FCC Radio Test Report

FCC ID: 2BGSB-5989811

The report concerns: Original Grant

Report Reference No. ..... :	24EFSS05047 03991
Date Sample(s) Received ..... :	2024-05-22
Date of Tested ..... :	From 2024-05-22 to 2024-06-18
Date of issue ..... :	2024-06-18
Testing Laboratory..... :	DongGuanShuoXin Electronic Technology Co., Ltd.
Address ..... :	Zone A, 1F, No. 6, XinGang Road YuanGang Street, XinAn District, ChangAn Town, DongGuan City, GuangDong, China
Applicant's name ..... :	XIEXUN ELECTRONIC(JIAN)CO.,LTD
Address ..... :	Industrial Park, Ji'an County, Ji' an , Jiangxi, China
Equipment ..... :	Wireless HDMI Transmitter & Receiver
Trade Mark ..... :	/
Model ..... :	8B19-3190001R-FG
Ratings ..... :	I/P: DC 5V/1A

Test Engineer: Blue Qiu

Responsible Engineer : Smile Wang

Authorized Signatory: King Wang

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1. TEST REPORT DECLARE

Applicant	XIEXUN ELECTRONIC(JIAN)CO.,LTD
Address	T Industrial Park, Ji'an County, Ji' an , Jiangxi, China
Manufacturer	XIEXUN ELECTRONIC(JIAN)CO.,LTD
Address	T Industrial Park, Ji'an County, Ji' an , Jiangxi, China
Factory	XIEXUN ELECTRONIC(JIAN)CO.,LTD
Address	T Industrial Park, Ji'an County, Ji' an , Jiangxi, China
Equipment	Wireless HDMI Transmitter & Receiver
Model No.	8B19-3190001R-FG
Trade Mark	/
Standard	FCC Part15, Subpart E(15.407) ANSI C63.10-2013 FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01

We Declare:

The equipment described above is tested by DongGuan ShuoXin Electronic Technology Co., Ltd(ATT). and in the configuration tested the equipment complied with the standards specified above. The test results are contained in this test report and DongGuan ShuoXin Electronic Technology Co., Ltd.(ATT) is assumed of full responsibility for the accuracy and completeness of these tests.

ATT is not responsible for the sampling stage, so the results only apply to the sample as received.

ATT's reports apply only to the specific samples tested under conditions. It is manufacture's responsibility to ensure that additional production units of this model are manufactured with the identical electrical and mechanical components. ATT shall have no liability for any declarations, inferences or generalizations drawn by the client or others from ATT issued reports.

2. SUMMARY OF TEST RESULTS

The EUT have been tested according to the applicable standards as referenced below:

Standard(s) Section FCC	Test Item	Judgment	Remark
15.207 15.407(b)	AC Power Line Conducted Emissions	PASS	------
15.407(b) 15.205(a) 15.209(a)	Radiated Emissions	PASS	------
15.407(a) 15.407(e)	Spectrum Bandwidth	PASS	------
15.407(a)	Maximum Output Power	PASS	------
15.407(a)	Power Spectral Density	PASS	------
15.407(g)	Frequency Stability	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.

2.1 MEASUREMENT UNCERTAINTY

Test Item	Uncertainty
Uncertainty for Conduction emission test (9kHz-150kHz)	3.7 dB
Uncertainty for Conduction emission test (150kHz-30MHz)	3.3 dB
Uncertainty for Radiation Emission test (30MHz-200MHz)	4.60 dB (Polarize: V)
	4.60 dB (Polarize: H)
Uncertainty for Radiation Emission test (200MHz-1GHz)	6.10 dB (Polarize: V)
	5.08 dB (Polarize: H)
Uncertainty for Radiation Emission test (1GHz-6GHz)	5.01 dB (Polarize: V)
	5.01 dB (Polarize: H)
Uncertainty for Radiation Emission test (6GHz-18GHz)	5.26 dB (Polarize: V)
	5.26 dB (Polarize: H)
Uncertainty for Radiation Emission test (18GHz-40GHz)	5.06 dB (Polarize: V)
	5.06 dB (Polarize: H)
Uncertainty for radio frequency	±0.048kHz
Uncertainty for conducted RF Power	±0.32dB

Note:

This uncertainty represents an expanded uncertainty expressed at approximately the 95%confidence level using a coverage factor of k=2.

Test Facility:

The Test site used by DongGuan ShuoXin Electronic Technology Co., Ltd. to collect test data is located on the Zone A, 1F, No. 6, XinGang Road YuanGang Street, XinAn District, ChangAn Town, DongGuan City, GuangDong, China

The test facility is recognized, certified, or accredited by the following organizations:

Item	Registration No.	Expiration Date
CNAS	L3098	2024-08-27
A2LA	4893.01	2026-06-30
Innovation, Science and Economic Development Canada (ISED)	11033A	2026-06-30
Federal Communications Commission (FCC)	171688 Designation No.:CN1235	2026-06-30

3 GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

Equipment	Wireless HDMI Transmitter & Receiver	
Brand Name	/	
Test Model	8B19-3190001R-FG	
Series Model	N/A	
Model Difference(s)	N/A	
Hardware Version	V1.0	
Software Version	V1.0	
Power Source	DC Mains	
Power Rating	I/P: DC 5V/1A	
Operation Frequency Bands	UNII-1: 5150 MHz~5250 MHz UNII-3: 5725 MHz~5850 MHz	
Modulation Type	OFDMA	
Bit Rate of Transmitter	Up to1200Mbps	
Operating Mode	IEEE 802.11a: 1TX IEEE 802.11n (HT20): 1TX	
Antenna Information	Antenna Type: PCB	Maximum Peak Gain: 2 dBi(Ant 1)(Provide by manufacturer)
Maximum Output Power for UNII-1 For FCC	IEEE 802.11a: -0.03dBm (0.0000993W) IEEE 802.11n (HT20): -0.02dBm (0.0000995W)	

Note:

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

IEEE 802.11a IEEE 802.11n (HT20)	
UNII-1	
Channel	Frequency (MHz)
36	5180
40	5200
44	5220
48	5240

IEEE 802.11a IEEE 802.11n (HT20)	
UNII-3	
Channel	Frequency (MHz)
149	5745
153	5765
157	5785
161	5805
165	5825

3.2 TEST MODES

	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 A Mode / CH149,CH157,CH165 (UNII-3)
Mode 4	TX N (HT20) Mode / CH149,CH157,CH165 (UNII-3)

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
TX Mode 37	TX N (HT20) Mode / CH36 (UNII-1)

Radiated emissions test - Below 1GHz	
Final Test Mode	Description
Mode 37	TX N (HT20) Mode / CH36 (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 A Mode / CH149,CH157,CH165 (UNII-3)
Mode 4	TX N (HT20) Mode / CH149,CH157,CH165 (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 A Mode / CH149,CH157,CH165 (UNII-3)
Mode 4	TX N (HT20) Mode / CH149,CH157,CH165 (UNII-3)

Note:

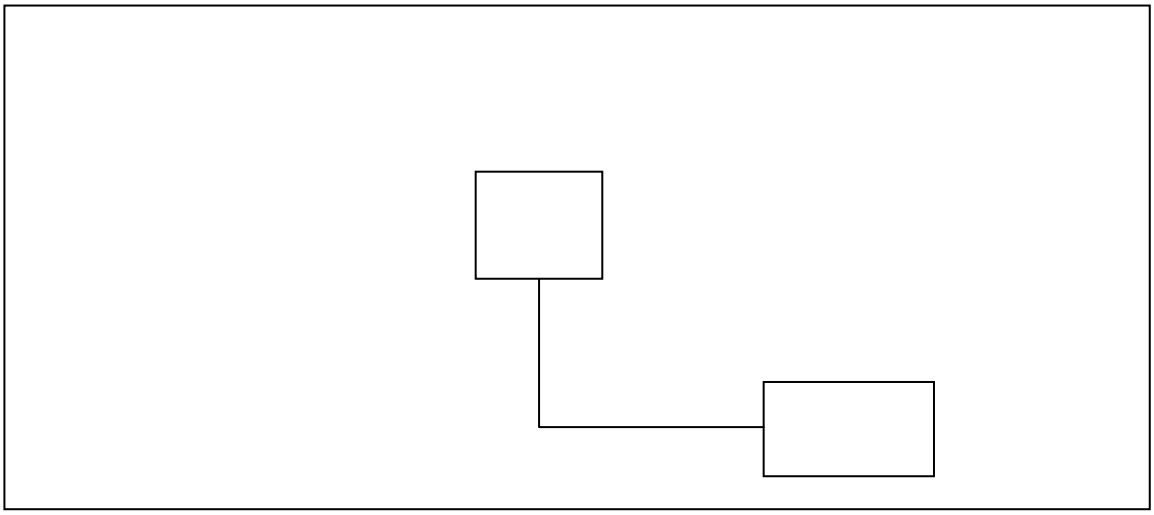
(1) For radiated emission below 1 GHz and AC power line conducted emissions test, the IEEE 802.11n20 channel 1 is found to be the worst case and recorded.

3.3 PARAMETERS OF TEST SOFTWARE

UNII-1			
Test Software	Stream1955		
Test Frequency (MHz)	5180	5200	5240
IEEE 802.11a	Default	Default	Default
IEEE 802.11n (HT20)	Default	Default	Default

UNII-3			
Test Software	Stream1955		
Test Frequency (MHz)	5745	5785	5825
IEEE 802.11a	Default	Default	Default
IEEE 802.11n (HT20)	Default	Default	Default

3.4 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED



3.5 SUPPORT UNITS

Item	Equipment	Brand	Model No.	Series No.
AE	Notebook	ACER	MS2367	32807810766

Item	Cable Type	Shielded Type	Ferrite Core	Length
C1	DC Cable	NO	NO	1m

3.6 TEST ENVIRONMENT CONDITIONS

Test Item	Temperature	Humidity	Test Voltage
AC Power Line Conducted Emissions	25°C	53%	DC 5V
Radiated Emissions-9K-30MHz	25°C	60%	DC 5V
Radiated Emissions-30 MHz to 1GHz	24°C	68%	DC 5V
Radiated Emissions-Above 1000 MHz	24°C	68%	DC 5V
Spectrum Bandwidth	25.3°C	44.8%	DC 5V
Maximum Output Power	25.3°C	44.8%	DC 5V
Power Spectral Density	25.3°C	44.8%	DC 5V
Frequency Stability	Normal, Extreme	44.8%	Normal, Extreme

3.7 DUTY CYCLE

All tests were performed under the condition of 100% Duty Cycle

NOTE:
For IEEE 802.11a,IEEE 802.11n (HT20) and IEEE 802.11ac (VHT20), IEEE 802.11ax (HE20):
For radiated emissions frequency above 1 GHz, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 1 kHz (Duty cycle < 98%).
For IEEE 802.11n (HT40) and IEEE 802.11ac (VHT40), IEEE 802.11ax (HE40):
For radiated emissions frequency above 1 GHz, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 2 kHz (Duty cycle < 98%).
For IEEE 802.11ac (VHT80), IEEE 802.11ax (HE80):
For radiated emissions frequency above 1 GHz, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 kHz (Duty cycle < 98%).

4. AC POWER LINE CONDUCTED EMISSIONS TEST

4.1 LIMIT

Frequency (MHz)	Limit (dBμV)	
	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

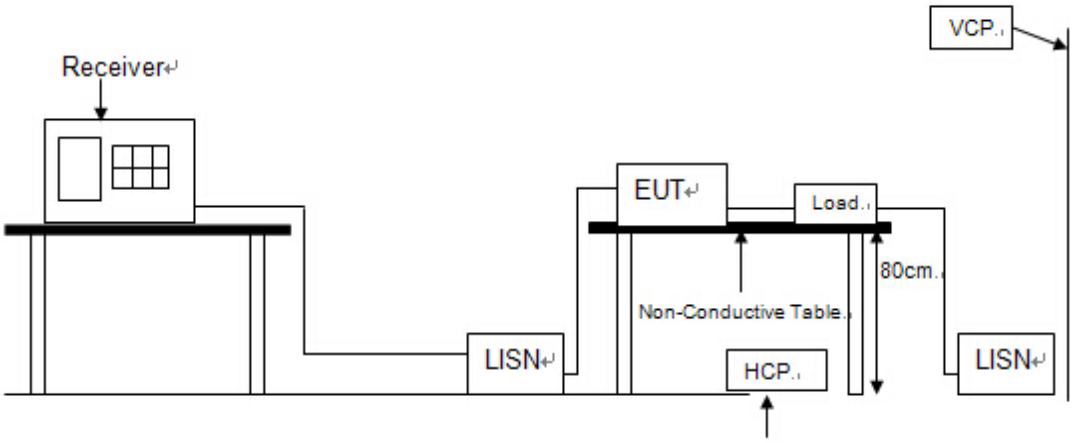
4.2 TEST PROCEDURE

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

4.3 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Pulse Limiter	MTS-systemtechnik	MTS-IMP-136	261115-010-0024	12/04/2024
2	EMI Test Receiver	R&S	ESCI	101308	11/29/2024
3	LISN	AFJ	LS16	16011103219	08/11/2024
4	LISN	Schwarzbeck	NSLK 8127	8127-432	08/11/2024
5	Measurement Software	Farad	EZ-EMC (Ver.ATT-03A)	N/A	N/A

4.4 TESTSETUP

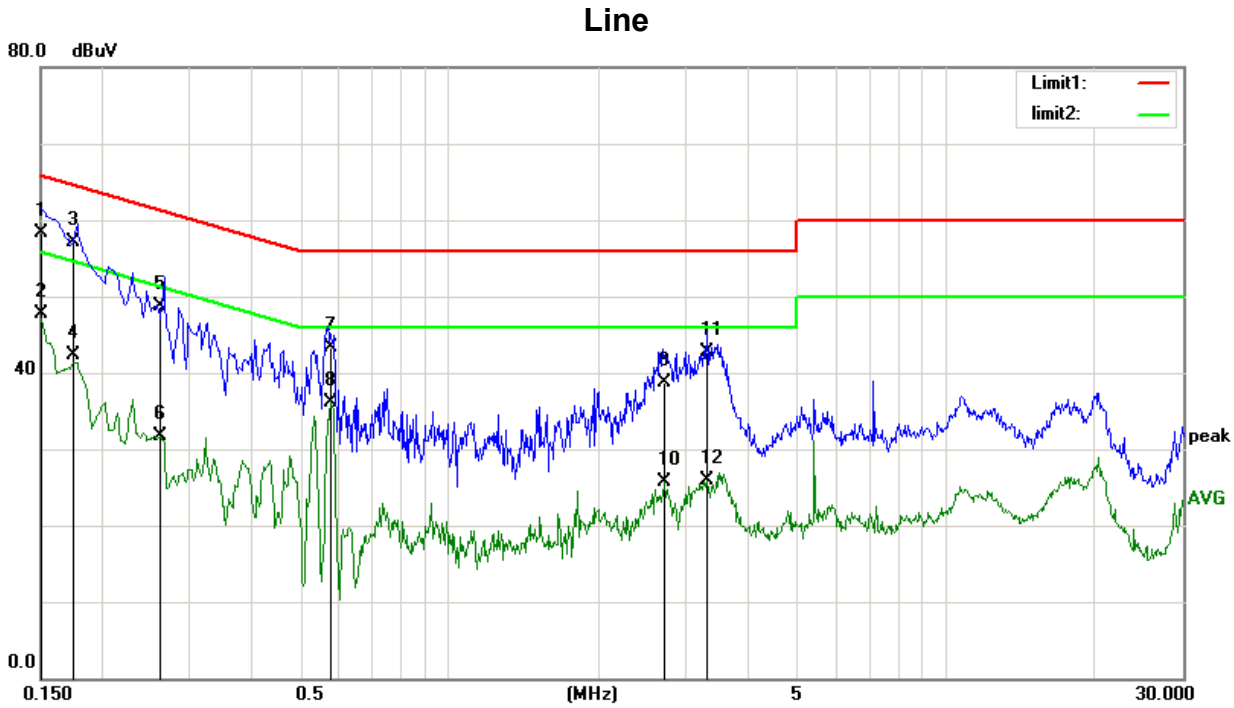


4.5 EUT OPERATION CONDITIONS

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

4.6 TEST RESULTS

Test Mode:	TX N (HT20) Mode / CH36 (UNII-1)

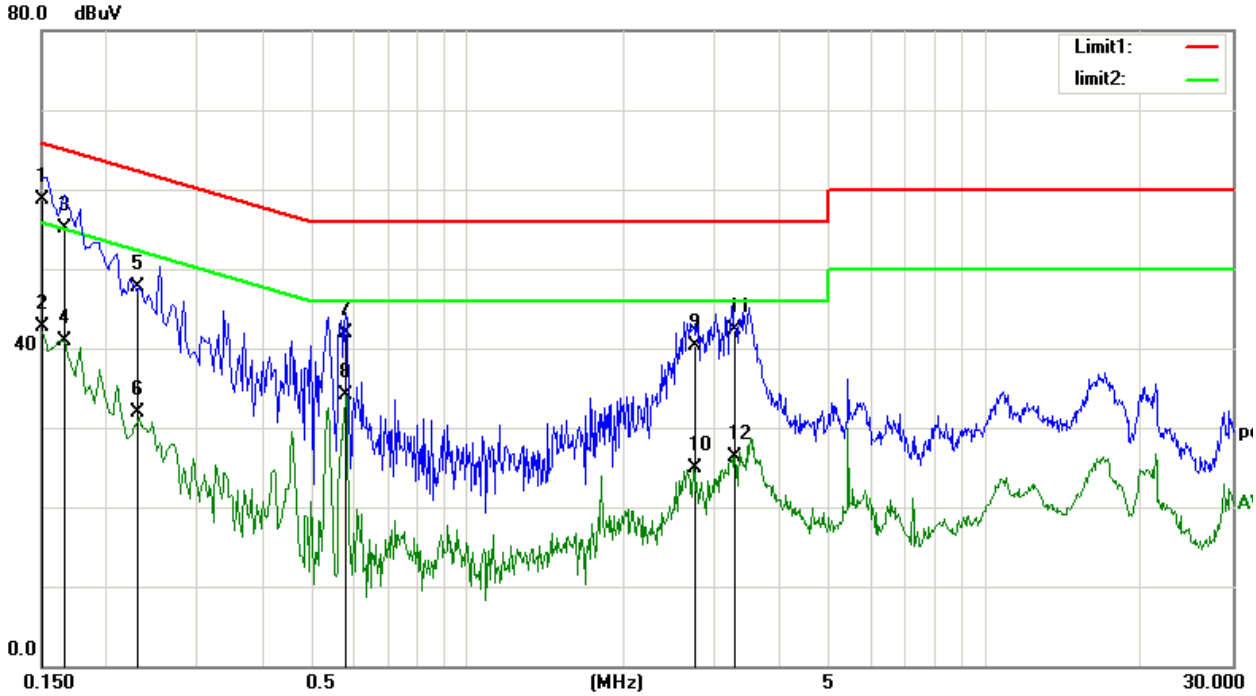


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1500	47.66	10.70	58.36	65.99	-7.63	QP
2	0.1500	37.07	10.70	47.77	55.99	-8.22	AVG
3	0.1740	46.52	10.59	57.11	64.76	-7.65	QP
4	0.1740	31.78	10.59	42.37	54.76	-12.39	AVG
5	0.2620	38.13	10.56	48.69	61.36	-12.67	QP
6	0.2620	21.10	10.56	31.66	51.36	-19.70	AVG
7	0.5780	32.57	10.64	43.21	56.00	-12.79	QP
8	0.5780	25.56	10.64	36.20	46.00	-9.80	AVG
9	2.7100	27.69	11.05	38.74	56.00	-17.26	QP
10	2.7100	14.63	11.05	25.68	46.00	-20.32	AVG
11	3.3100	31.49	11.20	42.69	56.00	-13.31	QP
12	3.3100	14.73	11.20	25.93	46.00	-20.07	AVG

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

Test Mode:	TX N (HT20) Mode / CH36 (UNII-1)

Neutral



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1500	48.04	10.70	58.74	65.99	-7.25	QP
2	0.1500	32.10	10.70	42.80	55.99	-13.19	AVG
3	0.1660	44.50	10.61	55.11	65.15	-10.04	QP
4	0.1660	30.29	10.61	40.90	55.15	-14.25	AVG
5	0.2300	37.11	10.58	47.69	62.45	-14.76	QP
6	0.2300	21.33	10.58	31.91	52.45	-20.54	AVG
7	0.5820	31.24	10.65	41.89	56.00	-14.11	QP
8	0.5820	23.54	10.65	34.19	46.00	-11.81	AVG
9	2.7300	29.17	11.06	40.23	56.00	-15.77	QP
10	2.7300	13.91	11.06	24.97	46.00	-21.03	AVG
11	3.2900	31.16	11.20	42.36	56.00	-13.64	QP
12	3.2900	15.08	11.20	26.28	46.00	-19.72	AVG

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

5. RADIATED EMISSIONSTEST

5.1 LIMIT

In case the emission fall within the restricted band specified on 15.205(a)&RSS-Gen 8.10, then the 15.209(a)&RSS-Gen 8.9 limit in the table below has to be followed.

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

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

LIMITS OF UNWANTED EMISSION OUT OF THE RESTRICTED BANDS

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

Note:

(1) The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength: $E = \frac{1000000\sqrt{30P}}{3}$ 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 25MHz 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 27dBm/MHz at the band edge.

(3) Radiation larger than 26.5GHz is background, so the following data only measures the maximum 26.5GHz

(4) Duty Cycle compensation less than 98% has been compensated in the test software prior to the implementation of the test

5.2 TEST PROCEDURE

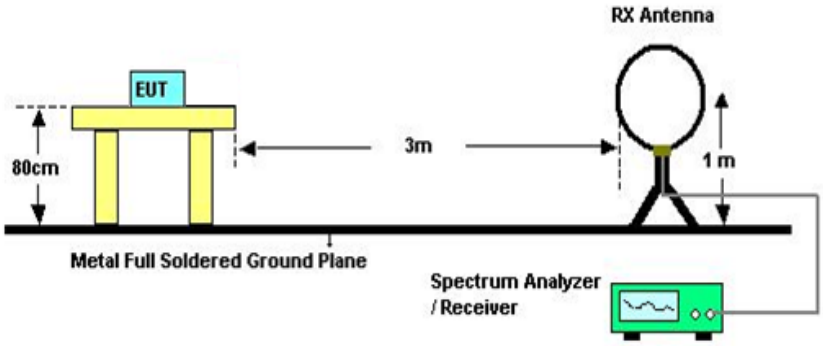
a. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1GHz)
b. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 1.5 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(above 1GHz)
c. The height of the equipment or of the substitution antenna shall be 0.8m 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 1GHz.
f. The initial step in collecting radiated emission data is a receiver peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
g. All readings are Peak unless otherwise stated QP in column of Note. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn‘t perform. (below 1GHz)
h. All readings are Peak Mode value unless otherwise stated AVG in column of Note. If the Peak Mode Measured value compliance with the Peak Limits and lower than AVG Limits, the EUT shall be deemed to meet both Peak & AVG Limits and then only Peak Mode was measured, but AVG Mode didn‘t perform. (above 1GHz)
i. The test result is calculated as the following:
(1) Result = Reading + Correct Factor
(2) Correct Factor = Antenna Factor + Cable Loss – Amplifier Gain + Attenuator
(3) Margin = Result - Limit

5.3 MEASUREMENT INSTRUMENTS LIST

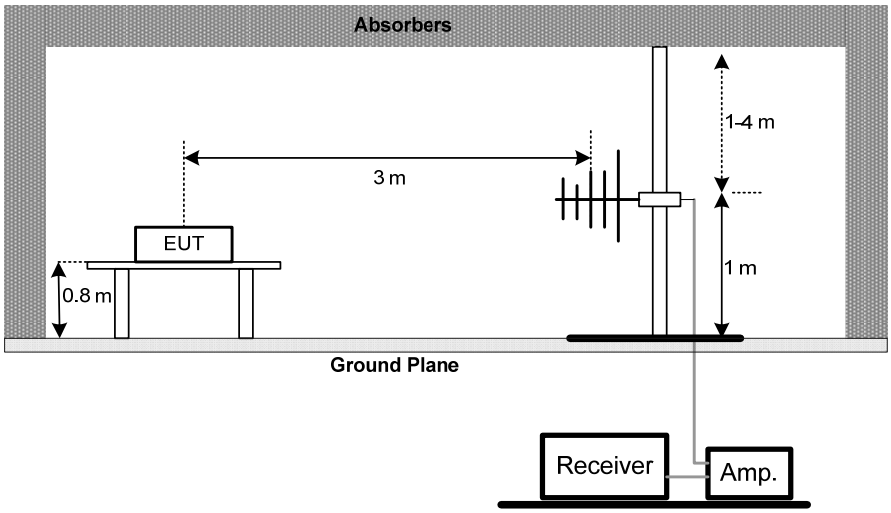
Item	Equipment	Manufacturer	Model No.	Serial No.	Calibrated until
1	EMI Test Receiver	R&S	ESCI	101307	11/29/2024
2	Spectrum Analyzer	Agilent	E4407B	US40240708	11/06/2024
3	Spectrum Analyzer	R&S	FSP	1164.4391.38	05/28/2025
4	Loop antenna	SCHWARZBECK	FMZB1519	1519-062	01/14/2025
5	Broadband antenna	SCHWARZBECK	VULB9168	VULB9168-192	03/29/2025
6	HORN ANTENNA	SCHWARZBECK	BBHA9120D	9120D 1065	04/17/2025
7	DRG Horn Antenna	A.H. Systems	SAS-574	588	05/28/2025
8	Preamplifier Amplifier	HP	8447F	3113A05680	12/04/2024
9	Preamplifier Amplifier	Aeroflex	33711-392-77150-11	97	05/28/2025
10	PRE-AMPLIFIER	EMEC	EM01G26G	980136	04/17/2025
11	RF Cable	R&S	Test Cable 4	4	12/11/2024
12	RF Cable	R&S	Test Cable 5	5	12/11/2024
13	RF Cable	R&S	Test Cable 9	9	04/17/2025
14	RF Cable	R&S	Test Cable 10	10	04/17/2025
15	Measurement Software	Farad	EZ-EMC (Ver.ATT-03A)	N/A	N/A

5.4 TESTSETUP

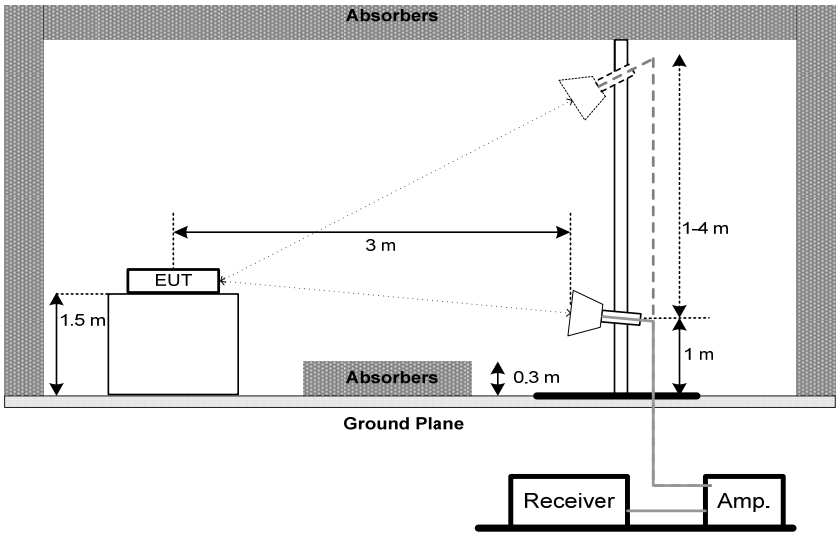
9 kHz to 30 MHz



30 MHz to 1 GHz



Above 1 GHz



5.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

5.6 TEST RESULTS - 9 KHZ to 30MHZ

Test Mode:	TX N (HT20) Mode / CH36 (UNII-1)

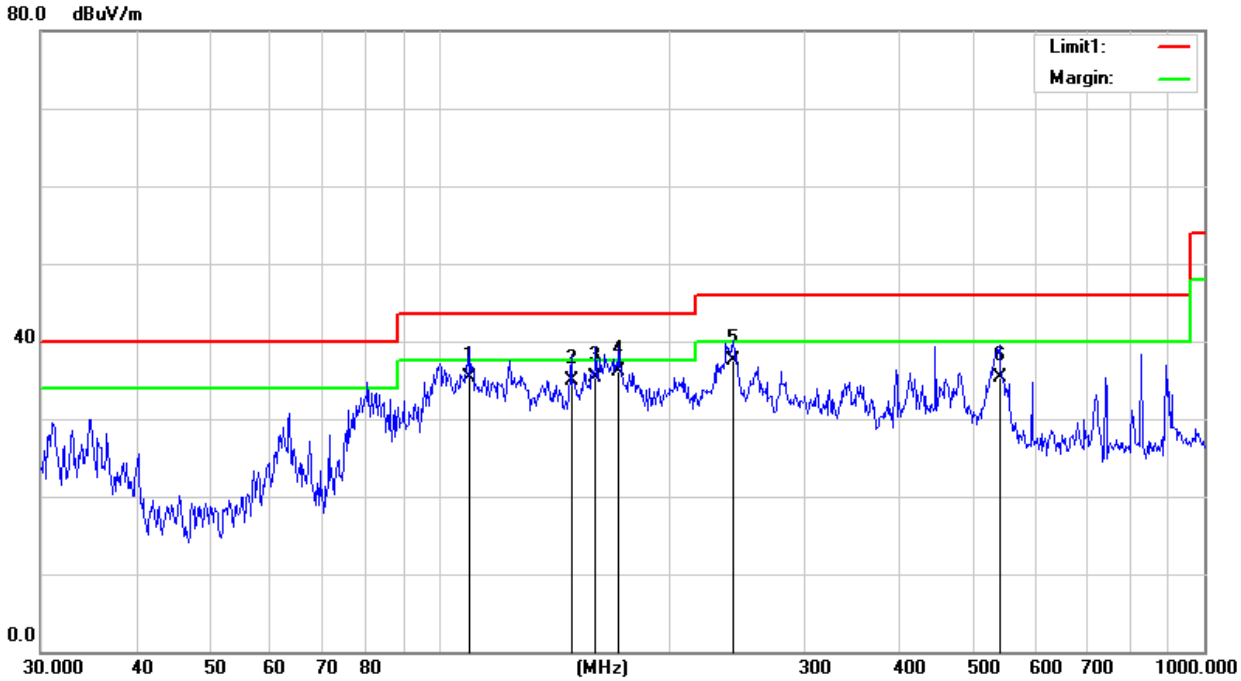
Freq.	Reading	Limit	Margin	State
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	P/F
--	--	--	--	P
--	--	--	--	P

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

5.7 TEST RESULTS - 30 MHz TO 1000 MHz

Test Mode:	TX N (HT20) Mode / CH36 (UNII-1)

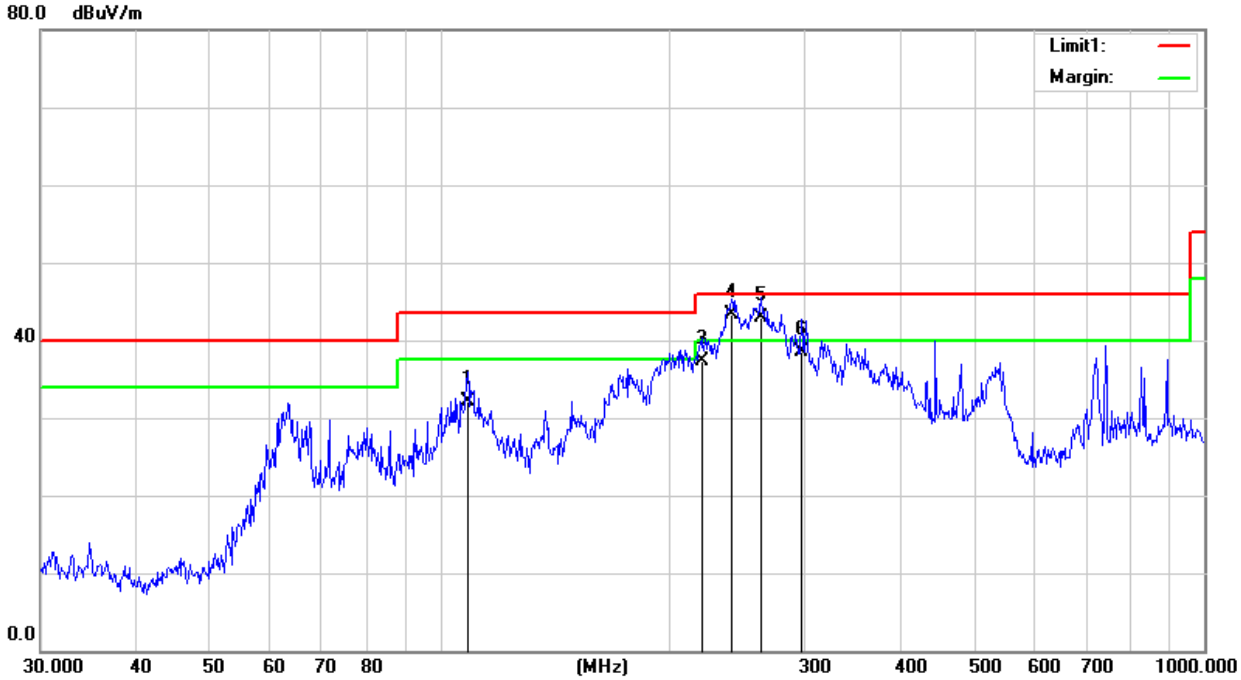
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree	Comment
1		109.0286	49.92	-14.70	35.22	43.50	-8.28	QP			
2		148.4410	46.17	-11.19	34.98	43.50	-8.52	QP			
3		159.7844	45.96	-10.75	35.21	43.50	-8.29	QP			
4	*	171.3926	46.23	-10.11	36.12	43.50	-7.38	QP			
5		241.6760	45.83	-8.42	37.41	46.00	-8.59	QP			
6		539.4773	41.46	-6.17	35.29	46.00	-10.71	QP			

Test Mode:	TX N (HT20) Mode / CH36 (UNII-1)

Horizontal

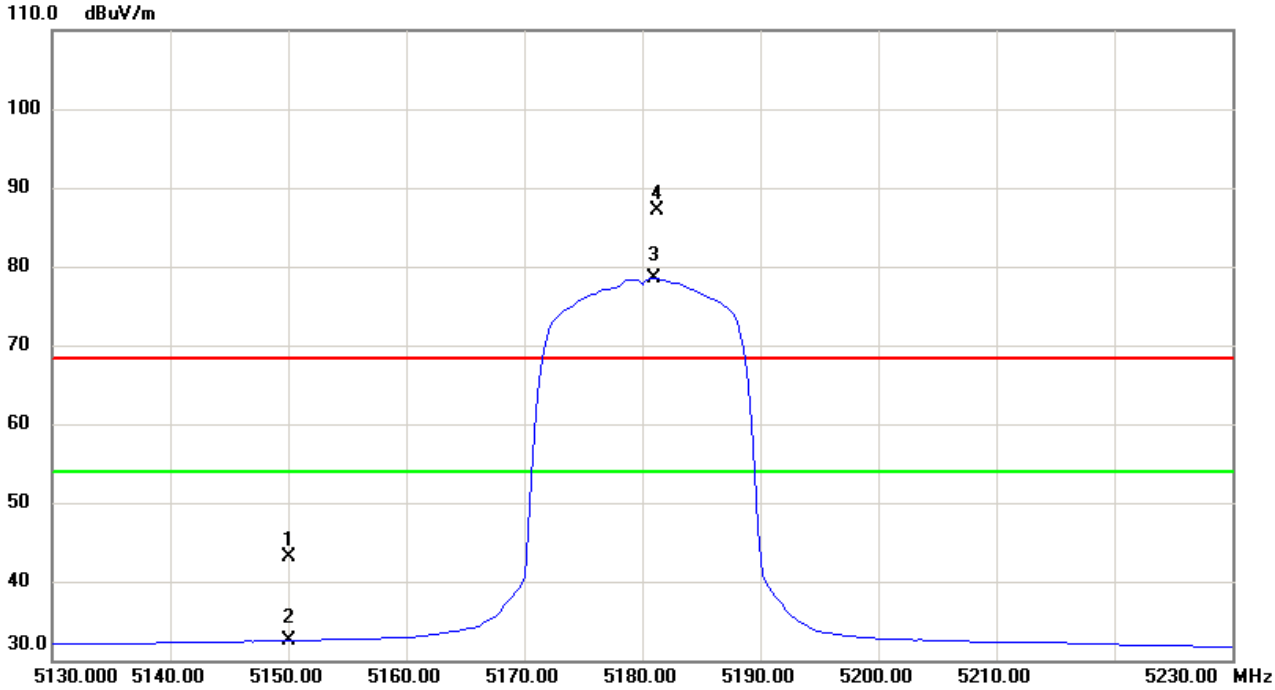


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree	Comment
1		108.6470	47.24	-15.13	32.11	43.50	-11.39	QP			
2		219.5569	45.51	-8.22	37.29	46.00	-8.71	QP			
3		219.8449	45.41	-8.15	37.26	46.00	-8.74	QP			
4	*	240.8301	49.62	-6.41	43.21	46.00	-2.79	QP			
5	!	262.8955	47.31	-4.42	42.89	46.00	-3.11	QP			
6		297.2241	43.98	-5.44	38.54	46.00	-7.46	QP			

5.8 TEST RESULTS - ABOVE1000 MHz(BAND EDGE)

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

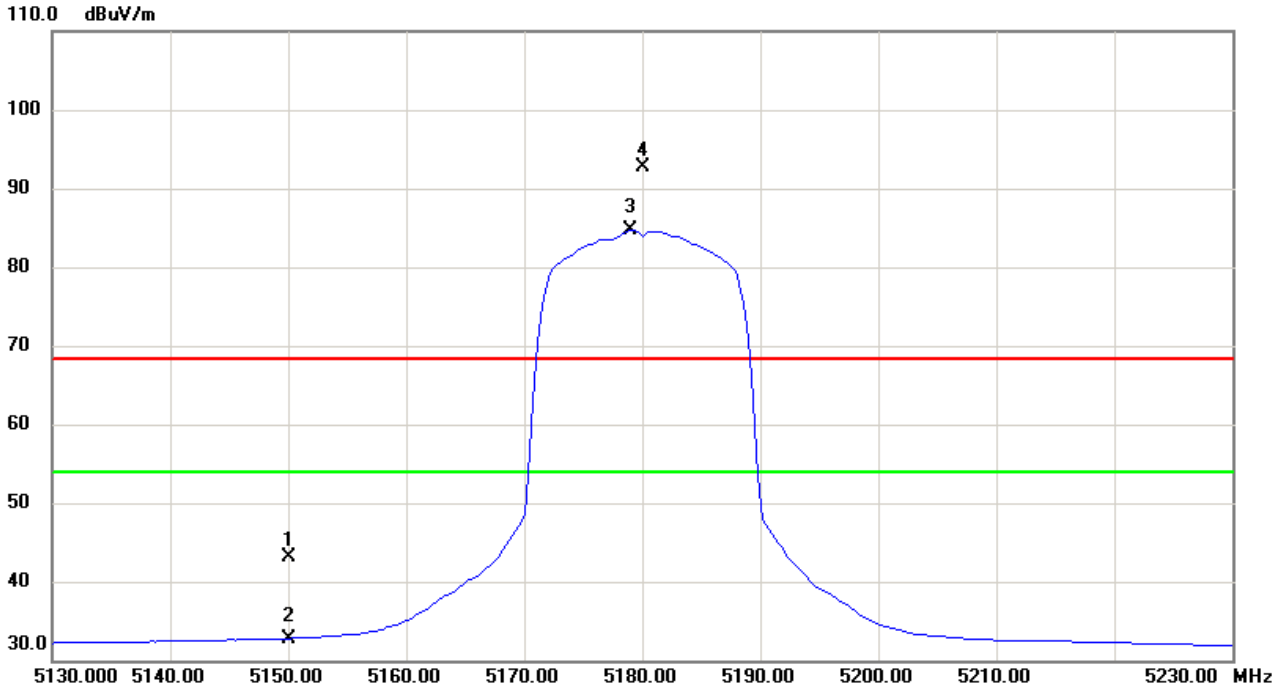
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5150.000	40.42	2.68	43.10	68.30	-25.20	peak	
2		5150.000	29.85	2.68	32.53	54.00	-21.47	AVG	
3	*	5181.000	75.90	2.55	78.45	54.00	24.45	AVG	No Limit
4	X	5181.250	84.51	2.55	87.06	68.30	18.76	peak	No Limit

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

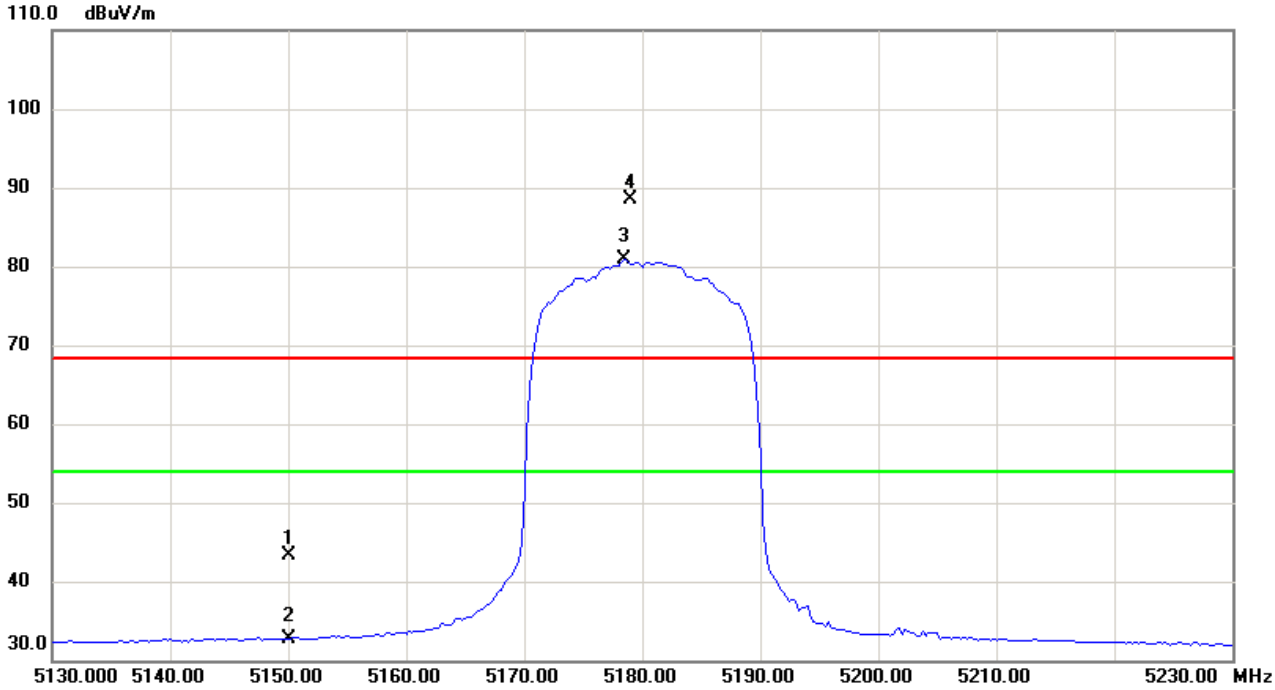
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5150.000	40.49	2.68	43.17	68.30	-25.13	peak	
2		5150.000	30.11	2.68	32.79	54.00	-21.21	AVG	
3	*	5179.000	82.07	2.56	84.63	54.00	30.63	AVG	No Limit
4	X	5180.000	90.13	2.55	92.68	68.30	24.38	peak	No Limit

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

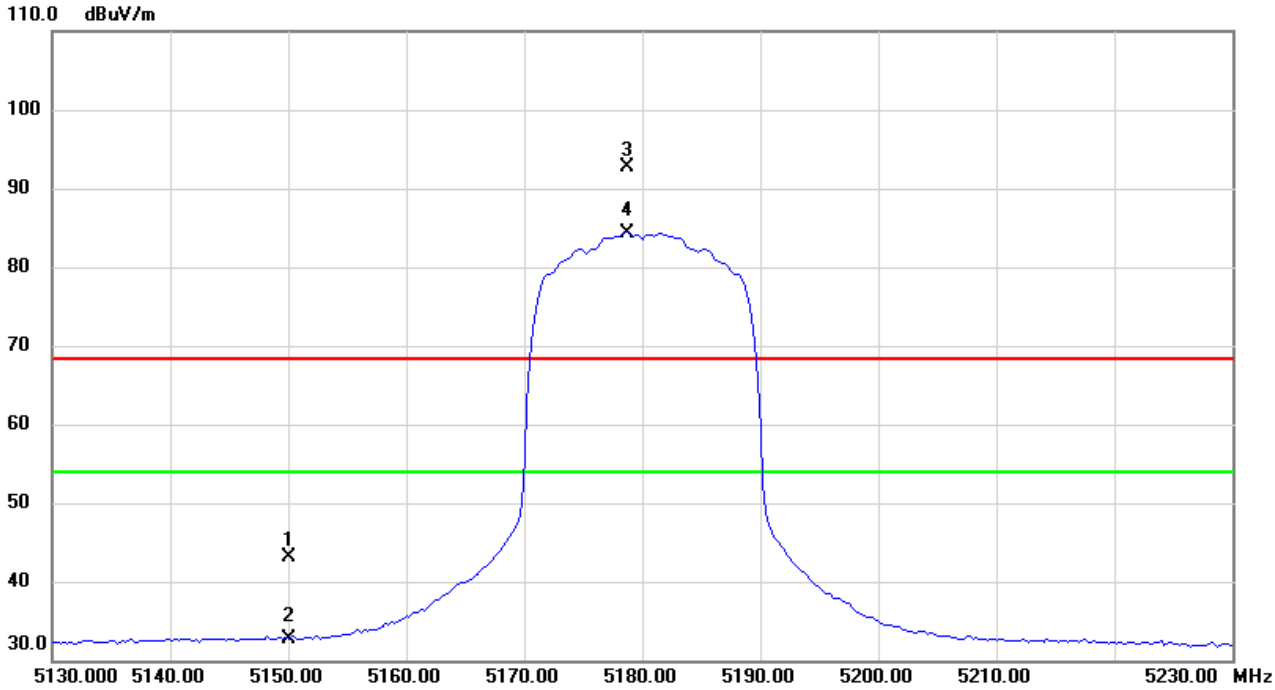
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5150.000	40.59	2.68	43.27	68.30	-25.03	peak	
2		5150.000	30.05	2.68	32.73	54.00	-21.27	AVG	
3	*	5178.500	78.25	2.57	80.82	54.00	26.82	AVG	No Limit
4	X	5179.000	85.97	2.56	88.53	68.30	20.23	peak	No Limit

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

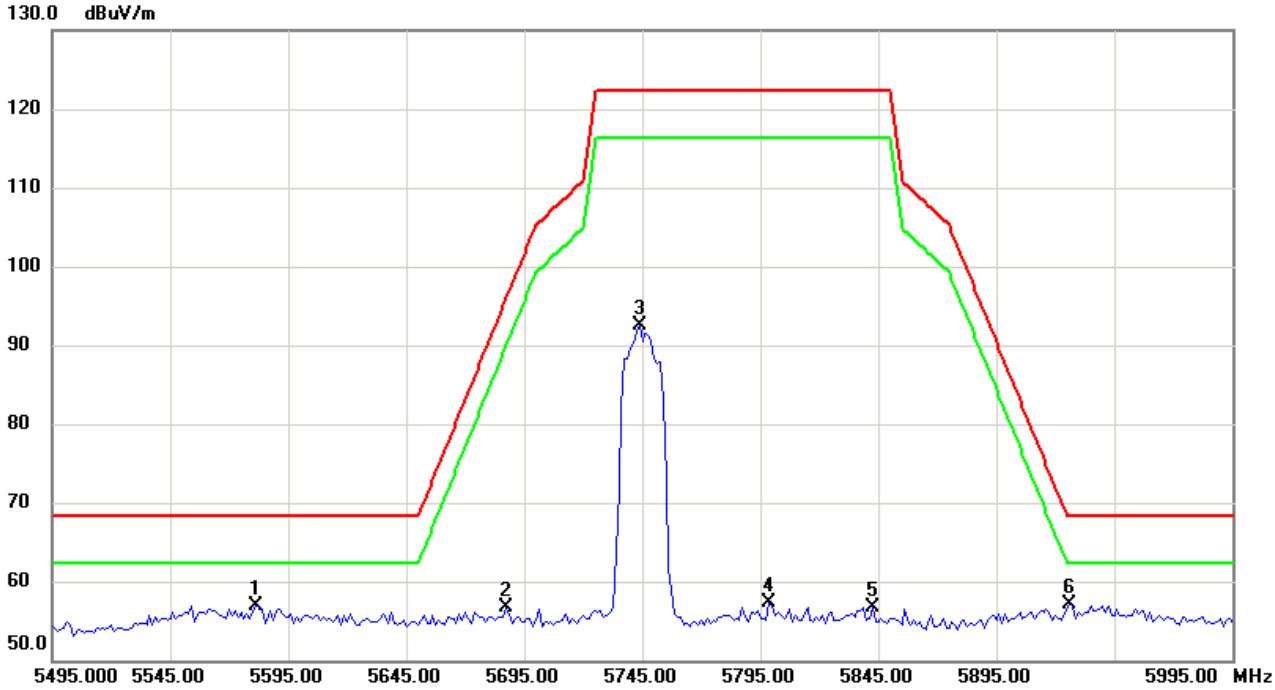
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5150.000	40.34	2.68	43.02	68.30	-25.28	peak	
2		5150.000	30.05	2.68	32.73	54.00	-21.27	AVG	
3	X	5178.750	90.20	2.56	92.76	68.30	24.46	peak	No Limit
4	*	5178.750	81.84	2.56	84.40	54.00	30.40	AVG	No Limit

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

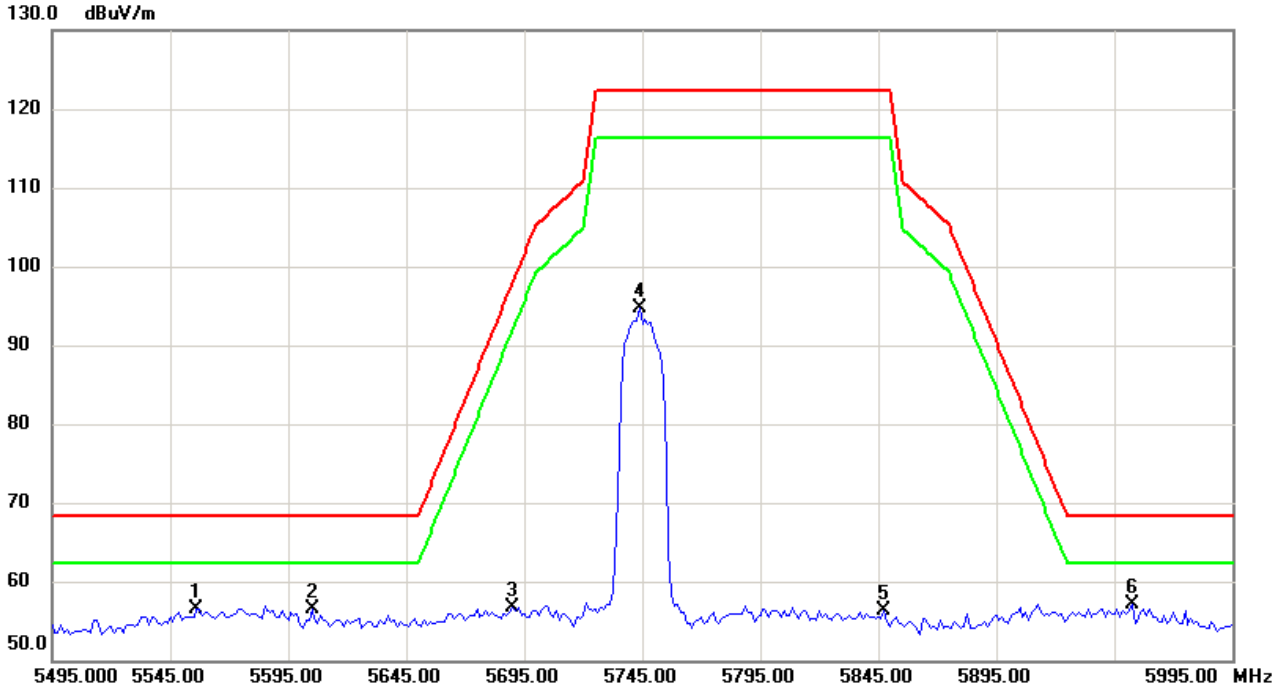
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5581.250	54.26	2.56	56.82	68.30	-11.48	peak	
2		5687.500	53.75	3.00	56.75	96.05	-39.30	peak	
3		5743.750	89.33	3.10	92.43	122.3	-29.87	peak	
4		5798.750	53.66	3.55	57.21	122.3	-65.09	peak	
5		5842.500	52.96	3.72	56.68	122.3	-65.62	peak	
6	*	5926.250	53.57	3.51	57.08	68.30	-11.22	peak	

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

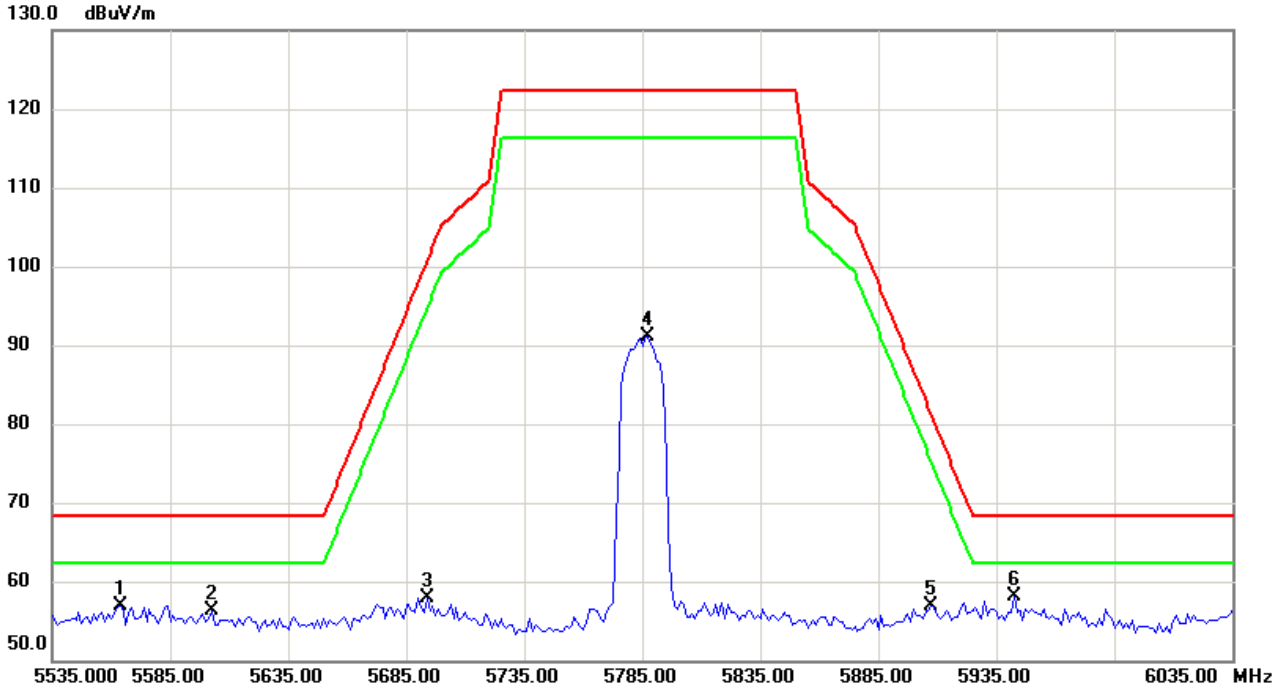
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5556.250	54.06	2.47	56.53	68.30	-11.77	peak	
2		5605.000	53.84	2.61	56.45	68.30	-11.85	peak	
3		5690.000	53.64	3.04	56.68	97.90	-41.22	peak	
4		5743.750	91.51	3.10	94.61	122.3	-27.69	peak	
5		5847.500	52.46	3.74	56.20	122.3	-66.10	peak	
6	*	5952.500	53.62	3.44	57.06	68.30	-11.24	peak	

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

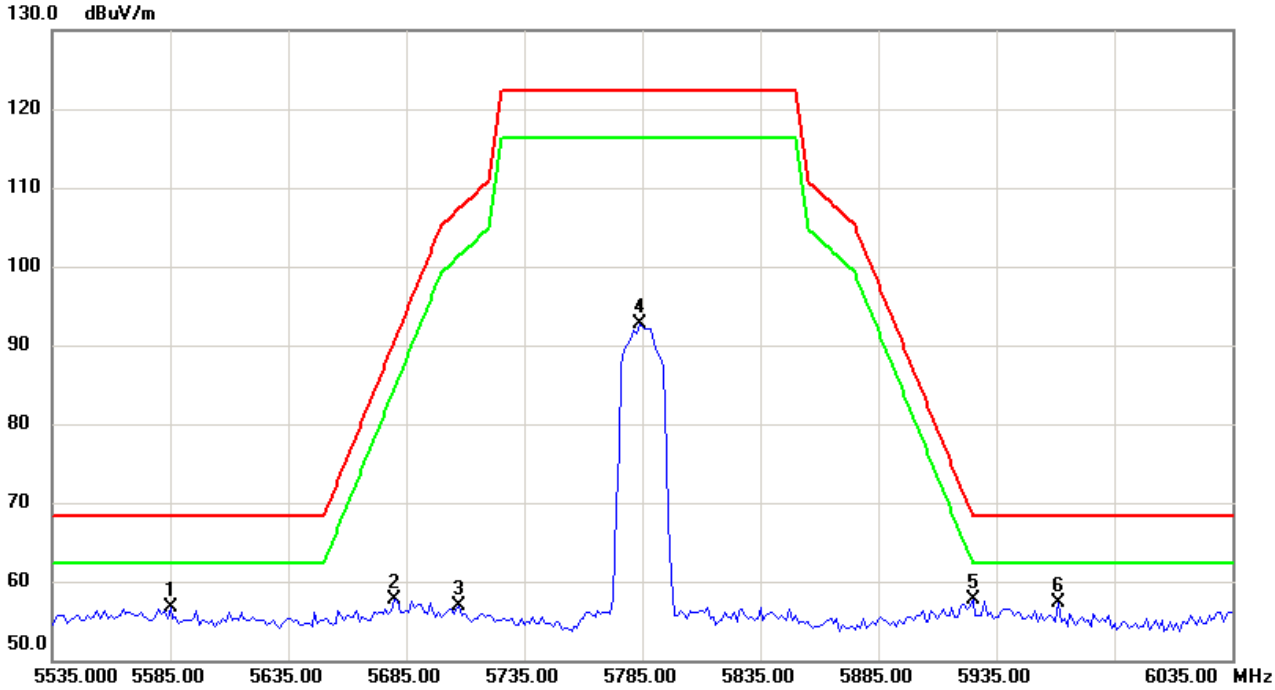
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5563.750	54.39	2.49	56.88	68.30	-11.42	peak	
2		5602.500	53.67	2.62	56.29	68.30	-12.01	peak	
3		5693.750	54.85	3.10	57.95	100.6	-42.72	peak	
4		5787.500	87.73	3.46	91.19	122.3	-31.11	peak	
5		5907.500	53.30	3.60	56.90	81.25	-24.35	peak	
6	*	5942.500	54.61	3.45	58.06	68.30	-10.24	peak	

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

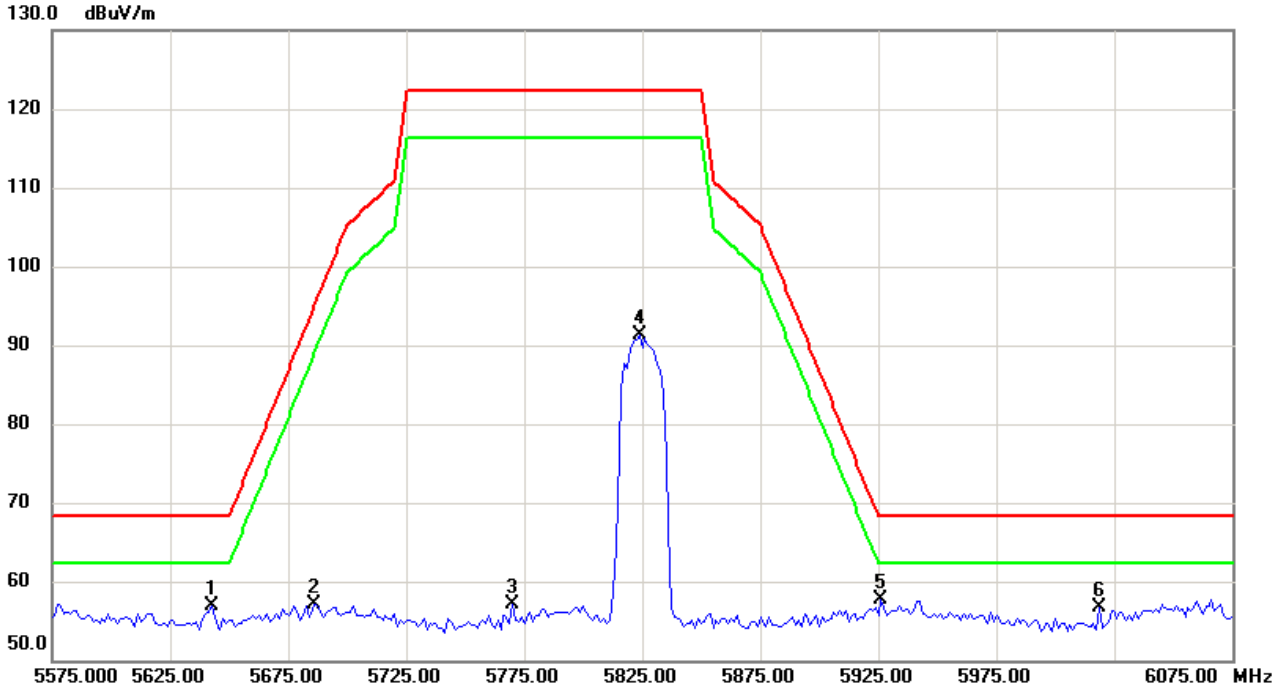
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5585.000	54.18	2.58	56.76	68.30	-11.54	peak	
2		5680.000	54.86	2.89	57.75	90.50	-32.75	peak	
3		5707.500	53.78	3.19	56.97	107.4	-50.43	peak	
4		5783.750	89.24	3.42	92.66	122.3	-29.64	peak	
5	*	5925.000	54.20	3.52	57.72	68.30	-10.58	peak	
6		5961.250	53.79	3.48	57.27	68.30	-11.03	peak	

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

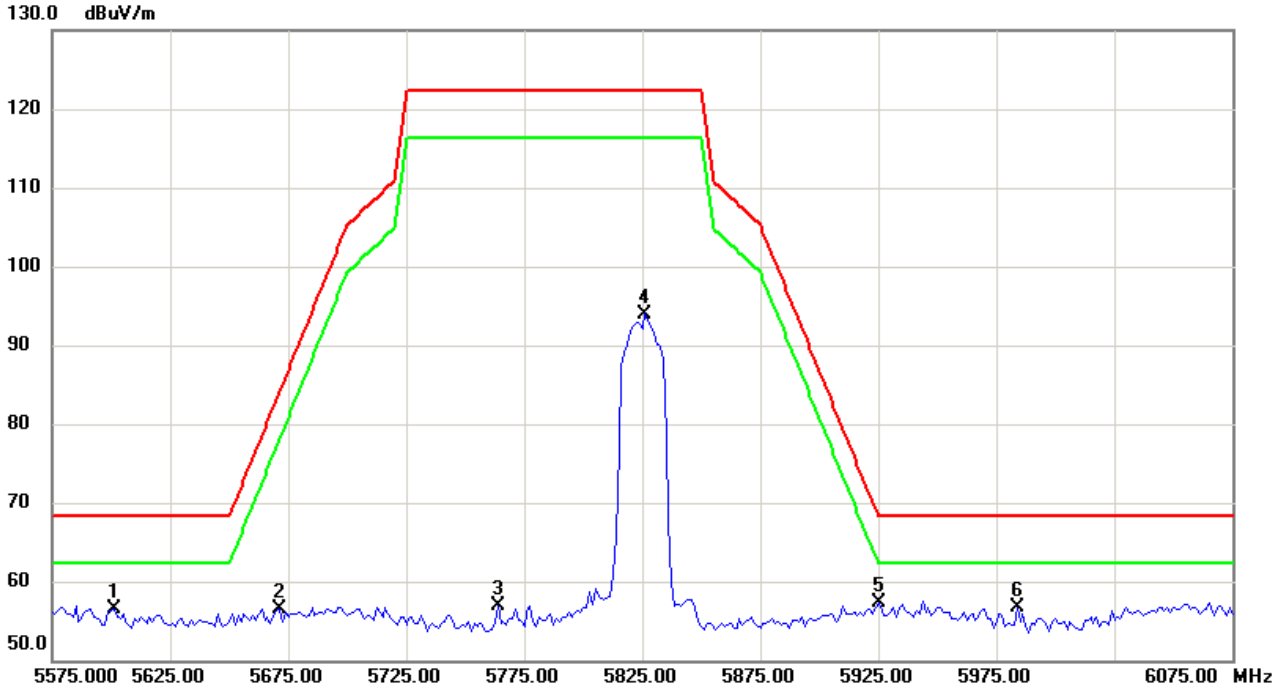
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5642.500	54.53	2.45	56.98	68.30	-11.32	peak	
2		5686.250	54.14	2.99	57.13	95.13	-38.00	peak	
3		5770.000	53.79	3.28	57.07	122.3	-65.23	peak	
4		5823.750	87.61	3.66	91.27	122.3	-31.03	peak	
5	*	5926.250	54.12	3.51	57.63	68.30	-10.67	peak	
6		6018.750	53.07	3.67	56.74	68.30	-11.56	peak	

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

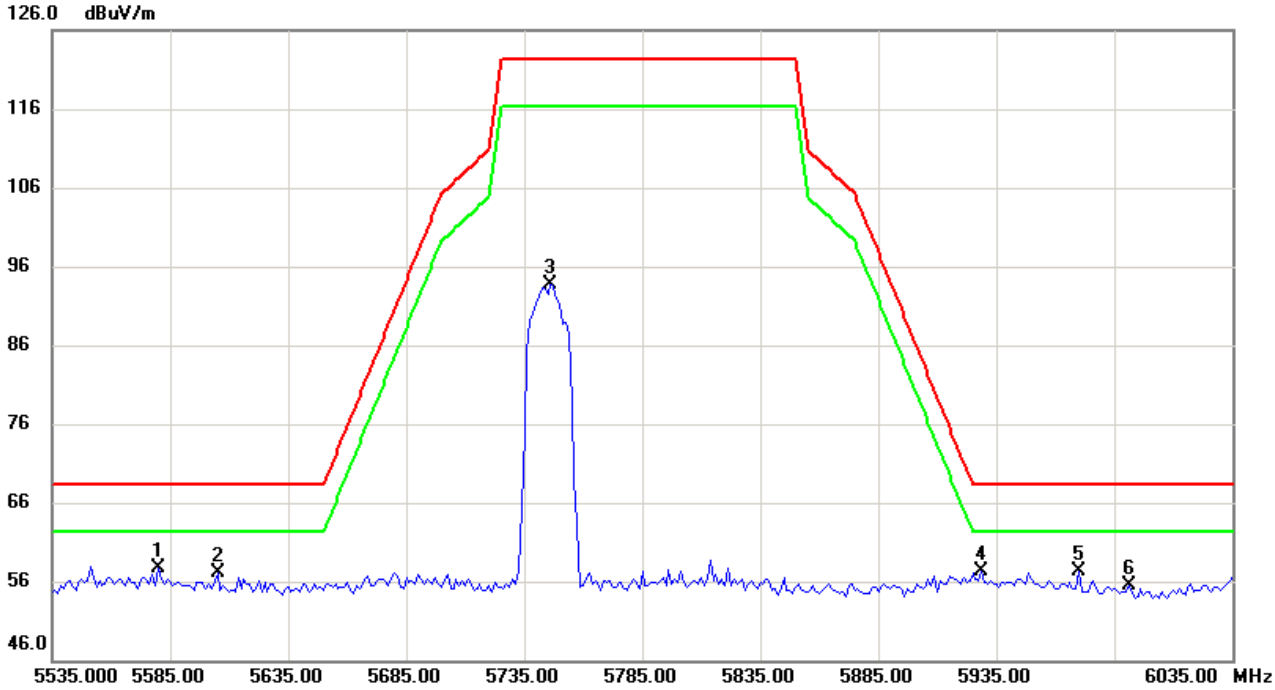
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5601.250	53.94	2.62	56.56	68.30	-11.74	peak	
2		5671.250	53.81	2.74	56.55	84.02	-27.47	peak	
3		5763.750	53.74	3.22	56.96	122.3	-65.34	peak	
4		5826.250	90.34	3.66	94.00	122.3	-28.30	peak	
5	*	5925.000	53.72	3.52	57.24	68.30	-11.06	peak	
6		5983.750	53.00	3.60	56.60	68.30	-11.70	peak	

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

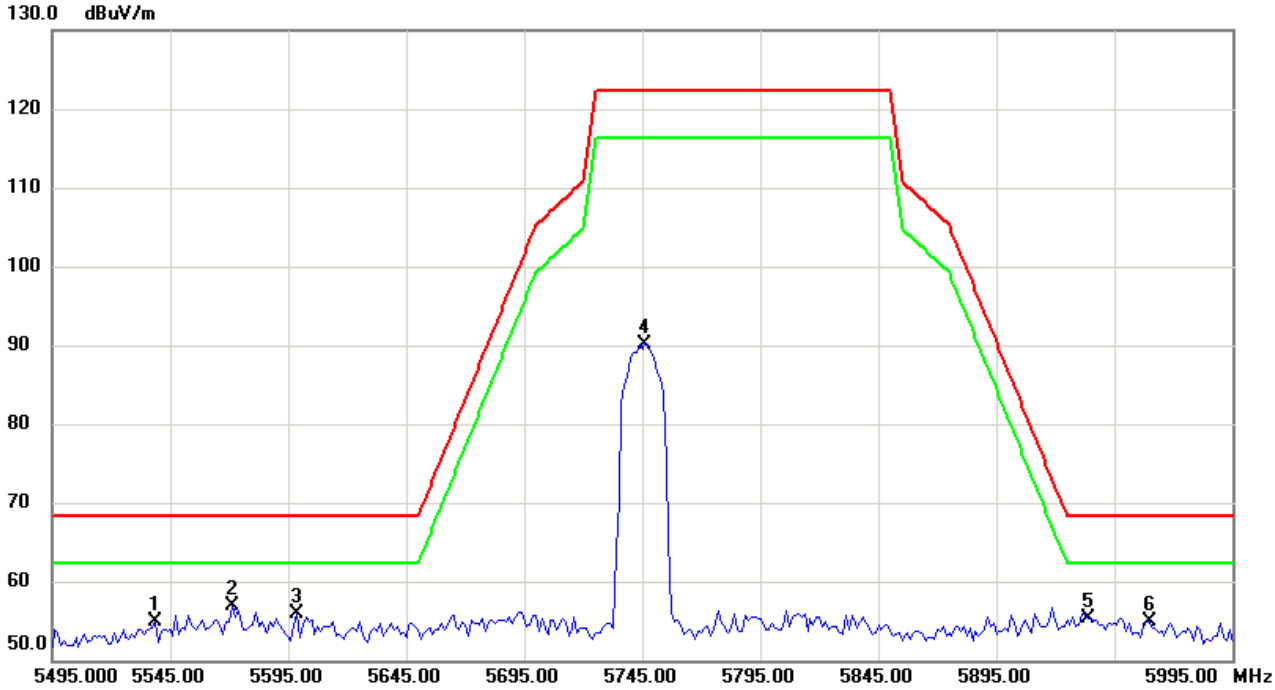
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	5580.000	55.12	2.56	57.68	68.30	-10.62	peak	
2		5605.000	54.43	2.61	57.04	68.30	-11.26	peak	
3		5746.250	90.52	3.09	93.61	122.3	-28.69	peak	
4		5928.750	53.77	3.52	57.29	68.30	-11.01	peak	
5		5970.000	53.83	3.54	57.37	68.30	-10.93	peak	
6		5991.250	51.79	3.66	55.45	68.30	-12.85	peak	

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

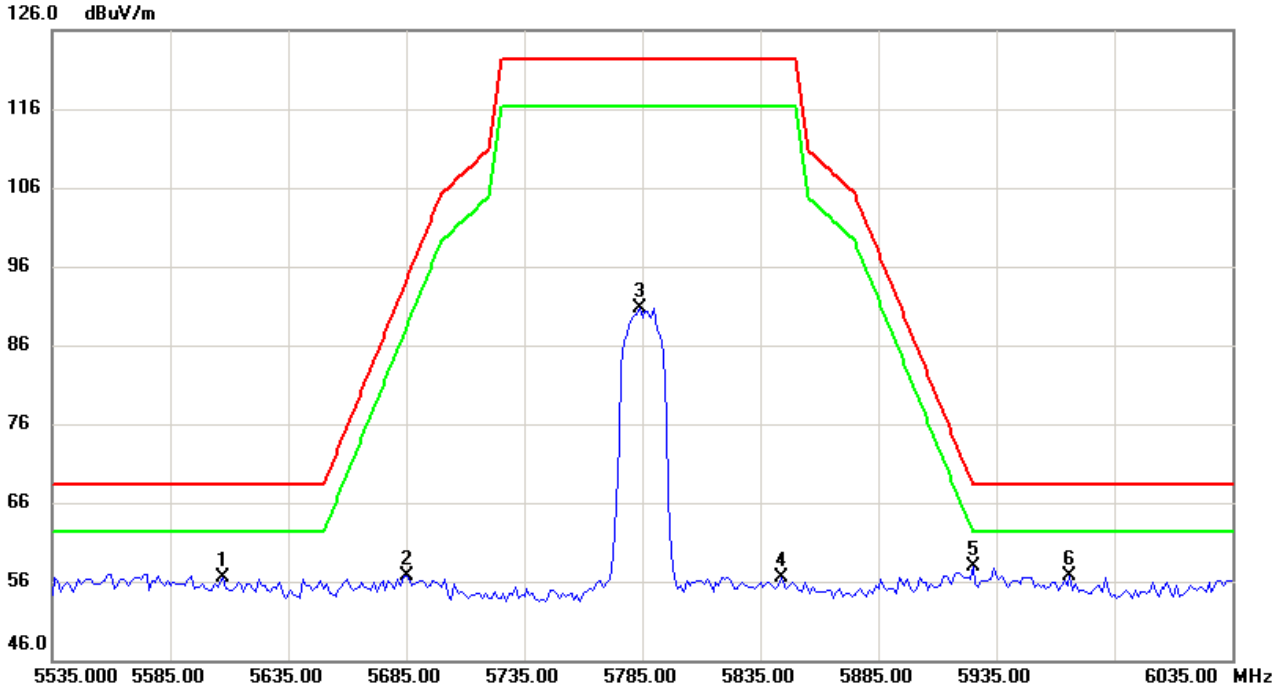
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5538.750	52.53	2.36	54.89	68.30	-13.41	peak	
2	*	5571.250	54.48	2.51	56.99	68.30	-11.31	peak	
3		5598.750	53.21	2.62	55.83	68.30	-12.47	peak	
4		5746.250	87.11	3.09	90.20	122.3	-32.10	peak	
5		5933.750	51.74	3.48	55.22	68.30	-13.08	peak	
6		5960.000	51.53	3.47	55.00	68.30	-13.30	peak	

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

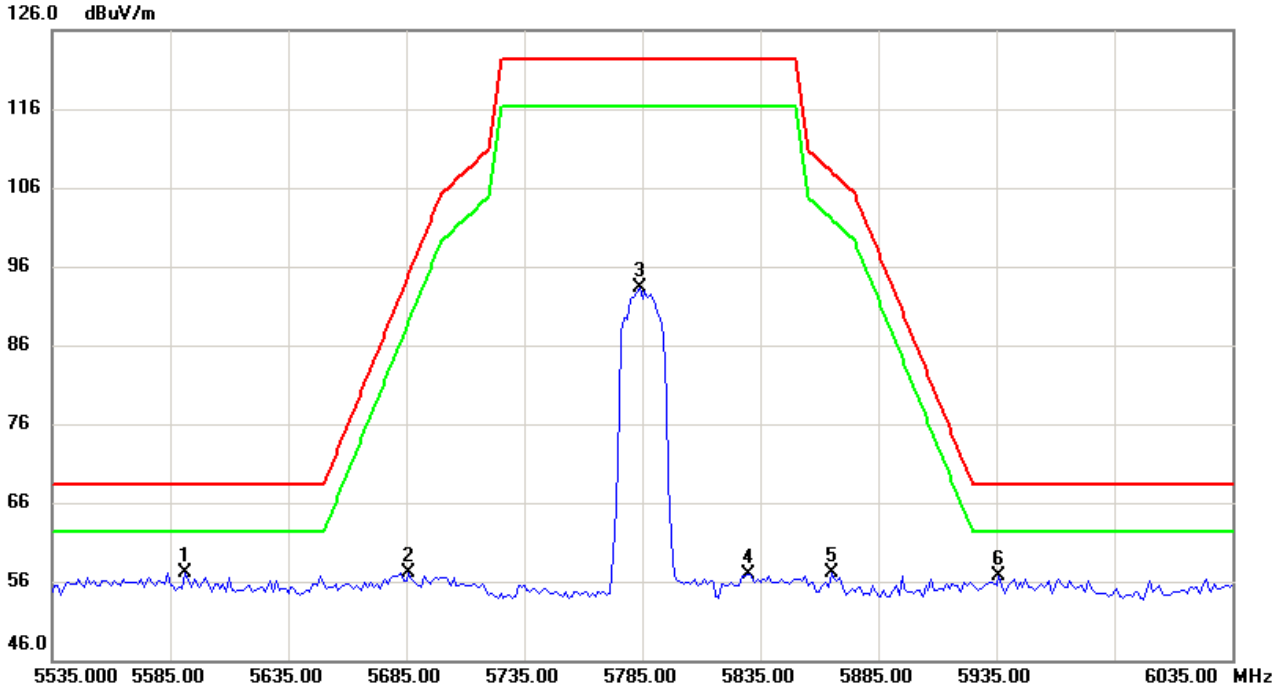
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5607.500	53.84	2.60	56.44	68.30	-11.86	peak	
2		5685.000	53.79	2.97	56.76	94.20	-37.44	peak	
3		5783.750	87.36	3.42	90.78	122.3	-31.52	peak	
4		5843.750	52.73	3.72	56.45	122.3	-65.85	peak	
5	*	5925.000	54.31	3.52	57.83	68.30	-10.47	peak	
6		5966.250	53.13	3.51	56.64	68.30	-11.66	peak	

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

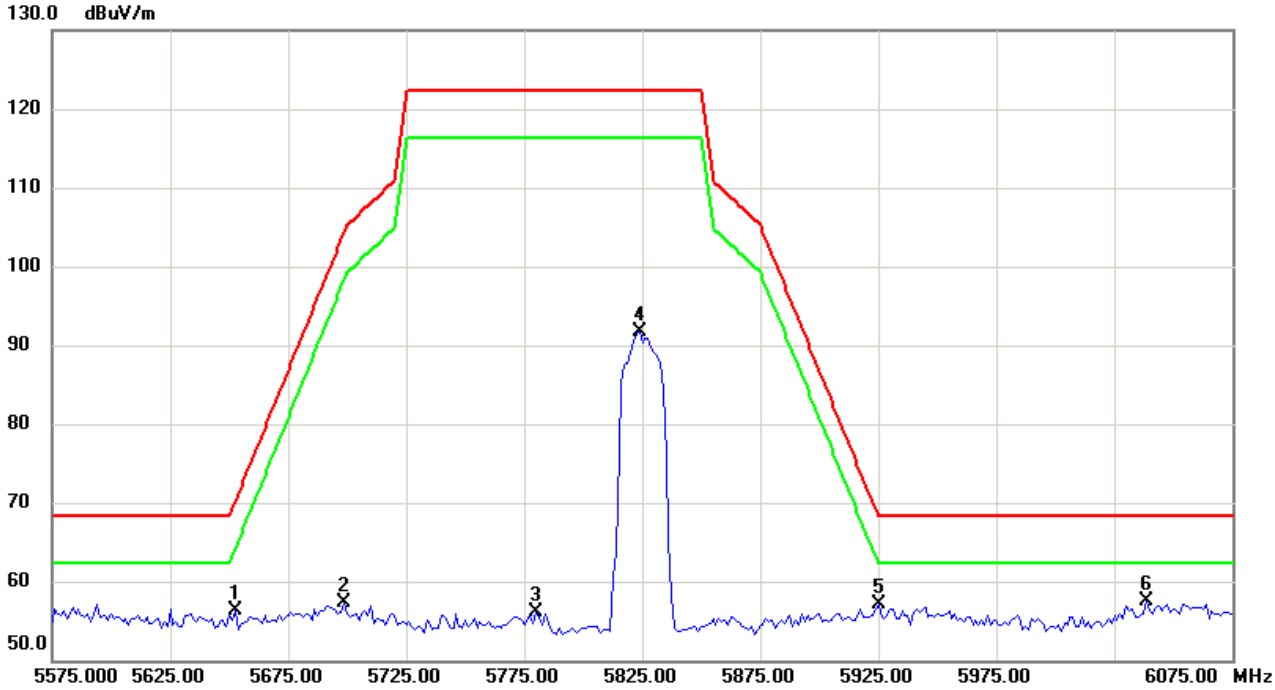
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	5591.250	54.50	2.59	57.09	68.30	-11.21	peak	
2		5686.250	54.17	2.99	57.16	95.13	-37.97	peak	
3		5783.750	89.86	3.42	93.28	122.3	-29.02	peak	
4		5830.000	53.18	3.67	56.85	122.3	-65.45	peak	
5		5865.000	53.39	3.72	57.11	108.1	-50.99	peak	
6		5936.250	53.27	3.48	56.75	68.30	-11.55	peak	

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

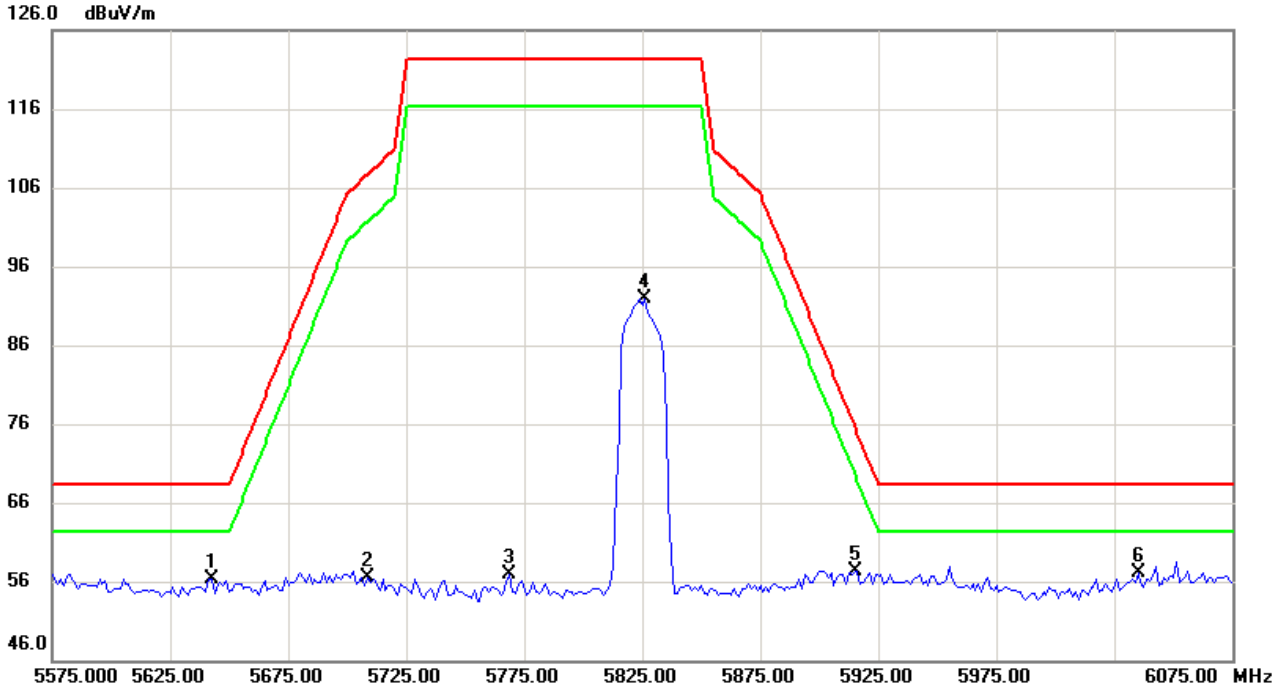
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5652.500	53.85	2.45	56.30	70.15	-13.85	peak	
2		5698.750	54.16	3.18	57.34	104.3	-47.04	peak	
3		5780.000	52.77	3.36	56.13	122.3	-66.17	peak	
4		5823.750	88.05	3.66	91.71	122.3	-30.59	peak	
5		5925.000	53.50	3.52	57.02	68.30	-11.28	peak	
6	*	6038.750	53.98	3.61	57.59	68.30	-10.71	peak	

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

Horizontal

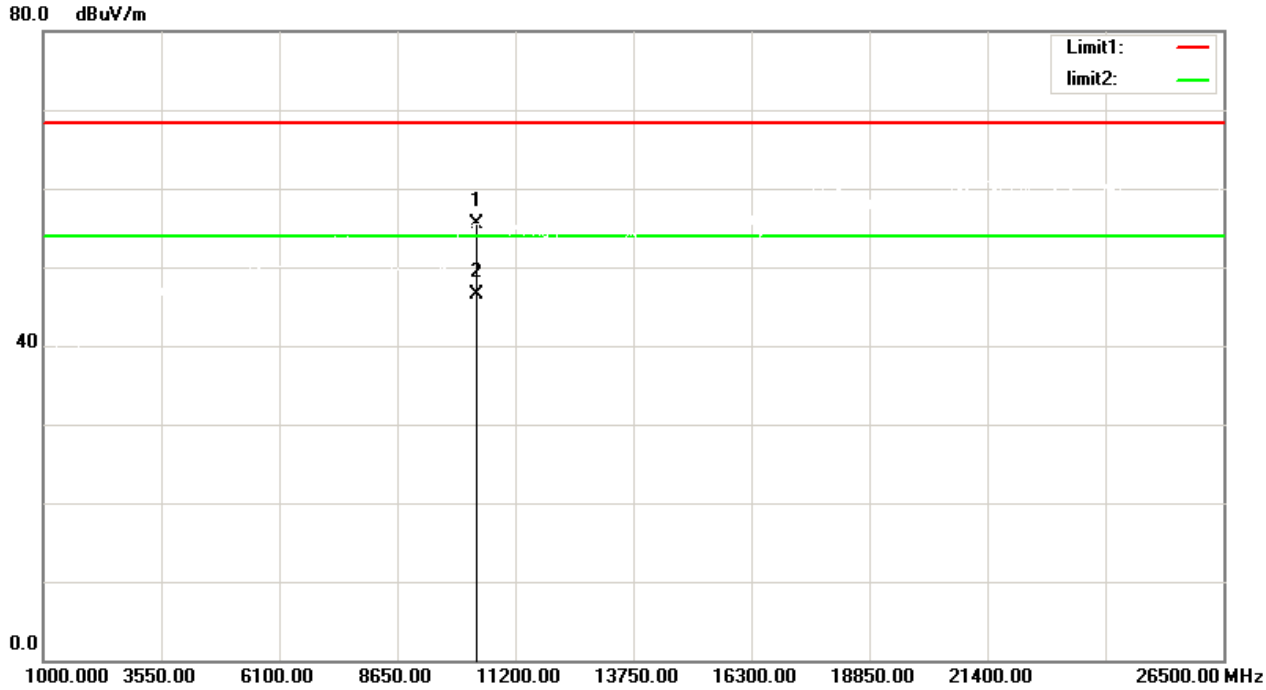


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5642.500	53.89	2.45	56.34	68.30	-11.96	peak	
2		5708.750	53.35	3.18	56.53	107.7	-51.22	peak	
3		5768.750	53.66	3.27	56.93	122.3	-65.37	peak	
4		5826.250	88.28	3.66	91.94	122.3	-30.36	peak	
5		5915.000	53.70	3.57	57.27	75.70	-18.43	peak	
6	*	6035.000	53.40	3.61	57.01	68.30	-11.29	peak	

5.9 TEST RESULTS - ABOVE1000 MHz (HARMONIC)

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

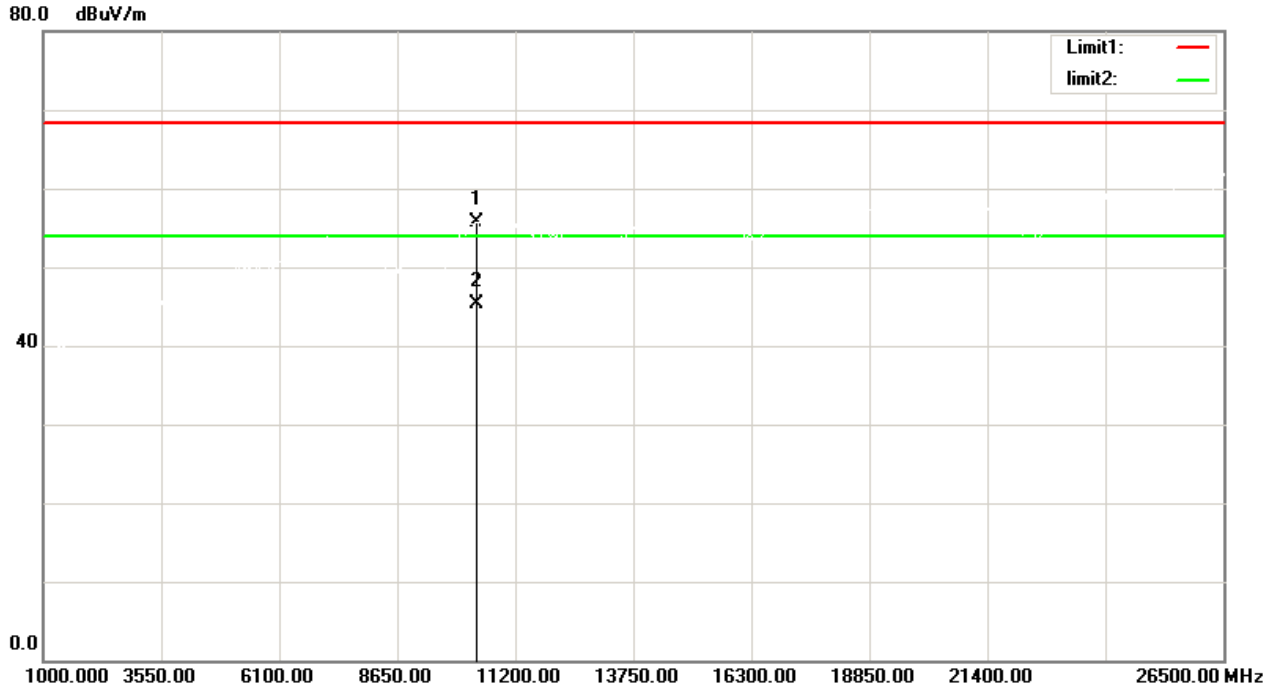
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree	Comment
1		10360.00	47.61	7.86	55.47	68.30	-12.83	peak	150	46	
2	*	10371.25	38.68	7.91	46.59	54.00	-7.41	AVG	150	46	

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

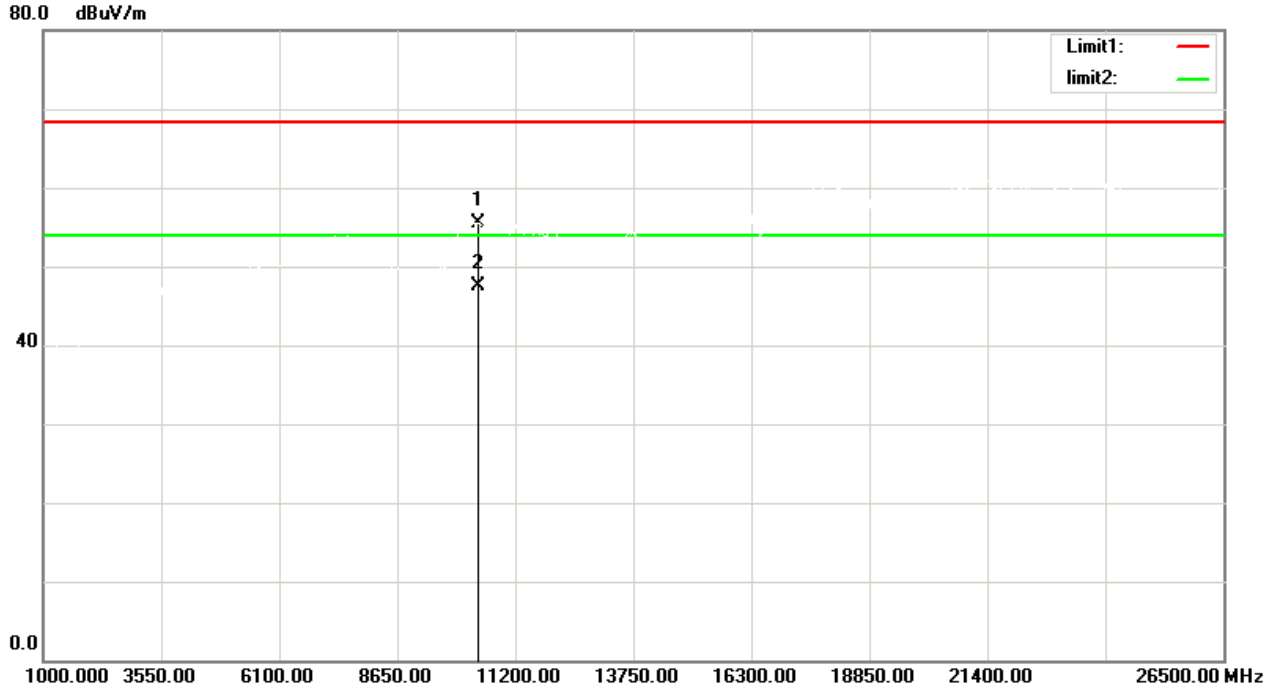
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree	Comment
1		10360.00	47.76	7.86	55.62	68.30	-12.68	peak	150	53	
2	*	10360.00	37.43	7.86	45.29	54.00	-8.71	AVG	150	53	

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

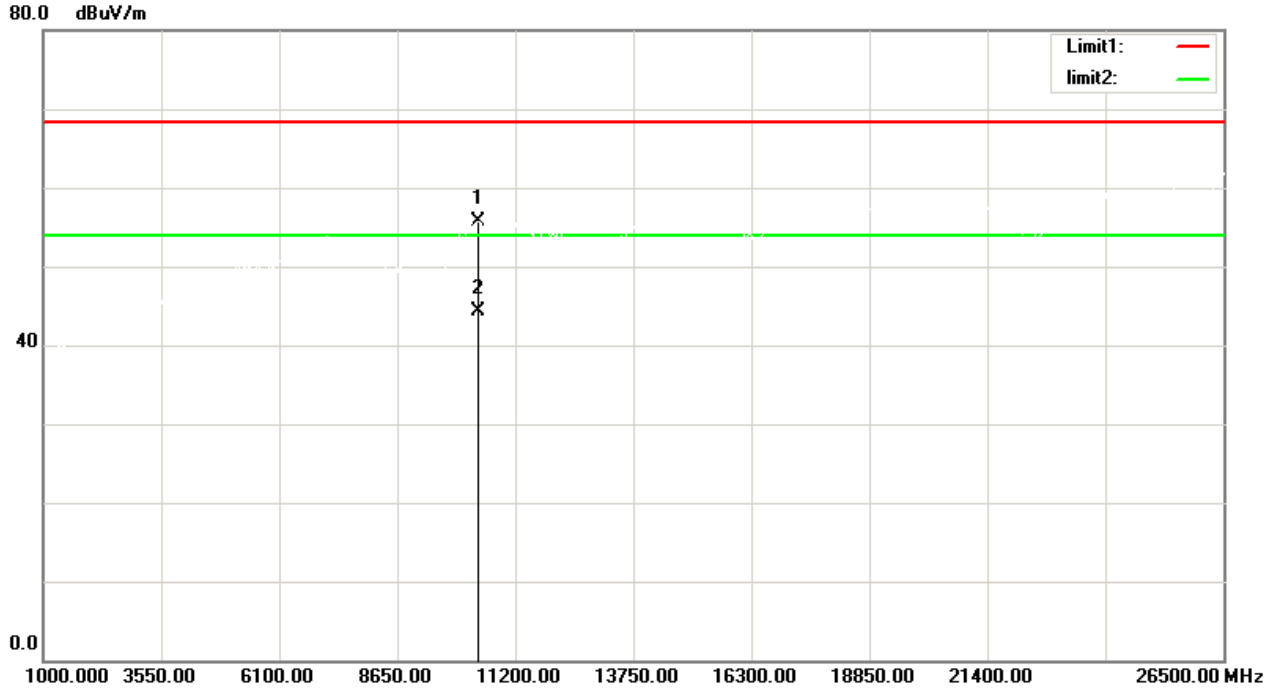
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree	Comment
1		10400.00	47.37	8.04	55.41	68.30	-12.89	peak	150	25	
2	*	10400.00	39.48	8.04	47.52	54.00	-6.48	AVG	150	25	

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

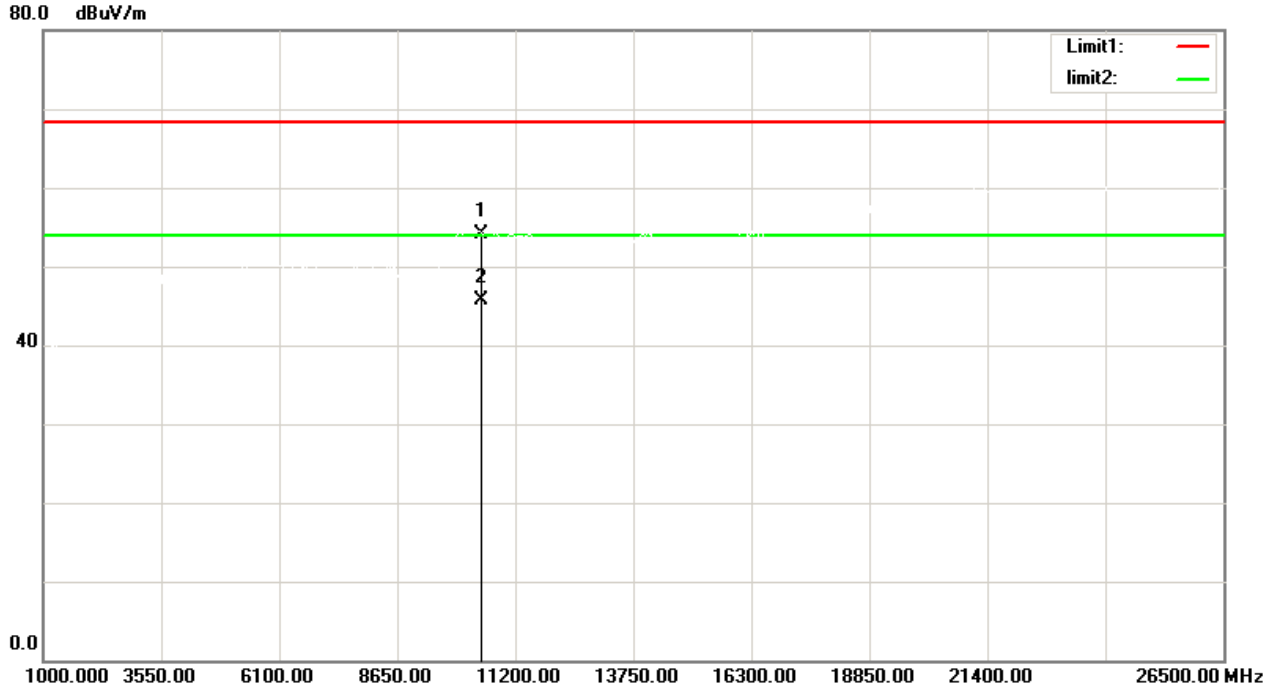
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree	Comment
1		10400.00	47.59	8.04	55.63	68.30	-12.67	peak	150	59	
2	*	10400.00	36.32	8.04	44.36	54.00	-9.64	AVG	150	59	

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

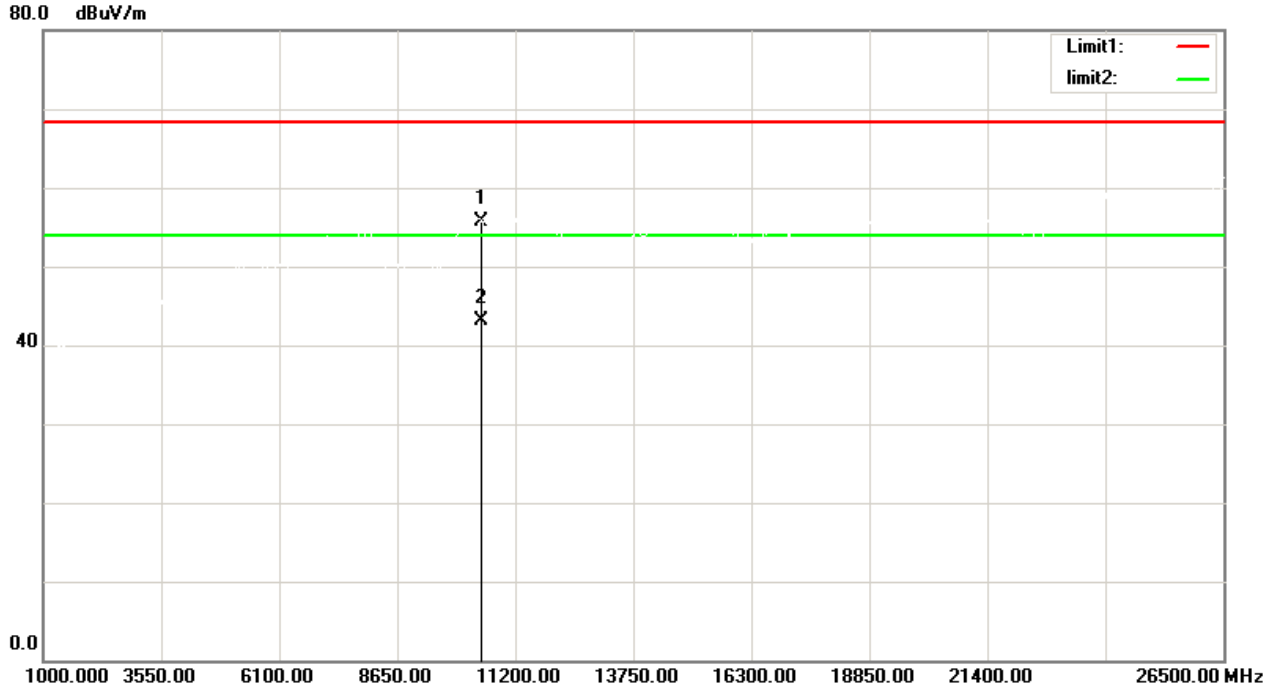
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree	Comment
1		10480.00	45.80	8.37	54.17	68.30	-14.13	peak	150	61	
2	*	10480.00	37.32	8.37	45.69	54.00	-8.31	AVG	150	61	

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

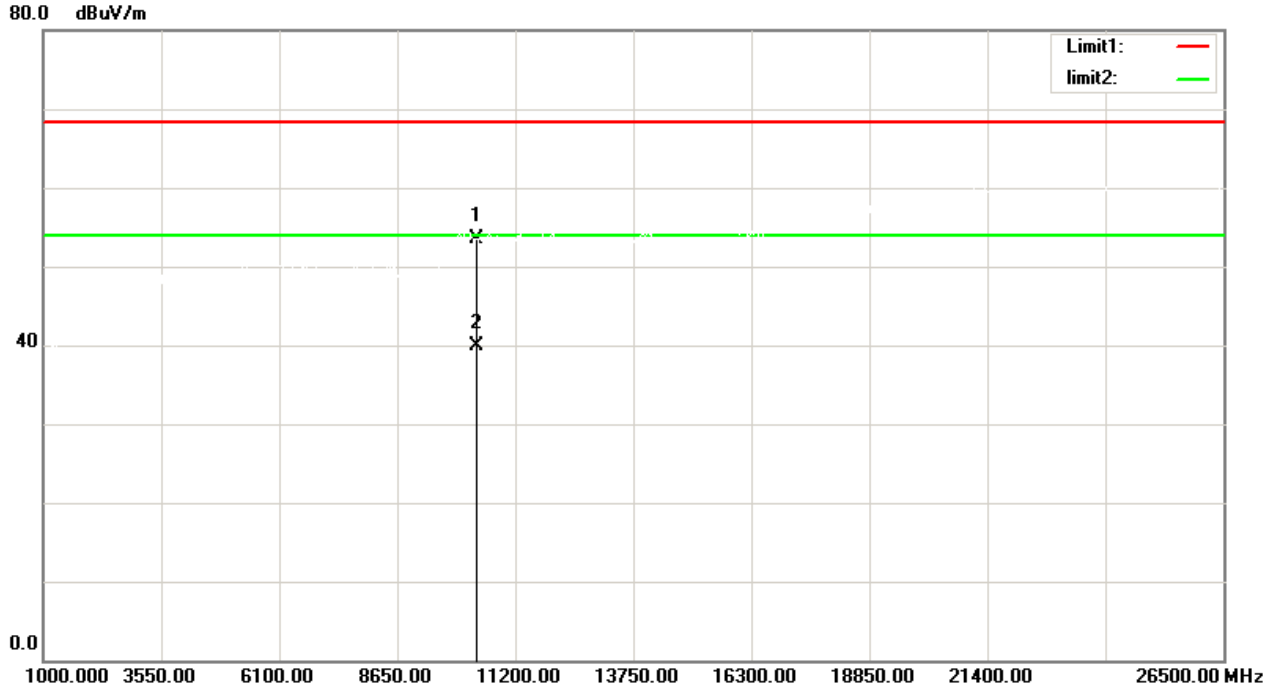
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree	Comment
1	*	10480.00	47.30	8.37	55.67	68.30	-12.63	peak	150	79	
2		10480.00	34.74	8.37	43.11	68.30	-25.19	peak	150	79	

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

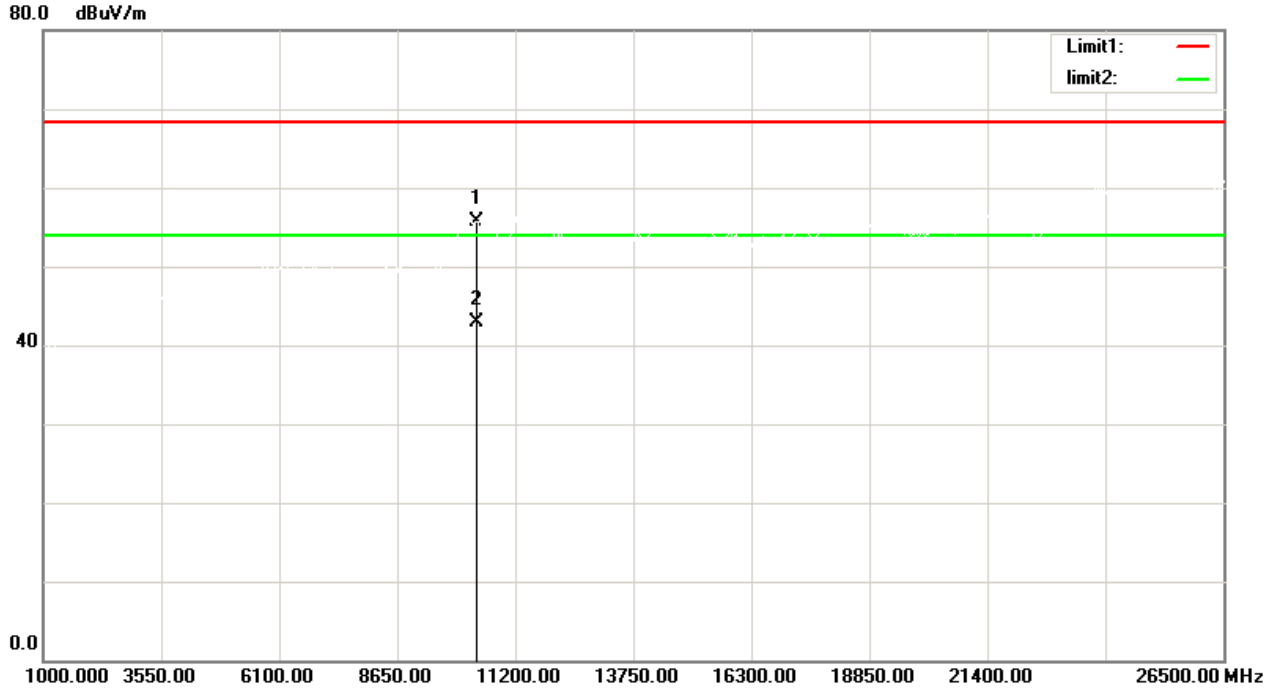
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree	Comment
1		10360.00	45.61	7.86	53.47	68.30	-14.83	peak	150	58	
2	*	10360.00	32.01	7.86	39.87	54.00	-14.13	AVG	150	58	

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

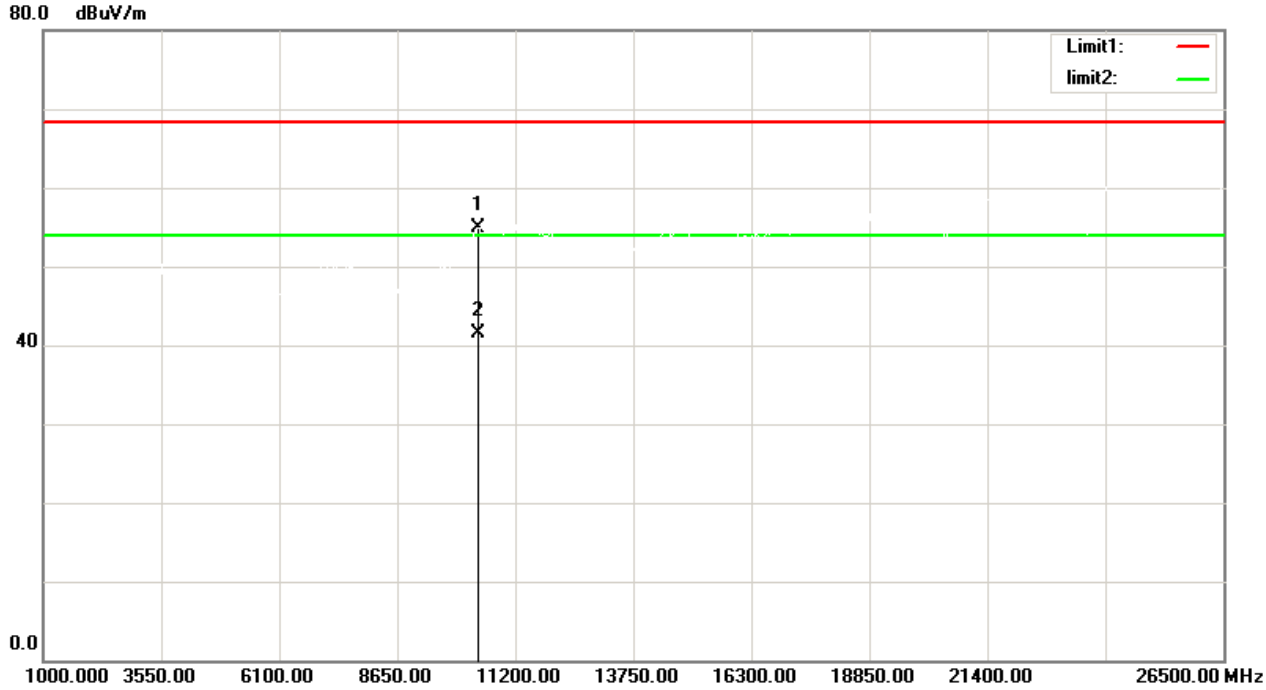
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree	Comment
1		10360.00	47.76	7.86	55.62	68.30	-12.68	peak	150	79	
2	*	10360.00	35.02	7.86	42.88	54.00	-11.12	AVG	150	79	

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

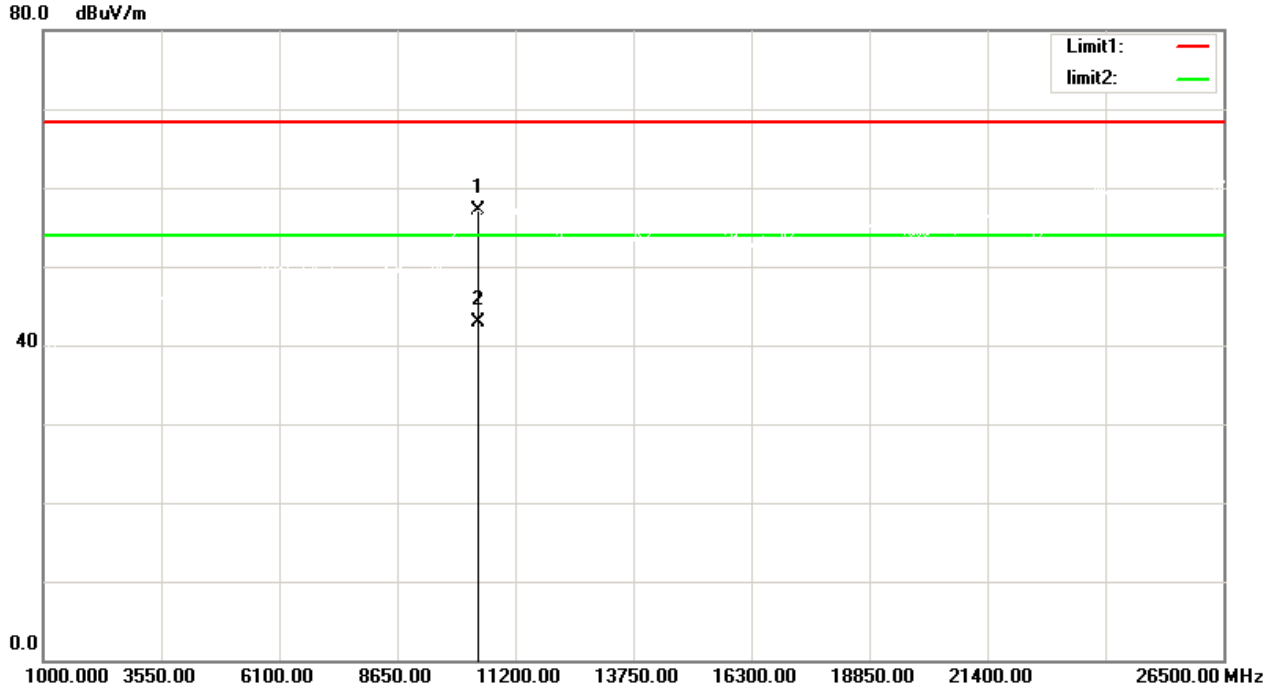
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree	Comment
1		10400.00	46.87	8.04	54.91	68.30	-13.39	peak	150	98	
2	*	10400.00	33.53	8.04	41.57	54.00	-12.43	AVG	150	98	

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

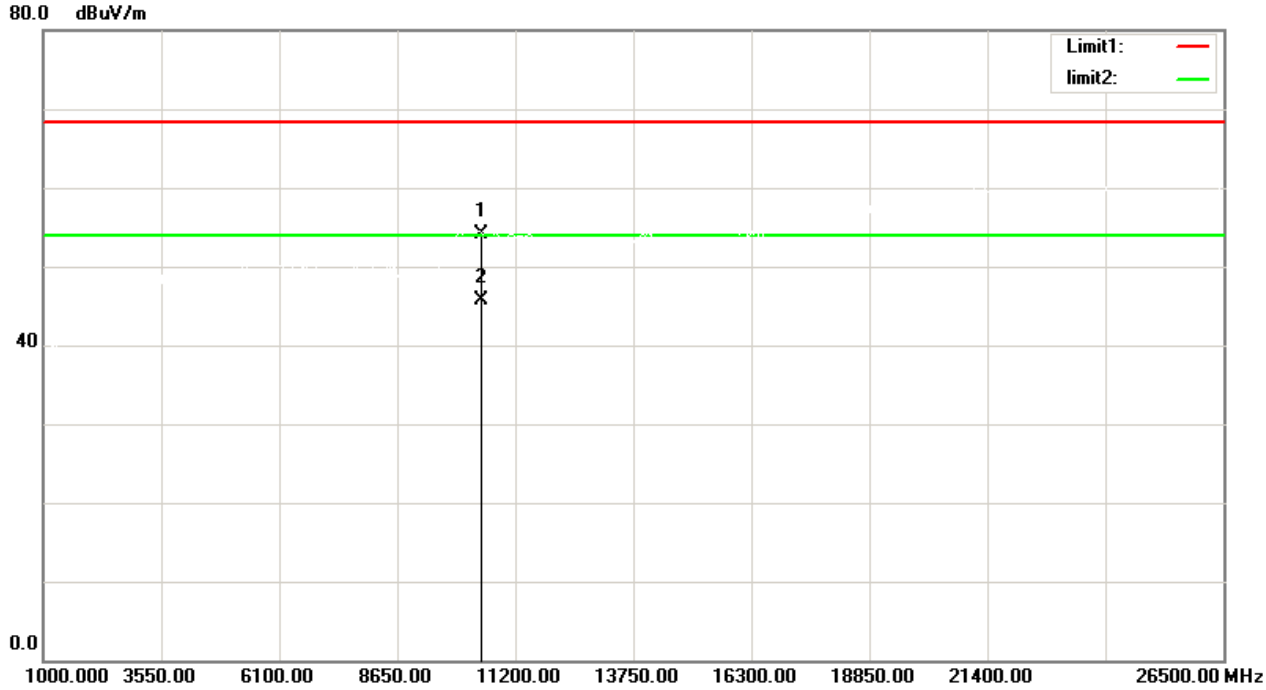
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree	Comment
1		10400.00	49.09	8.04	57.13	68.30	-11.17	peak	150	102	
2	*	10400.00	34.85	8.04	42.89	54.00	-11.11	AVG	150	102	

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

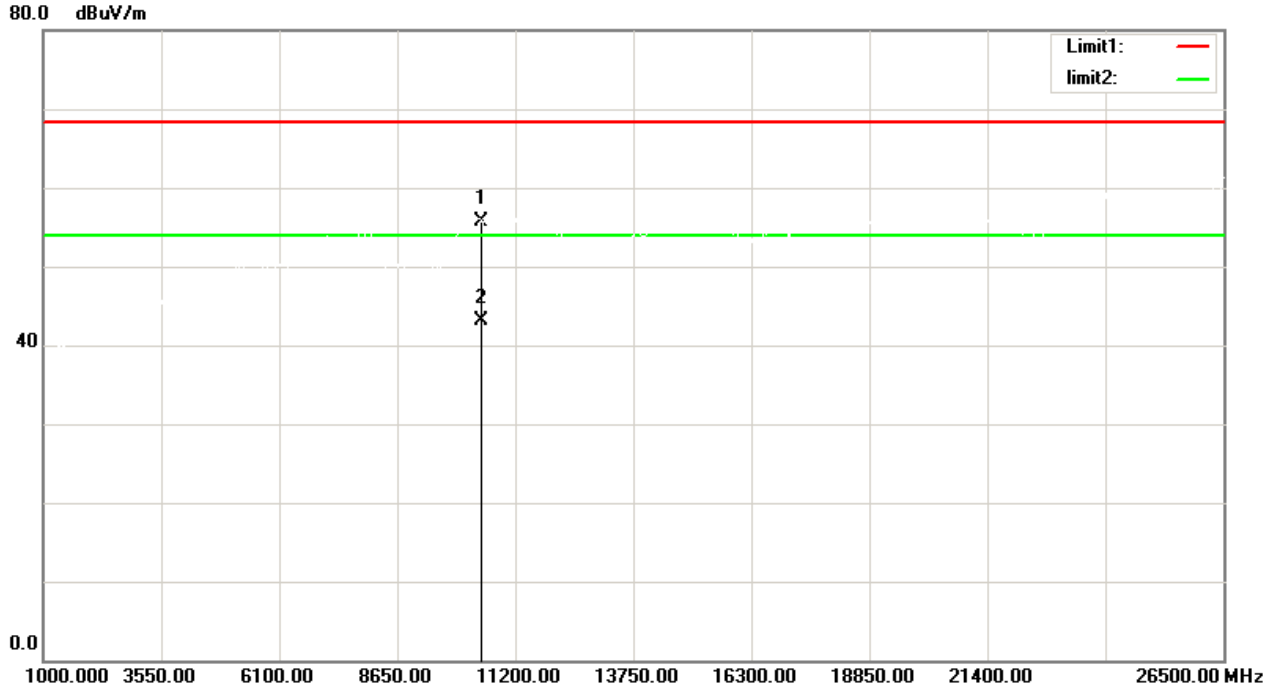
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree	Comment
1		10480.00	45.80	8.37	54.17	68.30	-14.13	peak	150	48	
2	*	10480.00	37.32	8.37	45.69	54.00	-8.31	AVG	150	48	

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

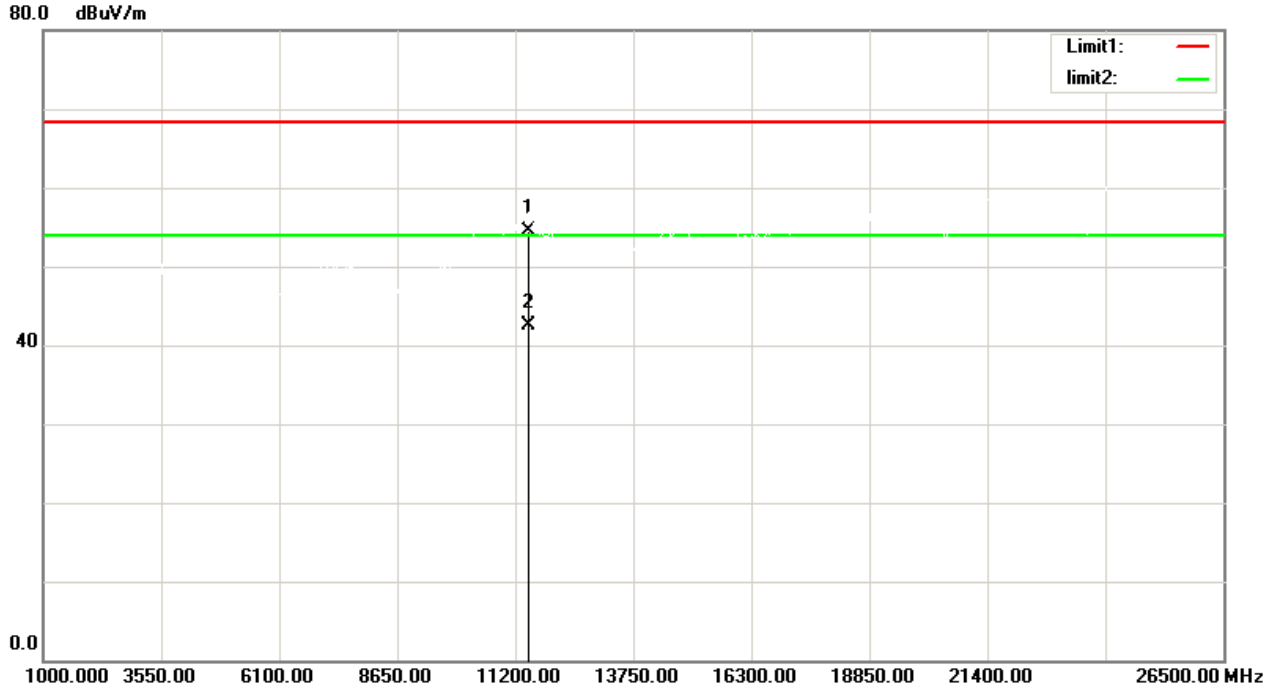
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree	Comment
1	*	10480.00	47.30	8.37	55.67	68.30	-12.63	peak	150	32	
2		10480.00	34.74	8.37	43.11	68.30	-25.19	peak	150	32	

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

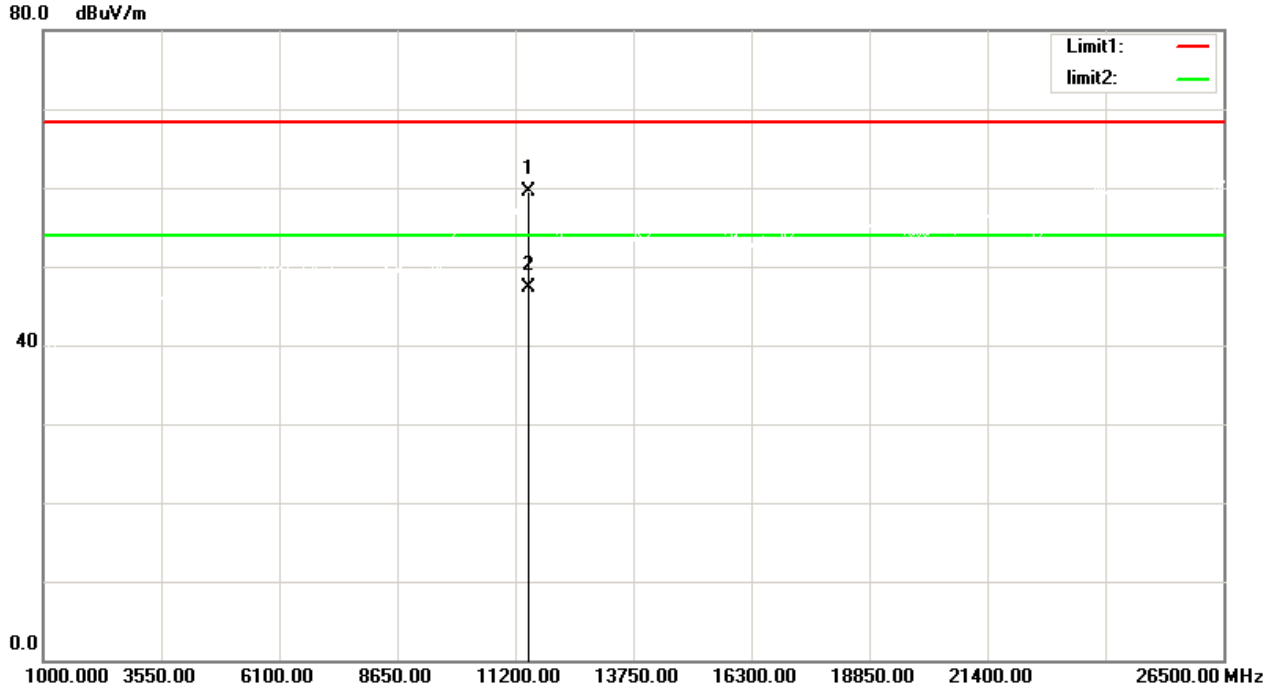
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree	Comment
1		11490.00	46.17	8.36	54.53	68.30	-13.77	peak	150	84	
2	*	11490.00	34.22	8.36	42.58	54.00	-11.42	AVG	150	84	

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

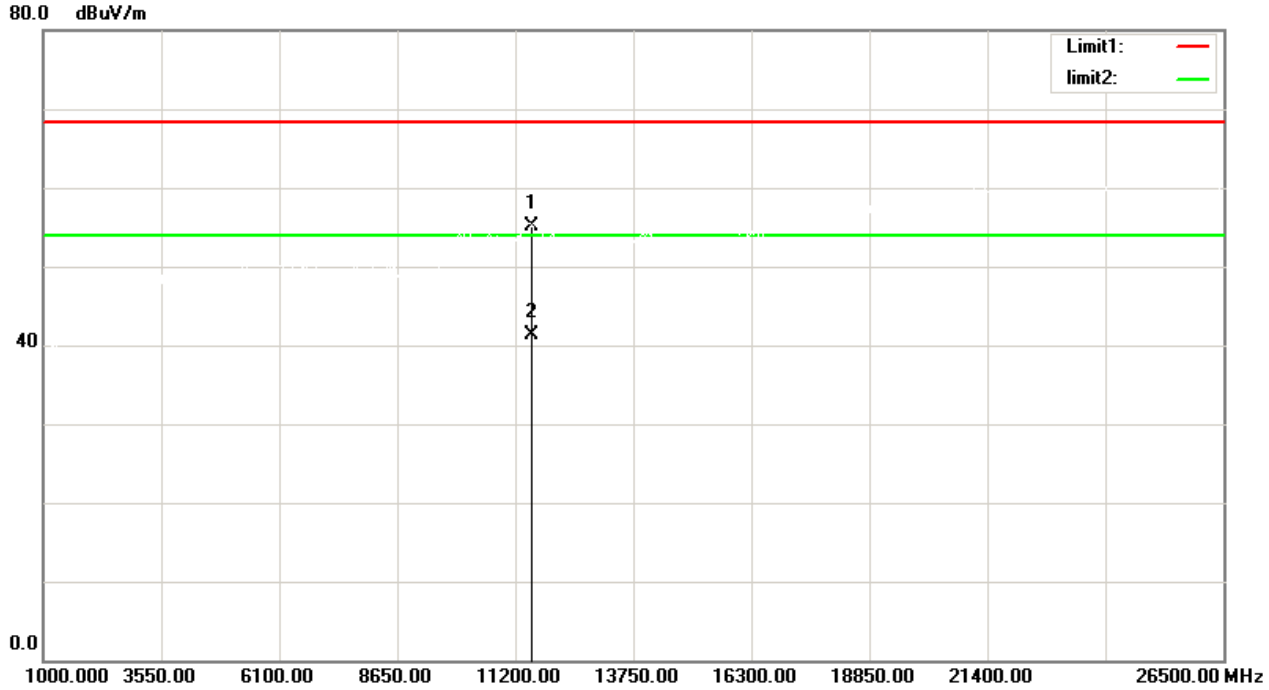
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree	Comment
1		11490.00	51.09	8.36	59.45	68.30	-8.85	peak	150	88	
2	*	11490.00	39.00	8.36	47.36	54.00	-6.64	AVG	150	88	

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

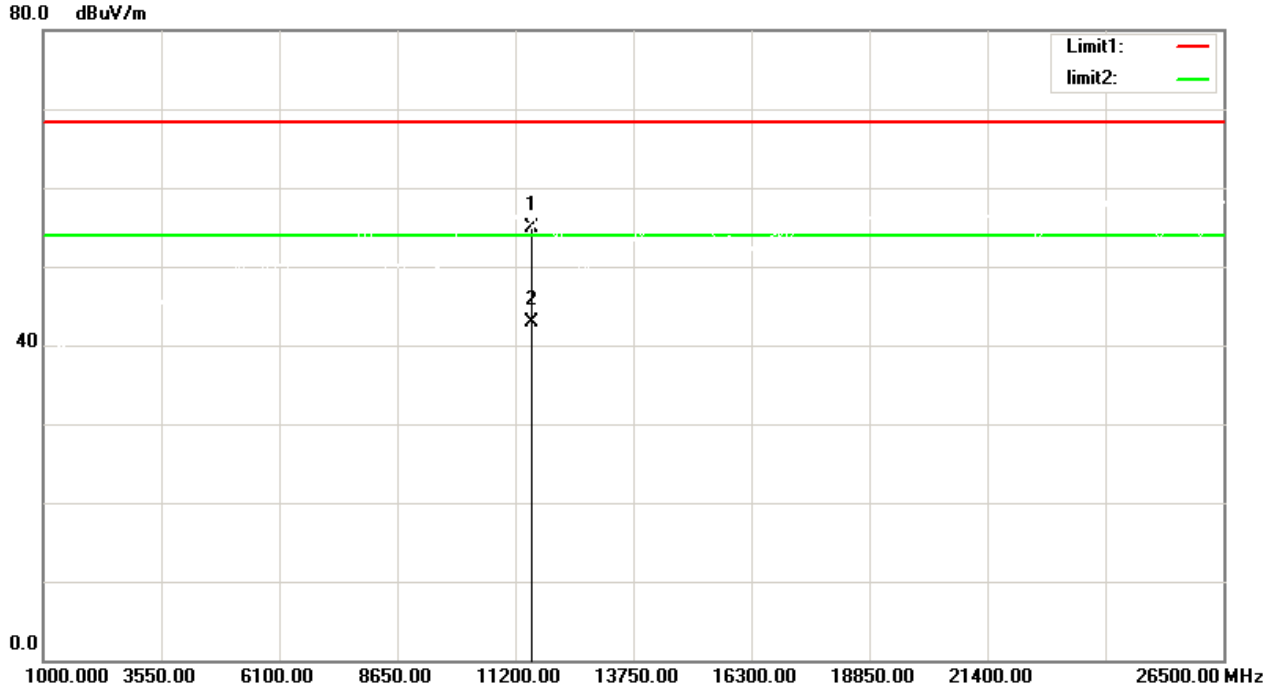
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree	Comment
1		11570.00	46.61	8.40	55.01	68.30	-13.29	peak	150	57	
2	*	11570.00	32.96	8.40	41.36	54.00	-12.64	AVG	150	57	

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

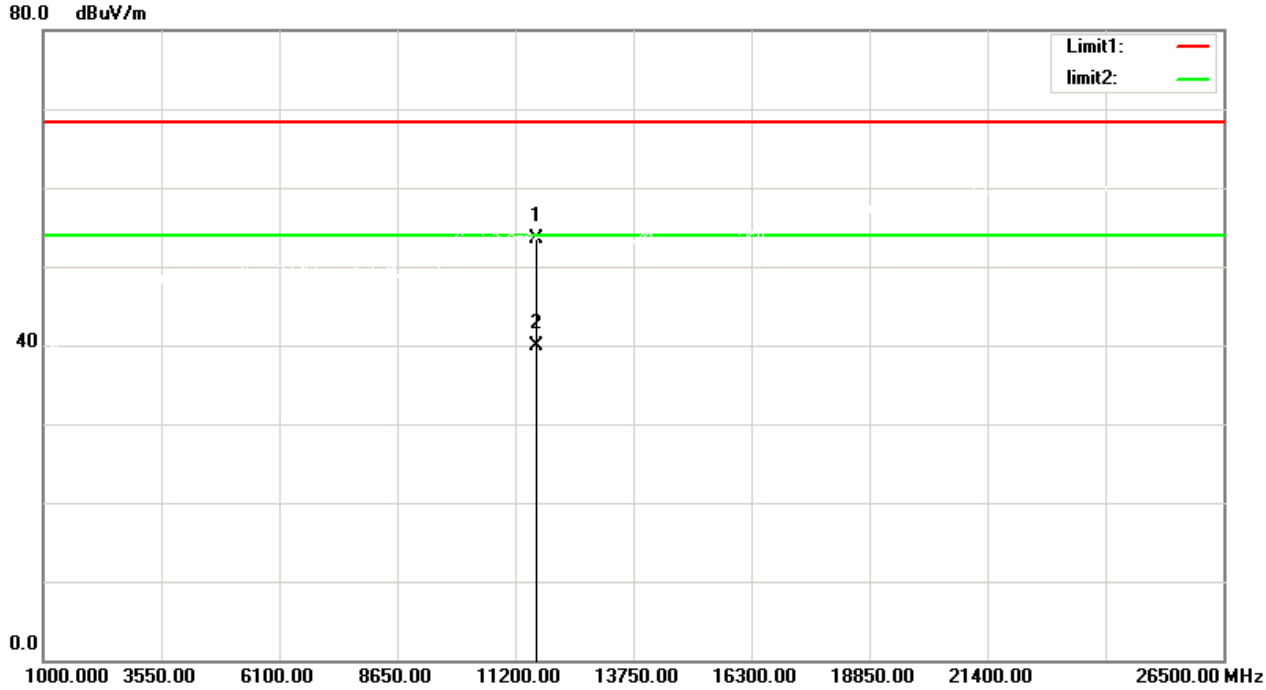
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree	Comment
1		11570.00	46.43	8.40	54.83	68.30	-13.47	peak	150	97	
2	*	11570.00	34.49	8.40	42.89	54.00	-11.11	AVG	150	97	

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

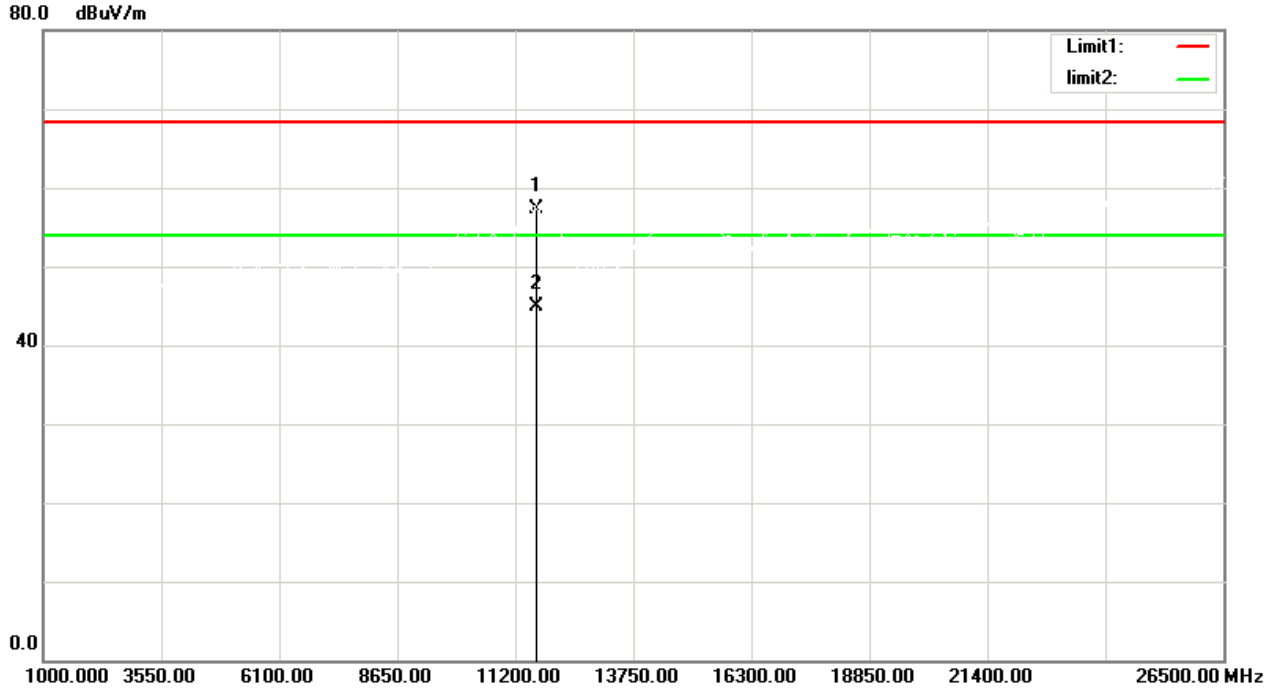
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree	Comment
1		11650.00	45.15	8.45	53.60	68.30	-14.70	peak	150	21	
2	*	11650.00	31.42	8.45	39.87	54.00	-14.13	AVG	150	21	

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

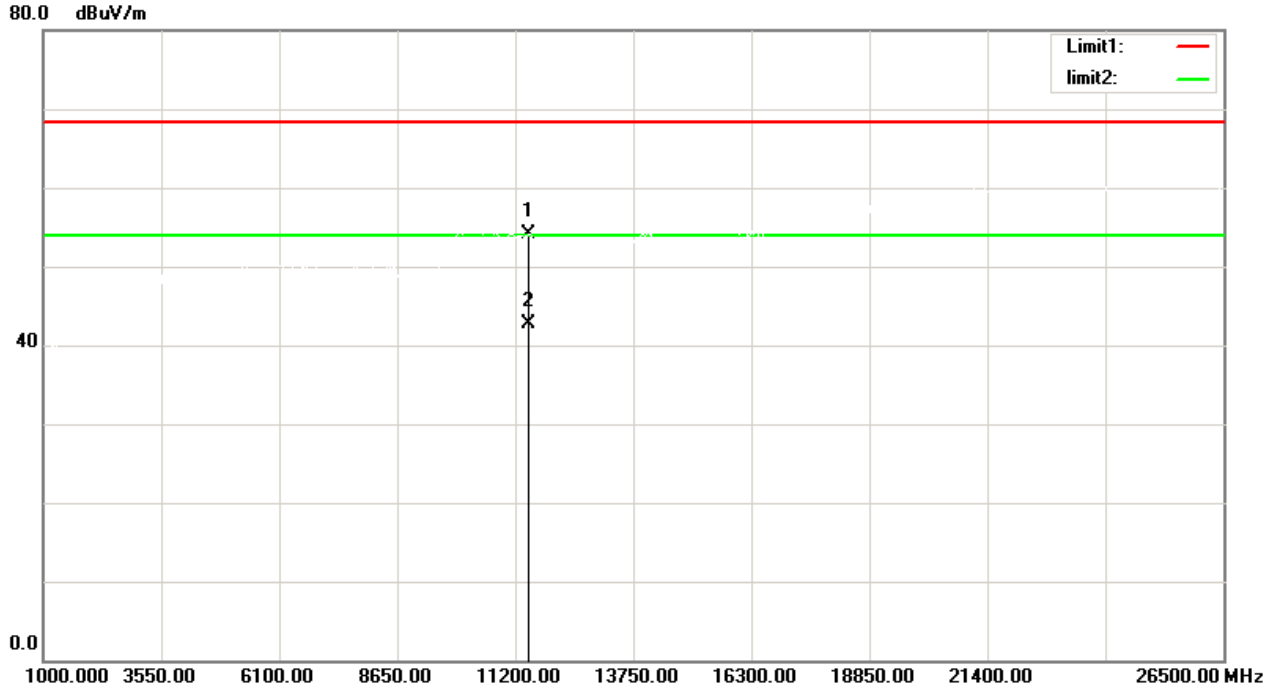
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree	Comment
1		11650.00	48.90	8.45	57.35	68.30	-10.95	peak	150	110	
2	*	11650.00	36.54	8.45	44.99	54.00	-9.01	AVG	150	110	

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

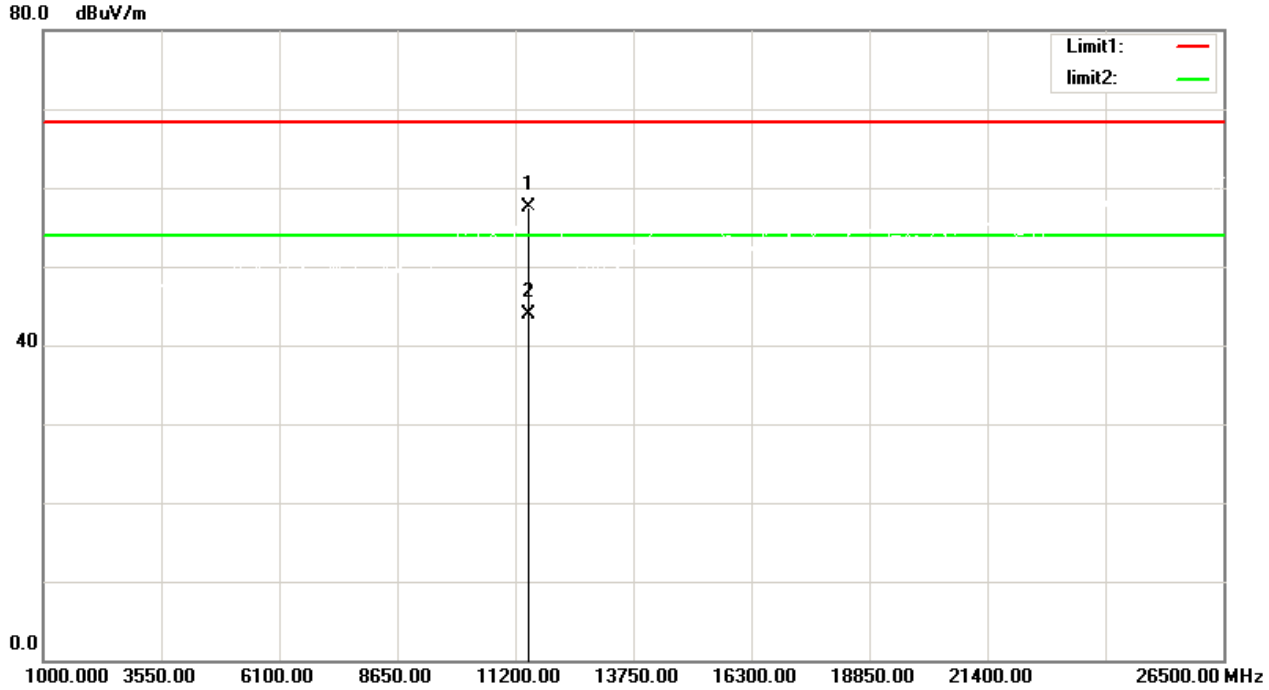
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree	Comment
1		11490.00	45.67	8.36	54.03	68.30	-14.27	peak	150	29	
2	*	11490.00	34.33	8.36	42.69	54.00	-11.31	AVG	150	29	

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

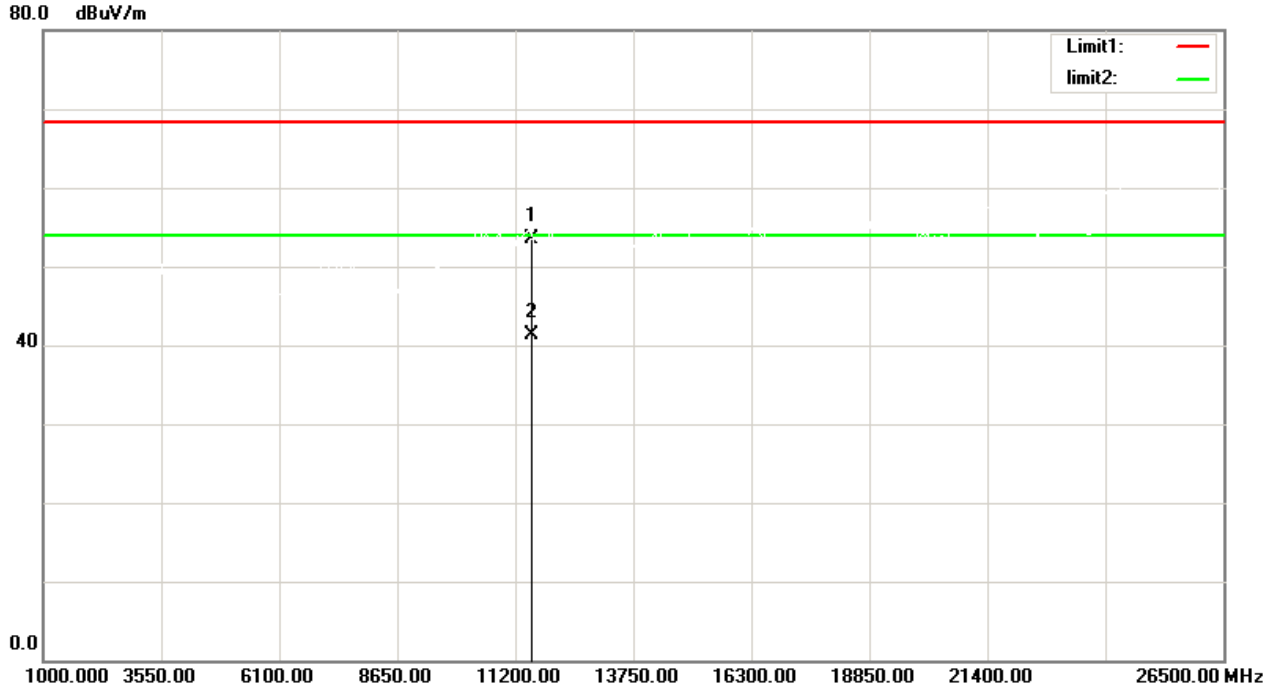
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree	Comment
1		11490.00	49.09	8.36	57.45	68.30	-10.85	peak	150	45	
2	*	11490.00	35.53	8.36	43.89	54.00	-10.11	AVG	150	45	

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

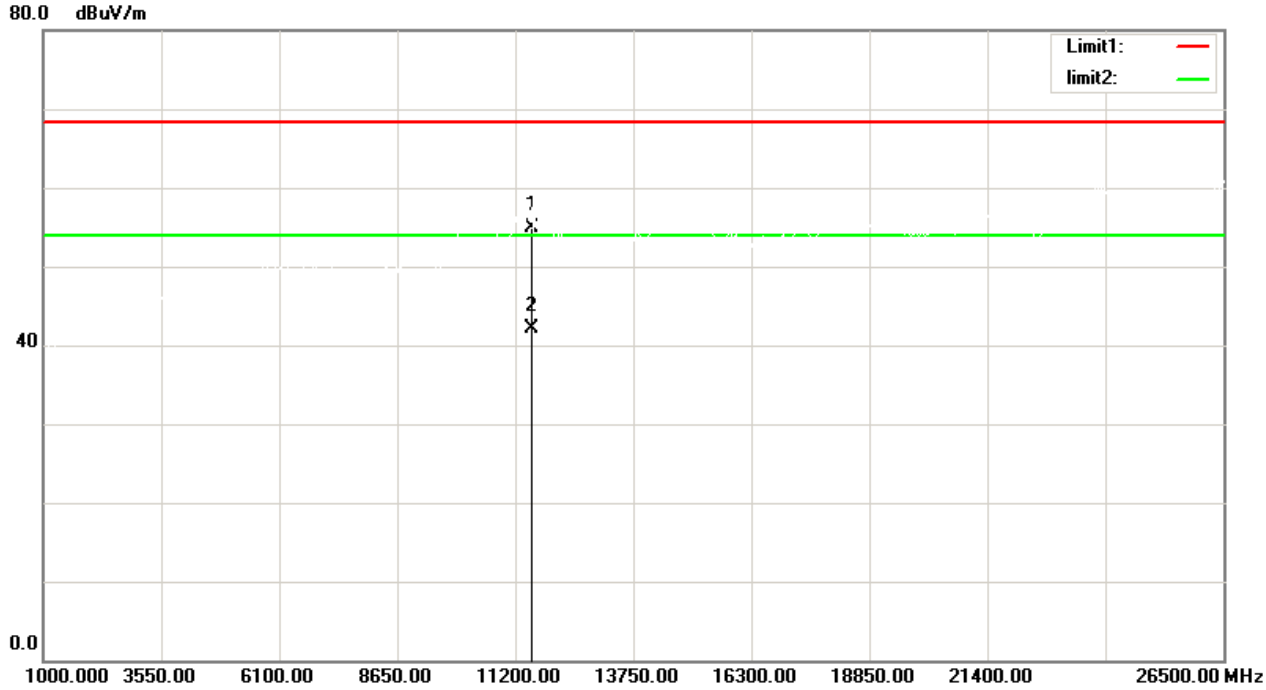
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree	Comment
1		11570.00	45.11	8.40	53.51	68.30	-14.79	peak	150	58	
2	*	11570.00	32.93	8.40	41.33	54.00	-12.67	AVG	150	58	

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

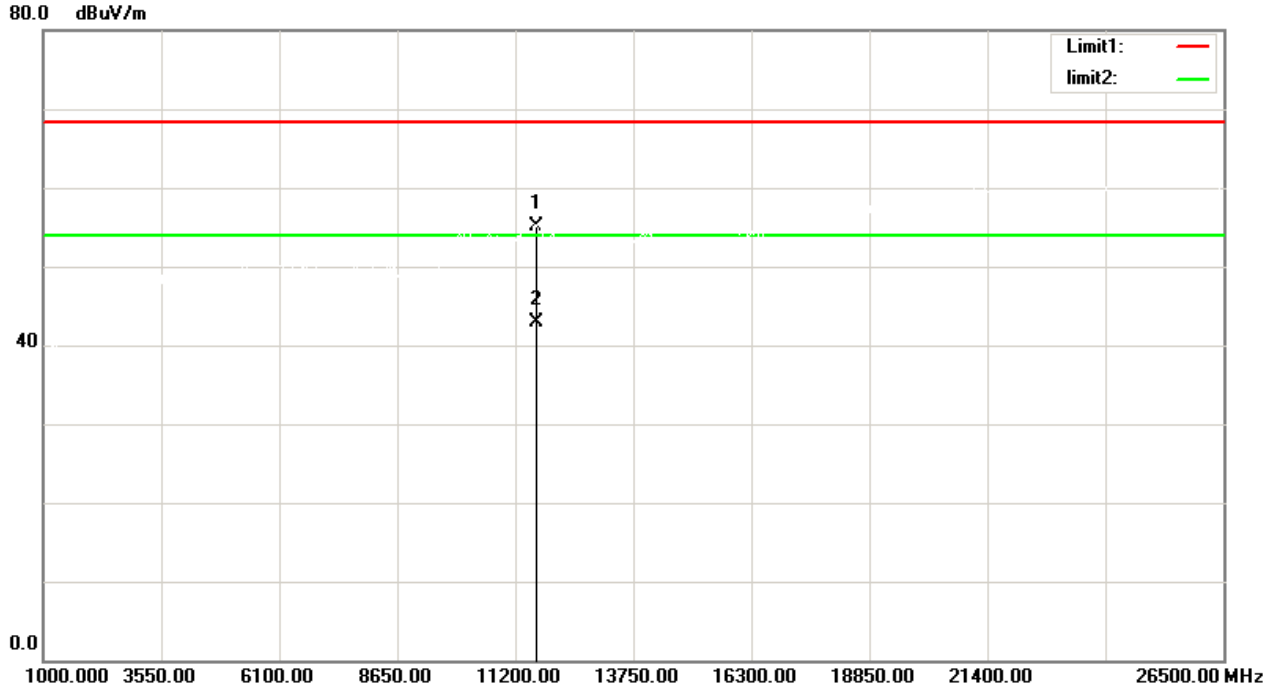
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree	Comment
1		11570.00	46.43	8.40	54.83	68.30	-13.47	peak	150	78	
2	*	11570.00	33.78	8.40	42.18	54.00	-11.82	AVG	150	78	

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

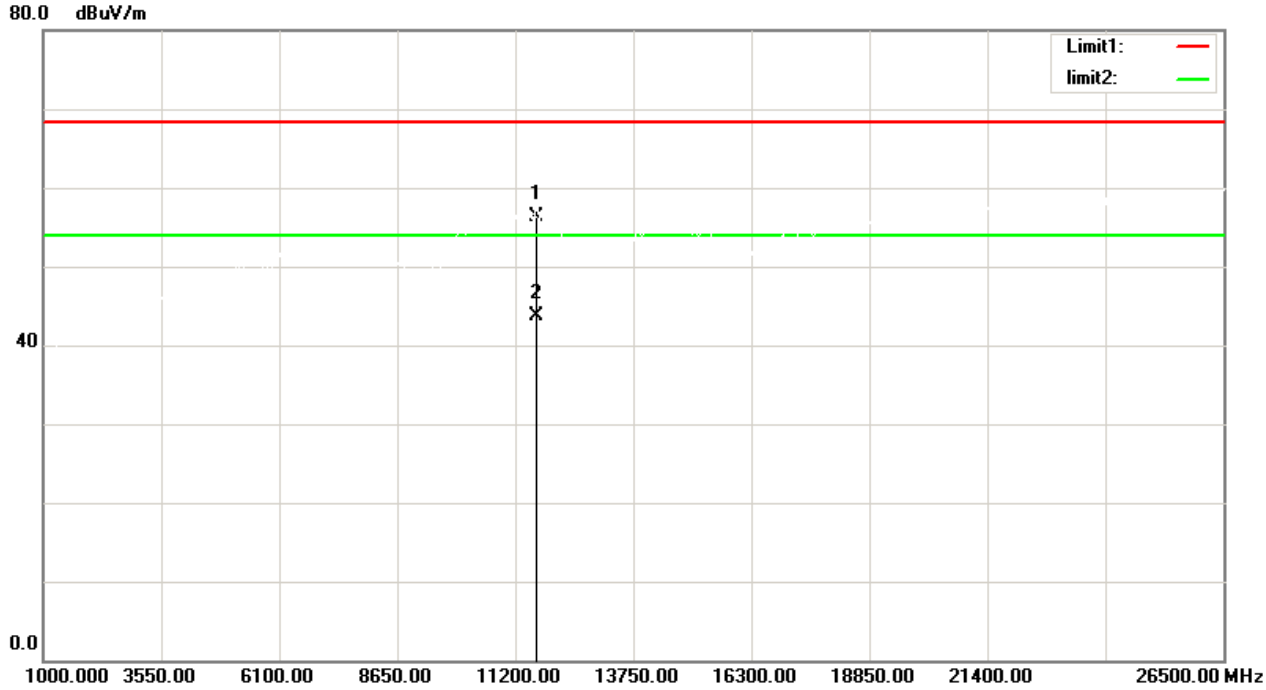
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree	Comment
1		11650.00	46.65	8.45	55.10	68.30	-13.20	peak	150	69	
2	*	11650.00	34.40	8.45	42.85	54.00	-11.15	AVG	150	69	

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

Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree	Comment
1		11650.00	47.90	8.45	56.35	68.30	-11.95	peak	150	93	
2	*	11650.00	35.24	8.45	43.69	54.00	-10.31	AVG	150	93	

6. BANDWIDTH TEST

6.1 LIMIT

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

6.2 TEST PROCEDURE AND SETTING

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	> 26dB 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:

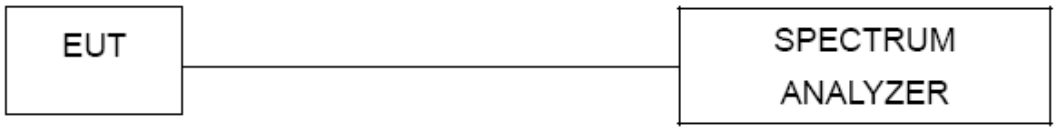
Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	6dB Bandwidth
RBW	100 kHz
VBW	300 kHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

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

6.3 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum analyzer	KEYSIGHT	N9010A	MY55150427	2025/05/22
2	Attenuator	Mini-Circuits	BW-S10W2	101109	N/A
3	RF Cable	Mi-cable	C10-01-01-1	100309	N/A

6.4 TEST SETUP



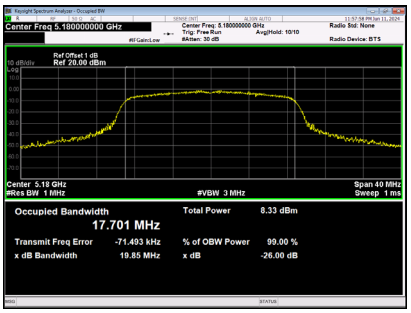
6.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

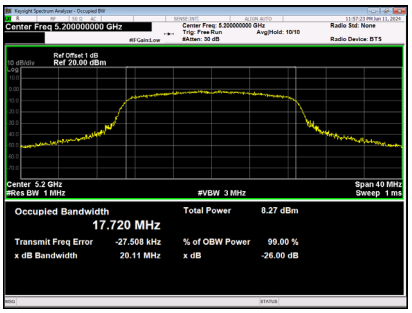
6.6 TEST RESULTS

UNII-1_TX A Mode			
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99 % Emission Bandwidth (MHz)
36	5180	19.85	17.701
40	5200	20.11	17.720
48	5240	20.03	17.682

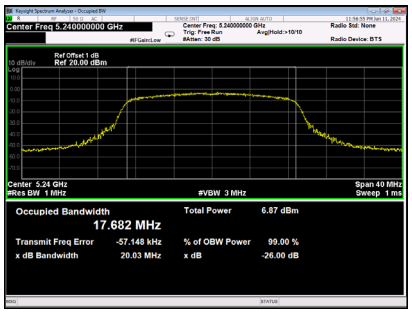
CH36



CH40

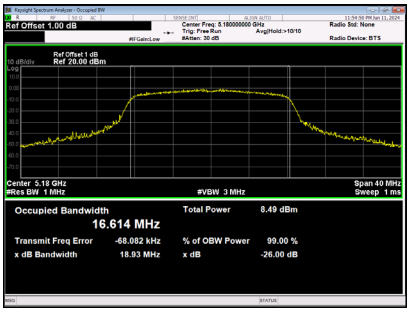


CH48



UNII-1_TX N (HT20) Mode			
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99 % Emission Bandwidth (MHz)
36	5180	18.93	16.614
40	5200	19.14	16.633
48	5240	20.29	17.712

CH36



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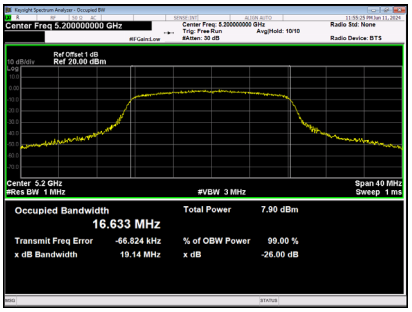

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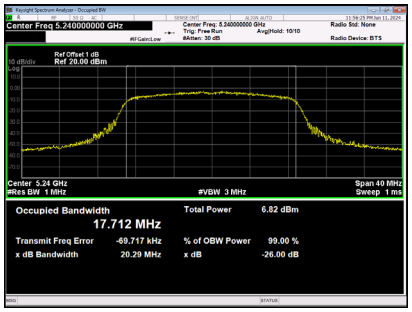
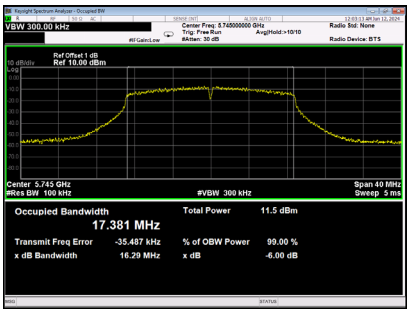


UNII-3_TX A Mode					
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	99% Emission Bandwidth(MHz)	6dB Bandwidth Min. Limit(kHz)	Result
149	5745	16.29	16.839	500	PASS
157	5785	16.30	16.892	500	PASS
165	5825	16.26	17.781	500	PASS

6 dB Bandwidth

CH149



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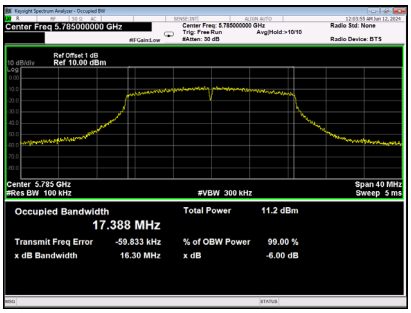
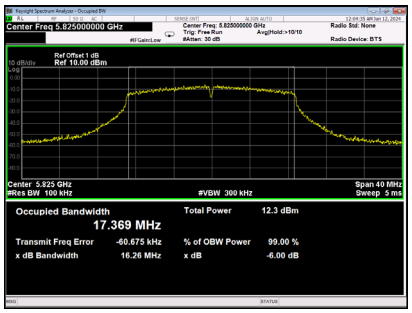
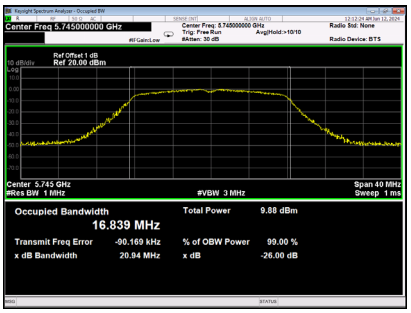


CH165



99% Emission Bandwidth

CH149



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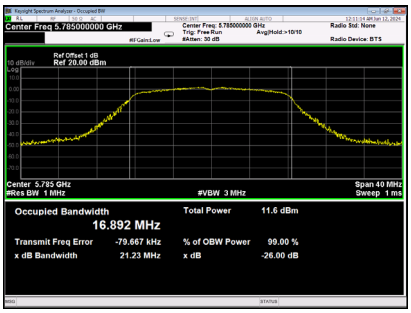

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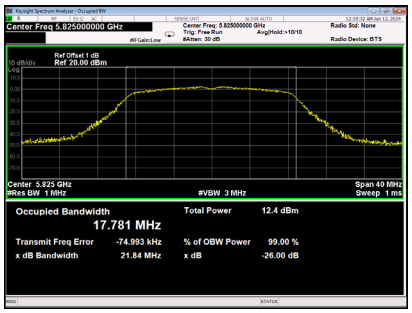
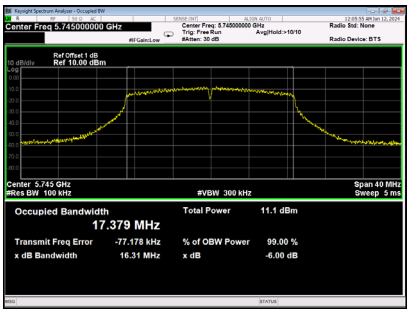


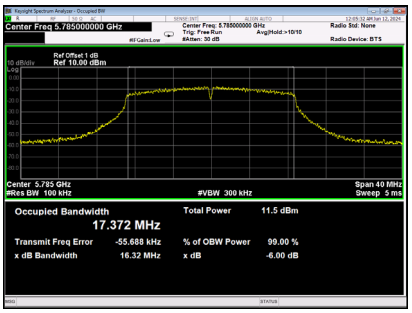
UNII-3_TX N (HT20) Mode					
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	99% Emission Bandwidth(MHz)	6dB Bandwidth Min. Limit(kHz)	Result
149	5745	16.31	16.953	500	PASS
157	5785	16.32	16.766	500	PASS
165	5825	16.29	17.880	500	PASS

6 dB Bandwidth

CH149



CH157



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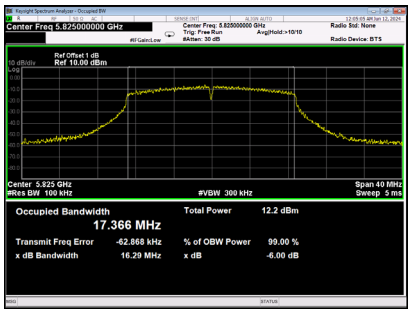
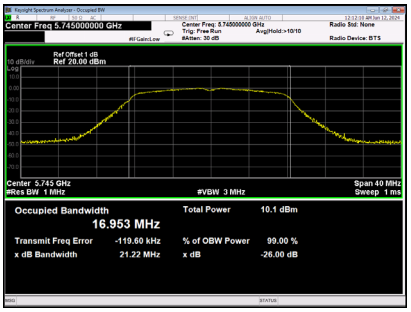
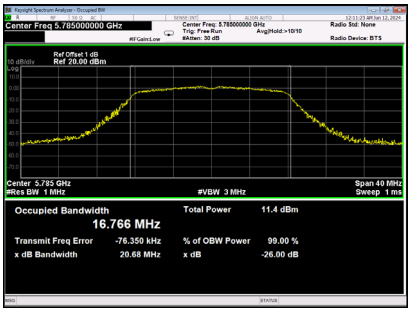


99% Emission Bandwidth

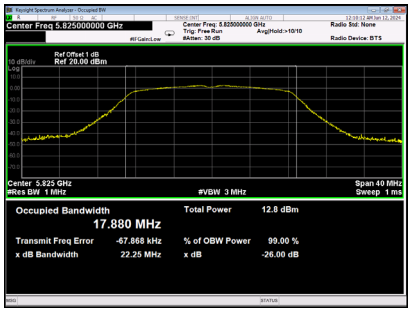
CH149



CH157



CH165



7 MAXIMUM OUTPUT POWER TEST

7.1 LIMIT

FCC Part15, Subpart E (15.407)&RSS-247			
Section	Test Item	Limit	Frequency Range (MHz)
15.407(a)	Maximum Output Power	AP device:1 Watt (30dBm) Client device: 250mW (24dBm)	5150-5250
15.407(a)	Maximum Output Power	1 Watt (30dBm)	5725-5850

Note:

a. For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

b. B is the 99% emission bandwidth in megahertz.

7.2 TEST PROCEDURE AND SETTING

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

b. Test was performed in accordance with method of FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

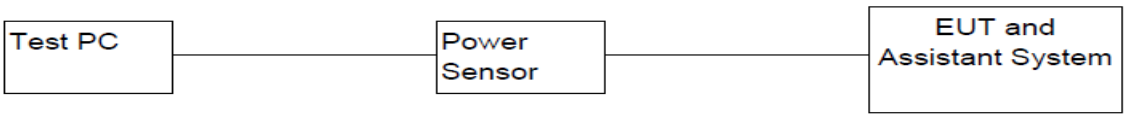
c. EIRP Power=Output Power + Directional Gain

MIMO Directional Gain=Ant 1 Gain+Ant 2 Gain=3dBi+3dBi=6.01dBi

7.3 MEASUREMENT INSTRUMENTS LIST

Item	Equipment	Manufacturer	Model No.	Serial No.	Calibrated until
1	Power Sensor	KEYSIGHT	U2021XA	MY55240009	05/22/2025
2	Attenuator	Mini-Circuits	BW-S10W2	101109	N/A
3	RF Cable	Micable	C10-01-01-1	100309	N/A
4	Test Software	KEYSIGHT	Power Panel	V3.11	N/A

7.4 TEST SETUP



7.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

7.6 TEST RESULTS

UNII-1_TX A Mode							
Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
36	5180	-0.33	0.00	-0.33	24.00	0.25	PASS
40	5200	-0.47	0.00	-0.47	24.00	0.25	PASS
48	5240	-0.03	0.00	-0.03	24.00	0.25	PASS

UNII-1_TX N (HT20) Mode							
Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
36	5180	-0.54	0.00	-0.54	24.00	0.25	PASS
40	5200	-0.33	0.00	-0.33	24.00	0.25	PASS
48	5240	-0.86	0.00	-0.86	24.00	0.25	PASS

UNII-3_TX A Mode							
Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
149	5745	-0.27	0	-0.27	30.00	1.00	PASS
157	5785	-0.07	0	-0.07	30.00	1.00	PASS
165	5825	-0.38	0	-0.38	30.00	1.00	PASS

UNII-3_TX N (HT20) Mode							
Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
149	5745	-0.19	0.00	-0.19	30.00	1.00	PASS
157	5785	-0.02	0.00	-0.02	30.00	1.00	PASS
165	5825	-0.34	0.00	-0.34	30.00	1.00	PASS

8 POWER SPECTRAL DENSITY TEST

8.1 LIMIT

FCC Part15, Subpart E (15.407)&RSS-247			
Section	Test Item	Limit	Frequency Range (MHz)
15.407(a)	Power Spectral Density	AP device:17dBm/MHz Client device:11dBm/MHz	5150-5250
15.407(a)	Power Spectral Density	30dBm/500kHz	5725-5850

8.2 TEST PROCEDURE ANS SETTING

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	= 1MHz.
VBW	≥ 3MHz.
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 1MHz and VBW at 3MHz if the spectrum analyzer does not have 500kHz RBW.

2.The value measured with RBW=1MHz is to be added with 10log(500kHz/1MHz) which is -3dB. For example, if the measured value is +10dBm using RBW=1MHz (that is +10dBm/MHz), then the converted value will be +7dBm/500kHz.

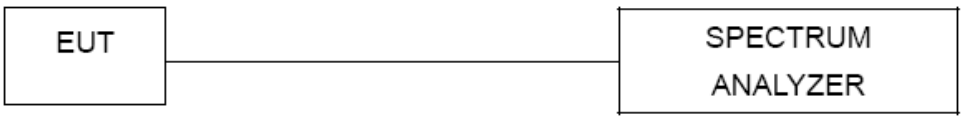
3. EIRP Power Spectral Density = Power Spectral Density+Antenna Gain

MIMO Directional Gain= Ant 1 Gain+Ant 2 Gain=0.10dBi+（-0.38）dBi=2.88dBi

8.3 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum analyzer	KEYSIGHT	N9010A	MY55150427	2025/05/22
2	Attenuator	Mini-Circuits	BW-S10W2	101109	N/A
3	RF Cable	Mi-cable	C10-01-01-1	100309	N/A

8.4 TEST SETUP



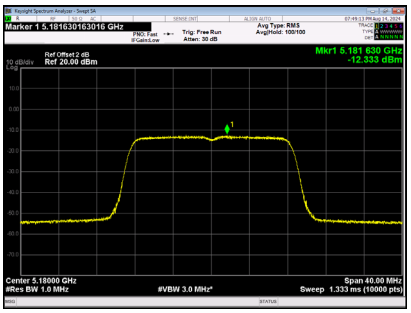
8.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

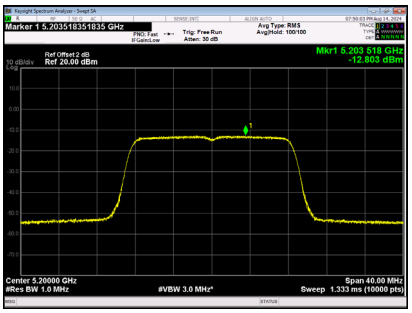
8.6 TEST RESULTS

UNII-1_TX A Mode						
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Result
36	5180	-12.333	0.00	-12.333	11.00	PASS
40	5200	-12.803	0.00	-12.803	11.00	PASS
48	5240	-14.214	0.00	-14.214	11.00	PASS

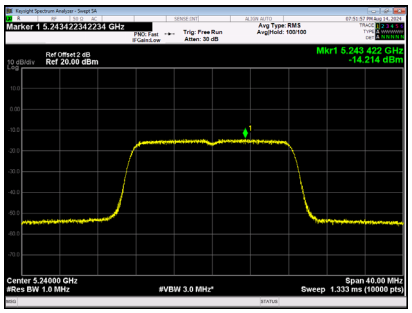
CH36



CH40

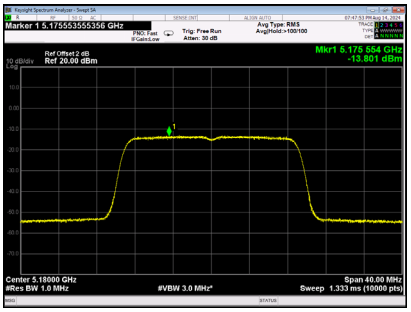


CH48



UNII-1_TX N (HT20) Mode						
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Result
36	5180	-13.801	0.00	-13.801	11.00	PASS
40	5200	-13.584	0.00	-13.584	11.00	PASS
48	5240	-14.805	0.00	-14.805	11.00	PASS

CH36



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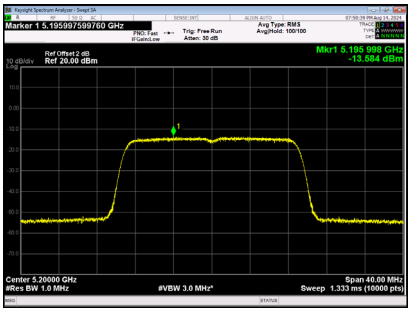

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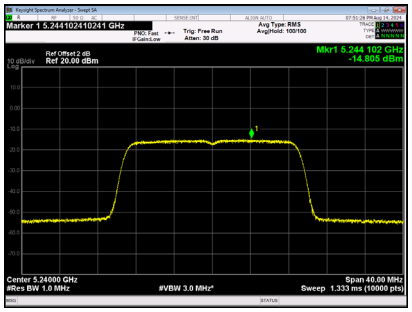
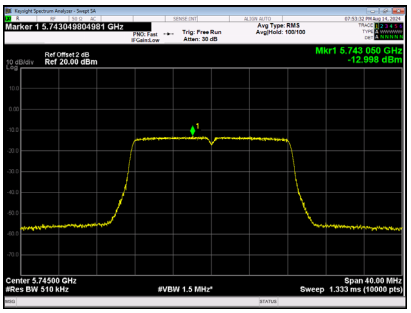


UNII-3_TX A Mode						
Channel	Frequency (MHz)	Power Spectral Density (dBm/500 kHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/500 kHz)	Max. Limit (dBm/500 kHz)	Result
149	5745	-12.998	0.00	-12.998	30.00	PASS
157	5785	-15.156	0.00	-15.156	30.00	PASS
165	5825	-15.011	0.00	-15.011	30.00	PASS

CH149



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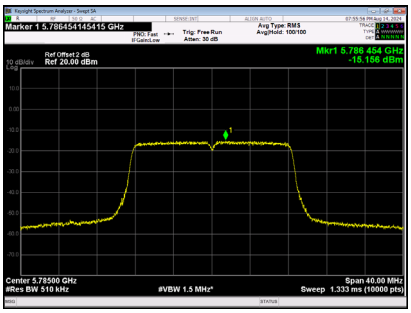

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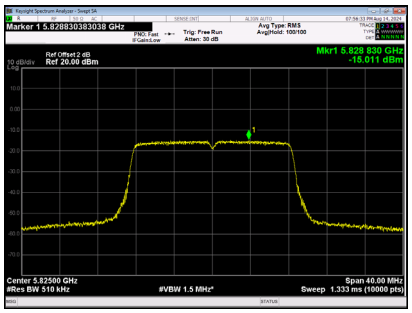
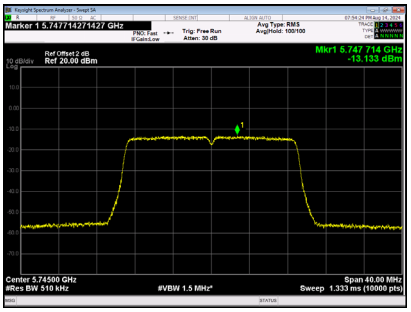


UNII-3_TX N (HT20) Mode						
Channel	Frequency (MHz)	Power Spectral Density (dBm/500 kHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/500 kHz)	Max. Limit (dBm/500 kHz)	Result
149	5745	-13.133	0.00	-13.133	30.00	PASS
157	5785	-15.431	0.00	-15.431	30.00	PASS
165	5825	-15.021	0.00	-15.021	30.00	PASS

CH149



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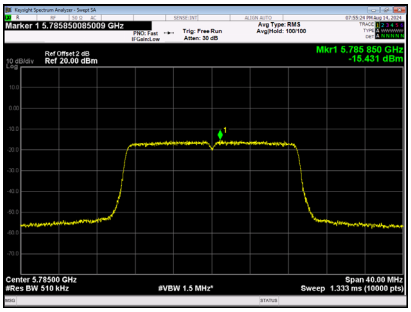

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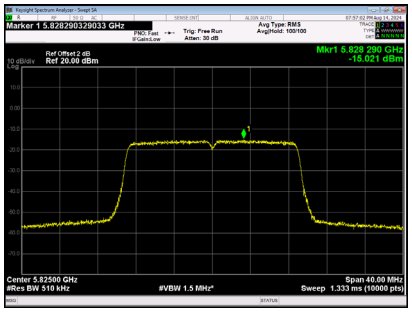


9. FREQUENCY STABILITY MEASUREMENT

9.1 LIMIT

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

9.2 TEST PROCEDURE AND SETTING

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

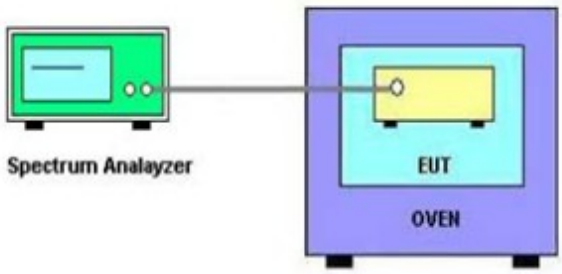
b. Spectrum Setting:

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

9.3 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum analyzer	KEYSIGHT	N9010A	MY55150427	2025/05/22
2	Attenuator	Mini-Circuits	BW-S10W2	101109	N/A
3	RF Cable	Mi-cable	C10-01-01-1	100309	N/A
4	Temperature conditioning	Guan Jian.HTH1000	-20-130℃	GJ1000-10D001	N/A
5	DC Power Supply	G.KE	IPR-10010D	010931954	N/A

9.4 TEST SETUP



9.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

9.6 TEST RESULTS

	Temperature vs. Frequency Stability-UNII-1	
Voltage	Temperature	Measurement Frequency (MHz)
120V	(℃)	5180
	0	5179.9384
	25	5179.9382
	40	5179.9382
89V	25	5179.9384
Max. Deviation (MHz)		-0.062
Max. Deviation (ppm)		-11.93

	Temperature vs. Frequency Stability-UNII-3	
Voltage	Temperature	Measurement Frequency (MHz)
120V	(℃)	5745
	0	5744.9388
	25	5744.9386
	40	5744.9388
89V	25	5744.9382
Max. Deviation (MHz)		-0.062
Max. Deviation (ppm)		-10.76

Note:3.2V is the end point voltage, and products below 3.2V will cease working.

END OF TEST REPORT