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国际互认
检测
TESTING
CNAS L0446



Page 1 of 191

Test Report

Verified code: 069878

Report No.: E202109052880-2

Customer: Fiberhome Telecommunication Technologies Co., Ltd.

Address: No.88 Youkeyuan Lu, Hongshan District 430032 Wuhan, Hubei PEOPLE'S REPUBLIC OF CHINA

Sample Name: Wireless Router

Sample Model: SR1021Y

Receive Sample Date: Sep.15,2021

Test Date: Sep.15,2021 ~ Nov.03,2021

Reference Document: CFR 47, FCC Part 15 Subpart C
RADIO FREQUENCY DEVICES: Subpart C—Intentional Radiators
ANSI C63.10-2013
KDB 558074 D01 15.247 Meas Guidance v05r02

Test Result: Pass

Prepared By: Yang Zhaojun

Reviewed By:

Jiang Tao

Approved By: Xiao Liang

GUANGZHOU GRG METROLOGY & TEST CO., LTD

Issued Date: 2021-12-31

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2. The sample information is provided by the client and responsible for its authenticity; The content of the report is only valid for the samples sent this time.
3. When there are reports in both Chinese and English, the Chinese version will prevail when the language problems are inconsistent.
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1. TEST RESULT SUMMARY

Standard	Item	Limit / Severity	Result
CFR 47, FCC Part 15 Subpart C (§15.247)	Antenna Requirement	§ 15.203	PASS
	Conducted Emissions	§15.207 (a)	PASS
	Radiated Spurious Emission	§15.247(d) § 15.205 § 15.209	PASS
	6 dB Bandwidth	§15.247 (a)(2)	PASS
	Maximum Peak Output Power	§15.247(b)(3)	PASS
	Power Spectral Density	§15.247(e)	PASS
	Conducted band edges and Spurious Emission	§15.247(d)	PASS
	Restricted bands of operation	§15.205 § 15.209 §15.247(d)	PASS

The EUT have two antennas. The antenna is Internal antenna.

The max gain of antenna is 3.95dBi, which accordance 15.203 is considered sufficient to comply with the provisions of this section.

----- The following blanks -----

2. GENERAL DESCRIPTION OF EUT

2.1. APPLICANT

Name: Fiberhome Telecommunication Technologies Co., Ltd.
Address: No.88 Youkeyuan Lu, Hongshan District 430032 Wuhan,Hubei PEOPLE'S REPUBLIC OF CHINA

2.2. MANUFACTURER

Name: Fiberhome Telecommunication Technologies Co., Ltd.
Address: No.88 Youkeyuan Lu, Hongshan District 430032 Wuhan,Hubei PEOPLE'S REPUBLIC OF CHINA

2.3. FACTORY

Name: Fiberhome Telecommunication Technologies Co., Ltd.
Address: No.88 Youkeyuan Lu, Hongshan District 430032 Wuhan,Hubei PEOPLE'S REPUBLIC OF CHINA

2.4. BASIC DESCRIPTION OF EQUIPMENT UNDER TEST

Product Name: Wireless Router
Product Model: SR1021Y
Adding Model: /
Trade Name: FiberHome
FCC ID: 2AV2N-SR1021Y

Power Supply: DC12.0V power supplied by adapter
Adapter 1: KL-WA120150-D
Input:100-240V~50/60Hz 0.7A
Output:12.0V 1.5A
Adapter Specification: Adapter 2: RD1201500-C55-153MG
Input:100-240V~50/60Hz 0.6A
Output:12.0V 1.5A

Frequency Band: 2412MHz-2462MHz for 802.11b/g/n HT20/ax HE20
2422MHz-2452MHz: 802.11n HT40/ax HE40

Modulation Type: DSSS for 802.11b mode;
OFDM for 802.11g/n mode
OFDM , OFDMA for 802.11ax mode

Antenna Specification: Internal antenna 1 with 3.95dBi gain (Max)
Internal antenna 2 with 3.95dBi gain (Max)
Temperature Range: -5℃~45℃
Hardware Version: /
Software Version: V1.0
Sample submitting way: ☒ Provided by customer ☐ Sampling
Sample No: E202109052880-0002, E202109052880-0003
Note: /

2.5. CHANNEL LIST

CH01 - CH11 for IEEE 802.11b, IEEE 802.11g, IEEE 802.11n HT20, IEEE 802.11ax HE20							
CH03 – CH09 for IEEE 802.11n HT40, IEEE 802.11ax HE40,							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
01	2412	04	2427	07	2442	10	2457
02	2417	05	2432	08	2447	11	2462
03	2422	06	2437	09	2452		

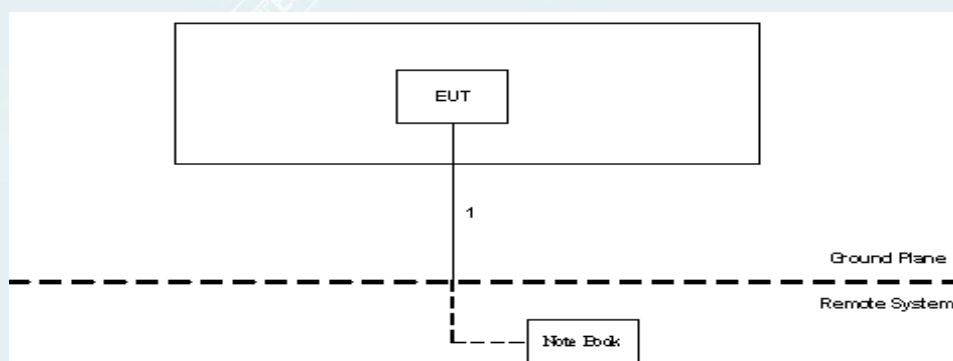
2.6. TEST OPERATION MODE

Mode No.	Description of the modes
1	2.4G Wi-Fi TX mode

2.7. LOCAL SUPPORTIVE INSTRUMENTS

Name of Equipment	Manufacturer	Model	Serial Number	Note
Notebook	LENOVO	TianYi 310-14ISK	MP18DLC6	/
/	/	/	/	/
Cable				
DC cable	/	/	/	UnShielded, 1.5m
RJ45	/	/	/	UnShielded, 8.0m

2.8. CONFIGURATION OF SYSTEM UNDER TEST



Test software:

Software version
QATool_Dbg

Power Setting:

Mode	Date Rate	Frequency (MHz)	Power Setting
802.11b	1M	2412	11
		2437	11
		2462	11
802.11g	6M	2412	17.5
		2437	17.5
		2462	17
802.11n HT20	MCS8	2412	15
		2437	17.5
		2462	14.5
802.11n HT40	MCS8	2422	12.5
		2437	15
		2452	12
802.11ax HE20	MCS0	2412	13
		2437	17.5
		2462	11.5
802.11ax HE40	MCS0	2422	11.5
		2437	13
		2452	11.5

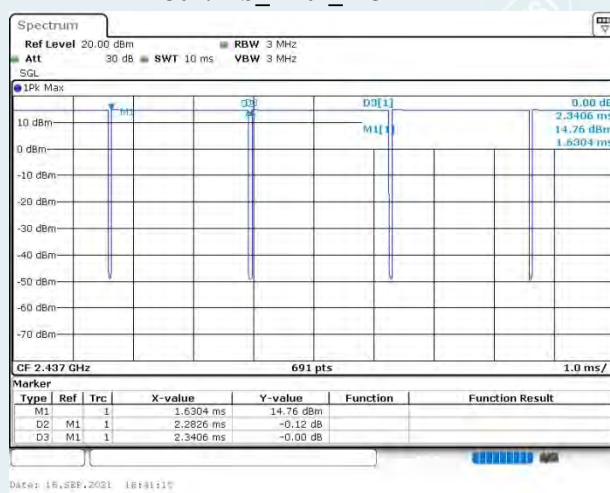
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2.9. DUTY CYCLE

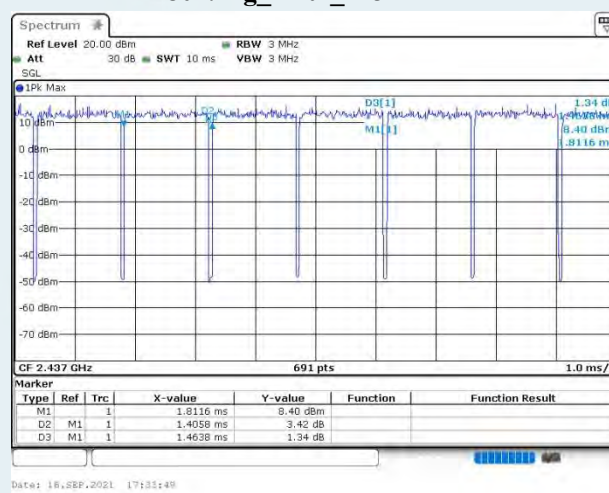
EUT Name	Wireless Router	Model	SR1021Y
Environmental Conditions	23.9°C/47%RH	Test Voltage	AC120V/60Hz
Tested By	Lu Wei	Tested Date	2021/09/16

Test Mode	Antenna	Frequency (MHz)	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	T [s]
802.11b	Ant1	2437	2.2826	2.3406	97.52	0.0022826
802.11g	Ant1	2437	1.4058	1.4638	96.04	0.0014058
802.11n	Ant1	2437	0.3623	0.4203	86.22	0.0003623
802.11n	Ant1	2437	0.1957	0.2536	77.17	0.0001957
802.11ax HE20	Ant1	2437	0.3261	0.3841	84.90	0.0003261
802.11ax HE40	Ant1	2437	0.3261	0.3841	84.90	0.0003261

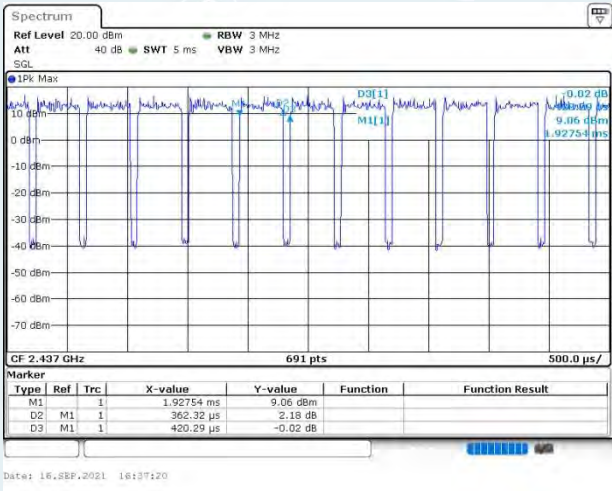
802.11b_Ant1_2437MHz



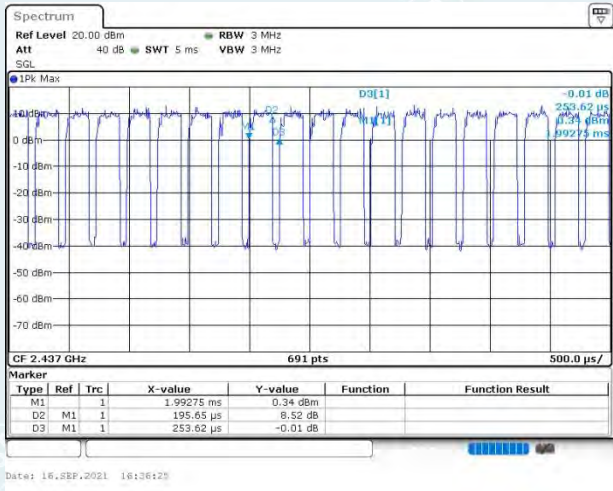
802.11g_Ant1_2437MHz



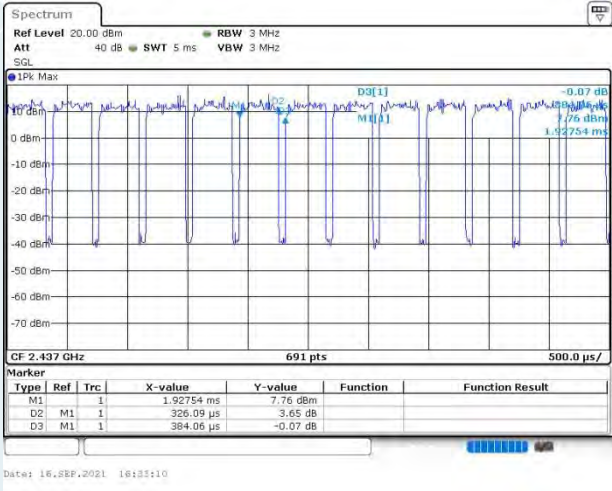
802.11n HT20_Ant1_2437MHz



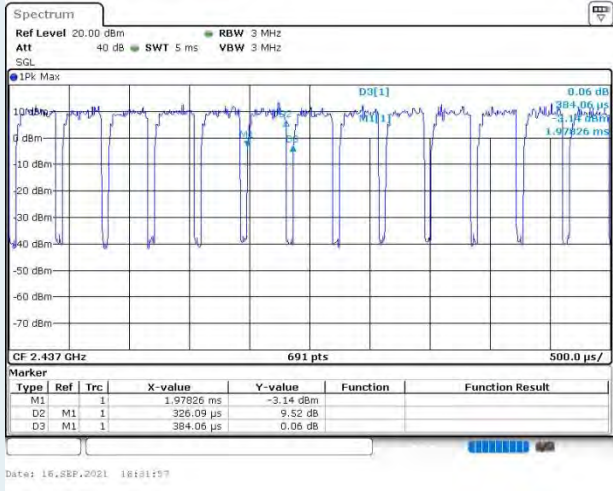
802.11n HT40_Ant1_2437MHz



802.11ax HE20_Ant1_2437MHz



802.11ax HE40_Ant1_2437MHz



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3. LABORATORY AND ACCREDITATIONS

3.1. LABORATORY

The tests & measurements refer to this report were performed by Shenzhen EMC Laboratory of Guangzhou GRG Metrology & Test Co., Ltd.

Add : No.1301 Guangang Road Xinlan Community, Guanlan Street, Longhua District
Shenzhen, 518110, People's Republic of China

P.C. : 518000

Tel : 0755-61180008

Fax : 0755-61180008

3.2. ACCREDITATIONS

Our laboratories are accredited and approved by the following approval agencies according to ISO/IEC 17025.

USA A2LA(Certificate#:2861.01)

China CNAS(L0446)

The measuring facility of laboratories has been authorized or registered by the following approval agencies.

Canada ISED (Company Number: 24897, CAB identifier:CN0069)

USA FCC (Registration Number: 759402, Designation Number:CN1198)

Copies of granted accreditation certificates are available for downloading from our web site,
<http://www.grgtest.com>

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3.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Measurement		Frequency	Uncertainty
Radiated Emission	Horizontal	9kHz~30MHz	4.46dB
		30MHz~1000MHz	4.30dB
		1GHz~18GHz	5.60dB
		18GHz~26.5GHz	3.65dB
	Vertical	9kHz~30MHz	4.46dB
		30MHz~1000MHz	4.30dB
		1GHz~18GHz	5.60dB
		18GHz~26.5GHz	3.65dB
Conduction Emission		9 kHz ~ 150kHz	2.80dB
		150kHz ~ 10MHz	2.80dB
		10MHz ~ 30MHz	2.20dB

Measurement	Uncertainty
RF frequency	6.0×10^{-6}
RF power conducted	0.78 dB
Occupied channel bandwidth	0.4 dB
Unwanted emission, conducted	0.68 dB
Humidity	6 %
Temperature	2°C

This uncertainty represents an expanded uncertainty factor of $k=2$.

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4. LIST OF USED TEST EQUIPMENT AT GRGT

Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Conducted Emissions				
EZ-EMC	EZ	CCS-3A1-CE	/	/
EMI Receiver	R&S	ESCI	100783	2022-09-13
LISN(EUT)	R&S	ENV216	101543	2022-03-21
Radiated Spurious Emission&Restricted bands of operation				
Test S/W	EZ	CCS-2ANT		
Loop Antenna	TESEQ	HLA6121	52599	2022-04-21
Test Receiver	R&S	ESCI	100088	2021-11-14
Preamplifier	EMEC	EM330	/	2022-03-21
Bi-log Antenna	TESEQ	CBL6143A	32399	2021-11-25
Spectrum Analyzer	Agilent	N9010A	MY52221469	2022-04-16
Horn Antenna	Schwarzbeck	BBHA9120D	286	2022-03-04
Board-Band Horn Antenna	Schwarzbeck	BBHA 9170	BBHA 9170-497	2022-10-16
Amplifier	Tonscend	TAP01018048	AP20E8060075	2022-06-07
Amplifier	Tonscend	TAP184050	AP20E806071	2022-05-17
Test S/W	Tonscend	JS32-RE/2.5.1.5		
6 dB Bandwidth				
Spectrum Analyzer	R&S	FSV30	104381	2022-02-21
Output Power				
Pulse power sensor	Agilent	MA2411B	1126150	2022-03-21
Power meter	Anritsu	ML2495A	1204003	2022-03-21
Conducted band edges and Spurious Emission				
Spectrum Analyzer	R&S	FSV30	104381	2022-02-21
Power Spectral Density				
Spectrum Analyzer	R&S	FSV30	104381	2022-02-21

Note: The calibration interval of the above test instruments is 12 months.

5. CONDUCTED EMISSION MEASUREMENT

5.1. LIMITS

Frequency range	Limits (dB μ V)	
	Quasi-peak	Average
150kHz ~ 0.5MHz	66~56	56~46
0.5 MHz ~ 5 MHz	56	46
5 MHz ~ 30 MHz	60	50

NOTE: (1) The lower limit shall apply at the transition frequencies.

(2) The limit decreases in line with the logarithm of the frequency in the range of 150 kHz to 0.5MHz.

5.2. TEST PROCEDURES

Procedure of Preliminary Test

Test procedures follow ANSI C63.10:2013.

For measurement of the disturbance voltage the equipment under test (EUT) is connected to the power supply mains and any other extended network via one or more artificial network(s). An EUT, whether intended to be grounded or not, and which is to be used on a table is configured as follows:

– Either the bottom or the rear of the EUT shall be at a controlled distance of 40 cm from a reference ground plane. This ground plane is normally the wall or floor of a shielded room. It may also be a grounded metal plane of at least 2 m by 2 m. This is physically accomplished as follows:

1) place the EUT on a table of non-conducting material which is at least 80 cm high. Place the EUT so that it is 40 cm from the wall of the shielded room, or

2) place the EUT on a table of non-conducting material which is 40 cm high so that the bottom of the EUT is 40 cm above the ground plane;

– All other conductive surfaces of the EUT shall be at least 80 cm from the reference ground plane;

– The EUT are placed on the floor that one side of the housings is 40 cm from the vertical reference ground plane and other metallic parts;

– Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth forming a bundle 30 cm to 40 cm long, hanging approximately in the middle between the ground plane and the table.

– I/O cables that are connected to a peripheral shall be bundled in the centre. The end of the cable may be terminated if required using correct terminating impedance. The total length shall not exceed 1 m.

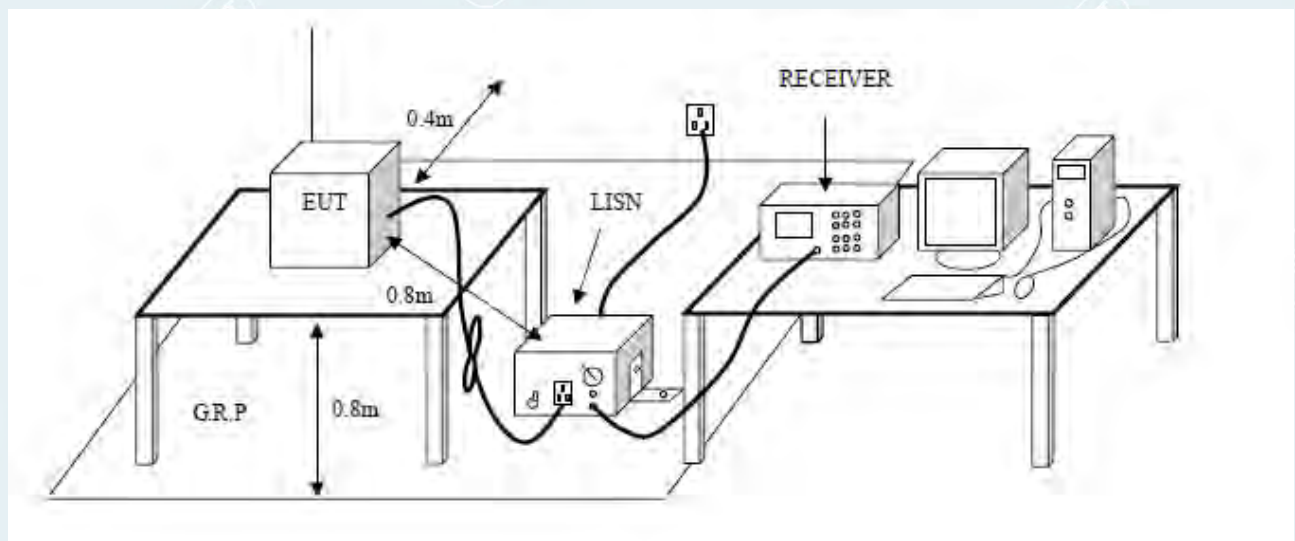
– Use serial board or connecting line to make EUT and notebook to communicate, according to the actual need to make EUT send constant frequency signal continuously.

The test mode(s) described in Item 2.6 were scanned during the preliminary test. After the preliminary scan, we found the test mode described in Item 2.6 producing the highest emission level. The EUT configuration and cable configuration of the above highest emission levels were recorded for reference of the final test.

Procedure of Final Test

EUT and support equipment were set up on the test bench as per the configuration with highest emission level in the preliminary test. A scan was taken on both power lines, recording at least the six highest emissions. Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit. The test data of the worst-case condition(s) was recorded.

5.3. TEST SETUP



5.4. DATA SAMPLE

Frequency (MHz)	QuasiPeak Reading (dBuV)	Average Reading (dBuV)	Correction Factor (dB)	QuasiPeak Result (dBuV)	Average Result (dBuV)	QuasiPeak Limit (dBuV)	Average Limit (dBuV)	QuasiPeak Margin (dB)	Average Margin (dB)	Remark (Pass/Fail)
X.XXXX	32.69	25.65	11.52	44.21	37.17	65.78	55.79	-21.57	-18.62	Pass

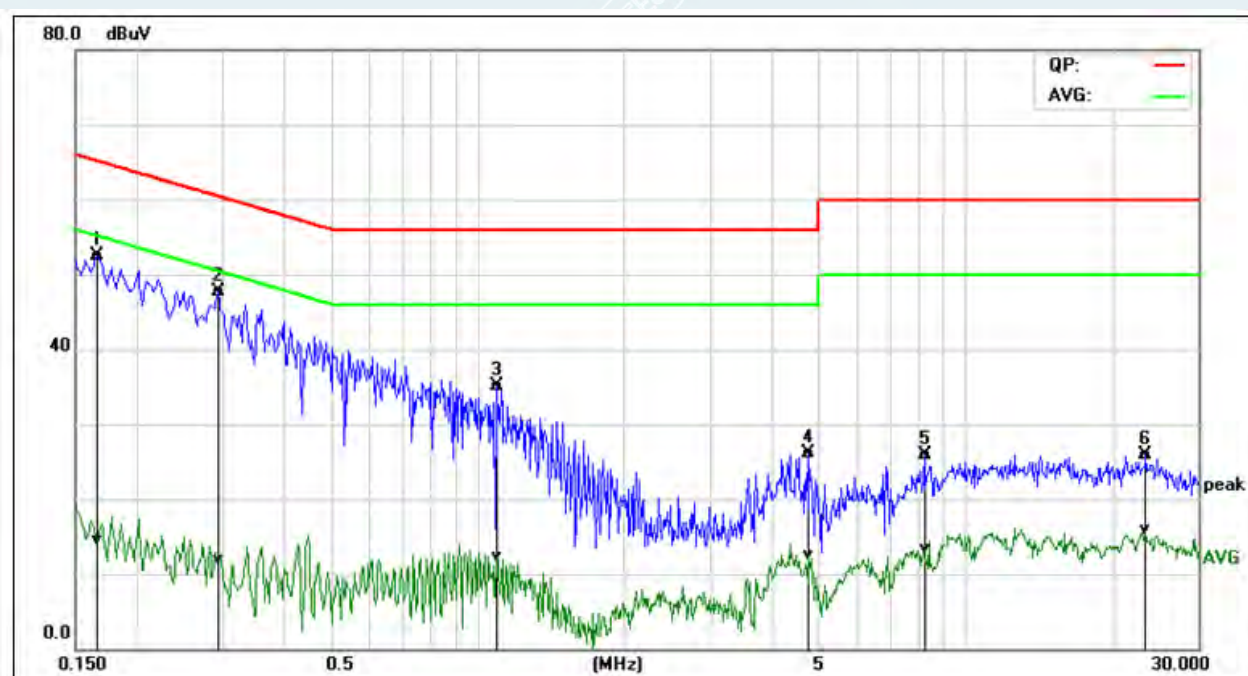
Factor = Insertion loss of LISN + Cable Loss
 Result = Quasi-peak Reading/ Average Reading + Factor
 Limit = Limit stated in standard
 Margin = Result (dBuV) – Limit (dBuV)

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5.5. TEST RESULTS

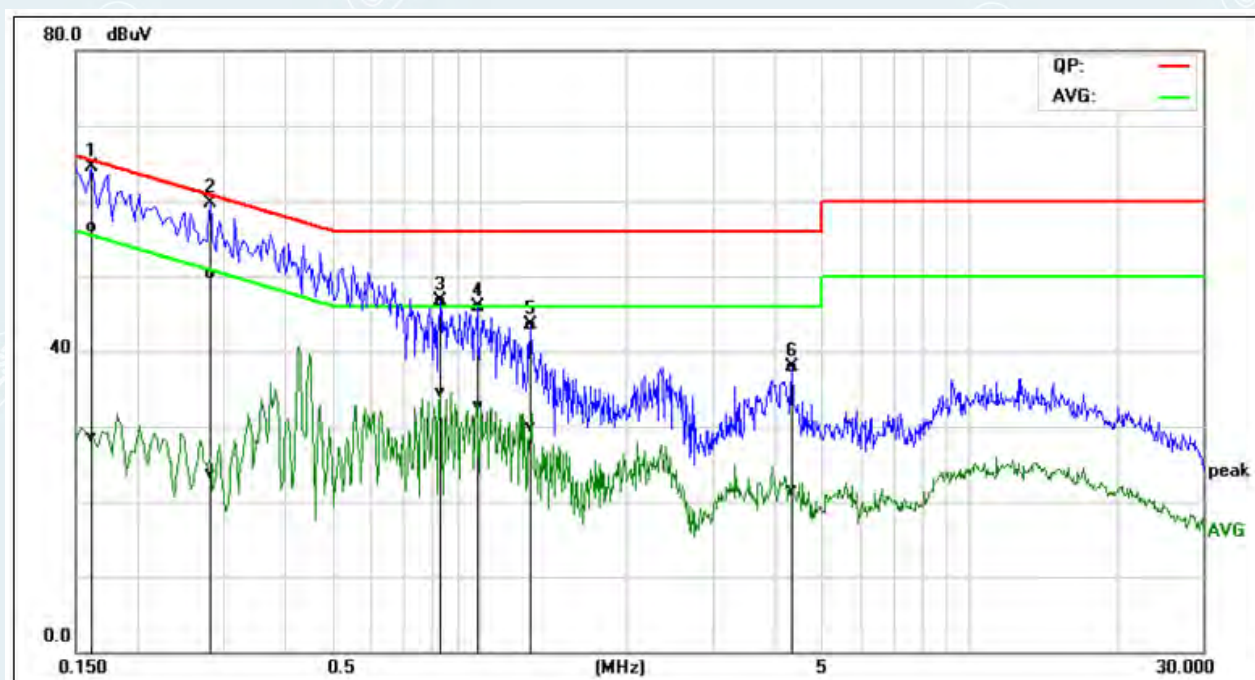
All models were pretested and only the worst modes and channels were recorded in this report. (IEEE 802.11g 2412MHz)

EUT Name	Wireless Router	Model	SR1021Y
Environmental Conditions	23.9°C/47%RH	Test Mode	Adapter 1: (KL-WA120150-D)
Tested By	Tang Shenghui	Line	L
Tested Date	2021/11/5	Test Voltage	AC120V/60Hz



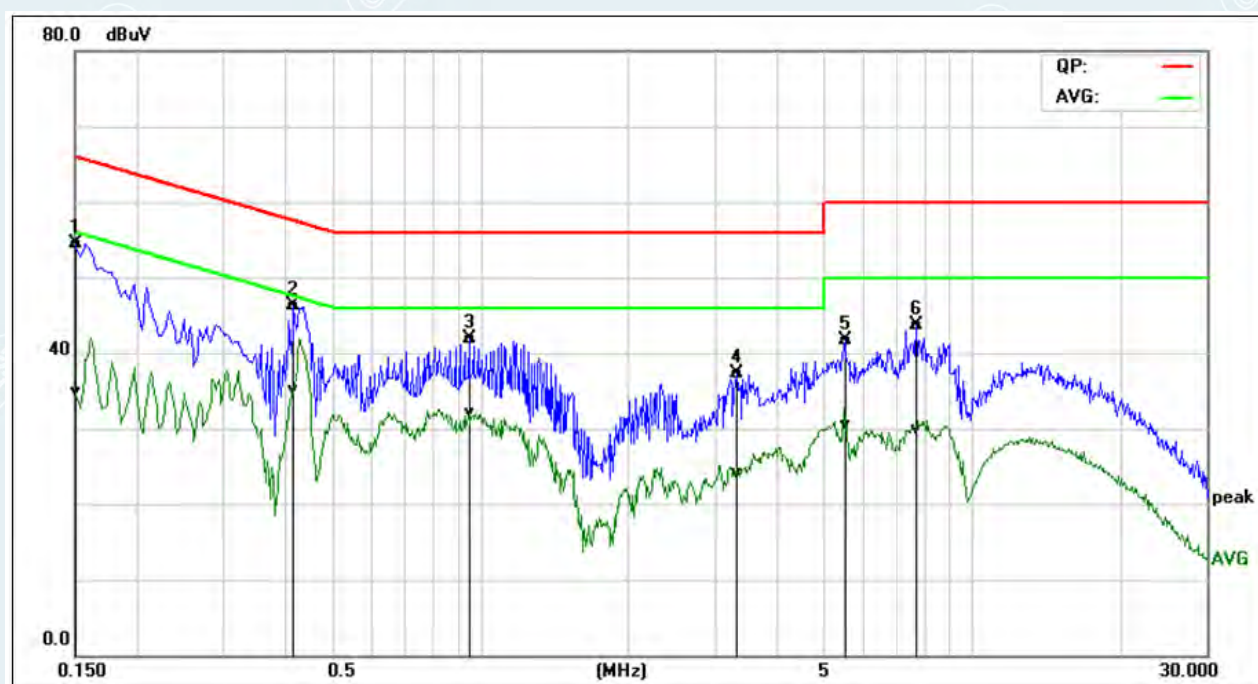
No.	Frequency	QuasiPeak reading	Average reading	Correction factor	QuasiPeak result	Average result	QuasiPeak limit	Average limit	QuasiPeak margin	Average margin	Remark
	(MHz)	(dBuV)	(dBuV)	(dB)	(dBuV)	(dBuV)	(dBuV)	(dBuV)	(dB)	(dB)	
1	0.1539	43.06	13.86	9.54	52.60	23.40	65.78	55.79	-13.18	-32.39	Pass
2*	0.2220	40.65	12.75	9.55	50.20	22.30	62.74	52.74	-12.54	-30.44	Pass
3	0.3300	36.13	8.83	9.57	45.70	18.40	59.45	49.45	-13.75	-31.05	Pass
4	0.8980	31.65	6.82	9.59	41.24	16.41	56.00	46.00	-14.76	-29.59	Pass
5	3.9620	20.90	9.84	9.64	30.54	19.48	56.00	46.00	-25.46	-26.52	Pass
6	13.8060	26.04	12.75	9.85	35.89	22.60	60.00	50.00	-24.11	-27.40	Pass

EUT Name	Wireless Router	Model	SR1021Y
Environmental Conditions	23.9°C/47%RH	Test Mode	Adapter 1: (KL-WA120150-D)
Tested By	Tang Shenghui	Line	N
Tested Date	2021/11/5	Test Voltage	AC120V/60Hz



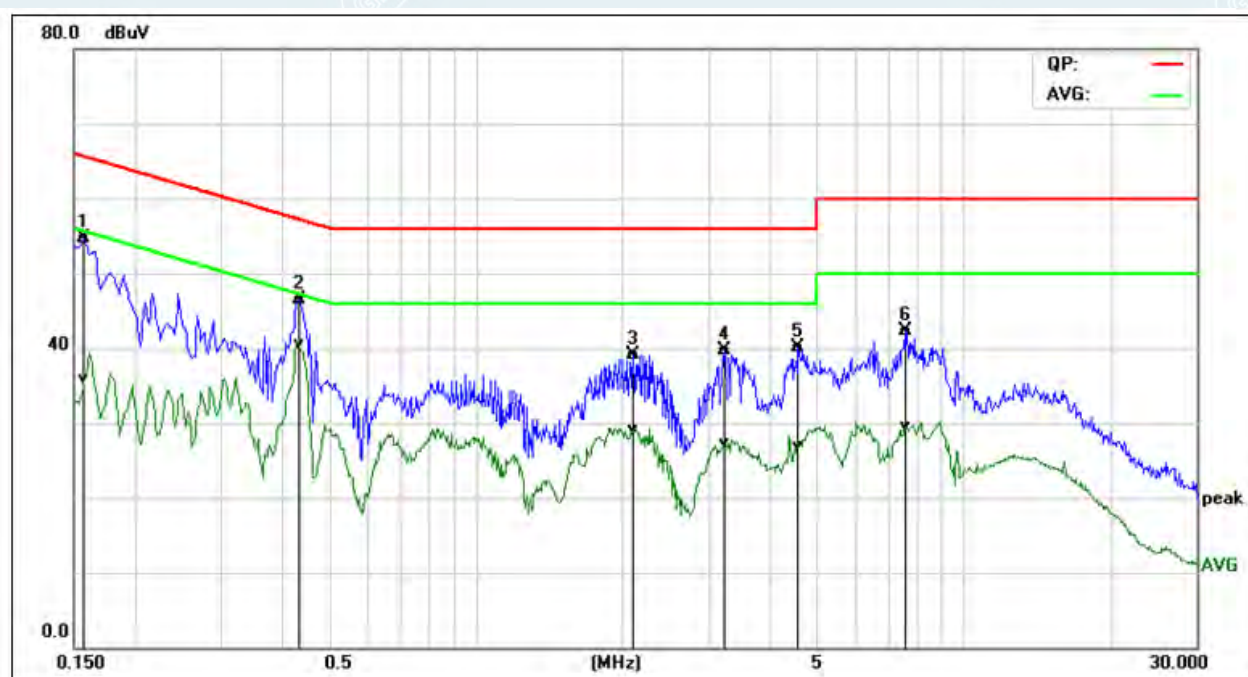
No.	Frequency (MHz)	QuasiPeak reading (dBuV)	Average reading (dBuV)	Correction factor (dB)	QuasiPeak result (dBuV)	Average result (dBuV)	QuasiPeak limit (dBuV)	Average limit (dBuV)	QuasiPeak margin (dB)	Average margin (dB)	Remark
1*	0.1620	46.89	18.98	9.53	56.42	28.51	65.36	55.36	-8.94	-26.85	Pass
2	0.2819	40.66	14.07	9.61	50.27	23.68	60.76	50.76	-10.49	-27.08	Pass
3	0.8340	37.15	24.85	9.65	46.80	34.50	56.00	46.00	-9.20	-11.50	Pass
4	0.9900	36.32	23.05	9.63	45.95	32.68	56.00	46.00	-10.05	-13.32	Pass
5	1.2740	33.90	20.22	9.62	43.52	29.84	56.00	46.00	-12.48	-16.16	Pass
6	4.3580	28.17	11.80	9.64	37.81	21.44	56.00	46.00	-18.19	-24.56	Pass

EUT Name	Wireless Router	Model	SR1021Y
Environmental Conditions	23.9°C/47%RH	Test Mode	Adapter2: (RD1201500-C55-153MG)
Tested By	Tang Shenghui	Line	L
Tested Date	2021/11/5	Test Voltage	AC120V/60Hz



No.	Frequency (MHz)	QuasiPeak reading (dBuV)	Average reading (dBuV)	Correction factor (dB)	QuasiPeak result (dBuV)	Average result (dBuV)	QuasiPeak limit (dBuV)	Average limit (dBuV)	QuasiPeak margin (dB)	Average margin (dB)	Remark
1	0.1500	45.00	25.48	9.51	54.51	34.99	65.99	56.00	-11.48	-21.01	Pass
2*	0.4180	36.54	25.41	9.68	46.22	35.09	57.49	47.49	-11.27	-12.40	Pass
3	0.9500	32.19	22.40	9.64	41.83	32.04	56.00	46.00	-14.17	-13.96	Pass
4	3.3380	27.69	14.45	9.61	37.30	24.06	56.00	46.00	-18.70	-21.94	Pass
5	5.5100	32.02	20.86	9.67	41.69	30.53	60.00	50.00	-18.31	-19.47	Pass
6	7.7060	33.96	20.24	9.75	43.71	29.99	60.00	50.00	-16.29	-20.01	Pass

EUT Name	Wireless Router	Model	SR1021Y
Environmental Conditions	23.9°C/47%RH	Test Mode	Adapter2: (RD1201500-C55-153MG)
Tested By	Tang Shenghui	Line	N
Tested Date	2021/11/5	Test Voltage	AC120V/60Hz



No.	Frequency	QuasiPeak reading	Average reading	Correction factor	QuasiPeak result	Average result	QuasiPeak limit	Average limit	QuasiPeak margin	Average margin	Remark
	(MHz)	(dBuV)	(dBuV)	(dB)	(dBuV)	(dBuV)	(dBuV)	(dBuV)	(dB)	(dB)	
1	0.1580	45.20	26.47	9.52	54.72	35.99	65.56	55.57	-10.84	-19.58	Pass
2*	0.4340	36.85	30.74	9.69	46.54	40.43	57.18	47.18	-10.64	-6.75	Pass
3	2.1060	29.54	19.55	9.59	39.13	29.14	56.00	46.00	-16.87	-16.86	Pass
4	3.2300	30.11	17.66	9.61	39.72	27.27	56.00	46.00	-16.28	-18.73	Pass
5	4.5939	30.39	17.34	9.65	40.04	26.99	56.00	46.00	-15.96	-19.01	Pass
6	7.5940	32.47	19.72	9.74	42.21	29.46	60.00	50.00	-17.79	-20.54	Pass

6. RADIATED SPURIOUS EMISSIONS

6.1. LIMITS

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required.

Frequency (MHz)	Quasi-peak($\mu\text{V/m}$)	Measurement distance(m)	Quasi-peak(dB $\mu\text{V/m}$)@distance 3m
0.009-0.490	2400/F(kHz)	300	53.8~88.5
0.490-1.705	24000/F(kHz)	30	43~53.8
1.705-30.0	30	30	49.5
30 ~ 88	100	3	40
88~216	150	3	43.5
216 ~ 960	200	3	46
Above 960	500	3	54

NOTE:

- (1) The emission limits for the ranges 9-90 kHz and 110-490 kHz are based on measurements employing a linear average detector.
- (2) The lower limit shall apply at the transition frequencies.
- (3) Above 18GHz test distance is 1m, so the Peak Limit= $74+20*\log(3/1)=83.54$ (dB $\mu\text{V/m}$).
The Avg Limit= $54+20*\log(3/1)=63.54$ (dB $\mu\text{V/m}$).

6.2. TEST PROCEDURES

1) Sequence of testing 9kHz to 30MHz

Setup:

--- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.

--- If the EUT is a tabletop system, a rotatable table with 0.8 m height is used.

--- If the EUT is a floor standing device, it is placed on the ground.

--- Use serial board or connecting line to make EUT and notebook to communicate, according to the actual need to make EUT send constant frequency signal continuously.

--- The EUT is placed on a desktop position in the center of the turntable.

--- The measurement distance is 3 meter.

--- The EUT was set into operation.

Pre measurement:

--- The turntable rotates from 0° to 360°

--- The antenna height is 1.0 meter.

--- At each turntable position the analyzer sweeps with peak detection to find the maximum of all emissions

Final measurement:

--- Identified emissions during the pre measurement the software maximizes by rotating the turntable position (0° to 360°) and by rotating the elevation axes (0° to 360°).

--- The final measurement will be done in the position (turntable and elevation) causing the highest emissions with QP detector.

--- The final levels, frequency, measuring time, bandwidth, turntable position, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the pre measurement and the limit will be stored.

2) Sequence of testing 30MHz to 1GHz**Setup:**

--- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.

--- If the EUT is a tabletop system, a table with 0.8 m height is used, which is placed on the ground plane.

--- If the EUT is a floor standing device, it is placed on the ground plane with insulation between both.

--- Use serial board or connecting line to make EUT and notebook to communicate, according to the actual need to make EUT send constant frequency signal continuously.

--- The EUT is placed on a desktop position in the center of the turntable.

--- The measurement distance is 3 meter.

--- The EUT was set into operation.

Pre measurement:

--- The turntable rotates from 0° to 360° .

--- The antenna is polarized vertical and horizontal.

--- The antenna height changes from 1 to 4 meter.

--- At each turntable position, antenna polarization and height the analyzer sweeps three times in peak to find the maximum of all emissions.

Final measurement:

--- The final measurement will be performed with minimum the six highest peaks.

--- According to the maximum antenna and turntable positions of premeasurement the software maximize the peaks by changing turntable rotates from 0° to 360° and antenna movement between 1 and 4 meter.

--- The final measurement will be done with QP detector with an EMI receiver.

--- The final levels, frequency, measuring time, bandwidth, antenna height, antenna polarization, turntable angle, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the premeasurement with marked maximum final measurements and the limit will be stored.

3) Sequence of testing 1GHz to 18GHz

Setup:

- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.
- If the EUT is a tabletop system, a rotatable table with 1.5 m height is used.
- If the EUT is a floor standing device, it is placed on the ground plane with insulation between both.
- Use serial board or connecting line to make EUT and notebook to communicate, according to the actual need to make EUT send constant frequency signal continuously.
- The EUT is placed on a desktop position in the center of the turntable.
- The measurement distance is 3 meter.
- The EUT was set into operation.

Pre measurement:

- The turntable rotates from 0° to 360°
- The antenna is polarized vertical and horizontal.
- The antenna height scan range is 1 meter to 4 meter.
- At each turntable position and antenna polarization the analyzer sweeps with peak detection to find the maximum of all emissions.

Final measurement:

- The final measurement will be performed with minimum the six highest peaks.
- According to the maximum antenna and turntable positions of premeasurement the software maximize the peaks by changing turntable rotates from 0° to 360° and antenna movement between 1 and 4 meter. This procedure is repeated for both antenna polarizations.
- The final measurement will be done in the position (turntable, EUT-table and antenna polarization) causing the highest emissions with Peak and Average detector.
- The final levels, frequency, measuring time, bandwidth, turntable position, EUT-table position, antenna polarization, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the pre measurement with marked maximum final measurements and the limit will be stored.

4) Sequence of testing above 18GHz

Setup:

- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.
- If the EUT is a tabletop system, a rotatable table with 1.5 m height is used.
- If the EUT is a floor standing device, it is placed on the ground plane with insulation between both.
- Use serial board or connecting line to make EUT and notebook to communicate, according to the actual need to make EUT send constant frequency signal continuously.
- The EUT is placed on a desktop position in the center of the turntable.
- The measurement distance is 1 meter.
- The EUT was set into operation.

Pre measurement:

--- The antenna is moved spherical over the EUT in different polarisations of the antenna.

Final measurement:

--- The final measurement will be performed at the position and antenna orientation for all detected emissions that were found during the premeasurements with Peak and Average detector.

--- The final levels, frequency, measuring time, bandwidth, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the premeasurement and the limit will be stored.

NOTE:

(a).The frequency from 9KHz to 150KHz, Set RBW=300Hz(for Peak&AVG), RBW=300Hz(for Peak&AVG). the frequency from 150KHz to 30MHz, Set RBW=9KHz, RBW=9KHz, (for QP Detector).

(b).The frequency from 30MHz to 1GHz, Set RBW=120KHz, RBW=300KHz, (for QP Detector).

(c).The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 3MHz for Unwanted Maximum Emissions Measurements above 1000MHz.

(d).If the EUT is configured to transmit with duty cycle $\geq 98\%$, set $VBW \leq RBW/100$ (i.e., 10kHz) but not less than 10 Hz.

(e).If the EUT duty cycle is $< 98\%$, set $VBW \geq 1/T$, Where T is defined in section 2.9.

(f).The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 3MHz for Peak measurement. The AVG value measurement is based on duty cycle.

6.3. TEST SETUP

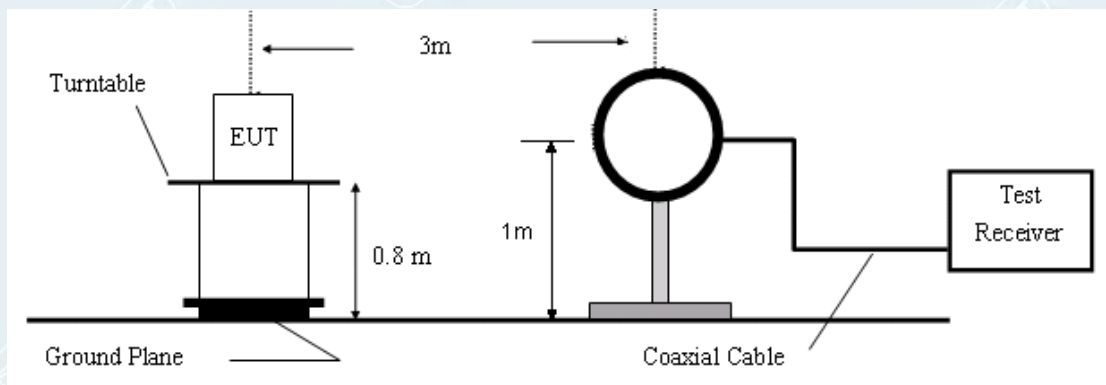


Figure 1. 9kHz to 30MHz radiated emissions test configuration

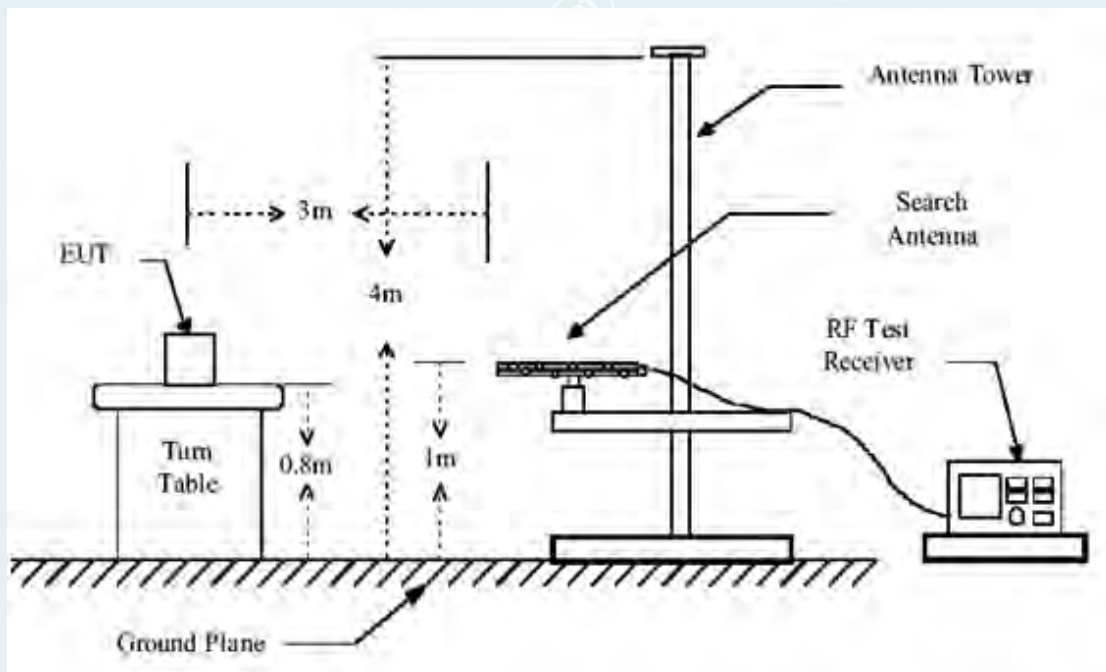


Figure 2. 30MHz to 1GHz radiated emissions test configuration

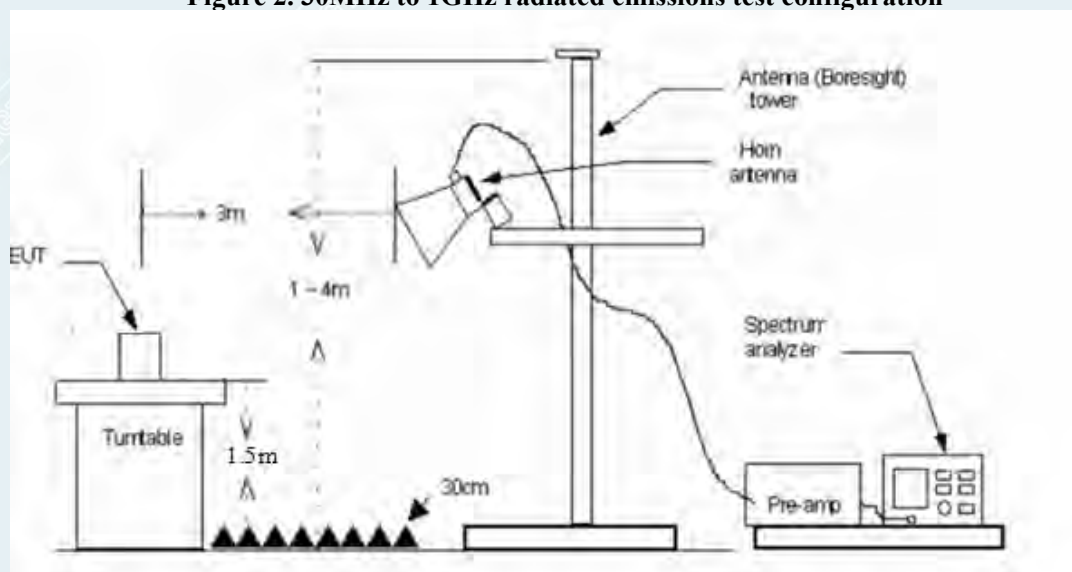


Figure 3. 1GHz to 18GHz radiated emissions test configuration

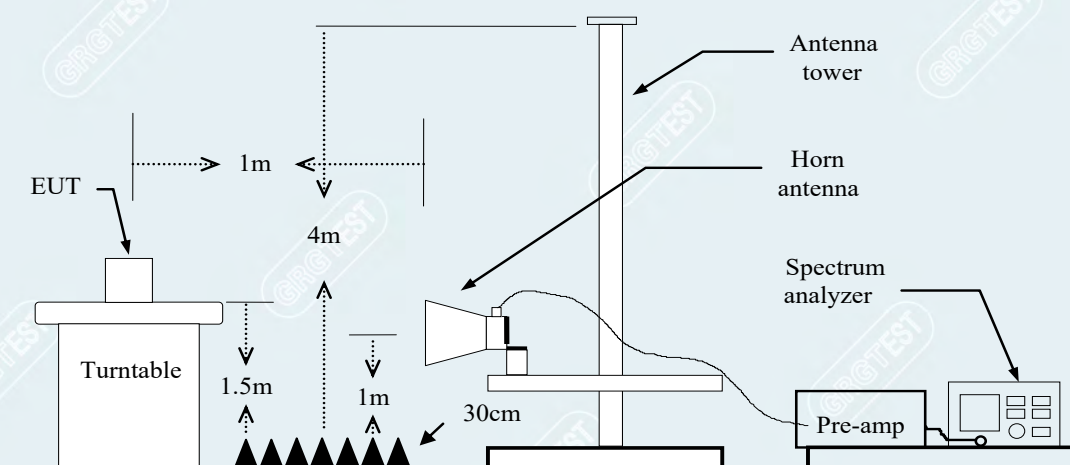


Figure 4. 18GHz to 26.5GHz radiated emissions test configuration

6.4. DATA SAMPLE

30MHz to 1GHz

No.	Frequency (MHz)	Reading (dBuV/m)	Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Pole
xxx	xxx	37.06	-15.48	21.58	40.00	-18.42	QP	Vertical

Above 1GHz-18GHz

No.	Frequency (MHz)	Reading (dBuV/m)	Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Pole
xxx	xxx	65.45	-11.12	54.33	74.00	-19.67	peak	Vertical
xxx	xxx	63.00	-11.12	51.88	54.00	-2.12	AVG	Vertical

Above 18GHz

No.	Frequency (MHz)	Reading (dBuV/m)	Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Pole
xxx	xxx	68.86	57.66	-11.20	83.54	25.88	peak	Vertical
xxx	xxx	68.89	-11.20	57.69	63.54	5.85	AVG	Vertical

Frequency (MHz) = Emission frequency in MHz

Ant.Pol. (H/V) = Antenna polarization

Reading (dBuV) = Uncorrected Analyzer / Receiver reading

Correction Factor (dB/m) = Antenna factor + Cable loss – Amplifier gain

Result (dBuV/m) = Reading (dBuV) + Correction Factor (dB/m)

Limit (dBuV/m) = Limit stated in standard

Margin (dB) = Remark Result (dBuV/m) – Limit (dBuV/m)

Peak = Peak Reading

QP = Quasi-peak Reading

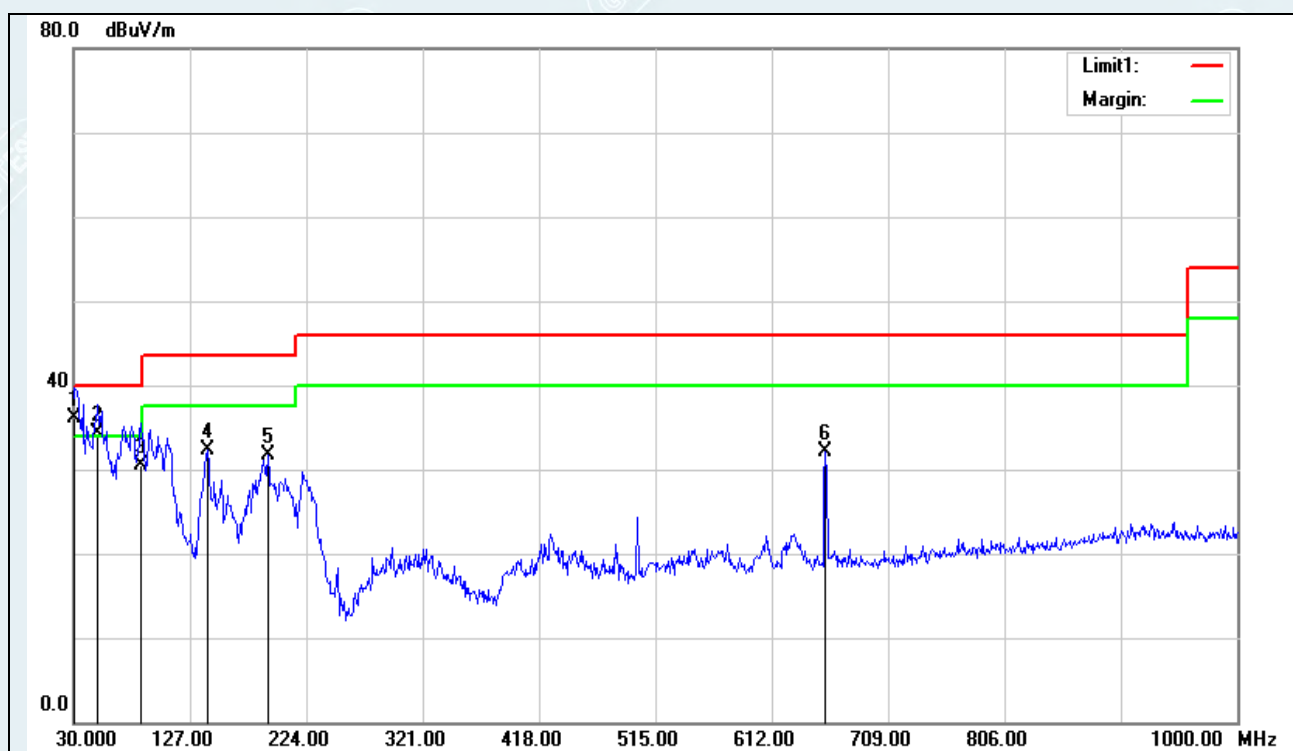
AVG = Average Reading

6.5. TEST RESULTS

Below 1GHz

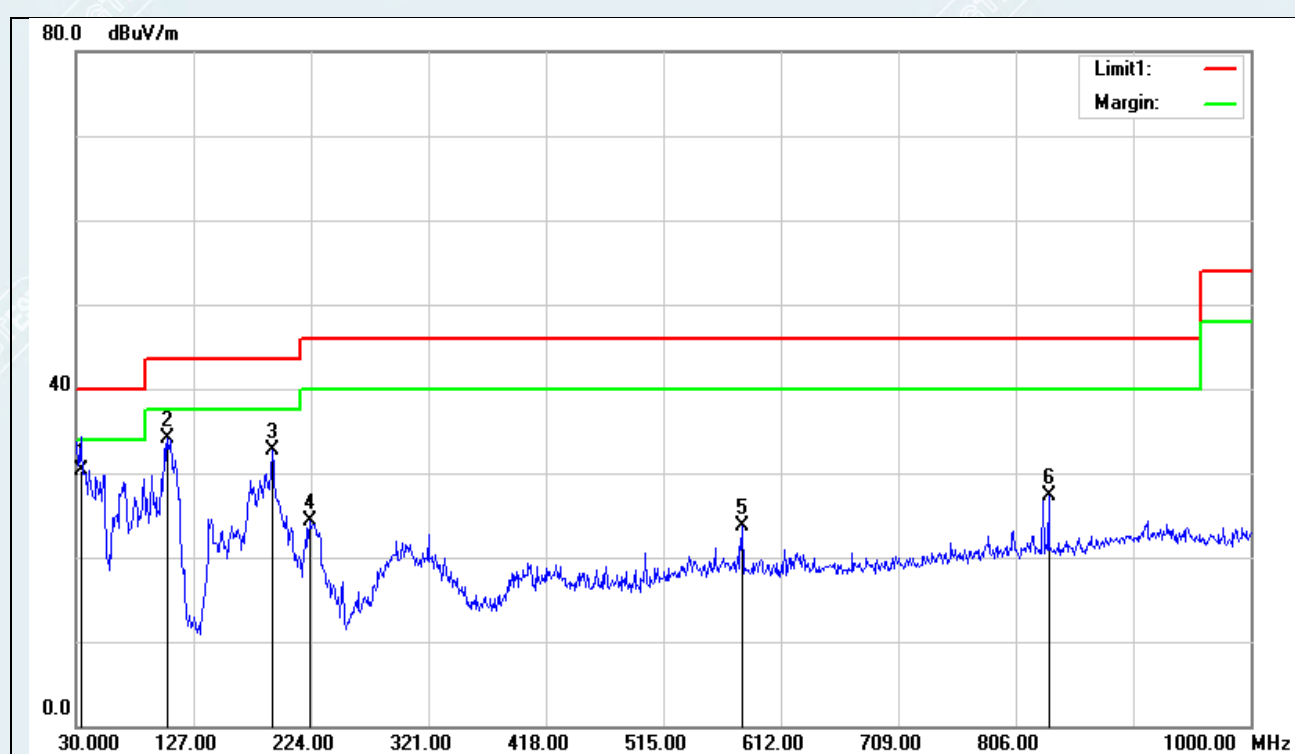
All models were pretested and only the worst modes and channels were recorded in this report. (IEEE 802.11g 2412MHz)

EUT Name	Wireless Router	Model	SR1021Y
Environmental Conditions	25.5°C/45%RH	Test Voltage	AC120V/60Hz
Test Mode	IEEE 802.11g Frequency (2412MHz)	Polarity	Vertical
Tested By	Zhong fu ping	Tested Date	2021/11/04
Note	Adapter1: (KL-WA120150-D)		



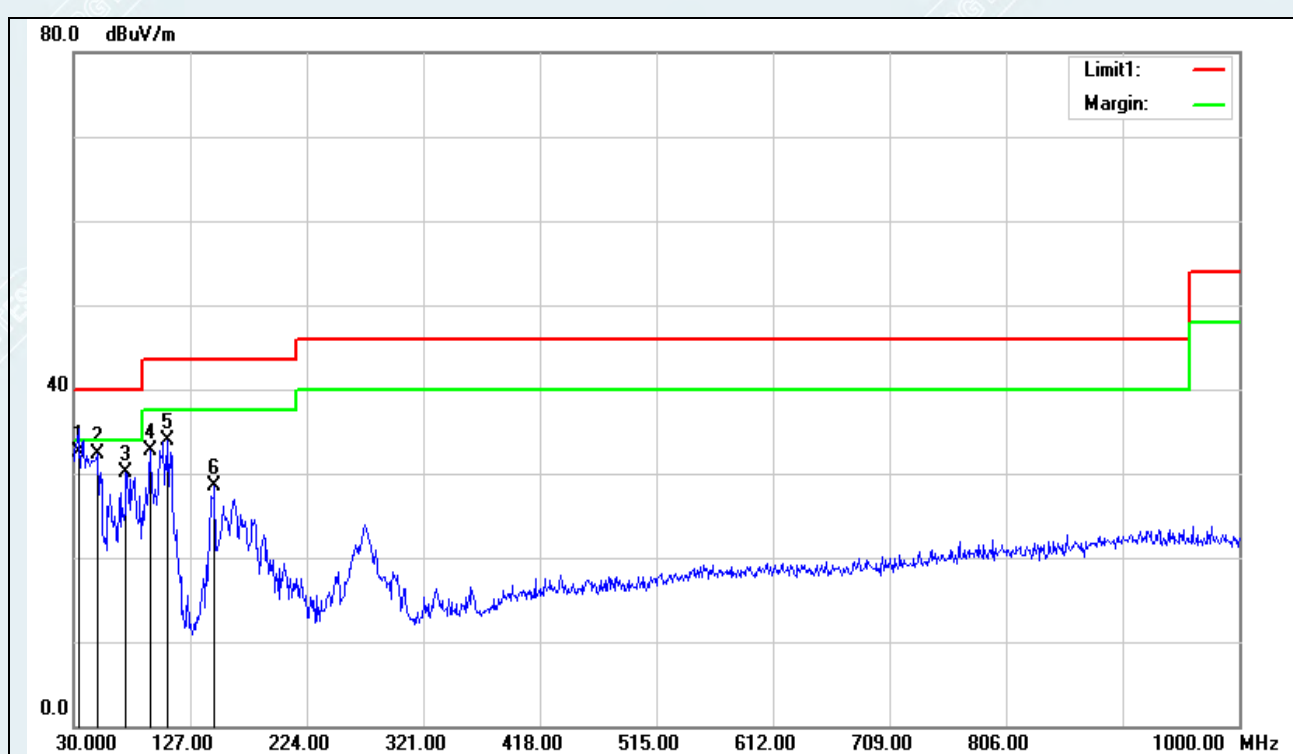
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg)	Remark
1*	30.9700	53.10	-16.90	36.20	40.00	-3.80	100	231	QP
2!	50.3700	60.12	-25.82	34.30	40.00	-5.70	100	80	QP
3	86.2600	61.18	-30.68	30.50	40.00	-9.50	100	108	QP
4	141.5500	58.10	-25.79	32.31	43.50	-11.19	100	242	QP
5	191.9900	58.52	-26.91	31.61	43.50	-11.89	100	229	QP
6	656.6200	48.29	-16.28	32.01	46.00	-13.99	100	220	QP

EUT Name	Wireless Router	Model	SR1021Y
Environmental Conditions	25.5°C/45%RH	Test Voltage	AC120V/60Hz
Test Mode	IEEE 802.11g Frequency (2412MHz)	Polarity	Horizontal
Tested By	Zhong fu ping	Tested Date	2021/11/04
Note	Adapter1: (KL-WA120150-D)		



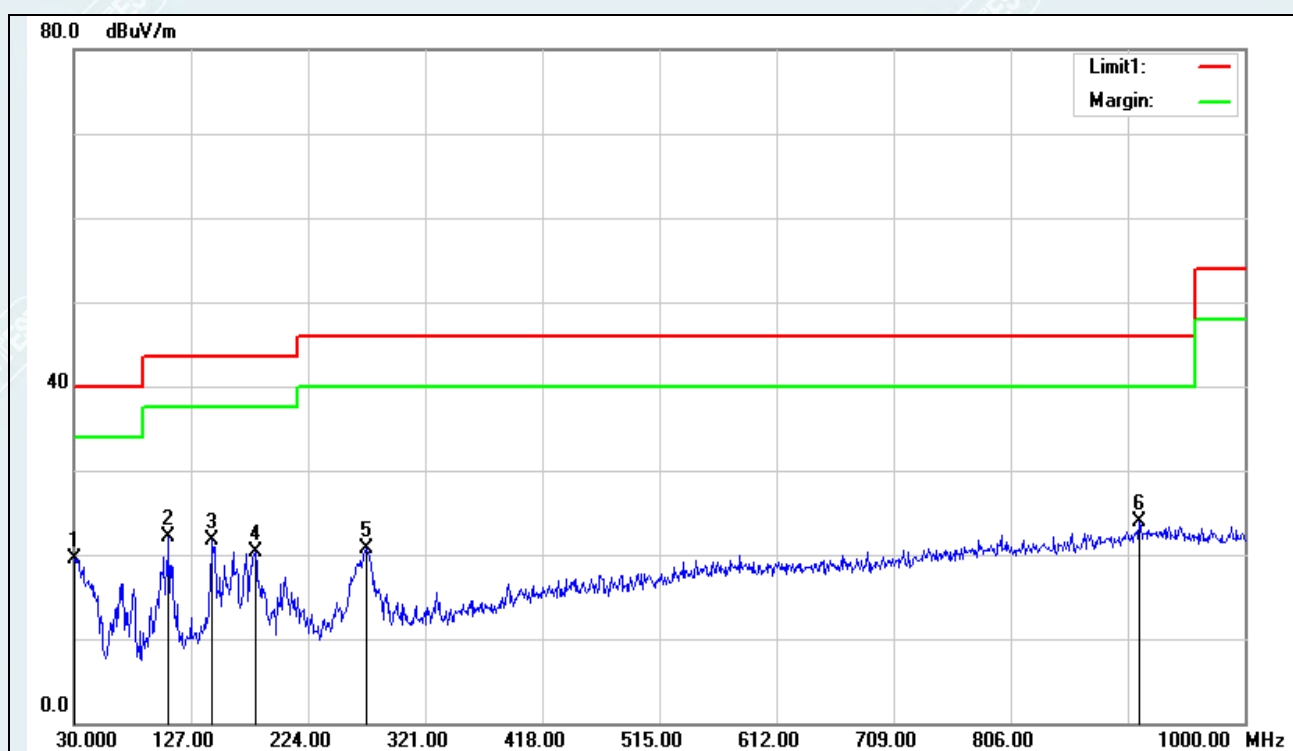
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg)	Remark
1	33.8800	48.51	-18.25	30.26	40.00	-9.74	100	152	QP
2*	105.6600	61.36	-27.27	34.09	43.50	-9.41	200	272	QP
3	191.9900	59.52	-26.91	32.61	43.50	-10.89	100	154	QP
4	223.0300	48.97	-24.76	24.21	46.00	-21.79	200	276	QP
5	579.9900	40.28	-16.64	23.64	46.00	-22.36	200	215	QP
6	833.1600	41.45	-14.13	27.32	46.00	-18.68	201	0	QP

EUT Name	Wireless Router	Model	SR1021Y
Environmental Conditions	25.5°C/45%RH	Test Voltage	AC120V/60Hz
Test Mode	IEEE 802.11g Frequency (2412MHz)	Polarity	Vertical
Tested By	Zhong fu ping	Tested Date	2021/11/04
Note	Adapter 2(RD1201500-C55-153MG)		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg)	Remark
1*	33.8800	50.75	-18.25	32.50	40.00	-7.50	100	201	QP
2	49.4000	57.69	-25.43	32.26	40.00	-7.74	100	96	QP
3	73.6500	60.86	-30.85	30.01	40.00	-9.99	100	109	QP
4	94.0200	62.13	-29.47	32.66	43.50	-10.84	100	136	QP
5	108.5700	60.62	-26.76	33.86	43.50	-9.64	100	165	QP
6	147.3700	54.68	-26.10	28.58	43.50	-14.92	100	265	QP

EUT Name	Wireless Router	Model	SR1021Y
Environmental Conditions	25.5°C/45%RH	Test Voltage	AC120V/60Hz
Test Mode	IEEE 802.11g Frequency (2412MHz)	Polarity	Horizontal
Tested By	Zhong fu ping	Tested Date	2021/11/04
Note	Adapter 2(RD1201500-C55-153MG)		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg)	Remark
1*	30.9700	36.35	-16.90	19.45	40.00	-20.55	300	62	QP
2	108.5700	48.78	-26.76	22.02	43.50	-21.48	200	277	QP
3	144.4600	47.71	-25.94	21.77	43.50	-21.73	200	177	QP
4	180.3500	47.66	-27.36	20.30	43.50	-23.20	200	277	QP
5	272.5000	44.93	-24.20	20.73	46.00	-25.27	100	100	QP
6	912.7000	37.21	-13.23	23.98	46.00	-22.02	300	83	QP

Remark:

- 1 No emission found between lowest internal used/generated frequency to 30MHz.
- 2 Radiated emissions measured in frequency range from 9 kHz to 1GHz were made with an instrument using Quasi-peak detector mode.
- 3 Data of measurement within this frequency range shown "—" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 4 The IF bandwidth of Receiver between 30MHz to 1GHz was 120 kHz.

1GHz-18GHz:

Mode: IEEE 802.11b

Lowest Frequency (2412MHz)

Environment: 25°C/60%RH

Tested By: Lu Qiang

Date: 2021-10-19

Voltage: AC120V/60Hz

/

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1410.8014	56.53	33.11	-23.42	74.00	40.89	200	360	Horizontal
2	1763.5954	59.58	37.24	-22.34	74.00	36.76	100	360	Horizontal
3	3661.9577	53.47	38.73	-14.74	74.00	35.27	100	77	Horizontal
4	4824.6031	54.65	44.94	-9.71	74.00	29.06	200	126	Horizontal
5	7198.6498	47.36	44.24	-3.12	74.00	29.76	200	1	Horizontal
6	9415.1769	44.76	46.25	1.49	74.00	27.75	200	192	Horizontal

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dBμV/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	4823.9759	-9.71	52.99	43.28	54.00	10.72	195	133	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1188.7736	57.32	32.78	-24.54	74.00	41.22	100	136	Vertical
2	1465.5582	56.43	33.35	-23.08	74.00	40.65	200	282	Vertical
3	3105.0131	53.27	36.66	-16.61	74.00	37.34	200	175	Vertical
4	3718.2148	52.88	38.13	-14.75	74.00	35.87	100	200	Vertical
5	4824.6031	55.65	45.94	-9.71	74.00	28.06	200	53	Vertical
6	7236.1545	47.93	44.40	-3.53	74.00	29.60	100	118	Vertical

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dBμV/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	4823.9759	-9.71	55.43	45.72	54.00	8.28	168	63	Vertical

Mode: IEEE 802.11b
 Middle Frequency (2437 MHz)
 Environment: 25°C/60%RH
 Tested By: Lu Qiang

Date: 2021-10-19
 Voltage: AC120V/60Hz
 /

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1001.5002	57.03	31.87	-25.16	74.00	42.13	100	21	Horizontal
2	1453.0566	57.06	33.92	-23.14	74.00	40.08	200	353	Horizontal
3	1746.0933	58.16	35.73	-22.43	74.00	38.27	200	145	Horizontal
4	3802.6003	52.90	38.62	-14.28	74.00	35.38	200	175	Horizontal
5	4873.3592	56.72	46.90	-9.82	74.00	27.10	200	135	Horizontal
6	7753.7192	47.32	45.38	-1.94	74.00	28.62	200	94	Horizontal

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dBμV/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	4873.3592	-9.82	55.29	45.47	54.00	8.53	200	135	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1000.0000	57.50	32.34	-25.16	74.00	41.66	100	186	Vertical
2	1352.5441	56.27	32.54	-23.73	74.00	41.46	100	21	Vertical
3	1675.3344	56.06	33.62	-22.44	74.00	40.38	200	360	Vertical
4	3660.0825	53.45	38.71	-14.74	74.00	35.29	200	19	Vertical
5	4873.3592	58.57	48.75	-9.82	74.00	25.25	200	59	Vertical
6	7174.2718	48.48	45.30	-3.18	74.00	28.70	100	53	Vertical

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dBμV/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	4873.9927	-9.83	57.57	47.74	54.00	6.26	174	64	Vertical

Mode: IEEE 802.11b
 Highest Frequency (2462MHz)
 Environment: 25°C/60%RH
 Tested By: Lu Qiang

Date: 2021-10-19
 Voltage: AC120V/60Hz
 /

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1363.5454	56.72	33.05	-23.67	74.00	40.95	100	160	Horizontal
2	1675.0844	55.02	32.58	-22.44	74.00	41.42	200	1	Horizontal
3	2935.4919	54.54	36.72	-17.82	74.00	37.28	100	257	Horizontal
4	3601.9502	53.15	38.86	-14.29	74.00	35.14	100	110	Horizontal
5	4923.9905	58.90	48.83	-10.07	74.00	25.17	200	125	Horizontal
6	7198.6498	49.08	45.96	-3.12	74.00	28.04	100	266	Horizontal

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dBμV/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	4923.9905	-10.07	56.78	46.71	54.00	7.29	188	135	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1453.3067	56.51	33.37	-23.14	74.00	40.63	100	274	Vertical
2	2303.1629	61.14	41.03	-20.11	74.00	32.97	200	78	Vertical
3	3298.1623	54.24	38.39	-15.85	74.00	35.61	200	11	Vertical
4	3588.8236	53.44	38.77	-14.67	74.00	35.23	200	282	Vertical
5	4923.9905	59.03	48.96	-10.07	74.00	25.04	200	68	Vertical
6	7386.1733	49.60	46.09	-3.51	74.00	27.91	100	110	Vertical

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dBμV/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	4923.9905	-10.07	59.23	49.16	54.00	4.84	174	64	Vertical

Mode: IEEE 802.11g
 Lowest Frequency (2412MHz)
 Environment: 25°C/60%RH
 Tested By: Chen XiaoCong

Date: 2021-10-18
 Voltage: AC120V/60Hz
 /

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1487.0000	56.39	33.43	-22.96	74.00	40.57	100	32	Horizontal
2	3804.0000	53.00	38.71	-14.29	74.00	35.29	100	280	Horizontal
3	4821.0000	61.80	52.08	-9.72	74.00	21.92	100	335	Horizontal
4	5911.5000	50.21	42.49	-7.72	74.00	31.51	200	329	Horizontal
5	7237.5000	56.06	52.51	-3.55	74.00	21.49	200	287	Horizontal
6	9643.5000	52.12	54.21	2.09	74.00	19.79	100	260	Horizontal

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dBμV/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	4822.9525	-9.72	51.63	41.91	54.00	12.09	200	316	Horizontal
2	7236.3420	-3.55	43.77	40.22	54.00	13.78	115	231	Horizontal
3	9648.1289	2.10	37.87	39.97	54.00	14.03	100	197	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1597.0000	57.20	34.28	-22.92	74.00	39.72	200	18	Vertical
2	3319.5000	54.39	38.36	-16.03	74.00	35.64	200	287	Vertical
3	4824.0000	65.57	55.86	-9.71	74.00	18.14	200	260	Vertical
4	7227.0000	59.42	55.99	-3.43	74.00	18.01	100	308	Vertical
5	9648.0000	47.07	49.27	2.20	74.00	24.73	200	287	Vertical
6	12057.0000	45.79	49.76	3.97	74.00	24.24	100	280	Vertical

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dBμV/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	4822.9628	-9.71	50.97	41.26	54.00	12.74	200	192	Vertical
2	7236.0699	-3.43	45.97	42.54	54.00	11.46	100	226	Vertical
3	9647.8553	2.20	35.25	37.45	54.00	16.55	200	213	Vertical
4	12058.9894	3.97	33.90	37.87	54.00	16.13	100	231	Vertical

Mode: IEEE 802.11g
 Middle Frequency (2437 MHz)
 Environment: 25°C/60%RH
 Tested By: Chen XiaoCong

Date: 2021-10-18
 Voltage: AC120V/60Hz
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Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1597.0000	56.15	33.23	-22.92	74.00	40.77	200	251	Horizontal
2	3733.5000	53.38	38.70	-14.68	74.00	35.30	200	48	Horizontal
3	4875.0000	63.66	53.82	-9.84	74.00	20.18	200	348	Horizontal
4	7314.0000	59.00	54.74	-4.26	74.00	19.26	200	280	Horizontal
5	9750.0000	53.00	54.42	1.42	74.00	19.58	100	259	Horizontal
6	10807.5000	43.34	47.18	3.84	74.00	26.82	100	102	Horizontal

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dBμV/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	4872.7819	-9.84	51.39	41.55	54.00	12.45	200	269	Horizontal
2	7310.5990	-4.26	43.88	39.62	54.00	14.38	106	226	Horizontal
3	9748.7325	1.42	38.98	40.40	54.00	13.60	128	197	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1580.6000	56.81	33.92	-22.89	74.00	40.08	200	126	Vertical
2	3690.0000	53.42	38.61	-14.81	74.00	35.39	100	255	Vertical
3	4875.0000	67.23	57.39	-9.84	74.00	16.61	200	261	Vertical
4	7311.0000	62.21	57.90	-4.31	74.00	16.10	100	310	Vertical
5	9742.5000	48.07	49.53	1.46	74.00	24.47	200	282	Vertical
6	12181.5000	45.72	50.16	4.44	74.00	23.84	100	269	Vertical

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dBμV/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	4873.1475	-9.84	52.92	43.08	54.00	10.92	200	196	Vertical
2	7310.0861	-4.30	47.27	42.97	54.00	11.03	100	227	Vertical
3	9746.1534	1.46	35.99	37.45	54.00	16.55	200	226	Vertical
4	12186.0681	4.43	33.04	37.47	54.00	16.53	100	231	Vertical

Mode: IEEE 802.11g
 Highest Frequency (2462MHz)
 Environment: 25°C/60%RH
 Tested By: Chen XiaoCong

Date: 2021-10-18
 Voltage: AC120V/60Hz
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Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1540.2000	55.90	33.04	-22.86	74.00	40.96	100	7	Horizontal
2	3580.5000	53.53	38.57	-14.96	74.00	35.43	200	144	Horizontal
3	4926.0000	64.46	54.39	-10.07	74.00	19.61	200	335	Horizontal
4	7386.0000	56.42	52.91	-3.51	74.00	21.09	200	274	Horizontal
5	9838.5000	51.95	53.45	1.50	74.00	20.55	100	252	Horizontal
6	12310.5000	42.51	47.64	5.13	74.00	26.36	100	34	Horizontal

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dBμV/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	4926.0154	-10.07	51.67	41.60	54.00	12.40	200	335	Horizontal
2	7386.0032	-3.50	43.10	39.59	54.00	14.41	100	280	Horizontal
3	9838.4981	1.50	38.41	39.91	54.00	14.09	100	252	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1498.2000	57.24	34.34	-22.90	74.00	39.66	100	298	Vertical
2	3750.0000	53.11	38.51	-14.60	74.00	35.49	200	76	Vertical
3	4926.0000	65.74	55.67	-10.07	74.00	18.33	200	268	Vertical
4	7390.5000	60.68	57.19	-3.49	74.00	16.81	100	308	Vertical
5	9843.0000	47.26	48.73	1.47	74.00	25.27	200	261	Vertical
6	12312.0000	44.86	50.01	5.15	74.00	23.99	100	321	Vertical

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dBμV/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	4926.1254	-10.07	52.36	42.29	54.00	11.71	200	268	Vertical
2	7390.5028	-3.48	47.61	44.12	54.00	9.88	100	280	Vertical
3	9843.1201	1.46	35.64	37.11	54.00	16.89	200	289	Vertical
4	12312.0917	5.16	33.18	38.33	54.00	15.67	200	310	Vertical

Mode: IEEE 802.11n HT20
 Lowest Frequency (2412MHz)
 Environment: 25°C/60%RH
 Tested By: Chen XiaoCong

Date: 2021-10-19
 Voltage: AC120V/60Hz
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Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1359.4000	56.34	32.65	-23.69	74.00	41.35	200	3	Horizontal
2	2075.6000	60.74	39.29	-21.45	74.00	34.71	200	59	Horizontal
3	3646.5000	52.76	38.08	-14.68	74.00	35.92	100	96	Horizontal
4	4819.5000	61.93	52.20	-9.73	74.00	21.80	200	328	Horizontal
5	7234.5000	55.22	51.71	-3.51	74.00	22.29	200	288	Horizontal
6	9657.0000	49.27	51.44	2.17	74.00	22.56	100	213	Horizontal

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dBμV/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	4821.9579	-9.72	49.59	39.87	54.00	14.13	200	307	Horizontal
2	7235.5128	-3.51	44.89	41.38	54.00	12.62	110	256	Horizontal
3	9648.4053	2.16	39.47	41.63	54.00	12.37	128	222	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1186.4000	57.11	32.56	-24.55	74.00	41.44	200	14	Vertical
2	3619.5000	52.38	37.94	-14.44	74.00	36.06	200	130	Vertical
3	4821.0000	63.49	53.77	-9.72	74.00	20.23	200	253	Vertical
4	7242.0000	61.10	57.50	-3.60	74.00	16.50	100	306	Vertical
5	9646.5000	46.11	48.27	2.16	74.00	25.73	200	281	Vertical
6	12069.0000	45.45	49.68	4.23	74.00	24.32	100	265	Vertical

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dBμV/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	4825.0737	-9.72	50.40	40.68	54.00	13.32	200	243	Vertical
2	7236.4237	-3.60	48.20	44.60	54.00	9.40	160	260	Vertical
3	9647.2717	2.16	34.43	36.59	54.00	17.41	195	272	Vertical
4	12058.3189	4.22	33.68	37.90	54.00	16.10	100	256	Vertical

Mode: IEEE 802.11n HT20
 Middle Frequency (2437 MHz)
 Environment: 25°C/60%RH
 Tested By: Chen XiaoCong

Date: 2021-10-19
 Voltage: AC120V/60Hz
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Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1514.0000	56.02	33.14	-22.88	74.00	40.86	200	86	Horizontal
2	3300.0000	53.59	37.77	-15.82	74.00	36.23	200	326	Horizontal
3	4875.0000	65.06	55.22	-9.84	74.00	18.78	200	333	Horizontal
4	7309.5000	58.62	54.29	-4.33	74.00	19.71	200	279	Horizontal
5	9747.0000	54.57	56.01	1.44	74.00	17.99	100	233	Horizontal
6	12190.5000	43.23	47.54	4.31	74.00	26.46	100	329	Horizontal

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dBμV/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	4875.0114	-9.85	49.36	39.52	54.00	14.48	200	333	Horizontal
2	7309.4987	-4.33	40.21	35.88	54.00	18.12	200	279	Horizontal
3	9747.0102	1.43	39.51	40.95	54.00	13.05	100	239	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1188.2000	57.01	32.47	-24.54	74.00	41.53	200	333	Vertical
2	3735.0000	53.16	38.49	-14.67	74.00	35.51	100	328	Vertical
3	4876.5000	66.12	56.27	-9.85	74.00	17.73	200	270	Vertical
4	7312.5000	61.78	57.50	-4.28	74.00	16.50	100	307	Vertical
5	9748.5000	48.28	49.71	1.43	74.00	24.29	200	284	Vertical
6	12196.5000	45.30	49.53	4.23	74.00	24.47	100	307	Vertical

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dBμV/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	4876.4981	-9.85	49.87	40.02	54.00	13.98	200	270	Vertical
2	7312.4820	-4.28	48.33	44.05	54.00	9.95	100	307	Vertical
3	9748.4994	1.43	34.64	36.07	54.00	17.93	200	284	Vertical
4	12196.5024	4.21	33.71	37.94	54.00	16.06	200	304	Vertical

Mode: IEEE 802.11n HT20
 Highest Frequency (2462MHz)
 Environment: 25°C/60%RH
 Tested By: Chen XiaoCong

Date: 2021-10-19
 Voltage: AC120V/60Hz
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Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1746.5933	62.03	39.60	-22.43	74.00	34.40	200	14	Horizontal
2	3631.9540	52.85	38.30	-14.55	74.00	35.70	100	49	Horizontal
3	4929.6162	65.04	54.97	-10.07	74.00	19.03	200	137	Horizontal
4	7389.9237	58.95	55.46	-3.49	74.00	18.54	200	71	Horizontal
5	9848.3560	52.93	54.36	1.43	74.00	19.64	200	54	Horizontal
6	12308.6636	42.75	47.86	5.11	74.00	26.14	100	108	Horizontal

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dBμV/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	4924.3415	-10.07	57.63	47.56	54.00	6.44	195	133	Horizontal
2	7385.4158	-3.49	48.16	44.67	54.00	9.33	198	86	Horizontal
3	9847.3712	1.43	43.89	45.32	54.00	8.68	122	63	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1777.0971	64.94	42.71	-22.23	74.00	31.29	200	359	Vertical
2	3236.2795	54.05	37.65	-16.40	74.00	36.35	200	118	Vertical
3	4925.8657	66.34	56.27	-10.07	74.00	17.73	200	60	Vertical
4	7391.7990	62.26	58.78	-3.48	74.00	15.22	100	115	Vertical
5	9850.2313	47.77	49.19	1.42	74.00	24.81	200	93	Vertical
6	12312.4141	45.94	51.09	5.15	74.00	22.91	100	88	Vertical

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dBμV/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	4923.3042	-10.07	59.72	49.65	54.00	4.35	164	76	Vertical
2	7386.3291	-3.47	51.11	47.64	54.00	6.36	100	125	Vertical
3	12309.8285	5.15	36.30	41.45	54.00	12.55	112	123	Vertical

Mode: IEEE 802.11n HT40
 Lowest Frequency (2422MHz)
 Environment: 25°C/60%RH
 Tested By: Chen XiaoCong

Date: 2021-10-19
 Voltage: AC120V/60Hz
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Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1042.0053	56.91	31.83	-25.08	74.00	42.17	100	120	Horizontal
2	1767.5959	61.49	39.18	-22.31	74.00	34.82	100	301	Horizontal
3	1912.8641	60.78	38.88	-21.90	74.00	35.12	100	360	Horizontal
4	4839.6050	60.84	51.19	-9.65	74.00	22.81	200	126	Horizontal
5	7266.1583	51.63	47.69	-3.94	74.00	26.31	100	125	Horizontal
6	9696.4621	47.20	48.95	1.75	74.00	25.05	100	68	Horizontal

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dBμV/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	4844.4446	-9.64	53.19	43.55	54.00	10.45	200	134	Horizontal
2	7268.2655	-3.94	44.73	40.79	54.00	13.21	112	85	Horizontal
3	9692.8744	1.75	39.38	41.13	54.00	12.87	100	37	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1049.5062	56.88	31.81	-25.07	74.00	42.19	100	87	Vertical
2	1367.0459	55.89	32.24	-23.65	74.00	41.76	200	136	Vertical
3	1763.5954	65.68	43.34	-22.34	74.00	30.66	200	360	Vertical
4	3620.7026	52.94	38.49	-14.45	74.00	35.51	100	249	Vertical
5	4854.6068	62.30	52.65	-9.65	74.00	21.35	200	60	Vertical
6	7258.6573	56.63	52.80	-3.83	74.00	21.20	100	109	Vertical

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dBμV/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	4844.4121	-9.65	55.89	46.24	54.00	7.76	165	65	Vertical
2	7268.6742	-3.83	48.90	45.07	54.00	8.93	111	117	Vertical

Mode: IEEE 802.11n HT40
 Middle Frequency (2437 MHz)
 Environment: 25°C/60%RH
 Tested By: Chen XiaoCong

Date: 2021-10-19
 Voltage: AC120V/60Hz
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Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1768.5961	60.33	38.03	-22.30	74.00	35.97	200	128	Horizontal
2	1900.6126	64.39	42.51	-21.88	74.00	31.49	200	103	Horizontal
3	3183.7730	53.23	37.04	-16.19	74.00	36.96	200	93	Horizontal
4	4873.3592	62.18	52.36	-9.82	74.00	21.64	200	126	Horizontal
5	7309.2887	53.07	48.74	-4.33	74.00	25.26	200	77	Horizontal
6	9745.2182	49.36	50.81	1.45	74.00	23.19	100	52	Horizontal

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dBμV/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	4875.2111	-9.83	54.88	45.05	54.00	8.95	197	133	Horizontal
2	7305.2686	-4.34	47.01	42.67	54.00	11.33	126	75	Horizontal
3	9749.4086	1.45	41.68	43.13	54.00	10.87	105	37	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1763.8455	69.75	47.42	-22.33	74.00	26.58	200	178	Vertical
2	1898.8624	66.66	44.78	-21.88	74.00	29.22	200	1	Vertical
3	4871.4839	64.90	55.09	-9.81	74.00	18.91	100	69	Vertical
4	7305.5382	57.64	53.25	-4.39	74.00	20.75	100	101	Vertical
5	9756.4696	46.85	48.32	1.47	74.00	25.68	200	84	Vertical
6	12164.2705	43.97	48.65	4.68	74.00	25.35	100	110	Vertical

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dBμV/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	4875.3324	-9.81	53.62	43.81	54.00	10.19	116	87	Vertical
2	7306.1957	-4.39	50.77	46.38	54.00	7.62	110	113	Vertical
3	9747.8839	1.47	38.25	39.72	54.00	14.28	137	96	Vertical

Mode: IEEE 802.11n HT40
 Highest Frequency (2452MHz)
 Environment: 25°C/60%RH
 Tested By: Chen XiaoCong

Date: 2021-10-19
 Voltage: AC120V/60Hz
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Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1369.5462	56.91	33.27	-23.64	74.00	40.73	200	348	Horizontal
2	1894.3618	57.90	36.02	-21.88	74.00	37.98	200	300	Horizontal
3	4901.4877	62.14	52.07	-10.07	74.00	21.93	200	126	Horizontal
4	7350.5438	52.85	49.13	-3.72	74.00	24.87	100	76	Horizontal
5	9797.7247	50.71	52.47	1.76	74.00	21.53	100	27	Horizontal
6	13394.4243	41.51	49.52	8.01	74.00	24.48	100	359	Horizontal

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dBμV/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	7354.0721	-3.72	45.17	41.45	54.00	12.55	116	87	Horizontal
2	9814.4788	1.76	42.25	44.01	54.00	9.99	108	37	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1768.3460	70.55	48.25	-22.30	74.00	25.75	100	63	Vertical
2	3200.6501	53.95	38.11	-15.84	74.00	35.89	200	117	Vertical
3	4897.7372	62.71	52.66	-10.05	74.00	21.34	200	59	Vertical
4	7371.1714	56.67	53.07	-3.60	74.00	20.93	100	109	Vertical
5	9810.8514	47.10	48.80	1.70	74.00	25.20	200	84	Vertical
6	12271.1589	44.30	48.63	4.33	74.00	25.37	100	109	Vertical

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dBμV/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	4906.1613	-10.05	57.22	47.17	54.00	6.83	167	70	Vertical
2	7357.8296	-3.60	48.01	44.41	54.00	9.59	109	123	Vertical

Mode: IEEE 802.11ax HE20
 Lowest Frequency (2412MHz)
 Environment: 25°C/60%RH
 Tested By: Lu Qiang

Date: 2021-10-19
 Voltage: AC120V/60Hz
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Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1746.5933	58.89	36.46	-22.43	74.00	37.54	200	144	Horizontal
2	3729.4662	53.52	38.82	-14.70	74.00	35.18	200	240	Horizontal
3	4828.3535	62.78	53.09	-9.69	74.00	20.91	200	85	Horizontal
4	7236.1545	59.83	56.30	-3.53	74.00	17.70	100	126	Horizontal
5	9651.4564	53.21	55.43	2.22	74.00	18.57	200	76	Horizontal
6	12059.2574	45.16	49.18	4.02	74.00	24.82	100	53	Horizontal

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dBμV/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	4824.3460	-9.69	55.48	45.79	54.00	8.21	195	130	Horizontal
2	7235.1414	-3.53	48.90	45.37	54.00	8.63	121	134	Horizontal
3	9647.4028	2.22	44.26	46.48	54.00	7.52	116	85	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1746.5933	65.76	43.33	-22.43	74.00	30.67	200	251	Vertical
2	3742.5928	53.84	39.20	-14.64	74.00	34.80	200	306	Vertical
3	4824.6031	68.39	58.68	-9.71	74.00	15.32	200	28	Vertical
4	7236.1545	60.75	57.22	-3.53	74.00	16.78	200	101	Vertical
5	9645.8307	51.70	53.85	2.15	74.00	20.15	200	53	Vertical
6	12061.1326	47.10	51.16	4.06	74.00	22.84	100	85	Vertical

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dBμV/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	4824.2654	-9.71	58.47	48.76	54.00	5.24	184	64	Vertical
2	7234.7796	-3.53	49.61	46.08	54.00	7.92	133	121	Vertical
3	9646.5059	2.15	41.96	44.11	54.00	9.89	200	58	Vertical

Mode: IEEE 802.11ax HE20
 Middle Frequency (2437 MHz)
 Environment: 25°C/60%RH
 Tested By: Lu Qiang

Date: 2021-10-19
 Voltage: AC120V/60Hz
 /

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1447.8060	55.77	32.60	-23.17	74.00	41.40	200	360	Horizontal
2	3601.9502	52.46	38.17	-14.29	74.00	35.83	200	331	Horizontal
3	4871.4839	64.72	54.91	-9.81	74.00	19.09	200	126	Horizontal
4	7311.1639	60.16	55.86	-4.30	74.00	18.14	100	110	Horizontal
5	9752.7191	54.59	56.03	1.44	74.00	17.97	100	85	Horizontal
6	12179.2724	45.38	49.85	4.47	74.00	24.15	100	110	Horizontal

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dBμV/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	4872.4095	-9.81	57.50	47.69	54.00	6.31	179	132	Horizontal
2	7311.1639	-4.30	48.39	44.09	54.00	9.91	137	84	Horizontal
3	9746.7699	1.44	43.61	45.05	54.00	8.95	116	63	Horizontal
4	12184.5095	4.47	35.04	39.51	54.00	14.49	107	143	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1358.2948	56.55	32.85	-23.70	74.00	41.15	100	29	Vertical
2	3611.3264	53.50	39.13	-14.37	74.00	34.87	200	232	Vertical
3	4873.3592	68.28	58.46	-9.82	74.00	15.54	200	359	Vertical
4	7311.1639	61.95	57.65	-4.30	74.00	16.35	100	110	Vertical
5	9748.9686	49.28	50.71	1.43	74.00	23.29	200	85	Vertical
6	12184.8981	48.96	53.35	4.39	74.00	20.65	100	110	Vertical

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dBμV/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	4873.1643	-9.83	59.94	50.11	54.00	3.89	198	63	Vertical
2	7308.3125	-4.30	51.36	47.06	54.00	6.94	100	116	Vertical
3	9745.2640	1.43	40.32	41.75	54.00	12.25	200	58	Vertical
4	12190.3813	4.39	37.16	41.55	54.00	12.45	102	84	Vertical

Mode: IEEE 802.11ax HE20
 Highest Frequency (2462MHz)
 Environment: 25°C/60%RH
 Tested By: Lu Qiang

Date: 2021-10-19
 Voltage: AC120V/60Hz
 /

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1136.7671	56.44	31.77	-24.67	74.00	42.23	100	94	Horizontal
2	3581.3227	53.58	38.65	-14.93	74.00	35.35	100	359	Horizontal
3	4925.8657	64.66	54.59	-10.07	74.00	19.41	200	126	Horizontal
4	7386.1733	59.43	55.92	-3.51	74.00	18.08	100	100	Horizontal
5	9844.6056	51.02	52.48	1.46	74.00	21.52	100	59	Horizontal
6	12308.6636	44.93	50.04	5.11	74.00	23.96	100	190	Horizontal

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dBμV/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	4925.4224	-10.07	56.38	46.31	54.00	7.69	193	135	Horizontal
2	7385.2131	-3.51	46.80	43.29	54.00	10.71	117	86	Horizontal
3	9846.9683	1.46	41.62	43.08	54.00	10.92	117	64	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1497.5622	56.04	33.14	-22.90	74.00	40.86	100	96	Vertical
2	4923.9905	68.90	58.83	-10.07	74.00	15.17	200	53	Vertical
3	5698.4623	49.50	41.45	-8.05	74.00	32.55	200	232	Vertical
4	7389.9237	59.15	55.66	-3.49	74.00	18.34	100	109	Vertical
5	9846.4808	48.88	50.33	1.45	74.00	23.67	200	85	Vertical
6	12310.5388	46.12	51.25	5.13	74.00	22.75	200	77	Vertical

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dBμV/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	4925.5169	-10.07	59.56	49.49	54.00	4.51	184	64	Vertical
2	7384.9725	-3.49	51.53	48.04	54.00	5.96	112	112	Vertical
3	9846.2839	1.45	38.88	40.33	54.00	13.67	131	97	Vertical

Mode: IEEE 802.11ax HE40
 Lowest Frequency (2422MHz)
 Environment: 25°C/60%RH
 Tested By: Lu Qiang

Date: 2021-10-19
 Voltage: AC120V/60Hz
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Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1048.5061	57.10	32.03	-25.07	74.00	41.97	200	357	Horizontal
2	1746.3433	56.47	34.04	-22.43	74.00	39.96	200	37	Horizontal
3	3626.3283	53.15	38.65	-14.50	74.00	35.35	200	150	Horizontal
4	4850.8564	62.48	52.86	-9.62	74.00	21.14	200	85	Horizontal
5	7269.9087	57.03	53.03	-4.00	74.00	20.97	100	126	Horizontal
6	9692.7116	49.78	51.57	1.79	74.00	22.43	100	69	Horizontal

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dBμV/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	4846.8302	-9.62	53.51	43.89	54.00	10.11	191	131	Horizontal
2	7270.2722	-4.00	46.25	42.25	54.00	11.75	138	131	Horizontal
3	9695.0379	1.79	39.64	41.43	54.00	12.57	133	86	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1259.0324	56.76	32.64	-24.12	74.00	41.36	200	29	Vertical
2	3669.4587	52.69	37.93	-14.76	74.00	36.07	100	76	Vertical
3	4848.9811	65.27	55.66	-9.61	74.00	18.34	200	61	Vertical
4	7271.7840	58.28	54.25	-4.03	74.00	19.75	100	109	Vertical
5	9698.3373	48.01	49.74	1.73	74.00	24.26	200	45	Vertical
6	13906.3633	40.48	49.58	9.10	74.00	24.42	200	102	Vertical

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dBμV/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	4845.9262	-9.61	56.54	46.93	54.00	7.07	200	64	Vertical
2	7260.1491	-4.03	48.81	44.78	54.00	9.22	102	112	Vertical

Mode: IEEE 802.11ax HE40
 Middle Frequency (2437 MHz)
 Environment: 25°C/60%RH
 Tested By: Lu Qiang

Date: 2021-10-19
 Voltage: AC120V/60Hz
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Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1238.7798	56.89	32.65	-24.24	74.00	41.35	200	111	Horizontal
2	3586.9484	53.03	38.30	-14.73	74.00	35.70	100	323	Horizontal
3	4880.8601	62.22	52.33	-9.89	74.00	21.67	200	91	Horizontal
4	7311.1639	55.74	51.44	-4.30	74.00	22.56	100	107	Horizontal
5	9743.3429	50.84	52.30	1.46	74.00	21.70	200	82	Horizontal
6	13925.1156	40.05	49.13	9.08	74.00	24.87	100	290	Horizontal

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dBμV/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	4871.2448	-9.90	52.74	42.84	54.00	11.16	200	132	Horizontal
2	7303.1947	-4.30	48.04	43.74	54.00	10.26	136	130	Horizontal
3	9747.9223	1.46	41.88	43.34	54.00	10.66	116	85	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1901.3627	65.68	43.80	-21.88	74.00	30.20	100	103	Vertical
2	3727.5909	53.50	38.79	-14.71	74.00	35.21	200	45	Vertical
3	4880.8601	67.80	57.91	-9.89	74.00	16.09	200	69	Vertical
4	7305.5382	58.69	54.30	-4.39	74.00	19.70	100	110	Vertical
5	9737.7172	49.72	51.21	1.49	74.00	22.79	200	53	Vertical
6	12179.2724	44.70	49.17	4.47	74.00	24.83	100	118	Vertical

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dBμV/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	4874.4174	-9.90	55.44	45.54	54.00	8.46	153	75	Vertical
2	7313.3551	-4.39	50.35	45.96	54.00	8.04	117	116	Vertical
3	9747.3575	1.49	40.72	42.21	54.00	11.79	126	86	Vertical

Mode: IEEE 802.11ax HE40
 Highest Frequency (2452MHz)
 Environment: 25°C/60%RH
 Tested By: Lu Qiang

Date: 2021-10-19
 Voltage: AC120V/60Hz
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Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1754.8444	64.97	42.57	-22.40	74.00	31.43	200	275	Horizontal
2	3733.2167	54.19	39.51	-14.68	74.00	34.49	100	7	Horizontal
3	4908.9886	62.16	52.09	-10.07	74.00	21.91	200	126	Horizontal
4	7354.2943	55.51	51.81	-3.70	74.00	22.19	100	118	Horizontal
5	9793.9742	49.15	50.89	1.74	74.00	23.11	200	61	Horizontal
6	12273.0341	44.98	49.36	4.38	74.00	24.64	100	19	Horizontal

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dBμV/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	4904.8650	-10.07	53.76	43.69	54.00	10.31	188	130	Horizontal
2	7356.7212	-3.69	45.96	42.27	54.00	11.73	117	76	Horizontal
3	9807.9796	1.74	40.39	42.13	54.00	11.87	147	69	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1763.5954	63.38	41.04	-22.34	74.00	32.96	100	1	Vertical
2	3697.5872	53.00	38.17	-14.83	74.00	35.83	200	158	Vertical
3	4910.8639	64.51	54.44	-10.07	74.00	19.56	200	77	Vertical
4	7358.0448	56.87	53.20	-3.67	74.00	20.80	200	101	Vertical
5	9803.3504	46.31	48.07	1.76	74.00	25.93	200	28	Vertical
6	12248.6561	46.08	49.92	3.84	74.00	24.08	100	85	Vertical

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dBμV/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	4904.7744	-10.07	56.21	46.14	54.00	7.86	173	64	Vertical
2	7355.9845	-3.68	48.91	45.23	54.00	8.77	113	112	Vertical

18GHz-26.5GHz:

Pre-scan all modes and recorded the worst case results in this report (IEEE 802.11g)
The peak test results is less than the average limits, so the average test results had not reported.

Mode: IEEE 802.11g
Lowest Frequency (2412MHz)
Environment: 25°C/60%RH
Tested By: Lu Qiang

Date: 2021-10-25
Voltage: AC120V/60Hz
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Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	18770.9500	55.78	44.47	-11.31	83.54	39.07	100	359	Horizontal
2	19285.6250	58.79	47.75	-11.04	83.54	35.79	100	145	Horizontal
3	19478.5750	56.23	45.30	-10.93	83.54	38.24	100	58	Horizontal
4	21709.8250	59.04	49.11	-9.93	83.54	34.43	100	145	Horizontal
5	23299.7500	54.40	45.60	-8.80	83.54	37.94	100	14	Horizontal
6	25232.2250	54.15	46.50	-7.65	83.54	37.04	100	23	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	18441.5750	56.58	45.07	-11.51	83.54	38.47	100	328	Vertical
2	18882.7250	56.10	44.89	-11.21	83.54	38.65	100	135	Vertical
3	21186.2250	55.91	45.63	-10.28	83.54	37.91	100	257	Vertical
4	23154.4000	53.81	44.95	-8.86	83.54	38.59	100	222	Vertical
5	24632.5500	54.07	45.96	-8.11	83.54	37.58	100	178	Vertical
6	25267.9250	53.08	45.41	-7.67	83.54	38.13	100	13	Vertical

Note:

Above 18G test distance is 1m, so the Peak Limit=74+20*log(3/1)=83.54 (dBμV/m).

----- The following blanks -----

Mode: IEEE 802.11g
 Middle Frequency (2437MHz)
 Environment: 25°C/60%RH
 Tested By: Lu Qiang

Date: 2021-10-25
 Voltage: AC120V/60Hz
 /

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	18207.4000	55.49	43.90	-11.59	83.54	39.64	100	206	Horizontal
2	19503.2250	57.53	46.61	-10.92	83.54	36.93	100	328	Horizontal
3	20535.9750	55.37	44.90	-10.47	83.54	38.64	100	266	Horizontal
4	21934.2250	56.48	46.52	-9.96	83.54	37.02	100	67	Horizontal
5	23236.0000	54.40	45.58	-8.82	83.54	37.96	100	162	Horizontal
6	25586.2500	53.89	46.01	-7.88	83.54	37.53	100	240	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	18007.6500	55.49	43.83	-11.66	83.54	39.71	100	206	Vertical
2	19510.4500	56.68	45.76	-10.92	83.54	37.78	100	110	Vertical
3	20560.2000	56.06	45.61	-10.45	83.54	37.93	100	346	Vertical
4	21928.7000	54.63	44.67	-9.96	83.54	38.87	100	41	Vertical
5	23798.2750	54.07	45.60	-8.47	83.54	37.94	100	0	Vertical
6	25810.6500	53.98	45.84	-8.14	83.54	37.70	100	7	Vertical

Note:

Above 18G test distance is 1m, so the Peak Limit=74+20*log(3/1)=83.54 (dBμV/m).

----- The following blanks -----

Mode: IEEE 802.11g
 Highest Frequency (2462MHz)
 Environment: 25°C/60%RH
 Tested By: Lu Qiang

Date: 2021-10-25
 Voltage: AC120V/60Hz
 /

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	18077.7750	55.89	44.26	-11.63	83.54	39.28	100	188	Horizontal
2	19696.1750	57.16	46.29	-10.87	83.54	37.25	100	75	Horizontal
3	21240.6250	54.76	44.52	-10.24	83.54	39.02	100	250	Horizontal
4	22177.3250	56.51	46.76	-9.75	83.54	36.78	100	49	Horizontal
5	24030.3250	53.70	45.45	-8.25	83.54	38.09	100	241	Horizontal
6	26396.3000	53.49	46.01	-7.48	83.54	37.53	100	346	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	18031.8750	55.24	43.59	-11.65	83.54	39.95	100	23	Vertical
2	19276.7000	55.61	44.57	-11.04	83.54	38.97	100	320	Vertical
3	20549.1500	55.91	45.45	-10.46	83.54	38.09	100	320	Vertical
4	21783.7750	54.98	45.04	-9.94	83.54	38.50	100	303	Vertical
5	24035.4250	54.15	45.90	-8.25	83.54	37.64	100	189	Vertical
6	26191.0250	53.36	45.42	-7.94	83.54	38.12	100	338	Vertical

Note:

Above 18G test distance is 1m, so the Peak Limit=74+20*log(3/1)=83.54 (dBμV/m).

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7. 6DB BANDWIDTH

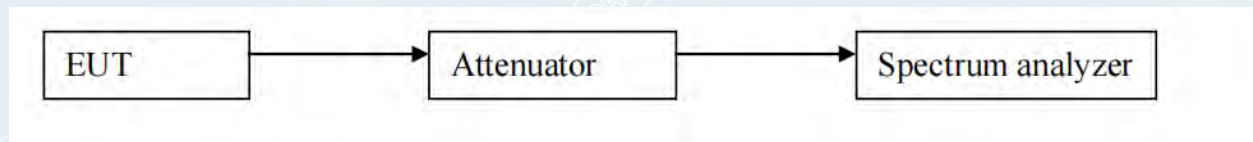
7.1. LIMITS

Systems using digital modulation techniques may operate in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

7.2. TEST PROCEDURES

- 1) Remove the antenna from the EUT, and then connect a low loss RF cable from antenna port to the spectrum analyzer.
- 2) Set resolution bandwidth (RBW) = 100kHz. Set the video bandwidth (VBW) $\geq 3 \times$ RBW. Detector = Peak. Trace mode = max hold. Sweep = auto couple. Allow the trace to stabilize, record 6dB bandwidth value.
- 3) Repeat above procedures until all frequencies measured were complete.

7.3. TEST SETUP



----- The following blanks -----

7.4. TEST RESULTS

Environment: 25°C/60%RH

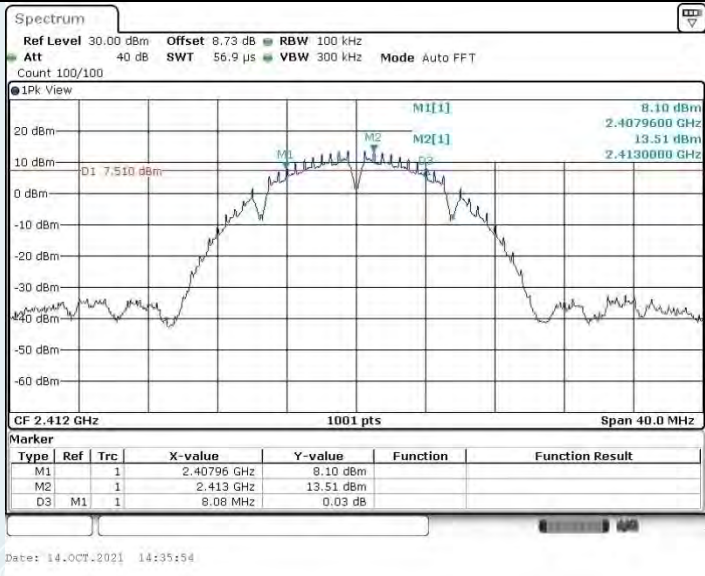
Tested By: Lu Wei

Voltage: AC120V/60Hz

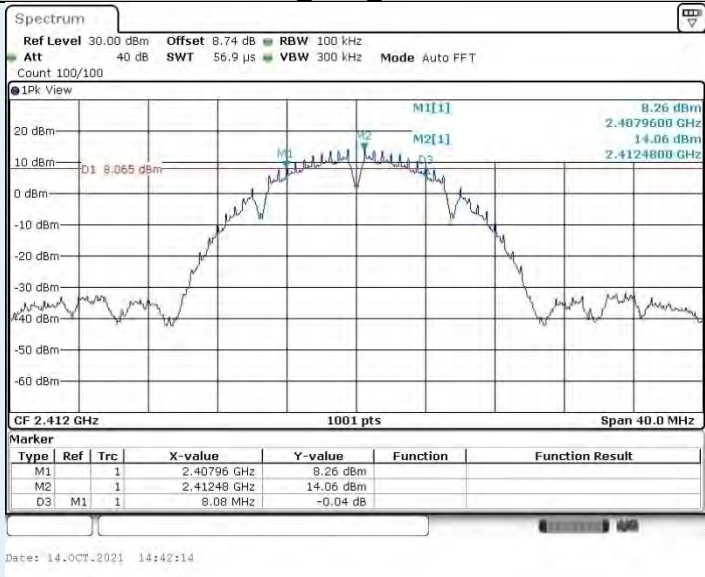
Date: 2021-10-14

TestMode	Antenna	Frequency[MHz]	DTS BW[MHz]	Limit[MHz]	Verdict
802.11b	Ant1	2412	8.080	≥ 0.5	PASS
	Ant2	2412	8.080	≥ 0.5	PASS
	Ant1	2437	8.080	≥ 0.5	PASS
	Ant2	2437	8.080	≥ 0.5	PASS
	Ant1	2462	8.000	≥ 0.5	PASS
	Ant2	2462	8.080	≥ 0.5	PASS
802.11g	Ant1	2412	15.120	≥ 0.5	PASS
	Ant2	2412	15.120	≥ 0.5	PASS
	Ant1	2437	15.120	≥ 0.5	PASS
	Ant2	2437	15.120	≥ 0.5	PASS
	Ant1	2462	15.120	≥ 0.5	PASS
	Ant2	2462	15.120	≥ 0.5	PASS
802.11n HT20	Ant1	2412	15.120	≥ 0.5	PASS
	Ant2	2412	16.320	≥ 0.5	PASS
	Ant1	2437	15.120	≥ 0.5	PASS
	Ant2	2437	15.720	≥ 0.5	PASS
	Ant1	2462	15.120	≥ 0.5	PASS
	Ant2	2462	16.320	≥ 0.5	PASS
802.11n HT40	Ant1	2422	35.040	≥ 0.5	PASS
	Ant2	2422	35.040	≥ 0.5	PASS
	Ant1	2437	35.120	≥ 0.5	PASS
	Ant2	2437	35.040	≥ 0.5	PASS
	Ant1	2452	35.040	≥ 0.5	PASS
	Ant2	2452	35.040	≥ 0.5	PASS
802.11ax HE20	Ant1	2412	19.040	≥ 0.5	PASS
	Ant2	2412	18.560	≥ 0.5	PASS
	Ant1	2437	18.560	≥ 0.5	PASS
	Ant2	2437	19.080	≥ 0.5	PASS
	Ant1	2462	18.560	≥ 0.5	PASS
	Ant2	2462	18.520	≥ 0.5	PASS
802.11ax HE40	Ant1	2422	36.160	≥ 0.5	PASS
	Ant2	2422	35.200	≥ 0.5	PASS
	Ant1	2437	36.640	≥ 0.5	PASS
	Ant2	2437	36.080	≥ 0.5	PASS
	Ant1	2452	36.320	≥ 0.5	PASS
	Ant2	2452	37.280	≥ 0.5	PASS

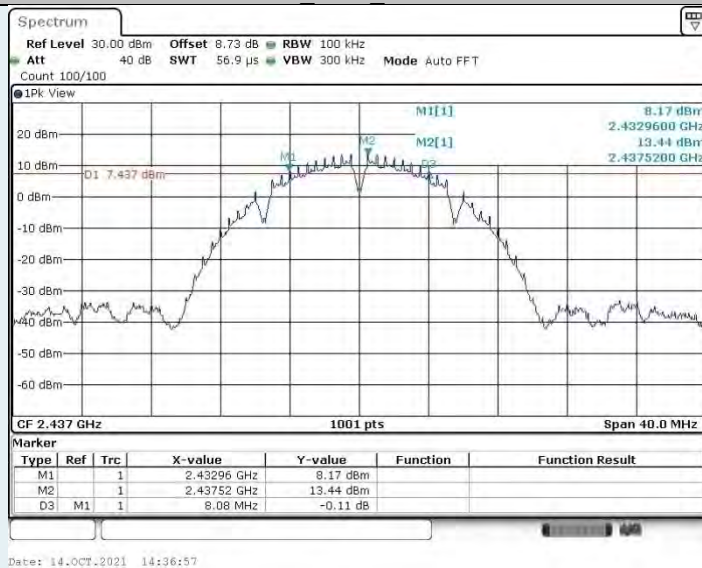
802.11b Ant1 2412MHz



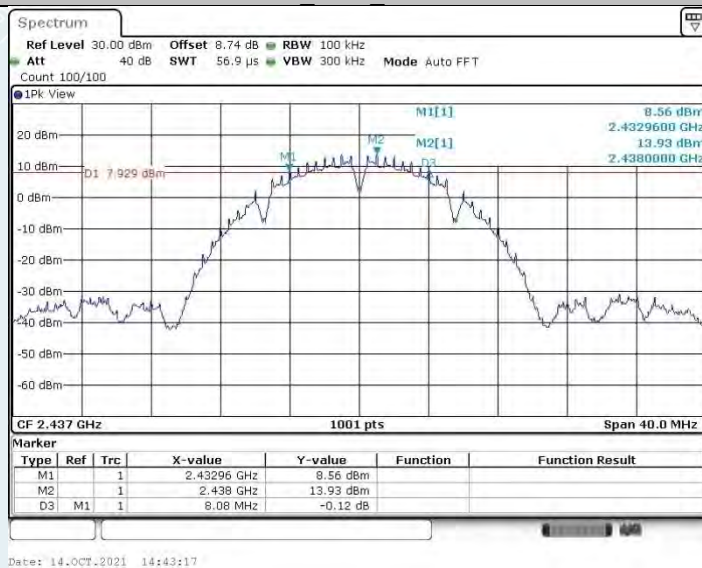
802.11b Ant2 2412 MHz



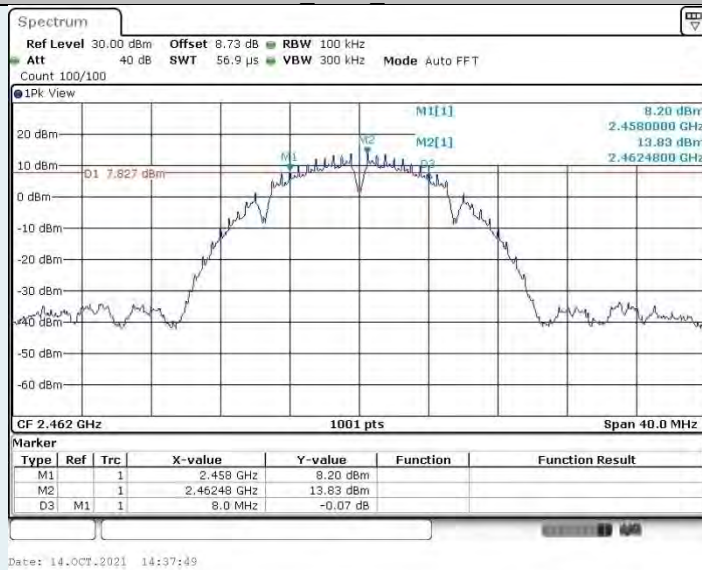
802.11b Ant1 2437 MHz



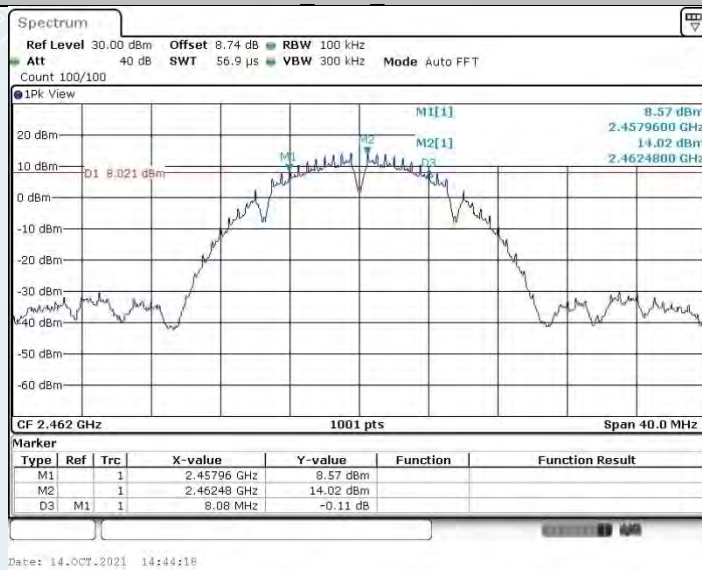
802.11b Ant2 2437 MHz



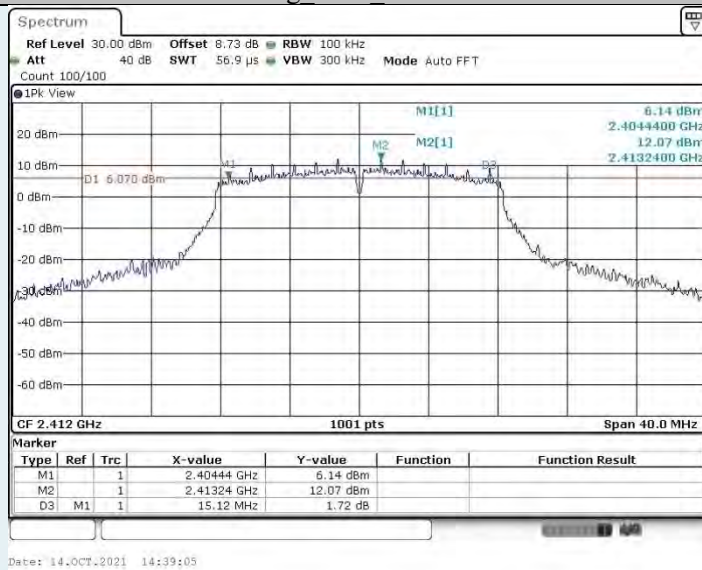
802.11b Ant1 2462 MHz



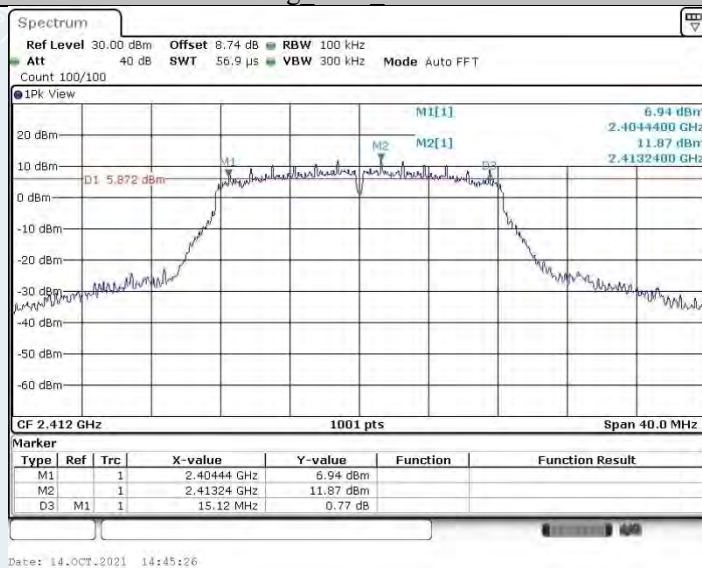
802.11b Ant2 2462 MHz



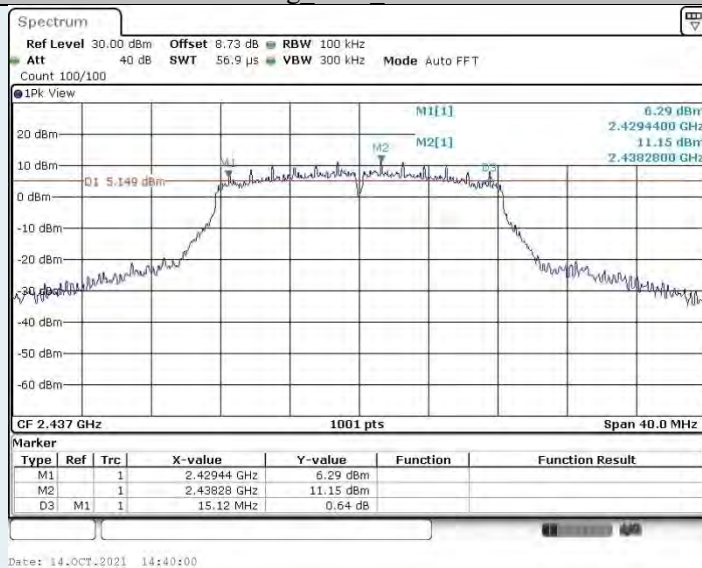
802.11g Ant1 2412 MHz



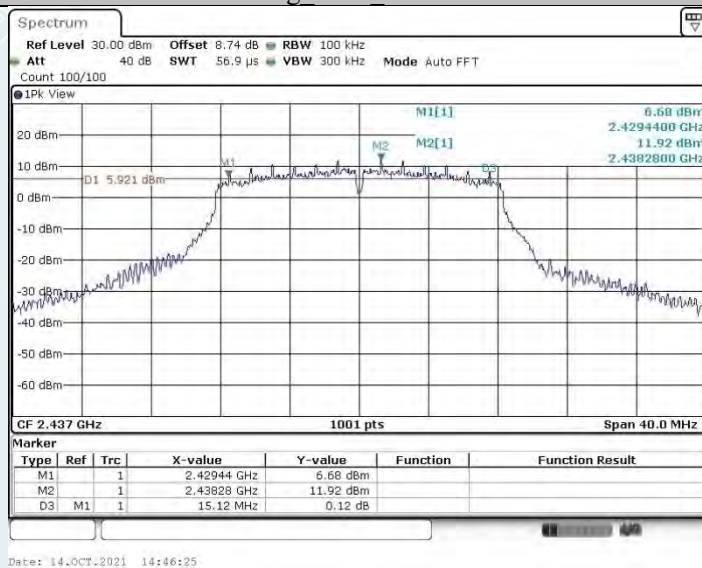
802.11g Ant2 2412 MHz



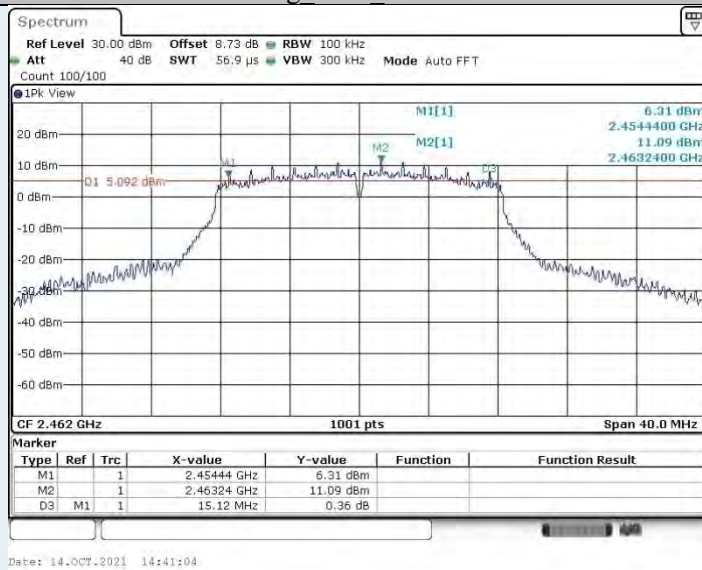
802.11g Ant1 2437 MHz



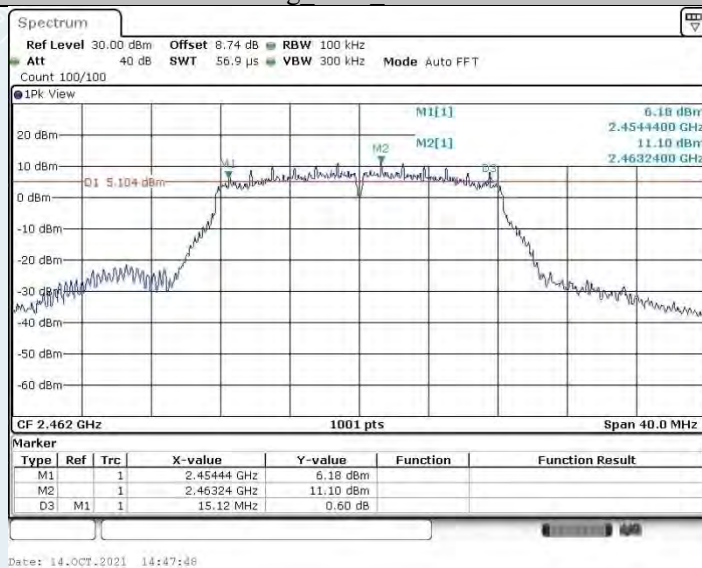
802.11g Ant2 2437 MHz



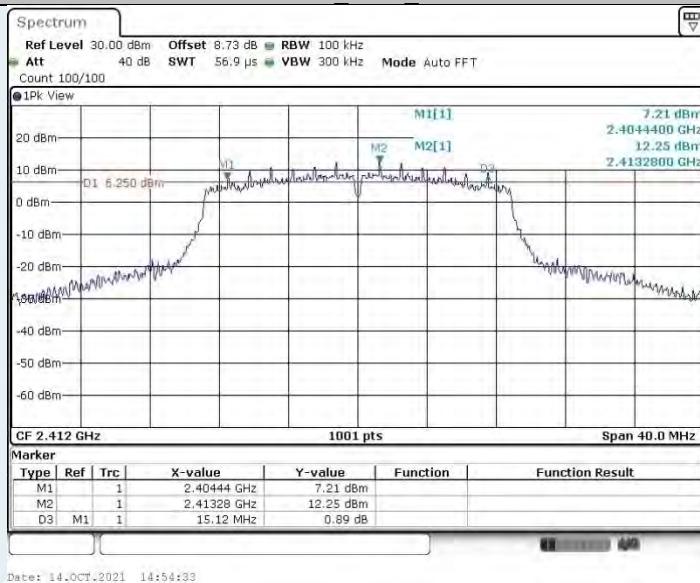
802.11g Ant1 2462 MHz



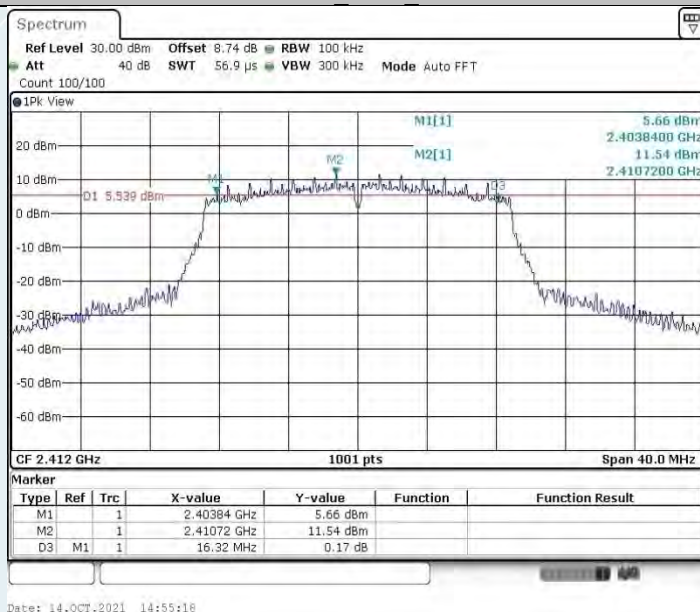
802.11g Ant2 2462 MHz



802.11n HT20 Ant1 2412 MHz



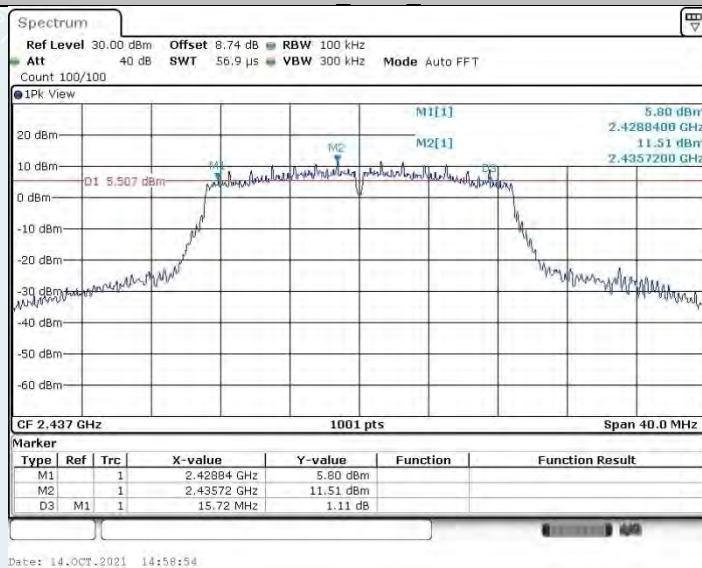
802.11n HT20 Ant2 2412 MHz



802.11n HT20 Ant1 2437 MHz



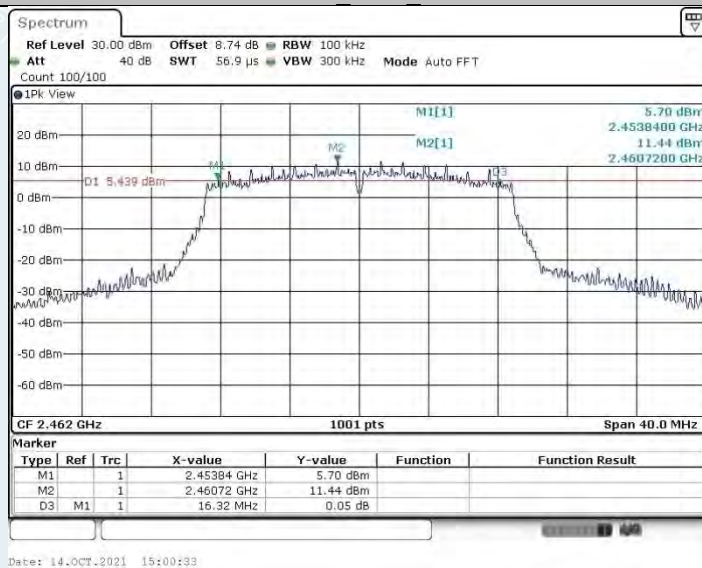
802.11n HT20 Ant2 2437 MHz



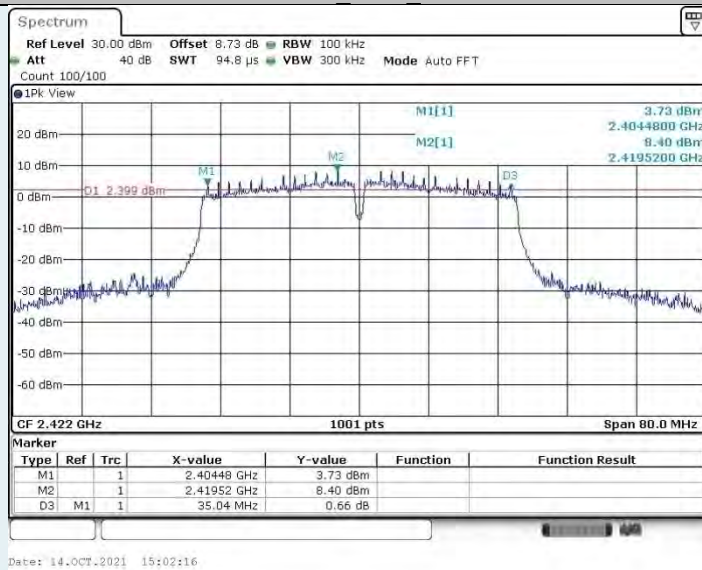
802.11n HT20 Ant1 2462 MHz



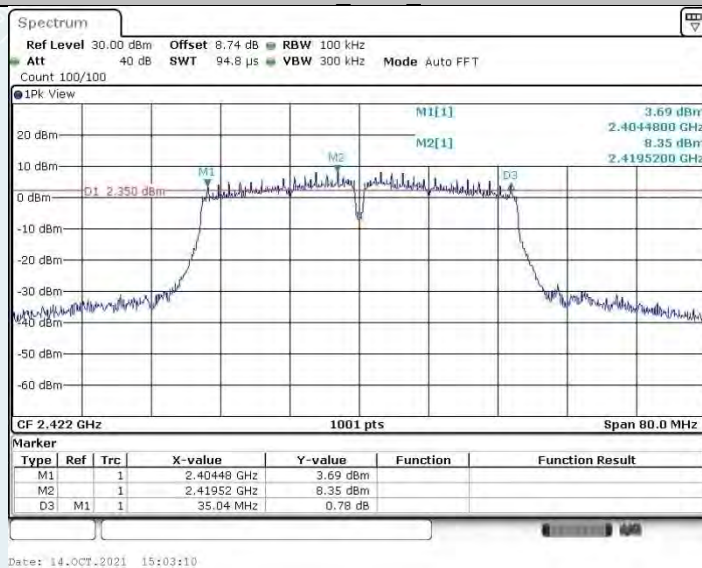
802.11n HT20 Ant2 2462 MHz

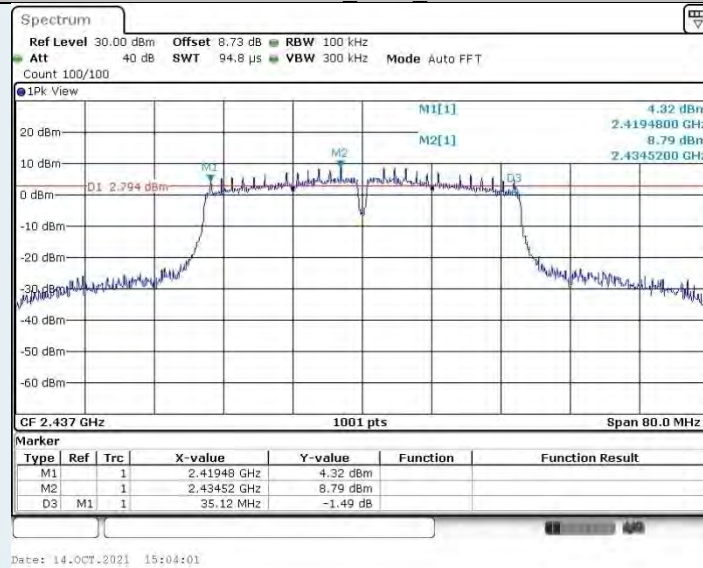


802.11n HT40 Ant1 2422 MHz

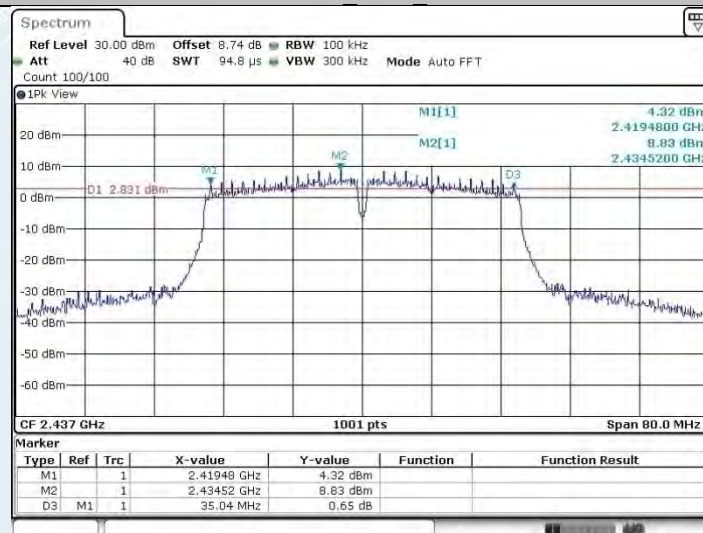


802.11n HT40 Ant2 2422 MHz



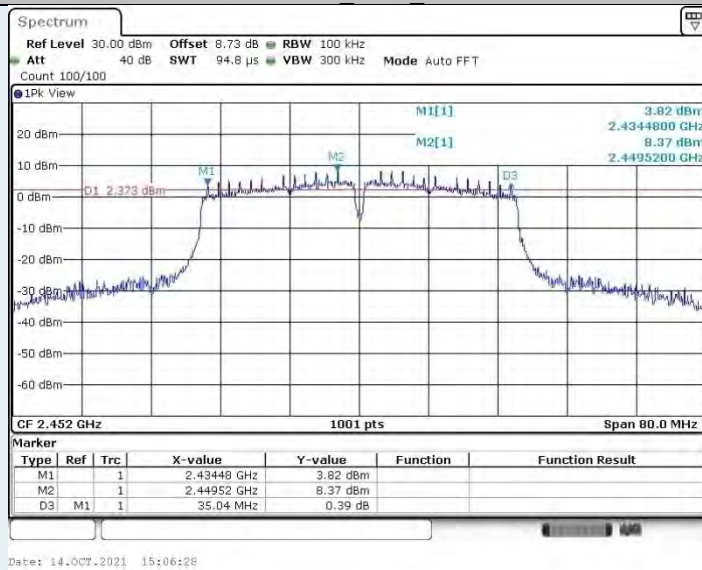


Date: 14.OCT.2021 15:04:01

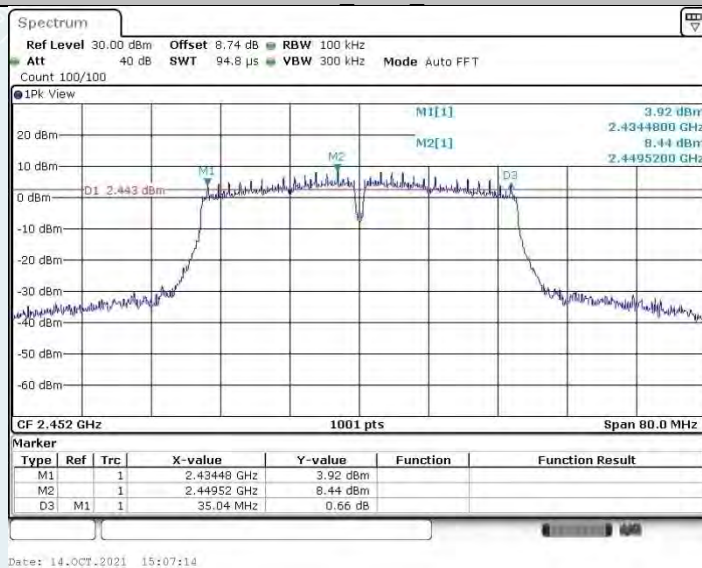


Date: 14.OCT.2021 15:04:51

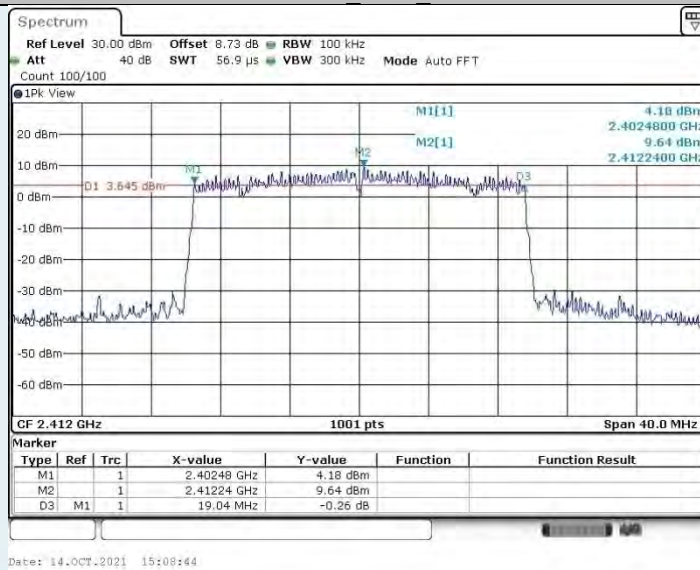
802.11n HT40 Ant1 2452MHz



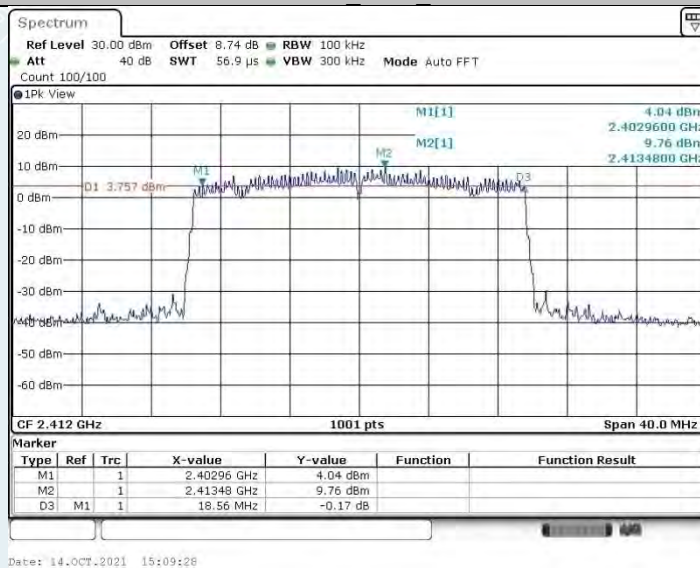
802.11n HT40 Ant2 2452MHz



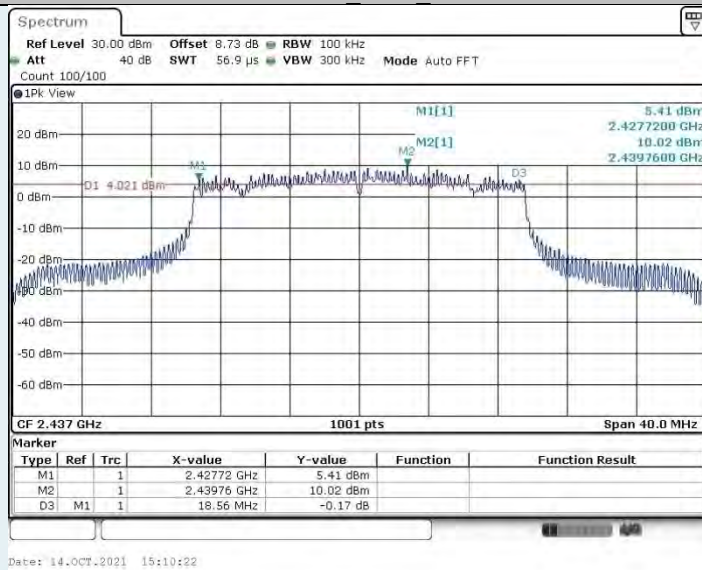
802.11ax HE20_Ant1_2412MHz



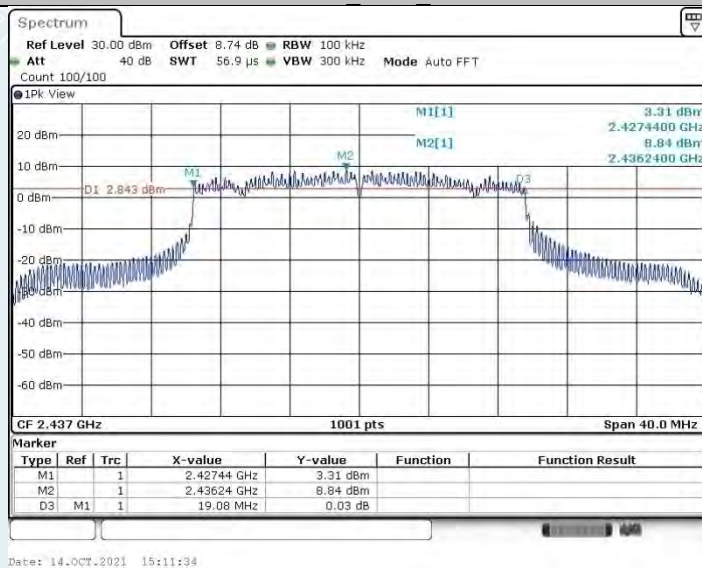
802.11ax HE20_Ant2_2412MHz



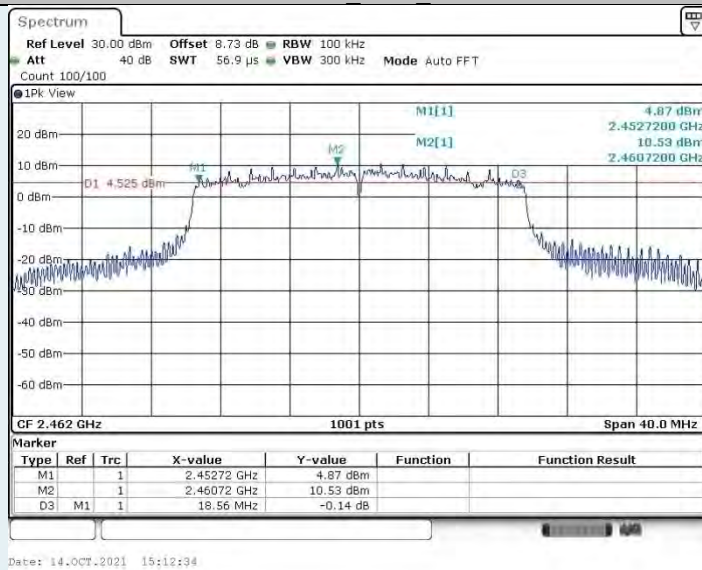
802.11ax HE20_Ant1_2437MHz



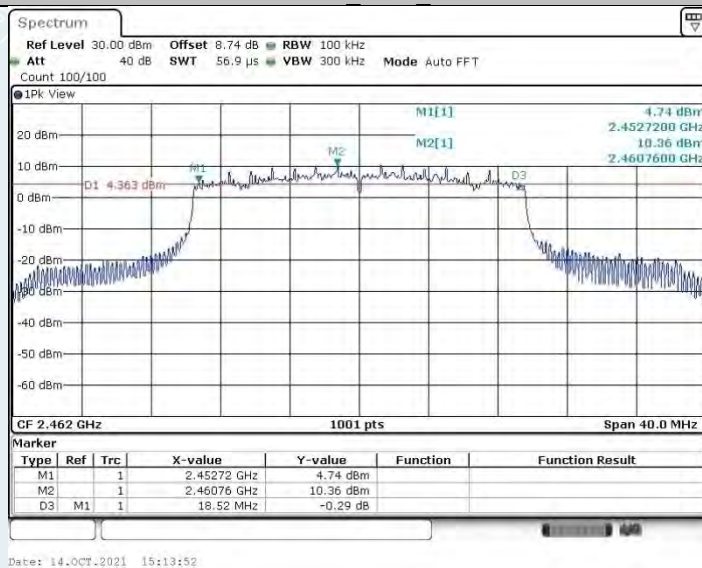
802.11ax HE20_Ant2_2437MHz



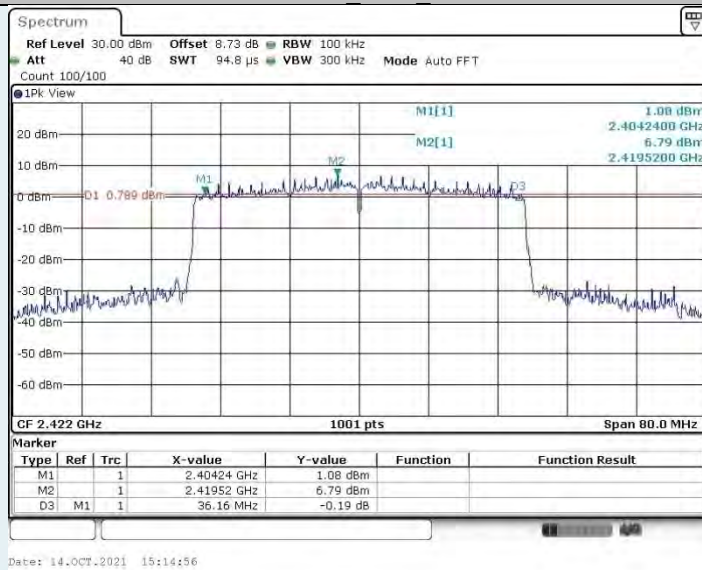
802.11ax HE20_Ant1_2462MHz



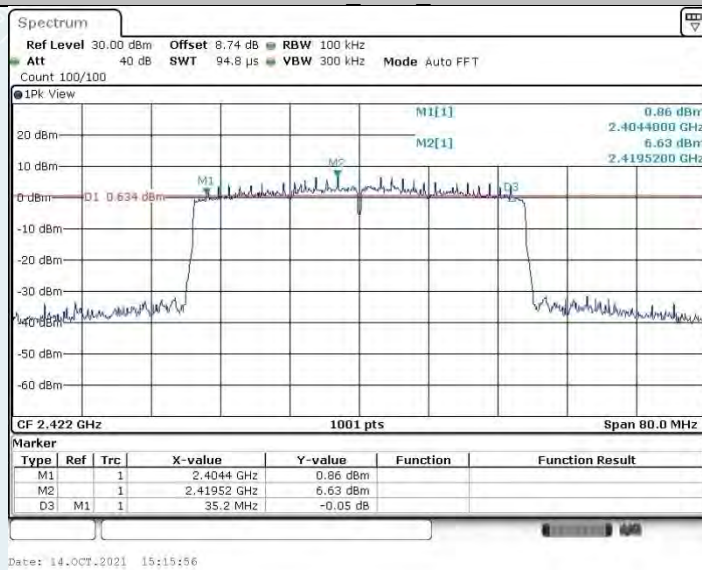
802.11ax HE20_Ant2_2462MHz



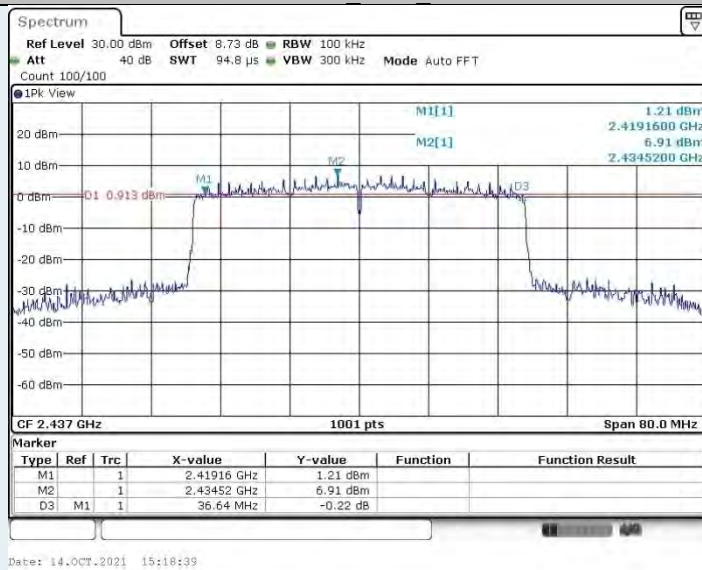
802.11ax HE40_Ant1_2422MHz



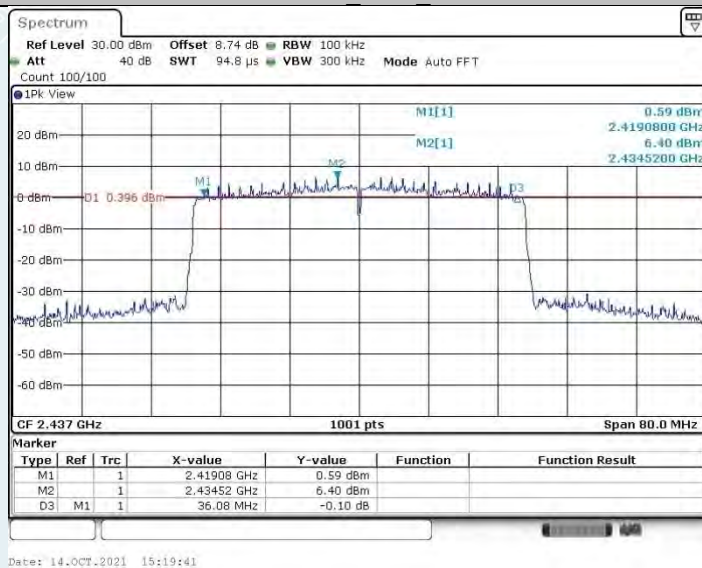
802.11ax HE40_Ant2_2422MHz

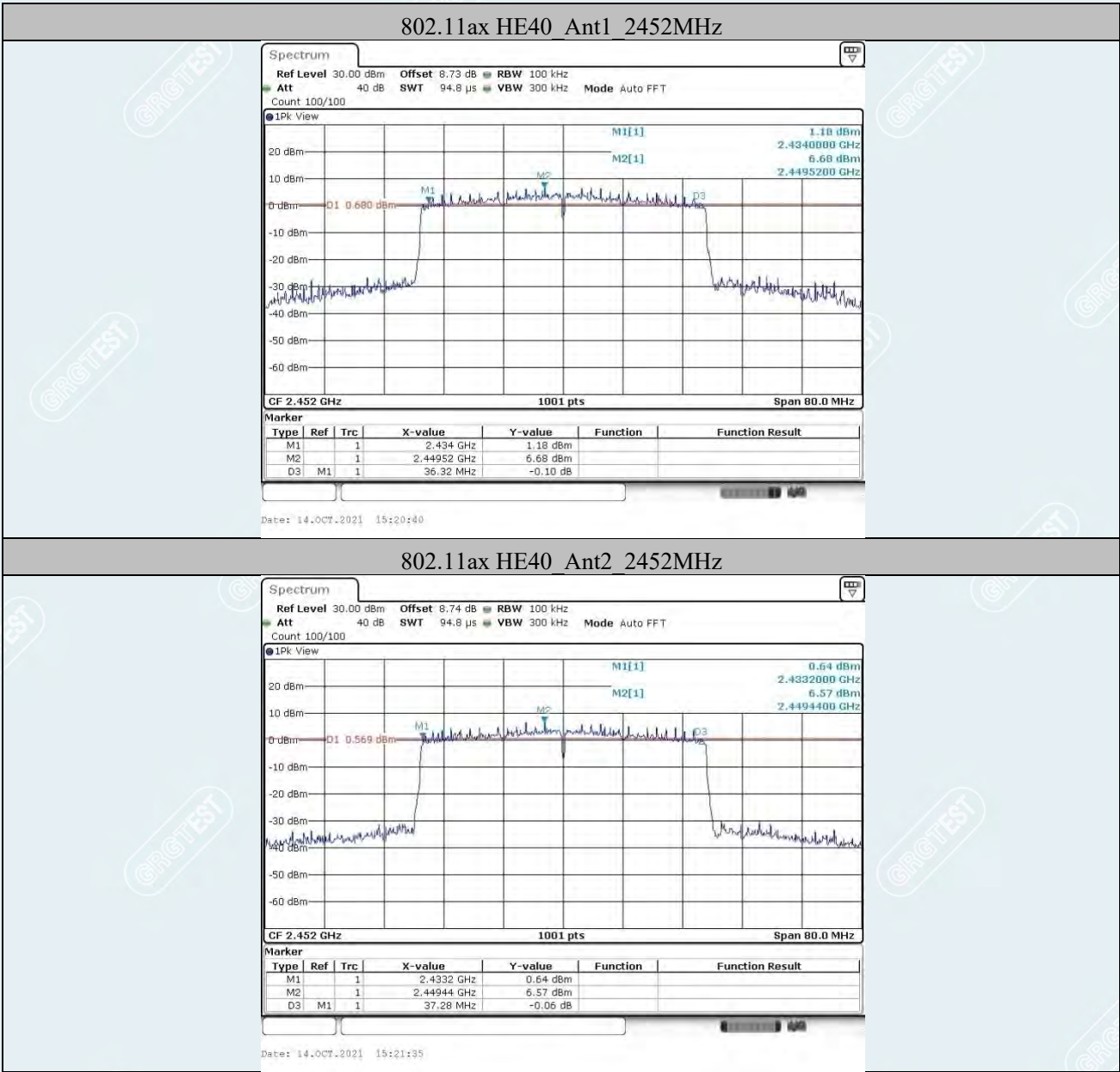


802.11ax HE40_Ant1_2437MHz



802.11ax HE40_Ant2_2437MHz





8. MAXIMUM PEAK OUTPUT POWER

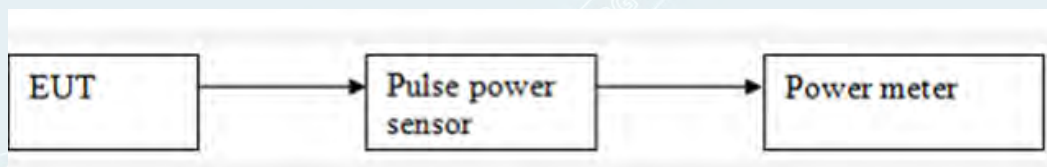
8.1. LIMITS

The maximum Peak output power measurement is 1W

8.2. TEST PROCEDURES

- 1) RF output of EUT was connected to the broadband peak RF power meter by RF cable and attenuator. The path loss was compensated to the results for each measurement.
- 2) Set to the maximum power setting and enable the EUT transmit continuously.
- 3) Measure the conducted output power and record the results in the test report.

8.3. TEST SETUP



----- The following blanks -----

8.4. TEST RESULT

Environment: 25°C/60%RH
 Tested By: Lu Wei

Voltage: AC120V/60Hz
 Date: 2021-10-24

802.11b Mode (antenna 1):

Channel No.	Frequency (MHz)	Measured Channel Power (dBm)	Peak / AVG	Limit	Result
1	2412	18.45	Peak	30dBm	Pass
6	2437	18.55			Pass
11	2462	18.57			Pass

802.11b Mode (antenna 2):

Channel No.	Frequency (MHz)	Measured Channel Power (dBm)	Peak / AVG	Limit	Result
1	2412	18.95	Peak	30dBm	Pass
6	2437	19.04			Pass
11	2462	19.10			Pass

802.11g Mode (antenna 1):

Channel No.	Frequency (MHz)	Measured Channel Power (dBm)	Peak / AVG	Limit	Result
1	2412	24.82	Peak	30dBm	Pass
6	2437	24.82			Pass
11	2462	24.82			Pass

802.11g Mode (antenna 2):

Channel No.	Frequency (MHz)	Measured Channel Power (dBm)	Peak / AVG	Limit	Result
1	2412	24.85	Peak	30dBm	Pass
6	2437	24.84			Pass
11	2462	24.82			Pass

802.11n HT20 Mode:

Channel No.	Frequency (MHz)	Measured Channel Power (dBm)			Peak/ AVG	Limit	Result
		antenna 1	antenna 2	total			
1	2412	24.88	24.83	27.87	Peak	30dBm	Pass
6	2437	24.90	24.96	27.94			Pass
11	2462	24.89	24.83	27.87			Pass

802.11n HT40 Mode:

Channel No.	Frequency (MHz)	Measured Channel Power (dBm)			Peak/ AVG	Limit	Result
		antenna 1	antenna 2	total			
3	2422	24.86	24.74	27.81	Peak	30dBm	Pass
6	2437	24.82	24.74	27.79			Pass
9	2452	24.74	24.74	27.75			Pass

802.11ax HE20 Mode:

Channel No.	Frequency (MHz)	Measured Channel Power (dBm)			Peak/ AVG	Limit	Result
		antenna 1	antenna 2	total			
1	2412	24.75	24.80	27.79	Peak	30dBm	Pass
6	2437	24.79	24.83	27.82			Pass
11	2462	24.62	24.77	27.71			Pass

802.11ax HE40 Mode:

Channel No.	Frequency (MHz)	Measured Channel Power (dBm)			Peak/ AVG	Limit	Result
		antenna 1	antenna 2	total			
3	2422	24.61	24.78	27.71	Peak	30dBm	Pass
6	2437	24.75	24.76	27.77			Pass
9	2452	24.60	24.65	27.64			Pass

Note: 1. This EUT supports MIMO 2X2, any transmit signals are correlated with each other,
 For power measurements on IEEE 802.11 devices, $Array\ Gain = 0\ dB$ (i.e., no array gain) for $N_{ANT} \leq 4$.

----- The following blanks -----

9. POWER SPECTRAL DENSITY

9.1. LIMITS

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

9.2. TEST PROCEDURES

- 1) Remove the antenna from the EUT, and then connect a low loss RF cable from antenna port to the spectrum analyzer.
- 2) Position the EUT was set without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range.
- 3) The following procedure shall be used if maximum peak conducted output power was used to determine compliance, and it is optional if the maximum conducted (average) output power was used to determine compliance:
 - a) Set analyzer center frequency to DTS channel center frequency.
 - b) Set the span to 1.5 times the DTS bandwidth.
 - c) Set the RBW to $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$.
 - d) Set the VBW $\geq [3 \times \text{RBW}]$.
 - e) Detector = average
 - f) Sweep time = auto couple.
 - g) Trace mode = max hold.
 - h) Allow trace to fully stabilize.
 - i) Use the peak marker function to determine the maximum amplitude level within the RBW.
 - j) If measured value exceeds requirement, then reduce RBW (but no less than 3 kHz) and repeat.
- 4) Repeat above procedures until all frequencies measured were complete.

9.3. TEST SETUP



9.4. TEST RESULTS

Environment: 25°C/60%RH

Tested By: Lu Wei

Voltage: AC120V/60Hz

Date: 2021-10-24

802.11b Mode:

Channel No.	Frequency (MHz)	PSD (dBm/3kHz)		Duty Factor	Total PSD with Duty Factor (dBm/3kHz)		Limit (dBm/3kHz)	Result
		antenna 1	antenna 2		antenna 1	antenna 2		
1	2412	-14.89	-15.28	0.11	-14.78	-15.17	8.00	Pass
6	2437	-14.77	-15.10	0.11	-14.66	-14.99	8.00	Pass
11	2462	-14.87	-14.86	0.11	-14.76	-14.75	8.00	Pass

802.11g Mode:

Channel No.	Frequency (MHz)	PSD (dBm/3kHz)		Duty Factor	Total PSD with Duty Factor (dBm/3kHz)		Limit (dBm/3kHz)	Result
		antenna 1	antenna 2		antenna 1	antenna 2		
1	2412	-11.49	-11.41	0.18	-11.31	-11.23	8.00	Pass
6	2437	-11.58	-11.35	0.18	-11.40	-11.17	8.00	Pass
11	2462	-11.76	-11.17	0.18	-11.58	-10.99	8.00	Pass

802.11n HT20 Mode:

Channel No.	Frequency (MHz)	PSD (dBm/3kHz)			Duty Factor	Total PSD with Duty Factor (dBm/3kHz)	Limit (dBm/3kHz)	Result
		antenna 1	antenna 2	total				
1	2412	-10.34	-10.45	-7.38	0.64	-6.74	7.04	Pass
6	2437	-11.10	-10.40	-7.73	0.64	-7.09	7.04	Pass
11	2462	-11.54	-10.52	-7.99	0.64	-7.35	7.04	Pass

802.11n HT40 Mode:

Channel No.	Frequency (MHz)	PSD (dBm/3kHz)			Duty Factor	Total PSD with Duty Factor (dBm/3kHz)	Limit (dBm/3kHz)	Result
		antenna 1	antenna 2	total				
3	2422	-11.42	-11.7	-8.55	1.13	-7.42	7.04	Pass
6	2437	-12.27	-11.91	-9.08	1.13	-7.95	7.04	Pass
9	2452	-12.30	-11.75	-9.01	1.13	-7.88	7.04	Pass

802.11ax HE20 Mode:

Channel No.	Frequency (MHz)	PSD (dBm/3kHz)			Duty Factor	Total PSD with Duty Factor (dBm/3kHz)	Limit (dBm/3kHz)	Result
		antenna 1	antenna 2	total				
1	2412	-8.27	-8.28	-5.26	0.71	-4.55	7.04	Pass
6	2437	-8.77	-7.64	-5.16	0.71	-4.45	7.04	Pass
11	2462	-9.86	-8.68	-6.22	0.71	-5.51	7.04	Pass

802.11ax HE40 Mode:

Channel No.	Frequency (MHz)	PSD (dBm/3kHz)			Duty Factor	Total PSD with Duty Factor (dBm/3kHz)	Limit (dBm/3kHz)	Result
		antenna 1	antenna 2	total				
3	2422	-13.22	-13.40	-10.30	0.71	-9.59	7.04	Pass
6	2437	-13.41	-13.38	-10.38	0.71	-9.67	7.04	Pass
9	2452	-13.27	-13.30	-10.27	0.71	-9.56	7.04	Pass

Note1: This EUT supports MIMO 2X2, any transmit signals are correlated with each other,
 So Directional gain = $3.95 + 10\log(2)$ dBi, HT20, HT40, HE20, HE40 mode: Directional gain (dBi) = 6.96.

Note2: Antenna gain is greater than 6, HT20, HT40, HE20, HE40 mode: PSD limit = $8 - (6.96 - 6) = 7.04$ dBm.

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802.11b Ant1_2412MHz



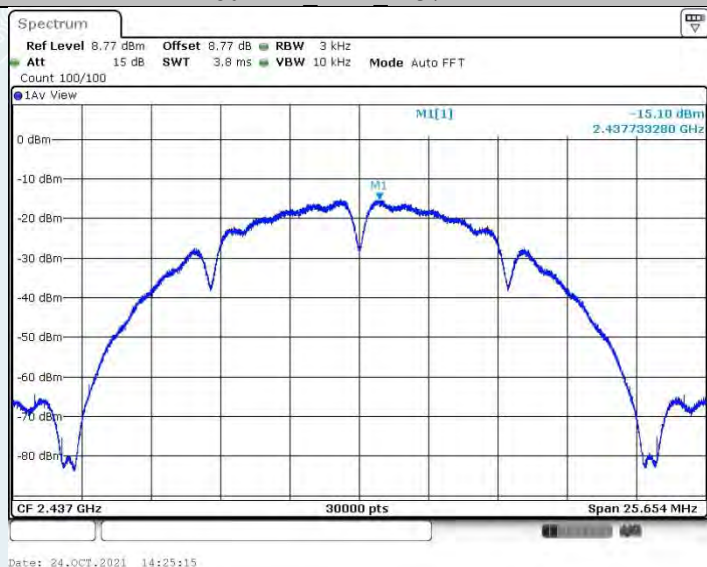
802.11b Ant2_2412MHz



802.11b Ant1_2437MHz



802.11b Ant2_2437MHz



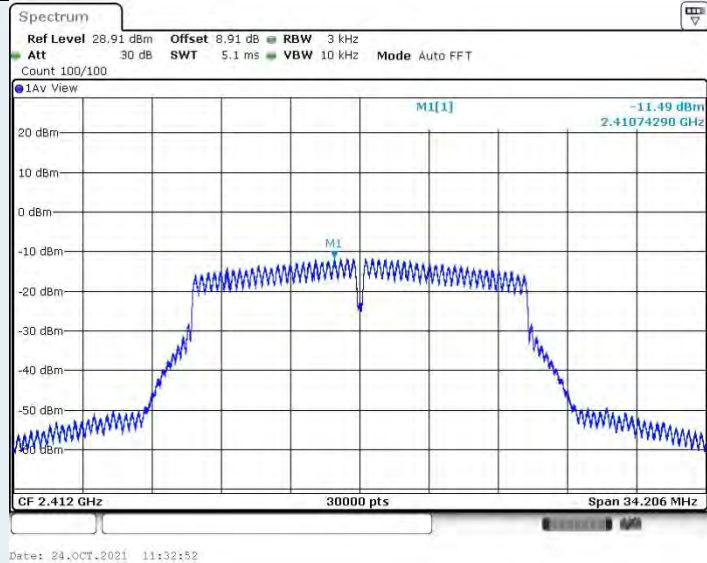
802.11b Ant1_2462MHz



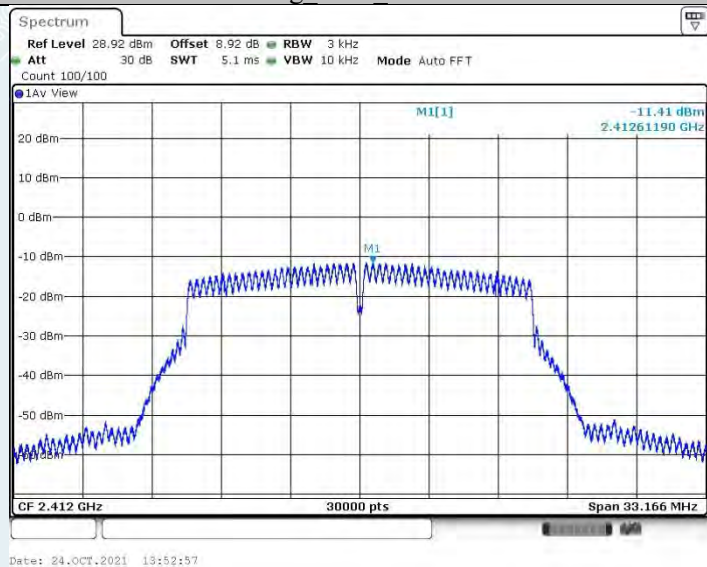
802.11b Ant2_2462MHz



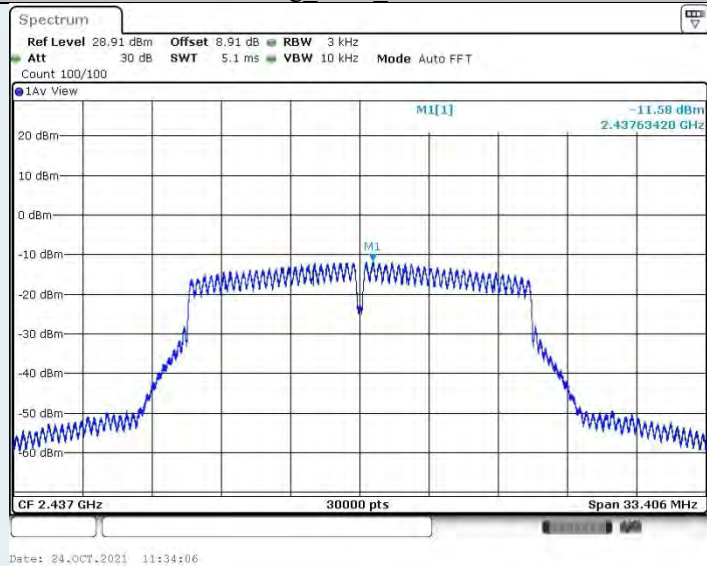
802.11g Ant1_2412MHz



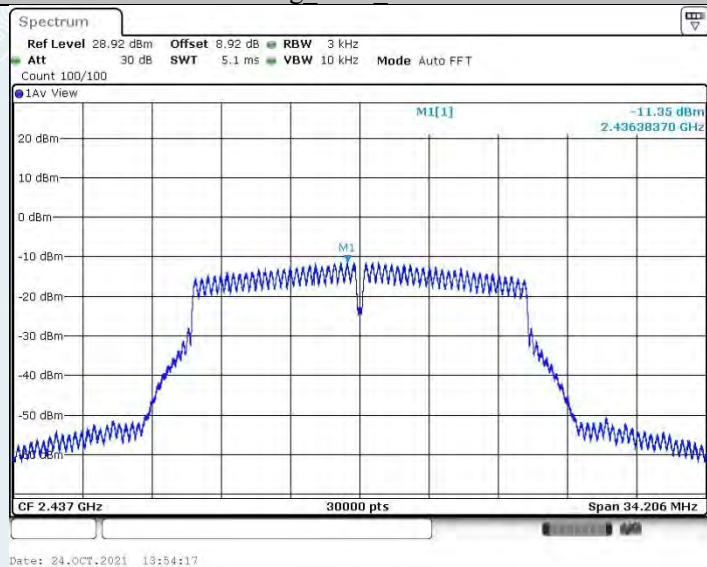
802.11g Ant2_2412MHz



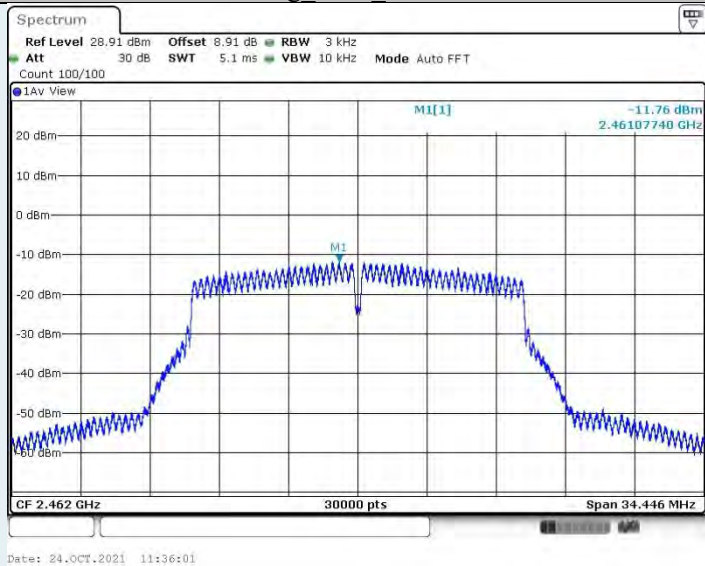
802.11g Ant1_2437MHz



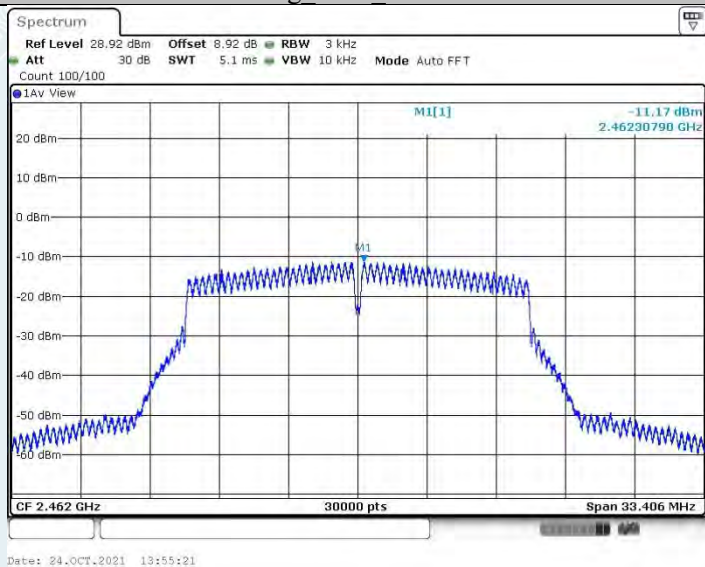
802.11g Ant2_2437MHz



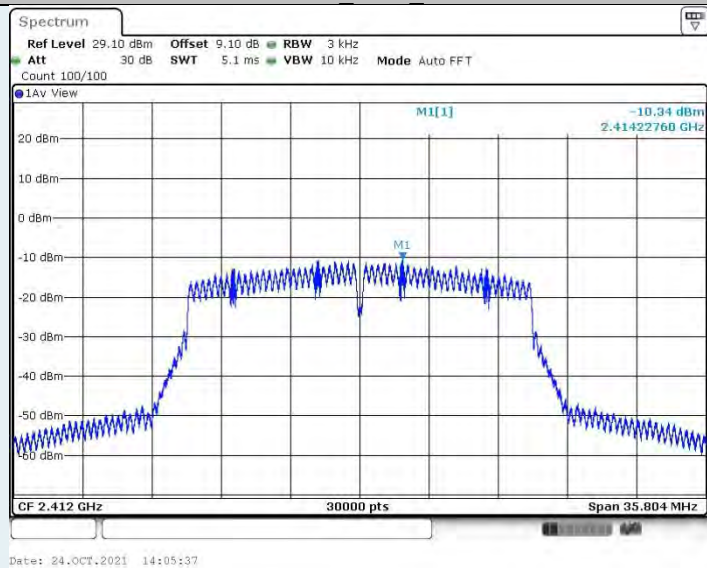
802.11g Ant1_2462MHz



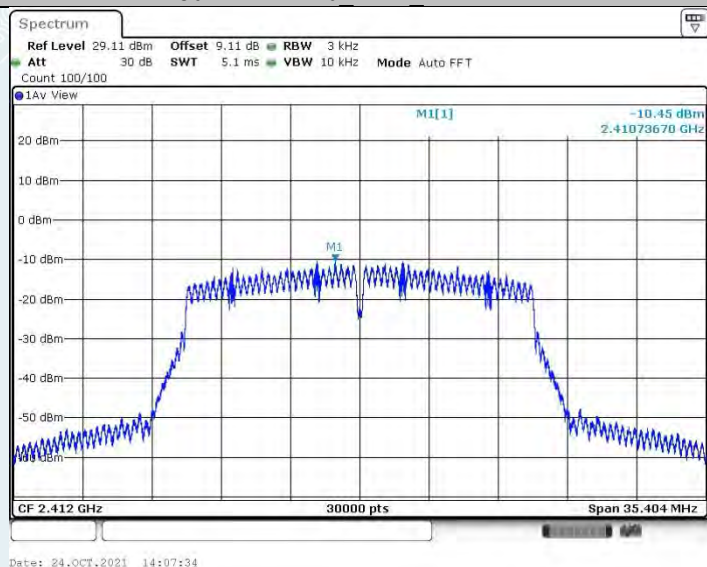
802.11g Ant2_2462MHz



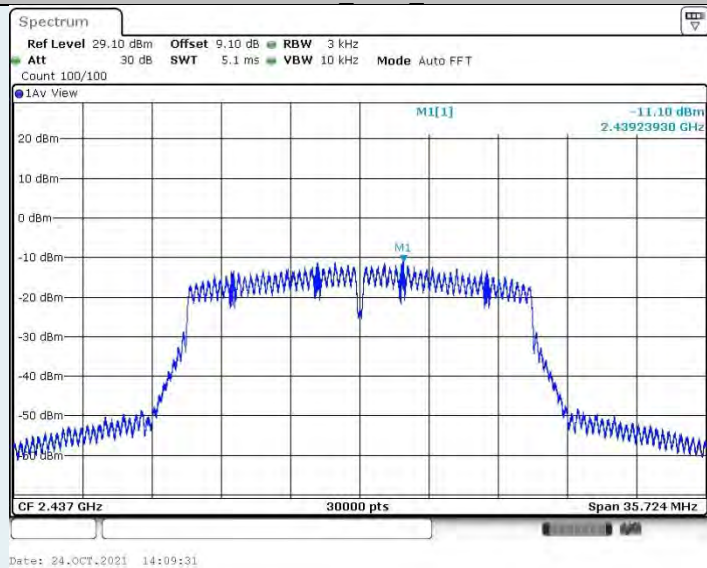
802.11n HT20_Ant1_2412MHz



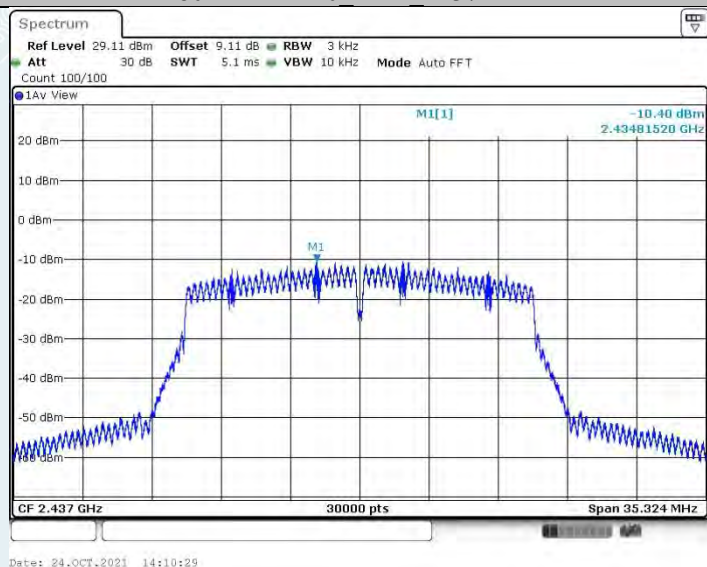
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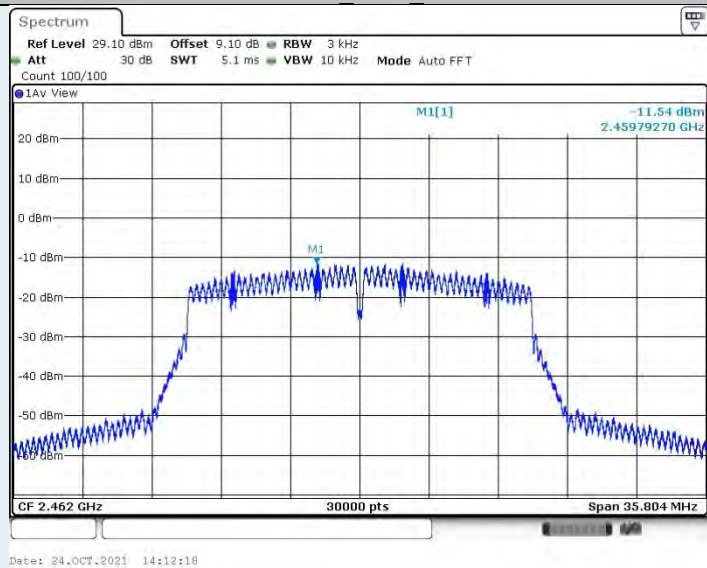
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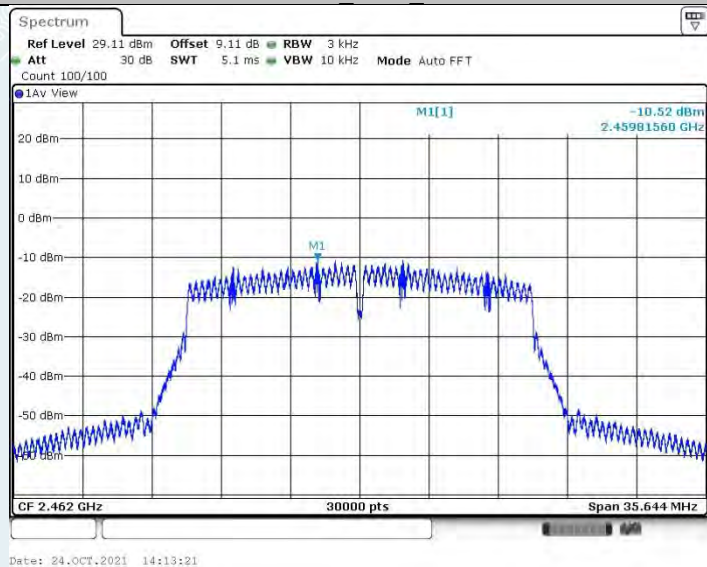
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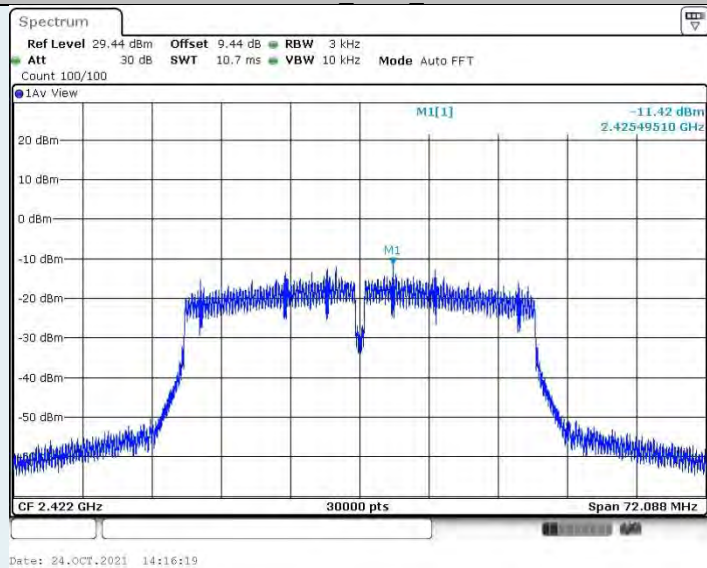
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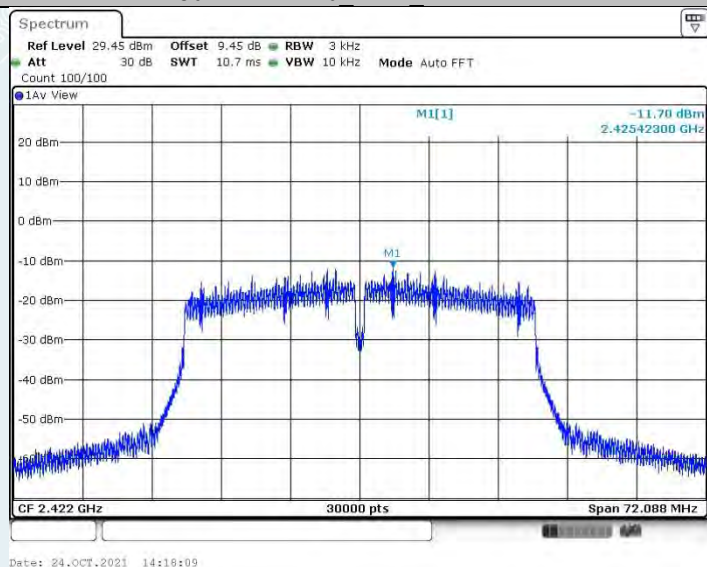
802.11n HT20_Ant2_2462MHz



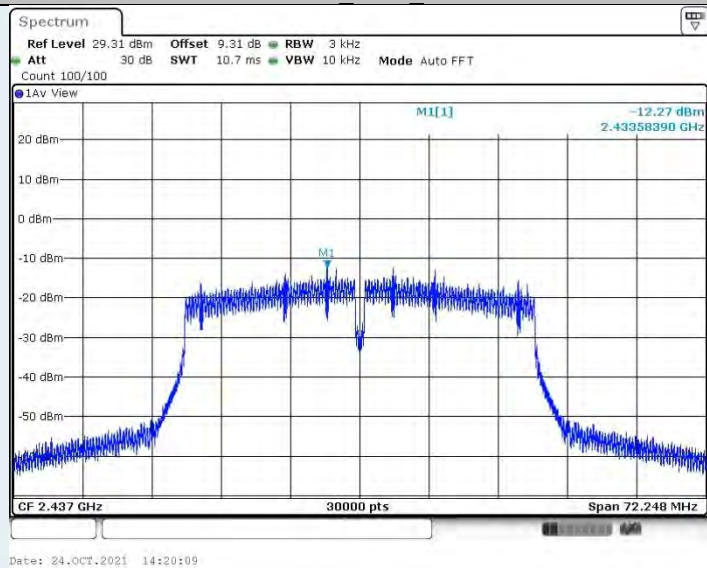
802.11n HT40 Ant1 2422MHz



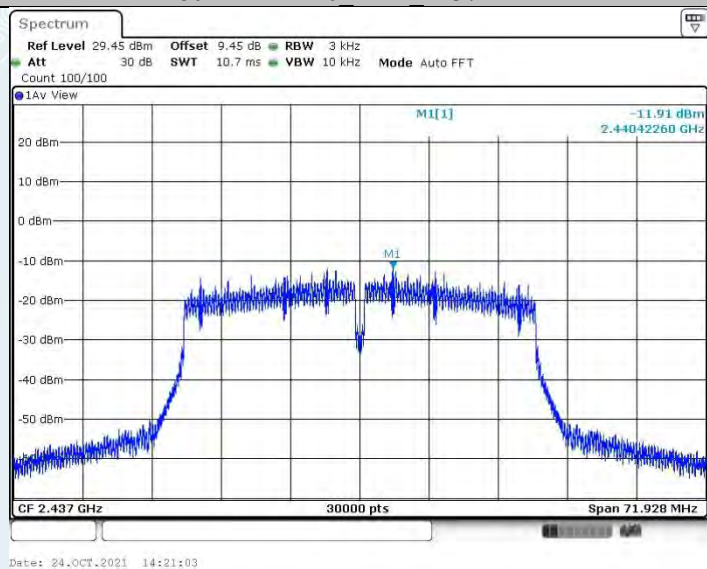
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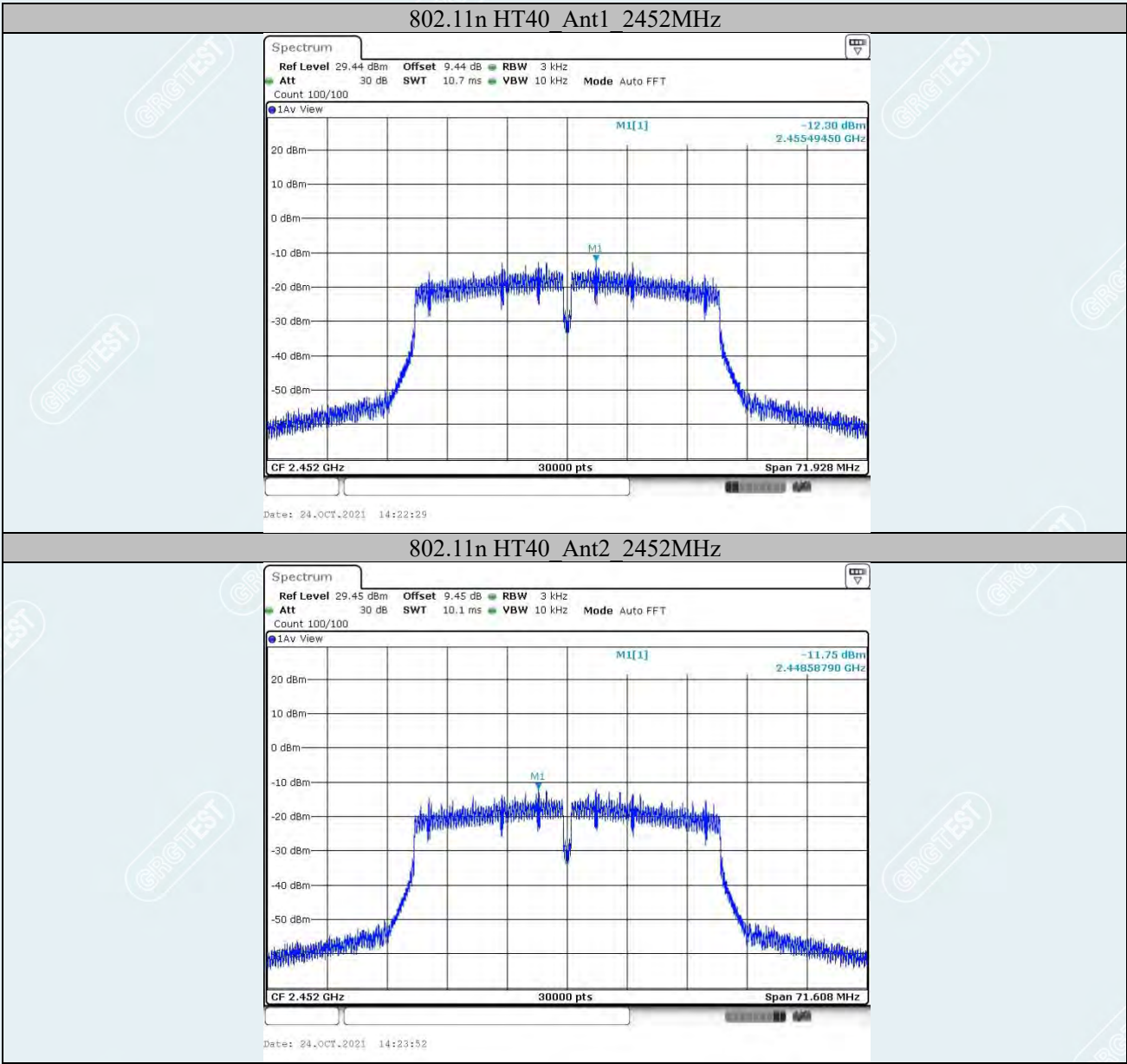


802.11n HT40 Ant1 2437MHz

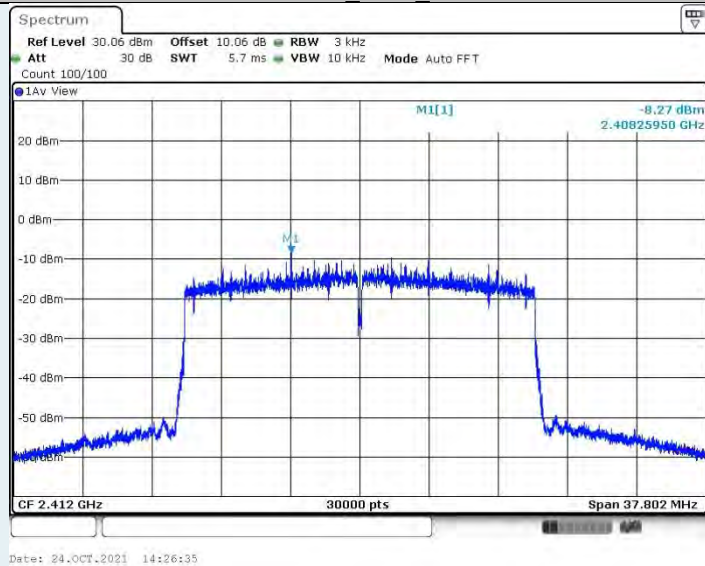


802.11n HT40 Ant2 2437MHz

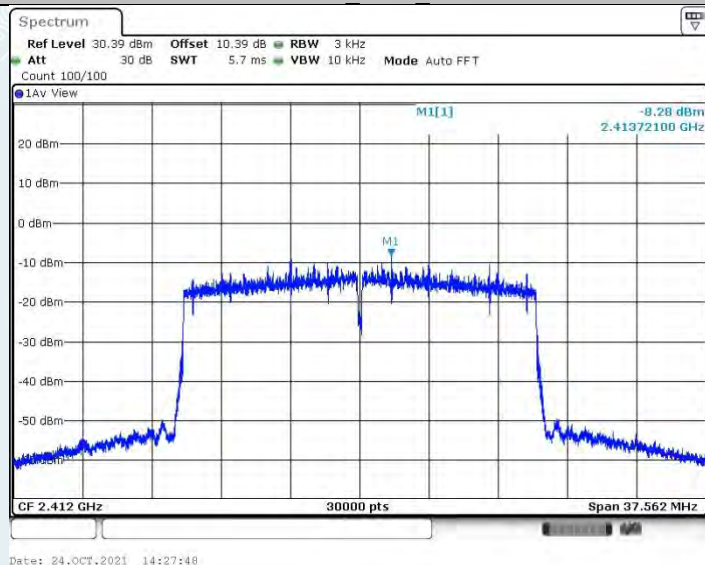




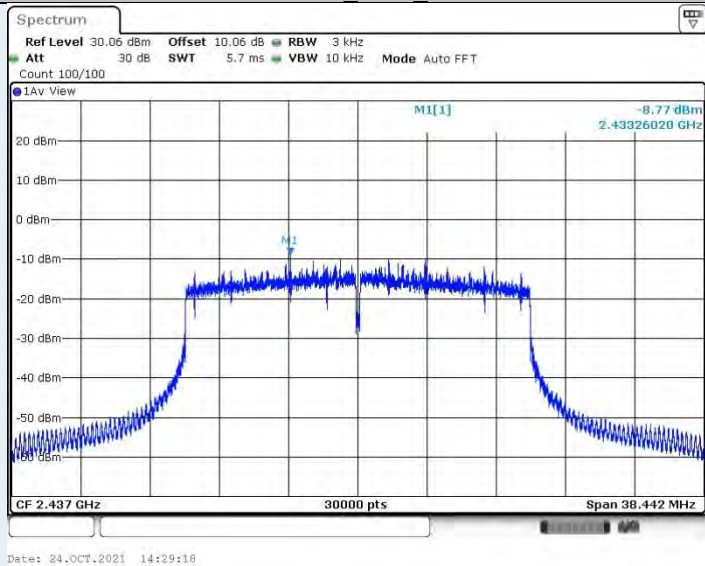
802.11ax HE20 Ant1 2412MHz



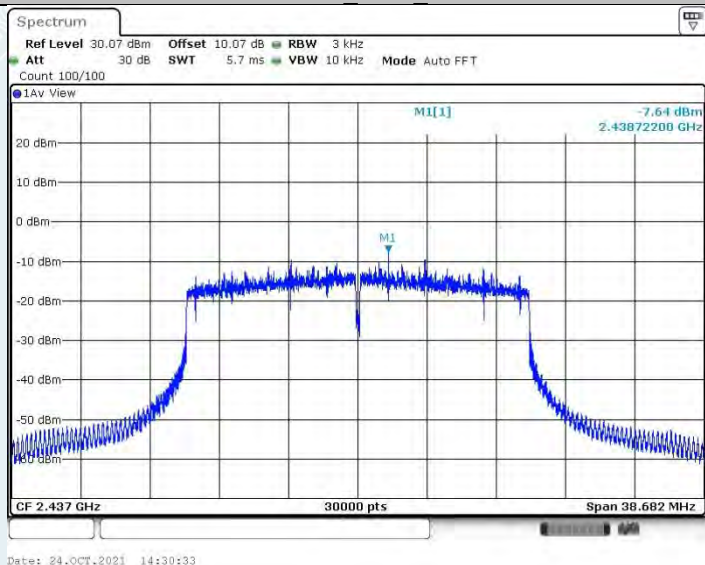
802.11ax HE20 Ant2 2412MHz



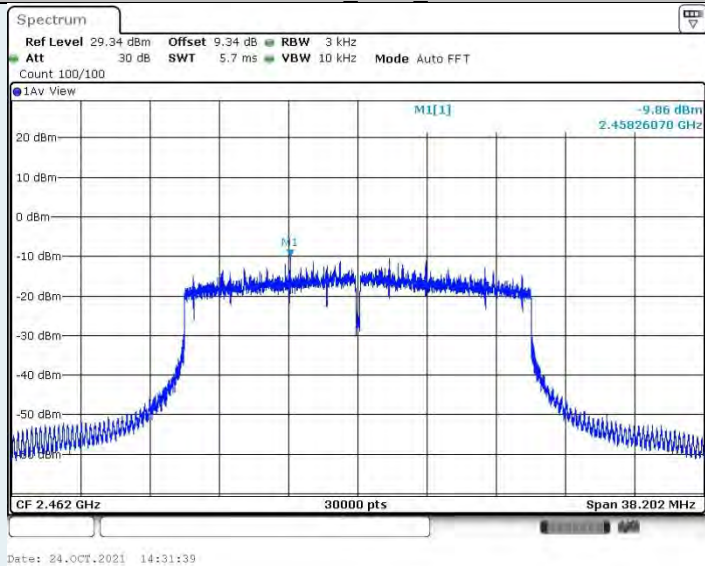
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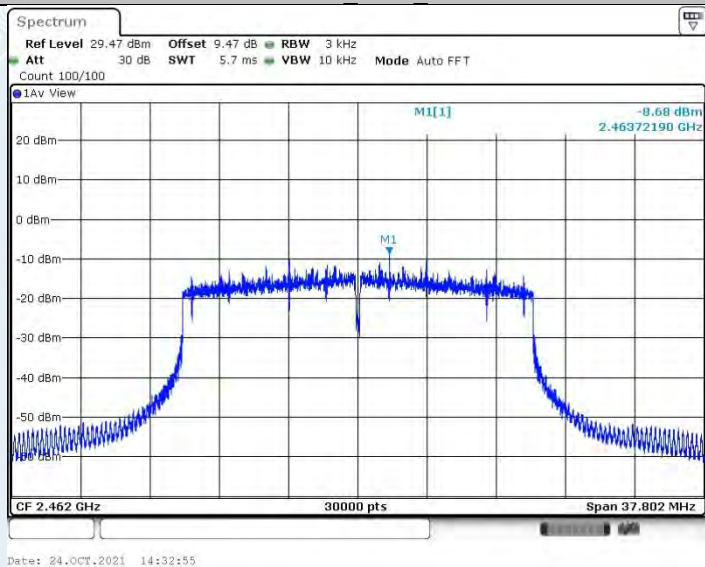
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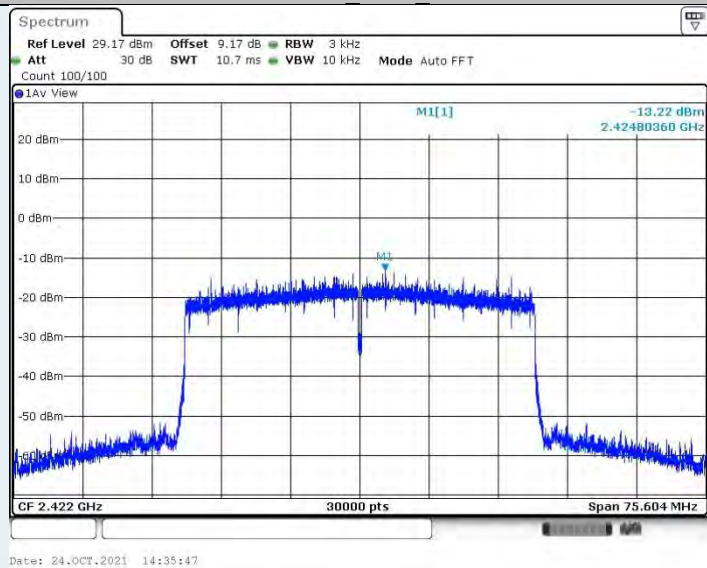
802.11ax HE20 Ant1 2462MHz



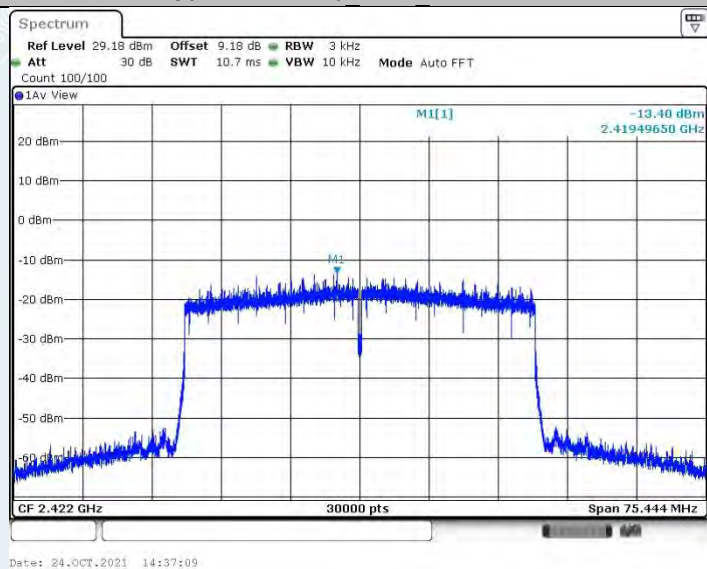
802.11ax HE20 Ant2 2462MHz



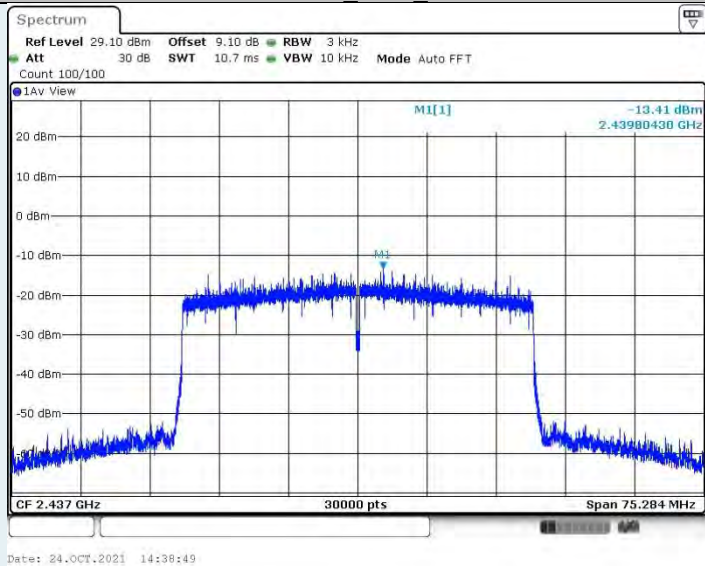
802.11ax HE40 Ant1 2422MHz



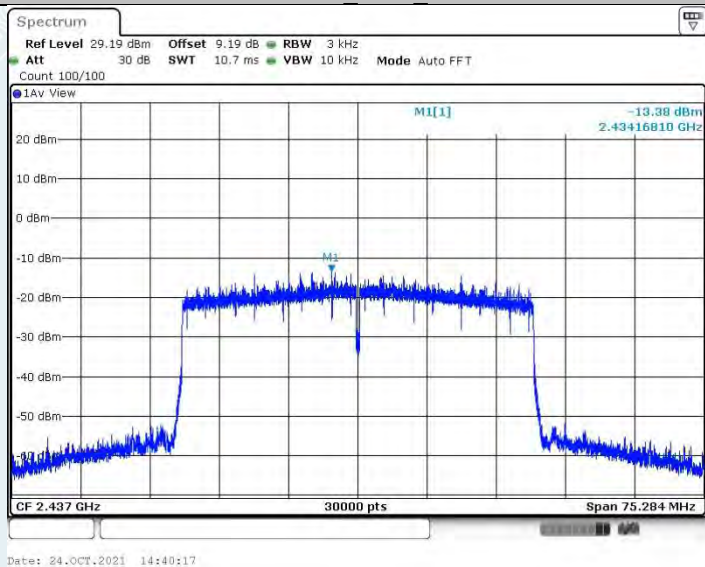
802.11ax HE40 Ant2 2422MHz

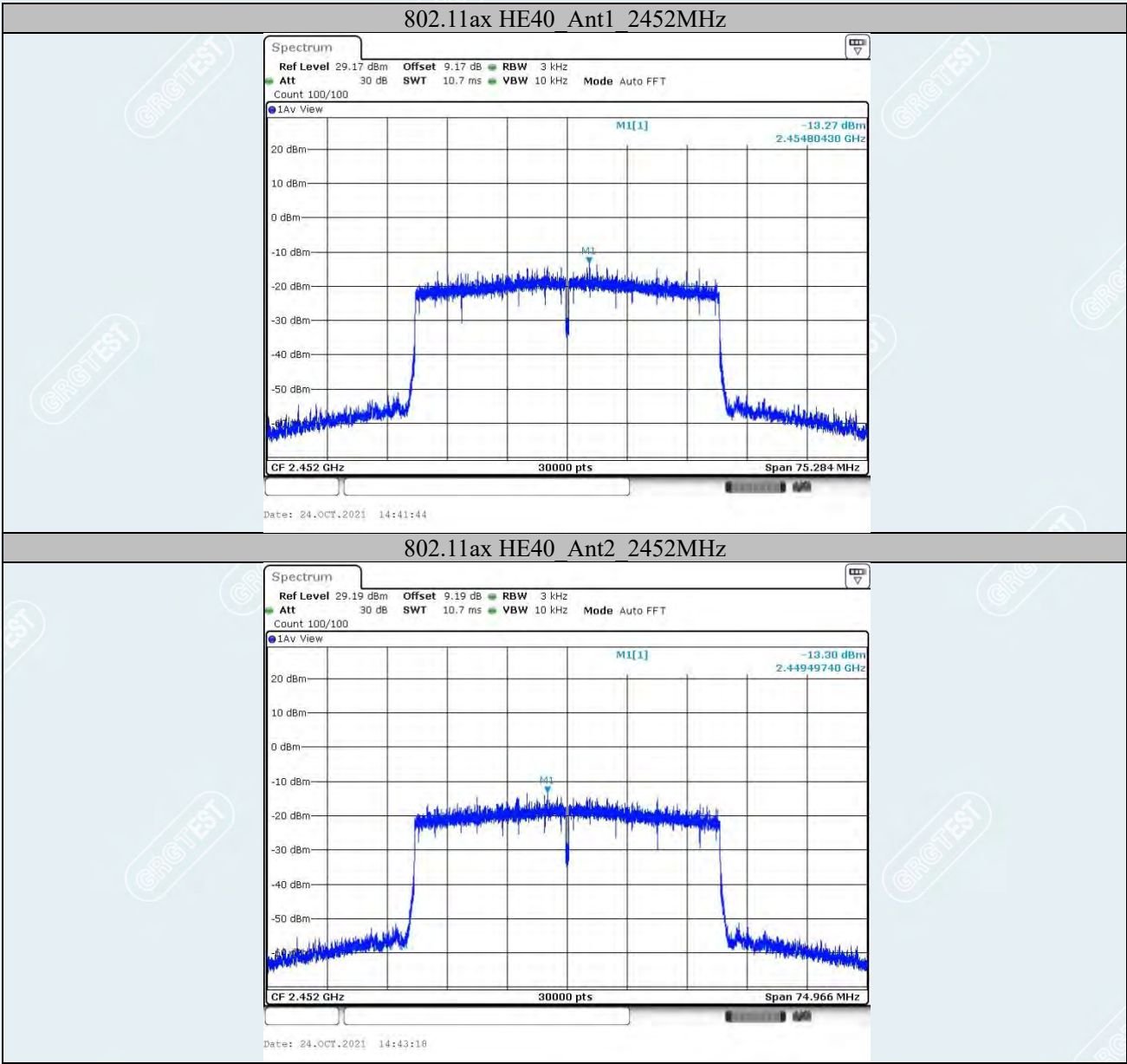


802.11ax HE40 Ant1 2437MHz



802.11ax HE40 Ant2 2437MHz





10. CONDUCTED BAND EDGES AND SPURIOUS EMISSIONS

10.1. LIMITS

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.

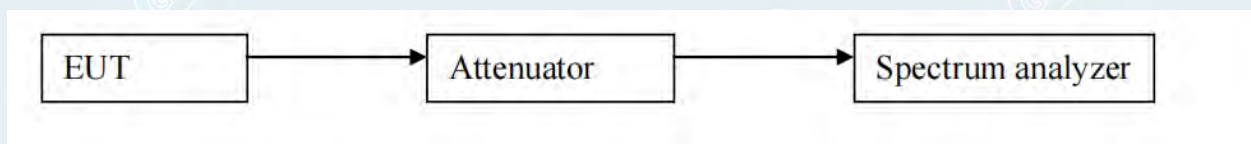
10.2. TEST PROCEDURES

Test procedures follow KDB 558074 D01 DTS Measurement Guidance.

Remove the antenna from the EUT and then connect a low attenuation cable from the antenna port to the spectrum.

- 1) Remove the antenna from the EUT and then connect a low attenuation cable from the antenna port to the spectrum.
- 2) Set the spectrum analyzer: RBW = 100KHz; VBW = 300KHz, Frequency range = 30MHz to 26.5GHz; Sweep = auto; Detector Function = Peak; Trace = Max hold.
- 3) Measure and record the results in the test report.
- 4) The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

10.3. TEST SETUP



10.4. TEST RESULTS

Environment: 25°C/60%RH

Tested By: Lu Wei

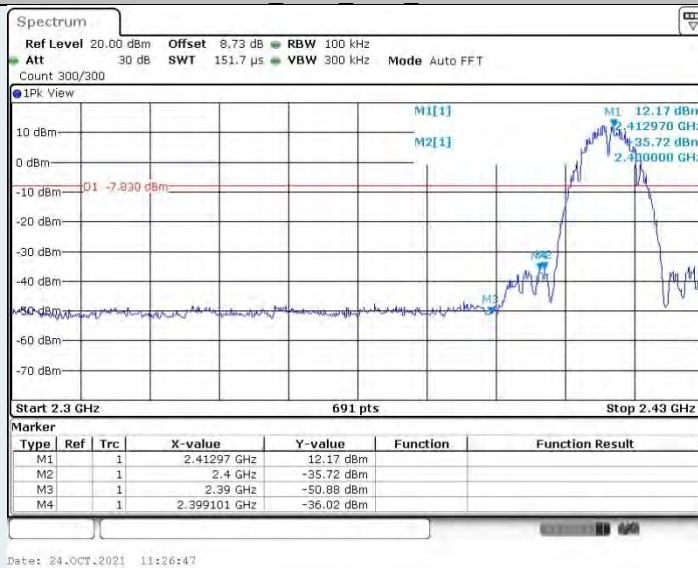
Voltage: AC120V/60Hz

Date: 2021-10-24

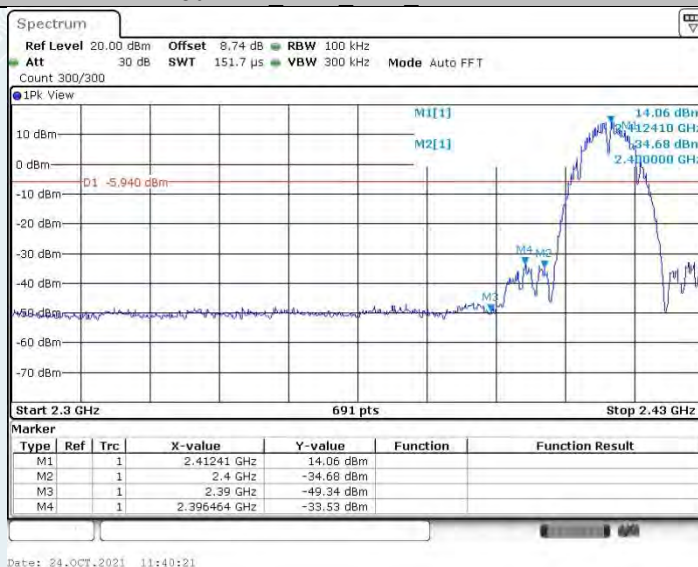
Band edge

TestMode	Antenna	ChName	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
802.11b	Ant1	Low	2412	12.17	-36.02	≤ -7.83	PASS
	Ant2	Low	2412	14.06	-33.53	≤ -5.94	PASS
	Ant1	High	2462	12.10	-47.59	≤ -7.9	PASS
	Ant2	High	2462	13.68	-46.56	≤ -6.32	PASS
802.11g	Ant1	Low	2412	11.08	-24.05	≤ -8.92	PASS
	Ant2	Low	2412	11.09	-26.94	≤ -8.91	PASS
	Ant1	High	2462	10.84	-38.56	≤ -9.16	PASS
	Ant2	High	2462	11.11	-36.05	≤ -8.89	PASS
802.11n HT20	Ant1	Low	2412	11.51	-23.21	≤ -8.49	PASS
	Ant2	Low	2412	11.41	-19.93	≤ -8.59	PASS
	Ant1	High	2462	10.84	-36.69	≤ -9.16	PASS
	Ant2	High	2462	11.02	-37.35	≤ -8.98	PASS
802.11n HT40	Ant1	Low	2422	8.97	-25.66	≤ -11.03	PASS
	Ant2	Low	2422	9.36	-27.07	≤ -10.64	PASS
	Ant1	High	2452	9.01	-27.04	≤ -10.99	PASS
	Ant2	High	2452	9.43	-27.14	≤ -10.57	PASS
802.11ax HE20	Ant1	Low	2412	10.22	-26.14	≤ -9.78	PASS
	Ant2	Low	2412	10.42	-27.05	≤ -9.58	PASS
	Ant1	High	2462	9.89	-34.71	≤ -10.11	PASS
	Ant2	High	2462	10.20	-34.97	≤ -9.8	PASS
802.11ax HE40	Ant1	Low	2422	8.13	-23.72	≤ -11.87	PASS
	Ant2	Low	2422	8.34	-22.49	≤ -11.66	PASS
	Ant1	High	2452	7.15	-26.37	≤ -12.85	PASS
	Ant2	High	2452	8.66	-25.26	≤ -11.34	PASS

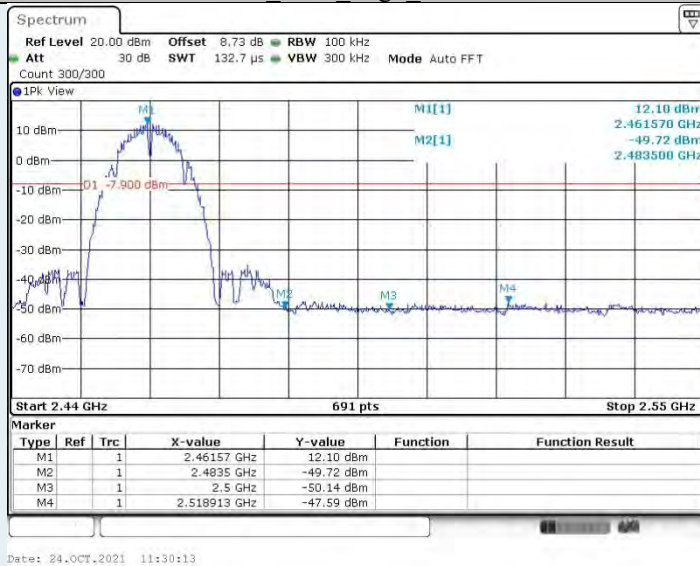
802.11b Ant1 Low 2412MHz



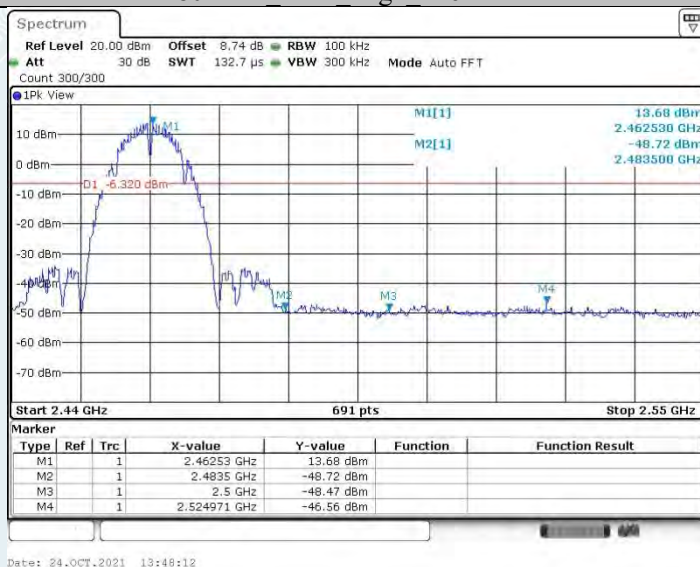
802.11b Ant2 Low 2412MHz



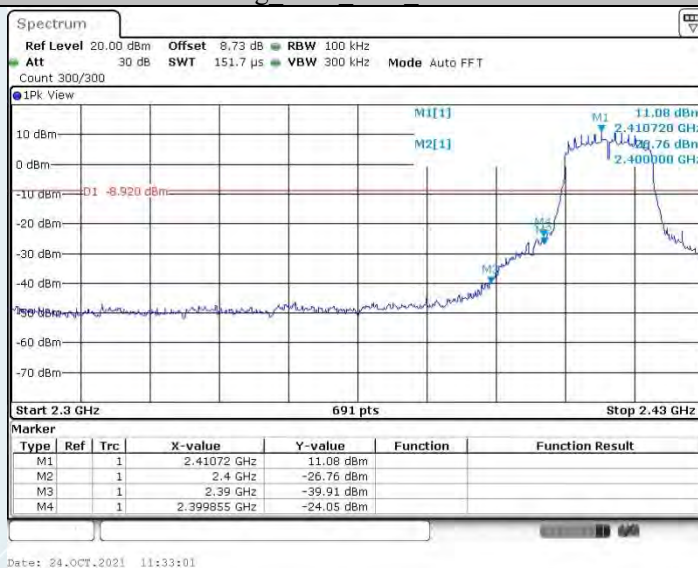
802.11b Ant1_High 2462MHz



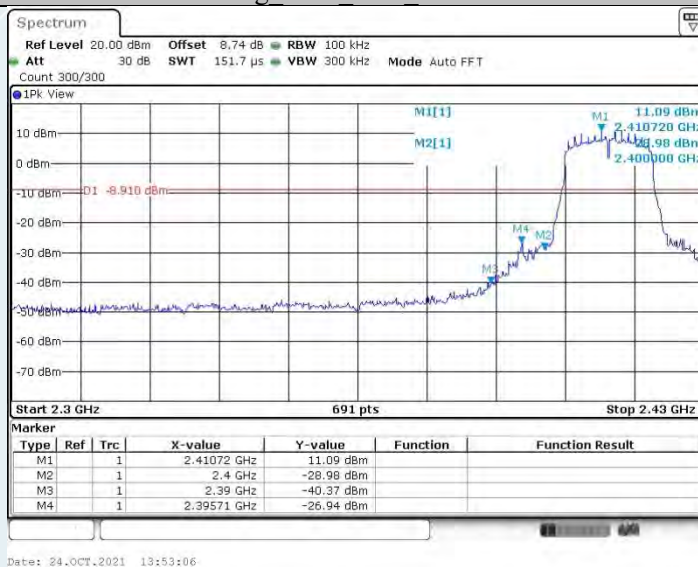
802.11b Ant2_High 2462MHz



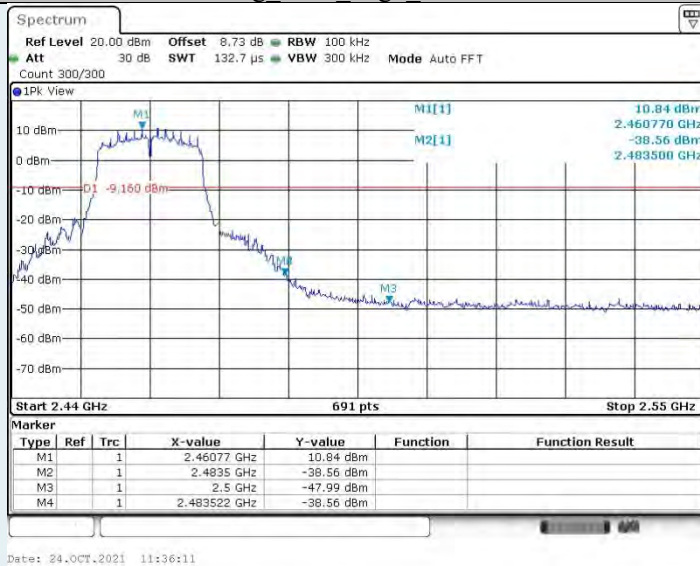
802.11g Ant1 Low 2412MHz



802.11g Ant2 Low 2412MHz



802.11g Ant1_High 2462MHz



802.11g Ant2_High 2462MHz

