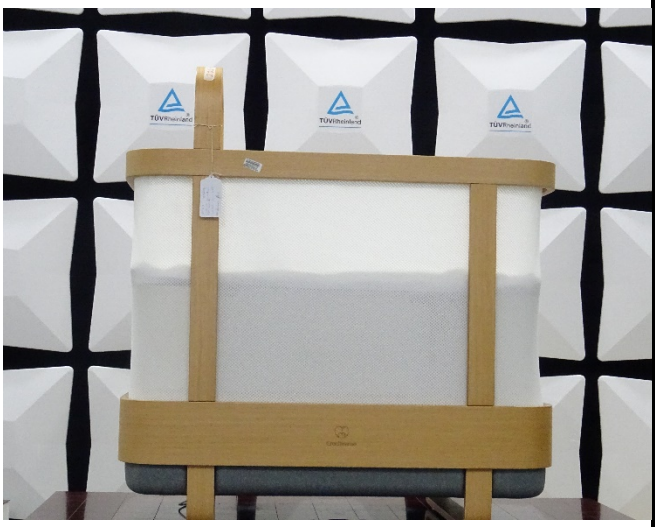
Prüfbericht-Nr.: *Test report no.:*	**ULR-TC568822300000063F**	**Auftrags-Nr.:** *Order no.*:	**146681475 010** Seite 1 von 129 *Page 1 of 129*
Kunden-Referenz-Nr.: *Client reference no.:*	2130858	**Auftragsdatum:** *Order date:*	2022-05-03
Auftraggeber: *Client:*	Cradlewise Incorporated, 479 Jessie street, San Francisco CA, 94103		
Prüfgegenstand: *Test item:*	Cradlewise Smart Crib	**Serien-Nr.:** *serial no.*:	2205-00001-LT1
Bezeichnung.: *Identification .:*	2V0		
Auftrags-Inhalt: *Order content*:	Testing and issue of Test report with Grant Certificate		
Prüfgrundlage: *Test specification:*	FCC Part 15 Subpart E 15.247,15.407,15.207, 15.205 & 15.209		
Wareneingangsdatum: *Date of sample receipt:*	2022.05.18		
Prüfmuster-Nr & *Test sample no &*	A003263032-001 & A003263032-002		
Prüfzeitraum: *Testing period:*	2022.05.18 - 2022.05.26		
Ort der Prüfung: *Place of testing:*	Wireless laboratory, Bangalore		
Prüflaboratorium: *Testing laboratory:*	TÜV Rheinland (India) Pvt.Ltd., 27/B, 2nd Cross, Electronic City Phase1 Bangalore -560 100, India FCC Test site registration number: 496599 ISED Test site registration number: 3466E-1		
Prüfergebnis*: *Test result*:*	Pass		



geprüft von: *tested by:*		**genehmigt von:** *authorized by:*	
Datum: *Date:*	**2022.06.08**	**Ausstellatum:** *Issue date:*	**2022.08.16**
Stellung / *Position:*	M.V.Naveen Kumar **Engineer**	**Stellung** / *Position:*	Madhu K.N **Senior Engineer**
Sonstiges / *Other:*	FCC ID: 2A6EK-SC-6275S-001		
Zustand des Prüfgegenstandes bei Anlieferung: *Condition of the test item at delivery:*	Prüfmuster vollständig und unbeschädigt *Test item complete and undamaged*		

* Legende:	1 = sehr gut	2 = gut	3 = befriedigend	4 = ausreichend	5 = mangelhaft
	P(ass) = entspricht o.g. Prüfgrundlage(n)		F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	N/A = nicht anwendbar	N/T = nicht getestet
** Legend:*	*1 = very good*	*2 = good*	*3 = satisfactory*	*4 = sufficient*	*5 = poor*
	P(ass) = passed a.m. test specification(s)		*F(ail) = failed a.m. test specification(s)*	*N/A = not applicable*	*N/T = not tested*

TEST SUMMARY

Test Item	Applicable Standard FCC	Result
Emission Bandwidth	15.407 (a) & (e)	*N/T
Frequency Stability	15.407 (g)	*N/T
Maximum conducted output power	15.247 (b) & 15.407 (a)	Pass
Maximum Power spectral density	15.407 (a)	*N/T
Dynamic Frequency Selection	15.407 (h)	*N/T
Spurious Radiated Emissions & Restricted Bands of Operation	15.407 (b) / (15.205 &15.209)	Pass
Conducted Spurious Emission on AC Power Lines	15.207	Pass
Antenna Requirement	15.203	Pass

Note:

*N/T: Not tested – These test cases are not tested, the product uses certified RF module **WIFI+BT Combo Module** from **Askey Computer Corporation.,** with **FCC ID: H8N-AP6275S & IC : 1353A-AP6275S.** Issued by the **MRT Technology (Suzhou) Co., Ltd**

Product Category: Electronics Testing
Test Discipline : EMC Test Facility

REVISION HISTORY OF THIS REPORT

Report Number	Version	Description	Issue date
ULR-TC568822300000063F	01	Initial issue of report	2022.08.16

Table of Contents

1 GENERAL REMARKS

1.1 Attachments

All attachments are part of this test report and are issued in separate document

1. TEST SETUP PHOTOS

2: EUT EXTERNAL PHOTOS

3: EUT INTERNAL PHOTOS

4: FCC LABEL AND LABEL LOCATION

5: BLOCK DIAGRAM

6: SPECIFICATION OF EUT

7: SCHEMATIC DIAGRAM

8: BILL OF MATERIAL

9: USER MANUAL

10: MAXIMUM PERMISSIBLE EXPOSURE INFORMATION

2 TEST SITES

2.1 Testing Facilities

1. TÜV Rheinland (India) Pvt.Ltd.,
   27/B, 2nd Cross,
   ElectronicCityPhase1
   Bangalore – 560 100,
   India

   Radiated Measurement site type :
   Fully anechoic chamber (used for above 1 GHz measurements)

2. TUV Rheinland (India) Pvt.Ltd.,
   108 , Beside ISBR Business School,
   Electronic city Phase I
   Bangalore - 560 100.
   India

   Radiated Measurement site type :
   Semi anechoic chamber (used for below 1 GHz measurements)

2.2 List of Test and Measurement Instruments

Table 1: List of test and measurement instruments

Equipment	Manufacturer	Model Name	Serial Number	Firmware Versions	Calibration Due Date	Periodicity	Test Facility
EMI Receiver	Rohde & Schwarz	ESW 44	101732	4.73 SP5	19.08.2022	Yearly	Radiated Spurious Emission
EMI Receiver	Rohde & Schwarz	ESW 44	101733	1.72SP1	12.02.2023	Yearly	
Active loop antenna	Frankonia	LAX-18	LAX-10-800	-	31.01.2023	Yearly	
Balloon and Biconical Antenna	Schwarzbeck	VHBB-9124 / BBA-9106	1028	-	03.02.2023	Yearly	
Log - Periodical Antenna	Schwarzbeck	VUSLP-9111B	9111B-111	-	04.02.2023	Yearly	
Horn Antenna	Schwarzbeck	BBHA 9120 D	9120D-1944	-	03.07.2022	Yearly	
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA 9170-0904	-	06.07.2022	Yearly	
Semi Anechoic Chamber	Frankonia	-	-	-	-	-	
Fully Anechoic Chamber	Albatross	-	-	-	-	-	
Spectrum Analyser	Agilent Technologies	E4407B	US41192772	A.14.06	15.12.2022	Yearly	Antenna-Port Conducted test
EMI Receiver	Rohde & Schwarz	ESR7	101133	3.48 SP3	14.07.2022	Yearly	Conducted AC Power line Test
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100811	-	29.07.2022	Yearly	
LISN	Rohde & Schwarz	ENV216	100022	-	07.10.2022	Yearly	

Table 2: Instrument application Software versions

SL. No.	Test Type	Application software	Version
1	Radiated spurious emission measurement in 10mtr-SAC	BAT EMC	3.20.0.17
2	Radiated spurious emission measurement in FAC	EMC 32	10.60.00

3 GENERAL PRODUCT INFORMATION

3.1 Product Function and Intended Use

Cradlewise smart crib is a self-soothing crib that automatically rocks the baby to sleep. It has an in-built baby monitor that senses the baby's wake-ups, and in response bounces and plays music.Cradlewise's baby monitor has an in-built night vision camera. It converts from a bassinet to a crib, so it can be used for up to 24-month-old baby.

3.2 Ratings and System Details of Equipment under Test

Table 3: Ratings and System Details as declared by the Client*

Radio Protocol		WI-FI 5GHz
Operating Frequency Range		UNII-1 _ 5150MHz to 5250MHz UNII-2a _ 5250MHz to 5350MHz UNII-2c _ 5470MHz to 5725MHz UNII-3 _ 5725MHz to 5825MHz
No. of Channels		(Refer Table 5)
Channel Spacing		20 MHz, 40MHz, 80MHz
Modulation		802.11a/n/ac: OFDM, 802.11ax: OFDMA
Power level index setting used		Refer Clause 10
Maximum Measured Average Power (dBm)		17.55Bm @ UNII-3(5755MHz ax-mode HE40MHz)
Number of antennas		2
Frequency range of Antenna Gain		3.3dBi (max peak gain)
Antenna Type		Molex 2042811100 balanced, dipole-type antenna
Supply Voltage to Product		12VDC using an AC-DC Adapter
Environmental Conditions	Storage	5℃ to +60℃ Relative Humidity 5% < to <95%
	Operating	5℃ to +40℃ Relative Humidity 10%< to <90%
EUT Dimension(L x Wx H)		1070mm x970mm x 638mm

*__Disclaimer__: The information/data is supplied by the client and the same is considered to arrive at the final value. Any changes made apart from the specified specification, can directly impact on the tests results. Refer the products user manual for more details.

Note: Product **Cradlewise Smart Crib** has multiple protocols. All the supported wireless protocols and their respective test results are issued in separate test reports, refer clause 4.7 Report Reference

3.3 Measurement Uncertainty:

Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of $k = 2$

Table 4: Measurement Uncertainty

Parameter	Uncertainty
Occupied Channel Bandwidth	±5 %
RF output power, conducted	±1.5 dB
Power Spectral Density, conducted	±3 dB
Unwanted Emissions, conducted	±3 dB
SAC, radiated measurement	±6 dB
FAC, radiated measurement	±6 dB
Temperature	±3 ℃
Supply Voltages	±3 %
Time	±5 %

Note: The listsed uncertainities are the worst case uncertainity for the entire range of mesurements and are for the reporting purpose only and are not used in determining the PASS/FAIL of the results.

4 TEST SET-UP AND OPERATION MODE

4.1 Principle of Configuration Selection

Transmission was enabled with highest possible duty cycle on low, mid and high channels.

4.2 UUT Operation and Software

Hardware Version : 2V0

Software version : 3.00

Software Name: Cradlewise smart crib firmware

Hardware Name: Cradlewise smart crib

4.3 Special Accessories and Auxiliary Equipment

- None

4.4 Simultaneous Transmission

This product supports Simultaneous transmission

4.5 Countermeasures to achieve EMC Compliance

- None

4.6 List of frequencies

Frequency Band	Channel No.	Frequency (MHz)
5150–5250 MHz	**36**	**5180**
	38	5190
	46	5230
	48	**5240**
UNII 2A (5250-5350)	**52**	**5260**
	54	**5270**
	56	5280
	58	**5290**
	60	5300
	62	5310
	64	**5320**
UNII 2C (5470-5725)	**100**	**5500**
	102	5510
	106	**5530**
	108	5540
	112	5560
	116	5580
	120	5600
	124	5620
	128	5640
	132	5660
	134	**5670**
	136	5680
	138	**5690**
	140	**5700**
	142	**5710**
	144	**5720**
5725-5825 MHz	**149**	**5745**
	151	5755
	159	5795
	165	**5825**

Table 5: List of Wi-Fi center Frequencies

Channel used for Wi-Fi Testing

Channel Bandwidth (20MHz)	Channel Bandwidth (40MHz)	Channel Bandwidth (80MHz)
5180	5190	5210
5240	5230	5290
5260	5270	5530
5320	5310	5690
5500	5510	5755
5700	5590	-
5720	5670	-
5745	5710	-
5825	5755	-
-	5795	-

Note:

TUV Sample Identification number : A003263032-001– Radiated test Sample
A003263032-002– Conducted test Sample

4.7 Report Reference

Note: Product **Cradlewise Smart Crib** has multiple protocols. All the supported wireless protocols and their respective test results are issued in saparate test reports, following table lists the report numbers.

Radio Protocol	Report Number
RF test report for Wi-Fi (2.4GHz) & BLE (2.4GHz)	ULR-TC568822300000062F
RF test report for Wi-Fi (5GHz) – (This report)	**ULR-TC568822300000063F**
RF test report for Bluetooth (2.4GHz)	ULR-TC568822300000064F

5 Operational Description

The smart crib runs on 12V DC power supply supplied by an AC to DC adapter connected to 110V 60Hz AC supply. It relies on cameras and microphones to detect signs of the baby waking up. In response to these signs the cradle starts an up and down movement using a motor and starts playing white noise/music using a speaker. The product connects to the internet using WiFi and allows caregivers to monitor the baby on their phones using an app. The night vision features allow unobtrusive monitoring at night too.

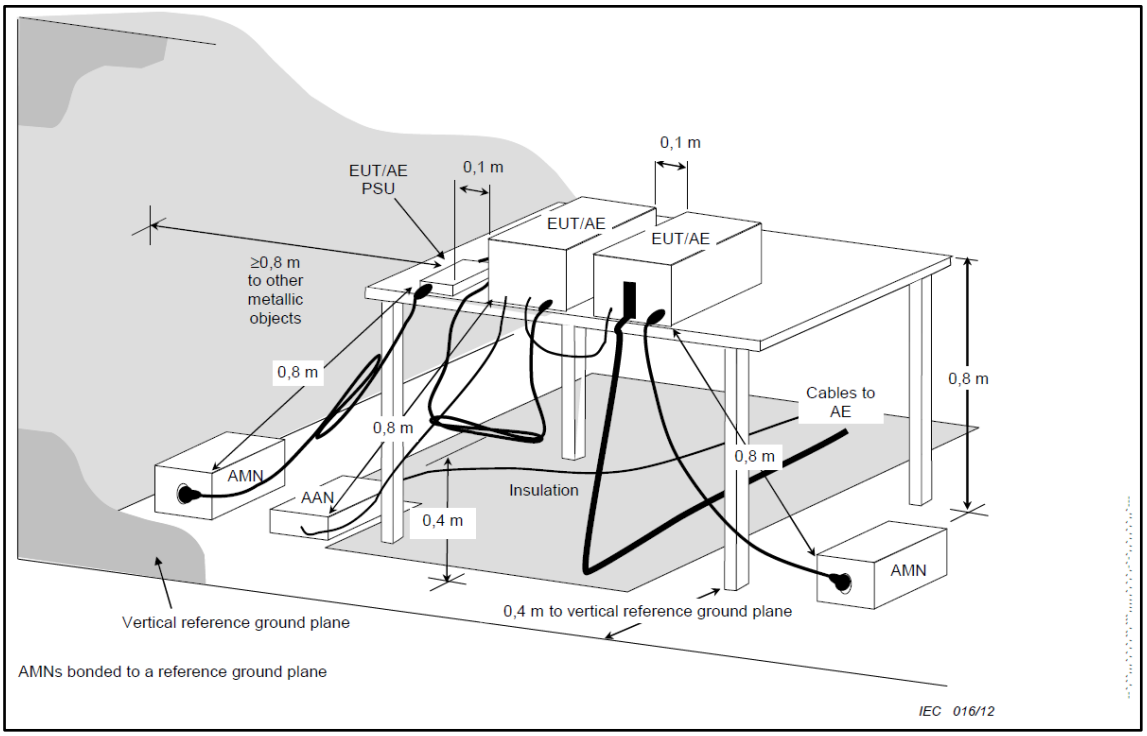
6 TEST METHODOLOGY

6.1 Conducted Spurious Emission AC Power line Test

Measured levels of ac power-line conducted emission across the 50Ω LISN port (to which the EUT is connected). All emission voltage and current measurements shall be made on each current-carrying conductor at the plug end of the EUT power cord by the use of mating plugs and receptacles on the LISN, if used. Equipment shall be tested with power cords that are normally supplied or recommended by the manufacturer and that have electrical and shielding characteristics that are the same as those cords normally supplied or recommended by the manufacturer.

The device is placed on the test table, raised 80cm above the referance ground plane. The vertical conducting plane is located 40cm to the rear of the device. AC Conducted emission measurement is made over frequency range from 150kHz to 30MHz, this measurement was performed with EUT powered by 2 methods and both method are tested individually, one with an AC adaptor with 110V AC 60Hz supply and second with Wireless charger with supply 110V AC 60Hz.

6.1.1 Test Setup Configuration



6.2 Radiated Emission Test

The radiated emission measurement was performed according to the procedures in ANSI C63.10-2013. The equipment under test (EUT) was placed at the middle of the 80 cm high turntable for below 1 GHz & 1.5 m height for above 1 GHz measurement, and the EUT is 3 meters far from the measuring antenna. The turntable was rotated 360˚ for obtaining the maximum emission. The height of the measuring antennas was scanned between 1 m and 4 m, and the antenna rotated to repeat the measurements for both the horizontal and vertical antenna polarizations. Repeat the measurement steps until the maximum emissions were obtained. The measurement above 1000 MHz was performed by horn antenna, The measurement below 30 MHz was performed by loop antenna, Measurement from 30 MHz to 200 MHz was performed by Baloon and Biconical Antenna, and mesurement from 200 MHz to 1 GHz was performed by Log-Periodic Antenna.

The EUT was rotated around the X-, Y-, and Z-Axis and the results from worst case axis are recorded

6.2.1 Test Setup Configuration

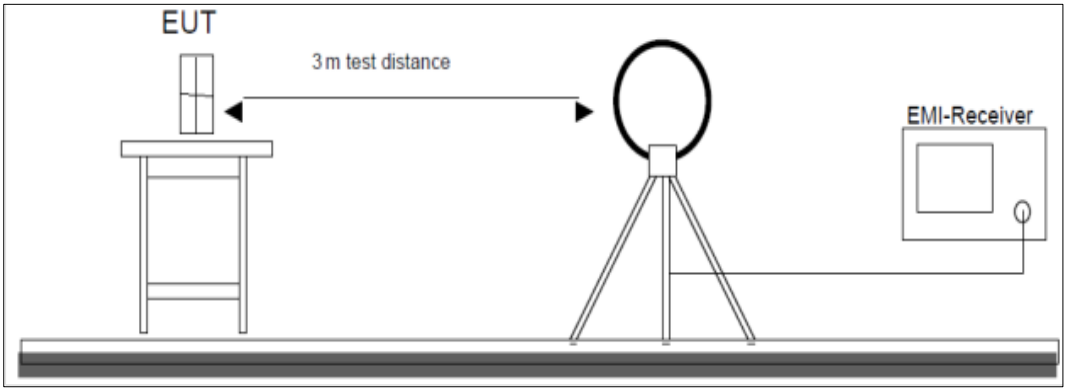


Figure 1: Frequency Range 9 kHz- 30 MHz

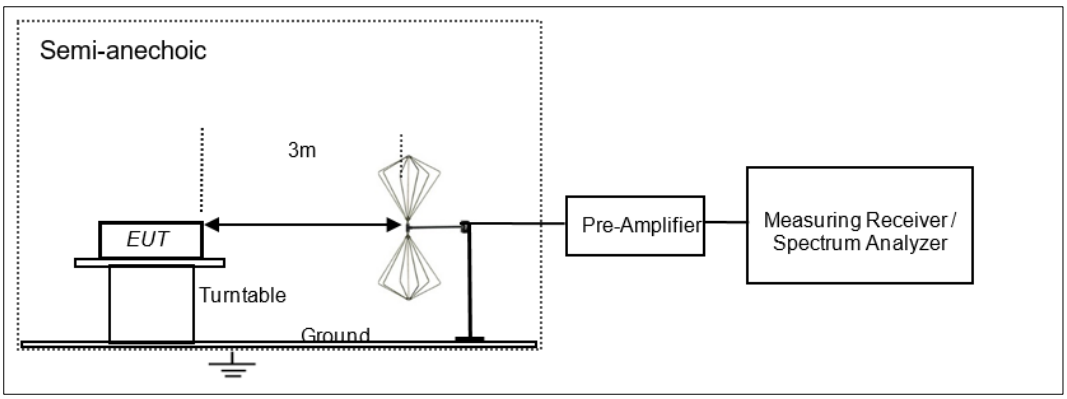


Figure 2: Frequency Range 30 MHz – 200 MHz

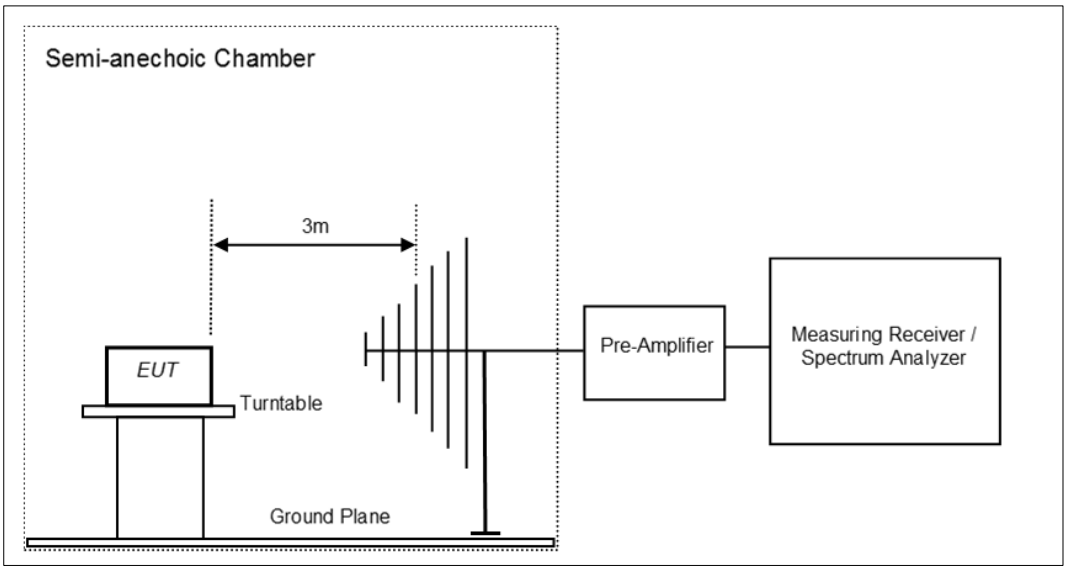


Figure 3: Frequency Range 200 MHz - 1GHz

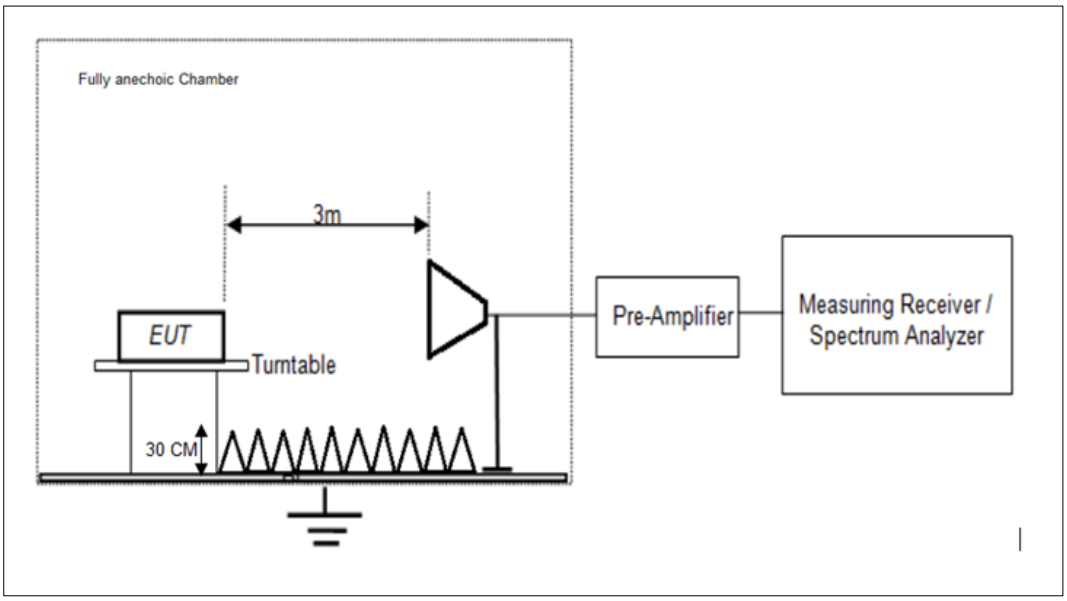


Figure 4: Frequency Range above 1 GHz

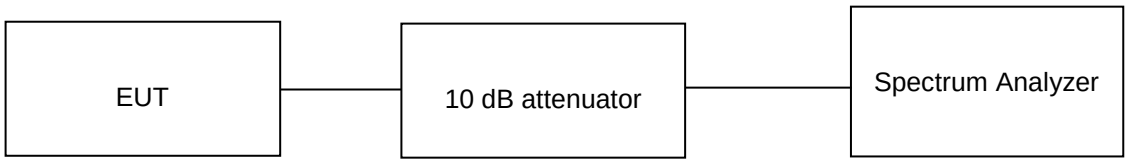
7 TEST RESULTS

7.1 Maximum Conducted Output Power

Result ***Pass***

Test Specification	FCC part 15 Subpart C 15.247 (b) (2) & 15.407 (a)
Test Method	Subclause 12.3.2.6 of ANSI C63.10
Measurement Bandwidth	Refer the remarks below
Detector	Average sample detector mode
Port of testing	Antenna port
Requirement for FCC	1. 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 2. For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz 3. For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W

Test Method



The following procedure shall be used (uses rms detection with max hold. The procedure for this method is as follows:):

1. Set center frequency to the nominal EUT channel center frequency
2. Set span to encompass the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal.
3. Set RBW = 1MHz
4. Set VBW ≥ 3 x RBW
5. Number of points in sweep ≥ 2 × span / RBW. (This ensures that bin-to-bin spacing is ≤ RBW/2, so that narrowband signals are not lost between frequency bins.)
6. Sweep time ≤ [(number of points in sweep) × T], Where T is Transmission duration
7. Detector = power averaging (rms)
8. Do not use sweep triggering. Allow the sweep to “free run.”
9. Trace mode = maxhold
10. Allow max hold to run for at least 60 s or longer as needed to allow the trace to stabilize.
11. Compute power by integrating the spectrum across the 26 dB EBW or 99% OBW of the signal using the instrument’s band power measurement function with band limits set equal to the EBW or OBW band edges. If the instrument does not have a band power function, then sum the spectrum levels (in power units) at 1 MHz intervals extending across the 26 dB EBW of the spectrum.

Test Condition:

Normal Test Condition:

Temperature (Norm) = + 22.6 °C Voltage = 12VDC through AC-DC Adapter Relative humidity: 62 %

KDB Guidelines applied:

Measurements were made as per section E (2) sub-section (d) in KDB 789033 D02 General UNII Test Procedures New Rules v02r01

Test results:

Note:
1. All the losses are included during measurement and final values are mentioned in the test report

10 dB attenuator + 0.8 dB Cable loss = 10.8 dB total offset

2. This product do not support additional beamforming gain / directional gain, it uses signal antenna and hence directional gain of the single antenna is (3.37 dBi)

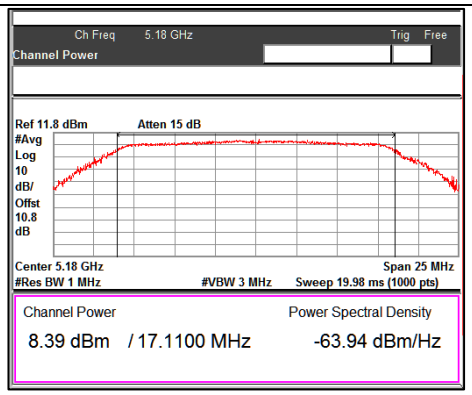
Modulation: 802.11a

Data Rate (Mbps)	Band	Channel Frequency (MHz)	Measured Average Power (dBm) Chain 1	Measured Average Power (dBm) Chain 2	Final Average output power (dBm)	Power Limit (dBm)
6	UNII 1	5180	8.39	7.78	11.11	24
		5240	8.07	7.52	10.81	24
	UNII 2a	5320	10.19	9.09	12.69	24
	UNII 2c	5500	6.65	6.56	9.62	24
		5600	6.73	6.60	9.68	24
		5700	6.89	6.58	9.75	24
	UNII 3	5745	11.56	11.99	14.79	30
		5825	10.79	11.56	14.20	30
54	UNII 1	5180	6.63	5.83	9.26	24
		5240	6.45	6.27	9.37	24
	UNII 2a	5320	8.44	7.51	11.01	24
	UNII 2c	5500	5.14	4.74	7.96	24
		5600	5.29	4.84	8.08	24
		5700	5.31	5.17	8.25	24
	UNII 3	5745	9.81	10.1	12.97	30
		5825	9.25	10.1	12.71	30

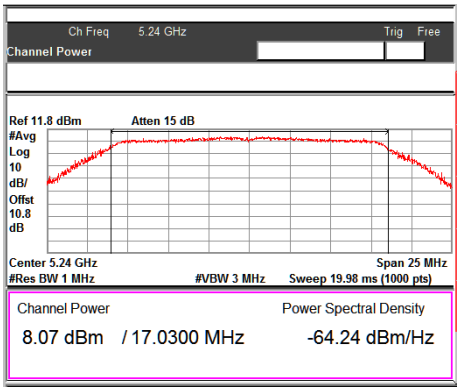
Note:

Total Average power (dBm): $10*\log\{10^{(\text{Ant0 of avg power}/10)}+10^{(\text{Ant1 of avg power}/10)}\}$

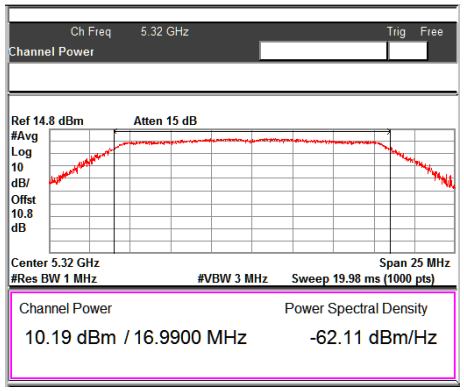
Data Rate: 6Mbps



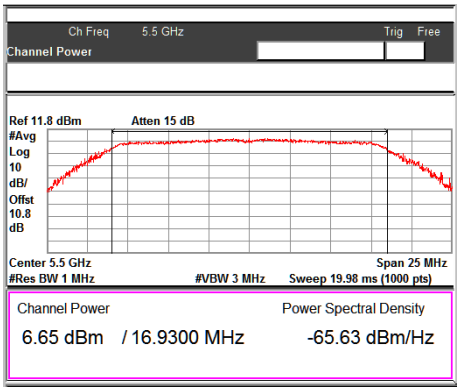
Channel frequency:5180MHz@Chain1



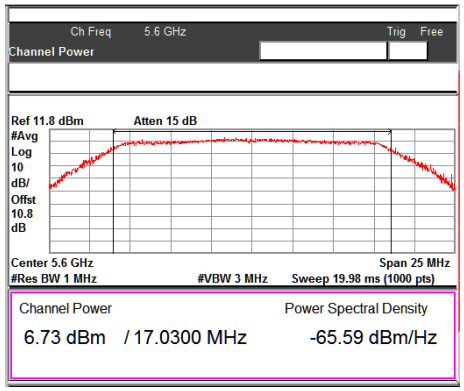
Channel frequency:5240MHz@Chain1



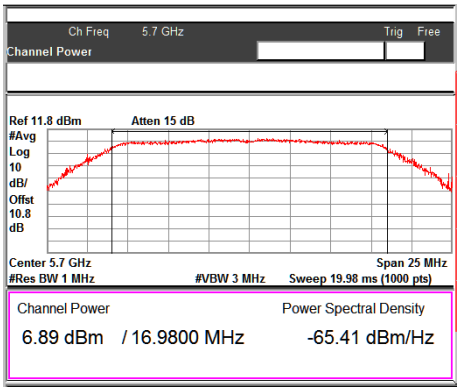
Channel frequency:5320MHz@Chain1



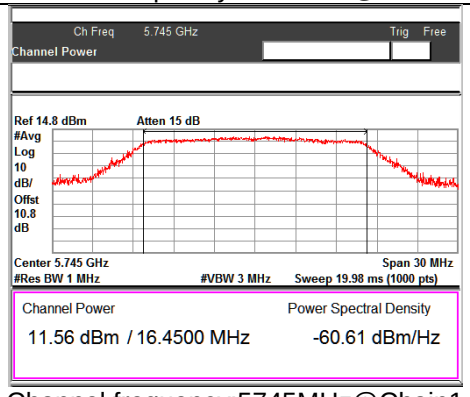
Channel frequency:5500MHz@Chain1



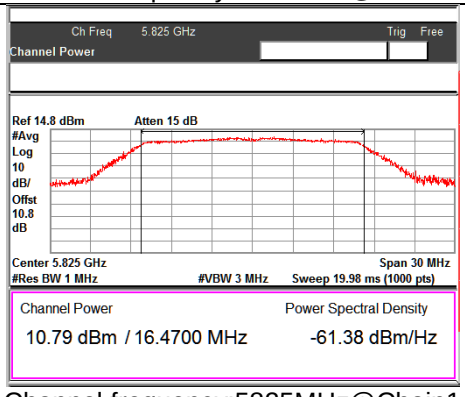
Channel frequency:5600MHz@Chain1



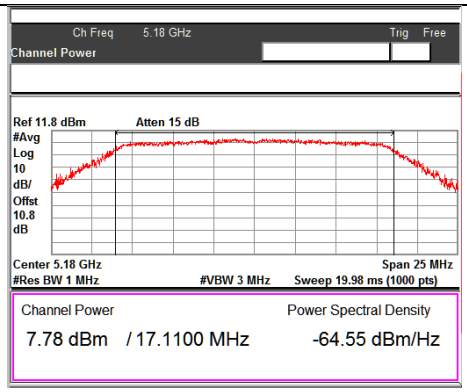
Channel frequency:5700MHz@Chain1



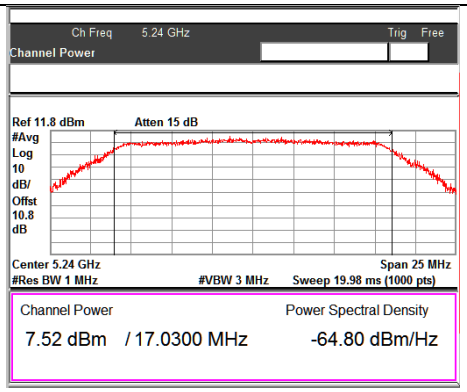
Channel frequency:5745MHz@Chain1



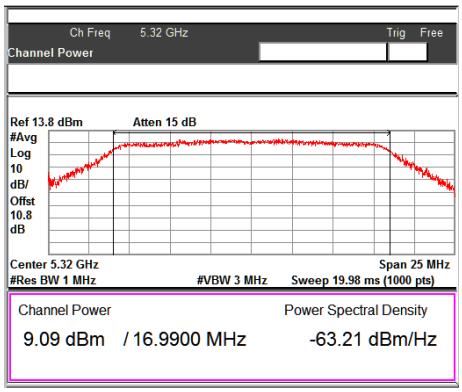
Channel frequency:5825MHz@Chain1



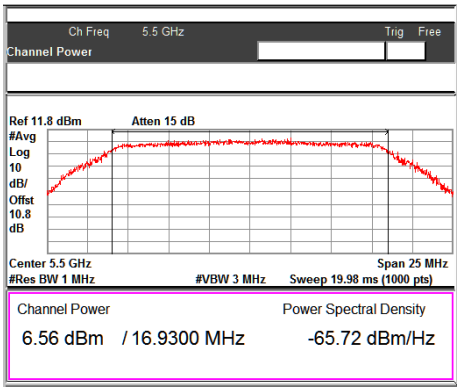
Channel frequency:5180MHz@Chain2



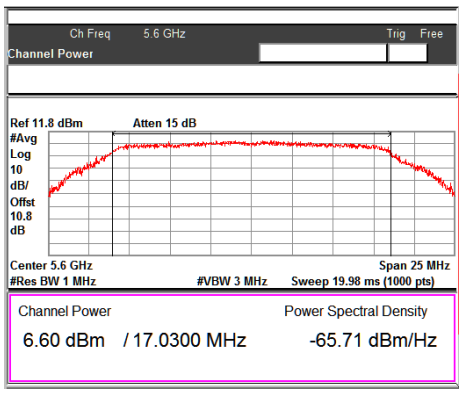
Channel frequency:5240MHz@Chain2



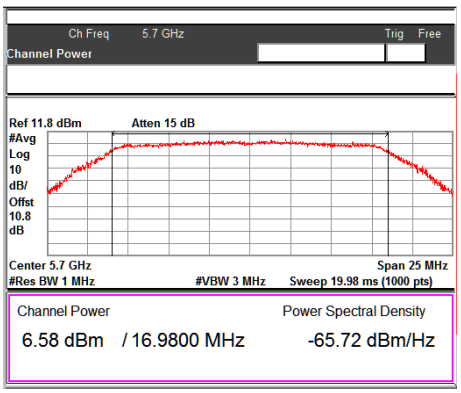
Channel frequency:5320MHz@Chain2



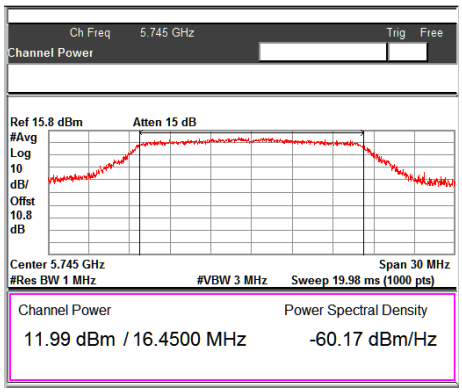
Channel frequency:5500MHz@Chain2



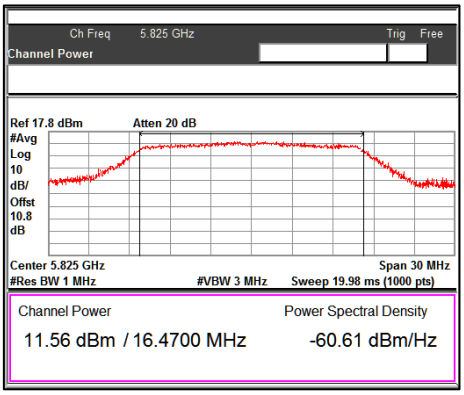
Channel frequency:5600MHz@Chain2



Channel frequency:5700MHz@Chain2

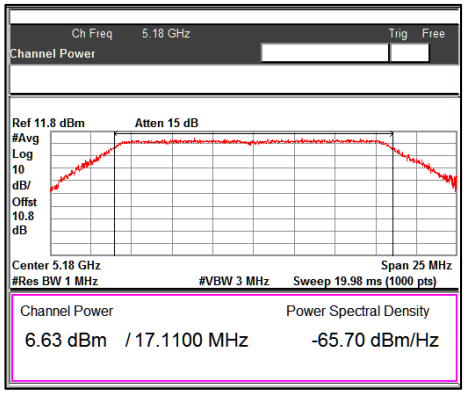


Channel frequency:5745MHz@Chain2

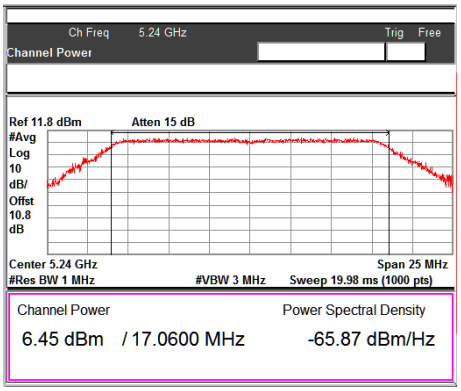


Channel frequency:5825MHz@Chain2

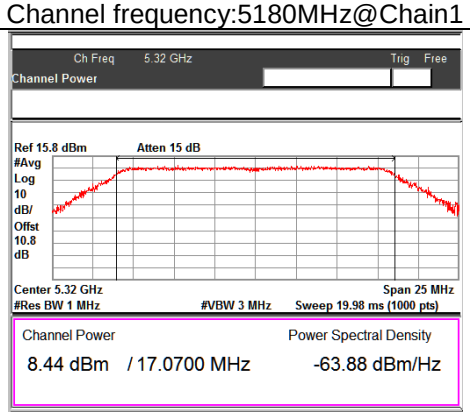
a-mode 54Mbps:



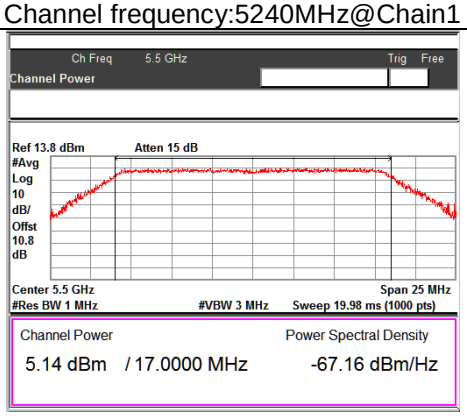
Channel frequency:5180MHz@Chain1



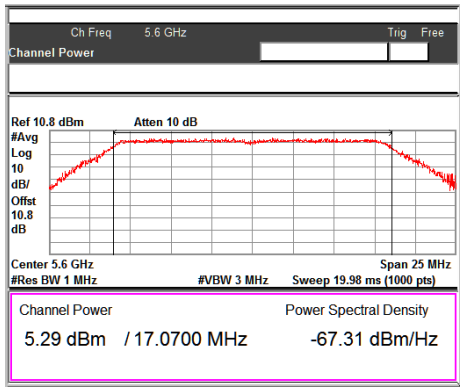
Channel frequency:5240MHz@Chain1



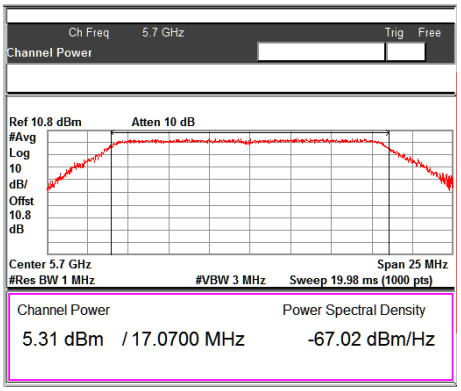
Channel frequency:5320MHz@Chain1



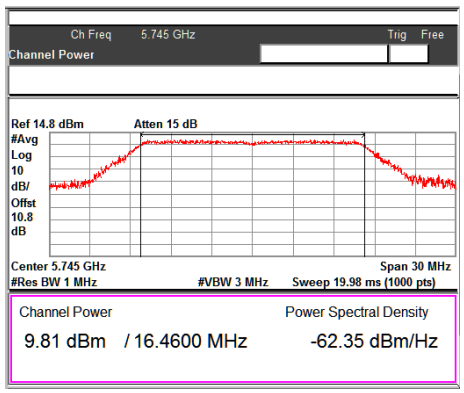
Channel frequency:5500MHz@Chain1



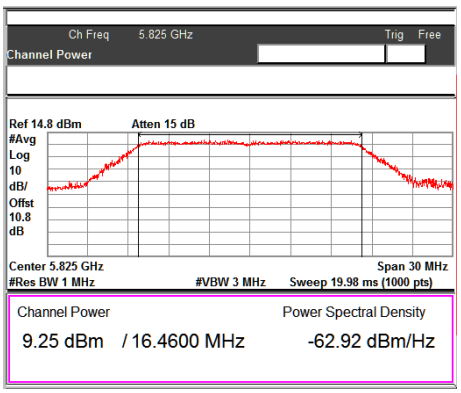
Channel frequency:5600MHz@Chain1



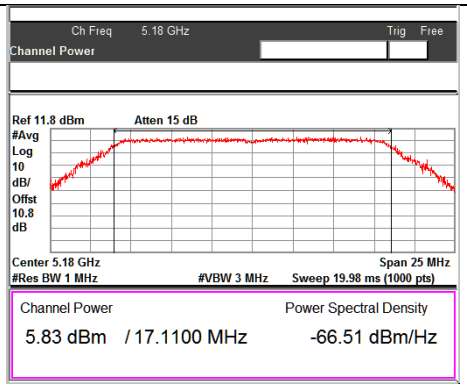
Channel frequency:5700MHz@Chain1



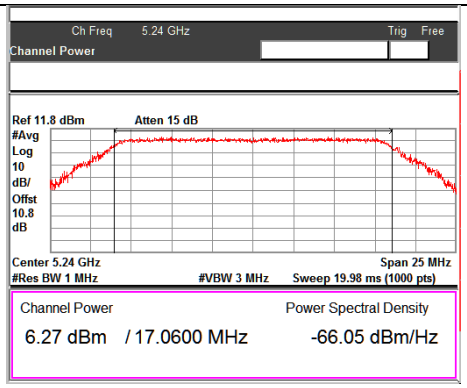
Channel frequency:5745MHz@Chain1



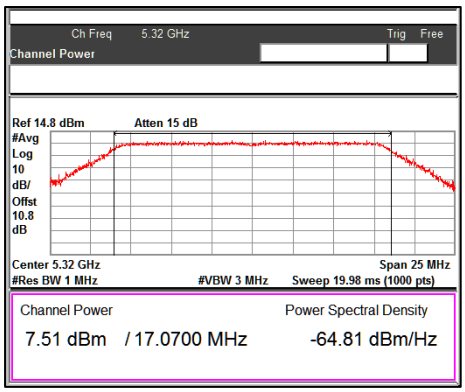
Channel frequency:5825MHz@Chain1



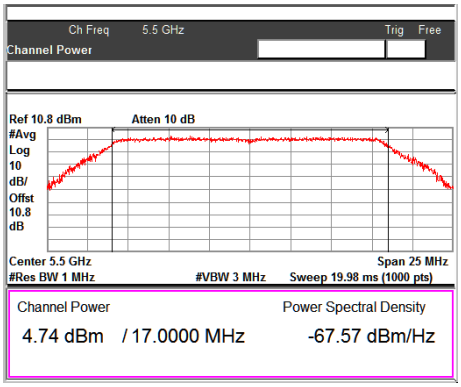
Channel frequency:5180MHz@Chain2



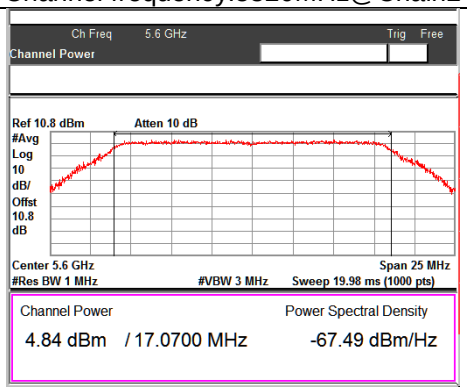
Channel frequency:5240MHz@Chain2



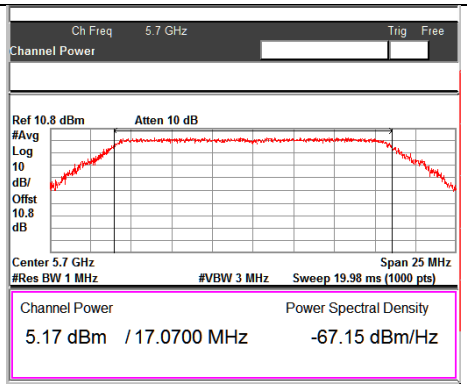
Channel frequency:5320MHz@Chain2



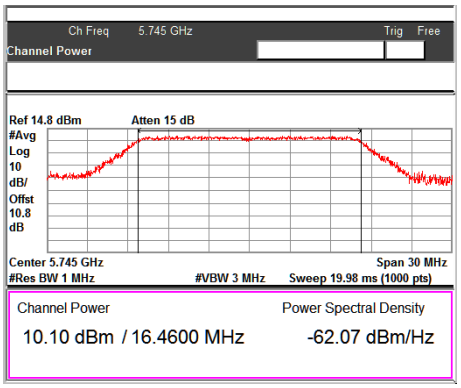
Channel frequency:5500MHz@Chain2



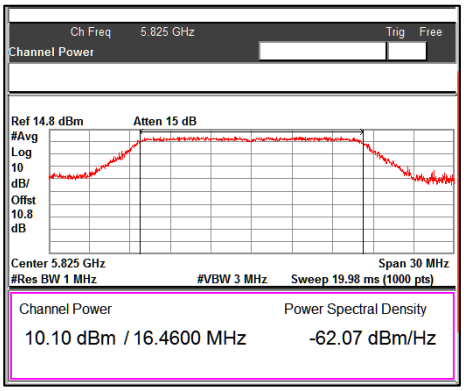
Channel frequency:5600MHz@Chain2



Channel frequency:5700MHz@Chain2



Channel frequency:5745MHz@Chain2



Channel frequency:5825MHz@Chain2

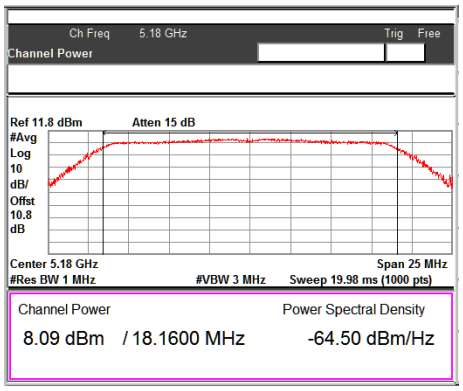
n-mode 20MHz

Data Rate (Mbps)	Band	Channel Frequency (MHz)	Measured Average Power (dBm) Chain 1	Measured Average Power (dBm) Chain 2	Final Average output power (dBm)	Power Limit (dBm)
MCS0	UNII 1	5180	8.09	7.32	10.73	24
		5240	8.24	7.77	11.02	24
	UNII 2a	5320	10.00	9.29	12.67	24
	UNII 2c	5500	6.83	6.20	9.54	24
		5600	6.84	6.63	9.75	24
		5700	6.93	6.77	9.86	24
	UNII 3	5745	13.47	13.75	16.62	30
		5825	12.72	13.45	16.11	30
MCS7	UNII 1	5180	5.84	4.66	8.30	24
		5240	5.82	5.24	8.55	24
	UNII 2a	5320	8.49	7.74	11.14	24
	UNII 2c	5500	3.60	2.77	6.22	24
		5600	4.34	3.44	6.92	24
		5700	4.07	3.24	6.69	24
	UNII 3	5745	10.71	10.96	13.85	30
		5825	9.97	10.79	13.41	30

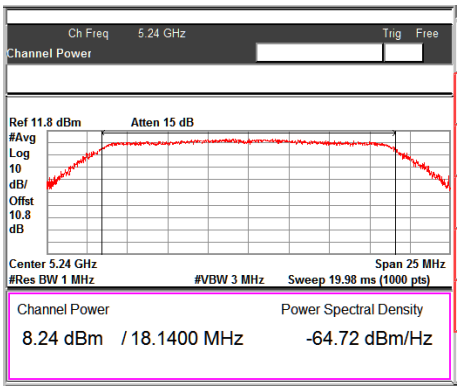
Note:

Total Average power (dBm): $10*\log\{10^{(\text{Ant0 of avg power}/10)}+10^{(\text{Ant1 of avg power}/10)}\}$

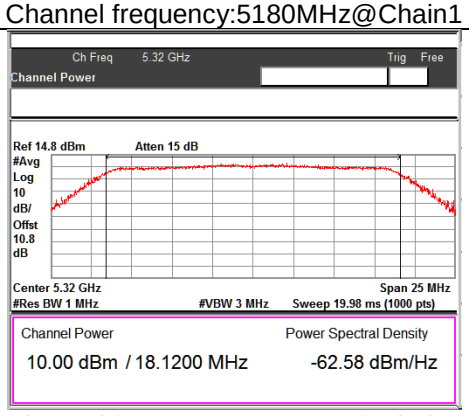
Test Plots:
Data rate: MCS0



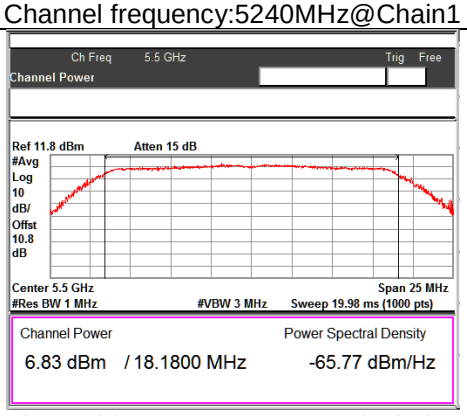
Channel frequency:5180MHz@Chain1



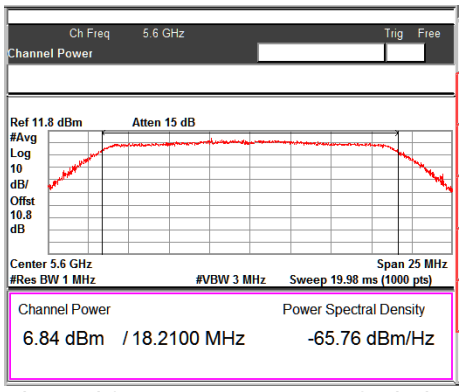
Channel frequency:5240MHz@Chain1



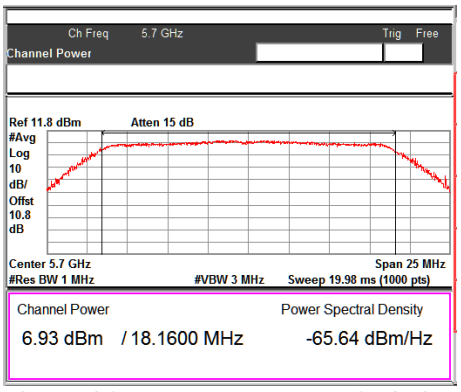
Channel frequency:5320MHz@Chain1



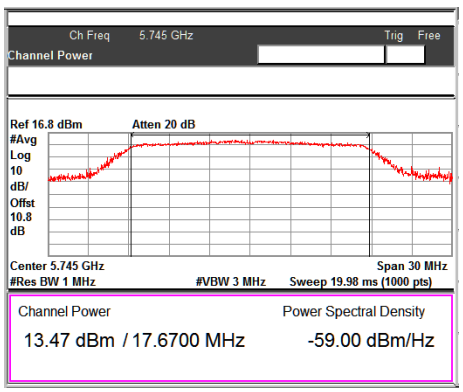
Channel frequency:5500MHz@Chain1



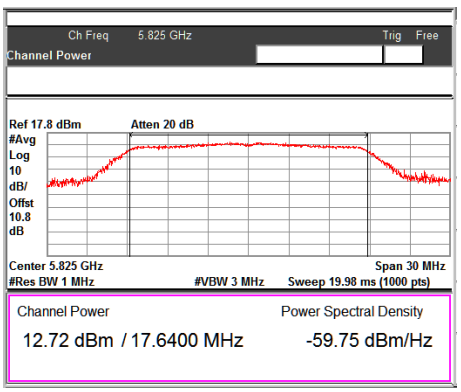
Channel frequency:5600MHz@Chain1



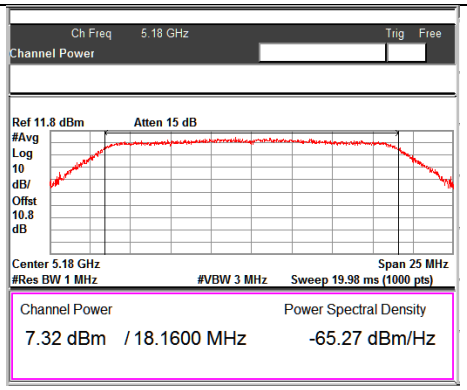
Channel frequency:5700MHz@Chain1



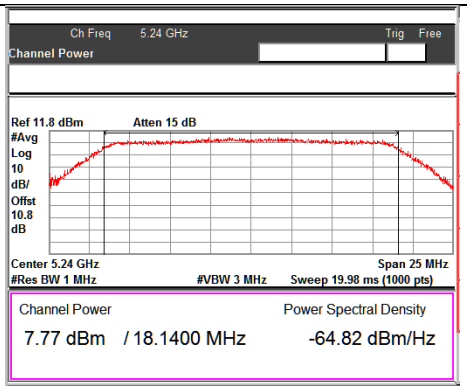
Channel frequency:5745MHz@Chain1



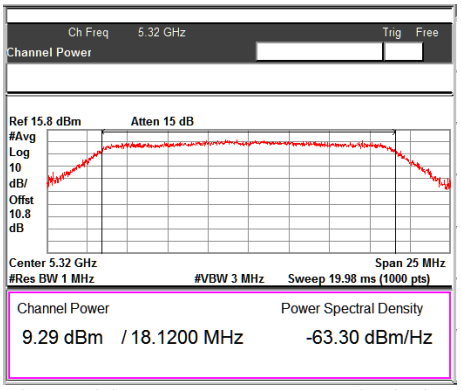
Channel frequency:5825MHz@Chain1



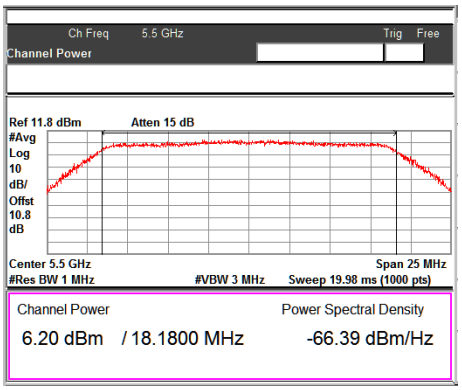
Channel frequency:5180MHz@Chain2



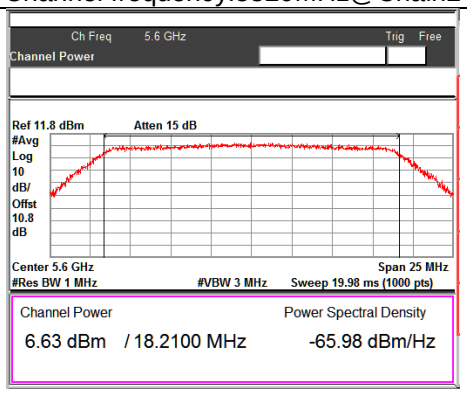
Channel frequency:5240MHz@Chain2



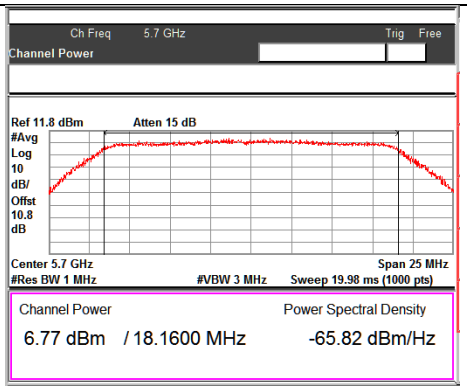
Channel frequency:5320MHz@Chain2



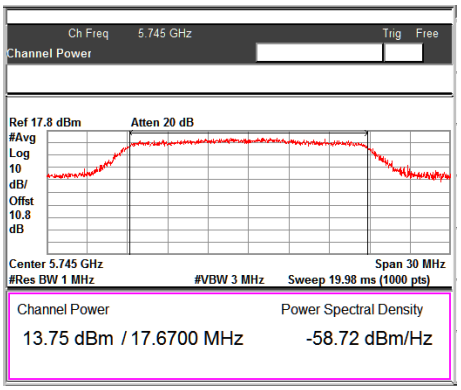
Channel frequency:5500MHz@Chain2



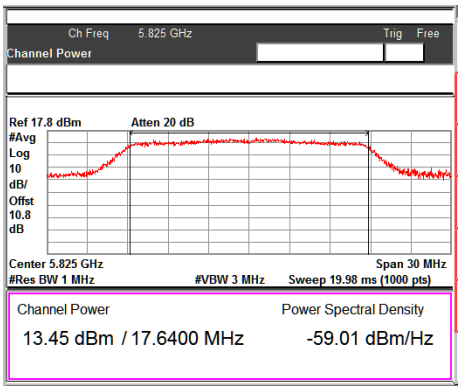
Channel frequency:5600MHz@Chain2



Channel frequency:5700MHz@Chain2

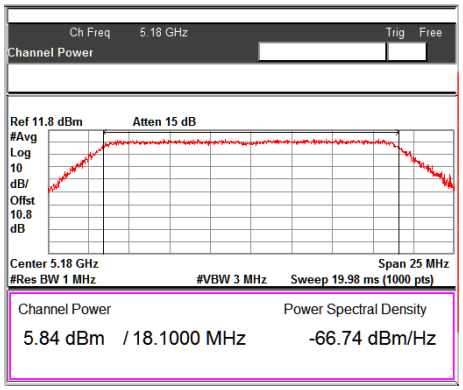


Channel frequency:5745MHz@Chain2

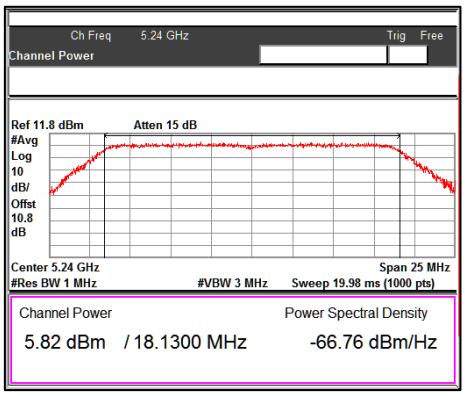


Channel frequency:5825MHz@Chain2

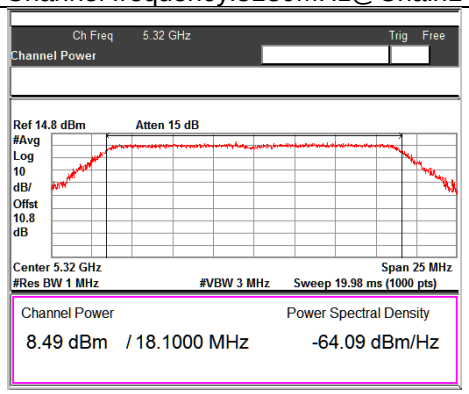
Data Rate: MCS7



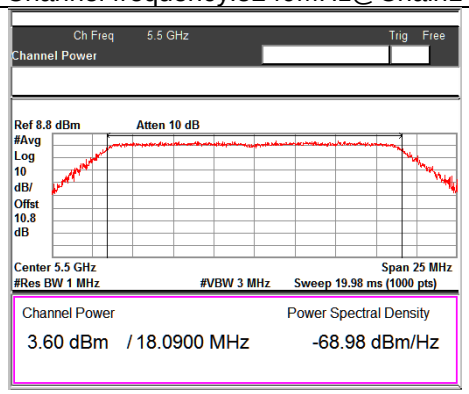
Channel frequency:5180MHz@Chain1



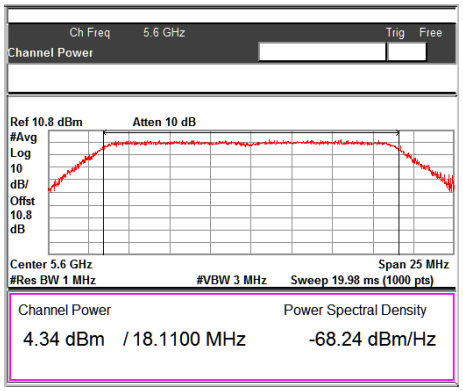
Channel frequency:5240MHz@Chain1



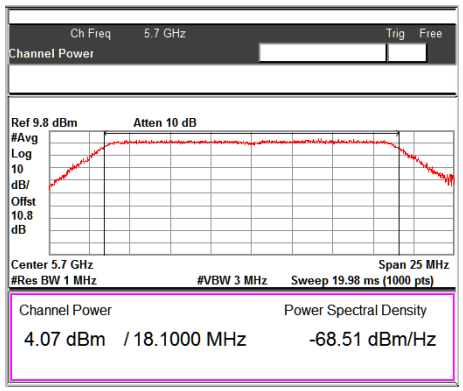
Channel frequency:5320MHz@Chain1



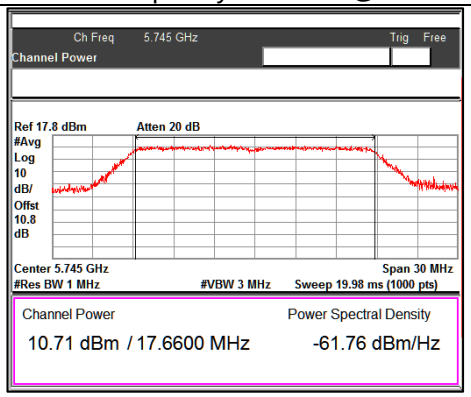
Channel frequency:5500MHz@Chain1



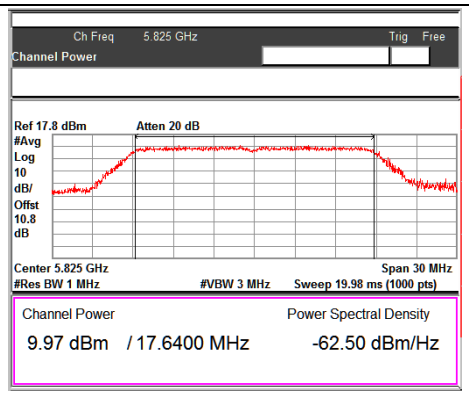
Channel frequency:5600MHz@Chain1



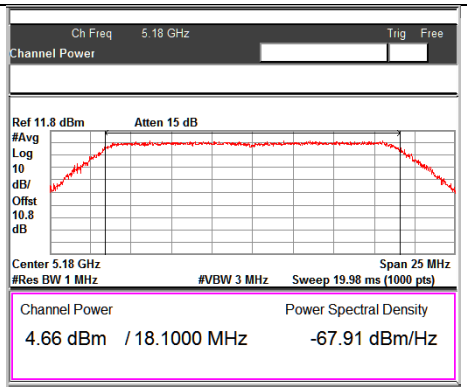
Channel frequency:5700MHz@Chain1



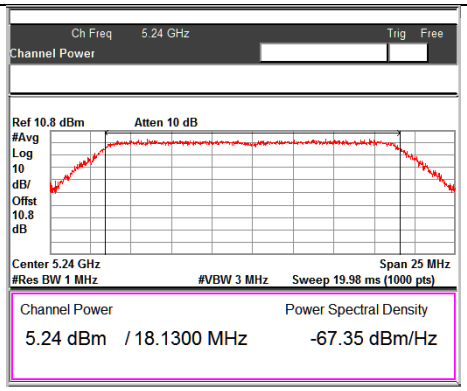
Channel frequency:5745MHz@Chain1



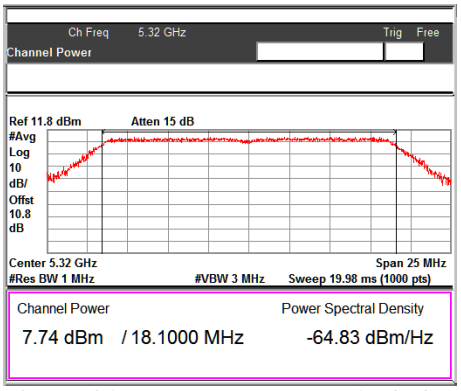
Channel frequency:5825MHz@Chain1



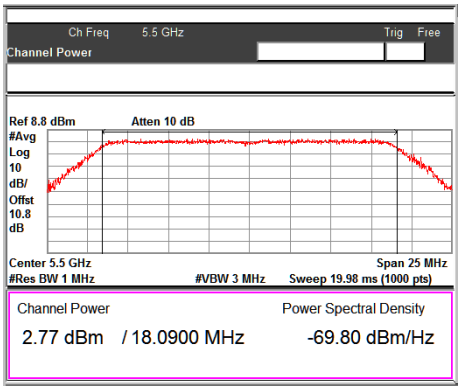
Channel frequency:5180MHz@Chain2



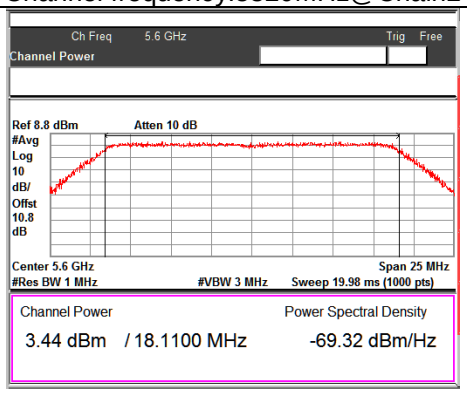
Channel frequency:5240MHz@Chain2



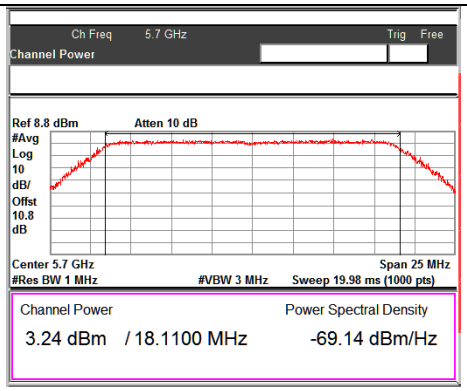
Channel frequency:5320MHz@Chain2



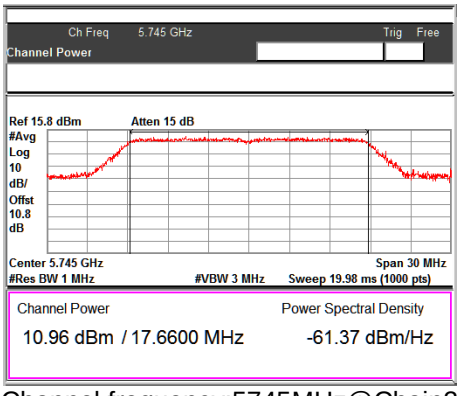
Channel frequency:5500MHz@Chain2



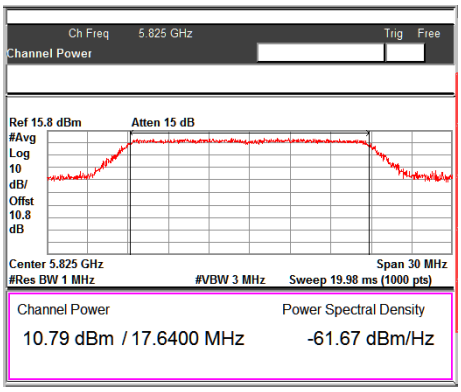
Channel frequency:5600MHz@Chain2



Channel frequency:5700MHz@Chain2



Channel frequency:5745MHz@Chain2



Channel frequency:5825MHz@Chain2

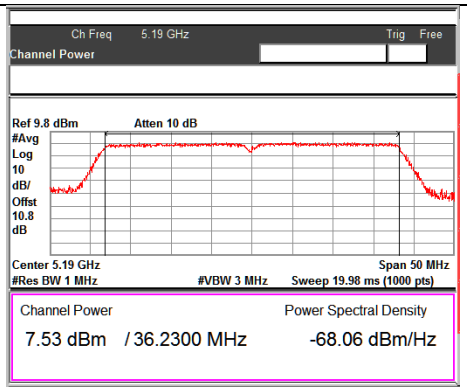
n-mode 40MHz

Data Rate (Mbps)	Band	Channel Frequency (MHz)	Measured Average Power (dBm) Chain 1	Measured Average Power (dBm) Chain 2	Final Average output power (dBm)	Power Limit (dBm)
MCS0	UNII 1	5190	7.53	6.34	9.99	24
		5230	7.30	6.15	9.77	24
	UNII 2a	5270	8.80	8.47	11.65	24
	UNII 2c	5510	6.87	6.26	9.59	24
		5590	6.62	6.13	9.39	24
		5670	7.09	6.03	9.60	24
	UNII 3	5755	13.69	13.74	16.73	30
		5795	13.42	14.02	16.74	30
MCS7	UNII 1	5190	5.10	3.68	7.46	24
		5230	4.64	3.91	7.30	24
	UNII 2a	5270	6.62	6.01	9.34	24
	UNII 2c	5510	3.30	2.00	5.71	24
		5590	3.38	1.81	5.68	24
		5670	3.77	2.55	6.21	24
	UNII 3	5755	10.29	10.58	13.45	30
		5795	10.07	10.47	13.28	30

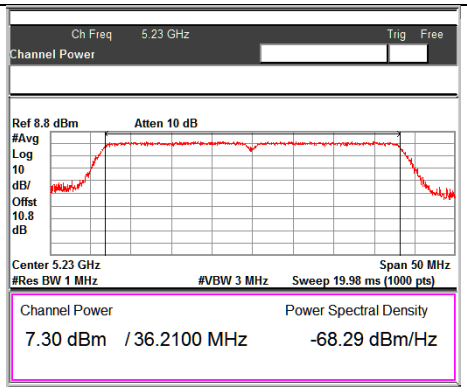
Note:

Total Average power (dBm): $10*\log\{10^{(\text{Ant0 of avg power}/10)}+10^{(\text{Ant1 of avg power}/10)}\}$

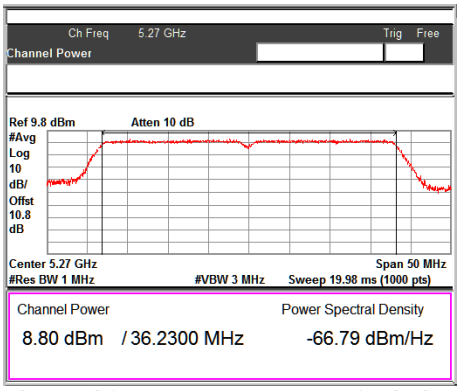
Data rate: MCS0



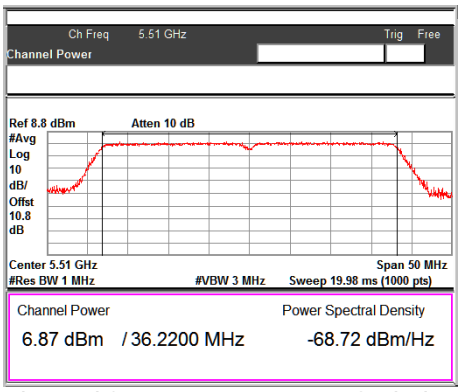
Channel frequency:5190MHz@Chain1



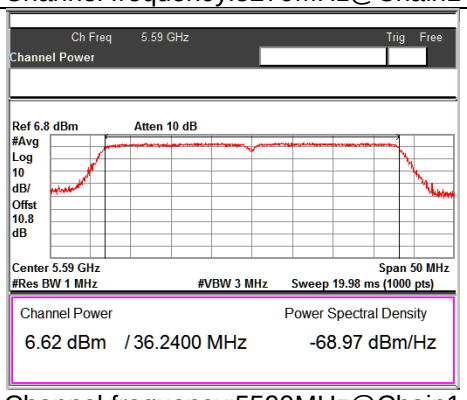
Channel frequency:5230MHz@Chain1



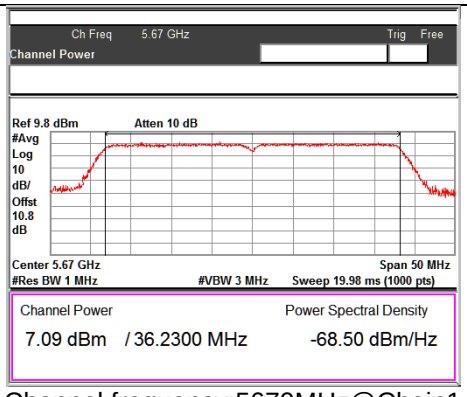
Channel frequency:5270MHz@Chain1



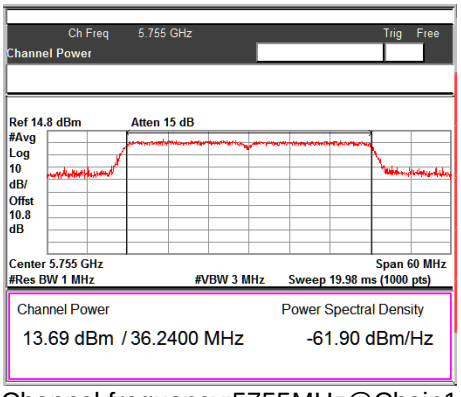
Channel frequency:5510MHz@Chain1



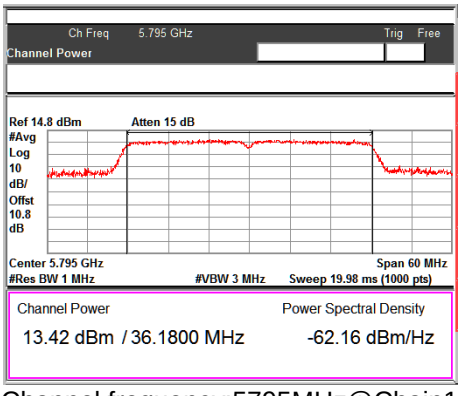
Channel frequency:5590MHz@Chain1



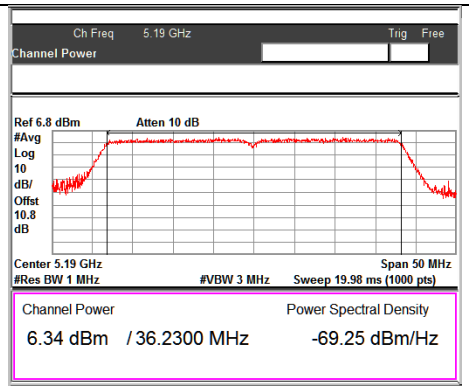
Channel frequency:5670MHz@Chain1



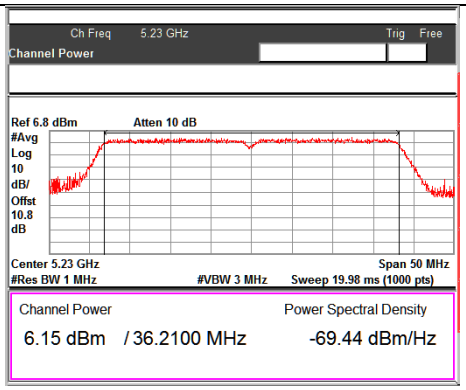
Channel frequency:5755MHz@Chain1



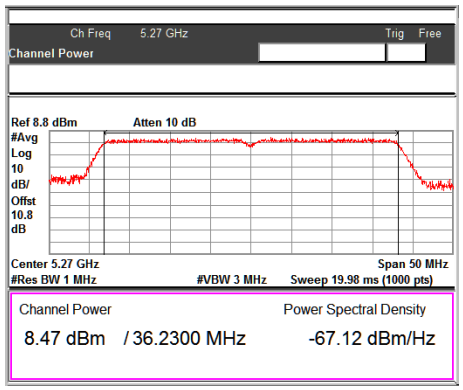
Channel frequency:5795MHz@Chain1



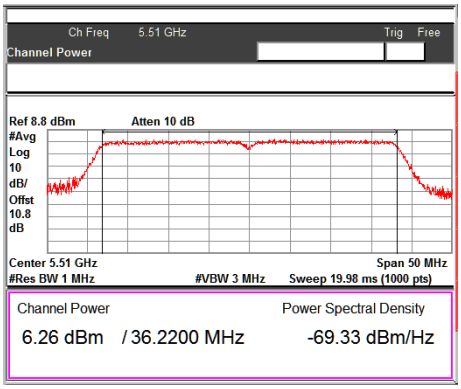
Channel frequency:5190MHz@Chain2



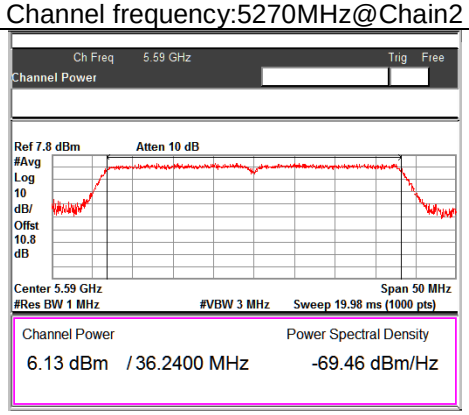
Channel frequency:5230MHz@Chain2



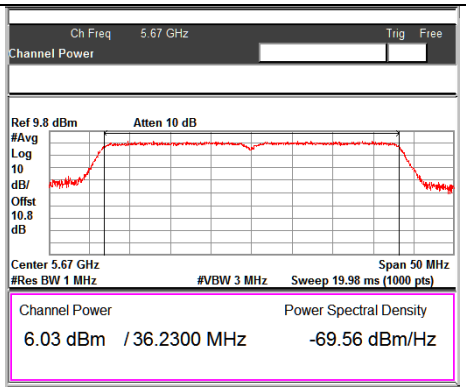
Channel frequency:5270MHz@Chain2



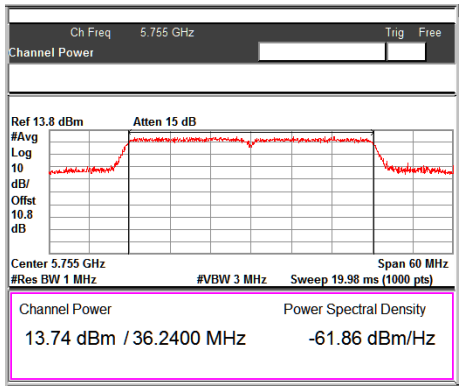
Channel frequency:5510MHz@Chain2



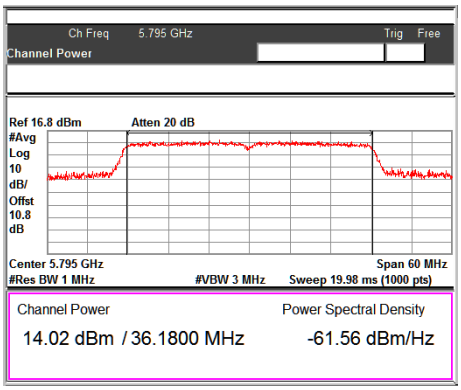
Channel frequency:5590MHz@Chain2



Channel frequency:5670MHz@Chain2

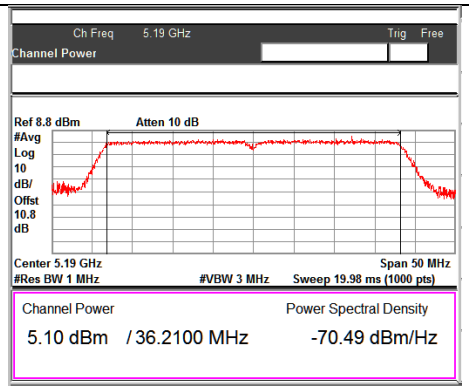


Channel frequency:5755MHz@Chain2

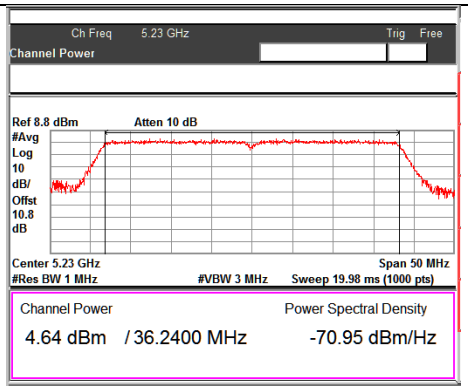


Channel frequency:5795MHz@Chain2

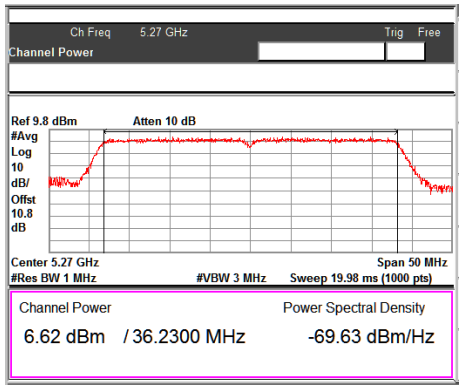
Data Rate: MCS7



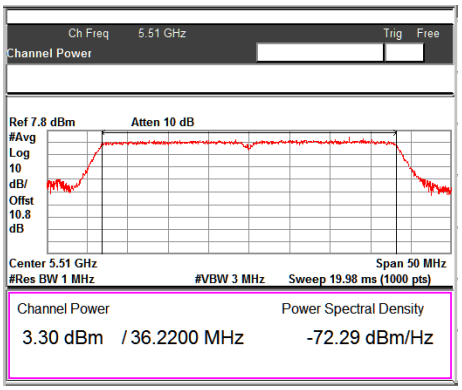
Channel frequency:5190MHz@Chain1



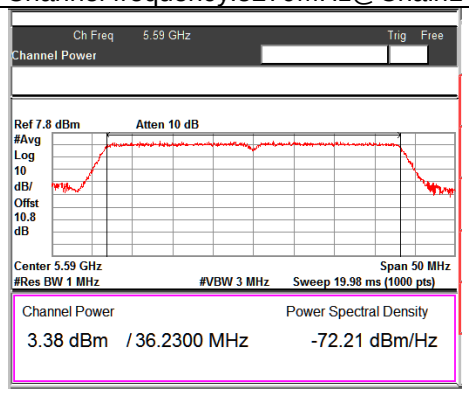
Channel frequency:5230MHz@Chain1



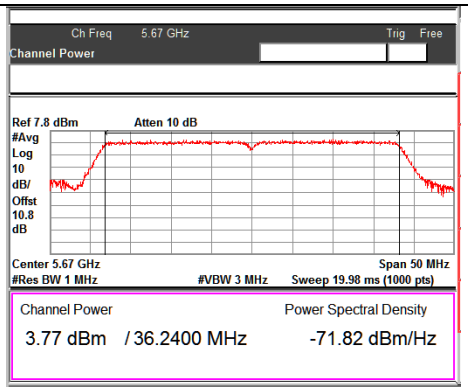
Channel frequency:5270MHz@Chain1



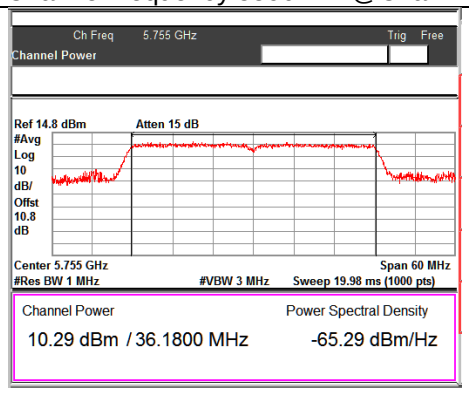
Channel frequency:5510MHz@Chain1



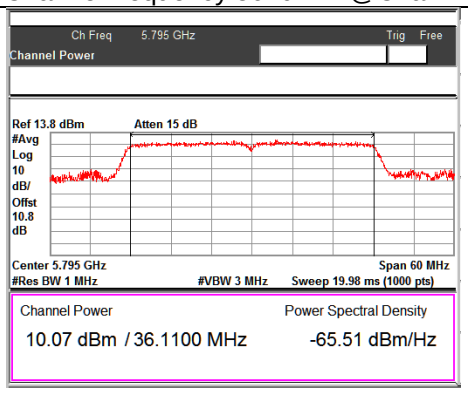
Channel frequency:5590MHz@Chain1



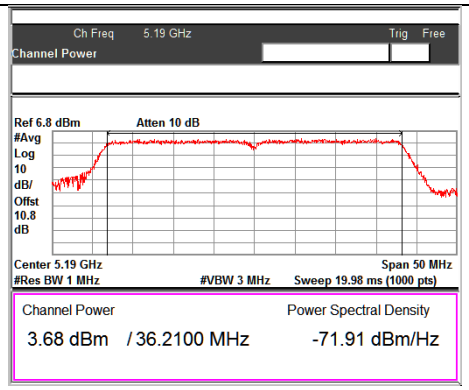
Channel frequency:5670MHz@Chain1



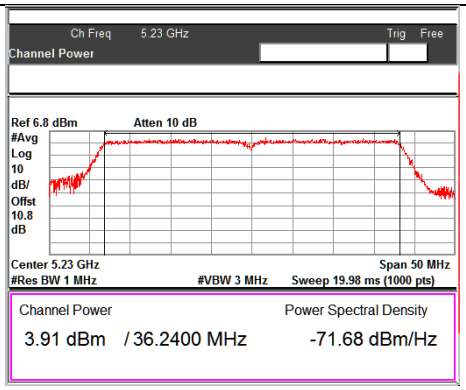
Channel frequency:5755MHz@Chain1



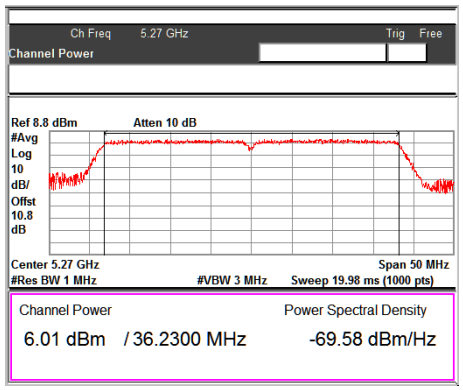
Channel frequency:5795MHz@Chain1



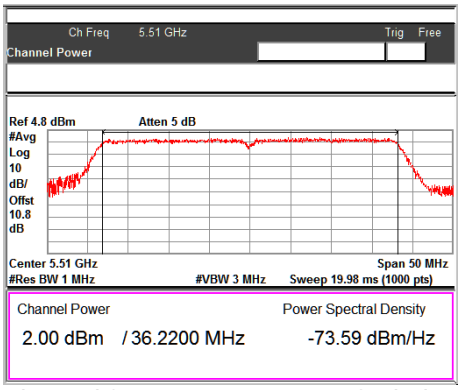
Channel frequency:5190MHz@Chain2



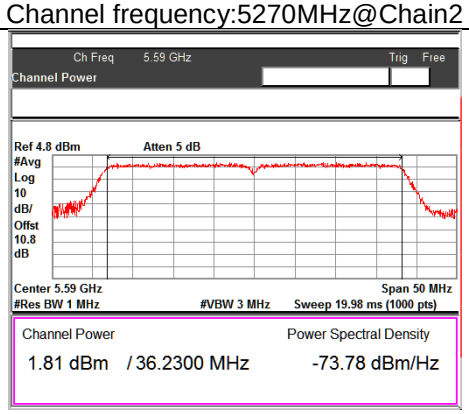
Channel frequency:5230MHz@Chain2



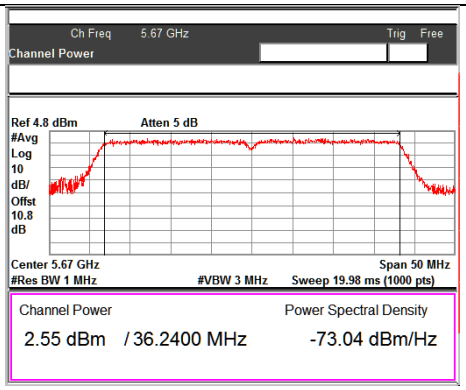
Channel frequency:5270MHz@Chain2



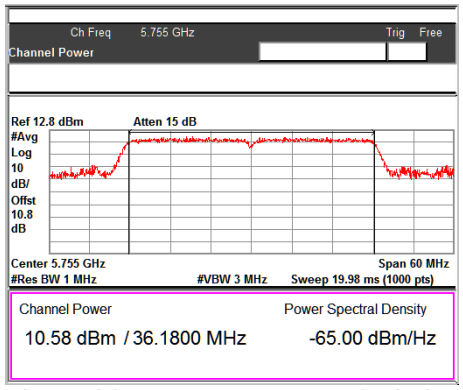
Channel frequency:5510MHz@Chain2



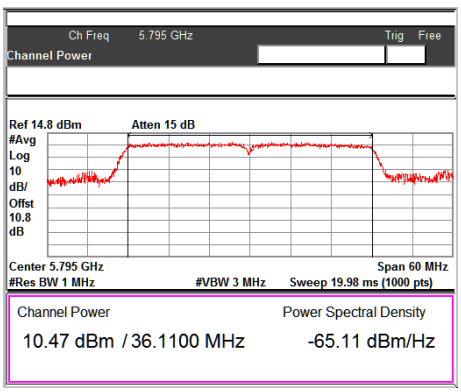
Channel frequency:5590MHz@Chain2



Channel frequency:5670MHz@Chain2



Channel frequency:5755MHz@Chain2



Channel frequency:5795MHz@Chain2

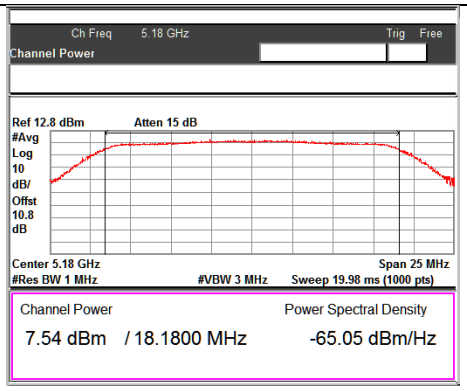
Modulation: 802.11ac-mode VHT20MHz

Data Rate (Mbps)	Band	Channel Frequency (MHz)	Measured Average Power (dBm) Chain 1	Measured Average Power (dBm) Chain 2	Final Average output power (dBm)	Power Limit (dBm)
MCS0	UNII 1	5180	7.54	7.91	10.74	24
		5240	7.16	7.72	10.46	24
	UNII 2a	5320	9.12	9.32	12.23	24
	UNII 2c	5500	5.05	6.59	8.90	24
		5600	5.00	6.68	8.93	24
		5700	4.91	7.14	9.18	24
	UNII 3	5745	11.82	12.15	15.00	30
		5825	11.13	11.69	14.43	30
MCS8	UNII 1	5180	3.03	3.02	6.04	24
		5240	2.88	3.32	6.12	24
	UNII 2a	5320	8.50	9.21	11.88	24
	UNII 2c	5500	3.22	2.12	5.72	24
		5600	2.94	2.45	5.71	24
		5700	2.97	2.38	5.70	24
	UNII 3	5745	10.62	11.01	13.83	30
		5825	9.61	10.83	13.27	30

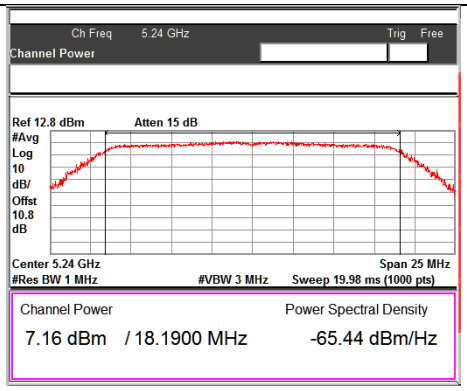
Note:

Total Average power (dBm): $10*\log\{10^{(\text{Ant0 of avg power}/10)}+10^{(\text{Ant1 of avg power}/10)}\}$

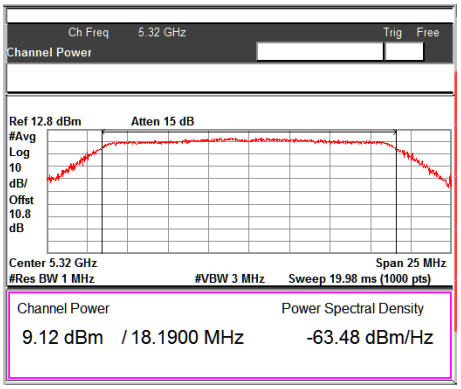
Data Rate: MCS0



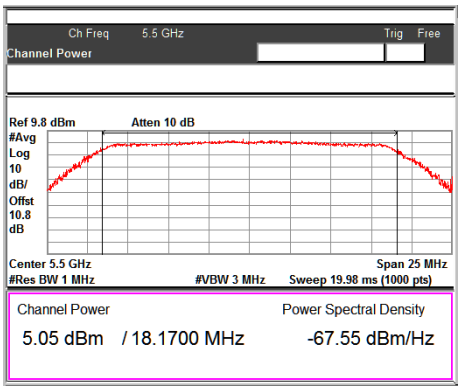
Channel frequency:5180MHz@Chain1



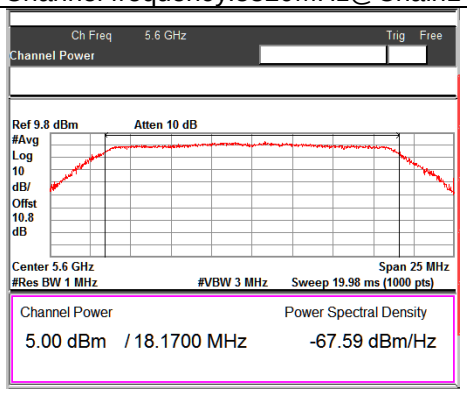
Channel frequency:5240MHz@Chain1



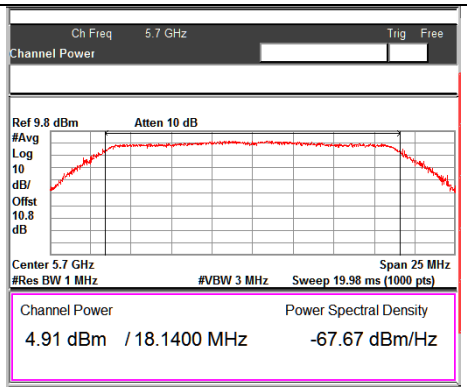
Channel frequency:5320MHz@Chain1



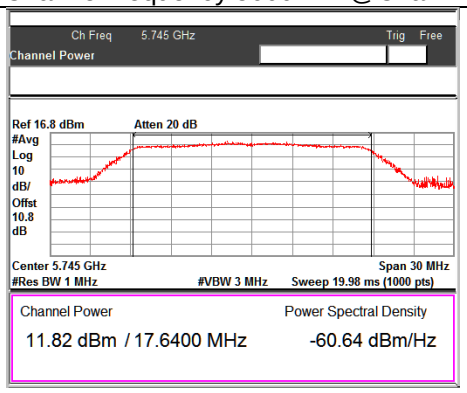
Channel frequency:5500MHz@Chain1



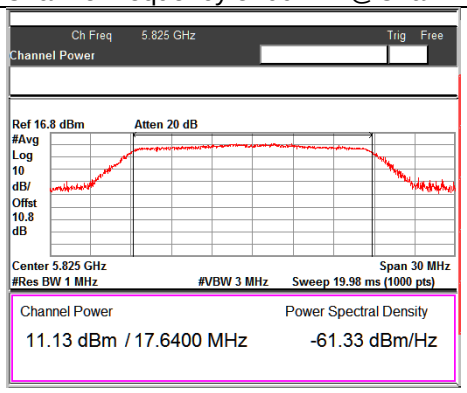
Channel frequency:5600MHz@Chain1



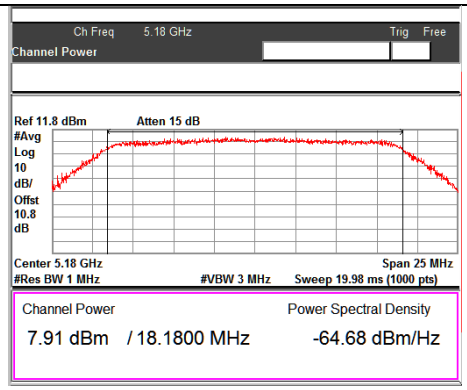
Channel frequency:5700MHz@Chain1



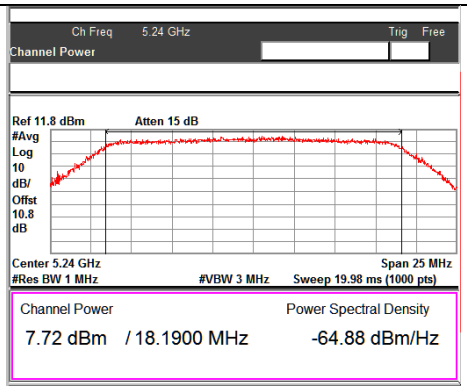
Channel frequency:5745MHz@Chain1



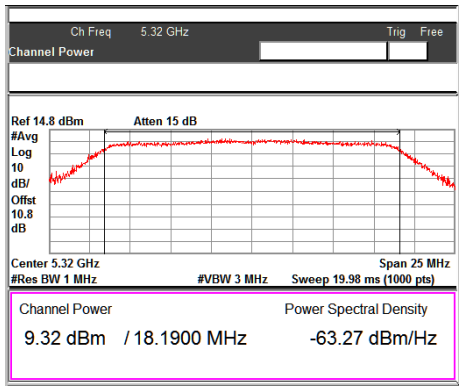
Channel frequency:5825MHz@Chain1



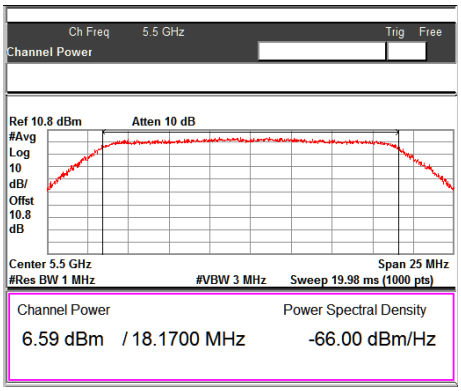
Channel frequency:5180MHz@Chain2



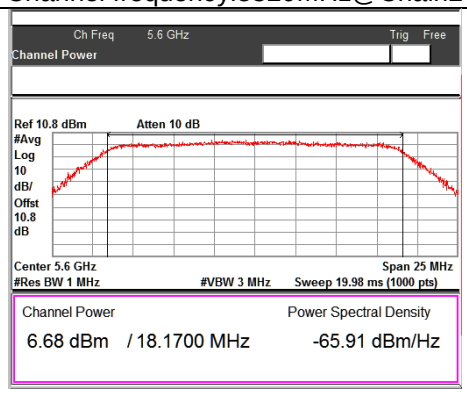
Channel frequency:5240MHz@Chain2



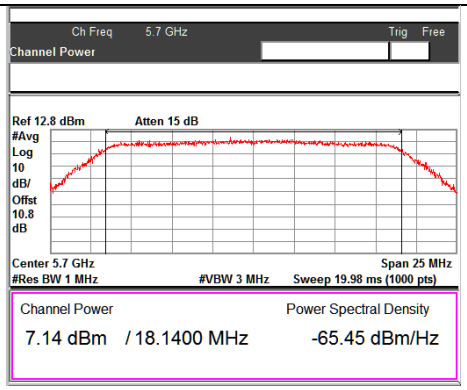
Channel frequency:5320MHz@Chain2



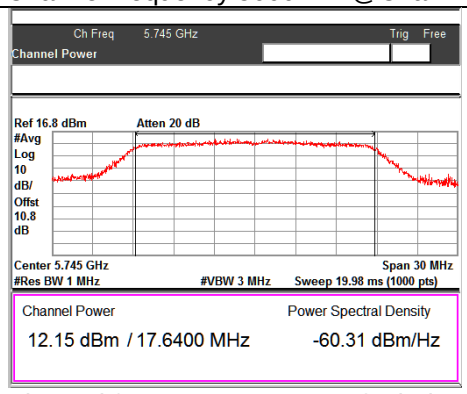
Channel frequency:5500MHz@Chain2



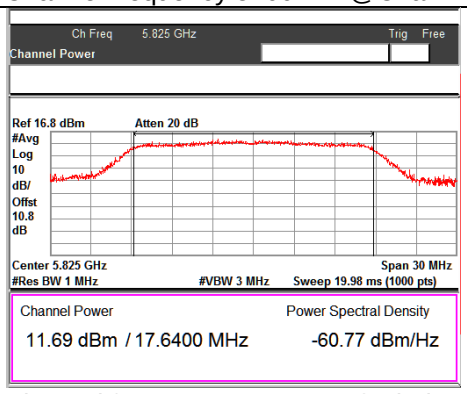
Channel frequency:5600MHz@Chain2



Channel frequency:5700MHz@Chain2

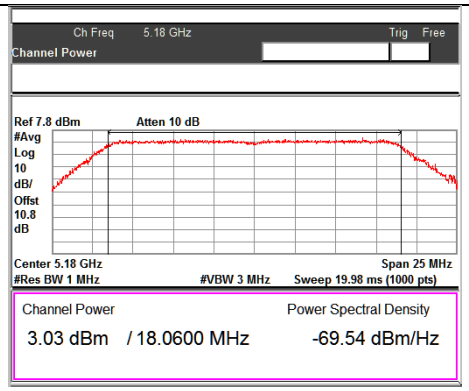


Channel frequency:5745MHz@Chain2

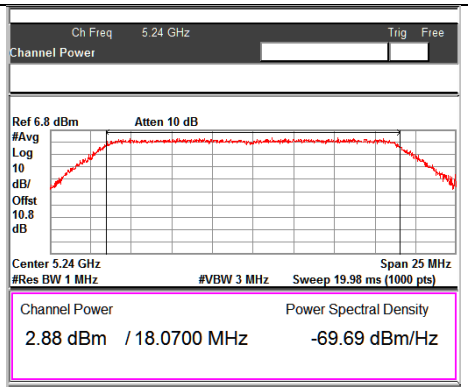


Channel frequency:5825MHz@Chain2

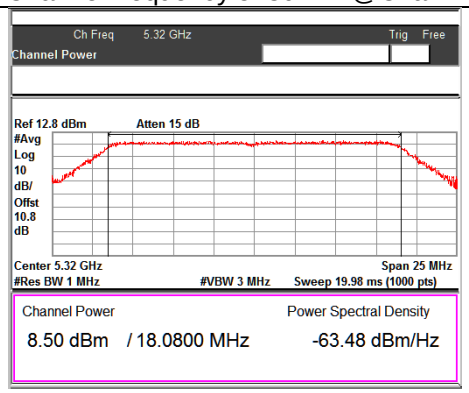
Data Rate: MCS8



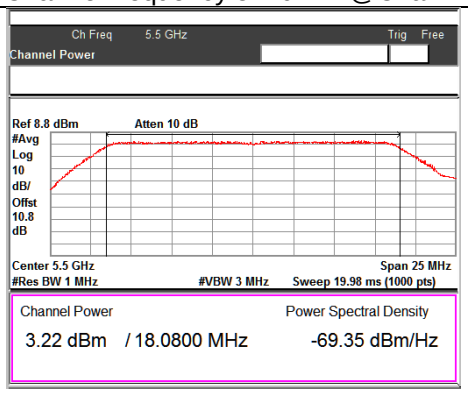
Channel frequency:5180MHz@Chain1



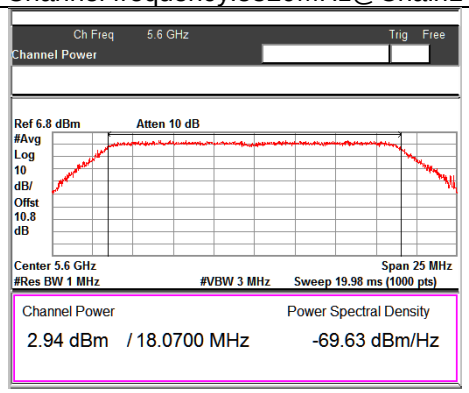
Channel frequency:5240MHz@Chain1



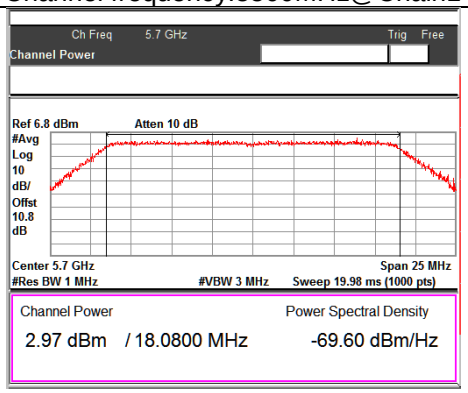
Channel frequency:5320MHz@Chain1



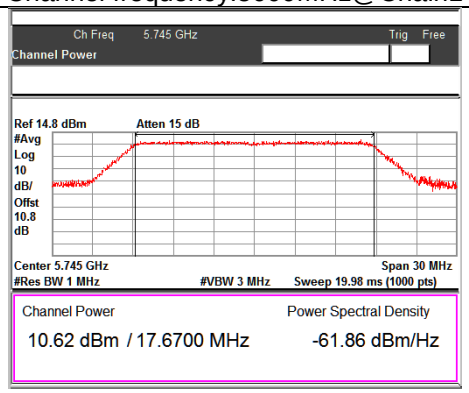
Channel frequency:5500MHz@Chain1



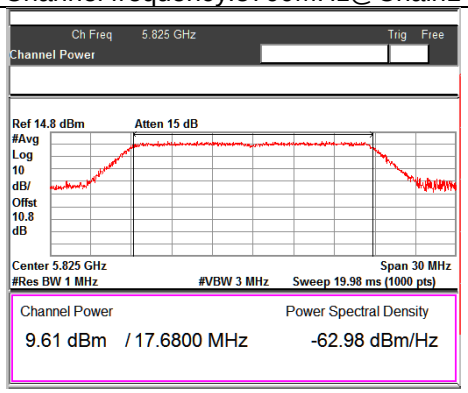
Channel frequency:5600MHz@Chain1



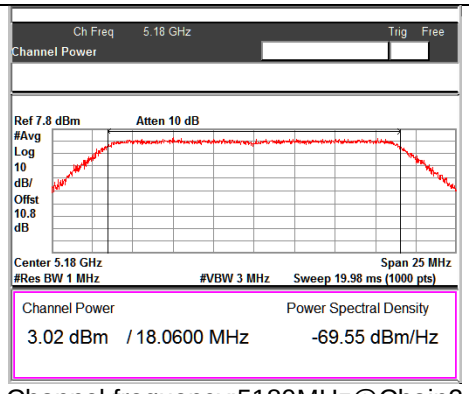
Channel frequency:5700MHz@Chain1



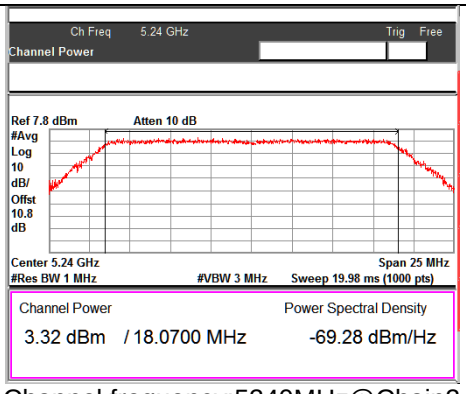
Channel frequency:5745MHz@Chain1



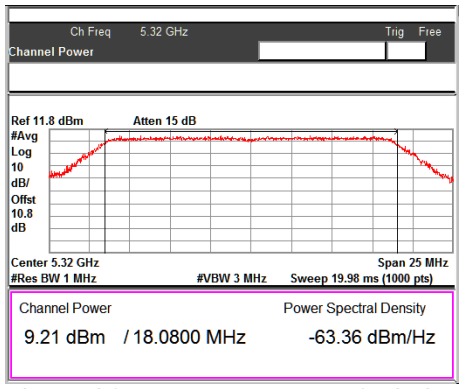
Channel frequency:5825MHz@Chain1



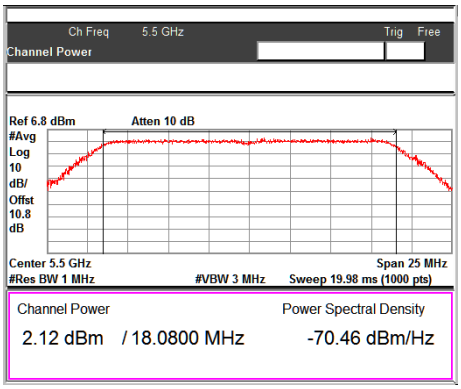
Channel frequency:5180MHz@Chain2



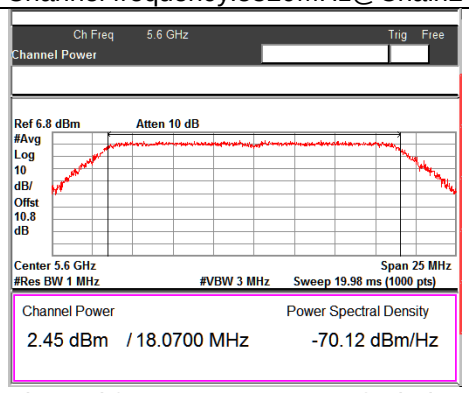
Channel frequency:5240MHz@Chain2



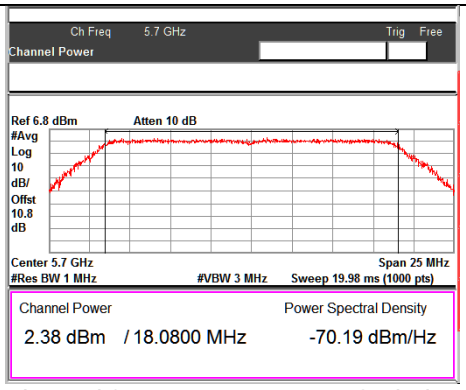
Channel frequency:5320MHz@Chain2



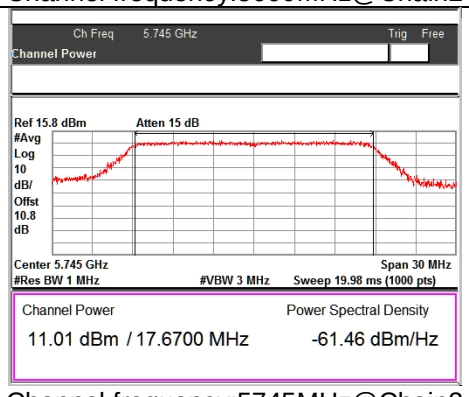
Channel frequency:5500MHz@Chain2



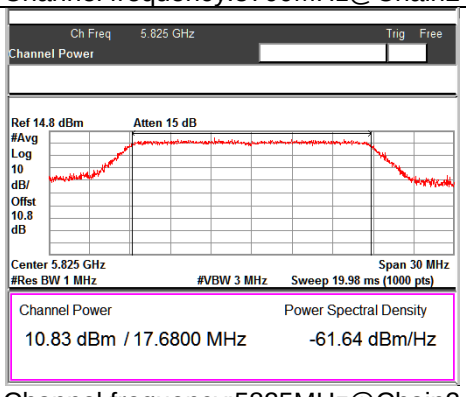
Channel frequency:5600MHz@Chain2



Channel frequency:5700MHz@Chain2



Channel frequency:5745MHz@Chain2



Channel frequency:5825MHz@Chain2

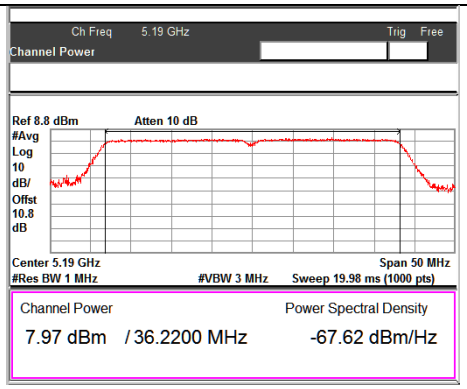
Modulation: 802.11ac-mode VHT40MHz

Data Rate (Mbps)	Band	Channel Frequency (MHz)	Measured Average Power (dBm) Chain 1	Measured Average Power (dBm) Chain 2	Final Average output power (dBm)	Power Limit (dBm)
MCS0	UNII 1	5190	7.97	6.89	10.47	24
		5230	7.84	7.00	10.45	24
	UNII 2a	5270	9.61	8.95	12.30	24
	UNII 2c	5510	7.31	6.85	10.10	24
		5590	7.29	6.99	10.15	24
		5670	7.49	7.10	10.31	24
	UNII 3	5755	14.01	14.63	17.34	30
		5795	14.04	14.5	17.29	30
MCS9	UNII 1	5190	7.40	6.24	9.87	24
		5230	7.42	6.36	9.93	24
	UNII 2a	5270	8.89	8.39	11.66	24
	UNII 2c	5510	1.36	-0.12	3.69	24
		5590	1.20	0.19	3.73	24
		5670	1.51	-0.03	3.82	24
	UNII 3	5755	8.88	8.97	11.94	30
		5795	8.91	9.09	12.01	30

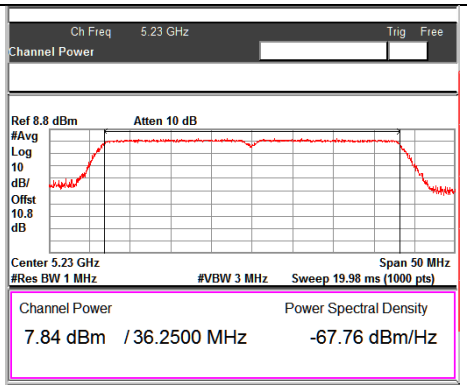
Note:

Total Average power (dBm)= $10*\log\{10^{(\text{Ant0 of avg power}/10)}+10^{(\text{Ant1 of avg power}/10)}\}$

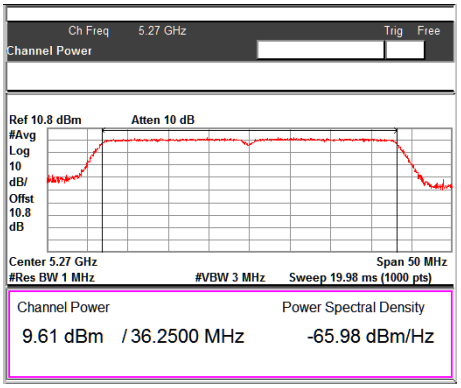
Data Rate: MCS0



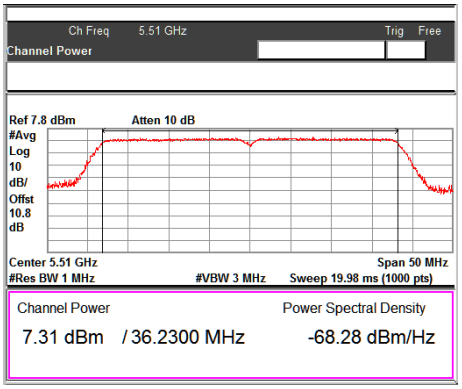
Channel frequency:5190MHz@Chain1



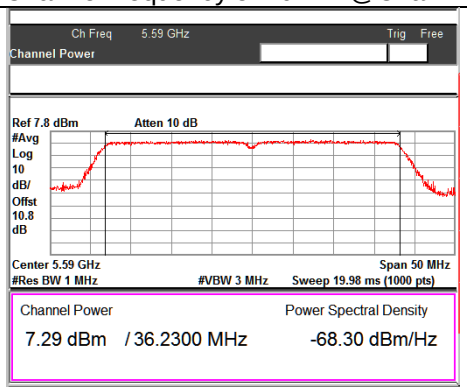
Channel frequency:5230MHz@Chain1



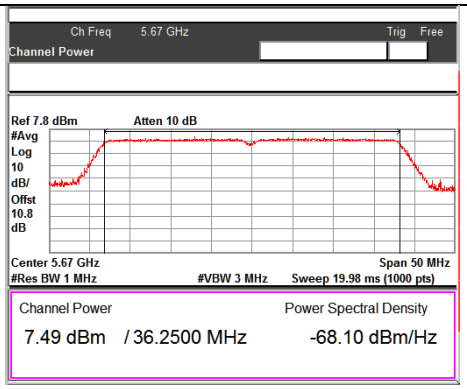
Channel frequency:5270MHz@Chain1



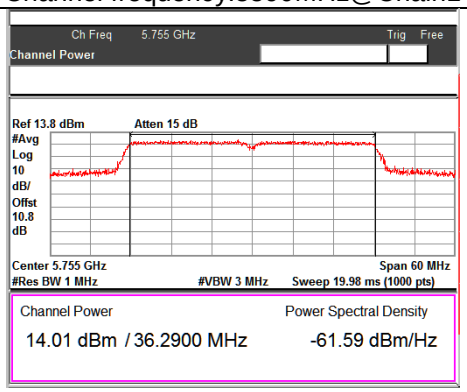
Channel frequency:5510MHz@Chain1



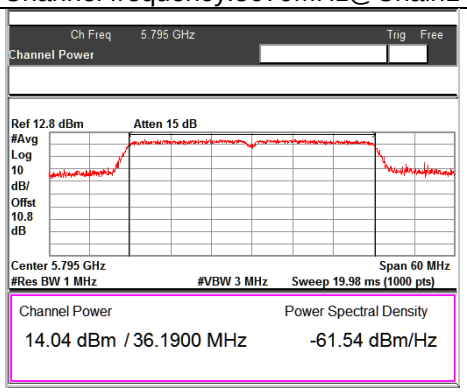
Channel frequency:5590MHz@Chain1



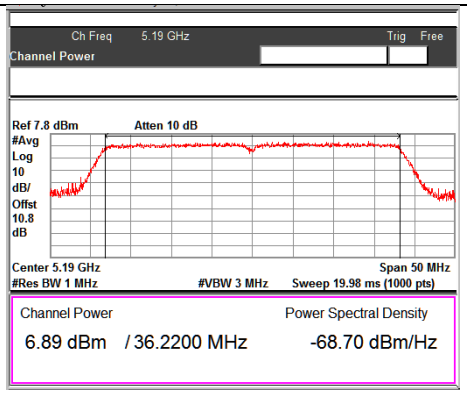
Channel frequency:5670MHz@Chain1



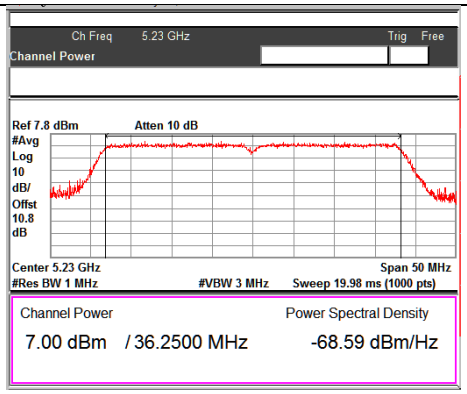
Channel frequency:5755MHz@Chain1



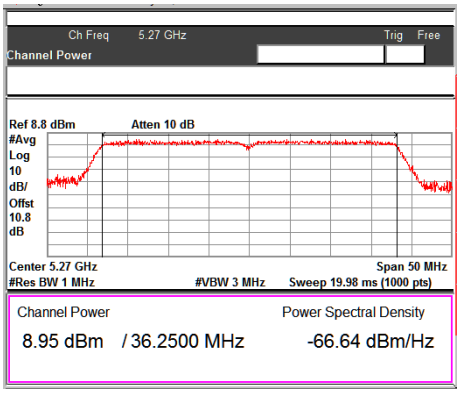
Channel frequency:5795MHz@Chain1



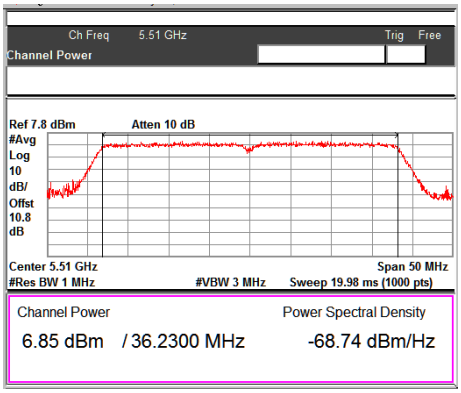
Channel frequency:5190MHz@Chain2



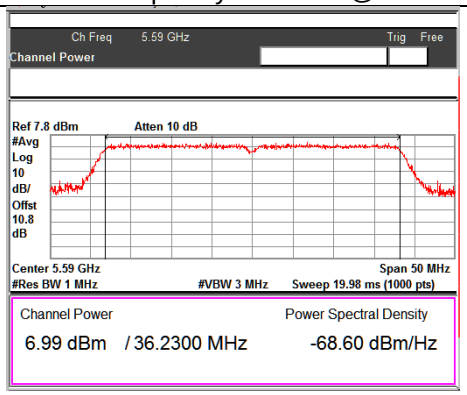
Channel frequency:5230MHz@Chain2



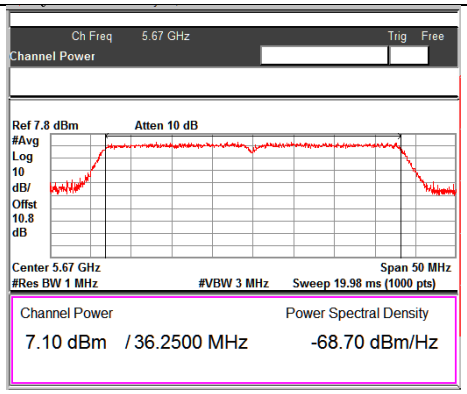
Channel frequency:5270MHz@Chain2



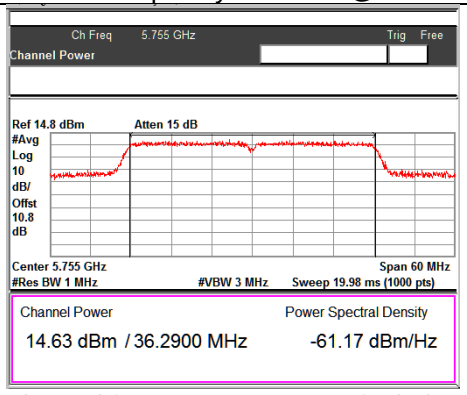
Channel frequency:5510MHz@Chain2



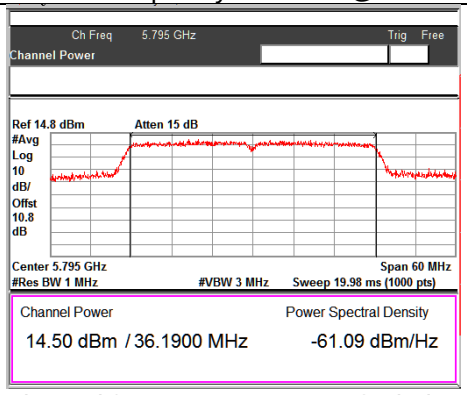
Channel frequency:5590MHz@Chain2



Channel frequency:5670MHz@Chain2

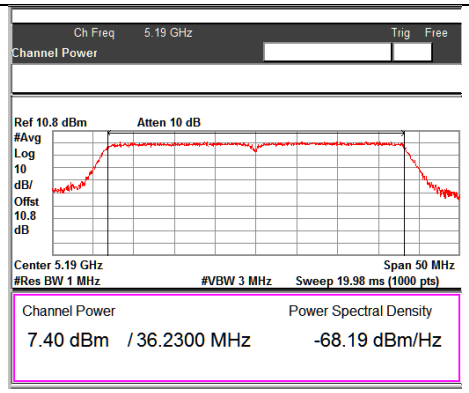


Channel frequency:5755MHz@Chain2

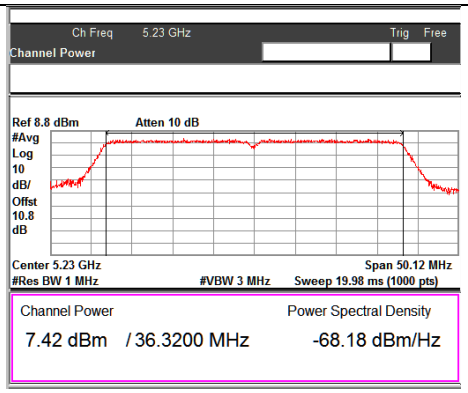


Channel frequency:5795MHz@Chain2

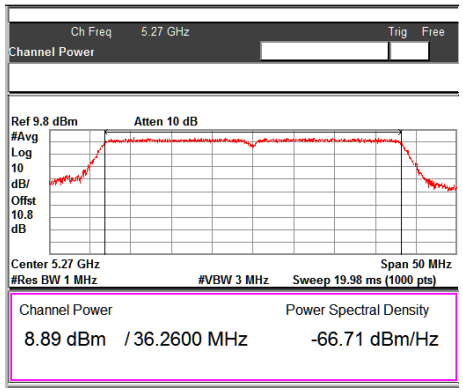
Data Rate: MCS9



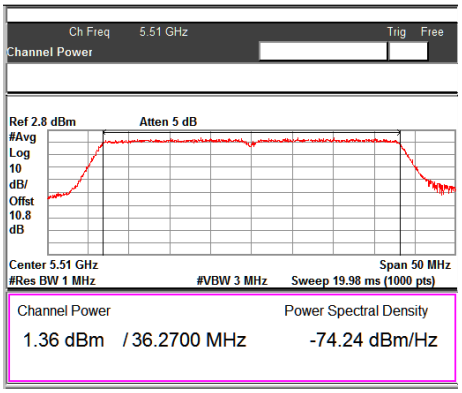
Channel frequency:5190MHz@Chain1



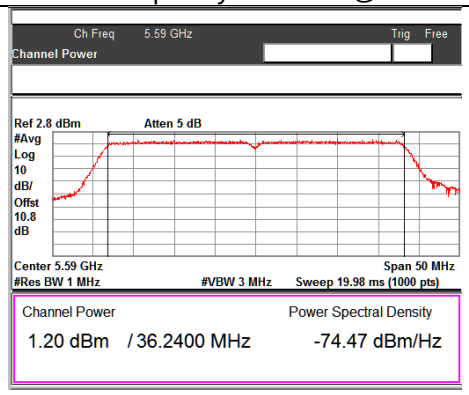
Channel frequency:5230MHz@Chain1



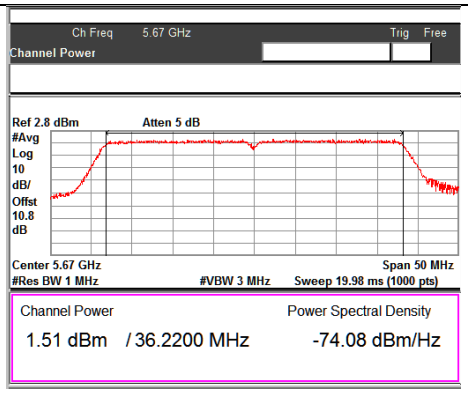
Channel frequency:5270MHz@Chain1



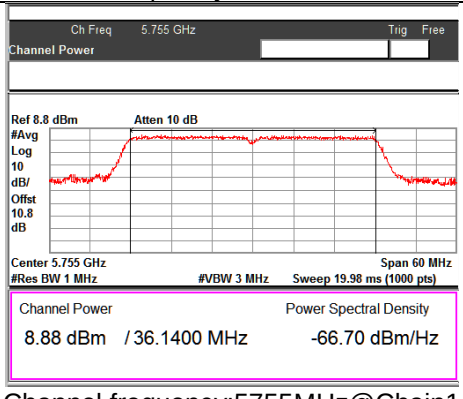
Channel frequency:5510MHz@Chain1



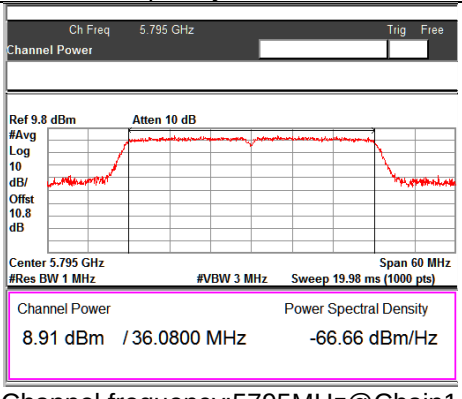
Channel frequency:5590MHz@Chain1



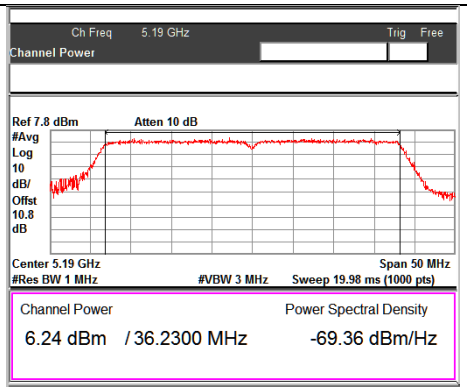
Channel frequency:5670MHz@Chain1



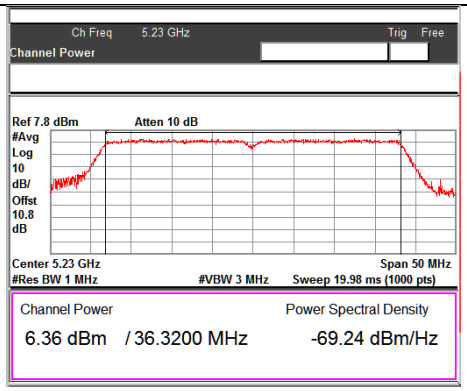
Channel frequency:5755MHz@Chain1



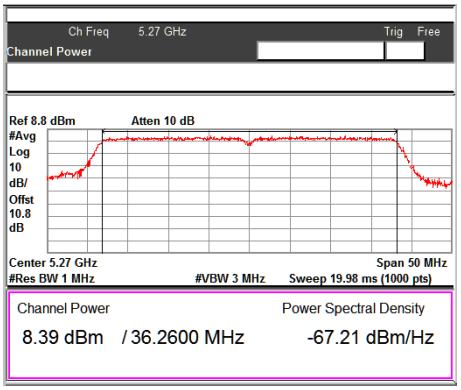
Channel frequency:5795MHz@Chain1



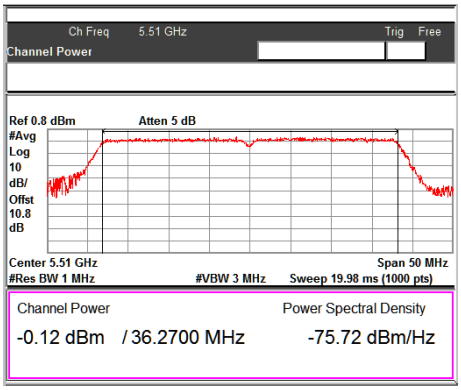
Channel frequency:5190MHz@Chain2



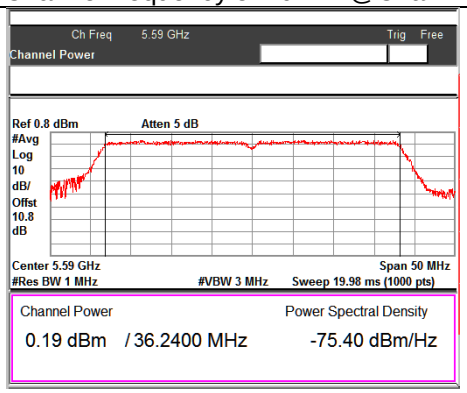
Channel frequency:5230MHz@Chain2



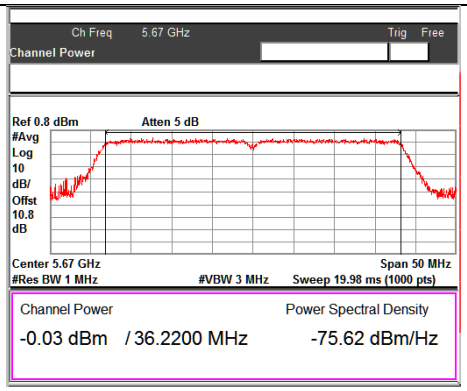
Channel frequency:5270MHz@Chain2



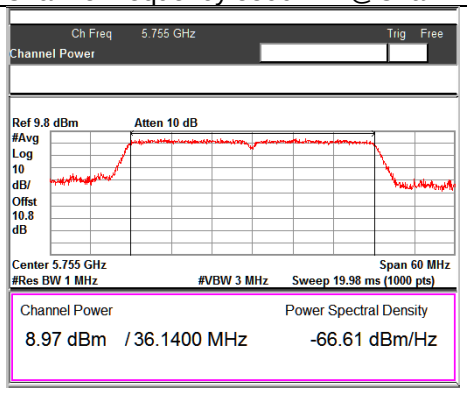
Channel frequency:5510MHz@Chain2



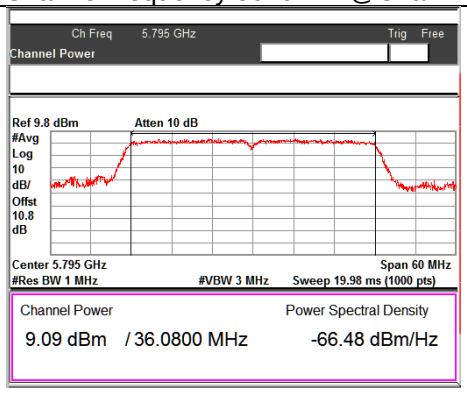
Channel frequency:5590MHz@Chain2



Channel frequency:5670MHz@Chain2



Channel frequency:5755MHz@Chain2



Channel frequency:5795MHz@Chain2

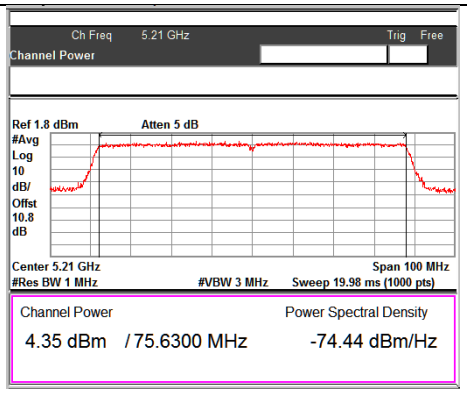
Modulation: 802.11ac-mode VHT80MHz

Data Rate (Mbps)	Band	Channel Frequency (MHz)	Measured Average Power (dBm) Chain 1	Measured Average Power (dBm) Chain 2	Final Average output power (dBm)	Power Limit (dBm)
MCS0	UNII 1	5210.00	4.35	3.64	7.02	24
	UNII 2a	5290.00	4.36	2.90	6.70	24
	UNII 2c	5530.00	3.80	3.21	6.53	24
		5690.00	4.52	3.55	7.07	24
	UNII 3	5775.00	12.12	12.26	15.20	30
MCS9	UNII 1	5210.00	4.25	3.09	6.72	24
	UNII 2a	5290.00	3.83	2.68	6.30	24
	UNII 2c	5530.00	-1.07	-2.18	1.42	24
		5690.00	-1.49	-1.76	1.39	24
	UNII 3	5775.00	6.68	6.96	9.83	30

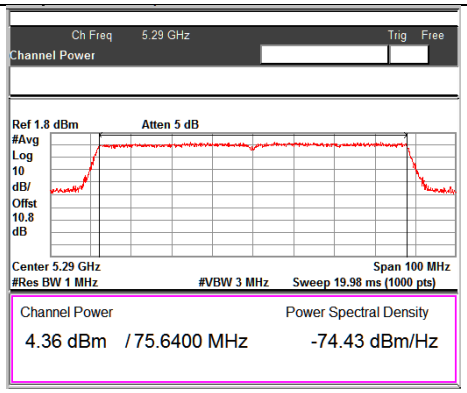
Note:

Total Average power (dBm): $10*\log\{10^{(\text{Ant0 of avg power}/10)}+10^{(\text{Ant1 of avg power}/10)}\}$

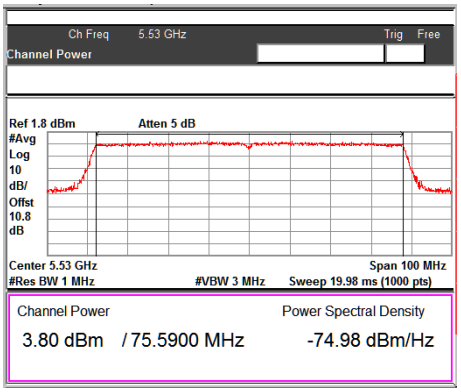
Test Plots: MCS0



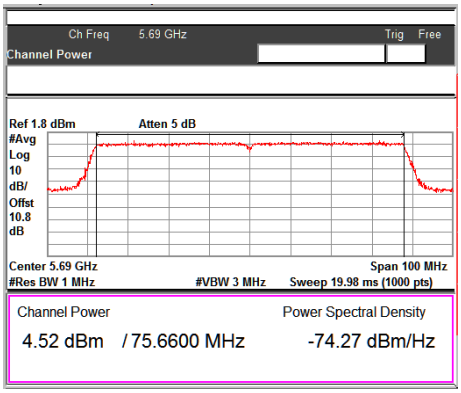
Channel frequency:5210MHz@Chain1



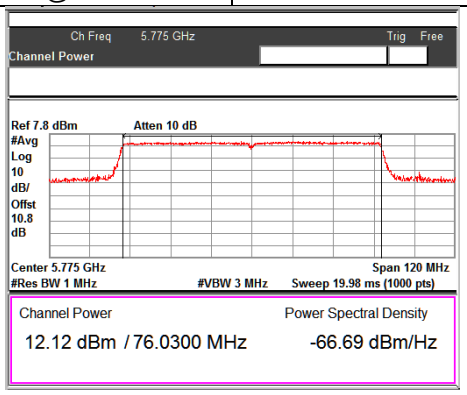
Channel frequency:5290MHz@Chain1



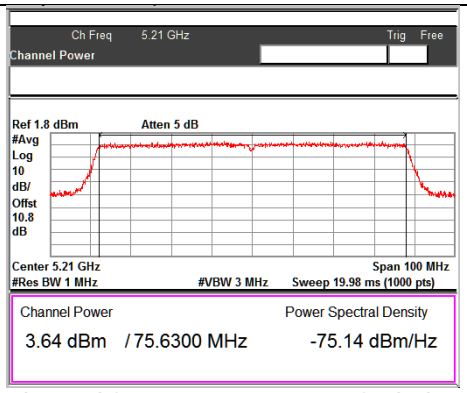
Channel frequency:5530MHz@Chain1



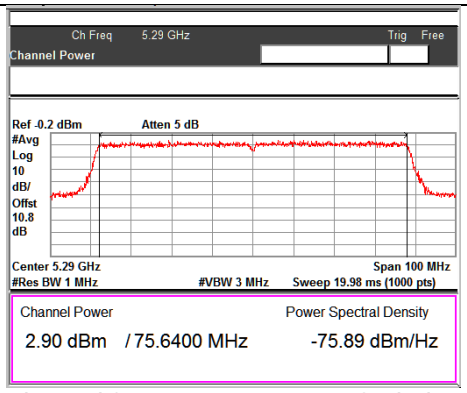
Channel frequency:5690MHz@Chain1



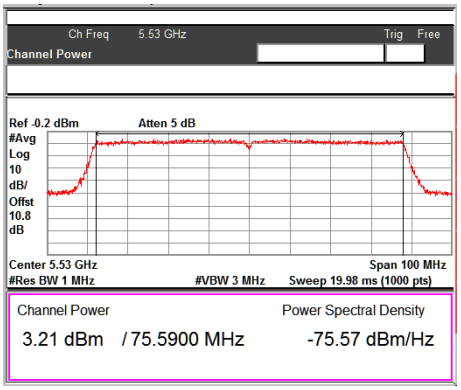
Channel frequency:5775MHz@Chain1



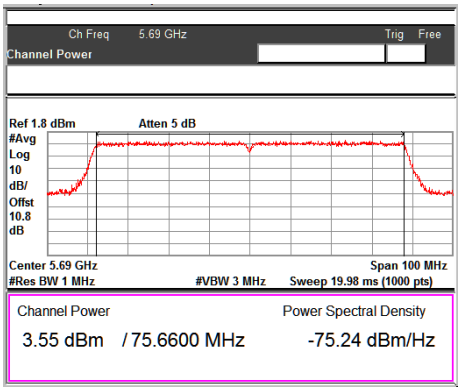
Channel frequency:5210MHz@Chain2



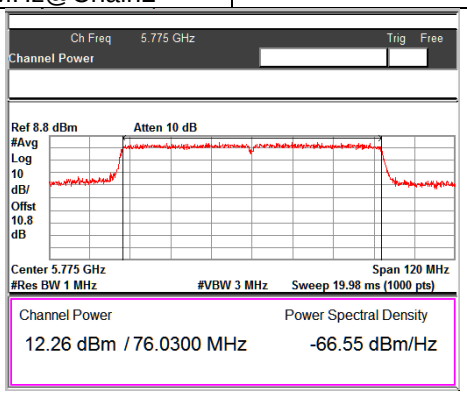
Channel frequency:5290MHz@Chain2



Channel frequency:5530MHz@Chain2

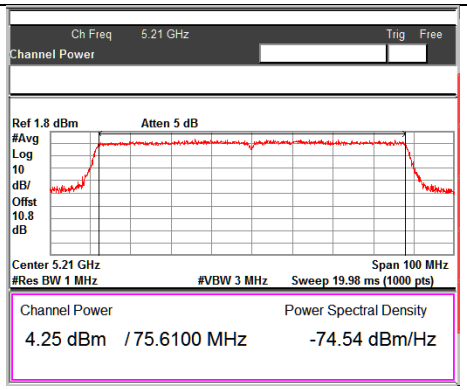


Channel frequency:5690MHz@Chain2

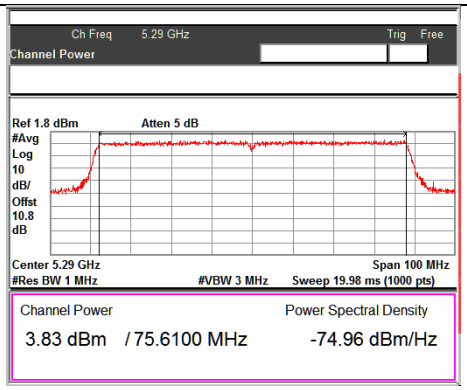


Channel frequency:5775MHz@Chain2

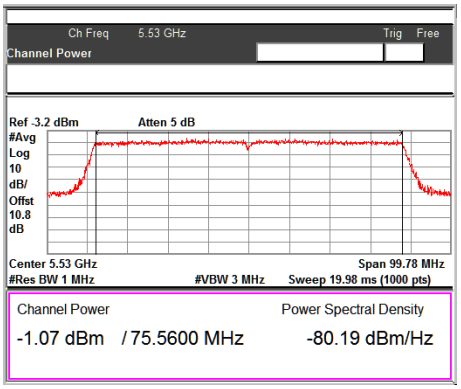
Test Plots: MCS9



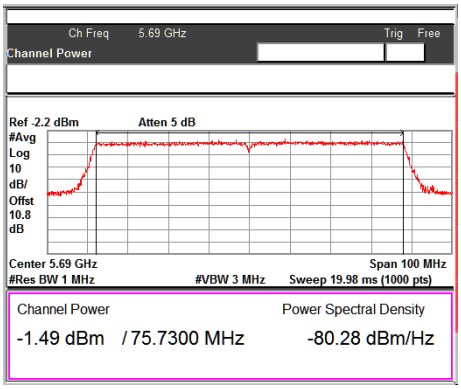
Channel frequency:5210MHz@Chain1



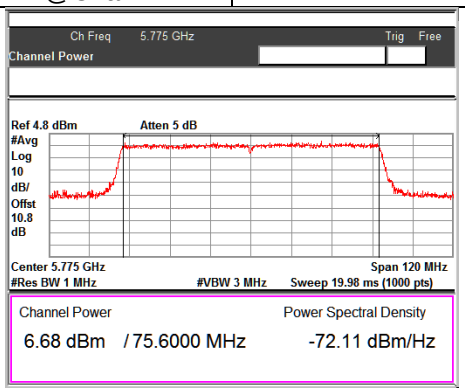
Channel frequency:5290MHz@Chain1



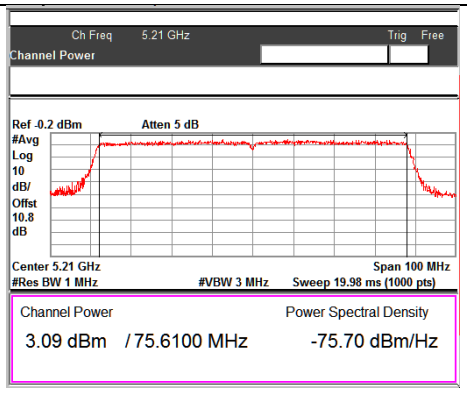
Channel frequency:5530MHz@Chain1



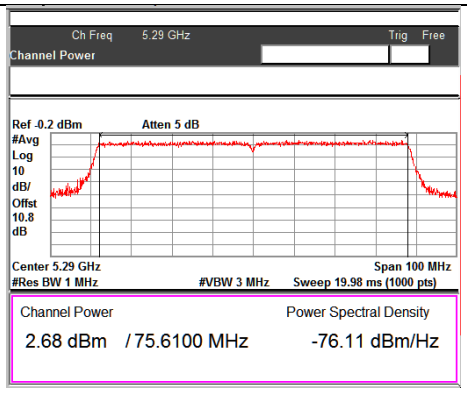
Channel frequency:5690MHz@Chain1



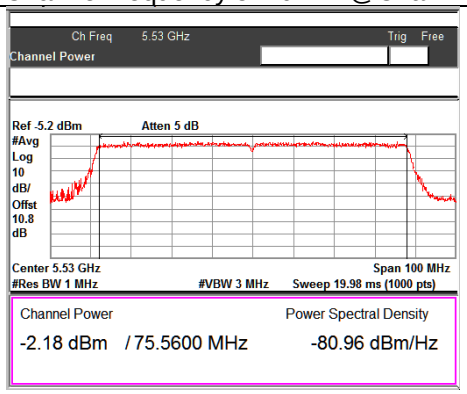
Channel frequency:5775MHz@Chain1



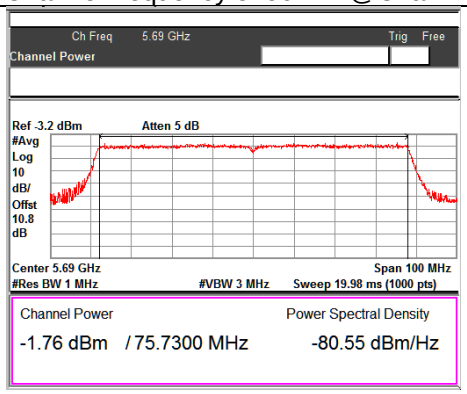
Channel frequency:5210MHz@Chain2



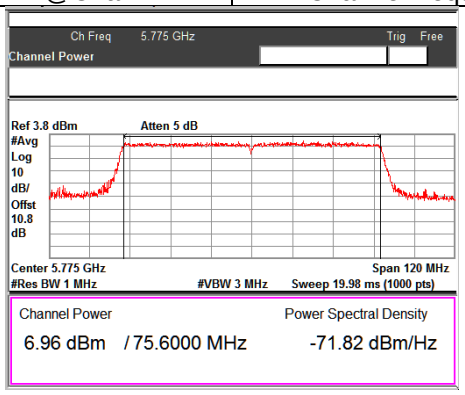
Channel frequency:5290MHz@Chain2



Channel frequency:5530MHz@Chain2



Channel frequency:5690MHz@Chain2



Channel frequency:5775MHz@Chain2

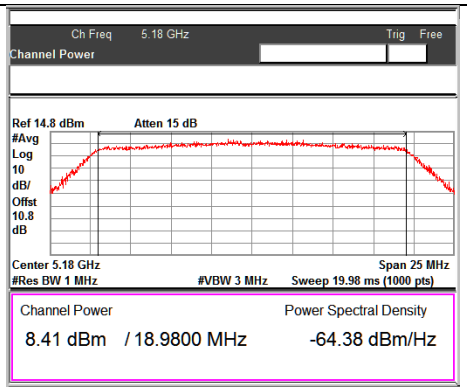
Modulation: 802.11ax-mode HE20MHz

Data Rate (Mbps)	Band	Channel Frequency (MHz)	Measured Average Power (dBm) Chain 1	Measured Average Power (dBm) Chain 2	Final Average output power (dBm)	Power Limit (dBm)
MCS0	UNII 1	5180	8.41	7.99	11.22	24
		5240	8.55	7.96	11.28	24
	UNII 2a	5320	10.56	9.61	13.12	24
	UNII 2c	5500	7.04	6.45	9.77	24
		5600	7.43	7.05	10.25	24
		5700	7.05	7.13	10.10	24
	UNII 3	5745	12.02	12.42	15.23	30
		5825	11.04	11.58	14.33	30
MCS11	UNII 1	5180	6.80	6.41	9.62	24
		5240	7.05	6.52	9.80	24
	UNII 2a	5320	9.07	7.88	11.53	24
	UNII 2c	5500	0.90	-0.42	3.30	24
		5600	0.74	0.17	3.47	24
		5700	1.00	0.10	3.58	24
	UNII 3	5745	8.31	8.64	11.49	30
		5825	7.22	8.33	10.82	30

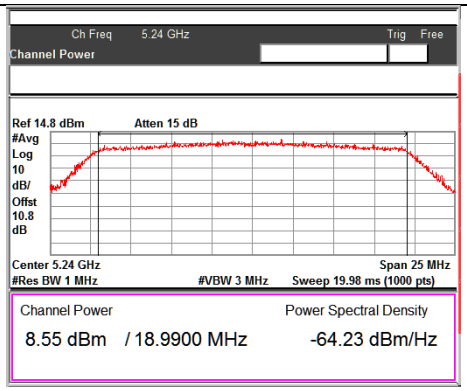
Note:

Total Average power (dBm): $10*\log\{10^{(\text{Ant0 of avg power}/10)}+10^{(\text{Ant1 of avg power}/10)}\}$

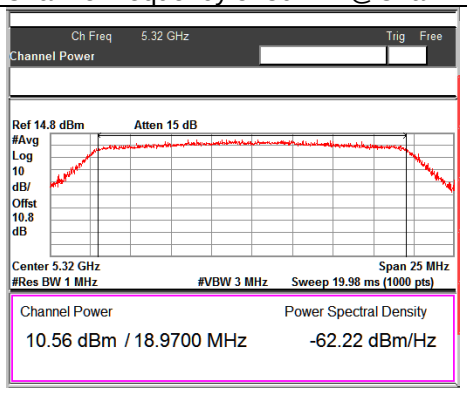
Test Plots: MCS0



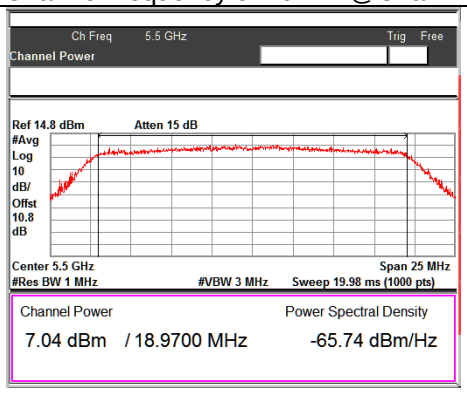
Channel frequency:5180MHz@Chain1



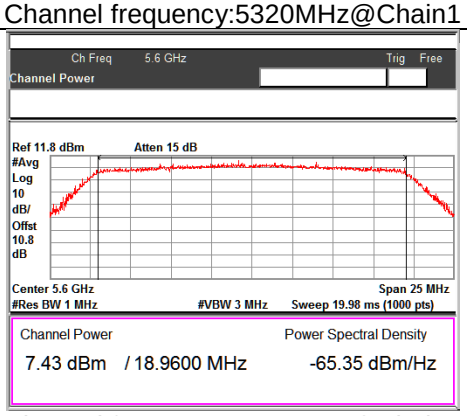
Channel frequency:5240MHz@Chain1



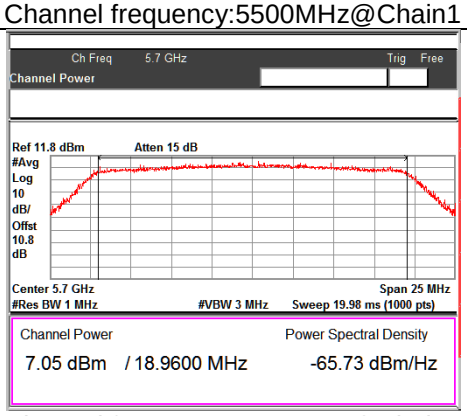
Channel frequency:5320MHz@Chain1



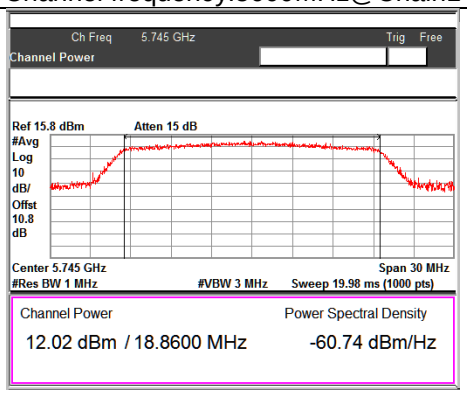
Channel frequency:5500MHz@Chain1



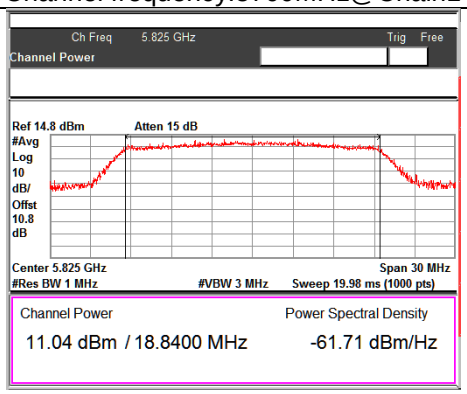
Channel frequency:5600MHz@Chain1



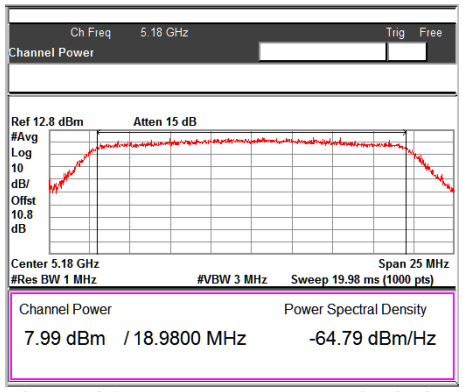
Channel frequency:5700MHz@Chain1



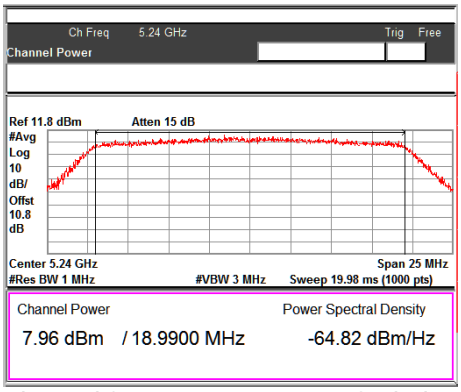
Channel frequency:5745MHz@Chain1



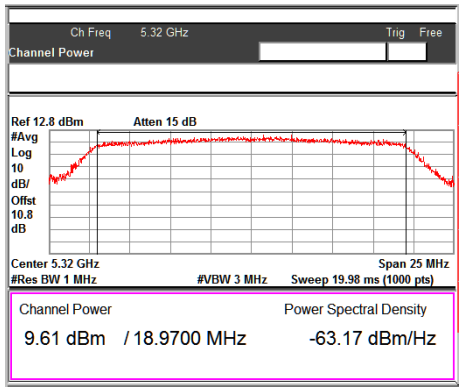
Channel frequency:5825MHz@Chain1



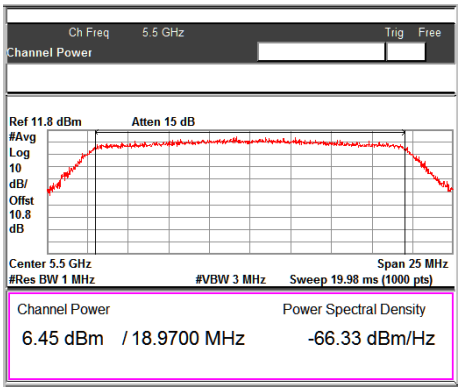
Channel frequency:5180MHz@Chain2



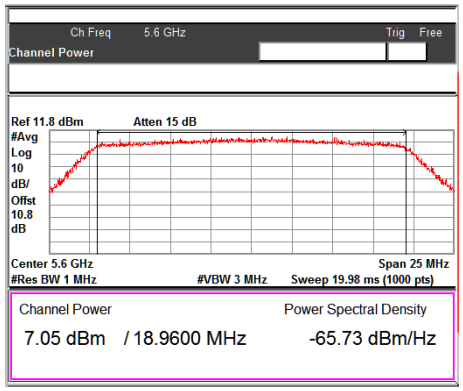
Channel frequency:5240MHz@Chain2



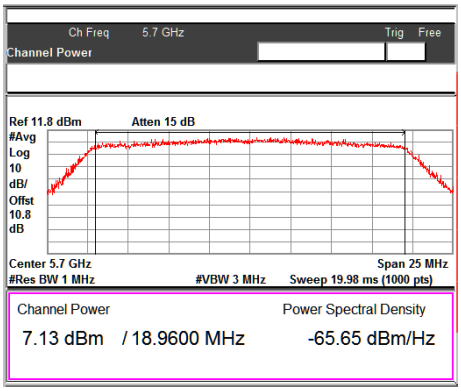
Channel frequency:5320MHz@Chain2



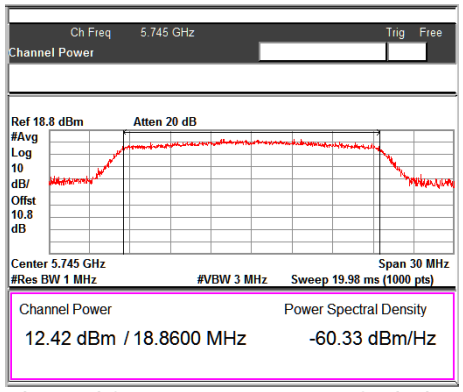
Channel frequency:5500MHz@Chain2



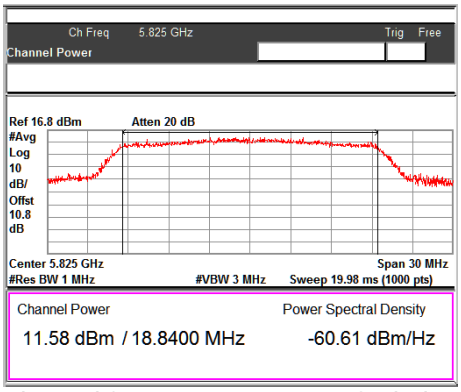
Channel frequency:5600MHz@Chain2



Channel frequency:5700MHz@Chain2



Channel frequency:5745MHz@Chain2



Channel frequency:5825MHz@Chain2