

FCC Radio Test Report

FCC ID: TE7CPE510V32

This report concerns: **Original Grant**

Project No. : 1908C025
Equipment : 5GHz 300Mbps 13dBi Outdoor CPE
Brand Name : tp-link
Test Model : CPE510
Series Model : N/A
Applicant : TP-Link Technologies Co., Ltd.
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Manufacturer : TP-Link Technologies Co., Ltd.
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Date of Receipt : Aug. 05, 2019
Date of Test : Aug. 07, 2019 ~ Sep. 22, 2019
Issued Date : Oct. 10, 2019
Report Version : R00
Test Sample : Engineering Sample No.: DG19080731
Standard(s) : FCC Part15, Subpart E(15.407)
ANSI C63.10-2013
FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01
FCC KDB 662911 D01 Multiple Transmitter Output v02r01

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

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The information, data and test plan are provided by manufacturer which may affect the validity of results, so it is manufacturer's responsibility to ensure that the apparatus meets the essential requirements of applied standards and in all the possible configurations as representative of its intended use.

Limitation

For the use of the authority's logo is limited unless the Test Standard(s)/Scope(s)/Item(s) mentioned in this test report is (are) included in the conformity assessment authorities acceptance respective.

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REPORT ISSUED HISTORY

Report Version	Description	Issued Date
R00	Original Issue.	Oct. 10, 2019

1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standard(s):

FCC Part15, Subpart E(15.407)				
Standard(s) Section	Test Item	Test Result	Judgement	Remark
15.207 15.407(b)	AC Power Line Conducted Emissions	APPENDIX A	PASS	-----
15.407(b) 15.205(a) 15.209(a)	Radiated Emissions	APPENDIX B APPENDIX C APPENDIX D	PASS	-----
15.407(a) 15.407(e)	Spectrum Bandwidth	APPENDIX E	PASS	-----
15.407(a)	Maximum Output Power	APPENDIX F	PASS	-----
15.407(a)	Power Spectral Density	APPENDIX G	PASS	-----
15.407(g)	Frequency Stability	APPENDIX H	PASS	-----
15.203	Antenna Requirements	-----	PASS	NOTE (4)
15.407(c)	Automatically Discontinue Transmission	-----	PASS	NOTE (2)

Note:

- (1) "N/A" denotes test is not applicable in this test report.
- (2) During no any information transmission, the EUT can automatically discontinue transmission and become standby mode for power saving. the EUT can detect the controlling signal of ACK message transmitting from remote device and verify whether it shall resend or discontinue transmission.
- (3) For UNII-1 this device was functioned as a
 Access point device Client device
- (4) The device what use a permanently attached antenna were considered sufficient to comply with the provisions of 15.203.

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	150 kHz ~ 30 MHz	2.32

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	-	3.80
		26.5GHz ~ 40GHz	-	4.30

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	25°C	53%	AC 120V/60Hz	Laughing Zhang
Radiated Emissions-9K-30MHz	25°C	60%	DC 24V	Laughing Zhang
Radiated Emissions-30 MHz to 1GHz	24°C	68%	DC 24V	Bert Xu
Radiated Emissions-Above 1000 MHz	26°C	65%	DC 24V	Sheldon Ou
Spectrum Bandwidth	31.9°C	40.5%	DC 24V	Chella Zheng
Maximum Output Power	31.9°C	40.5%	DC 24V	Chella Zheng
Power Spectral Density	31.9°C	40.5%	DC 24V	Chella Zheng
Frequency Stability	31.9°C	40.5%	DC 24V	Chella Zheng

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Equipment	5GHz 300Mbps 13dBi Outdoor CPE
Brand Name	tp-link
Test Model	CPE510
Series Model	N/A
Model Difference(s)	N/A
Power Source	DC voltage supplied from PoE adapter.
Power Rating	24V --- 0.5A
Operation Frequency Bands	UNII-1: 5150 MHz~5250 MHz UNII-3: 5725 MHz~5850 MHz
Modulation Type	OFDM
Bit Rate of Transmitter	Up to 300Mbps
Maximum Output Power for UNII-1	IEEE 802.11a: 24.86 dBm (0.3062 W) IEEE 802.11n (HT20): 24.80 dBm (0.3020 W) IEEE 802.11n (HT40): 24.60 dBm (0.2884 W)
Maximum Output Power for UNII-3	IEEE 802.11a: 21.71 dBm (0.1483 W) IEEE 802.11n (HT20): 20.69 dBm (0.1172 W) IEEE 802.11n (HT40): 19.63 dBm (0.0918 W)

Note:

- 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 802.11n (HT40)	
UNII-1		UNII-1	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
36	5180	38	5190
40	5200	46	5230
44	5220		
48	5240		

IEEE 802.11a IEEE 802.11n (HT20)		IEEE 802.11n (HT40)	
UNII-3		UNII-3	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
149	5745	151	5755
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	N/A	PCB	N/A	11.6
2	TP-LINK	N/A	PCB	N/A	11.6

Note:

This EUT supports CDD, and all antennas have the same gain, so Directional gain= $G_{ANT} + \text{Array Gain}$.

For Output Power measurements, Array Gain = 0 dB ($N_{ANT} \leq 4$), so the Directional gain=11.6. The antenna were fixed point to point,so the Output Power and Power Spectral Density limit not need to be reduced.

4. Table for Antenna Configuration:

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)

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 N (HT20) Mode / CH36, CH40, CH48 (UNII-1)
Mode 3	TX N (HT40) Mode / CH38, CH46 (UNII-1)
Mode 4	TX A Mode / CH149,CH157,CH165 (UNII-3)
Mode 5	TX N (HT20) Mode / CH149,CH157,CH165 (UNII-3)
Mode 6	TX N (HT40) Mode / CH151,CH159 (UNII-3)
Mode 7	TX A Mode / CH48 (UNII-1)

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

AC power line conducted emissions test	
Final Test Mode	Description
Mode 7	TX A Mode / CH48 (UNII-1)

Radiated emissions test - Below 1GHz	
Final Test Mode	Description
Mode 7	TX A Mode / CH48 (UNII-1)

Radiated emissions test - Above 1GHz	
Final Test Mode	Description
Mode 1	TX A Mode / CH36, CH40, CH48 (UNII-1)
Mode 2	TX N (HT20) Mode / CH36, CH40, CH48 (UNII-1)
Mode 3	TX N (HT40) Mode / CH38, CH46 (UNII-1)
Mode 4	TX A Mode / CH149,CH157,CH165 (UNII-3)
Mode 5	TX N (HT20) Mode / CH149,CH157,CH165 (UNII-3)
Mode 6	TX N (HT40) Mode / CH151,CH159 (UNII-3)

Conducted test	
Final Test Mode	Description
Mode 1	TX A Mode / CH36, CH40, CH48 (UNII-1)
Mode 2	TX N (HT20) Mode / CH36, CH40, CH48 (UNII-1)
Mode 3	TX N (HT40) Mode / CH38, CH46 (UNII-1)
Mode 4	TX A Mode / CH149,CH157,CH165 (UNII-3)
Mode 5	TX N (HT20) Mode / CH149,CH157,CH165 (UNII-3)
Mode 6	TX N (HT40) Mode / CH151,CH159 (UNII-3)

Note:

- (1) For radiated emission below 1 GHz test, the IEEE 802.11a channel 48 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) All the bit rate of transmitter have been tested and found the lowest rate is found to be the worst case and recorded.

2.3 PARAMETERS OF TEST SOFTWARE

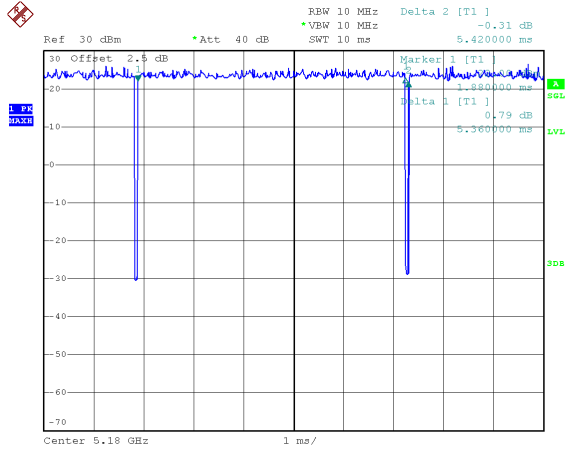
UNII-1			
Test Software	cart		
Test Frequency (MHz)	5180	5200	5240
IEEE 802.11a	22	22	22
IEEE 802.11n (HT20)	22	22	22
Test Frequency (MHz)	5190	5230	
IEEE 802.11n (HT40)	17	22	

UNII-3			
Test Software	cart		
Test Frequency (MHz)	5745	5785	5825
IEEE 802.11a	19	18	18
IEEE 802.11n (HT20)	18	17	17
Test Frequency (MHz)	5755	5795	
IEEE 802.11n (HT40)	17	17	

2.4 DUTY CYCLE

If duty cycle is $\geq 98\%$, duty factor is not required.
 If duty cycle is $< 98\%$, duty factor shall be considered.
 The output power = measured power + duty factor.

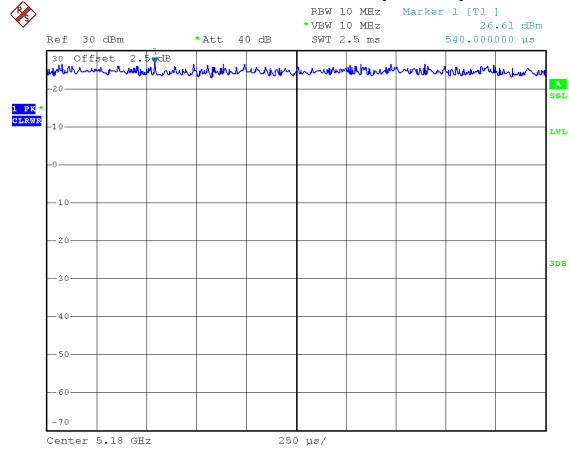
IEEE 802.11a



Date: 9.AUG.2019 16:32:24

Duty cycle = $5.36 \text{ ms} / 5.42 \text{ ms} = 98.89\%$
 Duty Factor = $10 \log(1 / \text{Duty cycle}) = 0.00$

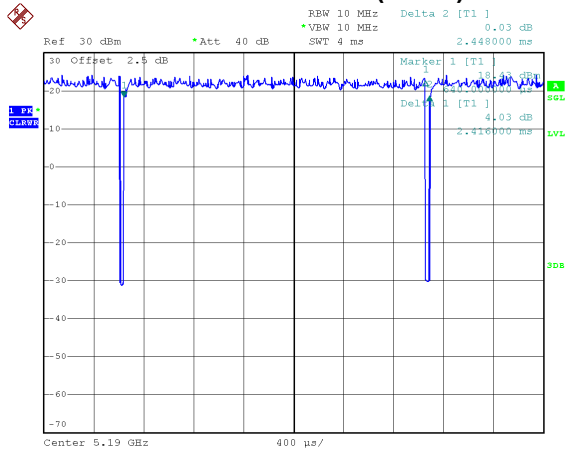
IEEE 802.11n (HT20)



Date: 9.AUG.2019 16:33:19

Duty cycle = $2.5 \text{ ms} / 2.5 \text{ ms} = 100.00\%$
 Duty Factor = $10 \log(1 / \text{Duty cycle}) = 0.00$

IEEE 802.11n (HT40)



Date: 9.AUG.2019 16:34:02

Duty cycle = $2.416 \text{ ms} / 2.448 \text{ ms} = 98.69\%$
 Duty Factor = $10 \log(1 / \text{Duty cycle}) = 0.00$

NOTE:

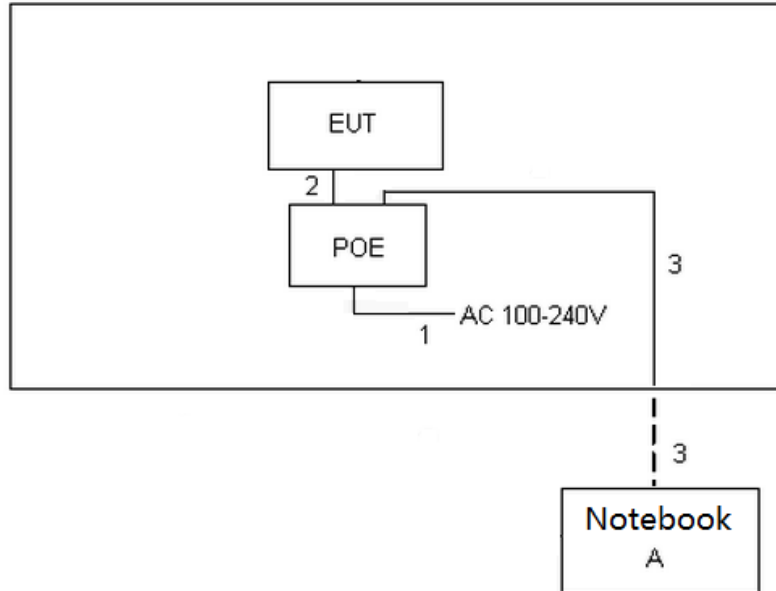
For IEEE 802.11a and IEEE 802.11n (HT20):

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

For IEEE 802.11n (HT40):

For radiated emissions frequency above 1 GHz, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 2 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	AC Cable	NO	NO	1m
2	Network Cable	NO	NO	1m
3	RJ45 Cable	NO	NO	10m

3. AC POWER LINE CONDUCTED EMISSIONS TEST

3.1 LIMIT

Frequency (MHz)	Limit (dB μ V)	
	Quasi-peak	Average
0.15 - 0.50	66 to 56*	56 to 46*
0.50 - 5.0	56	46
5.0 - 30.0	60	50

NOTE:

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

The following table is the setting of the receiver

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

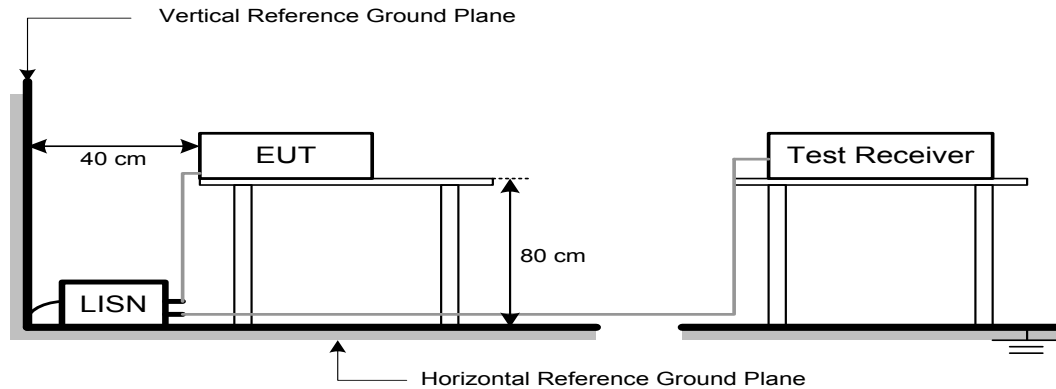
3.2 TEST PROCEDURE

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

3.3 DEVIATION FROM TEST STANDARD

No deviation

3.4 TEST SETUP



3.5 EUT OPERATION CONDITIONS

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

The EUT was programmed to be in continuously transmitting/TX mode.

3.6 TEST RESULTS

Please refer to the APPENDIX A.

4. RADIATED EMISSIONS TEST

4.1 LIMIT

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

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

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

LIMITS OF UNWANTED EMISSION OUT OF THE RESTRICTED BANDS

Frequency (MHz)	EIRP Limit (dBm/MHz)	Equivalent Field Strength at 3m (dBμV/m)
5150-5250	-27	68.3
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

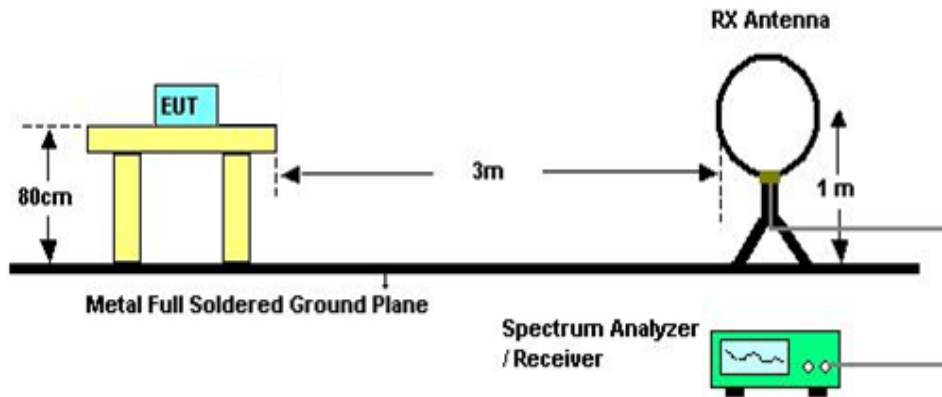
- a. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1GHz)
- b. The measuring distance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

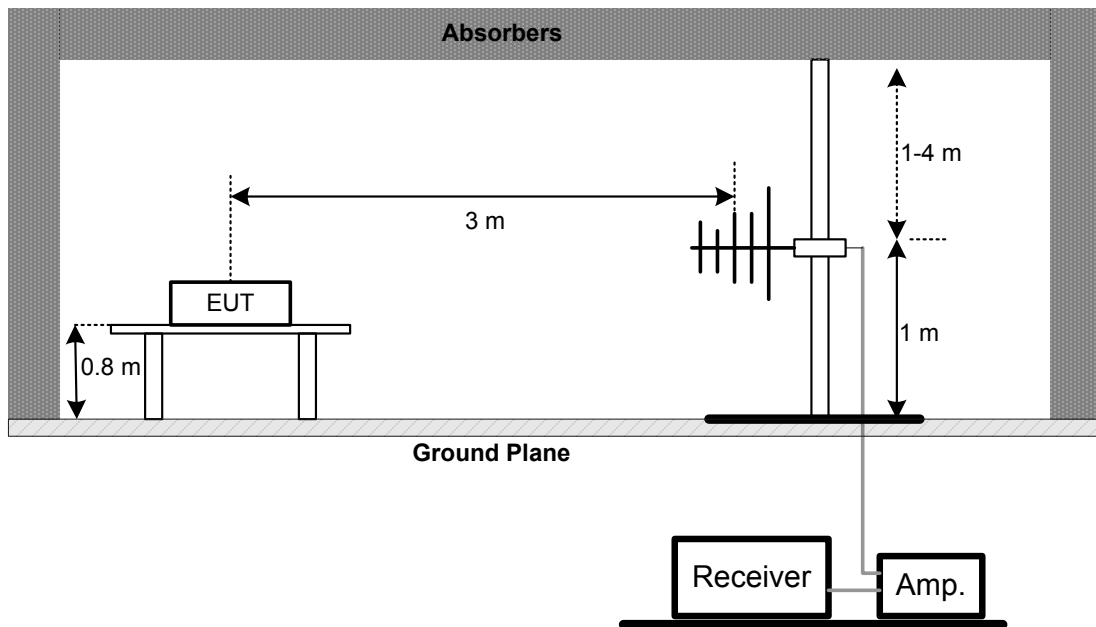
No deviation

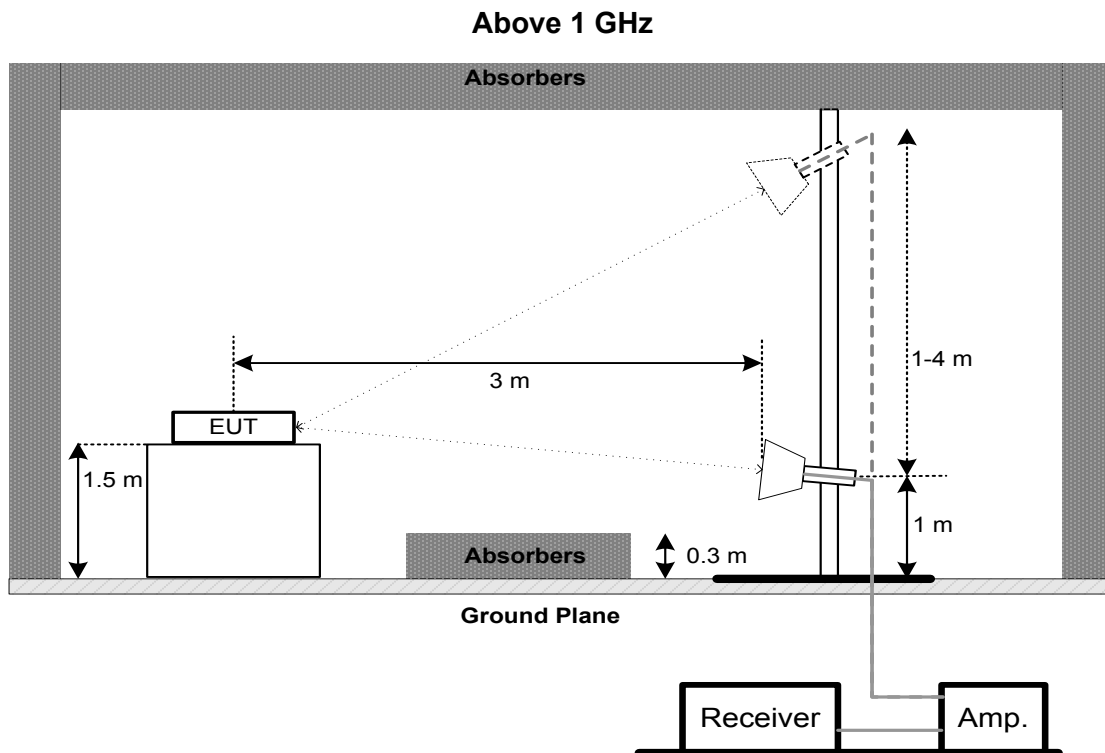
4.4 TEST SETUP

9 kHz to 30 MHz



30 MHz to 1 GHz





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 = $40 \log (\text{specific distance} / \text{test distance})$ (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) 1 MHz (Bandwidth 40 MHz and 80 MHz)
VBW	1 MHz (Bandwidth 20 MHz) 3 MHz (Bandwidth 40 MHz and 80 MHz)
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

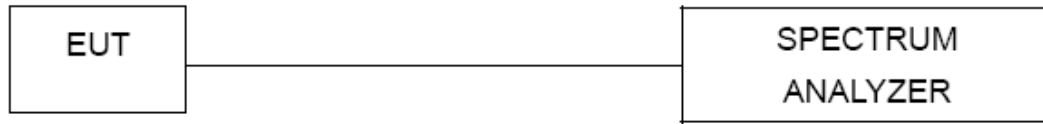
For UNII-3:

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

- c. Measured the spectrum width with power higher than 26 dB / 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:

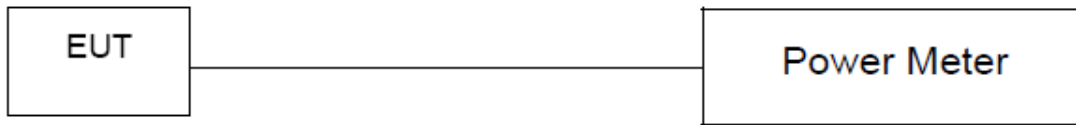
- a. For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

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:

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

Note:

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

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	Specified in the user's manual	5150-5250
			5725-5850

8.2 TEST PROCEDURE

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

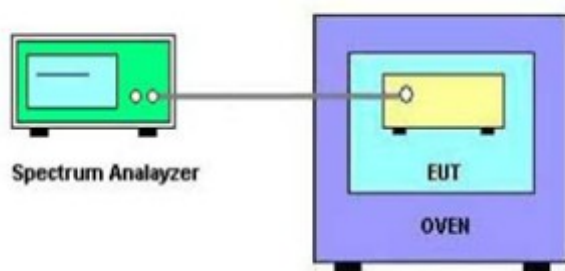
Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	Entire absence of modulation emissions bandwidth
RBW	10 kHz
VBW	10 kHz
Sweep Time	Auto

- The test extreme voltage is to change the primary supply voltage from 85 to 115 percent of the nominal value.
- 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	Mar. 10, 2020
2	LISN	EMCO	3816/2	52765	Mar. 10, 2020
3	50ohm Terminator	SHX	TF5-3	15041305	Mar. 10, 2020
4	Artificial-Mains Network	Schwarzbeck	NSLK 8127	8127685	Mar. 10, 2020
5	TRANSIENT LIMITER	EM	EM-7600	772	Mar. 10, 2020
6	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
7	Cable	N/A	RG223	12m	Mar. 12, 2020

Radiated Emissions - 9 kHz to 30 MHz					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Loop Antenna	EM	EM-6876-1	230	Jan. 15, 2020
2	Cable	N/A	RG 213/U	C-102	May 31, 2020
3	EMI Test Receiver	R&S	ESCI	100895	Mar. 10, 2020
4	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A

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, 2020
2*	Amplifier	HP	8447D	2944A09673	Aug. 11, 2021
3	Receiver	Agilent	N9038A	MY52130039	Aug. 03, 2020
4	Cable	emci	LMR-400(30MHz-1GHz)(8m+5m)	N/A	May 24, 2020
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

Radiated Emissions - Above 1 GHz					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Double Ridged Guide Antenna	ETS	3115	75789	Mar. 09, 2020
2	Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	9170319	Jun. 23, 2020
3	Amplifier	Agilent	8449B	3008A02333	Mar. 10, 2020
4	Microwave Preamp With Adaptor	EMC INSTRUMENT	EMC2654045	980039 & HA01	Mar. 10, 2020
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	mitron	B10-01-01-12M	18072744	Jun. 29, 2020
9	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A

Bandwidth & Power Spectral Density					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP40	100185	Aug. 03, 2020

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

Frequency Stability					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP40	100185	Aug. 03, 2020
2	Precision Oven Tester	Bell	BTH-50C	20170306001	Mar. 10, 2020

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**

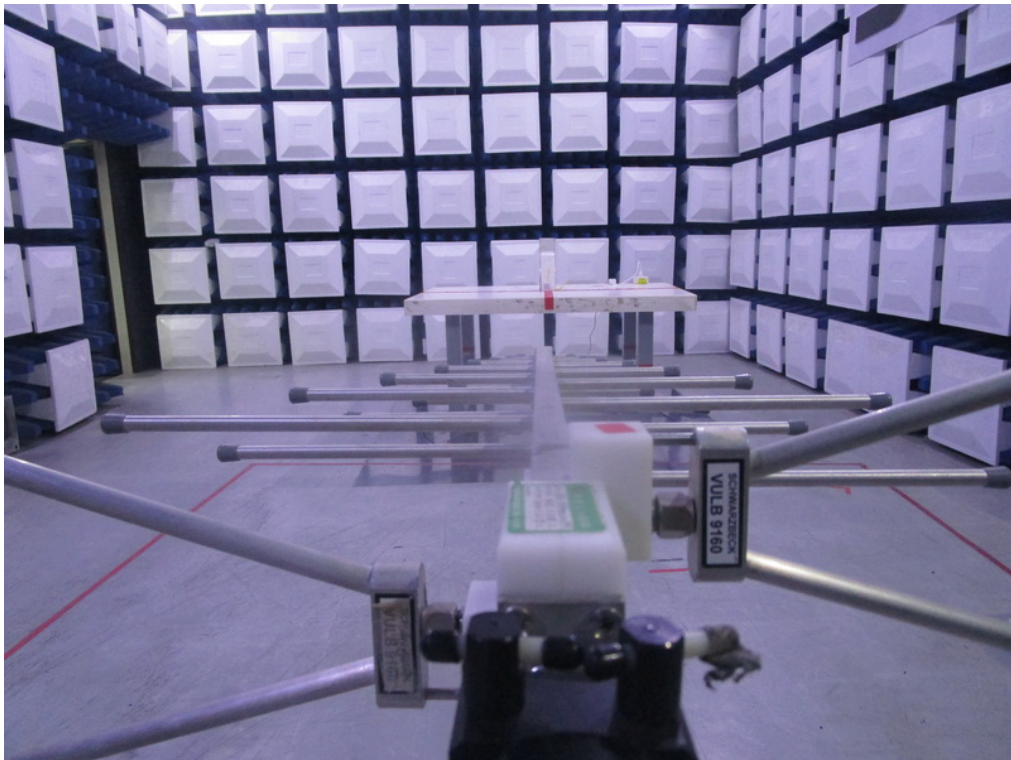
Radiated Emissions Test Photos

9 kHz to 30 MHz



Radiated Emissions Test Photos

30 MHz to 1 GHz

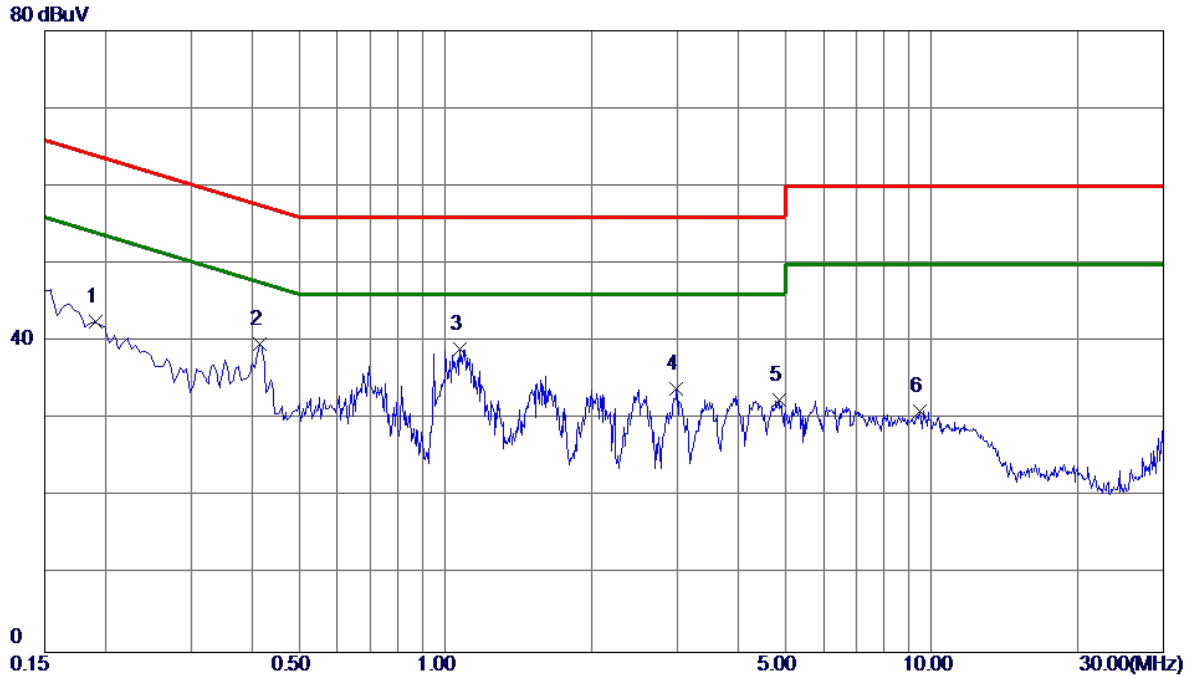


Radiated Emissions Test Photos**Above 1 GHz**

APPENDIX A - AC POWER LINE CONDUCTED EMISSIONS

Test Mode: TX A MODE CHANNEL 48

Line



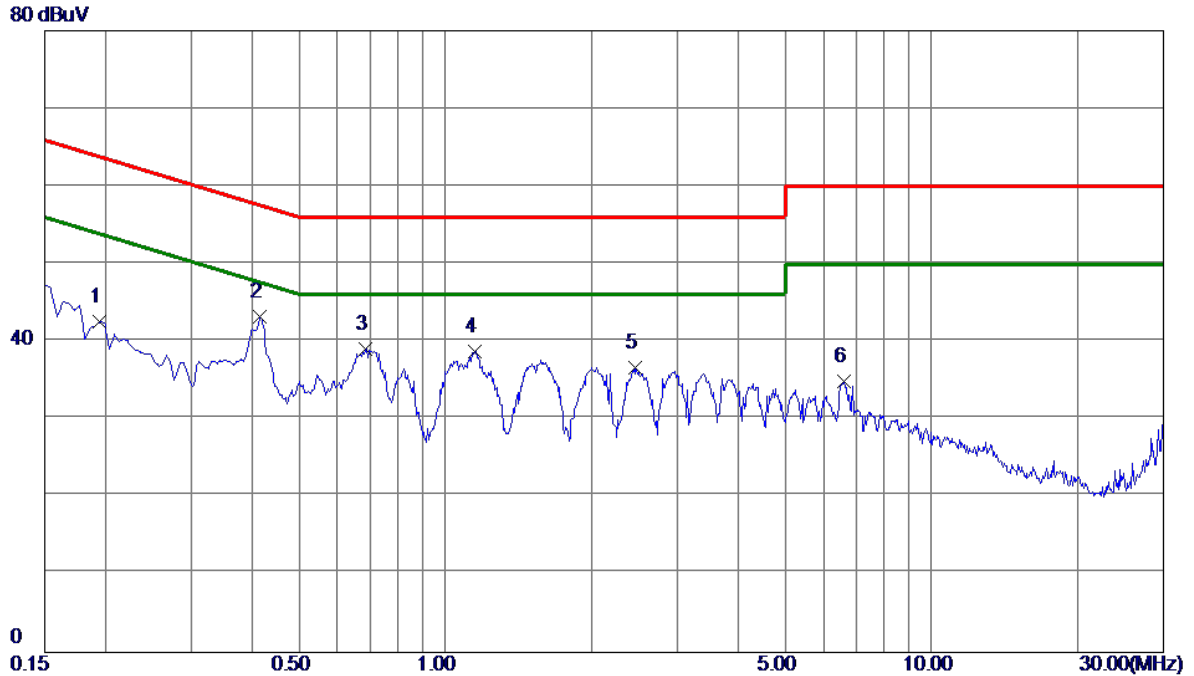
No.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1	0.1905	32.76	9.81	42.57	64.01	-21.44	Peak	
2	0.4155	29.79	9.87	39.66	57.54	-17.88	Peak	
3 *	1.0725	29.05	9.92	38.97	56.00	-17.03	Peak	
4	2.9805	23.84	10.06	33.90	56.00	-22.10	Peak	
5	4.8705	22.35	10.18	32.53	56.00	-23.47	Peak	
6	9.4515	20.63	10.46	31.09	60.00	-28.91	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 A MODE CHANNEL 48

Neutral



No.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1	0.1949	32.65	9.90	42.55	63.83	-21.28	Peak	
2 *	0.4155	33.15	10.01	43.16	57.54	-14.38	Peak	
3	0.6855	29.01	10.07	39.08	56.00	-16.92	Peak	
4	1.1490	28.61	10.13	38.74	56.00	-17.26	Peak	
5	2.4630	26.46	10.21	36.67	56.00	-19.33	Peak	
6	6.6165	24.38	10.55	34.93	60.00	-25.07	Peak	

Note: The test result has included the cable loss.

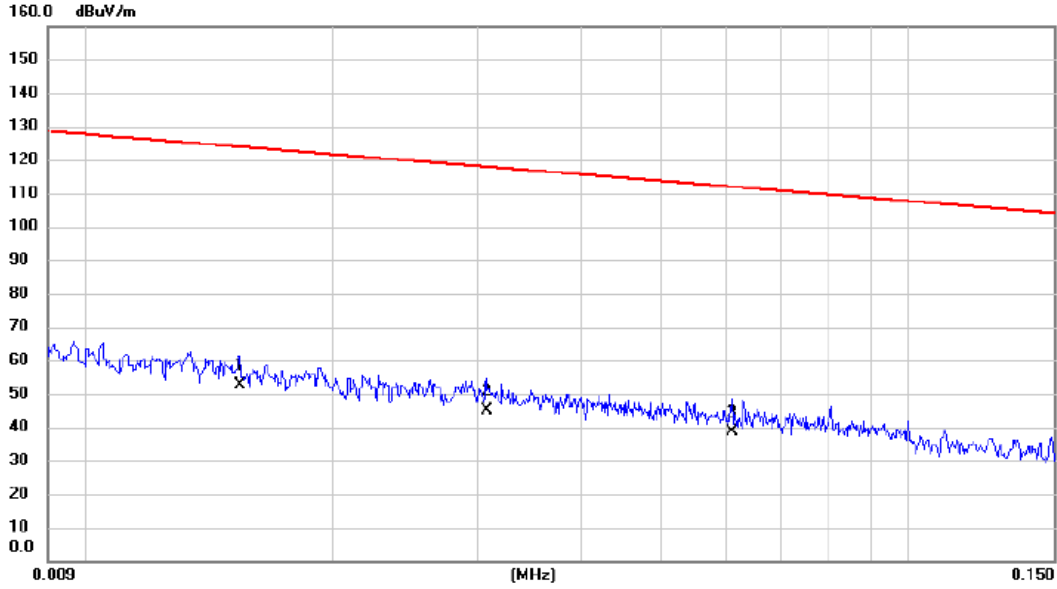
REMARKS:

- (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 A MODE CHANNEL 48

Ant 0°



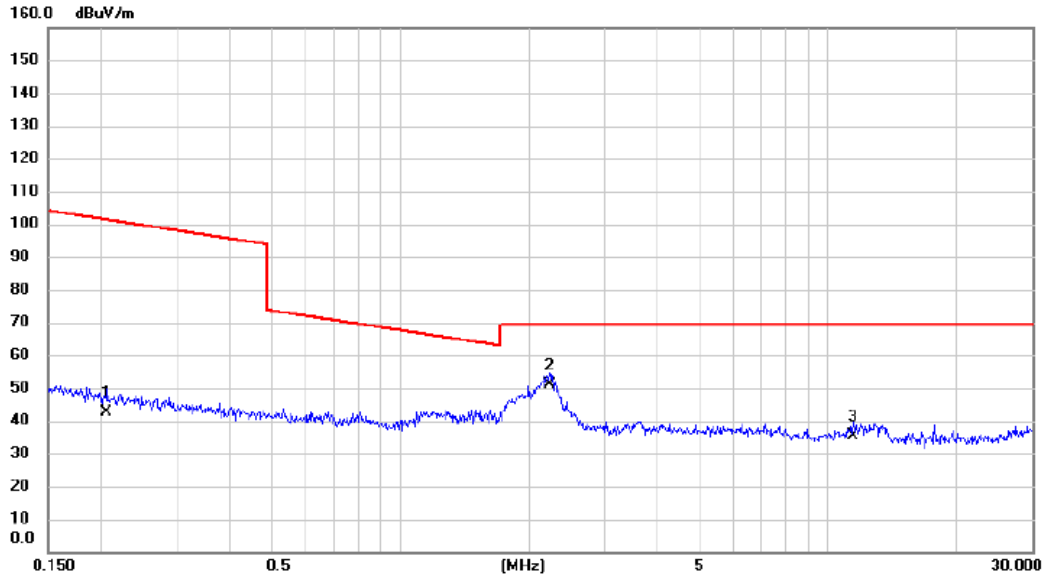
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
		MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB		
1	*	0.015	37.52	15.20	52.72	123.85	-71.13	AVG	
2		0.031	31.28	13.86	45.14	117.83	-72.69	AVG	
3		0.061	24.85	13.75	38.60	111.88	-73.28	AVG	

REMARKS:

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

Test Mode: TX A MODE CHANNEL 48

Ant 0°



No.	Mk.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		0.206	28.90	13.62	42.52	101.32	-58.80	AVG	
2	*	2.237	39.50	11.68	51.18	69.54	-18.36	QP	
3		11.438	23.70	11.61	35.31	69.54	-34.23	QP	

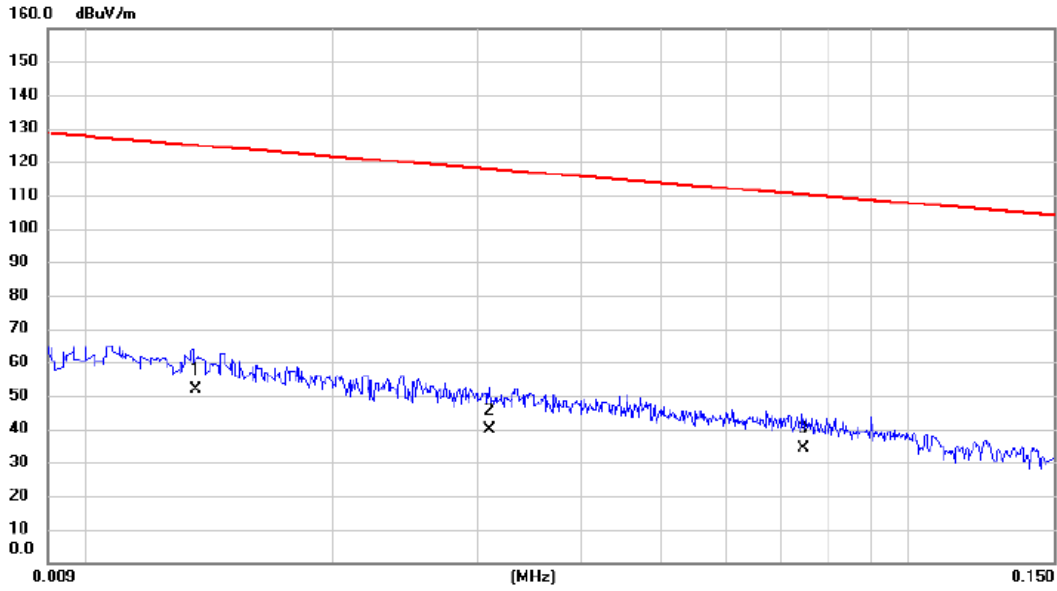
REMARKS:

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

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

Test Mode: TX A MODE CHANNEL 48

Ant 90°



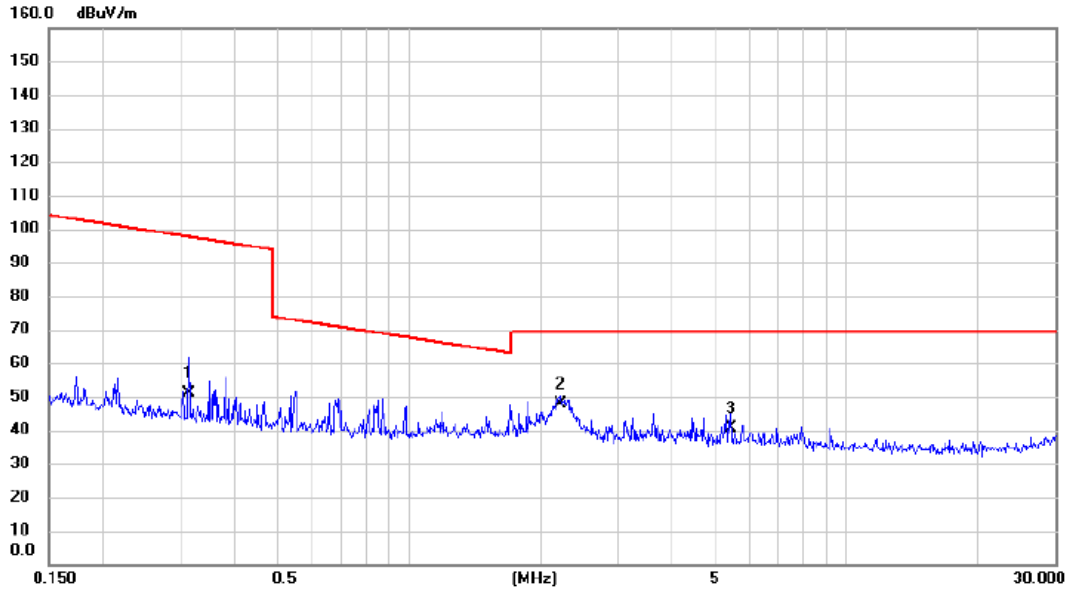
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
		MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB		
1	*	0.014	36.20	15.74	51.94	124.93	-72.99	AVG	
2		0.031	25.80	13.86	39.66	117.78	-78.12	AVG	
3		0.074	20.50	13.54	34.04	110.17	-76.13	AVG	

REMARKS:

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

Test Mode: TX A MODE CHANNEL 48

Ant 90°



No. Mk.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measurement dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	0.313	37.50	13.51	51.01	97.69	-46.68	AVG	
2 *	2.225	36.20	11.68	47.88	69.54	-21.66	QP	
3	5.447	29.70	10.93	40.63	69.54	-28.91	QP	

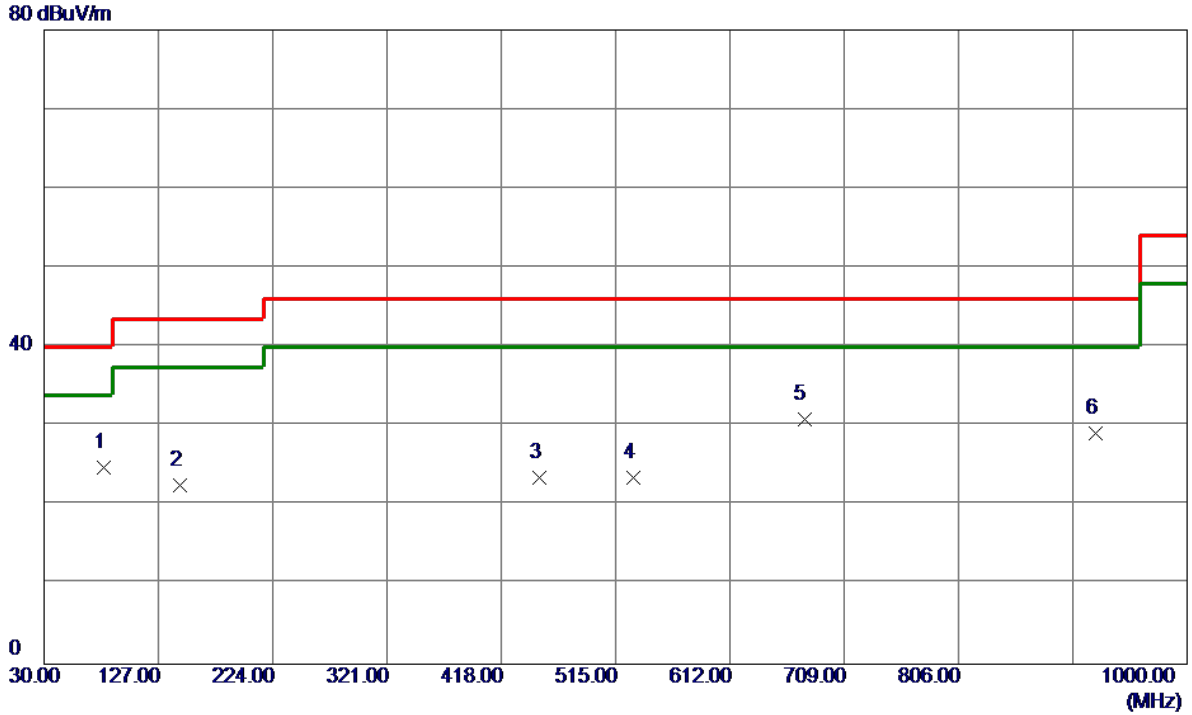
REMARKS:

- (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 A MODE CHANNEL 48

Vertical



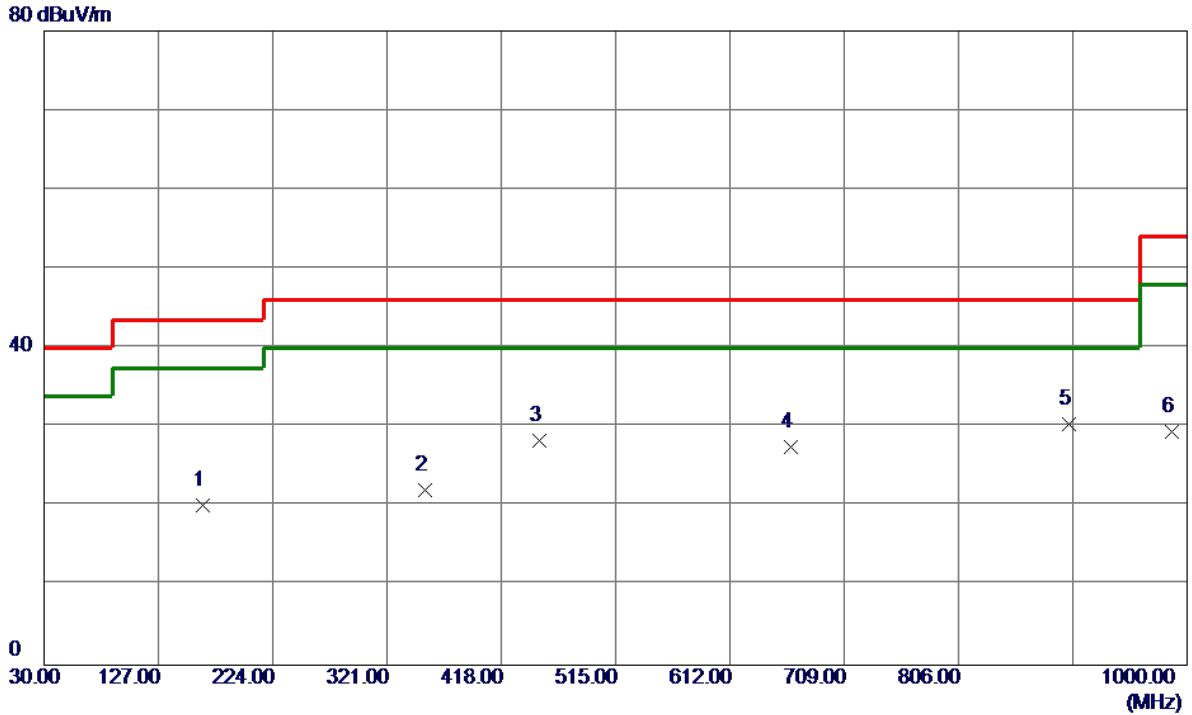
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	80.4400	42.70	-17.94	24.76	40.00	-15.24	Peak	
2	145.4299	35.05	-12.55	22.50	43.50	-21.00	Peak	
3	450.0100	31.56	-8.08	23.48	46.00	-22.52	Peak	
4	530.0349	30.85	-7.40	23.45	46.00	-22.55	Peak	
5 *	675.0500	35.15	-4.34	30.81	46.00	-15.19	Peak	
6	921.9150	30.60	-1.42	29.18	46.00	-16.82	Peak	

REMARKS:

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

Test Mode: TX A MODE CHANNEL 48

Horizontal



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	164.3450	31.78	-11.62	20.16	43.50	-23.34	Peak	
2	353.4950	32.63	-10.58	22.05	46.00	-23.95	Peak	
3	450.0100	36.44	-8.08	28.36	46.00	-17.64	Peak	
4	663.8950	31.99	-4.49	27.50	46.00	-18.50	Peak	
5 *	900.0900	32.33	-1.92	30.41	46.00	-15.59	Peak	
6	987.3900	29.60	-0.14	29.46	54.00	-24.54	Peak	

REMARKS:

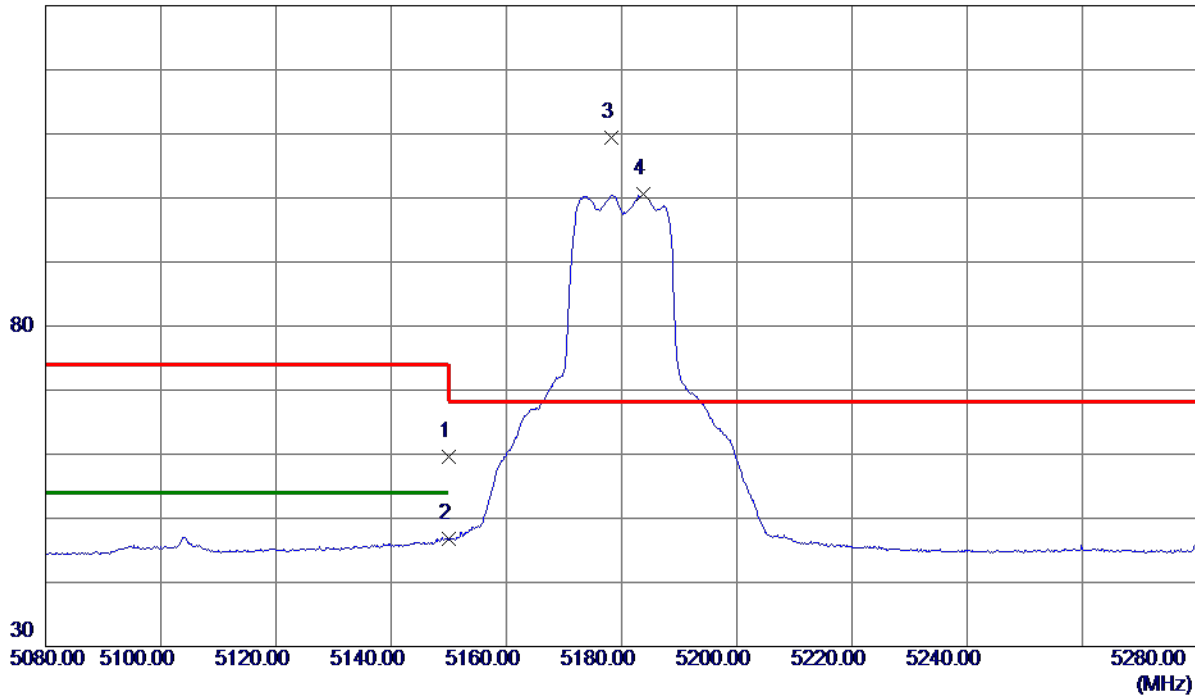
- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

APPENDIX D - RADIATED EMISSION - ABOVE 1000 MHZ

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

Vertical

130 dBuV/m



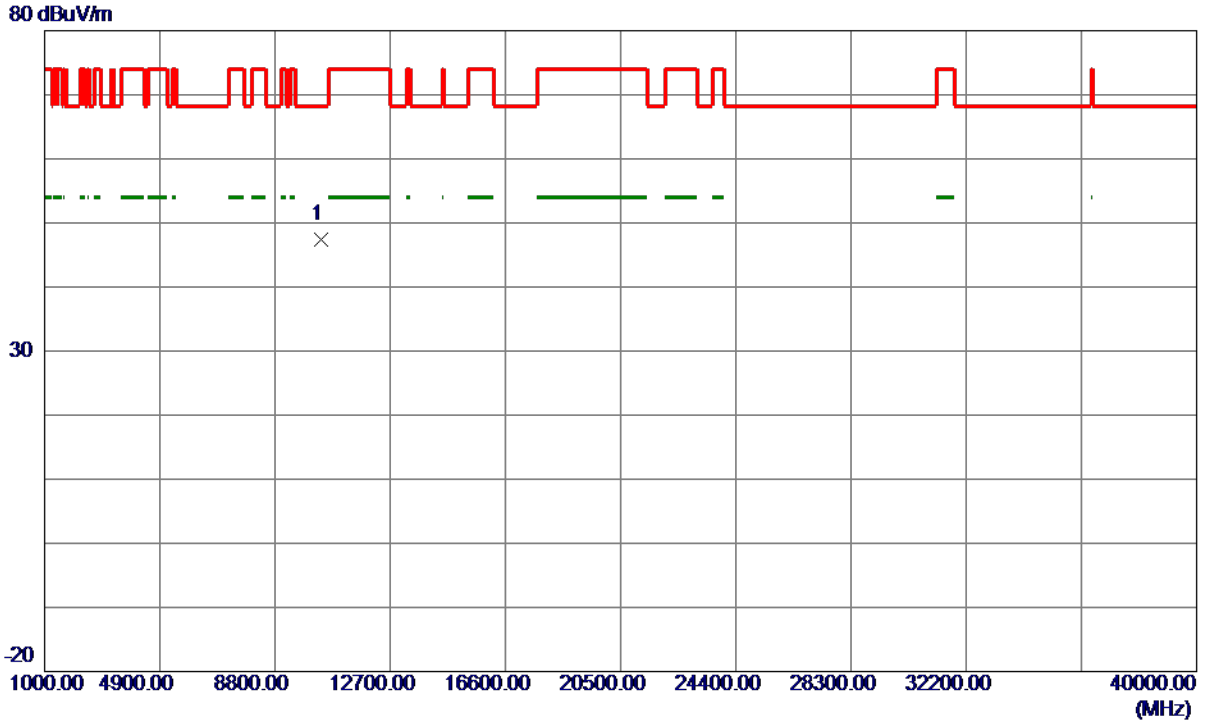
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	5150.0000	44.51	15.02	59.53	74.00	-14.47	Peak	
2	5150.0000	31.75	15.02	46.77	54.00	-7.23	AVG	
3 *	5178.2000	94.44	15.03	109.47	68.30	41.17	Peak	No Limit
4	5183.8000	85.57	15.04	100.61	999.00	-898.39	AVG	No Limit

REMARKS:

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

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

Vertical



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	10360.0000	38.71	8.77	47.48	68.30	-20.82	Peak	

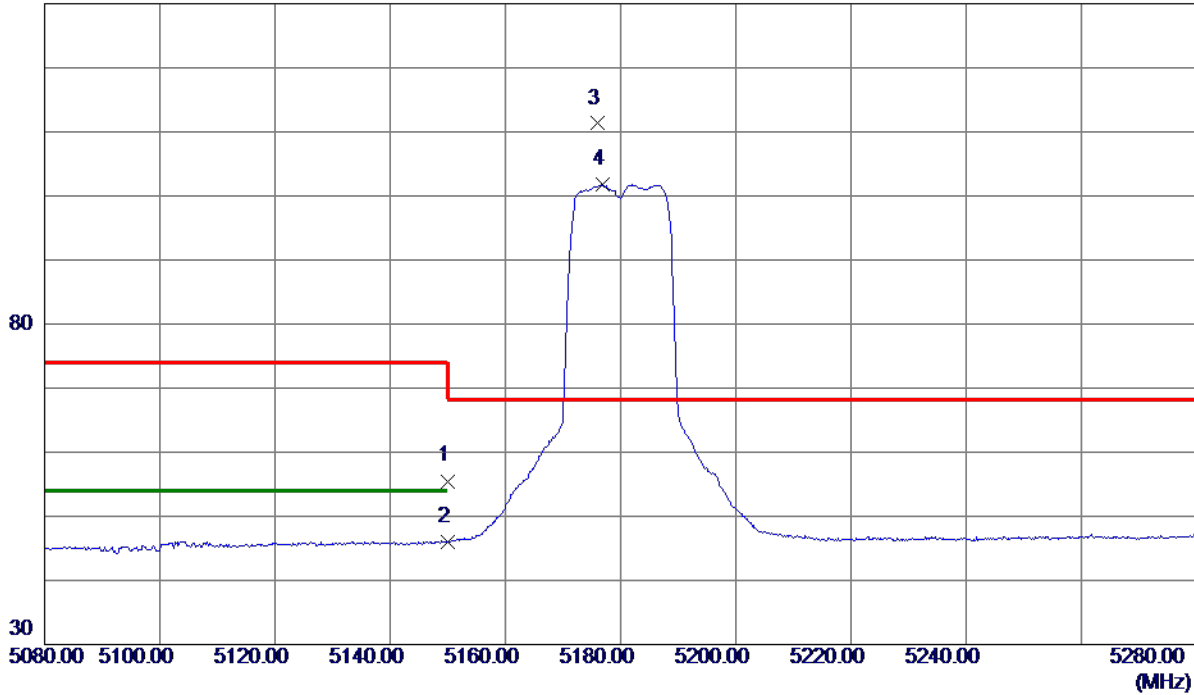
REMARKS:

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

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

Horizontal

130 dBuV/m



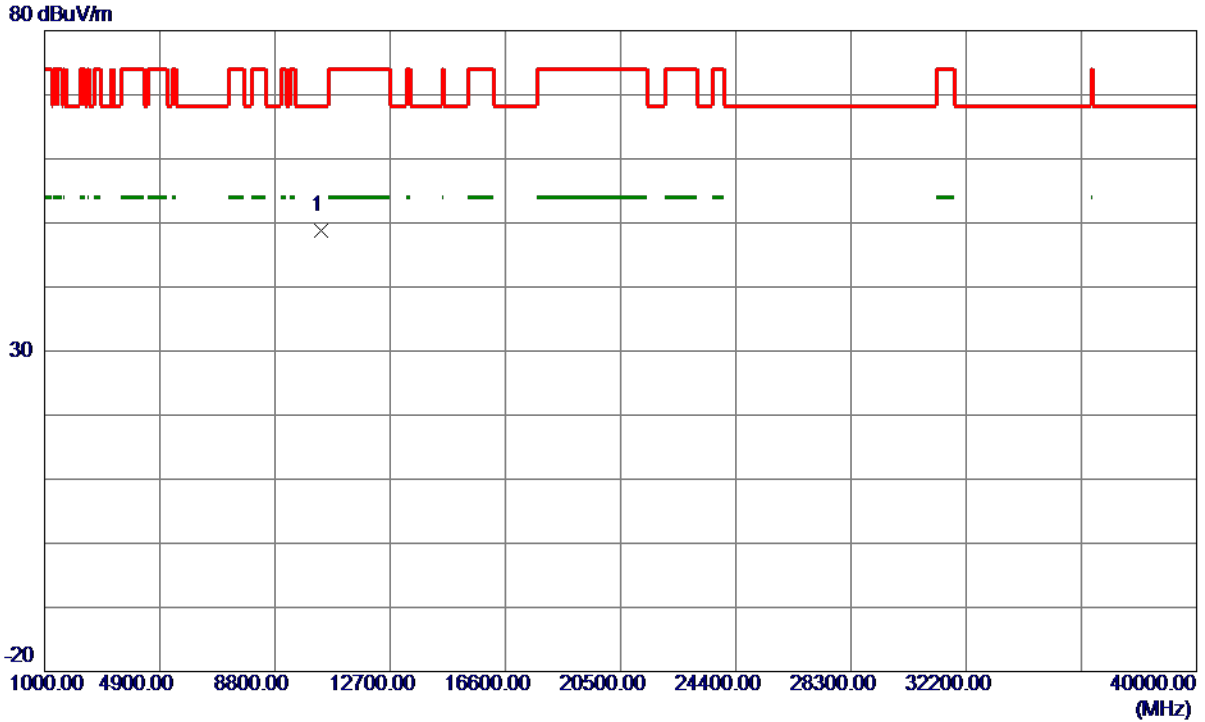
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	5150.0000	40.48	15.02	55.50	74.00	-18.50	Peak	
2	5150.0000	30.89	15.02	45.91	54.00	-8.09	AVG	
3 *	5176.1000	96.27	15.03	111.30	68.30	43.00	Peak	No Limit
4	5176.9000	86.73	15.03	101.76	999.00	-897.24	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 5180 MHz

Horizontal



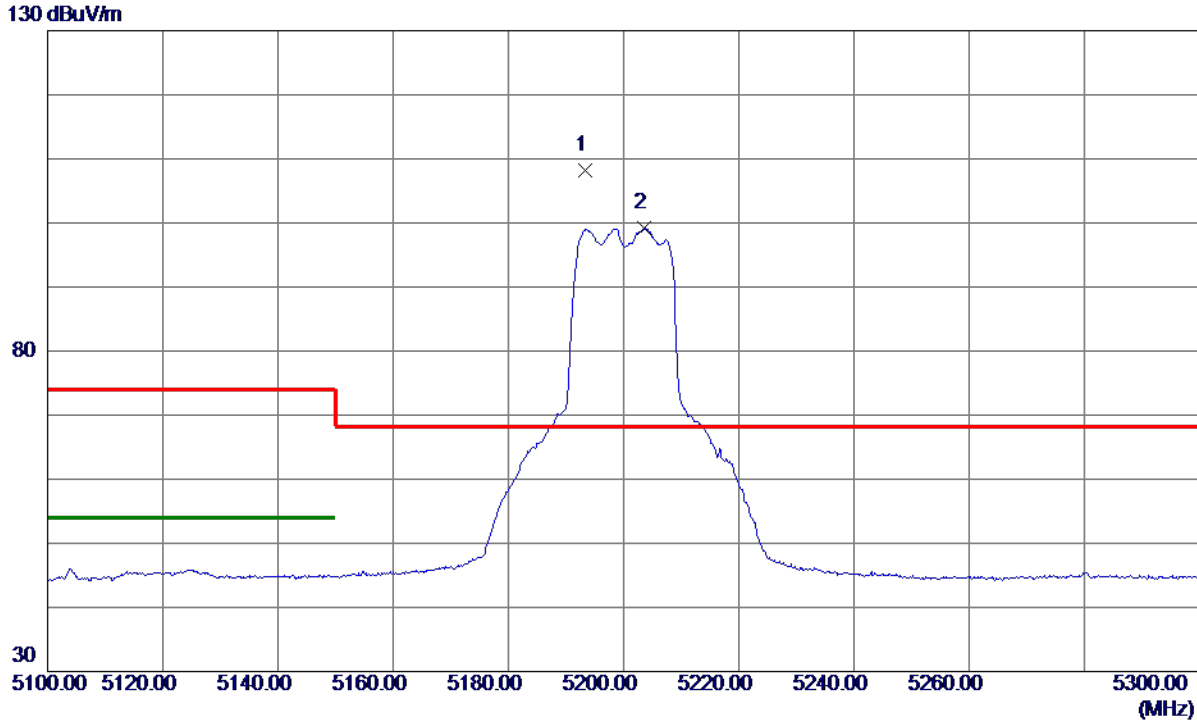
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	10360.0000	39.94	8.77	48.71	68.30	-19.59	Peak	

REMARKS:

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

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

Vertical



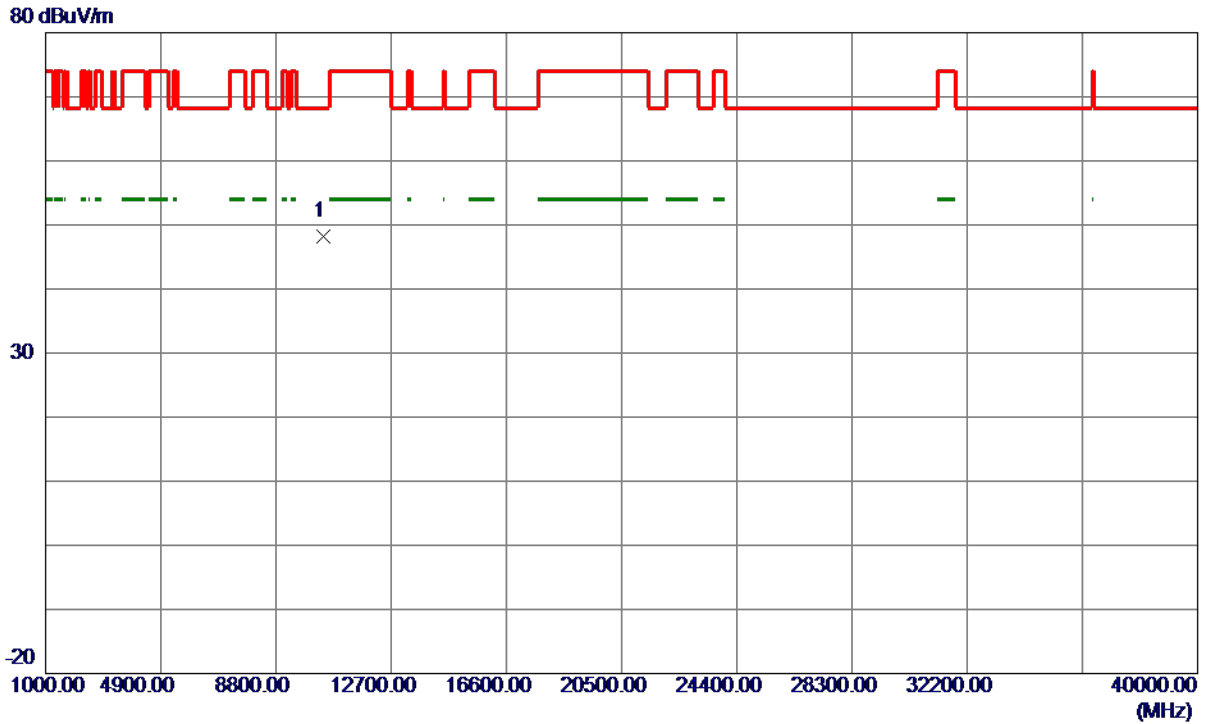
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	5193.4000	93.22	15.05	108.27	68.30	39.97	Peak	No Limit
2	5203.6000	84.21	15.05	99.26	999.00	-899.74	AVG	No Limit

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 5200 MHz

Vertical



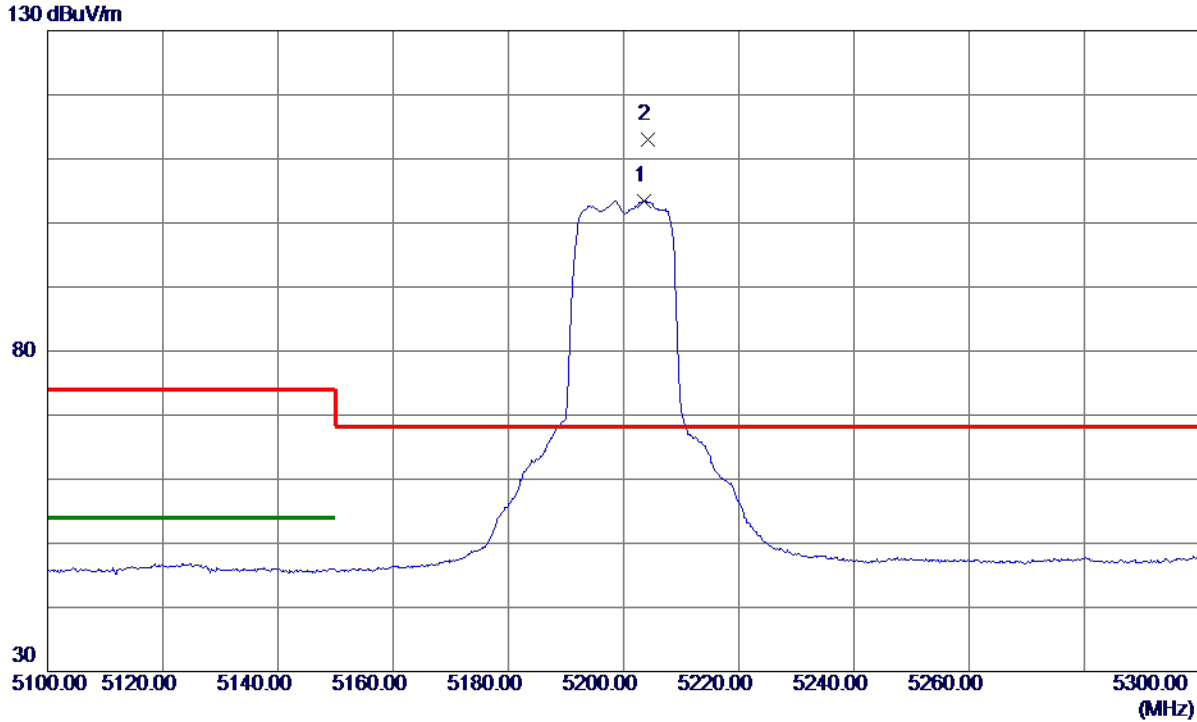
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	10400.0000	39.42	8.85	48.27	68.30	-20.03	Peak	

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

Horizontal



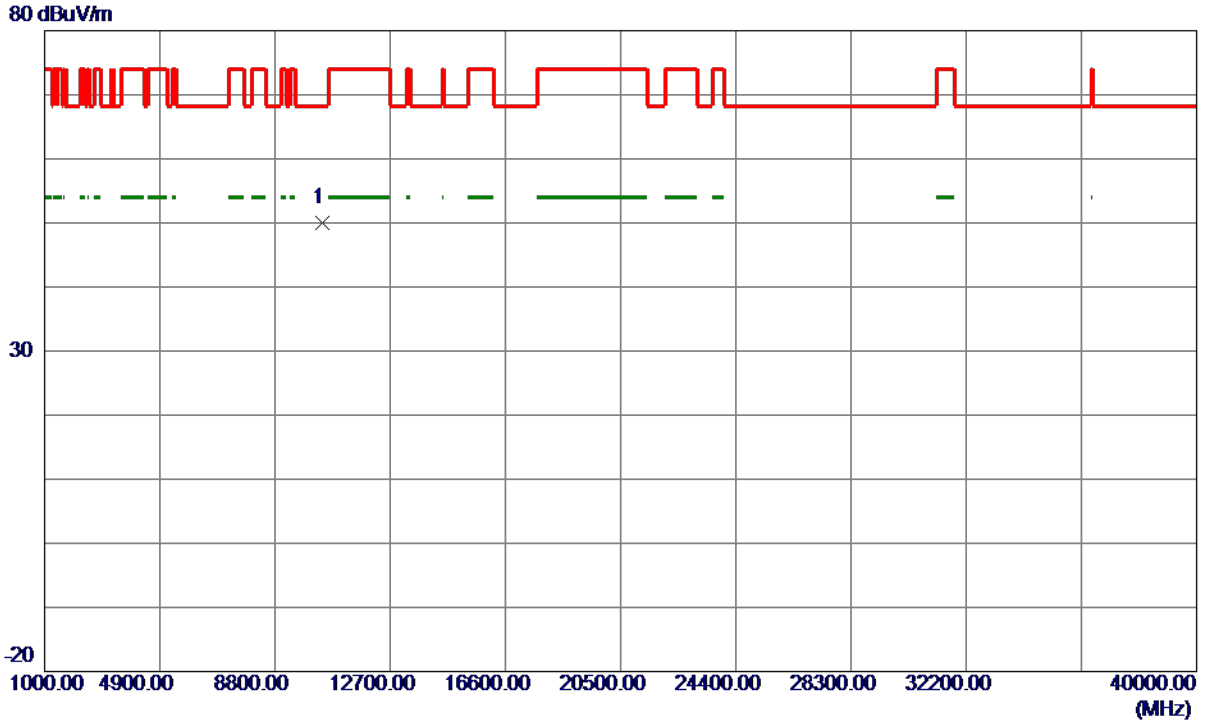
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	5203.6000	88.38	15.05	103.43	999.00	-895.57	AVG	No Limit
2 *	5204.3000	97.95	15.05	113.00	68.30	44.70	Peak	No Limit

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

Horizontal



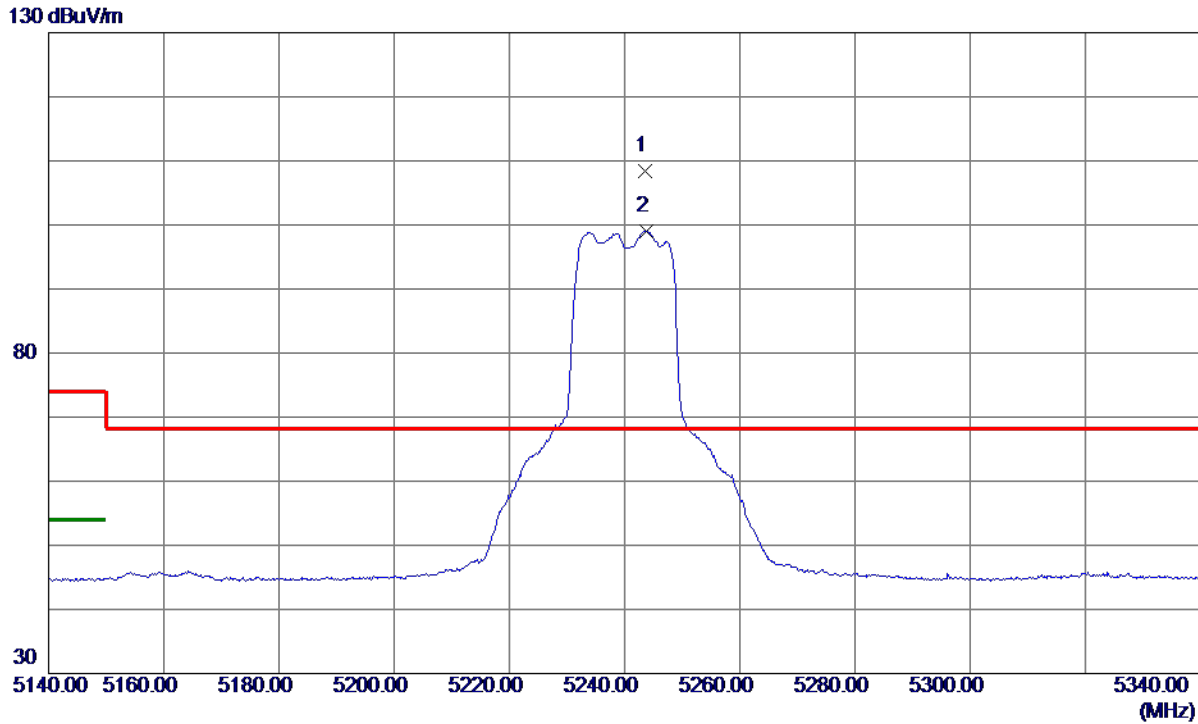
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	10400.0000	41.16	8.85	50.01	68.30	-18.29	Peak	

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



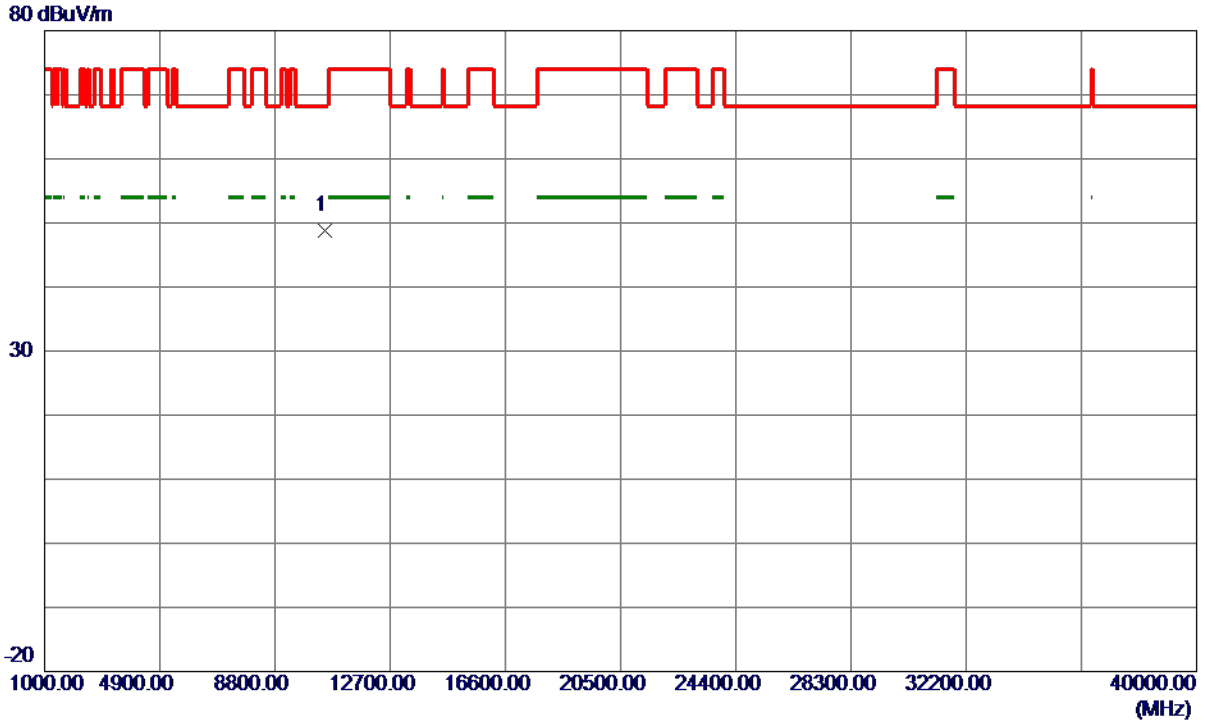
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	5243.5000	93.35	15.08	108.43	68.30	40.13	Peak	No Limit
2	5243.8000	83.97	15.08	99.05	999.00	-899.95	AVG	No Limit

REMARKS:

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

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

Vertical



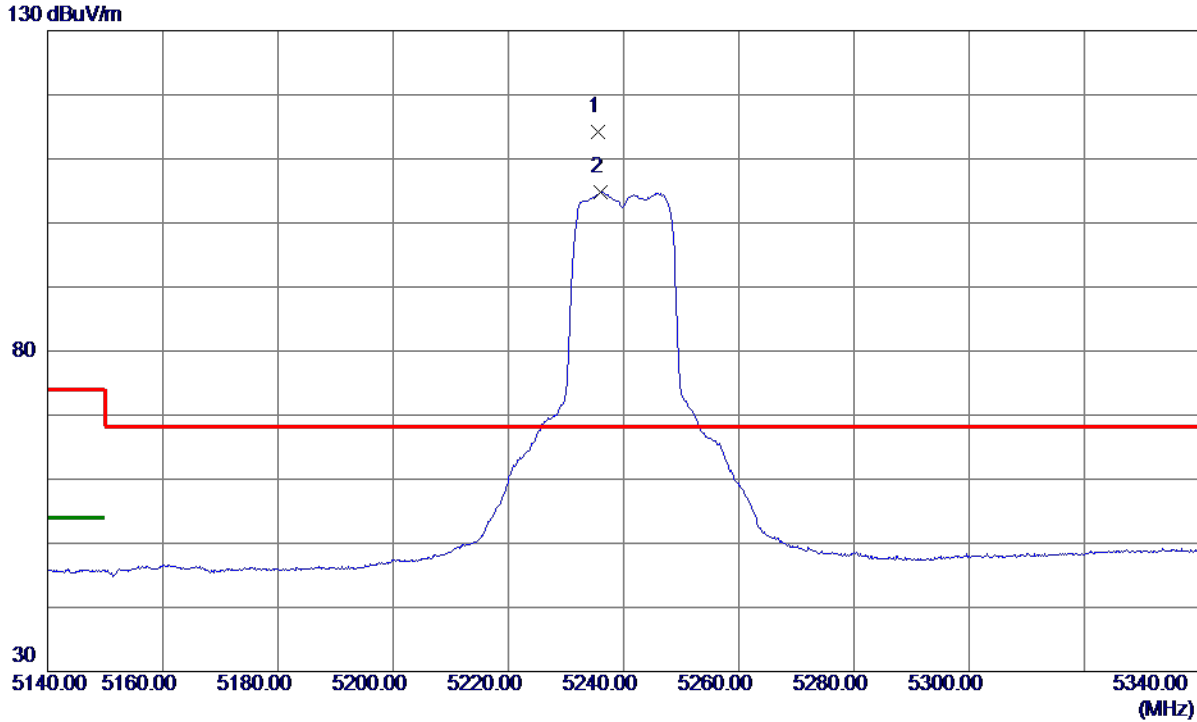
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	10480.0000	39.84	9.02	48.86	68.30	-19.44	Peak	

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

Horizontal



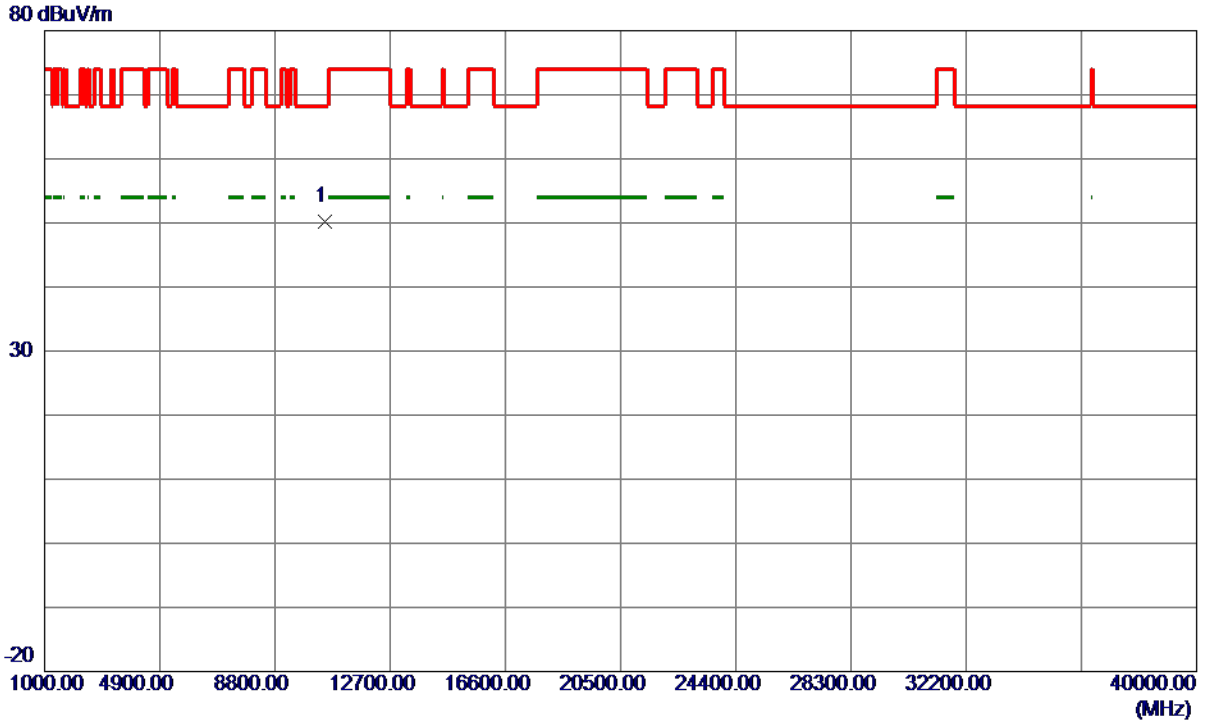
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	5235.6000	99.08	15.07	114.15	68.30	45.85	Peak	No Limit
2	5236.0000	89.80	15.08	104.88	999.00	-894.12	AVG	No Limit

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

Horizontal



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	10480.0000	41.23	9.02	50.25	68.30	-18.05	Peak	

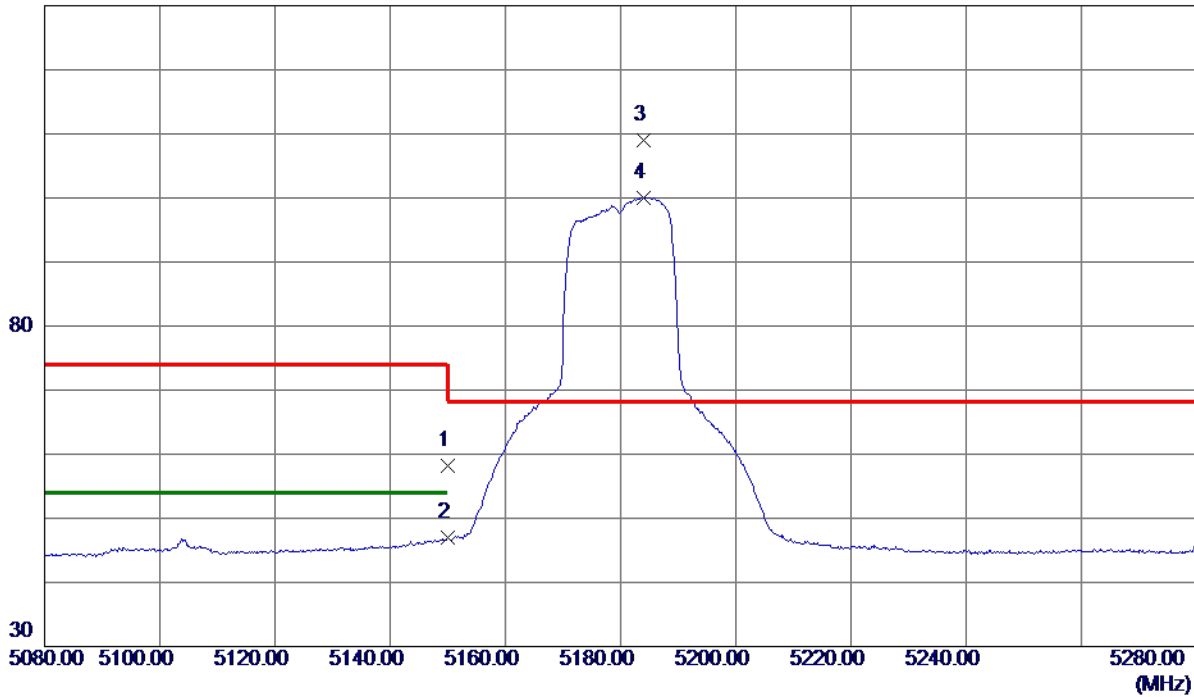
REMARKS:

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

Orthogonal Axis	X
Test Mode	UNII-1_TX N (HT20) Mode 5180 MHz

Vertical

130 dBuV/m



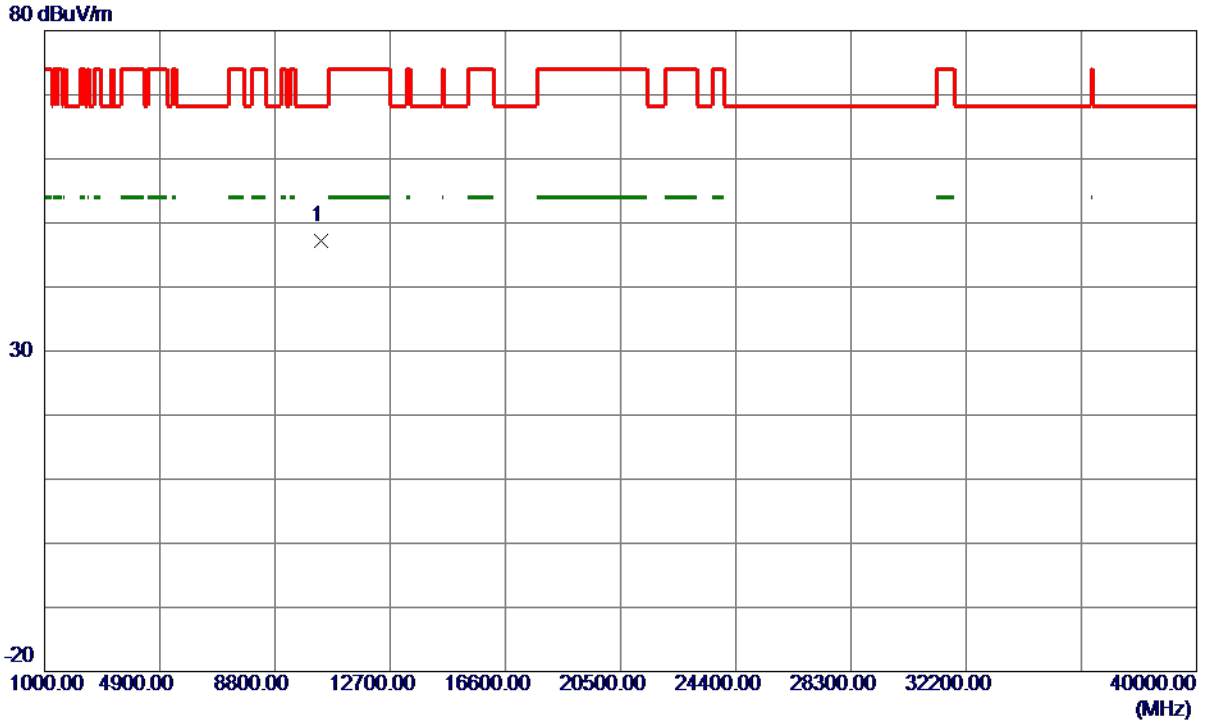
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	5150.0000	43.15	15.02	58.17	74.00	-15.83	Peak	
2	5150.0000	31.90	15.02	46.92	54.00	-7.08	AVG	
3 *	5183.9000	93.97	15.04	109.01	68.30	40.71	Peak	No Limit
4	5184.1000	85.02	15.04	100.06	999.00	-898.94	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 N (HT20) Mode 5180 MHz

Vertical



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	10360.0000	38.43	8.77	47.20	68.30	-21.10	Peak	

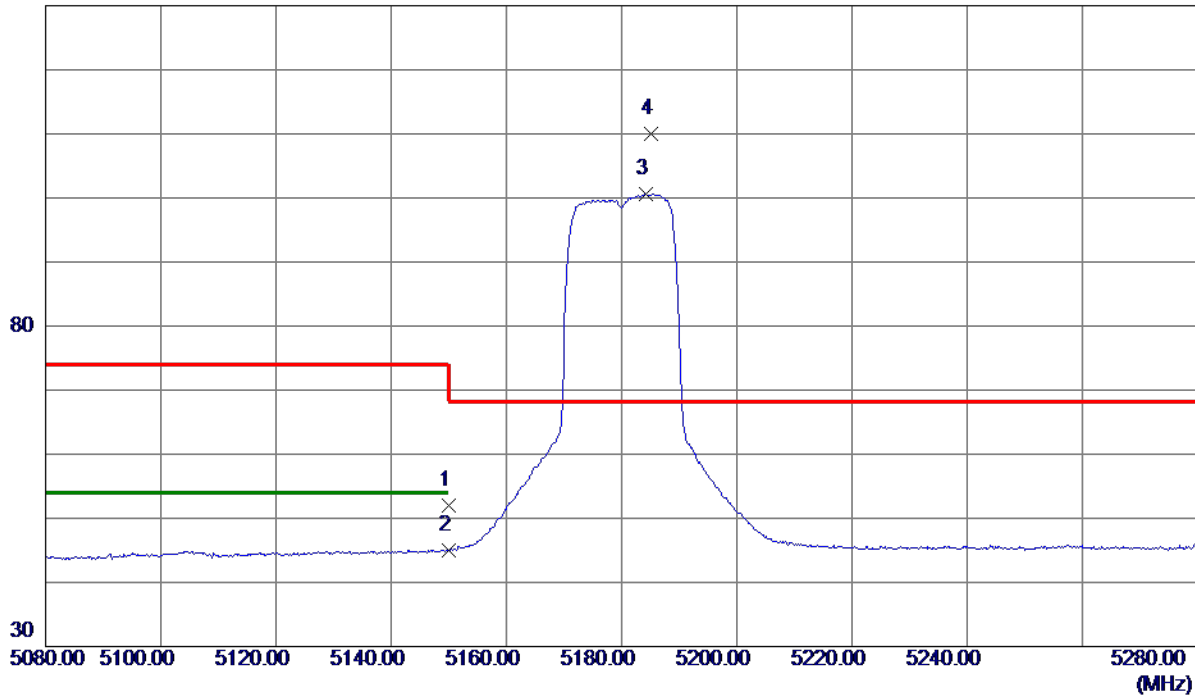
REMARKS:

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

Orthogonal Axis	X
Test Mode	UNII-1_TX N (HT20) Mode 5180 MHz

Horizontal

130 dBuV/m



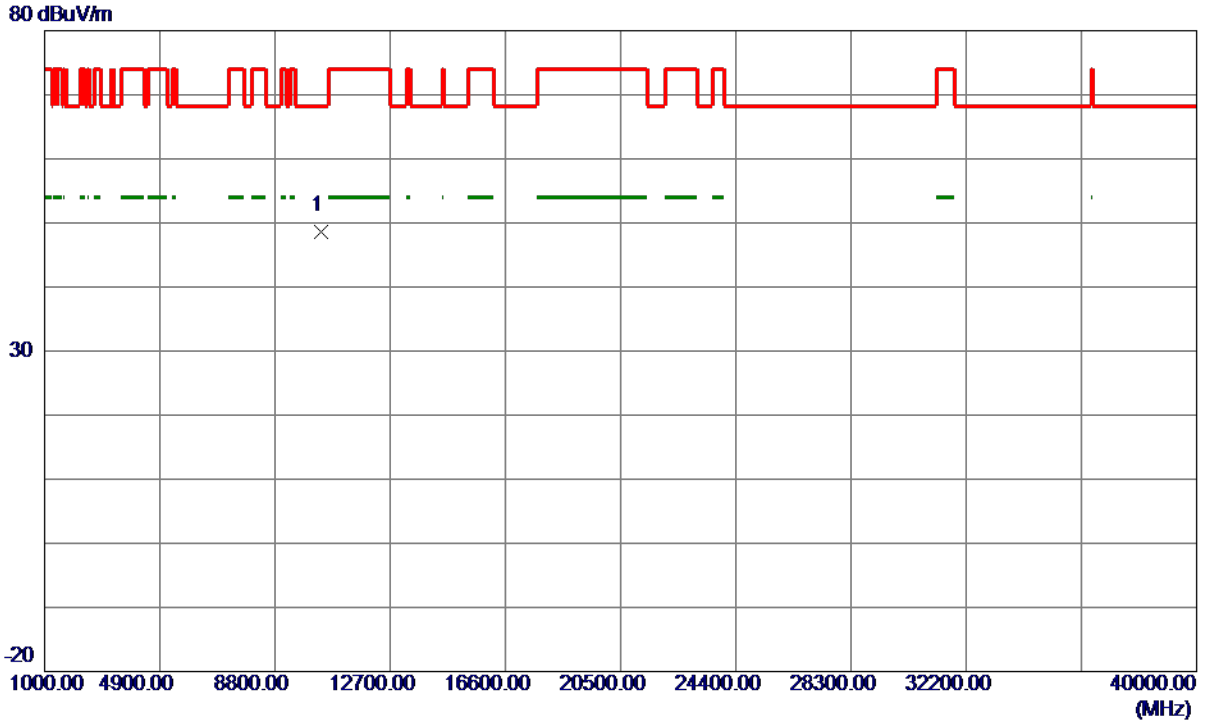
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	5150.0000	37.03	15.02	52.05	74.00	-21.95	Peak	
2	5150.0000	30.07	15.02	45.09	54.00	-8.91	AVG	
3	5184.3000	85.53	15.04	100.57	999.00	-898.43	AVG	No Limit
4 *	5185.1000	94.87	15.04	109.91	68.30	41.61	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 N (HT20) Mode 5180 MHz

Horizontal



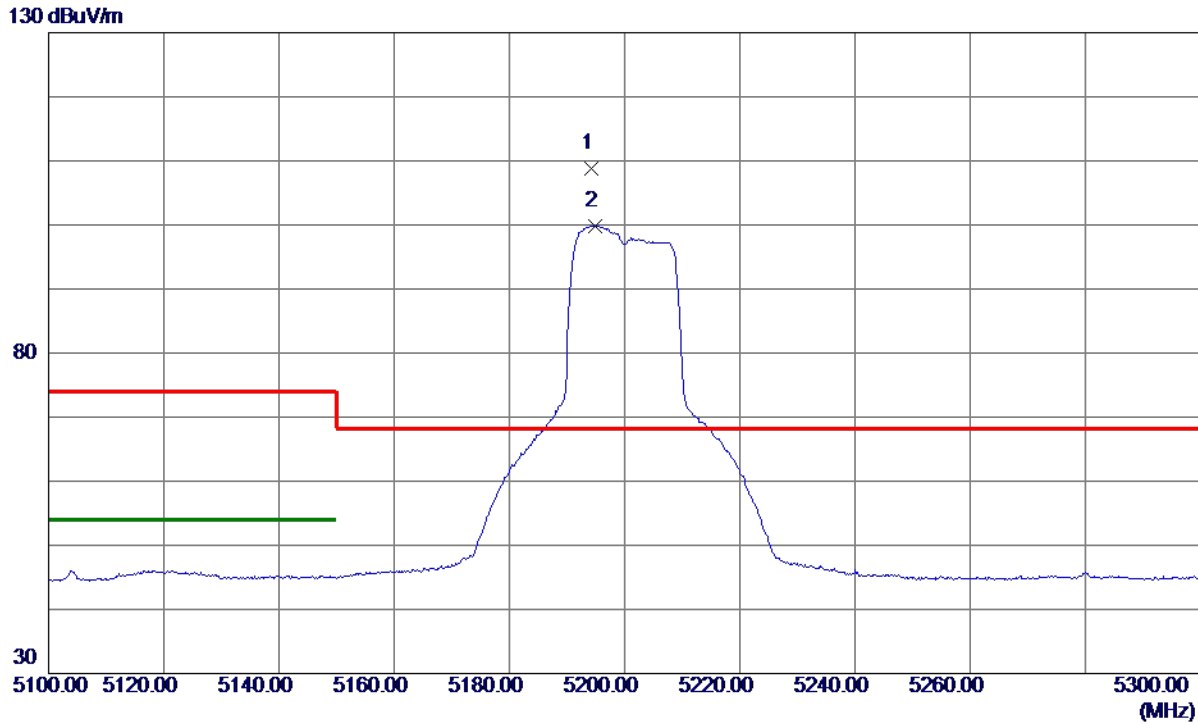
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	10360.0000	39.93	8.77	48.70	68.30	-19.60	Peak	

REMARKS:

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

Orthogonal Axis	X
Test Mode	UNII-1_TX N (HT20) Mode 5200 MHz

Vertical



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	5194.2000	93.80	15.05	108.85	68.30	40.55	Peak	No Limit
2	5194.8000	84.71	15.05	99.76	999.00	-899.24	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 N (HT20) Mode 5200 MHz

Vertical



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	10400.0000	39.34	8.85	48.19	68.30	-20.11	Peak	

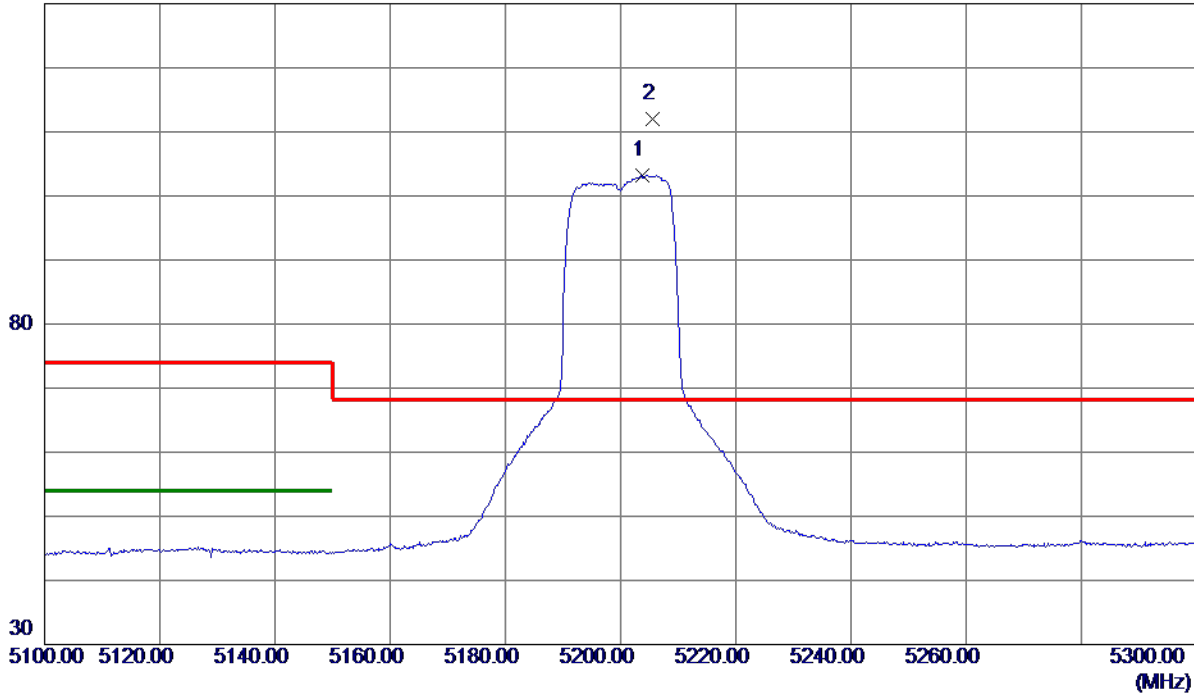
REMARKS:

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

Orthogonal Axis	X
Test Mode	UNII-1_TX N (HT20) Mode 5200 MHz

Horizontal

130 dBuV/m



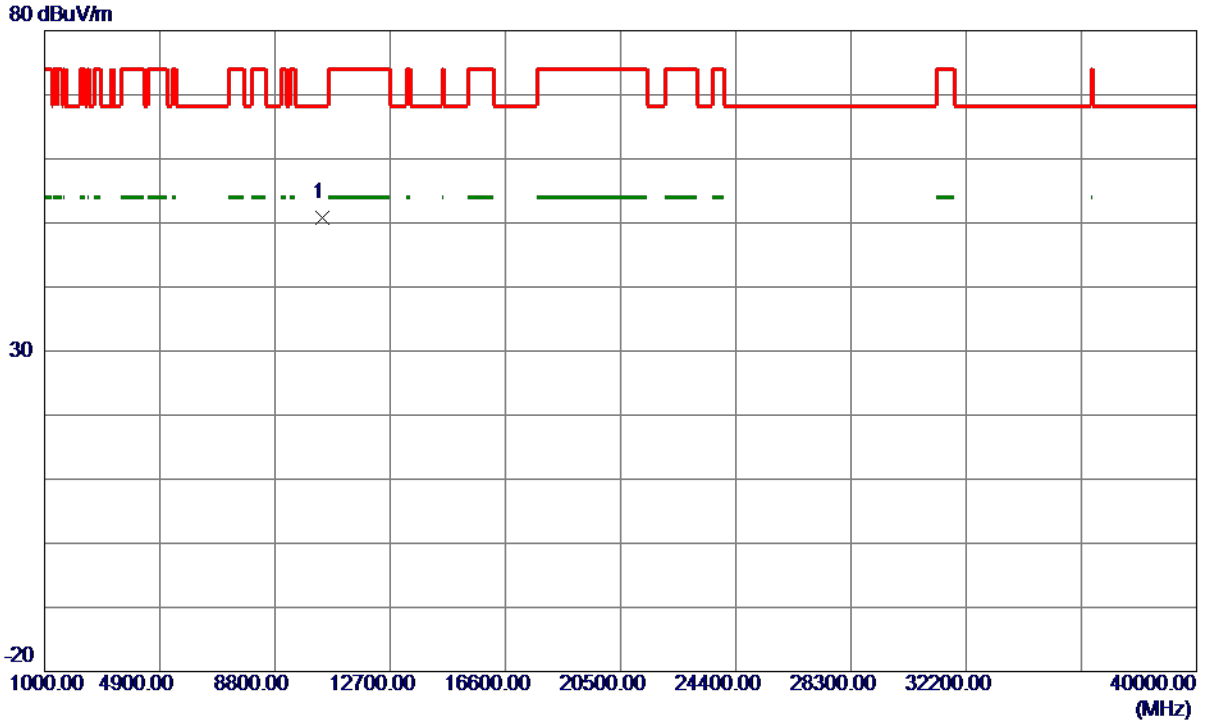
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	5203.7000	88.23	15.05	103.28	999.00	-895.72	AVG	No Limit
2 *	5205.6000	96.89	15.05	111.94	68.30	43.64	Peak	No Limit

REMARKS:

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

Orthogonal Axis	X
Test Mode	UNII-1_TX N (HT20) Mode 5200 MHz

Horizontal



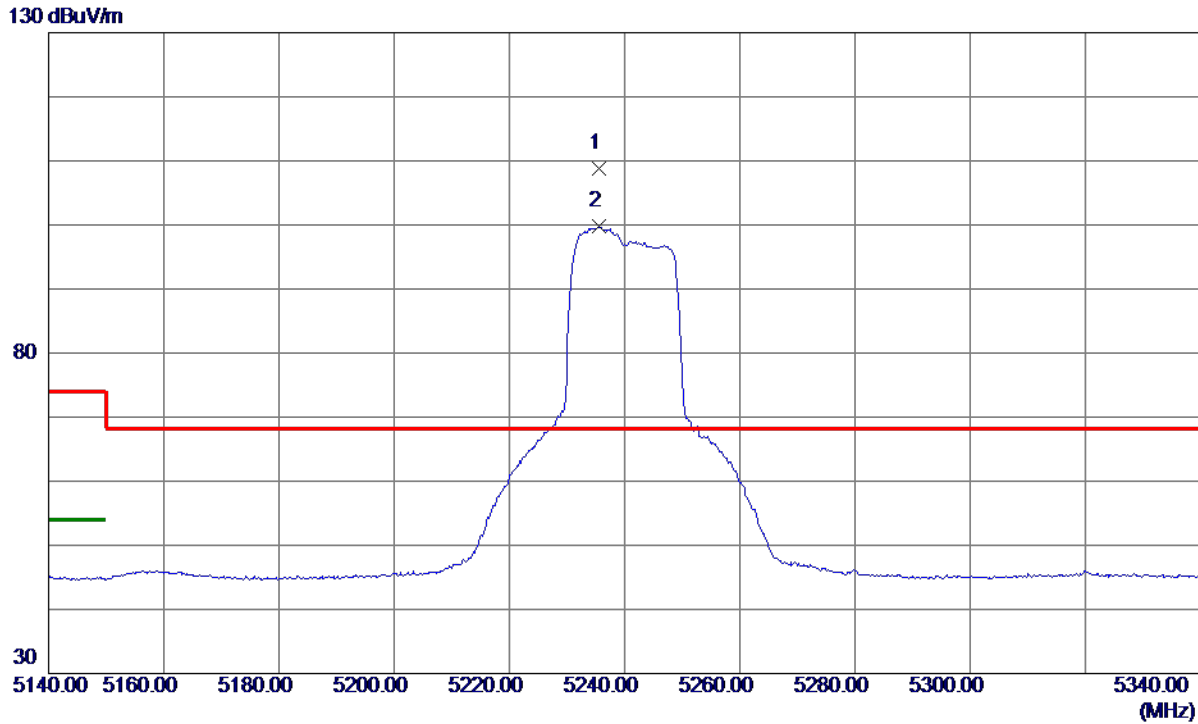
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	10400.0000	41.86	8.85	50.71	68.30	-17.59	Peak	

REMARKS:

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

Orthogonal Axis	X
Test Mode	UNII-1_TX N (HT20) Mode 5240 MHz

Vertical



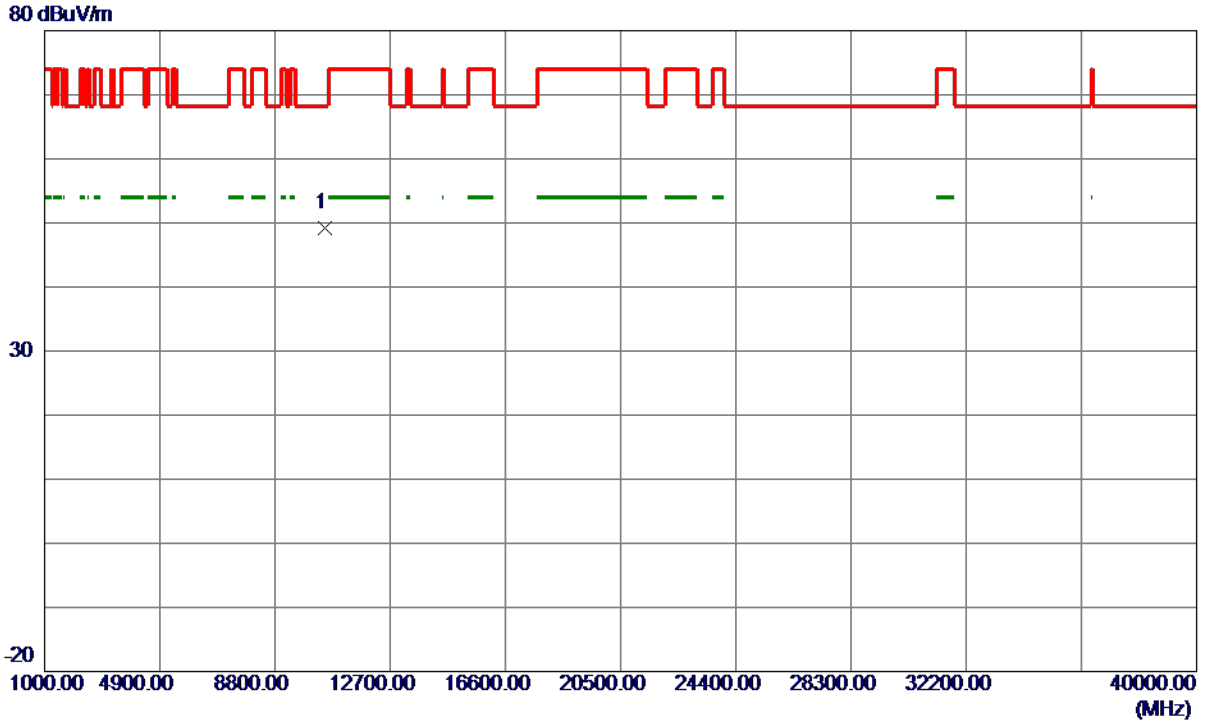
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	5235.5000	93.74	15.07	108.81	68.30	40.51	Peak	No Limit
2	5235.5000	84.78	15.07	99.85	999.00	-899.15	AVG	No Limit

REMARKS:

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

Orthogonal Axis	X
Test Mode	UNII-1_TX N (HT20) Mode 5240 MHz

Vertical



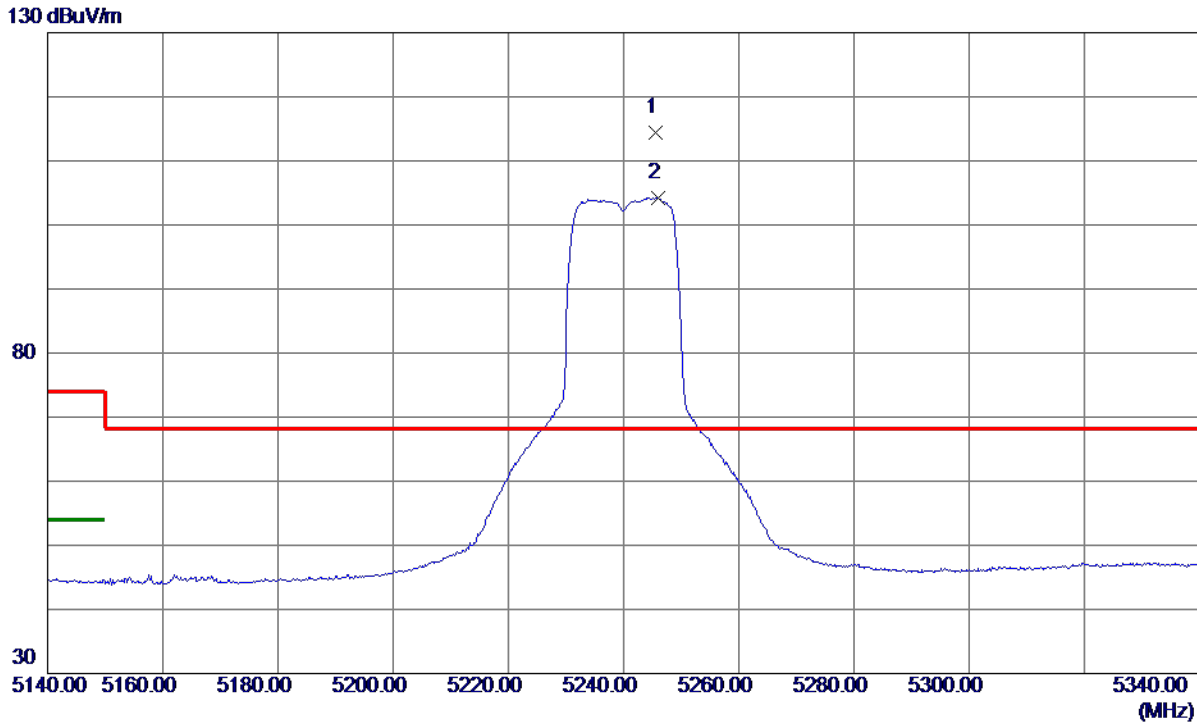
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	10480.0000	40.10	9.02	49.12	68.30	-19.18	Peak	

REMARKS:

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

Orthogonal Axis	X
Test Mode	UNII-1_TX N (HT20) Mode 5240 MHz

Horizontal



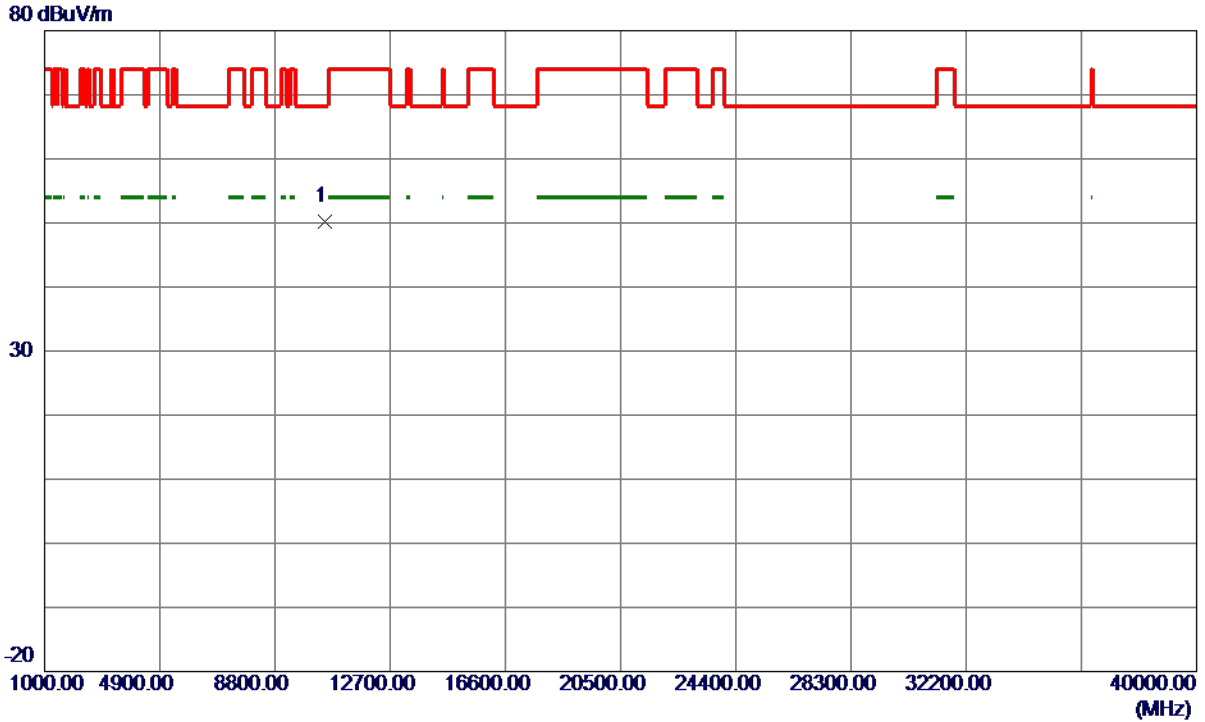
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	5245.6000	99.29	15.08	114.37	68.30	46.07	Peak	No Limit
2	5246.0000	89.19	15.08	104.27	999.00	-894.73	AVG	No Limit

REMARKS:

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

Orthogonal Axis	X
Test Mode	UNII-1_TX N (HT20) Mode 5240 MHz

Horizontal



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	10480.0000	41.20	9.02	50.22	68.30	-18.08	Peak	

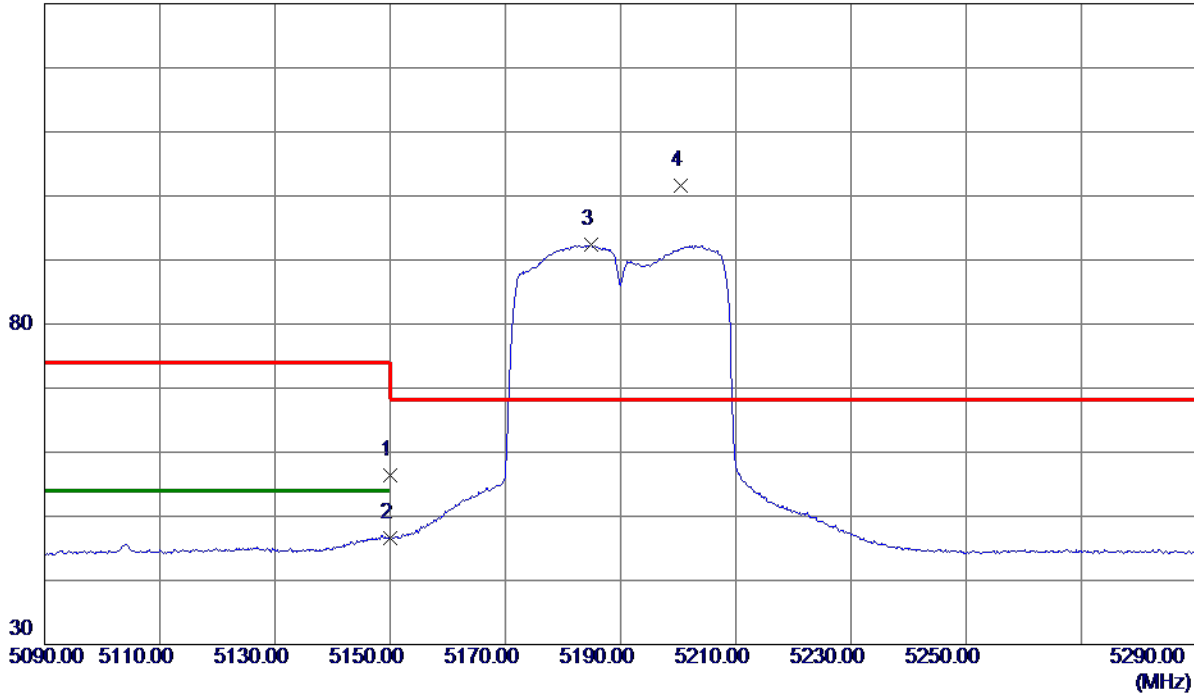
REMARKS:

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

Orthogonal Axis	X
Test Mode	UNII-1_TX N (HT40) Mode 5190 MHz

Vertical

130 dBuV/m



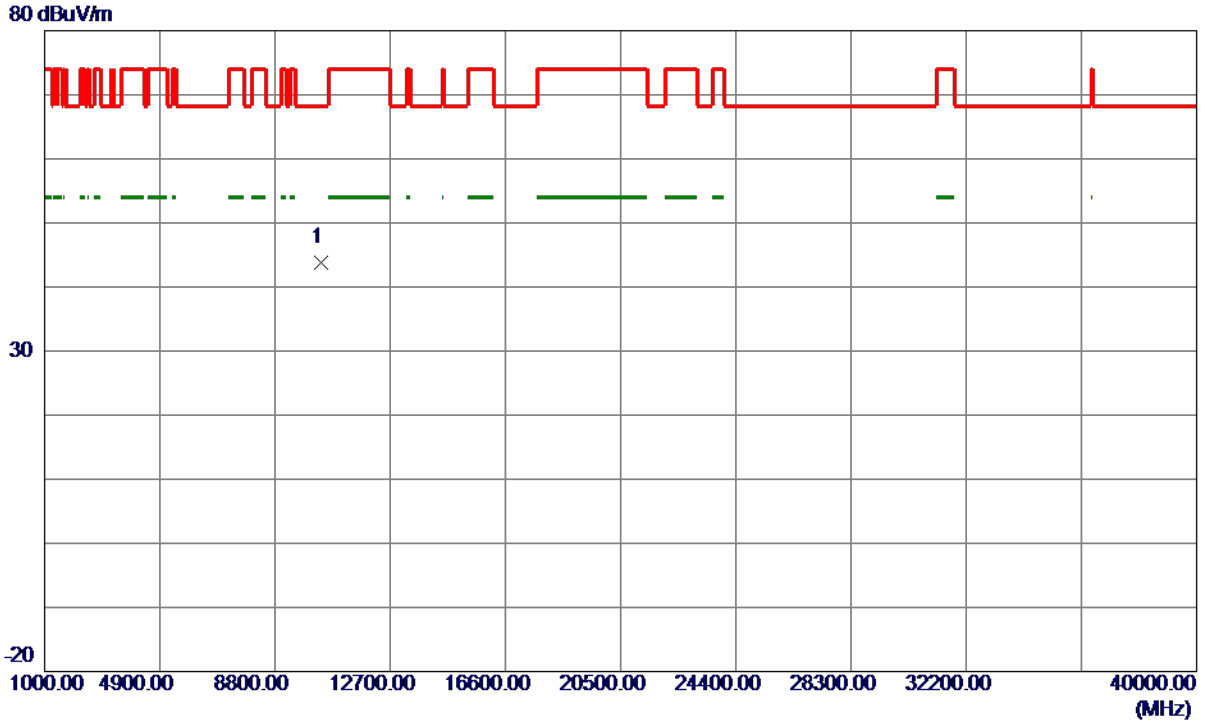
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	5150.0000	41.30	15.02	56.32	74.00	-17.68	Peak	
2	5150.0000	31.65	15.02	46.67	54.00	-7.33	AVG	
3	5184.9000	77.31	15.04	92.35	999.00	-906.65	AVG	No Limit
4 *	5200.4000	86.47	15.05	101.52	68.30	33.22	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 N (HT40) Mode 5190 MHz

Vertical



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	10380.0000	35.01	8.81	43.82	68.30	-24.48	Peak	

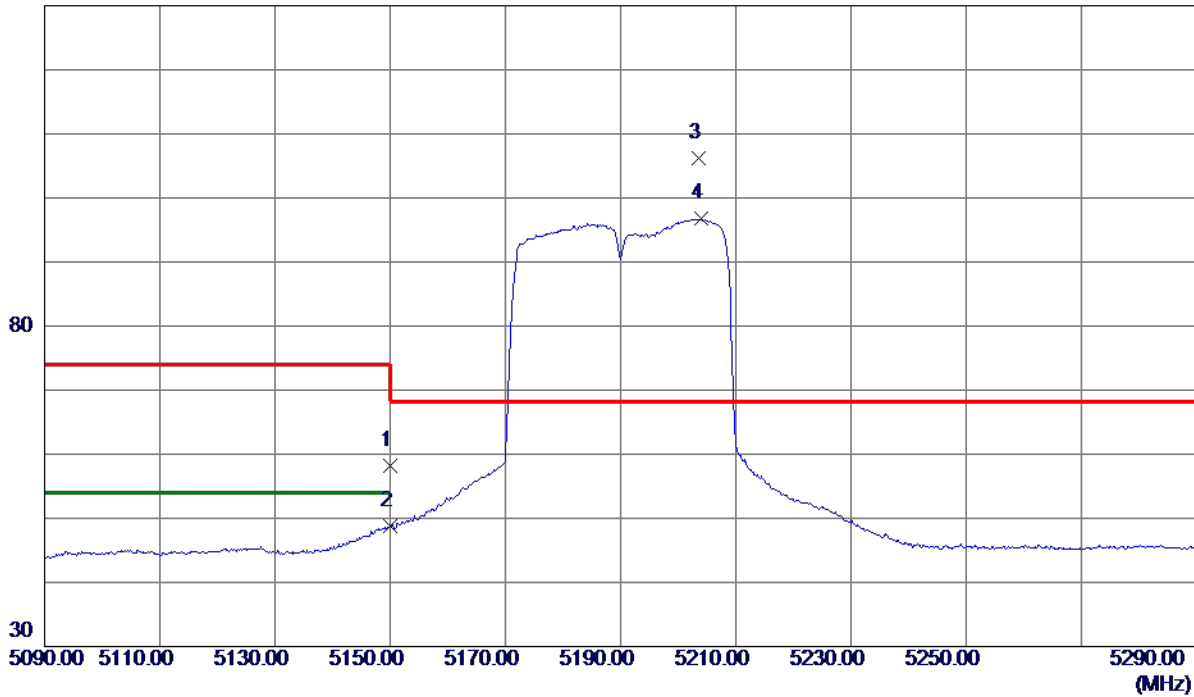
REMARKS:

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

Orthogonal Axis	X
Test Mode	UNII-1_TX N (HT40) Mode 5190 MHz

Horizontal

130 dBuV/m



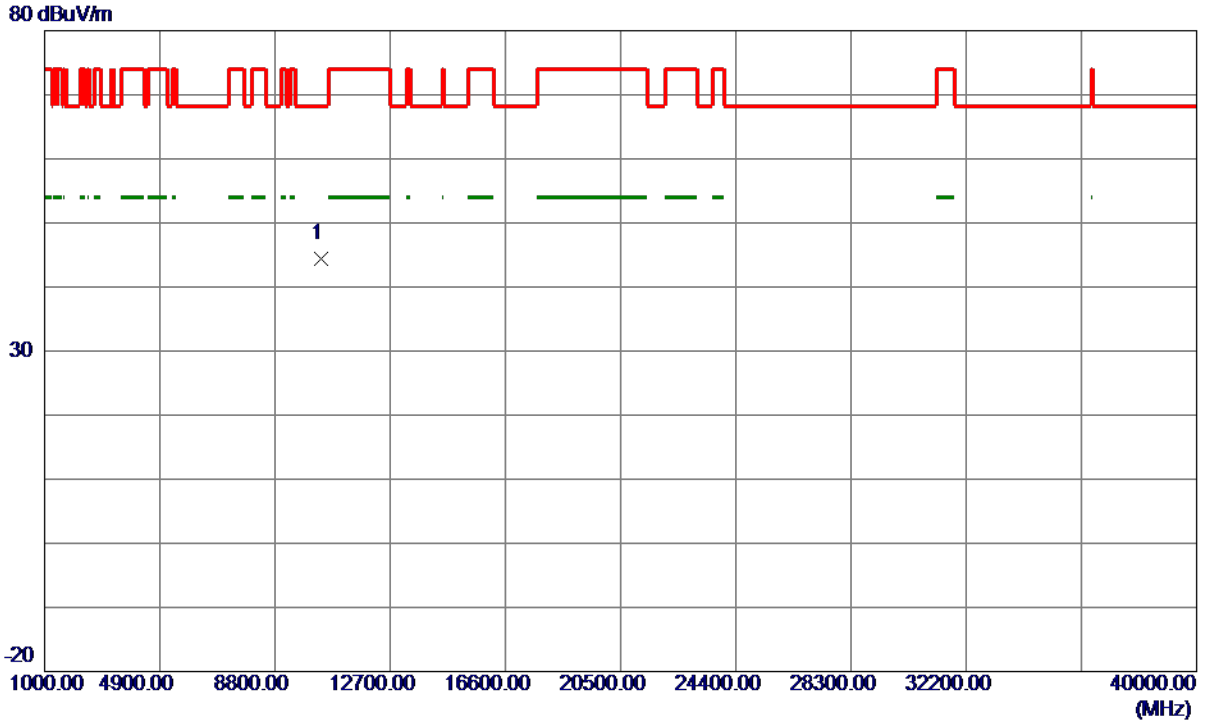
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	5150.0000	43.26	15.02	58.28	74.00	-15.72	Peak	
2	5150.0000	33.84	15.02	48.86	54.00	-5.14	AVG	
3 *	5203.6000	91.13	15.05	106.18	68.30	37.88	Peak	No Limit
4	5203.9000	81.71	15.05	96.76	999.00	-902.24	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 N (HT40) Mode 5190 MHz

Horizontal



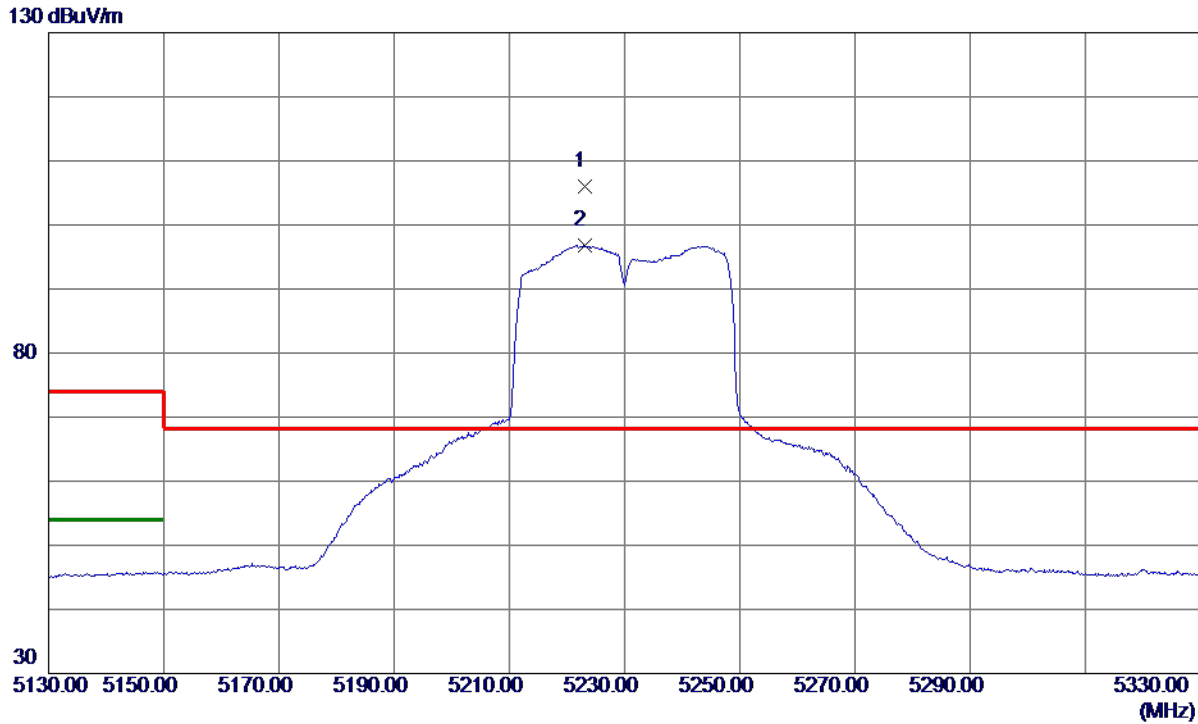
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	10380.0000	35.58	8.81	44.39	68.30	-23.91	Peak	

REMARKS:

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

Orthogonal Axis	X
Test Mode	UNII-1_TX N (HT40) Mode 5230 MHz

Vertical



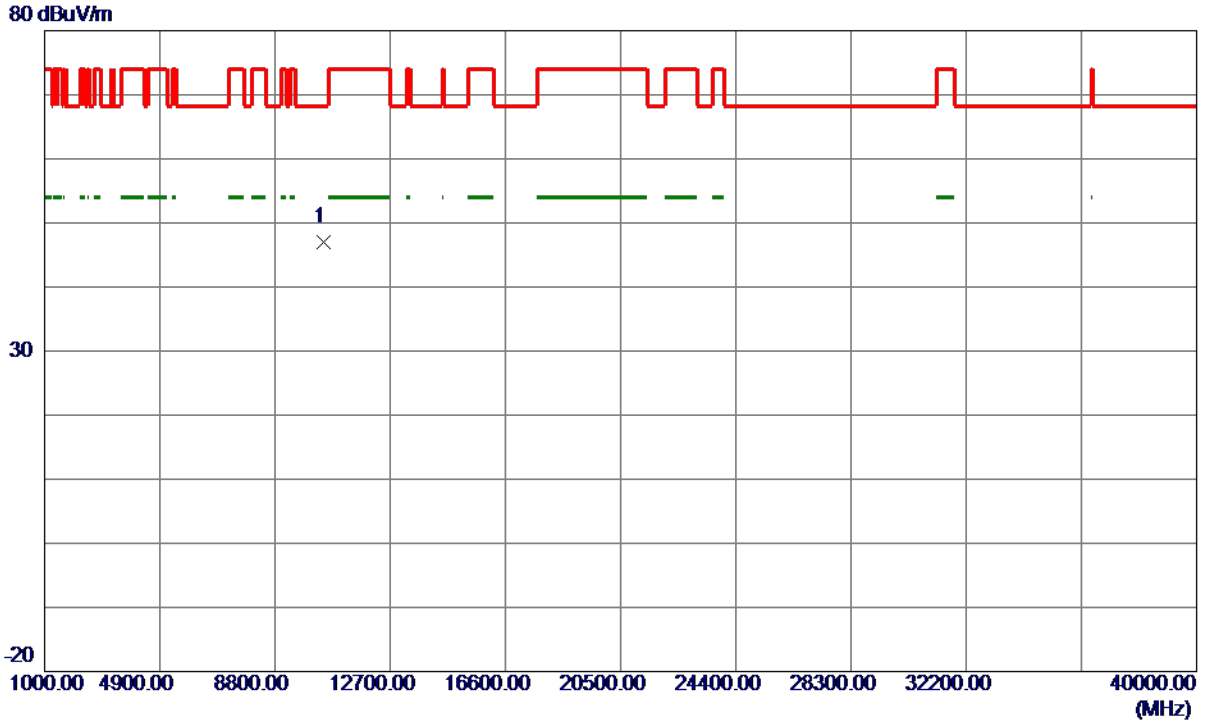
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	5223.0000	90.94	15.07	106.01	68.30	37.71	Peak	No Limit
2	5223.0000	81.72	15.07	96.79	999.00	-902.21	AVG	No Limit

REMARKS:

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

Orthogonal Axis	X
Test Mode	UNII-1_TX N (HT40) Mode 5230 MHz

Vertical



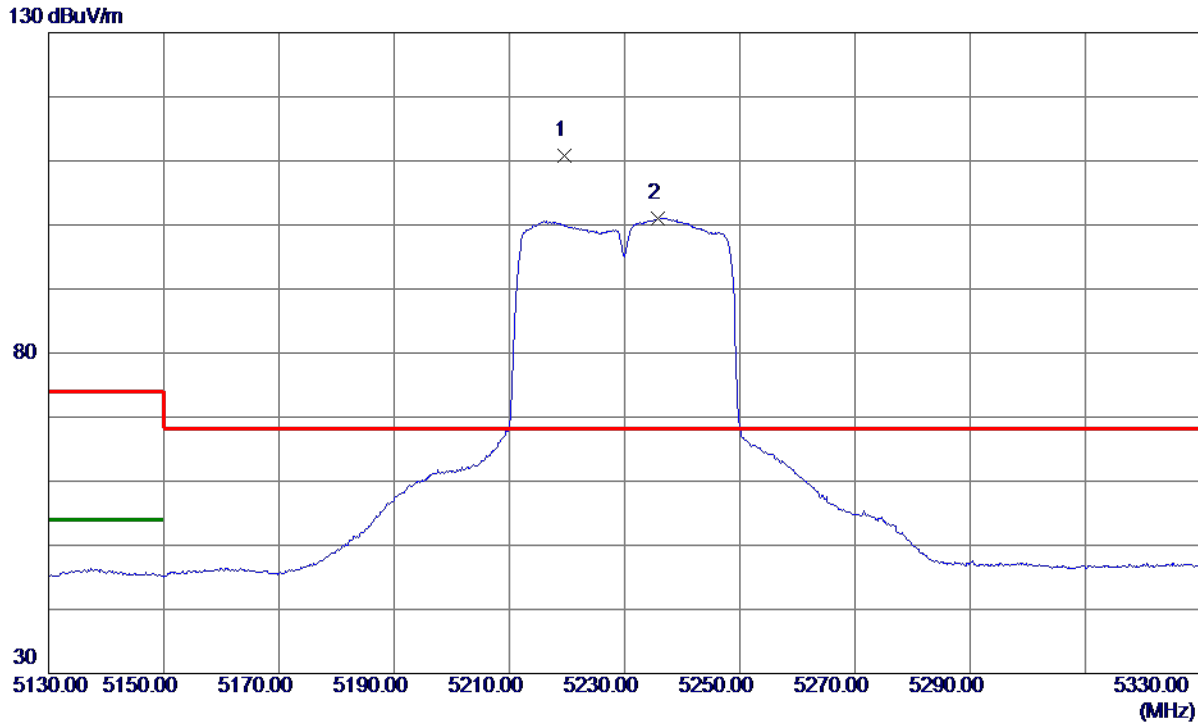
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	10460.0000	37.93	8.98	46.91	68.30	-21.39	Peak	

REMARKS:

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

Orthogonal Axis	X
Test Mode	UNII-1_TX N (HT40) Mode 5230 MHz

Horizontal



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	5219.5000	95.67	15.06	110.73	68.30	42.43	Peak	No Limit
2	5235.7000	85.93	15.07	101.00	999.00	-898.00	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 N (HT40) Mode 5230 MHz

Horizontal



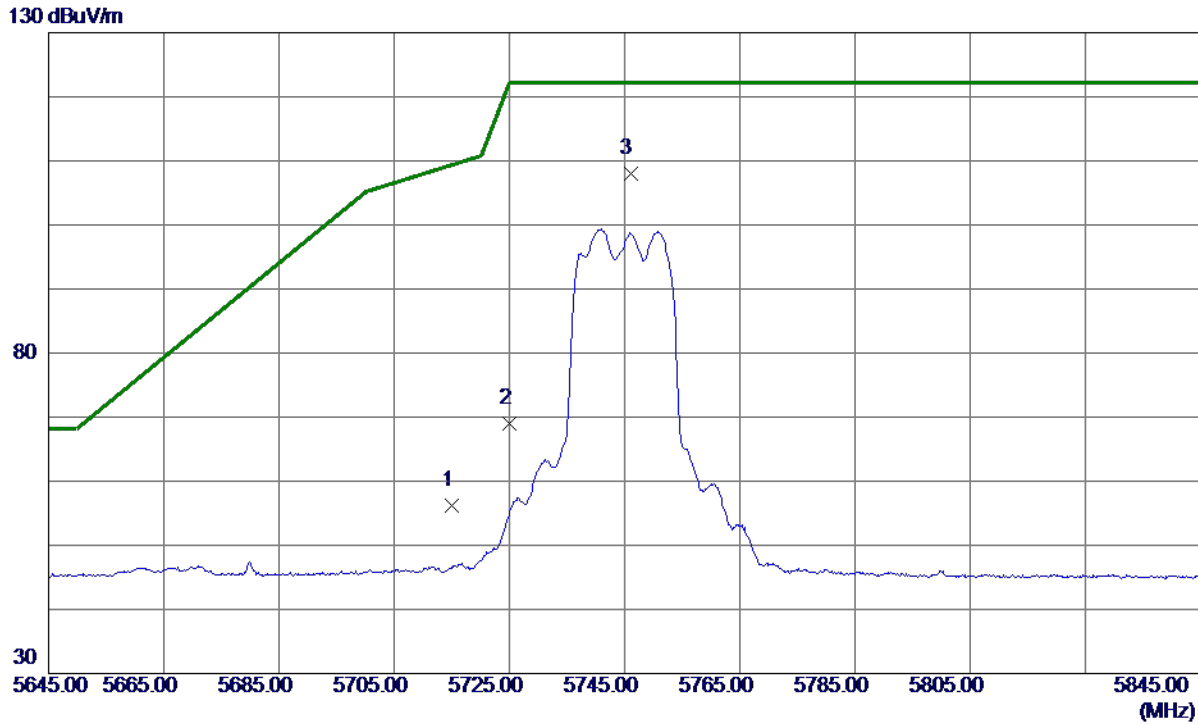
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	10460.0000	39.72	8.98	48.70	68.30	-19.60	Peak	

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



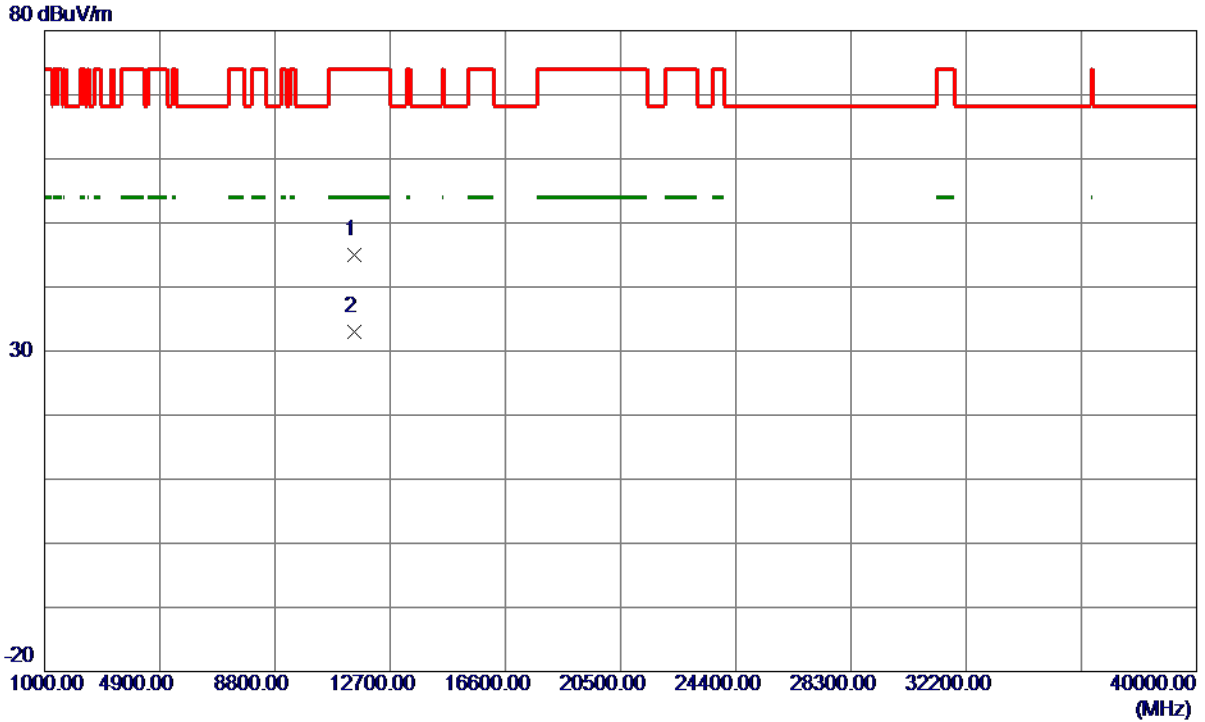
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	5715.0000	40.57	15.65	56.22	109.40	-53.18	Peak	
2	5725.0000	53.39	15.67	69.06	122.20	-53.14	Peak	
3 *	5746.0000	92.37	15.71	108.08	122.20	-14.12	Peak	No Limit

REMARKS:

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

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

Vertical



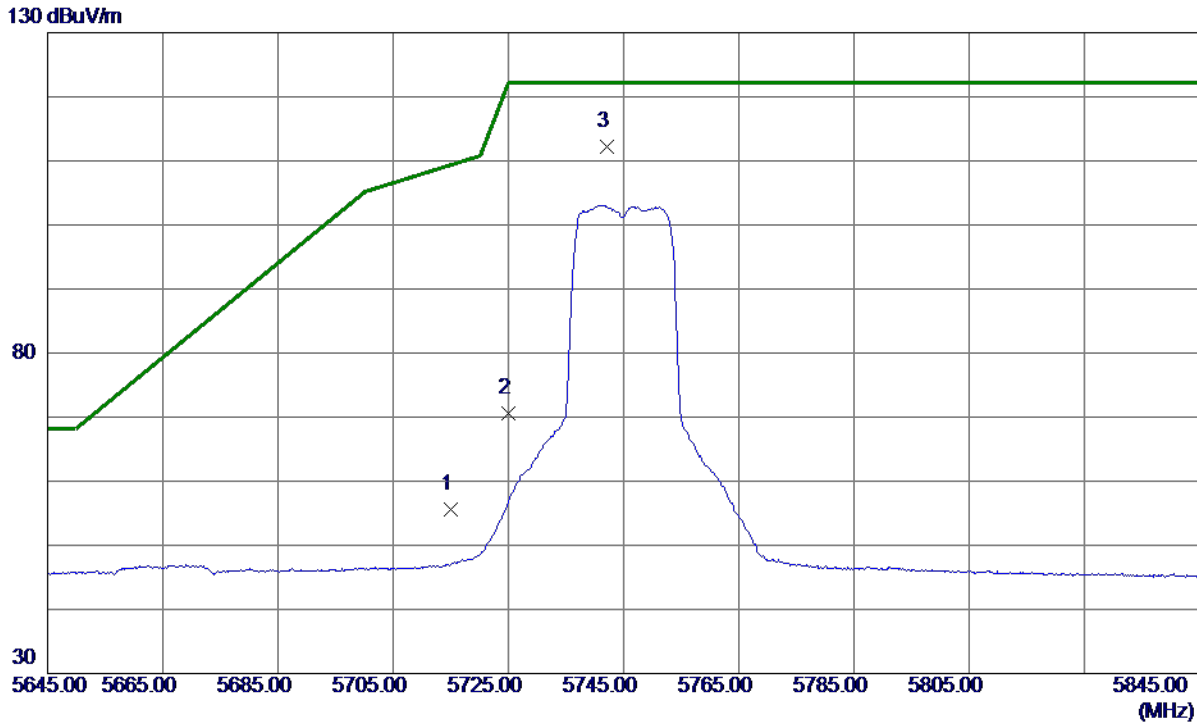
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	11484.2750	33.93	11.08	45.01	74.00	-28.99	Peak	
2 *	11489.4000	21.96	11.10	33.06	54.00	-20.94	AVG	

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

Horizontal



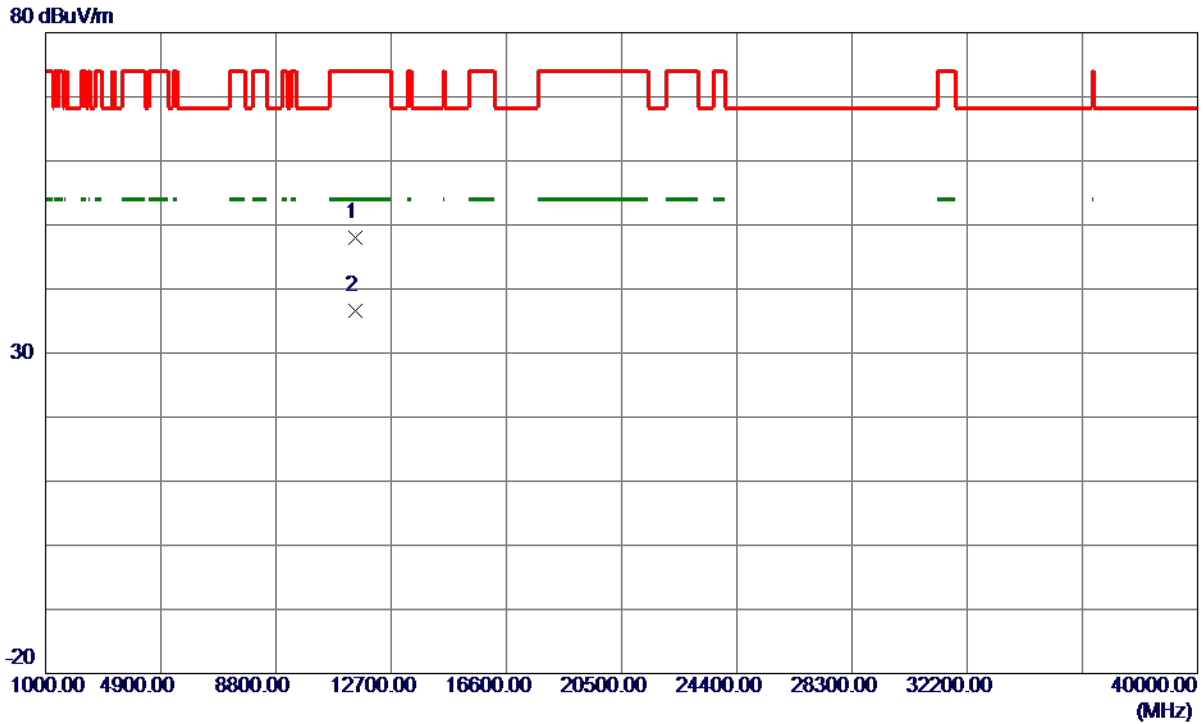
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	5715.0000	39.89	15.65	55.54	109.40	-53.86	Peak	
2	5725.0000	55.02	15.67	70.69	122.20	-51.51	Peak	
3 *	5742.1000	96.46	15.70	112.16	122.20	-10.04	Peak	No Limit

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

Horizontal



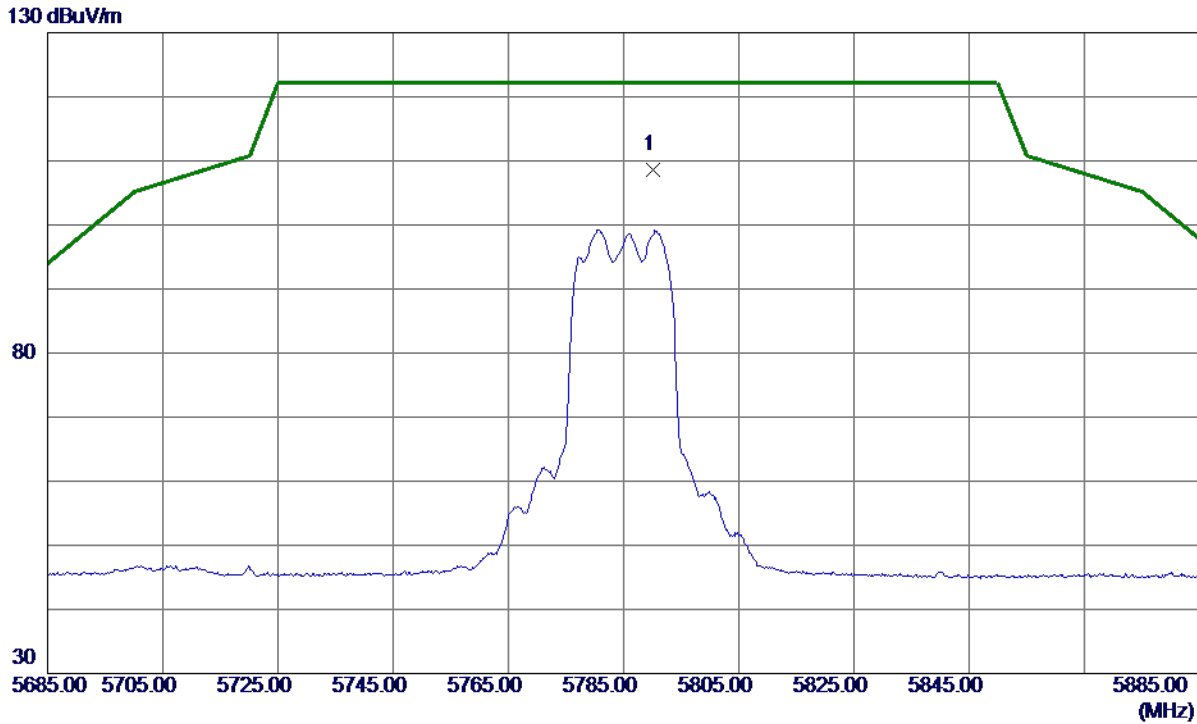
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	11489.0500	36.94	11.10	48.04	74.00	-25.96	Peak	
2 *	11490.1750	25.44	11.10	36.54	54.00	-17.46	AVG	

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



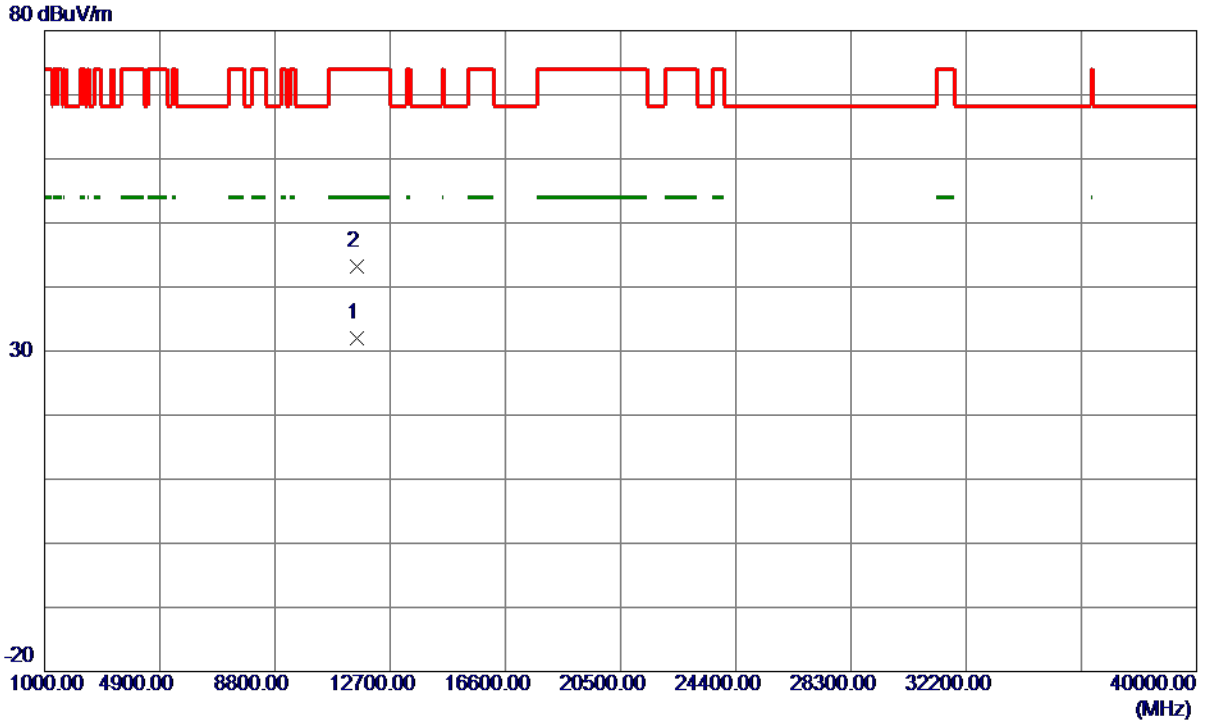
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	5790.1000	92.78	15.79	108.57	122.20	-13.63	Peak	No Limit

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



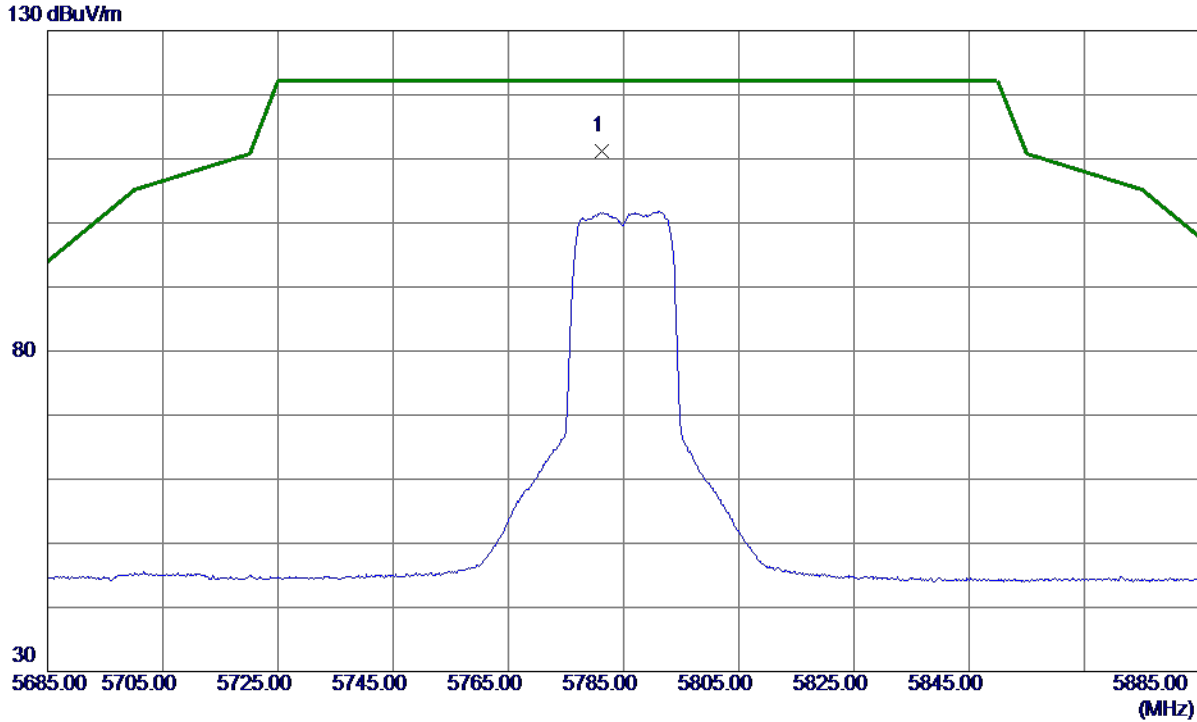
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	11568.3750	20.73	11.22	31.95	54.00	-22.05	AVG	
2	11571.3250	31.96	11.22	43.18	74.00	-30.82	Peak	

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

Horizontal



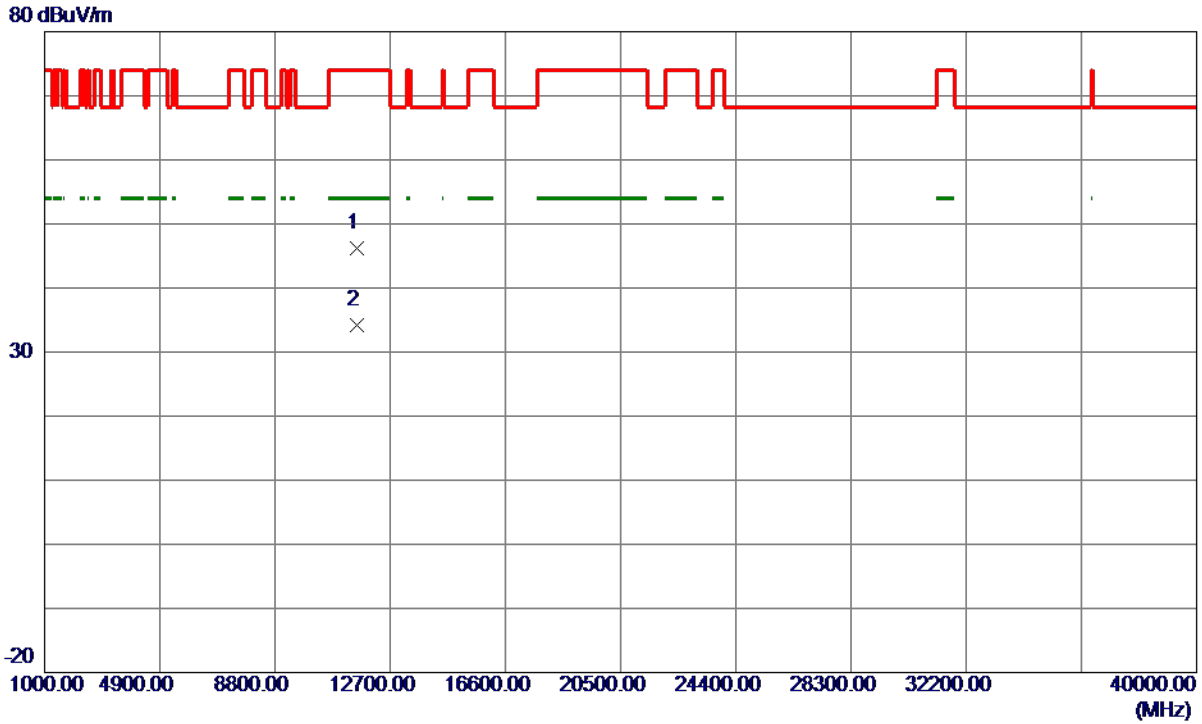
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	5781.2000	95.36	15.77	111.13	122.20	-11.07	Peak	No Limit

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

Horizontal



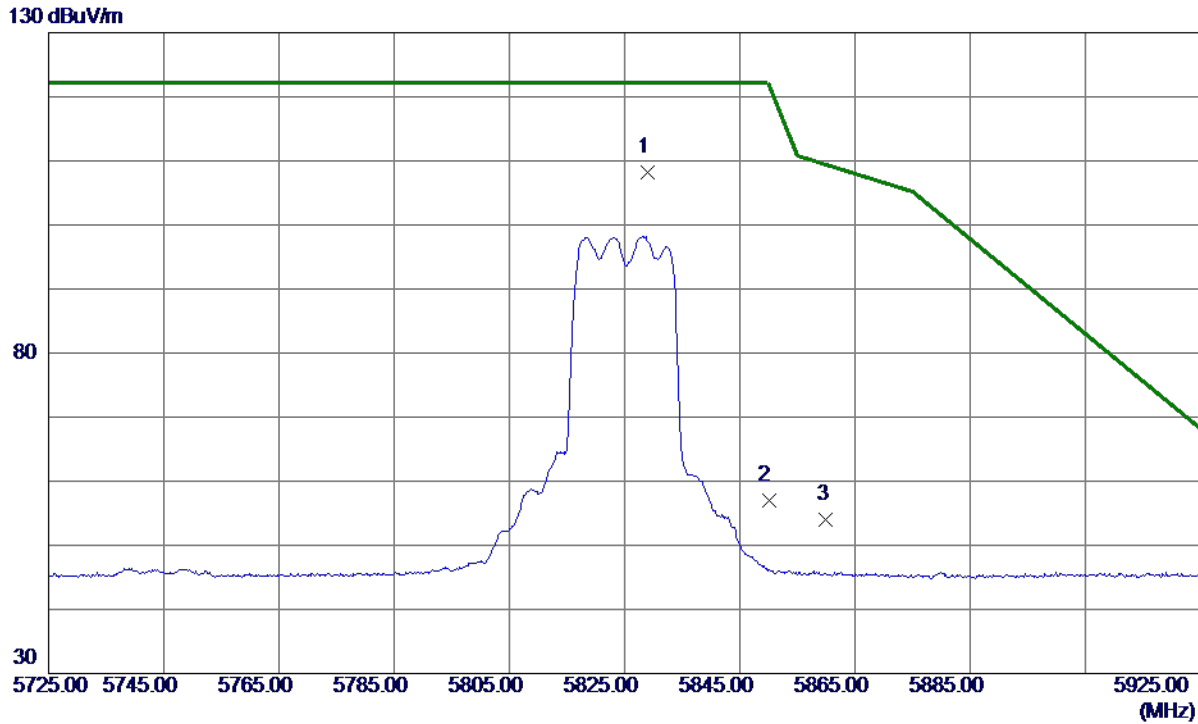
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	11569.6250	35.07	11.22	46.29	74.00	-27.71	Peak	
2 *	11570.0000	22.97	11.22	34.19	54.00	-19.81	AVG	

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



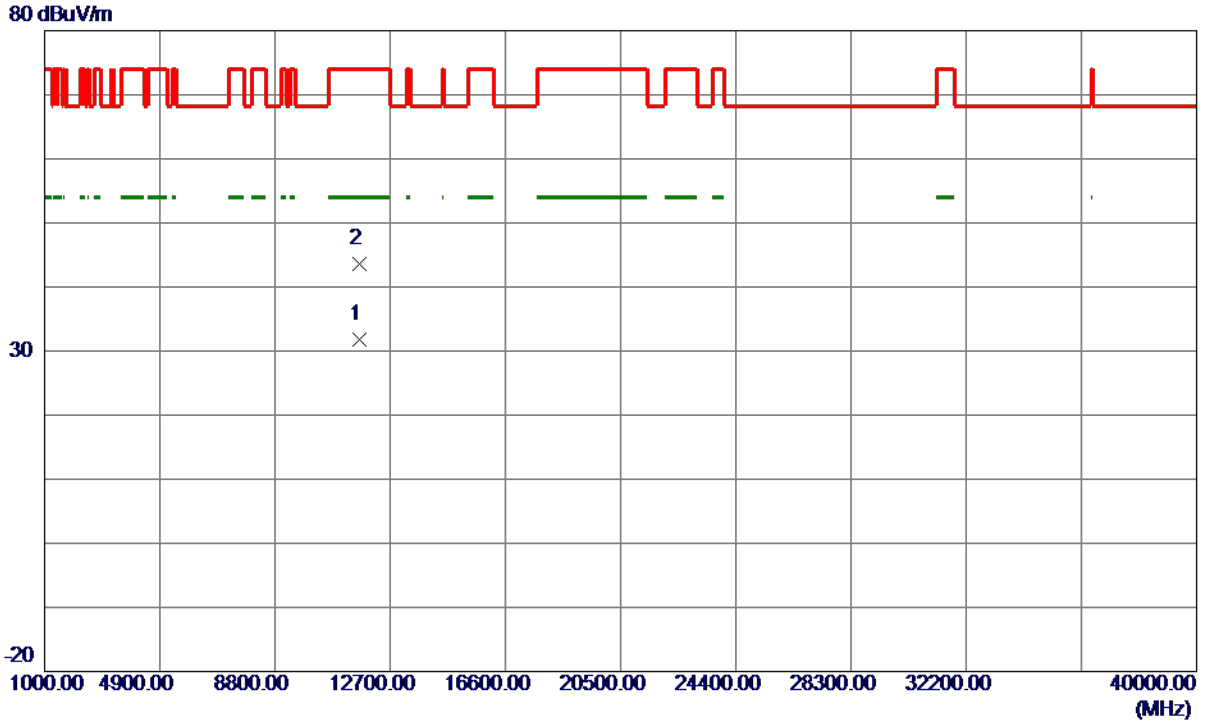
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	5829.1000	92.37	15.86	108.23	122.20	-13.97	Peak	No Limit
2	5850.0000	41.01	15.90	56.91	122.20	-65.29	Peak	
3	5860.0000	38.02	15.92	53.94	109.40	-55.46	Peak	

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



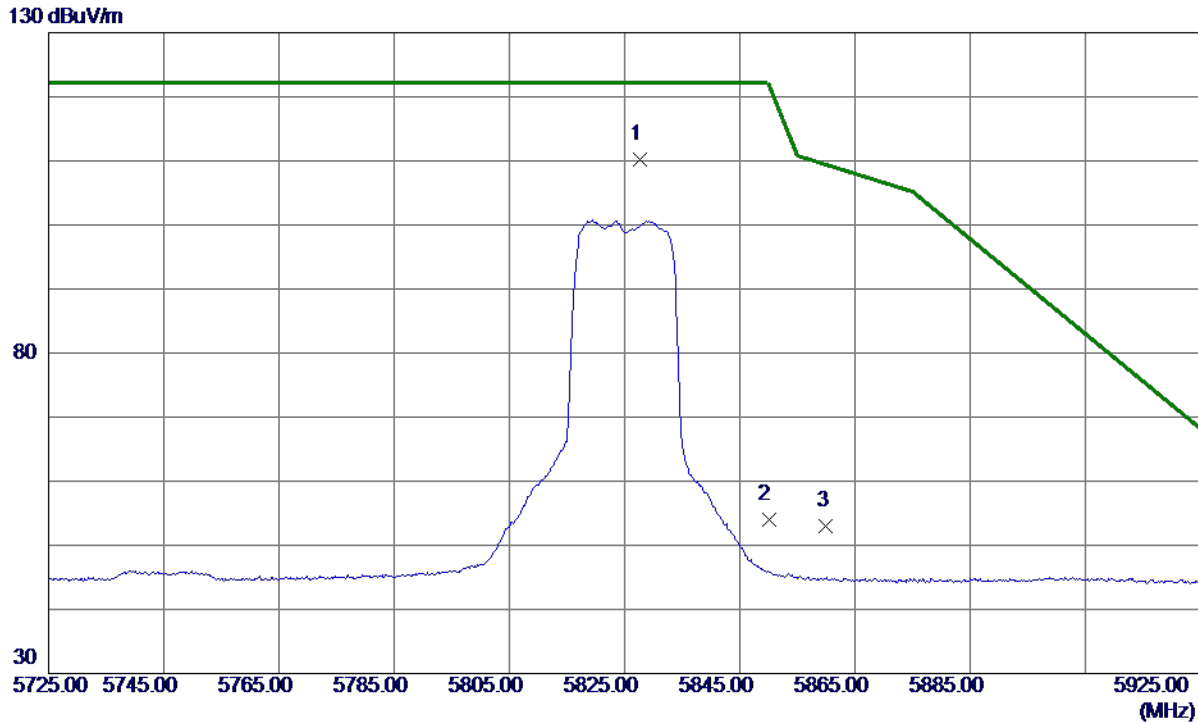
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	11647.0750	20.48	11.32	31.80	54.00	-22.20	AVG	
2	11660.6000	32.28	11.34	43.62	74.00	-30.38	Peak	

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

Horizontal



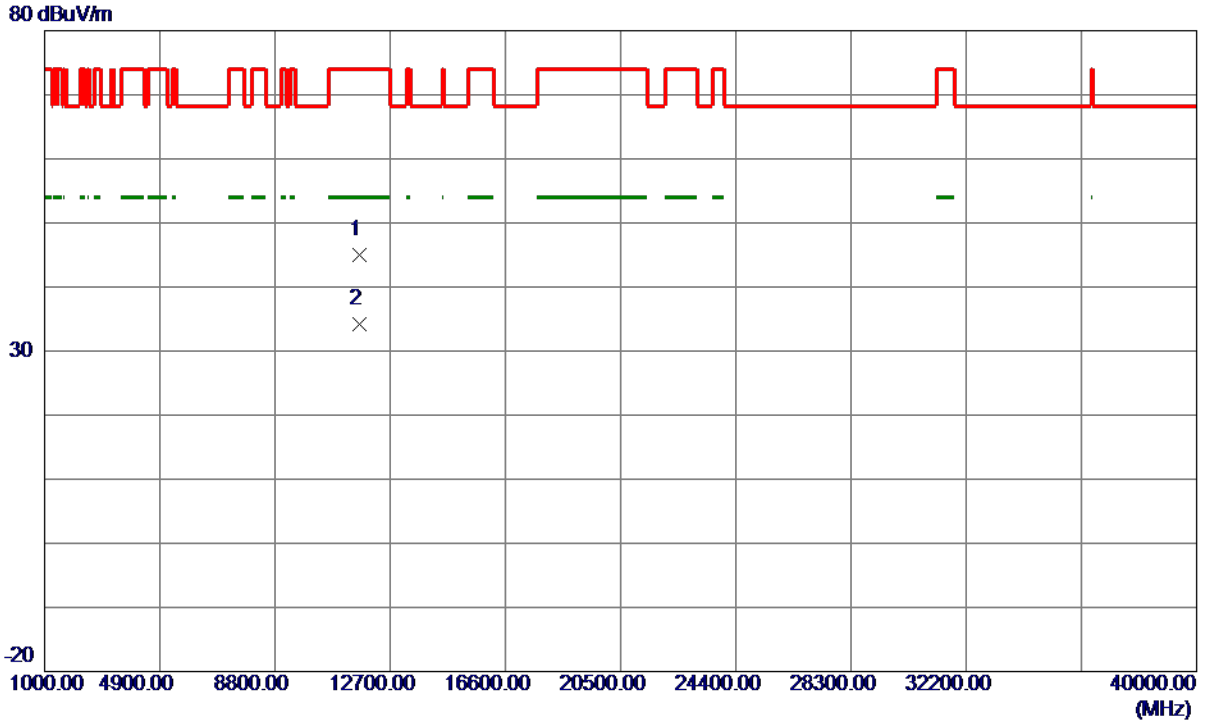
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	5827.7000	94.27	15.86	110.13	122.20	-12.07	Peak	No Limit
2	5850.0000	38.12	15.90	54.02	122.20	-68.18	Peak	
3	5860.0000	37.08	15.92	53.00	109.40	-56.40	Peak	

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

Horizontal



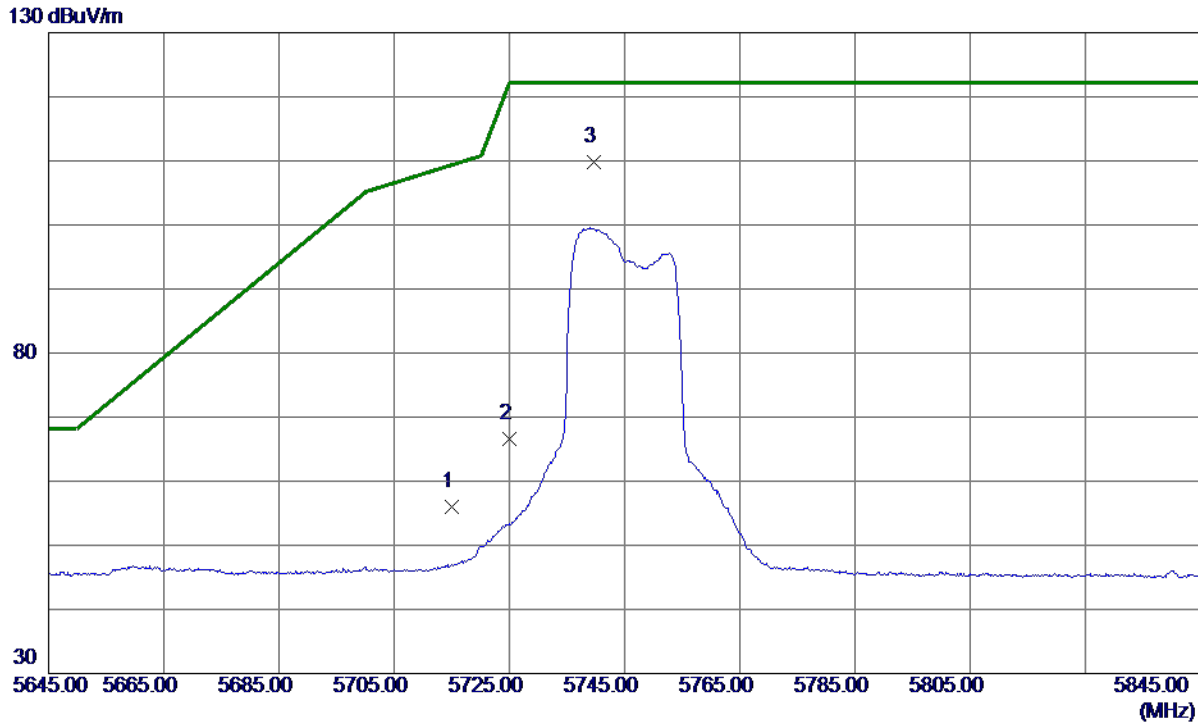
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	11646.5250	33.62	11.32	44.94	74.00	-29.06	Peak	
2 *	11649.8750	22.84	11.32	34.16	54.00	-19.84	AVG	

REMARKS:

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

Orthogonal Axis	X
Test Mode	UNII-3_TX N (HT20) Mode 5745 MHz

Vertical



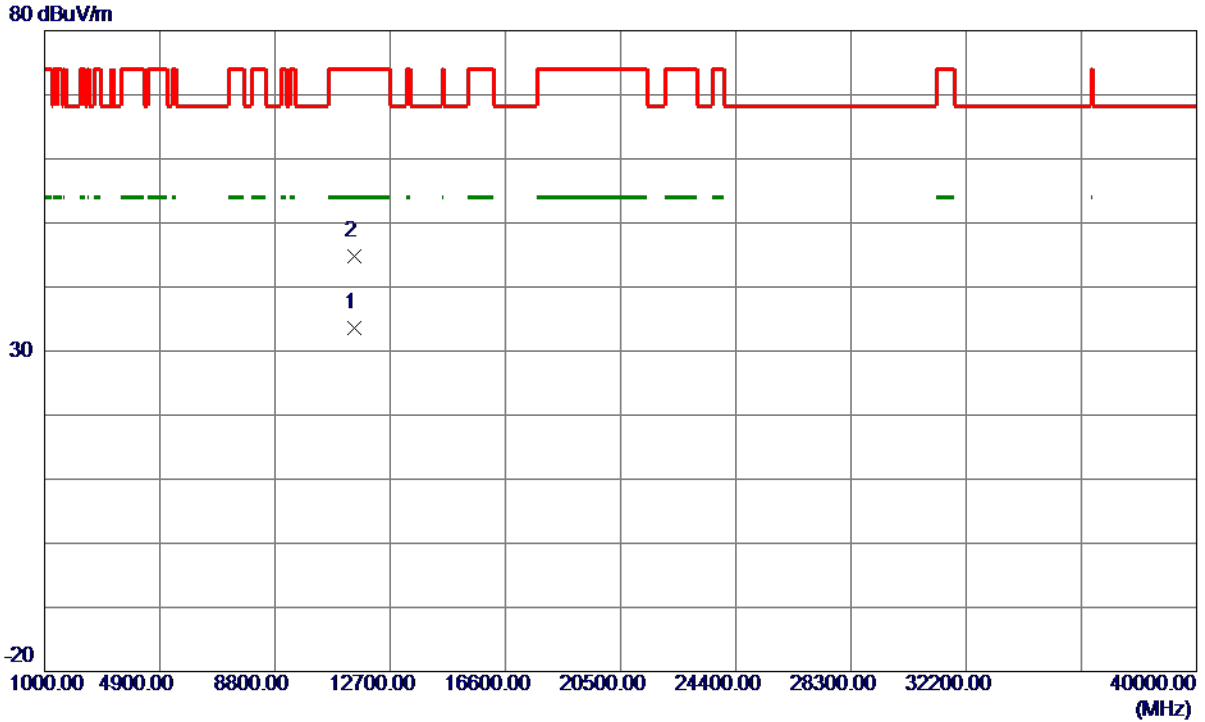
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	5715.0000	40.44	15.65	56.09	109.40	-53.31	Peak	
2	5725.0000	50.87	15.67	66.54	122.20	-55.66	Peak	
3 *	5739.6000	94.13	15.70	109.83	122.20	-12.37	Peak	No Limit

REMARKS:

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

Orthogonal Axis	X
Test Mode	UNII-3_TX N (HT20) Mode 5745 MHz

Vertical



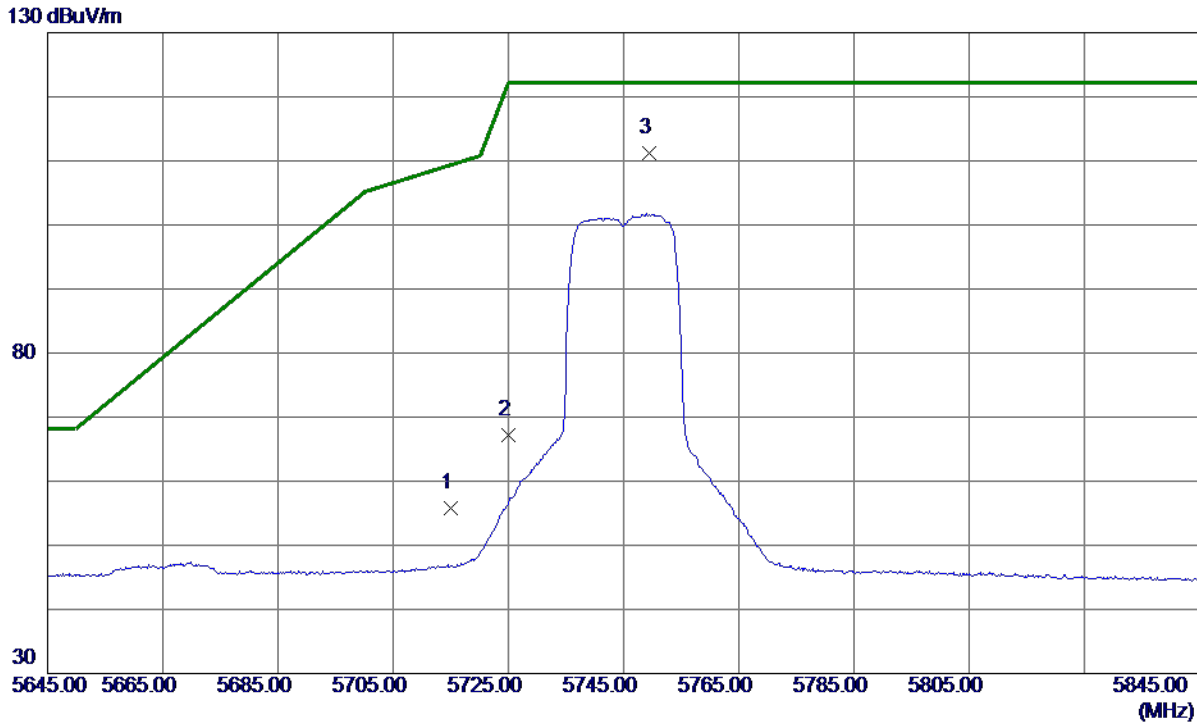
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	11488.2750	22.57	11.09	33.66	54.00	-20.34	AVG	
2	11489.5000	33.68	11.10	44.78	74.00	-29.22	Peak	

REMARKS:

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

Orthogonal Axis	X
Test Mode	UNII-3_TX N (HT20) Mode 5745 MHz

Horizontal



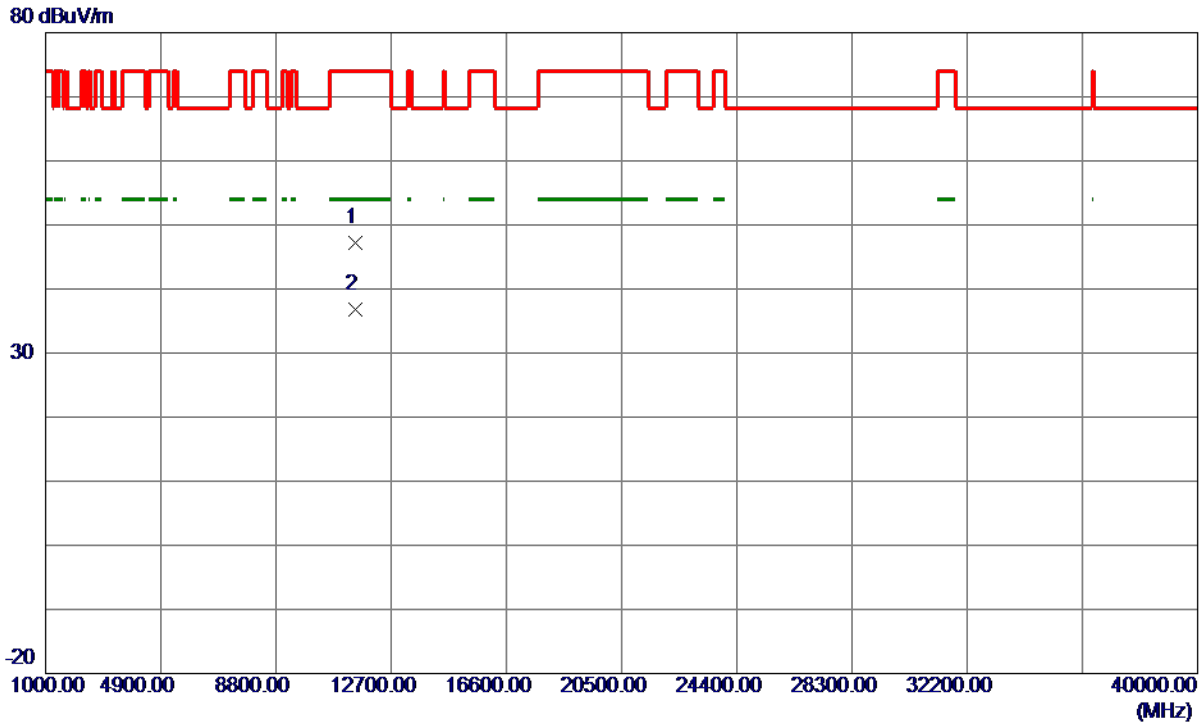
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	5715.0000	40.10	15.65	55.75	109.40	-53.65	Peak	
2	5725.0000	51.50	15.67	67.17	122.20	-55.03	Peak	
3 *	5749.4000	95.49	15.71	111.20	122.20	-11.00	Peak	No Limit

REMARKS:

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

Orthogonal Axis	X
Test Mode	UNII-3_TX N (HT20) Mode 5745 MHz

Horizontal



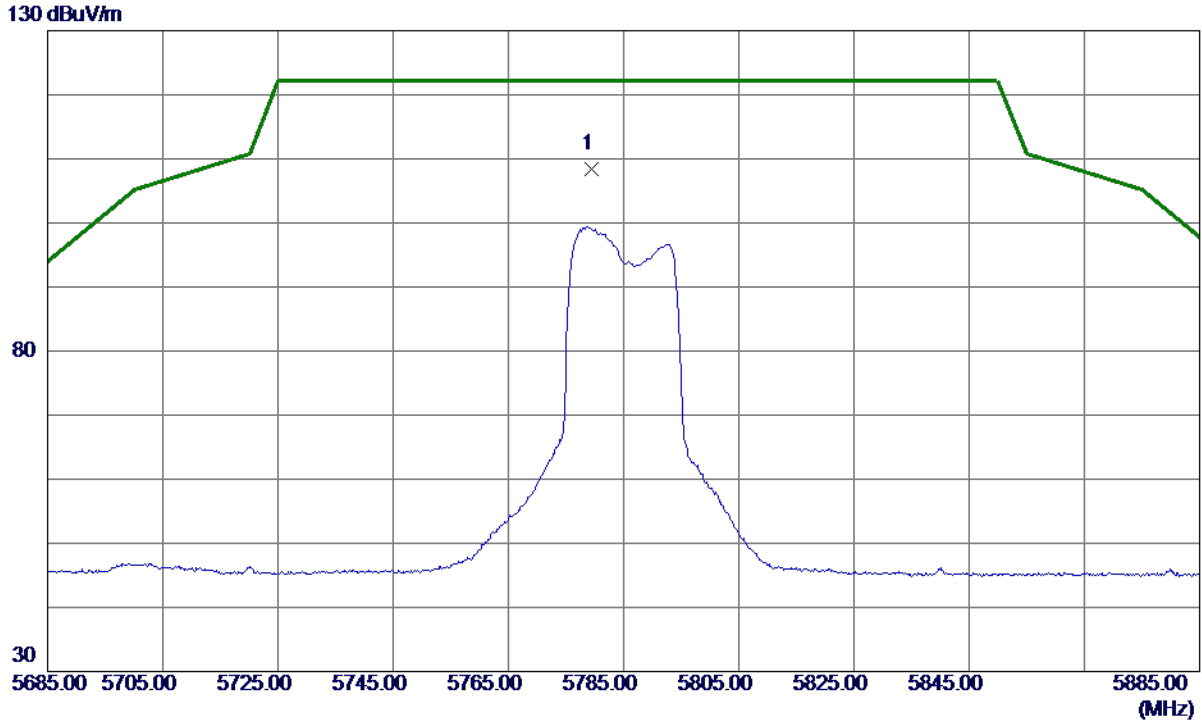
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	11489.4750	36.18	11.10	47.28	74.00	-26.72	Peak	
2 *	11490.6750	25.66	11.10	36.76	54.00	-17.24	AVG	

REMARKS:

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

Orthogonal Axis	X
Test Mode	UNII-3_TX N (HT20) Mode 5785 MHz

Vertical



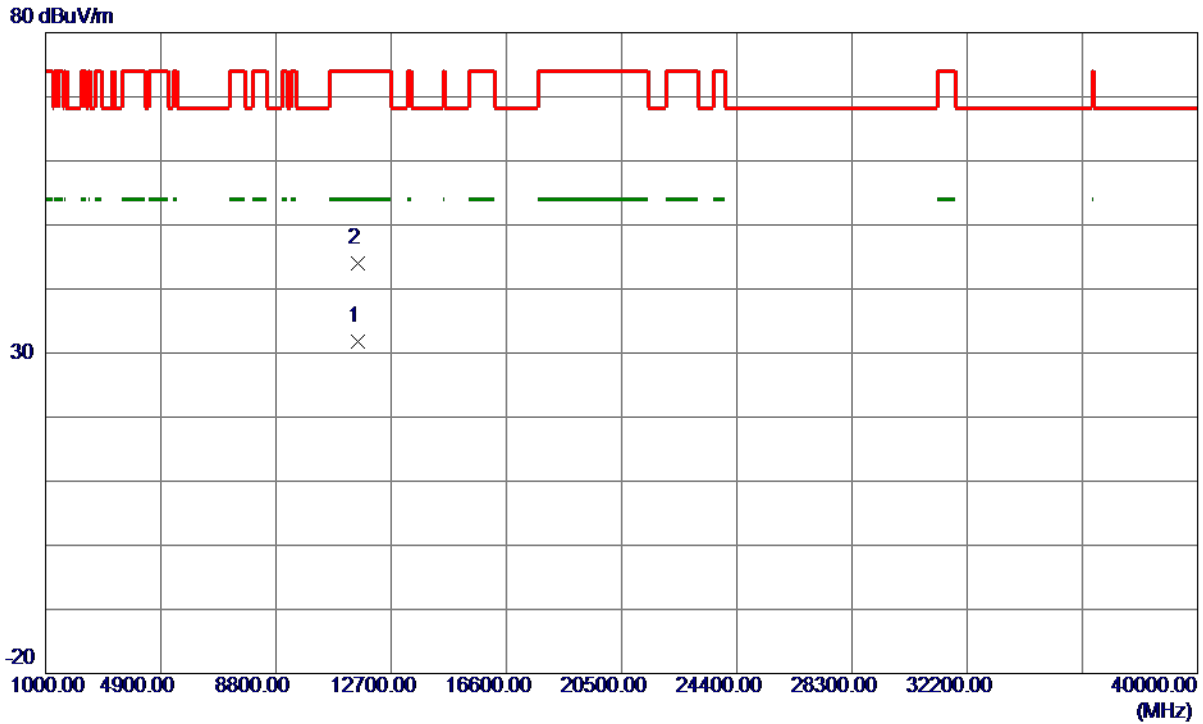
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	5779.4000	92.58	15.77	108.35	122.20	-13.85	Peak	No Limit

REMARKS:

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

Orthogonal Axis	X
Test Mode	UNII-3_TX N (HT20) Mode 5785 MHz

Vertical



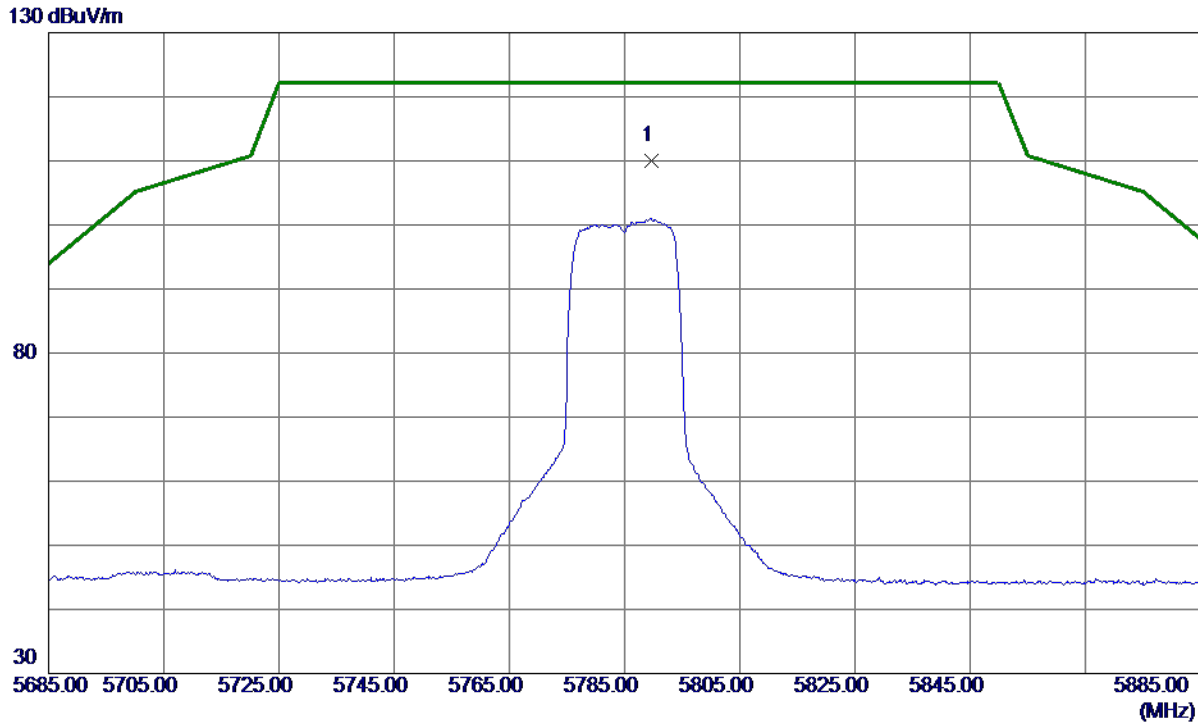
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	11566.6000	20.66	11.22	31.88	54.00	-22.12	AVG	
2	11574.3250	32.73	11.23	43.96	74.00	-30.04	Peak	

REMARKS:

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

Orthogonal Axis	X
Test Mode	UNII-3_TX N (HT20) Mode 5785 MHz

Horizontal



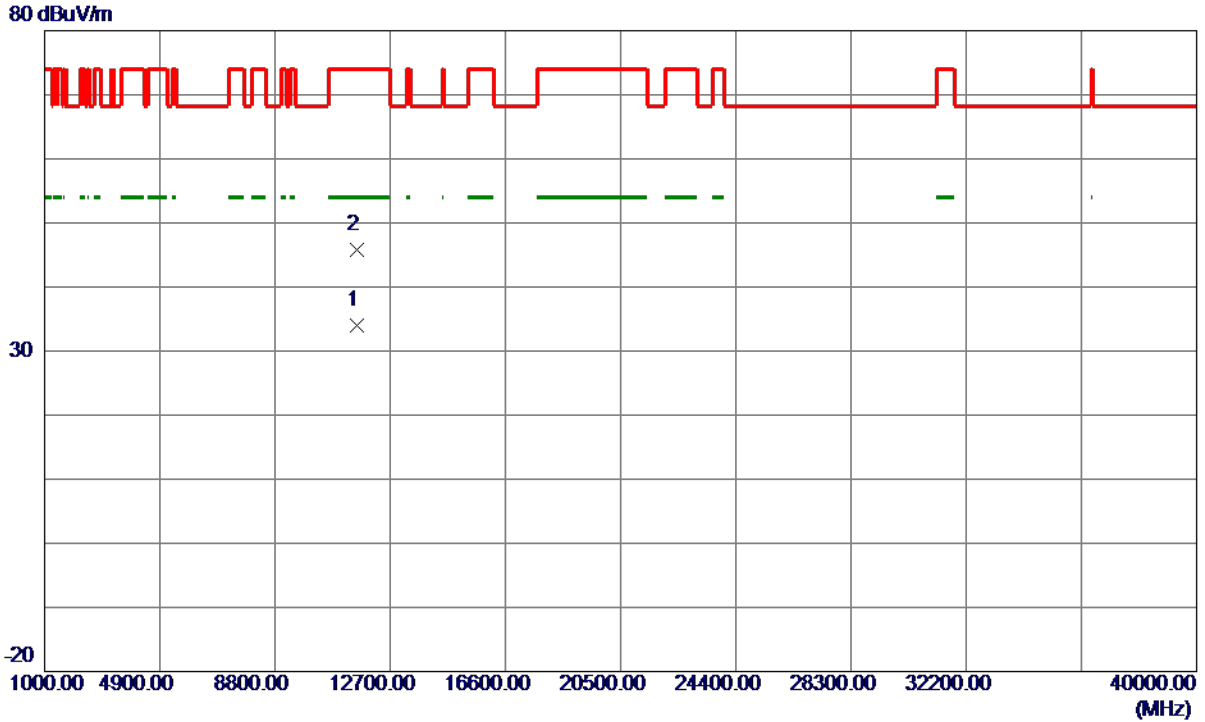
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	5789.6000	94.30	15.79	110.09	122.20	-12.11	Peak	No Limit

REMARKS:

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

Orthogonal Axis	X
Test Mode	UNII-3_TX N (HT20) Mode 5785 MHz

Horizontal



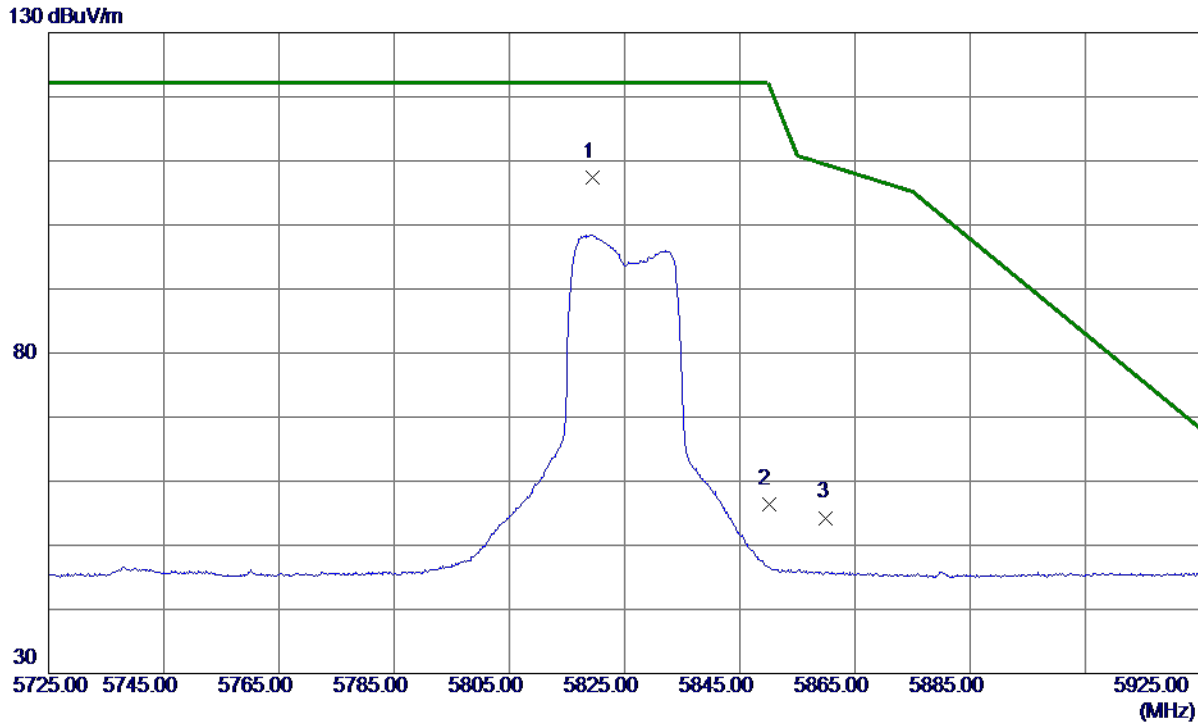
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	11568.8250	22.70	11.22	33.92	54.00	-20.08	AVG	
2	11573.4000	34.53	11.23	45.76	74.00	-28.24	Peak	

REMARKS:

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

Orthogonal Axis	X
Test Mode	UNII-3_TX N (HT20) Mode 5825 MHz

Vertical



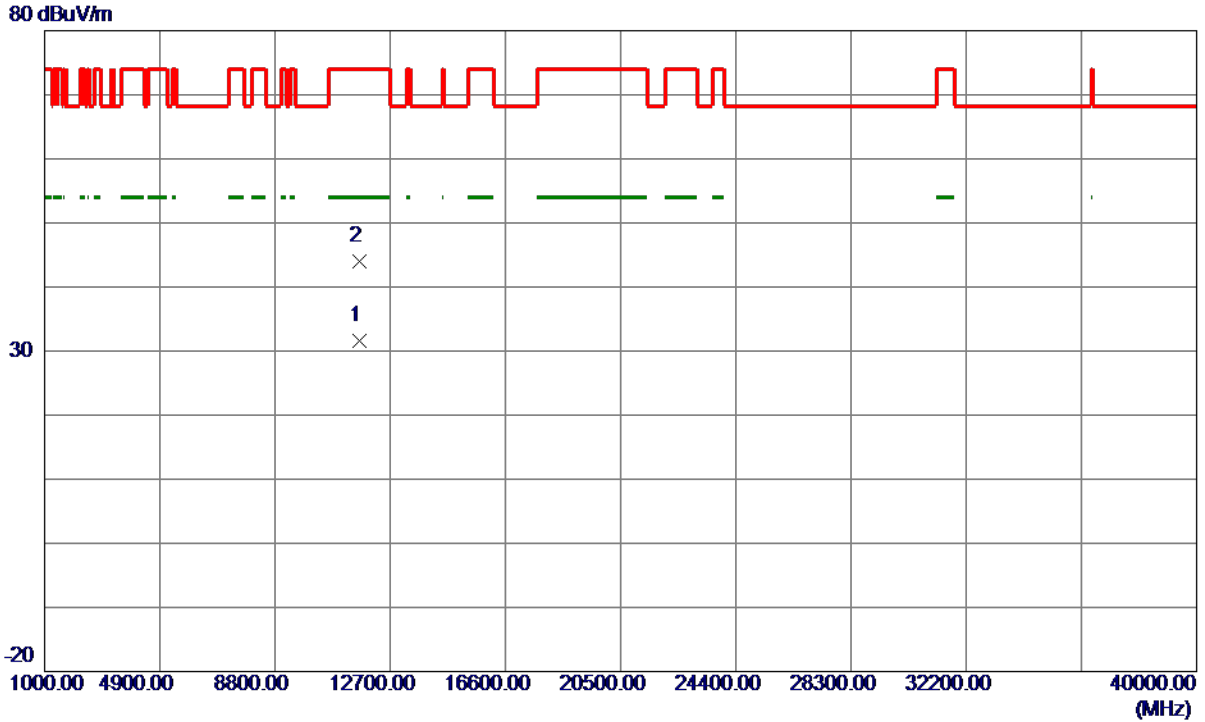
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	5819.5000	91.50	15.84	107.34	122.20	-14.86	Peak	No Limit
2	5850.0000	40.43	15.90	56.33	122.20	-65.87	Peak	
3	5860.0000	38.38	15.92	54.30	109.40	-55.10	Peak	

REMARKS:

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

Orthogonal Axis	X
Test Mode	UNII-3_TX N (HT20) Mode 5825 MHz

Vertical



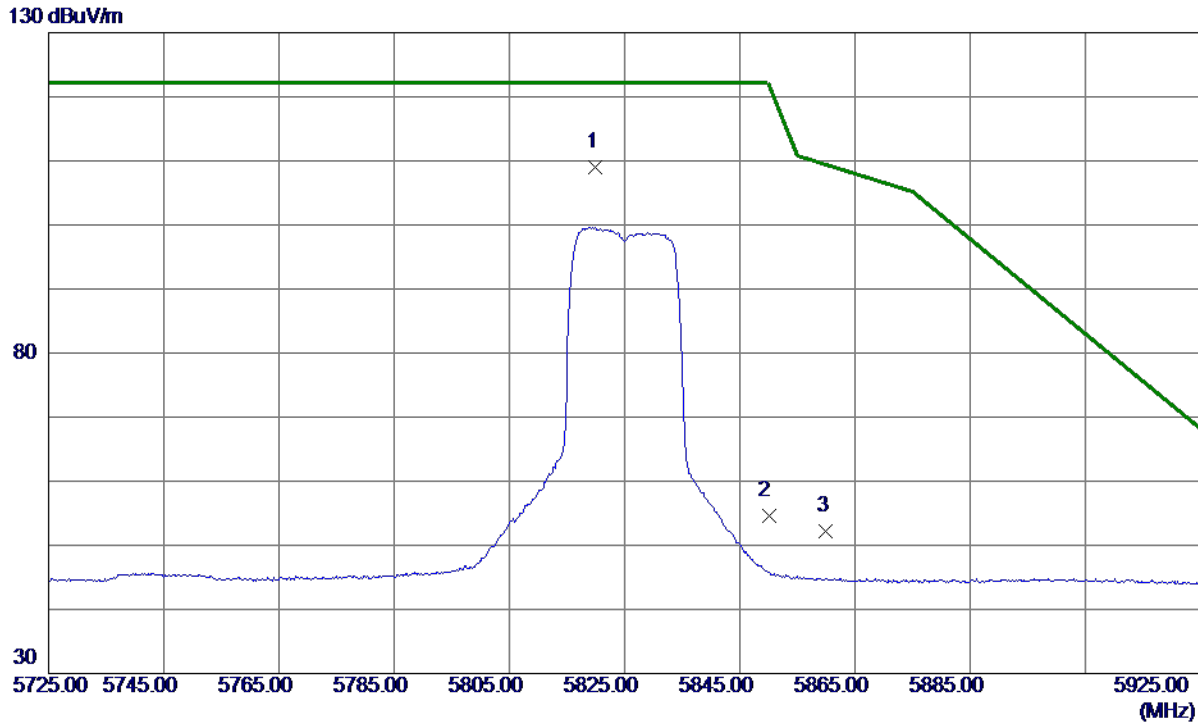
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	11650.0000	20.25	11.33	31.58	54.00	-22.42	AVG	
2	11670.9250	32.70	11.35	44.05	74.00	-29.95	Peak	

REMARKS:

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

Orthogonal Axis	X
Test Mode	UNII-3_TX N (HT20) Mode 5825 MHz

Horizontal



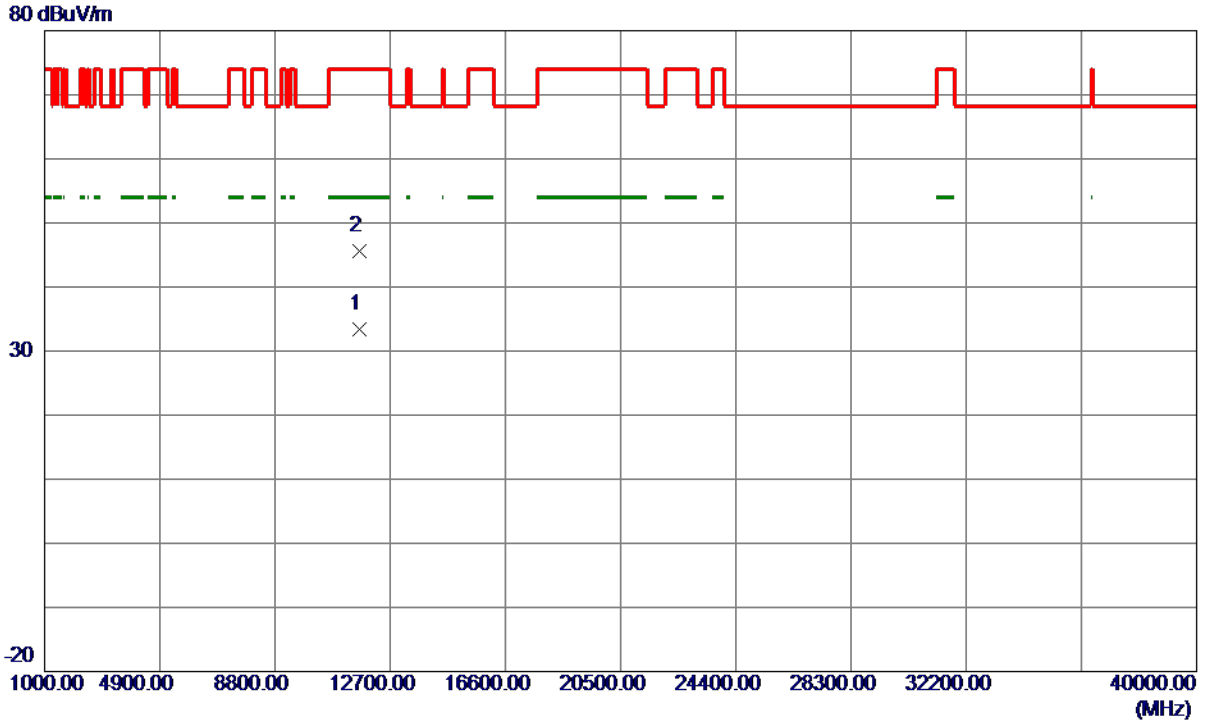
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	5820.0000	93.15	15.84	108.99	122.20	-13.21	Peak	No Limit
2	5850.0000	38.75	15.90	54.65	122.20	-67.55	Peak	
3	5860.0000	36.31	15.92	52.23	109.40	-57.17	Peak	

REMARKS:

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

Orthogonal Axis	X
Test Mode	UNII-3_TX N (HT20) Mode 5825 MHz

Horizontal



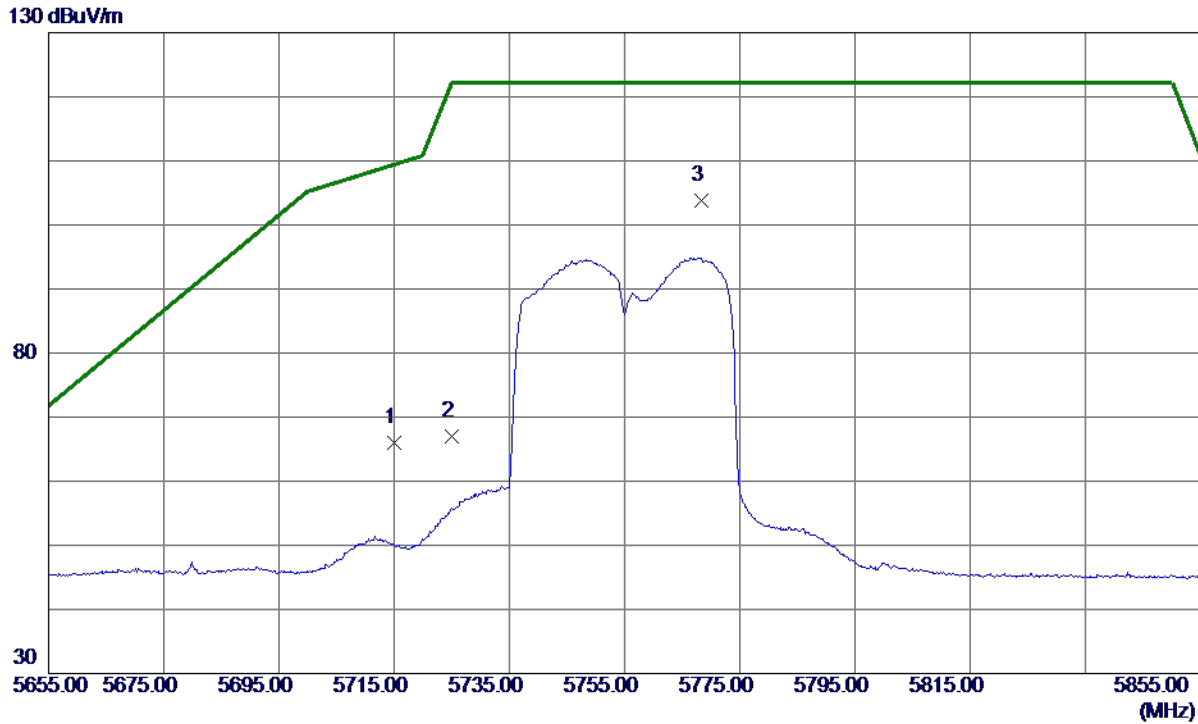
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	11650.9250	22.15	11.33	33.48	54.00	-20.52	AVG	
2	11654.8750	34.27	11.33	45.60	74.00	-28.40	Peak	

REMARKS:

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

Orthogonal Axis	X
Test Mode	UNII-3_TX N (HT40) Mode 5755 MHz

Vertical



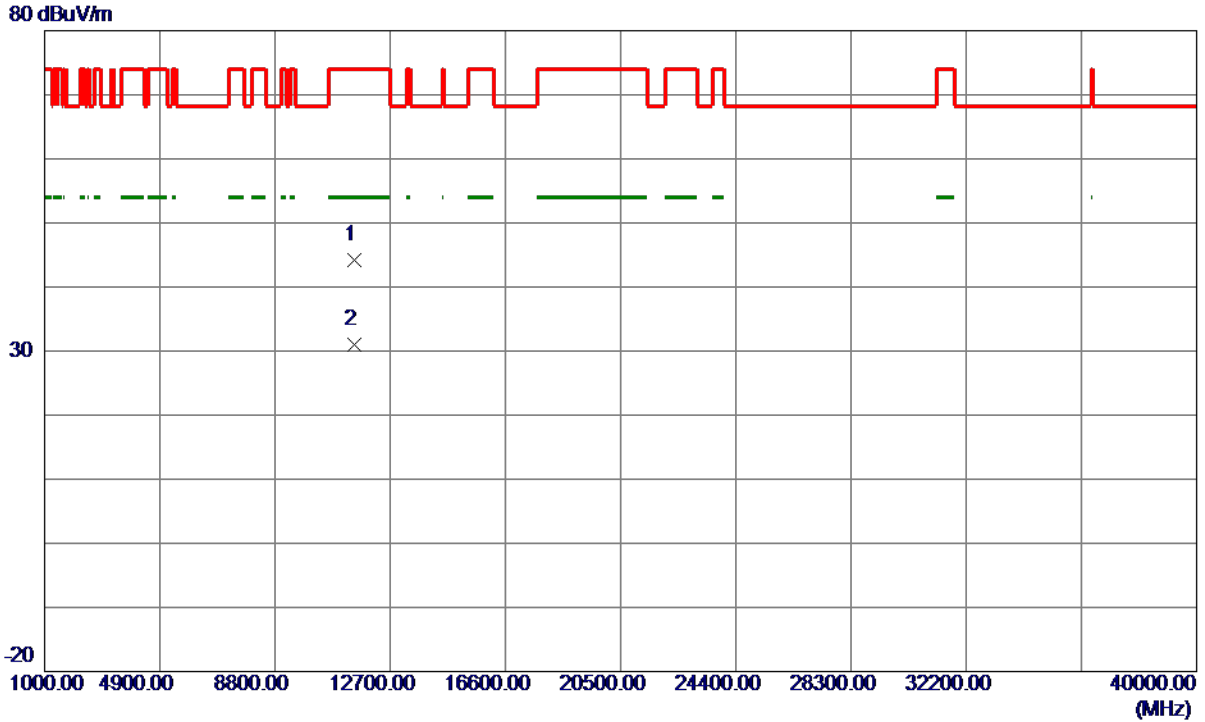
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	5715.0000	50.44	15.65	66.09	109.40	-43.31	Peak	
2	5725.0000	51.29	15.67	66.96	122.20	-55.24	Peak	
3 *	5768.4000	88.00	15.75	103.75	122.20	-18.45	Peak	No Limit

REMARKS:

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

Orthogonal Axis	X
Test Mode	UNII-3_TX N (HT40) Mode 5755 MHz

Vertical



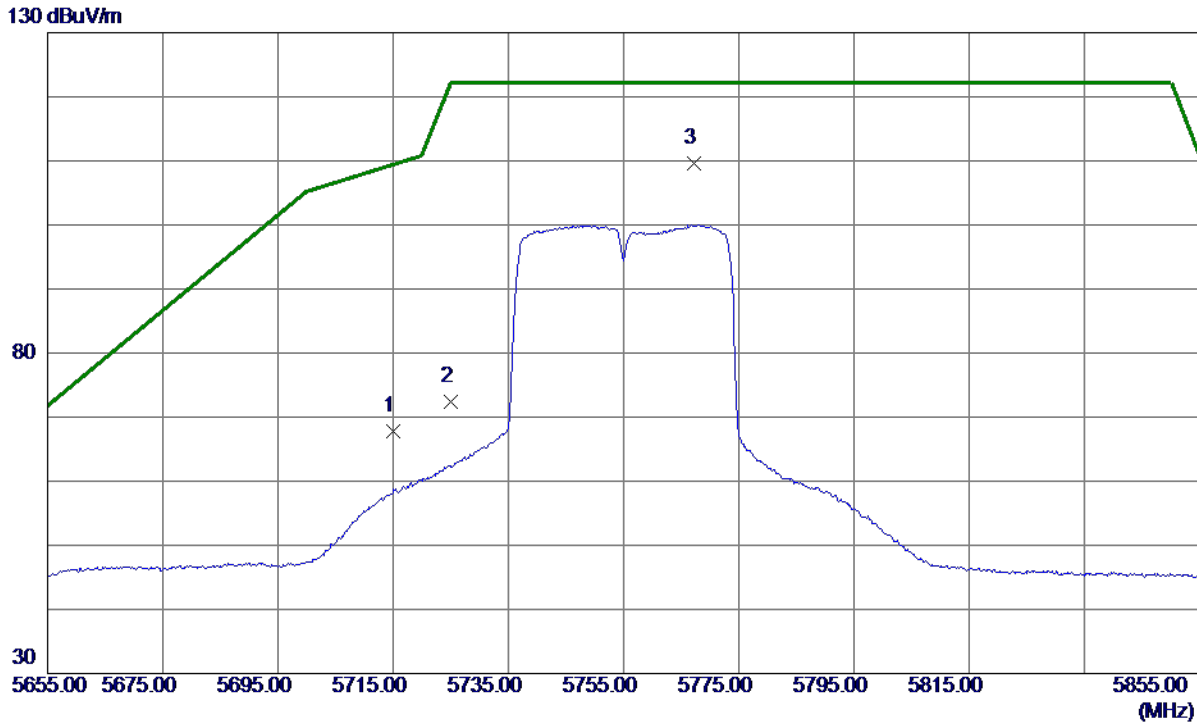
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	11498.3500	33.03	11.13	44.16	74.00	-29.84	Peak	
2 *	11500.8500	19.96	11.13	31.09	54.00	-22.91	AVG	

REMARKS:

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

Orthogonal Axis	X
Test Mode	UNII-3_TX N (HT40) Mode 5755 MHz

Horizontal



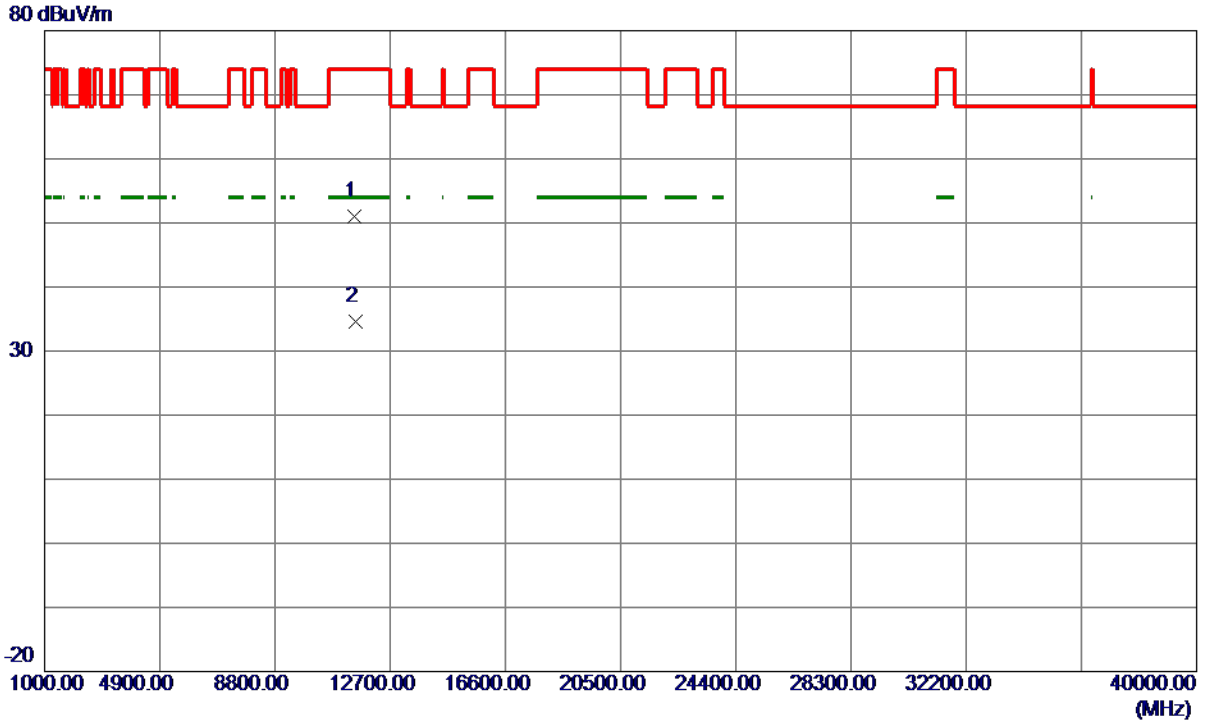
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	5715.0000	52.18	15.65	67.83	109.40	-41.57	Peak	
2	5725.0000	56.82	15.67	72.49	122.20	-49.71	Peak	
3 *	5767.2000	93.79	15.75	109.54	122.20	-12.66	Peak	No Limit

REMARKS:

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

Orthogonal Axis	X
Test Mode	UNII-3_TX N (HT40) Mode 5755 MHz

Horizontal



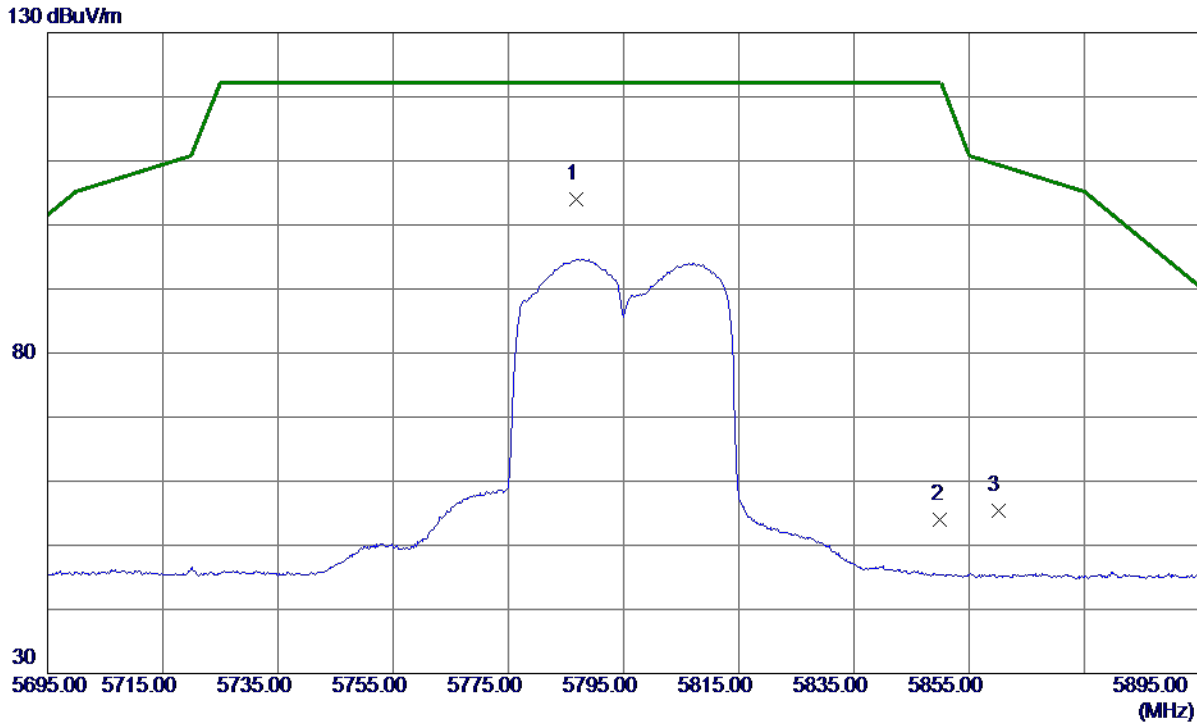
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	11508.3250	39.81	11.14	50.95	74.00	-23.05	Peak	
2 *	11511.4000	23.41	11.14	34.55	54.00	-19.45	AVG	

REMARKS:

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

Orthogonal Axis	X
Test Mode	UNII-3_TX N (HT40) Mode 5795 MHz

Vertical



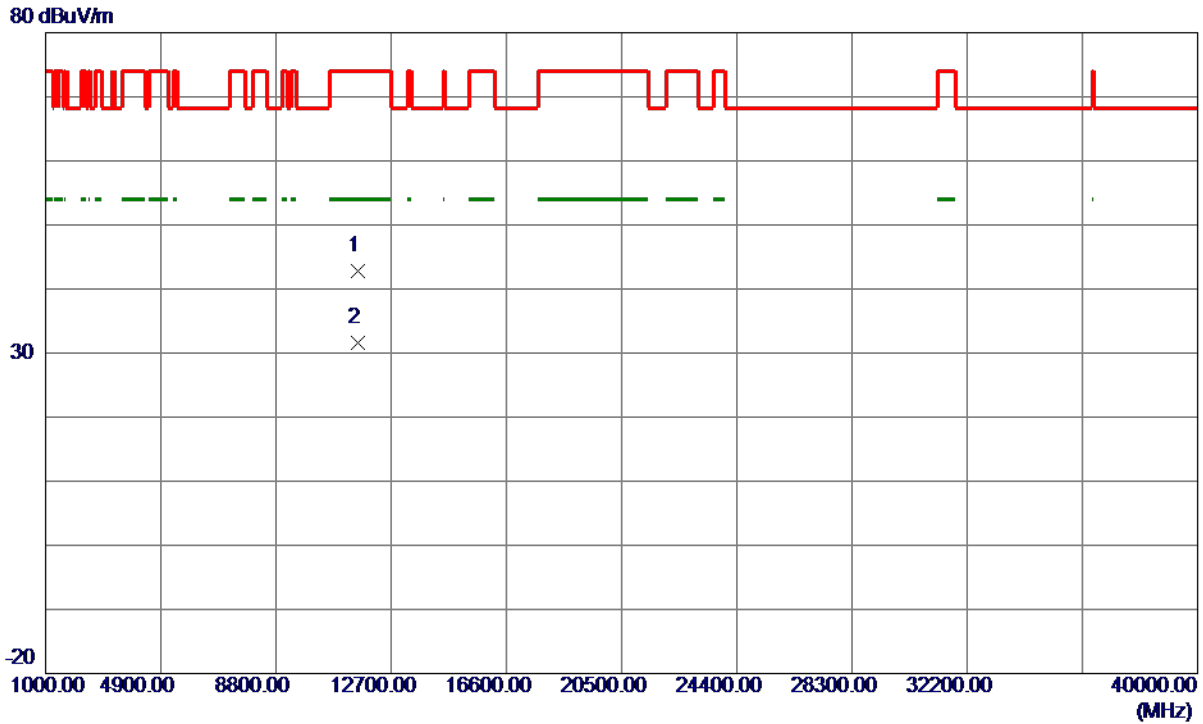
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	5786.8000	88.16	15.78	103.94	122.20	-18.26	Peak	No Limit
2	5850.0000	38.15	15.90	54.05	122.20	-68.15	Peak	
3	5860.0000	39.44	15.92	55.36	109.40	-54.04	Peak	

REMARKS:

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

Orthogonal Axis	X
Test Mode	UNII-3_TX N (HT40) Mode 5795 MHz

Vertical



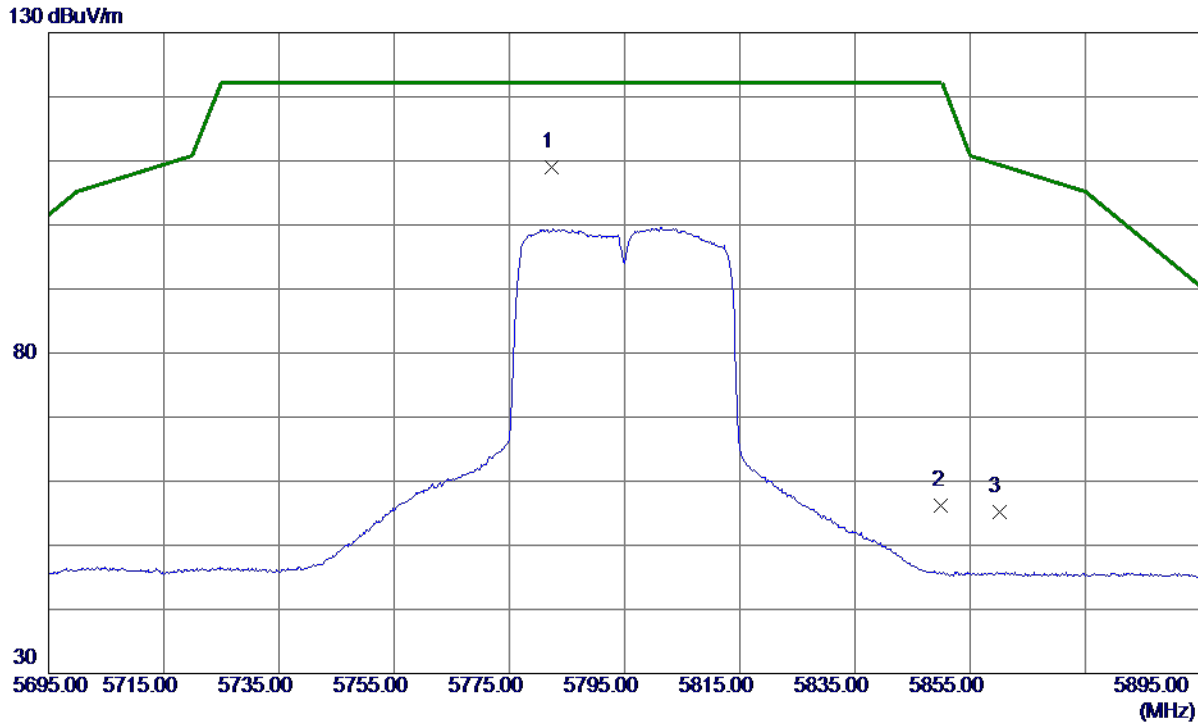
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	11585.5750	31.65	11.24	42.89	74.00	-31.11	Peak	
2 *	11589.9500	20.28	11.25	31.53	54.00	-22.47	AVG	

REMARKS:

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

Orthogonal Axis	X
Test Mode	UNII-3_TX N (HT40) Mode 5795 MHz

Horizontal



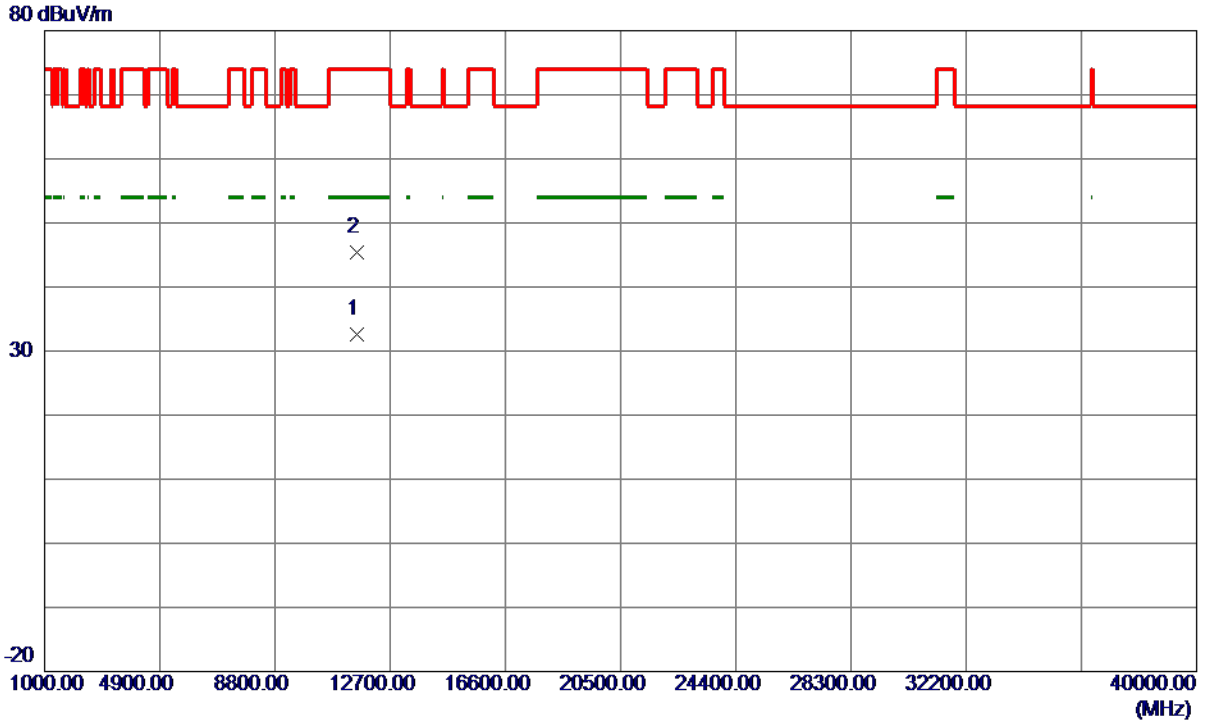
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	5782.3000	93.19	15.77	108.96	122.20	-13.24	Peak	No Limit
2	5850.0000	40.34	15.90	56.24	122.20	-65.96	Peak	
3	5860.0000	39.35	15.92	55.27	109.40	-54.13	Peak	

REMARKS:

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

Orthogonal Axis	X
Test Mode	UNII-3_TX N (HT40) Mode 5795 MHz

Horizontal



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	11589.4000	21.38	11.25	32.63	54.00	-21.37	AVG	
2	11593.7750	34.09	11.25	45.34	74.00	-28.66	Peak	

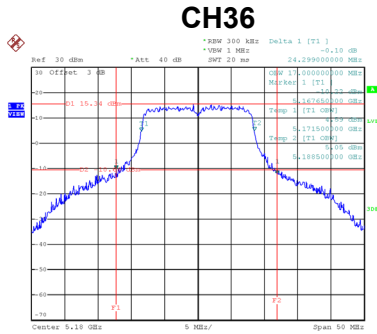
REMARKS:

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

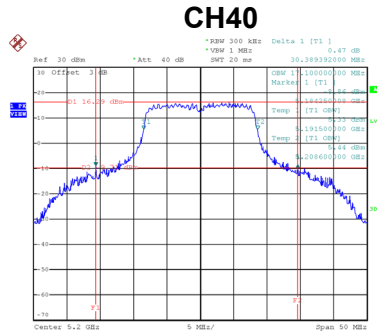
APPENDIX E - BANDWIDTH

Test Mode	UNII-1_TX A Mode
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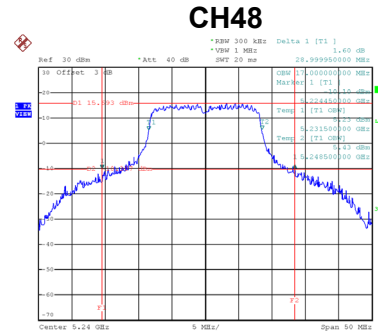
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99 % Emission Bandwidth (MHz)
36	5180	24.30	17.00
40	5200	30.39	17.10
48	5240	29.00	17.00



Date: 9.AUG.2019 01:26:39



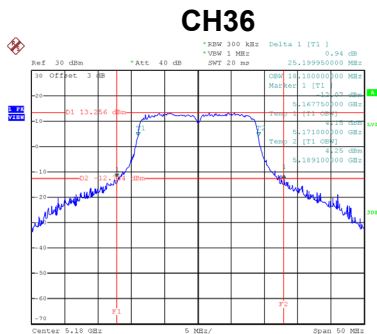
Date: 9.AUG.2019 01:27:34



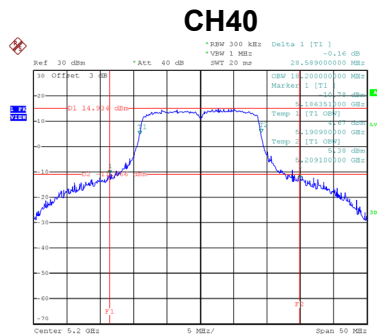
Date: 9.AUG.2019 01:28:40

Test Mode	UNII-1_TX N (HT20) Mode
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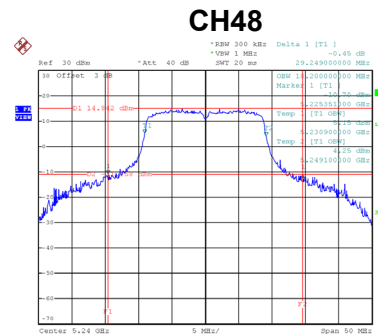
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99 % Emission Bandwidth (MHz)
36	5180	25.20	18.10
40	5200	28.59	18.20
48	5240	29.25	18.20



Date: 9.AUG.2019 01:42:33



Date: 9.AUG.2019 01:43:09

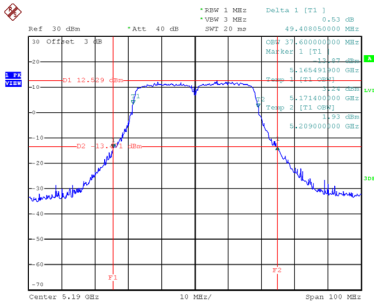


Date: 9.AUG.2019 01:43:41

Test Mode	UNII-1_TX N (HT40) Mode
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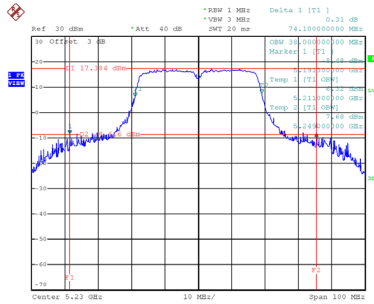
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99 % Emission Bandwidth (MHz)
38	5190	49.41	37.60
46	5230	74.10	38.00

CH38



Date: 9.AUG.2019 01:52:39

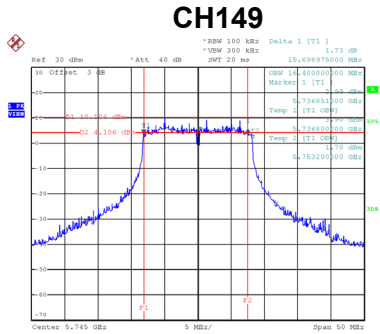
CH46



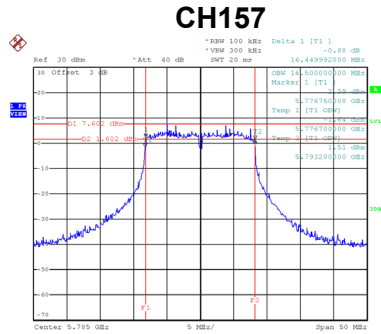
Date: 9.AUG.2019 01:53:35

Test Mode	UNII-3_TX A Mode
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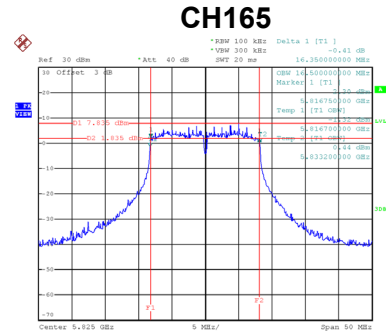
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	6 dB Bandwidth Min. Limit (kHz)	Result
149	5745	15.70	500	Complies
157	5785	16.45	500	Complies
165	5825	16.35	500	Complies



Date: 9.AUG.2019 01:30:16

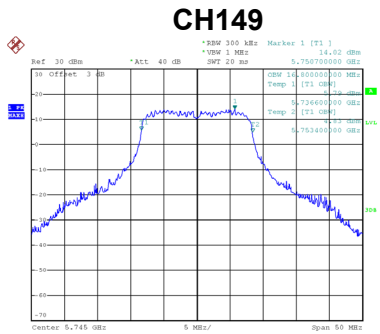


Date: 9.AUG.2019 01:37:38

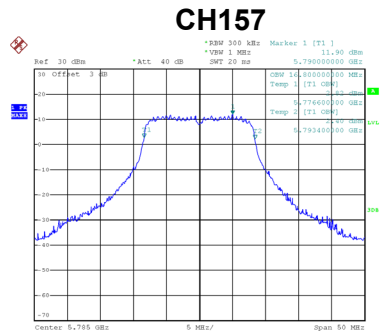


Date: 9.AUG.2019 01:40:02

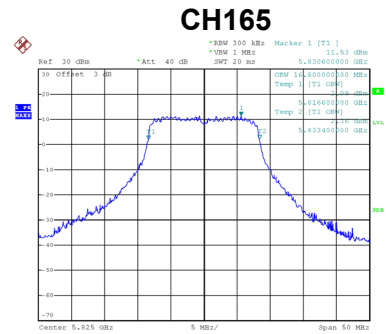
Channel	Frequency (MHz)	99 % Emission Bandwidth (MHz)	Result
149	5745	16.80	Complies
157	5785	16.80	Complies
165	5825	16.80	Complies



Date: 9.AUG.2019 01:31:33



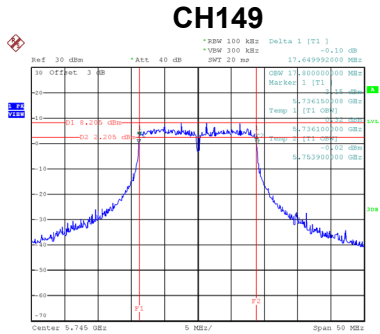
Date: 9.AUG.2019 01:38:22



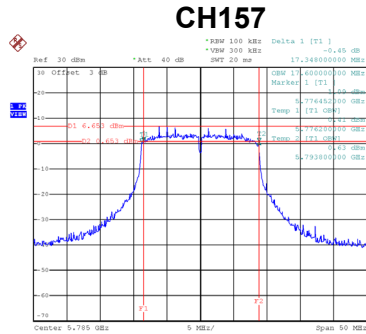
Date: 9.AUG.2019 01:41:17

Test Mode	UNII-3_TX N (HT20) Mode
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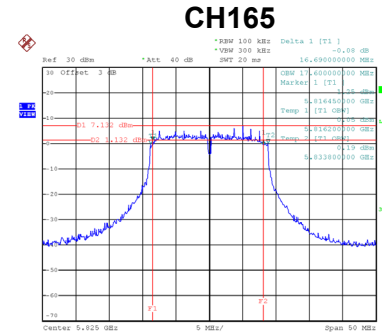
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	6 dB Bandwidth Min. Limit (kHz)	Result
149	5745	17.65	500	Complies
157	5785	17.35	500	Complies
165	5825	16.69	500	Complies



Date: 9.AUG.2019 01:44:24

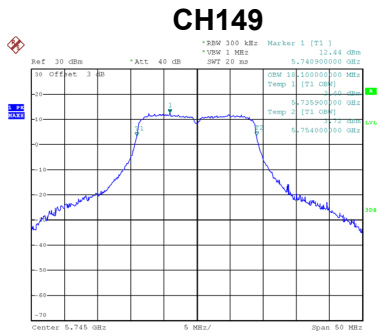


Date: 9.AUG.2019 01:47:00

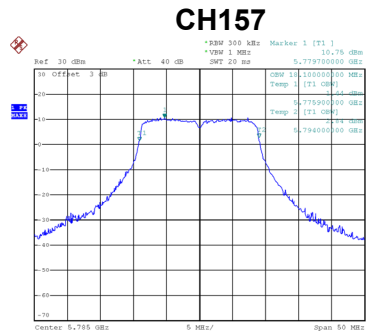


Date: 9.AUG.2019 01:49:30

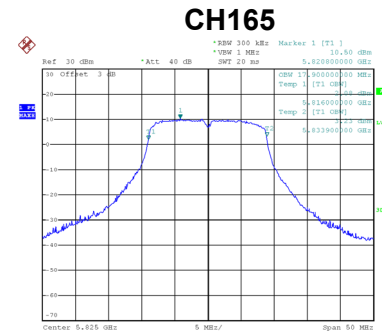
Channel	Frequency (MHz)	99 % Emission Bandwidth (MHz)	Result
149	5745	18.10	Complies
157	5785	18.10	Complies
165	5825	17.90	Complies



Date: 9.AUG.2019 01:45:49



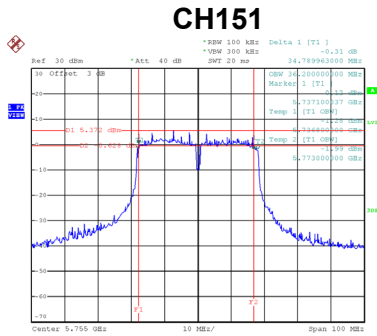
Date: 9.AUG.2019 02:27:23



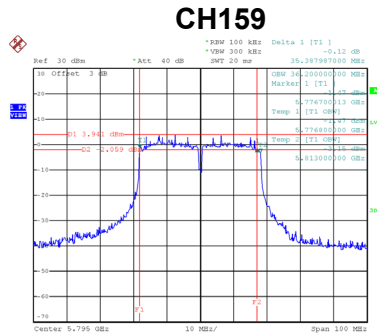
Date: 9.AUG.2019 01:50:40

Test Mode	UNII-3_TX N (HT40) Mode
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Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	6 dB Bandwidth Min. Limit (kHz)	Result
151	5755	34.79	500	Complies
159	5795	35.39	500	Complies

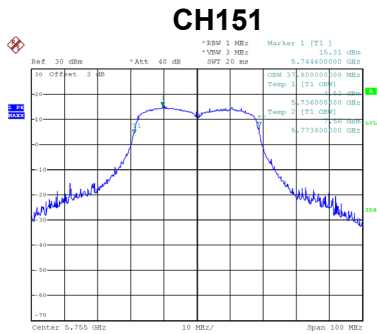


Date: 9.AUG.2019 01:55:14

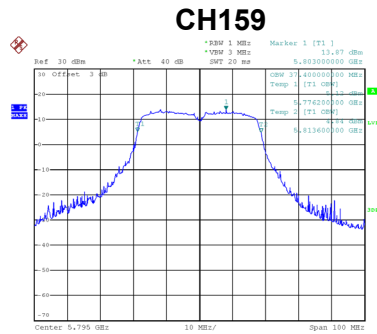


Date: 9.AUG.2019 01:57:17

Channel	Frequency (MHz)	99 % Emission Bandwidth (MHz)	Result
151	5755	37.80	Complies
159	5795	37.40	Complies



Date: 9.AUG.2019 01:55:53



Date: 9.AUG.2019 01:57:55

APPENDIX F - MAXIMUM OUTPUT POWER

Test Mode	UNII-1_TX A Mode_Ant. 1
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Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
36	5180	21.51	0.00	21.51	30.00	1.00	Complies
40	5200	21.53	0.00	21.53	30.00	1.00	Complies
48	5240	21.85	0.00	21.85	30.00	1.00	Complies

Test Mode	UNII-1_TX A Mode_Ant. 2
-----------	-------------------------

Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
36	5180	21.76	0.00	21.76	30.00	1.00	Complies
40	5200	21.88	0.00	21.88	30.00	1.00	Complies
48	5240	21.84	0.00	21.84	30.00	1.00	Complies

Test Mode	UNII-1_TX A Mode_Total
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Channel	Frequency (MHz)	Output Power (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
36	5180	24.65	30.00	1.00	Complies
40	5200	24.72	30.00	1.00	Complies
48	5240	24.86	30.00	1.00	Complies

Test Mode	UNII-1_TX N (HT20) Mode_Ant. 1
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Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
36	5180	21.51	0.00	21.51	30.00	1.00	Complies
40	5200	21.85	0.00	21.85	30.00	1.00	Complies
48	5240	21.56	0.00	21.56	30.00	1.00	Complies

Test Mode	UNII-1_TX N (HT20) Mode_Ant. 2
-----------	--------------------------------

Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
36	5180	21.56	0.00	21.56	30.00	1.00	Complies
40	5200	21.72	0.00	21.72	30.00	1.00	Complies
48	5240	21.75	0.00	21.75	30.00	1.00	Complies

Test Mode	UNII-1_TX N (HT20) Mode_Total
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Channel	Frequency (MHz)	Output Power (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
36	5180	24.55	30.00	1.00	Complies
40	5200	24.80	30.00	1.00	Complies
48	5240	24.67	30.00	1.00	Complies

Test Mode	UNII-1_TX N (HT40) Mode_Ant. 1
-----------	--------------------------------

Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
38	5190	16.42	0.00	16.42	30.00	1.00	Complies
46	5230	21.55	0.00	21.55	30.00	1.00	Complies

Test Mode	UNII-1_TX N (HT40) Mode_Ant. 2
-----------	--------------------------------

Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
38	5190	16.47	0.00	16.47	30.00	1.00	Complies
46	5230	21.62	0.00	21.62	30.00	1.00	Complies

Test Mode	UNII-1_TX N (HT40) Mode_Total
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Channel	Frequency (MHz)	Output Power (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
38	5190	19.46	30.00	1.00	Complies
46	5230	24.60	30.00	1.00	Complies

Test Mode	UNII-3_TX A Mode_Ant. 1
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Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
149	5745	18.69	0.00	18.69	30.00	1.00	Complies
157	5785	17.63	0.00	17.63	30.00	1.00	Complies
165	5825	17.52	0.00	17.52	30.00	1.00	Complies

Test Mode	UNII-3_TX A Mode_Ant. 2
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Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
149	5745	18.70	0.00	18.70	30.00	1.00	Complies
157	5785	17.83	0.00	17.83	30.00	1.00	Complies
165	5825	17.51	0.00	17.51	30.00	1.00	Complies

Test Mode	UNII-3_TX A Mode_Total
-----------	------------------------

Channel	Frequency (MHz)	Output Power (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
149	5745	21.71	30.00	1.00	Complies
157	5785	20.74	30.00	1.00	Complies
165	5825	20.53	30.00	1.00	Complies

Test Mode	UNII-3_TX N (HT20) Mode_Ant. 1
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Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
149	5745	17.50	0.00	17.50	30.00	1.00	Complies
157	5785	16.55	0.00	16.55	30.00	1.00	Complies
165	5825	16.51	0.00	16.51	30.00	1.00	Complies

Test Mode	UNII-3_TX N (HT20) Mode_Ant. 2
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Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
149	5745	17.86	0.00	17.86	30.00	1.00	Complies
157	5785	16.95	0.00	16.95	30.00	1.00	Complies
165	5825	16.62	0.00	16.62	30.00	1.00	Complies

Test Mode	UNII-3_TX N (HT20) Mode_Total
-----------	-------------------------------

Channel	Frequency (MHz)	Output Power (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
149	5745	20.69	30.00	1.00	Complies
157	5785	19.76	30.00	1.00	Complies
165	5825	19.58	30.00	1.00	Complies

Test Mode	UNII-3_TX N (HT40) Mode_Ant. 1
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Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
151	5755	16.61	0.00	16.61	30.00	1.00	Complies
159	5795	16.53	0.00	16.53	30.00	1.00	Complies

Test Mode	UNII-3_TX N (HT40) Mode_Ant. 2
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Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
151	5755	16.62	0.00	16.62	30.00	1.00	Complies
159	5795	16.65	0.00	16.65	30.00	1.00	Complies

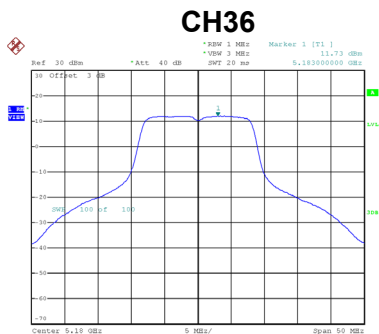
Test Mode	UNII-3_TX N (HT40) Mode_Total
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Channel	Frequency (MHz)	Output Power (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
151	5755	19.63	30.00	1.00	Complies
159	5795	19.60	30.00	1.00	Complies

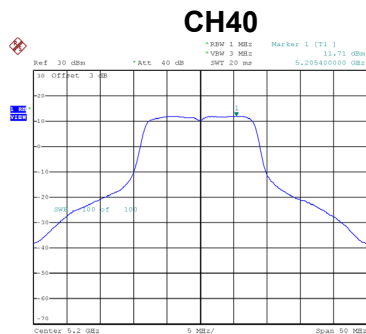
APPENDIX G - POWER SPECTRAL DENSITY

Test Mode	UNII-1_TX A Mode_Ant. 1
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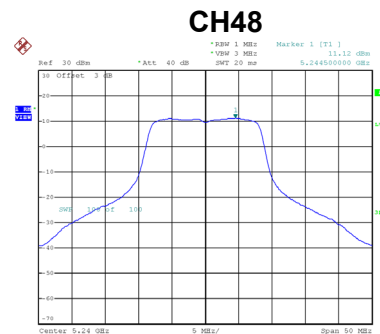
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Result
36	5180	11.73	0.00	11.73	17.00	Complies
40	5200	11.71	0.00	11.71	17.00	Complies
48	5240	11.12	0.00	11.12	17.00	Complies



Date: 15.AUG.2019 11:23:23



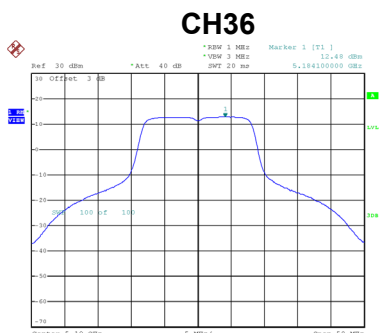
Date: 15.AUG.2019 11:35:21



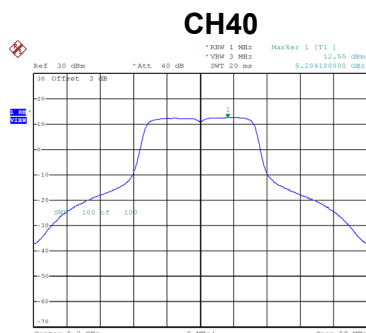
Date: 15.AUG.2019 11:35:58

Test Mode	UNII-1_TX A Mode_Ant. 2
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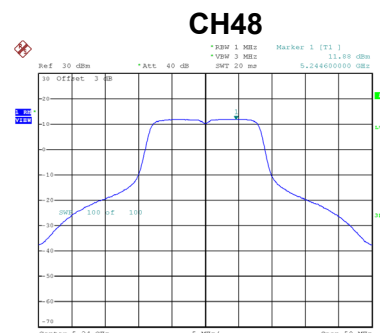
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Result
36	5180	12.48	0.00	12.48	17.00	Complies
40	5200	12.55	0.00	12.55	17.00	Complies
48	5240	11.88	0.00	11.88	17.00	Complies



Date: 15.AUG.2019 11:52:35



Date: 15.AUG.2019 11:53:19



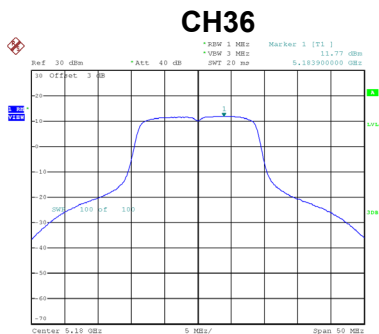
Date: 15.AUG.2019 11:53:54

Test Mode	UNII-1_TX A Mode_Total
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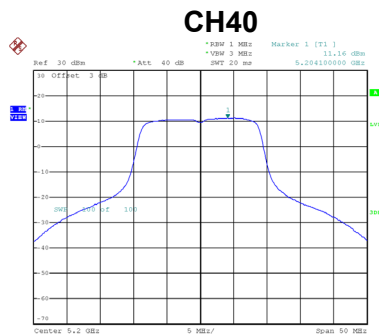
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
36	5180	15.13	17.00	Complies
40	5200	15.16	17.00	Complies
48	5240	14.53	17.00	Complies

Test Mode UNII-1_TX N (HT20) Mode_Ant. 1

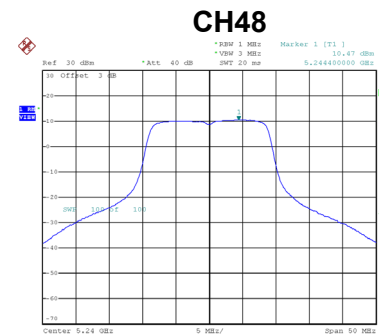
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Result
36	5180	11.77	0.00	11.77	17.00	Complies
40	5200	11.16	0.00	11.16	17.00	Complies
48	5240	10.47	0.00	10.47	17.00	Complies



Date: 15.AUG.2019 11:41:39



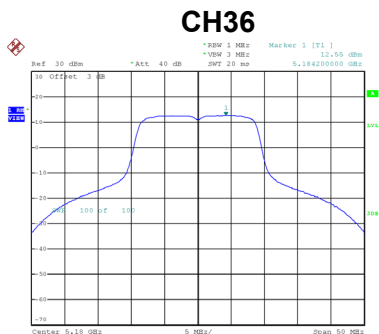
Date: 15.AUG.2019 11:43:39



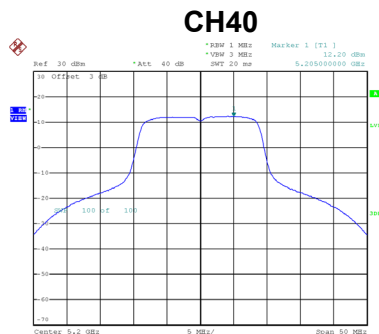
Date: 15.AUG.2019 11:44:14

Test Mode UNII-1_TX N (HT20) Mode_Ant. 2

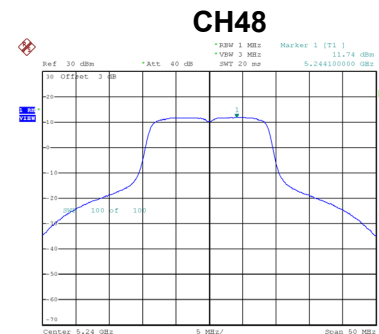
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Result
36	5180	12.55	0.00	12.55	17.00	Complies
40	5200	12.20	0.00	12.20	17.00	Complies
48	5240	11.74	0.00	11.74	17.00	Complies



Date: 15.AUG.2019 12:01:46



Date: 15.AUG.2019 12:02:23



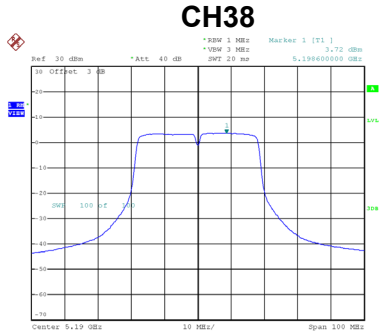
Date: 15.AUG.2019 12:03:11

Test Mode	UNII-1_TX N (HT20) Mode_Total
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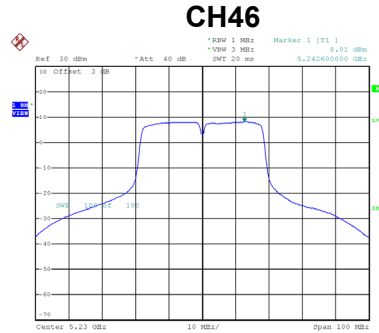
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
36	5180	15.19	17.00	Complies
40	5200	14.72	17.00	Complies
48	5240	14.16	17.00	Complies

Test Mode UNII-1_TX N (HT40) Mode_Ant. 1

Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Result
38	5190	3.72	0.00	3.72	17.00	Complies
46	5230	8.01	0.00	8.01	17.00	Complies



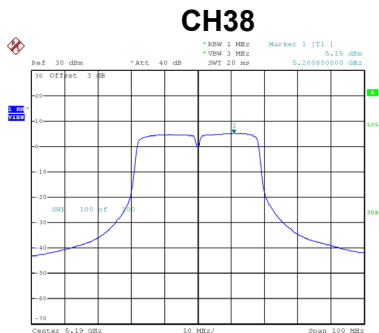
Date: 15.AUG.2019 11:48:21



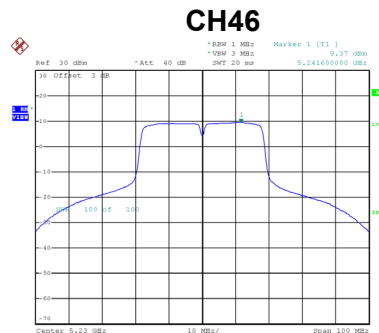
Date: 15.AUG.2019 11:49:17

Test Mode UNII-1_TX N (HT40) Mode_Ant. 2

Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Result
38	5190	5.15	0.00	5.15	17.00	Complies
46	5230	9.37	0.00	9.37	17.00	Complies



Date: 15.AUG.2019 12:07:12



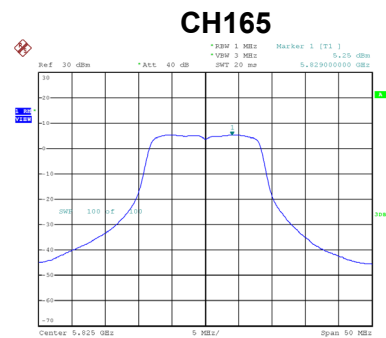
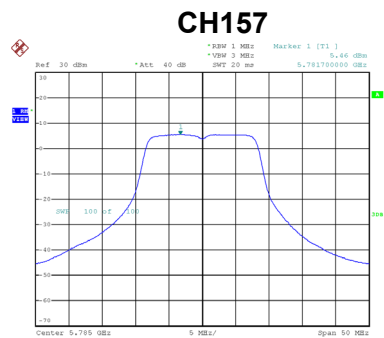
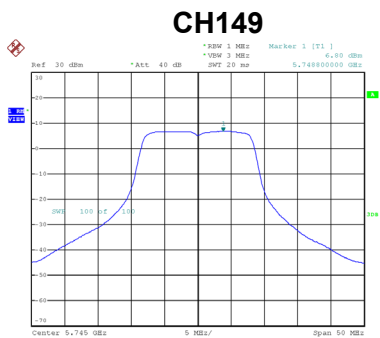
Date: 15.AUG.2019 12:07:55

Test Mode	UNII-1_TX N (HT40) Mode_Total
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Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
38	5190	7.50	17.00	Complies
46	5230	11.75	17.00	Complies

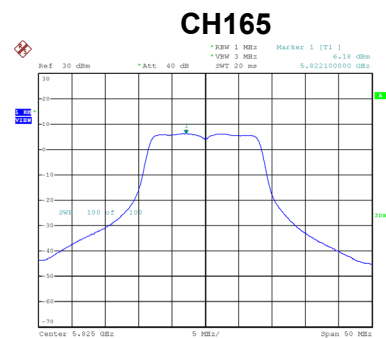
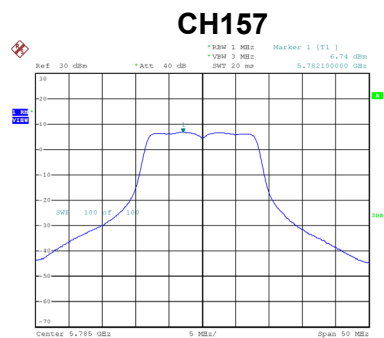
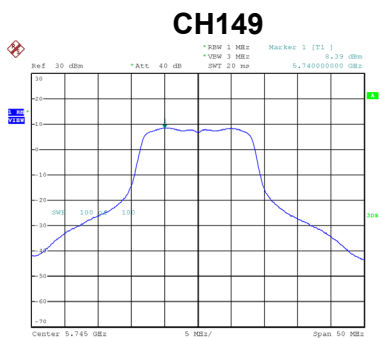
Test Mode	UNII-3_TX A Mode_Ant. 1
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Channel	Frequency (MHz)	Power Spectral Density (dBm/500 kHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/500 kHz)	Max. Limit (dBm/500 kHz)	Result
149	5745	6.80	0.00	6.80	30.00	Complies
157	5785	5.46	0.00	5.46	30.00	Complies
165	5825	5.25	0.00	5.25	30.00	Complies



Test Mode	UNII-3_TX A Mode_Ant. 2
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Channel	Frequency (MHz)	Power Spectral Density (dBm/500 kHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/500 kHz)	Max. Limit (dBm/500 kHz)	Result
149	5745	8.39	0.00	8.39	30.00	Complies
157	5785	6.74	0.00	6.74	30.00	Complies
165	5825	6.18	0.00	6.18	30.00	Complies

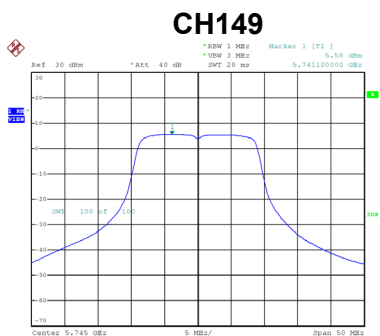


Test Mode	UNII-3_TX A Mode_Total
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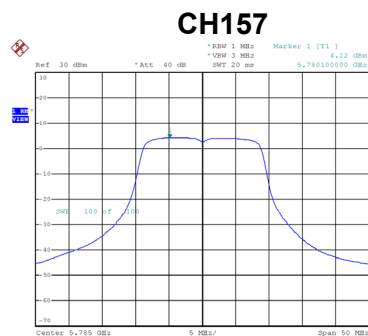
Channel	Frequency (MHz)	Power Spectral Density (dBm/500 kHz)	Max. Limit (dBm/500 kHz)	Result
149	5745	10.68	30.00	Complies
157	5785	9.16	30.00	Complies
165	5825	8.75	30.00	Complies

Test Mode UNII-3_TX N (HT20) Mode_Ant. 1

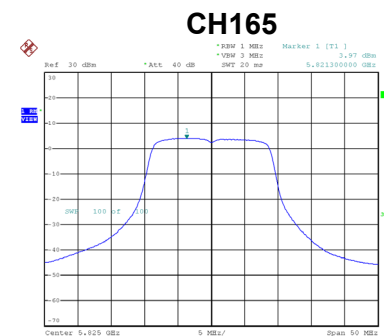
Channel	Frequency (MHz)	Power Spectral Density (dBm/500 kHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/500 kHz)	Max. Limit (dBm/500 kHz)	Result
149	5745	5.58	0.00	5.58	30.00	Complies
157	5785	4.22	0.00	4.22	30.00	Complies
165	5825	3.97	0.00	3.97	30.00	Complies



Date: 15.AUG.2019 11:44:55



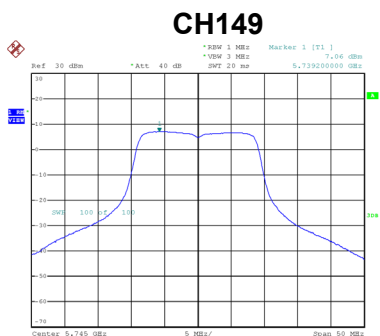
Date: 15.AUG.2019 11:45:47



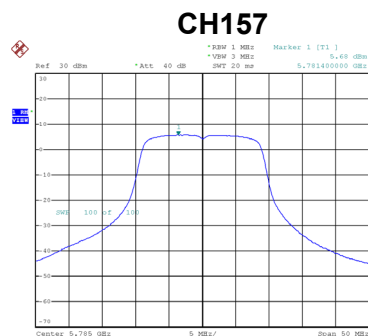
Date: 15.AUG.2019 11:46:35

Test Mode UNII-3_TX N (HT20) Mode_Ant. 2

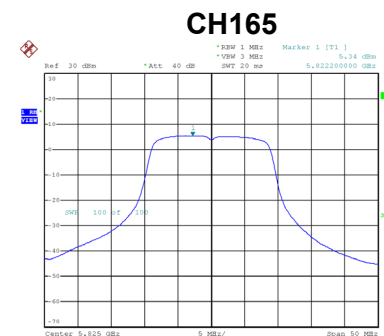
Channel	Frequency (MHz)	Power Spectral Density (dBm/500 kHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/500 kHz)	Max. Limit (dBm/500 kHz)	Result
149	5745	7.06	0.00	7.06	30.00	Complies
157	5785	5.68	0.00	5.68	30.00	Complies
165	5825	5.34	0.00	5.34	30.00	Complies



Date: 15.AUG.2019 12:03:53



Date: 15.AUG.2019 12:04:51



Date: 15.AUG.2019 12:05:36

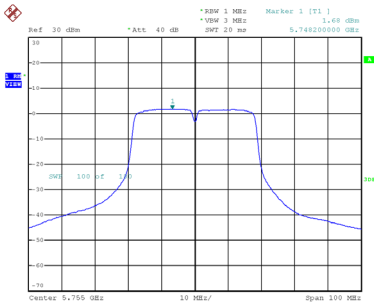
Test Mode	UNII-3_TX N (HT20) Mode_Total
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Channel	Frequency (MHz)	Power Spectral Density (dBm/500 kHz)	Max. Limit (dBm/500 kHz)	Result
149	5745	9.39	30.00	Complies
157	5785	8.02	30.00	Complies
165	5825	7.72	30.00	Complies

Test Mode UNII-3_TX N (HT40) Mode_Ant. 1

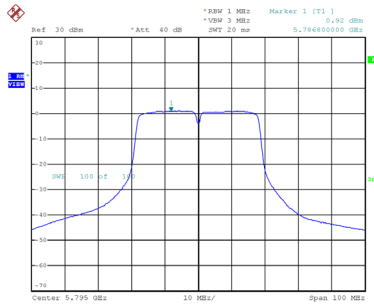
Channel	Frequency (MHz)	Power Spectral Density (dBm/500 kHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/500 kHz)	Max. Limit (dBm/500 kHz)	Result
151	5755	1.68	0.00	1.68	30.00	Complies
159	5795	0.92	0.00	0.92	30.00	Complies

CH151



Date: 15.AUG.2019 11:50:24

CH159

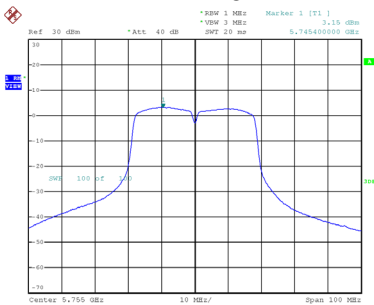


Date: 15.AUG.2019 11:51:18

Test Mode UNII-3_TX N (HT40) Mode_Ant. 2

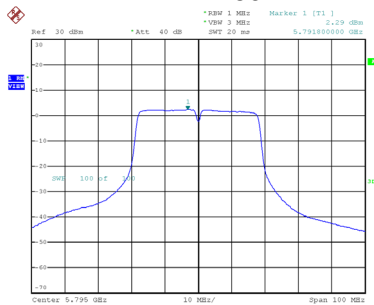
Channel	Frequency (MHz)	Power Spectral Density (dBm/500 kHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/500 kHz)	Max. Limit (dBm/500 kHz)	Result
151	5755	3.15	0.00	3.15	30.00	Complies
159	5795	2.29	0.00	2.29	30.00	Complies

CH151



Date: 15.AUG.2019 12:08:43

CH159



Date: 15.AUG.2019 12:09:14

Test Mode	UNII-3_TX N (HT40) Mode_Total
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Channel	Frequency (MHz)	Power Spectral Density (dBm/500 kHz)	Max. Limit (dBm/500 kHz)	Result
151	5755	5.49	30.00	Complies
159	5795	4.67	30.00	Complies

APPENDIX H - FREQUENCY STABILITY

Test Mode	UNII-1
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Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)
(V)	5180.0000
132	5180.0000
120	5179.9950
108	5180.0000
Maximum Deviation (MHz)	0.0050
Maximum Deviation (ppm)	0.9628

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)
(°C)	5180.0000
-5	5179.9750
5	5179.9800
15	5179.9799
25	5179.9750
35	5179.9597
45	5179.9950
50	5180.0000
Maximum Deviation (MHz)	0.0403
Maximum Deviation (ppm)	7.7847

Test Mode	UNII-3
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Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)
(V)	5745.0000
132	5744.9600
120	5744.9600
108	5744.9800
Maximum Deviation (MHz)	0.0400
Maximum Deviation (ppm)	6.9648

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)
(°C)	5745.0000
-5	5744.9951
5	5744.9750
15	5744.9800
25	5744.9800
35	5744.9599
45	5744.9599
50	5744.9800
Maximum Deviation (MHz)	0.0401
Maximum Deviation (ppm)	6.9843

End of Test Report