



FCC RADIO TEST REPORT

Applicant : Ubiquiti Inc.
Address : 685 Third Avenue, New York, New York 10017 USA
Equipment : AmpliFi Router
Model No. : AFi-R, AFi-R-G
Trade Name : ULABS
FCC ID : SWX-AFRP

I HEREBY CERTIFY THAT :

The sample was received on Jun. 27, 2019 and the testing was completed on Oct. 08, 2019 at CerpPASS Technology Corp. The test result refers exclusively to the test presented test model / sample. Without written approval of CerpPASS Technology Corp., the test report shall not be reproduced except in full.

Approved by:

Mark Liao / Supervisor

Laboratory Accreditation:

CerpPASS Technology Corporation Test Laboratory





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1. Summary of Test Procedure and Test Results

1.1. Applicable Standards

ANSI C63.4:2014

ANSI C63.10:2013

FCC Rules and Regulations Part 15 Subpart E §15.407

KDB789033

FCC Rule	Description of Test	Result
15.203	Antenna Requirement	PASS
15.207(a)	AC Power Line Conducted Emission	PASS
15.407(b) 15.209	Radiated Spurious Emission	PASS
15.407(a)	26 dB & Occupied Bandwidth	PASS
15.407	6 dB Bandwidth	PASS
15.407 (a) & (a)(3)	Average Power	PASS
15.407(a)	Power Spectral Density	PASS
15.407(g)	Frequency Stability	PASS
2.1091	Radio Frequency Exposure	PASS

*The lab has lowered the uncertainty risk of test equipment, environment, and staff technicians according to ISO-IEC17025. Therefore we define test result as compliant when it complies with the standard without further evaluation of test result uncertainty.

*This EUT has been also tested and compiled with the requirement of FCC Part 15, Subpart B, recorded in a separate test report(TEFD1906241).



2. Test Configuration of Equipment under Test

2.1. Feature of Equipment under Test

Frequency Range	BT / BLE: 2400-2483.5MHz 802.11b/g/n: 2400-2483.5MHz 802.11a/n/ac: 5150-5250MHz, 5725-5850MHz
Modulation Type	BT: GFSK, $\pi/4$ -DQPSK, 8DPSK BLE: GFSK 802.11b: CCK, DQPSK, DBPSK 802.11g/n/a: BPSK, QPSK, 16QAM, 64QAM 802.11ac: BPSK, QPSK, 16QAM, 64QAM, 256QAM
Modulation Technology	DSSS, OFDM, FHSS, DTS
Data Rate	BT: GFSK: 1Mbps, $\pi/4$ -DQPSK: 2Mbps, 8DPSK: 3Mbps BLE: GFSK: 1Mbps WLAN: For 2.4G 802.11b: 1, 2, 5.5, 11Mbps 802.11g: 6, 9, 12, 18, 24, 36, 48, 54Mbps 802.11n: MCS0 – MCS23, HT20/40 For 5G 802.11a: 6, 9, 12, 18, 24, 36, 48, 54Mbps 802.11n: MCS0 – MCS23, HT20/40 802.11ac: MCS0 – MCS9, VHT20/40/80
Antenna Type	Internal Antenna
Antenna Gain	For BT/BLE 2400-2480MHz: 1dBi For WLAN: 2400-2483.5MHz: ANT A / B / C: 4dBi 5150-5250MHz: ANT A / B / C: 4dBi 5725-5850MHz: ANT A / B / C: 4dBi
Adapter	UBIQUITI / GP-M015-QC INPUT: 100-240Vac, 50/60Hz, 0.5A MAX OUTPUT: 5Vdc, 3.0A or 9Vdc, 1.7A or 12Vdc, 1.25A
Firmware Number	v3.3.0

Note: For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

Difference description

Model No.	Remark
AFi-R	The differences between these two model numbers is housing color.
AFi-R-G	



2.2. Carrier Frequency of Channels

Band: 5150MHz-5250MHz

802.11a, 802.11n HT20, 802.11ac VHT20

Channel	Frequency(MHz)	Channel	Frequency(MHz)
*36	5180	*44	5220
40	5200	*48	5240

802.11n HT40, 802.11ac VHT40

Channel	Frequency(MHz)	Channel	Frequency(MHz)
*38	5190	*46	5230

802.11ac VHT80

Channel	Frequency(MHz)
*42	5210

Band: 5725MHz -5850MHz

802.11a, 802.11n HT20, 802.11ac VHT20

Channel	Frequency(MHz)	Channel	Frequency(MHz)
*149	5745	161	5805
153	5765	*165	5825
*157	5785		

802.11n HT40, 802.11ac VHT40

Channel	Frequency(MHz)	Channel	Frequency(MHz)
*151	5755	*159	5795

802.11ac VHT80

Channel	Frequency(MHz)
*155	5775

Note: Channels remarked * are selected to perform test.



2.3. Test Mode and Test Software

- a. During testing, the interface cables and equipment positions were varied according to ANSI C63.10.
- b. The complete test system included remote workstation and EUT for RF test. The remote workstation included Notebook.
- c. An executive program, " Art2 command " under Windows OS system was executed to transmit and receive data via WLAN.
- d. The following test modes were performed for the test:

Conducted Emissions from the AC mains power ports	
Test Mode	Operating Description
1	802.11a (6Mbps)
2	802.11ac VHT20 (6.5Mbps)
3	802.11ac VHT40 (13.5Mbps)
4	802.11ac VHT80 (29.3Mbps)
caused "Test Mode 3" generated the worst case, it was reported as the final data.	
Radiation Emissions (30MHz ~ 1GHz)	
Test Mode	Operating Description
1	802.11a (6Mbps)
2	802.11ac VHT20 (6.5Mbps)
3	802.11ac VHT40 (13.5Mbps)
4	802.11ac VHT80 (29.3Mbps)
caused "Test Mode 3" generated the worst case, they were reported as the final data.	
Radiation Emissions (1GHz ~ 40GHz)	
Test Mode	Operating Description
1	802.11a (6Mbps)
2	802.11ac VHT20 (6.5Mbps)
3	802.11ac VHT40 (13.5Mbps)
4	802.11ac VHT80 (29.3Mbps)
caused "Test Mode 1~4" generated the worst case, they were reported as the final data.	

2.4. Description of Test System

N/A

**2.5. General Information of Test**

Test Site	Cerpass Technology Corporation Test Laboratory Address: No.10, Ln. 2, Lianfu St., Luzhu Dist., Taoyuan City 33848, Taiwan (R.O.C.) Tel:+886-3-3226-888 Fax:+886-3-3226-881	
	FCC	TW1439, TW1079
	IC	4934E-1, 4934E-2
	VCCI	T-2205 for Telecommunication test C-4663 for Conducted emission test R-4218 for Radiated emission test G-10812, G-10813 for radiated disturbance above 1GHz
Frequency Range Investigated:	Conducted: from 150kHz to 30 MHz Radiation: from 30 MHz to 40,000MHz	
Test Distance:	The test distance of radiated emission from antenna to EUT is 3 M.	

Test Item	Test Site	Finish Date	Environmental Conditions	Tested By
RF Conducted	RFCON01-NK	2019/08/01	24°C / 62%	Vic Yeh
Radiated Emissions	3M02-NK	2019/10/08	24°C / 50%	Vic Yeh
RF Conduction	CON01-NK	2019/10/05	20°C / 40%	Leon Huang



2.6. Measurement Uncertainty

Measurement Item	Uncertainty
Radiated Spurious Emission(9KHz~30MHz)	±3.405dB
Radiated Spurious Emission(30MHz~1GHz)	±5.326dB
Radiated Spurious Emission(1GHz~40GHz)	±5.011dB
6dB Bandwidth	±4.407%
26dB Bandwidth	±4.459%
Occupied Bandwidth	±4.403%
Peak Output Power(Conducted Power Meter)	±1.31dB
Power Spectral Density	±2.106dB
Duty Cycle	±0.17%
Frequency Stability	±156.543Hz
Temperature	±1.2°C
Humidity	±2.7%



3. Test Equipment and Ancillaries Used for Tests

Test Item	Radiated Emissions				
Test Site	Semi Anechoic Room(3M02-NK)				
Instrument	Manufacturer	Model No	Serial No	Calibration Date	Valid Date
Bilog Antenna	Schwarzbeck	VULB9168	275	2019/09/24	2020/09/23
Bilog Antenna	Schwarzbeck	VULB9168	369	2019/03/29	2020/03/28
Active Loop Antenna	EMCO	6507	40855	2019/05/24	2020/05/23
Horn Antenna	EMCO	3115	31589	2019/04/01	2020/03/31
Horn Antenna	EMCO	3116	31974	2019/09/17	2020/09/16
EMI Receiver	ROHDE & SCHWARZ	ESCI	101423	2019/05/14	2020/05/13
Spectrum Analyzer	ROHDE & SCHWARZ	FSP 40	100047	2019/03/28	2020/03/27
Spectrum Analyzer	ROHDE & SCHWARZ	FSV 40-N	102151	2019/08/02	2020/08/01
Preamplifier	EM Electronics corp.	EM330	60660	2019/03/11	2020/03/10
Preamplifier	EMC INSTRUMENTS	EMC051845SE	980333	2019/09/20	2020/09/19
Preamplifier	Agilent	8449B	3008A01954	2019/03/11	2020/03/10
Preamplifier	EMC INSTRUMENTS	EMC184045	980065	2018/10/31	2019/10/30
Bluetooth Tester	ROHDE & SCHWARZ	CBT	101133	2019/04/07	2020/04/06
Cable-3in1(30M-1G)	HARBOUR INDUSTRIES	LL142	CCE1315	2019/04/09	2020/04/08
Cable-3in1(30M-1G)	HARBOUR INDUSTRIES	LL142	CCE1316	2019/09/20	2020/09/19
Cable-0.5m(1G-40G)	HUBER SUHNER	SUCOFLEX 100	805443/4	2019/05/20	2020/05/19
Cable-3m(1G-40G)	HUBER SUHNER	SUCOFLEX 100	805796/4	2019/05/20	2020/05/19
Cable-8m(1G-40G)	HUBER SUHNER	SUCOFLEX 100	805795/4	2019/05/20	2020/05/19
E3	AUDIX	v8.2014-8-6	RK-000529	NA	NA

Test Item	RF Conducted				
Test Site	RFCON01-NK				
Instrument	Manufacturer	Model No	Serial No	Calibration Date	Valid Date
Spectrum Analyzer	ROHDE & SCHWARZ	FSP 40	100047	2019/03/28	2020/03/27
Bluetooth Tester	ROHDE & SCHWARZ	CBT	101133	2019/04/07	2020/04/06
Attenuator	KEYSIGHT	8491B	MY39250705	2018/09/04	2019/09/03
TEMP & HUMIDITY CHAMBER	T-MACHINE	TMJ-9712	T-12-040111	2018/08/30	2019/08/29
Power Meter	Anritsu	ML2495A	1224005	2019/4/11	2020/04/10
Power Sensor	Anritsu	MA2411B	1207295	2019/04/09	2020/04/08



Test Item	AC Power Line Conducted Emission				
Test Site	CON01-NK				
Instrument	Manufacturer	Model No	Serial No	Calibration Date	Valid Date
EMI Receiver	ROHDE & SCHWARZ	ESCI	100443	2019/03/29	2020/03/28
Line Impedance Stabilization Network	Schwarzbeck	NSLK 8127	8127-568	2019/03/15	2020/03/14
Pulse Limiter	ROHDE & SCHWARZ	ESH3-Z2	101934	2019/03/12	2020/03/11
Cable-6m(9k~300M)	NA	EMC5D-BM-BM-6	130606	2019/03/14	2020/03/13
E3	AUDIX	v8.2014-8-6	RK-000531	NA	NA



4. Antenna Requirements

4.1. Standard Applicable

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

And according to FCC 47 CFR Section 15.407 (a), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

4.2. Antenna Construction and Directional Gain

Antenna Type	Internal Antenna
Antenna Gain	2412-2462MHz: ANT A / B / C: 4dBi 5150MHz-5250MHz: ANT A / B / C: 4dBi 5725MHz -5850MHz: ANT A / B / C: 4dBi

2412-2462MHz

For Power directional gain= $G_{ant}= 4 \text{ dBi}$

$$\text{For PSD directional gain} = 10 \log[(10^{G^1/20} + 10^{G^2/20} + \dots + 10^{G^N/20})^2 / N_{ANT}] = 8.77 \text{ (dBi)}$$

5150MHz-5250MHz

For Power directional gain= $G_{ant}= 4 \text{ dBi}$

$$\text{For PSD directional gain} = 10 \log[(10^{G^1/20} + 10^{G^2/20} + \dots + 10^{G^N/20})^2 / N_{ANT}] = 8.77 \text{ (dBi)}$$

5725MHz -5850MHz

For Power directional gain= $G_{ant}= 4 \text{ dBi}$

$$\text{For PSD directional gain} = 10 \log[(10^{G^1/20} + 10^{G^2/20} + \dots + 10^{G^N/20})^2 / N_{ANT}] = 8.77 \text{ (dBi)}$$



5. Test of AC Power Line Conducted Emission

5.1. Test Limit

Conducted Emissions were measured from 150 kHz to 30 MHz with a bandwidth of 9 KHz, according to the methods defined in ANSI C63.4-2014. The EUT was placed on a nonmetallic stand in a shielded room 0.8 meters above the ground plane. The interface cables and equipment positioning were varied within limits of reasonable applications to determine the position produced maximum conducted emissions.

Frequency (MHz)	Quasi Peak (dB μ V)	Average (dB μ V)
0.15 – 0.5	66-56*	56-46*
0.5 – 5.0	56	46
5.0 – 30.0	60	50

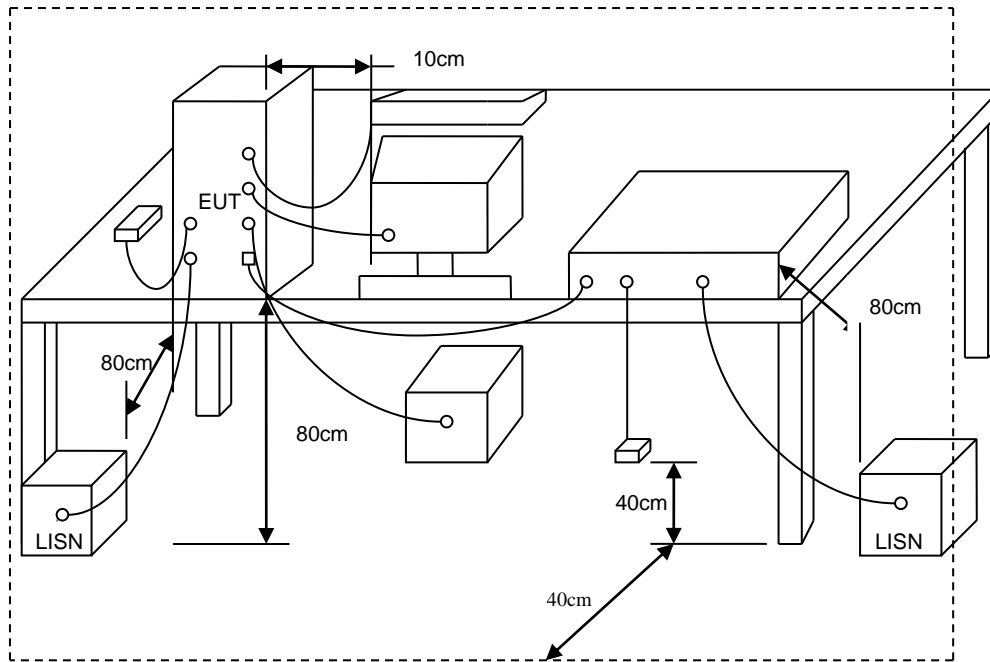
*Decreases with the logarithm of the frequency.

5.2. Test Procedures

- The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
- Connect EUT to the power mains through a line impedance stabilization network (LISN).
- All the support units are connecting to the other LISN.
- The LISN provides 50 ohm coupling impedance for the measuring instrument.
- The FCC states that a 50 ohm, 50 micro-Henry LISN should be used.
- Both sides of AC line were checked for maximum conducted interference.
- The frequency range from 150 kHz to 30 MHz was searched.
- Set the test-receiver system to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.



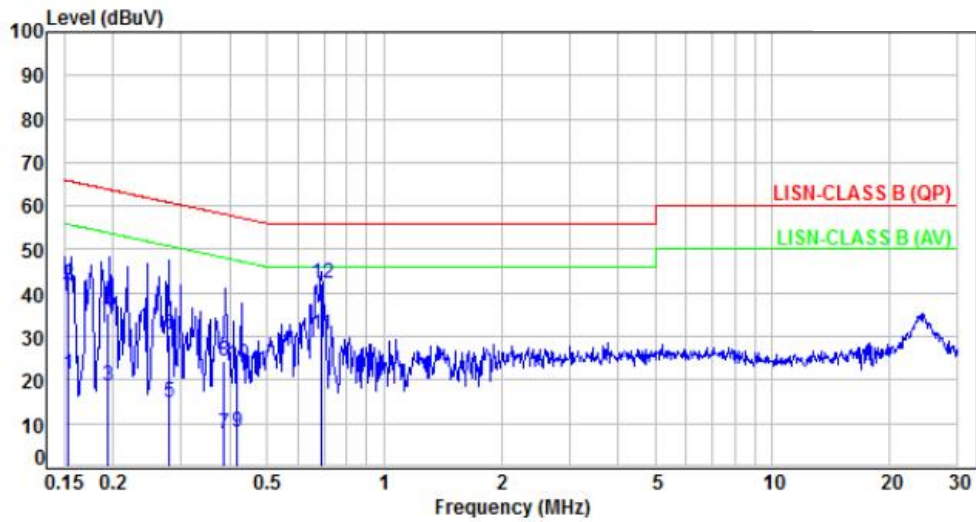
5.3. Typical Test Setup





5.4. Test Result and Data

Power	: AC 120V / 60Hz	Pol/Phase	: LINE
Test Mode	: Mode 3, Band 1		:

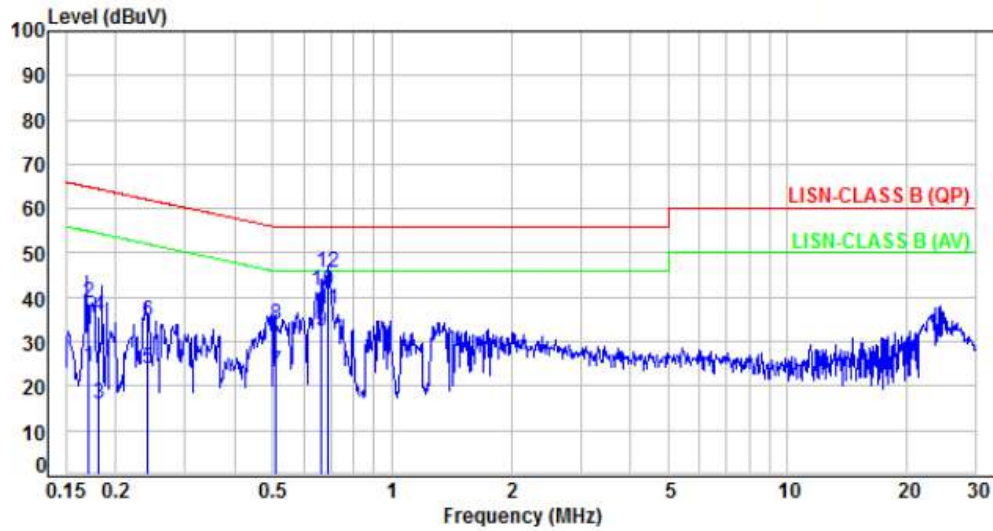


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.15	9.92	11.42	21.34	55.80	-34.46	Average	P
2	0.15	9.92	31.94	41.86	65.80	-23.94	QP	P
3	0.19	9.92	8.78	18.70	53.85	-35.15	Average	P
4	0.19	9.92	25.27	35.19	63.85	-28.66	QP	P
5	0.28	9.92	4.86	14.78	50.88	-36.10	Average	P
6	0.28	9.92	20.64	30.56	60.88	-30.32	QP	P
7	0.39	9.94	-2.19	7.75	48.16	-40.41	Average	P
8	0.39	9.94	14.39	24.33	58.16	-33.83	QP	P
9	0.42	9.94	-2.00	7.94	47.50	-39.56	Average	P
10	0.42	9.94	13.59	23.53	57.50	-33.97	QP	P
11	0.69	9.95	20.30	30.25	46.00	-15.75	Average	P
12	0.69	9.95	32.07	42.02	56.00	-13.98	QP	P

Note: Level=Reading+Factor
 Margin=Level-Limit
 Factor=(LISM or ISN or Current Probe)Factor + Cable Loss



Power	: AC 120V / 60Hz	Pol/Phase	: NEUTRAL
Test Mode	: Mode 3, Band 1		:

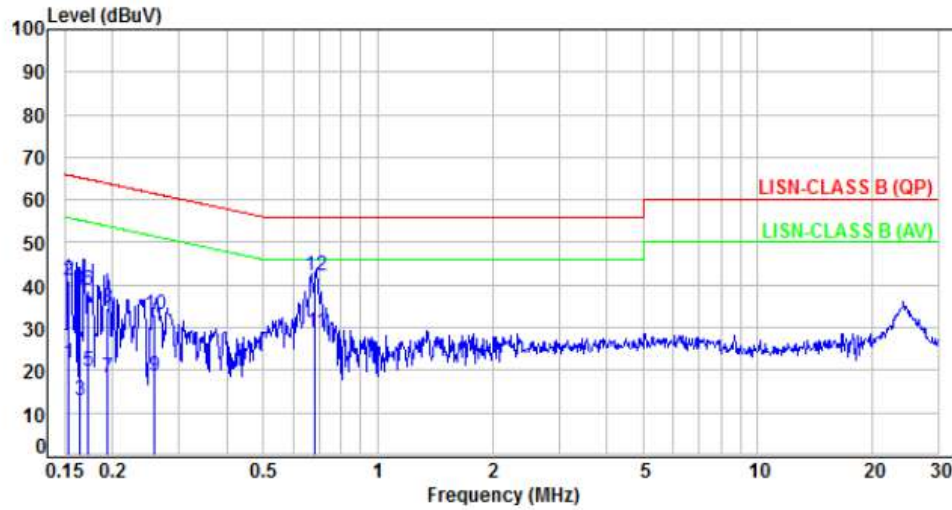


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.17	9.95	14.42	24.37	54.89	-30.52	Average	P
2	0.17	9.95	28.80	38.75	64.89	-26.14	QP	P
3	0.18	9.95	6.03	15.98	54.44	-38.46	Average	P
4	0.18	9.95	25.89	35.84	64.44	-28.60	QP	P
5	0.24	9.95	13.95	23.90	52.07	-28.17	Average	P
6	0.24	9.95	24.49	34.44	62.07	-27.63	QP	P
7	0.51	9.96	13.06	23.02	46.00	-22.98	Average	P
8	0.51	9.96	23.77	33.73	56.00	-22.27	QP	P
9	0.66	9.97	22.26	32.23	46.00	-13.77	Average	P
10	0.66	9.97	31.50	41.47	56.00	-14.53	QP	P
11	0.69	9.97	27.30	37.27	46.00	-8.73	Average	P
12	0.69	9.97	35.78	45.75	56.00	-10.25	QP	P

Note: Level=Reading+Factor
 Margin=Level-Limit
 Factor=(LISN or ISN or Current Probe)Factor + Cable Loss



Power	: AC 120V / 60Hz	Pol/Phase	: LINE
Test Mode	: Mode 3, Band 4		:

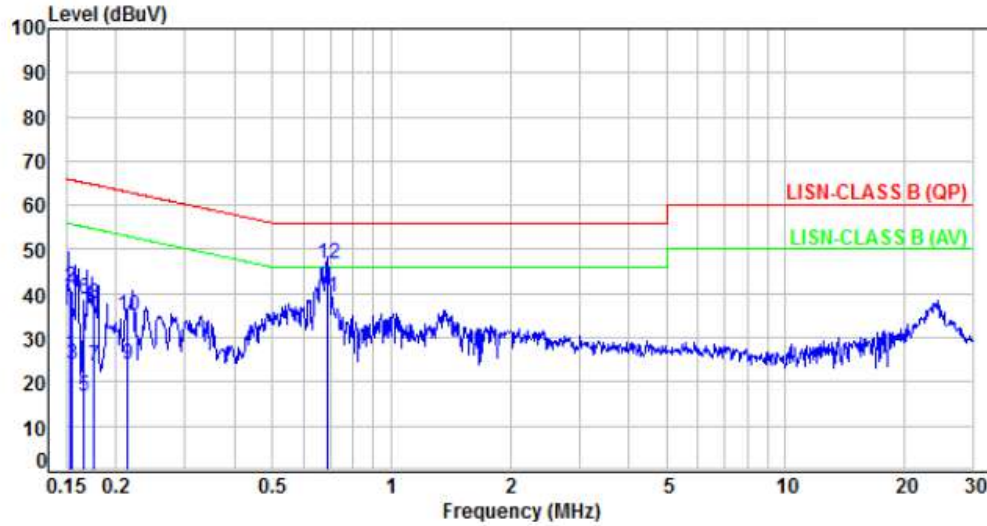


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.15	9.92	11.75	21.67	55.84	-34.17	Average	P
2	0.15	9.92	31.33	41.25	65.84	-24.59	QP	P
3	0.16	9.92	2.88	12.80	55.28	-42.48	Average	P
4	0.16	9.92	28.81	38.73	65.28	-26.55	QP	P
5	0.17	9.92	9.85	19.77	54.84	-35.07	Average	P
6	0.17	9.92	28.72	38.64	64.84	-26.20	QP	P
7	0.19	9.92	8.16	18.08	53.90	-35.82	Average	P
8	0.19	9.92	24.62	34.54	63.90	-29.36	QP	P
9	0.26	9.92	8.59	18.51	51.46	-32.95	Average	P
10	0.26	9.92	23.28	33.20	61.46	-28.26	QP	P
11	0.68	9.95	19.06	29.01	46.00	-16.99	Average	P
12	0.68	9.95	32.15	42.10	56.00	-13.90	QP	P

Note: Level=Reading+Factor
 Margin=Level-Limit
 Factor=(LISN or ISN or Current Probe)Factor + Cable Loss



Power	: AC 120V / 60Hz	Pol/Phase	: NEUTRAL
Test Mode	: Mode 3, Band 4		:



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.15	9.95	16.43	26.38	55.80	-29.42	Average	P
2	0.15	9.95	31.55	41.50	65.80	-24.30	QP	P
3	0.16	9.95	14.00	23.95	55.70	-31.75	Average	P
4	0.16	9.95	30.78	40.73	65.70	-24.97	QP	P
5	0.17	9.95	6.82	16.77	55.20	-38.43	Average	P
6	0.17	9.95	28.65	38.60	65.20	-26.60	QP	P
7	0.18	9.95	13.74	23.69	54.65	-30.96	Average	P
8	0.18	9.95	27.60	37.55	64.65	-27.10	QP	P
9	0.21	9.95	14.14	24.09	53.02	-28.93	Average	P
10	0.21	9.95	25.06	35.01	63.02	-28.01	QP	P
11	0.69	9.97	29.11	39.08	46.00	-6.92	Average	P
12	0.69	9.97	36.71	46.68	56.00	-9.32	QP	P

Note: Level=Reading+Factor
 Margin=Level-Limit
 Factor=(LISN or ISN or Current Probe)Factor + Cable Loss



6. Test of Spurious Emission (Radiated)

6.1. Test Limit

Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

- (1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- (2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- (3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- (4) For transmitters operating in the 5.725-5.85 GHz band:
All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.
- (5) The emission measurements shall be performed using a minimum resolution bandwidth of 1 MHz. A lower resolution bandwidth may be employed near the band edge, when necessary, provided the measured energy is integrated to show the total power over 1 MHz.
- (6) Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in §15.209. Further, any U-NII devices using an AC power line are required to comply also with the conducted limits set forth in §15.207.
- (7) The provisions of §15.205 apply to intentional radiators operating under this section.
- (8) When measuring the emission limits, the nominal carrier frequency shall be adjusted as close to the upper and lower frequency band edges as the design of the equipment permits.

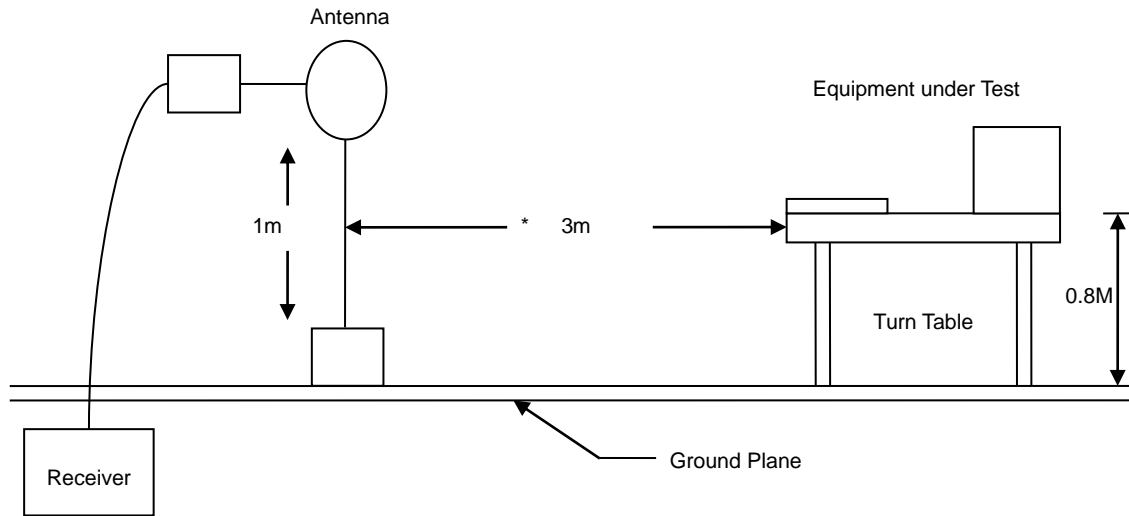
6.2. Test Procedures

- a. The EUT was placed on a rotatable table top 0.8 meter above ground.
- b. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
- c. The table was rotated 360 degrees to determine the position of the highest radiation.
- d. The antenna is a broadband antenna and its height is varied between one meter and four meters above ground to find the maximum value of the field strength both horizontal polarization and vertical polarization of the antenna are set to make the measurement.
- e. For each suspected emission the EUT was arranged to its worst case and then tune the antenna tower (from 1 M to 4 M) and turn table (from 0 degree to 360 degrees) to find the maximum reading.
- f. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function and specified bandwidth with Maximum Hold Mode.
- g. If the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method and reported.
- h. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
- i. "Cone of radiation" has been considered to be 3dB bandwidth of the measurement antenna.

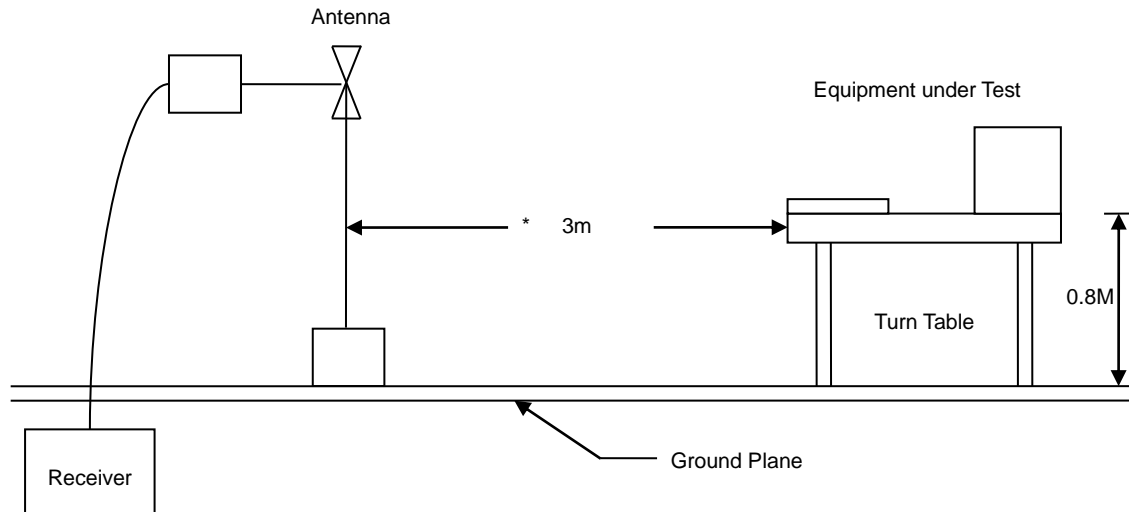


6.3. Typical Test Setup

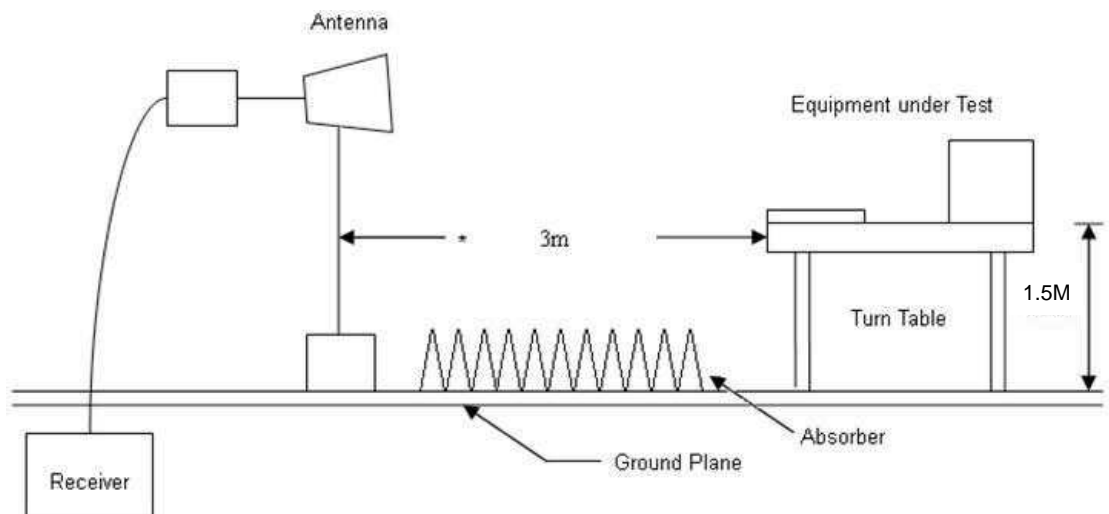
Below 30MHz test setup



30MHz- 1GHz Test Setup



Above 1GHz Test Setup



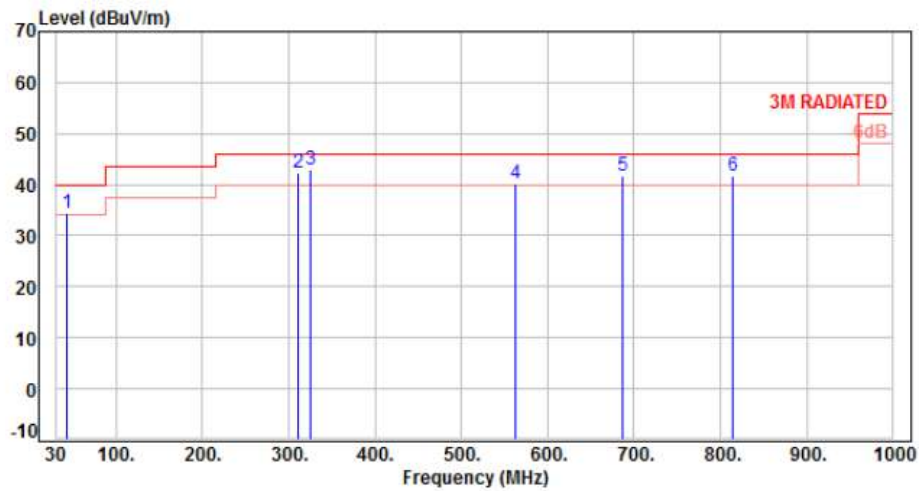


6.4. Test Result and Data (9kHz ~ 30MHz)

The 9kHz - 30MHz spurious emission is under limit 20dB more.

6.5. Test Result and Data (30MHz ~ 1GHz)

Power	: AC 120V / 60Hz	Pol/Phase	: VERTICAL
Test Mode	: Mode 3, Band 1		:

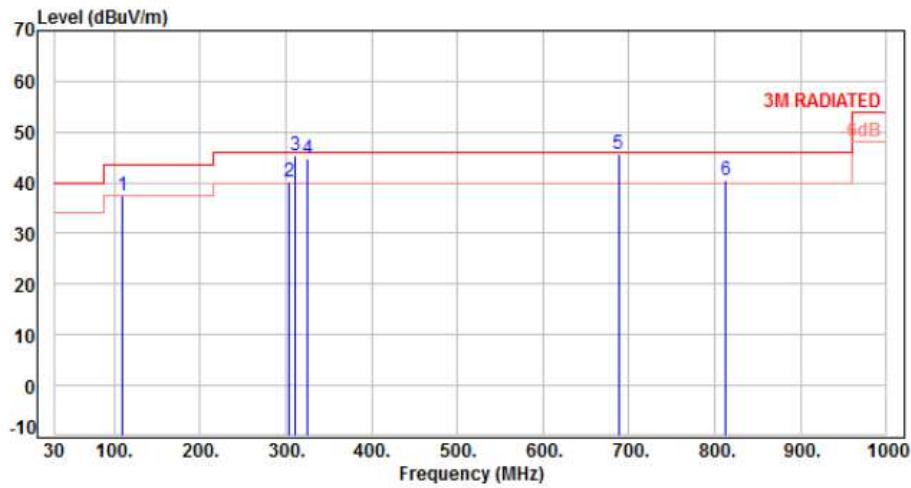


No.	Frequency (MHz)	Factor (dB)	Reading (dBUV)	Level (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	43.39	-9.36	43.85	34.49	40.00	-5.51	QP	100	320	P
2	311.38	-8.14	50.47	42.33	46.00	-3.67	Peak	100	0	P
3	324.88	-7.63	50.55	42.92	46.00	-3.08	Peak	100	0	P
4	563.46	-2.26	42.58	40.32	46.00	-5.68	Peak	100	0	P
5	687.46	-0.04	41.81	41.77	46.00	-4.23	Peak	100	0	P
6	813.76	1.97	39.72	41.69	46.00	-4.31	QP	125	19	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 3, Band 1		:

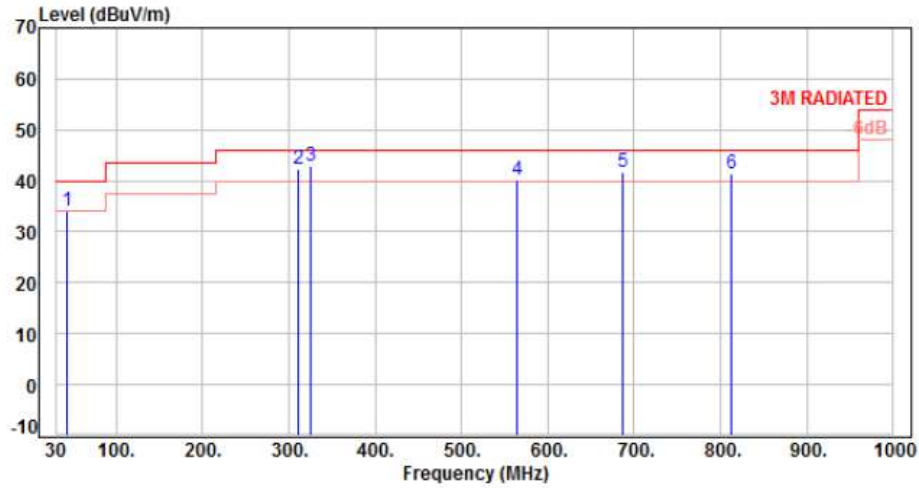


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	108.95	-12.56	49.99	37.43	43.50	-6.07	QP	200	258	P
2	303.85	-8.32	48.57	40.25	46.00	-5.75	QP	100	239	P
3	311.30	-8.15	53.51	45.36	46.00	-0.64	QP	100	232	P
4	325.04	-7.62	52.51	44.89	46.00	-1.11	QP	100	247	P
5	687.66	-0.04	45.68	45.64	46.00	-0.36	QP	100	113	P
6	813.13	1.95	38.61	40.56	46.00	-5.44	Peak	100	0	P

Note: Level=Reading+Factor
 Margin=Level-Limit
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: VERTICAL
Test Mode	: Mode 3, Band 4		

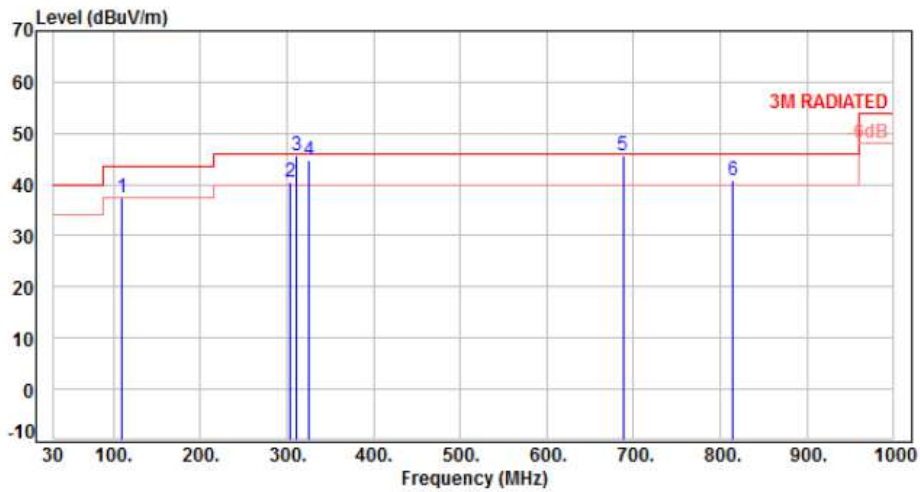


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	42.18	-9.52	43.67	34.15	40.00	-5.85	QP	100	336	P
2	311.52	-8.14	50.37	42.23	46.00	-3.77	Peak	100	0	P
3	324.74	-7.64	50.52	42.88	46.00	-3.12	Peak	100	0	P
4	563.96	-2.24	42.39	40.15	46.00	-5.85	Peak	100	0	P
5	687.52	-0.04	41.70	41.66	46.00	-4.34	Peak	100	0	P
6	813.48	1.96	39.56	41.52	46.00	-4.48	QP	133	25	P

Note: Level=Reading+Factor
 Margin=Level-Limit
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 3, Band 4		:



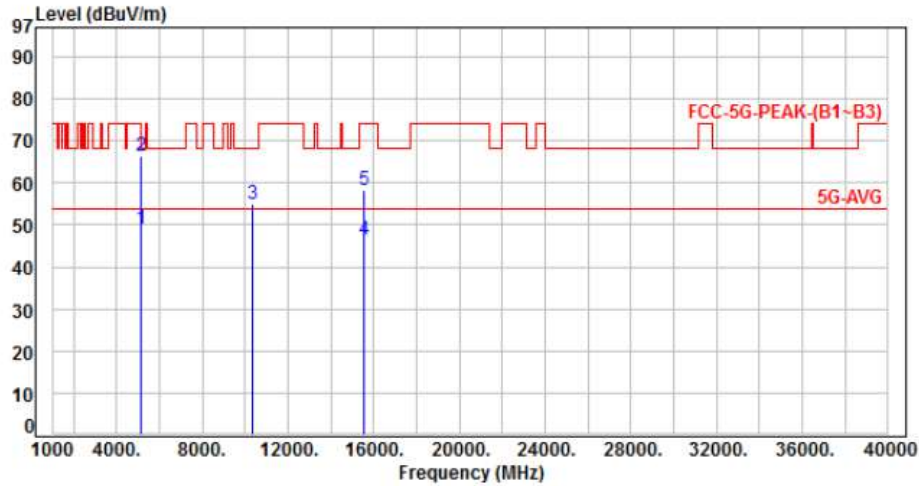
No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	108.72	-12.61	50.01	37.40	43.50	-6.10	QP	200	251	P
2	304.02	-8.32	48.71	40.39	46.00	-5.61	QP	100	242	P
3	311.30	-8.15	53.73	45.58	46.00	-0.42	QP	100	238	P
4	325.04	-7.62	52.44	44.82	46.00	-1.18	QP	100	251	P
5	687.66	-0.04	45.60	45.56	46.00	-0.44	QP	100	120	P
6	813.85	1.97	38.81	40.78	46.00	-5.22	Peak	100	0	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor



6.6. Test Result and Data (1GHz ~ 40GHz)

Power	: AC 120V / 60Hz	Pol/Phase	: VERTICAL
Test Mode	: Mode 1, CH36, Band 1		:

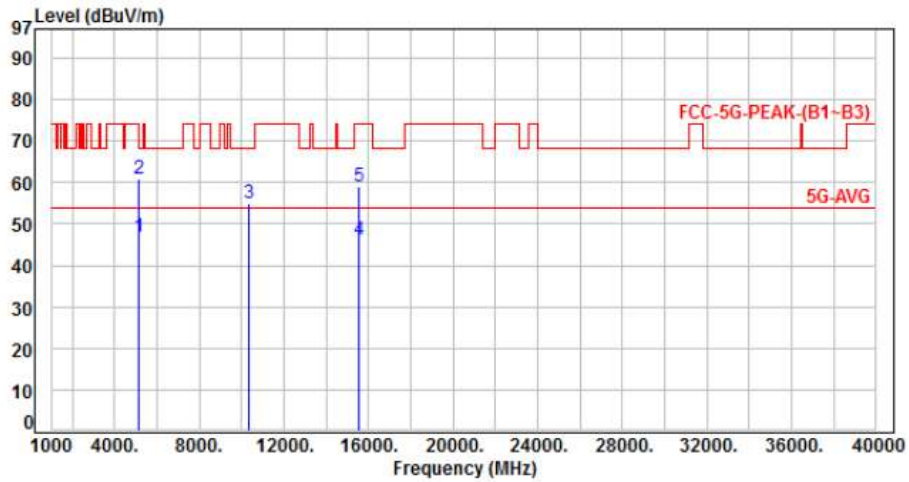


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	4.73	44.30	49.03	54.00	-4.97	Average	239	90	P
2	5150.00	4.73	61.52	66.25	74.00	-7.75	Peak	239	90	P
3	10360.00	11.43	43.51	54.94	68.20	-13.26	Peak	100	223	P
4	15540.00	14.27	32.07	46.34	54.00	-7.66	Average	100	253	P
5	15540.00	14.27	43.88	58.15	74.00	-15.85	Peak	100	253	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 1, CH36, Band 1		:

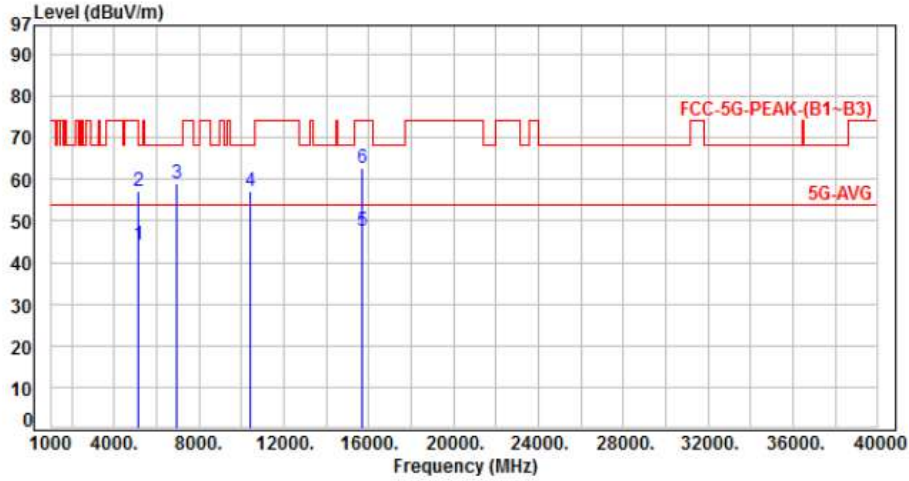


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	4.73	42.09	46.82	54.00	-7.18	Average	100	70	P
2	5150.00	4.73	56.29	61.02	74.00	-12.98	Peak	100	70	P
3	10360.00	11.43	43.36	54.79	68.20	-13.41	Peak	100	180	P
4	15540.00	14.27	31.94	46.21	54.00	-7.79	Average	100	125	P
5	15540.00	14.27	44.68	58.95	74.00	-15.05	Peak	100	125	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: VERTICAL
Test Mode	: Mode 1, CH44, Band 1		:

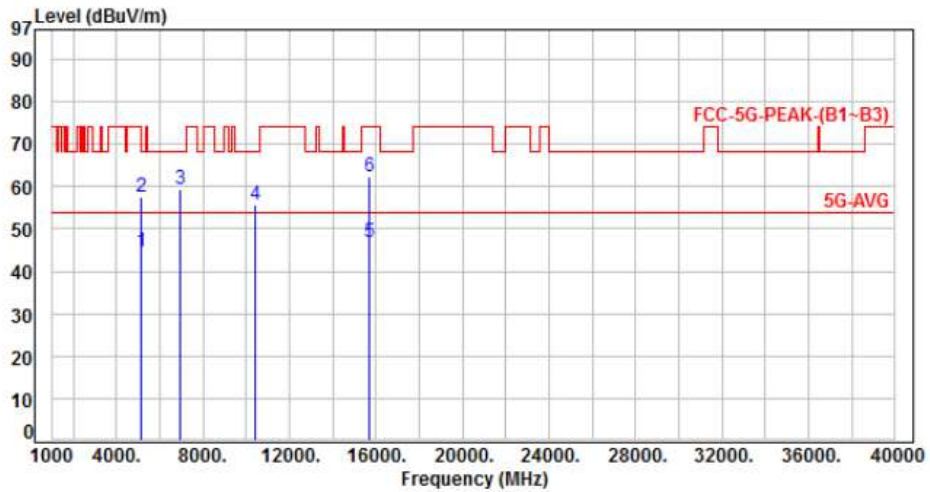


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	4.73	39.42	44.15	54.00	-9.85	Average	389	93	P
2	5150.00	4.73	52.50	57.23	74.00	-16.77	Peak	389	93	P
3	6960.00	7.40	51.57	58.97	68.20	-9.23	Peak	386	62	P
4	10440.00	11.55	45.80	57.35	68.20	-10.85	Peak	140	308	P
5	15660.00	13.72	33.95	47.67	54.00	-6.33	Average	391	210	P
6	15660.00	13.72	48.80	62.52	74.00	-11.48	Peak	391	210	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 1, CH44, Band 1		:

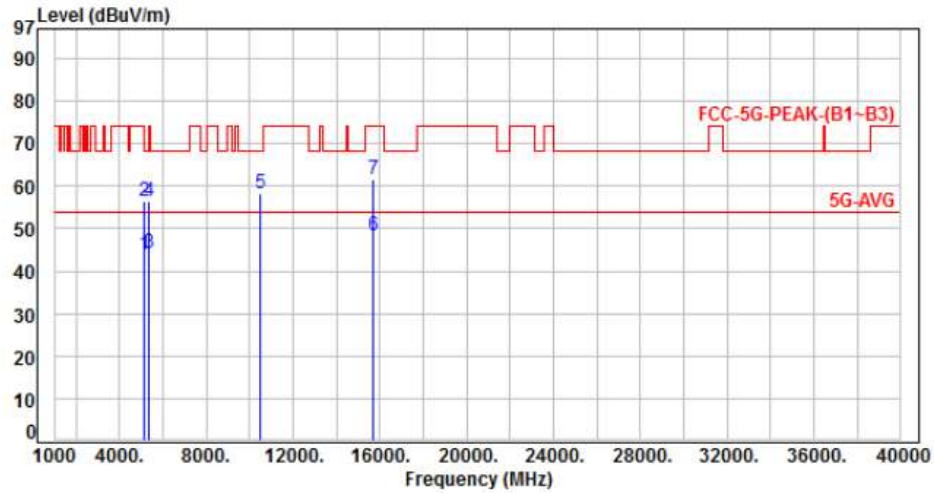


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	4.73	39.80	44.53	54.00	-9.47	Average	384	105	P
2	5150.00	4.73	52.67	57.40	74.00	-16.60	Peak	384	105	P
3	6960.00	7.40	51.89	59.29	68.20	-8.91	Peak	131	100	P
4	10440.00	11.55	44.03	55.58	68.20	-12.62	Peak	123	266	P
5	15660.00	13.72	33.26	46.98	54.00	-7.02	Average	100	244	P
6	15660.00	13.72	48.54	62.26	74.00	-11.74	Peak	100	244	P

Note: Level=Reading+Factor
 Margin=Level-Limit
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: VERTICAL
Test Mode	: Mode 1, CH48, Band 1		

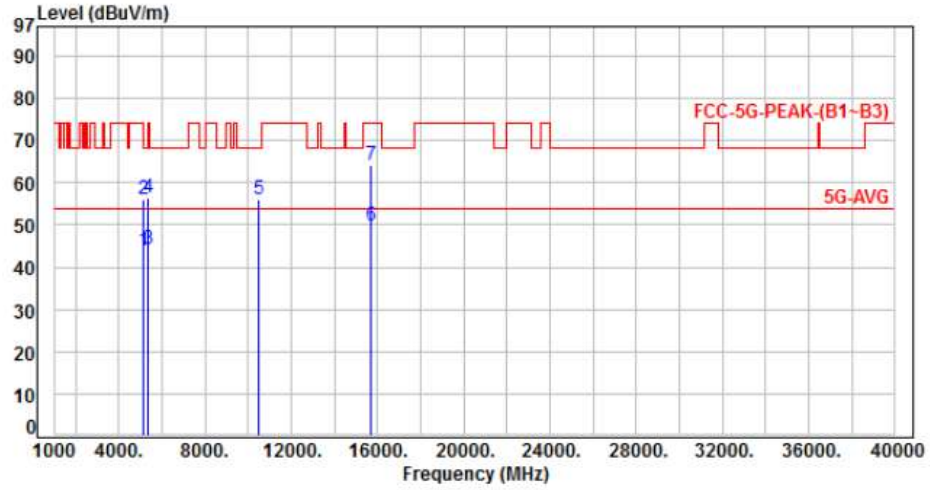


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	4.73	39.20	43.93	54.00	-10.07	Average	100	0	P
2	5150.00	4.73	51.81	56.54	74.00	-17.46	Peak	100	0	P
3	5350.00	5.07	39.02	44.09	54.00	-9.91	Average	100	290	P
4	5350.00	5.07	51.26	56.33	74.00	-17.67	Peak	100	290	P
5	10480.00	11.65	46.78	58.43	68.20	-9.77	Peak	100	315	P
6	15720.00	13.60	34.64	48.24	54.00	-5.76	Average	240	118	P
7	15720.00	13.60	47.97	61.57	74.00	-12.43	Peak	240	118	P

Note: Level=Reading+Factor
 Margin=Level-Limit
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 1, CH48, Band 1		:

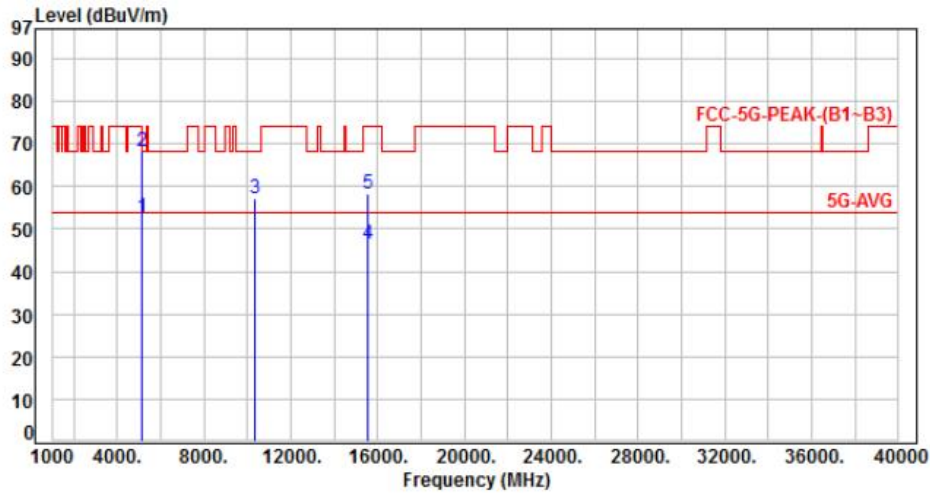


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	4.73	38.98	43.71	54.00	-10.29	Average	100	135	P
2	5150.00	4.73	51.50	56.23	74.00	-17.77	Peak	100	135	P
3	5350.00	5.07	39.35	44.42	54.00	-9.58	Average	100	115	P
4	5350.00	5.07	51.41	56.48	74.00	-17.52	Peak	100	115	P
5	10480.00	11.65	44.39	56.04	68.20	-12.16	Peak	220	0	P
6	15720.00	13.60	36.14	49.74	54.00	-4.26	Average	210	250	P
7	15720.00	13.60	50.71	64.31	74.00	-9.69	Peak	210	250	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: VERTICAL
Test Mode	: Mode 2, CH36, Band 1		

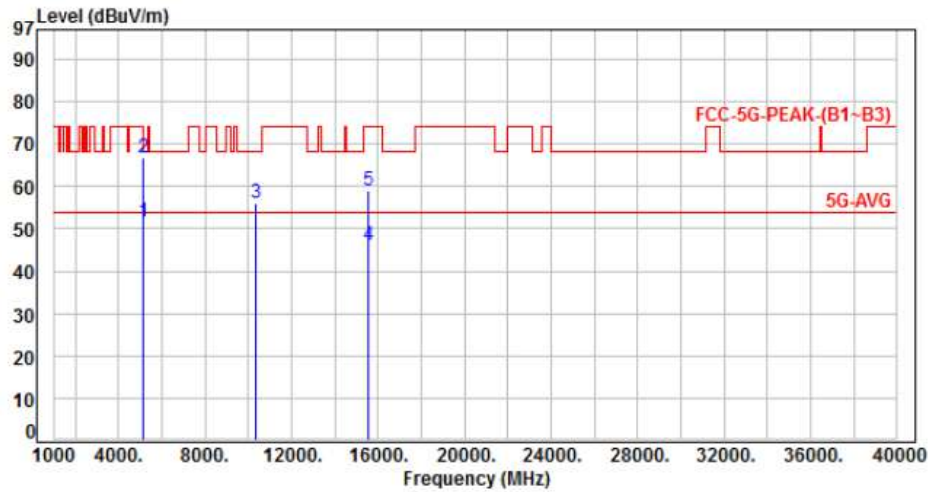


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	4.73	47.99	52.72	54.00	-1.28	Average	100	100	P
2	5150.00	4.73	63.63	68.36	74.00	-5.64	Peak	100	100	P
3	10360.00	11.43	45.59	57.02	68.20	-11.18	Peak	100	222	P
4	15540.00	14.27	32.23	46.50	54.00	-7.50	Average	100	130	P
5	15540.00	14.27	43.96	58.23	74.00	-15.77	Peak	100	130	P

Note: Level=Reading+Factor
 Margin=Level-Limit
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 2, CH36, Band 1		:

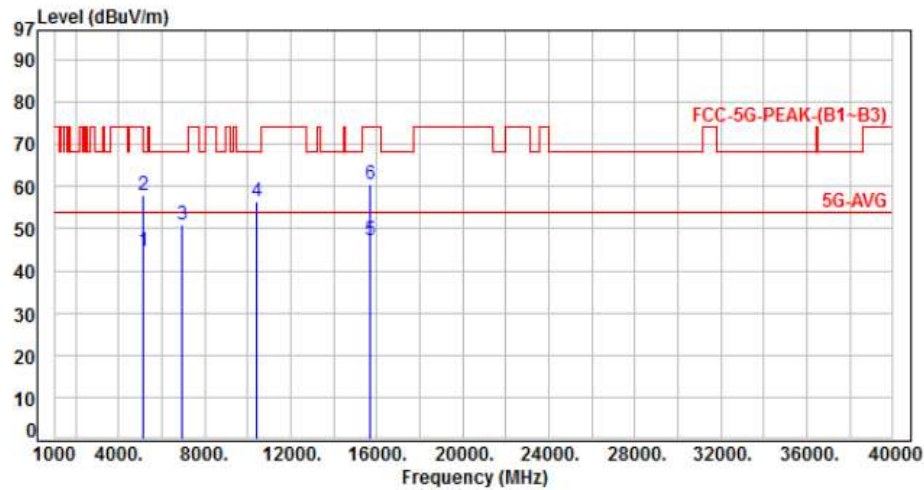


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	4.73	46.86	51.59	54.00	-2.41	Average	100	95	P
2	5150.00	4.73	62.04	66.77	74.00	-7.23	Peak	100	95	P
3	10360.00	11.43	44.53	55.96	68.20	-12.24	Peak	100	105	P
4	15540.00	14.27	31.84	46.11	54.00	-7.89	Average	100	235	P
5	15540.00	14.27	44.69	58.96	74.00	-15.04	Peak	100	235	P

Note: Level=Reading+Factor
 Margin=Level-Limit
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: VERTICAL
Test Mode	: Mode 2, CH44, Band 1		:

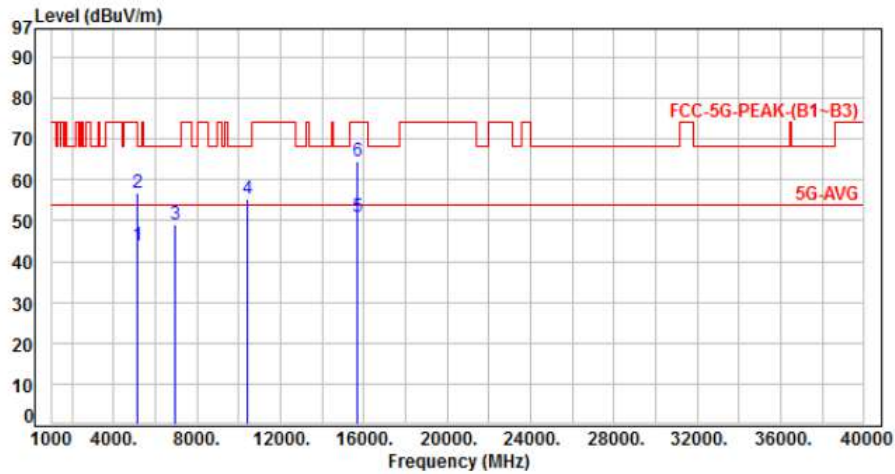


No.	Frequency (MHz)	Factor (dB)	Reading (dBUV)	Level (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	4.73	39.89	44.62	54.00	-9.38	Average	186	90	P
2	5150.00	4.73	53.30	58.03	74.00	-15.97	Peak	186	90	P
3	6960.30	7.40	43.47	50.87	68.20	-17.33	Peak	373	55	P
4	10440.00	11.55	44.80	56.35	68.20	-11.85	Peak	100	222	P
5	15660.00	13.72	33.50	47.22	54.00	-6.78	Average	209	248	P
6	15660.00	13.72	46.90	60.62	74.00	-13.38	Peak	209	248	P

Note: Level=Reading+Factor
 Margin=Level-Limit
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 2, CH44, Band 1		:

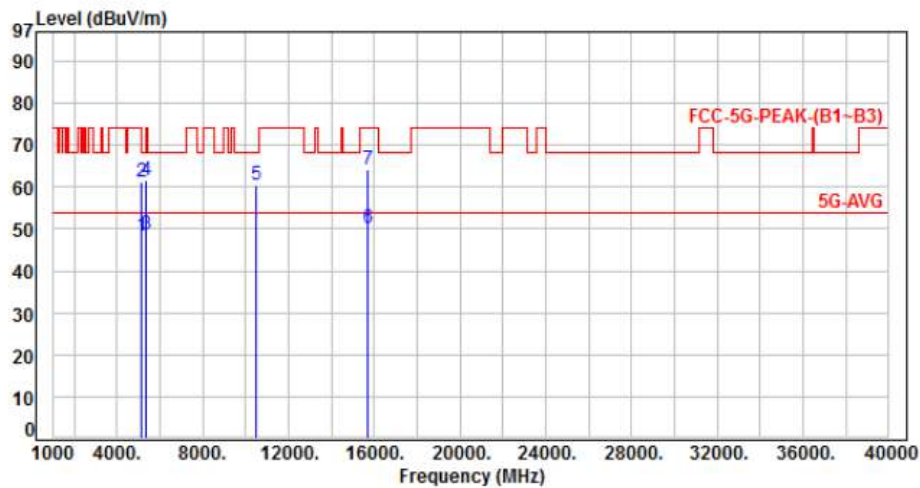


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	4.73	39.32	44.05	54.00	-9.95	Average	100	244	P
2	5150.00	4.73	52.21	56.94	74.00	-17.06	Peak	100	244	P
3	6960.30	7.40	41.79	49.19	68.20	-19.01	Peak	145	99	P
4	10440.00	11.55	43.60	55.15	68.20	-13.05	Peak	100	266	P
5	15660.00	13.72	37.10	50.82	54.00	-3.18	Average	100	12	P
6	15660.00	13.72	50.90	64.62	74.00	-9.38	Peak	100	12	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: VERTICAL
Test Mode	: Mode 2, CH48, Band 1		:

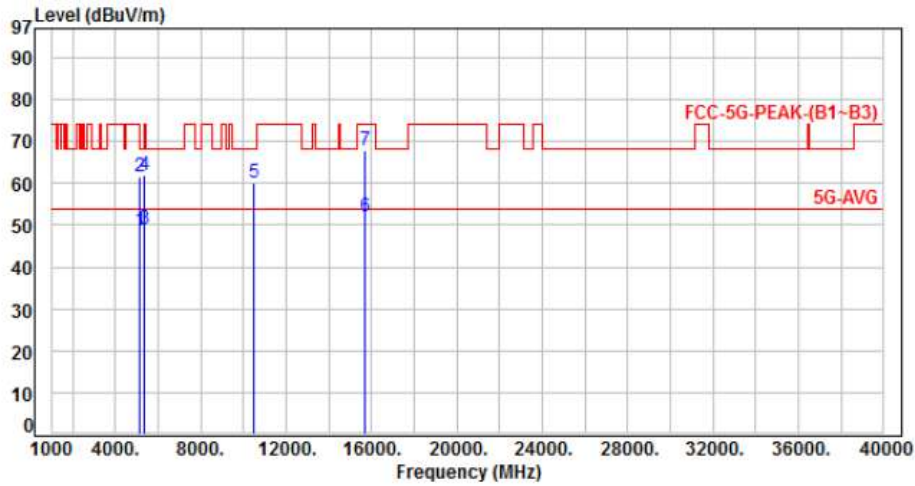


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	4.73	43.70	48.43	54.00	-5.57	Average	100	85	P
2	5150.00	4.73	56.46	61.19	74.00	-12.81	Peak	100	85	P
3	5350.00	5.07	43.57	48.64	54.00	-5.36	Average	100	85	P
4	5350.00	5.07	56.64	61.71	74.00	-12.29	Peak	100	85	P
5	10480.00	11.65	48.93	60.58	68.20	-7.62	Peak	100	317	P
6	15720.00	13.60	36.47	50.07	54.00	-3.93	Average	380	210	P
7	15720.00	13.60	50.43	64.03	74.00	-9.97	Peak	380	210	P

Note: Level=Reading+Factor
 Margin=Level-Limit
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 2, CH48, Band 1		:

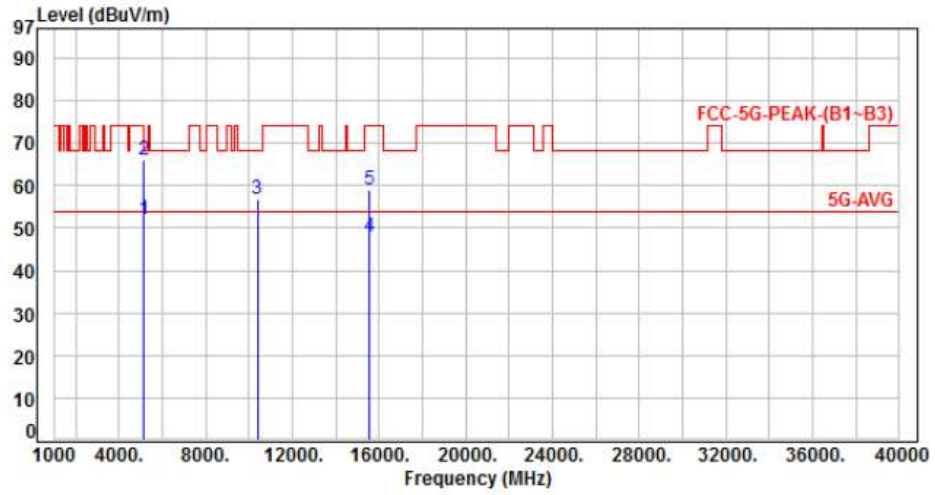


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	4.73	43.79	48.52	54.00	-5.48	Average	100	45	P
2	5150.00	4.73	56.77	61.50	74.00	-12.50	Peak	100	45	P
3	5350.00	5.07	43.94	49.01	54.00	-4.99	Average	100	45	P
4	5350.00	5.07	56.73	61.80	74.00	-12.20	Peak	100	45	P
5	10480.00	11.65	48.65	60.30	68.20	-7.90	Peak	216	0	P
6	15720.00	13.60	38.46	52.06	54.00	-1.94	Average	205	250	P
7	15720.00	13.60	54.18	67.78	74.00	-6.22	Peak	205	250	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: VERTICAL
Test Mode	: Mode 3, CH38, Band 1		

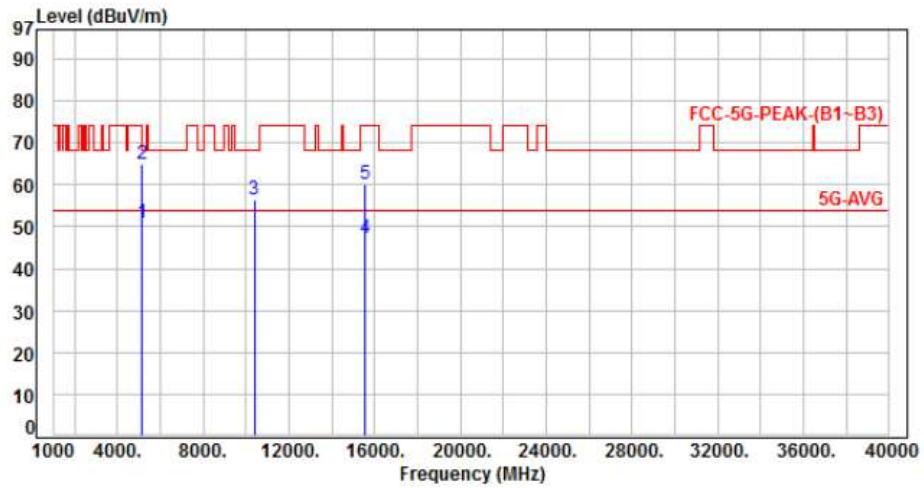


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	4.73	47.29	52.02	54.00	-1.98	Average	400	35	P
2	5150.00	4.73	61.17	65.90	74.00	-8.10	Peak	400	35	P
3	10380.00	11.44	45.18	56.62	68.20	-11.58	Peak	100	115	P
4	15570.00	14.07	33.78	47.85	54.00	-6.15	Average	100	330	P
5	15570.00	14.07	44.92	58.99	74.00	-15.01	Peak	100	330	P

Note: Level=Reading+Factor
 Margin=Level-Limit
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 3, CH38, Band 1		:

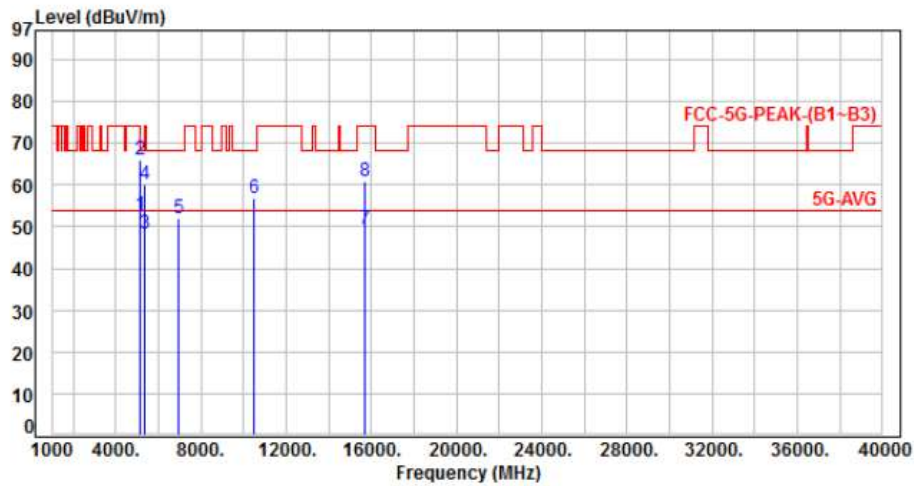


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	4.73	46.20	50.93	54.00	-3.07	Average	100	275	P
2	5150.00	4.73	60.17	64.90	74.00	-9.10	Peak	100	275	P
3	10380.00	11.44	44.94	56.38	68.20	-11.82	Peak	100	245	P
4	15570.00	14.07	33.07	47.14	54.00	-6.86	Average	100	335	P
5	15570.00	14.07	45.95	60.02	74.00	-13.98	Peak	100	335	P

Note: Level=Reading+Factor
 Margin=Level-Limit
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: VERTICAL
Test Mode	: Mode 3, CH46, Band 1		

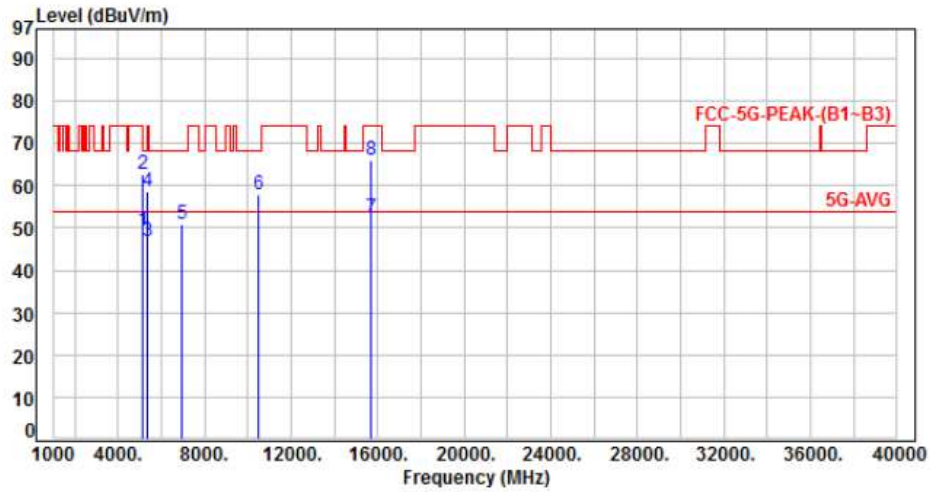


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	4.73	47.93	52.66	54.00	-1.34	Average	400	100	P
2	5150.00	4.73	61.30	66.03	74.00	-7.97	Peak	400	100	P
3	5350.00	5.07	43.21	48.28	54.00	-5.72	Average	400	100	P
4	5350.00	5.07	54.92	59.99	74.00	-14.01	Peak	400	100	P
5	6973.60	7.39	44.51	51.90	68.20	-16.30	Peak	383	60	P
6	10460.00	11.60	45.37	56.97	68.20	-11.23	Peak	100	241	P
7	15690.00	13.64	35.80	49.44	54.00	-4.56	Average	100	357	P
8	15690.00	13.64	47.21	60.85	74.00	-13.15	Peak	100	357	P

Note: Level=Reading+Factor
 Margin=Level-Limit
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 3, CH46, Band 1		:

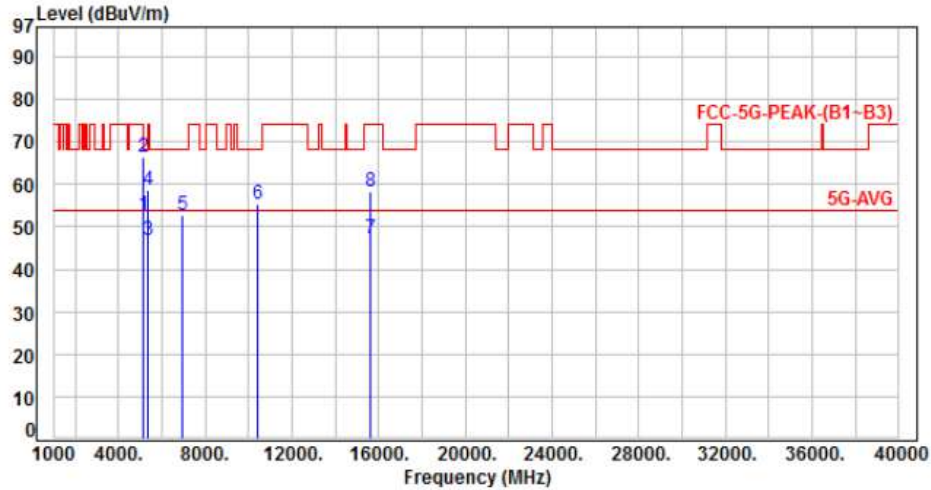


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	4.73	44.81	49.54	54.00	-4.46	Average	211	340	P
2	5150.00	4.73	57.80	62.53	74.00	-11.47	Peak	211	340	P
3	5350.00	5.07	41.70	46.77	54.00	-7.23	Average	211	340	P
4	5350.00	5.07	53.62	58.69	74.00	-15.31	Peak	211	340	P
5	6973.60	7.39	43.69	51.08	68.20	-17.12	Peak	183	97	P
6	10460.00	11.60	46.23	57.83	68.20	-10.37	Peak	247	360	P
7	15690.00	13.64	38.70	52.34	54.00	-1.66	Average	212	246	P
8	15690.00	13.64	52.20	65.84	74.00	-8.16	Peak	212	246	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: VERTICAL
Test Mode	: Mode 4, CH42, Band 1		

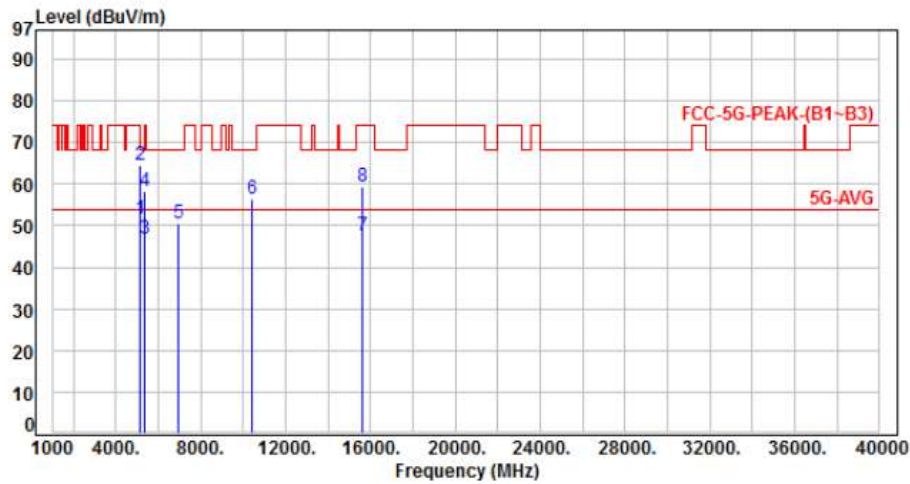


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5136.00	4.66	47.91	52.57	54.00	-1.43	Average	350	97	P
2	5136.00	4.66	61.81	66.47	74.00	-7.53	Peak	350	97	P
3	5350.00	5.07	41.80	46.87	54.00	-7.13	Average	350	97	P
4	5350.00	5.07	53.40	58.47	74.00	-15.53	Peak	350	97	P
5	6946.80	7.38	45.30	52.68	68.20	-15.52	Peak	400	63	P
6	10420.00	11.49	43.97	55.46	68.20	-12.74	Peak	100	106	P
7	15630.00	13.80	33.45	47.25	54.00	-6.75	Average	100	58	P
8	15630.00	13.80	44.32	58.12	74.00	-15.88	Peak	100	58	P

Note: Level=Reading+Factor
 Margin=Level-Limit
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 4, CH42, Band 1		:

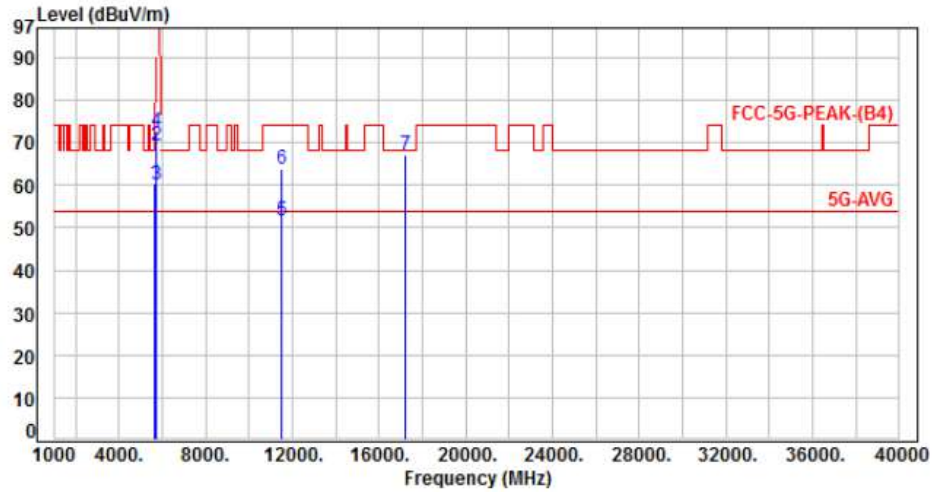


No.	Frequency (MHz)	Factor (dB)	Reading (dBUV)	Level (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5136.00	4.66	46.81	51.47	54.00	-2.53	Average	100	198	P
2	5136.00	4.66	59.81	64.47	74.00	-9.53	Peak	100	198	P
3	5350.00	5.07	41.59	46.66	54.00	-7.34	Average	100	198	P
4	5350.00	5.07	53.26	58.33	74.00	-15.67	Peak	100	198	P
5	6946.80	7.38	43.21	50.59	68.20	-17.61	Peak	166	100	P
6	10420.00	11.49	44.81	56.30	68.20	-11.90	Peak	100	312	P
7	15630.00	13.80	33.80	47.60	54.00	-6.40	Average	100	301	P
8	15630.00	13.80	45.62	59.42	74.00	-14.58	Peak	100	301	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: VERTICAL
Test Mode	: Mode 1, CH149, Band 4		

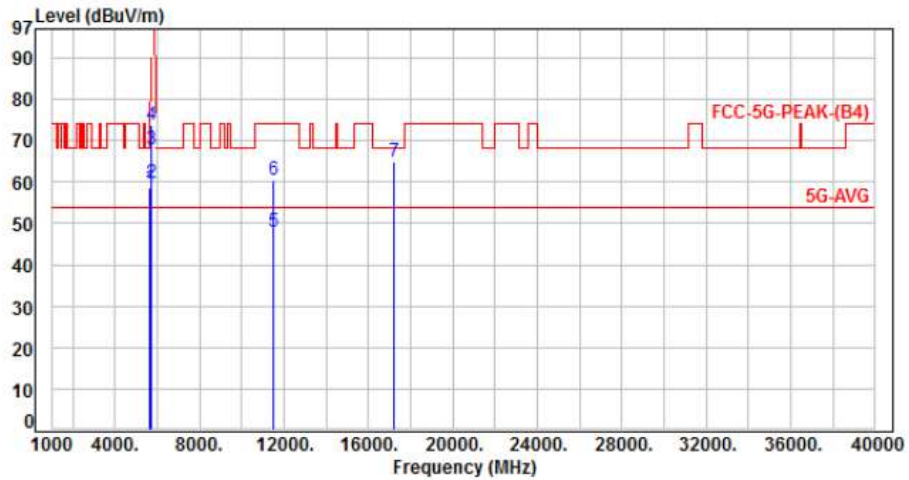


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	5.25	55.37	60.62	68.20	-7.58	Peak	215	264	P
2	5720.00	5.19	64.17	69.36	110.80	-41.44	Peak	215	264	P
3	5720.00	5.19	55.08	60.27	110.80	-50.53	Peak	215	264	P
4	5725.00	5.19	67.40	72.59	122.20	-49.61	Peak	215	264	P
5	11490.00	13.16	38.65	51.81	54.00	-2.19	Average	222	245	P
6	11490.00	13.16	50.74	63.90	74.00	-10.10	Peak	222	245	P
7	17235.00	19.21	47.74	66.95	68.20	-1.25	Peak	100	330	P

Note: Level=Reading+Factor
 Margin=Level-Limit
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 1, CH149, Band 4		:

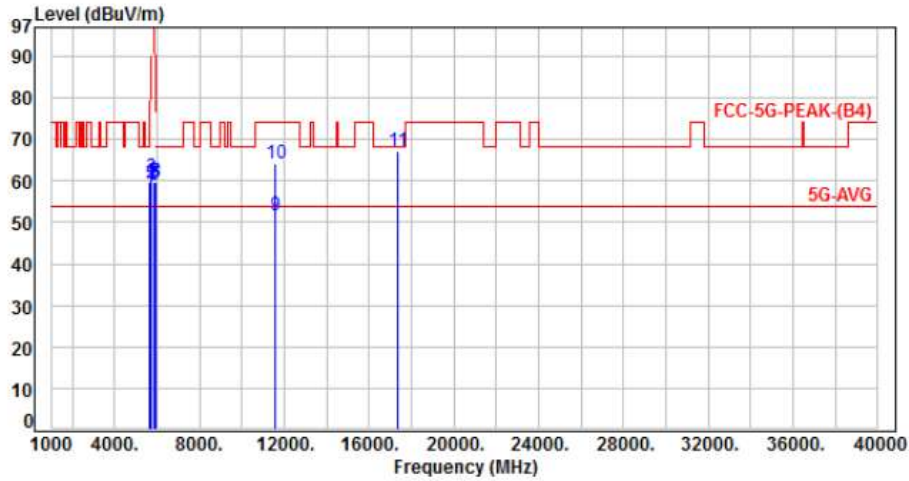


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	5.25	53.57	58.82	68.20	-9.38	Peak	200	274	P
2	5700.00	5.18	54.62	59.80	105.20	-45.40	Peak	200	274	P
3	5720.00	5.19	62.79	67.98	110.80	-42.82	Peak	200	274	P
4	5725.00	5.19	68.70	73.89	122.20	-48.31	Peak	200	274	P
5	11490.00	13.16	34.87	48.03	54.00	-5.97	Average	100	217	P
6	11490.00	13.16	47.33	60.49	74.00	-13.51	Peak	100	217	P
7	17235.00	19.21	45.88	65.09	68.20	-3.11	Peak	100	115	P

Note: Level=Reading+Factor
 Margin=Level-Limit
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: VERTICAL
Test Mode	: Mode 1, CH157, Band 4		

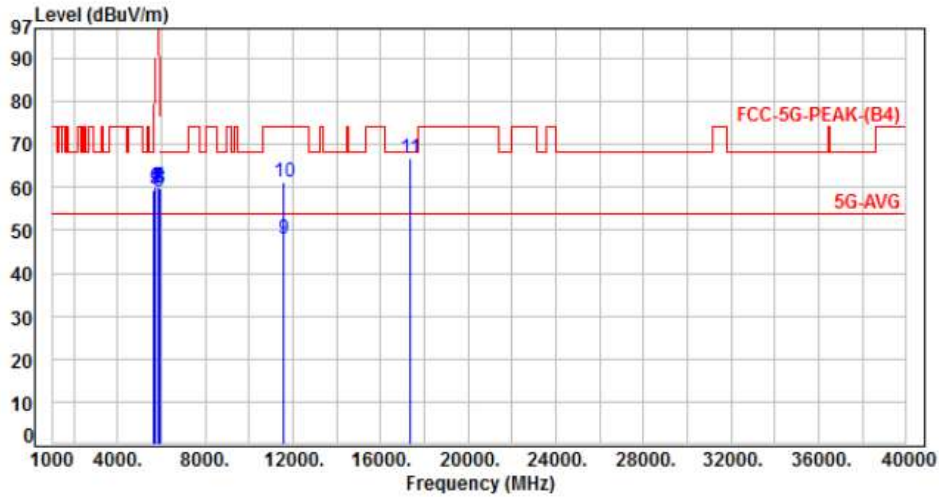


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	5.25	54.33	59.58	68.20	-8.62	Peak	100	95	P
2	5700.00	5.18	54.30	59.48	105.20	-45.72	Peak	100	95	P
3	5720.00	5.19	55.60	60.79	110.80	-50.01	Peak	100	95	P
4	5725.00	5.19	54.97	60.16	122.20	-62.04	Peak	100	95	P
5	5850.00	5.37	53.77	59.14	122.20	-63.06	Peak	100	95	P
6	5855.00	5.39	54.21	59.60	110.80	-51.20	Peak	100	95	P
7	5875.00	5.47	54.37	59.84	105.20	-45.36	Peak	100	95	P
8	5925.00	5.60	54.12	59.72	68.20	-8.48	Peak	100	95	P
9	11570.00	13.44	38.23	51.67	54.00	-2.33	Average	206	220	P
10	11570.00	13.44	50.60	64.04	74.00	-9.96	Peak	206	220	P
11	17355.00	19.83	47.21	67.04	68.20	-1.16	Peak	349	198	P

Note: Level=Reading+Factor
 Margin=Level-Limit
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 1, CH157, Band 4		:

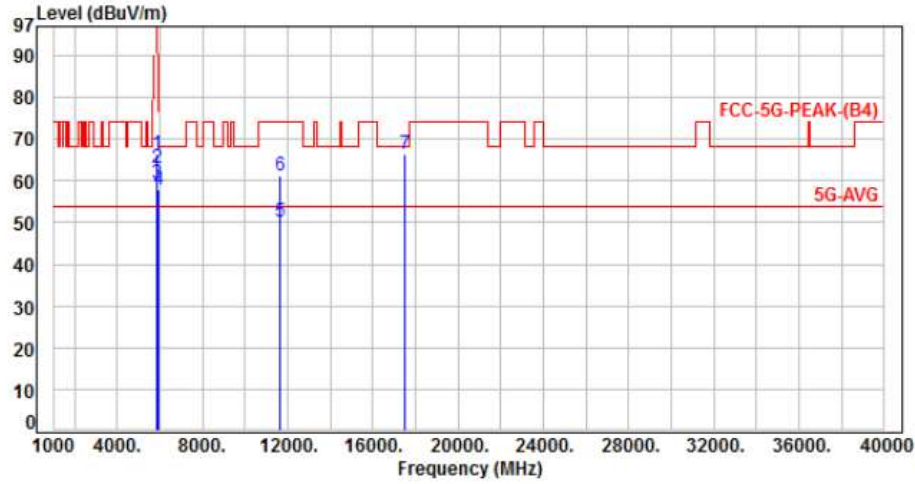


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	5.25	54.20	59.45	68.20	-8.75	Peak	190	260	P
2	5700.00	5.18	54.50	59.68	105.20	-45.52	Peak	190	260	P
3	5720.00	5.19	54.63	59.82	110.80	-50.98	Peak	190	260	P
4	5725.00	5.19	54.89	60.08	122.20	-62.12	Peak	190	260	P
5	5850.00	5.37	53.60	58.97	122.20	-63.23	Peak	190	260	P
6	5855.00	5.39	54.44	59.83	110.80	-50.97	Peak	190	260	P
7	5875.00	5.47	54.53	60.00	105.20	-45.20	Peak	190	260	P
8	5925.00	5.60	54.12	59.72	68.20	-8.48	Peak	190	260	P
9	11570.00	13.44	34.40	47.84	54.00	-6.16	Average	100	204	P
10	11570.00	13.44	47.90	61.34	74.00	-12.66	Peak	100	204	P
11	17355.00	19.83	46.97	66.80	68.20	-1.40	Peak	100	195	P

Note: Level=Reading+Factor
 Margin=Level-Limit
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: VERTICAL
Test Mode	: Mode 1, CH165, Band 4		

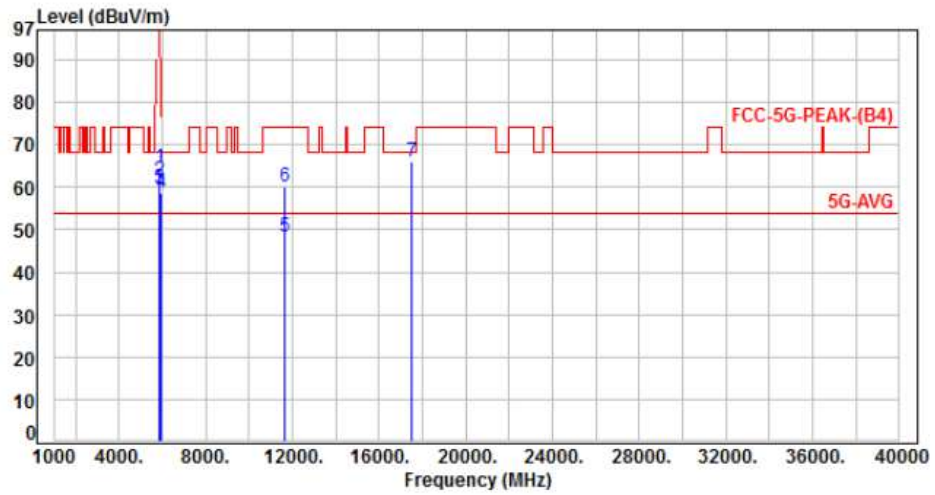


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5850.00	5.37	61.03	66.40	122.20	-55.80	Peak	160	195	P
2	5855.00	5.39	57.82	63.21	110.80	-47.59	Peak	160	195	P
3	5875.00	5.47	53.74	59.21	105.20	-45.99	Peak	160	195	P
4	5925.00	5.60	52.24	57.84	68.20	-10.36	Peak	160	195	P
5	11650.00	13.60	36.74	50.34	54.00	-3.66	Average	215	220	P
6	11650.00	13.60	47.59	61.19	74.00	-12.81	Peak	215	220	P
7	17475.00	20.67	45.78	66.45	68.20	-1.75	Peak	100	220	P

Note: Level=Reading+Factor
 Margin=Level-Limit
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 1, CH165, Band 4		:

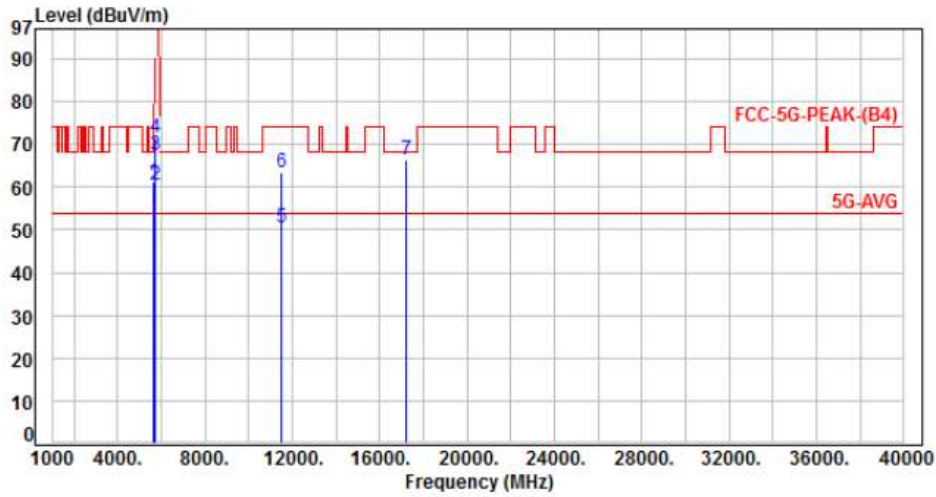


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5850.00	5.37	59.31	64.68	122.20	-57.52	Peak	253	100	P
2	5855.00	5.39	56.29	61.68	110.80	-49.12	Peak	253	100	P
3	5875.00	5.47	54.31	59.78	105.20	-45.42	Peak	253	100	P
4	5925.00	5.60	53.15	58.75	68.20	-9.45	Peak	253	100	P
5	11650.00	13.60	34.71	48.31	54.00	-5.69	Average	100	215	P
6	11650.00	13.60	46.59	60.19	74.00	-13.81	Peak	100	215	P
7	17475.00	20.67	45.27	65.94	68.20	-2.26	Peak	100	310	P

Note: Level=Reading+Factor
 Margin=Level-Limit
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: VERTICAL
Test Mode	: Mode 2, CH149, Band 4		

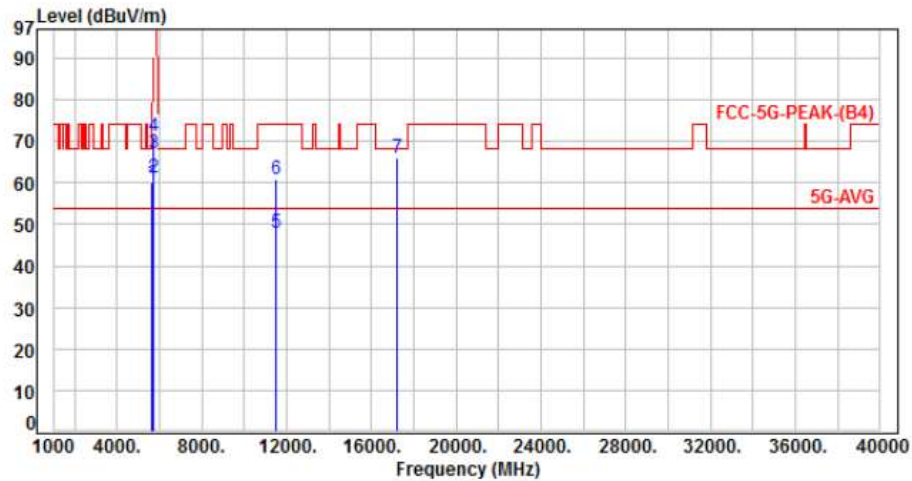


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	5.25	56.10	61.35	68.20	-6.85	Peak	185	195	P
2	5700.00	5.18	55.28	60.46	105.20	-44.74	Peak	185	195	P
3	5720.00	5.19	62.42	67.61	110.80	-43.19	Peak	185	195	P
4	5725.00	5.19	66.37	71.56	122.20	-50.64	Peak	185	195	P
5	11490.00	13.16	37.53	50.69	54.00	-3.31	Average	212	235	P
6	11490.00	13.16	50.36	63.52	74.00	-10.48	Peak	212	235	P
7	17235.00	19.21	47.32	66.53	68.20	-1.67	Peak	100	330	P

Note: Level=Reading+Factor
 Margin=Level-Limit
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 2, CH149, Band 4		

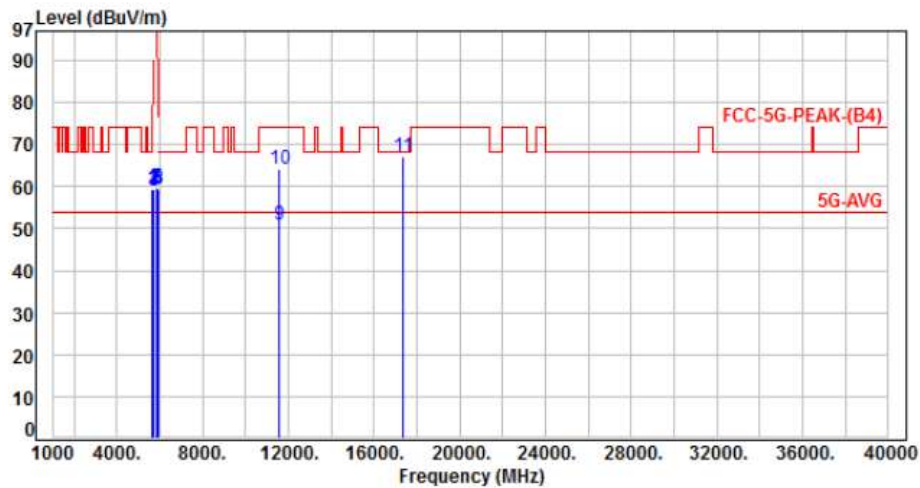


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	5.25	54.83	60.08	68.20	-8.12	Peak	100	245	P
2	5700.00	5.18	56.16	61.34	105.20	-43.86	Peak	100	245	P
3	5720.00	5.19	62.04	67.23	110.80	-43.57	Peak	100	245	P
4	5725.00	5.19	65.96	71.15	122.20	-51.05	Peak	100	245	P
5	11490.00	13.16	34.78	47.94	54.00	-6.06	Average	100	218	P
6	11490.00	13.16	47.79	60.95	74.00	-13.05	Peak	100	218	P
7	17235.00	19.21	46.70	65.91	68.20	-2.29	Peak	100	187	P

Note: Level=Reading+Factor
 Margin=Level-Limit
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: VERTICAL
Test Mode	: Mode 2, CH157, Band 4		:

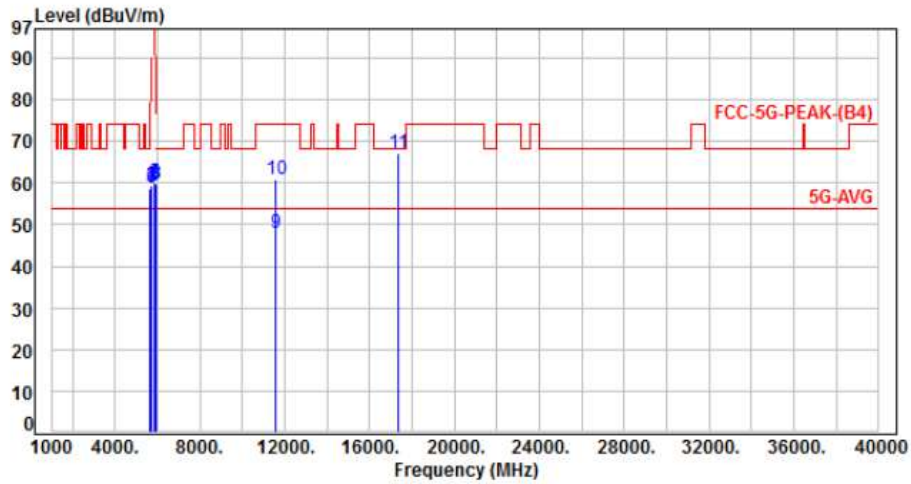


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	5.25	54.22	59.47	68.20	-8.73	Peak	110	105	P
2	5700.00	5.18	54.19	59.37	105.20	-45.83	Peak	110	105	P
3	5720.00	5.19	53.68	58.87	110.80	-51.93	Peak	110	105	P
4	5725.00	5.19	53.86	59.05	122.20	-63.15	Peak	110	105	P
5	5850.00	5.37	54.16	59.53	122.20	-62.67	Peak	110	105	P
6	5855.00	5.39	54.39	59.78	110.80	-51.02	Peak	110	105	P
7	5875.00	5.47	54.26	59.73	105.20	-45.47	Peak	110	105	P
8	5925.00	5.60	53.89	59.49	68.20	-8.71	Peak	110	105	P
9	11570.00	13.44	37.52	50.96	54.00	-3.04	Average	211	219	P
10	11570.00	13.44	50.60	64.04	74.00	-9.96	Peak	211	219	P
11	17355.00	19.83	47.33	67.16	68.20	-1.04	Peak	100	220	P

Note: Level=Reading+Factor
 Margin=Level-Limit
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 2, CH157, Band 4		:

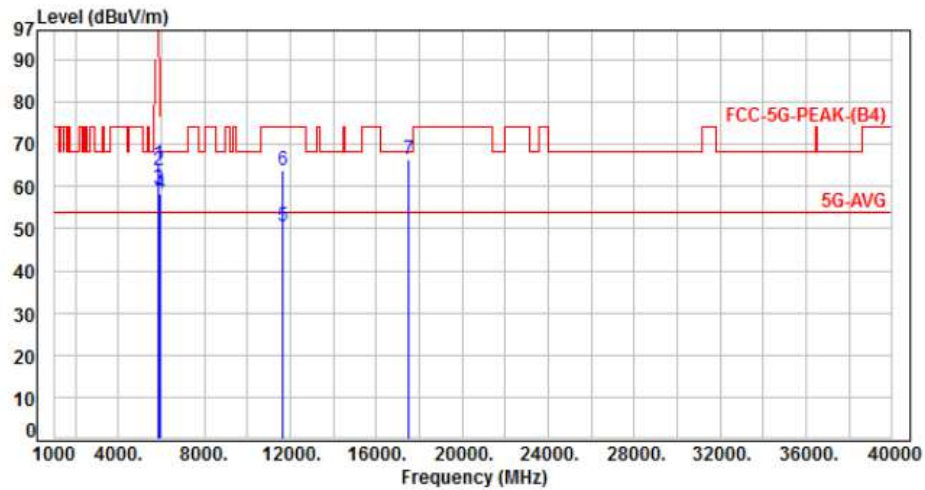


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	5.25	53.46	58.71	68.20	-9.49	Peak	201	199	P
2	5700.00	5.18	54.23	59.41	105.20	-45.79	Peak	201	199	P
3	5720.00	5.19	53.83	59.02	110.80	-51.78	Peak	201	199	P
4	5725.00	5.19	54.20	59.39	122.20	-62.81	Peak	201	199	P
5	5850.00	5.37	54.63	60.00	122.20	-62.20	Peak	201	199	P
6	5855.00	5.39	53.99	59.38	110.80	-51.42	Peak	201	199	P
7	5875.00	5.47	53.65	59.12	105.20	-46.08	Peak	201	199	P
8	5925.00	5.60	54.03	59.63	68.20	-8.57	Peak	201	199	P
9	11570.00	13.44	34.58	48.02	54.00	-5.98	Average	100	216	P
10	11570.00	13.44	47.27	60.71	74.00	-13.29	Peak	100	216	P
11	17355.00	19.83	47.37	67.20	68.20	-1.00	Peak	280	237	P

Note: Level=Reading+Factor
 Margin=Level-Limit
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: VERTICAL
Test Mode	: Mode 2, CH165, Band 4		:

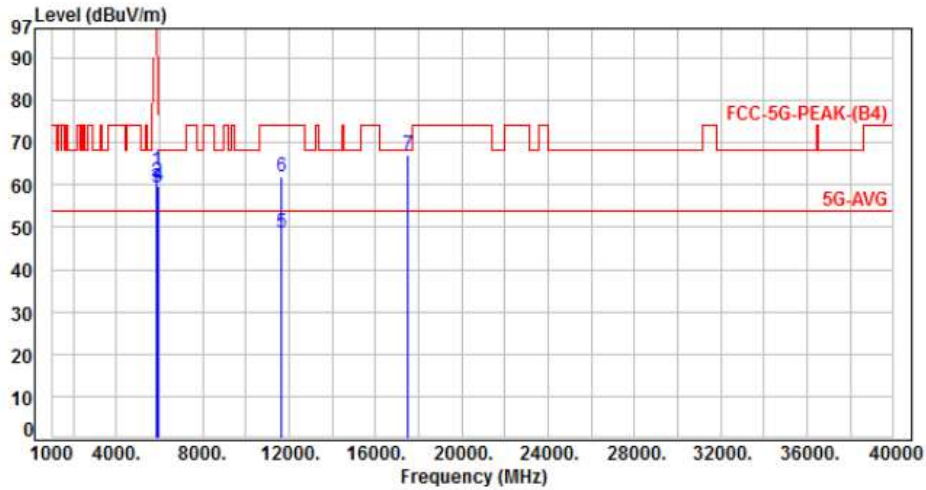


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5850.00	5.37	59.87	65.24	122.20	-56.96	Peak	100	270	P
2	5855.00	5.39	58.35	63.74	110.80	-47.06	Peak	100	270	P
3	5875.00	5.47	53.79	59.26	105.20	-45.94	Peak	100	270	P
4	5925.00	5.60	52.75	58.35	68.20	-9.85	Peak	100	270	P
5	11650.00	13.60	37.06	50.66	54.00	-3.34	Average	202	0	P
6	11650.00	13.60	50.09	63.69	74.00	-10.31	Peak	202	0	P
7	17475.00	20.67	45.76	66.43	68.20	-1.77	Peak	170	330	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 2, CH165, Band 4		:

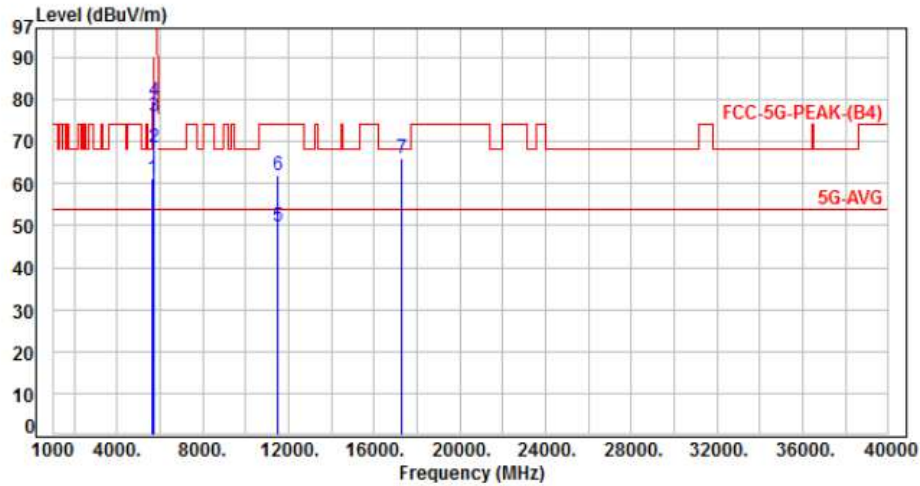


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5850.00	5.37	58.03	63.40	122.20	-58.80	Peak	100	5	P
2	5855.00	5.39	55.54	60.93	110.80	-49.87	Peak	100	5	P
3	5875.00	5.47	53.94	59.41	105.20	-45.79	Peak	100	5	P
4	5925.00	5.60	54.30	59.90	68.20	-8.30	Peak	100	5	P
5	11650.00	13.60	34.93	48.53	54.00	-5.47	Average	100	285	P
6	11650.00	13.60	48.18	61.78	74.00	-12.22	Peak	100	285	P
7	17475.00	20.67	46.34	67.01	68.20	-1.19	Peak	190	225	P

Note: Level=Reading+Factor
 Margin=Level-Limit
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: VERTICAL
Test Mode	: Mode 3, CH151, Band 4		:

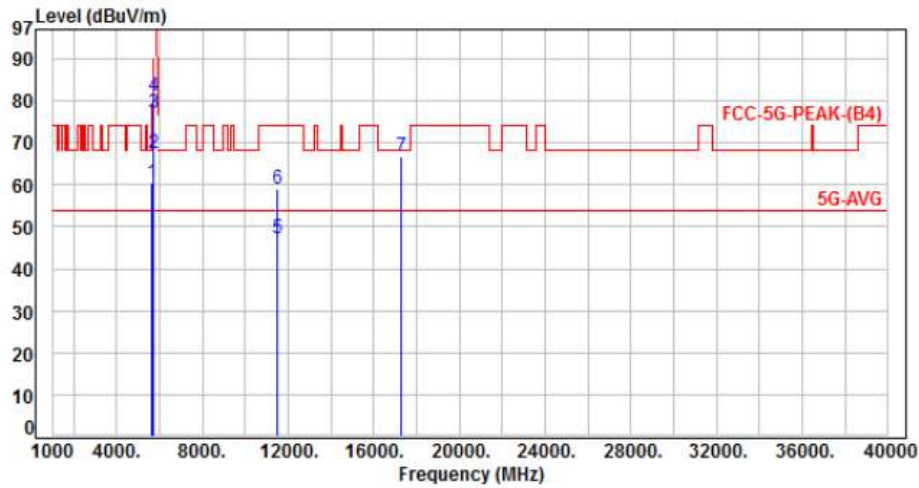


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	5.25	56.13	61.38	68.20	-6.82	Peak	220	265	P
2	5700.00	5.18	63.44	68.62	105.20	-36.58	Peak	220	265	P
3	5720.00	5.19	70.89	76.08	110.80	-34.72	Peak	220	265	P
4	5725.00	5.19	74.53	79.72	122.20	-42.48	Peak	220	265	P
5	11510.00	13.20	36.72	49.92	54.00	-4.08	Average	210	241	P
6	11510.00	13.20	48.60	61.80	74.00	-12.20	Peak	210	241	P
7	17265.00	19.34	46.59	65.93	68.20	-2.27	Peak	100	329	P

Note: Level=Reading+Factor
 Margin=Level-Limit
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 3, CH151, Band 4		:

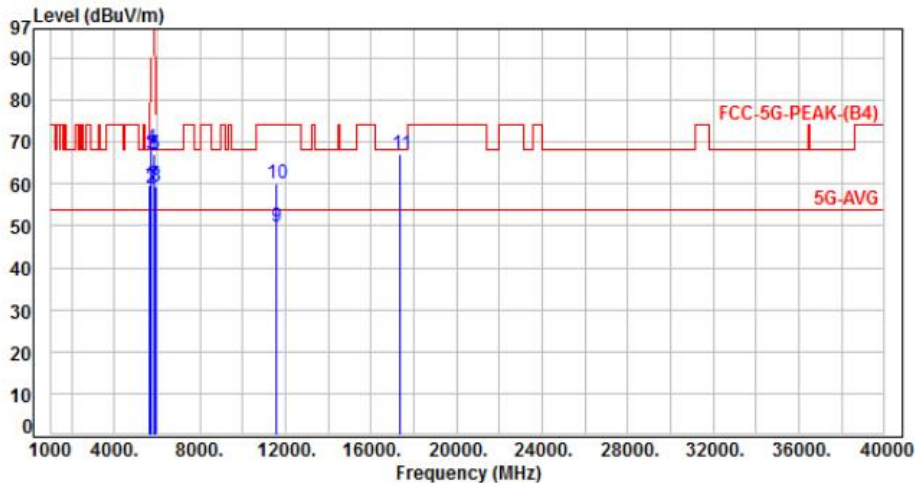


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	5.25	55.30	60.55	68.20	-7.65	Peak	208	273	P
2	5700.00	5.18	62.21	67.39	105.20	-37.81	Peak	208	273	P
3	5720.00	5.19	71.78	76.97	110.80	-33.83	Peak	208	273	P
4	5725.00	5.19	75.89	81.08	122.20	-41.12	Peak	208	273	P
5	11510.00	13.20	34.18	47.38	54.00	-6.62	Average	100	216	P
6	11510.00	13.20	45.67	58.87	74.00	-15.13	Peak	100	216	P
7	17265.00	19.34	47.26	66.60	68.20	-1.60	Peak	200	247	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: VERTICAL
Test Mode	: Mode 3, CH159, Band 4		

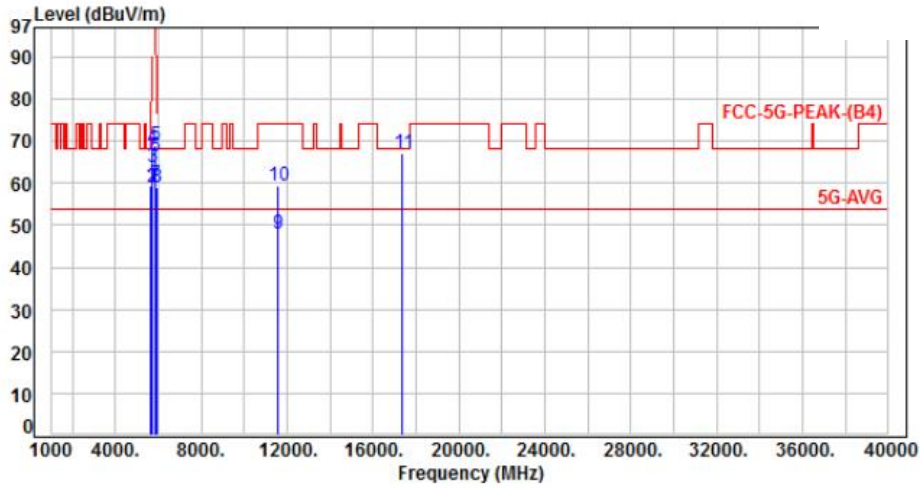


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	5.25	54.56	59.81	68.20	-8.39	Peak	310	95	P
2	5700.00	5.18	53.99	59.17	105.20	-46.03	Peak	310	95	P
3	5720.00	5.19	61.86	67.05	110.80	-43.75	Peak	310	95	P
4	5725.00	5.19	63.31	68.50	122.20	-53.70	Peak	310	95	P
5	5850.00	5.37	61.76	67.13	122.20	-55.07	Peak	310	95	P
6	5855.00	5.39	61.44	66.83	110.80	-43.97	Peak	310	95	P
7	5875.00	5.47	54.31	59.78	105.20	-45.42	Peak	310	95	P
8	5925.00	5.60	53.65	59.25	68.20	-8.95	Peak	310	95	P
9	11590.00	13.52	36.22	49.74	54.00	-4.26	Average	279	220	P
10	11590.00	13.52	46.70	60.22	74.00	-13.78	Peak	279	220	P
11	17385.00	20.03	47.16	67.19	68.20	-1.01	Peak	213	215	P

Note: Level=Reading+Factor
 Margin=Level-Limit
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 3, CH159, Band 4		

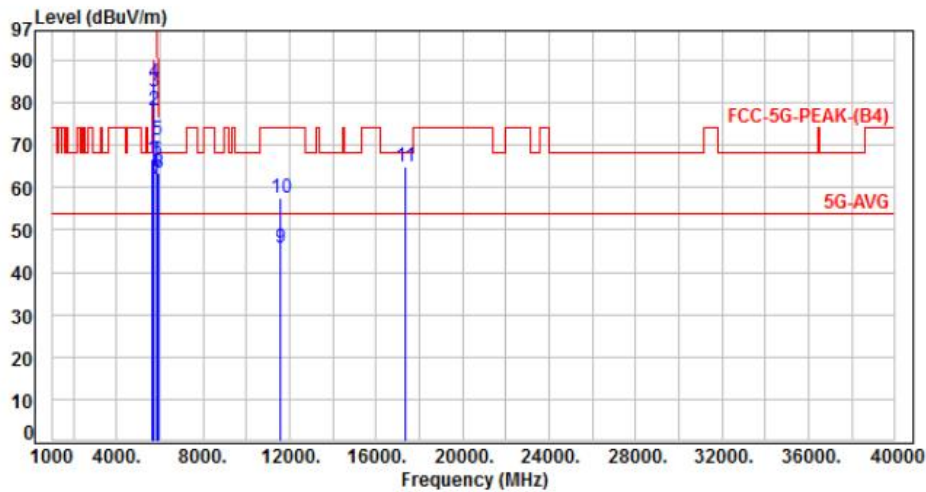


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	5.25	54.12	59.37	68.20	-8.83	Peak	245	252	P
2	5700.00	5.18	53.98	59.16	105.20	-46.04	Peak	245	252	P
3	5720.00	5.19	58.53	63.72	110.80	-47.08	Peak	245	252	P
4	5725.00	5.19	63.00	68.19	122.20	-54.01	Peak	245	252	P
5	5850.00	5.37	63.50	68.87	122.20	-53.33	Peak	245	252	P
6	5855.00	5.39	60.91	66.30	110.80	-44.50	Peak	245	252	P
7	5875.00	5.47	54.24	59.71	105.20	-45.49	Peak	245	252	P
8	5925.00	5.60	53.37	58.97	68.20	-9.23	Peak	245	252	P
9	11590.00	13.52	34.26	47.78	54.00	-6.22	Average	233	207	P
10	11590.00	13.52	45.81	59.33	74.00	-14.67	Peak	233	207	P
11	17385.00	20.03	47.09	67.12	68.20	-1.08	Peak	200	241	P

Note: Level=Reading+Factor
 Margin=Level-Limit
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: VERTICAL
Test Mode	: Mode 4, CH155, Band 4		:

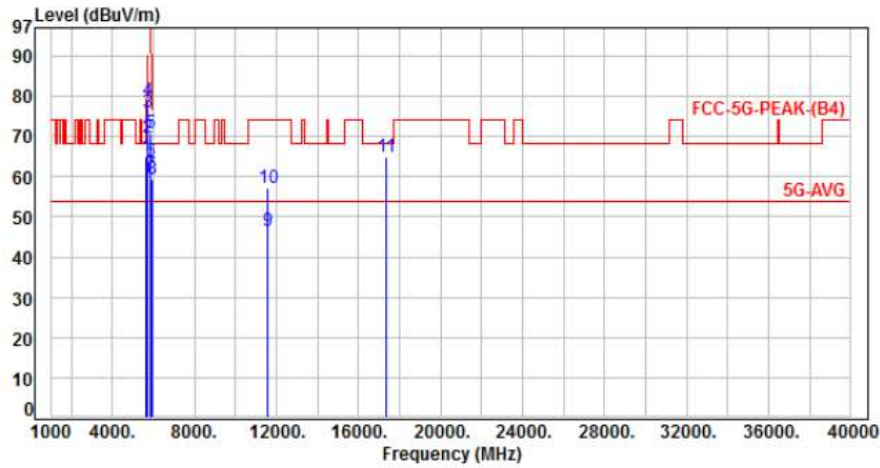


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	5.25	61.64	66.89	68.20	-1.31	Peak	370	92	P
2	5700.00	5.18	73.10	78.28	105.20	-26.92	Peak	370	92	P
3	5720.00	5.19	77.50	82.69	110.80	-28.11	Peak	370	92	P
4	5725.00	5.19	79.51	84.70	122.20	-37.50	Peak	370	92	P
5	5850.00	5.37	65.96	71.33	122.20	-50.87	Peak	370	92	P
6	5855.00	5.39	60.88	66.27	110.80	-44.53	Peak	370	92	P
7	5875.00	5.47	56.37	61.84	105.20	-43.36	Peak	370	92	P
8	5925.00	5.60	57.85	63.45	68.20	-4.75	Peak	370	92	P
9	11550.00	13.36	32.53	45.89	54.00	-8.11	Average	100	78	P
10	11550.00	13.36	44.29	57.65	74.00	-16.35	Peak	100	78	P
11	17325.00	19.64	45.34	64.98	68.20	-3.22	Peak	100	112	P

Note: Level=Reading+Factor
 Margin=Level-Limit
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 4, CH155, Band 4		



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	5.25	59.68	64.93	68.20	-3.27	Peak	201	136	P
2	5700.00	5.18	64.60	69.78	105.20	-35.42	Peak	201	136	P
3	5720.00	5.19	70.80	75.99	110.80	-34.81	Peak	201	136	P
4	5725.00	5.19	73.61	78.80	122.20	-43.40	Peak	201	136	P
5	5850.00	5.37	65.60	70.97	122.20	-51.23	Peak	201	136	P
6	5855.00	5.39	58.26	63.65	110.80	-47.15	Peak	201	136	P
7	5875.00	5.47	54.93	60.40	105.20	-44.80	Peak	201	136	P
8	5925.00	5.60	53.78	59.38	68.20	-8.82	Peak	201	136	P
9	11550.00	13.36	33.26	46.62	54.00	-7.38	Average	100	214	P
10	11550.00	13.36	43.68	57.04	74.00	-16.96	Peak	100	214	P
11	17325.00	19.64	45.37	65.01	68.20	-3.19	Peak	100	332	P

Note: Level=Reading+Factor
 Margin=Level-Limit
 Factor=Antenna Factor + cable loss - Amplifier Factor



6.7. Restricted Bands of Operation

Only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.09000 – 0.11000	16.42000 – 16.42300	399.9 – 410.0	4.500 – 5.150
0.49500 – 0.505**	16.69475 – 16.69525	608.0 – 614.0	5.350 – 5.460
2.17350 – 2.19050	16.80425 – 16.80475	960.0 – 1240.0	7.250 – 7.750
4.12500 – 4.12800	25.50000 – 25.67000	1300.0 – 1427.0	8.025 – 8.500
4.17725 – 4.17775	37.50000 – 38.25000	1435.0 – 1626.5	9.000 – 9.200
4.20725 – 4.20775	73.00000 – 74.60000	1645.5 – 1646.5	9.300 – 9.500
6.21500 – 6.21800	74.80000 – 75.20000	1660.0 – 1710.0	10.600 – 12.700
6.26775 – 6.26825	108.00000 – 121.94000	1718.8 – 1722.2	13.250 – 13.400
6.31175 – 6.31225	123.00000 – 138.00000	2200.0 – 2300.0	14.470 – 14.500
8.29100 – 8.29400	149.90000 – 150.05000	2310.0 – 2390.0	15.350 – 16.200
8.36200 – 8.36600	156.52475 – 156.52525	2483.5 – 2500.0	17.700 – 21.400
8.37625 – 8.38675	156.70000 – 156.90000	2655.0 – 2900.0	22.010 – 23.120
8.41425 – 8.41475	162.01250 – 167.17000	3260.0 – 3267.0	23.600 – 24.000
12.29000 – 12.29300	167.72000 – 173.20000	3332.0 – 3339.0	31.200 – 31.800
12.51975 – 12.52025	240.00000 – 285.00000	3345.8 – 3358.0	36.430 – 36.500
12.57675 – 12.57725	322.00000 – 335.40000	3600.0 – 4400.0	Above 38.6
13.36000 – 13.41000			

** : Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz



7. On Time, Duty Cycle and Measurement methods

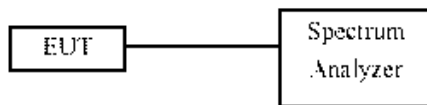
7.1. Test Limit

None; for reporting purposes only.

7.2. Test Procedure

KDB 789033 Zero-Span Spectrum Analyzer Method.

7.3. Test Setup Layout



7.4. Test Result and Data

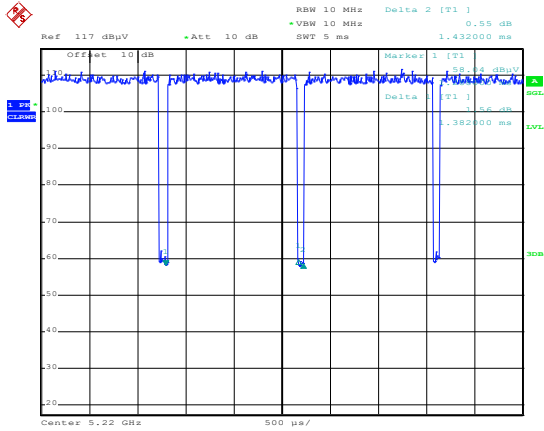
Modulation Type	On Time (msec)	Period Time (msec)	Duty Cycle (%)
802.11a,6M	1.38	1.43	96.51%
802.11ac VHT20	1.30	1.35	96.30%
802.11ac VHT40	0.64	0.70	91.48%
802.11ac VHT80	0.34	0.39	86.15%

7.5. Measurement Methods

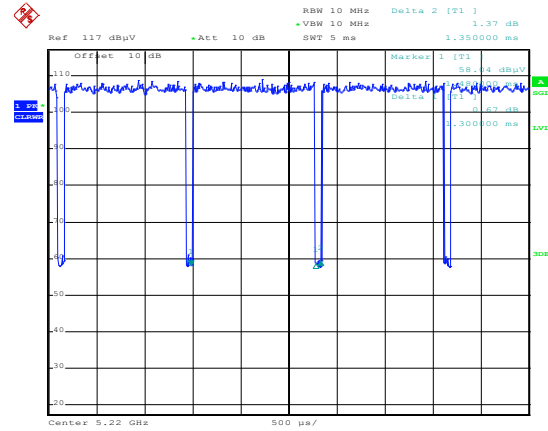
26 dB and 6dB Emission BW	KDB 789033 D02 v02r01, Section C
99% Occupied BW	KDB 789033 D02 v02r01, Section D
Conducted Output Power	KDB 789033 D02 v02r01, Section E.2.d and E.3.b (Method PM-G)
Power Spectral Density	KDB 789033 D02 v02r01, Section F
Unwanted emissions in restricted bands	KDB 789033 D02 v02r01, Sections G and H
Unwanted emissions in non-restricted bands	KDB 789033 D02 v02r01, Sections G and H



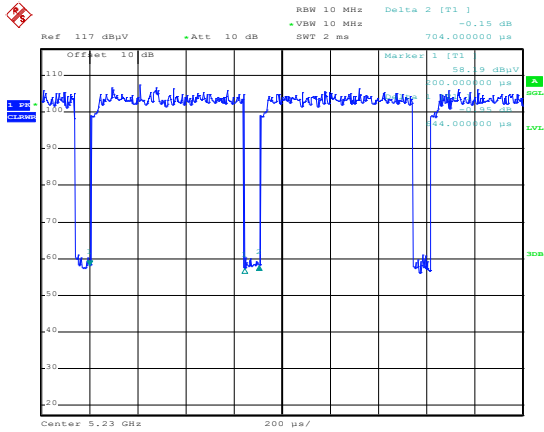
Modulation Type: 802.11a (6Mbps)



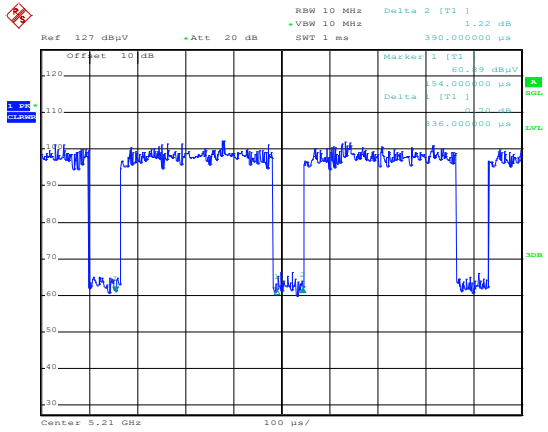
Modulation Type: 802.11ac VHT20 (6.5Mbps)



Modulation Type: 802.11ac VHT40 (13.5Mbps)



Modulation Type: 802.11ac VHT80 (29.3Mbps)





8. 6dB Bandwidth & 99% Occupied Bandwidth

8.1. Test Limit

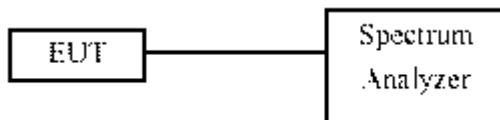
FCC §15.407

The minimum 6 dB bandwidth shall be at least 500 kHz.

8.2. Test Procedure

Reference to 789033 D02 General UNII Test Procedures New Rules v01: The transmitter output is connected to a spectrum analyzer with the RBW set to 100KHz, the VBW $\geq 3 \times$ RBW, peak detector and max hold.

8.3. Test Setup Layout



8.4. Test Result and Data (6dB Bandwidth)

In the 5.8G Band

Modulation Type	Channel	Frequency (MHz)	6dB Bandwidth (MHz)			Minimum Limit (MHz)
			ANT A	ANT B	ANT C	
802.11a	149	5745	16.35	16.35	16.35	0.50
	157	5785	16.35	16.35	16.35	0.50
	165	5825	16.35	16.35	16.35	0.50
802.11ac VHT20	149	5745	17.55	17.55	17.55	0.50
	157	5785	17.60	17.55	17.60	0.50
	165	5825	17.60	17.60	17.60	0.50
802.11ac VHT40	151	5755	36.30	36.30	36.30	0.50
	159	5795	36.40	35.10	36.30	0.50
802.11ac VHT80	155	5775	75.36	75.20	75.36	0.50



8.5. Test Result and Data (99% Occupied Bandwidth)

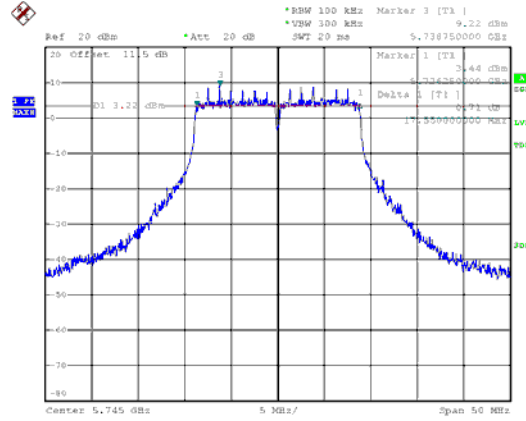
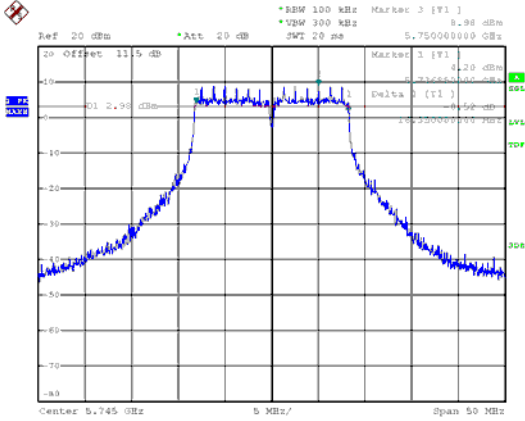
In the 5.8G Band

Modulation Type	Channel	Frequency (MHz)	99% Bandwidth (MHz)		
			ANT A	ANT B	ANT C
802.11a	149	5745	16.70	16.65	16.75
	157	5785	16.75	16.70	16.65
	165	5825	16.80	16.65	16.75
802.11ac VHT20	149	5745	17.90	17.80	17.85
	157	5785	17.90	17.85	17.85
	165	5825	17.90	17.80	17.90
802.11ac VHT40	151	5755	36.80	36.90	36.80
	159	5795	36.90	36.80	36.60
802.11ac VHT80	155	5775	75.84	75.84	75.52



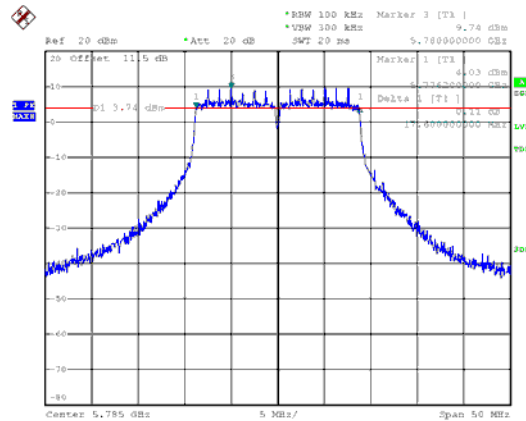
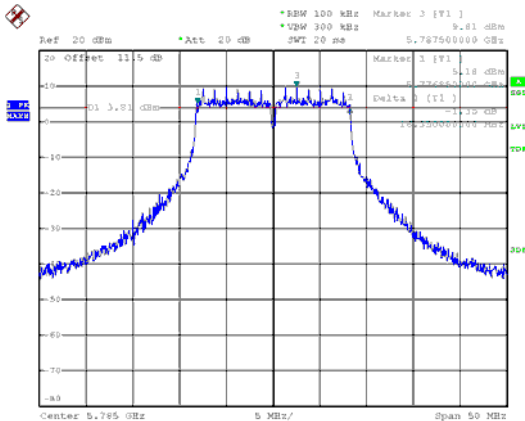
6dB Bandwidth
ANT A
Modulation Type: 802.11a (6Mbps)
CH149

Modulation Type: 802.11ac, VHT20 (6.5Mbps)
CH149



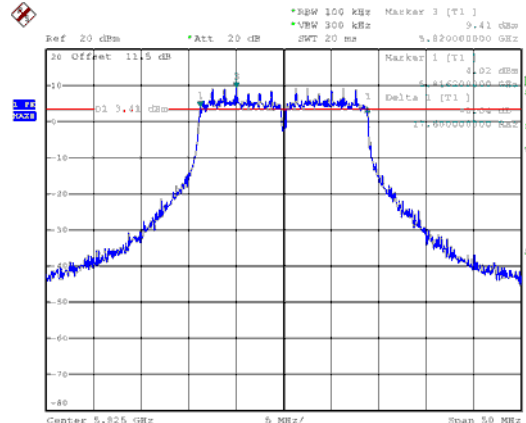
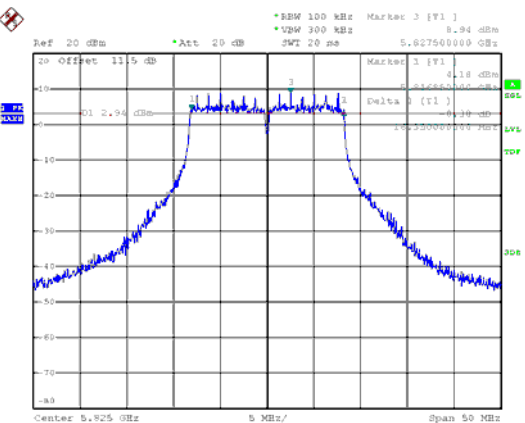
CH157

CH157



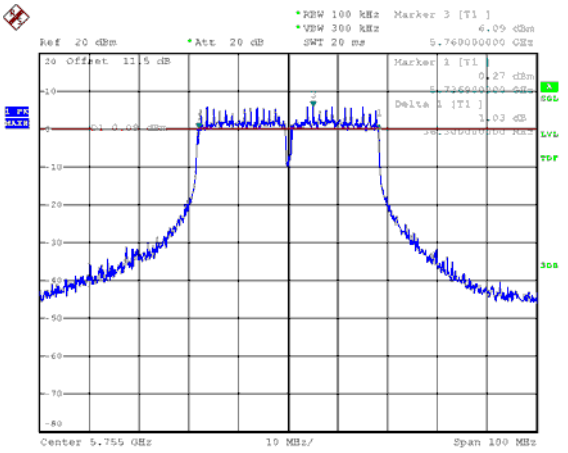
CH165

CH165

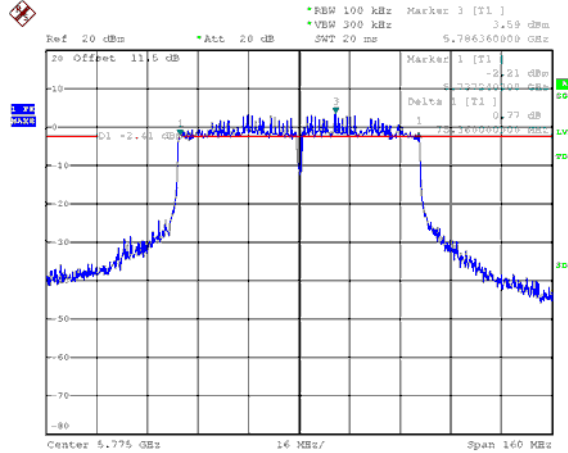




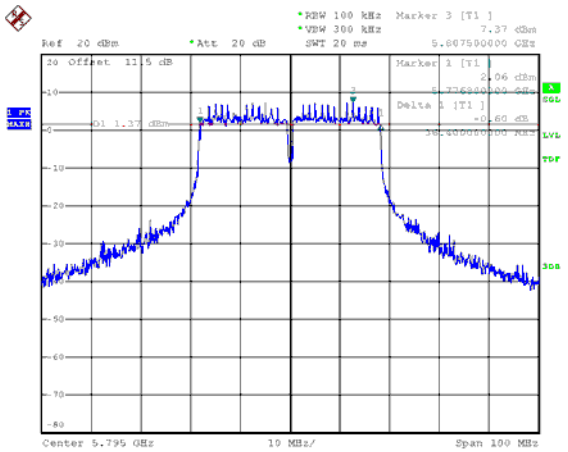
Modulation Type: 802.11ac, VHT40 (13.5Mbps)
CH151



Modulation Type: 802.11ac, VHT80 (29.3Mbps)
CH155

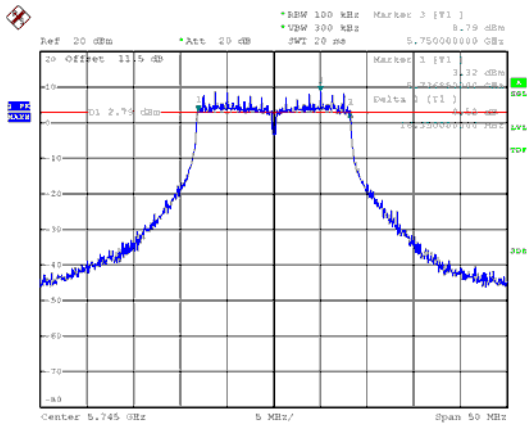


CH159

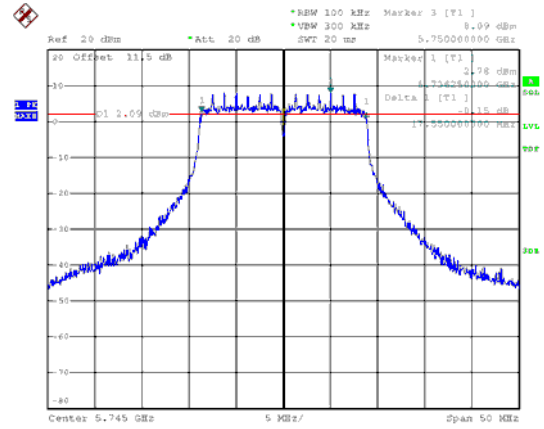




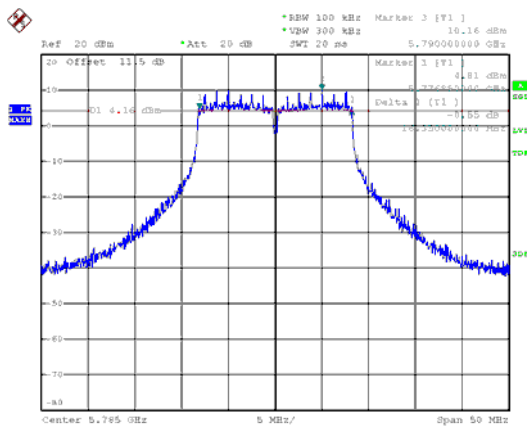
ANT B
Modulation Type: 802.11a (6Mbps)
CH149



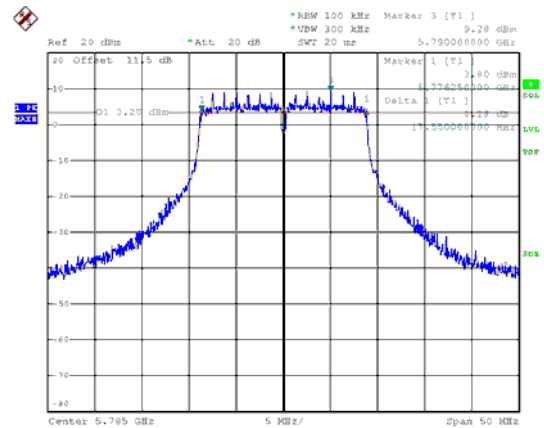
Modulation Type: 802.11ac, VHT20 (6.5Mbps)
CH149



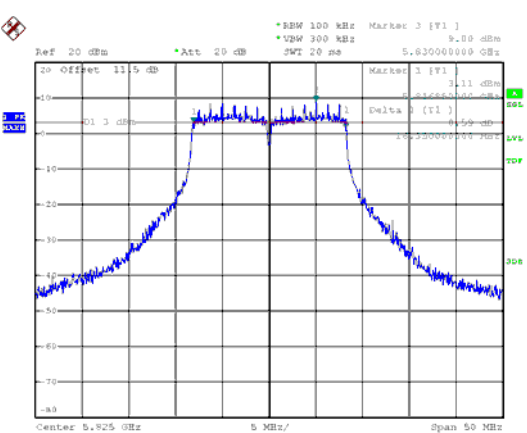
CH157



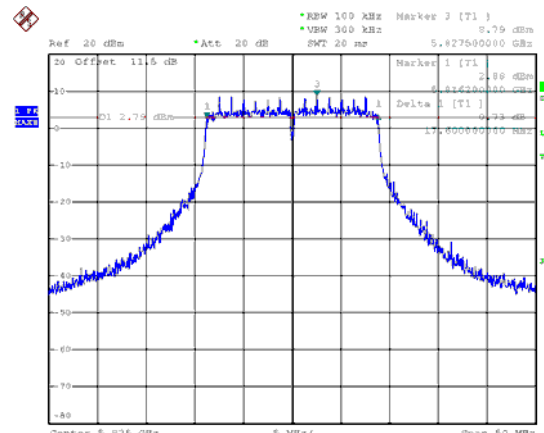
CH157



CH165

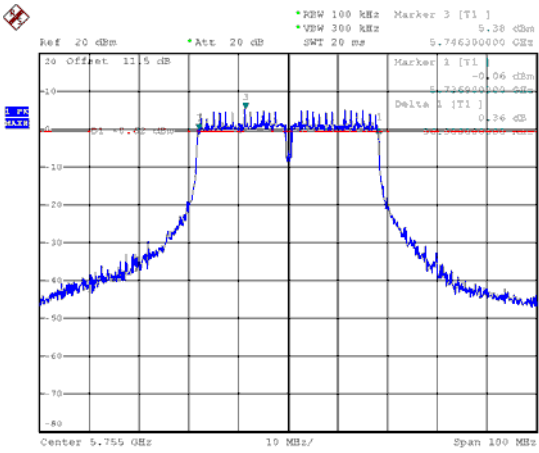


CH165

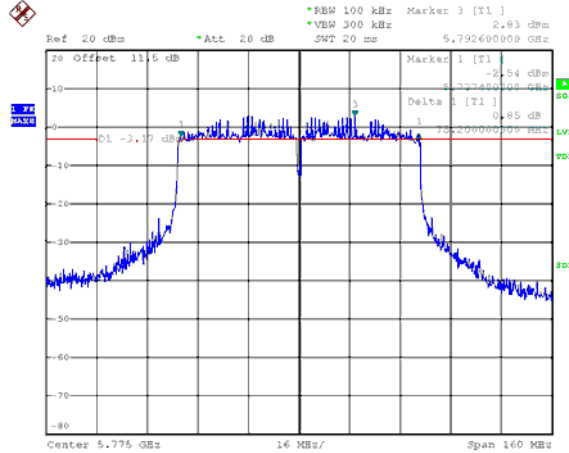




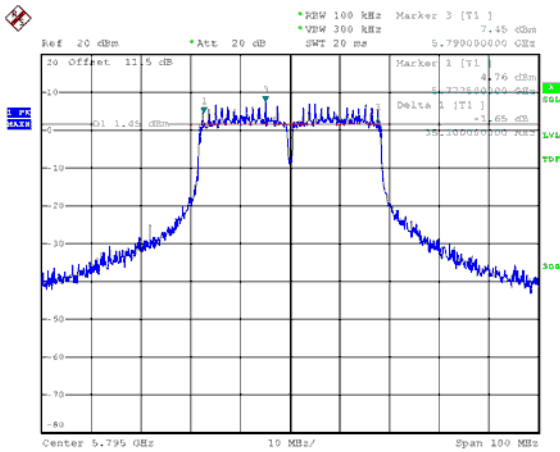
Modulation Type: 802.11ac, VHT40 (13.5Mbps)
CH151



Modulation Type: 802.11ac, VHT80 (29.3Mbps)
CH155

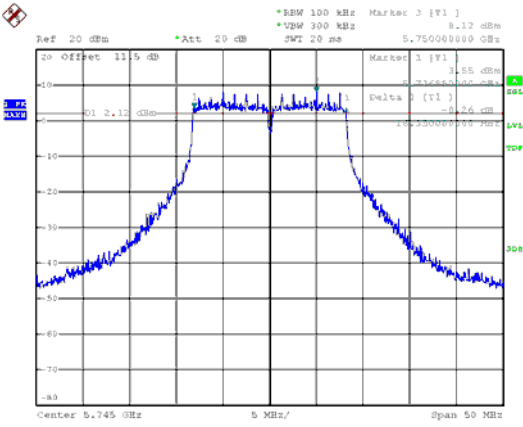


CH159

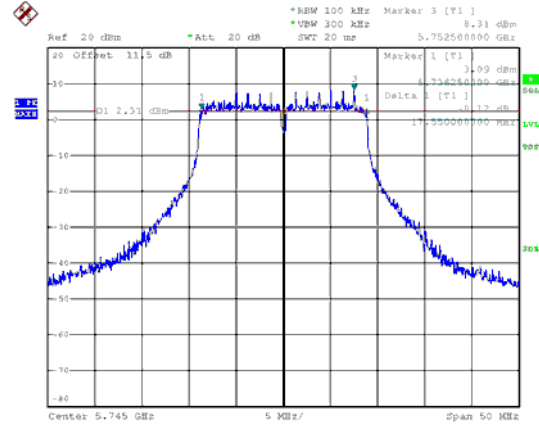




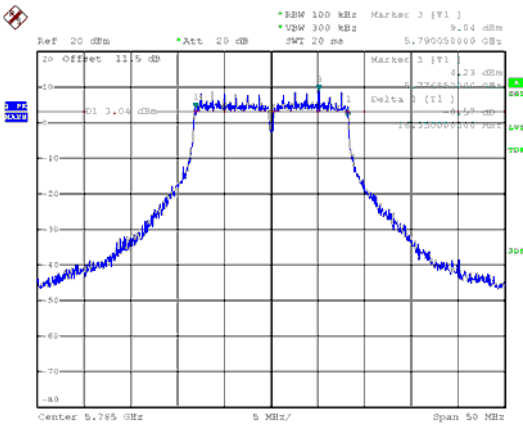
ANT C
Modulation Type: 802.11a (6Mbps)
CH149



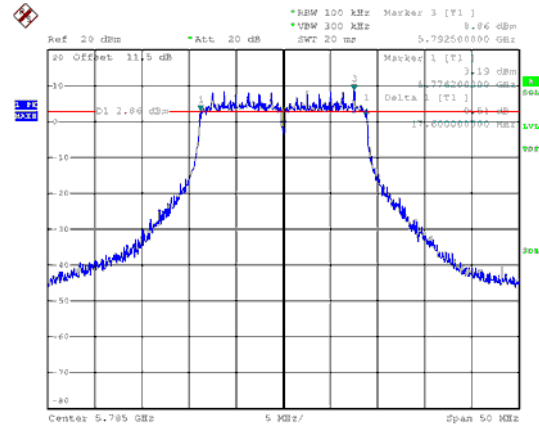
Modulation Type: 802.11ac, VHT20 (6.5Mbps)
CH149



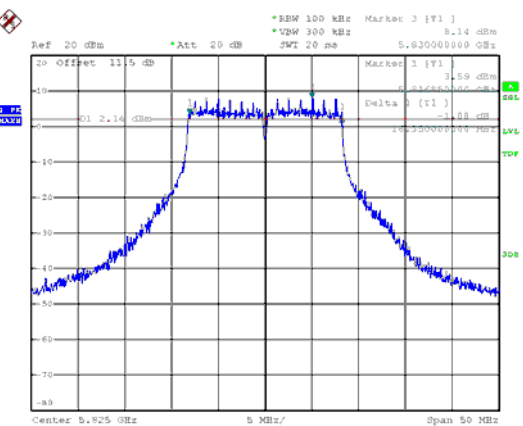
CH157



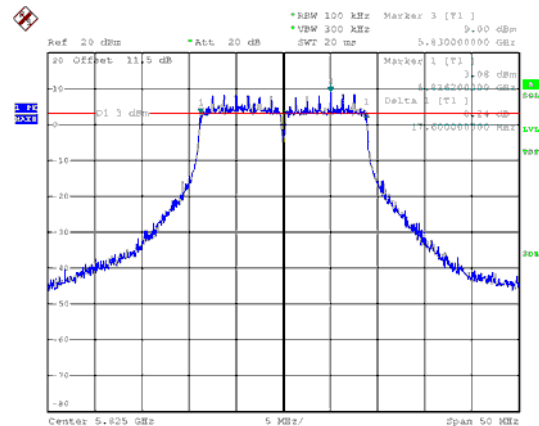
CH157



CH165

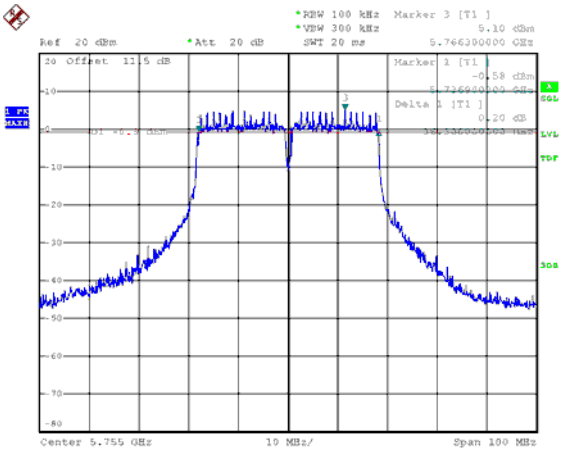


CH165

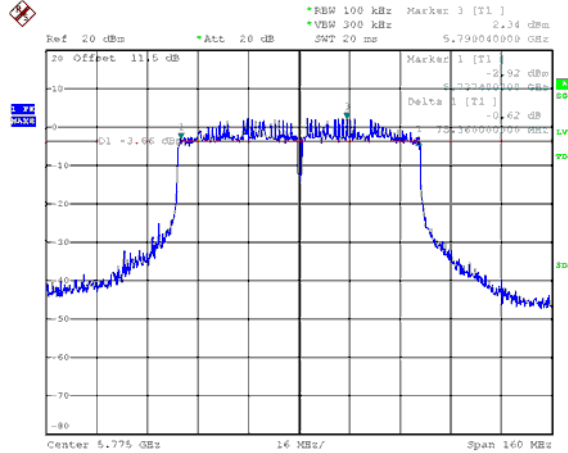




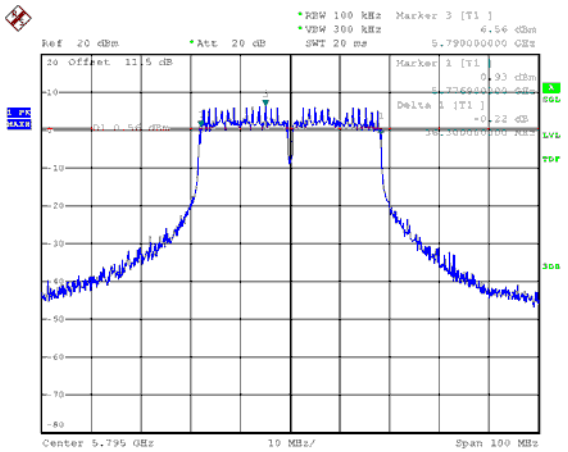
Modulation Type: 802.11ac, VHT40 (13.5Mbps)
CH151



Modulation Type: 802.11ac, VHT80 (29.3Mbps)
CH155



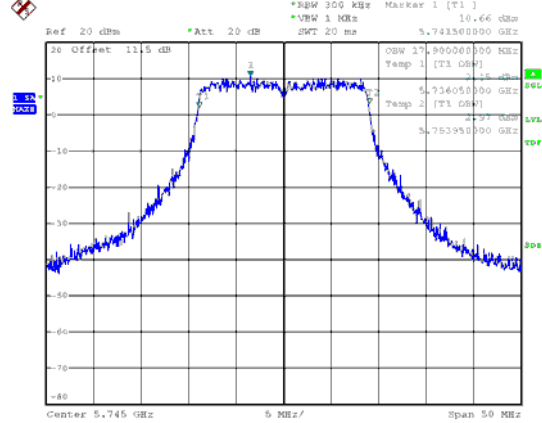
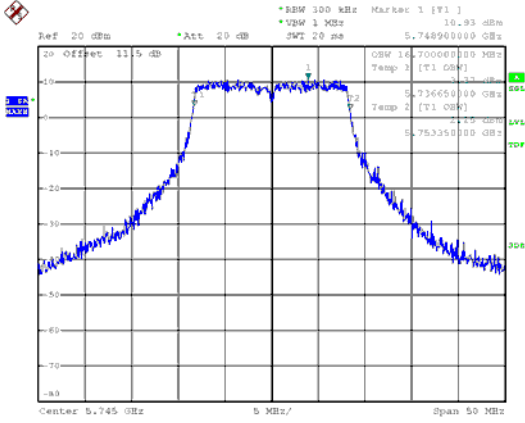
CH159





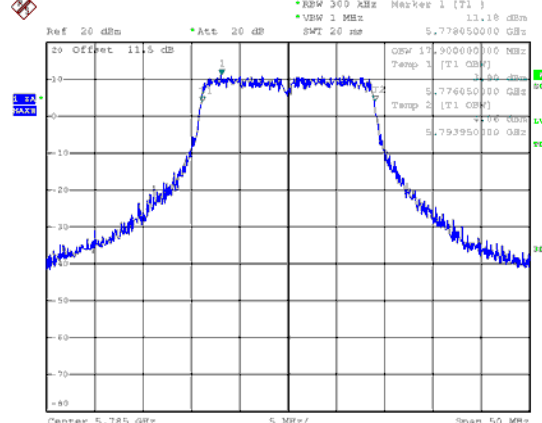
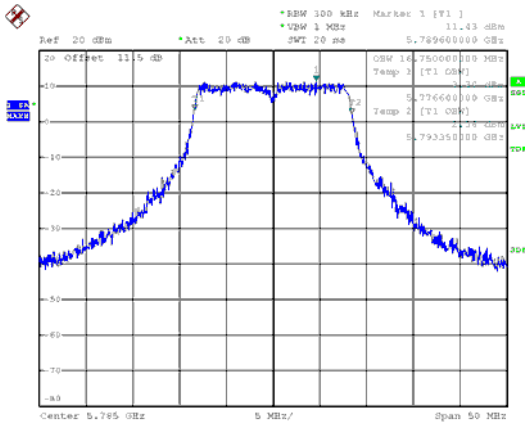
99% Occupied Bandwidth
ANT A
Modulation Type: 802.11a (6Mbps)
CH149

Modulation Type: 802.11ac, VHT20 (6.5Mbps)
CH149



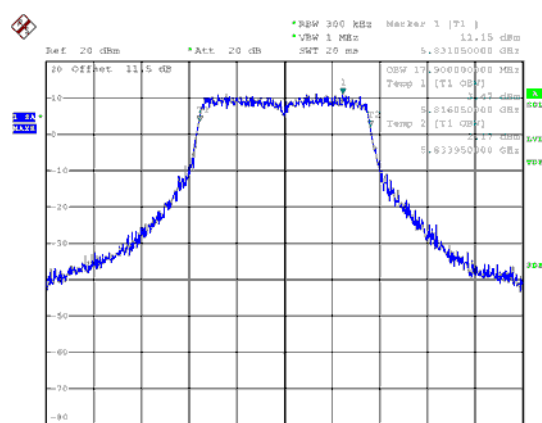
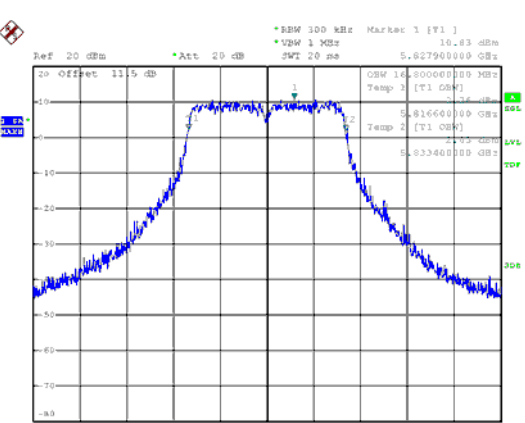
CH157

CH157



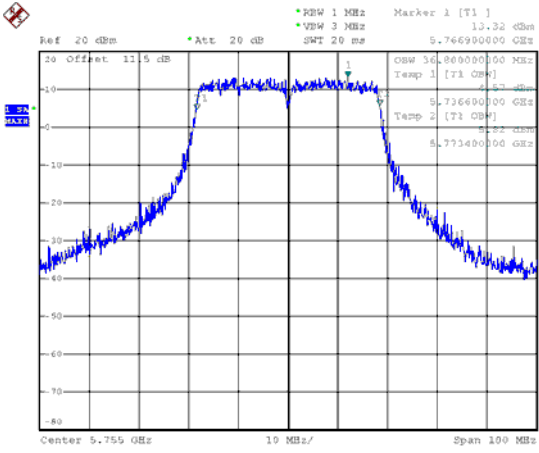
CH165

CH165

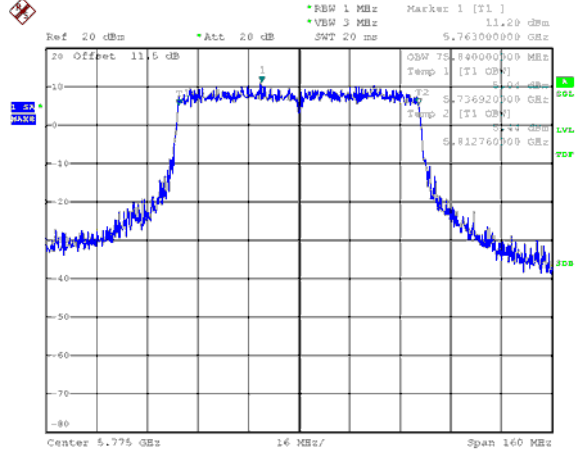




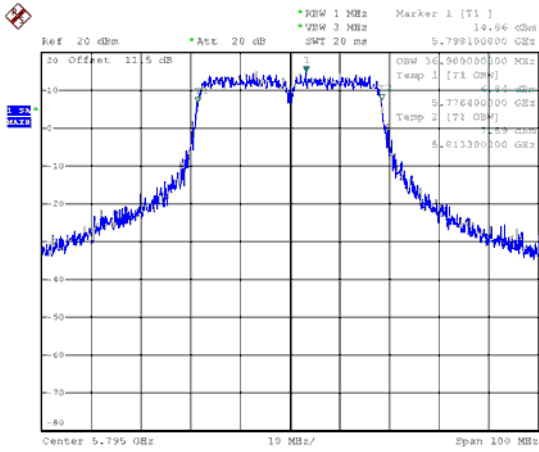
Modulation Type: 802.11ac, VHT40 (13.5Mbps) CH151



Modulation Type: 802.11ac, VHT80 (29.3Mbps) CH155

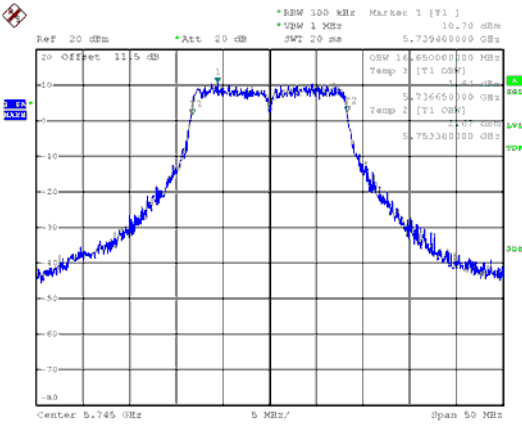


CH159

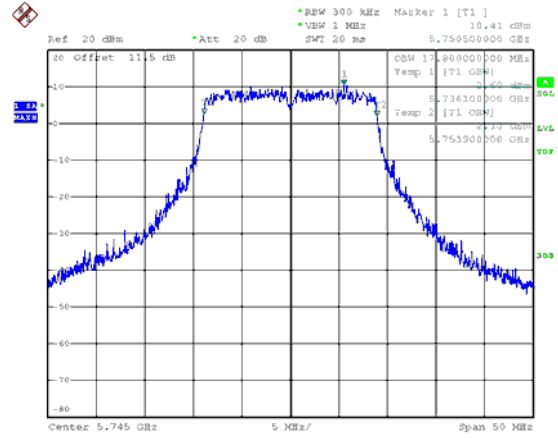




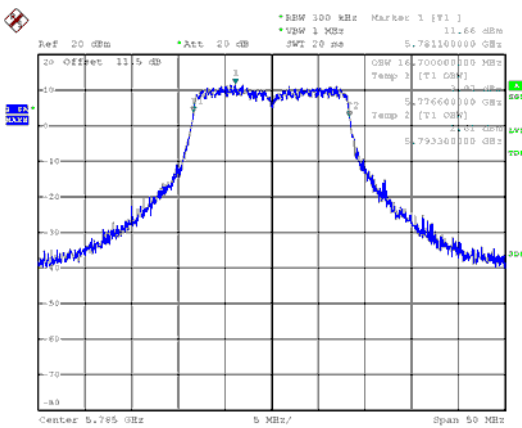
ANT B
Modulation Type: 802.11a (6Mbps)
CH149



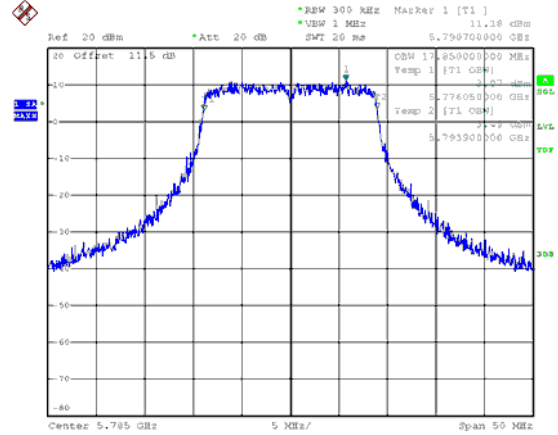
Modulation Type: 802.11ac, VHT20 (6.5Mbps)
CH149



CH157

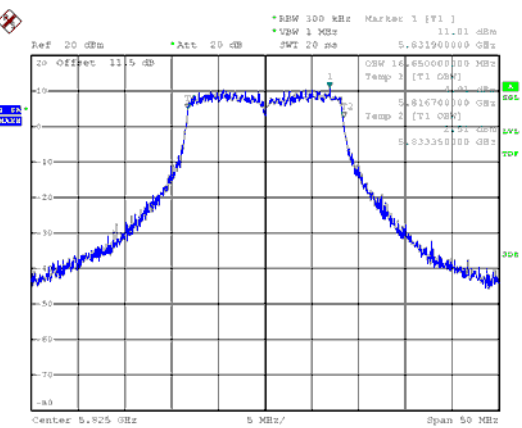


CH157

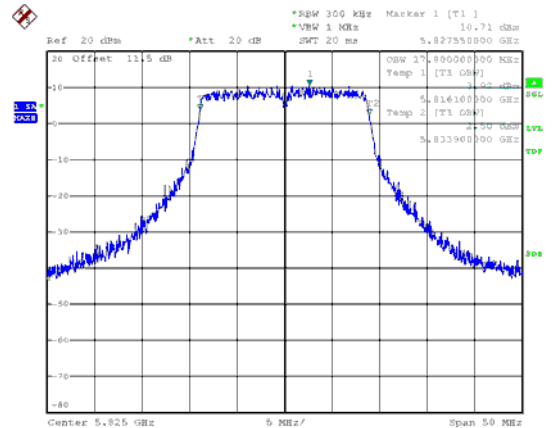


Date: 1.AUG.2019 17:07:42

CH165

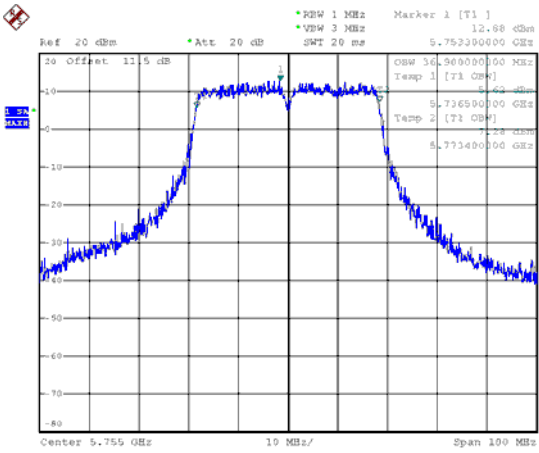


CH165

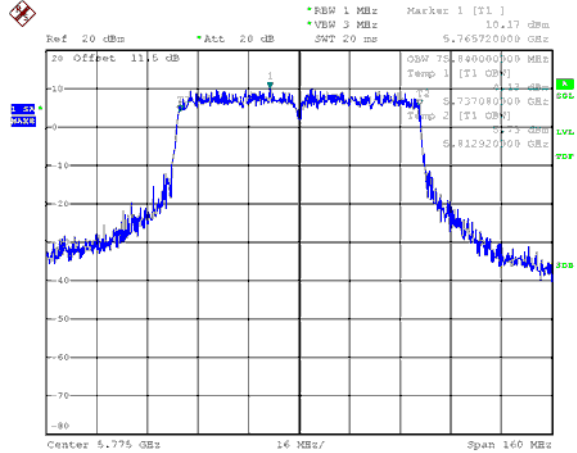




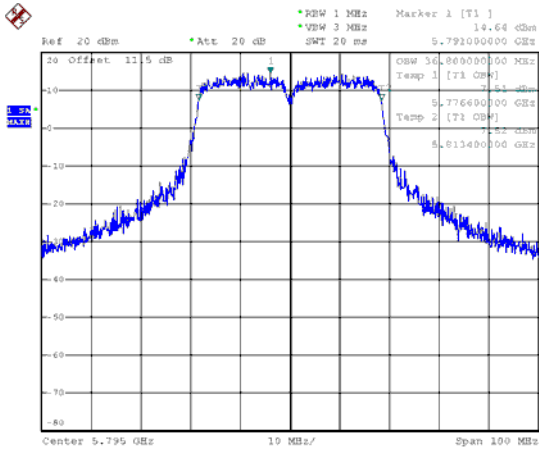
Modulation Type: 802.11ac, VHT40 (13.5Mbps)
CH151



Modulation Type: 802.11ac, VHT80 (29.3Mbps)
CH155

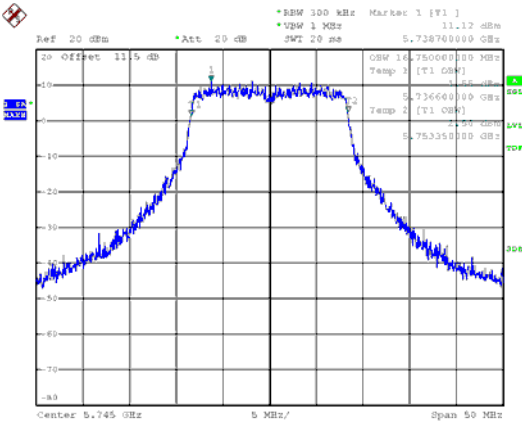


CH159

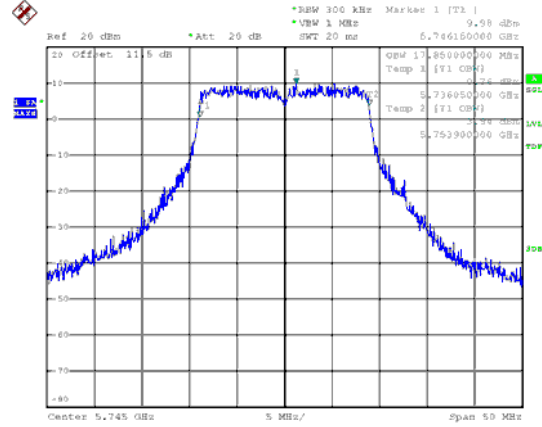




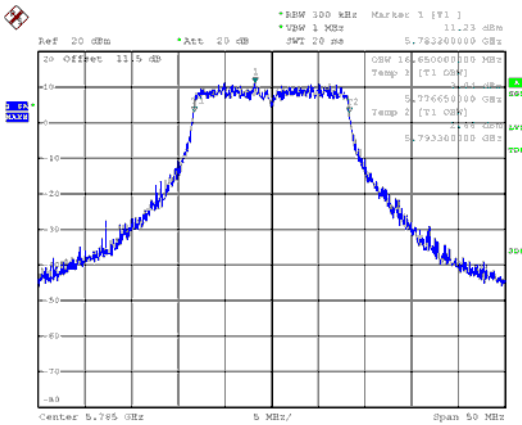
ANT C
Modulation Type: 802.11a (6Mbps)
CH149



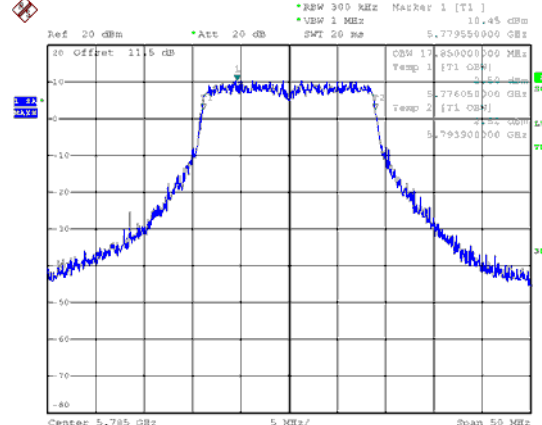
Modulation Type: 802.11ac, VHT20 (6.5Mbps)
CH149



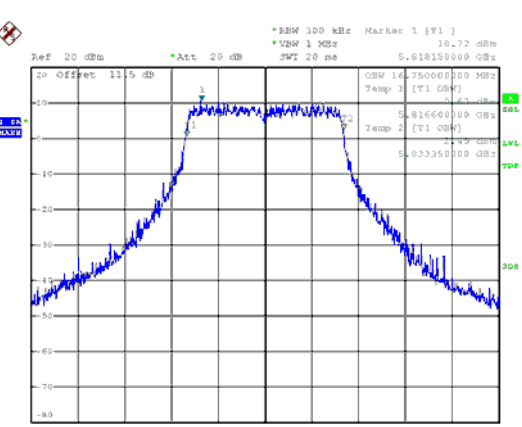
CH157



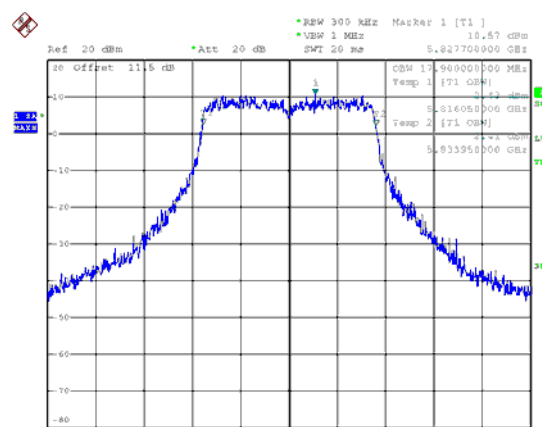
CH157



CH165

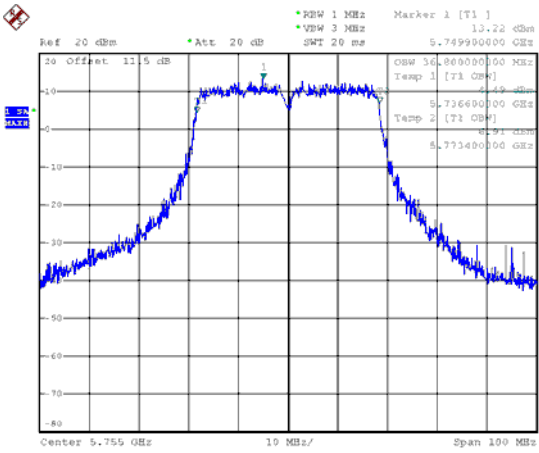


CH165

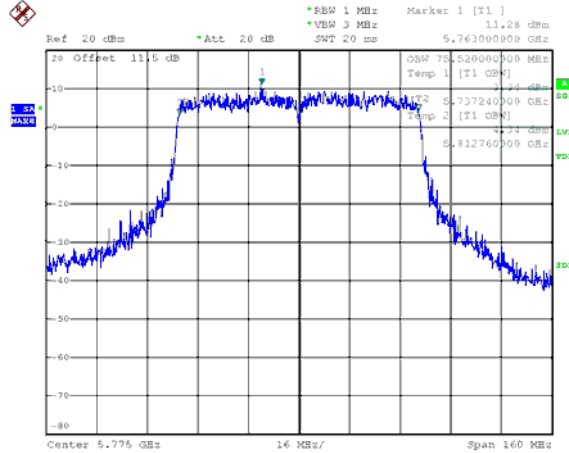




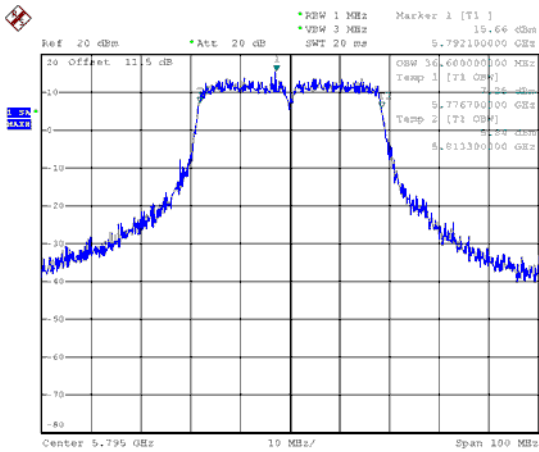
Modulation Type: 802.11ac, VHT40 (13.5Mbps) CH151



Modulation Type: 802.11ac, VHT80 (29.3Mbps) CH155



CH159





9. 26dB Bandwidth & 99% Occupied Bandwidth

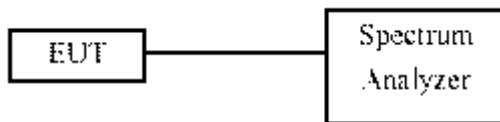
9.1. Test Limit

None; for reporting purposes only.

9.2. Test Procedure

Reference to 789033 D02 General UNII Test Procedures New Rules v01: The transmitter output is connected to a spectrum analyzer with the RBW = approximately 1% of the emission bandwidth, the VBW >= 3 x RBW, peak detector and max hold.

9.3. Test Setup Layout



9.4. Test Result and Data (26dB Bandwidth)

In the 5.2G Band

Modulation Type	Channel	Frequency (MHz)	26dB Bandwidth (MHz)		
			ANT A	ANT B	ANT C
802.11a	36	5180	21.80	21.95	21.35
	44	5220	21.85	21.55	21.10
	48	5240	22.30	21.45	21.20
802.11ac VHT20	36	5180	22.50	22.85	22.85
	44	5220	22.60	22.95	22.35
	48	5240	22.80	22.35	22.25
802.11ac VHT40	38	5190	45.60	44.00	44.60
	46	5230	52.10	46.10	45.80
802.11ac VHT80	42	5210	87.36	87.04	86.40



9.5. Test Result and Data (99% Occupied Bandwidth)

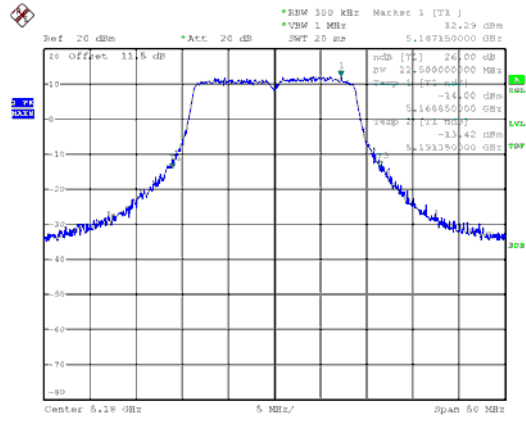
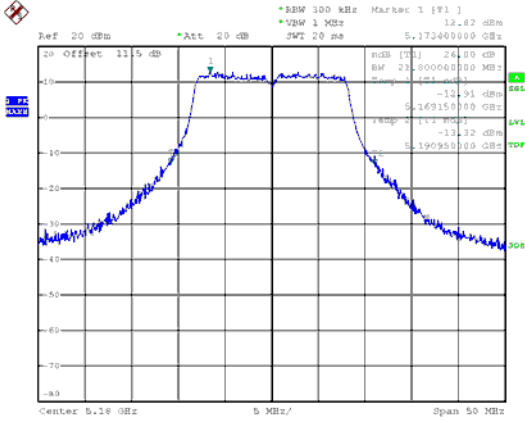
In the 5.2G Band

Modulation Type	Channel	Frequency (MHz)	26dB Bandwidth (MHz)		
			ANT A	ANT B	ANT C
802.11a	36	5180	16.75	16.75	16.65
	44	5220	16.80	16.75	16.75
	48	5240	16.85	16.70	16.70
802.11ac VHT20	36	5180	17.90	17.90	17.90
	44	5220	17.95	17.90	17.90
	48	5240	17.90	17.90	17.85
802.11ac VHT40	38	5190	36.80	36.80	36.80
	46	5230	37.10	36.80	36.80
802.11ac VHT80	42	5210	75.84	76.00	76.00



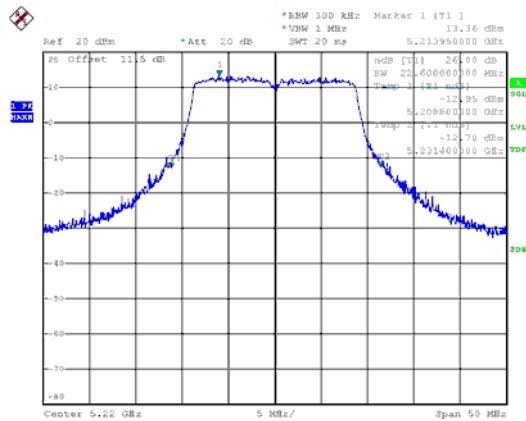
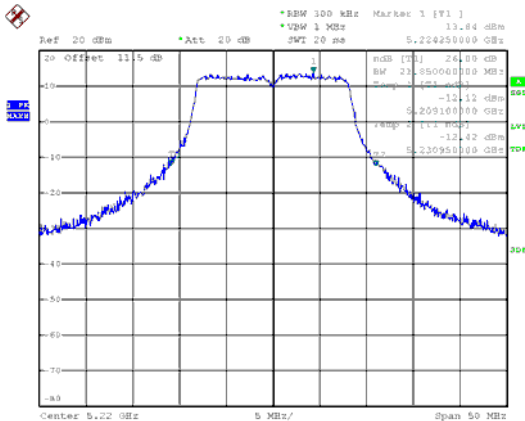
26dB Bandwidth
ANT A
Modulation Type: 802.11a (6Mbps)
CH36

802.11ac VHT20 (6.5Mbps)
CH36



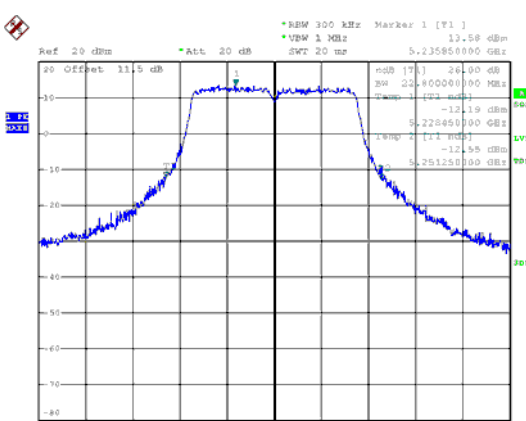
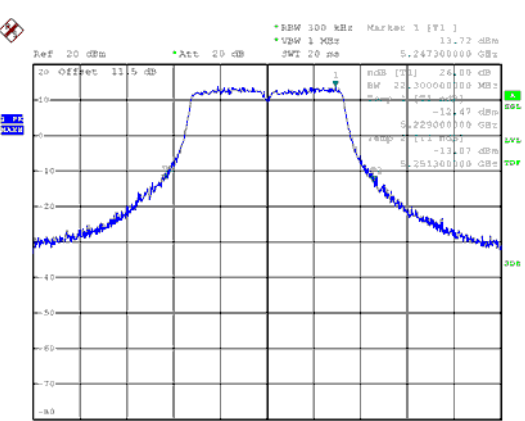
CH44

CH44



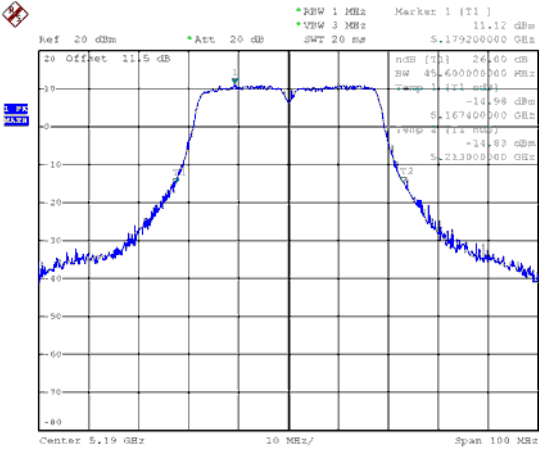
CH48

CH48

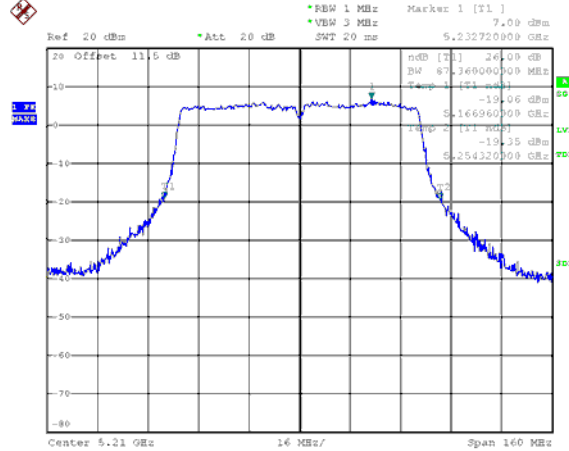




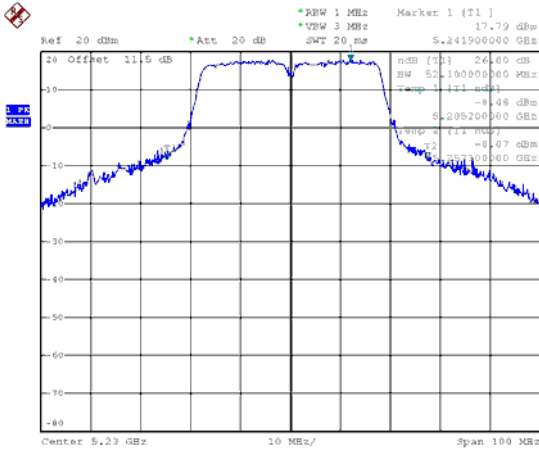
Modulation Type: 802.11ac VHT40 (13.5Mbps) CH38



Modulation Type: 802.11ac VHT80 (29.3Mbps) CH42

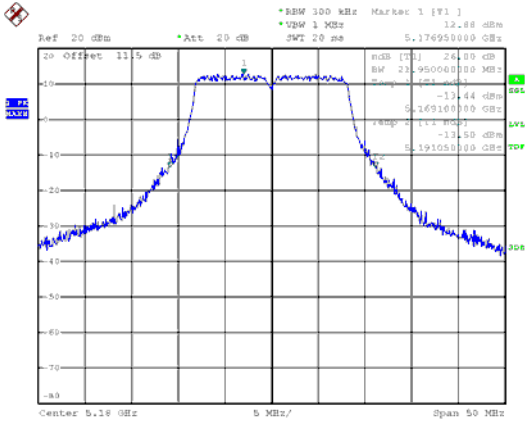


CH46

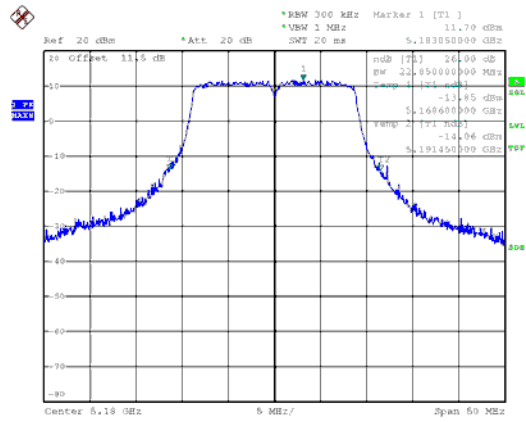




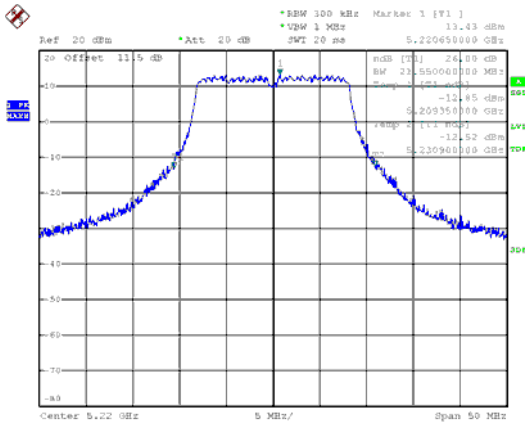
ANT B
Modulation Type: 802.11a (6Mbps)
CH36



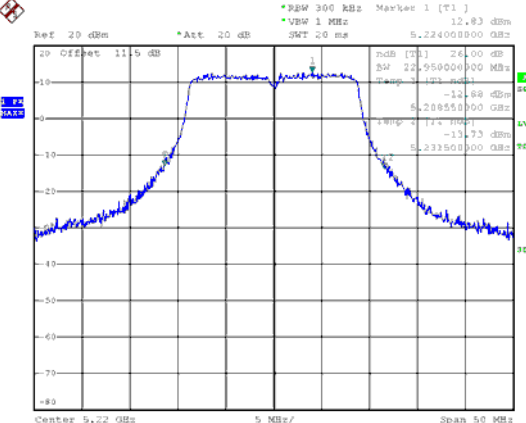
802.11ac VHT20 (6.5Mbps)
CH36



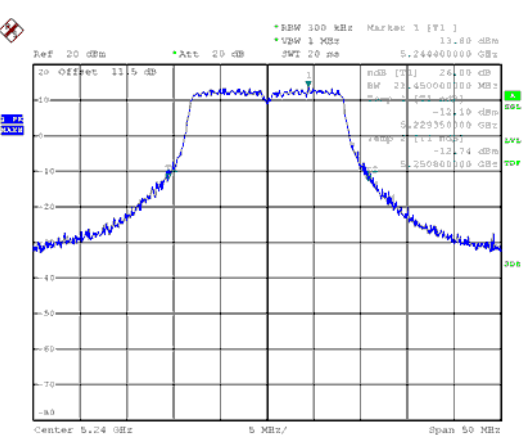
CH44



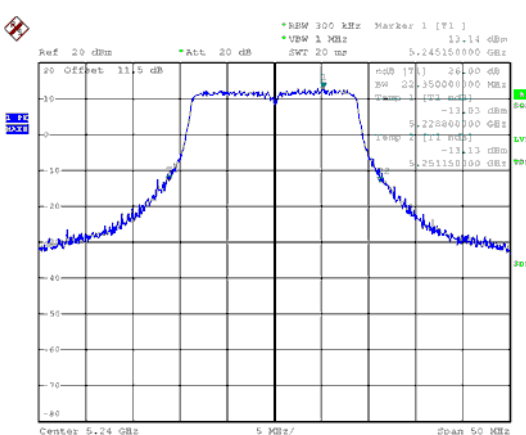
CH44



CH48

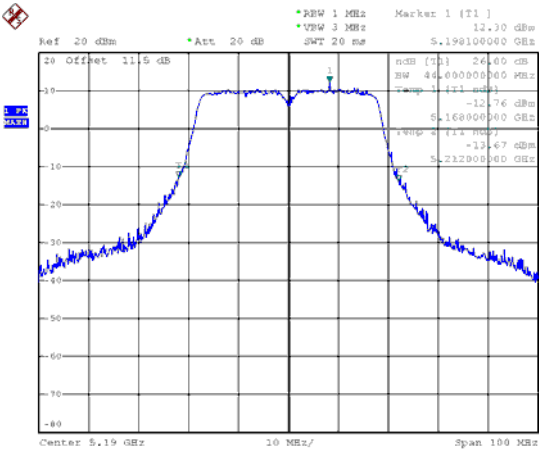


CH48

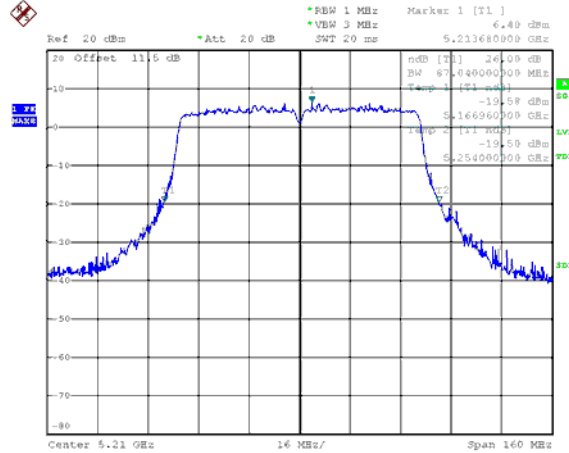




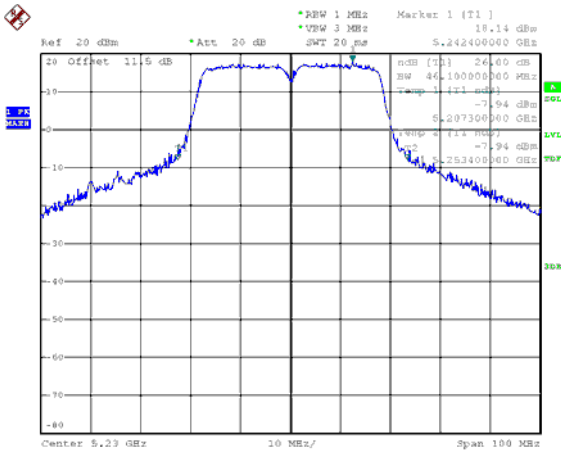
Modulation Type: 802.11ac VHT40 (13.5Mbps) CH38



Modulation Type: 802.11ac VHT80 (29.3Mbps) CH42

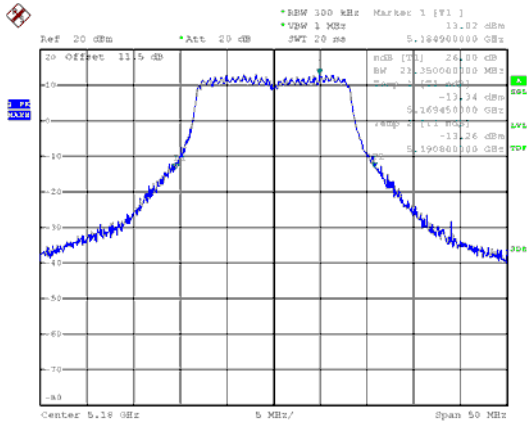


CH46

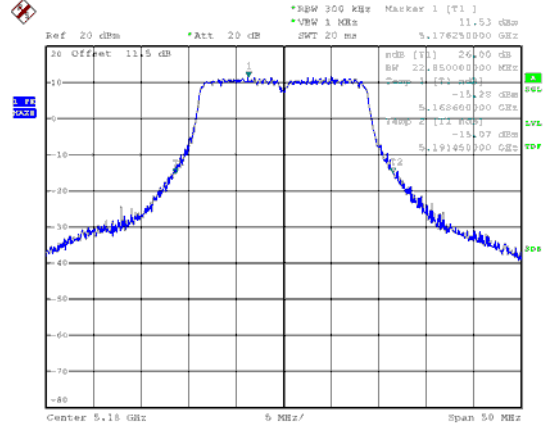




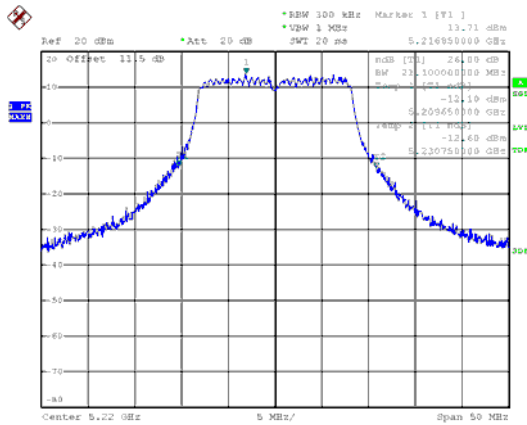
ANT C
Modulation Type: 802.11a (6Mbps)
CH36



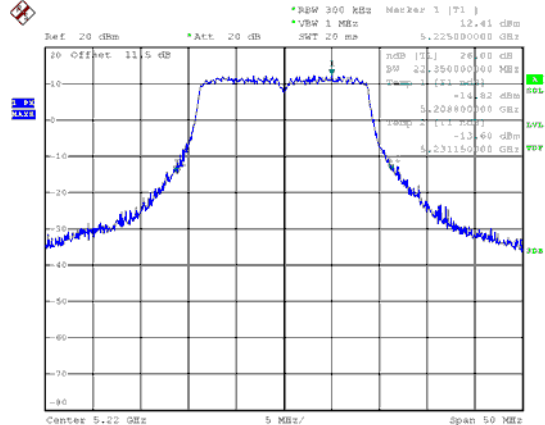
802.11ac VHT20 (6.5Mbps)
CH36



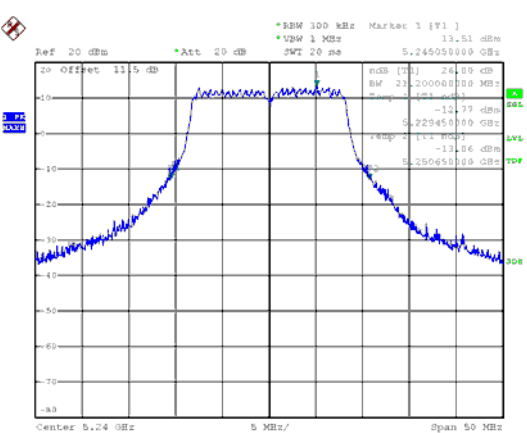
CH44



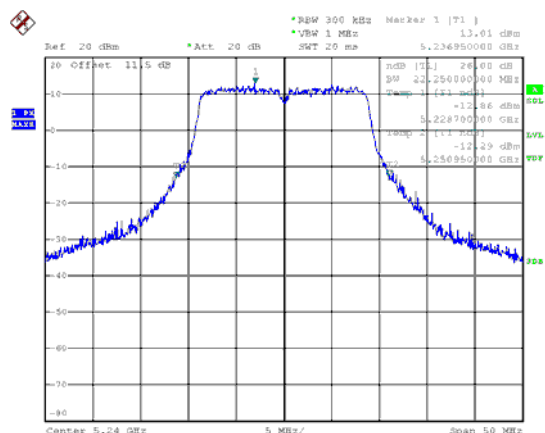
CH44



CH48

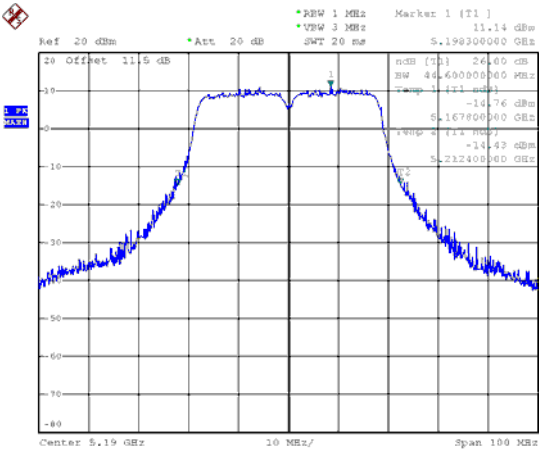


CH48

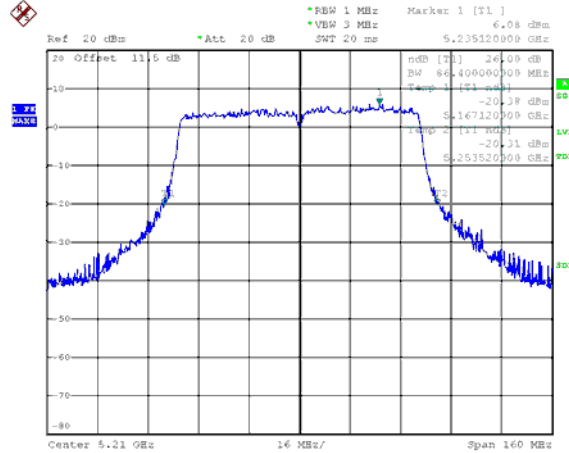




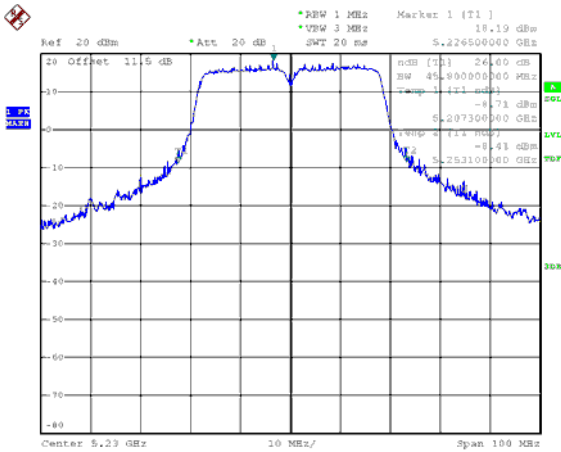
Modulation Type: 802.11ac VHT40 (13.5Mbps) CH38



Modulation Type: 802.11ac VHT80 (29.3Mbps) CH42



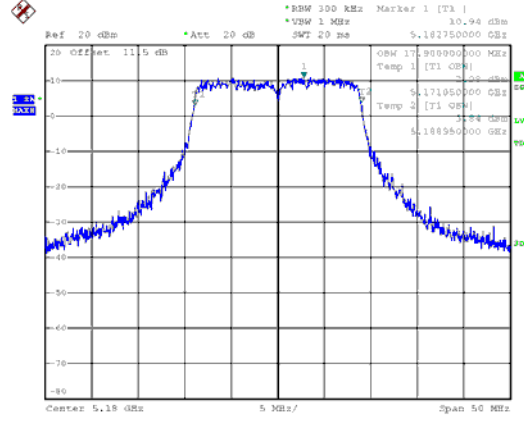
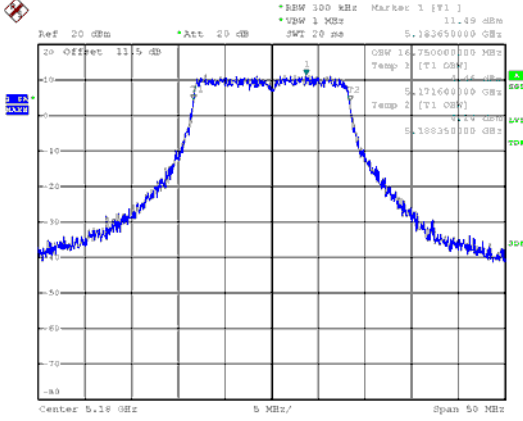
CH46





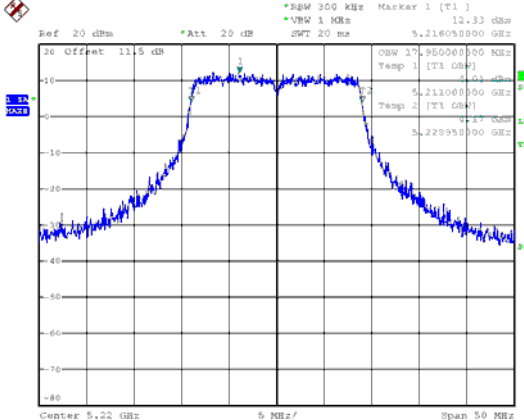
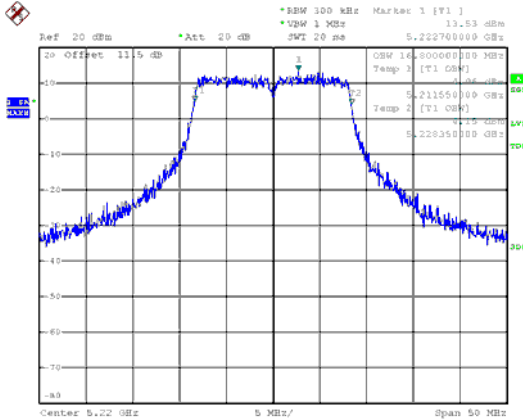
99% Occupied Bandwidth
ANT A
Modulation Type: 802.11a (6Mbps)
CH36

802.11ac VHT20 (6.5Mbps)
CH36



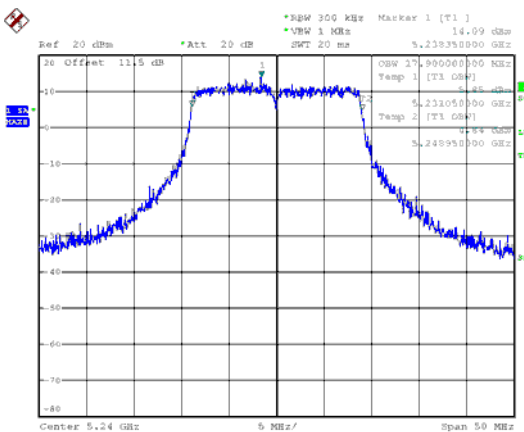
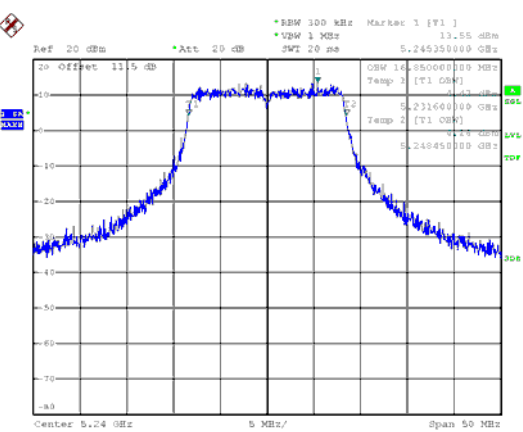
CH44

CH44



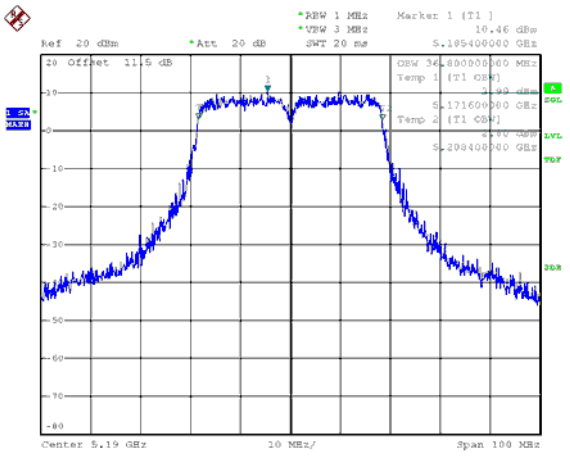
CH48

CH48

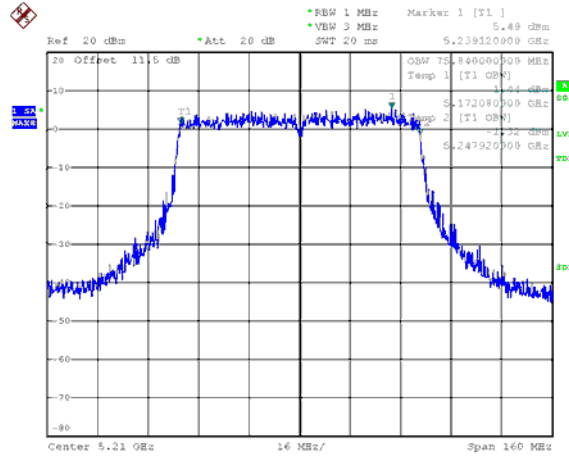




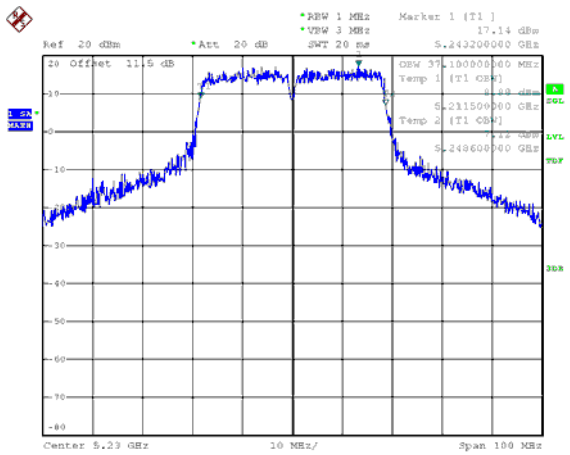
Modulation Type: 802.11ac VHT40 (13.5Mbps)
CH38



Modulation Type: 802.11ac VHT80 (29.3Mbps)
CH42



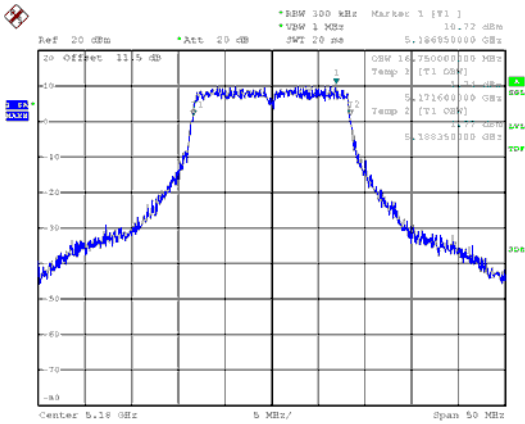
CH46



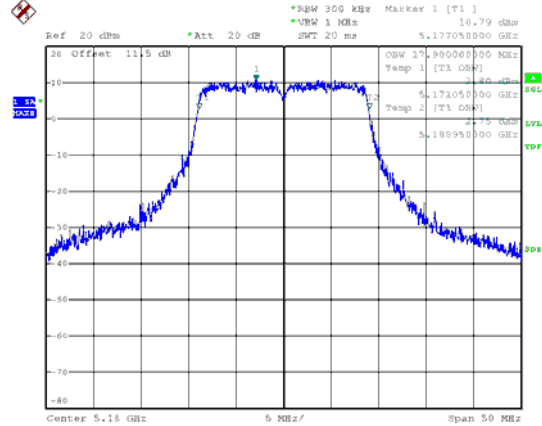


ANT B

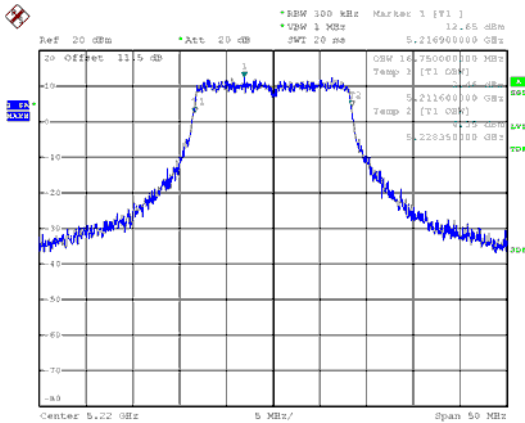
Modulation Type: 802.11a (6Mbps)
CH36



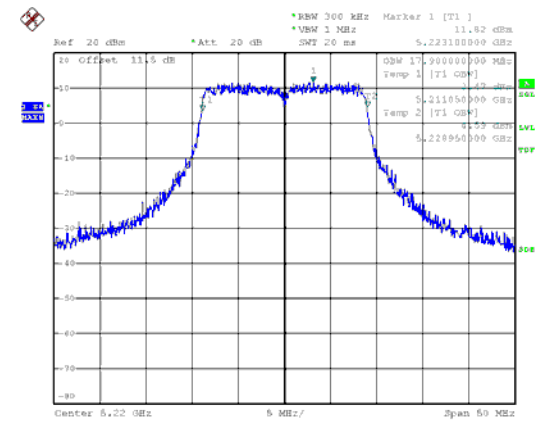
802.11ac VHT20 (6.5Mbps)
CH36



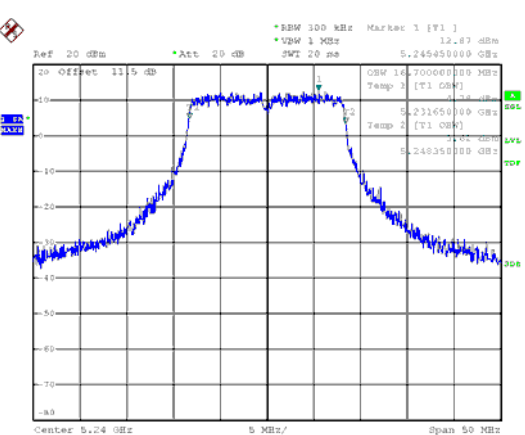
CH44



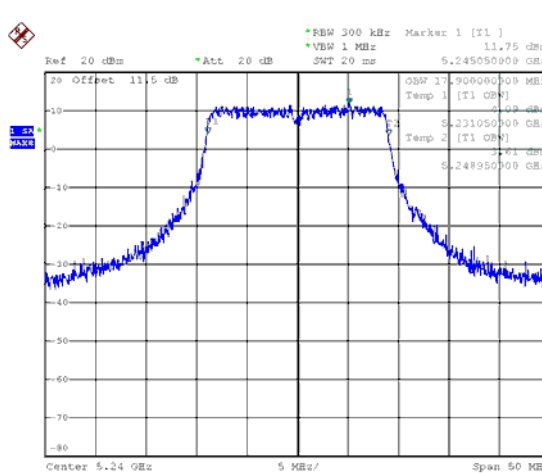
CH44



CH48

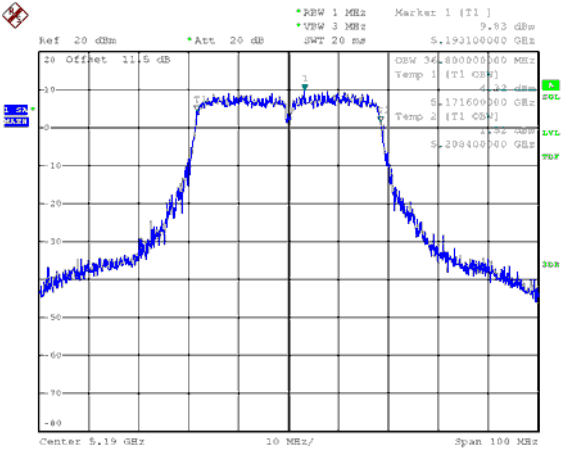


CH48

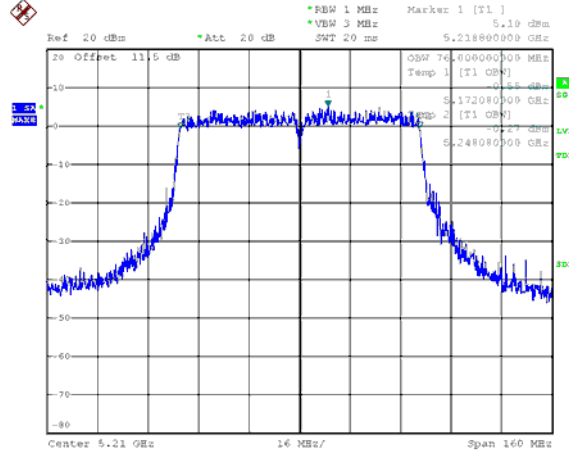




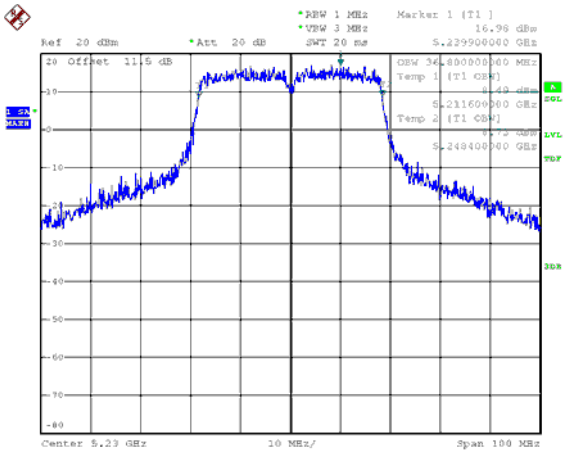
Modulation Type: 802.11ac VHT40 (13.5Mbps)
CH38



Modulation Type: 802.11ac VHT80 (29.3Mbps)
CH42



CH46





10. Average Power

10.1. Test Limit

Output Power:

Frequency Band	Limit	
<input checked="" type="checkbox"/> 5.15~5.25GHz		
Operating Mode		
<input type="checkbox"/>	Outdoor access point	The maximum conducted output power over the frequency band of operation shall not exceed 1 W (30dBm) provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30degrees as measured from the horizon must not exceed 125 mW (21 dBm).
<input checked="" type="checkbox"/>	Indoor access point	The maximum conducted output power over the frequency band of operation shall not exceed 1 W (30dBm) provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
<input type="checkbox"/>	Fixed point-to-point access points	The maximum conducted output power over the frequency band of operation shall not exceed 1 W (30dBm). Fixed point-to-point 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.
<input type="checkbox"/>	client devices	The maximum conducted output power over the frequency band of operation shall not exceed 250 mW (24dBm) provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

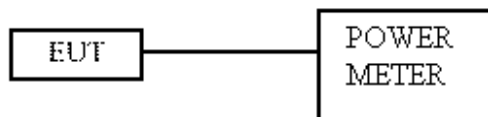


Frequency Band		Limit
<input type="checkbox"/>	5.25-5.35 GHz	The maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW (24dBm) or 11 dBm 10 log B, where B is the 26 dB emission bandwidth in megahertz. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
<input type="checkbox"/>	5.470-5.725 GHz	
<input checked="" type="checkbox"/>	5.725~5.85 GHz	

10.2. Test Procedure

The transmitter output is connected to a power meter.
The cable assembly insertion loss of 11.5 dB (including 10 dB pad and 1.5 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

10.3. Test Setup Layout





10.4. Test Result and Data

In the 5.2G Band

Modulation Type	Channel	Frequency (MHz)	Measured value of each antenna port (dBm)			Total Power (dBm)	Total Power (mW)	Power Limit (dBm)
			ANT A	ANT B	ANT C			
802.11a	36	5180	21.01	21.59	20.62	25.86	385.740	30.00
	44	5220	22.13	21.88	21.52	26.62	459.381	30.00
	48	5240	21.84	21.86	21.06	26.37	433.862	30.00
802.11an HT20	36	5180	21.08	21.73	21.24	26.13	410.215	30.00
	44	5220	21.94	21.87	21.19	26.45	441.653	30.00
	48	5240	22.01	21.76	20.90	26.35	431.850	30.00
802.11an HT40	38	5190	16.67	16.87	16.11	21.33	135.924	30.00
	46	5230	23.57	23.42	22.64	28.00	630.950	30.00
802.11ac VHT20	36	5180	21.28	21.07	20.75	25.81	381.065	30.00
	44	5220	22.04	21.97	21.34	26.57	453.499	30.00
	48	5240	22.12	21.88	21.05	26.48	444.450	30.00
802.11ac VHT40	38	5190	16.83	17.05	16.21	21.48	140.677	30.00
	46	5230	23.75	23.62	22.81	28.18	658.267	30.00
802.11ac VHT80	42	5210	15.12	15.33	14.35	19.72	93.855	30.00

In the 5.8G Band

Modulation Type	Channel	Frequency (MHz)	Measured value of each antenna port (dBm)			Total Power (dBm)	Total Power (mW)	Power Limit (dBm)
			ANT A	ANT B	ANT C			
802.11a	149	5745	20.12	19.92	19.93	24.76	299.378	30.00
	157	5785	20.59	20.61	20.35	25.29	338.024	30.00
	165	5825	19.71	19.66	19.45	24.38	274.115	30.00
802.11an HT20	149	5745	19.62	20.41	19.84	24.74	297.906	30.00
	157	5785	20.60	20.49	19.84	25.09	323.142	30.00
	165	5825	20.22	20.41	19.64	24.87	307.142	30.00
802.11an HT40	151	5755	19.94	20.20	19.51	24.66	292.671	30.00
	159	5795	21.36	21.16	20.53	25.80	380.370	30.00
802.11ac VHT20	149	5745	19.82	20.05	19.96	24.72	296.181	30.00
	157	5785	20.73	20.61	19.99	25.23	333.154	30.00
	165	5825	20.37	20.51	19.76	25.00	315.977	30.00
802.11ac VHT40	151	5755	20.12	20.36	19.62	24.82	303.066	30.00
	159	5795	21.52	21.37	20.65	25.97	395.139	30.00
802.11ac VHT80	155	5775	20.14	20.34	19.72	24.85	305.176	30.00



11. Power Spectral Density

11.1. Test Limit

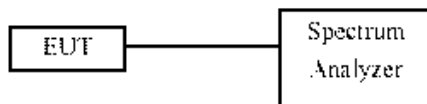
PSD:

Frequency Band		Limit
<input checked="" type="checkbox"/>	5.15~5.25GHz	
	Operating Mode	
<input type="checkbox"/>	Outdoor access point	17 dBm/MHz
<input checked="" type="checkbox"/>	Indoor access point	17 dBm/MHz
<input type="checkbox"/>	Fixed point-to-point access points	17 dBm/MHz
<input type="checkbox"/>	Mobile and portable client devices	11 dBm/MHz
<input type="checkbox"/>	5.725~5.85 GHz	11 dBm/MHz
<input type="checkbox"/>	5.470-5.725 GHz	11 dBm/MHz
<input checked="" type="checkbox"/>	5.725~5.85 GHz	30 dBm/500kHz

11.2. Test Procedure

Reference to KDB789033 D02 General UNII Test Procedures New Rules v02r01

11.3. Test Setup Layout



**11.4. Test Result and Data****In the 5.2G Band**

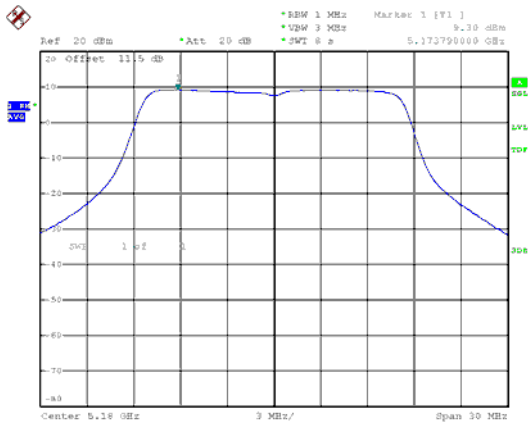
Modulation Type	CH	Freq. (MHz)	Meas PSD (dBm/MHz)			Sum chain (dBm)	Duty Cycle CF(dB)	Total Corr'd PSD (dBm/MHz)	PSD Limit (dBm/MHz)
			ANT A	ANT B	ANT C				
802.11a	36	5180	9.30	9.31	9.14	14.02	0.15	14.17	14.23
	44	5220	9.59	8.89	8.69	13.85	0.15	14.00	14.23
	48	5240	9.70	9.02	8.72	13.94	0.15	14.09	14.23
802.11ac VHT20	36	5180	8.46	7.84	7.46	12.71	0.16	12.87	14.23
	44	5220	9.69	8.78	8.31	13.74	0.16	13.90	14.23
	48	5240	9.74	9.09	8.36	13.87	0.16	14.03	14.23
802.11ac VHT40	38	5190	1.03	0.44	0.18	5.34	0.39	5.73	14.23
	46	5230	8.15	7.59	6.94	12.36	0.39	12.75	14.23
802.11ac VHT80	42	5210	-4.11	-4.64	-4.71	0.29	0.65	0.94	14.23

In the 5.8G Band

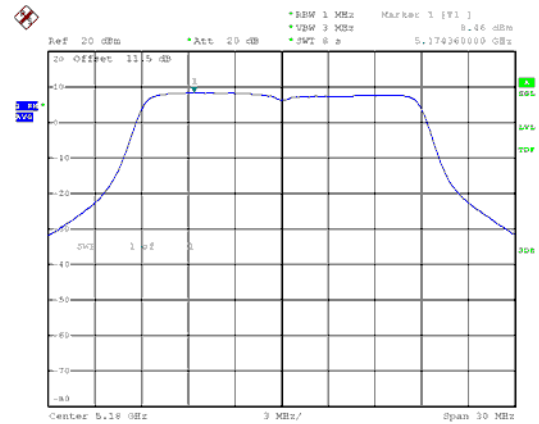
Modulation Type	CH	Freq. (MHz)	Meas PSD (dBm/MHz)			Sum chain (dBm)	Duty Cycle CF(dB)	10log(500K Hz/RBW) CF (dB)	Total Corr'd PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)
			ANT A	ANT B	ANT C					
802.11a	149	5745	7.78	6.85	7.36	12.12	0.15	-3.01	9.26	27.23
	157	5785	8.65	8.09	7.84	12.98	0.15	-3.01	10.12	27.23
	165	5825	7.65	6.74	6.92	11.89	0.15	-3.01	9.03	27.23
802.11ac VHT20	149	5745	7.86	7.76	7.45	12.46	0.16	-3.01	9.61	27.23
	157	5785	8.24	8.64	7.84	13.02	0.16	-3.01	10.17	27.23
	165	5825	7.94	8.23	7.48	12.67	0.16	-3.01	9.82	27.23
802.11ac VHT40	151	5755	4.43	4.33	3.57	8.90	0.39	-3.01	6.28	27.23
	159	5795	5.70	6.00	5.13	10.40	0.39	-3.01	7.78	27.23
802.11ac VHT80	155	5775	1.50	0.84	0.24	5.66	0.65	-3.01	3.30	27.23



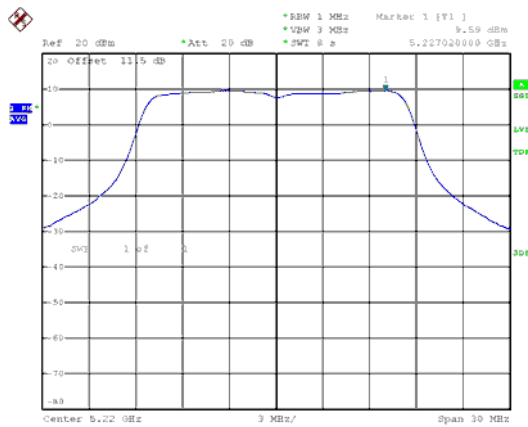
5.2G Band 1, ANT A
Modulation Type: 802.11a (6Mbps)
CH36



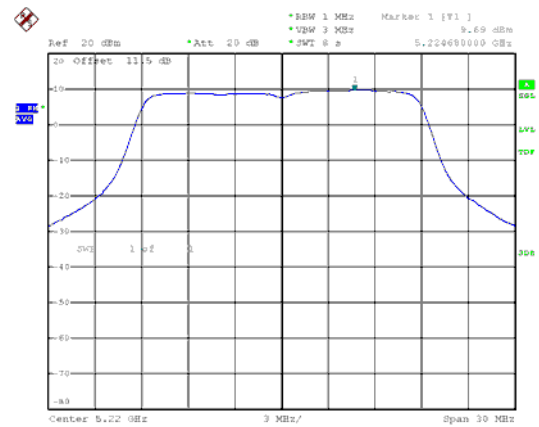
Modulation Type: 802.11ac VHT20 (6.5Mbps)
CH36



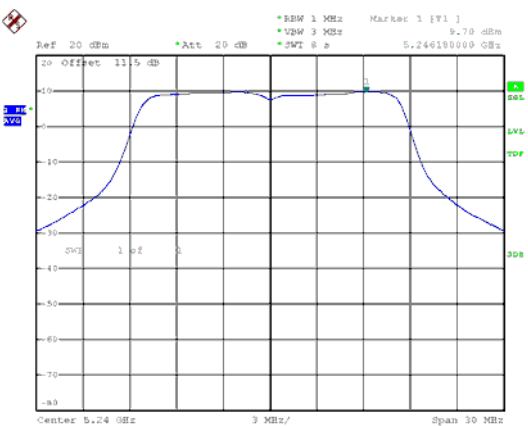
CH44



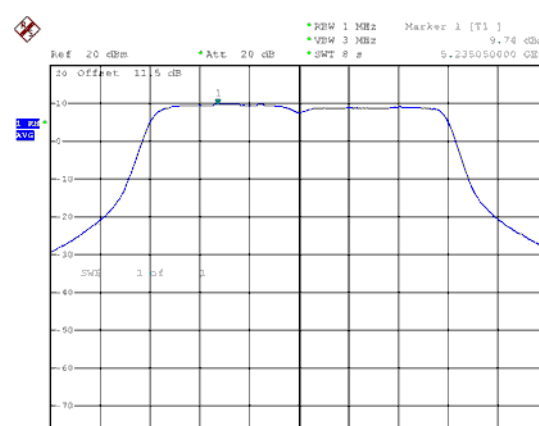
CH44



CH48

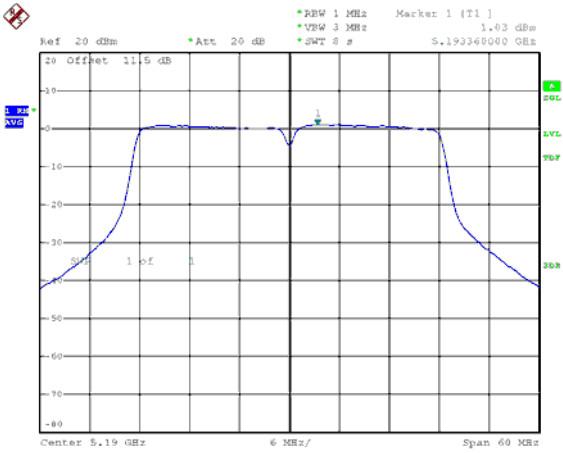


CH48

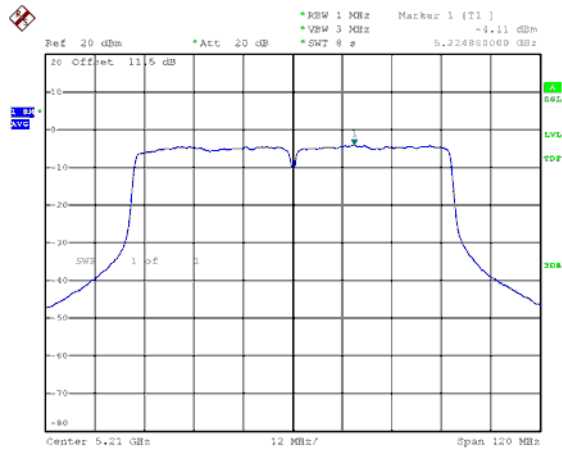




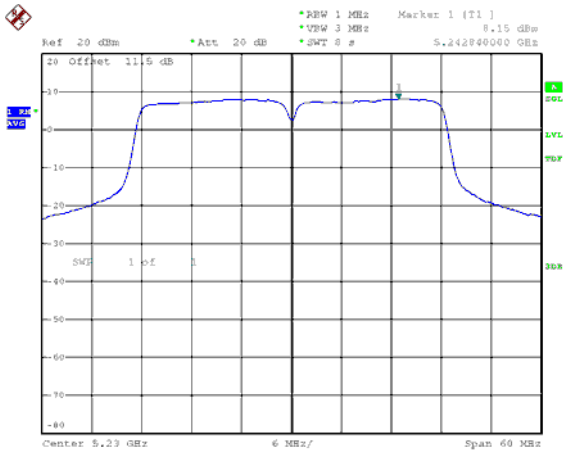
Modulation Type: 802.11ac VHT40 (13.5Mbps)
CH38



Modulation Type: 802.11ac VHT80 (29.3Mbps)
CH42

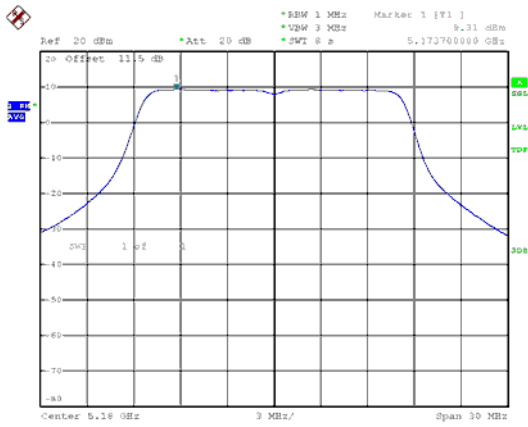


CH46

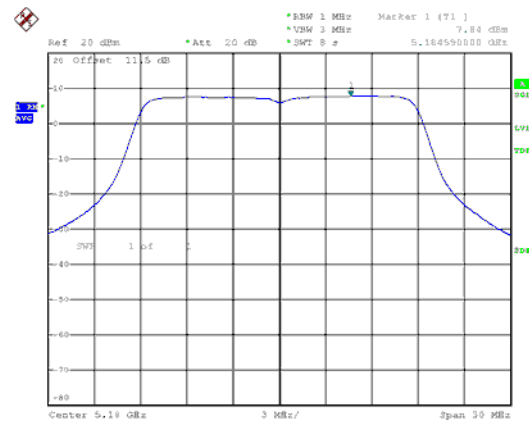




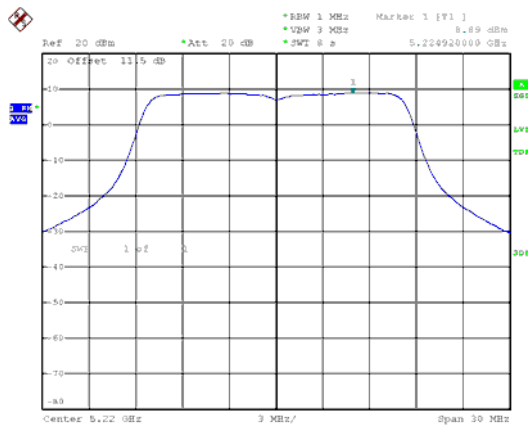
5.2G Band 1, ANT B
Modulation Type: 802.11a (6Mbps)
CH36



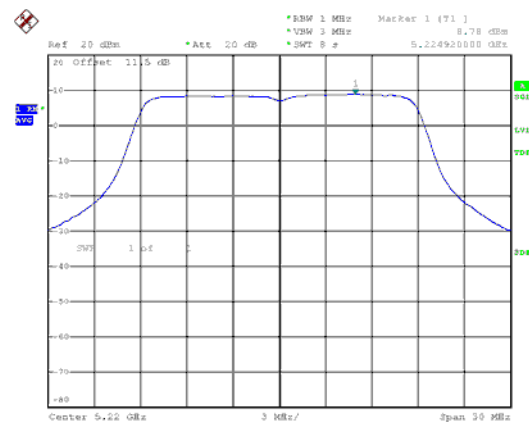
Modulation Type: 802.11ac VHT20 (6.5Mbps)
CH36



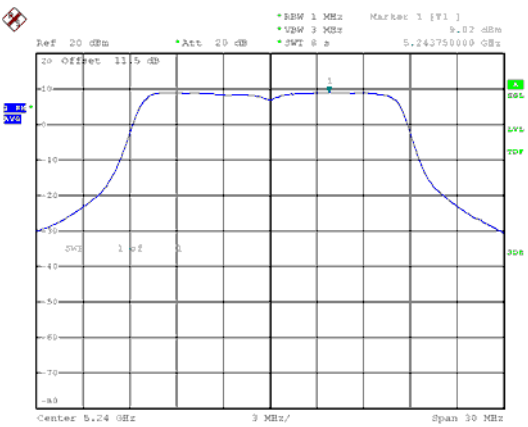
CH44



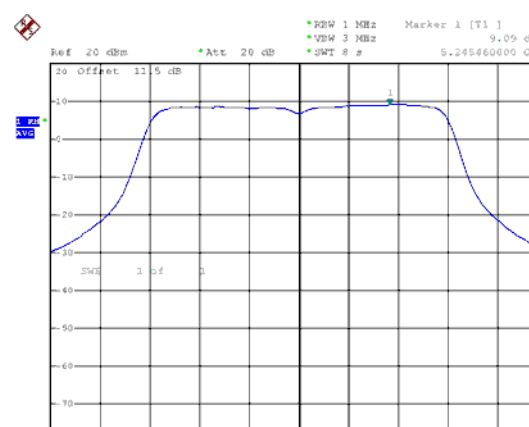
CH44



CH48

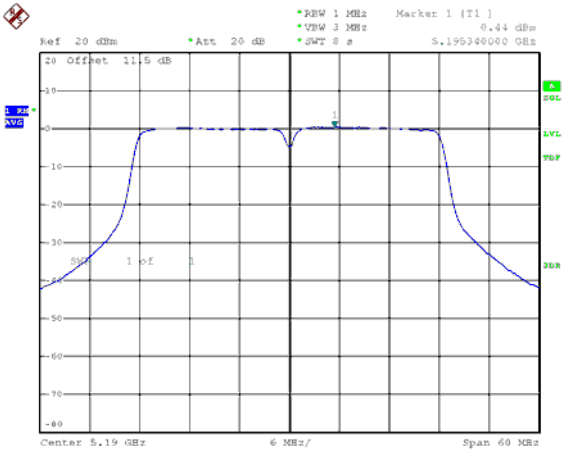


CH48

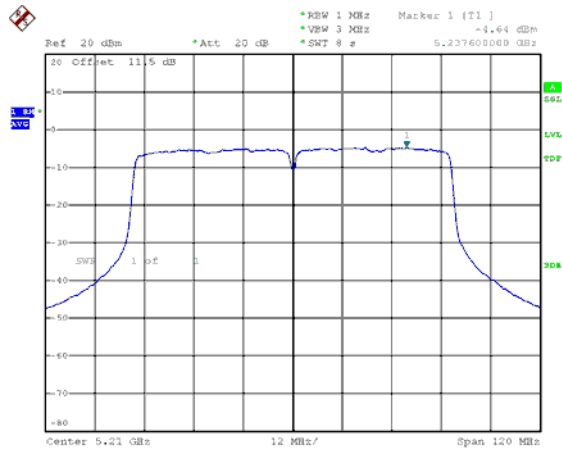




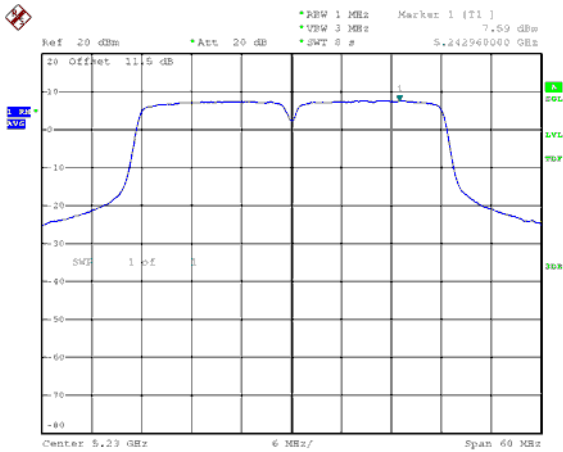
Modulation Type: 802.11ac VHT40 (13.5Mbps)
CH38



Modulation Type: 802.11ac VHT80 (29.3Mbps)
CH42

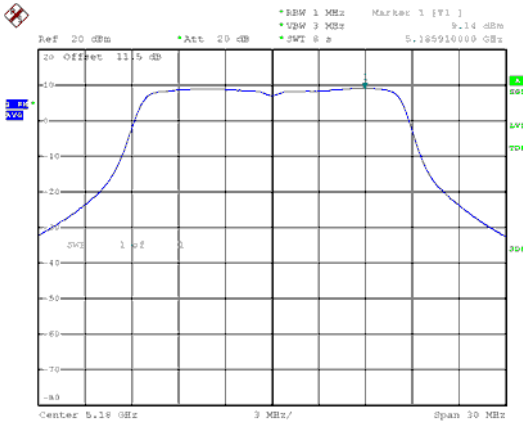


CH46

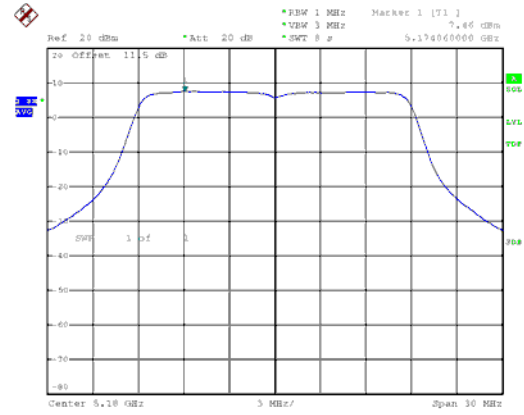




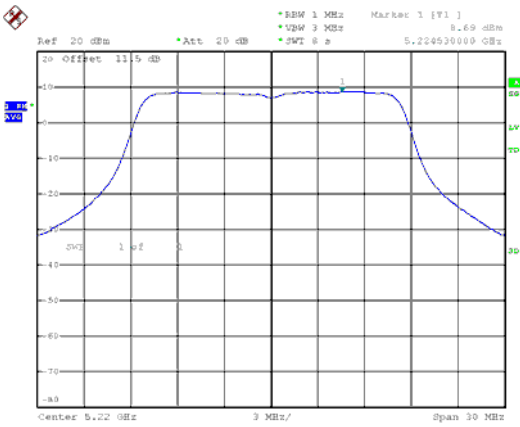
5.2G Band 1, ANT C
Modulation Type: 802.11a (6Mbps)
CH36



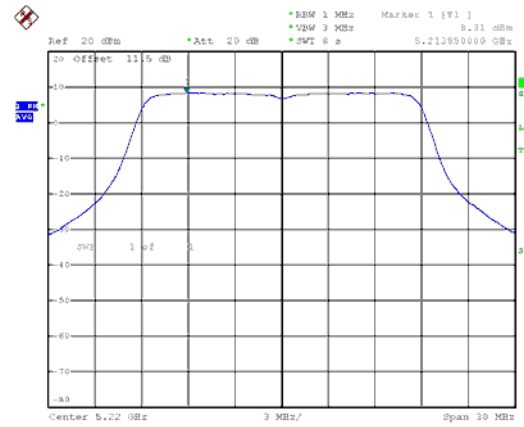
Modulation Type: 802.11ac VHT20 (6.5Mbps)
CH36



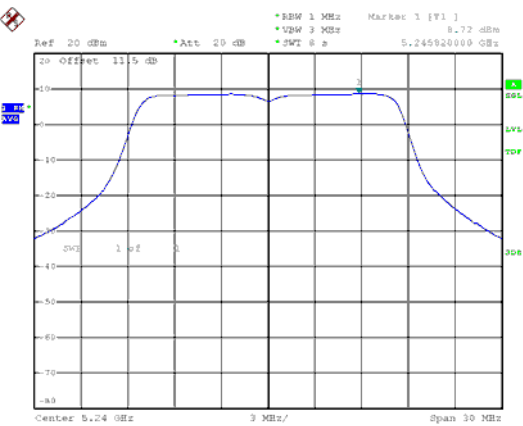
CH44



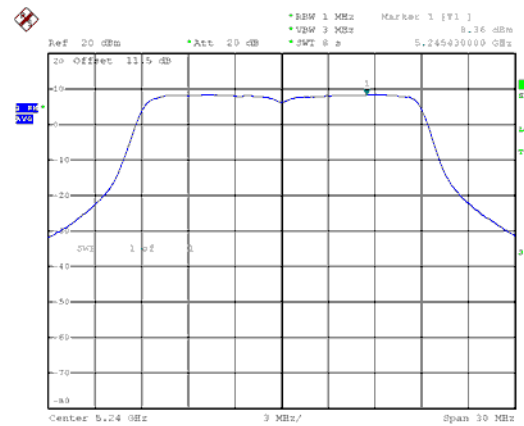
CH44



CH48

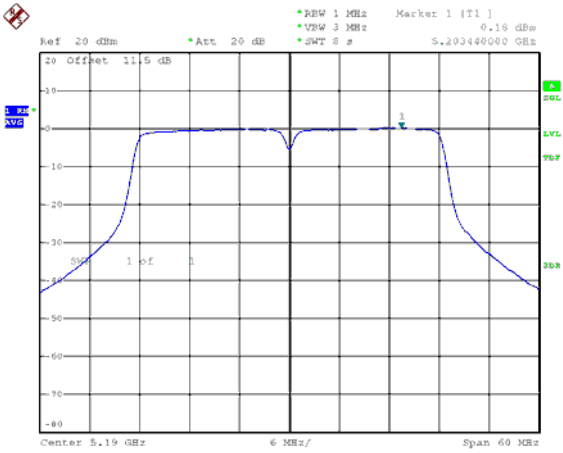


CH48

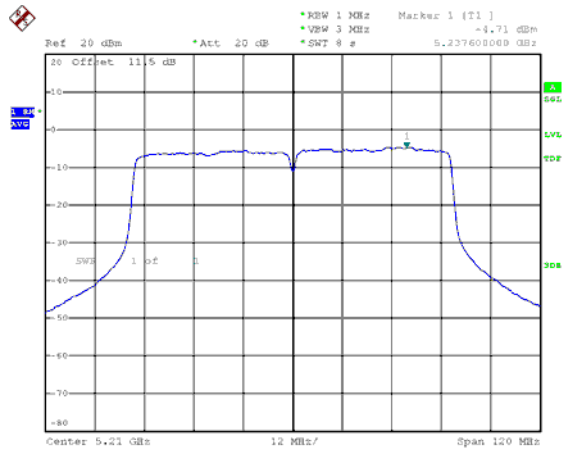




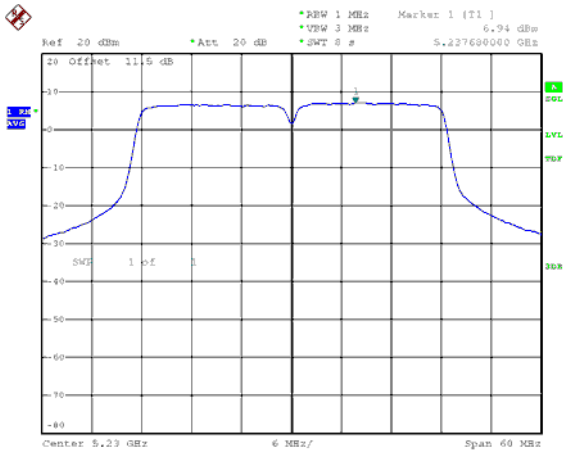
Modulation Type: 802.11ac VHT40 (13.5Mbps)
CH38



Modulation Type: 802.11ac VHT80 (29.3Mbps)
CH42

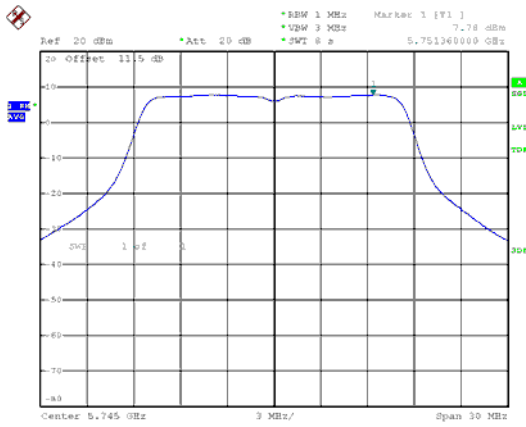


CH46

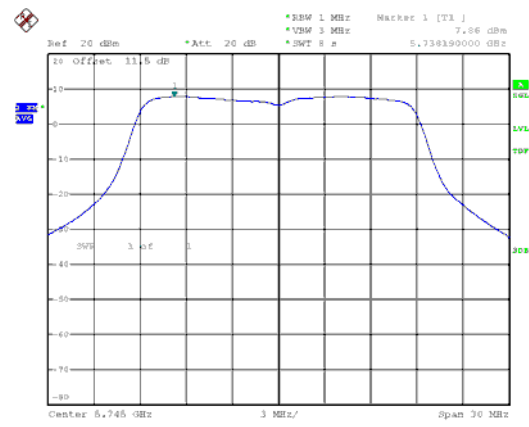




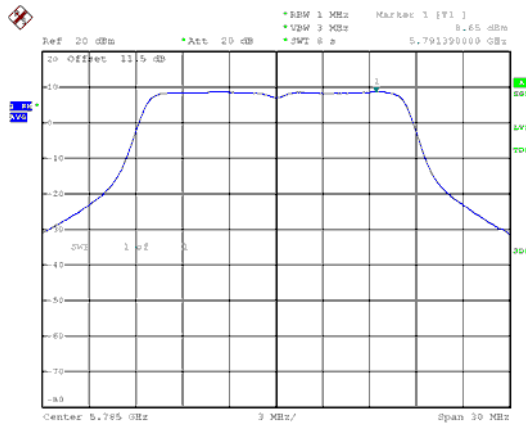
5.8G Band 4, ANT A
Modulation Type: 802.11a (6Mbps)
CH149



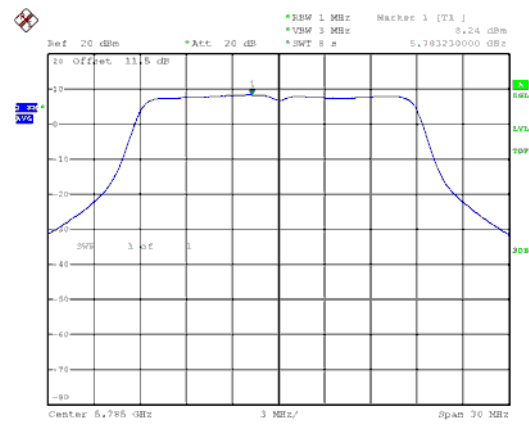
Modulation Type: 802.11ac VHT20 (6.5Mbps)
CH149



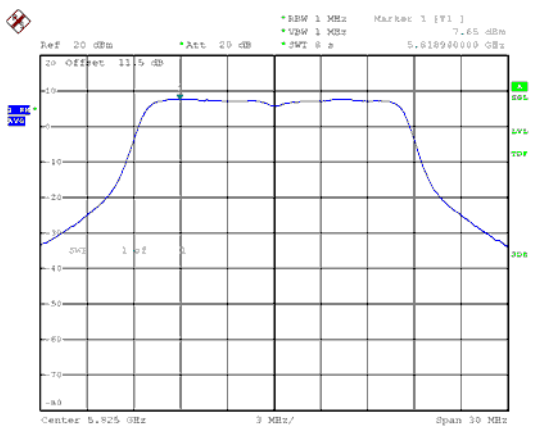
CH157



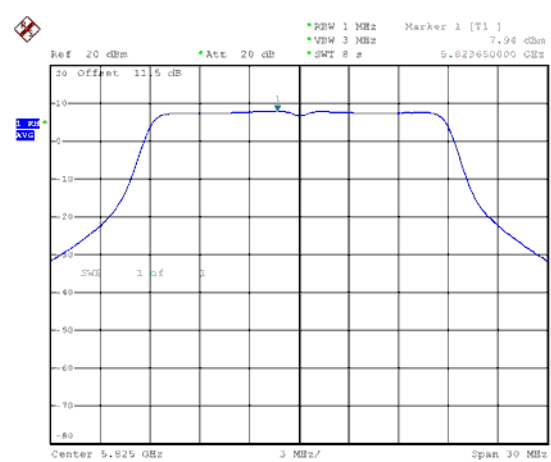
CH157



CH165

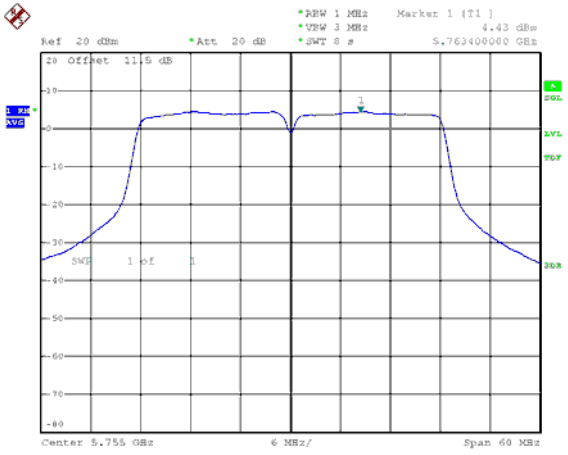


CH165

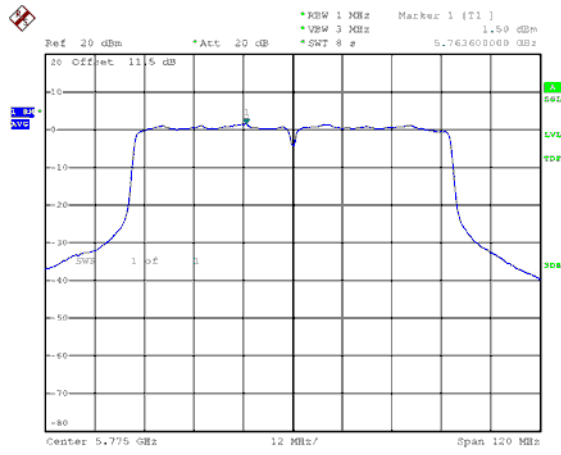




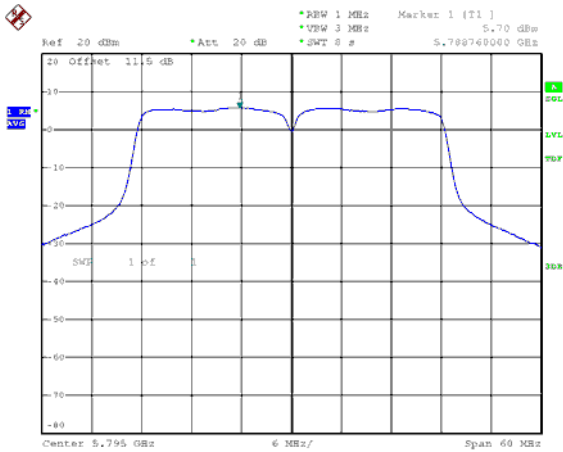
Modulation Type: 802.11ac VHT40 (13.5Mbps)
CH151



Modulation Type: 802.11ac VHT80 (29.3Mbps)
CH155

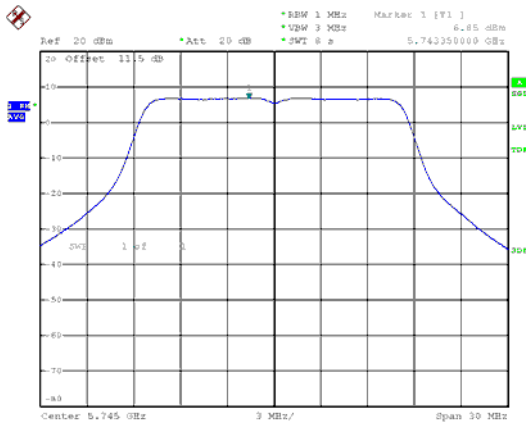


CH159

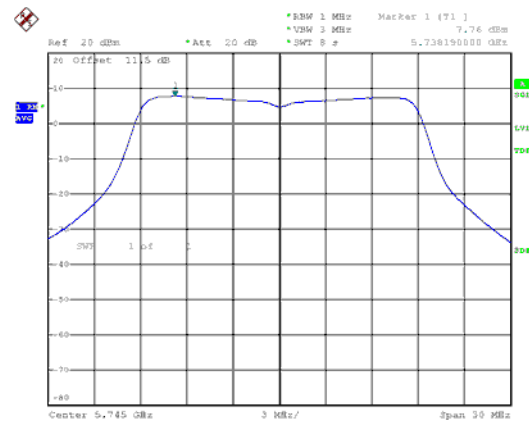




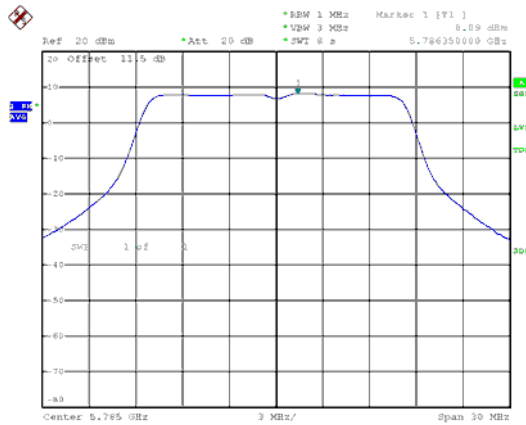
5.8G Band 4, ANT B
Modulation Type: 802.11a (6Mbps)
CH149



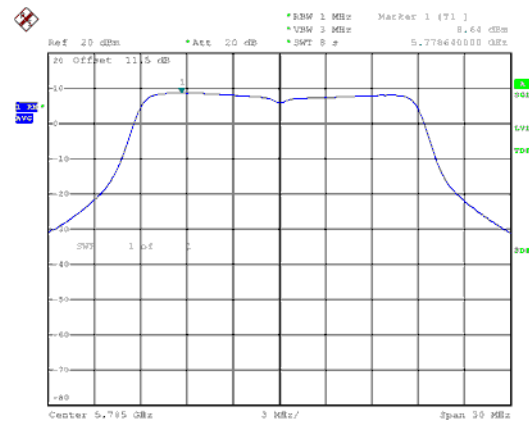
Modulation Type: 802.11ac VHT20 (6.5Mbps)
CH149



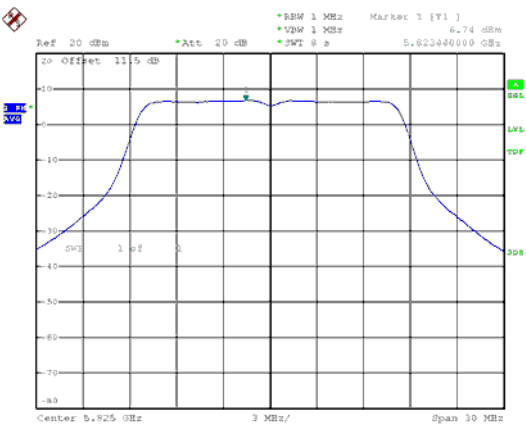
CH157



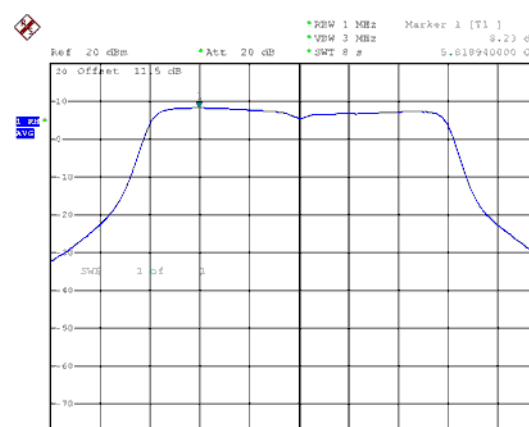
CH157



CH165

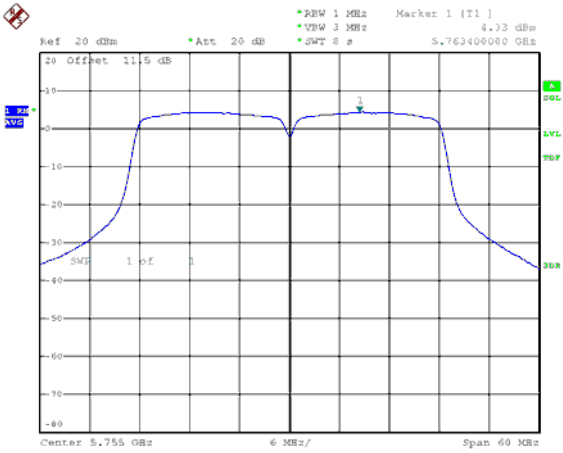


CH165

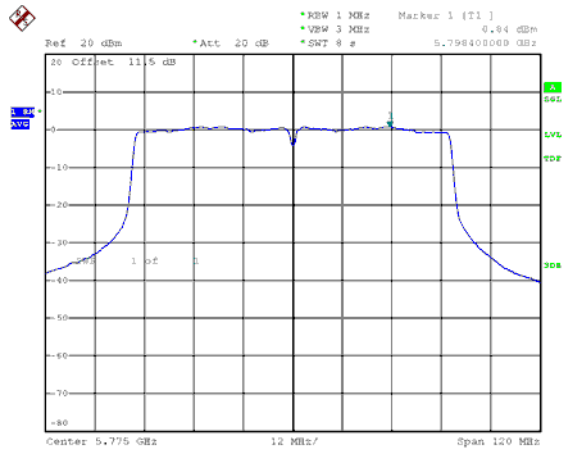




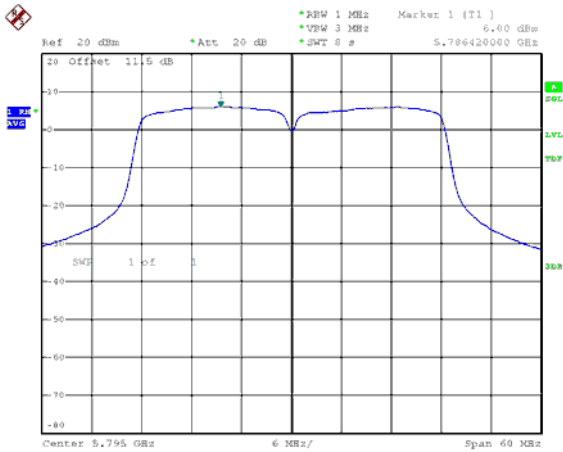
Modulation Type: 802.11ac VHT40 (13.5Mbps)
CH151



Modulation Type: 802.11ac VHT80 (29.3Mbps)
CH155

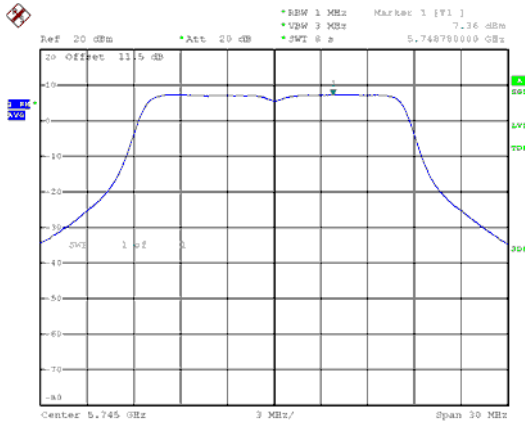


CH159

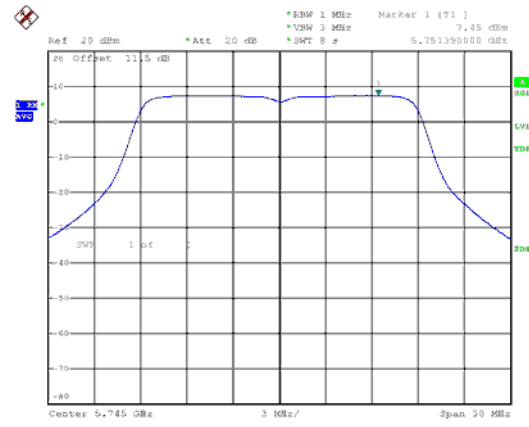




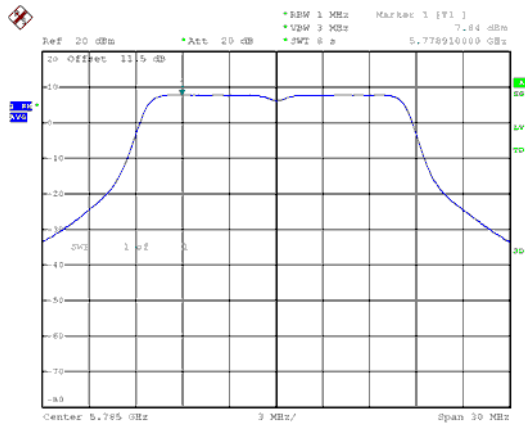
5.8G Band 4, ANT C
Modulation Type: 802.11a (6Mbps)
CH149



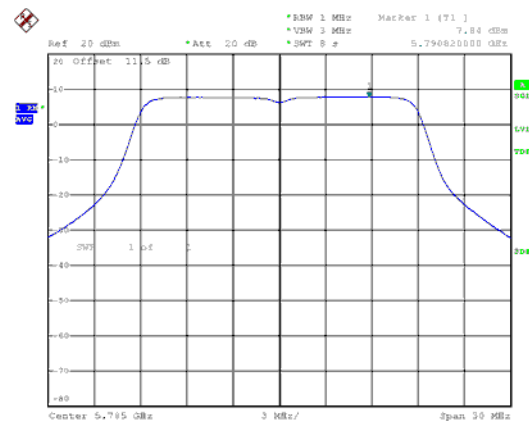
Modulation Type: 802.11ac VHT20 (6.5Mbps)
CH149



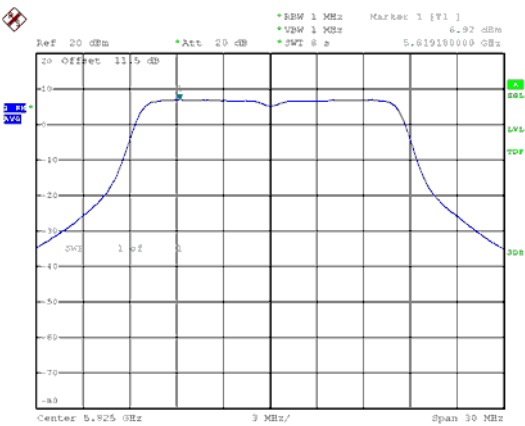
CH157



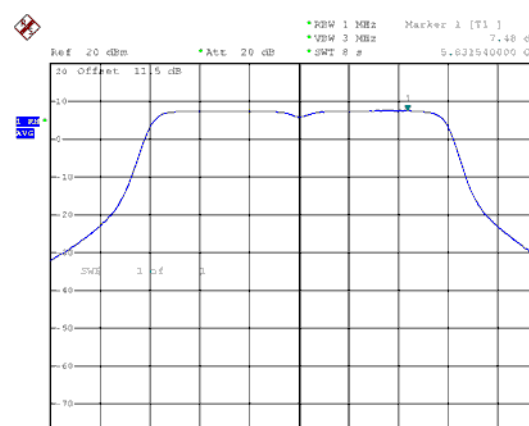
CH157



CH165

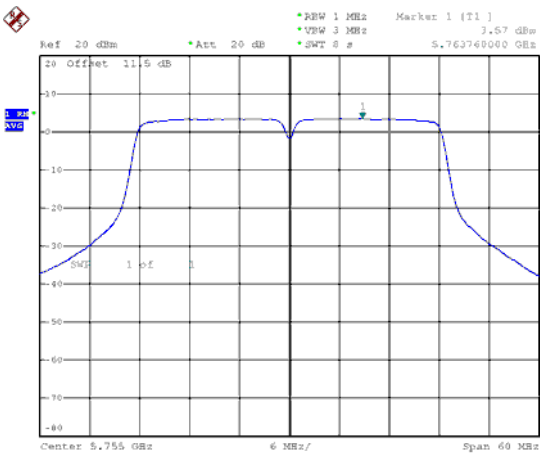


CH165

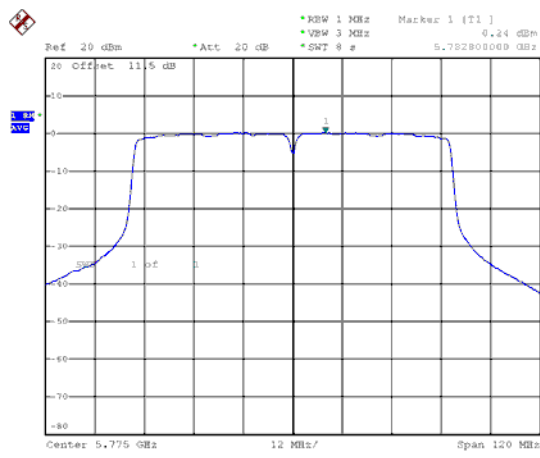




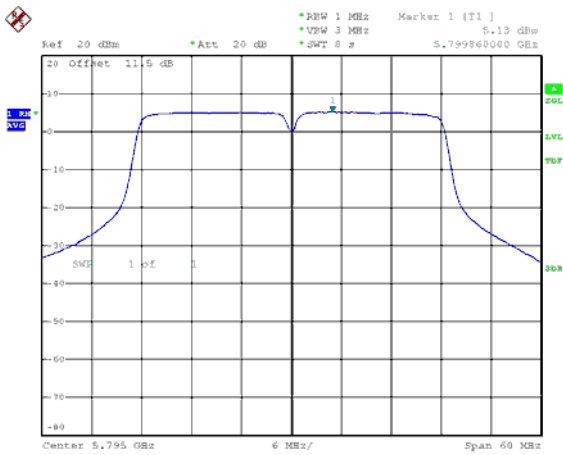
Modulation Type: 802.11ac VHT40 (13.5Mbps)
CH151



Modulation Type: 802.11ac VHT80 (29.3Mbps)
CH155



CH159



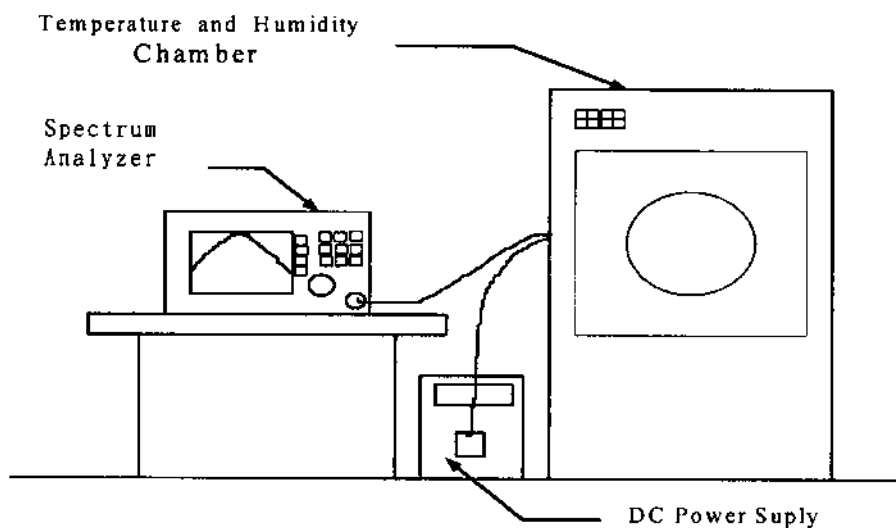


12. Frequency Stability

12.1. Test Procedure

1. The EUT was placed inside the Temperature and Humidity chamber.
2. The transmitter output was connected to spectrum analyzer.
3. Turn the EUT on and couple its output to a spectrum analyzer.
4. Turn the EUT off and set the chamber to the highest temperature specified.
5. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 minutes.
6. Repeat step 2 and 3 with the temperature chamber set to the lowest temperature.
7. The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.

12.2. Test Setup Layout



**12.3. Test Result and Data**

Operating frequency: 5240 MHz							
Temp	Power supply	2 minute		5 minute		10 minute	
(°C)	(V)	(MHz)	(%)	(MHz)	(%)	(MHz)	(%)
50	102	5239.9517	-0.000922	5239.6745	-0.006212	5239.9591	-0.000781
	120	5239.9878	-0.000233	5239.4609	-0.010288	5239.3420	-0.012557
	138	5239.1706	-0.015828	5239.7164	-0.005412	5239.3800	-0.011832
40	102	5239.7050	-0.005630	5239.8274	-0.003294	5239.9658	-0.000653
	120	5239.5008	-0.009527	5239.6549	-0.006586	5239.6506	-0.006668
	138	5239.3720	-0.011985	5239.3986	-0.011477	5239.5621	-0.008357
30	102	5239.4871	-0.009788	5239.0909	-0.017349	5239.5101	-0.009349
	120	5239.2092	-0.015092	5239.1107	-0.016971	5239.5234	-0.009095
	138	5239.9891	-0.000208	5239.7809	-0.004181	5239.9447	-0.001055
20	102	5239.6748	-0.006206	5239.1630	-0.015973	5239.2178	-0.014927
	120	5239.5741	-0.008128	5239.1559	-0.016109	5239.5465	-0.008655
	138	5239.8608	-0.002656	5239.4638	-0.010233	5239.9312	-0.001313
10	102	5239.9008	-0.001893	5239.8538	-0.002790	5239.8163	-0.003506
	120	5239.6013	-0.007609	5239.6538	-0.006607	5239.1536	-0.016153
	138	5239.6319	-0.007025	5239.8241	-0.003357	5239.9559	-0.000842
0	102	5239.9319	-0.001300	5239.3970	-0.011508	5239.9505	-0.000945
	120	5239.1122	-0.016943	5239.7412	-0.004939	5239.0088	-0.018916
	138	5239.9342	-0.001256	5239.7446	-0.004874	5239.4890	-0.009752
-10	102	5239.1636	-0.015962	5239.5444	-0.008695	5239.3172	-0.013031
	120	5239.3939	-0.011567	5239.8788	-0.002313	5239.6455	-0.006765
	138	5239.3910	-0.011622	5239.1834	-0.015584	5239.7359	-0.005040
-20	102	5239.0565	-0.018006	5239.7590	-0.004599	5239.1212	-0.016771
	120	5239.4370	-0.010744	5239.5032	-0.009481	5239.8569	-0.002731
	138	5239.6150	-0.007347	5239.6440	-0.006794	5239.4677	-0.010158
-30	102	5239.6252	-0.007153	5239.5658	-0.008286	5239.7004	-0.005718
	120	5239.4259	-0.010956	5239.5037	-0.009471	5239.0153	-0.018792
	138	5239.1842	-0.015569	5239.6597	-0.006494	5239.2270	-0.014752

Limit:

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the users manual.