FCC Test Report

Product Name	STREAMING SOUNDBAR
Model No	AU-SNDBR-2.0-BLK
FCC ID	2AJAAAUSNDBR20BLK

Applicant	DONGGUAN MEILOON ACOUSTIC EQUIPMENTS CO., LTD.
Address	77, Yuanlin Road, Fenghuanggang Ind. Estate,Tangxia Town, Guangdong Province, Dongguan City, 523727, China

Date of Receipt	Aug. 30, 2018
Issued Date	Dec. 20, 2018
Report No.	1880389R-RFUSP72V00-D
Report Version	V1.0

Testing Laboratory
3023

The test results relate only to the samples tested.
The test results shown in the test report are traceable to the national/international standard through the calibration report of the equipment and evaluated measurement uncertainty herein.
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The test report shall not be reproduced without the written approval of DEKRA Testing and Certification Co., Ltd.

Test Report

Issued Date: Dec. 20, 2018
Report No.: 1880389R-RFUSP72V00-D

Product Name	STREAMING SOUNDBAR
Applicant	DONGGUAN MEILOON ACOUSTIC EQUIPMENTS CO., LTD.
Address	77, Yuanlin Road, Fenghuanggang Ind. Estate,Tangxia Town, Guangdong Province, Dongguan City, 523727, China
Manufacturer	Wirepath Home Systems, LLC – doing business as SnapAV
Model No.	AU-SNDBR-2.0-BLK
FCC ID.	2AJAAAUSNDBR20BLK
EUT Rated Voltage	AC 100-240V, 50/60Hz
EUT Test Voltage	AC 120V/60Hz
Trade Name	AUTONOMIC
Applicable Standard	FCC CFR Title 47 Part 15 Subpart E: 2016 ANSI C63.4: 2014, ANSI C63.10: 2013 789033 D02 General UNII Test Procedures New Rules v02
Test Result	Complied

Documented By : April Chen

(Senior Adm. Specialist / April Chen)

Tested By : Sam Hsu

(Engineer / Sam Hsu)

Approved By :

(Director / Vincent Lin)

TABLE OF CONTENTS

1. GENERAL INFORMATION

1.1. EUT Description

Product Name	STREAMING SOUNDBAR
Trade Name	AUTONOMIC
FCC ID.	2AJAAAUSNDBR20BLK
Model No.	AU-SNDBR-2.0-BLK
Frequency Range	802.11a/n-20MHz: 5180-5320MHz, 5500-5700MHz, 5745-5825MHz 802.11n-40MHz: 5190-5310, 5510-5670MHz, 5755-5795MHz 802.11ac-20MHz: 5180-5320MHz, 5500-5720MHz, 5745-5825MHz 802.11ac-40MHz: 5190-5310, 5510-5710MHz, 5755-5795MHz 802.11ac-80MHz: 5210-5290MHz, 5530-5690MHz, 5775MHz
Number of Channels	802.11a/n-20MHz: 24; 802.11n-40MHz: 11 802.11ac-20MHz: 25, 802.11ac-40MHz: 12, 802.11ac-80MHz: 6
Data Rate	802.11a: 6 - 54Mbps 802.11n: up to 150Mbps 802.11ac-80MHz: up to 433.3MHz
Channel Control	Auto
Type of Modulation	802.11a/n/ac: OFDM, BPSK, QPSK, 16QAM, 64QAM, 256QAM
Antenna type	PIFA Antenna
Antenna Gain	Refer to the table “Antenna List”
RCA Cable	Non-shielded,1.5m
Fiber Cable	Non-shielded,1.5m
Power Adapter #1	MFR: Dongguan Dongsong Electronic Co., Ltd, M/N: DYS602-240250-15714A Input: AC 100-240V~50-60Hz 1.5A MAX Output: 24.0V⎓2.5A Cable out: Non-Shielded, 1.8m with one ferrite core bonded. Power cord: Non-Shielded, 1.8m.
Power Adapter #2	MFR: EPS, M/N: F150602-A Input: AC 100-240V~1.8A 50-60Hz Output: 24V⎓2.5A Cable out: Non-Shielded, 1.8m with one ferrite core bonded. Power cord: Non-Shielded, 1.8m.

Antenna List

No.	Manufacturer	Part No.	Antenna Type	Peak Gain
1	Taiwan Anjie	AJDP1J-B0019	PIFA	5.1dBi For 5.15~5.25GHz 5.1dBi For 5.25~5.35GHz 4.7dBi For 5.47~5.725GHz 4.9dBi For 5.725~5.825GHz

Note: 1. The antenna of EUT is conform to FCC 15.203.

802.11a/n-20MHz Center Working Frequency of Each Channel:

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 36:	5180 MHz	Channel 40:	5200 MHz	Channel 44:	5220 MHz	Channel 48:	5240 MHz
Channel 52:	5260 MHz	Channel 56:	5280 MHz	Channel 60:	5300 MHz	Channel 64:	5320 MHz
Channel 100:	5500 MHz	Channel 104:	5520 MHz	Channel 108:	5540 MHz	Channel 112:	5560 MHz
Channel 116:	5580 MHz	Channel 120:	5600 MHz	Channel 124:	5620 MHz	Channel 128:	5640 MHz
Channel 132:	5660 MHz	Channel 136:	5680 MHz	Channel 140:	5700 MHz	Channel 149:	5745 MHz
Channel 153:	5765 MHz	Channel 157:	5785 MHz	Channel 161:	5805 MHz	Channel 165:	5825 MHz

802.11n-40MHz Center Working Frequency of Each Channel:

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 38:	5190 MHz	Channel 46:	5230 MHz	Channel 54:	5270 MHz	Channel 62:	5310 MHz
Channel 102:	5510 MHz	Channel 110:	5550 MHz	Channel 118:	5590 MHz	Channel 126:	5630 MHz
Channel 134:	5670 MHz	Channel 151:	5755 MHz	Channel 159:	5795 MHz		

802.11ac-20MHz Center Working Frequency of Each Channel:

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 36:	5180 MHz	Channel 40:	5200 MHz	Channel 44:	5220 MHz	Channel 48:	5240 MHz
Channel 52:	5260 MHz	Channel 56:	5280 MHz	Channel 60:	5300 MHz	Channel 64:	5320 MHz
Channel 100:	5500 MHz	Channel 104:	5520 MHz	Channel 108:	5540 MHz	Channel 112:	5560 MHz
Channel 116:	5580 MHz	Channel 120:	5600 MHz	Channel 124:	5620 MHz	Channel 128:	5640 MHz
Channel 132:	5660 MHz	Channel 136:	5680 MHz	Channel 140:	5700 MHz	Channel 144:	5720 MHz
Channel 149:	5745 MHz	Channel 153:	5765 MHz	Channel 157:	5785 MHz	Channel 161:	5805 MHz
Channel 165:	5825 MHz						

802.11ac-40MHz Center Working Frequency of Each Channel:

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 38:	5190 MHz	Channel 46:	5230 MHz	Channel 54:	5270 MHz	Channel 62:	5310 MHz
Channel 102:	5510 MHz	Channel 110:	5550 MHz	Channel 118:	5590 MHz	Channel 126:	5630 MHz
Channel 134:	5670 MHz	Channel 142:	5710 MHz	Channel 151:	5755 MHz	Channel 159:	5795 MHz

802.11ac-80MHz Center Working Frequency of Each Channel:

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 42:	5210 MHz	Channel 58:	5290 MHz	Channel 106:	5530 MHz	Channel 122:	5610 MHz
Channel 138:	5690 MHz	Channel 155:	5775 MHz				

Note:

1. This device is a STREAMING SOUNDBAR with a built-in WLAN,Bluetooth and 5.8GHz transceiver transceiver, this report for 5GHz WLAN.
2. Regarding to the operation frequency, the lowest, middle and highest frequency are selected to perform the test.
3. At result of pretests, module supports dual-channel transmission, only the worst case is shown in the report.
4. Lowest and highest data rates are tested in each mode. Only worst case is shown in the report.
5. The modulation and bandwidth are similar for 802.11n mode for 20MHz(40MHz) and 802.11ac mode for 20MHz(40MHz), Only worst case is shown in the report.
6. These tests were conducted on a sample of the equipment for the purpose of demonstrating compliance with Part 15 Subpart E for Unlicensed National Information Infrastructure devices.

Test Mode	Mode 1: Transmit (802.11a-6Mbps) Mode 2: Transmit (802.11n-20BW 7.2Mbps) Mode 3: Transmit (802.11n-40BW 15Mbps) Mode 4: Transmit (802.11ac-20BW-7.2Mbps) Mode 5: Transmit (802.11ac-40BW-15Mbps) Mode 6: Transmit (802.11ac-80BW-32.5Mbps)

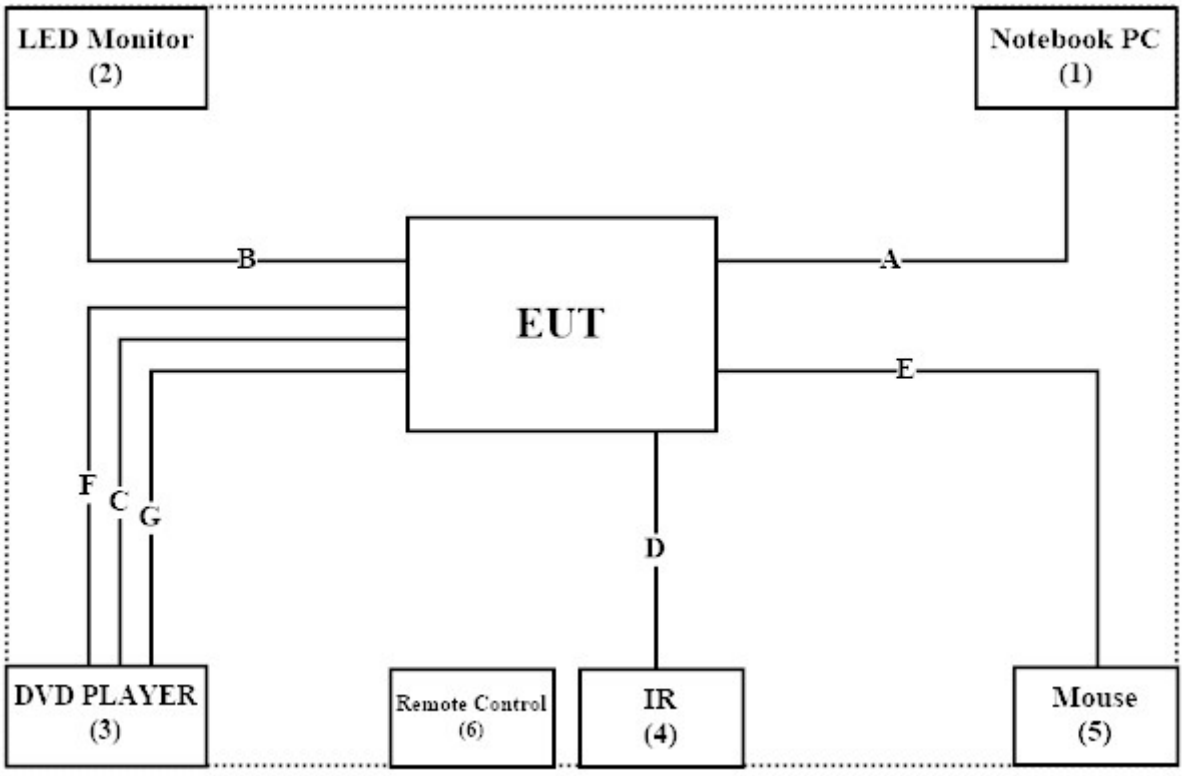
1.3. Tested System Datails

The types for all equipment, plus descriptions of all cables used in the tested system (including inserted cards) are:

Product		Manufacturer	Model No.	Serial No.	Power Cord
1	Notebook PC	DELL	Latitude 5580	2HRD7H2	Non-Shielded, 0.8m
2	LED Monitor	ViewSonic	VX2257-mhd	UFY163502150	Non-Shielded, 1.8m
3	DVD PLAYER	Pioneer	DV-600AV	GJKD006463LS	Non-Shielded, 1.8m
4	IR	N/A	N/A	N/A	N/A
5	Mouse	Logitech	M-SBM96B	810-000439	N/A
6	Remote Control	N/A	N/A	N/A	N/A

Signal Cable Type		Signal cable Description
A	LAN Cable	Non-Shielded, 0.7m
B	HDMI Cable	Non-Shielded, 1.8m
C	Signal Cable	Non-Shielded, 1.8m
D	IR Cable	Non-Shielded, 1.8m
E	Mouse Cable	Shielded, 1.8m
E	Fiber Cable	Non-Shielded, 1.5m
F	RCA Cable	Non-Shielded, 1.5m

1.4. Configuration of tested System



1.5. EUT Exercise Software

1. Setup the EUT as shown in Section 1.4.
2. Execute software “LINUX ” on the EUT.
3. Configure the test mode, the test channel, and the data rate.
4. Press “OK” to start the continuous Transmit.
5. Verify that the EUT works properly.

1.6. Test Facility

Ambient conditions in the laboratory:

Items	Required (IEC 68-1)	Actual
Temperature (°C)	15-35	20-35
Humidity (%RH)	25-75	50-65
Barometric pressure (mbar)	860-1060	950-1000

The related certificate for our laboratories about the test site and management system can be downloaded from DEKRA Testing and Certification Co., Ltd. Web Site:
http://www.dekra.com.tw/english/about/certificates.aspx?bval=5
The address and introduction of DEKRA Testing and Certification Co., Ltd. laboratories can be founded in our Web site: http://www.dekra.com.tw/index_en.aspx

Site Description: Accredited by TAF
Accredited Number: 3023

Site Name: DEKRA Testing and Certification Co., Ltd
Site Address: No.5-22, Ruishukeng, Linkou Dist., New Taipei City 24451, Taiwan, R.O.C.
TEL : 886-2-8601-3788 / FAX : 886-2-8601-3789
E-Mail : info.tw@dekra.com

FCC Accreditation Number: TW3023

1.7. List of Test Equipment

For Conducted measurements /CB3/SR8

	Equipment	Manufacturer	Model No.	Serial No.	Cali. Date	Due. Date
	Temperature Chamber	WIT GROUP	TH-1S-B	EQ-201-00146	2018/02/12	2019/02/11
X	Spectrum Analyzer	Agilent	N9010A	MY53470892	2018/09/27	2019/09/26
X	Peak Power Analyzer	Keysight	8990B	MY51000410	2018/08/01	2019/07/31
X	Wideband Power Sensor	Keysight	N1923A	MY56080003	2018/07/25	2019/07/24
X	Wideband Power Sensor	Keysight	N1923A	MY56080004	2018/07/25	2019/07/24
X	EMI Test Receiver	R&S	ESCS 30	100369	2018/11/19	2019/11/18
X	LISN	R&S	ESH3-Z5	836679/017	2018/02/09	2019/02/08
X	LISN	R&S	ENV216	100097	2018/02/09	2019/02/08
X	Coaxial Cable	DEKRA	RG 400	LC018-RG	2018/06/21	2019/06/20

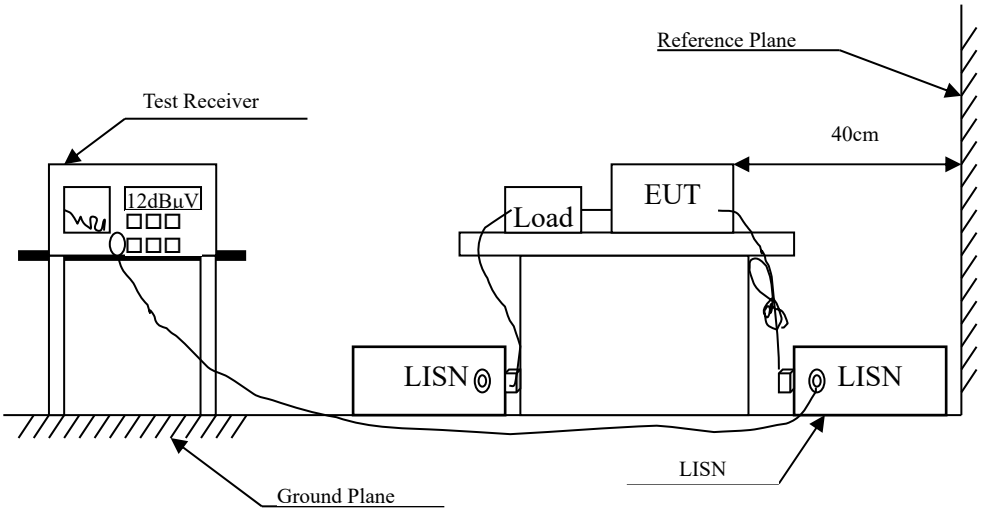
For Radiated measurements /Site3/CB8

	Equipment	Manufacturer	Model No.	Serial No.	Cali. Date	Due. Date
X	Spectrum Analyzer	R&S	FSP40	100170	2018/03/12	2019/03/11
X	Loop Antenna	Teseq	HLA6121	37133	2018/10/13	2019/10/12
X	Bilog Antenna	Schaffner Chase	CBL6112B	2707	2018/06/24	2019/06/23
X	Coaxial Cable	DEKRA	RG 214	LC003-RG	2018/06/14	2019/06/13
X	Pre-Amplifier	Jet-Power	JPA-10M1G33	170101000330010	2018/06/14	2019/06/13
X	Horn Antenna	ETS-Lindgren	3117	00135205	2018/05/03	2019/05/02
X	Horn Antenna	SCHWARZBECK	9120D	576	2018/11/30	2019/11/29
X	Pre-Amplifier	EMCI	EMC012630SE	980210	2018/04/10	2019/04/09
X	Horn Antenna	Com-Power	AH-840	101043	2018/01/09	2019/01/08
X	Amplifier + Cable	EMCI	EMC184045SE	980370	2018/03/21	2019/03/20
X	Filter	MICRO-TRONICS	BRM50702	G270	2018/08/06	2019/08/05
X	Filter	MICRO-TRONICS	BRM50716	G196	2018/08/06	2019/08/05

Note:
1. All equipments are calibrated every one year.
2. The test instruments marked with “X” are used to measure the final test results.
3. Test Software version :QuieTek EMI 2.0 V2.1.113.

2. Conducted Emission

2.1. Test Setup



2.2. Limits

FCC Part 15 Subpart C Paragraph 15.207 (dBµV) Limit		
Frequency MHz	Limits	
	QP	AV
0.15 - 0.50	66-56	56-46
0.50-5.0	56	46
5.0 - 30	60	50

Remarks : In the above table, the tighter limit applies at the band edges.

2.3. Test Procedure

The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm /50uH coupling impedance with 50ohm termination. (Please refers to the block diagram of the test setup and photographs.)

Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4:2014 on conducted measurement.

Conducted emissions were invested over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9kHz.

The EUT was setup to ANSI C63.4, 2014; tested to UNII test procedure of FCC KDB-789033 for compliance to FCC 47CFR Subpart E requirements.

2.4. Uncertainty

± 2.26 dB

2.5. Test Result of Conducted Emission

Product : STREAMING SOUNDBAR
Test Item : Conducted Emission Test
Power Line : Line 1
Test Date : 2018/12/11
Test Mode : Mode 6: Transmit (802.11ac-80BW-32.5Mbps) (5210MHz) (DYS602-240250-15714A)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBµV	dBµV	dB	dBµV
LINE 1					
Quasi-Peak					
0.162	9.745	35.500	45.245	-20.412	65.657
0.181	9.740	29.700	39.440	-25.674	65.114
0.228	9.739	24.500	34.239	-29.532	63.771
0.345	9.744	29.260	39.004	-21.425	60.429
14.990	10.162	16.200	26.362	-33.638	60.000
25.228	10.274	15.800	26.074	-33.926	60.000
Average					
0.162	9.745	15.040	24.785	-30.872	55.657
0.181	9.740	10.360	20.100	-35.014	55.114
0.228	9.739	7.510	17.249	-36.522	53.771
0.345	9.744	18.770	28.514	-21.915	50.429
14.990	10.162	5.400	15.562	-34.438	50.000
25.228	10.274	13.820	24.094	-25.906	50.000

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " " means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

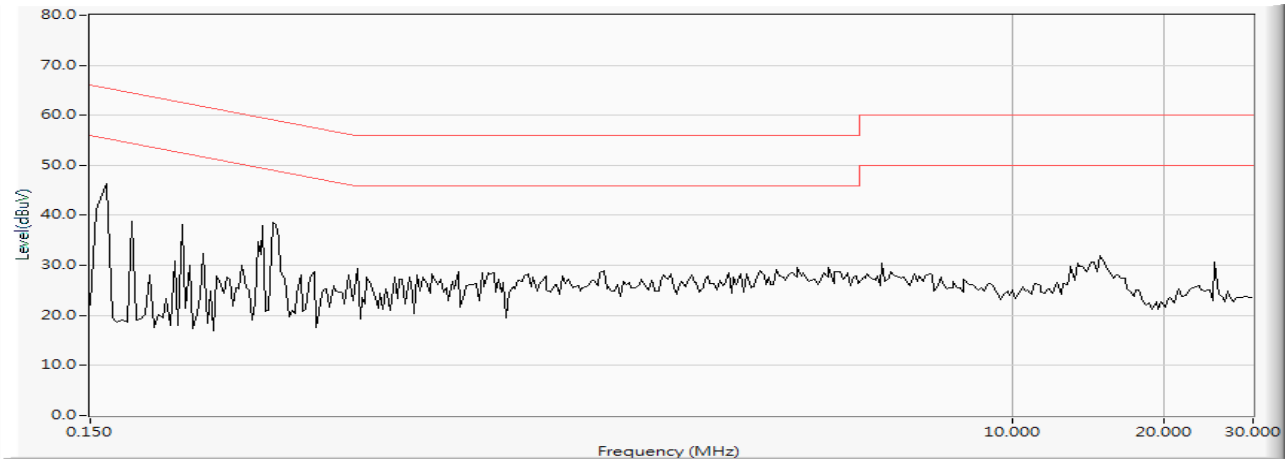
Product	:	STREAMING SOUNDBAR
Test Item	:	Conducted Emission Test
Power Line	:	Line 2
Test Date	:	2018/12/11
Test Mode	:	Mode 6: Transmit (802.11ac-80BW-32.5Mbps) (5210MHz) (DYS602-240250-15714A)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBµV	dBµV	dB	dBµV
LINE 2					
Quasi-Peak					
0.166	9.736	30.380	40.116	-25.427	65.543
0.205	9.738	26.400	36.138	-28.291	64.429
0.330	9.733	27.500	37.233	-23.624	60.857
0.482	9.739	18.700	28.439	-28.075	56.514
14.349	10.221	16.780	27.001	-32.999	60.000
25.228	10.464	18.880	29.344	-30.656	60.000
Average					
0.166	9.736	10.250	19.986	-35.557	55.543
0.205	9.738	7.660	17.398	-37.031	54.429
0.330	9.733	15.990	25.723	-25.134	50.857
0.482	9.739	8.430	18.169	-28.345	46.514
14.349	10.221	5.450	15.671	-34.329	50.000
25.228	10.464	17.540	28.004	-21.996	50.000

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " " means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

LINE 1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70.0
60.0
50.0
40.0
30.0
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10.0
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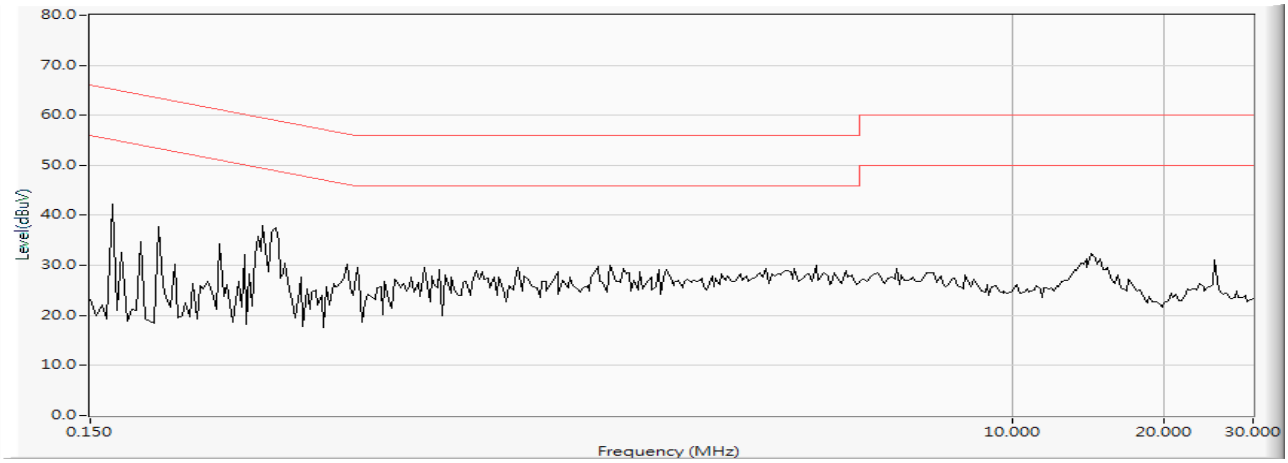
Level(dBuV)
0.150
10.000
20.000
30.000
Frequency (MHz)

LINE 2


80.0
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60.0
50.0
40.0
30.0
20.0
10.0
0.0
Level(dBuV)
0.150
10.000
20.000
30.000
Frequency (MHz)

Product	:	STREAMING SOUNDBAR
Test Item	:	Conducted Emission Test
Power Line	:	Line 1
Test Date	:	2018/12/11
Test Mode	:	Mode 6: Transmit (802.11ac-80BW-32.5Mbps) (5290MHz) (DYS602-240250-15714A)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBµV	dBµV	dB	dBµV
LINE 1					
Quasi-Peak					
0.259	9.740	19.960	29.700	-33.186	62.886
0.330	9.743	31.160	40.903	-19.954	60.857
0.349	9.744	30.840	40.584	-19.730	60.314
0.666	9.757	19.120	28.877	-27.123	56.000
3.396	9.867	15.400	25.267	-30.733	56.000
14.318	10.150	15.540	25.690	-34.310	60.000
Average					
0.259	9.740	9.630	19.370	-33.516	52.886
0.330	9.743	19.990	29.733	-21.124	50.857
0.349	9.744	22.230	31.974	-18.340	50.314
0.666	9.757	8.160	17.917	-28.083	46.000
3.396	9.867	6.000	15.867	-30.133	46.000
14.318	10.150	4.170	14.320	-35.680	50.000

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " " means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

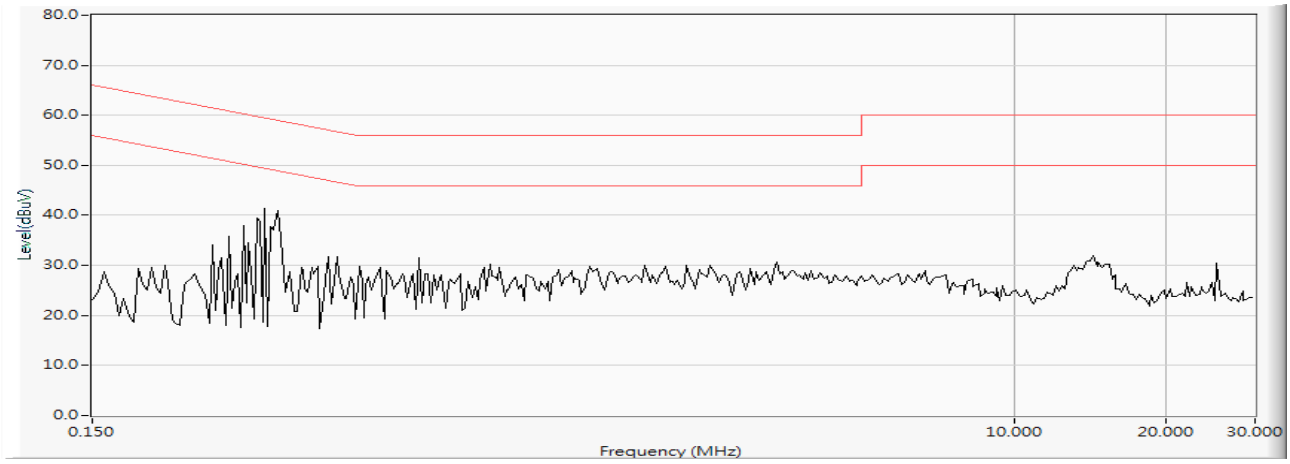
Product	:	STREAMING SOUNDBAR
Test Item	:	Conducted Emission Test
Power Line	:	Line 2
Test Date	:	2018/12/11
Test Mode	:	Mode 6: Transmit (802.11ac-80BW-32.5Mbps) (5290MHz) (DYS602-240250-15714A)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBµV	dBµV	dB	dBµV
LINE 2					
Quasi-Peak					
0.185	9.737	30.920	40.657	-24.343	65.000
0.212	9.738	21.060	30.798	-33.431	64.229
0.326	9.733	28.600	38.333	-22.638	60.971
0.345	9.734	29.320	39.054	-21.375	60.429
0.548	9.742	17.280	27.022	-28.978	56.000
14.916	10.241	16.600	26.841	-33.159	60.000
Average					
0.185	9.737	11.080	20.817	-34.183	55.000
0.212	9.738	4.340	14.078	-40.151	54.229
0.326	9.733	18.770	28.503	-22.468	50.971
0.345	9.734	18.850	28.584	-21.845	50.429
0.548	9.742	6.090	15.832	-30.168	46.000
14.916	10.241	5.640	15.881	-34.119	50.000

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " " means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

LINE 1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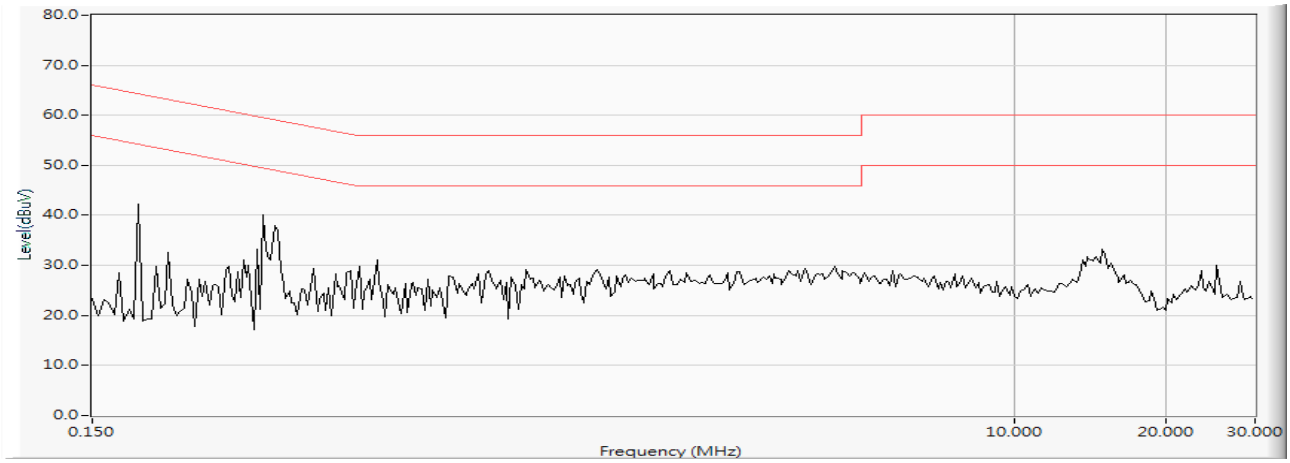
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
Level(dBuV)
0.150
10.000
20.000
30.000
Frequency (MHz)

LINE 2


80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
Level(dBuV)
0.150
10.000
20.000
30.000
Frequency (MHz)

Product : STREAMING SOUNDBAR
Test Item : Conducted Emission Test
Power Line : Line 1
Test Date : 2018/12/11
Test Mode : Mode 6: Transmit (802.11ac-80BW-32.5Mbps) (5530MHz)
(DYS602-240250-15714A)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBµV	dBµV	dB	dBµV
LINE 1					
Quasi-Peak					
0.189	9.737	25.780	35.517	-29.369	64.886
0.228	9.739	25.020	34.759	-29.012	63.771
0.275	9.741	26.220	35.961	-26.468	62.429
0.330	9.743	30.820	40.563	-20.294	60.857
1.517	9.802	16.700	26.502	-29.498	56.000
14.556	10.154	15.960	26.114	-33.886	60.000
Average					
0.189	9.737	10.030	19.767	-35.119	54.886
0.228	9.739	11.080	20.819	-32.952	53.771
0.275	9.741	14.590	24.331	-28.098	52.429
0.330	9.743	19.470	29.213	-21.644	50.857
1.517	9.802	7.280	17.082	-28.918	46.000
14.556	10.154	4.910	15.064	-34.936	50.000

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " " means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

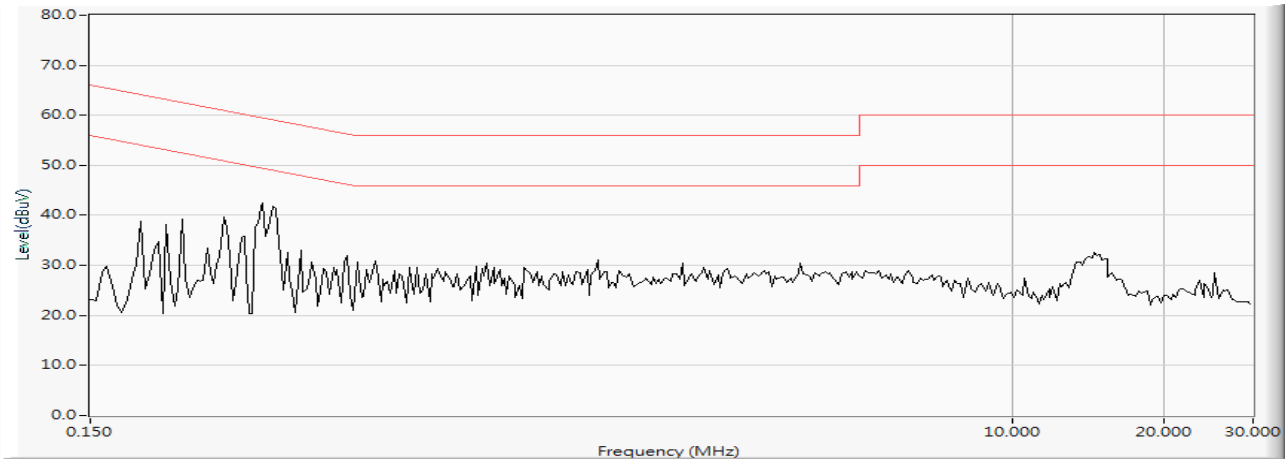
Product	:	STREAMING SOUNDBAR
Test Item	:	Conducted Emission Test
Power Line	:	Line 2
Test Date	:	2018/12/11
Test Mode	:	Mode 6: Transmit (802.11ac-80BW-32.5Mbps) (5530MHz) (DYS602-240250-15714A)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBµV	dBµV	dB	dBµV
LINE 2					
Quasi-Peak					
0.166	9.736	30.020	39.756	-25.787	65.543
0.197	9.738	17.480	27.218	-37.439	64.657
0.326	9.733	28.580	38.313	-22.658	60.971
0.345	9.734	29.320	39.054	-21.375	60.429
14.525	10.224	17.260	27.484	-32.516	60.000
25.228	10.464	17.520	27.984	-32.016	60.000
Average					
0.166	9.736	9.860	19.596	-35.947	55.543
0.197	9.738	-0.710	9.028	-45.629	54.657
0.326	9.733	18.930	28.663	-22.308	50.971
0.345	9.734	18.850	28.584	-21.845	50.429
14.525	10.224	5.780	16.004	-33.996	50.000
25.228	10.464	15.930	26.394	-23.606	50.000

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " " means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

LINE 1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60.0
50.0
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30.0
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10.0
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Level(dBuV)
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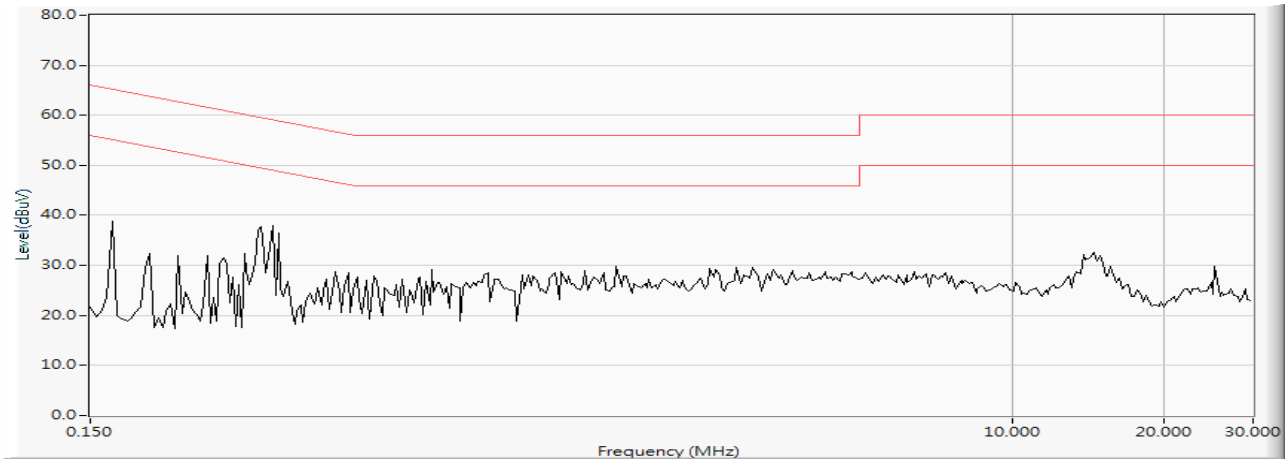
10.000
20.000
30.000
Frequency (MHz)

LINE 2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70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
Level(dBuV)
0.150
10.000
20.000
30.000
Frequency (MHz)

Product	:	STREAMING SOUNDBAR
Test Item	:	Conducted Emission Test
Power Line	:	Line 1
Test Date	:	2018/12/11
Test Mode	:	Mode 6: Transmit (802.11ac-80BW-32.5Mbps) (5775MHz) (DYS602-240250-15714A)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBµV	dBµV	dB	dBµV
LINE 1					
Quasi-Peak					
0.162	9.745	35.540	45.285	-20.372	65.657
0.177	9.741	24.340	34.081	-31.148	65.229
0.326	9.743	32.260	42.003	-18.968	60.971
0.341	9.744	31.200	40.944	-19.599	60.543
14.564	10.155	17.060	27.215	-32.785	60.000
25.228	10.274	19.200	29.474	-30.526	60.000
Average					
0.162	9.745	17.300	27.045	-28.612	55.657
0.177	9.741	7.280	17.021	-38.208	55.229
0.326	9.743	23.120	32.863	-18.108	50.971
0.341	9.744	18.850	28.594	-21.949	50.543
14.564	10.155	5.640	15.795	-34.205	50.000
25.228	10.274	18.090	28.364	-21.636	50.000

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " " means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

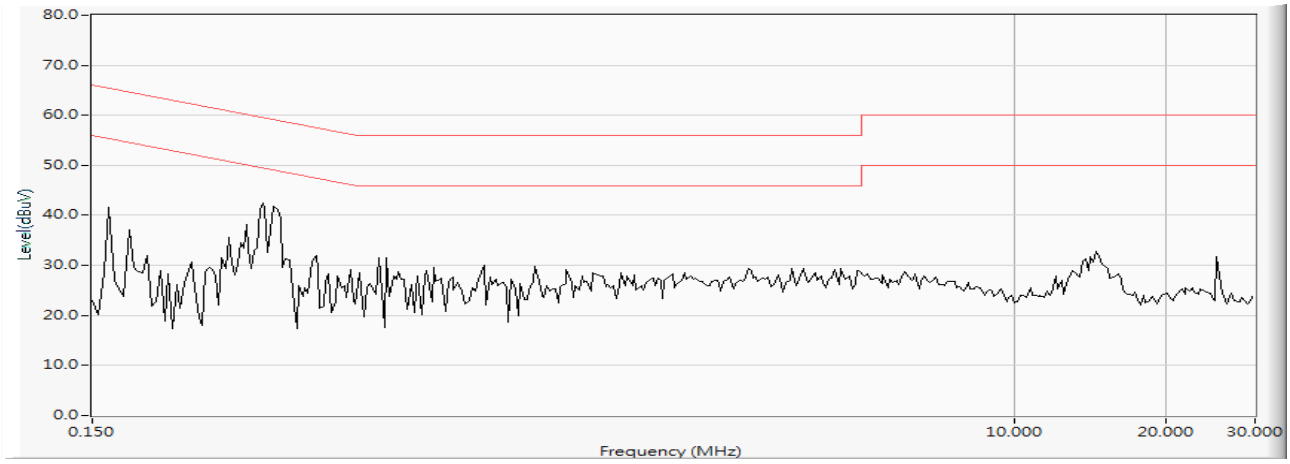
Product : STREAMING SOUNDBAR
Test Item : Conducted Emission Test
Power Line : Line 2
Test Date : 2018/12/11
Test Mode : Mode 6: Transmit (802.11ac-80BW-32.5Mbps) (5775MHz) (DYS602-240250-15714A)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBµV	dBµV	dB	dBµV
LINE 2					
Quasi-Peak					
0.162	9.736	35.300	45.036	-20.621	65.657
0.209	9.738	27.140	36.878	-27.436	64.314
0.326	9.733	28.580	38.313	-22.658	60.971
0.345	9.734	29.280	39.014	-21.415	60.429
14.798	10.239	16.660	26.899	-33.101	60.000
25.228	10.464	19.900	30.364	-29.636	60.000
Average					
0.162	9.736	14.520	24.256	-31.401	55.657
0.209	9.738	8.630	18.368	-35.946	54.314
0.326	9.733	18.850	28.583	-22.388	50.971
0.345	9.734	18.770	28.504	-21.925	50.429
14.798	10.239	4.910	15.149	-34.851	50.000
25.228	10.464	18.770	29.234	-20.766	50.000

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " " means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

LINE 1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10.0
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Level(dBuV)
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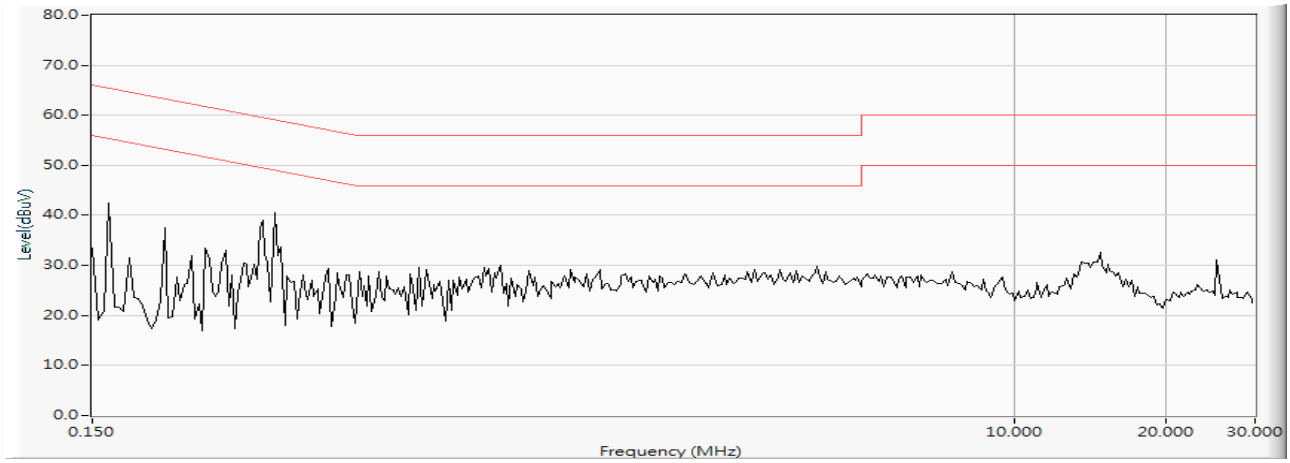
10.000
20.000
30.000
Frequency (MHz)

LINE 2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40.0
30.0
20.0
10.0
0.0
Level(dBuV)
0.150
10.000
20.000
30.000
Frequency (MHz)

Product : STREAMING SOUNDBAR
Test Item : Conducted Emission Test
Power Line : Line 1
Test Date : 2018/12/19
Test Mode : Mode 6: Transmit (802.11ac-80BW-32.5Mbps) (5210MHz) (F150602-A)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBµV	dBµV	dB	dBµV
LINE 1					
Quasi-Peak					
0.150	9.749	37.420	47.169	-18.831	66.000
0.177	9.741	31.780	41.521	-23.708	65.229
0.216	9.738	27.680	37.418	-26.696	64.114
0.252	9.740	22.460	32.200	-30.886	63.086
0.283	9.741	20.140	29.881	-32.319	62.200
0.478	9.749	7.660	17.409	-39.220	56.629
Average					
0.150	9.749	17.050	26.799	-29.201	56.000
0.177	9.741	10.140	19.881	-35.348	55.229
0.216	9.738	7.800	17.538	-36.576	54.114
0.252	9.740	4.440	14.180	-38.906	53.086
0.283	9.741	4.760	14.501	-37.699	52.200
0.478	9.749	-1.060	8.689	-37.940	46.629

Note:

4. All Reading Levels are Quasi-Peak and average value.
5. “ “ means the worst emission level.
6. Measurement Level = Reading Level + Correct Factor

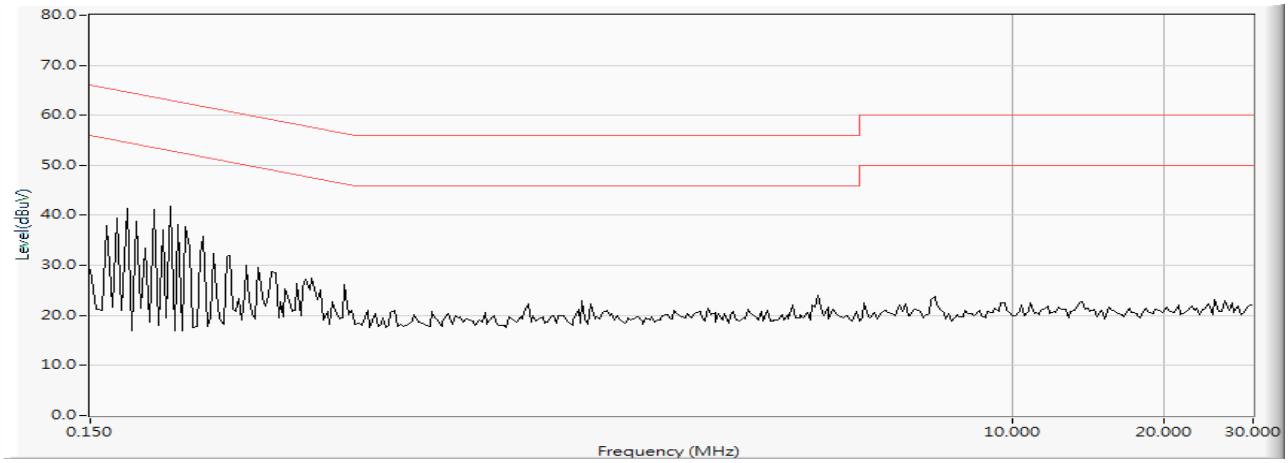
Product : STREAMING SOUNDBAR
Test Item : Conducted Emission Test
Power Line : Line 2
Test Date : 2018/12/19
Test Mode : Mode 6: Transmit (802.11ac-80BW-32.5Mbps) (5210MHz) (F150602-A)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBµV	dBµV	dB	dBµV
LINE 2					
Quasi-Peak					
0.150	9.739	38.940	48.679	-17.321	66.000
0.166	9.736	36.380	46.116	-19.427	65.543
0.224	9.739	25.420	35.159	-28.727	63.886
0.275	9.741	19.160	28.901	-33.528	62.429
0.408	9.736	20.640	30.376	-28.253	58.629
0.505	9.740	4.820	14.560	-41.440	56.000
Average					
0.150	9.739	19.620	29.359	-26.641	56.000
0.166	9.736	16.900	26.636	-28.907	55.543
0.224	9.739	5.590	15.329	-38.557	53.886
0.275	9.741	2.810	12.551	-39.878	52.429
0.408	9.736	11.280	21.016	-27.613	48.629
0.505	9.740	-2.900	6.840	-39.160	46.000

Note:

4. All Reading Levels are Quasi-Peak and average value.
5. " " means the worst emission level.
6. Measurement Level = Reading Level + Correct Factor

LINE 1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50.0
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Level(dBuV)
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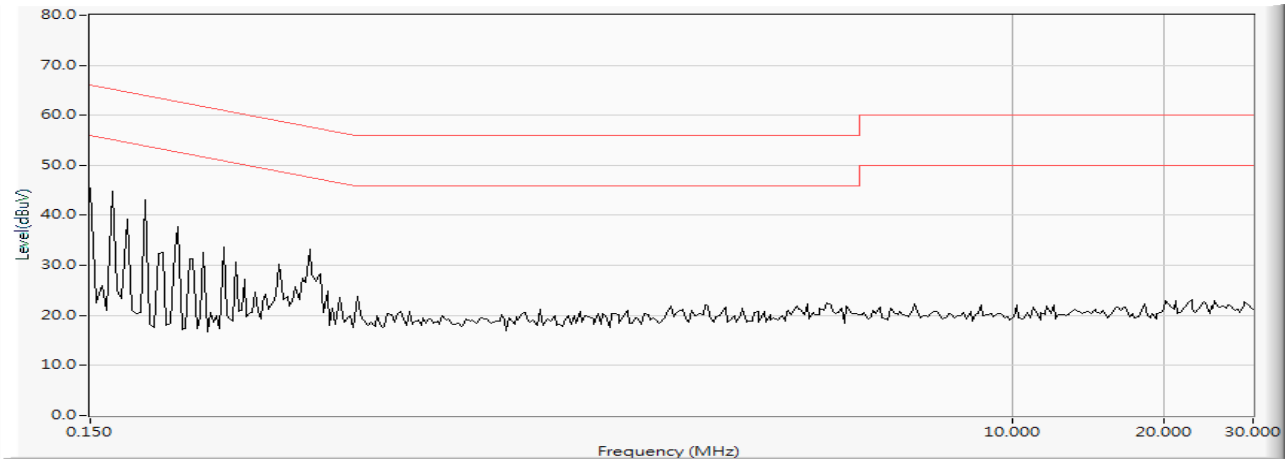
10.000
20.000
30.000
Frequency (MHz)

LINE 2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10.0
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Level(dBuV)
0.150
10.000
20.000
30.000
Frequency (MHz)

Product : STREAMING SOUNDBAR
Test Item : Conducted Emission Test
Power Line : Line 1
Test Date : 2018/12/19
Test Mode : Mode 6: Transmit (802.11ac-80BW-32.5Mbps) (5290MHz) (F150602-A)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBµV	dBµV	dB	dBµV
LINE 1					
Quasi-Peak					
0.150	9.749	37.480	47.229	-18.771	66.000
0.189	9.737	33.020	42.757	-22.129	64.886
0.244	9.740	24.680	34.420	-28.894	63.314
0.404	9.746	19.040	28.786	-29.957	58.743
4.724	9.917	1.960	11.877	-44.123	56.000
25.232	10.274	6.480	16.754	-43.246	60.000
Average					
0.150	9.749	17.100	26.849	-29.151	56.000
0.189	9.737	14.850	24.587	-30.299	54.886
0.244	9.740	5.910	15.650	-37.664	53.314
0.404	9.746	10.410	20.156	-28.587	48.743
4.724	9.917	-3.880	6.037	-39.963	46.000
25.232	10.274	4.600	14.874	-35.126	50.000

Note:

4. All Reading Levels are Quasi-Peak and average value.
5. " " means the worst emission level.
6. Measurement Level = Reading Level + Correct Factor

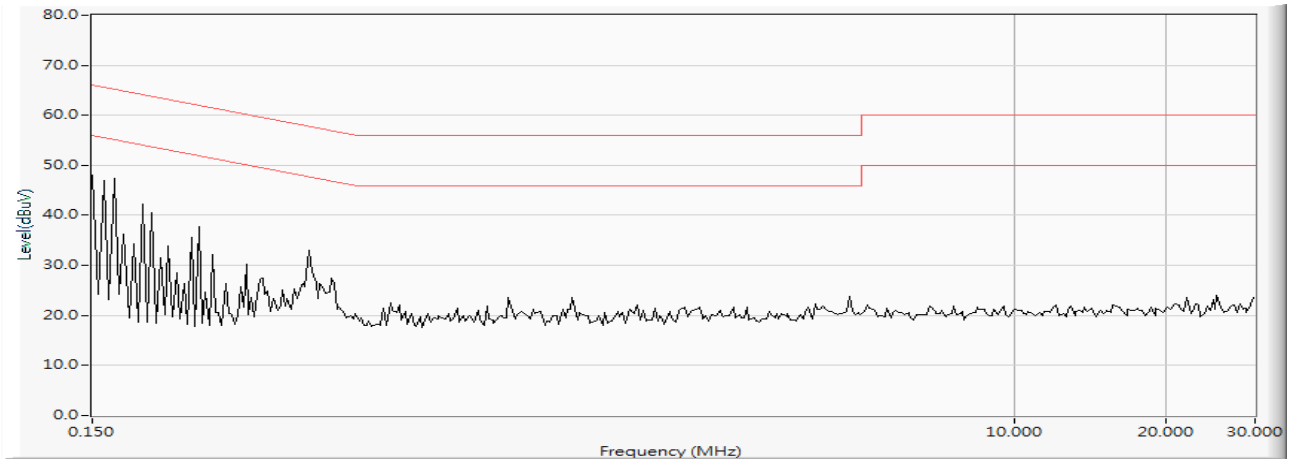
Product : STREAMING SOUNDBAR
Test Item : Conducted Emission Test
Power Line : Line 2
Test Date : 2018/12/19
Test Mode : Mode 6: Transmit (802.11ac-80BW-32.5Mbps) (5290MHz) (F150602-A)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBµV	dBµV	dB	dBµV
LINE 2					
Quasi-Peak					
0.150	9.739	37.120	46.859	-19.141	66.000
0.170	9.737	33.780	43.517	-21.912	65.429
0.212	9.738	29.020	38.758	-25.471	64.229
0.263	9.740	20.880	30.620	-32.151	62.771
0.404	9.736	19.540	29.276	-29.467	58.743
0.470	9.739	8.160	17.899	-38.958	56.857
Average					
0.150	9.739	16.690	26.429	-29.571	56.000
0.170	9.737	13.450	23.187	-32.242	55.429
0.212	9.738	10.250	19.988	-34.241	54.229
0.263	9.740	3.060	12.800	-39.971	52.771
0.404	9.736	9.450	19.186	-29.557	48.743
0.470	9.739	-1.060	8.679	-38.178	46.857

Note:

4. All Reading Levels are Quasi-Peak and average value.
5. " " means the worst emission level.
6. Measurement Level = Reading Level + Correct Factor

LINE 1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50.0
40.0
30.0
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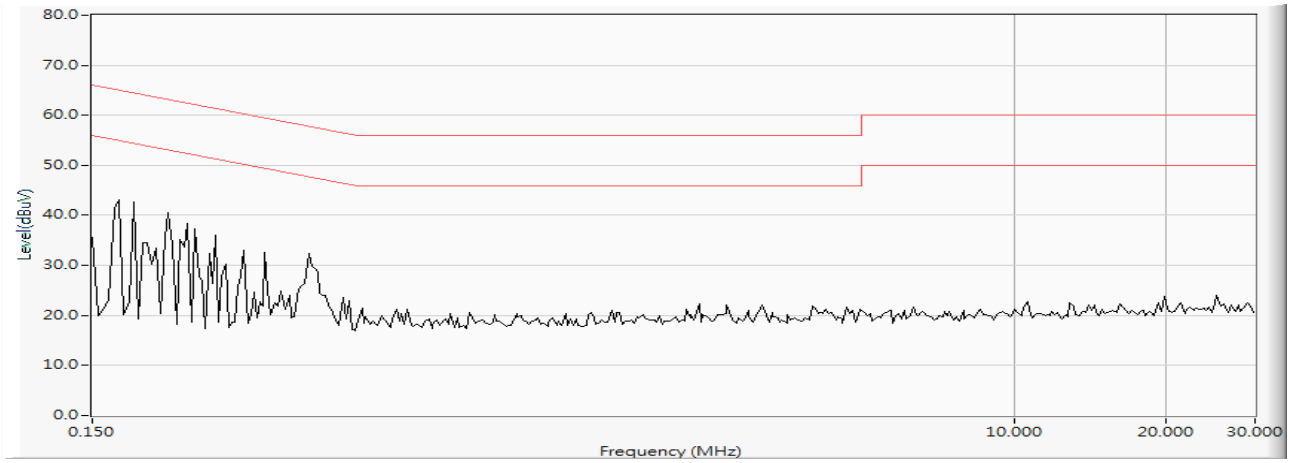
10.0
0.0
Level(dBuV)
0.150
10.000
20.000
30.000
Frequency (MHz)

LINE 2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70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
Level(dBuV)
0.150
10.000
20.000
30.000
Frequency (MHz)

Product : STREAMING SOUNDBAR
Test Item : Conducted Emission Test
Power Line : Line 1
Test Date : 2018/12/19
Test Mode : Mode 6: Transmit (802.11ac-80BW-32.5Mbps) (5530MHz) (F150602-A)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBµV	dBµV	dB	dBµV
LINE 1					
Quasi-Peak					
0.158	9.746	37.620	47.366	-18.405	65.771
0.185	9.738	32.980	42.718	-22.282	65.000
0.224	9.739	23.900	33.639	-30.247	63.886
0.287	9.741	18.940	28.681	-33.405	62.086
0.330	9.743	15.440	25.183	-35.674	60.857
0.416	9.747	17.820	27.567	-30.833	58.400
Average					
0.158	9.746	18.130	27.876	-27.895	55.771
0.185	9.738	14.180	23.918	-31.082	55.000
0.224	9.739	3.890	13.629	-40.257	53.886
0.287	9.741	3.120	12.861	-39.225	52.086
0.330	9.743	3.430	13.173	-37.684	50.857
0.416	9.747	7.580	17.327	-31.073	48.400

Note:

4. All Reading Levels are Quasi-Peak and average value.
5. " " means the worst emission level.
6. Measurement Level = Reading Level + Correct Factor

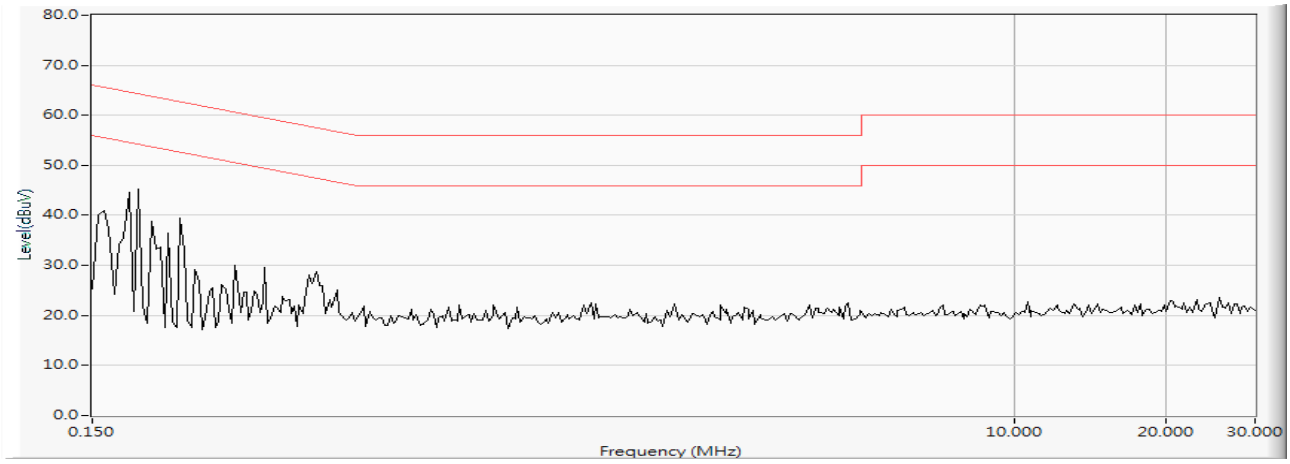
Product : STREAMING SOUNDBAR
Test Item : Conducted Emission Test
Power Line : Line 2
Test Date : 2018/12/19
Test Mode : Mode 6: Transmit (802.11ac-80BW-32.5Mbps) (5530MHz) (F150602-A)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBµV	dBµV	dB	dBµV
LINE 2					
Quasi-Peak					
0.150	9.739	40.020	49.759	-16.241	66.000
0.166	9.736	38.840	48.576	-16.967	65.543
0.212	9.738	30.420	40.158	-24.071	64.229
0.416	9.737	23.100	32.837	-25.563	58.400
4.185	9.885	6.320	16.205	-39.795	56.000
20.478	10.386	16.740	27.126	-32.874	60.000
Average					
0.150	9.739	25.640	35.379	-20.621	56.000
0.166	9.736	19.920	29.656	-25.887	55.543
0.212	9.738	14.250	23.988	-30.241	54.229
0.416	9.737	12.580	22.317	-26.083	48.400
4.185	9.885	-1.470	8.415	-37.585	46.000
20.478	10.386	15.930	26.316	-23.684	50.000

Note:

4. All Reading Levels are Quasi-Peak and average value.
5. " " means the worst emission level.
6. Measurement Level = Reading Level + Correct Factor

LINE 1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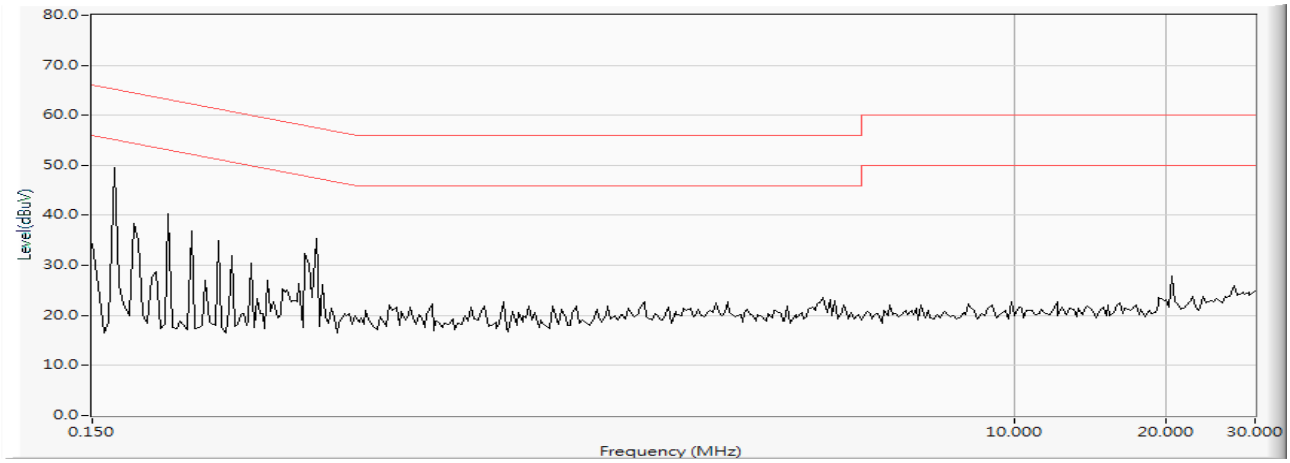
60.0
50.0
40.0
30.0
20.0
10.0
0.0
Level(dBuV)
0.150
10.000
20.000
30.000
Frequency (MHz)

LINE 2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30.0
20.0
10.0
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Level(dBuV)
0.150
10.000
20.000
30.000
Frequency (MHz)

Product : STREAMING SOUNDBAR
Test Item : Conducted Emission Test
Power Line : Line 1
Test Date : 2018/12/19
Test Mode : Mode 6: Transmit (802.11ac-80BW-32.5Mbps) (5775MHz) (F150602-A)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBµV	dBµV	dB	dBµV
LINE 1					
Quasi-Peak					
0.162	9.745	37.020	46.765	-18.892	65.657
0.173	9.742	36.880	46.622	-18.721	65.343
0.193	9.738	34.260	43.998	-20.773	64.771
0.252	9.740	22.300	32.040	-31.046	63.086
0.423	9.747	17.860	27.607	-30.593	58.200
20.478	10.246	16.740	26.986	-33.014	60.000
Average					
0.162	9.745	17.910	27.655	-28.002	55.657
0.173	9.742	13.300	23.042	-32.301	55.343
0.193	9.738	16.590	26.328	-28.443	54.771
0.252	9.740	4.390	14.130	-38.956	53.086
0.423	9.747	8.430	18.177	-30.023	48.200
20.478	10.246	15.930	26.176	-23.824	50.000

Note:

4. All Reading Levels are Quasi-Peak and average value.
5. " " means the worst emission level.
6. Measurement Level = Reading Level + Correct Factor

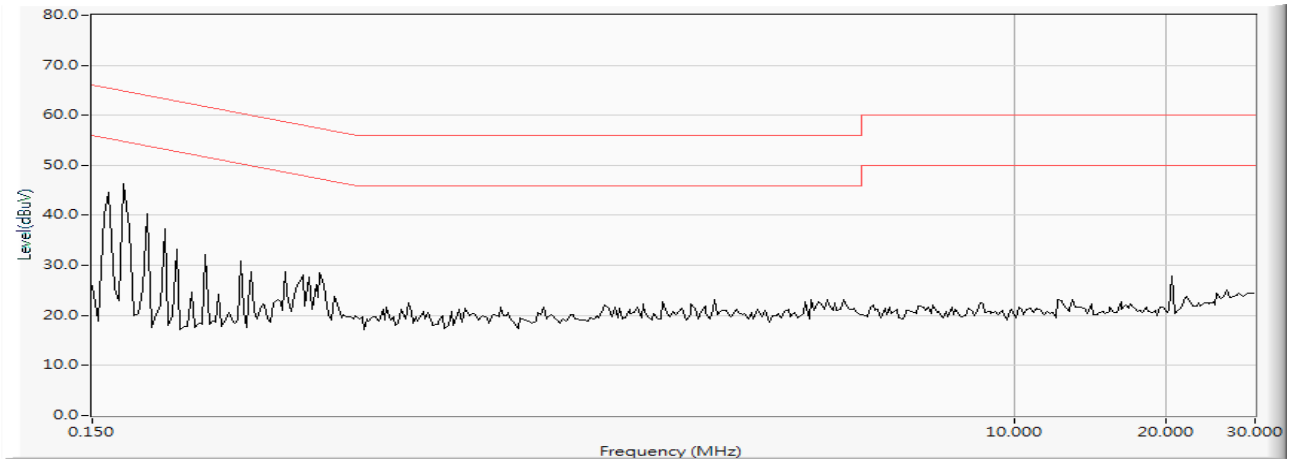
Product : STREAMING SOUNDBAR
Test Item : Conducted Emission Test
Power Line : Line 2
Test Date : 2018/12/19
Test Mode : Mode 6: Transmit (802.11ac-80BW-32.5Mbps) (5775MHz) (F150602-A)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBµV	dBµV	dB	dBµV
LINE 2					
Quasi-Peak					
0.150	9.739	38.340	48.079	-17.921	66.000
0.177	9.737	33.560	43.297	-21.932	65.229
0.197	9.738	30.040	39.778	-24.879	64.657
0.236	9.739	25.860	35.599	-27.944	63.543
0.400	9.736	21.120	30.856	-28.001	58.857
20.478	10.386	16.440	26.826	-33.174	60.000
Average					
0.150	9.739	18.930	28.669	-27.331	56.000
0.177	9.737	13.450	23.187	-32.042	55.229
0.197	9.738	10.410	20.148	-34.509	54.657
0.236	9.739	7.880	17.619	-35.924	53.543
0.400	9.736	11.980	21.716	-27.141	48.857
20.478	10.386	15.650	26.036	-23.964	50.000

Note:

4. All Reading Levels are Quasi-Peak and average value.
5. " " means the worst emission level.
6. Measurement Level = Reading Level + Correct Factor

LINE 1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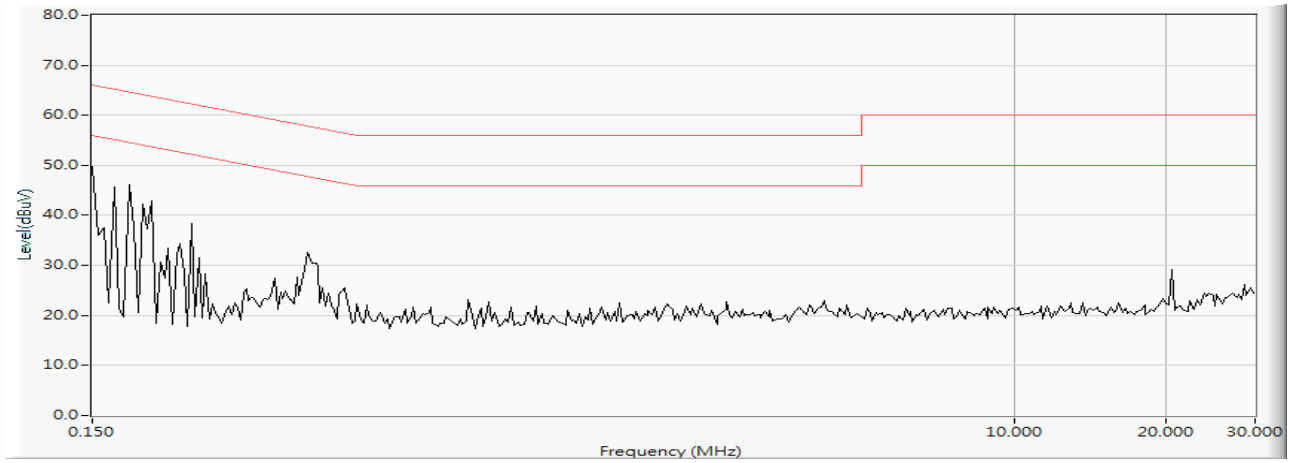
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
Level(dBuV)
0.150
10.000
20.000
30.000
Frequency (MHz)

LINE 2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50.0
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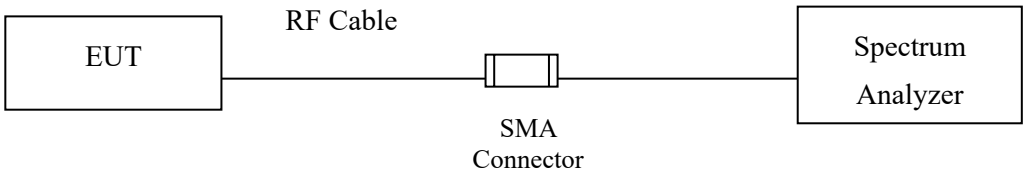
30.0
20.0
10.0
0.0
Level(dBuV)
0.150
10.000
20.000
30.000
Frequency (MHz)

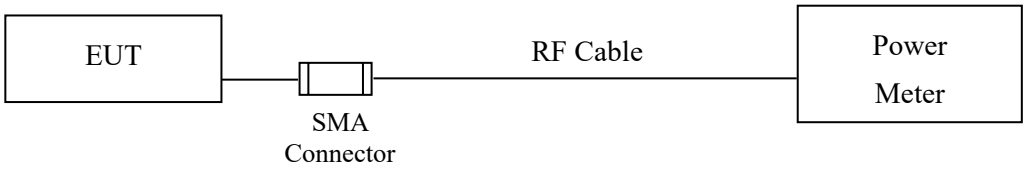
3. Maximun conducted output power

3.1. Test Setup

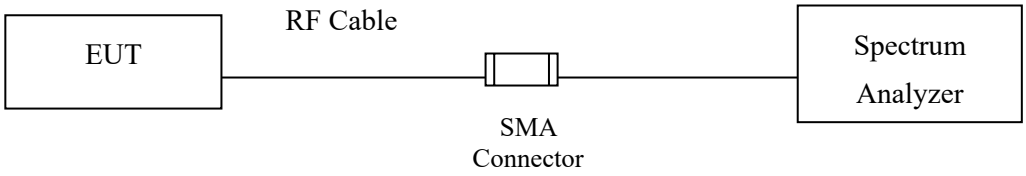
99% Occupied Bandwidth



Conduction Power Measurement (for 802.11an)



Conduction Power Measurement (for 802.11ac)



3.2. Limits

3.2.1. For the band 5.15-5.25 GHz,

(i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

(ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
(iii) For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. Fixed point-topoint U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.
(iv) For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

3.2.2. 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. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

3.2.3. For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point UNII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

3.3. Test Procedure

As an alternative to FCC KDB-789033, the EUT maximum conducted output power was measured with an average power meter employing a video bandwidth greater the 6dB BW of the emission under test. Maximum conducted output power was read directly from the meter across all data rates, and across three channels within each sub-band. Special care was used to make sure that the EUT was transmitting in continuous mode. This method exceeds the limitations of FCC KDB-789033, and provides more accurate measurements.

802.11an (BW≦40MHz) Maximum conducted output power using KDB 789033 section E)3)b) Method PM-G (Measurement using a gated RF average power meter)
Note: the power meter have a video bandwidth that is greater than or equal to the measurement bandwidth, (Anritsu/ MA2411B video bandwidth: 65MHz)

802.11ac (BW=80MHz) Maximum conducted output power using KDB 789033 section E)2)b) Method SA-1 (trace averaging with the EUT transmitting at full power throughout each sweep).

When transmitted signals consist of two or more non-contiguous spectrum segments (e.g., 80+80 MHz mode) or when a single spectrum segment of a transmission crosses the boundary between two adjacent U-NII bands, KDB 644545 D03 section D) procedure is used for measurements.

3.4. Uncertainty

± 1.62 dB

3.5. Test Result of Maximum conducted output power

Product : STREAMING SOUNDBAR
Test Item : Maximum conducted output power
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11a-6Mbps)

Cable loss=1dB		Maximum conducted output power							
Channel No.	Frequency (MHz)	Data Rate (Mbps)							
		6	9	12	18	24	36	48	54
		Measurement Level (dBm)							
36	5180	13.25	--	--	--	--	--	--	--
44	5220	10.81	10.71	10.65	10.59	10.53	10.47	10.41	10.32
48	5240	10.93	--	--	--	--	--	--	--
52	5260	7.77	--	--	--	--	--	--	--
60	5300	7.7	7.61	7.55	7.47	7.41	7.35	7.26	7.19
64	5320	7.69	--	--	--	--	--	--	--
100	5500	6.85	--	--	--	--	--	--	--
116	5580	6.04	5.96	5.91	5.84	5.78	5.71	5.65	5.58
140	5700	3.91	--	--	--	--	--	--	--
149	5745	5.26	--	--	--	--	--	--	--
157	5785	4.24	4.36	4.31	4.23	4.15	4.09	4.01	3.93
165	5825	4.44	--	--	--	--	--	--	--

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

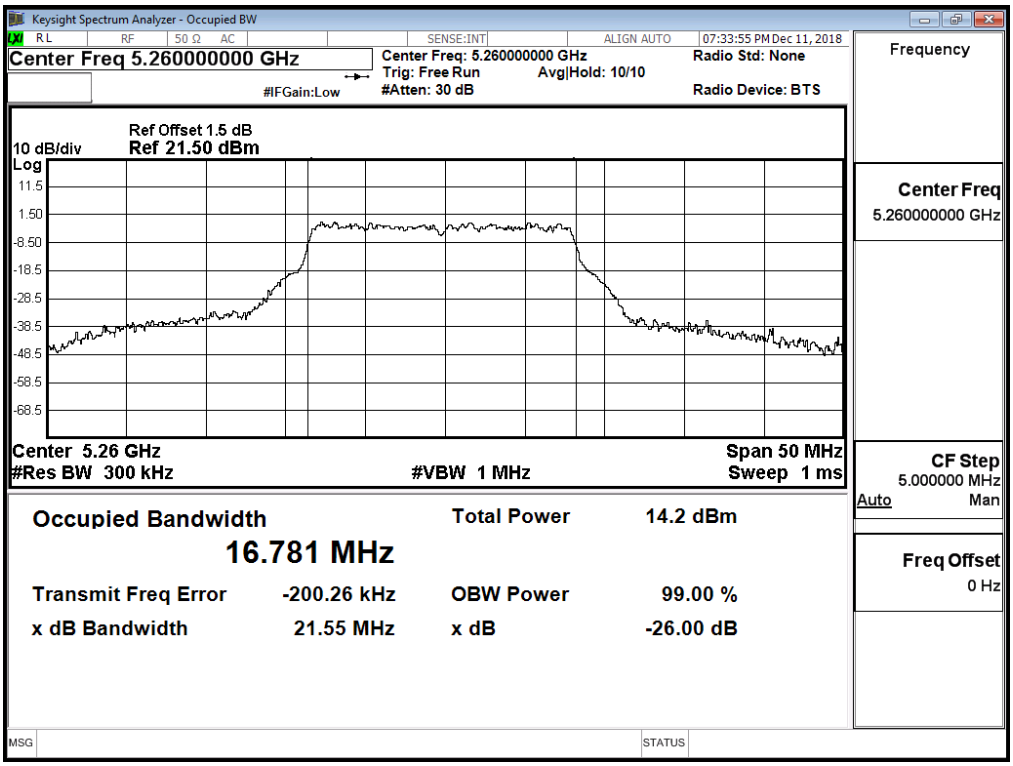
Maximum conducted output power Measurement:

Channel No	Frequency Range (MHz)	99% Bandwidth (MHz)	Output Power (dBm)	Output Power Limit	
				(dBm)	dBm+10log(BW)
36	5180	--	13.25	24	--
44	5220	--	10.81	24	--
48	5240	--	10.93	24	--
52	5260	21.550	7.77	24	24.33
60	5300	21.550	7.7	24	24.33
64	5320	22.060	7.69	24	24.44
100	5500	22.240	6.85	24	24.47
116	5580	22.150	6.04	24	24.45
140	5700	21.420	3.91	24	24.31
149	5745	--	5.26	30	--
157	5785	--	4.36	30	--
165	5825	--	4.44	30	--

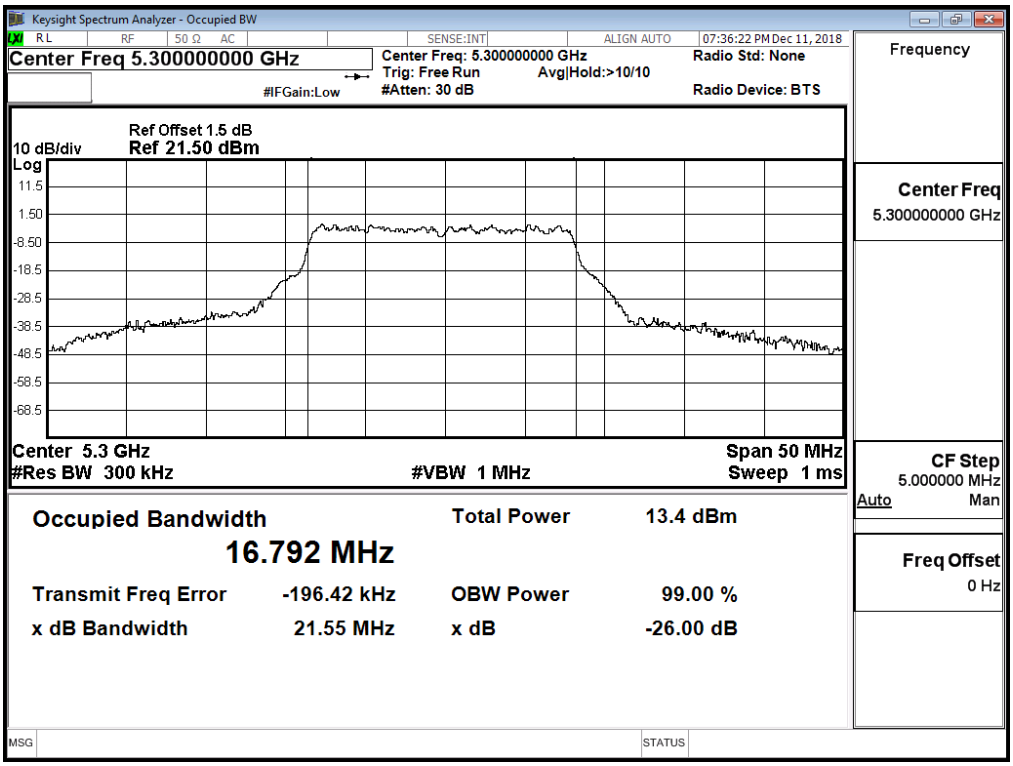
Note: Power Output Value =Reading value on average power meter + cable loss

99% Occupied Bandwidth:

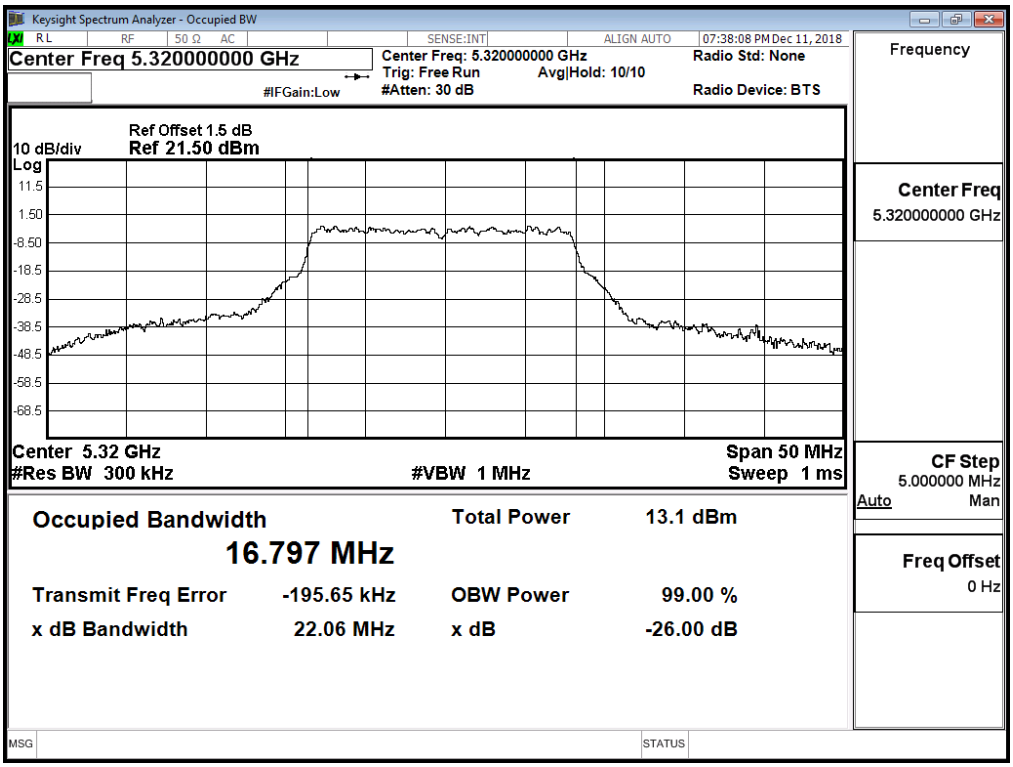
Channel 52:



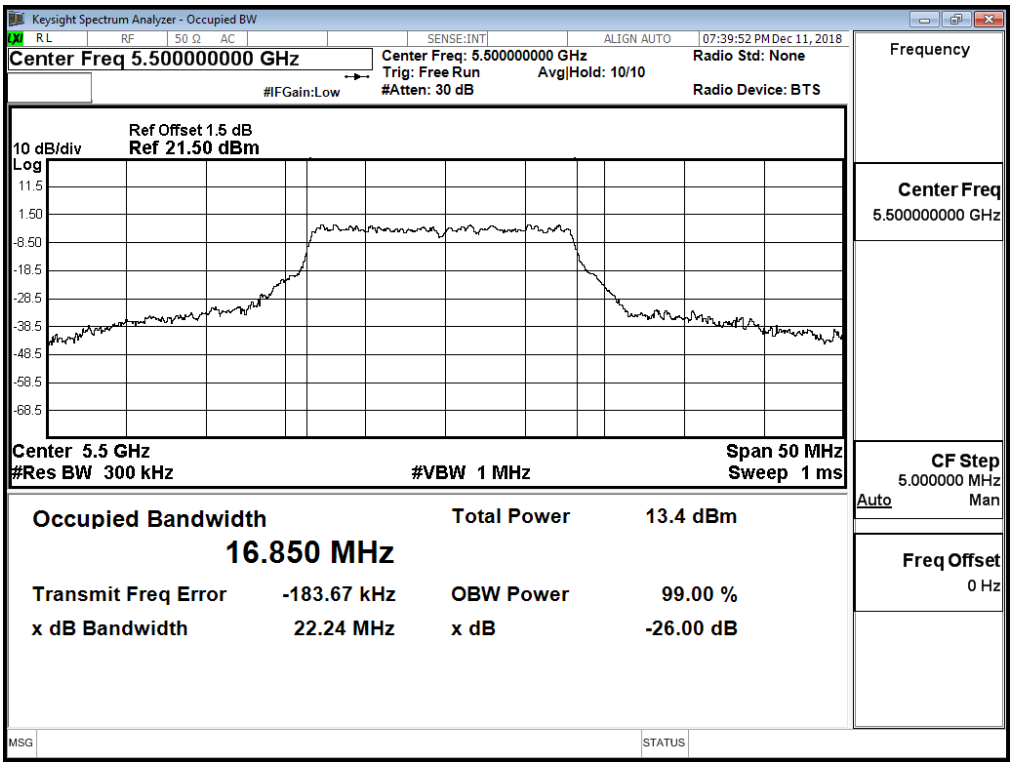
Channel 60:



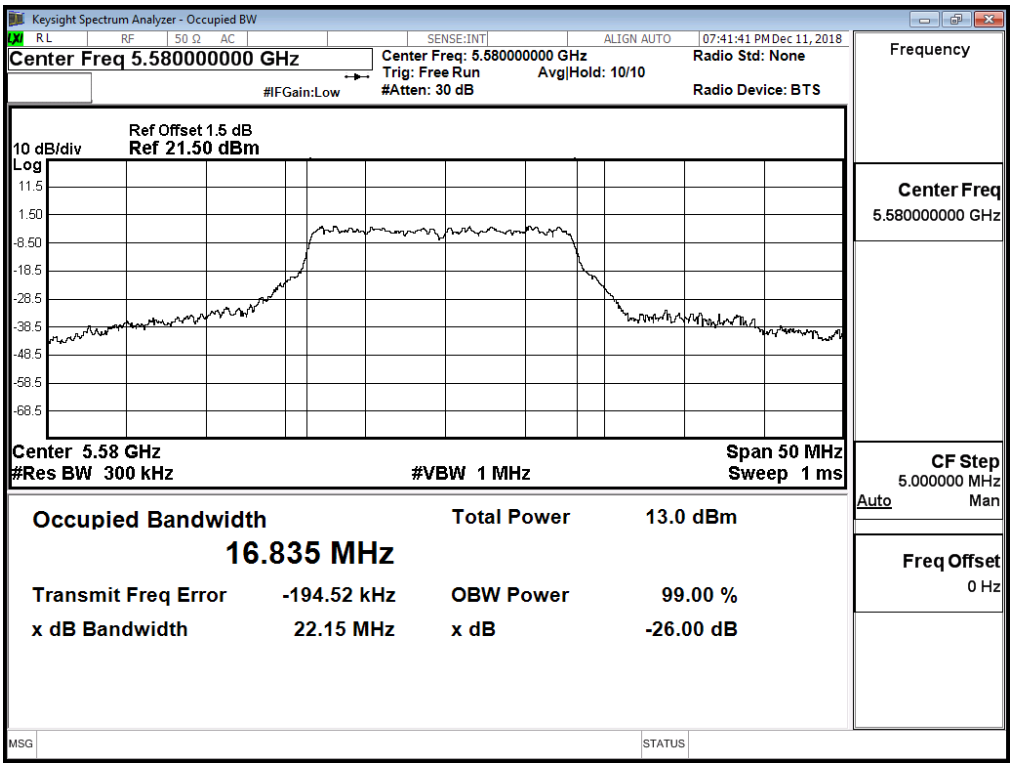
Channel 64:



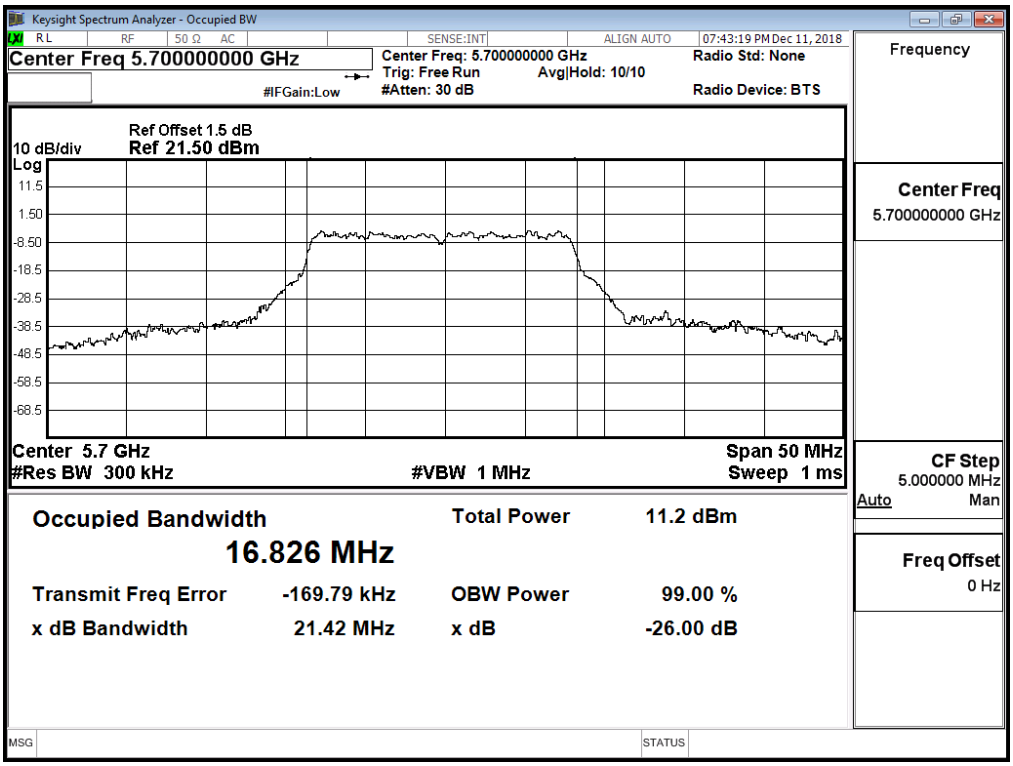
Channel 100:



Channel 116:



Channel 140:



Product : STREAMING SOUNDBAR
Test Item : Maximum conducted output power
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11n-20BW 7.2Mbps)

Cable loss=1dB		Maximum conducted output power							
Channel No.	Frequency (MHz)	Data Rate (Mbps)							
		7.2	14.4	21.7	28.9	43.3	57.8	65	72.2
		Measurement Level (dBm)							
36	5180	8.55	--	--	--	--	--	--	--
44	5220	9.18	9.08	8.99	8.93	8.86	8.81	8.72	8.65
48	5240	9.29	--	--	--	--	--	--	--
52	5260	10.27	--	--	--	--	--	--	--
60	5300	10.3	10.22	10.17	10.11	10.04	9.95	9.88	9.81
64	5320	10.15	--	--	--	--	--	--	--
100	5500	8.37	--	--	--	--	--	--	--
116	5580	7.59	7.51	7.45	7.37	7.31	7.24	7.18	7.11
140	5700	5.68	--	--	--	--	--	--	--
149	5745	6.72	--	--	--	--	--	--	--
157	5785	6.87	6.8	6.72	6.66	6.59	6.51	6.45	6.38
165	5825	6.81	--	--	--	--	--	--	--

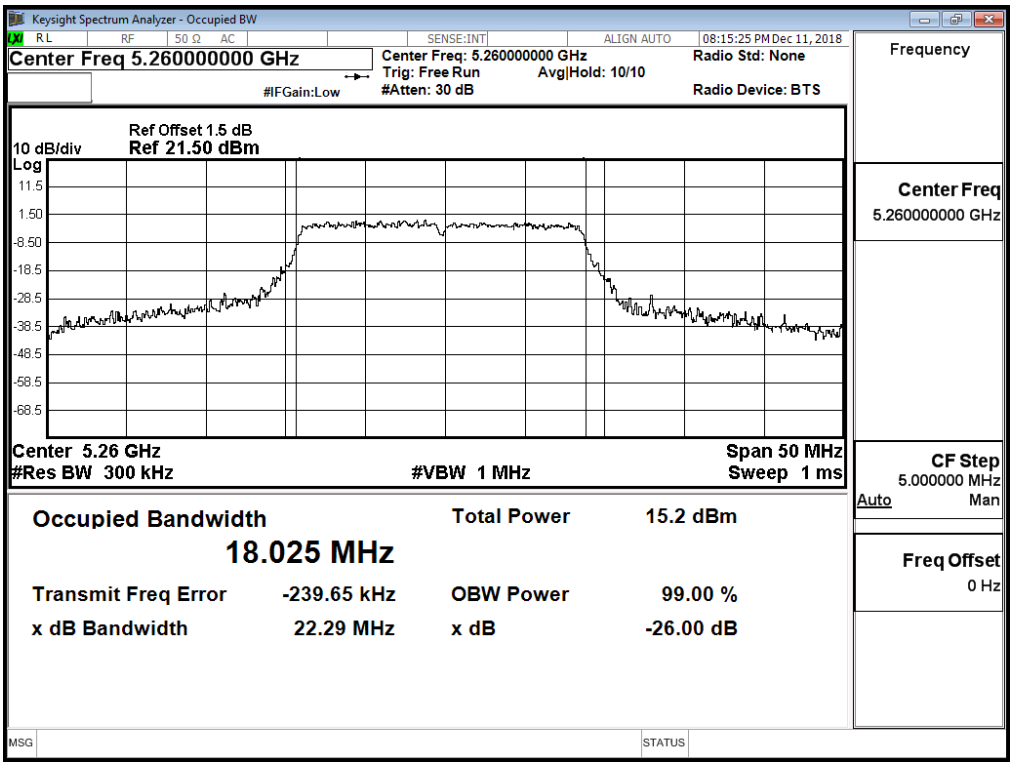
Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Maximum conducted output power Measurement:

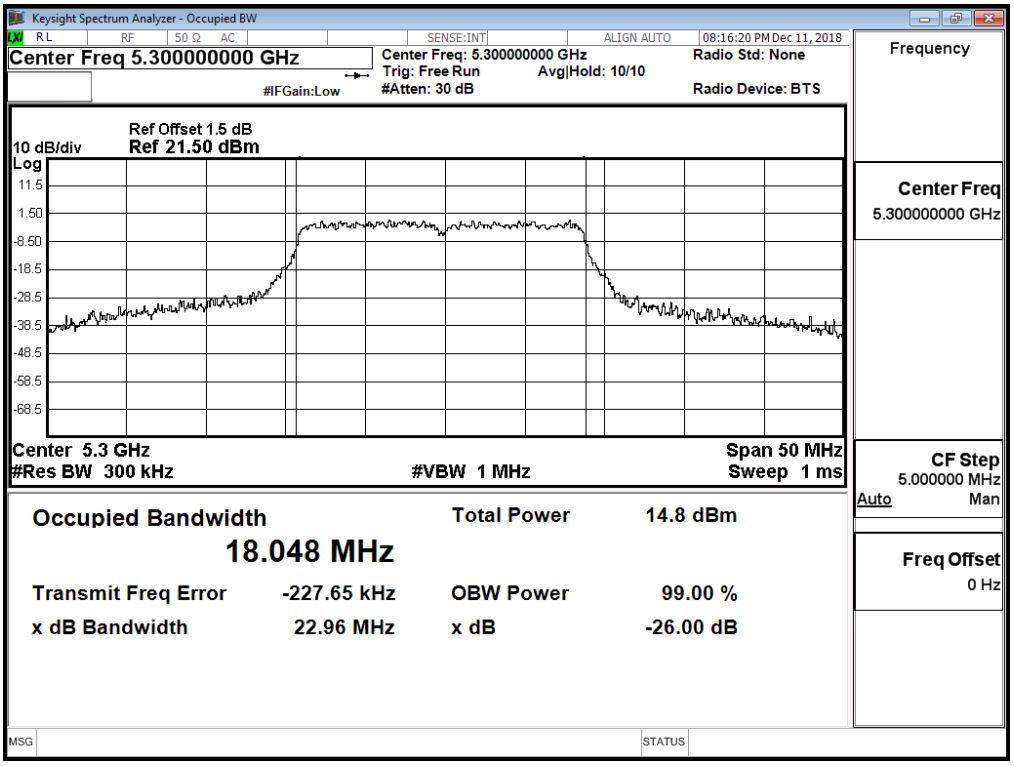
Channel No	Frequency Range (MHz)	99% Bandwidth (MHz)	Output Power (dBm)	Output Power Limit	
				(dBm)	dBm+10log(BW)
36	5180	--	8.55	24	--
44	5220	--	9.18	24	--
48	5240	--	9.29	24	--
52	5260	22.290	10.27	24	24.48
60	5300	22.960	10.3	24	24.61
64	5320	21.950	10.15	24	24.41
100	5500	22.730	8.37	24	24.57
116	5580	24.680	7.59	24	24.92
140	5700	21.580	5.68	24	24.34
149	5745	--	6.72	30	--
157	5785	--	6.87	30	--
165	5825	--	6.81	30	--

Note: Power Output Value =Reading value on average power meter + cable loss

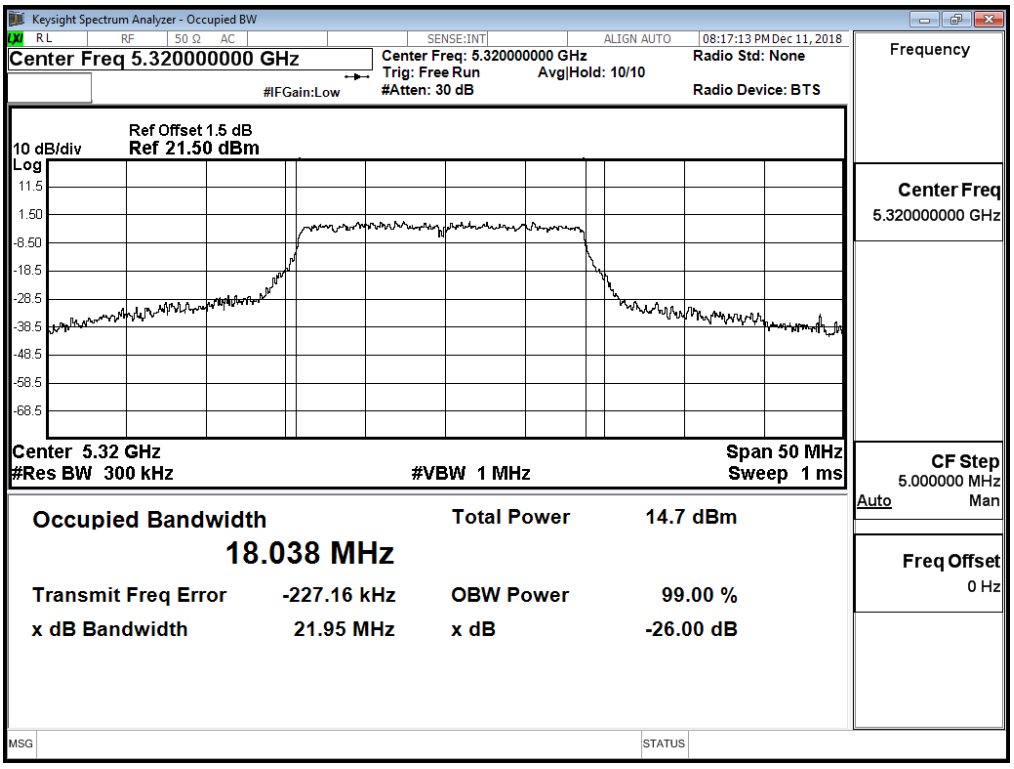
99% Occupied Bandwidth:
Channel 52



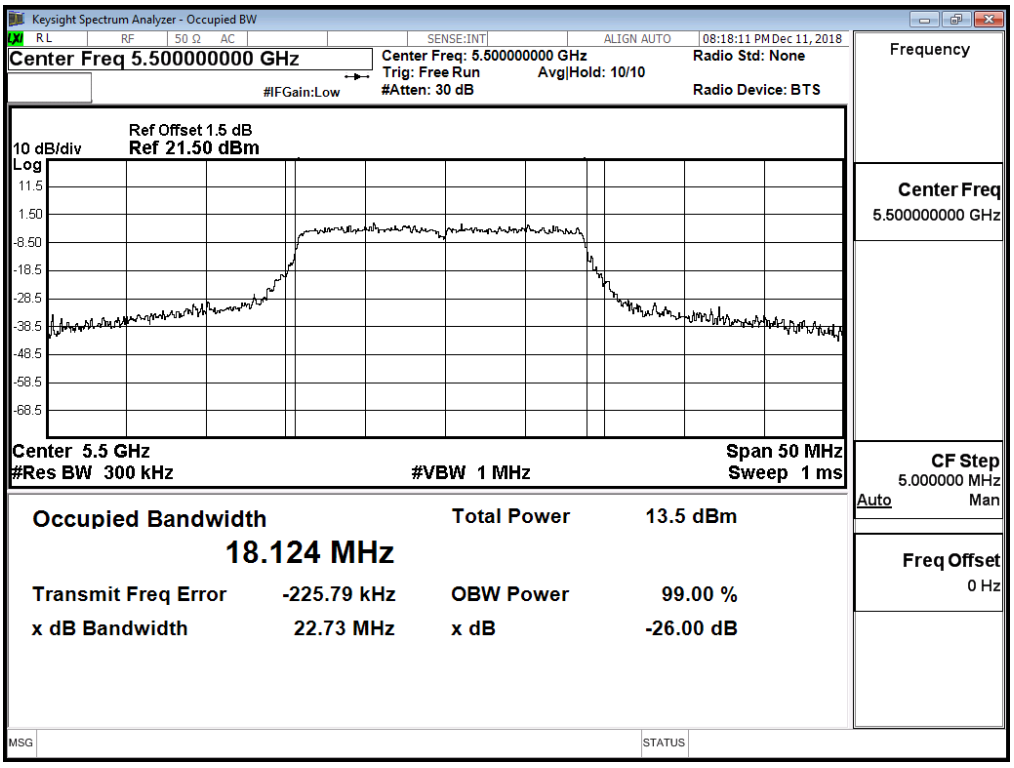
Channel 60



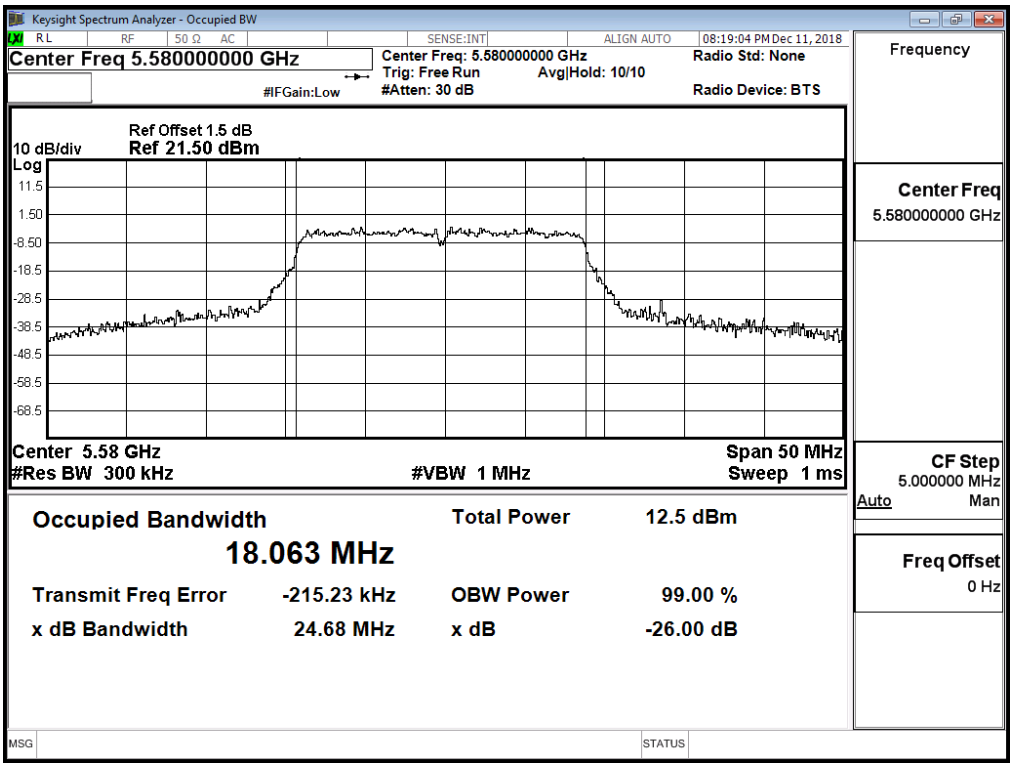
Channel 64



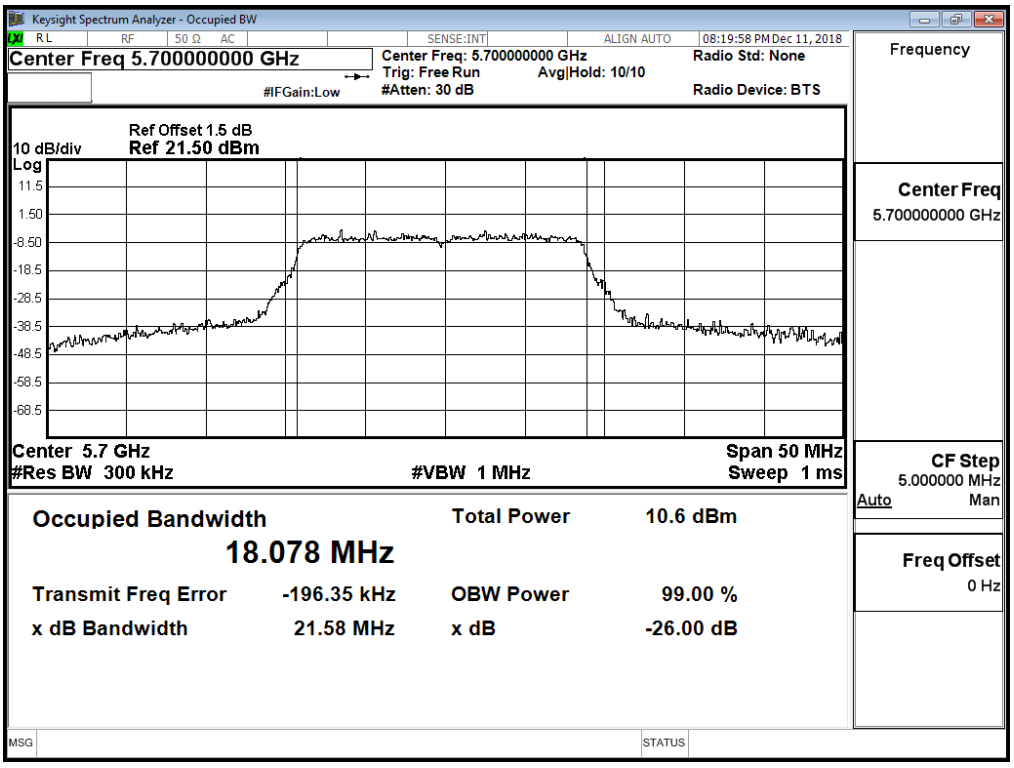
Channel 100



Channel 116



Channel 140



Product : STREAMING SOUNDBAR
Test Item : Maximum conducted output power
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-40BW 15Mbps)

Cable loss=1dB		Maximum conducted output power							
Channel No.	Frequency (MHz)	Data Rate (Mbps)							
		15	30	45	60	90	120	135	150
		Measurement Level (dBm)							
38	5190	10.55	--	--	--	--	--	--	--
46	5230	10.32	10.25	10.15	10.08	10.00	9.94	9.87	9.81
54	5270	7.39	--	--	--	--	--	--	--
62	5310	7.18	7.11	7.06	7.01	6.87	6.81	6.75	6.65
102	5510	6.91	--	--	--	--	--	--	--
110	5550	5.93	5.87	5.8	5.72	5.66	5.59	5.50	5.44
134	5670	3.93	--	--	--	--	--	--	--
151	5755	4.66	--	--	--	--	--	--	--
159	5795	4.84	4.77	4.7	4.61	4.55	4.48	4.41	4.33

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

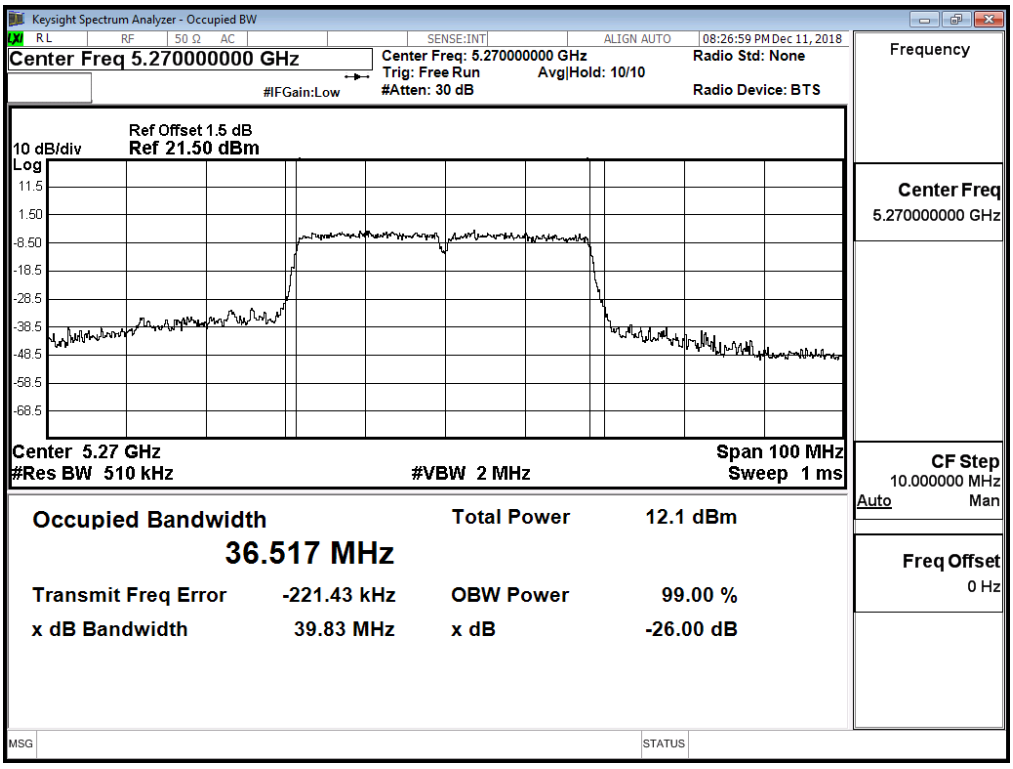
Maximum conducted output power Measurement:

Channel No	Frequency Range (MHz)	99% Bandwidth (MHz)	Output Power (dBm)	Output Power Limit	
				(dBm)	dBm+10log(BW)
38	5190	--	10.55	24	--
46	5230	--	10.32	24	--
54	5270	39.830	7.39	24	27.00
62	5310	39.950	7.18	24	27.02
102	5510	41.260	6.91	24	27.16
110	5550	39.620	5.93	24	26.98
134	5670	39.590	3.93	24	26.98
151	5755	--	4.66	30	--
159	5795	--	4.84	30	--

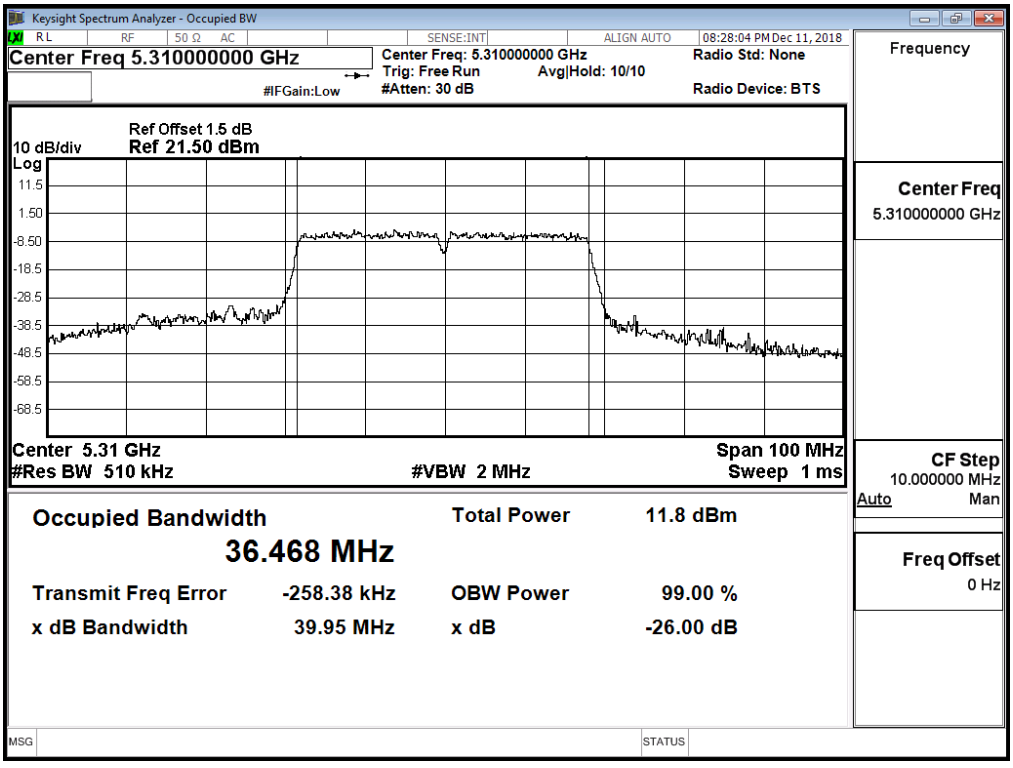
Note: Power Output Value =Reading value on average power meter + cable loss

99% Occupied Bandwidth:

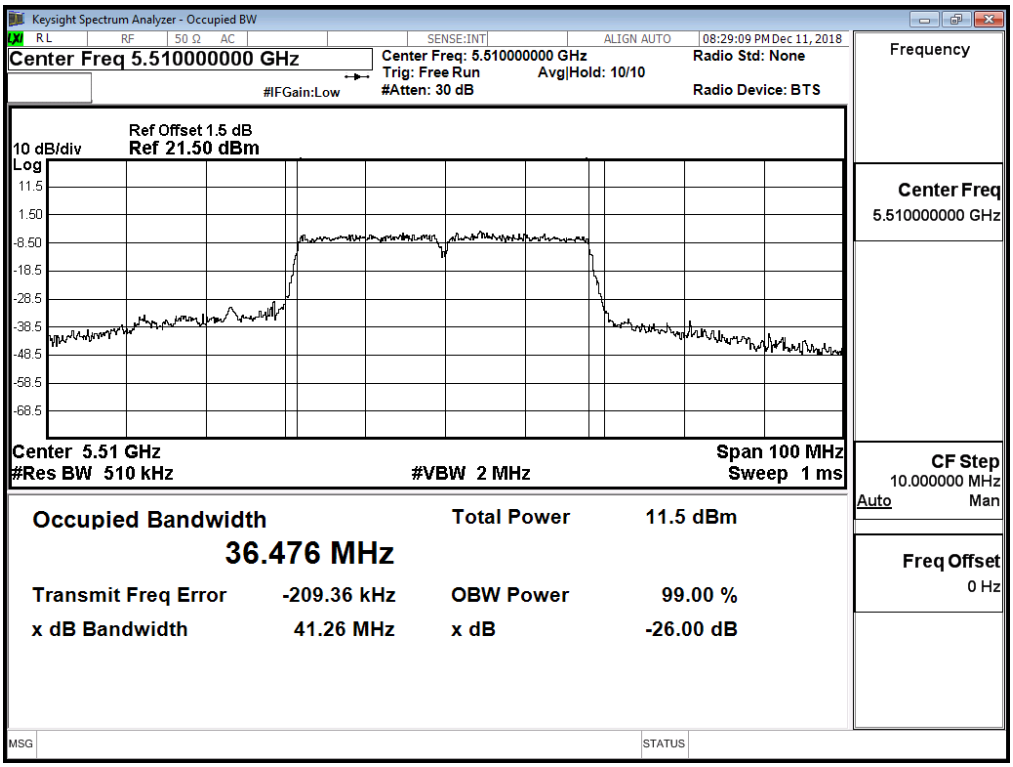
Channel 54



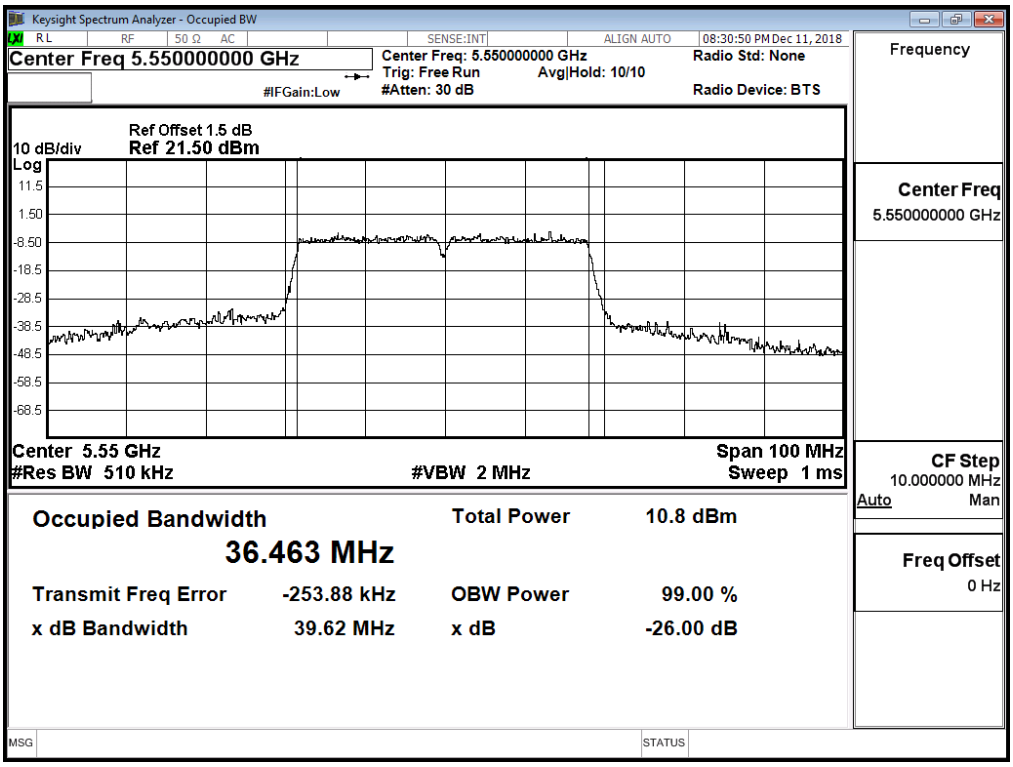
Channel 62



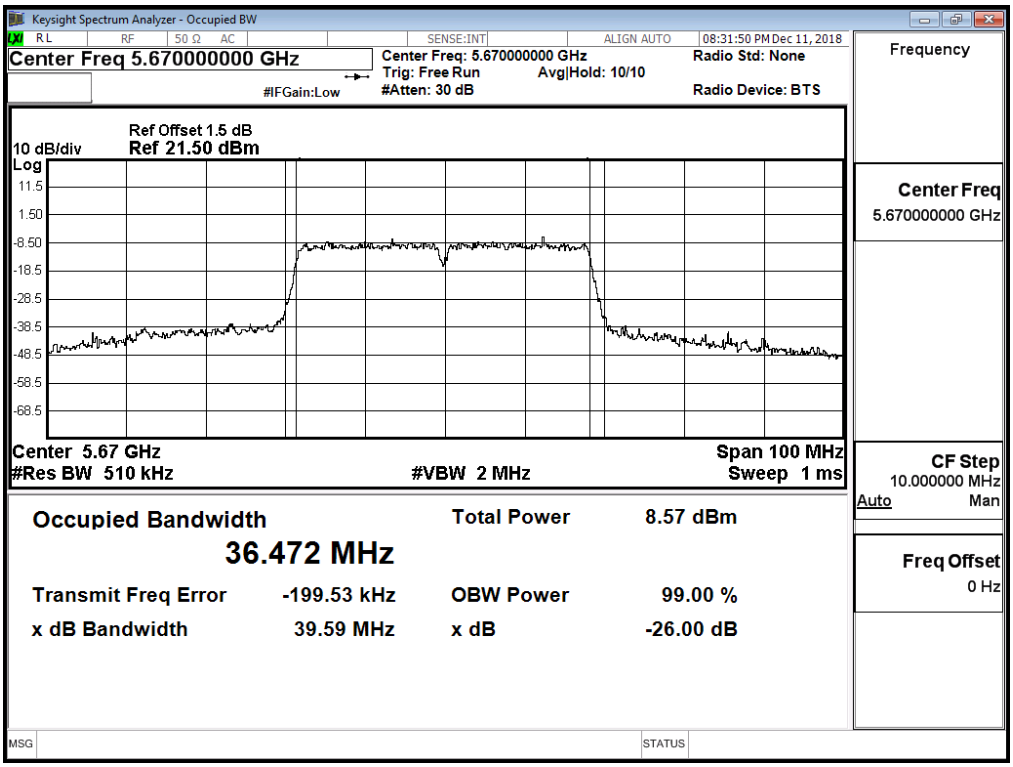
Channel 102



Channel 110



Channel 134


Keysight Spectrum Analyzer - Occupied BW
RL
RF
50 Ω AC
SENSE:INT
ALIGN AUTO
08:31:50 PM Dec 11, 2018
Center Freq 5.670000000 GHz
Center Freq: 5.670000000 GHz
Trig: Free Run
Avg|Hold: 10/10
#IFGain:Low
#Atten: 30 dB
Radio Std: None
Radio Device: BTS
Frequency
Ref Offset 1.5 dB
10 dB/div
Ref 21.50 dBm
Log
11.5
1.50
-8.50
-18.5
-28.5
-38.5
-48.5
-58.5
-68.5
Center Freq
5.670000000 GHz
Center 5.67 GHz
#Res BW 510 kHz
#VBW 2 MHz
Span 100 MHz
Sweep 1 ms
CF Step
10.000000 MHz
Auto
Man
Occupied Bandwidth
36.472 MHz
Total Power
8.57 dBm
Freq Offset
0 Hz
Transmit Freq Error
-199.53 kHz
OBW Power
99.00 %
x dB Bandwidth
39.59 MHz
x dB
-26.00 dB
MSG
STATUS

Product : STREAMING SOUNDBAR
Test Item : Maximum conducted output power
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit (802.11ac-20BW-7.2Mbps)

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8
		Measurement Level (dBm)								
144 (Band3)	5720	3.07	3.01	2.94	2.85	2.79	2.71	2.63	2.58	2.52
144 (Band4)	5720	-3.62	-3.68	-3.76	-3.83	-3.89	-3.95	-4.04	-4.11	-4.18

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

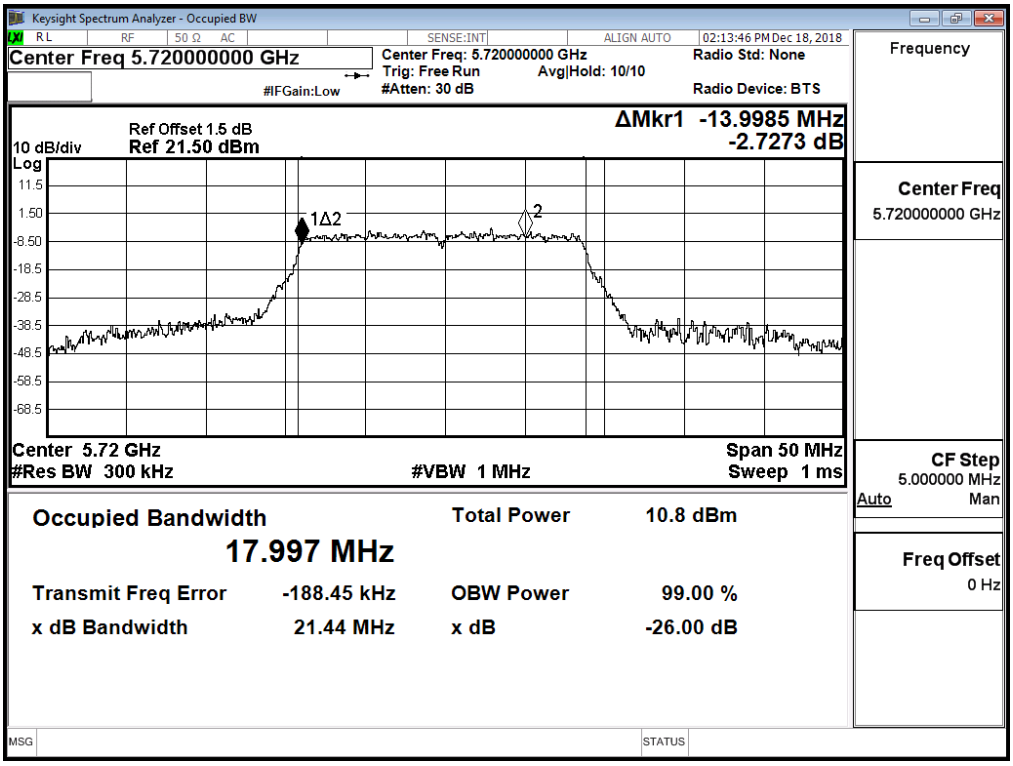
Maximum conducted output power Measurement:

Channel No	Frequency Range (MHz)	99% Bandwidth (MHz)	Output Power (dBm)	Output Power Limit		Result
				(dBm)	dBm+10log(BW)	
144(Band3)	5720	21.44	3.070	24	24.31	Pass
144(Band4)	5720	--	-3.620	30	--	Pass

Note: Power Output Value =Reading value on average power meter + cable loss

99% Occupied Bandwidth:

Channel 144



Product : STREAMING SOUNDBAR
Test Item : Maximum conducted output power
Test Site : No.3 OATS
Test Mode : Mode 5: Transmit (802.11ac-40BW-15Mbps)

Cable loss=1dB		Maximum conducted output power									
Channel No	Frequency (MHz)	Data Rate (Mbps)									
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	VTH9
142F(Band3)	5710	0.35	0.29	0.21	0.14	0.08	0.01	-0.08	-0.15	-0.22	-0.30
142F(Band4)	5710	-10.68	-10.75	-10.83	-10.91	-10.97	-11.02	-11.11	-11.19	-11.25	-11.32

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

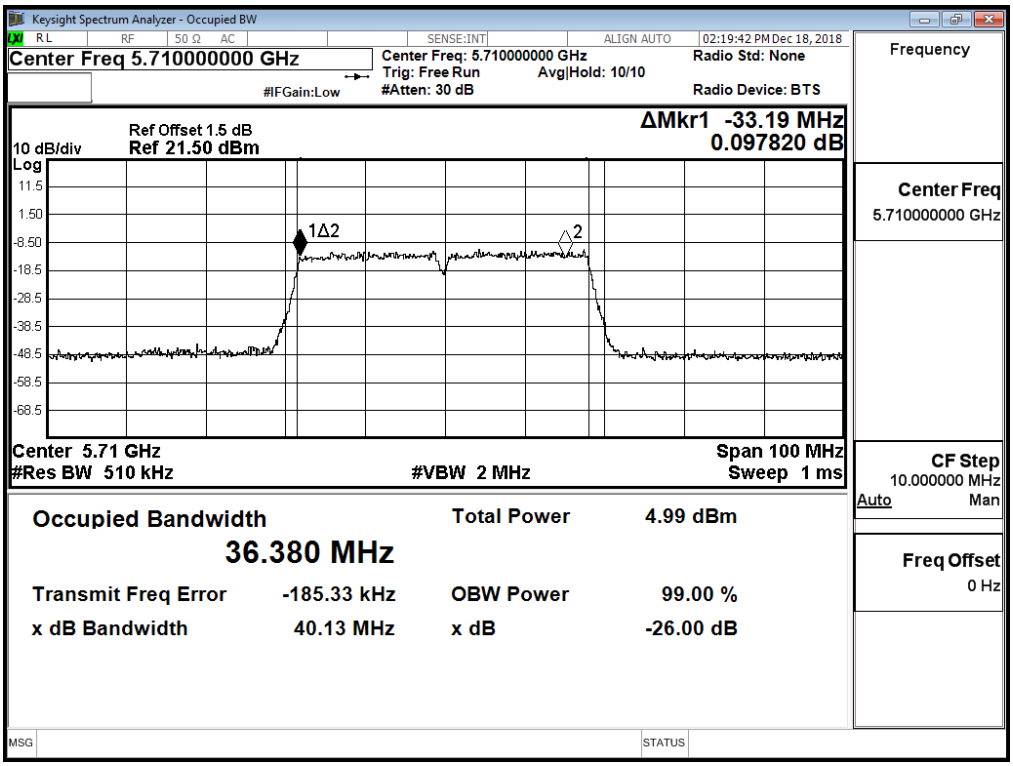
Maximum conducted output power Measurement:

Channel No	Frequency Range	26dB Bandwidth	Output Power	Output Power Limit		Result
	(MHz)	(MHz)	(dBm)	(dBm)	dBm+10log(BW)	
142F(Band3)	5710	40.130	0.350	24	27.03	Pass
142F(Band4)	5710	--	-10.680	30	--	Pass

Note: Power Output Value =Reading value on average power meter + cable loss

99% Occupied Bandwidth:

Channel 142



Product : STREAMING SOUNDBAR
Test Item : Maximum conducted output power
Test Site : No.3 OATS
Test Mode : Mode 6: Transmit (802.11ac-80BW-32.5Mbps)

Cable loss=1dB		Maximum conducted output power									
Channel No	Frequency (MHz)	Data Rate (Mbps)									
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	VTH9
42	5210	6.36	6.29	6.21	6.15	6.08	6	5.91	5.85	5.78	5.71
58	5290	6.16	6.11	6.03	5.96	5.88	5.81	5.75	5.67	5.60	5.52
106	5530	4.42	--	--	--	--	--	--	--	--	--
122	5610	3.02	2.95	2.85	2.79	2.71	2.64	2.59	2.51	2.44	2.35
138(Band3)	5690	1.93	--	--	--	--	--	--	--	--	--
138(Band4)	5690	-10.84	--	--	--	--	--	--	--	--	--
155	5775	3.33	3.25	3.19	3.11	3.05	2.97	2.90	2.84	2.75	2.68

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

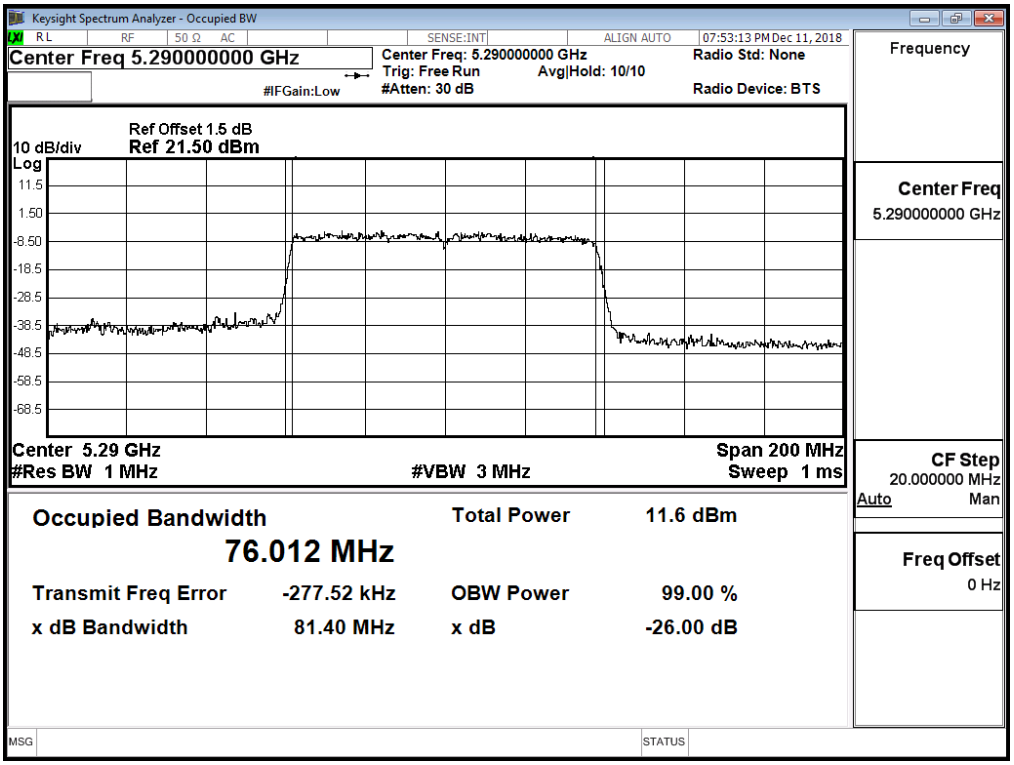
Maximum conducted output power Measurement

Channel No	Frequency Range	99% Bandwidth	Output Power	Output Power Limit		Result
	(MHz)	(MHz)	(dBm)	(dBm)	dBm+10log(BW)	
42	5210	--	6.360	24	--	Pass
58	5290	81.400	6.160	24	30.11	Pass
106	5530	81.470	4.420	24	30.11	Pass
122	5610	81.760	3.020	24	30.13	Pass
138(Band3)	5690	81.620	1.930	24	30.12	Pass
138(Band4)	5690	--	-10.840	30	--	Pass
155	5775	--	3.330	30	--	Pass

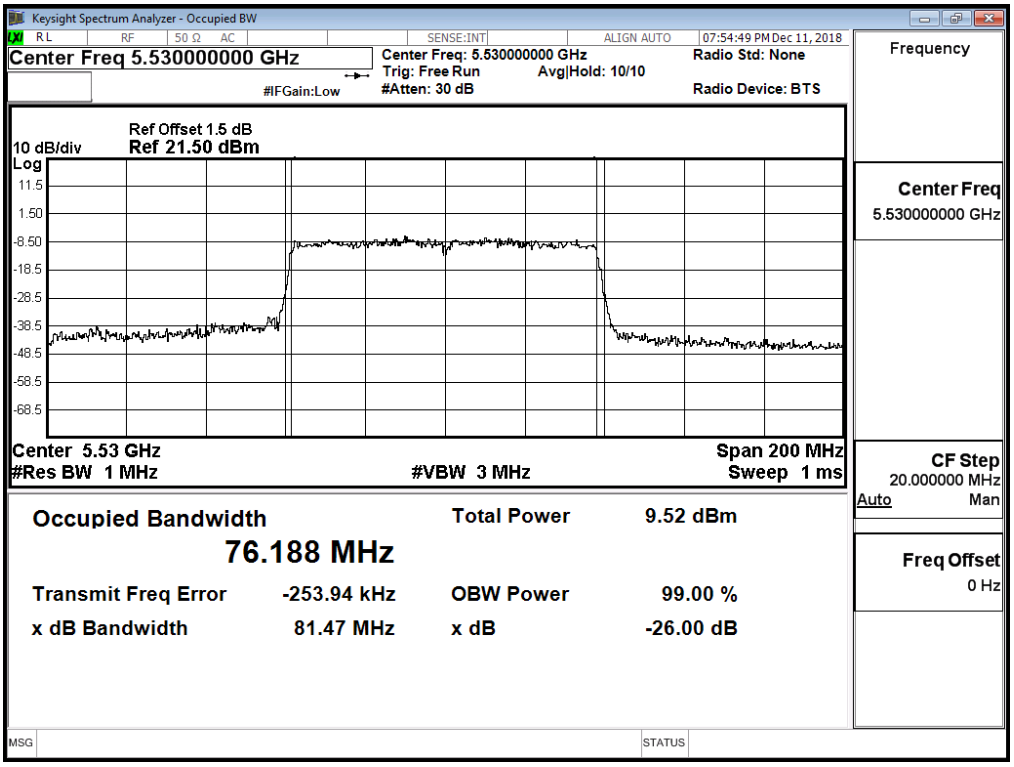
Note: Power Output Value =Reading value on average power meter + cable loss

99% Occupied Bandwidth:

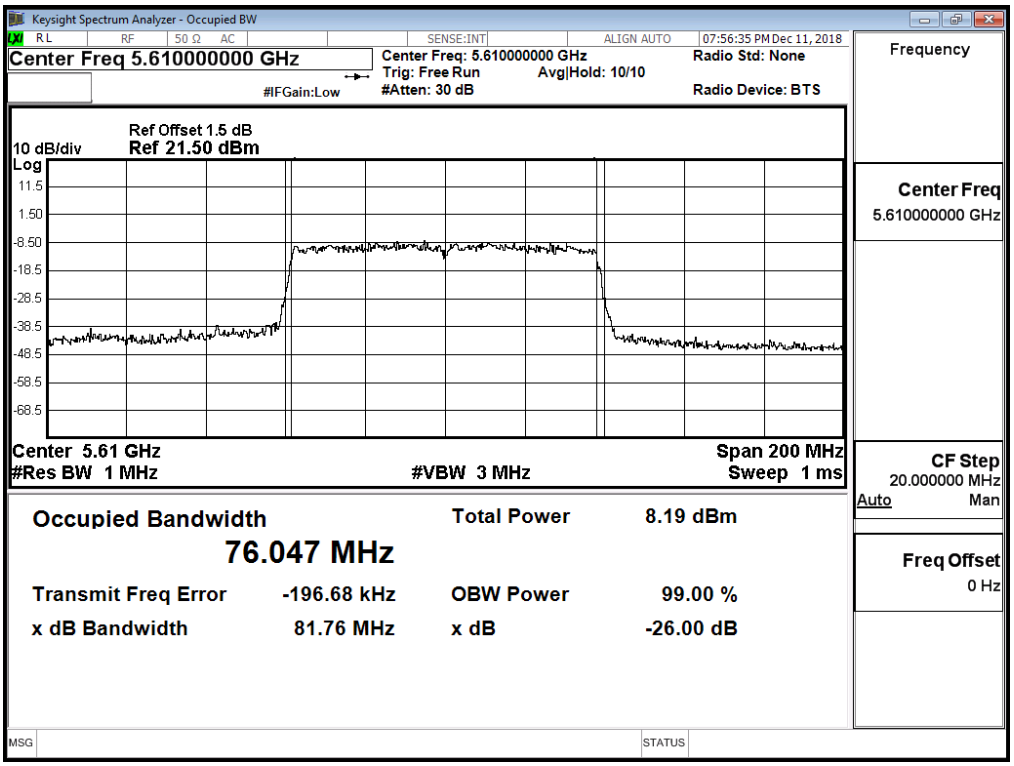
Channel 58



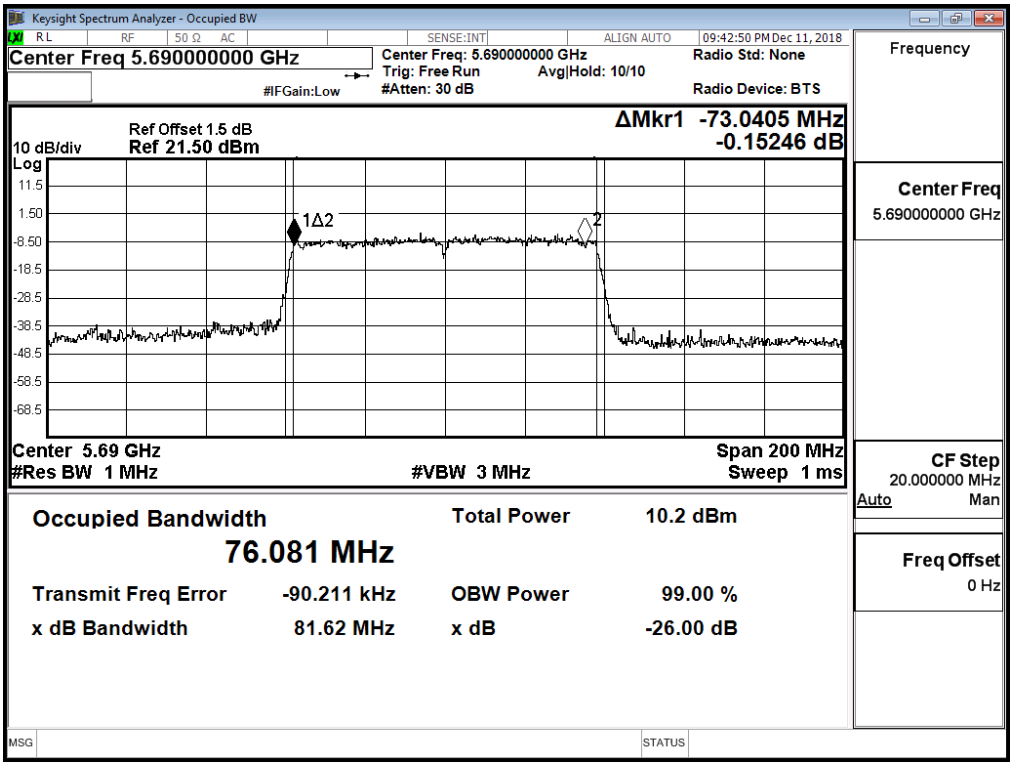
Channel 106



Channel 122

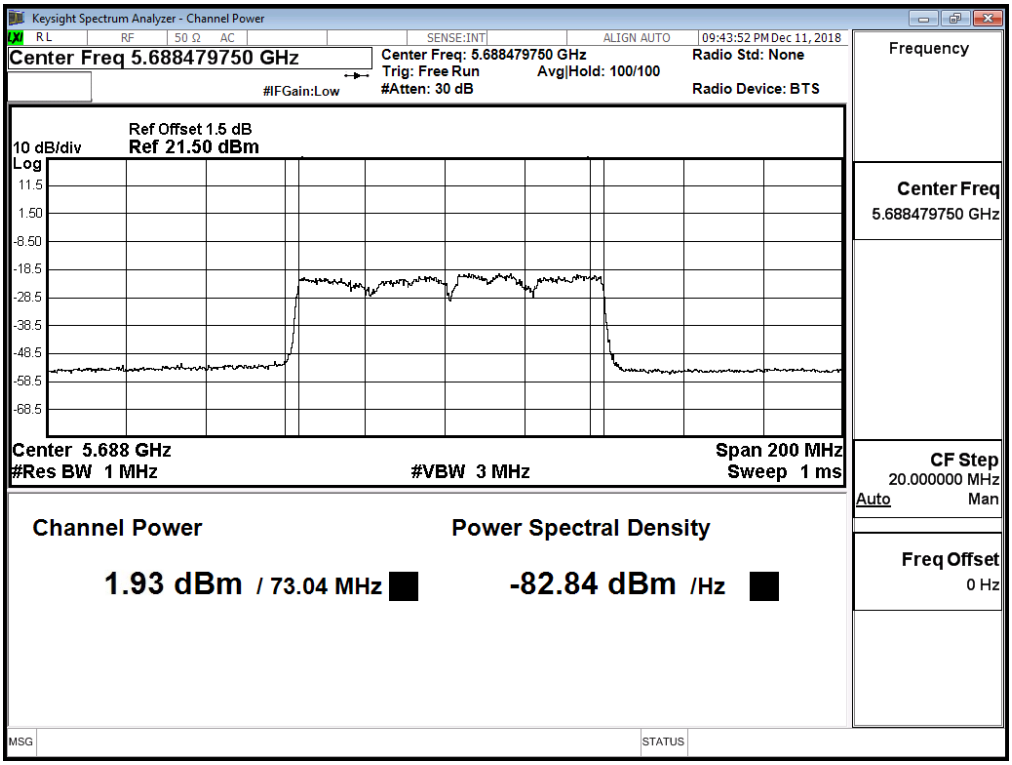


Channel 138

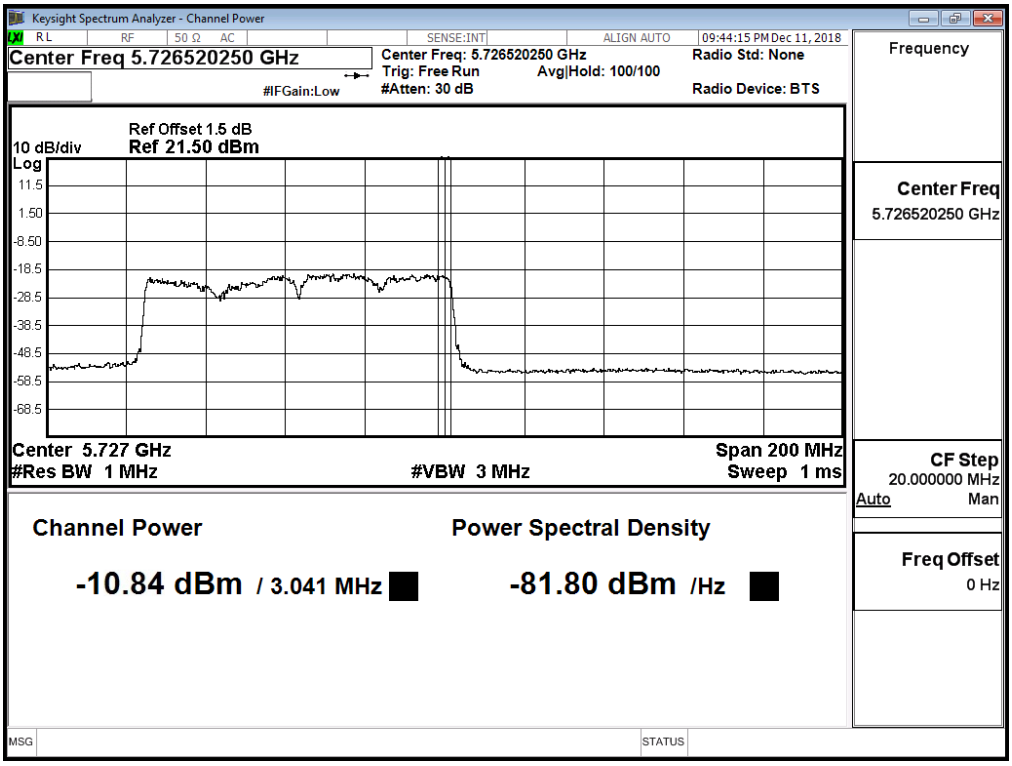


Maximum conducted output power:

Channel 138

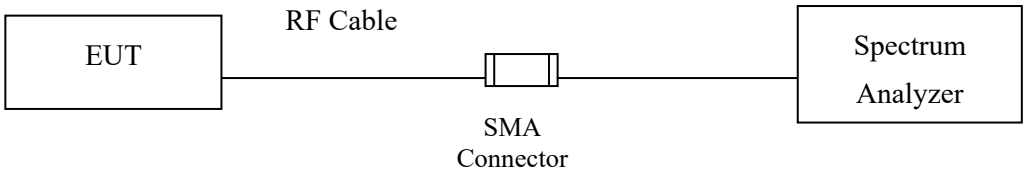


Channel 138



4. Peak Power Spectral Density

4.1. Test Setup



4.2. Limits

(1) For the band 5.15-5.25 GHz,

(i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(iii) For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. Fixed point-topoint U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

(iv) For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.+

(2) For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(3) For the band 5.725-5.85 GHz, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point UNII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

4.3. Test Procedure

The EUT was setup to ANSI C63.10, 2009; tested to UNII test procedure of FCC KDB-789033 for compliance to FCC 47CFR Subpart E requirements.

The Peak Power Spectral Density using KDB 789033 section F) procedure, Create an average power spectrum for the EUT operating mode being tested by following the instructions in section E)2) for measuring maximum conducted output power using a spectrum analyzer.

SA-1 method is selected to run the test.

For the band 5.725-5.85 GHz, Scale the observed power level to an equivalent value in 500 kHz by adjusting (increase) the measured power by a bandwidth correction factor (BWCF) where BWCF = 10log (500 kHz/100 kHz) = 6.98 dB.

4.4. Uncertainty

± 1.62 dB

4.5. Test Result of Peak Power Spectral Density

Product : STREAMING SOUNDBAR
Test Item : Peak Power Spectral Density
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11a-6Mbps)

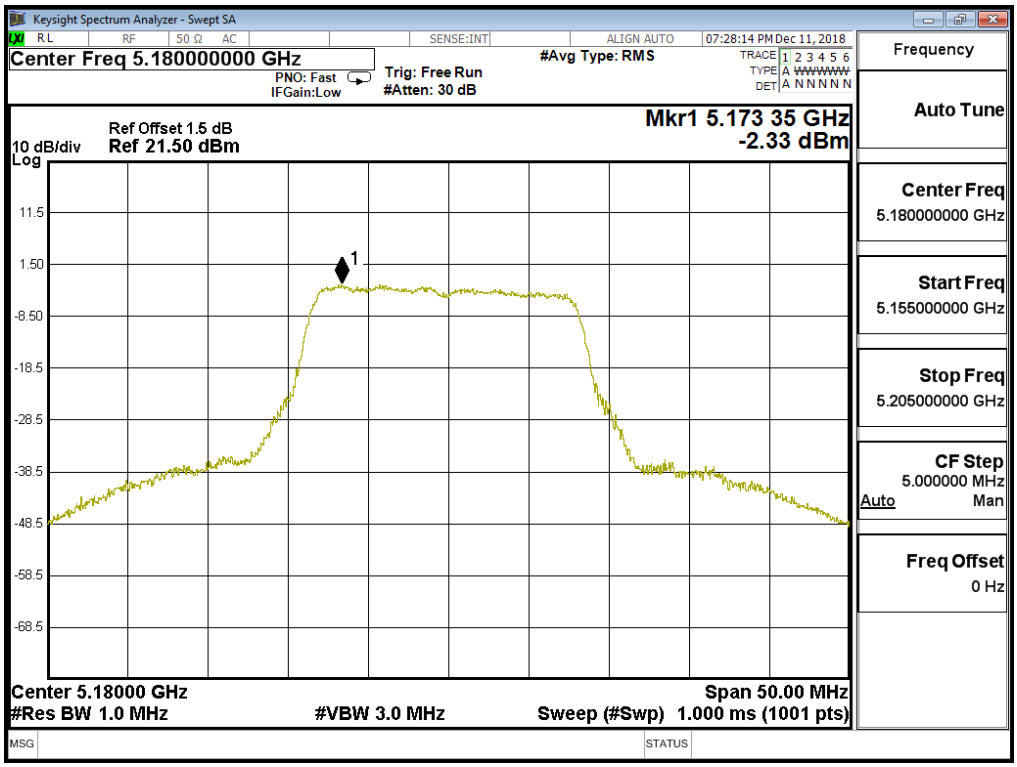
Channel Number	Frequency (MHz)	Data Rata (Mbps)	Measurement Level (dBm)	Duty Factor (dBm)	Total PSD (dBm)	Required Limit (dBm)	Result
36	5180	6	-2.330	3.570	1.240	11	Pass
44	5220	6	-3.390	3.570	0.180	11	Pass
48	5240	6	-3.300	3.570	0.270	11	Pass
52	5260	6	-5.890	3.570	-2.320	11	Pass
60	5300	6	-7.590	3.570	-4.020	11	Pass
64	5320	6	-7.990	3.570	-4.420	11	Pass
100	5500	6	-7.200	3.570	-3.630	11	Pass
116	5580	6	-8.110	3.570	-4.540	11	Pass
140	5700	6	-10.010	3.570	-6.440	11	Pass

Note: Total PPSD Value = Measurement Level + Duty Factor

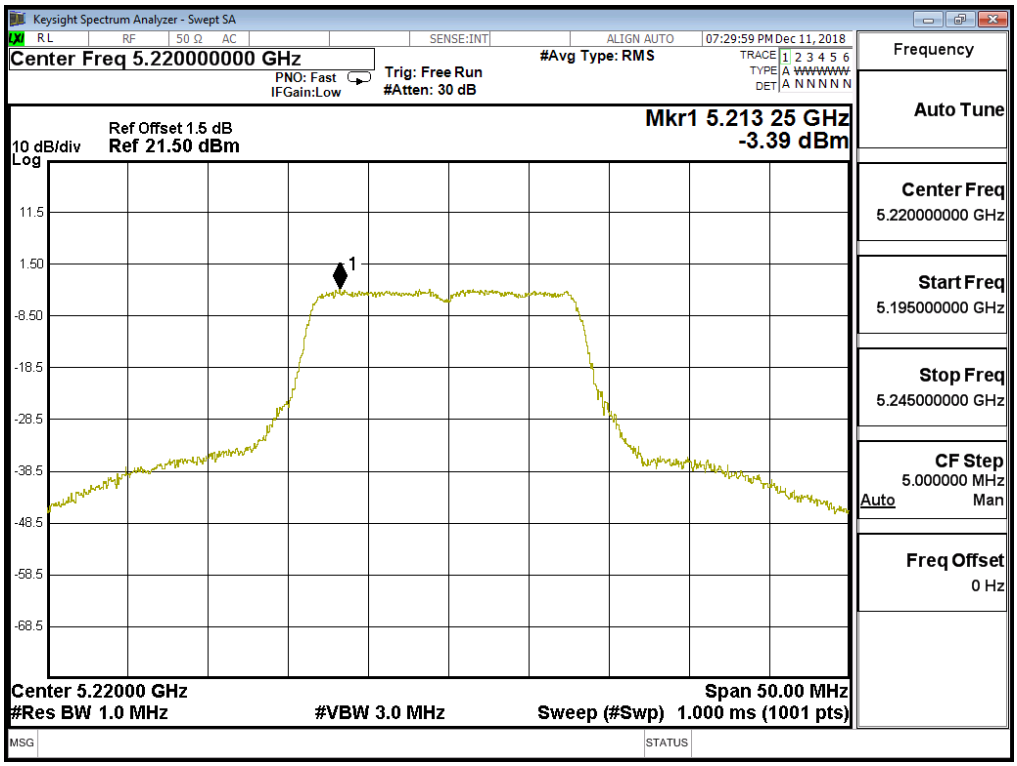
Channel Number	Frequency (MHz)	Data Rata (Mbps)	PPSD (dBm)	Duty Factor (dBm)	BWCF (dB)	Total PPSD (dBm)	Required Limit (dBm)	Result
149	5745	6	-19.480	3.570	6.980	-8.930	<30	Pass
157	5785	6	-19.510	3.570	6.980	-8.960	<30	Pass
165	5825	6	-20.350	3.570	6.980	-9.800	<30	Pass

Note: Total PPSD Value = PPSD value + Duty Factor + BWCF.

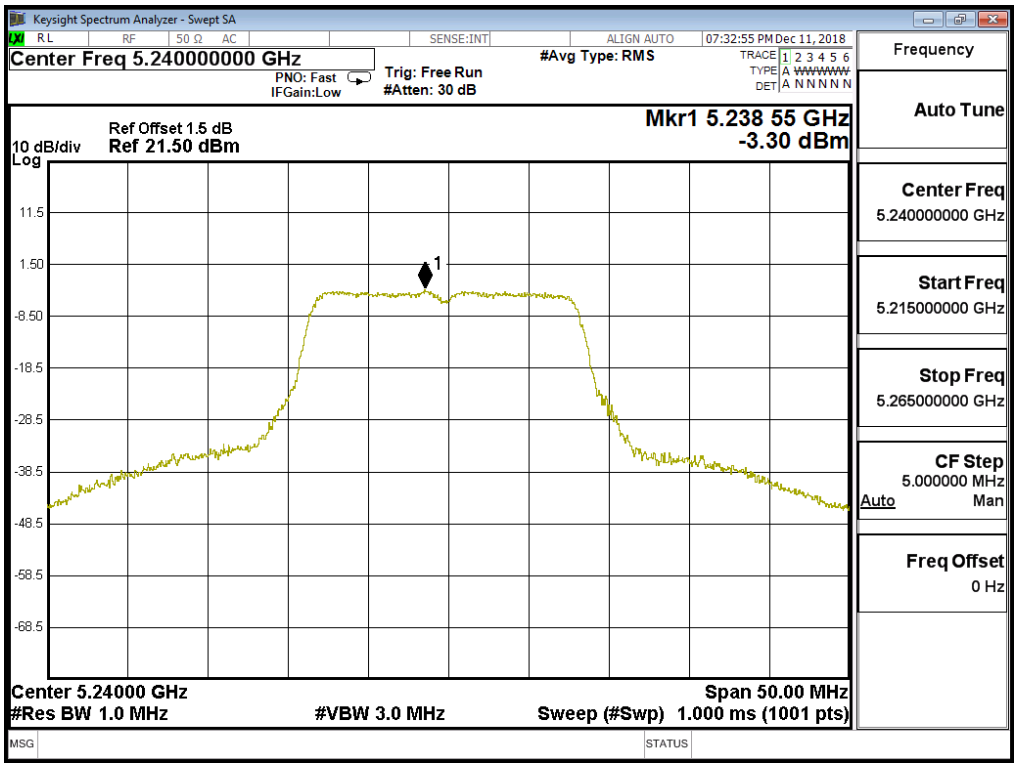
Channel 36:



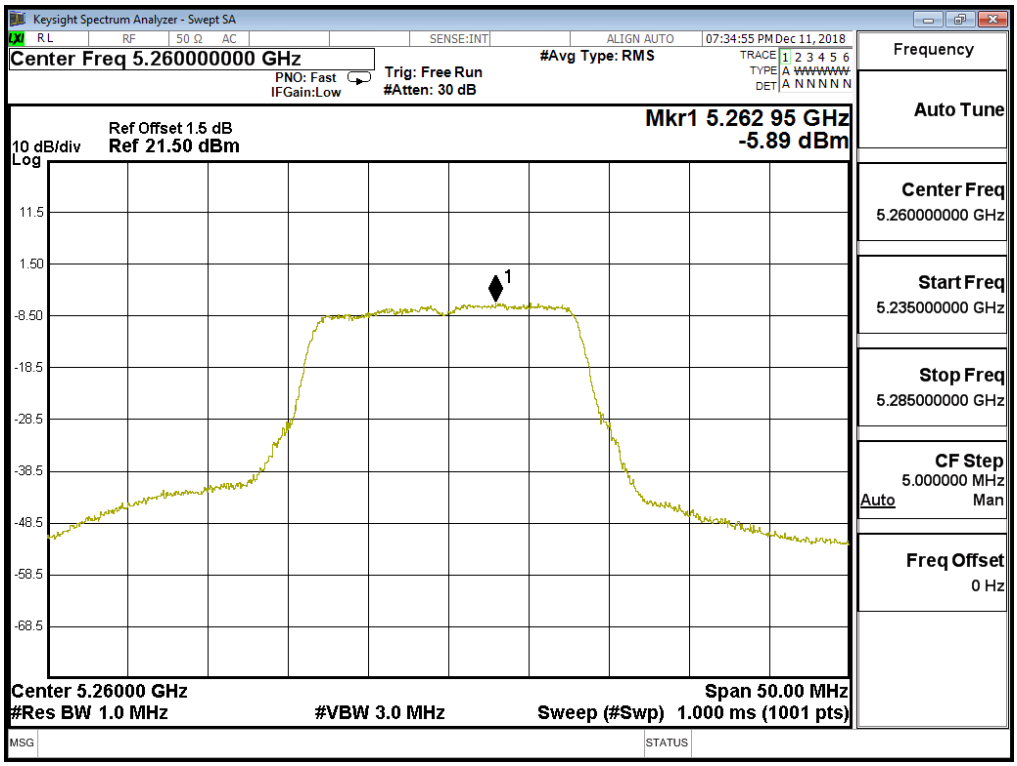
Channel 44:



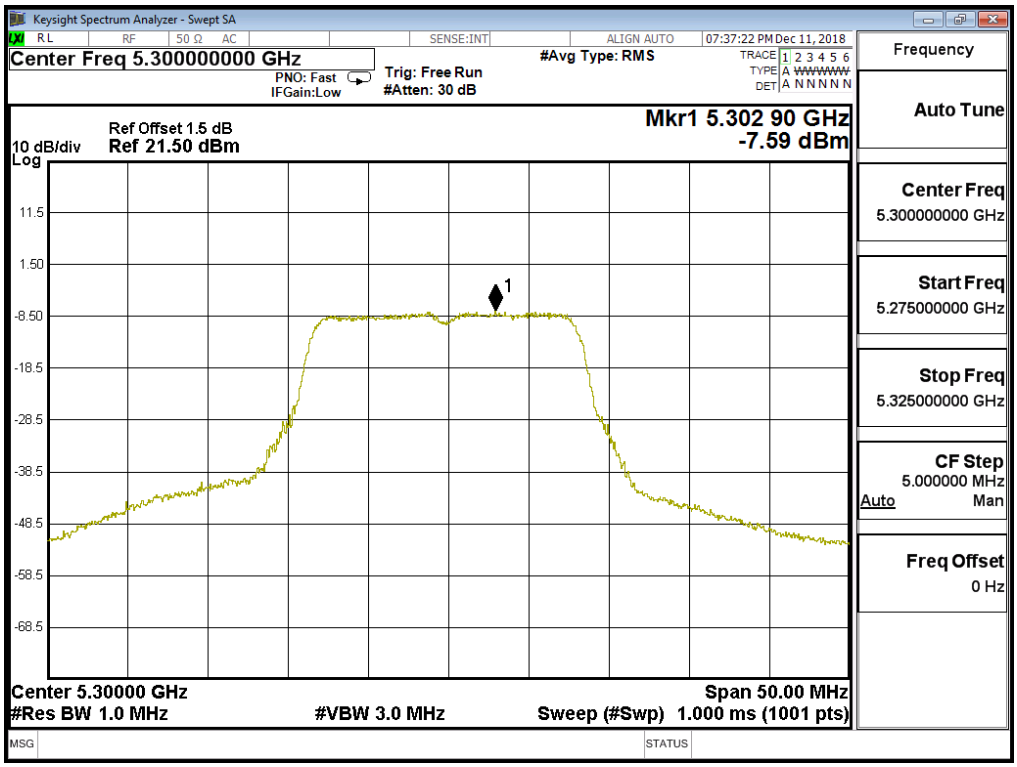
Channel 48:



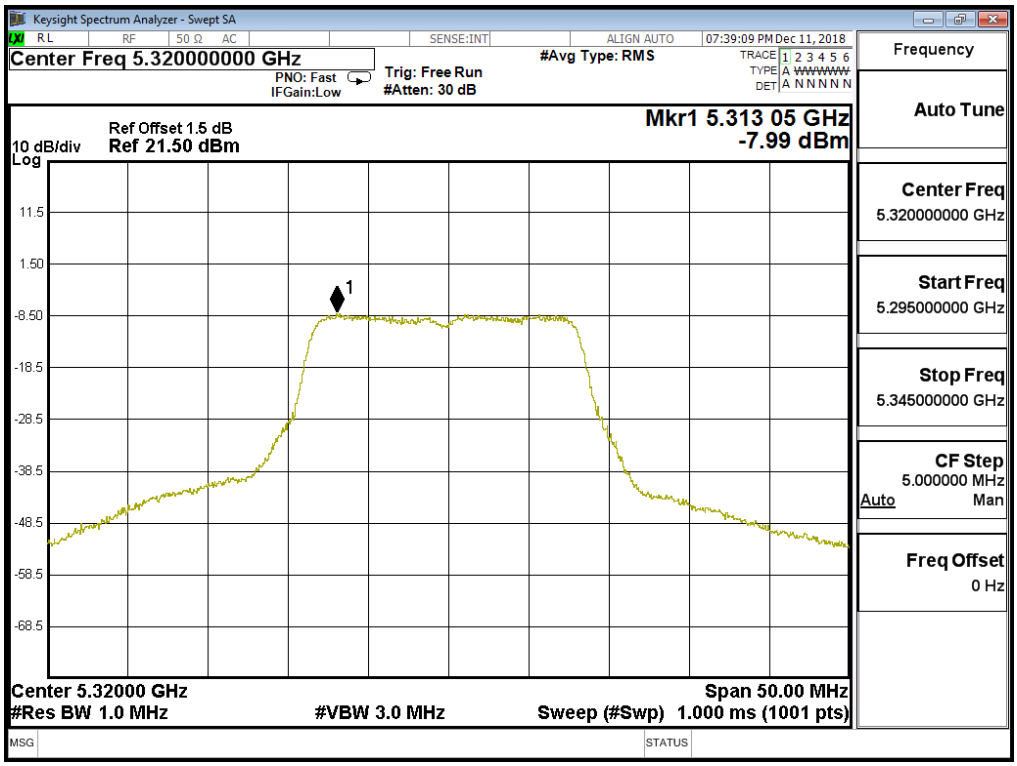
Channel 52:



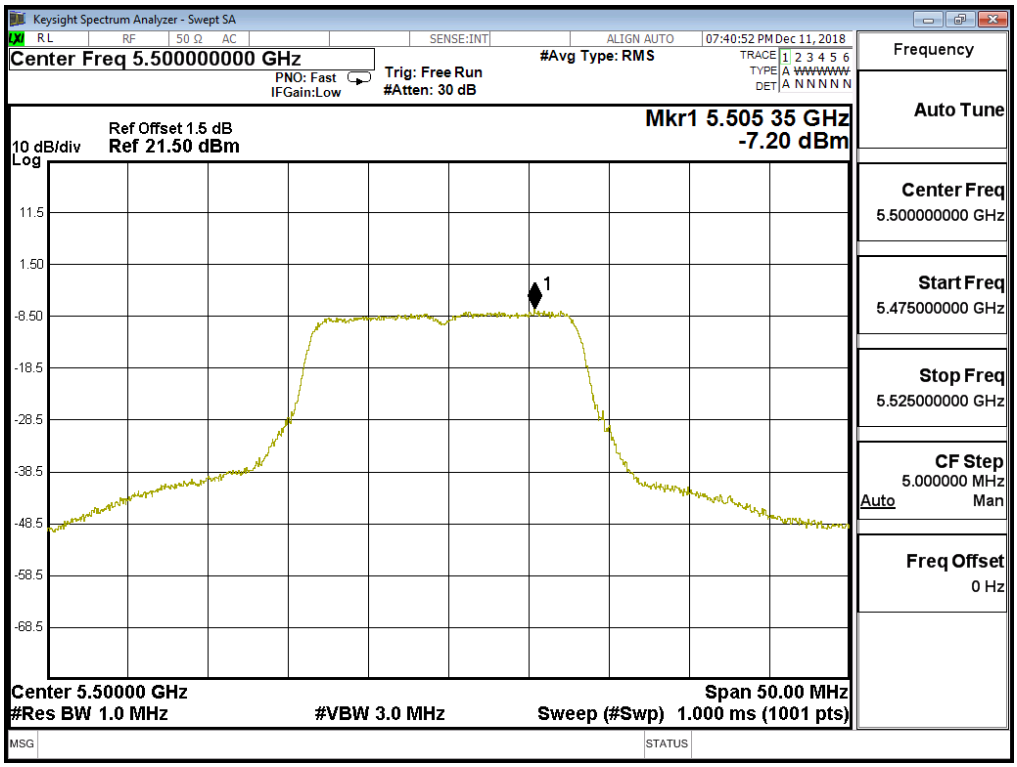
Channel 60:



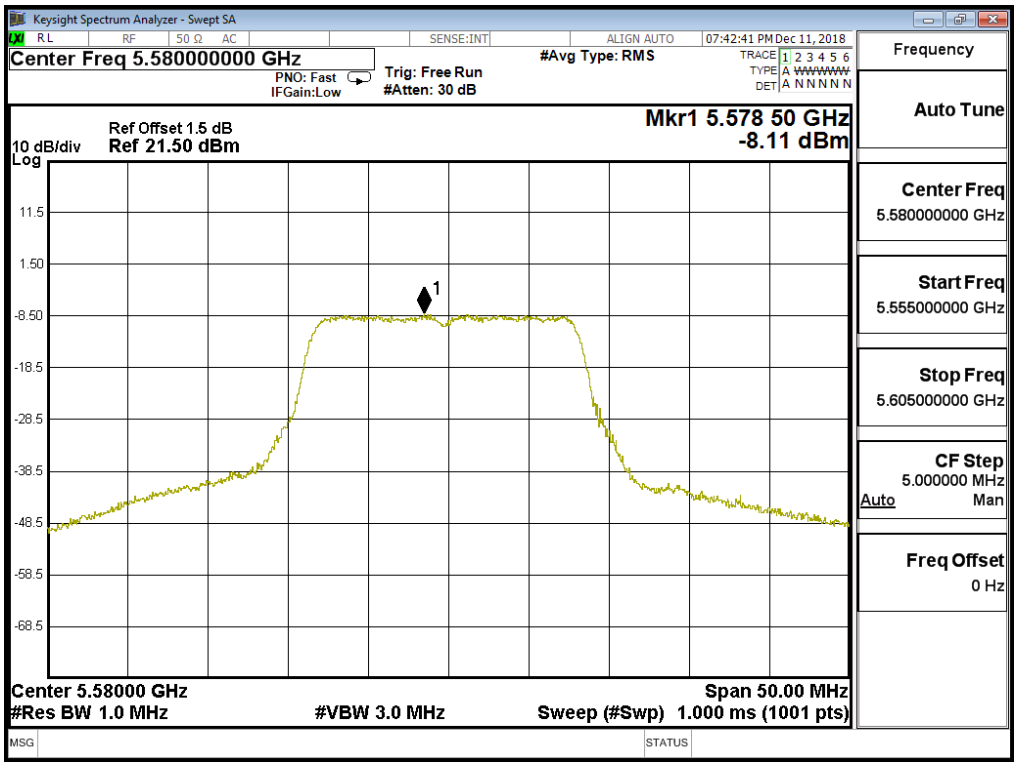
Channel 64:



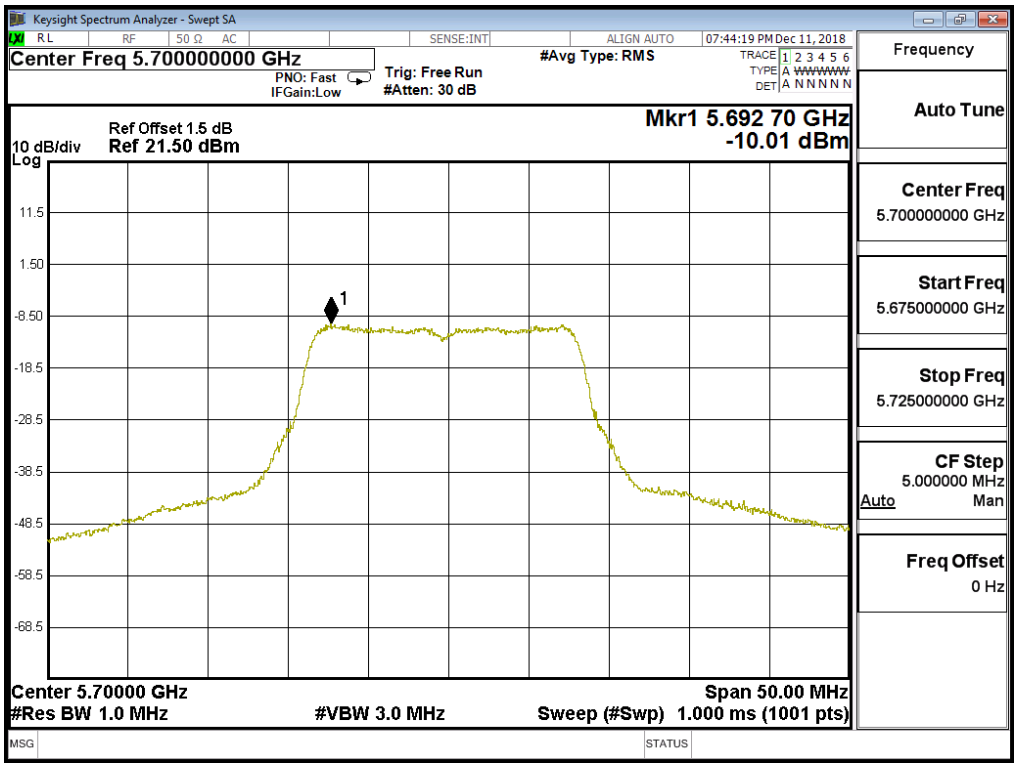
Channel 100:



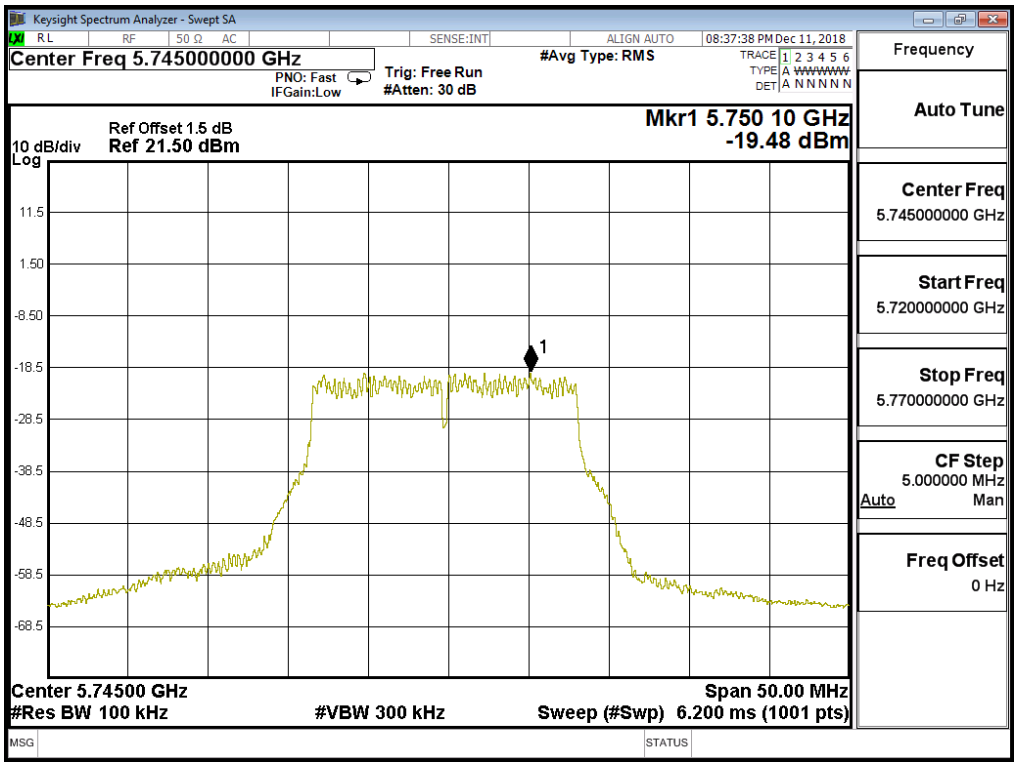
Channel 116:



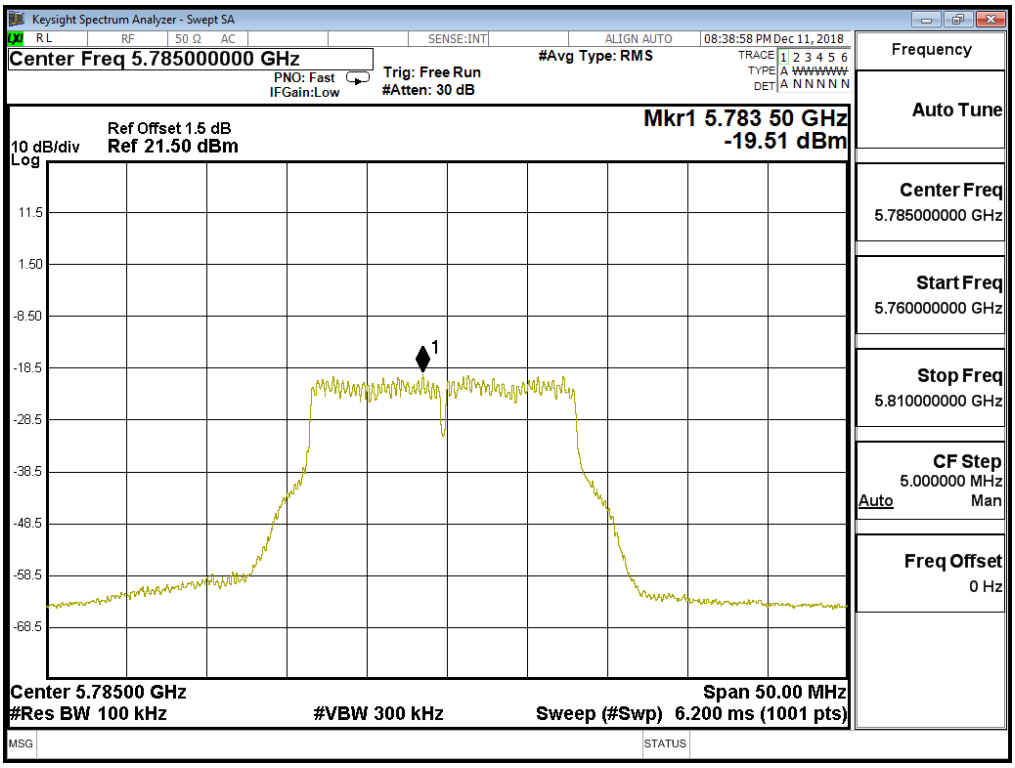
Channel 140:



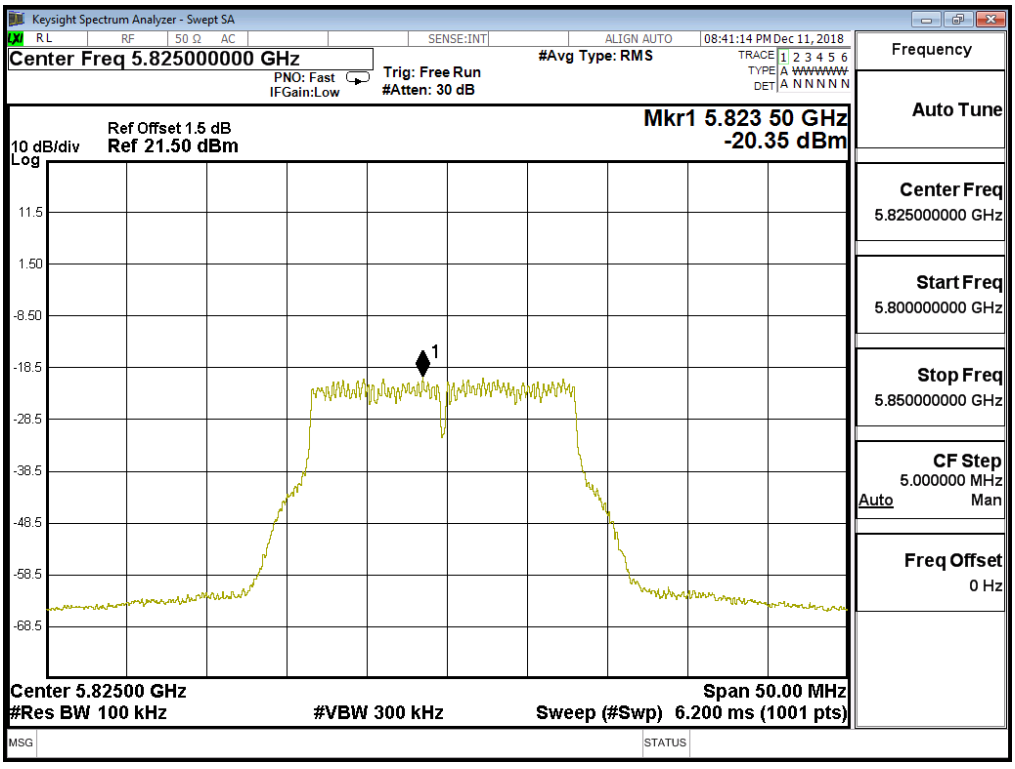
Channel 149



Channel 157



Channel 165



Product : STREAMING SOUNDBAR
Test Item : Peak Power Spectral Density
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11n-20BW 7.2Mbps)

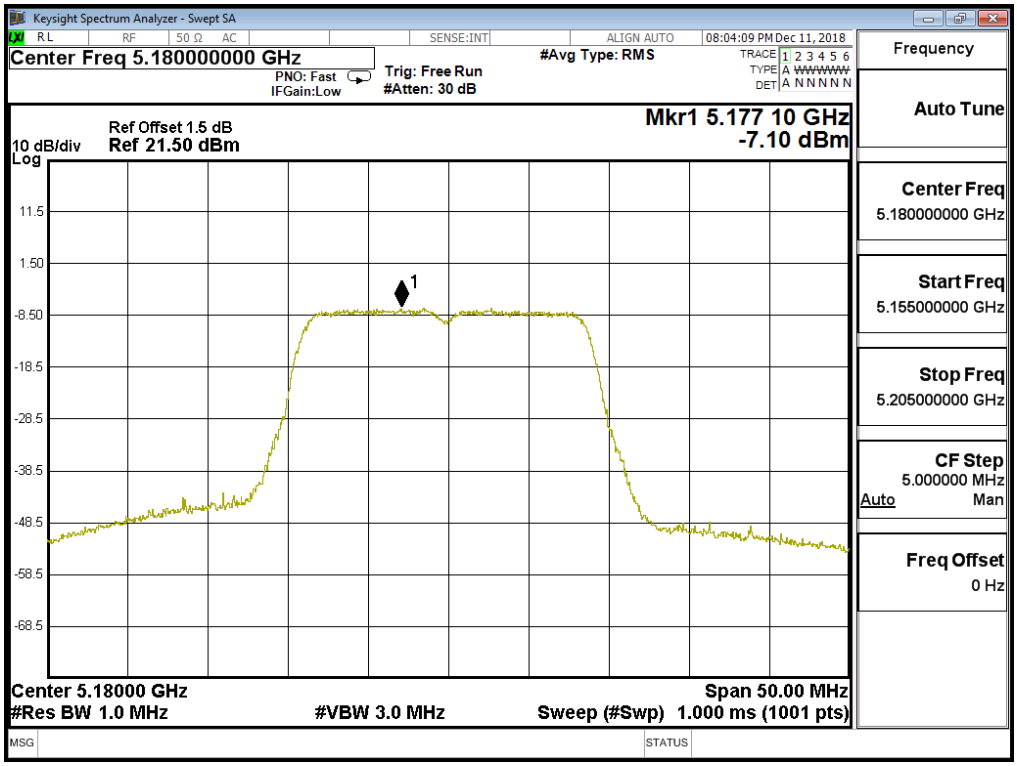
Channel Number	Frequency (MHz)	Data Rata (Mbps)	Measurement Level (dBm)	Duty Factor (dBm)	Total PSD (dBm)	Required Limit (dBm)	Result
36	5180	HT0	-7.100	3.680	-3.420	11	Pass
44	5220	HT0	-7.810	3.680	-4.130	11	Pass
48	5240	HT0	-7.150	3.680	-3.470	11	Pass
52	5260	HT0	-6.330	3.680	-2.650	11	Pass
60	5300	HT0	-7.130	3.680	-3.450	11	Pass
64	5320	HT0	-7.280	3.680	-3.600	11	Pass
100	5500	HT0	-8.380	3.680	-4.700	11	Pass
116	5580	HT0	-9.480	3.680	-5.800	11	Pass
140	5700	HT0	-11.280	3.680	-7.600	11	Pass

Note: Total PPSD Value = Measurement Level + Duty Factor

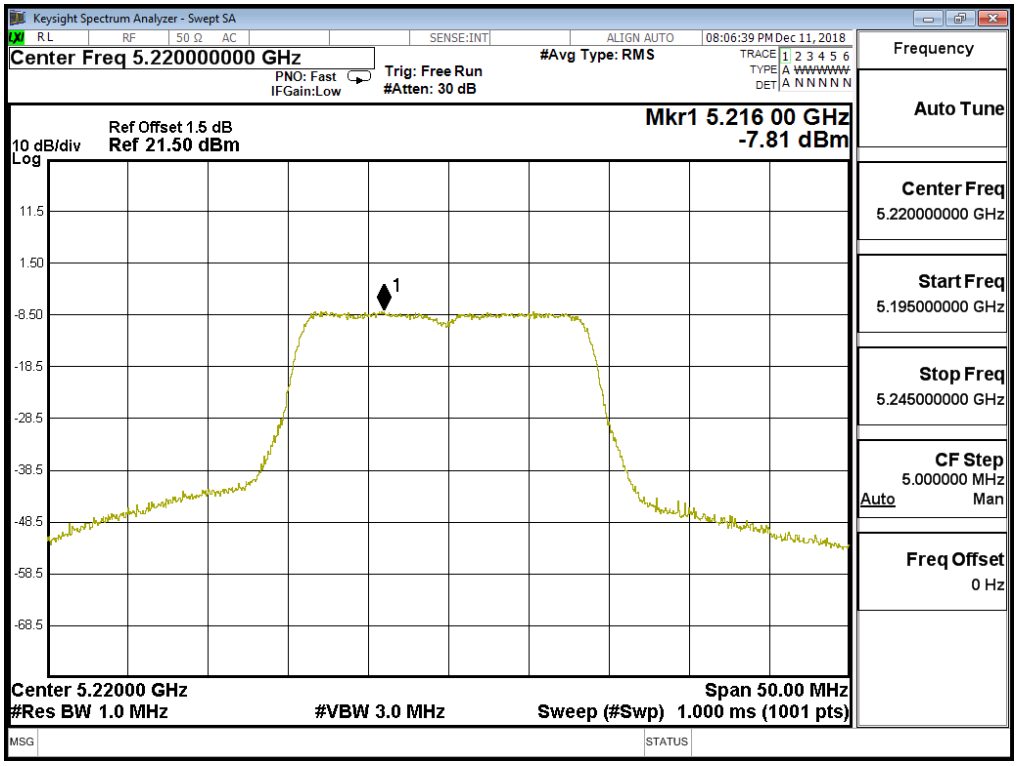
Channel Number	Frequency (MHz)	Data Rata (Mbps)	PPSD (dBm)	Duty Factor (dBm)	BWCF (dB)	Total PPSD (dBm)	Required Limit (dBm)	Result
149	5745	HT0	-18.050	3.680	6.980	-7.390	<30	Pass
157	5785	HT0	-19.250	3.680	6.980	-8.590	<30	Pass
165	5825	HT0	-19.640	3.680	6.980	-8.980	<30	Pass

Note: Total PPSD Value = PPSD value + Duty Factor + BWCF

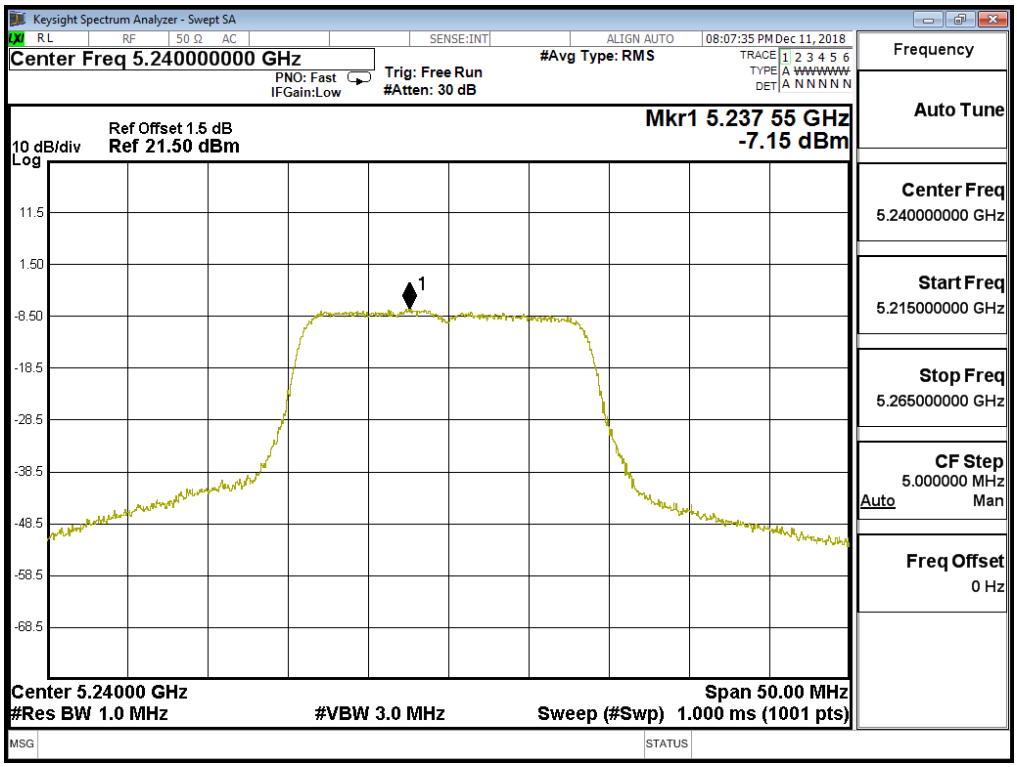
Channel 36:



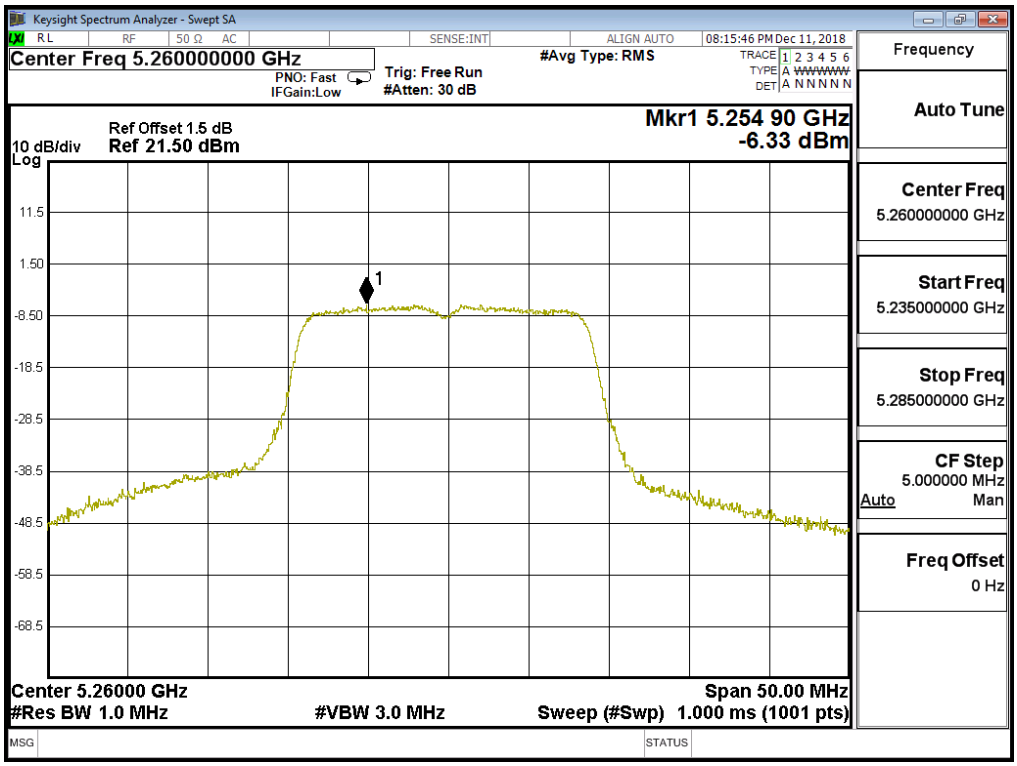
Channel 44:



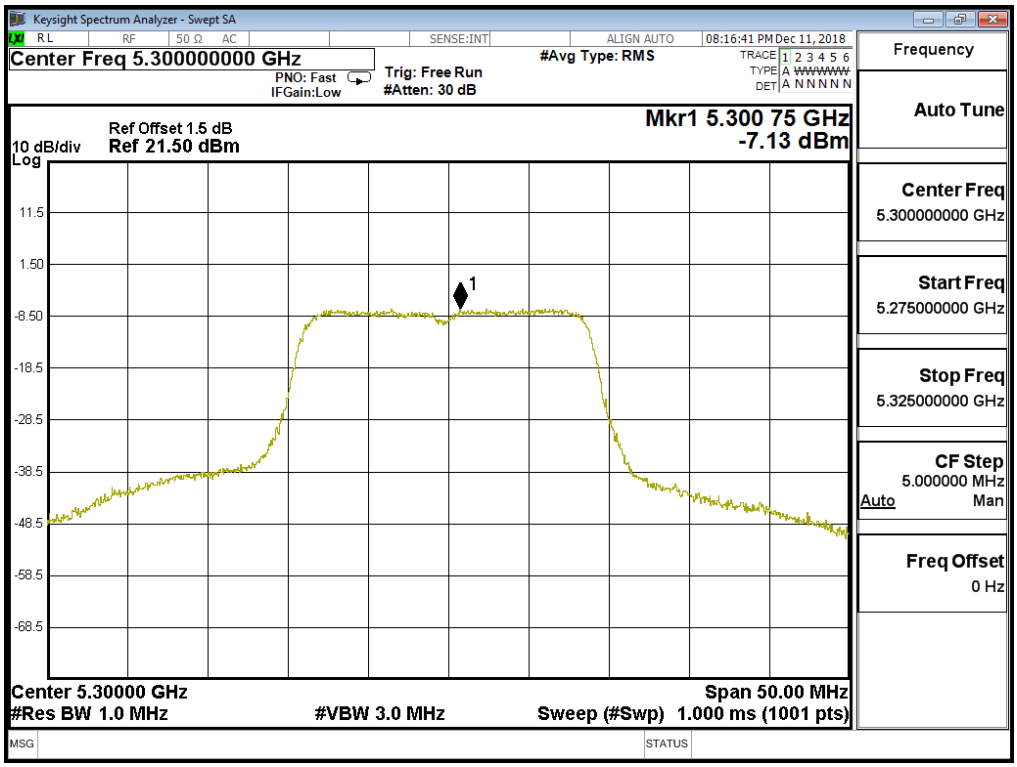
Channel 48:



Channel 52:



Channel 60:



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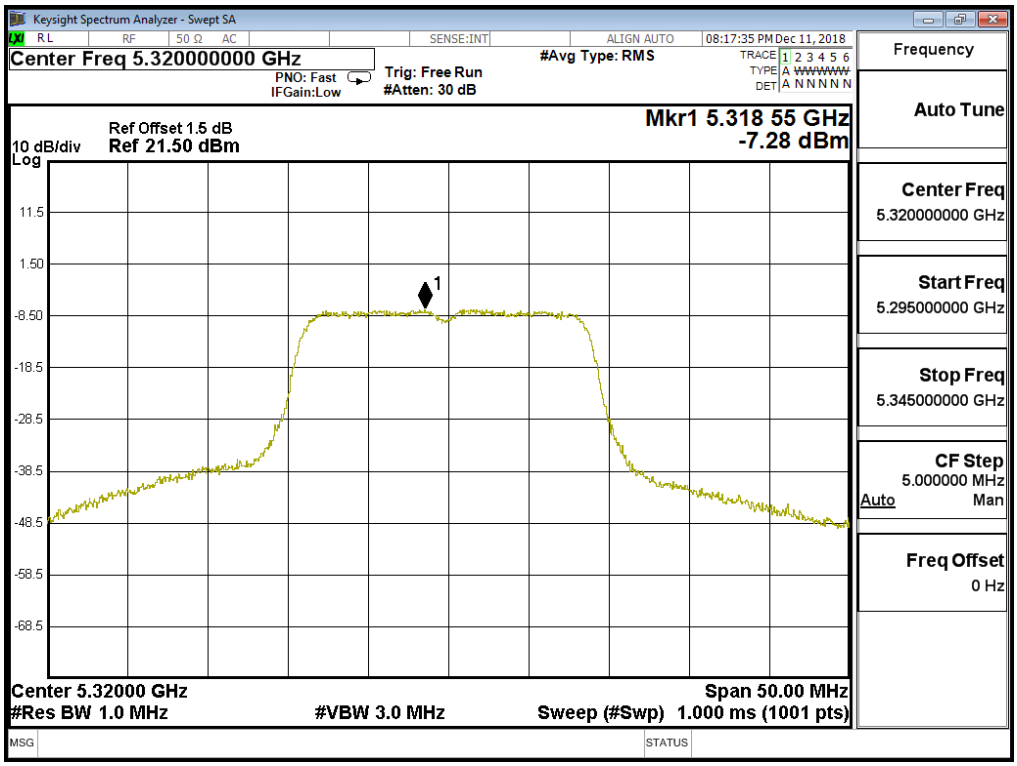
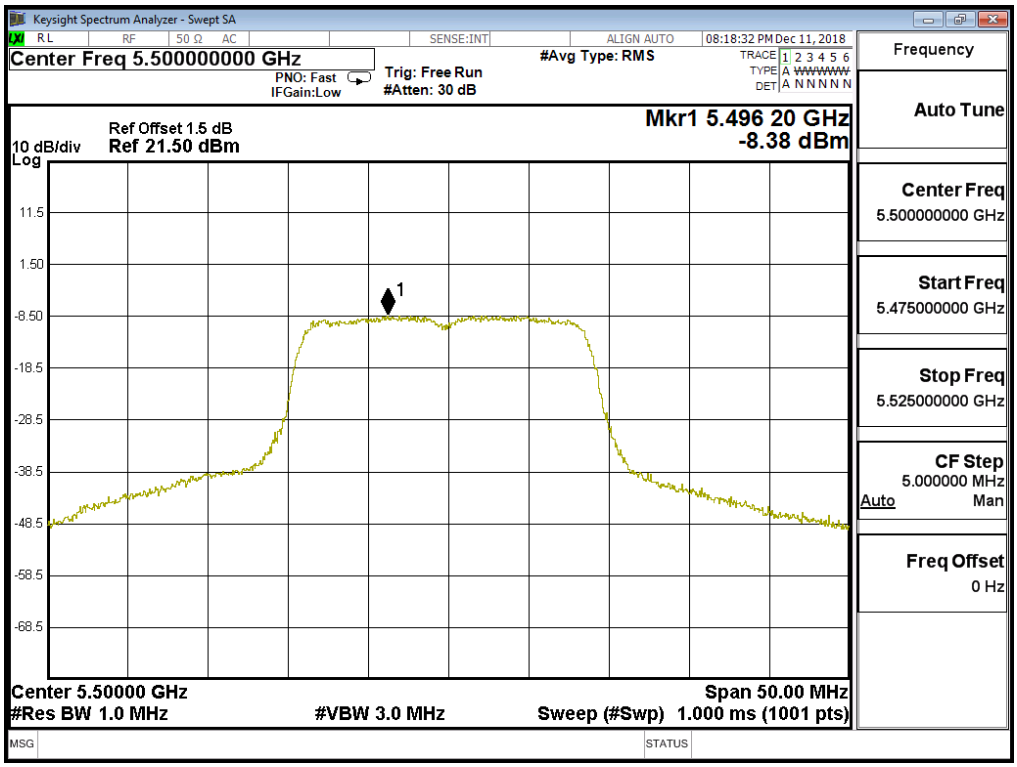


Channel 100:



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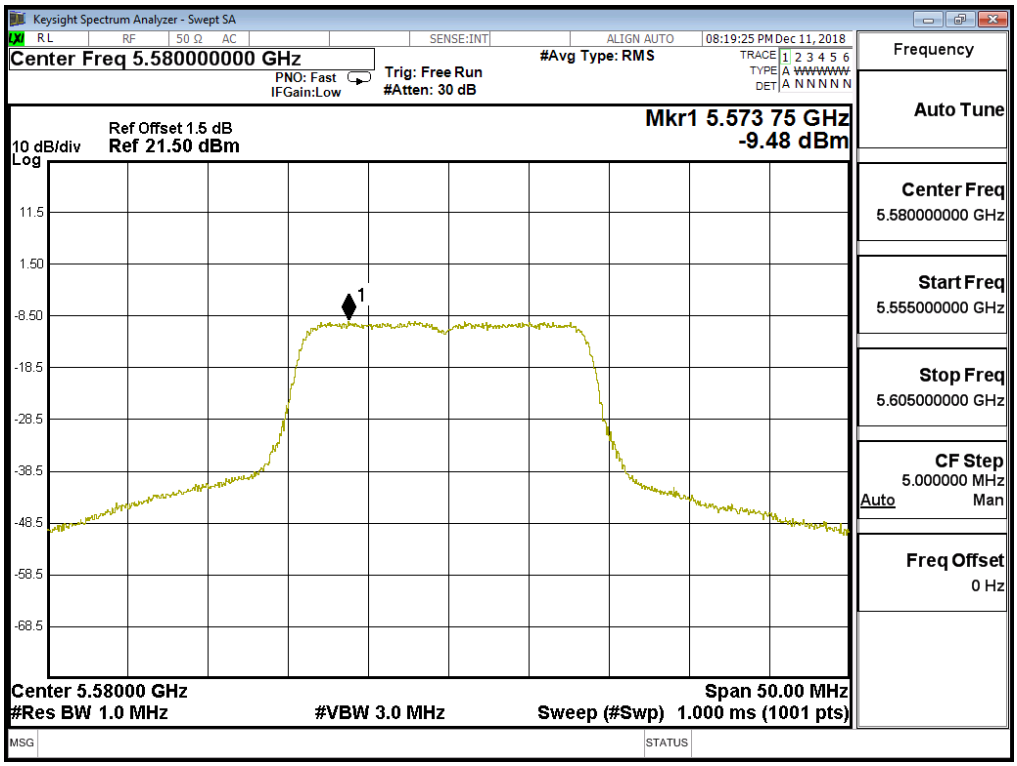

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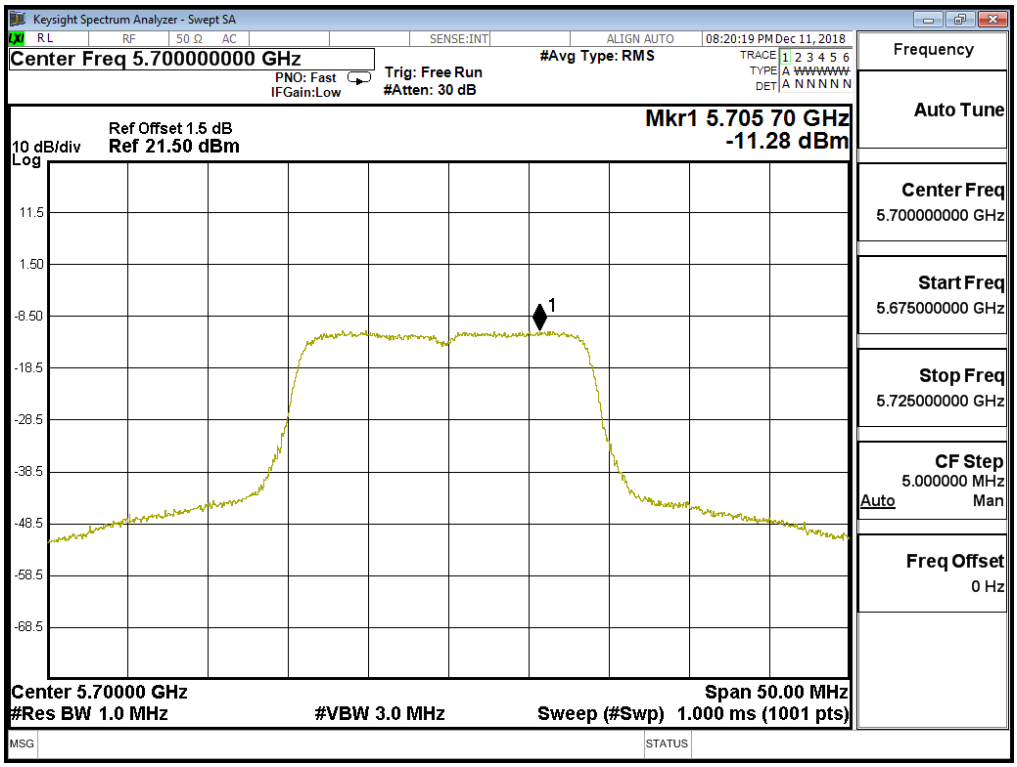
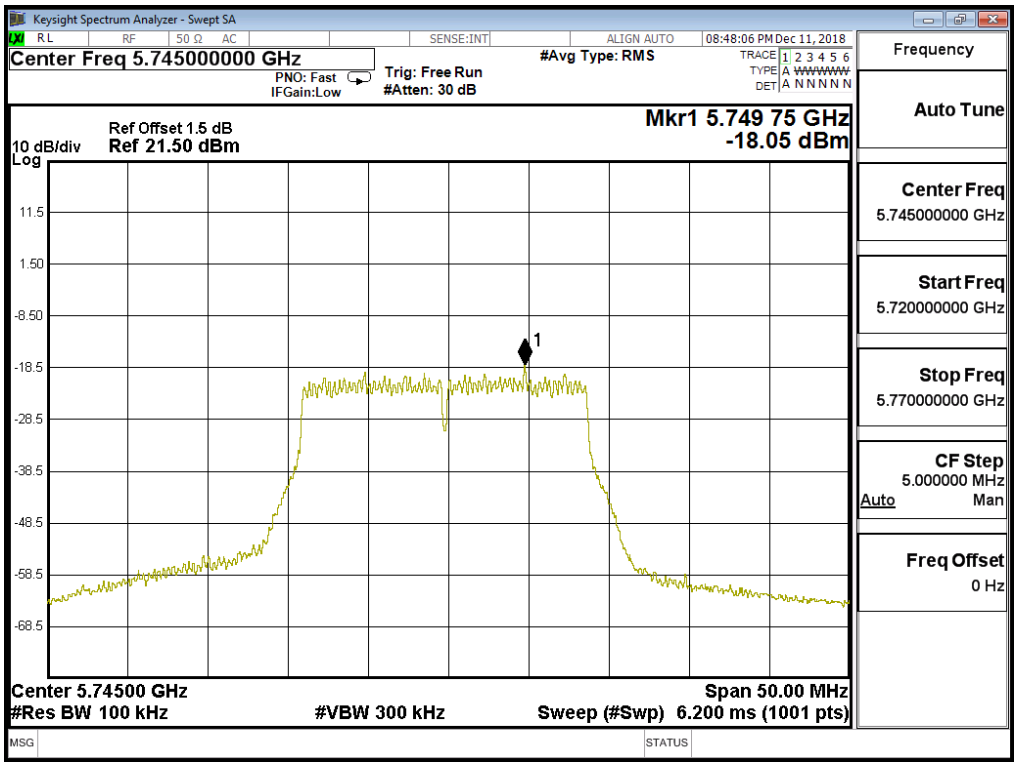
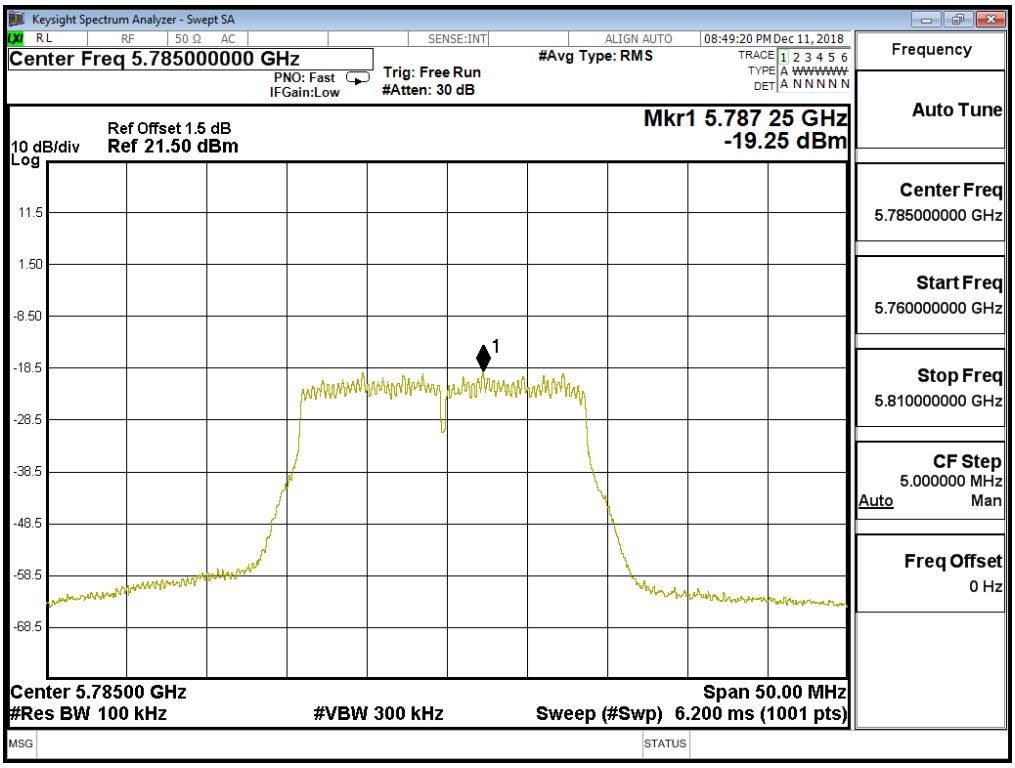


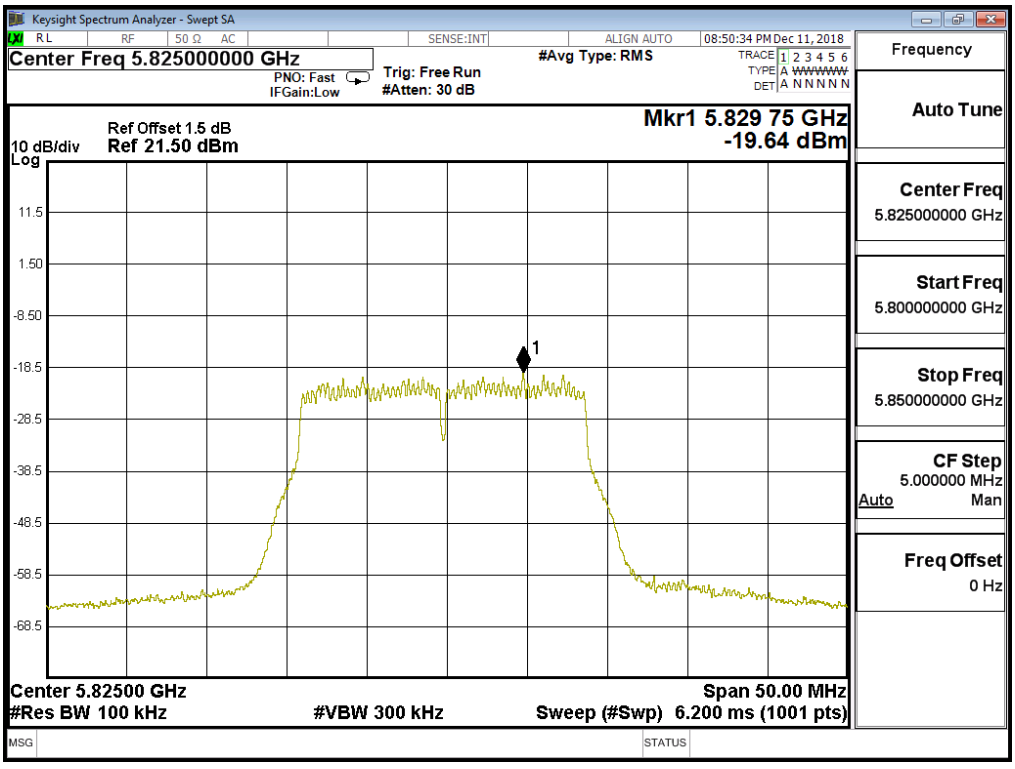
Channel 149



Channel 157



Channel 165



Product : STREAMING SOUNDBAR
Test Item : Peak Power Spectral Density
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-40BW 15Mbps)

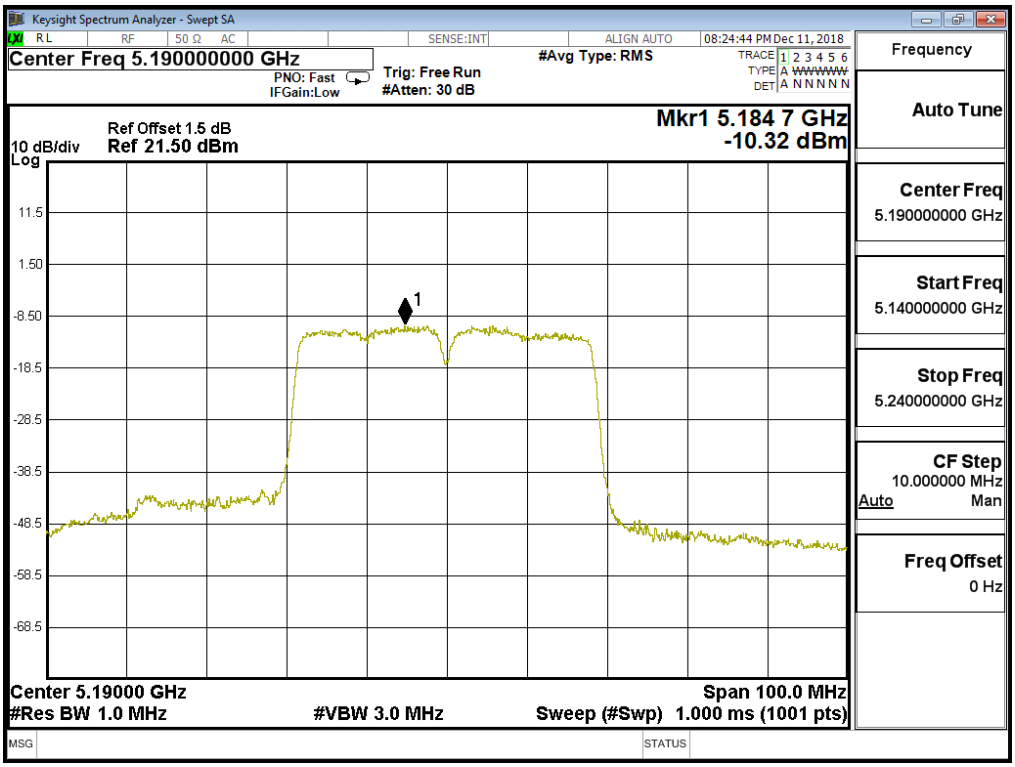
Channel Number	Frequency (MHz)	Data Rata (Mbps)	Measurement Level (dBm)	Duty Factor (dBm)	Total PSD (dBm)	Required Limit (dBm)	Result
38	5190	HT0	-10.320	5.320	-5.000	11	Pass
46	5230	HT0	-10.490	5.320	-5.170	11	Pass
54	5270	HT0	-13.610	5.320	-8.290	11	Pass
62	5310	HT0	-13.970	5.320	-8.650	11	Pass
102	5510	HT0	-14.580	5.320	-9.260	11	Pass
110	5550	HT0	-15.500	5.320	-10.180	11	Pass
134	5670	HT0	-17.540	5.320	-12.220	11	Pass

Note: Total PPSD Value = Measurement Level + Duty Factor

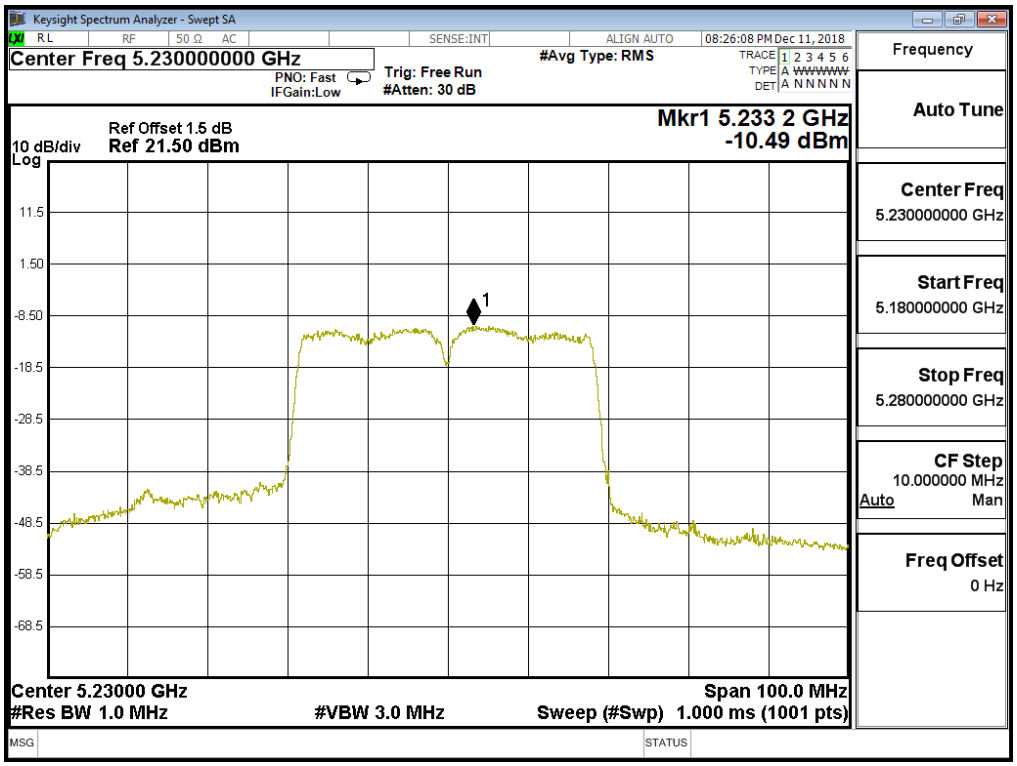
Channel Number	Frequency (MHz)	Data Rata (Mbps)	PPSD (dBm)	Duty Factor (dBm)	BWCF (dB)	Total PPSD (dBm)	Required Limit (dBm)	Result
151	5755	HT0	-24.840	5.320	6.980	-17.860	<30	Pass
159	5795	HT0	-25.160	5.320	6.980	-18.180	<30	Pass

Note: Total PPSD Value = PPSD value + Duty Factor + BWCF

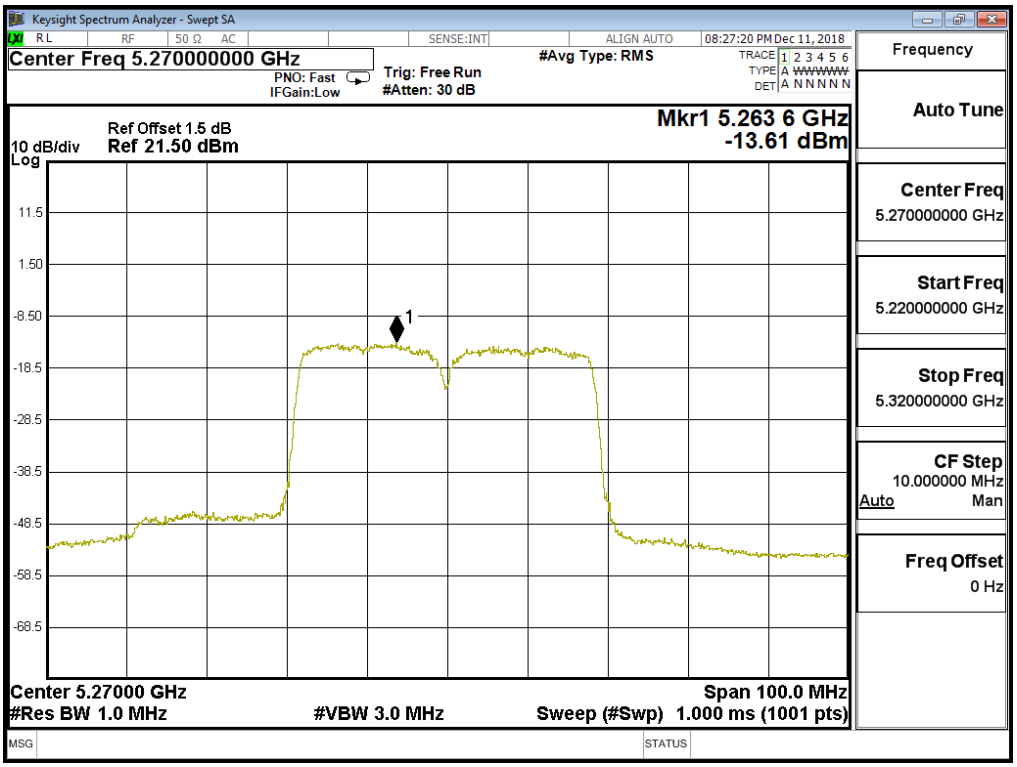
Channel 38



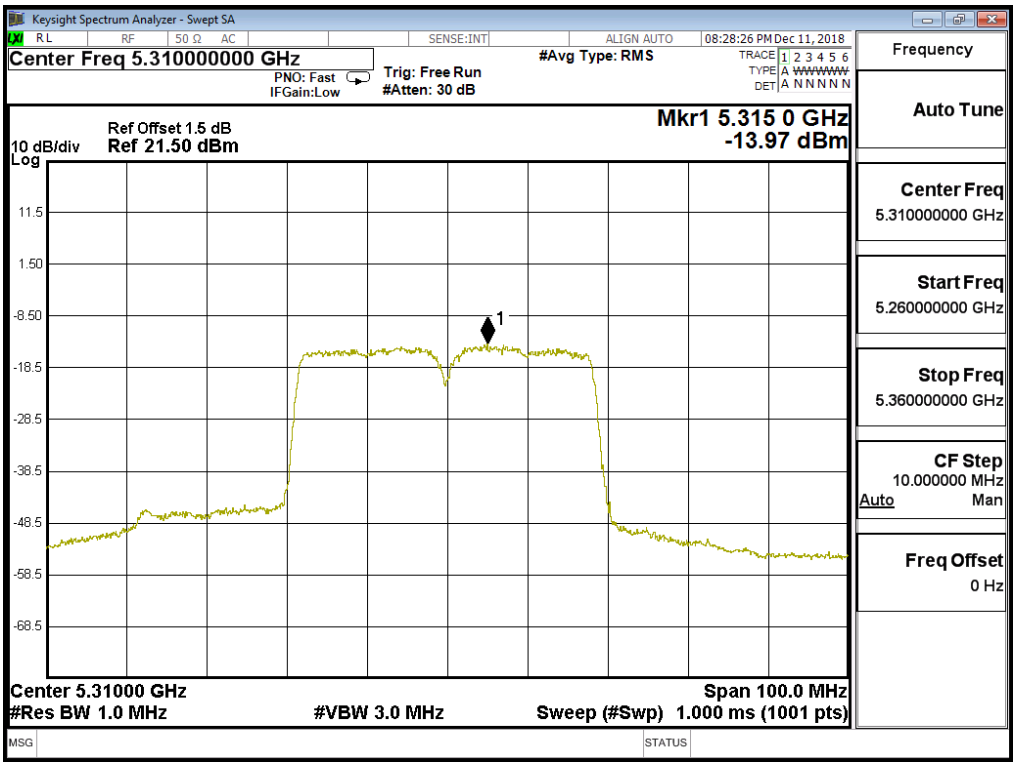
Channel 46



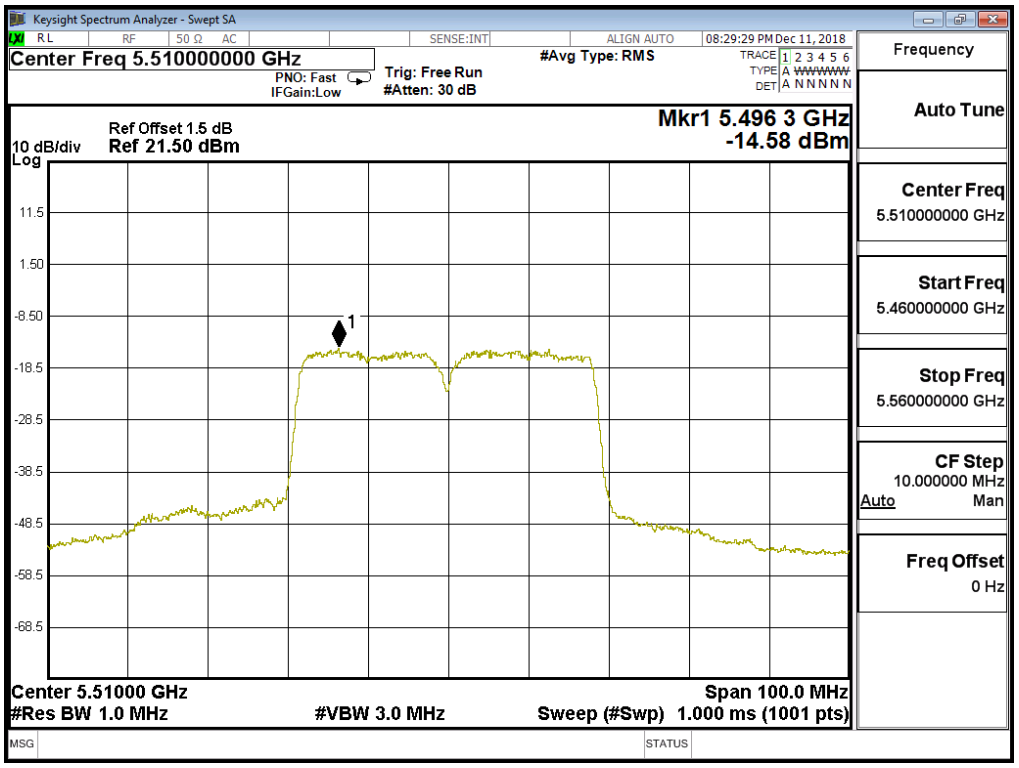
Channel 54



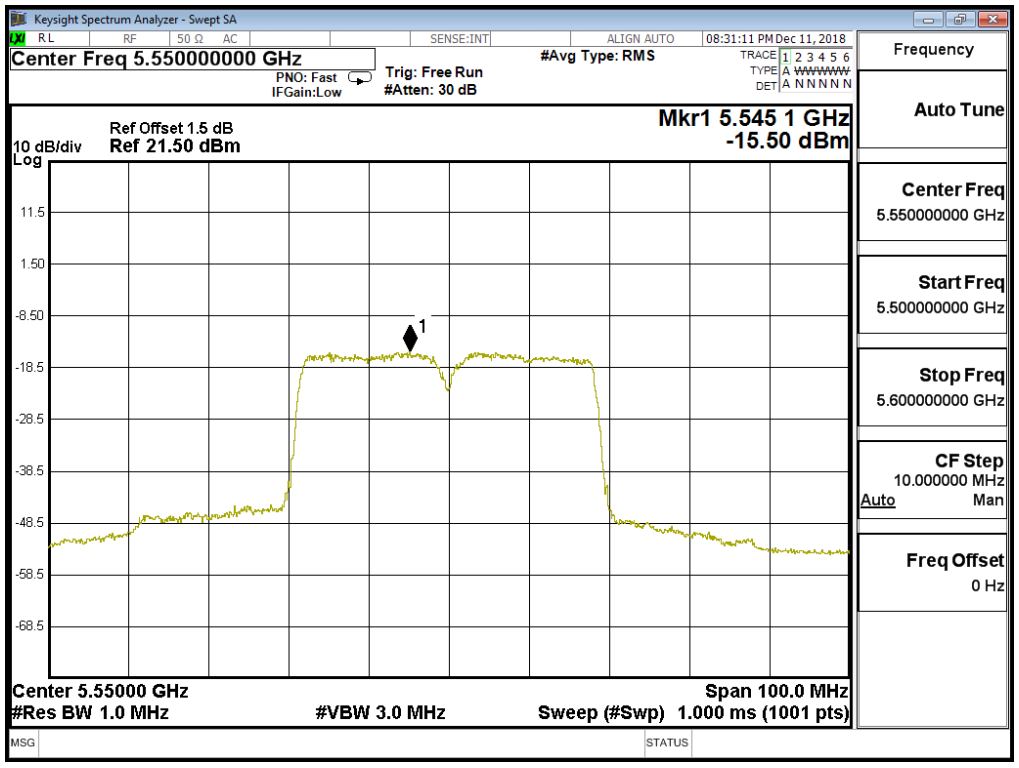
Channel 62



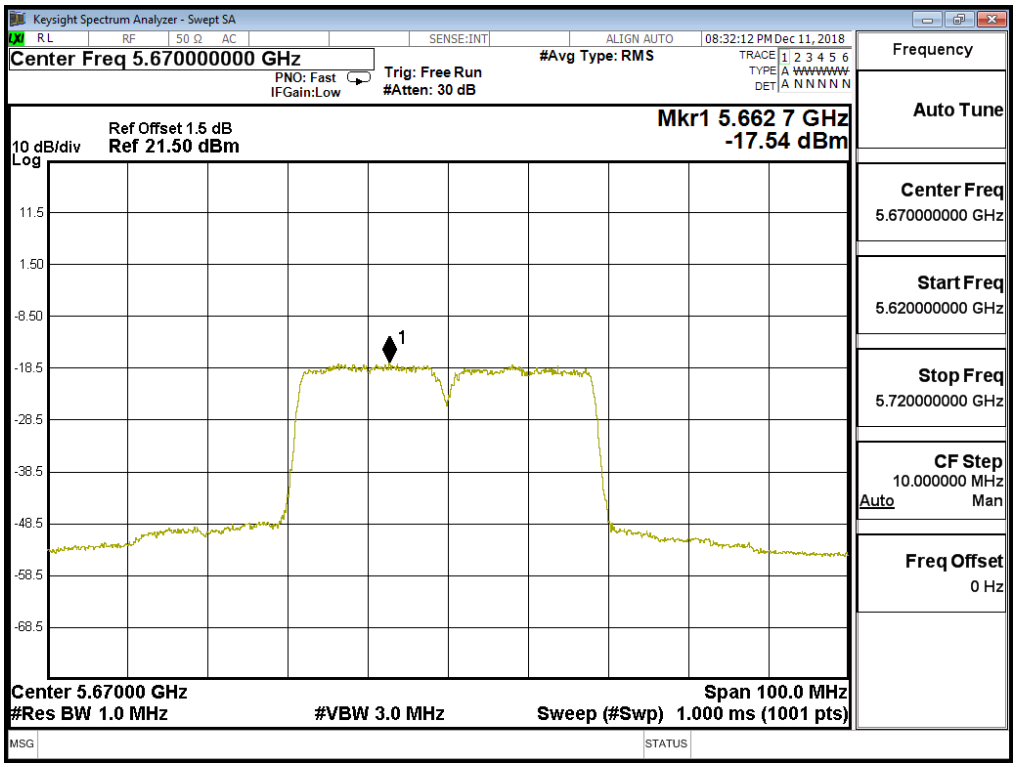
Channel 102



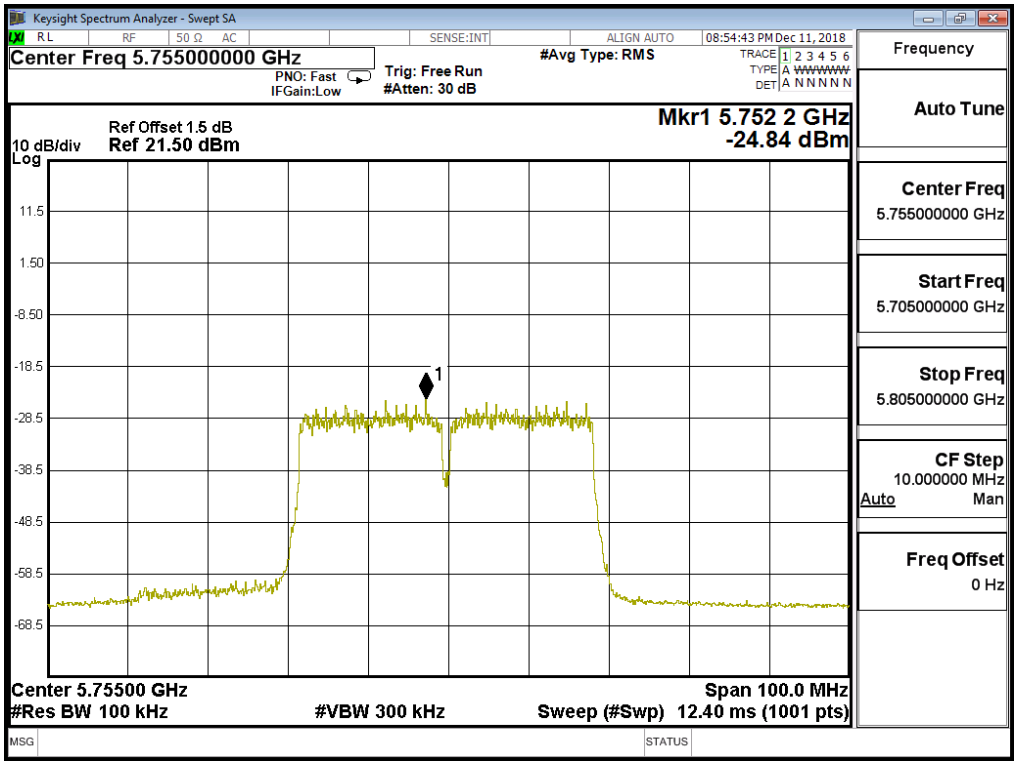
Channel 110



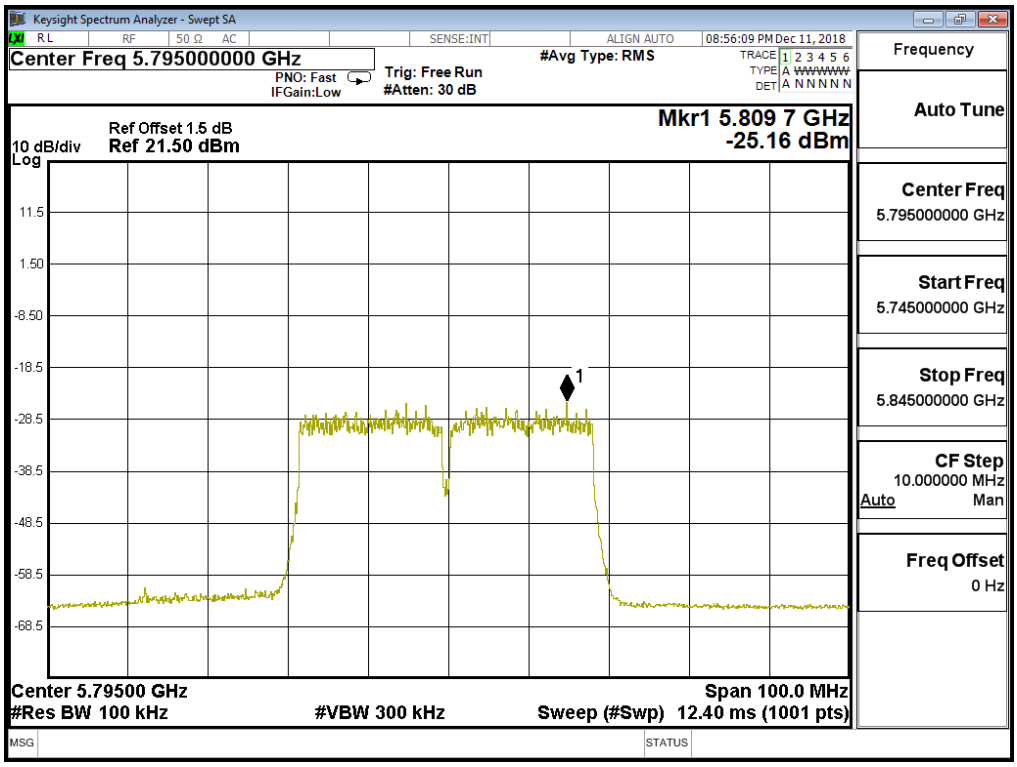
Channel 134



Channel 151



Channel 159

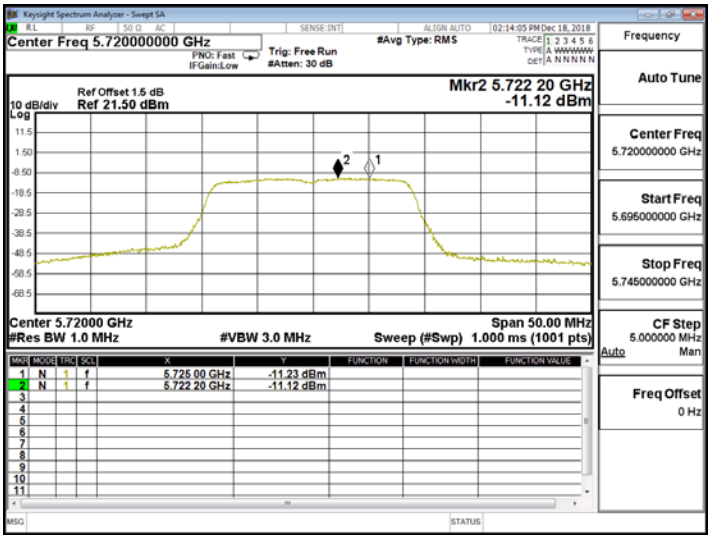

Keysight Spectrum Analyzer - Swept SA
RL
RF
50 Ω AC
SENSE:INT
ALIGN AUTO
08:56:09 PM Dec 11, 2018
Center Freq 5.795000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
TRACE 1 2 3 4 5 6
TYPE A WWWWW
DET A N N N N N
Ref Offset 1.5 dB
10 dB/div
Log
Ref 21.50 dBm
Mkr1 5.809 7 GHz
-25.16 dBm
11.5
1.50
-8.50
-18.5
-28.5
-38.5
-48.5
-58.5
-68.5
1
Center 5.79500 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 100.0 MHz
Sweep (#Swp) 12.40 ms (1001 pts)
MSG
STATUS
Frequency
Auto Tune
Center Freq
5.795000000 GHz
Start Freq
5.745000000 GHz
Stop Freq
5.845000000 GHz
CF Step
10.000000 MHz
Auto
Man
Freq Offset
0 Hz

Product : STREAMING SOUNDBAR
Test Item : Peak Power Spectral Density
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit (802.11ac-20BW-7.2Mbps)

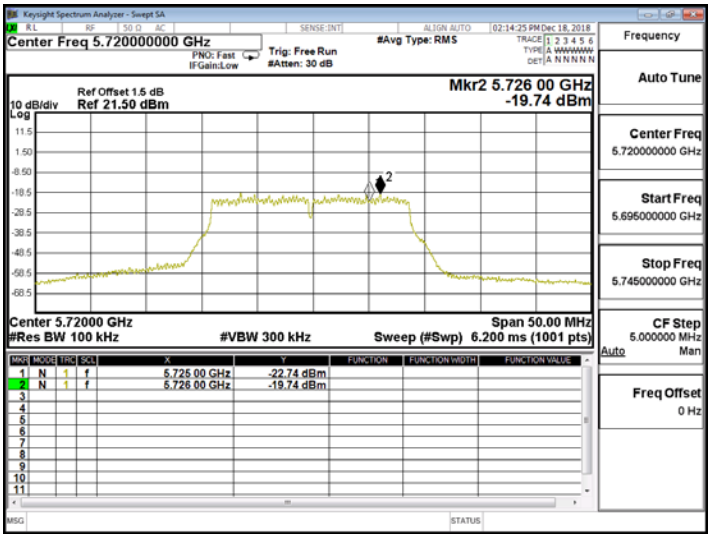
Channel Number	Frequency (MHz)	PPSD (dBm)	BWCF (dB)	Duty Factor (dBm)	Total PPSD (dBm)1	Required Limit (dBm)	Result
144	5720(Band3)	-11.120	--	4.01	-7.110	<11	Pass
144	5720(Band4)	-19.740	6.98	4.01	-8.750	<30	Pass

Note: Total PPSD Value = PPSD value + Duty Factor + BWCF.

Channel 144



Channel 144

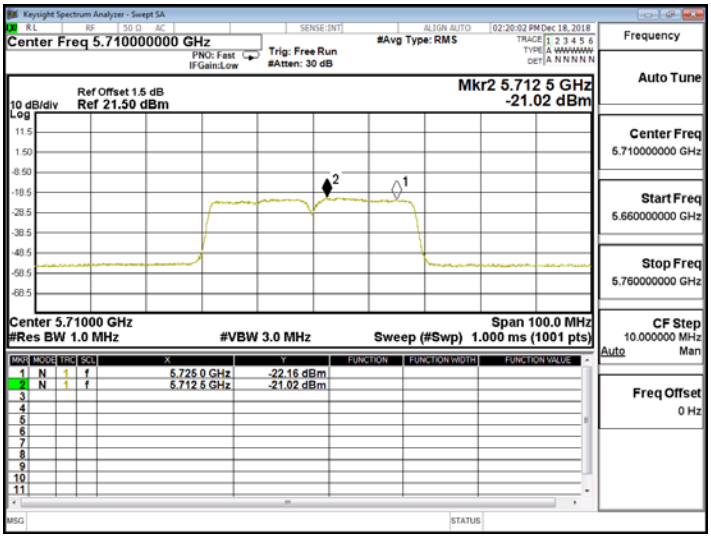


Product : STREAMING SOUNDBAR
Test Item : Peak Power Spectral Density
Test Site : No.3 OATS
Test Mode : Mode 5: Transmit (802.11ac-40BW-15Mbps)

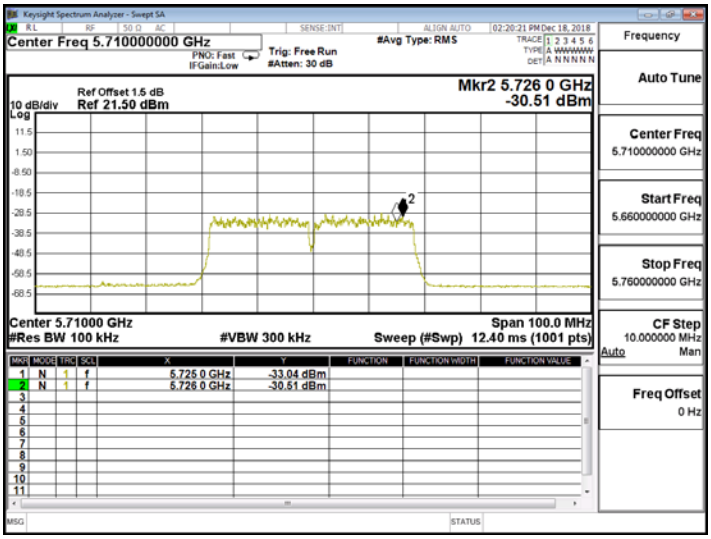
Channel Number	Frequency (MHz)	PPSD (dBm)	BWCF (dB)	Duty Factor (dBm)	Total PPSD (dBm)1	Required Limit (dBm)	Result
142	5710(Band3)	-21.020	--	5.68	-15.340	<11	Pass
142	5710(Band4)	-30.510	6.98	5.68	-17.850	<30	Pass

Note: Total PPSD Value = PPSD value + Duty Factor + BWCF.

Channel 142



Channel 142



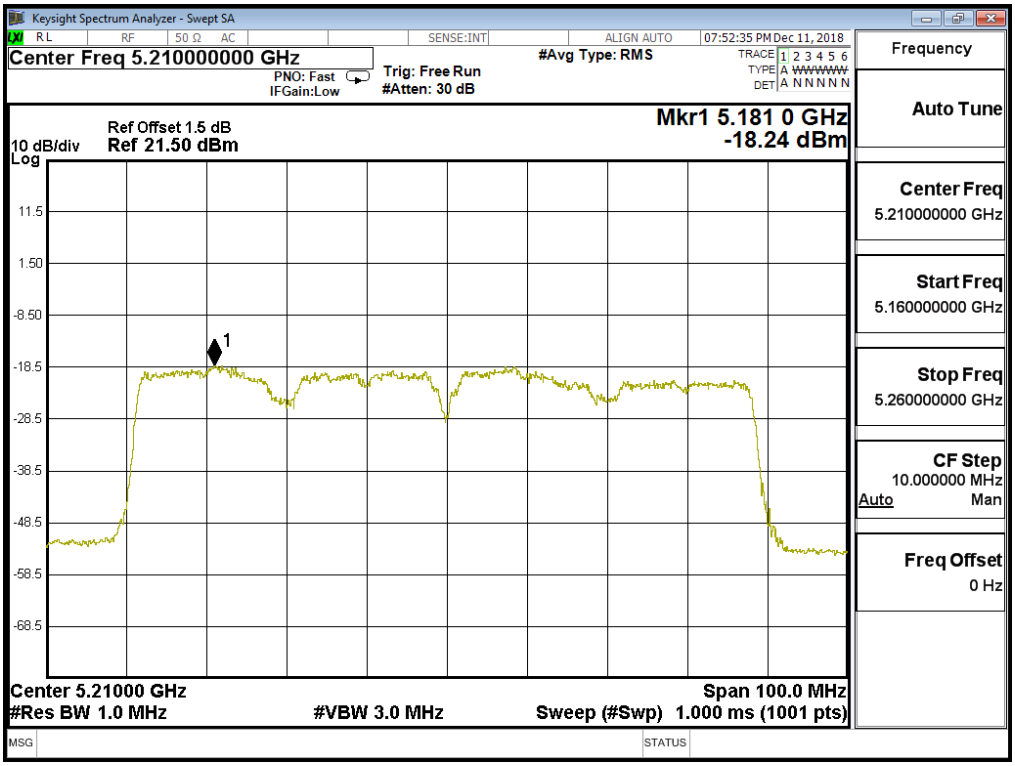
Product : STREAMING SOUNDBAR
Test Item : Peak Power Spectral Density
Test Site : No.3 OATS
Test Mode : Mode 6: Transmit (802.11ac-80BW-32.5Mbps)

Channel Number	Frequency (MHz)	PPSD (dBm)	BWCF (dB)	Duty Factor (dBm)	Total PPSD (dBm)	Result
42	5210	-18.240	--	7.13	-11.110	<11
58	5290	-18.350	--	7.13	-11.220	<11
106	5530	-21.060	--	7.13	-13.930	<11
122	5610	-22.450	--	7.13	-15.320	<11
138	5690(Band3)	-20.230	--	7.13	-13.100	<11
138	5690(Band4)	-28.520	6.98	7.13	-14.410	<30
155	5775	-30.240	6.98	7.13	-16.130	<30

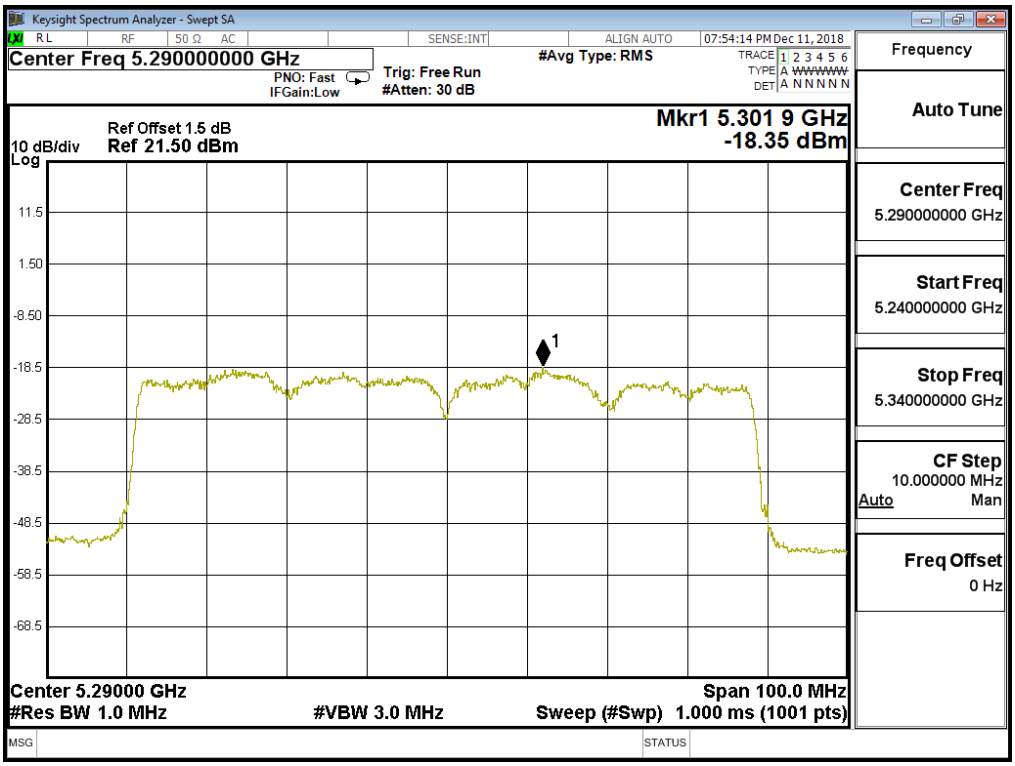
Note: Total PPSD Value = PPSD value + Duty Factor + BWCF.

.

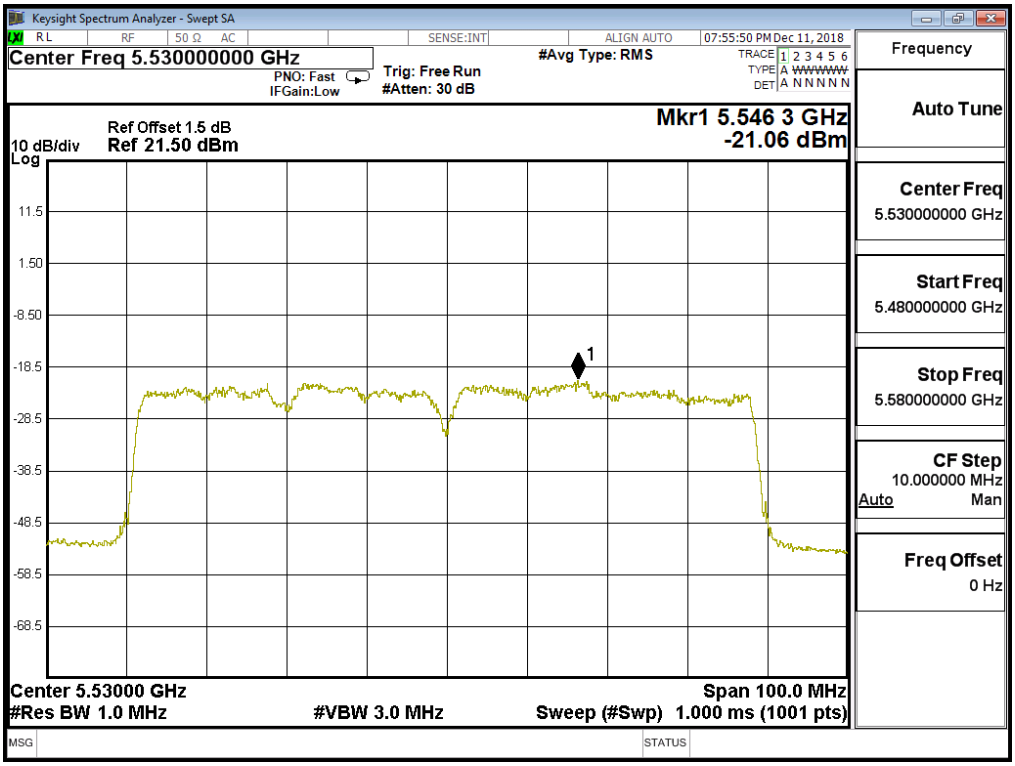
Channel 42



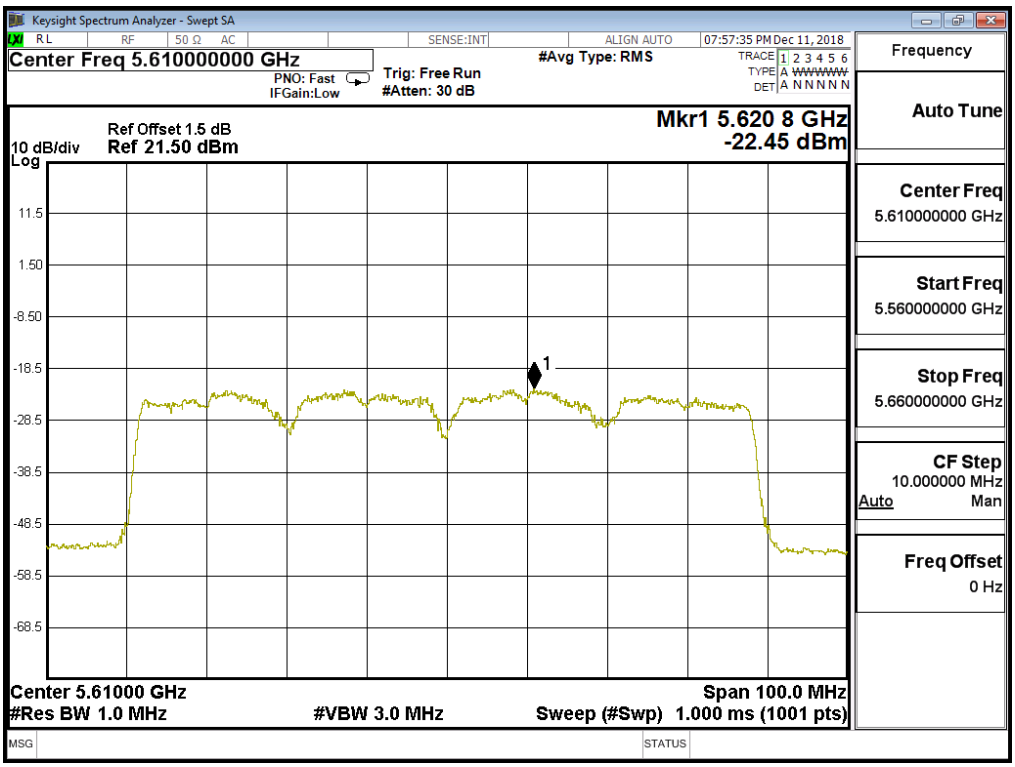
Channel 58



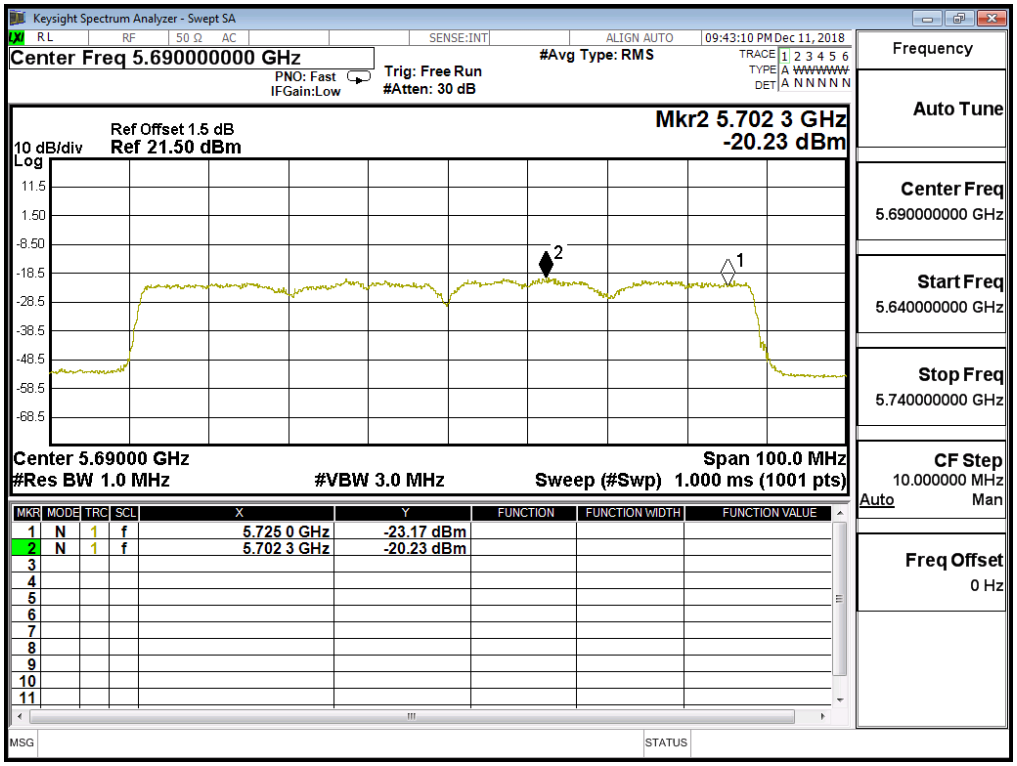
Channel 106



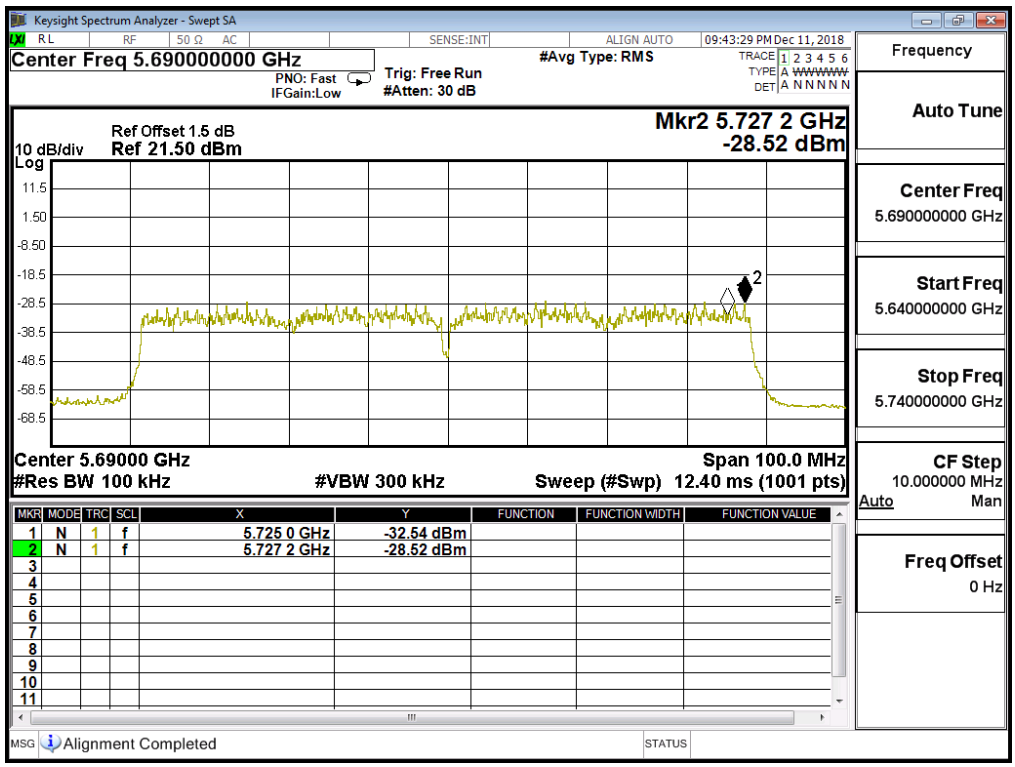
Channel 122



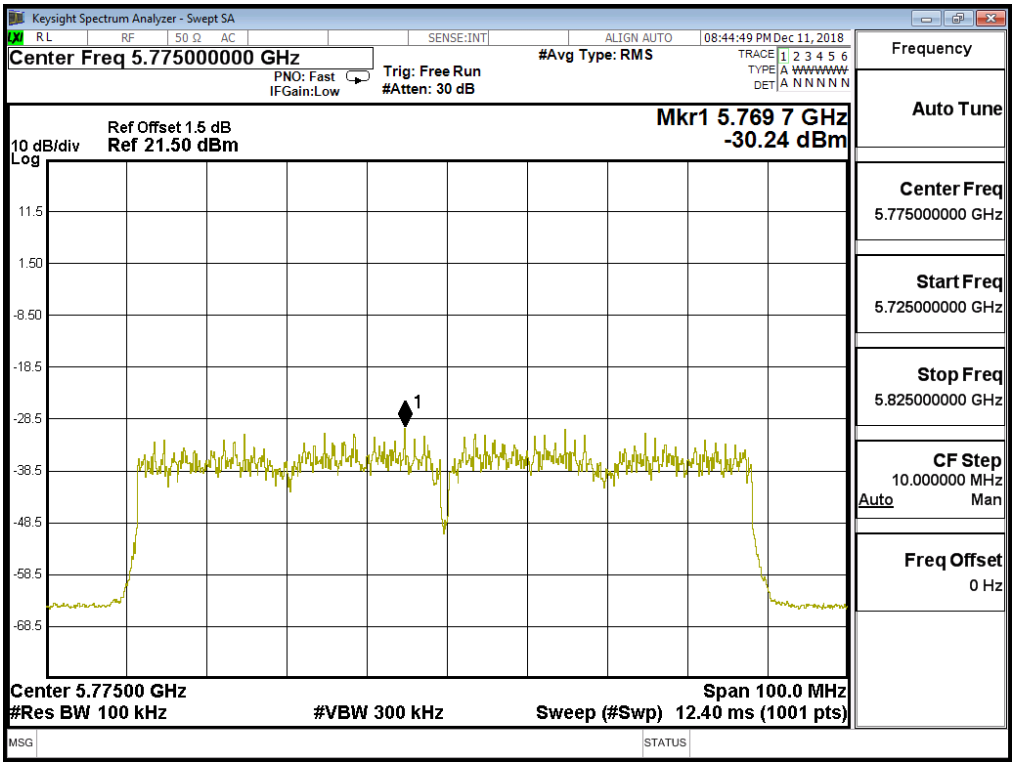
Channel 138



Channel 138



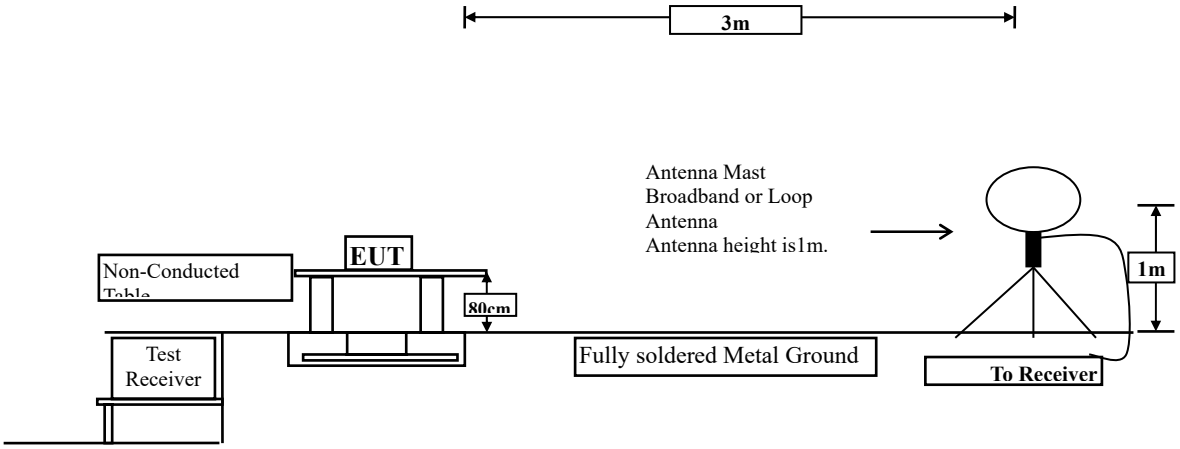
Channel 155


Keysight Spectrum Analyzer - Swept SA
RL
RF
50 Ω AC
SENSE:INT
ALIGN AUTO
08:44:49 PM Dec 11, 2018
Center Freq 5.775000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
TRACE 1 2 3 4 5 6
TYPE A WWWWW
DET A N N N N N
Ref Offset 1.5 dB
10 dB/div
Log
Ref 21.50 dBm
Mkr1 5.769 7 GHz
-30.24 dBm
11.5
1.50
-8.50
-18.5
-28.5
-38.5
-48.5
-58.5
-68.5
1
Center 5.77500 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 100.0 MHz
Sweep (#Swp) 12.40 ms (1001 pts)
MSG
STATUS
Frequency
Auto Tune
Center Freq
5.775000000 GHz
Start Freq
5.725000000 GHz
Stop Freq
5.825000000 GHz
CF Step
10.000000 MHz
Auto
Man
Freq Offset
0 Hz

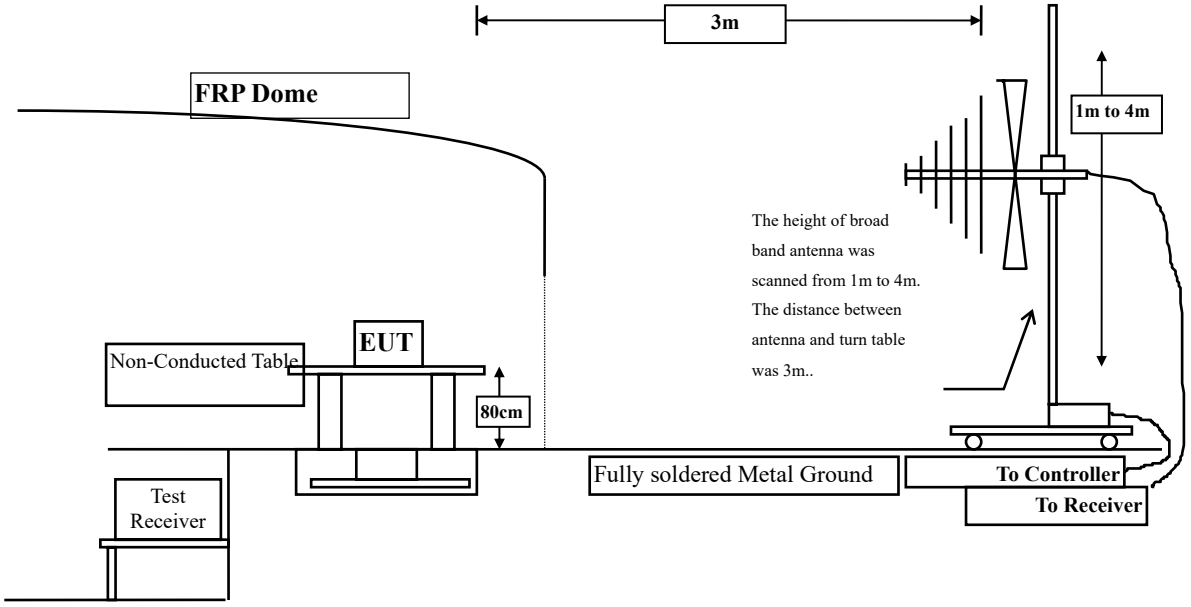
5. Radiated Emission

5.1. Test Setup

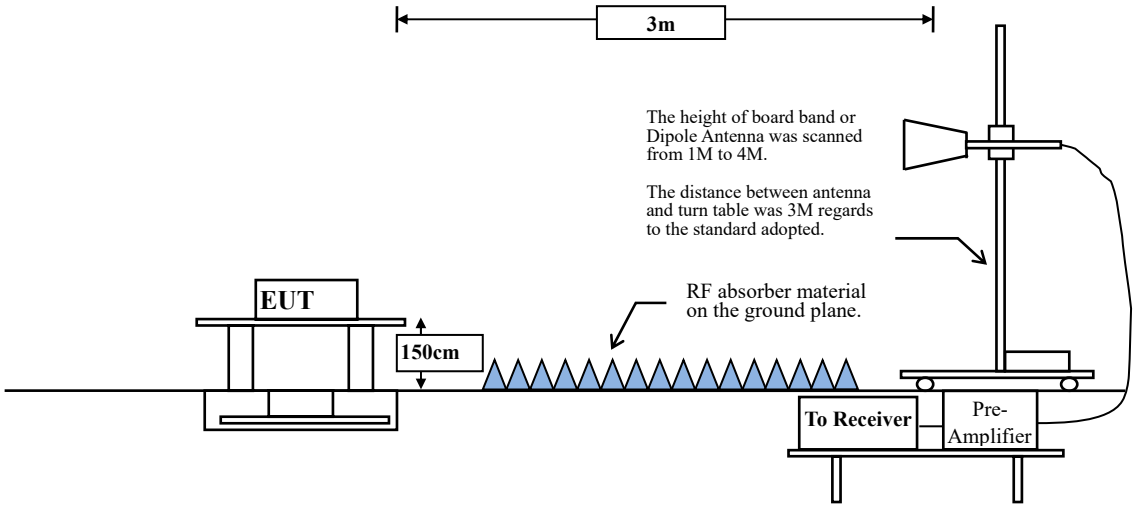
Radiated Emission Under 30MHz



Radiated Emission Below 1GHz



Radiated Emission Above 1GHz



5.2. Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

FCC Part 15 Subpart C Paragraph 15.209(a) Limits		
Frequency MHz	Field strength (microvolts/meter)	Measurement distance (meter)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

Remarks: E field strength (dBμV/m) = 20 log E field strength (uV/m)

5.3. Test Procedure

The EUT was setup according to ANSI C63.10, 2013 and tested according to FCC KDB-789033 test procedure for compliance to FCC 47CFR 15. 407 requirements.

Measuring the frequency range below 1GHz, the EUT is placed on a turn table which is 0.8 meter above ground,when measuring the frequency range above 1GHz, the EUT is placed on a turn table which is 1.5 meter above ground.

The turn table is rotated 360 degrees to determine the position of the maximum emission level.

The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna is scanned between 1 meter and 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10: 2013 on radiated measurement.

The resolution bandwidth below 30MHz setting on the field strength meter is 9kHz and 30MHz~1GHz is 120kHz and above 1GHz is 1MHz.

Radiated emission measurements below 30MHz are made using Loop Antenna and 30MHz~1GHz are made using broadband Bilog antenna and above 1GHz are made using Horn Antennas.

The measurement is divided into the Preliminary Measurement and the Final Measurement.

The suspected frequencies are searched for in Preliminary Measurement with the measurement antenna kept pointed at the source of the emission both in azimuth and elevation, with the polarization of the antenna oriented for maximum response. The antenna is pointed at an angle towards the source of the emission, and the EUT is rotated in both height and polarization to maximize the measured emission. The emission is kept within the illumination area of the 3 dB bandwidth of the antenna.

The worst radiated emission is measured in the Open Area Test Site on the Final Measurement.

The measurement frequency range form 9kHz - 10th Harmonic of fundamental was investigated.

RBW and VBW Parameter setting:

According to KDB 789033 section II.G.5 Procedure for Unwanted Maximum Emissions Measurements above 1000 MHz.

RBW = 1MHz.

VBW ≥ 3MHz.

According to KDB 789033 section II.G.6 Procedures for Average Unwanted Emissions Measurements above 1000 MHz.

RBW = 1MHz.

VBW = 10Hz, when duty cycle ≥ 98 %

VBW ≥ 1/T, when duty cycle < 98 %

(T refers to the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.)

5GHz band	Duty Cycle (%)	T (ms)	1/T (Hz)	VBW (Hz)
802.11a	43.95	0.2420	4132	5kHz
802.11n20	42.90	0.2275	4395	5kHz
802.11n40	29.39	0.1261	7931	8kHz
802.11ac20	39.72	0.1990	5025	6kHz
802.11ac40	27.05	0.1120	8929	10kHz
802.11ac80	19.38	0.0725	13801	20kHz

Note: Duty Cycle Refer to Section 8

5.4. Uncertainty

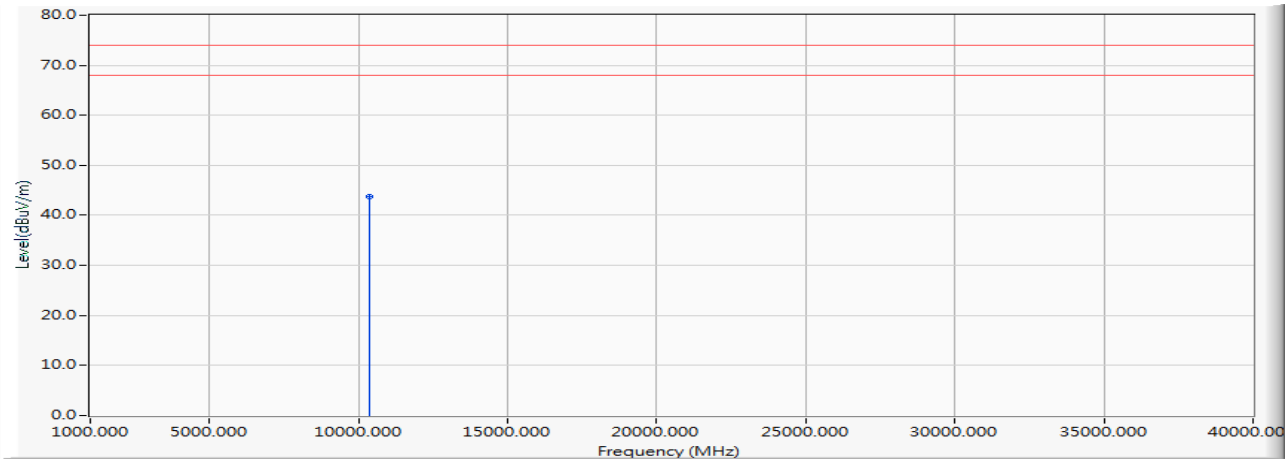
± 4.08 dB above 1GHz

± 4.22 dB below 1GHz

5.5. Test Result of Radiated Emission

Product	:	STREAMING SOUNDBAR
Test Item	:	Harmonic Radiated Emission Data
Test Site	:	No.3 OATS
Test Date	:	2018/12/11
Test Mode	:	Mode 1: Transmit (802.11a-6Mbps) (5180MHz)

Horizontal:



Vertical: