BTL

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Certificate #7130.01

FCC Radio Test Report

FCC ID: 2BH7FTX30UPLUS

This report concerns: Original Grant

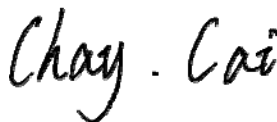|		
Project No.	:	2408G116
Equipment	:	AX1800 Dual Antennas High Gain Wireless USB Adapter
Brand Name	:	tp-link
Test Model	:	Archer TX30U Plus
Series Model	:	N/A
Applicant	:	TP-Link Systems Inc.
Address	:	10 Mauchly, Irvine, CA 92618
Manufacturer	:	TP-Link Systems Inc.
Address	:	10 Mauchly, Irvine, CA 92618
Date of Receipt	:	Aug. 24, 2024
Date of Test	:	Aug. 27, 2024 ~ Jan. 17, 2025
Issued Date	:	Jan. 24, 2025
Report Version	:	R00
Test Sample	:	Engineering Sample No.: DG202408242 for radiated, DG202408244 for PSD, DG202408243 for other conducted.
Standard(s)	:	FCC CFR Title 47, Part 15, Subpart E

The above equipment has been tested and found compliance with the requirement of the relative standards by BTL Inc.

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Declaration

BTL represents to the client that testing is done in accordance with standard procedures as applicable and that test instruments used has been calibrated with standards traceable to international standard(s) and/or national standard(s).

BTL's reports apply only to the specific samples tested under conditions. It is manufacture's responsibility to ensure that additional production units of this model are manufactured with the identical electrical and mechanical components. BTL assumes no responsibility for the data provided by the customer, any statements, inferences or generalizations drawn by the customer or others from the reports issued by BTL.

The report must not be used by the client to claim product certification, approval, or endorsement by A2LA or any agency of the U.S. Government.

This report is the confidential property of the client. As a mutual protection to the clients, the public and ourselves, the test report shall not be reproduced, except in full, without our written approval.

BTL's laboratory quality assurance procedures are in compliance with the ISO/IEC 17025: 2017 requirements, and accredited by the conformity assessment authorities listed in this test report.

BTL is not responsible for the sampling stage, so the results only apply to the sample as received.

The information, data and test plan are provided by manufacturer which may affect the validity of results, so it is manufacturer's responsibility to ensure that the apparatus meets the essential requirements of applied standards and in all the possible configurations as representative of its intended use.

Limitation

For the use of the authority's logo is limited unless the Test Standard(s)/Scope(s)/Item(s) mentioned in this test report is (are) included in the conformity assessment authorities acceptance respective.

Please note that the measurement uncertainty is provided for informational purpose only and are not use in determining the Pass/Fail results.

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REPORT ISSUED HISTORY

Report No.	Version	Description	Issued Date	Note
BTL-FCCP-2-2408G116	R00	Original Report.	Jan. 24, 2025	Valid

1. APPLICABLE STANDARDS

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:
ANSI C63.10-2013
The following reference test guidance is not within the scope of accreditation of A2LA:
KDB 558074 D01 15.247 Meas Guidance v05r02
KDB 662911 D01 Multiple Transmitter Output v02r01

2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standard(s):

FCC CFR Title 47, Part 15, Subpart E				
Standard(s) Section	Test Item	Test Result	Judgment	Remark
15.207 15.407(b)	AC Power Line Conducted Emissions	APPENDIX A	N/A	------
15.407(b) 15.205(a) 15.209(a)	Radiated Emissions	APPENDIX B APPENDIX C APPENDIX D	PASS	------
15.407(a) 15.407(e)	Bandwidth	APPENDIX E	PASS	------
15.407(a)	Maximum Output Power	APPENDIX F	PASS	------
15.407(a)	Power Spectral Density	APPENDIX G	PASS	------
15.407(g)	Frequency Stability	------	NOTE (5)	------
15.203	Antenna Requirements	------	PASS	NOTE (2)
15.407(c)	Automatically Discontinue Transmission	------	PASS	NOTE (3)

Note:
 (1) "N/A" denotes test is not applicable in this test report.
 (2) The device what use a permanently attached antenna were considered sufficient to comply with the provisions of 15.203.
 (3) During no any information transmission, the EUT can automatically discontinue transmission and become standby mode for power saving. the EUT can detect the controlling signal of ACK message transmitting from remote device and verify whether it shall resend or discontinue transmission.
 (4) For UNII-1 this device was functioned as a
      ☐ Outdoor access point device
      ☐ Indoor access point device
      ☐ Fixed point-to-point access points device
      ☒ Client device
 (5) The item is declared oy the manufacturer.

2.1 TEST FACILITY

The test facilities used to collect the test data in this report is at the location of 1-2/F, 4/F, Building A, 1-2/F, Building B, 3/F, Building C, No.3, Jinshagang 1st Road, Dalang Town, Dongguan City, Guangdong People's Republic of China.
BTL's Registration Number for FCC: 747969
BTL's Designation Number for FCC: CN1377

2.2 MEASUREMENT UNCERTAINTY

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2))
The BTL measurement uncertainty as below table:

A. AC power line conducted emissions test:

Test Site	Method	Measurement Frequency Range	U,(dB)
DG-C02	CISPR	150kHz ~ 30MHz	2.88

B. Radiated emissions test:

Test Site	Method	Measurement Frequency Range	U,(dB)
DG-CB01	CISPR	9kHz ~ 30MHz	2.36

Test Site	Method	Measurement Frequency Range	Ant. H / V	U,(dB)
DG-CB03 (3m)	CISPR	30MHz ~ 200MHz	V	4.40
		30MHz ~ 200MHz	H	3.62
		200MHz ~ 1,000MHz	V	4.58
		200MHz ~ 1,000MHz	H	3.98

Test Site	Method	Measurement Frequency Range	U,(dB)
DG-CB03 (3m)	CISPR	1GHz ~ 6GHz	4.08
		6GHz ~ 18GHz	4.62

Test Site	Method	Measurement Frequency Range	U,(dB)
DG-CB03 (1m)	CISPR	18 ~ 26.5 GHz	3.36
		26.5 ~ 40 GHz	3.58

C. Other Measurement test:

Test Item	Uncertainty
Bandwidth	0.90 %
Maximum Output Power	1.3 dB
Power Spectral Density	1.4 dB
Temperature	0.8 °C
Humidity	2.2 %

Note: Unless specifically mentioned, the uncertainty of measurement has not been taken into account to declare the compliance or non-compliance to the specification.

2.3 TEST ENVIRONMENT CONDITIONS

Test Item	Temperature	Humidity	Test Voltage	Tested By	Test Date
AC Power Line Conducted Emissions	25°C	48%	DC 5V	Hayden Chen	Nov. 13, 2024
Radiated Emissions -9kHz to 30MHz	25°C	42%	DC 5V	Hayden Chen	Sep. 19, 2024
Radiated Emissions -30MHz to 1000MHz	22°C	53%	DC 5V	Calvin Wen	Sep. 09, 2024
Radiated Emissions -Above 1000 MHz	22-24°C	42-54%	DC 5V	Allen Tong Calvin Wen	Sep. 06, 2024- Jan. 15, 2025
Bandwidth	24°C	46%	DC 5V	Arvin Tong	Sep. 19, 2024
Maximum Output Power	22°C	57%	DC 5V	Andrew jiang Steve Zhou	Dec. 27, 2024- Jan. 17, 2025
Power Spectral Density	22°C	57%	DC 5V	Complex Qin	Dec. 26, 2024

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

Equipment	AX1800 Dual Antennas High Gain Wireless USB Adapter
Brand Name	tp-link
Test Model	Archer TX30U Plus
Series Model	N/A
Model Difference(s)	N/A
Software Version	V1
Hardware Version	V1
Power Source	DC supply from PC.
Power Rating	DC 5V
Operation Frequency Band(s)	UNII-1: 5150 MHz ~ 5250 MHz UNII-2A: 5250 MHz ~ 5350 MHz UNII-2C: 5470 MHz ~ 5725 MHz UNII-3: 5725 MHz ~ 5850 MHz
Modulation Type	IEEE 802.11a/n/ac: OFDM IEEE 802.11ax: OFDMA
Bit Rate of Transmitter	IEEE 802.11a: 54/48/36/24/18/12/9/6 Mbps IEEE 802.11n: up to 300 Mbps IEEE 802.11ac: up to 866.7 Mbps IEEE 802.11ax: up to 1201 Mbps
Maximum Output Power _UNII-1	IEEE 802.11ac(VHT40): 23.69 dBm (0.2339 W)
Maximum Output Power _UNII-2A	IEEE 802.11ax(HE20): 22.41 dBm (0.1742 W)
Maximum Output Power _UNII-2C	IEEE 802.11a: 22.55 dBm (0.1799 W)
Maximum Output Power _UNII-3	IEEE 802.11ac(VHT20): 23.36 dBm (0.2168 W)

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.

2. Channel List:

IEEE 802.11a IEEE 802.11n(HT20) IEEE 802.11ac(VHT20) IEEE 802.11ax(HE20)		IEEE 802.11n(HT40) IEEE 802.11ac(VHT40) IEEE 802.11ax(HE40)		IEEE 802.11ac(VHT80) IEEE 802.11ax(HE80)	
UNII-1		UNII-1		UNII-1	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
36	5180	38	5190	42	5210
40	5200	46	5230		
44	5220				
48	5240				

IEEE 802.11a IEEE 802.11n(HT20) IEEE 802.11ac(VHT20) IEEE 802.11ax(HE20)		IEEE 802.11n(HT40) IEEE 802.11ac(VHT40) IEEE 802.11ax(HE40)		IEEE 802.11ac(VHT80) IEEE 802.11ax(HE80)	
UNII-2A		UNII-2A		UNII-2A	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
52	5260	54	5270	58	5290
56	5280	62	5310		
60	5300				
64	5320				

IEEE 802.11a IEEE 802.11n(HT20) IEEE 802.11ac(VHT20) IEEE 802.11ax(HE20)		IEEE 802.11n(HT40) IEEE 802.11ac(VHT40) IEEE 802.11ax(HE40)		IEEE 802.11ac(VHT80) IEEE 802.11ax(HE80)	
UNII-2C		UNII-2C		UNII-2C	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
100	5500	102	5510	106	5530
104	5520	110	5550	122	5610
108	5540	118	5590		
112	5560	126	5630		
116	5580	134	5670		
120	5600				
124	5620				
128	5640				
132	5660				
136	5680				
140	5700				

IEEE 802.11a IEEE 802.11n(HT20) IEEE 802.11ac(VHT20) IEEE 802.11ax(HE20)		IEEE 802.11n(HT40) IEEE 802.11ac(VHT40) IEEE 802.11ax(HE40)		IEEE 802.11ac(VHT80) IEEE 802.11ax(HE80)	
UNII-3		UNII-3		UNII-3	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
149	5745	151	5755	155	5775
153	5765	159	5795		
157	5785				
161	5805				
165	5825				

3. Antenna Specification:

Ant.	Manufacturer	P/N	Antenna Type	Connector	Gain (dBi)
1	TP-LINK CORPORATION PTE. LTD.	3101507187	Dipole	N/A	2.00
2	TP-LINK CORPORATION PTE. LTD.	3101507187	Dipole	N/A	2.00

Note:
1) This EUT supports CDD, and all antennas have the same gain, Directional gain = G_{ANT}+Array Gain.
   For power measurements, Array Gain=0dB (N_{ANT}≤4), so the Directional gain=2.00.
   For power spectral density measurements, N_{ANT}=2, N_{SS} = 1.
   So the Directional gain=G_{ANT}+Array Gain=G_{ANT}+10log(N_{ANT}/ N_{SS})dBi=2+10log(2/1)dBi=5.01.

4. Table for Antenna Configuration:

Operating Mode / TX Mode	2TX
IEEE 802.11a	V (Ant. 1 + Ant. 2)
IEEE 802.11n(HT20)	V (Ant. 1 + Ant. 2)
IEEE 802.11n(HT40)	V (Ant. 1 + Ant. 2)
IEEE 802.11ac(VHT20)	V (Ant. 1 + Ant. 2)
IEEE 802.11ac(VHT40)	V (Ant. 1 + Ant. 2)
IEEE 802.11ac(VHT80)	V (Ant. 1 + Ant. 2)
IEEE 802.11ax(HE20)	V (Ant. 1 + Ant. 2)
IEEE 802.11ax(HE40)	V (Ant. 1 + Ant. 2)
IEEE 802.11ax(HE80)	V (Ant. 1 + Ant. 2)

3.2 TEST MODES

The test system was pre-tested based on the consideration of all possible combinations of EUT operation mode.

Pretest Mode	Description
Mode 1	TX A Mode Channel 36/40/48 (UNII-1)
Mode 2	TX AC(VHT20) Mode Channel 36/40/48 (UNII-1)
Mode 3	TX AC(VHT40) Mode Channel 38/46 (UNII-1)
Mode 4	TX AC(VHT80) Mode Channel 42 (UNII-1)
Mode 5	TX AX(HE20) Mode Channel 36/40/48 (UNII-1)
Mode 6	TX AX(HE40) Mode Channel 38/46 (UNII-1)
Mode 7	TX AX(HE80) Mode Channel 42 (UNII-1)
Mode 8	TX A Mode Channel 52/60/64 (UNII-2A)
Mode 9	TX AC(VHT20) Mode Channel 52/60/64 (UNII-2A)
Mode 10	TX AC(VHT40) Mode Channel 54/62 (UNII-2A)
Mode 11	TX AC(VHT80) Mode Channel 58 (UNII-2A)
Mode 12	TX AX(HE20) Mode Channel 52/60/64 (UNII-2A)
Mode 13	TX AX(HE40) Mode Channel 54/62 (UNII-2A)
Mode 14	TX AX(HE80) Mode Channel 58 (UNII-2A)
Mode 15	TX A Mode Channel 100/116/140 (UNII-2C)
Mode 16	TX AC(VHT20) Mode Channel 100/116/140 (UNII-2C)
Mode 17	TX AC(VHT40) Mode Channel 102/110/134 (UNII-2C)
Mode 18	TX AC(VHT80) Mode Channel 106/122 (UNII-2C)
Mode 21	TX AX(HE20) Mode Channel 100/116/140 (UNII-2C)
Mode 22	TX AX(HE40) Mode Channel 102/110/134 (UNII-2C)
Mode 23	TX AX(HE80) Mode Channel 106/122 (UNII-2C)
Mode 24	TX A Mode Channel 149/157/165 (UNII-3)
Mode 25	TX AC(VHT20) Mode Channel 149/157/165 (UNII-3)
Mode 26	TX AC(VHT40) Mode Channel 151/159 (UNII-3)
Mode 28	TX AC(VHT80) Mode Channel 155 (UNII-3)
Mode 29	TX AX(HE20) Mode Channel 149/157/165 (UNII-3)
Mode 30	TX AX(HE40) Mode Channel 151/159 (UNII-3)
Mode 32	TX AX(HE80) Mode Channel 155 (UNII-3)
Mode 33	TX AC(VHT40) Mode Channel 46 (UNII-1)

Following mode(s) was (were) found to be the worst case(s) and selected for the final test.

AC power line conducted emissions test	
Final Test Mode	Description
Mode 33	TX AC(VHT40) Mode Channel 46 (UNII-1)

Radiated Emissions Test - Below 1GHz	
Final Test Mode	Description
Mode 33	TX AC(VHT40) Mode Channel 46 (UNII-1)

Radiated Emissions Test - Above 1GHz	
Final Test Mode	Description
Mode 1	TX A Mode Channel 36/40/48 (UNII-1)
Mode 2	TX AC(VHT20) Mode Channel 36/40/48 (UNII-1)
Mode 3	TX AC(VHT40) Mode Channel 38/46 (UNII-1)
Mode 4	TX AC(VHT80) Mode Channel 42 (UNII-1)
Mode 5	TX AX(HE20) Mode Channel 36/40/48 (UNII-1)
Mode 6	TX AX(HE40) Mode Channel 38/46 (UNII-1)
Mode 7	TX AX(HE80) Mode Channel 42 (UNII-1)
Mode 8	TX A Mode Channel 52/60/64 (UNII-2A)
Mode 9	TX AC(VHT20) Mode Channel 52/60/64 (UNII-2A)
Mode 10	TX AC(VHT40) Mode Channel 54/62 (UNII-2A)
Mode 11	TX AC(VHT80) Mode Channel 58 (UNII-2A)
Mode 12	TX AX(HE20) Mode Channel 52/60/64 (UNII-2A)
Mode 13	TX AX(HE40) Mode Channel 54/62 (UNII-2A)
Mode 14	TX AX(HE80) Mode Channel 58 (UNII-2A)
Mode 15	TX A Mode Channel 100/116/140 (UNII-2C)
Mode 16	TX AC(VHT20) Mode Channel 100/116/140 (UNII-2C)
Mode 17	TX AC(VHT40) Mode Channel 102/110/134 (UNII-2C)
Mode 18	TX AC(VHT80) Mode Channel 106/122 (UNII-2C)
Mode 21	TX AX(HE20) Mode Channel 100/116/140 (UNII-2C)
Mode 22	TX AX(HE40) Mode Channel 102/110/134 (UNII-2C)
Mode 23	TX AX(HE80) Mode Channel 106/122 (UNII-2C)
Mode 24	TX A Mode Channel 149/157/165 (UNII-3)
Mode 25	TX AC(VHT20) Mode Channel 149/157/165 (UNII-3)
Mode 26	TX AC(VHT40) Mode Channel 151/159 (UNII-3)
Mode 28	TX AC(VHT80) Mode Channel 155 (UNII-3)
Mode 29	TX AX(HE20) Mode Channel 149/157/165 (UNII-3)
Mode 30	TX AX(HE40) Mode Channel 151/159 (UNII-3)
Mode 32	TX AX(HE80) Mode Channel 155 (UNII-3)

Conducted Test	
Final Test Mode	Description
Mode 1	TX A Mode Channel 36/40/48 (UNII-1)
Mode 2	TX AC(VHT20) Mode Channel 36/40/48 (UNII-1)
Mode 3	TX AC(VHT40) Mode Channel 38/46 (UNII-1)
Mode 4	TX AC(VHT80) Mode Channel 42 (UNII-1)
Mode 5	TX AX(HE20) Mode Channel 36/40/48 (UNII-1)
Mode 6	TX AX(HE40) Mode Channel 38/46 (UNII-1)
Mode 7	TX AX(HE80) Mode Channel 42 (UNII-1)
Mode 8	TX A Mode Channel 52/60/64 (UNII-2A)
Mode 9	TX AC(VHT20) Mode Channel 52/60/64 (UNII-2A)
Mode 10	TX AC(VHT40) Mode Channel 54/62 (UNII-2A)
Mode 11	TX AC(VHT80) Mode Channel 58 (UNII-2A)
Mode 12	TX AX(HE20) Mode Channel 52/60/64 (UNII-2A)
Mode 13	TX AX(HE40) Mode Channel 54/62 (UNII-2A)
Mode 14	TX AX(HE80) Mode Channel 58 (UNII-2A)
Mode 15	TX A Mode Channel 100/116/140 (UNII-2C)
Mode 16	TX AC(VHT20) Mode Channel 100/116/140 (UNII-2C)
Mode 17	TX AC(VHT40) Mode Channel 102/110/134 (UNII-2C)
Mode 18	TX AC(VHT80) Mode Channel 106/122 (UNII-2C)
Mode 21	TX AX(HE20) Mode Channel 100/116/140 (UNII-2C)
Mode 22	TX AX(HE40) Mode Channel 102/110/134 (UNII-2C)
Mode 23	TX AX(HE80) Mode Channel 106/122 (UNII-2C)
Mode 24	TX A Mode Channel 149/157/165 (UNII-3)
Mode 25	TX AC(VHT20) Mode Channel 149/157/165 (UNII-3)
Mode 26	TX AC(VHT40) Mode Channel 151/159 (UNII-3)
Mode 28	TX AC(VHT80) Mode Channel 155 (UNII-3)
Mode 29	TX AX(HE20) Mode Channel 149/157/165 (UNII-3)
Mode 30	TX AX(HE40) Mode Channel 151/159 (UNII-3)
Mode 32	TX AX(HE80) Mode Channel 155 (UNII-3)

Note:
(1) For radiated emission below 1 GHz test, the TX AC(VHT40) Mode Channel 46 (UNII-1) is found to be the worst case and recorded.
(2) For radiated emission above 1 GHz test, the spurious points of 1GHz~26.5GHz and 26.5GHz~40GHz have been pre-tested and in this report only recorded the worst case. The remaining spurious points are all below the limit value of 20dB.
(3) For radiated emission Harmonic 18-40GHz test, only tested the worst case and recorded.
(4) All the bit rate of transmitter have been tested and found the lowest rate is found to be the worst case and recorded.
(5) VHT20/VHT40 covers HT20/HT40, due to same modulation. The power setting for 802.11n HT20 and HT40 are the same or lower than 802.11ac VHT20 and VHT40.
(6) For radiated emission above 1GHz test, both Vertical and Horizontal are evaluated, only the worst case is recorded.
(7) IEEE 802.11ax mode only supports full RU, so only the full RU is evaluated and measured inside report.

3.3 PARAMETERS OF TEST SOFTWARE

UNII-1			
Test Software Version	AX Series MP Toolkit 3.0.24.0		
Frequency (MHz)	5180	5200	5240
IEEE 802.11a	16.5	18	18
IEEE 802.11n(HT20)	16.5	18.5	18.5
IEEE 802.11ac(VHT20)	16.5	18.5	18.5
IEEE 802.11ax(HE20)	15	19	19
Frequency (MHz)	5190	5230	
IEEE 802.11n(HT40)	14	21.5	
IEEE 802.11ac(VHT40)	14	21.5	
IEEE 802.11ax(HE40)	12.5	21	
Frequency (MHz)	5210		
IEEE 802.11ac(VHT80)	13.5		
IEEE 802.11ax(HE80)	14		

UNII-2A			
Test Software Version	AX Series MP Toolkit 3.0.24.0		
Frequency (MHz)	5260	5300	5320
IEEE 802.11a	20	20	17.5
IEEE 802.11n(HT20)	20	20	20
IEEE 802.11ac(VHT20)	20	20	20
IEEE 802.11ax(HE20)	21	20	17
Frequency (MHz)	5270	5310	
IEEE 802.11n(HT40)	20	16	
IEEE 802.11ac(VHT40)	20	16	
IEEE 802.11ax(HE40)	20.5	16	
Frequency (MHz)	5290		
IEEE 802.11ac(VHT80)	16		
IEEE 802.11ax(HE80)	15		

UNII-2C			
Test Software Version	AX Series MP Toolkit 3.0.24.0		
Frequency (MHz)	5500	5580	5700
IEEE 802.11a	19	19.5	15.5
IEEE 802.11n(HT20)	17.5	19.5	15
IEEE 802.11ac(VHT20)	17.5	19.5	15
IEEE 802.11ax(HE20)	18.5	20	17
Frequency (MHz)	5510	5550	5670
IEEE 802.11n(HT40)	18	19.5	19
IEEE 802.11ac(VHT40)	18	19.5	19
IEEE 802.11ax(HE40)	18	20	19.5
Frequency (MHz)	5530	5610	
IEEE 802.11ac(VHT80)	17	19.5	
IEEE 802.11ax(HE80)	17.5	20	
Frequency (MHz)	5570		

UNII-3			
Test Software Version	AX Series MP Toolkit 3.0.24.0		
Frequency (MHz)	5745	5785	5825
IEEE 802.11a	19.5	19.5	19.5
IEEE 802.11n(HT20)	20.5	20.5	20.5
IEEE 802.11ac(VHT20)	20.5	20.5	20.5
IEEE 802.11ax(HE20)	21	21	21
Frequency (MHz)	5755	5795	
IEEE 802.11n(HT40)	20.5	20.5	
IEEE 802.11ac(VHT40)	20.5	20.5	
IEEE 802.11ax(HE40)	20.5	20.5	
Frequency (MHz)	5775		
IEEE 802.11ac(VHT80)	21		
IEEE 802.11ax(HE80)	20.5		

3.4 DUTY CYCLE

If duty cycle is ≥ 98 %, duty factor is not required.
If duty cycle is < 98 %, duty factor shall be considered.
The output power = measured power + duty factor.
The power spectral density = measured power spectral density + duty factor.

IEEE 802.11a
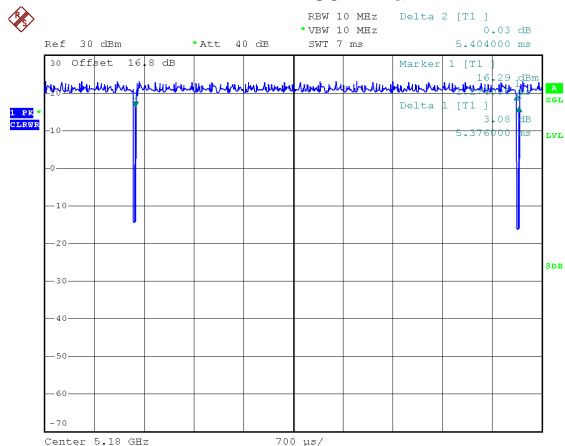
Date: 25.DEC.2024 09:31:19

Duty cycle = 5.376 ms / 5.404 ms = 99.48%
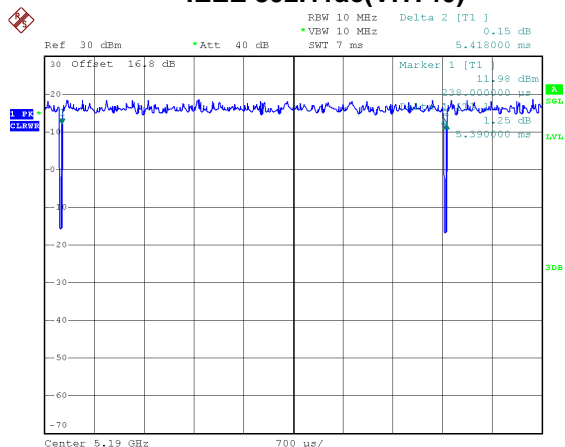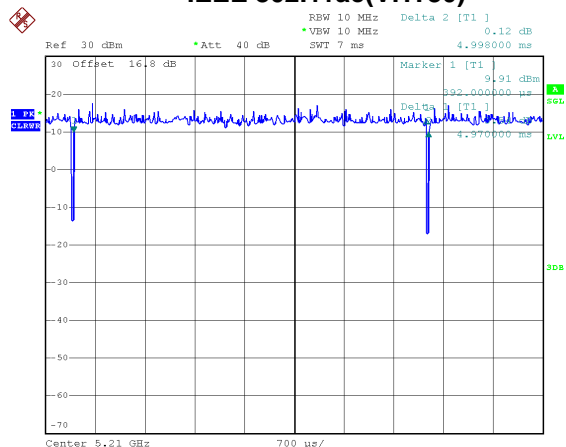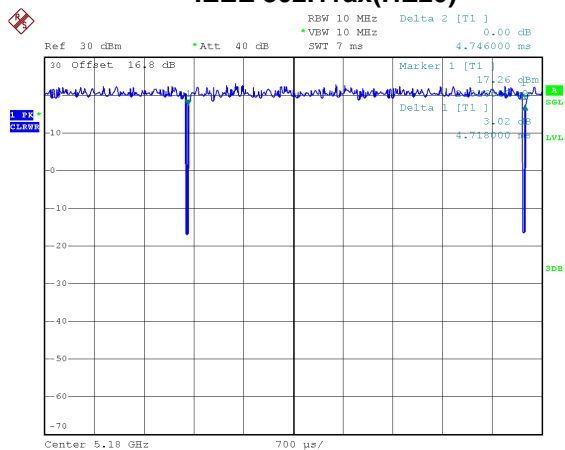Duty Factor = 10 log(1 / Duty cycle) = 0.00
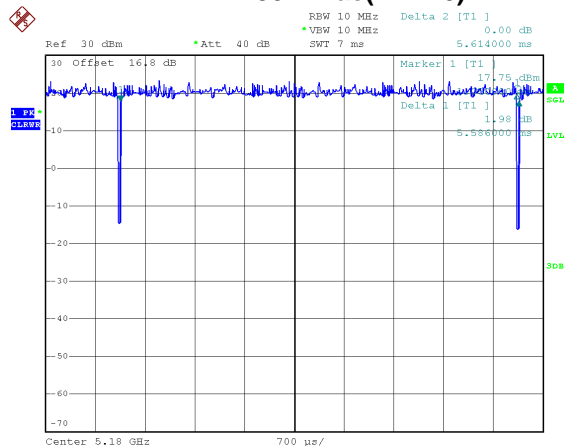
IEEE 802.11ac(VHT20)

Date: 25.DEC.2024 09:40:28

Duty cycle = 5.586 ms / 5.614 ms = 99.50%
Duty Factor = 10 log(1 / Duty cycle) = 0.00

IEEE 802.11ac(VHT40)

Date: 25.DEC.2024 09:43:58

Duty cycle = 5.390 ms / 5.418 ms = 99.48%
Duty Factor = 10 log(1 / Duty cycle) = 0.00

IEEE 802.11ac(VHT80)

Date: 25.DEC.2024 09:46:42

Duty cycle = 4.970 ms / 4.998 ms = 99.44%
Duty Factor = 10 log(1 / Duty cycle) = 0.00
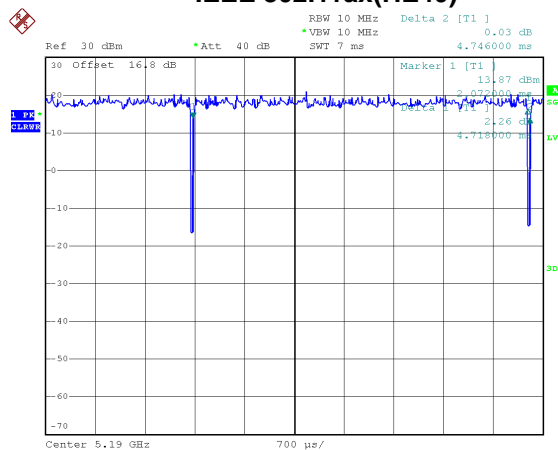
IEEE 802.11ax(HE20)

Date: 25.DEC.2024 09:41:16

Duty cycle = 4.718 ms / 4.746 ms = 99.41%
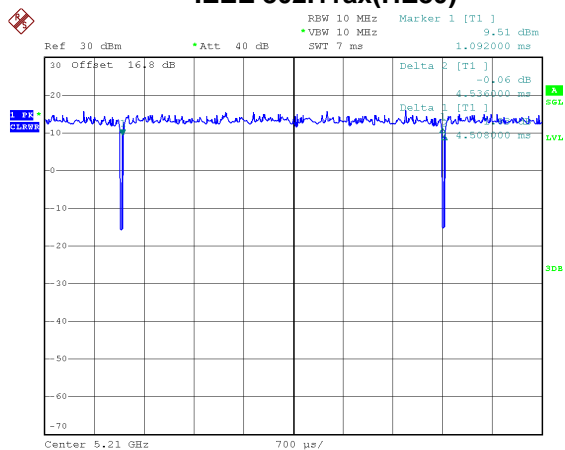Duty Factor = 10 log(1 / Duty cycle) = 0.00

IEEE 802.11ax(HE40)

Date: 25.DEC.2024 09:45:24

Duty cycle = 4.718 ms / 4.746 ms = 99.41%
Duty Factor = 10 log(1 / Duty cycle) = 0.00

IEEE 802.11ax(HE80)

Date: 25.DEC.2024 09:47:37

Duty cycle = 4.508 ms / 4.536 ms = 99.38%
Duty Factor = 10 log(1 / Duty cycle) = 0.00

NOTE:

For IEEE 802.11a:

For radiated emissions frequency above 1 GHz, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 1 kHz (Duty cycle ≥ 98%).

For IEEE 802.11ac(VHT20):

For radiated emissions frequency above 1 GHz, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 1 kHz (Duty cycle ≥ 98%).

For IEEE 802.11ac(VHT40):

For radiated emissions frequency above 1 GHz, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 2 kHz (Duty cycle ≥ 98%).

For IEEE 802.11ac(VHT80):

For radiated emissions frequency above 1 GHz, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 kHz (Duty cycle ≥ 98%).

For IEEE 802.11ax(HE20):

For radiated emissions frequency above 1 GHz, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 1 kHz (Duty cycle ≥ 98%).

For IEEE 802.11ax(HE40):

For radiated emissions frequency above 1 GHz, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 2 kHz (Duty cycle ≥ 98%).

For IEEE 802.11ax(HE80):

For radiated emissions frequency above 1 GHz, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 kHz (Duty cycle ≥ 98%).

3.5 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED
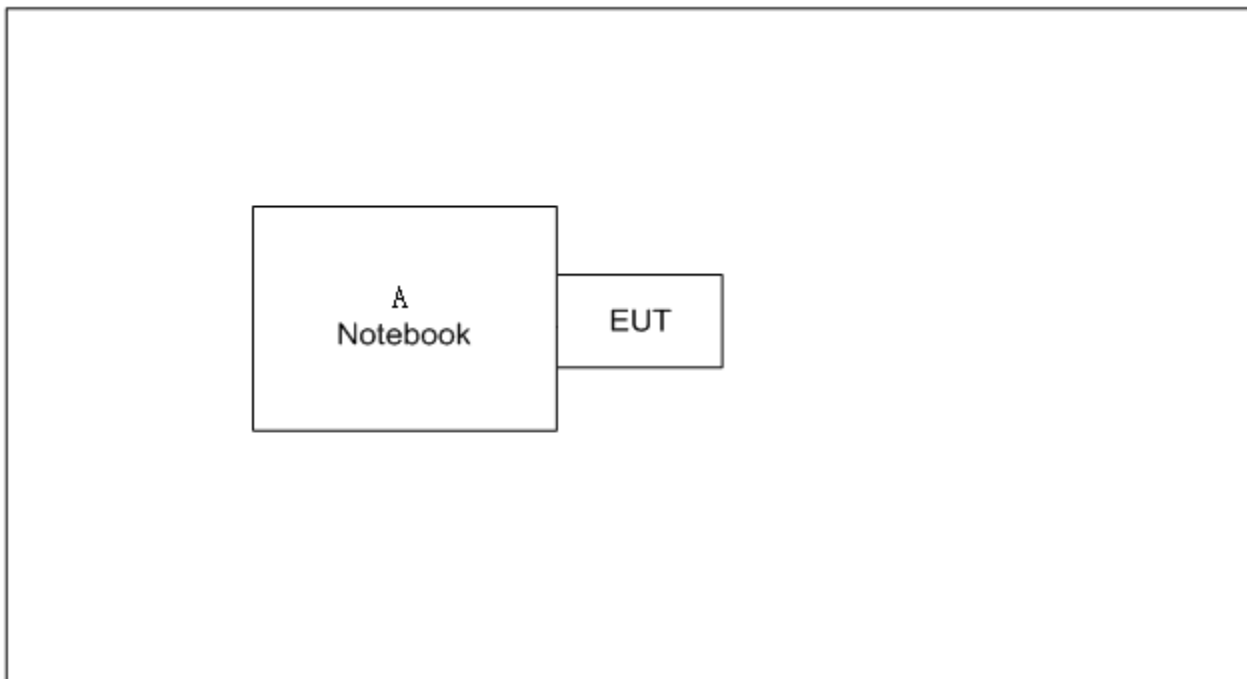
3.6 SUPPORT UNITS

Item	Equipment	Brand	Model No.	Series No.
A	Notebook	Honor	Nbl-WAQ9HNRP	N/A

Item	Cable Type	Shielded Type	Ferrite Core	Length
-	-	-	-	-

3.7 CUSTOMER INFORMATION DESCRIPTION

1) The antenna gain is provided by the manufacturer.
2) Except for radiated emissions, the results of all test items include cable losses. All cable losses are provided by the testing laboratory.

4. AC POWER LINE CONDUCTED EMISSIONS

4.1 LIMIT

Frequency (MHz)	Limit (dBμV)	
	Quasi-peak	Average
0.15 - 0.5	66 to 56*	56 to 46*
0.5 - 5.0	56	46
5.0 - 30.0	60	50

NOTE:
(1) The tighter limit applies at the band edges.
(2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.
(3) The test result calculated as following:
Measurement Value = Reading Level + Correct Factor
Correct Factor = Insertion Loss + Cable Loss + Attenuator Factor (if use)
Margin Level = Measurement Value – Limit Value

4.2 TEST PROCEDURE

a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipment powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
d. LISN at least 80 cm from nearest part of EUT chassis.
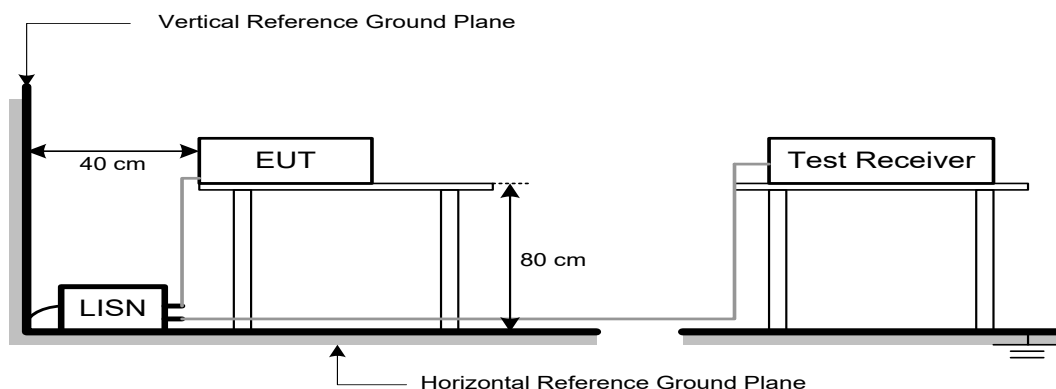e. For the actual test configuration, please refer to the related Item -EUT Test Photos.

The following table is the setting of the receiver:

Receiver Parameter	Setting
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

4.3 DEVIATION FROM TEST STANDARD

No deviation

4.4 TEST SETUP

Vertical Reference Ground Plane

40 cm

EUT

Test Receiver

80 cm

LISN

Horizontal Reference Ground Plane

4.5 EUT OPERATION CONDITIONS

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.
The EUT was programmed to be in continuously transmitting/TX mode.

4.6 TEST RESULTS

Please refer to the APPENDIX A.

5. RADIATED EMISSIONS

5.1 LIMIT

In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

LIMITS OF RADIATED EMISSIONS MEASUREMENT (9 kHz to 1000 MHz)

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

LIMITS OF UNWANTED EMISSION OUT OF THE RESTRICTED BANDS (Above 1000 MHz)

Frequency (MHz)	EIRP Limit (dBm/MHz)	Band edge at 3m (dBµV/m)	Harmonic at 1m (dBµV/m)
5150-5250	-27	68.2	77.7 (Note 3)
5250-5350	-27	68.2	77.7 (Note 3)
5470-5725	-27	68.2	77.7 (Note 3)
5725-5850 NOTE (2)	-27	68.2	77.7 (Note 3)
	10	105.2	114.7 (Note 3)
	15.6	110.8	120.3 (Note 3)
	27	122.2	131.7 (Note 3)

NOTE:

(1) The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

$$E = \frac{1000000\sqrt{30P}}{3} \text{ µV/m, where P is the eirp (Watts)}$$

(2) According to 15.407(b)(4)(i), 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 25 MHz 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.

(3)

$$FS_{\text{limit}} = FS_{\text{max}} - 20\log\left(\frac{d_{\text{limit}}}{d_{\text{measure}}}\right)$$

20log ($d_{\text{limit}}/d_{\text{measure}}$)=20log (3/1)=9.5 dB.
FS_{limit}: Harmonic at 3m Peak and Average limit.
FS_{max}: Harmonic at 1m Peak and Average Maximum value.
d_{limit}: Harmonic at 3m test distance.
d_{measure}: Harmonic Actual test distance.

5.2 TEST PROCEDURE

a. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1GHz)

b. The measuring distance of 3 m or 1m shall be used for measurements. The EUT was placed on the top of a rotating table 1.5 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(above 1GHz)

c. The height of the equipment or of the substitution antenna shall be 0.8m or 1.5m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights find the maximum reading (used Bore sight function).

e. The receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz.

f. The initial step in collecting radiated emission data is a receiver peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.

g. All readings are Peak unless otherwise stated QP in column of Note. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform.
(below 1 GHz)

h. All readings are Peak Mode value unless otherwise stated AVG in column of Note. If the Peak Mode Measured value compliance with the Peak Limits and lower than AVG Limits, the EUT shall be deemed to meet both Peak & AVG Limits and then only Peak Mode was measured, but AVG Mode didn't perform. (above 1 GHz)

i. For the actual test configuration, please refer to the related Item –EUT Test Photos.

The following table is the setting of the receiver:

Spectrum Parameters	Setting
Start ~ Stop Frequency	9 kHz~150 kHz for RBW 200 Hz
Start ~ Stop Frequency	0.15 MHz~30 MHz for RBW 9 kHz
Start ~ Stop Frequency	30 MHz~1000 MHz for RBW 100 kHz

Spectrum Parameters	Setting
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic or 40 GHz, whichever is lower
RBW / VBW	1 MHz / 3 MHz for PK value
(Emission in restricted band)	1 MHz / 1/T Hz for AVG value

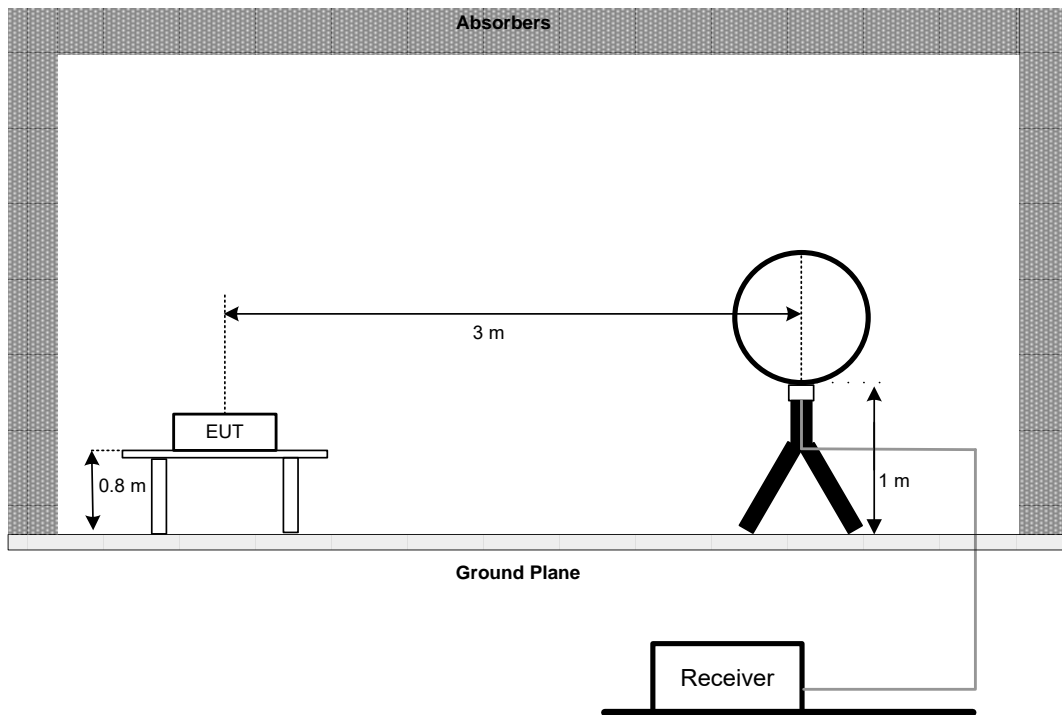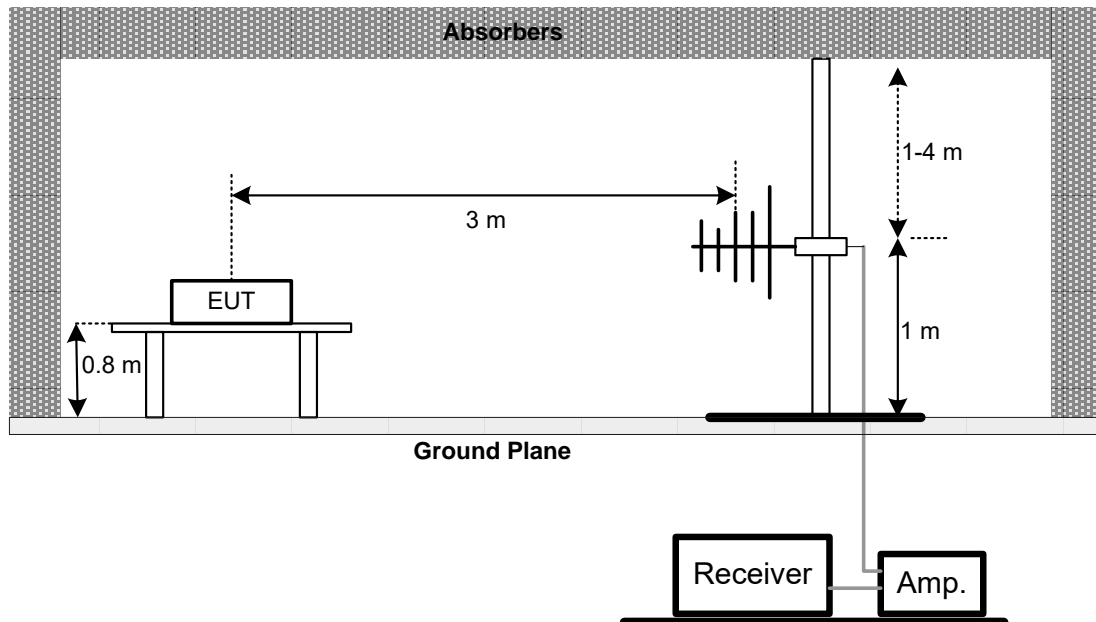| Receiver Parameters	Setting
Start ~ Stop Frequency	9 kHz~90 kHz for PK/AVG detector
Start ~ Stop Frequency	90 kHz~110 kHz for QP detector
Start ~ Stop Frequency	110 kHz~490 kHz for PK/AVG detector
Start ~ Stop Frequency	490 kHz~30 MHz for QP detector
Start ~ Stop Frequency	30 MHz~1000 MHz for QP detector
Start ~ Stop Frequency	1 GHz~40 GHz for PK/AVG detector

5.3 DEVIATION FROM TEST STANDARD
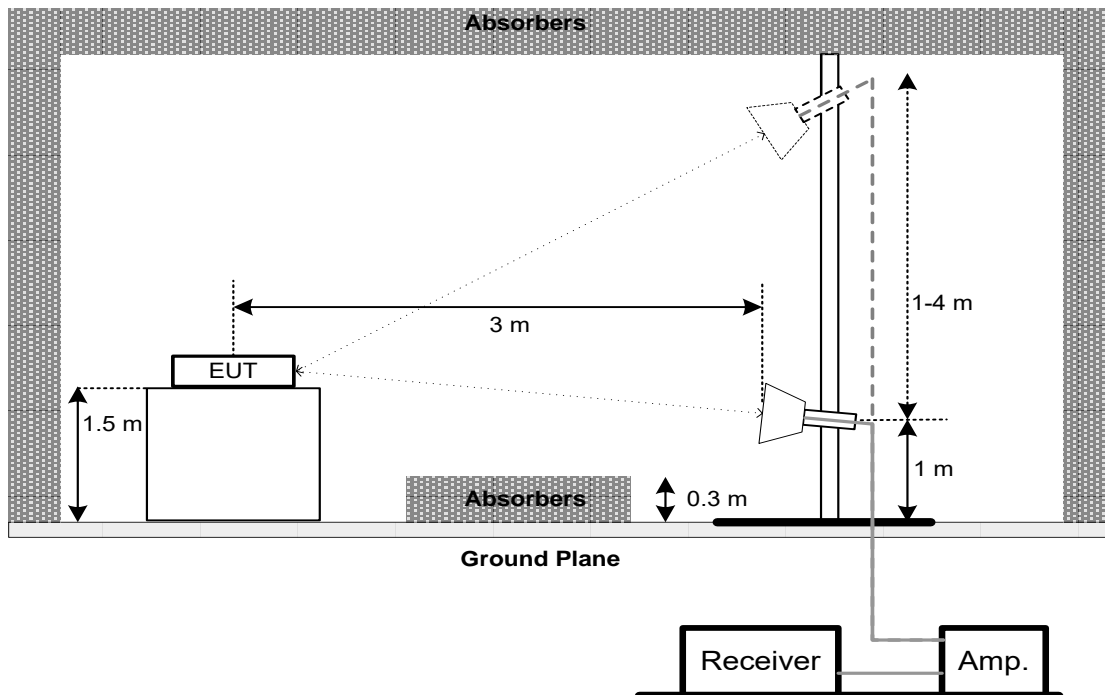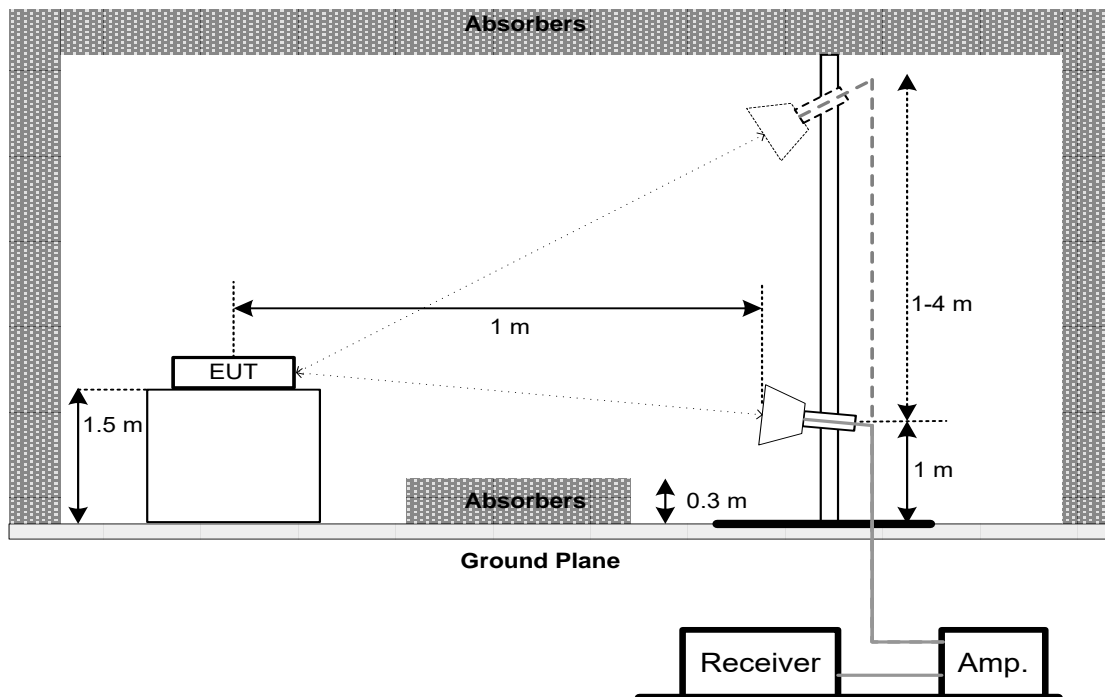
No deviation.

5.4 TEST SETUP

9 kHz to 30 MHz

30 MHz to 1 GHz

Above 1 GHz

Band edge & Harmonic (1 GHz to 18 GHz)

Absorbers

3 m

EUT

1-4 m

1.5 m

1 m

Absorbers   0.3 m

Ground Plane

Receiver   Amp.

Harmonic (18 GHz to 40 GHz)

Absorbers

1 m

EUT

1-4 m

1.5 m

1 m

Absorbers   0.3 m

Ground Plane

Receiver   Amp.

5.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 3.5 unless otherwise a special operating condition is specified in the follows during the testing.

5.6 TEST RESULTS - 9 KHZ TO 30 MHZ

Please refer to the APPENDIX B.

Remark:
(1) Distance extrapolation factor = 40 log (specific distance / test distance) (dB).
(2) Limit line = specific limits (dBuV) + distance extrapolation factor.

5.7 TEST RESULTS - 30 MHZ TO 1000 MHZ

Please refer to the APPENDIX C.

5.8 TEST RESULTS - ABOVE 1000 MHZ

Please refer to the APPENDIX D.

Remark:
(1) No limit: This is fundamental signal, the judgment is not applicable.
For fundamental signal judgment was referred to Peak output test.

6. BANDWIDTH

6.1 LIMIT

Section	Test Item	Limit	Frequency Range (MHz)
FCC 15.407(a) FCC 15.407(e)	26 dB Bandwidth	-	5150-5250
	26 dB Bandwidth	-	5250-5350
	26 dB Bandwidth	-	5470-5725
	6 dB Bandwidth	Minimum 500 kHz	5725-5850

6.2 TEST PROCEDURE

a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below

b. Spectrum Setting:
For UNII-1, UNII-2A, UNII-2C:

Spectrum Parameter	Setting
Span Frequency	> 26 dB Bandwidth
RBW	Appromiximately 1% of the emission bandwidth
VBW	> RBW
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

For UNII-3:

Spectrum Parameter	Setting
Span Frequency	> 6 dB Bandwidth
RBW	100 kHz
VBW	300 kHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

For 99% Occupied Bandwidth:

Spectrum Parameter	Setting
Span Frequency	1.5 times to 5 times the OBW
RBW	1% to 5% of the OBW
VBW	≥3*RBW
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

c. Measured the spectrum width with power higher than 26 dB / 6 dB below carrier.

6.3 DEVIATION FROM STANDARD

No deviation.

6.4 TEST SETUP

```
┌──────────┐         ┌──────┐         ┌─────────────────┐
│   EUT    │─────────│ ATT. │─────────│    SPECTRUM     │
│          │         │      │         │    ANALYZER     │
└──────────┘         └──────┘         └─────────────────┘
```
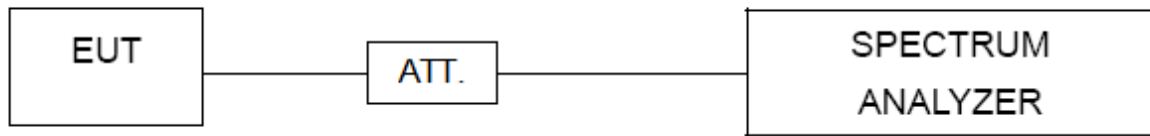
6.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

6.6 TEST RESULTS

Please refer to the APPENDIX E.

7. MAXIMUM OUTPUT POWER

7.1 LIMIT

Section	Test Item	Limit	Frequency Range (MHz)
FCC 15.407(a)	Maximum Output Power	AP device: 1 Watt (30 dBm) Client device: 250 mW (23.98 dBm)	5150-5250
		250 mW (23.98 dBm)	5250-5350
		250 mW (23.98 dBm)	5470-5725
		1 Watt (30dBm)	5725-5850

Note:
a. For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, 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.
b. For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10log B, where B is the 26dB Bandwidth in megahertz.

7.2 TEST PROCEDURE

a. The EUT was directly connected to the peak power analyzer and antenna output port as show in the block diagram below.
b. The test was performed in accordance with method of FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

7.3 DEVIATION FROM STANDARD

No deviation.

7.4 TEST SETUP
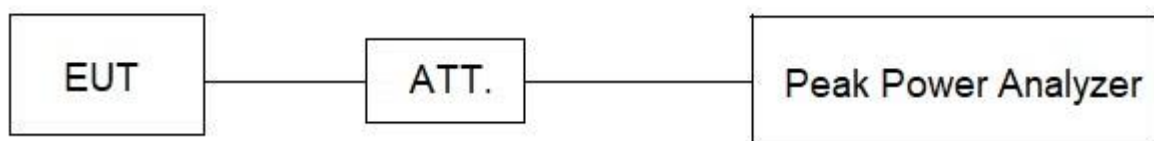
7.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

7.6 TEST RESULTS

Please refer to the APPENDIX F.

8. POWER SPECTRAL DENSITY

8.1 LIMIT

Section	Test Item	Limit	Frequency Range (MHz)
FCC 15.407(a)	Power Spectral Density	AP device: 17 dBm/MHz Client device: 11 dBm/MHz	5150-5250
		11 dBm/MHz	5250-5350
		11 dBm/MHz	5470-5725
		30 dBm/500 kHz	5725-5850

8.2 TEST PROCEDURE

a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.

b. Spectrum Setting:
For UNII-1, UNII-2A, UNII-2C:

Spectrum Parameter	Setting
Span Frequency	Encompass the entire emissions bandwidth (EBW) of the signal
RBW	1 MHz.
VBW	3 MHz.
Detector	RMS
Trace average	100 trace
Sweep Time	Auto

For UNII-3:

Spectrum Parameter	Setting
Span Frequency	Encompass the entire emissions bandwidth (EBW) of the signal
RBW	100 kHz.
VBW	300 kHz.
Detector	RMS
Trace average	100 trace
Sweep Time	Auto

Note:

1. For UNII-3, according to KDB publication 789033 D02 General UNII Test Procedures New Rules v02r01, section II.F.5., it is acceptable to set RBW at 100kHz and VBW at 300kHz if the spectrum analyzer does not have 500 kHz RBW. Then, add 10 log (500 kHz/100 kHz) to the measured result, i.e. 7 dB.

2. During the test of U-NII 3 PSD, the measurement result with RBW=100kHz has been added 7 dB by compensating offset. For example, the cable loss is 13 dB, and the final offset is 13 + 7 = 20 dB when RBW=100kHz is used.

8.3 DEVIATION FROM STANDARD

No deviation.

8.4 TEST SETUP
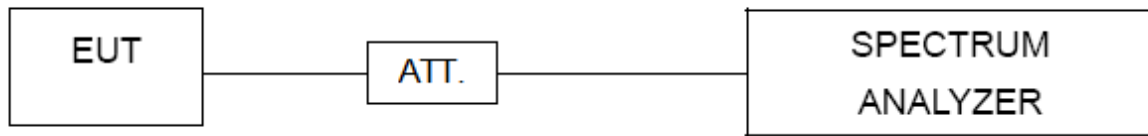
8.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

8.6 TEST RESULTS

Please refer to the APPENDIX G.

9. MEASUREMENT INSTRUMENTS LIST

AC Power Line Conducted Emissions					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	EMI TEST RECEIVER	R&S	ESCI	100382	Dec. 22, 2024
2	TWO-LINE V-NETWORK	R&S	ENV216	101447	Dec. 22, 2024
3	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
4	Cable	N/A	SFT205-NMNM-9M-001	9M	Nov. 27, 2024
5	643 Shield Room	ETS	6*4*3	N/A	N/A

Radiated Emissions - 9 kHz to 30 MHz					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Active Loop Antenna	Schwarzbeck	FMZB 1513-60B	1513-60 B-034	Mar. 30, 2025
2	MXE EMI Receiver	Keysight	N9038A	MY56400091	Dec. 22, 2024
3	Cable	N/A	RW2350-3.8A-NMBM-1.5M	N/A	Jun. 09, 2025
4	Cable	N/A	LMR400-NMNM-8M	N/A	Sep. 09, 2025
5	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
6	966 Chamber room	ETS	9*6*6	N/A	May 16, 2025

Radiated Emissions - 30 MHz to 1 GHz					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Trilog-Broadband Antenna	Schwarzbeck	VULB 9168	1462	Dec. 13, 2024
2	Attenuator	EMC INSTRUMENT	EMCI-N-6-06	AT-06009	Dec. 13, 2024
3	Preamplifier	EMC INSTRUMENT	EMC001330	980998	Nov. 17, 2024
4	Cable	RegalWay	LMR400-NMNM-12.5m	N/A	Jun. 06, 2025
5	Cable	RegalWay	LMR400-NMNM-3m	N/A	Jun. 06, 2025
6	Cable	RegalWay	LMR400-NMNM-0.5m	N/A	Jun. 06, 2025
7	Receiver	Agilent	N9038A	MY52130039	Dec. 22, 2024
8	Positioning Controller	MF	MF-7802	N/A	N/A
9	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
10	966 Chamber room	CM	9*6*6	N/A	May 16, 2025

Radiated Emissions - Above 1 GHz
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Receiver	Agilent	N9038A	MY52130039	Dec. 22, 2024 Dec. 21, 2025
2	Preamplifier	EMC INSTRUMENT	EMC118A45SE	980888	Nov. 17, 2024 Nov. 16, 2025
3	Double Ridged Guide Antenna	ETS	3115	75789	Jun. 15, 2025
4	Cable	RegalWay	RWLP50-4.0A-SMSM-12.5M	N/A	Jul. 03, 2025
5	Cable	RegalWay	RWLP50-4.0A-NMRASM-2.5M	N/A	Jul. 03, 2025
6	Cable	RegalWay	RWLP50-4.0A-NMRASMRA-0.8M	N/A	Jul. 03, 2025
7	966 Chamber room	CM	9*6*6	N/A	May 19, 2025
8	Attenuator	Talent Microwave	TA10A2-S-18	N/A	N/A
9	Filter	STI	STI15-9969	N/A	May 31, 2025
10	Positioning Controller	MF	MF-7802	N/A	N/A
11	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
12	EXA Signal Analyzer	Keysight	N9010A	MY56480488	Dec. 22, 2024 Dec. 21, 2025
13	Low Noise Amplifier	CONNPHY	CLN-18G40G-4330-K	619413	Jul. 17, 2025
14	Cable	RegalWay	RWLP50-2.6A-2.92M2.92M-1.1M	N/A	Jul. 25, 2025
15	Cable	Tonscend	HF160-KMKM-3M	N/A	Jul. 25, 2025
16	Broad-Band Horn Antenna	Schwarzbeck	BBHA9170(3m)	9170-319	Jun. 16, 2025

Bandwidth & Power Spectral Density
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
5	Spectrum Analyzer	R&S	FSP40	100185	May 31, 2025
2	Spectrum Analyzer	R&S	FSP38	100852	May 31, 2025
3	Measurement Software	BTL	BTL Conducted Test	N/A	N/A
4	Isolation attenuator	Z-Link	ASMA-16-18-2W	N/A	N/A

Maximum Output Power
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Peak Power Analyzer	Keysight	8990B	MY51000506	May 31, 2025
2	Wideband power sensor	Keysight	N1923A	MY58310004	May 31, 2025
3	Isolation attenuator	Z-Link	ASMA-10-18-2W	N/A	N/A

Remark: "N/A" denotes no model name, serial no. or calibration specified.
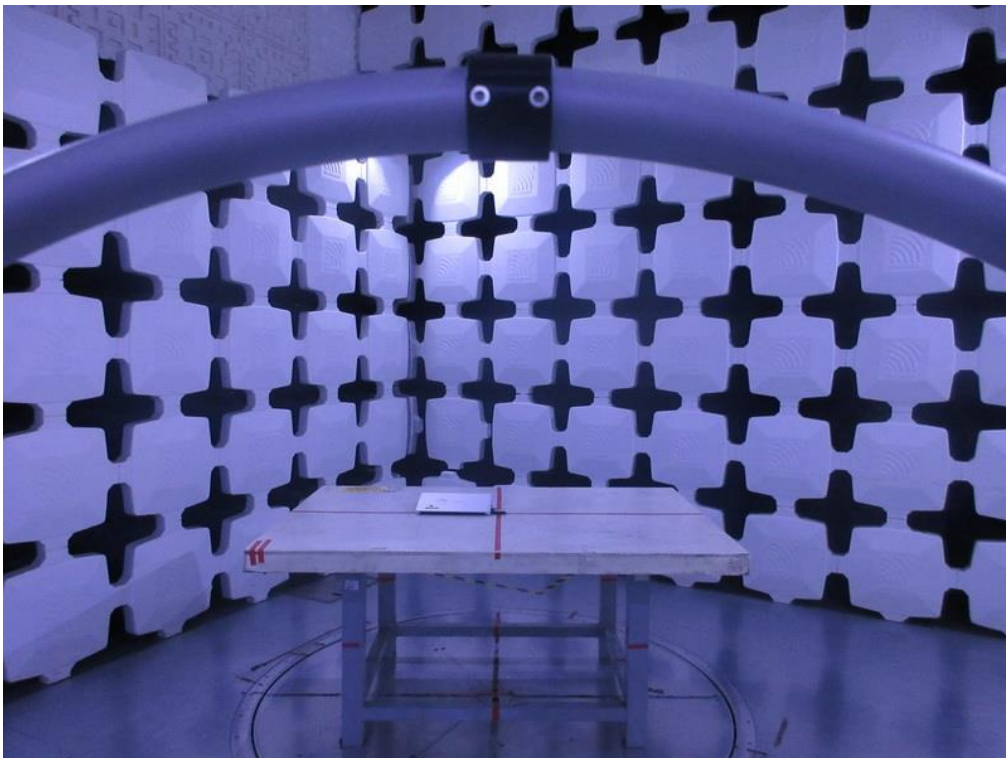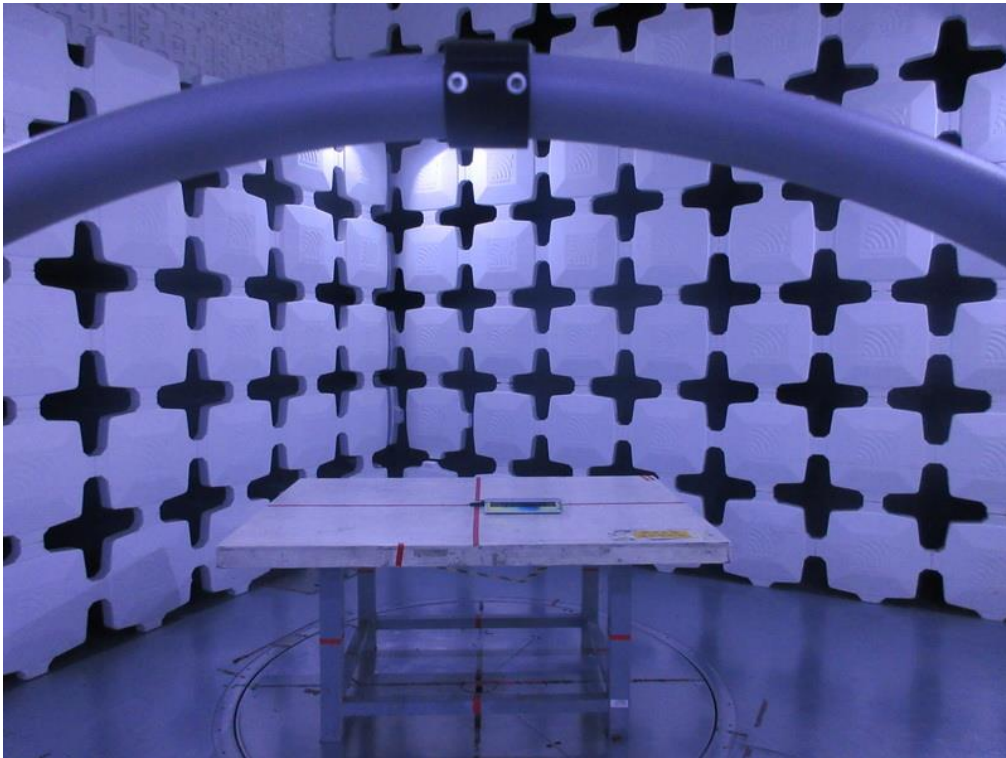
All calibration period of equipment list is one year.

10. EUT TEST PHOTOS

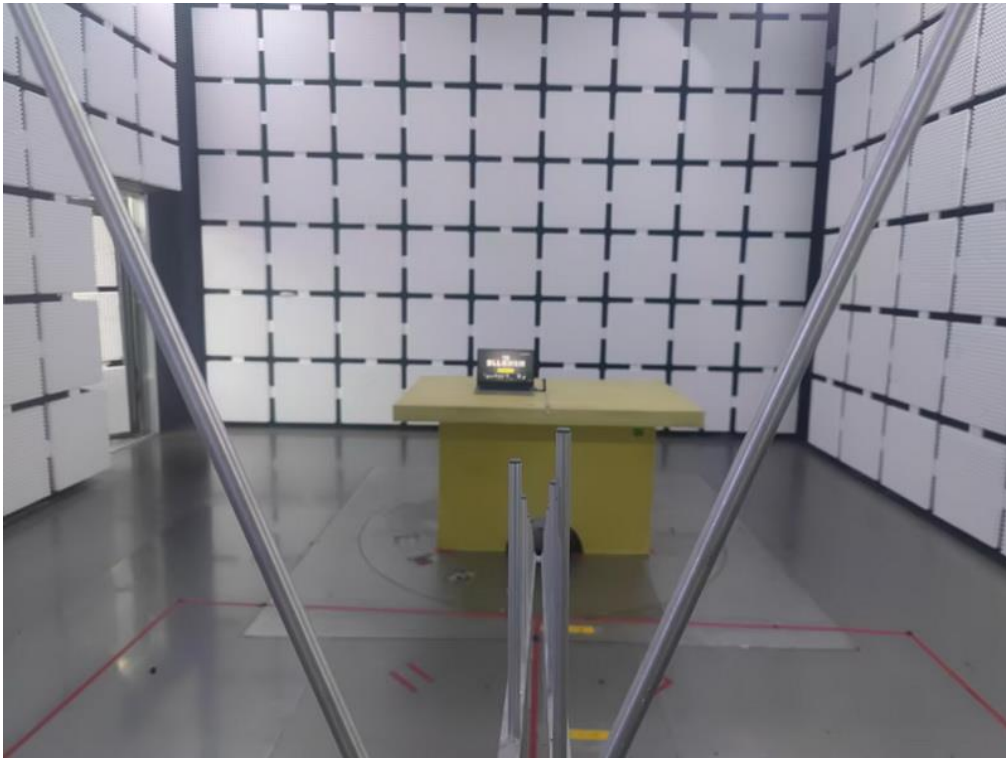**AC Power Line Conducted Emissions Test Photos**
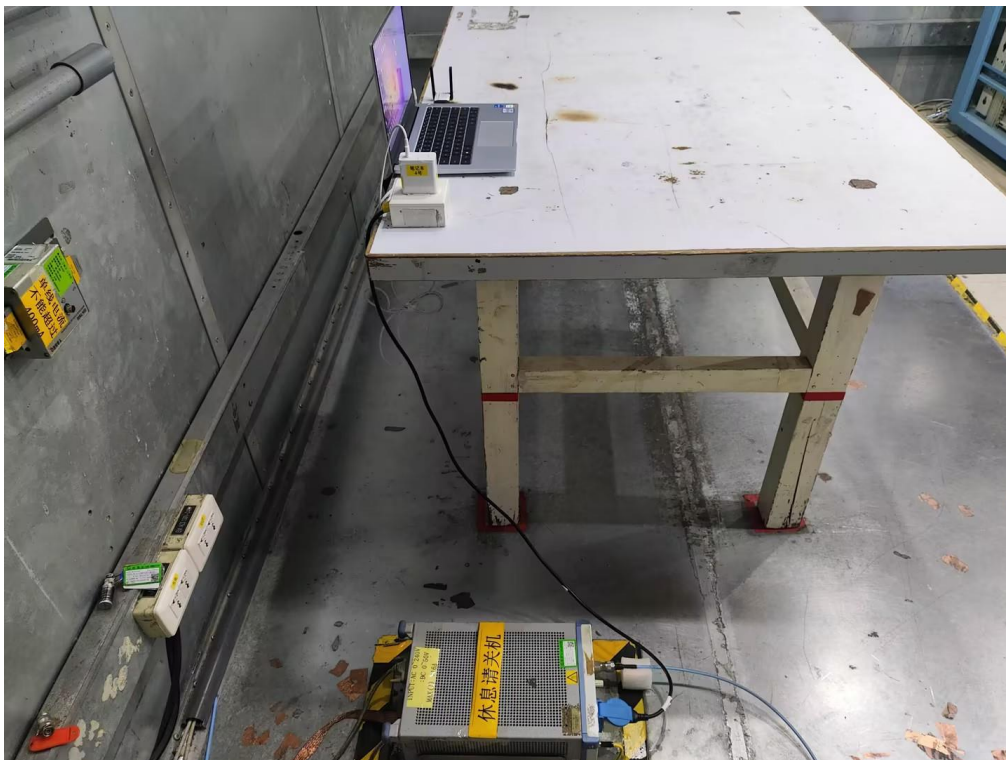
Radiated Emissions Test Photos
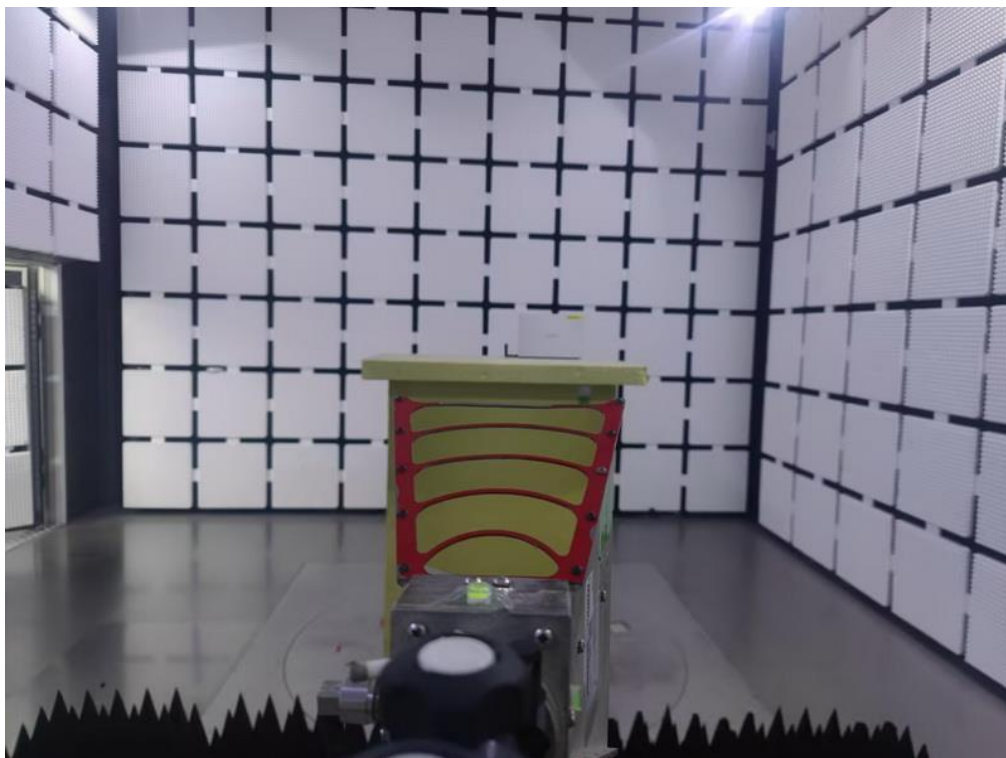
9 kHz to 30 MHz

Radiated Emissions Test Photos
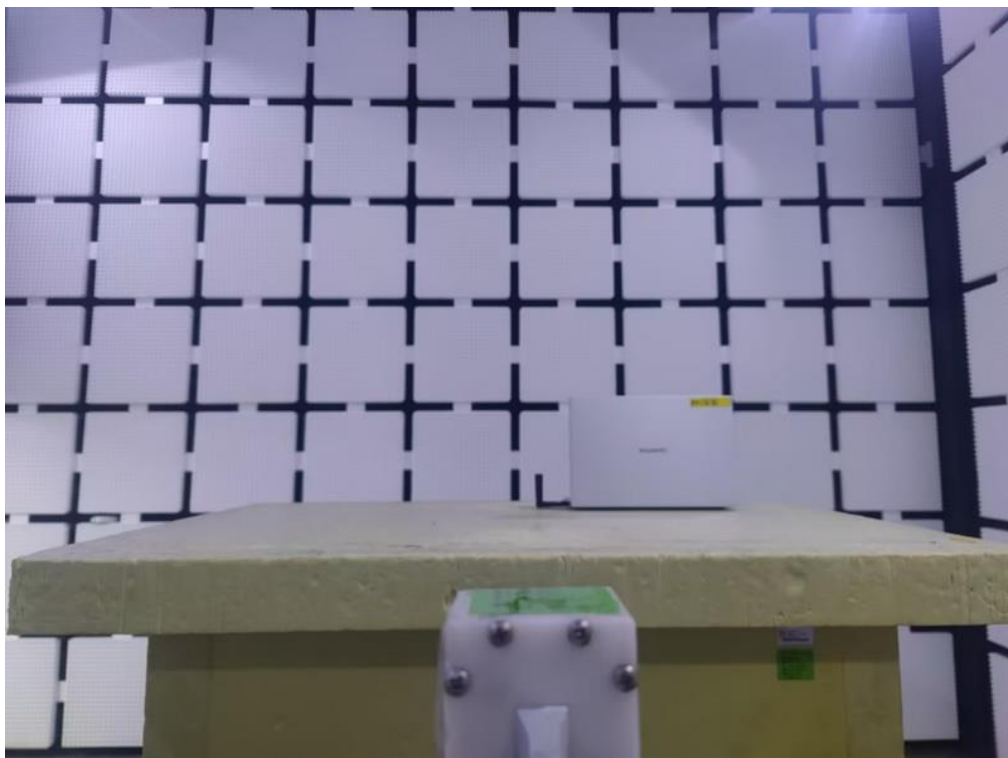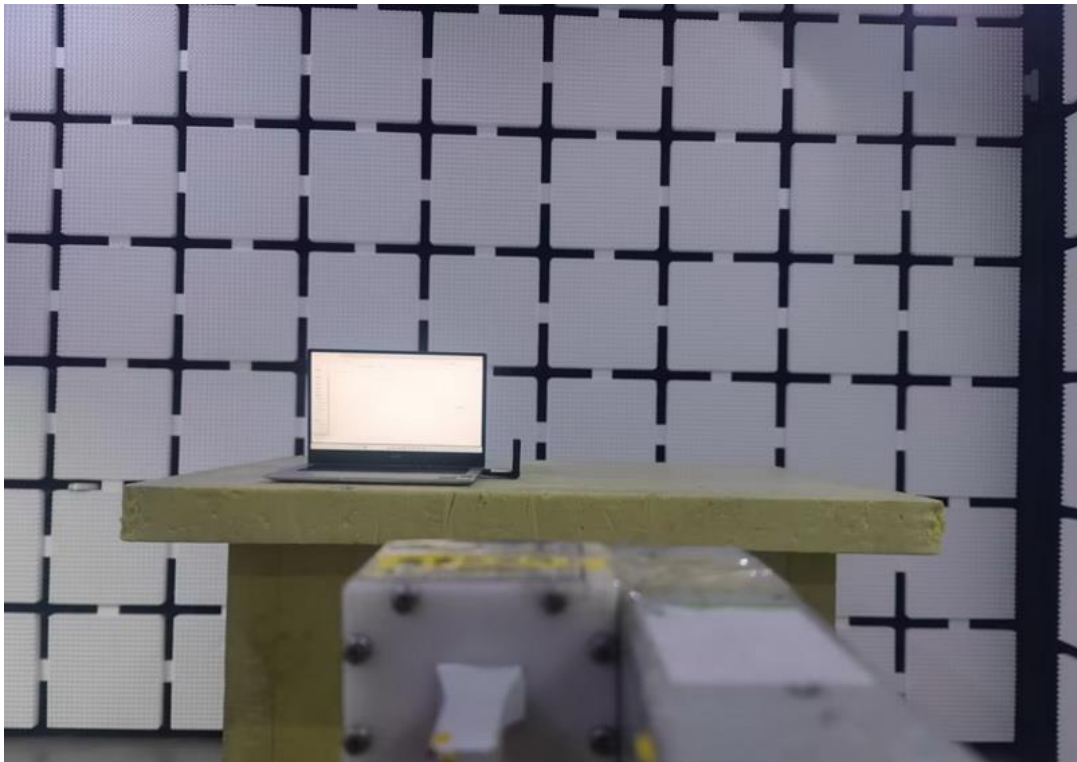
30 MHz to 1 GHz

Radiated Emissions Test Photos

1 GHz -18 GHz
(Band Edge & Harmonic)

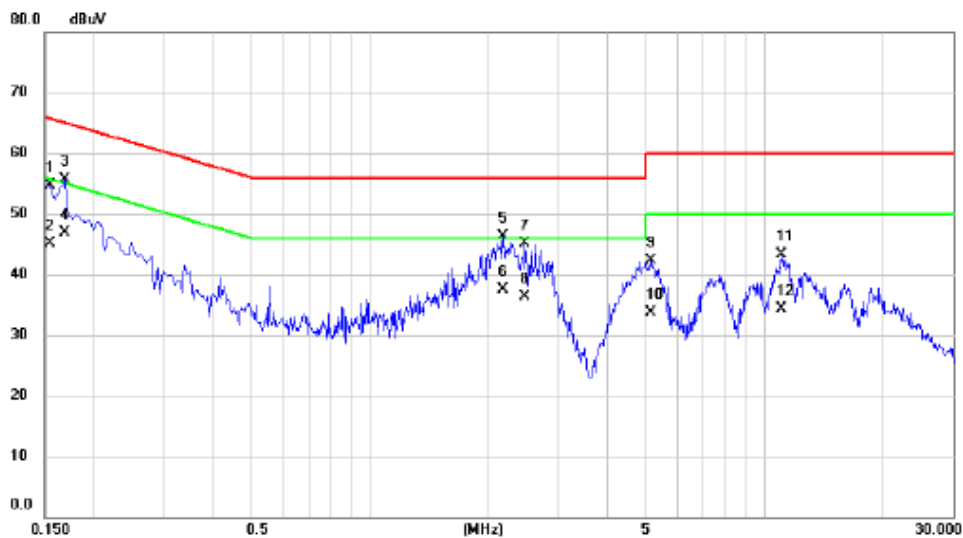**Radiated Emissions Test Photos**

18 GHz to 40 GHz
(Harmonic)

Radiated Emissions Test Photos

Conducted Test Photos

APPENDIX A - AC POWER LINE CONDUCTED EMISSIONS

Test Mode	TX AC(VHT40) Mode Channel 46 (UNII-1)	Phase	Line

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1545	44.78	9.93	54.71	65.75	-11.04	QP	
2		0.1545	35.10	9.93	45.03	55.75	-10.72	AVG	
3		0.1680	45.75	9.93	55.68	65.06	-9.38	QP	
4	*	0.1680	36.90	9.93	46.83	55.06	-8.23	AVG	
5		2.1705	35.51	10.73	46.24	56.00	-9.76	QP	
6		2.1705	26.70	10.73	37.43	46.00	-8.57	AVG	
7		2.4720	34.54	10.50	45.04	56.00	-10.96	QP	
8		2.4720	25.80	10.50	36.30	46.00	-9.70	AVG	
9		5.1360	31.64	10.65	42.29	60.00	-17.71	QP	
10		5.1360	23.10	10.65	33.75	50.00	-16.25	AVG	
11		11.0310	31.20	12.03	43.23	60.00	-16.77	QP	
12		11.0310	22.30	12.03	34.33	50.00	-15.67	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX AC(VHT40) Mode Channel 46 (UNII-1)	Phase	Neutral

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin	Detector	Comment
		MHz	dBuV	dB	dBuV	dBuV	dB		
1		0.1500	44.74	9.90	54.64	66.00	-11.36	QP	
2		0.1500	35.60	9.90	45.50	56.00	-10.50	AVG	
3		0.1590	44.21	9.90	54.11	65.52	-11.41	QP	
4	*	0.1590	35.20	9.90	45.10	55.52	-10.42	AVG	
5		0.2040	39.12	9.91	49.03	63.45	-14.42	QP	
6		0.2040	30.70	9.91	40.61	53.45	-12.84	AVG	
7		2.1210	32.07	10.72	42.79	56.00	-13.21	QP	
8		2.1210	23.90	10.72	34.62	46.00	-11.38	AVG	
9		5.1900	32.22	10.60	42.82	60.00	-17.18	QP	
10		5.1900	24.30	10.60	34.90	50.00	-15.10	AVG	
11		10.9905	32.65	11.97	44.62	60.00	-15.38	QP	
12		10.9905	23.10	11.97	35.07	50.00	-14.93	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

APPENDIX B - RADIATED EMISSION - 9 KHZ TO 30 MHZ

Test Mode	TX AC(VHT40) Mode Channel 46 (UNII-1)	Polarization	Ant 0°
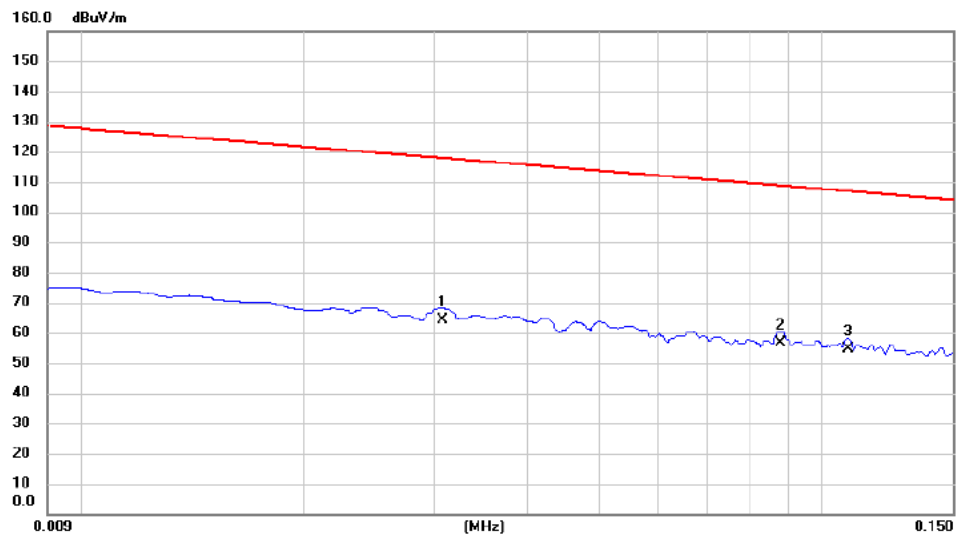
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1		0.0307	43.10	21.10	64.20	117.86	-53.66	AVG	
2	*	0.0880	35.16	21.30	56.46	108.72	-52.26	AVG	
3		0.1084	33.36	21.29	54.65	106.91	-52.26	QP	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX AC(VHT40) Mode Channel 46 (UNII-1)	Polarization	Ant 0°
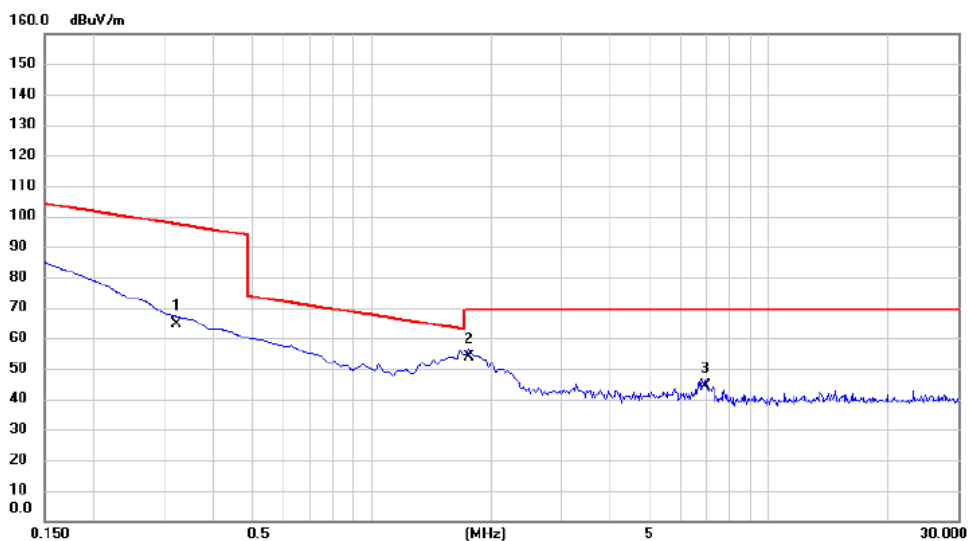
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1		0.3234	43.59	21.00	64.59	97.41	-32.82	AVG	
2	*	1.7620	32.94	21.02	53.96	69.54	-15.58	QP	
3		6.9260	23.16	21.00	44.16	69.54	-25.38	QP	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX AC(VHT40) Mode Channel 46 (UNII-1)	Polarization	Ant 90°
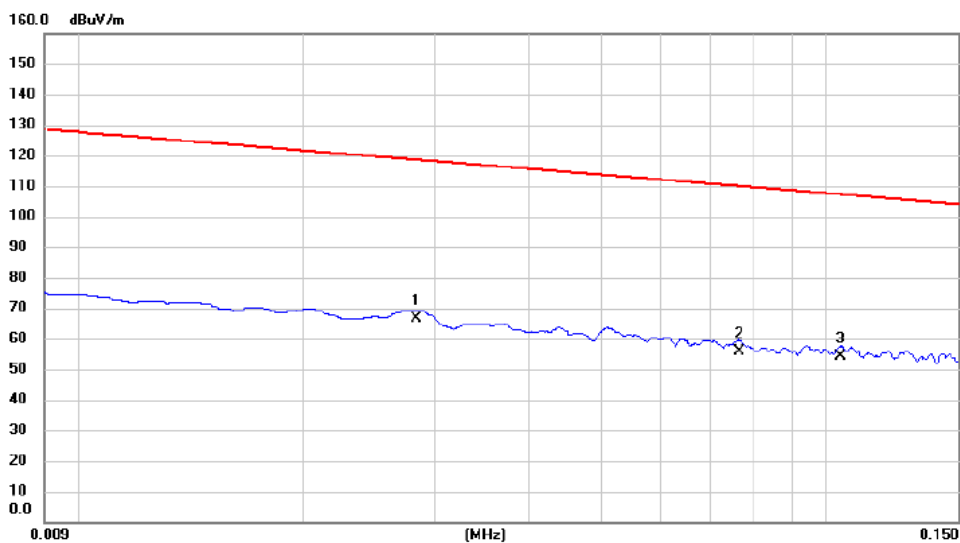
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	0.0283	45.37	21.05	66.42	118.57	-52.15	AVG	
2		0.0764	34.61	21.29	55.90	109.94	-54.04	AVG	
3		0.1046	32.94	21.29	54.23	107.22	-52.99	QP	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX AC(VHT40) Mode Channel 46 (UNII-1)	Polarization	Ant 90°
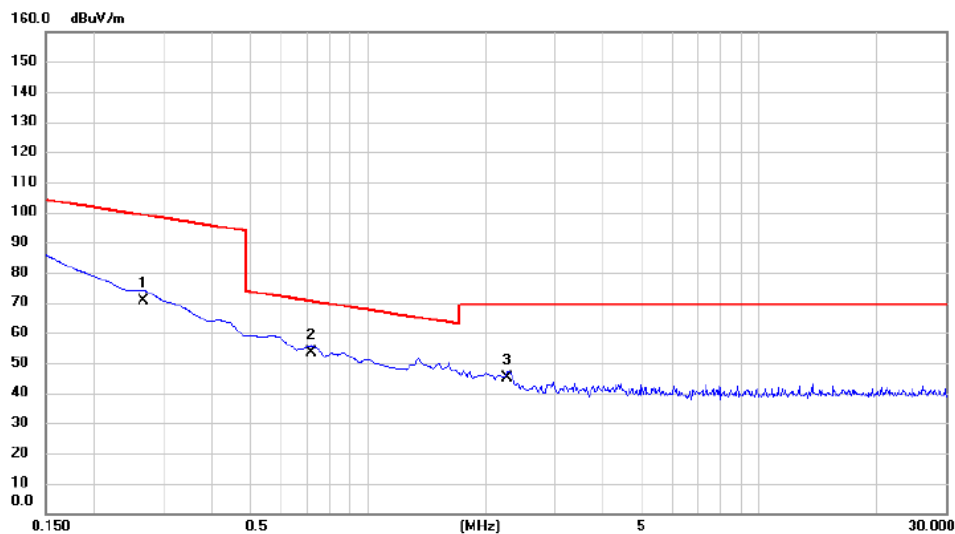
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1		0.2672	49.36	21.05	70.41	99.07	-28.66	AVG	
2	*	0.7171	32.16	21.07	53.23	70.49	-17.26	QP	
3		2.2694	23.84	21.00	44.84	69.54	-24.70	QP	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

APPENDIX C - RADIATED EMISSION - 30 MHZ TO 1000 MHZ

Test Mode	TX AC(VHT40) Mode Channel 46 (UNII-1)	Polarization	Vertical
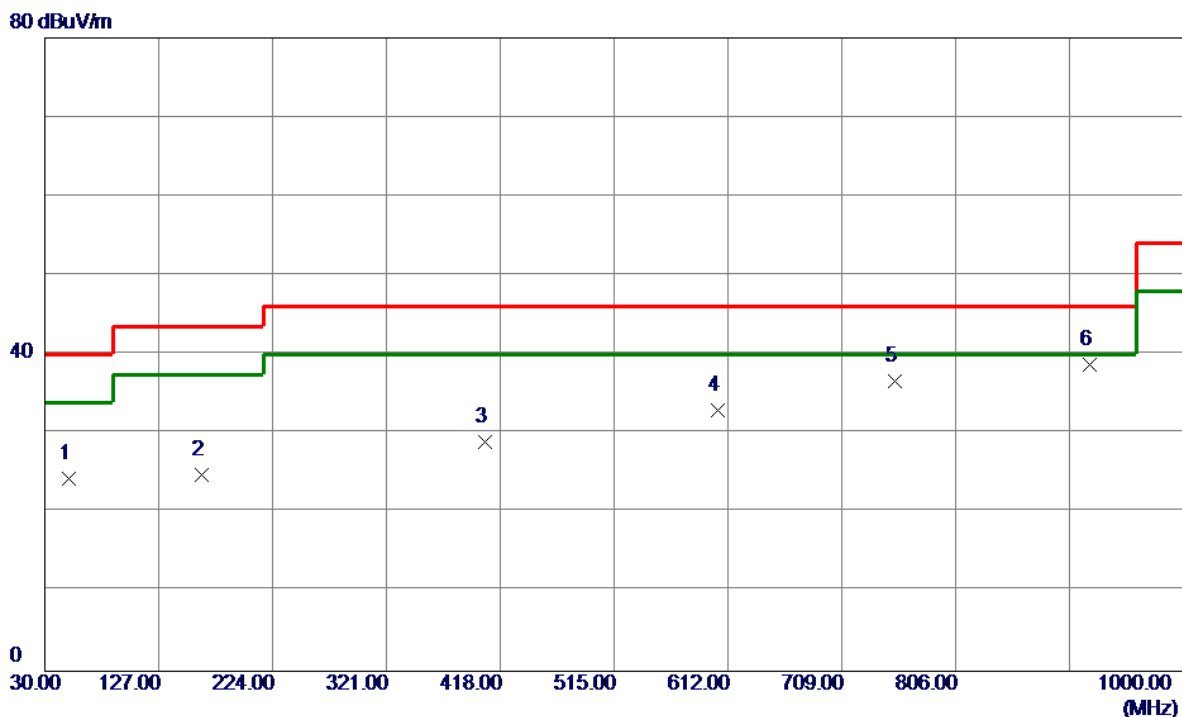
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	50.3700	35.58	-11.28	24.30	40.00	-15.70	Peak	
2	163.8600	35.78	-11.00	24.78	43.50	-18.72	Peak	
3	405.3900	36.82	-7.90	28.92	46.00	-17.08	Peak	
4	603.2700	36.49	-3.55	32.94	46.00	-13.06	Peak	
5	754.1050	37.77	-1.07	36.70	46.00	-9.30	Peak	
6 *	920.4600	38.31	0.40	38.71	46.00	-7.29	Peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX AC(VHT40) Mode Channel 46 (UNII-1)	Polarization	Horizontal
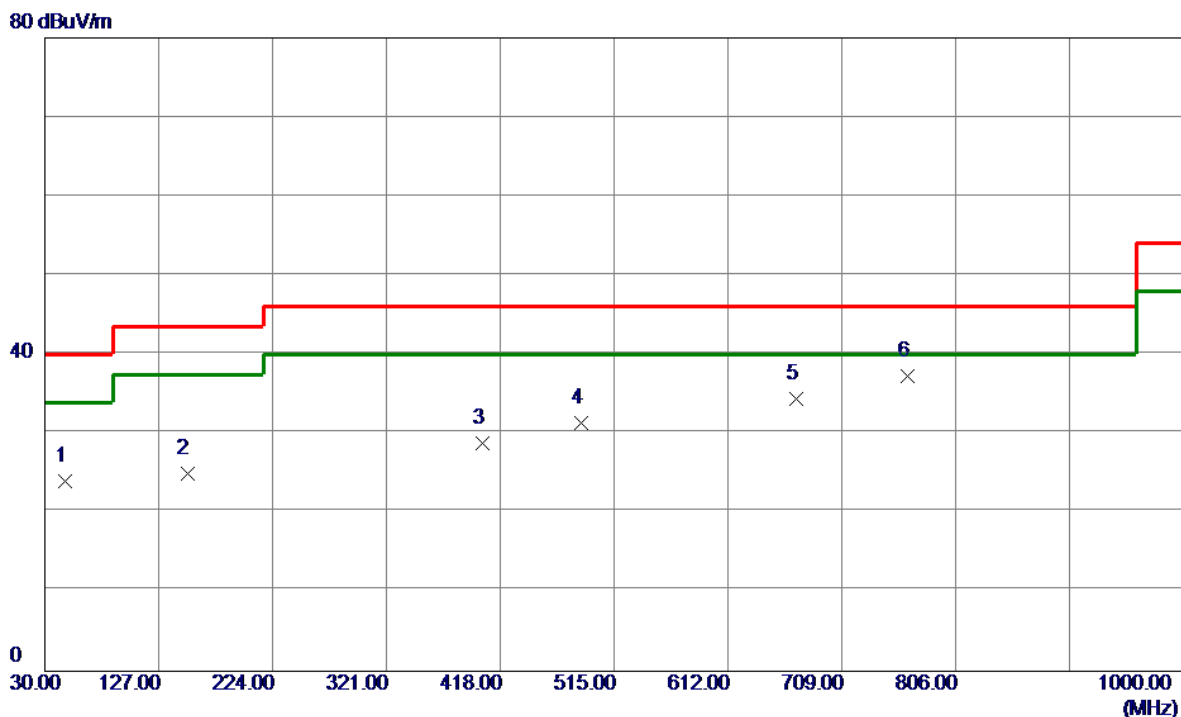
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin	Detector	Comment
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB		
1	46.9750	35.23	-11.29	23.94	40.00	-16.06	Peak	
2	151.2500	36.05	-11.12	24.93	43.50	-18.57	Peak	
3	402.9650	36.77	-7.96	28.81	46.00	-17.19	Peak	
4	486.8700	37.59	-6.22	31.37	46.00	-14.63	Peak	
5	670.6850	37.02	-2.61	34.41	46.00	-11.59	Peak	
6 *	765.2600	38.45	-1.12	37.33	46.00	-8.67	Peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

APPENDIX D - RADIATED EMISSION - ABOVE 1000 MHZ

Test Mode	UNII-1_TX A Mode 5180 MHz	Polarization	Vertical
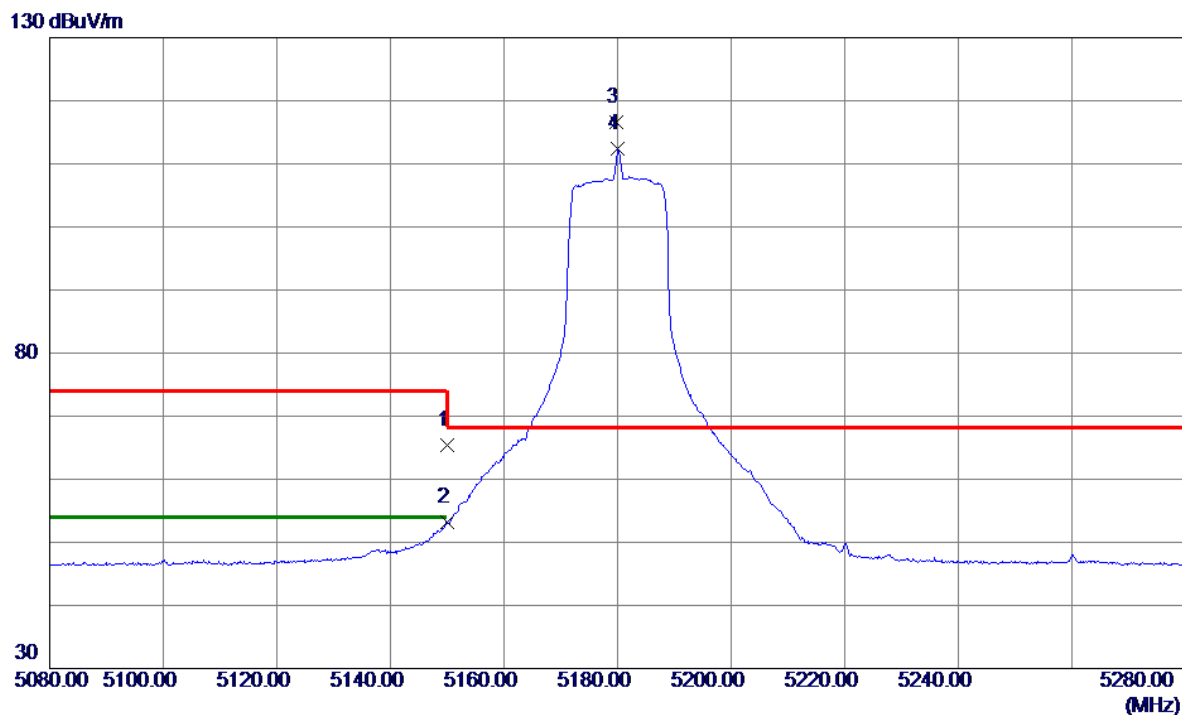
No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB		
1	5150.0000	51.88	13.56	65.44	74.00	-8.56	Peak	
2	5150.0000	39.61	13.56	53.17	54.00	-0.83	AVG	
3 *	5179.8000	102.95	13.62	116.57	68.20	48.37	Peak	No Limit
4	5180.0000	98.78	13.62	112.40	999.00	-886.60	AVG	No Limit

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	UNII-1_TX A Mode 5180 MHz		Polarization	Vertical
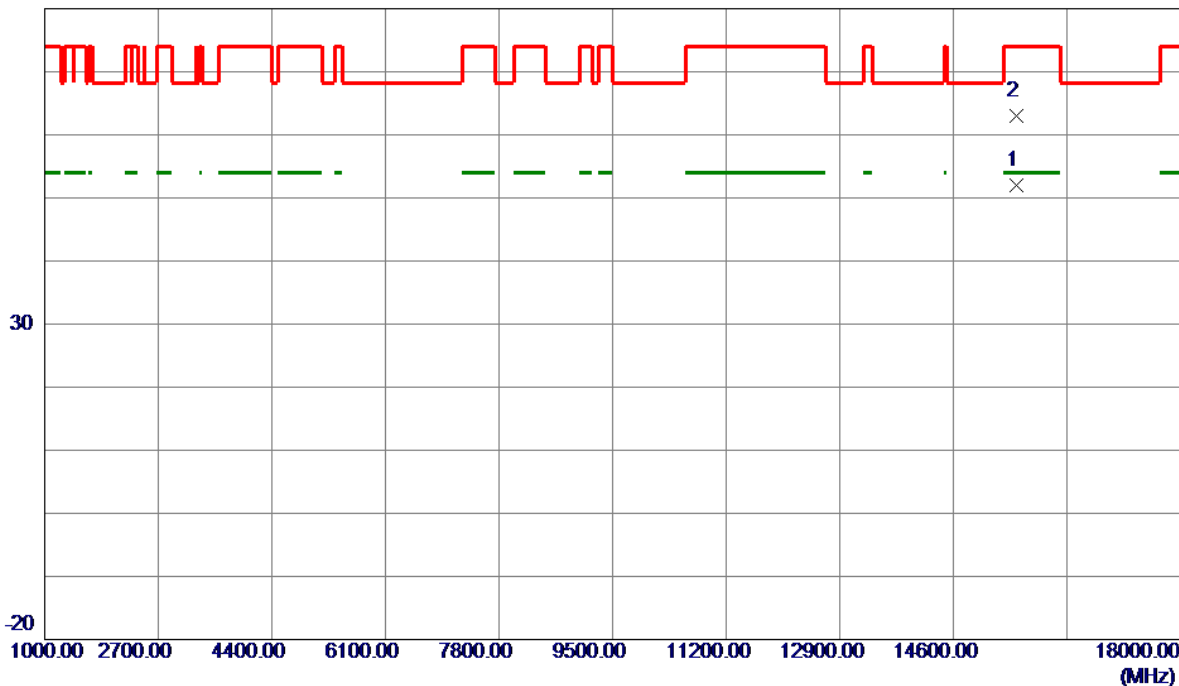
No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		Detector	Comment
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB			
1 *	15541.4000	43.08	8.90	51.98	54.00	−2.02		AVG	
2	15546.8500	54.06	8.91	62.97	74.00	−11.03		Peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	UNII-1_TX A Mode 5200 MHz		Polarization	Vertical
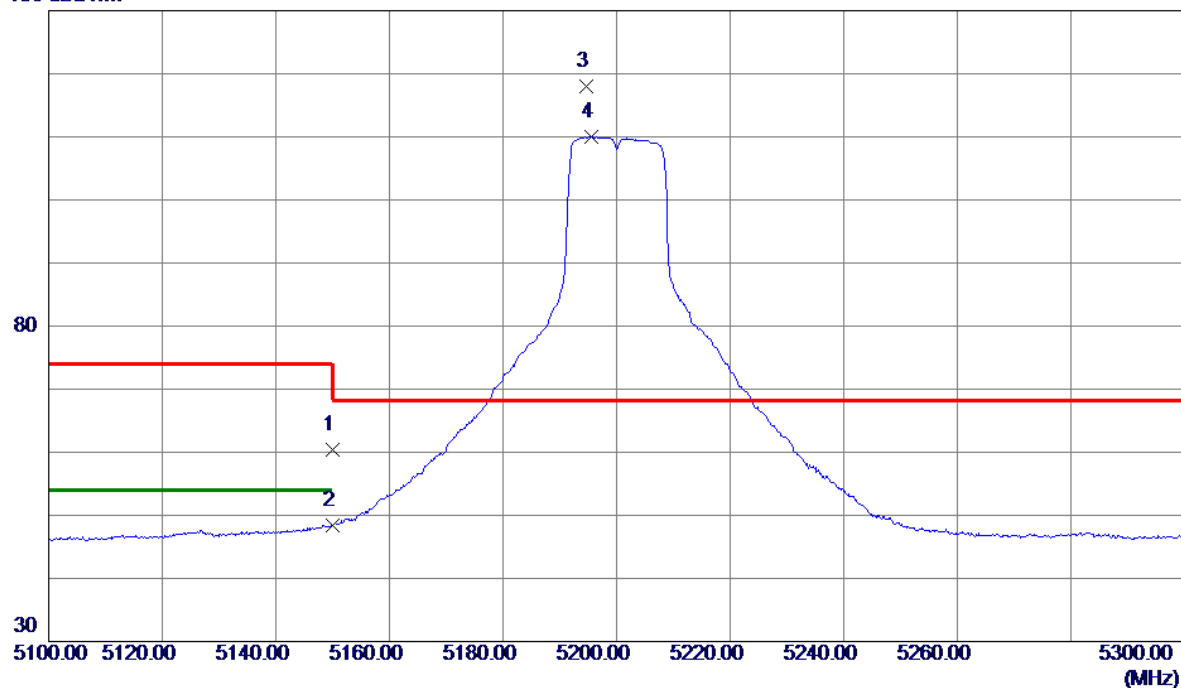
No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		Detector	Comment
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB			
1	5150.0000	46.89	13.56	60.45	74.00	-13.55		Peak	
2	5150.0000	34.82	13.56	48.38	54.00	-5.62		AVG	
3 *	5194.7000	104.40	13.65	118.05	68.20	49.85		Peak	No Limit
4	5195.5000	96.39	13.65	110.04	999.00	-888.96		AVG	No Limit

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	UNII-1_TX A Mode 5200 MHz	Polarization	Vertical
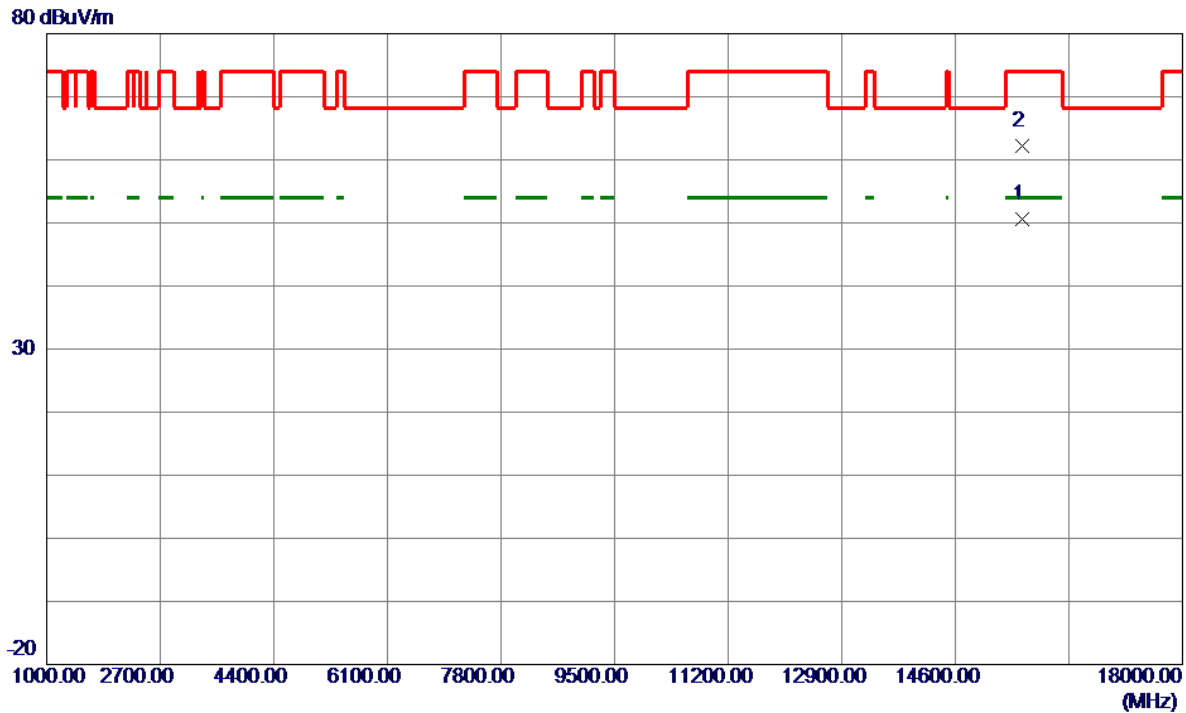
No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		Detector	Comment
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB			
1 *	15602.5000	41.68	8.99	50.67	54.00	-3.33		AVG	
2	15607.0000	53.19	9.00	62.19	74.00	-11.81		Peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	UNII-1_TX A Mode 5240 MHz		Polarization	Vertical
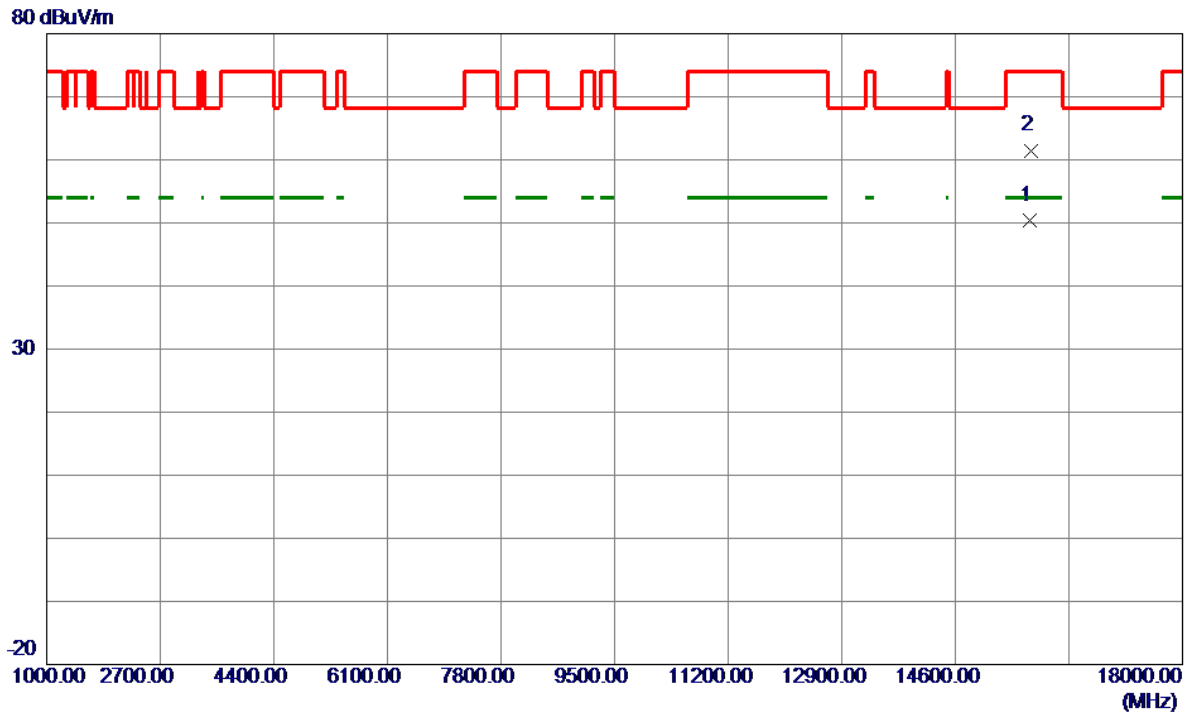
No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	15722.1000	41.20	9.16	50.36	54.00	−3.64	AVG	
2	15725.0500	52.33	9.17	61.50	74.00	−12.50	Peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	UNII-1_TX AC(VHT20) Mode 5180 MHz	Polarization	Vertical
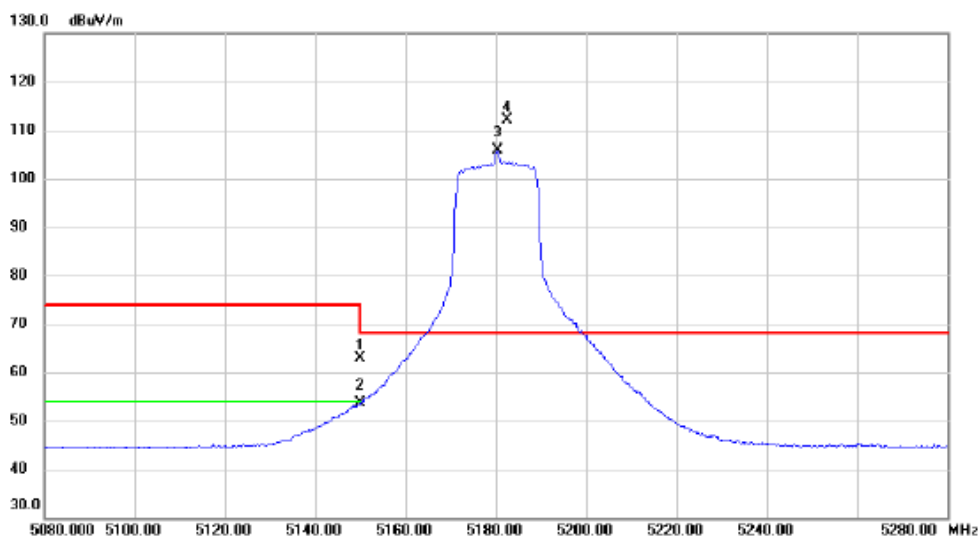
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure-ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		5150.000	47.49	15.30	62.79	74.00	-11.21	peak	
2		5150.000	38.31	15.30	53.61	54.00	-0.39	AVG	
3	X	5180.300	90.43	15.38	105.81	68.20	37.61	AVG	No Limit
4	*	5182.500	96.71	15.38	112.09	68.20	43.89	peak	No Limit

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	UNII-1_TX AC(VHT20) Mode 5180 MHz	Polarization	Vertical
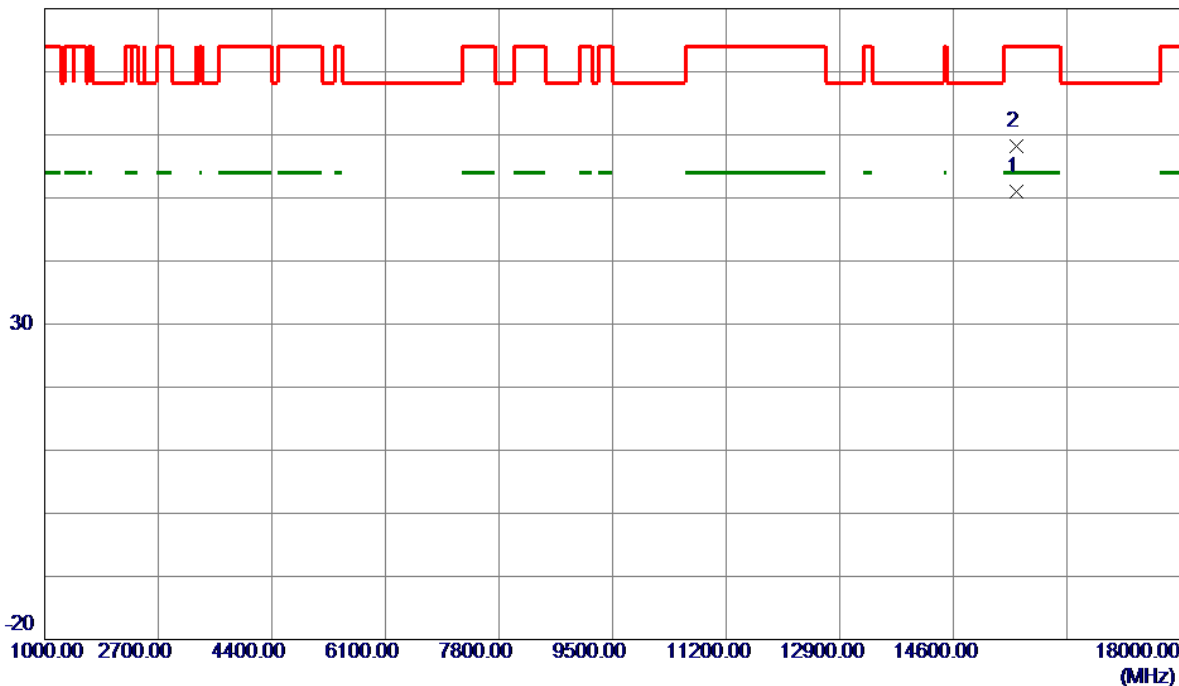
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin			
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB		Detector	Comment
1 *	15538.3500	42.02	8.90	50.92	54.00	−3.08		AVG	
2	15541.7500	49.31	8.90	58.21	74.00	−15.79		Peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	UNII-1_TX AC(VHT20) Mode 5200 MHz		Polarization	Vertical
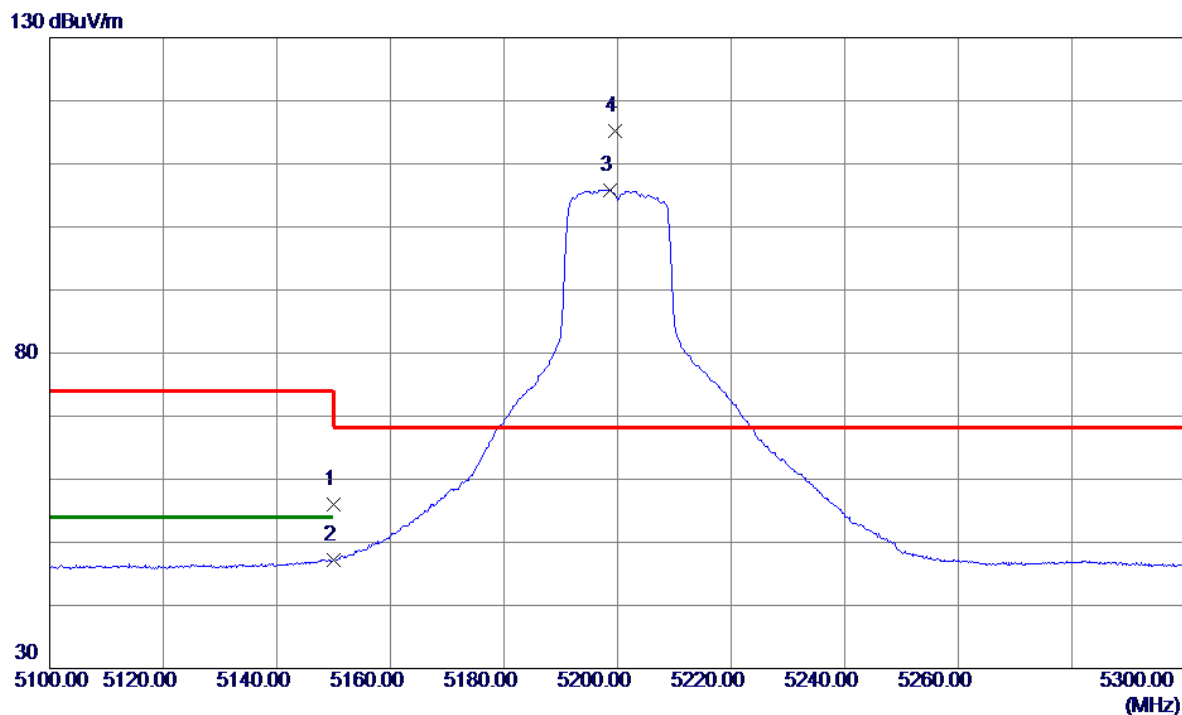
No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		Detector	Comment
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB			
1	5150.0000	42.37	13.56	55.93	74.00	-18.07		Peak	
2	5150.0000	33.62	13.56	47.18	54.00	-6.82		AVG	
3	5198.7000	92.23	13.66	105.89	999.00	-893.11		AVG	No Limit
4 *	5199.6000	101.56	13.66	115.22	68.20	47.02		Peak	No Limit

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	UNII-1_TX AC(VHT20) Mode 5200 MHz	Polarization	Vertical
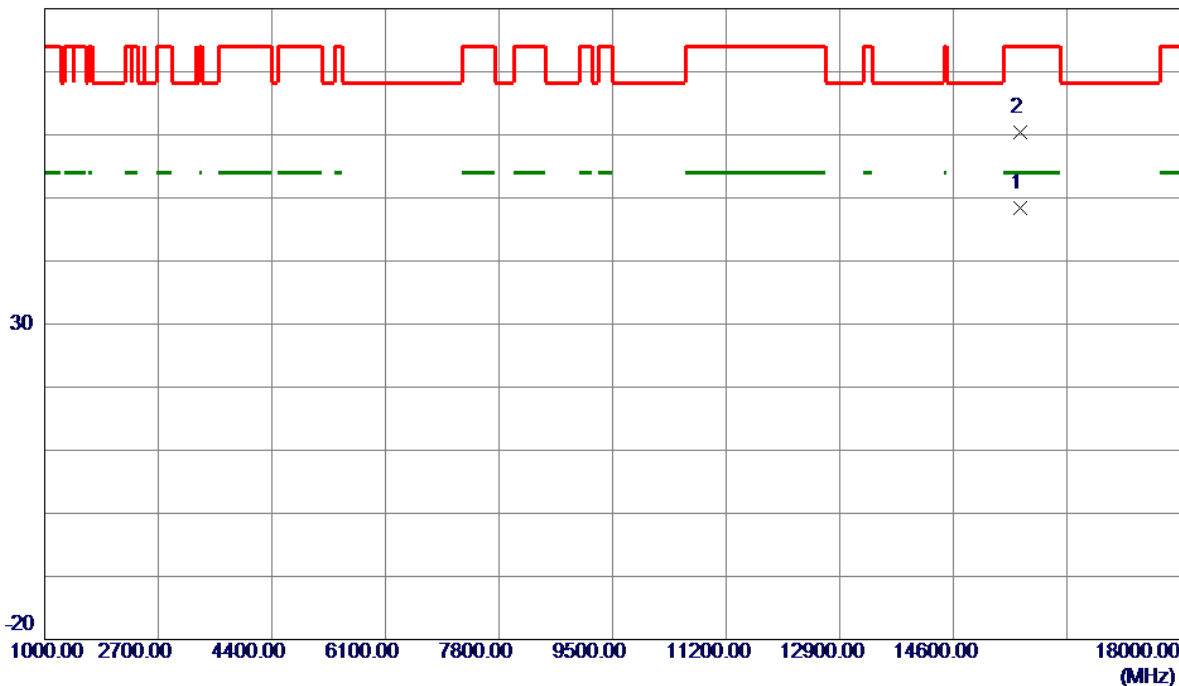
No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		Detector	Comment
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB			
1 *	15598.0000	39.48	8.99	48.47	54.00	−5.53		AVG	
2	15606.6000	51.44	9.00	60.44	74.00	−13.56		Peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	UNII-1_TX AC(VHT20) Mode 5240 MHz	Polarization	Vertical
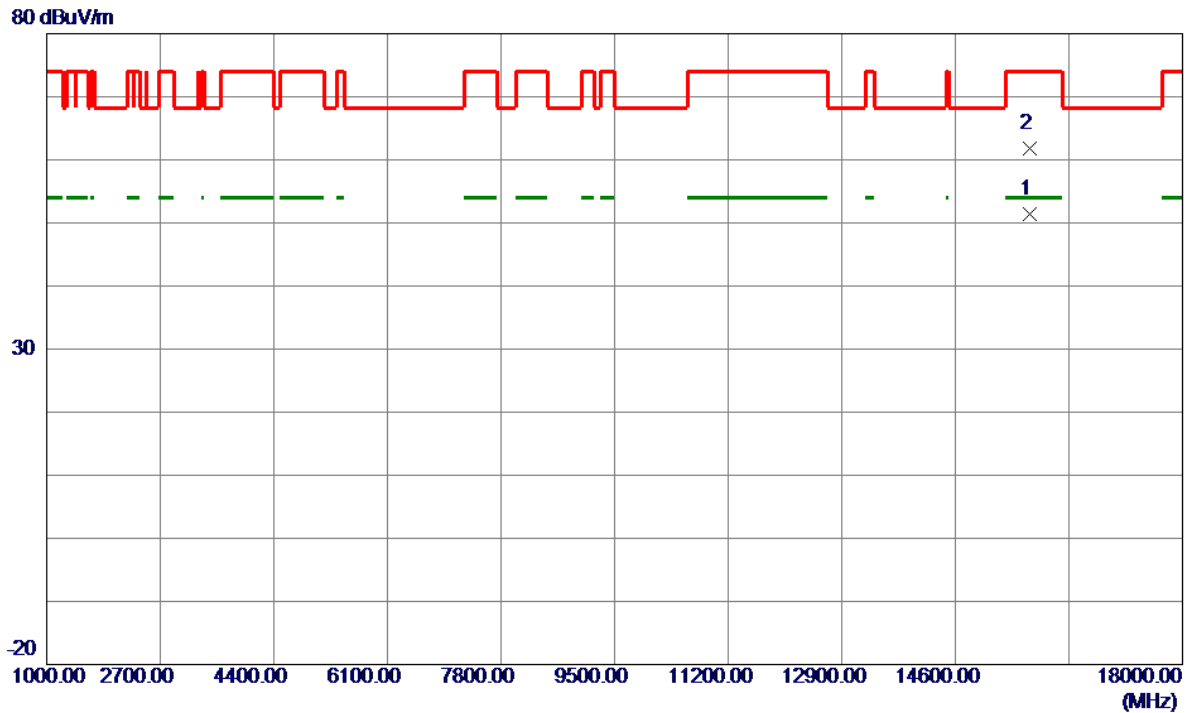
No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		Detector	Comment
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB		Detector	Comment
1 *	15717.7500	42.19	9.16	51.35	54.00	-2.65		AVG	
2	15723.5000	52.69	9.16	61.85	74.00	-12.15		Peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	UNII-1_TX AC(VHT40) Mode 5190 MHz	Polarization	Vertical
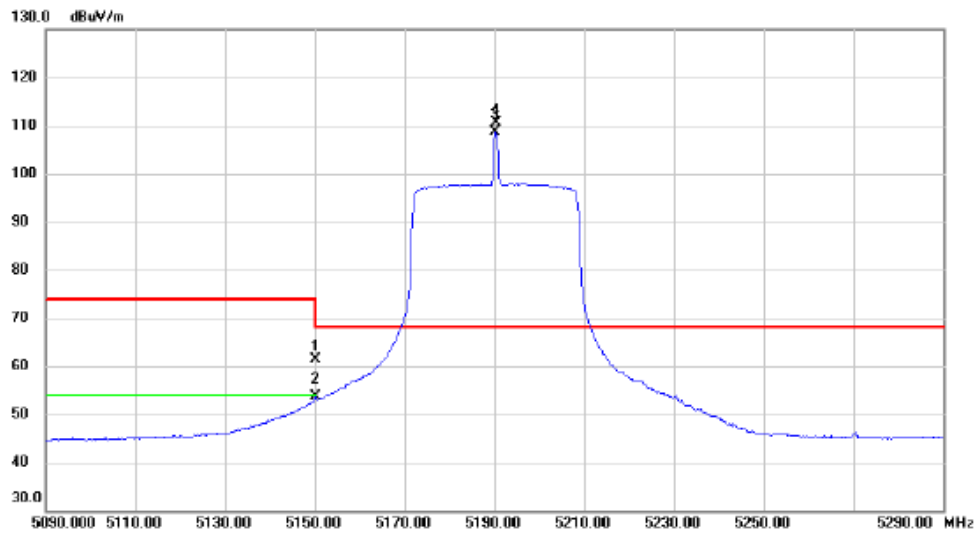
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1		5150.000	46.19	15.30	61.49	74.00	-12.51	peak	
2		5150.000	38.25	15.30	53.55	54.00	-0.45	AVG	
3	X	5190.200	93.15	15.40	108.55	68.20	40.35	AVG	No Limit
4	*	5190.300	95.18	15.40	110.58	68.20	42.38	peak	No Limit

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

| Test Mode	UNII-1_TX AC(VHT40) Mode 5190 MHz	Polarization	Vertical
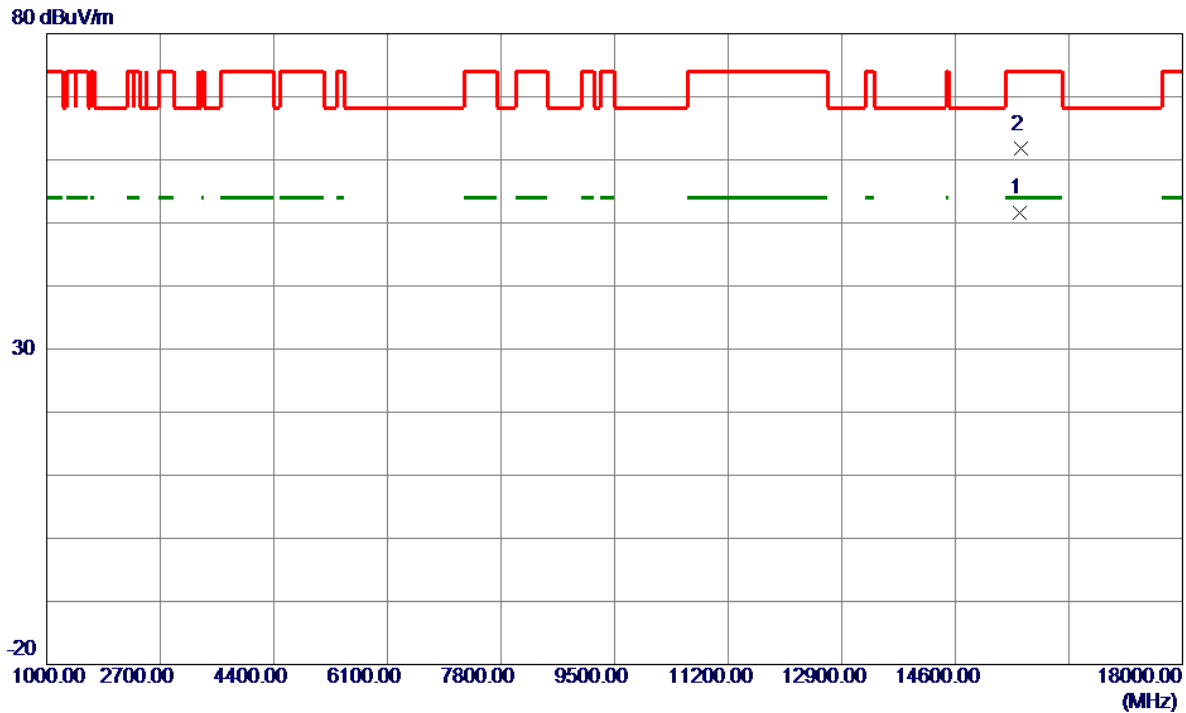
No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	15563.6000	42.67	8.94	51.61	54.00	-2.39	AVG	
2	15584.4000	52.73	8.97	61.70	74.00	-12.30	Peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

| Test Mode	UNII-1_TX AC(VHT40) Mode 5230 MHz	Polarization	Vertical
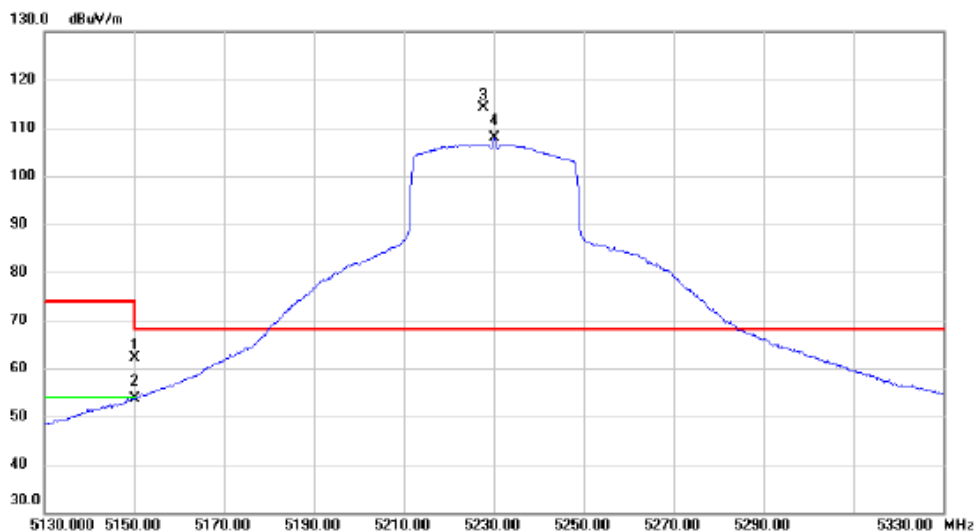
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1		5150.000	46.94	15.30	62.24	74.00	-11.76	peak	
2		5150.000	38.27	15.30	53.57	54.00	-0.43	AVG	
3	*	5227.700	98.54	15.48	114.02	68.20	45.82	peak	No Limit
4	X	5230.200	92.50	15.48	107.98	68.20	39.78	AVG	No Limit

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	UNII-1_TX AC(VHT40) Mode 5230 MHz	Polarization	Vertical
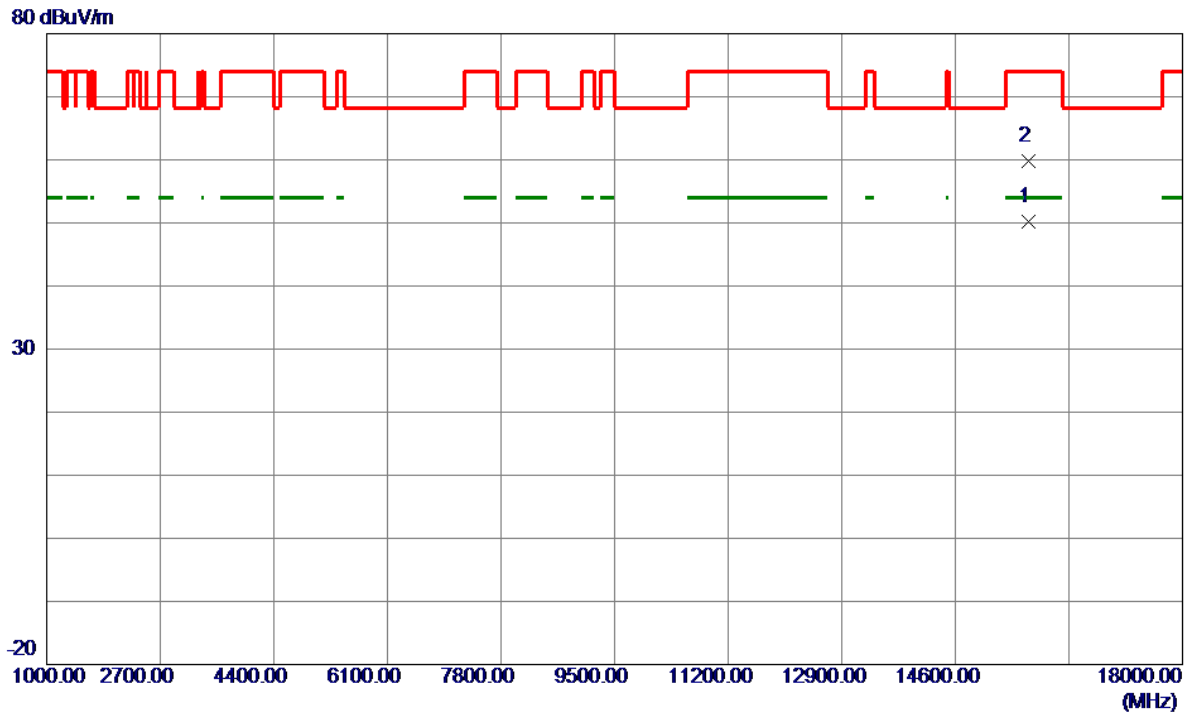
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		Detector	Comment
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB			
1 *	15686.2000	41.16	9.11	50.27	54.00	-3.73		AVG	
2	15686.9000	50.75	9.11	59.86	74.00	-14.14		Peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	UNII-1_TX AC(VHT80) Mode 5210 MHz	Polarization	Vertical
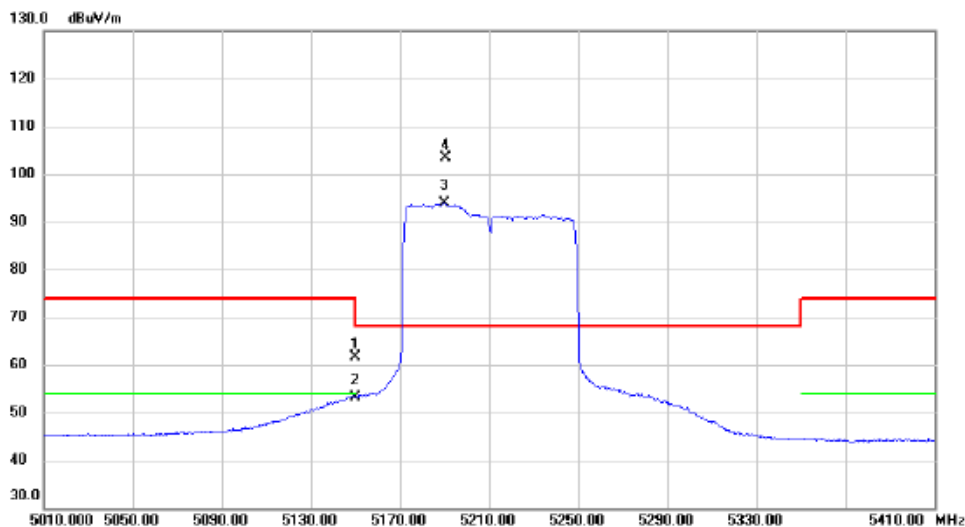
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5150.000	46.29	15.30	61.59	74.00	-12.41	peak	
2		5150.000	37.94	15.30	53.24	54.00	-0.76	AVG	
3	X	5190.000	78.39	15.40	93.79	68.20	25.59	AVG	No Limit
4	*	5190.600	88.01	15.40	103.41	68.20	35.21	peak	No Limit

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	UNII-1_TX AC(VHT80) Mode 5210 MHz	Polarization	Vertical
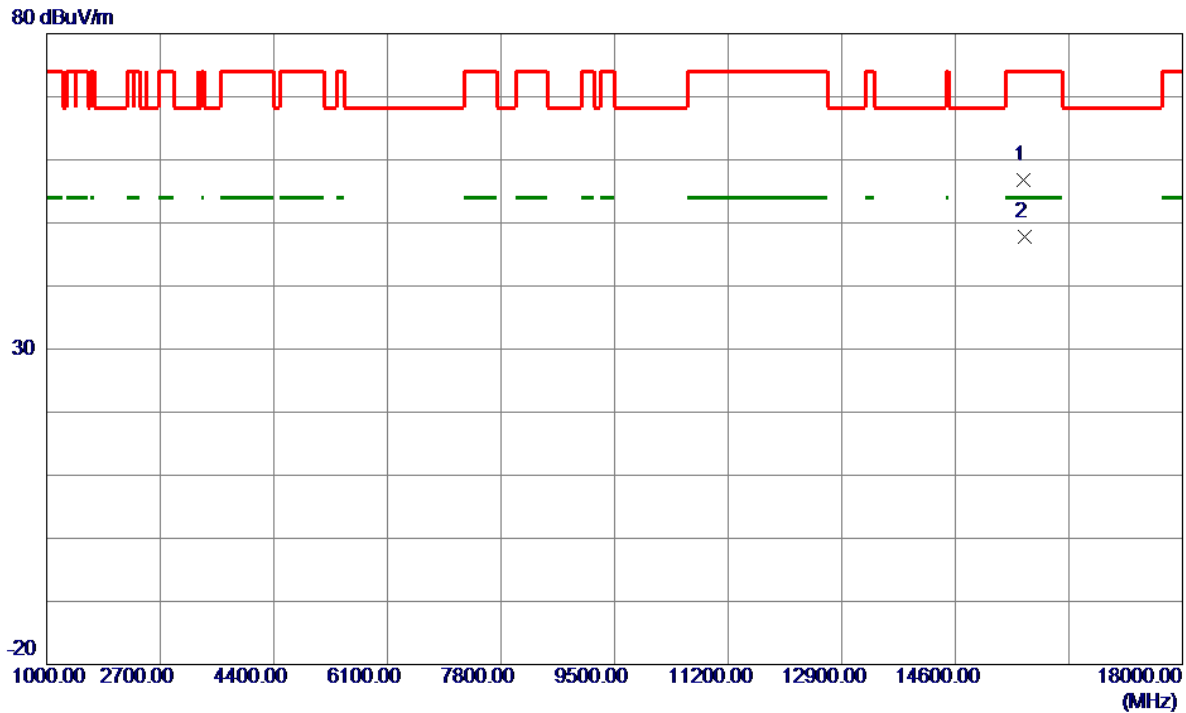
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		Detector	Comment
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB			
1	15628.2000	47.82	9.03	56.85	74.00	-17.15		Peak	
2 *	15640.8000	38.75	9.05	47.80	54.00	-6.20		AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

| Test Mode	UNII-1_TX AX(HE20) Mode 5180 MHz	Polarization	Vertical
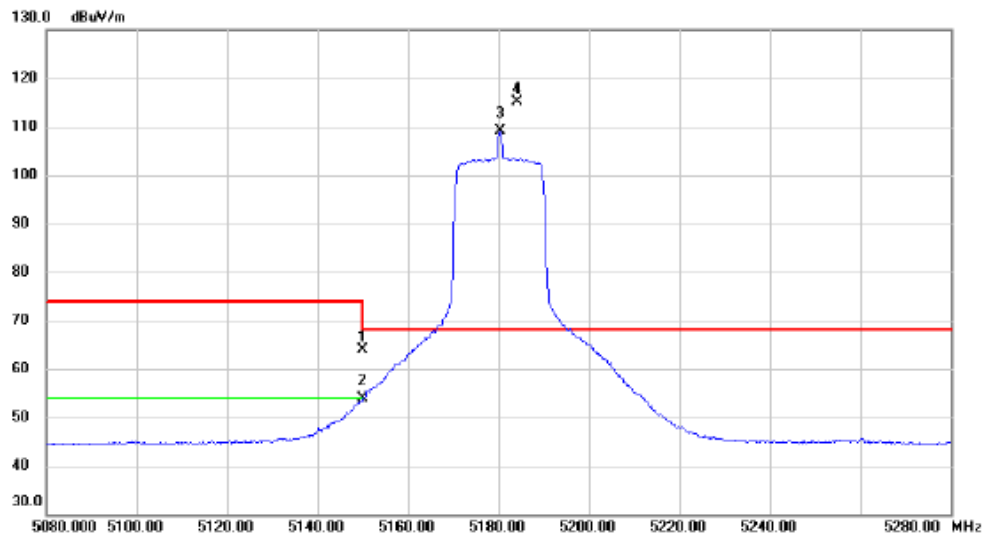
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1		5150.000	48.58	15.30	63.88	74.00	-10.12	peak	
2		5150.000	38.48	15.30	53.78	54.00	-0.22	AVG	
3	X	5180.300	93.67	15.38	109.05	68.20	40.85	AVG	No Limit
4	*	5184.200	99.76	15.38	115.14	68.20	46.94	peak	No Limit

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	UNII-1_TX AX(HE20) Mode 5180 MHz	Polarization	Vertical
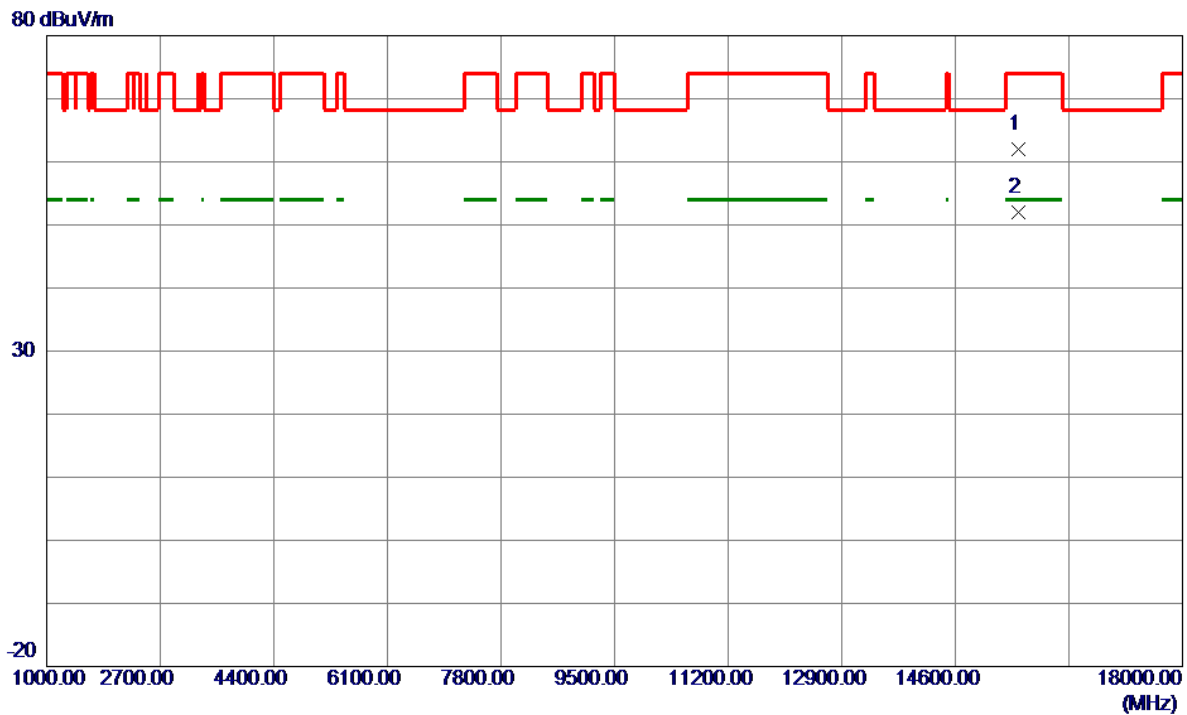
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		Detector	Comment
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB			
1	15542.9500	53.03	8.91	61.94	74.00	-12.06		Peak	
2 *	15543.1500	43.04	8.91	51.95	54.00	-2.05		AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	UNII-1_TX AX(HE20) Mode 5200 MHz	Polarization	Vertical
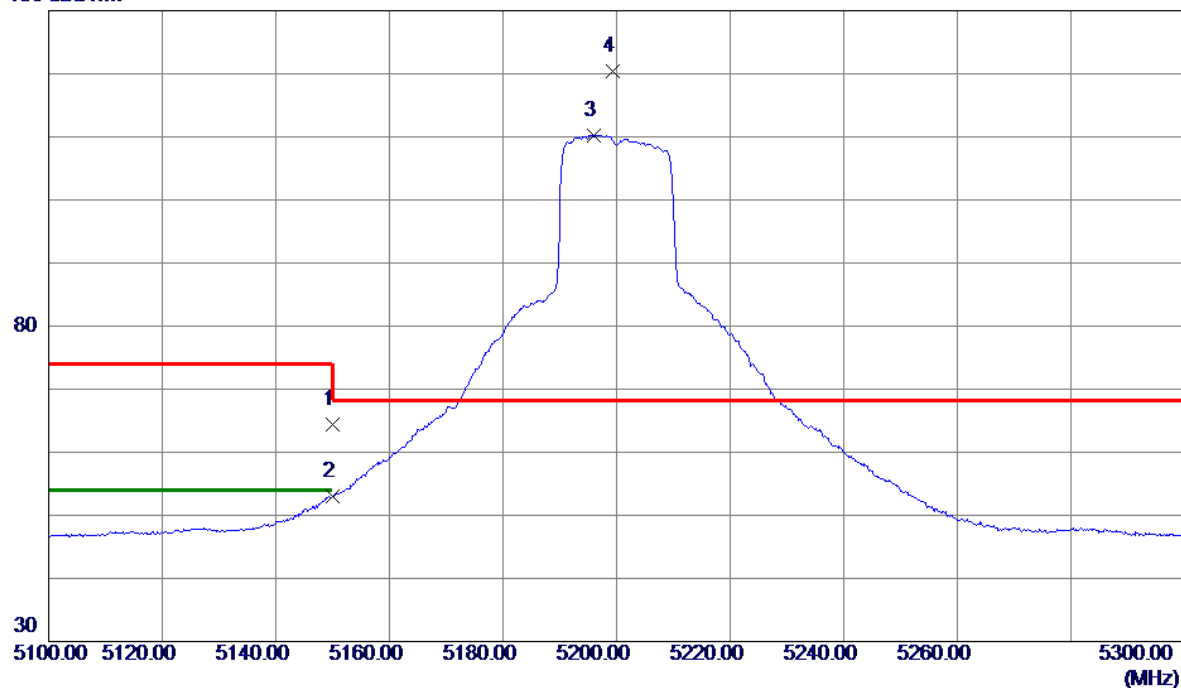
No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		Detector	Comment
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB			
1	5150.0000	50.82	13.56	64.38	74.00	-9.62		Peak	
2	5150.0000	39.47	13.56	53.03	54.00	-0.97		AVG	
3	5195.9000	96.62	13.66	110.28	999.00	-888.72		AVG	No Limit
4 *	5199.4000	106.76	13.66	120.42	68.20	52.22		Peak	No Limit

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	UNII-1_TX AX(HE20) Mode 5200 MHz	Polarization	Vertical
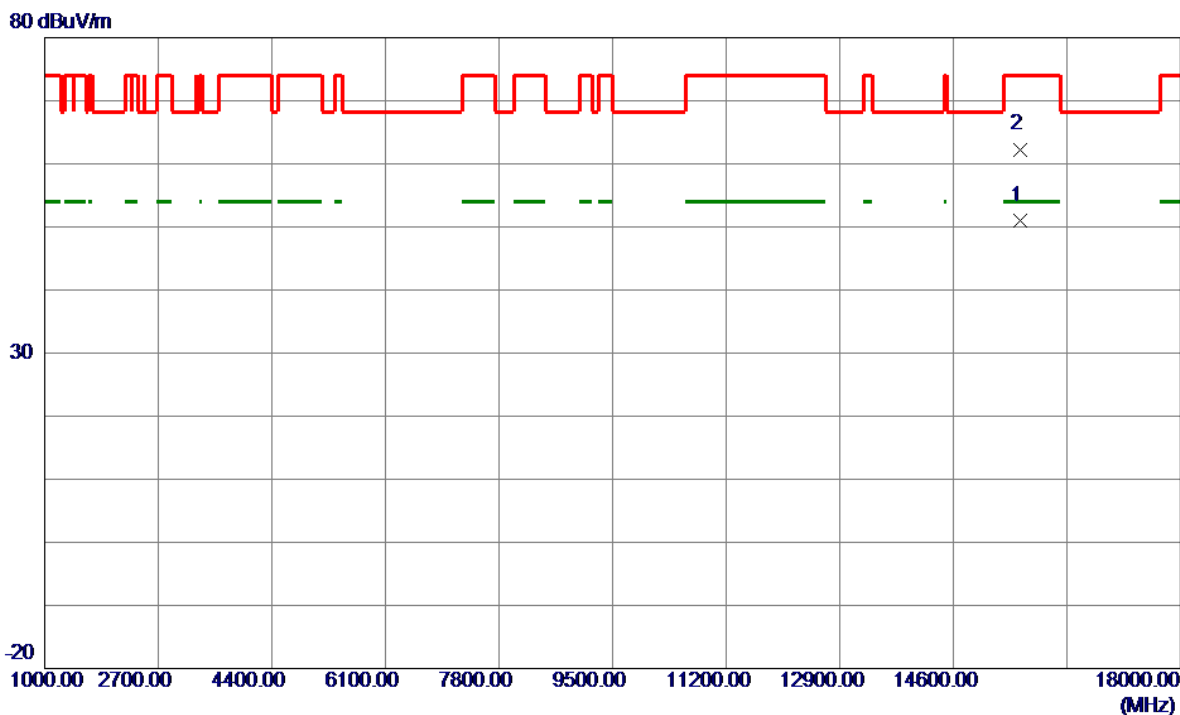
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin			
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB		Detector	Comment
1 *	15596.4500	42.10	8.98	51.08	54.00	−2.92		AVG	
2	15602.6500	53.31	8.99	62.30	74.00	−11.70		Peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	UNII-1_TX AX(HE20) Mode 5240 MHz	Polarization	Vertical
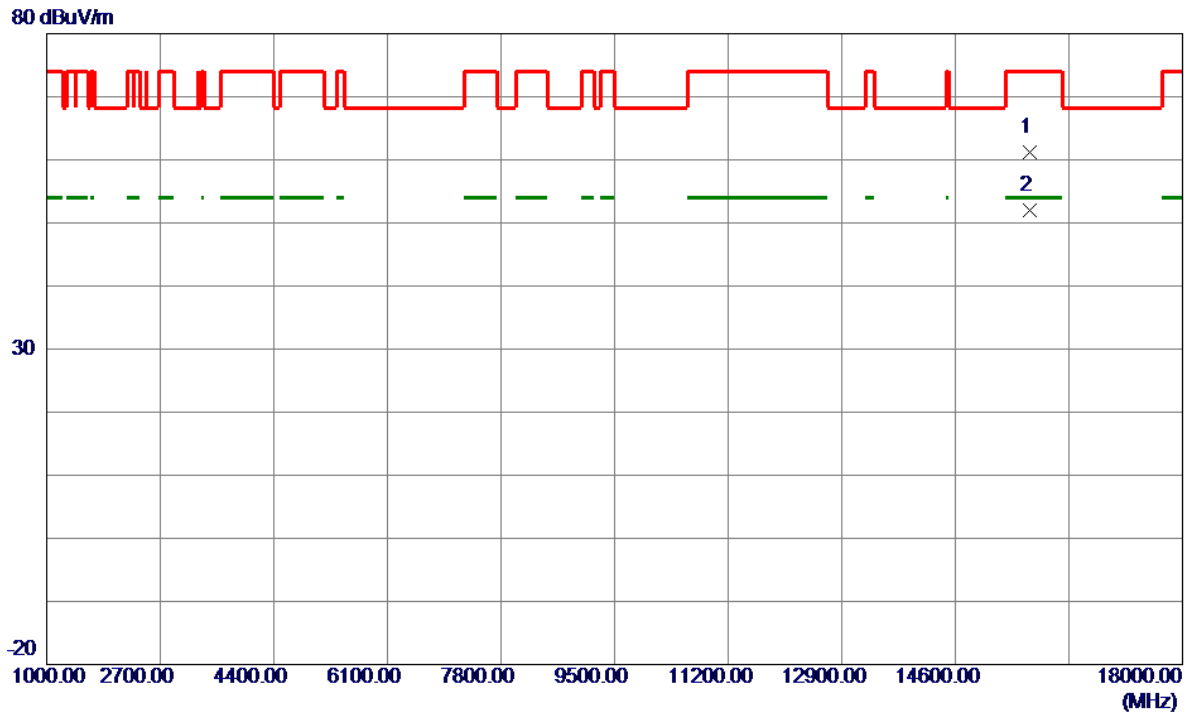
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	15714.2500	52.01	9.15	61.16	74.00	-12.84	Peak	
2 *	15722.9500	42.80	9.16	51.96	54.00	-2.04	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	UNII-1_TX AX(HE40) Mode 5190 MHz	Polarization	Vertical
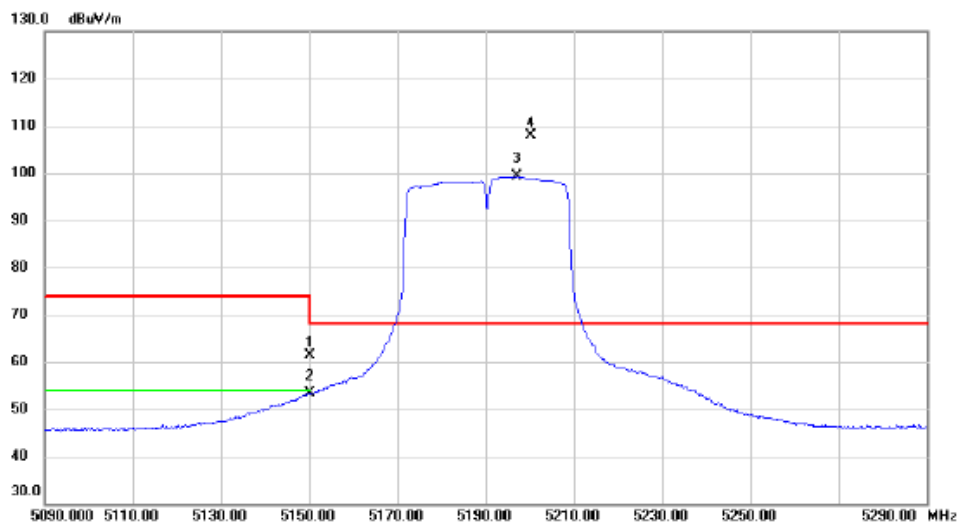
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1		5150.000	45.98	15.30	61.28	74.00	-12.72	peak	
2		5150.000	38.00	15.30	53.30	54.00	-0.70	AVG	
3	X	5197.200	83.91	15.41	99.32	68.20	31.12	AVG	No Limit
4	*	5200.400	92.35	15.41	107.76	68.20	39.56	peak	No Limit

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	UNII-1_TX AX(HE40) Mode 5190 MHz	Polarization	Vertical
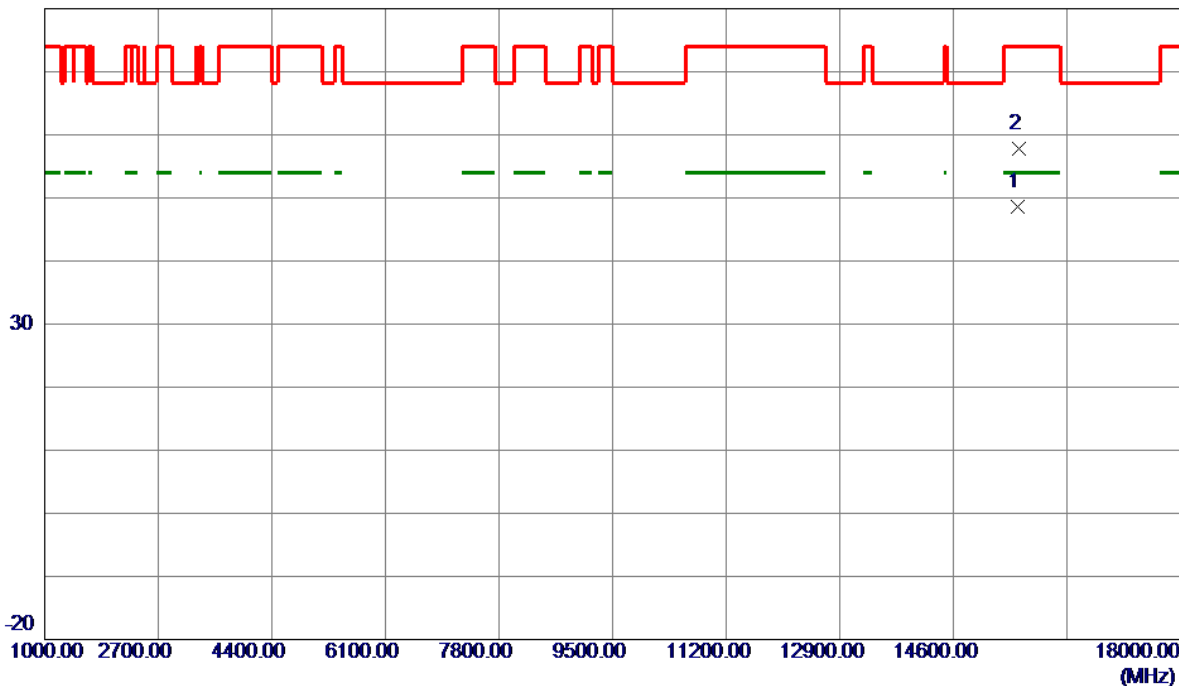
No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin			
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB		Detector	Comment
1 *	15570.1000	39.66	8.95	48.61	54.00	−5.39		AVG	
2	15587.2000	48.77	8.97	57.74	74.00	−16.26		Peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	UNII-1_TX AX(HE40) Mode 5230 MHz		Polarization	Vertical
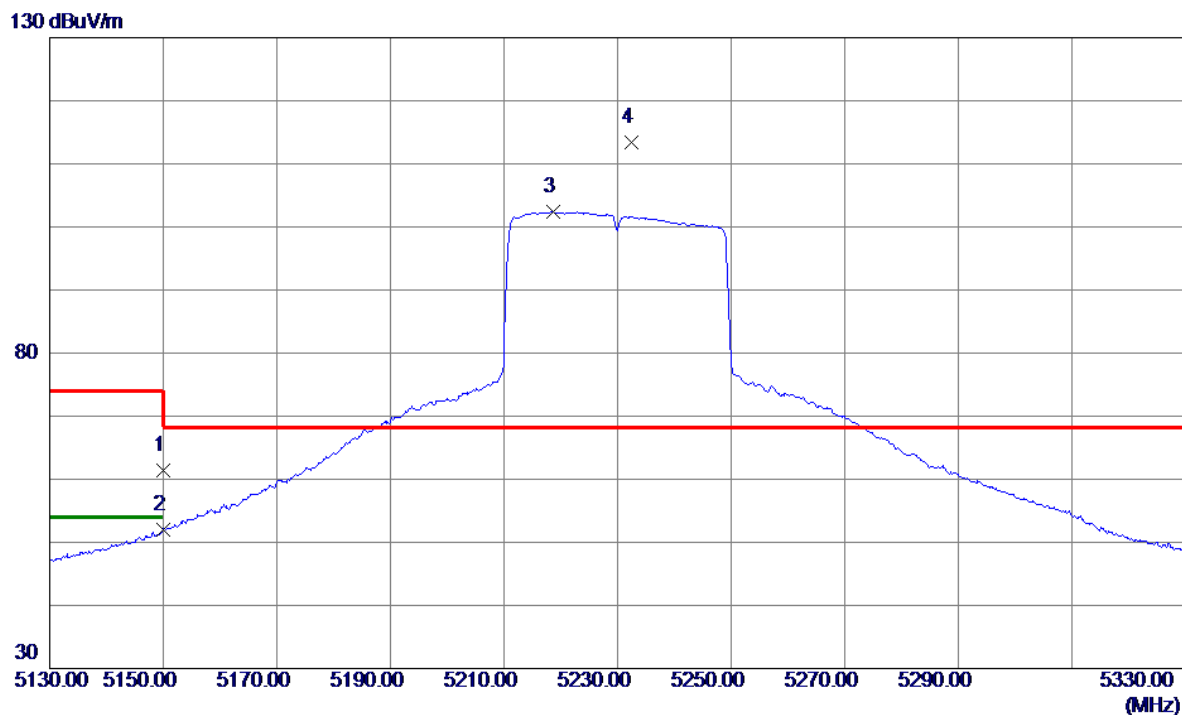
No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	5150.0000	47.76	13.56	61.32	74.00	-12.68	Peak	
2	5150.0000	38.45	13.56	52.01	54.00	-1.99	AVG	
3	5218.6000	88.68	13.70	102.38	999.00	-896.62	AVG	No Limit
4 *	5232.5000	99.75	13.73	113.48	68.20	45.28	Peak	No Limit

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	UNII-1_TX AX(HE40) Mode 5230 MHz	Polarization	Vertical
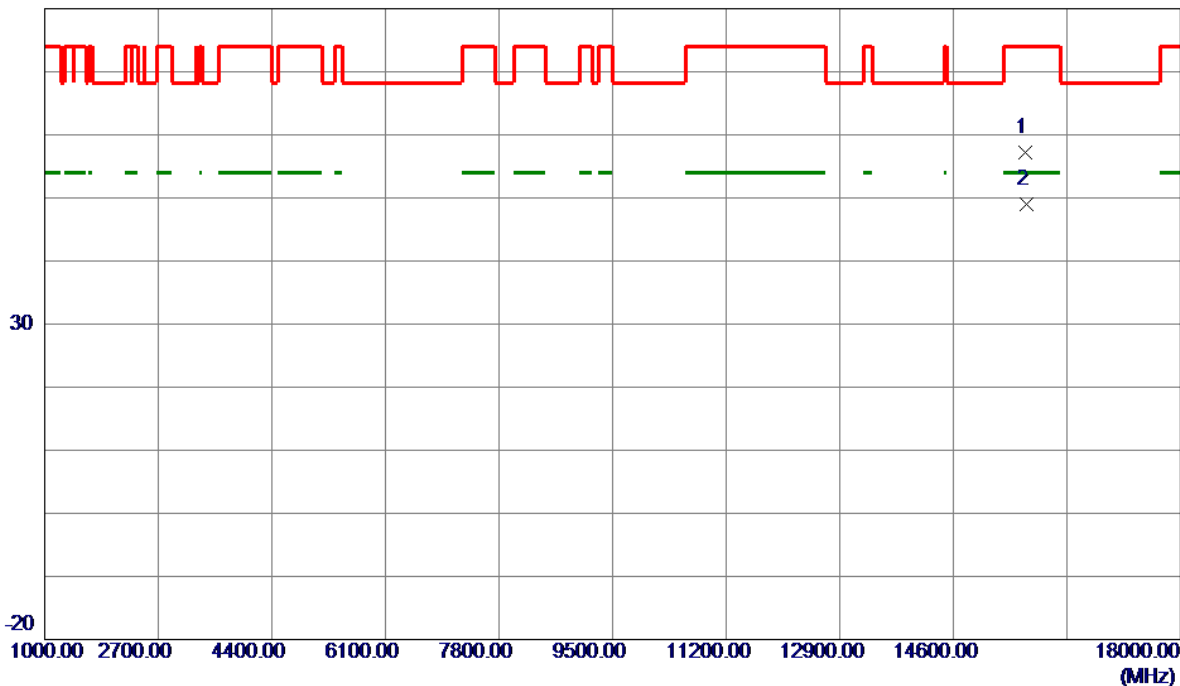
No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		Detector	Comment
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB			
1	15679.9000	48.01	9.10	57.11	74.00	-16.89		Peak	
2 *	15692.0500	39.94	9.12	49.06	54.00	-4.94		AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	UNII-1_TX AX(HE80) Mode 5210 MHz	Polarization	Vertical
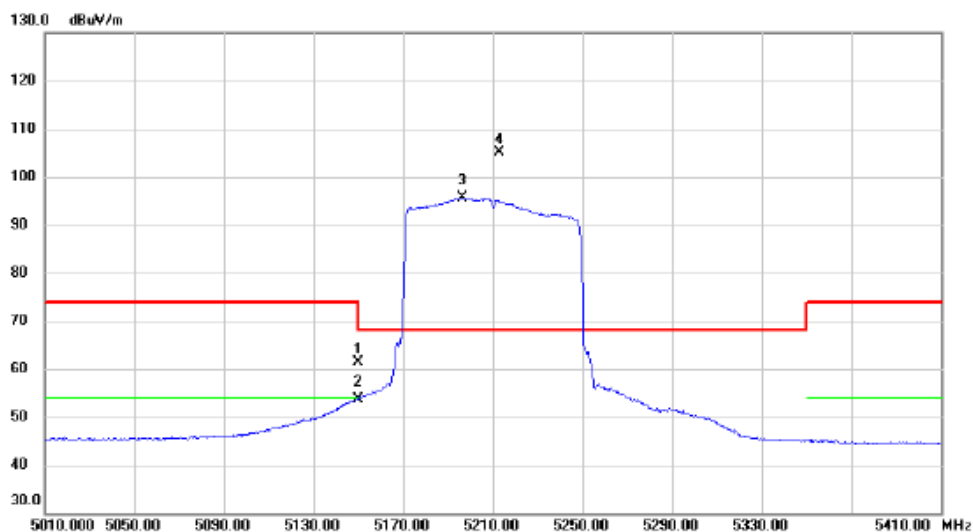
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		5150.000	46.15	15.30	61.45	74.00	-12.55	peak	
2		5150.000	38.42	15.30	53.72	54.00	-0.28	AVG	
3	X	5196.200	80.25	15.41	95.66	68.20	27.46	AVG	No Limit
4	*	5213.000	89.78	15.44	105.22	68.20	37.02	peak	No Limit

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	UNII-1_TX AX(HE80) Mode 5210 MHz	Polarization	Vertical
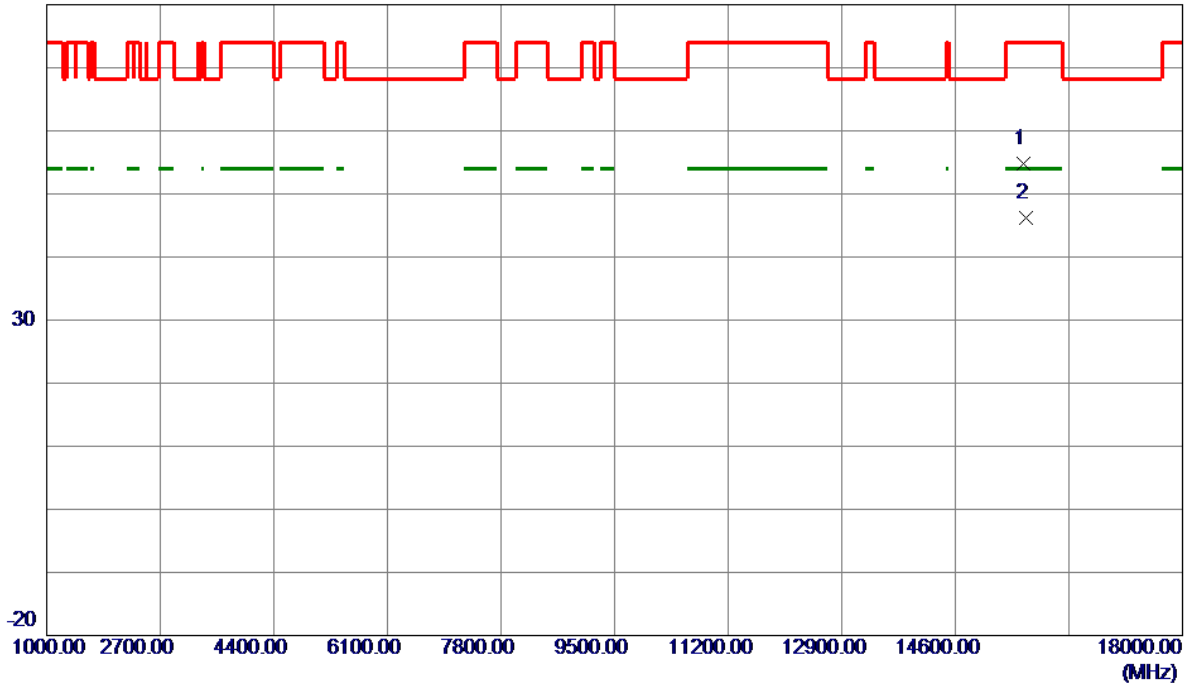
No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		Detector	Comment
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB		Detector	Comment
1	15619.7000	45.72	9.02	54.74	74.00	-19.26		Peak	
2 *	15651.5000	37.08	9.06	46.14	54.00	-7.86		AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

| Test Mode	UNII-2A_TX A Mode 5260 MHz		Polarization	Vertical
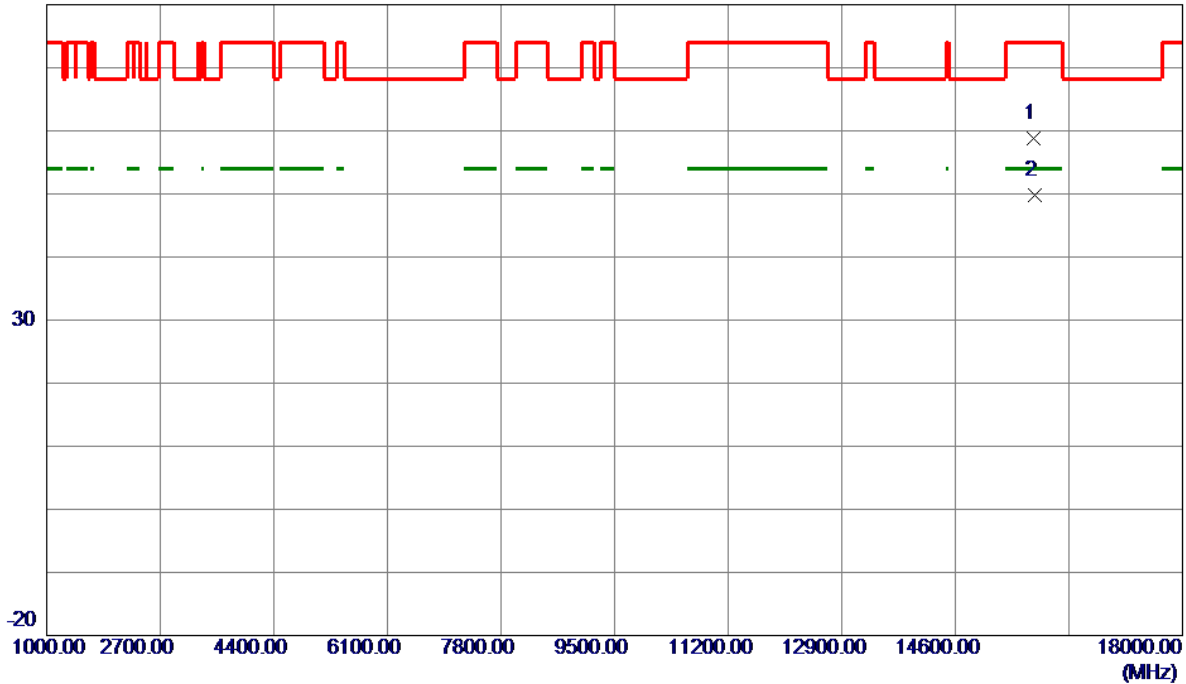
No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	15773.2500	49.63	9.24	58.87	74.00	-15.13	Peak	
2 *	15782.2000	40.46	9.25	49.71	54.00	-4.29	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	UNII-2A_TX A Mode 5300 MHz		Polarization	Vertical
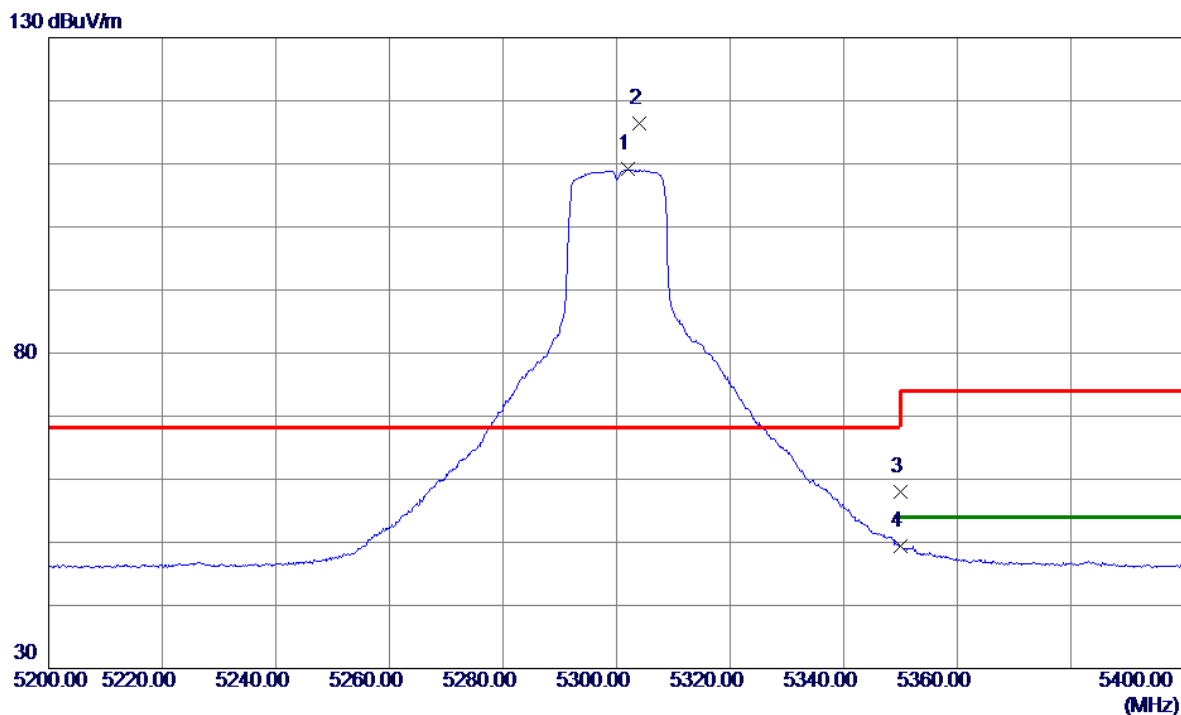
No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	5301.9000	95.25	13.87	109.12	999.00	-889.88	AVG	No Limit
2 *	5304.1000	102.43	13.88	116.31	68.20	48.11	Peak	No Limit
3	5350.0000	44.08	13.97	58.05	74.00	-15.95	Peak	
4	5350.0000	35.36	13.97	49.33	54.00	-4.67	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	UNII-2A_TX A Mode 5300 MHz	Polarization	Vertical
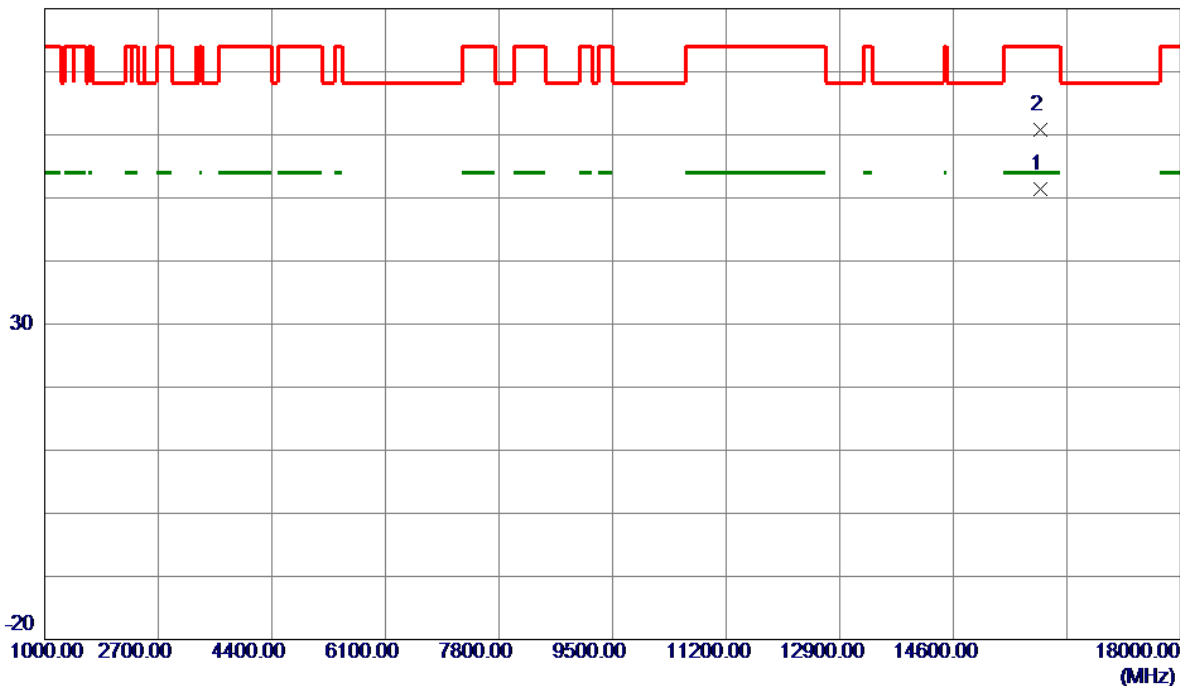
No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		Detector	Comment
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB			
1 *	15900.3000	42.00	9.42	51.42	54.00	-2.58		AVG	
2	15900.9000	51.45	9.42	60.87	74.00	-13.13		Peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	UNII-2A_TX A Mode 5320 MHz		Polarization	Vertical
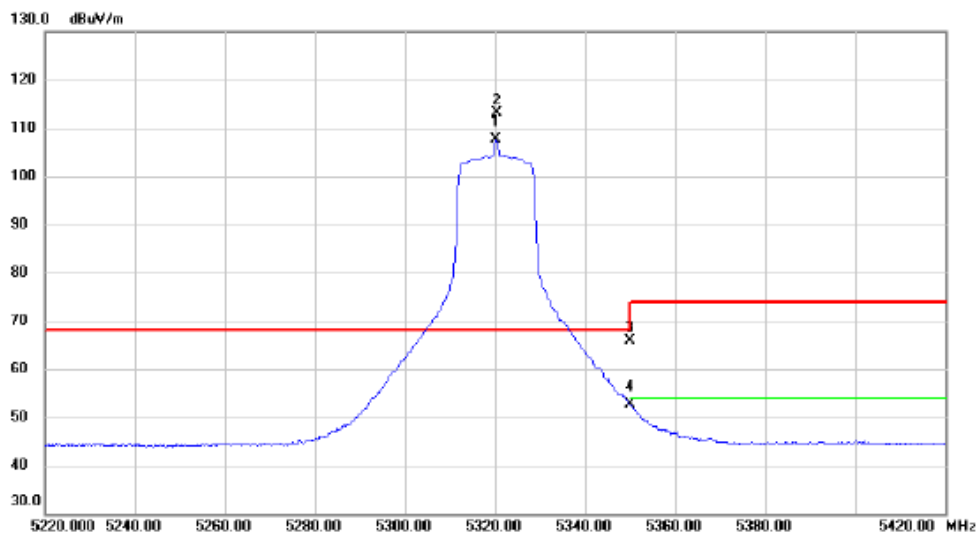
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	5320.200	91.86	15.66	107.52	68.20	39.32	AVG	No Limit
2	*	5320.400	97.46	15.66	113.12	68.20	44.92	peak	No Limit
3		5350.000	50.22	15.74	65.96	74.00	-8.04	peak	
4		5350.000	36.88	15.74	52.62	54.00	-1.38	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	UNII-2A_TX A Mode 5320 MHz		Polarization	Vertical
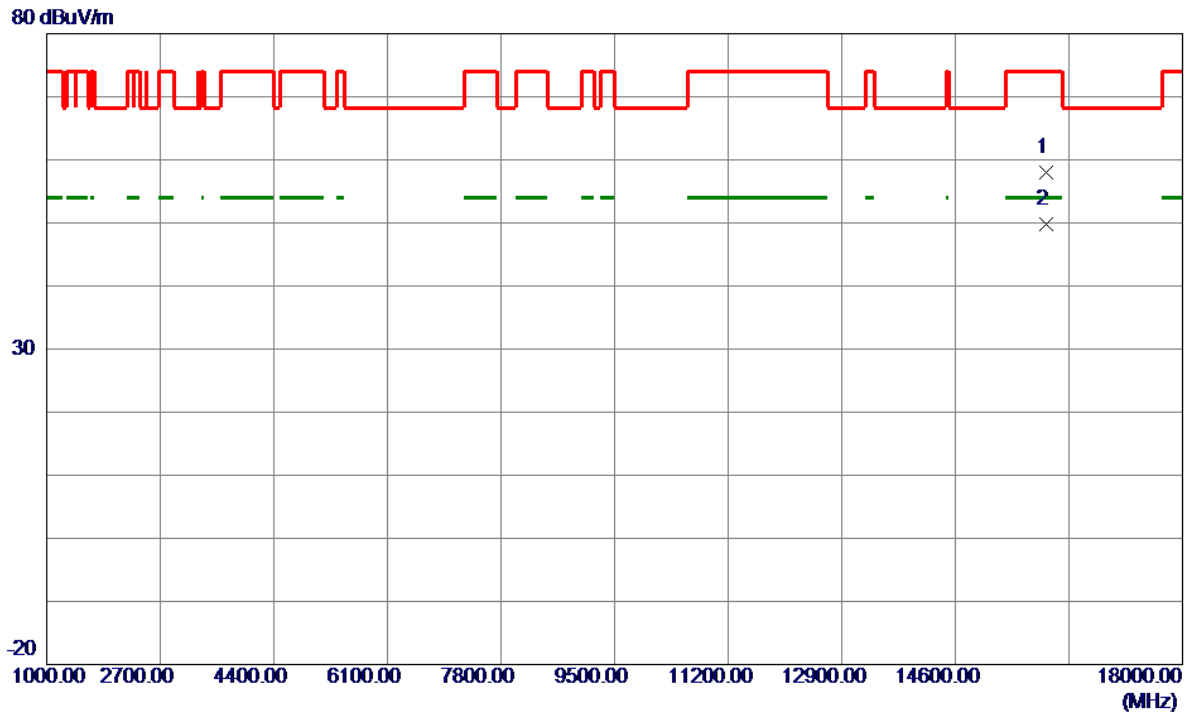
No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		Detector	Comment
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB			
1	15953.4000	48.60	9.49	58.09	74.00	-15.91		Peak	
2 *	15961.8000	40.26	9.51	49.77	54.00	-4.23		AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	UNII-2A_TX AC(VHT20) Mode 5260 MHz	Polarization	Vertical
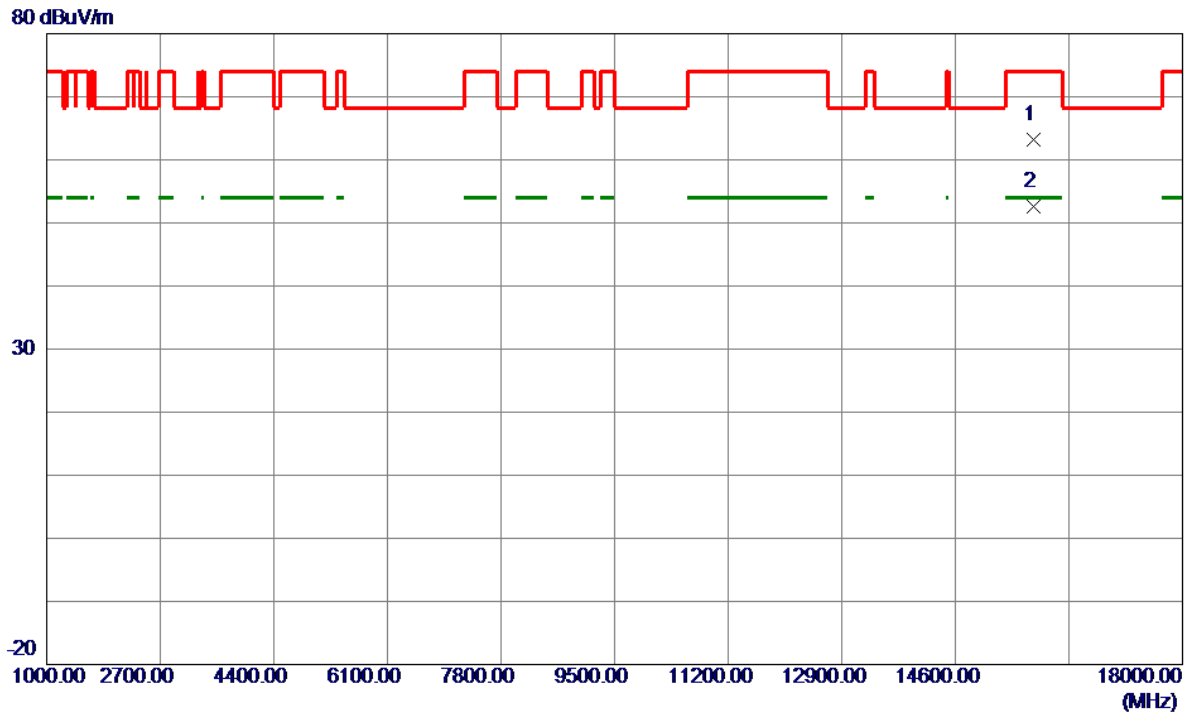
No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		Detector	Comment
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB			
1	15775.0000	53.98	9.24	63.22	74.00	-10.78		Peak	
2 *	15778.3500	43.31	9.24	52.55	54.00	-1.45		AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	UNII-2A_TX AC(VHT20) Mode 5300 MHz	Polarization	Vertical
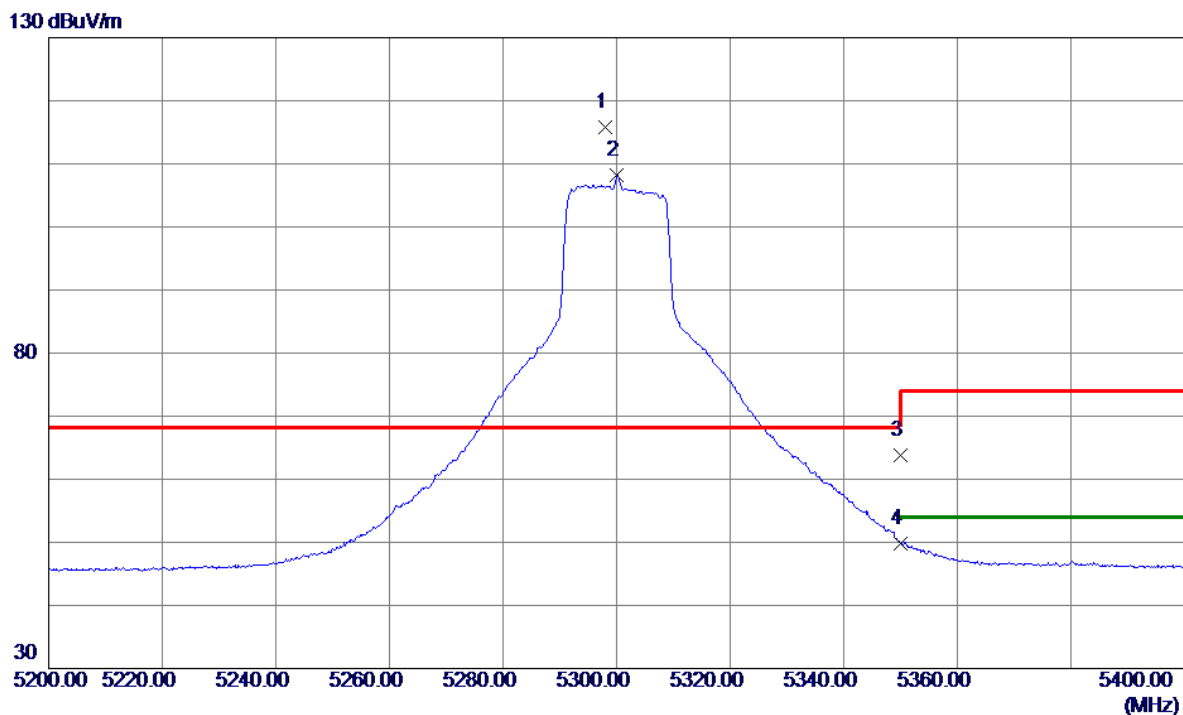
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	5298.0000	101.91	13.87	115.78	68.20	47.58	Peak	No Limit
2	5300.1000	94.41	13.87	108.28	999.00	-890.72	AVG	No Limit
3	5350.0000	49.89	13.97	63.86	74.00	-10.14	Peak	
4	5350.0000	35.76	13.97	49.73	54.00	-4.27	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	UNII-2A_TX AC(VHT20) Mode 5300 MHz	Polarization	Vertical
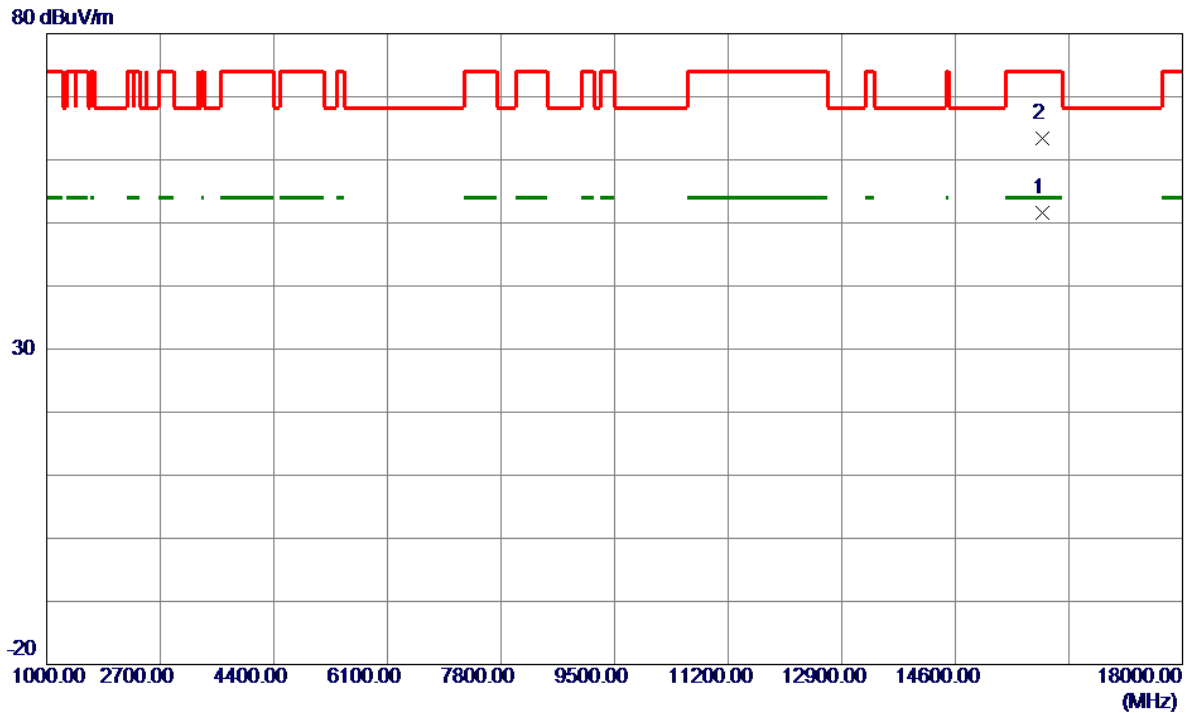
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	15897.9500	42.11	9.41	51.52	54.00	−2.48	AVG	
2	15899.4500	53.95	9.42	63.37	74.00	−10.63	Peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	UNII-2A_TX AC(VHT20) Mode 5320 MHz	Polarization	Vertical
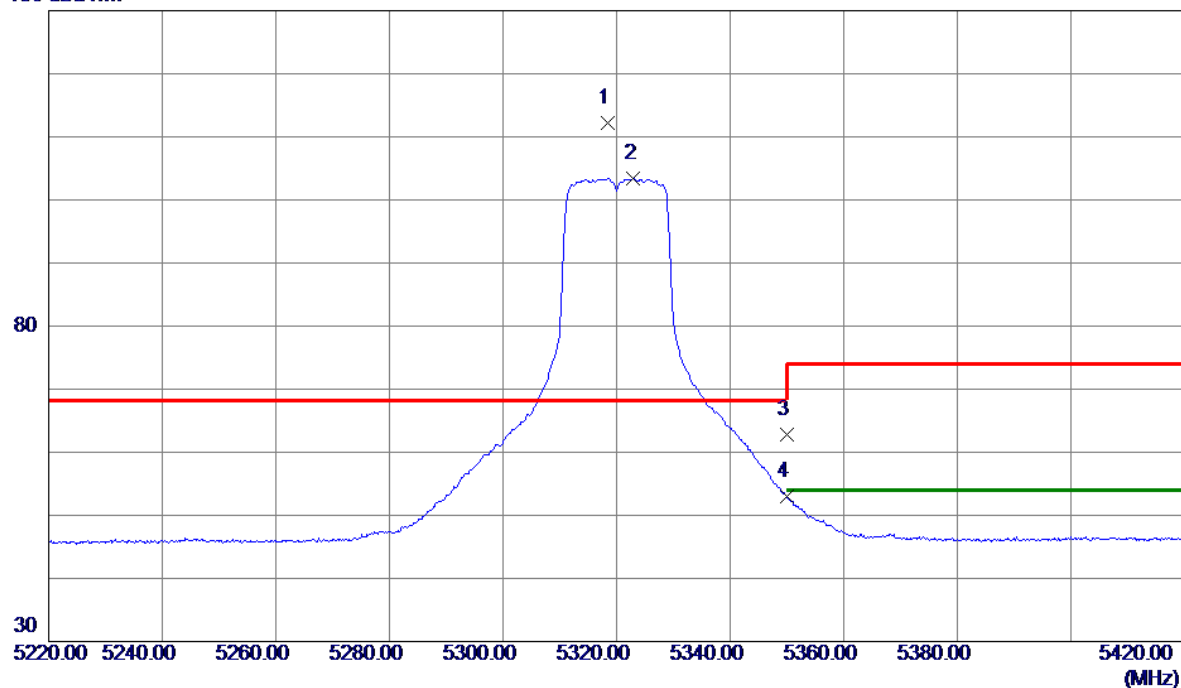
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		Detector	Comment
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB			
1 *	5318.5000	98.21	13.91	112.12	68.20	43.92		Peak	No Limit
2	5323.0000	89.44	13.92	103.36	999.00	-895.64		AVG	No Limit
3	5350.0000	48.77	13.97	62.74	74.00	-11.26		Peak	
4	5350.0000	39.00	13.97	52.97	54.00	-1.03		AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

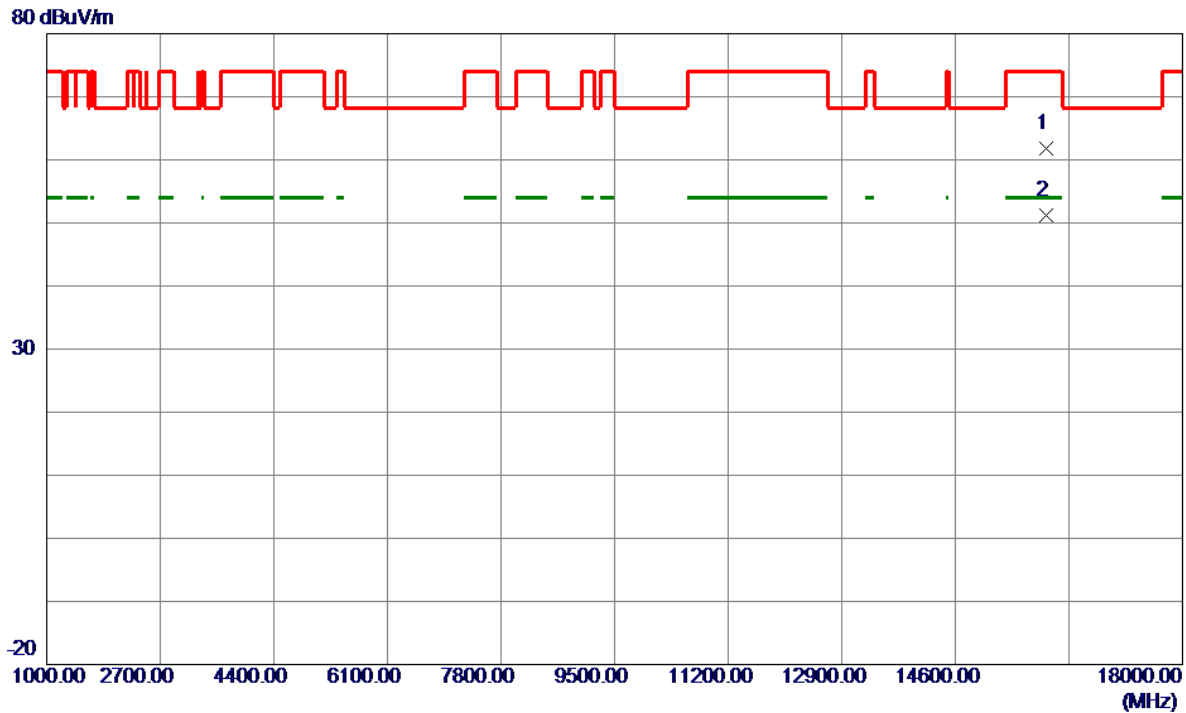| Test Mode	UNII-2A_TX AC(VHT20) Mode 5320 MHz	Polarization	Vertical

No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		Detector	Comment
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB			
1	15952.0500	52.38	9.49	61.87	74.00	-12.13		Peak	
2 *	15957.8500	41.64	9.50	51.14	54.00	-2.86		AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	UNII-2A_TX AC(VHT40) Mode 5270 MHz	Polarization	Vertical
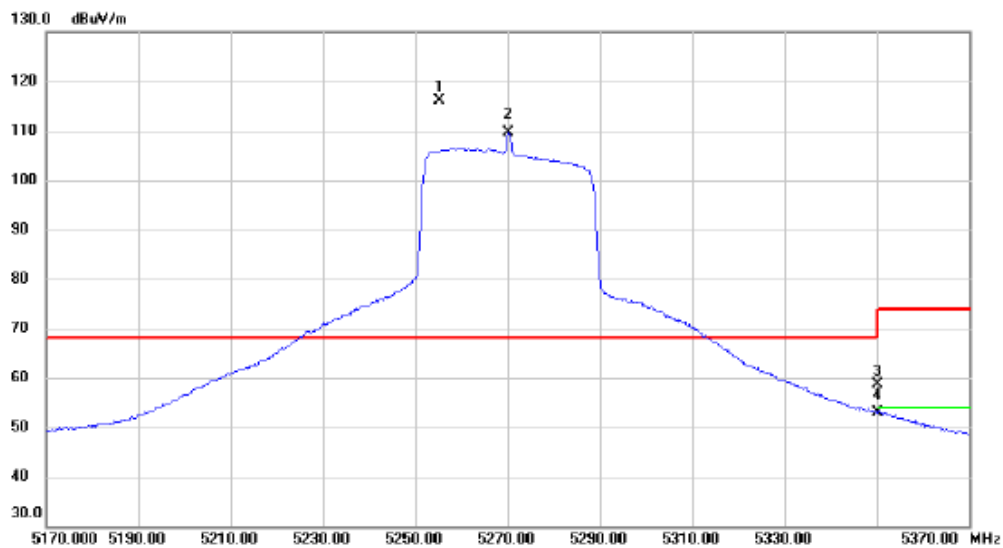
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1	*	5255.100	100.64	15.53	116.17	68.20	47.97	peak	No Limit
2	X	5270.200	94.09	15.56	109.65	68.20	41.45	AVG	No Limit
3		5350.000	43.00	15.74	58.74	74.00	-15.26	peak	
4		5350.000	37.23	15.74	52.97	54.00	-1.03	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	UNII-2A_TX AC(VHT40) Mode 5270 MHz	Polarization	Vertical
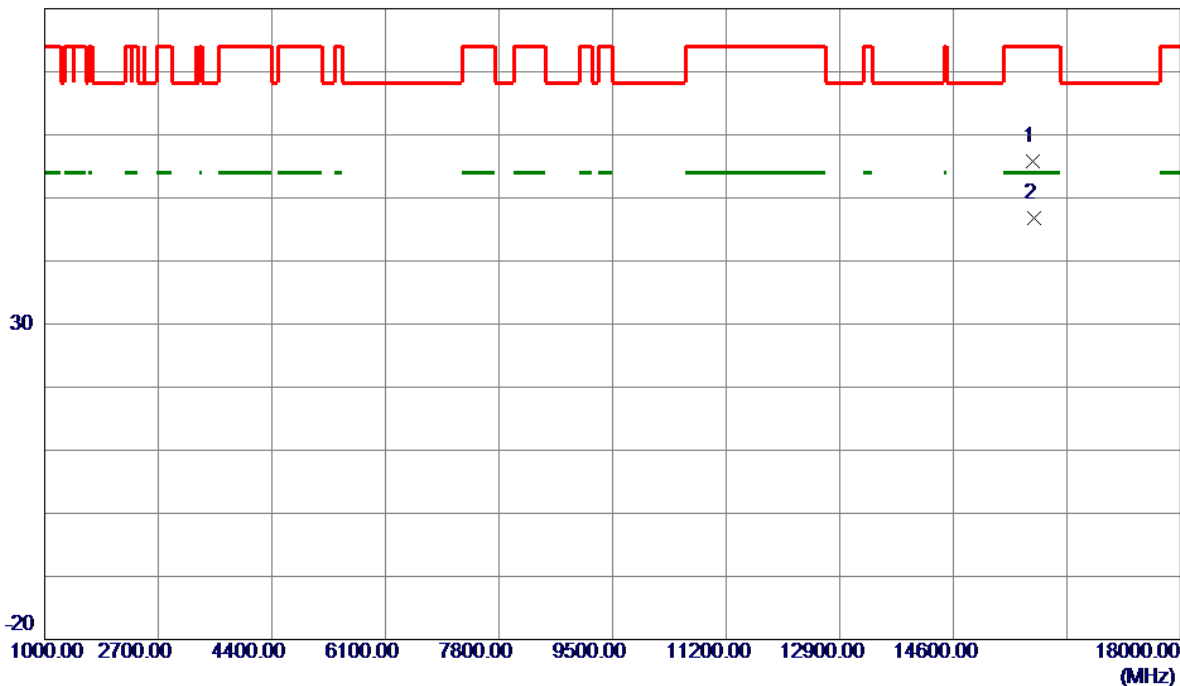
No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		Detector	Comment
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB			
1	15792.6000	46.46	9.26	55.72	74.00	-18.28		Peak	
2 *	15804.0000	37.61	9.28	46.89	54.00	-7.11		AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

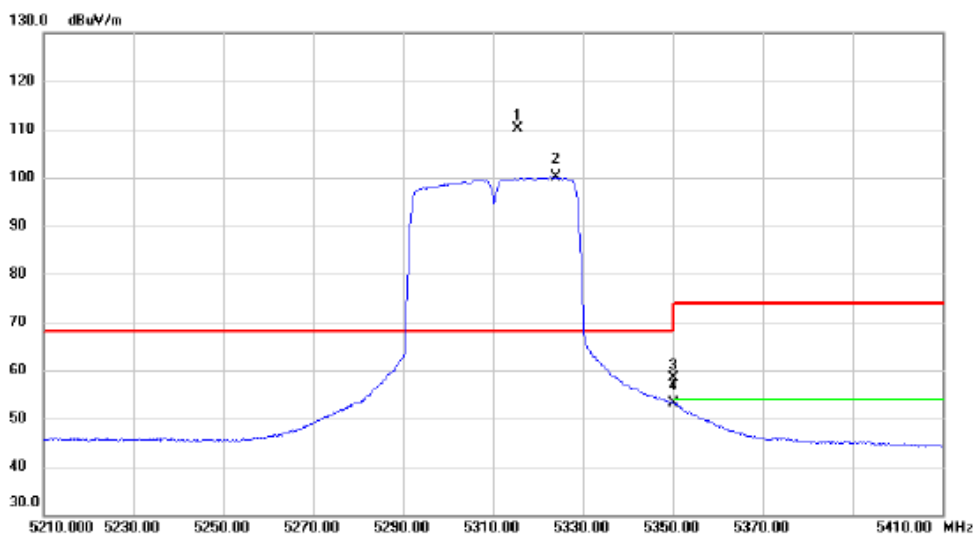| Test Mode	UNII-2A_TX AC(VHT40) Mode 5310 MHz	Polarization	Vertical

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1	*	5315.400	94.55	15.66	110.21	68.20	42.01	peak	No Limit
2	X	5324.100	84.45	15.68	100.13	68.20	31.93	AVG	No Limit
3		5350.000	42.67	15.74	58.41	74.00	-15.59	peak	
4		5350.000	37.34	15.74	53.08	54.00	-0.92	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	UNII-2A_TX AC(VHT40) Mode 5310 MHz	Polarization	Vertical
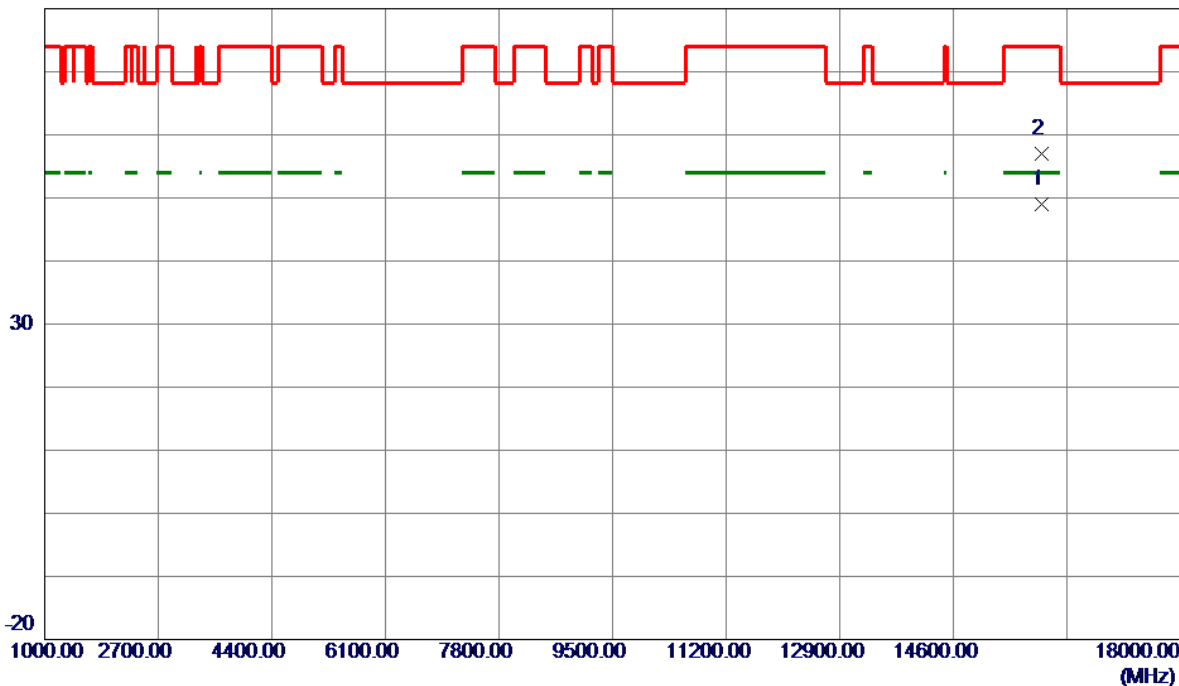
No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB		
1 *	15921.2000	39.56	9.45	49.01	54.00	-4.99	AVG	
2	15922.9000	47.50	9.45	56.95	74.00	-17.05	Peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	UNII-2A_TX AC(VHT80) Mode 5290 MHz	Polarization	Vertical
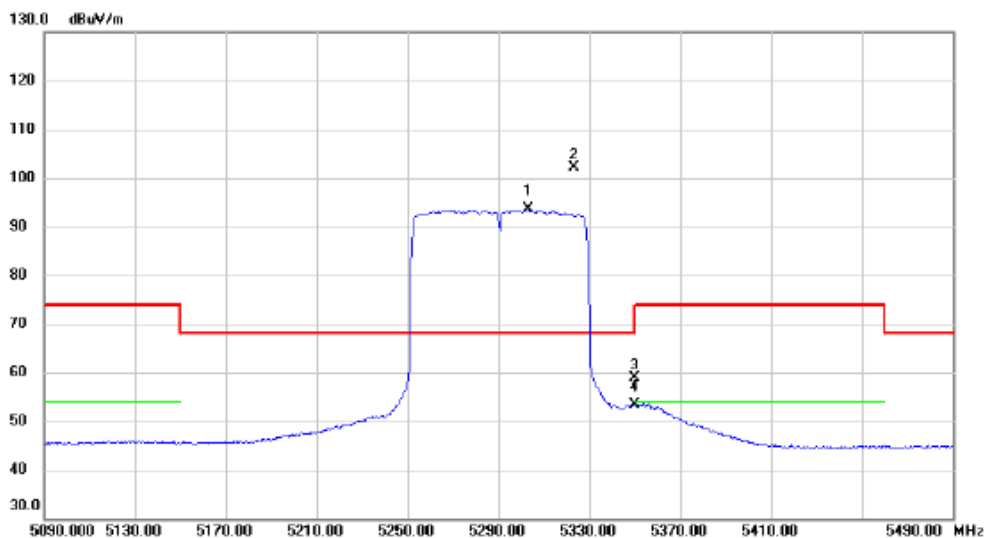
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1	X	5302.800	77.89	15.63	93.52	68.20	25.32	AVG	No Limit
2	*	5323.200	86.38	15.67	102.05	68.20	33.85	peak	No Limit
3		5350.000	43.12	15.74	58.86	74.00	-15.14	peak	
4		5350.000	37.52	15.74	53.26	54.00	-0.74	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	UNII-2A_TX AC(VHT80) Mode 5290 MHz	Polarization	Vertical
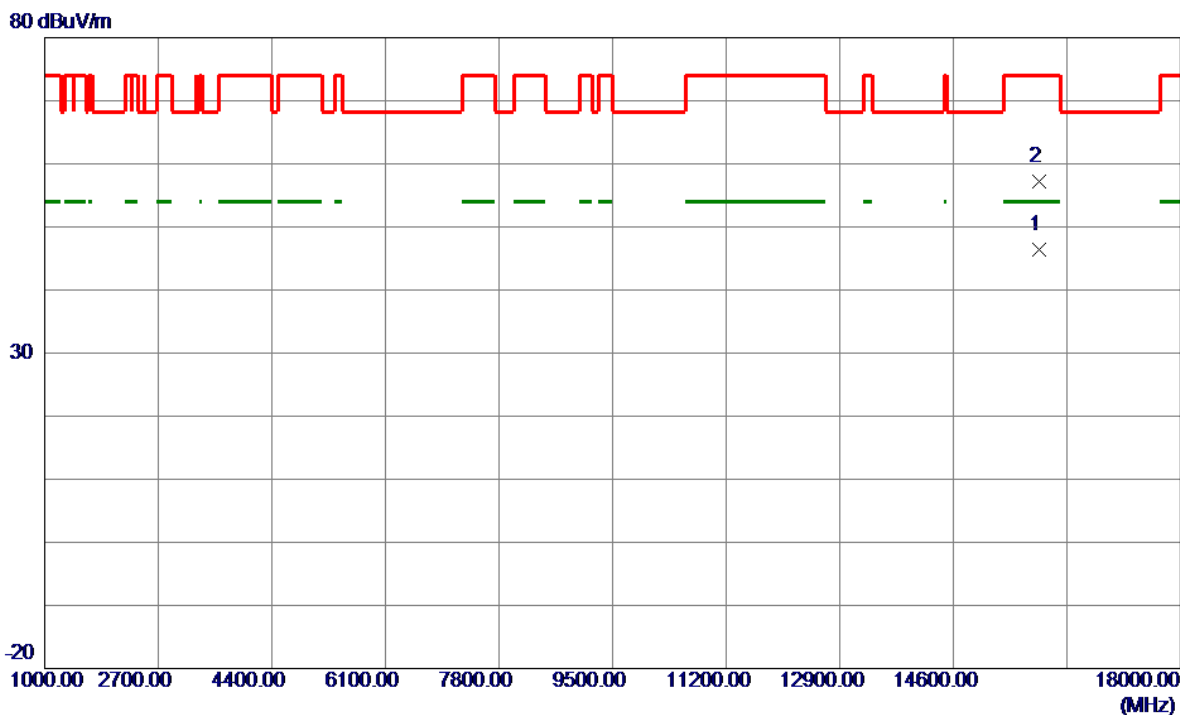
No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		Detector	Comment
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB			
1 *	15880.9000	36.94	9.39	46.33	54.00	-7.67		AVG	
2	15881.7000	47.89	9.39	57.28	74.00	-16.72		Peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	UNII-2A_TX AX(HE20) Mode 5260 MHz	Polarization	Vertical
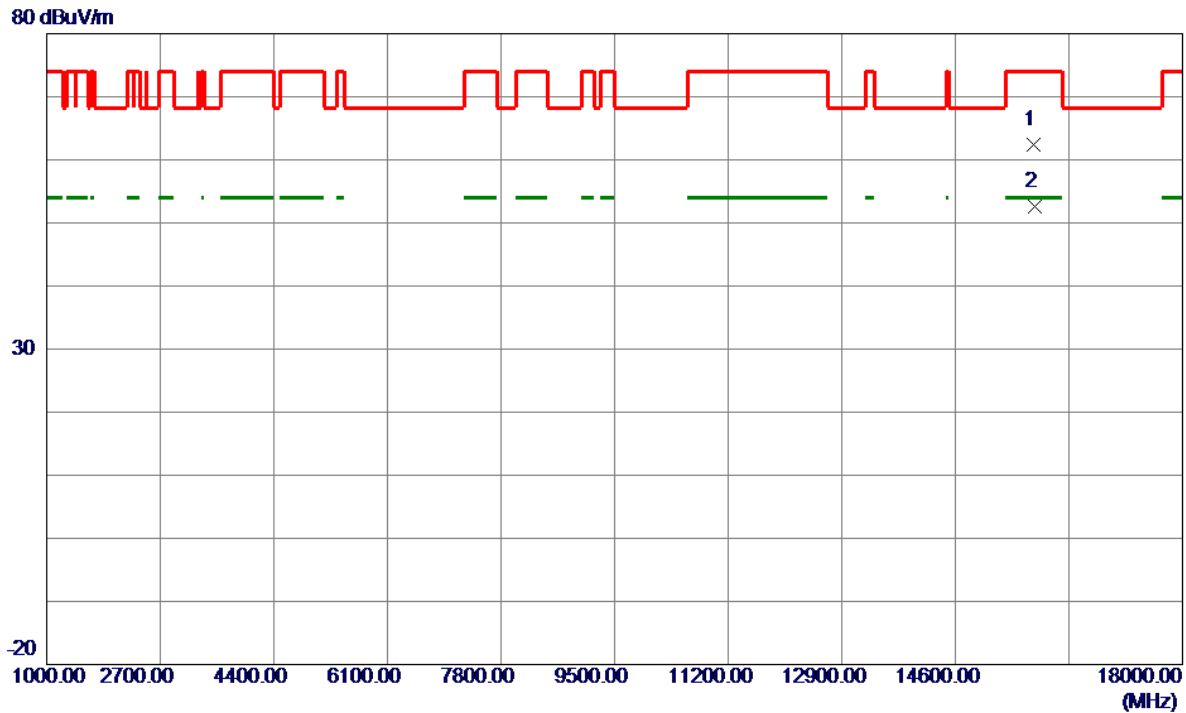
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin			
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB		Detector	Comment
1	15770.6500	53.16	9.23	62.39	74.00	-11.61		Peak	
2 *	15783.2500	43.41	9.25	52.66	54.00	-1.34		AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	UNII-2A_TX AX(HE20) Mode 5300 MHz		Polarization	Vertical
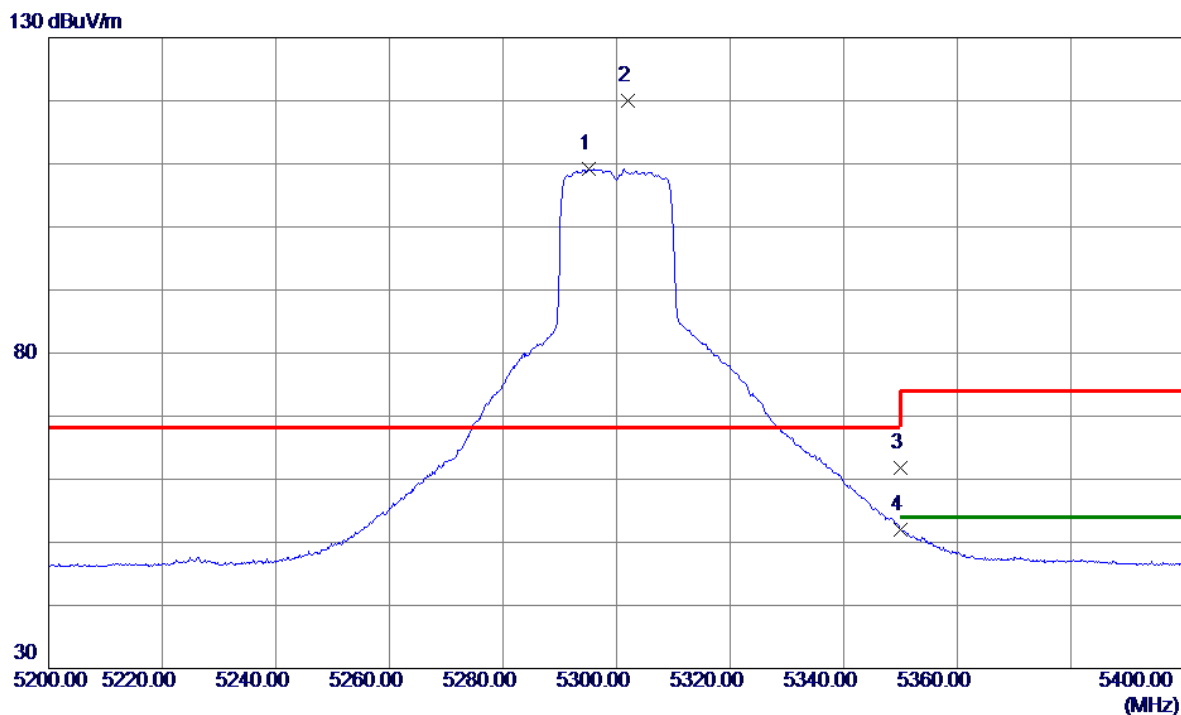
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin			
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB		Detector	Comment
1	5295.2000	95.25	13.86	109.11	999.00	-889.89		AVG	No Limit
2 *	5302.1000	106.05	13.88	119.93	68.20	51.73		Peak	No Limit
3	5350.0000	47.91	13.97	61.88	74.00	-12.12		Peak	
4	5350.0000	38.09	13.97	52.06	54.00	-1.94		AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

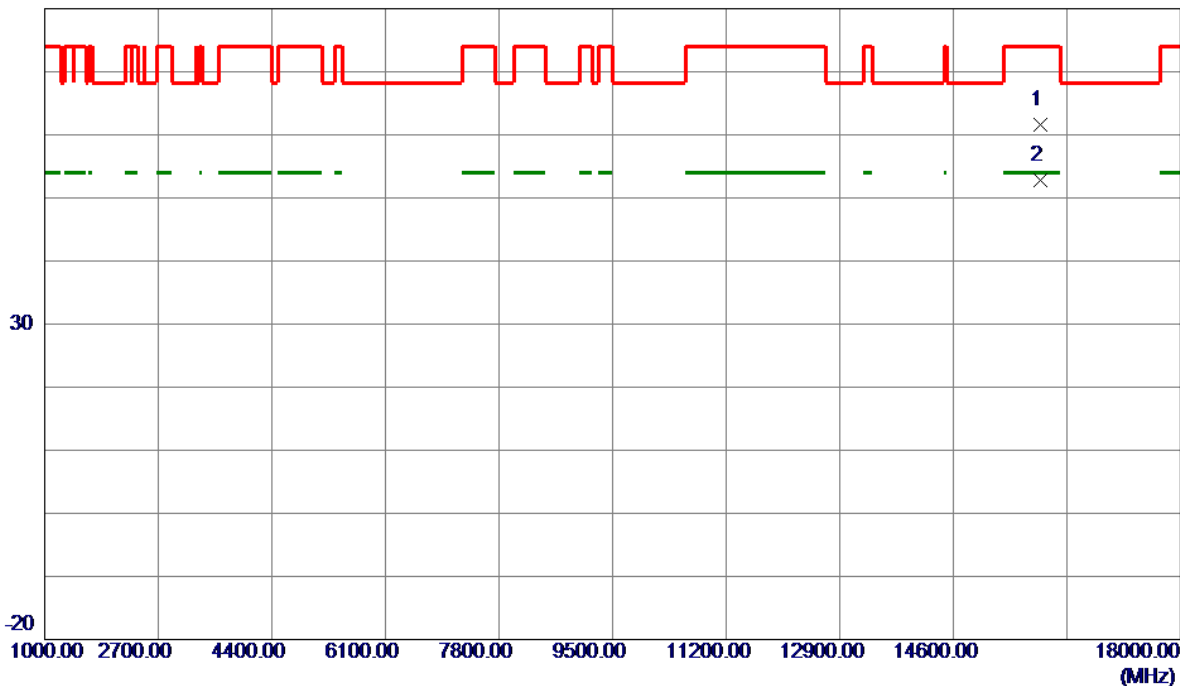| Test Mode	UNII-2A_TX AX(HE20) Mode 5300 MHz	Polarization	Vertical

No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		Detector	Comment
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB			
1	15898.4500	52.23	9.41	61.64	74.00	-12.36		Peak	
2 *	15903.1000	43.35	9.42	52.77	54.00	-1.23		AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

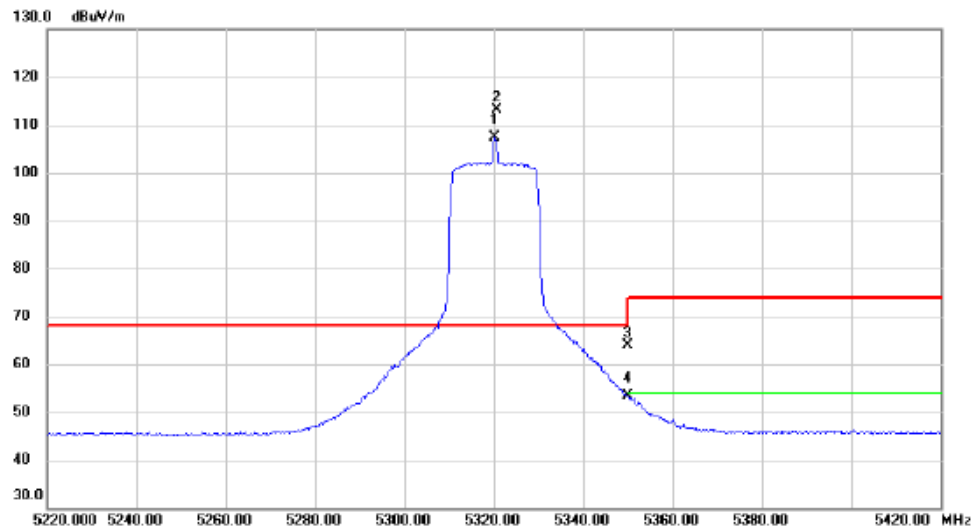| Test Mode	UNII-2A_TX AX(HE20) Mode 5320 MHz	Polarization	Vertical

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measurement dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	X	5320.200	91.66	15.66	107.32	68.20	39.12	AVG	No Limit
2	*	5320.700	97.43	15.66	113.09	68.20	44.89	peak	No Limit
3		5350.000	48.26	15.74	64.00	74.00	-10.00	peak	
4		5350.000	37.60	15.74	53.34	54.00	-0.66	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

| Test Mode	UNII-2A_TX AX(HE20) Mode 5320 MHz	Polarization	Vertical
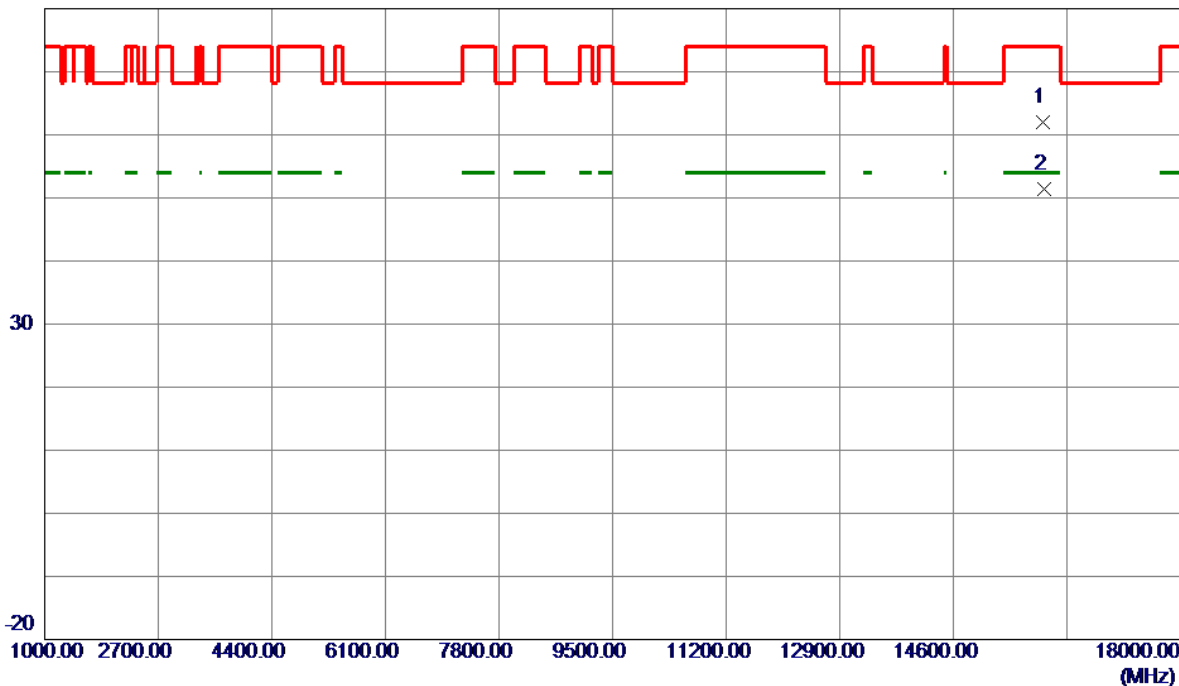
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		Detector	Comment
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB			
1	15947.0500	52.46	9.48	61.94	74.00	-12.06		Peak	
2 *	15956.2000	41.84	9.50	51.34	54.00	-2.66		AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

| Test Mode	UNII-2A_TX AX(HE40) Mode 5270 MHz	Polarization	Vertical
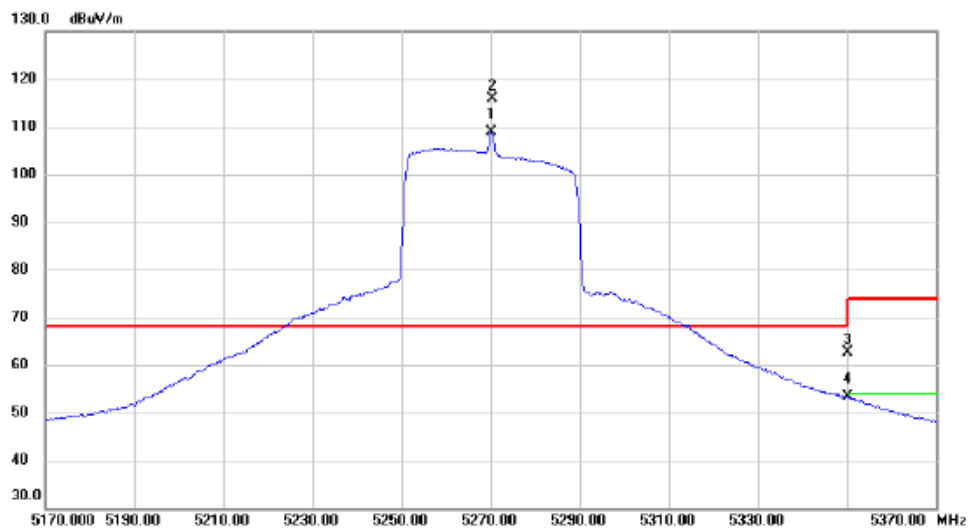
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	5270.100	93.26	15.56	108.82	68.20	40.62	AVG	No Limit
2	*	5270.400	100.23	15.56	115.79	68.20	47.59	peak	No Limit
3		5350.000	46.79	15.74	62.53	74.00	-11.47	peak	
4		5350.000	37.52	15.74	53.26	54.00	-0.74	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	UNII-2A_TX AX(HE40) Mode 5270 MHz	Polarization	Vertical
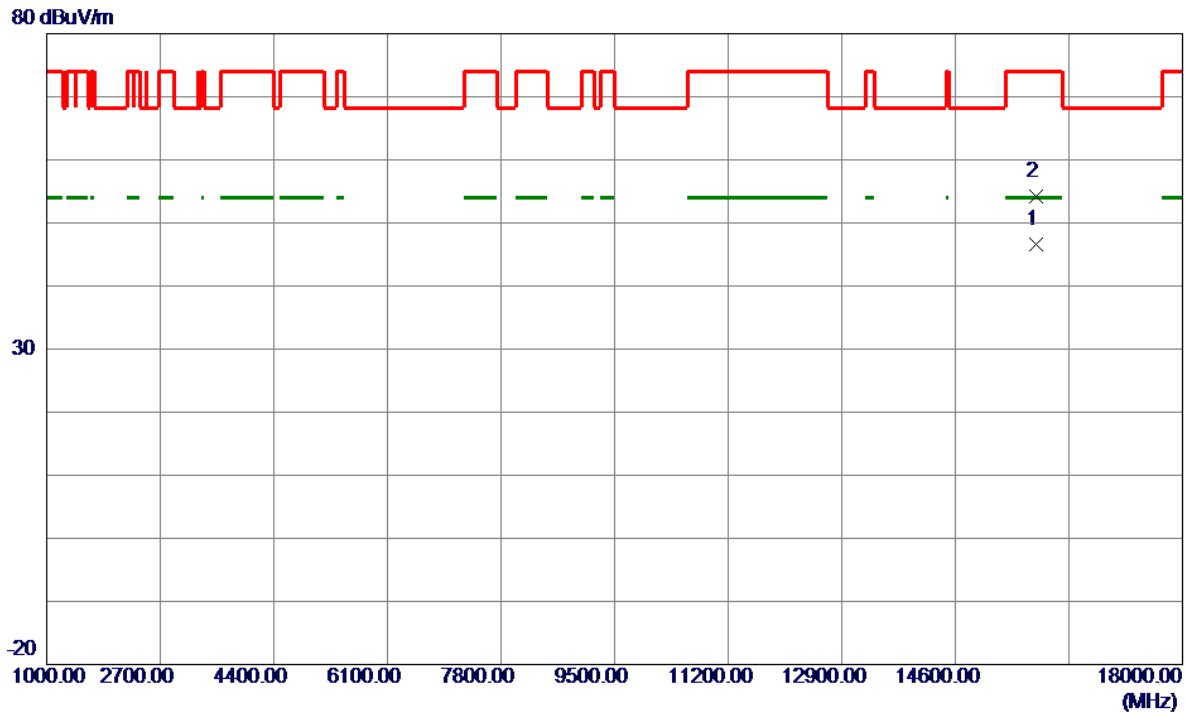
No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		Detector	Comment
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB			
1 *	15807.6000	37.39	9.28	46.67	54.00	−7.33		AVG	
2	15807.8000	44.87	9.29	54.16	74.00	−19.84		Peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	UNII-2A_TX AX(HE40) Mode 5310 MHz	Polarization	Vertical
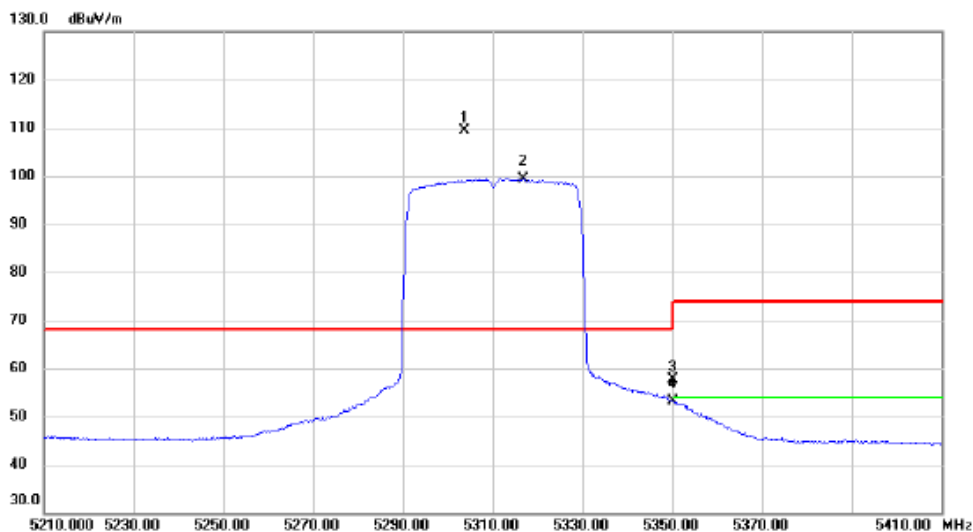
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1	*	5303.800	93.79	15.63	109.42	68.20	41.22	peak	No Limit
2	X	5316.900	83.71	15.65	99.36	68.20	31.16	AVG	No Limit
3		5350.000	41.98	15.74	57.72	74.00	-16.28	peak	
4		5350.000	37.44	15.74	53.18	54.00	-0.82	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

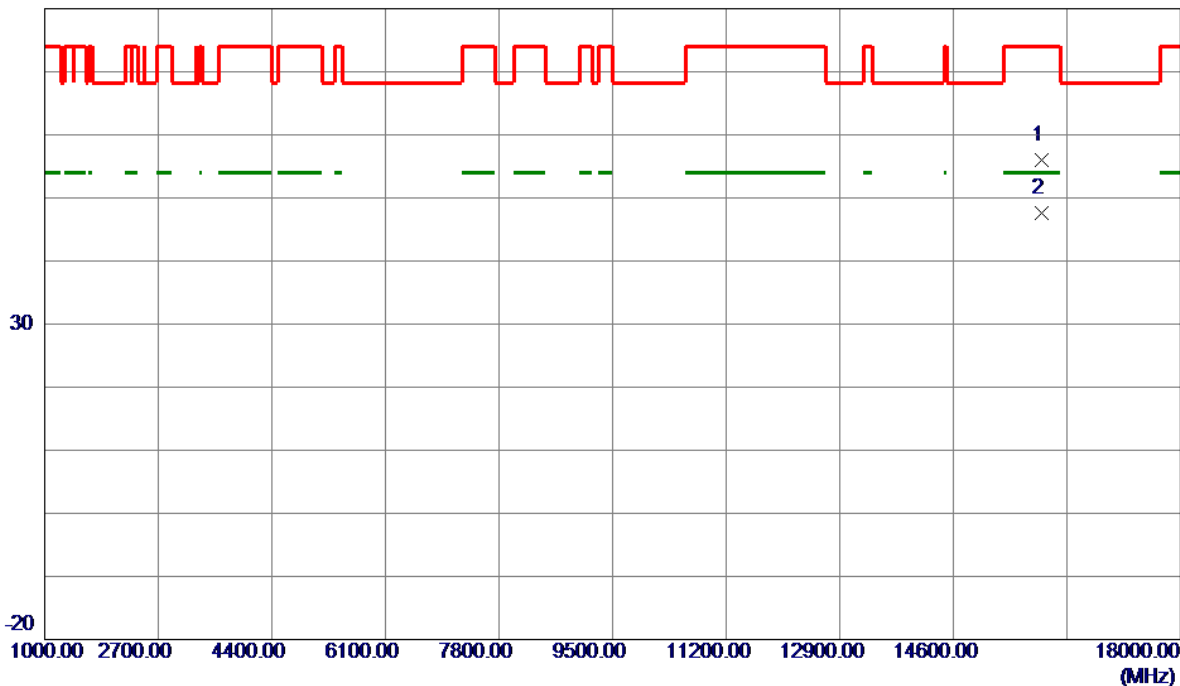| Test Mode	UNII-2A_TX AX(HE40) Mode 5310 MHz	Polarization	Vertical

No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		Detector	Comment
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB		Detector	Comment
1	15913.6000	46.61	9.44	56.05	74.00	−17.95		Peak	
2 *	15920.2000	38.11	9.45	47.56	54.00	−6.44		AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	UNII-2A_TX AX(HE80) Mode 5290 MHz	Polarization	Vertical
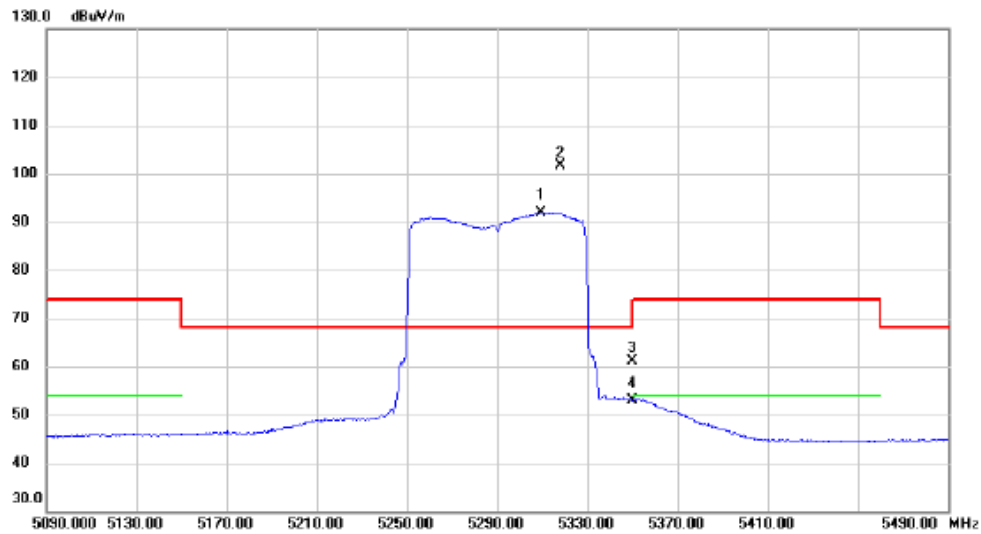
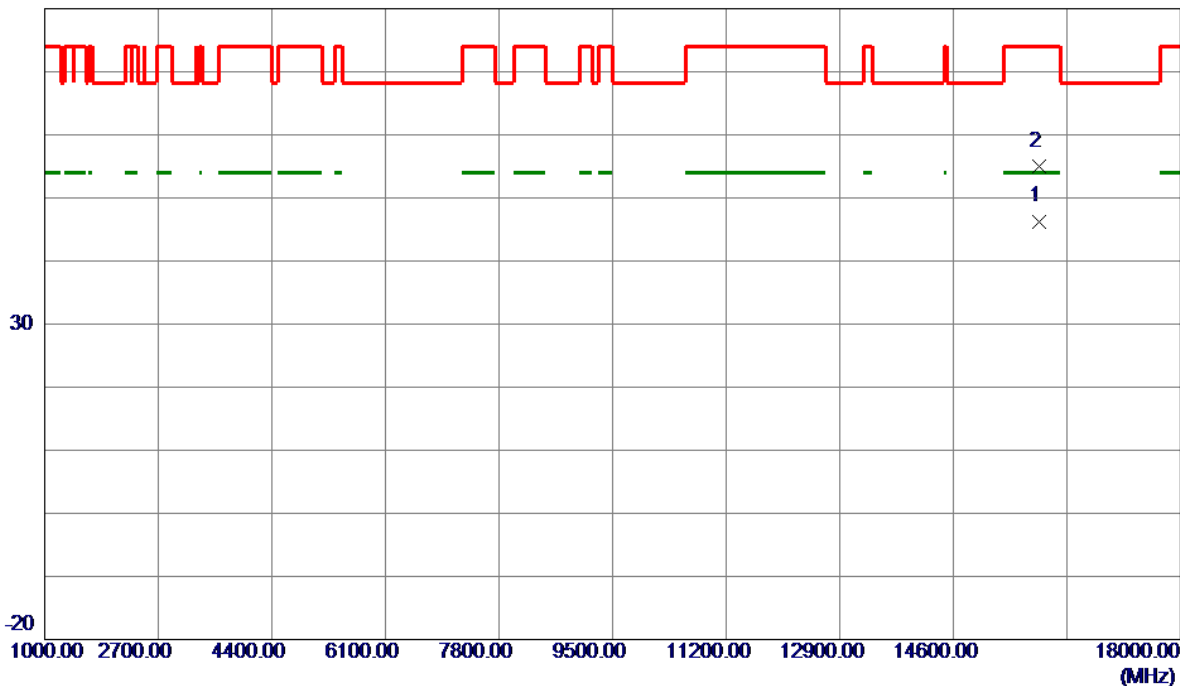| No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1	X	5309.600	76.31	15.64	91.95	68.20	23.75	AVG	No Limit
2	*	5318.000	86.00	15.66	101.66	68.20	33.46	peak	No Limit
3		5350.000	45.51	15.74	61.25	74.00	-12.75	peak	
4		5350.000	37.24	15.74	52.98	54.00	-1.02	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

| Test Mode	UNII-2A_TX AX(HE80) Mode 5290 MHz	Polarization	Vertical

No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		Detector	Comment
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB			
1 *	15877.8000	36.91	9.39	46.30	54.00	−7.70		AVG	
2	15888.2000	45.61	9.40	55.01	74.00	−18.99		Peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	UNII-2C_TX A Mode 5500 MHz		Polarization	Vertical
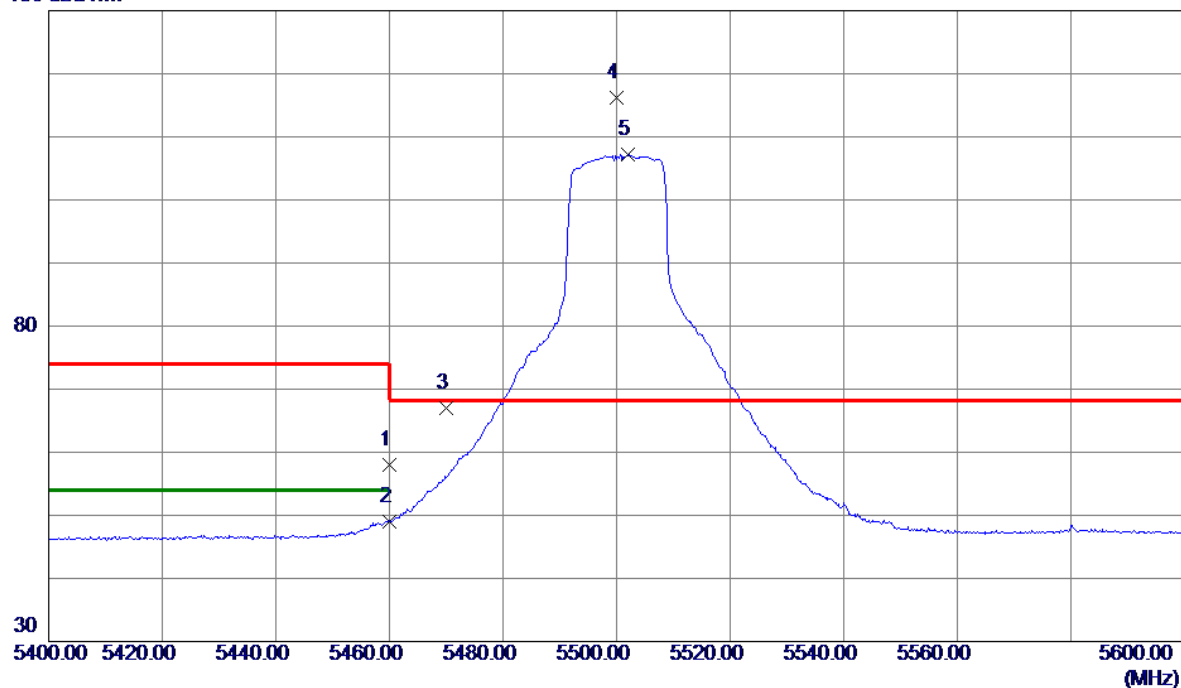
No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	5460.0000	43.83	14.20	58.03	74.00	−15.97	Peak	
2	5460.0000	34.75	14.20	48.95	54.00	−5.05	AVG	
3	5470.0000	52.80	14.22	67.02	68.20	−1.18	Peak	
4 *	5500.1000	101.93	14.29	116.22	68.20	48.02	Peak	No Limit
5	5502.1000	92.87	14.29	107.16	999.00	−891.84	AVG	No Limit

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	UNII-2C_TX A Mode 5500 MHz		Polarization	Vertical
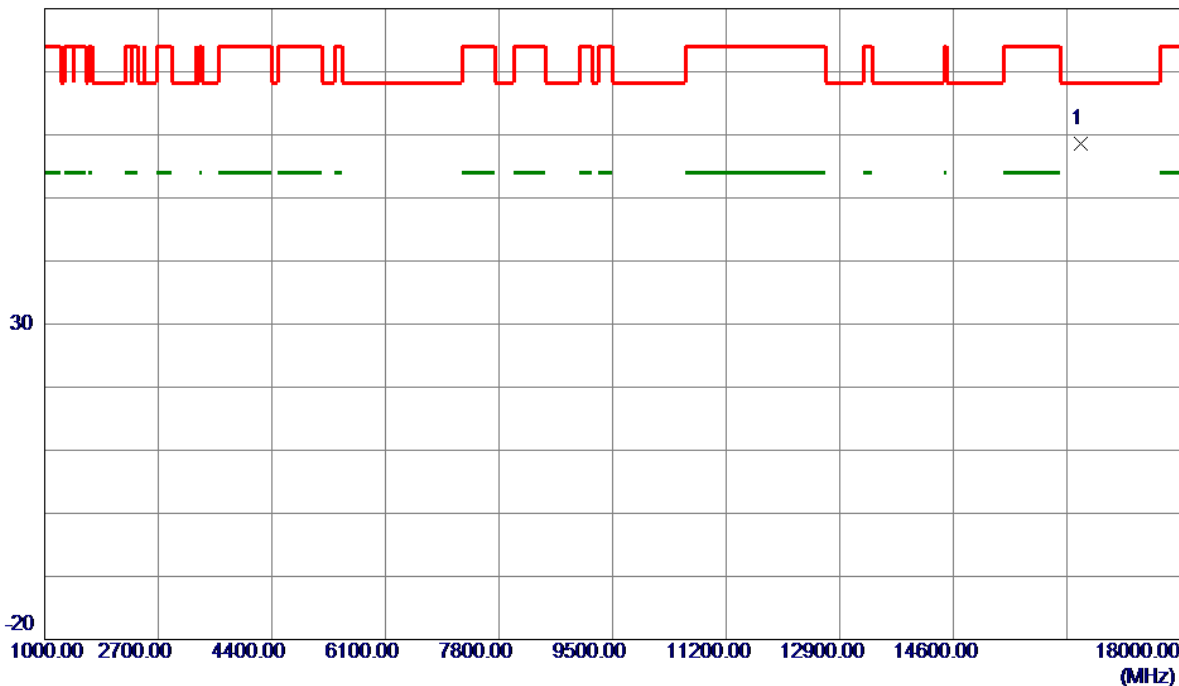
No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		Detector	Comment
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB			
1 *	16505.1500	48.35	10.16	58.51	68.20	−9.69		Peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	UNII-2C_TX A Mode 5580 MHz	Polarization	Vertical
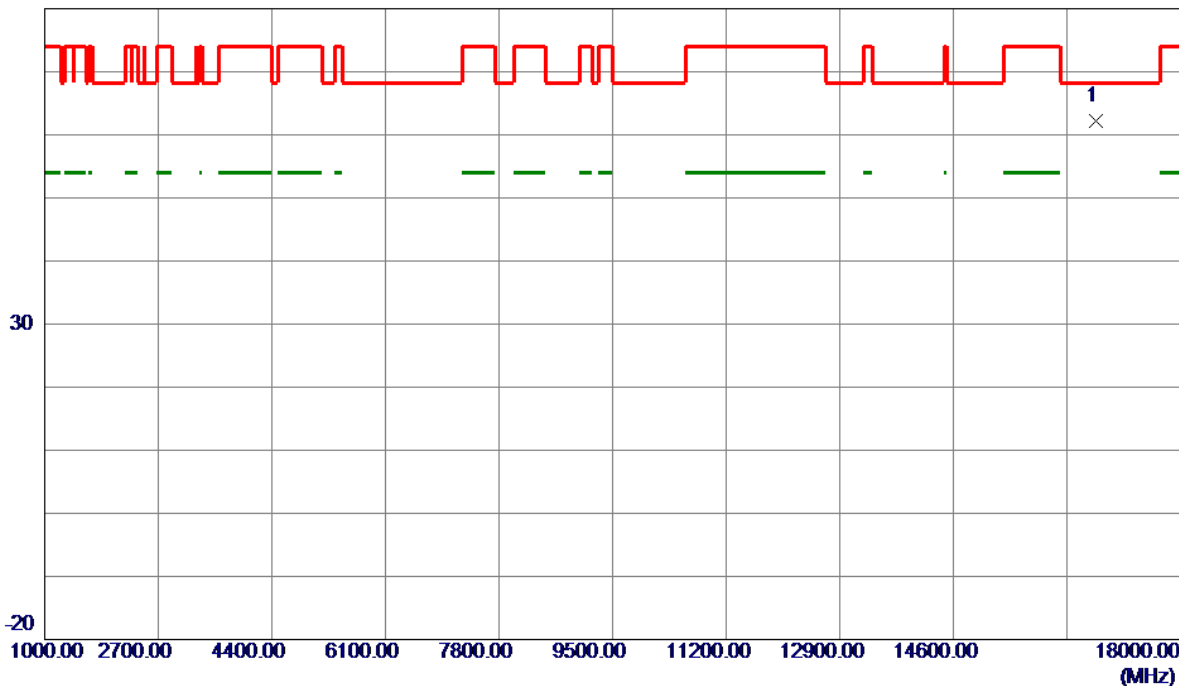
No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		Detector	Comment
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB			
1 *	16734.4000	51.48	10.66	62.14	68.20	-6.06		Peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

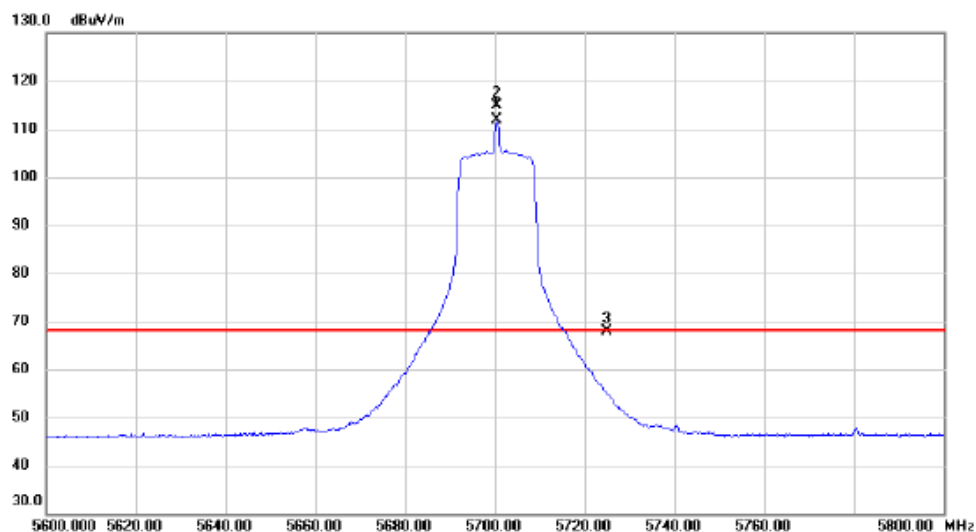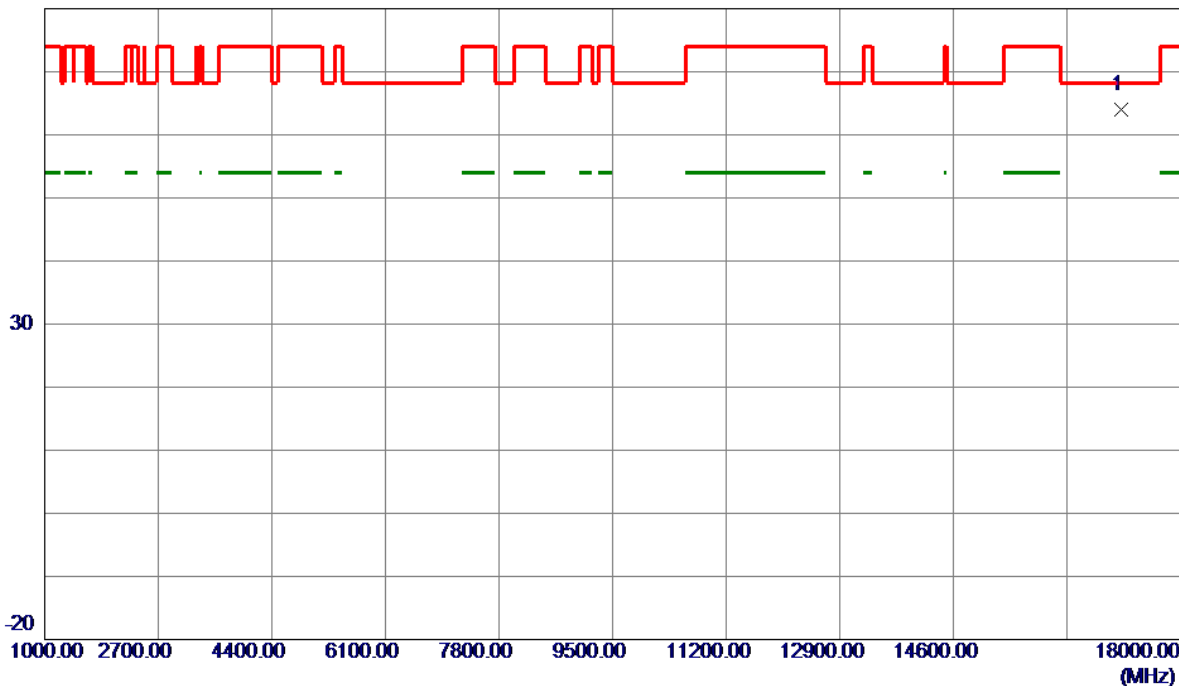| Test Mode	UNII-2C_TX A Mode 5700 MHz	Polarization	Vertical

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure-ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	X	5700.400	95.13	16.68	111.81	68.20	43.61	AVG	No Limit
2	*	5700.500	98.29	16.68	114.97	68.20	46.77	peak	No Limit
3		5725.000	51.05	16.75	67.80	68.20	-0.40	peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	UNII-2C_TX A Mode 5700 MHz	Polarization	Vertical

No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		Detector	Comment
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB			
1 *	17106.6000	52.35	11.57	63.92	68.20	-4.28		Peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	UNII-2C_TX AC(VHT20) Mode 5500 MHz	Polarization	Vertical
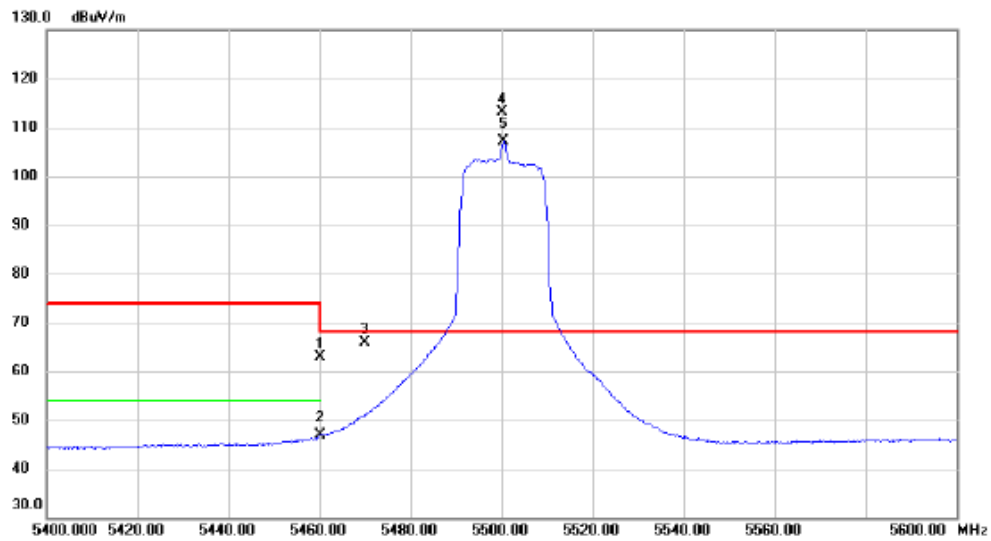
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure-ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		5460.000	47.03	15.96	62.99	74.00	-11.01	peak	
2		5460.000	30.81	15.96	46.77	54.00	-7.23	AVG	
3		5470.000	49.89	15.98	65.87	68.20	-2.33	peak	
4	*	5500.200	97.18	16.04	113.22	68.20	45.02	peak	No Limit
5	X	5500.500	91.17	16.04	107.21	68.20	39.01	AVG	No Limit

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.