Certificate #7130.01

FCC Radio Test Report

FCC ID: 2BCGWWPA7817

This report concerns: Original Grant

Project No.	:	2405G116
Equipment	:	AV1000 Powerline AX1500 Wi-Fi 6 Extender
Brand Name	:	tp-link
Test Model	:	TL-WPA7817
Series Model	:	N/A
Applicant	:	TP-LINK CORPORATION PTE. LTD.
Address	:	7 Temasek Boulevard #29-03 Suntec Tower One, Singapore 038987
Manufacturer	:	TP-LINK CORPORATION PTE. LTD.
Address	:	7 Temasek Boulevard #29-03 Suntec Tower One, Singapore 038987
Date of Receipt	:	May 26, 2024
Date of Test	:	Jun. 03, 2024 ~ Jul. 03, 2024
Issued Date	:	Aug. 13, 2024
Report Version	:	R00
Test Sample	:	Engineering Sample No.: SSL202405264 for conducted, SSL202405265 for other items.
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-2-2405G116	R00	Original Report.	Aug. 13, 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 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	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	------	**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 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-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	0.95 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	60%	AC 120V/60Hz	Hayden Chen	Jun, 06, 2024
Radiated Emissions -9kHz to 30MHz	23°C	42%	AC 120V/60Hz	Hayden Chen	Jun, 12, 2024
Radiated Emissions -30MHz to 1000MHz	24°C	56%	AC 120V/60Hz	Allen Tong	Jun, 26, 2024
Radiated Emissions -1000 MHz-18000 MHz	24°C	56%	AC 120V/60Hz	Allen Tong	Jun, 19, 2024 Jun, 26, 2024
Radiated Emissions -Above 18000 MHz	24°C	56%	AC 120V/60Hz	Allen Tong	Jun, 18, 2024
Bandwidth	19°C	48%	AC 120V/60Hz	Arvin Tong	Jun, 20, 2024
Maximum Output Power	19°C	48%	AC 120V/60Hz	Arvin Tong	Jun, 20, 2024
Power Spectral Density	19°C	48%	AC 120V/60Hz	Arvin Tong	Jun, 20, 2024

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

Equipment	AV1000 Powerline AX1500 Wi-Fi 6 Extender
Brand Name	tp-link
Test Model	TL-WPA7817
Series Model	N/A
Model Difference(s)	N/A
Software Version	V1.0
Hardware Version	V1.0
Power Source	AC Mains.
Power Rating	100-240V~ 50/60Hz 0.2A
Operation Frequency Band(s)	UNII-1: 5150 MHz ~ 5250 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 Non Beamforming	IEEE 802.11a: 26.30 dBm (0.4266 W)
Maximum Output Power _UNII-3 Non Beamforming	IEEE 802.11ac(VHT80): 26.47 dBm (0.4436 W)
Maximum Output Power _UNII-1 Beamforming	IEEE 802.11ac(VHT20): 25.52 dBm (0.3565 W)
Maximum Output Power _UNII-3 Beamforming	IEEE 802.11ac(VHT80): 25.78 dBm (0.3784 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-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.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	TP-LINK CORPORATION PTE. LTD.	TL-WPA7817 KIT-ant1	Dipole	N/A	2.0
2	TP-LINK CORPORATION PTE. LTD.	TL-WPA7817 KIT-ant2	Dipole	N/A	2.0

Note:

1) This EUT supports CDD, and all antennas have the same gain, Directional gain = G_{ANT}+Array Gain.
For power measurements, Array Gain=2.0dB (N_{ANT}≤4), so the Directional gain=2.0.
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.
2) Beamforming Gain: 1.5dB, so the Directional gain=1.5+2.0=3.5dB.

4. Table for Antenna Configuration:

For Non Beamforming:

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)

For Beamforming:

Operating Mode / TX Mode	2TX
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 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 149/157/165 (UNII-3)
Mode 11	TX AC(VHT20) Mode Channel 149/157/165 (UNII-3)
Mode 12	TX AC(VHT40) Mode Channel 151/159 (UNII-3)
Mode 13	TX AC(VHT80) Mode Channel 155 (UNII-3)
Mode 14	TX AX(HE20) Mode Channel 149/157/165 (UNII-3)
Mode 15	TX AX(HE40) Mode Channel 151/159 (UNII-3)
Mode 16	TX AX(HE80) Mode Channel 155 (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 13	TX AC(VHT80) Mode Channel 155 (UNII-3)

Radiated Emissions Test - Below 1GHz	
Final Test Mode	Description
Mode 13	TX AC(VHT80) Mode Channel 155 (UNII-3)

Radiated Emissions Test - Above 1GHz_Non Beamforming	
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 149/157/165 (UNII-3)
Mode 9	TX AC(VHT20) Mode Channel 149/157/165 (UNII-3)
Mode 10	TX AC(VHT40) Mode Channel 151/159 (UNII-3)
Mode 11	TX AC(VHT80) Mode Channel 155 (UNII-3)
Mode 12	TX AX(HE20) Mode Channel 149/157/165 (UNII-3)
Mode 13	TX AX(HE40) Mode Channel 151/159 (UNII-3)
Mode 14	TX AX(HE80) Mode Channel 155 (UNII-3)

Maximum Output Power test_Non Beamforming	
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 149/157/165 (UNII-3)
Mode 9	TX AC(VHT20) Mode Channel 149/157/165 (UNII-3)
Mode 10	TX AC(VHT40) Mode Channel 151/159 (UNII-3)
Mode 11	TX AC(VHT80) Mode Channel 155 (UNII-3)
Mode 12	TX AX(HE20) Mode Channel 149/157/165 (UNII-3)
Mode 13	TX AX(HE40) Mode Channel 151/159 (UNII-3)
Mode 14	TX AX(HE80) Mode Channel 155 (UNII-3)

Maximum Output Power test_Beamforming	
Final Test Mode	Description
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 149/157/165 (UNII-3)
Mode 9	TX AC(VHT20) Mode Channel 149/157/165 (UNII-3)
Mode 10	TX AC(VHT40) Mode Channel 151/159 (UNII-3)
Mode 11	TX AC(VHT80) Mode Channel 155 (UNII-3)
Mode 12	TX AX(HE20) Mode Channel 149/157/165 (UNII-3)
Mode 13	TX AX(HE40) Mode Channel 151/159 (UNII-3)
Mode 14	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 149/157/165 (UNII-3)
Mode 9	TX AC(VHT20) Mode Channel 149/157/165 (UNII-3)
Mode 10	TX AC(VHT40) Mode Channel 151/159 (UNII-3)
Mode 11	TX AC(VHT80) Mode Channel 155 (UNII-3)
Mode 12	TX AX(HE20) Mode Channel 149/157/165 (UNII-3)
Mode 13	TX AX(HE40) Mode Channel 151/159 (UNII-3)
Mode 14	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 AC(VHT80) Mode Channel 155 (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) 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) The measurements for Output Power are tested, the Non Beamforming and Beamforming are recorded in the report. The worst case is Non Beamforming and only the worst case is documented for other test items.
(7) IEEE 802.11ax mode only supports full RU, so only the full RU is evaluated and measured inside report.
(8) For radiated emission of Band edge, the Vertical antennas and Horizontal antennas are evaluated, the worst case is Horizontal antennas and recorded.
(9) For radiated emission of Harmonic, the Vertical antennas and Horizontal antennas are evaluated, the worst case is Vertica antennas and recorded.

3.3 PARAMETERS OF TEST SOFTWARE

Non Beamforming

UNII-1			
Test Software Version	IPOP V4.0		
Frequency (MHz)	5180	5200	5240
IEEE 802.11a	2000	2100	2100
IEEE 802.11ac(VHT20)	1850	2100	2100
IEEE 802.11ax(HE20)	1850	2100	2100
Frequency (MHz)	5190	5230	
IEEE 802.11ac(VHT40)	1750	2100	
IEEE 802.11ax(HE40)	1750	2000	
Frequency (MHz)	5210		
IEEE 802.11ac(VHT80)	1500		
IEEE 802.11ax(HE80)	1500		

UNII-3			
Test Software Version	IPOP V4.0		
Frequency (MHz)	5745	5785	5825
IEEE 802.11a	2100	2150	2150
IEEE 802.11ac(VHT20)	2100	2150	2150
IEEE 802.11ax(HE20)	2100	2150	2150
Frequency (MHz)	5755	5795	
IEEE 802.11ac(VHT40)	2100	2150	
IEEE 802.11ax(HE40)	2100	2150	
Frequency (MHz)	5775		
IEEE 802.11ac(VHT80)	2100		
IEEE 802.11ax(HE80)	2000		

Beamforming

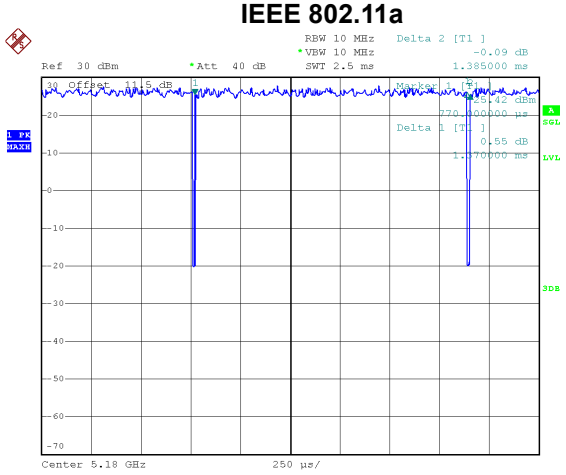
UNII-1			
Test Software Version	IPOP V4.0		
Frequency (MHz)	5180	5200	5240
IEEE 802.11ac(VHT20)	1800	2050	2050
IEEE 802.11ax(HE20)	1800	2050	2050
Frequency (MHz)	5190	5230	
IEEE 802.11ac(VHT40)	1700	2050	
IEEE 802.11ax(HE40)	1700	1950	
Frequency (MHz)	5210		
IEEE 802.11ac(VHT80)	1450		
IEEE 802.11ax(HE80)	1450		

UNII-3			
Test Software Version	IPOP V4.0		
Frequency (MHz)	5745	5785	5825
IEEE 802.11ac(VHT20)	2050	2100	2100
IEEE 802.11ax(HE20)	2050	2100	2100
Frequency (MHz)	5755	5795	
IEEE 802.11ac(VHT40)	2050	2100	
IEEE 802.11ax(HE40)	2050	2100	
Frequency (MHz)	5775		
IEEE 802.11ac(VHT80)	2050		
IEEE 802.11ax(HE80)	1950		

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.

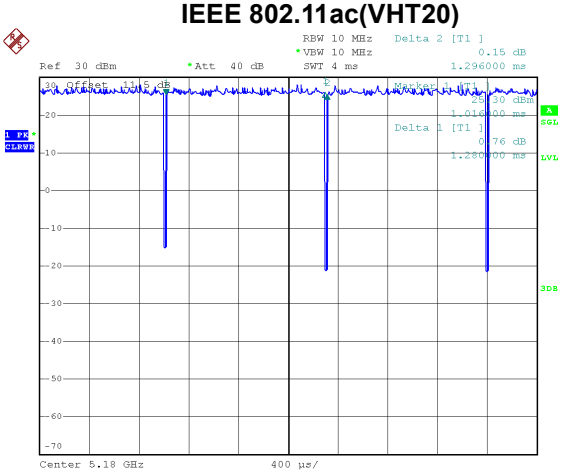
IEEE 802.11a



Date: 20.JUN.2024 14:09:34

Duty cycle = 1.370 ms / 1.385 ms = 98.92%
Duty Factor = 10 log(1 / Duty cycle) = 0.00

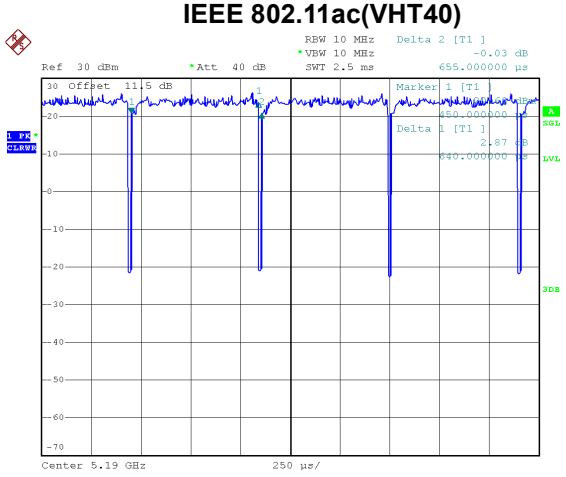
IEEE 802.11ac(VHT20)



Date: 20.JUN.2024 14:15:28

Duty cycle = 1.280 ms / 1.296 ms = 98.77%
Duty Factor = 10 log(1 / Duty cycle) = 0.00

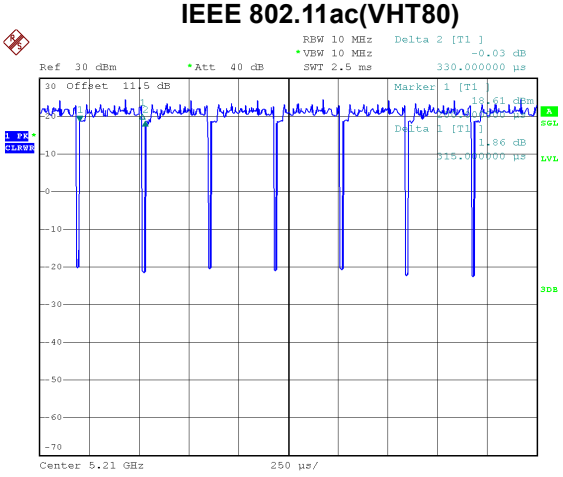
IEEE 802.11ac(VHT40)



Date: 20.JUN.2024 14:16:16

Duty cycle = 0.640 ms / 0.655 ms = 97.71%
Duty Factor = 10 log(1 / Duty cycle) = 0.10

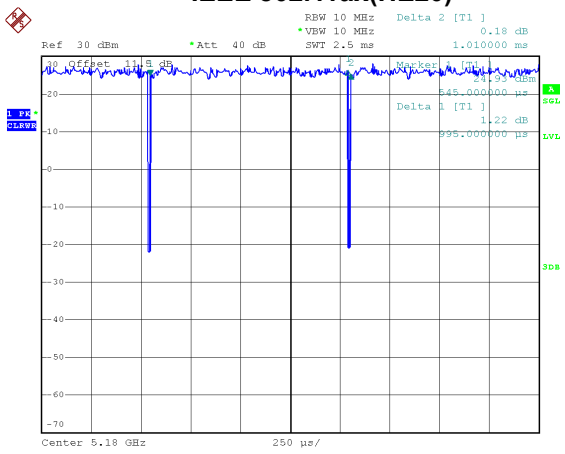
IEEE 802.11ac(VHT80)



Date: 20.JUN.2024 14:17:27

Duty cycle = 0.315 ms / 0.330 ms = 95.45%
Duty Factor = 10 log(1 / Duty cycle) = 0.20

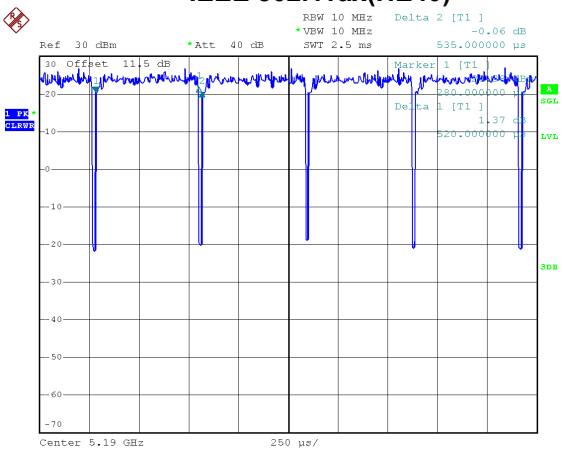
IEEE 802.11ax(HE20)



Date: 20.JUN.2024 14:18:17

Duty cycle = 0.995 ms / 1.010 ms = 98.51%
Duty Factor = 10 log(1 / Duty cycle) = 0.00

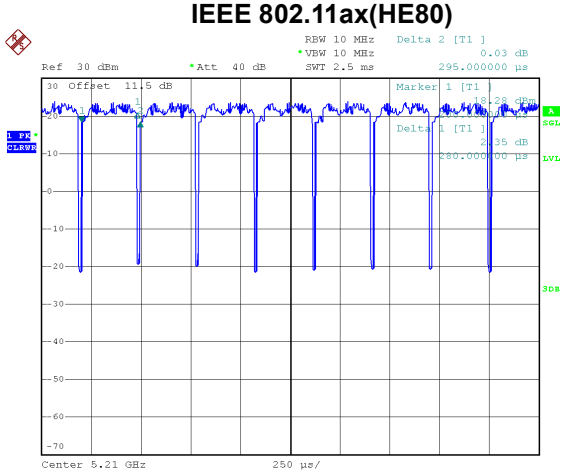
IEEE 802.11ax(HE40)



Date: 20.JUN.2024 14:19:10

Duty cycle = 0.520 ms / 0.535 ms = 97.20%
Duty Factor = 10 log(1 / Duty cycle) = 0.12

IEEE 802.11ax(HE80)



Date: 20.JUN.2024 14:19:24

Duty cycle = 0.280 ms / 0.295 ms = 94.92%
Duty Factor = 10 log(1 / Duty cycle) = 0.23

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 1562 Hz (Duty cycle < 98%).

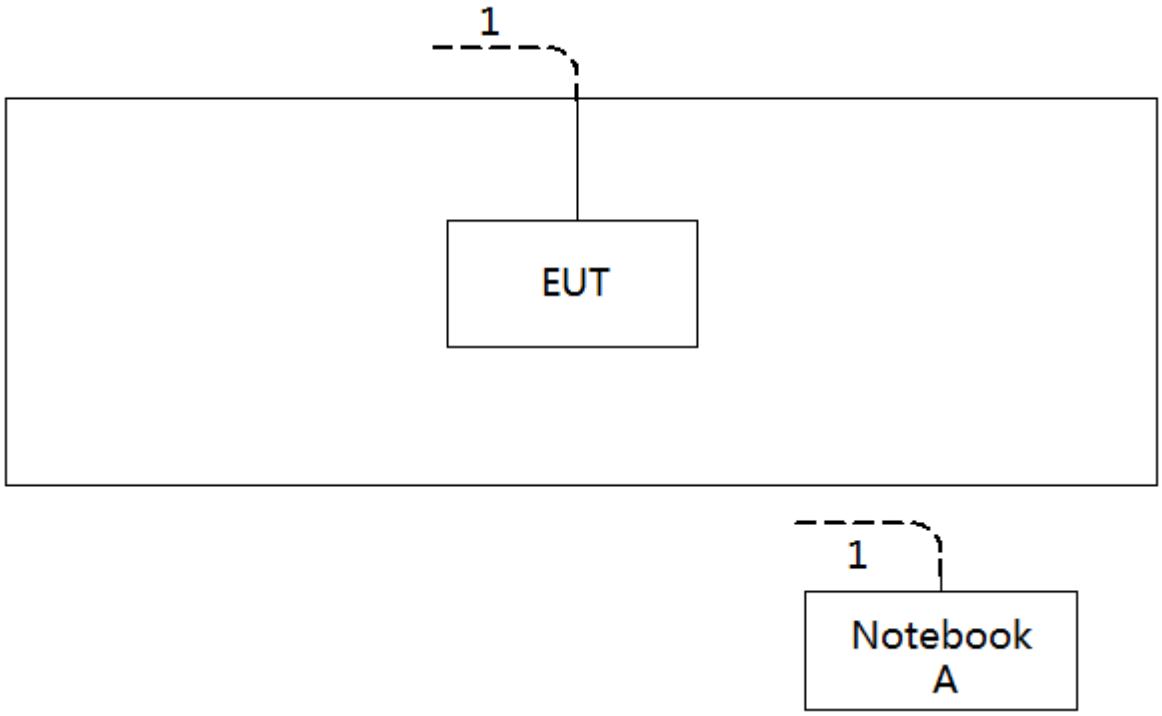
For IEEE 802.11ac(VHT80):
For radiated emissions frequency above 1 GHz, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3175 Hz (Duty cycle < 98%).

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 1923 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 3571 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	Honor	14SER5 3500	N/A

Item	Cable Type	Shielded Type	Ferrite Core	Length
1	RJ45 Cable	NO	NO	10m

3.7 CUSTOMER INFORMATION DESCRIPTION

1) The antenna gain and beamforming gain are 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.

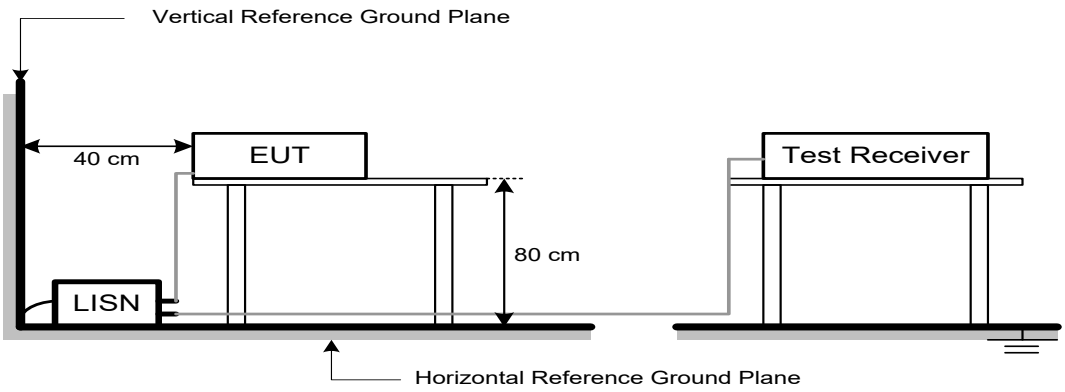
The following table is the setting of the receiver:

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)
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)

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

20log (dlimit/dmeasure)=20log (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

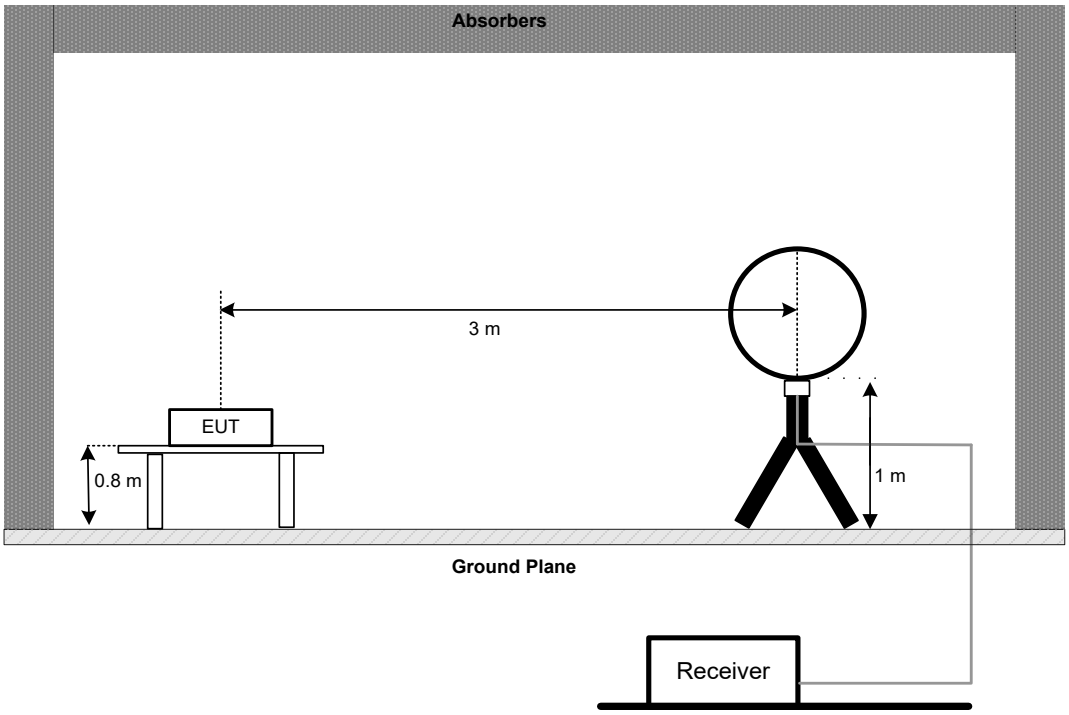
Receiver Parameters	Setting
Start ~ Stop Frequency	9 kHz~90 kHz for PK/AVG detector
Start ~ Stop Frequency	90 kHz~110 kHz for QP detector
Start ~ Stop Frequency	110 kHz~490 kHz for PK/AVG detector
Start ~ Stop Frequency	490 kHz~30 MHz for QP detector
Start ~ Stop Frequency	30 MHz~1000 MHz for QP detector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

5.3 DEVIATION FROM TEST STANDARD

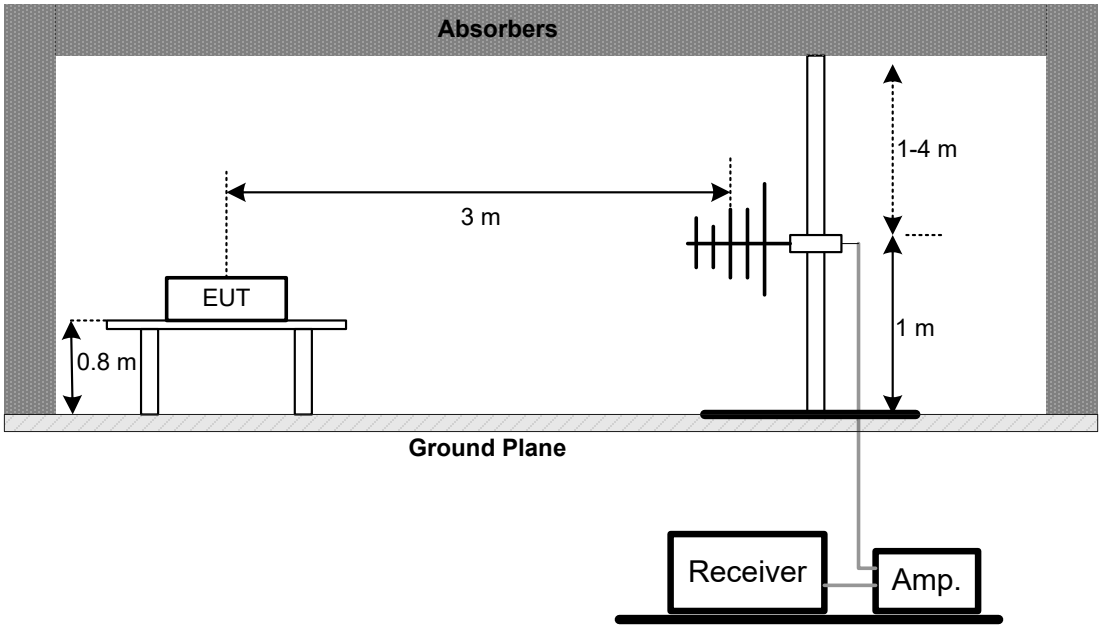
No deviation.

5.4 TEST SETUP

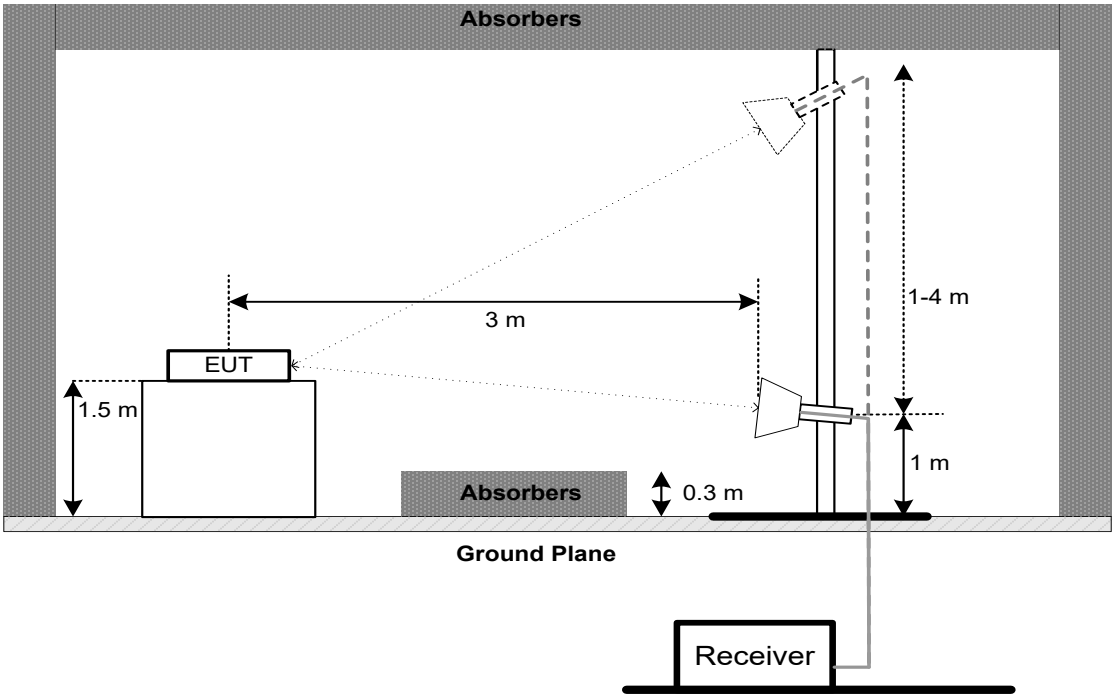
9 kHz to 30 MHz



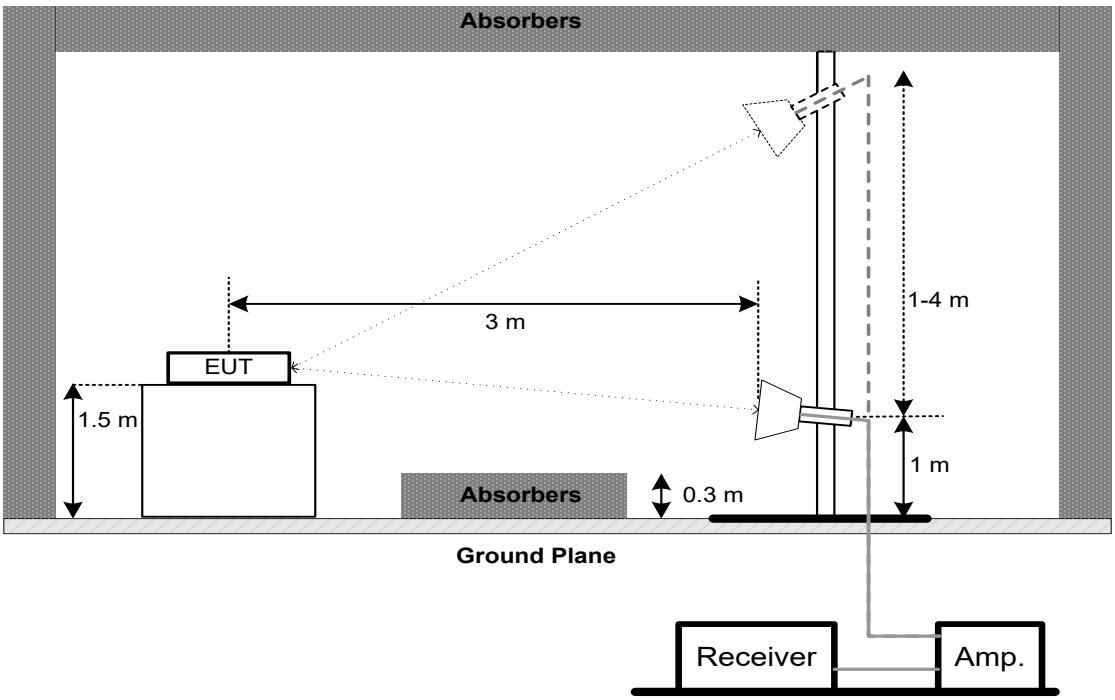
30 MHz to 1 GHz



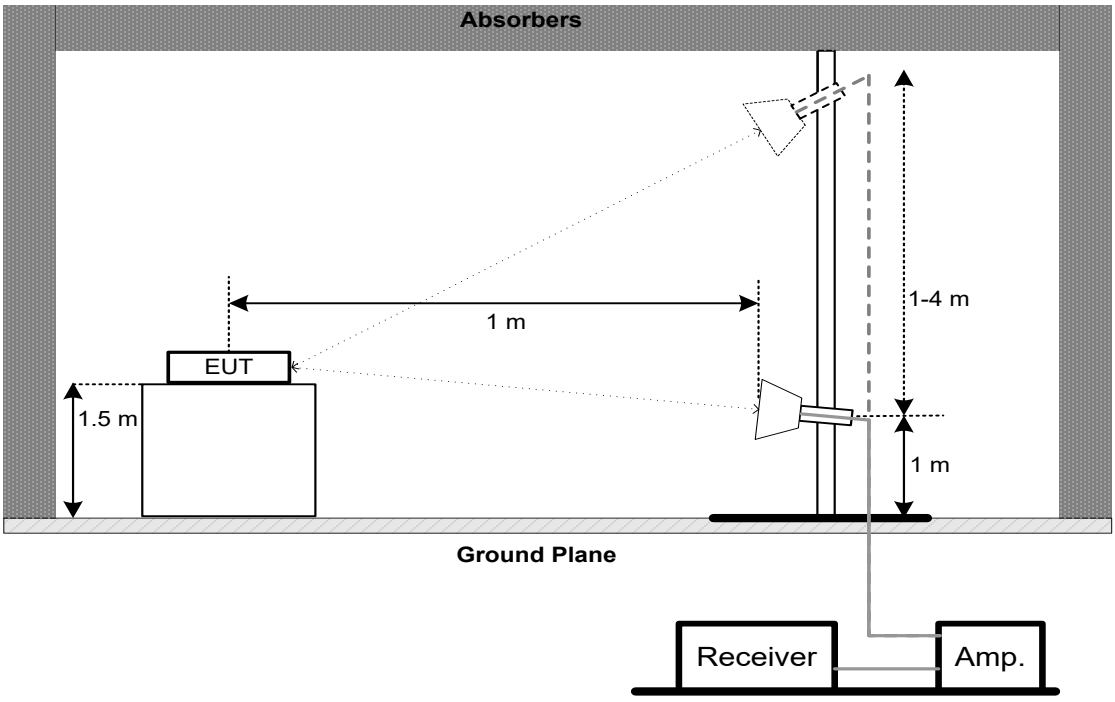
Above 1 GHz
Band edge



Harmonic (1 GHz to 18 GHz)



Harmonic (Above 18 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)	26 dB Bandwidth	-	5150-5250
FCC 15.407(e)	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:

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:

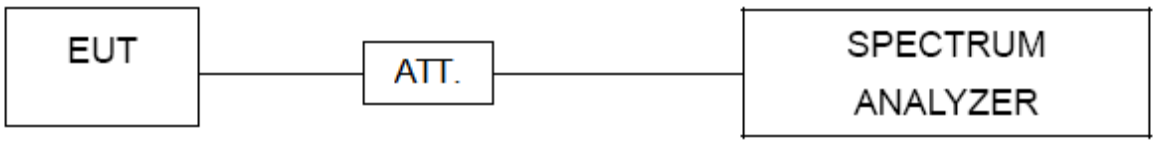
Spectrum Parameter	Setting
Span Frequency	1.5 times to 5 times the OBW
RBW	1% to 5% of the OBW
VBW	≥3*RBW
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

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
		1 Watt (30dBm)	5725-5850

Note:

a. For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, 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.

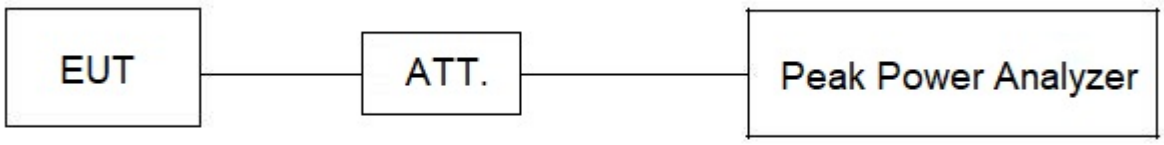
7.2 TEST PROCEDURE

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
		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:

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

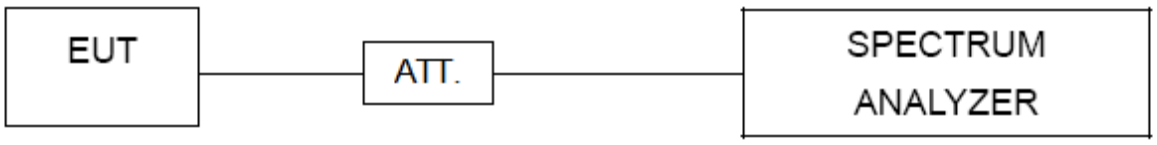
Note:

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	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	MXE EMI Receiver	Keysight	N9038A	MY56400091	Dec. 22, 2024
3	Cable	N/A	RW2350-3.8A-NMB M-1.5M	N/A	Jun. 09, 2025
4	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
5	966 Chamber room	ETS	9*6*6	N/A	Jul. 11, 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	980863	Apr. 07, 2025
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 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
2	Preamplifier	EMC INSTRUMENT	EMC118A45SE	980888	Nov. 17, 2024
3	EXA Spectrum Analyzer	Keysight	N9010A	MY55150209	May 31, 2025
4	Double Ridged Guide Antenna	ETS	3115	75846	Mar. 20, 2025
5	Cable	RegalWay	RWLP50-4.0A-SMSM-12.5M	N/A	Feb. 19, 2025
6	Cable	RegalWay	RWLP50-4.0A-NMRASM-2.5M	N/A	Aug. 08, 2024
7	Cable	RegalWay	RWLP50-4.0A-NMRASMRA-0.8M	N/A	Aug. 08, 2024
8	Low Noise Amplifier	CONNPHY	CLN-18G40G-4330-K	619413	Jul. 06, 2024
9	Cable	RegalWay	RWLP50-2.6A-2.92M2.92M-1.1M	N/A	Jul. 26, 2024
10	Cable	Tonscend	HF160-KMKM-3M	N/A	Jul. 26, 2024
11	Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	1227	Oct. 10, 2024
12	966 Chamber room	CM	9*6*6	N/A	May 19, 2025
13	Attenuator	Talent Microwave	TA10A2-S-18	N/A	N/A
14	Filter	STI	STI15-9969	N/A	May 31, 2025
15	Positioning Controller	MF	MF-7802	N/A	N/A
16	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	FSP40	100185	May 31, 2025
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	May 31, 2025
2	Wideband power sensor	Keysight	N1923A	MY58310004	May 31, 2025
3	Attenuator	Talent Microwave	TA10A2-S-18	N/A	N/A

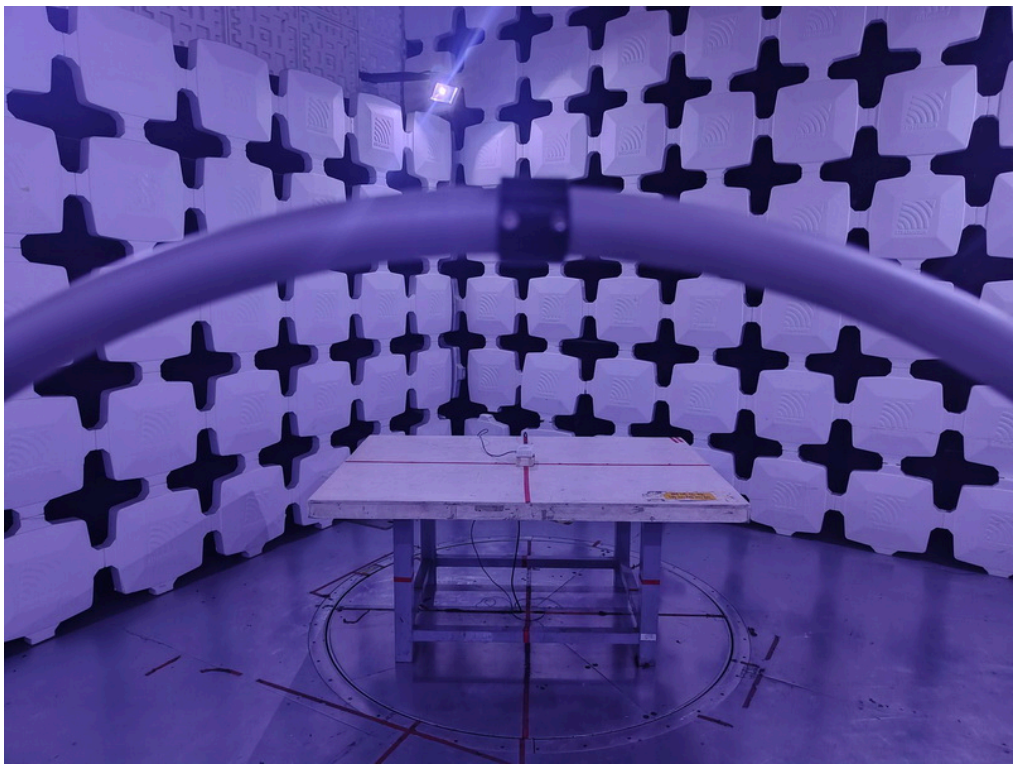
Remark: “N/A” denotes no model name, serial no. or calibration specified.
All calibration period of equipment list is one year.

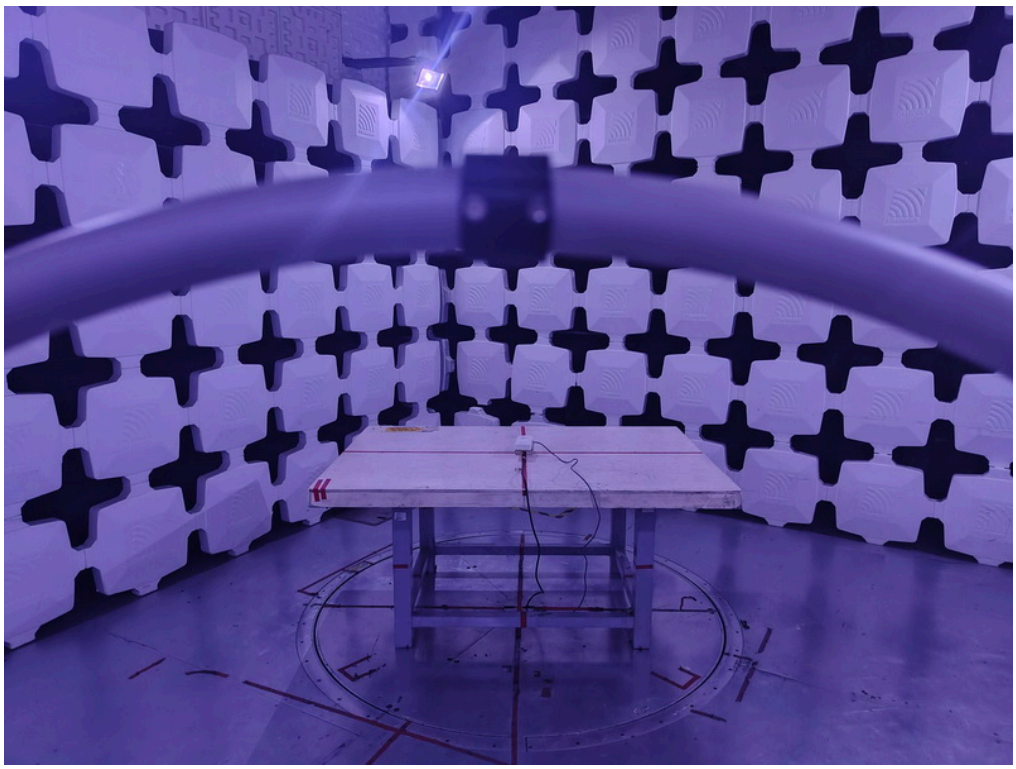
10. EUT TEST PHOTOS

AC Power Line Conducted Emissions Test Photos

Radiated Emissions Test Photos

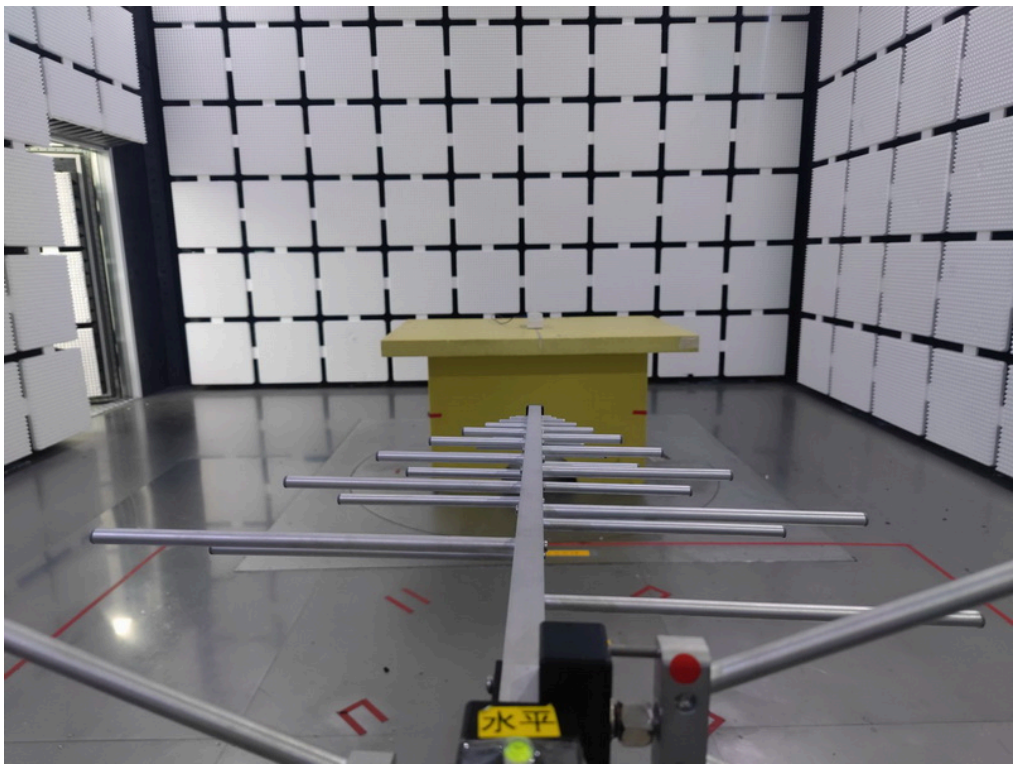
9 kHz to 30 MHz

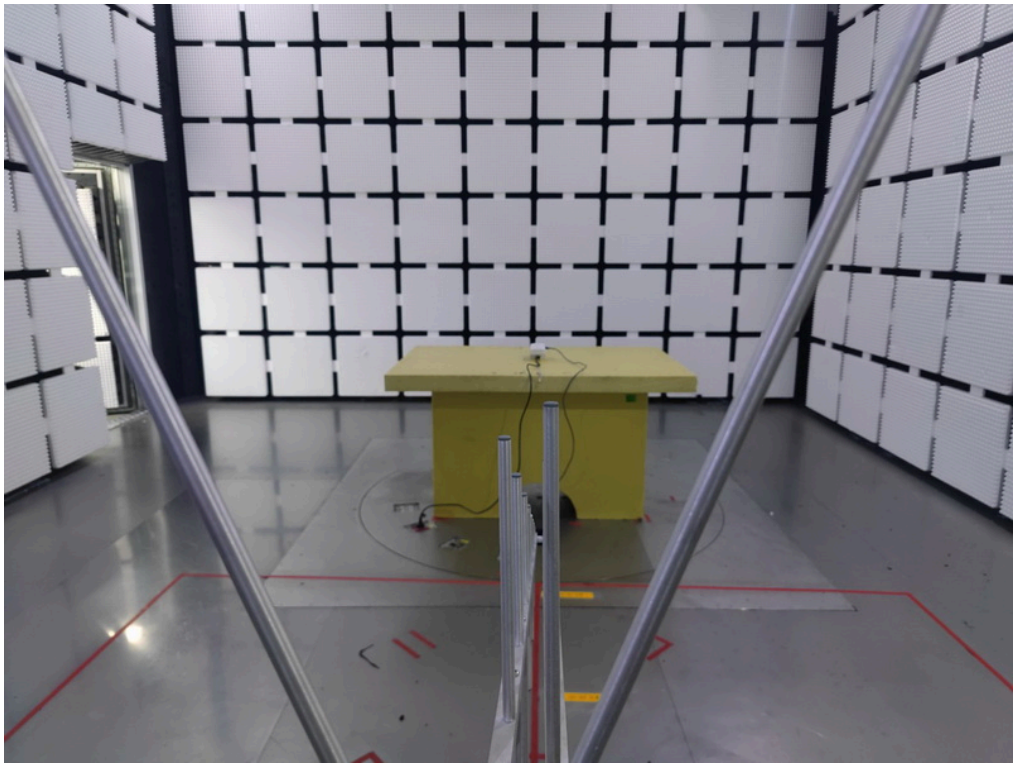




Radiated Emissions Test Photos

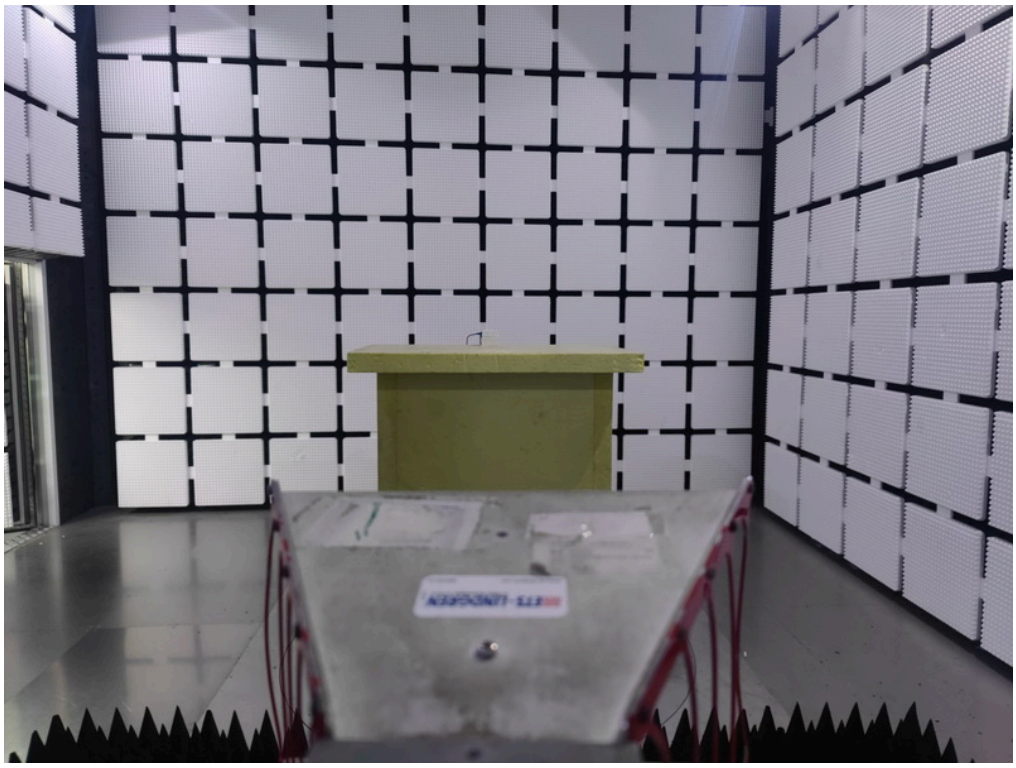
30 MHz to 1 GHz

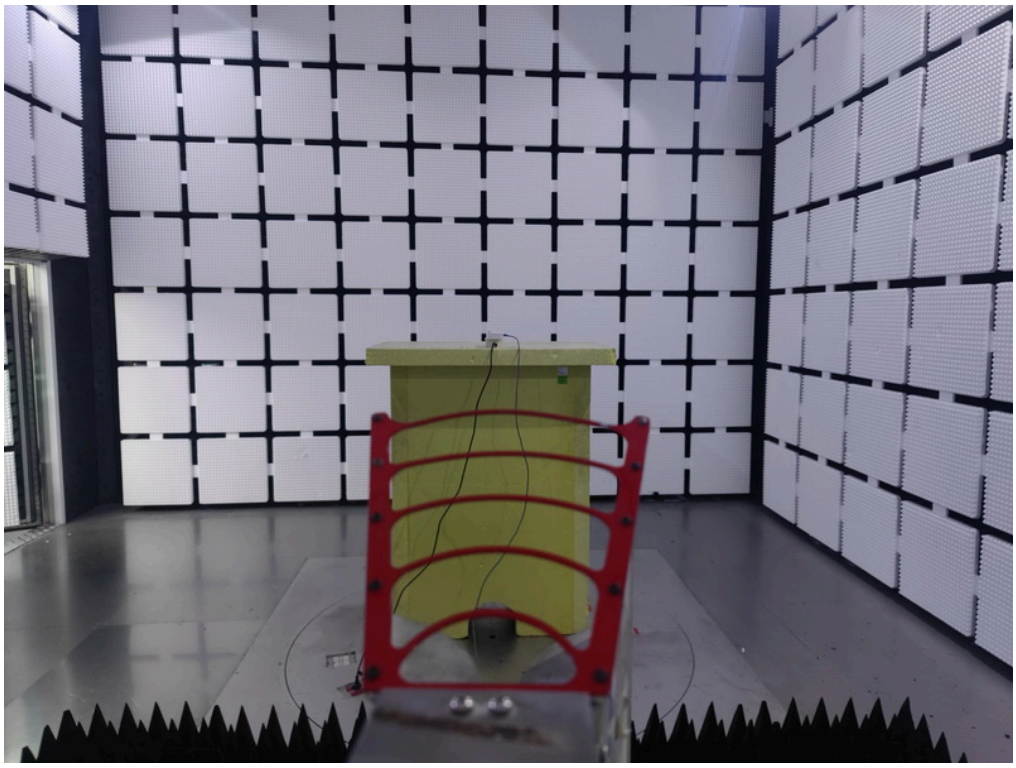




Radiated Emissions Test Photos

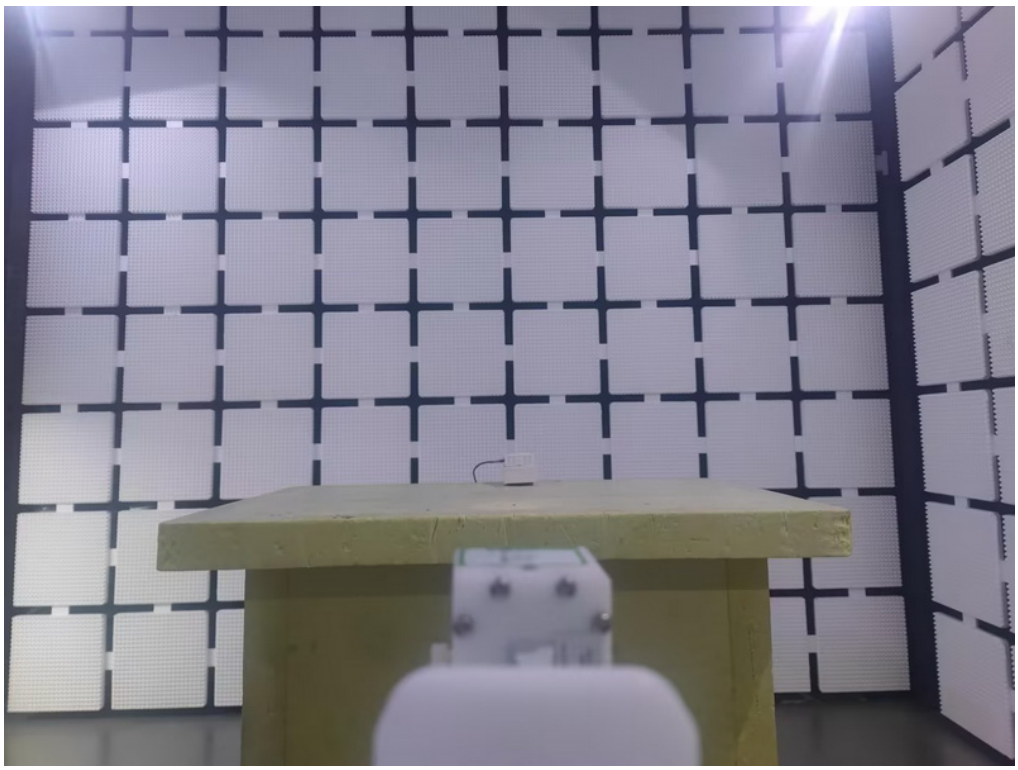
1 GHz -18 GHz
(Band edge & Harmonic)

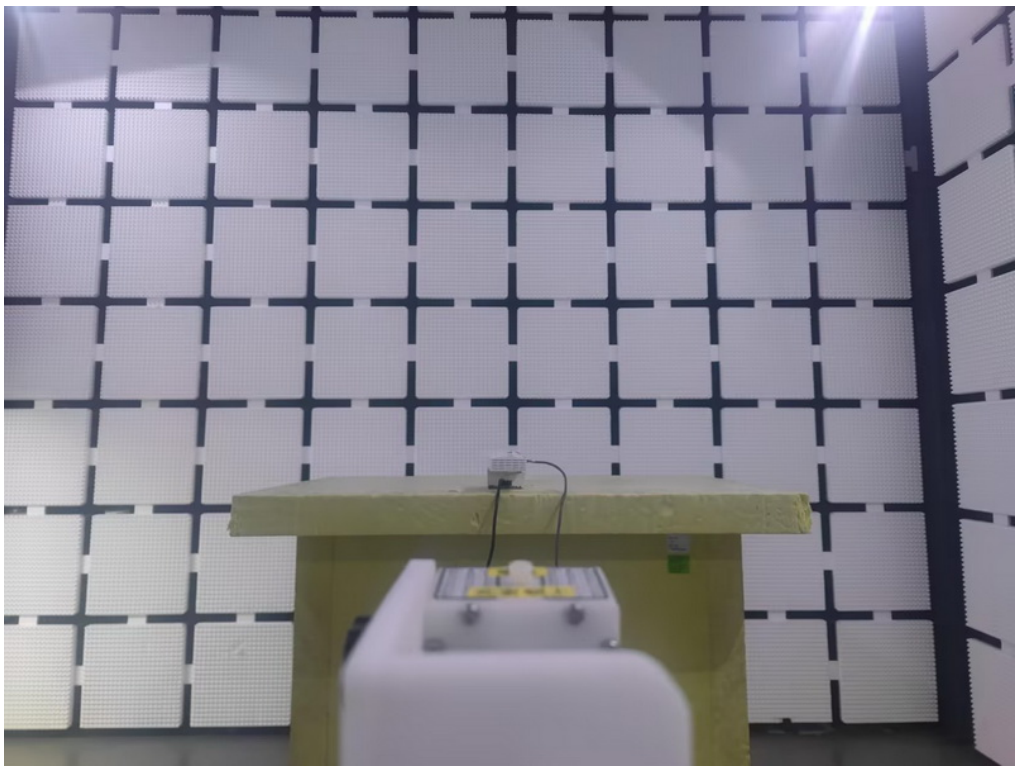




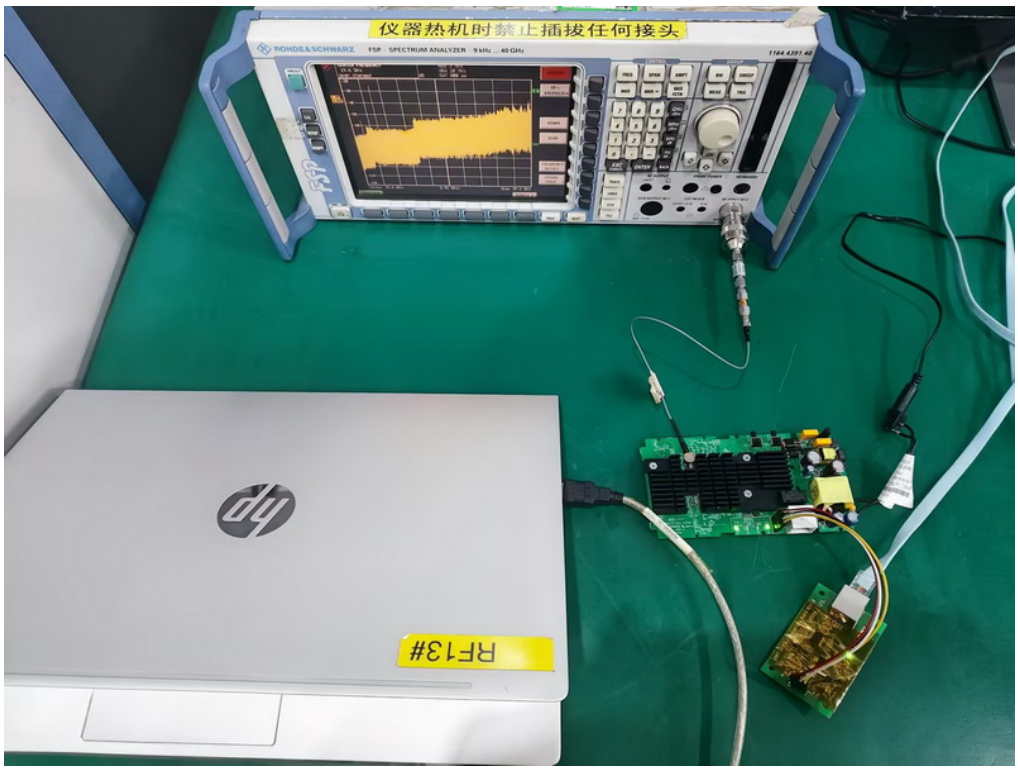
Radiated Emissions Test Photos

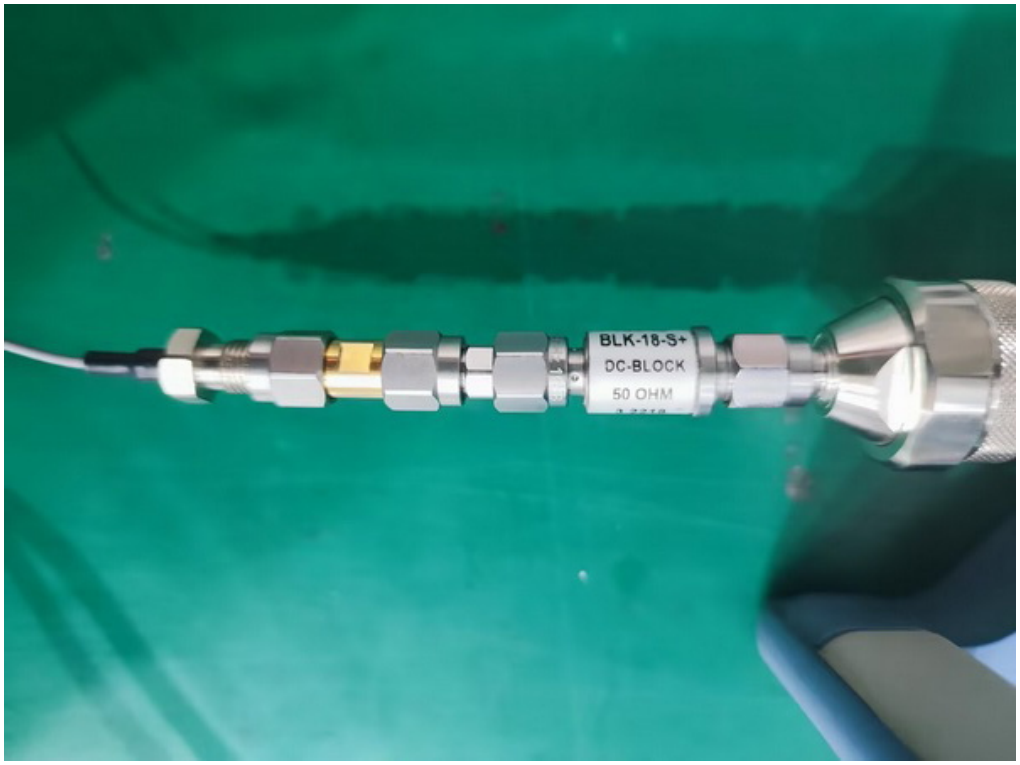
Above 18 GHz
(Harmonic)





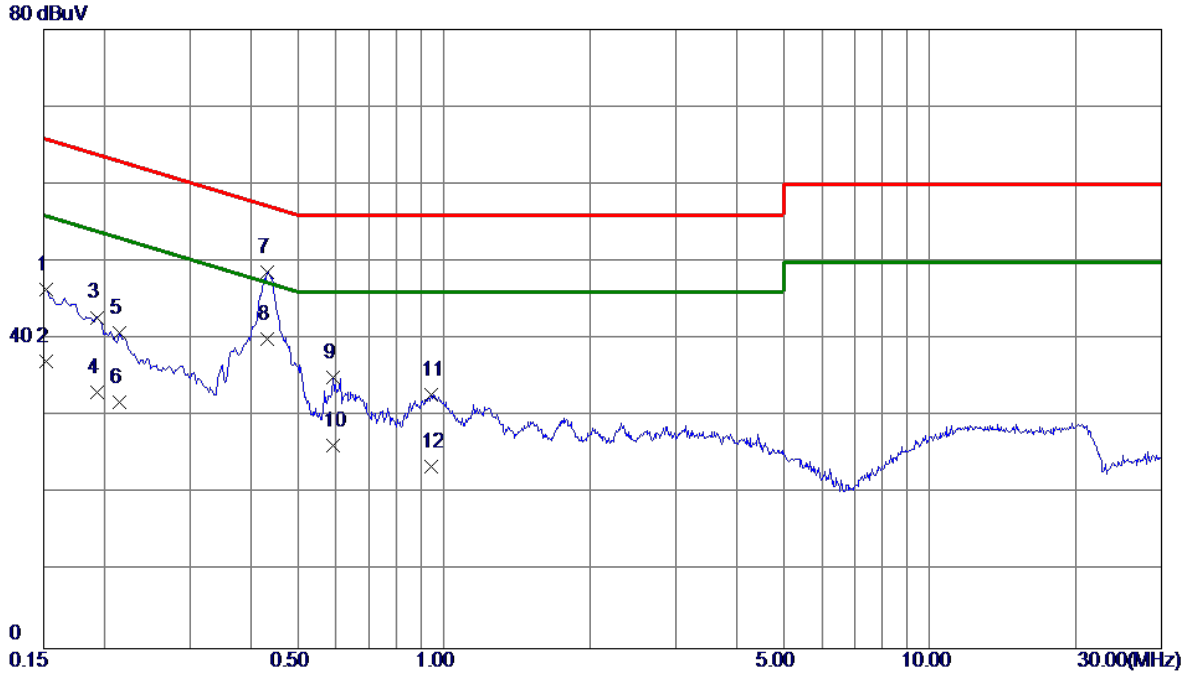
Conducted Test Photos





APPENDIX A - AC POWER LINE CONDUCTED EMISSIONS

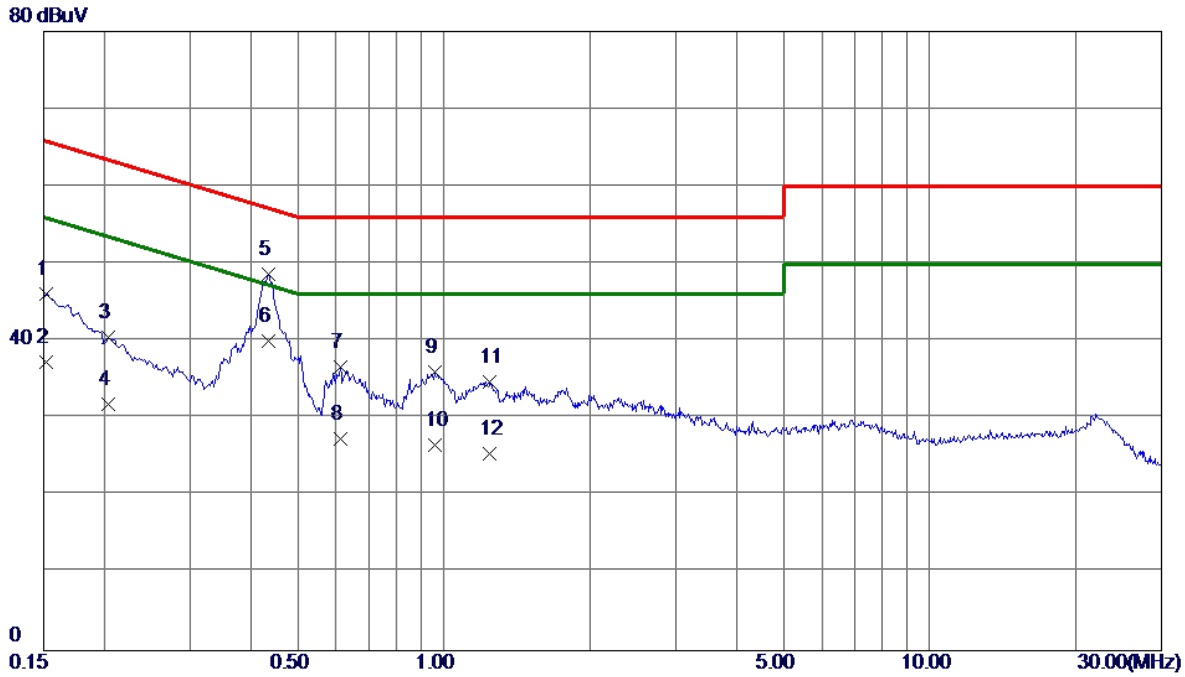
Test Mode	TX AC(VHT80) Mode Channel 155 (UNII-3)	Phase	Line



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	0.1522	36.39	9.97	46.36	65.88	-19.52	QP	
2	0.1522	27.20	9.97	37.17	55.88	-18.71	AVG	
3	0.1928	32.82	9.98	42.80	63.92	-21.12	QP	
4	0.1928	23.10	9.98	33.08	53.92	-20.84	AVG	
5	0.2153	30.86	10.01	40.87	63.00	-22.13	QP	
6	0.2153	21.89	10.01	31.90	53.00	-21.10	AVG	
7	0.4335	38.20	10.48	48.68	57.19	-8.51	QP	
8 *	0.4335	29.59	10.48	40.07	47.19	-7.12	AVG	
9	0.5910	24.27	10.81	35.08	56.00	-20.92	QP	
10	0.5910	15.40	10.81	26.21	46.00	-19.79	AVG	
11	0.9420	21.63	11.23	32.86	56.00	-23.14	QP	
12	0.9420	12.29	11.23	23.52	46.00	-22.48	AVG	

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

Test Mode	TX AC(VHT80) Mode Channel 155 (UNII-3)	Phase	Neutral

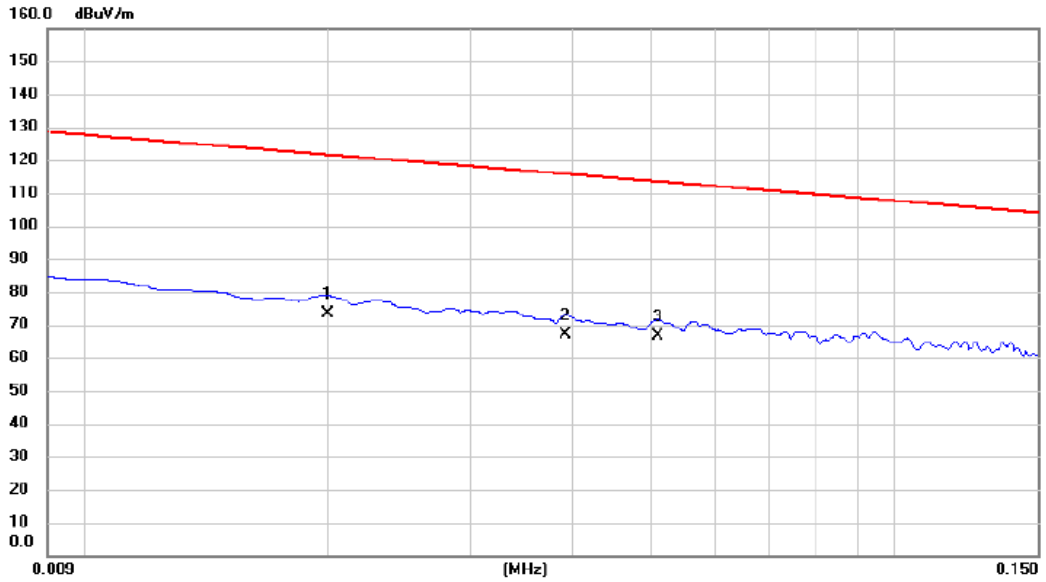


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	0.1522	36.14	9.93	46.07	65.88	-19.81	QP	
2	0.1522	27.31	9.93	37.24	55.88	-18.64	AVG	
3	0.2040	30.48	9.95	40.43	63.45	-23.02	QP	
4	0.2040	21.90	9.95	31.85	53.45	-21.60	AVG	
5	0.4357	38.13	10.44	48.57	57.14	-8.57	QP	
6 *	0.4357	29.60	10.44	40.04	47.14	-7.10	AVG	
7	0.6134	25.89	10.81	36.70	56.00	-19.30	QP	
8	0.6134	16.50	10.81	27.31	46.00	-18.69	AVG	
9	0.9577	24.79	11.18	35.97	56.00	-20.03	QP	
10	0.9577	15.41	11.18	26.59	46.00	-19.41	AVG	
11	1.2435	23.47	11.27	34.74	56.00	-21.26	QP	
12	1.2435	14.10	11.27	25.37	46.00	-20.63	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

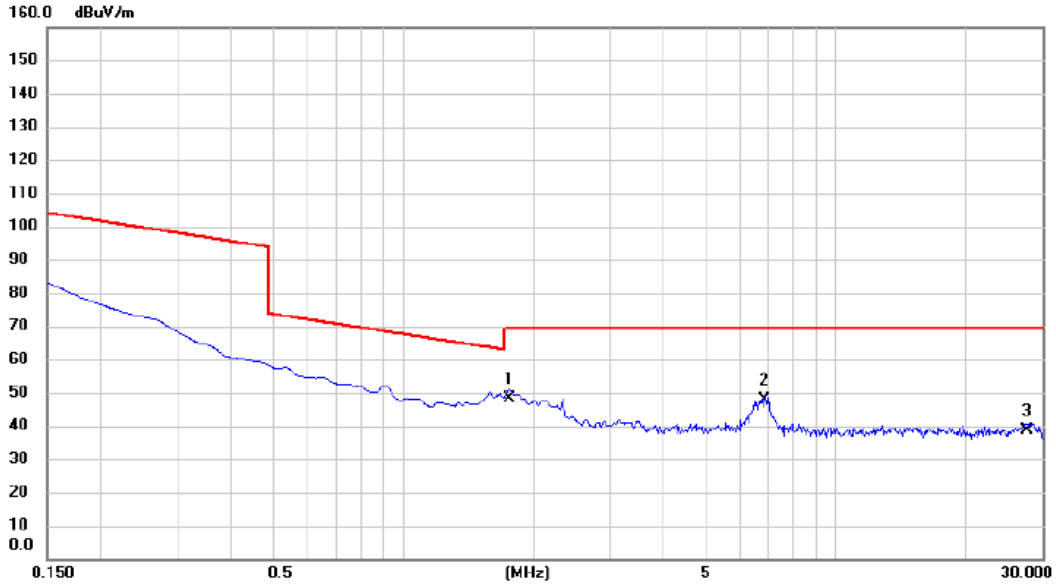
Test Mode	TX AC(VHT80) Mode Channel 155 (UNII-3)	Polarization	Ant 0°



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		0.0200	52.41	20.80	73.21	121.58	-48.37	AVG	
2		0.0393	45.88	21.15	67.03	115.72	-48.69	AVG	
3	*	0.0510	45.21	21.20	66.41	113.45	-47.04	AVG	

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

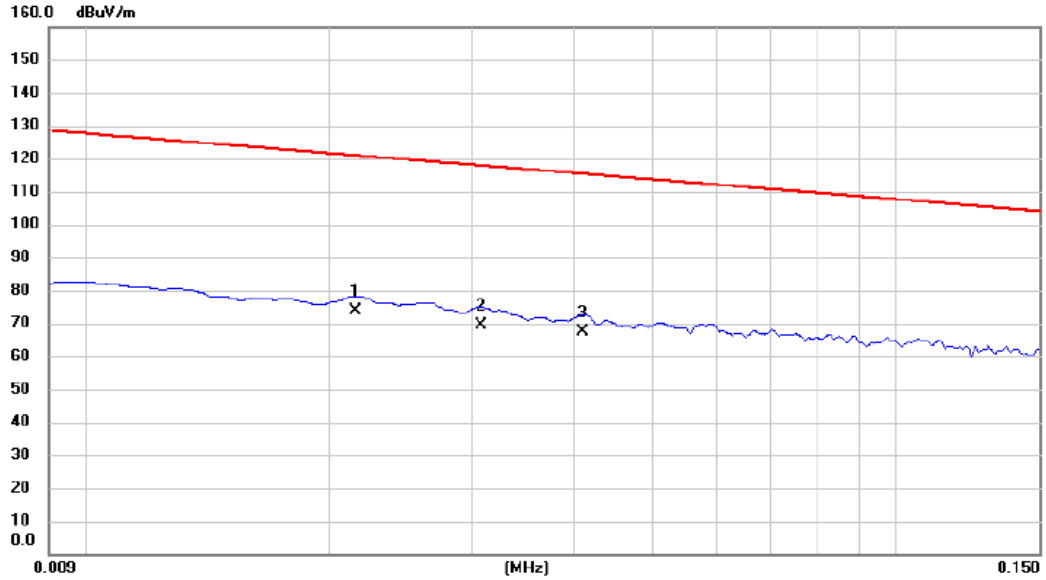
Test Mode	TX AC(VHT80) Mode Channel 155 (UNII-3)	Polarization	Ant 0°



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	1.7620	27.11	21.02	48.13	69.54	-21.41	QP	
2		6.8065	26.66	21.00	47.66	69.54	-21.88	QP	
3		27.6120	16.98	21.56	38.54	69.54	-31.00	QP	

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

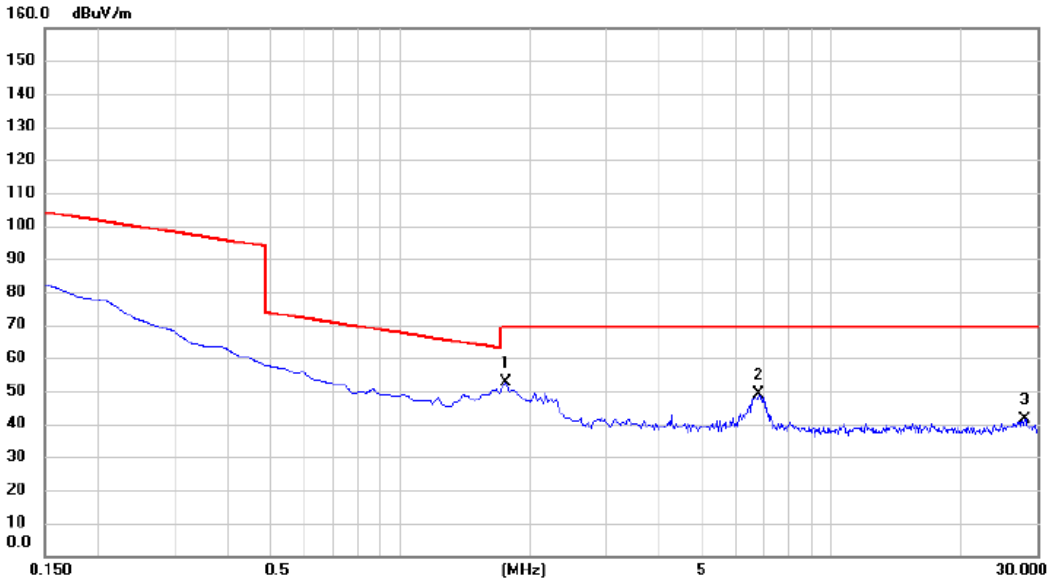
Test Mode	TX AC(VHT80) Mode Channel 155 (UNII-3)	Polarization	Ant 90°



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	0.0215	52.78	20.85	73.63	120.96	-47.33	AVG	
2		0.0307	48.44	21.10	69.54	117.86	-48.32	AVG	
3		0.0411	46.36	21.16	67.52	115.33	-47.81	AVG	

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

Test Mode	TX AC(VHT80) Mode Channel 155 (UNII-3)	Polarization	Ant 90°

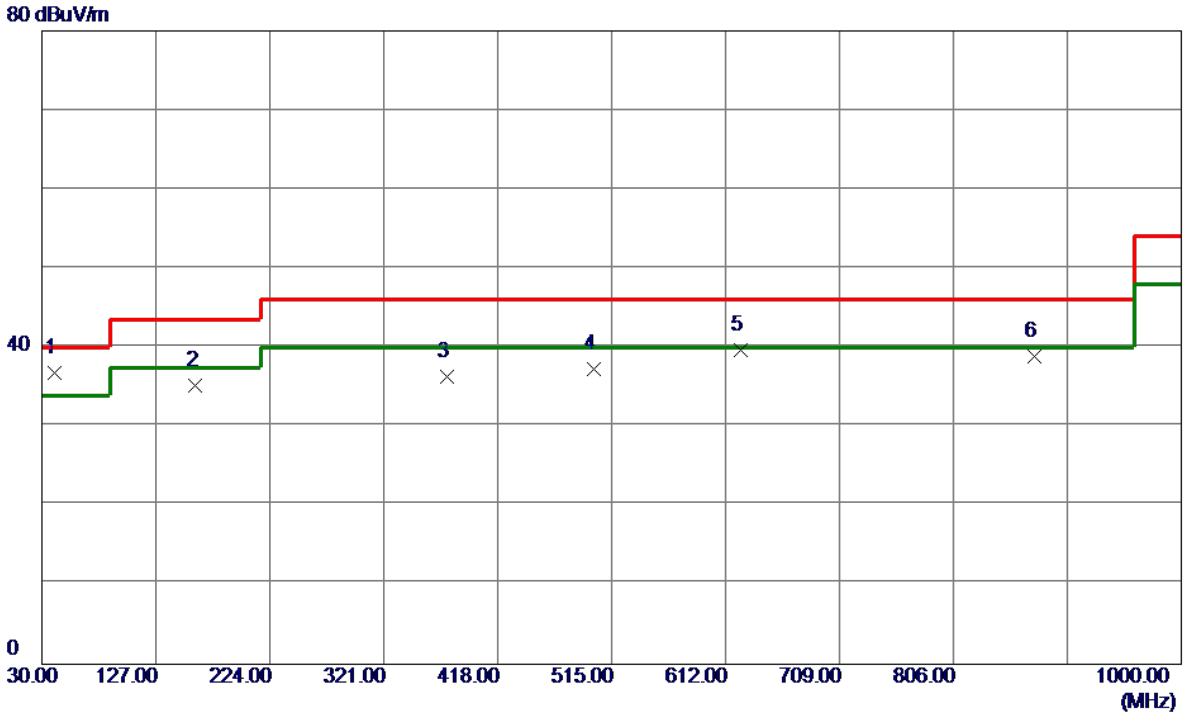


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	1.7620	31.49	21.02	52.51	69.54	-17.03	QP	
2		6.7767	27.88	21.00	48.88	69.54	-20.66	QP	
3		28.0896	19.86	21.62	41.48	69.54	-28.06	QP	

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

APPENDIX C - RADIATED EMISSION - 30 MHZ TO 1000 MHZ

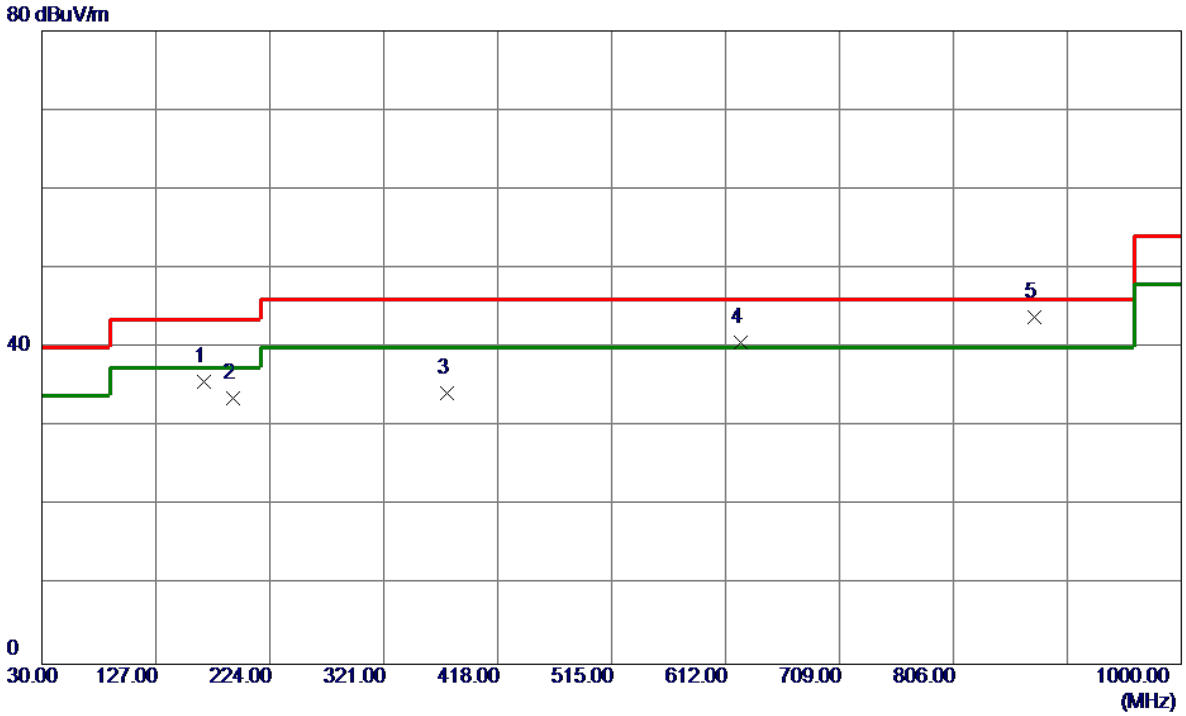
Test Mode	TX AC(VHT80) Mode Channel 155 (UNII-3)	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	41.1550	48.45	-11.66	36.79	40.00	-3.21	QP	
2	160.9500	46.04	-10.81	35.23	43.50	-8.27	Peak	
3	374.8350	45.01	-8.67	36.34	46.00	-9.66	Peak	
4	499.9650	43.16	-5.83	37.33	46.00	-8.67	Peak	
5	625.0949	42.70	-3.06	39.64	46.00	-6.36	Peak	
6	874.8700	38.91	0.04	38.95	46.00	-7.05	Peak	

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

Test Mode	TX AC(VHT80) Mode Channel 155 (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	167.7400	46.71	-11.08	35.63	43.50	-7.87	Peak	
2	192.9600	47.58	-13.95	33.63	43.50	-9.87	Peak	
3	374.8350	42.90	-8.67	34.23	46.00	-11.77	Peak	
4	625.0949	43.76	-3.06	40.70	46.00	-5.30	Peak	
5 *	874.8700	43.81	0.04	43.85	46.00	-2.15	Peak	

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

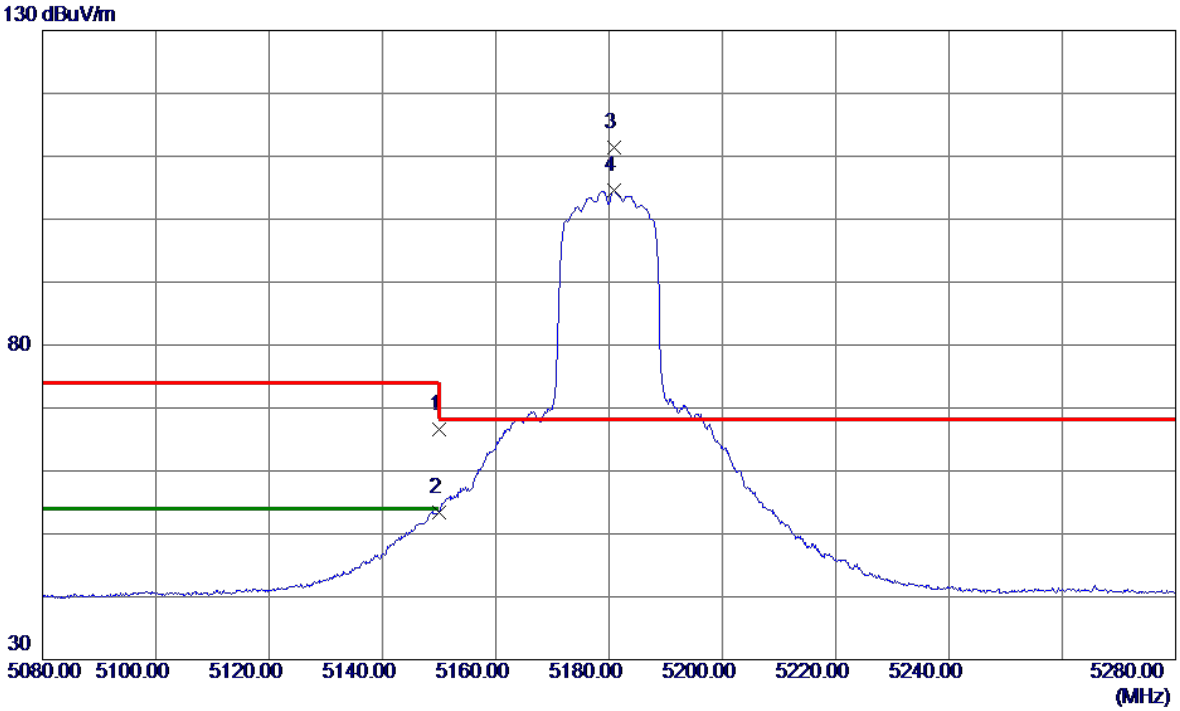
APPENDIX D - RADIATED EMISSION - ABOVE 1000 MHZ

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	15536.6000	52.84	7.43	60.27	74.00	-13.73	Peak	
2 *	15541.7000	42.89	7.43	50.32	54.00	-3.68	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	55.17	11.45	66.62	74.00	-7.38	Peak	
2	5150.0000	41.96	11.45	53.41	54.00	-0.59	AVG	
3 *	5180.9000	99.82	11.56	111.38	68.20	43.18	Peak	No Limit
4	5180.9000	92.96	11.56	104.52	999.00	-894.48	AVG	No Limit

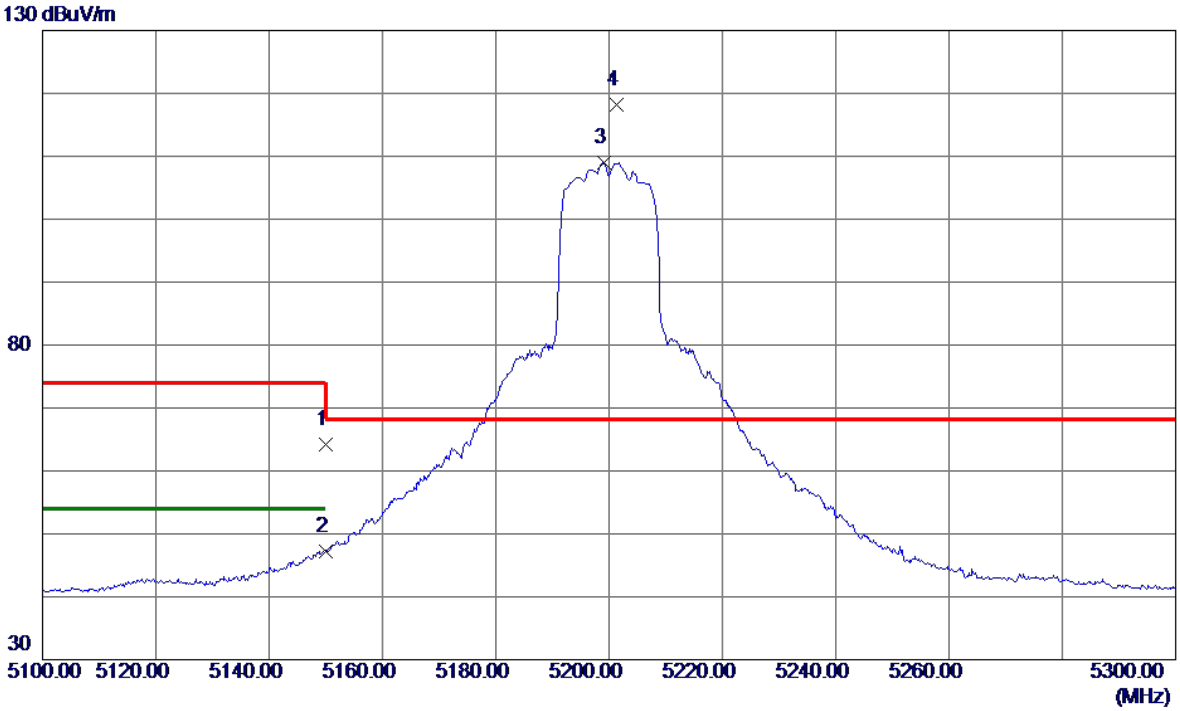
REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

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	15603.8250	53.72	7.51	61.23	74.00	-12.77	Peak	
2 *	15601.8750	43.40	7.51	50.91	54.00	-3.09	AVG	

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	52.71	11.45	64.16	74.00	-9.84	Peak	
2	5150.0000	35.71	11.45	47.16	54.00	-6.84	AVG	
3	5199.1000	97.41	11.62	109.03	999.00	-889.97	AVG	No Limit
4 *	5201.4000	106.49	11.63	118.12	68.20	49.92	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 *	15722.0000	42.28	7.65	49.93	54.00	-4.07	AVG	
2	15724.1500	54.70	7.65	62.35	74.00	-11.65	Peak	

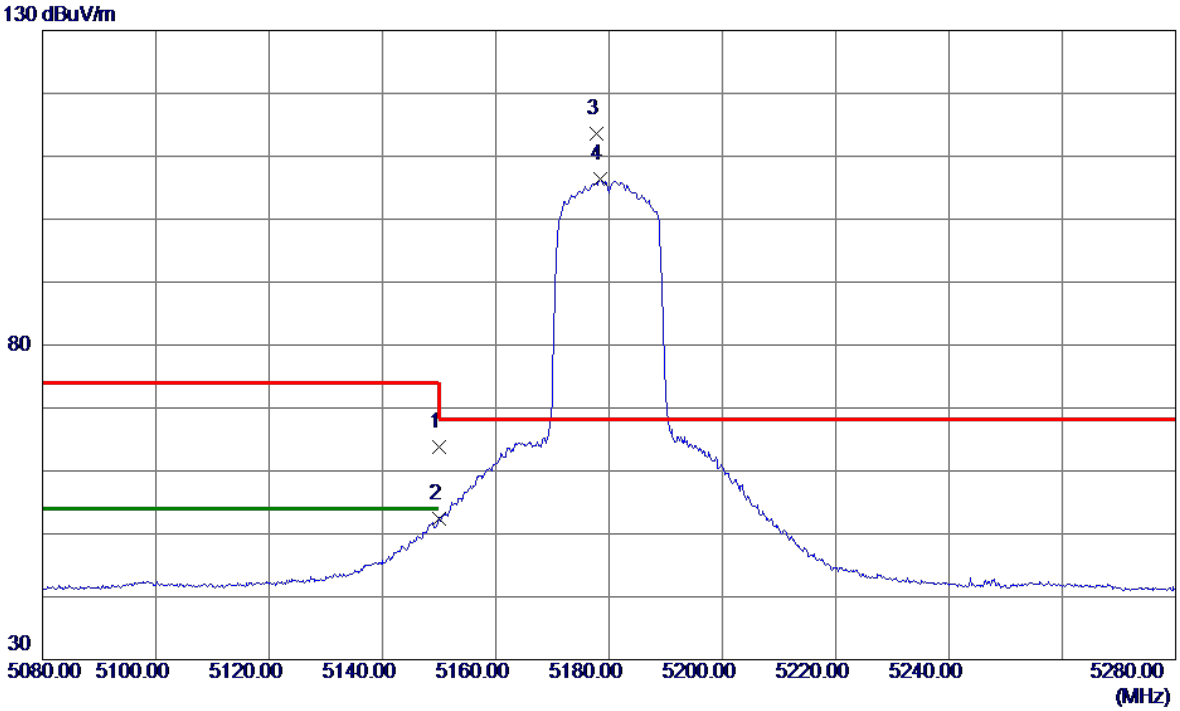
REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	UNII-1_TX 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 *	15540.1250	40.28	7.43	47.71	54.00	-6.29	AVG	
2	15544.0500	49.81	7.44	57.25	74.00	-16.75	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	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	52.26	11.45	63.71	74.00	-10.29	Peak	
2	5150.0000	40.97	11.45	52.42	54.00	-1.58	AVG	
3 *	5177.8000	102.01	11.55	113.56	68.20	45.36	Peak	No Limit
4	5178.4000	94.84	11.55	106.39	999.00	-892.61	AVG	No Limit

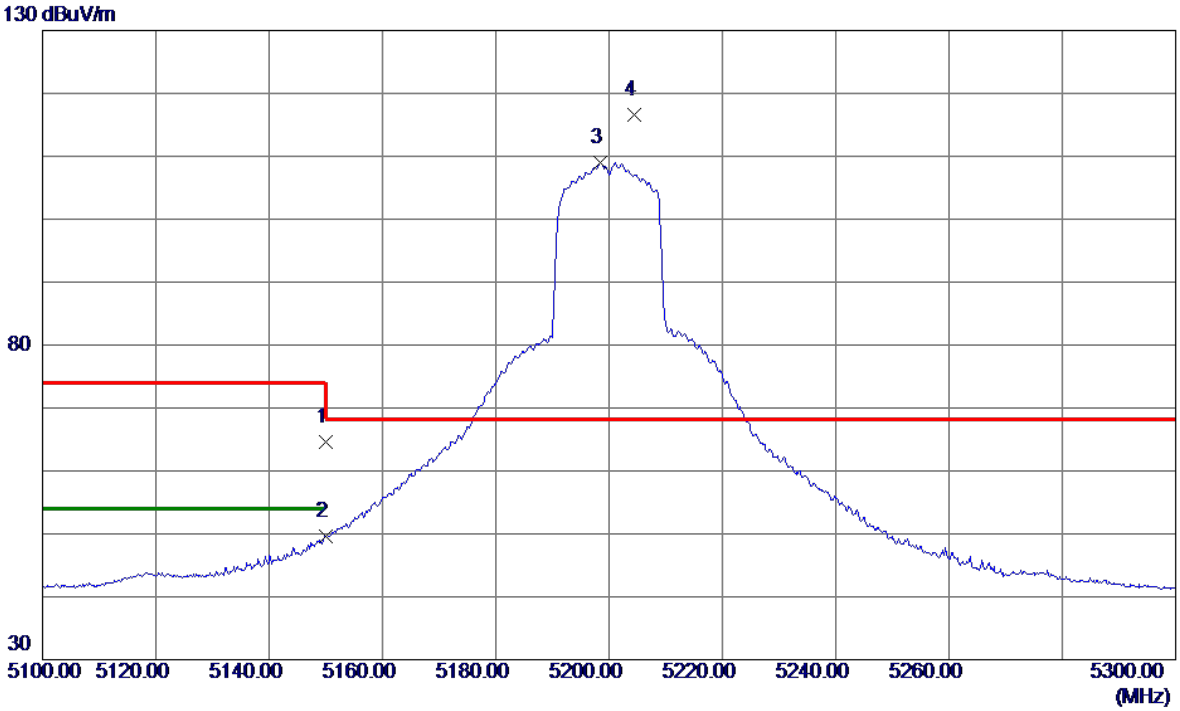
REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	UNII-1_TX AC(VHT20) Mode 5200 MHz	Polarization	Vertical

No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	15600.1000	52.92	7.50	60.42	74.00	-13.58	Peak	
2 *	15600.2000	42.75	7.50	50.25	54.00	-3.75	AVG	

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	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	53.09	11.45	64.54	74.00	-9.46	Peak	
2	5150.0000	38.06	11.45	49.51	54.00	-4.49	AVG	
3	5198.4000	97.31	11.62	108.93	999.00	-890.07	AVG	No Limit
4 *	5204.4000	104.93	11.64	116.57	68.20	48.37	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 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 *	15720.1500	43.97	7.65	51.62	54.00	-2.38	AVG	
2	15724.6500	53.37	7.65	61.02	74.00	-12.98	Peak	

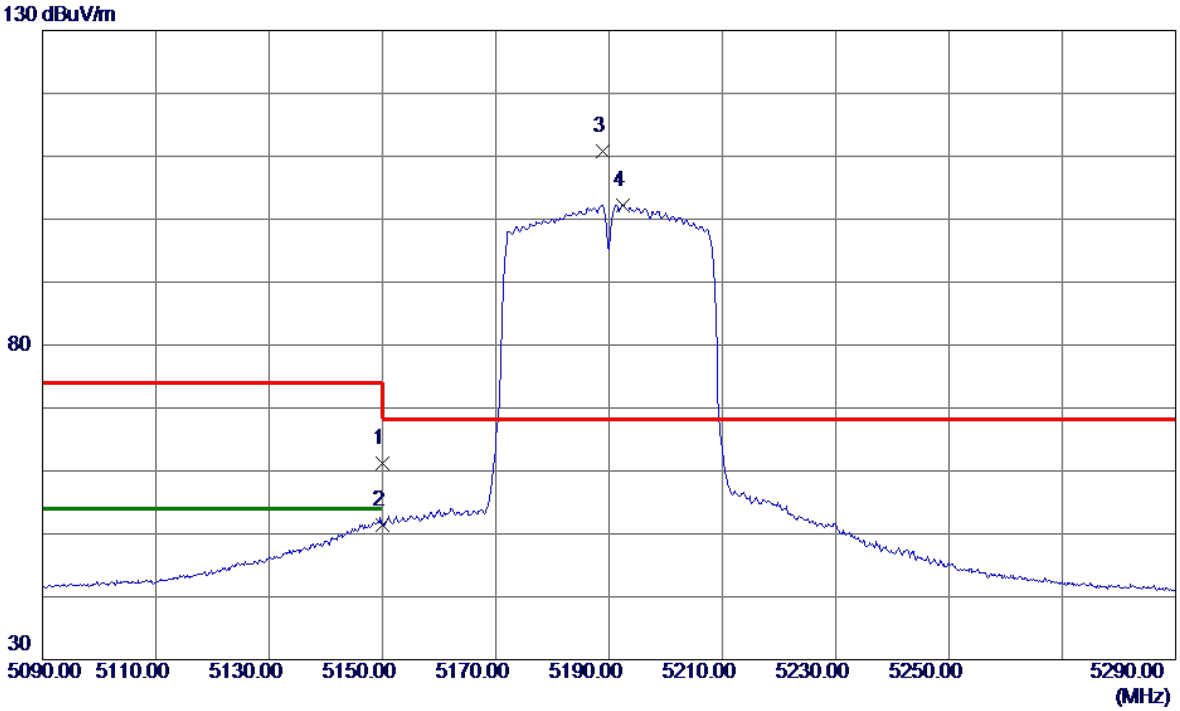
REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	UNII-1_TX AC(VHT40) Mode 5190 MHz	Polarization	Vertical

No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	15563.6500	41.39	7.46	48.85	54.00	-5.15	AVG	
2	15578.3000	51.17	7.48	58.65	74.00	-15.35	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	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	49.83	11.45	61.28	74.00	-12.72	Peak	
2	5150.0000	39.99	11.45	51.44	54.00	-2.56	AVG	
3 *	5188.9000	99.17	11.59	110.76	68.20	42.56	Peak	No Limit
4	5192.5000	90.64	11.60	102.24	999.00	-896.76	AVG	No Limit

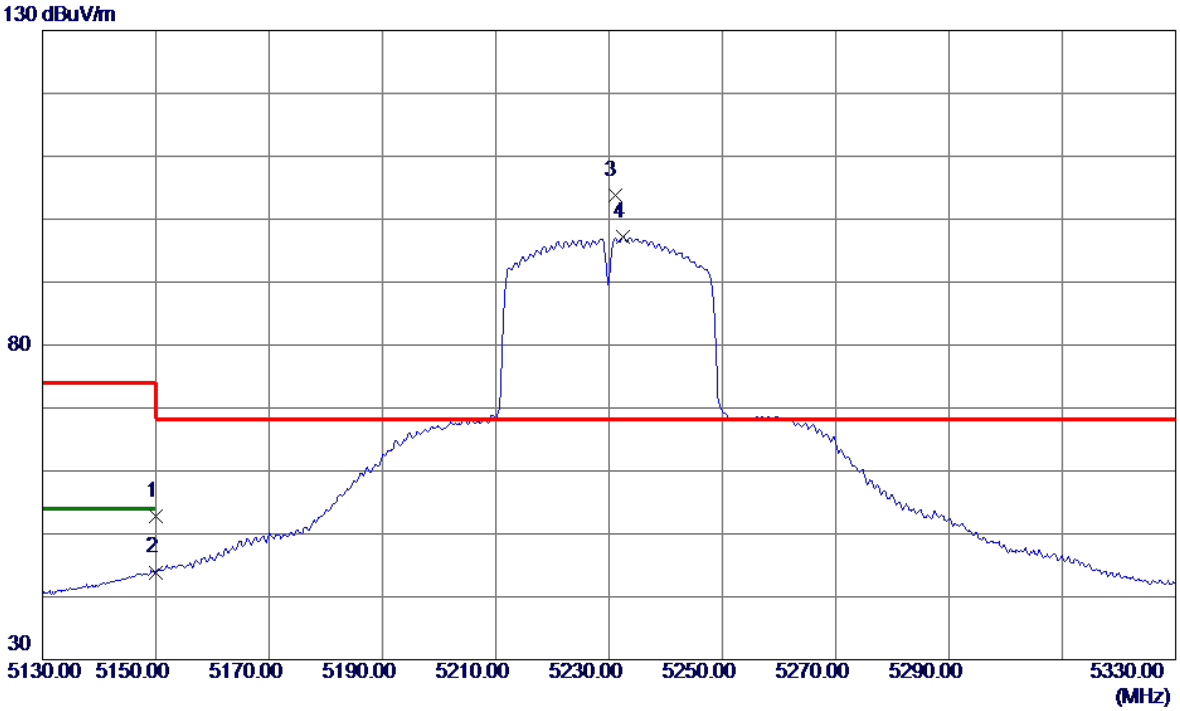
REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	UNII-1_TX AC(VHT40) Mode 5230 MHz	Polarization	Vertical

No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	15685.1500	41.00	7.61	48.61	54.00	-5.39	AVG	
2	15696.1750	50.61	7.62	58.23	74.00	-15.77	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	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	41.43	11.45	52.88	74.00	-21.12	Peak	
2	5150.0000	32.45	11.45	43.90	54.00	-10.10	AVG	
3 *	5231.0000	92.04	11.73	103.77	68.20	35.57	Peak	No Limit
4	5232.5000	85.47	11.74	97.21	999.00	-901.79	AVG	No Limit

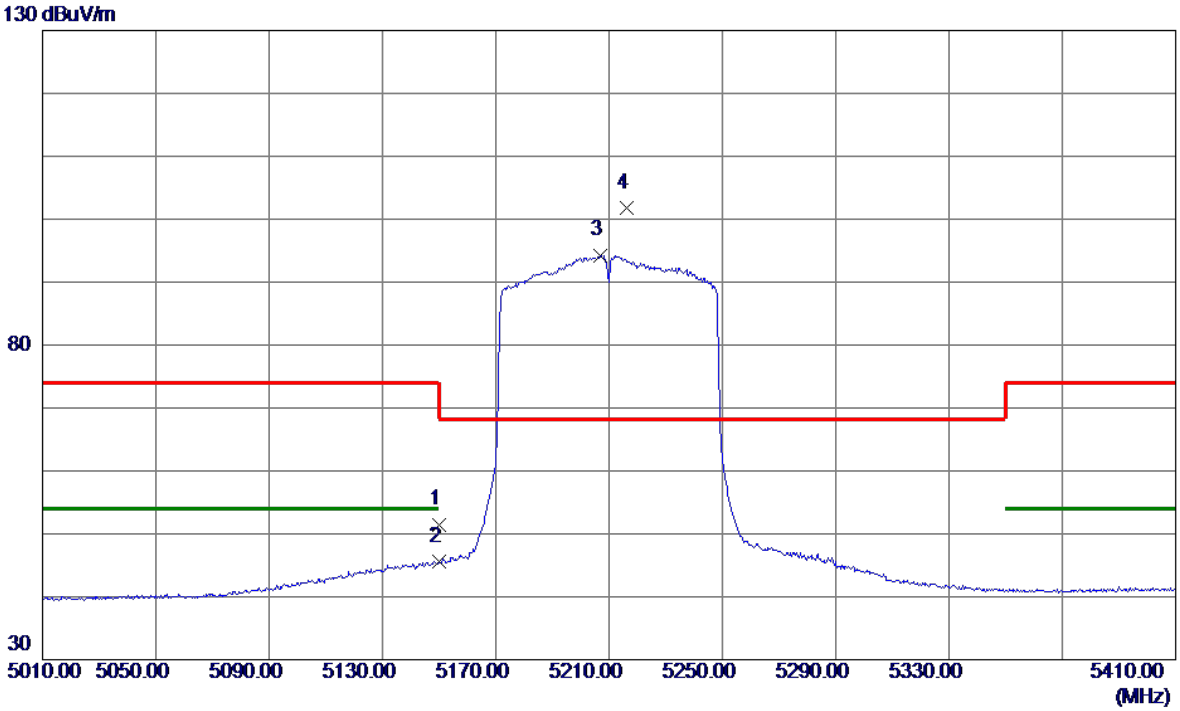
REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

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	15636.4000	37.98	7.55	45.53	74.00	-28.47	Peak	
2 *	15704.2000	28.42	7.63	36.05	54.00	-17.95	AVG	

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	40.05	11.45	51.50	74.00	-22.50	Peak	
2	5150.0000	34.07	11.45	45.52	54.00	-8.48	AVG	
3	5207.0000	82.65	11.65	94.30	999.00	-904.70	AVG	No Limit
4 *	5216.4000	90.10	11.68	101.78	68.20	33.58	Peak	No Limit

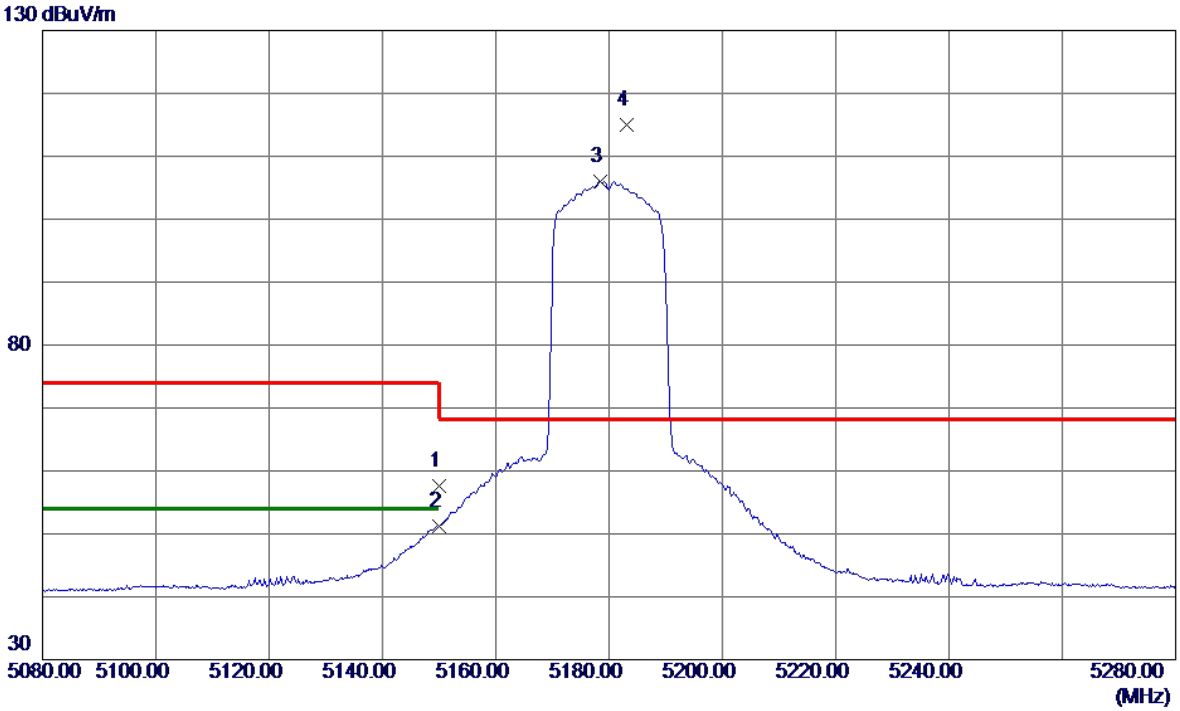
REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

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	15538.8500	53.83	7.43	61.26	74.00	-12.74	Peak	
2 *	15539.7250	44.65	7.43	52.08	54.00	-1.92	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	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	46.06	11.45	57.51	74.00	-16.49	Peak	
2	5150.0000	39.83	11.45	51.28	54.00	-2.72	AVG	
3	5178.4000	94.50	11.55	106.05	999.00	-892.95	AVG	No Limit
4 *	5183.2000	103.40	11.57	114.97	68.20	46.77	Peak	No Limit

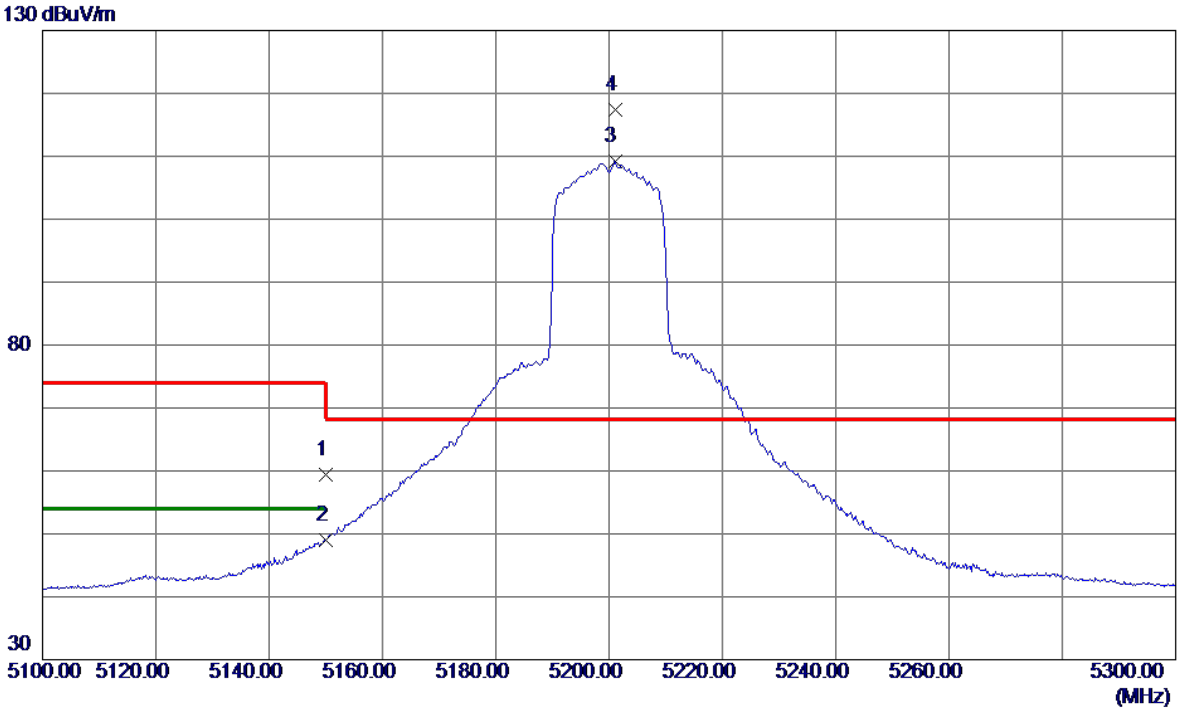
REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

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	15602.5000	54.19	7.51	61.70	74.00	-12.30	Peak	
2 *	15602.7750	44.02	7.51	51.53	54.00	-2.47	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	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	47.92	11.45	59.37	74.00	-14.63	Peak	
2	5150.0000	37.53	11.45	48.98	54.00	-5.02	AVG	
3	5201.0000	97.48	11.63	109.11	999.00	-889.89	AVG	No Limit
4 *	5201.2000	105.81	11.63	117.44	68.20	49.24	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 *	15717.9250	41.59	7.64	49.23	54.00	-4.77	AVG	
2	15721.7250	50.88	7.65	58.53	74.00	-15.47	Peak	

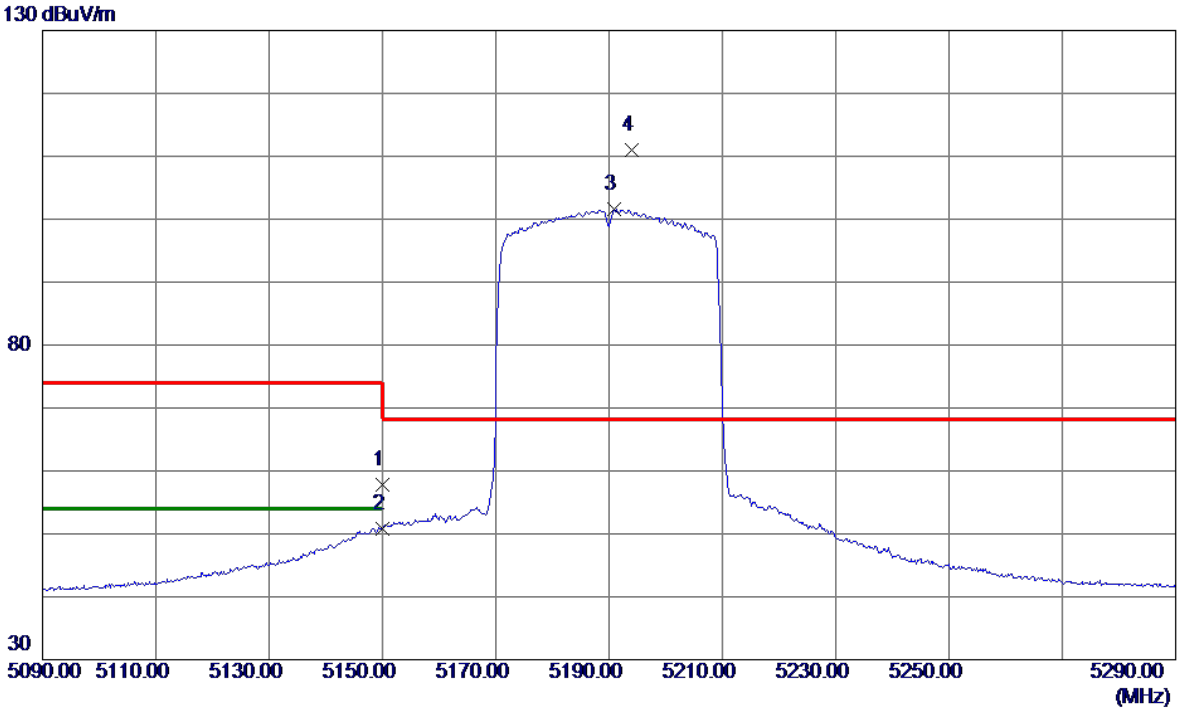
REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

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 *	15568.6000	42.77	7.47	50.24	54.00	-3.76	AVG	
2	15576.3000	51.88	7.48	59.36	74.00	-14.64	Peak	

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	46.38	11.45	57.83	74.00	-16.17	Peak	
2	5150.0000	39.28	11.45	50.73	54.00	-3.27	AVG	
3	5190.9000	89.96	11.59	101.55	999.00	-897.45	AVG	No Limit
4 *	5193.9000	99.40	11.61	111.01	68.20	42.81	Peak	No Limit

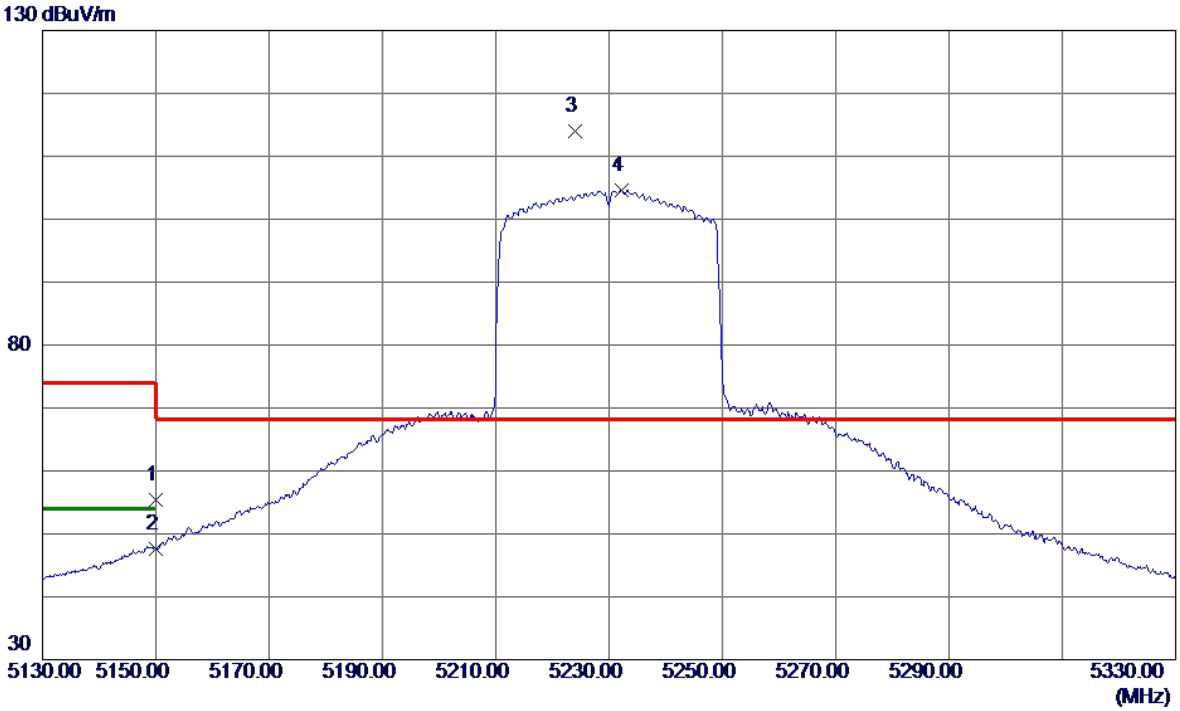
REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

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	15673.7000	50.46	7.59	58.05	74.00	-15.95	Peak	
2 *	15693.6000	39.21	7.62	46.83	54.00	-7.17	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	43.87	11.45	55.32	74.00	-18.68	Peak	
2	5150.0000	36.12	11.45	47.57	54.00	-6.43	AVG	
3 *	5224.1000	102.30	11.71	114.01	68.20	45.81	Peak	No Limit
4	5232.2000	92.88	11.74	104.62	999.00	-894.38	AVG	No Limit

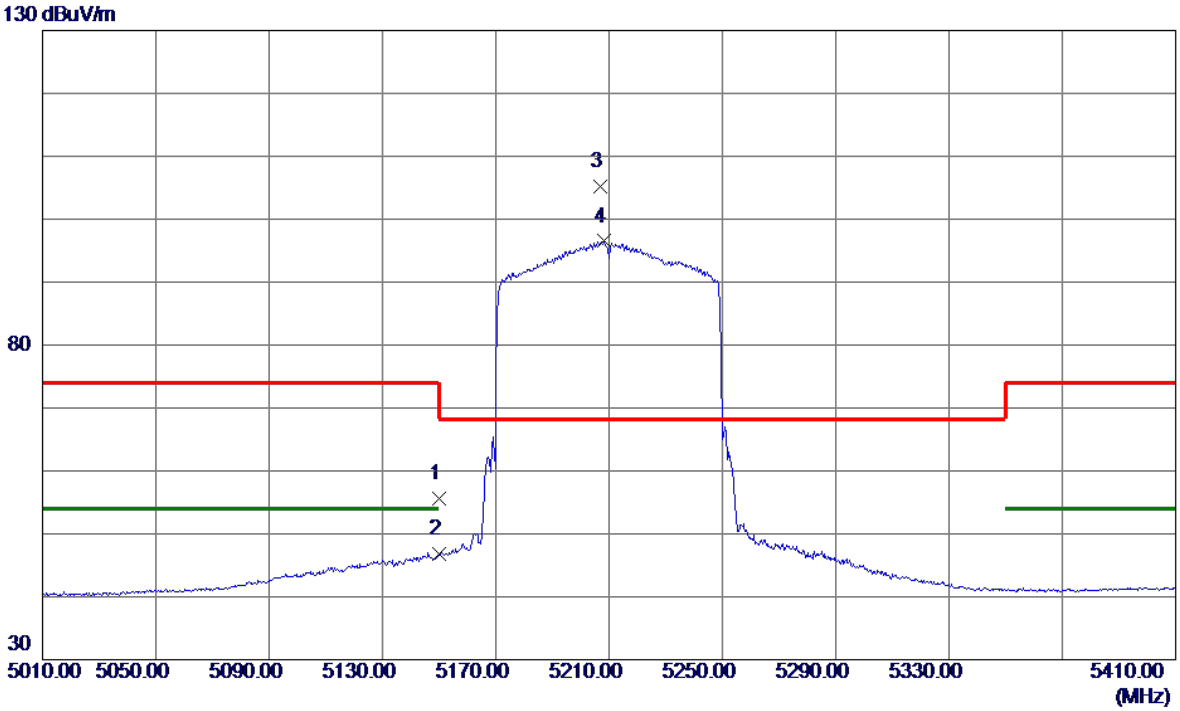
REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

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

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	15361.17	40.16	7.58	47.74	74.00	-26.26	peak	

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	44.14	11.45	55.59	74.00	-18.41	Peak	
2	5150.0000	35.34	11.45	46.79	54.00	-7.21	AVG	
3 *	5207.0000	93.51	11.65	105.16	68.20	36.96	Peak	No Limit
4	5208.4000	84.85	11.65	96.50	999.00	-902.50	AVG	No Limit

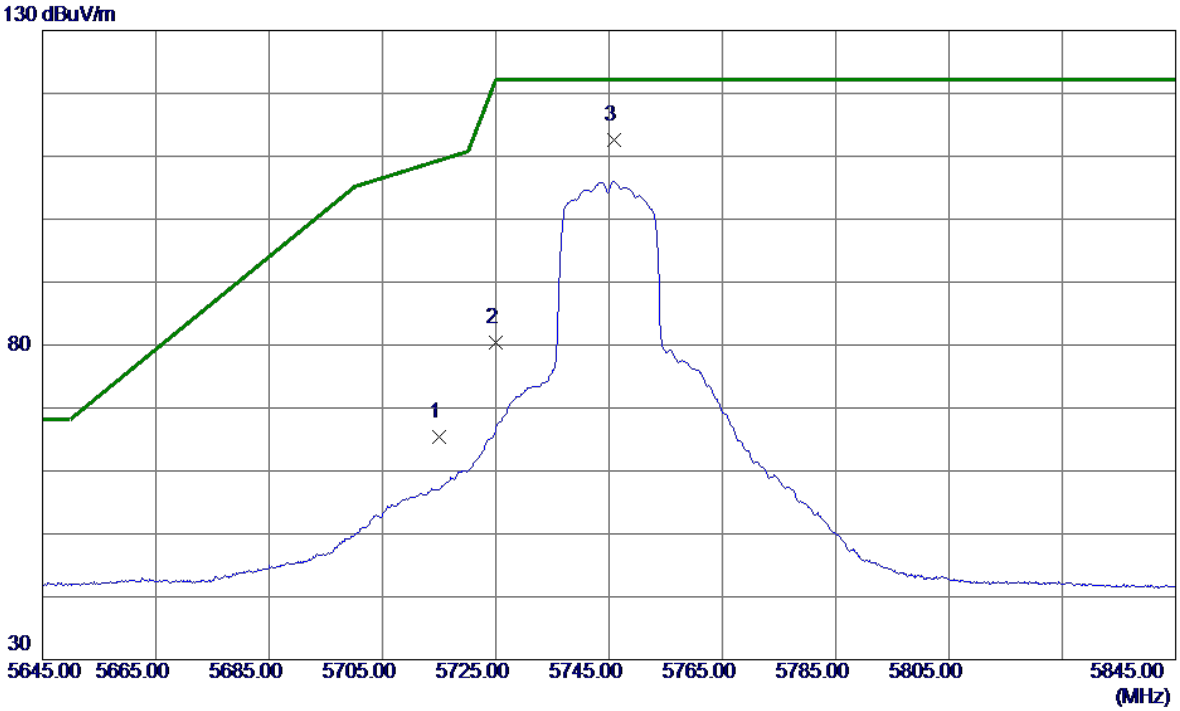
REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	UNII-3_TX A Mode 5745 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 *	17239.1250	48.02	8.95	56.97	68.20	-11.23	Peak	

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

Test Mode	UNII-3_TX A Mode 5745 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	5715.0000	52.47	13.01	65.48	109.40	-43.92	Peak	
2	5725.0000	67.35	13.03	80.38	122.20	-41.82	Peak	
3 *	5745.8000	99.60	13.07	112.67	122.20	-9.53	Peak	No Limit

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

Test Mode	UNII-3_TX A Mode 5785 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 *	17361.4000	47.55	9.06	56.61	68.20	-11.59	Peak	

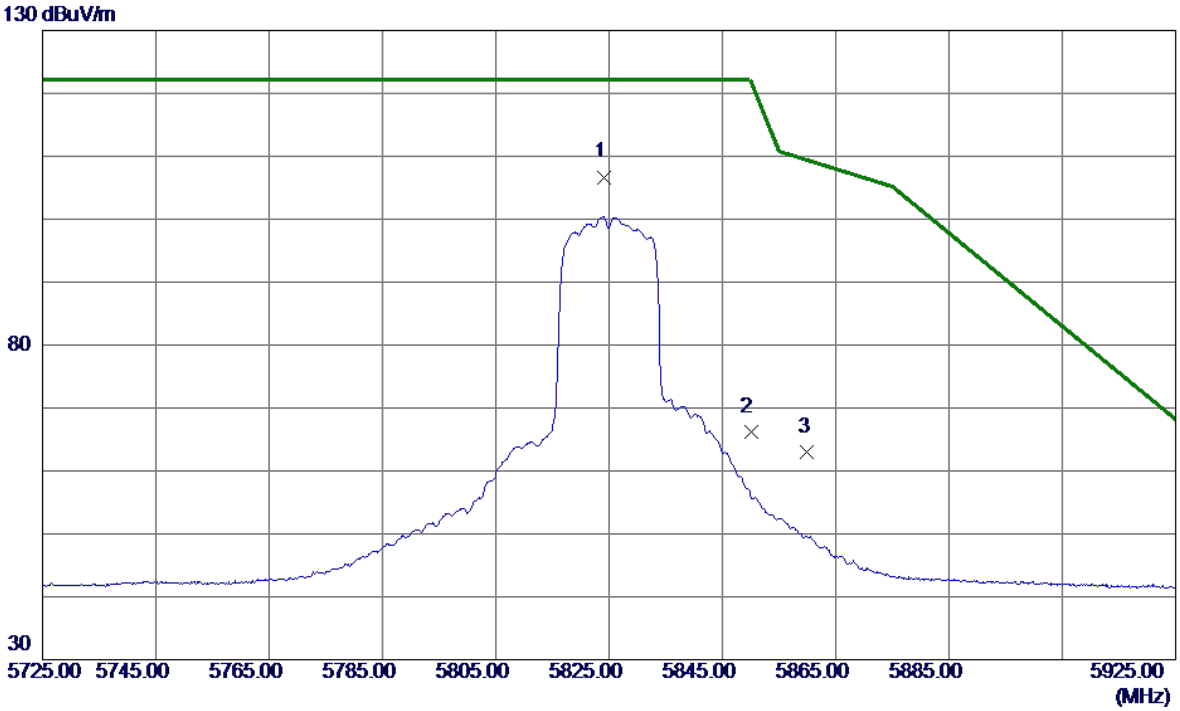
REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	UNII-3_TX A Mode 5825 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 *	17479.3250	46.47	9.18	55.65	68.20	-12.55	Peak	

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

Test Mode	UNII-3_TX A Mode 5825 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 *	5824.1000	93.50	13.20	106.70	122.20	-15.50	Peak	No Limit
2	5850.0000	52.90	13.24	66.14	122.20	-56.06	Peak	
3	5860.0000	49.80	13.26	63.06	109.40	-46.34	Peak	

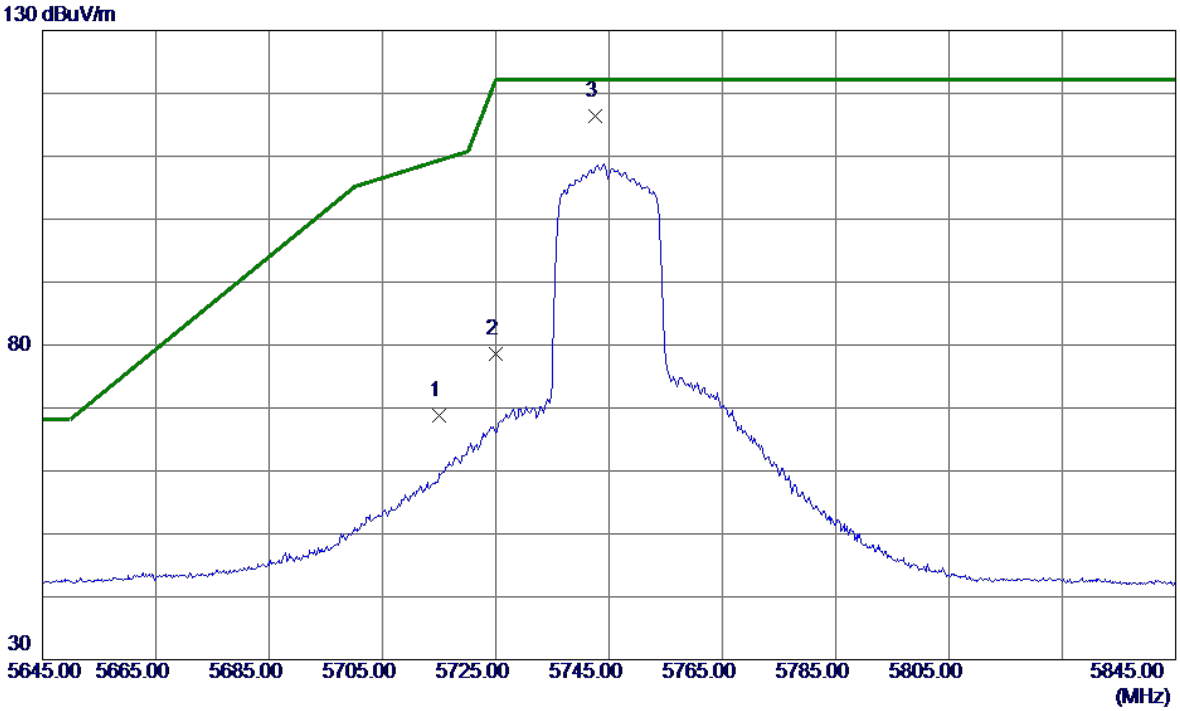
REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	UNII-3_TX AC(VHT20) Mode 5745 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 *	17241.6250	44.78	8.95	53.73	68.20	-14.47	Peak	

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

Test Mode	UNII-3_TX AC(VHT20) Mode 5745 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	5715.0000	55.83	13.01	68.84	109.40	-40.56	Peak	
2	5725.0000	65.63	13.03	78.66	122.20	-43.54	Peak	
3 *	5742.6000	103.38	13.06	116.44	122.20	-5.76	Peak	No Limit

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

Test Mode	UNII-3_TX AC(VHT20) Mode 5785 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 *	17359.2750	46.00	9.06	55.06	68.20	-13.14	Peak	

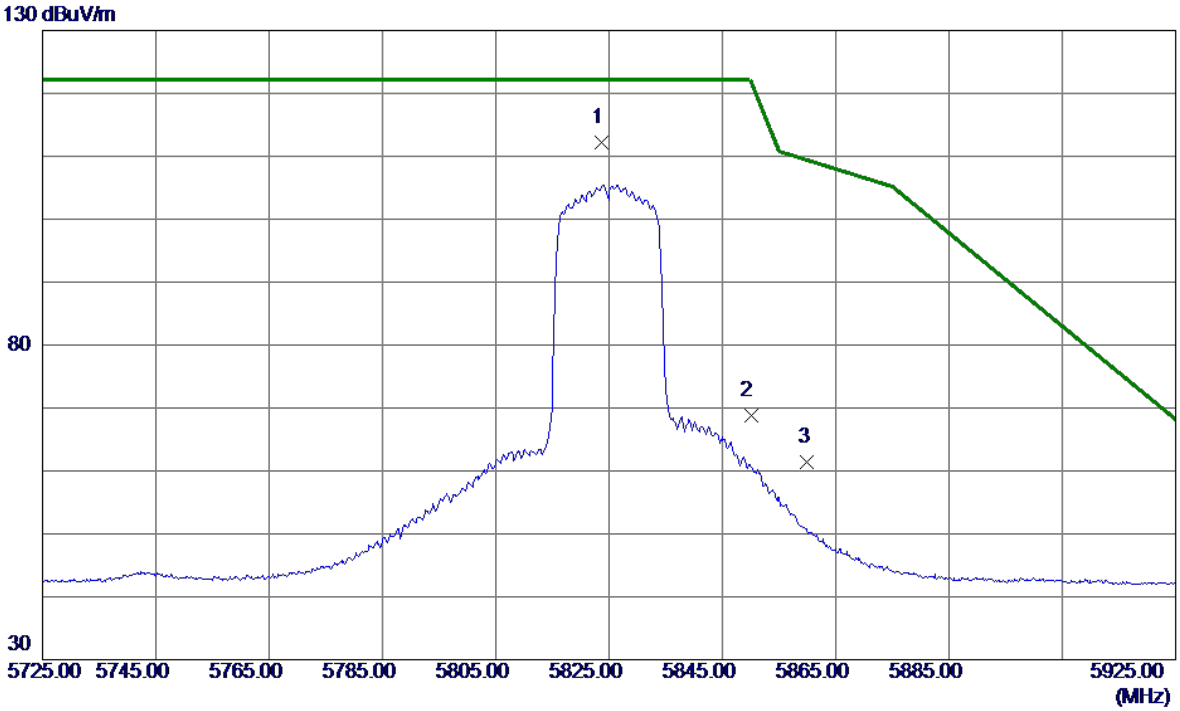
REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	UNII-3_TX AC(VHT20) Mode 5825 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 *	17468.6750	44.69	9.17	53.86	68.20	-14.34	Peak	

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

Test Mode	UNII-3_TX AC(VHT20) Mode 5825 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 *	5823.7000	98.91	13.20	112.11	122.20	-10.09	Peak	No Limit
2	5850.0000	55.60	13.24	68.84	122.20	-53.36	Peak	
3	5860.0000	48.23	13.26	61.49	109.40	-47.91	Peak	

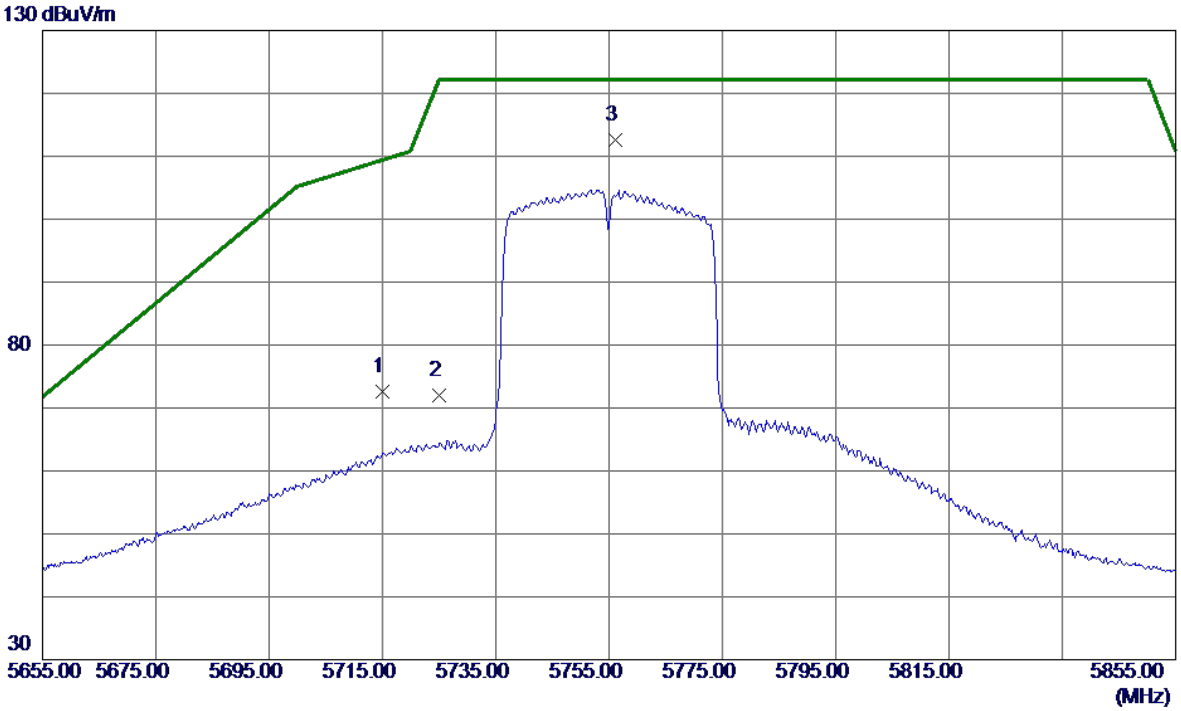
REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	UNII-3_TX AC(VHT40) Mode 5755 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 *	17260.9000	42.97	8.97	51.94	68.20	-16.26	Peak	

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

Test Mode	UNII-3_TX AC(VHT40) Mode 5755 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	5715.0000	59.54	13.01	72.55	109.40	-36.85	Peak	
2	5725.0000	58.93	13.03	71.96	122.20	-50.24	Peak	
3 *	5756.2000	99.48	13.08	112.56	122.20	-9.64	Peak	No Limit

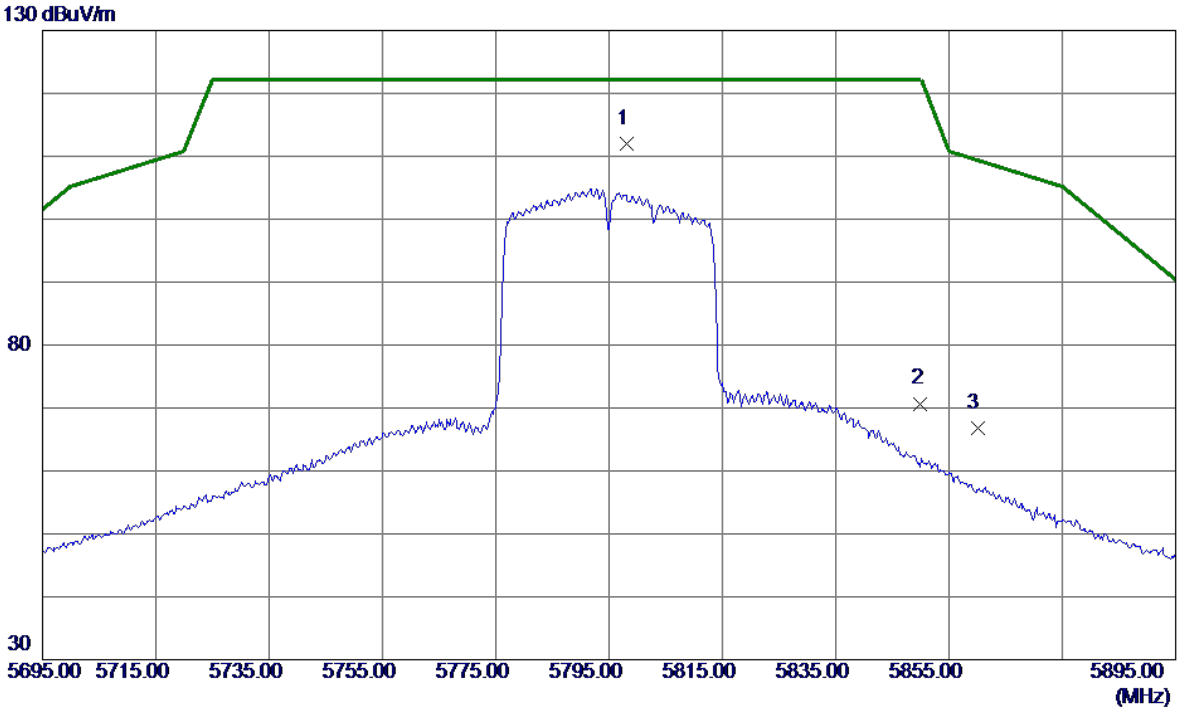
REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	UNII-3_TX AC(VHT40) Mode 5795 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 *	17392.7000	41.00	9.09	50.09	68.20	-18.11	Peak	

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

Test Mode	UNII-3_TX AC(VHT40) Mode 5795 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 *	5798.2000	98.95	13.15	112.10	122.20	-10.10	Peak	No Limit
2	5850.0000	57.46	13.24	70.70	122.20	-51.50	Peak	
3	5860.0000	53.57	13.26	66.83	109.40	-42.57	Peak	

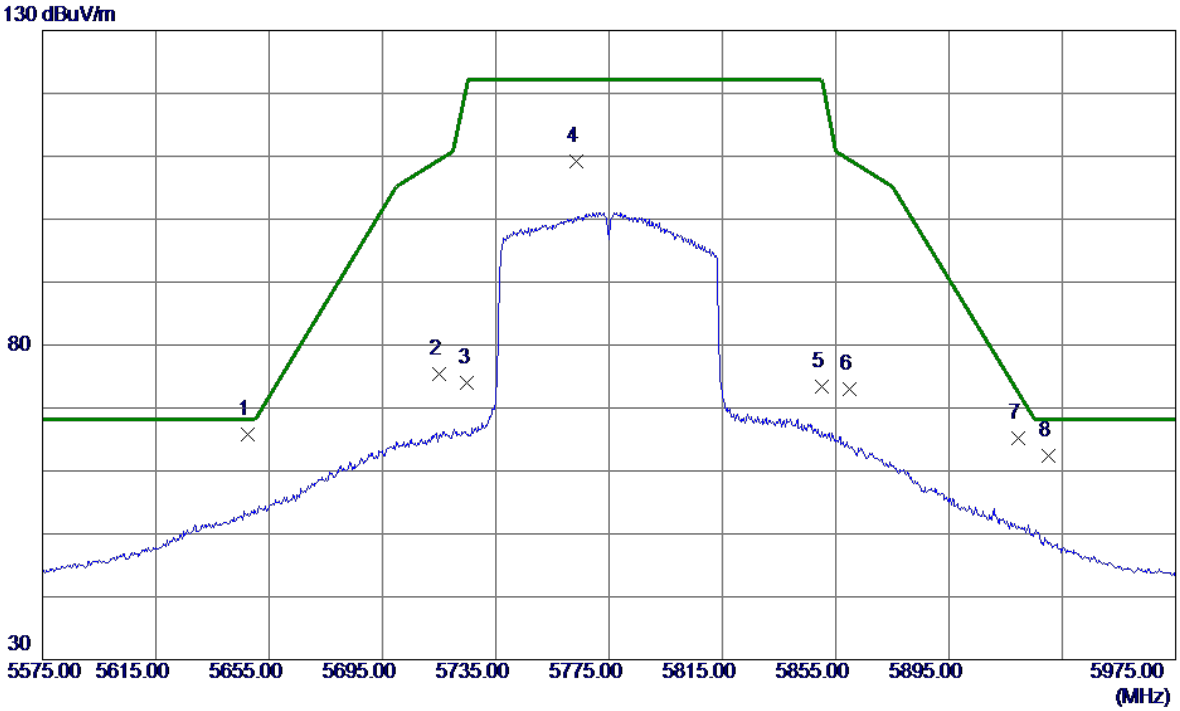
REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	UNII-3_TX AC(VHT80) Mode 5775 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 *	17315.5000	39.57	9.02	48.59	68.20	-19.61	Peak	

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

Test Mode	UNII-3_TX AC(VHT80) Mode 5775 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 *	5647.6000	52.89	12.90	65.79	68.20	-2.41	Peak	
2	5715.0000	62.32	13.01	75.33	109.40	-34.07	Peak	
3	5725.0000	60.97	13.03	74.00	122.20	-48.20	Peak	
4	5763.4000	96.03	13.09	109.12	122.20	-13.08	Peak	No Limit
5	5850.0000	60.11	13.24	73.35	122.20	-48.85	Peak	
6	5860.0000	59.69	13.26	72.95	109.40	-36.45	Peak	
7	5919.6000	51.93	13.36	65.29	72.20	-6.91	Peak	
8	5930.0000	49.11	13.37	62.48	68.20	-5.72	Peak	

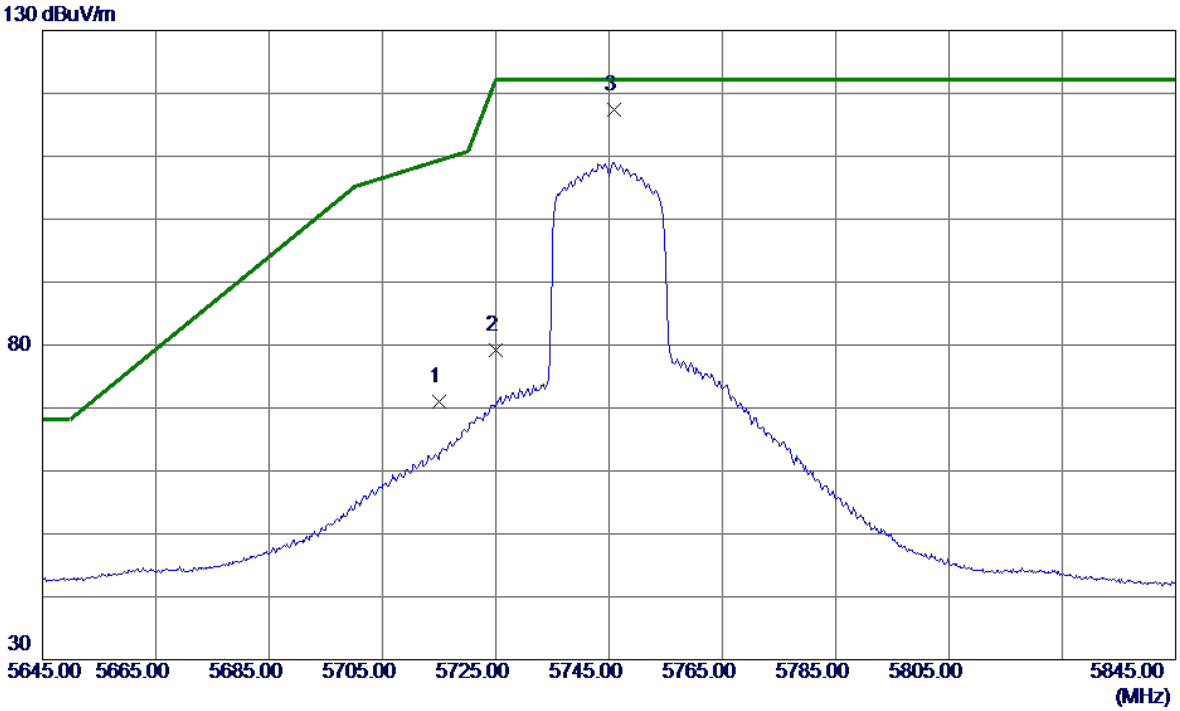
REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	UNII-3_TX AX(HE20) Mode 5745 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 *	17230.4250	45.22	8.94	54.16	68.20	-14.04	Peak	

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

Test Mode	UNII-3_TX AX(HE20) Mode 5745 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	5715.0000	57.96	13.01	70.97	109.40	-38.43	Peak	
2	5725.0000	66.17	13.03	79.20	122.20	-43.00	Peak	
3 *	5745.9000	104.34	13.07	117.41	122.20	-4.79	Peak	No Limit

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

Test Mode	UNII-3_TX AX(HE20) Mode 5785 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 *	17358.6250	43.87	9.06	52.93	68.20	-15.27	Peak	

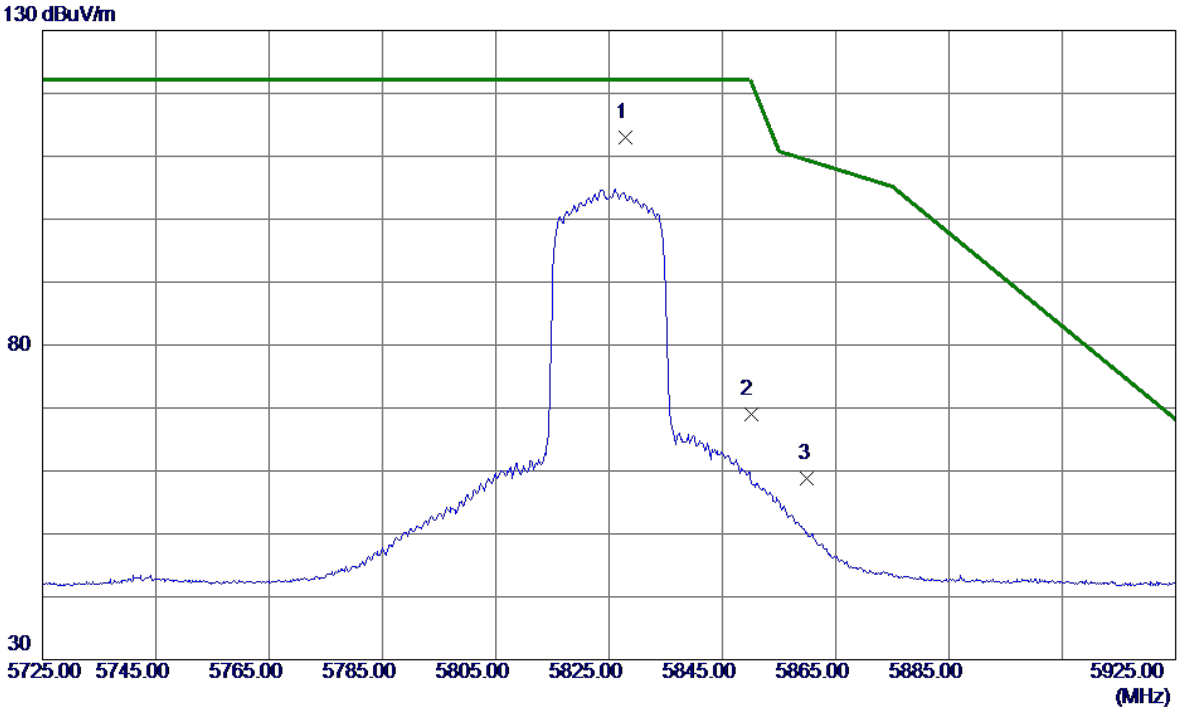
REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	UNII-3_TX AX(HE20) Mode 5825 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 *	17482.4750	43.37	9.18	52.55	68.20	-15.65	Peak	

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

Test Mode	UNII-3_TX AX(HE20) Mode 5825 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 *	5827.8000	99.80	13.20	113.00	122.20	-9.20	Peak	No Limit
2	5850.0000	55.81	13.24	69.05	122.20	-53.15	Peak	
3	5860.0000	45.58	13.26	58.84	109.40	-50.56	Peak	

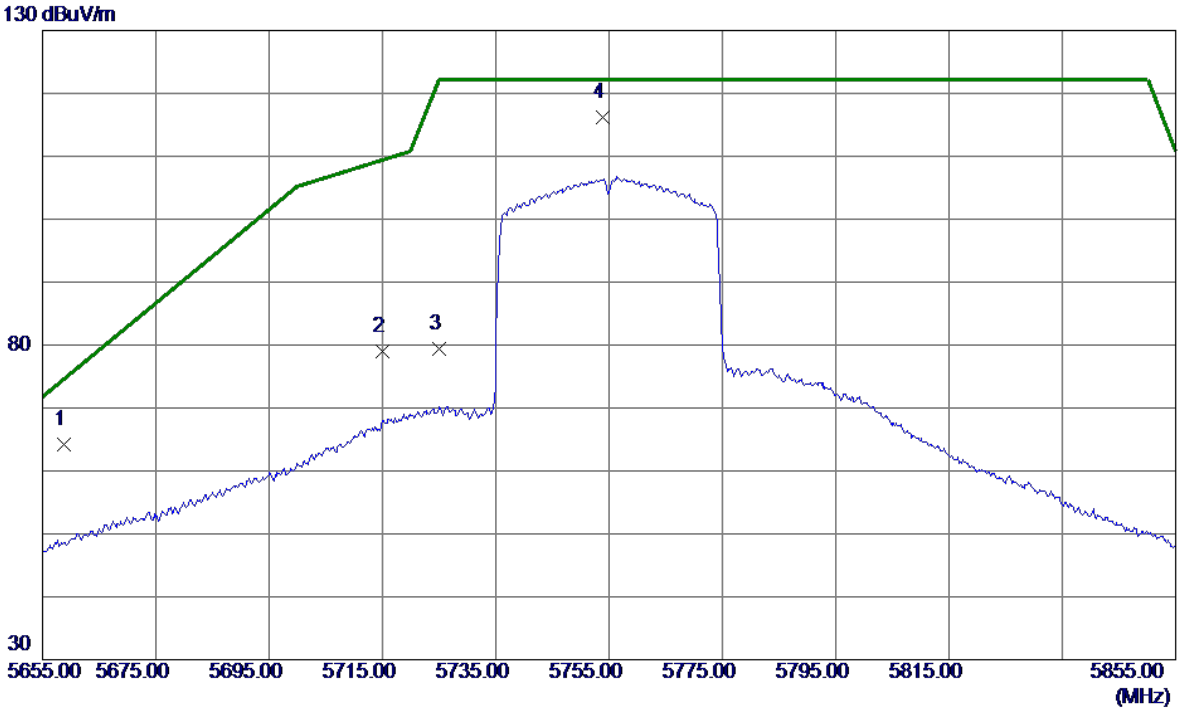
REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	UNII-3_TX AX(HE40) Mode 5755 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 *	17261.1500	41.97	8.97	50.94	68.20	-17.26	Peak	

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

Test Mode	UNII-3_TX AX(HE40) Mode 5755 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	5658.7000	51.25	12.92	64.17	74.64	-10.47	Peak	
2	5715.0000	65.97	13.01	78.98	109.40	-30.42	Peak	
3	5725.0000	66.38	13.03	79.41	122.20	-42.79	Peak	
4 *	5753.8000	103.03	13.08	116.11	122.20	-6.09	Peak	No Limit

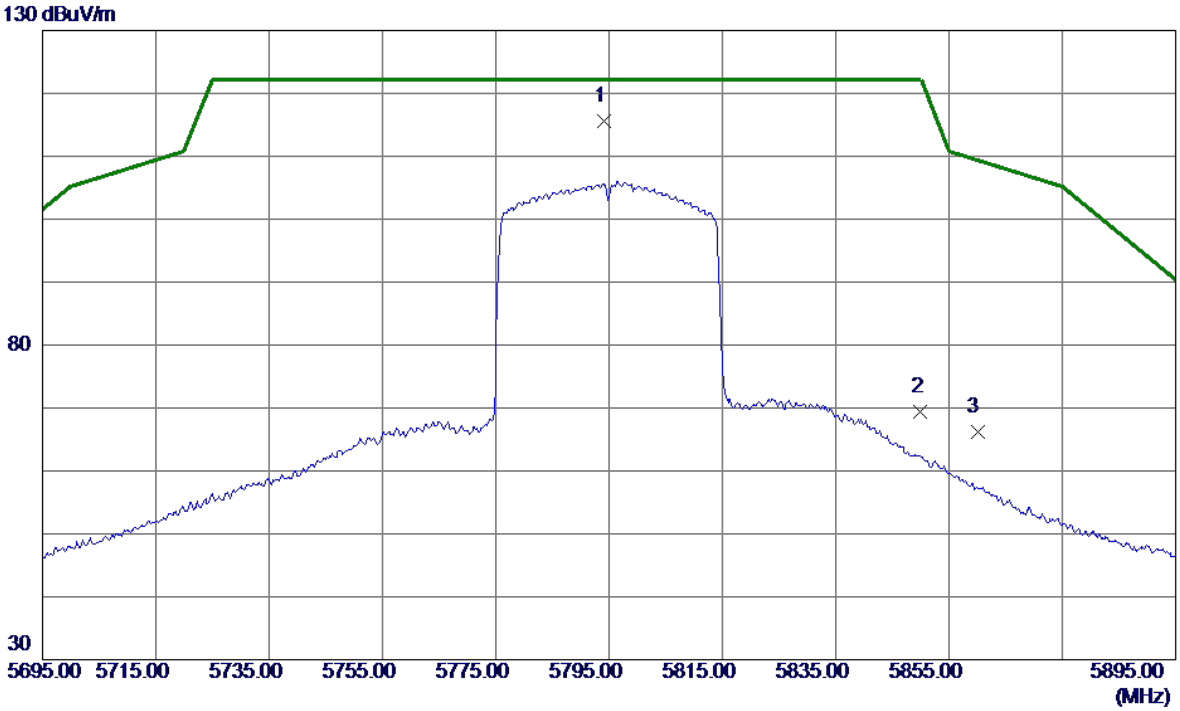
REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	UNII-3_TX AX(HE40) Mode 5795 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 *	17383.9000	42.81	9.08	51.89	68.20	-16.31	Peak	

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

Test Mode	UNII-3_TX AX(HE40) Mode 5795 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 *	5794.1000	102.38	13.15	115.53	122.20	-6.67	Peak	No Limit
2	5850.0000	56.13	13.24	69.37	122.20	-52.83	Peak	
3	5860.0000	52.85	13.26	66.11	109.40	-43.29	Peak	

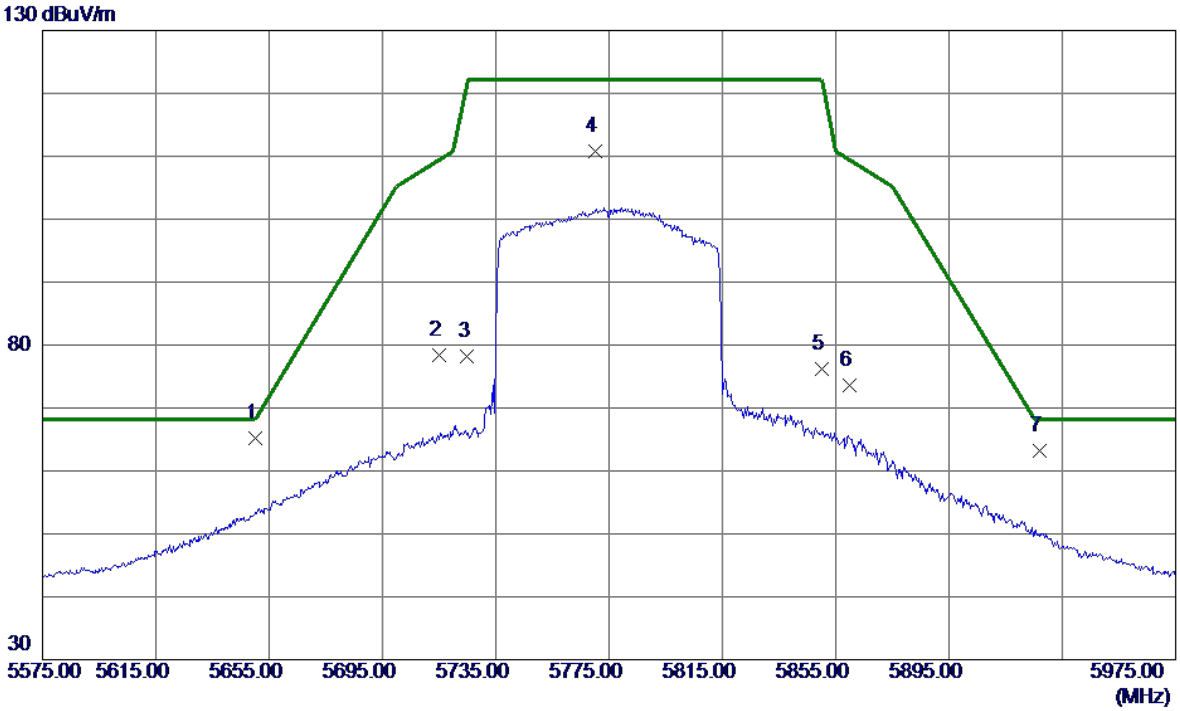
REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	UNII-3_TX AX(HE80) Mode 5775 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 *	17232.9280	41.43	8.94	50.37	68.20	-17.83	Peak	

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

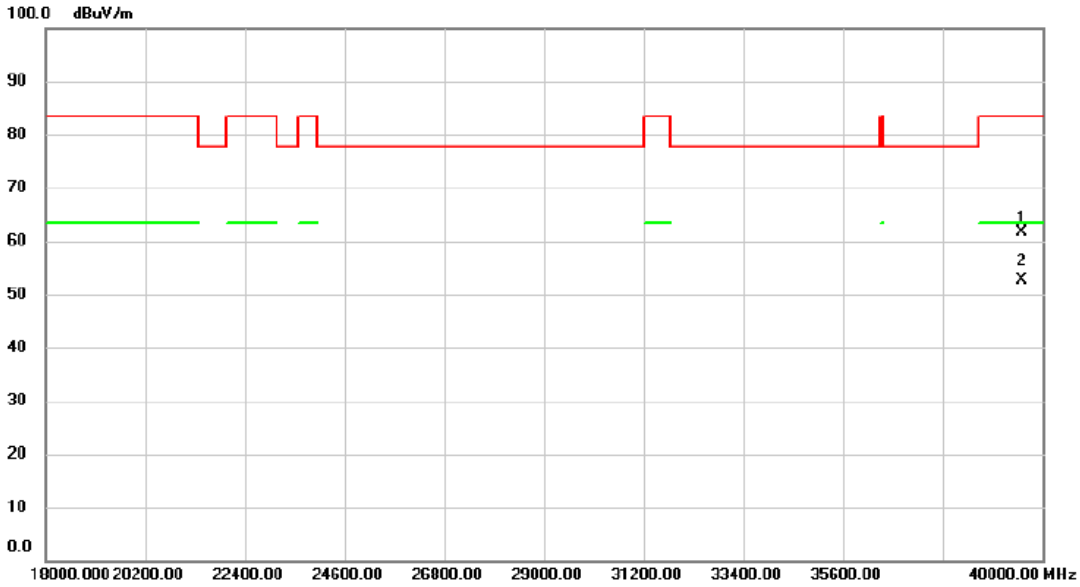
Test Mode	UNII-3_TX AX(HE80) Mode 5775 MHz	Polarization	Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	5650.0000	52.33	12.91	65.24	68.20	-2.96	Peak	
2	5715.0000	65.46	13.01	78.47	109.40	-30.93	Peak	
3	5725.0000	65.20	13.03	78.23	122.20	-43.97	Peak	
4	5770.2000	97.67	13.11	110.78	122.20	-11.42	Peak	No Limit
5	5850.0000	62.87	13.24	76.11	122.20	-46.09	Peak	
6	5860.0000	60.37	13.26	73.63	109.40	-35.77	Peak	
7	5927.0000	49.88	13.37	63.25	68.20	-4.95	Peak	

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

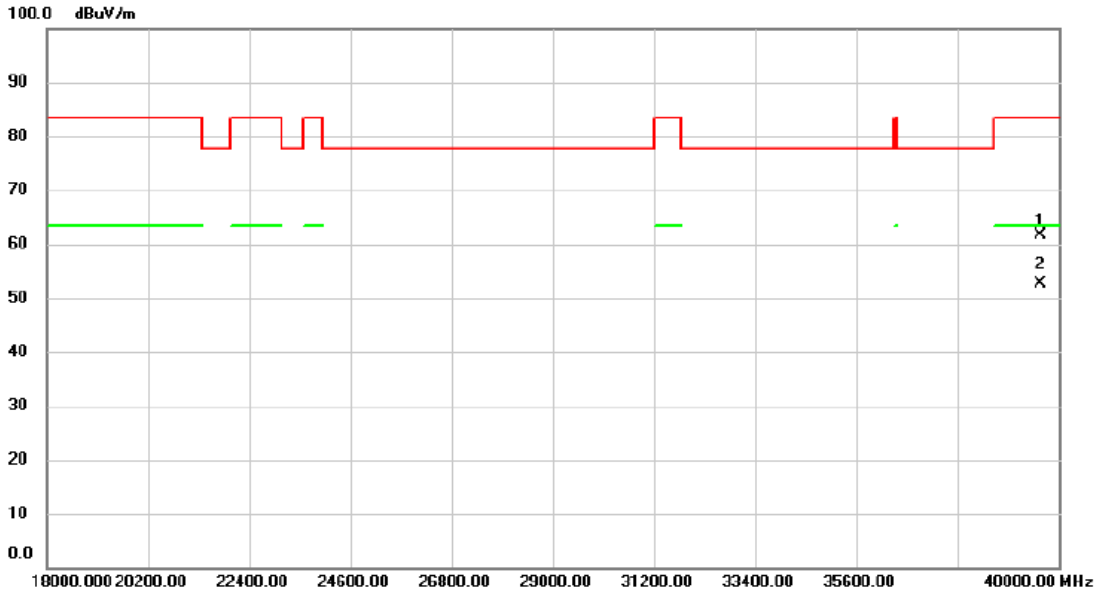
Test Mode	UNII-3_TX AC(VHT80) Mode 5775 MHz	Polarization	Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		39549.00	49.28	12.24	61.52	83.50	-21.98	peak	
2	*	39549.00	40.40	12.24	52.64	63.50	-10.86	AVG	

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

Test Mode	UNII-3_TX AC(VHT80) Mode 5775 MHz	Polarization	Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		39615.00	49.30	12.27	61.57	83.50	-21.93	peak	
2	*	39615.00	40.33	12.27	52.60	63.50	-10.90	AVG	

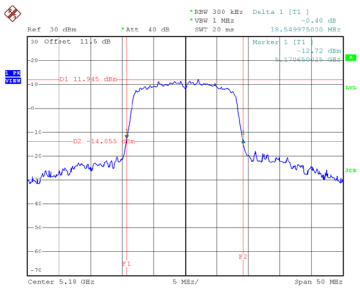
REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

APPENDIX E - BANDWIDTH

Test Mode	UNII-1_TX A Mode

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)
36	5180	18.550	16.300
40	5200	18.550	16.300
48	5240	18.559	16.300

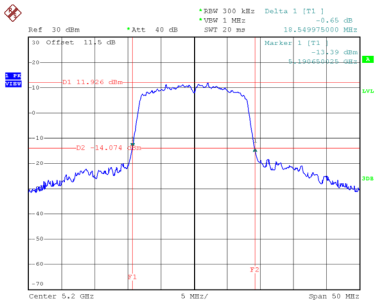
CH36



Date: 20.JUN.2024 17:15:09

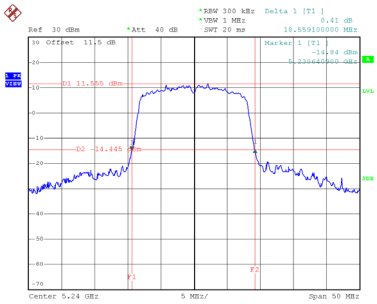
CH40

26 dB Bandwidth



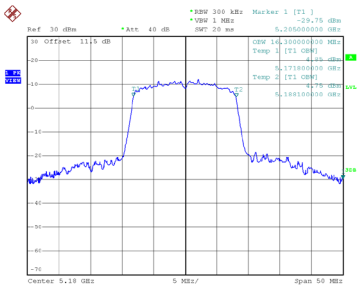
Date: 20.JUN.2024 17:16:09

CH48

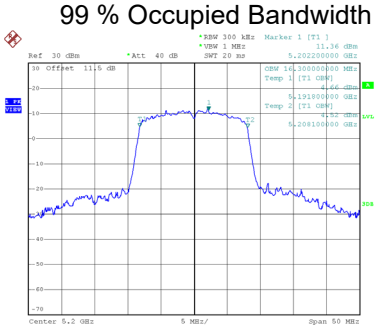


Date: 20.JUN.2024 17:17:04

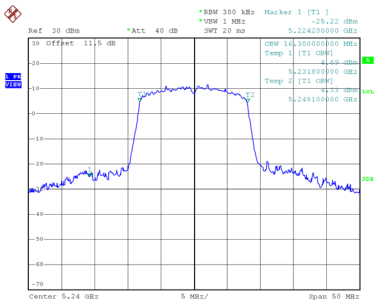
99 % Occupied Bandwidth



Date: 20.JUN.2024 17:14:23



Date: 20.JUN.2024 17:15:23

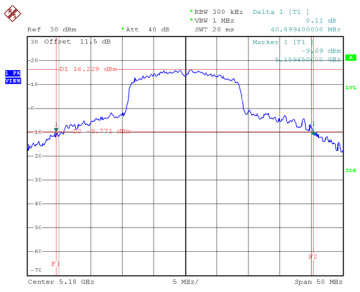


Date: 20.JUN.2024 17:16:19

Test Mode	UNII-1_TX AC(VHT20) Mode

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)
36	5180	40.899	25.300
40	5200	40.998	25.300
48	5240	39.090	23.100

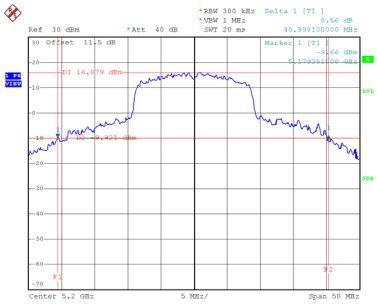
CH36



Date: 20.JUN.2024 17:24:08

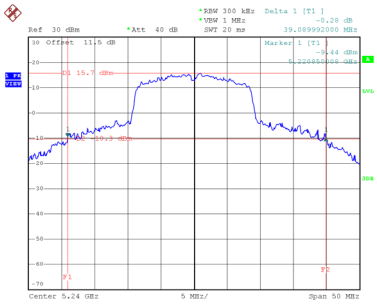
CH40

26 dB Bandwidth



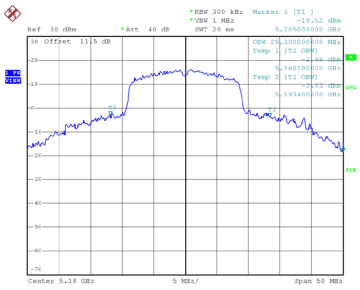
Date: 20.JUN.2024 17:24:46

CH48

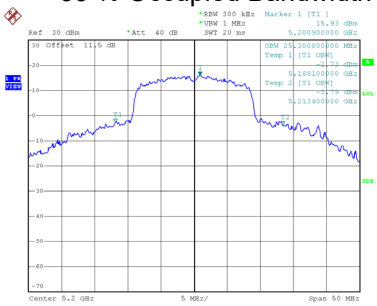


Date: 20.JUN.2024 17:25:29

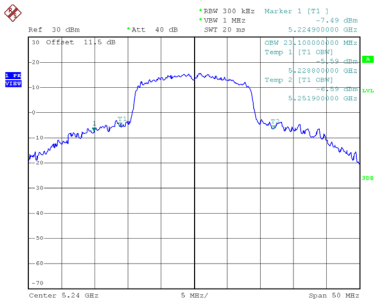
99 % Occupied Bandwidth



Date: 20.JUN.2024 17:23:46



Date: 20.JUN.2024 17:24:24

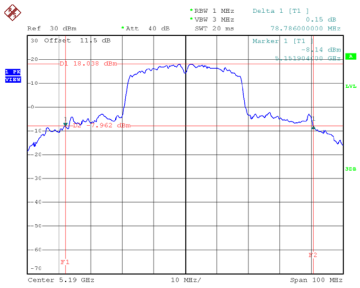


Date: 20.JUN.2024 17:25:06

Test Mode	UNII-1_TX AC(VHT40) Mode

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)
38	5190	78.786	39.200
46	5230	77.300	37.200

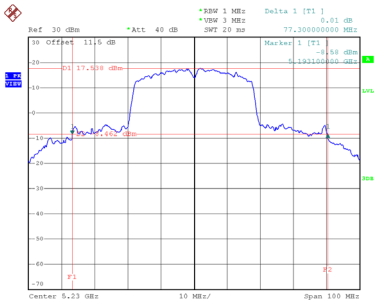
CH38



Date: 20.JUN.2024 17:42:04

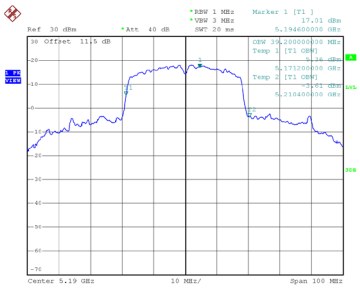
CH46

26 dB Bandwidth

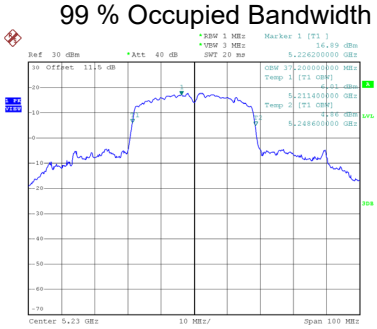


Date: 20.JUN.2024 17:42:52

99 % Occupied Bandwidth



Date: 20.JUN.2024 17:35:01



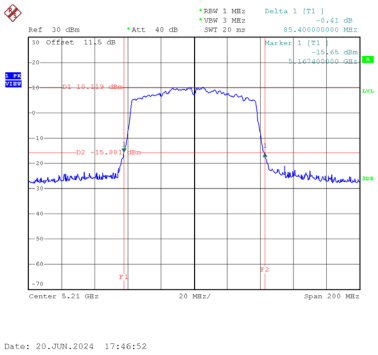
Date: 20.JUN.2024 17:35:24

Test Mode	UNII-1_TX AC(VHT80) Mode

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)
42	5210	85.400	75.200

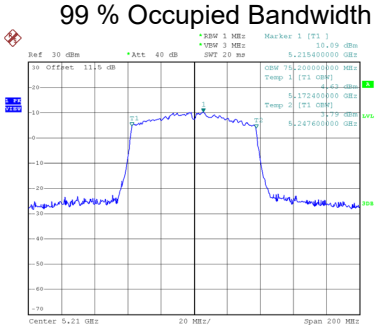
CH42

26 dB Bandwidth



Date: 20.JUN.2024 17:46:52

99 % Occupied Bandwidth

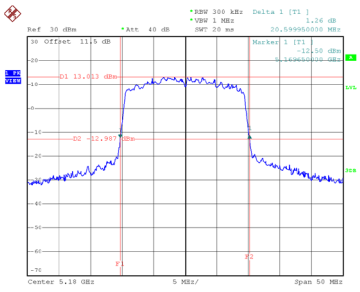


Date: 20.JUN.2024 17:46:03

Test Mode	UNII-1_TX AX(HE20) Mode

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)
36	5180	20.600	18.800
40	5200	20.550	18.800
48	5240	20.600	18.800

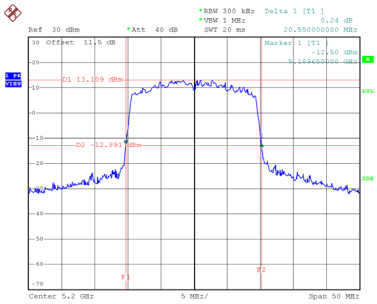
CH36



Date: 20.JUN.2024 17:53:13

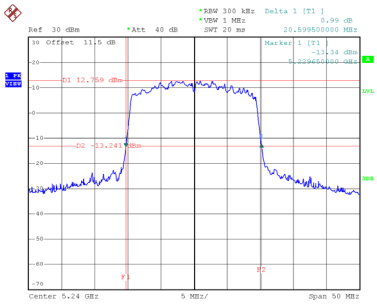
CH40

26 dB Bandwidth



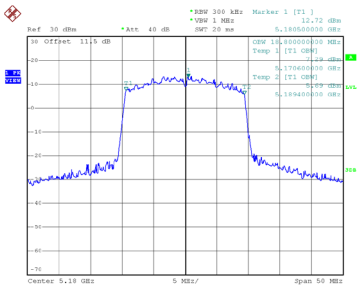
Date: 20.JUN.2024 17:54:54

CH48

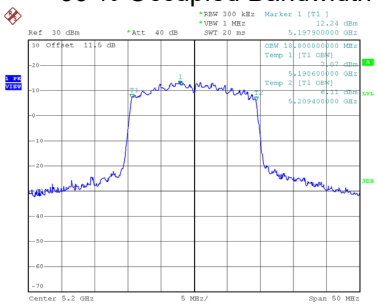


Date: 20.JUN.2024 17:55:58

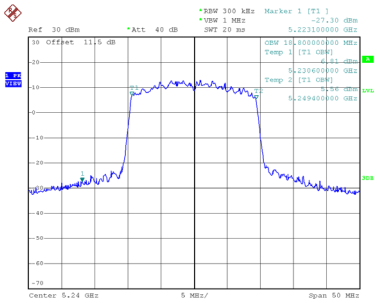
99 % Occupied Bandwidth



Date: 20.JUN.2024 17:52:32



Date: 20.JUN.2024 17:54:10

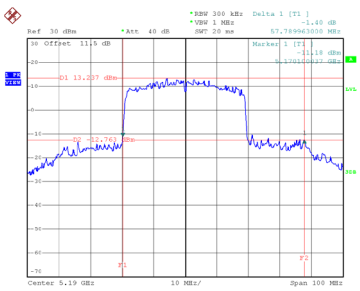


Date: 20.JUN.2024 17:55:16

Test Mode	UNII-1_TX AX(HE40) Mode

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)
38	5190	57.790	38.000
46	5230	56.390	38.000

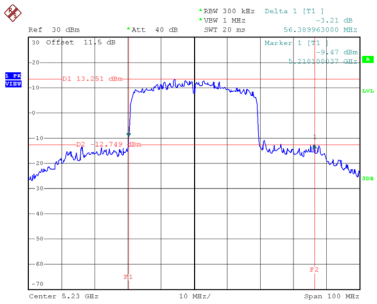
CH38



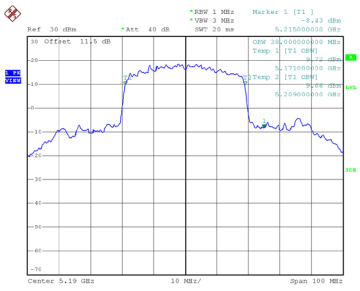
Date: 20.JUN.2024 18:35:57

CH46

26 dB Bandwidth

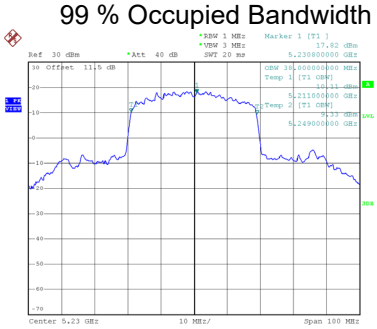


Date: 20.JUN.2024 18:38:16



Date: 20.JUN.2024 18:34:15

99 % Occupied Bandwidth



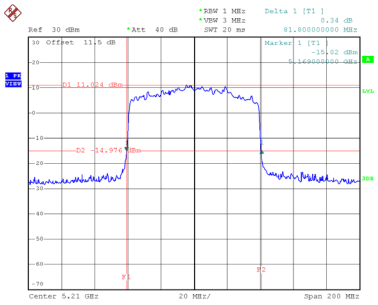
Date: 20.JUN.2024 18:36:24

Test Mode	UNII-1_TX AX(HE80) Mode

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)
42	5210	81.800	76.800

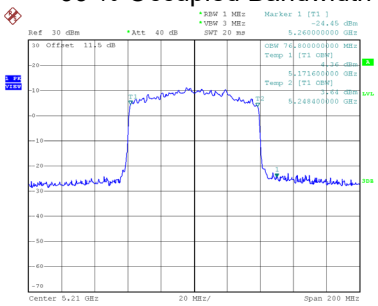
CH42

26 dB Bandwidth



Date: 20.JUN.2024 18:42:58

99 % Occupied Bandwidth



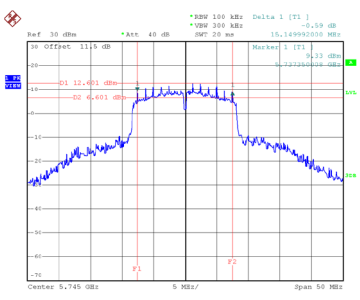
Date: 20.JUN.2024 18:42:06

Test Mode	UNII-3_TX A Mode

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	6 dB Bandwidth Min. Limit (MHz)	Result
149	5745	15.150	19.900	0.5	Complies
157	5785	15.150	21.800	0.5	Complies
165	5825	15.150	21.200	0.5	Complies

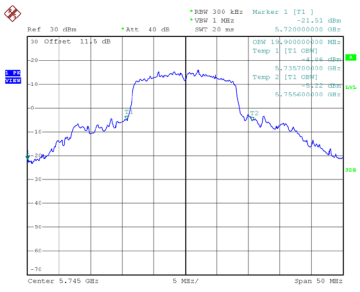
CH149

6 dB Bandwidth



Date: 20.JUN.2024 17:18:24

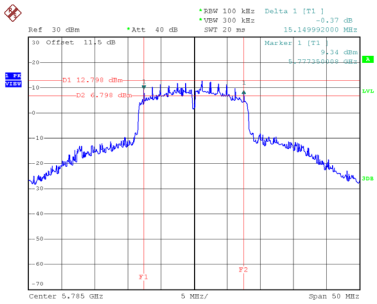
99 % Occupied Bandwidth



Date: 20.JUN.2024 17:17:33

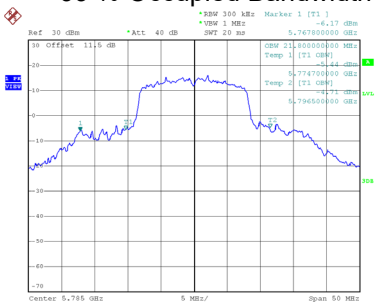
CH157

6 dB Bandwidth



Date: 20.JUN.2024 17:19:43

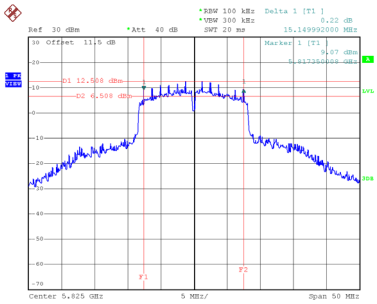
99 % Occupied Bandwidth



Date: 20.JUN.2024 17:18:52

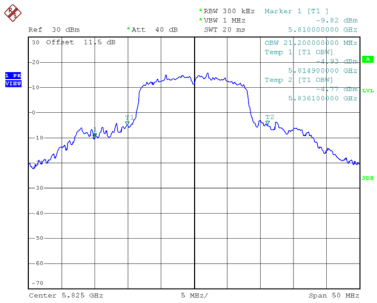
CH165

6 dB Bandwidth



Date: 20.JUN.2024 17:21:45

99 % Occupied Bandwidth



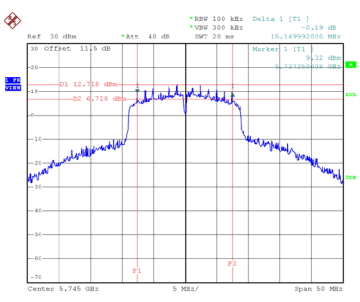
Date: 20.JUN.2024 17:20:54

Test Mode	UNII-3_TX AC(VHT20) Mode

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	6 dB Bandwidth Min. Limit (MHz)	Result
149	5745	15.150	20.900	0.5	Complies
157	5785	15.150	21.700	0.5	Complies
165	5825	15.109	21.300	0.5	Complies

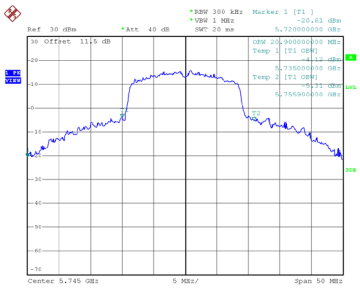
CH149

6 dB Bandwidth



Date: 20.JUN.2024 17:27:39

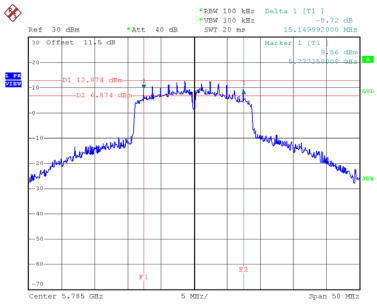
99 % Occupied Bandwidth



Date: 20.JUN.2024 17:26:46

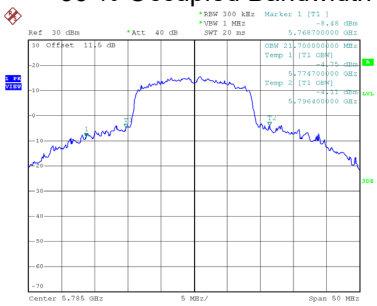
CH157

6 dB Bandwidth



Date: 20.JUN.2024 17:29:42

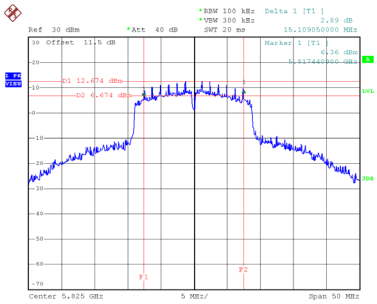
99 % Occupied Bandwidth



Date: 20.JUN.2024 17:28:50

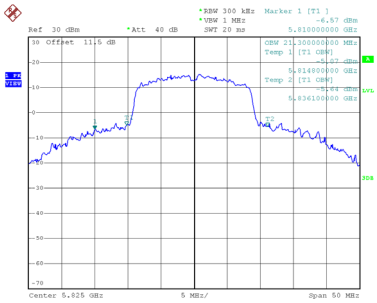
CH165

6 dB Bandwidth



Date: 20.JUN.2024 17:30:57

99 % Occupied Bandwidth



Date: 20.JUN.2024 17:30:06