FCC Radio Test Report

FCC ID: TE7X60V2

This report concerns: Original Grant

Project No.	:	2006C089
Equipment	:	AX3000 Whole Home Mesh Wi-Fi 6 System
Brand Name	:	tp-link
Test Model	:	Deco X60
Series Model	:	N/A
Applicant	:	TP-Link Technologies Co., Ltd.
Address	:	Building 24(floors1,3,4,5) and 28(floors1-4) Central Science and Technology Park, Shennan Rd, Nanshan, Shenzhen, China
Manufacturer	:	TP-Link Technologies Co., Ltd.
Address	:	Building 24(floors1,3,4,5) and 28(floors1-4) Central Science and Technology Park, Shennan Rd, Nanshan, Shenzhen, China
Date of Receipt	:	Jun. 11, 2020
Date of Test	:	Jun. 15, 2020 ~ Jul. 30, 2020
Issued Date	:	Aug. 24, 2020
Report Version	:	R02
Test Sample	:	Engineering Sample No.: DG20200611223 for conducted, DG20200611224 for radiated
Standard(s)	:	FCC Part15, Subpart E(15.407) ANSI C63.10-2013 FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01 FCC KDB 662911 D01 Multiple Transmitter Output v02r01

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

Vincent.Tan

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Certificate #5123.02

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Declaration

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

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Limitation

For the use of the authority's logo is limited unless the Test Standard(s)/Scope(s)/Item(s) mentioned in this test report is (are) included in the conformity assessment authorities acceptance respective.
Please note that the measurement uncertainty is provided for informational purpose only and are not use in determining the Pass/Fail results.

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REPORT ISSUED HISTORY

Report Version	Description	Issued Date
R00	Original Issue.	Aug. 03, 2020
R01	Only updated the parameters of test software in Section 2.3	Aug. 11, 2020
R02	Only updated the measurement instruments list.	Aug. 12, 2020
R03	Revised report to address comments	Aug. 24, 2020

1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standard(s):

FCC Part15, Subpart E(15.407)				
Standard(s) Section	**Test Item**	**Test Result**	**Judgment**	**Remark**
15.207 15.407(b)	AC Power Line Conducted Emissions	APPENDIX A	PASS	------
15.407(b) 15.205(a) 15.209(a)	Radiated Emissions	APPENDIX B APPENDIX C APPENDIX D	PASS	------
15.407(a) 15.407(e)	Spectrum Bandwidth	APPENDIX E	PASS	------
15.407(a)	Maximum Output Power	APPENDIX F	PASS	------
15.407(a)	Power Spectral Density	APPENDIX G	PASS	------
15.407(g)	Frequency Stability	APPENDIX H	PASS	------
15.203	Antenna Requirements	------	PASS	**NOTE (2)**
15.407(c)	Automatically Discontinue Transmission	------	PASS	**NOTE (3)**

Note:

(1) "N/A" denotes test is not applicable in this test report.

(2) The device what use a permanently attached antenna were considered sufficient to comply with the provisions of 15.203.

(3) During no any information transmission, the EUT can automatically discontinue transmission and become standby mode for power saving. the EUT can detect the controlling signal of ACK message transmitting from remote device and verify whether it shall resend or discontinue transmission.

(4) For UNII-1 this device was functioned as a

☒ Access point device ☐ Client device

1.1 TEST FACILITY

The test facilities used to collect the test data in this report is at the location of No.3,Jinshagang 1st Road, Shixia, Dalang Town, Dongguan, Guangdong, China.
BTL's Test Firm Registration Number for FCC: 357015
BTL's Designation Number for FCC: CN1240

1.2 MEASUREMENT UNCERTAINTY

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

A. AC power line conducted emissions test:

Test Site	Method	Measurement Frequency Range	U, (dB)
DG-C02	CISPR	150kHz ~ 30MHz	2.60

B. Radiated emissions test:

Test Site	Method	Measurement Frequency Range	Ant. H / V	U, (dB)
DG-CB03	CISPR	9kHz ~ 30MHz	V	3.79
		9kHz ~ 30MHz	H	3.57
		30MHz ~ 200MHz	V	4.88
		30MHz ~ 200MHz	H	4.14
		200MHz ~ 1,000MHz	V	4.62
		200MHz ~ 1,000MHz	H	4.80
		1GHz ~ 6GHz	-	4.58
		6GHz ~ 18GHz	-	5.18
		18GHz ~ 26.5GHz	-	3.62
		26.5GHz ~ 40GHz	-	4.00

C. Other Measurement:

Parameter	Uncertainty
Spectrum Bandwidth	±3.8 %
Maximum Output Power	±0.95 dB
Power Spectral Density	±0.86 dB
Frequency Stability	±0.16 dB
Temperature	±0.08 °C
Time	±0.58 %
Supply voltages	±0.3 %

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

1.3 TEST ENVIRONMENT CONDITIONS

Test Item	Temperature	Humidity	Test Voltage	Tested By
AC Power Line Conducted Emissions	22°C	54%	AC 120V/60Hz	Sheldon Ou
Radiated Emissions-9K-30MHz	25°C	60%	AC 120V/60Hz	Sheldon Ou
Radiated Emissions-30 MHz to 1GHz	22°C	54%	AC 120V/60Hz	Sheldon Ou
Radiated Emissions-Above 1000 MHz	24°C	60%	AC 120V/60Hz	Sheldon Ou
Spectrum Bandwidth	24°C	52%	AC 120V/60Hz	Hayden Chen
Maximum Output Power	24°C	52%	AC 120V/60Hz	Laughing Zhang
Power Spectral Density	24°C	52%	AC 120V/60Hz	Hayden Chen
Frequency Stability	Normal & Extreme	48%	Normal & Extreme	Hayden Chen

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Equipment	AX3000 Whole Home Mesh Wi-Fi 6 System
Brand Name	tp-link
Test Model	Deco X60
Series Model	N/A
Model Difference(s)	N/A
Power Source	DC voltage supplied from AC adapter. Model: T120200-2B4
Power Rating	I/P: 100-240V~ 50/60Hz 0.8A O/P: 12V ⎓ 2A
Operation Frequency Bands	UNII-1: 5150 MHz~5250 MHz UNII-3: 5725 MHz~5850 MHz
Modulation Type	IEEE 802.11a/n/ac: OFDM IEEE 802.11ax: OFDMA
Bit Rate of Transmitter	IEEE 802.11a: 6, 9, 12, 18, 24, 36, 48, 54 Mbps IEEE 802.11n: up to 300 Mbps IEEE 802.11ac: up to 1733.2 Mbps IEEE 802.11ax: up to 2402 Mbps
Maximum Output Power _UNII-1	IEEE 802.11a: 27.58 dBm (0.5728 W) IEEE 802.11ac (VHT20): 27.79 dBm (0.6012 W) IEEE 802.11ac (VHT40): 27.71 dBm (0.5902 W) IEEE 802.11ac (VHT80): 23.99 dBm (0.2506 W) IEEE 802.11ax (HEW20): 27.66 dBm (0.5834 W) IEEE 802.11ax (HEW40): 27.39 dBm (0.5481 W) IEEE 802.11ax (HEW80): 23.82 dBm (0.2410 W)
Maximum Output Power _UNII-3	IEEE 802.11a: 27.92 dBm (0.6194 W) IEEE 802.11ac (VHT20): 27.95 dBm (0.6237 W) IEEE 802.11ac (VHT40): 27.92 dBm (0.6194 W) IEEE 802.11ac (VHT80): 28.00 dBm (0.6310 W) IEEE 802.11ax (HEW20): 27.92 dBm (0.6194 W) IEEE 802.11ax (HEW40): 27.91 dBm (0.6180 W) IEEE 802.11ax (HEW80): 27.98 dBm (0.6281 W)

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

2. Channel List:

IEEE 802.11a IEEE 802.11n (HT20) IEEE 802.11ac (VHT20) IEEE 802.11ax (HEW20)		IEEE 802.11n (HT40) IEEE 802.11ac (VHT40) IEEE 802.11ax (HEW40)		IEEE 802.11ac (VHT80) IEEE 802.11ax (HEW80)	
UNII-1		UNII-1		UNII-1	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
36	5180	38	5190	42	5210
40	5200	46	5230		
44	5220				
48	5240				

IEEE 802.11a IEEE 802.11n (HT20) IEEE 802.11ac (VHT20) IEEE 802.11ax (HEW20)		IEEE 802.11n (HT40) IEEE 802.11ac (VHT40) IEEE 802.11ax (HEW40)		IEEE 802.11ac (VHT80) IEEE 802.11ax (HEW80)	
UNII-3		UNII-3		UNII-3	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
149	5745	151	5755	155	5775
153	5765	159	5795		
157	5785				
161	5805				
165	5825				

3. Antenna Specification:

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	TP-LINK	3101502754	Dipole	I-PEX	0.81
2	TP-LINK	3101502755	Dipole	I-PEX	0.88
3	TP-LINK	3101502756	Dipole	I-PEX	0.90
4	TP-LINK	3101502757	Dipole	I-PEX	0.97

Note:
This EUT supports CDD, and antenna gains are not equal,
so Directional gain= $10\log[(10^{G1/20}+10^{G2/20}+...10^{GN/20})^2/N]$dBi,
that is Directional gain=$10\log[(10^{0.81/20}+10^{0.88/20}+10^{0.90/20}+10^{0.97/20})^2/4]$dBi =6.91.
So, the the UNII-1 and UNII-3 output power limit is 30-(6.91-6)=29.09,
the the UNII-1 power spectral density limit is 17-(6.91-6)=16.09,
the the UNII-3 power spectral density limit is 30-(6.91-6)=29.09

4. Table for Antenna Configuration:

Operating Mode / TX Mode	4TX
IEEE 802.11a	V (Ant. 1 + Ant. 2 + Ant. 3 + Ant. 4)
IEEE 802.11n (HT20)	V (Ant. 1 + Ant. 2 + Ant. 3 + Ant. 4)
IEEE 802.11n (HT40)	V (Ant. 1 + Ant. 2 + Ant. 3 + Ant. 4)
IEEE 802.11ac (VHT20)	V (Ant. 1 + Ant. 2 + Ant. 3 + Ant. 4)
IEEE 802.11ac (VHT40)	V (Ant. 1 + Ant. 2 + Ant. 3 + Ant. 4)
IEEE 802.11ac (VHT80)	V (Ant. 1 + Ant. 2 + Ant. 3 + Ant. 4)
IEEE 802.11ax (HEW20)	V (Ant. 1 + Ant. 2 + Ant. 3 + Ant. 4)
IEEE 802.11ax (HEW40)	V (Ant. 1 + Ant. 2 + Ant. 3 + Ant. 4)
IEEE 802.11ax (HEW80)	V (Ant. 1 + Ant. 2 + Ant. 3 + Ant. 4)

2.2 TEST MODES

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

Pretest Mode	Description
Mode 1	TX A Mode / CH36, CH40, CH48 (UNII-1)
Mode 2	TX AC (VHT20) Mode / CH36, CH40, CH48 (UNII-1)
Mode 3	TX AC (VHT40) Mode / CH38, CH46 (UNII-1)
Mode 4	TX AC (VHT80) Mode / CH42 (UNII-1)
Mode 5	TX AX (HEW20) Mode / CH36, CH40, CH48 (UNII-1)
Mode 6	TX AX (HEW40) Mode / CH38, CH46 (UNII-1)
Mode 7	TX AX (HEW80) Mode / CH42 (UNII-1)
Mode 8	TX A Mode / CH149,CH157,CH165 (UNII-3)
Mode 9	TX AC (VHT20) Mode / CH149,CH157,CH165 (UNII-3)
Mode 10	TX AC (VHT40) Mode / CH151,CH159 (UNII-3)
Mode 11	TX AC (VHT80) Mode / CH155 (UNII-3)
Mode 12	TX AX (HEW20) Mode / CH149,CH157,CH165 (UNII-3)
Mode 13	TX AX (HEW40) Mode / CH151,CH159 (UNII-3)
Mode 14	TX AX (HEW80) Mode / CH155 (UNII-3)
Mode 15	TX AC (VHT80) Mode / CH155 (UNII-3)

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

AC power line conducted emissions test	
Final Test Mode	Description
Mode 15	TX AC (VHT80) Mode / CH155 (UNII-3)

Radiated emissions test - Below 1GHz	
Final Test Mode	Description
Mode 15	TX AC (VHT80) Mode / CH155 (UNII-3)

Radiated emissions test - Above 1GHz	
Final Test Mode	Description
Mode 1	TX A Mode / CH36, CH40, CH48 (UNII-1)
Mode 2	TX AC (VHT20) Mode / CH36, CH40, CH48 (UNII-1)
Mode 3	TX AC (VHT40) Mode / CH38, CH46 (UNII-1)
Mode 4	TX AC (VHT80) Mode / CH42 (UNII-1)
Mode 5	TX AX (HEW20) Mode / CH36, CH40, CH48 (UNII-1)
Mode 6	TX AX (HEW40) Mode / CH38, CH46 (UNII-1)
Mode 7	TX AX (HEW80) Mode / CH42 (UNII-1)
Mode 8	TX A Mode / CH149,CH157,CH165 (UNII-3)
Mode 9	TX AC (VHT20) Mode / CH149,CH157,CH165 (UNII-3)
Mode 10	TX AC (VHT40) Mode / CH151,CH159 (UNII-3)
Mode 11	TX AC (VHT80) Mode / CH155 (UNII-3)
Mode 12	TX AX (HEW20) Mode / CH149,CH157,CH165 (UNII-3)
Mode 13	TX AX (HEW40) Mode / CH151,CH159 (UNII-3)
Mode 14	TX AX (HEW80) Mode / CH155 (UNII-3)

Conducted test	
Final Test Mode	Description
Mode 1	TX A Mode / CH36, CH40, CH48 (UNII-1)
Mode 2	TX AC (VHT20) Mode / CH36, CH40, CH48 (UNII-1)
Mode 3	TX AC (VHT40) Mode / CH38, CH46 (UNII-1)
Mode 4	TX AC (VHT80) Mode / CH42 (UNII-1)
Mode 5	TX AX (HEW20) Mode / CH36, CH40, CH48 (UNII-1)
Mode 6	TX AX (HEW40) Mode / CH38, CH46 (UNII-1)
Mode 7	TX AX (HEW80) Mode / CH42 (UNII-1)
Mode 8	TX A Mode / CH149,CH157,CH165 (UNII-3)
Mode 9	TX AC (VHT20) Mode / CH149,CH157,CH165 (UNII-3)
Mode 10	TX AC (VHT40) Mode / CH151,CH159 (UNII-3)
Mode 11	TX AC (VHT80) Mode / CH155 (UNII-3)
Mode 12	TX AX (HEW20) Mode / CH149,CH157,CH165 (UNII-3)
Mode 13	TX AX (HEW40) Mode / CH151,CH159 (UNII-3)
Mode 14	TX AX (HEW80) Mode / CH155 (UNII-3)

Note:
(1) For radiated emission below 1 GHz test, the IEEE 802.11ac (VHT80) channel 155 is found to be the worst case and recorded.
(2) For radiated emission above 1 GHz test, 1GHz~26.5GHz and 26.5GHz~40GHz have been pre-tested and in this report only recorded the worst case. The remaining spurious points are all below the limit value of 20dB.
(3) VHT20/VHT40 covers HT20/HT40, due to same modulation. The power setting for 802.11n HT20 and HT40 are the same or lower than 802.11ac VHT20 and VHT40.
(4) 802.11ax full RU mode was evaluated and measured inside report.
(5) Radiated emissions above 1GHz have tested the vertical and horizontal polarities, the worst case is vertical, and only the worst case recorded in this report.

2.3 PARAMETERS OF TEST SOFTWARE

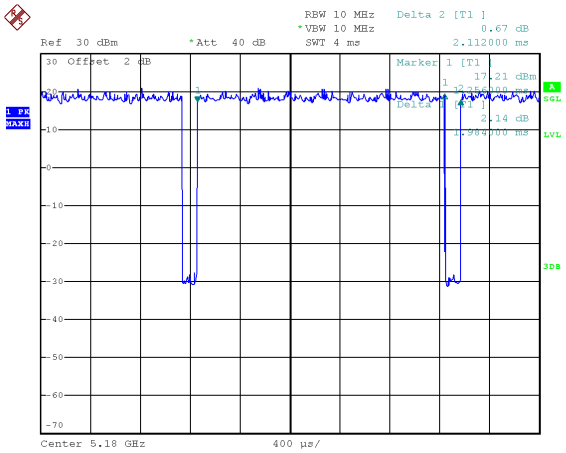
UNII-1			
Test Software	QSPR		
Test Frequency (MHz)	5180	5200	5240
IEEE 802.11a	20	21.5	21.5
IEEE 802.11ac (VHT20)	21	22	22
IEEE 802.11ax (HEW20)	21	21	22
Test Frequency (MHz)	5190	5230	
IEEE 802.11ac (VHT40)	17.5	20.5	
IEEE 802.11ax (HEW40)	17.5	20.5	
Test Frequency (MHz)	5210		
IEEE 802.11ac (VHT80)	17.5		
IEEE 802.11ax (HEW80)	17.5		

UNII-3			
Test Software	QSPR		
Test Frequency (MHz)	5745	5785	5825
IEEE 802.11a	22.5	22	22
IEEE 802.11ac (VHT20)	22.5	22.5	22
IEEE 802.11ax (HEW20)	22.5	22.5	22
Test Frequency (MHz)	5755	5795	
IEEE 802.11ac (VHT40)	21	21	
IEEE 802.11ax (HEW40)	21.5	21	
Test Frequency (MHz)	5775		
IEEE 802.11ac (VHT80)	22		
IEEE 802.11ax (HEW80)	22		

2.4 DUTY CYCLE

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

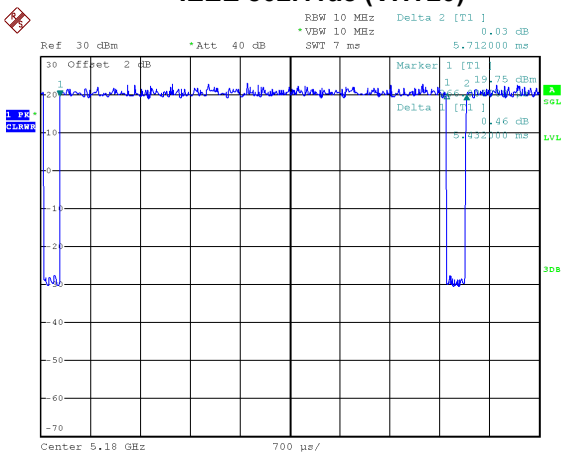
IEEE 802.11a



Date: 1.JUL.2020 11:37:48

Duty cycle = 1.984 ms / 2.112 ms = 93.94%
Duty Factor = 10 log(1 / Duty cycle) = 0.27

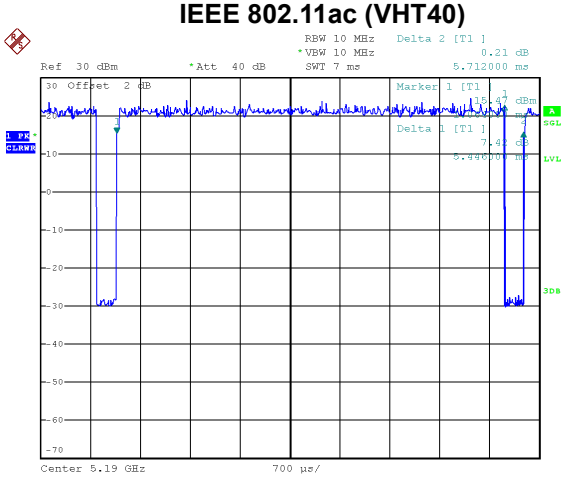
IEEE 802.11ac (VHT20)



Date: 1.JUL.2020 11:39:17

Duty cycle = 5.432 ms / 5.712 ms = 95.10%
Duty Factor = 10 log(1 / Duty cycle) = 0.22

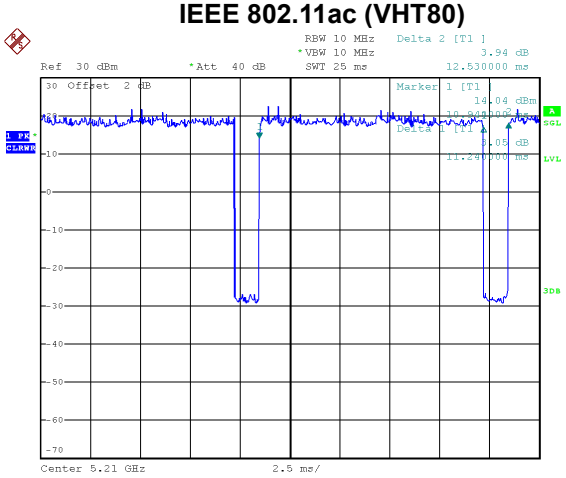
IEEE 802.11ac (VHT40)



Date: 1.JUL.2020 11:39:47

Duty cycle = 5.446 ms / 5.712 ms = 95.34%
Duty Factor = 10 log(1 / Duty cycle) = 0.21

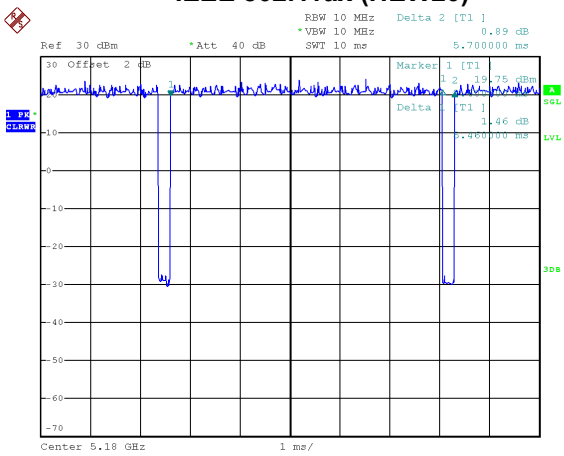
IEEE 802.11ac (VHT80)



Date: 1.JUL.2020 11:43:54

Duty cycle = 11.240 ms / 12.530 ms = 89.70%
Duty Factor = 10 log(1 / Duty cycle) = 0.47

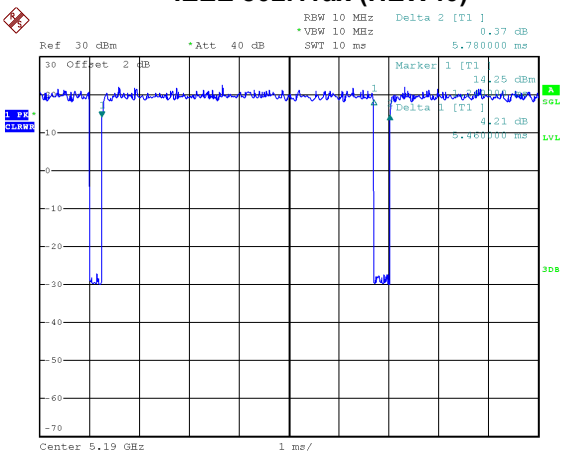
IEEE 802.11ax (HEW20)



Date: 1.JUL.2020 11:46:25

Duty cycle = 5.46 ms / 5.70 ms = 95.79%
Duty Factor = 10 log(1 / Duty cycle) = 0.19

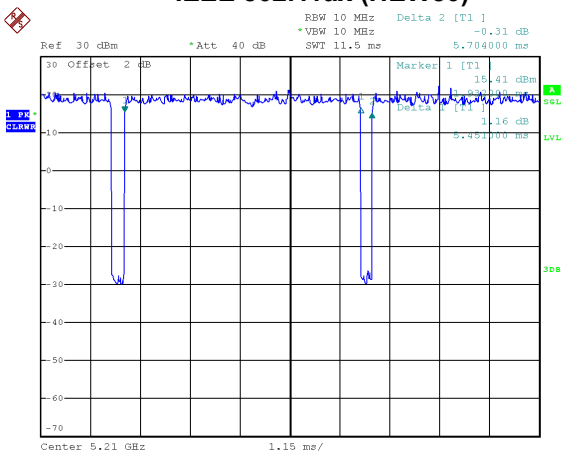
IEEE 802.11ax (HEW40)



Date: 1.JUL.2020 11:47:47

Duty cycle = 5.46 ms / 5.78 ms = 94.46%
Duty Factor = 10 log(1 / Duty cycle) = 0.25

IEEE 802.11ax (HEW80)

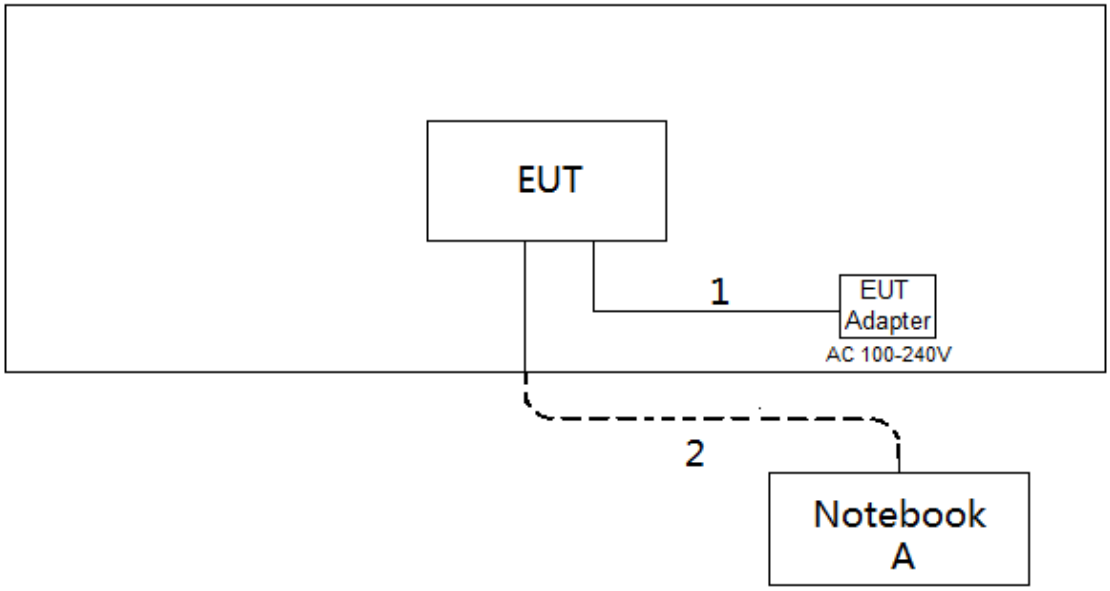


Date: 1.JUL.2020 11:48:34

Duty cycle = 5.451 ms / 5.704 ms = 95.57%
Duty Factor = 10 log(1 / Duty cycle) = 0.20

NOTE:
For IEEE 802.11a, IEEE 802.11ac (VHT20) and IEEE 802.11ax (HEW20):
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) and IEEE 802.11ax (HEW40):
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) and IEEE 802.11ax (HEW80):
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%).

2.5 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED



2.6 SUPPORT UNITS

Item	Equipment	Brand	Model No.	Series No.
A	Notebook	Dell	Inspiron 15-7559	N/A

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

3. AC POWER LINE CONDUCTED EMISSIONS TEST

3.1 LIMIT

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

NOTE:
(1) The tighter limit applies at the band edges.
(2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver

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

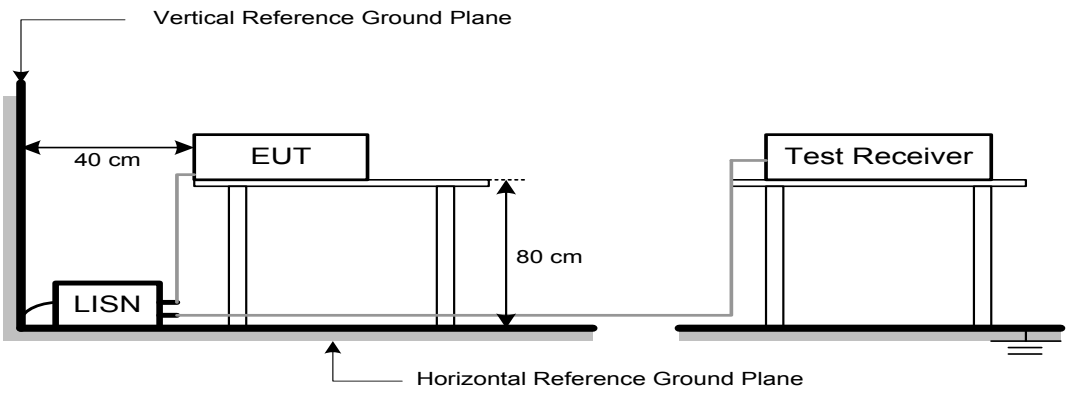
3.2 TEST PROCEDURE

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

3.3 DEVIATION FROM TEST STANDARD

No deviation

3.4 TEST SETUP



3.5 EUT OPERATION CONDITIONS

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

3.6 TEST RESULTS

Please refer to the APPENDIX A.

4. RADIATED EMISSIONS TEST

4.1 LIMIT

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

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

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

LIMITS OF UNWANTED EMISSION OUT OF THE RESTRICTED BANDS

Frequency (MHz)	EIRP Limit (dBm/MHz)	Equivalent Field Strength at 3m (dBμV/m)
5150-5250	-27	68.3
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 15.407(b)(4)(i), all emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

4.2 TEST PROCEDURE

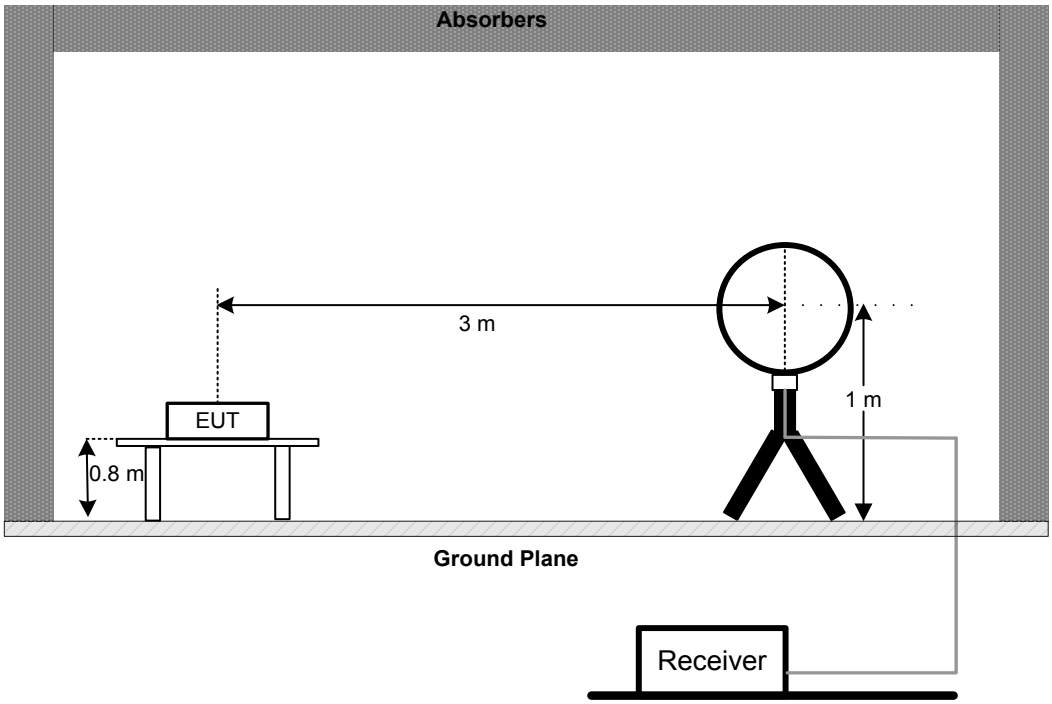
a. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1GHz)
b. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 1.5 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(above 1GHz)
c. The height of the equipment or of the substitution antenna shall be 0.8m or 1.5m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights find the maximum reading (used Bore sight function).
e. The receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz.
f. The initial step in collecting radiated emission data is a receiver peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
g. All readings are Peak unless otherwise stated QP in column of Note. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn‘t perform. (below 1 GHz)
h. All readings are Peak Mode value unless otherwise stated AVG in column of Note. If the Peak Mode Measured value compliance with the Peak Limits and lower than AVG Limits, the EUT shall be deemed to meet both Peak & AVG Limits and then only Peak Mode was measured, but AVG Mode didn‘t perform. (above 1 GHz)
i. For the actual test configuration, please refer to the related Item –EUT Test Photos.

4.3 DEVIATION FROM TEST STANDARD

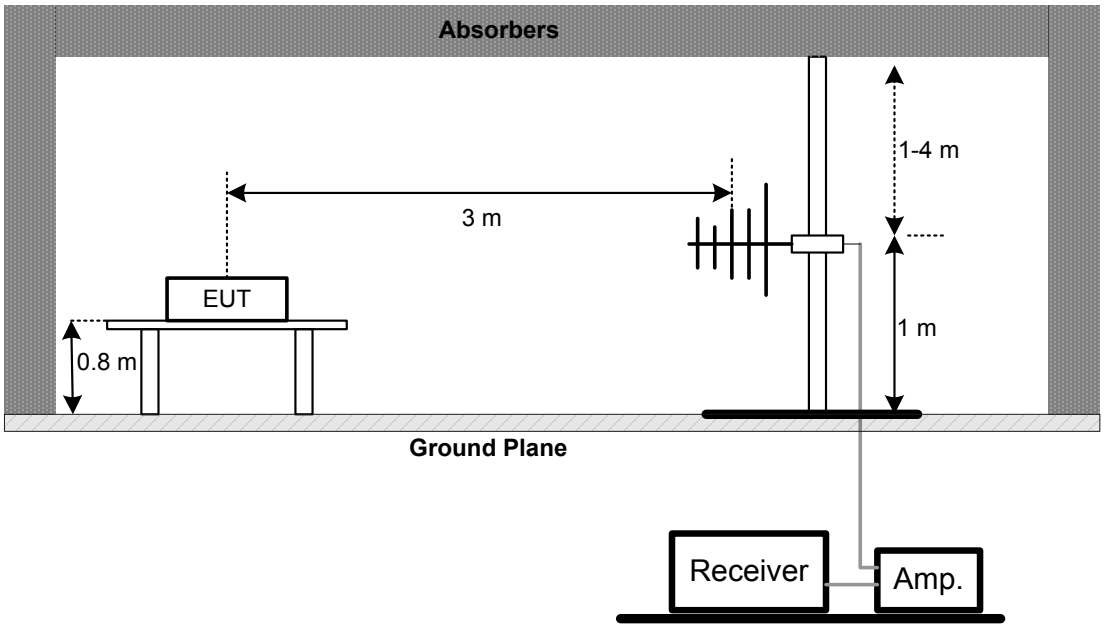
No deviation

4.4 TEST SETUP

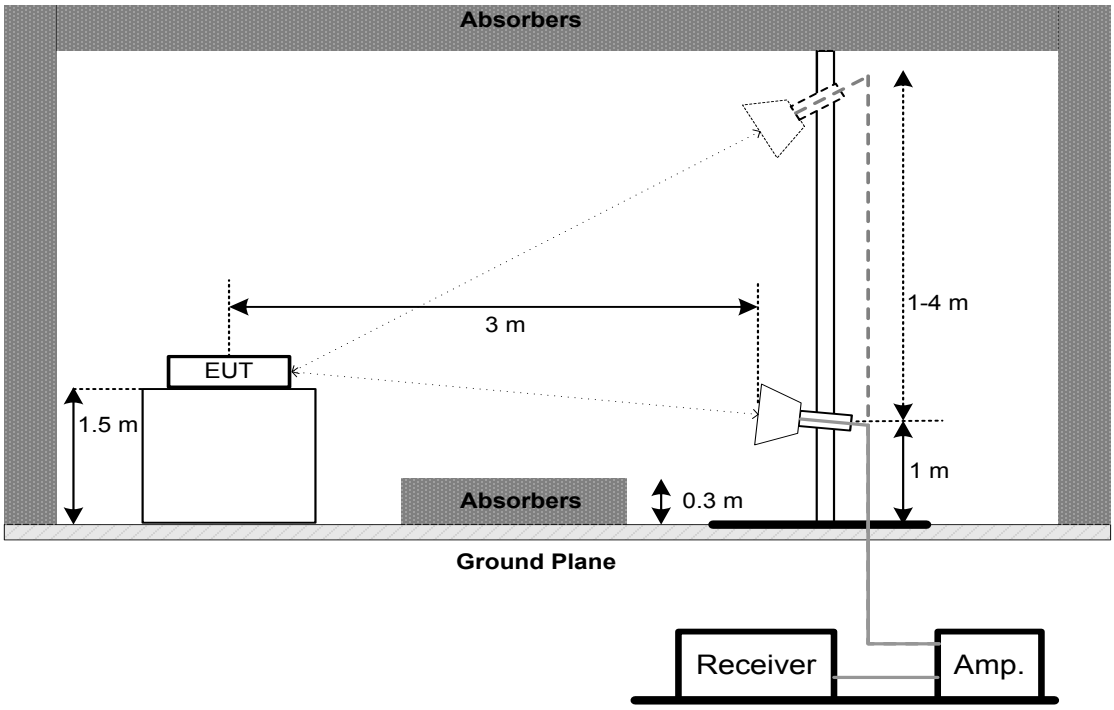
9 kHz to 30 MHz



30 MHz to 1 GHz



Above 1 GHz



4.5 EUT OPERATION CONDITIONS

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

4.6 TEST RESULTS - 9 KHZ to 30 MHZ

Please refer to the APPENDIX B

Remark:

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

4.7 TEST RESULTS - 30 MHz TO 1000 MHz

Please refer to the APPENDIX C.

4.8 TEST RESULTS - ABOVE 1000 MHz

Please refer to the APPENDIX D.

Remark:

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

5. BANDWIDTH TEST

5.1 LIMIT

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

5.2 TEST PROCEDURE

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

b. Spectrum Setting:
For UNII-1:

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	> 26 dB Bandwidth
RBW	300 kHz (Bandwidth 20 MHz) 100 kHz (Bandwidth 40 MHz) 1 MHz (Bandwidth 80 MHz)
VBW	1 MHz (Bandwidth 20 MHz and 40 MHz) 300 kHz (Bandwidth 40 MHz) 3 MHz (Bandwidth 80 MHz)
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

For UNII-3:

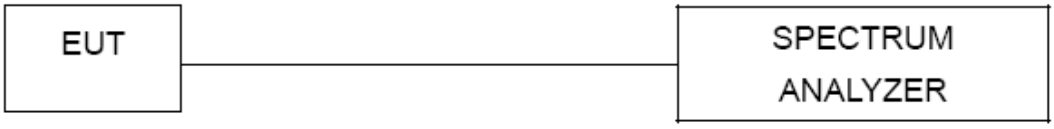
Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	6 dB Bandwidth
RBW	100 kHz
VBW	300 kHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

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

5.3 DEVIATION FROM STANDARD

No deviation.

5.4 TEST SETUP



5.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

5.6 TEST RESULTS

Please refer to the APPENDIX E.

6. MAXIMUM OUTPUT POWER TEST

6.1 LIMIT

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

Note:

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

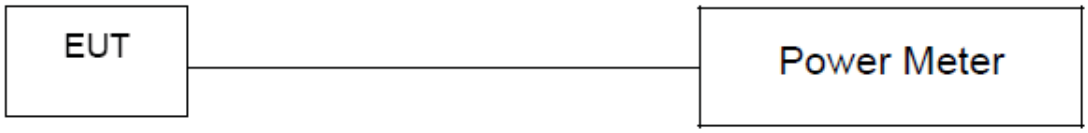
6.2 TEST PROCEDURE

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

6.3 DEVIATION FROM STANDARD

No deviation.

6.4 TEST SETUP



6.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

6.6 TEST RESULTS

Please refer to the APPENDIX F.

7. POWER SPECTRAL DENSITY TEST

7.1 LIMIT

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

7.2 TEST PROCEDURE

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

b. Spectrum Setting:

For UNII-1:

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

For UNII-3:

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

Note:

1. For UNII-3, according to KDB publication 789033 D02 General UNII Test Procedures New Rules v02r01, section II.F.5., it is acceptable to set RBW at 100kHz and VBW at 300kHz if the spectrum analyzer does not have 500 kHz RBW.
2. The value measured with RBW=100kHz is to be added with 10log(500 kHz/100kHz) which is +7 dB. During the test, the offset has added 7 dB, For example, if the offset value is +3dB , then the converted value will be 3+7=10dB using RBW=100kHz.

7.3 DEVIATION FROM STANDARD

No deviation.

7.4 TEST SETUP

7.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

7.6 TEST RESULTS

Please refer to the APPENDIX G.

8. FREQUENCY STABILITY MEASUREMENT

8.1 LIMIT

FCC Part15, Subpart E (15.407)			
Section	Test Item	Limit	Frequency Range (MHz)
15.407(g)	Frequency Stability	An emission is maintained within the band of operation under all conditions of normal operation as specified in the users manual.	5150-5250
			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	Entire absence of modulation emissions bandwidth
RBW	10 kHz
VBW	10 kHz
Sweep Time	Auto

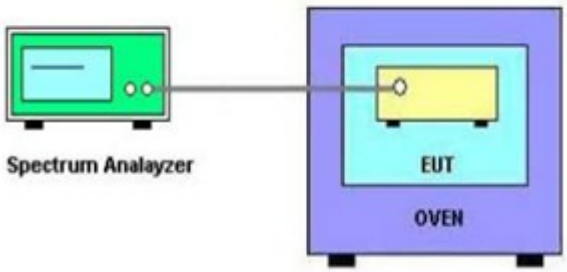
c. The test extreme voltage is to change the primary supply voltage from 85 to 115 percent of the nominal value.

d. User manual temperature is 0°C~40°C.

8.3 DEVIATION FROM STANDARD

No deviation.

8.4 TEST SETUP



8.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

8.6 TEST RESULTS

Please refer to the APPENDIX H.

9. MEASUREMENT INSTRUMENTS LIST

AC Power Line Conducted Emissions					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	EMI Test Receiver	R&S	ESCI	100382	Feb. 28, 2021
2	LISN	EMCO	3816/2	52765	Mar. 01, 2021
3	TWO-LINE V-NETWORK	R&S	ENV216	101447	Feb. 28, 2021
4	50Ω Terminator	SHX	TF5-3	15041305	Mar. 01, 2021
5	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
6	Cable	N/A	RG223	12m	Mar. 10, 2021
7	Shielded Room	ETS-LINDGREN	8.5*4.5*3m	N/A	N/A

Radiated Emissions - 9 kHz to 30 MHz					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Antenna	EM	EM-6876-1	230	Apr. 16, 2021
2	Cable	N/A	RG 213/U	N/A	May 29, 2021
3	EMI Test Receiver	R&S	ESCI	100895	Feb. 28, 2021
4	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
5	966 Chambe Room	RM	9*6*6	N/A	Jul. 25, 2021

Radiated Emissions - 30 MHz to 1 GHz					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Antenna	Schwarzbeck	VULB9160	9160-3232	Mar. 09, 2021
2*	Amplifier	HP	8447D	2944A09673	Aug. 11, 2021
3	Receiver	Agilent	N9038A	MY52130039	Aug. 03, 2020
4	Cable	emci	LMR-400(30MHz-1 GHz)(8m+5m)	N/A	May 22, 2021
5	Controller	CT	SC100	N/A	N/A
6	Controller	MF	MF-7802	MF780208416	N/A
7	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
8	966 Chambe Room	RM	9*6*6	N/A	Jul. 25, 2021

Radiated Emissions - Above 1 GHz					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Double Ridged Guide Antenna	ETS	3115	75789	May 12, 2021
2	Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	9170319	Jul. 07, 2021
3	Amplifier	Agilent	8449B	3008A02333	Mar. 01, 2021
4	Microwave Preamplifier With Adaptor	EMC INSTRUMENT	EMC2654045	980039 & HA01	Mar. 07, 2021
5	Receiver	Agilent	N9038A	MY52130039	Aug. 03, 2020
6	Controller	CT	SC100	N/A	N/A
7	Controller	MF	MF-7802	MF780208416	N/A
8	Cable	N/A	EMC104-SM-SM-6 000	N/A	May 09, 2021
9	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
10	966 Chambe Room	RM	9*6*6	N/A	Jul. 25, 2021
11	Band Reject filter	Micro-Tronics	BRC50703-01	007	Feb. 28, 2021
12	Band Reject filter	Micro-Tronics	BRC50705-01	010	Feb. 28, 2021

Bandwidth					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP40	100185	Aug. 03, 2020
2	DC BLOCK	Mini	N/A	N/A	N/A
3	RF Cable	tongkaichuan	N/A	N/A	N/A

Power Spectral Density					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	EXA Spectrum Analyzer	Agilent	N9010A	MY55150209	Mar. 01, 2021
2	DC BLOCK	Mini	N/A	N/A	N/A
3	RF Cable	tongkaichuan	N/A	N/A	N/A

Maximum Output Power					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Peak Power Analyzer	Keysight	8990B	MY51000506	Aug. 03, 2020
2	Wideband power sensor	Keysight	N1923A	MY58310004	Aug. 03, 2020
3	Attenuator	WOKEN	6SM3502	VAS1214NL	Feb. 11, 2021
4	RF Cable	tongkaichuan	N/A	N/A	N/A

Frequency Stability					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP40	100185	Aug. 03, 2020
2	Const Temp. & Humidity Chamber	CEPREI	CEEC-M64T-40	15-008	Feb. 28, 2021
3	DC BLOCK	Mini	N/A	N/A	N/A
4	RF Cable	tongkaichuan	N/A	N/A	N/A

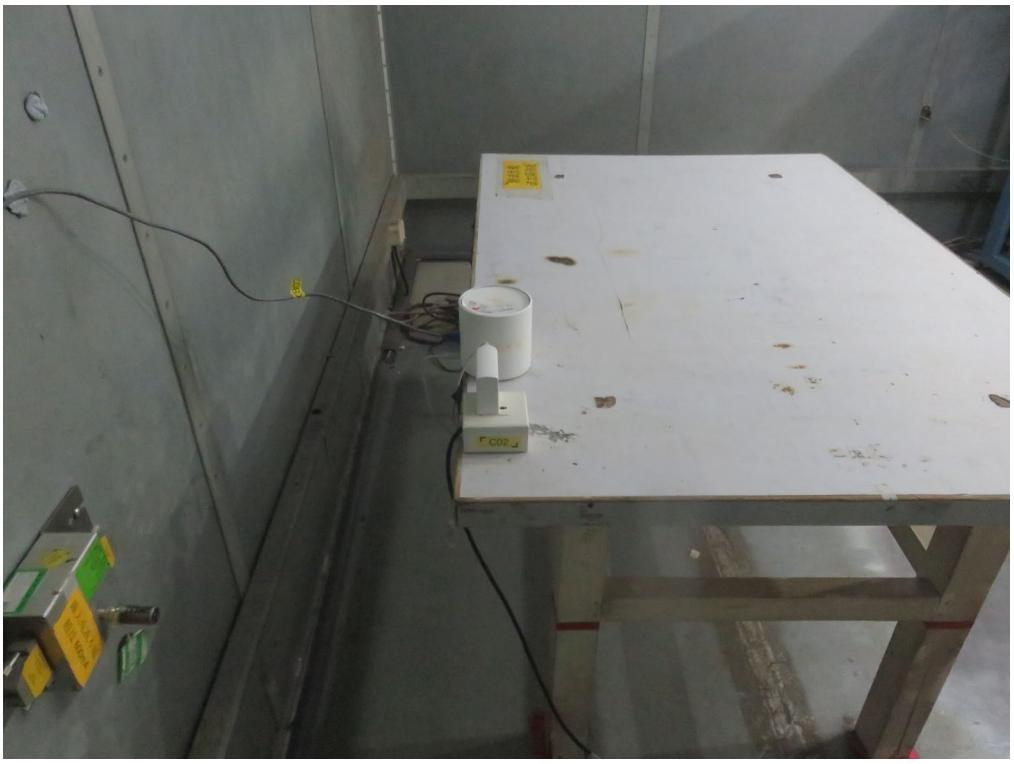
Remark: “N/A” denotes no model name, serial no. or calibration specified.

“*” calibration period of equipment list is three year.

Except * item, all calibration period of equipment list is one year.

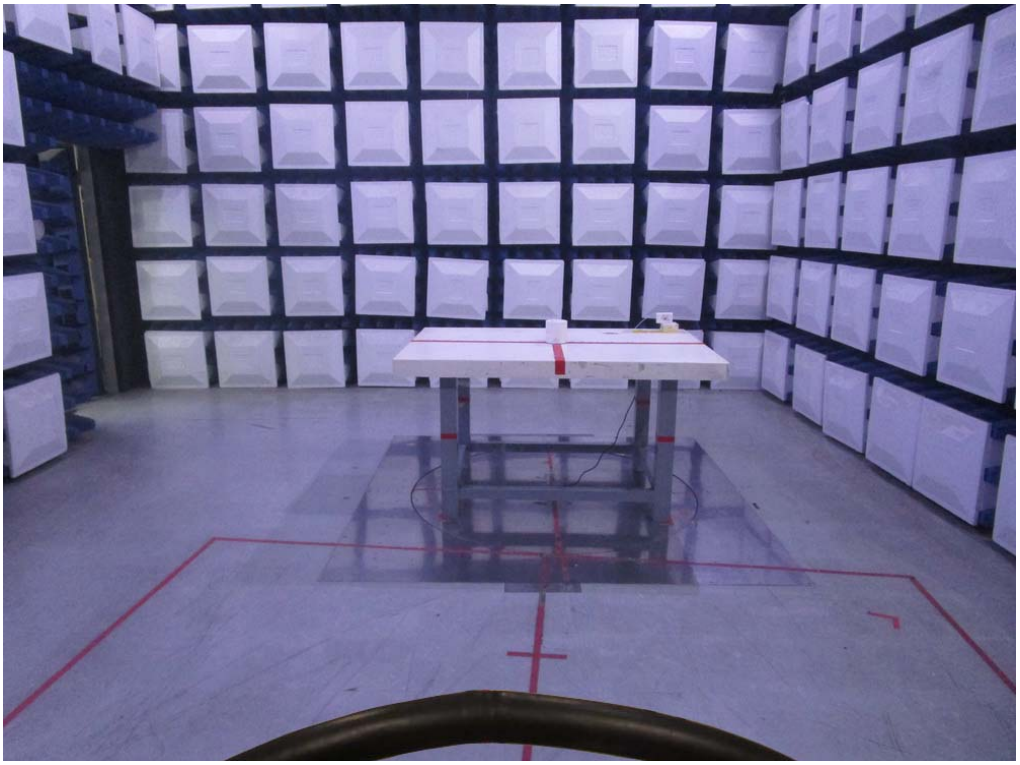
10. EUT TEST PHOTOS

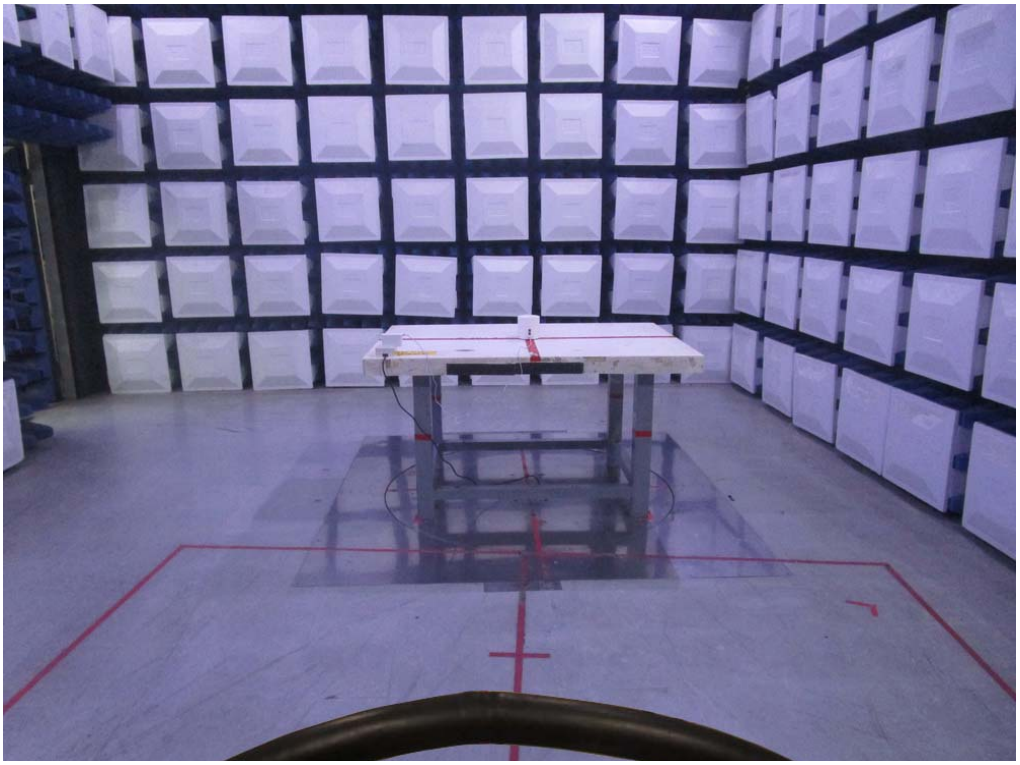
AC Power Line Conducted Emissions Test Photos



Radiated Emissions Test Photos

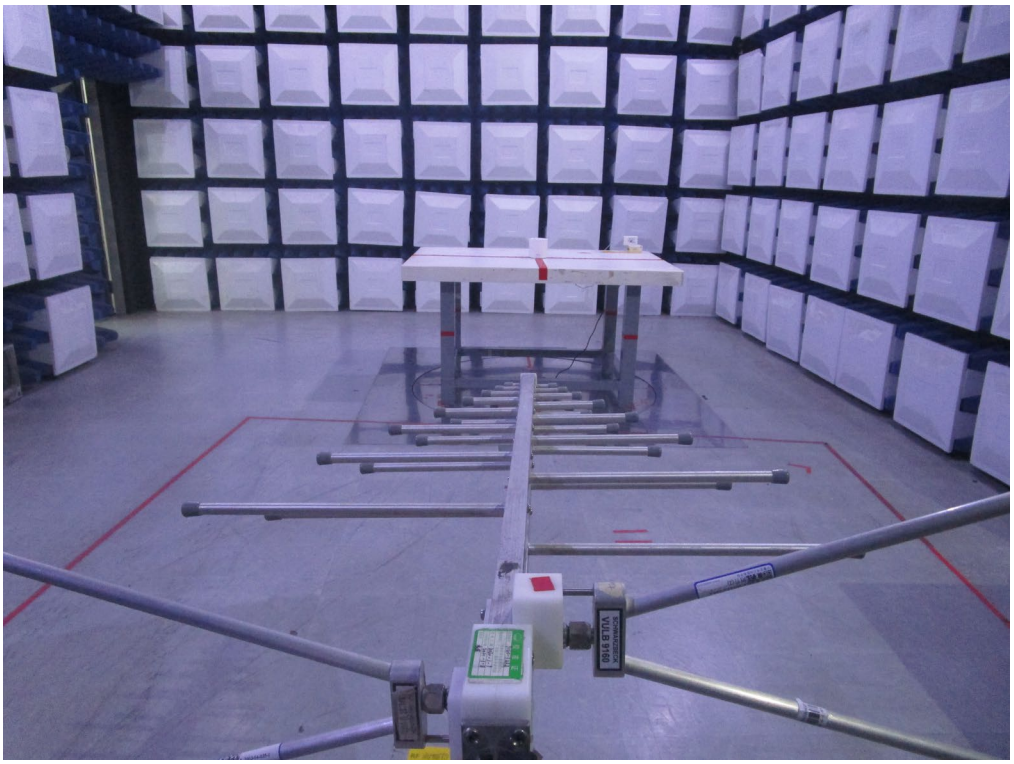
9 kHz to 30 MHz





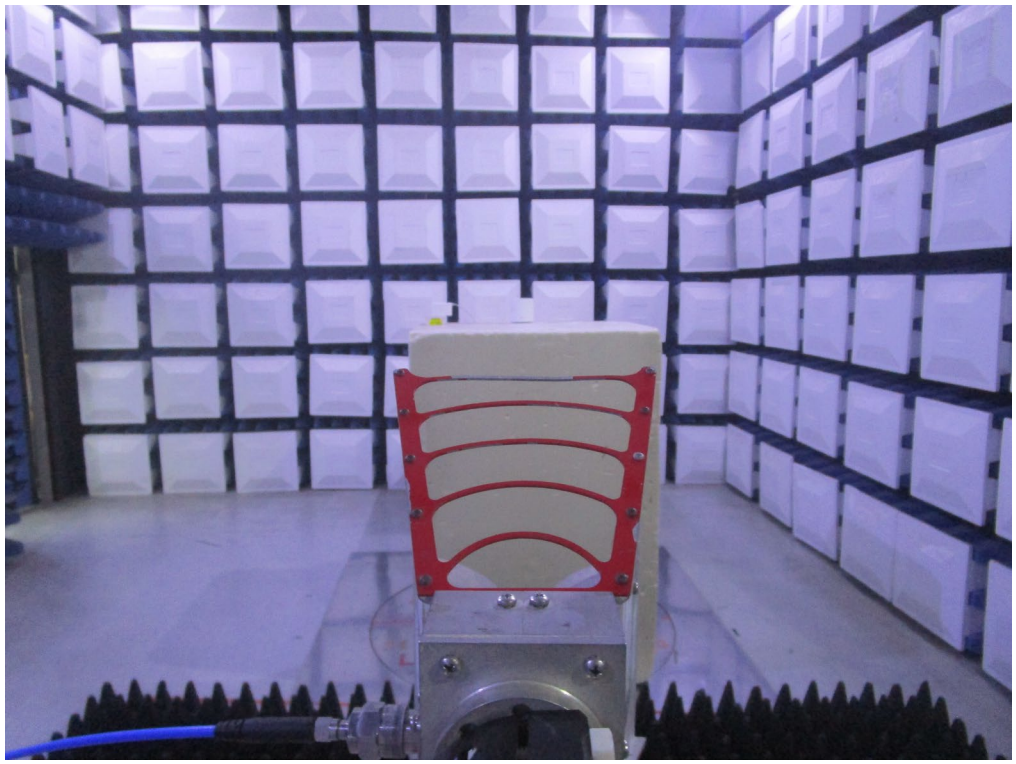
Radiated Emissions Test Photos

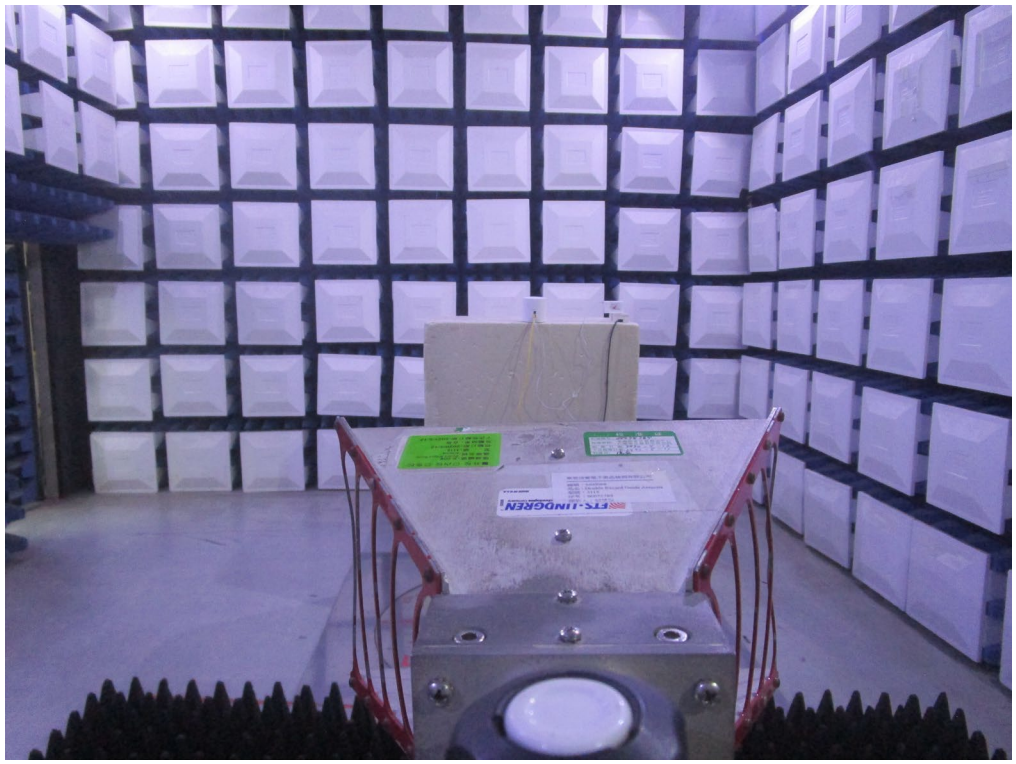
30 MHz to 1 GHz



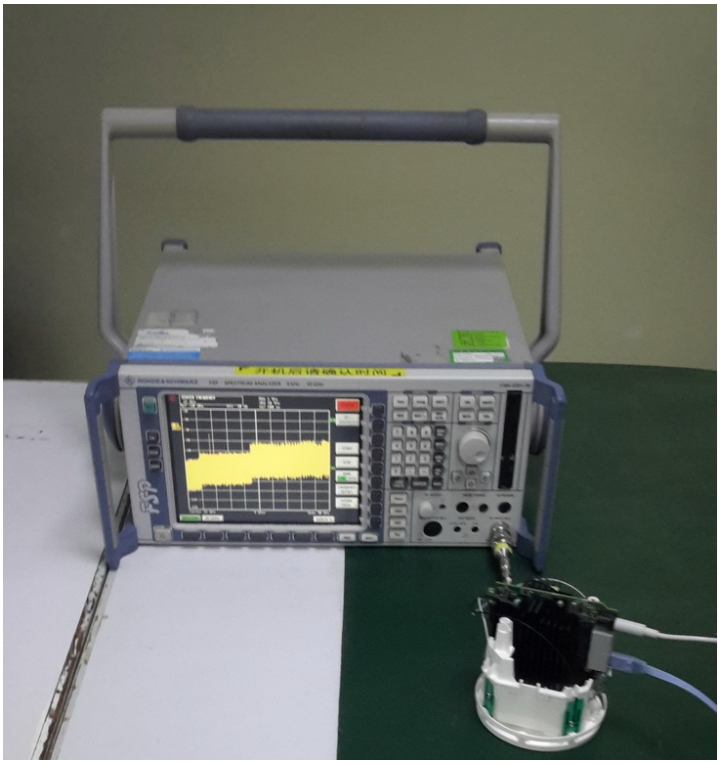
Radiated Emissions Test Photos

Above 1 GHz





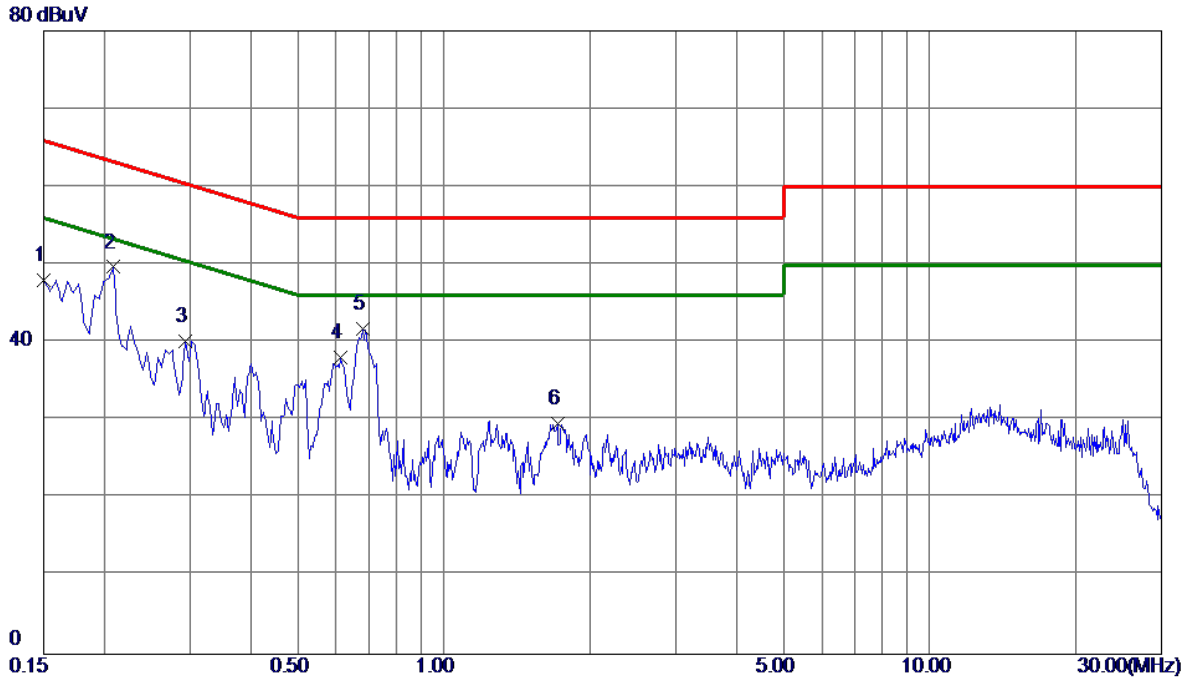
Conducted Emissions Test Photos



APPENDIX A - AC POWER LINE CONDUCTED EMISSIONS

Test Mode:	TX AC80 Mode CHANNEL 155

Line

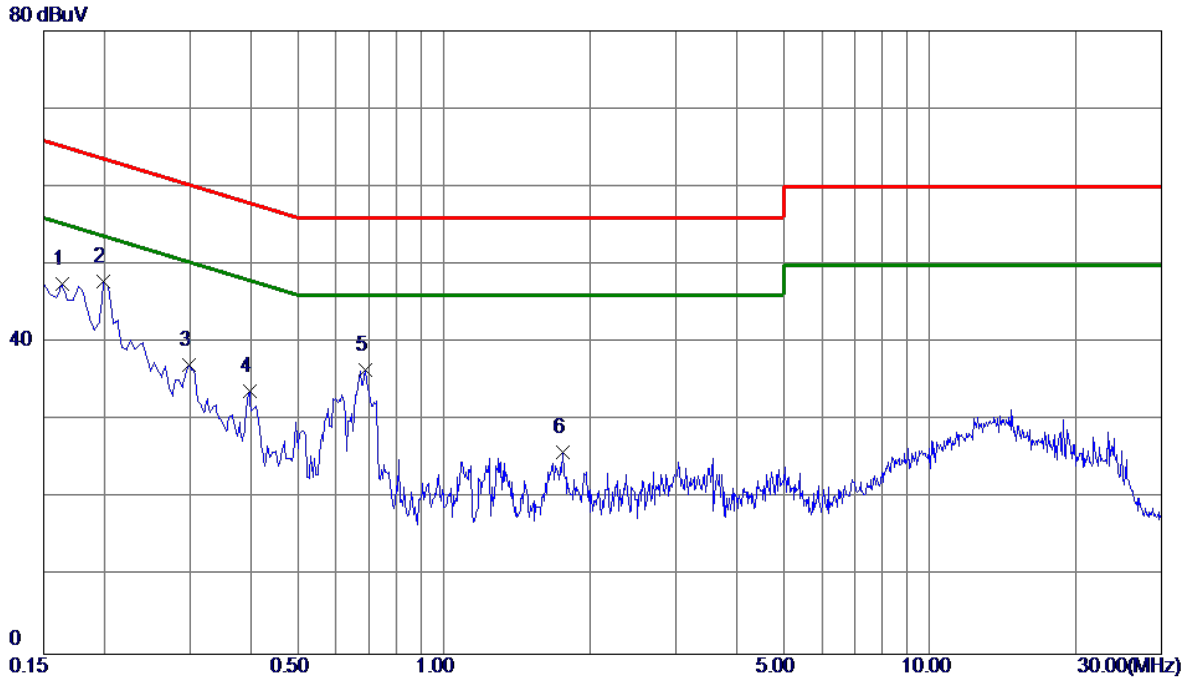


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	0.1500	38.34	9.67	48.01	66.00	-17.99	Peak	
2 *	0.2085	39.78	9.90	49.68	63.26	-13.58	Peak	
3	0.2940	30.32	9.89	40.21	60.41	-20.20	Peak	
4	0.6134	28.16	9.95	38.11	56.00	-17.89	Peak	
5	0.6809	31.87	9.89	41.76	56.00	-14.24	Peak	
6	1.7160	19.56	10.06	29.62	56.00	-26.38	Peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.
(3) The test result has included the cable loss.

Test Mode:	TX AC80 Mode CHANNEL 155

Neutral



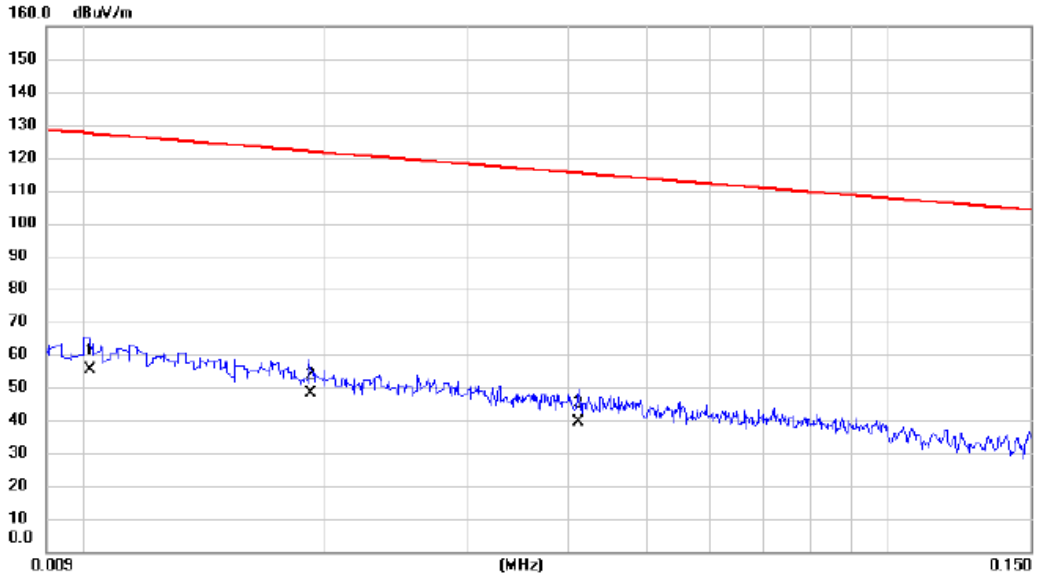
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	0.1635	37.71	9.85	47.56	65.28	-17.72	Peak	
2 *	0.1995	37.76	10.01	47.77	63.63	-15.86	Peak	
3	0.2985	27.15	10.02	37.17	60.28	-23.11	Peak	
4	0.3975	23.63	10.09	33.72	57.91	-24.19	Peak	
5	0.6900	26.38	10.12	36.50	56.00	-19.50	Peak	
6	1.7565	15.52	10.39	25.91	56.00	-30.09	Peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.
(3) The test result has included the cable loss.

APPENDIX B - RADIATED EMISSION - 9 KHZ TO 30 MHZ

Test Mode:	TX AC80 Mode CHANNEL 155

Ant 0°

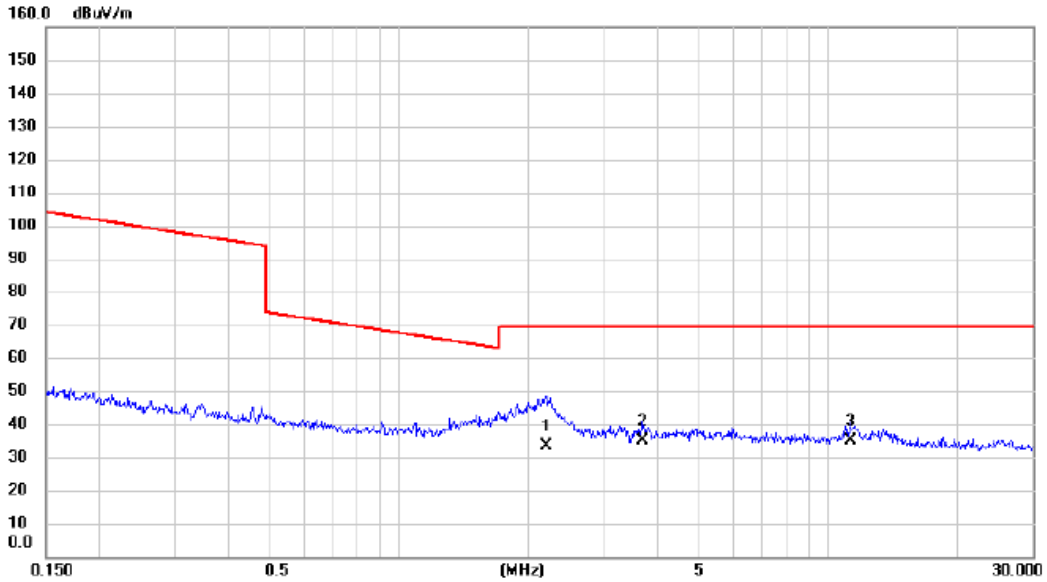


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	0.0102	39.36	16.17	55.53	127.43	-71.90	AVG	
2		0.0192	34.67	13.38	48.05	121.94	-73.89	AVG	
3		0.0412	26.85	12.57	39.42	115.31	-75.89	AVG	

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

Test Mode:	TX AC80 Mode CHANNEL 155

Ant 0°

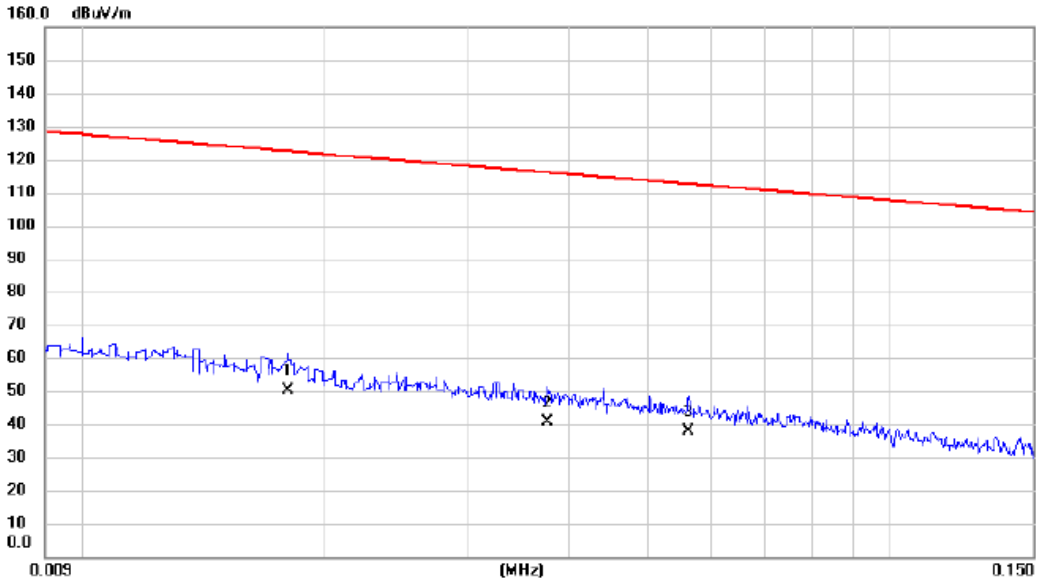


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2.2015	22.37	10.97	33.34	69.54	-36.20	QP	
2	*	3.6806	24.48	10.58	35.06	69.54	-34.48	QP	
3		11.2572	23.91	11.08	34.99	69.54	-34.55	QP	

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

Test Mode:	TX AC80 Mode CHANNEL 155

Ant 90°

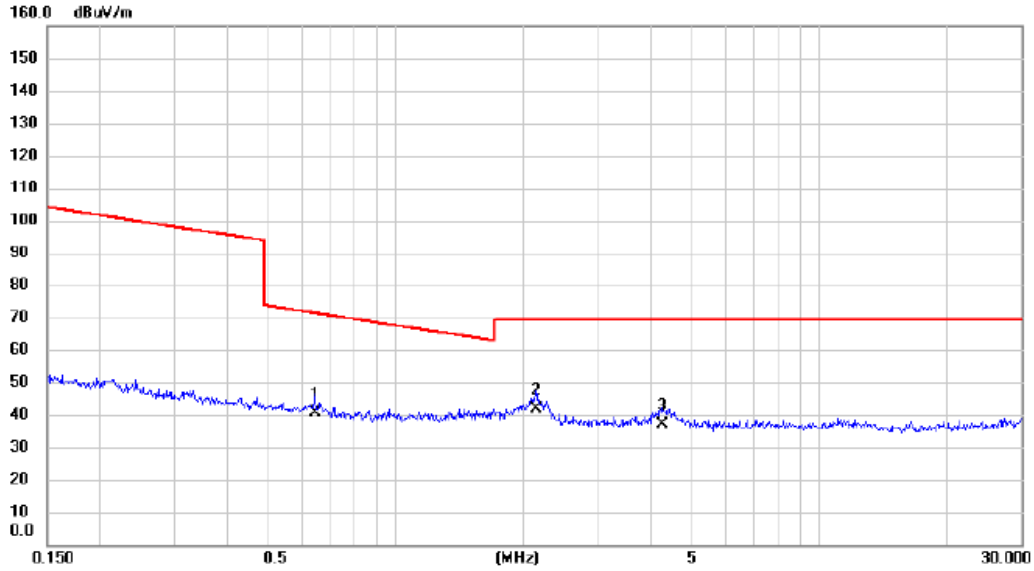


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	0.018	35.83	14.42	50.25	122.50	-72.25	AVG	
2		0.038	26.69	13.89	40.58	116.10	-75.52	AVG	
3		0.056	23.84	13.83	37.67	112.59	-74.92	AVG	

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

Test Mode:	TX AC80 Mode CHANNEL 155

Ant 90°



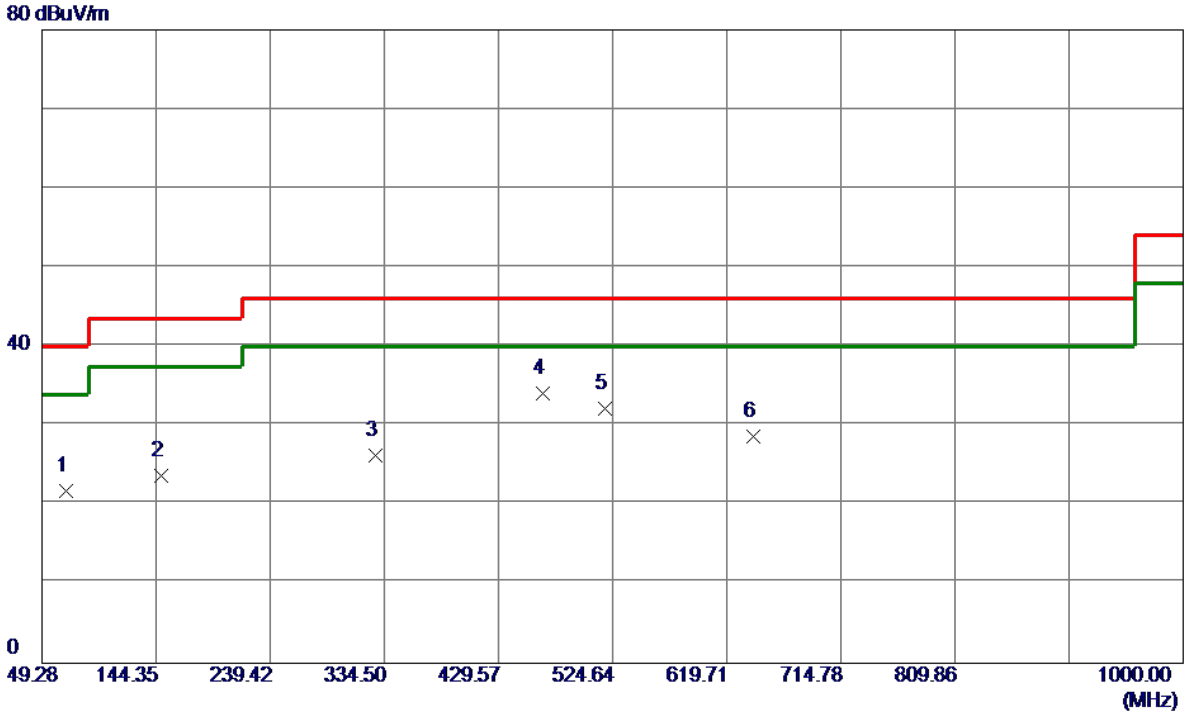
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		0.6440	27.79	12.78	40.57	71.43	-30.86	QP	
2	*	2.1440	29.93	11.73	41.66	69.54	-27.88	QP	
3		4.2465	26.18	10.93	37.11	69.54	-32.43	QP	

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

APPENDIX C - RADIATED EMISSION - 30 MHZ TO 1 GHZ

Test Mode:	TX AC80 Mode CHANNEL 155

Vertical

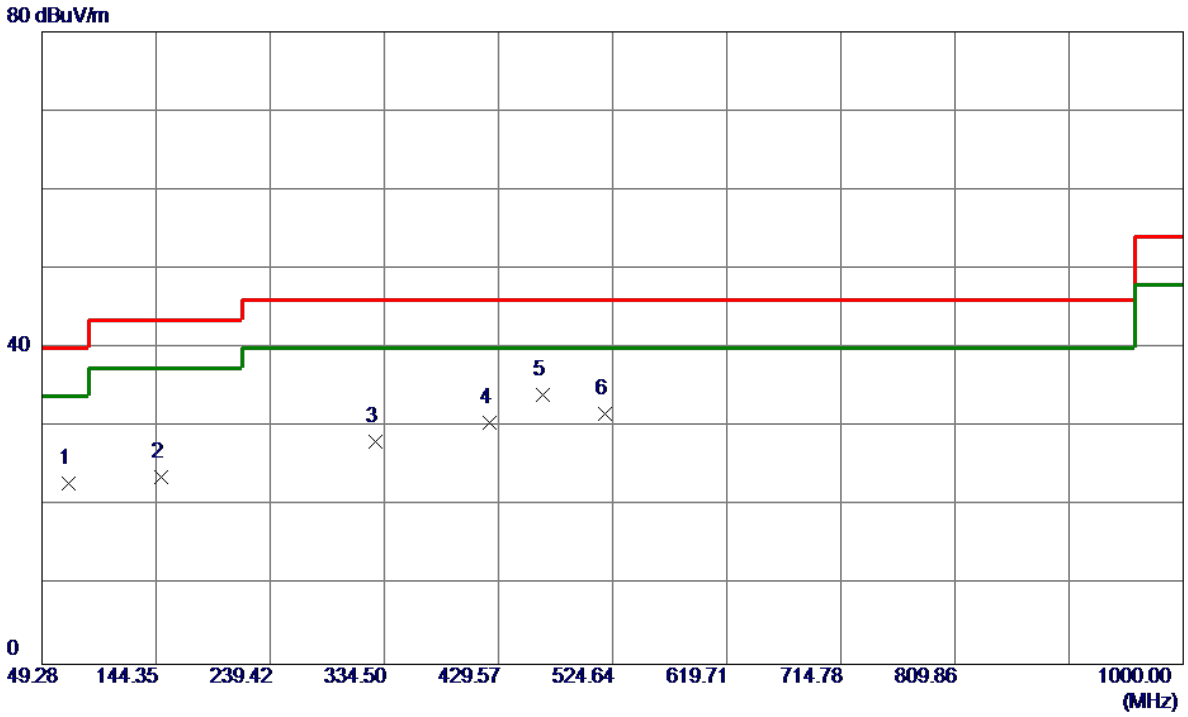


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	69.2441	37.57	-15.74	21.83	40.00	-18.17	Peak	
2	148.1540	35.82	-12.07	23.75	43.50	-19.75	Peak	
3	326.8894	36.74	-10.57	26.17	46.00	-19.83	Peak	
4 *	466.6455	41.52	-7.51	34.01	46.00	-11.99	Peak	
5	517.9844	39.33	-7.10	32.23	46.00	-13.77	Peak	
6	641.5780	33.04	-4.45	28.59	46.00	-17.41	Peak	

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

Test Mode:	TX AC80 Mode CHANNEL 155

Horizontal



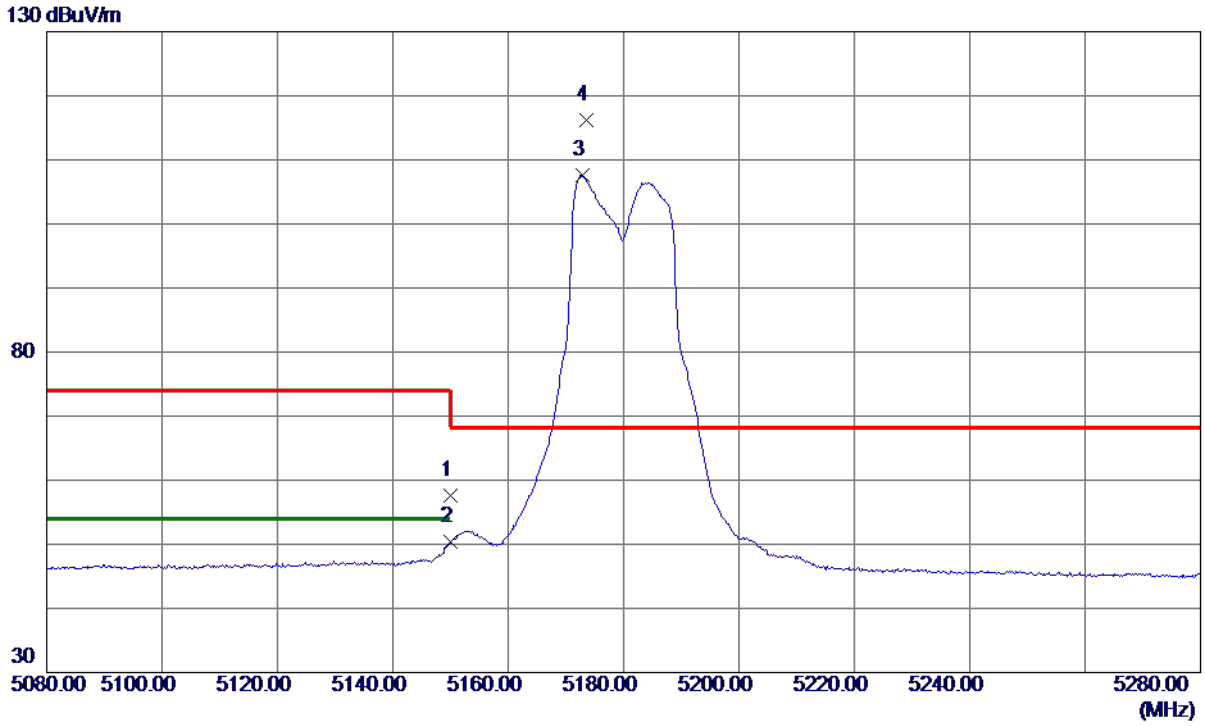
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	71.1455	39.03	-16.12	22.91	40.00	-17.09	Peak	
2	148.1540	35.82	-12.07	23.75	43.50	-19.75	Peak	
3	326.8895	38.74	-10.57	28.17	46.00	-17.83	Peak	
4	421.9616	38.90	-8.40	30.50	46.00	-15.50	Peak	
5 *	466.6455	41.52	-7.51	34.01	46.00	-11.99	Peak	
6	517.9844	38.83	-7.10	31.73	46.00	-14.27	Peak	

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

APPENDIX D - RADIATED EMISSION - ABOVE 1000 MHZ

Orthogonal Axis	X
Test Mode	UNII-1_TX A Mode 5180 MHz

Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	5150.0000	40.37	17.26	57.63	74.00	-16.37	Peak	
2	5150.0000	33.06	17.26	50.32	54.00	-3.68	AVG	
3	5172.8000	90.39	17.30	107.69	999.00	-891.31	AVG	No Limit
4 *	5173.6000	98.88	17.31	116.19	68.30	47.89	Peak	No Limit

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

Orthogonal Axis	X
Test Mode	UNII-1_TX A Mode 5180 MHz

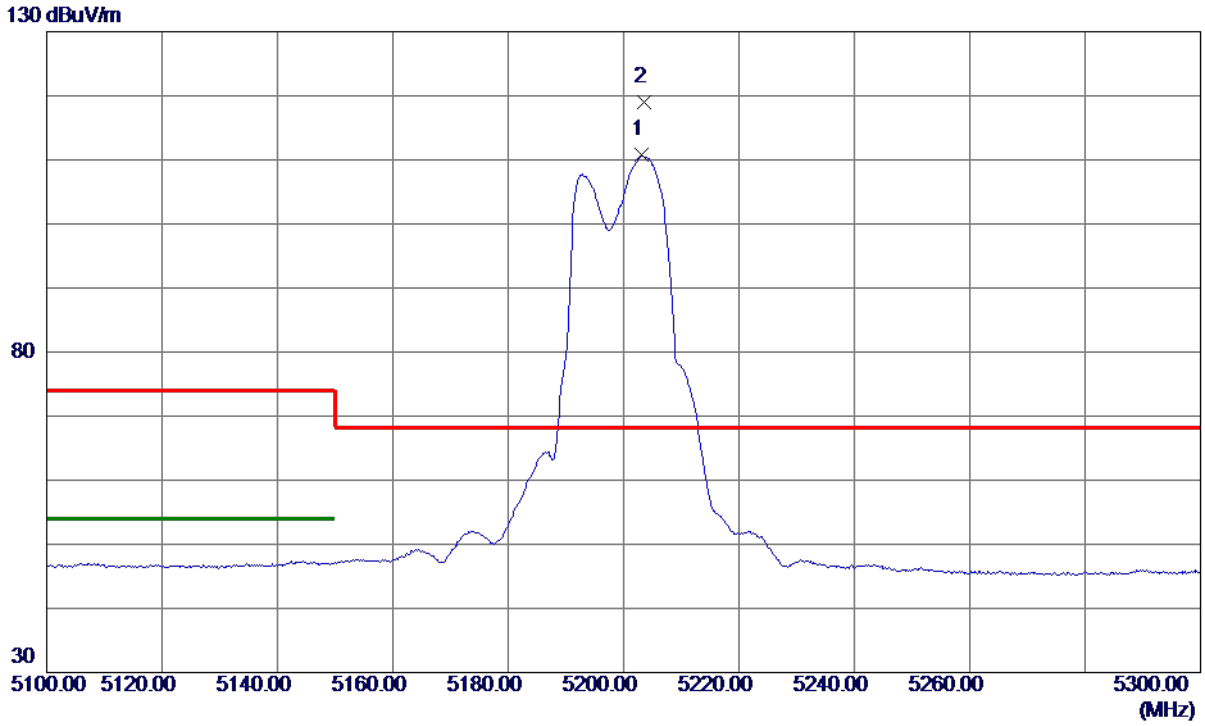
Vertical

No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	10359.7380	37.65	14.62	52.27	68.30	-16.03	Peak	

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

Orthogonal Axis	X
Test Mode	UNII-1_TX A Mode 5200 MHz

Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	5203.2000	93.46	17.36	110.82	999.00	-888.18	AVG	No Limit
2 *	5203.6000	101.72	17.37	119.09	68.30	50.79	Peak	No Limit

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

Orthogonal Axis	X
Test Mode	UNII-1_TX A Mode 5200 MHz

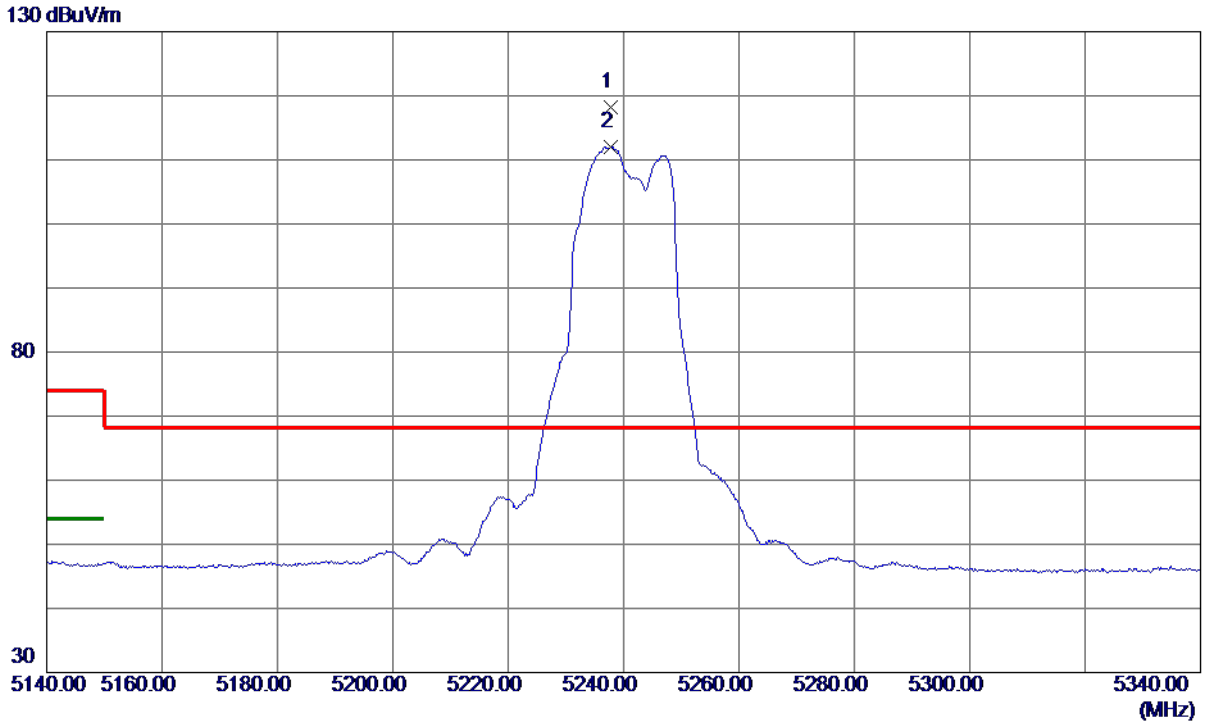
Vertical

No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	10399.9280	37.52	14.69	52.21	68.30	-16.09	Peak	

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

Orthogonal Axis	X
Test Mode	UNII-1_TX A Mode 5240 MHz

Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	5237.8000	100.81	17.43	118.24	68.30	49.94	Peak	No Limit
2	5237.8000	94.64	17.43	112.07	999.00	-886.93	AVG	No Limit

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

Orthogonal Axis	X
Test Mode	UNII-1_TX A Mode 5240 MHz

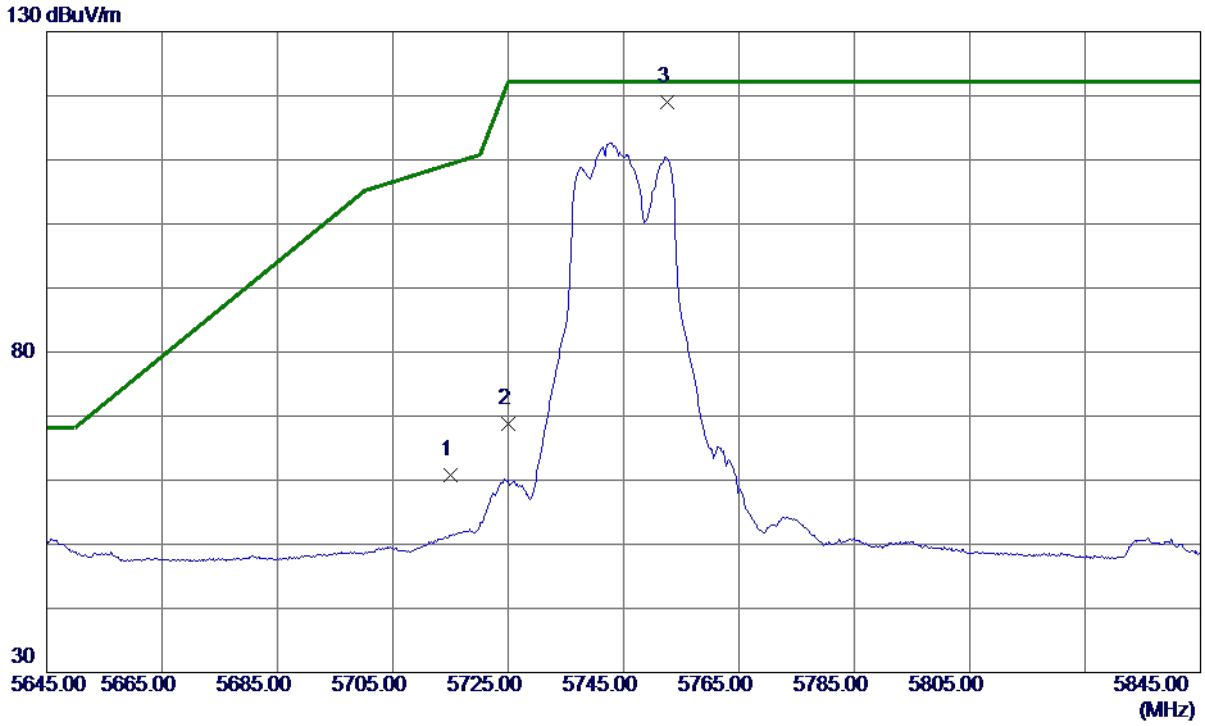
Vertical

No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	10479.6860	37.46	14.83	52.29	68.30	-16.01	Peak	

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

Orthogonal Axis	X
Test Mode	UNII-3_TX A Mode 5745 MHz

Vertical

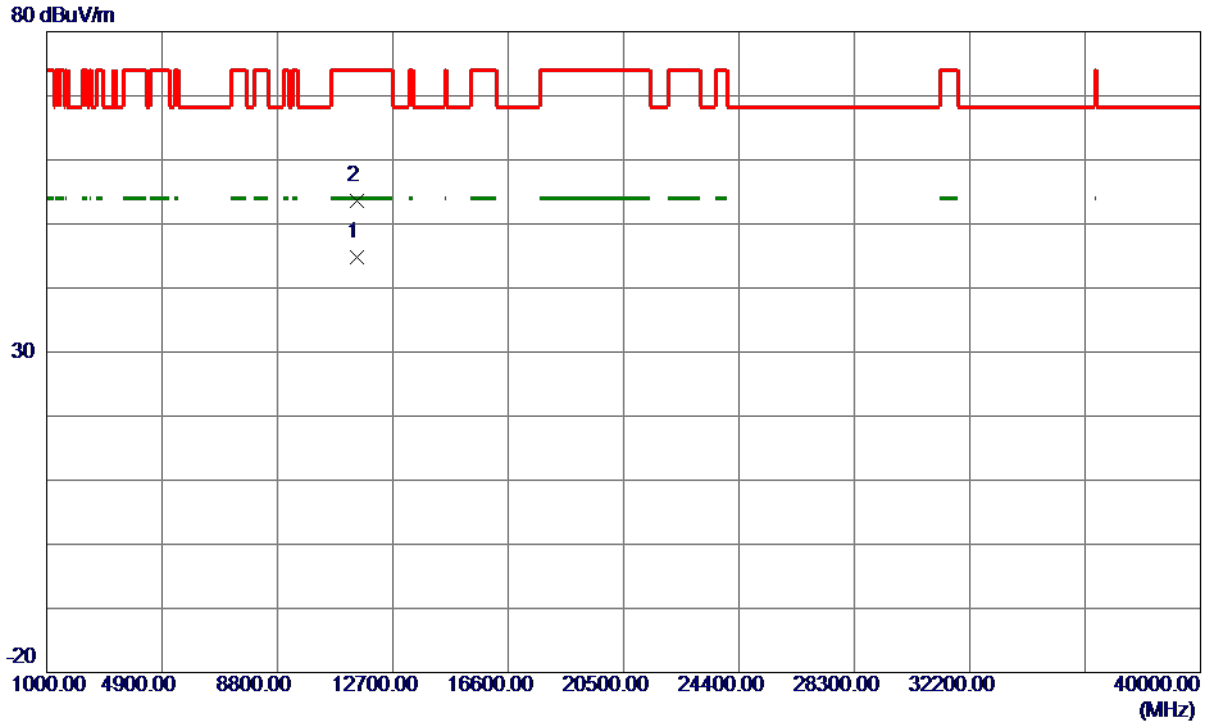


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	5715.0000	42.13	18.65	60.78	109.40	-48.62	Peak	
2	5725.0000	50.11	18.69	68.80	122.20	-53.40	Peak	
3 *	5752.6000	100.19	18.78	118.97	122.20	-3.23	Peak	No Limit

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

Orthogonal Axis	X
Test Mode	UNII-3_TX A Mode 5745 MHz

Vertical

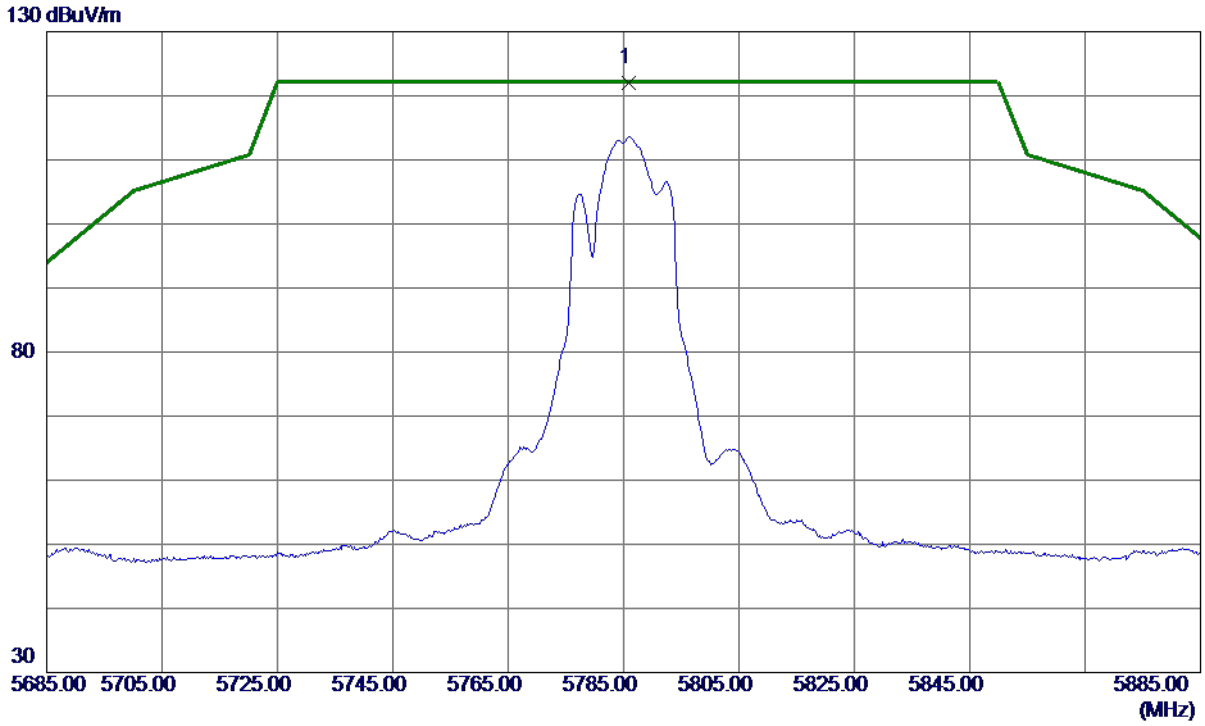


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	11489.8339	27.67	17.16	44.83	54.00	-9.17	AVG	
2	11490.0010	36.47	17.16	53.63	74.00	-20.37	Peak	

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

Orthogonal Axis	X
Test Mode	UNII-3_TX A Mode 5785 MHz

Vertical

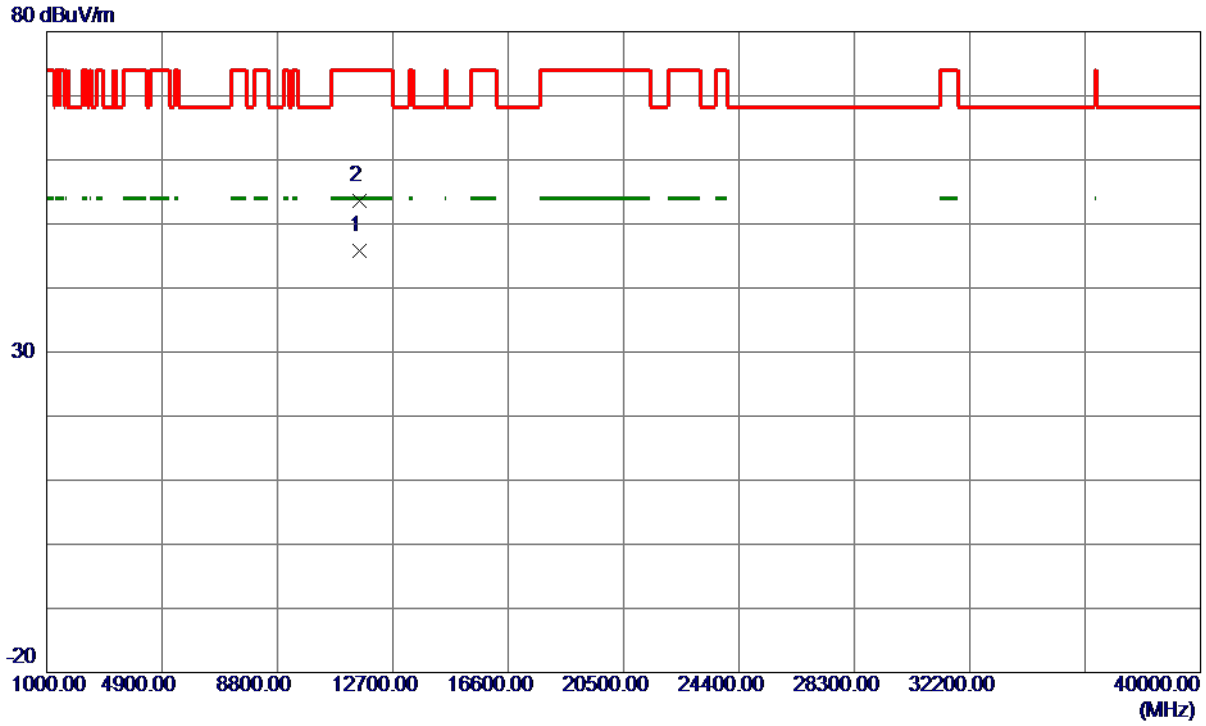


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	5785.8000	103.18	18.88	122.06	122.20	-0.14	Peak	No Limit

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

Orthogonal Axis	X
Test Mode	UNII-3_TX A Mode 5785 MHz

Vertical

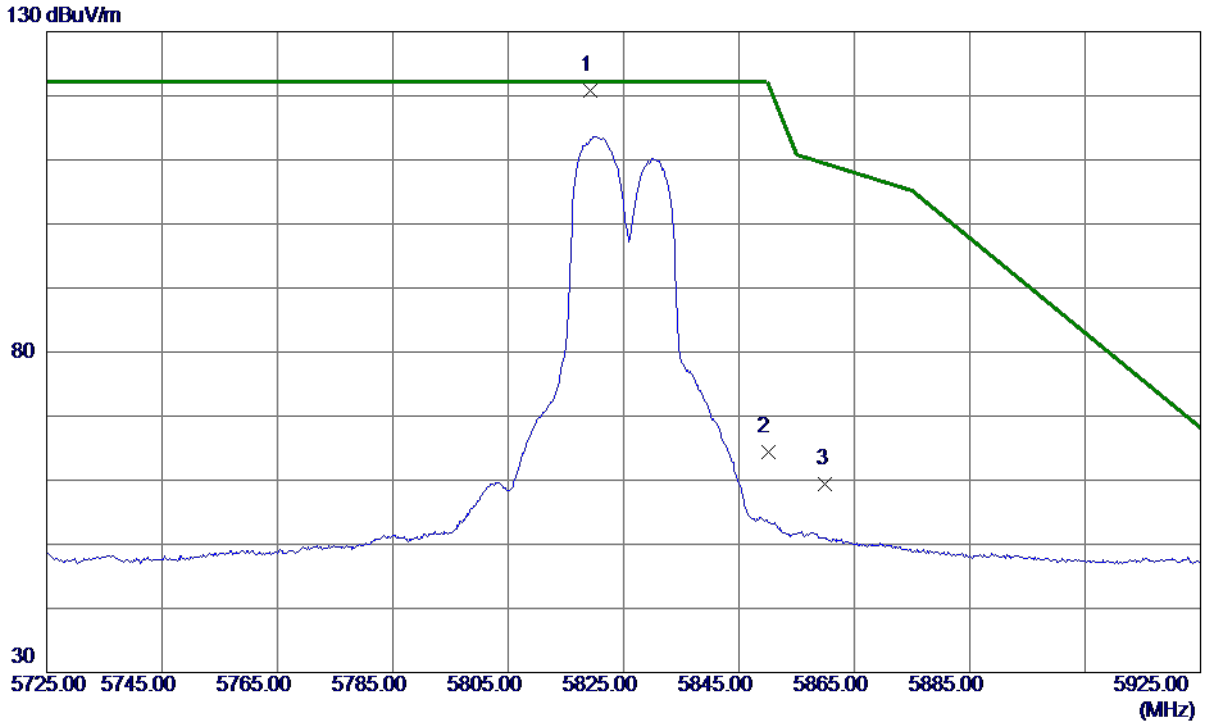


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	11569.8140	28.60	17.20	45.80	54.00	-8.20	AVG	
2	11569.9820	36.34	17.20	53.54	74.00	-20.46	Peak	

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

Orthogonal Axis	X
Test Mode	UNII-3_TX A Mode 5825 MHz

Vertical

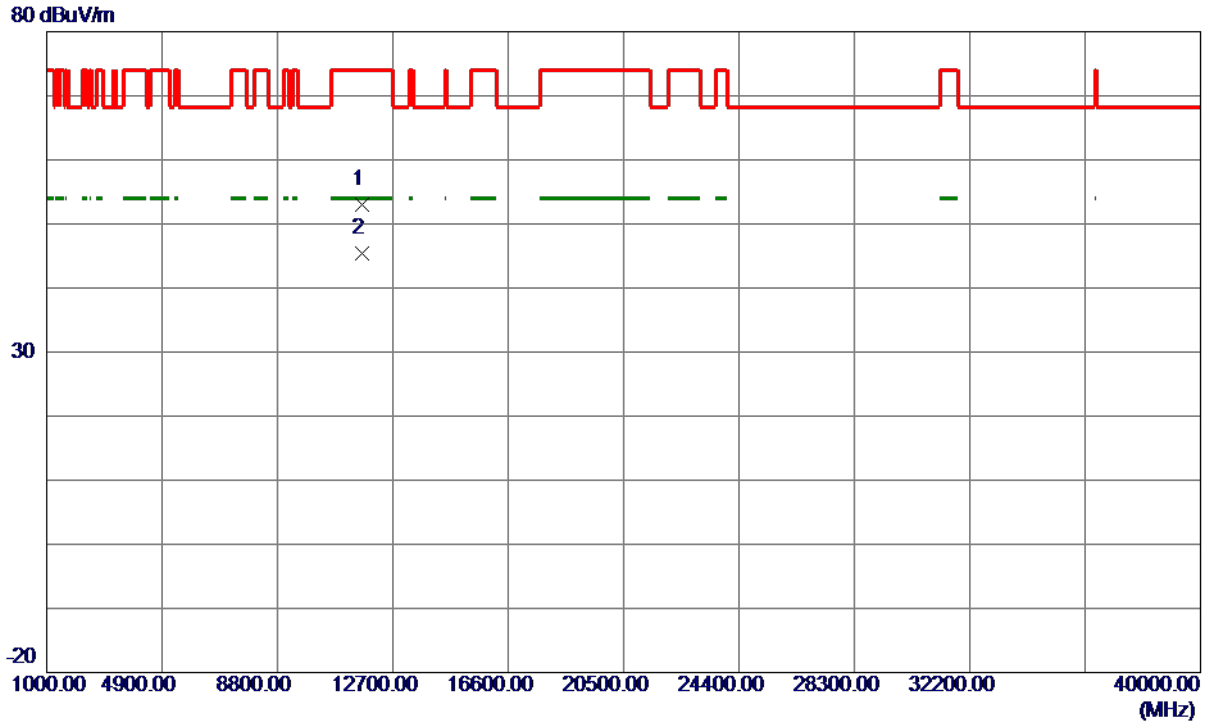


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	5819.2000	101.83	18.99	120.82	122.20	-1.38	Peak	No Limit
2	5850.0000	45.27	19.09	64.36	122.20	-57.84	Peak	
3	5860.0000	40.26	19.13	59.39	109.40	-50.01	Peak	

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

Orthogonal Axis	X
Test Mode	UNII-3_TX A Mode 5825 MHz

Vertical

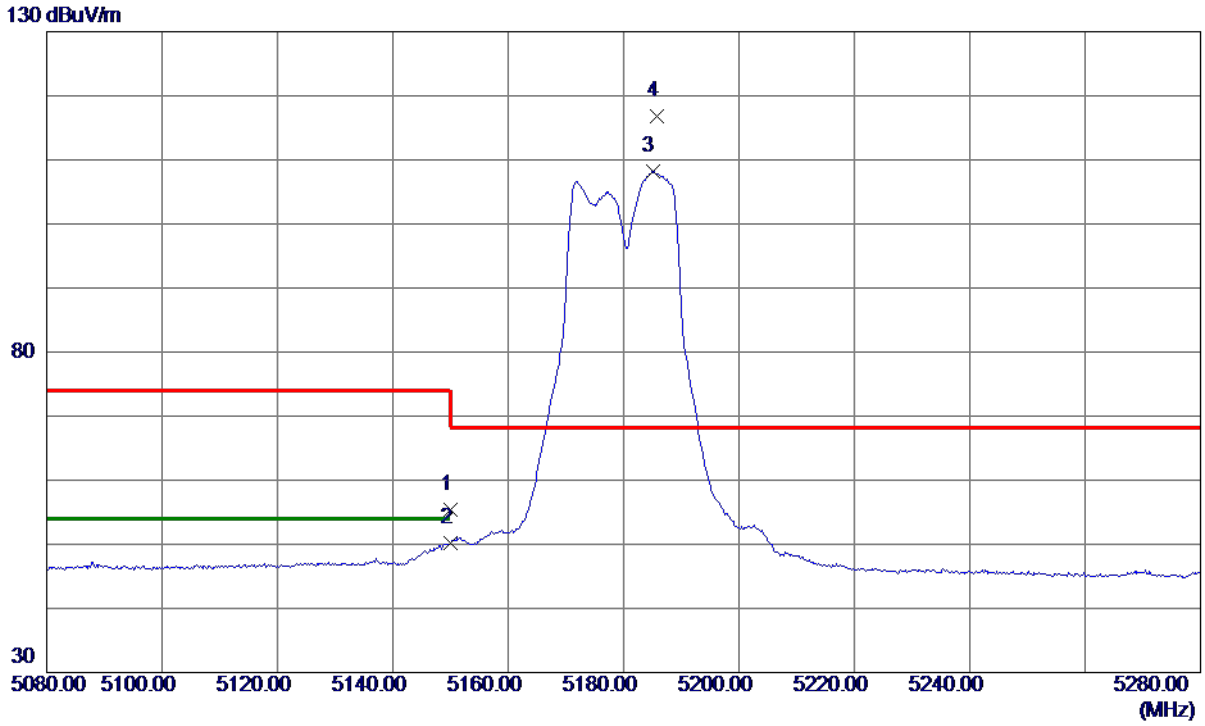


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	11649.7610	35.78	17.23	53.01	74.00	-20.99	Peak	
2 *	11649.8690	28.24	17.23	45.47	54.00	-8.53	AVG	

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

Orthogonal Axis	X
Test Mode	UNII-1_TX AC (VHT20) Mode 5180 MHz

Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	5150.0000	38.07	17.26	55.33	74.00	-18.67	Peak	
2	5150.0000	32.98	17.26	50.24	54.00	-3.76	AVG	
3	5185.0000	90.88	17.33	108.21	999.00	-890.79	AVG	No Limit
4 *	5185.8000	99.46	17.33	116.79	68.30	48.49	Peak	No Limit

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

Orthogonal Axis	X
Test Mode	UNII-1_TX AC (VHT20) Mode 5180 MHz

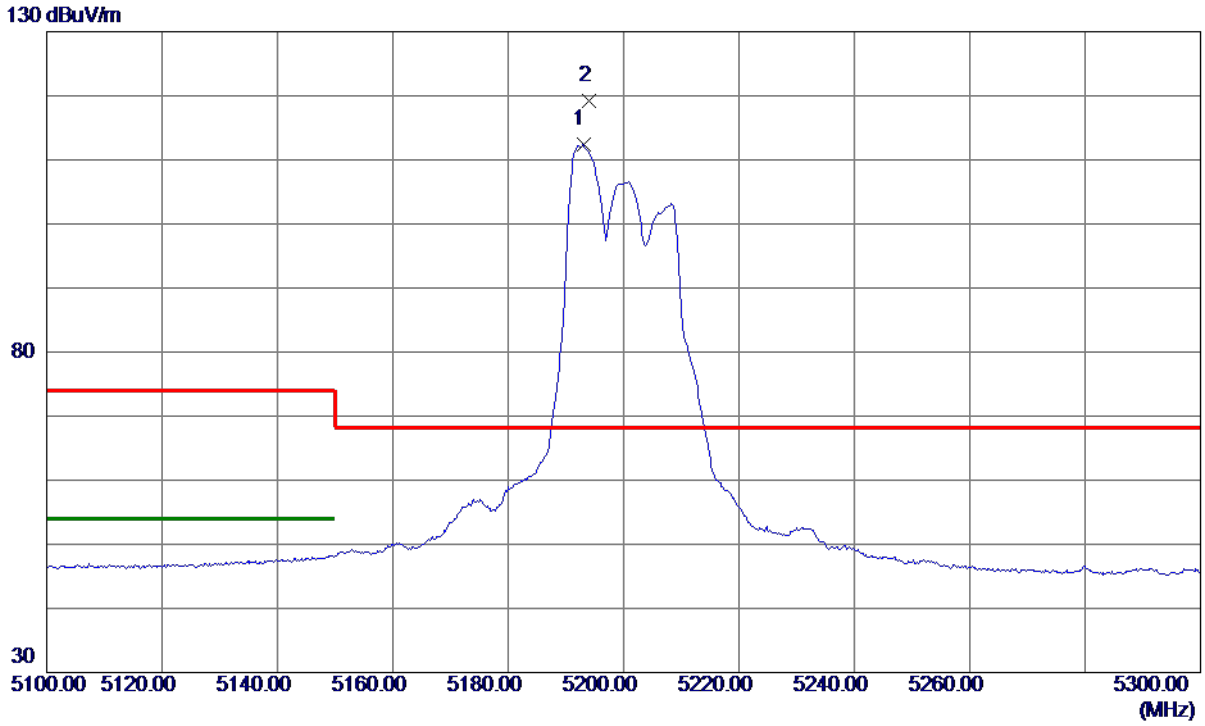
Vertical

No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	10359.6920	37.17	14.62	51.79	68.30	-16.51	Peak	

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

Orthogonal Axis	X
Test Mode	UNII-1_TX AC (VHT20) Mode 5200 MHz

Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	5193.0000	95.15	17.34	112.49	999.00	-886.51	AVG	No Limit
2 *	5194.0000	101.93	17.35	119.28	68.30	50.98	Peak	No Limit

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

Orthogonal Axis	X
Test Mode	UNII-1_TX AC (VHT20) Mode 5200 MHz

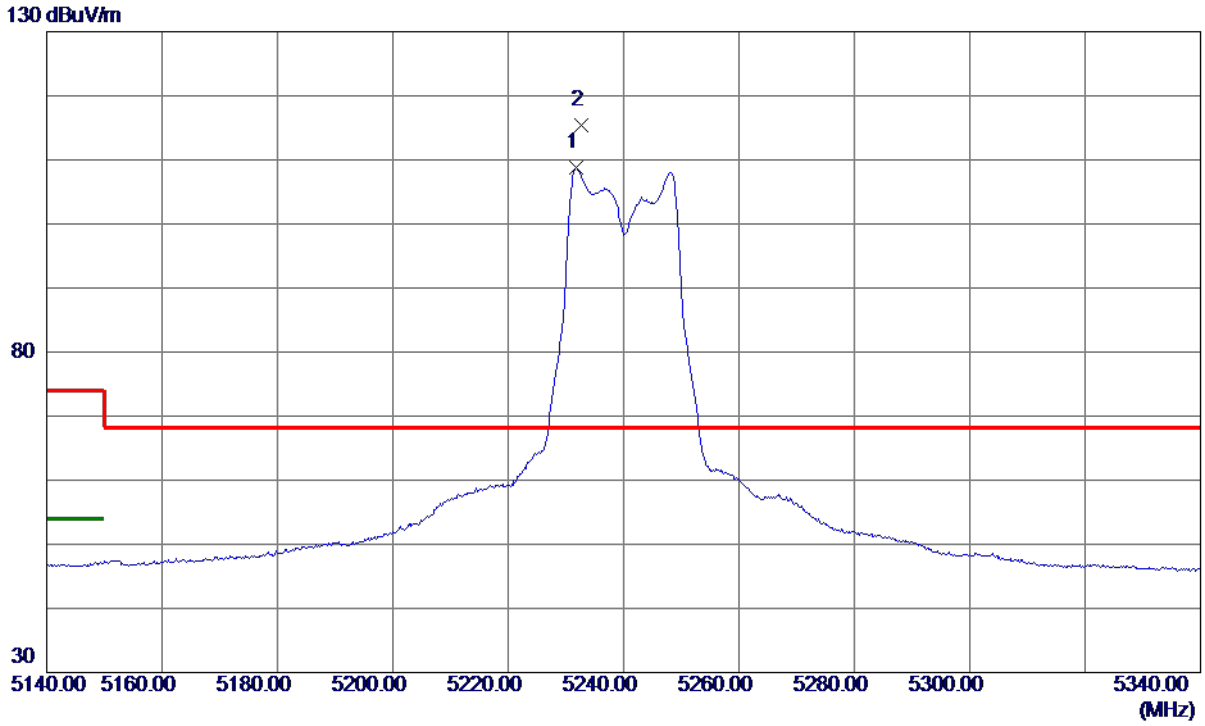
Vertical

No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	10399.8900	37.53	14.69	52.22	68.30	-16.08	Peak	

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

Orthogonal Axis	X
Test Mode	UNII-1_TX AC (VHT20) Mode 5240 MHz

Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	5231.8000	91.32	17.42	108.74	999.00	-890.26	AVG	No Limit
2 *	5232.6000	98.00	17.42	115.42	68.30	47.12	Peak	No Limit

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

Orthogonal Axis	X
Test Mode	UNII-1_TX AC (VHT20) Mode 5240 MHz

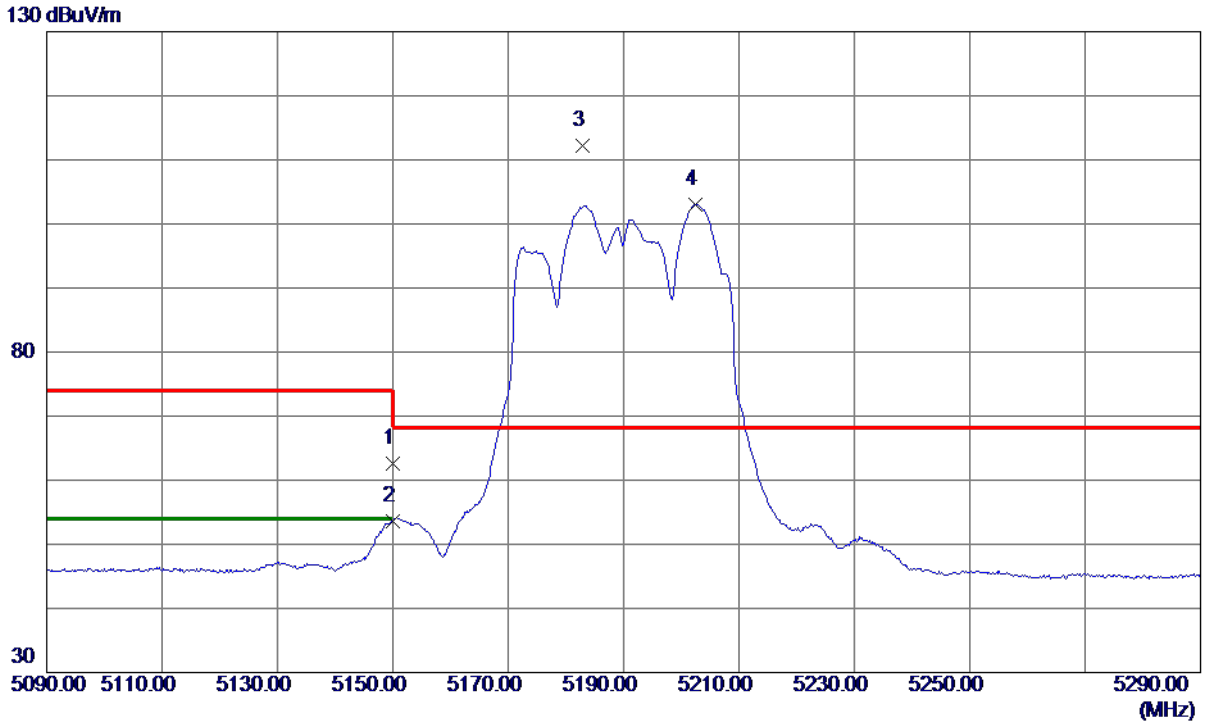
Vertical

No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	10480.1150	36.96	14.83	51.79	68.30	-16.51	Peak	

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

Orthogonal Axis	X
Test Mode	UNII-1_TX AC (VHT40) Mode 5190 MHz

Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	5150.0000	45.38	17.26	62.64	74.00	-11.36	Peak	
2	5150.0000	36.27	17.26	53.53	54.00	-0.47	AVG	
3 *	5182.8000	94.88	17.32	112.20	68.30	43.90	Peak	No Limit
4	5202.4000	85.69	17.36	103.05	999.00	-895.95	AVG	No Limit

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

Orthogonal Axis	X
Test Mode	UNII-1_TX AC (VHT40) Mode 5190 MHz

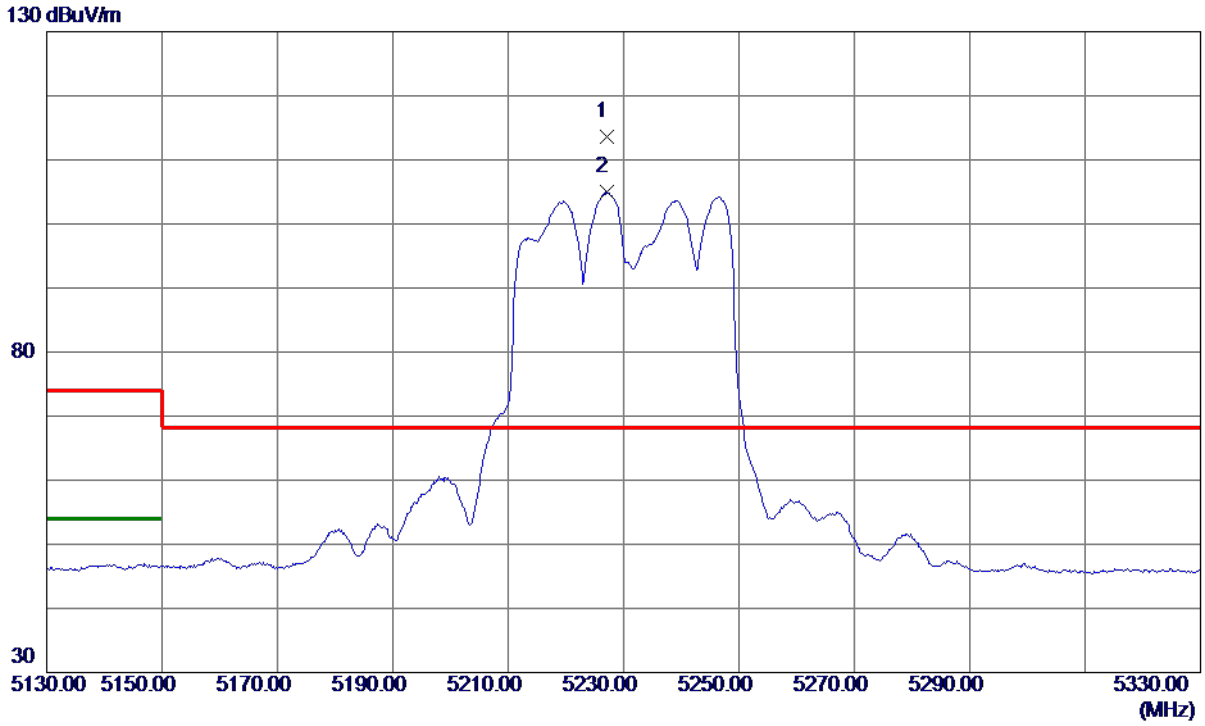
Vertical

No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	10379.6660	37.46	14.66	52.12	68.30	-16.18	Peak	

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

Orthogonal Axis	X
Test Mode	UNII-1_TX AC (VHT40) Mode 5230 MHz

Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	5227.0000	96.20	17.41	113.61	68.30	45.31	Peak	No Limit
2	5227.0000	87.49	17.41	104.90	999.00	-894.10	AVG	No Limit

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

Orthogonal Axis	X
Test Mode	UNII-1_TX AC (VHT40) Mode 5230 MHz

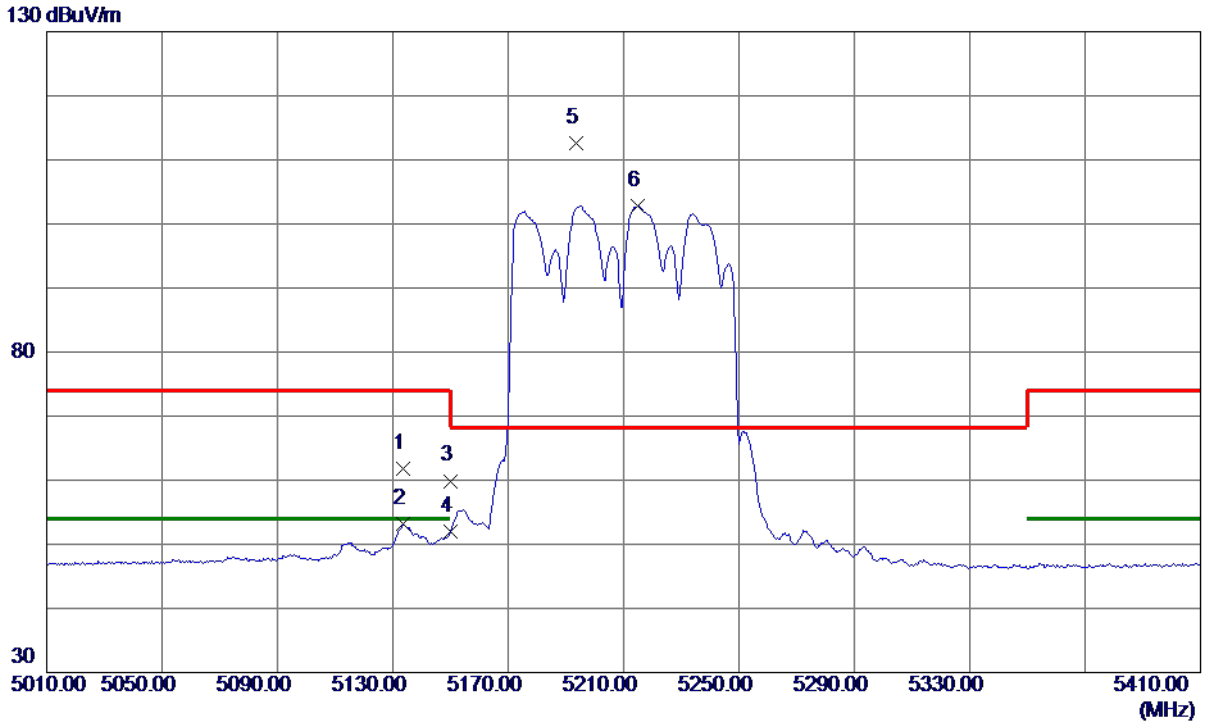
Vertical

No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	10459.7500	37.18	14.79	51.97	68.30	-16.33	Peak	

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

Orthogonal Axis	X
Test Mode	UNII-1_TX AC (VHT80) Mode 5210 MHz

Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	5133.6000	44.66	17.23	61.89	74.00	-12.11	Peak	
2	5133.6000	35.90	17.23	53.13	54.00	-0.87	AVG	
3	5150.0000	42.64	17.26	59.90	74.00	-14.10	Peak	
4	5150.0000	34.67	17.26	51.93	54.00	-2.07	AVG	
5 *	5193.6000	95.17	17.35	112.52	68.30	44.22	Peak	No Limit
6	5214.8000	85.42	17.39	102.81	999.00	-896.19	AVG	No Limit

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

Orthogonal Axis	X
Test Mode	UNII-1_TX AC (VHT80) Mode 5210 MHz

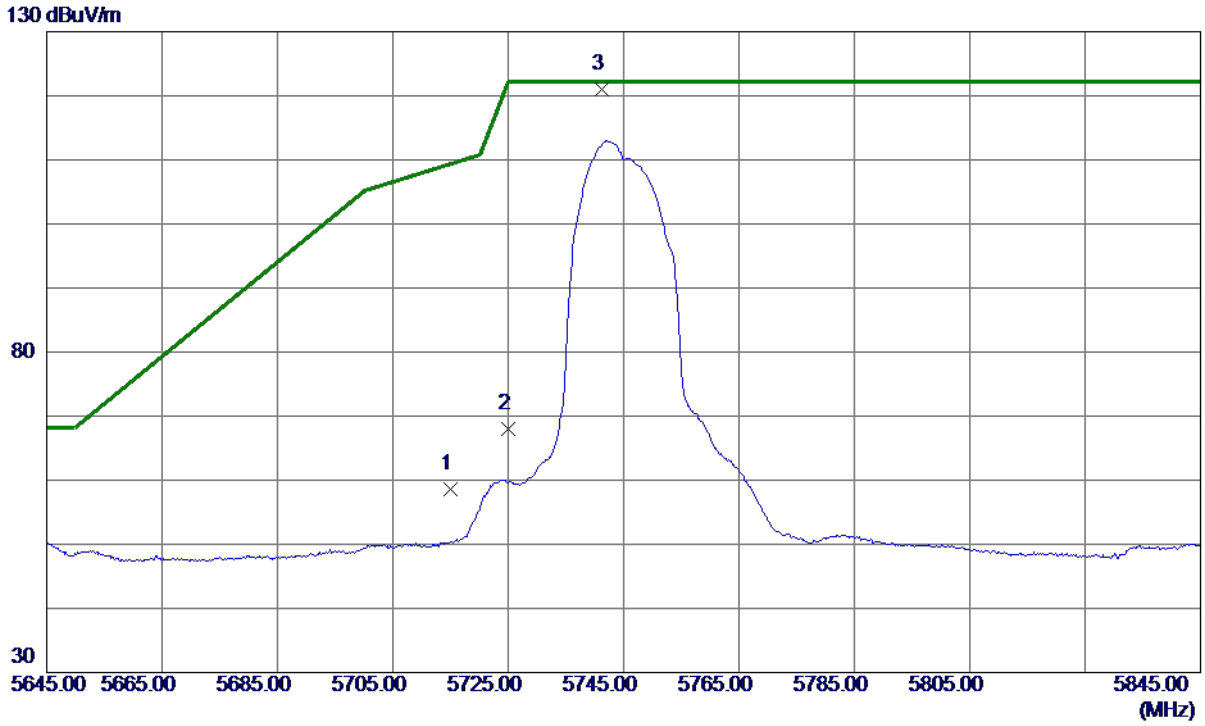
Vertical

No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	10419.6849	37.42	14.72	52.14	68.30	-16.16	Peak	

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

Orthogonal Axis	X
Test Mode	UNII-3_TX AC (VHT20) Mode 5745 MHz

Vertical

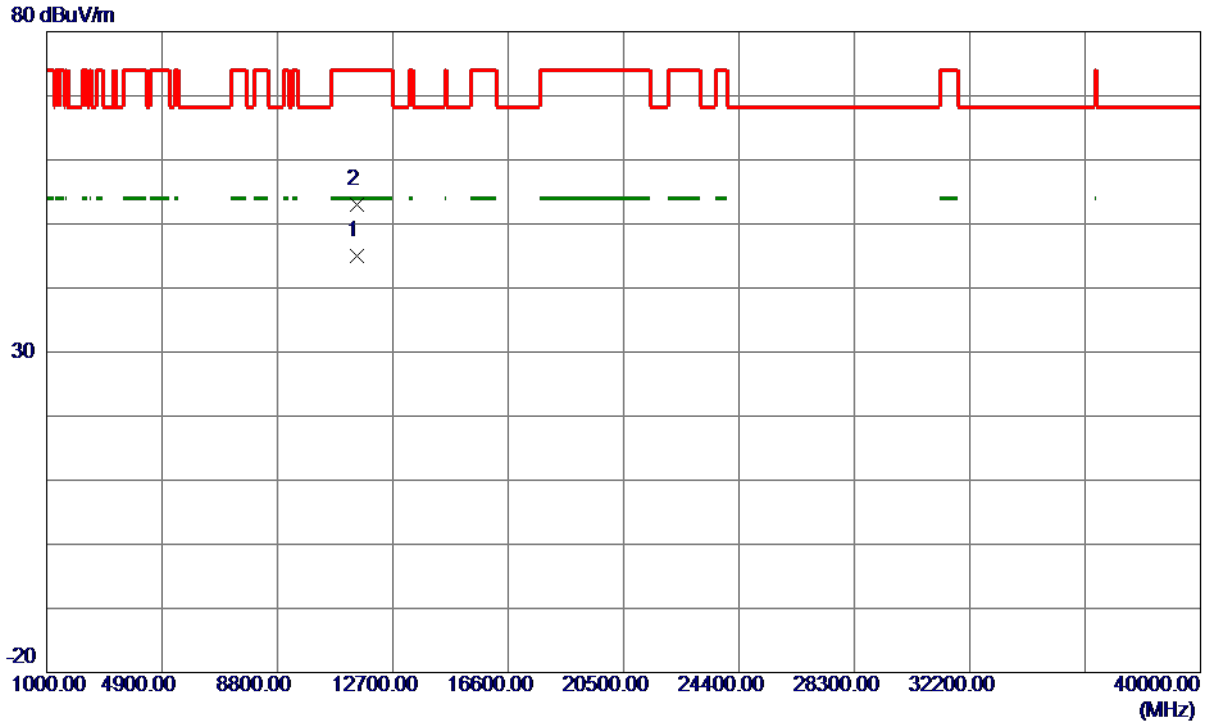


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	5715.0000	40.04	18.65	58.69	109.40	-50.71	Peak	
2	5725.0000	49.25	18.69	67.94	122.20	-54.26	Peak	
3 *	5741.2000	102.20	18.74	120.94	122.20	-1.26	Peak	No Limit

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

Orthogonal Axis	X
Test Mode	UNII-3_TX AC (VHT20) Mode 5745 MHz

Vertical

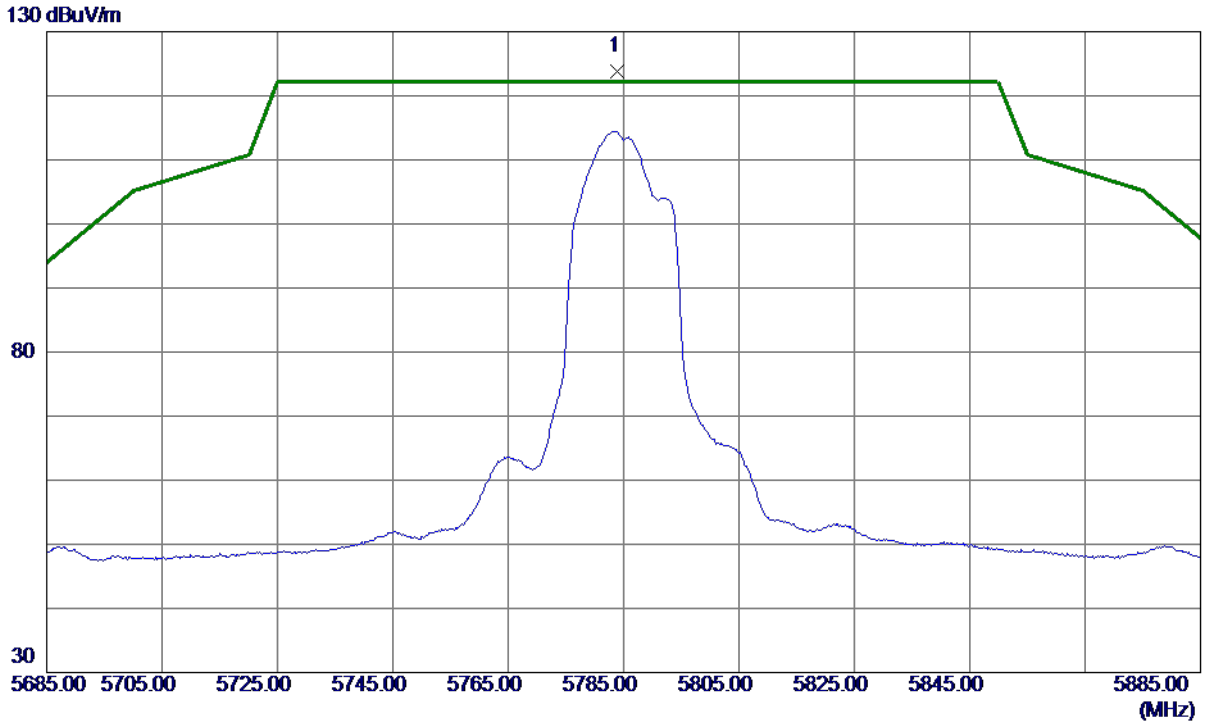


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	11489.8580	27.91	17.16	45.07	54.00	-8.93	AVG	
2	11490.0030	35.89	17.16	53.05	74.00	-20.95	Peak	

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

Orthogonal Axis	X
Test Mode	UNII-3_TX AC (VHT20) Mode 5785 MHz

Vertical

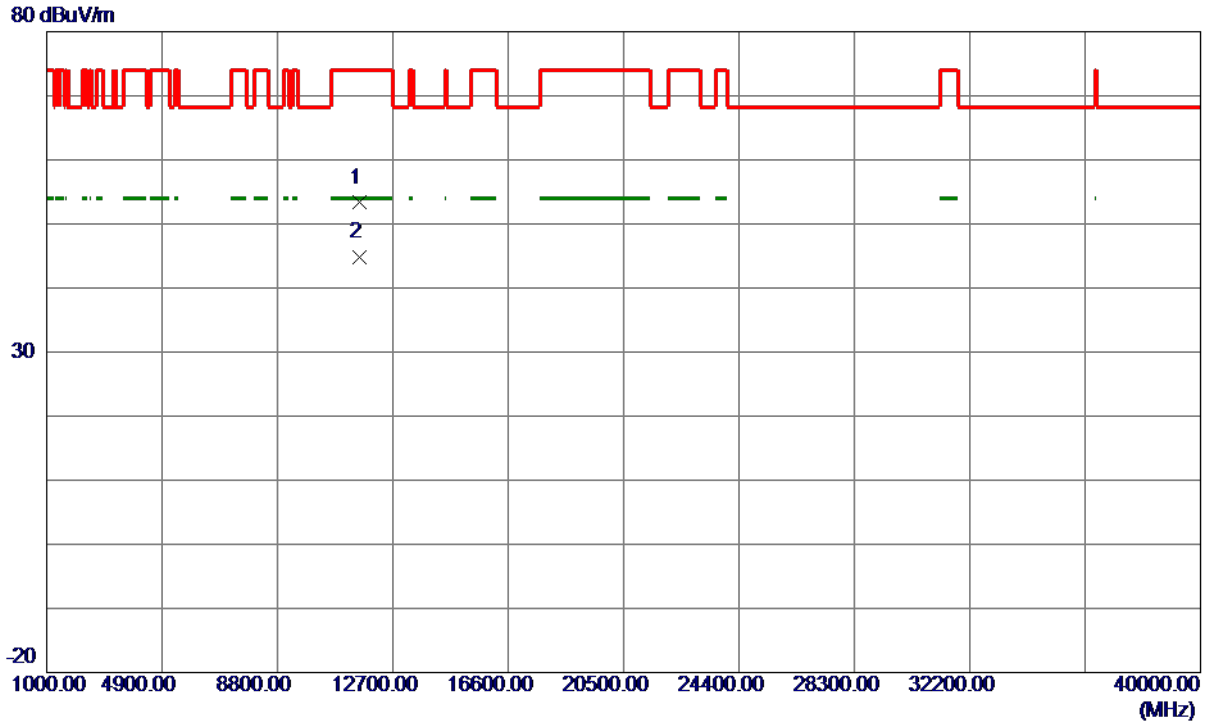


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	5784.0000	104.83	18.88	123.71	122.20	1.51	Peak	No Limit

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

Orthogonal Axis	X
Test Mode	UNII-3_TX AC (VHT20) Mode 5785 MHz

Vertical

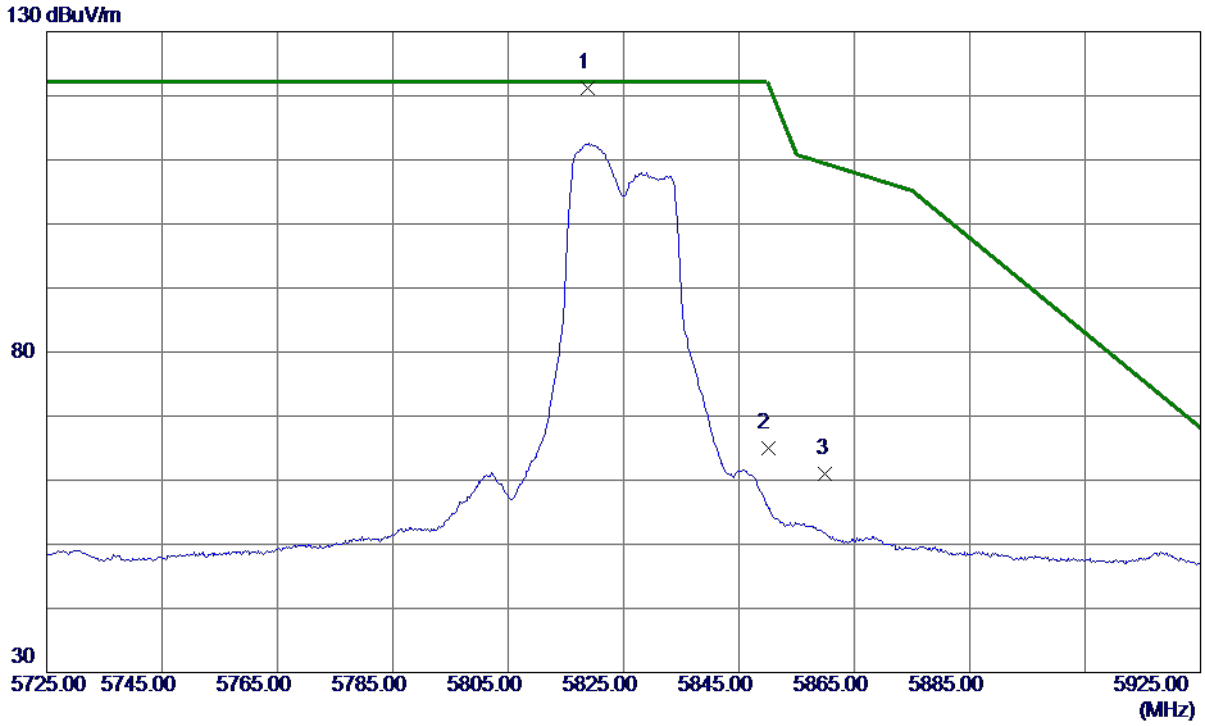


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	11569.5890	36.10	17.20	53.30	74.00	-20.70	Peak	
2 *	11569.8640	27.67	17.20	44.87	54.00	-9.13	AVG	

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

Orthogonal Axis	X
Test Mode	UNII-3_TX AC (VHT20) Mode 5825 MHz

Vertical

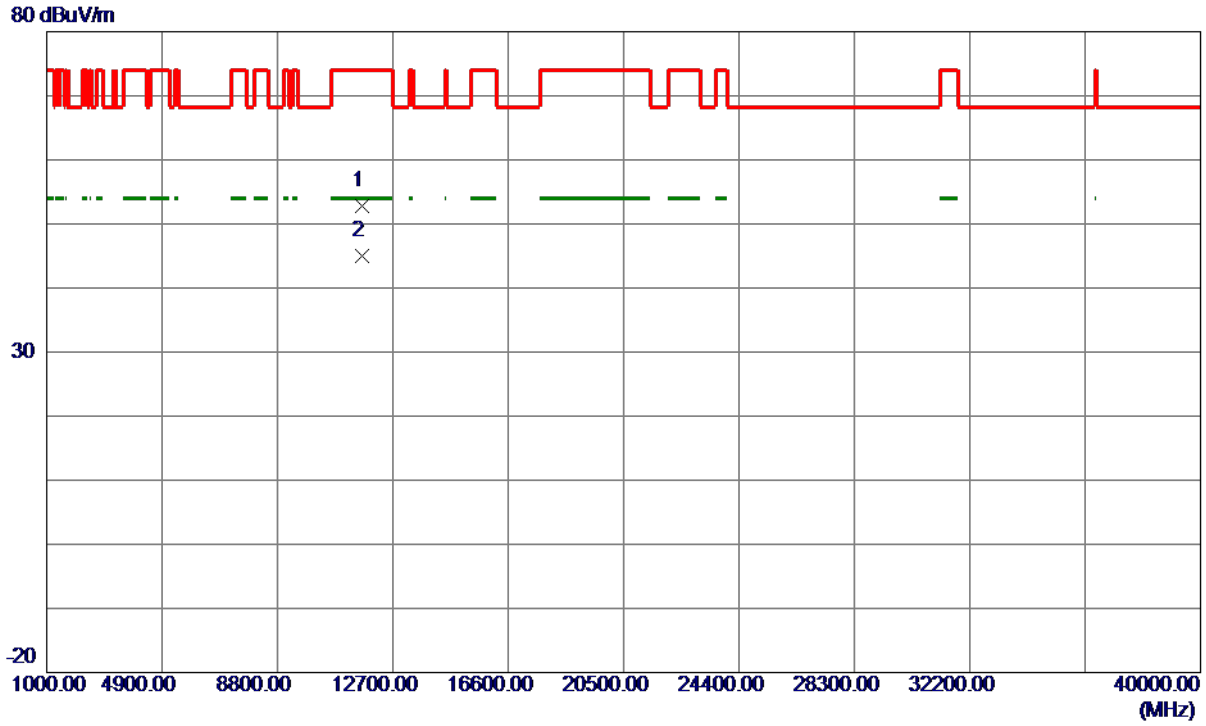


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	5818.8000	102.29	18.99	121.28	122.20	-0.92	Peak	No Limit
2	5850.0000	45.91	19.09	65.00	122.20	-57.20	Peak	
3	5860.0000	41.86	19.13	60.99	109.40	-48.41	Peak	

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

Orthogonal Axis	X
Test Mode	UNII-3_TX AC (VHT20) Mode 5825 MHz

Vertical

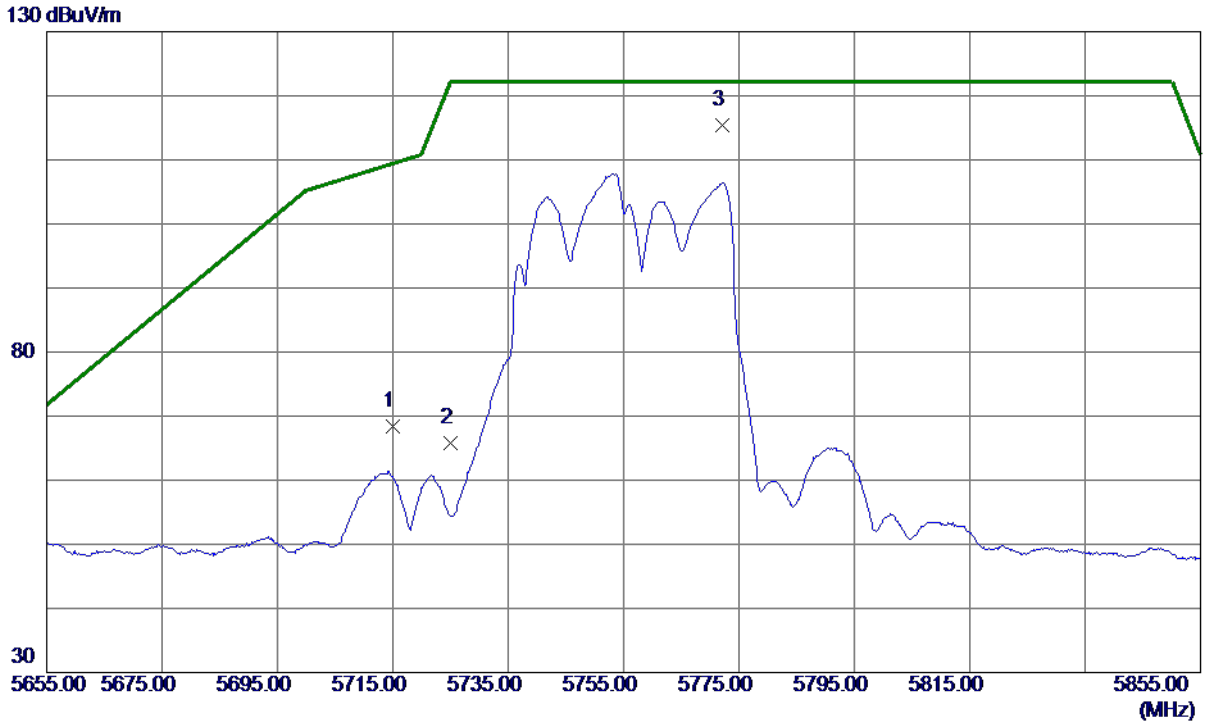


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	11649.7550	35.58	17.23	52.81	74.00	-21.19	Peak	
2 *	11649.8760	27.80	17.23	45.03	54.00	-8.97	AVG	

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

Orthogonal Axis	X
Test Mode	UNII-3_TX AC (VHT40) Mode 5755 MHz

Vertical

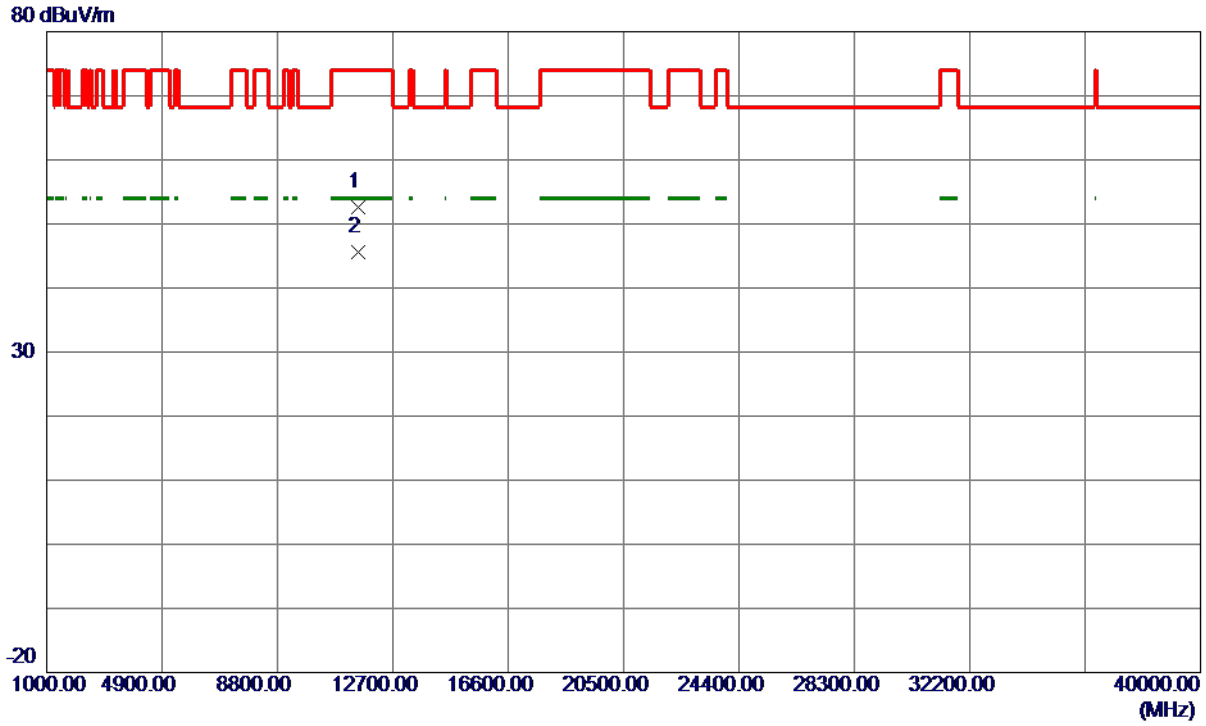


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	5715.0000	49.68	18.65	68.33	109.40	-41.07	Peak	
2	5725.0000	47.04	18.69	65.73	122.20	-56.47	Peak	
3 *	5772.2000	96.64	18.84	115.48	122.20	-6.72	Peak	No Limit

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

Orthogonal Axis	X
Test Mode	UNII-3_TX AC (VHT40) Mode 5755 MHz

Vertical

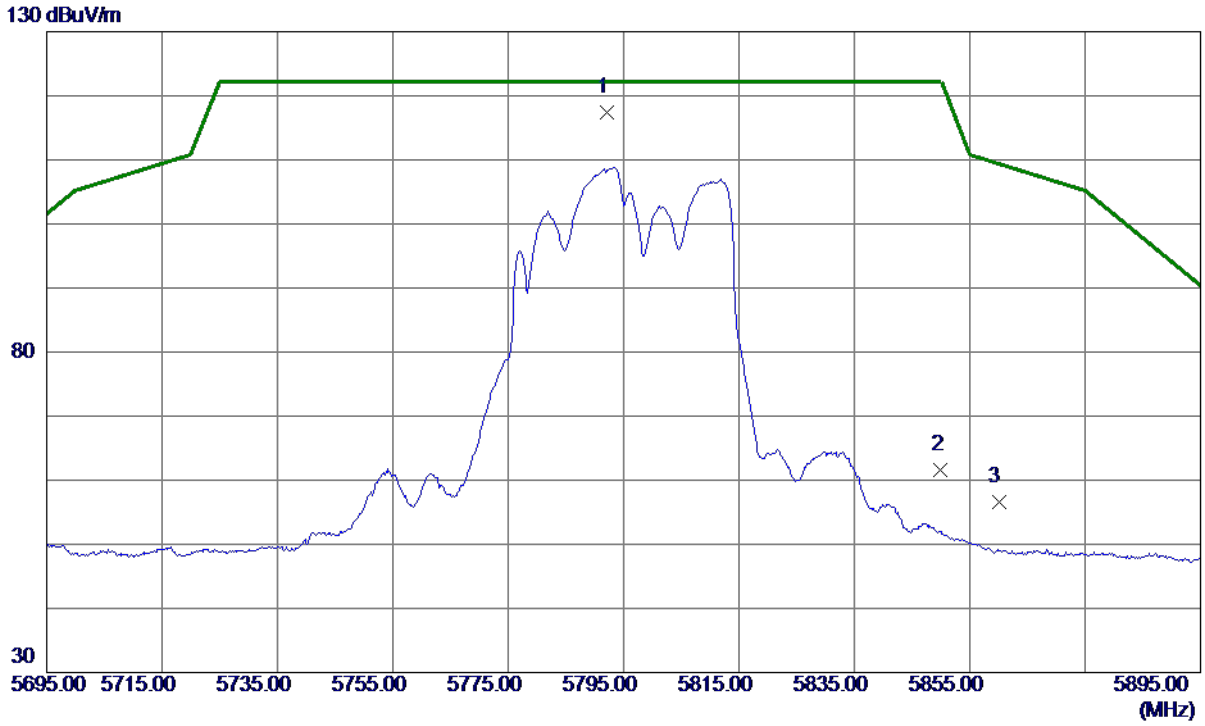


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	11509.8200	35.41	17.18	52.59	74.00	-21.41	Peak	
2 *	11509.8400	28.35	17.18	45.53	54.00	-8.47	AVG	

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

Orthogonal Axis	X
Test Mode	UNII-3_TX AC (VHT40) Mode 5795 MHz

Vertical

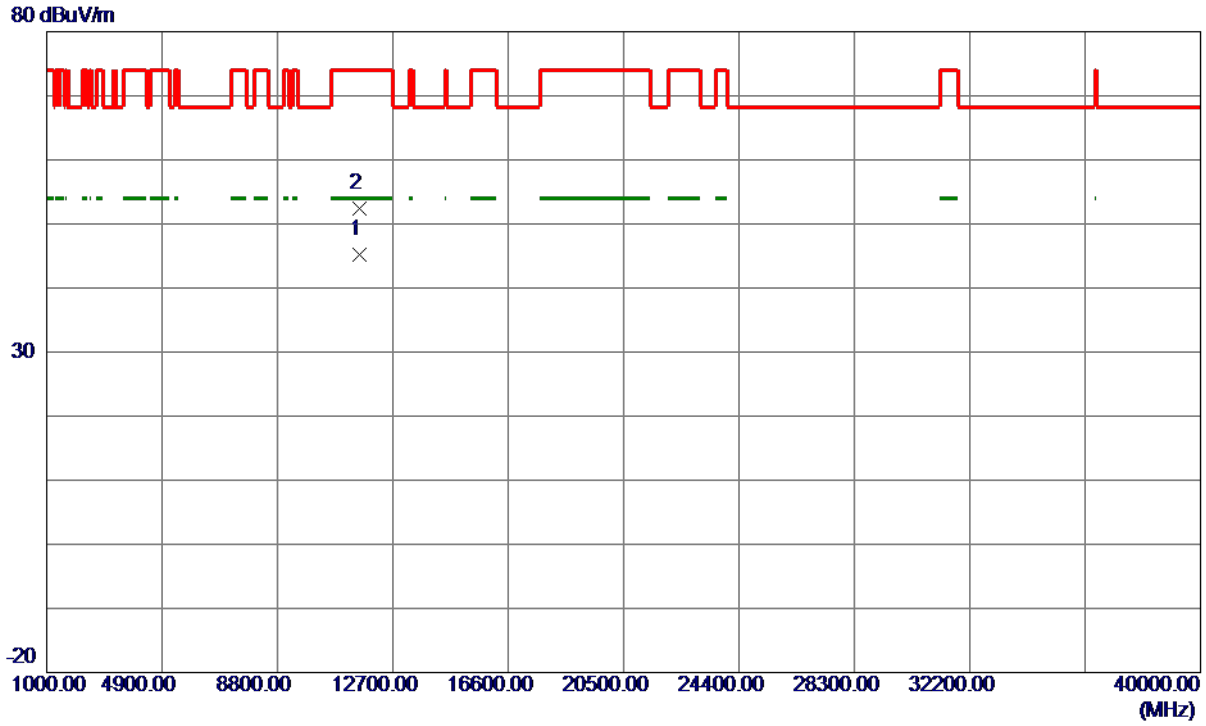


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	5792.2000	98.43	18.90	117.33	122.20	-4.87	Peak	No Limit
2	5850.0000	42.51	19.09	61.60	122.20	-60.60	Peak	
3	5860.0000	37.55	19.13	56.68	109.40	-52.72	Peak	

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

Orthogonal Axis	X
Test Mode	UNII-3_TX AC (VHT40) Mode 5795 MHz

Vertical

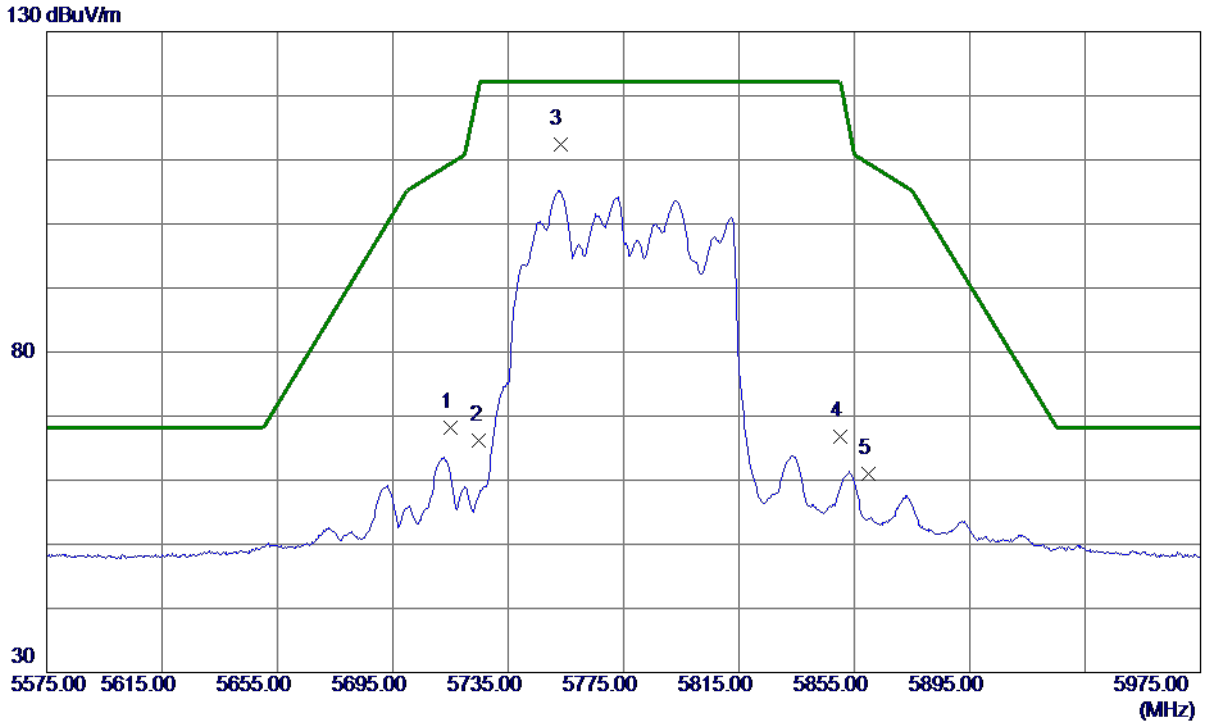


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	11589.8550	28.03	17.21	45.24	54.00	-8.76	AVG	
2	11590.0050	35.25	17.21	52.46	74.00	-21.54	Peak	

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

Orthogonal Axis	X
Test Mode	UNII-3_TX AC (VHT80) Mode 5775 MHz

Vertical

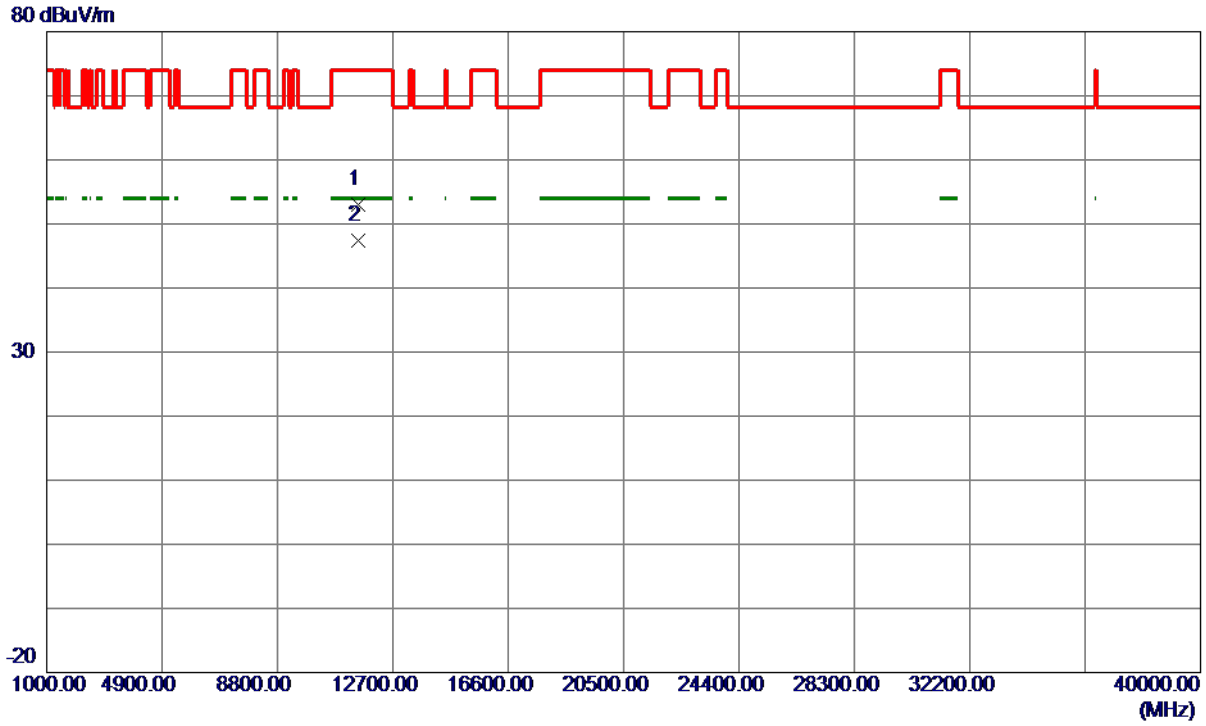


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	5715.0000	49.49	18.65	68.14	109.40	-41.26	Peak	
2	5725.0000	47.54	18.69	66.23	122.20	-55.97	Peak	
3 *	5753.0000	93.67	18.78	112.45	122.20	-9.75	Peak	No Limit
4	5850.0000	47.64	19.09	66.73	122.20	-55.47	Peak	
5	5860.0000	41.96	19.13	61.09	109.40	-48.31	Peak	

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

Orthogonal Axis	X
Test Mode	UNII-3_TX AC (VHT80) Mode 5775 MHz

Vertical

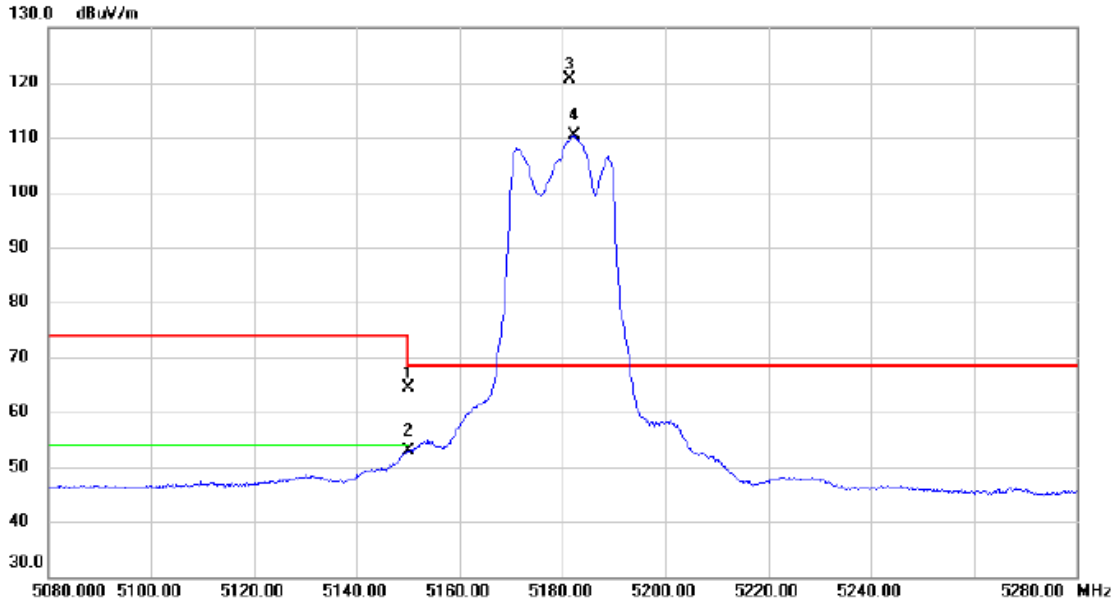


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	11549.8800	35.71	17.20	52.91	74.00	-21.09	Peak	
2 *	11549.8800	30.11	17.20	47.31	54.00	-6.69	AVG	

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

Orthogonal Axis	X
Test Mode	UNII-1_TX AX (HEW20) Mode 5180 MHz

Vertical

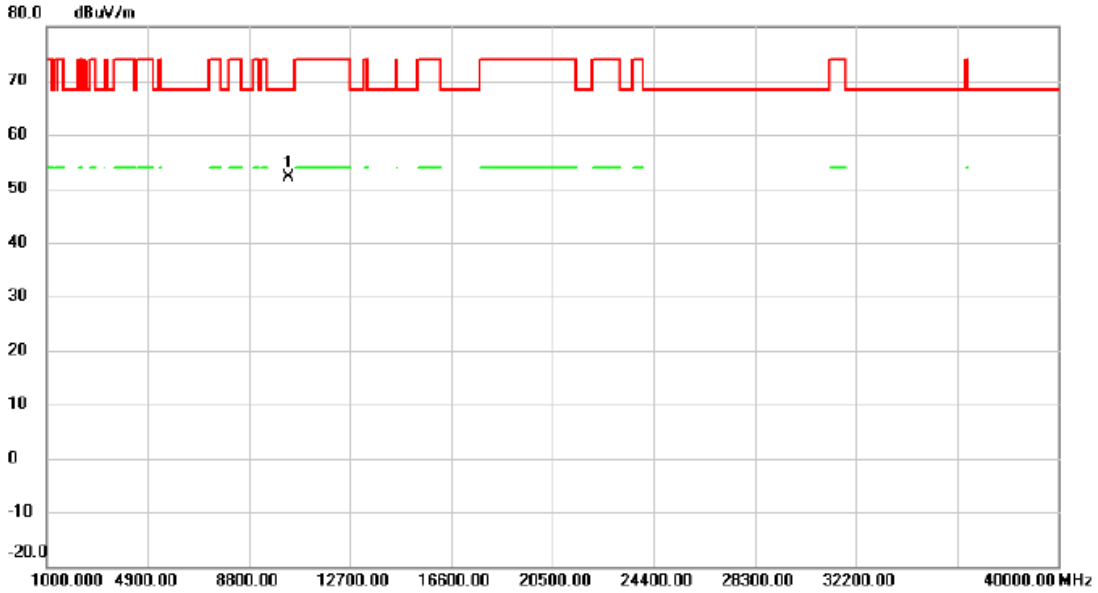


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5150.000	47.05	17.26	64.31	74.00	-9.69	peak	
2		5150.000	35.60	17.26	52.86	54.00	-1.14	AVG	
3	*	5181.400	103.29	17.32	120.61	68.30	52.31	peak	No Limit
4	X	5182.200	92.95	17.32	110.27	68.30	41.97	AVG	No Limit

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

Orthogonal Axis	X
Test Mode	UNII-1_TX AX (HEW20) Mode 5180 MHz

Vertical

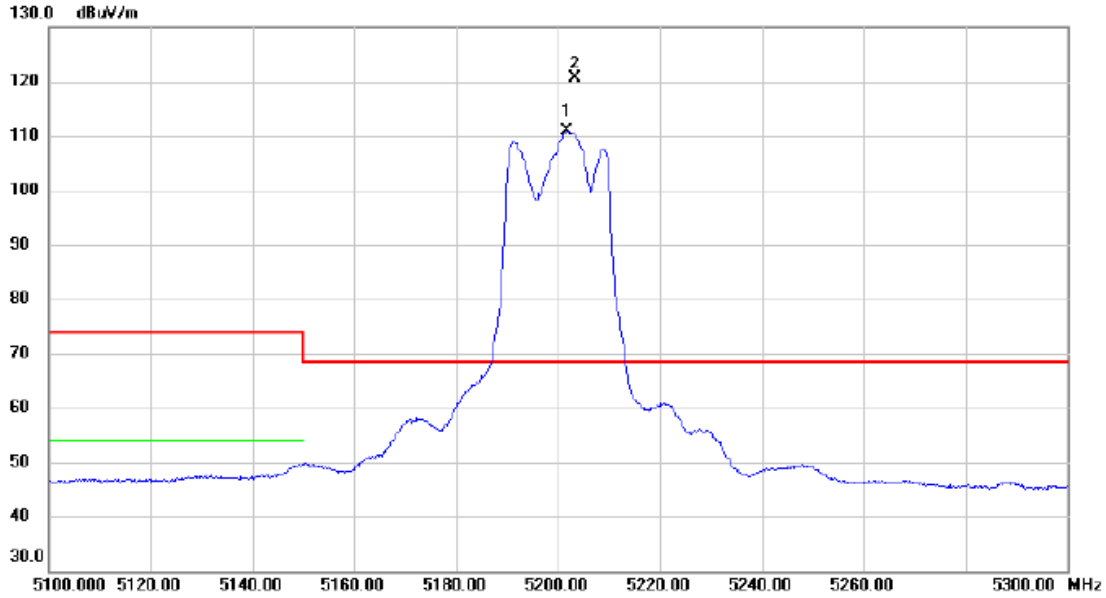


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	10359.964	37.46	14.63	52.09	68.30	-16.21	peak	

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

Orthogonal Axis	X
Test Mode	UNII-1_TX AX (HEW20) Mode 5200 MHz

Vertical

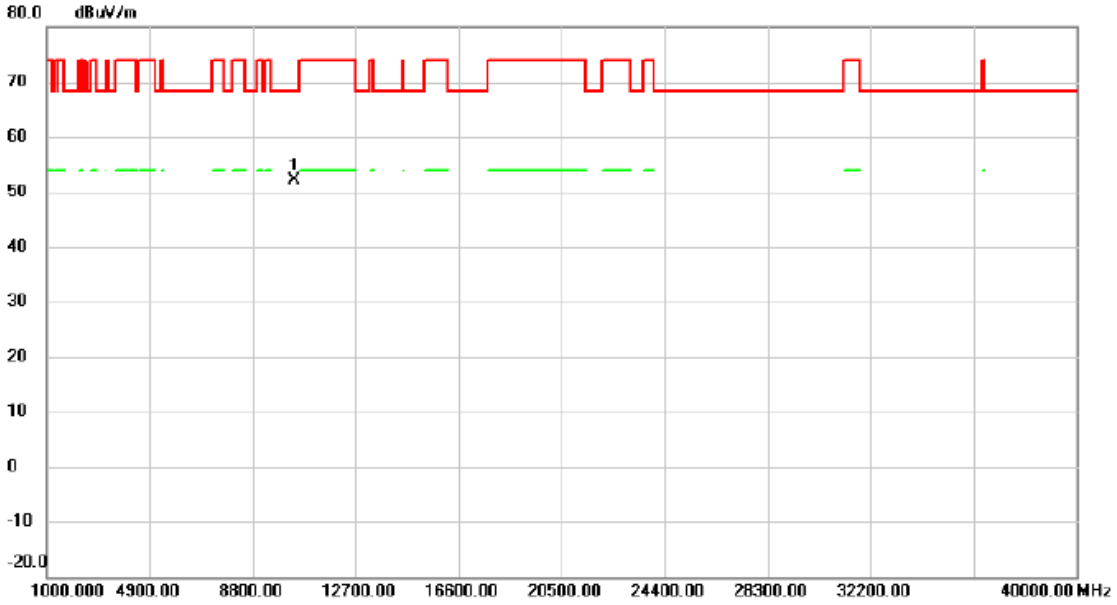


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	5201.800	93.52	17.36	110.88	68.30	42.58	AVG	No Limit
2	*	5203.400	103.23	17.36	120.59	68.30	52.29	peak	No Limit

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

Orthogonal Axis	X
Test Mode	UNII-1_TX AX (HEW20) Mode 5200 MHz

Vertical

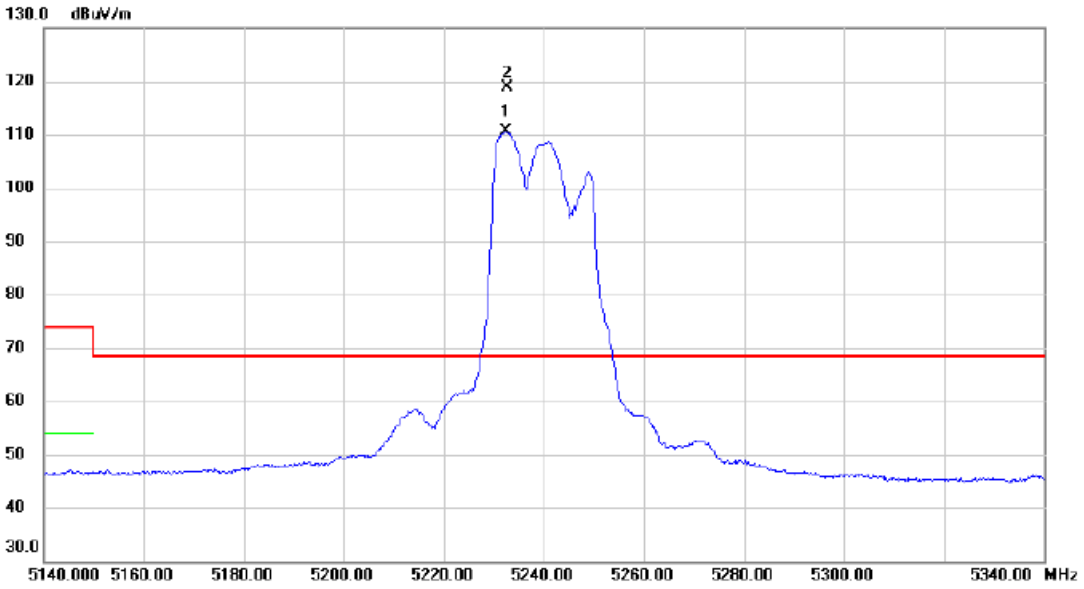


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	10399.961	37.45	14.69	52.14	68.30	-16.16	peak	

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

Orthogonal Axis	X
Test Mode	UNII-1_TX AX (HEW20) Mode 5240 MHz

Vertical

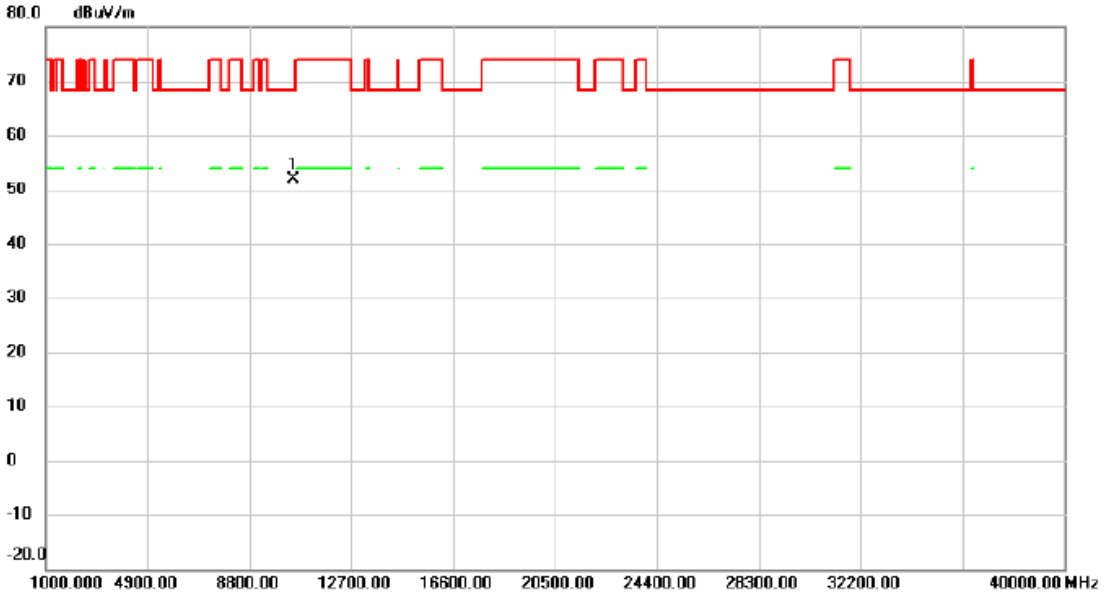


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	5232.400	93.13	17.42	110.55	68.30	42.25	AVG	No Limit
2	*	5232.600	101.52	17.42	118.94	68.30	50.64	peak	No Limit

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

Orthogonal Axis	X
Test Mode	UNII-1_TX AX (HEW20) Mode 5240 MHz

Vertical

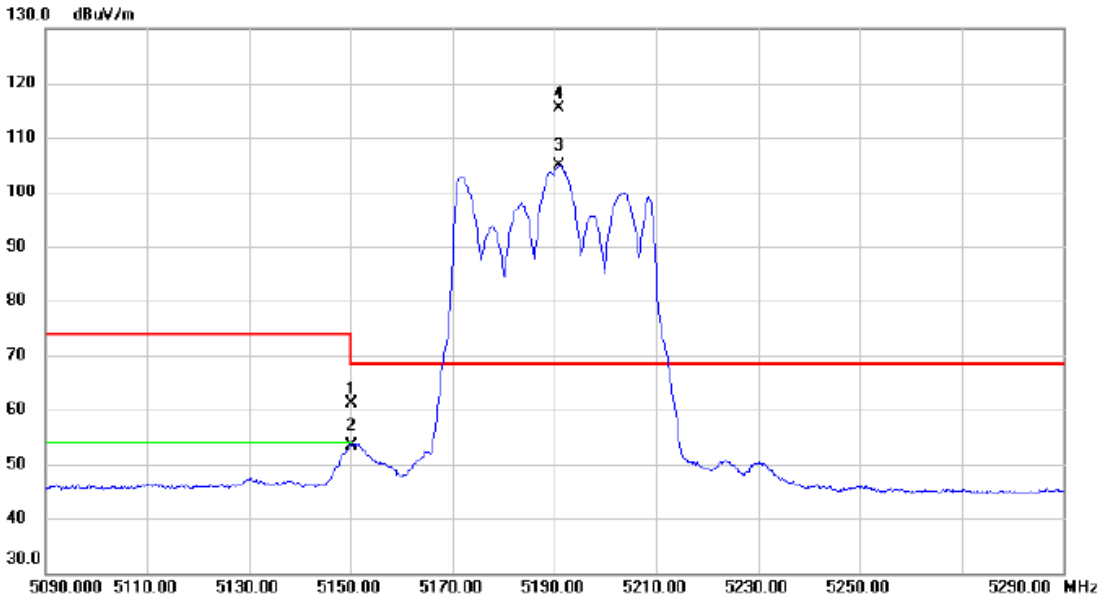


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	10479.914	37.16	14.82	51.98	68.30	-16.32	peak	

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

Orthogonal Axis	X
Test Mode	UNII-1_TX AX (HEW40) Mode 5190 MHz

Vertical

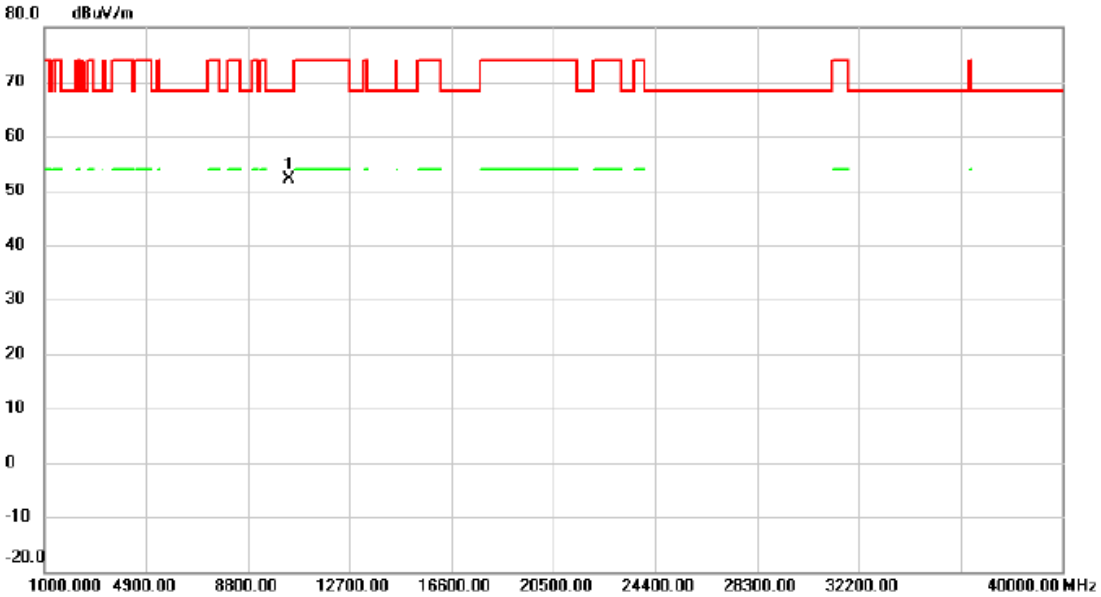


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5150.000	43.97	17.26	61.23	74.00	-12.77	peak	
2		5150.000	36.13	17.26	53.39	54.00	-0.61	AVG	
3	X	5190.800	87.61	17.34	104.95	68.30	36.65	AVG	No Limit
4	*	5191.000	98.01	17.34	115.35	68.30	47.05	peak	No Limit

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

Orthogonal Axis	X
Test Mode	UNII-1_TX AX (HEW40) Mode 5190 MHz

Vertical

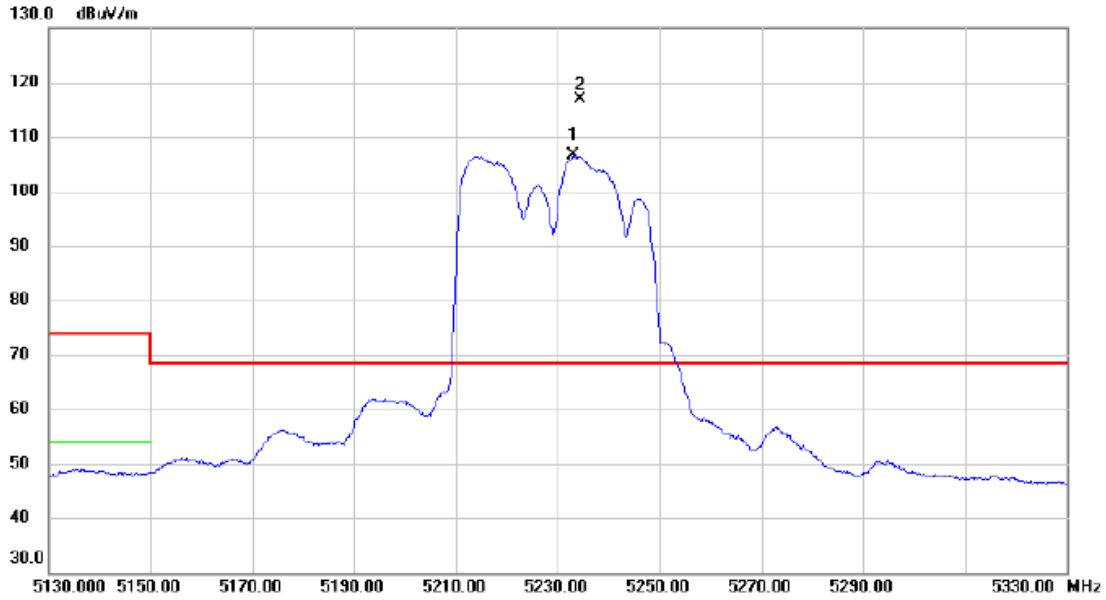


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	10379.817	37.37	14.65	52.02	68.30	-16.28	peak	

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

Orthogonal Axis	X
Test Mode	UNII-1_TX AX (HEW40) Mode 5230 MHz

Vertical

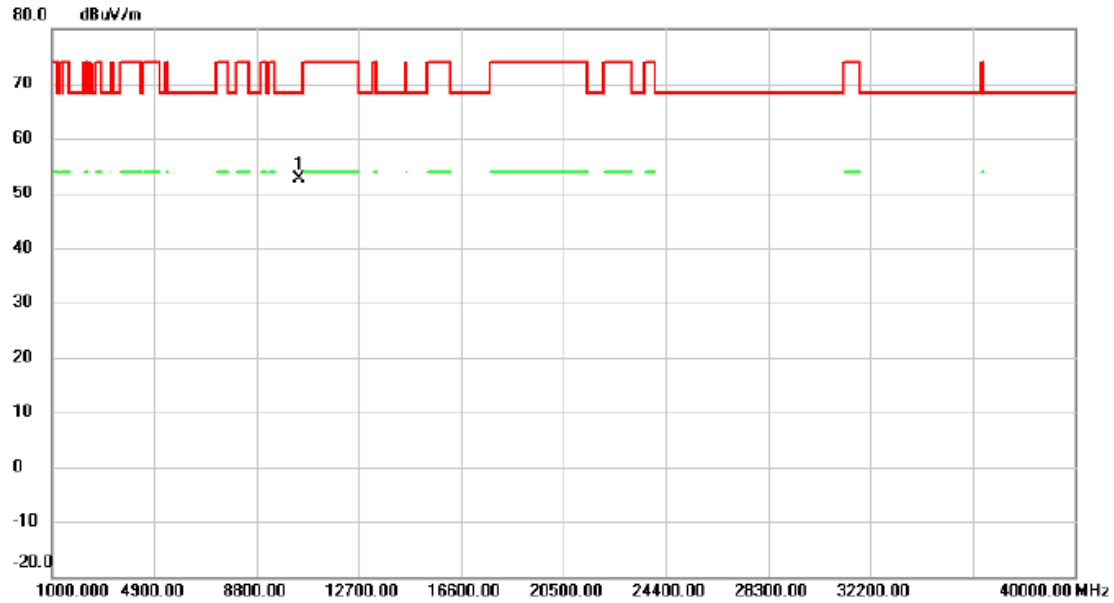


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	5233.000	89.19	17.42	106.61	68.30	38.31	AVG	No Limit
2	*	5234.400	99.57	17.42	116.99	68.30	48.69	peak	No Limit

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

Orthogonal Axis	X
Test Mode	UNII-1_TX AX (HEW40) Mode 5230 MHz

Vertical

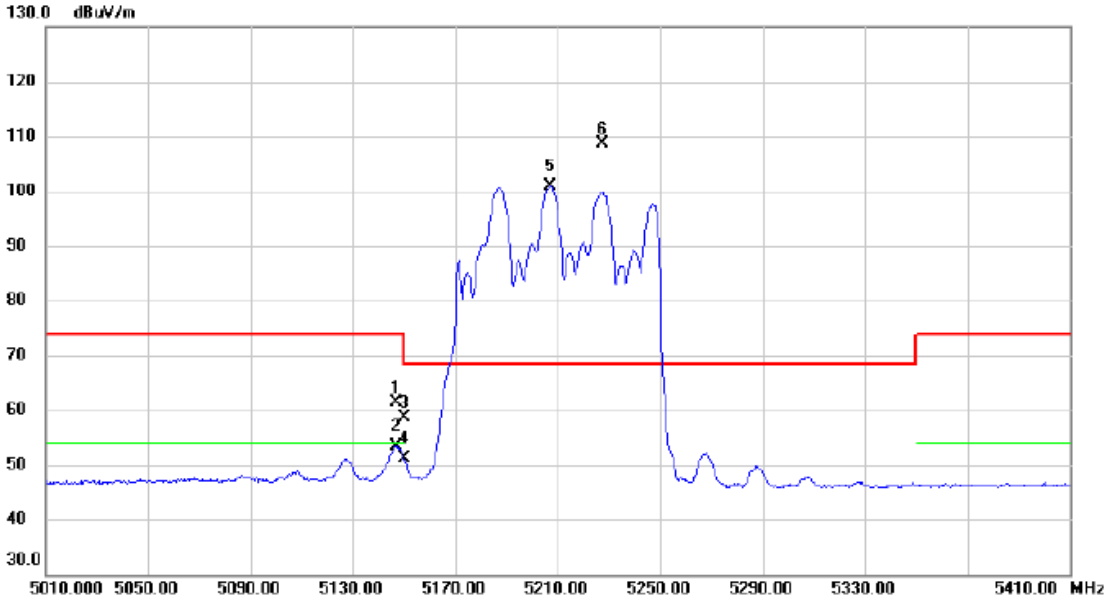


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	10459.760	37.91	14.80	52.71	68.30	-15.59	peak	

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

Orthogonal Axis	X
Test Mode	UNII-1_TX AX (HEW80) Mode 5210 MHz

Vertical

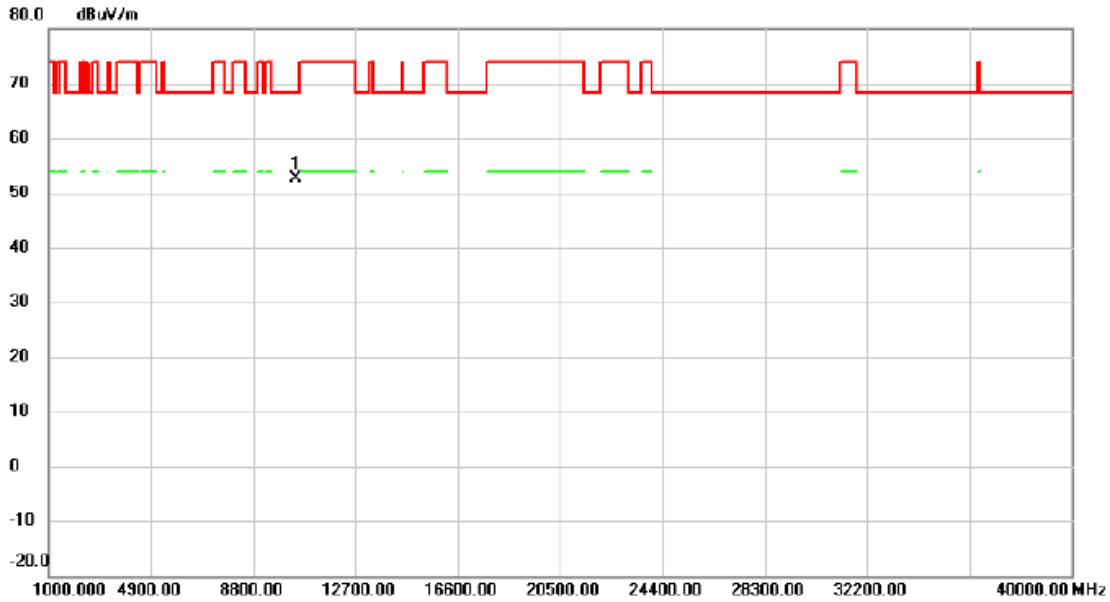


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5146.800	44.06	17.26	61.32	74.00	-12.68	peak	
2		5146.800	36.10	17.26	53.36	54.00	-0.64	AVG	
3		5150.000	41.31	17.26	58.57	74.00	-15.43	peak	
4		5150.000	33.89	17.26	51.15	54.00	-2.85	AVG	
5	X	5206.800	83.54	17.37	100.91	68.30	32.61	AVG	No Limit
6	*	5227.200	91.14	17.41	108.55	68.30	40.25	peak	No Limit

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

Orthogonal Axis	X
Test Mode	UNII-1_TX AX (HEW80) Mode 5210 MHz

Vertical

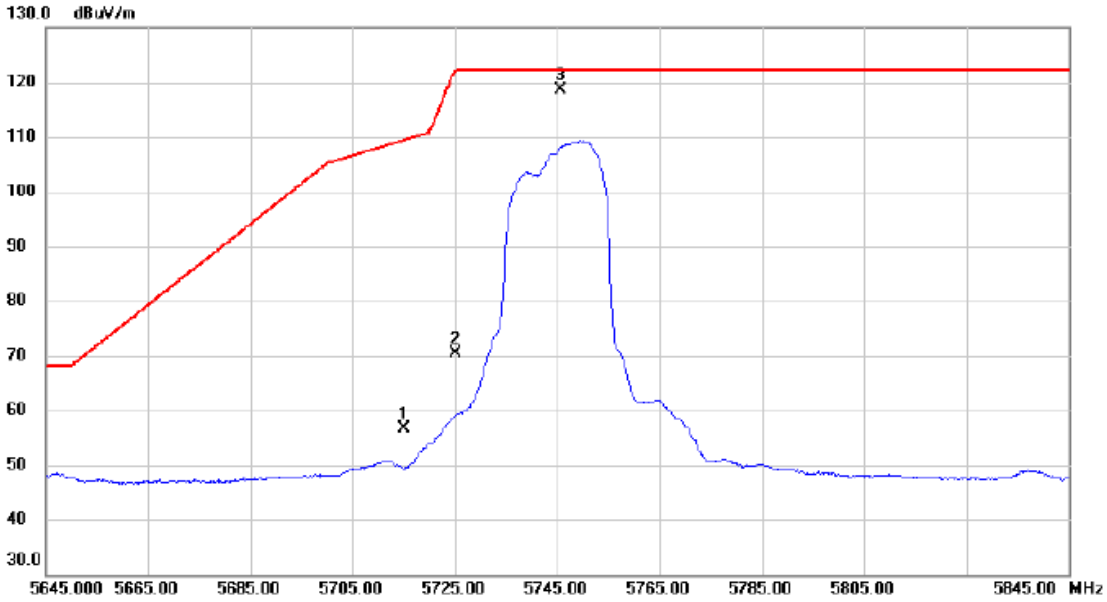


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	10419.655	37.88	14.73	52.61	68.30	-15.69	peak	

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

Orthogonal Axis	X
Test Mode	UNII-3_TX AX (HEW20) Mode 5745 MHz

Vertical

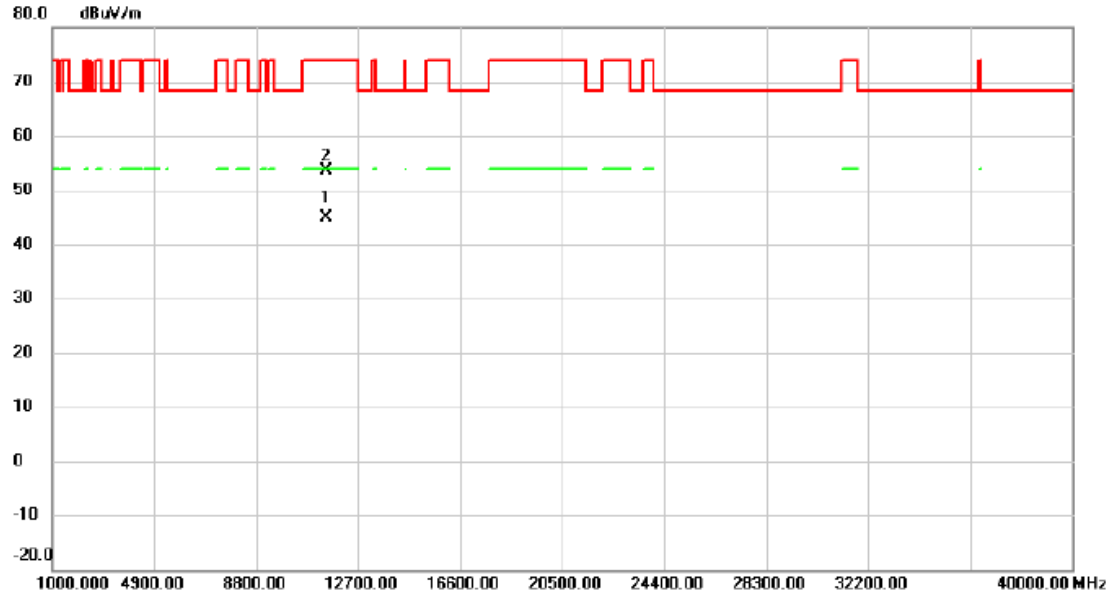


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5715.000	37.93	18.66	56.59	109.40	-52.81	peak	
2		5725.000	51.59	18.69	70.28	122.20	-51.92	peak	
3	*	5745.600	99.89	18.76	118.65	122.20	-3.55	peak	No Limit

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

Orthogonal Axis	X
Test Mode	UNII-3_TX AX (HEW20) Mode 5745 MHz

Vertical

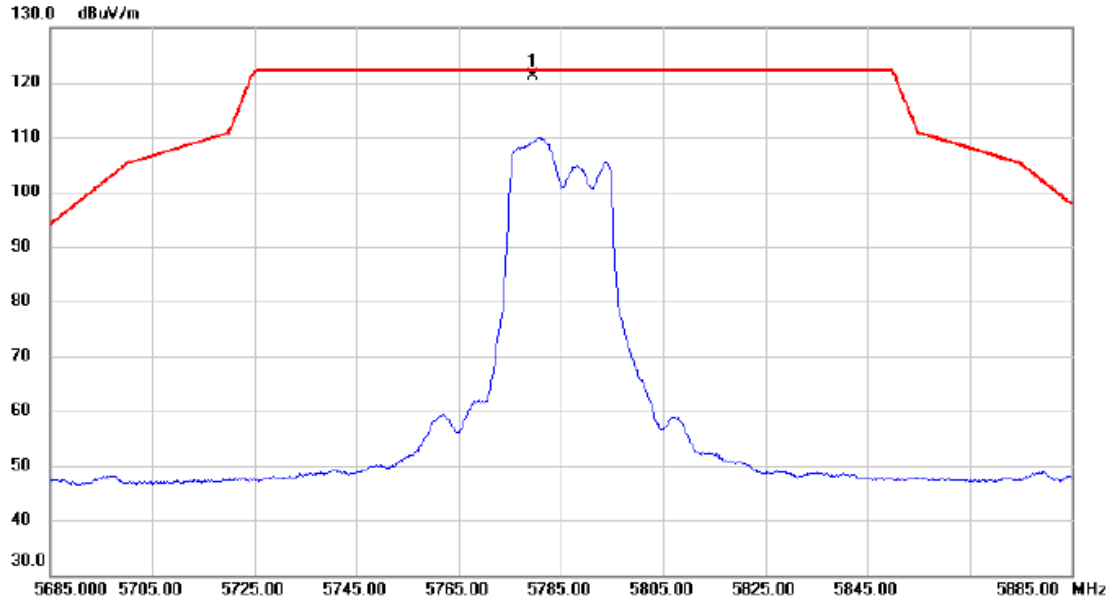


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	11489.840	27.81	17.16	44.97	54.00	-9.03	AVG	
2		11489.890	36.49	17.16	53.65	74.00	-20.35	peak	

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

Orthogonal Axis	X
Test Mode	UNII-3_TX AX (HEW20) Mode 5785 MHz

Vertical

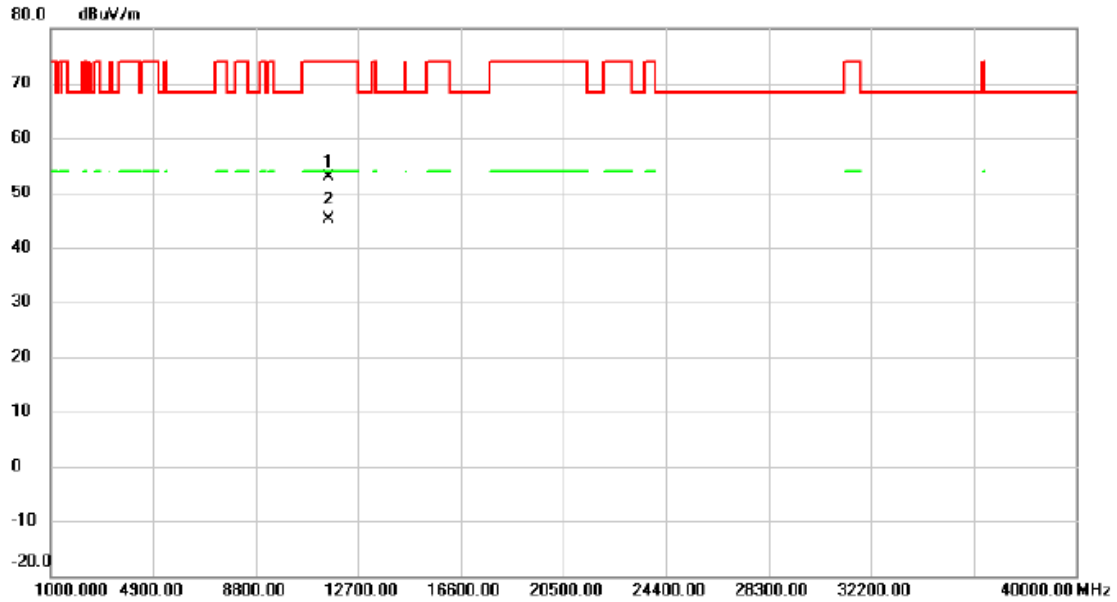


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	5779.600	102.16	18.86	121.02	122.20	-1.18	peak	No Limit

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

Orthogonal Axis	X
Test Mode	UNII-3_TX AX (HEW20) Mode 5785 MHz

Vertical

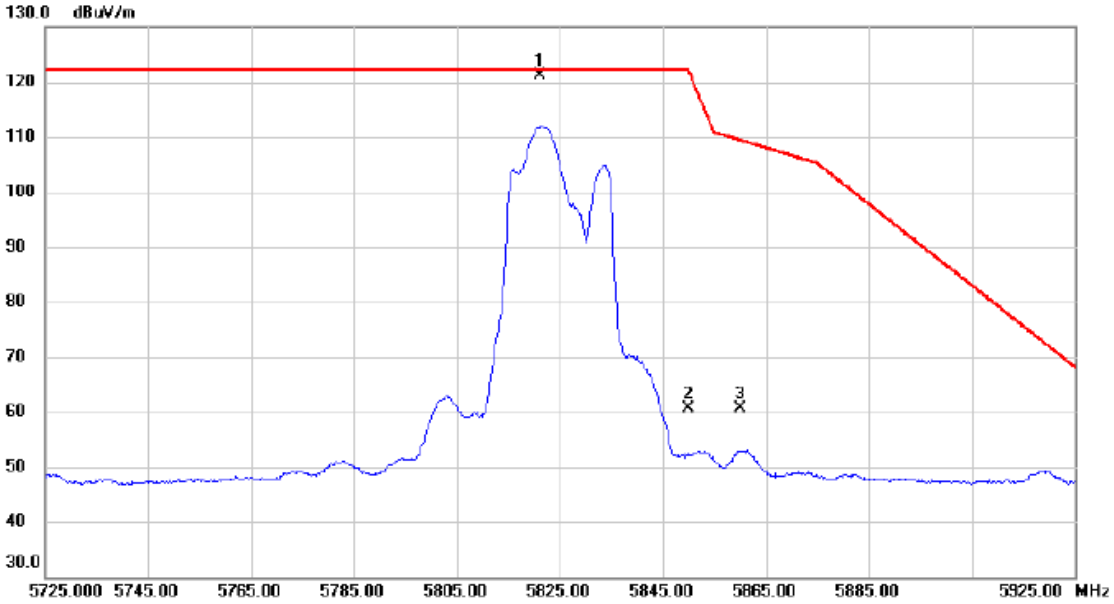


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		11569.830	35.78	17.20	52.98	74.00	-21.02	peak	
2	*	11569.830	27.91	17.20	45.11	54.00	-8.89	AVG	

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

Orthogonal Axis	X
Test Mode	UNII-3_TX AX (HEW20) Mode 5825 MHz

Vertical

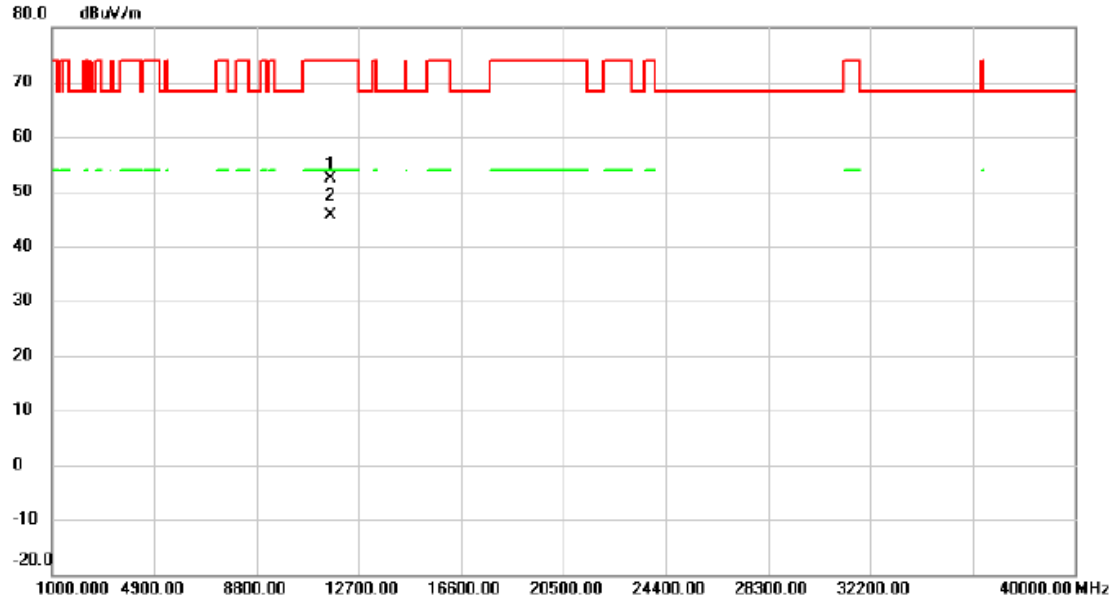


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	5821.000	102.20	19.00	121.20	122.20	-1.00	peak	No Limit
2		5850.000	41.56	19.09	60.65	122.20	-61.55	peak	
3		5860.000	41.59	19.12	60.71	109.40	-48.69	peak	

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

Orthogonal Axis	X
Test Mode	UNII-3_TX AX (HEW20) Mode 5825 MHz

Vertical

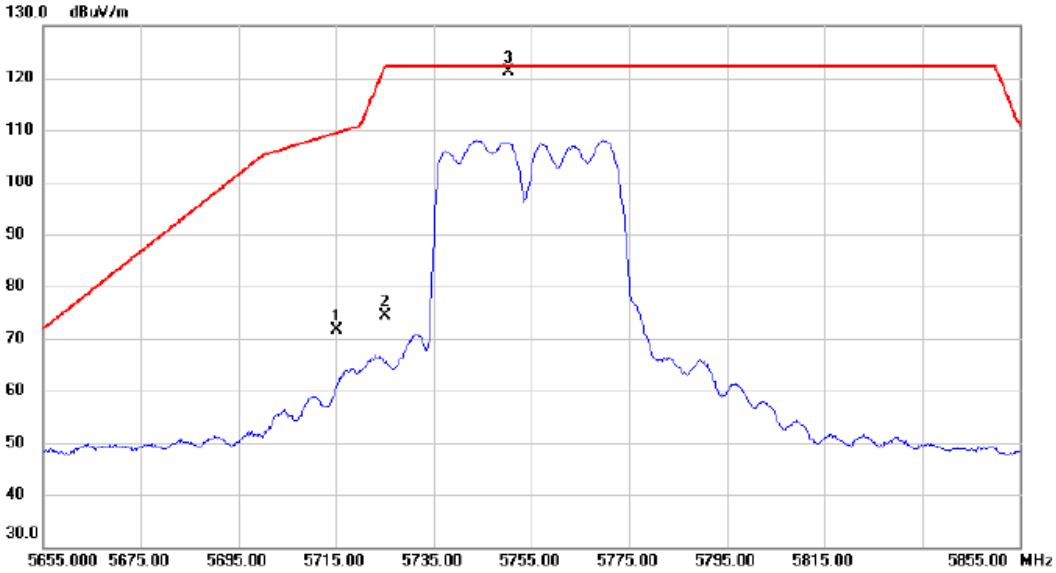


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		11649.615	35.15	17.22	52.37	74.00	-21.63	peak	
2	*	11649.880	28.33	17.22	45.55	54.00	-8.45	AVG	

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

Orthogonal Axis	X
Test Mode	UNII-3_TX AX (HEW40) Mode 5755 MHz

Vertical

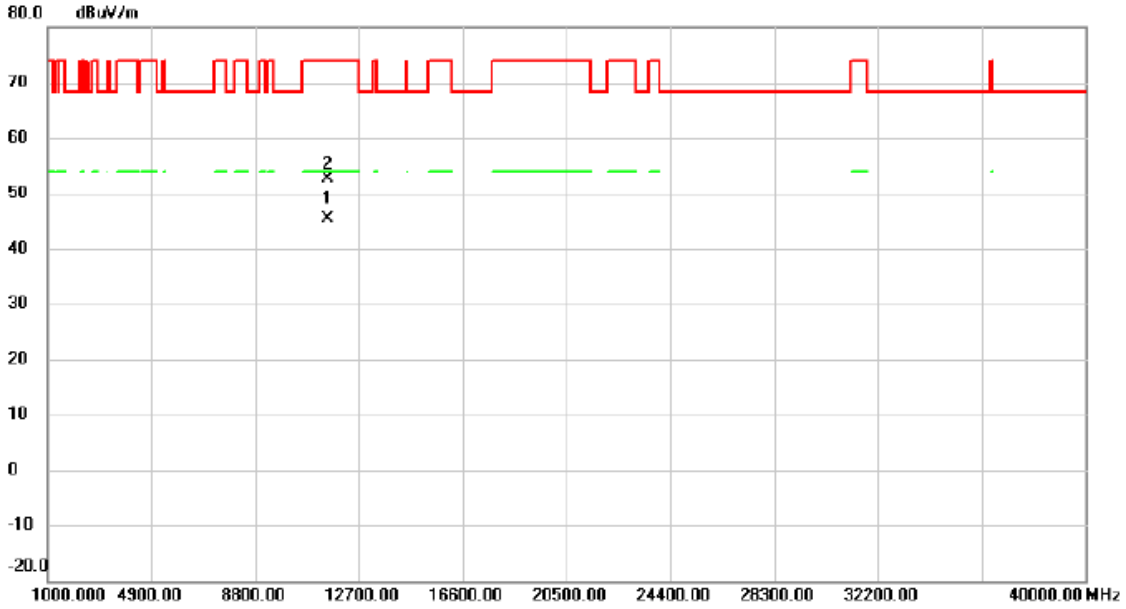


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5715.000	53.06	18.66	71.72	109.40	-37.68	peak	
2		5725.000	55.63	18.69	74.32	122.20	-47.88	peak	
3	*	5750.400	102.47	18.77	121.24	122.20	-0.96	peak	No Limit

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

Orthogonal Axis	X
Test Mode	UNII-3_TX AX (HEW40) Mode 5755 MHz

Vertical

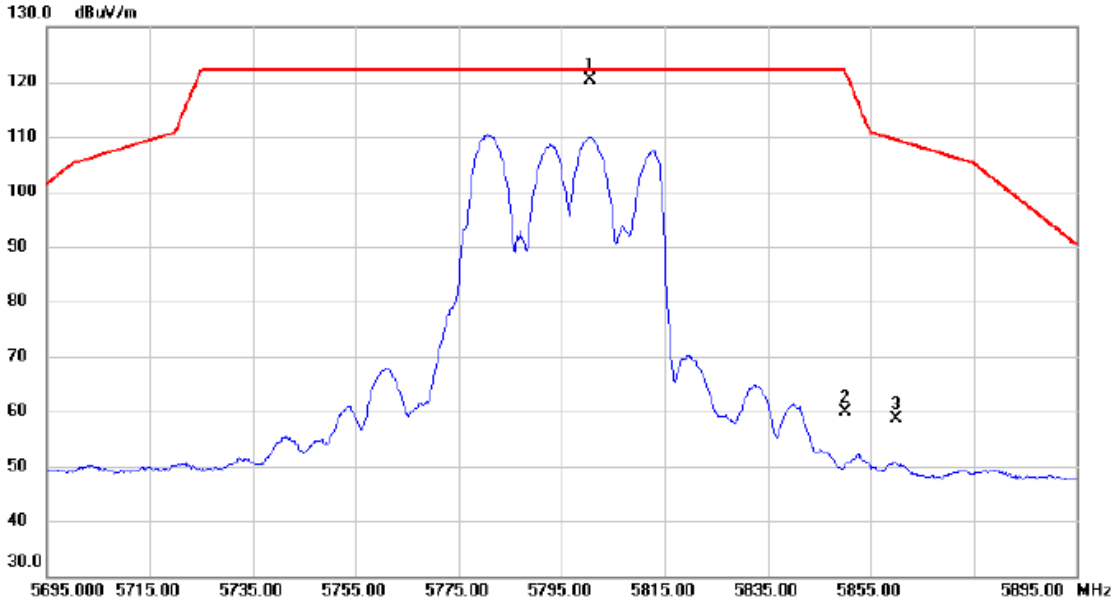


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	11509.930	28.26	17.18	45.44	54.00	-8.56	AVG	
2		11509.950	35.34	17.18	52.52	74.00	-21.48	peak	

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

Orthogonal Axis	X
Test Mode	UNII-3_TX AX (HEW40) Mode 5795 MHz

Vertical

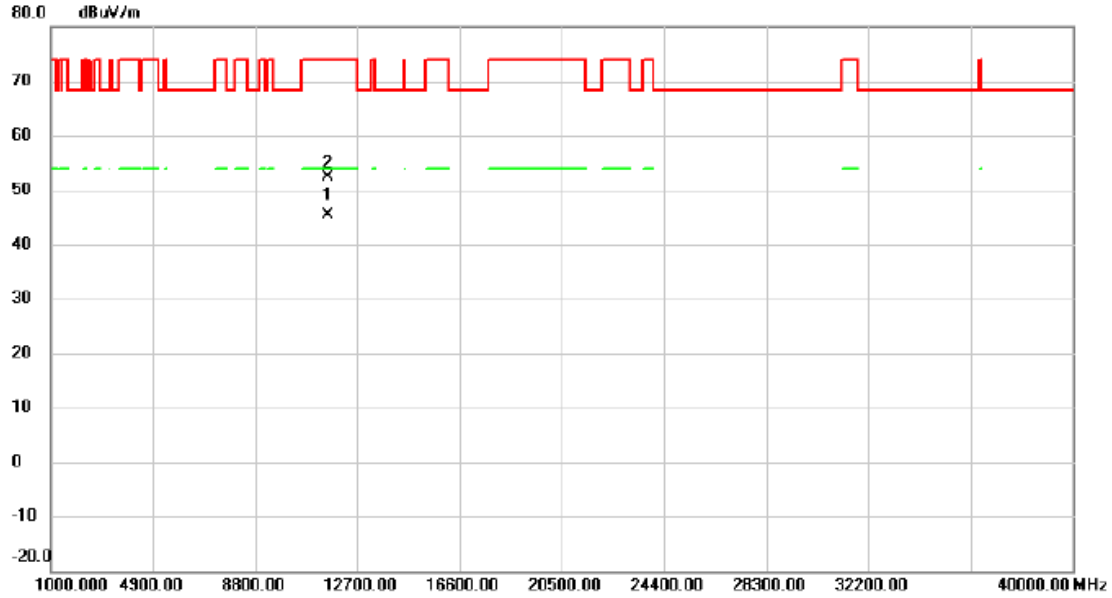


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	5800.400	101.46	18.93	120.39	122.20	-1.81	peak	No Limit
2		5850.000	40.76	19.09	59.85	122.20	-62.35	peak	
3		5860.000	39.44	19.12	58.56	109.40	-50.84	peak	

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

Orthogonal Axis	X
Test Mode	UNII-3_TX AX (HEW40) Mode 5795 MHz

Vertical

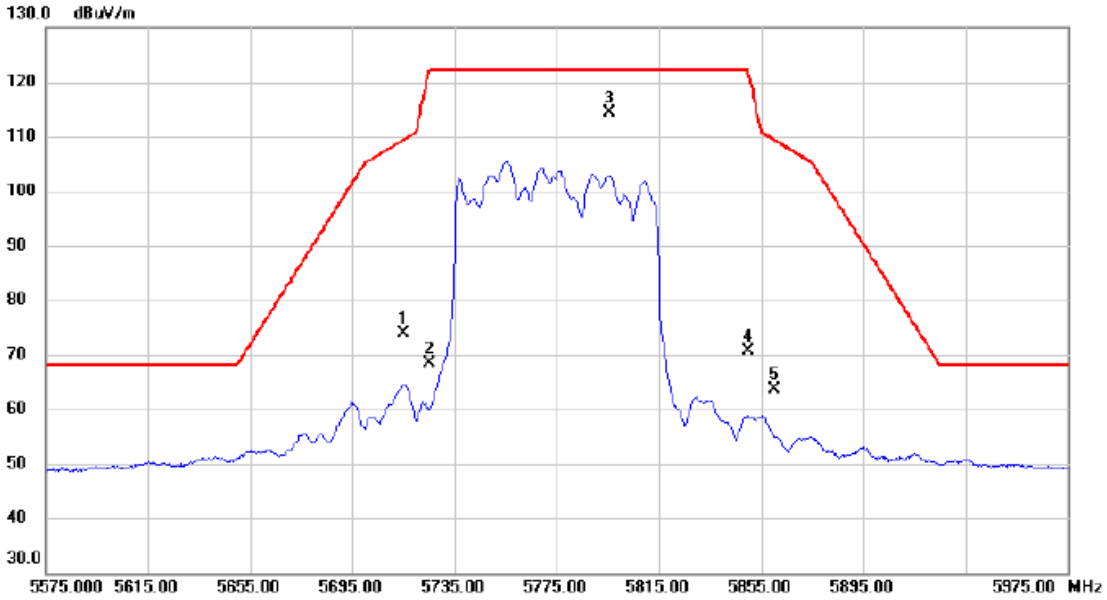


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	11589.890	28.29	17.21	45.50	54.00	-8.50	AVG	
2		11590.205	35.27	17.21	52.48	74.00	-21.52	peak	

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

Orthogonal Axis	X
Test Mode	UNII-3_TX AX (HEW80) Mode 5775 MHz

Vertical

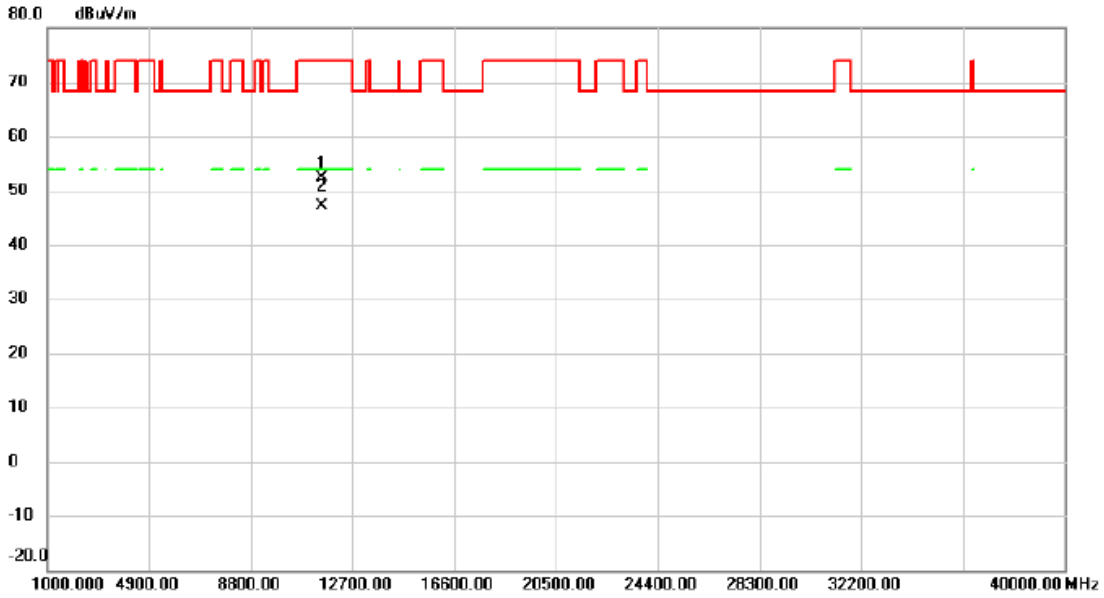


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5715.000	55.18	18.66	73.84	109.40	-35.56	peak	
2		5725.000	49.67	18.69	68.36	122.20	-53.84	peak	
3	*	5795.400	95.47	18.92	114.39	122.20	-7.81	peak	No Limit
4		5850.000	51.53	19.09	70.62	122.20	-51.58	peak	
5		5860.000	44.60	19.12	63.72	109.40	-45.68	peak	

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

Orthogonal Axis	X
Test Mode	UNII-3_TX AX (HEW80) Mode 5775 MHz

Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		11549.880	35.19	17.19	52.38	74.00	-21.62	peak	
2	*	11549.880	29.92	17.19	47.11	54.00	-6.89	AVG	

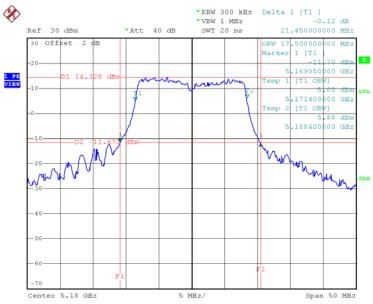
REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

APPENDIX E - BANDWIDTH

Test Mode	UNII-1_TX A Mode

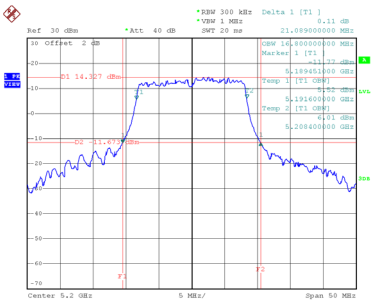
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99 % Emission Bandwidth (MHz)
36	5180	21.45	17.00
40	5200	21.09	16.80
48	5240	21.09	17.00

CH36



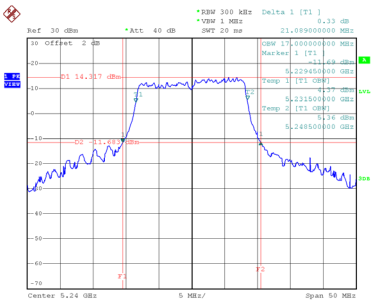
Date: 24.JUL.2020 17:43:14

CH40



Date: 24.JUL.2020 17:48:34

CH48

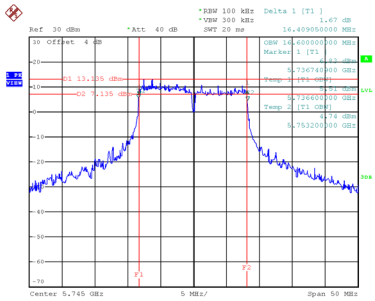


Date: 24.JUL.2020 17:50:49

Test Mode	UNII-3_TX A Mode

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Emission Bandwidth (MHz)	6 dB Bandwidth Min. Limit (kHz)	Result
149	5745	16.41	17.00	500	Complies
157	5785	16.45	17.20	500	Complies
165	5825	16.40	17.00	500	Complies

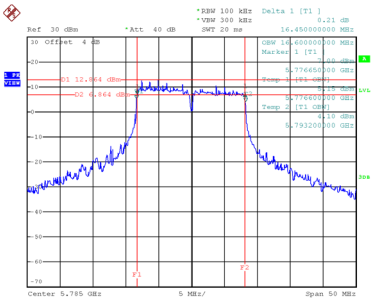
CH149



Date: 16.JUL.2020 19:15:28

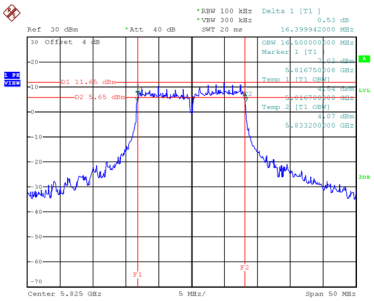
CH157

6 dB Bandwidth

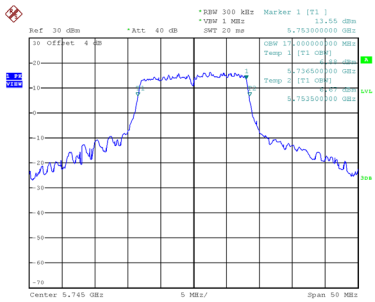


Date: 16.JUL.2020 19:16:13

CH165

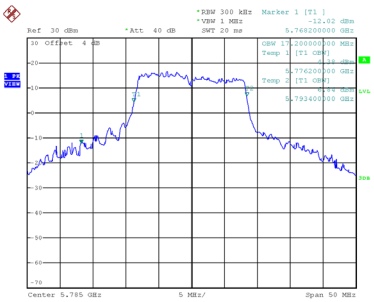


Date: 16.JUL.2020 19:17:08

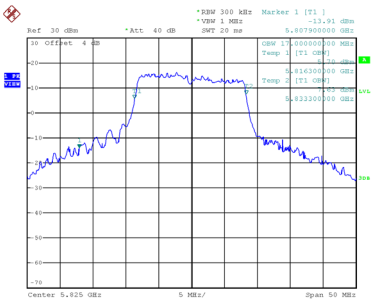


Date: 16.JUL.2020 19:37:28

99 % Emission Bandwidth



Date: 16.JUL.2020 19:37:51

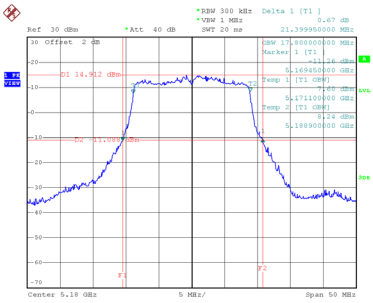


Date: 16.JUL.2020 19:38:11

Test Mode	UNII-1_TX AC (VHT20) Mode

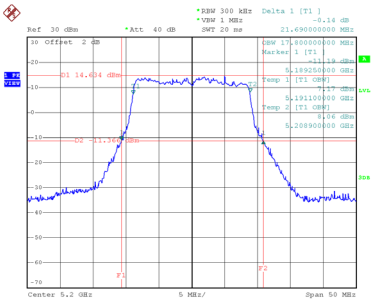
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99 % Emission Bandwidth (MHz)
36	5180	21.40	17.80
40	5200	21.69	17.80
48	5240	21.40	17.70

CH36



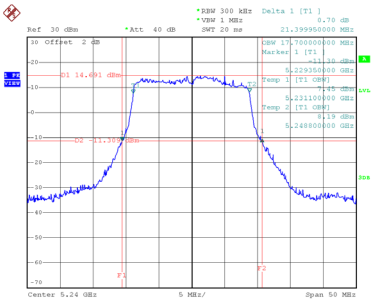
Date: 24.JUL.2020 19:16:53

CH40



Date: 24.JUL.2020 19:19:52

CH48

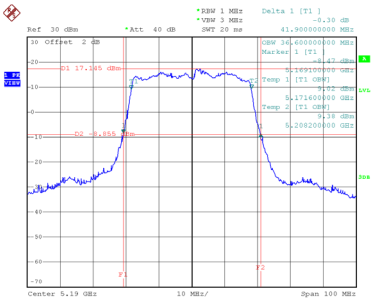


Date: 24.JUL.2020 19:23:01

Test Mode	UNII-1_TX AC (VHT40) Mode

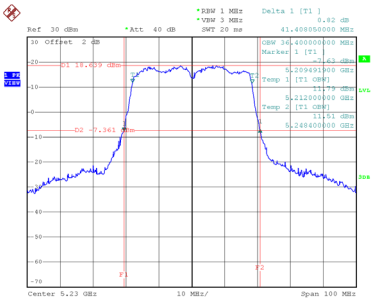
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99 % Emission Bandwidth (MHz)
38	5190	41.90	36.60
46	5230	41.41	36.40

CH38



Date: 24.JUL.2020 19:58:21

CH46

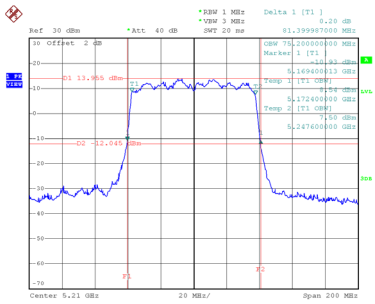


Date: 24.JUL.2020 20:03:00

Test Mode	UNII-1_TX AC (VHT80) Mode

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99 % Emission Bandwidth (MHz)
42	5210	81.40	75.20

CH42

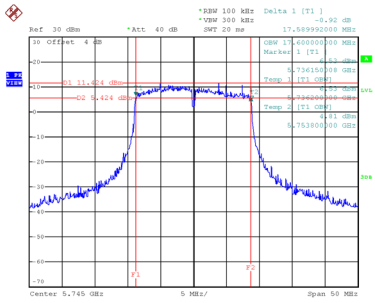


Date: 24.JUL.2020 20:06:55

Test Mode	UNII-3_TX AC (VHT20) Mode

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Emission Bandwidth (MHz)	6 dB Bandwidth Min. Limit (kHz)	Result
149	5745	17.59	17.70	500	Complies
157	5785	17.65	17.70	500	Complies
165	5825	17.65	17.60	500	Complies

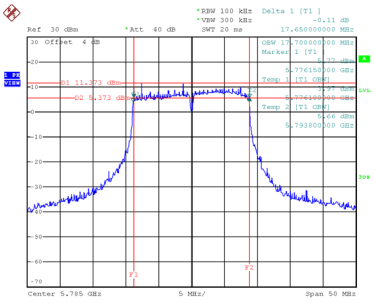
CH149



Date: 16.JUL.2020 19:17:55

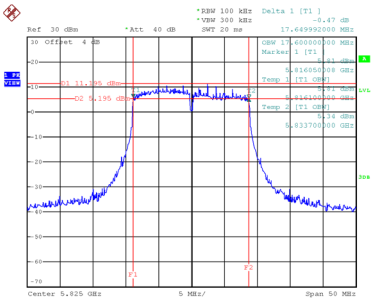
CH157

6 dB Bandwidth

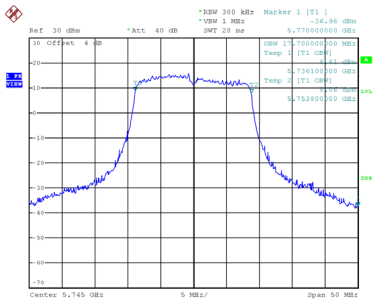


Date: 16.JUL.2020 19:18:39

CH165

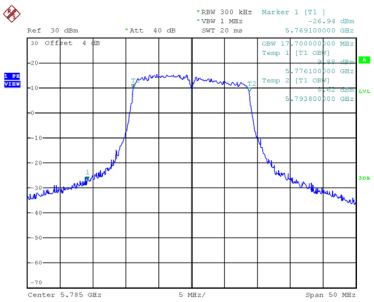


Date: 16.JUL.2020 19:19:27

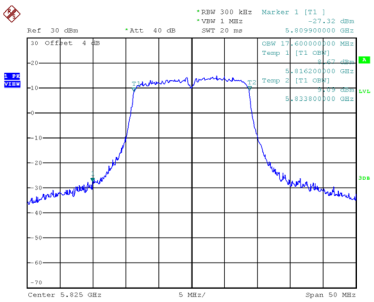


Date: 16.JUL.2020 19:38:34

99 % Emission Bandwidth



Date: 16.JUL.2020 19:39:05

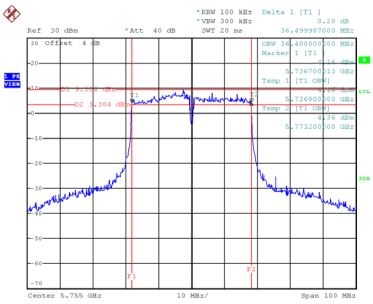


Date: 16.JUL.2020 19:39:30

Test Mode	UNII-3_TX AC (VHT40) Mode

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Emission Bandwidth (MHz)	6 dB Bandwidth Min. Limit (kHz)	Result
151	5755	36.50	36.60	500	Complies
159	5795	36.50	36.60	500	Complies

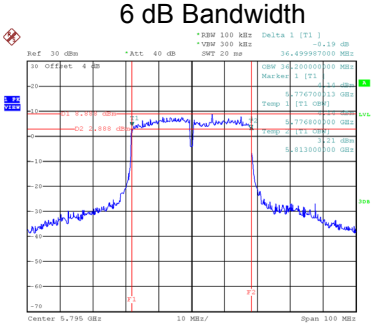
CH151



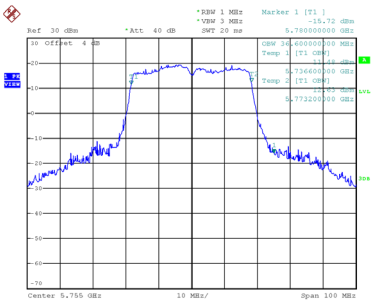
Date: 16.JUL.2020 19:20:40

CH159

6 dB Bandwidth

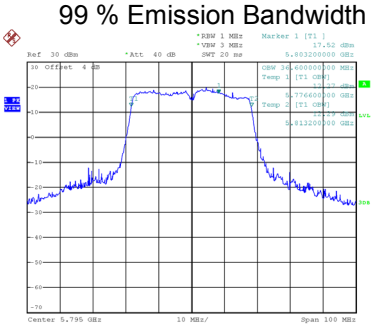


Date: 16.JUL.2020 19:21:41



Date: 16.JUL.2020 19:39:59

99 % Emission Bandwidth



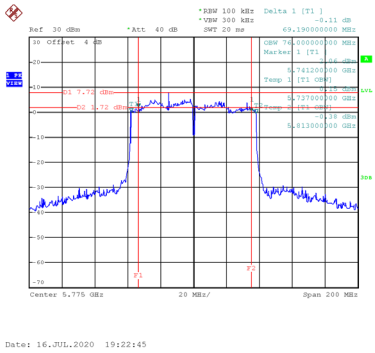
Date: 16.JUL.2020 19:40:28

Test Mode	UNII-3_TX AC (VHT80) Mode

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Emission Bandwidth (MHz)	6 dB Bandwidth Min. Limit (kHz)	Result
155	5775	69.19	75.60	500	Complies

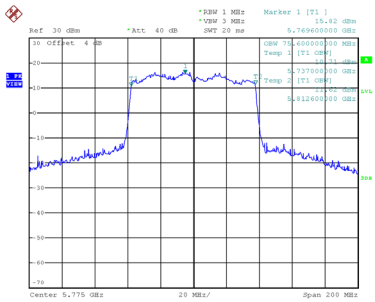
CH155

6 dB Bandwidth



Date: 16.JUL.2020 19:22:45

99 % Emission Bandwidth

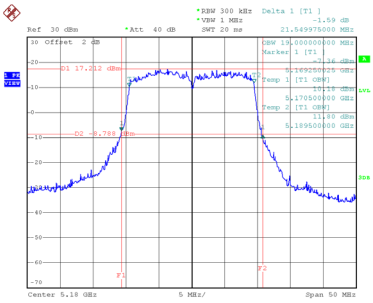


Date: 16.JUL.2020 19:41:14

Test Mode	UNII-1_TX AX (HEW20) Mode

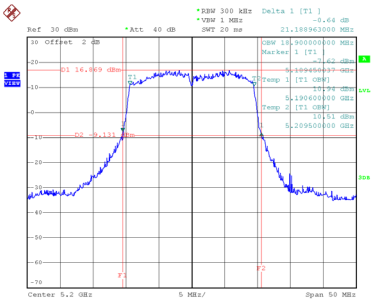
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99 % Emission Bandwidth (MHz)
36	5180	21.55	19.00
40	5200	21.19	18.90
48	5240	21.30	19.00

CH36



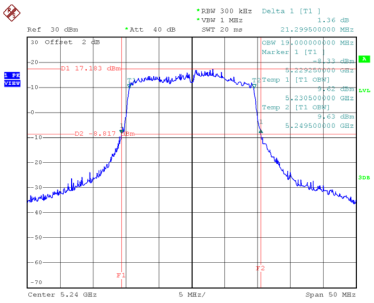
Date: 24.JUL.2020 19:31:03

CH40



Date: 24.JUL.2020 19:33:45

CH48

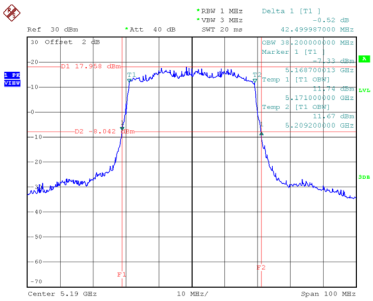


Date: 24.JUL.2020 19:41:15

Test Mode	UNII-1_TX AX (HEW40) Mode

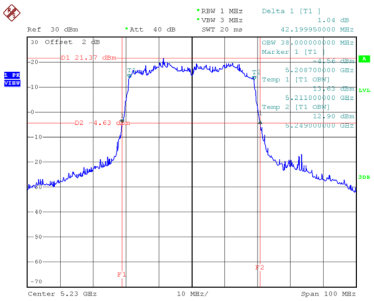
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99 % Emission Bandwidth (MHz)
38	5190	42.50	37.60
46	5230	42.20	37.80

CH38



Date: 24.JUL.2020 19:45:58

CH46

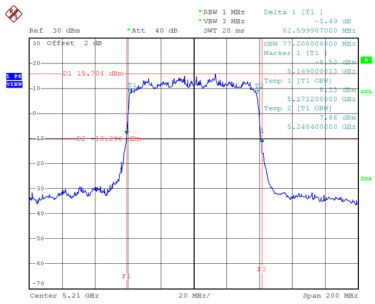


Date: 24.JUL.2020 19:49:41

Test Mode	UNII-1_TX AX (HEW80) Mode

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99 % Emission Bandwidth (MHz)
42	5210	82.60	77.60

CH42



Date: 24.JUL.2020 20:10:16