vertical						
Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
11570.000	35.86	16.71	52.57	74.00	-21.43	PEAK
17355.000	29.14	24.37	53.51	74.00	-20.49	PEAK
Horizontal						
Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
11570.000	34.27	16.71	50.98	74.00	-23.02	PEAK
17355.000	28.66	24.37	53.03	74.00	-20.97	PEAK

The field strength is calculated by adding the Antenna Factor. Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading + Antenna Factor + Cable Factor –Preamplifier Factor.

Average measurement was not performed if peak level lower than average limit.

No any other emissions level which are attenuated less than 20dB below the limit.

According to 15.31(o), The amplitude of spurious emissions from intentional radiators and emissions from unintentional radiators which are attenuated more than 20 dB below the permissible value need not be reported unless specifically required elsewhere in this Part.

Hence there no other emissions have been reported.

TX Mode:	Ant	Measurement Distance:	3 m
Test channel:	802.11ac HT20-5825MHz	Frequency Range:	1GHz to 40GHz
RBW/VBW:	Spurious emission: 1MHz/3MHz for Peak, 1MHz/10Hz for Average.		
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-40GHz, there is not show in the report.		

Vertical						
Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
11650.000	35.58	16.61	52.19	74.00	-21.81	PEAK
17475.000	29.30	25.01	54.31	74.00	-19.69	PEAK
Horizontal						
Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
11650.000	33.29	16.61	49.90	74.00	-24.10	PEAK
17475.000	28.76	25.01	53.77	74.00	-20.23	PEAK

The field strength is calculated by adding the Antenna Factor. Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading + Antenna Factor + Cable Factor –Preamplifier Factor.

Average measurement was not performed if peak level lower than average limit.

No any other emissions level which are attenuated less than 20dB below the limit.

According to 15.31(o), The amplitude of spurious emissions from intentional radiators and emissions from unintentional radiators which are attenuated more than 20 dB below the permissible value need not be reported unless specifically required elsewhere in this Part.

Hence there no other emissions have been reported.

TX Mode:	Ant	Measurement Distance:	3 m
Test channel:	802.11ac HT40-5190MHz	Frequency Range:	1GHz to 40GHz
RBW/VBW:	Spurious emission: 1MHz/3MHz for Peak, 1MHz/10Hz for Average.		
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-40GHz, there is not show in the report.		

Vertical						
Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
10380.000	33.12	12.58	45.70	74.00	-28.30	PEAK
15570.000	30.35	16.48	46.83	74.00	-27.17	PEAK
Horizontal						
Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
10380.000	35.57	12.58	48.15	74.00	-25.85	PEAK
15570.000	32.60	16.48	49.08	74.00	-24.92	PEAK

The field strength is calculated by adding the Antenna Factor. Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading + Antenna Factor + Cable Factor –Preamplifier Factor.

Average measurement was not performed if peak level lower than average limit.

No any other emissions level which are attenuated less than 20dB below the limit.

According to 15.31(o), The amplitude of spurious emissions from intentional radiators and emissions from unintentional radiators which are attenuated more than 20 dB below the permissible value need not be reported unless specifically required elsewhere in this Part.

Hence there no other emissions have been reported.

TX Mode:	Ant	Measurement Distance:	3 m
Test channel:	802.11ac HT40-5230MHz	Frequency Range:	1GHz to 40GHz
RBW/VBW:	Spurious emission: 1MHz/3MHz for Peak, 1MHz/10Hz for Average.		
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-40GHz, there is not show in the report.		

Vertical						
Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
10460.000	34.21	12.66	46.87	74.00	-27.13	PEAK
15690.000	30.66	16.53	47.19	74.00	-26.81	PEAK
Horizontal						
Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
10460.000	35.14	12.66	47.80	74.00	-26.20	PEAK
15690.000	30.77	16.53	47.30	74.00	-26.70	PEAK

The field strength is calculated by adding the Antenna Factor. Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading + Antenna Factor + Cable Factor –Preamplifier Factor.

Average measurement was not performed if peak level lower than average limit.

No any other emissions level which are attenuated less than 20dB below the limit.

According to 15.31(o), The amplitude of spurious emissions from intentional radiators and emissions from unintentional radiators which are attenuated more than 20 dB below the permissible value need not be reported unless specifically required elsewhere in this Part.

Hence there no other emissions have been reported.

TX Mode:	Ant	Measurement Distance:	3 m
Test channel:	802.11ac HT40-5755MHz	Frequency Range:	1GHz to 40GHz
RBW/VBW:	Spurious emission: 1MHz/3MHz for Peak, 1MHz/10Hz for Average.		
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-40GHz, there is not show in the report.		

Vertical						
Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
11510.000	36.37	16.78	53.15	74.00	-20.85	PEAK
17265.000	32.92	23.29	56.21	74.00	-17.79	PEAK
Horizontal						
Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
11510.000	34.85	16.78	51.63	74.00	-22.37	PEAK
17265.000	31.20	23.29	54.49	74.00	-19.51	PEAK

The field strength is calculated by adding the Antenna Factor. Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading + Antenna Factor + Cable Factor –Preamplifier Factor.

Average measurement was not performed if peak level lower than average limit.

No any other emissions level which are attenuated less than 20dB below the limit.

According to 15.31(o), The amplitude of spurious emissions from intentional radiators and emissions from unintentional radiators which are attenuated more than 20 dB below the permissible value need not be reported unless specifically required elsewhere in this Part.

Hence there no other emissions have been reported.

TX Mode:	Ant	Measurement Distance:	3 m
Test channel:	802.11ac HT40-5795MHz	Frequency Range:	1GHz to 40GHz
RBW/VBW:	Spurious emission: 1MHz/3MHz for Peak, 1MHz/10Hz for Average.		
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-40GHz, there is not show in the report.		

Vertical						
Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
11590.000	33.17	16.69	49.86	74.00	-24.14	PEAK
17385.000	31.62	24.73	56.35	74.00	-17.65	PEAK
Horizontal						
Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
11590.000	34.80	16.69	51.49	74.00	-22.51	PEAK
17385.000	30.35	24.73	55.08	74.00	-18.92	PEAK

The field strength is calculated by adding the Antenna Factor. Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading + Antenna Factor + Cable Factor –Preamplifier Factor.

Average measurement was not performed if peak level lower than average limit.

No any other emissions level which are attenuated less than 20dB below the limit.

According to 15.31(o), The amplitude of spurious emissions from intentional radiators and emissions from unintentional radiators which are attenuated more than 20 dB below the permissible value need not be reported unless specifically required elsewhere in this Part.

Hence there no other emissions have been reported.

TX Mode:	Ant	Measurement Distance:	3 m
Test channel:	802.11ac HT80-5210MHz	Frequency Range:	1GHz to 40GHz
RBW/VBW:	Spurious emission: 1MHz/3MHz for Peak, 1MHz/10Hz for Average.		
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-40GHz, there is not show in the report.		

Vertical						
Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
10420.000	32.16	12.62	44.78	74.00	-29.22	PEAK
15630.000	29.94	16.52	46.46	74.00	-27.54	PEAK
Horizontal						
Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
10420.000	34.52	12.62	47.14	74.00	-26.86	PEAK
15630.000	31.76	16.52	48.28	74.00	-25.72	PEAK

The field strength is calculated by adding the Antenna Factor. Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading + Antenna Factor + Cable Factor –Preamplifier Factor.

Average measurement was not performed if peak level lower than average limit.

No any other emissions level which are attenuated less than 20dB below the limit.

According to 15.31(o), The amplitude of spurious emissions from intentional radiators and emissions from unintentional radiators which are attenuated more than 20 dB below the permissible value need not be reported unless specifically required elsewhere in this Part.

Hence there no other emissions have been reported.

TX Mode:	Ant	Measurement Distance:	3 m
Test channel:	802.11ac HT80-5775MHz	Frequency Range:	1GHz to 40GHz
RBW/VBW:	Spurious emission: 1MHz/3MHz for Peak, 1MHz/10Hz for Average.		
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-40GHz, there is not show in the report.		

Vertical						
Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
11550.000	33.11	16.73	49.84	74.00	-24.16	PEAK
17325.000	30.45	24.01	54.46	74.00	-19.54	PEAK
Horizontal						
Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
11550.000	34.78	16.73	51.51	74.00	-22.49	PEAK
17325.000	31.54	24.01	55.55	74.00	-18.45	PEAK

The field strength is calculated by adding the Antenna Factor. Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading + Antenna Factor + Cable Factor –Preamplifier Factor.

Average measurement was not performed if peak level lower than average limit.

No any other emissions level which are attenuated less than 20dB below the limit.

According to 15.31(o), The amplitude of spurious emissions from intentional radiators and emissions from unintentional radiators which are attenuated more than 20 dB below the permissible value need not be reported unless specifically required elsewhere in this Part.

Hence there no other emissions have been reported.

5.3 Radiated Restricted Band Edge Measurement

5.3.1 Applied procedures / Limit

Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following 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.
(2) For transmitters operating in the 5.725-5.85 GHz band: All emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an e.i.r.p. of −17 dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an e.i.r.p. of −27 dBm/MHz.
(3) The emission measurements shall be performed using a minimum resolution bandwidth of 1 MHz. A lower resolution bandwidth may be employed near the band edge, when necessary, provided the measured energy is integrated to show the total power over 1 MHz.
(4) Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in §15.209. Further, any U-NII devices using an AC power line are required to comply also with the conducted limits set forth in §15.207.
(5) The provisions of §15.205 apply to intentional radiators operating under this section. (6) When measuring the emission limits, the nominal carrier frequency shall be adjusted as close to the upper and lower frequency band edges as the design of the equipment permits.

5.3.2 Test procedure

For Band edge

Spectrum Parameter	Setting
Detector	Peak
Start/Stop Frequency	Lower Band Edge: 5150 MHz Upper Band Edge: 5350 MHz
RB / VB (emission in restricted band)	1000 KHz/3000 KHz
Trace-Mode:	Max hold

For Band edge

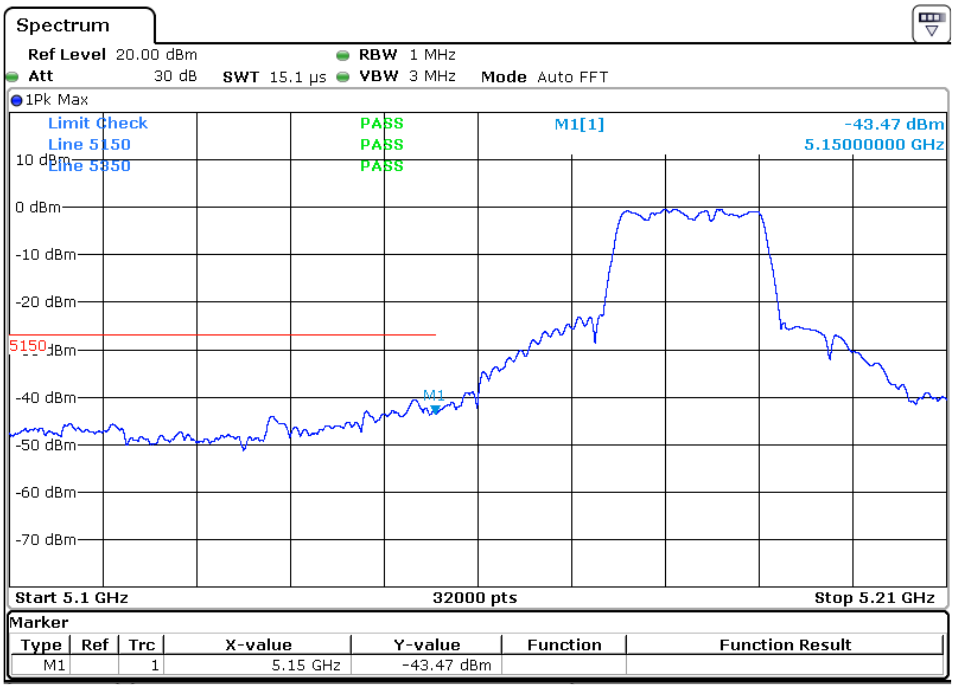
Spectrum Parameter	Setting
Detector	Peak
Start/Stop Frequency	Lower Band Edge: 5700 to 5725 MHz Upper Band Edge: 5850 to 5870 MHz
RB / VB (emission in restricted band)	1000 KHz/3000 KHz
Trace-Mode:	Max hold

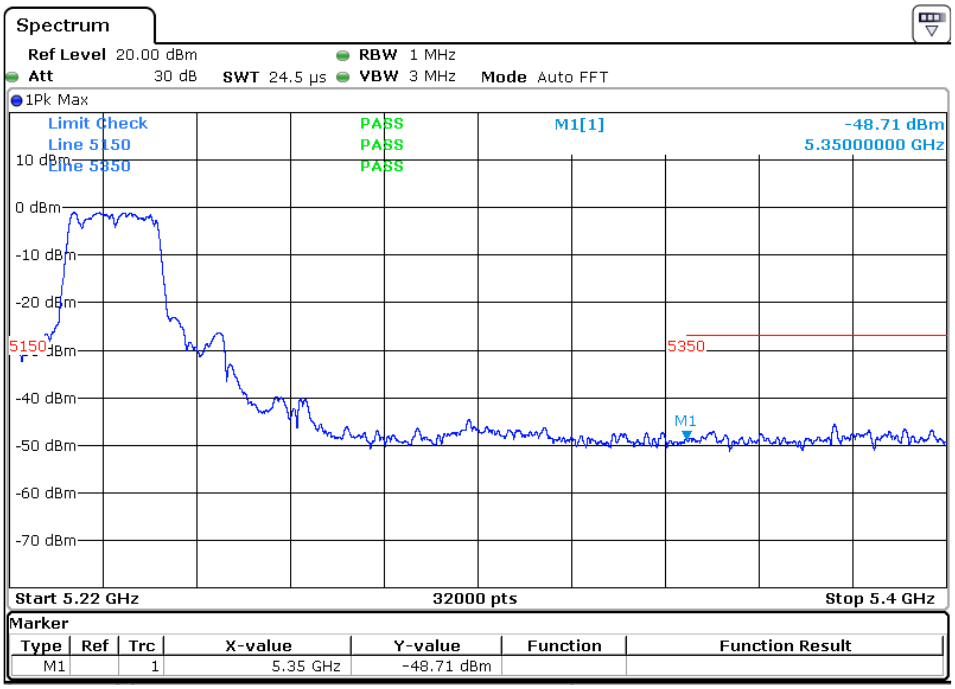
5.3.3 Deviation from standard

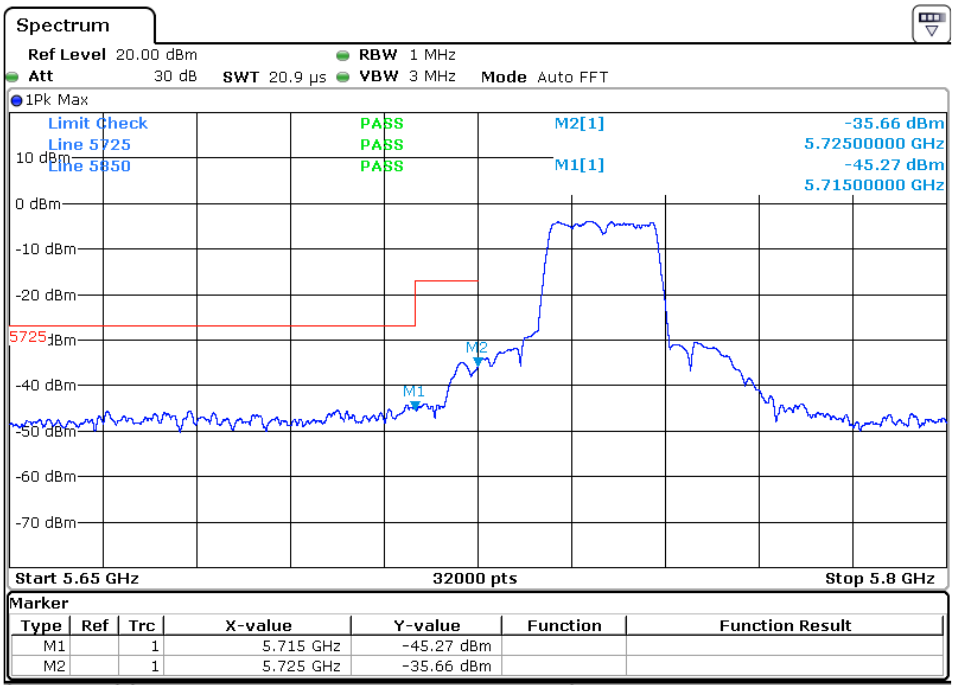
No deviation.

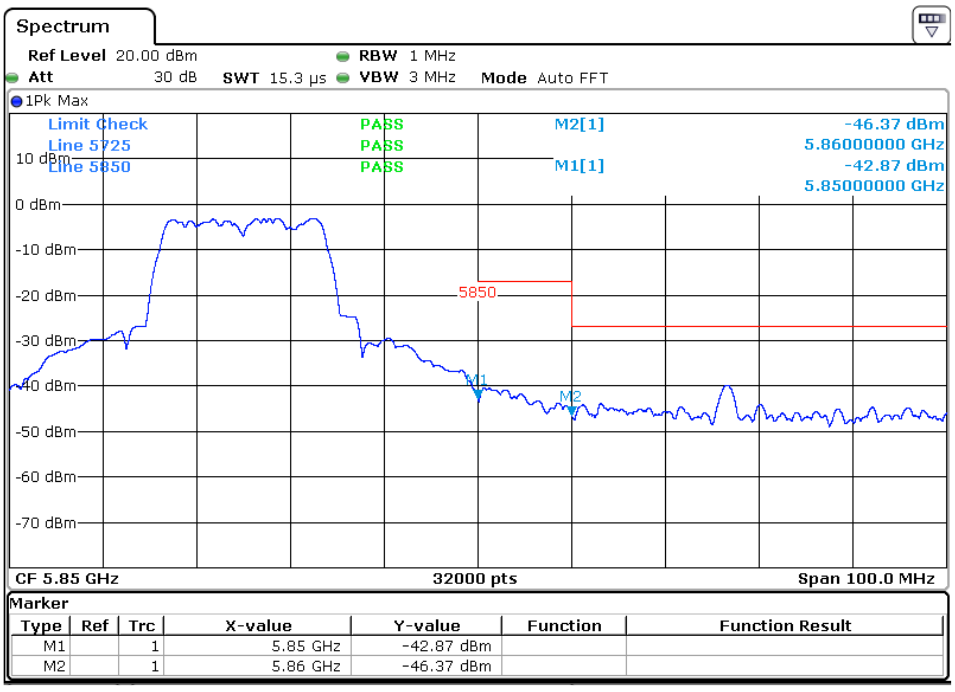
5.3.4 Test results

Ant 802.11 a

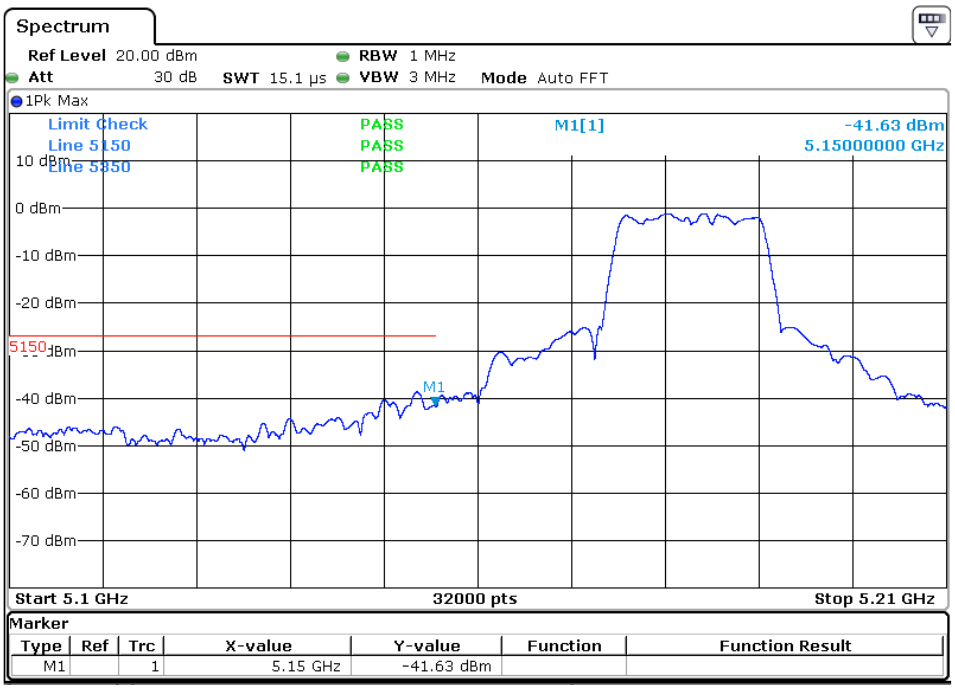


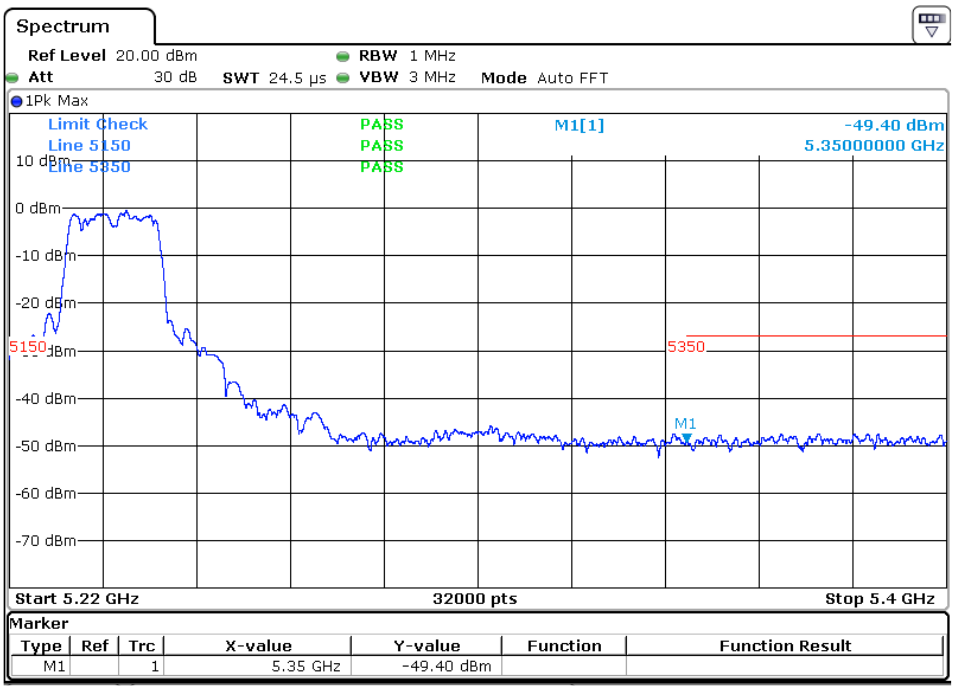


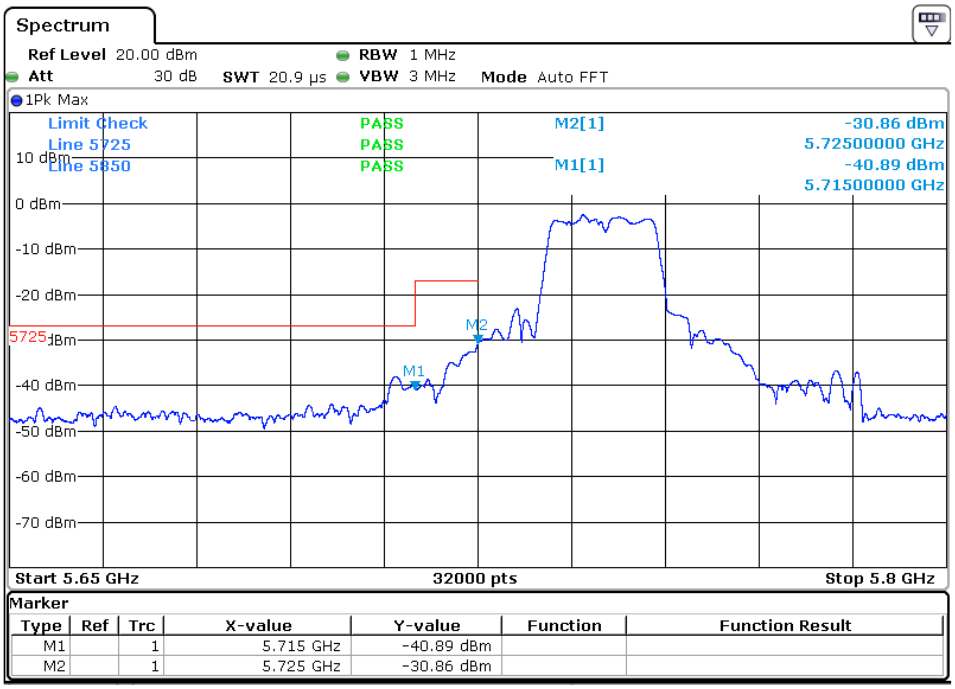

Spectrum
Ref Level 20.00 dBm
RBW 1 MHz
Att 30 dB
SWT 20.9 µs
VBW 3 MHz
Mode Auto FFT
1Pk Max
Limit Check PASS
Line 5725 PASS
Line 5850 PASS
M2[1] -35.66 dBm
5.72500000 GHz
M1[1] -45.27 dBm
5.71500000 GHz
10 dBm
0 dBm
-10 dBm
-20 dBm
5725
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
M1
M2
Start 5.65 GHz
32000 pts
Stop 5.8 GHz
Marker
Type Ref Trc X-value Y-value Function Function Result
M1 1 5.715 GHz -45.27 dBm
M2 1 5.725 GHz -35.66 dBm

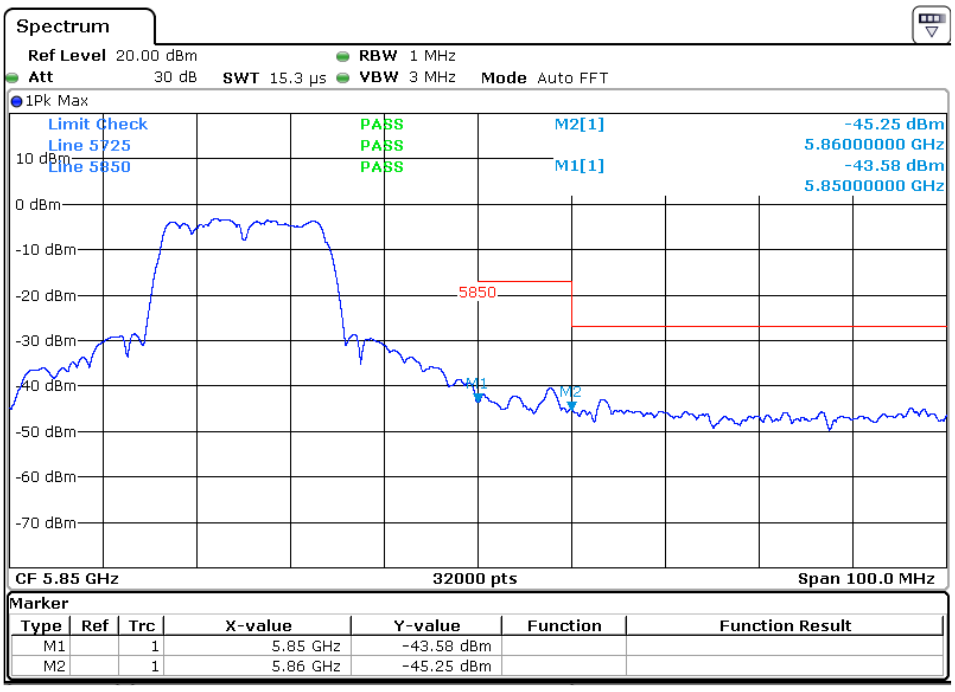

Spectrum
Ref Level 20.00 dBm
RBW 1 MHz
Att 30 dB
SWT 15.3 µs
VBW 3 MHz
Mode Auto FFT
1Pk Max
Limit Check PASS
Line 5725 PASS
Line 5850 PASS
M2[1] -46.37 dBm
5.86000000 GHz
M1[1] -42.87 dBm
5.85000000 GHz
10 dBm
0 dBm
-10 dBm
-20 dBm
5850
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
M1
M2
CF 5.85 GHz
32000 pts
Span 100.0 MHz
Marker
Type Ref Trc X-value Y-value Function Function Result
M1 1 5.85 GHz -42.87 dBm
M2 1 5.86 GHz -46.37 dBm

Ant 802.11 n20

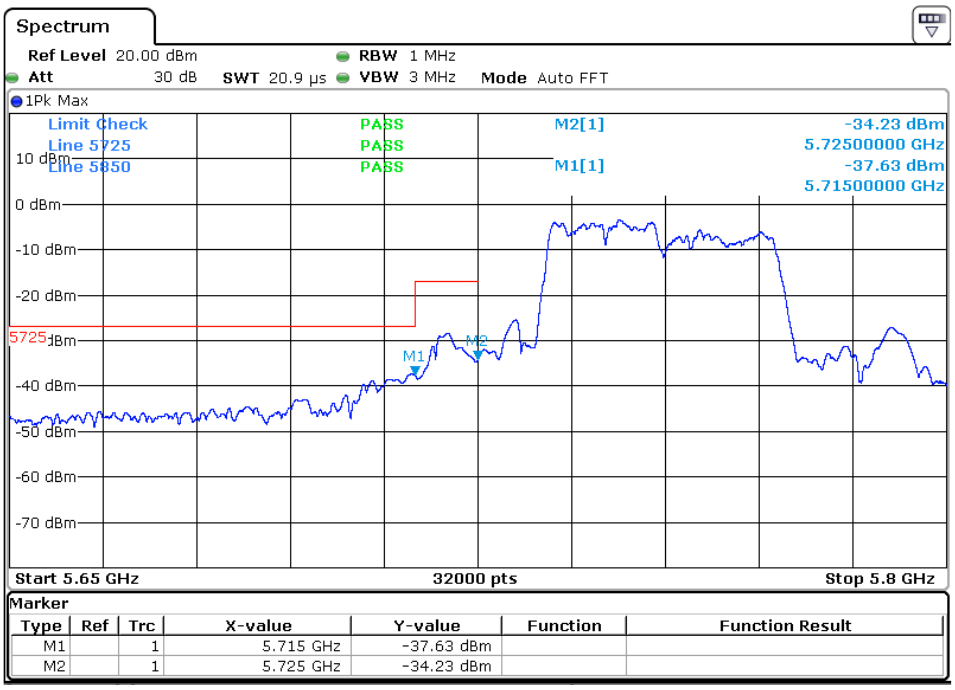


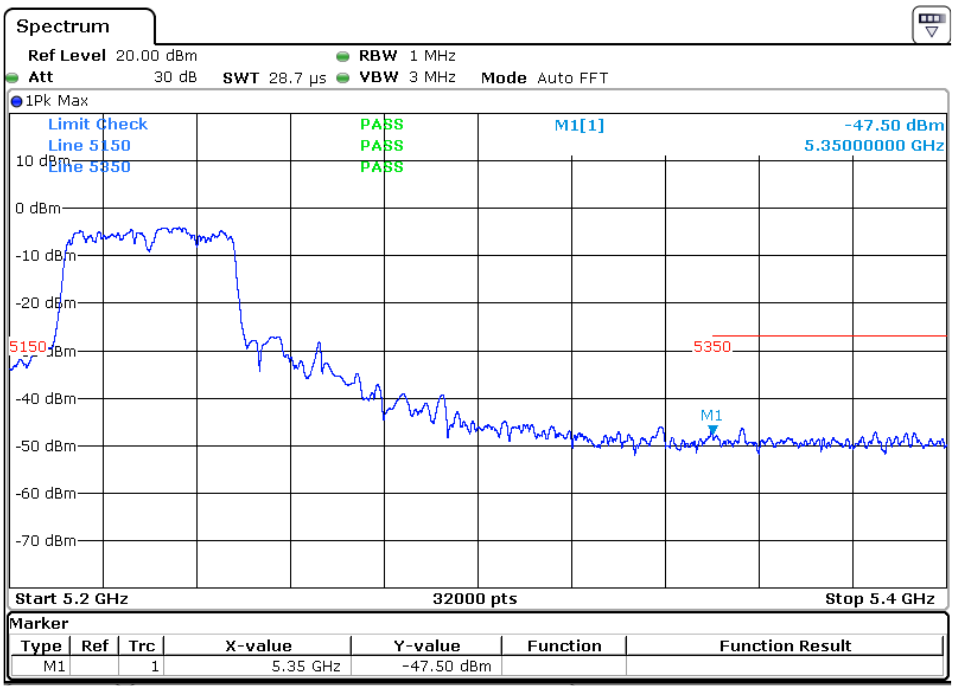



Spectrum
Ref Level 20.00 dBm
RBW 1 MHz
Att 30 dB
SWT 20.9 µs
VBW 3 MHz
Mode Auto FFT
1Pk Max
Limit Check PASS
Line 5725 PASS
Line 5850 PASS
M2[1] -30.86 dBm
5.72500000 GHz
M1[1] -40.89 dBm
5.71500000 GHz
10 dBm
0 dBm
-10 dBm
-20 dBm
5725
-40 dBm
-50 dBm
-60 dBm
-70 dBm
M1
M2
Start 5.65 GHz
32000 pts
Stop 5.8 GHz
Marker
Type Ref Trc X-value Y-value Function Function Result
M1 1 5.715 GHz -40.89 dBm
M2 1 5.725 GHz -30.86 dBm

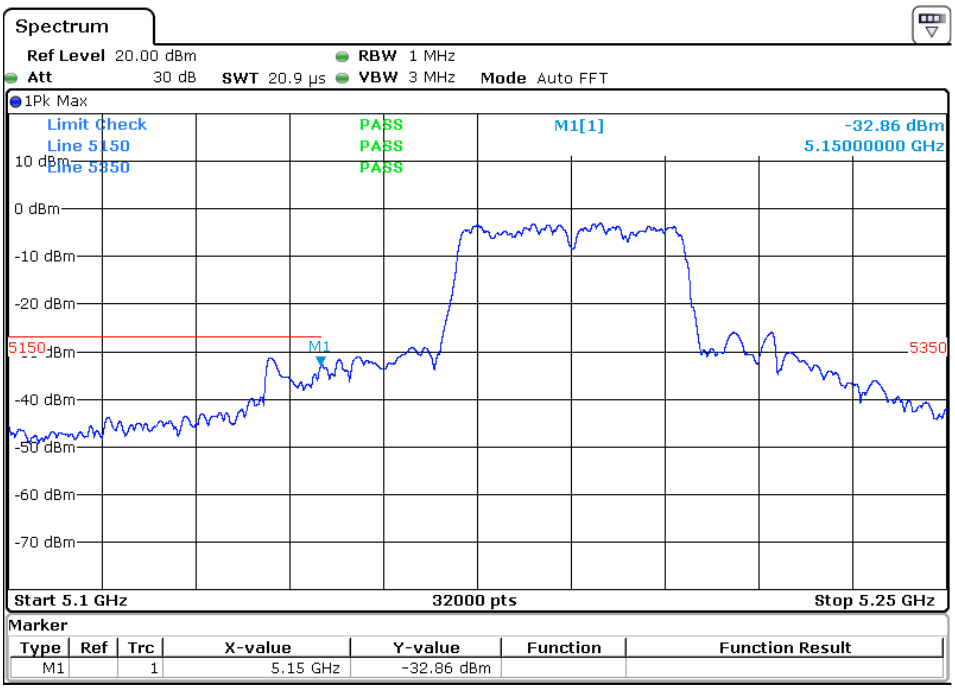

Spectrum
Ref Level 20.00 dBm
RBW 1 MHz
Att 30 dB
SWT 15.3 µs
VBW 3 MHz
Mode Auto FFT
1Pk Max
Limit Check PASS
Line 5725 PASS
Line 5850 PASS
M2[1] -45.25 dBm
5.86000000 GHz
M1[1] -43.58 dBm
5.85000000 GHz
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
5850
M1
M2
CF 5.85 GHz
32000 pts
Span 100.0 MHz
Marker
Type Ref Trc X-value Y-value Function Function Result
M1 1 5.85 GHz -43.58 dBm
M2 1 5.86 GHz -45.25 dBm

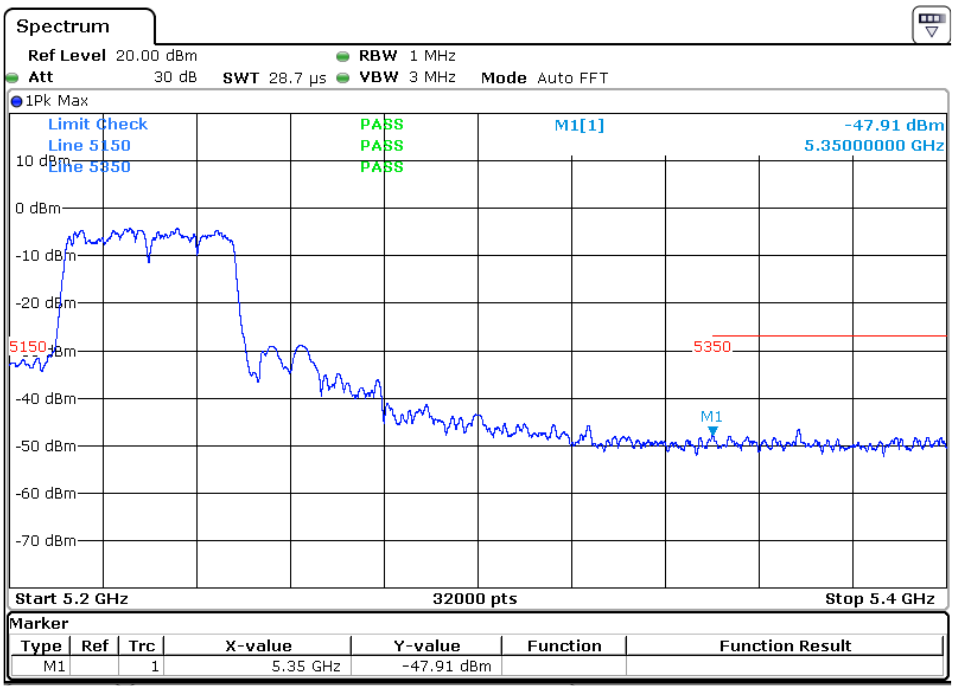
Ant 802.11 n40

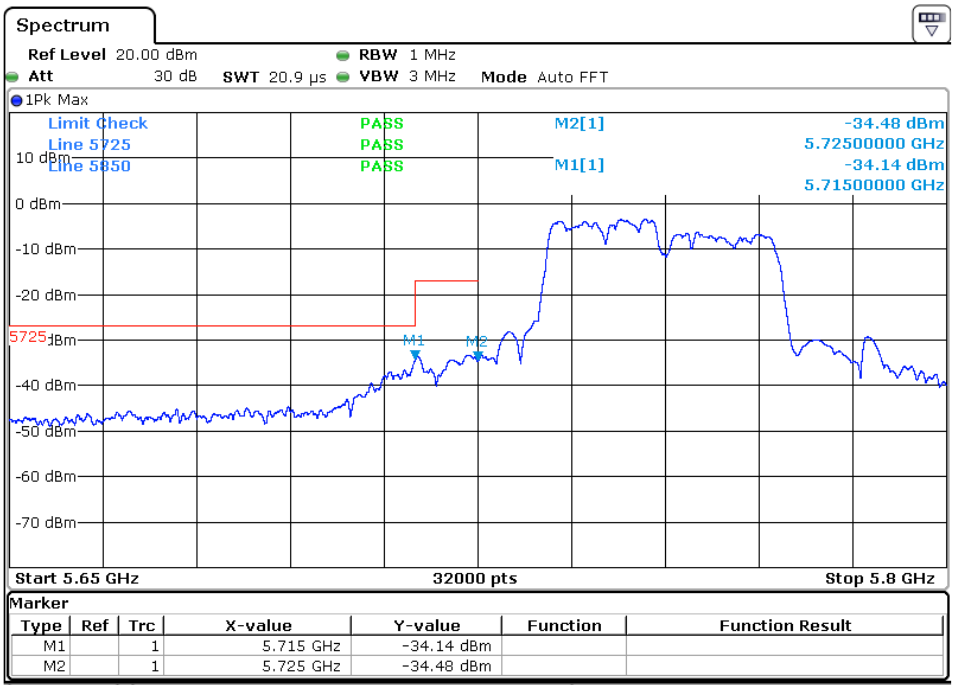


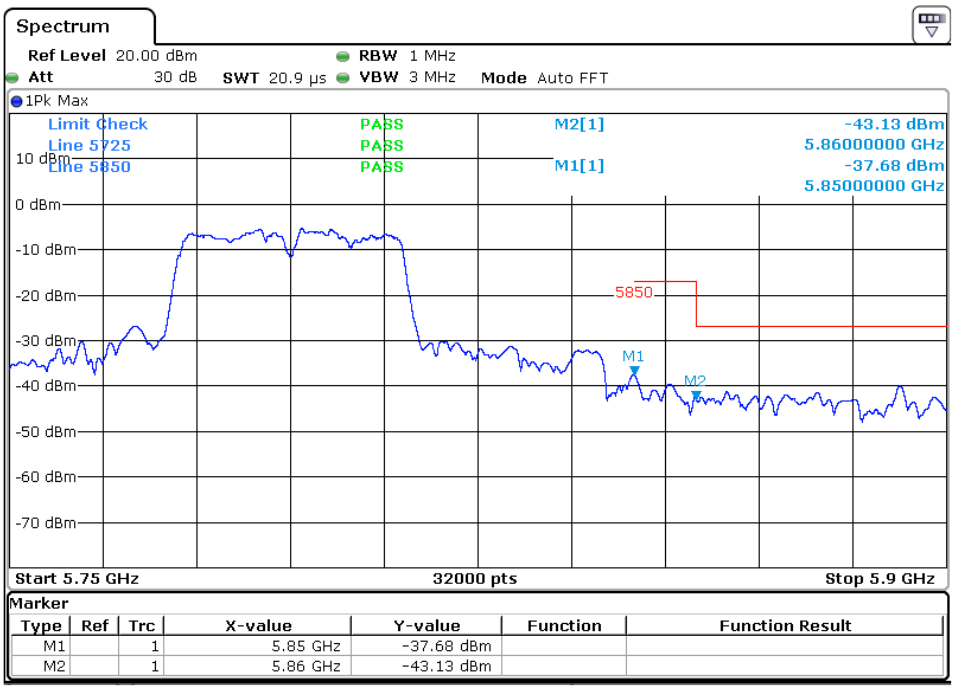


Ant 802.11 ac40

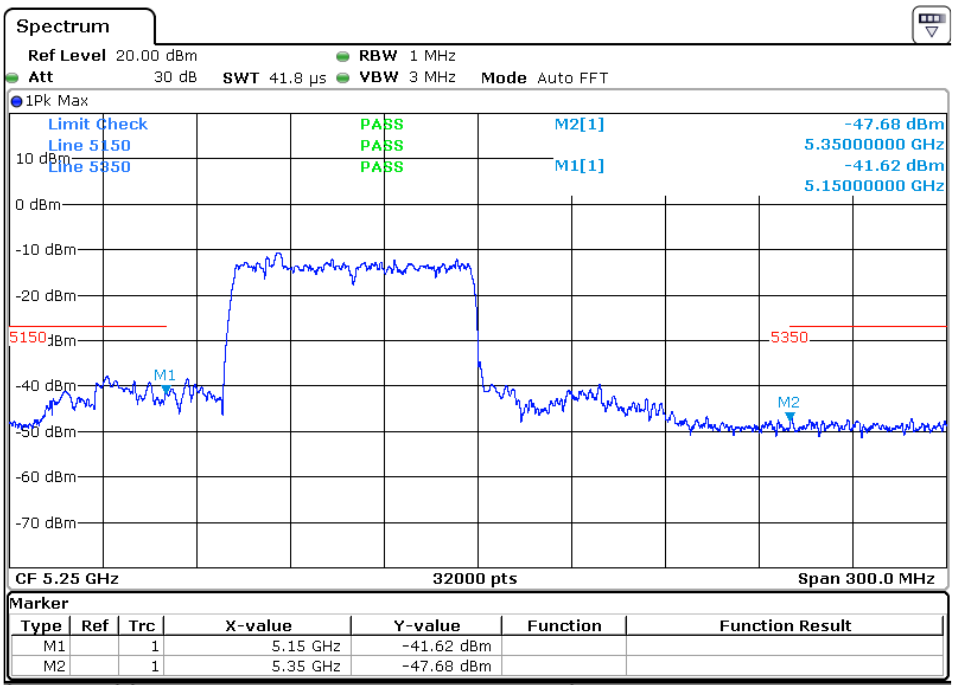


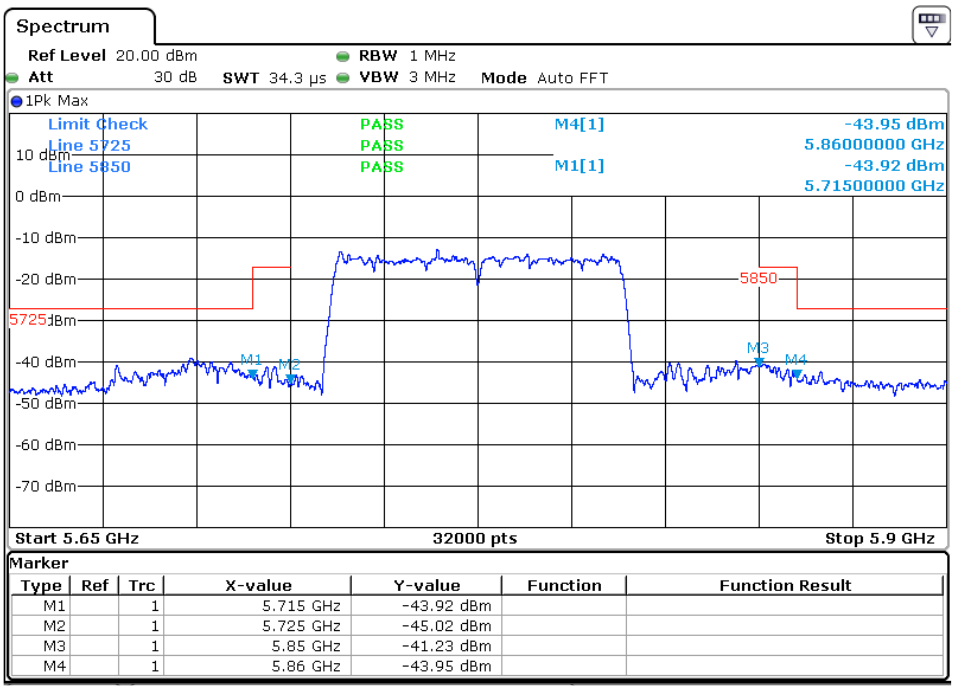



Spectrum
Ref Level 20.00 dBm
RBW 1 MHz
Att 30 dB
SWT 20.9 µs
VBW 3 MHz
Mode Auto FFT
1Pk Max
Limit Check PASS
Line 5725 PASS
Line 5850 PASS
M2[1] -34.48 dBm
5.72500000 GHz
M1[1] -34.14 dBm
5.71500000 GHz
10 dBm
0 dBm
-10 dBm
-20 dBm
5725
-40 dBm
-50 dBm
-60 dBm
-70 dBm
M1
M2
Start 5.65 GHz
32000 pts
Stop 5.8 GHz
Marker
Type Ref Trc X-value Y-value Function Function Result
M1 1 5.715 GHz -34.14 dBm
M2 1 5.725 GHz -34.48 dBm


Spectrum
Ref Level 20.00 dBm
RBW 1 MHz
Att 30 dB
SWT 20.9 µs
VBW 3 MHz
Mode Auto FFT
1Pk Max
Limit Check PASS
Line 5725 PASS
Line 5850 PASS
M2[1] -43.13 dBm
5.86000000 GHz
M1[1] -37.68 dBm
5.85000000 GHz
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
5850
M1
M2
Start 5.75 GHz
32000 pts
Stop 5.9 GHz
Marker
Type Ref Trc X-value Y-value Function Function Result
M1 1 5.85 GHz -37.68 dBm
M2 1 5.86 GHz -43.13 dBm

Ant 802.11 ac80





5.4 BANDWIDTH TEST

5.4.1 Applied procedures / Limit

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

5.4.2 Test procedure

26 dB BANDWID PROCEDURES

a. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v01

b. Set RBW = approximately 1% of the emission bandwidth.

c. Trace mode = max hold

d. Detector = Peak

e. 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%

6 dB BANDWID PROCEDURES

a. Set resolution bandwidth (RBW) = 100 kHz

b. Set the video bandwidth (VBW) ≥ 3 x RBW, Detector = Peak.

c. Trace mode = max hold.

d. Sweep = auto couple.

e. Measure the maximum width of the emission that is constrained by the frequencies associated with the two amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission

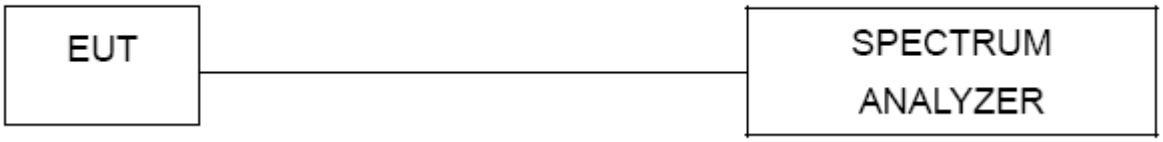
99% BANDWID PROCEDURES

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 ≥ 3 • RBW
5. Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.
6. Use the 99 % power bandwidth function of the instrument (if available).
7. If the instrument does not have a 99 % power bandwidth function, the trace data points are recovered and directly summed in power units. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5 % of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5 % of the total is reached; that frequency is recorded as the upper frequency. The 99% occupied bandwidth is the difference between these two frequencies.

5.4.3 Deviation from standard

No deviation.

5.4.4 Test setup

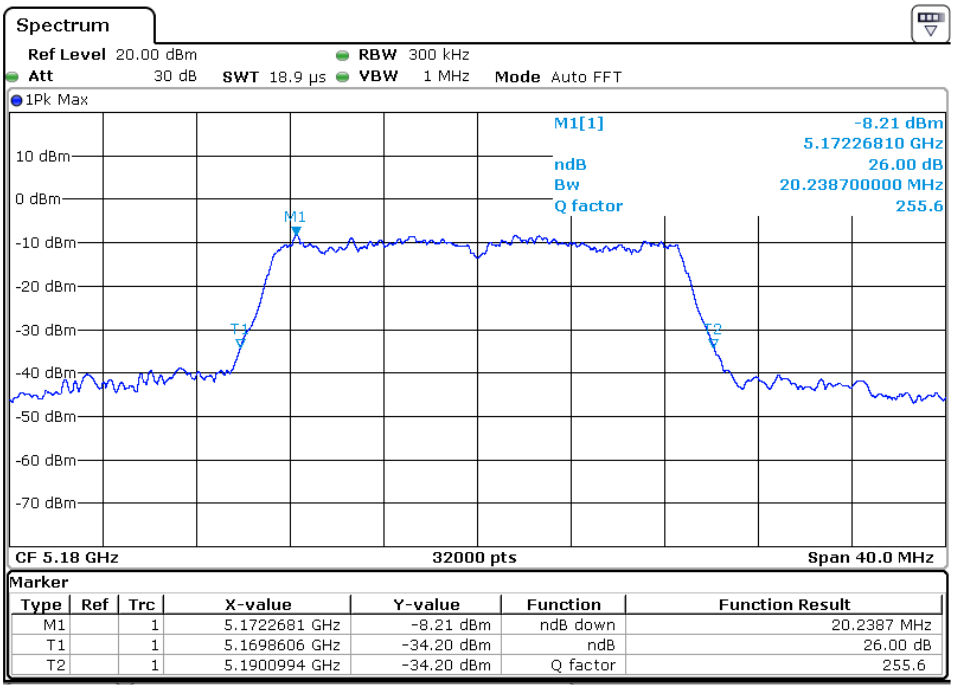


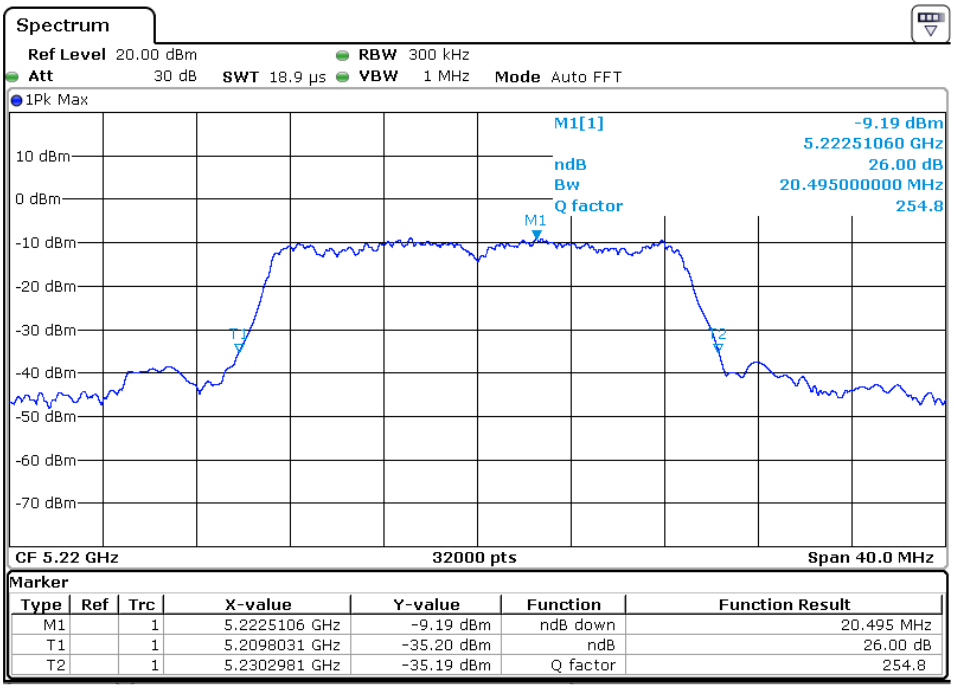
5.4.5 Test results

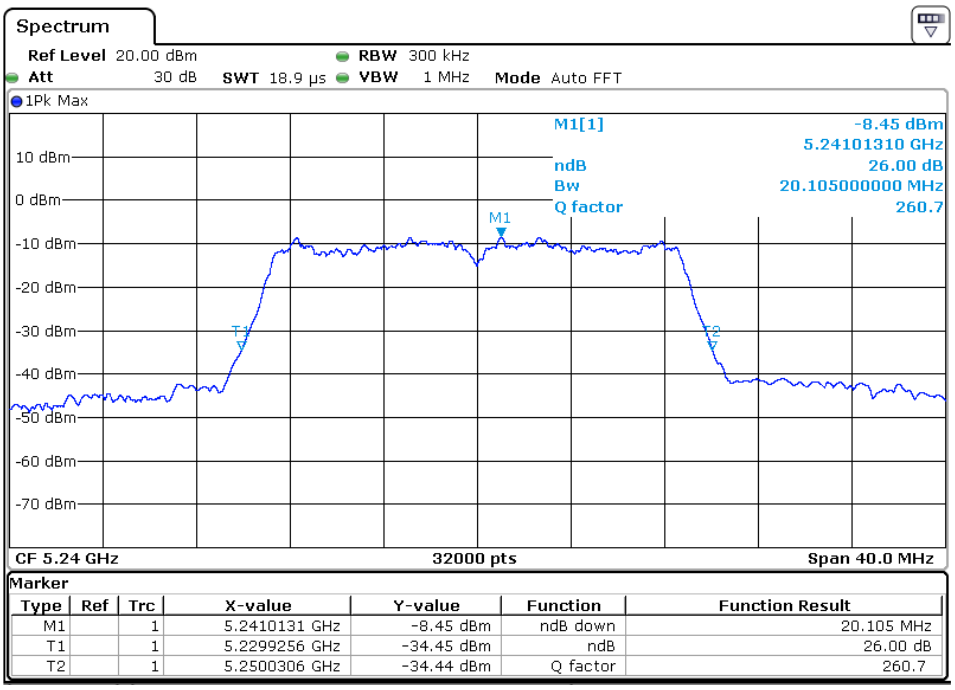
Test Mode	Data Rate (Mbps)	Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	6dB Bandwidth (MHz)	Result
Ant						
802.11a	6	36	5180	20.2387	17.4984	Pass
802.11a	6	44	5220	20.495	17.5062	Pass
802.11a	6	48	5240	20.105	17.5078	Pass
802.11a	6	149	5745	20.2387	17.4937	Pass
802.11a	6	157	5785	20.0037	17.5031	Pass
802.11a	6	165	5825	20.2587	17.4984	Pass
802.11n-HT20	7.2	36	5180	20.1187	17.4922	Pass
802.11n-HT20	7.2	44	5220	20.2125	17.4812	Pass
802.11n-HT20	7.2	48	5240	20.2225	17.5312	Pass
802.11n-HT20	7.2	149	5745	20.205	17.5094	Pass
802.11n-HT20	7.2	157	5785	20.125	17.5141	Pass
802.11n-HT20	7.2	165	5825	20.175	17.5016	Pass
802.11n-HT40	15	38	5190	40.44	35.625	Pass
802.11n-HT40	15	46	5230	40.6425	35.435	Pass
802.11n-HT40	15	151	5755	40.45	35.295	Pass
802.11n-HT40	15	159	5795	40.115	35.3175	Pass
802.11ac-VHT2	7.2	36	5180	20.815	17.4891	Pass
802.11ac-VHT2	7.2	44	5220	23.0862	17.4953	Pass
802.11ac-VHT2	7.2	48	5240	20.2075	17.5406	Pass
802.11ac-VHT2	7.2	149	5745	20.2012	17.5063	Pass
802.11ac-VHT2	7.2	157	5785	20.2325	17.525	Pass
802.11ac-VHT2	7.2	165	5825	20.4187	17.2437	Pass
802.11ac-VHT4	15	38	5190	40.515	35.005	Pass
802.11ac-VHT4	15	46	5230	40.1375	35.4238	Pass
802.11ac-VHT4	15	151	5755	40.4375	35.33	Pass
802.11ac-VHT4	15	159	5795	40.2075	35.455	Pass
802.11ac-VHT8	32.5	42	5210	81.625	76.1626	Pass
802.11ac-VHT8	32.5	155	5775	82.29	76.1	Pass

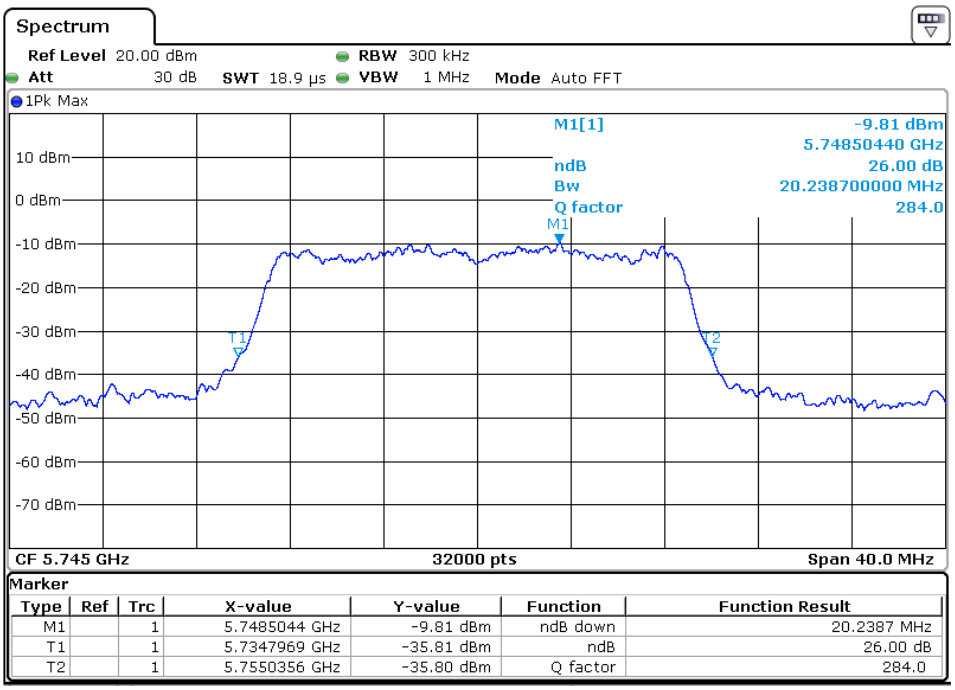
26 dBc Bandwidth plot as follows:

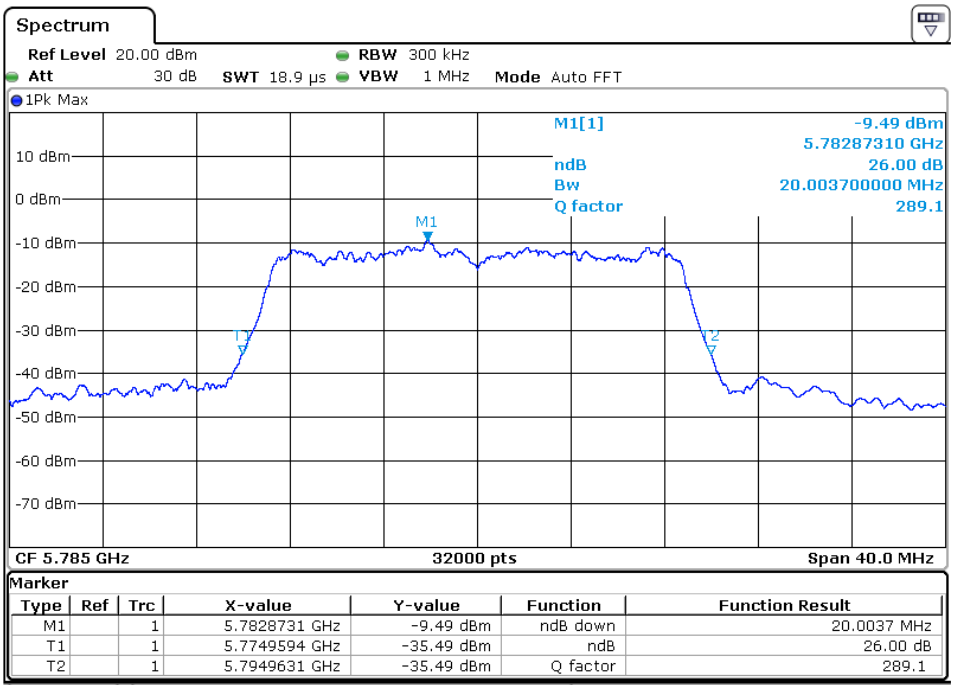
Ant 802.11 a





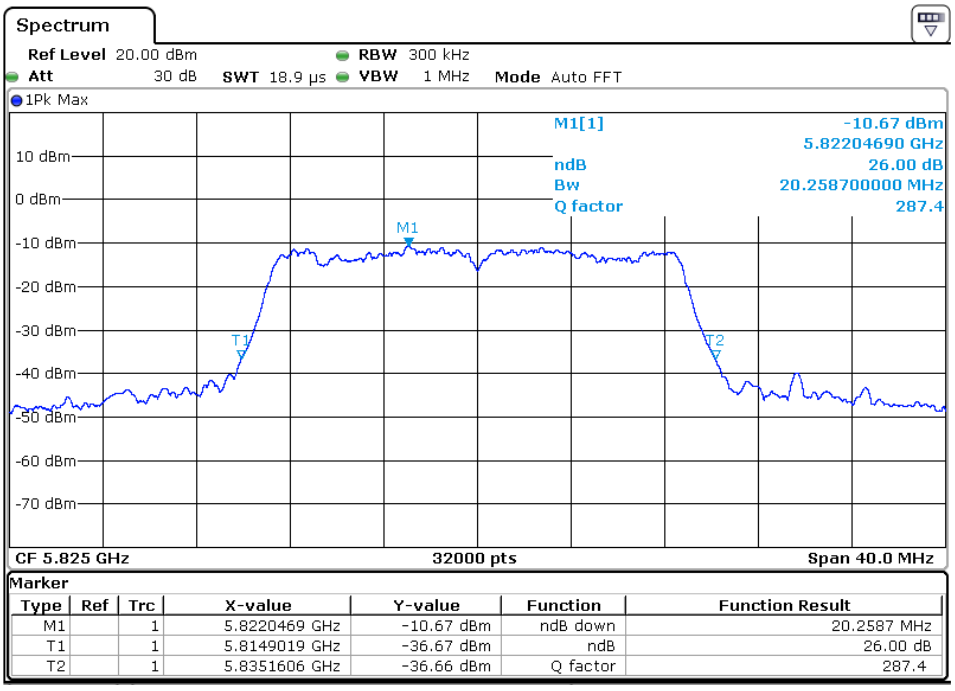

Spectrum
Ref Level 20.00 dBm
RBW 300 kHz
Att 30 dB
SWT 18.9 µs
VBW 1 MHz
Mode Auto FFT
1Pk Max
M1[1]
-8.45 dBm
5.24101310 GHz
ndB 26.00 dB
Bw 20.105000000 MHz
Q factor 260.7
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
CF 5.24 GHz
32000 pts
Span 40.0 MHz
Marker
Type Ref Trc X-value Y-value Function Function Result
M1 1 5.2410131 GHz -8.45 dBm ndB down 20.105 MHz
T1 1 5.2299256 GHz -34.45 dBm ndB 26.00 dB
T2 1 5.2500306 GHz -34.44 dBm Q factor 260.7


Spectrum
Ref Level 20.00 dBm
RBW 300 kHz
Att 30 dB
SWT 18.9 µs
VBW 1 MHz
Mode Auto FFT
1Pk Max
M1[1]
-9.81 dBm
5.74850440 GHz
ndB 26.00 dB
Bw 20.238700000 MHz
Q factor 284.0
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
CF 5.745 GHz
32000 pts
Span 40.0 MHz
Marker
Type Ref Trc X-value Y-value Function Function Result
M1 1 5.7485044 GHz -9.81 dBm ndB down 20.2387 MHz
T1 1 5.7347969 GHz -35.81 dBm ndB 26.00 dB
T2 1 5.7550356 GHz -35.80 dBm Q factor 284.0



Marker

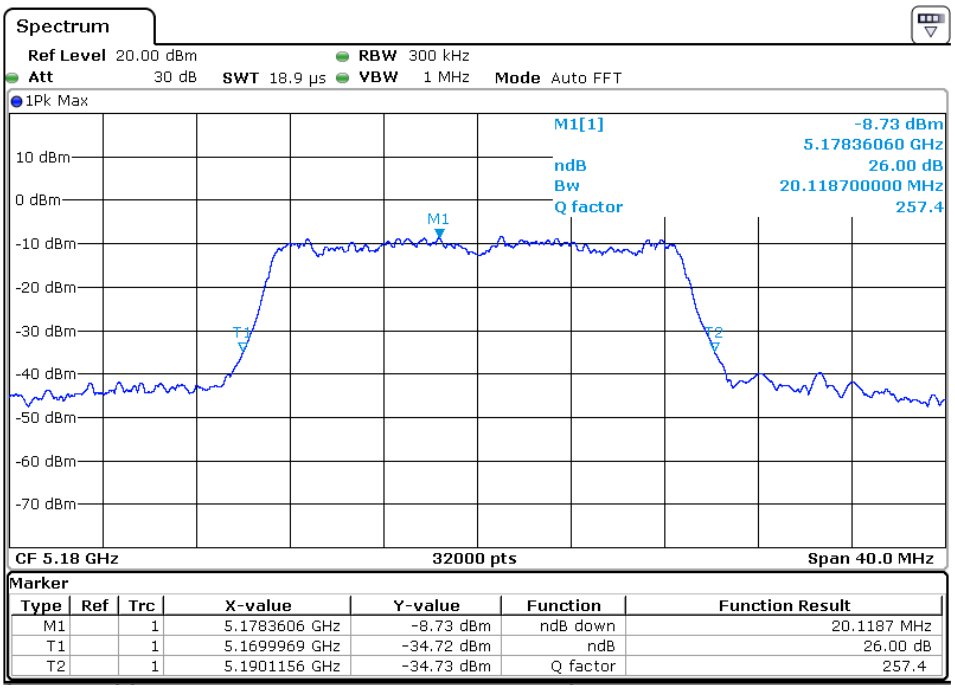
Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.7828731 GHz	-9.49 dBm	ndB down	20.0037 MHz
T1		1	5.7749594 GHz	-35.49 dBm	ndB	26.00 dB
T2		1	5.7949631 GHz	-35.49 dBm	Q factor	289.1

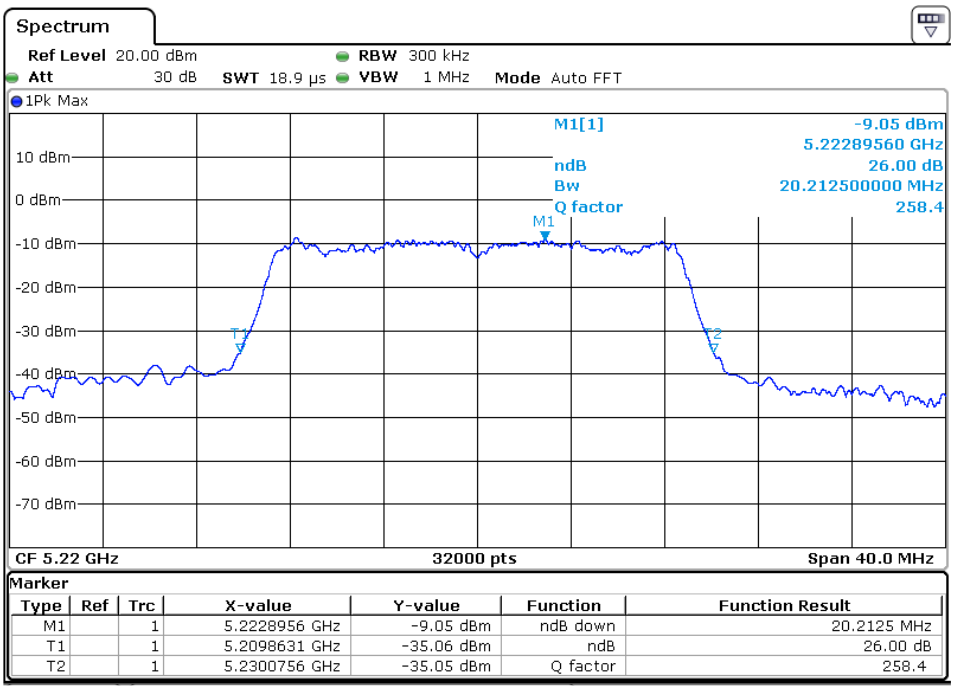


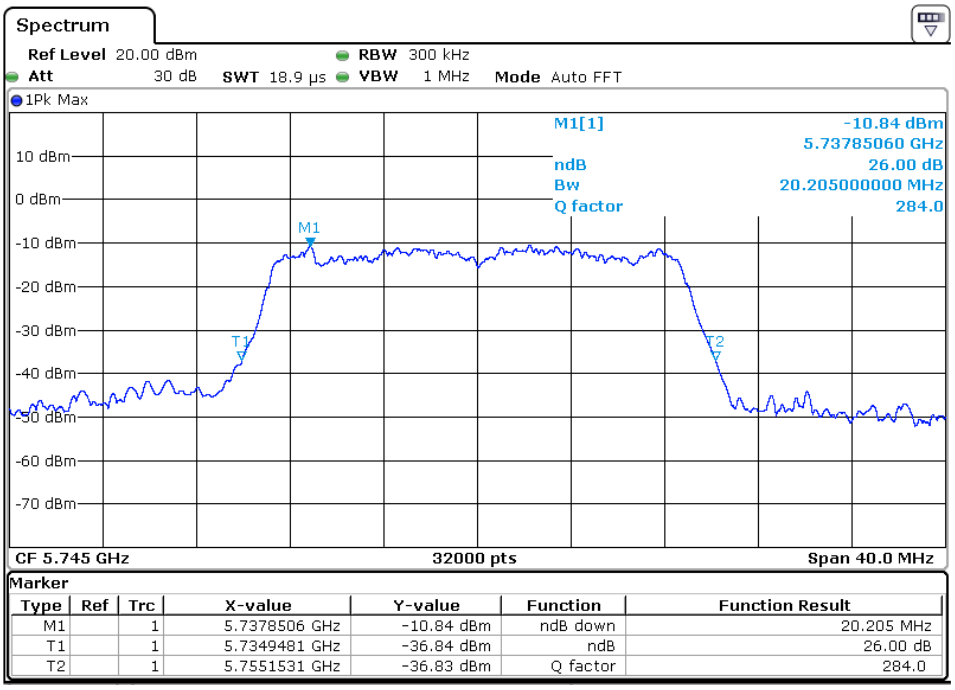
Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.8220469 GHz	-10.67 dBm	ndB down	20.2587 MHz
T1		1	5.8149019 GHz	-36.67 dBm	ndB	26.00 dB
T2		1	5.8351606 GHz	-36.66 dBm	Q factor	287.4

Ant 802.11 n20

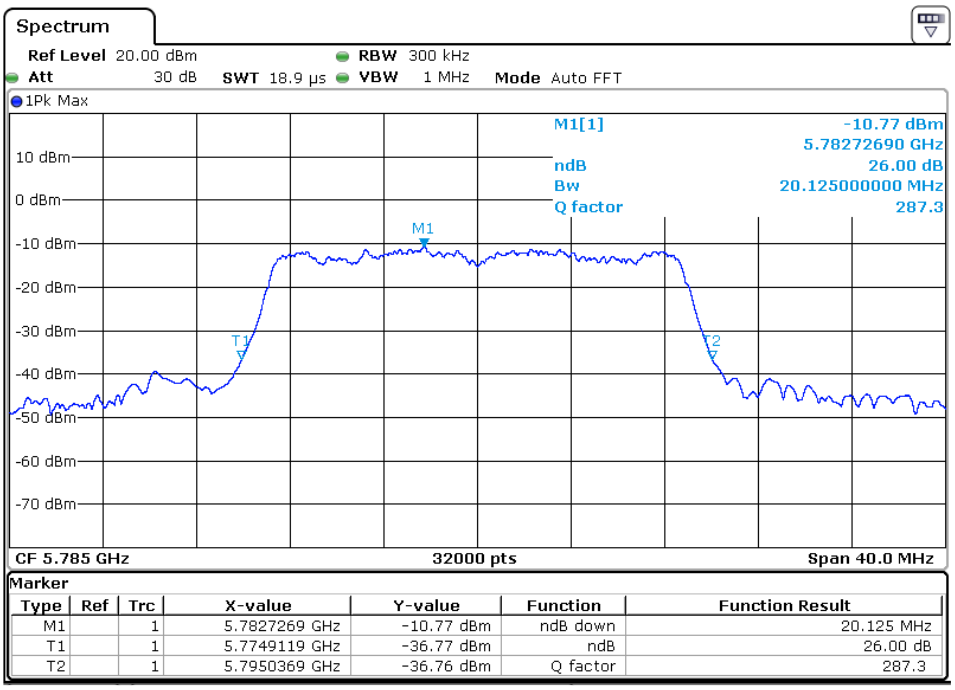






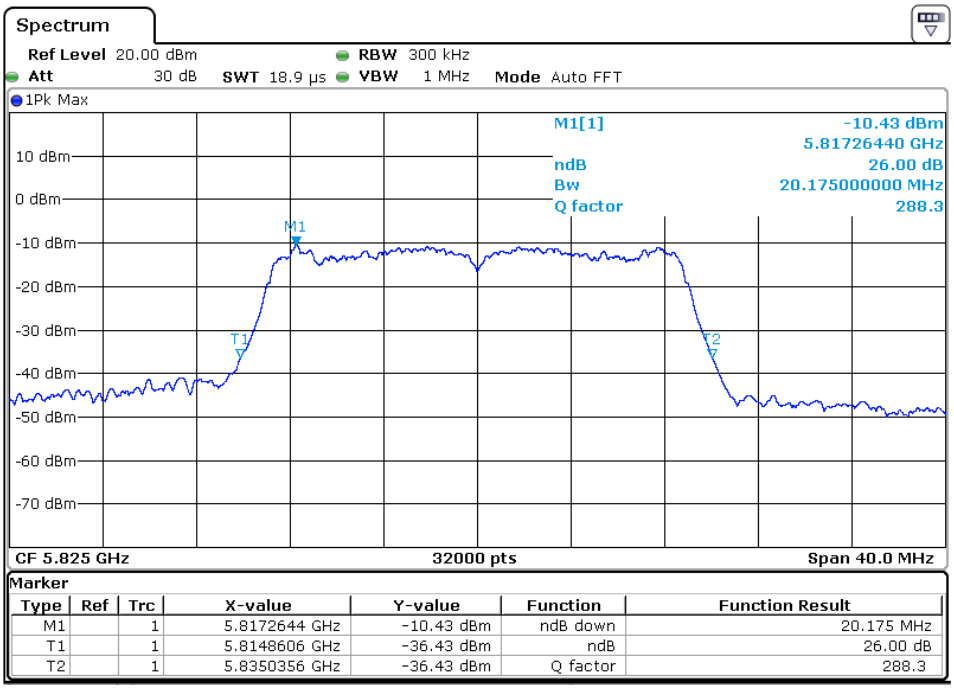
Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.7378506 GHz	-10.84 dBm	ndB down	20.205 MHz
T1		1	5.7349481 GHz	-36.84 dBm	ndB	26.00 dB
T2		1	5.7551531 GHz	-36.83 dBm	Q factor	284.0



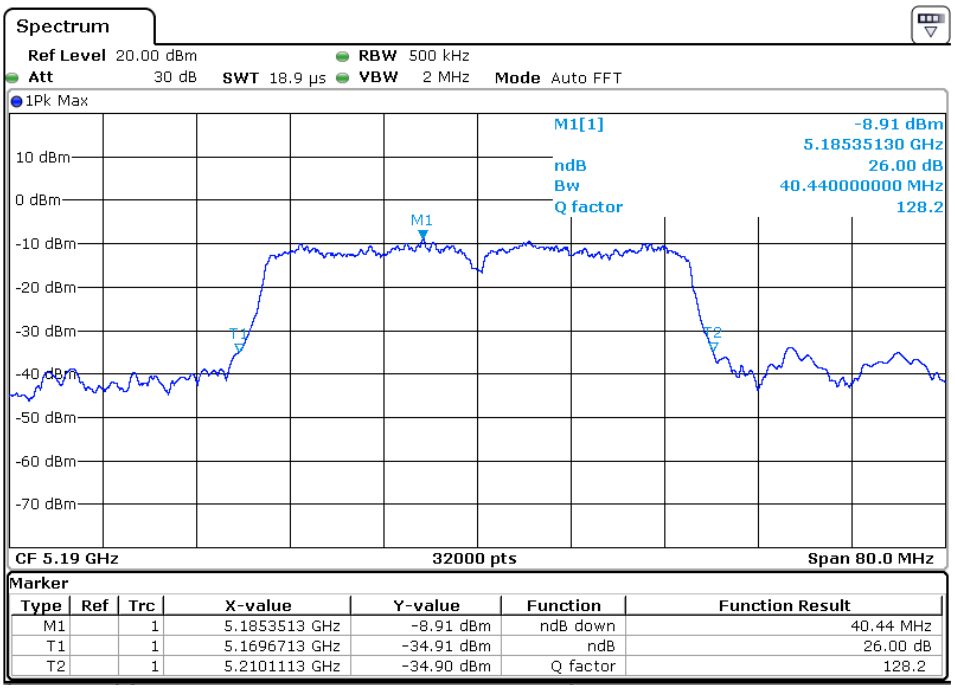
Marker

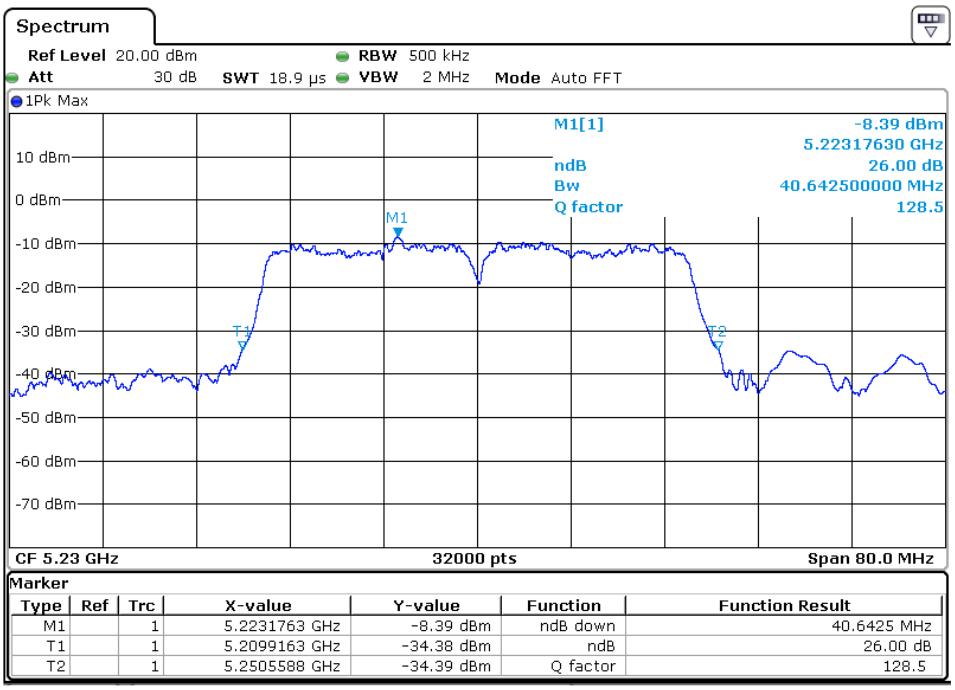
Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.7827269 GHz	-10.77 dBm	ndB down	20.125 MHz
T1		1	5.7749119 GHz	-36.77 dBm	ndB	26.00 dB
T2		1	5.7950369 GHz	-36.76 dBm	Q factor	287.3

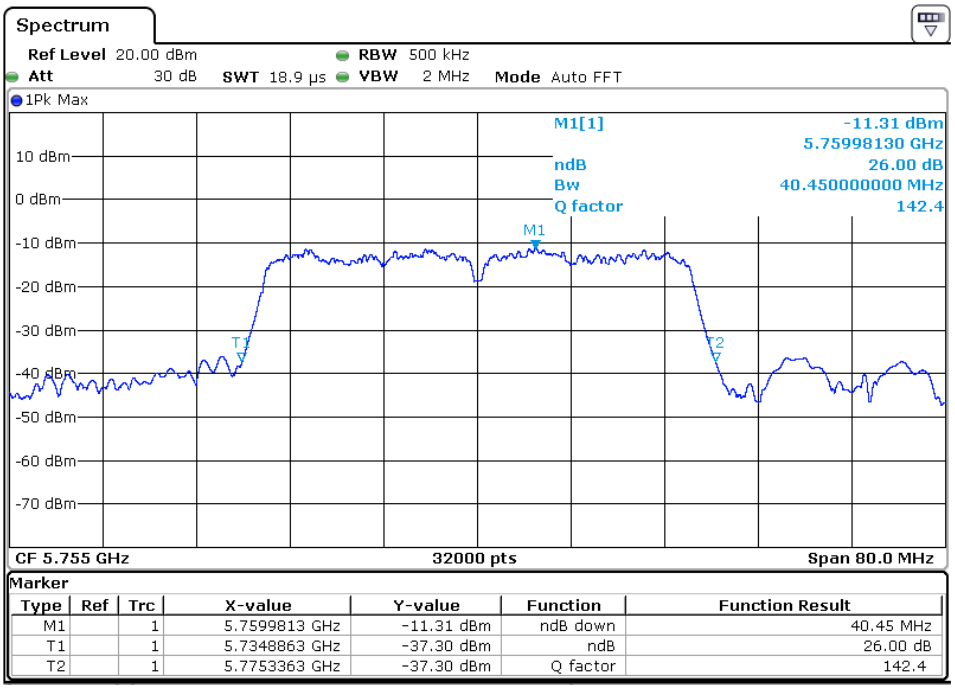


Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.8172644 GHz	-10.43 dBm	ndB down	20.175 MHz
T1		1	5.8148606 GHz	-36.43 dBm	ndB	26.00 dB
T2		1	5.8350356 GHz	-36.43 dBm	Q factor	288.3

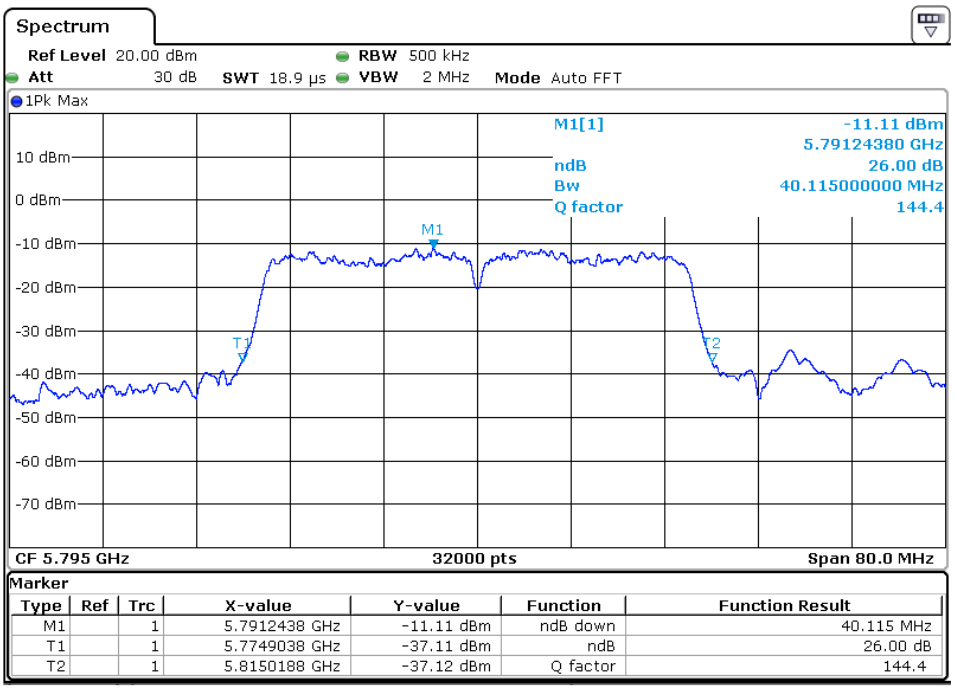
Ant 802.11 n40





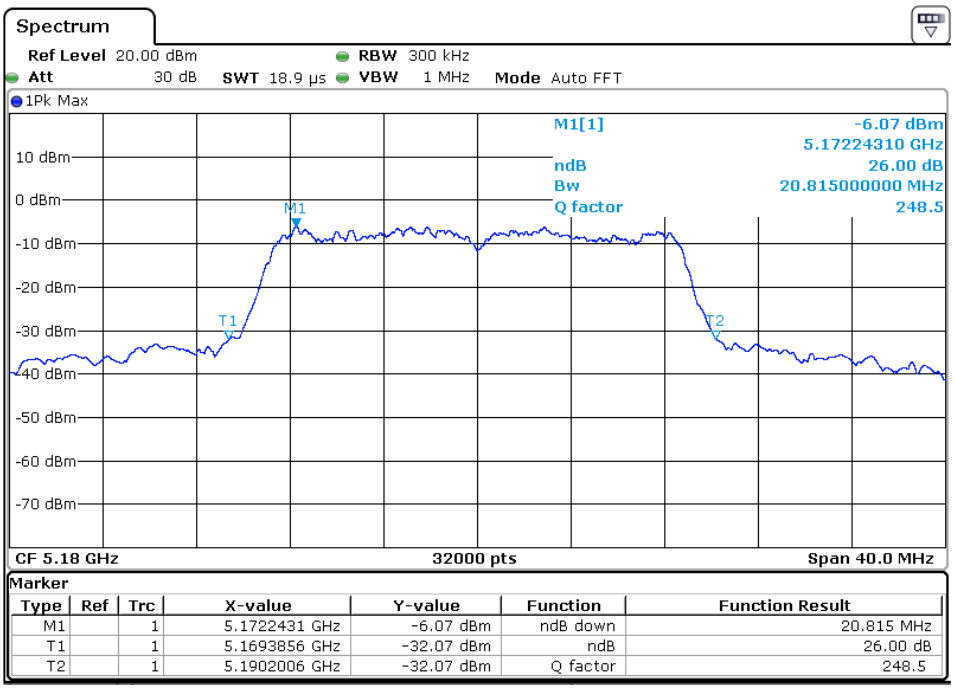


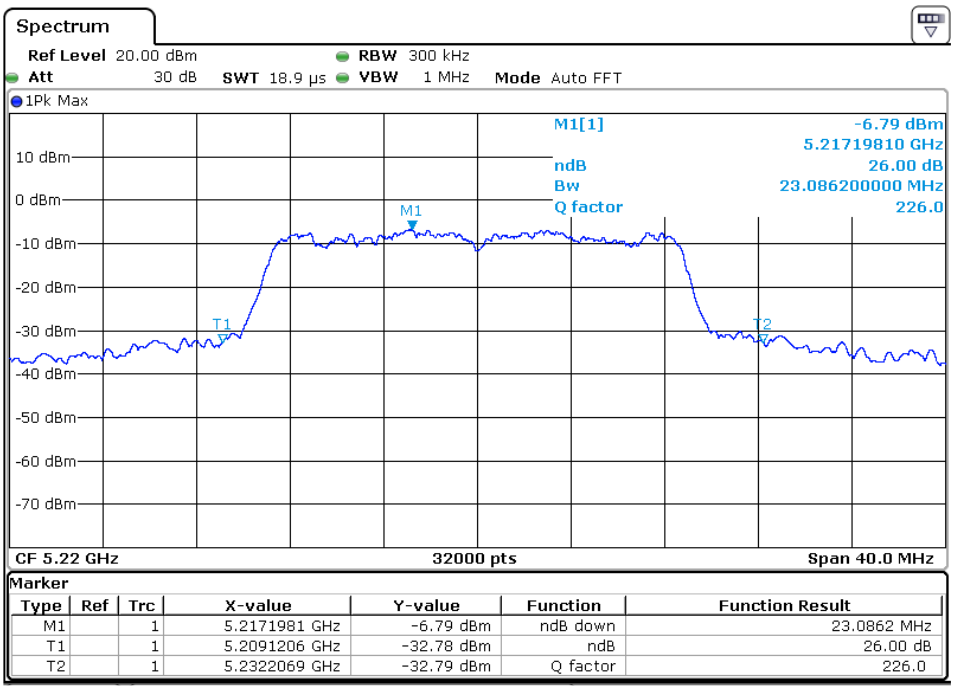
Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.7599813 GHz	-11.31 dBm	ndB down	40.45 MHz
T1		1	5.7348863 GHz	-37.30 dBm	ndB	26.00 dB
T2		1	5.7753363 GHz	-37.30 dBm	Q factor	142.4

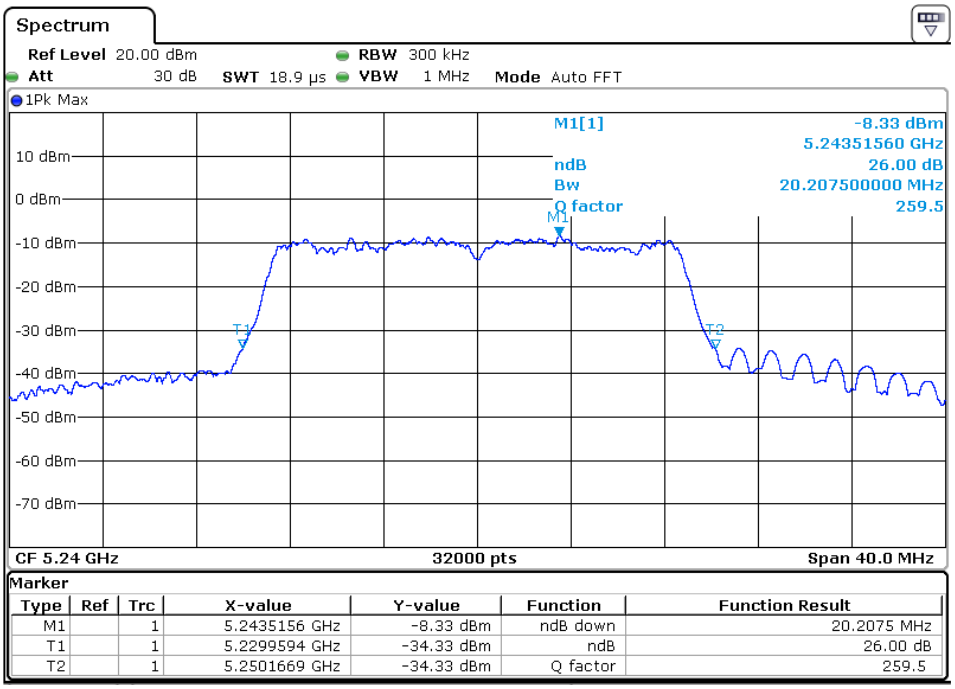


Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.7912438 GHz	-11.11 dBm	ndB down	40.115 MHz
T1		1	5.7749038 GHz	-37.11 dBm	ndB	26.00 dB
T2		1	5.8150188 GHz	-37.12 dBm	Q factor	144.4

Ant 802.11 ac20

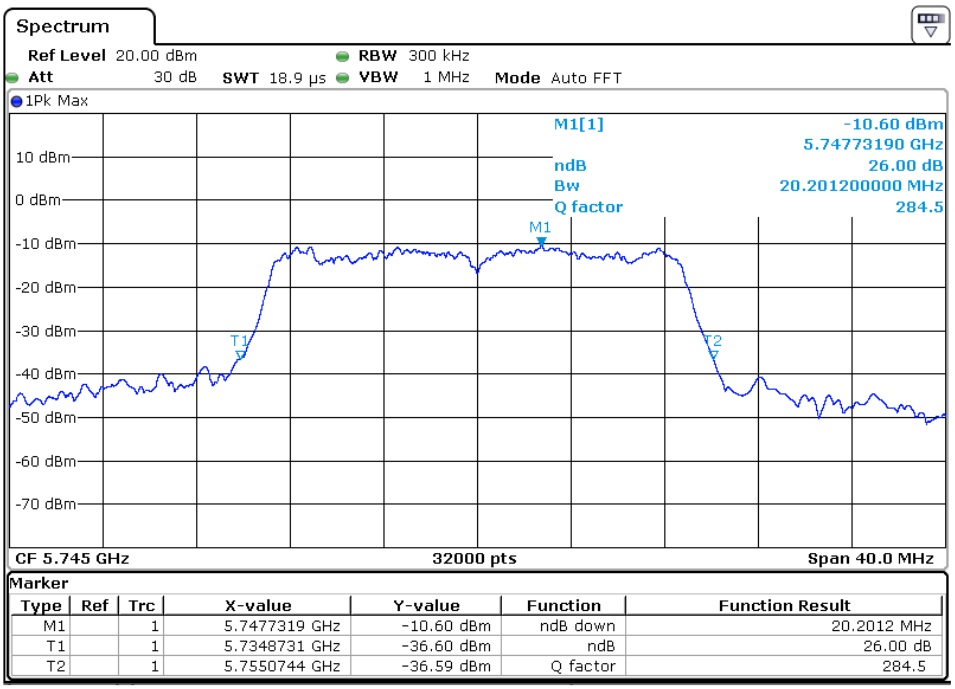






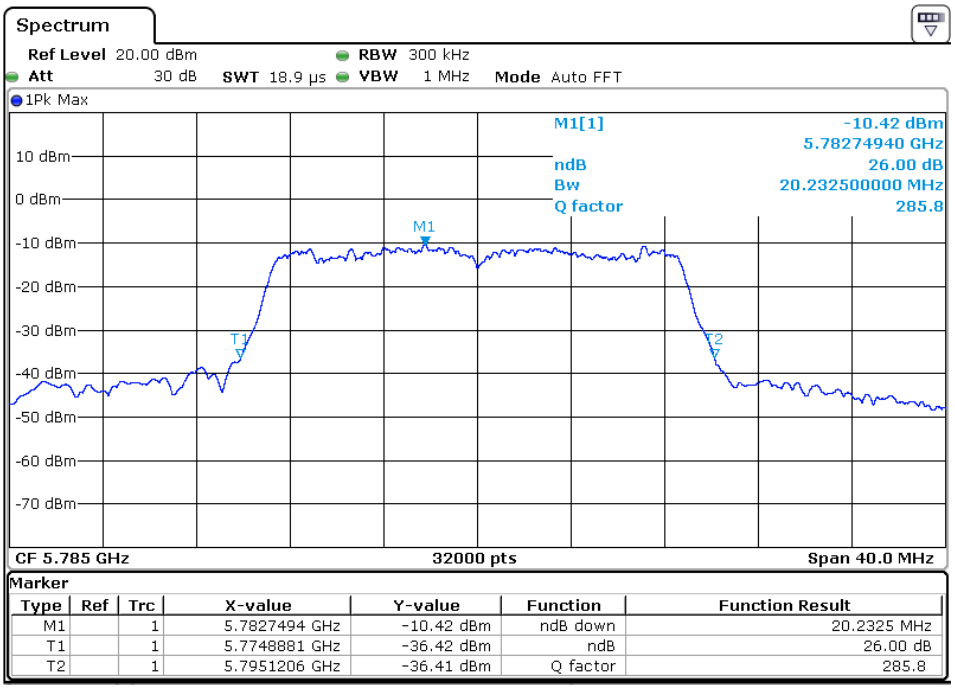
Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.2435156 GHz	-8.33 dBm	ndB down	20.2075 MHz
T1		1	5.2299594 GHz	-34.33 dBm	ndB	26.00 dB
T2		1	5.2501669 GHz	-34.33 dBm	Q factor	259.5



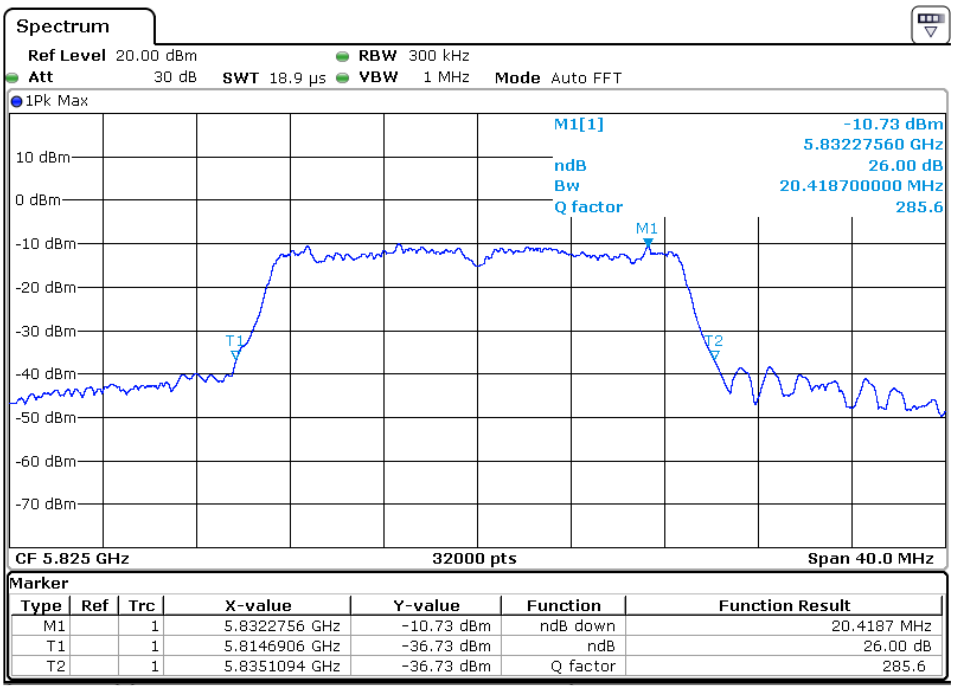
Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.7477319 GHz	-10.60 dBm	ndB down	20.2012 MHz
T1		1	5.7348731 GHz	-36.60 dBm	ndB	26.00 dB
T2		1	5.7550744 GHz	-36.59 dBm	Q factor	284.5



Marker

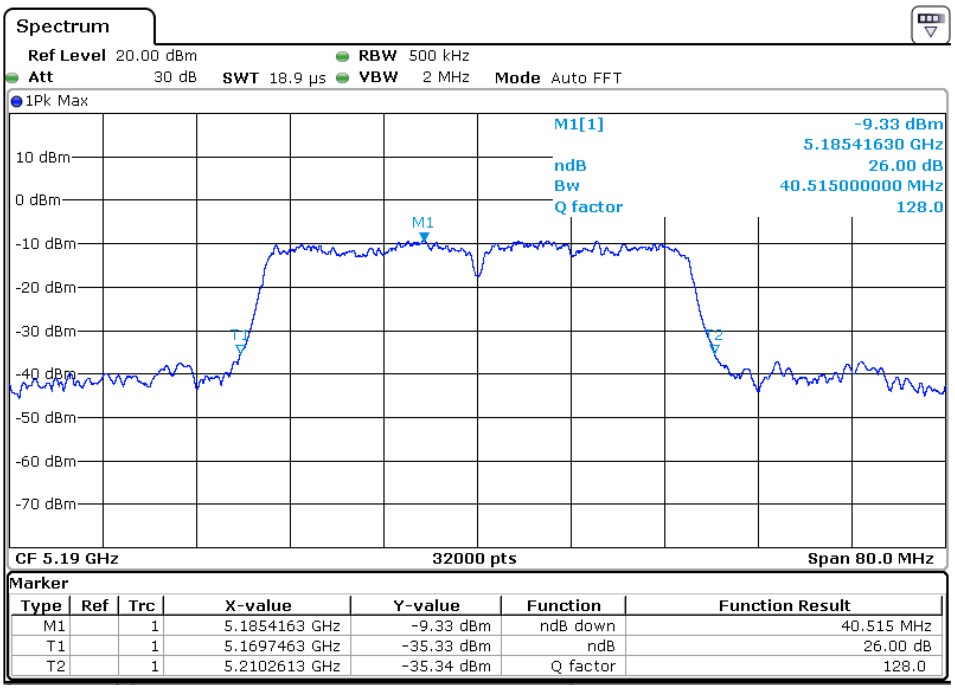
Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.7827494 GHz	-10.42 dBm	ndB down	20.2325 MHz
T1		1	5.7748881 GHz	-36.42 dBm	ndB	26.00 dB
T2		1	5.7951206 GHz	-36.41 dBm	Q factor	285.8

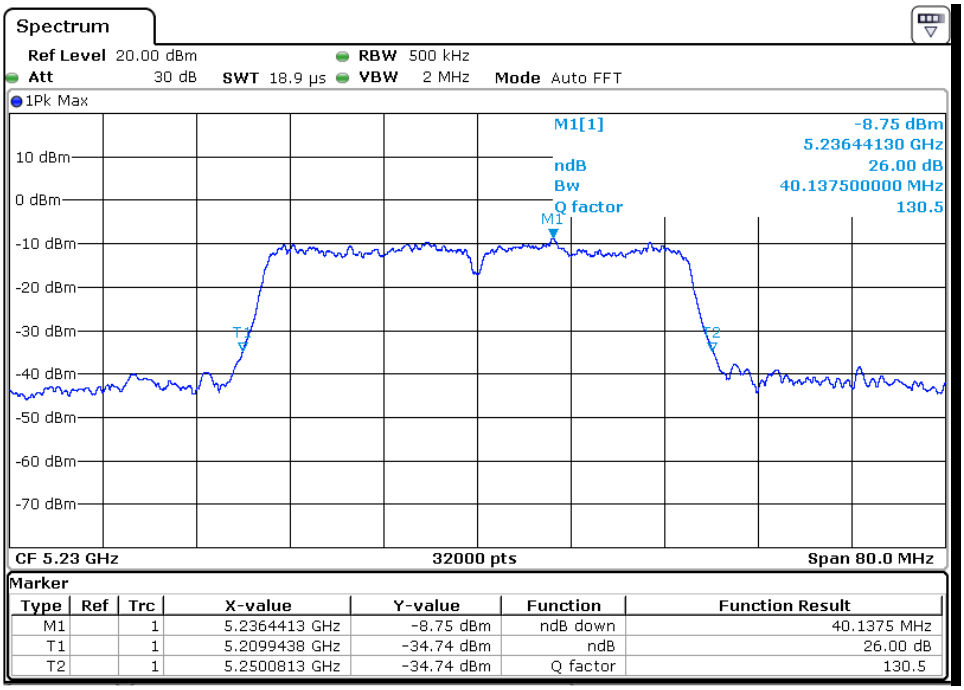


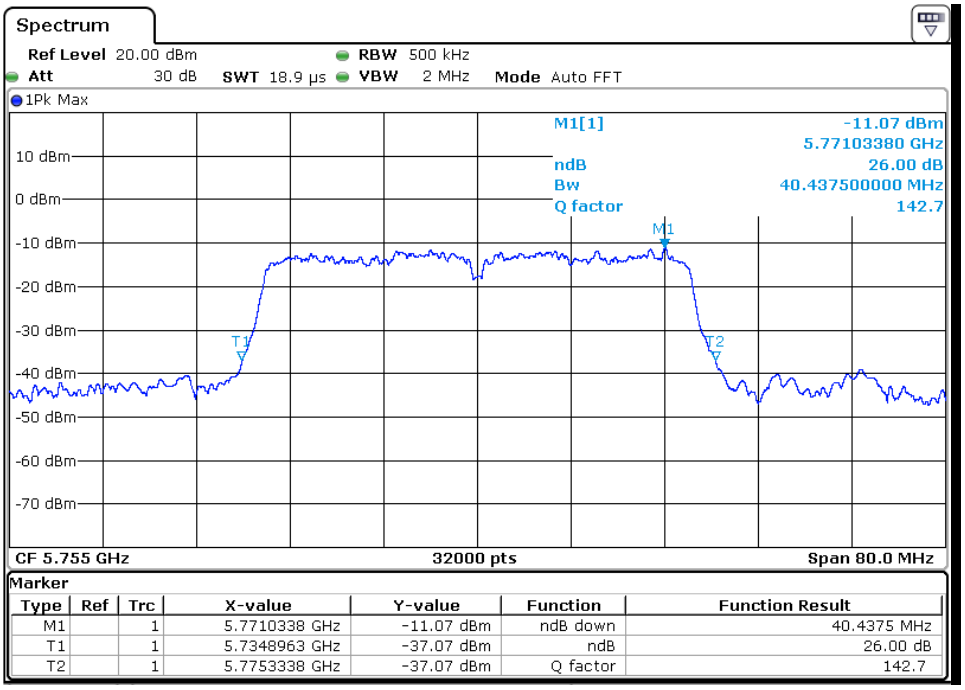
Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.8322756 GHz	-10.73 dBm	ndB down	20.4187 MHz
T1		1	5.8146906 GHz	-36.73 dBm	ndB	26.00 dB
T2		1	5.8351094 GHz	-36.73 dBm	Q factor	285.6

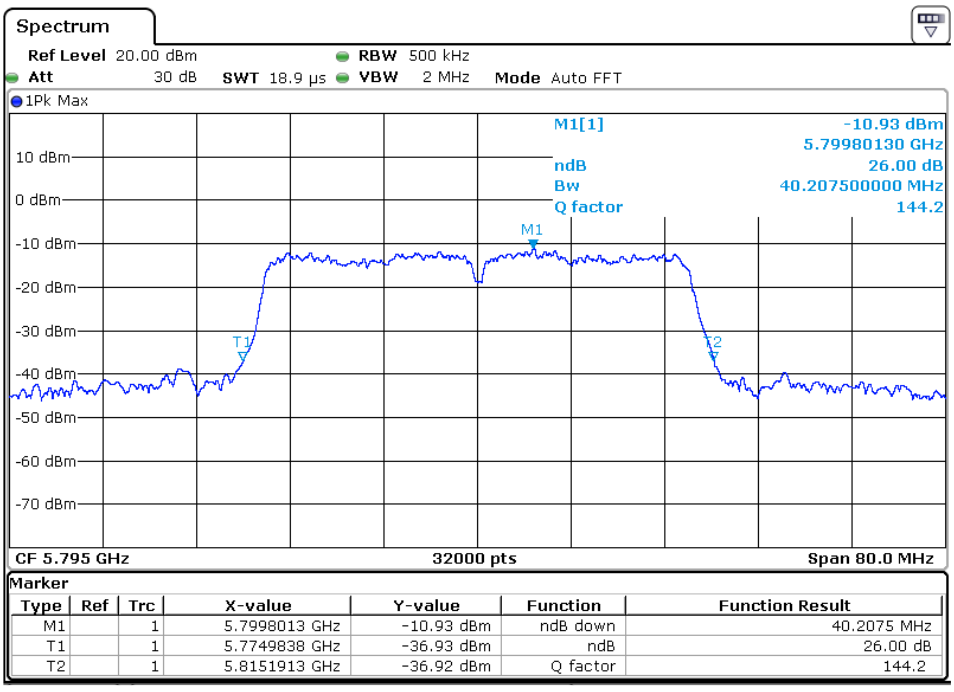
Ant 802.11 ac40





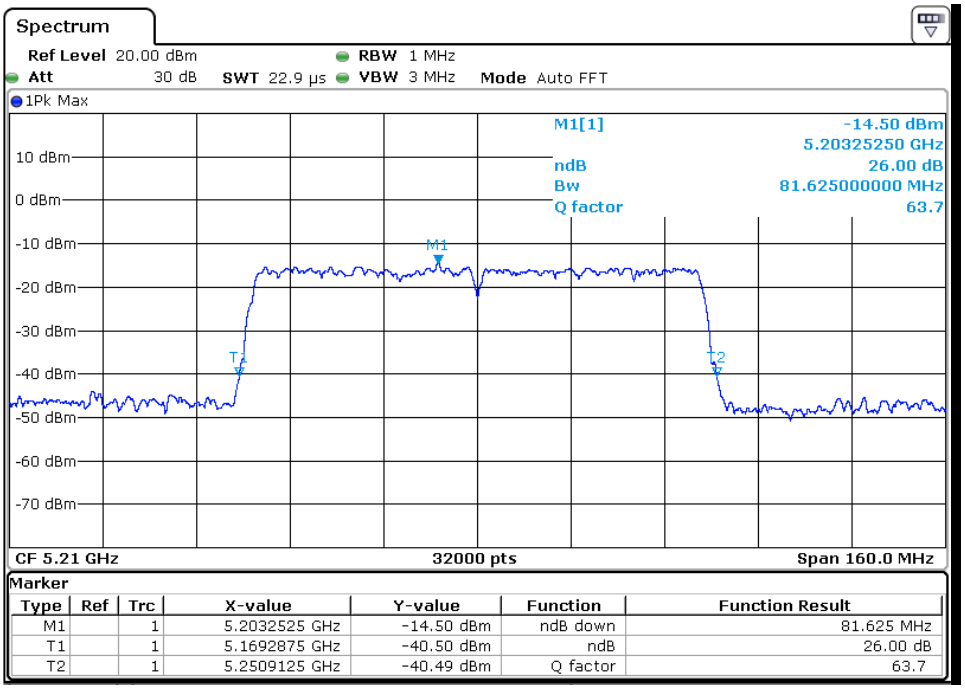


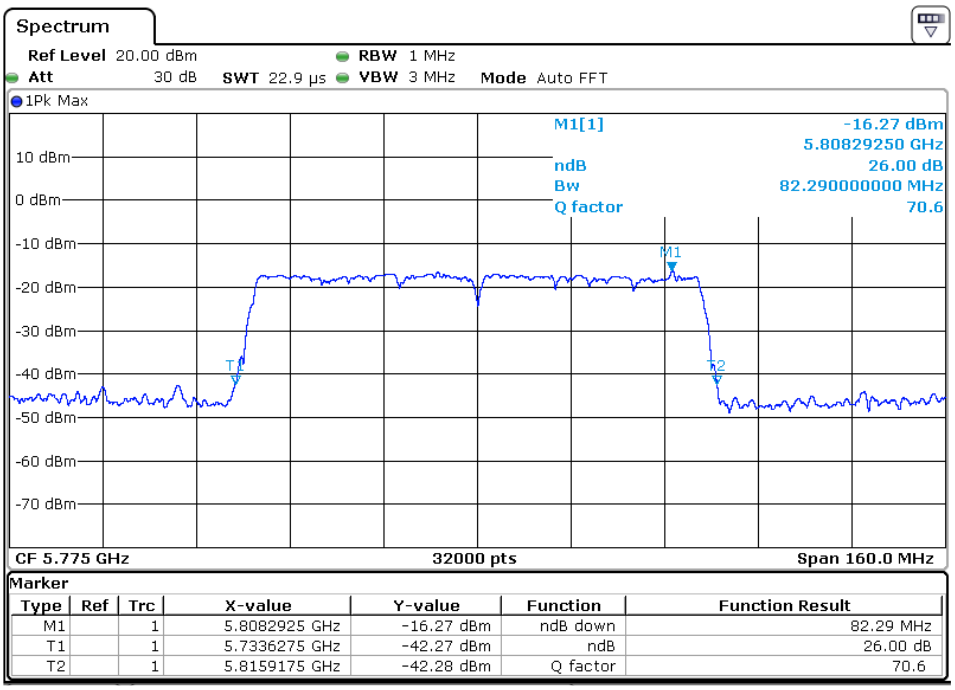
Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.7710338 GHz	-11.07 dBm	ndB down	40.4375 MHz
T1		1	5.7348963 GHz	-37.07 dBm	ndB	26.00 dB
T2		1	5.7753338 GHz	-37.07 dBm	Q factor	142.7



Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.7998013 GHz	-10.93 dBm	ndB down	40.2075 MHz
T1		1	5.7749838 GHz	-36.93 dBm	ndB	26.00 dB
T2		1	5.8151913 GHz	-36.92 dBm	Q factor	144.2

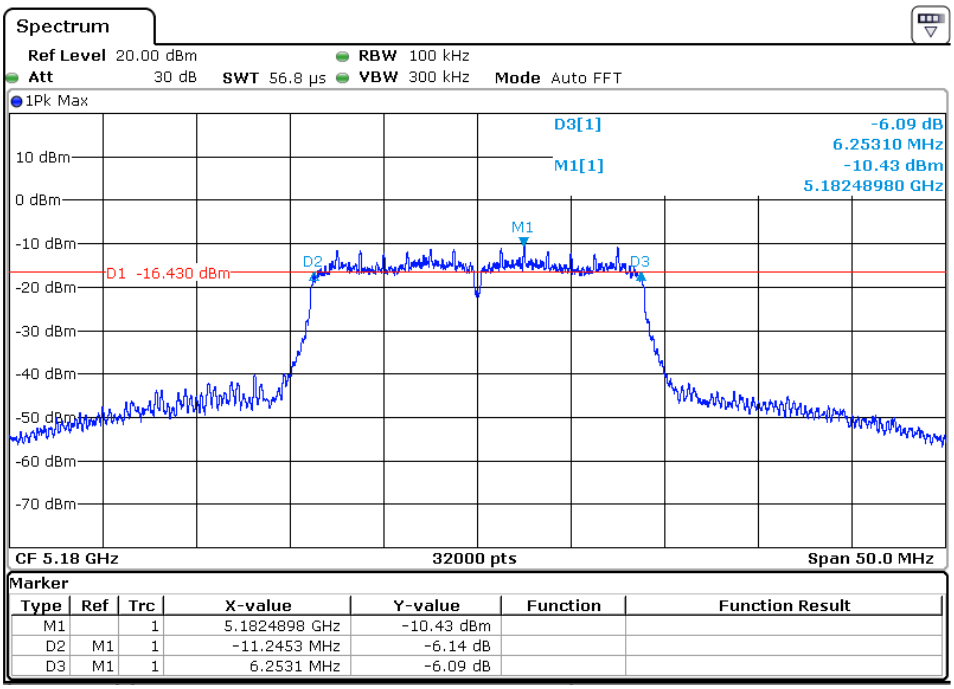
Ant 802.11 ac80

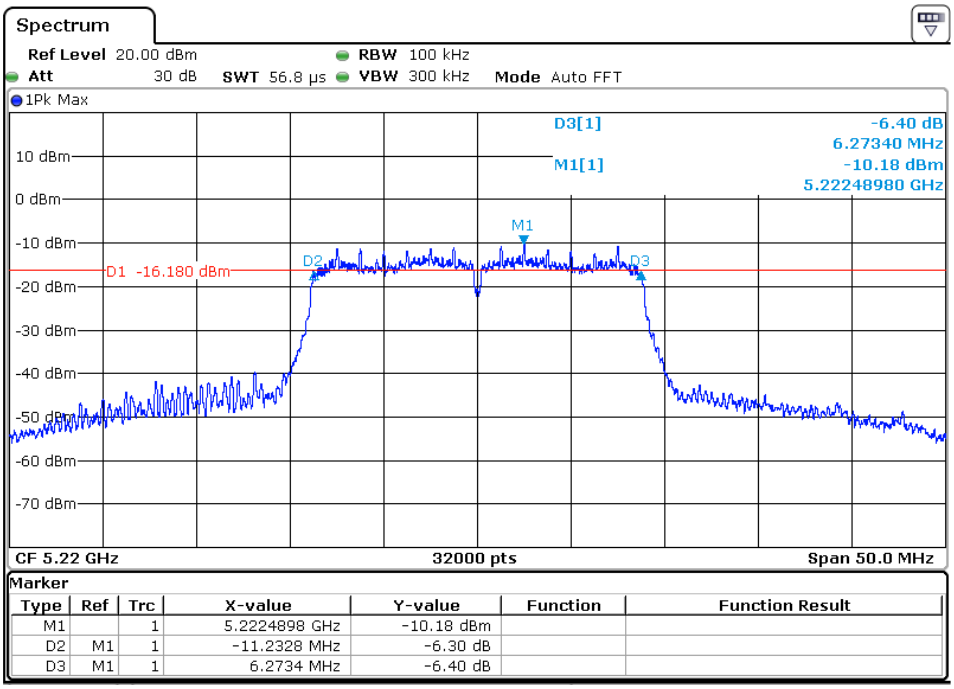


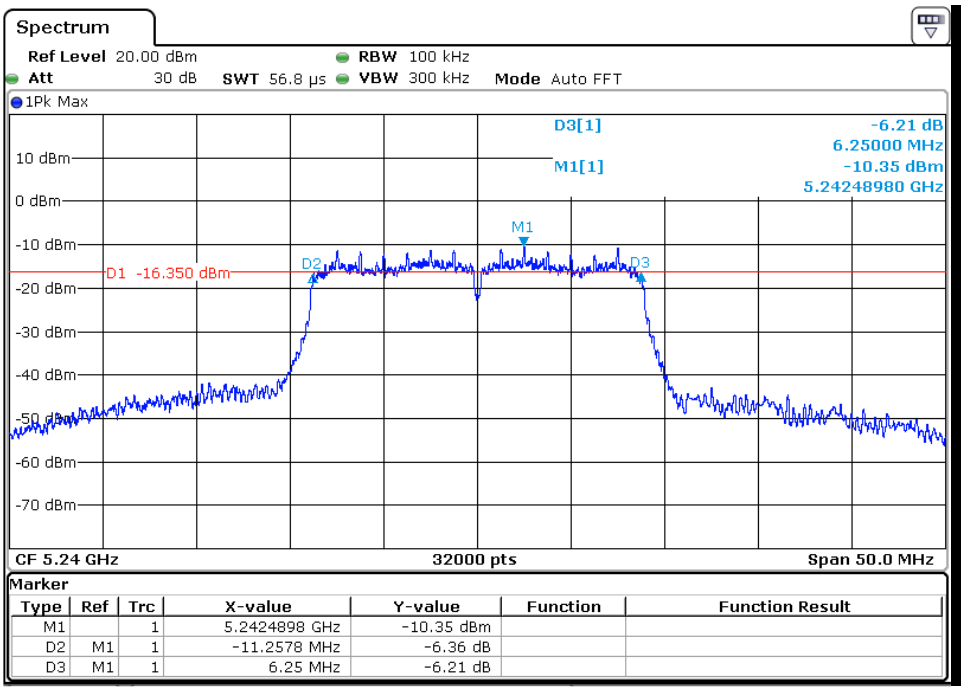


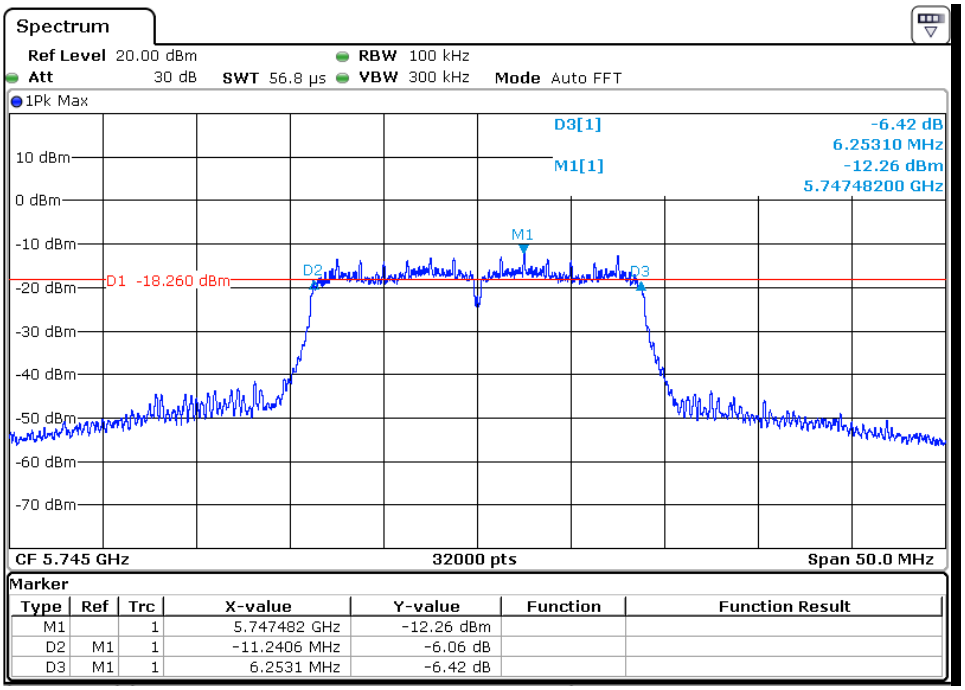
6 dBc Bandwidth plot as follows:

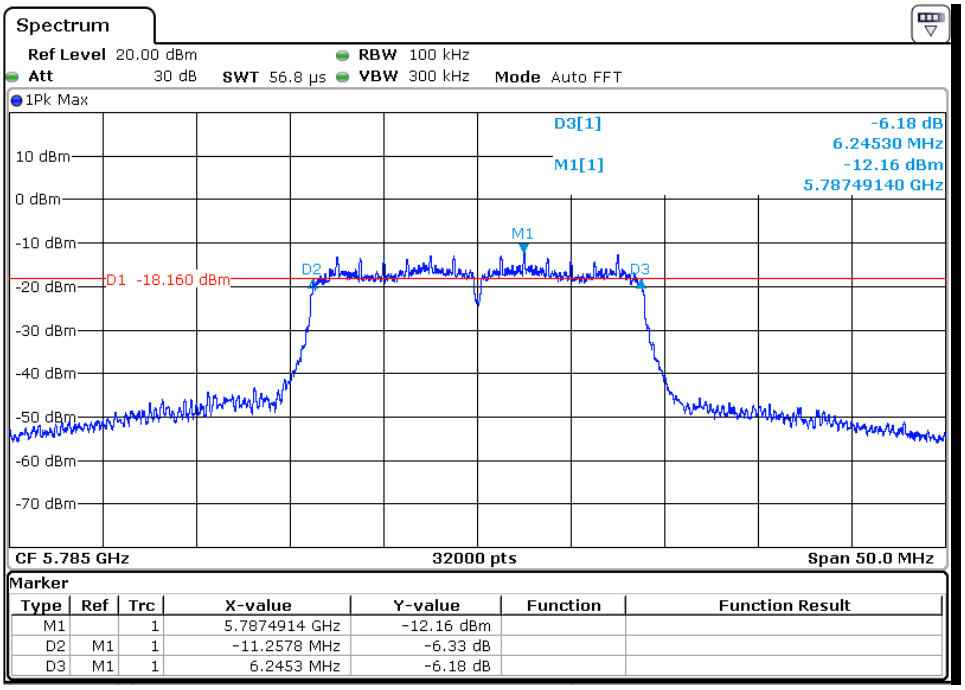
Ant 802.11 a

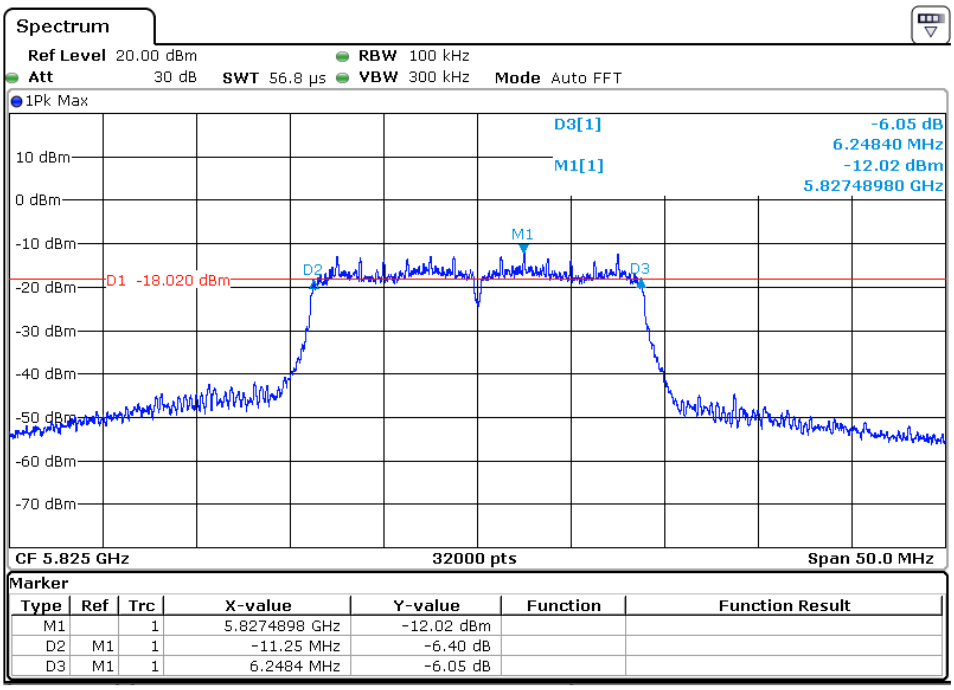




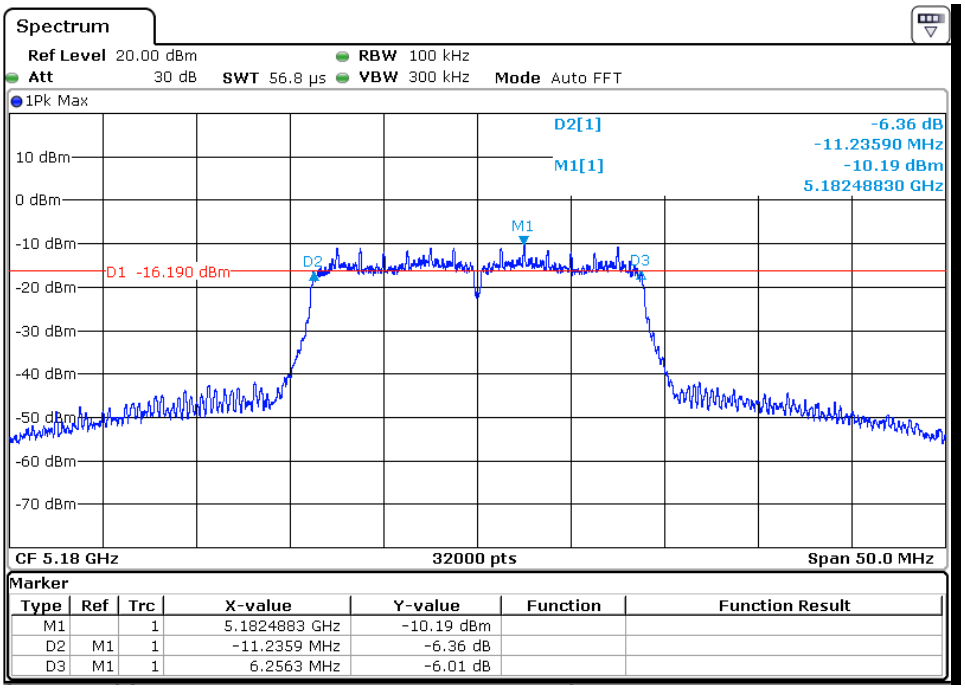

Spectrum
Ref Level 20.00 dBm
RBW 100 kHz
Att 30 dB
SWT 56.8 µs
VBW 300 kHz
Mode Auto FFT
1Pk Max
D3[1]
-6.21 dB
6.25000 MHz
M1[1]
-10.35 dBm
5.24248980 GHz
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
M1
D1 -16.350 dBm
D2
D3
CF 5.24 GHz
32000 pts
Span 50.0 MHz
Marker
Type Ref Trc X-value Y-value Function Function Result
M1 1 5.2424898 GHz -10.35 dBm
D2 M1 1 -11.2578 MHz -6.36 dB
D3 M1 1 6.25 MHz -6.21 dB

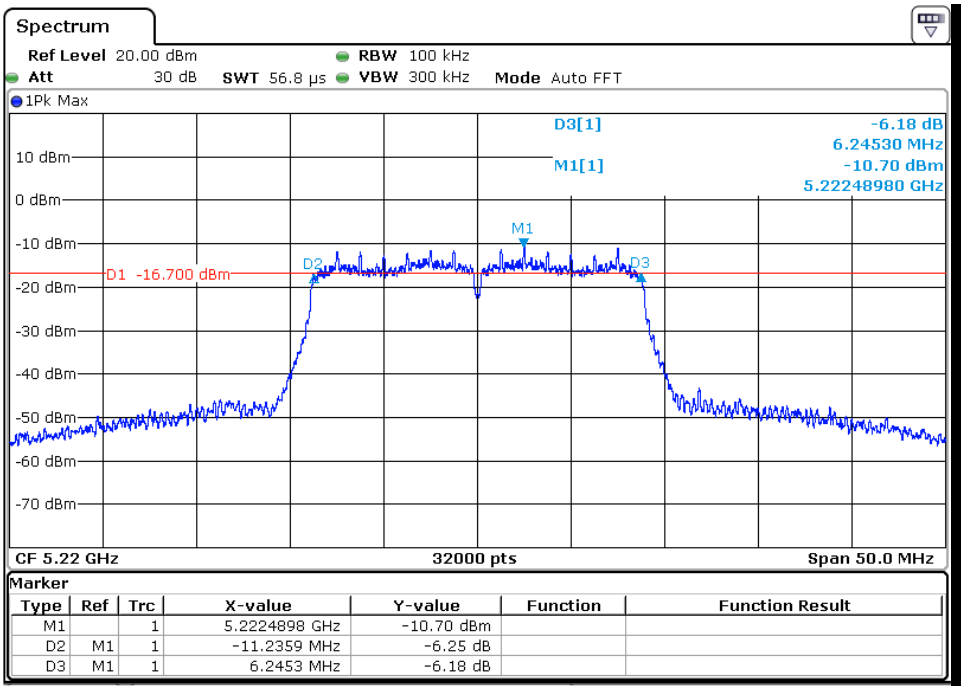

Spectrum
Ref Level 20.00 dBm
RBW 100 kHz
Att 30 dB
SWT 56.8 µs
VBW 300 kHz
Mode Auto FFT
1Pk Max
D3[1]
-6.42 dB
6.25310 MHz
M1[1]
-12.26 dBm
5.74748200 GHz
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
M1
D1 -18.260 dBm
D2
D3
CF 5.745 GHz
32000 pts
Span 50.0 MHz
Marker
Type Ref Trc X-value Y-value Function Function Result
M1 1 5.747482 GHz -12.26 dBm
D2 M1 1 -11.2406 MHz -6.06 dB
D3 M1 1 6.2531 MHz -6.42 dB

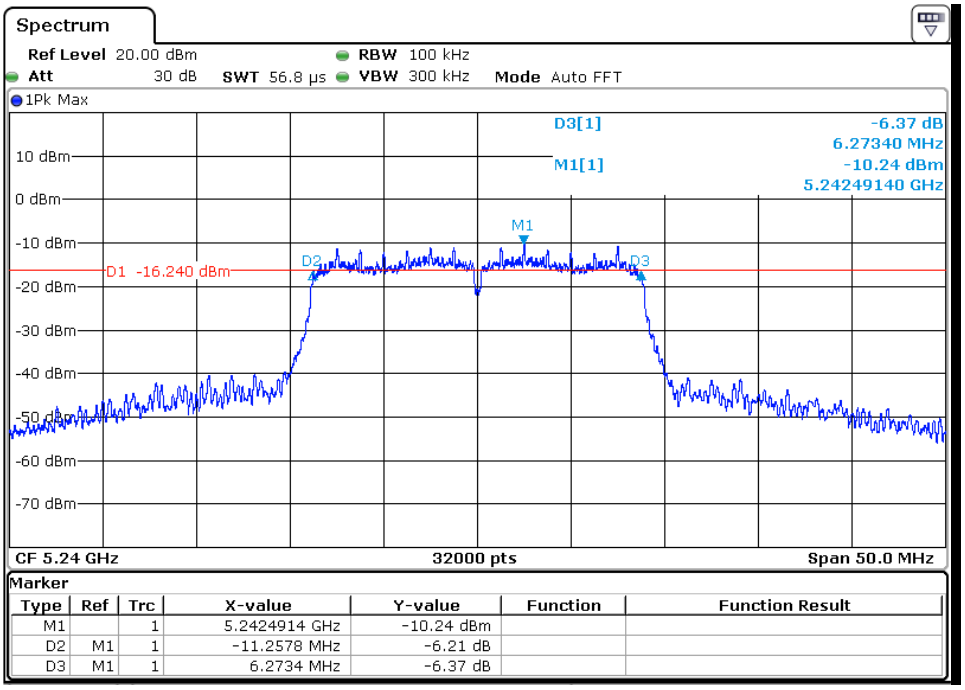

Spectrum
Ref Level 20.00 dBm
RBW 100 kHz
Att 30 dB
SWT 56.8 µs
VBW 300 kHz
Mode Auto FFT
1Pk Max
D3[1]
-6.18 dB
6.24530 MHz
M1[1]
-12.16 dBm
5.78749140 GHz
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
D1 -18.160 dBm
M1
D2
D3
CF 5.785 GHz
32000 pts
Span 50.0 MHz
Marker
Type Ref Trc X-value Y-value Function Function Result
M1 1 5.7874914 GHz -12.16 dBm
D2 M1 1 -11.2578 MHz -6.33 dB
D3 M1 1 6.2453 MHz -6.18 dB

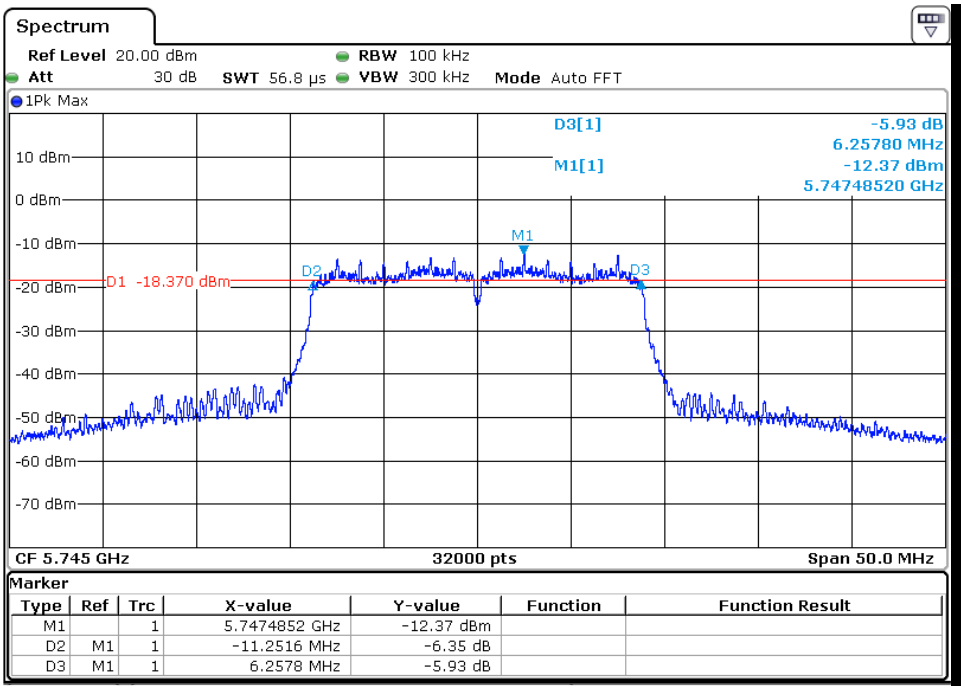

Spectrum
Ref Level 20.00 dBm
RBW 100 kHz
Att 30 dB
SWT 56.8 µs
VBW 300 kHz
Mode Auto FFT
1Pk Max
D3[1]
-6.05 dB
6.24840 MHz
M1[1]
-12.02 dBm
5.82748980 GHz
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
D1 -18.020 dBm
M1
D2
D3
CF 5.825 GHz
32000 pts
Span 50.0 MHz
Marker
Type Ref Trc X-value Y-value Function Function Result
M1 1 5.8274898 GHz -12.02 dBm
D2 M1 1 -11.25 MHz -6.40 dB
D3 M1 1 6.2484 MHz -6.05 dB

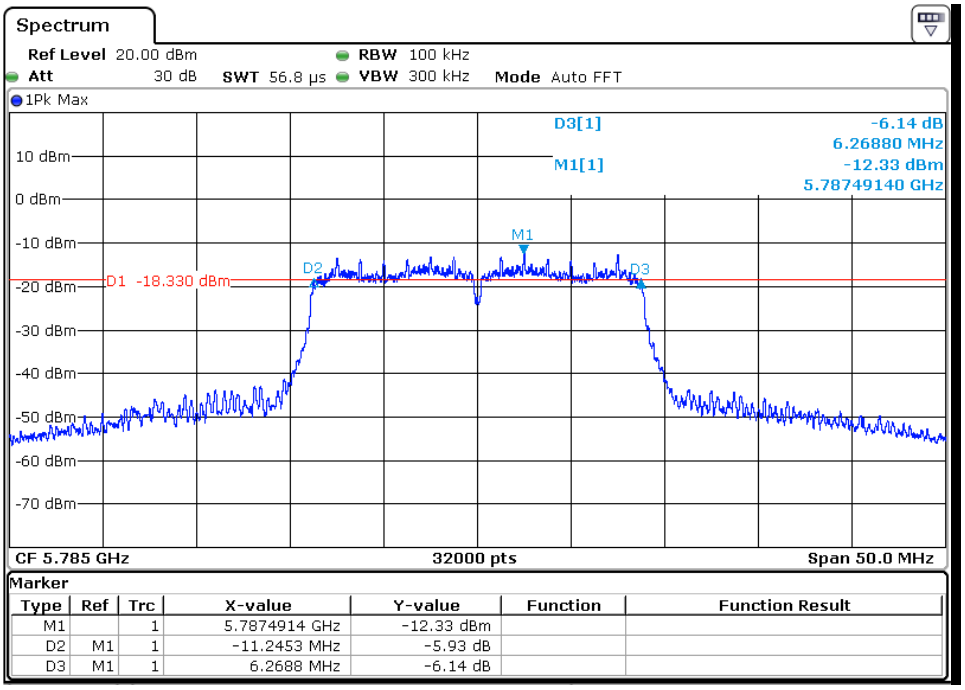
Ant 802.11 n20

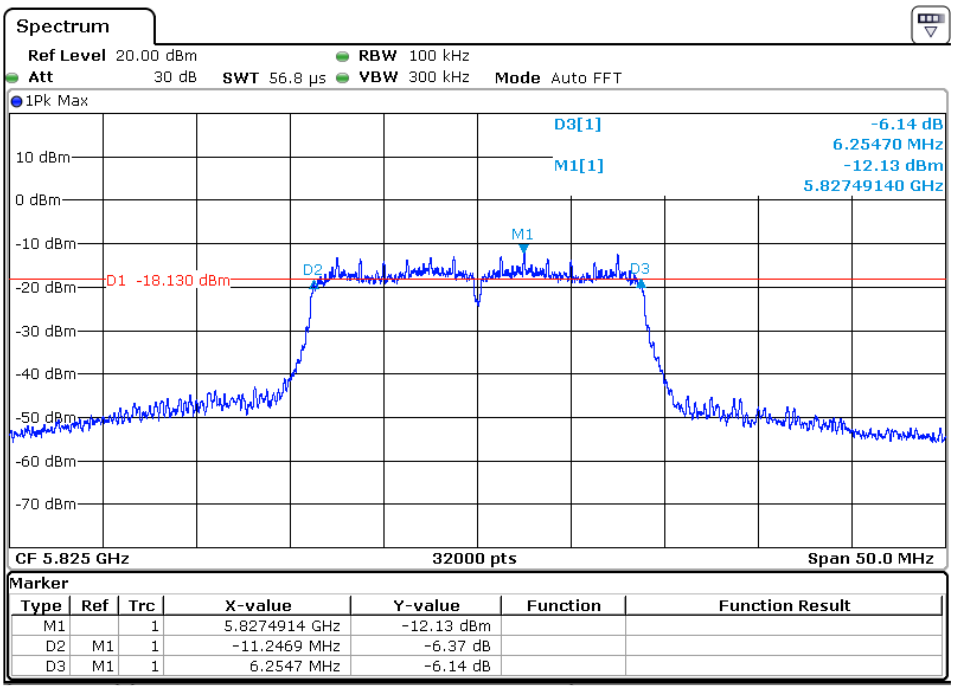




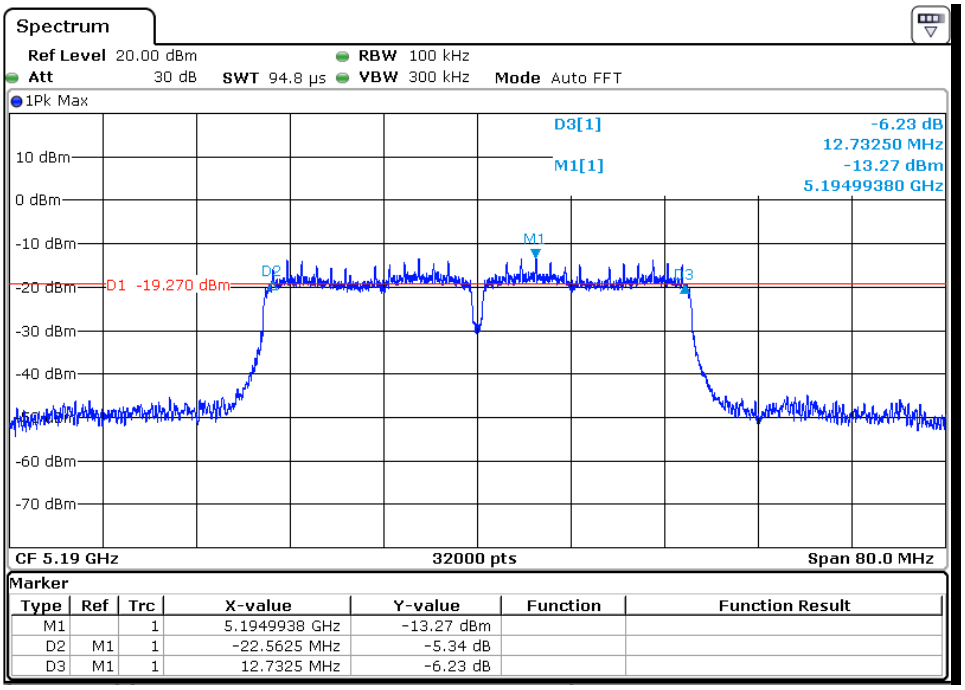

Spectrum
Ref Level 20.00 dBm
RBW 100 kHz
Att 30 dB
SWT 56.8 µs
VBW 300 kHz
Mode Auto FFT
1Pk Max
D3[1]
-6.37 dB
6.27340 MHz
M1[1]
-10.24 dBm
5.24249140 GHz
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
D1 -16.240 dBm
M1
D2
D3
CF 5.24 GHz
32000 pts
Span 50.0 MHz
Marker
Type Ref Trc X-value Y-value Function Function Result
M1 1 5.2424914 GHz -10.24 dBm
D2 M1 1 -11.2578 MHz -6.21 dB
D3 M1 1 6.2734 MHz -6.37 dB

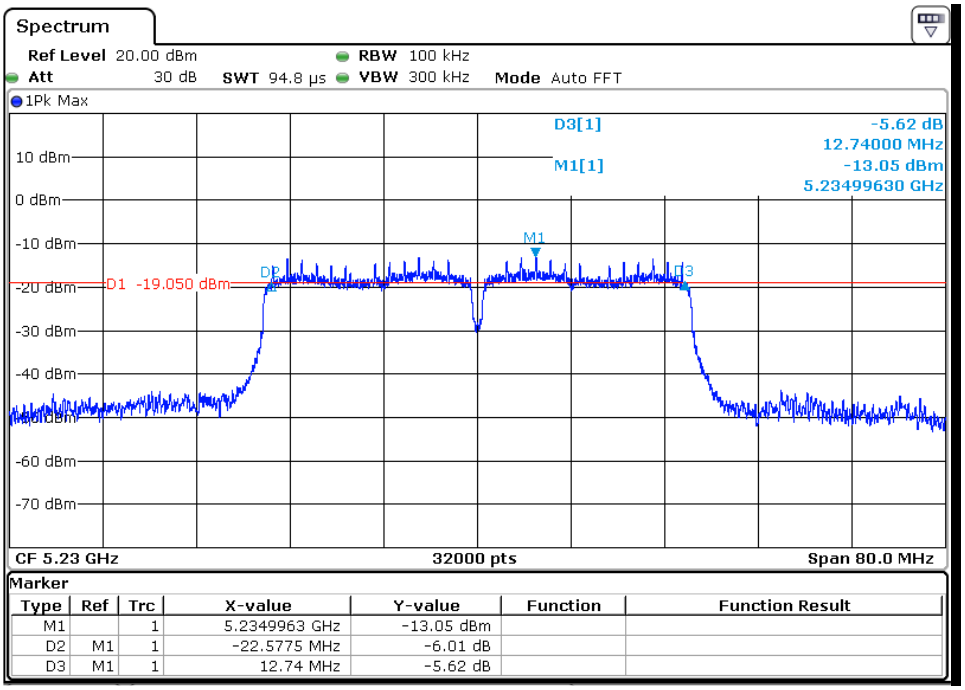

Spectrum
Ref Level 20.00 dBm
RBW 100 kHz
Att 30 dB
SWT 56.8 µs
VBW 300 kHz
Mode Auto FFT
1Pk Max
D3[1]
-5.93 dB
6.25780 MHz
M1[1]
-12.37 dBm
5.74748520 GHz
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
D1 -18.370 dBm
M1
D2
D3
CF 5.745 GHz
32000 pts
Span 50.0 MHz
Marker
Type Ref Trc X-value Y-value Function Function Result
M1 1 5.7474852 GHz -12.37 dBm
D2 M1 1 -11.2516 MHz -6.35 dB
D3 M1 1 6.2578 MHz -5.93 dB

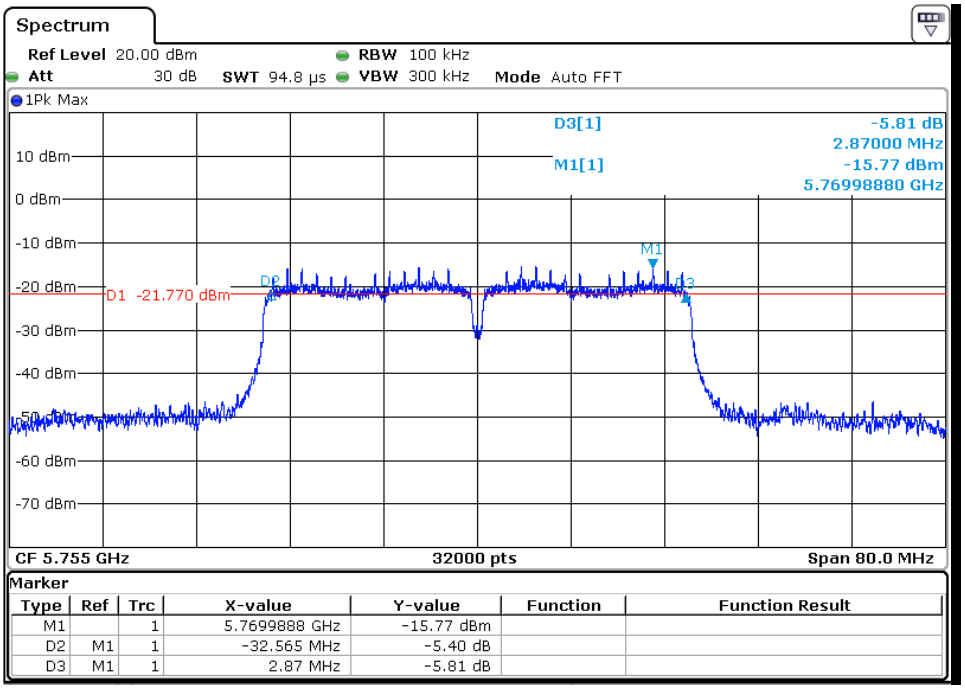

Spectrum
Ref Level 20.00 dBm
RBW 100 kHz
Att 30 dB
SWT 56.8 µs
VBW 300 kHz
Mode Auto FFT
1Pk Max
D3[1]
-6.14 dB
6.26880 MHz
M1[1]
-12.33 dBm
5.78749140 GHz
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
D1 -18.330 dBm
M1
D2
D3
CF 5.785 GHz
32000 pts
Span 50.0 MHz
Marker
Type Ref Trc X-value Y-value Function Function Result
M1 1 5.7874914 GHz -12.33 dBm
D2 M1 1 -11.2453 MHz -5.93 dB
D3 M1 1 6.2688 MHz -6.14 dB

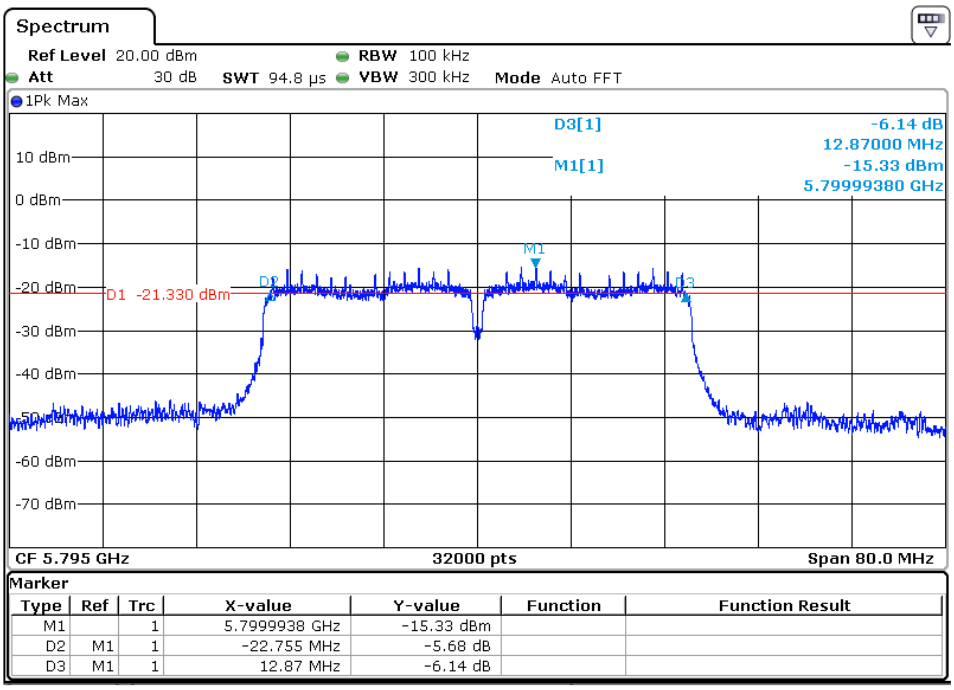

Spectrum
Ref Level 20.00 dBm
RBW 100 kHz
Att 30 dB
SWT 56.8 µs
VBW 300 kHz
Mode Auto FFT
1Pk Max
D3[1]
-6.14 dB
6.25470 MHz
M1[1]
-12.13 dBm
5.82749140 GHz
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
D1 -18.130 dBm
M1
D2
D3
CF 5.825 GHz
32000 pts
Span 50.0 MHz
Marker
Type Ref Trc X-value Y-value Function Function Result
M1 1 5.8274914 GHz -12.13 dBm
D2 M1 1 -11.2469 MHz -6.37 dB
D3 M1 1 6.2547 MHz -6.14 dB

Ant 802.11 n40

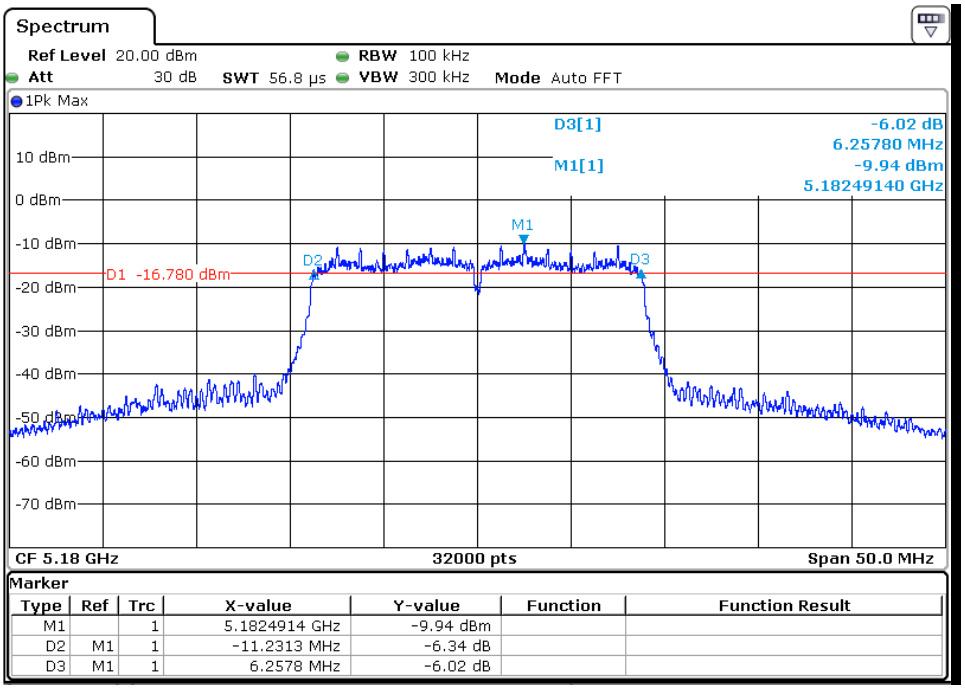


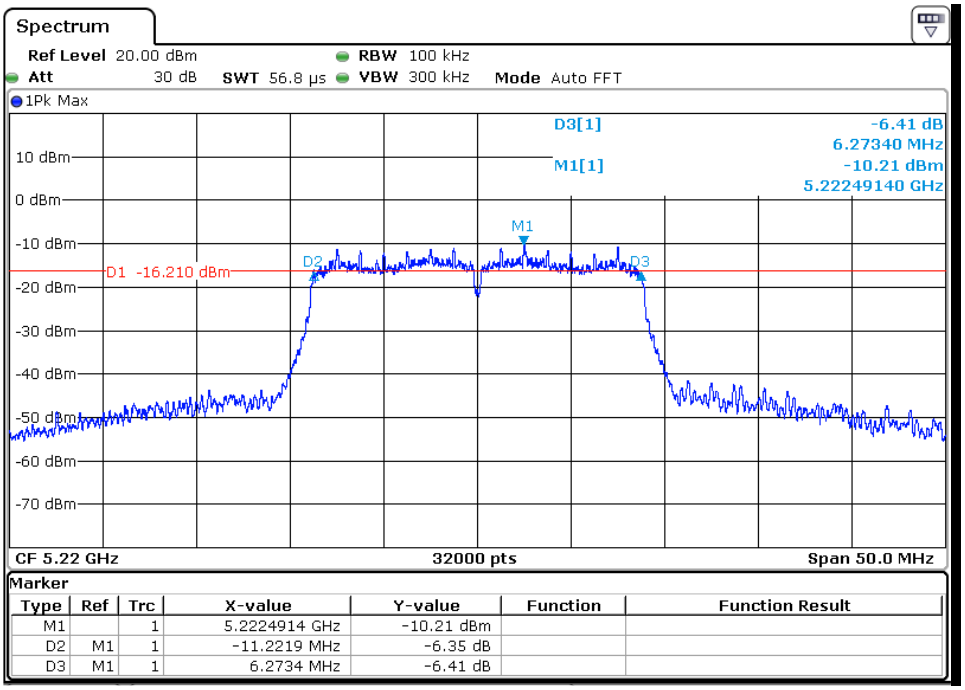


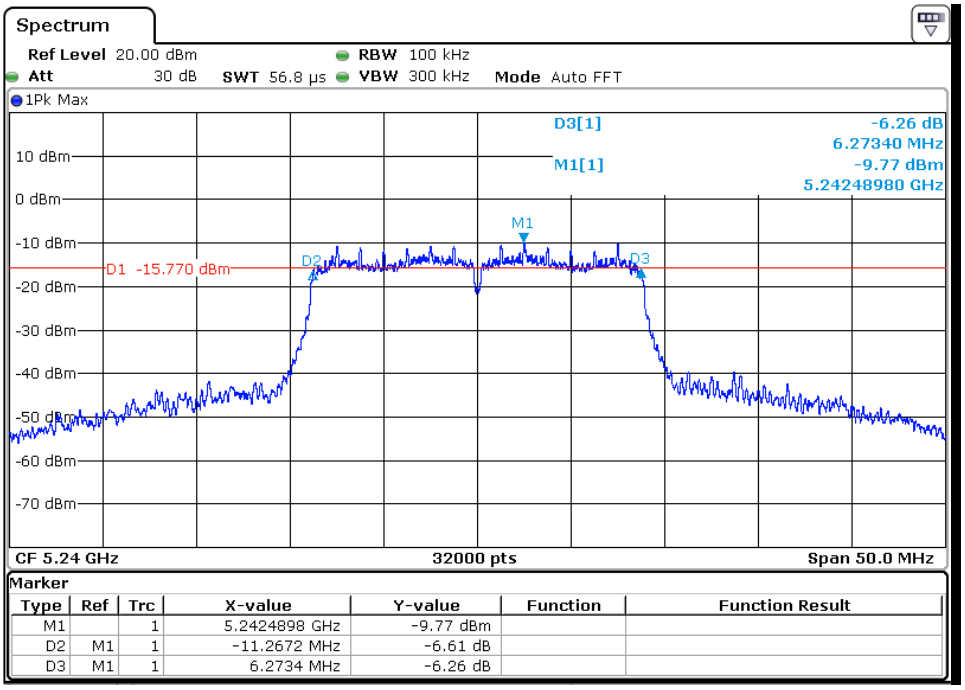

Spectrum
Ref Level 20.00 dBm
RBW 100 kHz
Att 30 dB
SWT 94.8 µs
VBW 300 kHz
Mode Auto FFT
1Pk Max
D3[1]
-5.81 dB
2.87000 MHz
M1[1]
-15.77 dBm
5.76998880 GHz
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
D1 -21.770 dBm
M1
D2
D3
CF 5.755 GHz
32000 pts
Span 80.0 MHz
Marker
Type Ref Trc X-value Y-value Function Function Result
M1 1 5.7699888 GHz -15.77 dBm
D2 M1 1 -32.565 MHz -5.40 dB
D3 M1 1 2.87 MHz -5.81 dB

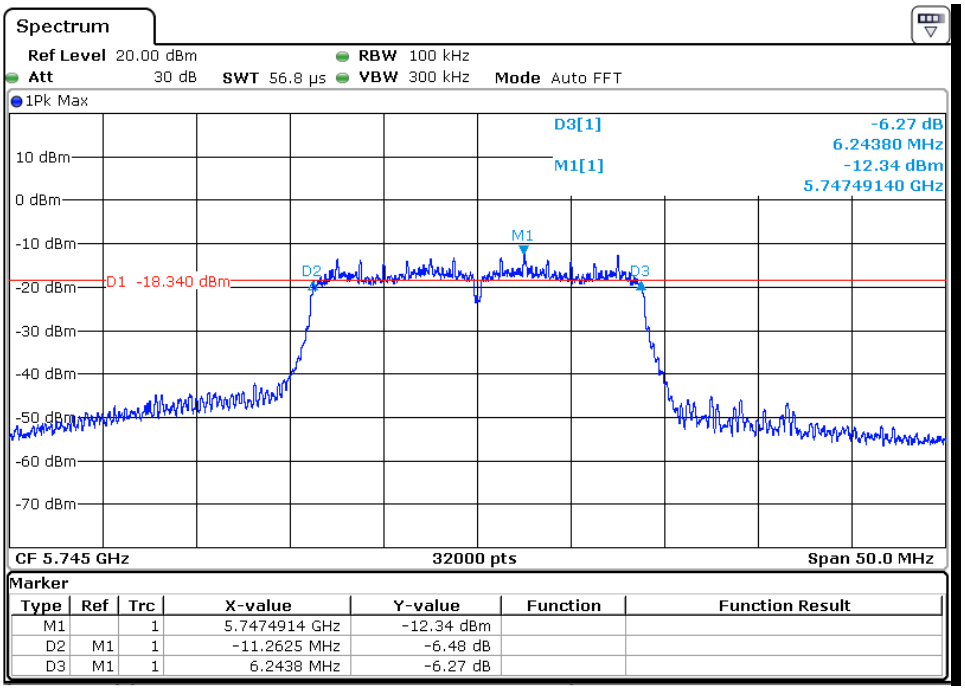

Spectrum
Ref Level 20.00 dBm
RBW 100 kHz
Att 30 dB
SWT 94.8 µs
VBW 300 kHz
Mode Auto FFT
1Pk Max
D3[1]
-6.14 dB
12.87000 MHz
M1[1]
-15.33 dBm
5.79999380 GHz
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
D1 -21.330 dBm
M1
D2
D3
CF 5.795 GHz
32000 pts
Span 80.0 MHz
Marker
Type Ref Trc X-value Y-value Function Function Result
M1 1 5.7999938 GHz -15.33 dBm
D2 M1 1 -22.755 MHz -5.68 dB
D3 M1 1 12.87 MHz -6.14 dB

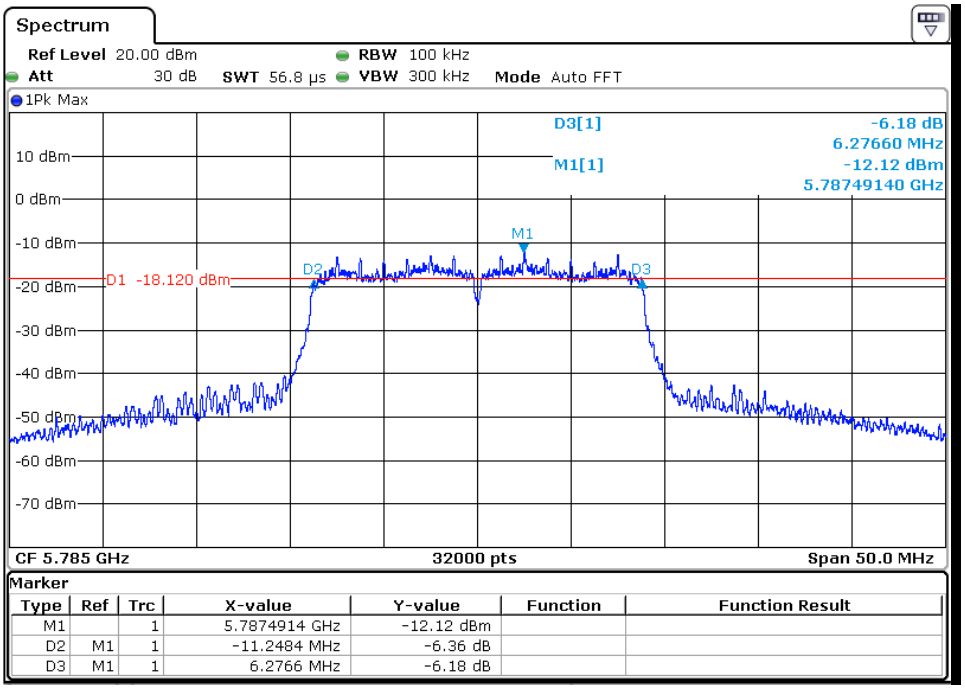
Ant 802.11 ac20

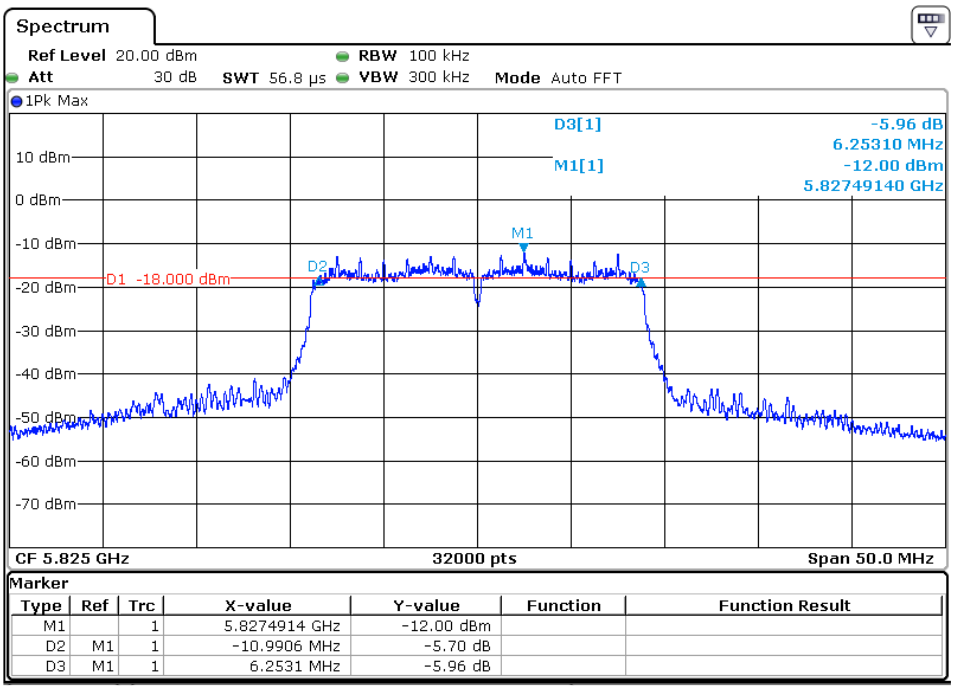




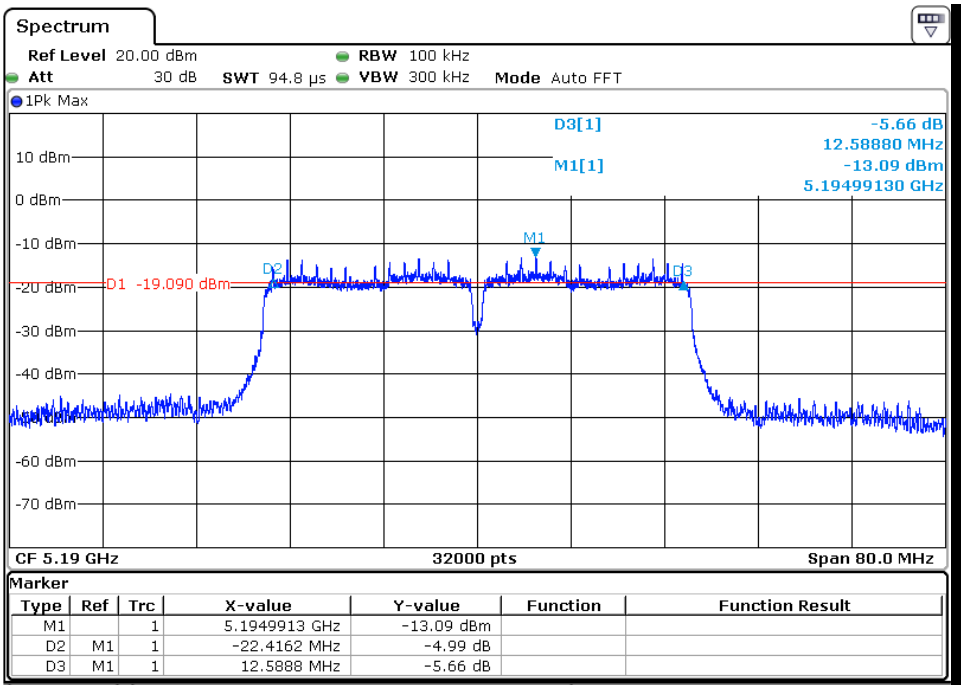

Spectrum
Ref Level 20.00 dBm
RBW 100 kHz
Att 30 dB
SWT 56.8 µs
VBW 300 kHz
Mode Auto FFT
1Pk Max
D3[1]
-6.26 dB
6.27340 MHz
M1[1]
-9.77 dBm
5.24248980 GHz
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
D1 -15.770 dBm
M1
D2
D3
CF 5.24 GHz
32000 pts
Span 50.0 MHz
Marker
Type Ref Trc X-value Y-value Function Function Result
M1 1 5.2424898 GHz -9.77 dBm
D2 M1 1 -11.2672 MHz -6.61 dB
D3 M1 1 6.2734 MHz -6.26 dB

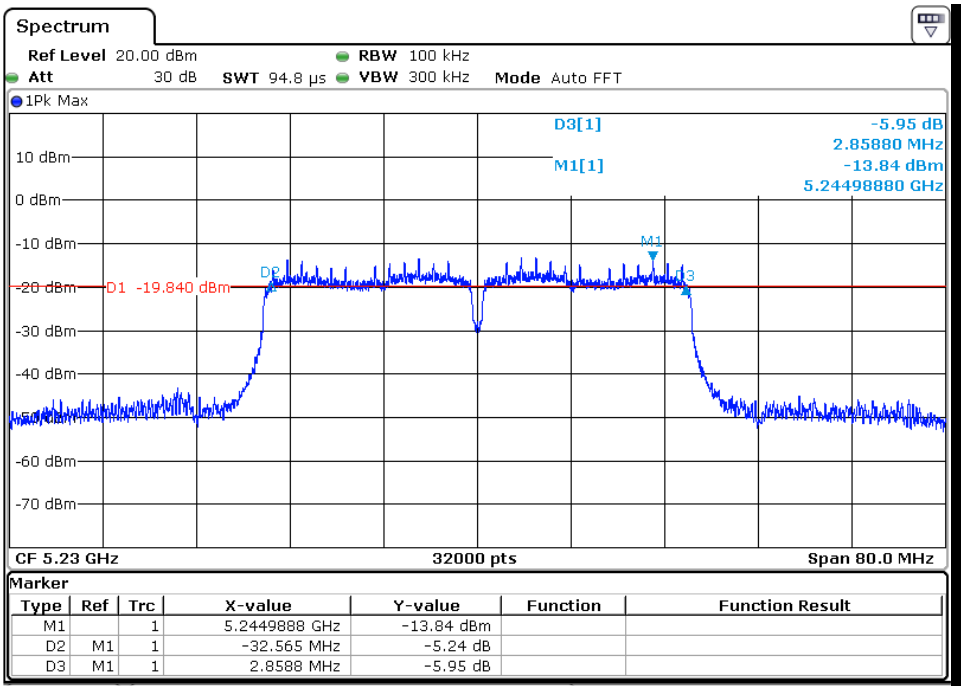

Spectrum
Ref Level 20.00 dBm
RBW 100 kHz
Att 30 dB
SWT 56.8 µs
VBW 300 kHz
Mode Auto FFT
1Pk Max
D3[1]
-6.27 dB
6.24380 MHz
M1[1]
-12.34 dBm
5.74749140 GHz
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
D1 -18.340 dBm
M1
D2
D3
CF 5.745 GHz
32000 pts
Span 50.0 MHz
Marker
Type Ref Trc X-value Y-value Function Function Result
M1 1 5.7474914 GHz -12.34 dBm
D2 M1 1 -11.2625 MHz -6.48 dB
D3 M1 1 6.2438 MHz -6.27 dB

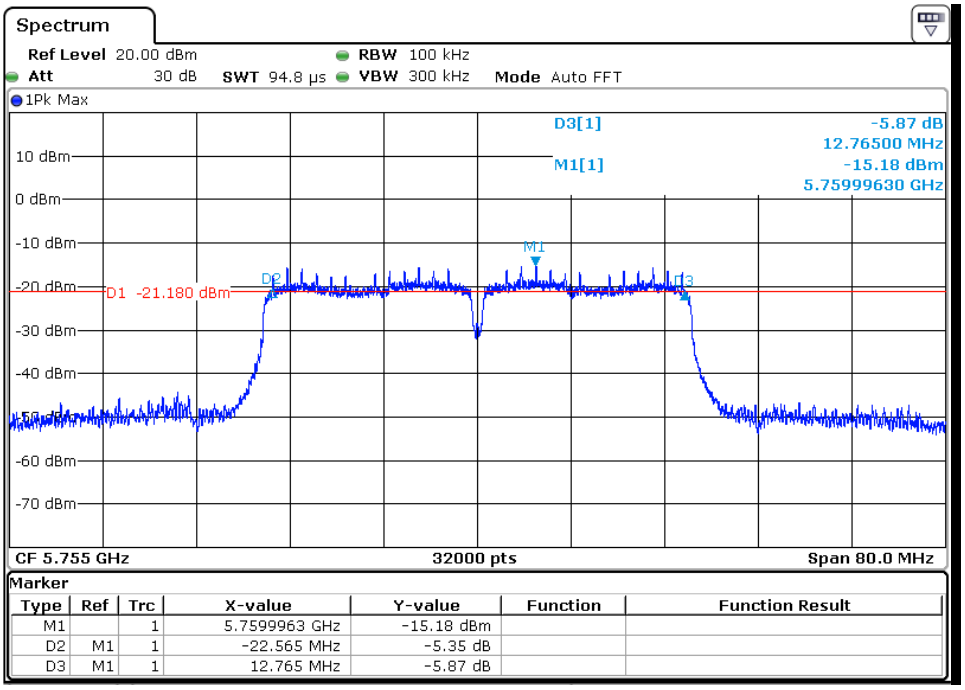

Spectrum
Ref Level 20.00 dBm
RBW 100 kHz
Att 30 dB
SWT 56.8 µs
VBW 300 kHz
Mode Auto FFT
1Pk Max
D3[1]
-6.18 dB
6.27660 MHz
M1[1]
-12.12 dBm
5.78749140 GHz
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
D1 -18.120 dBm
M1
D2
D3
CF 5.785 GHz
32000 pts
Span 50.0 MHz
Marker
Type Ref Trc X-value Y-value Function Function Result
M1 1 5.7874914 GHz -12.12 dBm
D2 M1 1 -11.2484 MHz -6.36 dB
D3 M1 1 6.2766 MHz -6.18 dB

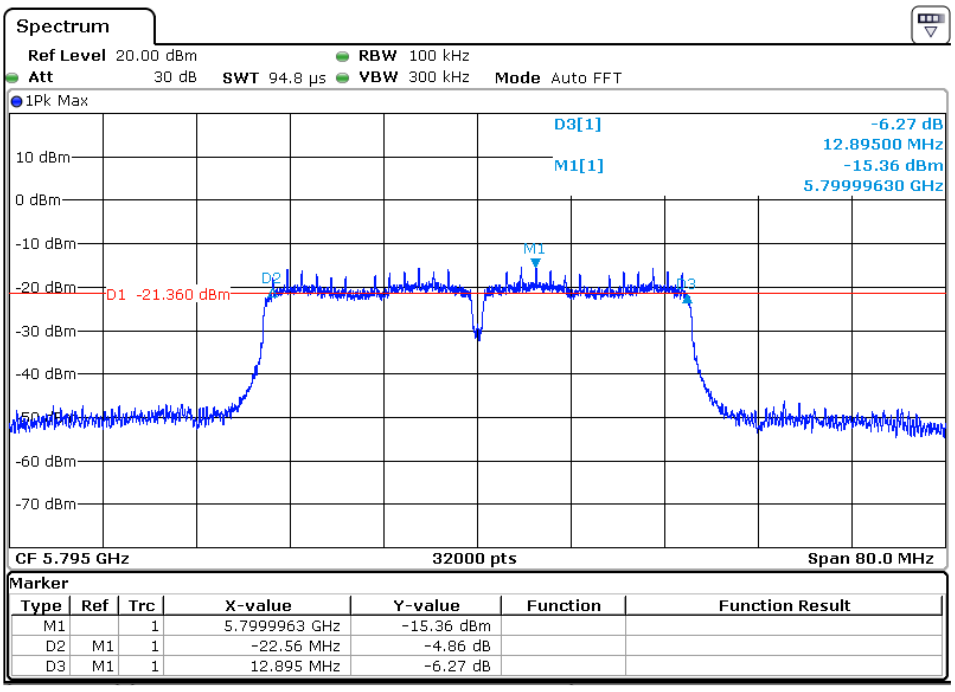

Spectrum
Ref Level 20.00 dBm
RBW 100 kHz
Att 30 dB
SWT 56.8 µs
VBW 300 kHz
Mode Auto FFT
1Pk Max
D3[1]
-5.96 dB
6.25310 MHz
M1[1]
-12.00 dBm
5.82749140 GHz
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
D1 -18.000 dBm
M1
D2
D3
CF 5.825 GHz
32000 pts
Span 50.0 MHz
Marker
Type Ref Trc X-value Y-value Function Function Result
M1 1 5.8274914 GHz -12.00 dBm
D2 M1 1 -10.9906 MHz -5.70 dB
D3 M1 1 6.2531 MHz -5.96 dB

Ant 802.11 ac40

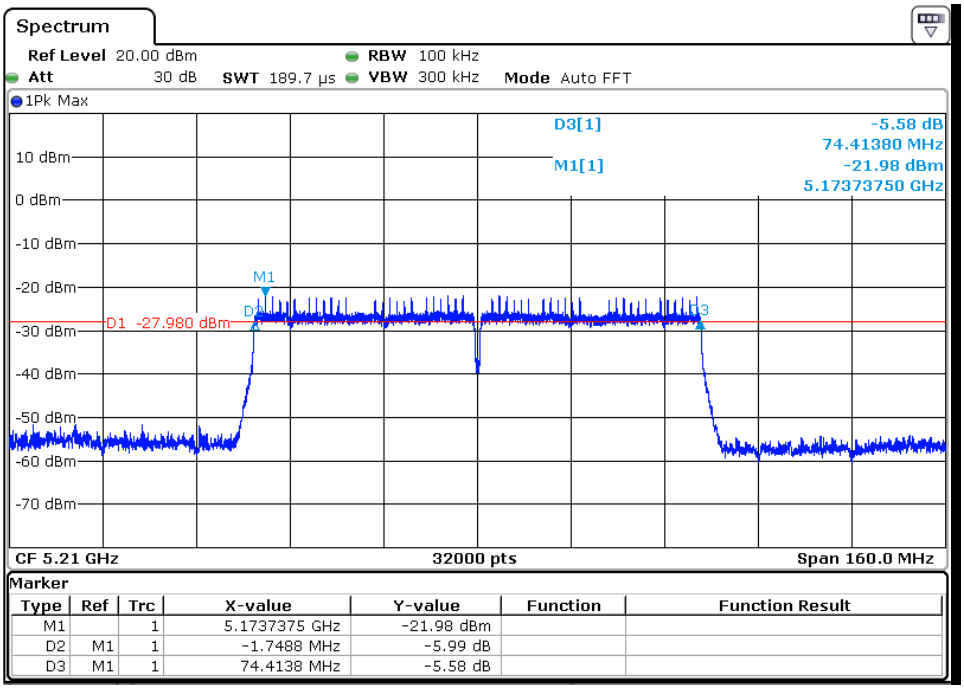


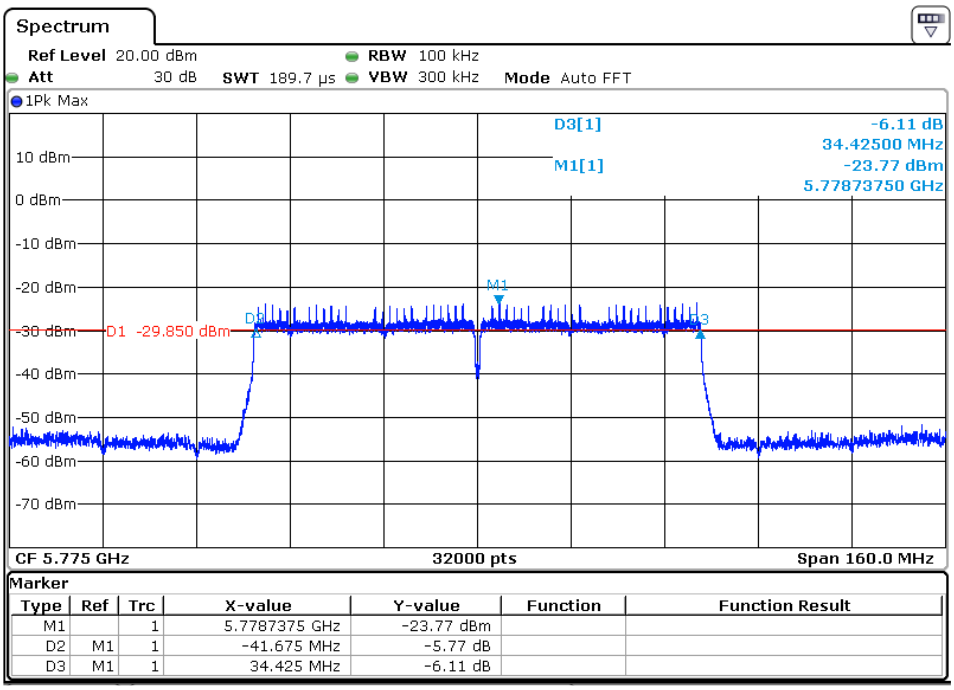



Spectrum
Ref Level 20.00 dBm
RBW 100 kHz
Att 30 dB
SWT 94.8 µs
VBW 300 kHz
Mode Auto FFT
1Pk Max
D3[1]
-5.87 dB
12.76500 MHz
M1[1]
-15.18 dBm
5.75999630 GHz
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
D1 -21.180 dBm
CF 5.755 GHz
32000 pts
Span 80.0 MHz
Marker
Type Ref Trc X-value Y-value Function Function Result
M1 1 5.7599963 GHz -15.18 dBm
D2 M1 1 -22.565 MHz -5.35 dB
D3 M1 1 12.765 MHz -5.87 dB


Spectrum
Ref Level 20.00 dBm
RBW 100 kHz
Att 30 dB
SWT 94.8 µs
VBW 300 kHz
Mode Auto FFT
1Pk Max
D3[1]
-6.27 dB
12.89500 MHz
M1[1]
-15.36 dBm
5.79999630 GHz
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
D1 -21.360 dBm
CF 5.795 GHz
32000 pts
Span 80.0 MHz
Marker
Type Ref Trc X-value Y-value Function Function Result
M1 1 5.7999963 GHz -15.36 dBm
D2 M1 1 -22.56 MHz -4.86 dB
D3 M1 1 12.895 MHz -6.27 dB

Ant 802.11 ac80





5.5 Peak Power Density

5.5.1 Applied procedures / Limit

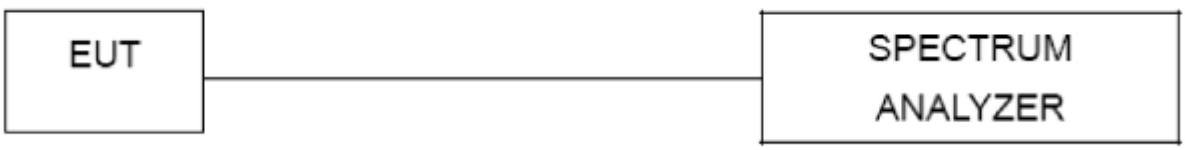
1.For the band 5.150-5.250 GHz, the peak power spectral density shall not exceed 11 dBm in any 1000KHz band.
2.For the band 5.725-5.850 GHz, the peak power spectral density shall not exceed 30 dBm in any 500KHz band. If transmitting antenna directional gain is greater than 6 dBi, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

5.5.2 Test procedure

1. The setting follows Method SA-1 of FCC KDB 789033 D02 General UNII Test Procedures New Rules v01 . For devices operating in the band, the rules specify a measurement bandwidth of 500 kHz. Many spectrum analyzers do not have 500 kHz RBW, thus a narrower RBW may need to be used. The rules permit the use of a RBWs less than 1 MHz, or 500 kHz, “provided that the measured power is integrated over the full reference bandwidth” to show the total power over the specified measurement bandwidth (*i.e.,* 1 MHz, or 500 kHz). If measurements are performed using a reduced resolution bandwidth (< 1 MHz, or < 500 kHz) and integrated over 1 MHz, or 500 KHz bandwidth, the following adjustments to the procedures apply:

   a) Set RBW ≥ 1/T, where T is defined in section II.B.I.a).
   b) Set VBW ≥ 3 RBW.
   c) If measurement bandwidth of Maximum PSD is specified in 500 kHz, add 10log(500kHz/RBW) to the measured result, whereas RBW (< 500 KHz) is the reduced resolution bandwidth of the spectrum analyzer set during measurement.
   d) If measurement bandwidth of Maximum PSD is specified in 1 MHz, add 10log(1MHz/RBW) to the measured result, whereas RBW (< 1 MHz) is the reduced resolution bandwidth of spectrum analyzer set during measurement.
   e) Care must be taken to ensure that the measurements are performed during a period of continuous transmission or are corrected upward for duty cycle.

5.5.3 TEST SETUP



5.5.4 Deviation from standard

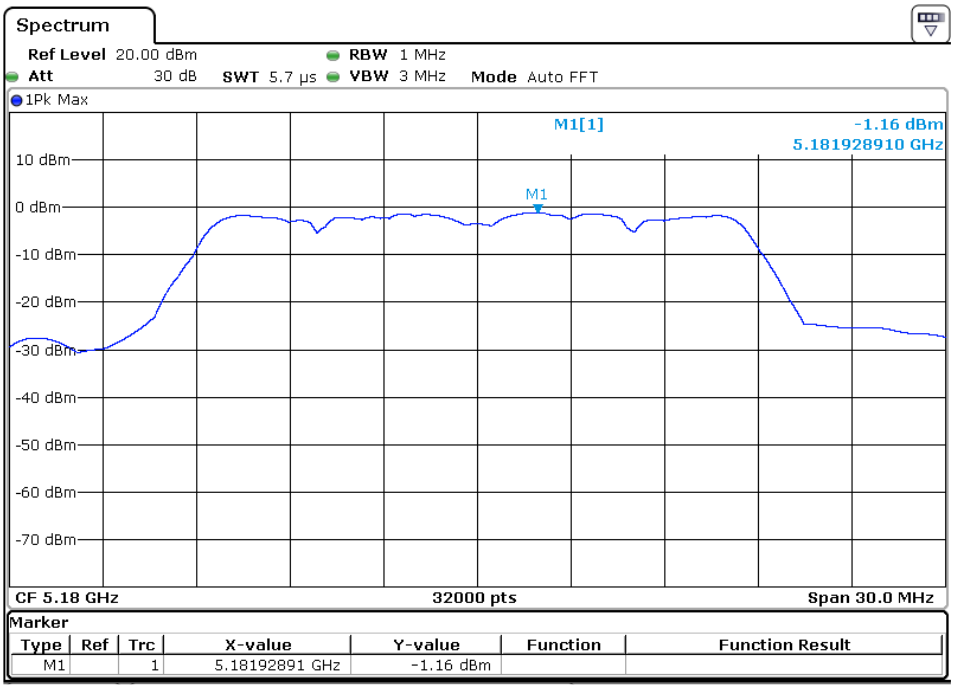
No deviation.

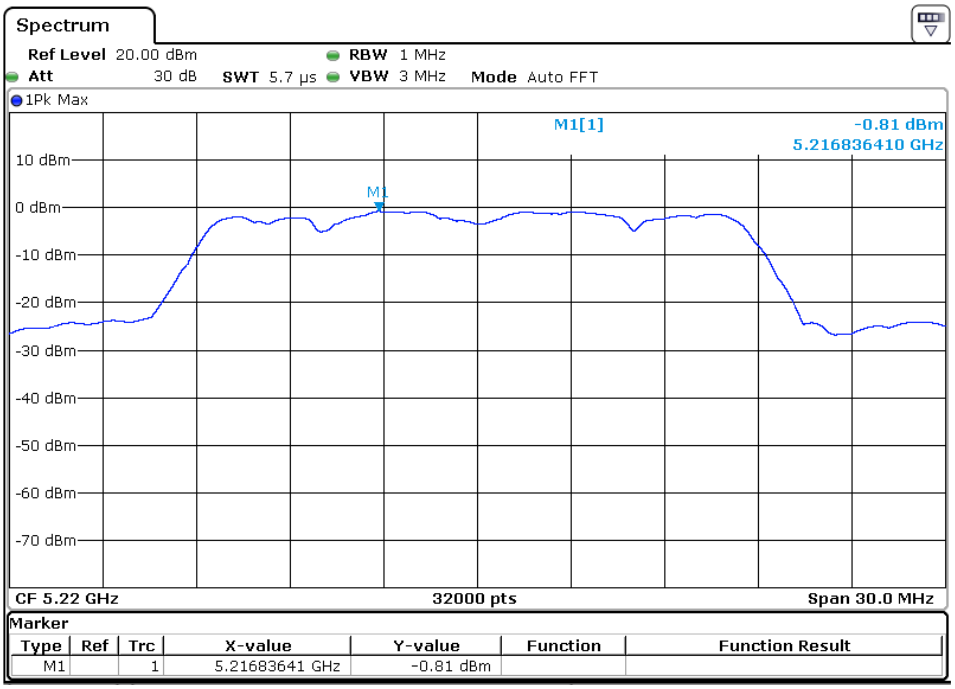
5.5.5 Test results

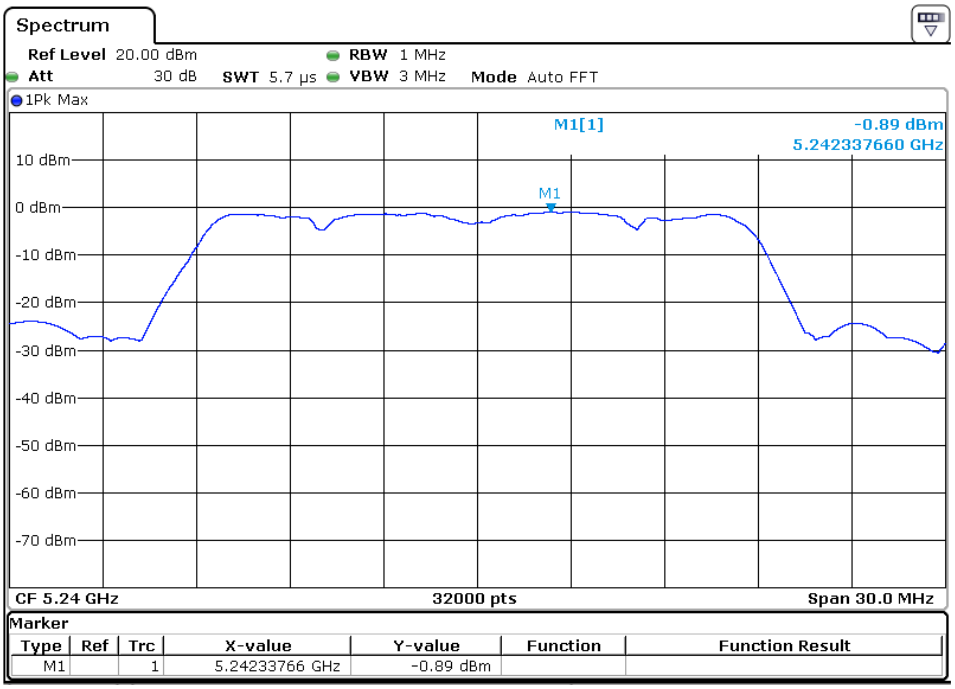
Test Mode	NTx	Data Rate (Mbps)	Channel No.	Freq. (MHz)	Ant PSD (dBm/MHz)	Limit (dBm /MHz)	Result
11a	2	6	36	5180	-1.16	11.00	Pass
11a	2	6	44	5220	-0.81	11.00	Pass
11a	2	6	48	5240	-0.89	11.00	Pass
11n-HT20	2	7.2	36	5180	-0.48	11.00	Pass
11n-HT20	2	7.2	44	5220	-0.82	11.00	Pass
11n-HT20	2	7.2	48	5240	-0.98	11.00	Pass
11n-HT40	2	15	38	5190	-4.19	11.00	Pass
11n-HT40	2	15	46	5230	-4.25	11.00	Pass
11ac-VHT20	2	7.2	36	5180	-1.02	11.00	Pass
11ac-VHT20	2	7.2	44	5220	-0.90	11.00	Pass
11ac-VHT20	2	7.2	48	5240	-0.64	11.00	Pass
11ac-VHT40	2	15	38	5190	-2.99	11.00	Pass
11ac-VHT40	2	15	46	5230	-2.83	11.00	Pass
11ac-VHT80	2	32.5	42	5210	-3.16	11.00	Pass
11a	2	6	149	5745	-3.31	30.00	Pass
11a	2	6	157	5785	-3.15	30.00	Pass
11a	2	6	165	5825	-2.58	30.00	Pass
11n-HT20	2	7.2	149	5745	-2.67	30.00	Pass
11n-HT20	2	7.2	157	5785	-3.35	30.00	Pass
11n-HT20	2	7.2	165	5825	-2.94	30.00	Pass
11n-HT40	2	15	151	5755	-5.94	30.00	Pass
11n-HT40	2	15	159	5795	-5.95	30.00	Pass
11ac-VHT20	2	7.2	149	5745	-2.99	30.00	Pass
11ac-VHT20	2	7.2	157	5785	-2.83	30.00	Pass
11ac-VHT20	2	7.2	165	5825	-3.16	30.00	Pass
11ac-VHT40	2	15	151	5755	-5.94	30.00	Pass
11ac-VHT40	2	15	159	5795	-5.28	30.00	Pass
11ac-VHT80	2	32.5	155	5775	-14.39	30.00	Pass

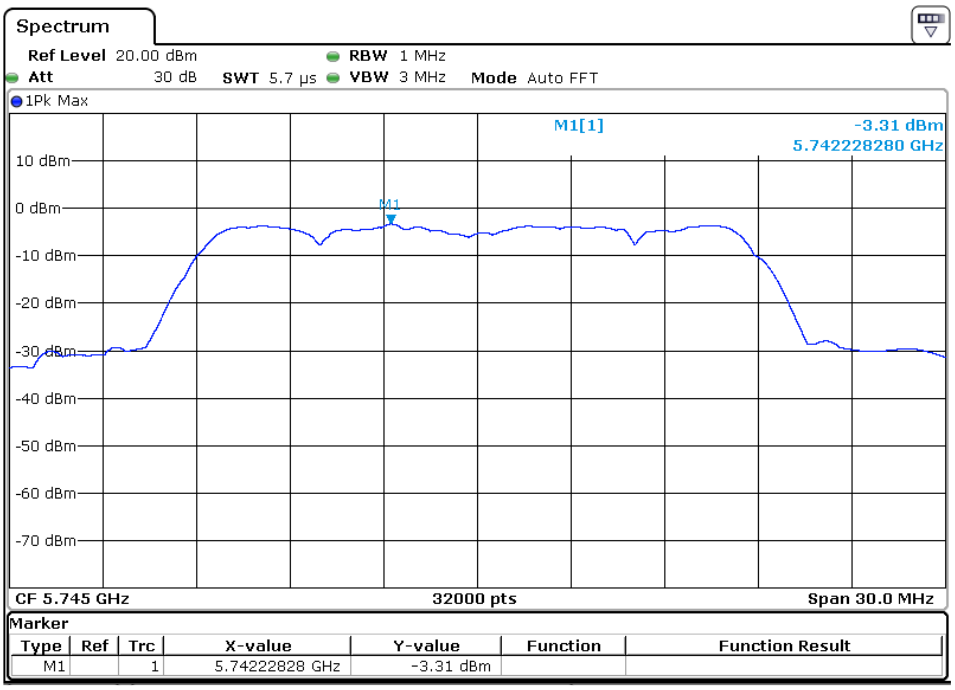
Result plot as follows:

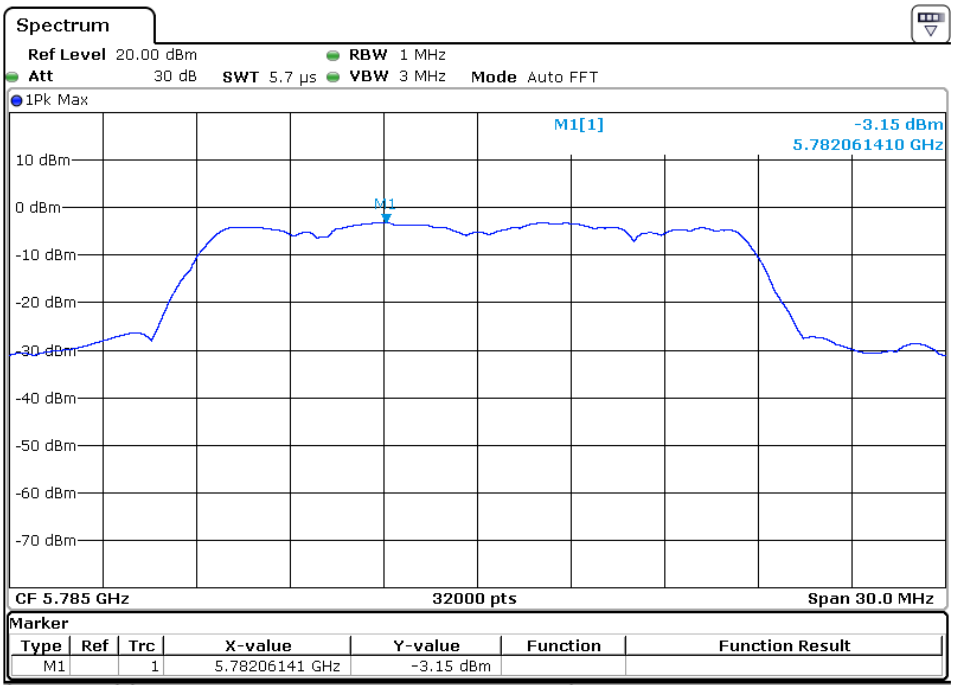
Ant 802.11 a

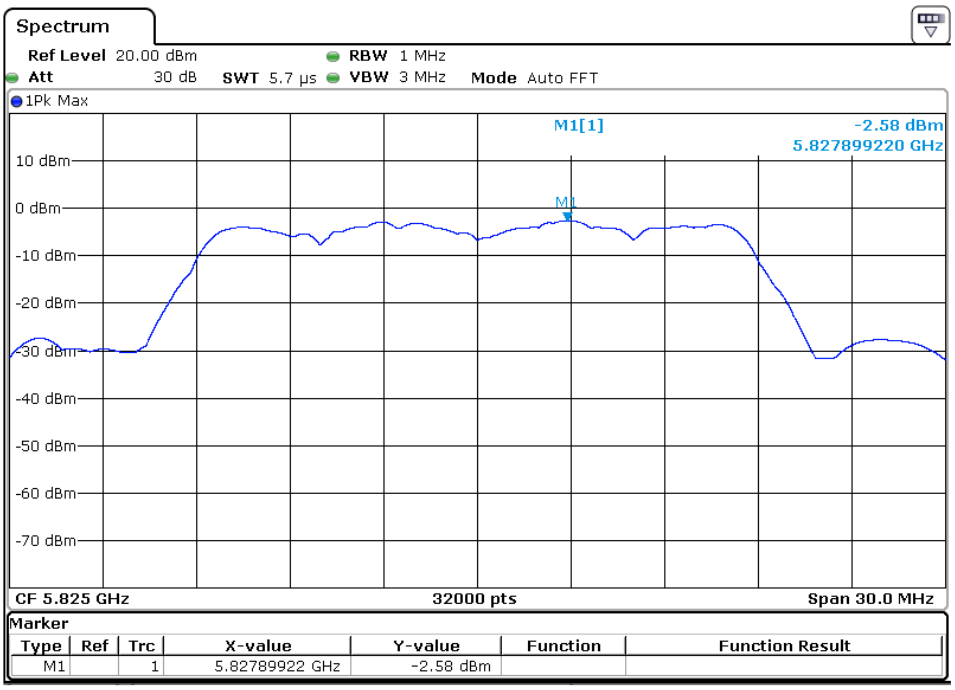




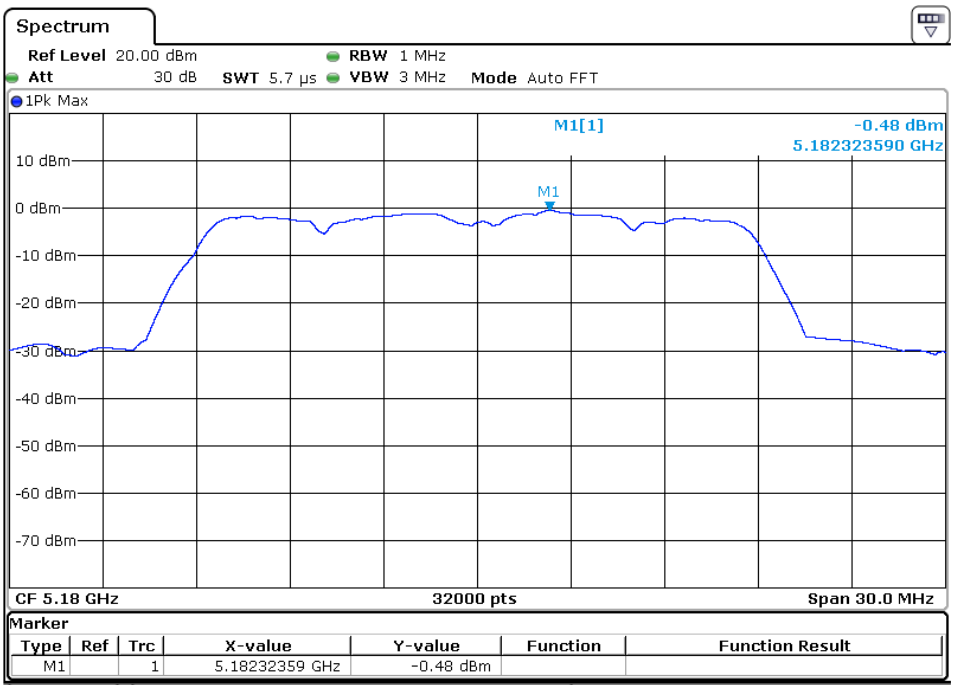

Spectrum
Ref Level 20.00 dBm
RBW 1 MHz
Att 30 dB
SWT 5.7 µs
VBW 3 MHz
Mode Auto FFT
1Pk Max
M1[1]
-0.89 dBm
5.242337660 GHz
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
M1
CF 5.24 GHz
32000 pts
Span 30.0 MHz
Marker
Type Ref Trc X-value Y-value Function Function Result
M1 1 5.24233766 GHz -0.89 dBm

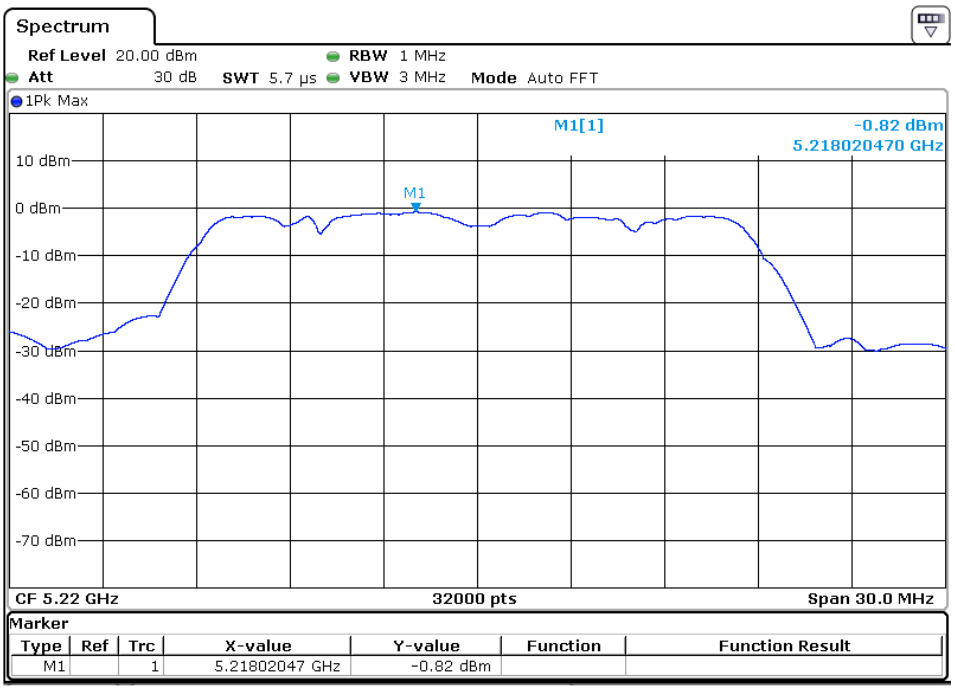

Spectrum
Ref Level 20.00 dBm
RBW 1 MHz
Att 30 dB
SWT 5.7 µs
VBW 3 MHz
Mode Auto FFT
1Pk Max
M1[1]
-3.31 dBm
5.742228280 GHz
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
M1
CF 5.745 GHz
32000 pts
Span 30.0 MHz
Marker
Type Ref Trc X-value Y-value Function Function Result
M1 1 5.74222828 GHz -3.31 dBm

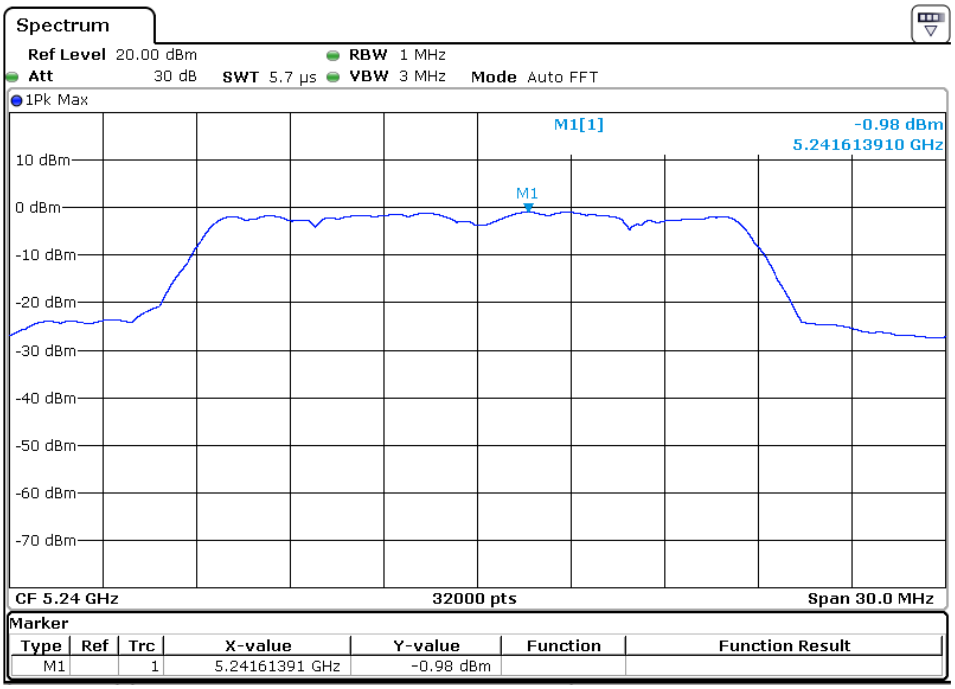

Spectrum
Ref Level 20.00 dBm
RBW 1 MHz
Att 30 dB
SWT 5.7 µs
VBW 3 MHz
Mode Auto FFT
1Pk Max
M1[1]
-3.15 dBm
5.782061410 GHz
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
M1
CF 5.785 GHz
32000 pts
Span 30.0 MHz
Marker
Type Ref Trc X-value Y-value Function Function Result
M1 1 5.78206141 GHz -3.15 dBm

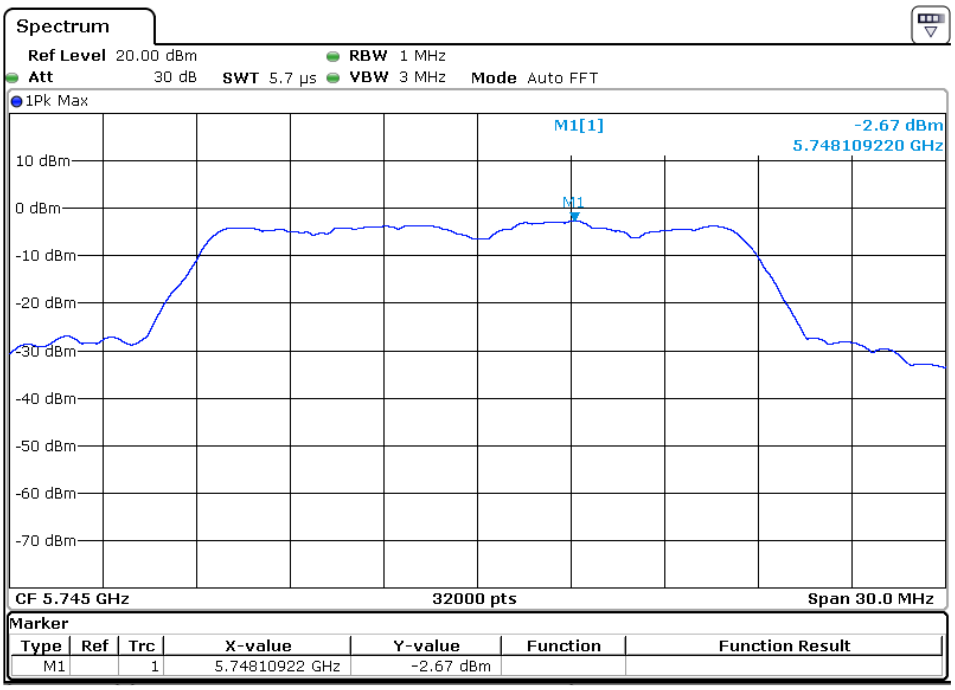

Spectrum
Ref Level 20.00 dBm
RBW 1 MHz
Att 30 dB
SWT 5.7 µs
VBW 3 MHz
Mode Auto FFT
1Pk Max
M1[1]
-2.58 dBm
5.827899220 GHz
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
M1
CF 5.825 GHz
32000 pts
Span 30.0 MHz
Marker
Type Ref Trc X-value Y-value Function Function Result
M1 1 5.82789922 GHz -2.58 dBm

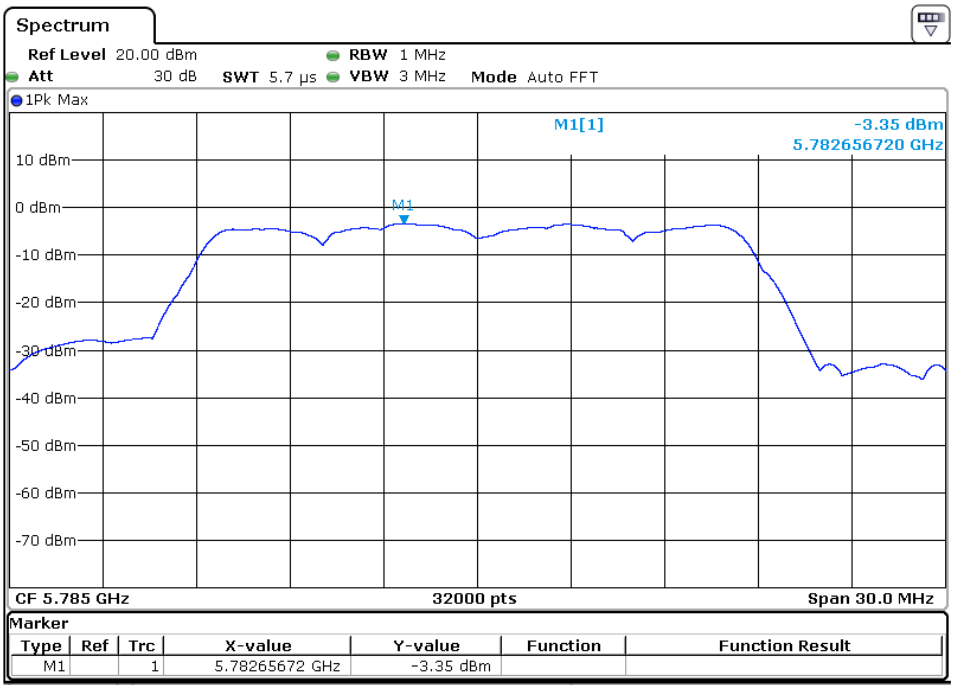
Ant 802.11 n20

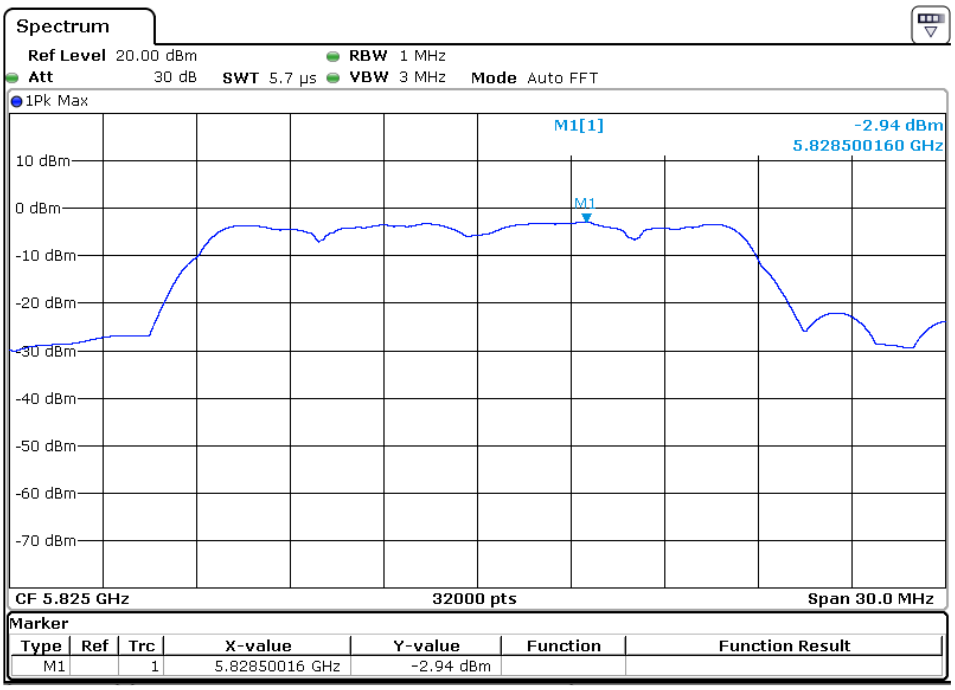




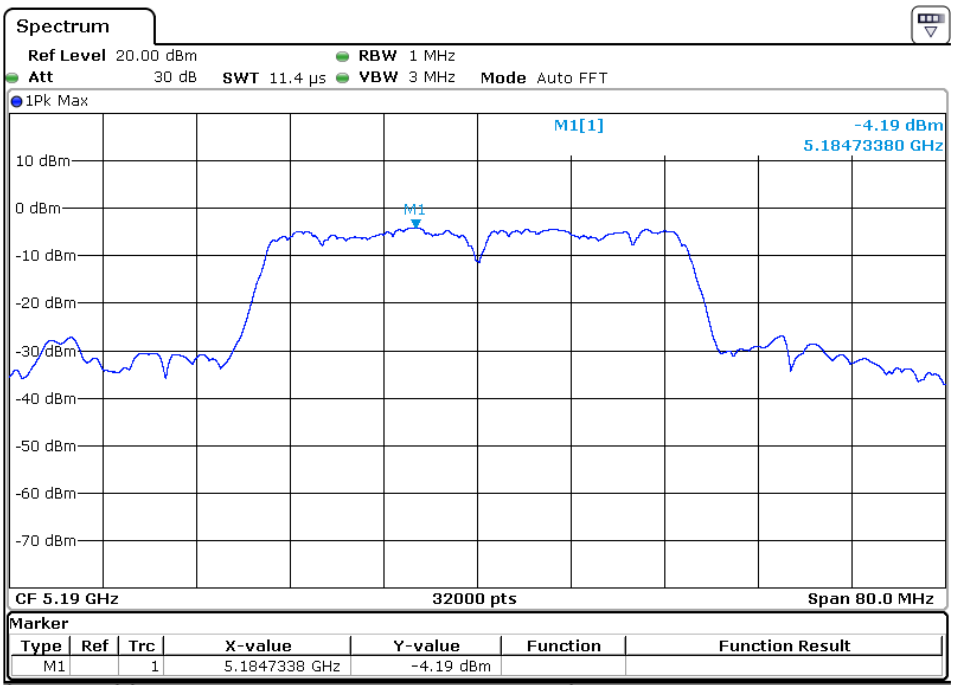

Spectrum
Ref Level 20.00 dBm
RBW 1 MHz
Att 30 dB
SWT 5.7 µs
VBW 3 MHz
Mode Auto FFT
1Pk Max
M1[1]
-0.98 dBm
5.241613910 GHz
M1
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
CF 5.24 GHz
32000 pts
Span 30.0 MHz
Marker
Type Ref Trc X-value Y-value Function Function Result
M1 1 5.24161391 GHz -0.98 dBm

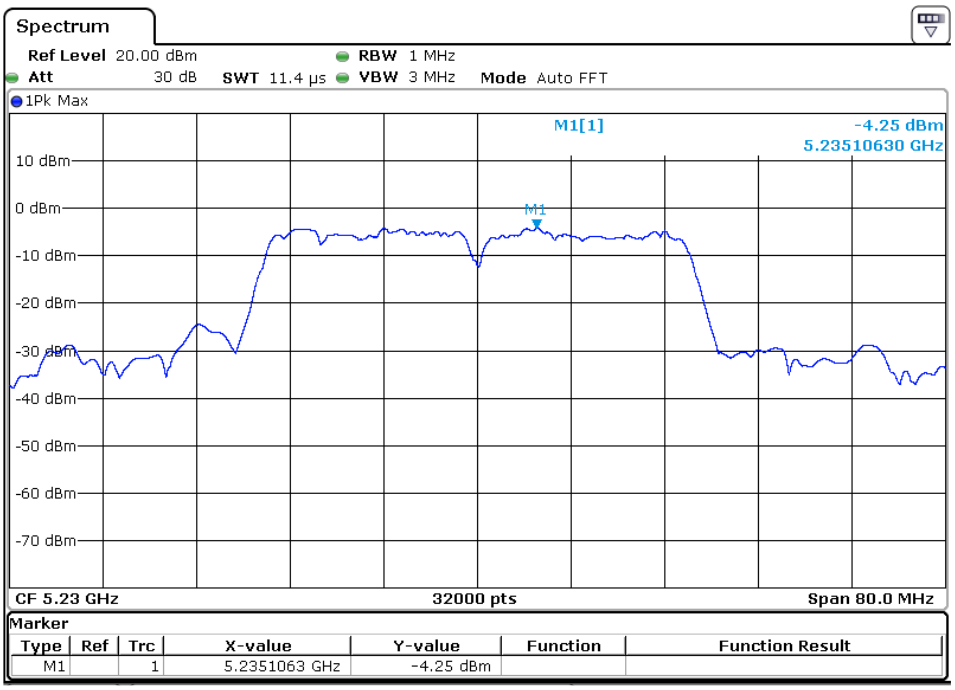

Spectrum
Ref Level 20.00 dBm
RBW 1 MHz
Att 30 dB
SWT 5.7 µs
VBW 3 MHz
Mode Auto FFT
1Pk Max
M1[1]
-2.67 dBm
5.748109220 GHz
M1
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
CF 5.745 GHz
32000 pts
Span 30.0 MHz
Marker
Type Ref Trc X-value Y-value Function Function Result
M1 1 5.74810922 GHz -2.67 dBm

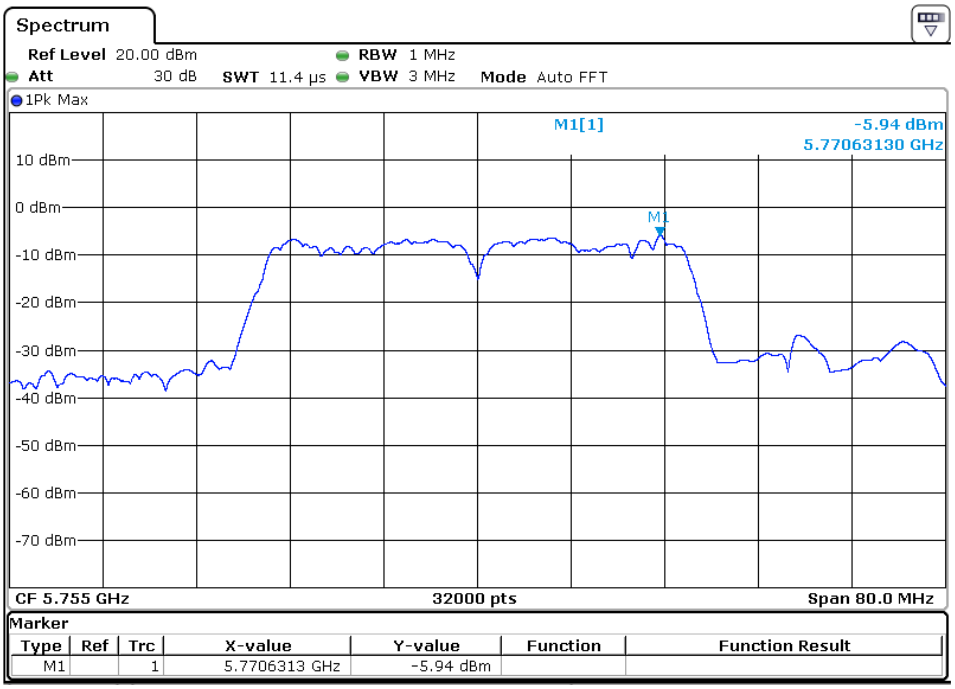

Spectrum
Ref Level 20.00 dBm
RBW 1 MHz
Att 30 dB
SWT 5.7 µs
VBW 3 MHz
Mode Auto FFT
1Pk Max
M1[1]
-3.35 dBm
5.782656720 GHz
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
M1
CF 5.785 GHz
32000 pts
Span 30.0 MHz
Marker
Type Ref Trc X-value Y-value Function Function Result
M1 1 5.78265672 GHz -3.35 dBm

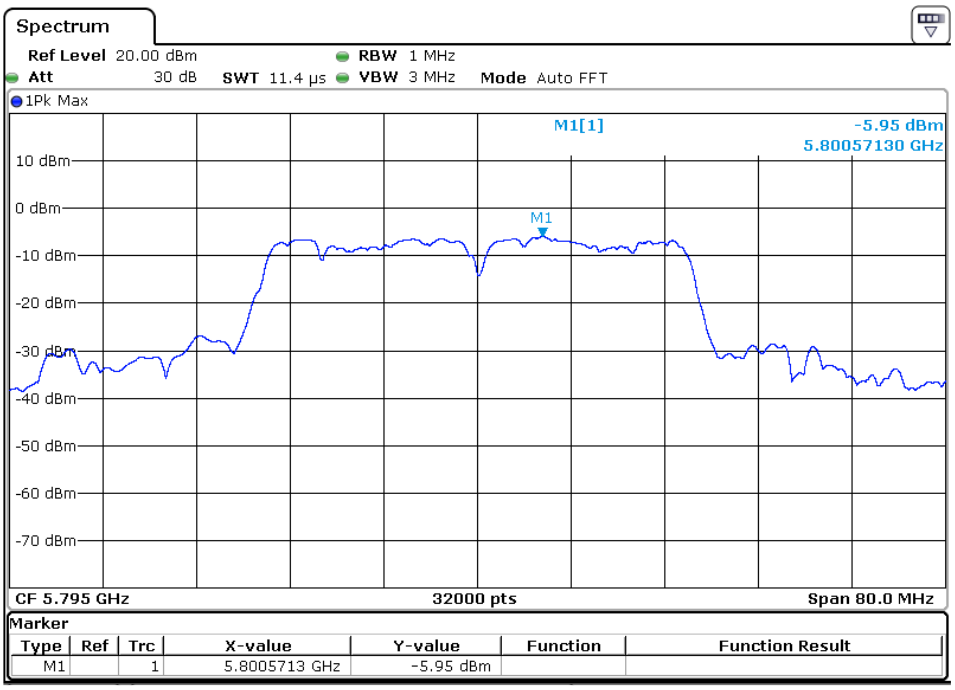

Spectrum
Ref Level 20.00 dBm
RBW 1 MHz
Att 30 dB
SWT 5.7 µs
VBW 3 MHz
Mode Auto FFT
1Pk Max
M1[1]
-2.94 dBm
5.828500160 GHz
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
M1
CF 5.825 GHz
32000 pts
Span 30.0 MHz
Marker
Type Ref Trc X-value Y-value Function Function Result
M1 1 5.82850016 GHz -2.94 dBm

Ant 802.11 n40

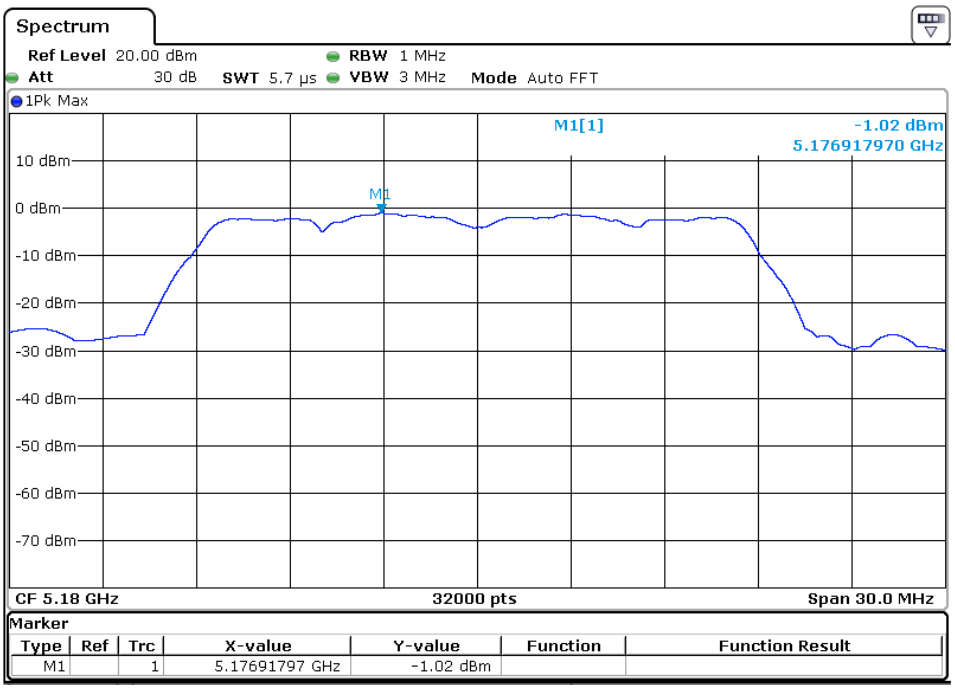


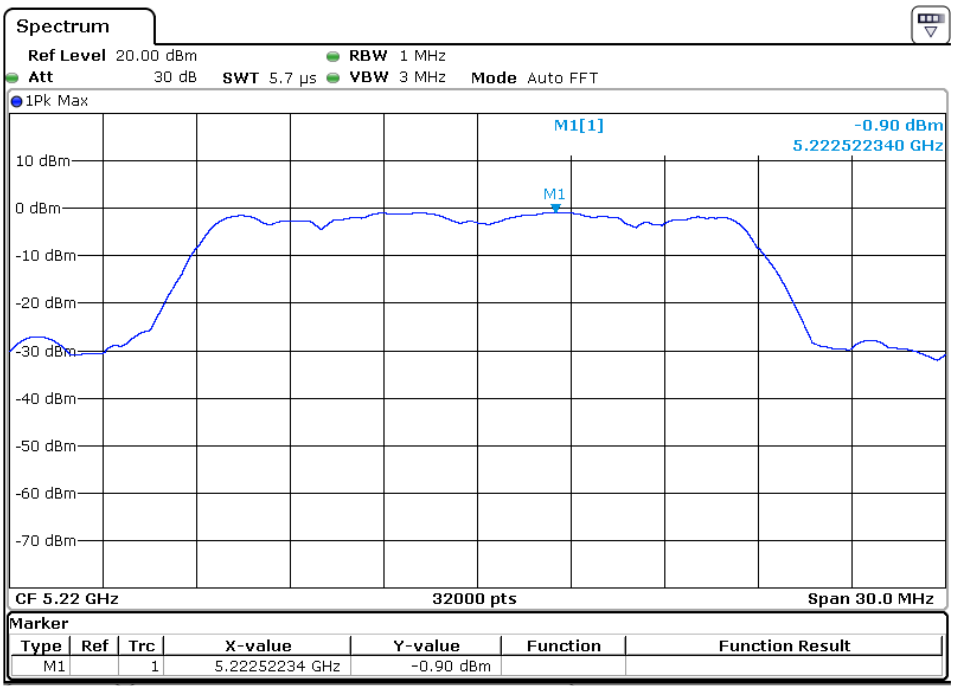


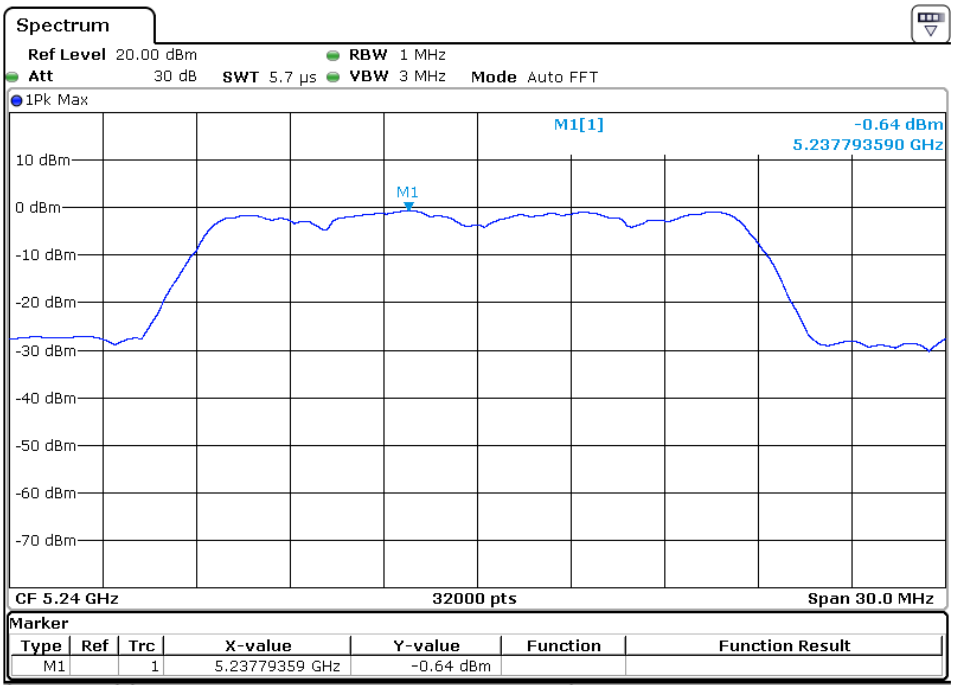

Spectrum
Ref Level 20.00 dBm
RBW 1 MHz
Att 30 dB
SWT 11.4 µs
VBW 3 MHz
Mode Auto FFT
1Pk Max
M1[1]
-5.94 dBm
5.77063130 GHz
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
M1
CF 5.755 GHz
32000 pts
Span 80.0 MHz
Marker
Type Ref Trc X-value Y-value Function Function Result
M1 1 5.7706313 GHz -5.94 dBm

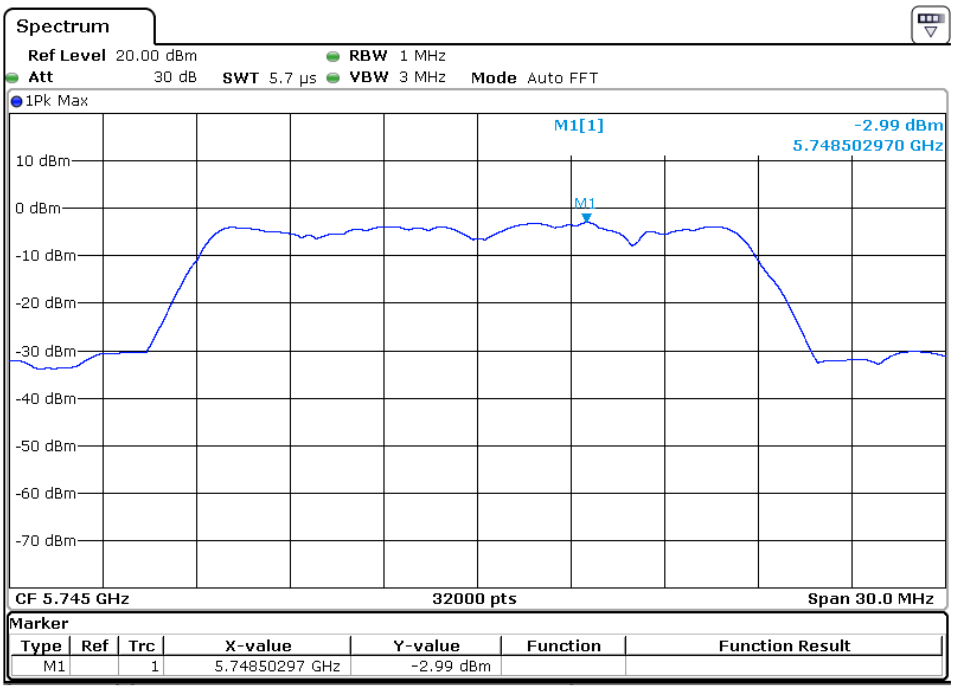

Spectrum
Ref Level 20.00 dBm
RBW 1 MHz
Att 30 dB
SWT 11.4 µs
VBW 3 MHz
Mode Auto FFT
1Pk Max
M1[1]
-5.95 dBm
5.80057130 GHz
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
M1
CF 5.795 GHz
32000 pts
Span 80.0 MHz
Marker
Type Ref Trc X-value Y-value Function Function Result
M1 1 5.8005713 GHz -5.95 dBm

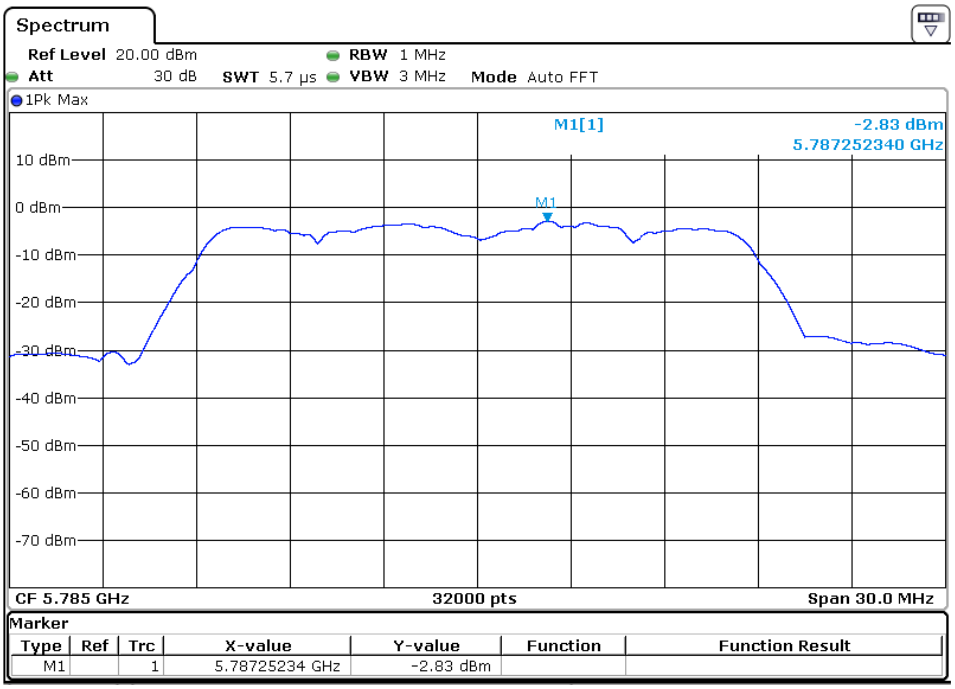
Ant 802.11 ac20

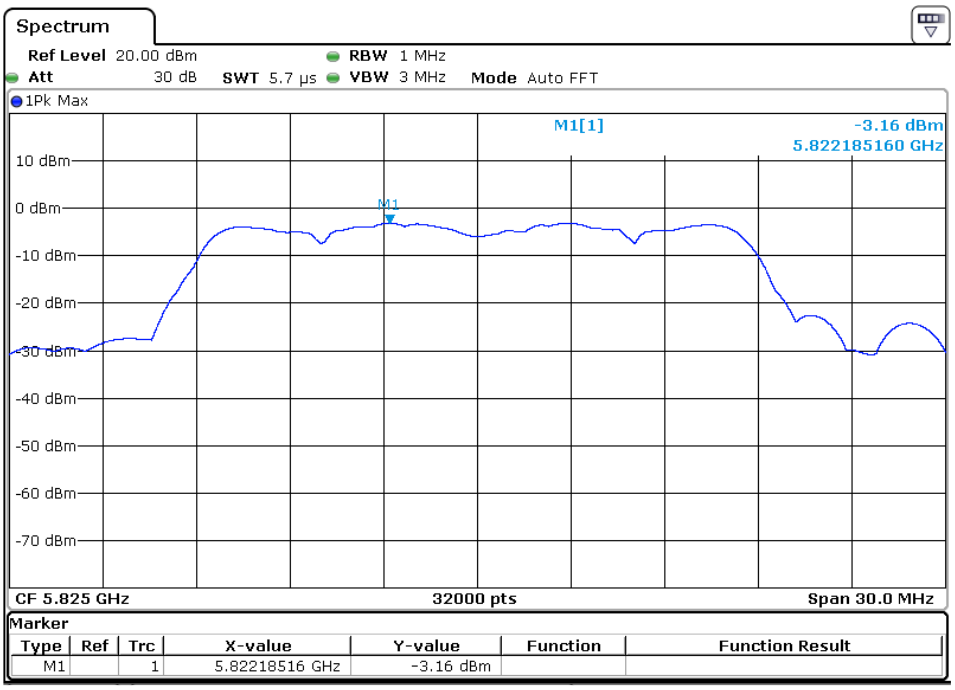




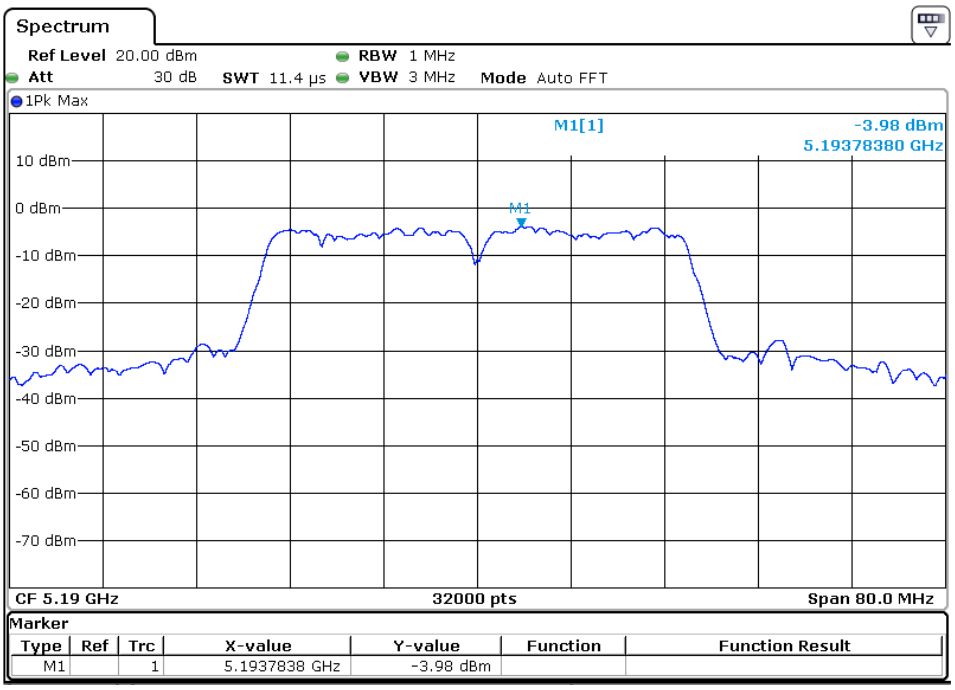

Spectrum
Ref Level 20.00 dBm
RBW 1 MHz
Att 30 dB
SWT 5.7 µs
VBW 3 MHz
Mode Auto FFT
1Pk Max
M1[1]
-0.64 dBm
5.237793590 GHz
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
M1
CF 5.24 GHz
32000 pts
Span 30.0 MHz
Marker
Type Ref Trc X-value Y-value Function Function Result
M1 1 5.23779359 GHz -0.64 dBm

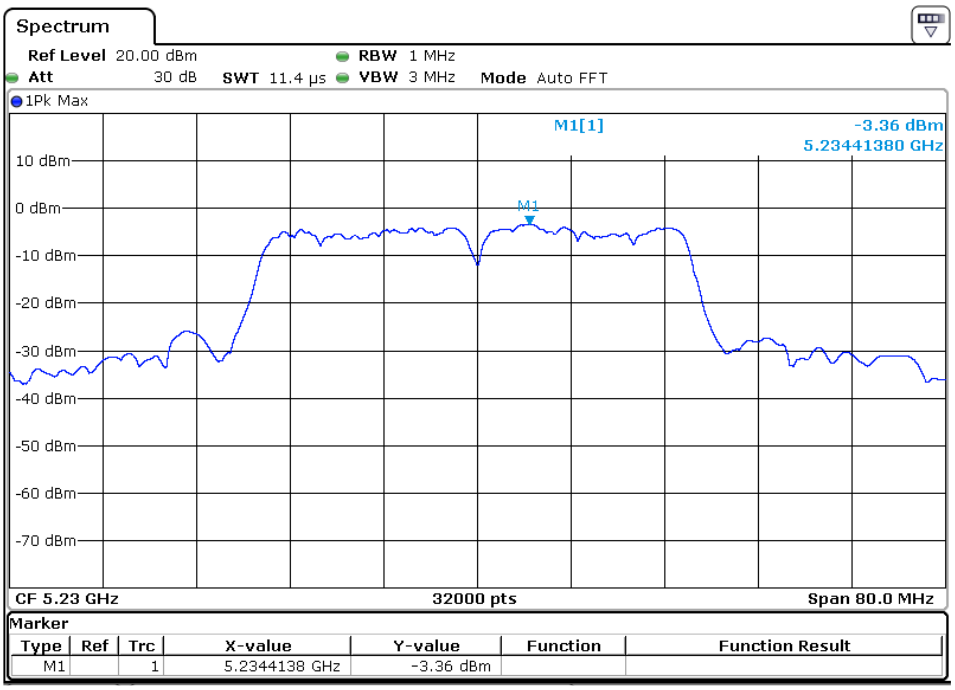

Spectrum
Ref Level 20.00 dBm
RBW 1 MHz
Att 30 dB
SWT 5.7 µs
VBW 3 MHz
Mode Auto FFT
1Pk Max
M1[1]
-2.99 dBm
5.748502970 GHz
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
M1
CF 5.745 GHz
32000 pts
Span 30.0 MHz
Marker
Type Ref Trc X-value Y-value Function Function Result
M1 1 5.74850297 GHz -2.99 dBm

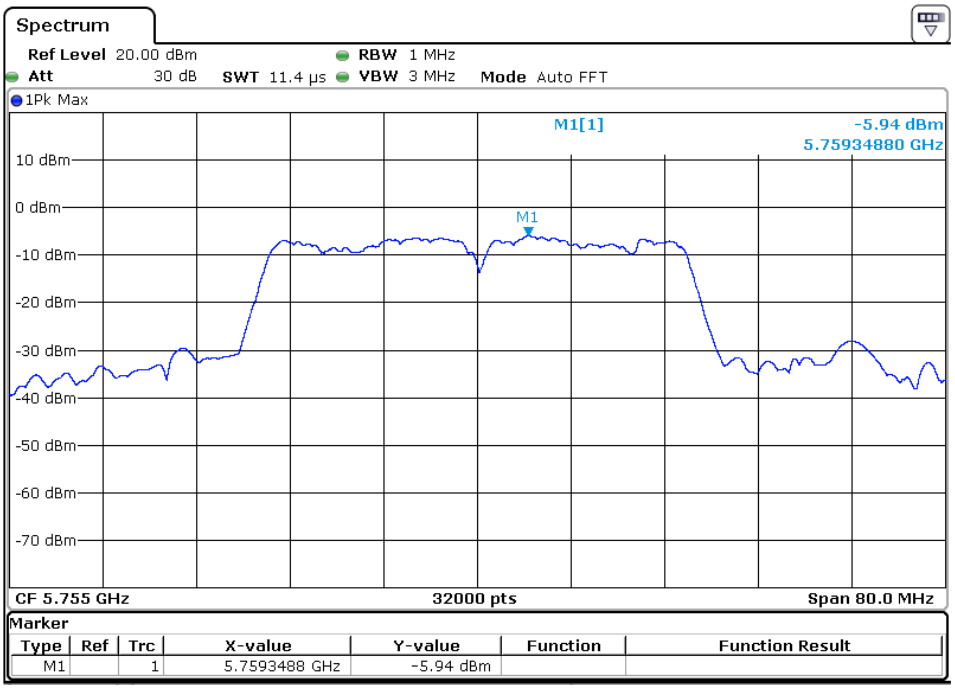

Spectrum
Ref Level 20.00 dBm
RBW 1 MHz
Att 30 dB
SWT 5.7 µs
VBW 3 MHz
Mode Auto FFT
1Pk Max
M1[1]
-2.83 dBm
5.787252340 GHz
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
M1
CF 5.785 GHz
32000 pts
Span 30.0 MHz
Marker
Type Ref Trc X-value Y-value Function Function Result
M1 1 5.78725234 GHz -2.83 dBm

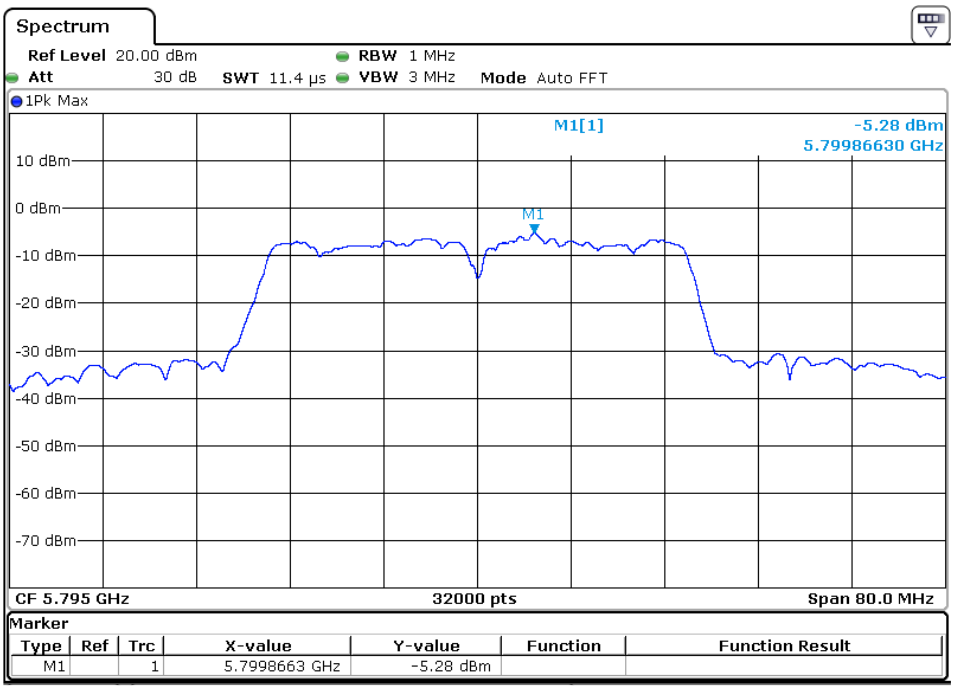

Spectrum
Ref Level 20.00 dBm
RBW 1 MHz
Att 30 dB
SWT 5.7 µs
VBW 3 MHz
Mode Auto FFT
1Pk Max
M1[1]
-3.16 dBm
5.822185160 GHz
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
M1
CF 5.825 GHz
32000 pts
Span 30.0 MHz
Marker
Type Ref Trc X-value Y-value Function Function Result
M1 1 5.82218516 GHz -3.16 dBm

Ant 802.11 ac40

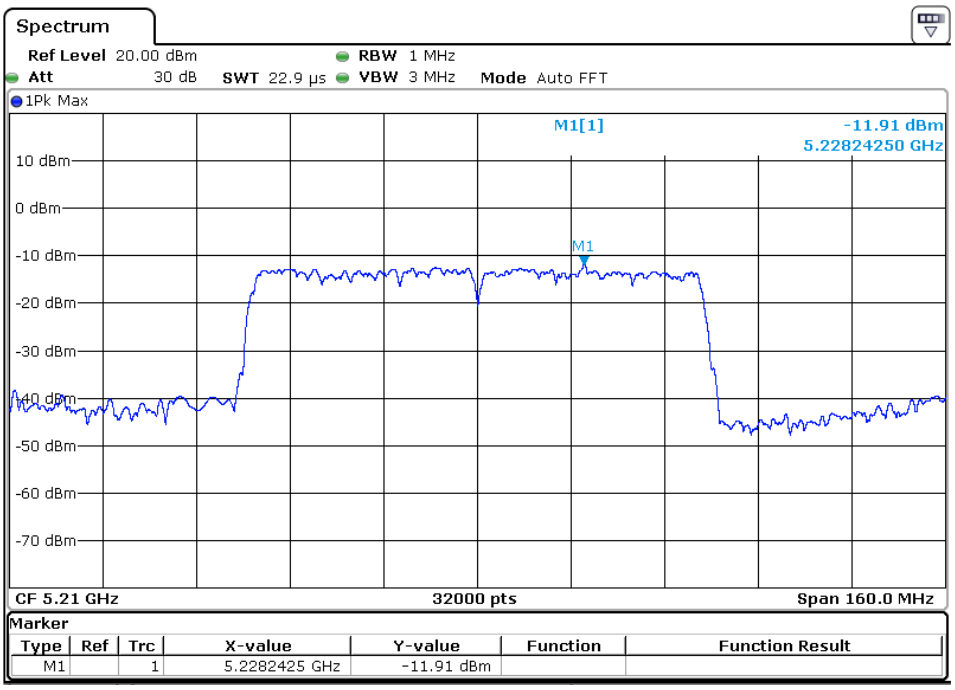


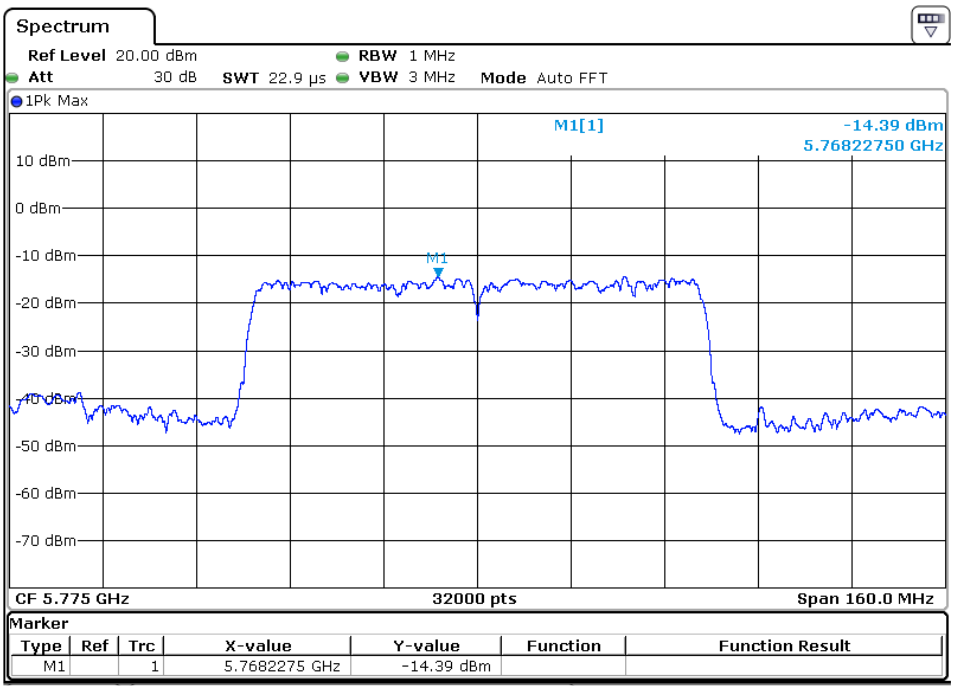



Spectrum
Ref Level 20.00 dBm
RBW 1 MHz
Att 30 dB
SWT 11.4 µs
VBW 3 MHz
Mode Auto FFT
1Pk Max
M1[1]
-5.94 dBm
5.75934880 GHz
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
M1
CF 5.755 GHz
32000 pts
Span 80.0 MHz
Marker
Type Ref Trc X-value Y-value Function Function Result
M1 1 5.7593488 GHz -5.94 dBm


Spectrum
Ref Level 20.00 dBm
RBW 1 MHz
Att 30 dB
SWT 11.4 µs
VBW 3 MHz
Mode Auto FFT
1Pk Max
M1[1]
-5.28 dBm
5.79986630 GHz
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
M1
CF 5.795 GHz
32000 pts
Span 80.0 MHz
Marker
Type Ref Trc X-value Y-value Function Function Result
M1 1 5.7998663 GHz -5.28 dBm

Ant 802.11 ac80





5.6 Maximum Peak Output Power

5.6.1 Applied procedures / Limit

For 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.

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.

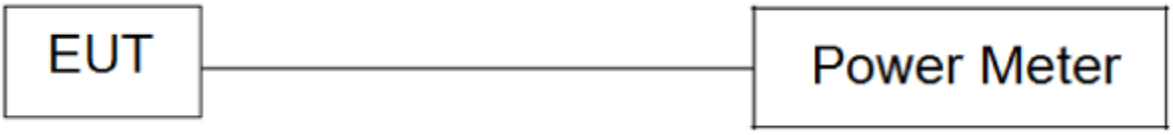
FCC Part15 (15.407) , Subpart E

Section	Test Item	Limit	Frequency Range (MHz)	Result
15.407(E) (ii)/(3)	Peak Output Power	0.25 watt or 23.9794dBm	5150-5250	PASS
		1 watt or 30dBm	5725-5850	PASS

5.6.2 Test procedure

KDB 789033 D02v01r01 - Section E) 3) b) Method PM-G
The EUT was directly connected to the Power Sensor & Power meter.
Average power measurements were perform 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.

5.6.3 Test Setup



5.6.4 Deviation from standard

No deviation.

5.6.5 Test results

Test Mode	Data Rate (Mbps)	Channel No.	Freq. (MHz)	Ant Average Power (dBm)	Limit ≤(dBm)	Result
11a	6	36	5180	11.62	23.9794	Pass
11a	6	44	5220	11.48	23.9794	Pass
11a	6	48	5240	11.51	23.9794	Pass
11a	6	149	5745	10.65	30	Pass
11a	6	157	5785	10.34	30	Pass
11a	6	165	5825	10.27	30	Pass
11n-HT20	7.2	36	5180	11.85	23.9794	Pass
11n-HT20	7.2	44	5220	11.33	23.9794	Pass
11n-HT20	7.2	48	5240	11.26	23.9794	Pass
11n-HT20	7.2	149	5745	10.71	30	Pass
11n-HT20	7.2	157	5785	10.45	30	Pass
11n-HT20	7.2	165	5825	10.36	30	Pass
11n-HT40	15	38	5190	11.19	23.9794	Pass
11n-HT40	15	46	5230	11.68	23.9794	Pass
11n-HT40	15	151	5755	10.52	30	Pass
11n-HT40	15	159	5795	10.33	30	Pass
11ac-VHT20	7.2	36	5180	11.29	23.9794	Pass
11ac-VHT20	7.2	44	5220	11.46	23.9794	Pass
11ac-VHT20	7.2	48	5240	11.35	23.9794	Pass
11ac-VHT20	7.2	149	5745	10.74	30	Pass
11ac-VHT20	7.2	157	5785	10.48	30	Pass
11ac-VHT20	7.2	165	5825	10.50	30	Pass
11ac-VHT40	15	38	5190	11.13	23.9794	Pass
11ac-VHT40	15	46	5230	11.69	23.9794	Pass
11ac-VHT40	15	151	5755	10.25	30	Pass
11ac-VHT40	15	159	5795	10.34	30	Pass
11ac-VHT80	32.5	42	5210	6.68	23.9794	Pass
11ac-VHT80	32.5	155	5775	6.45	30	Pass

5.7 FREQUENCY STABILITY MEASUREMENT

5.7.1 Applied procedures / Limit

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.

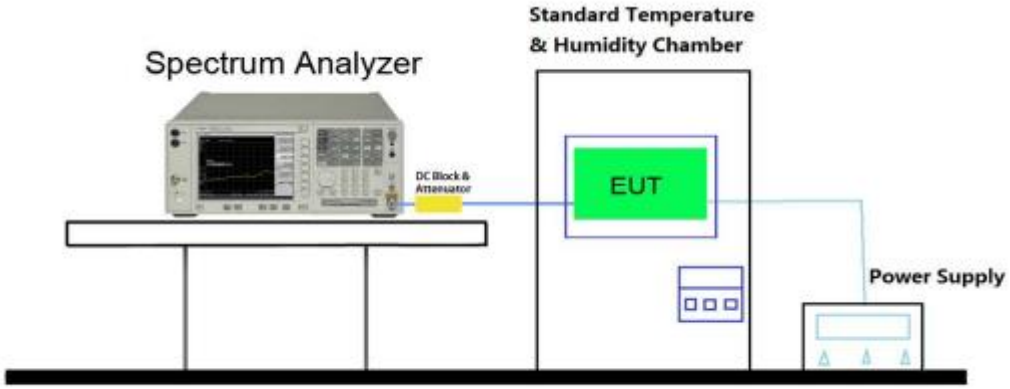
5.7.2 Test procedure

1. To ensure emission at the band edge is maintained within the authorized band, those values shall be measured by radiation emissions at upper and lower frequency points, and finally compensated by frequency deviation as procedures below.
2. The EUT was operated at the maximum output power, and connected to the spectrum analyzer, which is set to maximum hold function and peak detector. The peak value of the power envelope was measured and noted. The upper and lower frequency points were respectively measured relatively 10dB lower than the measured peak value.
3. The frequency deviation was calculated by adding the upper frequency point and the lower frequency point divided by two. Those detailed values of frequency deviation are provided in table below.

5.7.3 Deviation from standard

No deviation.

5.7.4 Test setup



5.7.5 Test results

Voltage (%)	Power (VAC)	Temp (°C)	Frequency Tolerance (ppm)
100%	120	- 20	3.47
		- 10	2.06
		0	1.73
		+ 10	2.51
		+ 20 (Ref)	3.96
		+ 30	4.24
		+ 40	3.01
		+ 50	2.68
115%	138	+ 20	3.47
85%	102	+ 20	2.88

Note: Frequency Tolerance (ppm) = {[Measured Frequency (Hz) - Declared Frequency (Hz)] / Declared Frequency (Hz)} *10^6.

5.8 AUTOMATICALLY DISCONTINUE TRANSMISSION

5.8.1 LIMIT OF AUTOMATICALLY DISCONTINUE TRANSMISSION

The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude the transmission of control or signaling information or the use of repetitive codes used by certain digital technologies to complete frame or burst intervals. Applicants shall include in their application for equipment authorization to describe how this requirement is met.

5.8.2 TEST RESULT OF AUTOMATICALLY DISCONTINUE TRANSMISSION

During no any information transmission, the EUT can automatically discontinue transmission and become standby mode for power saving. The EUT can detect the controlling signal of ACK message transmitting from remote device and verify whether it shall resend or discontinue transmission

5.9 ANTENNA REQUIREMENT

5.9.1 STANDARD REQUIREMENT

15.203 requirement: For intentional device, according to 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.

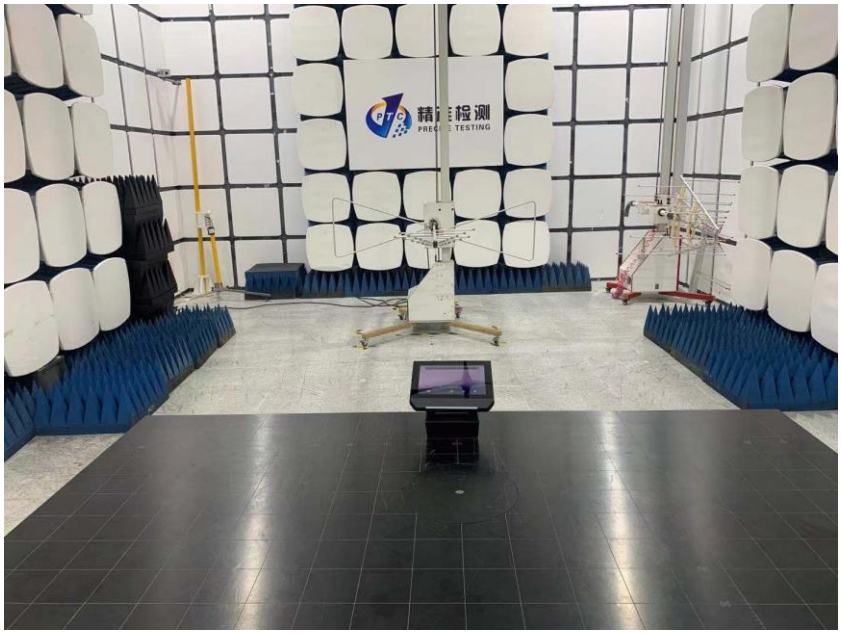
5.9.2 EUT ANTENNA

The EUT'S antenna, permanent attached antenna, is FPCB Antenna. The antenna's gain is 2dBi and meets the requirement.

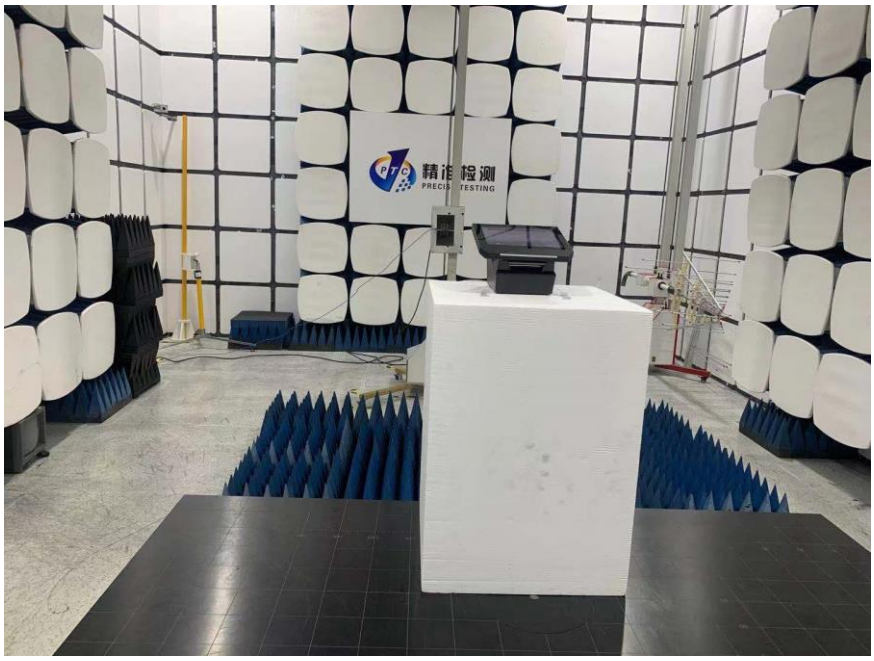
6 Photographs

6.1 Radiated Emission Test Setup

Below 1G



Above 1G



6.2 Conduction Emission Test Setup

6.3 EUT Constructional Details

Reference file “appendix II EUT photo”

****End of report****