

FCC Radio Test Report

FCC ID: KA2IRLX1870A1

This report concerns: Original Grant

Project No. : 2007H027
Equipment : AX1800 Mesh Wi-Fi 6 Router
Brand Name : D-Link
Test Model : DIR-X1870
Series Model : N/A
Applicant : D-Link Corporation
Address : 17595 Mt. Herrmann, Fountain Valley, California United State 92708
Manufacturer : D-Link Corporation
Address : 17595 Mt. Herrmann, Fountain Valley, California United State 92708
Date of Receipt : Jul. 16, 2020
Date of Test : Jul. 16, 2020~Aug. 28, 2020
Issued Date : Sep. 10, 2020
Report Version : R01
Test Sample : Engineering Sample No.: SH20200716113-1, SH20200716113-6
Standard(s) : FCC Part15, Subpart E(15.407)
ANSI C63.10-2013
FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01
FCC KDB 662911 D01 Multiple Transmitter Output v02r01

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

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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.

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REPORT ISSUED HISTORY

Report Version	Description	Issued Date
R00	Original Issue.	Sep. 08, 2020
R01	Revised report to address TCB's comments.	Sep. 10, 2020

1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standard(s):

FCC Part15, Subpart E(15.407)				
Standard(s) Section	Test Item	Test Result	Judgement	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)	Spectrum Bandwidth	APPENDIX E	PASS	-----
15.407(a)	Maximum Output Power	APPENDIX F	PASS	-----
15.407(a)	Power Spectral Density	APPENDIX G	PASS	-----
15.407(g)	Frequency Stability	APPENDIX H	PASS	-----
15.203	Antenna Requirements	-----	PASS	-----
15.407(c)	Automatically Discontinue Transmission	-----	PASS	NOTE (2)

Note:

- (1) "N/A" denotes test is not applicable in this test report.
- (2) 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.
- (3) For UNII-1 this device was functioned as a
☒ Access point device ☐ Client device

1.1 TEST FACILITY

The test facilities used to collect the test data in this report is at the location of No. 29, Jintang Road, Tangzhen Industry Park, Pudong New Area, Shanghai 201210, China

BTL's Test Firm Registration Number for FCC: 476765

BTL's Designation Number for FCC: CN1241

1.2 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)
SH-C01	CISPR	150 kHz ~ 30 MHz	± 2.26

B. Radiated emissions test:

Test Site	Method	Measurement Frequency Range	Ant. H / V	U, (dB)
SH-CB01	CISPR	9 KHz~30 MHz	V	3.79
		9 KHz~30 MHz	H	3.57
		30 MHz~200 MHz	V	4.04
		30 MHz~200 MHz	H	3.76
		200 MHz~1,000 MHz	V	4.24
		200 MHz~1,000 MHz	H	3.84
		1 GHz~18 GHz	V	4.46
		1 GHz~18 GHz	H	4.40
		18 GHz~40 GHz	V	3.95
		18 GHz~40 GHz	H	3.95

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

1.3 TEST ENVIRONMENT CONDITIONS

Test Item	Temperature	Humidity	Test Voltage	Tested By
AC Power Line Conducted Emissions	23°C	52%	AC 120V/60Hz	Forest
Radiated Emissions-30 MHz to 1GHz	23°C	52%	AC 120V/60Hz	Forest
Radiated Emissions-Above 1000 MHz	23°C	52%	AC 120V/60Hz	Forest
Spectrum Bandwidth	24°C	56%	AC 120V/60Hz	Forest
Maximum Output Power	24°C	56%	AC 120V/60Hz	Forest
Power Spectral Density	24°C	56%	AC 120V/60Hz	Forest

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Equipment	AX1800 Mesh Wi-Fi 6 Router
Brand Name	D-Link
Test Model	DIR-X1870
Series Model	N/A
Model Difference(s)	N/A
Software Version	1
Hardware Version	A1
Power Source	DC voltage supplied from AC/DC adapter. 1#Brand/Mode: S12A12-120A100-CJ 2#Brand/Mode: WB-12G12R
Power Rating	1# I/P: 100V-240V ~ 50Hz/60Hz Max0.5A, O/P:12V === 1A. 2# I/P: 100V-240V ~ 50Hz/60Hz 0.3A Max, O/P:12V === 1.0A.12W
Operation Frequency	UNII-1: 5150 MHz~5250 MHz UNII-3: 5725 MHz~5850 MHz
Modulation Type	OFDM,OFDMA
Bit Rate of Transmitter	Up to 1201Mbps
Maximum Conducted Output Power for UNII-1 (2TX) CDD	IEEE 802.11ax (HE20): 27.22 dBm (0. 5272W) IEEE 802.11ax (HE40): 23.49 dBm (0. 2234W) IEEE 802.11ax (HE80): 20.19 dBm (0. 1045W)
Maximum Conducted Output Power for UNII-3 (2TX) CDD	IEEE 802.11ax (HE20): 27.27 dBm (0.5333 W) IEEE 802.11ax (HE40): 25.07 dBm (0.3214 W) IEEE 802.11ax (HE80): 24.08 dBm (0.2559W)
Maximum Conducted Output Power for UNII-1 (2TX) Beamforming	IEEE 802.11ax (HE20): 27.03 dBm (0. 5047W) IEEE 802.11ax (HE40): 23.38 dBm (0.2178 W) IEEE 802.11ax (HE80): 20.00dBm (0.1000 W)
Maximum Conducted Output Power for UNII-3 (2TX) Beamforming	IEEE 802.11ax (HE20): 27.23 dBm (0. 5284W) IEEE 802.11ax (HE40): 25.00 dBm (0. 3162W) IEEE 802.11ax (HE80): 24.00 dBm (0. 2512 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 802.11ax (HE20)		IEEE 802.11ax (HE40)		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 802.11ax (HE20)		IEEE 802.11ax (HE40)		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				

4. Antenna Specification:

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	Note
1	N/A	N/A	Dipole	N/A	5	N/A
2	N/A	N/A	Dipole	N/A	5	N/A

Note:

(1) Beamforming:

All antennas have the same gain, Directional gain = $G_{ANT} + 10 \log(N_{ANT})$ dBi,

that is Directional gain = $5 + 10 \log(2)$ dBi = 8.01;

So output power limit is $30 - 8.01 + 6 = 27.99$, the UNII-1 power density limit is $17 - (8.01 - 6) = 14.99$. the UNII-3 power density limit is $30 - 8.01 + 6 = 27.99$.

(2) CDD:

All antennas have the same gain, Directional gain = $G_{ANT} + \text{Array Gain}$,

For power spectral density measurements, $N_{ANT} = 2$, $N_{SS} = 1$. So Directional gain = $G_{ANT} + \text{Array Gain} = 10 \log(N_{ANT} / N_{SS})$ dB = $5 + 10 \log(2/1)$ dBi = 8.01. Then, the UNII-1 power density limit is $17 - (11.02 - 6) = 14.99$. the UNII-3 power density limit is $30 - 8.01 + 6 = 27.99$

For power measurements, Array Gain = 0 dB ($N_{ANT} \leq 4$), so the Directional gain = 5.

5. Table for Antenna Configuration:

Operating Mode TX Mode	Ant. 1	Ant. 2	Ant. 1 + Ant. 2
IEEE 802.11ax (HE20)	✓	✓	✓
IEEE 802.11ax (HE40)	✓	✓	✓
IEEE 802.11ax (HE80)	✓	✓	✓

2.2 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 AX (HE20) Mode / CH36, CH40, CH48 (UNII-1)
Mode 2	TX AX (HE40) Mode / CH38, CH46 (UNII-1)
Mode 3	TX AX (HE80) Mode / CH42 (UNII-1)
Mode 4	TX AX (HE20) Mode / CH149,CH157,CH165 (UNII-3)
Mode 5	TX AX (HE40) Mode / CH151,CH159 (UNII-3)
Mode 6	TX Mode

Following mode(s) as (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 6	TX Mode

Radiated emissions test	
Final Test Mode	Description
Mode 1	TX AX (HE20) Mode / CH36, CH40, CH48 (UNII-1)
Mode 2	TX AX (HE40) Mode / CH38, CH46 (UNII-1)
Mode 3	TX AX (HE80) Mode / CH42 (UNII-1)
Mode 4	TX AX (HE20) Mode / CH149,CH157,CH165 (UNII-3)
Mode 5	TX AX (HE40) Mode / CH151,CH159 (UNII-3)
Mode 6	TX AX (HE80) Mode / CH155 (UNII-3)

Note:

- (1) For conducted emissions and radiated emission below 1 GHz test, two power adapter has been pre-tested, but only the worst case recorded in this report.
- (2) For radiated emission above 1 GHz test, 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) The measurements for RF Output Power were tested during CDD and Beamforming, the worst case was CDD, only worst case was documented for other test items.
- (4) The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported.

2.3 PARAMETERS OF TEST SOFTWARE

CDD

UNII-1 - 2TX			
Test Software	accessMTool.3.1.0.6		
Test Frequency (MHz)	5180	5200	5240
IEEE 802.11ac (VHT20)	52	52	52
Test Frequency (MHz)	5190	5230	
IEEE 802.11ac (VHT40)	60	58	
Test Frequency (MHz)	5210		
IEEE 802.11ac (VHT80)	57		

UNII-3 - 2TX			
Test Software	accessMTool.3.1.0.6		
Test Frequency (MHz)	5745	5785	5825
IEEE 802.11ac (VHT20)	104	104	104
Test Frequency (MHz)	5755	5795	
IEEE 802.11ac (VHT40)	90	90	
Test Frequency (MHz)	5775		
IEEE 802.11ac (VHT80)	84		

Beamforming

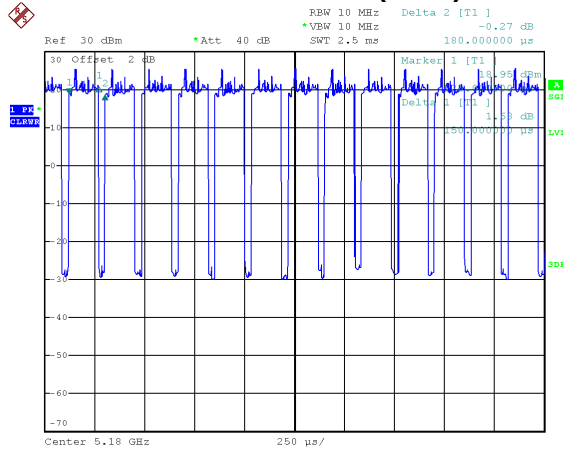
UNII-1 - 2TX			
Test Software	accessMTool.3.1.0.6		
Test Frequency (MHz)	5180	5200	5240
IEEE 802.11ac (VHT20)	41	42	42
Test Frequency (MHz)	5190	5230	
IEEE 802.11ac (VHT40)	46	45	
Test Frequency (MHz)	5210		
IEEE 802.11ac (VHT80)	47		

UNII-3 - 2TX			
Test Software	accessMTool.3.1.0.6		
Test Frequency (MHz)	5745	5785	5825
IEEE 802.11ac (VHT20)	104	104	104
Test Frequency (MHz)	5755	5795	
IEEE 802.11ac (VHT40)	90	90	
Test Frequency (MHz)	5775		
IEEE 802.11ac (VHT80)	84		

2.4 DUTY CYCLE

If duty cycle is $\geq 98\%$, duty factor is not required.
If duty cycle is $< 98\%$, duty factor shall be considered.

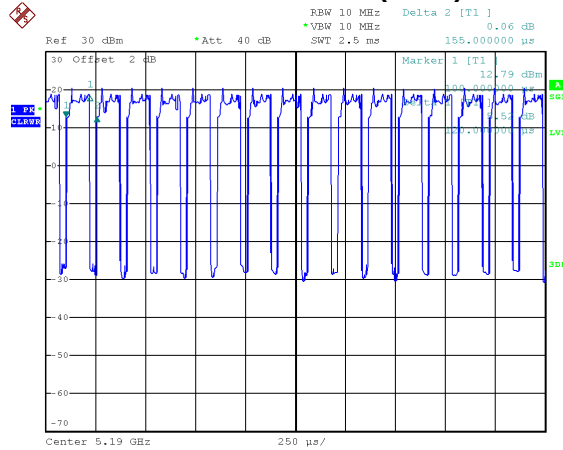
IEEE 802.11ax (HE20)



Date: 28.JUL.2020 11:53:53

Duty cycle = $0.150 \text{ ms} / 0.180 \text{ ms} = 83.33\%$
Duty Factor = $10 * \log(1 / 88.14\%) = 0.79 \text{ dB}$

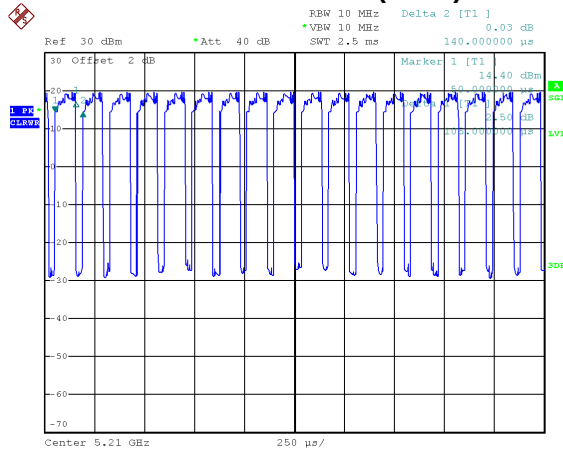
IEEE 802.11ax (HE40)



Date: 28.JUL.2020 11:54:34

Duty cycle = $0.120 \text{ ms} / 0.155 \text{ ms} = 77.42\%$
Duty Factor = $10 * \log(1 / 76.67\%) = 1.11 \text{ dB}$

IEEE 802.11ax (HE80)



Date: 28.JUL.2020 11:57:49

Duty cycle = $0.105 \text{ ms} / 0.140 \text{ ms} = 75.00\%$
Duty Factor = $10 * \log(1 / 75.00\%) = 1.25 \text{ dB}$

NOTE:

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 4 kHz (Duty cycle $< 98\%$).

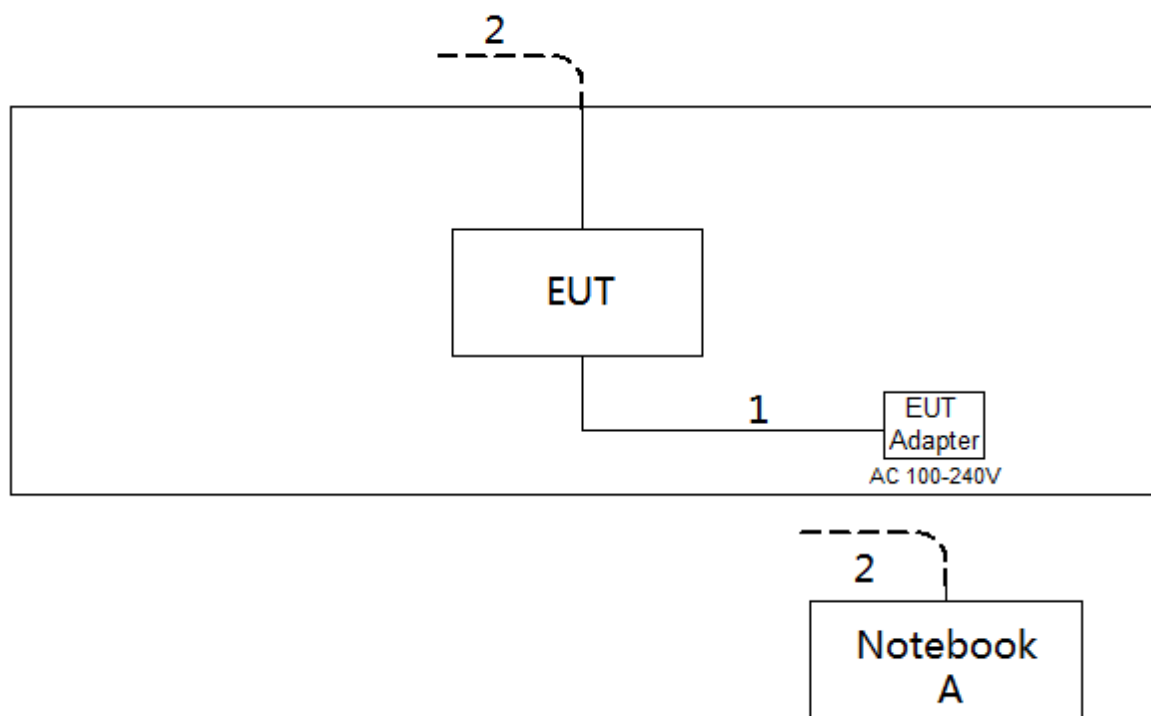
For IEEE 802.11ax (HE40):

For radiated emissions frequency above 1 GHz, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 9 kHz (Duty cycle $< 98\%$).

For IEEE 802.11ax (HE80):

For radiated emissions frequency above 1 GHz, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 10 kHz (Duty cycle $< 98\%$).

2.5 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED



2.6 SUPPORT UNITS

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.
A	Notebook	Lenovo	#P152014	N/A

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

3. AC POWER LINE CONDUCTED EMISSIONS TEST

3.1 LIMIT

Frequency (MHz)	Limit (dB μ V)	
	Quasi-peak	Average
0.15 - 0.5	66 to 56*	56 - 46*
0.50 - 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.

The following table is the setting of the receiver

Receiver Parameter	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 KHz

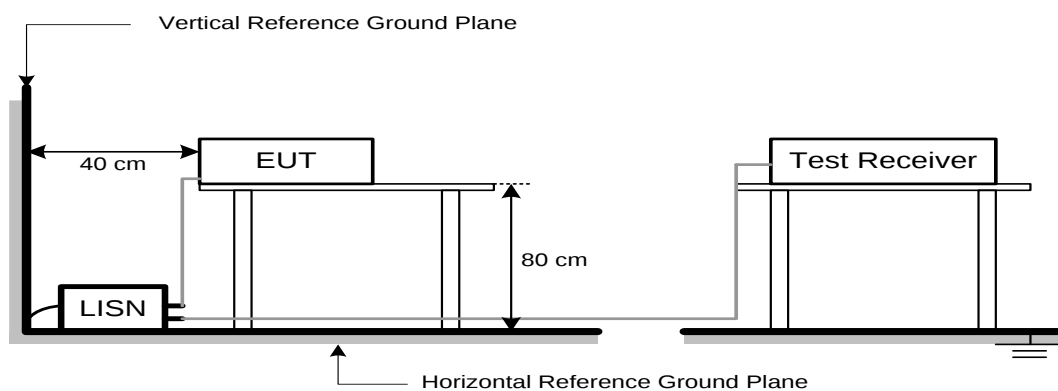
3.2 TEST PROCEDURE

- 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.

3.3 DEVIATION FROM TEST STANDARD

No deviation

3.4 TEST SETUP



3.5 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.

3.6 TEST RESULTS

Please refer to the APPENDIX A.

4. RADIATED EMISSIONS TEST

4.1 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

Frequency (MHz)	EIRP Limit (dBm/MHz)	Equivalent Field Strength at 3m (dBμV/m)
5150-5250	-27	68.3
5250-5350	-27	68.3
5470-5725	-27	68.3
5725-5850	-27 NOTE (2)	68.3
	10 NOTE (2)	105.3
	15.6 NOTE (2)	110.9
	27 NOTE (2)	122.3

NOTE:

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

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

(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.

4.2 TEST PROCEDURE

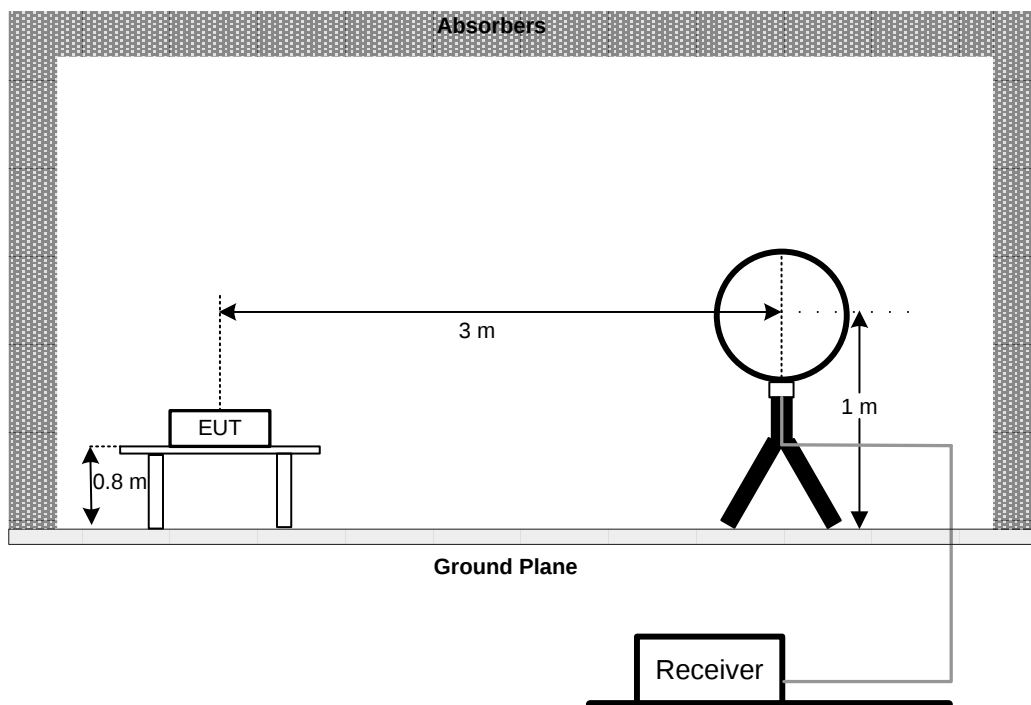
- a. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1GHz)
- b. The measuring distance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

4.3 DEVIATION FROM TEST STANDARD

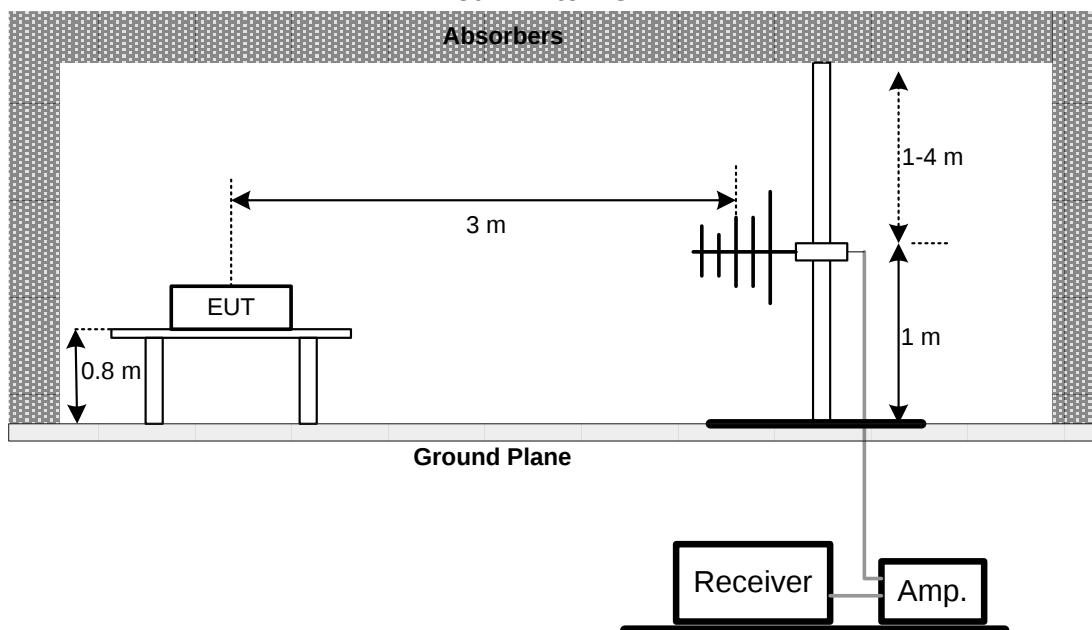
No deviation

4.4 TEST SETUP

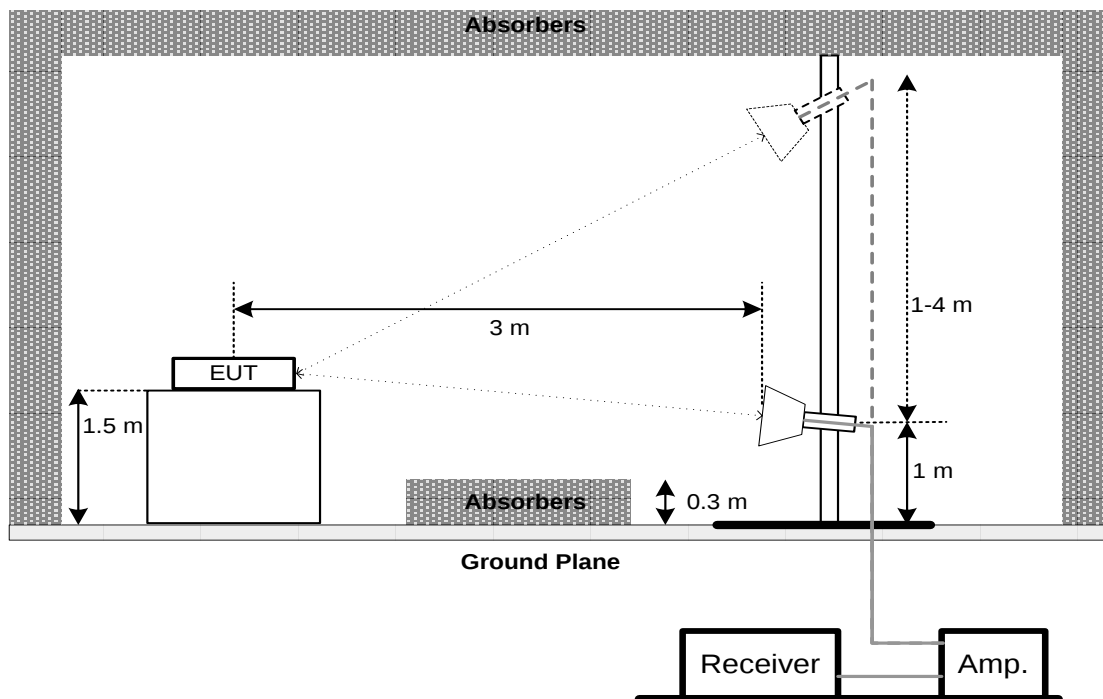
9 kHz to 30 MHz



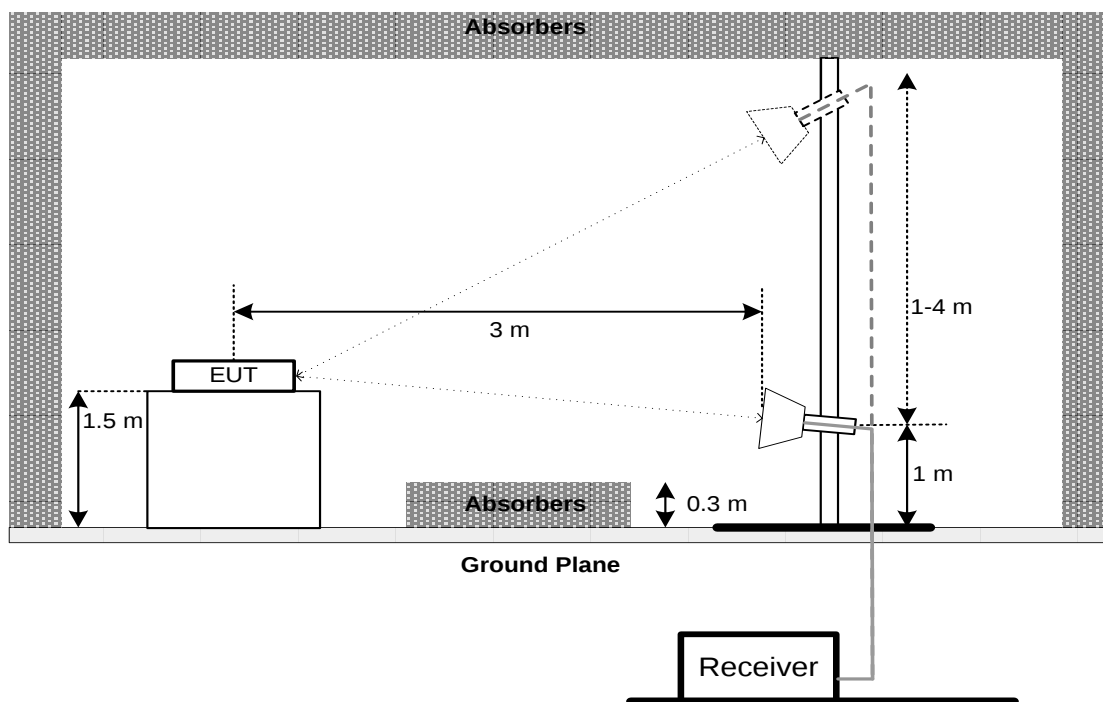
30 MHz to 1 GHz



Above 1 GHz



Above 1 GHz Band edge



4.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.1.5 unless otherwise a special operating condition is specified in the follows during the testing.

4.6 TEST RESULTS - 30 MHz TO 1000 MHz

Please refer to the APPENDIX B.

4.7 TEST RESULTS - ABOVE 1000 MHz

Please refer to the APPENDIX C.

Remark:

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

5. BANDWIDTH TEST

5.1 LIMIT

FCC Part15, Subpart E (15.407)			
Section	Test Item	Limit	Frequency Range (MHz)
15.407(a) 15.407(e)	26 dB Bandwidth	-	5150-5250
	26 dB Bandwidth	-	5250-5350
	26 dB Bandwidth	-	5470-5725
	6 dB Bandwidth	Minimum 500 kHz	5725-5850

5.2 TEST PROCEDURE

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

b. a. Spectrum Setting:

For UNII-1, UNII-2A, UNII-2C:

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	> 26 dB Bandwidth
RBW	300 kHz (Bandwidth 20 MHz) 1 MHz (Bandwidth 40 MHz and 80 MHz)
VBW	1 MHz (Bandwidth 20 MHz) 3 MHz (Bandwidth 40 MHz and 80 MHz)
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

For UNII-3:

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

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

5.3 TEST PROCEDURE

No deviation.

5.4 TEST SETUP**5.5 EUT OPERATION CONDITIONS**

The EUT was programmed to be in continuously transmitting mode.

5.6 TEST RESULTS

Please refer to the APPENDIX D.

6. MAXIMUM OUTPUT POWER TEST

6.1 LIMIT

FCC Part15, Subpart E (15.407)			
Section	Test Item	Limit	Frequency Range (MHz)
15.407(a)	Conducted Output Power	AP device: 1 Watt (30 dBm) Client device: 250 mW (24 dBm)	5150-5250
		250 mW (24 dBm)	5250-5350
		250 mW (24 dBm)	5470-5725
		1 Watt (30dBm)	5725-5850

Note:

- 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.
- For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10log B, where B is the 26dB Bandwidth in megahertz.

6.2 TEST PROCEDURE

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

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. POWER SPECTRAL DENSITY TEST

7.1 LIMIT

FCC Part15, Subpart E (15.407)			
Section	Test Item	Limit	Frequency Range (MHz)
15.407(a)	Power Spectral Density	AP device: 17 dBm/MHz Client device: 11 dBm/MHz	5150-5250
		11 dBm/MHz	5250-5350
		11 dBm/MHz	5470-5725
		30 dBm/500 kHz	5725-5850

7.2 TEST PROCEDURE

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

Spectrum Parameter	Setting
Attenuation	Auto
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

Note:

- 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 1 MHz and VBW at 3 MHz if the spectrum analyzer does not have 500 kHz RBW.
- The value measured with RBW=1 MHz is to be added with $10\log(500 \text{ kHz}/1 \text{ MHz})$ which is -3 dB. For example, if the measured value is +10dBm using RBW=1 MHz (that is +10 dBm/MHz), then the converted value will be +7dBm/500kHz.
- The value measured with RBW=100kHz is to be added with $10\log(500 \text{ kHz}/100\text{kHz})$ which is 7 dB. For example, if the measured value is +10dBm using RBW=100kHz (that is +10 dBm/100kHz), then the converted value will be +17dBm/500kHz.

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. MEASUREMENT INSTRUMENTS LIST

AC Power Line Conducted Emissions					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Line Impedance Stabilisation Network	Schwarzbeck	NNLK 8121	8121-822	Mar. 21, 2021
2	TWO-LINE V-NETWORK	R&S	ENV216	101340	Sep. 01, 2020
3	EMI Test Receiver	R&S	ESCI	100082	Mar. 21, 2021
4	50Ω coaxial switch	Anritsu	MP59B	6201750902	Mar. 21, 2021
5	Cable	10m	EMCRG400-BM-N M-10000	170628	Mar. 21, 2021
6	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A

Radiated Emissions - 9 kHz to 30 MHz					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Loop Antenna	EMCI	EMCI LPA600	275	Apr. 02, 2021
2	Cable	N/A	EMCRG400-BM-N M-10000	170628	Mar. 21, 2021
3	MXE EMI Receiver	Keysight	N9038A	MY57150106	May. 06, 2021
4	Measurement Software	Farad	EZ-EMC Ver.BTL-2ANT-1	N/A	N/A

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	719	Apr. 02, 2021
2	Pre-Amplifier	emci	EMC9135	980400	Mar. 21, 2021
3	MXE EMI Receiver	Keysight	N9038A	MY57150106	May. 06, 2021
4	Attenuator	emci	EMCI-N-6-06	AT-N0644	Mar. 21, 2021
5	Cable	7m	EMC104-SM-SM-7 000	170330	Apr. 13, 2021
6	Cable	1m	EMC104-SM-SM-1 000	170331	Apr. 13, 2021
7	Cable	3.5m	EMC104-SM-NM-3 500	170621	Apr. 13, 2021
8	Measurement Software	Farad	EZ-EMC Ver.BTL-2ANT-1	N/A	N/A

Radiated Emissions - Above 1 GHz					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Double-Ridged Waveguide Horn Antenna	Schwarzbeck	BBHA 9120D	9120D-1787	Mar. 21, 2021
2	Double-Ridged Waveguide Horn Antenna	ETS-Lindgren	3116C	00203919	Mar. 21, 2021
3	Pre-Amplifier	emci	EMC012645SE	980421	May. 11, 2021
4	Pre-Amplifier	emci	EMC184045SE	980409	Mar. 21, 2021
5	EXA Spectrum Analyzer	Keysight	N9010A	MY56480559	Mar. 21, 2021
6	MXE EMI Receiver	Keysight	N9038A	MY56400088	Mar. 21, 2021
7	Cable	7m	EMC104-SM-SM-700 0	170330	Apr. 13, 2021
8	Cable	1m	EMC104-SM-SM-100 0	170331	Apr. 13, 2021
9	Cable	3.5m	EMC104-SM-NM-350 0	170621	Apr. 13, 2021
10	Cable	0.8m	EMC102-SM-SM-800	170335	Apr. 13, 2021
11	Cable	6m	EMC102-SM-SM-600 0	170336	Apr. 13, 2021
12	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A

Bandwidth					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP40	100626	May. 06, 2021

Maximum Output Power					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Power Meter	Keysight	8990B	MY51000507	Mar. 21, 2021
2	Pulse Power Sensor	Keysight	N1923A	MY58310003	Mar. 21, 2021

Antenna Conducted Spurious Emissions					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP40	100626	May. 06, 2021

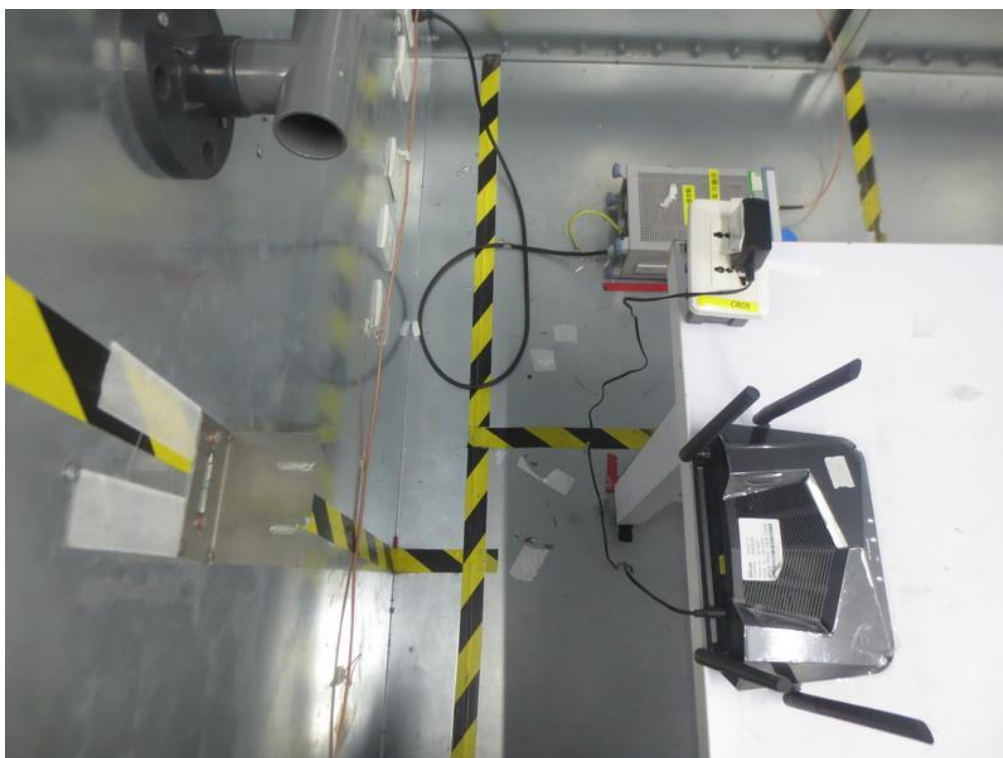
Power Spectral Density					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP40	100626	May. 06, 2021

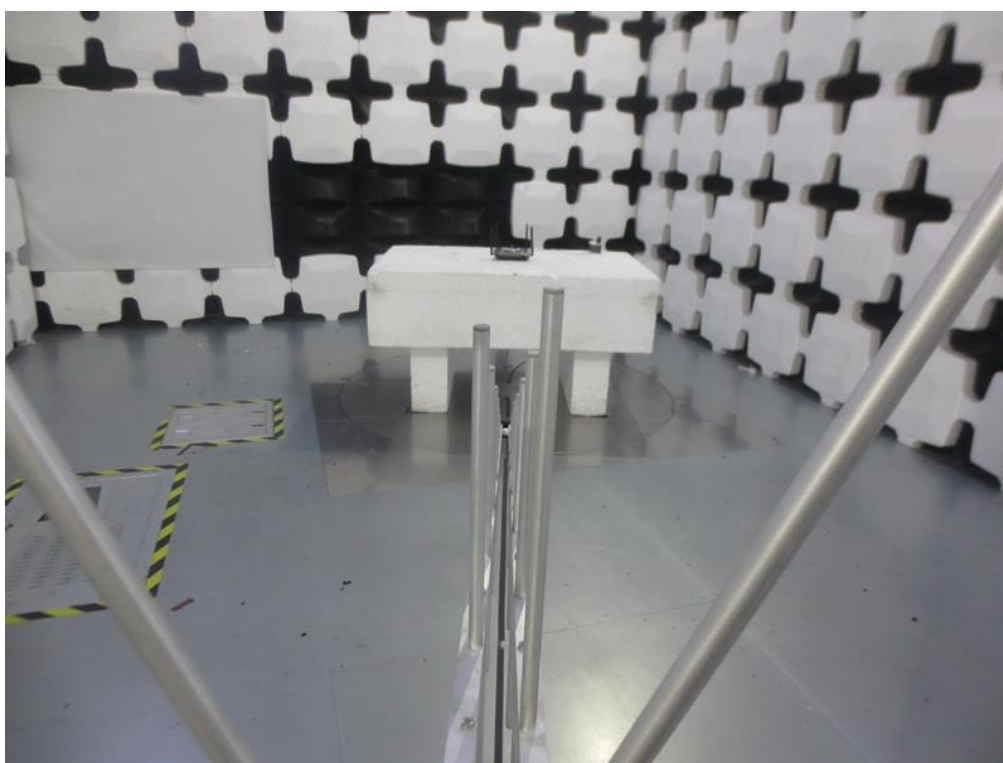
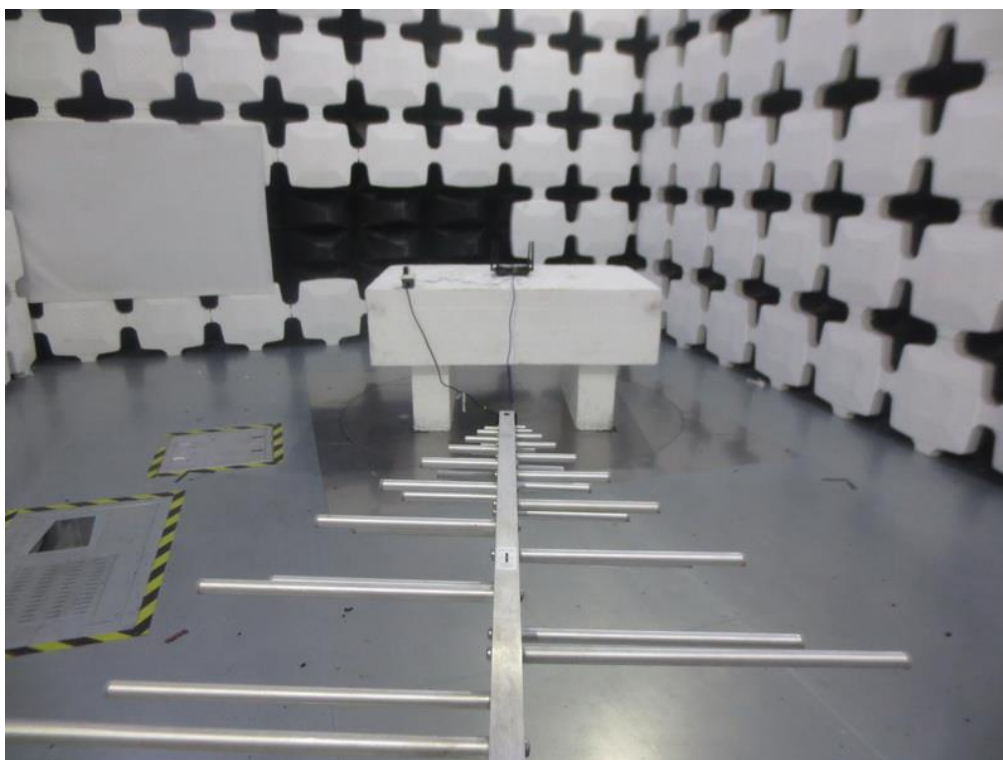
Remark: "N/A" denotes no model name, serial no. or calibration specified.

All calibration period of equipment list is one year.

9. EUT TEST PHOTOS

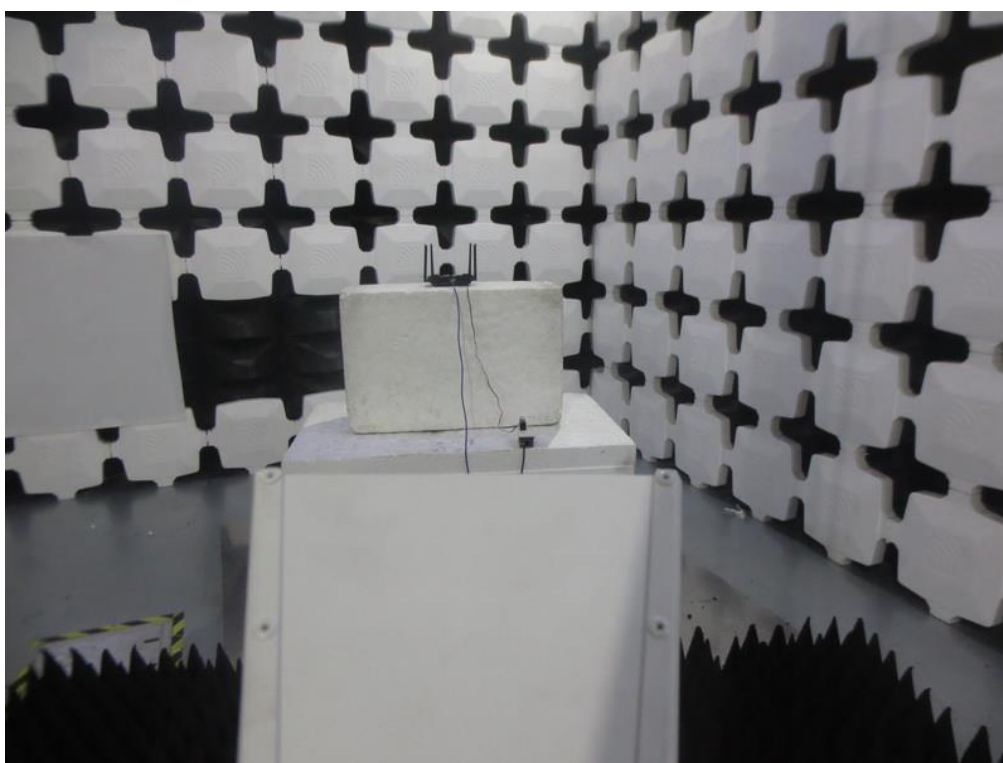
Conducted Emissions Test Photos



Radiated Emissions Test Photos**30 MHz to 1 GHz**

Radiated Emissions Test Photos

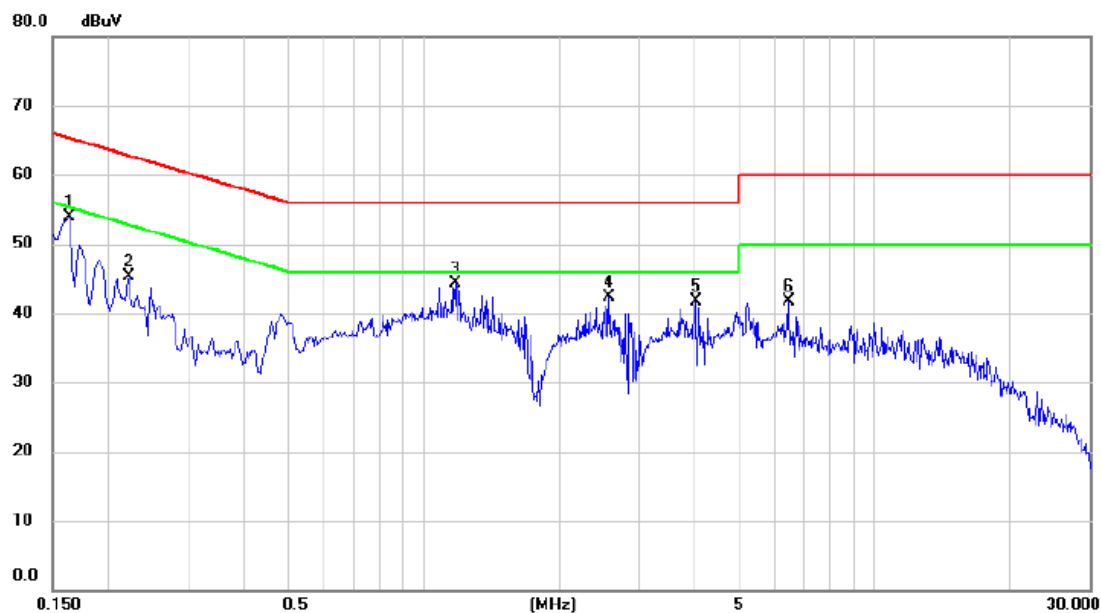
Above 1 GHz



APPENDIX A - AC POWER LINE CONDUCTED EMISSIONS

Test Mode: UNII-3_TX AX (HE20) Mode 5745 MHz

Line



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1	*	0.1635	44.08	9.74	53.82	65.28	-11.46	peak	
2		0.2220	35.56	9.79	45.35	62.74	-17.39	peak	
3		1.1801	34.54	9.75	44.29	56.00	-11.71	peak	
4		2.5844	32.53	9.83	42.36	56.00	-13.64	peak	
5		4.0243	31.83	9.92	41.75	56.00	-14.25	peak	
6		6.4320	31.66	10.04	41.70	60.00	-18.30	peak	

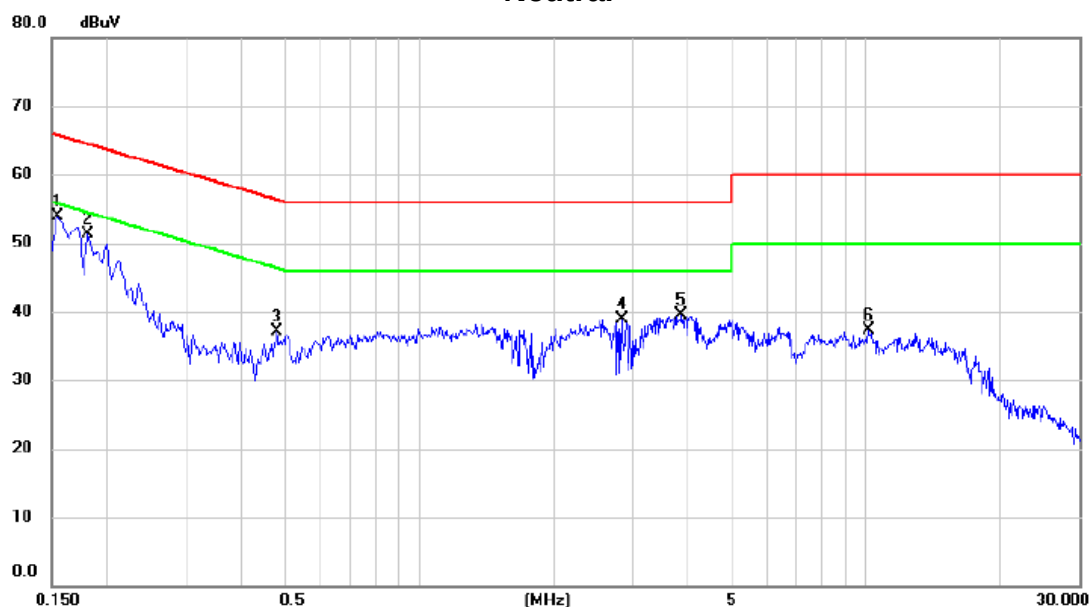
REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

Test Mode: UNII-3_TX AX (HE20) Mode 5745 MHz

Neutral



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1	*	0.1544	44.34	9.61	53.95	65.76	-11.81	peak	
2		0.1814	41.71	9.63	51.34	64.42	-13.08	peak	
3		0.4786	27.45	9.69	37.14	56.36	-19.22	peak	
4		2.8365	29.16	9.84	39.00	56.00	-17.00	peak	
5		3.8624	29.68	9.89	39.57	56.00	-16.43	peak	
6		10.1130	27.06	10.16	37.22	60.00	-22.78	peak	

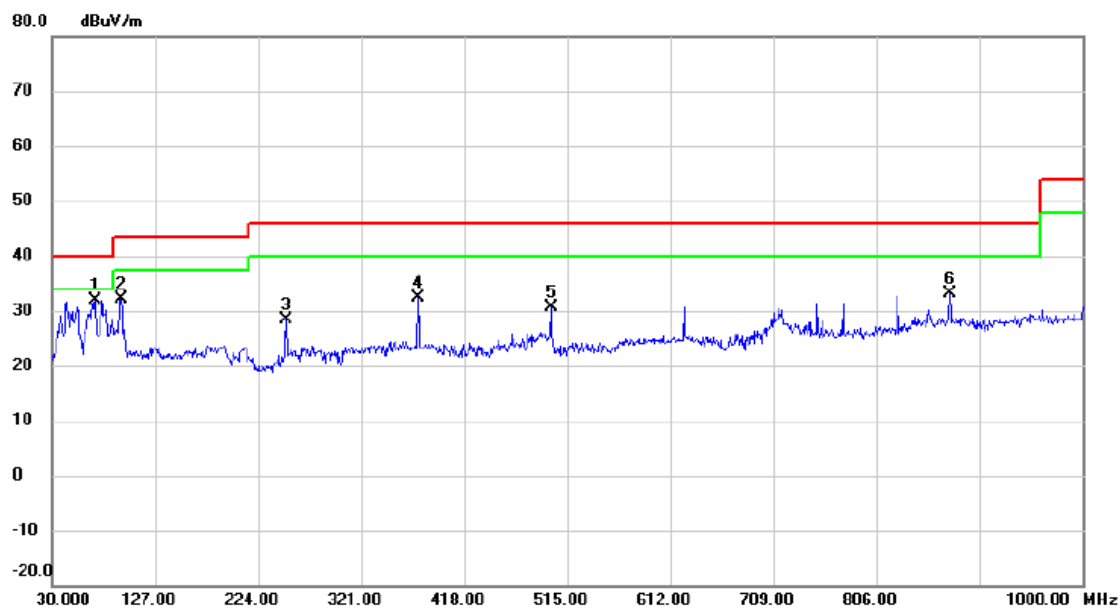
REMARKS:

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

APPENDIX B - RADIATED EMISSION - 30 MHZ TO 1 GHZ

Test Mode: UNII-3_TX AX (HE20) Mode 5745 MHz

Vertical



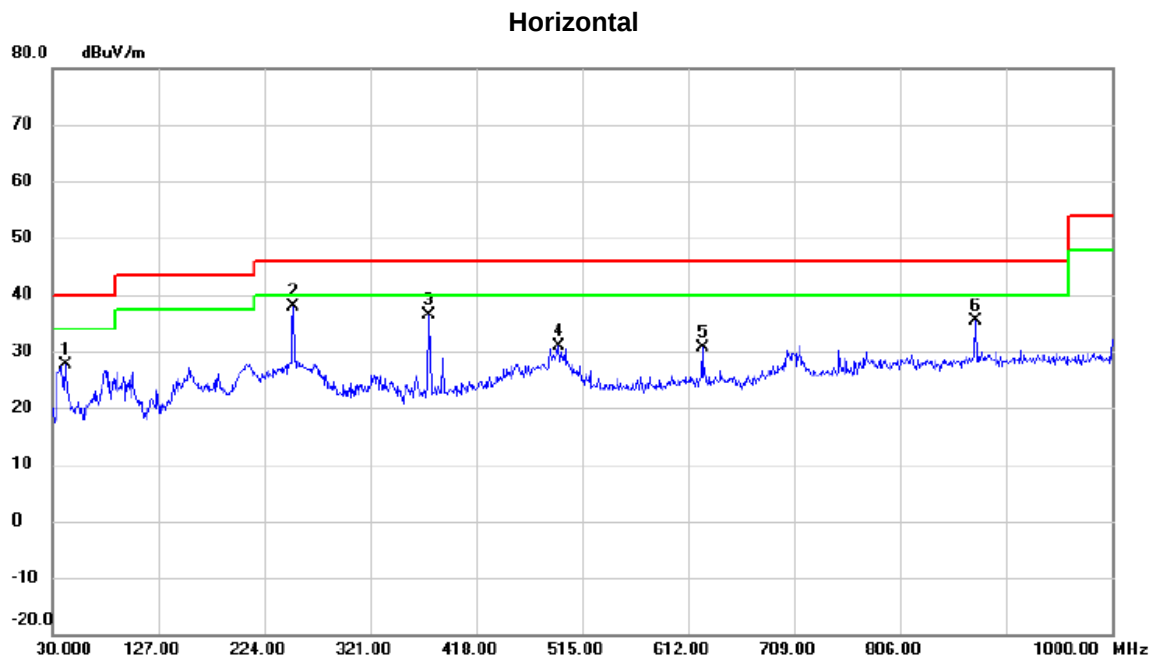
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	*	70.7400	50.24	-18.36	31.88	40.00	-8.12	peak	
2		94.9900	53.56	-21.45	32.11	43.50	-11.39	peak	
3		250.1900	45.06	-16.67	28.39	46.00	-17.61	peak	
4		374.8350	45.59	-13.11	32.48	46.00	-13.52	peak	
5		499.9650	40.95	-10.32	30.63	46.00	-15.37	peak	
6		874.8700	37.81	-4.66	33.15	46.00	-12.85	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



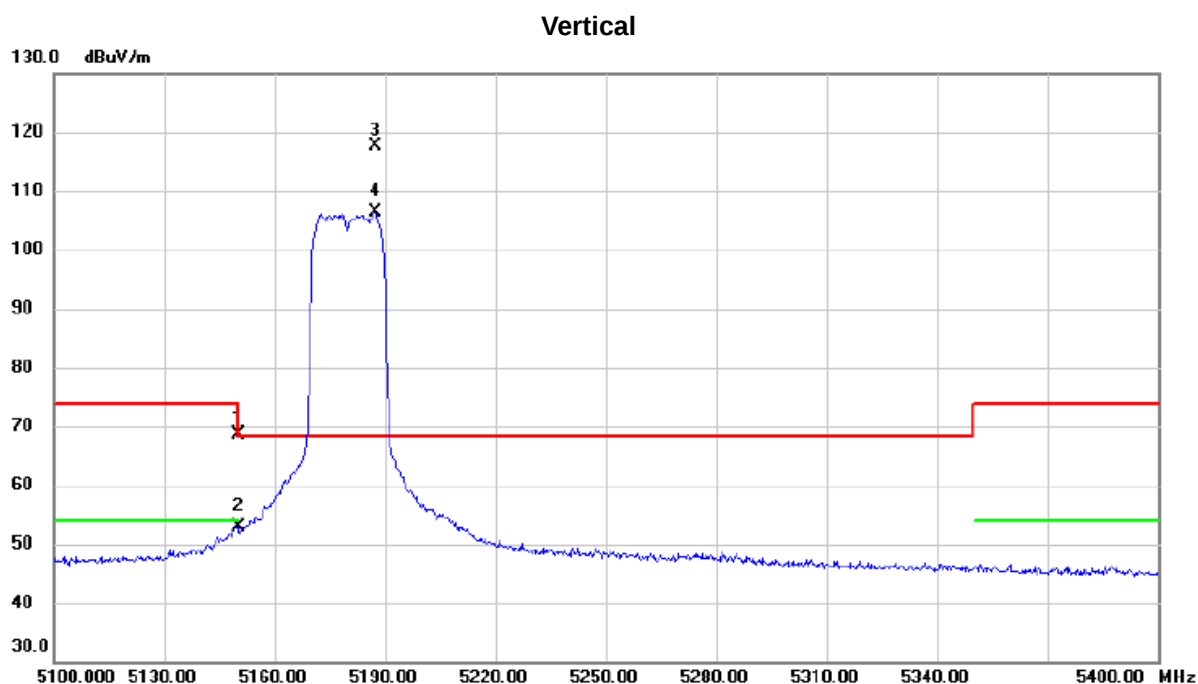
REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

APPENDIX C - RADIATED EMISSION - ABOVE 1000 MHZ

Orthogonal Axis	X
Test Mode	UNII-1_TX AX (HE20) Mode 5180 MHz



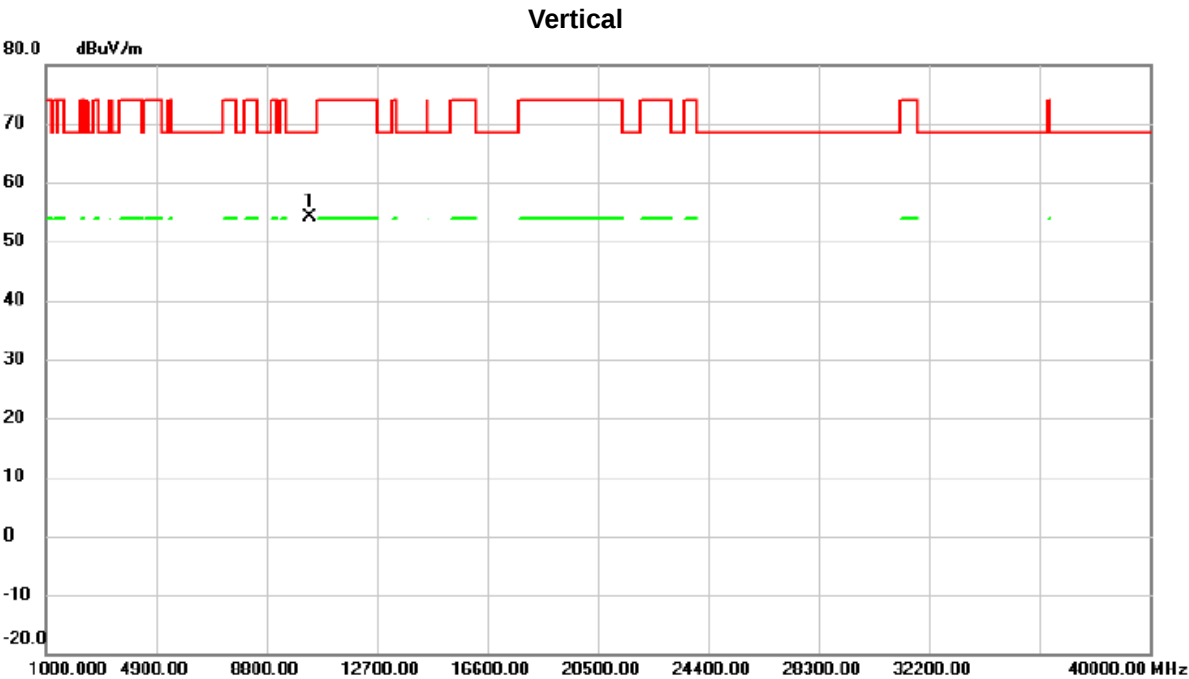
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		5150.000	30.78	37.88	68.66	74.00	-5.34	peak	
2		5150.000	15.12	37.88	53.00	54.00	-1.00	AVG	
3	*	5187.300	79.99	37.73	117.72	68.30	49.42	peak	No limit
4	X	5187.300	68.55	37.73	106.28	68.30	37.98	AVG	No limit

REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

Orthogonal Axis	X
Test Mode	UNII-1_TX AX (HE20) Mode 5180 MHz



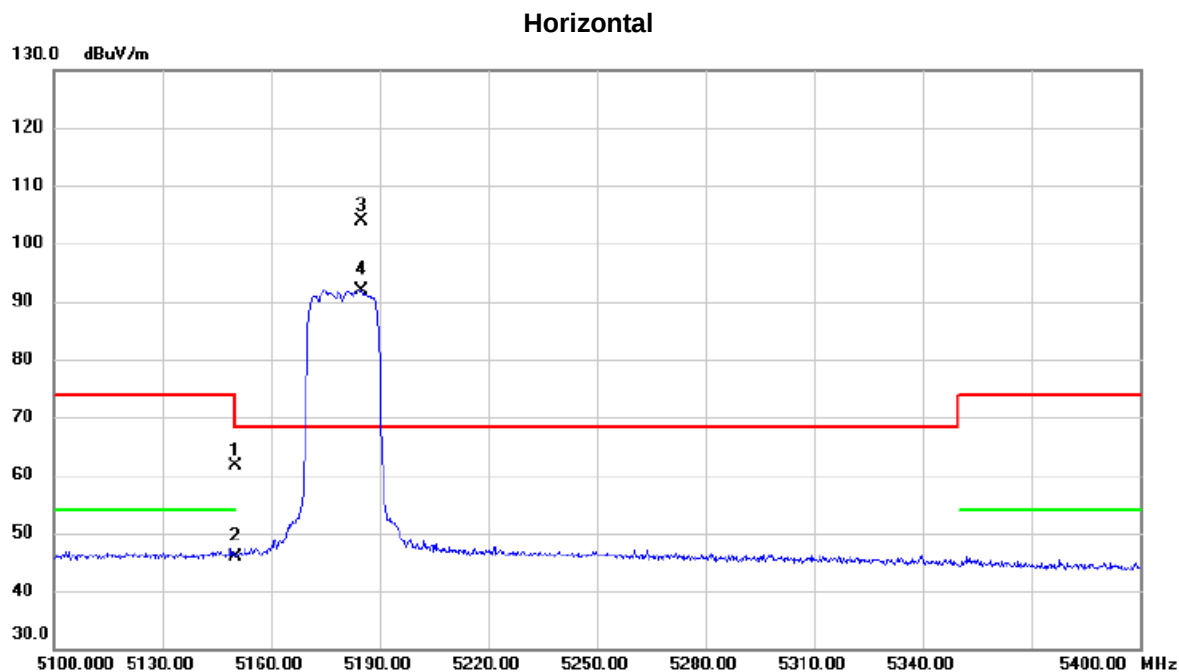
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	10357.73	52.45	1.65	54.10	68.30	-14.20	peak	

REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

Orthogonal Axis	X
Test Mode	UNII-1_TX AX (HE20) Mode 5180 MHz



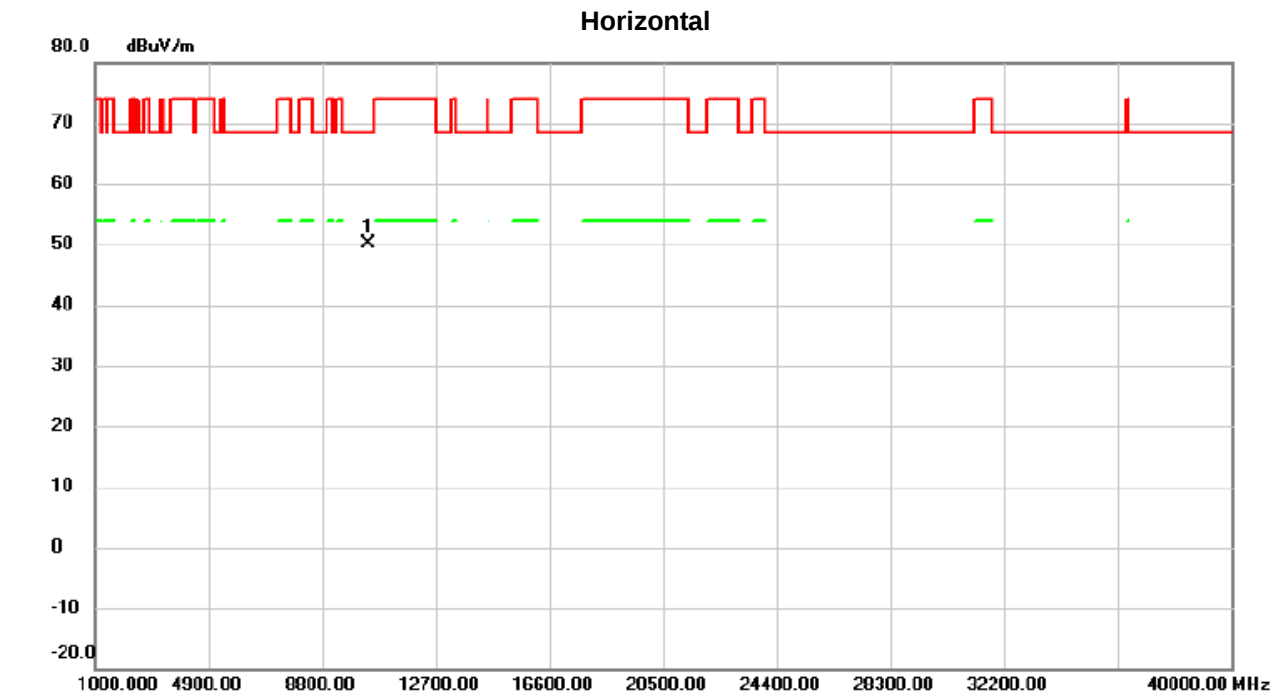
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		5150.000	23.76	37.88	61.64	74.00	-12.36	peak	
2		5150.000	8.09	37.88	45.97	54.00	-8.03	AVG	
3	*	5185.200	66.16	37.74	103.90	68.30	35.60	peak	No limit
4	X	5185.200	54.23	37.74	91.97	68.30	23.67	AVG	No limit

REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

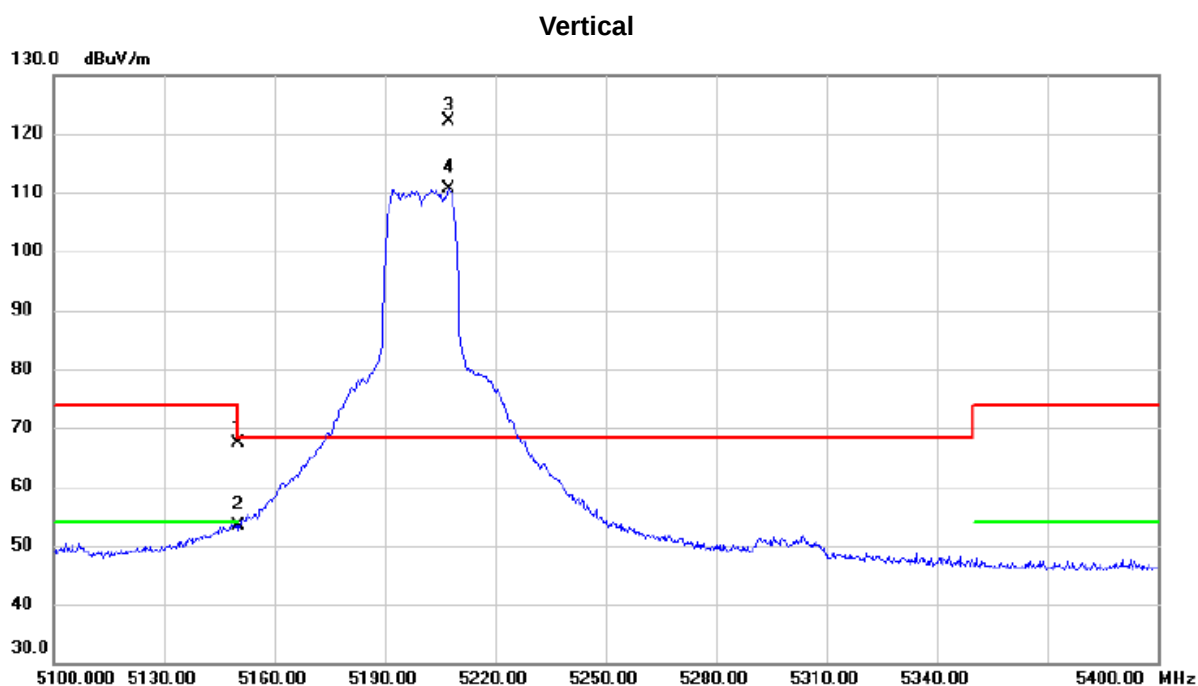
Orthogonal Axis	X
Test Mode	UNII-1_TX AX (HE20) Mode 5180 MHz



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	10360.01	48.55	1.65	50.20	68.30	-18.10	peak	

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

Orthogonal Axis	X
Test Mode	UNII-1_TX AX (HE20) Mode 5200 MHz



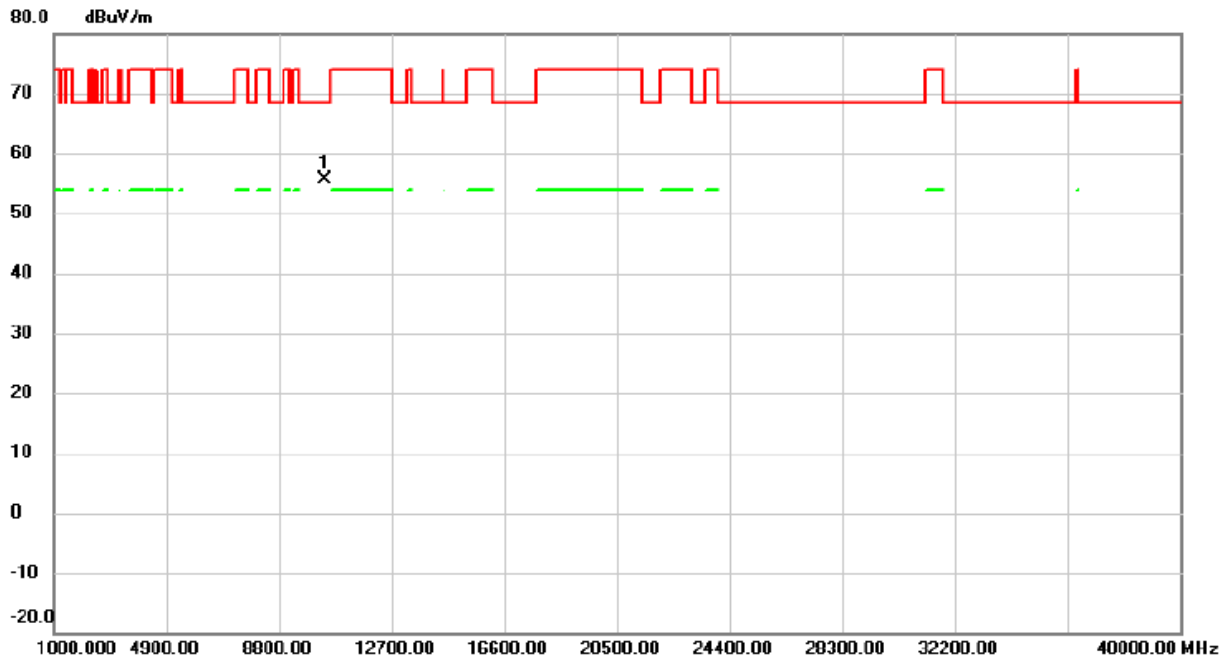
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		5150.000	29.53	37.88	67.41	74.00	-6.59	peak	
2		5150.000	15.54	37.88	53.42	54.00	-0.58	AVG	
3	*	5207.400	84.52	37.67	122.19	68.30	53.89	peak	No limit
4	X	5207.400	73.04	37.67	110.71	68.30	42.41	AVG	No limit

REMARKS:

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

Orthogonal Axis	X
Test Mode	UNII-1_TX AX (HE20) Mode 5200 MHz

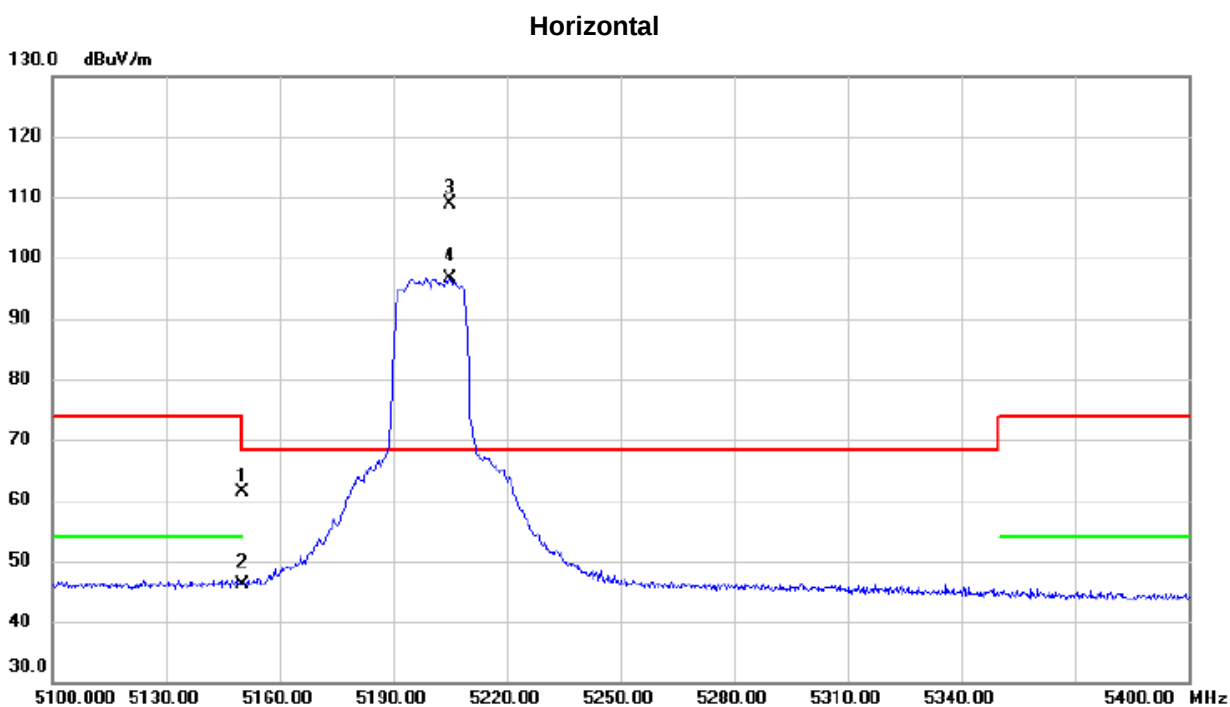
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector Comment
1	*	10397.73	53.80	1.71	55.51	68.30	-12.79	peak

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

Orthogonal Axis	X
Test Mode	UNII-1_TX AX (HE20) Mode 5200 MHz



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		5150.000	23.46	37.88	61.34	74.00	-12.66	peak	
2		5150.000	8.14	37.88	46.02	54.00	-7.98	AVG	
3	*	5205.150	71.11	37.67	108.78	68.30	40.48	peak	No limit
4	X	5205.150	59.02	37.67	96.69	68.30	28.39	AVG	No limit

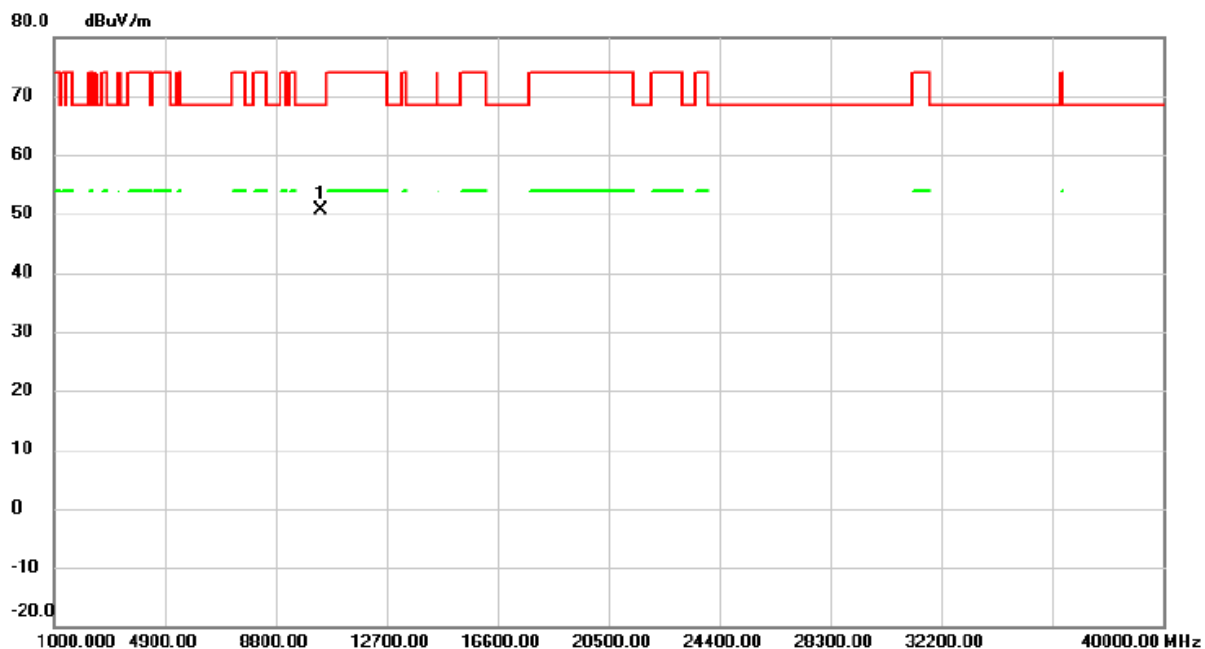
REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

Orthogonal Axis	X
Test Mode	UNII-1_TX AX (HE20) Mode 5200 MHz

Horizontal

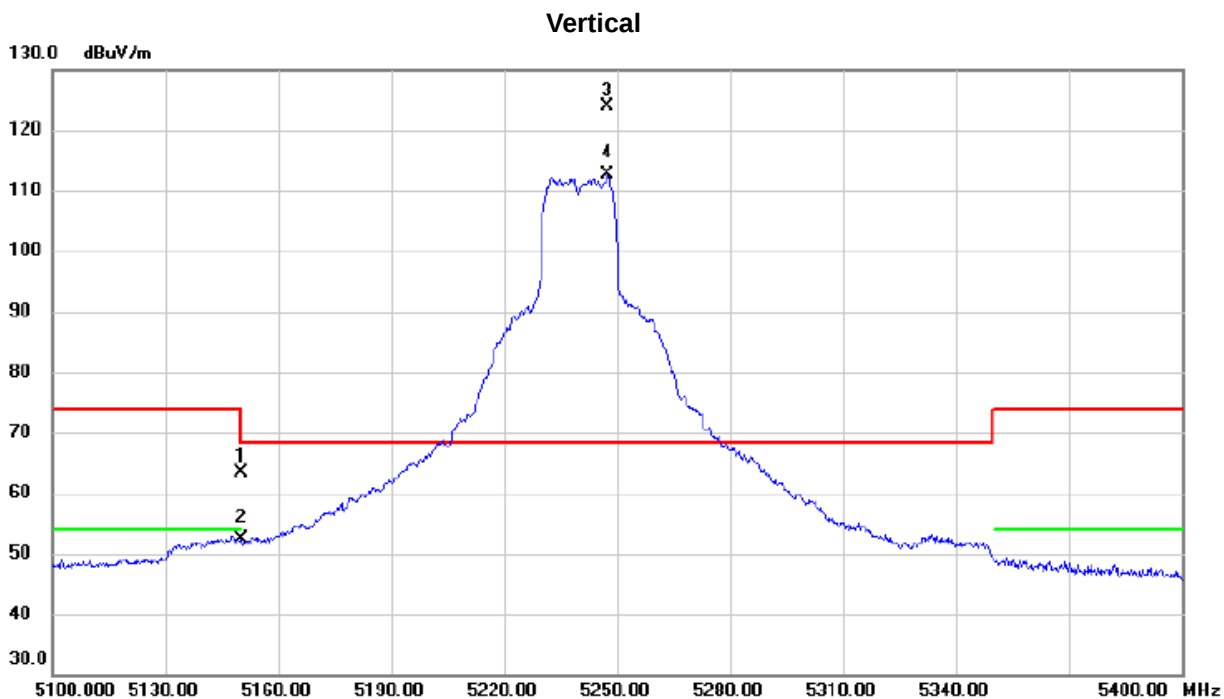


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	*	10398.39	48.95	1.72	50.67	68.30	-17.63	peak	

REMARKS:

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

Orthogonal Axis	X
Test Mode	UNII-1_TX AX (HE20) Mode 5240 MHz



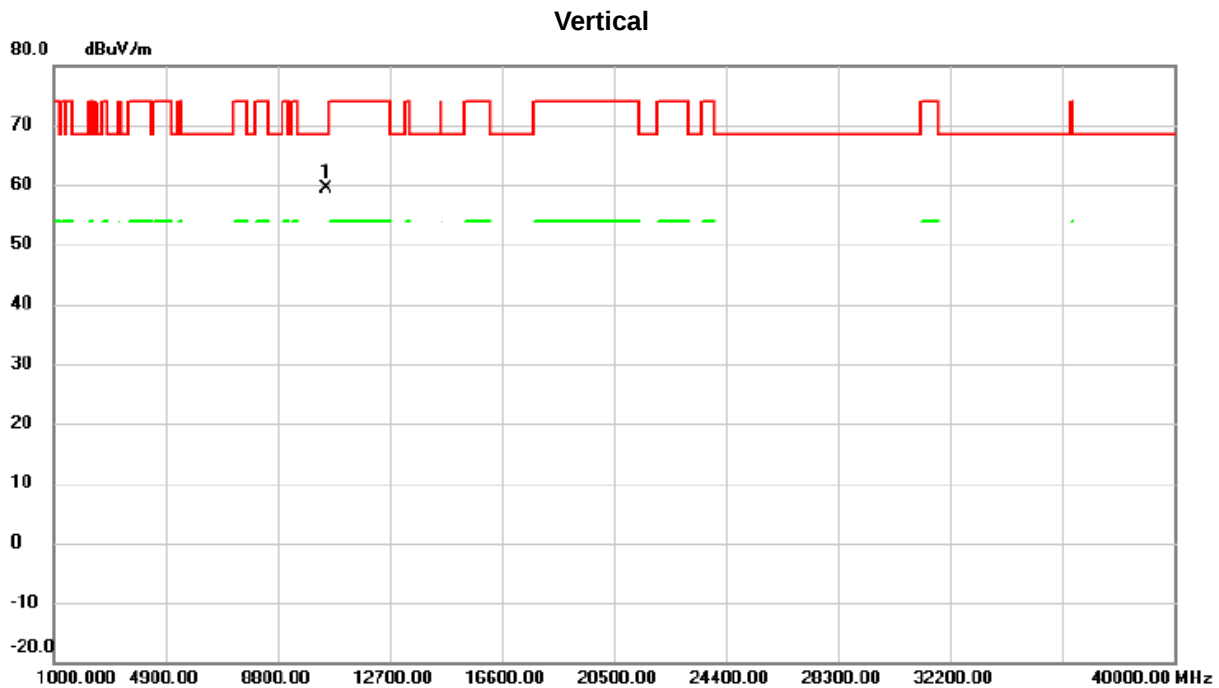
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5150.000	25.56	37.88	63.44	74.00	-10.56	peak	
2		5150.000	14.40	37.88	52.28	54.00	-1.72	AVG	
3	*	5247.450	86.17	37.62	123.79	68.30	55.49	peak	No limit
4	X	5247.450	74.94	37.62	112.56	68.30	44.26	AVG	No limit

REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

Orthogonal Axis	X
Test Mode	UNII-1_TX AX (HE20) Mode 5240 MHz

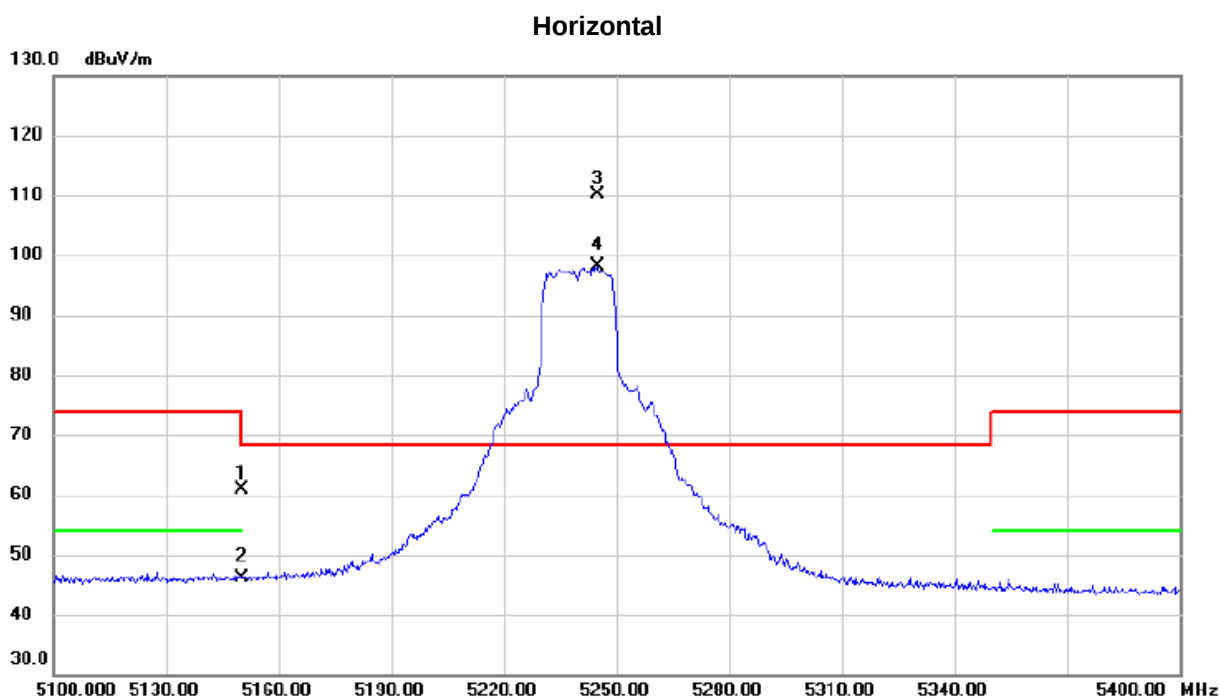


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	10477.94	57.52	1.80	59.32	68.30	-8.98	peak	

REMARKS:

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

Orthogonal Axis	X
Test Mode	UNII-1_TX AX (HE20) Mode 5240 MHz



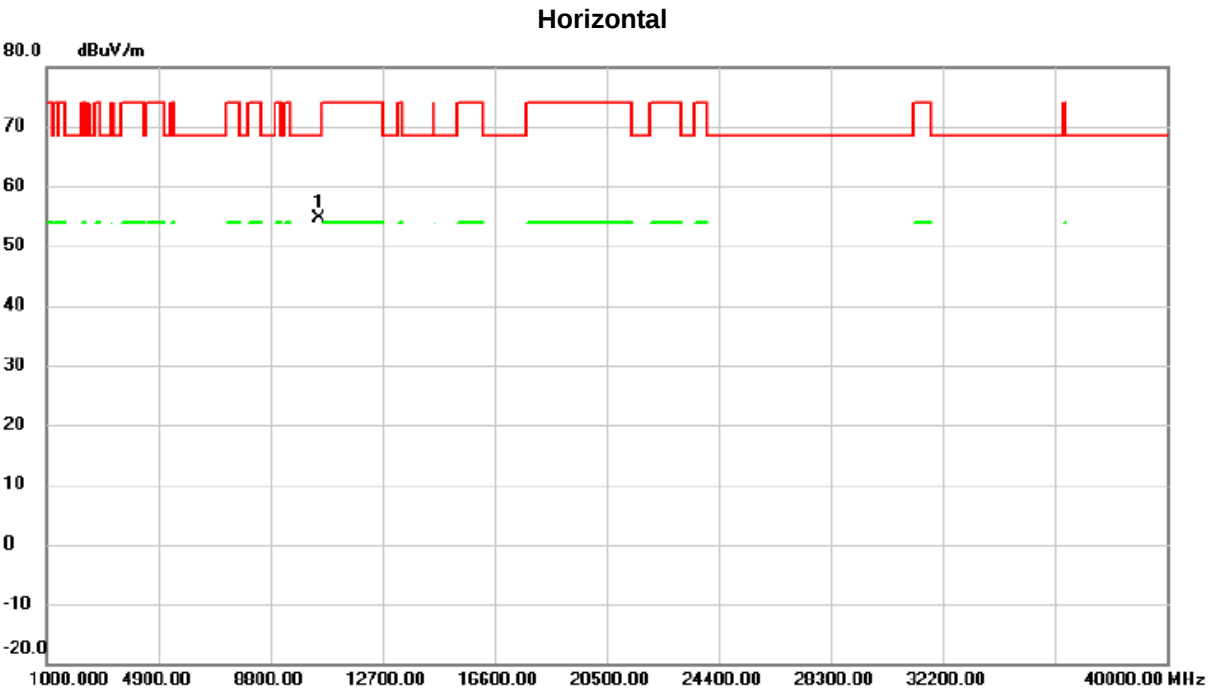
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		5150.000	23.02	37.88	60.90	74.00	-13.10	peak	
2		5150.000	8.34	37.88	46.22	54.00	-7.78	AVG	
3	*	5244.900	72.42	37.61	110.03	68.30	41.73	peak	No limit
4	X	5244.900	60.56	37.61	98.17	68.30	29.87	AVG	No limit

REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

Orthogonal Axis	X
Test Mode	UNII-1_TX AX (HE20) Mode 5240 MHz

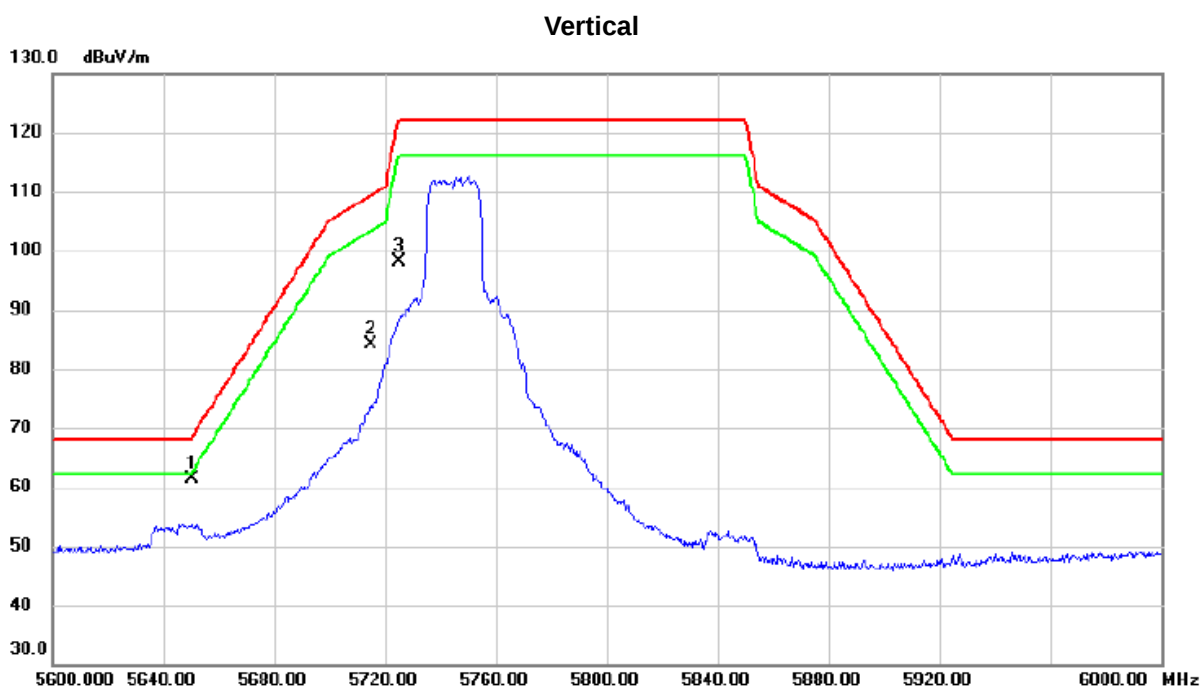


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	*	10477.74	52.75	1.80	54.55	68.30	-13.75	peak	

REMARKS:

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

Orthogonal Axis	X
Test Mode	UNII-3_TX AX (HE20) Mode 5745 MHz

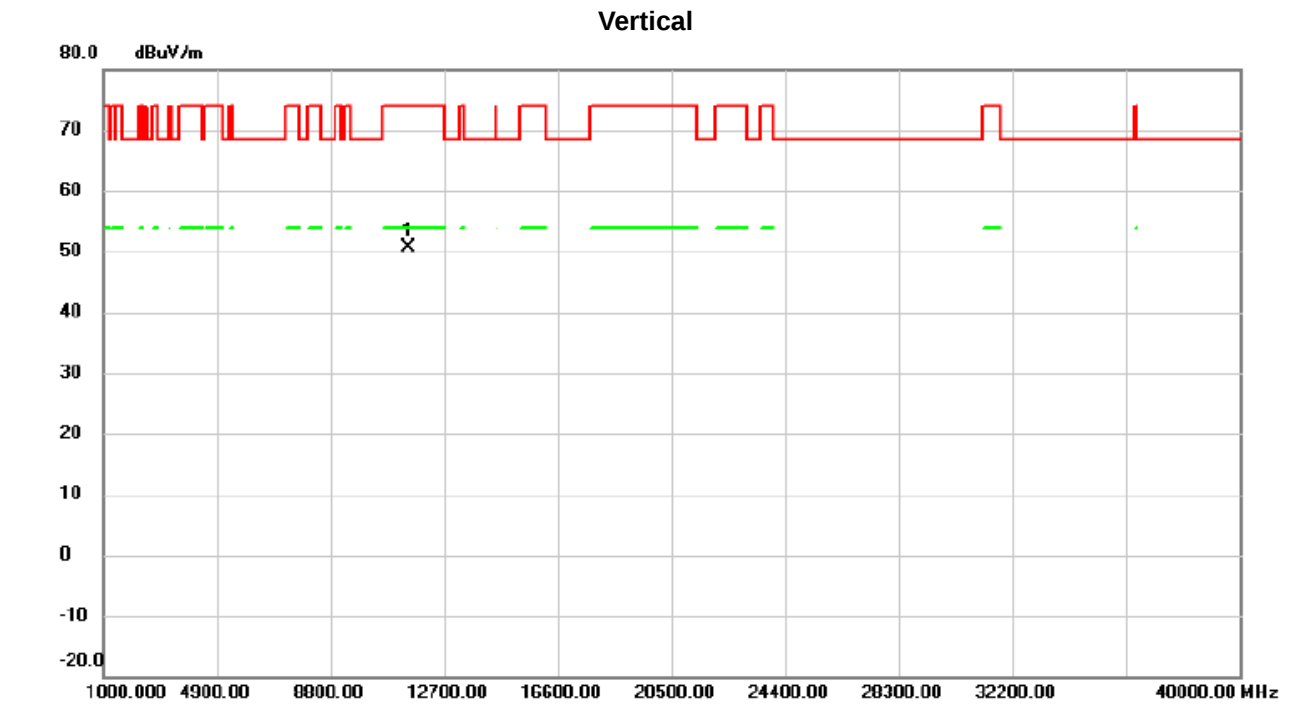


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	5650.400	23.07	38.37	61.44	68.50	-7.06	peak	
2		5715.000	45.62	38.46	84.08	109.40	-25.32	peak	
3		5725.000	59.69	38.50	98.19	122.20	-24.01	peak	

REMARKS:

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

Orthogonal Axis	X
Test Mode	UNII-3_TX AX (HE20) Mode 5745 MHz



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	11489.66	48.41	2.20	50.61	74.00	-23.39	peak	

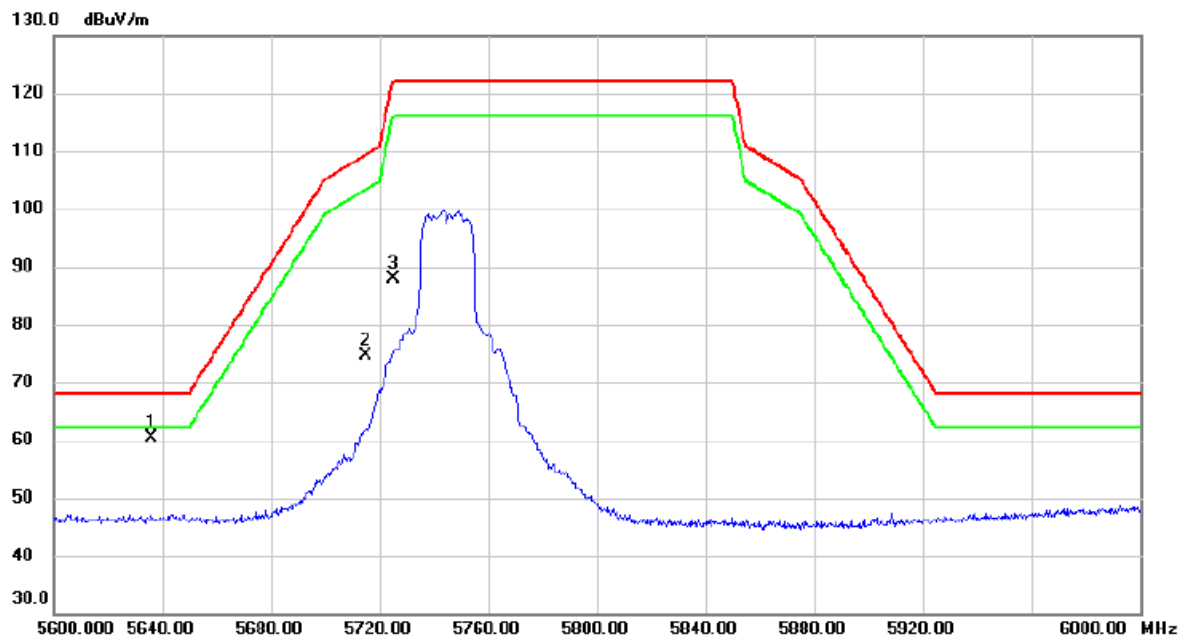
REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

Orthogonal Axis	X
Test Mode	UNII-3_TX AX (HE20) Mode 5745 MHz

Horizontal

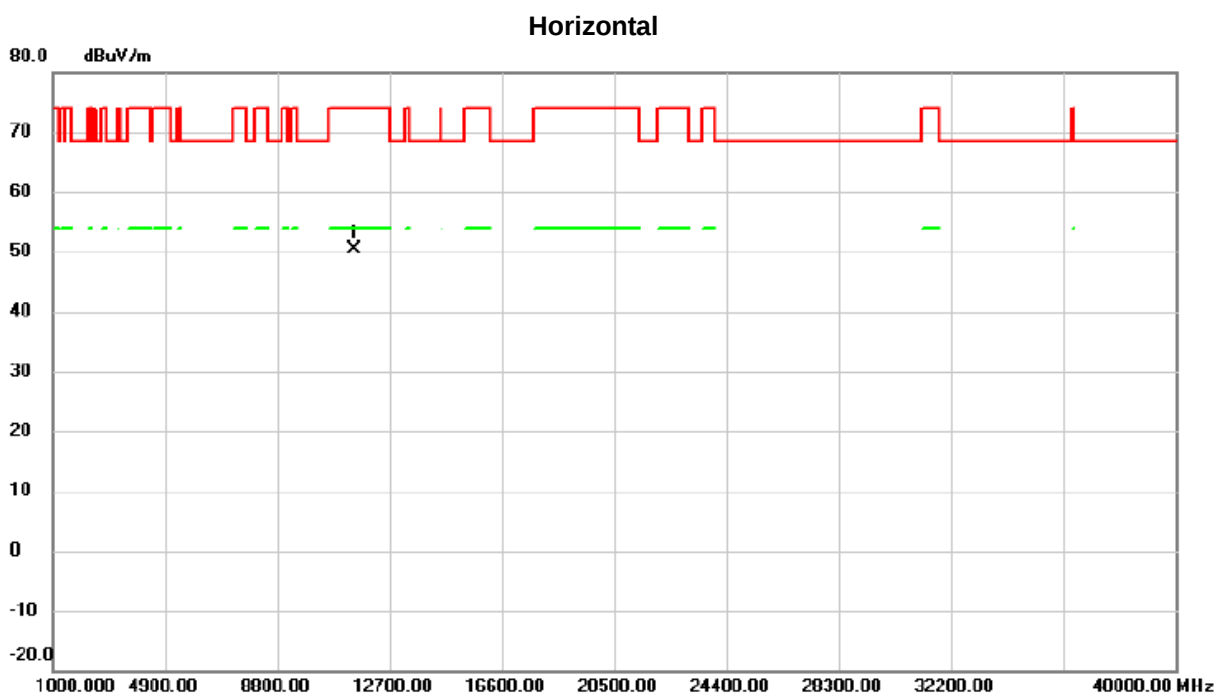


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	*	5636.200	22.11	38.36	60.47	68.20	-7.73	peak	
2		5715.000	36.28	38.46	74.74	109.40	-34.66	peak	
3		5725.000	49.36	38.50	87.86	122.20	-34.34	peak	

REMARKS:

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

Orthogonal Axis	X
Test Mode	UNII-3_TX AX (HE20) Mode 5745 MHz

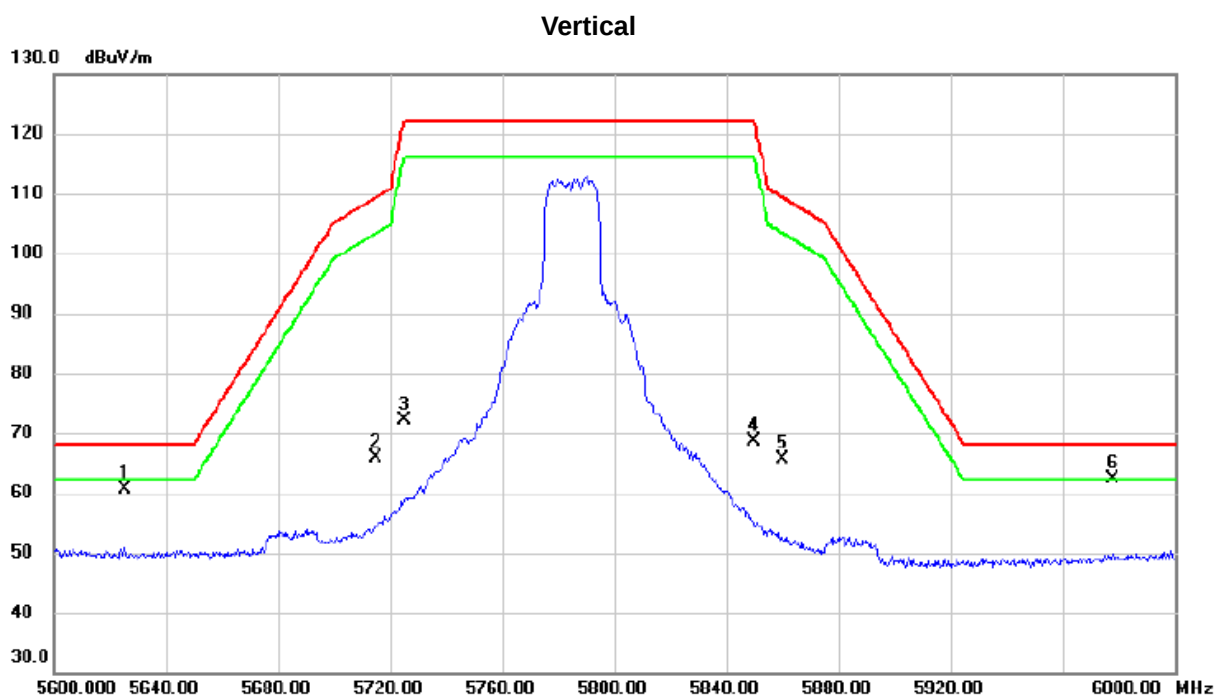


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	11491.15	48.22	2.21	50.43	74.00	-23.57	peak	

REMARKS:

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

Orthogonal Axis	X
Test Mode	UNII-3_TX AX (HE20) Mode 5785 MHz



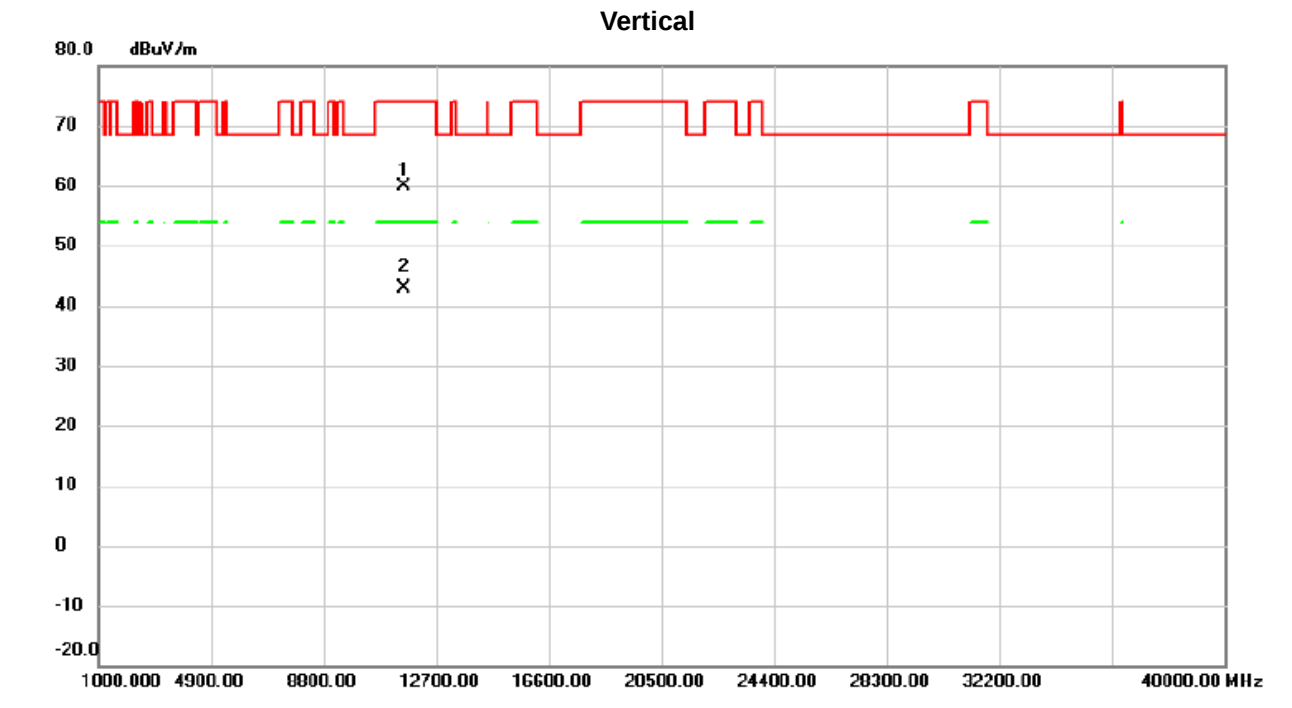
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		5625.200	22.32	38.36	60.68	68.20	-7.52	peak	
2		5715.000	27.39	38.46	65.85	109.40	-43.55	peak	
3		5725.000	33.54	38.50	72.04	122.20	-50.16	peak	
4		5850.000	29.67	38.91	68.58	122.20	-53.62	peak	
5		5860.000	26.66	38.95	65.61	109.40	-43.79	peak	
6	*	5977.600	23.15	39.21	62.36	68.20	-5.84	peak	

REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

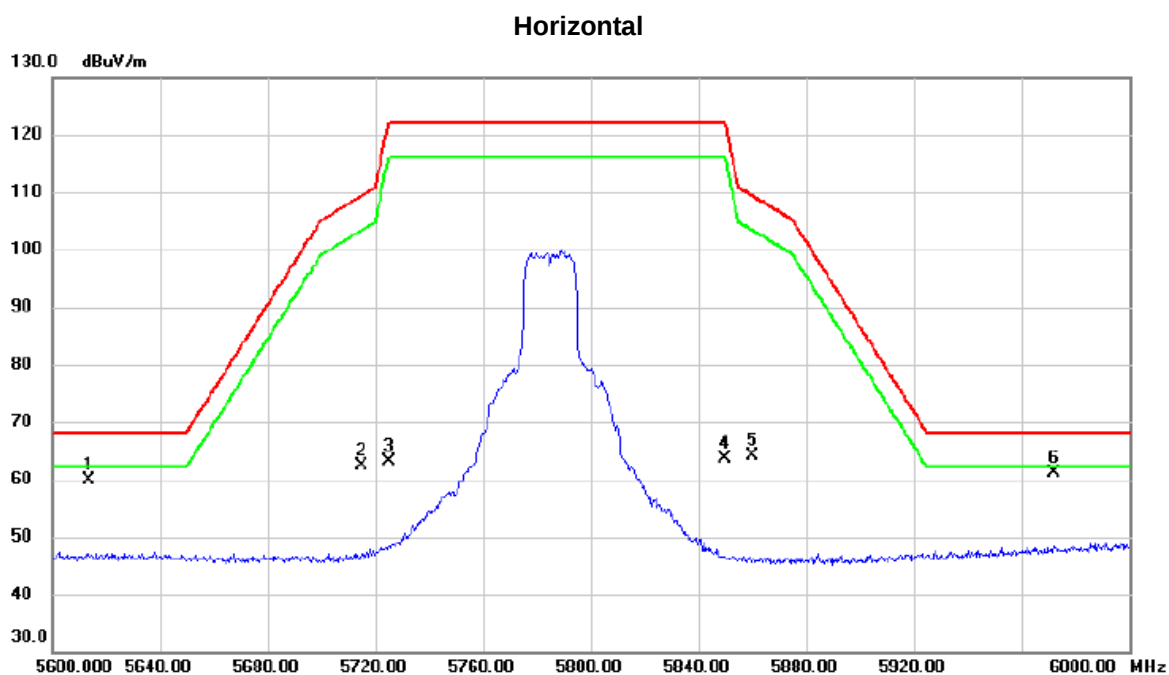
Orthogonal Axis	X
Test Mode	UNII-3_TX AX (HE20) Mode 5785 MHz



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		11568.01	57.50	2.27	59.77	74.00	-14.23	peak	
2	*	11568.59	40.70	2.27	42.97	54.00	-11.03	AVG	

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

Orthogonal Axis	X
Test Mode	UNII-3_TX AX (HE20) Mode 5785 MHz



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		5613.600	21.63	38.35	59.98	68.20	-8.22	peak	
2		5715.000	23.84	38.46	62.30	109.40	-47.10	peak	
3		5725.000	24.64	38.50	63.14	122.20	-59.06	peak	
4		5850.000	24.63	38.91	63.54	122.20	-58.66	peak	
5		5860.000	25.06	38.95	64.01	109.40	-45.39	peak	
6	*	5972.200	22.06	39.19	61.25	68.20	-6.95	peak	

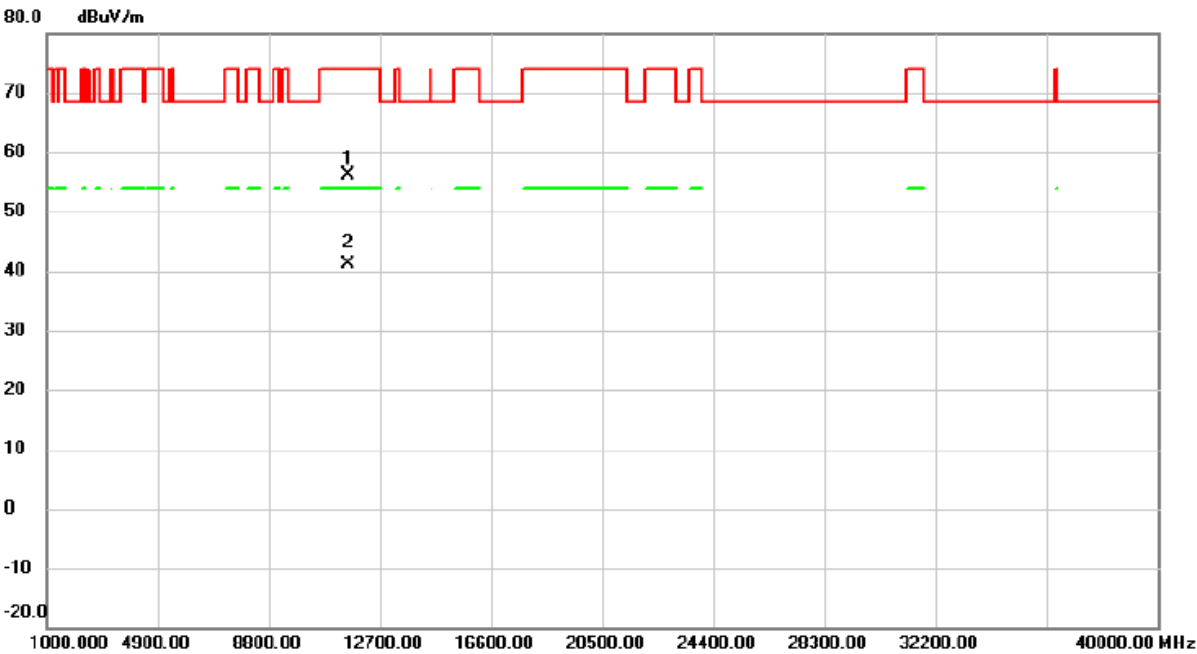
REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

Orthogonal Axis	X
Test Mode	UNII-3_TX AX (HE20) Mode 5785 MHz

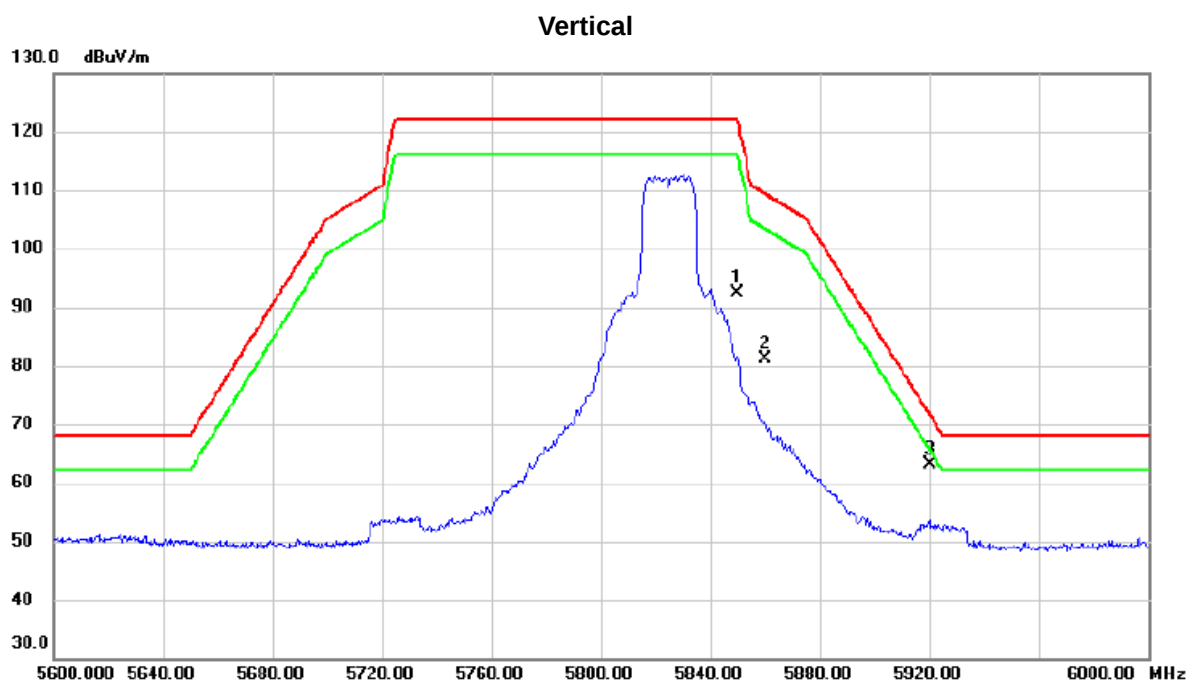
Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		11568.00	53.82	2.27	56.09	74.00	-17.91	peak	
2	*	11574.20	38.96	2.28	41.24	54.00	-12.76	AVG	

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

Orthogonal Axis	X
Test Mode	UNII-3_TX AX (HE20) Mode 5825 MHz



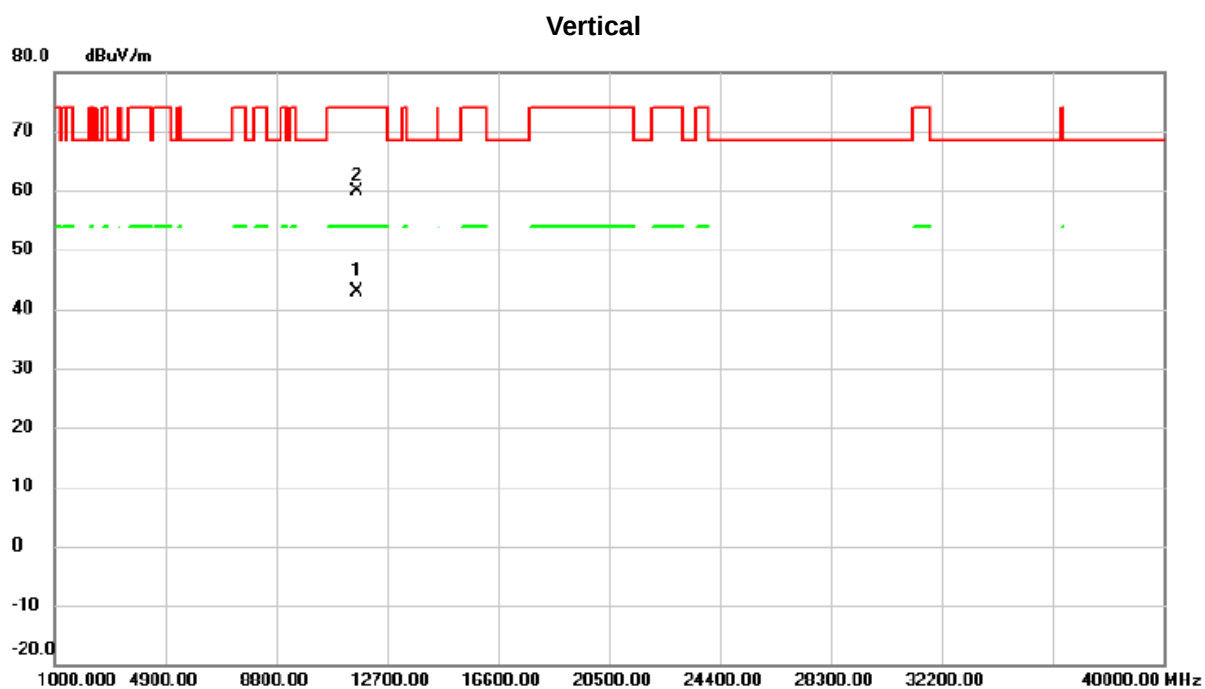
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		5850.000	53.46	38.91	92.37	122.20	-29.83	peak	
2		5860.000	42.08	38.95	81.03	109.40	-28.37	peak	
3	*	5920.000	24.06	39.09	63.15	71.90	-8.75	peak	

REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

Orthogonal Axis	X
Test Mode	UNII-3_TX AX (HE20) Mode 5825 MHz



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	*	11647.52	40.82	2.12	42.94	54.00	-11.06	AVG	
2		11647.72	57.72	2.12	59.84	74.00	-14.16	peak	

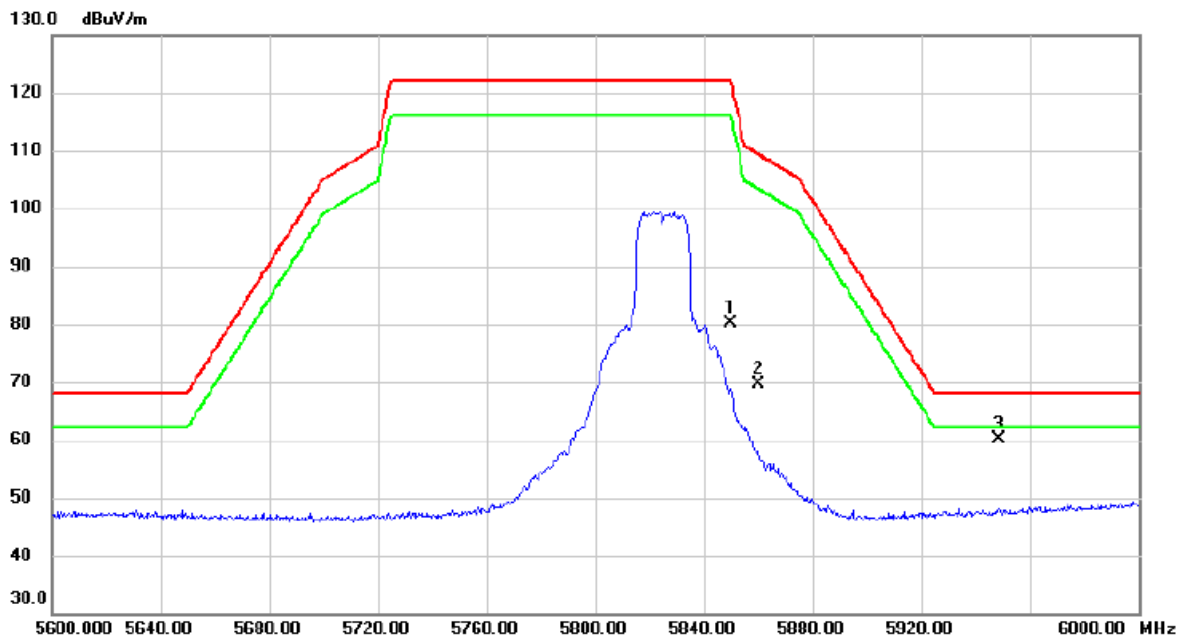
REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

Orthogonal Axis	X
Test Mode	UNII-3_TX AX (HE20) Mode 5825 MHz

Horizontal

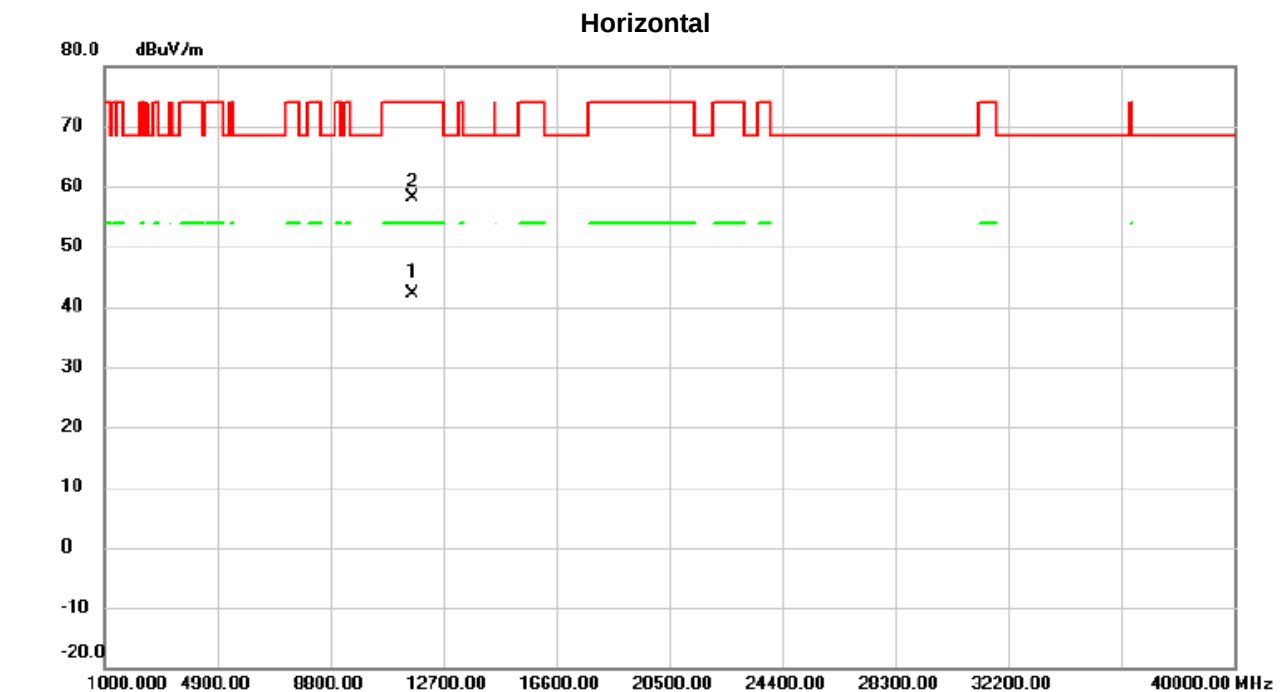


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		5850.000	41.12	38.91	80.03	122.20	-42.17	peak	
2		5860.000	30.63	38.95	69.58	109.40	-39.82	peak	
3	*	5948.600	21.04	39.14	60.18	68.20	-8.02	peak	

REMARKS:

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

Orthogonal Axis	X
Test Mode	UNII-3_TX AX (HE20) Mode 5825 MHz

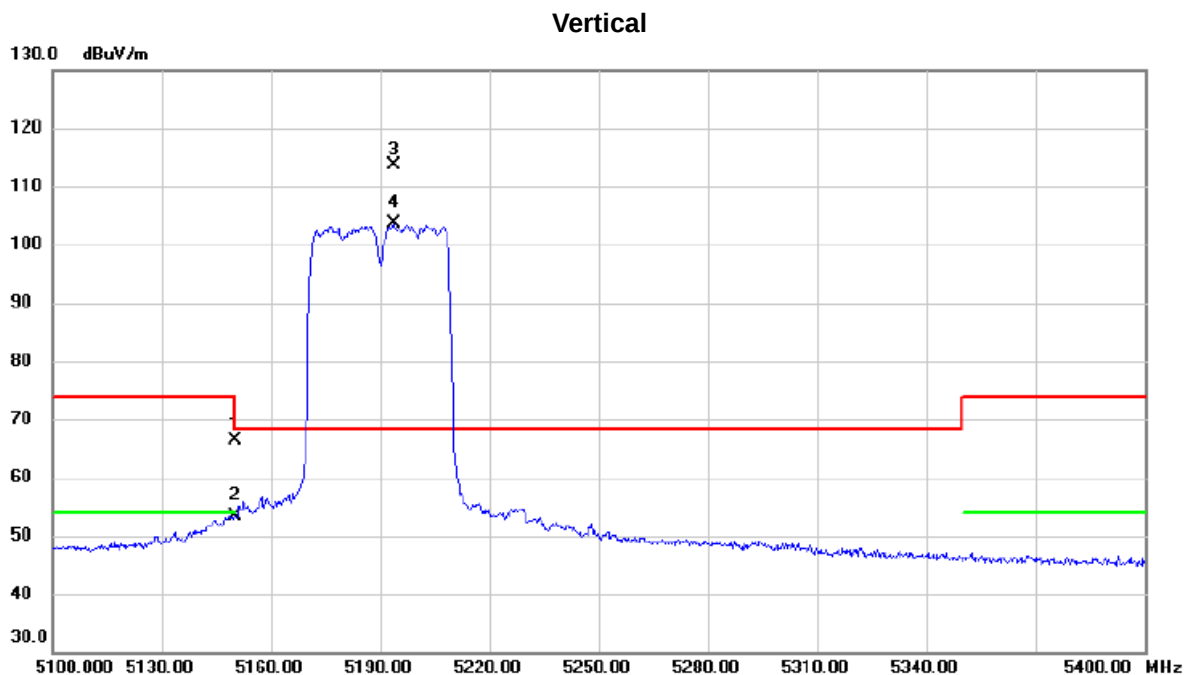


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	*	11647.16	40.08	2.12	42.20	54.00	-11.80	AVG	
2		11647.94	55.95	2.12	58.07	74.00	-15.93	peak	

REMARKS:

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

Orthogonal Axis	X
Test Mode	UNII-1_TX AX (HE40) Mode 5190 MHz



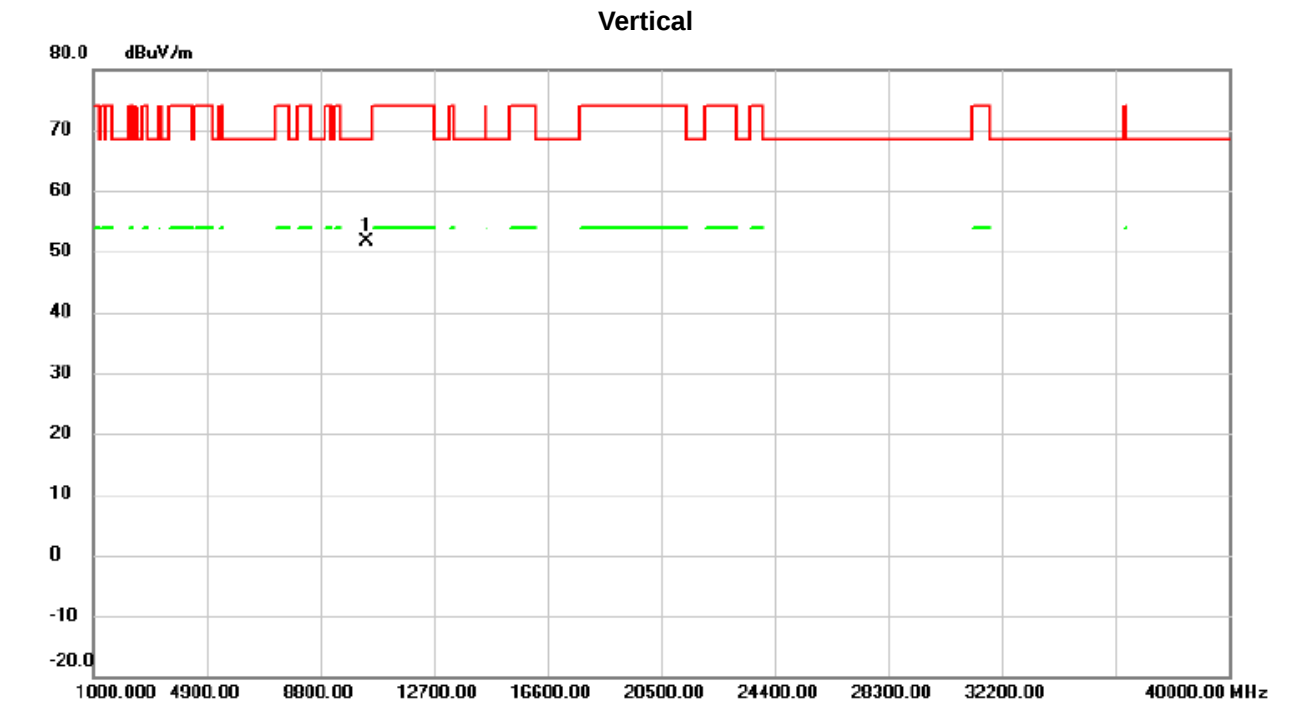
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		5150.000	28.46	37.88	66.34	74.00	-7.66	peak	
2		5150.000	15.42	37.88	53.30	54.00	-0.70	AVG	
3	*	5193.750	76.03	37.70	113.73	68.30	45.43	peak	No limit
4	X	5193.750	66.03	37.70	103.73	68.30	35.43	AVG	No limit

REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

Orthogonal Axis	X
Test Mode	UNII-1_TX AX (HE40) Mode 5190 MHz

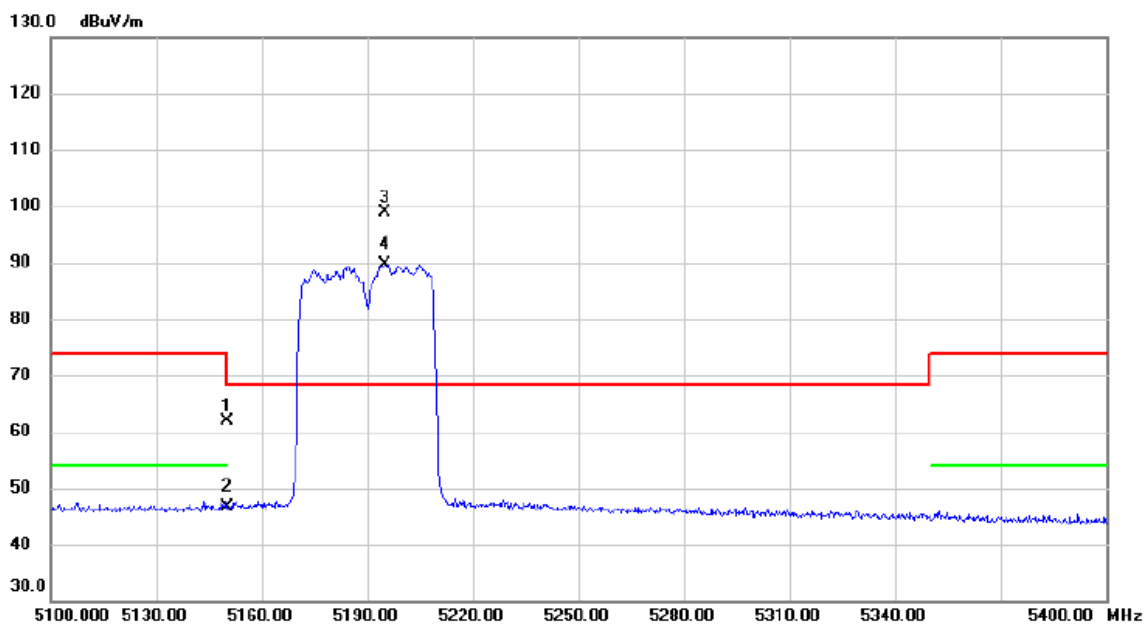


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	10379.12	49.96	1.68	51.64	68.30	-16.66	peak	

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

Orthogonal Axis	X
Test Mode	UNII-1_TX AX (HE40) Mode 5190 MHz

Horizontal



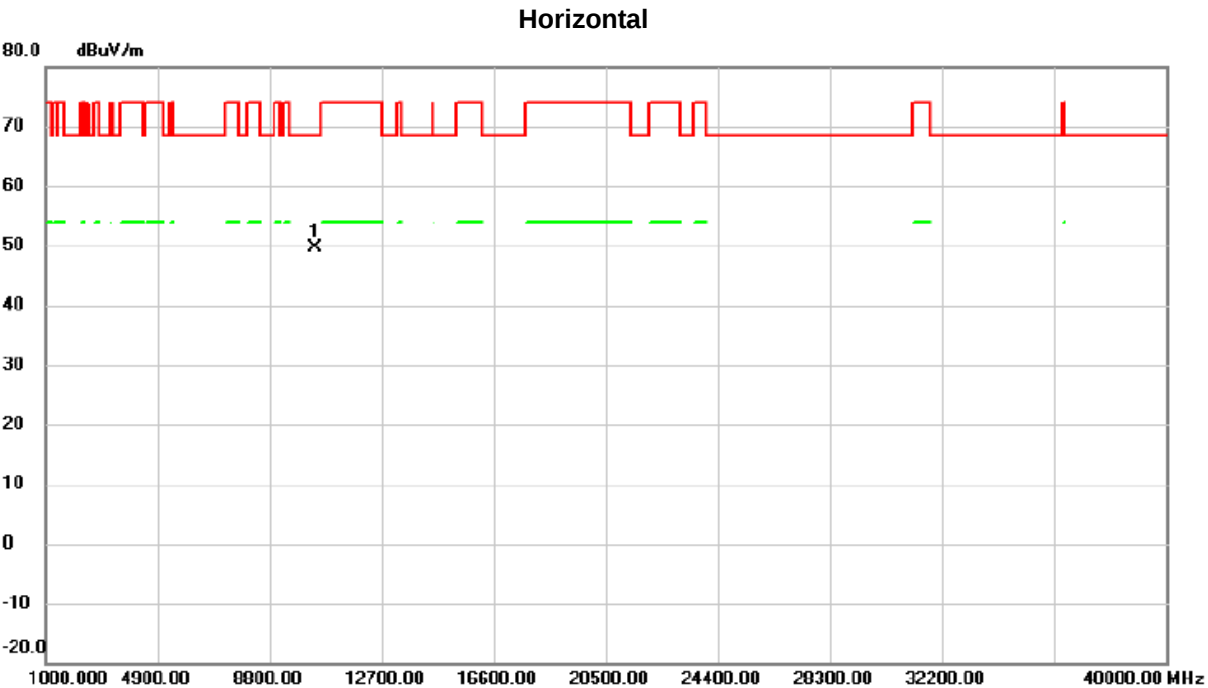
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		5150.000	23.95	37.88	61.83	74.00	-12.17	peak	
2		5150.000	8.83	37.88	46.71	54.00	-7.29	AVG	
3	*	5194.950	61.19	37.70	98.89	68.30	30.59	peak	No limit
4	X	5194.950	52.04	37.70	89.74	68.30	21.44	AVG	No limit

REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

Orthogonal Axis	X
Test Mode	UNII-1_TX AX (HE40) Mode 5190 MHz



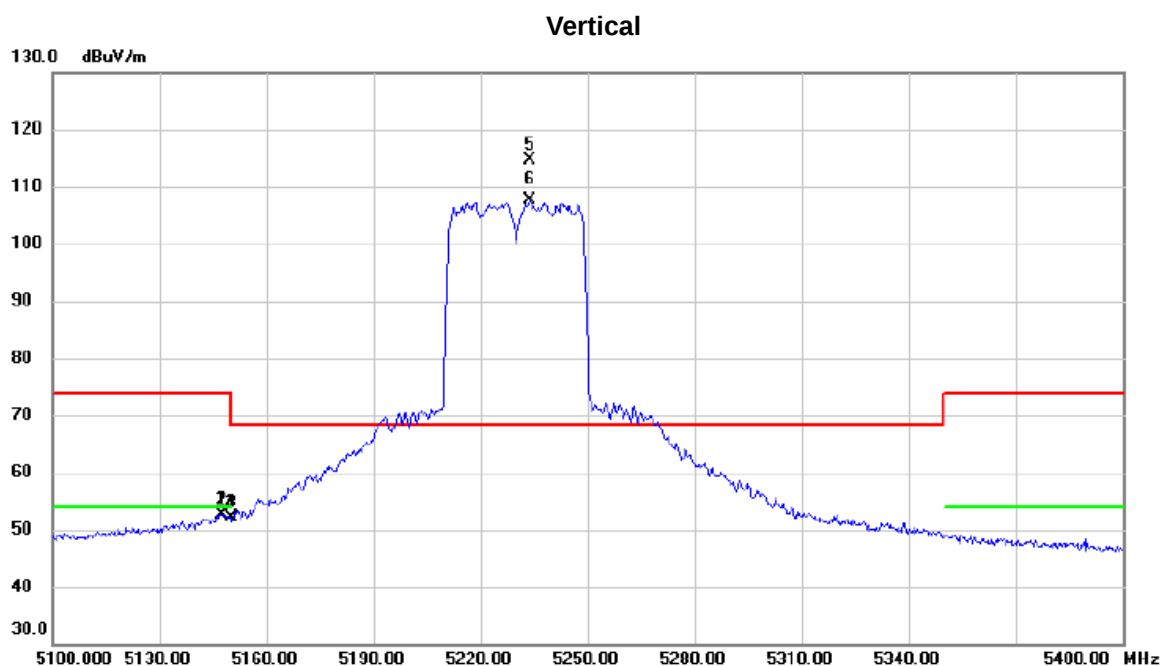
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	10377.88	48.04	1.68	49.72	68.30	-18.58	peak	

REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

Orthogonal Axis	X
Test Mode	UNII-1_TX AX (HE40) Mode 5230 MHz

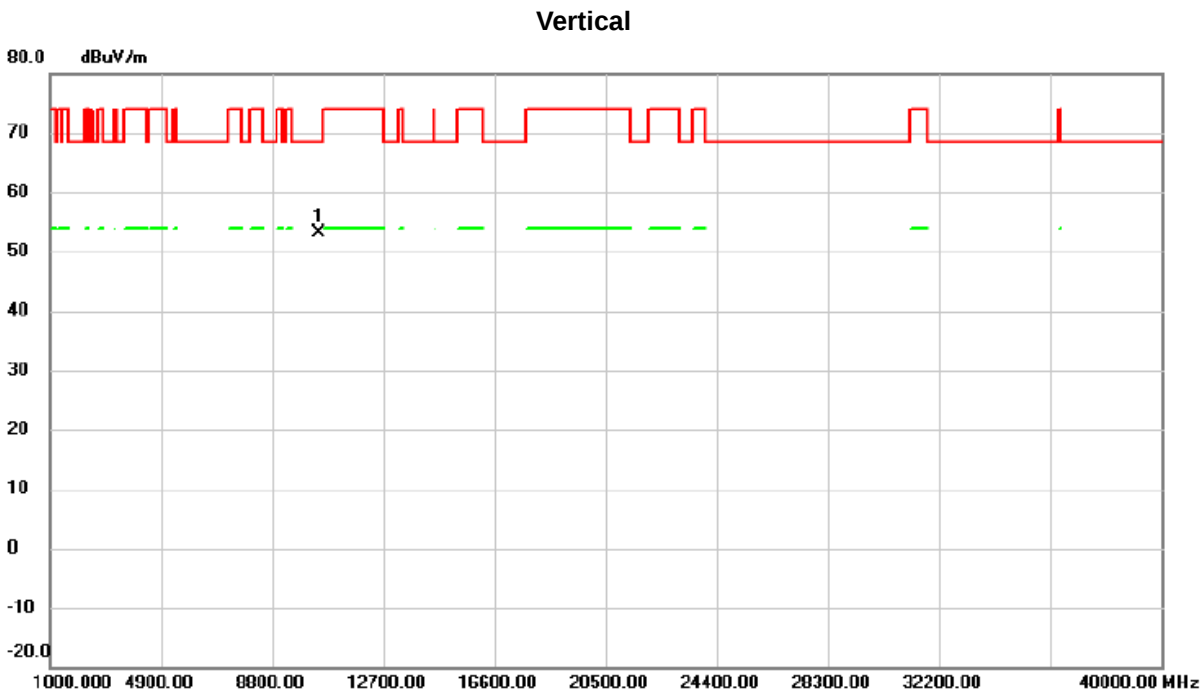


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		5147.550	14.71	37.88	52.59	74.00	-21.41	peak	
2		5147.550	14.71	37.88	52.59	74.00	-21.41	peak	
3		5150.000	14.19	37.88	52.07	74.00	-21.93	peak	
4		5150.000	14.19	37.88	52.07	74.00	-21.93	peak	
5	*	5233.800	76.94	37.63	114.57	68.30	46.27	peak	No limit
6	X	5233.800	69.93	37.63	107.56	68.30	39.26	AVG	No limit

REMARKS:

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

Orthogonal Axis	X
Test Mode	UNII-1_TX AX (HE40) Mode 5230 MHz



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	10458.81	51.44	1.78	53.22	68.30	-15.08	peak	

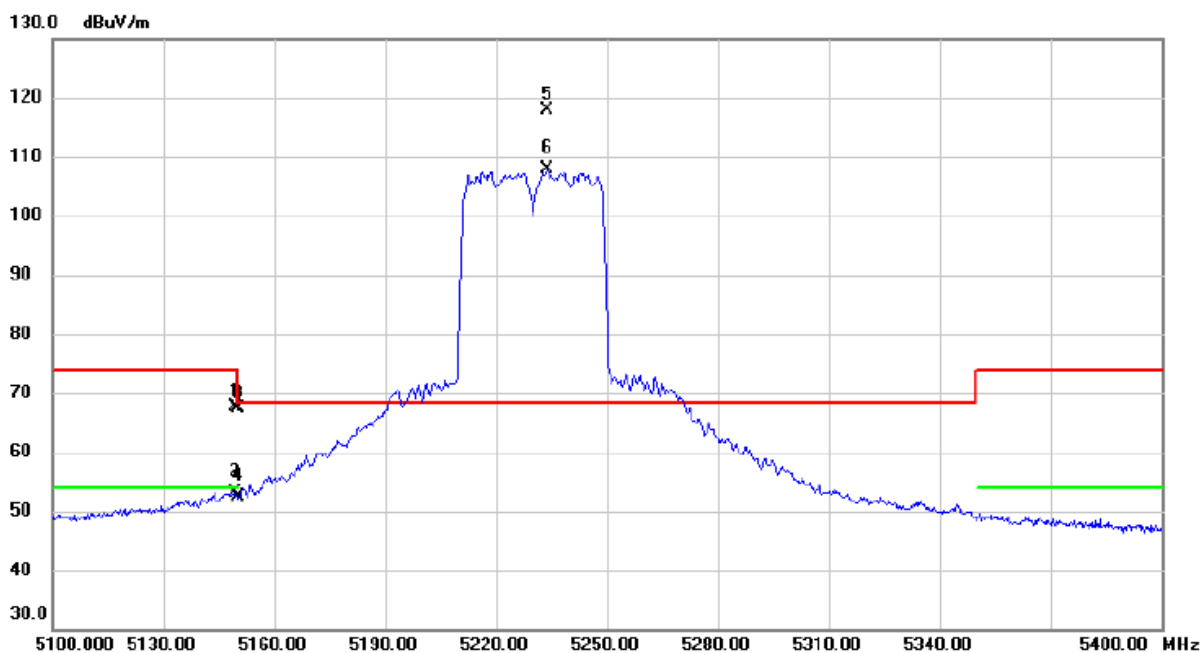
REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

Orthogonal Axis	X
Test Mode	UNII-1_TX AX (HE40) Mode 5230 MHz

Horizontal

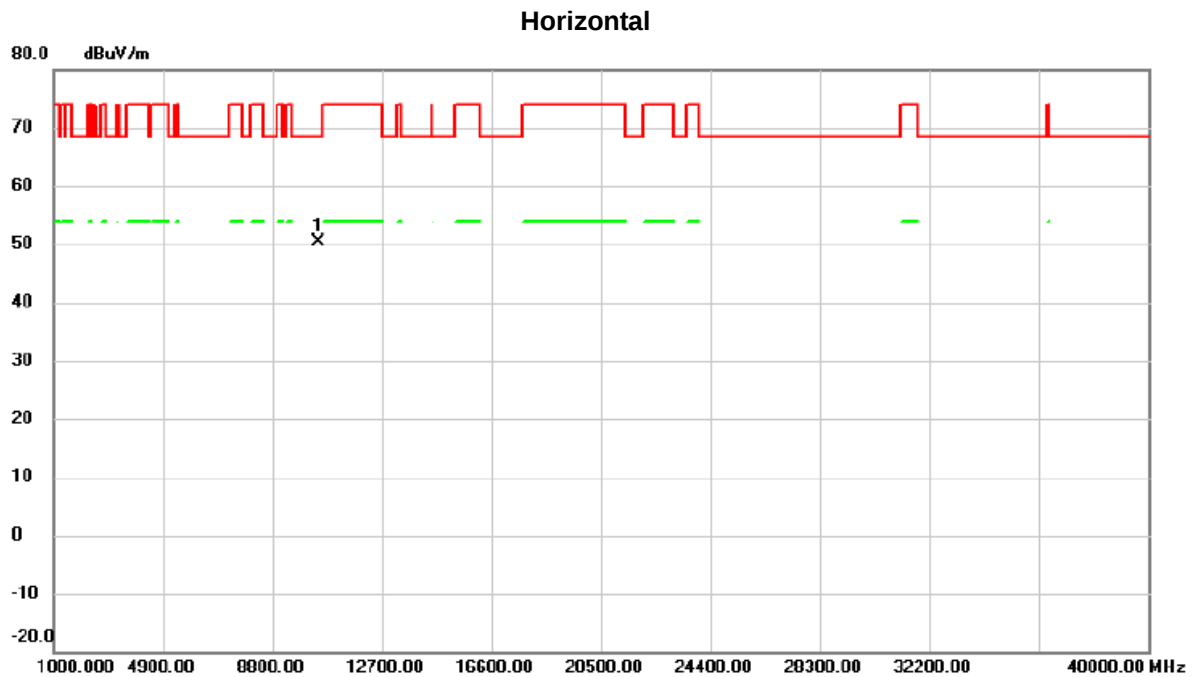


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		5149.500	29.79	37.88	67.67	74.00	-6.33	peak	
2		5149.500	15.24	37.88	53.12	54.00	-0.88	AVG	
3		5150.000	29.57	37.88	67.45	74.00	-6.55	peak	
4		5150.000	14.53	37.88	52.41	54.00	-1.59	AVG	
5	*	5233.800	80.28	37.63	117.91	68.30	49.61	peak	No limit
6	X	5233.800	70.23	37.63	107.86	68.30	39.56	AVG	No limit

REMARKS:

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

Orthogonal Axis	X
Test Mode	UNII-1_TX AX (HE40) Mode 5230 MHz



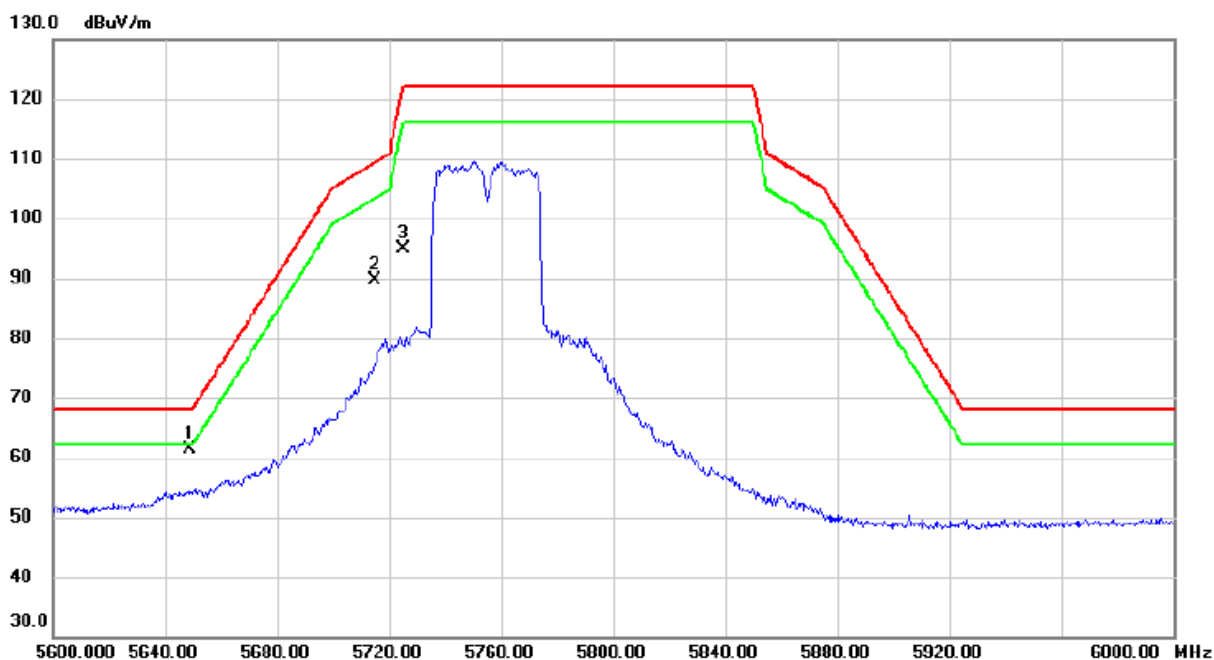
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	10459.58	48.52	1.78	50.30	68.30	-18.00	peak	

REMARKS:

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

Orthogonal Axis	X
Test Mode	UNII-3_TX AX (HE40) Mode 5755 MHz

Vertical



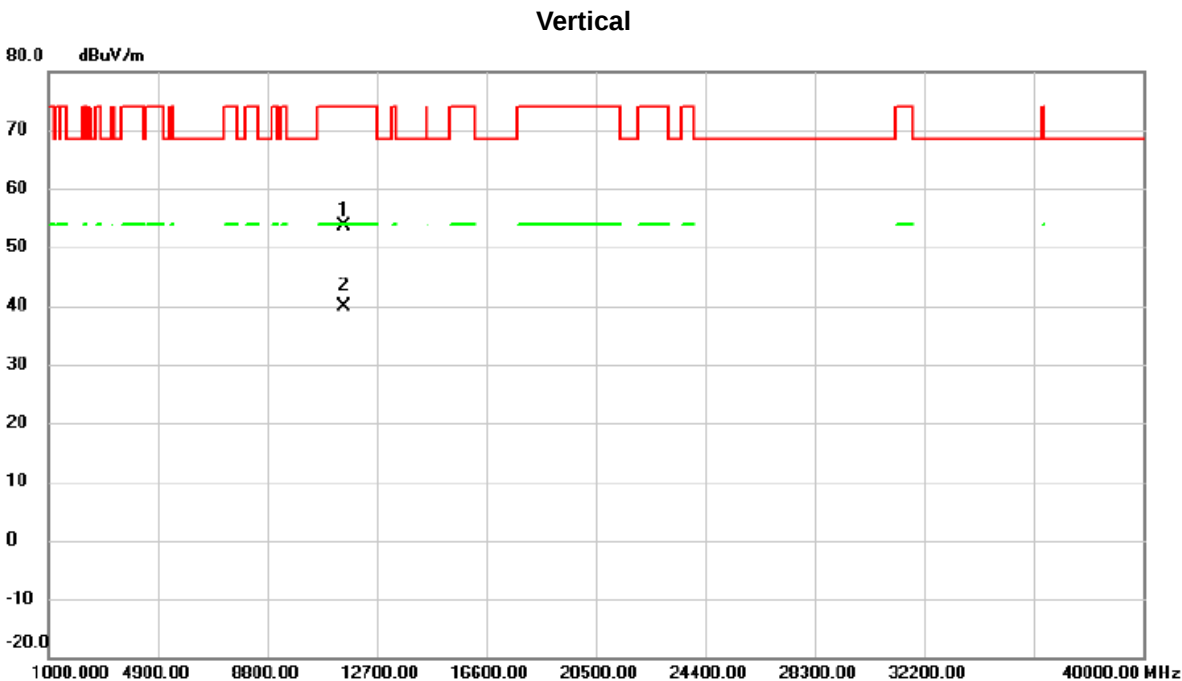
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	*	5649.000	23.05	38.37	61.42	68.20	-6.78	peak	
2		5715.000	51.10	38.46	89.56	109.40	-19.84	peak	
3		5725.000	56.31	38.50	94.81	122.20	-27.39	peak	

REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

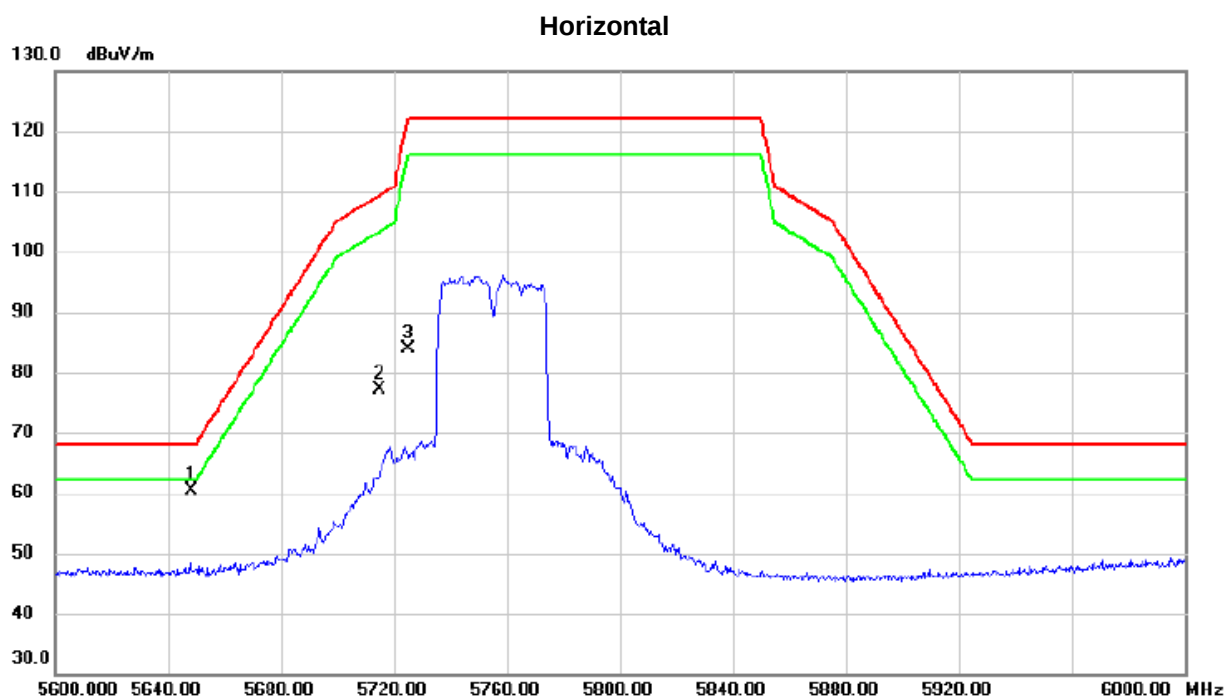
Orthogonal Axis	X
Test Mode	UNII-3_TX AX (HE40) Mode 5755 MHz



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		11508.09	51.42	2.22	53.64	74.00	-20.36	peak	
2	*	11508.75	37.59	2.22	39.81	54.00	-14.19	AVG	

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

Orthogonal Axis	X
Test Mode	UNII-3_TX AX (HE40) Mode 5755 MHz



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	5648.200	21.98	38.37	60.35	68.20	-7.85	peak	
2		5715.000	38.57	38.46	77.03	109.40	-32.37	peak	
3		5725.000	45.50	38.50	84.00	122.20	-38.20	peak	

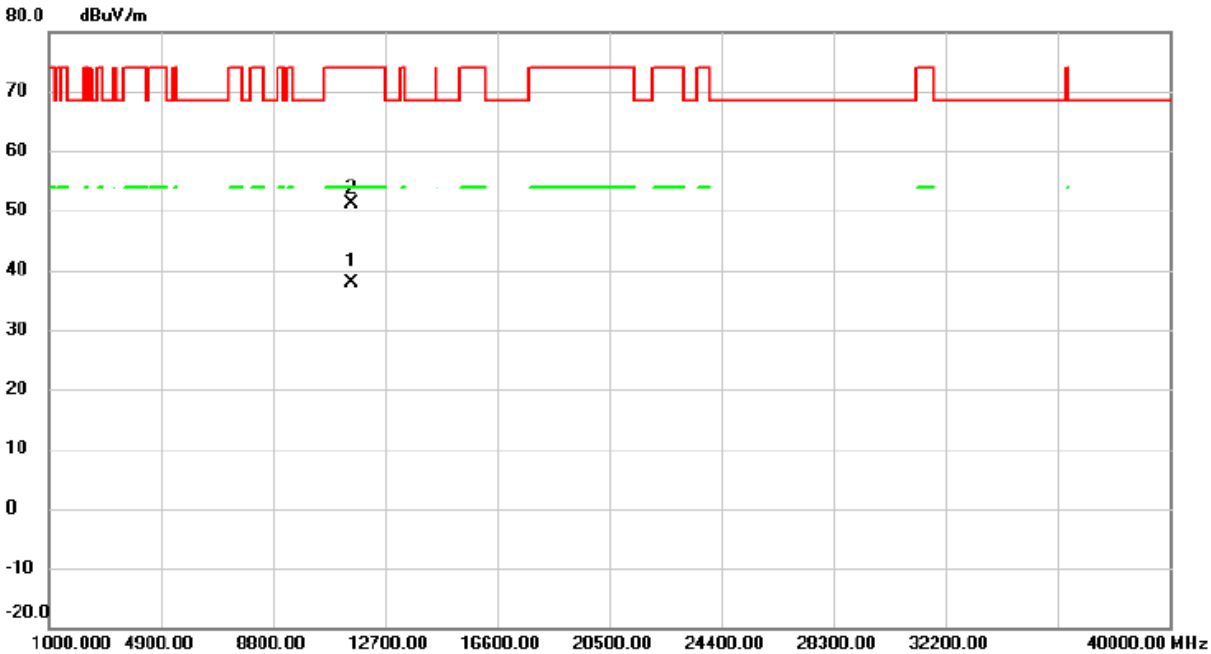
REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

Orthogonal Axis	X
Test Mode	UNII-3_TX AX (HE40) Mode 5755 MHz

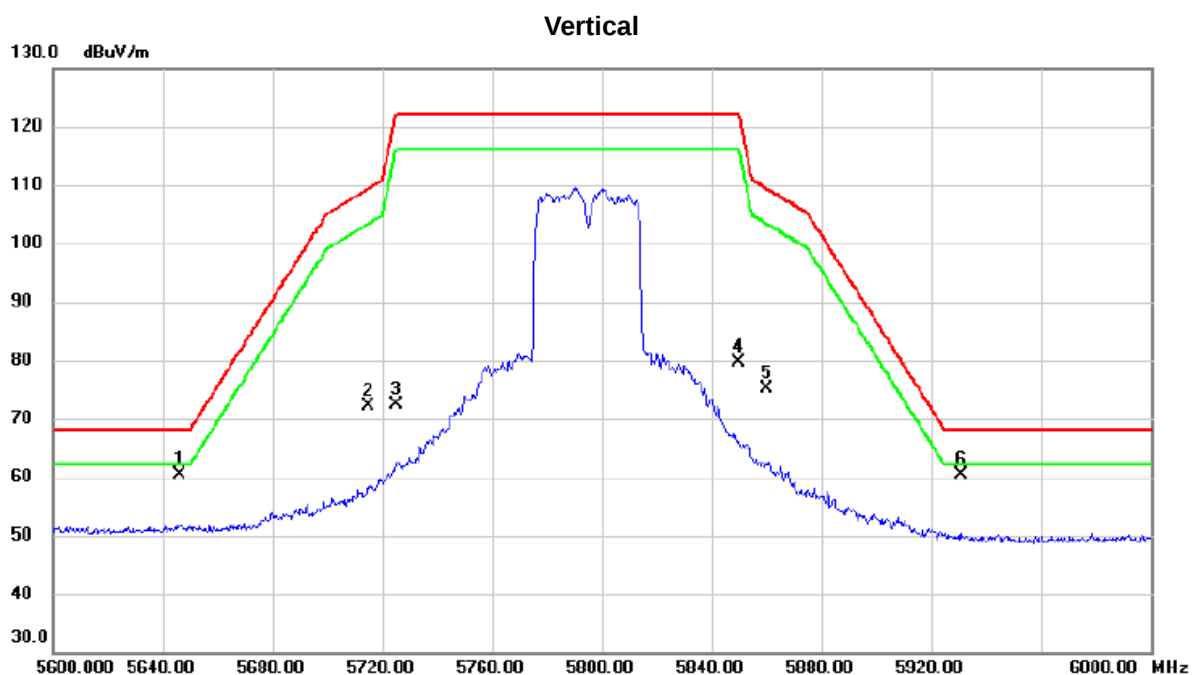
Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	*	11508.14	35.56	2.22	37.78	54.00	-16.22	AVG	
2		11510.65	48.97	2.23	51.20	74.00	-22.80	peak	

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

Orthogonal Axis	X
Test Mode	UNII-3_TX AX (HE40) Mode 5795 MHz



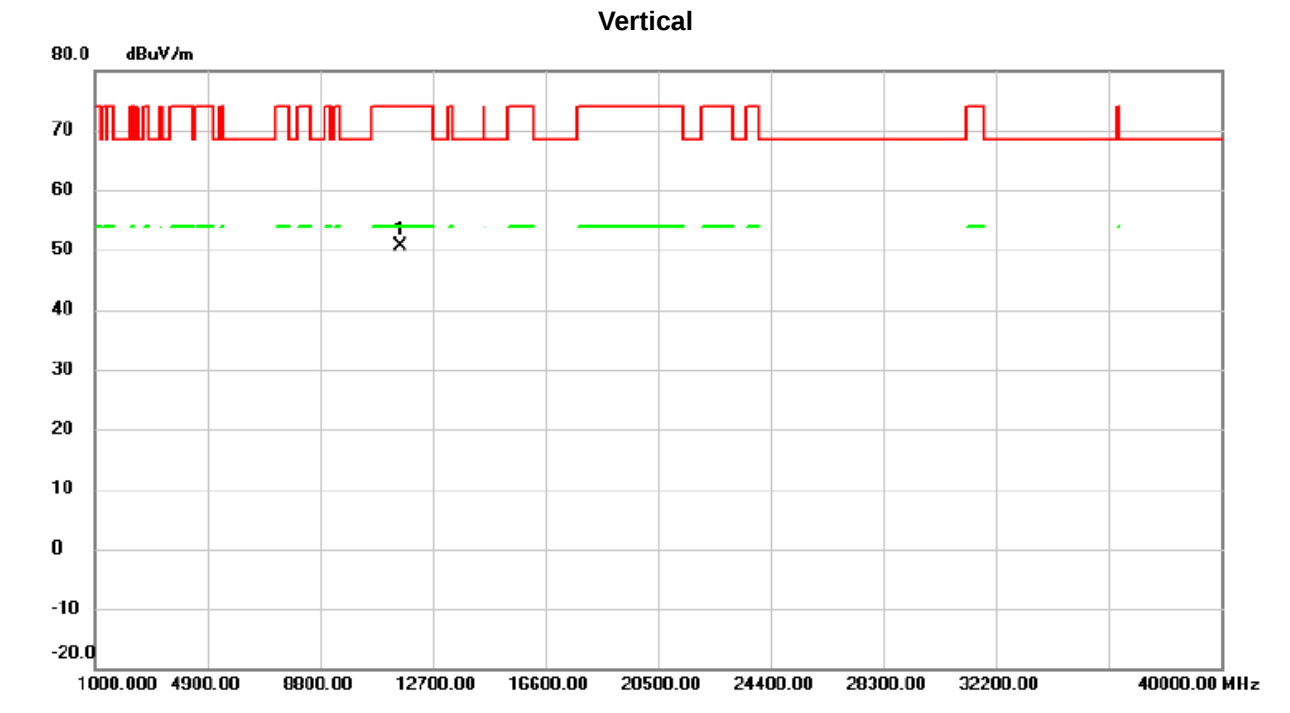
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	*	5646.000	22.07	38.37	60.44	68.20	-7.76	peak	
2		5715.000	33.79	38.46	72.25	109.40	-37.15	peak	
3		5725.000	33.85	38.50	72.35	122.20	-49.85	peak	
4		5850.000	40.77	38.91	79.68	122.20	-42.52	peak	
5		5860.000	36.23	38.95	75.18	109.40	-34.22	peak	
6		5931.000	21.33	39.11	60.44	68.20	-7.76	peak	

REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

Orthogonal Axis	X
Test Mode	UNII-3_TX AX (HE40) Mode 5795 MHz



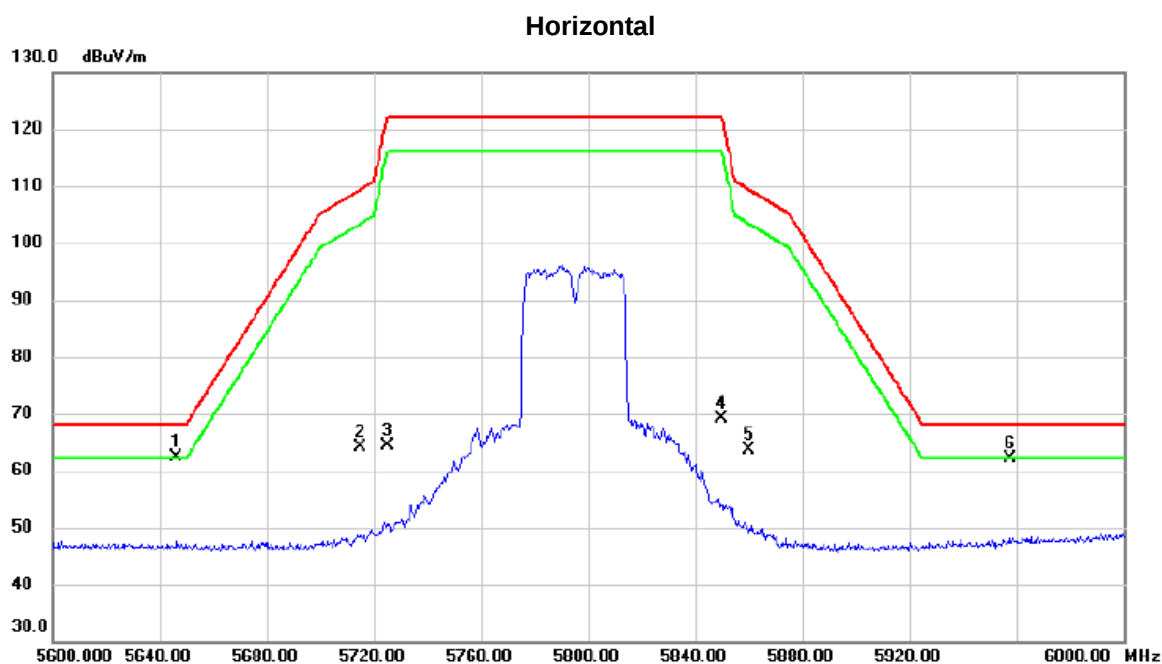
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	11588.21	48.23	2.28	50.51	74.00	-23.49	peak	

REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

Orthogonal Axis	X
Test Mode	UNII-3_TX AX (HE40) Mode 5795 MHz



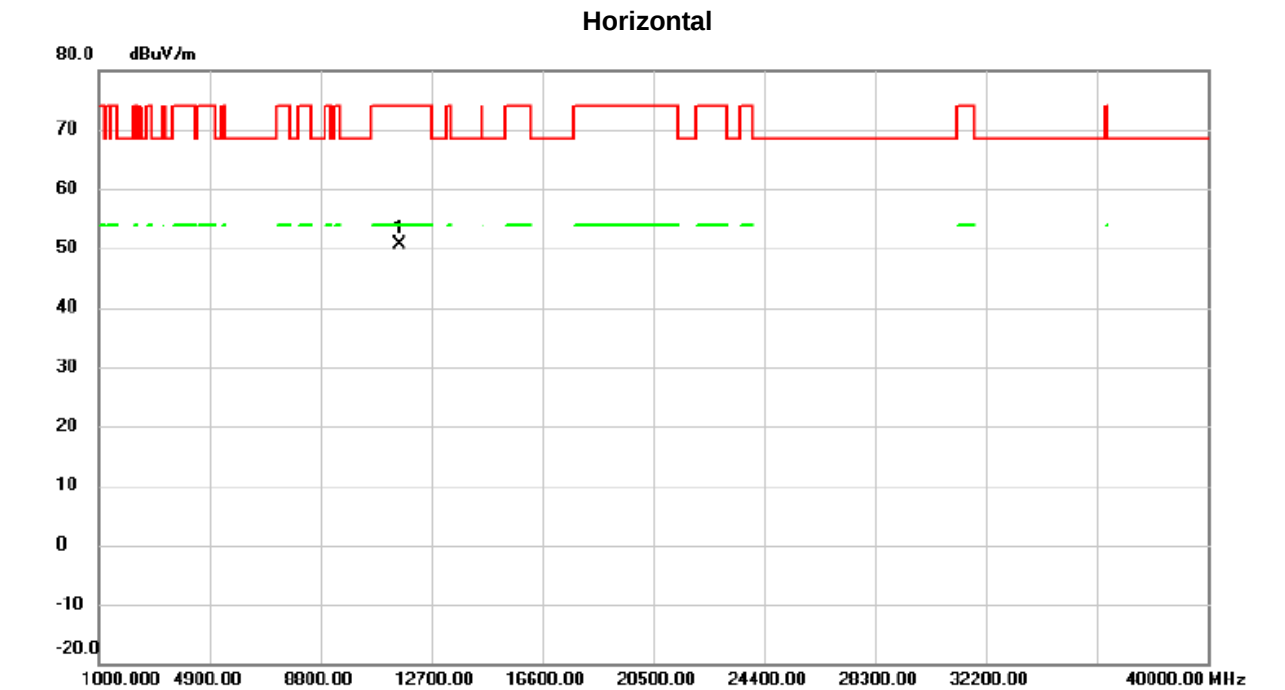
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	*	5646.400	24.02	38.37	62.39	68.20	-5.81	peak	
2		5715.000	25.68	38.46	64.14	109.40	-45.26	peak	
3		5725.000	25.78	38.50	64.28	122.20	-57.92	peak	
4		5850.000	30.16	38.91	69.07	122.20	-53.13	peak	
5		5860.000	24.59	38.95	63.54	109.40	-45.86	peak	
6		5957.400	23.01	39.16	62.17	68.20	-6.03	peak	

REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

Orthogonal Axis	X
Test Mode	UNII-3_TX AX (HE40) Mode 5795 MHz



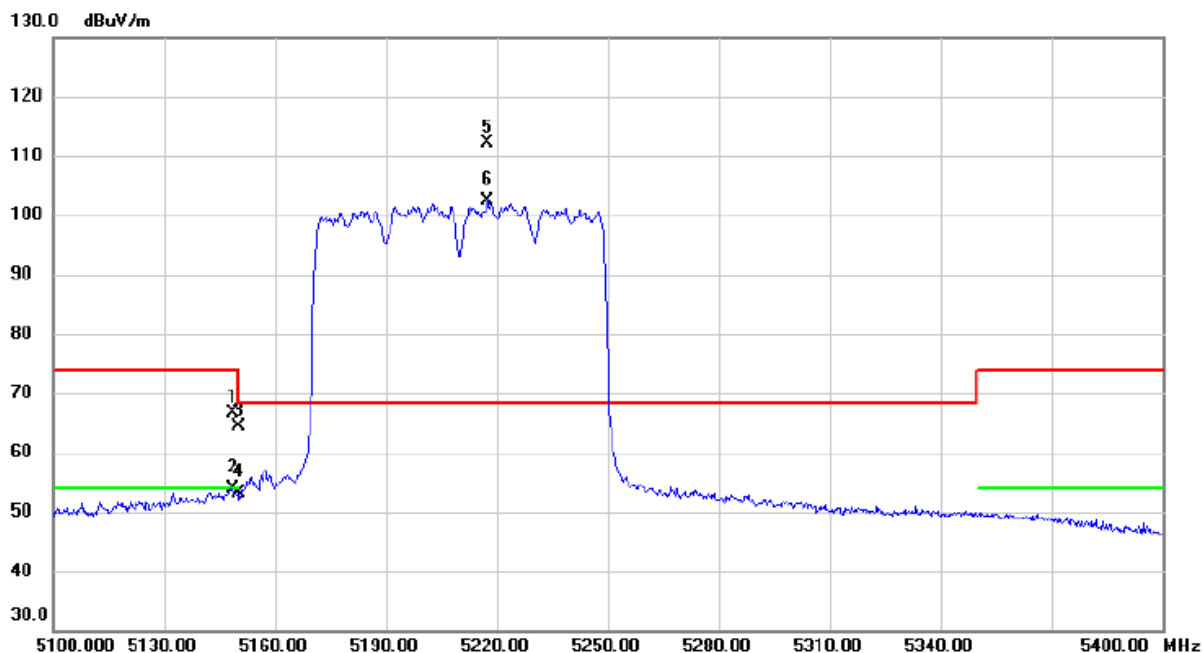
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	11588.76	48.45	2.28	50.73	74.00	-23.27	peak	

REMARKS:

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

Orthogonal Axis	X
Test Mode	UNII-1_TX AX (HE80) Mode 5210 MHz

Vertical



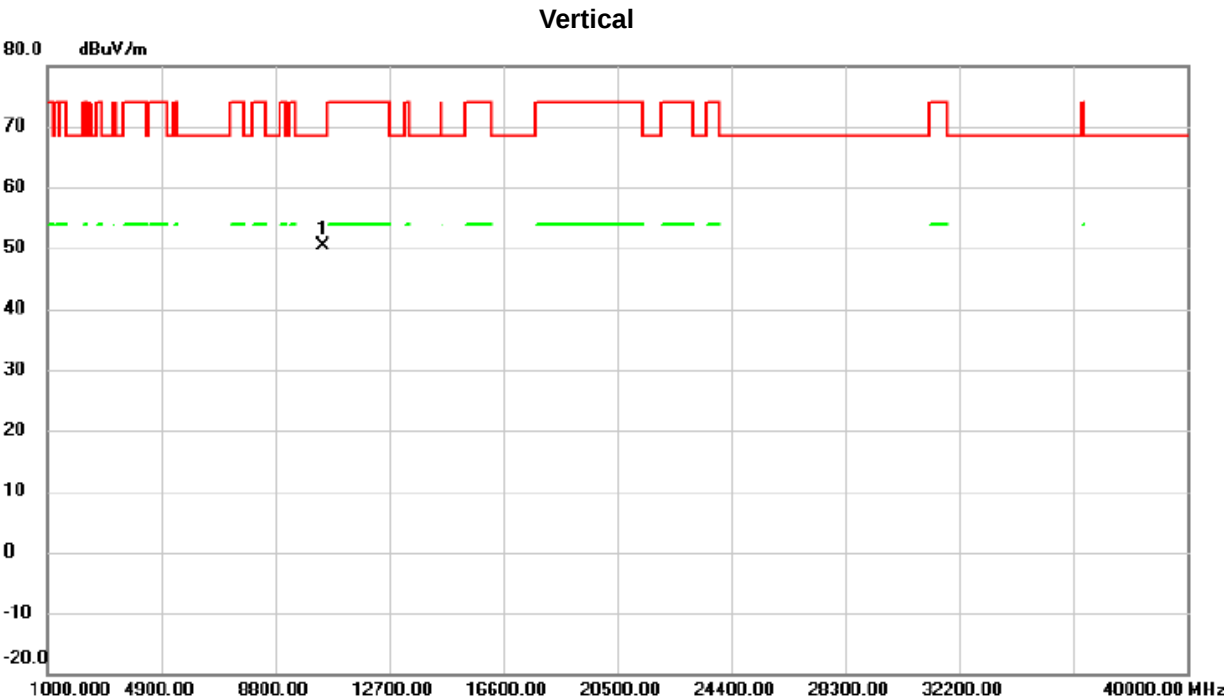
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		5148.600	28.65	37.88	66.53	74.00	-7.47	peak	
2		5148.600	15.97	37.88	53.85	54.00	-0.15	AVG	
3		5150.000	26.57	37.88	64.45	74.00	-9.55	peak	
4		5150.000	15.14	37.88	53.02	54.00	-0.98	AVG	
5	*	5217.450	74.57	37.66	112.23	68.30	43.93	peak	No limit
6	X	5217.450	64.79	37.66	102.45	68.30	34.15	AVG	No limit

REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

Orthogonal Axis	X
Test Mode	UNII-1_TX AX (HE80) Mode 5210 MHz



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	10418.86	48.65	1.73	50.38	68.30	-17.92	peak	

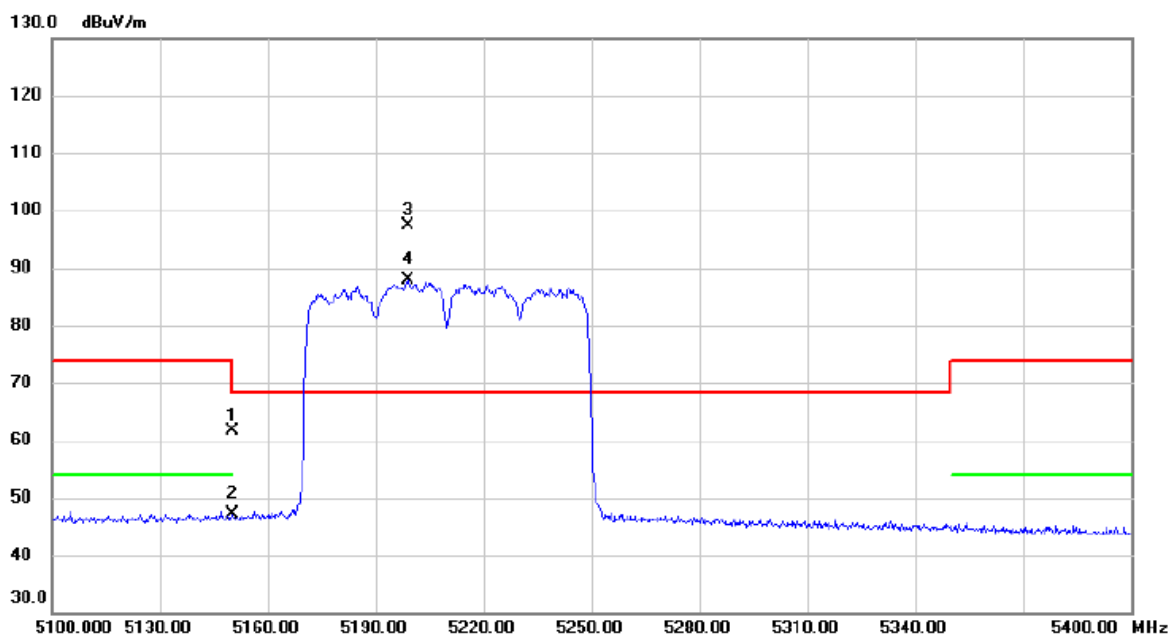
REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

Orthogonal Axis	X
Test Mode	UNII-1_TX AX (HE80) Mode 5210 MHz

Horizontal



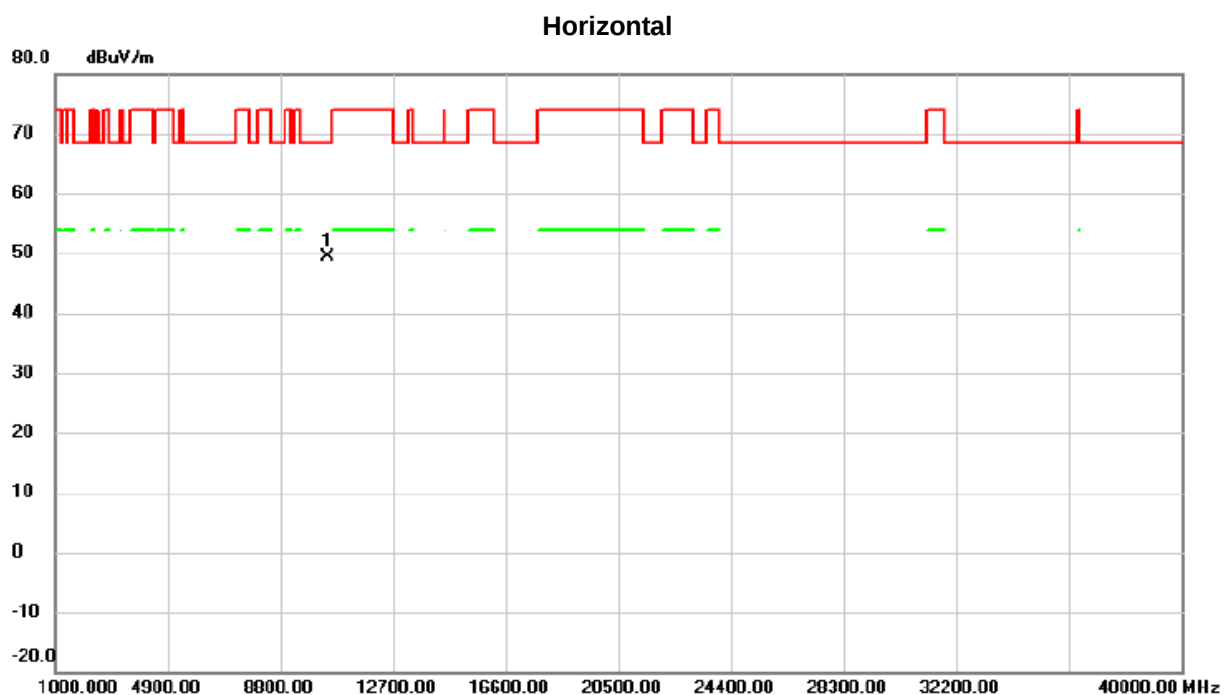
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		5150.000	23.79	37.88	61.67	74.00	-12.33	peak	
2		5150.000	9.26	37.88	47.14	54.00	-6.86	AVG	
3	*	5198.850	59.61	37.68	97.29	68.30	28.99	peak	No limit
4	X	5198.850	50.14	37.68	87.82	68.30	19.52	AVG	No limit

REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

Orthogonal Axis	X
Test Mode	UNII-1_TX AX (HE80) Mode 5210 MHz



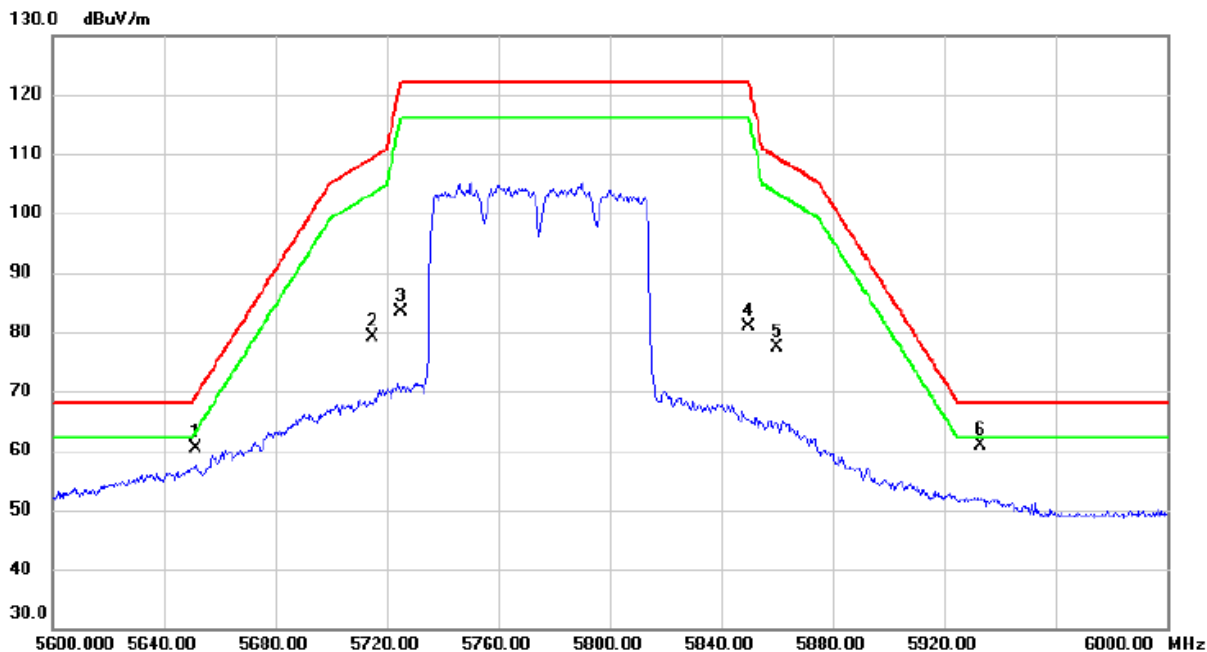
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	*	10417.51	47.68	1.73	49.41	68.30	-18.89	peak	

REMARKS:

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

Orthogonal Axis	X
Test Mode	UNII-3_TX AX (HE80) Mode 5775 MHz

Vertical

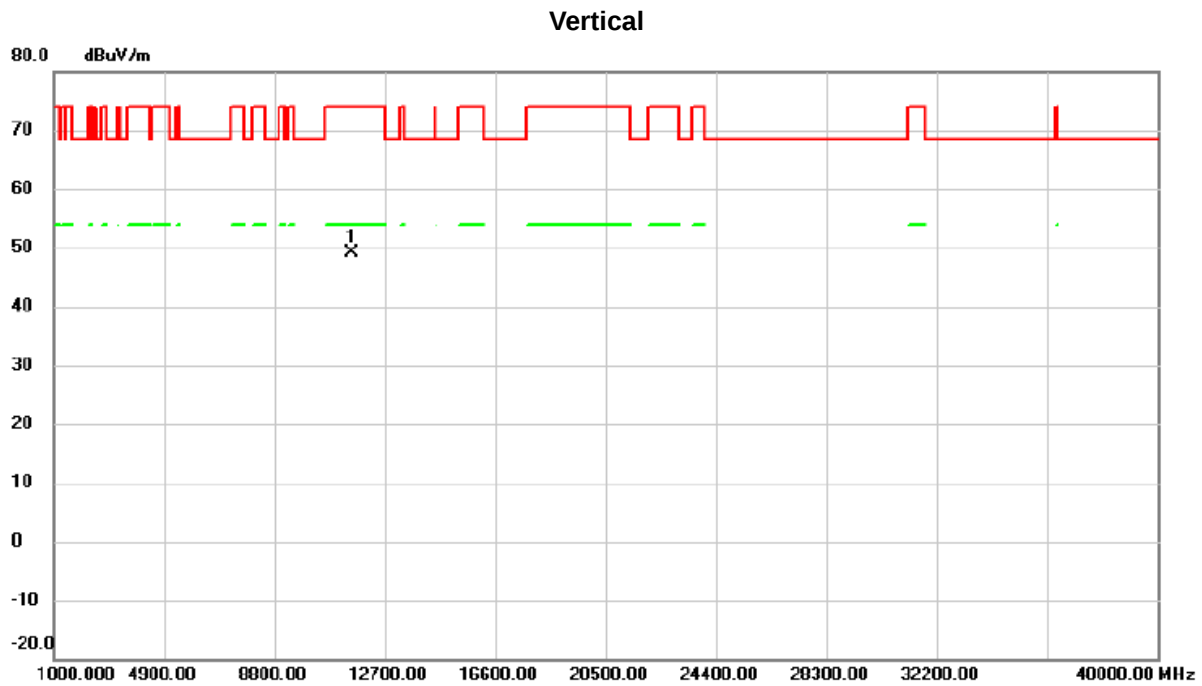


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		5651.400	22.06	38.37	60.43	69.24	-8.81	peak	
2		5715.000	40.74	38.46	79.20	109.40	-30.20	peak	
3		5725.000	44.79	38.50	83.29	122.20	-38.91	peak	
4		5850.000	41.89	38.91	80.80	122.20	-41.40	peak	
5		5860.000	38.34	38.95	77.29	109.40	-32.11	peak	
6	*	5932.800	21.73	39.12	60.85	68.20	-7.35	peak	

REMARKS:

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

Orthogonal Axis	X
Test Mode	UNII-3_TX AX (HE80) Mode 5775 MHz



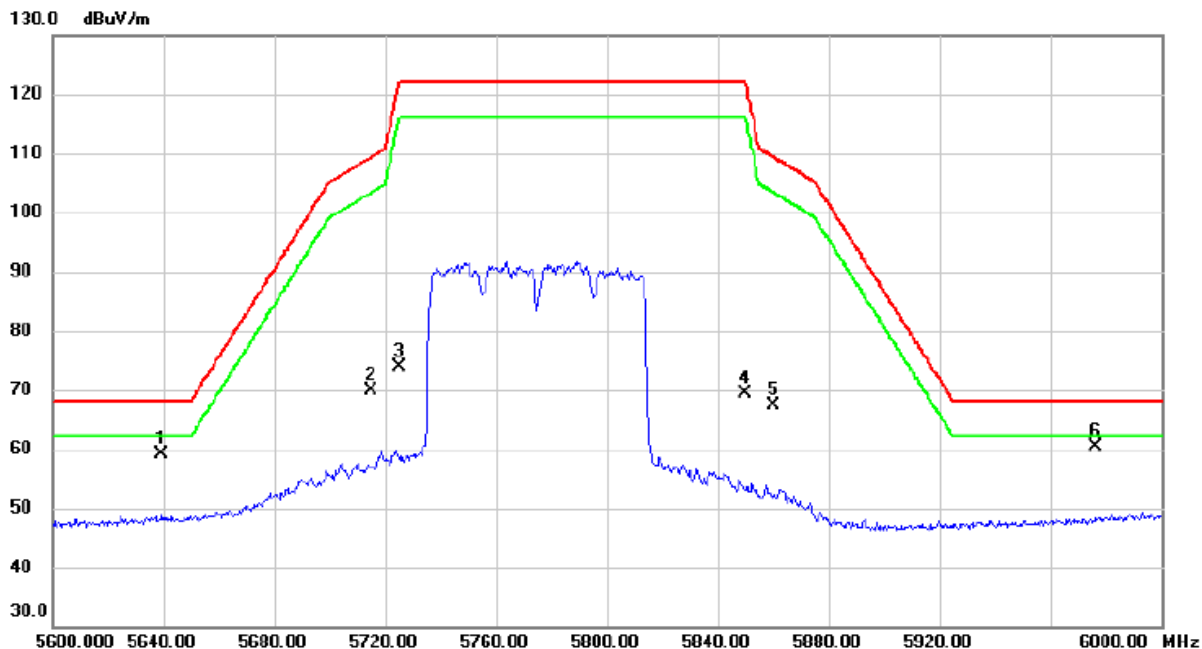
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1	*	11545.67	46.84	2.25	49.09	74.00	-24.91	peak	

REMARKS:

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

Orthogonal Axis	X
Test Mode	UNII-3_TX AX (HE80) Mode 5775 MHz

Horizontal



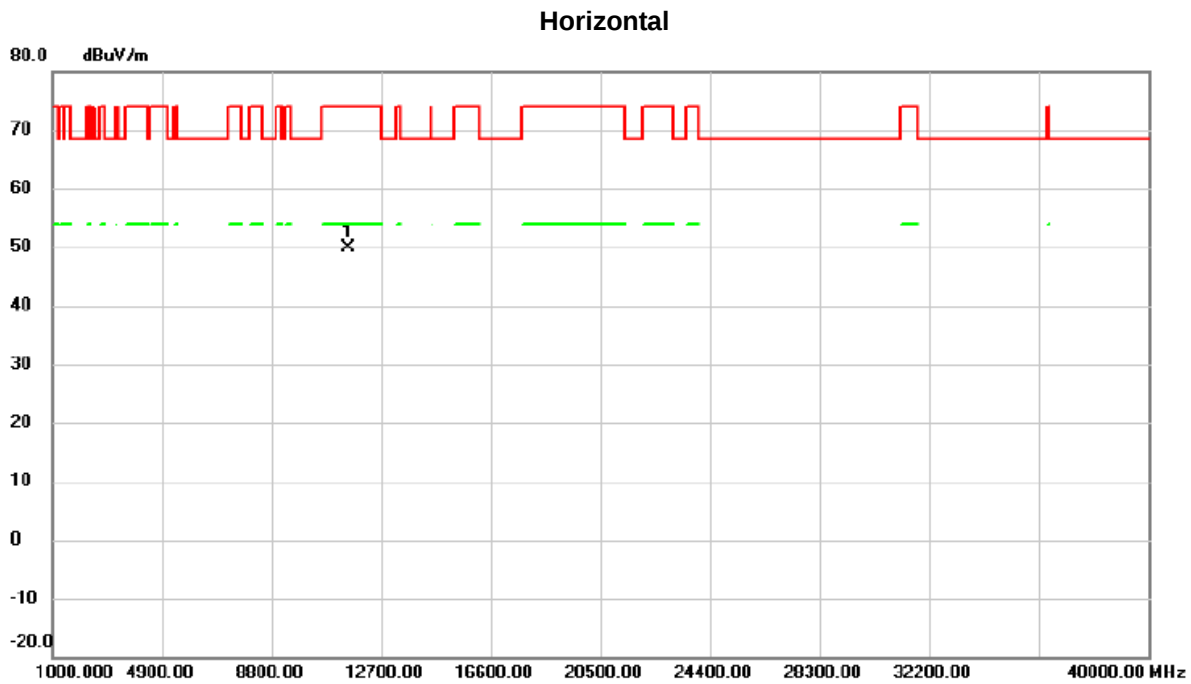
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		5639.200	20.84	38.37	59.21	68.20	-8.99	peak	
2		5715.000	31.36	38.46	69.82	109.40	-39.58	peak	
3		5725.000	35.44	38.50	73.94	122.20	-48.26	peak	
4		5850.000	30.40	38.91	69.31	122.20	-52.89	peak	
5		5860.000	28.51	38.95	67.46	109.40	-41.94	peak	
6	*	5976.400	21.07	39.20	60.27	68.20	-7.93	peak	

REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

Orthogonal Axis	X
Test Mode	UNII-3_TX AX (HE80) Mode 5775 MHz



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	*	11547.56	47.69	2.25	49.94	74.00	-24.06	peak	

REMARKS:

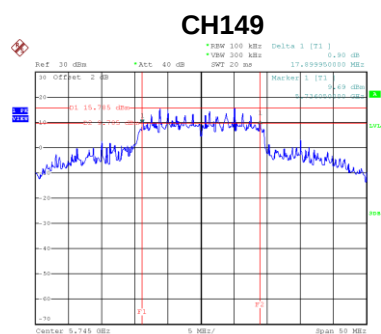
(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

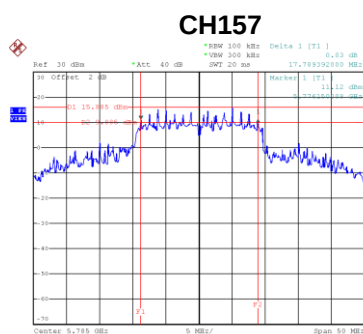
APPENDIX D - BANDWIDTH

Test Mode	UNII-3_TX AX (HE20) Mode
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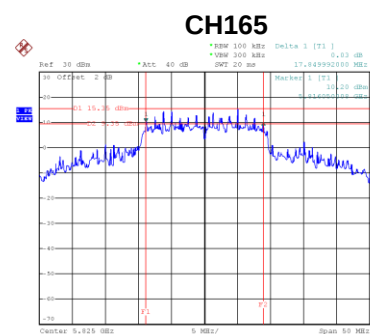
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Emission Bandwidth (MHz)
149	5745	17.90	40.90
157	5785	17.79	39.50
165	5825	17.85	41.00



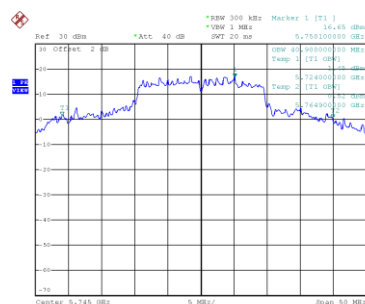
Date: 23.JUL.2020 15:38:17



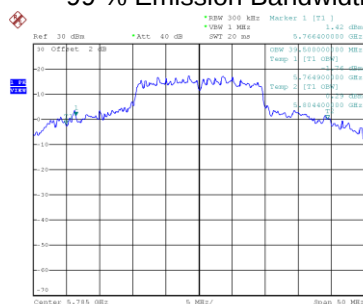
Date: 23.JUL.2020 15:48:16



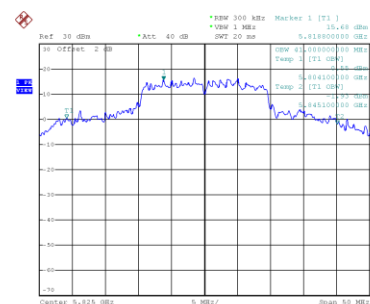
Date: 23.JUL.2020 15:57:21



Date: 23.JUL.2020 15:37:44



Date: 23.JUL.2020 15:47:44

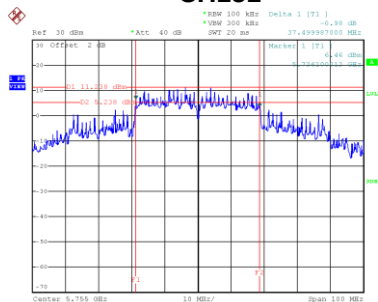


Date: 23.JUL.2020 15:56:48

Test Mode	UNII-3_TX AX (HE40) Mode
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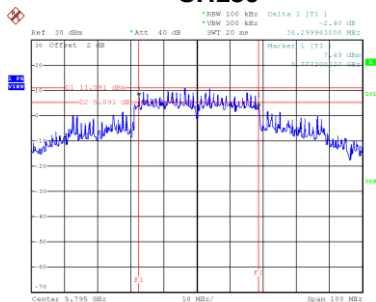
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Emission Bandwidth (MHz)
151	5755	37.50	82.60
159	5795	36.30	82.20

CH151



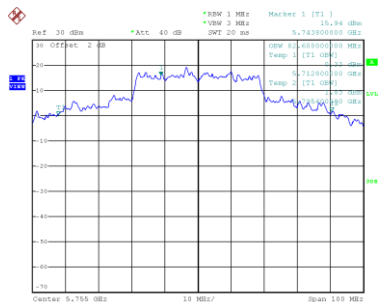
Date: 23.JUL.2020 16:12:48

CH159

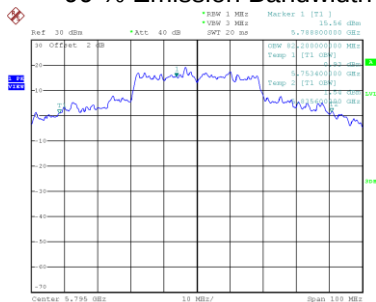


Date: 23.JUL.2020 16:14:50

99 % Emission Bandwidth



Date: 23.JUL.2020 16:12:03

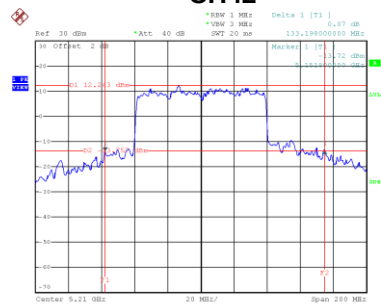


Date: 23.JUL.2020 16:13:57

Test Mode	UNII-1_TX AX (HE80) Mode
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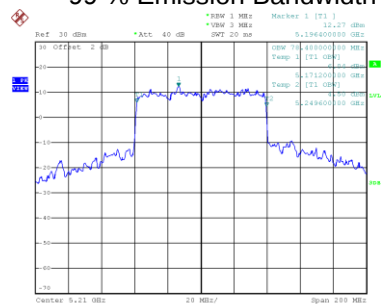
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99 % Emission Bandwidth (MHz)
42	5210	133.20	78.40

CH42



Date: 23.JUL.2020 16:20:08

99 % Emission Bandwidth



Date: 23.JUL.2020 16:19:42

APPENDIX E - CONDUCTED OUTPUT POWER

CDD

Test Mode	UNII-1_TX AX (HE20) Mode_Ant. 1
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Channel	Frequency (MHz)	Conducted Output Power (dBm)	Duty Factor	Conducted Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
36	5180	17.80	0.79	18.59	30.00	1.00	Complies
40	5200	21.94	0.79	22.73	30.00	1.00	Complies
48	5240	23.97	0.79	24.76	30.00	1.00	Complies

Test Mode	UNII-1_TX AX (HE20) Mode_Ant. 2
-----------	---------------------------------

Channel	Frequency (MHz)	Conducted Output Power (dBm)	Duty Factor	Conducted Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
36	5180	17.25	0.79	18.04	30.00	1.00	Complies
40	5200	21.08	0.79	21.87	30.00	1.00	Complies
48	5240	22.78	0.79	23.57	30.00	1.00	Complies

Test Mode	UNII-1_TX AX (HE20) Mode_Total
-----------	--------------------------------

Channel	Frequency (MHz)	Conducted Output Power (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
36	5180	21.34	30.00	1.00	Complies
40	5200	25.33	30.00	1.00	Complies
48	5240	27.22	30.00	1.00	Complies

Test Mode	UNII-1_TX AX (HE40) Mode_Ant. 1
-----------	---------------------------------

Channel	Frequency (MHz)	Conducted Output Power (dBm)	Duty Factor	Conducted Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
38	5190	16.62	1.11	17.73	30.00	1.00	Complies
46	5230	19.24	1.11	20.35	30.00	1.00	Complies

Test Mode	UNII-1_TX AX (HE40) Mode_Ant. 2
-----------	---------------------------------

Channel	Frequency (MHz)	Conducted Output Power (dBm)	Duty Factor	Conducted Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
38	5190	15.32	1.11	16.43	30.00	1.00	Complies
46	5230	19.50	1.11	20.61	30.00	1.00	Complies

Test Mode	UNII-1_TX AX (HE40) Mode_Total
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Channel	Frequency (MHz)	Conducted Output Power (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
38	5190	20.14	30.00	1.00	Complies
46	5230	23.49	30.00	1.00	Complies

Test Mode	UNII-1_TX AX (HE80) Mode_Ant. 1
-----------	---------------------------------

Channel	Frequency (MHz)	Conducted Output Power (dBm)	Duty Factor	Conducted Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
42	5210	16.37	1.25	17.62	30.00	1.00	Complies

Test Mode	UNII-1_TX AX (HE80) Mode_Ant. 2
-----------	---------------------------------

Channel	Frequency (MHz)	Conducted Output Power (dBm)	Duty Factor	Conducted Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
42	5210	15.43	1.25	16.68	30.00	1.00	Complies

Test Mode	UNII-1_TX AX (HE80) Mode_Total
-----------	--------------------------------

Channel	Frequency (MHz)	Conducted Output Power (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
42	5210	20.19	30.00	1.00	Complies

Test Mode	UNII-3_TX AX (HE20) Mode_Ant. 1
-----------	---------------------------------

Channel	Frequency (MHz)	Conducted Output Power (dBm)	Duty Factor	Conducted Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
149	5745	23.60	0.79	24.39	30.00	1.00	Complies
157	5785	23.56	0.79	24.35	30.00	1.00	Complies
165	5825	23.56	0.79	24.35	30.00	1.00	Complies

Test Mode	UNII-3_TX AX (HE20) Mode_Ant. 2
-----------	---------------------------------

Channel	Frequency (MHz)	Conducted Output Power (dBm)	Duty Factor	Conducted Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
149	5745	23.33	0.79	24.12	30.00	1.00	Complies
157	5785	23.30	0.79	24.09	30.00	1.00	Complies
165	5825	23.29	0.79	24.08	30.00	1.00	Complies

Test Mode	UNII-3_TX AX (HE20) Mode_Total
-----------	--------------------------------

Channel	Frequency (MHz)	Conducted Output Power (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
149	5745	27.27	30.00	1.00	Complies
157	5785	27.24	30.00	1.00	Complies
165	5825	27.23	30.00	1.00	Complies

Test Mode	UNII-3_TX AX (HE40) Mode_Ant. 1
-----------	---------------------------------

Channel	Frequency (MHz)	Conducted Output Power (dBm)	Duty Factor	Conducted Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
151	5755	19.49	1.11	20.60	30.00	1.00	Complies
159	5795	21.08	1.11	22.19	30.00	1.00	Complies

Test Mode	UNII-3_TX AX (HE40) Mode_Ant. 2
-----------	---------------------------------

Channel	Frequency (MHz)	Conducted Output Power (dBm)	Duty Factor	Conducted Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
151	5755	20.80	1.11	21.91	30.00	1.00	Complies
159	5795	20.82	1.11	21.93	30.00	1.00	Complies

Test Mode	UNII-3_TX AX (HE40) Mode_Total
-----------	--------------------------------

Channel	Frequency (MHz)	Conducted Output Power (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
151	5755	24.32	30.00	1.00	Complies
159	5795	25.07	30.00	1.00	Complies

Test Mode	UNII-3_TX AX (HE80) Mode_Ant. 1
-----------	---------------------------------

Channel	Frequency (MHz)	Conducted Output Power (dBm)	Duty Factor	Conducted Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
155	5775	19.97	1.25	21.22	30.00	1.00	Complies

Test Mode	UNII-3_TX AX (HE80) Mode_Ant. 2
-----------	---------------------------------

Channel	Frequency (MHz)	Conducted Output Power (dBm)	Duty Factor	Conducted Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
155	5775	19.66	1.25	20.91	30.00	1.00	Complies

Test Mode	UNII-3_TX AX (HE80) Mode_Total
-----------	--------------------------------

Channel	Frequency (MHz)	Conducted Output Power (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
155	5775	24.08	30.00	1.00	Complies

Beamforming

Test Mode	UNII-1_TX AX (HE20) Mode_Ant. 1
-----------	---------------------------------

Channel	Frequency (MHz)	Conducted Output Power (dBm)	Duty Factor	Conducted Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
36	5180	17.58	0.79	18.37	27.99	0.6295	Complies
40	5200	21.75	0.79	22.54	27.99	0.6295	Complies
48	5240	23.73	0.79	24.52	27.99	0.6295	Complies

Test Mode	UNII-1_TX AX (HE20) Mode_Ant. 2
-----------	---------------------------------

Channel	Frequency (MHz)	Conducted Output Power (dBm)	Duty Factor	Conducted Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
36	5180	17.07	0.79	17.86	27.99	0.6295	Complies
40	5200	20.98	0.79	21.77	27.99	0.6295	Complies
48	5240	22.65	0.79	23.44	27.99	0.6295	Complies

Test Mode	UNII-1_TX AX (HE20) Mode_Total
-----------	--------------------------------

Channel	Frequency (MHz)	Conducted Output Power (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
36	5180	21.13	27.99	0.6295	Complies
40	5200	25.18	27.99	0.6295	Complies
48	5240	27.03	27.99	0.6295	Complies

Test Mode	UNII-1_TX AX (HE40) Mode_Ant. 1
-----------	---------------------------------

Channel	Frequency (MHz)	Conducted Output Power (dBm)	Duty Factor	Conducted Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
38	5190	16.50	1.11	17.61	27.99	0.6295	Complies
46	5230	19.13	1.11	20.24	27.99	0.6295	Complies

Test Mode	UNII-1_TX AX (HE40) Mode_Ant. 2
-----------	---------------------------------

Channel	Frequency (MHz)	Conducted Output Power (dBm)	Duty Factor	Conducted Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
38	5190	15.10	1.11	16.21	27.99	0.6295	Complies
46	5230	19.39	1.11	20.50	27.99	0.6295	Complies

Test Mode	UNII-1_TX AX (HE40) Mode_Total
-----------	--------------------------------

Channel	Frequency (MHz)	Conducted Output Power (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
38	5190	19.98	27.99	0.6295	Complies
46	5230	23.38	27.99	0.6295	Complies

Test Mode	UNII-1_TX AX (HE80) Mode_Ant. 1
-----------	---------------------------------

Channel	Frequency (MHz)	Conducted Output Power (dBm)	Duty Factor	Conducted Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
42	5210	16.25	1.25	17.50	27.99	0.6295	Complies

Test Mode	UNII-1_TX AX (HE80) Mode_Ant. 2
-----------	---------------------------------

Channel	Frequency (MHz)	Conducted Output Power (dBm)	Duty Factor	Conducted Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
42	5210	15.16	1.25	16.41	27.99	0.6295	Complies

Test Mode	UNII-1_TX AX (HE80) Mode_Total
-----------	--------------------------------

Channel	Frequency (MHz)	Conducted Output Power (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
42	5210	20.00	27.99	0.6295	Complies

Test Mode	UNII-3_TX AX (HE20) Mode_Ant. 1
-----------	---------------------------------

Channel	Frequency (MHz)	Conducted Output Power (dBm)	Duty Factor	Conducted Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
149	5745	23.60	0.79	24.39	27.99	0.6295	Complies
157	5785	23.50	0.79	24.29	27.99	0.6295	Complies
165	5825	23.50	0.79	24.29	27.99	0.6295	Complies

Test Mode	UNII-3_TX AX (HE20) Mode_Ant. 2
-----------	---------------------------------

Channel	Frequency (MHz)	Conducted Output Power (dBm)	Duty Factor	Conducted Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
149	5745	23.24	0.79	24.03	27.99	0.6295	Complies
157	5785	23.26	0.79	24.05	27.99	0.6295	Complies
165	5825	23.11	0.79	23.90	27.99	0.6295	Complies

Test Mode	UNII-3_TX AX (HE20) Mode_Total
-----------	--------------------------------

Channel	Frequency (MHz)	Conducted Output Power (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
149	5745	27.23	27.99	0.6295	Complies
157	5785	27.19	27.99	0.6295	Complies
165	5825	27.11	27.99	0.6295	Complies

Test Mode	UNII-3_TX AX (HE40) Mode_Ant. 1
-----------	---------------------------------

Channel	Frequency (MHz)	Conducted Output Power (dBm)	Duty Factor	Conducted Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
151	5755	20.99	1.11	22.10	27.99	0.6295	Complies
159	5795	21.04	1.11	22.15	27.99	0.6295	Complies

Test Mode	UNII-3_TX AX (HE40) Mode_Ant. 2
-----------	---------------------------------

Channel	Frequency (MHz)	Conducted Output Power (dBm)	Duty Factor	Conducted Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
151	5755	20.77	1.11	21.88	27.99	0.6295	Complies
159	5795	20.65	1.11	21.76	27.99	0.6295	Complies

Test Mode	UNII-3_TX AX (HE40) Mode_Total
-----------	--------------------------------

Channel	Frequency (MHz)	Conducted Output Power (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
151	5755	25.00	27.99	0.6295	Complies
159	5795	24.97	27.99	0.6295	Complies

Test Mode	UNII-3_TX AX (HE80) Mode_Ant. 1
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Channel	Frequency (MHz)	Conducted Output Power (dBm)	Duty Factor	Conducted Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
155	5775	19.86	1.25	21.11	27.99	0.6295	Complies

Test Mode	UNII-3_TX AX (HE80) Mode_Ant. 2
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Channel	Frequency (MHz)	Conducted Output Power (dBm)	Duty Factor	Conducted Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
155	5775	19.62	1.25	20.87	27.99	0.6295	Complies

Test Mode	UNII-3_TX AX (HE80) Mode_Total
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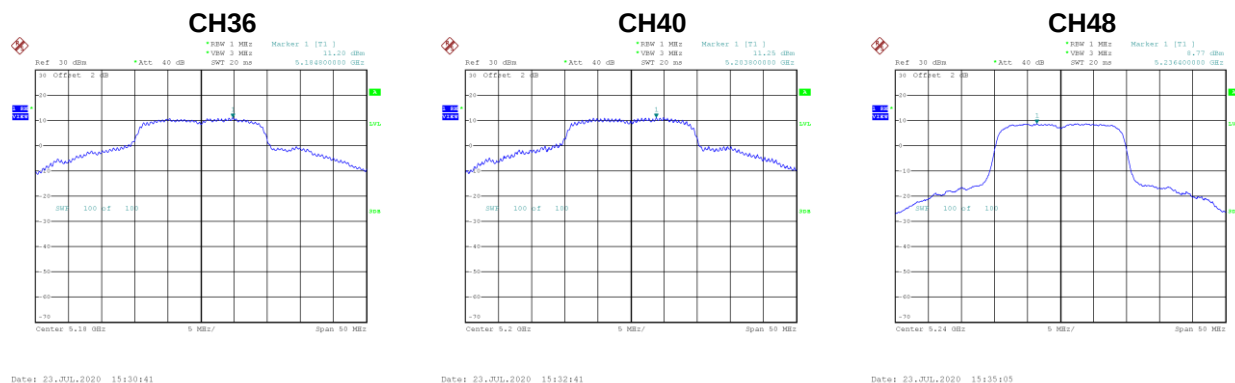
Channel	Frequency (MHz)	Conducted Output Power (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
155	5775	24.00	27.99	0.6295	Complies

APPENDIX F - POWER SPECTRAL DENSITY

CDD

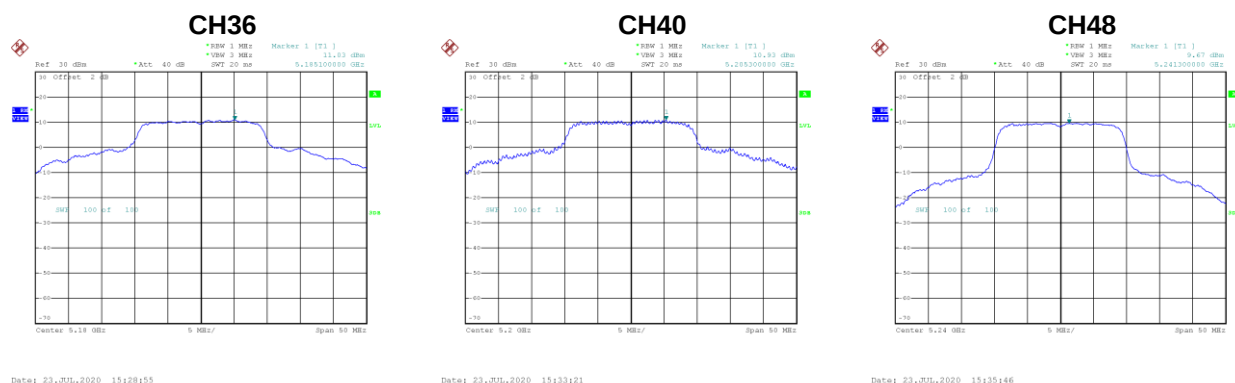
Test Mode	UNII-1_TX AX (HE20) Mode_Ant. 1
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Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Result
36	5180	11.20	0.79	11.99	14.99	Complies
40	5200	11.25	0.79	12.04	14.99	Complies
48	5240	8.77	0.79	9.56	14.99	Complies



Test Mode	UNII-1_TX AX (HE20) Mode_Ant. 2
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Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Result
36	5180	11.03	0.79	11.82	14.99	Complies
40	5200	10.93	0.79	11.72	14.99	Complies
48	5240	9.67	0.79	10.46	14.99	Complies



Test Mode	UNII-1_TX AX (HE20) Mode_Total
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Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
36	5180	14.92	14.99	Complies
40	5200	14.89	14.99	Complies
48	5240	13.04	14.99	Complies

Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Result
38	5190	5.65	1.11	6.76	14.99	Complies
46	5230	3.90	1.11	5.01	14.99	Complies



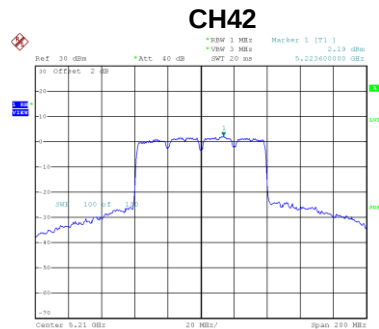
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Result
38	5190	6.01	1.11	7.12	14.99	Complies
46	5230	4.99	1.11	6.10	14.99	Complies



Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
38	5190	9.95	14.99	Complies
46	5230	8.60	14.99	Complies

Test Mode	UNII-1_TX AX (HE80) Mode_Ant. 1
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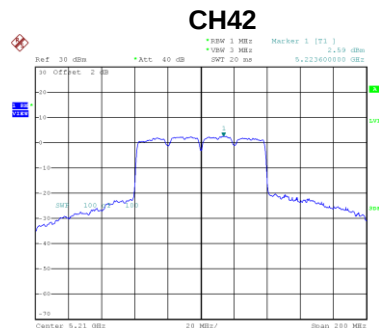
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Result
42	5210	2.19	1.25	3.44	14.99	Complies



Date: 23.JUL.2020 16:20:27

Test Mode	UNII-1_TX AX (HE80) Mode_Ant. 2
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Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Result
42	5210	2.59	1.25	3.84	14.99	Complies



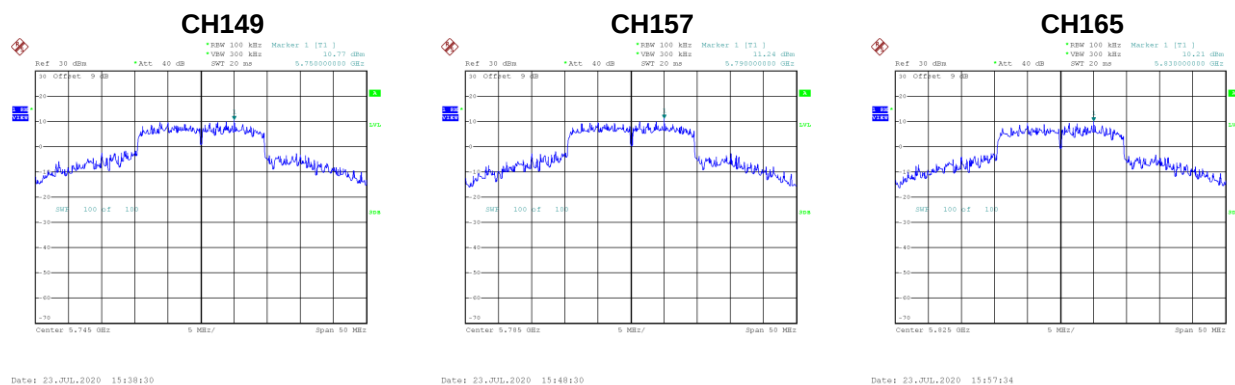
Date: 23.JUL.2020 16:21:21

Test Mode	UNII-1_TX AX (HE80) Mode_Total
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Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
42	5210	6.65	14.99	Complies

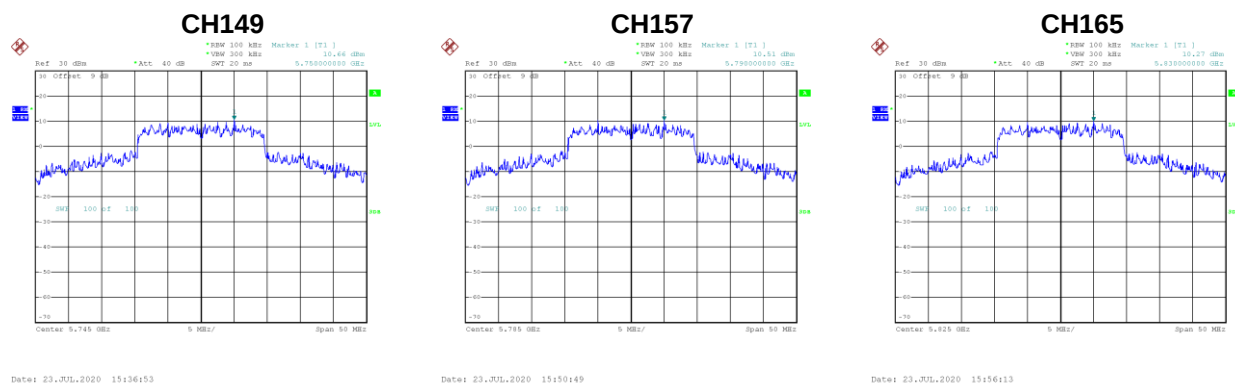
Test Mode	UNII-3_TX AX (HE20) Mode_Ant. 1
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Channel	Frequency (MHz)	Power Spectral Density (dBm/500 kHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/500 kHz)	Max. Limit (dBm/500 kHz)	Result
149	5745	10.77	0.79	11.56	27.99	Complies
157	5785	11.24	0.79	12.03	27.99	Complies
165	5825	10.21	0.79	11.00	27.99	Complies



Test Mode	UNII-3_TX AX (HE20) Mode_Ant. 2
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Channel	Frequency (MHz)	Power Spectral Density (dBm/500 kHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/500 kHz)	Max. Limit (dBm/500 kHz)	Result
149	5745	10.66	0.79	11.45	27.99	Complies
157	5785	10.51	0.79	11.30	27.99	Complies
165	5825	10.27	0.79	11.06	27.99	Complies

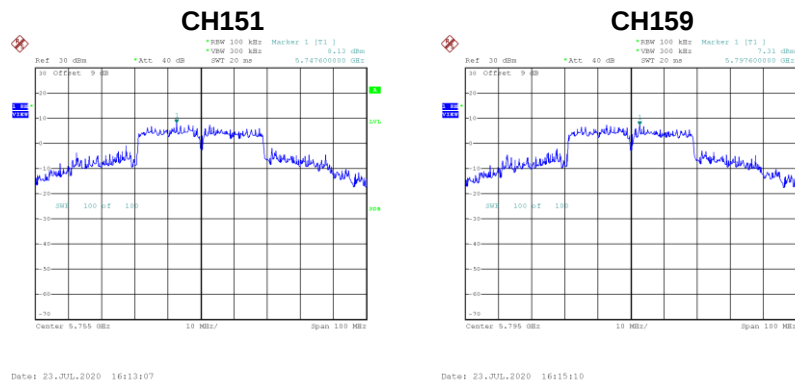


Test Mode	UNII-3_TX AX (HE20) Mode_Total
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Channel	Frequency (MHz)	Power Spectral Density (dBm/500 kHz)	Max. Limit (dBm/500 kHz)	Result
149	5745	14.52	27.99	Complies
157	5785	14.69	27.99	Complies
165	5825	14.04	27.99	Complies

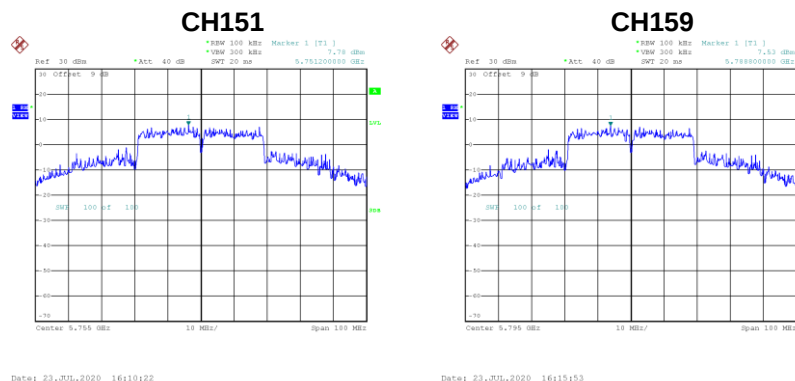
Test Mode	UNII-3_TX AX (HE40) Mode_Ant. 1
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Channel	Frequency (MHz)	Power Spectral Density (dBm/500 kHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/500 kHz)	Max. Limit (dBm/500 kHz)	Result
151	5755	8.13	1.11	9.24	27.99	Complies
159	5795	7.31	1.11	8.42	27.99	Complies



Test Mode	UNII-3_TX AX (HE40) Mode_Ant. 2
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Channel	Frequency (MHz)	Power Spectral Density (dBm/500 kHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/500 kHz)	Max. Limit (dBm/500 kHz)	Result
151	5755	7.78	1.11	8.89	27.99	Complies
159	5795	7.53	1.11	8.64	27.99	Complies

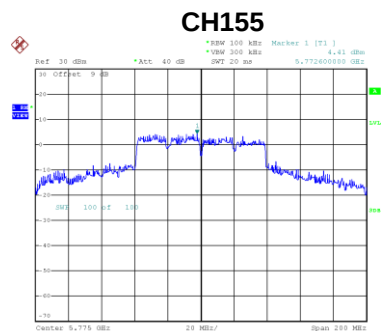


Test Mode	UNII-3_TX AX (HE40) Mode_Total
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Channel	Frequency (MHz)	Power Spectral Density (dBm/500 kHz)	Max. Limit (dBm/500 kHz)	Result
151	5755	12.08	27.99	Complies
159	5795	11.54	27.99	Complies

Test Mode	UNII-3_TX AX (HE80) Mode_Ant. 1
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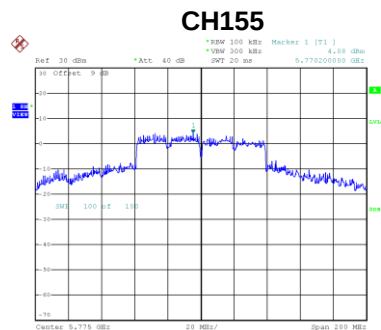
Channel	Frequency (MHz)	Power Spectral Density (dBm/500 kHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/500 kHz)	Max. Limit (dBm/500 kHz)	Result
155	5775	4.41	1.25	5.66	27.99	Complies



Date: 23.JUL.2020 16:23:37

Test Mode	UNII-3_TX AX (HE80) Mode_Ant. 2
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Channel	Frequency (MHz)	Power Spectral Density (dBm/500 kHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/500 kHz)	Max. Limit (dBm/500 kHz)	Result
155	5775	4.08	1.25	5.33	27.99	Complies



Date: 23.JUL.2020 16:22:05

Test Mode	UNII-3_TX AX (HE80) Mode_Total
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Channel	Frequency (MHz)	Power Spectral Density (dBm/500 kHz)	Max. Limit (dBm/MHz)	Result
155	5775	8.51	27.99	Complies

End of Test Report