Certificate #7130.01

FCC Radio Test Report

FCC ID: 2AJYB-S1832AE

This report concerns: Original Grant

Project No.	:	2404C068
Equipment	:	Network Audio Streaming Module
Brand Name	:	StreamUnlimited
Test Model	:	Stream1832AE
Series Model	:	N/A
Applicant	:	StreamUnlimited Engineering GmbH
Address	:	StreamUnlimited Engineering GmbH, Gutheil Schoder Gasse 10, Vienna 1100, Austria
Manufacturer	:	StreamUnlimited Engineering GmbH
Address	:	StreamUnlimited Engineering GmbH, Gutheil Schoder Gasse 10, Vienna 1100, Austria
Factory	:	StreamUnlimited Engineering GmbH
Address	:	StreamUnlimited Engineering GmbH, Gutheil Schoder Gasse 10, Vienna 1100, Austria
Date of Receipt	:	Apr. 09, 2024
Date of Test	:	Apr. 10, 2024 ~ May 30, 2024
Issued Date	:	Jun. 25, 2024
Report Version	:	R01
Test Sample	:	Engineering Sample No.: DG20240409195 for radiated emissions 30 MHz to 1000 MHz and 18GHz to 26.5GHz, DG20240409194 for others.
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-4-2404C068	R00	Original Report.	Jun. 17, 2024	Invalid
BTL-FCCP-4-2404C068	R01	Updated the antenna information.	Jun. 25, 2024	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 789033 D02 General UNII Test Procedures New Rules 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	PASS	------
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	APPENDIX H	PASS	------
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) Devices connected to antennas using non-standard jack are considered sufficient to comply with 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

2.1 TEST FACILITY

The test facilities used to collect the test data in this report is at the location of No.3, Jinshagang 1st Road, Dalang, 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-CB02	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
Frequency Stability	2.7 ppm
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	24°C	74%	AC 120V/60Hz	Hayden Chen	Apr. 24, 2024
Radiated Emissions -9kHz to 30MHz	23°C	56%	DC 5V	Hayden Chen	May 07, 2024
Radiated Emissions -30MHz to 1000MHz	22°C	51%	DC 5V	Chen Mo	Apr. 18, 2024
Radiated Emissions -Above 1000 MHz	22-25°C	51-56%	DC 5V	Jensen Zhou Chen Mo	Apr. 18, 2024- May 23, 2024
Bandwidth	24°C	51%	DC 5V	Steve Zhou	May 13, 2024
Maximum Output Power	22-23°C	54-61%	DC 5V	Oliver Wang	Apr. 25, 2024- May 23, 2024
Power Spectral Density	25°C	52%	DC 5V	Steve Zhou	May 09, 2024
Frequency Stability	Normal & Extreme	51-52%	Normal & Extreme	Steve Zhou	May 10, 2024- May 11, 2024

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

Equipment	Network Audio Streaming Module
Brand Name	StreamUnlimited
Test Model	Stream1832AE
Series Model	N/A
Model Difference(s)	N/A
Software Version	V0
Hardware Version	L0
Power Source	Supplied from external power supply.
Power Rating	DC 3.7V-5.2V
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 150 Mbps IEEE 802.11ac: up to 433.3 Mbps IEEE 802.11ax: up to 600.5 Mbps
Maximum Output Power _UNII-1	IEEE 802.11a: 14.13 dBm (0.0259 W)
Maximum Output Power _UNII-2A	IEEE 802.11a: 15.46 dBm (0.0352 W)
Maximum Output Power _UNII-2C	IEEE 802.11n(HT20): 15.57 dBm (0.0361 W)
Maximum Output Power _UNII-3	IEEE 802.11n(HT20): 15.93 dBm (0.0392 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:

Group 1:

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1		N/A	FPC	MHF4	4
2		N/A	FPC	MHF4	4

Note: There are two antennas but only one antenna works at a time.

Group 2:

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	2J antenna conceptor	2JF0102	FPC	Most RF Connectors	3.8
2	2J antenna conceptor	2JF0102	FPC	Most RF Connectors	3.8

Note: There are two antennas but only one antenna works at a time.

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 N(HT20) Mode Channel 36/40/48 (UNII-1)
Mode 3	TX N(HT40) Mode Channel 38/46 (UNII-1)
Mode 4	TX AC(VHT20) Mode Channel 36/40/48 (UNII-1)
Mode 5	TX AC(VHT40) Mode Channel 38/46 (UNII-1)
Mode 6	TX AC(VHT80) Mode Channel 42 (UNII-1)
Mode 7	TX AX(HE20) Mode Channel 36/40/48 (UNII-1)
Mode 8	TX AX(HE40) Mode Channel 38/46 (UNII-1)
Mode 9	TX AX(HE80) Mode Channel 42 (UNII-1)
Mode 10	TX A Mode Channel 52/60/64 (UNII-2A)
Mode 11	TX N(HT20) Mode Channel 52/60/64 (UNII-2A)
Mode 12	TX N(HT40) Mode Channel 54/62 (UNII-2A)
Mode 13	TX AC(VHT20) Mode Channel 52/60/64 (UNII-2A)
Mode 14	TX AC(VHT40) Mode Channel 54/62 (UNII-2A)
Mode 15	TX AC(VHT80) Mode Channel 58 (UNII-2A)
Mode 16	TX AX(HE20) Mode Channel 52/60/64 (UNII-2A)
Mode 17	TX AX(HE40) Mode Channel 54/62 (UNII-2A)
Mode 18	TX AX(HE80) Mode Channel 58 (UNII-2A)
Mode 19	TX A Mode Channel 100/116/140 (UNII-2C)
Mode 20	TX N(HT20) Mode Channel 100/116/140 (UNII-2C)
Mode 21	TX N(HT40) Mode Channel 102/110/134 (UNII-2C)
Mode 22	TX AC(VHT20) Mode Channel 100/116/140 (UNII-2C)
Mode 23	TX AC(VHT40) Mode Channel 102/110/134 (UNII-2C)
Mode 24	TX AC(VHT80) Mode Channel 106/122 (UNII-2C)
Mode 25	TX AX(HE20) Mode Channel 100/116/140 (UNII-2C)
Mode 26	TX AX(HE40) Mode Channel 102/110/134 (UNII-2C)
Mode 27	TX AX(HE80) Mode Channel 106/122 (UNII-2C)
Mode 28	TX A Mode Channel 149/157/165 (UNII-3)
Mode 29	TX N(HT20) Mode Channel 149/157/165 (UNII-3)
Mode 30	TX N(HT40) Mode Channel 151/159 (UNII-3)
Mode 31	TX AC(VHT20) Mode Channel 149/157/165 (UNII-3)
Mode 32	TX AC(VHT40) Mode Channel 151/159 (UNII-3)
Mode 33	TX AC(VHT80) Mode Channel 155 (UNII-3)
Mode 34	TX AX(HE20) Mode Channel 149/157/165 (UNII-3)
Mode 35	TX AX(HE40) Mode Channel 151/159 (UNII-3)
Mode 36	TX AX(HE80) Mode Channel 155 (UNII-3)
Mode 37	TX N(HT20) Mode Channel 149 (UNII-3)

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 37	TX N(HT20) Mode Channel 149 (UNII-3)

Radiated Emissions Test - Below 1GHz	
Final Test Mode	Description
Mode 37	TX N(HT20) Mode Channel 149 (UNII-3)

Radiated Emissions Test - Above 1GHz	
Final Test Mode	Description
Mode 1	TX A Mode Channel 36/40/48 (UNII-1)
Mode 2	TX N(HT20) Mode Channel 36/40/48 (UNII-1)
Mode 3	TX N(HT40) Mode Channel 38/46 (UNII-1)
Mode 6	TX AC(VHT80) Mode Channel 42 (UNII-1)
Mode 7	TX AX(HE20) Mode Channel 36/40/48 (UNII-1)
Mode 8	TX AX(HE40) Mode Channel 38/46 (UNII-1)
Mode 9	TX AX(HE80) Mode Channel 42 (UNII-1)
Mode 10	TX A Mode Channel 52/60/64 (UNII-2A)
Mode 11	TX N(HT20) Mode Channel 52/60/64 (UNII-2A)
Mode 12	TX N(HT40) Mode Channel 54/62 (UNII-2A)
Mode 15	TX AC(VHT80) Mode Channel 58 (UNII-2A)
Mode 16	TX AX(HE20) Mode Channel 52/60/64 (UNII-2A)
Mode 17	TX AX(HE40) Mode Channel 54/62 (UNII-2A)
Mode 18	TX AX(HE80) Mode Channel 58 (UNII-2A)
Mode 19	TX A Mode Channel 100/116/140 (UNII-2C)
Mode 20	TX N(HT20) Mode Channel 100/116/140 (UNII-2C)
Mode 21	TX N(HT40) Mode Channel 102/110/134 (UNII-2C)
Mode 24	TX AC(VHT80) Mode Channel 106/122 (UNII-2C)
Mode 25	TX AX(HE20) Mode Channel 100/116/140 (UNII-2C)
Mode 26	TX AX(HE40) Mode Channel 102/110/134 (UNII-2C)
Mode 27	TX AX(HE80) Mode Channel 106/122 (UNII-2C)
Mode 28	TX A Mode Channel 149/157/165 (UNII-3)
Mode 29	TX N(HT20) Mode Channel 149/157/165 (UNII-3)
Mode 30	TX N(HT40) Mode Channel 151/159 (UNII-3)
Mode 33	TX AC(VHT80) Mode Channel 155 (UNII-3)
Mode 34	TX AX(HE20) Mode Channel 149/157/165 (UNII-3)
Mode 35	TX AX(HE40) Mode Channel 151/159 (UNII-3)
Mode 36	TX AX(HE80) Mode Channel 155 (UNII-3)

Maximum Output Power Test	
Pretest Mode	Description
Mode 1	TX A Mode Channel 36/40/48 (UNII-1)
Mode 2	TX N(HT20) Mode Channel 36/40/48 (UNII-1)
Mode 3	TX N(HT40) Mode Channel 38/46 (UNII-1)
Mode 4	TX AC(VHT20) Mode Channel 36/40/48 (UNII-1)
Mode 5	TX AC(VHT40) Mode Channel 38/46 (UNII-1)
Mode 6	TX AC(VHT80) Mode Channel 42 (UNII-1)
Mode 7	TX AX(HE20) Mode Channel 36/40/48 (UNII-1)
Mode 8	TX AX(HE40) Mode Channel 38/46 (UNII-1)
Mode 9	TX AX(HE80) Mode Channel 42 (UNII-1)
Mode 10	TX A Mode Channel 52/60/64 (UNII-2A)
Mode 11	TX N(HT20) Mode Channel 52/60/64 (UNII-2A)
Mode 12	TX N(HT40) Mode Channel 54/62 (UNII-2A)
Mode 13	TX AC(VHT20) Mode Channel 52/60/64 (UNII-2A)
Mode 14	TX AC(VHT40) Mode Channel 54/62 (UNII-2A)
Mode 15	TX AC(VHT80) Mode Channel 58 (UNII-2A)
Mode 16	TX AX(HE20) Mode Channel 52/60/64 (UNII-2A)
Mode 17	TX AX(HE40) Mode Channel 54/62 (UNII-2A)
Mode 18	TX AX(HE80) Mode Channel 58 (UNII-2A)
Mode 19	TX A Mode Channel 100/116/140 (UNII-2C)
Mode 20	TX N(HT20) Mode Channel 100/116/140 (UNII-2C)
Mode 21	TX N(HT40) Mode Channel 102/110/134 (UNII-2C)
Mode 22	TX AC(VHT20) Mode Channel 100/116/140 (UNII-2C)
Mode 23	TX AC(VHT40) Mode Channel 102/110/134 (UNII-2C)
Mode 24	TX AC(VHT80) Mode Channel 106/122 (UNII-2C)
Mode 25	TX AX(HE20) Mode Channel 100/116/140 (UNII-2C)
Mode 26	TX AX(HE40) Mode Channel 102/110/134 (UNII-2C)
Mode 27	TX AX(HE80) Mode Channel 106/122 (UNII-2C)
Mode 28	TX A Mode Channel 149/157/165 (UNII-3)
Mode 29	TX N(HT20) Mode Channel 149/157/165 (UNII-3)
Mode 30	TX N(HT40) Mode Channel 151/159 (UNII-3)
Mode 31	TX AC(VHT20) Mode Channel 149/157/165 (UNII-3)
Mode 32	TX AC(VHT40) Mode Channel 151/159 (UNII-3)
Mode 33	TX AC(VHT80) Mode Channel 155 (UNII-3)
Mode 34	TX AX(HE20) Mode Channel 149/157/165 (UNII-3)
Mode 35	TX AX(HE40) Mode Channel 151/159 (UNII-3)
Mode 36	TX AX(HE80) Mode Channel 155 (UNII-3)

Other Conducted Test	
Final Test Mode	Description
Mode 1	TX A Mode Channel 36/40/48 (UNII-1)
Mode 2	TX N(HT20) Mode Channel 36/40/48 (UNII-1)
Mode 3	TX N(HT40) Mode Channel 38/46 (UNII-1)
Mode 6	TX AC(VHT80) Mode Channel 42 (UNII-1)
Mode 7	TX AX(HE20) Mode Channel 36/40/48 (UNII-1)
Mode 8	TX AX(HE40) Mode Channel 38/46 (UNII-1)
Mode 9	TX AX(HE80) Mode Channel 42 (UNII-1)
Mode 10	TX A Mode Channel 52/60/64 (UNII-2A)
Mode 11	TX N(HT20) Mode Channel 52/60/64 (UNII-2A)
Mode 12	TX N(HT40) Mode Channel 54/62 (UNII-2A)
Mode 15	TX AC(VHT80) Mode Channel 58 (UNII-2A)
Mode 16	TX AX(HE20) Mode Channel 52/60/64 (UNII-2A)
Mode 17	TX AX(HE40) Mode Channel 54/62 (UNII-2A)
Mode 18	TX AX(HE80) Mode Channel 58 (UNII-2A)
Mode 19	TX A Mode Channel 100/116/140 (UNII-2C)
Mode 20	TX N(HT20) Mode Channel 100/116/140 (UNII-2C)
Mode 21	TX N(HT40) Mode Channel 102/110/134 (UNII-2C)
Mode 24	TX AC(VHT80) Mode Channel 106/122 (UNII-2C)
Mode 25	TX AX(HE20) Mode Channel 100/116/140 (UNII-2C)
Mode 26	TX AX(HE40) Mode Channel 102/110/134 (UNII-2C)
Mode 27	TX AX(HE80) Mode Channel 106/122 (UNII-2C)
Mode 28	TX A Mode Channel 149/157/165 (UNII-3)
Mode 29	TX N(HT20) Mode Channel 149/157/165 (UNII-3)
Mode 30	TX N(HT40) Mode Channel 151/159 (UNII-3)
Mode 33	TX AC(VHT80) Mode Channel 155 (UNII-3)
Mode 34	TX AX(HE20) Mode Channel 149/157/165 (UNII-3)
Mode 35	TX AX(HE40) Mode Channel 151/159 (UNII-3)
Mode 36	TX AX(HE80) Mode Channel 155 (UNII-3)

Note:
(1) For AC power line conducted emissions and radiated emission below 1 GHz test, the TX N(HT20) Mode Channel 149 (UNII-3) 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) For radiated emission above 1 GHz test, the polarization of Vertical and Horizontal are evaluated, only the worst case is recorded.
(6) The measurements for Output Power are tested, the worst case are IEEE 802.11a mode, IEEE 802.11n(HT20) mode, IEEE 802.11n(HT40) mode, IEEE 802.11ac(VHT80) mode, IEEE 802.11ax(HE20) mode, IEEE 802.11ax(HE40) mode and IEEE 802.11ax(HE80) mode, only the worst cases are documented for other test items.
(7) Both Ant.1 and Ant.2 had been tested, but the data of Ant.1 were the worst case, so only the data of Ant.1 had been recorded.
(8) There are two antenna groups for this Network Audio Streaming Module which are only differ in gain. Only tested with the max gain's antenna group and recorded.

3.3 PARAMETERS OF TEST SOFTWARE

UNII-1			
Test Software Version	Labtool 1.0.0.45.6		
Frequency (MHz)	5180	5200	5240
IEEE 802.11a	12	12	15
IEEE 802.11n(HT20)	13	13	13
IEEE 802.11ac(VHT20)	13	13	13
IEEE 802.11ax(HE20)	12	12	12
Frequency (MHz)	5190	5230	
IEEE 802.11n(HT40)	14	14	
IEEE 802.11ac(VHT40)	14	14	
IEEE 802.11ax(HE40)	13	14	
Frequency (MHz)	5210		
IEEE 802.11ac(VHT80)	13		
IEEE 802.11ax(HE80)	9		

UNII-2A			
Test Software Version	Labtool 1.0.0.45.6		
Frequency (MHz)	5260	5300	5320
IEEE 802.11a	15	11	13
IEEE 802.11n(HT20)	11	11	13
IEEE 802.11ac(VHT20)	11	11	13
IEEE 802.11ax(HE20)	11	11	11
Frequency (MHz)	5270	5310	
IEEE 802.11n(HT40)	13	14	
IEEE 802.11ac(VHT40)	13	14	
IEEE 802.11ax(HE40)	12	14	
Frequency (MHz)	5290		
IEEE 802.11ac(VHT80)	13		
IEEE 802.11ax(HE80)	8		

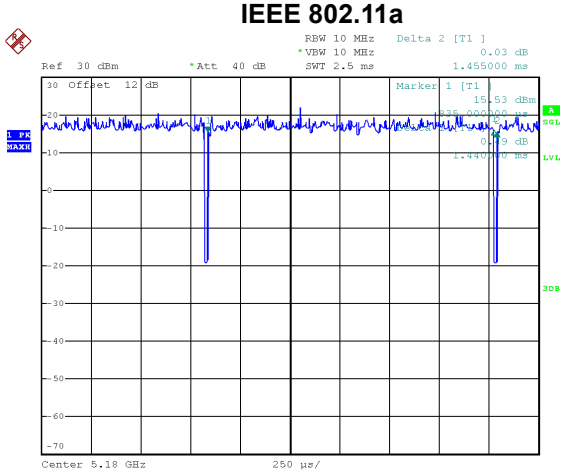
UNII-2C			
Test Software Version	Labtool 1.0.0.45.6		
Frequency (MHz)	5500	5580	5700
IEEE 802.11a	16	15	13
IEEE 802.11n(HT20)	16	16	13
IEEE 802.11ac(VHT20)	15	14	12
IEEE 802.11ax(HE20)	12	11	9
Frequency (MHz)	5510	5550	5670
IEEE 802.11n(HT40)	16	16	16
IEEE 802.11ac(VHT40)	14	14	14
IEEE 802.11ax(HE40)	14	14	14
Frequency (MHz)	5530	5610	
IEEE 802.11ac(VHT80)	13	13	
IEEE 802.11ax(HE80)	9	8	

UNII-3			
Test Software Version	Labtool 1.0.0.45.6		
Frequency (MHz)	5745	5785	5825
IEEE 802.11a	13	14	14
IEEE 802.11n(HT20)	14	14	15
IEEE 802.11ac(VHT20)	12	13	13
IEEE 802.11ax(HE20)	9	10	10
Frequency (MHz)	5755	5795	
IEEE 802.11n(HT40)	16	16	
IEEE 802.11ac(VHT40)	14	14	
IEEE 802.11ax(HE40)	14	14	
Frequency (MHz)	5775		
IEEE 802.11ac(VHT80)	13		
IEEE 802.11ax(HE80)	6		

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.

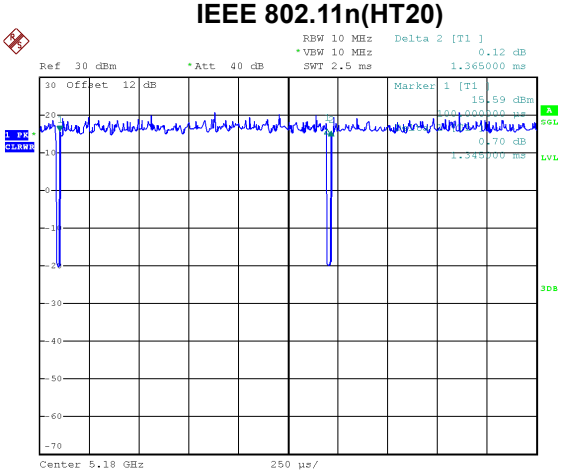
IEEE 802.11a



Date: 9.MAY.2024 05:10:01

Duty cycle = 1.440 ms / 1.455 ms = 98.97%
Duty Factor = 10 log(1 / Duty cycle) = 0.00

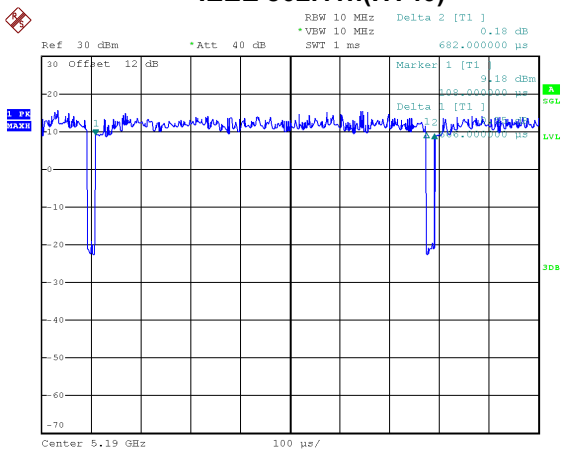
IEEE 802.11n(HT20)



Date: 9.MAY.2024 05:11:50

Duty cycle = 1.345 ms / 1.365 ms = 98.53%
Duty Factor = 10 log(1 / Duty cycle) = 0.00

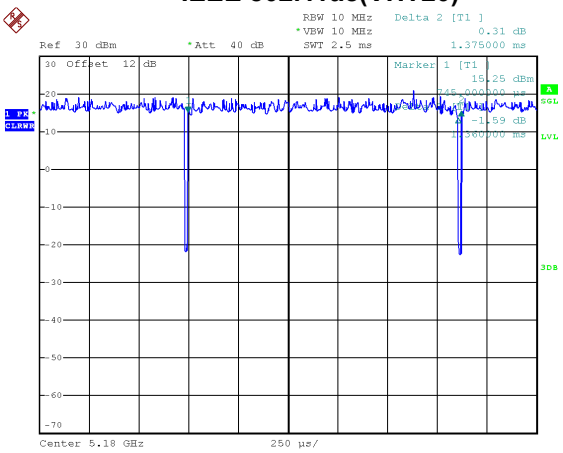
IEEE 802.11n(HT40)



Date: 9.MAY.2024 05:15:36

Duty cycle = 0.666 ms / 0.682 ms = 97.65%
Duty Factor = 10 log(1 / Duty cycle) = 0.10

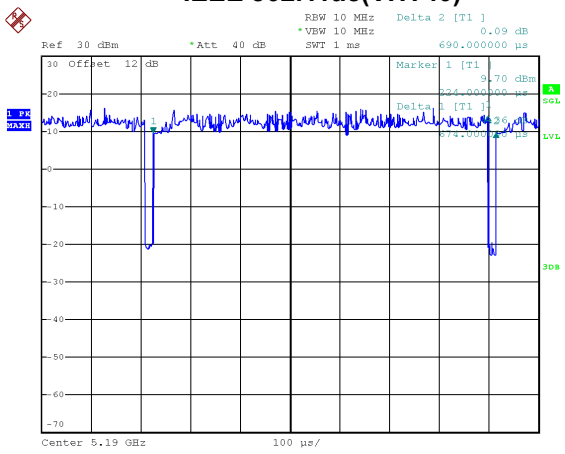
IEEE 802.11ac(VHT20)



Date: 9.MAY.2024 05:12:35

Duty cycle = 1.360 ms / 1.375 ms = 98.91%
Duty Factor = 10 log(1 / Duty cycle) = 0.00

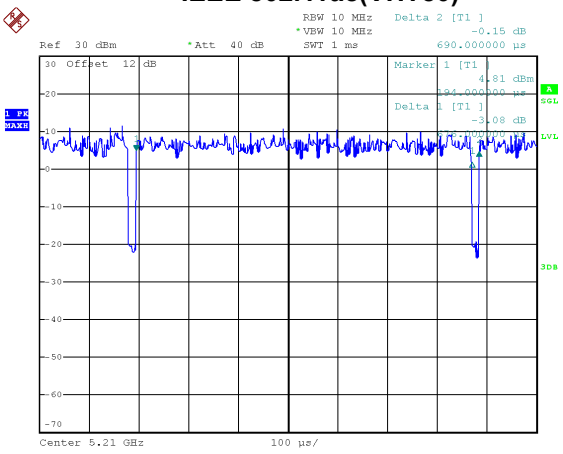
IEEE 802.11ac(VHT40)



Date: 9.MAY.2024 05:15:06

Duty cycle = 0.674 ms / 0.690 ms = 97.68%
Duty Factor = 10 log(1 / Duty cycle) = 0.10

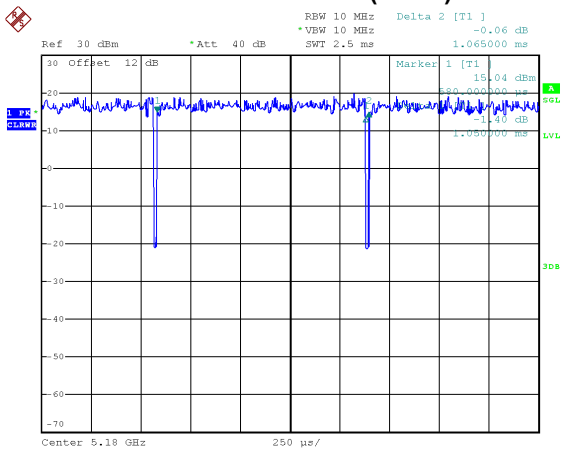
IEEE 802.11ac(VHT80)



Date: 9.MAY.2024 05:16:42

Duty cycle = 0.676 ms / 0.690 ms = 97.97%
Duty Factor = 10 log(1 / Duty cycle) = 0.09

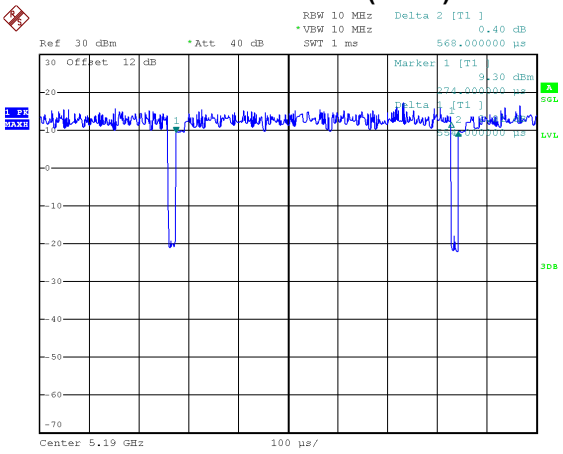
IEEE 802.11ax(HE20)



Date: 9.MAY.2024 05:12:51

Duty cycle = 1.050 ms / 1.065 ms = 98.59%
Duty Factor = 10 log(1 / Duty cycle) = 0.00

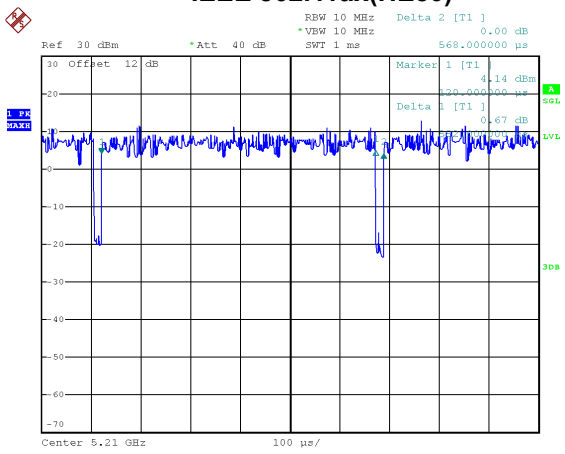
IEEE 802.11ax(HE40)



Date: 9.MAY.2024 05:14:15

Duty cycle = 0.554 ms / 0.568 ms = 97.54%
Duty Factor = 10 log(1 / Duty cycle) = 0.11

IEEE 802.11ax(HE80)



Duty cycle = 0.552 ms / 0.568 ms = 97.18%
Duty Factor = 10 log(1 / Duty cycle) = 0.12

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 802.11n(HT20):
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 802.11n(HT40):
For radiated emissions frequency above 1 GHz, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 1502 Hz (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 1484 Hz (Duty cycle < 98%).

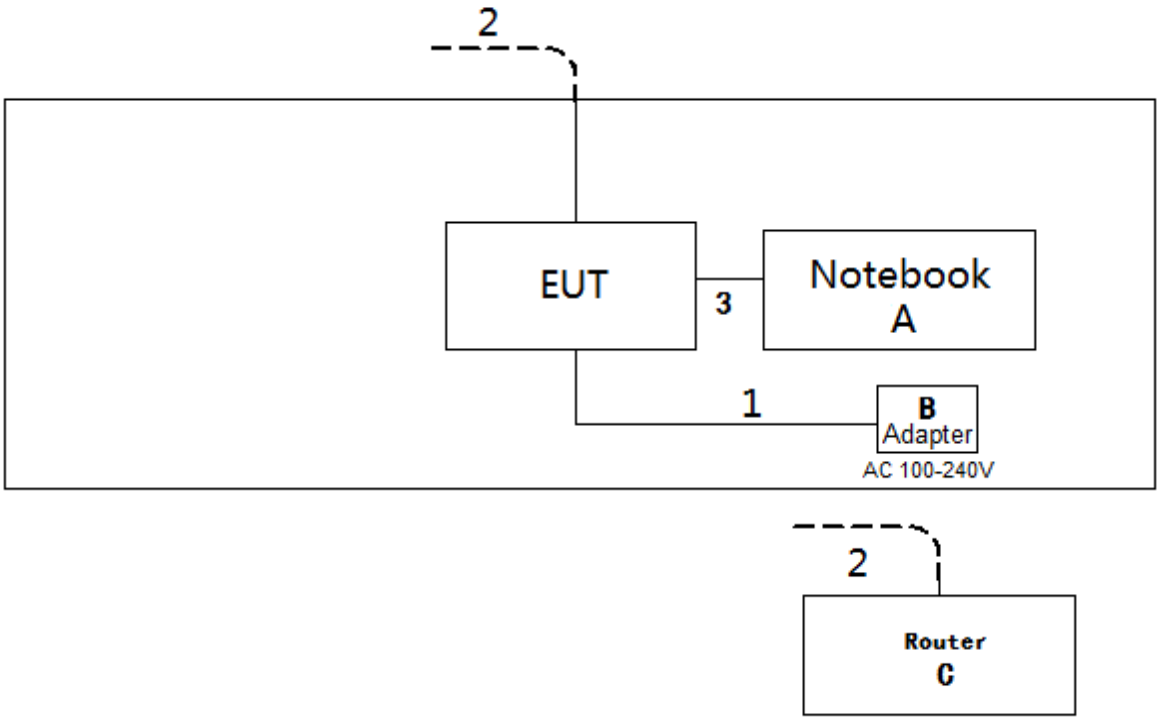
For IEEE 802.11ac(VHT80):
For radiated emissions frequency above 1 GHz, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 1479 Hz (Duty cycle < 98%).

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 1805 Hz (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 1812 Hz (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	HUAWEI	NbDE-WFH9	N/A
B	Adapter	ShenZhenJingQuanHua	0D264	N/A
C	Router	HUAWEI	W826E	N/A

Item	Cable Type	Shielded Type	Ferrite Core	Length
1	DC Cable	NO	NO	1.5m
2	RJ45 Cable	NO	NO	10m
3	USB Cable	NO	NO	1.5m

3.7 CUSTOMER INFORMATION DESCRIPTION

1) The antenna gain is provided by the manufacturer.
2) Except for AC power line conducted emissions and 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.

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.

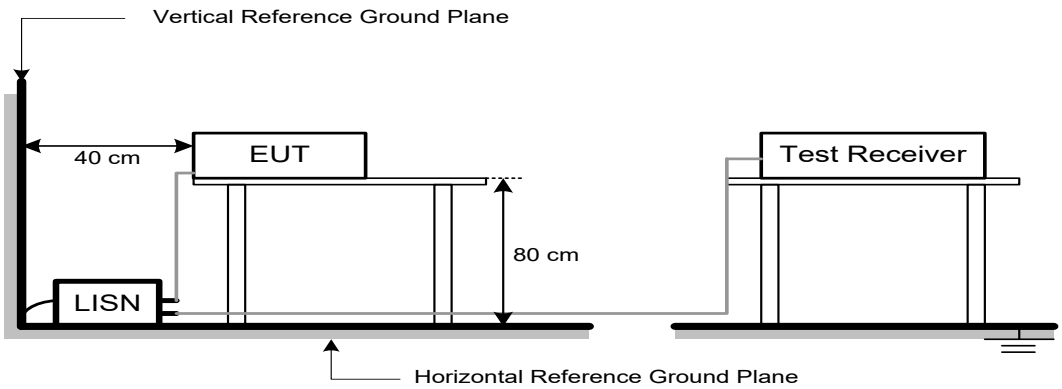
The following table is the setting of the receiver:

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



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:

$$E = \frac{1000000\sqrt{30P}}{3}$$ 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)

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

$20\log (d_{limit}/d_{measure})=20\log (3/1)=9.5$ dB.

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 (Emission in restricted band)	1 MHz / 3 MHz for PK value 1 MHz / 1/T Hz for AVG value

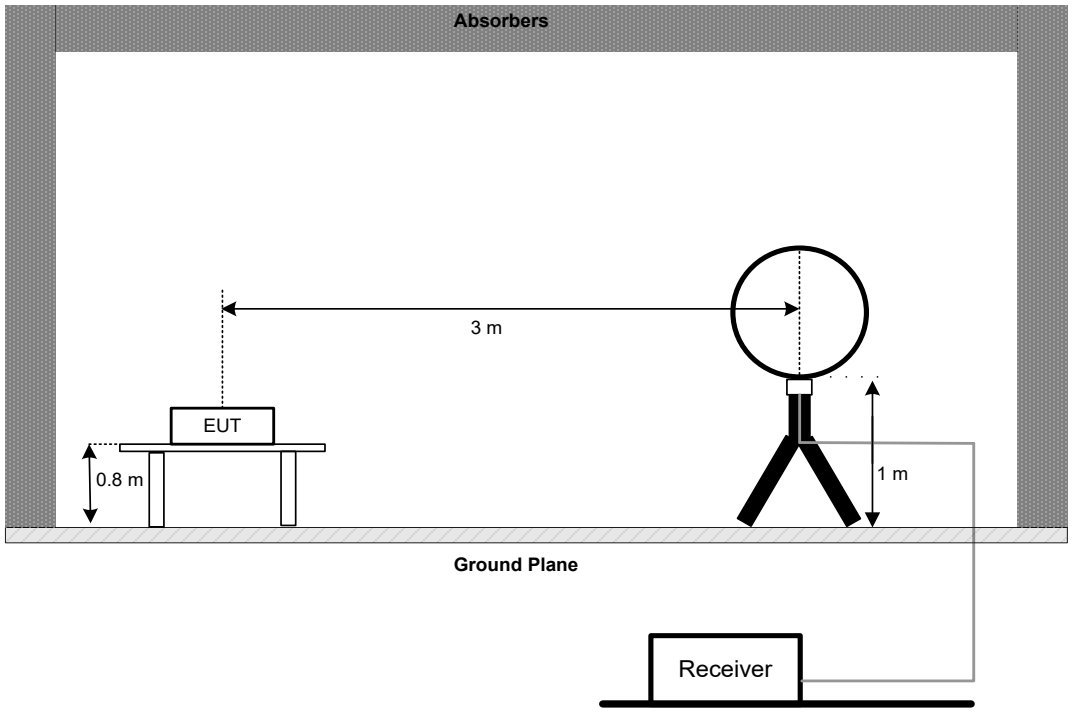
Receiver Parameters	Setting
Start ~ Stop Frequency	9 kHz~90 kHz for PK/AVG detector
Start ~ Stop Frequency	90 kHz~110 kHz for QP detector
Start ~ Stop Frequency	110 kHz~490 kHz for PK/AVG detector
Start ~ Stop Frequency	490 kHz~30 MHz for QP detector
Start ~ Stop Frequency	30 MHz~1000 MHz for QP detector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

5.3 DEVIATION FROM TEST STANDARD

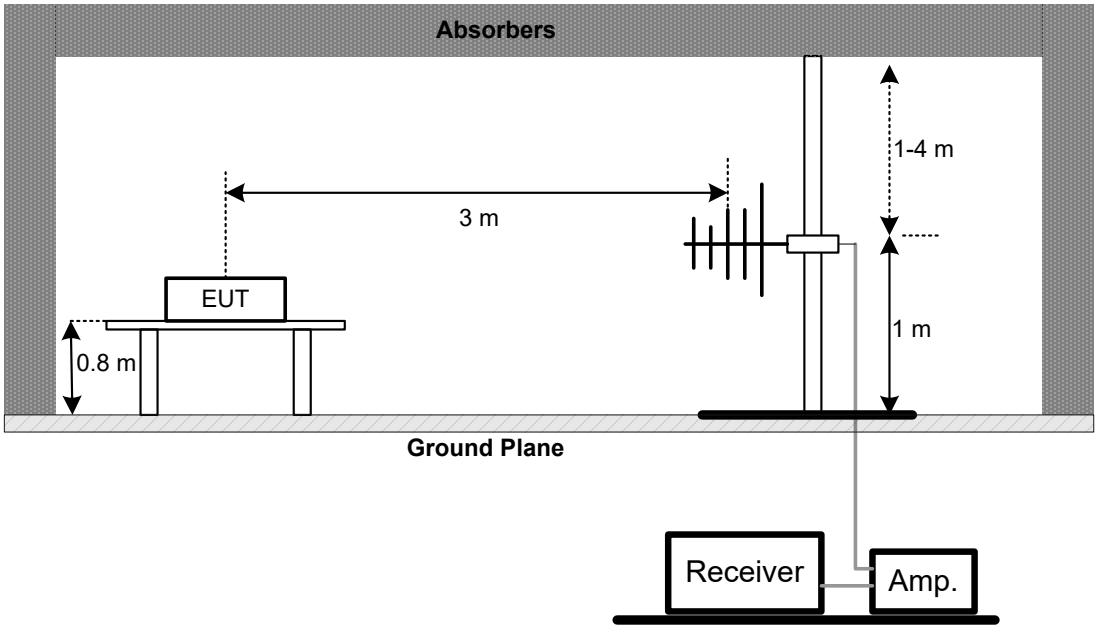
No deviation.

5.4 TEST SETUP

9 kHz to 30 MHz

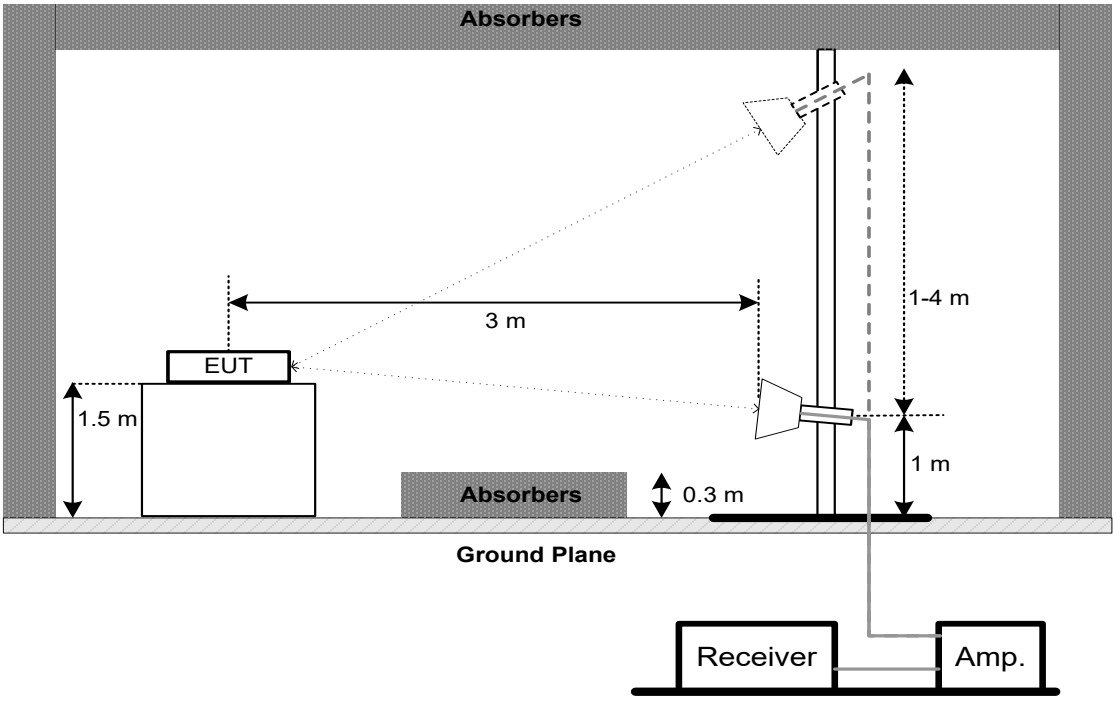


30 MHz to 1 GHz

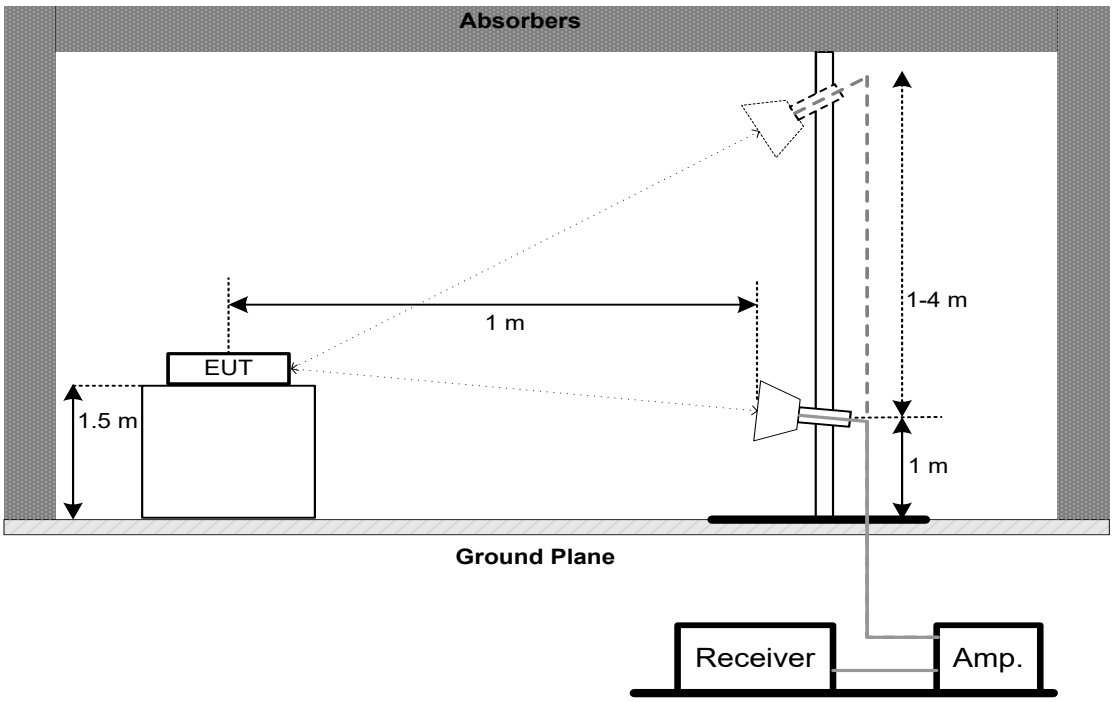


Above 1 GHz

Band edge and Harmonic (1 GHz to 18 GHz)



Harmonic (18 GHz to 40 GHz)



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

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

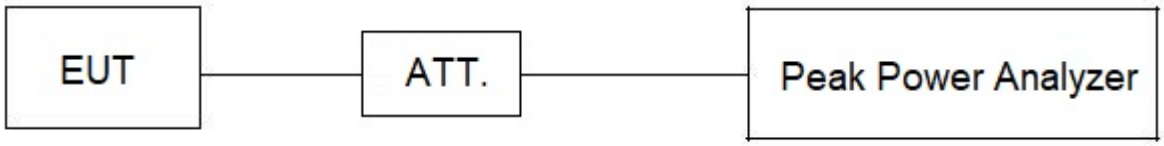
a. The EUT was directly connected to the peak power analyzer and antenna output port as show in the block diagram below.

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 12 dB, and the final offset is 12 + 7 = 19 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. FREQUENCY STABILITY

9.1 LIMIT

Section	Test Item	Limit	Frequency Range (MHz)
FCC 15.407(g)	Frequency Stability	An emission is maintained within the band of operation under all conditions of normal operation as specified in the users manual.	5150-5250
			5250-5350
			5470-5725
			5725-5850

9.2 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:

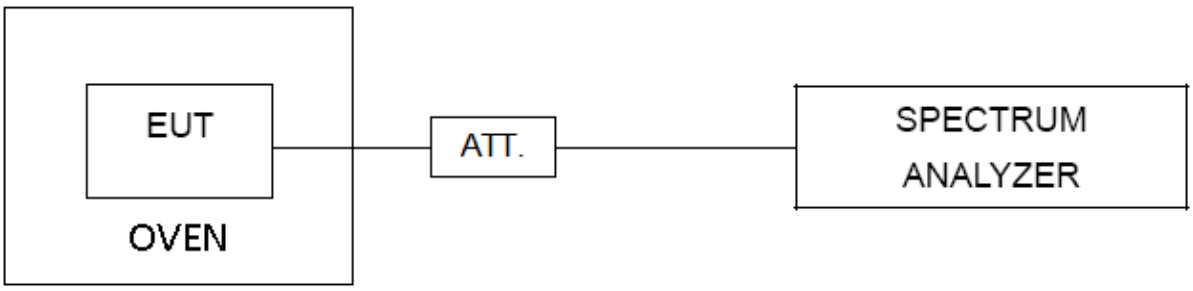
Spectrum Parameter	Setting
Span Frequency	Entire absence of modulation emissions bandwidth
RBW	10 kHz
VBW	10 kHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

c. The test extreme voltage is to change the primary supply voltage from 85 to 115 percent of the nominal value.
d. User manual temperature is 0°C~65°C.

9.3 DEVIATION FROM STANDARD

No deviation.

9.4 TEST SETUP



9.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

9.6 TEST RESULTS

Please refer to the APPENDIX H.

10. 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	ESR3	103027	Jun. 16, 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	EMI Test Receiver	Keysight	N9038A	MY56400060	Dec. 22, 2024
3	Cable	RW	LMR-400(30MHz-1 GHz)(10m+2.5m+0. 8M)	N/A	Jul. 04, 2024
4	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
5	1266 Chamber room	ETS	12*6*6	N/A	May 21, 2024

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	Jul. 04, 2024
5	Cable	RegalWay	LMR400-NMNM-3 m	N/A	Jul. 04, 2024
6	Cable	RegalWay	LMR400-NMNM-0. 5m	N/A	Jul. 04, 2024
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 17, 2024

Radiated Emissions - Above 1 GHz					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Receiver	Agilent	N9038A	MY52130039	Dec. 22, 2024
2	Preamplifier	EMC INSTRUMENT	EMC118A45SE	980888	Nov. 17, 2024
3	Double Ridged Guide Antenna	ETS	3115	75789	May 31, 2024
4	Cable	RegalWay	RWLP50-4.0A-SMSM-12.5M	N/A	Feb. 19, 2025
5	Cable	RegalWay	RWLP50-4.0A-NMRASM-2.5M	N/A	Aug. 08, 2024
6	Cable	RegalWay	RWLP50-4.0A-NMRASMRA-0.8M	N/A	Aug. 08, 2024
7	Low Noise Amplifier	CONNPHY	CLN-18G40G-4330-K	619413	Jul. 06, 2024
8	Cable	RegalWay	RWLP50-2.6A-2.92M2.92M-1.1M	N/A	Jul. 26, 2024
9	Cable	Tonscend	HF160-KMKM-3M	N/A	Jul. 26, 2024
10	Broad-Band Horn Antenna	Schwarzbeck	BBHA9170(3m)	9170-319	Jun. 20, 2024
11	966 Chamber room	CM	9*6*6	N/A	May 17, 2024 May 19, 2025
12	Attenuator	Talent Microwave	TA10A2-S-18	N/A	N/A
13	Filter	STI	STI15-9912	N/A	Jun. 21, 2024
14	Positioning Controller	MF	MF-7802	N/A	N/A
15	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A

Bandwidth & Power Spectral Density					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP38	100852	Jun. 16, 2024
2	Attenuator	Talent Microwave	TA10A0-S-26.5	N/A	N/A
3	DC Block	N/A	N/A	N/A	N/A
4	Measurement Software	BTL	BTL Conducted Test	N/A	N/A

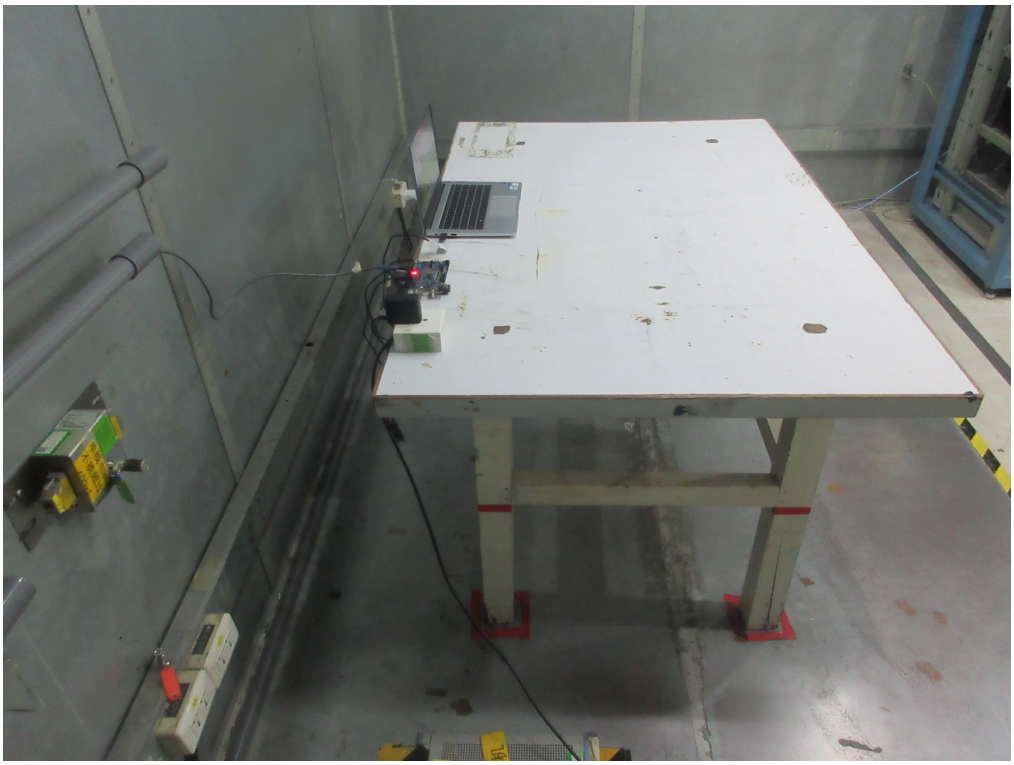
Maximum Output Power					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Peak Power Analyzer	Keysight	8990B	MY51000506	Jun. 17, 2024
2	Wideband power sensor	Keysight	N1923A	MY58310004	Jun. 17, 2024
3	Attenuator	Talent Microwave	TA10A2-S-18	N/A	N/A

Frequency Stability					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP38	100852	Jun. 16, 2024
2	Attenuator	Talent Microwave	TA10A0-S-26.5	N/A	N/A
3	DC Block	N/A	N/A	N/A	N/A
4	Multi-output DC Power Supply	GW Instek	GPC-3030DN	EK880675	Jul. 07, 2024
5	Temperature Chamber	ESPEC	SU-242	93018786	Jul. 07, 2024
6	Cable	Woke	S02-181212-064	N/A	N/A
7	Measurement Software	BTL	BTL Conducted Test	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.

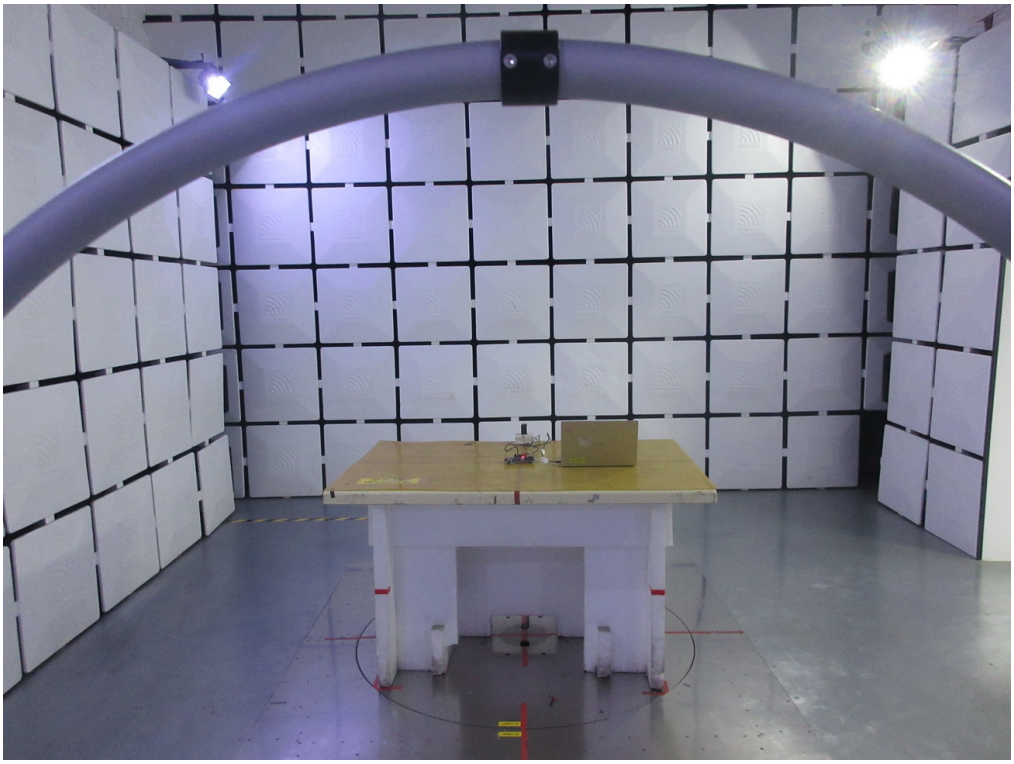
11. EUT TEST PHOTOS

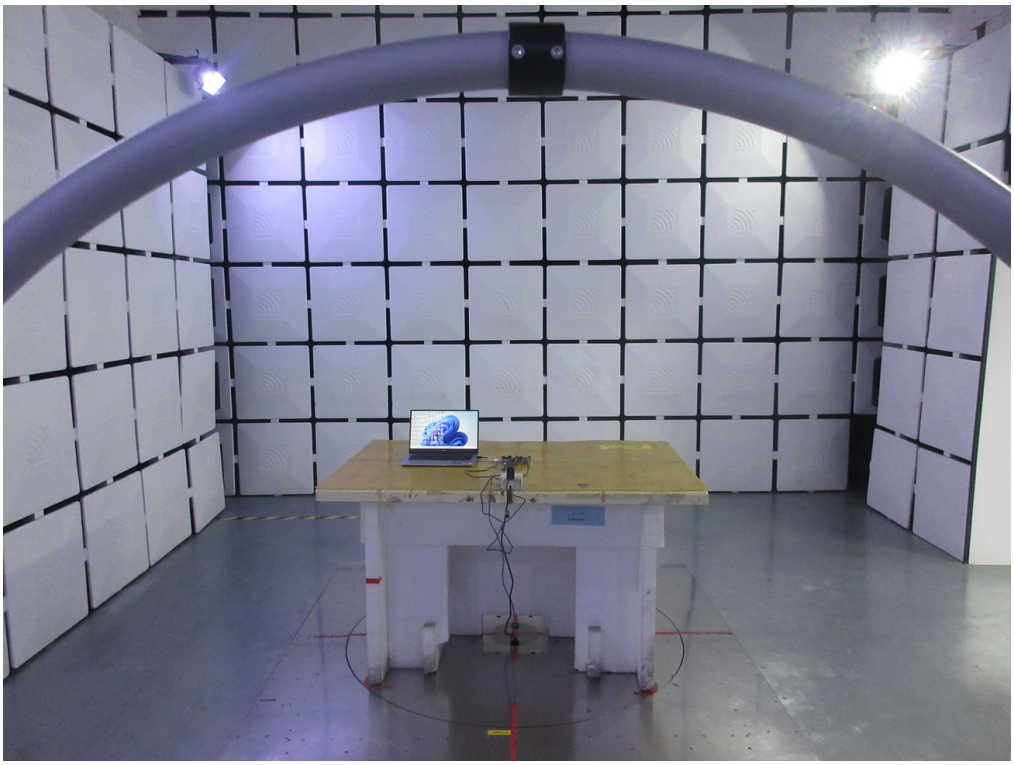
AC Power Line Conducted Emissions Test Photos



Radiated Emissions Test Photos

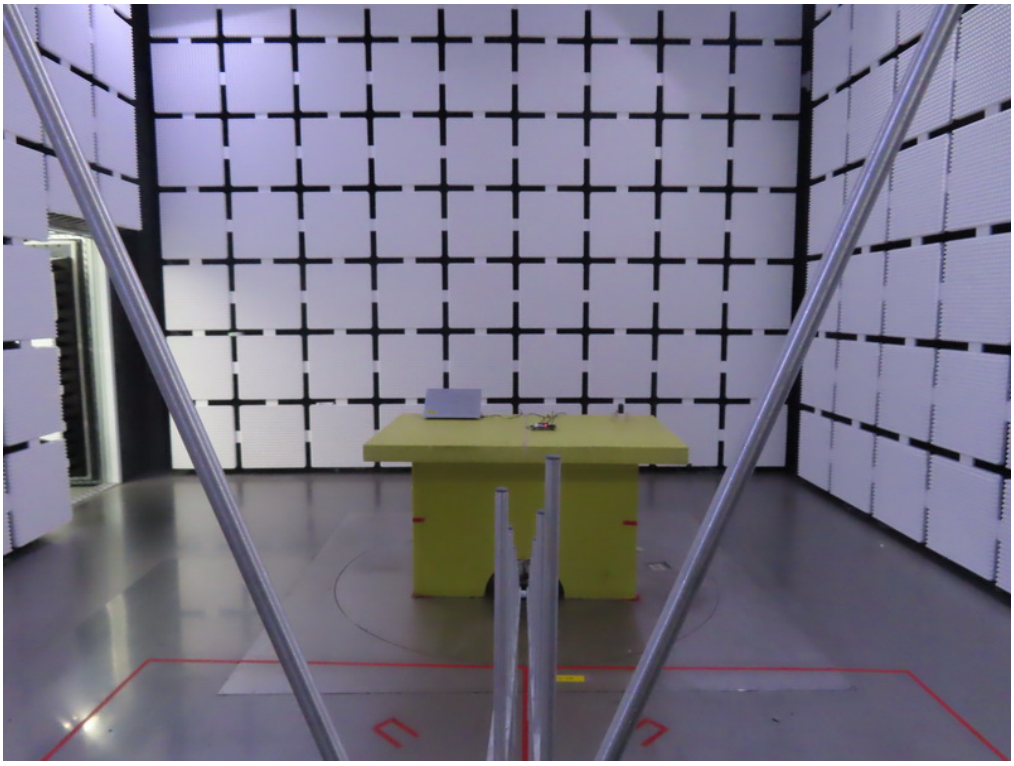
9 kHz to 30 MHz

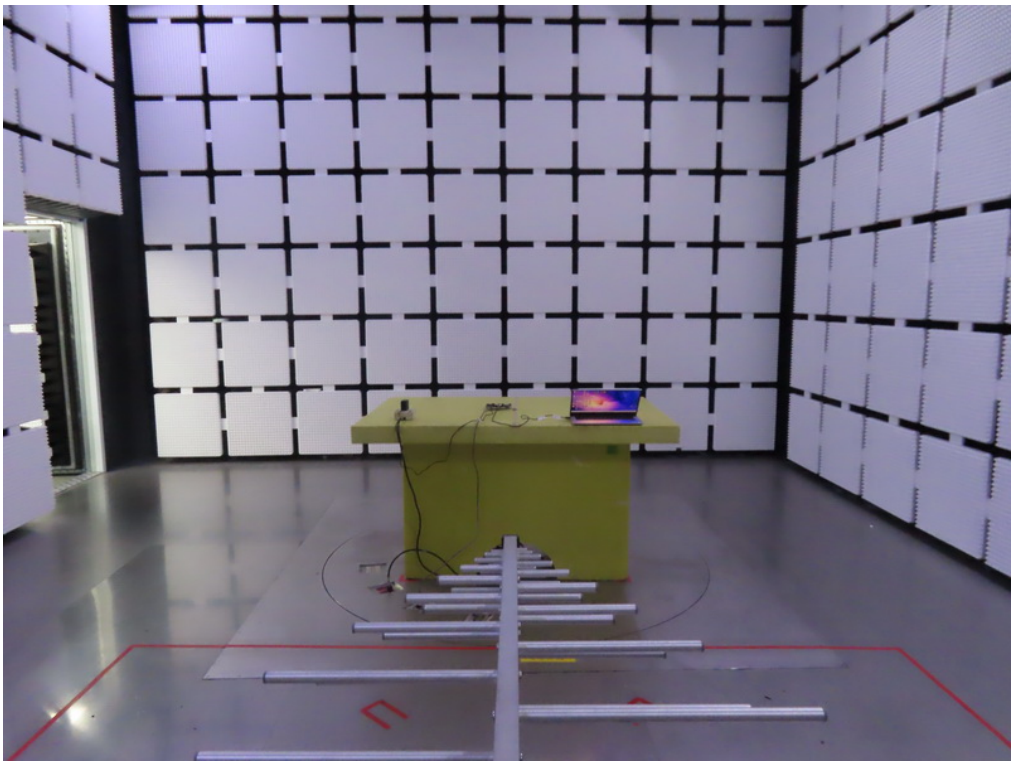




Radiated Emissions Test Photos

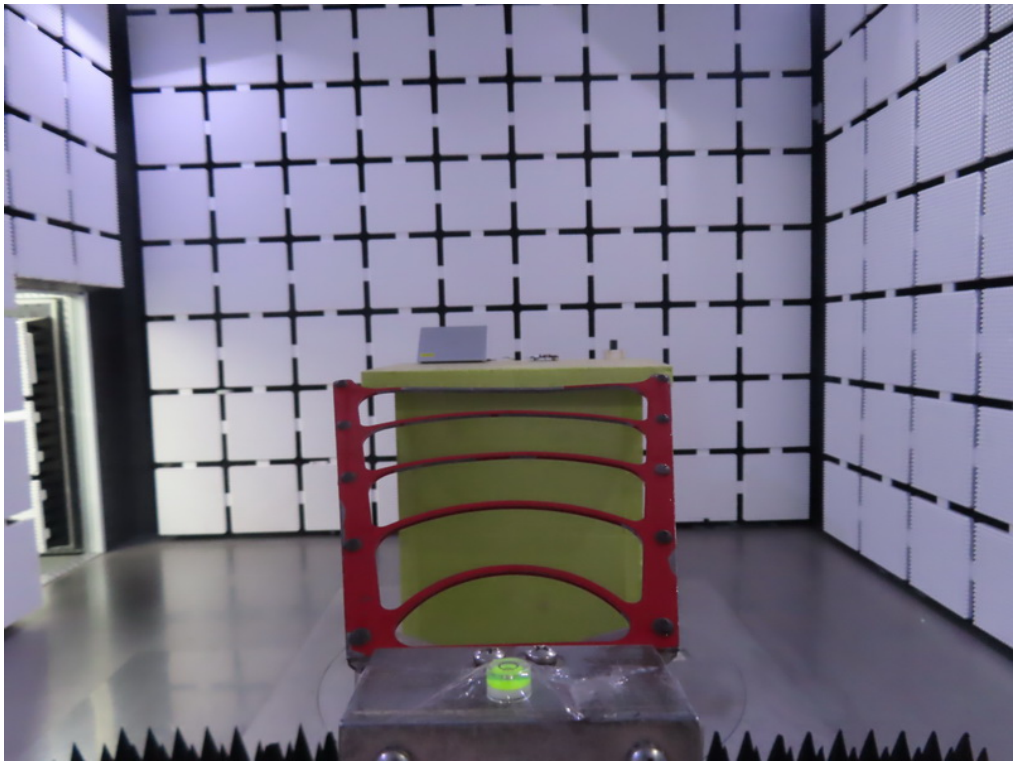
30 MHz to 1000 MHz

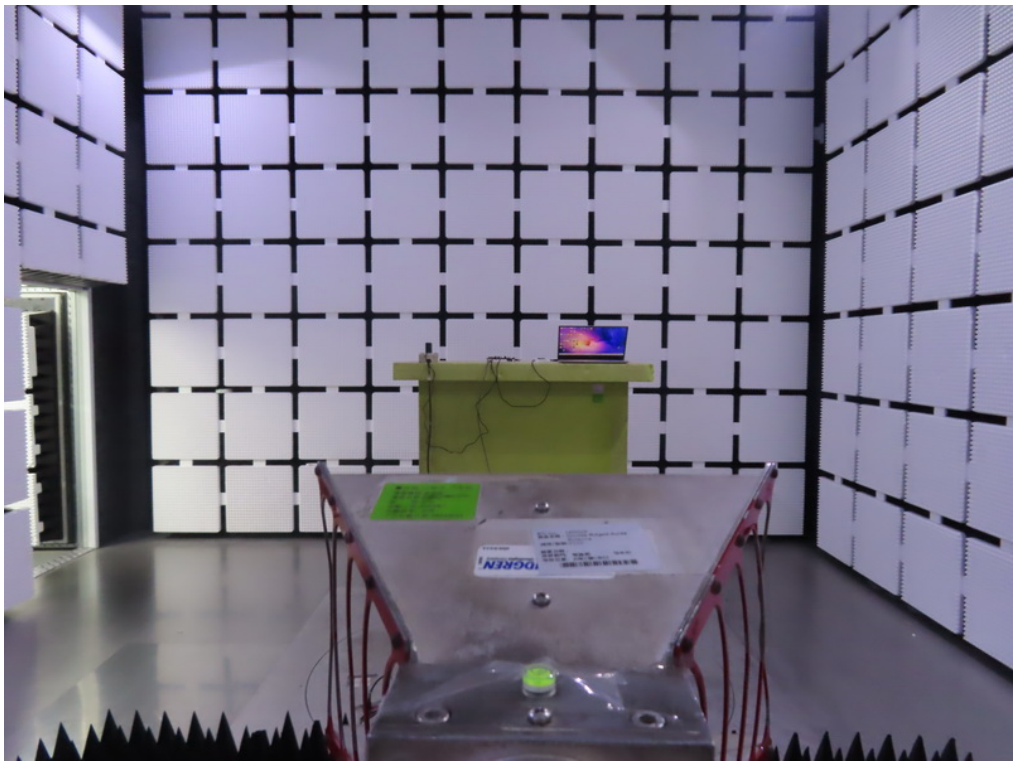




Radiated Emissions Test Photos

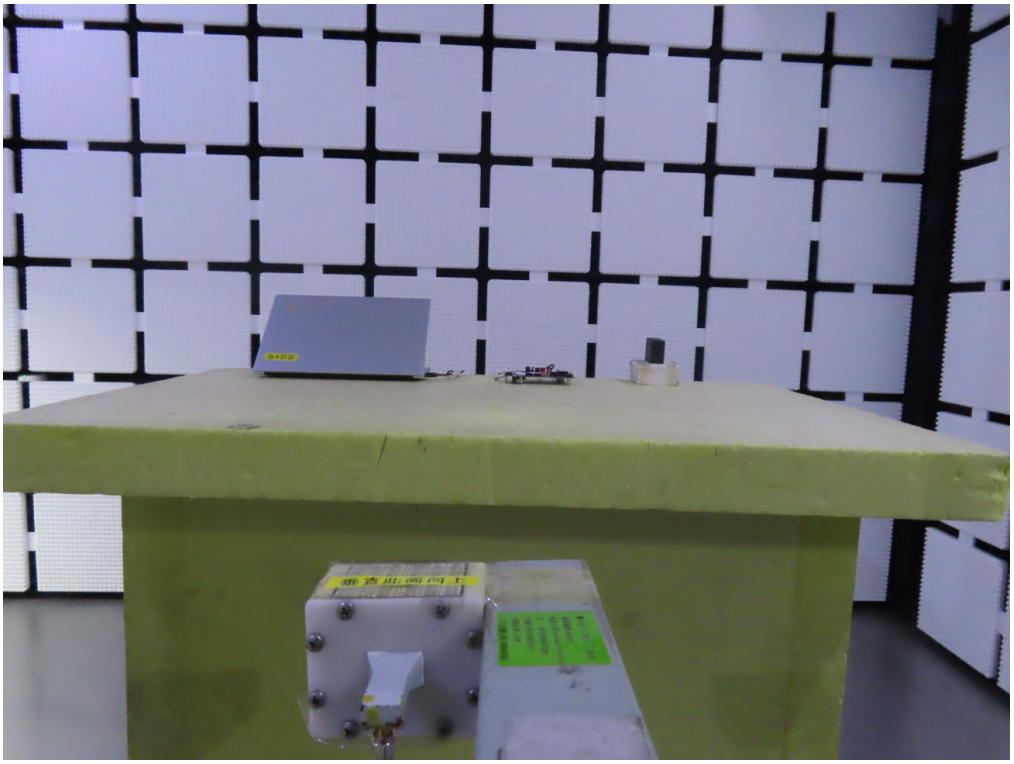
Above 1 GHz_Band edge and Harmonic (1 GHz to 18 GHz)

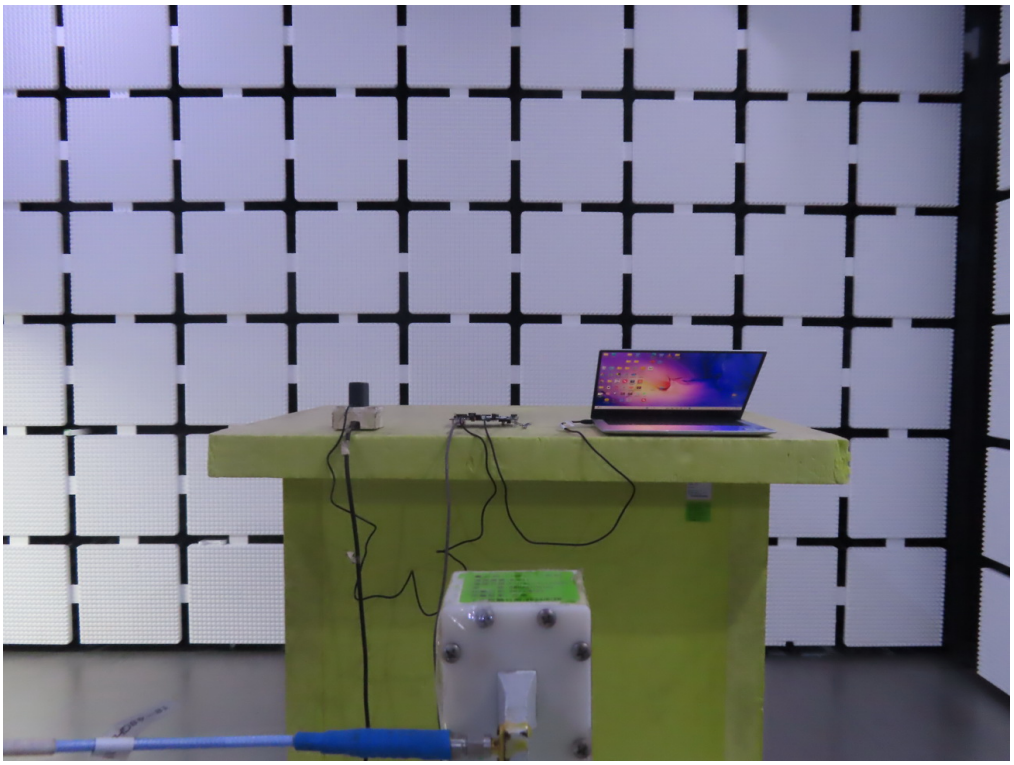




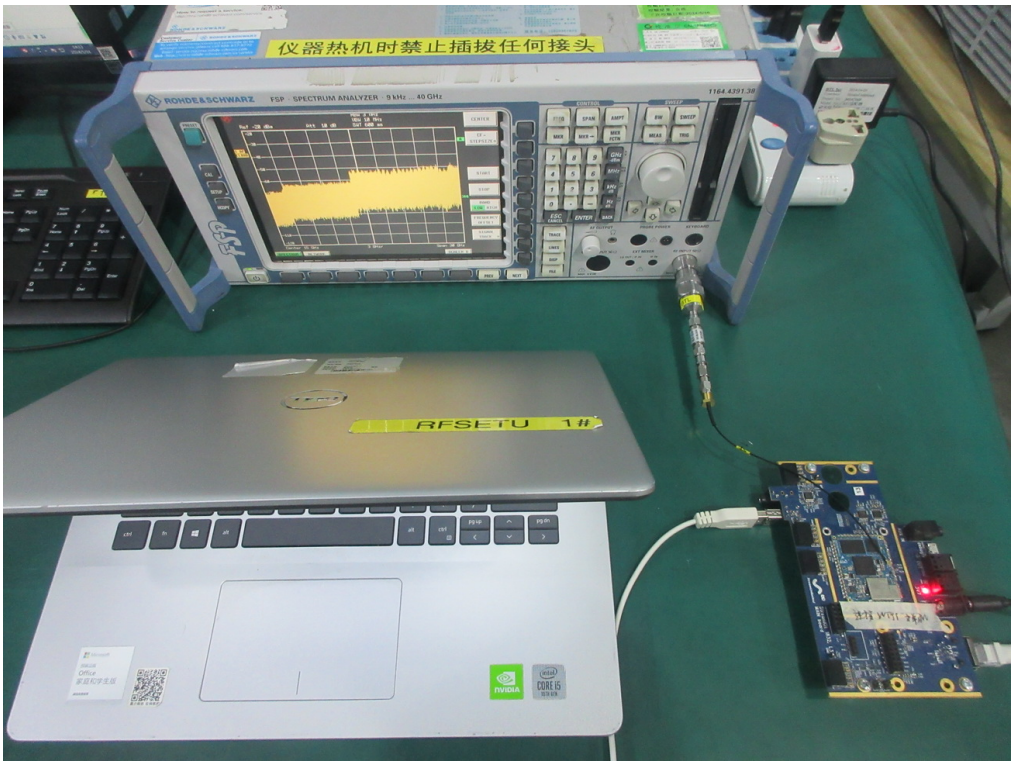
Radiated Emissions Test Photos

Above 1 GHz_Harmonic (18 GHz to 26.5 GHz)



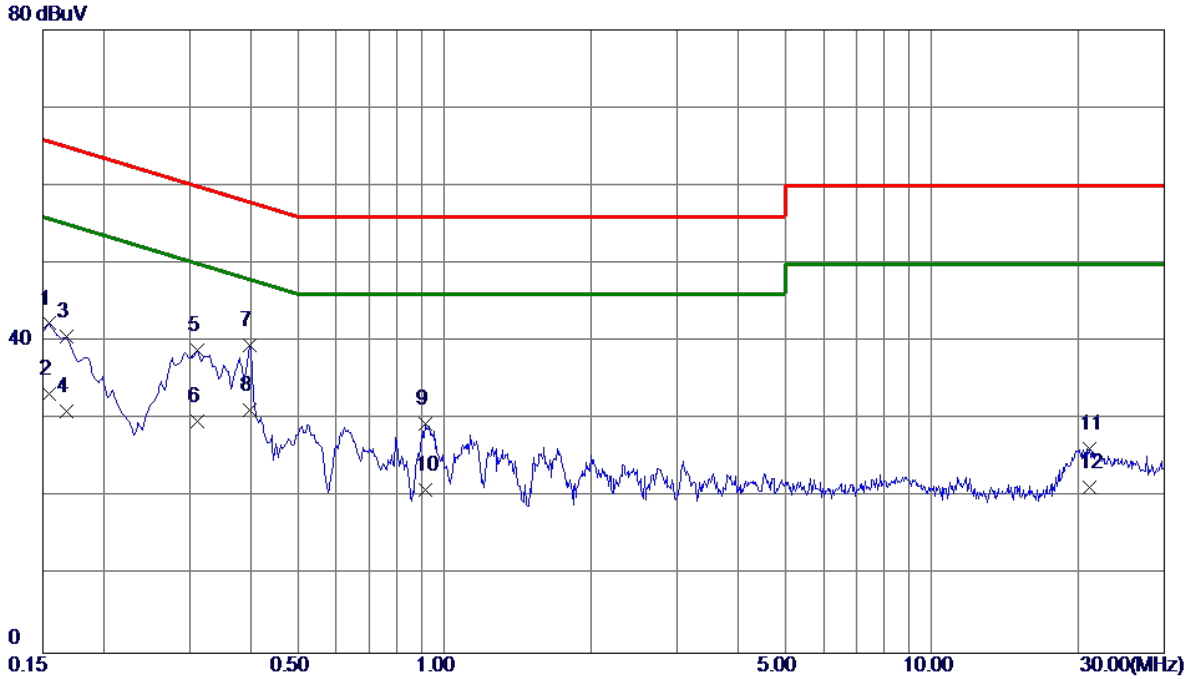


Conducted Test Photos



APPENDIX A - AC POWER LINE CONDUCTED EMISSIONS

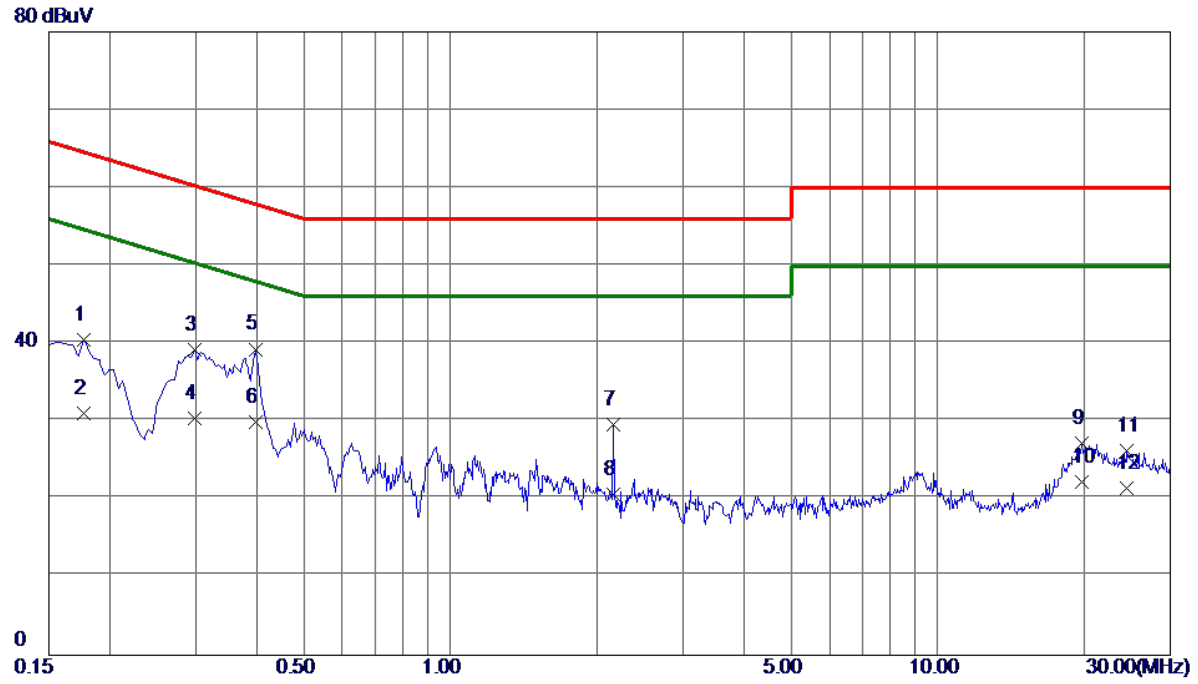
Test Mode	TX N(HT20) Mode Channel 149 (UNII-3)	Phase	Line



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	0.1544	32.35	9.97	42.32	65.76	-23.44	QP	
2	0.1544	23.30	9.97	33.27	55.76	-22.49	AVG	
3	0.1680	30.63	9.97	40.60	65.06	-24.46	QP	
4	0.1680	21.10	9.97	31.07	55.06	-23.99	AVG	
5	0.3120	28.71	10.20	38.91	59.92	-21.01	QP	
6	0.3120	19.60	10.20	29.80	49.92	-20.12	AVG	
7	0.3975	29.20	10.39	39.59	57.91	-18.32	QP	
8 *	0.3975	20.80	10.39	31.19	47.91	-16.72	AVG	
9	0.9150	18.30	11.21	29.51	56.00	-26.49	QP	
10	0.9150	9.70	11.21	20.91	46.00	-25.09	AVG	
11	21.0930	11.55	14.76	26.31	60.00	-33.69	QP	
12	21.0930	6.50	14.76	21.26	50.00	-28.74	AVG	

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

Test Mode	TX N(HT20) Mode Channel 149 (UNII-3)	Phase	Neutral

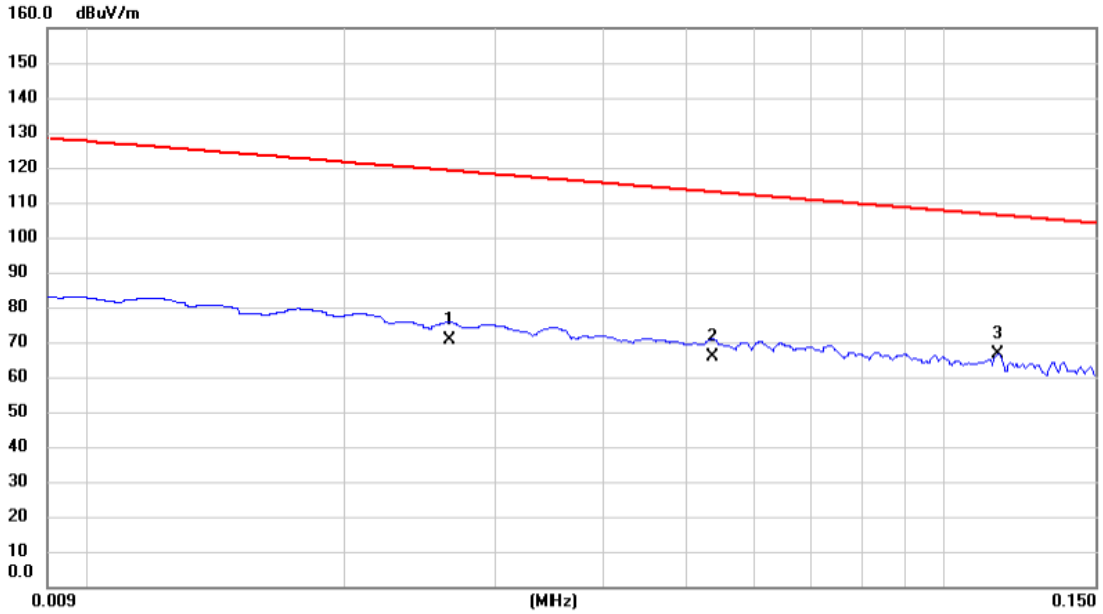


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	0.1770	30.61	9.93	40.54	64.63	-24.09	QP	
2	0.1770	21.10	9.93	31.03	54.63	-23.60	AVG	
3	0.2985	29.13	10.13	39.26	60.28	-21.02	QP	
4	0.2985	20.30	10.13	30.43	50.28	-19.85	AVG	
5	0.3975	28.93	10.35	39.28	57.91	-18.63	QP	
6 *	0.3975	19.60	10.35	29.95	47.91	-17.96	AVG	
7	2.1570	18.87	10.80	29.67	56.00	-26.33	QP	
8	2.1570	9.90	10.80	20.70	46.00	-25.30	AVG	
9	19.8015	12.76	14.43	27.19	60.00	-32.81	QP	
10	19.8015	7.80	14.43	22.23	50.00	-27.77	AVG	
11	24.4635	11.04	15.27	26.31	60.00	-33.69	QP	
12	24.4635	6.21	15.27	21.48	50.00	-28.52	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

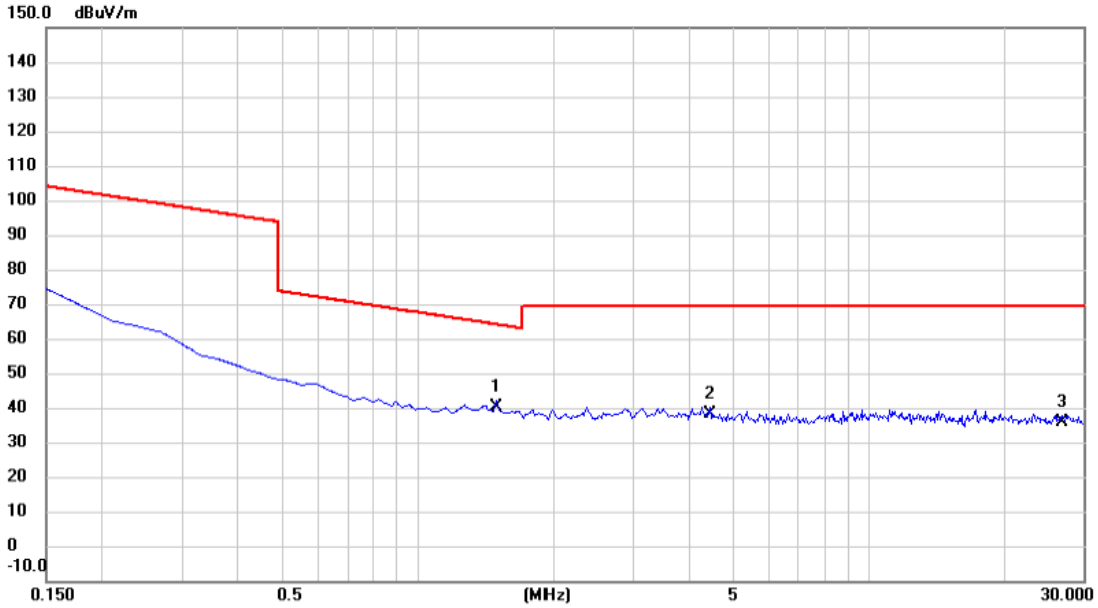
Test Mode	TX N(HT20) Mode Channel 149 (UNII-3)	Polarization	Ant 0°



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		0.0265	49.71	21.00	70.71	119.14	-48.43	AVG	
2		0.0536	44.67	21.21	65.88	113.02	-47.14	AVG	
3	*	0.1153	45.20	21.30	66.50	106.37	-39.87	AVG	

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

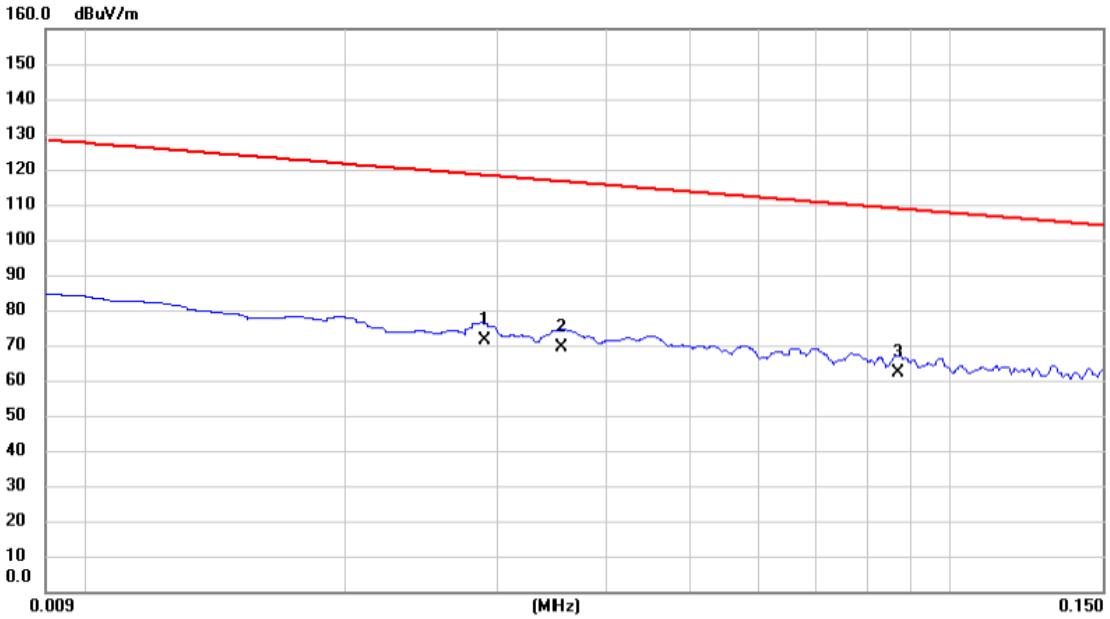
Test Mode	TX N(HT20) Mode Channel 149 (UNII-3)	Polarization	Ant 0°



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	1.4932	18.94	21.17	40.11	64.12	-24.01	QP	
2		4.4335	16.95	21.21	38.16	69.54	-31.38	QP	
3		26.8508	14.12	21.86	35.98	69.54	-33.56	QP	

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

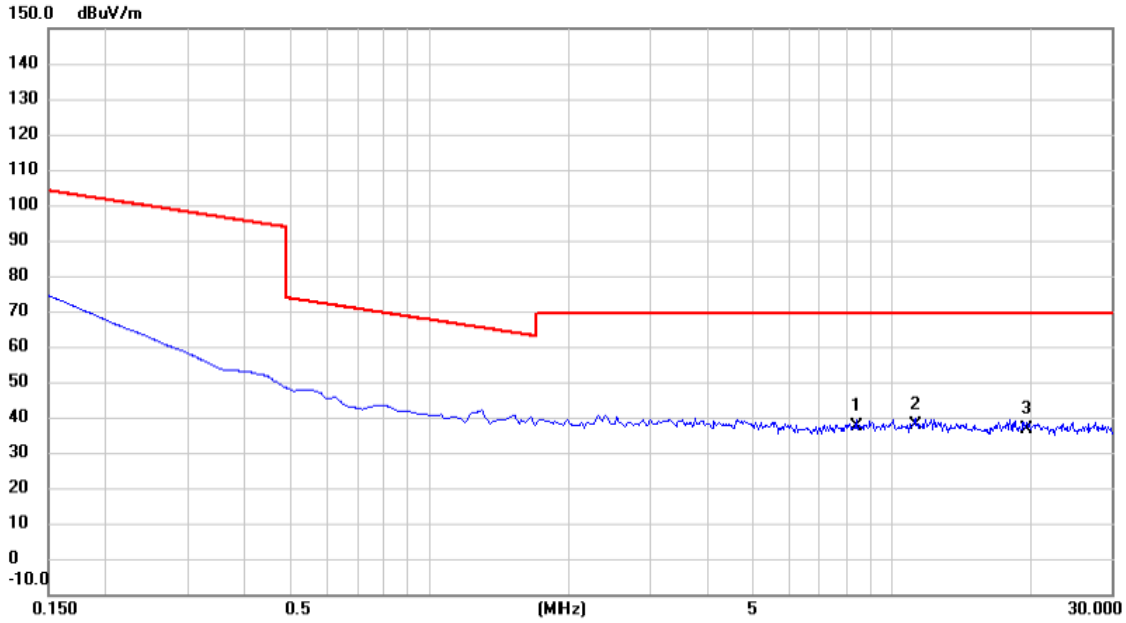
Test Mode	TX N(HT20) Mode Channel 149 (UNII-3)	Polarization	Ant 90°



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		0.0290	50.43	21.07	71.50	118.36	-46.86	AVG	
2		0.0355	48.31	21.13	69.44	116.60	-47.16	AVG	
3	*	0.0870	40.76	21.30	62.06	108.81	-46.75	AVG	

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

Test Mode	TX N(HT20) Mode Channel 149 (UNII-3)	Polarization	Ant 90°

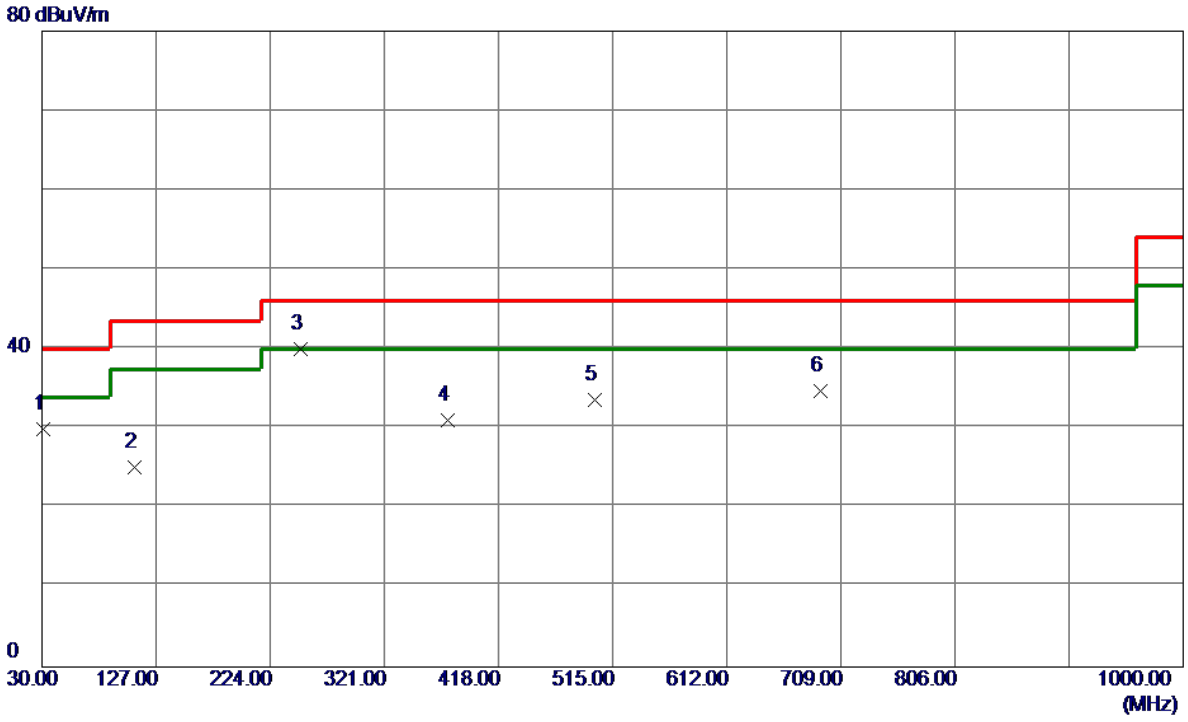


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		8.3588	16.01	21.27	37.28	69.54	-32.26	QP	
2	*	11.2542	16.55	21.24	37.79	69.54	-31.75	QP	
3		19.5525	15.10	21.37	36.47	69.54	-33.07	QP	

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

APPENDIX C - RADIATED EMISSION - 30 MHZ TO 1000 MHZ

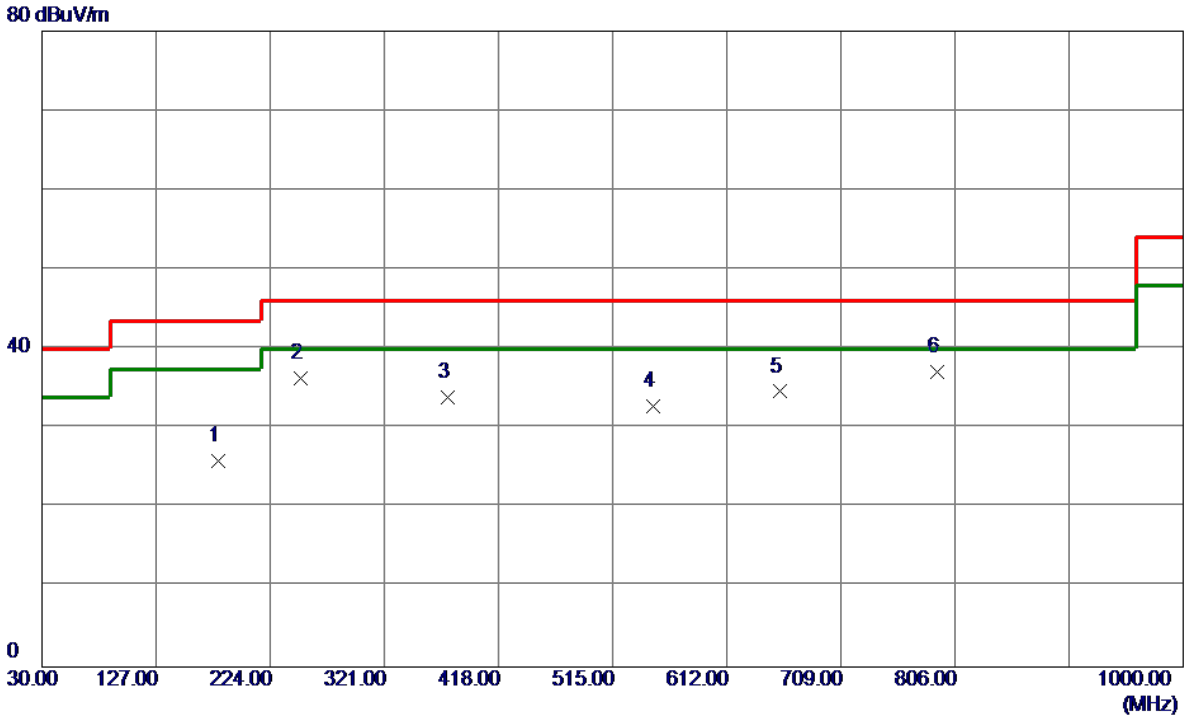
Test Mode	TX N(HT20) Mode Channel 149 (UNII-3)	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	31.4550	42.82	-12.87	29.95	40.00	-10.05	Peak	
2	108.5700	39.72	-14.54	25.18	43.50	-18.32	Peak	
3 *	250.1900	52.35	-12.42	39.93	46.00	-6.07	Peak	
4	374.8350	39.90	-8.91	30.99	46.00	-15.01	Peak	
5	499.9650	39.67	-6.12	33.55	46.00	-12.45	Peak	
6	691.5400	37.27	-2.55	34.72	46.00	-11.28	Peak	

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

Test Mode	TX N(HT20) Mode Channel 149 (UNII-3)	Polarization	Horizontal

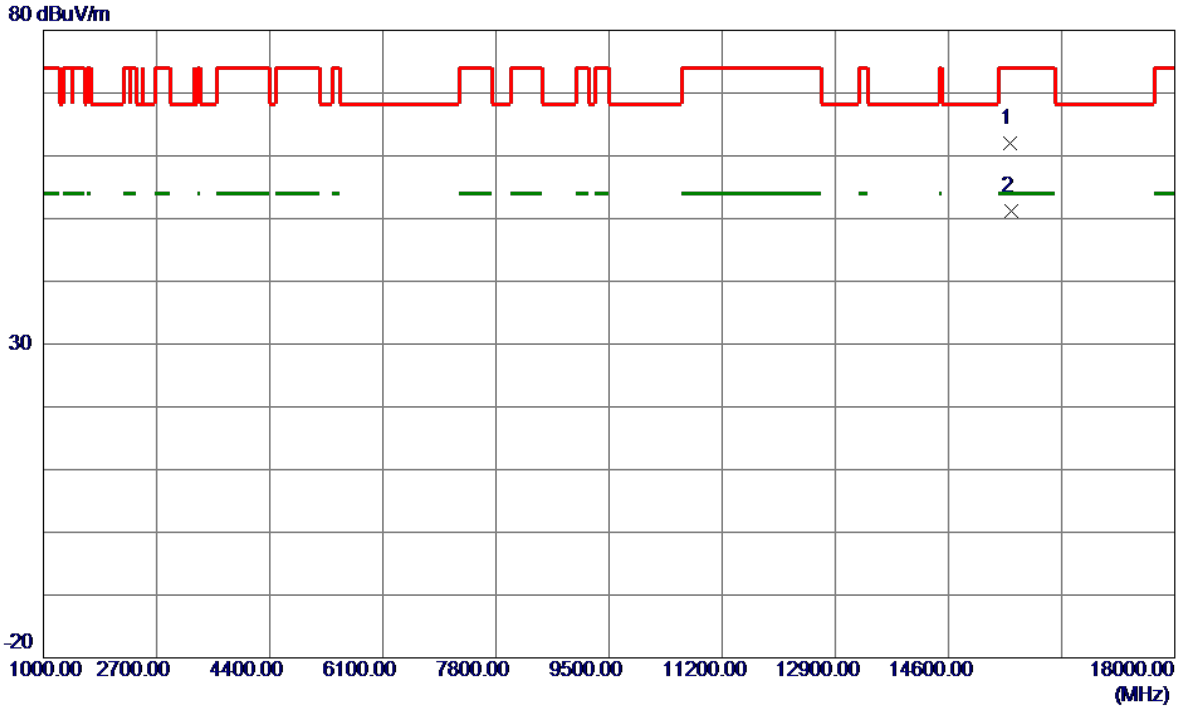


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	179.3800	38.22	-12.26	25.96	43.50	-17.54	Peak	
2	250.1900	48.76	-12.42	36.34	46.00	-9.66	Peak	
3	374.8350	42.82	-8.91	33.91	46.00	-12.09	Peak	
4	549.9200	37.90	-5.12	32.78	46.00	-13.22	Peak	
5	657.1050	37.55	-2.91	34.64	46.00	-11.36	Peak	
6 *	790.4800	38.50	-1.39	37.11	46.00	-8.89	Peak	

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

APPENDIX D - RADIATED EMISSION - ABOVE 1000 MHZ

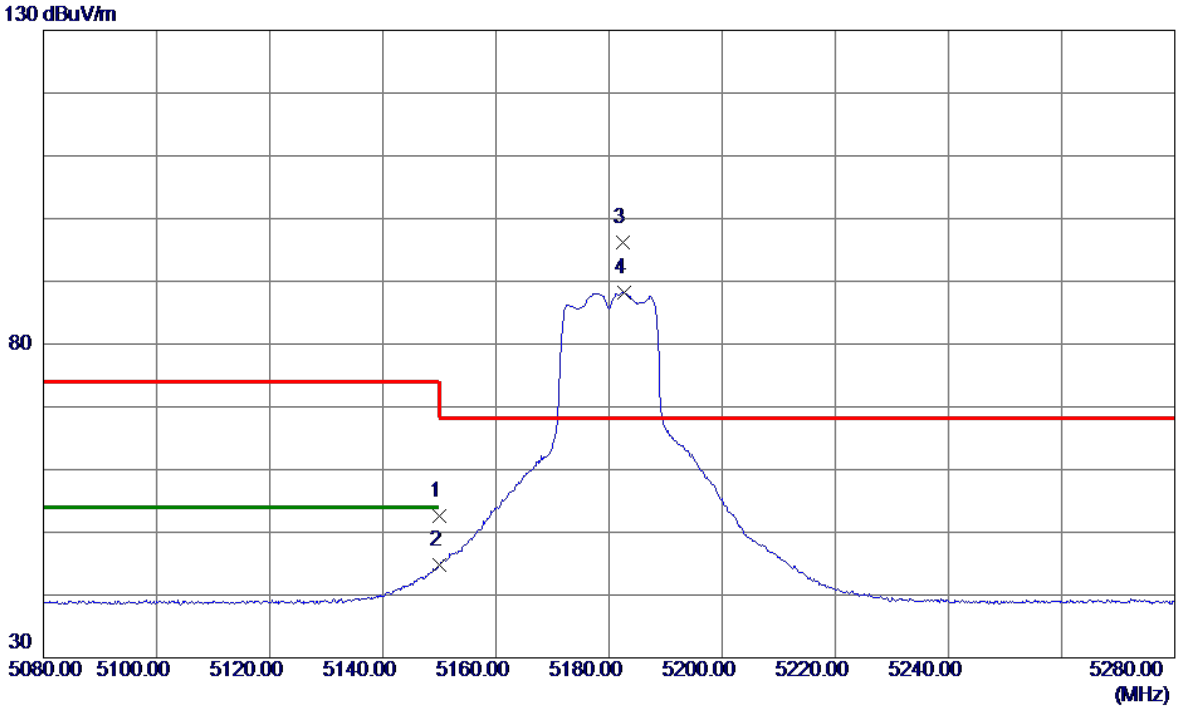
Test Mode	UNII-1_TX A Mode 5180 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	15526.2500	54.45	7.54	61.99	74.00	-12.01	Peak	
2 *	15543.0000	43.64	7.55	51.19	54.00	-2.81	AVG	

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

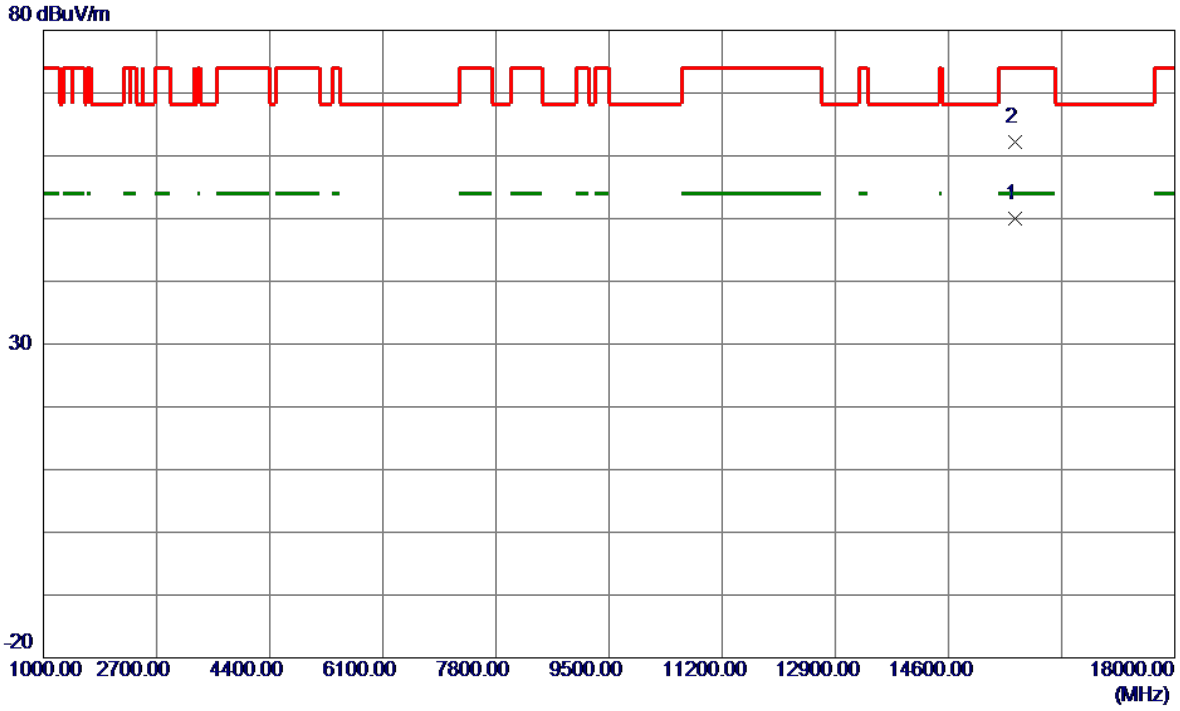
Test Mode	UNII-1_TX A Mode 5180 MHz	Polarization	Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	5150.0000	41.04	11.54	52.58	74.00	-21.42	Peak	
2	5150.0000	33.18	11.54	44.72	54.00	-9.28	AVG	
3 *	5182.4000	84.64	11.60	96.24	68.20	28.04	Peak	No Limit
4	5182.6000	76.61	11.61	88.22	999.00	-910.78	AVG	No Limit

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

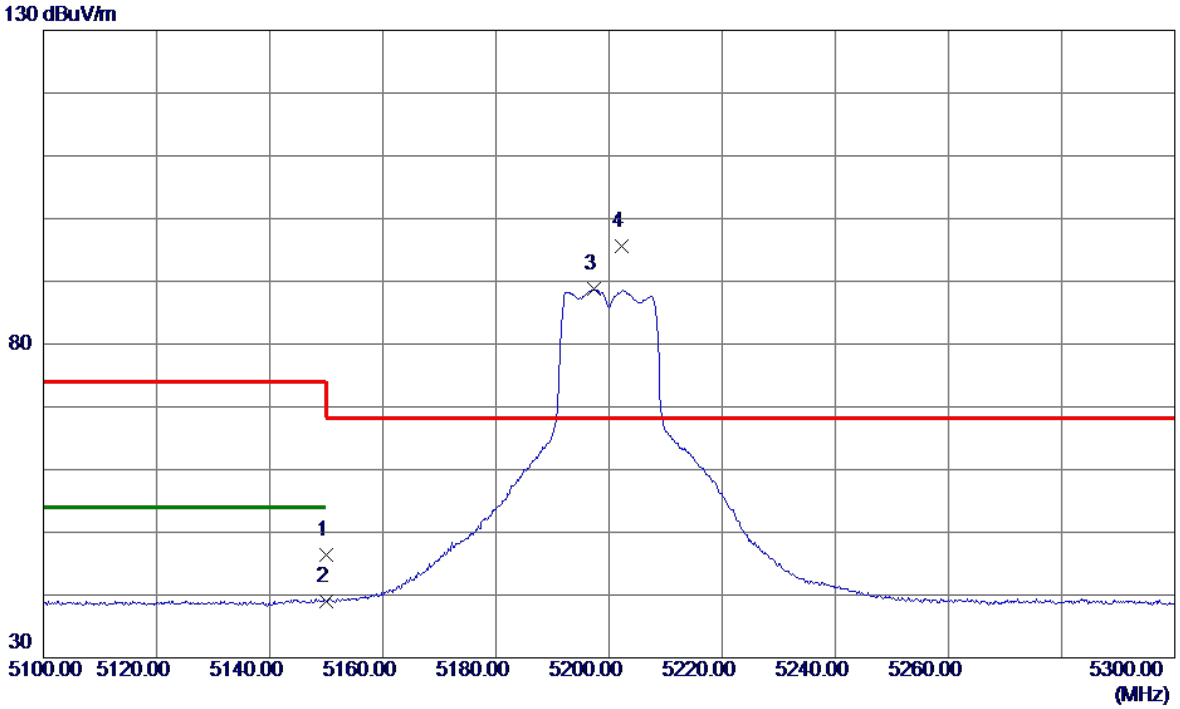
Test Mode	UNII-1_TX A Mode 5200 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	15599.0500	42.46	7.59	50.05	54.00	-3.95	AVG	
2	15603.5000	54.58	7.60	62.18	74.00	-11.82	Peak	

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

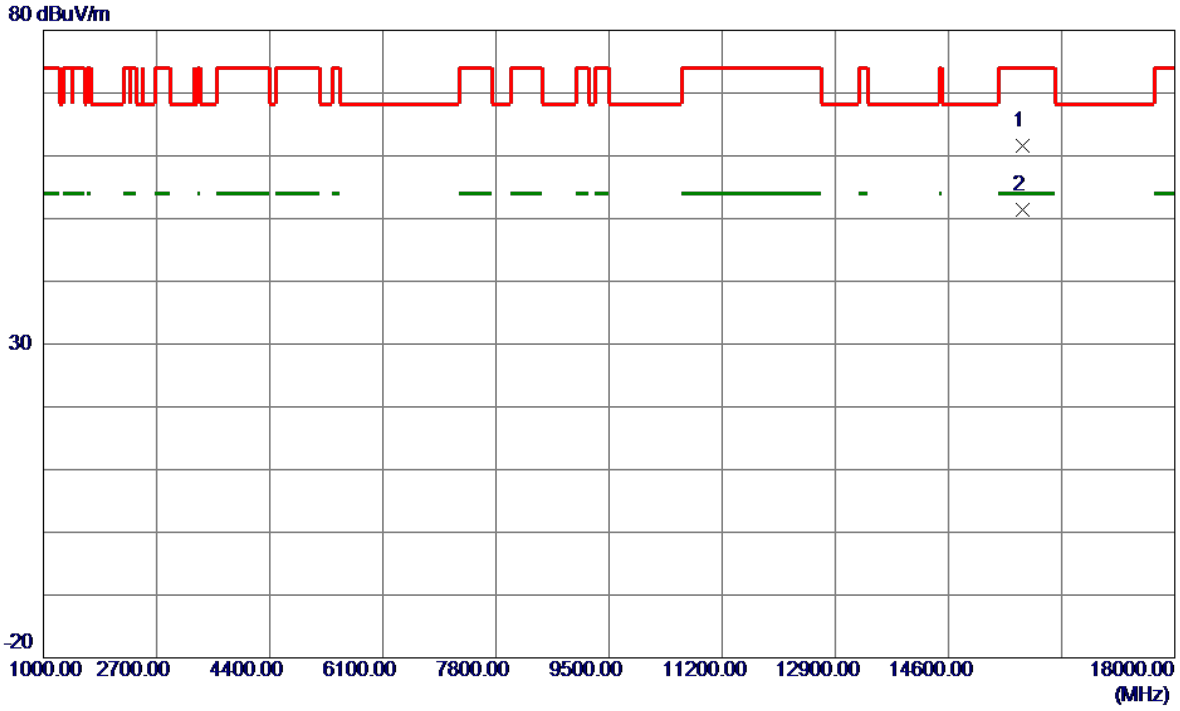
Test Mode	UNII-1_TX A Mode 5200 MHz	Polarization	Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	5150.0000	34.89	11.54	46.43	74.00	-27.57	Peak	
2	5150.0000	27.49	11.54	39.03	54.00	-14.97	AVG	
3	5197.4000	77.12	11.64	88.76	999.00	-910.24	AVG	No Limit
4 *	5202.3000	83.86	11.65	95.51	68.20	27.31	Peak	No Limit

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

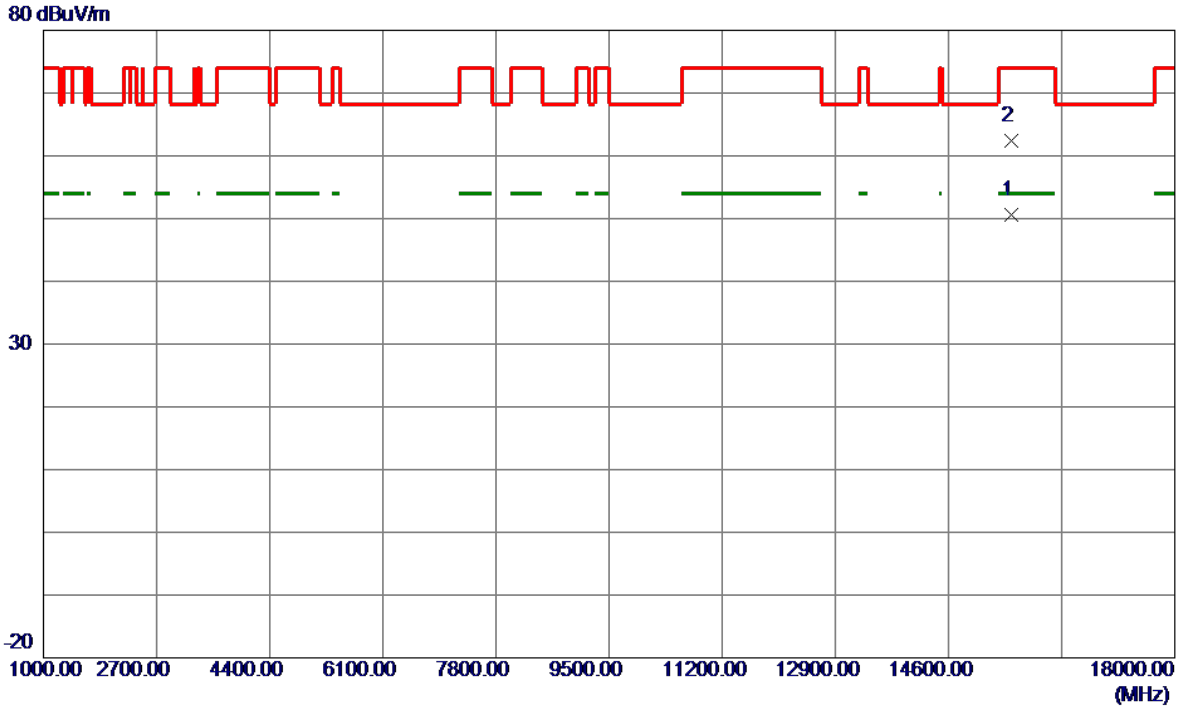
Test Mode	UNII-1_TX A Mode 5240 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	15708.0500	53.91	7.68	61.59	74.00	-12.41	Peak	
2 *	15720.3500	43.78	7.69	51.47	54.00	-2.53	AVG	

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

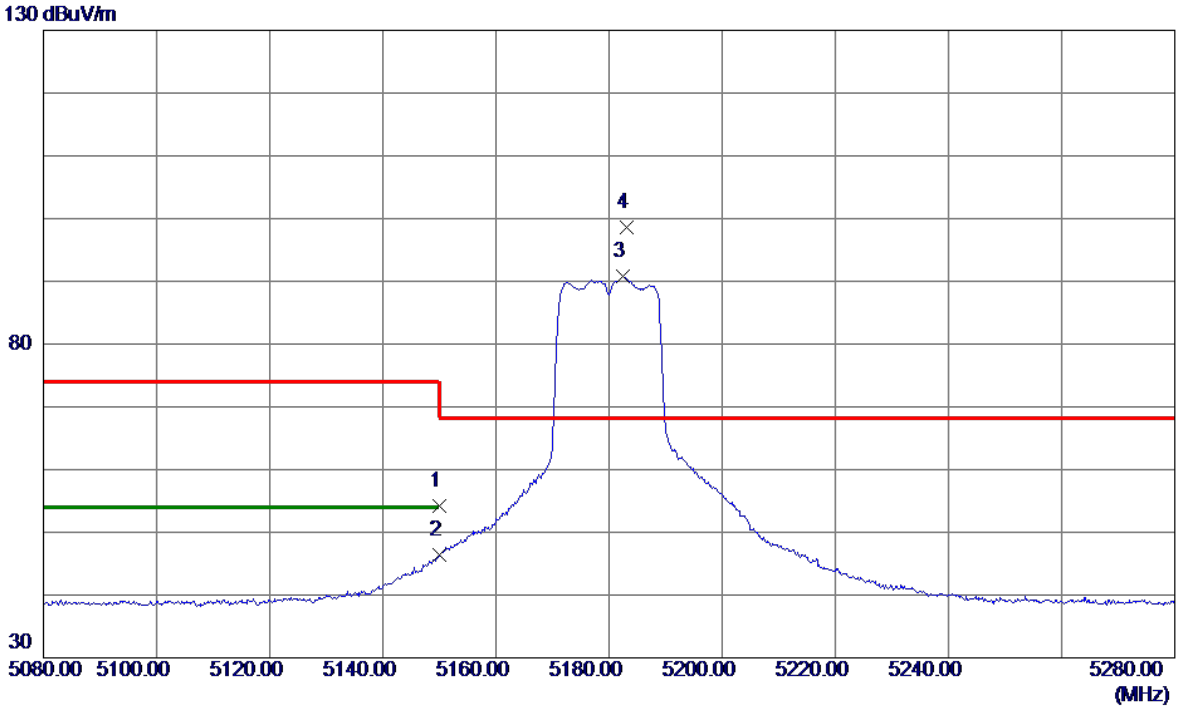
Test Mode	UNII-1_TX N(HT20) Mode 5180 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	15537.2500	43.11	7.54	50.65	74.00	-23.35	Peak	
2 *	15538.0500	54.80	7.55	62.35	74.00	-11.65	Peak	

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

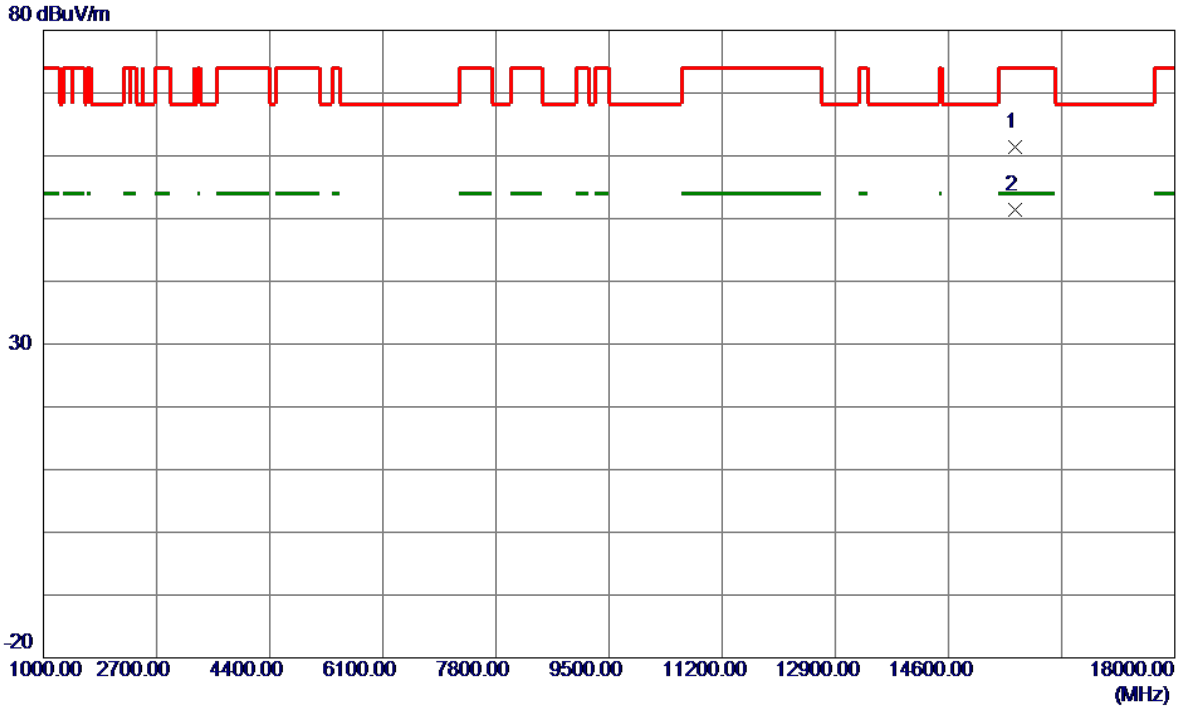
Test Mode	UNII-1_TX N(HT20) Mode 5180 MHz	Polarization	Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	5150.0000	42.59	11.54	54.13	74.00	-19.87	Peak	
2	5150.0000	34.87	11.54	46.41	54.00	-7.59	AVG	
3	5182.5000	79.14	11.61	90.75	999.00	-908.25	AVG	No Limit
4 *	5183.2000	86.98	11.61	98.59	68.20	30.39	Peak	No Limit

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

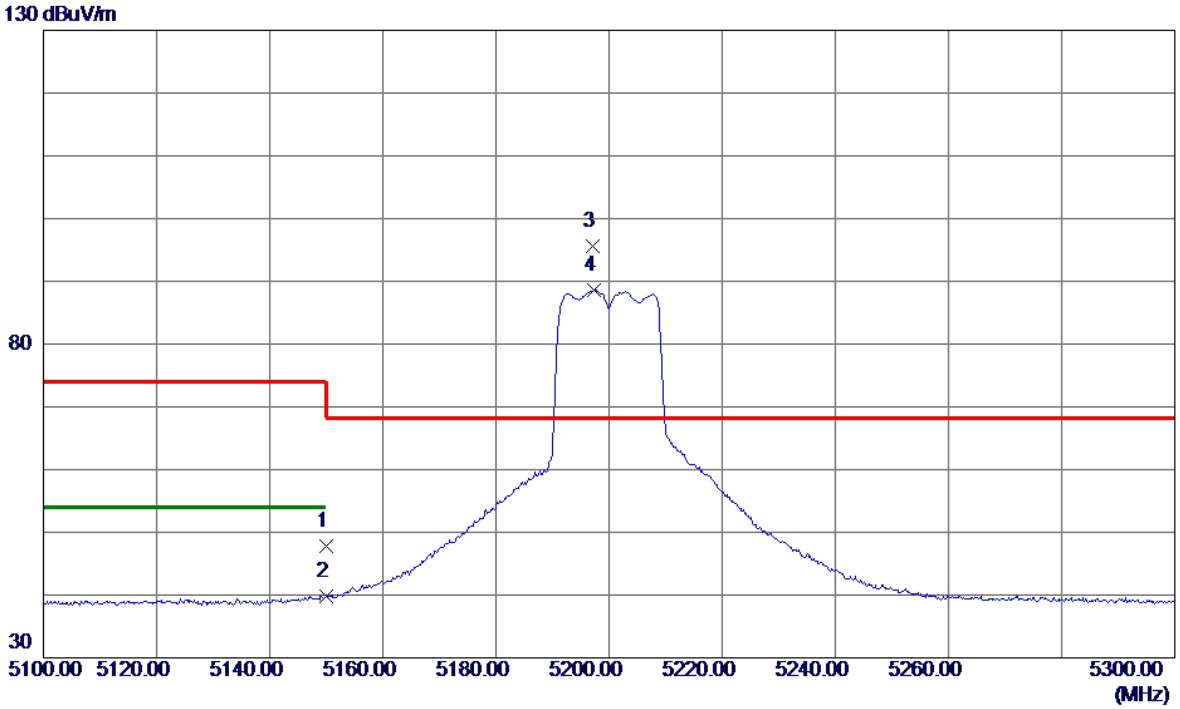
Test Mode	UNII-1_TX N(HT20) Mode 5200 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	15591.8000	53.83	7.59	61.42	74.00	-12.58	Peak	
2 *	15599.4000	43.77	7.59	51.36	54.00	-2.64	AVG	

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

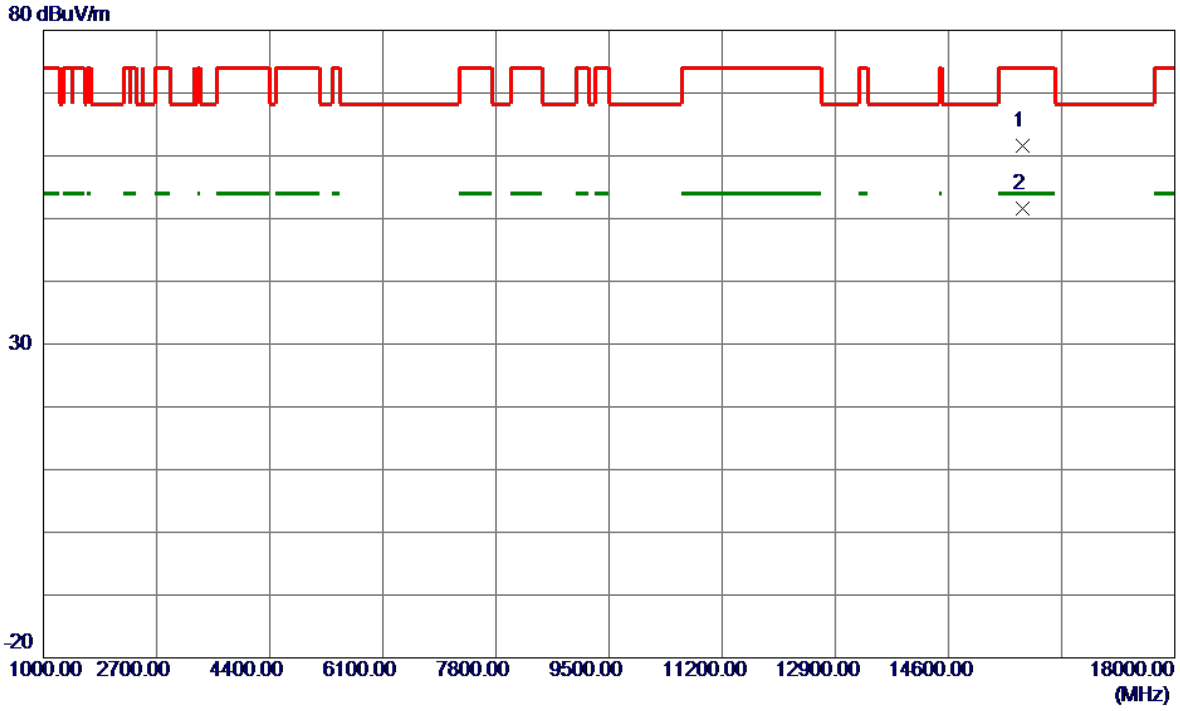
Test Mode	UNII-1_TX N(HT20) Mode 5200 MHz	Polarization	Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	5150.0000	36.17	11.54	47.71	74.00	-26.29	Peak	
2	5150.0000	28.35	11.54	39.89	54.00	-14.11	AVG	
3 *	5197.1000	83.95	11.64	95.59	68.20	27.39	Peak	No Limit
4	5197.4000	76.89	11.64	88.53	999.00	-910.47	AVG	No Limit

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

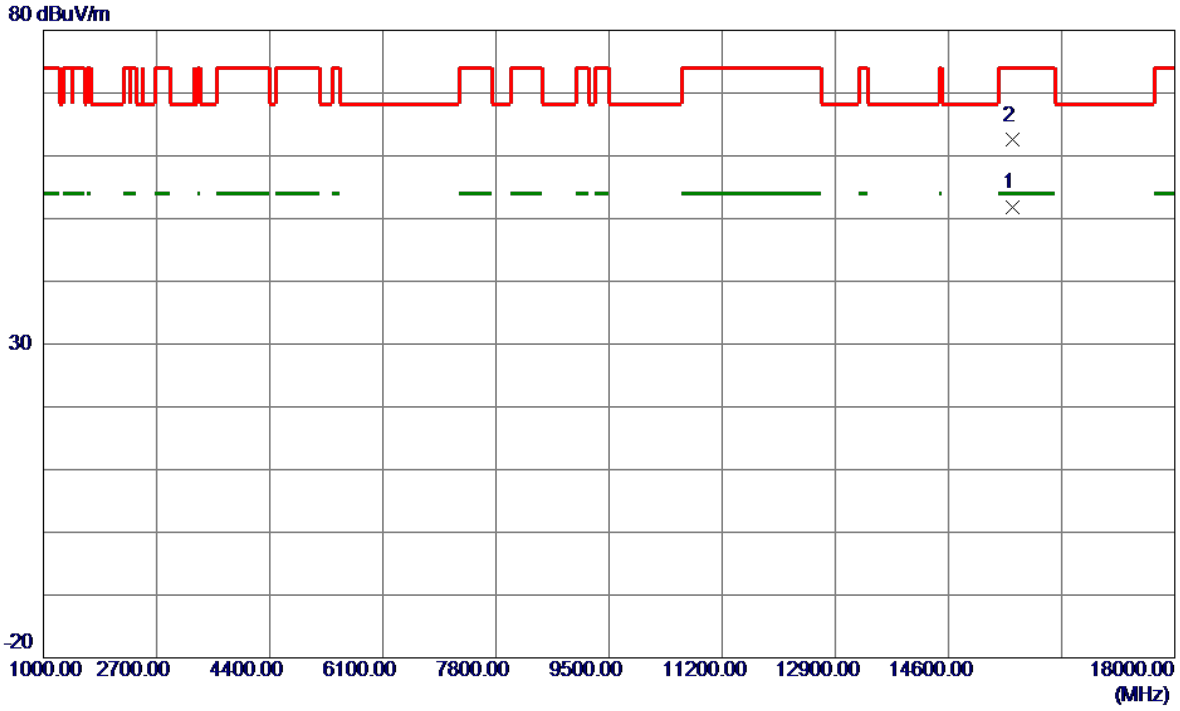
Test Mode	UNII-1_TX N(HT20) Mode 5240 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	15722.7000	53.89	7.69	61.58	74.00	-12.42	Peak	
2 *	15723.0000	43.82	7.69	51.51	54.00	-2.49	AVG	

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

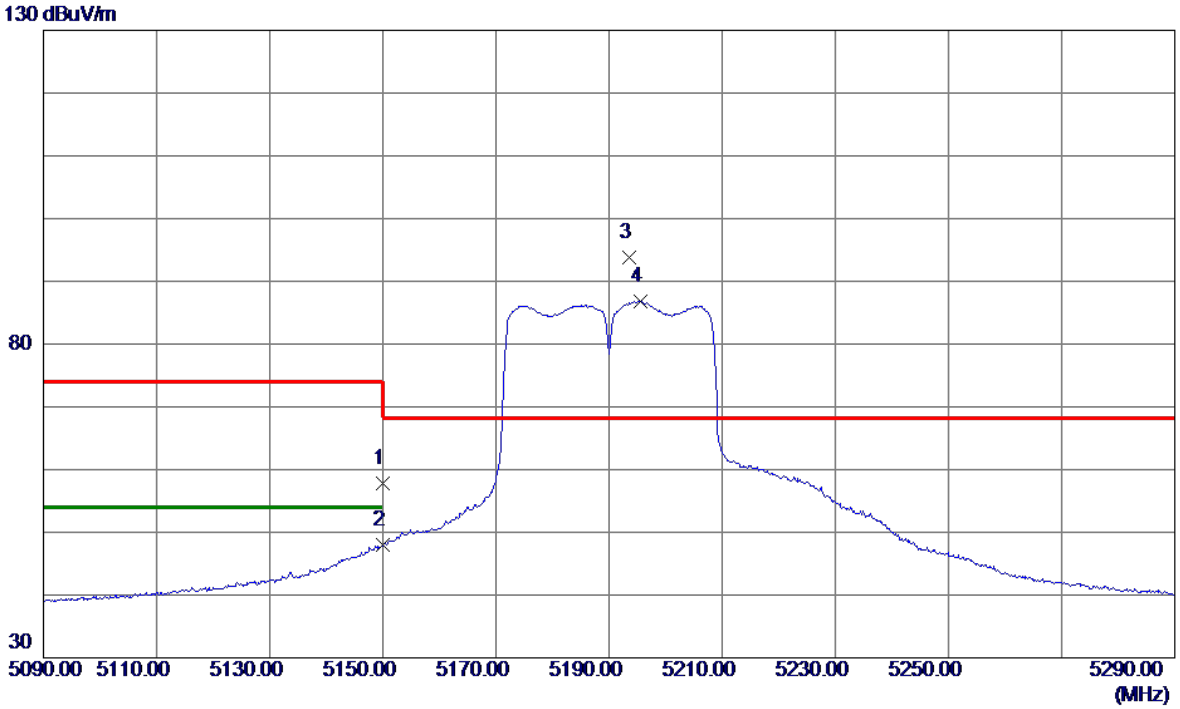
Test Mode	UNII-1_TX N(HT40) Mode 5190 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	15562.4250	44.20	7.56	51.76	54.00	-2.24	AVG	
2	15570.4500	54.93	7.57	62.50	74.00	-11.50	Peak	

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

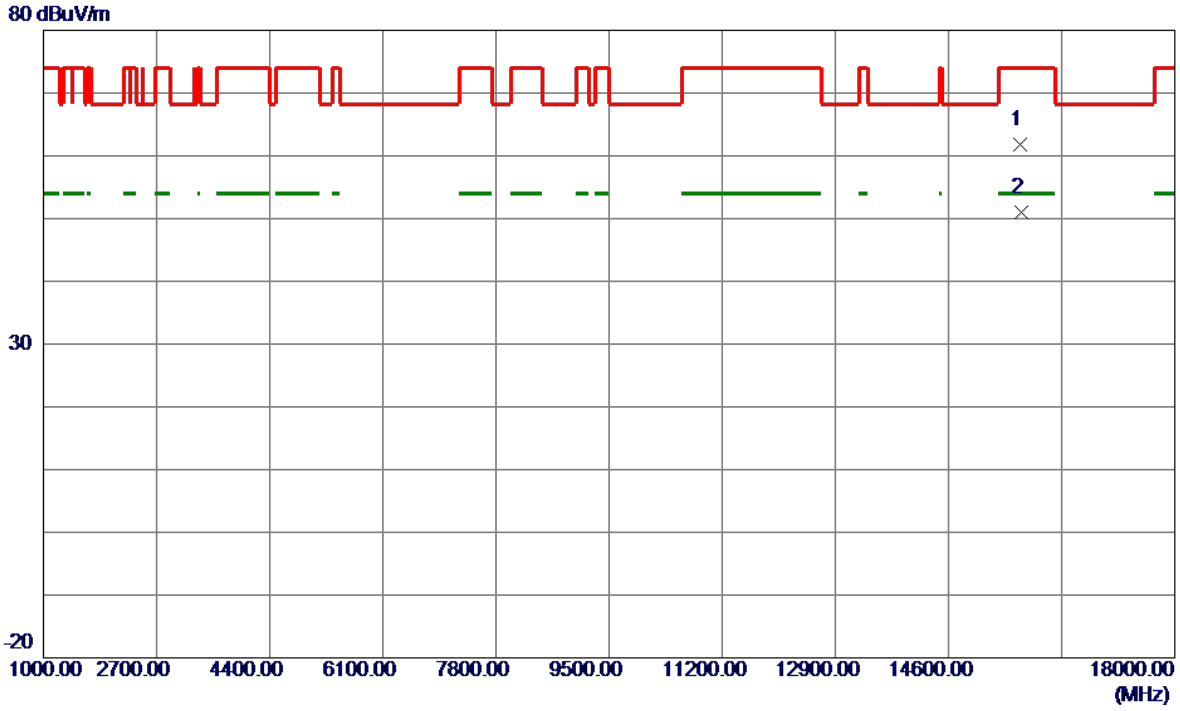
Test Mode	UNII-1_TX N(HT40) Mode 5190 MHz	Polarization	Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	5150.0000	46.31	11.54	57.85	74.00	-16.15	Peak	
2	5150.0000	36.44	11.54	47.98	54.00	-6.02	AVG	
3 *	5193.5000	82.25	11.63	93.88	68.20	25.68	Peak	No Limit
4	5195.5000	75.16	11.63	86.79	999.00	-912.21	AVG	No Limit

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

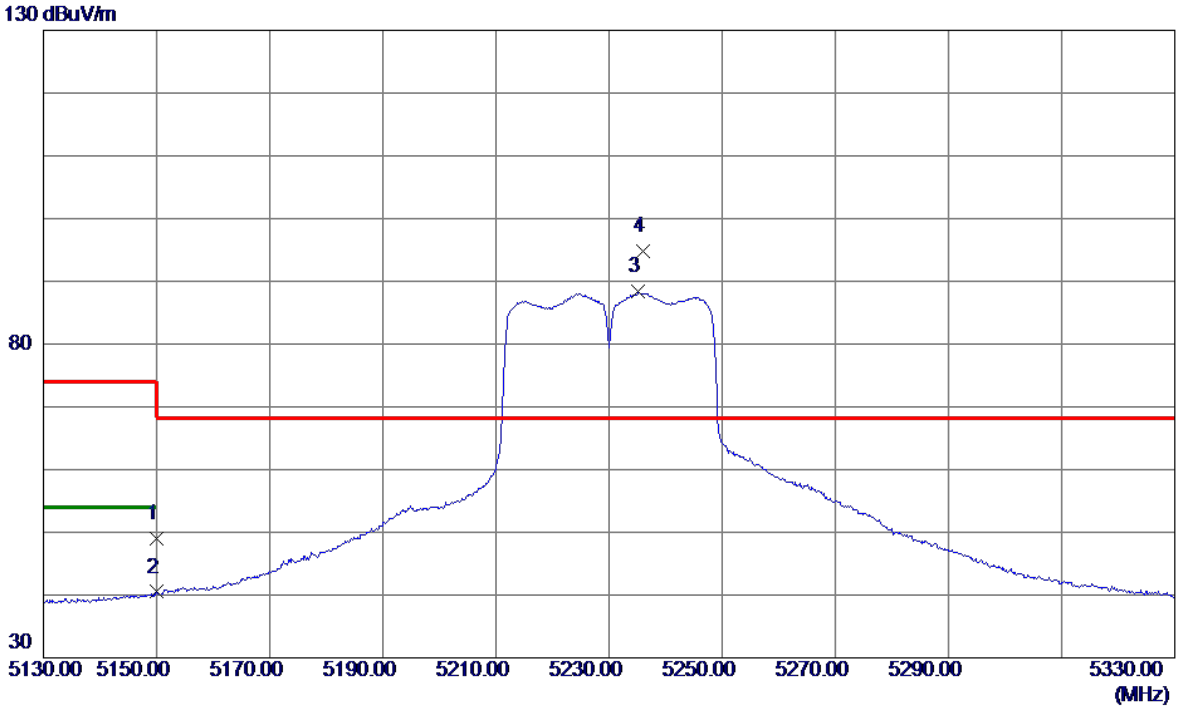
Test Mode	UNII-1_TX N(HT40) Mode 5230 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	15682.6500	54.06	7.66	61.72	74.00	-12.28	Peak	
2 *	15696.7500	43.40	7.67	51.07	54.00	-2.93	AVG	

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

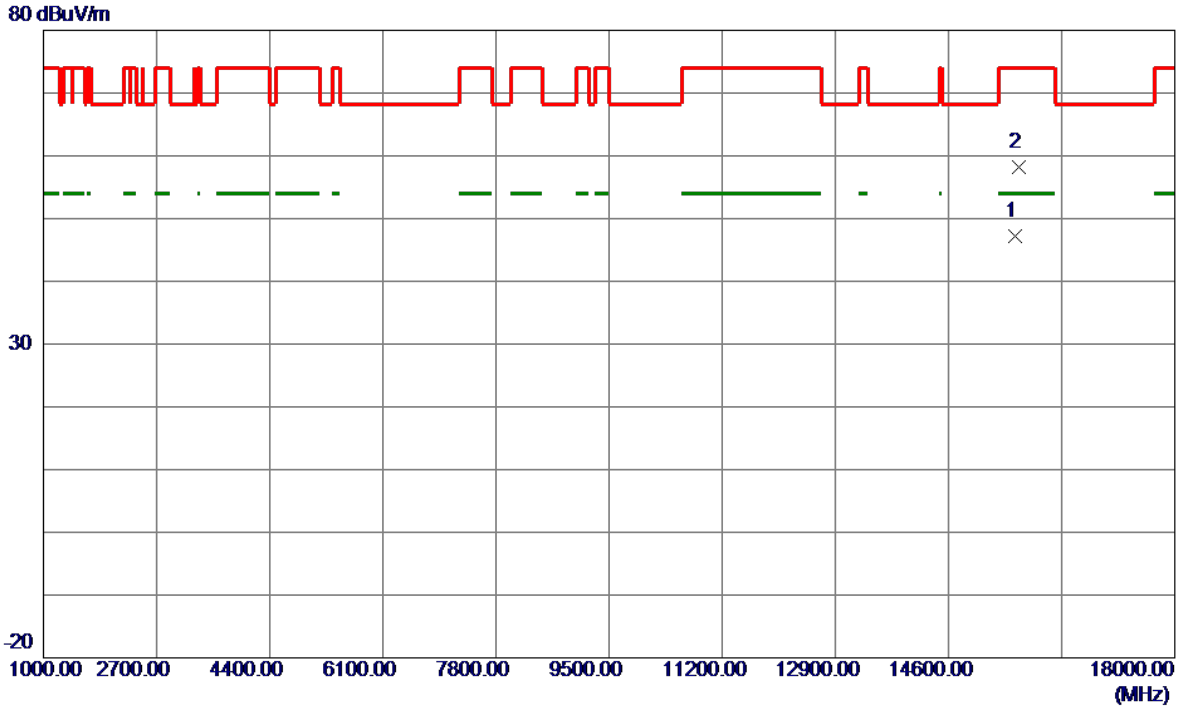
Test Mode	UNII-1_TX N(HT40) Mode 5230 MHz	Polarization	Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	5150.0000	37.40	11.54	48.94	74.00	-25.06	Peak	
2	5150.0000	28.96	11.54	40.50	54.00	-13.50	AVG	
3	5235.2000	76.59	11.72	88.31	999.00	-910.69	AVG	No Limit
4 *	5236.1000	83.06	11.72	94.78	68.20	26.58	Peak	No Limit

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

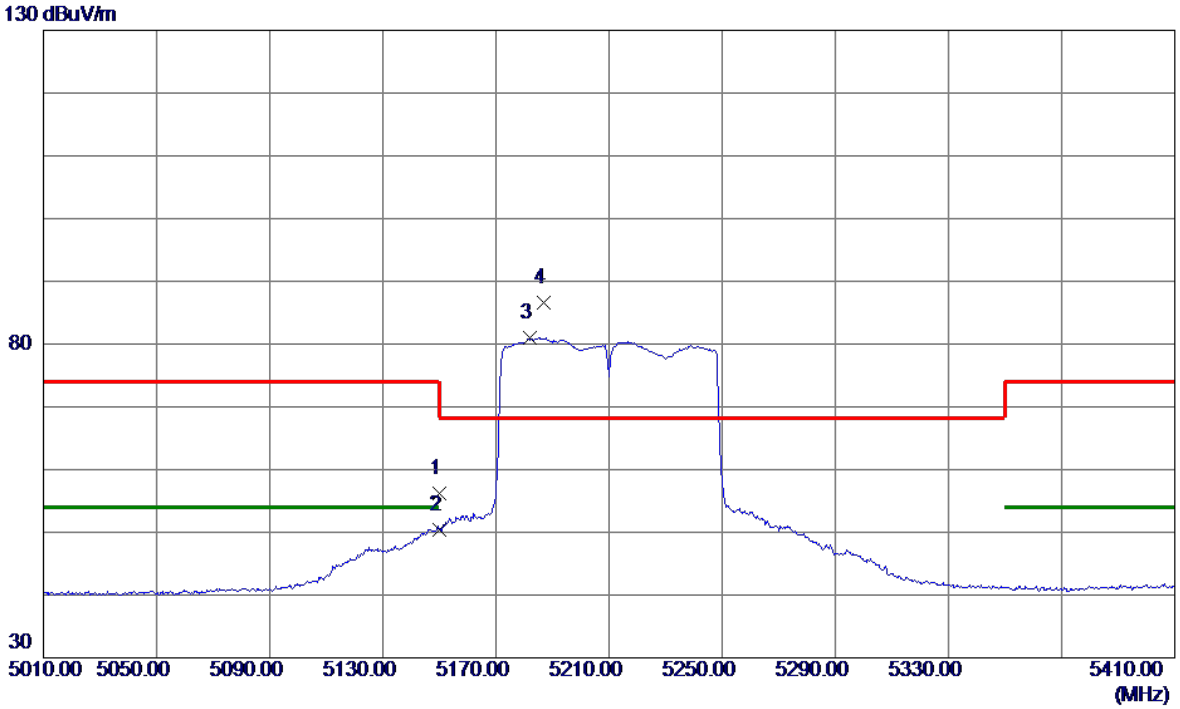
Test Mode	UNII-1_TX AC(VHT80) Mode 5210 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	15608.6000	39.54	7.60	47.14	54.00	-6.86	AVG	
2	15650.7000	50.62	7.63	58.25	74.00	-15.75	Peak	

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

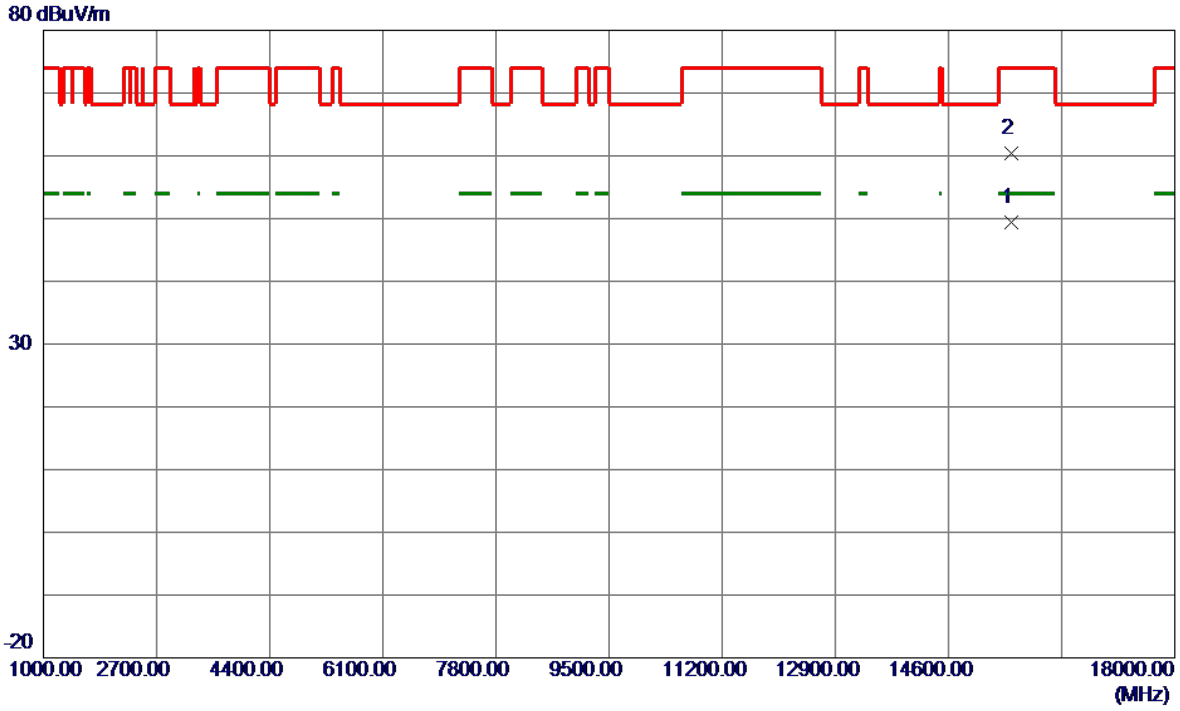
Test Mode	UNII-1_TX AC(VHT80) Mode 5210 MHz	Polarization	Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	5150.0000	44.61	11.54	56.15	74.00	-17.85	Peak	
2	5150.0000	38.87	11.54	50.41	54.00	-3.59	AVG	
3	5181.8000	69.36	11.60	80.96	999.00	-918.04	AVG	No Limit
4 *	5186.8000	75.02	11.61	86.63	68.20	18.43	Peak	No Limit

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

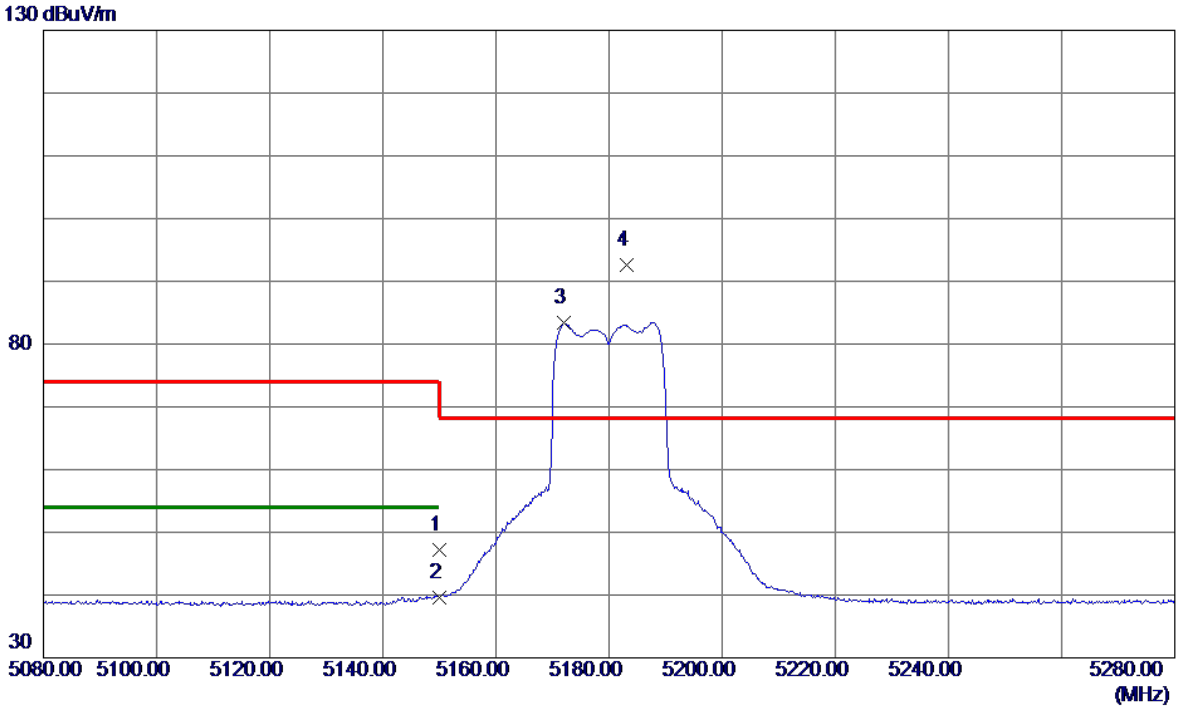
Test Mode	UNII-1_TX AX(HE20) Mode 5180 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	15535.2000	41.84	7.54	49.38	54.00	-4.62	AVG	
2	15535.4000	52.81	7.54	60.35	74.00	-13.65	Peak	

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

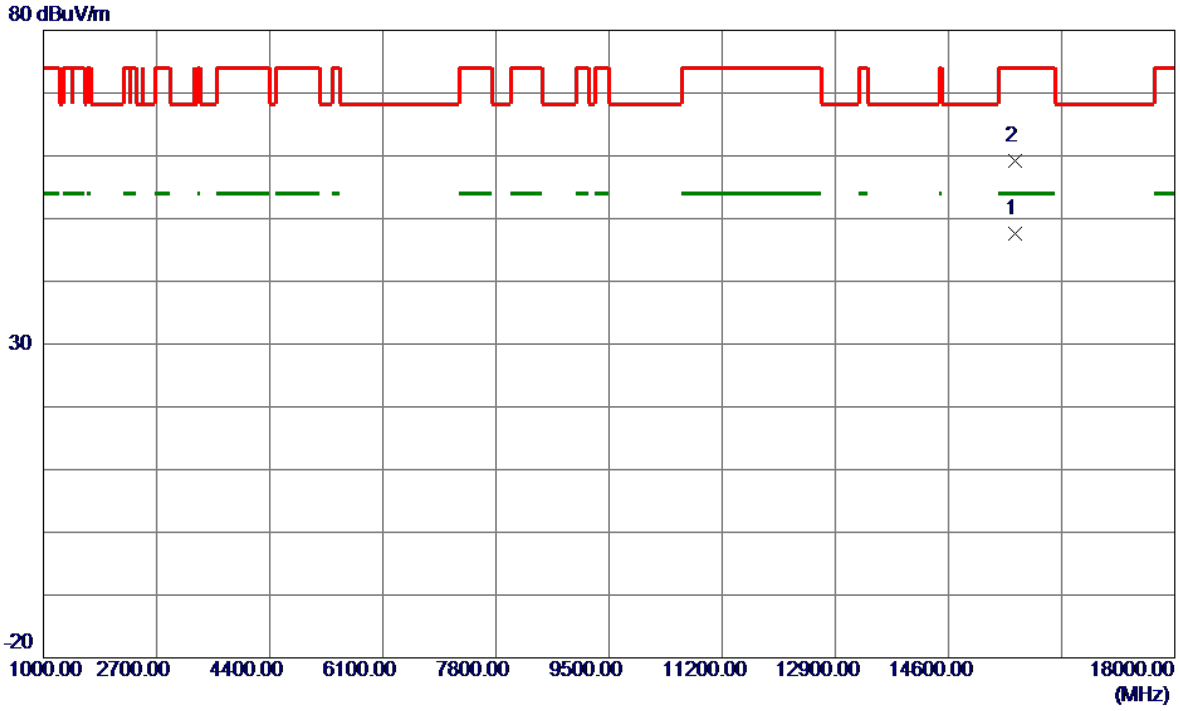
Test Mode	UNII-1_TX AX(HE20) Mode 5180 MHz	Polarization	Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	5150.0000	35.70	11.54	47.24	74.00	-26.76	Peak	
2	5150.0000	28.11	11.54	39.65	54.00	-14.35	AVG	
3	5172.0000	71.87	11.58	83.45	999.00	-915.55	AVG	No Limit
4 *	5183.1000	80.90	11.61	92.51	68.20	24.31	Peak	No Limit

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

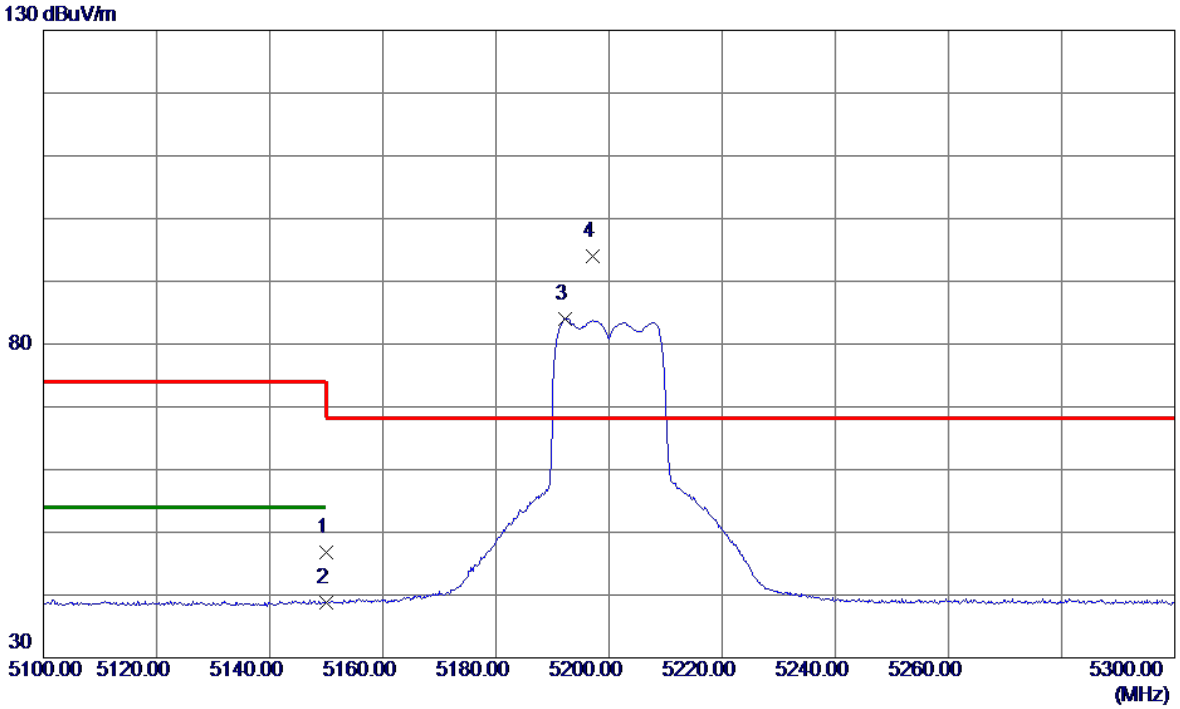
Test Mode	UNII-1_TX AX(HE20) Mode 5200 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	15600.9500	39.99	7.59	47.58	54.00	-6.42	AVG	
2	15602.0000	51.54	7.60	59.14	74.00	-14.86	Peak	

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

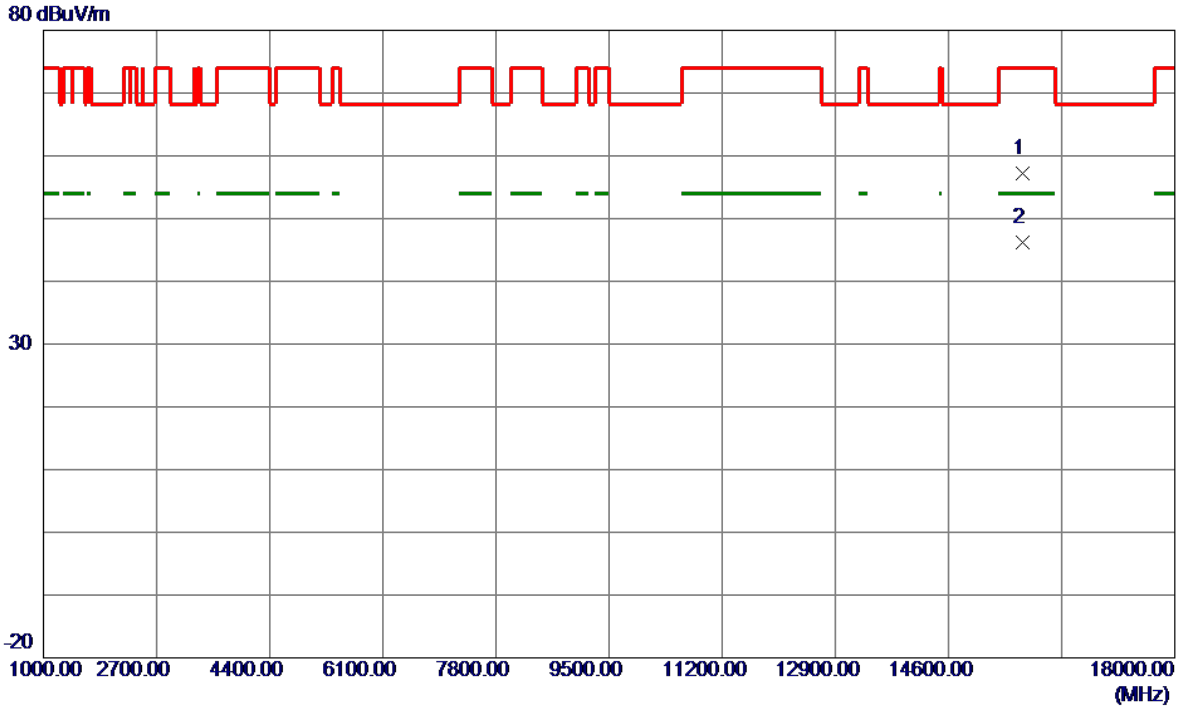
Test Mode	UNII-1_TX AX(HE20) Mode 5200 MHz	Polarization	Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	5150.0000	35.27	11.54	46.81	74.00	-27.19	Peak	
2	5150.0000	27.25	11.54	38.79	54.00	-15.21	AVG	
3	5192.3000	72.42	11.63	84.05	999.00	-914.95	AVG	No Limit
4 *	5197.2000	82.28	11.64	93.92	68.20	25.72	Peak	No Limit

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

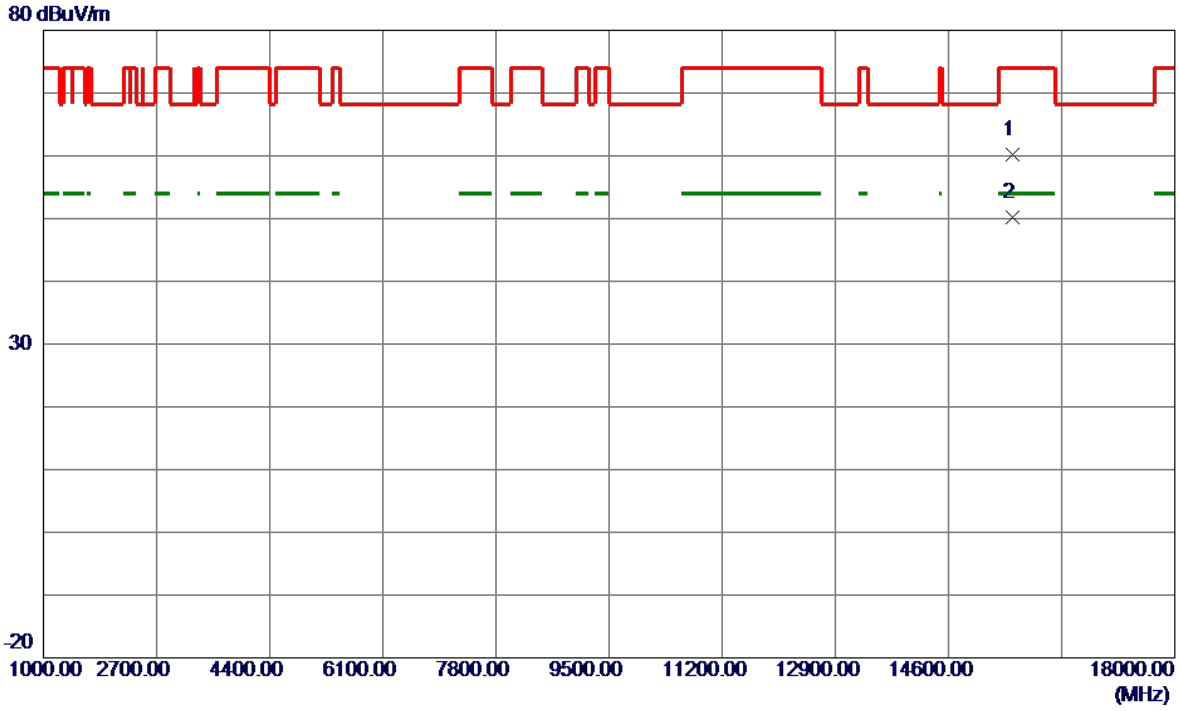
Test Mode	UNII-1_TX AX(HE20) Mode 5240 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	15710.8500	49.44	7.68	57.12	74.00	-16.88	Peak	
2 *	15717.1000	38.44	7.69	46.13	54.00	-7.87	AVG	

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

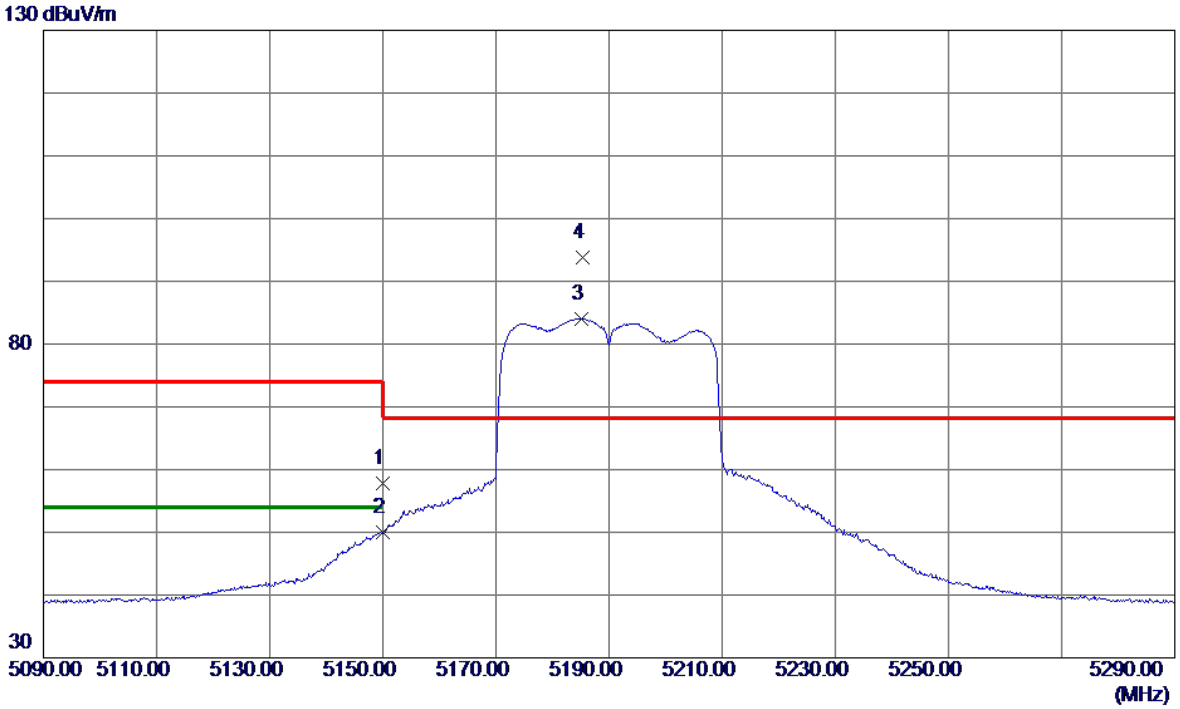
Test Mode	UNII-1_TX AX(HE40) Mode 5190 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	15557.5500	52.63	7.56	60.19	74.00	-13.81	Peak	
2 *	15564.2250	42.64	7.57	50.21	54.00	-3.79	AVG	

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

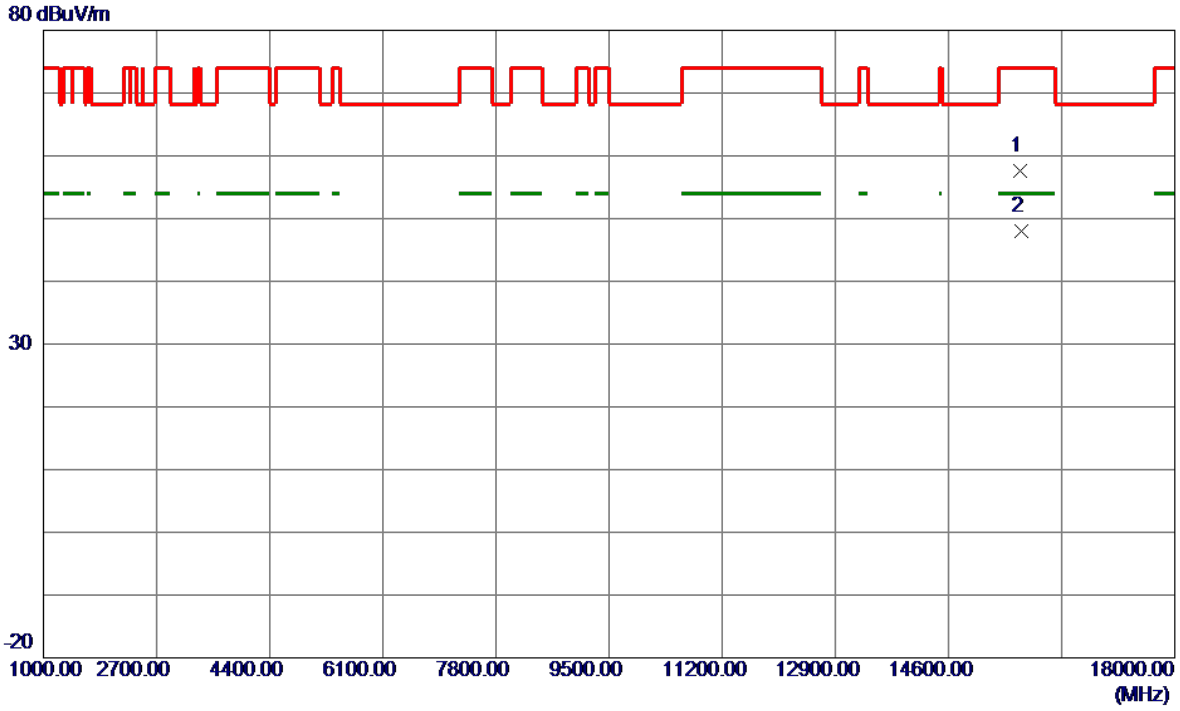
Test Mode	UNII-1_TX AX(HE40) Mode 5190 MHz	Polarization	Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	5150.0000	46.27	11.54	57.81	74.00	-16.19	Peak	
2	5150.0000	38.47	11.54	50.01	54.00	-3.99	AVG	
3	5185.1000	72.45	11.61	84.06	999.00	-914.94	AVG	No Limit
4 *	5185.4000	82.22	11.61	93.83	68.20	25.63	Peak	No Limit

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

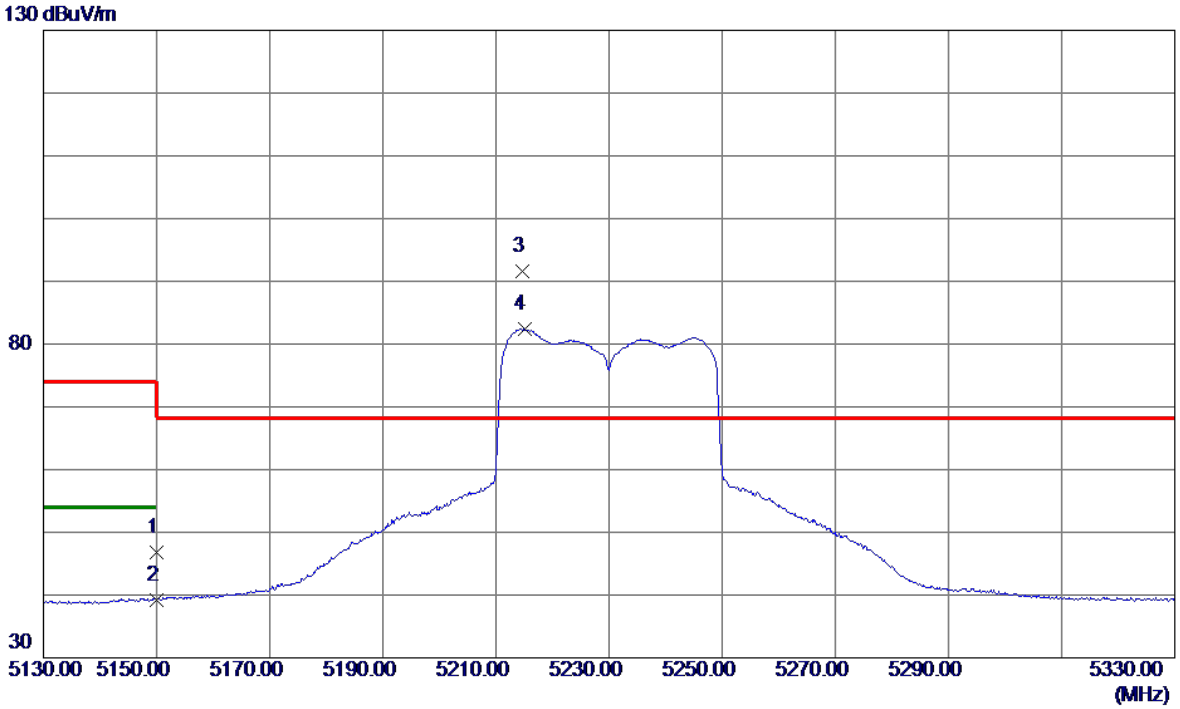
Test Mode	UNII-1_TX AX(HE40) Mode 5230 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	15678.8250	49.97	7.66	57.63	74.00	-16.37	Peak	
2 *	15694.8750	40.25	7.67	47.92	54.00	-6.08	AVG	

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

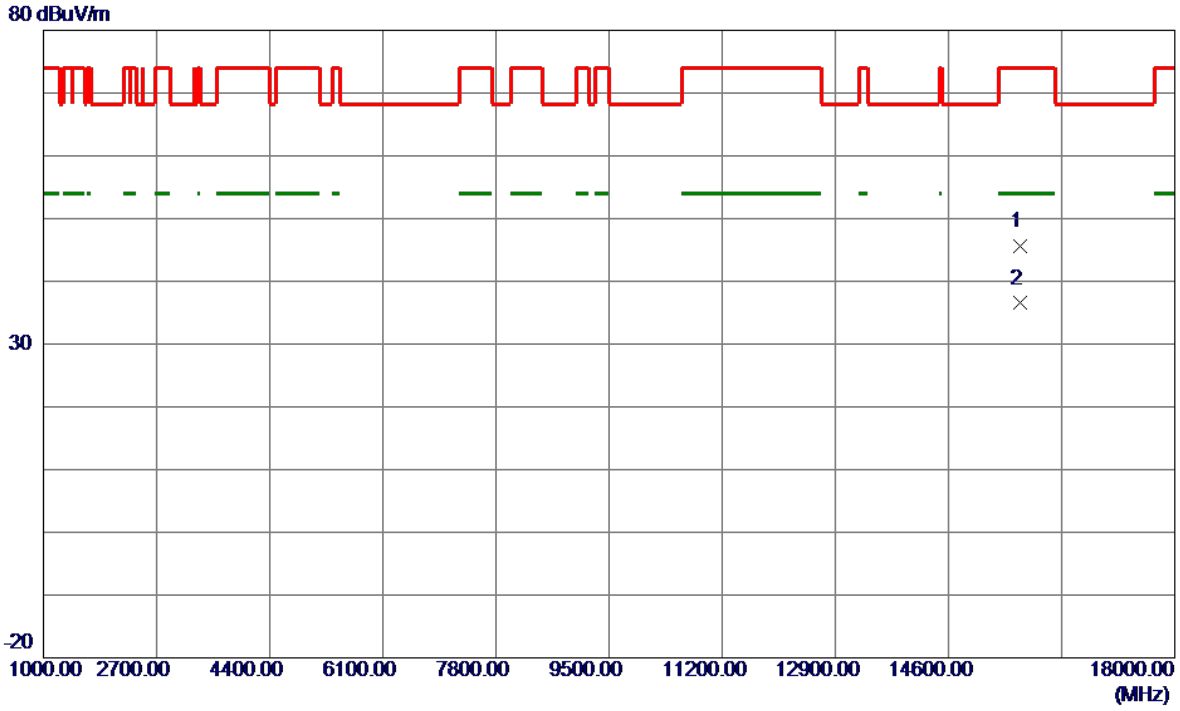
Test Mode	UNII-1_TX AX(HE40) Mode 5230 MHz	Polarization	Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	5150.0000	35.21	11.54	46.75	74.00	-27.25	Peak	
2	5150.0000	27.68	11.54	39.22	54.00	-14.78	AVG	
3 *	5214.6000	79.86	11.67	91.53	68.20	23.33	Peak	No Limit
4	5215.0000	70.74	11.67	82.41	999.00	-916.59	AVG	No Limit

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

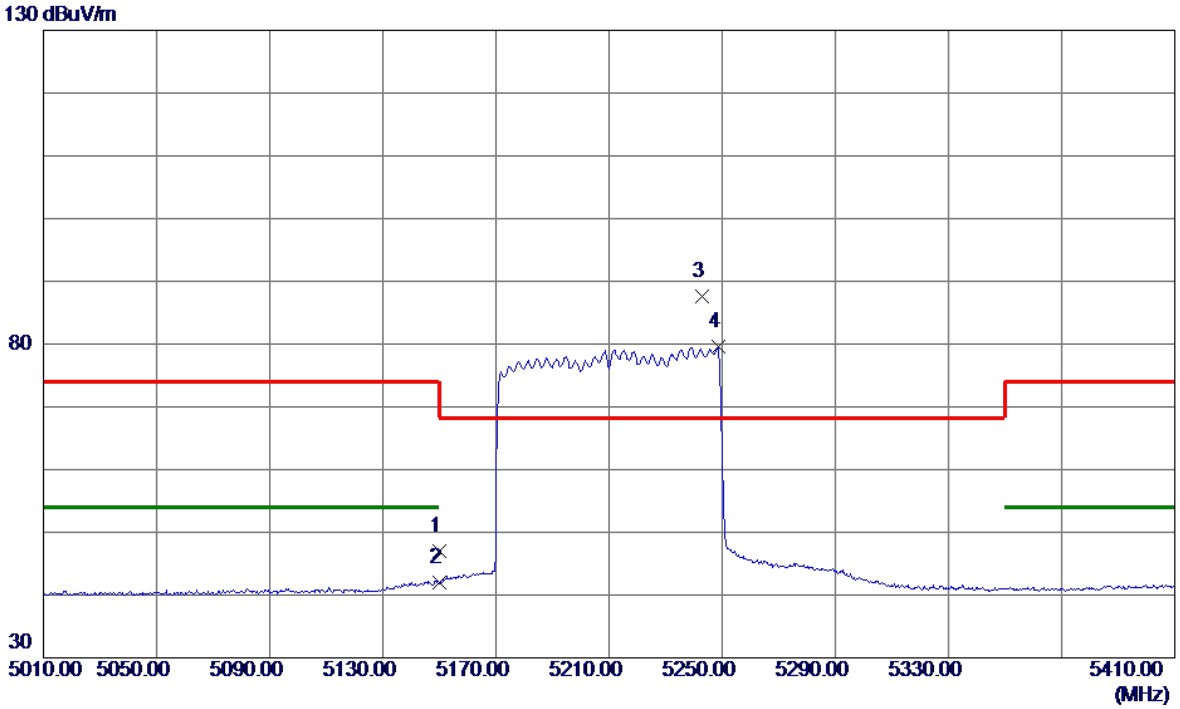
Test Mode	UNII-1_TX AX(HE80) Mode 5210 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	15671.8000	37.98	7.65	45.63	74.00	-28.37	Peak	
2 *	15682.6000	28.84	7.66	36.50	54.00	-17.50	AVG	

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

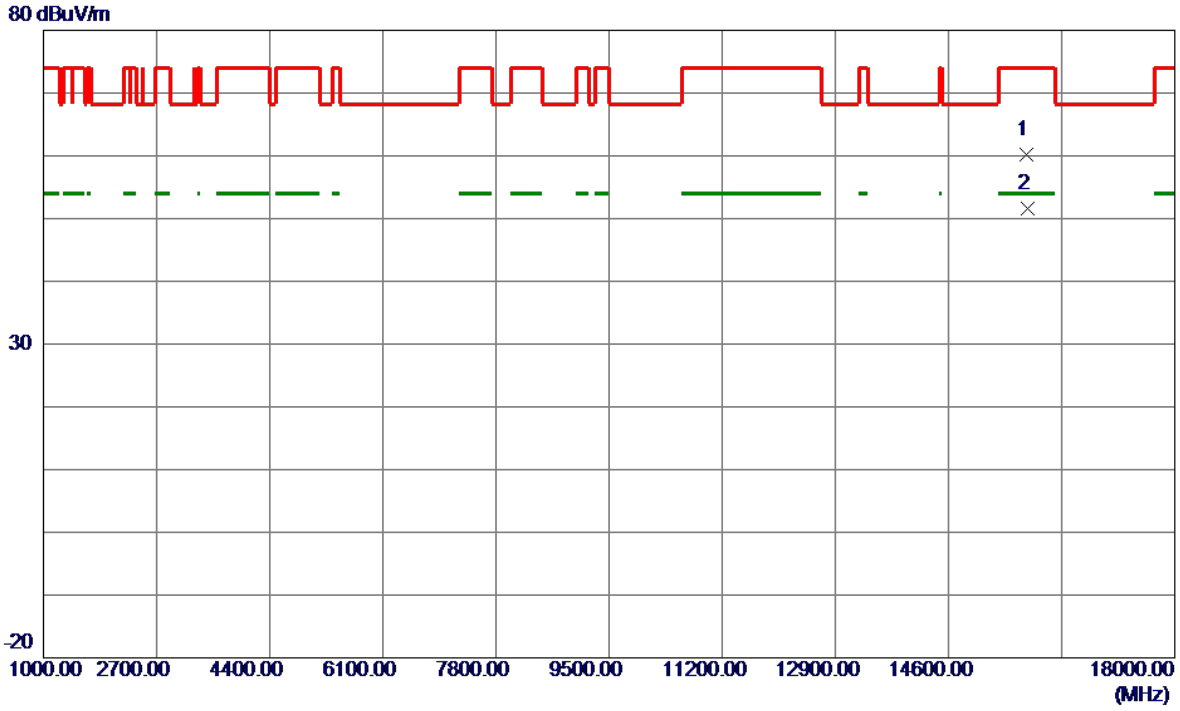
Test Mode	UNII-1_TX AX(HE80) Mode 5210 MHz	Polarization	Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	5150.0000	35.50	11.54	47.04	74.00	-26.96	Peak	
2	5150.0000	30.44	11.54	41.98	54.00	-12.02	AVG	
3 *	5242.8000	75.85	11.73	87.58	68.20	19.38	Peak	No Limit
4	5248.6000	67.78	11.74	79.52	999.00	-919.48	AVG	No Limit

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

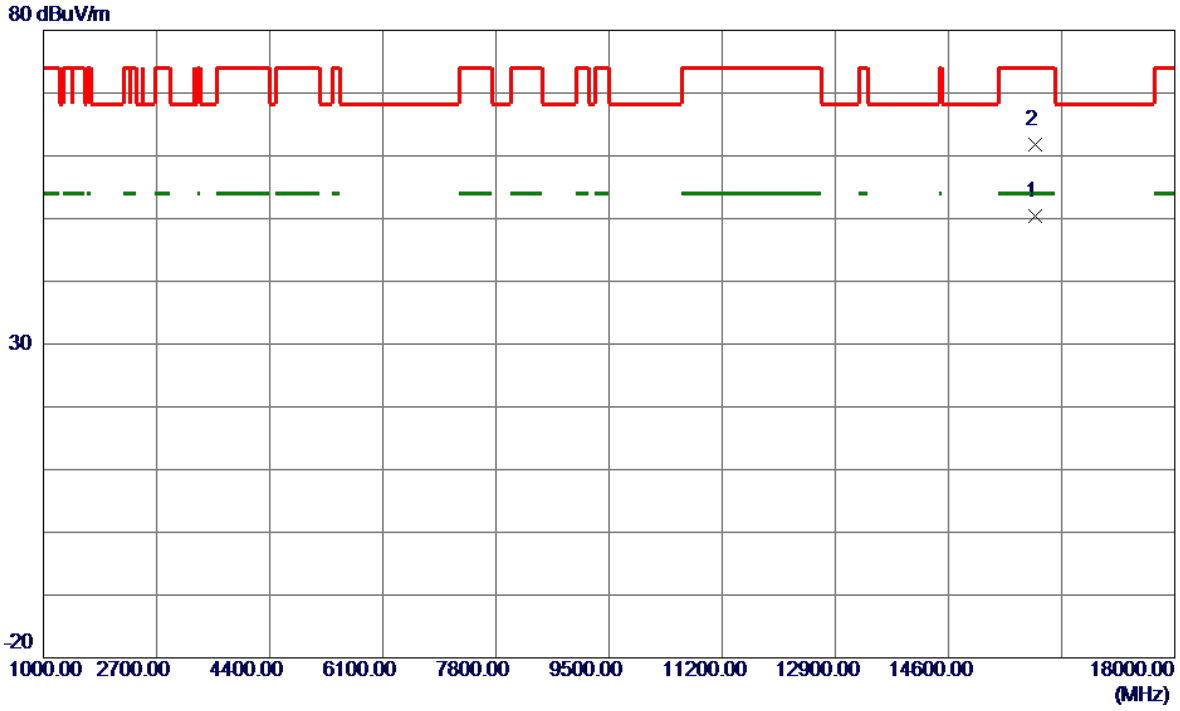
Test Mode	UNII-2A_TX A Mode 5260 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	15779.2500	52.47	7.74	60.21	74.00	-13.79	Peak	
2 *	15780.9000	43.87	7.74	51.61	54.00	-2.39	AVG	

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

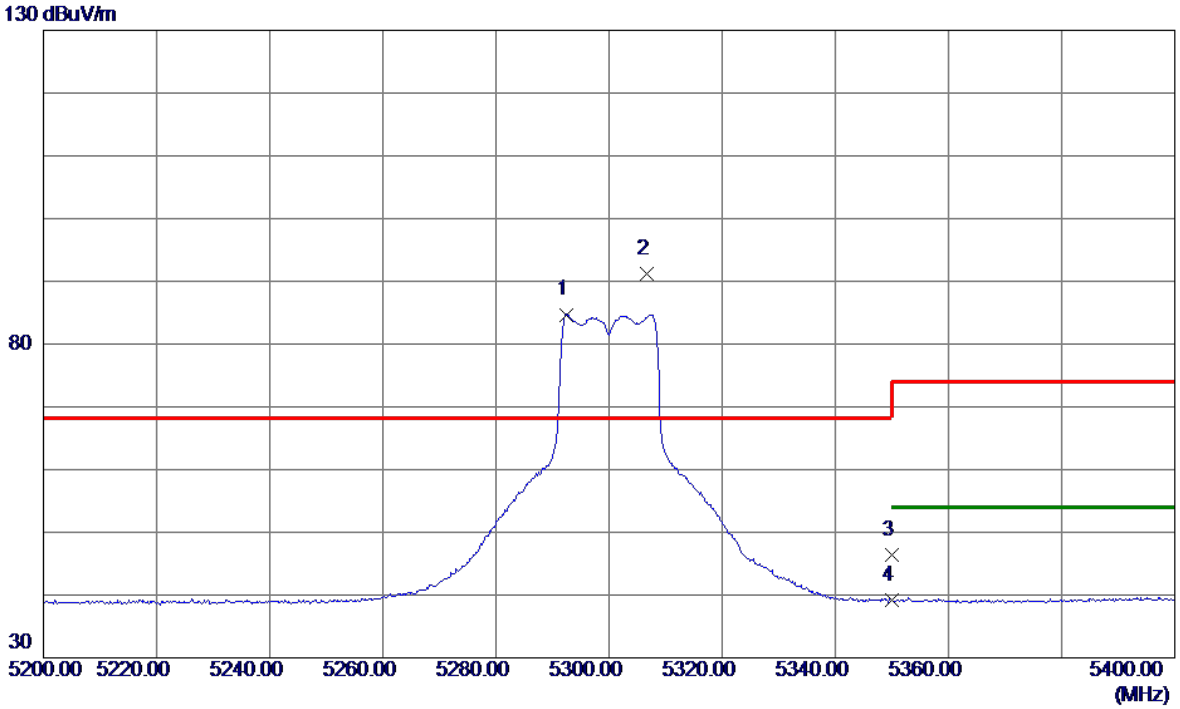
Test Mode	UNII-2A_TX A Mode 5300 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	15901.3000	42.52	7.83	50.35	54.00	-3.65	AVG	
2	15902.4500	54.06	7.83	61.89	74.00	-12.11	Peak	

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

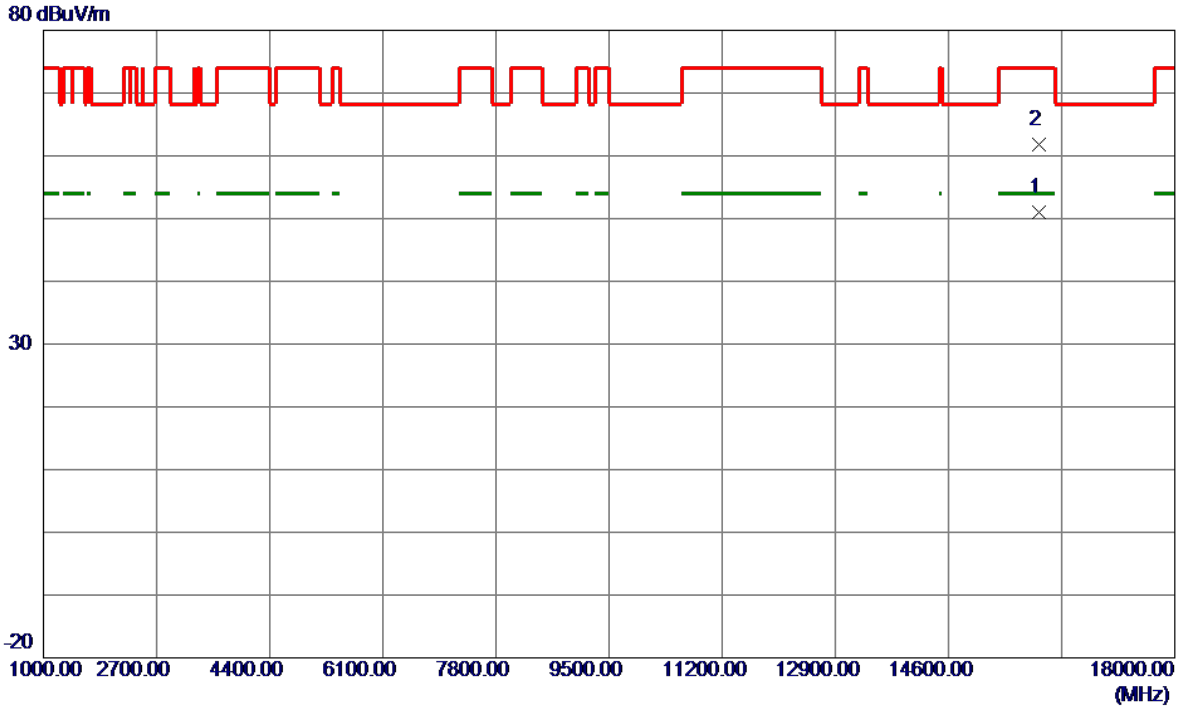
Test Mode	UNII-2A_TX A Mode 5300 MHz	Polarization	Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	5292.5000	72.86	11.84	84.70	999.00	-914.30	AVG	No Limit
2 *	5306.6000	79.37	11.87	91.24	68.20	23.04	Peak	No Limit
3	5350.0000	34.40	11.96	46.36	74.00	-27.64	Peak	
4	5350.0000	27.29	11.96	39.25	54.00	-14.75	AVG	

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

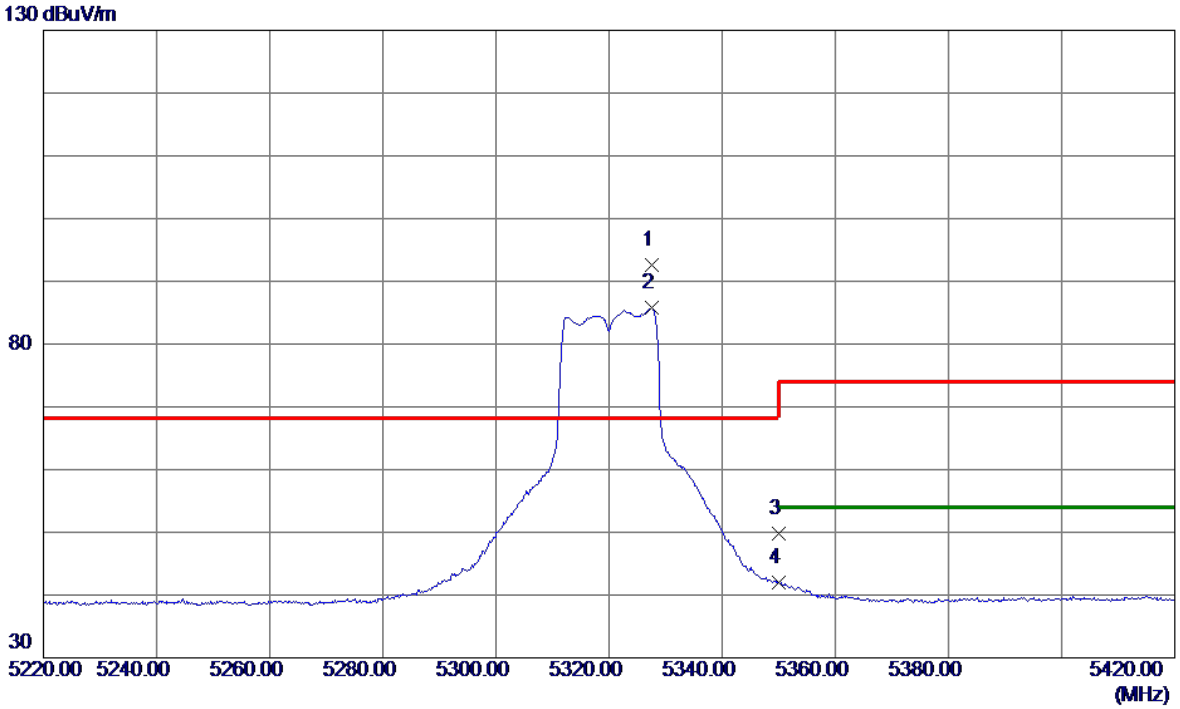
Test Mode	UNII-2A_TX A Mode 5320 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	15960.0500	43.11	7.88	50.99	54.00	-3.01	AVG	
2	15962.6000	53.83	7.88	61.71	74.00	-12.29	Peak	

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

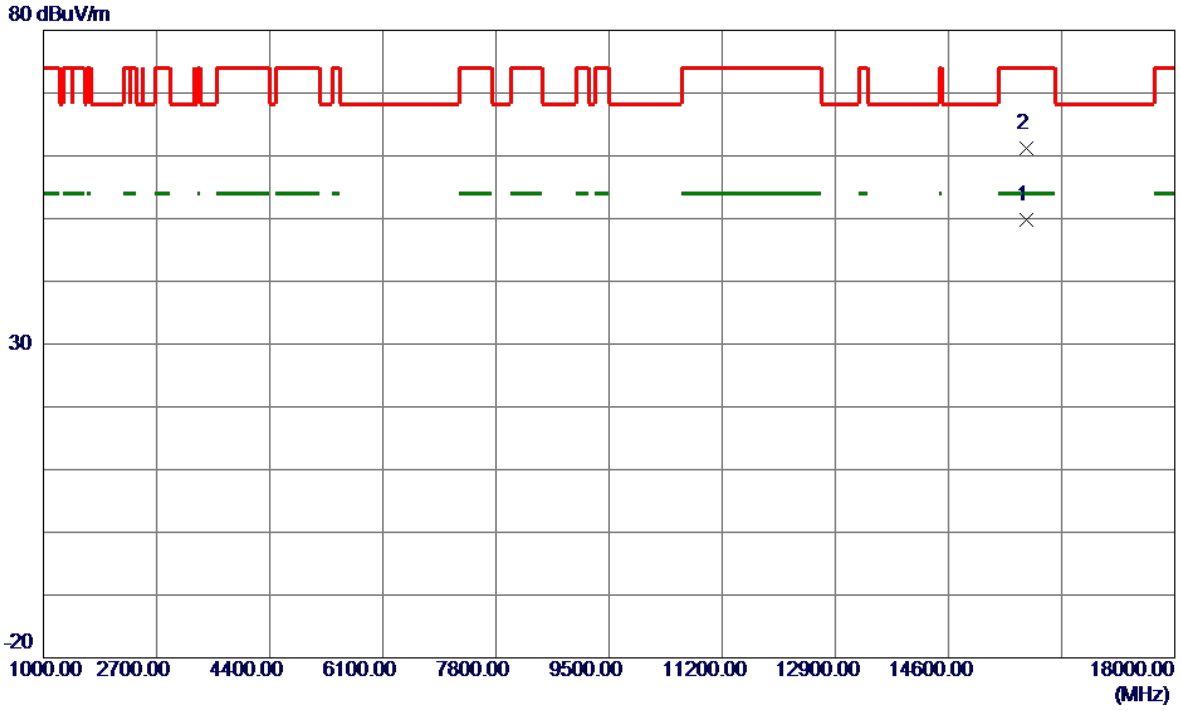
Test Mode	UNII-2A_TX A Mode 5320 MHz	Polarization	Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	5327.5000	80.76	11.91	92.67	68.20	24.47	Peak	No Limit
2	5327.5000	73.98	11.91	85.89	999.00	-913.11	AVG	No Limit
3	5350.0000	37.87	11.96	49.83	74.00	-24.17	Peak	
4	5350.0000	29.95	11.96	41.91	54.00	-12.09	AVG	

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

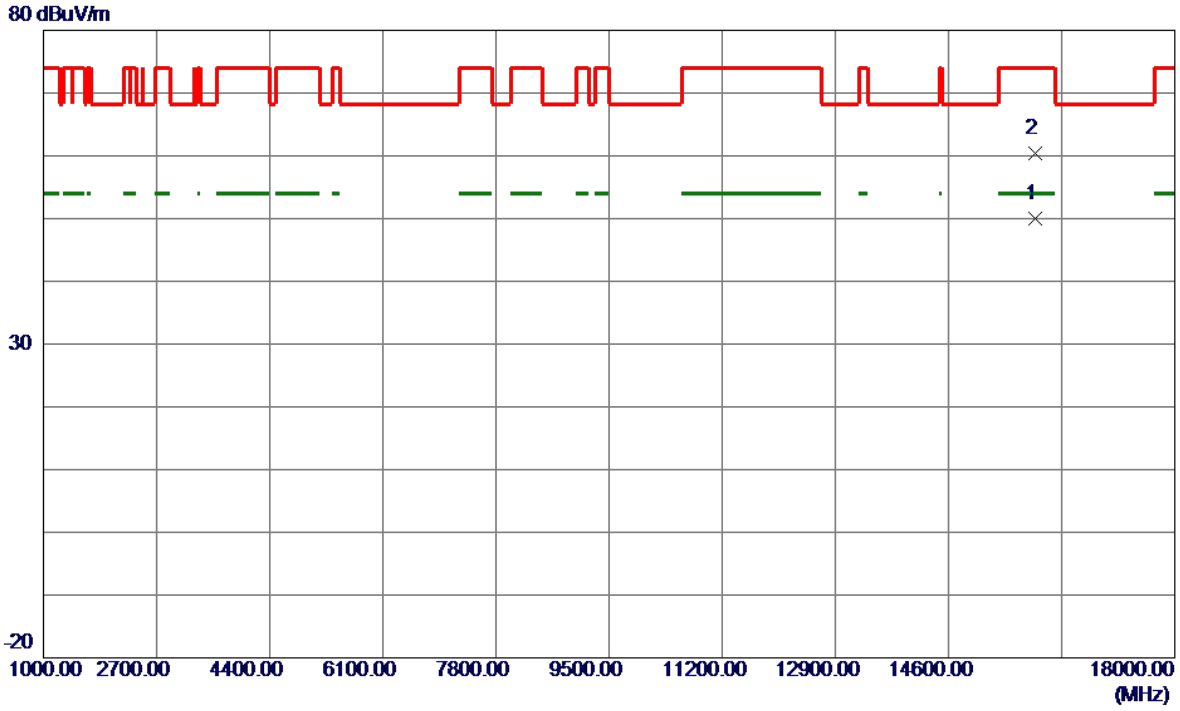
Test Mode	UNII-2A_TX N(HT20) Mode 5260 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	15778.1500	42.08	7.73	49.81	54.00	-4.19	AVG	
2	15779.1500	53.49	7.74	61.23	74.00	-12.77	Peak	

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

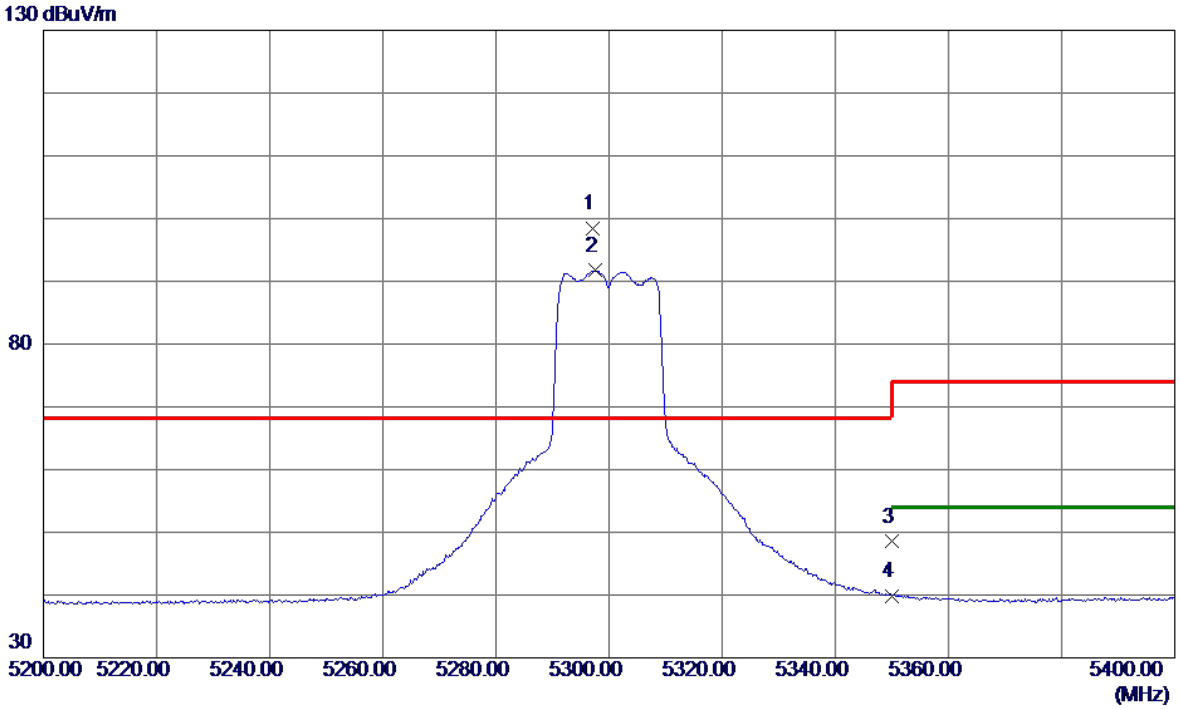
Test Mode	UNII-2A_TX N(HT20) Mode 5300 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	15899.6500	42.08	7.83	49.91	54.00	-4.09	AVG	
2	15901.6000	52.48	7.83	60.31	74.00	-13.69	Peak	

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

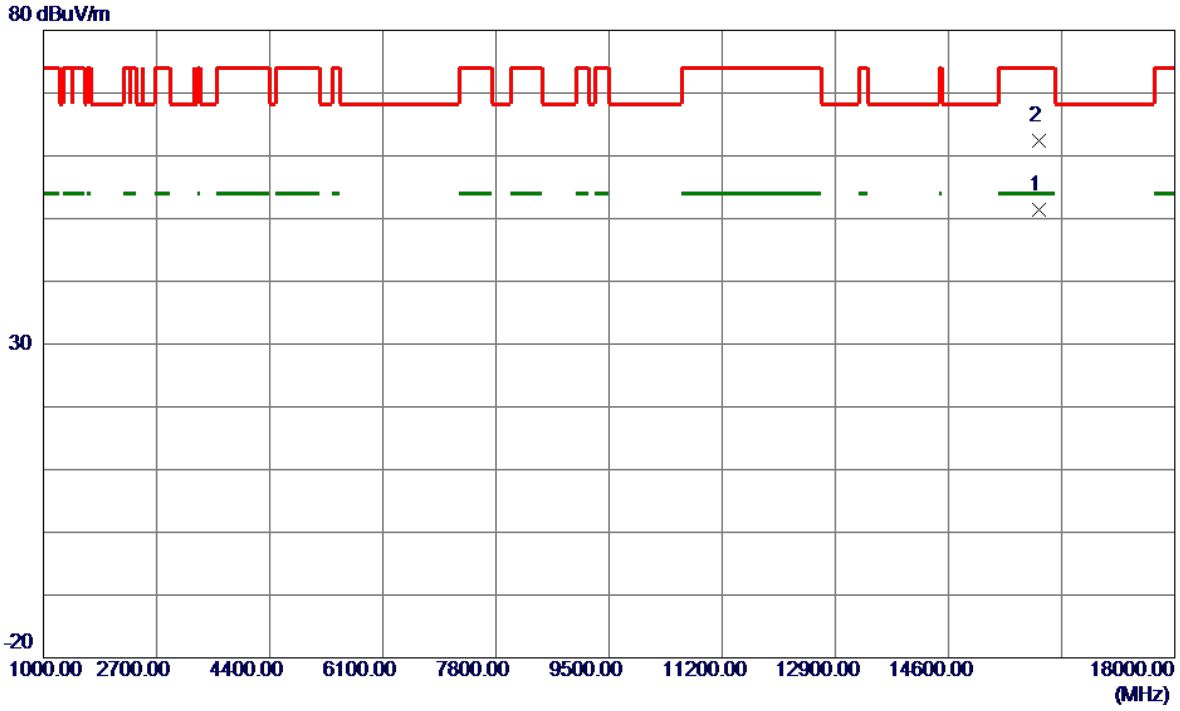
Test Mode	UNII-2A_TX N(HT20) Mode 5300 MHz	Polarization	Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	5297.1000	86.63	11.85	98.48	68.20	30.28	Peak	No Limit
2	5297.6000	79.85	11.85	91.70	999.00	-907.30	AVG	No Limit
3	5350.0000	36.54	11.96	48.50	74.00	-25.50	Peak	
4	5350.0000	27.85	11.96	39.81	54.00	-14.19	AVG	

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

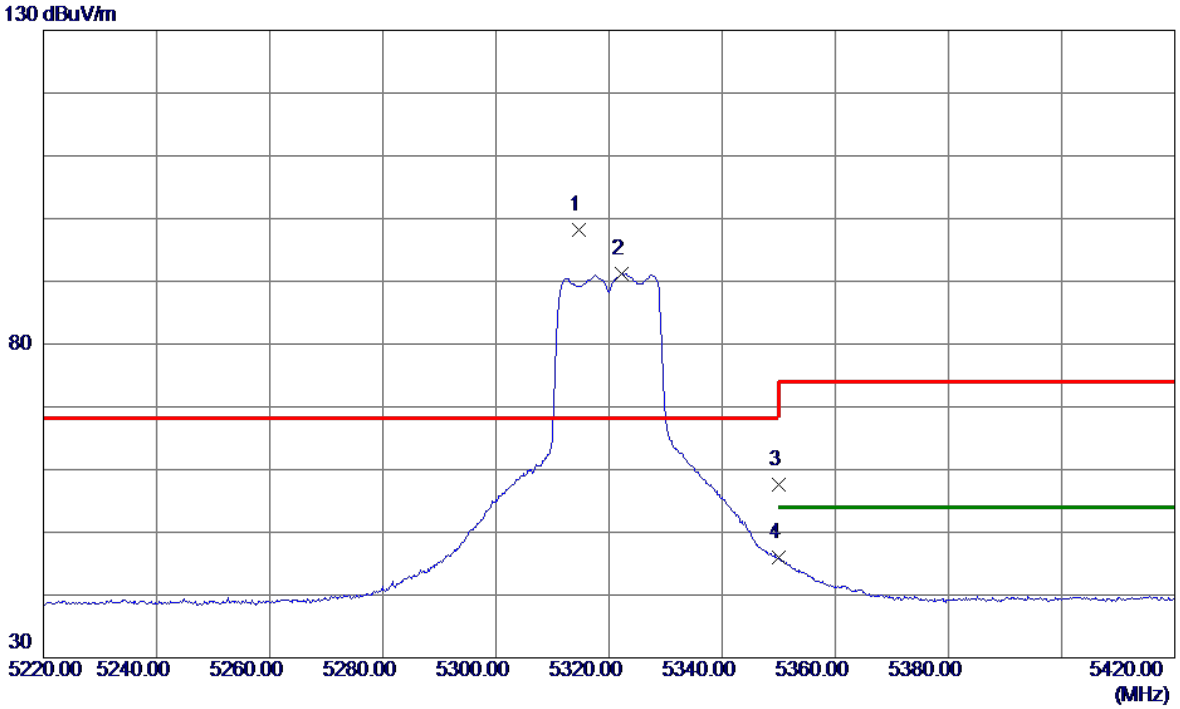
Test Mode	UNII-2A_TX N(HT20) Mode 5320 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	15959.9500	43.56	7.88	51.44	54.00	-2.56	AVG	
2	15963.8500	54.48	7.88	62.36	74.00	-11.64	Peak	

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

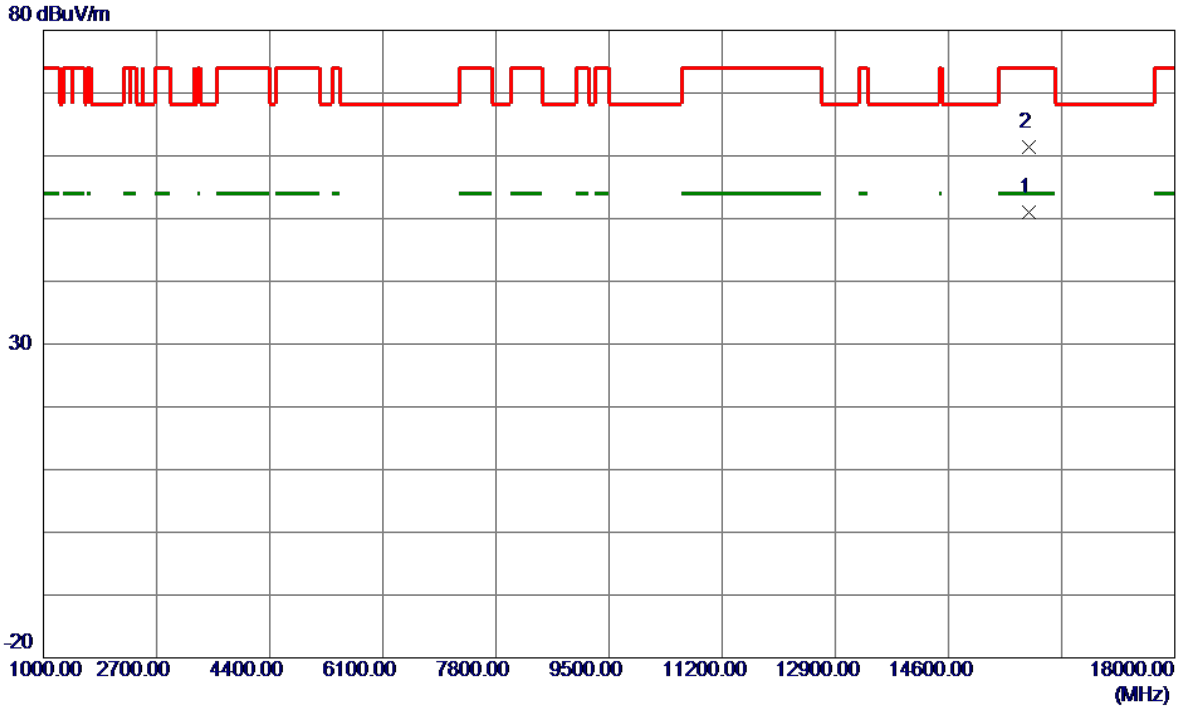
Test Mode	UNII-2A_TX N(HT20) Mode 5320 MHz	Polarization	Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	5314.6000	86.30	11.88	98.18	68.20	29.98	Peak	No Limit
2	5322.3000	79.33	11.90	91.23	999.00	-907.77	AVG	No Limit
3	5350.0000	45.66	11.96	57.62	74.00	-16.38	Peak	
4	5350.0000	33.97	11.96	45.93	54.00	-8.07	AVG	

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

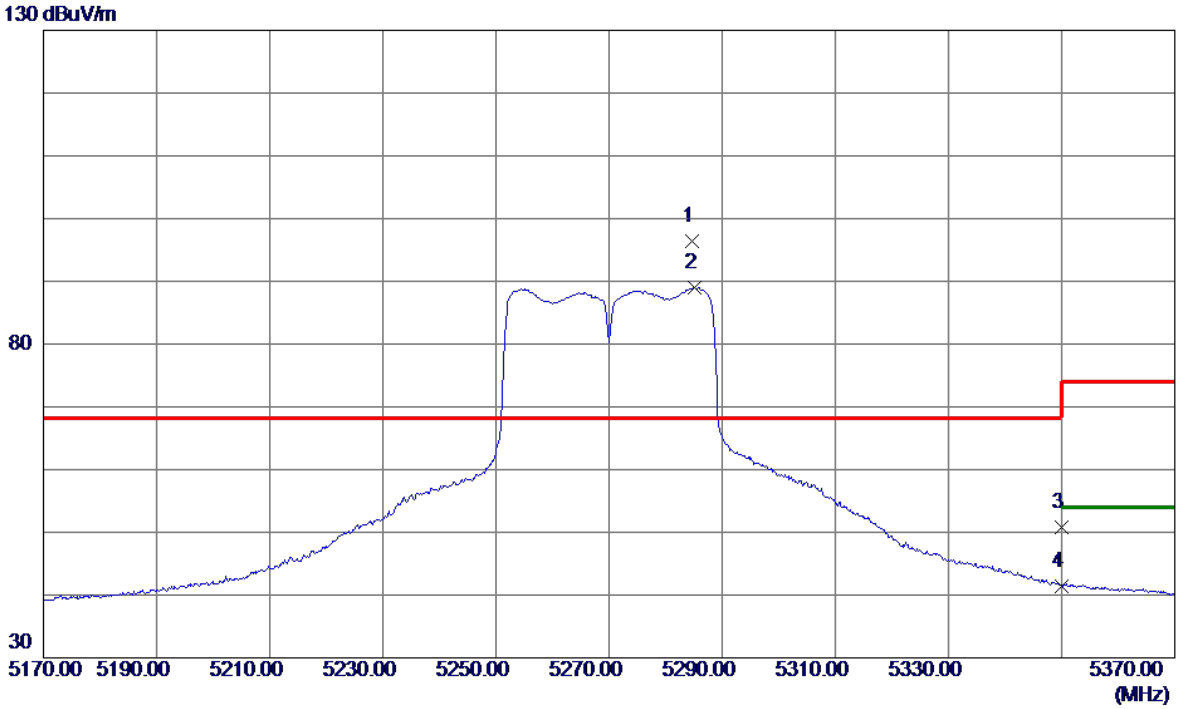
Test Mode	UNII-2A_TX N(HT40) Mode 5270 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	15802.5000	43.32	7.75	51.07	54.00	-2.93	AVG	
2	15802.6500	53.66	7.75	61.41	74.00	-12.59	Peak	

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

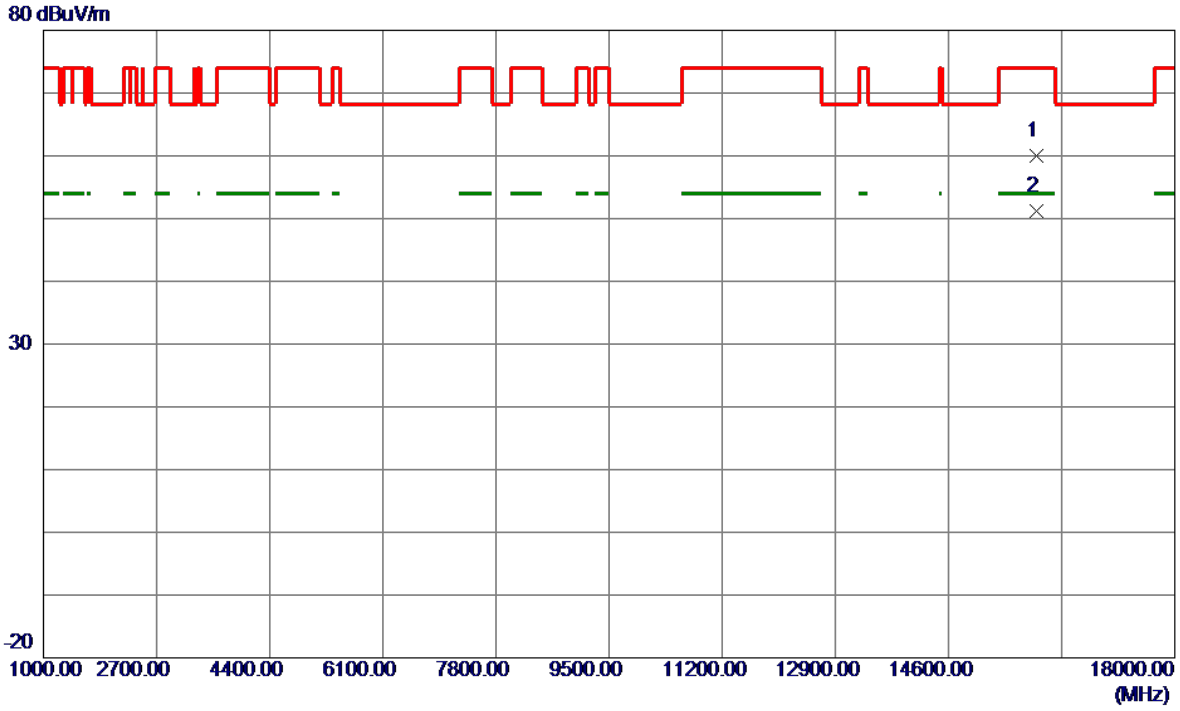
Test Mode	UNII-2A_TX N(HT40) Mode 5270 MHz	Polarization	Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	5284.6000	84.54	11.82	96.36	68.20	28.16	Peak	No Limit
2	5285.1000	77.23	11.82	89.05	999.00	-909.95	AVG	No Limit
3	5350.0000	38.83	11.96	50.79	74.00	-23.21	Peak	
4	5350.0000	29.45	11.96	41.41	54.00	-12.59	AVG	

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

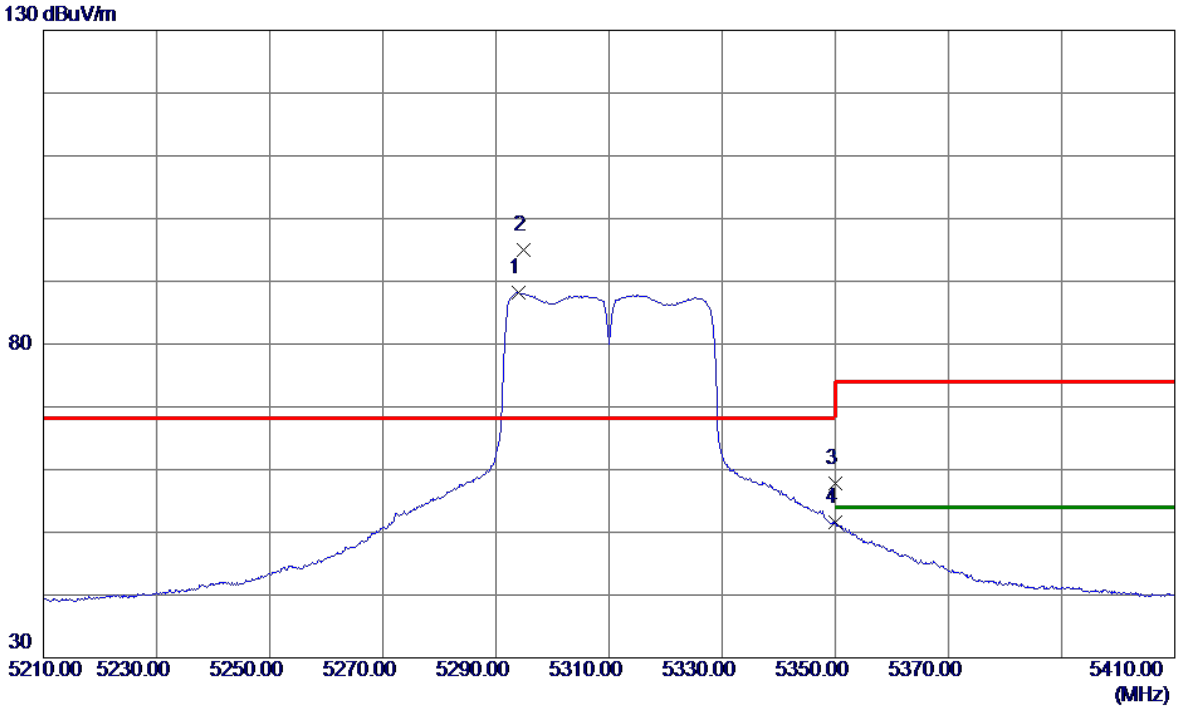
Test Mode	UNII-2A_TX N(HT40) Mode 5310 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	15916.8000	52.07	7.84	59.91	74.00	-14.09	Peak	
2 *	15922.2750	43.36	7.85	51.21	54.00	-2.79	AVG	

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

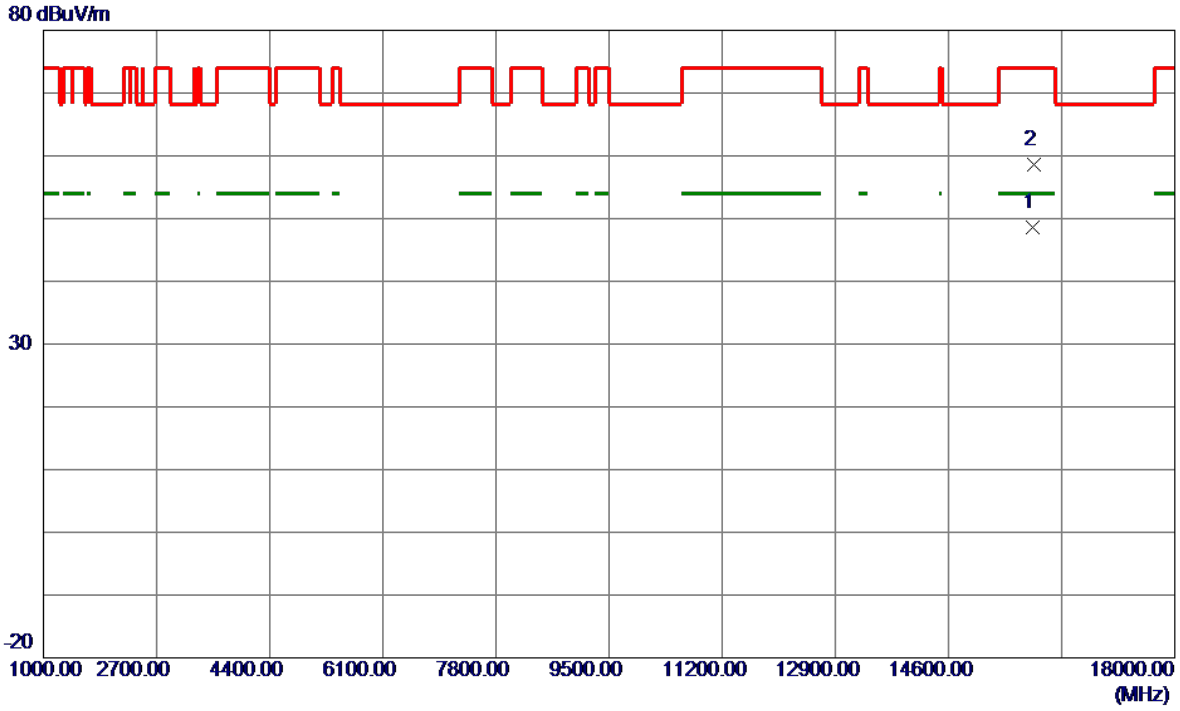
Test Mode	UNII-2A_TX N(HT40) Mode 5310 MHz	Polarization	Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	5294.1000	76.37	11.84	88.21	999.00	-910.79	AVG	No Limit
2 *	5294.8000	83.06	11.84	94.90	68.20	26.70	Peak	No Limit
3	5350.0000	45.91	11.96	57.87	74.00	-16.13	Peak	
4	5350.0000	39.55	11.96	51.51	54.00	-2.49	AVG	

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

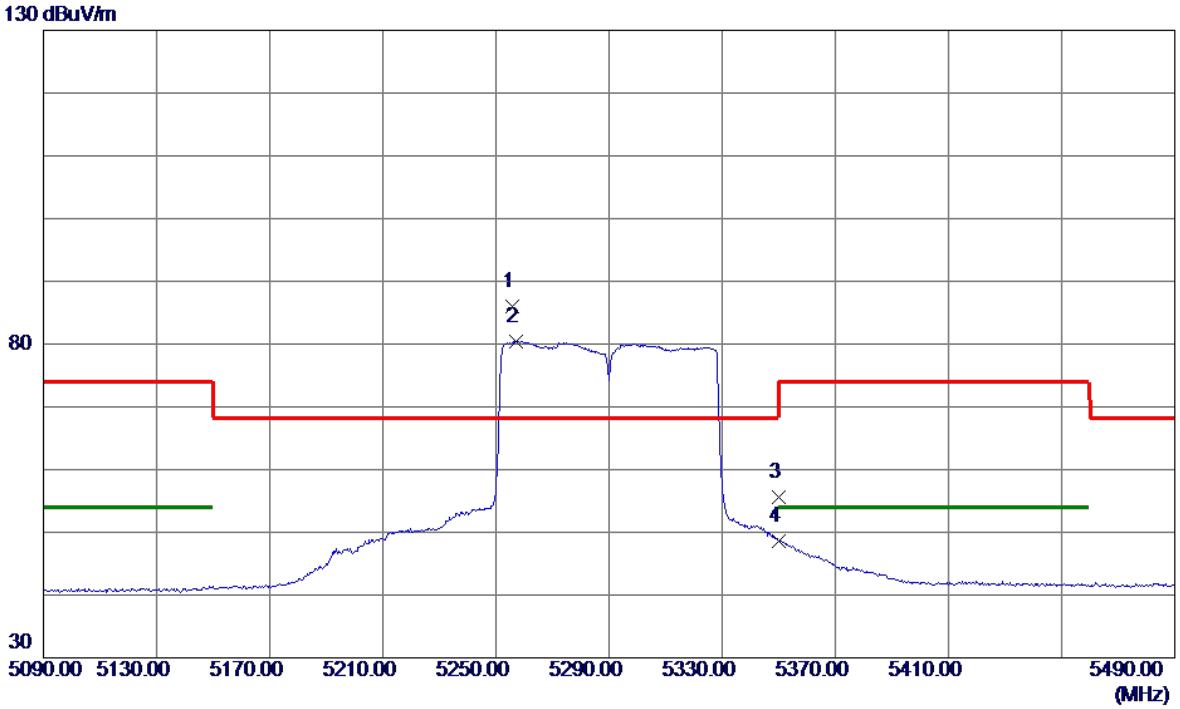
Test Mode	UNII-2A_TX AC(VHT80) Mode 5290 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	15874.0000	40.80	7.81	48.61	54.00	-5.39	AVG	
2	15879.8000	50.78	7.81	58.59	74.00	-15.41	Peak	

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

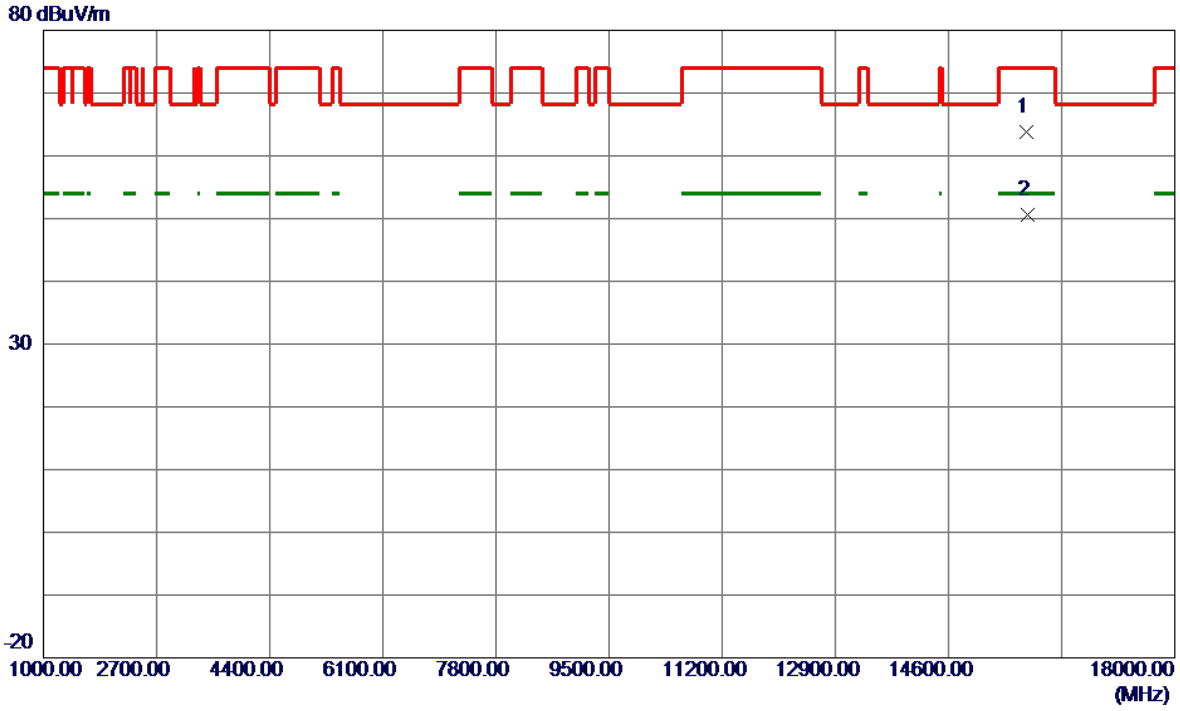
Test Mode	UNII-2A_TX AC(VHT80) Mode 5290 MHz	Polarization	Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	5255.6000	74.18	11.76	85.94	68.20	17.74	Peak	No Limit
2	5257.0000	68.64	11.76	80.40	999.00	-918.60	AVG	No Limit
3	5350.0000	43.59	11.96	55.55	74.00	-18.45	Peak	
4	5350.0000	36.73	11.96	48.69	54.00	-5.31	AVG	

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

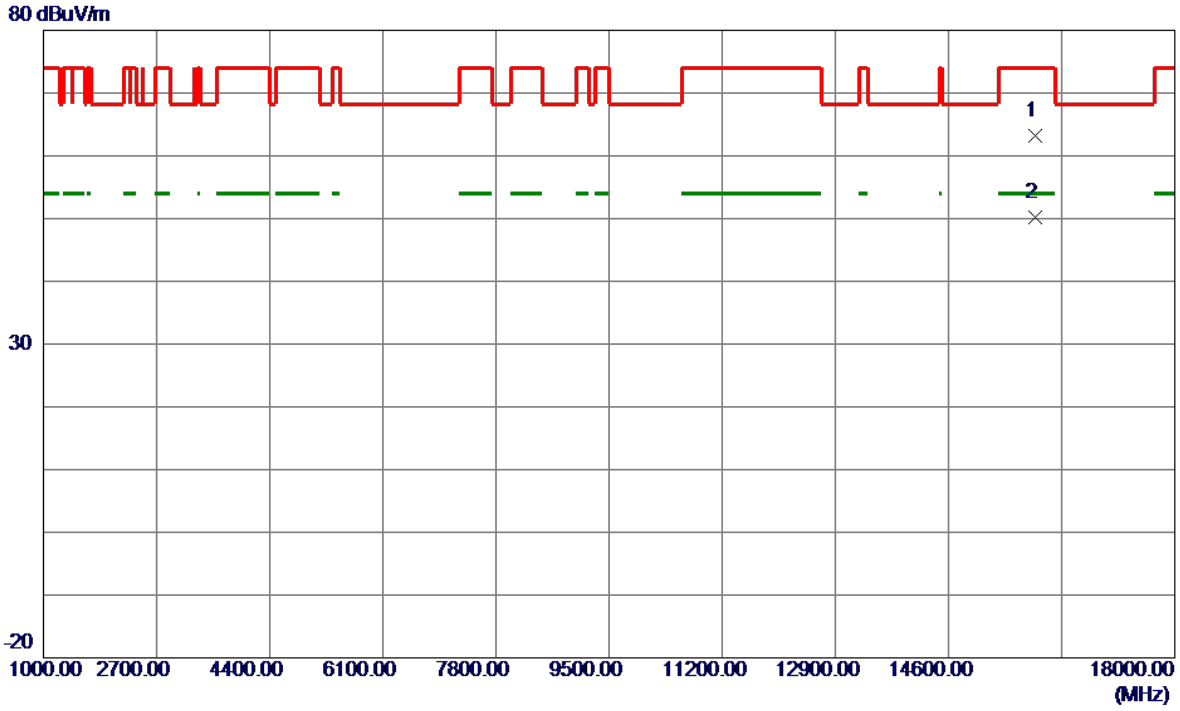
Test Mode	UNII-2A_TX AX(HE20) Mode 5260 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	15776.1000	56.11	7.73	63.84	74.00	-10.16	Peak	
2 *	15780.7000	42.81	7.74	50.55	54.00	-3.45	AVG	

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

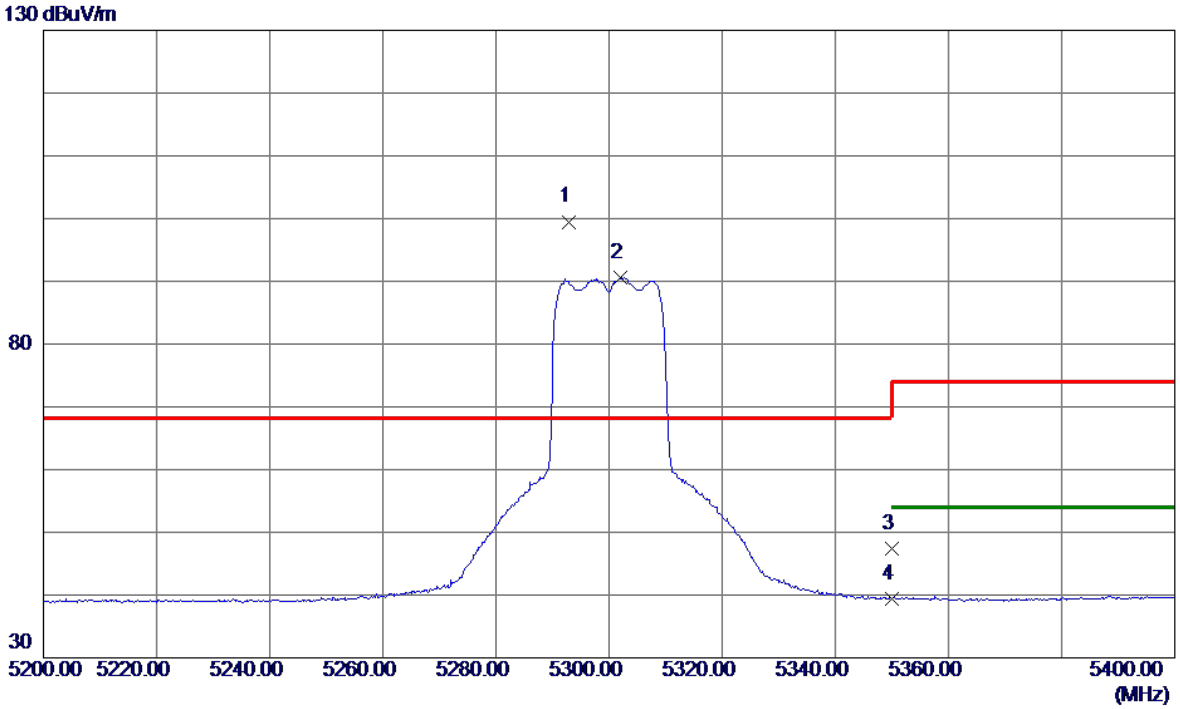
Test Mode	UNII-2A_TX AX(HE20) Mode 5300 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	15897.6500	55.39	7.83	63.22	74.00	-10.78	Peak	
2 *	15900.6000	42.39	7.83	50.22	54.00	-3.78	AVG	

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

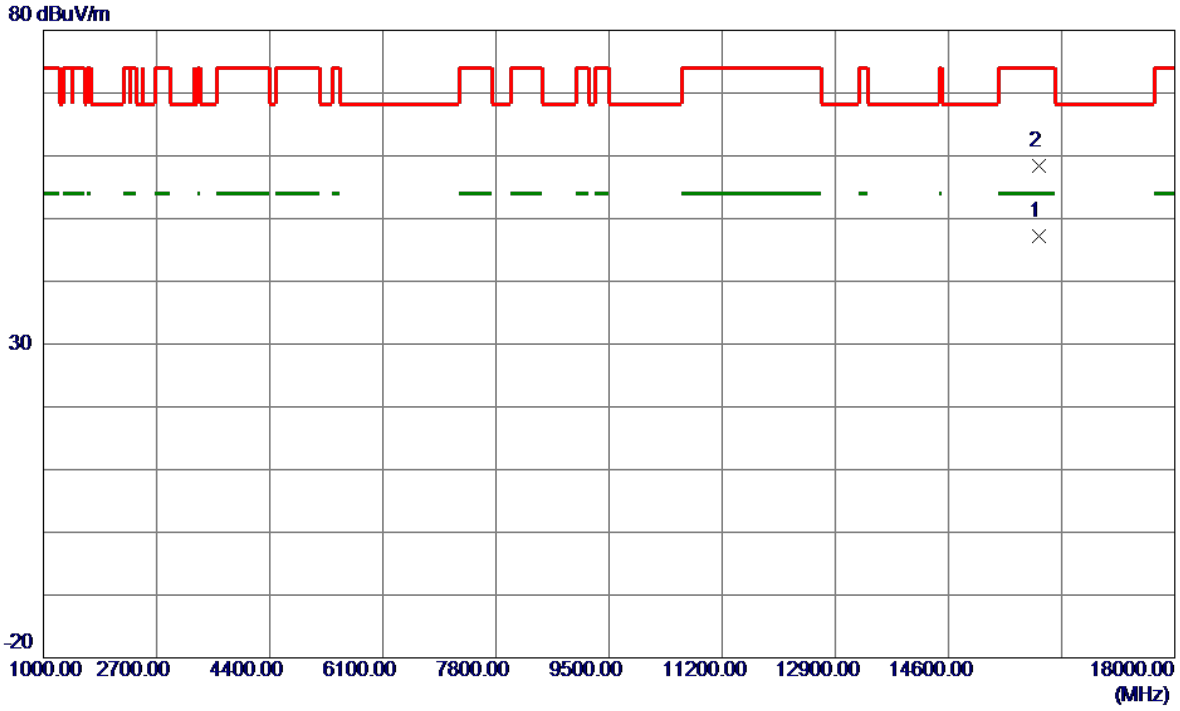
Test Mode	UNII-2A_TX AX(HE20) Mode 5300 MHz	Polarization	Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	5292.9000	87.66	11.84	99.50	68.20	31.30	Peak	No Limit
2	5302.1000	78.75	11.86	90.61	999.00	-908.39	AVG	No Limit
3	5350.0000	35.51	11.96	47.47	74.00	-26.53	Peak	
4	5350.0000	27.48	11.96	39.44	54.00	-14.56	AVG	

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

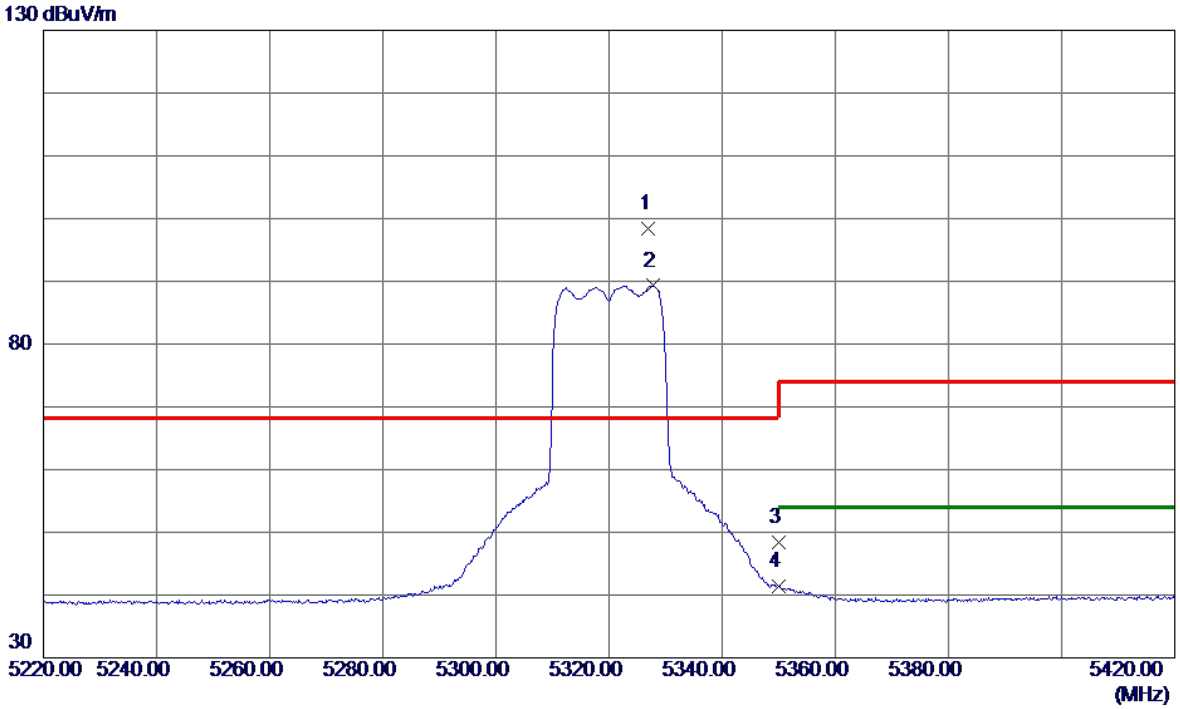
Test Mode	UNII-2A_TX AX(HE20) Mode 5320 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	15957.7500	39.28	7.88	47.16	54.00	-6.84	AVG	
2	15958.0000	50.48	7.88	58.36	74.00	-15.64	Peak	

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

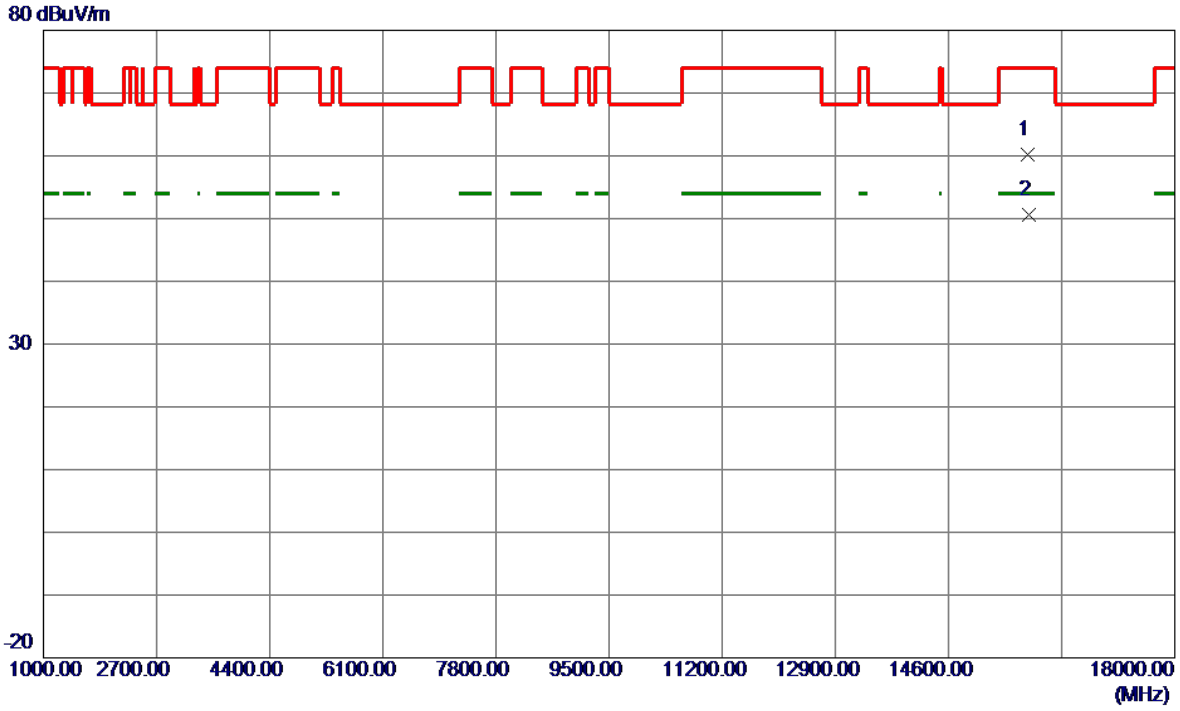
Test Mode	UNII-2A_TX AX(HE20) Mode 5320 MHz	Polarization	Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	5327.0000	86.52	11.91	98.43	68.20	30.23	Peak	No Limit
2	5327.8000	77.39	11.91	89.30	999.00	-909.70	AVG	No Limit
3	5350.0000	36.48	11.96	48.44	74.00	-25.56	Peak	
4	5350.0000	29.46	11.96	41.42	54.00	-12.58	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	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	15795.9000	52.42	7.75	60.17	74.00	-13.83	Peak	
2 *	15807.3000	42.79	7.76	50.55	54.00	-3.45	AVG	

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