FCC Radio Test Report

FCC ID: T58N4R

This report concerns: Original Grant

Project No.	:	1809T061
Equipment	:	AC1200 Wireless Daul Band Router
Test Model	:	N4
Series Model	:	N4D
Applicant	:	Netis systems Co., Ltd.
Address	:	Building 6, IC Park, Baolong 4th Road, Baolong Street, Longgang District, Shenzhen, China, 518116

Date of Receipt	:	Sep. 18, 2018
Date of Test	:	Sep. 18, 2018 ~ Oct. 29, 2018
Issued Date	:	Dec. 21, 2018
Tested by	:	BTL Inc.

Testing Engineer : Kenji Lin
(Kenji Lin)

Technical Manager :
(James Chiu)

Authorized Signatory :
(Andy Chiu)

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Testing Laboratory
0659

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** shall have no liability for any declarations, inferences or generalizations drawn by the client or others from **BTL** issued reports.

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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, so it is manufacturer's responsibility to ensure that the apparatus meets the essential requirements 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.

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REPORT ISSUED HISTORY

Report Version	Description	Issued Date
R00	Original Issue	Oct. 31, 2018
R01	Revised report to address TCB's comments.	Dec. 21, 2018

1 CERTIFICATION

Equipment	:	AC1200 Wireless Daul Band Router
Brand Name	:	netis
Test Model	:	N4
Series Model	:	N4D
Applicant	:	Netis systems Co., Ltd.
Manufacturer	:	Shenzhen Netcore Industrial Ltd.
Address	:	Building 6, Baolong Plant, Able Technology Park, No.2 of Baolong 4th Road, Baolong Steet, Baolong Community, Longgang District, Shenzhen, China
Date of Test	:	Sep. 18, 2018 ~ Oct. 29, 2018
Test Sample	:	Engineering Sample
Standard(s)	:	FCC Part15, Subpart E (§15.407) ANSI C63.10-2013

The above equipment has been tested and found in compliance with the requirement of the relative standards by BTL Inc.
The test data, data evaluation, and equipment configuration contained in our test report (Ref No. BTL-FCCP-2-1809T061) were obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of TAF according to the ISO-17025 quality assessment standard and technical standard(s).

Test results included in this report is only for the RLAN 5GHz part.

2 SUMMARY OF TEST RESULTS

Test procedures according to the technical standards.

FCC Part15, Subpart E (§15.407)				
FCC Clause No	**Description**	**Test Result**	**Judgement**	**Remark**
§15.207 §15.407(b)	AC Power Line Conducted Emissions	APPENDIX A	Pass	------
§15.205 §15.209 §15.407(b)	Radiated Emissions	APPENDIX B APPENDIX C APPENDIX D	Pass	------
§15.407(a)	Bandwidth	APPENDIX E	Pass	------
§15.407(a)	Peak 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 Requirement	------	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.

2.1 TEST FACILITY

The test facilities used to collect the test data in this report:

CB05: (FCC RN:674415; FCC DN:TW0659)
No. 68-1, Ln. 169, Sec. 2, Datong Rd., Xizhi Dist., New Taipei City 221, Taiwan (R.O.C.)

CB15: (VCCI RN: R-20020; FCC RN:674415; FCC DN:TW0659; ISED Assigned Code:20088-5)
No. 68-1, Ln. 169, Sec. 2, Datong Rd., Xizhi Dist., New Taipei City 221, Taiwan (R.O.C.)

2.2 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. The BTL measurement uncertainty is less than the CISPR 16-4-2 U_{cispr} requirement.

The reported uncertainty of measurement y ± U, where expanded uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95 %.

A. AC power line conducted emissions test:

Test Site	Method	Measurement Frequency Range	Ant. H / V	U (dB)
C05	CISPR	150 kHz ~ 30MHz	2.68	C05

B. Radiated emissions below 1 GHz test:

Test Site	Method	Measurement Frequency Range	Ant. H / V	U (dB)
CB15 (3m)	CISPR	30 MHz ~ 200 MHz	V	4.20
		30 MHz ~ 200 MHz	H	3.64
		200 MHz ~ 1,000 MHz	V	4.56
		200 MHz ~ 1,000 MHz	H	3.90

C. Radiated emissions above 1 GHz test:

Test Site	Method	Measurement Frequency Range	Ant. H / V	U (dB)
CB15 (3m)	CISPR	1 GHz ~ 6 GHz	V	4.46
		1 GHz ~ 6 GHz	H	4.40
		6 GHz ~18 GHz	V	3.88
		6 GHz ~18 GHz	H	4.00

Test Site	Method	Measurement Frequency Range	U (dB)
CB15 (1m)	CISPR	18 GHz ~ 26.5 GHz	4.62
		26.5 GHz ~ 40 GHz	5.12

D. Conducted tests:

Item	Method	U
Bandwidth	ANSI	3.8 %
Output Power	ANSI	0.95 dB
Power Spectral Density	ANSI	0.86 dB
Conducted Spurious Emissions	ANSI	2.71 dB

NOTE:
Unless specifically mentioned, the uncertainty of measurement has not been taken into account to declare the compliance or non-compliance to the specification.
Our calculated Measurement Instrumentation Uncertainty is shown in the tables above. These are our U_{lab} values in CISPR 16-4-2 terminology.
Since Table 1 of CISPR 16-4-2 has values of measurement instrumentation uncertainty, called U_{CISPR}, as follows:

Conducted Disturbance (mains port) – 150 kHz – 30 MHz : 3.6 dB
Radiated Disturbance (electric field strength on an open area test site or alternative test site) – 30 MHz – 1000 MHz : 5.2 dB

3 GENERAL INFORMATION

3.1 DESCRIPTION OF EUT

Equipment	AC1200 Wireless Daul Band Router
Brand Name	netis
Test Model	N4
Series Model	N4D
Model Difference	Different model distribute to different area.
Power Source	DC Voltage supplied from AC/DC adapter.
Power Rating	I/P: AC 100-240V~50/60Hz, 0.3A O/P: DC 12V⎓05A
Frequency Range	UNII-1: 5150 MHz to 5250 MHz UNII-3: 5725 MHz to 5850 MHz
Operation Frequency	UNII-1: 5180 MHz to 5240 MHz UNII-3: 5745 MHz to 5825 MHz
Modulation Type	OFDM
Bit Rate of Transmitter	up to 866 Mbps
Maximum Output Power for UNII-1	IEEE 802.11a: 19.98 dBm (0.0996 W) IEEE 802.11n (HT20): 19.67 dBm (0.0927 W) IEEE 802.11n (HT40): 20.59 dBm (0.1146 W) IEEE 802.11ac (VHT20): 19.76 dBm (0.0946 W) IEEE 802.11ac (VHT40): 20.61 dBm (0.1152 W) IEEE 802.11ac (VHT80): 14.35 dBm (0.0272 W)
Maximum Output Power for UNII-3	IEEE 802.11a: 18.13 dBm (0.0650 W) IEEE 802.11n (HT20): 18.05 dBm (0.0638 W) IEEE 802.11n (HT40): 18.81 dBm (0.0760 W) IEEE 802.11ac (VHT20): 18.17 dBm (0.0656 W) IEEE 802.11ac (VHT40): 19.05 dBm (0.0803 W) IEEE 802.11ac (VHT80): 18.35 dBm (0.0684 W)
Products Covered	3 * Adapter: (1) AMIGO / AMS195-1200500FB (2) AMIGO / AMS195-1200500FU (3) AMIGO / AMS195-1200500FV

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

(2) Channel List:

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

UNII-3					
IEEE 802.11a IEEE 802.11n (HT20) IEEE 802.11ac (VHT20)		IEEE 802.11n (HT40) IEEE 802.11ac (VHT40)		IEEE 802.11ac (VHT80)	
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) Table for Filed Antenna:

UNII-1:

Ant.	Brand	Model	Type	Connector	Gain (dBi)
1	RF Link	RF21C03631A	Dipole	IPEX	3
2	RF Link	RF21C03631A	Dipole	IPEX	3

UNII-3:

Ant.	Brand	Model	Type	Connector	Gain (dBi)
1	RF Link	RF21C03631A	Dipole	IPEX	3
2	RF Link	RF21C03631A	Dipole	IPEX	3

NOTE:

(a) The EUT incorporates a MIMO function. Physically, the EUT provides two completed transmitters and receivers (2T2R). 2.4 GHz and 5GHz can't transmit simultaneously.

(b) For Power Spectral Density(CDD mode):
Directional Gain = 10log $[(10^{G1/20} + 10^{G2/20} + \ldots + 10^{Gn/20})^2/N_{ANT}]$ = 6.01 dBi.
For UNII-1:
The Direction gain exceeds 6 dBi, so the reduced power spectral density limits = Limit - (Directional Gain - 6 dBi) = 17 - (6.01 - 6) = 16.99 dBm/MHz.
. For UNII-3:
The Direction gain exceeds 6 dBi, so the reduced power spectral density limits = Limit - (Directional Gain - 6 dBi) = 30 - (6.01 - 6) = 29.99 dBm/MHz.

(c) For Conducted Output Power (CDD mode)
For UNII-1:
For $N_{ANT} = 2 < 5$,
Direction gain = $G_{ANT} + 0 = 3 + 0 = 3$ dBi.
The Direction gain is less than 6 dBi, so conducted power limits will not be reduced.
For UNII-3:
For $N_{ANT} = 2 < 5$,
Direction gain = $G_{ANT} + 0 = 3 + 0 = 3$ dBi.
The Direction gain is less than 6 dBi, so conducted power limits will not be reduced.

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)

3.2 TEST MODES

The test system was pre-tested based on the consideration of all possible combinations of EUT operation 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	
Test Mode	Description
4	UNII-1_TX AC (VHT80) MODE CHANNEL 42
6	UNII-3_TX AC (VHT20) MODE CHANNEL 149

Radiated emissions test	
Test Mode	Description
1	UNII-1_TX A MODE CHANNEL 36/40/48
2	UNII-1_TX AC (VHT20) MODE CHANNEL 36/40/48
3	UNII-1_TX AC (VHT40) MODE CHANNEL 38/46
4	UNII-1_TX AC (VHT80) MODE CHANNEL 42
5	UNII-3_TX A MODE CHANNEL 149/157/165
6	UNII-3_TX AC (VHT20) MODE CHANNEL 36/40/48
7	UNII-3_TX AC (VHT40) MODE CHANNEL 38/46
8	UNII-3_TX AC (VHT80) MODE CHANNEL 155

Conducted test	
Test Mode	Description
1	UNII-1_TX A MODE CHANNEL 36/40/48
2	UNII-1_TX AC (VHT20) MODE CHANNEL 36/40/48
3	UNII-1_TX AC (VHT40) MODE CHANNEL 38/46
4	UNII-1_TX AC (VHT80) MODE CHANNEL 42
5	UNII-3_TX A MODE CHANNEL 149/157/165
6	UNII-3_TX AC (VHT20) MODE CHANNEL 36/40/48
7	UNII-3_TX AC (VHT40) MODE CHANNEL 38/46
8	UNII-3_TX AC (VHT80) MODE CHANNEL 155

NOTE:
(1) The measurements are performed at the low, middle and high available channels.
(2) The adapter KSA-24W-120200HU was found to be the worst case and used for final test.
(3) For radiated emission tests, the highest output powers were set for final test.
(4) For radiated emission below 1 GHz test, the IEEE 802.11ac (VHT80) for UNII-1, and IEEE 802.11ac (VHT20) for UNII-3 were found to be the worst case and recorded.

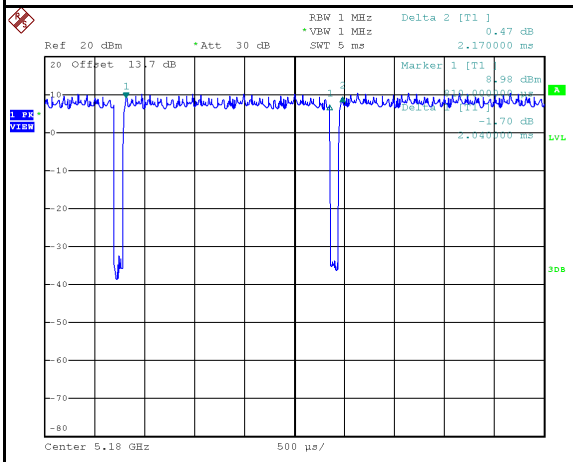
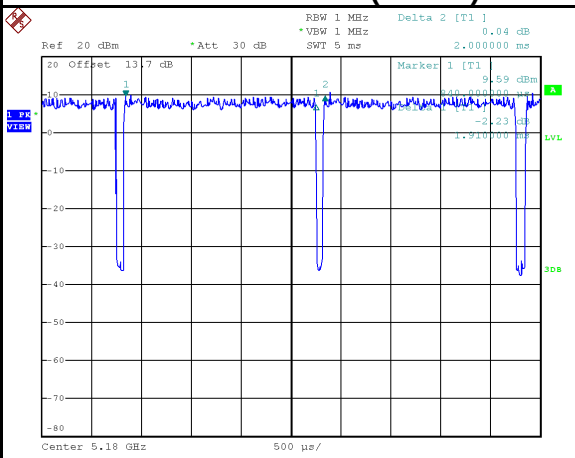
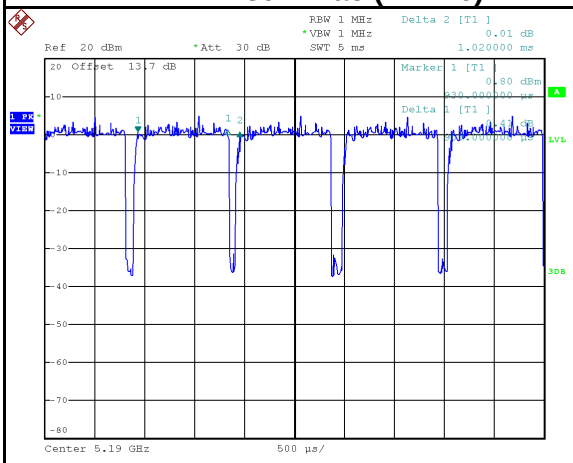
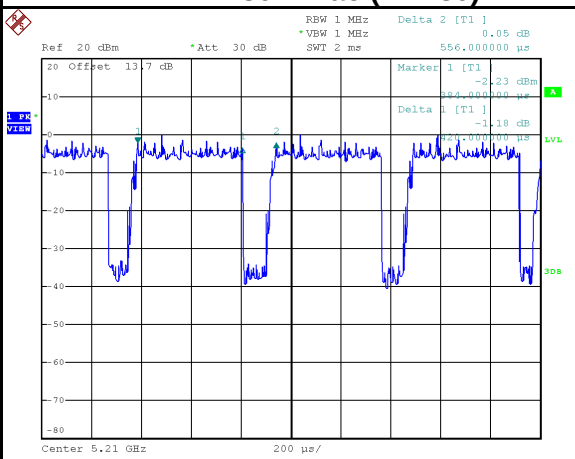
3.3 PARAMETERS OF TEST SOFTWARE

UNII-1			
Test Software	Telnet		
Mode	5180 MHz	5200 MHz	5240 MHz
IEEE 802.11a	49/49	50/50	51/51
IEEE 802.11n (HT20)	49/49	50/50	51/51
IEEE 802.11ac (HT20)	49/49	50/50	51/51
Mode	5190 MHz	5230 MHz	
IEEE 802.11n (HT40)	43/43	53/53	
IEEE 802.11ac (HT40)	43/43	53/53	
Mode	5210 MHz		
IEEE 802.11ac (VHT80)	38/38		

UNII-3			
Test Software	Telnet		
Mode	5745 MHz	5785 MHz	5825 MHz
IEEE 802.11a	51/51	53/53	51/51
IEEE 802.11n (HT20)	51/51	53/53	51/51
IEEE 802.11ac (HT20)	51/51	53/53	51/51
Mode	5755 MHz	5795 MHz	
IEEE 802.11n (HT40)	54/54	53/53	
IEEE 802.11ac (HT40)	54/54	53/53	
Mode	5775 MHz		
IEEE 802.11ac (VHT80)	53/53		

3.4 DUTY CYCLE

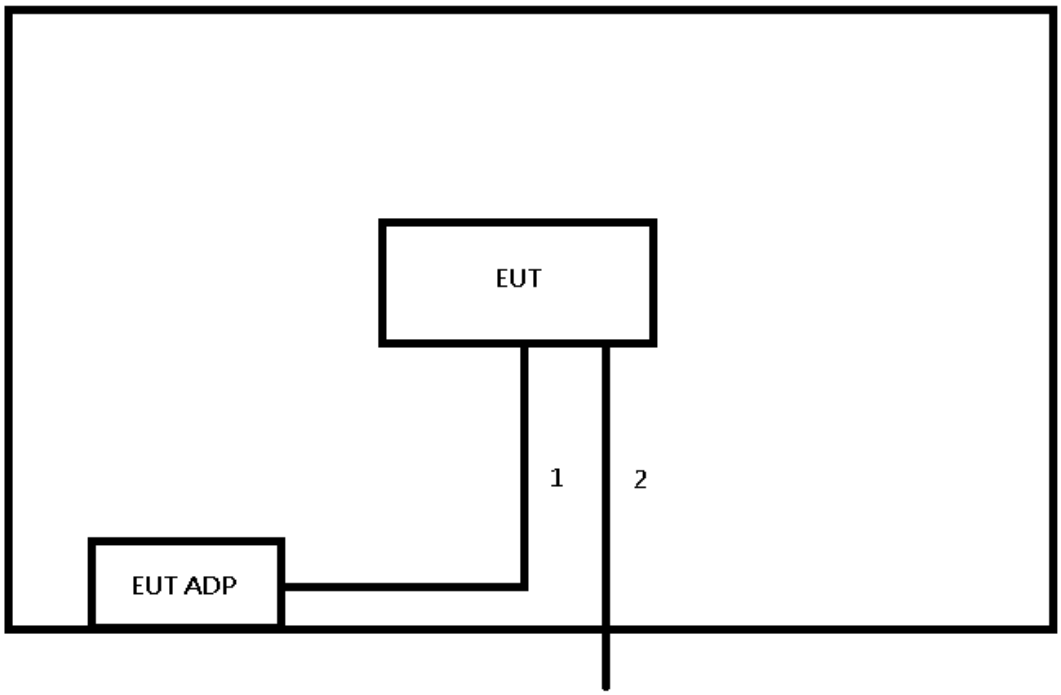
If duty cycle is ≥ 98 %, duty factor is not required.
If duty cycle is < 98 %, duty factor shall be considered.

IEEE 802.11a	IEEE 802.11ac (VHT20)
	
Duty cycle = 2.040 ms / 2.170 ms = 94.01 % Duty Factor = 10 * log(1 / 0.9401) = 0.27 dB	Duty cycle = 1.910 ms / 2.000 ms = 95.50 % Duty Factor = 10 * log(1 / 0.9550) = 0.20 dB
IEEE 802.11ac (VHT40)	**IEEE 802.11ac (VHT80)**
	
Duty cycle = 0.900 ms / 1.020 ms = 88.24 % Duty Factor = 10 * log(1 / 0.8824) = 0.54 dB	Duty cycle = 0.420 ms / 0.556 ms = 75.54 % Duty Factor = 10 * log(1 / 0.7554) = 1.22 dB

NOTE:
For IEEE 802.11a and IEEE 802.11ac (VHT20):
For radiated emissions frequency above 1 GHz, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 1 kHz (Duty cycle < 98%).
For IEEE 802.11ac (VHT40):
For radiated emissions frequency above 1 GHz, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 2 kHz (Duty cycle < 98%).
For IEEE 802.11ac (VHT80):
For radiated emissions frequency above 1 GHz, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 kHz (Duty cycle < 98%).

3.5 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

Equipment letters and Cable numbers refer to item numbers described in the tables of clause 3.6.



3.6 SUPPORT UNITS

Item	Equipment	Brand	Model No.	Series No.	Remarks
-	-	-	-	-	-

Item	Shielded	Ferrite Core	Length	Cable Type	Remarks
1	NO	NO	1.5m	Power cable	Supplied by Applicant
2	NO	NO	6.0m	RJ45	Furnished at test lab

4 AC POWER LINE CONDUCTED EMISSIONS TEST

4.1 LIMIT

Frequency (MHz)	Class A (dBμV)		Class B (dBμV)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 - 0.5	79	66	66 - 56 *	56 - 46 *
0.50 - 5.0	73	60	56	46
5.0 - 30.0	73	60	60	50

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

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

4.2 TEST PROCEDURE

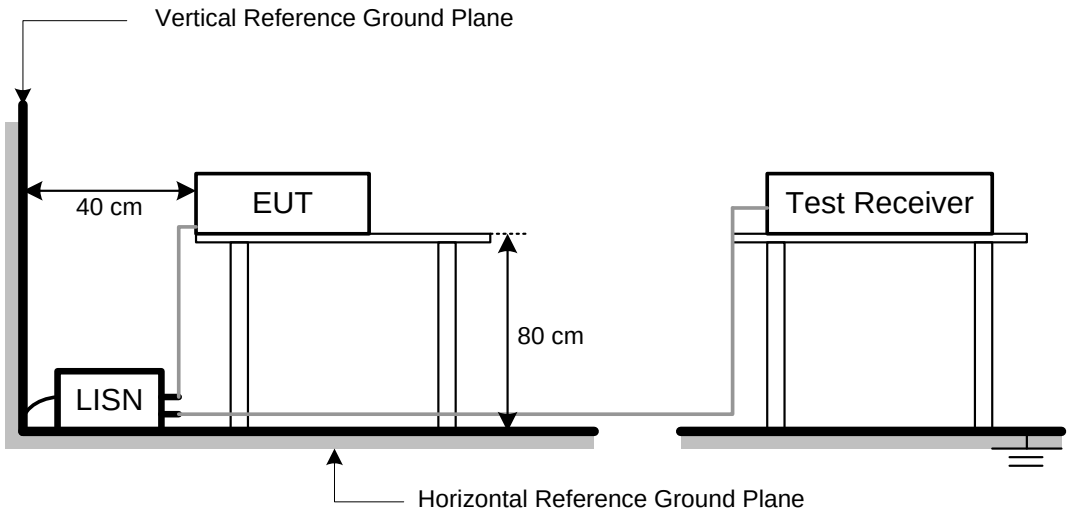
a. The EUT was placed 0.8 m above the horizontal ground plane with the EUT being connected to the power mains through a line impedance stabilization network (LISN).
All other support equipment were powered from an additional LISN(s).
The LISN provides 50 Ohm/50uH of impedance for the measuring instrument.
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 to keep the cable above 40 cm.
c. Excess I/O cables that are not connected to a peripheral shall be bundled in the center.
The end of the cable will be terminated, using the correct terminating impedance.
The overall length shall not exceed 1 m.
d. The LISN is spaced at least 80 cm from the nearest part of the EUT chassis.
e. For the actual test configuration, please refer to the related Item - EUT Test Photos.

NOTE:
1. In the results, each reading is marked as Peak, QP or AVG per the detector used.
BW=9 kHz (6 dB Bandwidth)
2. All readings are Peak unless otherwise stated QP or AVG in column of Note. Both the QP and the AVG readings must be less than the limit for compliance.

4.3 DEVIATION FROM TEST STANDARD

No deviation.

4.4 TEST SETUP



4.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in normal link mode.

4.6 TEST RESULT

Temperature: 25 °C Relative Humidity: 45 % Test Voltage: AC 120V/50Hz

Please refer to the APPENDIX A.

5 RADIATED EMISSIONS TEST

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
960~1000	500	3

LIMITS OF UNWANTED EMISSION OUT OF THE RESTRICTED BANDS

Frequency (MHz)	EIRP Limit (dBm)	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: $E = \frac{1000000\sqrt{30P}}{3}$ μV/m, where P is the eirp (Watts)
2. According to FCC 16-24,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.

5.2 TEST PROCEDURE

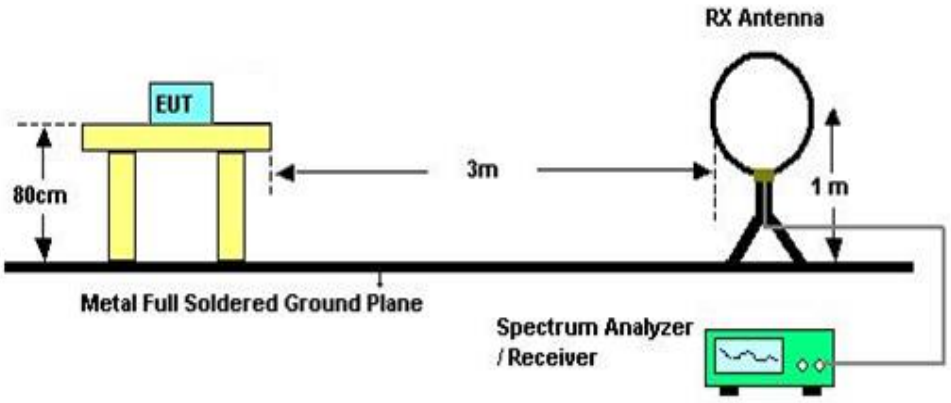
a. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1GHz)
b. The measuring distance of 3 m 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 0.8 m or 1.5 m, 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 1GHz.
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 1GHz)
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 1GHz)
i. For the actual test configuration, please refer to the related Item –EUT Test Photos.

5.3 DEVIATION FROM TEST STANDARD

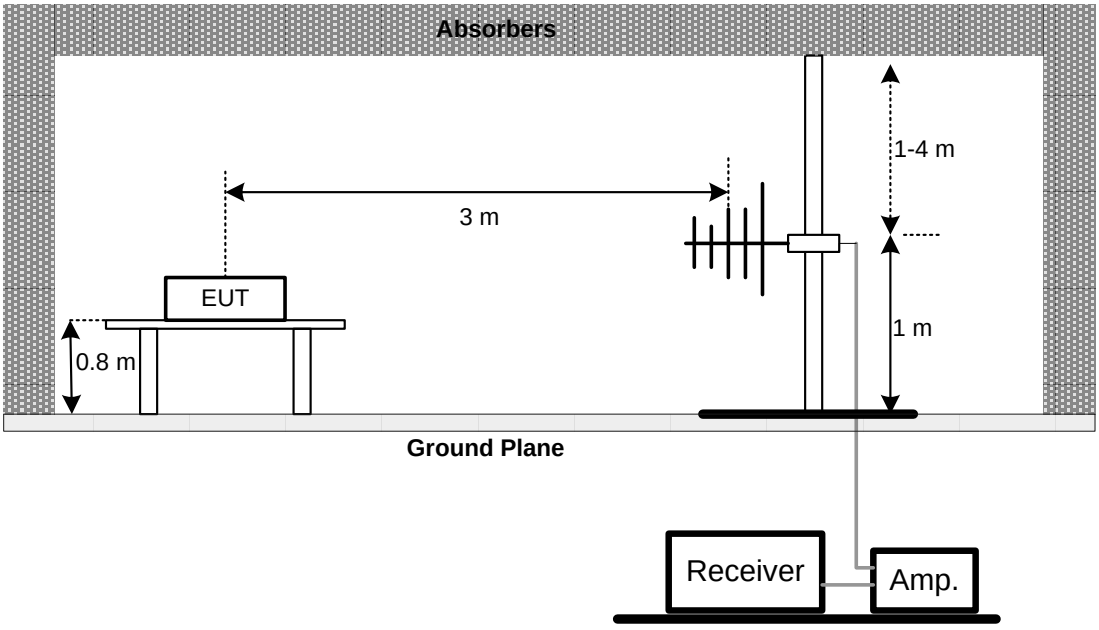
No deviation.

5.4 TEST SETUP

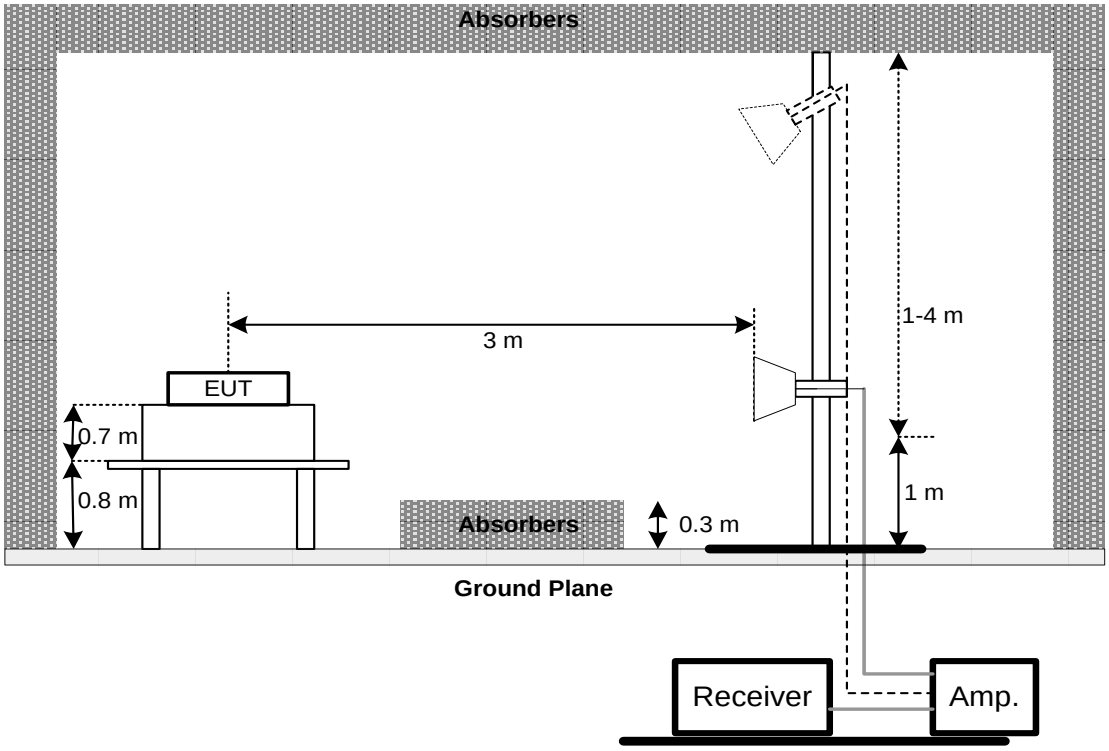
Below 30 MHz



30 MHz to 1 GHz



Above 1 GHz



5.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

5.6 TEST RESULT – 9 KHZ TO 30 MHZ

Temperature: 23 °C Relative Humidity: 70 % Test Voltage: AC 120V/50Hz

Please refer to the APPENDIX B.

NOTE:

(1) The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.
(2) Distance extrapolation factor = 40 log (specific distance / test distance) (dB).
(3) Limit line = specific limits (dBuV) + distance extrapolation factor.

5.7 TEST RESULT – 30MHZ TO 1000 MHZ

Temperature: 23 °C Relative Humidity: 70 % Test Voltage: AC 120V/50Hz

Please refer to the APPENDIX C.

5.8 TEST RESULT – ABOVE 1000 MHZ

Temperature: 23 °C Relative Humidity: 70 % Test Voltage: AC 120V/50Hz

Please refer to the APPENDIX D.

NOTE:

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

6 BANDWIDTH TEST

6.1 LIMIT

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

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

6.3 DEVIATION FROM TEST STANDARD

No deviation.

6.4 TEST SETUP

6.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

6.6 TEST RESULT

Please refer to the APPENDIX E.

7 PEAK OUTPUT POWER TEST

7.1 LIMIT

FCC Part15, Subpart E (§15.407)			
Section	Test Item	Limit	Frequency Range (MHz)
§15.407(a)	Maximum Output Power	Fixed:1 Watt (30 dBm) Mobile and portable: 250 mW (24 dBm)	5150-5250
		250 mW (24 dBm)	5250-5350
			5470-5725
		1 Watt (30dBm)	5725-5850
Note: The maximum e.i.r.p at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW(21 dBm).			

7.2 TEST PROCEDURE

a. The EUT was directly connected to the power meter and antenna output port as show in the block diagram below.
b. Spectrum Setting:

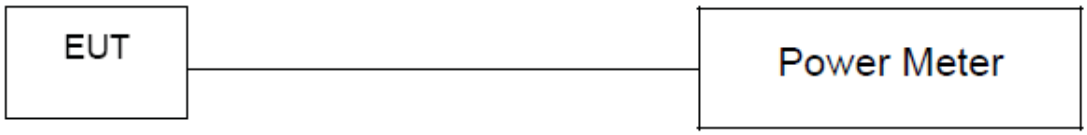
Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	Encompass the entire emissions bandwidth (EBW) of the signal
RBW	= 1 MHz
VBW	≥ 3 MHz
Detector	RMS
Trace	Max Hold
Sweep Time	auto

c. The maximum peak conducted output power was performed in accordance with method of FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

7.3 DEVIATION FROM TEST STANDARD

No deviation.

7.4 TEST SETUP



7.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

7.6 TEST RESULT

Please refer to the APPENDIX F.

8 POWER SPECTRAL DENSITY

8.1 LIMIT

FCC Part15, Subpart E (§15.407)			
Section	Test Item	Limit	Frequency Range (MHz)
§15.407(a)	Power Spectral Density	Other than Mobile and portable: 17 dBm/MHz Mobile and portable: 11 dBm/MHz	5150-5250
		11 dBm/MHz	5250-5350
			5470-5725
		30 dBm/500 kHz	5725-5850

8.2 TEST PROCEDURE

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

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	Max Hold
Sweep Time	Auto

8.3 DEVIATION FROM TEST STANDARD

No deviation.

8.4 TEST SETUP

8.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

8.6 TEST RESULT

Please refer to the APPENDIX G.

9 FREQUENCY STABILITY TEST

9.1 LIMIT

FCC Part15, Subpart E (§15.407)			
Section	Test Item	Limit	Frequency Range (MHz)
15.407(g)	Frequency Stability	Specified in the user's manual	5150-5250
			5250-5350
			5470-5725
			5725-5850

9.2 TEST PROCEDURE

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

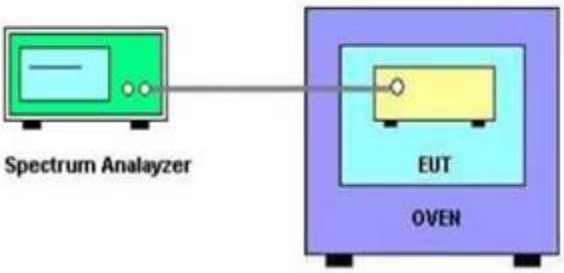
Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	Entire absence of modulation emissions bandwidth
RBW	10 kHz
VBW	10 kHz
Sweep Time	Auto

c. The test extreme voltage is to change the primary supply voltage from 85 to 115 percent of the nominal value.
d. User manual temperature is 0°C~40°C.

9.3 DEVIATION FROM TEST STANDARD

No deviation.

9.4 TEST SETUP



9.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

9.6 TEST RESULT

Please refer to the APPENDIX H.

10 LIST OF MEASURING EQUIPMENTS

AC Power Line Conducted Emissions					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	TWO-LINE V-NETWORK	R&S	ENV216	101050	Mar. 08, 2019
2	Test Cable	EMCI	EMCCFD300-BM-BMR-6000	170715	Aug. 07, 2019
3	EMI Test Receiver	R&S	ESR7	101433	Dec. 10, 2018
4	Measurement Software	EZ	EZ_EMC (Version NB-03A)	N/A	N/A

Radiated Emissions					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Preamplifier	EMCI	012645B	980267	Apr. 14, 2019
2	Preamplifier	EMCI	EMC02325	980217	Apr. 14, 2019
3	Preamplifier	EMCI	EMC2654045	980030	Apr. 14, 2019
4	Test Cable	EMCI	EMC104-SM-SM-8000	8m	Apr. 14, 2019
5	Test Cable	EMCI	EMC104-SM-SM-800	150207	Apr. 14, 2019
6	Test Cable	EMCI	EEMC104-SM-SM-3000	151205	Apr. 14, 2019
7	MXE EMI Receiver	Agilent	N9038A	MY55420127	Jan. 27, 2019
8	Signal Analyzer	Agilent	N9010A	MY52220990	May 22, 2019
9	Loop Ant	EMCI	LPA600	274	May 03, 2019
10	Horn Ant	SCHWARZBECK	BBHA 9120D	9120D-1342	May 02, 2019
11	Horn Ant	Schwarzbeck	BBHA 9170	187	Aug. 16, 2019
12	Trilog-Broadband Antenna	Schwarzbeck	VULB 9168	9168-548	Mar. 22, 2019
13	5dB Attenuator	EMCI	EMCI-N-6-05	AT-N0623	Mar. 22, 2019
14	Measurement Software	Farad	EZ_EMC (Ver. NB-03A1-01)	N/A	N/A

26 dB Bandwidth					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	R&S/FSP30	100854	May 24, 2019

Peak Output Power					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Power Meter	Anritsu	ML2495A	1128008	Aug. 15, 2019
2	Power Sensor	Anritsu	MA2411B	1126001	Aug. 15, 2019

Power Spectral Density					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	R&S/FSP30	100854	May 24, 2019

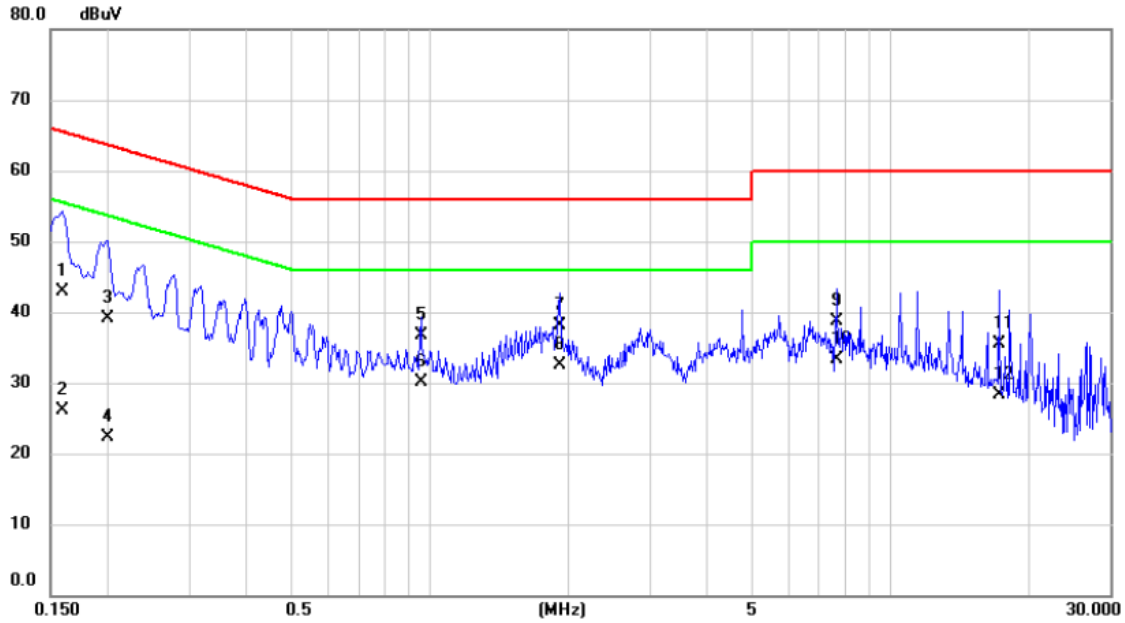
Frequency Stability					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	R&S/FSP30	100854	May 24, 2019

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

APPENDIX A AC POWER LINE CONDUCTED EMISSIONS

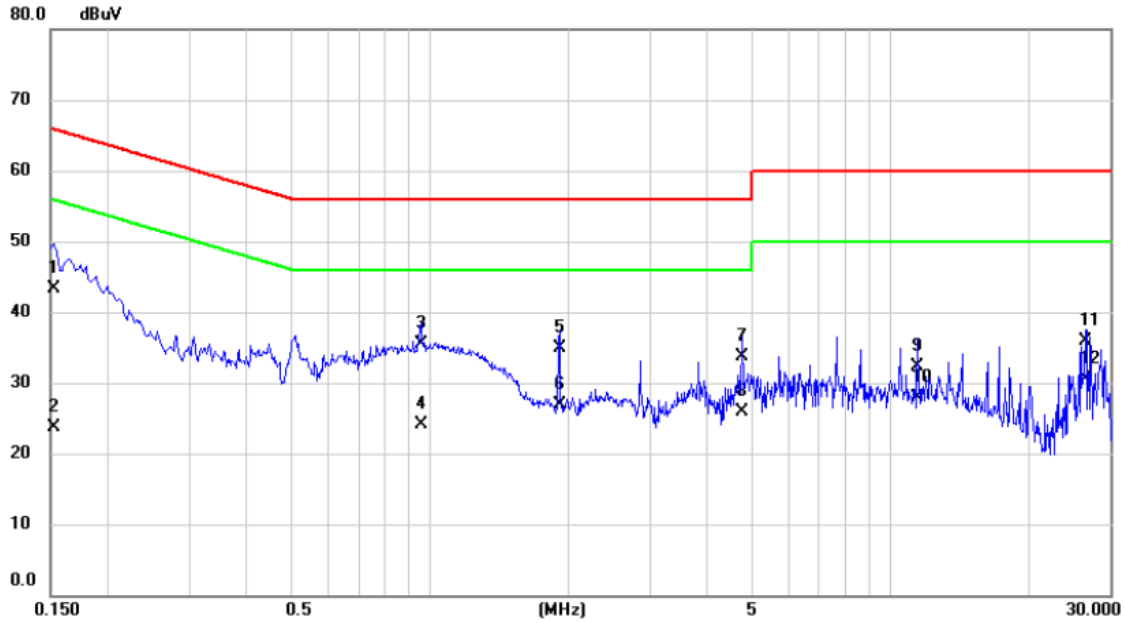
CONTINUE ON NEXT PAGE

Test Mode	UNII-1_TX AC (VHT80) MODE 5210 MHz	Phase	Line



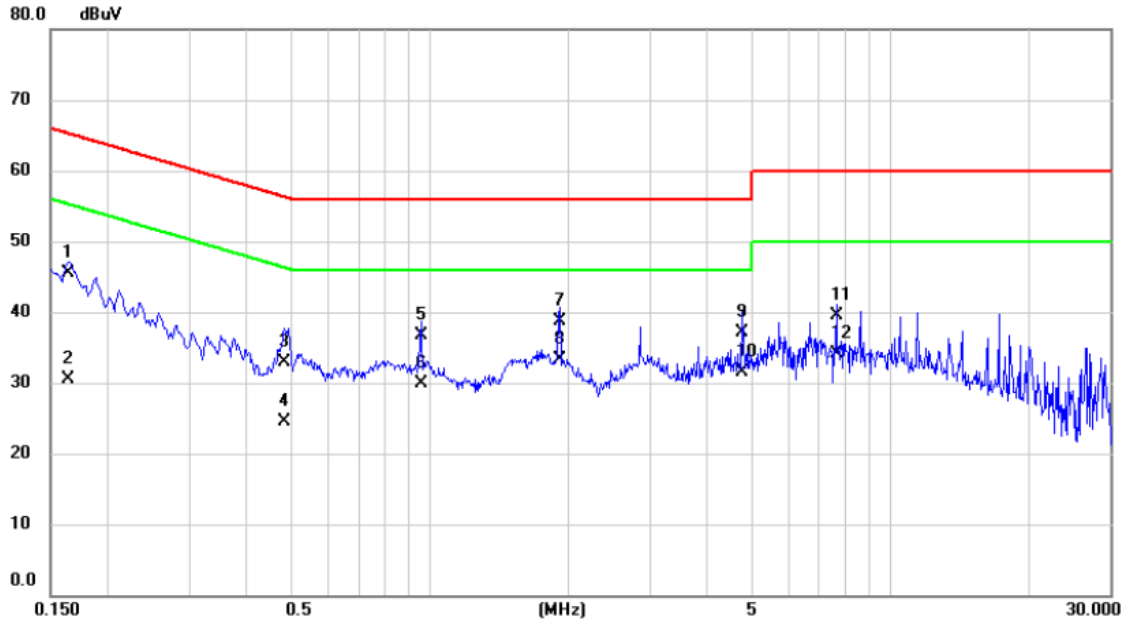
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1590	33.30	9.63	42.93	65.52	-22.59	QP	
2		0.1590	16.40	9.63	26.03	55.52	-29.49	AVG	
3		0.1995	29.40	9.63	39.03	63.63	-24.60	QP	
4		0.1995	12.60	9.63	22.23	53.63	-31.40	AVG	
5		0.9555	27.00	9.67	36.67	56.00	-19.33	QP	
6		0.9555	20.40	9.67	30.07	46.00	-15.93	AVG	
7		1.9118	28.50	9.69	38.19	56.00	-17.81	QP	
8	*	1.9118	22.90	9.69	32.59	46.00	-13.41	AVG	
9		7.6425	28.80	9.84	38.64	60.00	-21.36	QP	
10		7.6425	23.40	9.84	33.24	50.00	-16.76	AVG	
11		17.1960	25.60	9.95	35.55	60.00	-24.45	QP	
12		17.1960	18.30	9.95	28.25	50.00	-21.75	AVG	

Test Mode	UNII-1_TX AC (VHT80) MODE 5210 MHz	Phase	Neutral



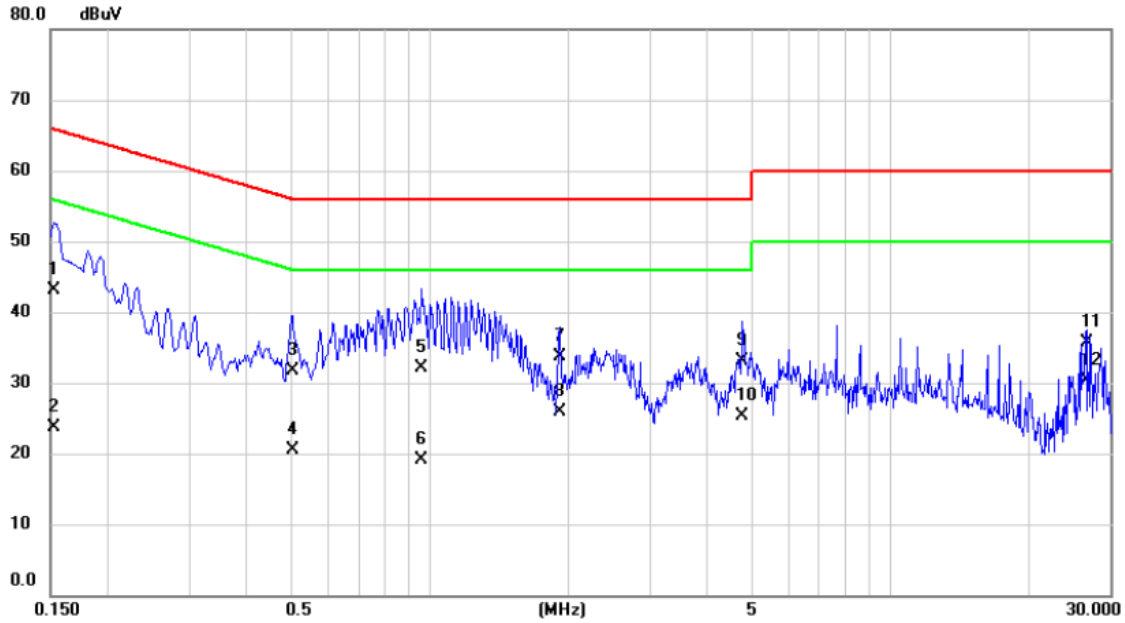
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1522	33.60	9.62	43.22	65.88	-22.66	QP	
2		0.1522	14.10	9.62	23.72	55.88	-32.16	AVG	
3		0.9555	25.80	9.66	35.46	56.00	-20.54	QP	
4		0.9555	14.50	9.66	24.16	46.00	-21.84	AVG	
5		1.9095	25.30	9.67	34.97	56.00	-21.03	QP	
6	*	1.9095	17.30	9.67	26.97	46.00	-19.03	AVG	
7		4.7760	23.90	9.75	33.65	56.00	-22.35	QP	
8		4.7760	16.10	9.75	25.85	46.00	-20.15	AVG	
9		11.4630	22.40	9.93	32.33	60.00	-27.67	QP	
10		11.4630	17.90	9.93	27.83	50.00	-22.17	AVG	
11		26.4863	25.90	10.00	35.90	60.00	-24.10	QP	
12		26.4863	20.50	10.00	30.50	50.00	-19.50	AVG	

Test Mode	UNII-3_TX AC (VHT20) MODE 5745 MHz	Phase	Line



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1635	35.80	9.63	45.43	65.28	-19.85	QP	
2		0.1635	20.90	9.63	30.53	55.28	-24.75	AVG	
3		0.4830	23.20	9.66	32.86	56.29	-23.43	QP	
4		0.4830	14.80	9.66	24.46	46.29	-21.83	AVG	
5		0.9555	27.00	9.67	36.67	56.00	-19.33	QP	
6		0.9555	20.30	9.67	29.97	46.00	-16.03	AVG	
7		1.9095	29.10	9.69	38.79	56.00	-17.21	QP	
8	*	1.9095	23.70	9.69	33.39	46.00	-12.61	AVG	
9		4.7738	27.30	9.76	37.06	56.00	-18.94	QP	
10		4.7738	21.70	9.76	31.46	46.00	-14.54	AVG	
11		7.6403	29.60	9.84	39.44	60.00	-20.56	QP	
12		7.6403	24.30	9.84	34.14	50.00	-15.86	AVG	

Test Mode	UNII-3_TX AC (VHT20) MODE 5745 MHz	Phase	Neutral

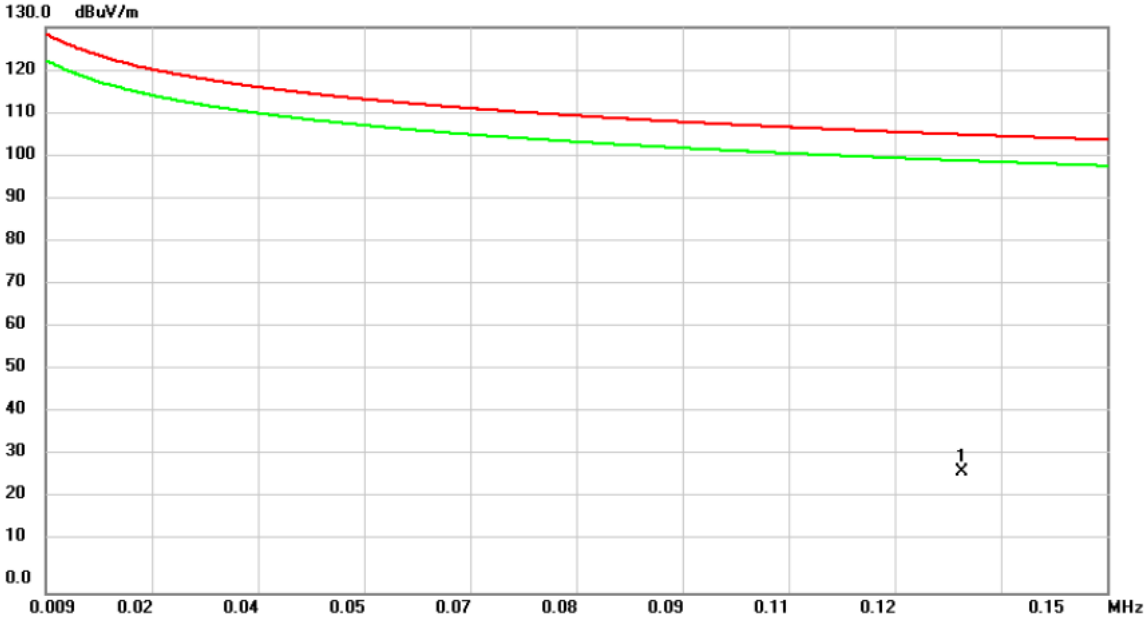


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1522	33.40	9.62	43.02	65.88	-22.86	QP	
2		0.1522	14.00	9.62	23.62	55.88	-32.26	AVG	
3		0.5032	22.10	9.65	31.75	56.00	-24.25	QP	
4		0.5032	10.90	9.65	20.55	46.00	-25.45	AVG	
5		0.9600	22.50	9.66	32.16	56.00	-23.84	QP	
6		0.9600	9.40	9.66	19.06	46.00	-26.94	AVG	
7		1.9118	24.10	9.67	33.77	56.00	-22.23	QP	
8		1.9118	16.20	9.67	25.87	46.00	-20.13	AVG	
9		4.7760	23.30	9.75	33.05	56.00	-22.95	QP	
10		4.7760	15.60	9.75	25.35	46.00	-20.65	AVG	
11		26.6100	25.80	10.00	35.80	60.00	-24.20	QP	
12	*	26.6100	20.40	10.00	30.40	50.00	-19.60	AVG	

APPENDIX B RADIATED EMISSIONS - 9 KHZ TO 30 MHZ

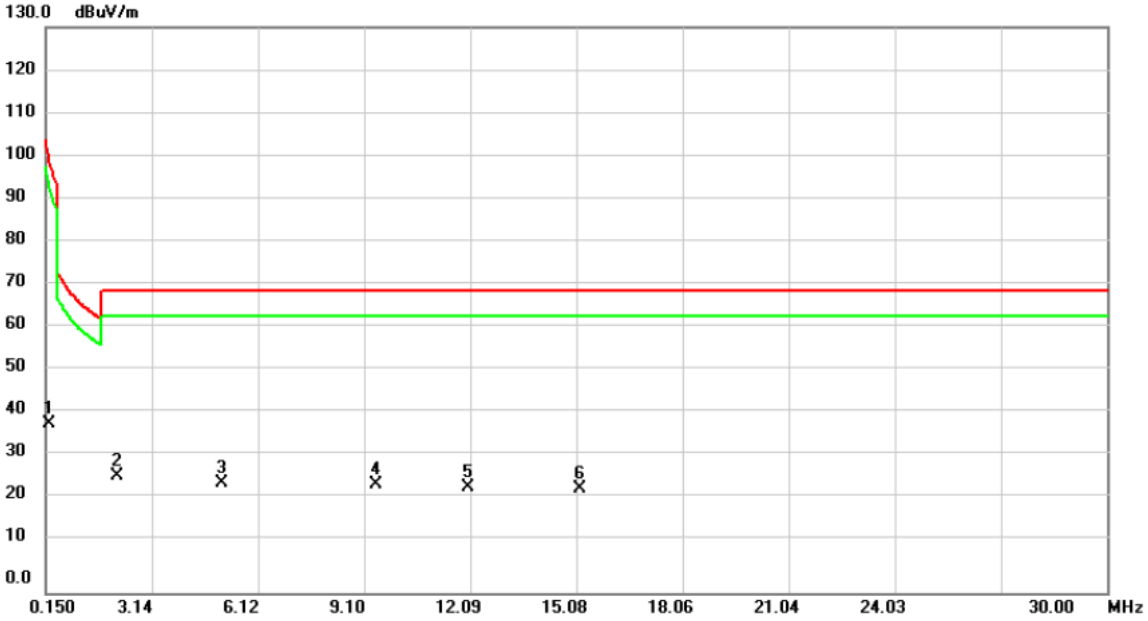
CONTINUE ON NEXT PAGE

Test Mode	UNII-1_TX AC (VHT80) MODE 5210 MHz	Azimuth Angle	90°



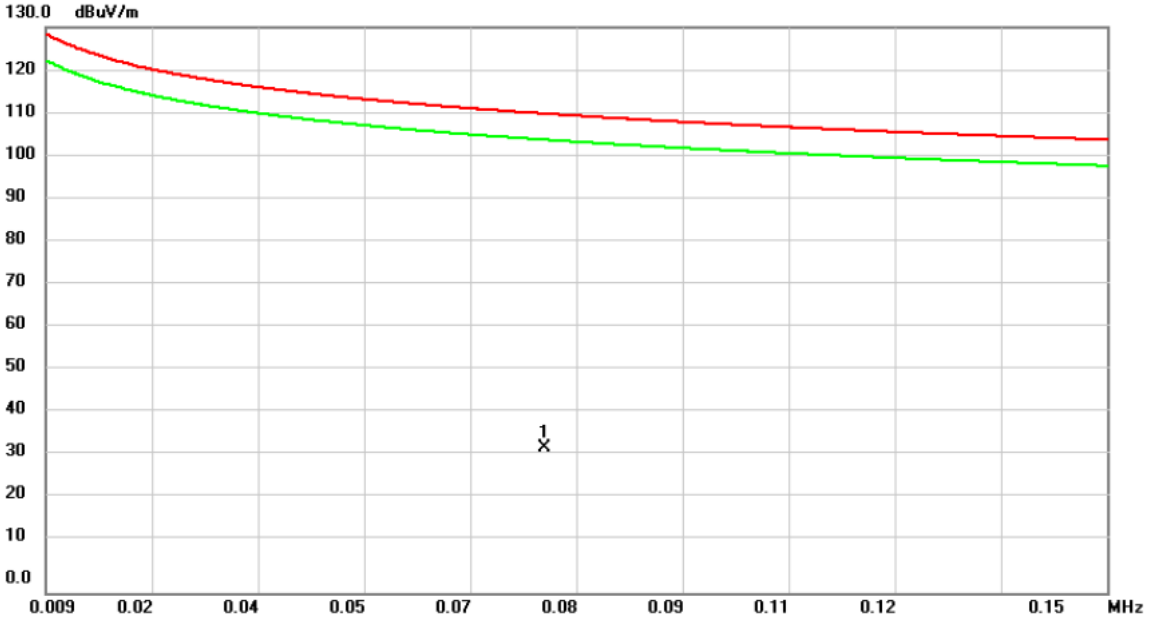
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	0.1307	13.44	14.29	27.73	105.28	-77.55	peak	

Test Mode	UNII-1_TX AC (VHT80) MODE 5210 MHz	Azimuth Angle	90°



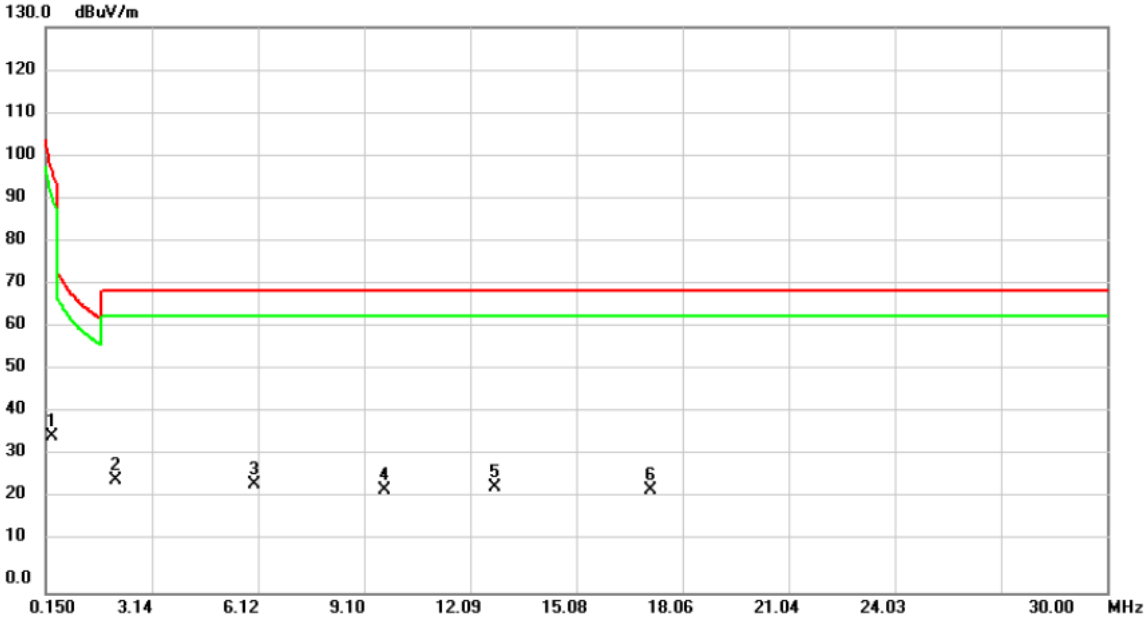
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		0.2296	29.44	9.36	38.80	100.38	-61.58	peak	
2	*	2.1400	29.88	-3.04	26.84	69.54	-42.70	peak	
3		5.0852	28.98	-3.94	25.04	69.54	-44.50	peak	
4		9.4234	29.69	-4.71	24.98	69.54	-44.56	peak	
5		12.0104	28.91	-4.82	24.09	69.54	-45.45	peak	
6		15.1546	29.08	-5.08	24.00	69.54	-45.54	peak	

Test Mode	UNII-1_TX AC (VHT80) MODE 5210 MHz	Azimuth Angle	0°



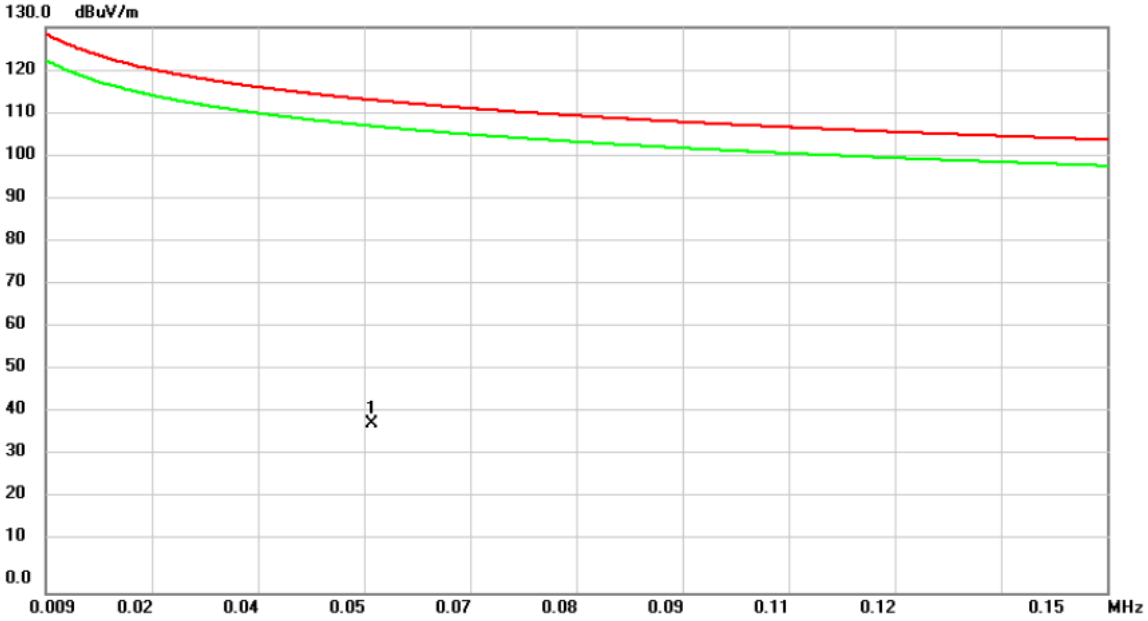
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	0.0752	14.44	18.73	33.17	110.08	-76.91	peak	

Test Mode	UNII-1_TX AC (VHT80) MODE 5210 MHz	Azimuth Angle	0°



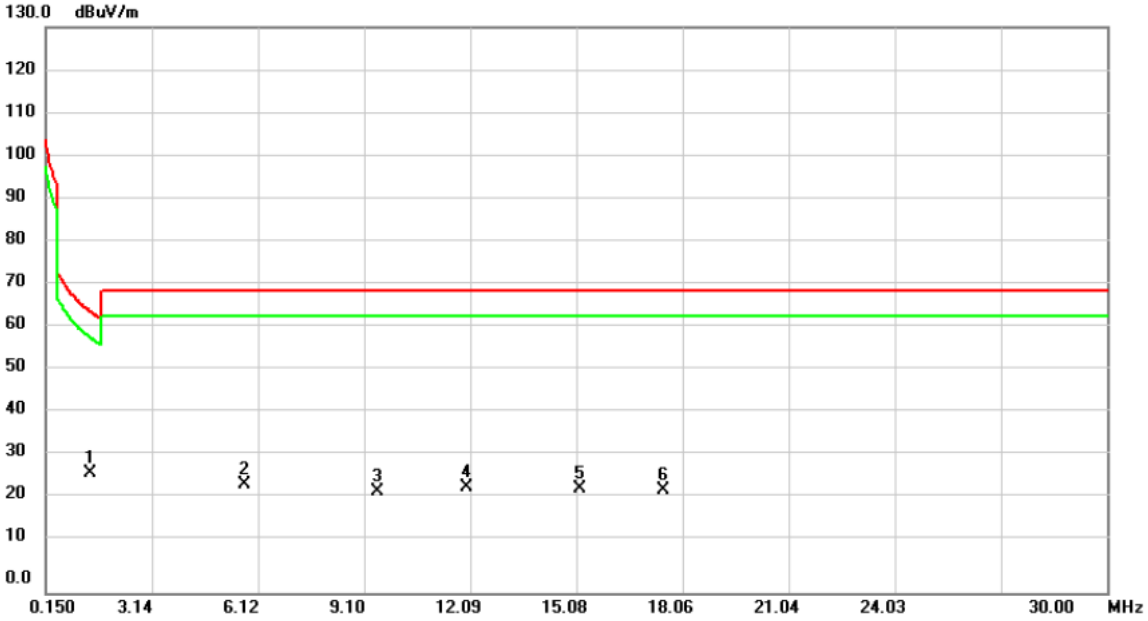
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		0.3092	29.16	6.81	35.97	97.80	-61.83	peak	
2	*	2.1002	28.86	-3.01	25.85	69.54	-43.69	peak	
3		6.0006	28.96	-4.03	24.93	69.54	-44.61	peak	
4		9.6622	28.35	-4.71	23.64	69.54	-45.90	peak	
5		12.7666	29.03	-4.82	24.21	69.54	-45.33	peak	
6		17.1446	29.37	-5.89	23.48	69.54	-46.06	peak	

Test Mode	UNII-3_TX AC (VHT20) MODE 5745 MHz	Azimuth Angle	90°



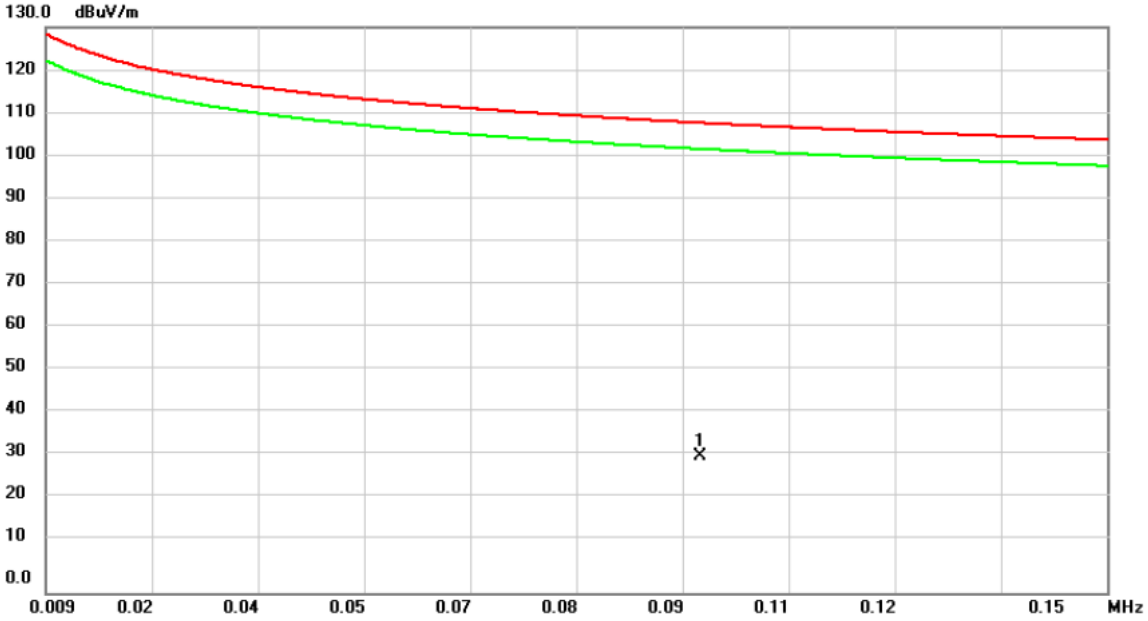
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	0.0524	17.02	21.93	38.95	113.22	-74.27	peak	

Test Mode	UNII-3_TX AC (VHT20) MODE 5745 MHz	Azimuth Angle	90°



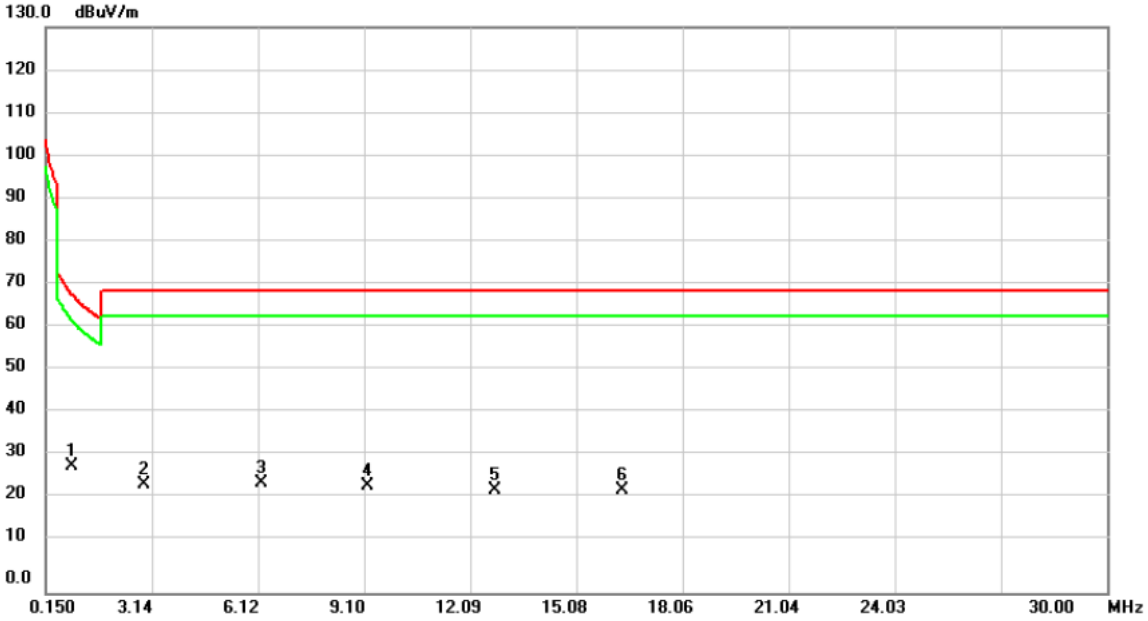
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	1.3838	28.72	-1.34	27.38	64.78	-37.40	peak	
2		5.7220	28.84	-4.00	24.84	69.54	-44.70	peak	
3		9.4632	27.86	-4.71	23.15	69.54	-46.39	peak	
4		11.9706	29.09	-4.82	24.27	69.54	-45.27	peak	
5		15.1546	29.08	-5.08	24.00	69.54	-45.54	peak	
6		17.5028	29.56	-6.03	23.53	69.54	-46.01	peak	

Test Mode	UNII-3_TX AC (VHT20) MODE 5745 MHz	Azimuth Angle	0°



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	0.0960	14.68	16.54	31.22	107.96	-76.74	peak	

Test Mode	UNII-3_TX AC (VHT20) MODE 5745 MHz	Azimuth Angle	0°

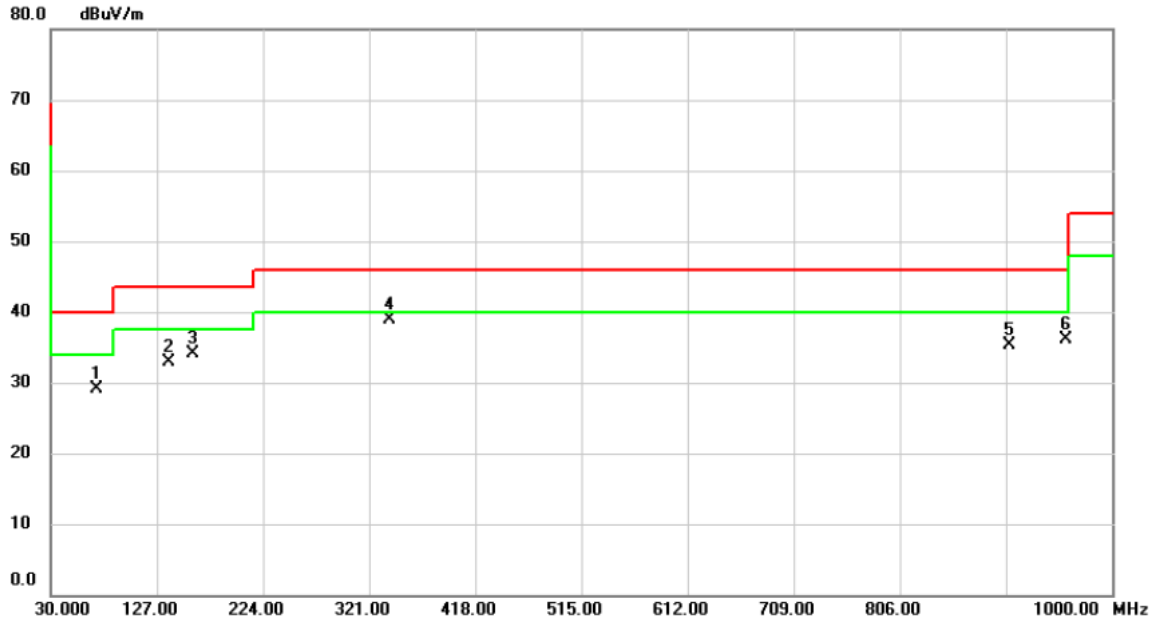


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	0.8664	28.89	0.21	29.10	68.85	-39.75	peak	
2		2.8962	28.50	-3.59	24.91	69.54	-44.63	peak	
3		6.1996	29.24	-4.05	25.19	69.54	-44.35	peak	
4		9.1846	29.25	-4.71	24.54	69.54	-45.00	peak	
5		12.8063	28.48	-4.82	23.66	69.54	-45.88	peak	
6		16.3486	29.04	-5.50	23.54	69.54	-46.00	peak	

APPENDIX C RADIATED EMISSIONS - 30 MHZ TO 1000 MHZ

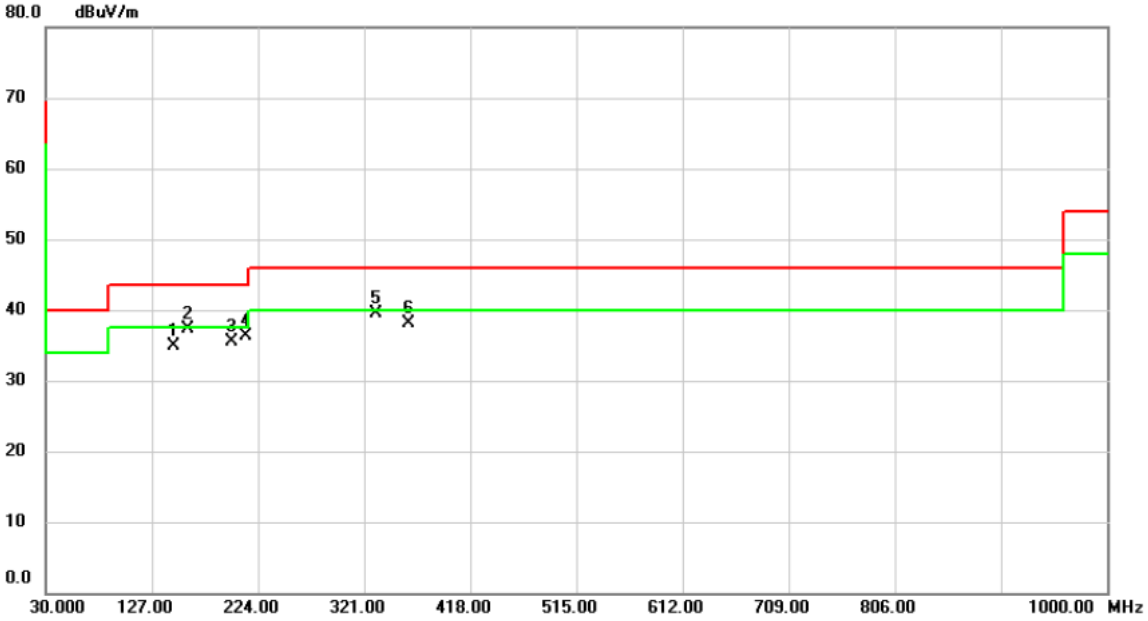
CONTINUE ON NEXT PAGE

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



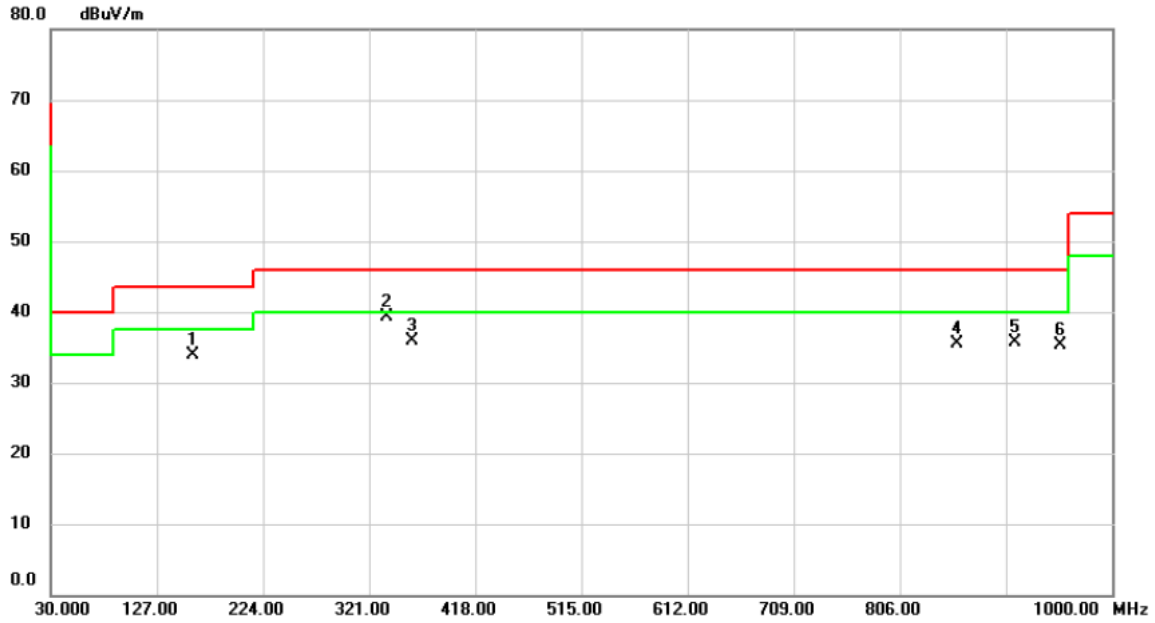
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		71.7100	40.19	-11.01	29.18	40.00	-10.82	peak	
2		138.6400	41.91	-8.96	32.95	43.50	-10.55	peak	
3		159.9800	42.70	-8.54	34.16	43.50	-9.34	peak	
4	*	339.4300	45.33	-6.47	38.86	46.00	-7.14	peak	
5		905.9100	30.27	5.07	35.34	46.00	-10.66	peak	
6		957.3200	30.33	5.85	36.18	46.00	-9.82	peak	

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



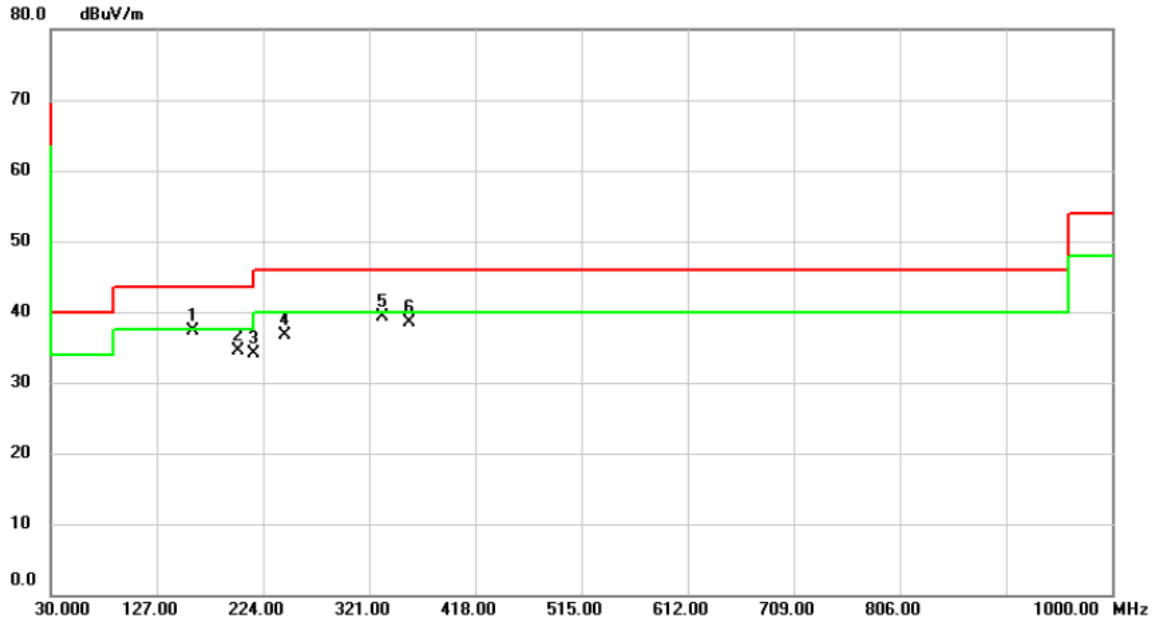
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		146.4000	43.62	-8.69	34.93	43.50	-8.57	peak	
2	*	159.9800	45.92	-8.54	37.38	43.50	-6.12	peak	
3		199.7500	46.36	-10.90	35.46	43.50	-8.04	peak	
4		212.3600	46.94	-10.67	36.27	43.50	-7.23	peak	
5		331.6700	46.26	-6.68	39.58	46.00	-6.42	peak	
6		361.7400	44.02	-5.93	38.09	46.00	-7.91	peak	

Test Mode	UNII-3_TX AC (VHT20) MODE 5745 MHz	Polarization	Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		159.9800	42.39	-8.54	33.85	43.50	-9.65	peak	
2	*	336.5200	45.85	-6.55	39.30	46.00	-6.70	peak	
3		359.8000	41.84	-5.97	35.87	46.00	-10.13	peak	
4		858.3800	31.35	4.13	35.48	46.00	-10.52	peak	
5		911.7300	30.53	5.17	35.70	46.00	-10.30	peak	
6		952.4700	29.58	5.81	35.39	46.00	-10.61	peak	

Test Mode	UNII-3_TX AC (VHT20) MODE 5745 MHz	Polarization	Horizontal

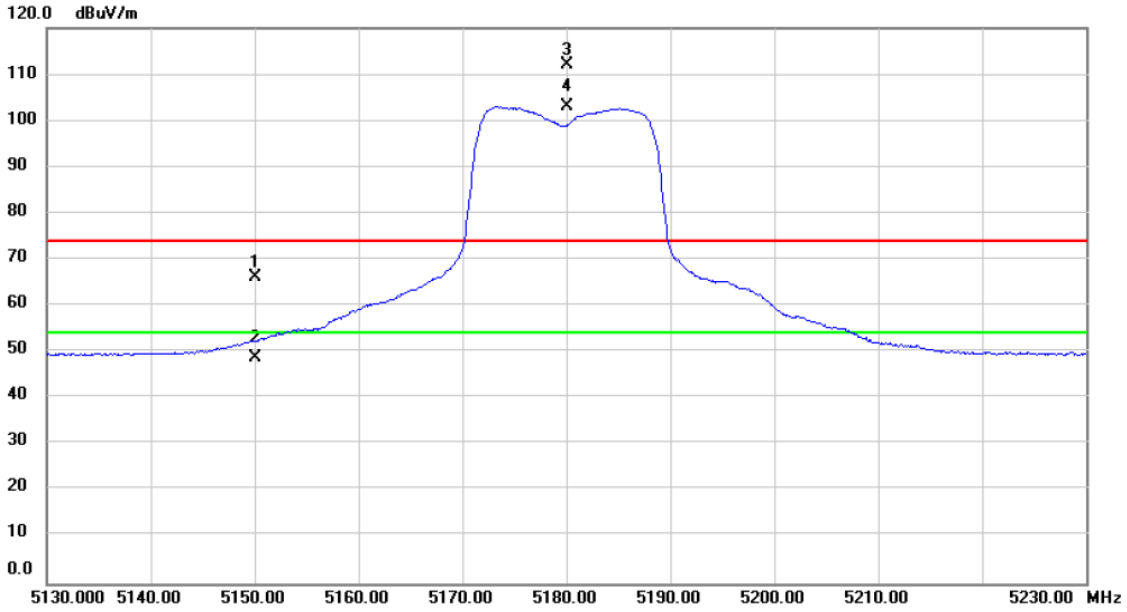


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	159.9800	45.89	-8.54	37.35	43.50	-6.15	peak	
2		201.6900	45.44	-10.87	34.57	43.50	-8.93	peak	
3		215.2700	44.73	-10.63	34.10	43.50	-9.40	peak	
4		244.3700	45.83	-9.12	36.71	46.00	-9.29	peak	
5		333.6100	45.98	-6.63	39.35	46.00	-6.65	peak	
6		357.8600	44.57	-6.03	38.54	46.00	-7.46	peak	

APPENDIX D RADIATED EMISSIONS - ABOVE 1000 MHZ

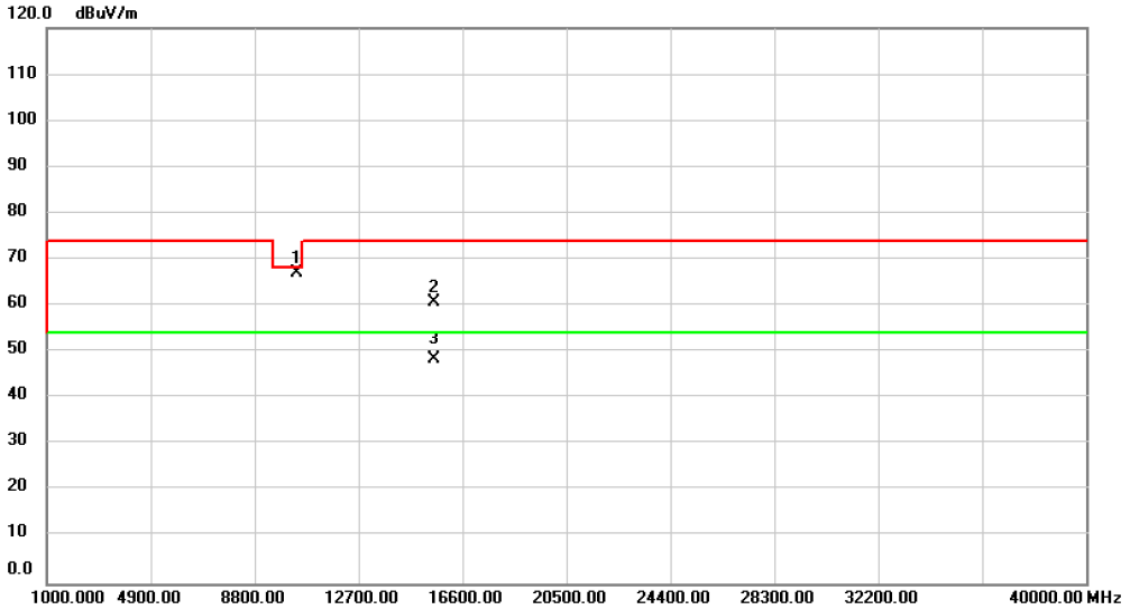
CONTINUE ON NEXT PAGE

Test Mode	UNII-1/ TX A Mode 5180MHz	Polarization	Vertical



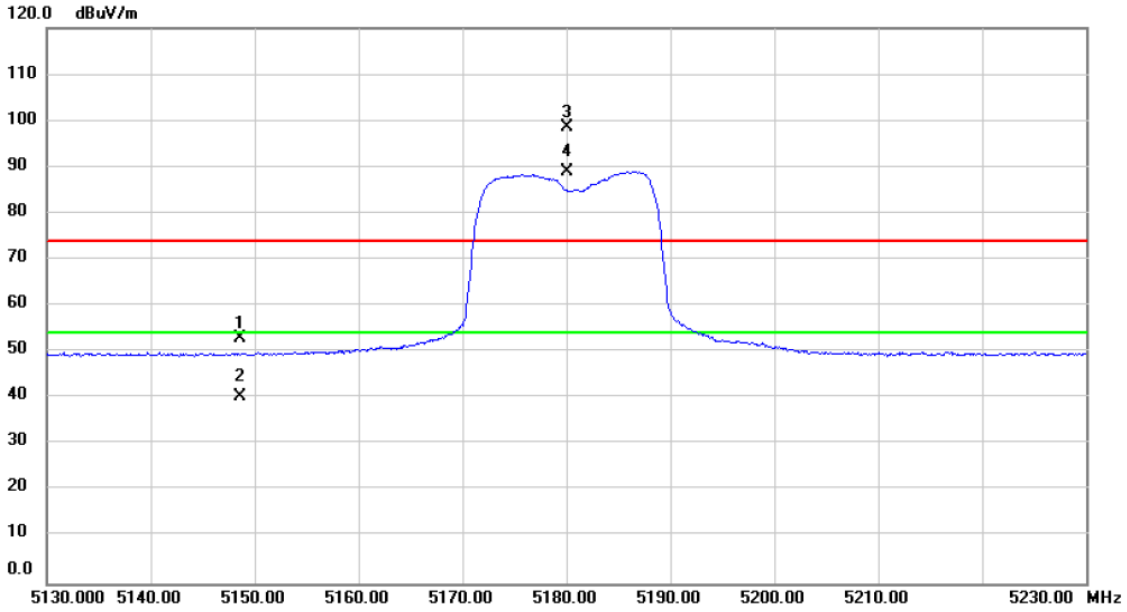
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5150.000	28.85	37.31	66.16	74.00	-7.84	peak	
2		5150.000	11.42	37.31	48.73	54.00	-5.27	AVG	
3	X	5180.000	74.79	37.34	112.13	74.00	38.13	peak	No Limit
4	*	5180.000	65.58	37.34	102.92	54.00	48.92	AVG	No Limit

Test Mode	UNII-1/ TX A Mode 5180MHz	Polarization	Vertical



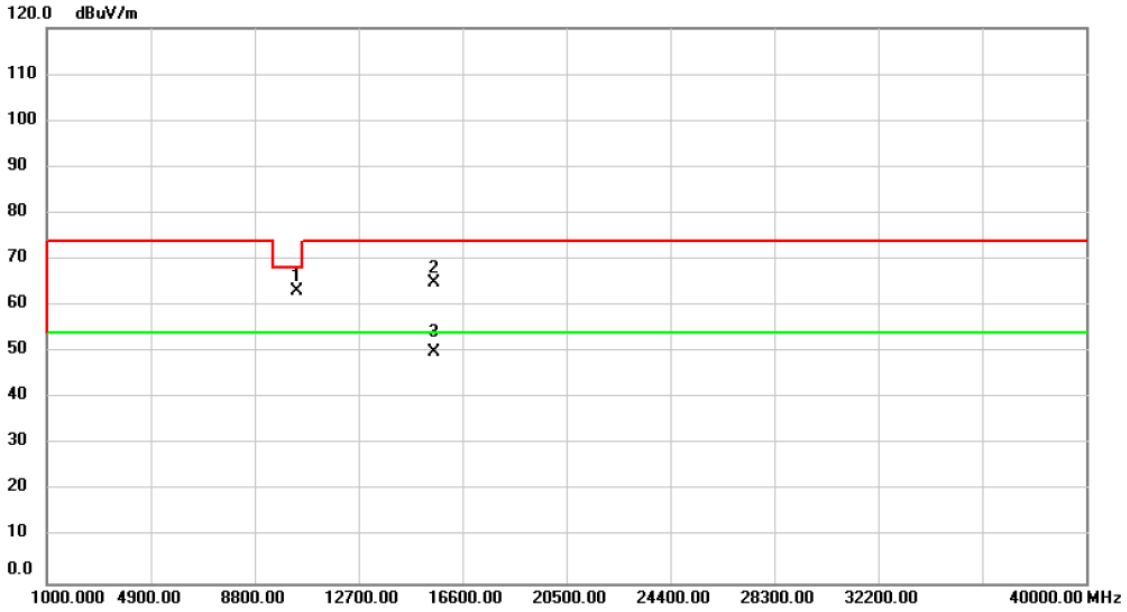
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	10360.000	65.55	1.57	67.12	68.20	-1.08	peak	
2		15540.000	56.41	4.42	60.83	74.00	-13.17	peak	
3		15540.000	44.18	4.42	48.60	54.00	-5.40	AVG	

Test Mode	UNII-1/ TX A Mode 5180MHz	Polarization	Horizontal



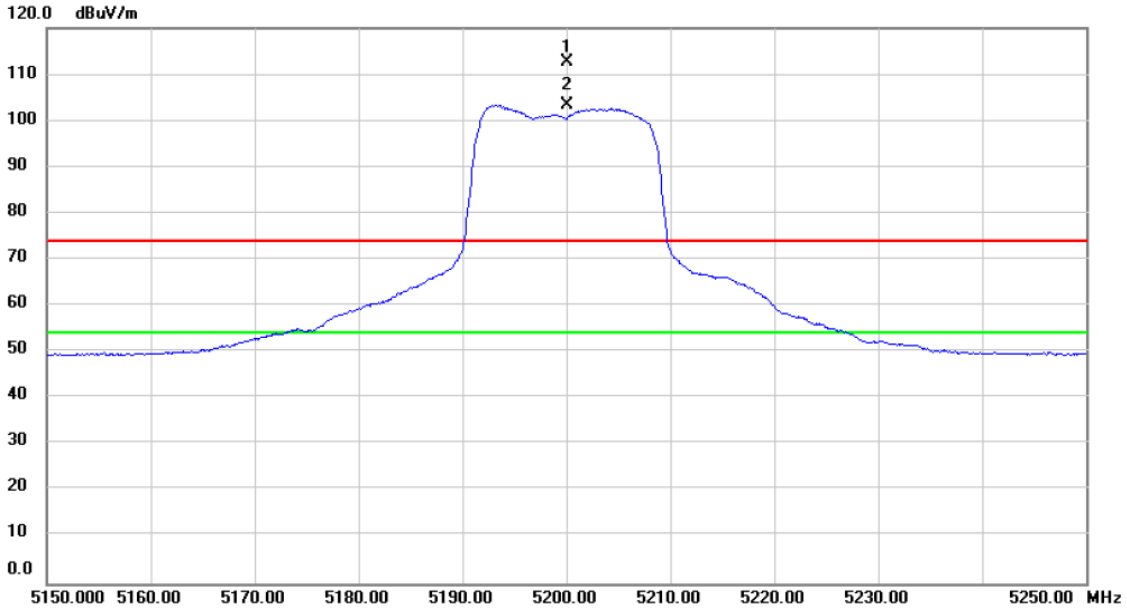
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5148.580	15.56	37.30	52.86	74.00	-21.14	peak	
2		5148.580	2.97	37.30	40.27	54.00	-13.73	AVG	
3	X	5180.000	61.08	37.34	98.42	74.00	24.42	peak	No Limit
4	*	5180.000	51.47	37.34	88.81	54.00	34.81	AVG	No Limit

Test Mode	UNII-1/ TX A Mode 5180MHz	Polarization	Horizontal



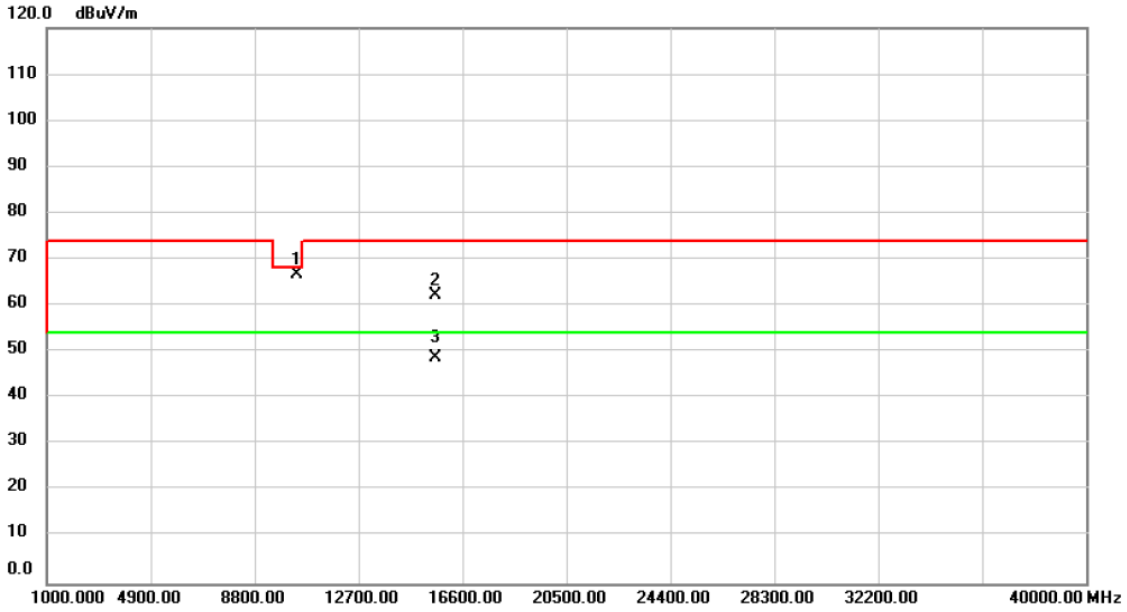
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		10360.000	61.55	1.57	63.12	68.20	-5.08	peak	
2		15540.000	60.60	4.42	65.02	74.00	-8.98	peak	
3	*	15540.000	45.58	4.42	50.00	54.00	-4.00	AVG	

Test Mode	UNII-1/ TX A Mode 5200MHz	Polarization	Vertical



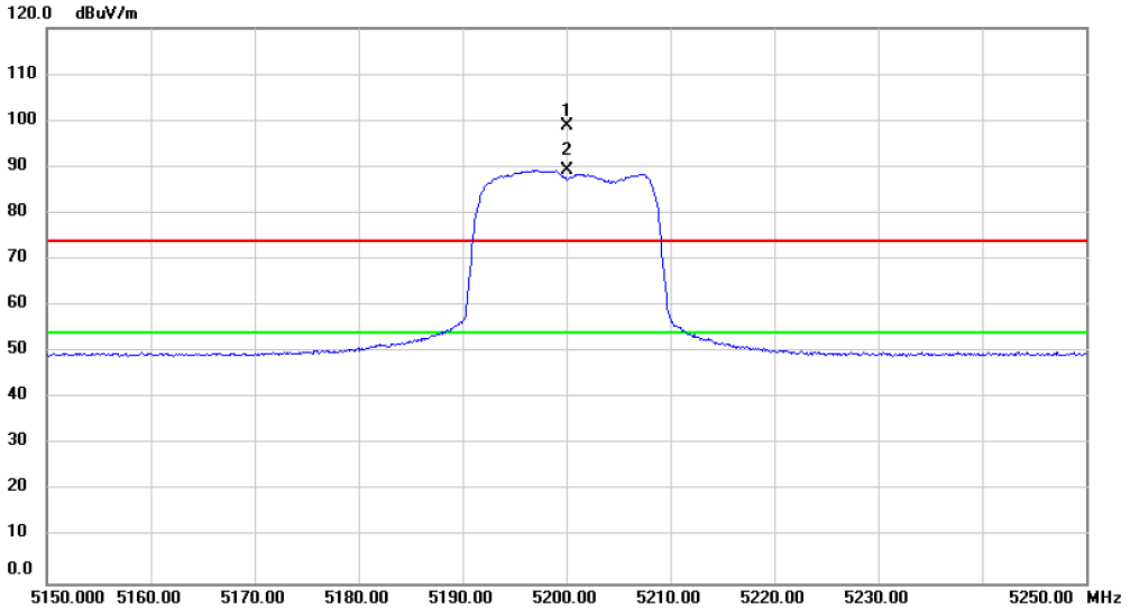
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	5200.000	75.40	37.36	112.76	74.00	38.76	peak	No Limit
2	*	5200.000	65.99	37.36	103.35	54.00	49.35	AVG	No Limit

Test Mode	UNII-1/ TX A Mode 5200MHz	Polarization	Vertical



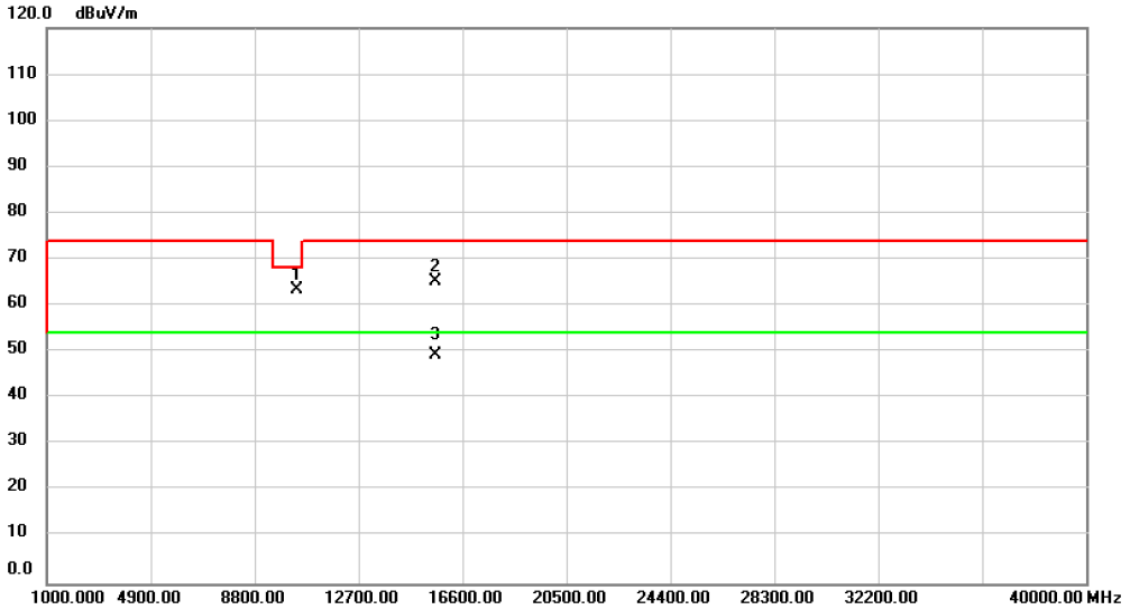
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	10400.000	65.00	1.62	66.62	68.20	-1.58	peak	
2		15600.000	57.87	4.32	62.19	74.00	-11.81	peak	
3		15600.000	44.42	4.32	48.74	54.00	-5.26	AVG	

Test Mode	UNII-1/ TX A Mode 5200MHz	Polarization	Horizontal



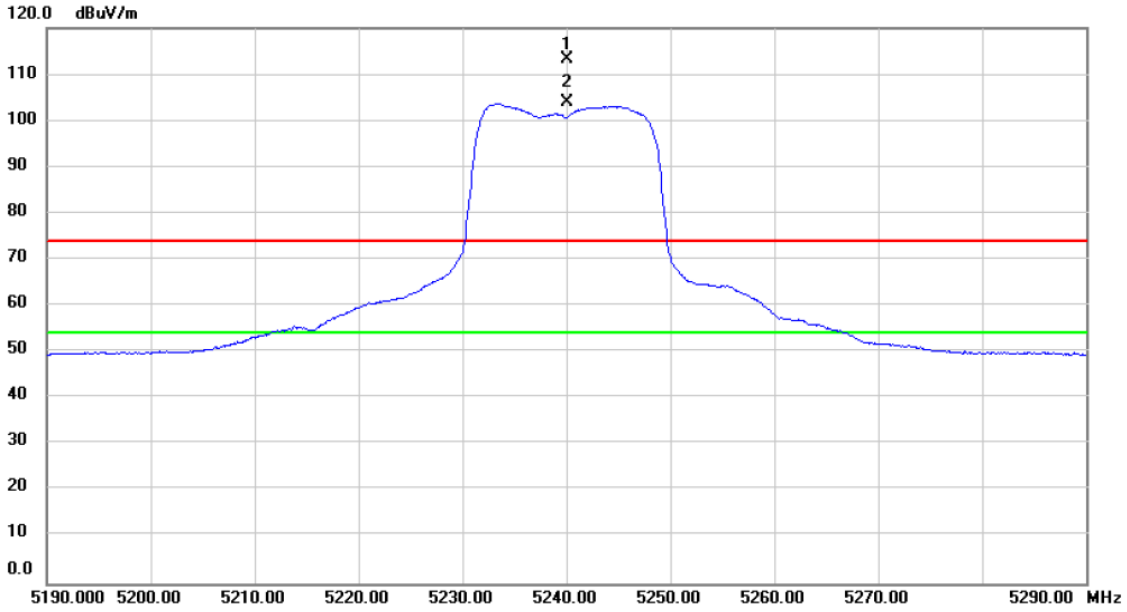
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	5200.000	61.43	37.36	98.79	74.00	24.79	peak	No Limit
2	*	5200.000	51.90	37.36	89.26	54.00	35.26	AVG	No Limit

Test Mode	UNII-1/ TX A Mode 5200MHz	Polarization	Horizontal



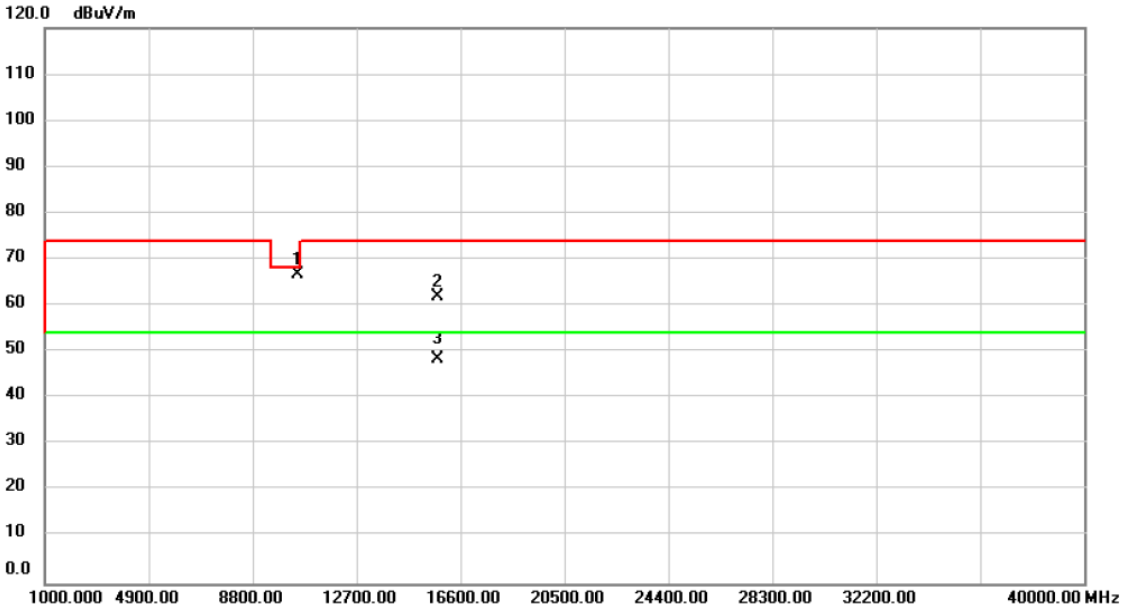
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		10400.000	61.73	1.62	63.35	68.20	-4.85	peak	
2		15600.000	60.96	4.32	65.28	74.00	-8.72	peak	
3	*	15600.000	45.01	4.32	49.33	54.00	-4.67	AVG	

Test Mode	UNII-1/ TX A Mode 5240MHz	Polarization	Vertical



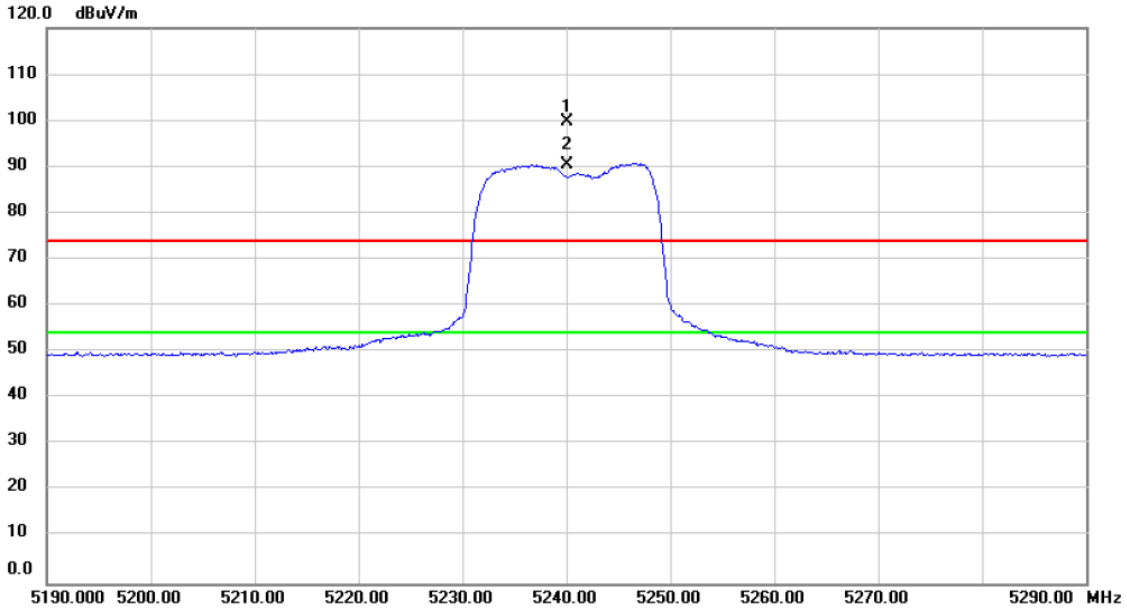
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	5240.000	75.86	37.40	113.26	74.00	39.26	peak	No Limit
2	*	5240.000	66.49	37.40	103.89	54.00	49.89	AVG	No Limit

Test Mode	UNII-1/ TX A Mode 5240MHz	Polarization	Vertical



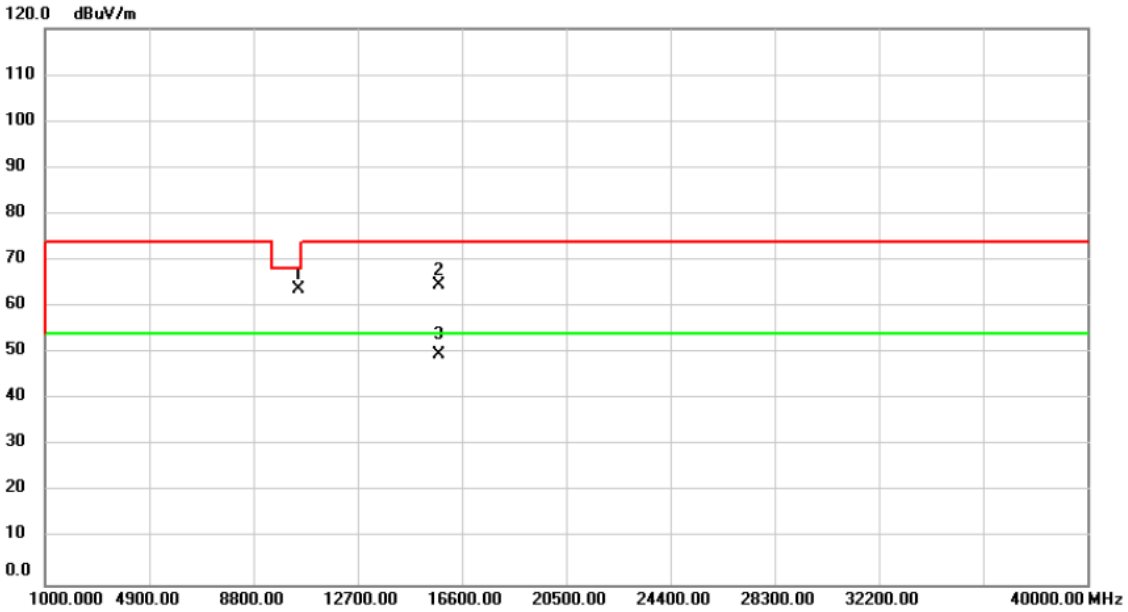
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	10480.000	65.10	1.69	66.79	68.20	-1.41	peak	
2		15720.000	57.70	4.11	61.81	74.00	-12.19	peak	
3		15720.000	44.35	4.11	48.46	54.00	-5.54	AVG	

Test Mode	UNII-1/ TX A Mode 5240MHz	Polarization	Horizontal



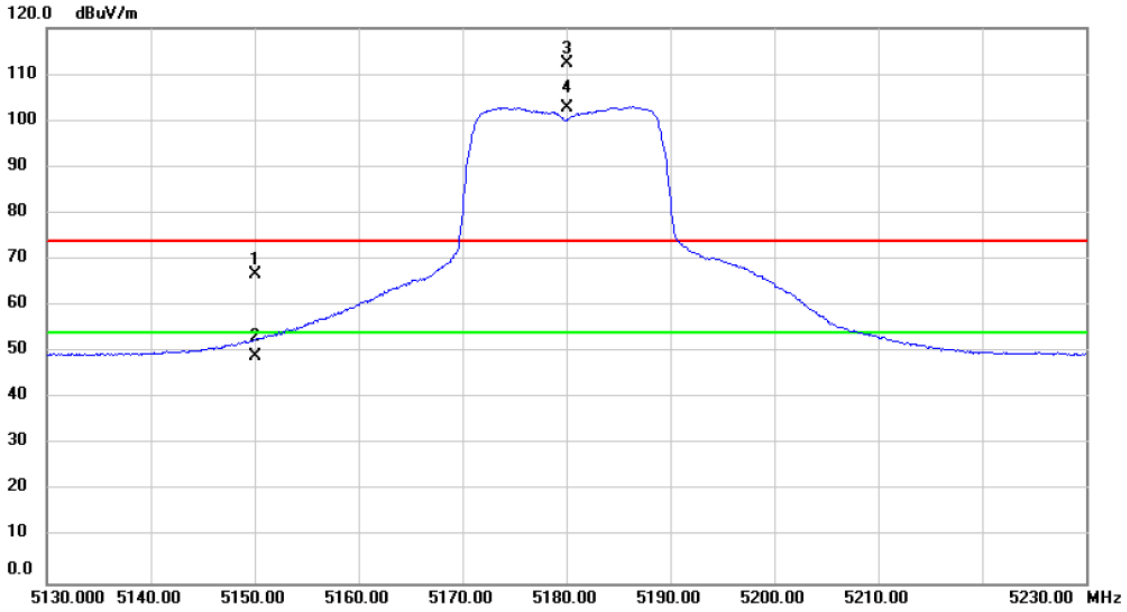
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	5240.000	62.36	37.40	99.76	74.00	25.76	peak	No Limit
2	*	5240.000	53.16	37.40	90.56	54.00	36.56	AVG	No Limit

Test Mode	UNII-1/ TX A Mode 5240MHz	Polarization	Horizontal



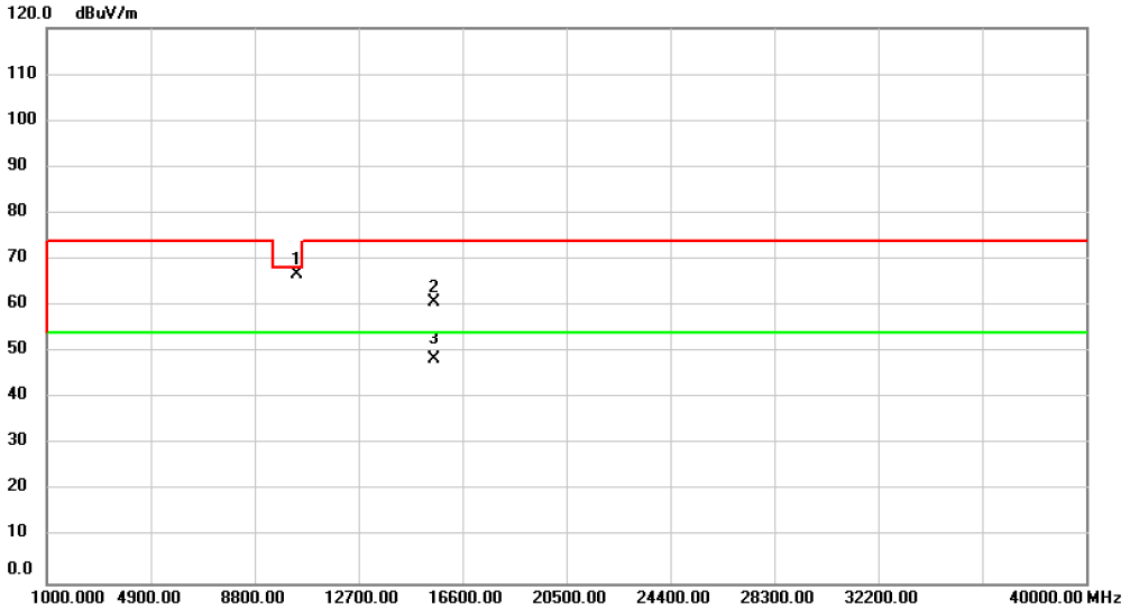
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		10480.000	61.92	1.69	63.61	68.20	-4.59	peak	
2		15720.000	60.55	4.11	64.66	74.00	-9.34	peak	
3	*	15720.000	45.65	4.11	49.76	54.00	-4.24	AVG	

Test Mode	UNII-1/ TX AC (VHT20) Mode 5180MHz	Polarization	Vertical



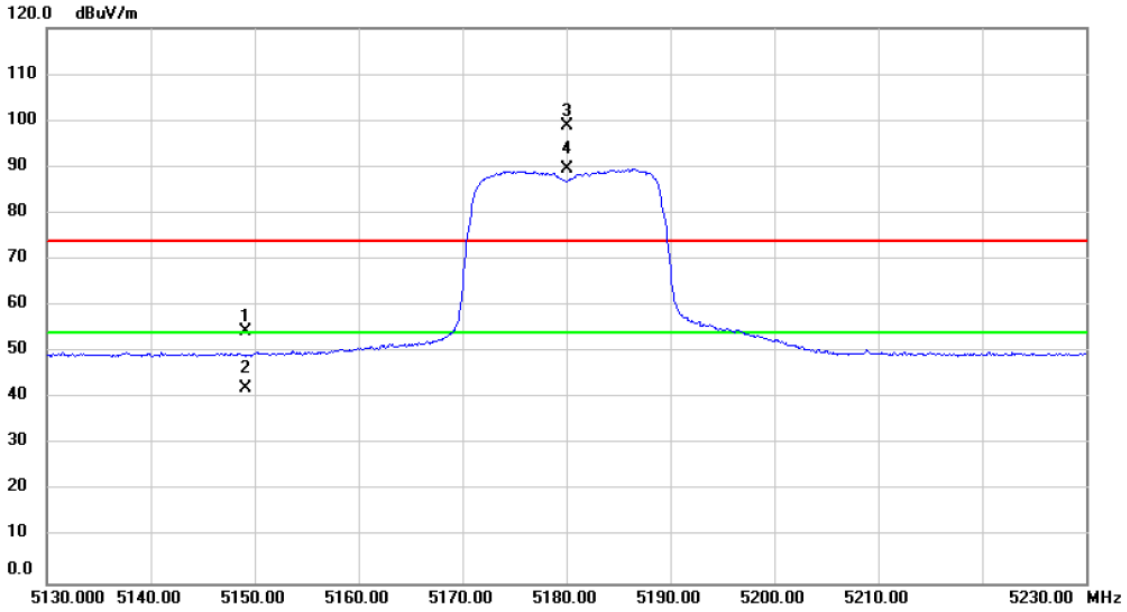
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5150.000	29.45	37.31	66.76	74.00	-7.24	peak	
2		5150.000	11.60	37.31	48.91	54.00	-5.09	AVG	
3	X	5180.000	74.88	37.34	112.22	74.00	38.22	peak	No Limit
4	*	5180.000	65.53	37.34	102.87	54.00	48.87	AVG	No Limit

Test Mode	UNII-1/ TX AC (VHT20) Mode 5180MHz	Polarization	Vertical



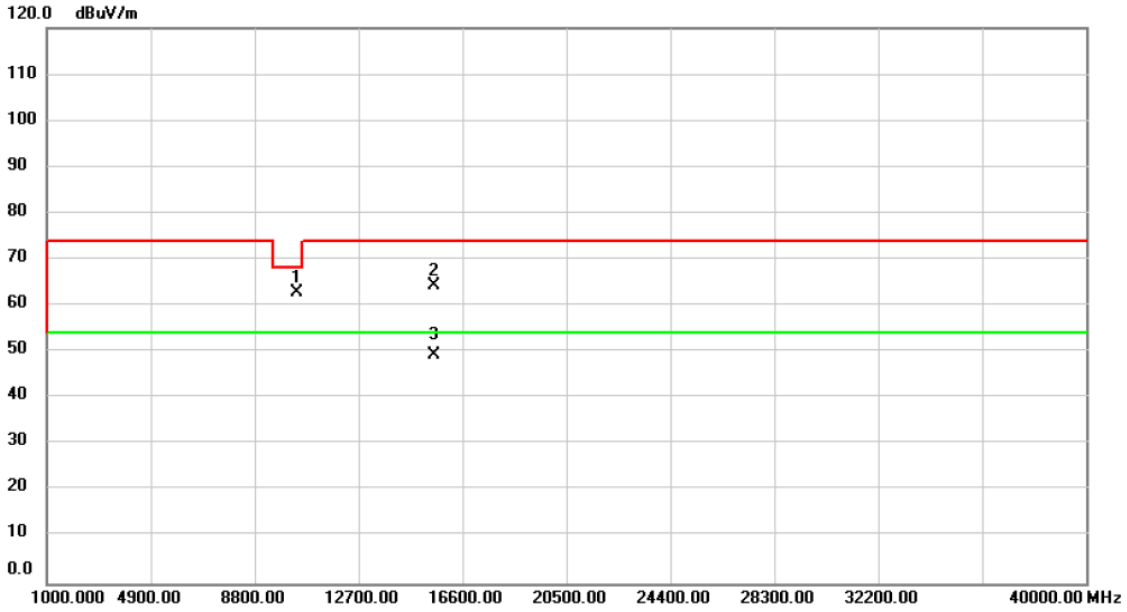
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	10360.000	65.05	1.57	66.62	68.20	-1.58	peak	
2		15540.000	56.43	4.42	60.85	74.00	-13.15	peak	
3		15540.000	44.17	4.42	48.59	54.00	-5.41	AVG	

Test Mode	UNII-1/ TX AC (VHT20) Mode 5180MHz	Polarization	Horizontal



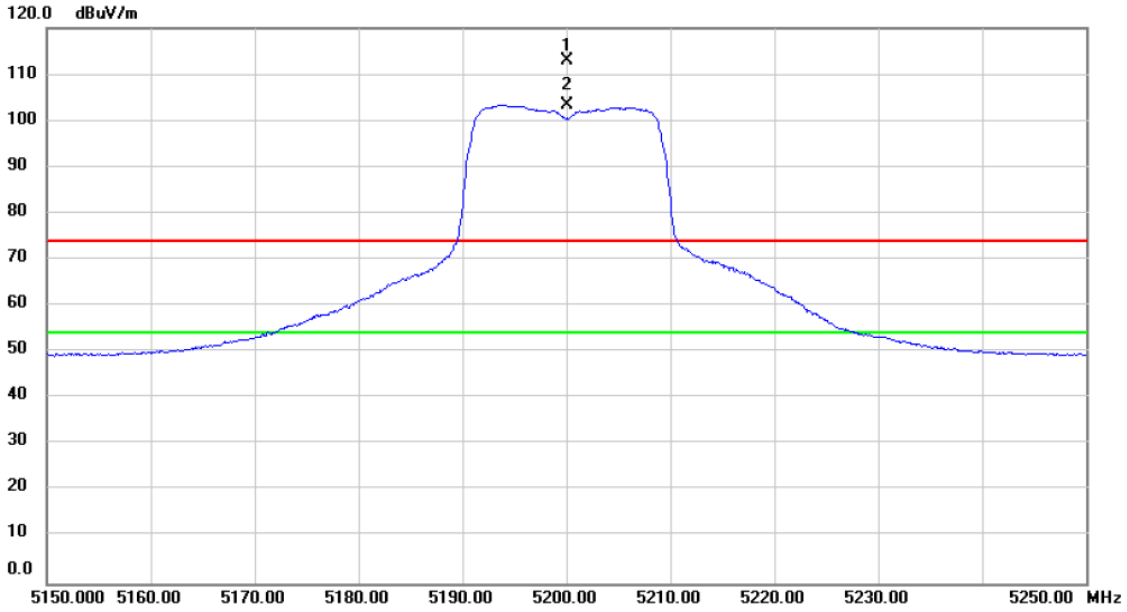
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5149.200	17.17	37.30	54.47	74.00	-19.53	peak	
2		5149.200	4.80	37.30	42.10	54.00	-11.90	AVG	
3	X	5180.000	61.50	37.34	98.84	74.00	24.84	peak	No Limit
4	*	5180.000	52.12	37.34	89.46	54.00	35.46	AVG	No Limit

Test Mode	UNII-1/ TX AC (VHT20) Mode 5180MHz	Polarization	Horizontal



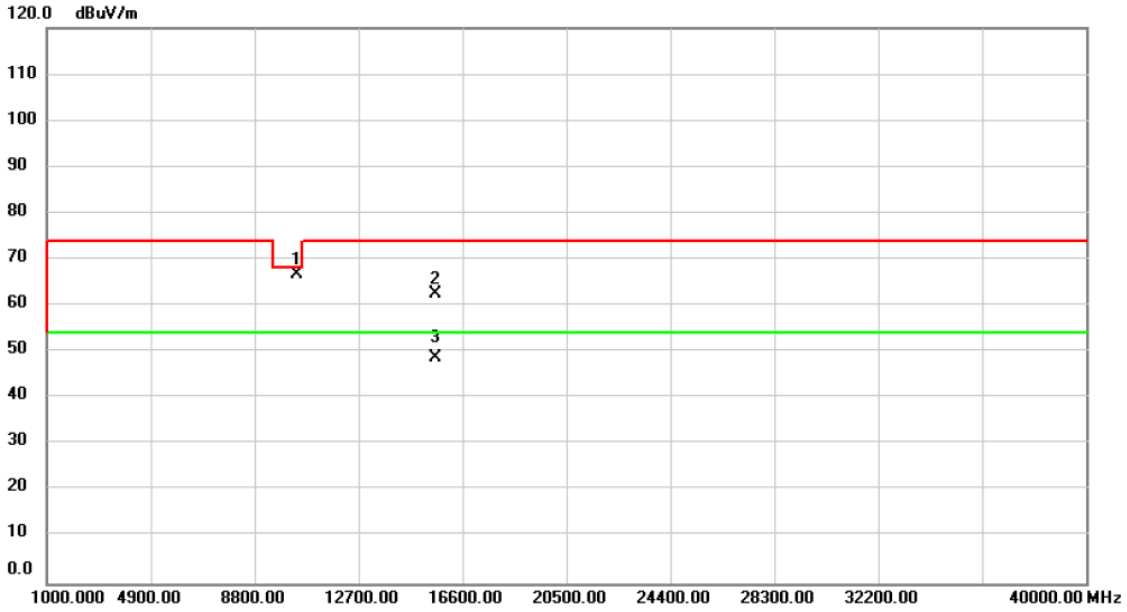
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		10360.000	61.20	1.57	62.77	68.20	-5.43	peak	
2		15540.000	59.91	4.42	64.33	74.00	-9.67	peak	
3	*	15540.000	44.91	4.42	49.33	54.00	-4.67	AVG	

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



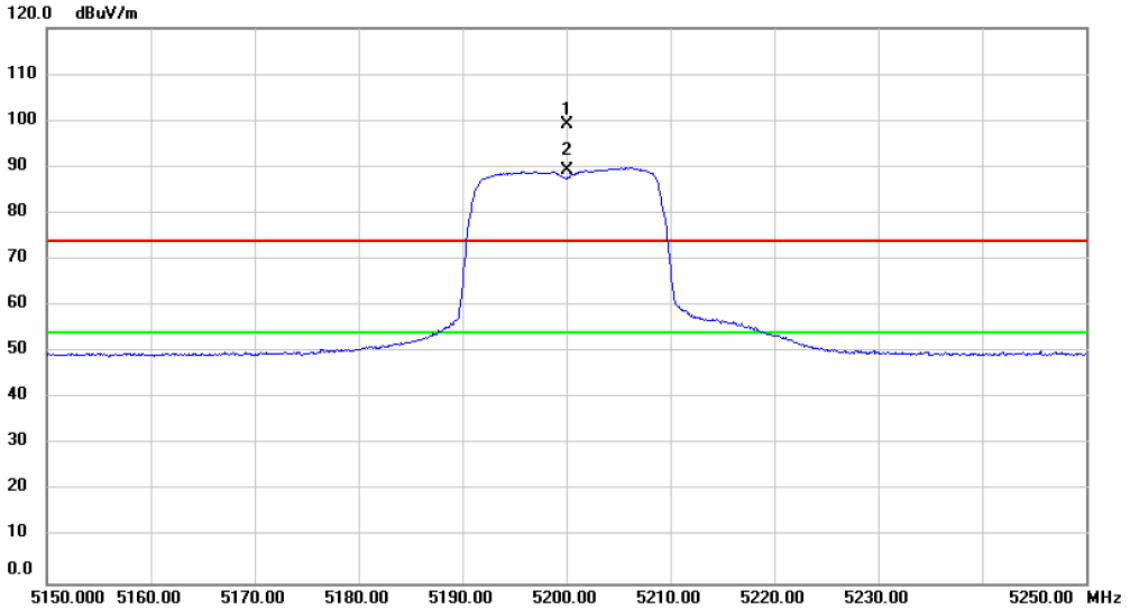
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	5200.000	75.63	37.36	112.99	74.00	38.99	peak	No Limit
2	*	5200.000	66.04	37.36	103.40	54.00	49.40	AVG	No Limit

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



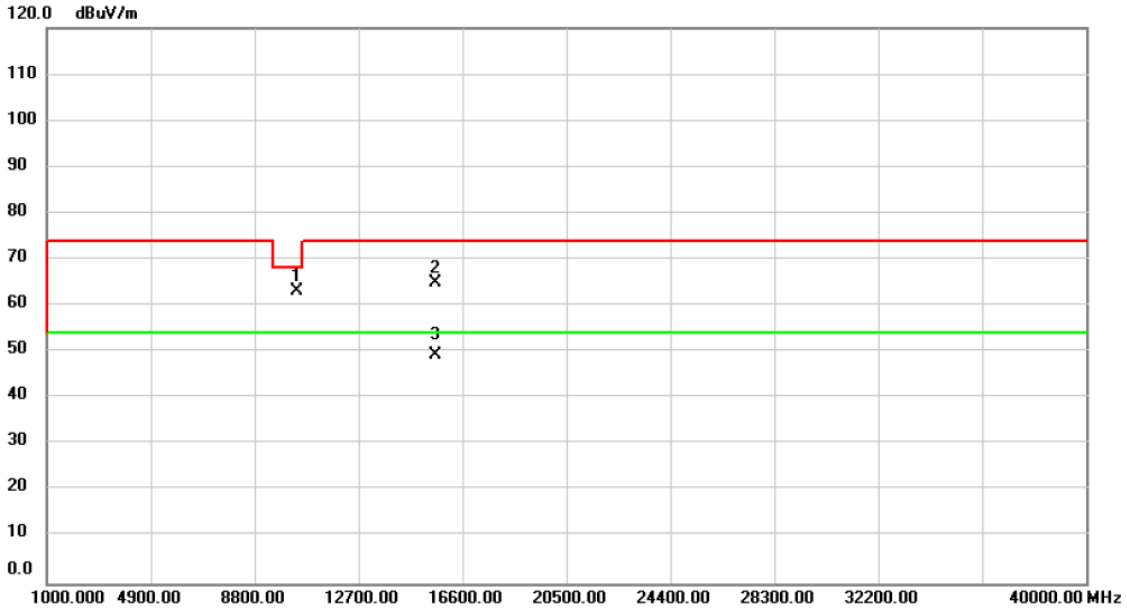
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	10400.000	65.23	1.62	66.85	68.20	-1.35	peak	
2		15600.000	58.36	4.32	62.68	74.00	-11.32	peak	
3		15600.000	44.36	4.32	48.68	54.00	-5.32	AVG	

Test Mode	UNII-1/ TX AC (VHT20) Mode 5200MHz	Polarization	Horizontal



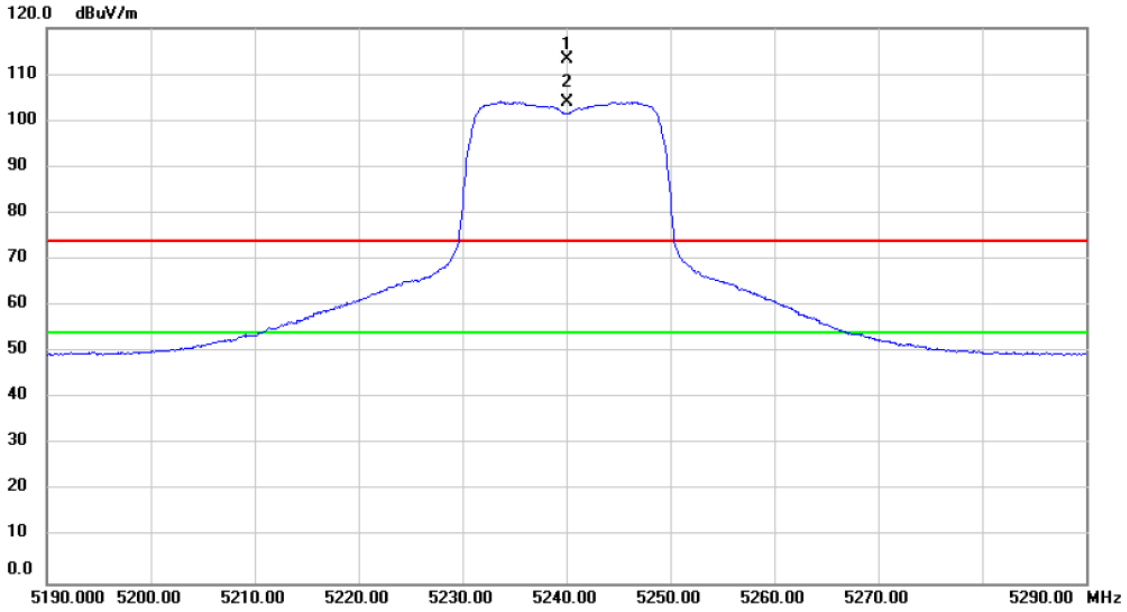
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	5200.000	61.75	37.36	99.11	74.00	25.11	peak	No Limit
2	*	5200.000	51.99	37.36	89.35	54.00	35.35	AVG	No Limit

Test Mode	UNII-1/ TX AC (VHT20) Mode 5200MHz	Polarization	Horizontal



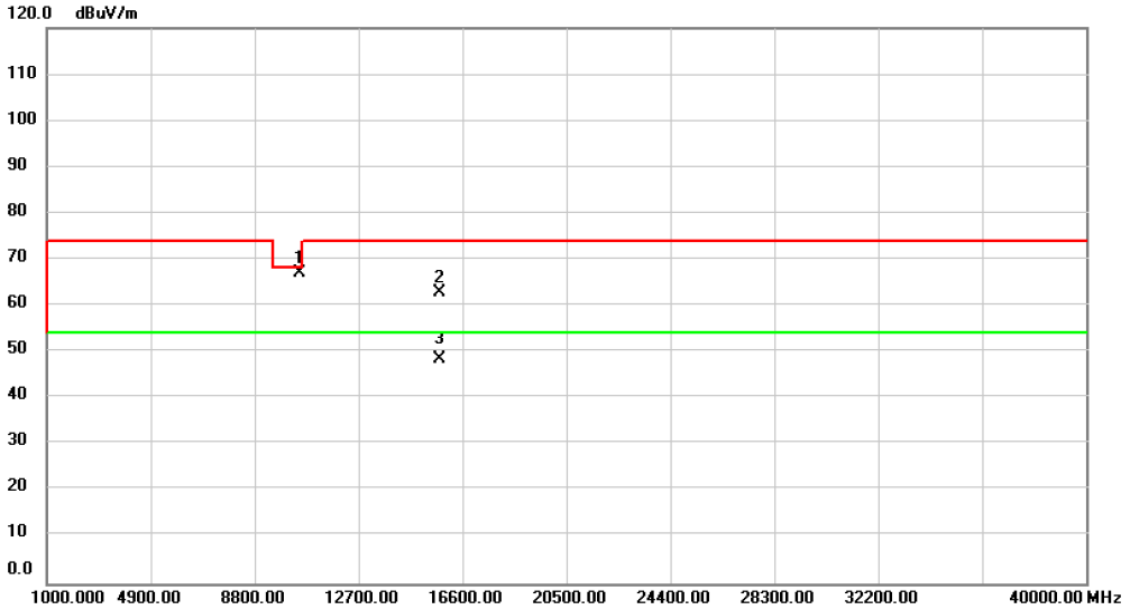
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		10400.000	61.62	1.62	63.24	68.20	-4.96	peak	
2		15600.000	60.59	4.32	64.91	74.00	-9.09	peak	
3	*	15600.000	44.90	4.32	49.22	54.00	-4.78	AVG	

Test Mode	UNII-1/ TX AC (VHT20) Mode 5240MHz	Polarization	Vertical



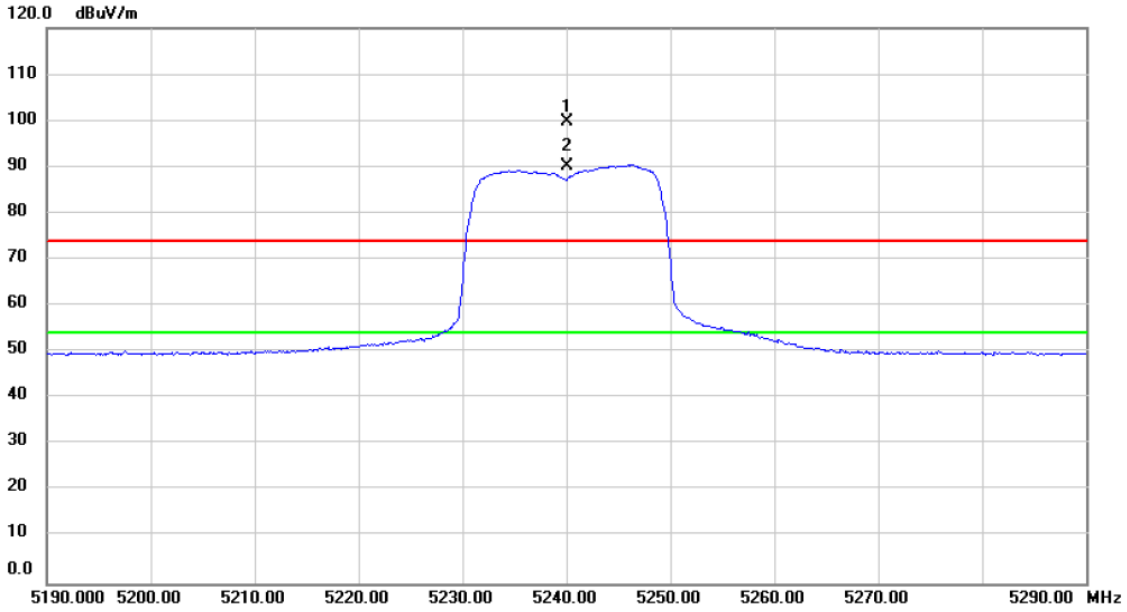
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	5240.000	75.92	37.40	113.32	74.00	39.32	peak	No Limit
2	*	5240.000	66.41	37.40	103.81	54.00	49.81	AVG	No Limit

Test Mode	UNII-1/ TX AC (VHT20) Mode 5240MHz	Polarization	Vertical



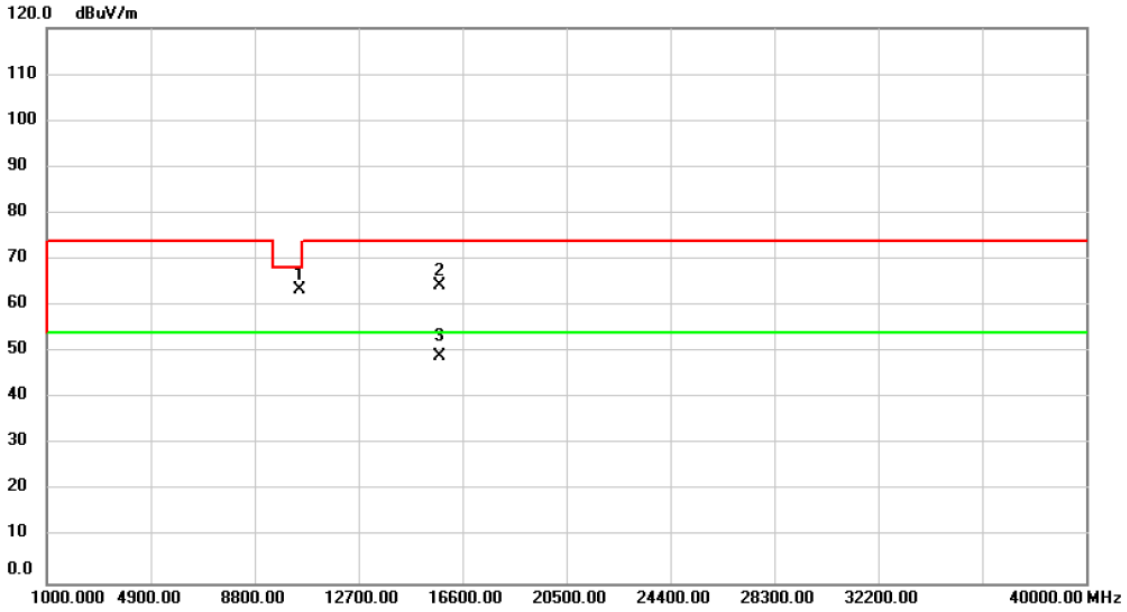
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	10480.000	65.49	1.69	67.18	68.20	-1.02	peak	
2		15720.000	58.89	4.11	63.00	74.00	-11.00	peak	
3		15720.000	44.39	4.11	48.50	54.00	-5.50	AVG	

Test Mode	UNII-1/ TX AC (VHT20) Mode 5240MHz	Polarization	Horizontal



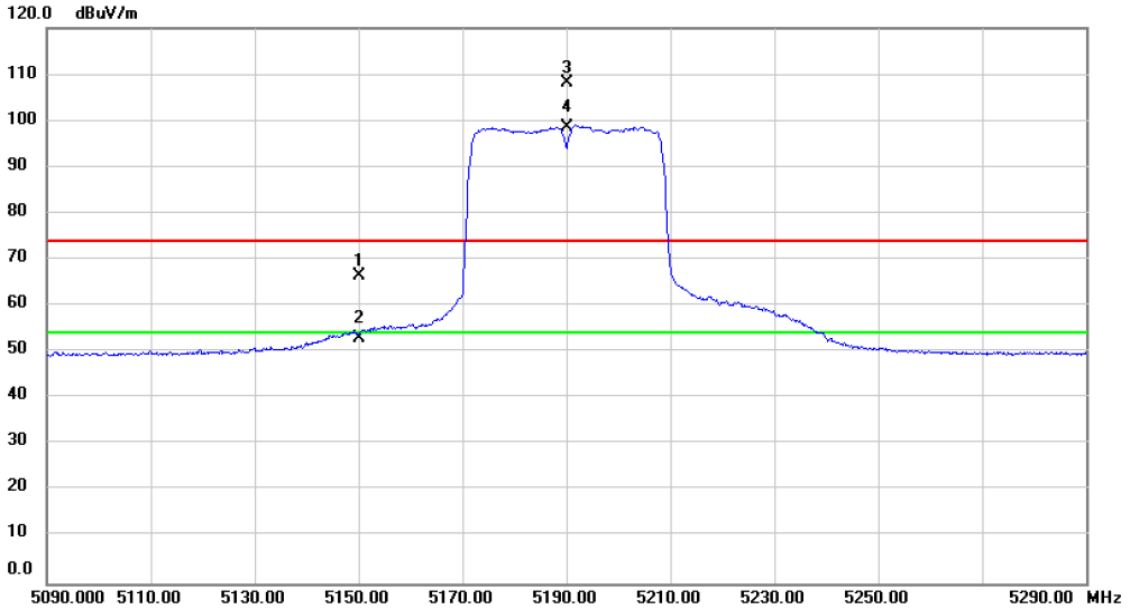
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	5240.000	62.29	37.40	99.69	74.00	25.69	peak	No Limit
2	*	5240.000	52.69	37.40	90.09	54.00	36.09	AVG	No Limit

Test Mode	UNII-1/ TX AC (VHT20) Mode 5240MHz	Polarization	Horizontal



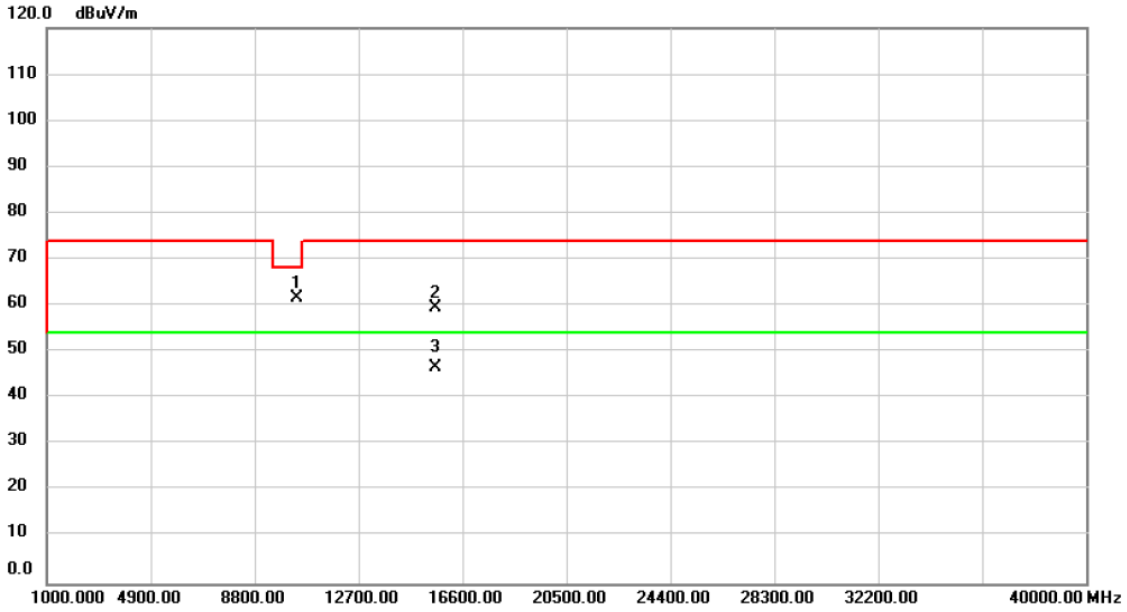
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	10480.000	61.82	1.69	63.51	68.20	-4.69	peak	
2		15720.000	60.39	4.11	64.50	74.00	-9.50	peak	
3		15720.000	44.94	4.11	49.05	54.00	-4.95	AVG	

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



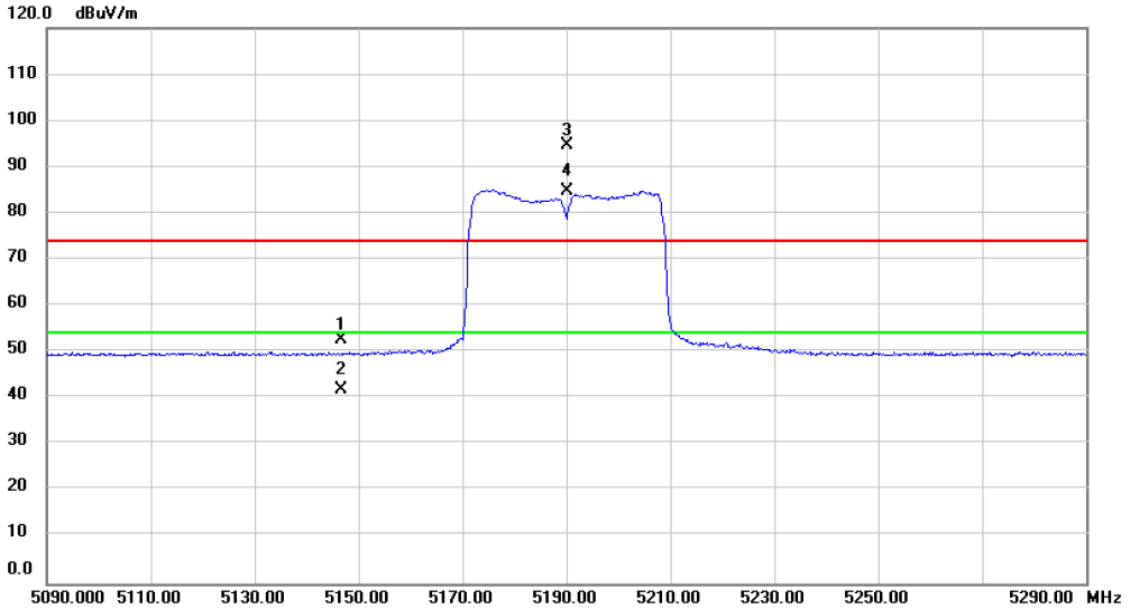
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5150.000	29.12	37.31	66.43	74.00	-7.57	peak	
2		5150.000	15.67	37.31	52.98	54.00	-1.02	AVG	
3	X	5190.000	70.78	37.34	108.12	74.00	34.12	peak	No Limit
4	*	5190.000	61.17	37.34	98.51	54.00	44.51	AVG	No Limit

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



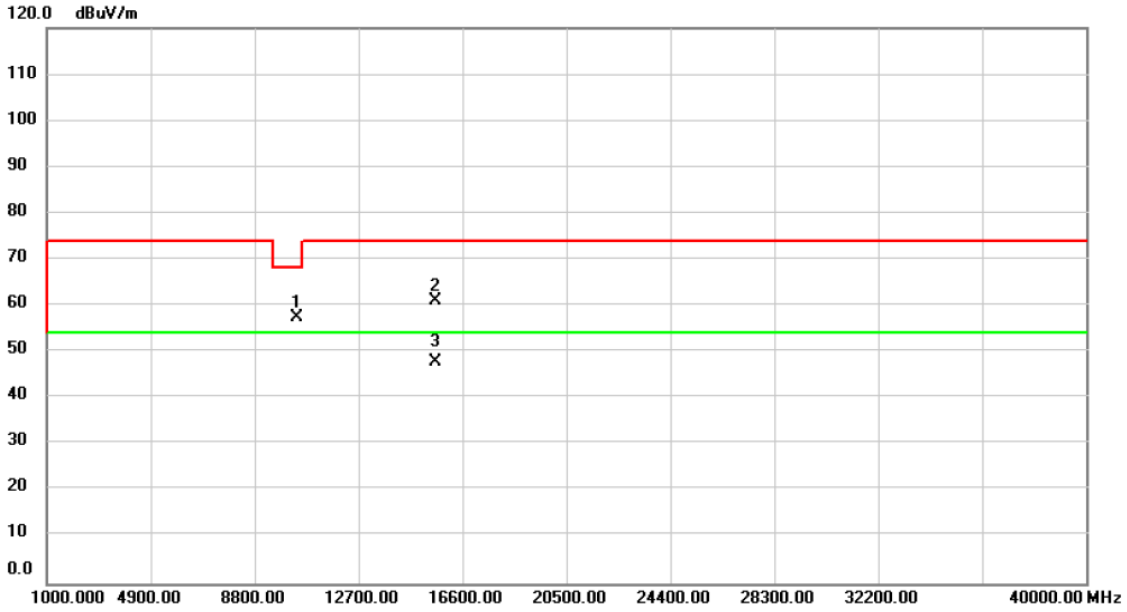
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	10380.000	60.03	1.59	61.62	68.20	-6.58	peak	
2		15570.000	55.18	4.37	59.55	74.00	-14.45	peak	
3		15570.000	42.40	4.37	46.77	54.00	-7.23	AVG	

Test Mode	UNII-1/ TX AC (VHT40) Mode 5190MHz	Polarization	Horizontal



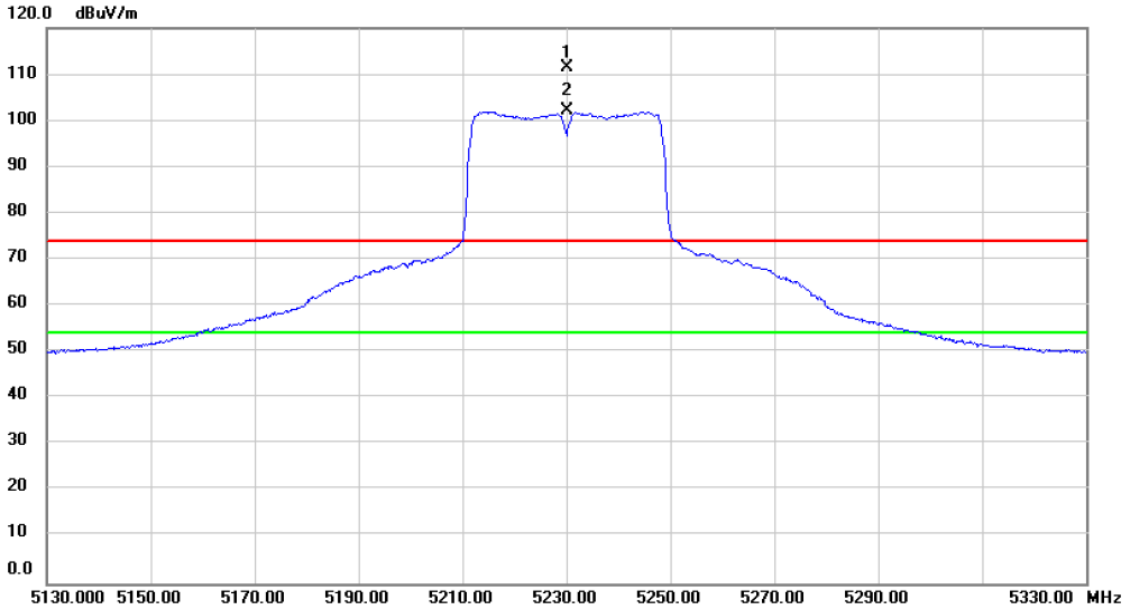
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5146.700	15.27	37.30	52.57	74.00	-21.43	peak	
2		5146.700	4.50	37.30	41.80	54.00	-12.20	AVG	
3	X	5190.000	57.18	37.34	94.52	74.00	20.52	peak	No Limit
4	*	5190.000	47.43	37.34	84.77	54.00	30.77	AVG	No Limit

Test Mode	UNII-1/ TX AC (VHT40) Mode 5190MHz	Polarization	Horizontal



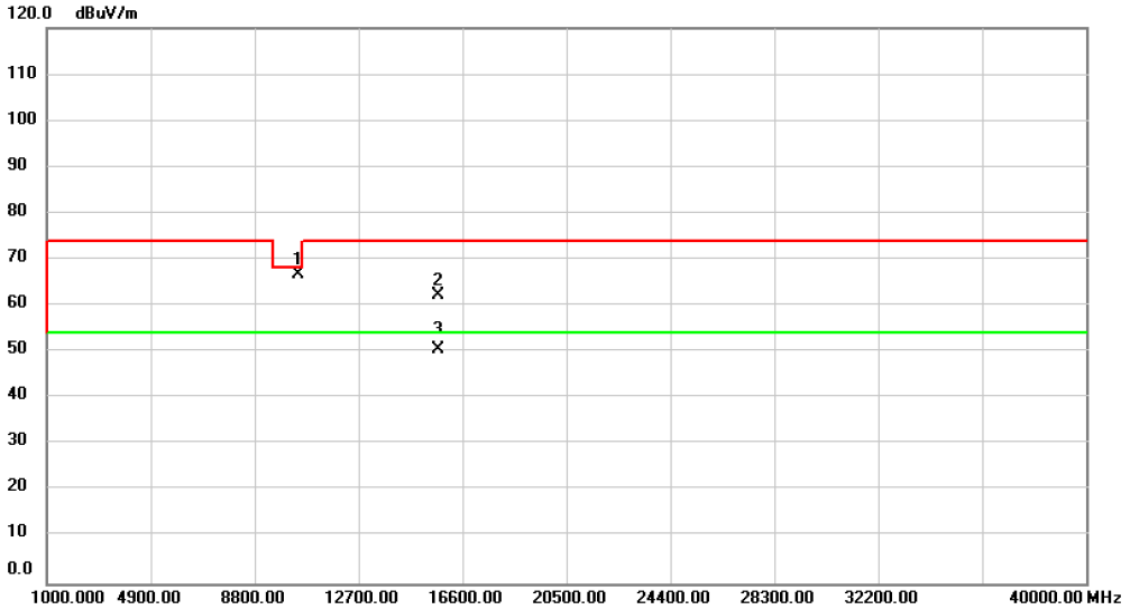
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		10380.000	55.84	1.59	57.43	68.20	-10.77	peak	
2		15570.000	56.63	4.37	61.00	74.00	-13.00	peak	
3	*	15570.000	43.39	4.37	47.76	54.00	-6.24	AVG	

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



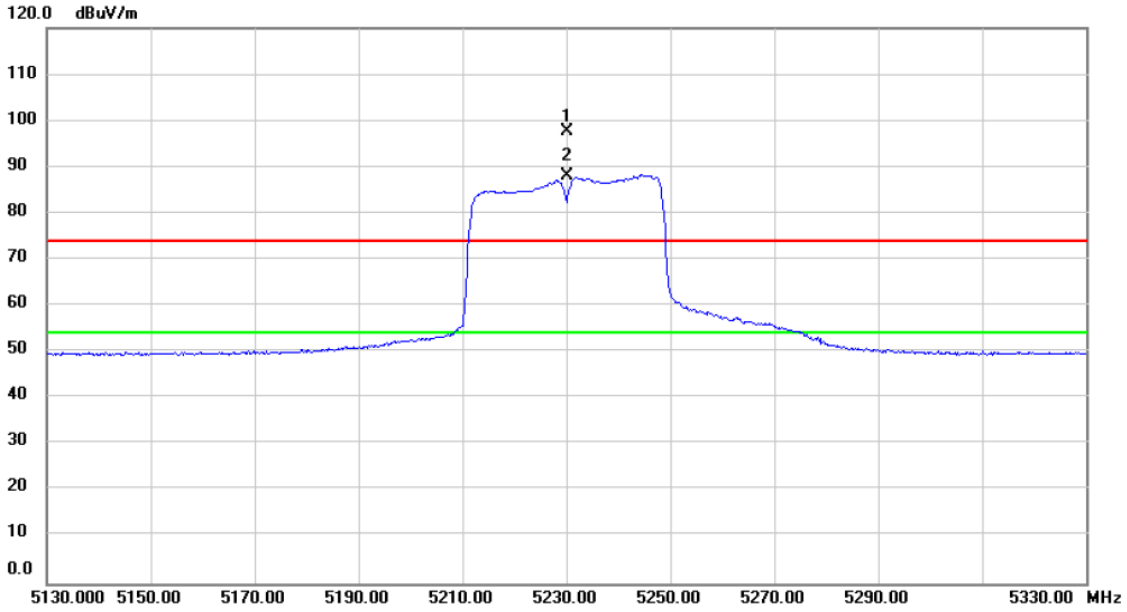
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	5230.000	73.91	37.40	111.31	74.00	37.31	peak	No Limit
2	*	5230.000	64.78	37.40	102.18	54.00	48.18	AVG	No Limit

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



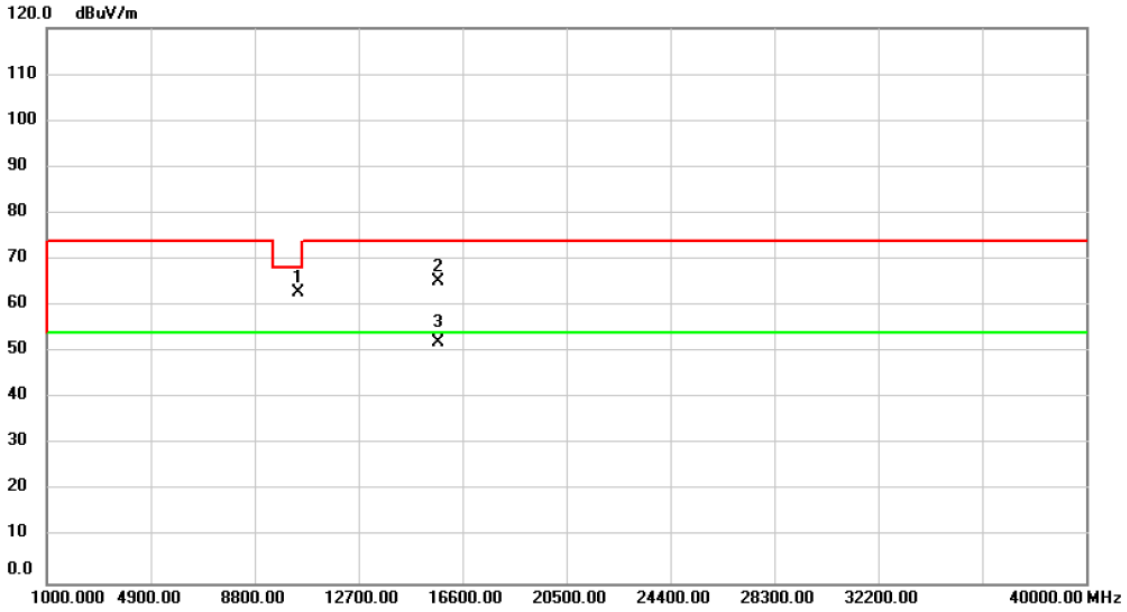
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	10460.000	65.20	1.68	66.88	68.20	-1.32	peak	
2		15690.000	58.20	4.17	62.37	74.00	-11.63	peak	
3		15690.000	46.36	4.17	50.53	54.00	-3.47	AVG	

Test Mode	UNII-1/ TX AC (VHT40) Mode 5230MHz	Polarization	Horizontal



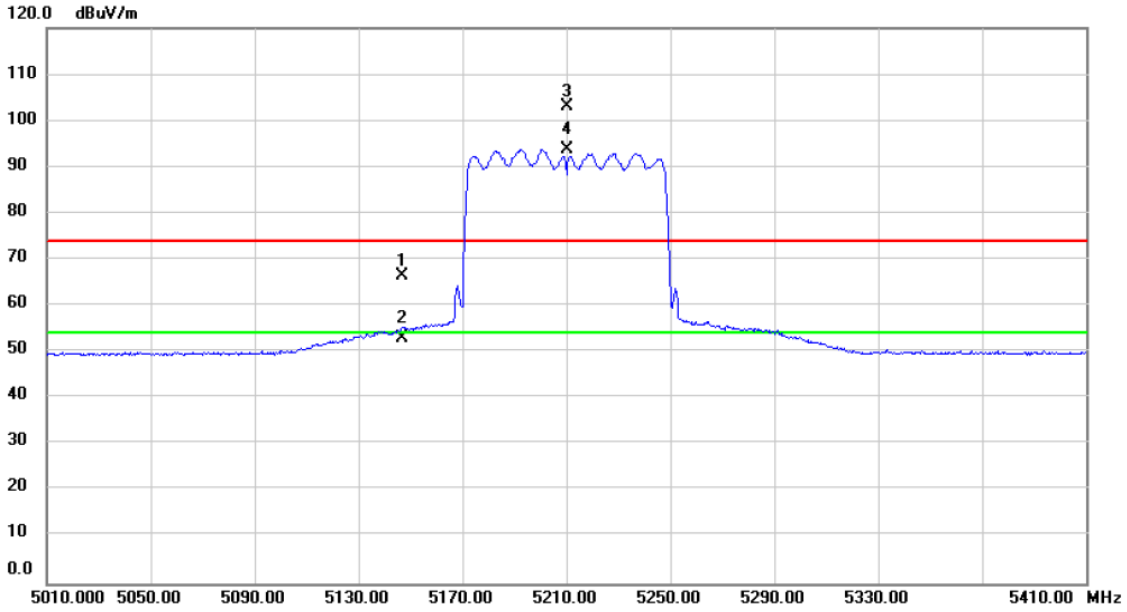
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	5230.000	60.40	37.40	97.80	74.00	23.80	peak	No Limit
2	*	5230.000	50.76	37.40	88.16	54.00	34.16	AVG	No Limit

Test Mode	UNII-1/ TX AC (VHT40) Mode 5230MHz	Polarization	Horizontal



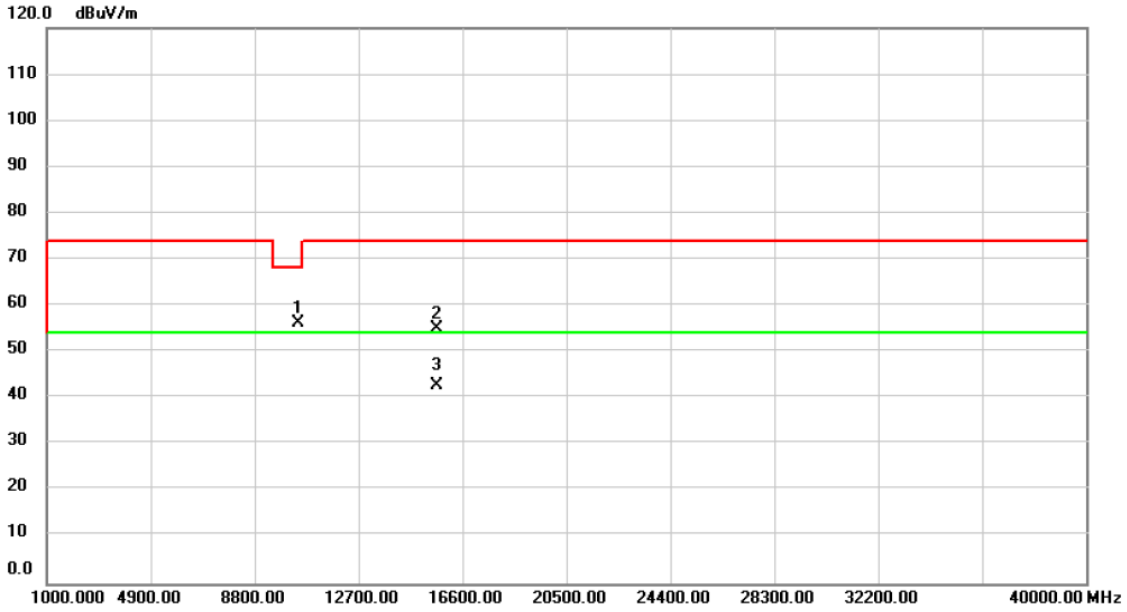
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		10460.000	61.20	1.68	62.88	68.20	-5.32	peak	
2		15690.000	60.98	4.17	65.15	74.00	-8.85	peak	
3	*	15690.000	47.75	4.17	51.92	54.00	-2.08	AVG	

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



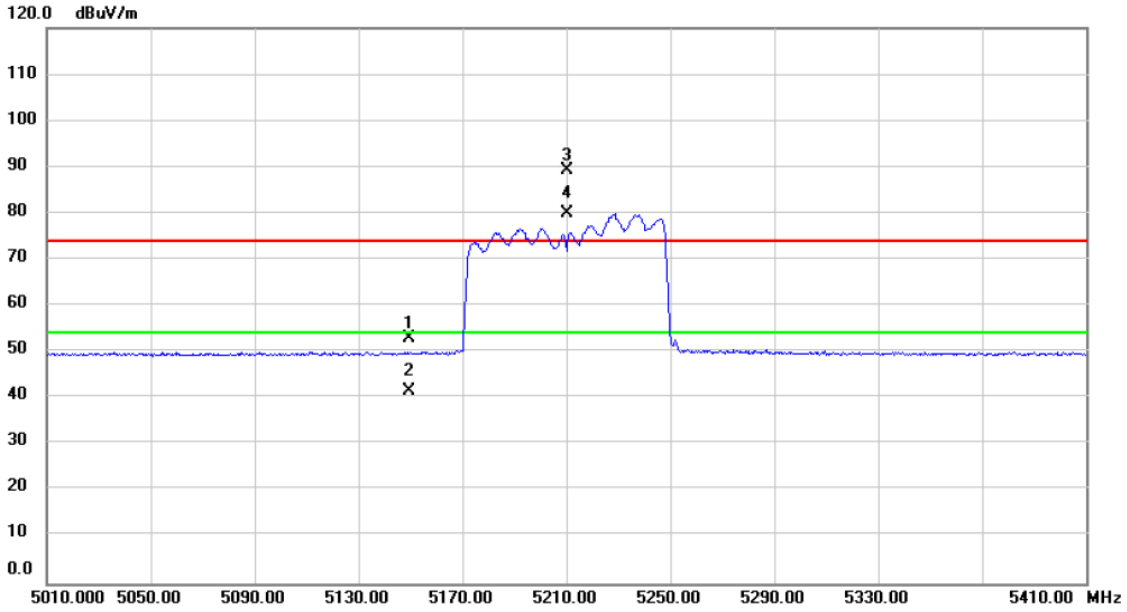
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5146.920	29.25	37.30	66.55	74.00	-7.45	peak	
2		5146.920	15.69	37.30	52.99	54.00	-1.01	AVG	
3	X	5210.000	65.75	37.38	103.13	74.00	29.13	peak	No Limit
4	*	5210.000	56.25	37.38	93.63	54.00	39.63	AVG	No Limit

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



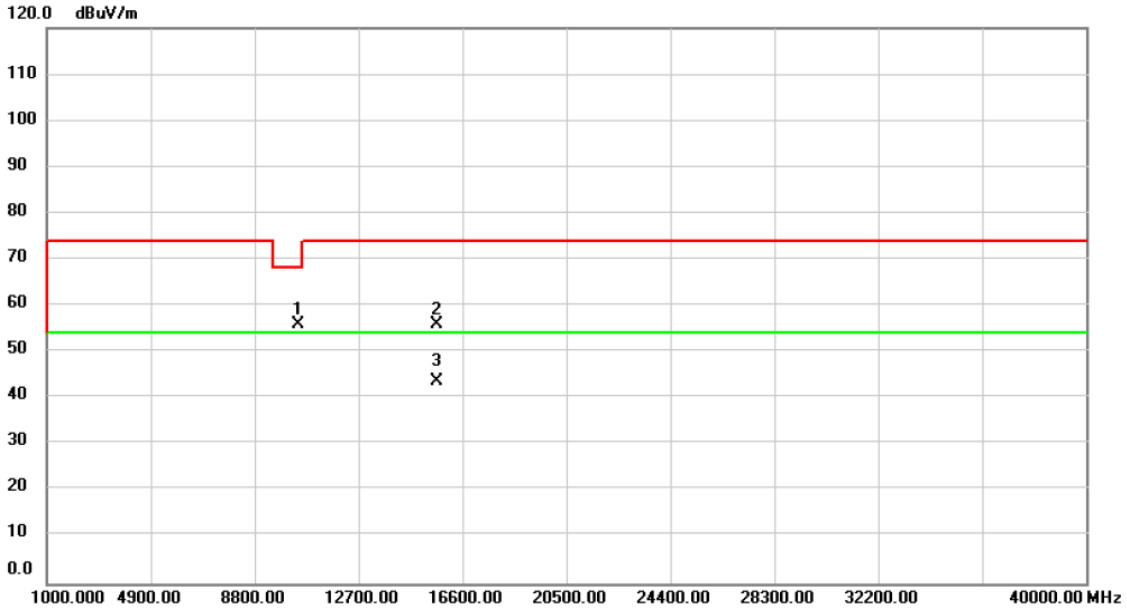
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		10420.000	54.48	1.64	56.12	68.20	-12.08	peak	
2		15630.000	50.74	4.27	55.01	74.00	-18.99	peak	
3	*	15630.000	38.44	4.27	42.71	54.00	-11.29	AVG	

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



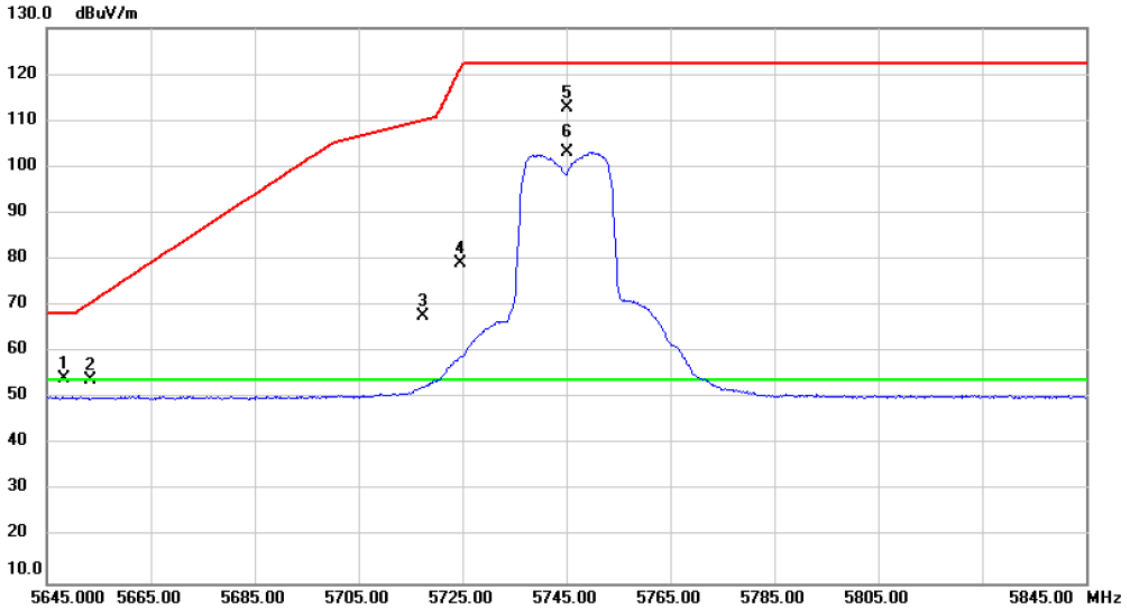
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5149.720	15.62	37.30	52.92	74.00	-21.08	peak	
2		5149.720	4.20	37.30	41.50	54.00	-12.50	AVG	
3	X	5210.000	51.99	37.38	89.37	74.00	15.37	peak	No Limit
4	*	5210.000	42.56	37.38	79.94	54.00	25.94	AVG	No Limit

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



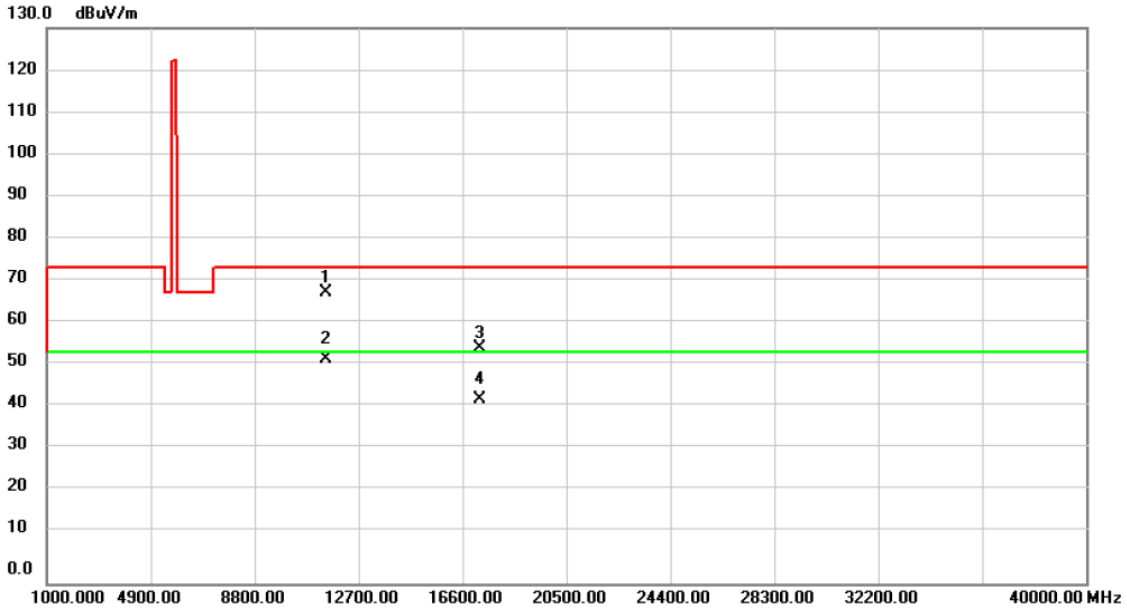
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		10420.000	54.34	1.64	55.98	68.20	-12.22	peak	
2		15630.000	51.62	4.27	55.89	74.00	-18.11	peak	
3	*	15630.000	39.35	4.27	43.62	54.00	-10.38	AVG	

Test Mode	UNII-3/ TX A Mode 5745MHz	Polarization	Vertical



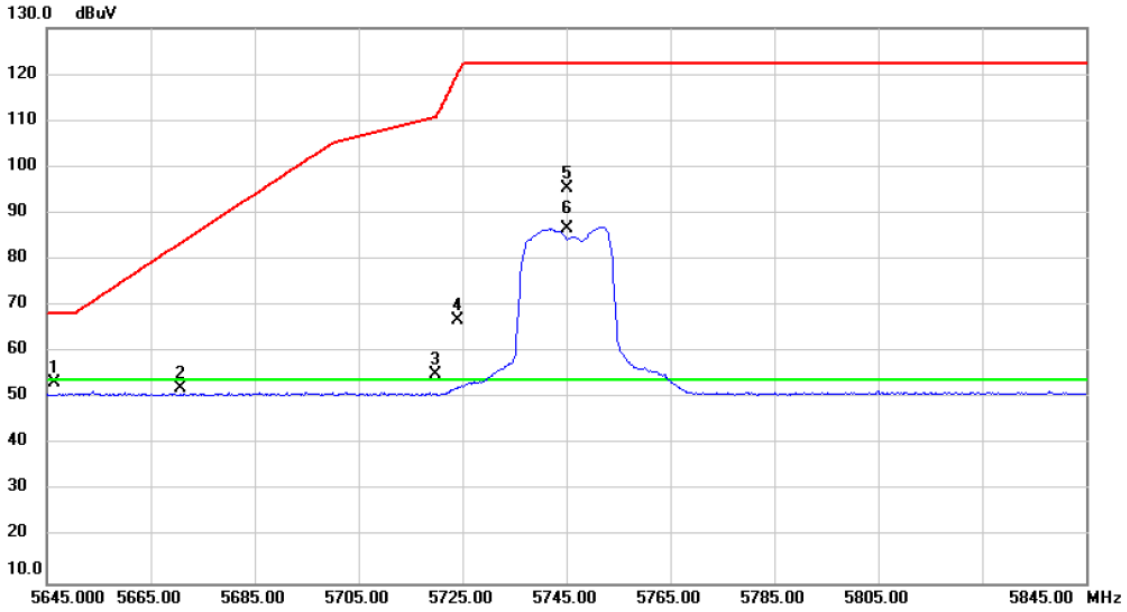
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5648.275	16.22	38.00	54.22	68.20	-13.98	peak	
2		5653.350	16.03	38.01	54.04	70.69	-16.65	peak	
3		5717.520	29.74	38.14	67.88	110.11	-42.23	peak	
4		5724.665	40.88	38.15	79.03	121.44	-42.41	peak	
5		5745.000	74.65	38.19	112.84	122.20	-9.36	peak	No Limit
6	*	5745.000	65.01	38.19	103.20	54.00	49.20	AVG	No Limit

Test Mode	UNII-3/ TX A Mode 5745MHz	Polarization	Vertical



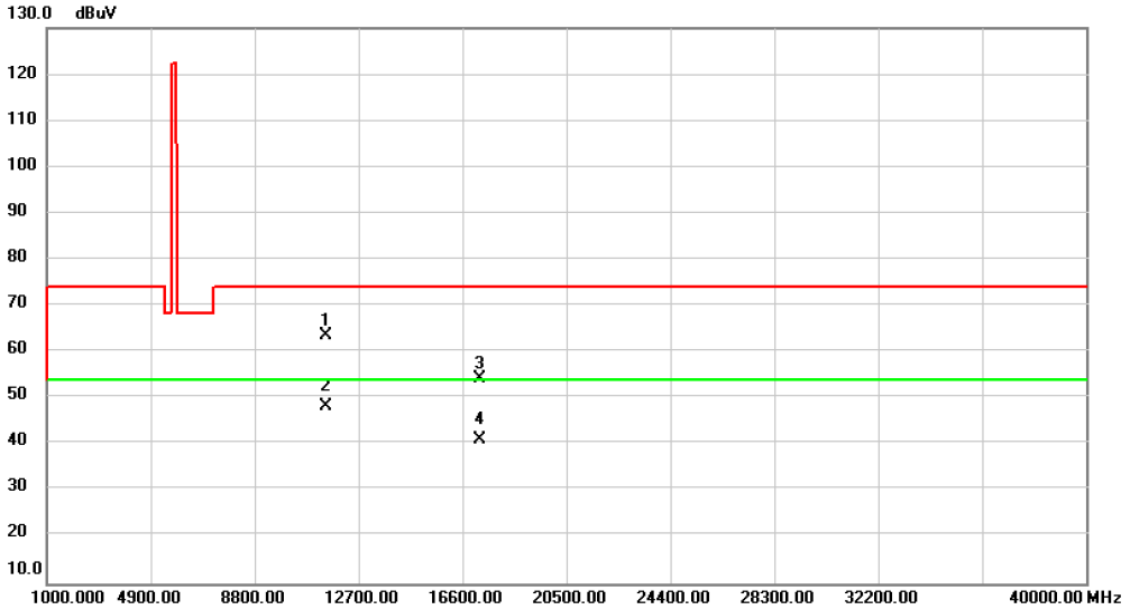
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		11490.00	65.36	2.89	68.25	74.00	-5.75	peak	
2	*	11490.00	49.62	2.89	52.51	54.00	-1.49	AVG	
3		17235.00	48.46	6.79	55.25	74.00	-18.75	peak	
4		17235.00	36.16	6.79	42.95	54.00	-11.05	AVG	

Test Mode	UNII-3/ TX A Mode 5745MHz	Polarization	Horizontal



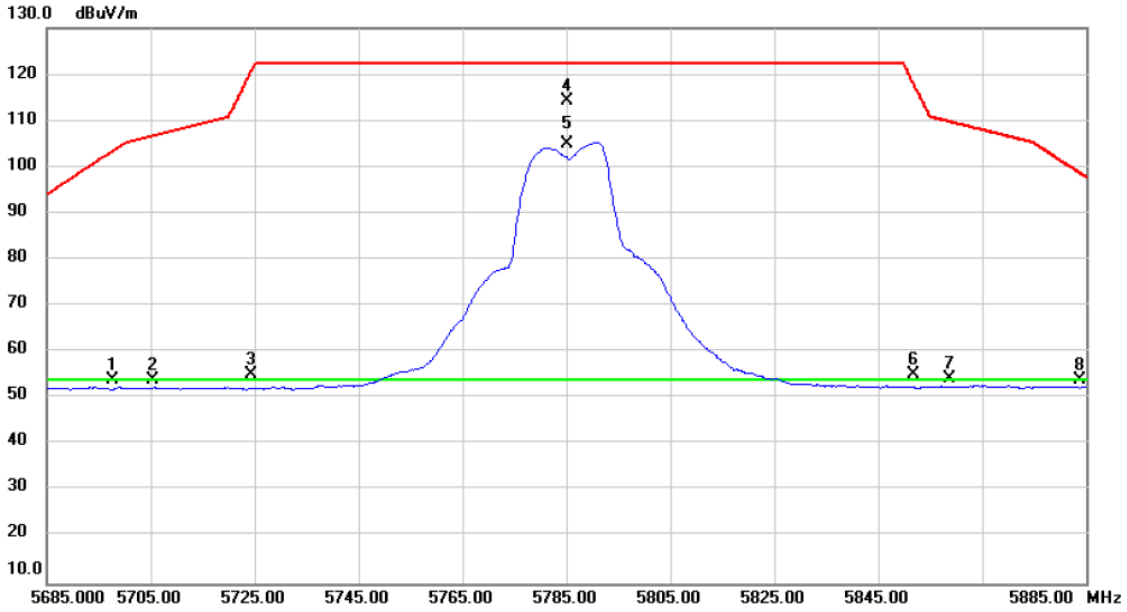
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		5646.545	15.44	37.99	53.43	68.20	-14.77	peak	
2		5670.800	14.15	38.04	52.19	83.63	-31.44	peak	
3		5719.760	16.93	38.14	55.07	110.73	-55.66	peak	
4		5724.035	28.81	38.15	66.96	120.00	-53.04	peak	
5		5745.000	57.30	38.19	95.49	122.20	-26.71	peak	No Limit
6	*	5745.000	48.56	38.19	86.75	54.00	32.75	AVG	No Limit

Test Mode	UNII-3/ TX A Mode 5745MHz	Polarization	Horizontal



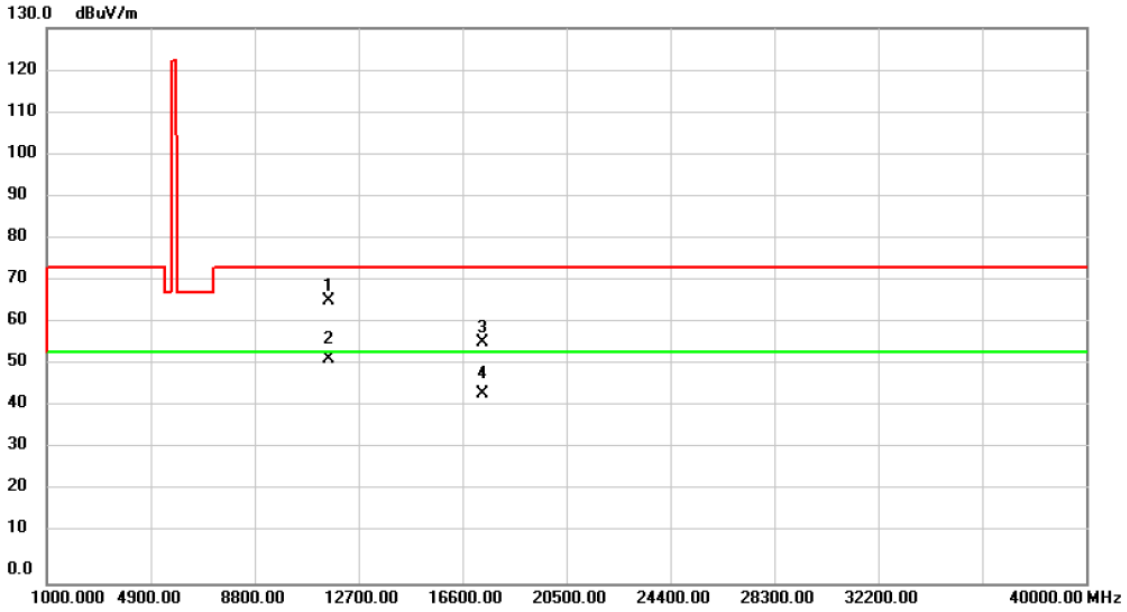
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		11490.00	61.41	2.12	63.53	74.00	-10.47	peak	
2	*	11490.00	46.28	2.12	48.40	54.00	-5.60	AVG	
3		17235.00	48.26	5.89	54.15	74.00	-19.85	peak	
4		17235.00	35.26	5.89	41.15	54.00	-12.85	AVG	

Test Mode	UNII-3/ TX A Mode 5785MHz	Polarization	Vertical



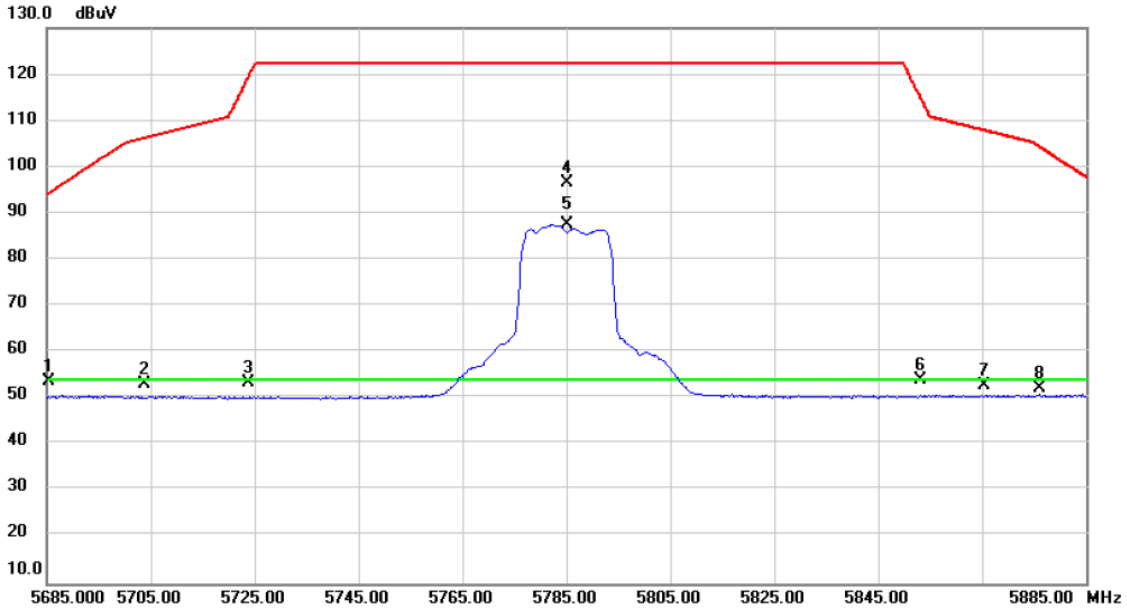
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5697.555	15.77	38.10	53.87	103.40	-49.53	peak	
2		5705.380	15.98	38.11	54.09	106.71	-52.62	peak	
3		5724.385	16.99	38.15	55.14	120.80	-65.66	peak	
4		5785.000	76.04	38.28	114.32	122.20	-7.88	peak	No Limit
5	*	5785.000	66.82	38.28	105.10	54.00	51.10	AVG	No Limit
6		5851.680	16.64	38.41	55.05	118.37	-63.32	peak	
7		5858.820	15.68	38.43	54.11	109.73	-55.62	peak	
8		5883.770	15.41	38.48	53.89	98.69	-44.80	peak	

Test Mode	UNII-3/ TX A Mode 5785MHz	Polarization	Vertical



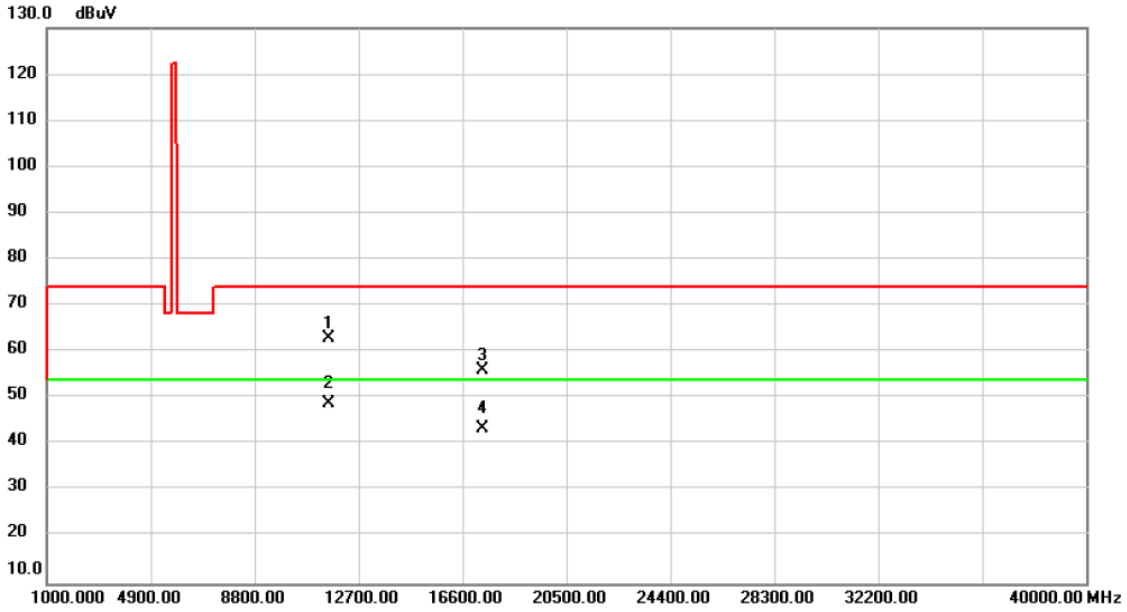
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		11570.00	63.26	2.72	65.98	74.00	-8.02	peak	
2	*	11570.00	49.78	2.72	52.50	54.00	-1.50	AVG	
3		17355.00	48.93	7.46	56.39	74.00	-17.61	peak	
4		17355.00	36.91	7.46	44.37	54.00	-9.63	AVG	

Test Mode	UNII-3/ TX A Mode 5785MHz	Polarization	Horizontal



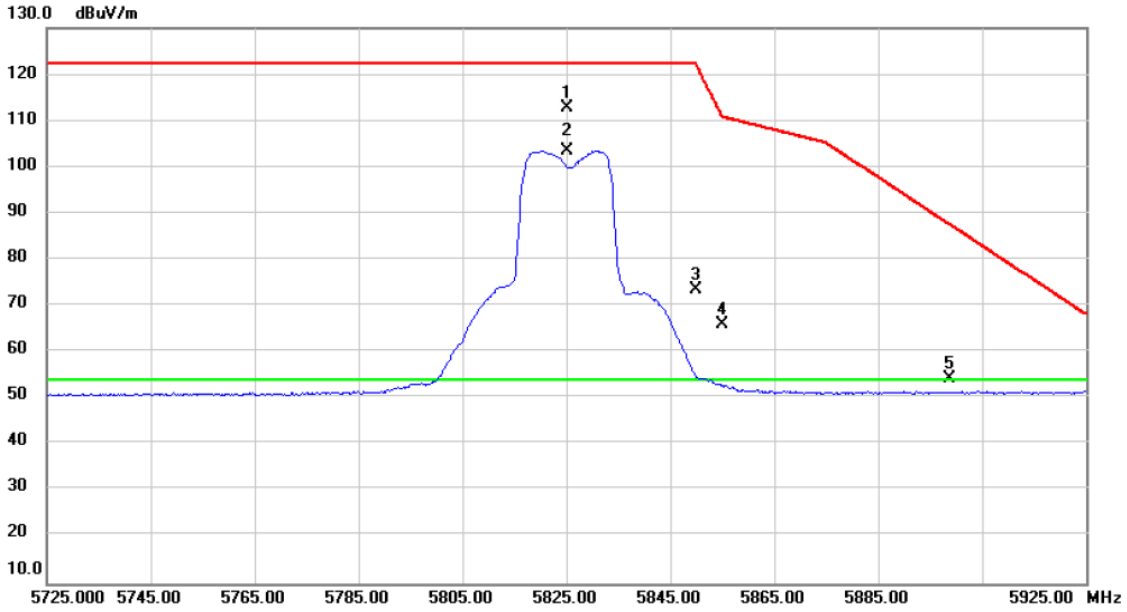
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		5685.495	15.49	38.08	53.57	94.50	-40.93	peak	
2		5703.860	14.83	38.11	52.94	106.28	-53.34	peak	
3		5723.870	15.05	38.15	53.20	119.62	-66.42	peak	
4		5785.000	58.23	38.28	96.51	122.20	-25.69	peak	No Limit
5	*	5785.000	49.13	38.28	87.41	54.00	33.41	AVG	No Limit
6		5853.235	15.63	38.42	54.05	114.82	-60.77	peak	
7		5865.500	14.38	38.44	52.82	107.86	-55.04	peak	
8		5875.940	13.56	38.46	52.02	104.50	-52.48	peak	

Test Mode	UNII-3/ TX A Mode 5785MHz	Polarization	Horizontal



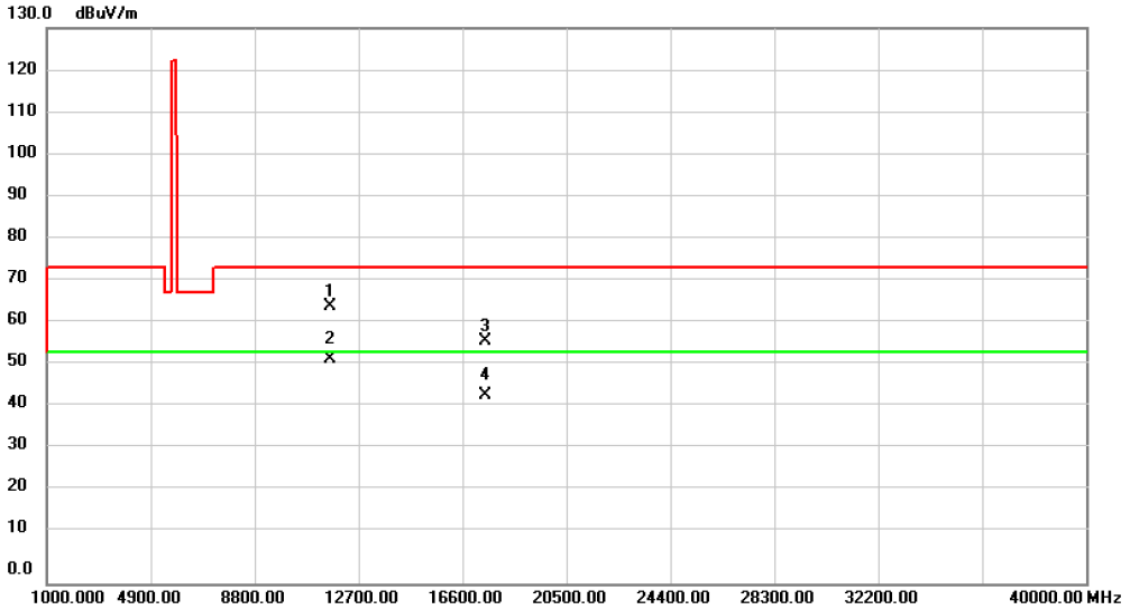
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		11570.00	61.04	1.94	62.98	74.00	-11.02	peak	
2	*	11570.00	46.92	1.94	48.86	54.00	-5.14	AVG	
3		17355.00	49.36	6.57	55.93	74.00	-18.07	peak	
4		17355.00	36.91	6.57	43.48	54.00	-10.52	AVG	

Test Mode	UNII-3/ TX A Mode 5825MHz	Polarization	Vertical



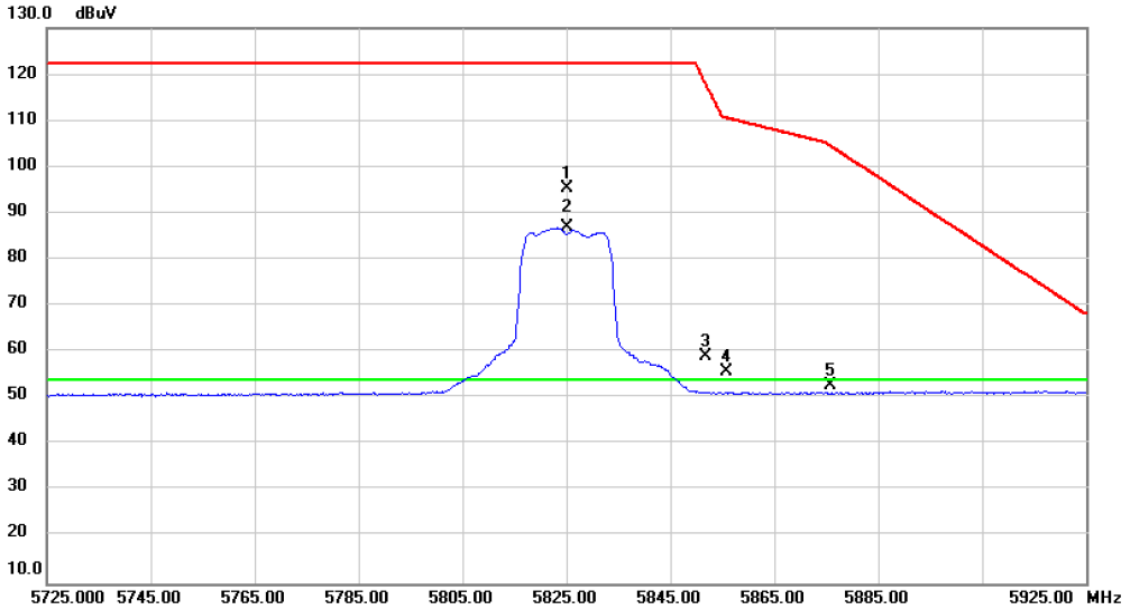
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5825.000	74.47	38.36	112.83	122.20	-9.37	peak	No Limit
2	*	5825.000	65.19	38.36	103.55	54.00	49.55	AVG	No Limit
3		5850.050	34.92	38.41	73.33	122.09	-48.76	peak	
4		5855.020	27.40	38.42	65.82	110.79	-44.97	peak	
5		5898.700	15.75	38.51	54.26	87.62	-33.36	peak	

Test Mode	UNII-3/ TX A Mode 5825MHz	Polarization	Vertical



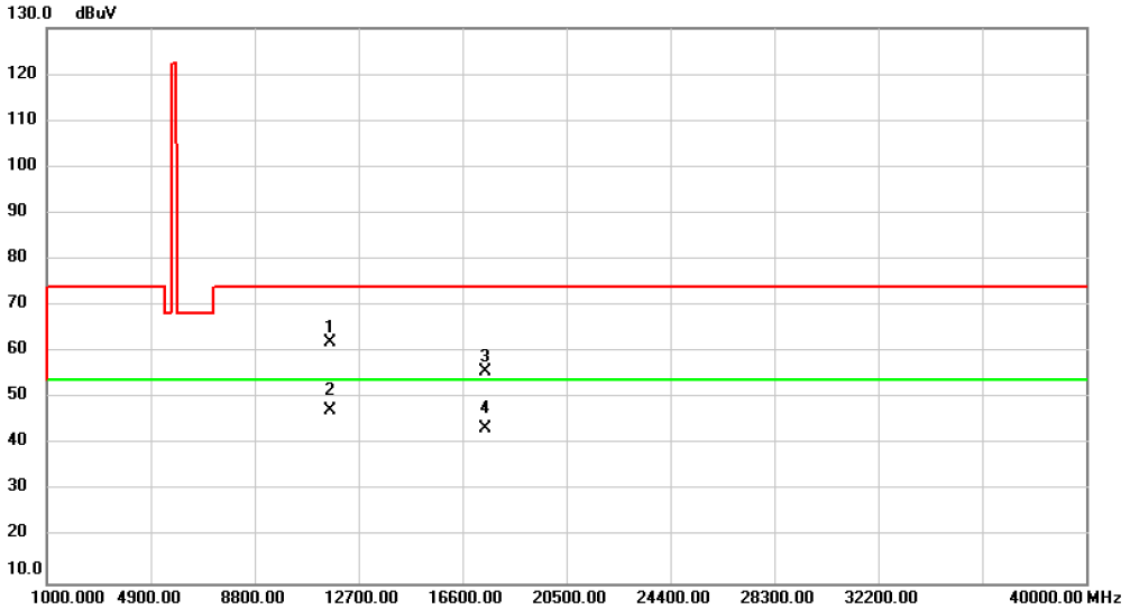
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		11650.00	62.50	2.50	65.00	74.00	-9.00	peak	
2	*	11650.00	49.93	2.50	52.43	54.00	-1.57	AVG	
3		17475.00	48.57	8.13	56.70	74.00	-17.30	peak	
4		17475.00	36.05	8.13	44.18	54.00	-9.82	AVG	

Test Mode	UNII-3/ TX A Mode 5825MHz	Polarization	Horizontal



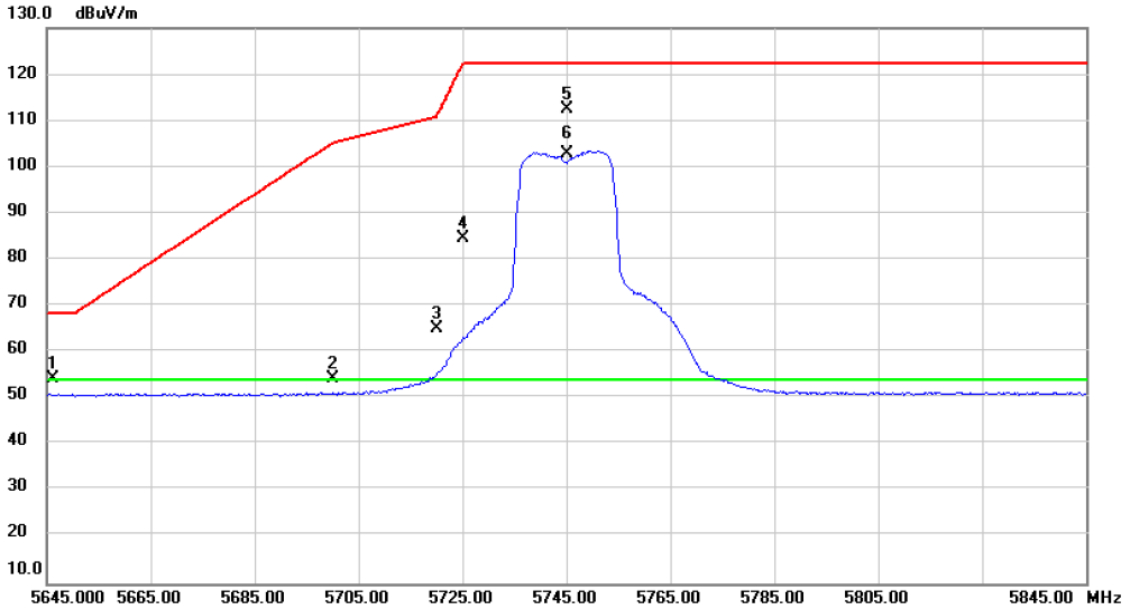
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		5825.000	57.05	38.36	95.41	122.20	-26.79	peak	No Limit
2	*	5825.000	48.65	38.36	87.01	54.00	33.01	AVG	No Limit
3		5851.785	20.54	38.41	58.95	118.13	-59.18	peak	
4		5855.760	17.19	38.42	55.61	110.59	-54.98	peak	
5		5875.850	14.17	38.46	52.63	104.57	-51.94	peak	

Test Mode	UNII-3/ TX A Mode 5825MHz	Polarization	Horizontal



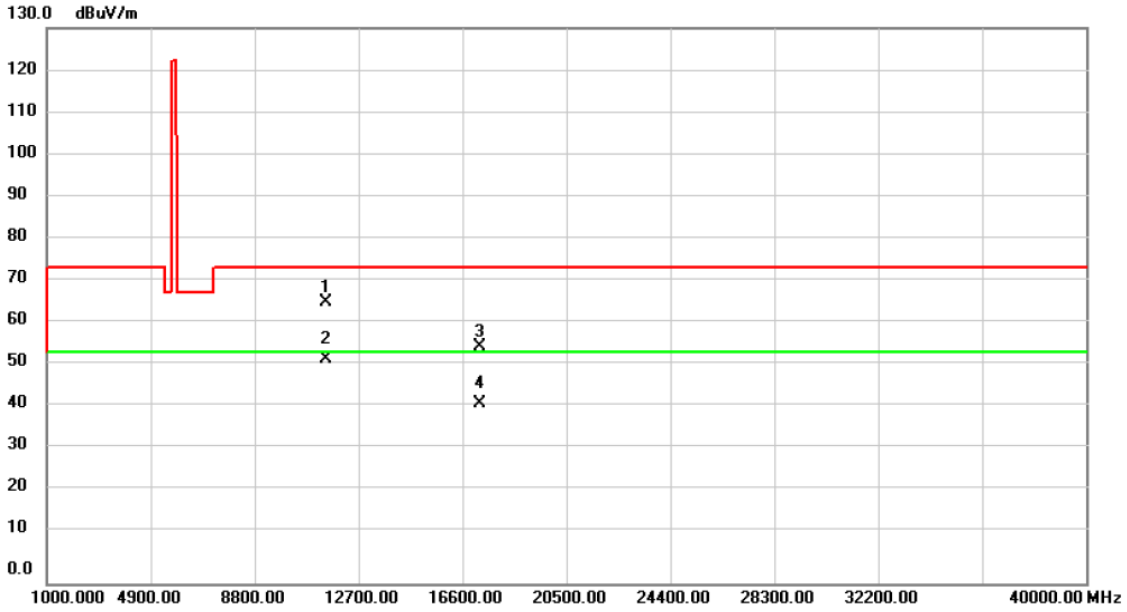
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		11650.00	60.29	1.71	62.00	74.00	-12.00	peak	
2	*	11650.00	45.63	1.71	47.34	54.00	-6.66	AVG	
3		17475.00	48.65	7.25	55.90	74.00	-18.10	peak	
4		17475.00	36.08	7.25	43.33	54.00	-10.67	AVG	

Test Mode	UNII-3/ TX AC (VHT20) Mode 5745MHz	Polarization	Vertical



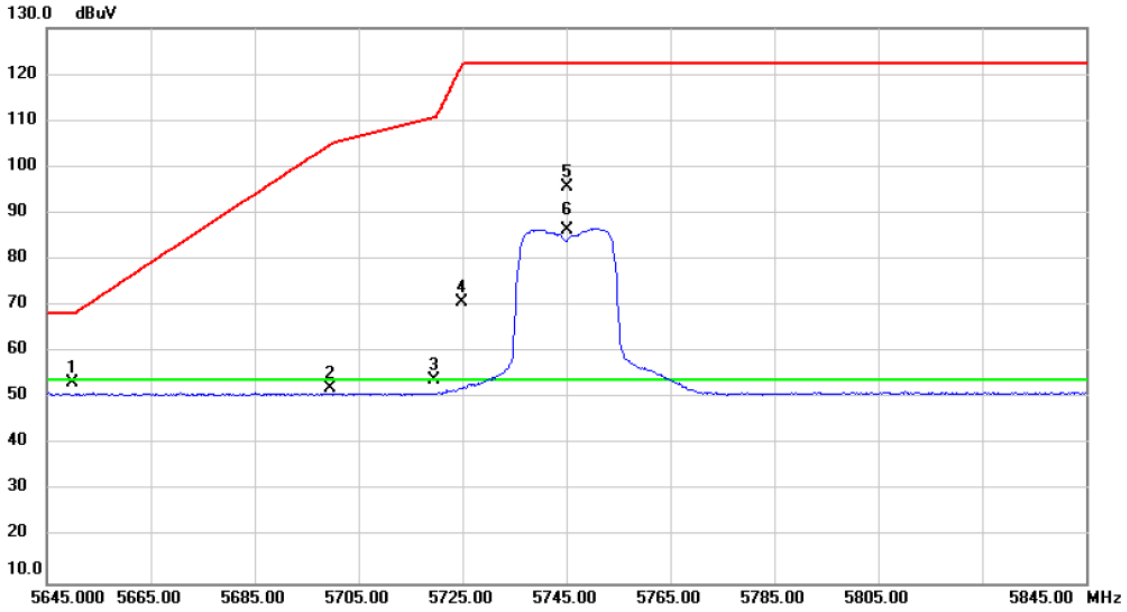
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5646.290	16.37	37.99	54.36	68.20	-13.84	peak	
2		5700.000	16.22	38.10	54.32	105.20	-50.88	peak	
3		5720.000	26.83	38.14	64.97	110.80	-45.83	peak	
4		5725.000	46.53	38.15	84.68	122.20	-37.52	peak	
5		5745.000	74.36	38.19	112.55	122.20	-9.65	peak	No Limit
6	*	5745.000	64.76	38.19	102.95	54.00	48.95	AVG	No Limit

Test Mode	UNII-3/ TX AC (VHT20) Mode 5745MHz	Polarization	Vertical



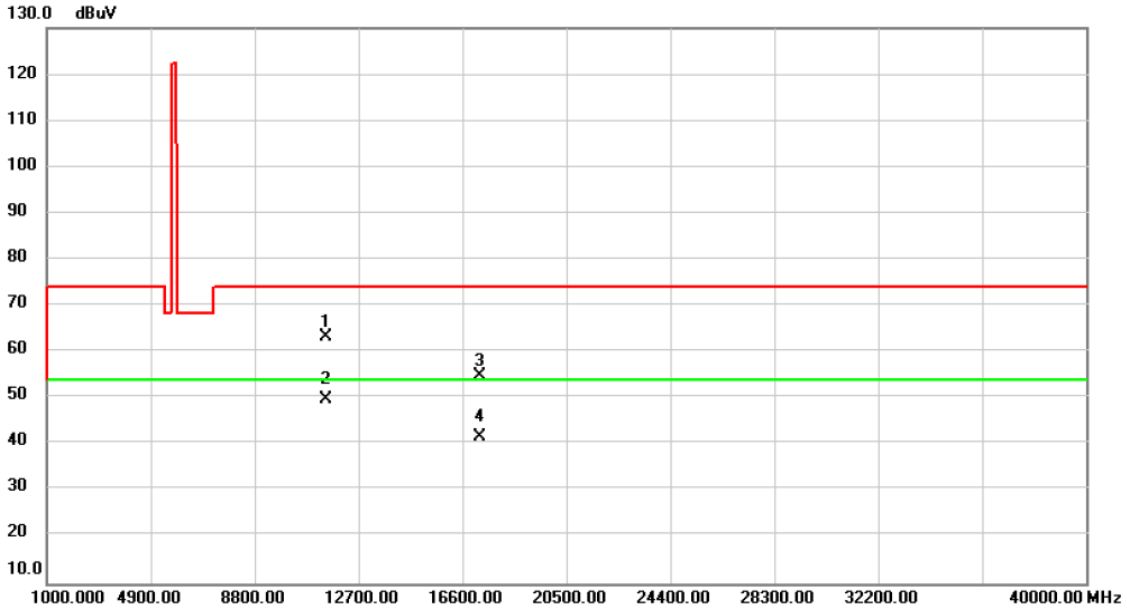
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		11490.00	62.91	2.89	65.80	74.00	-8.20	peak	
2	*	11490.00	49.72	2.89	52.61	54.00	-1.39	AVG	
3		17235.00	48.59	6.79	55.38	74.00	-18.62	peak	
4		17235.00	35.46	6.79	42.25	54.00	-11.75	AVG	

Test Mode	UNII-3/ TX AC (VHT20) Mode 5745MHz	Polarization	Horizontal



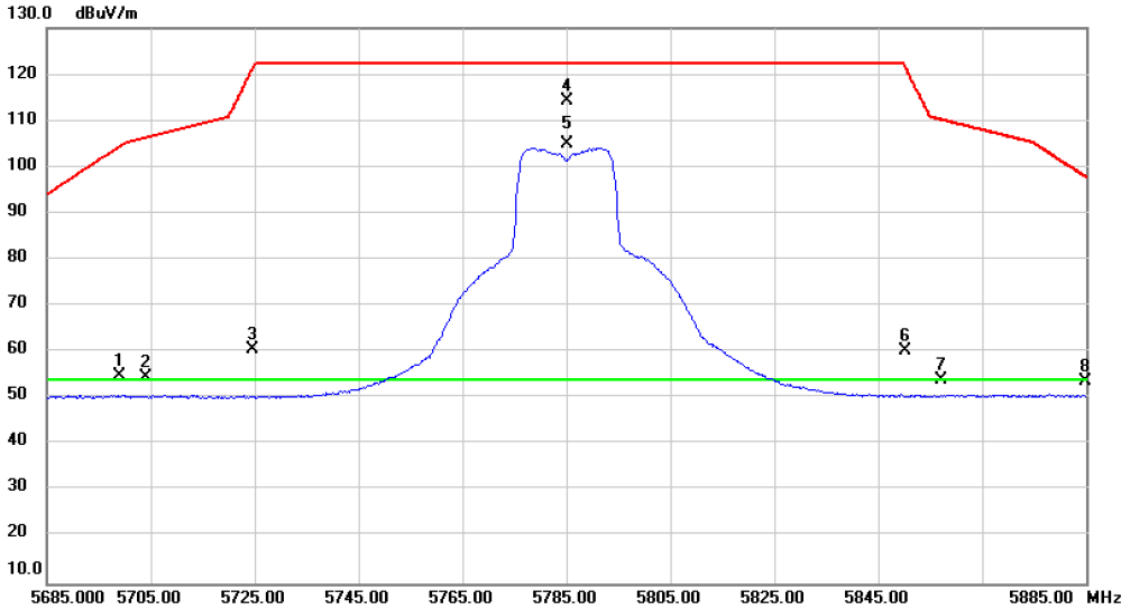
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		5649.970	15.36	38.00	53.36	68.20	-14.84	peak	
2		5699.500	14.17	38.10	52.27	104.83	-52.56	peak	
3		5719.460	15.83	38.14	53.97	110.65	-56.68	peak	
4		5724.905	32.47	38.15	70.62	121.98	-51.36	peak	
5		5745.000	57.41	38.19	95.60	122.20	-26.60	peak	No Limit
6	*	5745.000	48.25	38.19	86.44	54.00	32.44	AVG	No Limit

Test Mode	UNII-3/ TX AC (VHT20) Mode 5745MHz	Polarization	Horizontal



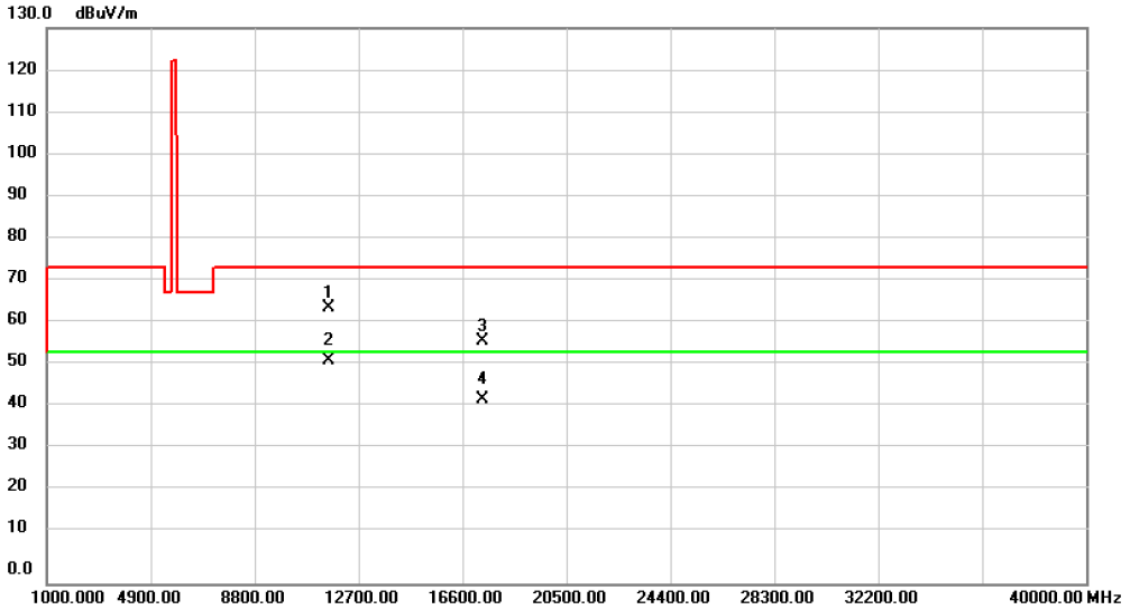
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		11490.00	61.13	2.12	63.25	74.00	-10.75	peak	
2	*	11490.00	47.55	2.12	49.67	54.00	-4.33	AVG	
3		17235.00	48.98	5.89	54.87	74.00	-19.13	peak	
4		17235.00	35.64	5.89	41.53	54.00	-12.47	AVG	

Test Mode	UNII-3/ TX AC (VHT20) Mode 5785MHz	Polarization	Vertical



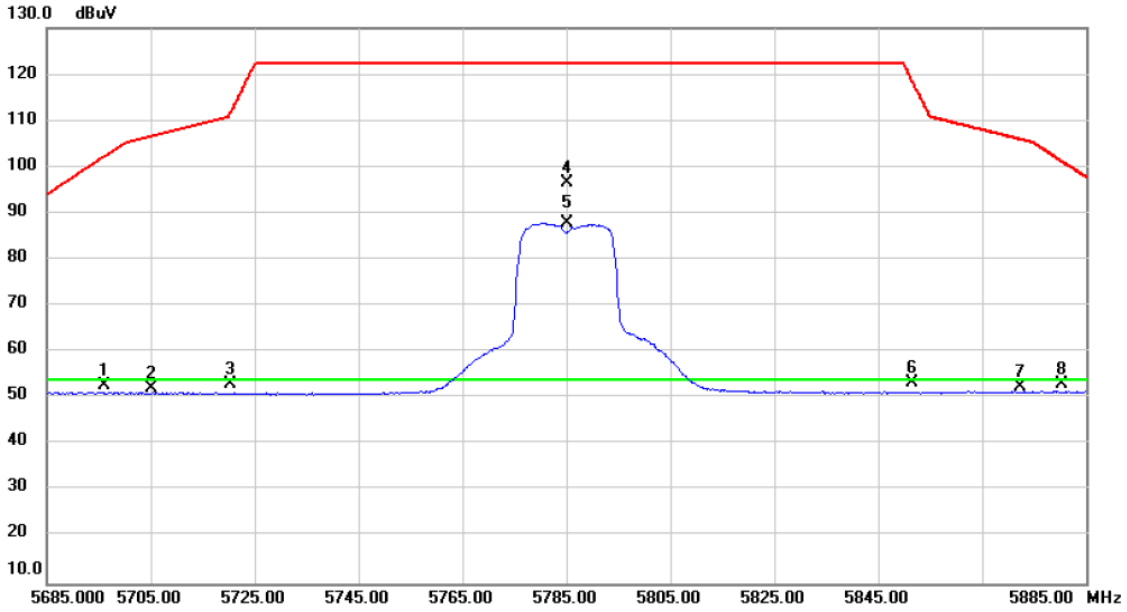
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5699.010	16.71	38.10	54.81	104.47	-49.66	peak	
2		5703.940	16.49	38.11	54.60	106.30	-51.70	peak	
3		5724.545	22.38	38.15	60.53	121.16	-60.63	peak	
4		5785.000	76.02	38.28	114.30	122.20	-7.90	peak	No Limit
5	*	5785.000	66.82	38.28	105.10	54.00	51.10	AVG	No Limit
6		5850.085	21.90	38.41	60.31	122.01	-61.70	peak	
7		5857.080	15.59	38.42	54.01	110.22	-56.21	peak	
8		5884.970	15.27	38.49	53.76	97.80	-44.04	peak	

Test Mode	UNII-3/ TX AC (VHT20) Mode 5785MHz	Polarization	Vertical



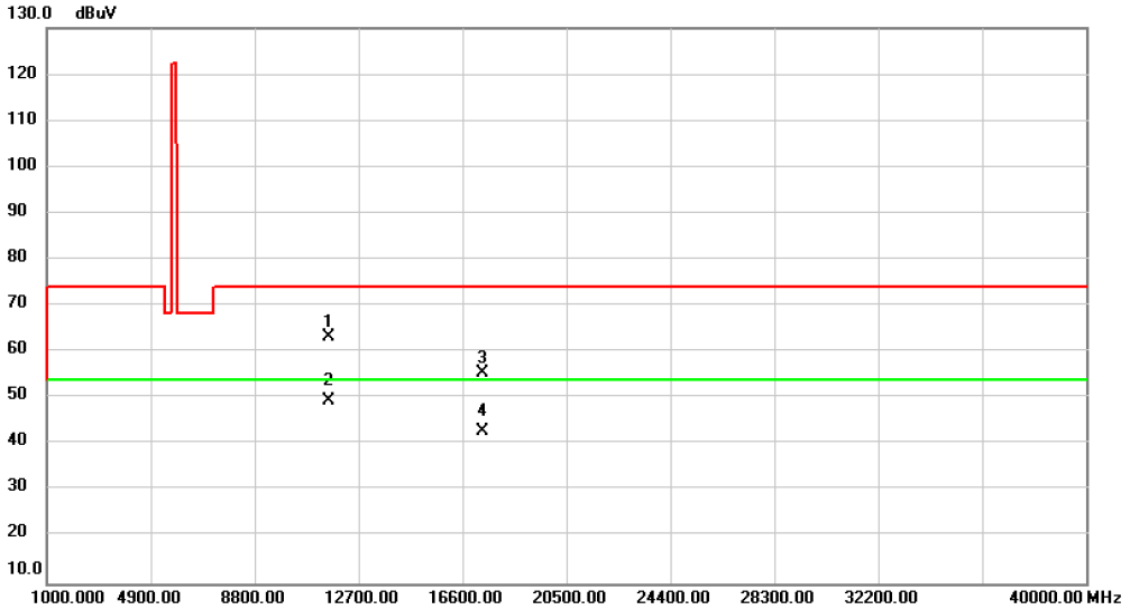
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		11570.00	61.75	2.72	64.47	74.00	-9.53	peak	
2	*	11570.00	49.51	2.72	52.23	54.00	-1.77	AVG	
3		17355.00	49.36	7.46	56.82	74.00	-17.18	peak	
4		17355.00	35.76	7.46	43.22	54.00	-10.78	AVG	

Test Mode	UNII-3/ TX AC (VHT20) Mode 5785MHz	Polarization	Horizontal



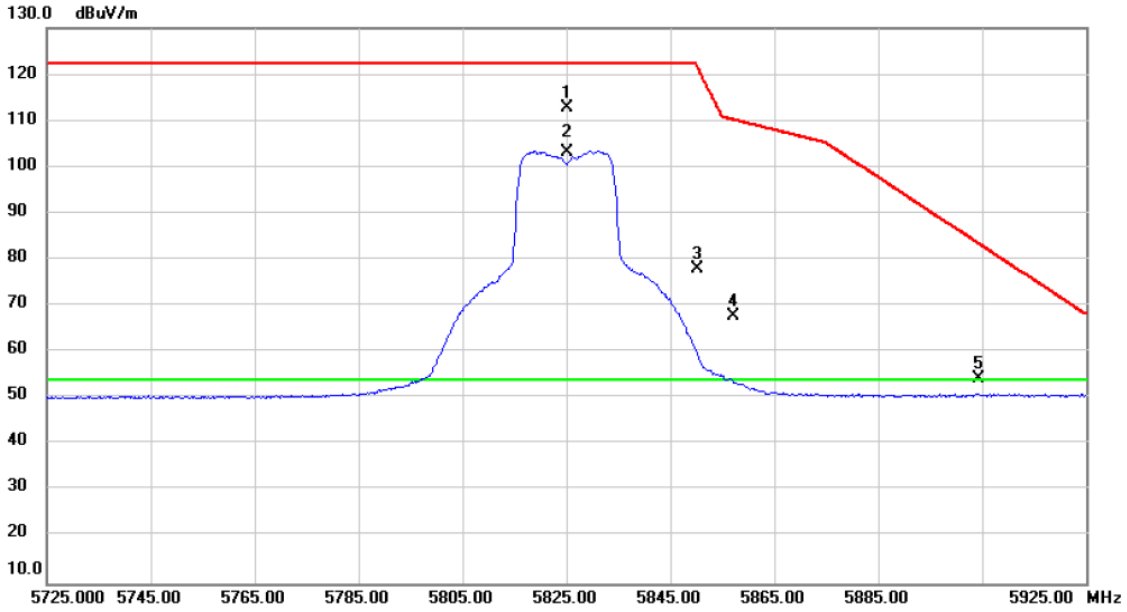
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		5695.935	14.59	38.09	52.68	102.20	-49.52	peak	
2		5705.240	13.97	38.11	52.08	106.67	-54.59	peak	
3		5720.425	14.95	38.14	53.09	111.77	-58.68	peak	
4		5785.000	58.22	38.28	96.50	122.20	-25.70	peak	No Limit
5	*	5785.000	49.48	38.28	87.76	54.00	33.76	AVG	No Limit
6		5851.585	14.86	38.41	53.27	118.59	-65.32	peak	
7		5872.240	14.01	38.46	52.47	105.97	-53.50	peak	
8		5880.350	14.63	38.47	53.10	101.23	-48.13	peak	

Test Mode	UNII-3/ TX AC (VHT20) Mode 5785MHz	Polarization	Horizontal



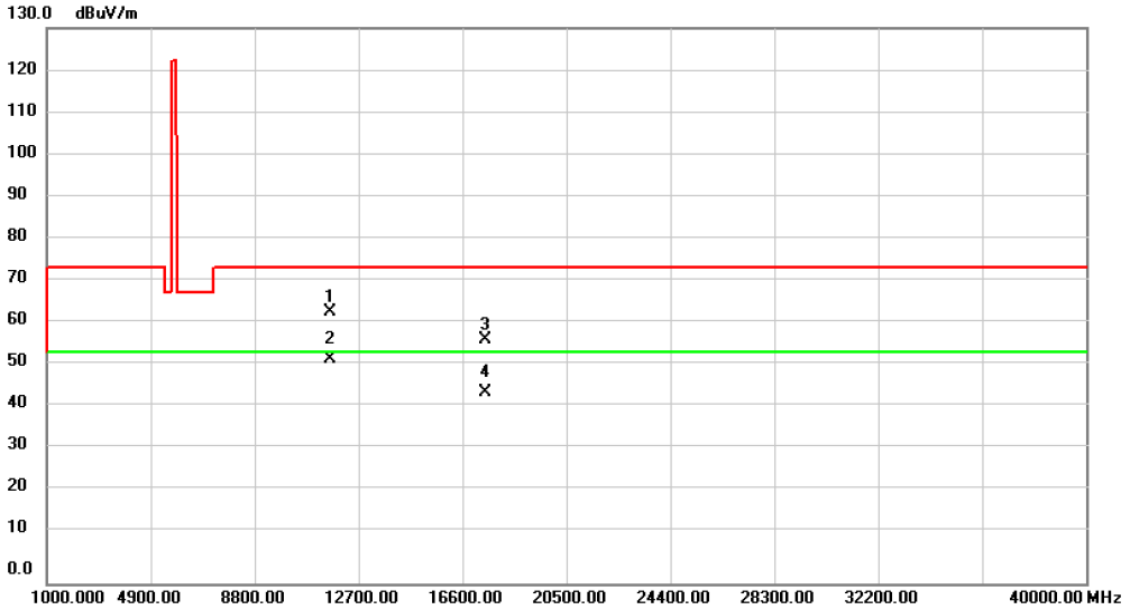
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		11570.30	61.19	1.94	63.13	74.00	-10.87	peak	
2	*	11570.79	47.40	1.93	49.33	54.00	-4.67	AVG	
3		17355.00	49.03	6.57	55.60	74.00	-18.40	peak	
4		17355.00	36.29	6.57	42.86	54.00	-11.14	AVG	

Test Mode	UNII-3/ TX AC (VHT20) Mode 5825MHz	Polarization	Vertical



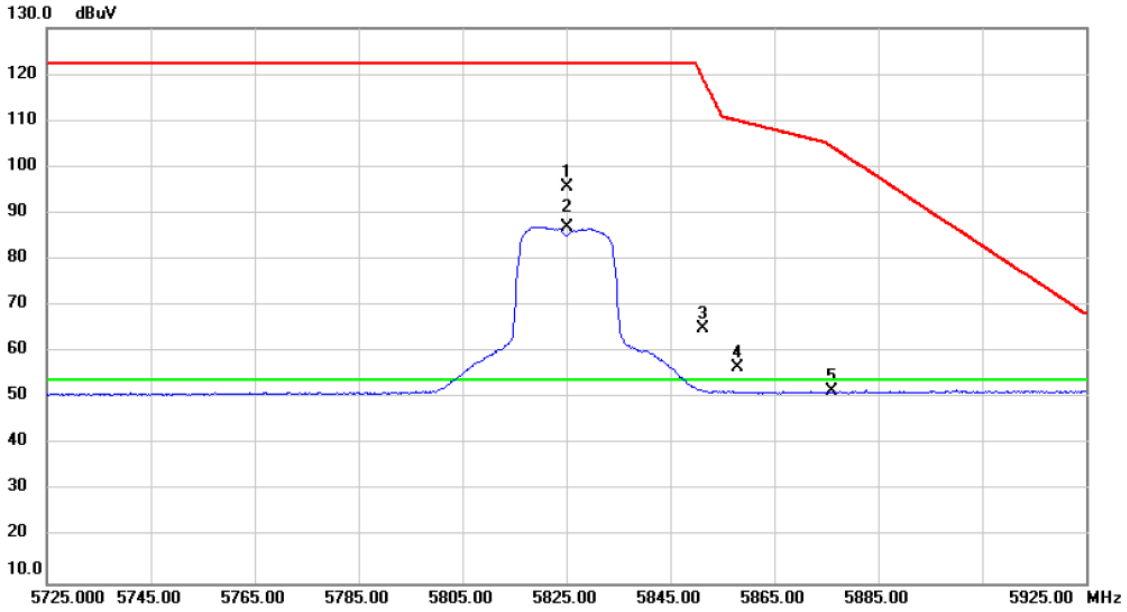
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5825.000	74.44	38.36	112.80	122.20	-9.40	peak	No Limit
2	*	5825.000	64.94	38.36	103.30	54.00	49.30	AVG	No Limit
3		5850.270	39.44	38.41	77.85	121.58	-43.73	peak	
4		5857.180	29.21	38.42	67.63	110.19	-42.56	peak	
5		5904.280	15.78	38.53	54.31	83.49	-29.18	peak	

Test Mode	UNII-3/ TX AC (VHT20) Mode 5825MHz	Polarization	Vertical



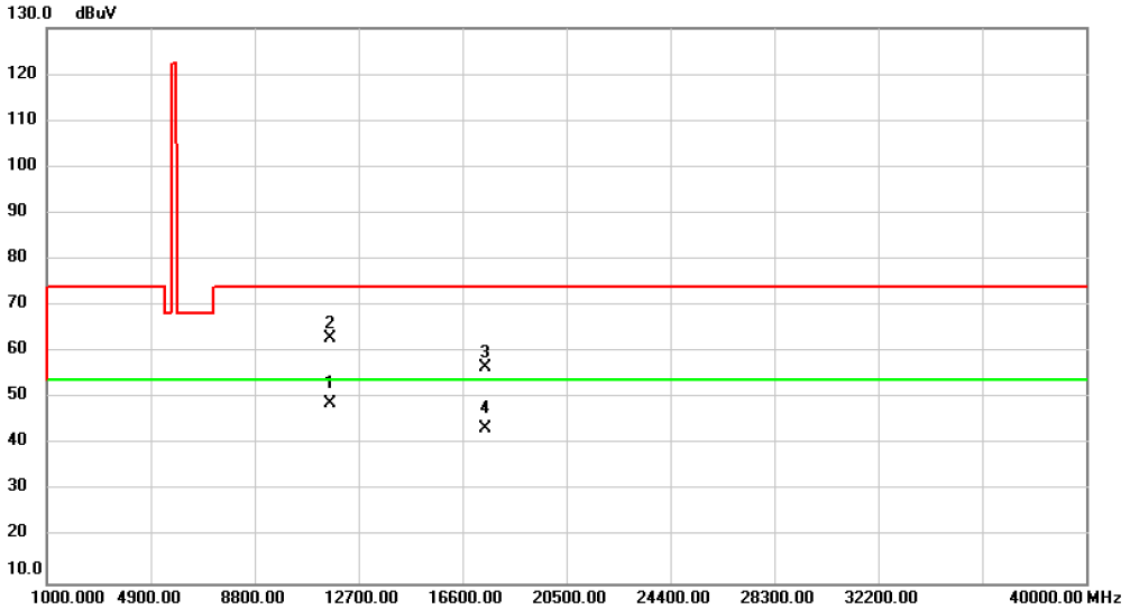
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		11650.00	61.18	2.50	63.68	74.00	-10.32	peak	
2	*	11650.00	49.94	2.50	52.44	54.00	-1.56	AVG	
3		17475.00	48.76	8.13	56.89	74.00	-17.11	peak	
4		17475.00	36.63	8.13	44.76	54.00	-9.24	AVG	

Test Mode	UNII-3/ TX AC (VHT20) Mode 5825MHz	Polarization	Horizontal



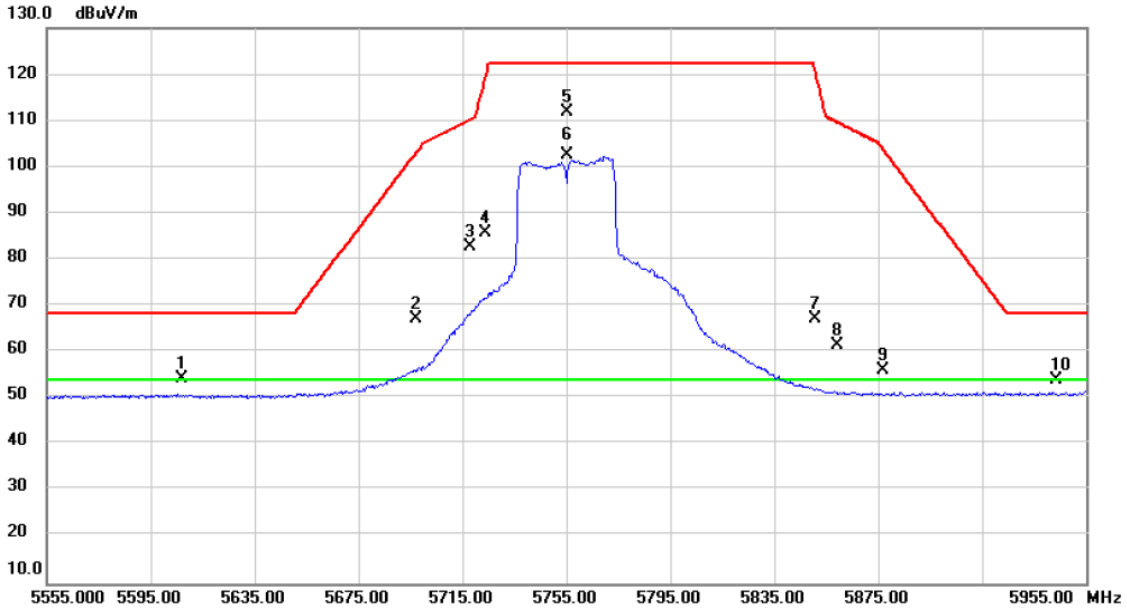
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		5825.000	57.20	38.36	95.56	122.20	-26.64	peak	No Limit
2	*	5825.000	48.66	38.36	87.02	54.00	33.02	AVG	No Limit
3		5851.185	26.76	38.41	65.17	119.50	-54.33	peak	
4		5858.060	18.11	38.42	56.53	109.94	-53.41	peak	
5		5876.200	13.22	38.46	51.68	104.31	-52.63	peak	

Test Mode	UNII-3/ TX AC (VHT20) Mode 5825MHz	Polarization	Horizontal



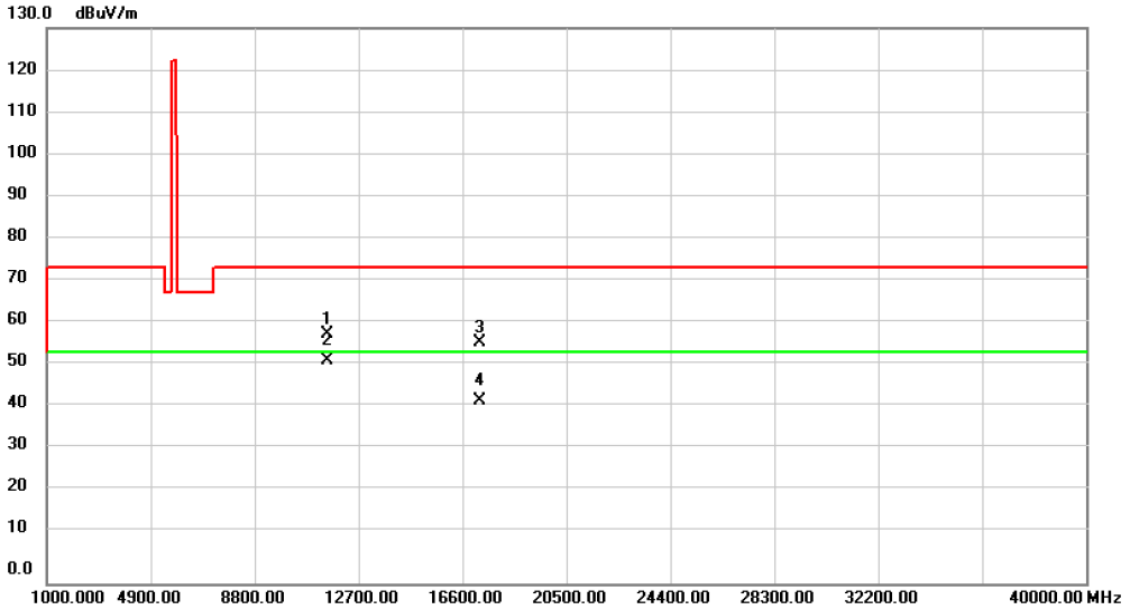
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	11650.00	47.19	1.71	48.90	54.00	-5.10	AVG	
2		11650.00	61.26	1.71	62.97	74.00	-11.03	peak	
3		17475.00	49.54	7.25	56.79	74.00	-17.21	peak	
4		17475.00	36.28	7.25	43.53	54.00	-10.47	AVG	

Test Mode	UNII-3/ TX AC (VHT40) Mode 5755MHz	Polarization	Vertical



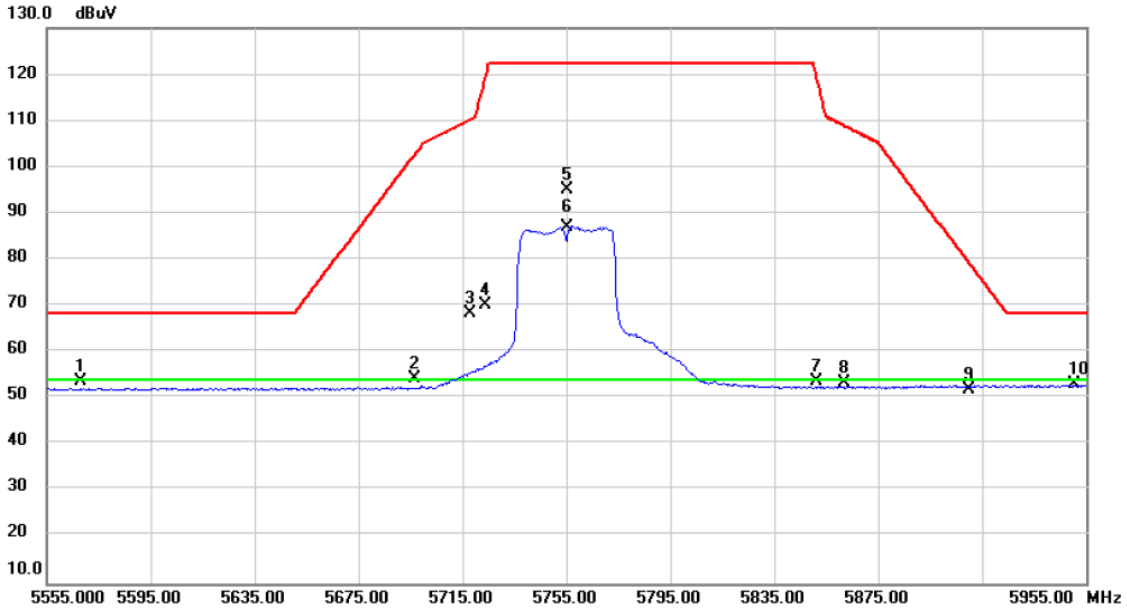
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5607.250	16.47	37.91	54.38	68.20	-13.82	peak	
2		5697.350	29.10	38.10	67.20	103.25	-36.05	peak	
3		5717.820	44.71	38.14	82.85	110.19	-27.34	peak	
4		5723.845	47.64	38.15	85.79	119.57	-33.78	peak	
5		5755.000	73.64	38.22	111.86	122.20	-10.34	peak	No Limit
6	*	5755.000	64.46	38.22	102.68	54.00	48.68	AVG	No Limit
7		5850.650	28.60	38.41	67.01	120.72	-53.71	peak	
8		5859.400	23.01	38.44	61.45	109.57	-48.12	peak	
9		5876.800	17.57	38.46	56.03	103.86	-47.83	peak	
10		5943.360	15.22	38.60	53.82	68.20	-14.38	peak	

Test Mode	UNII-3/ TX AC (VHT40) Mode 5755MHz	Polarization	Vertical



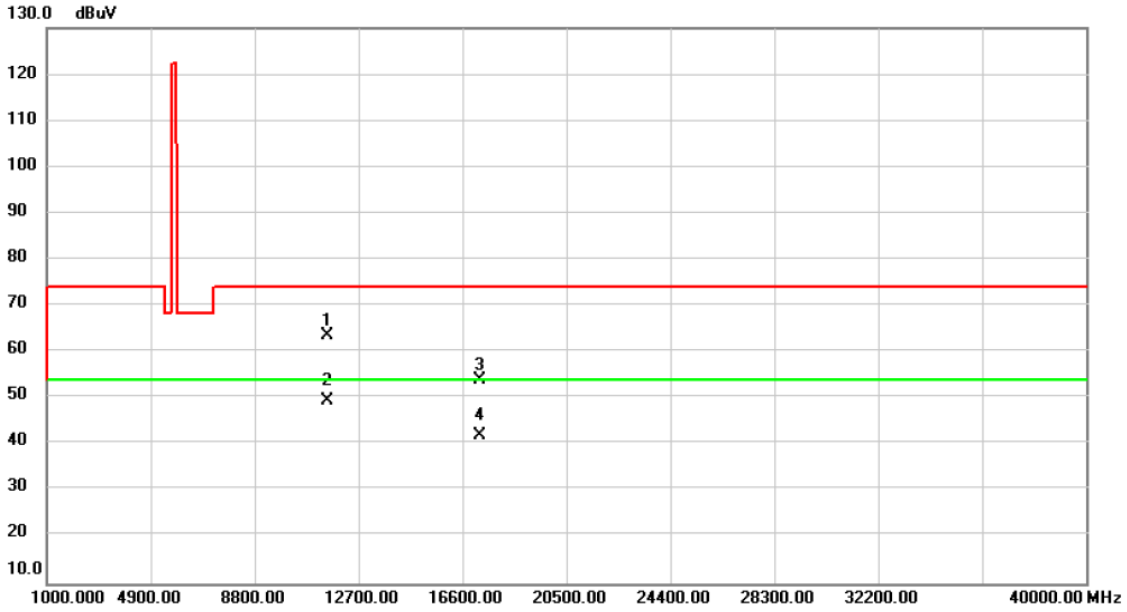
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		11510.00	55.32	2.88	58.20	74.00	-15.80	peak	
2	*	11510.00	49.44	2.88	52.32	54.00	-1.68	AVG	
3		17265.00	49.49	6.96	56.45	74.00	-17.55	peak	
4		17265.00	35.85	6.96	42.81	54.00	-11.19	AVG	

Test Mode	UNII-3/ TX AC (VHT40) Mode 5755MHz	Polarization	Horizontal



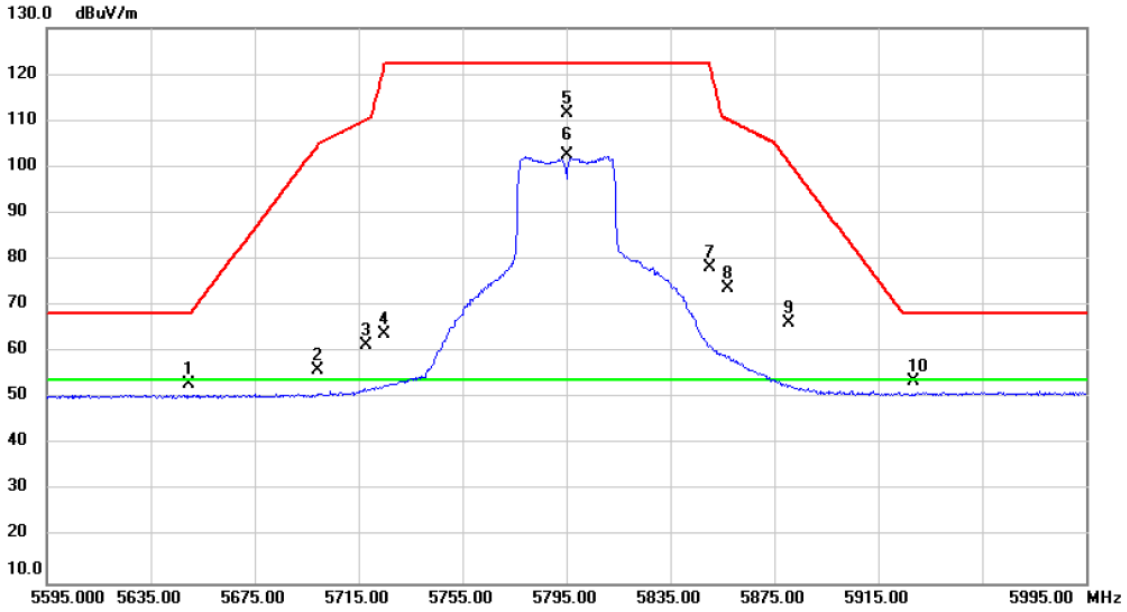
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		5567.825	15.79	37.83	53.62	68.20	-14.58	peak	
2		5696.850	16.04	38.09	54.13	102.88	-48.75	peak	
3		5717.760	30.27	38.14	68.41	110.17	-41.76	peak	
4		5724.035	32.08	38.15	70.23	120.00	-49.77	peak	
5		5755.000	56.90	38.22	95.12	122.20	-27.08	peak	No Limit
6	*	5755.000	48.72	38.22	86.94	54.00	32.94	AVG	No Limit
7		5851.020	15.39	38.41	53.80	119.87	-66.07	peak	
8		5861.980	14.95	38.44	53.39	108.84	-55.45	peak	
9		5909.900	13.24	38.54	51.78	79.34	-27.56	peak	
10		5950.440	14.48	38.62	53.10	68.20	-15.10	peak	

Test Mode	UNII-3/ TX AC (VHT40) Mode 5755MHz	Polarization	Horizontal



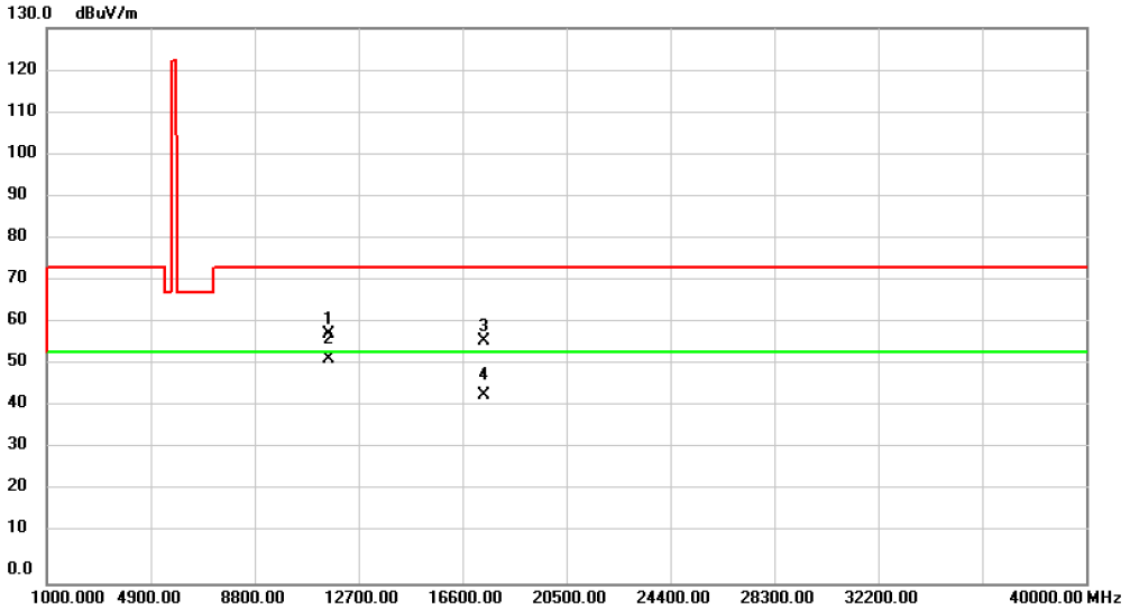
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		11510.00	61.52	2.11	63.63	74.00	-10.37	peak	
2	*	11510.00	47.32	2.11	49.43	54.00	-4.57	AVG	
3		17265.00	47.79	6.07	53.86	74.00	-20.14	peak	
4		17265.00	35.87	6.07	41.94	54.00	-12.06	AVG	

Test Mode	UNII-3/ TX AC (VHT40) Mode 5795MHz	Polarization	Vertical



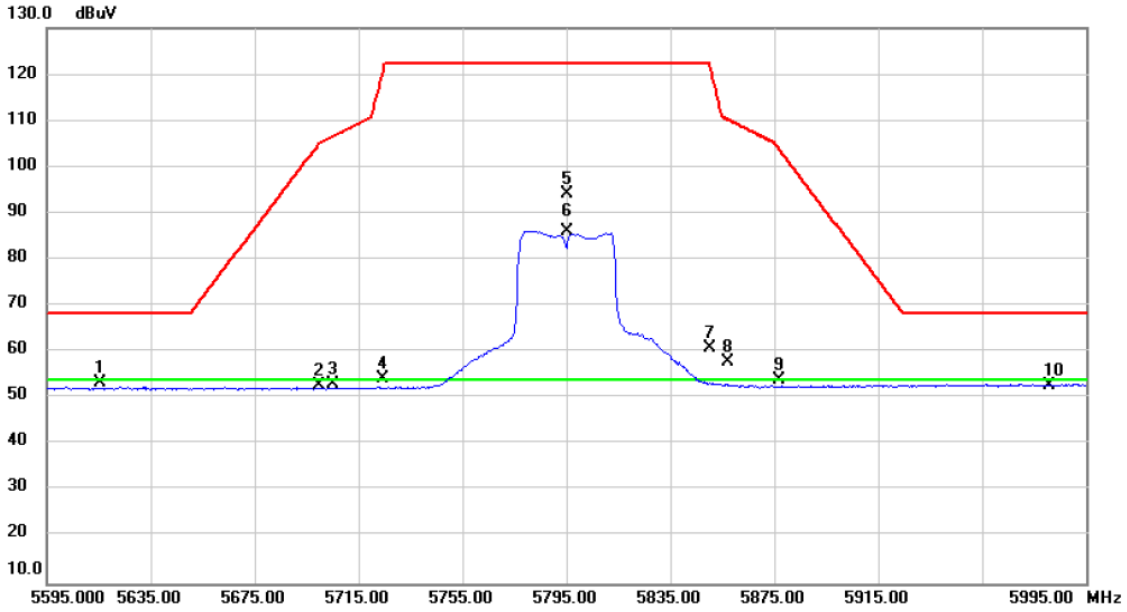
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5649.670	15.15	38.00	53.15	68.20	-15.05	peak	
2		5699.450	17.96	38.10	56.06	104.79	-48.73	peak	
3		5718.020	23.18	38.14	61.32	110.25	-48.93	peak	
4		5724.880	25.84	38.15	63.99	121.93	-57.94	peak	
5		5795.000	73.33	38.30	111.63	122.20	-10.57	peak	No Limit
6	*	5795.000	64.10	38.30	102.40	54.00	48.40	AVG	No Limit
7		5850.405	39.93	38.41	78.34	121.28	-42.94	peak	
8		5857.140	35.31	38.42	73.73	110.20	-36.47	peak	
9		5880.450	27.64	38.48	66.12	101.15	-35.03	peak	
10		5928.500	15.01	38.58	53.59	68.20	-14.61	peak	

Test Mode	UNII-3/ TX AC (VHT40) Mode 5795MHz	Polarization	Vertical



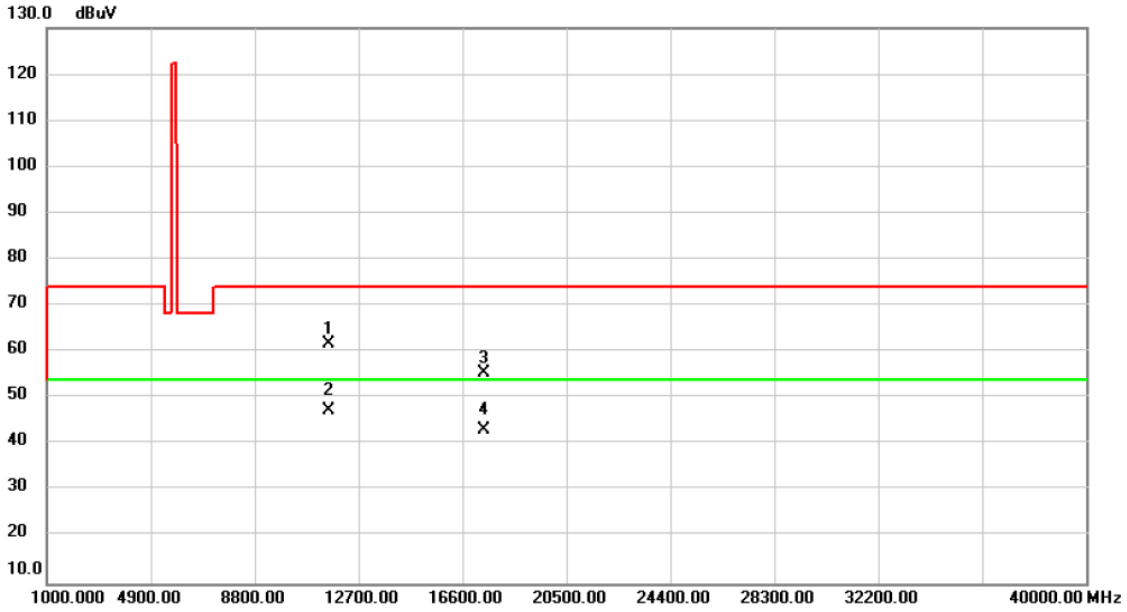
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		11590.00	55.77	2.67	58.44	74.00	-15.56	peak	
2	*	11590.00	49.81	2.67	52.48	54.00	-1.52	AVG	
3		17385.00	49.01	7.62	56.63	74.00	-17.37	peak	
4		17385.00	36.35	7.62	43.97	54.00	-10.03	AVG	

Test Mode	UNII-3/ TX AC (VHT40) Mode 5795MHz	Polarization	Horizontal



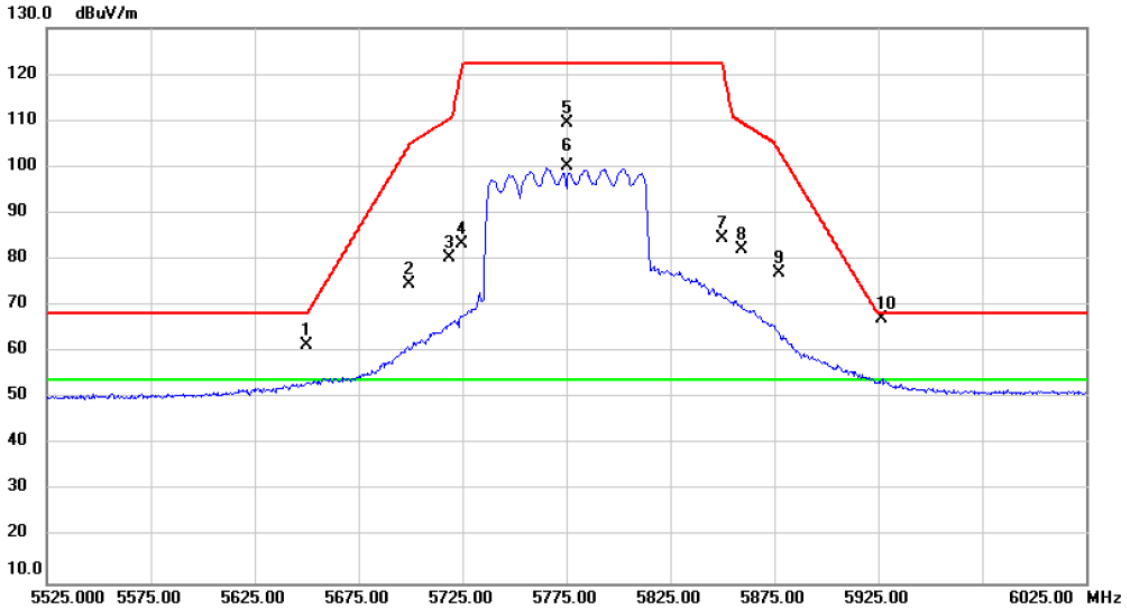
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		5615.295	15.48	37.92	53.40	68.20	-14.80	peak	
2		5699.600	14.67	38.10	52.77	104.91	-52.14	peak	
3		5705.020	15.04	38.11	53.15	106.61	-53.46	peak	
4		5724.090	15.98	38.15	54.13	120.13	-66.00	peak	
5		5795.000	55.98	38.30	94.28	122.20	-27.92	peak	No Limit
6	*	5795.000	47.85	38.30	86.15	54.00	32.15	AVG	No Limit
7		5850.230	22.49	38.41	60.90	121.68	-60.78	peak	
8		5856.980	19.48	38.42	57.90	110.24	-52.34	peak	
9		5876.600	15.49	38.46	53.95	104.01	-50.06	peak	
10		5980.720	13.94	38.68	52.62	68.20	-15.58	peak	

Test Mode	UNII-3/ TX AC (VHT40) Mode 5795MHz	Polarization	Horizontal



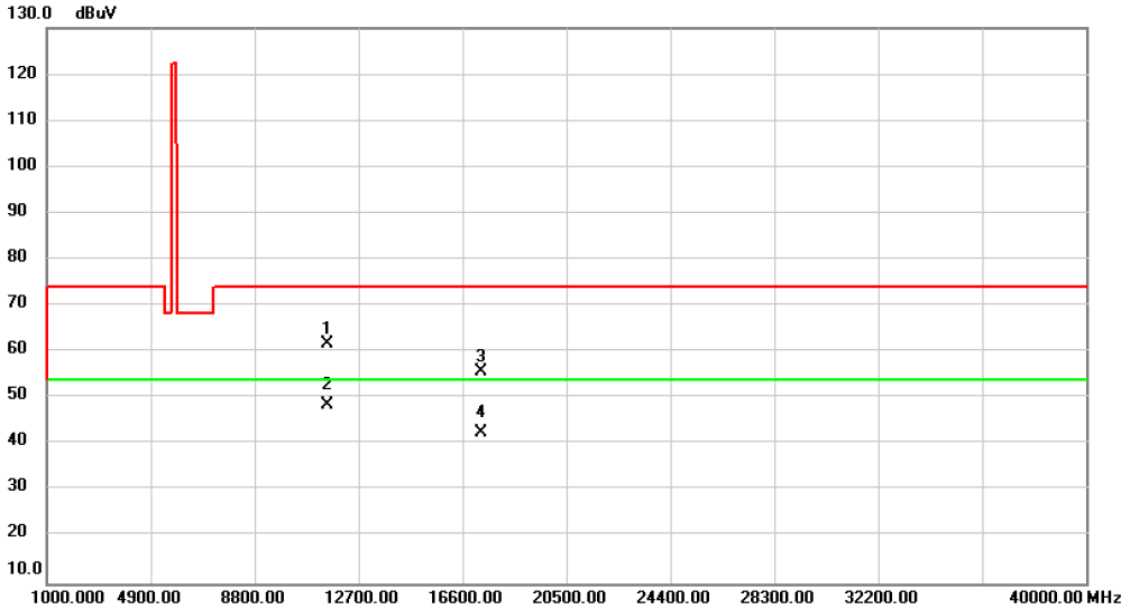
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		11590.00	59.87	1.88	61.75	74.00	-12.25	peak	
2	*	11590.00	45.57	1.88	47.45	54.00	-6.55	AVG	
3		17385.00	48.76	6.74	55.50	74.00	-18.50	peak	
4		17385.00	36.45	6.74	43.19	54.00	-10.81	AVG	

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



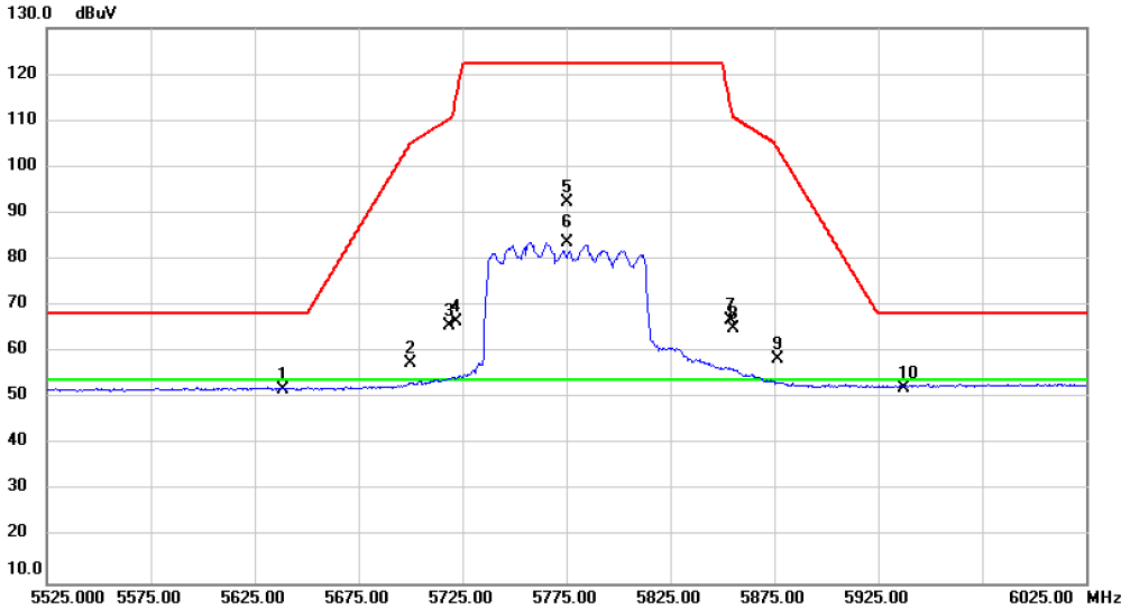
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5649.875	23.52	38.00	61.52	68.20	-6.68	peak	
2		5699.200	36.64	38.10	74.74	104.61	-29.87	peak	
3		5718.860	42.11	38.14	80.25	110.48	-30.23	peak	
4		5724.890	45.05	38.15	83.20	121.95	-38.75	peak	
5		5775.000	71.32	38.26	109.58	122.20	-12.62	peak	No Limit
6	*	5775.000	61.94	38.26	100.20	54.00	46.20	AVG	No Limit
7		5850.015	46.23	38.41	84.64	122.17	-37.53	peak	
8		5859.400	43.76	38.44	82.20	109.57	-27.37	peak	
9		5877.450	38.50	38.46	76.96	103.38	-26.42	peak	
10		5926.500	28.50	38.57	67.07	68.20	-1.13	peak	

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



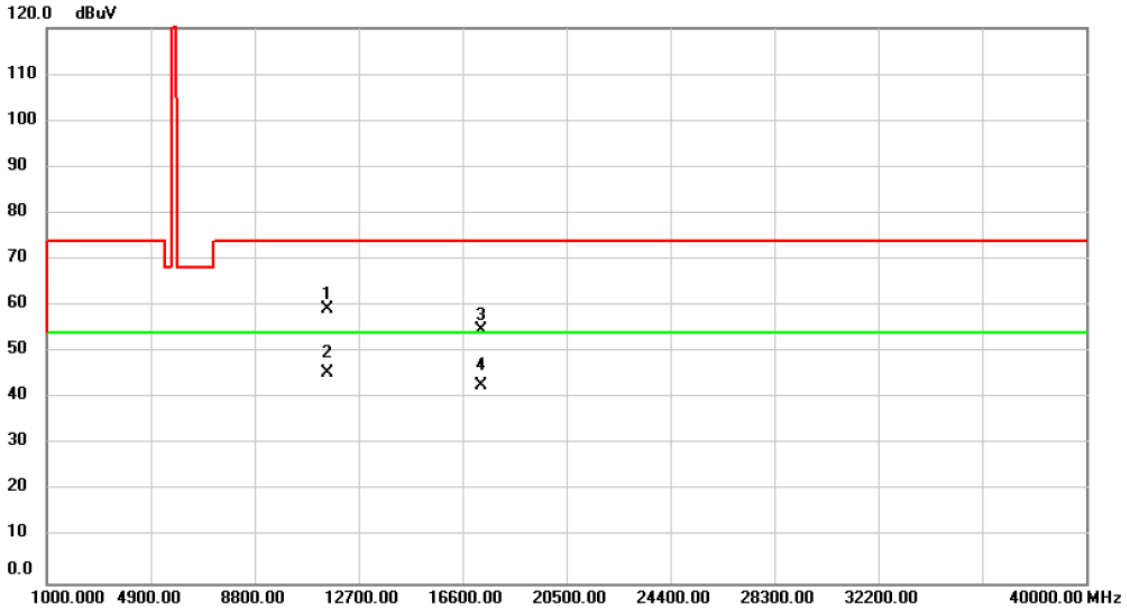
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		11550.00	59.75	1.99	61.74	74.00	-12.26	peak	
2	*	11550.00	46.56	1.99	48.55	54.00	-5.45	AVG	
3		17325.00	49.33	6.41	55.74	74.00	-18.26	peak	
4		17325.00	36.12	6.41	42.53	54.00	-11.47	AVG	

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



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		5638.875	13.82	37.97	51.79	68.20	-16.41	peak	
2		5699.850	19.43	38.10	57.53	105.09	-47.56	peak	
3		5718.700	27.45	38.14	65.59	110.44	-44.85	peak	
4		5721.965	28.25	38.15	66.40	115.28	-48.88	peak	
5		5775.000	54.13	38.26	92.39	122.20	-29.81	peak	No Limit
6	*	5775.000	45.35	38.26	83.61	54.00	29.61	AVG	No Limit
7		5854.200	28.48	38.42	66.90	112.62	-45.72	peak	
8		5855.360	26.60	38.42	65.02	110.70	-45.68	peak	
9		5876.350	20.13	38.46	58.59	104.20	-45.61	peak	
10		5937.100	13.59	38.59	52.18	68.20	-16.02	peak	

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



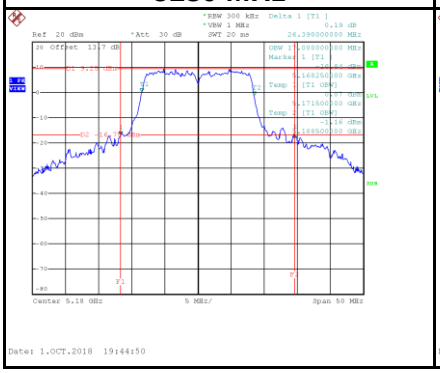
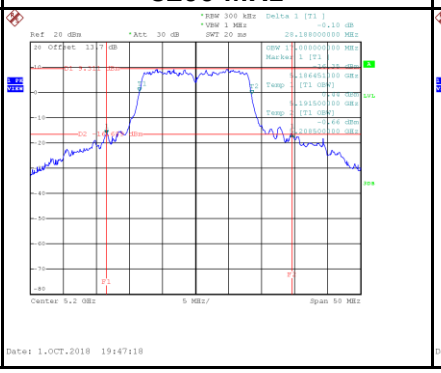
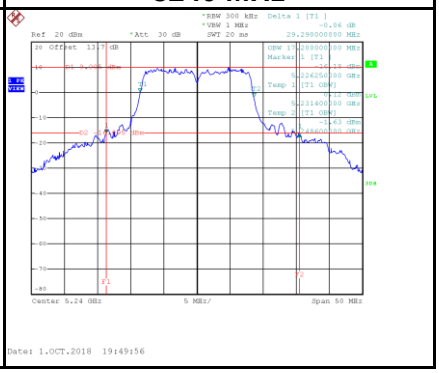
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		11550.00	57.15	1.99	59.14	74.00	-14.86	peak	
2	*	11550.00	43.35	1.99	45.34	54.00	-8.66	AVG	
3		17325.00	48.22	6.41	54.63	74.00	-19.37	peak	
4		17325.00	36.26	6.41	42.67	54.00	-11.33	AVG	

APPENDIX E BANDWIDTH

CONTINUE ON NEXT PAGE

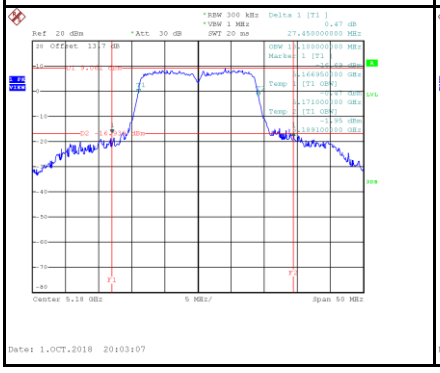
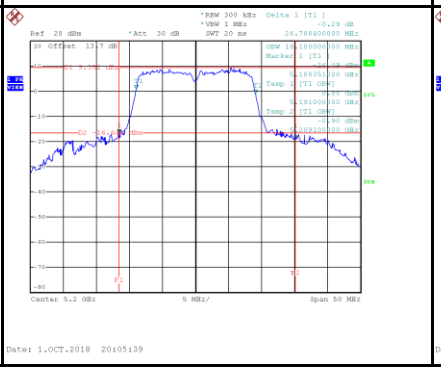
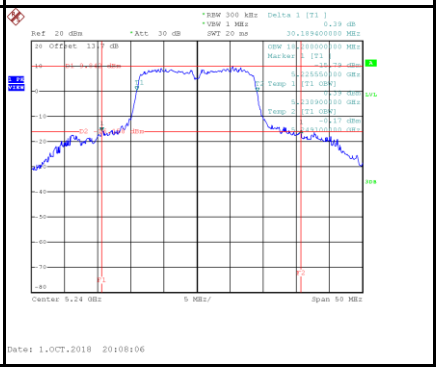
Test Mode	UNII-1_IEEE 802.11a

Frequency (MHz)	26 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)
5180	26.39	17.00
5200	28.19	17.00
5240	29.29	17.20

5180 MHz	5200 MHz	5240 MHz
		

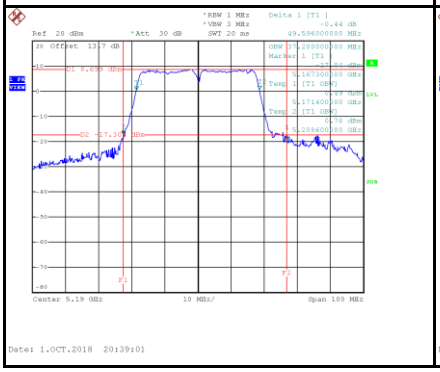
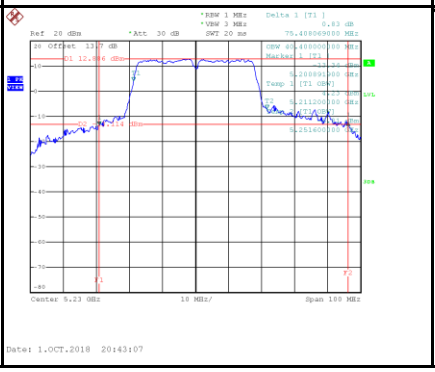
Test Mode	UNII-1_IEEE 802.11ac (HT20)

Frequency (MHz)	26 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)
5180	27.45	18.10
5200	26.79	18.10
5240	30.19	18.20

5180 MHz	5200 MHz	5240 MHz
		

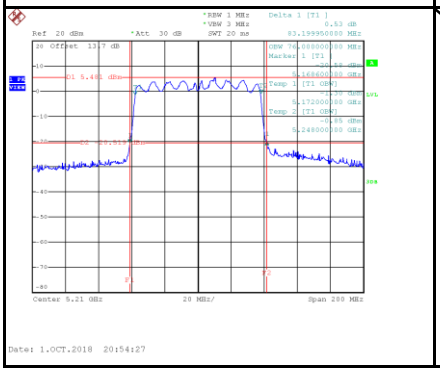
Test Mode	UNII-1_IEEE 802.11ac (HT40)

Frequency (MHz)	26 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)
5190	49.60	37.20
5230	75.41	40.40

5190 MHz	5230 MHz	
		

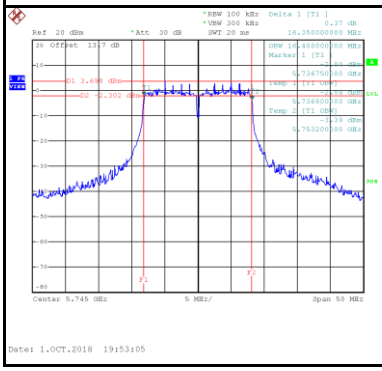
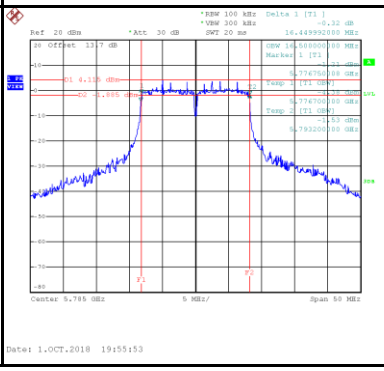
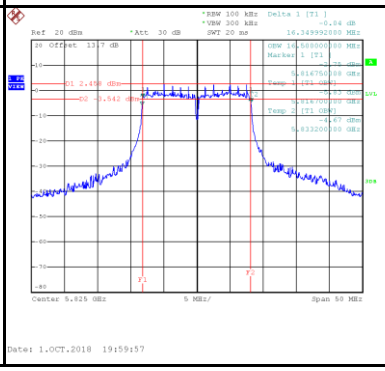
Test Mode	UNII-1_IEEE 802.11ac (VHT80)

Frequency (MHz)	26 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)
5210	83.20	76.00

5210 MHz		
		

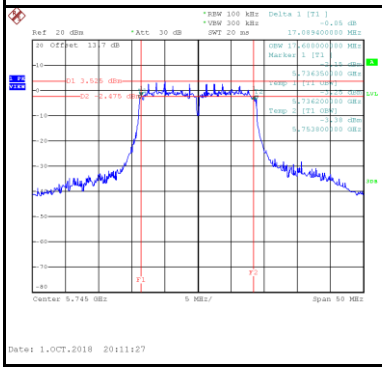
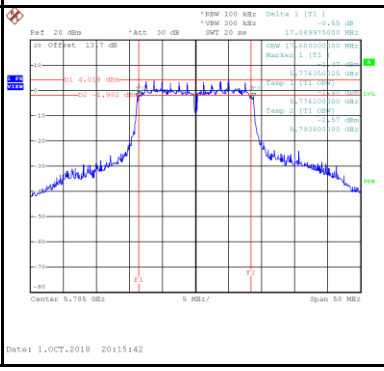
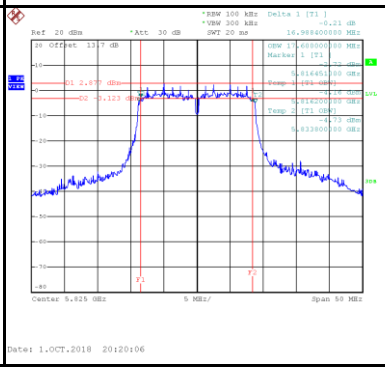
Test Mode	UNII-3_IEEE 802.11a

Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)
5180	16.35	16.40
5200	16.45	16.50
5240	16.35	16.50

5745 MHz	5785 MHz	5825 MHz
		

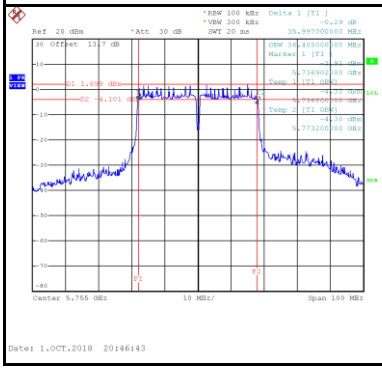
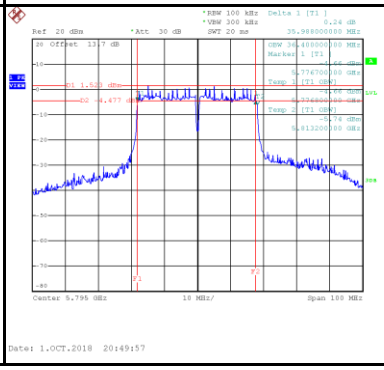
Test Mode	UNII-3_IEEE 802.11ac (HT20)

Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)
5180	17.09	17.60
5200	17.09	17.60
5240	16.99	17.60

5745 MHz	5785 MHz	5825 MHz
		

Test Mode	UNII-3_IEEE 802.11ac (HT40)

Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)
5190	36.00	36.40
5230	35.99	36.40

5755 MHz	5795 MHz	
		

Test Mode	UNII-3_IEEE 802.11ac (VHT80)

Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)
5210	74.20	76.00

5775 MHz