FCC 47 CFR PART 15 SUBPART E

UNII

CERTIFICATION TEST REPORT

FOR

WCDMA/LTE Tablet + BT/BLE and DTS/UNII a/b/g/n

MODEL NUMBER : SM-T378V

FCC ID: A3LSMT378V

REPORT NUMBER: 4788103295-E4V2

ISSUE DATE: SEP 21, 2017

Prepared for
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ACCREDITED
TL-637

Revision History

Rev.	Issue Date	Revisions	Revised By
V1	09/14/17	Initial issue	Junwhan Lee
V2	09/21/17	Updated report to address TCB's questions	Junwhan Lee

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME:	SAMSUNG ELECTRONICS CO., LTD.
EUT DESCRIPTION:	WCDMA/LTE Tablet + BT/BLE and DTS/UNII a/b/g/n
MODEL NUMBER:	SM-T378V
SERIAL NUMBER:	R32J7008EVD (RADIATED); R32J7008CBB (CONDUCTED)
DATE TESTED:	AUG 14, 2017 - SEP 21, 2017

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
CFR 47 Part 15 Subpart E	Pass

UL Korea, Ltd. tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by UL Korea, Ltd. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL Korea, Ltd. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Korea, Ltd. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by IAS, any agency of the Federal Government, or any agency of any government.

Approved & Released For
UL Korea, Ltd. By:

CY Choi
Suwon Lab Engineer
UL Korea, Ltd.

Tested By:

Junwhan Lee
Suwon Lab Engineer
UL Korea, Ltd.

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with following methods.

1. FCC CFR 47 Part 2.
2. FCC CFR 47 Part 15.
3. KDB 789033 D02 General UNII Test Procedures New Rules v01r04
4. KDB 905462 D02 UNII DFS Compliance Procedures New Rules v02
5. KDB 905462 D03 UNII Clients Without Radar Detection New Rules v01r02
6. ANSI C63.10-2013.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 218 Maeyeong-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16675, Korea. Line conducted emissions are measured only at the 218 address. The following table identifies which facilities were utilized for radiated emission measurements documented in this report. Specific facilities are also identified in the test results sections.

218 Maeyeong-ro
☒ Chamber 1
☒ Chamber 2

UL Korea, Ltd. is accredited by IAS, Laboratory Code TL-637. The full scope of accreditation can be viewed at http://www.iasonline.org/PDF/TL/TL-637.pdf.

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB)

36.5 dBuV + 18.7 dB/m + 0.6 dB – 26.9 dB = 28.9 dBuV/m

4.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER	UNCERTAINTY
Conducted Disturbance, 0.15 to 30 MHz	2.32 dB
Radiated Disturbance, Below 1GHz	4.14 dB
Radiated Disturbance, Above 1 GHz	5.97 dB

Uncertainty figures are valid to a confidence level of 95%.

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is a WCDMA/LTE Tablet + BT/BLE and DTS/UNII a/b/g/n.
This test report addresses the NII (UNII) operational mode.

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum total conducted average output power as follows:

Frequency Range [MHz]	Mode	Output Power [dBm]	Output Power [mW]
5180 - 5240	802.11a	12.43	17.50
	802.11n HT20	11.86	15.35
5190 - 5230	802.11n HT40	11.28	13.44
5260 - 5320	802.11a	12.41	17.41
	802.11n HT20	11.86	15.36
5270 - 5310	802.11n HT40	10.75	11.89
5500 - 5720	802.11a	12.42	17.46
	802.11n HT20	11.78	15.05
5510 - 5710	802.11n HT40	10.70	11.75
5745 - 5825	802.11a	12.85	19.28
	802.11n HT20	11.93	15.60
5755 - 5795	802.11n HT40	11.04	12.69

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes an internal antenna, with a maximum gain of:

Frequency Range [MHz]	Antenna Gain [dBi]
UNII 1 5150 – 5250	-0.2
UNII 2A 5250 – 5350	-0.29
UNII 2C 5470 – 5725	0.62
UNII 3 5725 – 5850	0.77

5.4. WORST-CASE CONFIGURATION AND MODE

Radiated emission below 1GHz and power line conducted emission were performed with the EUT set to transmit at the channel with highest output power as worst-case scenario.

Radiated emission above 1GHz was performed with the EUT set to transmit low/mid/high channels.

The fundamental of the EUT was investigated in three orthogonal orientations X,Y,Z, it was determined that the X orientation was worst-case orientation; therefore, all final radiated testing was performed with the EUT in the X orientation.

Based on the baseline scan, the worst-case data rates were:

802.11a mode: 6 Mbps
802.11n HT20 mode: MCS0
802.11n HT40 mode: MCS0

5.5. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	**Manufacturer**	**Model**	**Serial Number**	**FCC ID**
Charger	SAMSUNG	EP-TA12JWE	RT4J221eS/B- E	N/A
Data Cable	SAMSUNG	EP-DG915UWZ	N/A	N/A
Earphone	SAMSUNG	EHS64AVFWE	N/A	N/A

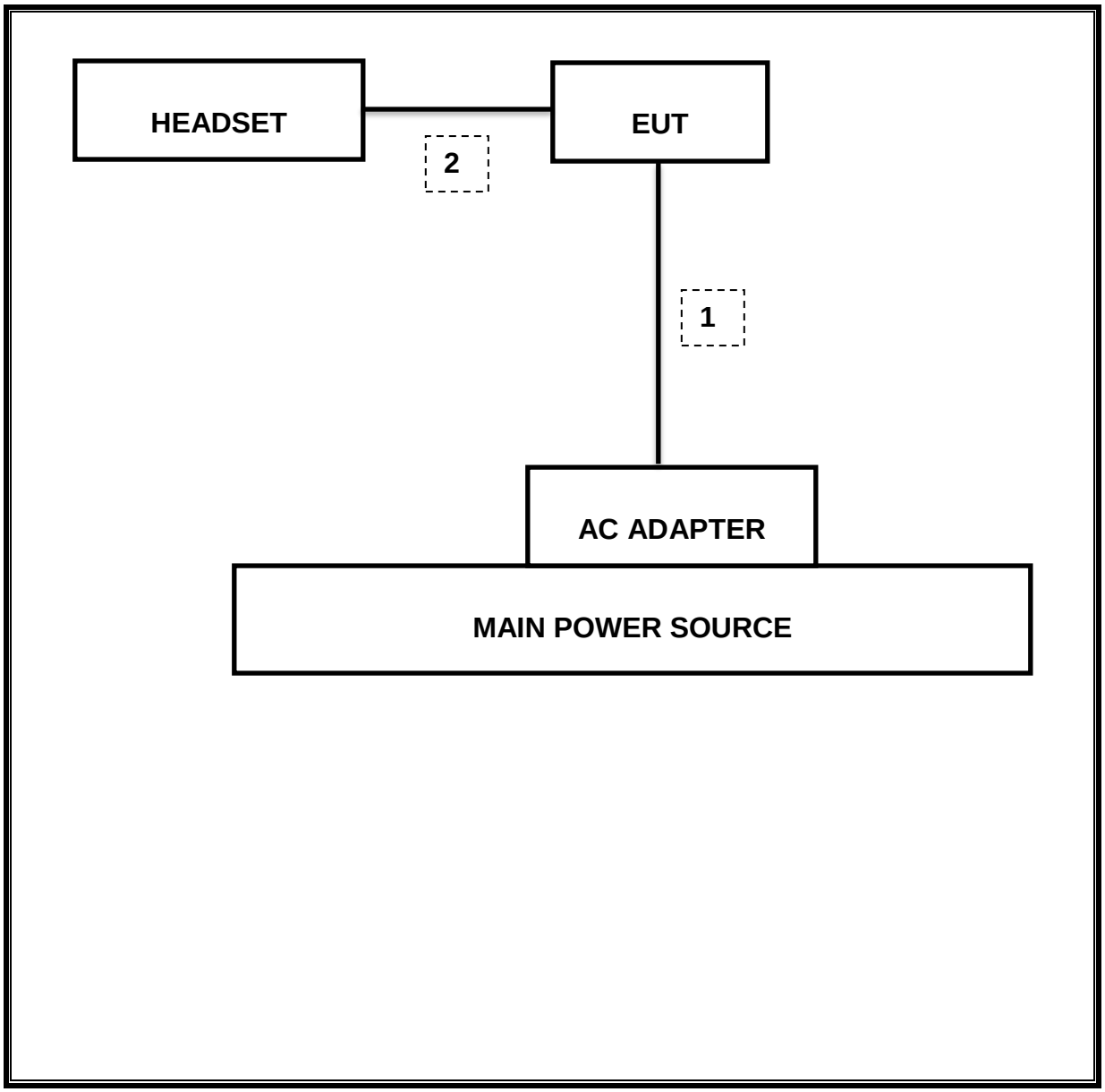
I/O CABLES

I/O Cable List						
Cable No	**Port**	**# of identical ports**	**Connector Type**	**Cable Type**	**Cable Length (m)**	**Remarks**
1	DC Power	1	Mini-USB	Shielded	1.1m	N/A
2	Audio	2	Mini-Jack	Unshielded	1.1m	N/A

TEST SETUP

The EUT is a stand-alone unit during the tests.
Test software in hidden menu exercised the EUT to enable NII mode.

SETUP DIAGRAM FOR TESTS



6. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

Test Equipment List				
Description	**Manufacturer**	**Model**	**S/N**	**Cal Due**
Antenna, Bilog, 30MHz-1GHz	SCHWARZBECK	VULB9163	750	10-14-18
Antenna, Bilog, 30MHz-1GHz	SCHWARZBECK	VULB9163	749	04-14-19
Antenna, Horn, 18 GHz	ETS	3115	00167211	10-14-18
Antenna, Horn, 18 GHz	ETS	3115	00161451	03-10-19
Antenna, Horn, 18 GHz	ETS	3117	00168724	05-31-19
Antenna, Horn, 18 GHz	ETS	3117	00168717	05-31-19
Antenna, Horn, 40 GHz	ETS	3116C	00166155	11-30-17
Antenna, Horn, 40 GHz	ETS	3116C-PA	00168841	12-15-17
Attenuator / Switch driver	HP	11713A	3748A04272	N/A
Preamplifier, 1000 MHz	Sonoma	310N	341282	08-09-18
Preamplifier, 1000 MHz	Sonoma	310N	351741	08-07-18
Preamplifier	ETS	3115-PA	00167475	08-09-18
Preamplifier, 18 GHz	Miteq	AFS42-00101800-25-S-42	1896138	08-08-18
Spectrum Analyzer, 44 GHz	Agilent / HP	N9030A	MY54170614	08-08-18
Spectrum Analyzer, 44 GHz	Agilent / HP	N9030A	MY54490312	08-08-18
Average Power Sensor	Agilent / HP	U2000	MY54270007	08-08-18
Attenuator	PASTERNACK	PE7087-10	A009	08-08-18
EMI Test Receive, 40 GHz	R&S	ESU40	100439	08-08-18
EMI Test Receive, 40 GHz	R&S	ESU40	100457	08-08-18
EMI Test Receive, 3 GHz	R&S	ESR3	101832	08-07-18
Low Pass Filter 5GHz	Micro-Tronics	LPS17541	009	08-08-18
Low Pass Filter 5GHz	Micro-Tronics	LPS17541	015	08-08-18
High Pass Filter 3GHz	Micro-Tronics	HPM17543	010	08-08-18
High Pass Filter 3GHz	Micro-Tronics	HPM17543	015	08-08-18
High Pass Filter 6GHz	Micro-Tronics	HPM17542	009	08-08-18
High Pass Filter 6GHz	Micro-Tronics	HPM17542	016	08-08-18
LISN	R&S	ENV-216	101837	08-09-18
Antenna, Loop, 9kHz-30MHz	R&S	HFH2-Z2	100418	11-25-17
UL Software				
Description	**Manufacturer**	**Model**	**Version**	
Radiated software	UL	UL EMC	Ver 9.5	
AC Line Conducted software	UL	UL EMC	Ver 9.5	

7. SUMMARY TABLE

FCC Part Section	Test Description	Test Limit	Test Condition	Test Result
15.407(e)	6dB Band width (5.8Ghz)	500KHz		1.46 MHz (Straddle Ch.)
15.407 (a)(2)	TX Cond. Power 5.15-2.25, 5.25-5.35 & 5.47-5.725	<24dBm or 11+10Log(OBW)		12.43 dBm
15.407 (a)(3)	TX Cond. Power 5.725-5.825	< 30dBm or 17+10Log(OBW)		12.85 dBm
15.407 (a)(5)	PSD (5.2,5.3,5.5GHz)	<11dBm		3.00 dBm
15.407 (a)(5)	PSD (5.8GHz)	30dBm per 500kHz		0.29 dBm
15.207 (a)	AC Power Line conducted emissions	Section 10	Radiated	47.59 dBuV (Pk)
15.407 (b) & 15.209	Radiated Spurious Emission	< 68.2dBuV/m		65.09 dBuV/m (Pk)
15.407 (h)(2)	Dynamic Frequency Selection	N/A	Condcuted	Pass

8. REFERENCE MEASUREMENTS RESULTS

LIMITS

None; for reporting purposes only.

PROCEDURE

KDB 789033 D02 v01r04 Zero-Span Spectrum Analyzer Method.

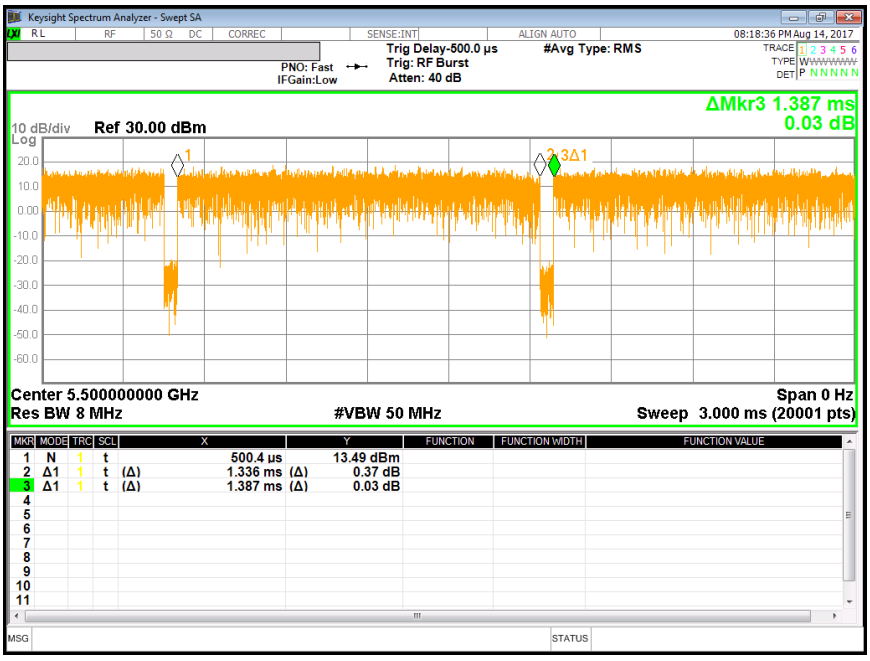
8.1. ON TIME AND DUTY CYCLE RESULTS

Mode	ON Time B [msec)	Period [msec]	Duty Cycle x [linear]	Duty Cycle [%]	Duty Cycle Correction Factor [dB]	1/T Minimum VBW [kHz]
802.11a	1.428	1.488	0.960	96.0%	0.18	0.700
802.11n HT20	1.336	1.387	0.963	96.3%	0.16	0.749
802.11n HT40	0.664	0.724	0.917	91.7%	0.38	1.506

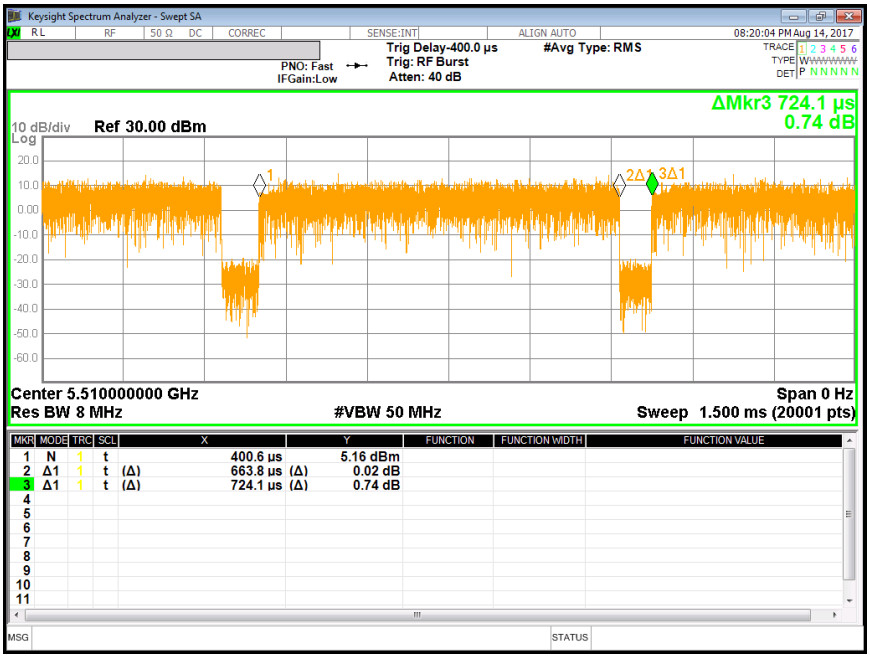
8.2. DUTY CYCLE PLOTS

DUTY CYCLE 802.11a MODE

DUTY CYCLE 802.11n HT20 MODE



DUTY CYCLE 802.11n HT40 MODE



8.3. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Reference to 789033 D02 General UNII Test Procedures New Rules v01r04: The transmitter output is connected to a spectrum analyzer with the RBW set to approximately 1% of EBW, the VBW > RBW, peak detector and max hold.

NOTE

- Calculation for 26dB Bandwidth of UNII-2C and UNII-3 Straddle Channel

ex) Fundamental frequency : 5720MHz
  - 26dB BW : 21.00MHz
  - Turning Frequency : 5725MHz
  - 26dB Bandwidth of UNII-2C band Portion
    = (5725 – (5720 - (21.00 / 2)) = 15.50 MHz
  - 26dB Bandwidth of UNII-3 band Portion
    = (5720 + (21.00 / 2) -5725) = 5.50 MHz

RESULTS

8.3.1. 802.11a MODE IN THE 5.2 GHz BAND

Channel	Frequency [MHz]	26 dB Bandwidth [MHz]
Low	5180	20.95
Mid	5200	20.84
High	5240	20.74
Worst		20.95

8.3.2. 802.11n HT20 MODE IN THE 5.2 GHz BAND

Channel	Frequency [MHz]	26 dB Bandwidth [MHz]
Low	5180	21.16
Mid	5200	21.67
High	5240	21.36
Worst		21.67

8.3.3. 802.11n HT40 MODE IN THE 5.2 GHz BAND

Channel	Frequency [MHz]	26 dB Bandwidth [MHz]
Low	5190	41.82
High	5230	39.35
Worst		41.82

8.3.4. 802.11a MODE IN THE 5.3 GHz BAND

Channel	Frequency [MHz]	26 dB Bandwidth [MHz]
Low	5260	20.55
Mid	5300	20.94
High	5320	20.86
Worst		20.94

8.3.5. 802.11n HT20 MODE IN THE 5.3 GHz BAND

Channel	Frequency [MHz]	26 dB Bandwidth [MHz]
Low	5260	21.22
Mid	5300	21.46
High	5320	21.73
Worst		21.73

8.3.6. 802.11n HT40 MODE IN THE 5.3 GHz BAND

Channel	Frequency [MHz]	26 dB Bandwidth [MHz]
Low	5270	39.66
High	5310	42.06
Worst		42.06

8.3.7. 802.11a MODE IN THE 5.5 GHz BAND

Channel	Frequency [MHz]	26 dB Bandwidth [MHz]
Low	5500	20.74
Mid	5580	20.78
High	5700	20.66
Straddle	5720	15.38
Worst		20.78

8.3.8. 802.11n HT20 MODE IN THE 5.5 GHz BAND

Channel	Frequency [MHz]	26 dB Bandwidth [MHz]
Low	5500	20.73
Mid	5580	20.86
High	5700	21.04
Straddle	5720	15.49
Worst		21.04

8.3.9. 802.11n HT40 MODE IN THE 5.5 GHz BAND

Channel	Frequency [MHz]	26 dB Bandwidth [MHz]
Low	5510	39.18
Mid	5590	41.64
High	5670	39.69
Straddle	5710	35.79
Worst		41.64

8.3.10. 802.11a MODE IN THE 5.8 GHz BAND

Channel	Frequency [MHz]	26 dB Bandwidth [MHz]
Straddle	5720	5.38
Low	5745	20.77
Mid	5785	20.72
High	5825	20.59
Worst		20.77

8.3.11. 802.11n HT20 MODE IN THE 5.8 GHz BAND

Channel	Frequency [MHz]	26 dB Bandwidth [MHz]
Straddle	5720	5.49
Low	5745	21.14
Mid	5785	22.21
High	5825	21.14
Worst		22.21

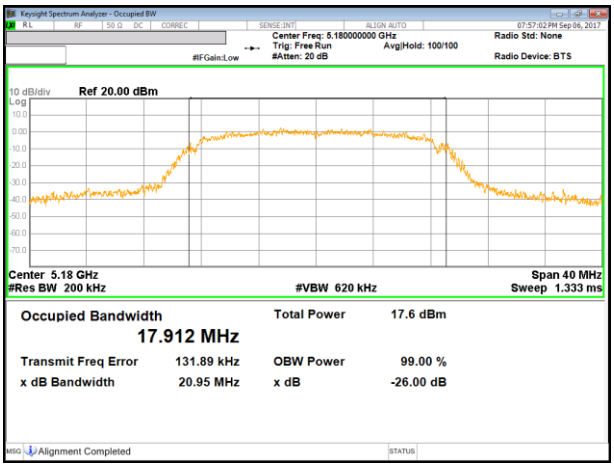
8.3.12. 802.11n HT40 MODE IN THE 5.8 GHz BAND

Channel	Frequency [MHz]	26 dB Bandwidth [MHz]
Straddle	5710	5.79
Low	5755	39.48
High	5795	39.39
Worst		39.48

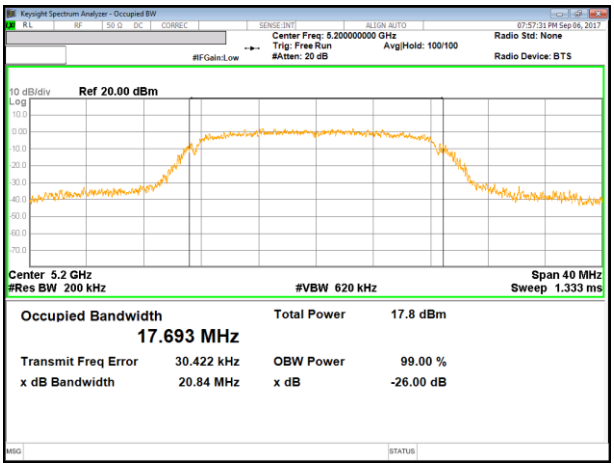
8.3.13. 26 dB BANDWIDTH PLOTS

UNII 5.2 GHz IEEE 802.11a mode

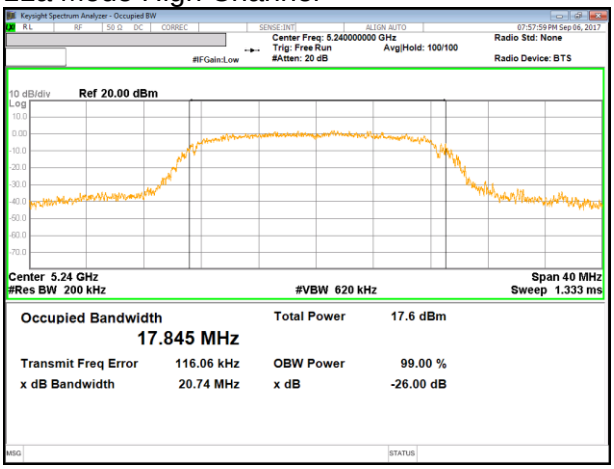
11a Mode Low Channel



11a Mode Middle Channel

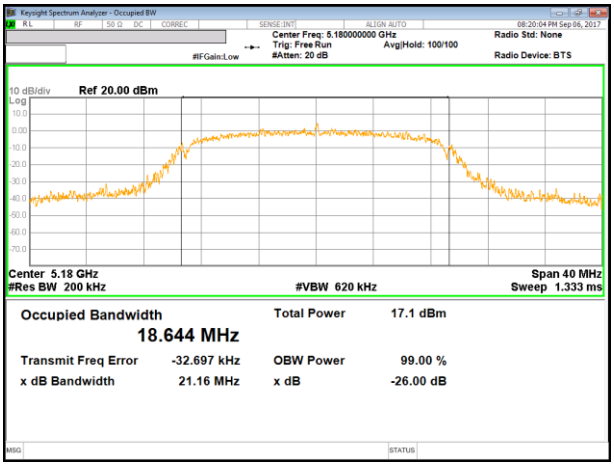


11a Mode High Channel



UNII 5.2 GHz IEEE 802.11n HT20 mode

11n HT20 Mode Low Channel



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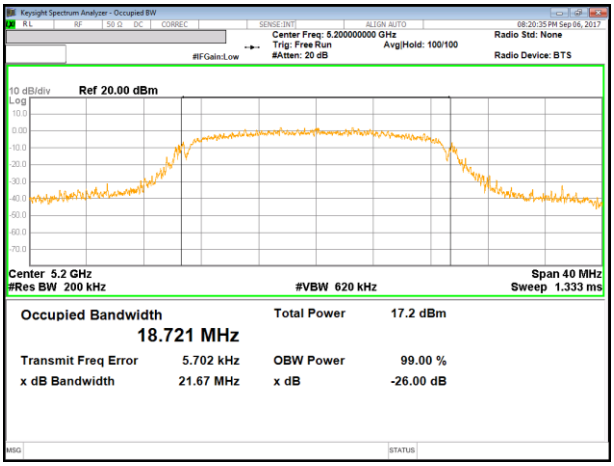
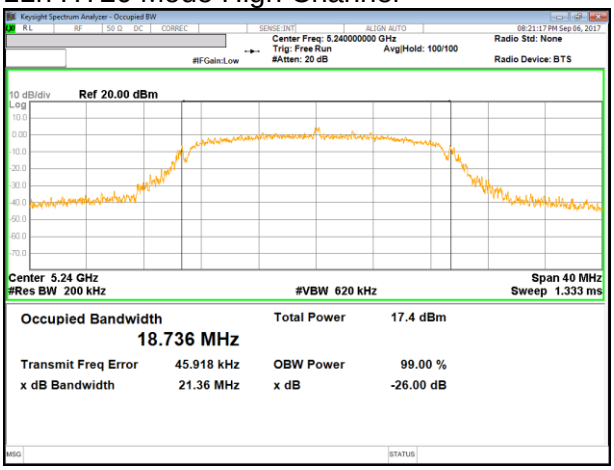
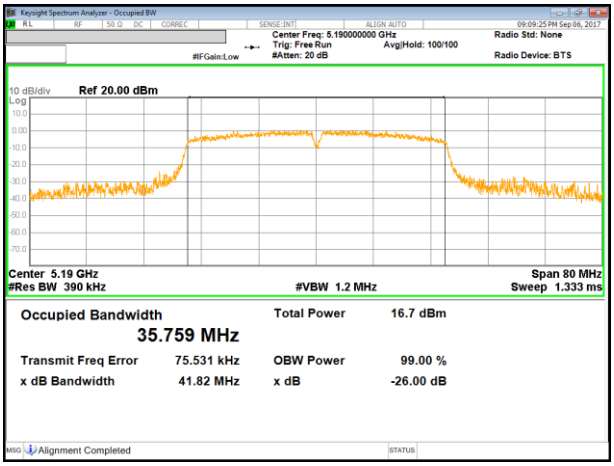


11n HT20 Mode High Channel

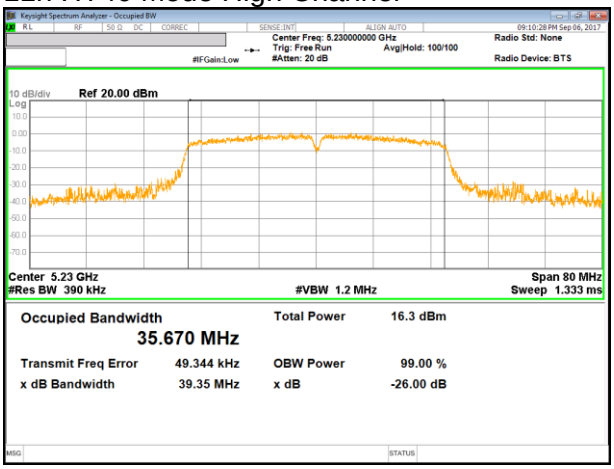


UNII 5.2 GHz IEEE 802.11n HT40 mode

11n HT40 Mode Low Channel

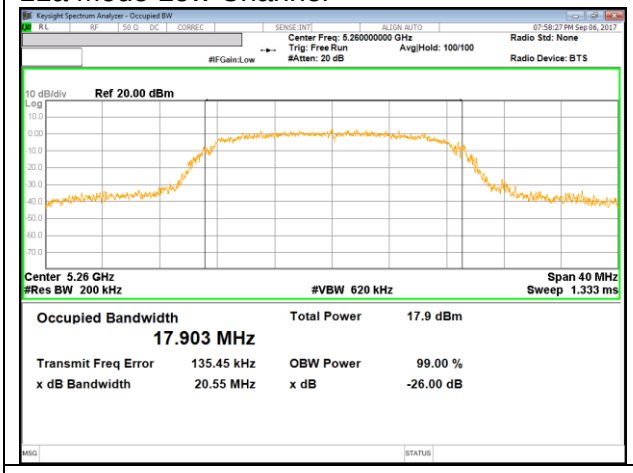


11n HT40 Mode High Channel

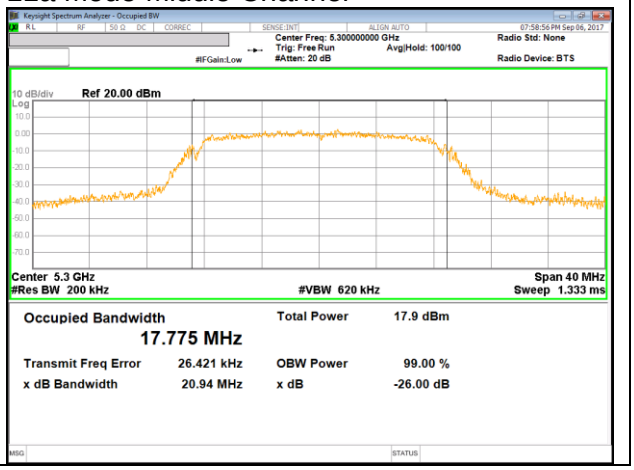


UNII 5.3 GHz IEEE 802.11a mode

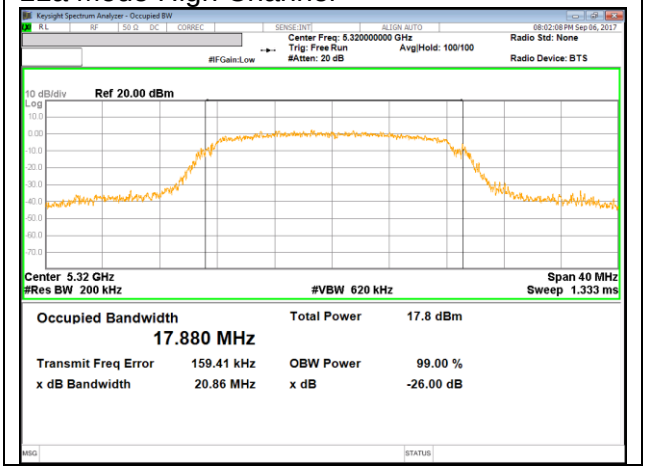
11a Mode Low Channel



11a Mode Middle Channel

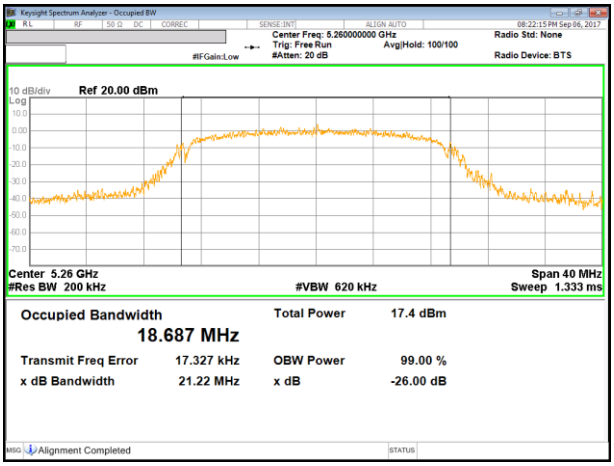


11a Mode High Channel

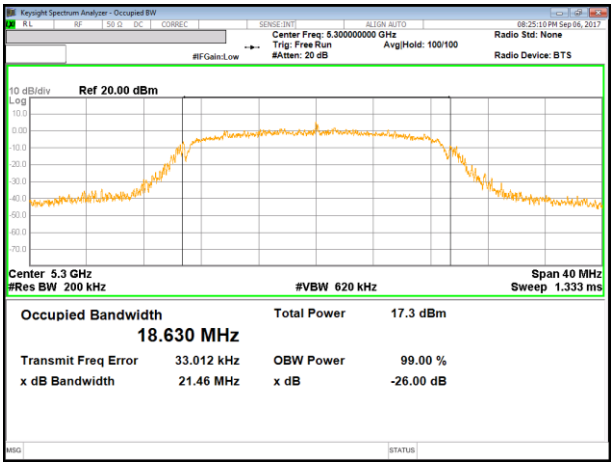


UNII 5.3 GHz IEEE 802.11n HT20 mode

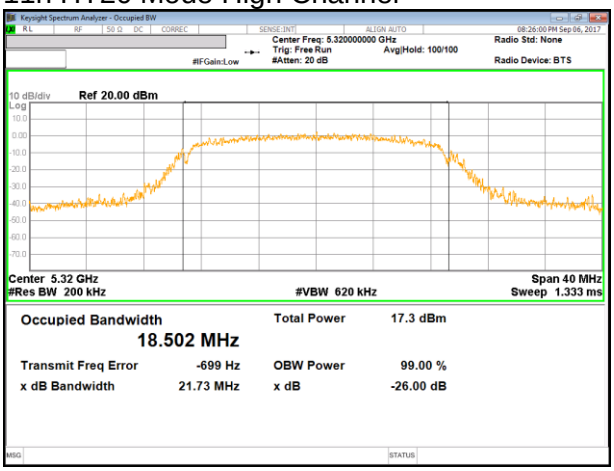
11n HT20 Mode Low Channel



11n HT20 Mode Middle Channel

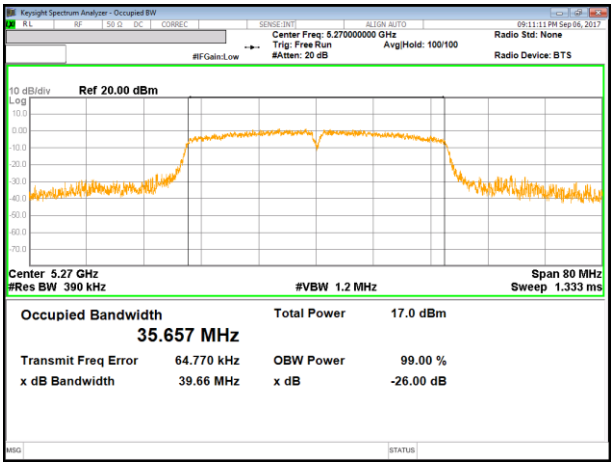


11n HT20 Mode High Channel

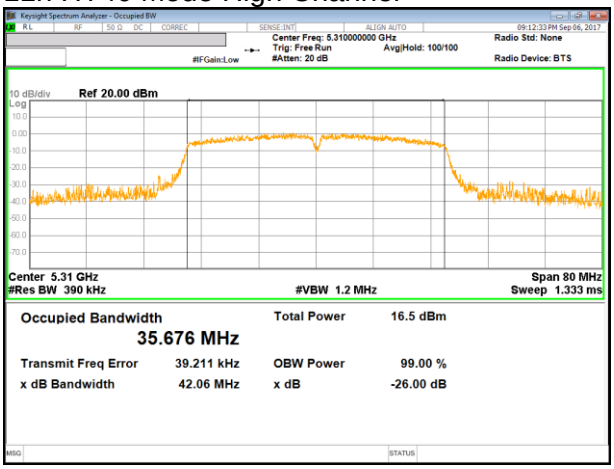


UNII 5.3 GHz IEEE 802.11n HT40 mode

11n HT40 Mode Low Channel

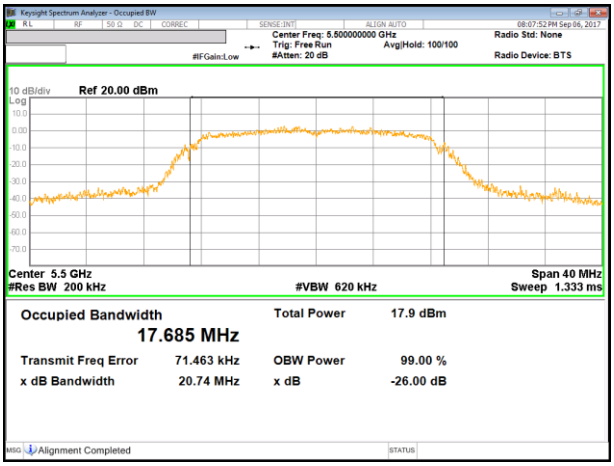


11n HT40 Mode High Channel

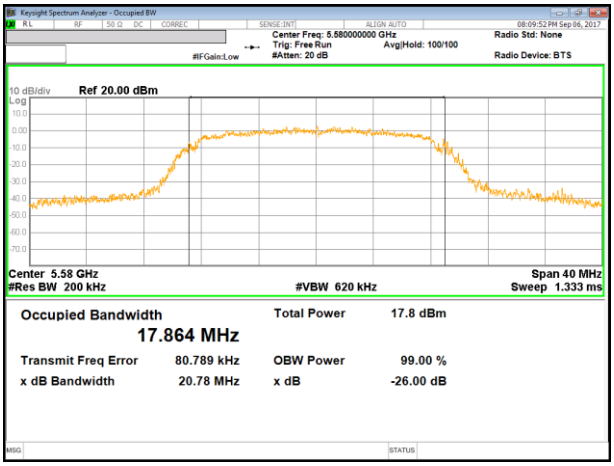


UNII 5.5 GHz IEEE 802.11a mode

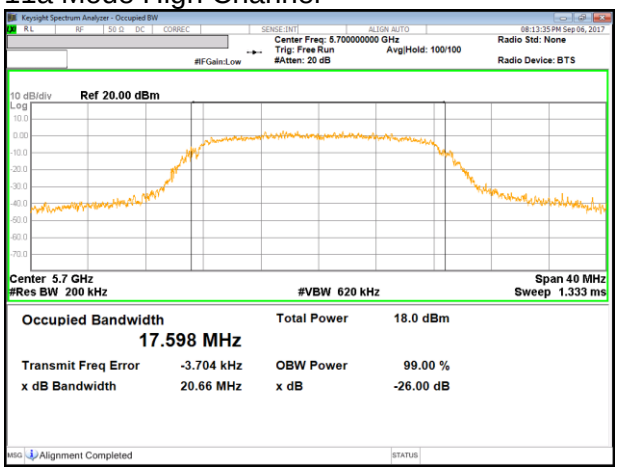
11a Mode Low Channel



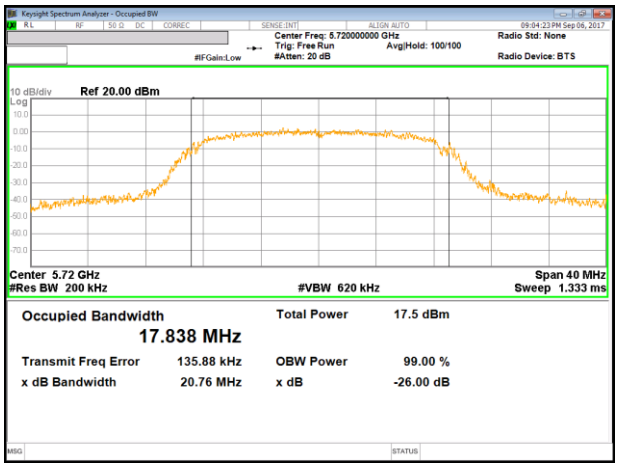
11a Mode Middle Channel



11a Mode High Channel

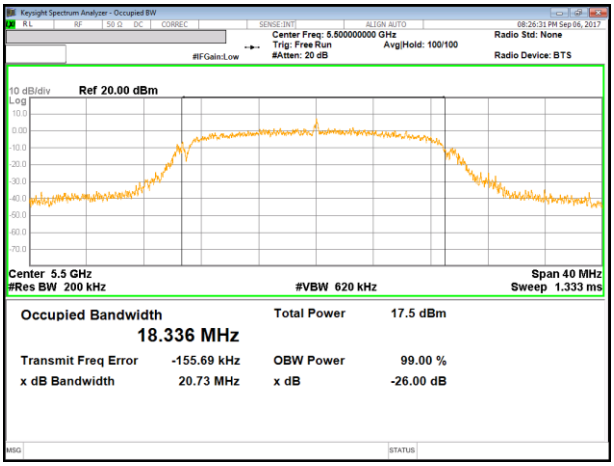


11a Mode Straddle Channel

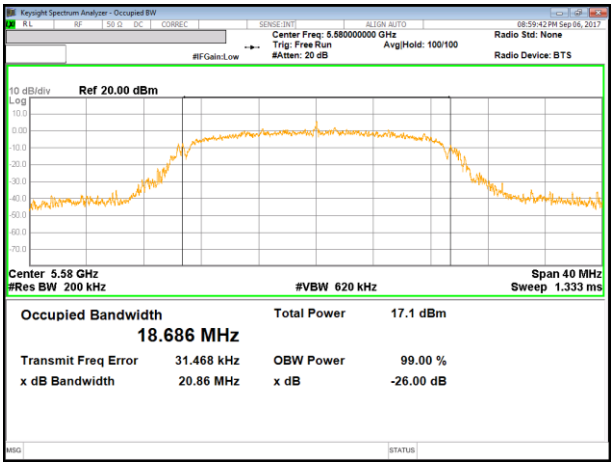


UNII 5.5 GHz IEEE 802.11n HT20 mode

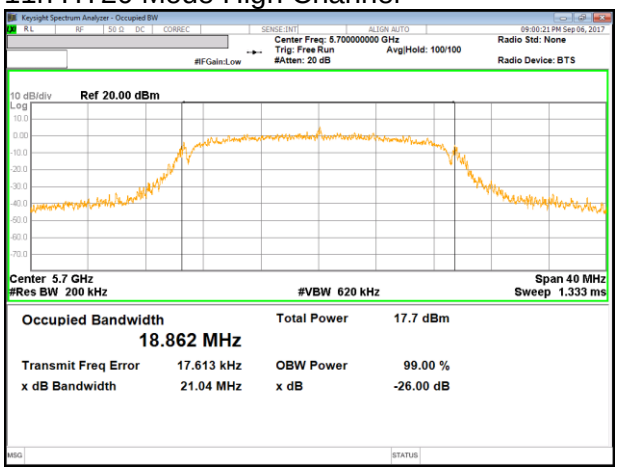
11n HT20 Mode Low Channel



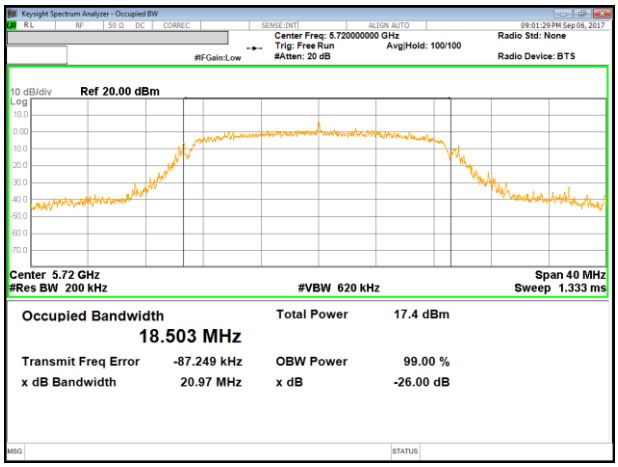
11n HT20 Mode Middle Channel



11n HT20 Mode High Channel

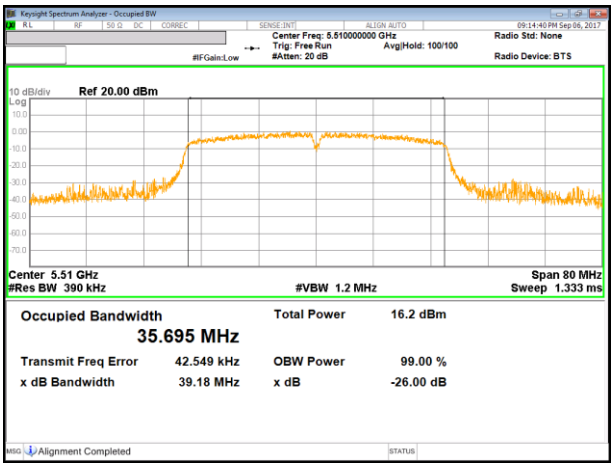


11n HT20 Mode Straddle Channel

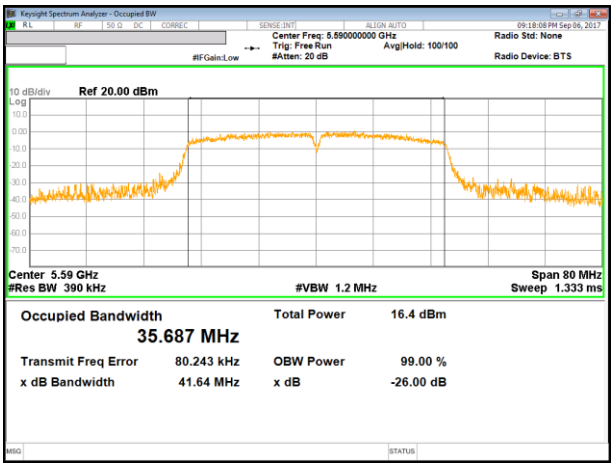


UNII 5.5 GHz IEEE 802.11n HT40 mode

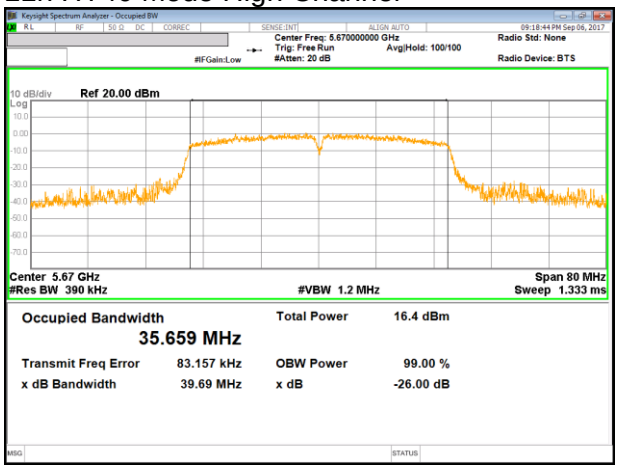
11n HT40 Mode Low Channel



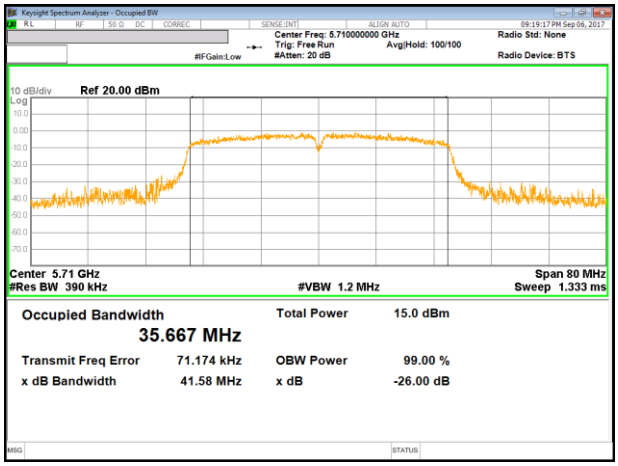
11n HT40 Mode Middle Channel



11n HT40 Mode High Channel

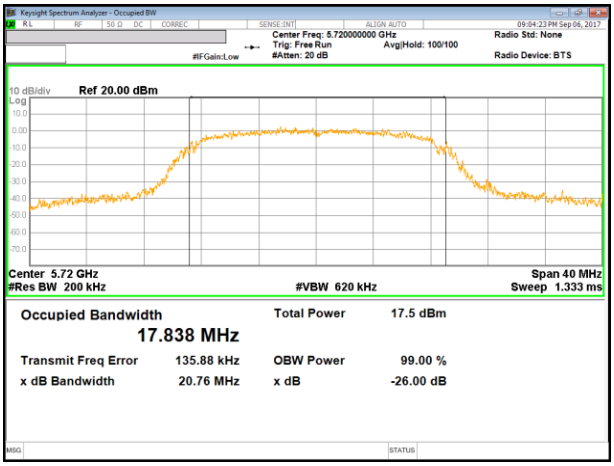


11n HT40 Mode Straddle Channel

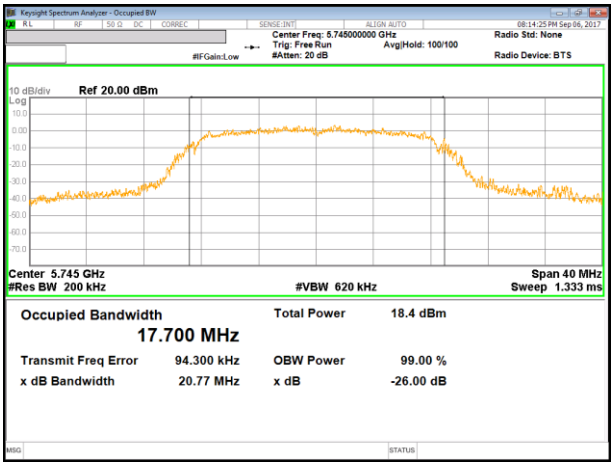


UNII 5.8 GHz IEEE 802.11a mode

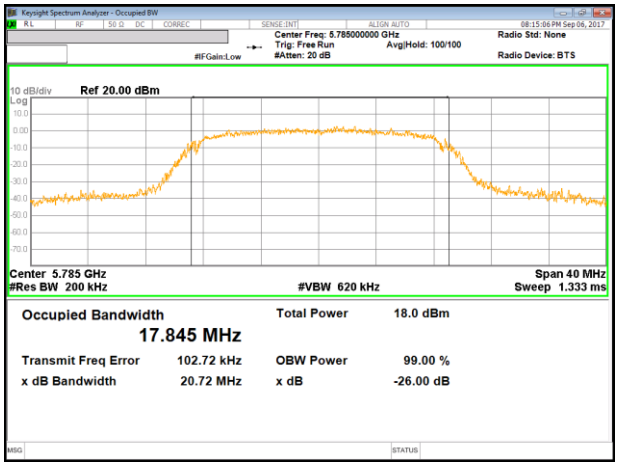
11a Mode Straddle Channel



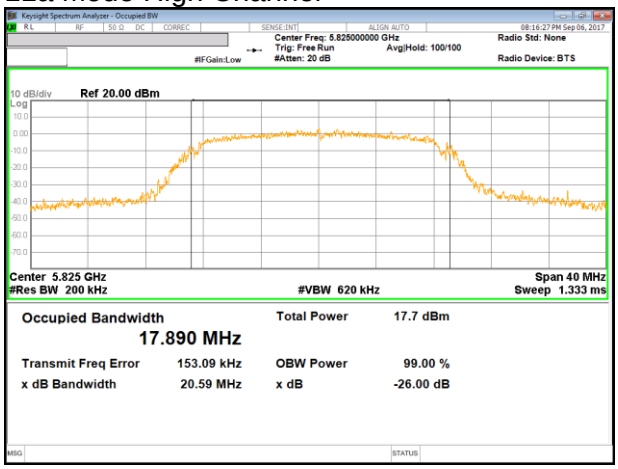
11a Mode Low Channel



11a Mode Middle Channel

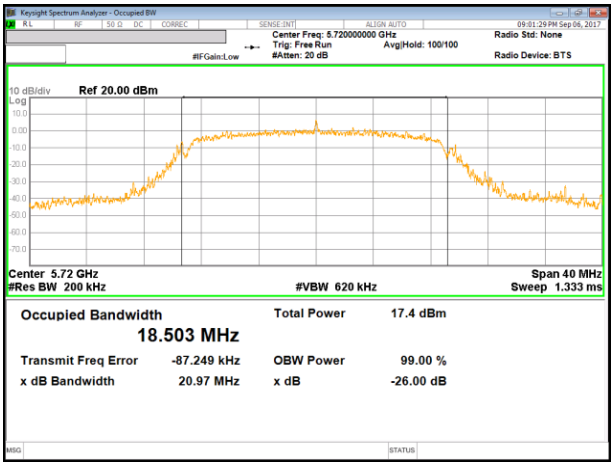


11a Mode High Channel

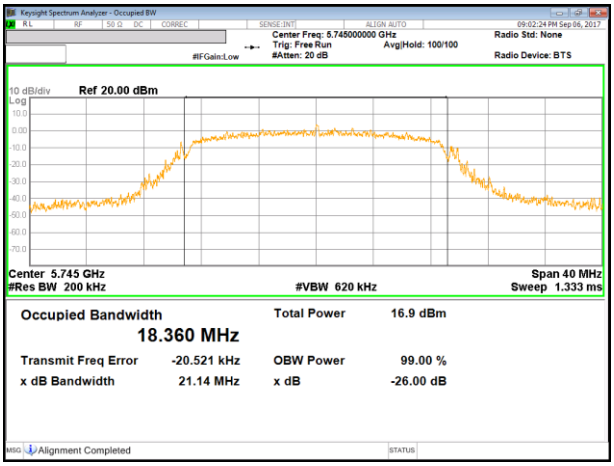


UNII 5.8 GHz IEEE 802.11n HT20 mode

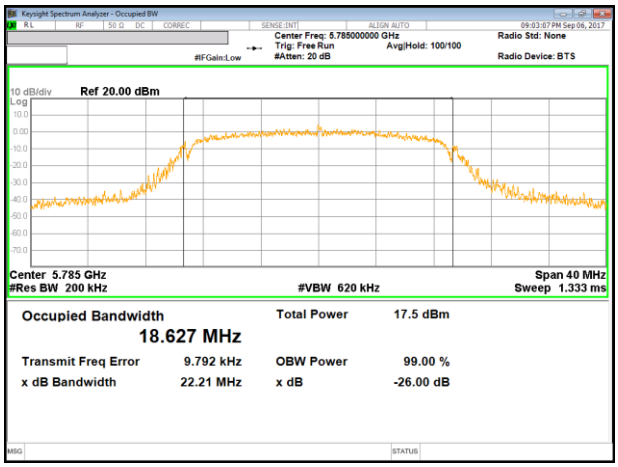
11n HT20 Mode Straddle Channel



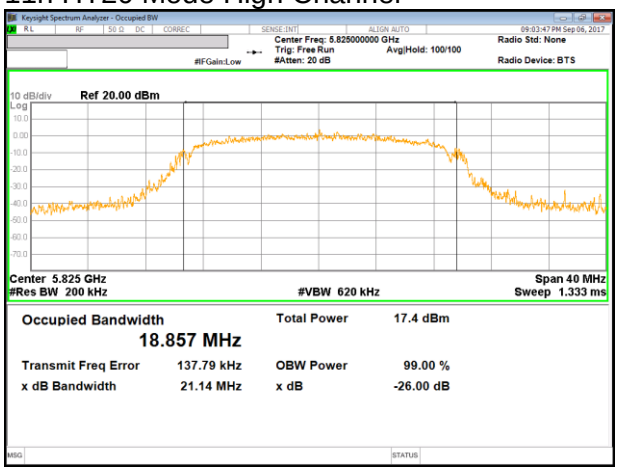
11n HT20 Mode Low Channel



11n HT20 Mode Middle Channel

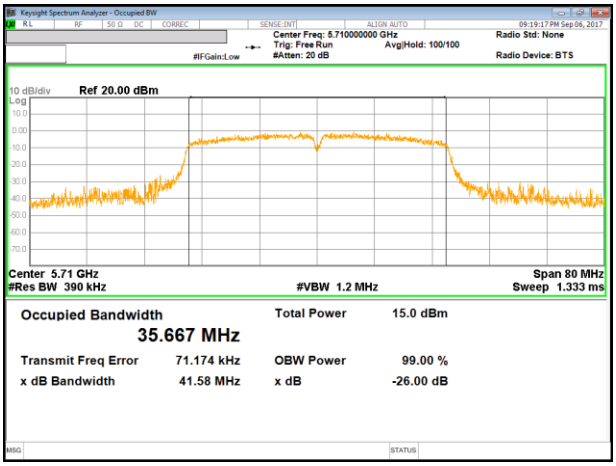


11n HT20 Mode High Channel

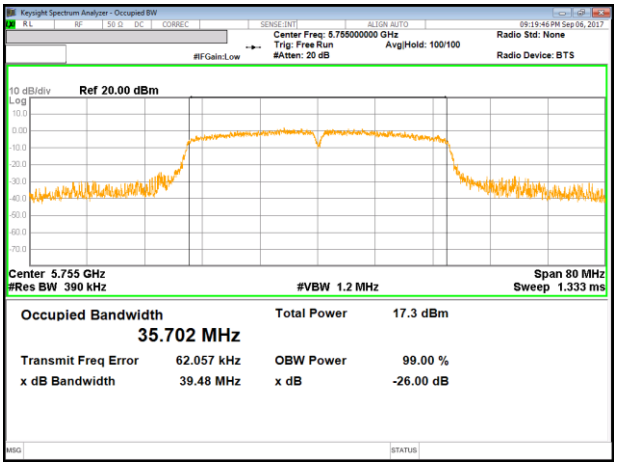


UNII 5.8 GHz IEEE 802.11n HT40 mode

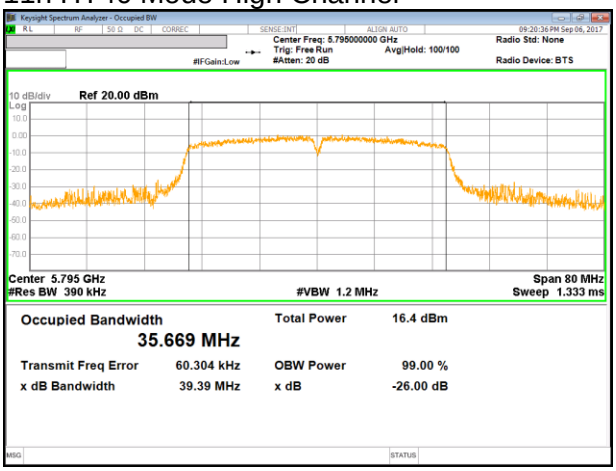
11n HT40 Mode Straddle Channel



11n HT40 Mode Low Channel



11n HT40 Mode High Channel



8.4. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Reference to 789033 D02 General UNII Test Procedures New Rules v01r04: The transmitter output is connected to a spectrum analyzer with the RBW set to approximately 1% to 5% of OBW, the VBW >= 3 x RBW, single sweep.

NOTE

- Calculation for 99% Bandwidth of UNII-2C and UNII-3 Straddle Channel

ex) Fundamental frequency : 5720MHz
  - 99% BW : 21.00MHz
  - Turning Frequency : 5725MHz
  - 99% Bandwidth of UNII-2C band Portion
    = (5725 – (5720 - (21.00 / 2)) = 15.50 MHz
  - 99% Bandwidth of UNII-3 band Portion
    = (5720 + (21.00 / 2) -5725) = 5.50 MHz

RESULTS

8.4.1. 802.11a MODE IN THE 5.2 GHz BAND

Channel	Frequency [MHz]	99% Bandwidth [MHz]
Low	5180	16.47
Mid	5200	16.44
High	5240	16.44
Worst		16.47

8.4.2. 802.11n HT20 MODE IN THE 5.2 GHz BAND

Channel	Frequency [MHz]	99% Bandwidth [MHz]
Low	5180	17.45
Mid	5200	17.43
High	5240	17.42
Worst		17.45

8.4.3. 802.11n HT40 MODE IN THE 5.2 GHz BAND

Channel	Frequency [MHz]	99% Bandwidth [MHz]
Low	5190	35.69
High	5230	35.67
Worst		35.69

8.4.4. 802.11a MODE IN THE 5.3 GHz BAND

Channel	Frequency [MHz]	99% Bandwidth [MHz]
Low	5260	16.46
Mid	5300	16.43
High	5320	16.45
Worst		16.46

8.4.5. 802.11n HT20 MODE IN THE 5.3 GHz BAND

Channel	Frequency [MHz]	99% Bandwidth [MHz]
Low	5260	17.49
Mid	5300	17.49
High	5320	17.47
Worst		17.49

8.4.6. 802.11n HT40 MODE IN THE 5.3 GHz BAND

Channel	Frequency [MHz]	99% Bandwidth [MHz]
Low	5270	35.70
High	5310	35.66
Worst		35.70

8.4.7. 802.11a MODE IN THE 5.5 GHz BAND

Channel	Frequency [MHz]	99% Bandwidth [MHz]
Low	5500	16.47
Mid	5580	16.45
High	5700	16.43
Straddle	5720	13.22
Worst		16.47

8.4.8. 802.11n HT20 MODE IN THE 5.5 GHz BAND

Channel	Frequency [MHz]	99% Bandwidth [MHz]
Low	5500	17.48
Mid	5580	17.50
High	5700	17.44
Straddle	5720	13.73
Worst		17.50

8.4.9. 802.11n HT40 MODE IN THE 5.5 GHz BAND

Channel	Frequency [MHz]	99% Bandwidth [MHz]
Low	5510	35.67
Mid	5590	35.73
High	5670	35.62
Straddle	5710	32.85
Worst		35.73

8.4.10. 802.11a MODE IN THE 5.8 GHz BAND

Channel	Frequency [MHz]	99% Bandwidth [MHz]
Straddle	5720	3.22
Low	5745	16.39
Mid	5785	16.42
High	5825	16.46
Worst		16.46

8.4.11. 802.11n HT20 MODE IN THE 5.8 GHz BAND

Channel	Frequency [MHz]	99% Bandwidth [MHz]
Straddle	5720	3.73
Low	5745	17.47
Mid	5785	17.48
High	5825	17.49
Worst		17.49

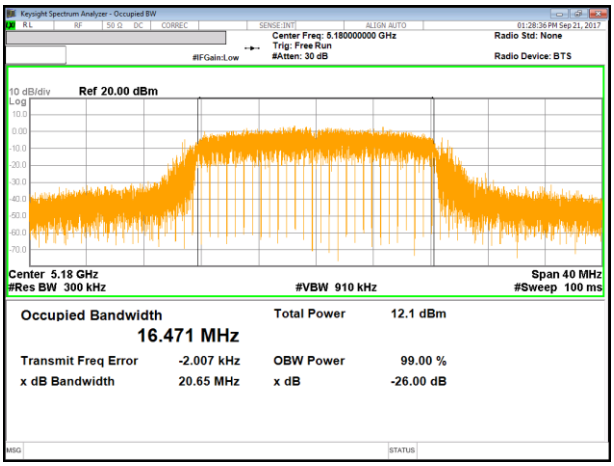
8.4.12. 802.11n HT40 MODE IN THE 5.8 GHz BAND

Channel	Frequency [MHz]	99% Bandwidth [MHz]
Straddle	5710	2.85
Low	5755	35.72
High	5795	35.67
Worst		35.72

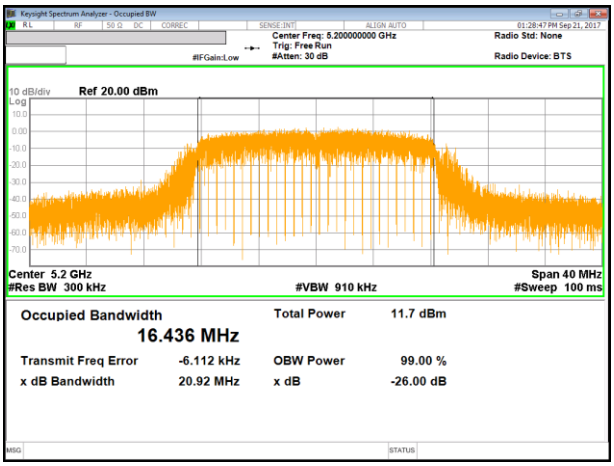
8.4.13. 99% BANDWIDTH PLOTS

UNII 5.2 GHz IEEE 802.11a mode

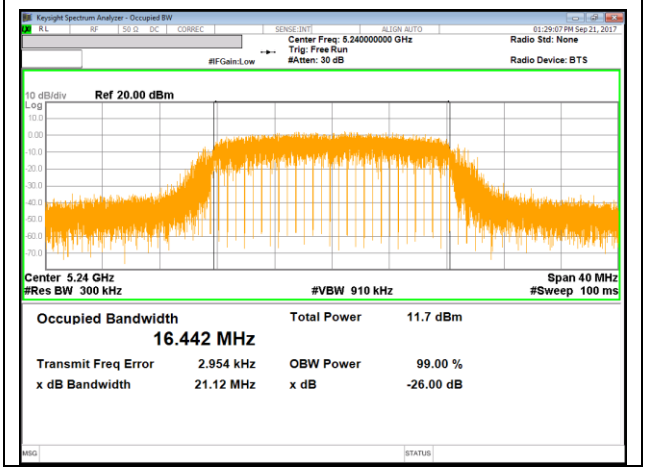
11a Mode Low Channel



11a Mode Middle Channel

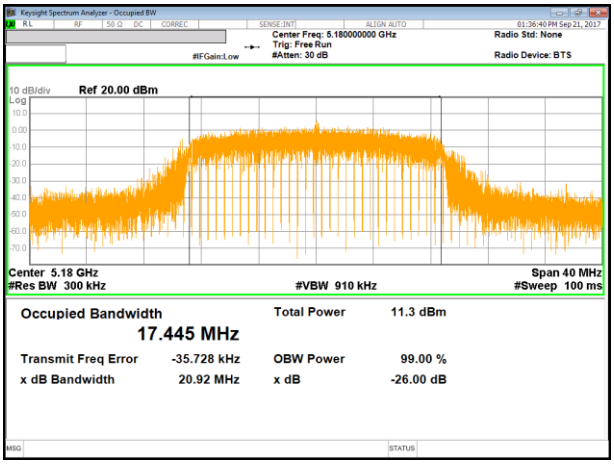


11a Mode High Channel

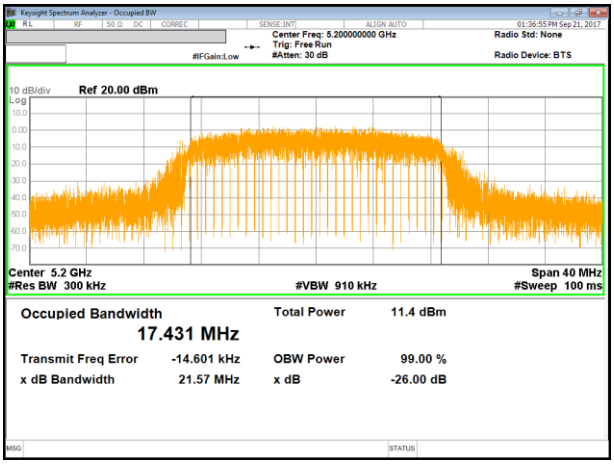


UNII 5.2 GHz IEEE 802.11n HT20 mode

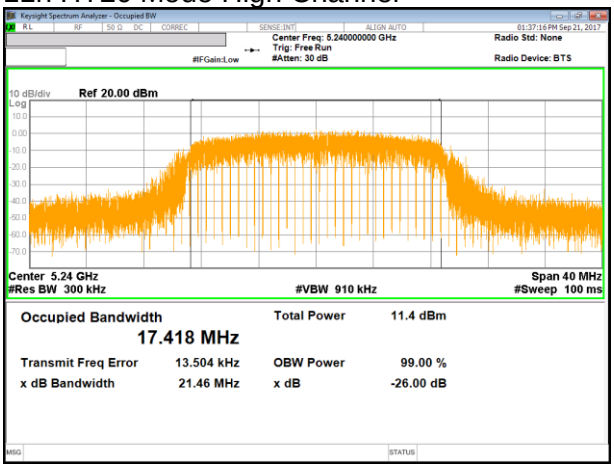
11n HT20 Mode Low Channel



11n HT20 Mode Middle Channel



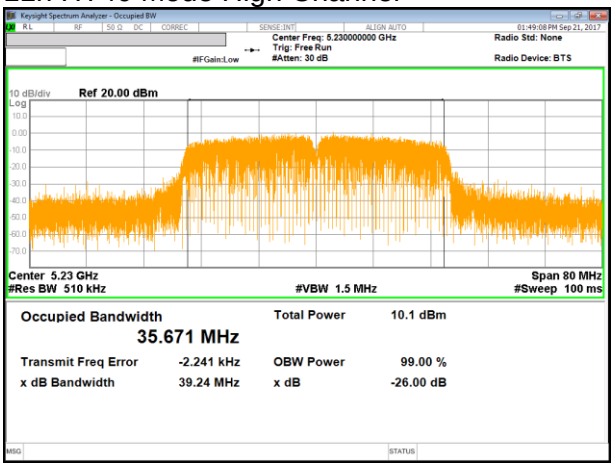
11n HT20 Mode High Channel



UNII 5.2 GHz IEEE 802.11n HT40 mode

11n HT40 Mode Low Channel

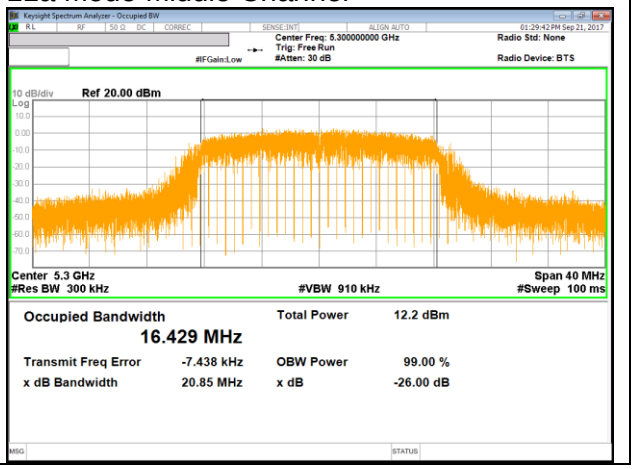
11n HT40 Mode High Channel



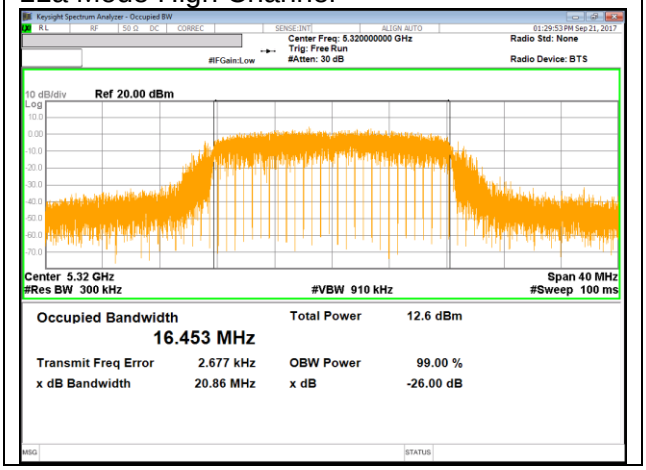
UNII 5.3 GHz IEEE 802.11a mode

11a Mode Low Channel

11a Mode Middle Channel

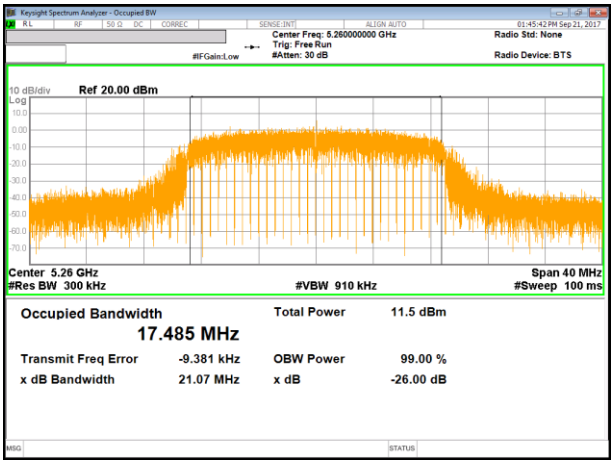


11a Mode High Channel

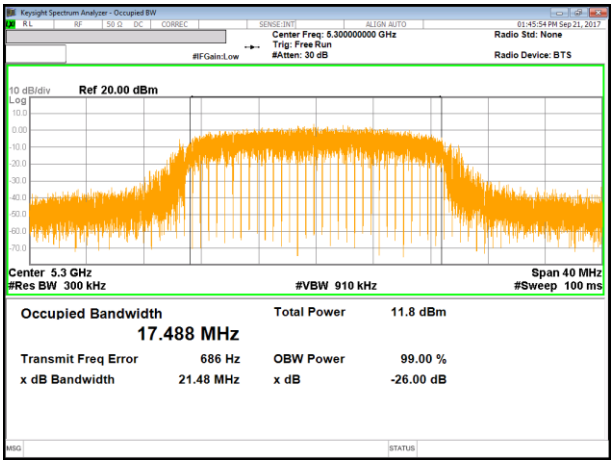


UNII 5.3 GHz IEEE 802.11n HT20 mode

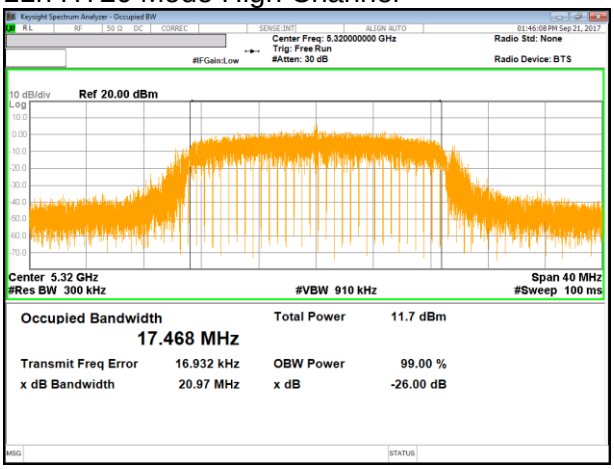
11n HT20 Mode Low Channel



11n HT20 Mode Middle Channel



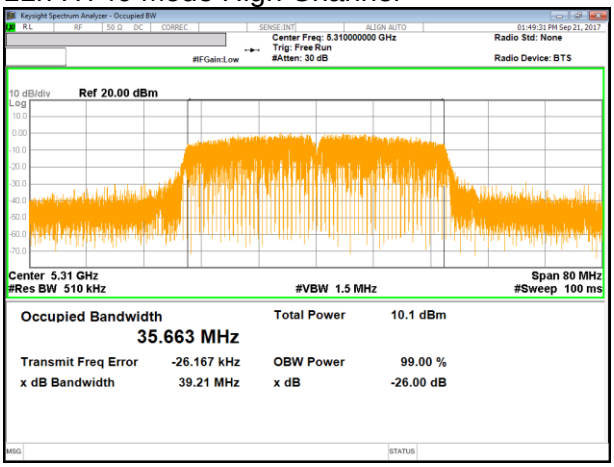
11n HT20 Mode High Channel



UNII 5.3 GHz IEEE 802.11n HT40 mode

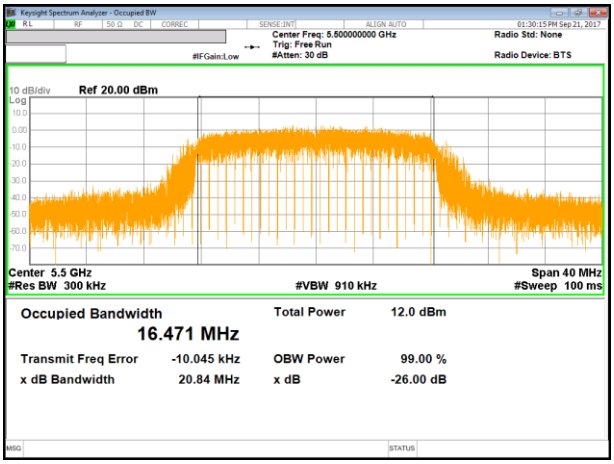
11n HT40 Mode Low Channel

11n HT40 Mode High Channel

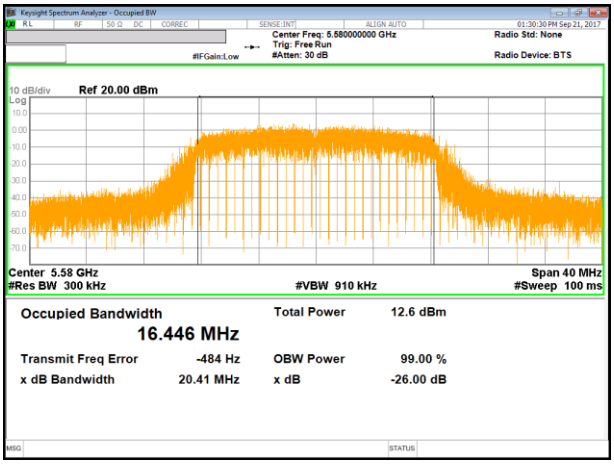


UNII 5.5 GHz IEEE 802.11a mode

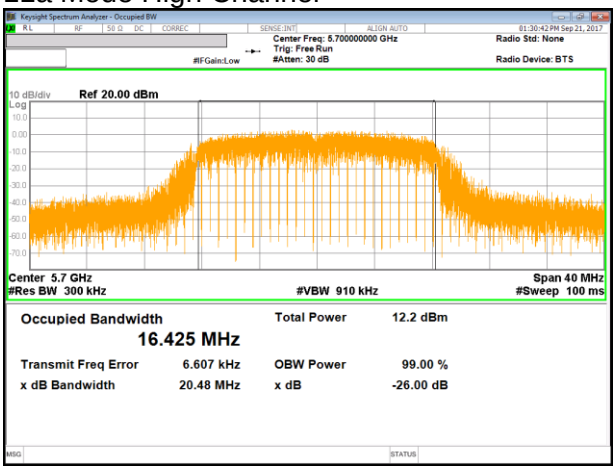
11a Mode Low Channel



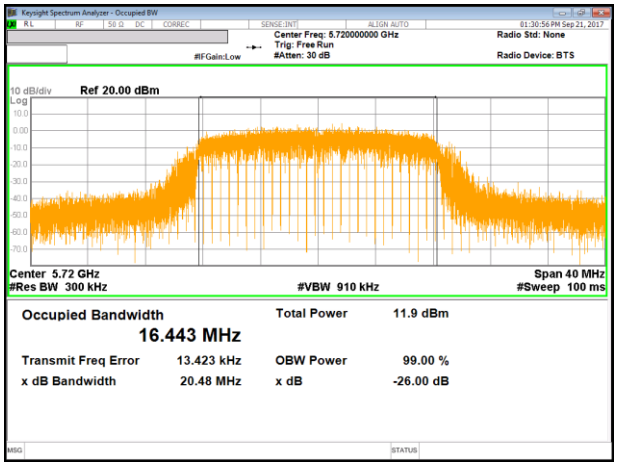
11a Mode Middle Channel



11a Mode High Channel

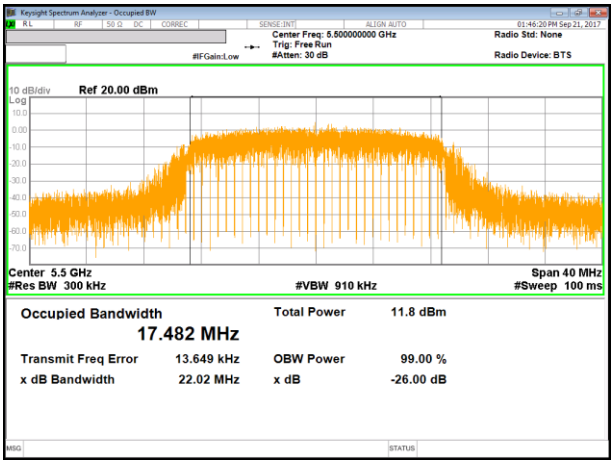


11a Mode Straddle Channel

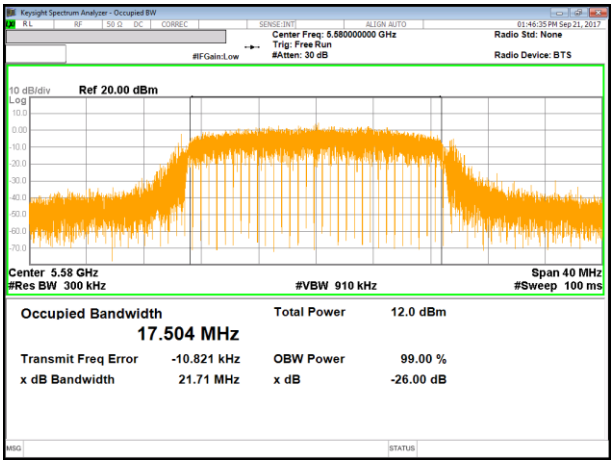


UNII 5.5 GHz IEEE 802.11n HT20 mode

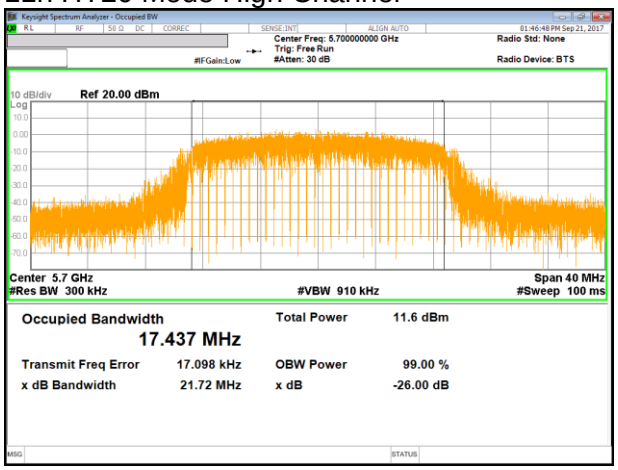
11n HT20 Mode Low Channel



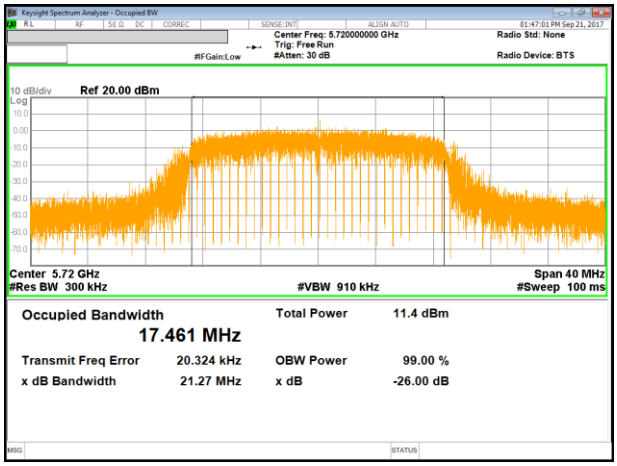
11n HT20 Mode Middle Channel



11n HT20 Mode High Channel



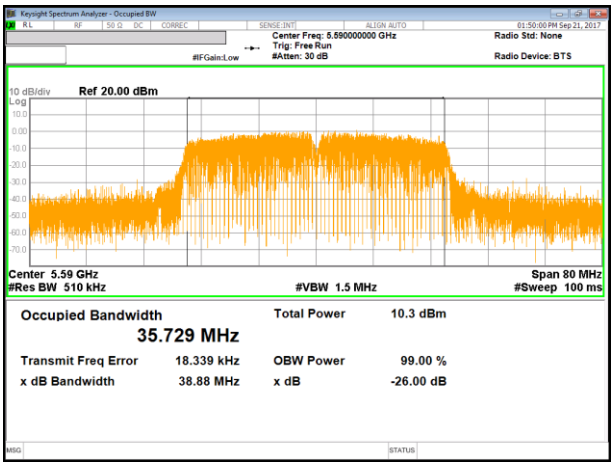
11n HT20 Mode Straddle Channel



UNII 5.5 GHz IEEE 802.11n HT40 mode

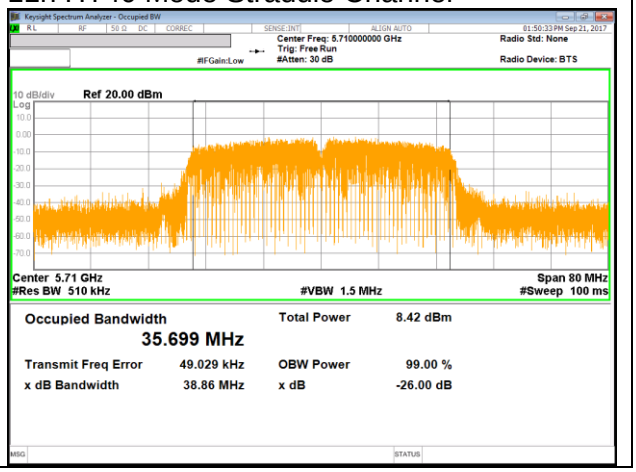
11n HT40 Mode Low Channel

11n HT40 Mode Middle Channel



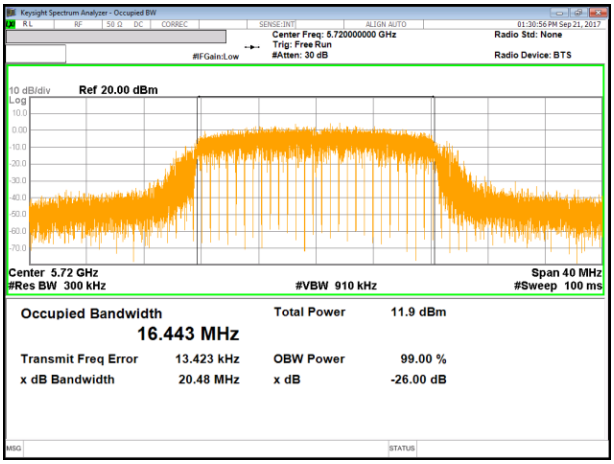
11n HT40 Mode High Channel

11n HT40 Mode Straddle Channel

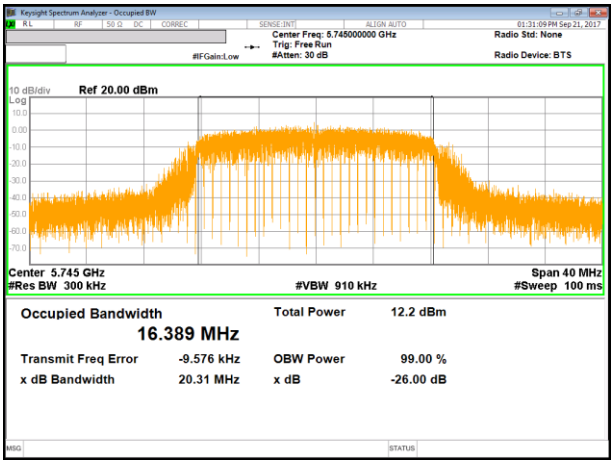


UNII 5.8 GHz IEEE 802.11a mode

11a Mode Straddle Channel

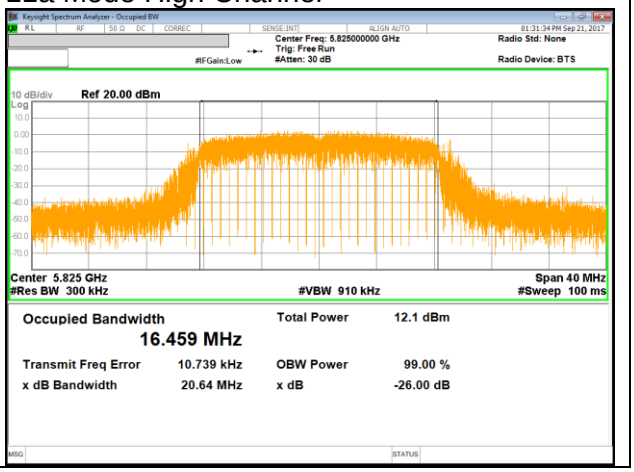


11a Mode Low Channel



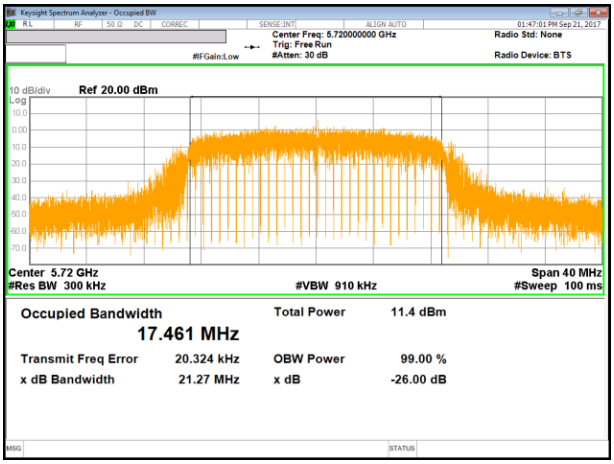
11a Mode Middle Channel

11a Mode High Channel



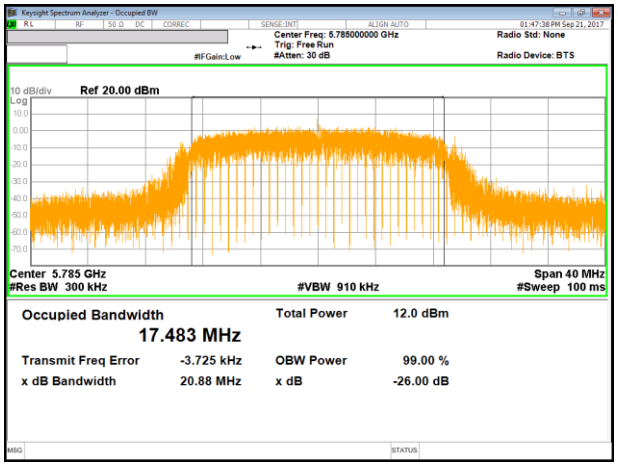
UNII 5.8 GHz IEEE 802.11n HT20 mode

11n HT20 Mode Straddle Channel



11n HT20 Mode Low Channel

11n HT20 Mode Middle Channel



11n HT20 Mode High Channel