RADIO TEST REPORT

The device described below is tested by Dongguan Nore Testing Center Co., Ltd. to determine the maximum emission levels emanating from the device, the severe levels which the device can endure and E.U.T.'s performance criterion. The test results, data evaluation, test procedures, and equipment of configurations shown in this report were made in accordance with the procedures in ANSI C63.10(2013).

Applicant	:	DX Manufacturing Solutions Inc.
Address	:	3-4/F, Lilan Technology Building, Chengde Road, Jiazitang Community, Gongming, Guangming New District, Shenzhen, China
Manufacturer /Factory	:	DX Manufacturing Solutions Inc.
Address	:	3-4/F, Lilan Technology Building, Chengde Road, Jiazitang Community, Gongming, Guangming New District, Shenzhen, China
E.U.T.	:	Tablet
Brand Name	:	Humanware
Model No.	:	PGI-400
FCC ID	:	2ASN8PGI400
Measurement Standard	:	47 CFR FCC PART 15 Subpart E (section 407)
Date of Receiver	:	August 18, 2018
Date of Test	:	August 19, 2018 to November 20, 2018
Date of Report	:	November 20, 2018

This Test Report is Issued Under the Authority of :

Prepared by	Approved & Authorized Signer
Alina Guo / Engineer	Iori Fan / Authorized Signatory

This test report is for the customer shown above and their specific product only. This report applies to above tested sample only and shall not be reproduced in part without written approval of Dongguan Nore Testing Center Co., Ltd.

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Revision History of This Test Report

Report Number	Description	Issued Date
NTC1808335FV00	Initial Issue	2018-11-20

1. GENERAL INFORMATION

1.1 Product Description for Equipment under Test

Product Name	:	Tablet
Main Model Name	:	PGI-400
Additional Model Name	:	N/A
Model difference	:	N/A
Brand Name	:	Humanware
Power Supply	:	DC 12V From adapter DC 7.4V From internal battery
Adapter	:	M/N: SK03T1-1200250Z Input: AC100-240V 50/60Hz, 0.6A Output: DC 12V, 2.5A
Test voltage	:	AC 240V/60Hz, AC 120V/60Hz, DC 7.4V (Only the worst case was recorded in this report.)
Hardware version	:	V01
Software version	:	CONNECT_12.V.1.0.2.20180807
Serial number	:	N/A
Note	:	N/A

Technical parameters
For 5G Band

Frequency Range	:	U-NII-1: 5180-5240MHz U-NII-4: 5745-5825MHz
Modulation type	:	IEEE 802.11a: OFDM IEEE 802.11n/ac: see the below table
Data Modulation	:	EEE 802.11a: OFDM (BPSK/QPSK/16QAM/64-QAM) IEEE 802.11n/ac: OFDM (BPSK/QPSK/16QAM/ 64-QAM/256-QAM)
Modulation Technology	:	OFDM
Number of Channel	:	802.11a/n(HT20)/ac(VHT20): 9 802.11n(HT40)/ac (VHT40): 4 802.11ac (VHT80): 2
Data rate	:	802.11a: 6~54Mbps 802.11n(HT20): MCS 0~7 802.11n(HT40): MCS 0~7 802.11ac(VHT20): MCS 0~8, Nss=1 802.11ac(VHT40): MCS 0~9, Nss=1 802.11ac(VHT80): MCS 0~9, Nss=1
Beamforming function	:	do not support
Antenna Type	:	FPC antenna
Number of Antenna	:	1
Antenna Gain	:	1.5dBi (Declaration by Manufacturer)

Channel list for 5GHz Band

U-NII-1 5180~5240MHz			
802.11a/ n(HT20)/ac (VHT20)		**802.11 n(HT40)/ac (VHT40)**	
Channel	**Frequency MHz**	**Channel**	**Frequency MHz**
36	5180	38	5190
40	5200	46	5230
44	5220	**802.11 ac (VHT80)**	
48	5240	42	5210

U-NII-4 5745~5825MHz			
802.11a/ n(HT20)/ac (VHT20)		**802.11 n(HT40)/ac (VHT40)**	
Channel	**Frequency MHz**	**Channel**	**Frequency MHz**
149	5745	151	5755
153	5765	159	5795
157	5785	**802.11 ac (VHT80)**	
161	5805	155	5775
165	5825		

Note: According to section 15.31(m), regards to the operating frequency range over 10MHz, the Lowest, middle, and the Highest frequency of channel were selected to perform the test. The selected frequency see below:

Test SW version	RF Test Tool

1.2 Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended for FCC ID: **2ASN8PGI400** filing to comply with Section 15.407 of the FCC Part 15 subpart E(2017) Rule.

1.3 Test Methodology

Both AC mains line-conducted and radiated emission measurements were performed according to the procedures in ANSI C63.10 (2013). Radiated emission measurement was performed in semi-anechoic chamber and conducted emission measurement was performed in shield room. For radiated emission measurement, preliminary scans were performed in the semi-anechoic chamber only to determine the worst case modes. All radiated tests were performed at an antenna to EUT distance of 3 meters. All other measurements were made in accordance with the procedures in 47 CFR part 2.

1.4 Equipment Modifications

Not available for this EUT intended for grant.

1.5 Support Device

N/A

1.6 Test Facility and Location

Site Description		
EMC Lab	:	Listed by CNAS, August 13, 2018 The certificate is valid until August 13, 2024 The Laboratory has been assessed and proved to be in compliance with CNAS/CL01 The Certificate Registration Number is L5795. Listed by A2LA, November 01, 2017 The certificate is valid until December 31, 2019 The Laboratory has been assessed and proved to be in compliance with ISO17025 The Certificate Registration Number is 4429.01 Listed by FCC, November 06, 2017 The Designation Number is CN1214 Test Firm Registration Number: 907417 Listed by Industry Canada, June 08, 2017 The Certificate Registration Number. Is 46405-9743
Name of Firm	:	Dongguan Nore Testing Center Co., Ltd. (Dongguan NTC Co., Ltd.)
Site Location	:	Building D, Gaosheng Science & Technology Park, Zhouxi Longxi Road, Nancheng District, Dongguan City, Guangdong Province, China

1.7 Summary of Test Results

FCC Rules	Description Of Test	Uncertainty	Result
§15.207 (a)	AC Power Conducted Emission	±1.06dB	Compliant
§15.407(a)	Max. Conducted Output Power	±1.06dB	Compliant
§15.407(a)	26dB Spectrum Bandwidth and 99% Occupied Bandwidth	±1.42 $x10^{-4}$%	Compliant
§15.407(e)	6dB Bandwidth	±1.42 $x10^{-4}$%	Compliant
§15.407(a)	Power Spectral Density	±1.70dB	Compliant
§15.407(b) §15.205	Radiated Emissions	±3.70dB	Compliant
§15.407(b)	Band Edge Emissions	±1.06dB	Compliant
§15.407(g)	Frequency Stability	±8.42 $x10^{-8}$	Compliant
§15.203	Antenna Requirement	N/A	Compliant

2. System Test Configuration

2.1 EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

2.2 Special Accessories

Not available for this EUT intended for grant.

2.3 Description of test modes

The EUT has been tested under continuous operating condition. Test program used to control the EUT staying in continuous transmitting mode. The Lowest, middle and highest channel were chosen for testing, and modulation type OFDM, OFDM-BPSK, QPSK, 16QAM, 256QAM and all data rate were tested. But only the worst case data is shown in this report.

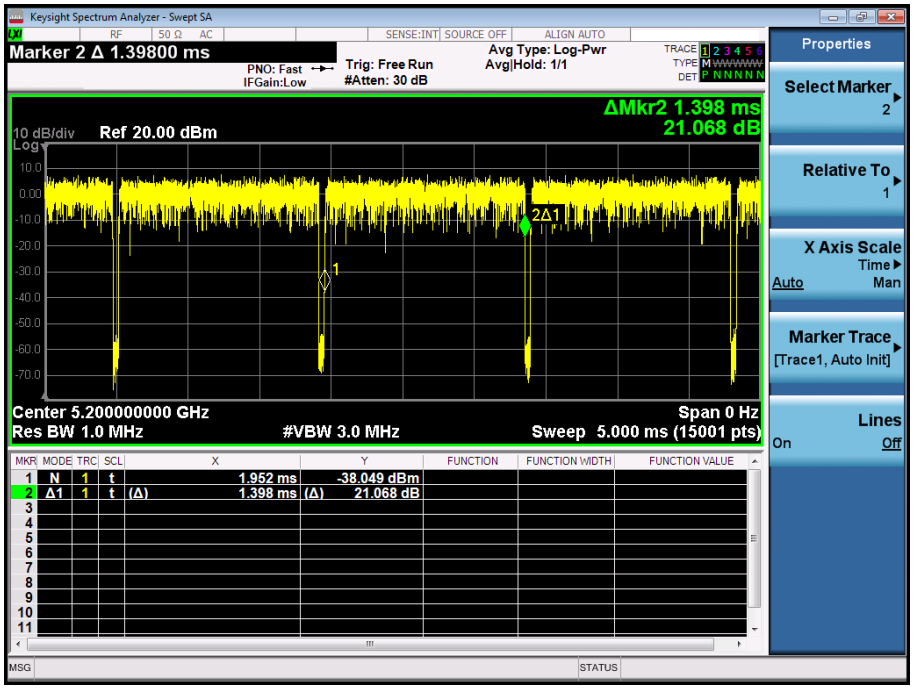
2.4 EUT Exercise

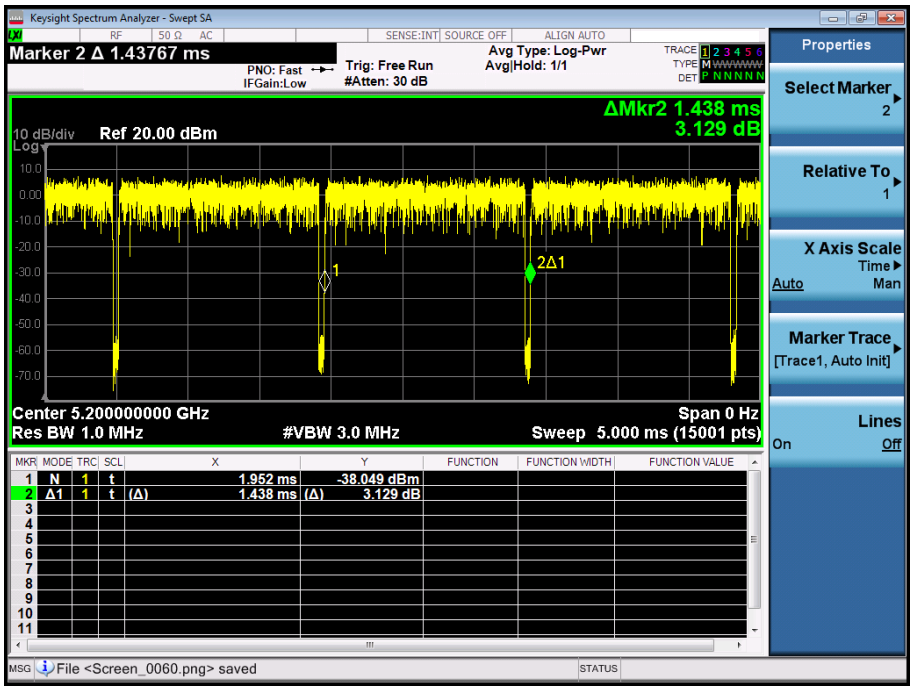
The EUT was operated in the engineering mode to fix the Tx frequency that was for the purpose of the measurements.

2.5 Duty cycle

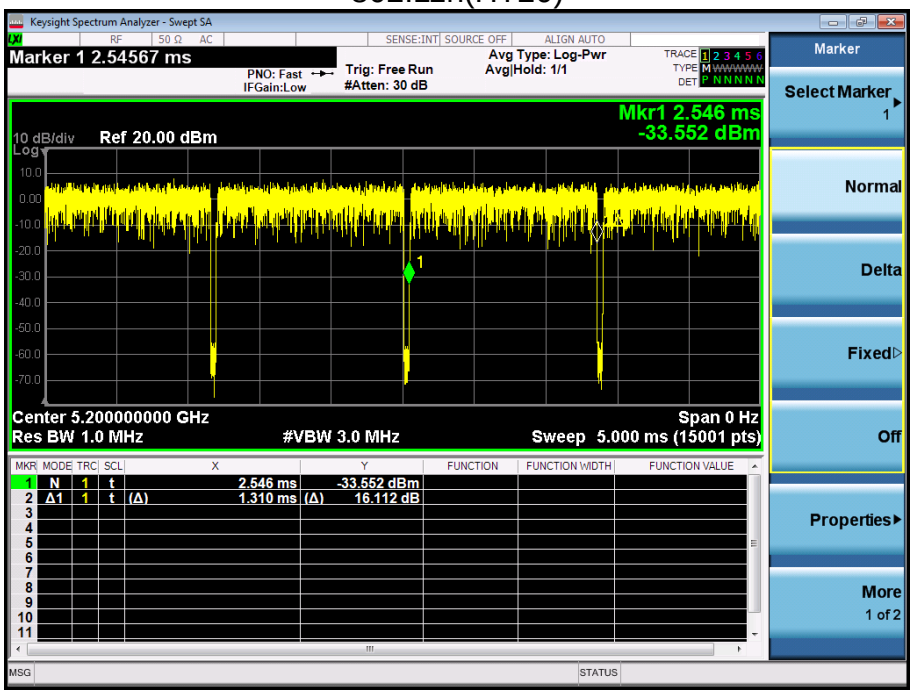
Operation Band (MHz)	Mode	Ton (ms)	Ton+off (ms)	Duty Cycle (%)	1/T minimum VBW (kHz)
5180~5240	802.11a	1.398	1.438	97.22%	0.72
	802.11n(HT20)	1.310	1.350	97.04%	0.76
	802.11n(HT40)	0.647	0.686	94.31%	1.55
	802.11ac(VHT20)	1.319	1.357	97.20%	0.76
	802.11ac(VHT40)	0.659	0.697	94.55%	1.52
	802.11ac(VHT80)	0.327	0.366	89.34%	3.06
5745~5825	802.11a	1.398	1.437	97.29%	0.72
	802.11n(HT20)	1.311	1.350	97.11%	0.76
	802.11n(HT40)	0.651	0.690	94.35%	1.54
	802.11ac(VHT20)	1.318	1.357	97.13%	0.76
	802.11ac(VHT40)	0.658	0.697	94.40%	1.52
	802.11ac(VHT80)	0.328	0.365	89.86%	3.05

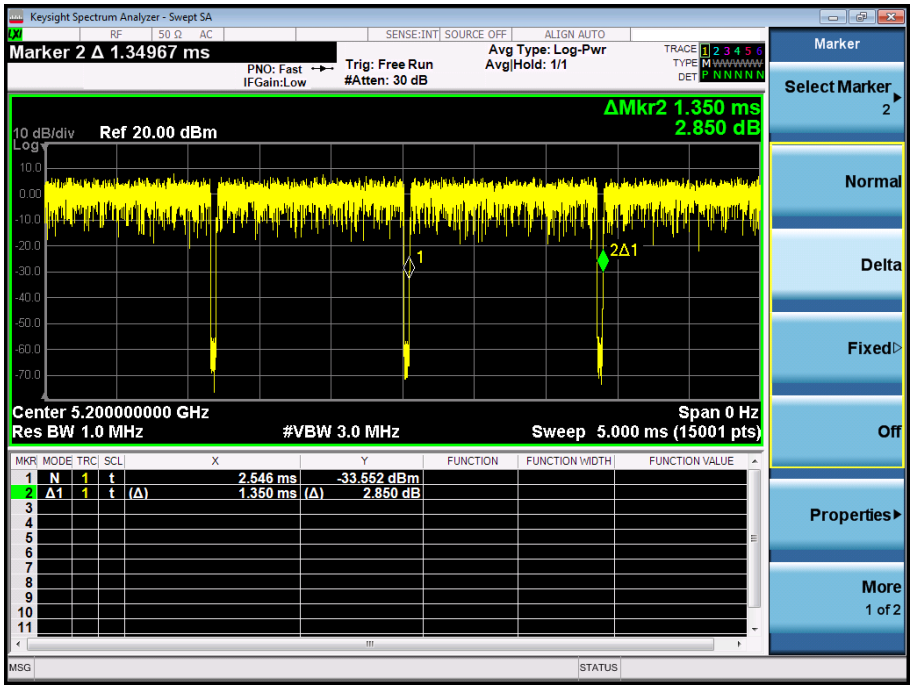
Band 5180-5240MHz
802.11a



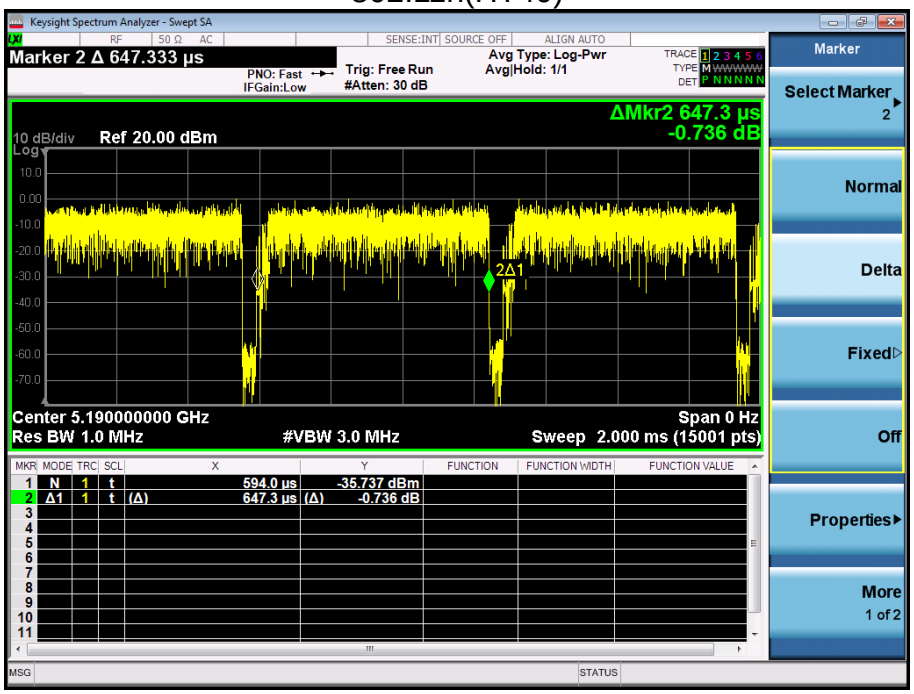


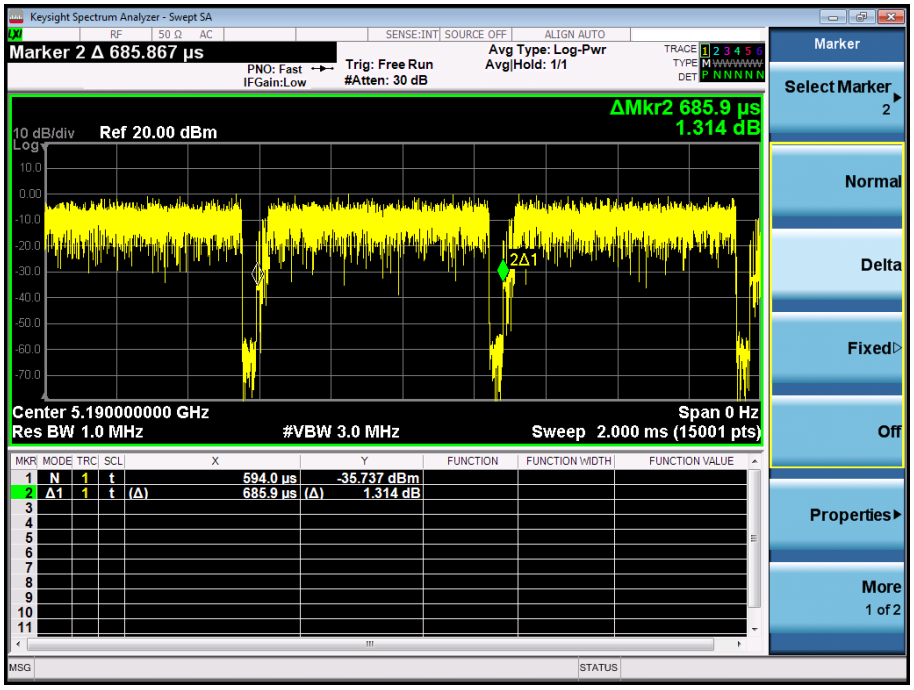
802.11n(HT20)


Keysight Spectrum Analyzer - Swept SA
Marker 1 2.54567 ms
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 1/1
Mkr1 2.546 ms
-33.552 dBm
10 dB/div
Ref 20.00 dBm
Center 5.200000000 GHz
Res BW 1.0 MHz
#VBW 3.0 MHz
Span 0 Hz
Sweep 5.000 ms (15001 pts)
1 N 1 t 2.546 ms -33.552 dBm
2 Δ1 1 t (Δ) 1.310 ms (Δ) 16.112 dB
Marker
Select Marker 1
Normal
Delta
Fixed
Off
Properties
More 1 of 2

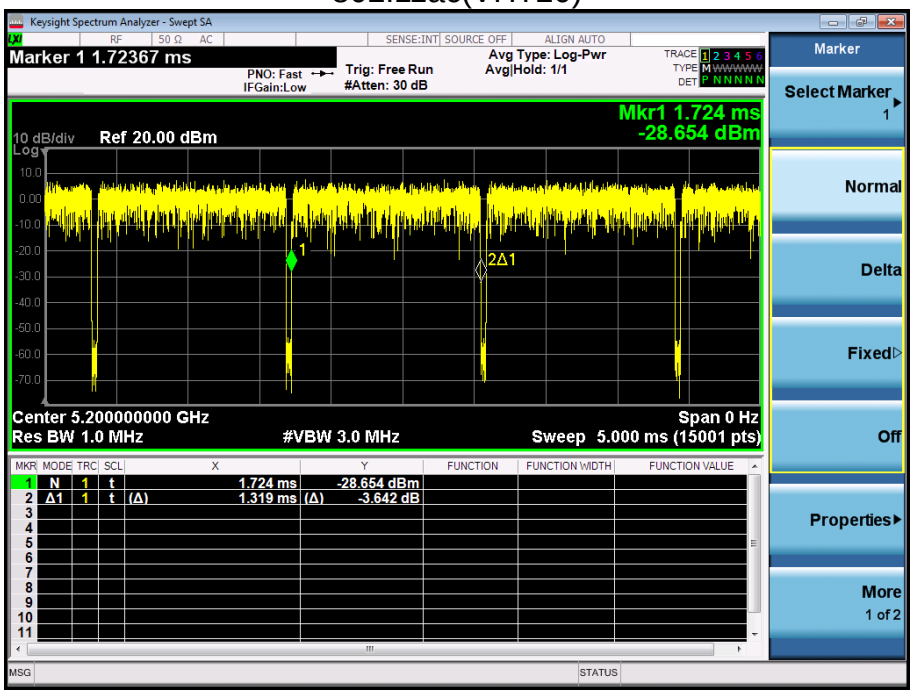

Keysight Spectrum Analyzer - Swept SA
Marker 2 Δ 1.34967 ms
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 1/1
ΔMkr2 1.350 ms
2.850 dB
10 dB/div
Ref 20.00 dBm
Center 5.200000000 GHz
Res BW 1.0 MHz
#VBW 3.0 MHz
Span 0 Hz
Sweep 5.000 ms (15001 pts)
1 N 1 t 2.546 ms -33.552 dBm
2 Δ1 1 t (Δ) 1.350 ms (Δ) 2.850 dB
Marker
Select Marker 2
Normal
Delta
Fixed
Off
Properties
More 1 of 2

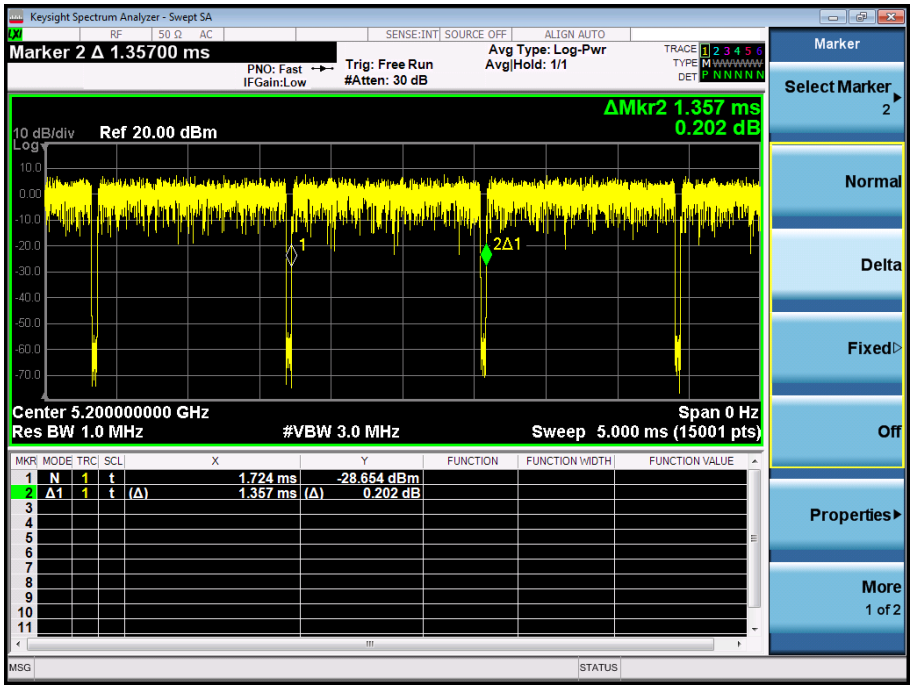
802.11n(HT40)


Keysight Spectrum Analyzer - Swept SA
Marker 2 Δ 647.333 µs
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 1/1
ΔMkr2 647.3 µs
-0.736 dB
10 dB/div
Ref 20.00 dBm
Center 5.190000000 GHz
Res BW 1.0 MHz
#VBW 3.0 MHz
Span 0 Hz
Sweep 2.000 ms (15001 pts)
1 N 1 t 594.0 µs -35.737 dBm
2 Δ1 1 t (Δ) 647.3 µs (Δ) -0.736 dB
Marker
Select Marker 2
Normal
Delta
Fixed
Off
Properties
More 1 of 2

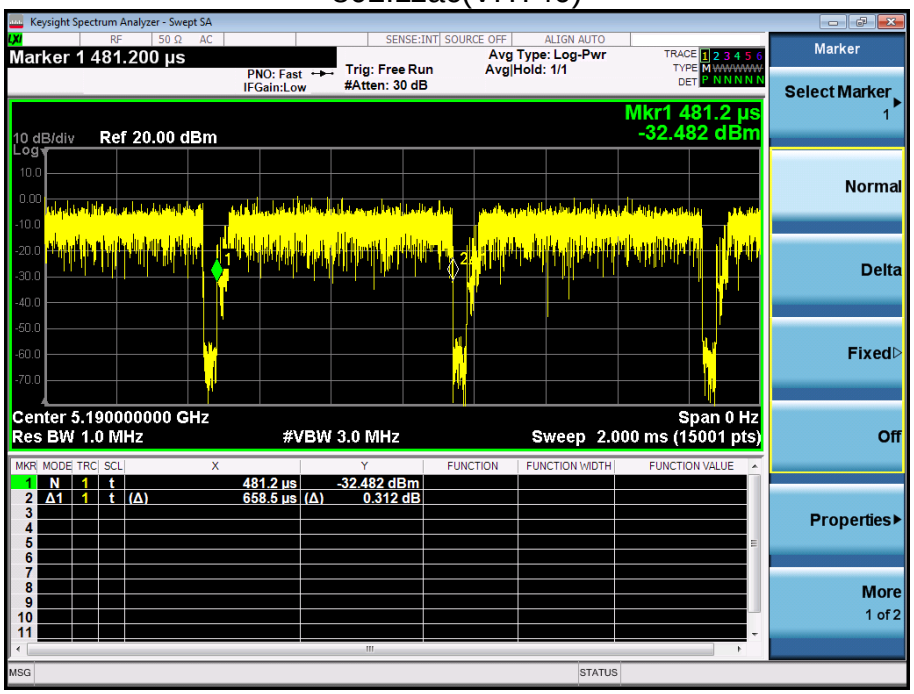

Keysight Spectrum Analyzer - Swept SA
Marker 2 Δ 685.867 µs
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 1/1
ΔMkr2 685.9 µs
1.314 dB
10 dB/div
Ref 20.00 dBm
Center 5.190000000 GHz
Res BW 1.0 MHz
#VBW 3.0 MHz
Span 0 Hz
Sweep 2.000 ms (15001 pts)
1 N 1 t 594.0 µs -35.737 dBm
2 Δ1 1 t (Δ) 685.9 µs (Δ) 1.314 dB
Marker
Select Marker 2
Normal
Delta
Fixed
Off
Properties
More 1 of 2

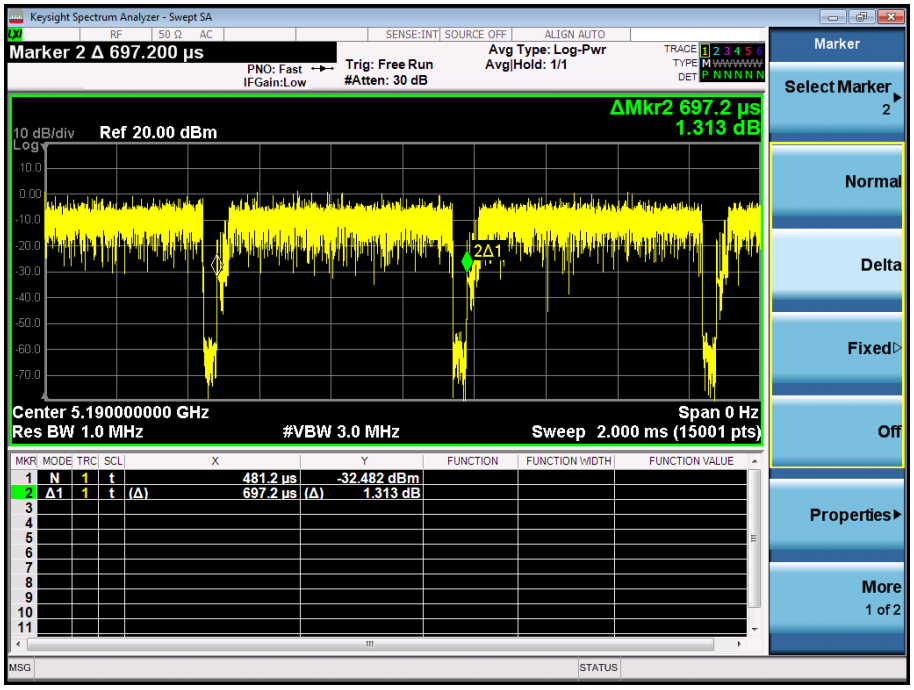
802.11ac(VHT20)



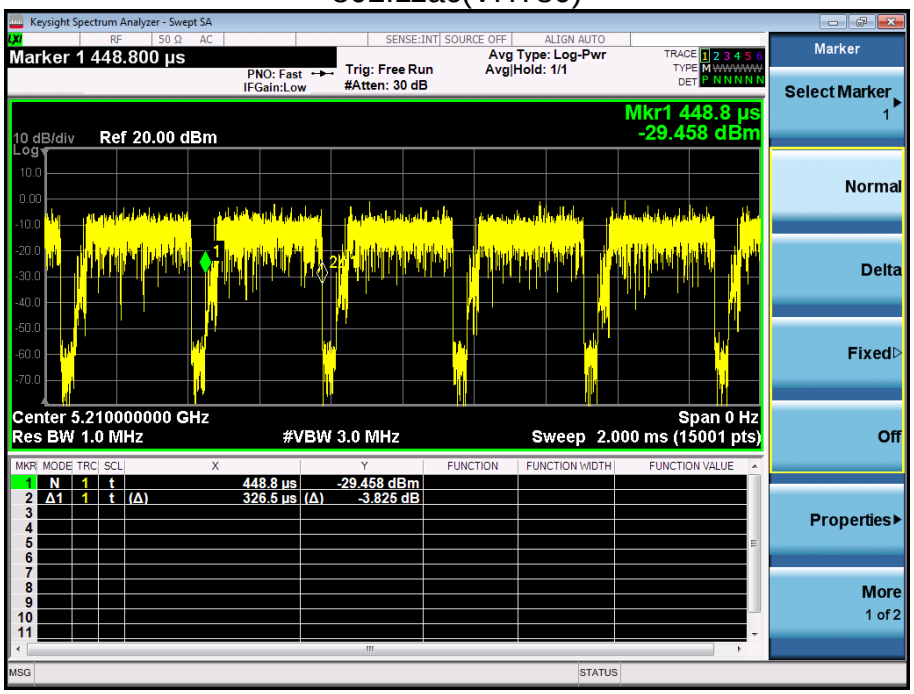


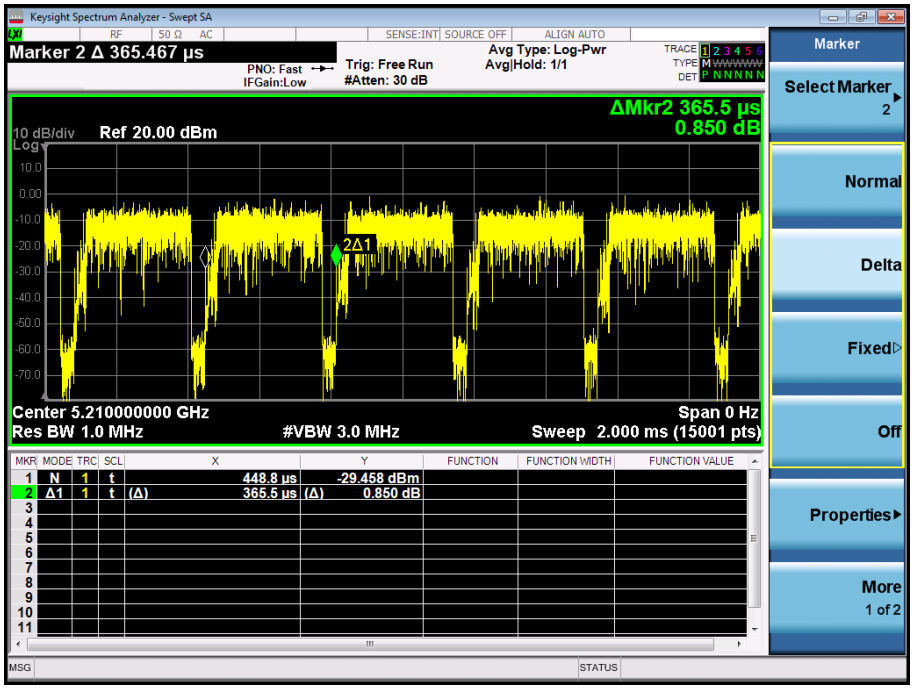
802.11ac(VHT40)



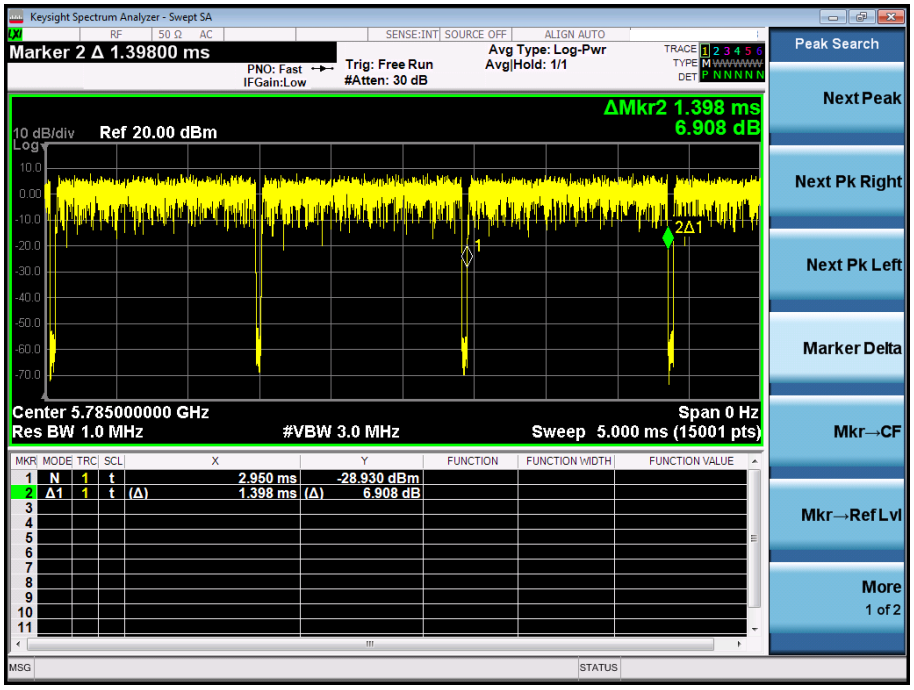


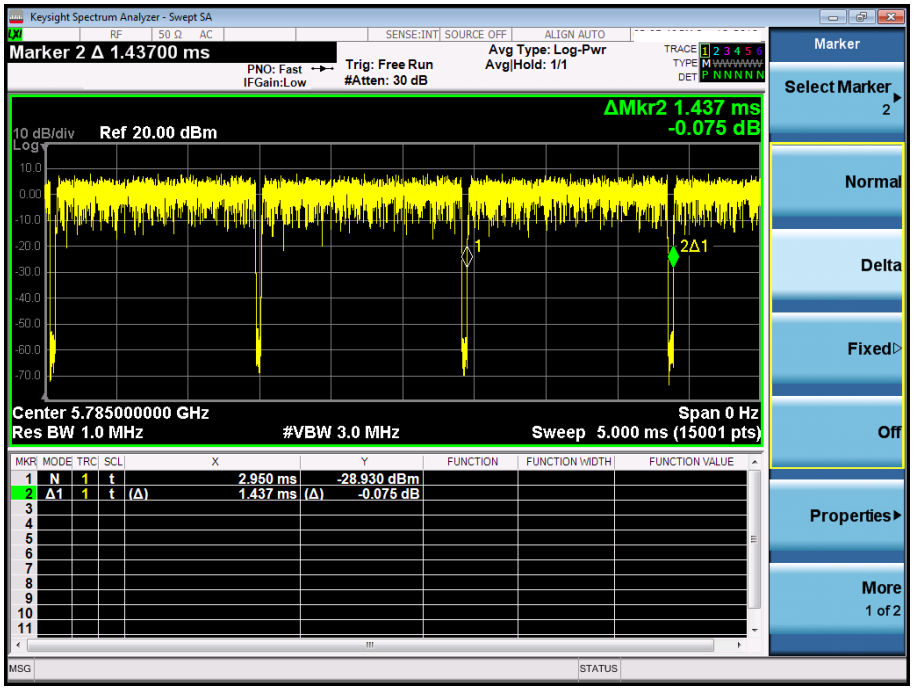
802.11ac(VHT80)



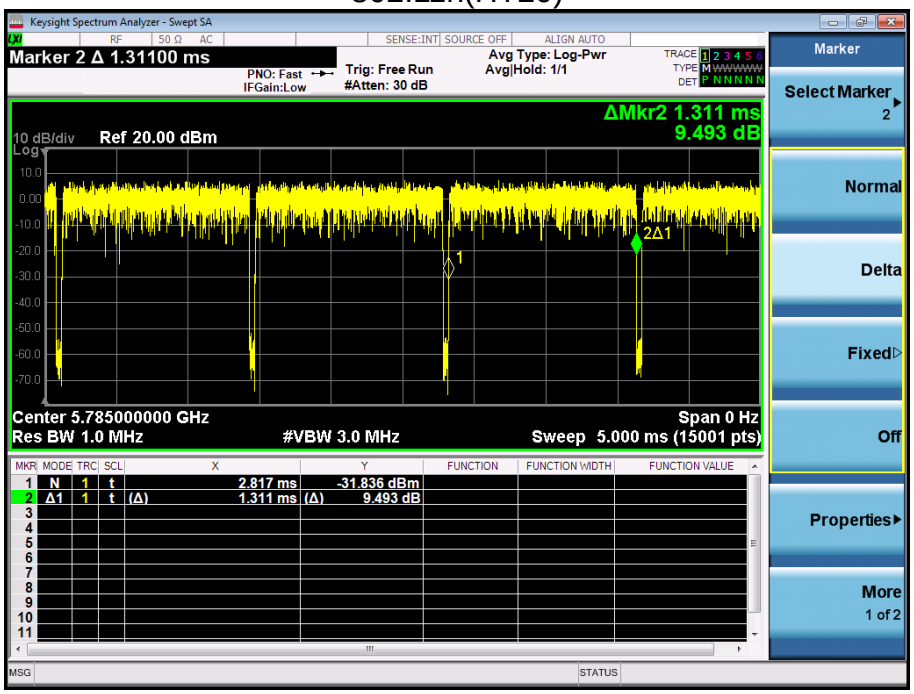


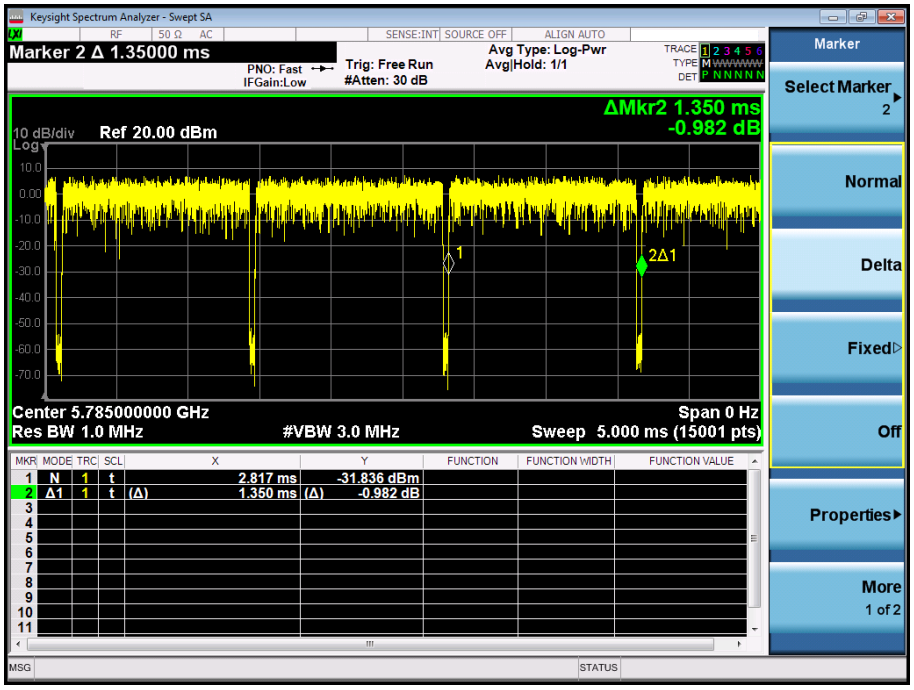
Band 5725-5850MHz
802.11a



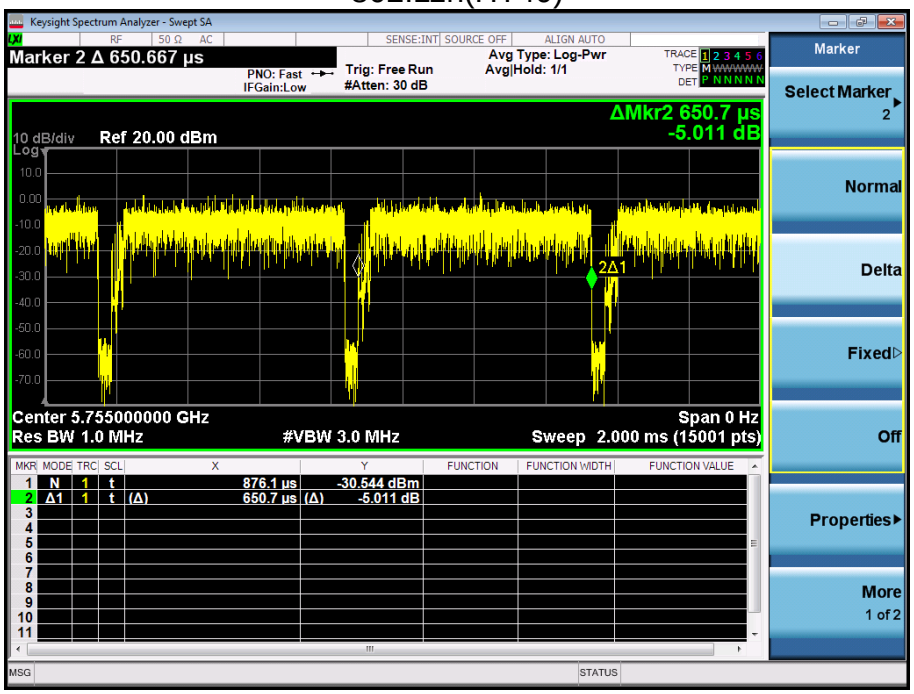


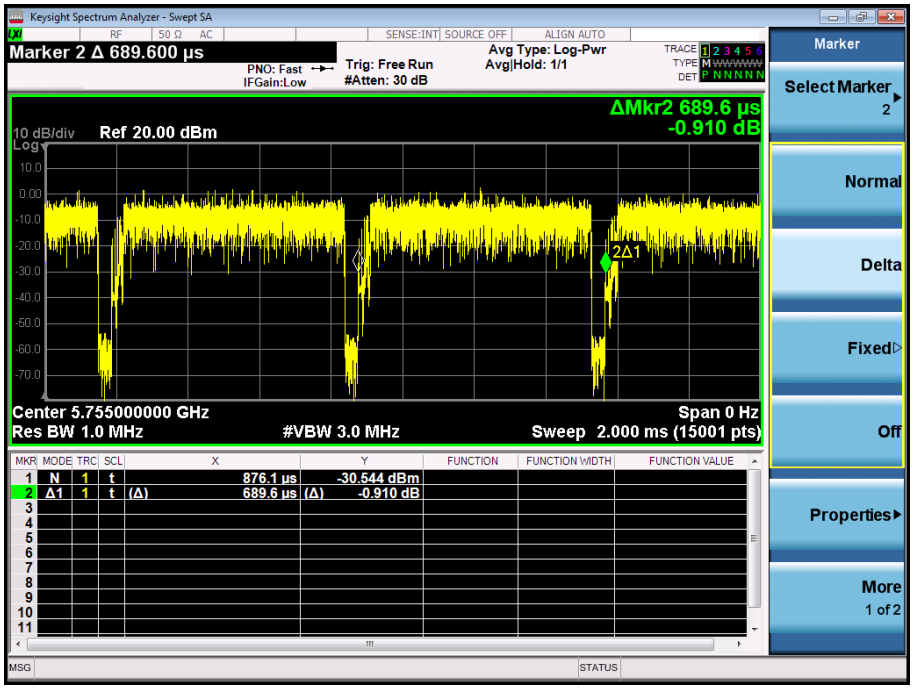
802.11n(HT20)


Keysight Spectrum Analyzer - Swept SA
Marker 2 Δ 1.31100 ms
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 1/1
ΔMkr2 1.311 ms
9.493 dB
10 dB/div
Ref 20.00 dBm
Center 5.785000000 GHz
Res BW 1.0 MHz
#VBW 3.0 MHz
Span 0 Hz
Sweep 5.000 ms (15001 pts)
Marker
Select Marker 2
Normal
Delta
Fixed
Off
Properties
More 1 of 2
1 N 1 t 2.817 ms -31.836 dBm
2 Δ1 1 t (Δ) 1.311 ms (Δ) 9.493 dB

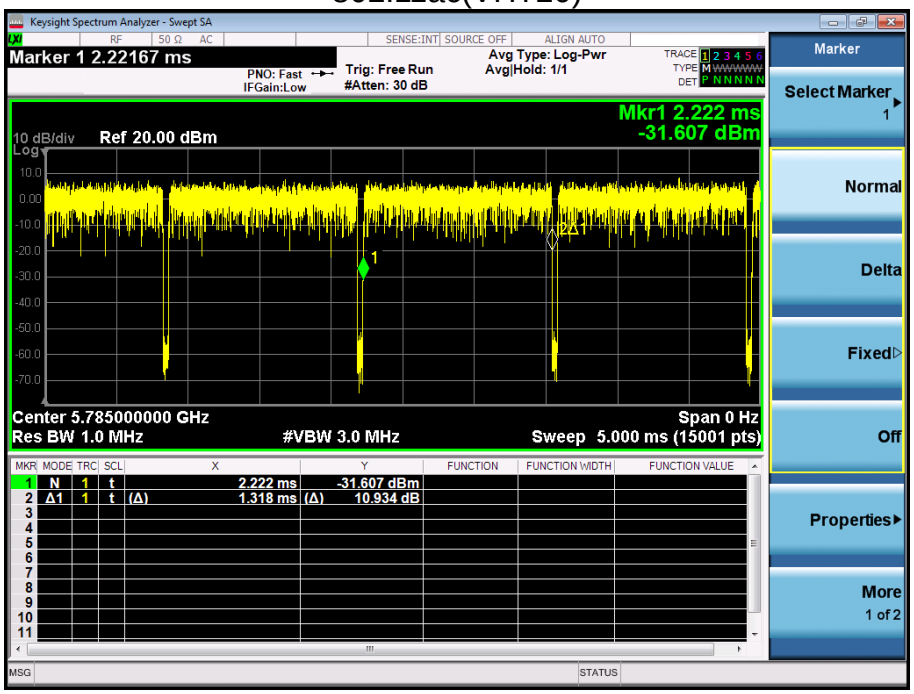

Keysight Spectrum Analyzer - Swept SA
Marker 2 Δ 1.35000 ms
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 1/1
ΔMkr2 1.350 ms
-0.982 dB
10 dB/div
Ref 20.00 dBm
Center 5.785000000 GHz
Res BW 1.0 MHz
#VBW 3.0 MHz
Span 0 Hz
Sweep 5.000 ms (15001 pts)
Marker
Select Marker 2
Normal
Delta
Fixed
Off
Properties
More 1 of 2
1 N 1 t 2.817 ms -31.836 dBm
2 Δ1 1 t (Δ) 1.350 ms (Δ) -0.982 dB

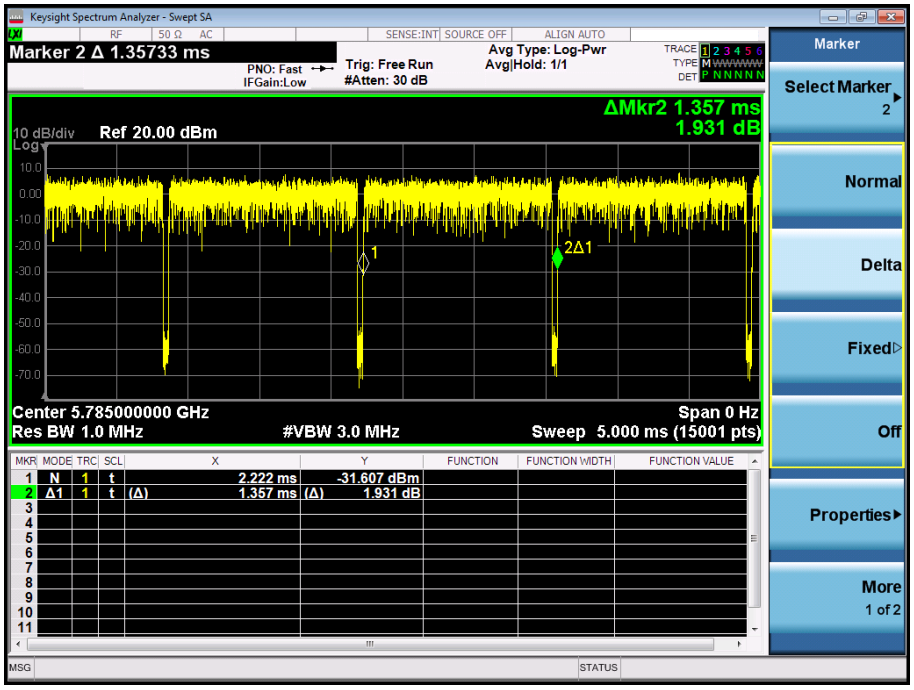
802.11n(HT40)


Keysight Spectrum Analyzer - Swept SA
Marker 2 Δ 650.667 µs
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 1/1
ΔMkr2 650.7 µs
-5.011 dB
10 dB/div
Ref 20.00 dBm
Center 5.755000000 GHz
Res BW 1.0 MHz
#VBW 3.0 MHz
Span 0 Hz
Sweep 2.000 ms (15001 pts)
1 N 1 t 876.1 µs -30.544 dBm
2 Δ1 1 t (Δ) 650.7 µs (Δ) -5.011 dB
Marker
Select Marker 2
Normal
Delta
Fixed
Off
Properties
More 1 of 2

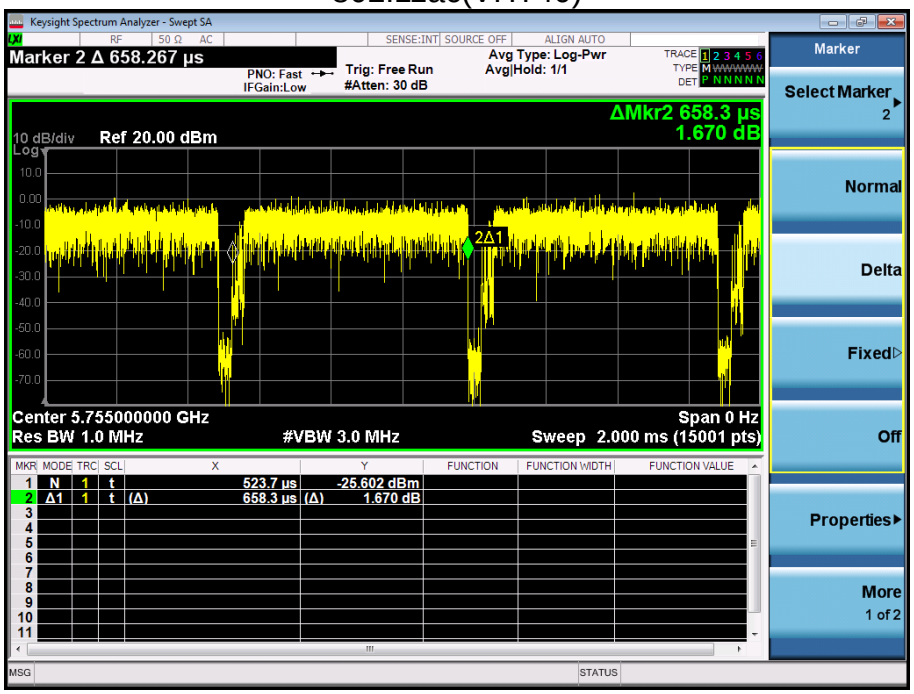

Keysight Spectrum Analyzer - Swept SA
Marker 2 Δ 689.600 µs
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 1/1
ΔMkr2 689.6 µs
-0.910 dB
10 dB/div
Ref 20.00 dBm
Center 5.755000000 GHz
Res BW 1.0 MHz
#VBW 3.0 MHz
Span 0 Hz
Sweep 2.000 ms (15001 pts)
1 N 1 t 876.1 µs -30.544 dBm
2 Δ1 1 t (Δ) 689.6 µs (Δ) -0.910 dB
Marker
Select Marker 2
Normal
Delta
Fixed
Off
Properties
More 1 of 2

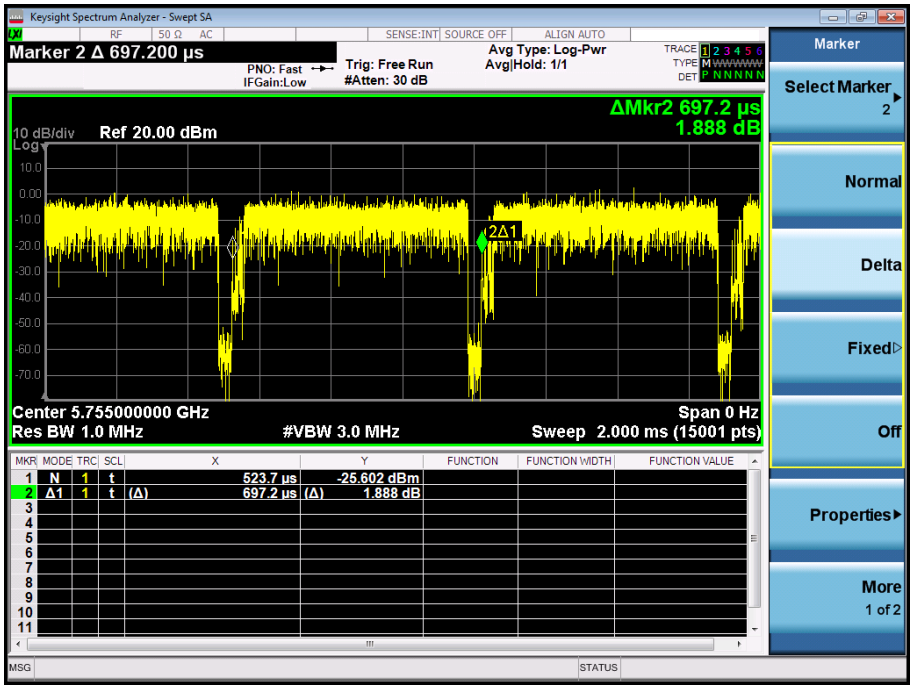
802.11ac(VHT20)



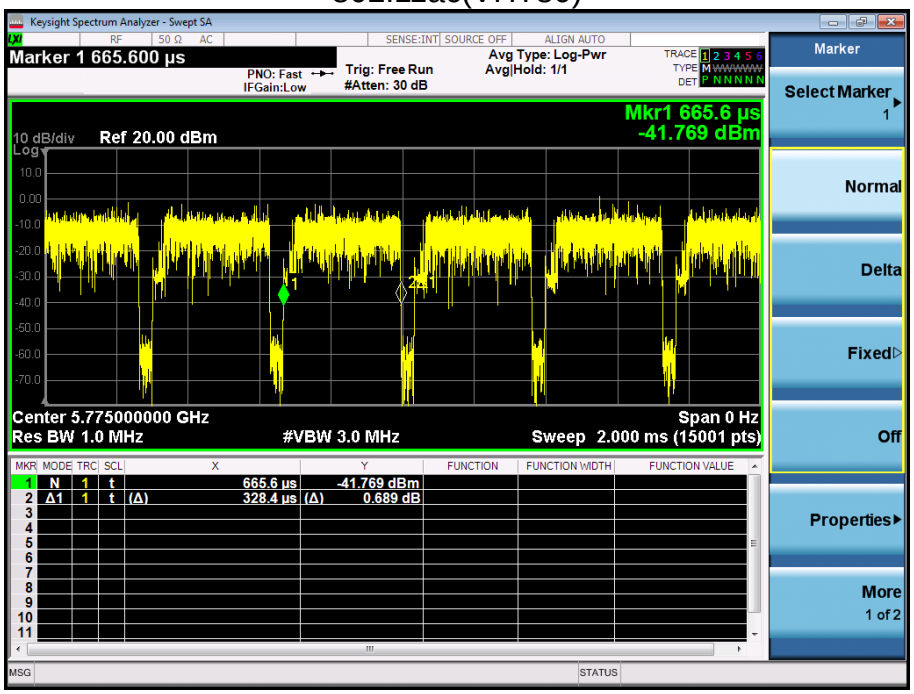


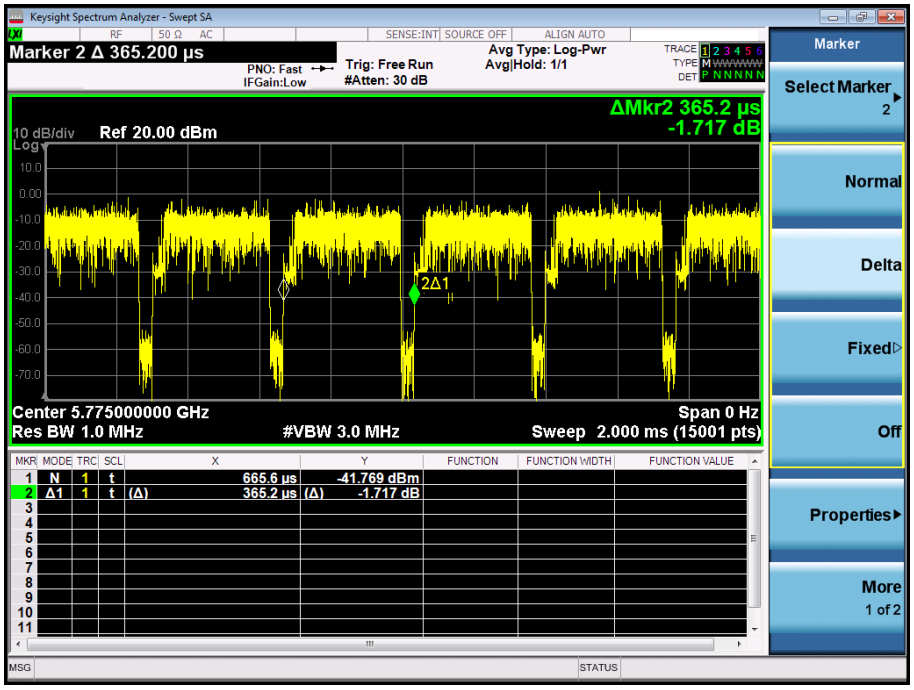
802.11ac(VHT40)





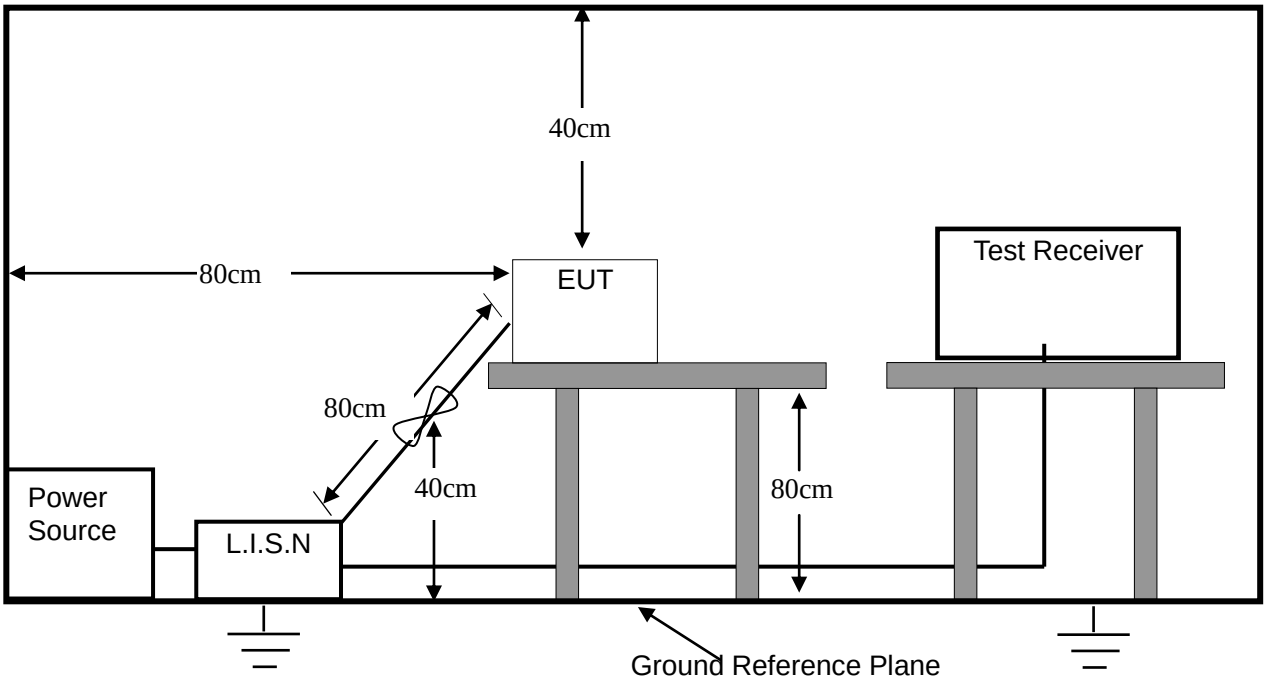
802.11ac(VHT80)





3. Conducted Emissions Test

3.1 Test SET-UP (Block Diagram of Configuration)



3.2 Test Condition

Test Requirement: FCC Part 15.207

Frequency Range: 150KHz ~ 30MHz

Detector: RBW 9KHz, VBW 30KHz

Operation Mode: TX

3.3 Measurement Results

Please refer to following plots of the worst case (AC 120V/60Hz).

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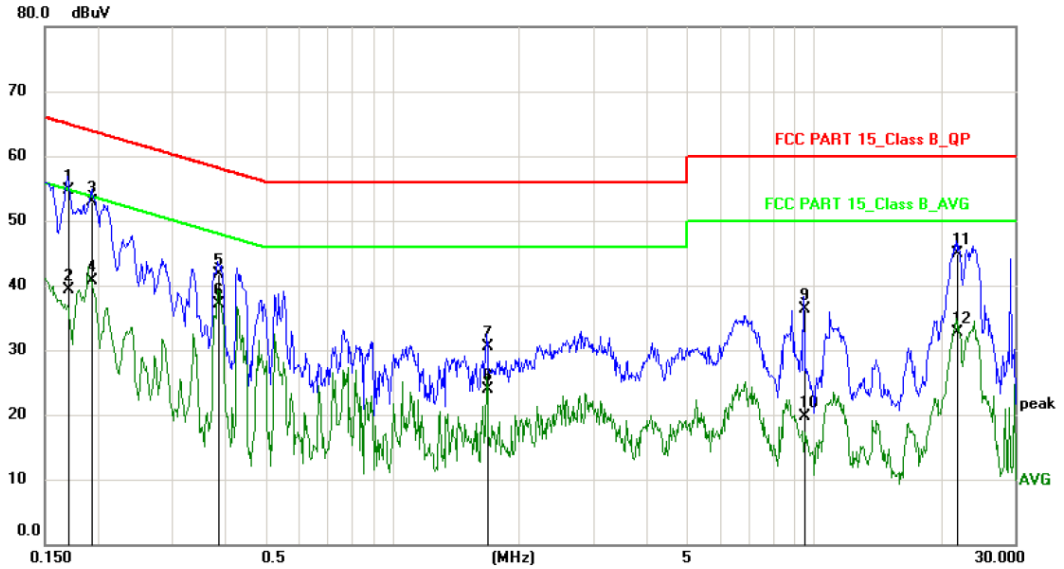
Web: Http://www.ntc-c.com

Conducted Emission Measurement

File: PGI-400 Data :#20 Date: 2018-11-12 Time: 20:05:25



Site Phase: *L1* Temperature: 26
Limit: FCC PART 15_Class B_QP Power: AC120V/60Hz Humidity: 50 %
EUT: Tablet
M/N: PGI-400
Mode: TX(5G Band 1)
Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1700	44.19	10.61	54.80	64.96	-10.16	QP	
2		0.1700	28.69	10.61	39.30	54.96	-15.66	AVG	
3		0.1940	42.29	10.61	52.90	63.86	-10.96	QP	
4		0.1940	30.19	10.61	40.80	53.86	-13.06	AVG	
5		0.3860	31.09	10.61	41.70	58.15	-16.45	QP	
6		0.3860	26.59	10.61	37.20	48.15	-10.95	AVG	
7		1.6774	19.95	10.65	30.60	56.00	-25.40	QP	
8		1.6774	13.25	10.65	23.90	46.00	-22.10	AVG	
9		9.4778	25.63	10.67	36.30	60.00	-23.70	QP	
10		9.4778	9.13	10.67	19.80	50.00	-30.20	AVG	
11		21.8060	34.22	10.68	44.90	60.00	-15.10	QP	
12		21.8060	22.12	10.68	32.80	50.00	-17.20	AVG	

*:Maximum data x:Over limit !:over margin 〈Reference Only

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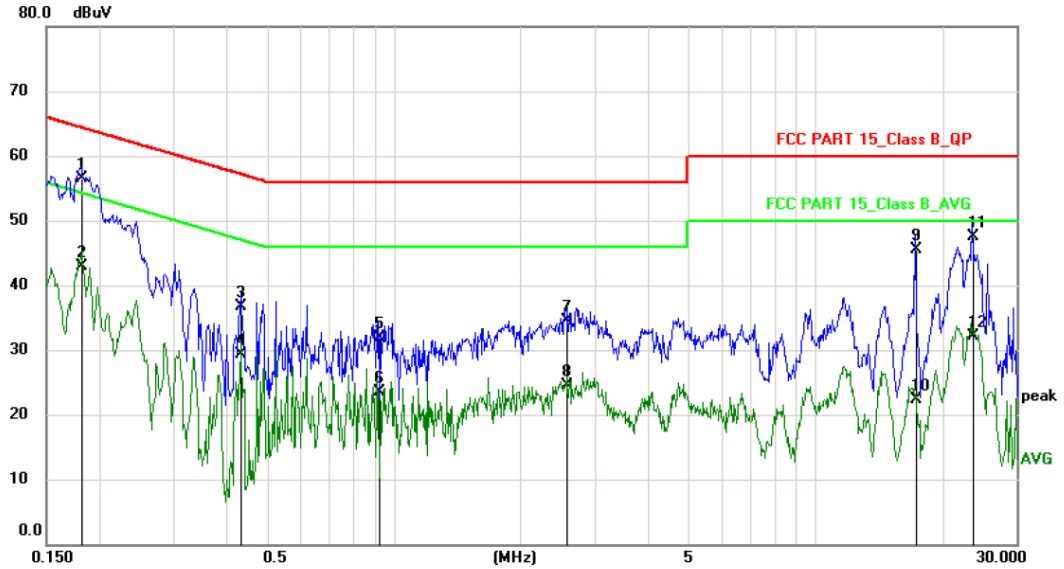
Conducted Emission Measurement

File: PGI-400 Data :#19 Date: 2018-11-12 Time: 19:58:20



Site Phase: *N* Temperature: 26
Limit: FCC PART 15_Class B_QP Power: AC120V/60Hz Humidity: 50 %
EUT: Tablet
M/N: PGI-400
Mode: TX(5G Band 1)
Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1819	45.89	10.61	56.50	64.40	-7.90	QP	
2		0.1819	32.39	10.61	43.00	54.40	-11.40	AVG	
3		0.4339	26.18	10.62	36.80	57.18	-20.38	QP	
4		0.4339	18.68	10.62	29.30	47.18	-17.88	AVG	
5		0.9220	21.35	10.65	32.00	56.00	-24.00	QP	
6		0.9220	12.95	10.65	23.60	46.00	-22.40	AVG	
7		2.5739	23.85	10.65	34.50	56.00	-21.50	QP	
8		2.5739	13.85	10.65	24.50	46.00	-21.50	AVG	
9		17.2333	34.93	10.67	45.60	60.00	-14.40	QP	
10		17.2333	11.63	10.67	22.30	50.00	-27.70	AVG	
11		23.6340	36.92	10.68	47.60	60.00	-12.40	QP	
12		23.6340	21.42	10.68	32.10	50.00	-17.90	AVG	

*:Maximum data x:Over limit !:over margin 〈Reference Only

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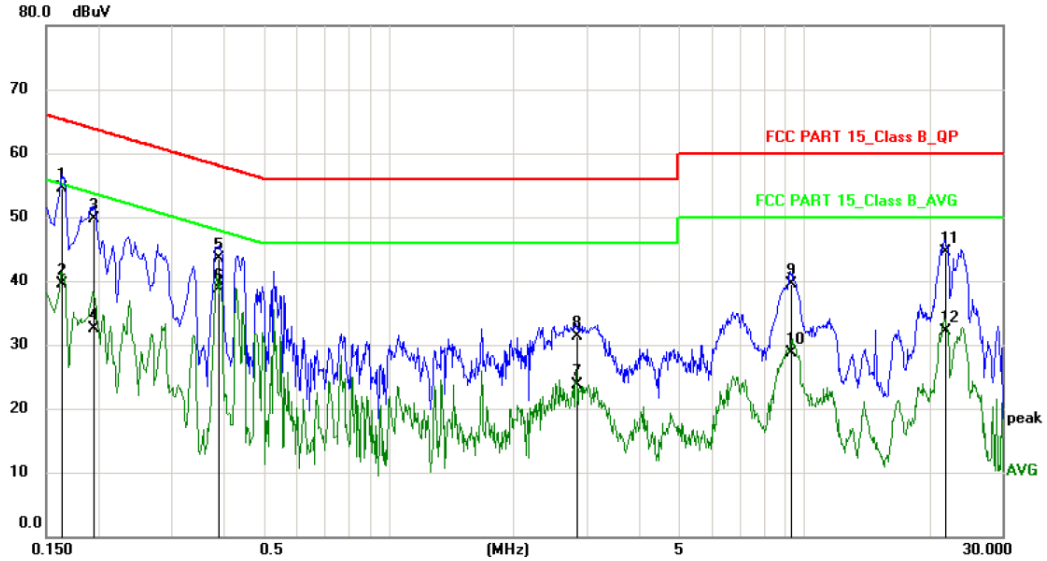
Conducted Emission Measurement

File: PGI-400 Data :#21 Date: 2018-11-12 Time: 20:12:00



Site Phase: *L1* Temperature: 26
Limit: FCC PART 15_Class B_QP Power: AC120V/60Hz Humidity: 50 %
EUT: Tablet
M/N: PGI-400
Mode: TX(5G Band 4)
Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1640	43.99	10.61	54.60	65.26	-10.66	QP	
2		0.1640	28.89	10.61	39.50	55.26	-15.76	AVG	
3		0.1955	39.09	10.61	49.70	63.80	-14.10	QP	
4		0.1955	21.99	10.61	32.60	53.80	-21.20	AVG	
5		0.3899	32.89	10.61	43.50	58.07	-14.57	QP	
6	*	0.3899	28.19	10.61	38.80	48.07	-9.27	AVG	
7		2.8260	13.15	10.65	23.80	56.00	-32.20	QP	
8		2.8260	20.65	10.65	31.30	46.00	-14.70	AVG	
9		9.2819	28.83	10.67	39.50	60.00	-20.50	QP	
10		9.2819	18.13	10.67	28.80	50.00	-21.20	AVG	
11		21.7377	33.82	10.68	44.50	60.00	-15.50	QP	
12		21.7377	21.42	10.68	32.10	50.00	-17.90	AVG	

*:Maximum data x:Over limit !:over margin 〈Reference Only

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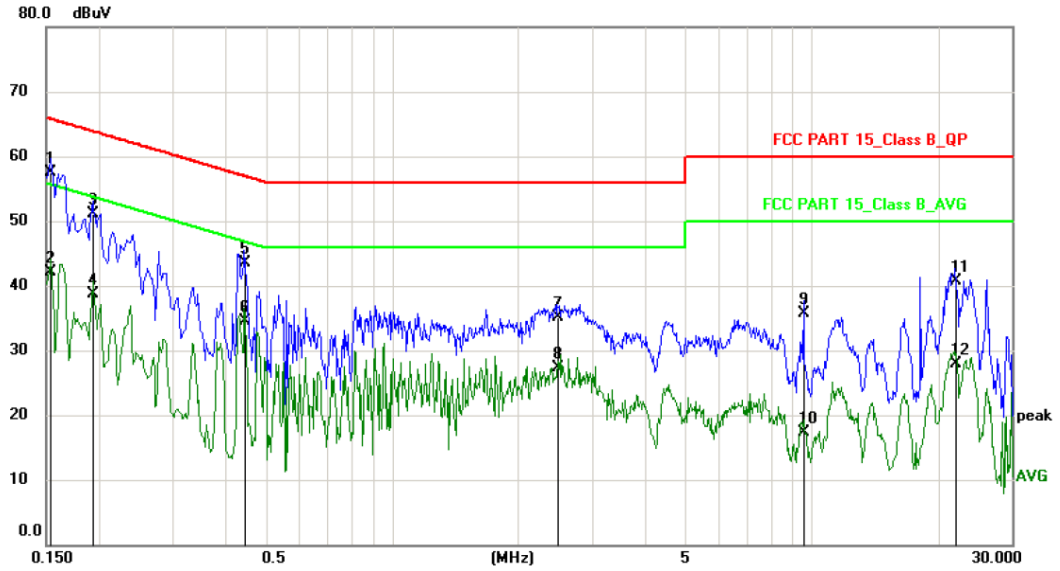
Conducted Emission Measurement

File: PGI-400 Data :#22 Date: 2018-11-12 Time: 20:19:54



Site Phase: *N* Temperature: 26
Limit: FCC PART 15_Class B_QP Power: AC120V/60Hz Humidity: 50 %
EUT: Tablet
M/N: PGI-400
Mode: TX(5G Band 4)
Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1539	46.99	10.61	57.60	65.79	-8.19	QP	
2		0.1539	31.59	10.61	42.20	55.79	-13.59	AVG	
3		0.1940	40.59	10.61	51.20	63.86	-12.66	QP	
4		0.1940	28.19	10.61	38.80	53.86	-15.06	AVG	
5		0.4460	32.88	10.62	43.50	56.95	-13.45	QP	
6		0.4460	23.88	10.62	34.50	46.95	-12.45	AVG	
7		2.4860	24.45	10.65	35.10	56.00	-20.90	QP	
8		2.4860	16.75	10.65	27.40	46.00	-18.60	AVG	
9		9.5739	25.03	10.67	35.70	60.00	-24.30	QP	
10		9.5739	6.63	10.67	17.30	50.00	-32.70	AVG	
11		22.0180	30.12	10.68	40.80	60.00	-19.20	QP	
12		22.0180	17.22	10.68	27.90	50.00	-22.10	AVG	

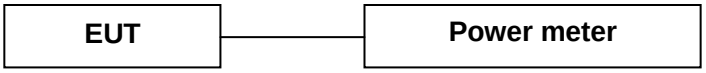
*:Maximum data x:Over limit !:over margin 〈Reference Only

4. Max. Conducted Output Power

4.1 Limits

Operation Band	EUT category	Limit
■5150~5250MHz	□Outdoor Access Point	1 Watt (30dBm) (Max. e.i.r.p ≤ 125mW(21dBm) at any elevation angle above 30 degrees as measured from the horizon)
	□Fixed point-to-point Access Point	1 Watt (30dBm)
	□Indoor Access Point	1 Watt (30dBm)
	■Mobile and Portable client device	250mW (24dBm)
■5725~5850MHz		1 Watt (30dBm)

4.2 Test SET-UP (Block Diagram of Configuration)



4.3 Test Procedure

1. The transmitter output (antenna port) was connected to the power meter.
2. Test was performed in accordance with KDB789033 v01r03 for compliance testing of Unlicensed National Information Infrastructure (U-NII) Device -section (E) Maximum conducted output power. =3. Measurement using a power meter (PM) =b Method PM-G (Measurement using a gated RF average power meter).

4.4 Measurement Results

Pass

Please refer to following table.

Band 1: 5180~5240MHz

Temperature :	23 ℃	Humidity :	52%
Test By:	Sance	Test Date :	November 15, 2018
Test Result:	PASS		
Frequency MHz	Data Rate Mbps	Peak Output Power dBm	Limit dBm
IEEE 802.11a Mode (OFDM, Antenna Gain=1.5dBi)			
Low Channel: 5180	6	9.03	24
Middle Channel: 5200	6	9.61	24
High Channel: 5240	6	10.85	24
IEEE 802.11n(HT20)Mode (OFDM, Antenna Gain=1.5dBi)			
Low Channel: 5180	MCS0	8.64	24
Middle Channel: 5200	MCS0	9.48	24
High Channel: 5240	MCS0	10.26	24
IEEE 802.11n(HT40) Mode (OFDM, Antenna Gain=1.5dBi)			
Low Channel: 5190	MCS0	8.37	24
High Channel: 5230	MCS0	9.66	24
IEEE 802.11ac (VHT20) Mode (OFDM, Antenna Gain=1.5dBi)			
Low Channel: 5180	MCS0	8.75	24
Middle Channel: 5200	MCS0	9.42	24
High Channel: 5240	MCS0	10.27	24
IEEE 802.11ac (VHT40) Mode (OFDM, Antenna Gain=1.5dBi)			
Low Channel: 5190	MCS0	8.33	24
High Channel: 5230	MCS0	9.64	24
IEEE 802.11ac (VHT80) Mode (OFDM, Antenna Gain=1.5dBi)			
Channel: 5210	MCS0	8.85	24

Band 4: 5745~5825MHz

Temperature :	22 ℃	Humidity :	54%
Test By:	Sance	Test Date :	November 15, 2018
Test Result:	PASS		

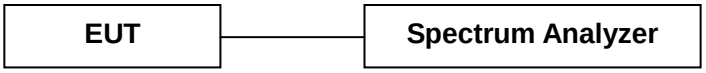
Frequency MHz	Data Rate Mbps	Peak Output Power dBm	Limit dBm
IEEE 802.11a Mode (OFDM, Antenna Gain=1.5dBi)			
Low Channel: 5745	6	9.81	30
Middle Channel: 5785	6	10.00	30
High Channel: 5825	6	9.74	30
IEEE 802.11n(HT20)Mode (OFDM, Antenna Gain=1.5dBi)			
Low Channel: 5745	MCS0	9.65	30
Middle Channel: 5785	MCS0	9.68	30
High Channel: 5825	MCS0	9.41	30
IEEE 802.11n(HT40) Mode (OFDM, Antenna Gain=1.5dBi)			
Low Channel: 5755	MCS0	9.04	30
High Channel: 5795	MCS0	11.15	30
IEEE 802.11ac (VHT20) Mode (OFDM, Antenna Gain=1.5dBi)			
Low Channel: 5745	MCS0	9.65	30
Middle Channel: 5785	MCS0	9.64	30
High Channel: 5825	MCS0	9.38	30
IEEE 802.11ac (VHT40) Mode (OFDM, Antenna Gain=1.5dBi)			
Low Channel: 5755	MCS0	9.07	30
High Channel: 5795	MCS0	9.16	30
IEEE 802.11ac (VHT80) Mode (OFDM, Antenna Gain=1.5dBi)			
Channel: 5775	MCS0	9.06	30

5. 6dB Bandwidth

5.1 Limits

For digital modulation systems, the minimum 6dB bandwidth shall be at least 500 kHz.

5.2 Test SET-UP (Block Diagram of Configuration)



5.3 Test Procedure

The antenna port of the EUT was connected to the input of a spectrum analyzer. Analyzer was set as below according to FCC KDB789033(v01r03):

1. For 6dB bandwidth, Set the RBW = 100KHz.
2. Set the VBW ≥ 3 x RBW
3. Detector = peak.
4. Sweep time = auto couple.
5. Trace mode = max hold.
6. Allow trace to fully stabilize.
7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

5.4 Measurement Results

Pass

Please refer to following table and plots.

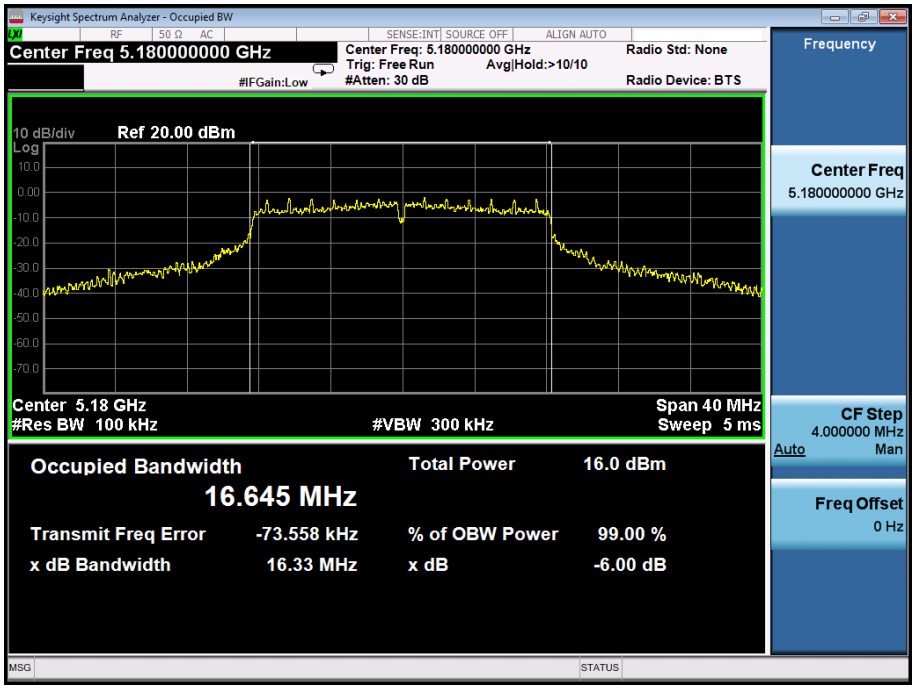
Band 1: 5180~5240MHz

Temperature :	21 ℃	Humidity : 54 %	
Test By:	Sance	Test Date : November 15, 2018	
Test Result:	PASS		
Frequency MHz	Data Rate Mbps	6dB Bandwidth MHz	Limit
IEEE 802.11a Mode (OFDM)			
Low Channel: 5180	6	16.33	>500KHz
Middle Channel: 5200	6	16.33	>500KHz
High Channel: 5240	6	16.34	>500KHz
IEEE 802.11n(HT20) Mode (OFDM)			
Low Channel: 5180	MCS0	17.55	>500KHz
Middle Channel: 5200	MCS0	17.54	>500KHz
High Channel: 5240	MCS0	17.56	>500KHz
IEEE 802.11n(HT40) Mode (OFDM)			
Low Channel: 5190	MCS0	36.37	>500KHz
High Channel: 5230	MCS0	36.35	>500KHz
IEEE 802.11ac (VHT20) Mode (OFDM)			
Low Channel: 5180	MCS0	17.57	>500KHz
Middle Channel: 5200	MCS0	17.53	>500KHz
High Channel: 5240	MCS0	17.56	>500KHz
IEEE 802.11ac (VHT40) Mode (OFDM)			
Low Channel: 5190	MCS0	36.35	>500KHz
High Channel: 5230	MCS0	36.31	>500KHz
IEEE 802.11ac (VHT80) Mode (OFDM)			
Channel: 5210	MCS0	75.82	>500KHz

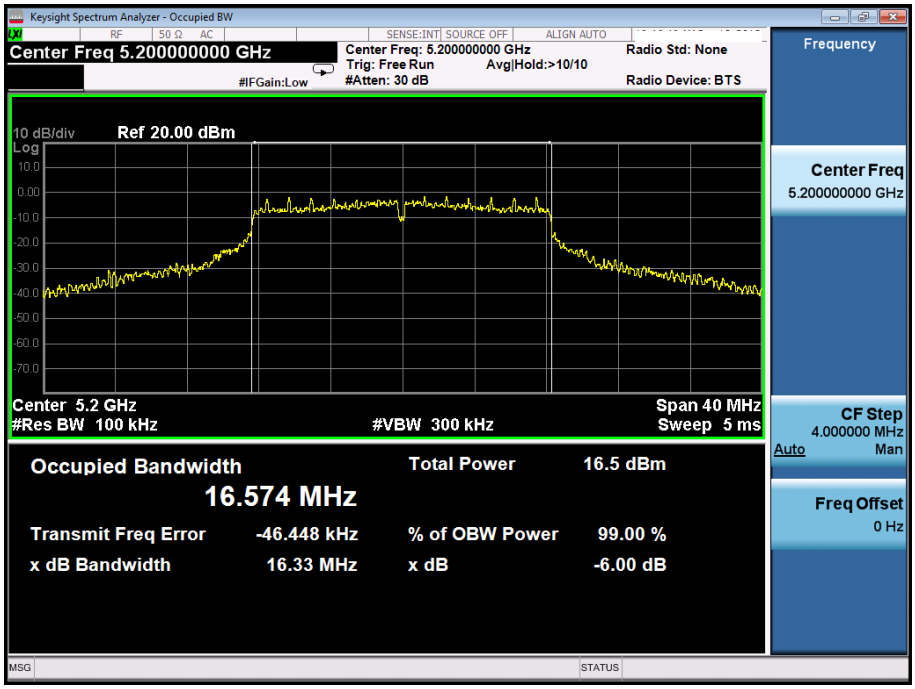
Band 4: 5745~5825MHz

Temperature :	23 ℃	Humidity : 53 %	
Test By:	Sance	Test Date : November 15, 2018	
Test Result:	PASS		
Frequency MHz	Data Rate Mbps	6dB Bandwidth MHz	Limit
IEEE 802.11a Mode (OFDM)			
Low Channel: 5745	6	16.33	>500KHz
Middle Channel: 5785	6	16.33	>500KHz
High Channel: 5825	6	16.35	>500KHz
IEEE 802.11n(HT20) Mode (OFDM)			
Low Channel: 5745	MCS0	17.30	>500KHz
Middle Channel: 5785	MCS0	17.56	>500KHz
High Channel: 5825	MCS0	17.55	>500KHz
IEEE 802.11n(HT40) Mode (OFDM)			
Low Channel: 5755	MCS0	36.30	>500KHz
High Channel: 5795	MCS0	36.30	>500KHz
IEEE 802.11ac (VHT20) Mode (OFDM)			
Low Channel: 5745	MCS0	17.55	>500KHz
Middle Channel: 5785	MCS0	17.58	>500KHz
High Channel: 5825	MCS0	17.55	>500KHz
IEEE 802.11ac (VHT40) Mode (OFDM)			
Low Channel: 5755	MCS0	36.27	>500KHz
High Channel: 5795	MCS0	36.31	>500KHz
IEEE 802.11ac (VHT80) Mode (OFDM)			
Channel: 5775	MCS0	75.62	>500KHz

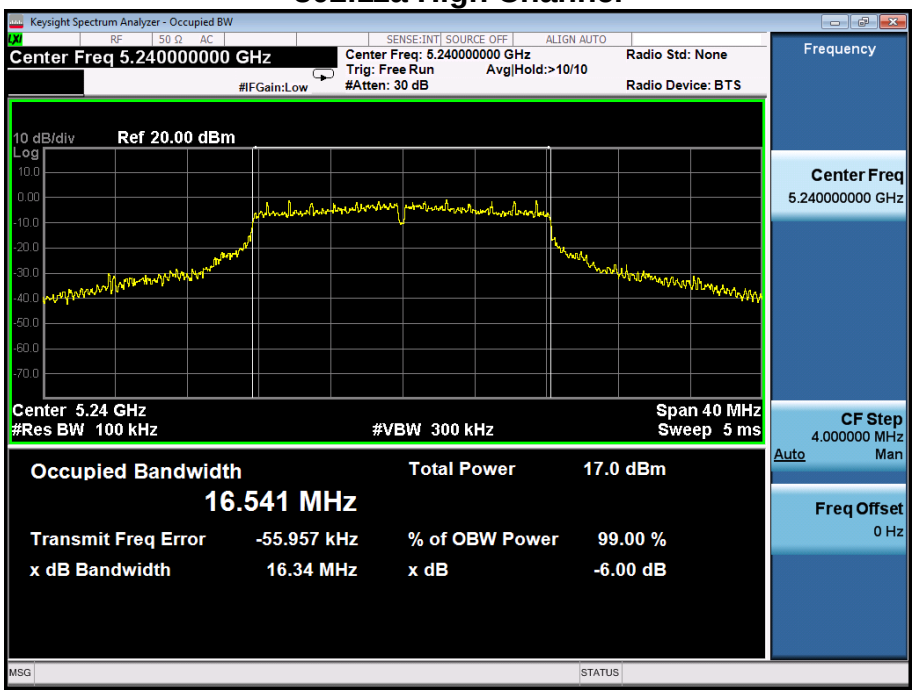
Band 5180-5240MHz
802.11a Low Channel



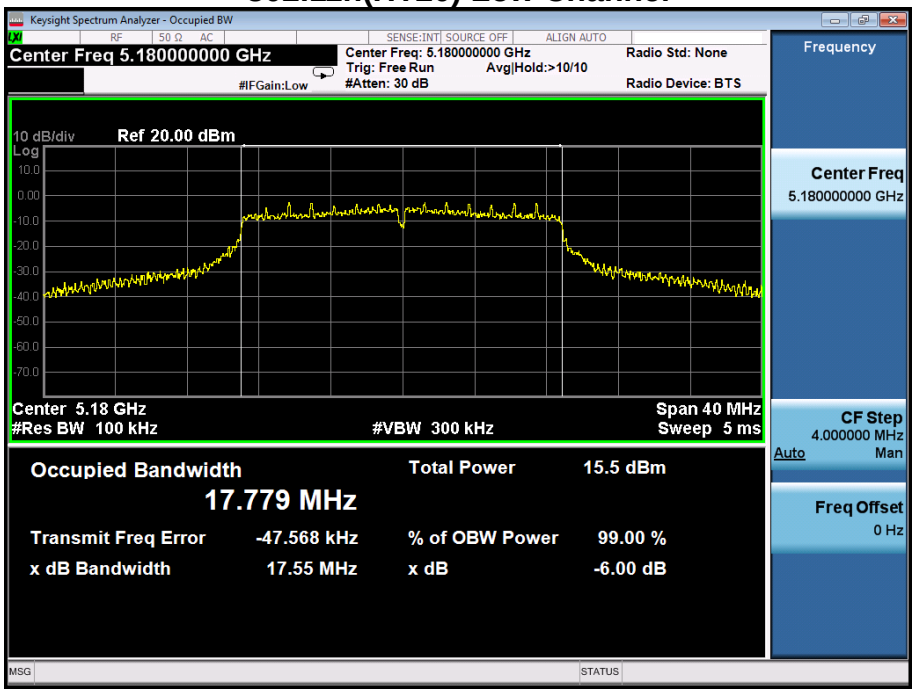
802.11a Middle Channel



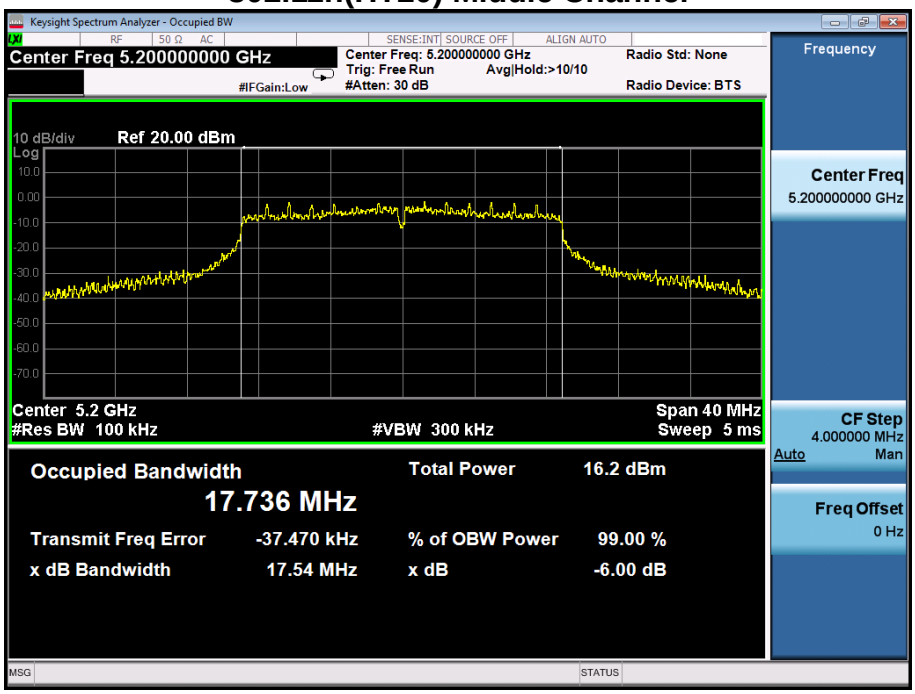
802.11a High Channel



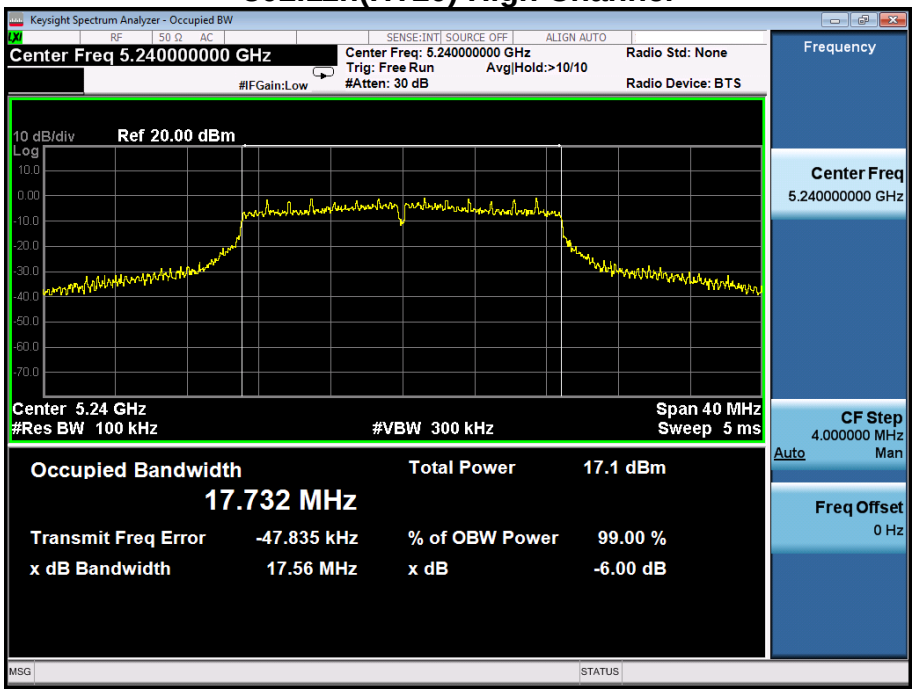
802.11n(HT20) Low Channel



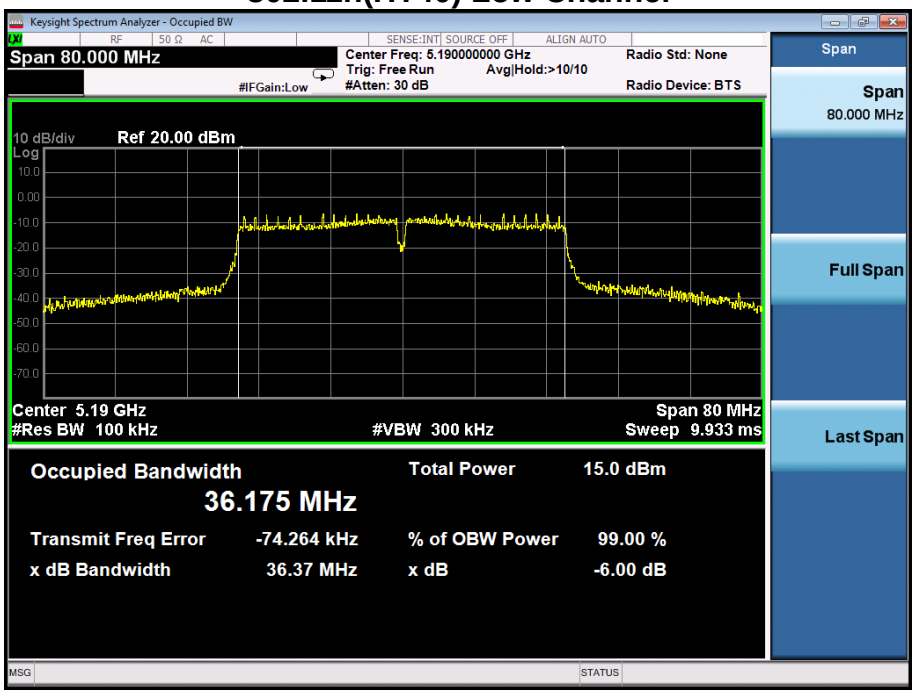
802.11n(HT20) Middle Channel



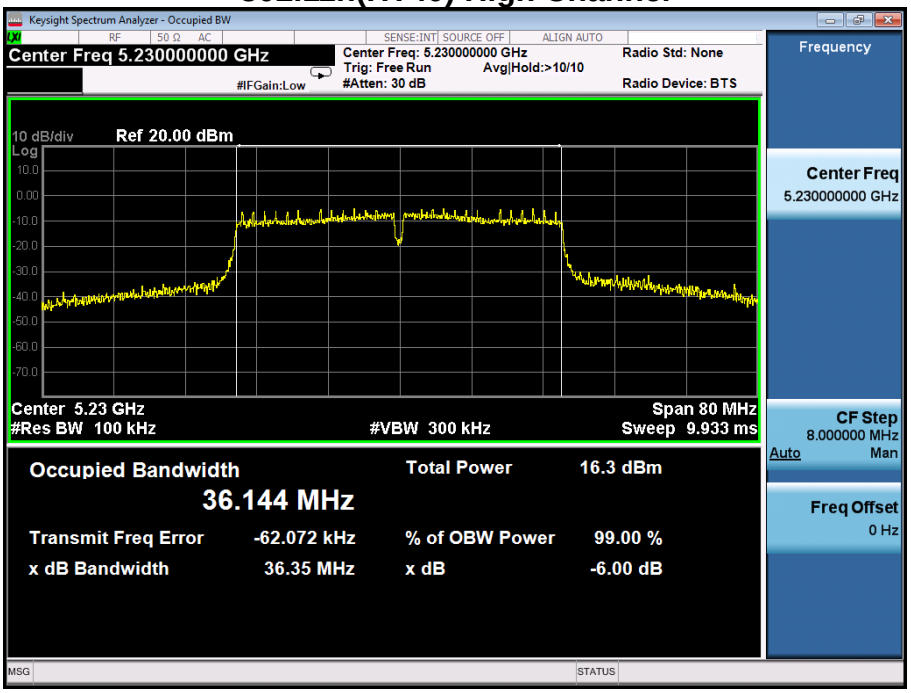
802.11n(HT20) High Channel



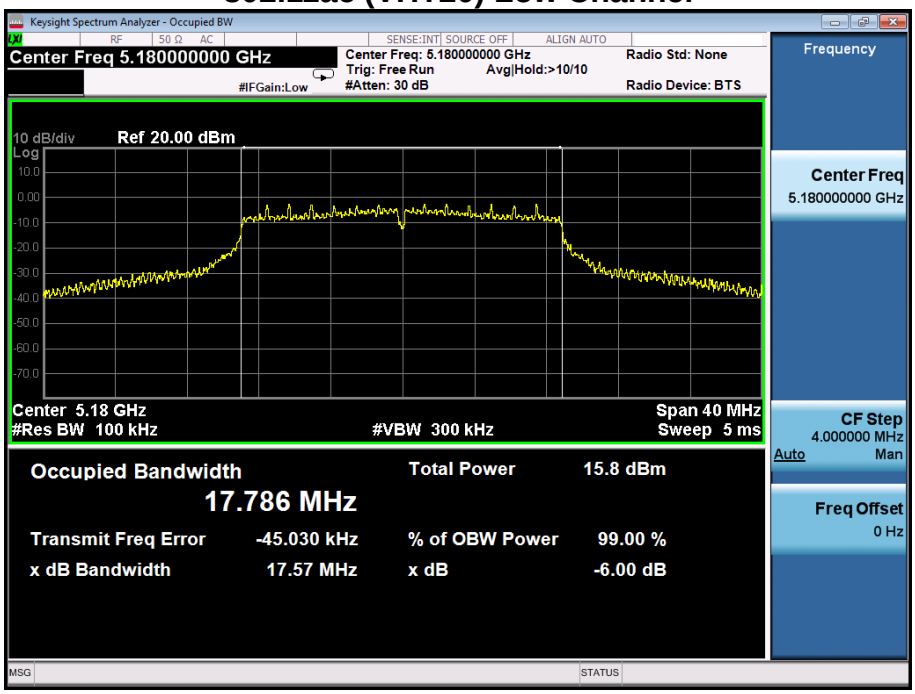
802.11n(HT40) Low Channel



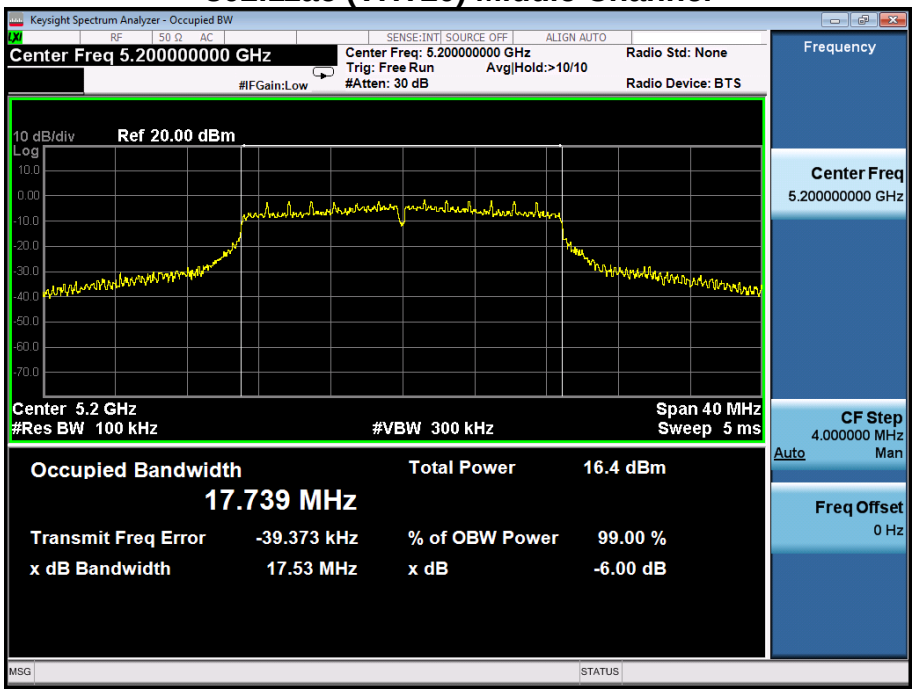
802.11n(HT40) High Channel



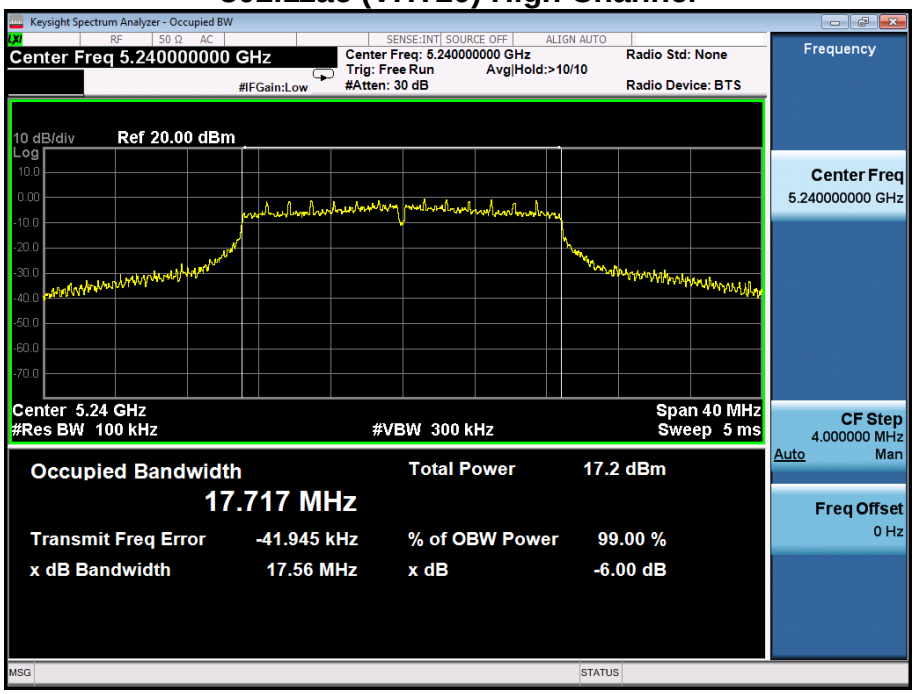
802.11ac (VHT20) Low Channel



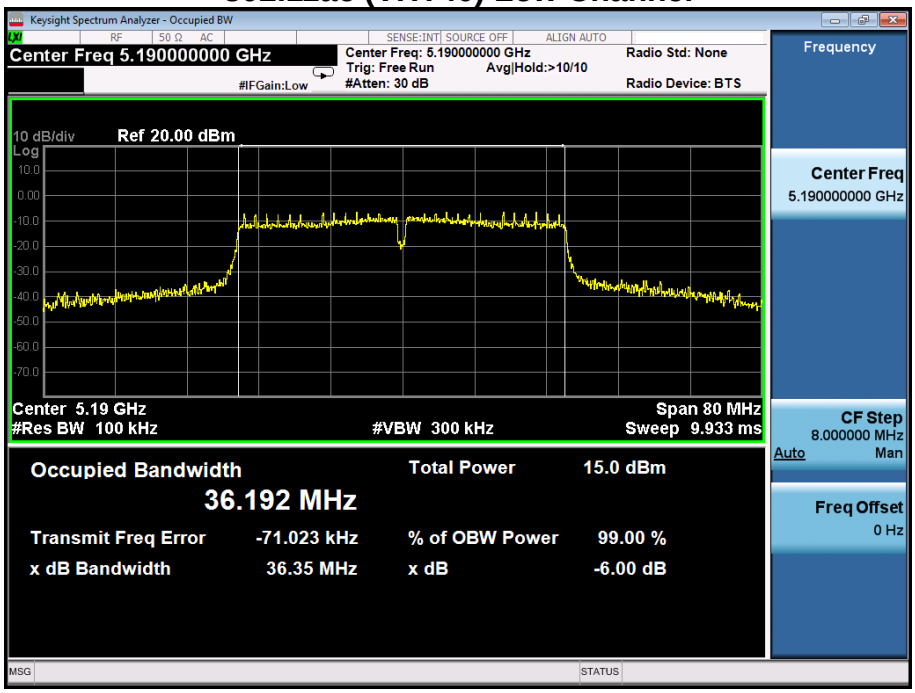
802.11ac (VHT20) Middle Channel



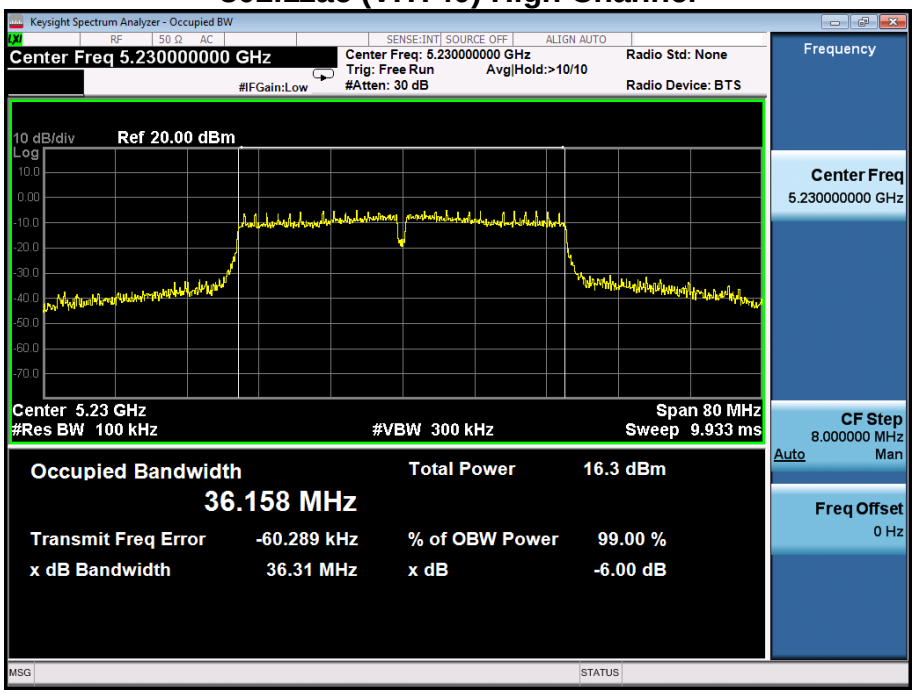
802.11ac (VHT20) High Channel



802.11ac (VHT40) Low Channel

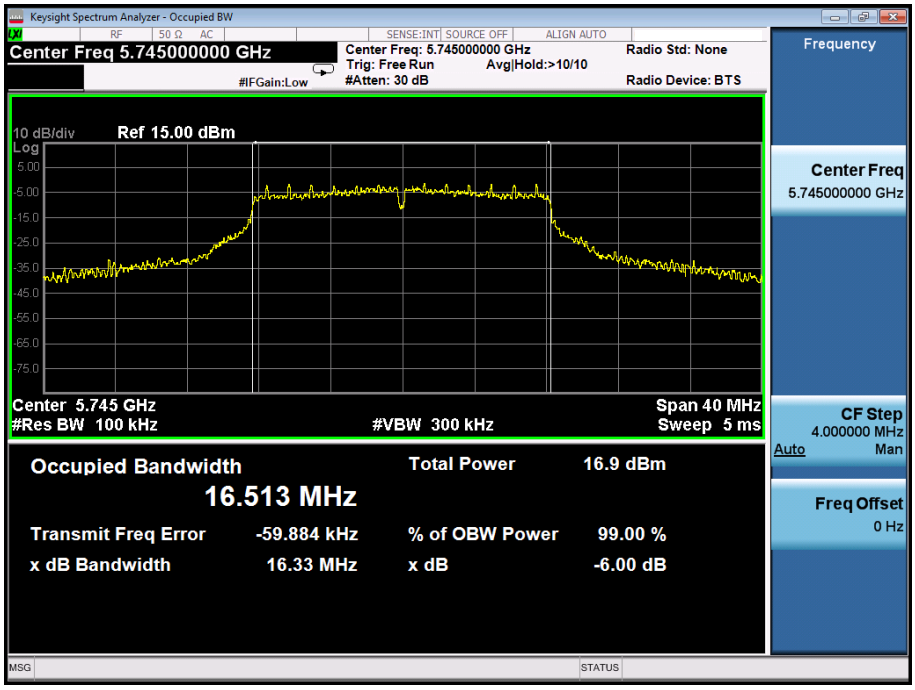
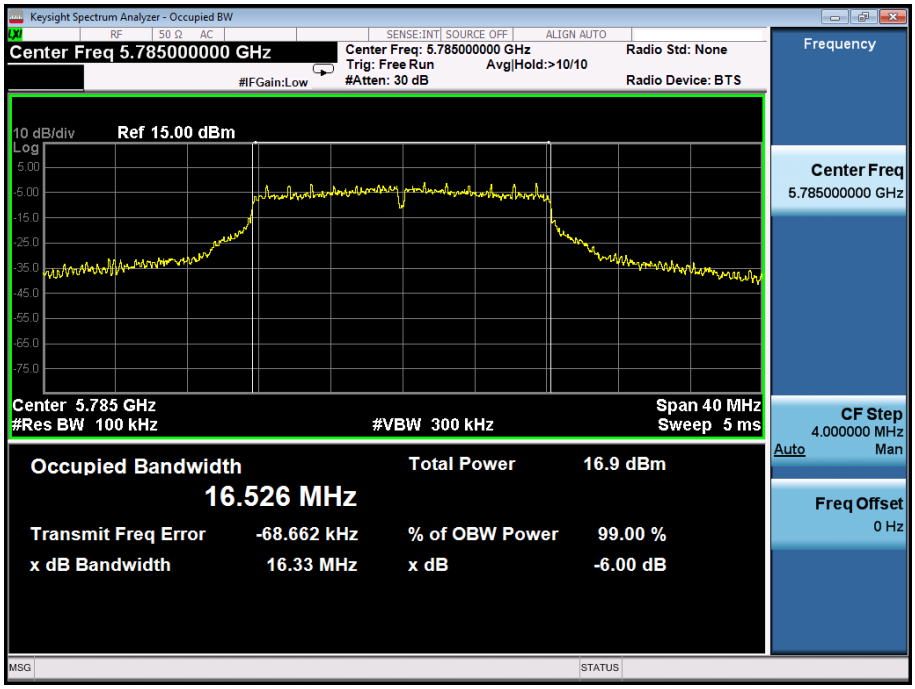


802.11ac (VHT40) High Channel



802.11ac (VHT80) Channel

Band 5745-5825MHz
802.11a Low Channel



802.11a Middle Channel