



TEST REPORT

Application No.: GZCR2204000355AT
Applicant: DT Research, Inc.
Address of Applicant: 3RD FL NO 36 WUQUAN 7TH RD WUGU DISTRICT, NEW TAIPEI, Taiwan
Manufacturer: DT Research, Inc.
Address of Manufacturer: 2000 Concourse Drive, San Jose, CA 95131, USA
Factory: DT Research, Inc. Taiwan Branch
Address of Factory: 6F., No.36 Wuquan 7 th Rd., Wugu Dist. New Taipei City 248 Taiwan
Equipment Under Test (EUT):
EUT Name: Rugged Tablet
Model No.: 300SXX, 301SXX(x= 0-9, A-Z, - or null) ♣
♣ Please refer to section 2 of this report which indicates which model was actually tested and which were electrically identical.

Trade Mark:



Standard(s) : 47 CFR Part 15, Subpart C 15.247
Date of Receipt: 2022-04-08
Date of Test: 2022-04-08 to 2022-04-14
Date of Issue: 2022-04-15

Test Result:	Pass*
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* In the configuration tested, the EUT complied with the standards specified above.

Kobe Jian
EMC Laboratory Manager



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Revision Record				
Version	Chapter	Date	Modifier	Remark
01		2022-04-15		Original

Authorized for issue by:				
				
		Curry Wu/Project Engineer		
				
		Ricky Liu/Reviewer		

2 Test Summary

Radio Spectrum Technical Requirement				
Item	Standard	Method	Requirement	Result
Antenna Requirement	47 CFR Part 15, Subpart C 15.247	N/A	47 CFR Part 15, Subpart C 15.203 & 15.247(b)(4)	Pass

Radio Spectrum Matter Part				
Item	Standard	Method	Requirement	Result
Conducted Emissions at AC Power Line (150kHz-30MHz)	47 CFR Part 15, Subpart C 15.247	ANSI C63.10 (2013) Section 6.2	47 CFR Part 15, Subpart C 15.207	Pass
Radiated Emissions which fall in the restricted bands		ANSI C63.10 (2013) Section 6.10.5	47 CFR Part 15, Subpart C 15.205 & 15.209	Pass
Radiated Spurious Emissions (Below 1GHz)		ANSI C63.10 (2013) Section 6.4,6.5,6.6	47 CFR Part 15, Subpart C 15.205 & 15.209	Pass
Radiated Spurious Emissions (Above 1GHz)		ANSI C63.10 (2013) Section 6.4,6.5,6.6	47 CFR Part 15, Subpart C 15.205 & 15.209	Pass

Note:

E.U.T./EUT means Equipment Under Test.

Pass means the test result passed the test standard requirement, please find the detailed decision rule in the report relative section.

Declaration of EUT Family Grouping:

Model No.: 300Sxx, 301Sxx(x= 0-9, A-Z, - or null)

Only the model 301SY was tested, since according to the declaration from the applicant, the electrical circuit design, PCB layout, components used, internal wiring and functions were identical for all the above models, with only difference on model No..

This report is prepared for FCC class II permissive change.

The modular approval by TCB, FCC ID:YE3600-SC66A, Granted on 03/08/2022.

The module installed into host platform mentioned above is electronically and mechanically identical to the original certified module. The Original FCC testing on module under FCC ID:YE3600-SC66A was performed with an antenna of lower gain, and the antenna was connected to the module in an open environment. The current host platform under application uses a new antenna of the different type, lower gain and is installed outside the host platform enclosure.

Therefore in this report Conducted Emissions at AC Power Line (150kHz-30MHz), Radiated Emissions which fall in the restricted bands and Radiated Spurious Emissions were fully retested on model 301SY and shown the data in this report.



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4 General Information

4.1 Details of E.U.T.

Power supply:	AC Adapter Model: A11-065N1A UP/N: A065R112L Input: AC 100-240V, 1.7A, 50-60Hz Output: DC 19V, 3.42A, 65W Rechargeable lithium-Ion polymer battery Model: ACC-006-311K(2ICP6/57/60-2) Rated Capacity: 6000mAh Volt: 7.6VDC Watt-Hour: 45.6Wh Max Charge Voltage: 8.7V
Cable(s):	DC cable:175cm with a ferrite core
Operation Frequency:	802.11b/g/n(HT20): 2412MHz to 2462MHz 802.11n(HT40): 2422MHz to 2452MHz
Modulation Type:	802.11b: DSSS (CCK, DQPSK, DBPSK) 802.11g/n: OFDM (64QAM, 16QAM, QPSK, BPSK)
Number of Channels:	802.11b/g/n(HT20):11 802.11n(HT40):7
Channel Spacing:	5MHz
Antenna Type:	PIFA Antenna
Antenna Gain:	2.3dBi

4.2 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
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The EUT has been tested as an independent unit.

4.3 Measurement Uncertainty

Test Item	Measurement Uncertainty
Conducted Emissions at AC Power Line (150kHz-30MHz)	±2.76dB
Radiated Emissions which fall in the restricted bands	±5.08dB (1GHz-6GHz); ±5.14dB (above 6GHz)
Radiated Spurious Emissions (Below 1GHz)	±5.06dB (3m);±4.46dB (10m)
Radiated Spurious Emissions (Above 1GHz)	±5.08dB (1GHz-6GHz); ±5.14dB (above 6GHz)

4.4 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou Branch EMC Laboratory,
198 Kezhu Road, Sciotech Park, Guangzhou Economic & Technology Development District,
Guangzhou, China 510663

Tel: +86 20 82155555 Fax: +86 20 82075059

No tests were sub-contracted.

4.5 Test Facility

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

- **NVLAP (Lab Code: 200611-0)**

SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou EMC Laboratory is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP/NIST). NVLAP Code: 200611-0.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.

- **ACMA**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory can also perform testing for the Australian/New Zealand Regulatory Compliance Mark (RCM).

- **SGS UK(Certificate No.: 32), SGS-TUV SAARLAND and SGS-FIMKO**

Have approved SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory as a supplier of EMC TESTING SERVICES and SAFETY TESTING SERVICES.

- **CNAS (Lab Code: L0167)**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory has been assessed and in compliance with CNAS-CL01:2018 accreditation criteria for testing laboratories (identical to ISO/IEC 17025:2017 General Requirements) for the Competence of Testing Laboratories.

- **FCC Recognized Accredited Test Firm(Registration No.: 486818)**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory has been accredited and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Designation Number: CN5016, Test Firm Registration Number: 486818.

- **ISED (Registration No.: 4620B, CAB identifier: CN0052)**

SGS-CSTC Standards Technical Services Co., Ltd., has been registered by Innovation Science and Economic Development Canada for Wireless Device Testing laboratories to test to Canadian radio equipment requirements. Registration No. 4620B, CAB identifier: CN0052.

- **VCCI (Registration No.: R-12460, C-12584, G-20107 and T-11179)**

The 10m Semi-anechoic chamber, 966 Anechoic Chamber and Shielded Room of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-12460, C-12584, G-20107 and T-11179 respectively.

- **CBTL (Lab Code: TL129)**

SGS-CSTC Standards Technical Services Co., Ltd., E&E Laboratory has been assessed and fully comply with the requirements of ISO/IEC 17025:2017, the Basic Rules, IECEE 01 and Rules of procedure IECEE 02, and the relevant IECEE CB-Scheme Operational documents.



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4.6 Deviation from Standards

None

4.7 Abnormalities from Standard Conditions

None

5 Equipment List

Conducted Emissions at AC Power Line (150kHz-30MHz)					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
Shielding Room	ChangZhou ZhongYu	8m x 3m x 3.8m	EMC0306	N/A	N/A
Two-Line V-Network	Rohde & Schwarz	ENV216	EMC0118	2021-12-23	2022-12-22
Two-Line V-Network-GZ	Rohde & Schwarz	ENV216	EMC2135	2021-09-24	2022-09-23
Coaxial Cable	HangTianXing	2m	EMC0107	2020-09-09	2022-09-08
Test Software E3c	Audix	Ver. 5.4.1221b	GZE100-62	N/A	N/A
EMI Test Receiver(9kHz-3.6GHz)	Rohde & Schwarz	ESR3	EMC2221	2021-06-01	2022-05-31

Radiated Emissions which fall in the restricted bands					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
EMI Test Receiver(20Hz-26.5GHz)	Rohde & Schwarz	ESIB26	EMC0522	2021-12-17	2022-12-16
Chamber cable(Above 1GHz)	Scoflex	KMKM-8.0m	EMC0545	2020-09-09	2022-09-08
Horn Antenna(1GHz-18GHz)	SCHWARZBECK MESS-ELEKTRONIK	BBHA 9120D	EMC2026	2019-09-25	2022-09-24
1GHz-26.5 GHz Pre-Amplifier	Agilent	8449B	EMC0521	2021-12-17	2022-12-16
2.4GHz Filter	Micro-Tronics	BRM 50702	EMC2069	2021-12-17	2022-12-16
966 Anechoic Chamber	C.R.T	9m x 6m x 6m	EMC2142	2020-12-20	2023-12-19
MXE EMI Receiver(10Hz-8.4GHz)	Keysight	N9038A	EMC2139	2021-11-01	2022-10-31
EXA Signal Analyzer(10Hz-44GHz)	Keysight	N9010A	EMC2138	2021-09-16	2022-09-15
Test Software E3	Audix	Ver.6.120110a	GZE100-61	N/A	N/A
Notch Filter (5150-5880)	Mico-Tronics	BRM50716	EMC2168	2021-07-29	2022-07-28
Horn Antenna(14-40GHz)	SCHWARZBECK	BBHA 9170	EMC2041	2020-06-28	2023-06-27
Microwave Broadband Preamplifier (18-40GHz)	SCHWARZBECK	BBV 9721	EMC2172	2021-08-30	2022-08-29



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Radiated Spurious Emissions (Below 1GHz)					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
EMI Test Receiver(10Hz-26.5GHz)	Rohde & Schwarz	ESIB26	EMC0522	2021-12-17	2022-12-16
Chamber cable	HangTianXing	N/A	EMC0542	2020-09-09	2022-09-08
Trilog Broadband Antenna(25MHz-1GHz)-Lab	SCHWARZBECK MESS-ELEKTRONIK	VULB 9168	SEM003-18	2019-02-22	2022-02-22
				2022-02-22	2025-02-21
Amplifier(9kHz-1.3GHz)	HP	8447F	EMC2065	2021-05-19	2022-05-18
High Pass Filter (915MHz)	FSY MICROWAVE	HM1465-9SS	EMC2079	2021-12-17	2022-12-16
10m Semi-Anechoic Chamber	ETS	N/A	EMC0530	2019-10-20	2022-10-19
Test Software E3	Audix	Ver.6.120110a	GZE100-61	N/A	N/A
EMI Test Receiver(1Hz-8GHz)	Rohde & Schwarz	ESW8	EMC2220	2021-05-26	2022-05-25
Loop Antenna	ZHINAN	ZN3040	EMC2187	2022-03-27	2024-03-26

Radiated Spurious Emissions (Above 1GHz)					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
EMI Test Receiver(20Hz-26.5GHz)	Rohde & Schwarz	ESIB26	EMC0522	2021-12-17	2022-12-16
Chamber cable(Above 1GHz)	Scoflex	KMKM-8.0m	EMC0545	2020-09-09	2022-09-08
Horn Antenna(1GHz-18GHz)	SCHWARZBECK MESS-ELEKTRONIK	BBHA 9120D	EMC2026	2019-09-25	2022-09-24
1GHz-26.5 GHz Pre-Amplifier	Agilent	8449B	EMC0521	2021-12-17	2022-12-16
2.4GHz Filter	Micro-Tronics	BRM 50702	EMC2069	2021-12-17	2022-12-16
966 Anechoic Chamber	C.R.T	9m x 6m x 6m	EMC2142	2020-12-20	2023-12-19
MXE EMI Receiver(10Hz-8.4GHz)	Keysight	N9038A	EMC2139	2021-11-01	2022-10-31
EXA Signal Analyzer(10Hz-44GHz)	Keysight	N9010A	EMC2138	2021-09-16	2022-09-15
Test Software E3	Audix	Ver.6.120110a	GZE100-61	N/A	N/A
Notch Filter (5150-5880)	Mico-Tronics	BRM50716	EMC2168	2021-07-29	2022-07-28
Horn Antenna(14-40GHz)	SCHWARZBECK	BBHA 9170	EMC2041	2020-06-28	2023-06-27





Microwave Broadband Preamplifier (18-40GHz)	SCHWARZBECK	BBV 9721	EMC2172	2021-08-30	2022-08-29
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General used equipment

Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
DMM	Fluke	73	EMC0006	2021-07-05	2022-07-05
DMM	Fluke	73	EMC0007	2021-07-05	2022-07-05



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6 Radio Spectrum Technical Requirement

6.1 Antenna Requirement

6.1.1 Test Requirement:

47 CFR Part 15, Subpart C 15.203 & 15.247(b)(4)

6.1.2 Conclusion

15.203 Requirement:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of 15.211, 15.213, 15.217, 15.219, 15.221, or 15.236. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with 15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

15.247(b) (4) requirement:

The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

EUT Antenna:

The antenna is a IPEX PIFA antenna and no consideration of replacement. The best case gain of the antenna is 2.3 dBi.

Antenna location: Refer to internal photo.

7 Radio Spectrum Matter Test Results

7.1 Conducted Emissions at AC Power Line (150kHz-30MHz)

Test Requirement 47 CFR Part 15, Subpart C 15.207

Test Method: ANSI C63.10 (2013) Section 6.2

Limit:

Frequency of emission(MHz)	Conducted limit(dBμV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

Detector: Peak for pre-scan (9kHz resolution bandwidth) 0.15M to 30MHz

7.1.1 E.U.T. Operation

Operating Environment:

Temperature: 22.3 °C

Humidity: 47.2 % RH

Atmospheric Pressure: 1020 mbar

7.1.2 Test Mode Description

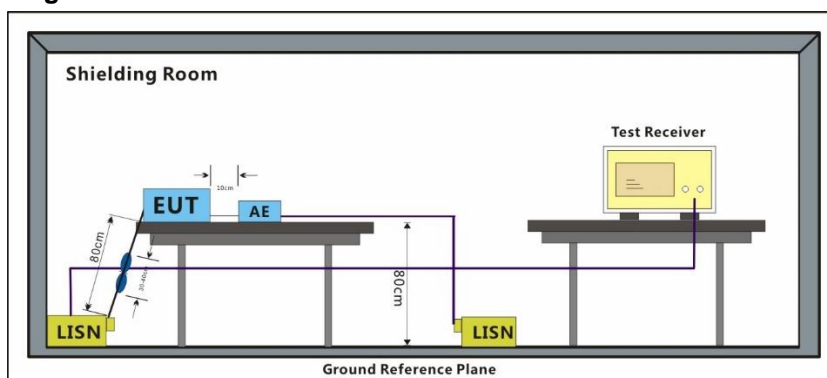
Pre-scan /	Mode
Final test	Code

Description

Final test 14

Charge + TX mode_Keep the EUT in charging and continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 1Mbps is the worst case of IEEE 802.11b; data rate @ 6Mbps is the worst case of IEEE 802.11g; data rate @ 6.5Mbps is the worst case of IEEE 802.11n(HT20); data rate @ 13.5Mbps is the worst case of IEEE 802.11n(HT40). Only the data of worst case is recorded in the report.

7.1.3 Test Setup Diagram

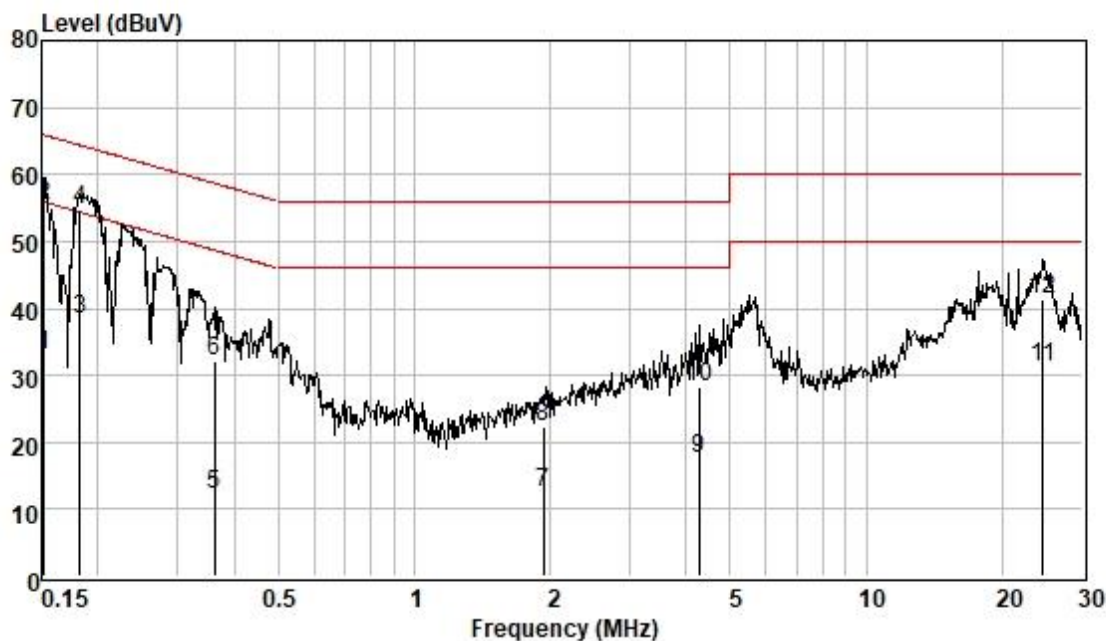


7.1.4 Measurement Procedure and Data

- 1) The mains terminal disturbance voltage test was conducted in a shielded room.
- 2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a 50ohm/50μH + 5ohm linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded.
- 3) The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane.
- 4) The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0.8 m from the LISN 2.
- 5) In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10 on conducted measurement.

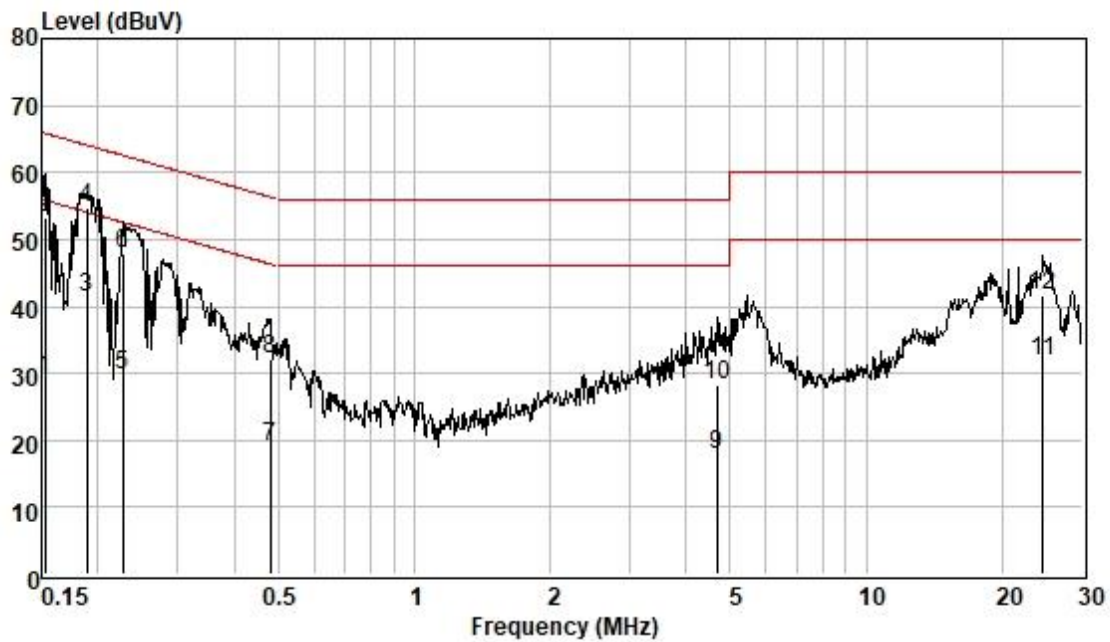
Remark: LISN=Read Level+ Cable Loss+ LISN Factor

Test Mode: 14; Line: Live line

Pol : LINE
Mode :
Model :

	Freque	Read	Cable	LISN	Measured	Limit	Over	Remark
	nc	Level	Loss	Factor	Level	Line	Limit	
	MHz	dBuV	dB	dB	dBuV	dBuV	dB	
1	0.152	23.28	0.06	9.54	32.88	55.91	-23.03	Average
2	0.152	45.62	0.06	9.54	55.22	65.91	-10.69	QP
3	0.182	28.66	0.06	9.55	38.27	54.37	-16.10	Average
4	0.182	44.96	0.06	9.55	54.57	64.37	-9.80	QP
5	0.361	2.54	0.06	9.58	12.18	48.69	-36.51	Average
6	0.361	22.36	0.06	9.58	32.00	58.69	-26.69	QP
7	1.928	2.84	0.12	9.60	12.56	46.00	-33.44	Average
8	1.928	12.44	0.12	9.60	22.16	56.00	-33.84	QP
9	4.269	7.64	0.17	9.65	17.46	46.00	-28.54	Average
10	4.269	18.50	0.17	9.65	28.32	56.00	-27.68	QP
11	24.529	20.89	0.40	9.79	31.08	50.00	-18.92	Average
12	24.529	31.09	0.40	9.79	41.28	60.00	-18.72	QP

Test Mode: 14; Line: Neutral Line

Pol : NEUTRAL
Mode :
Model :

	Freque	Read	Cable	LISN	Measured	Limit	Over	Remark
	nc	Level	Loss	Factor	Level	Line	Limit	
	MHz	dBuV	dB	dB	dBuV	dBuV	dB	
1	0.152	19.46	0.06	9.53	29.05	55.87	-26.82	Average
2	0.152	43.52	0.06	9.53	53.11	65.87	-12.76	QP
3	0.189	31.67	0.06	9.55	41.28	54.06	-12.78	Average
4	0.189	45.05	0.06	9.55	54.66	64.06	-9.40	QP
5	0.227	20.15	0.06	9.56	29.77	52.57	-22.80	Average
6	0.227	38.36	0.06	9.56	47.98	62.57	-14.59	QP
7	0.481	9.31	0.07	9.58	18.96	46.32	-27.36	Average
8	0.481	22.47	0.07	9.58	32.12	56.32	-24.20	QP
9	4.672	7.95	0.18	9.65	17.78	46.00	-28.22	Average
10	4.672	18.47	0.18	9.65	28.30	56.00	-27.70	QP
11	24.529	21.51	0.40	9.90	31.81	50.00	-18.19	Average
12	24.529	31.25	0.40	9.90	41.55	60.00	-18.45	QP

7.2 Radiated Emissions which fall in the restricted bands

Test Requirement 47 CFR Part 15, Subpart C 15.205 & 15.209

Test Method: ANSI C63.10 (2013) Section 6.10.5

Measurement Distance: 3m

Limit:

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

Remark: The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90kHz, 110-490kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.

7.2.1 E.U.T. Operation

Operating Environment:

Temperature: 21.3 °C

Humidity: 54.1 % RH

Atmospheric Pressure: 1020 mbar

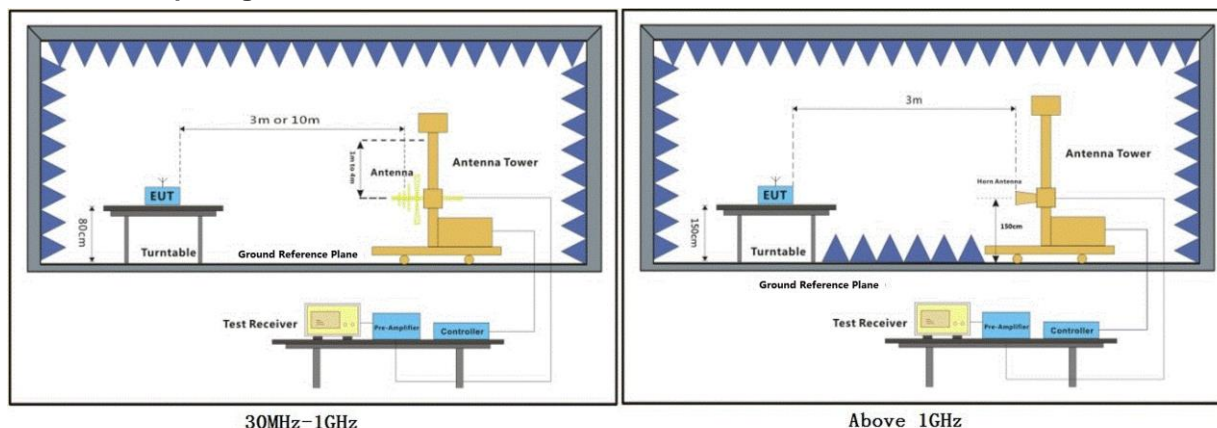
7.2.2 Test Mode Description

Pre-scan / Mode
Final test Code Description

Pre-scan 13 TX mode_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 1Mbps is the worst case of IEEE 802.11b; data rate @ 6Mbps is the worst case of IEEE 802.11g; data rate @ 6.5Mbps is the worst case of IEEE 802.11n(HT20); data rate @ 13.5Mbps is the worst case of IEEE 802.11n(HT40). Only the data of worst case is recorded in the report.

Final test 14 Charge + TX mode_Keep the EUT in charging and continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 1Mbps is the worst case of IEEE 802.11b; data rate @ 6Mbps is the worst case of IEEE 802.11g; data rate @ 6.5Mbps is the worst case of IEEE 802.11n(HT20); data rate @ 13.5Mbps is the worst case of IEEE 802.11n(HT40). Only the data of worst case is recorded in the report.

7.2.3 Test Setup Diagram



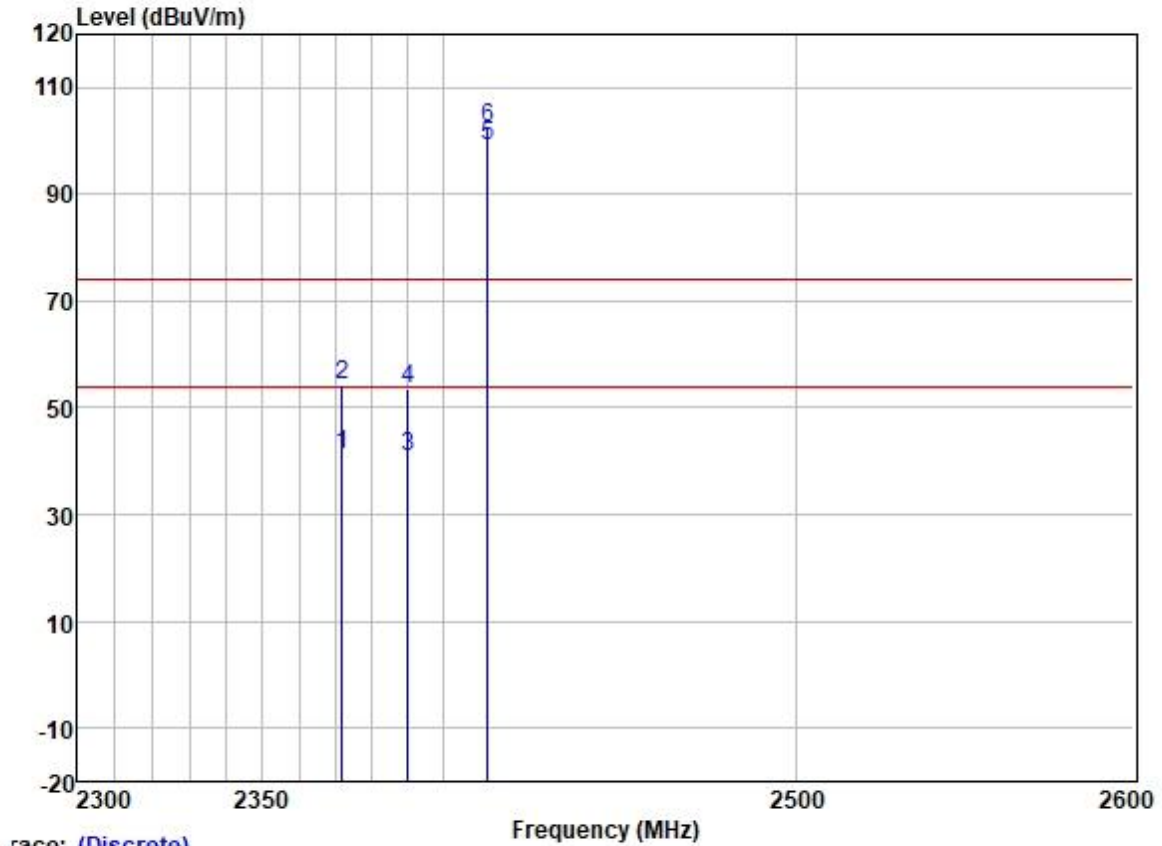
7.2.4 Measurement Procedure and Data

- For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
- Test the EUT in the lowest channel, the Highest channel.
- The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.
- Repeat above procedures until all frequencies measured was complete.

Remark 1: Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor

Remark 2: For frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For the emissions whose peak level is lower than the average limit, only the peak measurement is shown in the report.

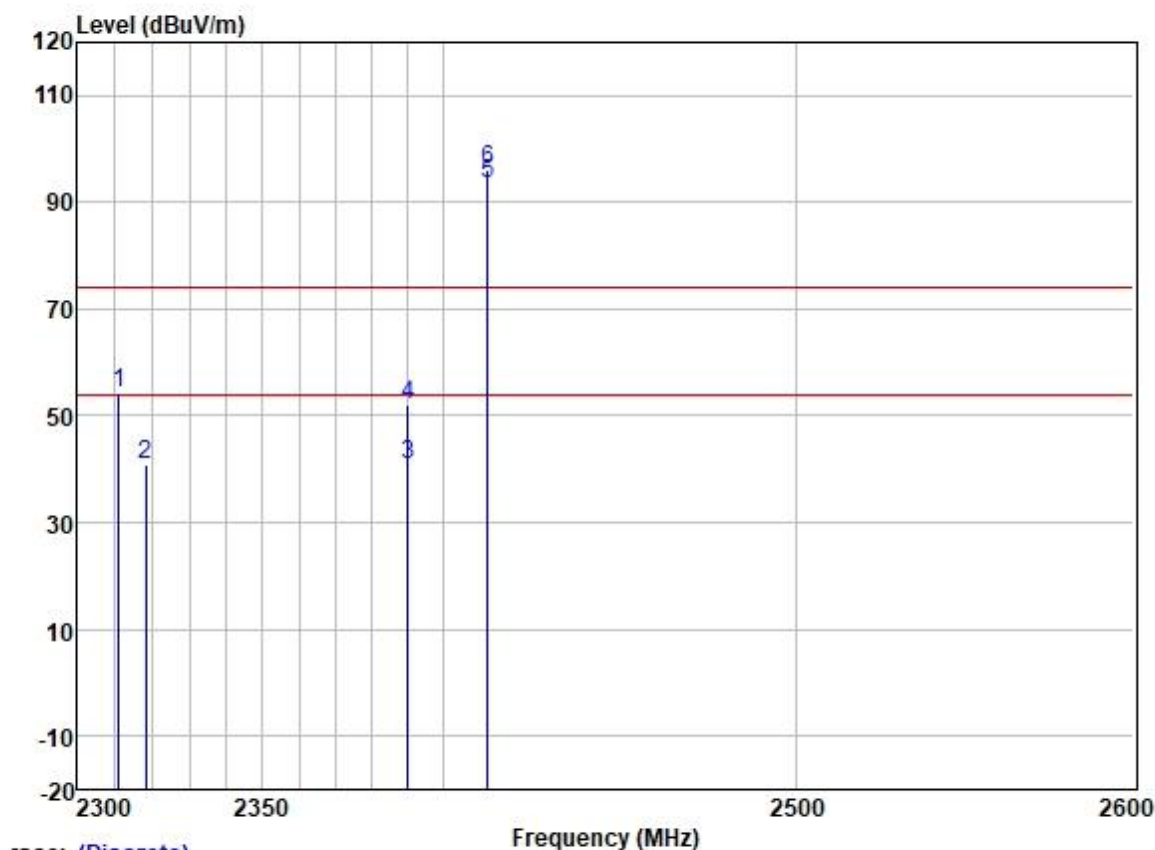
Test Mode: 14; Polarity: Horizontal; Modulation:802.11b; Bandwidth:20MHz; Channel:Low



race: (Discrete)

	Freq	ReadAntenna	Cable	Preamp		Limit	Over			
	MHz	Level	Factor	Loss	Factor	Level	Line	Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	2371.641	47.92	27.30	3.45	37.60	41.07	54.00	-12.93	HORIZONTAL	Average
2	2371.641	61.21	27.30	3.45	37.60	54.36	74.00	-19.64	HORIZONTAL	Peak
3	2390.000	47.58	27.33	3.48	37.59	40.80	54.00	-13.20	HORIZONTAL	Average
4	2390.000	60.32	27.33	3.48	37.59	53.54	74.00	-20.46	HORIZONTAL	Peak
5 *	2412.000	105.97	27.38	3.47	37.59	99.23	54.00	45.23	HORIZONTAL	Average
6 *	2412.000	109.18	27.38	3.47	37.59	102.44	74.00	28.44	HORIZONTAL	Peak

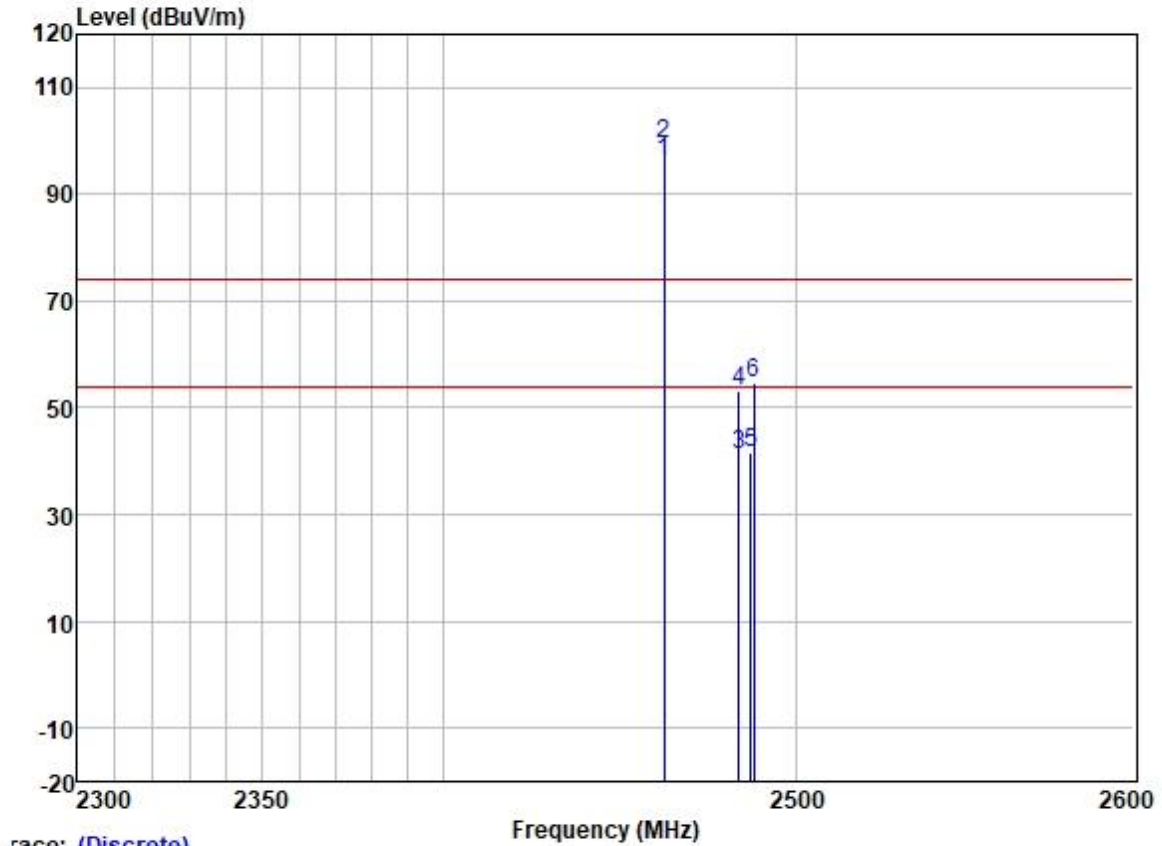
Test Mode: 14; Polarity: Vertical; Modulation:802.11b; Bandwidth:20MHz; Channel:Low



Trace: (Discrete)

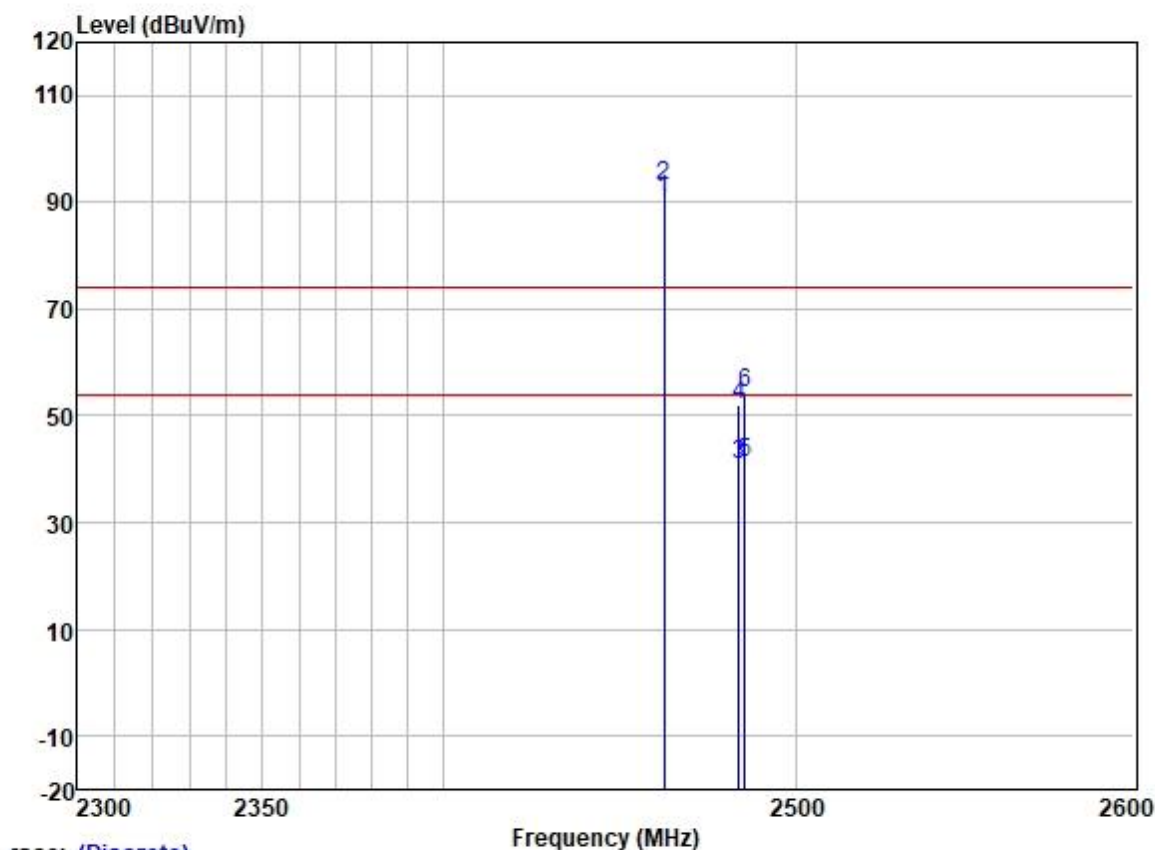
	Freq	ReadAntenna	Cable	Preamp		Limit	Over			
	MHz	Level	Factor	Loss	Factor	Level	Line	Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	2311.170	61.46	27.15	3.32	37.62	54.31	74.00	-19.69	VERTICAL	Peak
2	2318.204	48.14	27.17	3.33	37.62	41.02	54.00	-12.98	VERTICAL	Average
3	2390.000	47.55	27.33	3.48	37.59	40.77	54.00	-13.23	VERTICAL	Average
4	2390.000	58.68	27.33	3.48	37.59	51.90	74.00	-22.10	VERTICAL	Peak
5 *	2412.000	100.05	27.38	3.47	37.59	93.31	54.00	39.31	VERTICAL	Average
6 *	2412.000	102.72	27.38	3.47	37.59	95.98	74.00	21.98	VERTICAL	Peak

Test Mode: 14; Polarity: Horizontal; Modulation:802.11b; Bandwidth:20MHz; Channel:High



		ReadAntenna		Cable	Preamp		Limit	Over		
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1 *	2462.000	102.62	27.45	3.50	37.58	95.99	54.00	41.99	HORIZONTAL	Average
2 *	2462.000	106.23	27.45	3.50	37.58	99.60	74.00	25.60	HORIZONTAL	Peak
3	2483.500	47.74	27.48	3.53	37.57	41.18	54.00	-12.82	HORIZONTAL	Average
4	2483.500	59.56	27.48	3.53	37.57	53.00	74.00	-21.00	HORIZONTAL	Peak
5	2486.853	48.18	27.48	3.53	37.57	41.62	54.00	-12.38	HORIZONTAL	Average
6	2487.757	61.38	27.48	3.53	37.56	54.83	74.00	-19.17	HORIZONTAL	Peak

Test Mode: 14; Polarity: Vertical; Modulation:802.11b; Bandwidth:20MHz; Channel:High



race: (Discrete)

	Freq	ReadAntenna Level	Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1 *	2462.000	97.10	27.45	3.50	37.58	90.47	54.00	36.47	VERTICAL	Average
2 *	2462.000	99.76	27.45	3.50	37.58	93.13	74.00	19.13	VERTICAL	Peak
3	2483.500	47.47	27.48	3.53	37.57	40.91	54.00	-13.09	VERTICAL	Average
4	2483.500	58.73	27.48	3.53	37.57	52.17	74.00	-21.83	VERTICAL	Peak
5	2485.044	47.80	27.48	3.53	37.57	41.24	54.00	-12.76	VERTICAL	Average
6	2485.044	60.81	27.48	3.53	37.57	54.25	74.00	-19.75	VERTICAL	Peak

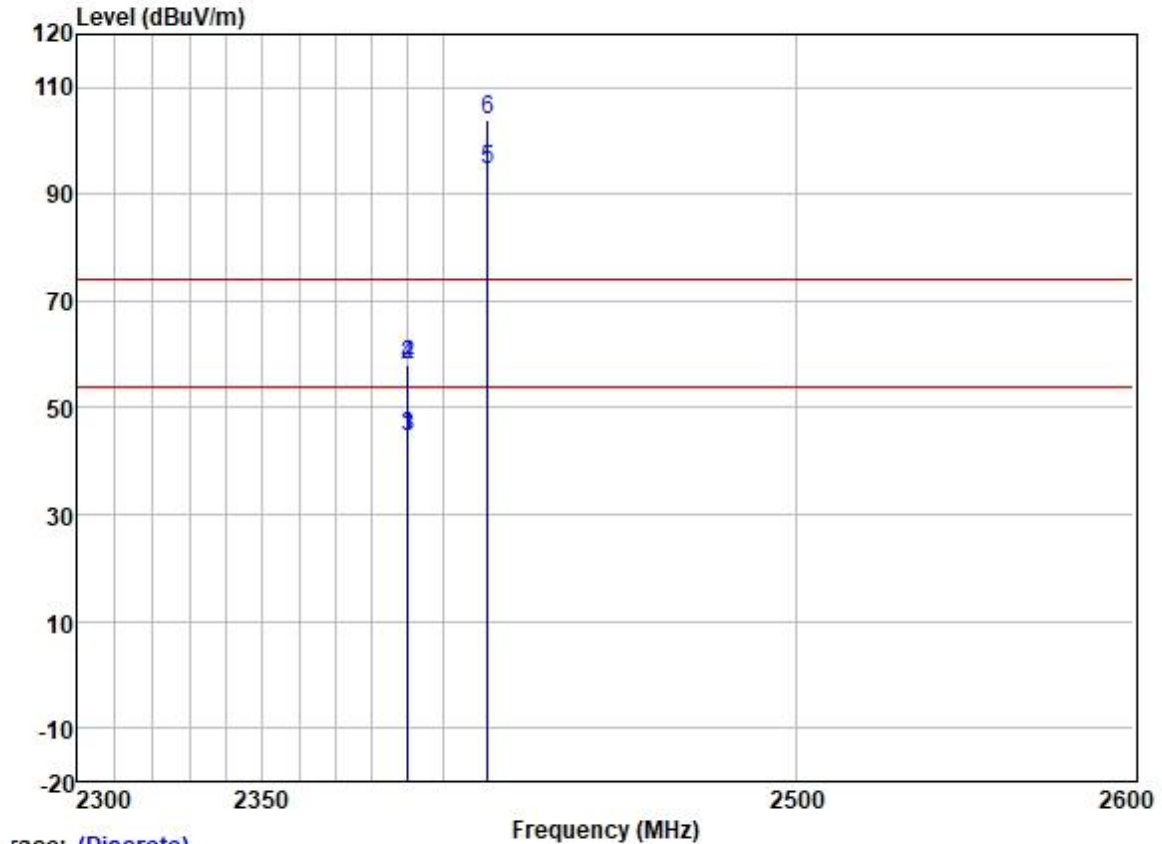


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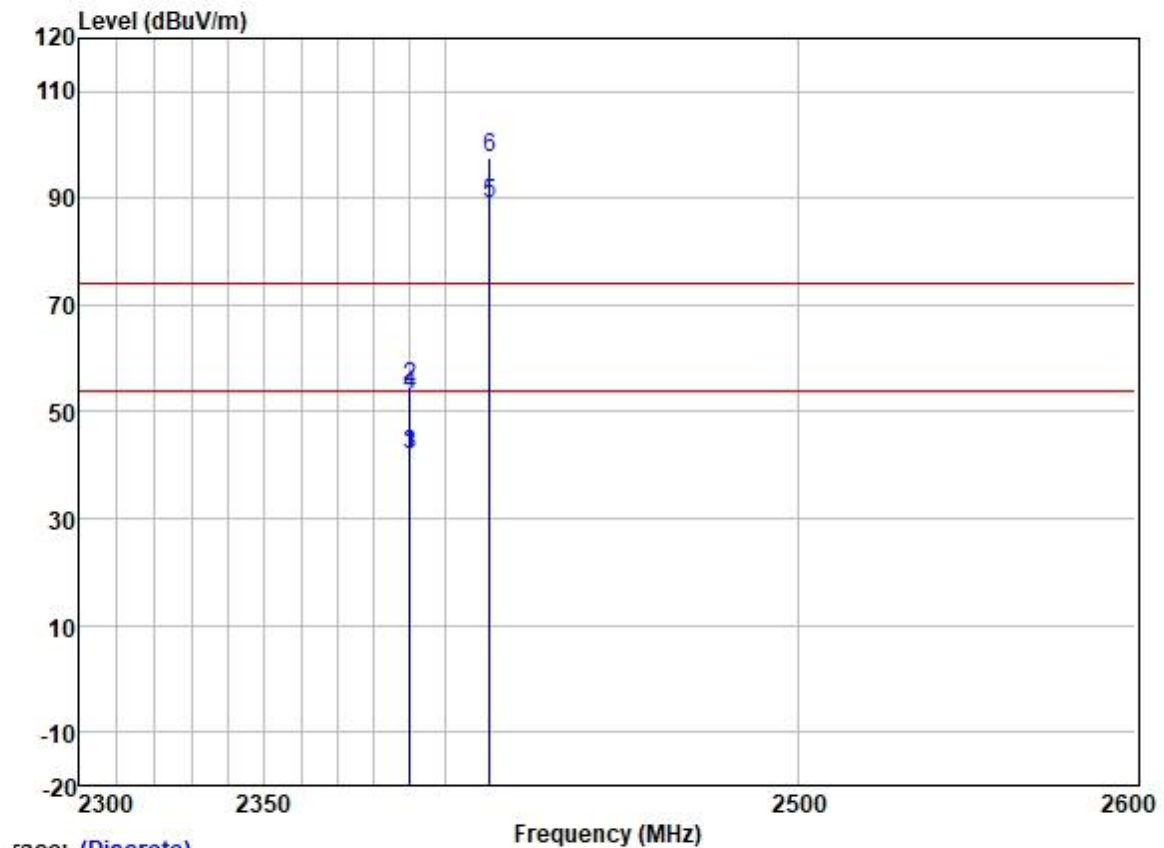
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race: (Discrete)

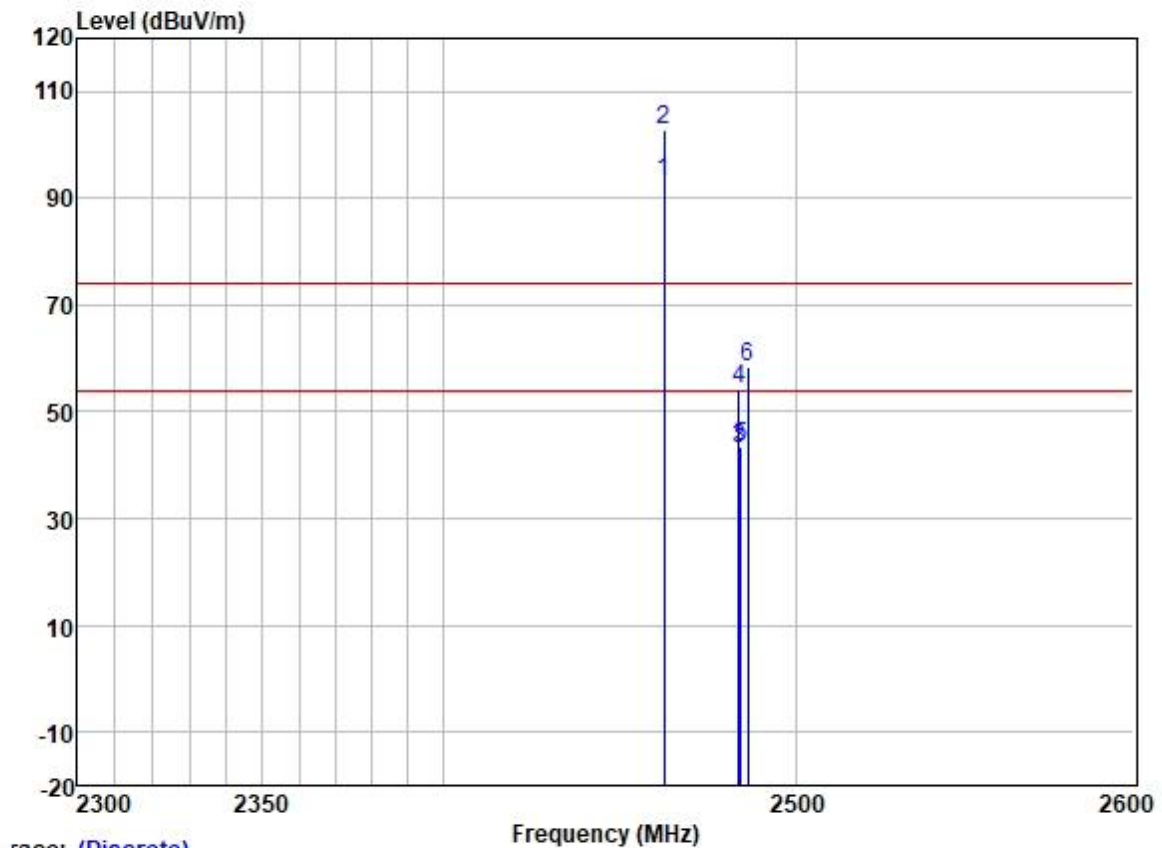
	Freq	ReadAntenna	Cable	Preamp		Limit	Over			
	MHz	Level	Factor	Loss	Factor	Level	Line	Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	2389.968	51.53	27.33	3.48	37.59	44.75	54.00	-9.25	HORIZONTAL	Average
2	2389.968	64.92	27.33	3.48	37.59	58.14	74.00	-15.86	HORIZONTAL	Peak
3	2390.000	51.53	27.33	3.48	37.59	44.75	54.00	-9.25	HORIZONTAL	Average
4	2390.000	64.92	27.33	3.48	37.59	58.14	74.00	-15.86	HORIZONTAL	Peak
5 *	2412.000	101.25	27.38	3.47	37.59	94.51	54.00	40.51	HORIZONTAL	Average
6 *	2412.000	110.87	27.38	3.47	37.59	104.13	74.00	30.13	HORIZONTAL	Peak

Test Mode: 14; Polarity: Vertical; Modulation:802.11g; Bandwidth:20MHz; Channel:Low



	Freq	ReadAntenna	Cable	Preamp		Limit	Over			
	MHz	Level	Factor	Loss	Factor	Level	Line	Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	2389.968	48.58	27.33	3.48	37.59	41.80	54.00	-12.20	VERTICAL	Average
2	2389.968	61.48	27.33	3.48	37.59	54.70	74.00	-19.30	VERTICAL	Peak
3	2390.000	48.58	27.33	3.48	37.59	41.80	54.00	-12.20	VERTICAL	Average
4	2390.000	59.79	27.33	3.48	37.59	53.01	74.00	-20.99	VERTICAL	Peak
5 *	2412.000	95.66	27.38	3.47	37.59	88.92	54.00	34.92	VERTICAL	Average
6 *	2412.000	104.21	27.38	3.47	37.59	97.47	74.00	23.47	VERTICAL	Peak

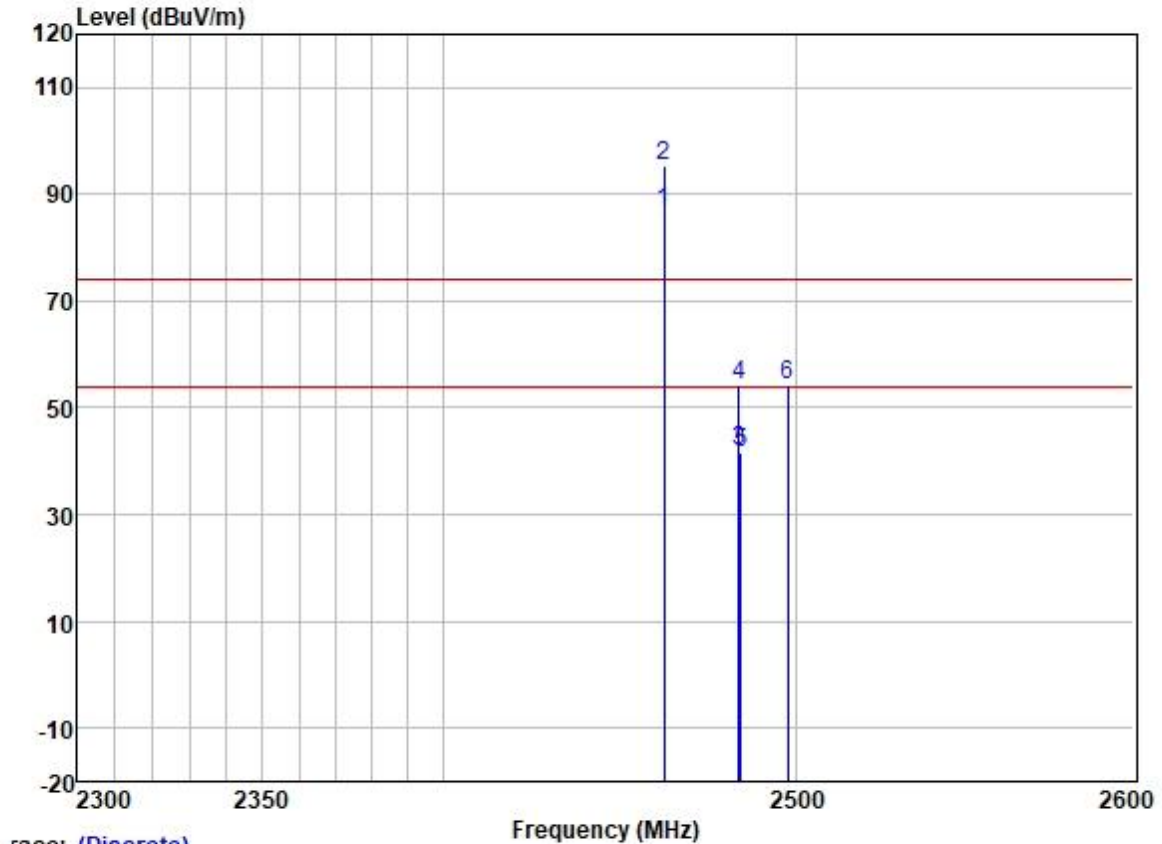
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Trace: (Discrete)

		ReadAntenna		Cable	Preamp		Limit	Over		
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1 *	2462.000	99.59	27.45	3.50	37.58	92.96	54.00	38.96	HORIZONTAL	Average
2 *	2462.000	109.63	27.45	3.50	37.58	103.00	74.00	29.00	HORIZONTAL	Peak
3	2483.500	49.67	27.48	3.53	37.57	43.11	54.00	-10.89	HORIZONTAL	Average
4	2483.500	60.79	27.48	3.53	37.57	54.23	74.00	-19.77	HORIZONTAL	Peak
5	2484.041	49.88	27.48	3.53	37.57	43.32	54.00	-10.68	HORIZONTAL	Average
6	2485.999	65.04	27.48	3.53	37.57	58.48	74.00	-15.52	HORIZONTAL	Peak

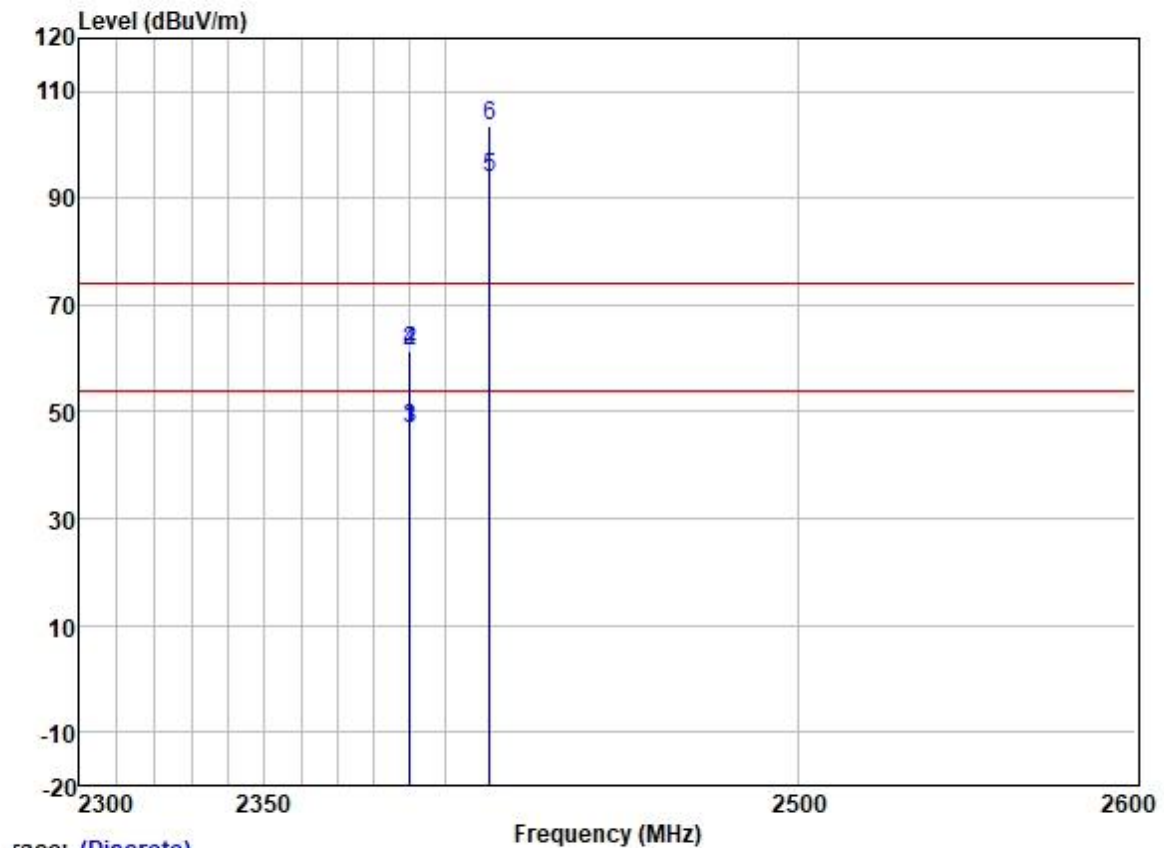
Test Mode: 14; Polarity: Vertical; Modulation:802.11g; Bandwidth:20MHz; Channel:High



Trace: (Discrete)

		ReadAntenna		Cable	Preamp		Limit	Over		
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1 *	2462.000	93.46	27.45	3.50	37.58	86.83	54.00	32.83	VERTICAL	Average
2 *	2462.000	102.08	27.45	3.50	37.58	95.45	74.00	21.45	VERTICAL	Peak
3	2483.500	48.44	27.48	3.53	37.57	41.88	54.00	-12.12	VERTICAL	Average
4	2483.500	60.93	27.48	3.53	37.57	54.37	74.00	-19.63	VERTICAL	Peak
5	2483.940	48.26	27.48	3.53	37.57	41.70	54.00	-12.30	VERTICAL	Average
6	2497.526	61.09	27.50	3.40	37.56	54.43	74.00	-19.57	VERTICAL	Peak

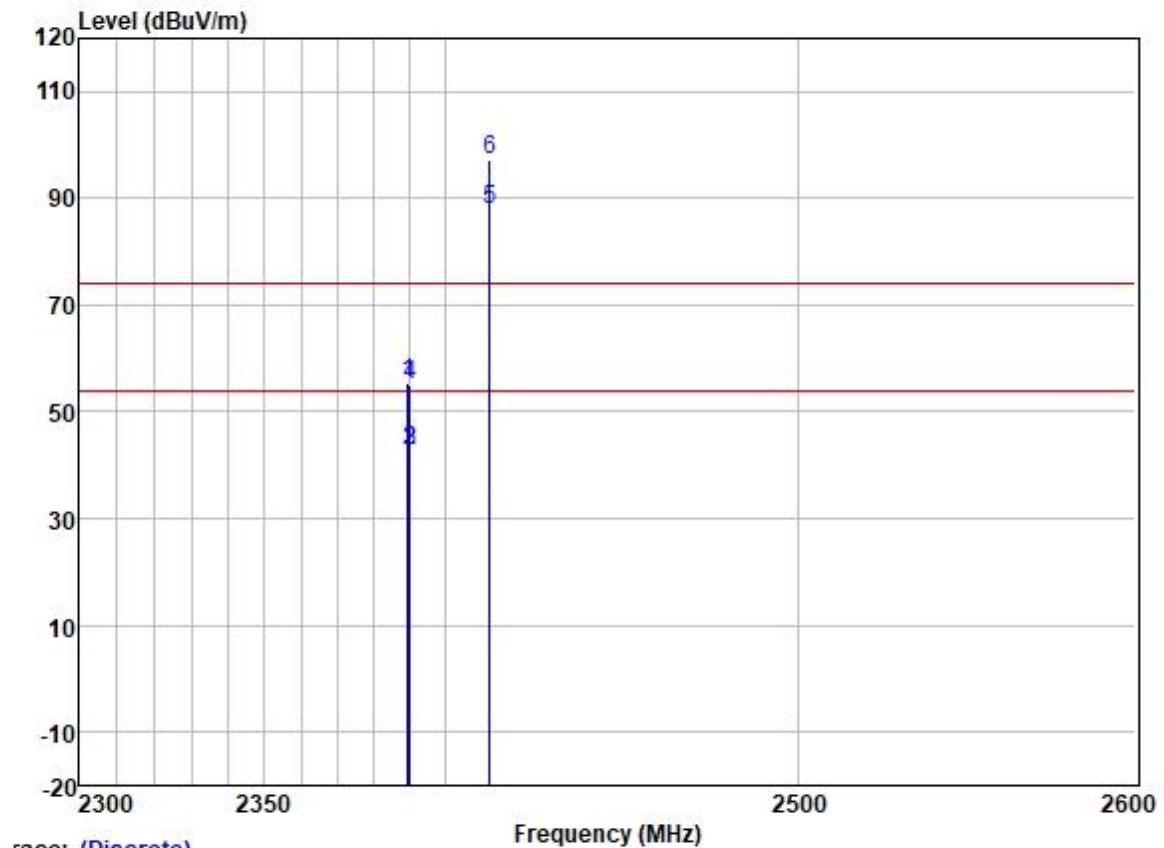
Test Mode: 14; Polarity: Horizontal; Modulation:802.11n; Bandwidth:20MHz; Channel:Low



Trace: (Discrete)

	Freq	ReadAntenna	Cable	Preamp		Limit	Over			
	MHz	Level	Factor	Loss	Factor	Level	Line	Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	2389.968	53.73	27.33	3.48	37.59	46.95	54.00	-7.05	HORIZONTAL	Average
2	2389.968	68.10	27.33	3.48	37.59	61.32	74.00	-12.68	HORIZONTAL	Peak
3	2390.000	53.73	27.33	3.48	37.59	46.95	54.00	-7.05	HORIZONTAL	Average
4	2390.000	68.10	27.33	3.48	37.59	61.32	74.00	-12.68	HORIZONTAL	Peak
5 *	2412.000	100.66	27.38	3.47	37.59	93.92	54.00	39.92	HORIZONTAL	Average
6 *	2412.000	110.45	27.38	3.47	37.59	103.71	74.00	29.71	HORIZONTAL	Peak

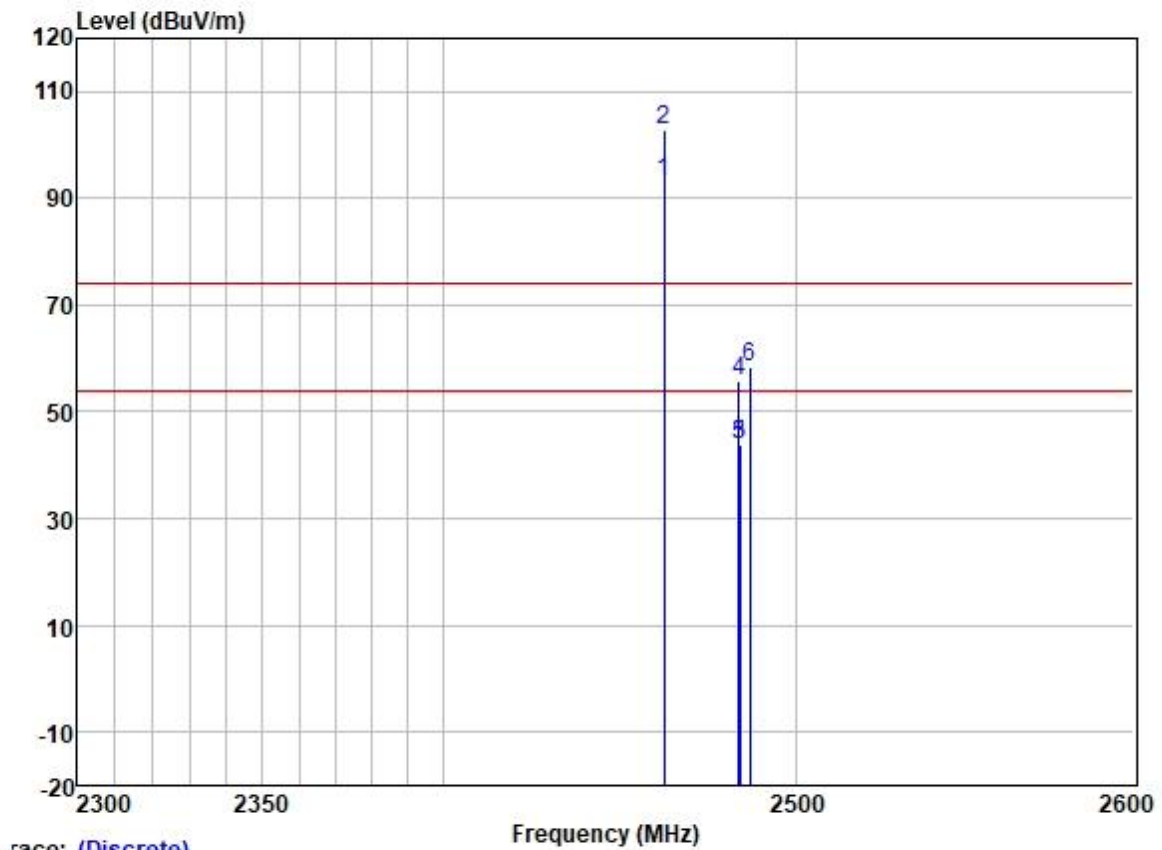
Test Mode: 14; Polarity: Vertical; Modulation:802.11n; Bandwidth:20MHz; Channel:Low



Trace: (Discrete)

	Freq	Read	Antenna	Cable	Preamp	Level	Limit	Over		
	MHz	Level	Factor	Loss	Factor	dBuV/m	Line	Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	2389.363	62.34	27.33	3.48	37.59	55.56	74.00	-18.44	VERTICAL	Peak
2	2389.968	49.41	27.33	3.48	37.59	42.63	54.00	-11.37	VERTICAL	Average
3	2390.000	49.41	27.33	3.48	37.59	42.63	54.00	-11.37	VERTICAL	Average
4	2390.000	61.66	27.33	3.48	37.59	54.88	74.00	-19.12	VERTICAL	Peak
5 *	2412.000	94.58	27.38	3.47	37.59	87.84	54.00	33.84	VERTICAL	Average
6 *	2412.000	103.87	27.38	3.47	37.59	97.13	74.00	23.13	VERTICAL	Peak

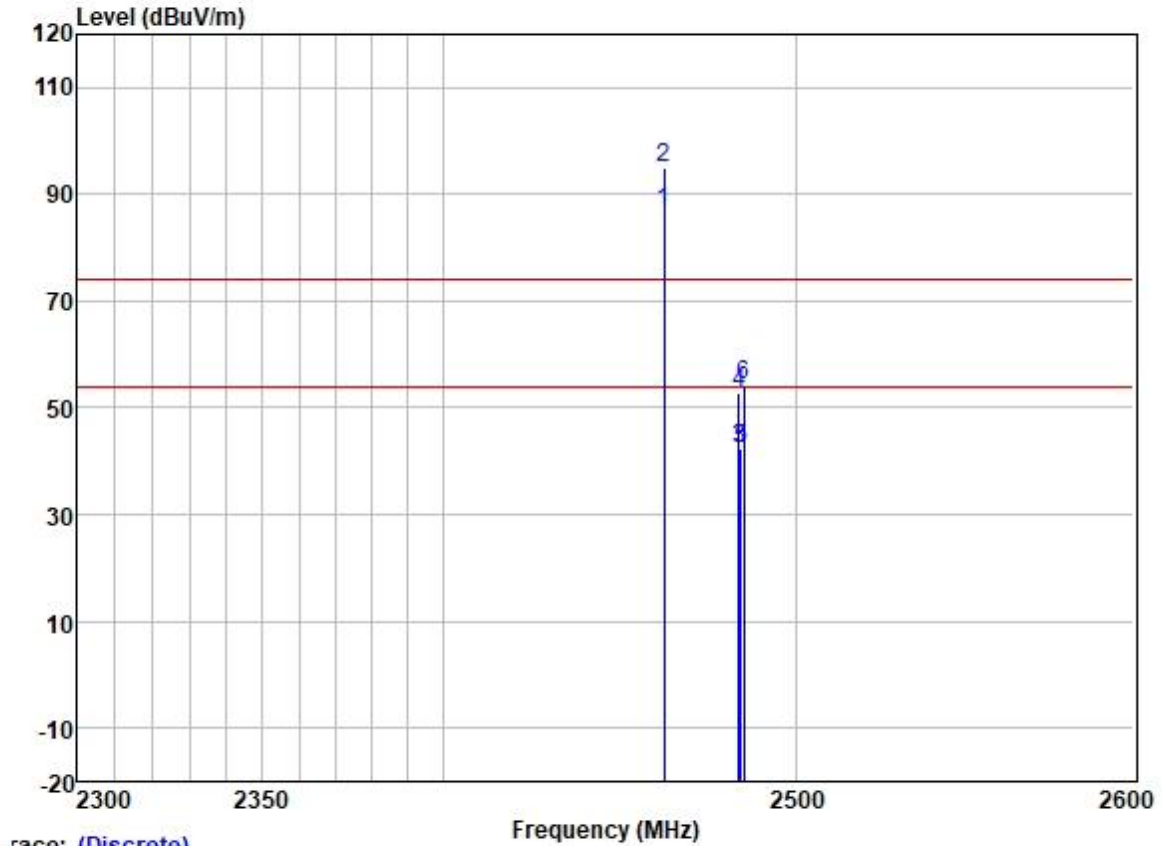
Test Mode: 14; Polarity: Horizontal; Modulation:802.11n; Bandwidth:20MHz; Channel:High



Trace: (Discrete)

		ReadAntenna		Cable	Preamp		Limit	Over		
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1 *	2462.000	99.83	27.45	3.50	37.58	93.20	54.00	39.20	HORIZONTAL	Average
2 *	2462.000	109.35	27.45	3.50	37.58	102.72	74.00	28.72	HORIZONTAL	Peak
3	2483.500	50.44	27.48	3.53	37.57	43.88	54.00	-10.12	HORIZONTAL	Average
4	2483.500	62.53	27.48	3.53	37.57	55.97	74.00	-18.03	HORIZONTAL	Peak
5	2483.790	50.27	27.48	3.53	37.57	43.71	54.00	-10.29	HORIZONTAL	Average
6	2486.501	65.05	27.48	3.53	37.57	58.49	74.00	-15.51	HORIZONTAL	Peak

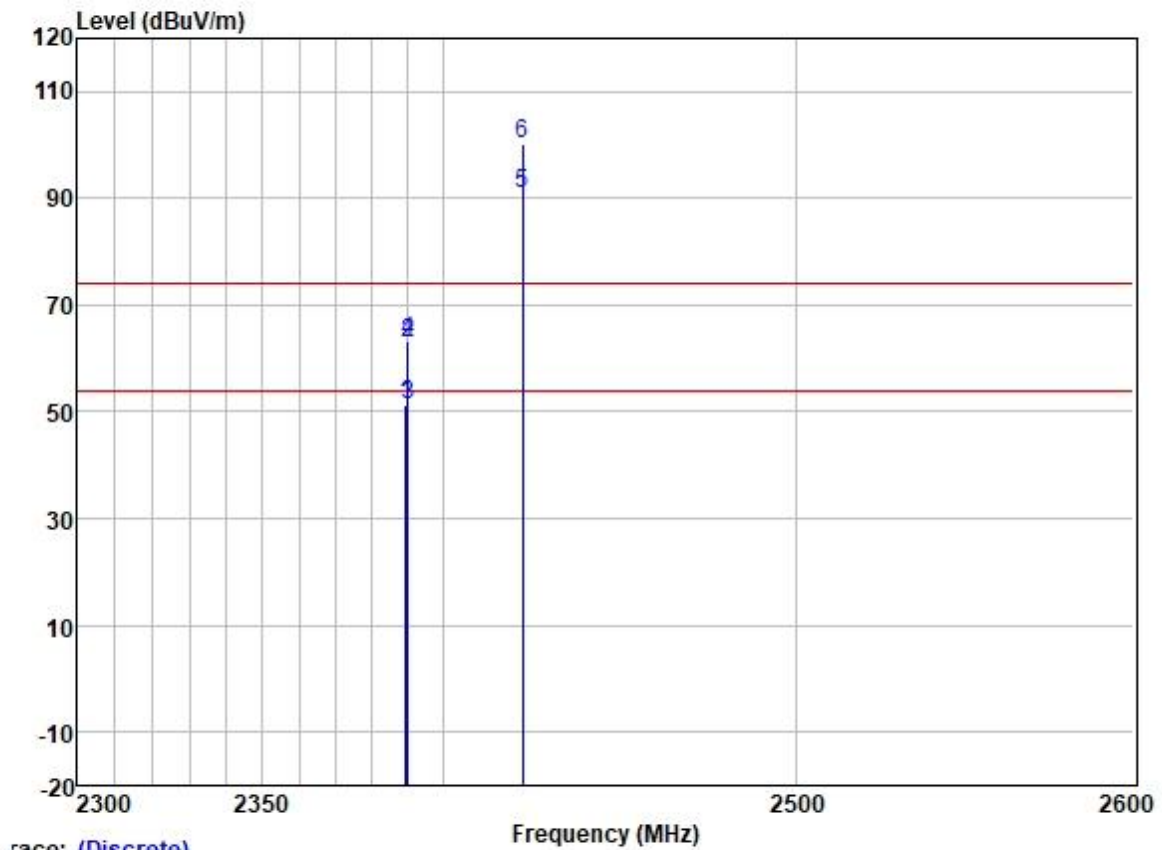
Test Mode: 14; Polarity: Vertical; Modulation:802.11n; Bandwidth:20MHz; Channel:High



Trace: (Discrete)

		ReadAntenna		Cable	Preamp		Limit	Over		
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1 *	2462.000	93.28	27.45	3.50	37.58	86.65	54.00	32.65	VERTICAL	Average
2 *	2462.000	101.74	27.45	3.50	37.58	95.11	74.00	21.11	VERTICAL	Peak
3	2483.500	48.91	27.48	3.53	37.57	42.35	54.00	-11.65	VERTICAL	Average
4	2483.500	59.40	27.48	3.53	37.57	52.84	74.00	-21.16	VERTICAL	Peak
5	2483.940	48.80	27.48	3.53	37.57	42.24	54.00	-11.76	VERTICAL	Average
6	2484.994	60.82	27.48	3.53	37.57	54.26	74.00	-19.74	VERTICAL	Peak

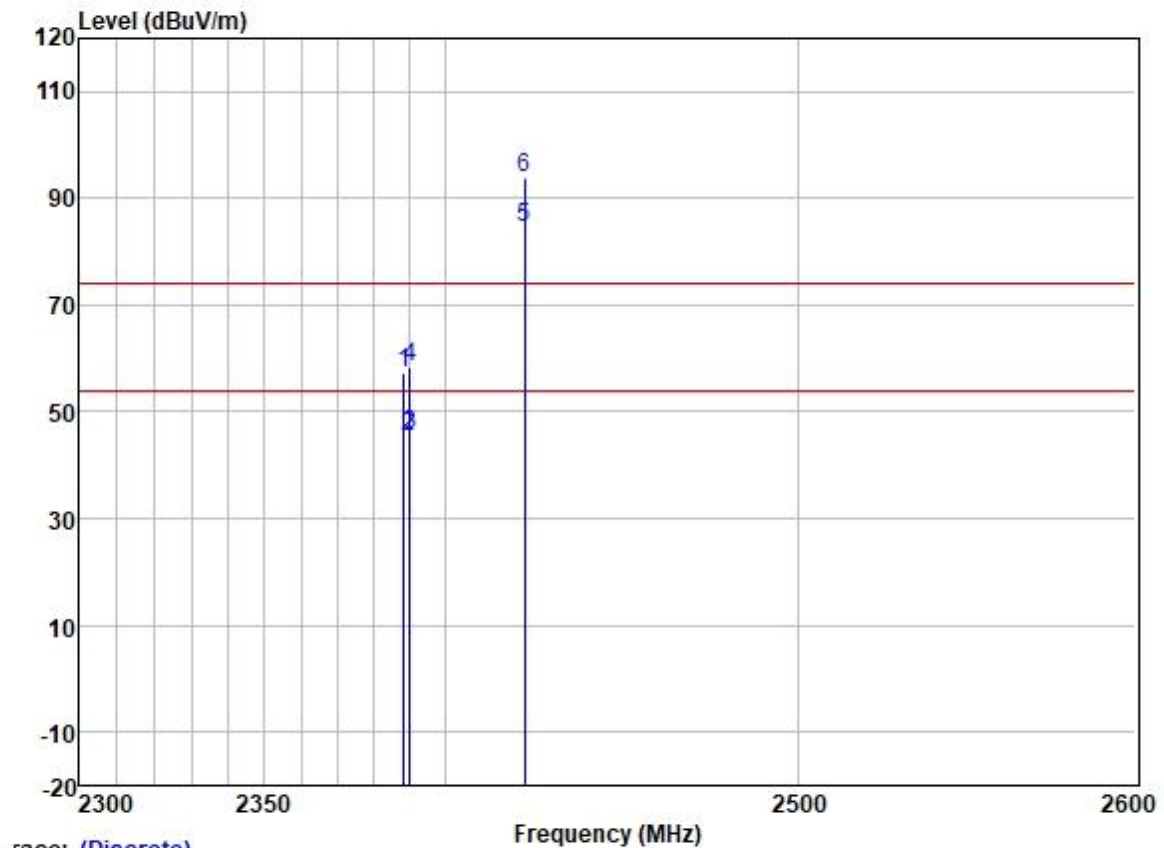
Test Mode: 14; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:Low



race: (Discrete)

	Freq	ReadAntenna	Cable	Preamp		Limit	Over			
	MHz	Level	Factor	Loss	Factor	Level	Line	Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	2389.376	58.10	27.33	3.48	37.59	51.32	54.00	-2.68	HORIZONTAL	Average
2	2389.827	69.53	27.33	3.48	37.59	62.75	74.00	-11.25	HORIZONTAL	Peak
3	2390.000	58.24	27.33	3.48	37.59	51.46	54.00	-2.54	HORIZONTAL	Average
4	2390.000	69.94	27.33	3.48	37.59	63.16	74.00	-10.84	HORIZONTAL	Peak
5 *	2422.000	97.75	27.39	3.45	37.58	91.01	54.00	37.01	HORIZONTAL	Average
6 *	2422.000	106.97	27.39	3.45	37.58	100.23	74.00	26.23	HORIZONTAL	Peak

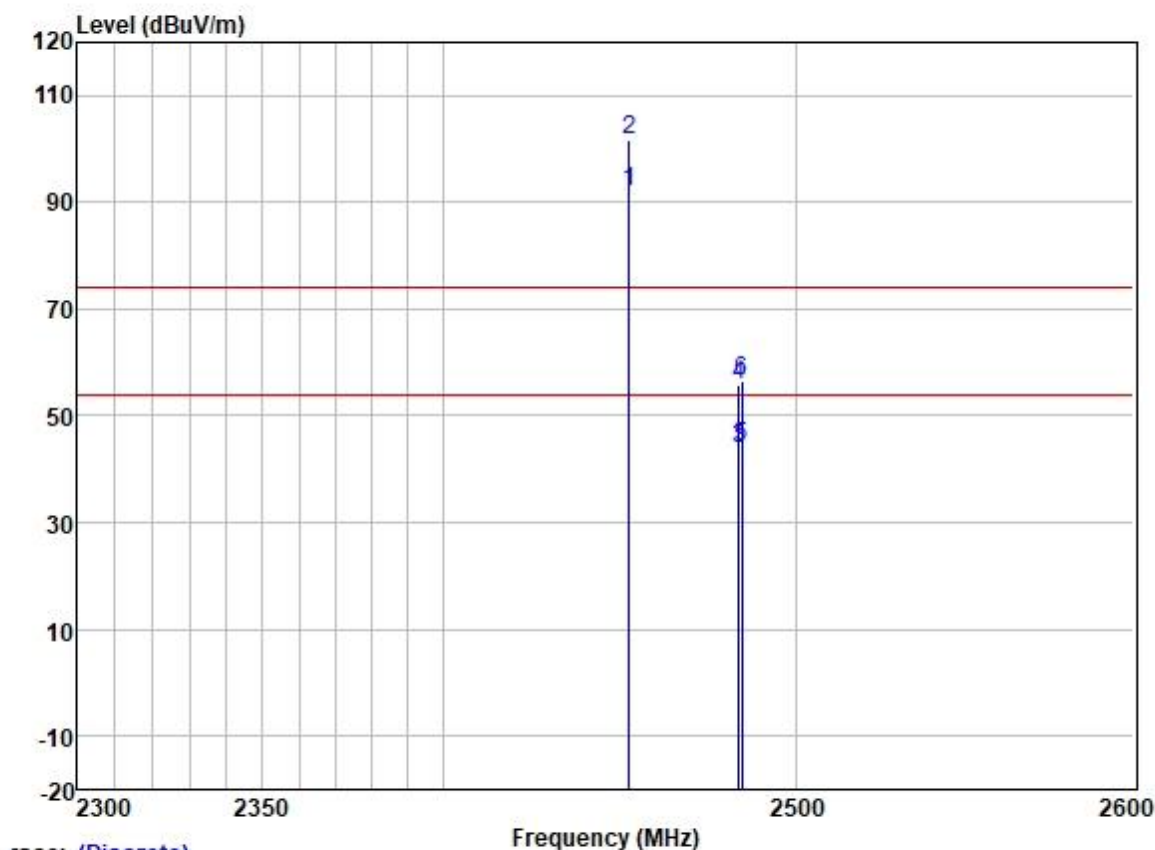
Test Mode: 14; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:Low



Trace: (Discrete)

	Freq	Read	Antenna	Cable	Preamp	Limit	Over		
	MHz	Level	Factor	Loss	Factor	Line	Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	2388.324	64.07	27.33	3.48	37.59	57.29	74.00	-16.71	VERTICAL Peak
2	2389.677	52.16	27.33	3.48	37.59	45.38	54.00	-8.62	VERTICAL Average
3	2390.000	52.42	27.33	3.48	37.59	45.64	54.00	-8.36	VERTICAL Average
4	2390.000	65.24	27.33	3.48	37.59	58.46	74.00	-15.54	VERTICAL Peak
5 *	2422.000	91.16	27.39	3.45	37.58	84.42	54.00	30.42	VERTICAL Average
6 *	2422.000	100.68	27.39	3.45	37.58	93.94	74.00	19.94	VERTICAL Peak

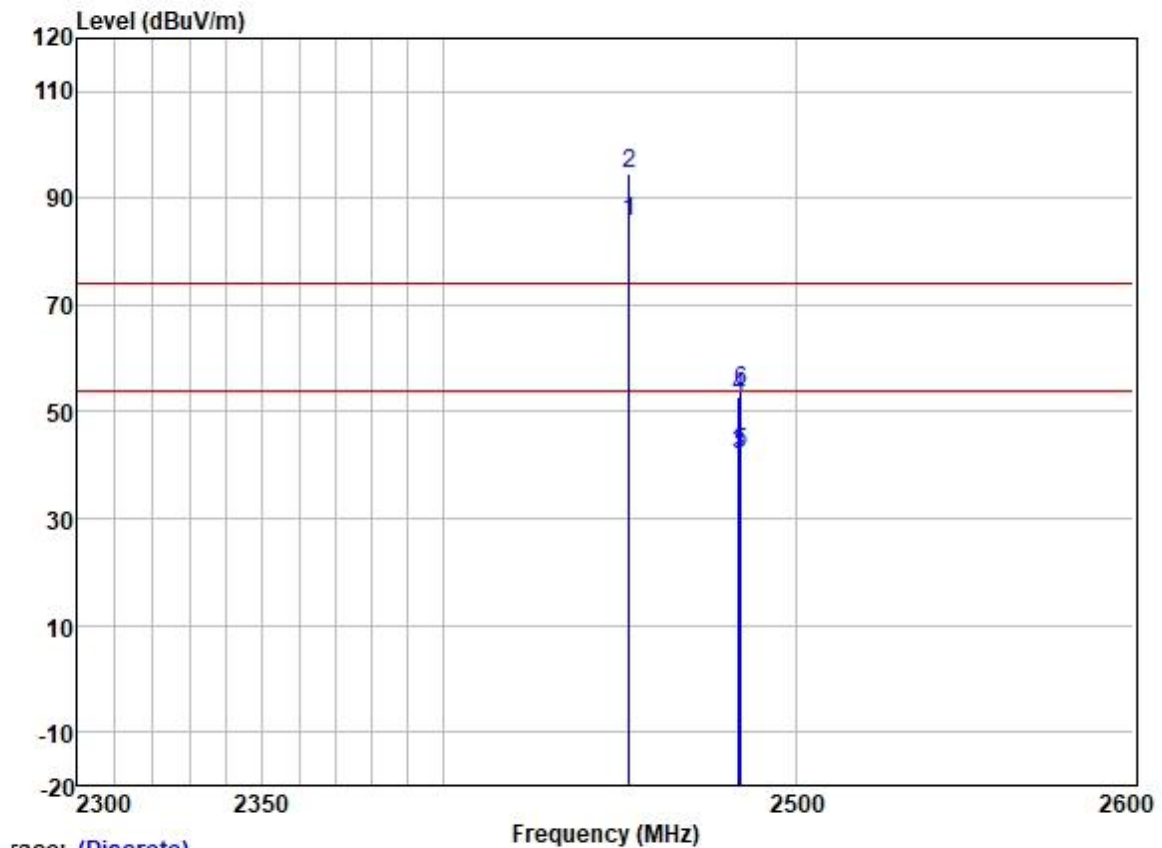
Test Mode: 14; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:High



Trace: (Discrete)

		Read	Antenna	Cable	Preamp		Limit	Over		
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1 *	2452.000	98.83	27.43	3.40	37.58	92.08	54.00	38.08	HORIZONTAL	Average
2 *	2452.000	108.52	27.43	3.40	37.58	101.77	74.00	27.77	HORIZONTAL	Peak
3	2483.500	50.42	27.48	3.53	37.57	43.86	54.00	-10.14	HORIZONTAL	Average
4	2483.500	62.19	27.48	3.53	37.57	55.63	74.00	-18.37	HORIZONTAL	Peak
5	2484.358	50.90	27.48	3.53	37.57	44.34	54.00	-9.66	HORIZONTAL	Average
6	2484.358	62.95	27.48	3.53	37.57	56.39	74.00	-17.61	HORIZONTAL	Peak

Test Mode: 14; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:High



Trace: (Discrete)

		ReadAntenna		Cable	Preamp		Limit	Over		
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1 *	2452.000	92.31	27.43	3.40	37.58	85.56	54.00	31.56	VERTICAL	Average
2 *	2452.000	101.35	27.43	3.40	37.58	94.60	74.00	20.60	VERTICAL	Peak
3	2483.500	48.39	27.48	3.53	37.57	41.83	54.00	-12.17	VERTICAL	Average
4	2483.500	59.28	27.48	3.53	37.57	52.72	74.00	-21.28	VERTICAL	Peak
5	2484.006	49.00	27.48	3.53	37.57	42.44	54.00	-11.56	VERTICAL	Average
6	2484.076	60.55	27.48	3.53	37.57	53.99	74.00	-20.01	VERTICAL	Peak

7.3 Radiated Spurious Emissions (Below 1GHz)

Test Requirement 47 CFR Part 15, Subpart C 15.205 & 15.209

Test Method: ANSI C63.10 (2013) Section 6.4,6.5,6.6

Limit:

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

Remark: The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90kHz, 110-490kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.

7.3.1 E.U.T. Operation

Operating Environment:

Temperature: 20.2 °C

Humidity: 45.2 % RH

Atmospheric Pressure: 1020 mbar

7.3.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
--------------------------	--------------	-------------

Pre-scan 13

TX mode_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 1Mbps is the worst case of IEEE 802.11b; data rate @ 6Mbps is the worst case of IEEE 802.11g; data rate @ 6.5Mbps is the worst case of IEEE 802.11n(HT20); data rate @ 13.5Mbps is the worst case of IEEE 802.11n(HT40). Only the data of worst case is recorded in the report.

Final test 14

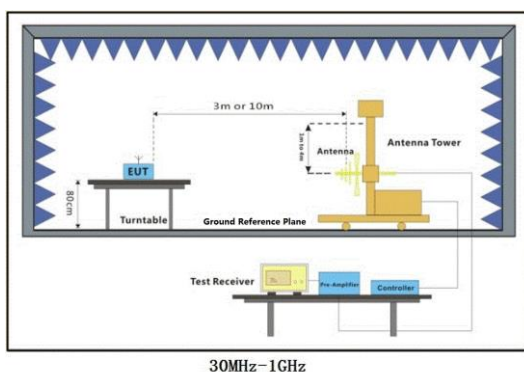
Charge + TX mode_Keep the EUT in charging and continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 1Mbps is the worst case of IEEE 802.11b; data rate @ 6Mbps is the worst case of IEEE 802.11g; data rate @ 6.5Mbps is the worst case of IEEE 802.11n(HT20); data rate @ 13.5Mbps is the worst case of IEEE 802.11n(HT40). Only the data of worst case is recorded in the report.



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7.3.3 Test Setup Diagram



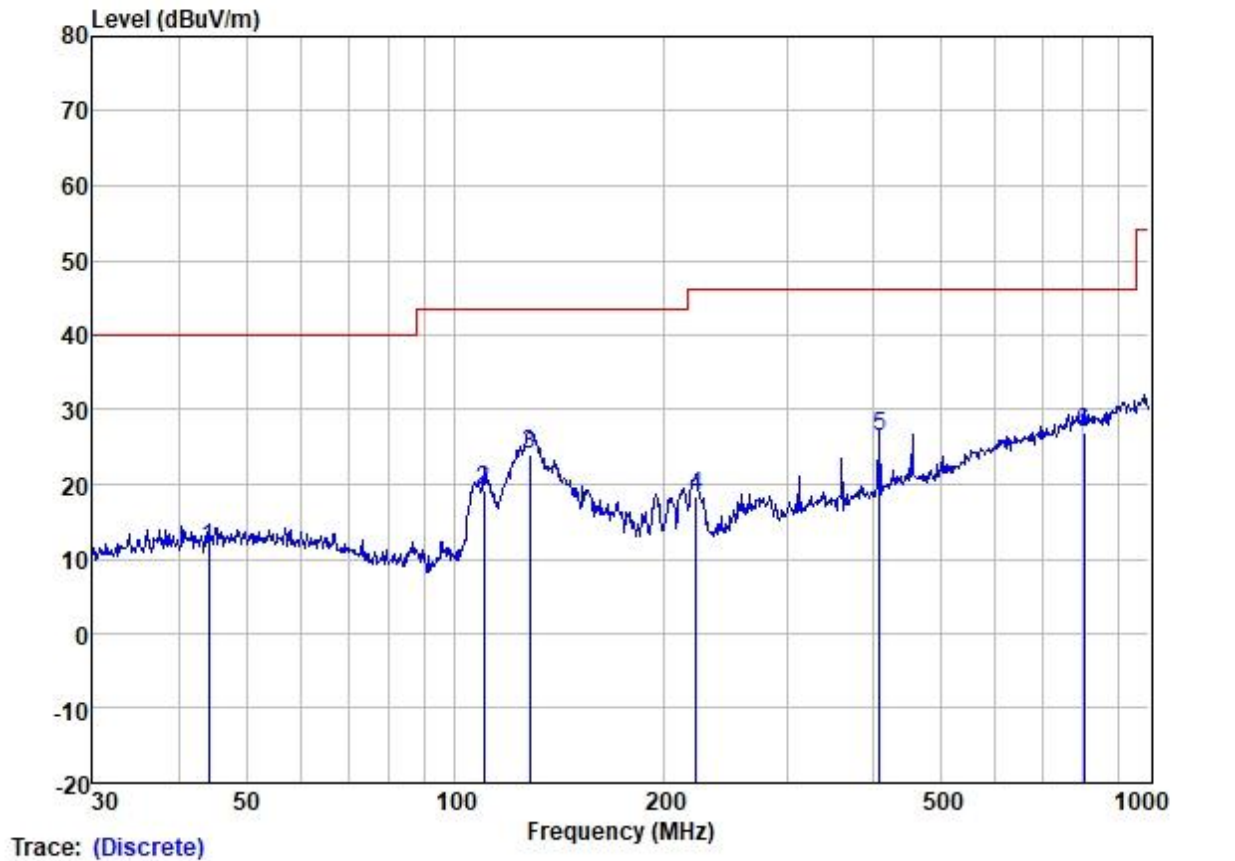
7.3.4 Measurement Procedure and Data

- For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
- Test the EUT in the lowest channel, the middle channel, the Highest channel.
- The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.
- Repeat above procedures until all frequencies measured was complete.

Remark:

- Through pre-scan found the worst case is the lowest channel. Only the worst case is recorded in the report.
- The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:
Final Test Level = Receiver Reading + Antenna Factor + Cable Factor - Preamplifier Factor
- Scan from 9kHz to 1 GHz, the disturbance below 30MHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only above points had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.

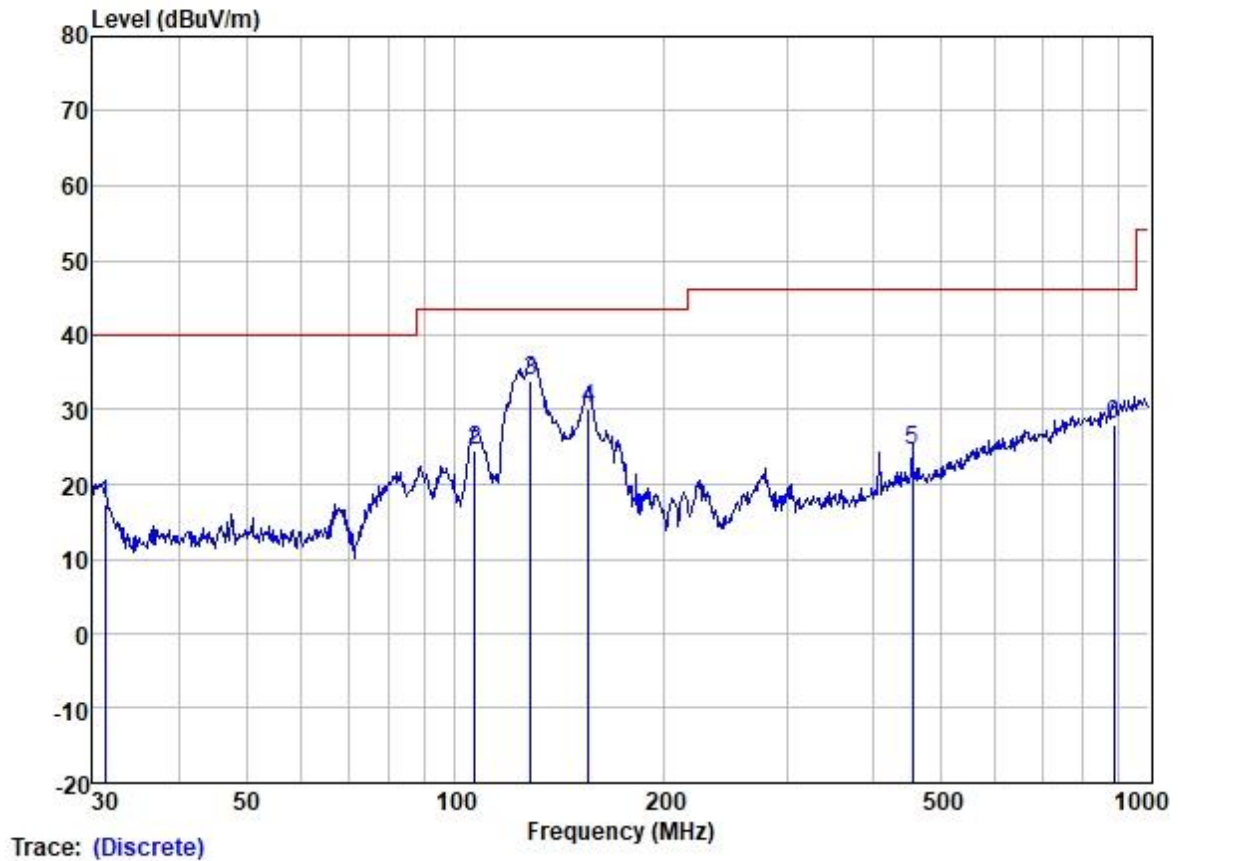
Test Mode: 14; Polarity: Horizontal; Modulation: 802.11b; Bandwidth: 20MHz; Channel: Low



Site : SGS
Job :
Model :
Power :
Test Mode : 14

	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Measured Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	44.120	24.16	13.40	1.12	27.17	11.51	40.00	-28.49	HORIZONTAL	QP
2	109.796	34.50	10.05	1.79	27.06	19.28	43.50	-24.22	HORIZONTAL	QP
3	128.113	37.48	11.70	1.94	27.00	24.12	43.50	-19.38	HORIZONTAL	QP
4	222.170	32.61	9.71	2.67	26.70	18.29	46.00	-27.71	HORIZONTAL	QP
5	408.946	34.14	15.56	3.97	27.36	26.31	46.00	-19.69	HORIZONTAL	QP
6	804.603	26.18	22.51	6.17	28.03	26.83	46.00	-19.17	HORIZONTAL	QP

Test Mode: 14; Polarity: Vertical; Modulation:802.11b; Bandwidth:20MHz; Channel:Low



Site : SGS
Job :
Model :
Power :
Test Mode : 14

	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Measured Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	31.289	31.63	11.85	1.03	27.20	17.31	40.00	-22.69	VERTICAL	QP
2	106.759	40.25	9.69	1.77	27.07	24.64	43.50	-18.86	VERTICAL	QP
3	128.563	47.12	11.75	1.94	27.00	33.81	43.50	-9.69	VERTICAL	QP
4	155.364	41.18	13.34	2.30	26.81	30.01	43.50	-13.49	VERTICAL	QP
5	455.906	31.21	16.91	4.22	27.75	24.59	46.00	-21.41	VERTICAL	QP
6	890.728	25.85	23.22	6.86	27.86	28.07	46.00	-17.93	VERTICAL	QP

7.4 Radiated Spurious Emissions (Above 1GHz)

Test Requirement 47 CFR Part 15, Subpart C 15.205 & 15.209

Test Method: ANSI C63.10 (2013) Section 6.4,6.5,6.6

Measurement Distance: 3m

Limit:

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

Remark: The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90kHz, 110-490kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.

7.4.1 E.U.T. Operation

Operating Environment:

Temperature: 21.3 °C

Humidity: 54.1 % RH

Atmospheric Pressure: 1020 mbar

7.4.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
--------------------------	--------------	-------------

Pre-scan 13

TX mode_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 1Mbps is the worst case of IEEE 802.11b; data rate @ 6Mbps is the worst case of IEEE 802.11g; data rate @ 6.5Mbps is the worst case of IEEE 802.11n(HT20); data rate @ 13.5Mbps is the worst case of IEEE 802.11n(HT40). Only the data of worst case is recorded in the report.

Final test 14

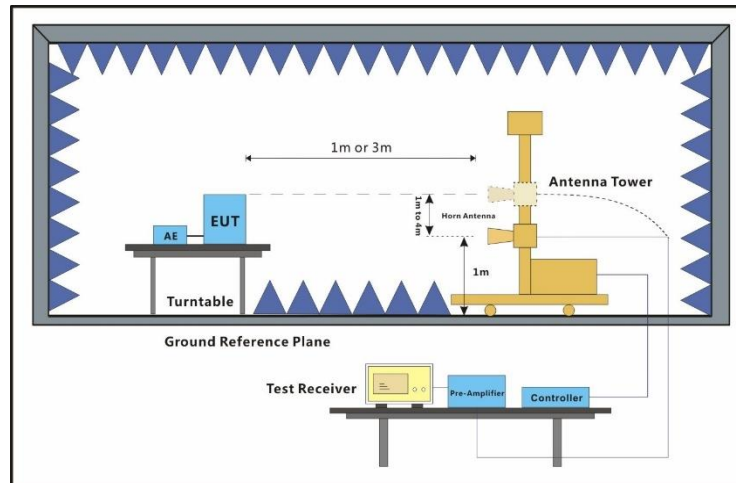
Charge + TX mode_Keep the EUT in charging and continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 1Mbps is the worst case of IEEE 802.11b; data rate @ 6Mbps is the worst case of IEEE 802.11g; data rate @ 6.5Mbps is the worst case of IEEE 802.11n(HT20); data rate @ 13.5Mbps is the worst case of IEEE 802.11n(HT40). Only the data of worst case is recorded in the report.



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7.4.3 Test Setup Diagram



7.4.4 Measurement Procedure and Data

- a. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
- g. Test the EUT in the lowest channel, the middle channel, the Highest channel.
- h. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.
- i. Repeat above procedures until all frequencies measured was complete.

Remark:

1) The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level = Receiver Reading + Antenna Factor + Cable Factor - Preamplifier Factor

2) Scan from 1GHz to 25GHz, the disturbance above 18GHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only above points had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.

3) The field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For the emissions whose peak level is lower than the average limit, only the peak measurement is shown in the report.



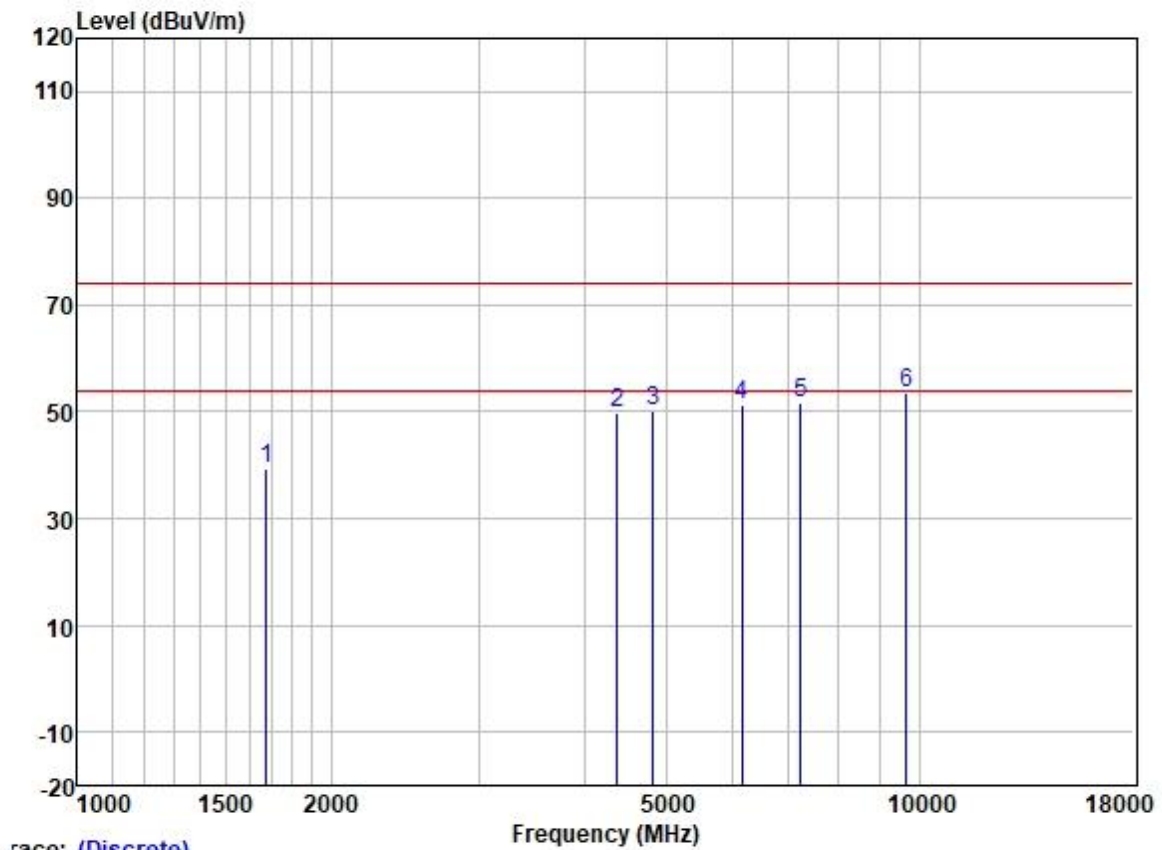
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Guangzhou Branch Testing Laboratory

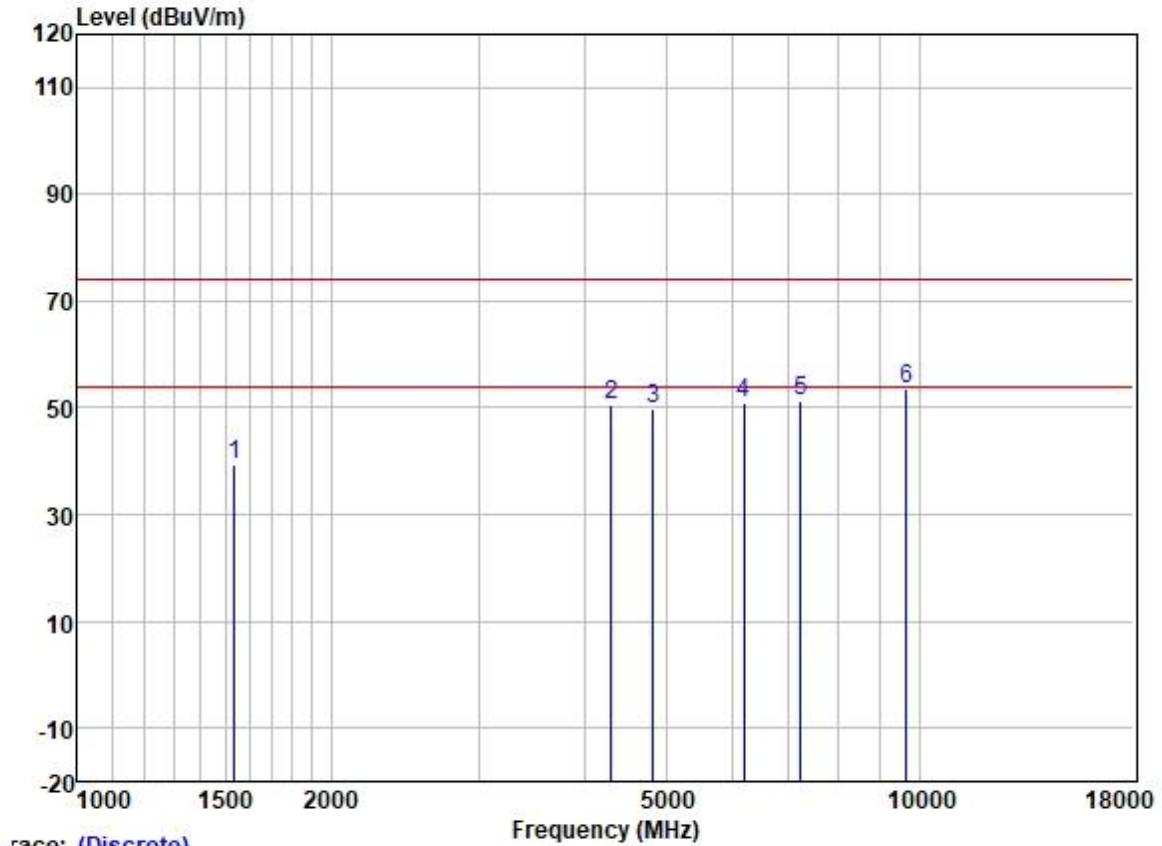
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中国·广州·经济技术开发区科学城科珠路198号 邮编: 510663 t (86-20) 82155555 f (86-20) 82075058 sgs.china@sgs.com

Test Mode: 14; Polarity: Horizontal; Modulation:802.11b; Bandwidth:20MHz; Channel:Low



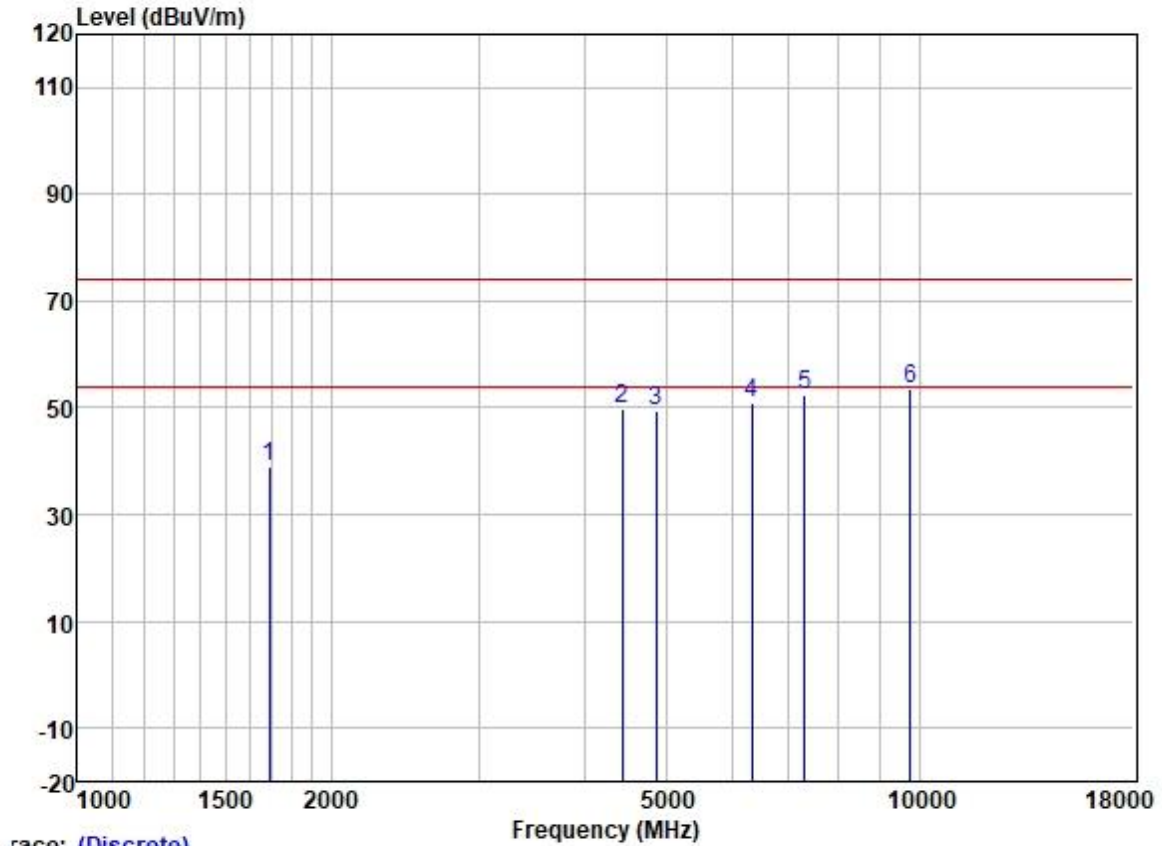
	Freq	ReadAntenna	Cable	Preamp	Limit	Over			
	MHz	Level	Factor	Loss	Factor	Level	Line	Limit	Pol/Phase
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	Remark
1	1677.621	48.87	25.68	2.80	37.91	39.44	74.00	-34.56	HORIZONTAL Peak
2	4379.699	51.23	30.64	4.69	36.81	49.75	74.00	-24.25	HORIZONTAL Peak
3	4824.000	49.97	31.45	5.42	36.83	50.01	74.00	-23.99	HORIZONTAL Peak
4	6159.797	49.43	32.83	6.10	36.93	51.43	74.00	-22.57	HORIZONTAL Peak
5	7236.000	47.43	35.70	6.03	37.39	51.77	74.00	-22.23	HORIZONTAL Peak
6	9648.000	45.63	38.40	7.06	37.42	53.67	74.00	-20.33	HORIZONTAL Peak

Test Mode: 14; Polarity: Vertical; Modulation:802.11b; Bandwidth:20MHz; Channel:Low



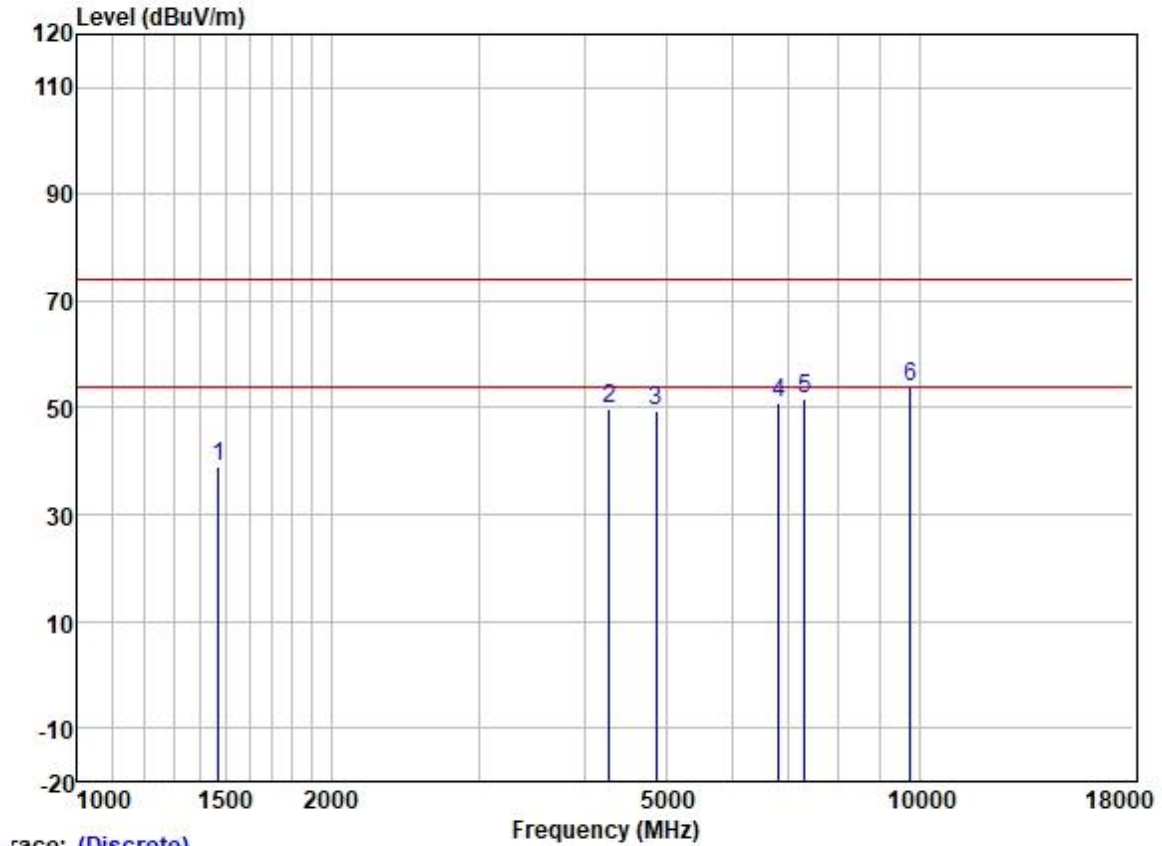
		Freq	ReadAntenna Level Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Pol/Phase	Remark	
		MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1		1538.281	49.19	25.53	2.80	38.03	39.49	74.00	-34.51	VERTICAL	Peak
2		4304.400	52.11	30.48	4.65	36.81	50.43	74.00	-23.57	VERTICAL	Peak
3		4824.000	49.88	31.45	5.42	36.83	49.92	74.00	-24.08	VERTICAL	Peak
4		6195.508	48.95	32.96	6.07	36.94	51.04	74.00	-22.96	VERTICAL	Peak
5		7236.000	47.12	35.70	6.03	37.39	51.46	74.00	-22.54	VERTICAL	Peak
6		9648.000	45.69	38.40	7.06	37.42	53.73	74.00	-20.27	VERTICAL	Peak

Test Mode: 14; Polarity: Horizontal; Modulation:802.11b; Bandwidth:20MHz; Channel:middle



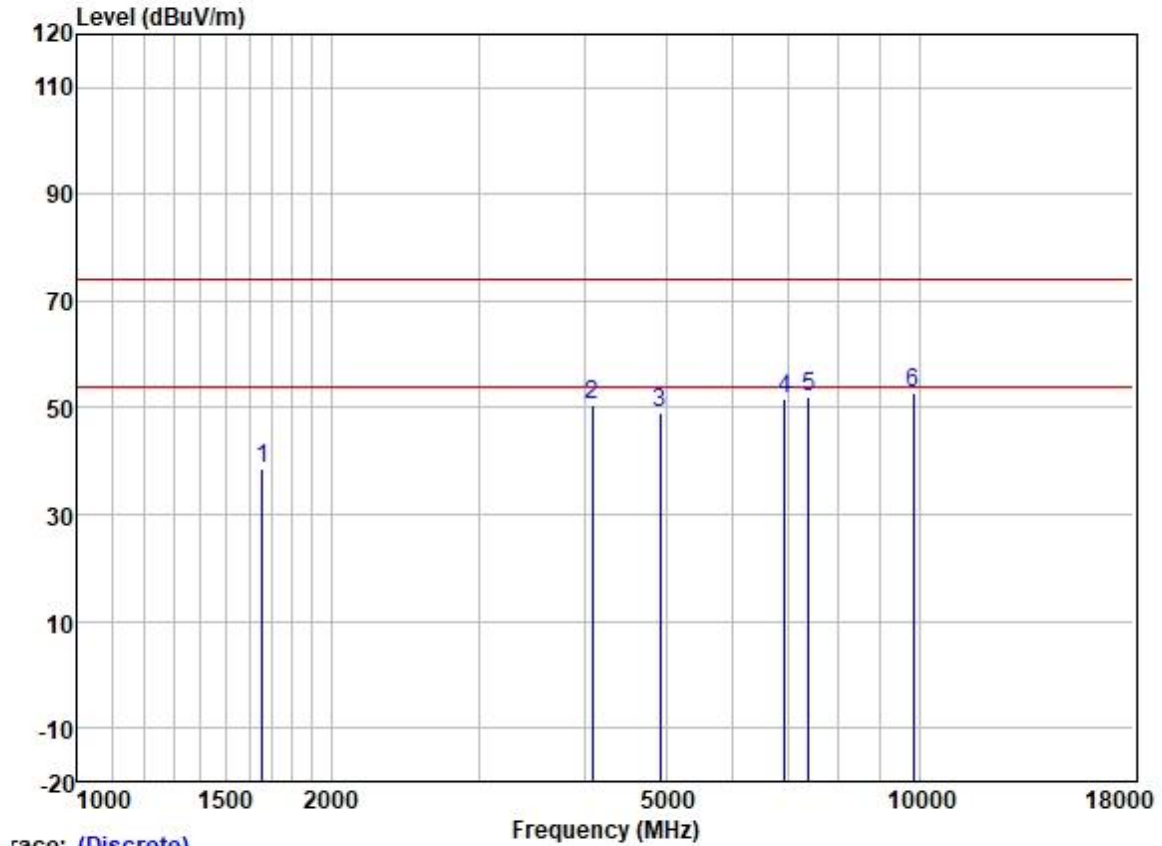
	Freq	ReadAntenna	Cable	Preamp		Limit	Over			
	MHz	Level	Factor	Loss	Factor	Level	Line	Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	1692.231	48.44	25.70	2.80	37.89	39.05	74.00	-34.95	HORIZONTAL	Peak
2	4443.453	51.24	30.73	4.83	36.81	49.99	74.00	-24.01	HORIZONTAL	Peak
3	4874.000	49.15	31.54	5.50	36.84	49.35	74.00	-24.65	HORIZONTAL	Peak
4	6322.136	48.62	33.51	5.95	36.97	51.11	74.00	-22.89	HORIZONTAL	Peak
5	7311.000	47.95	35.93	6.11	37.42	52.57	74.00	-21.43	HORIZONTAL	Peak
6	9748.000	45.45	38.50	7.02	37.41	53.56	74.00	-20.44	HORIZONTAL	Peak

Test Mode: 14; Polarity: Vertical; Modulation:802.11b; Bandwidth:20MHz; Channel:middle



	Freq	ReadAntenna	Cable	Preamp		Limit	Over			
	MHz	Level	Factor	Loss	Factor	Level	Line	Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	1468.761	48.78	25.47	2.75	38.13	38.87	74.00	-35.13	VERTICAL	Peak
2	4279.589	51.71	30.42	4.63	36.81	49.95	74.00	-24.05	VERTICAL	Peak
3	4874.000	49.06	31.54	5.50	36.84	49.26	74.00	-24.74	VERTICAL	Peak
4	6815.551	47.70	34.70	5.82	37.13	51.09	74.00	-22.91	VERTICAL	Peak
5	7311.000	46.95	35.93	6.11	37.42	51.57	74.00	-22.43	VERTICAL	Peak
6	9748.000	45.79	38.50	7.02	37.41	53.90	74.00	-20.10	VERTICAL	Peak

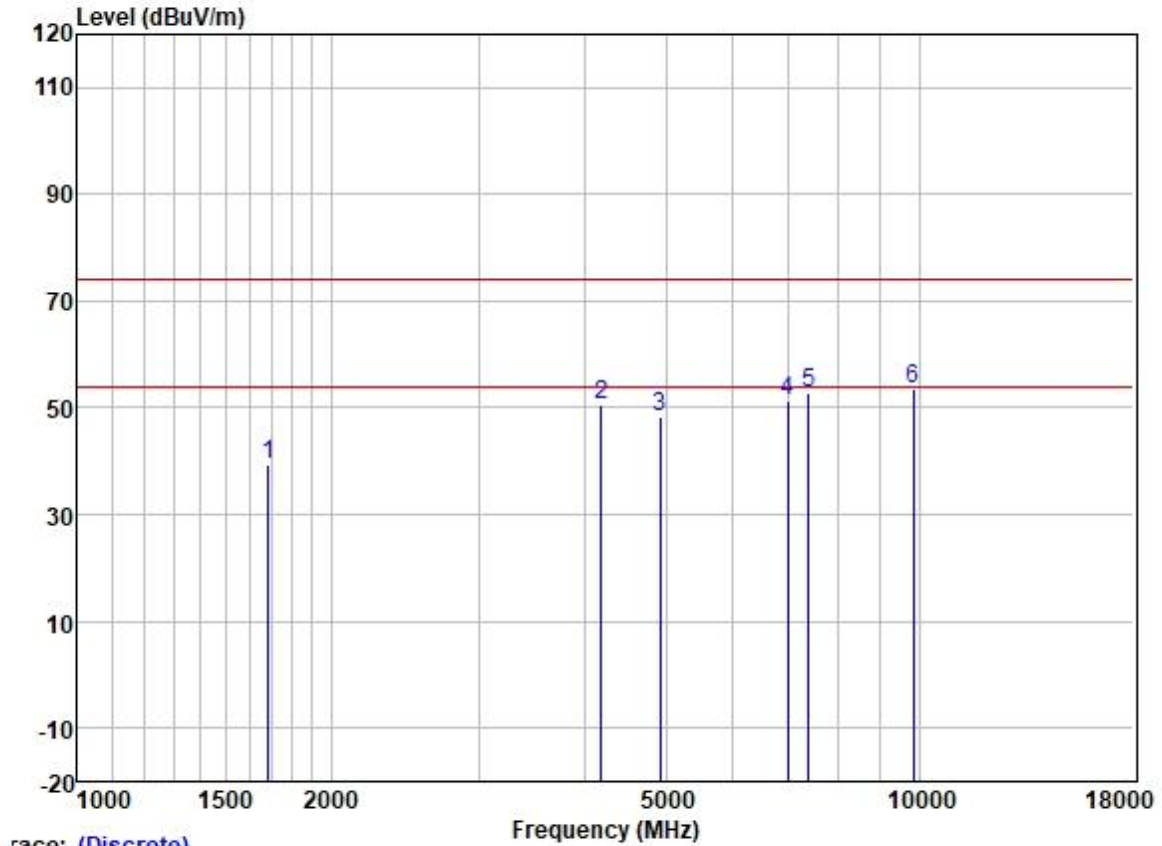
Test Mode: 14; Polarity: Horizontal; Modulation:802.11b; Bandwidth:20MHz; Channel:High



Trace: (Discrete)

	Freq	ReadAntenna	Cable	Preamp		Limit	Over		
	MHz	Level	Factor	Loss	Factor	Level	Line	Limit	Pol/Phase
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	1658.337	48.11	25.65	2.80	37.93	38.63	74.00	-35.37	HORIZONTAL Peak
2	4086.182	52.98	29.92	4.60	36.80	50.70	74.00	-23.30	HORIZONTAL Peak
3	4924.000	48.78	31.62	5.60	36.84	49.16	74.00	-24.84	HORIZONTAL Peak
4	6914.763	48.28	34.89	5.81	37.19	51.79	74.00	-22.21	HORIZONTAL Peak
5	7386.000	47.22	36.17	6.19	37.45	52.13	74.00	-21.87	HORIZONTAL Peak
6	9848.000	44.81	38.58	6.99	37.41	52.97	74.00	-21.03	HORIZONTAL Peak

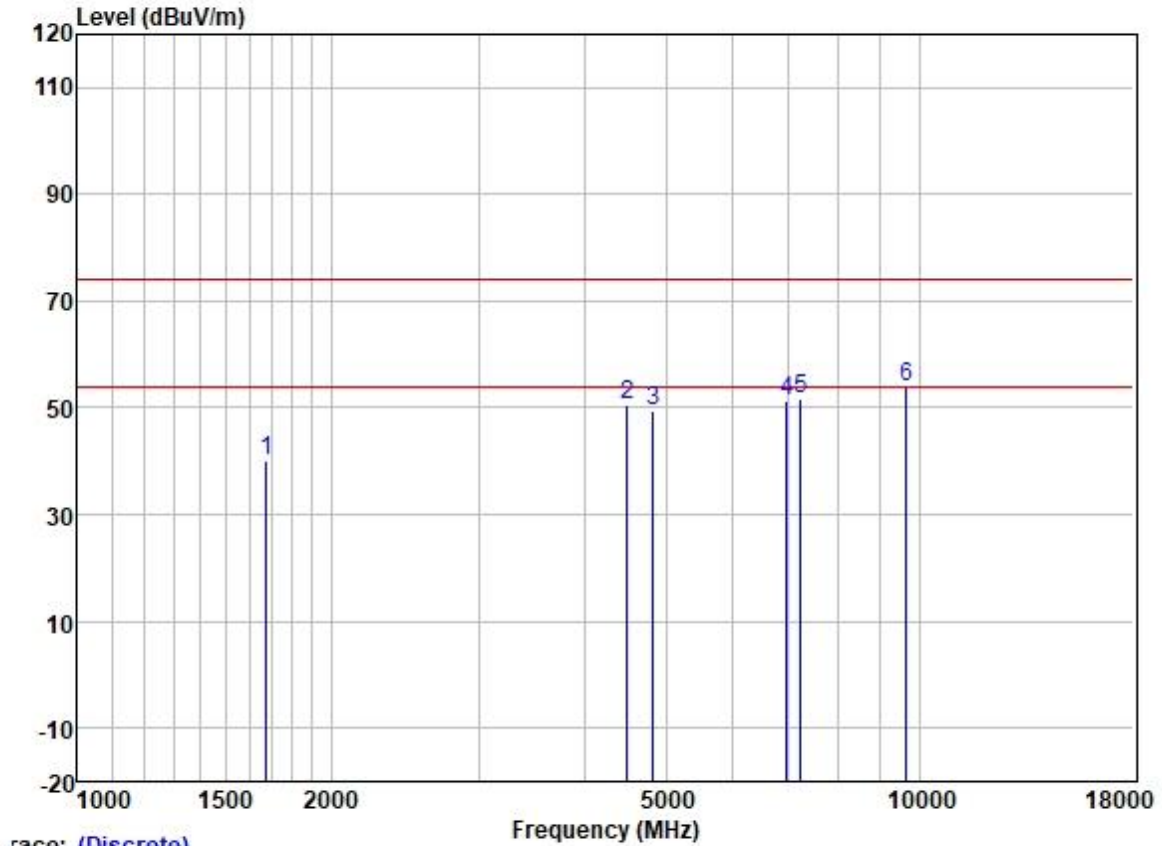
Test Mode: 14; Polarity: Vertical; Modulation:802.11b; Bandwidth:20MHz; Channel:High



Trace: (Discrete)

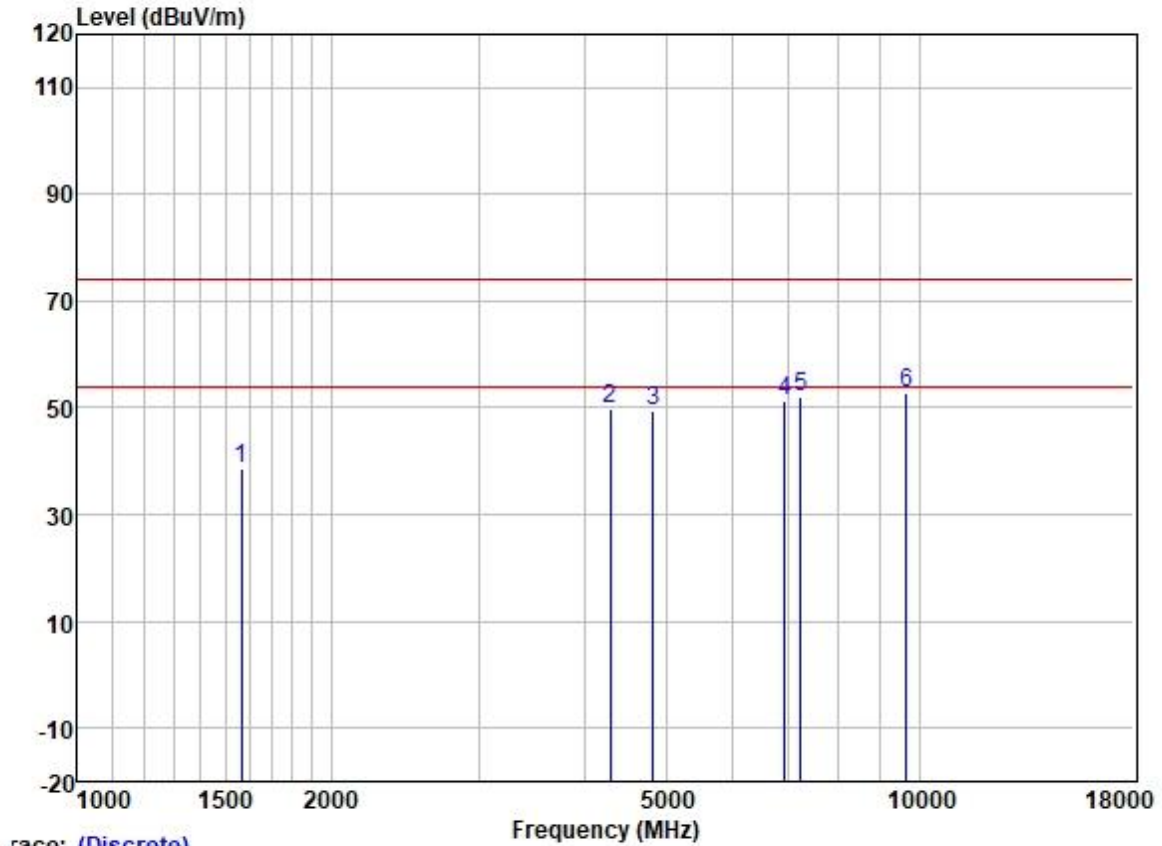
	Freq	Read	Antenna	Cable	Preamp	Limit	Over		
	MHz	Level	Factor	Loss	Factor	Line	Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dB		
1	1687.347	48.88	25.69	2.80	37.91	39.46	74.00	-34.54	VERTICAL Peak
2	4193.872	52.62	30.15	4.60	36.81	50.56	74.00	-23.44	VERTICAL Peak
3	4924.000	48.10	31.62	5.60	36.84	48.48	74.00	-25.52	VERTICAL Peak
4	6974.982	47.67	34.97	5.81	37.23	51.22	74.00	-22.78	VERTICAL Peak
5	7386.000	48.01	36.17	6.19	37.45	52.92	74.00	-21.08	VERTICAL Peak
6	9848.000	45.43	38.58	6.99	37.41	53.59	74.00	-20.41	VERTICAL Peak

Test Mode: 14; Polarity: Horizontal; Modulation:802.11g; Bandwidth:20MHz; Channel:Low



	Freq	ReadAntenna	Cable	Preamp	Limit	Over			
	MHz	Level	Factor	Loss	Factor	Level	Line	Limit	Pol/Phase
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	dB
1	1677.621	49.45	25.68	2.80	37.91	40.02	74.00	-33.98	HORIZONTAL Peak
2	4495.125	51.46	30.80	5.05	36.82	50.49	74.00	-23.51	HORIZONTAL Peak
3	4824.000	49.30	31.45	5.42	36.83	49.34	74.00	-24.66	HORIZONTAL Peak
4	6954.852	47.82	34.95	5.81	37.21	51.37	74.00	-22.63	HORIZONTAL Peak
5	7236.000	47.42	35.70	6.03	37.39	51.76	74.00	-22.24	HORIZONTAL Peak
6	9648.000	45.73	38.40	7.06	37.42	53.77	74.00	-20.23	HORIZONTAL Peak

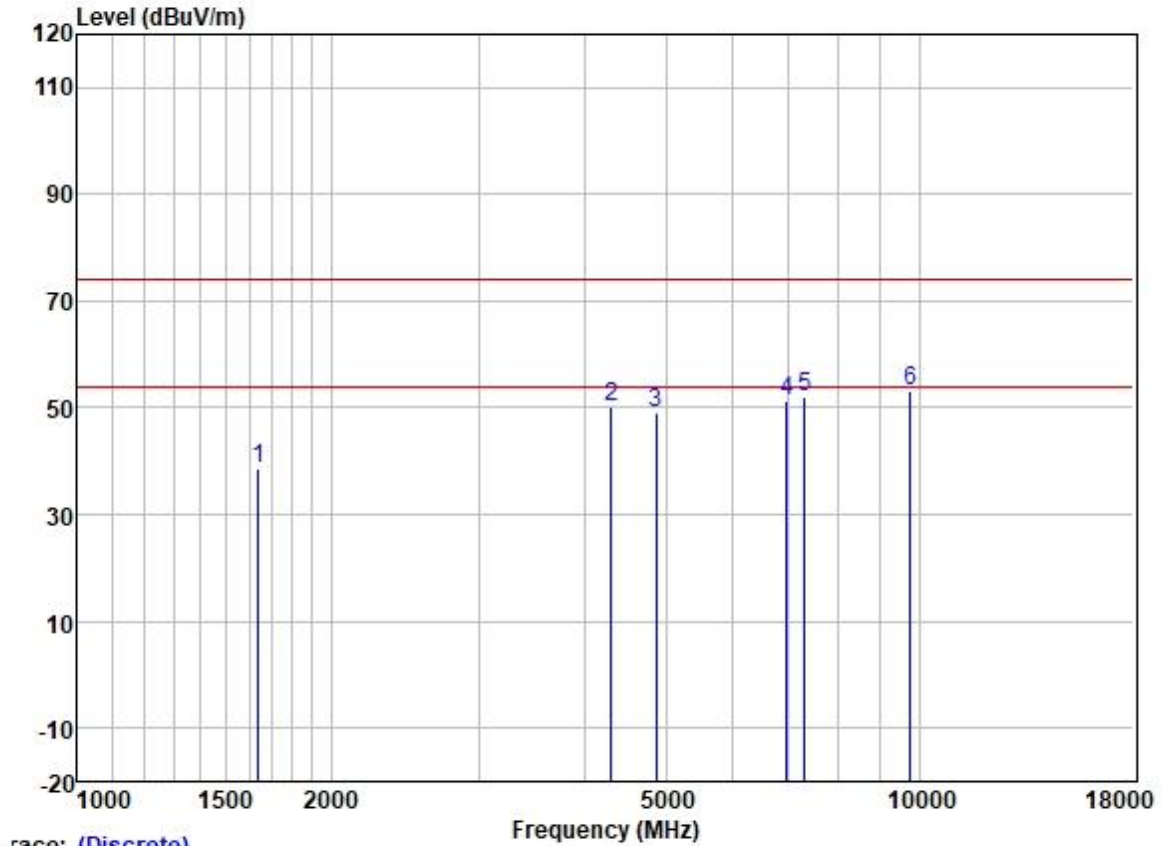
Test Mode: 14; Polarity: Vertical; Modulation:802.11g; Bandwidth:20MHz; Channel:Low



Trace: (Discrete)

	Freq	ReadAntenna	Cable	Preamp		Limit	Over		
	MHz	Level	Factor	Loss	Factor	Line	Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	1565.191	48.26	25.55	2.80	38.00	38.61	74.00	-35.39	VERTICAL Peak
2	4291.977	51.64	30.45	4.64	36.81	49.92	74.00	-24.08	VERTICAL Peak
3	4824.000	49.50	31.45	5.42	36.83	49.54	74.00	-24.46	VERTICAL Peak
4	6914.763	47.90	34.89	5.81	37.19	51.41	74.00	-22.59	VERTICAL Peak
5	7236.000	47.88	35.70	6.03	37.39	52.22	74.00	-21.78	VERTICAL Peak
6	9648.000	44.67	38.40	7.06	37.42	52.71	74.00	-21.29	VERTICAL Peak

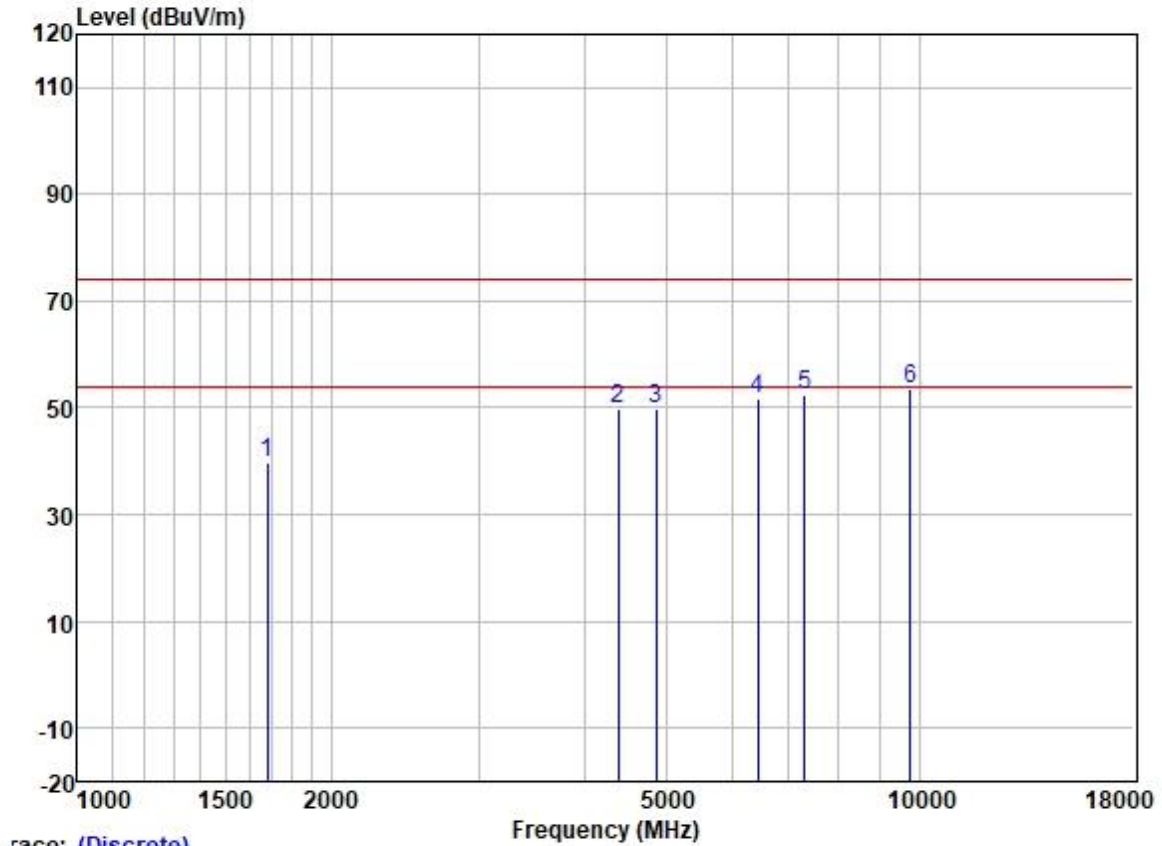
Test Mode: 14; Polarity: Horizontal; Modulation:802.11g; Bandwidth:20MHz; Channel:middle



Trace: (Discrete)

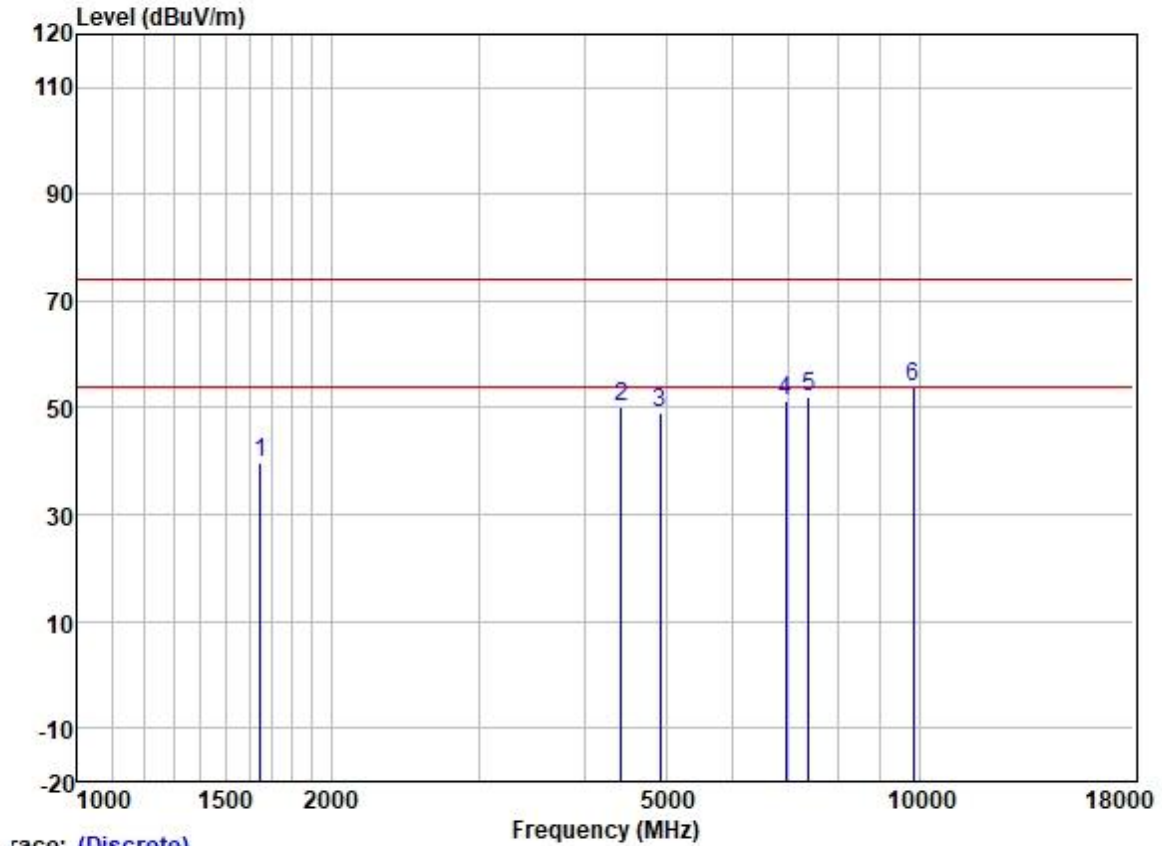
	Freq	Read	Antenna	Cable	Preamp	Limit	Over		
	MHz	Level	Factor	Loss	Factor	Line	Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	1639.274	48.22	25.62	2.80	37.93	38.71	74.00	-35.29	HORIZONTAL Peak
2	4304.400	52.04	30.48	4.65	36.81	50.36	74.00	-23.64	HORIZONTAL Peak
3	4874.000	48.80	31.54	5.50	36.84	49.00	74.00	-25.00	HORIZONTAL Peak
4	6954.852	47.75	34.95	5.81	37.21	51.30	74.00	-22.70	HORIZONTAL Peak
5	7311.000	47.53	35.93	6.11	37.42	52.15	74.00	-21.85	HORIZONTAL Peak
6	9748.000	44.93	38.50	7.02	37.41	53.04	74.00	-20.96	HORIZONTAL Peak

Test Mode: 14; Polarity: Vertical; Modulation:802.11g; Bandwidth:20MHz; Channel:middle



	Freq	ReadAntenna	Cable	Preamp		Limit	Over			
	MHz	Level	Factor	Loss	Factor	Level	Line	Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	1682.477	49.32	25.68	2.80	37.91	39.89	74.00	-34.11	VERTICAL	Peak
2	4392.376	51.17	30.66	4.70	36.81	49.72	74.00	-24.28	VERTICAL	Peak
3	4874.000	49.47	31.54	5.50	36.84	49.67	74.00	-24.33	VERTICAL	Peak
4	6432.732	48.86	33.83	5.88	36.99	51.58	74.00	-22.42	VERTICAL	Peak
5	7311.000	47.67	35.93	6.11	37.42	52.29	74.00	-21.71	VERTICAL	Peak
6	9748.000	45.27	38.50	7.02	37.41	53.38	74.00	-20.62	VERTICAL	Peak

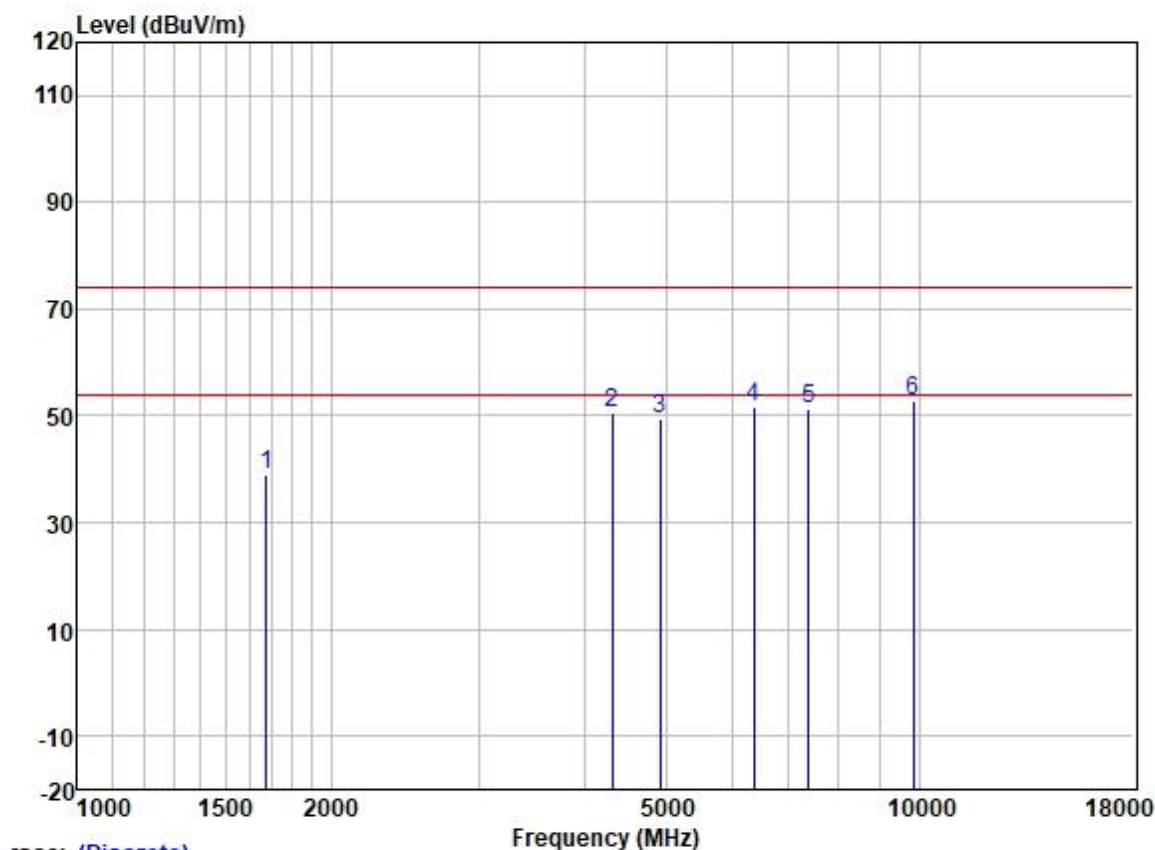
Test Mode: 14; Polarity: Horizontal; Modulation:802.11g; Bandwidth:20MHz; Channel:High



Trace: (Discrete)

	Freq	Read	Antenna	Cable	Preamp	Limit	Over		
	MHz	Level	Factor	Loss	Factor	Line	Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	1648.778	49.07	25.63	2.80	37.93	39.57	74.00	-34.43	HORIZONTAL Peak
2	4430.628	51.54	30.72	4.78	36.81	50.23	74.00	-23.77	HORIZONTAL Peak
3	4924.000	48.75	31.62	5.60	36.84	49.13	74.00	-24.87	HORIZONTAL Peak
4	6934.778	47.92	34.92	5.81	37.19	51.46	74.00	-22.54	HORIZONTAL Peak
5	7386.000	47.11	36.17	6.19	37.45	52.02	74.00	-21.98	HORIZONTAL Peak
6	9848.000	45.72	38.58	6.99	37.41	53.88	74.00	-20.12	HORIZONTAL Peak

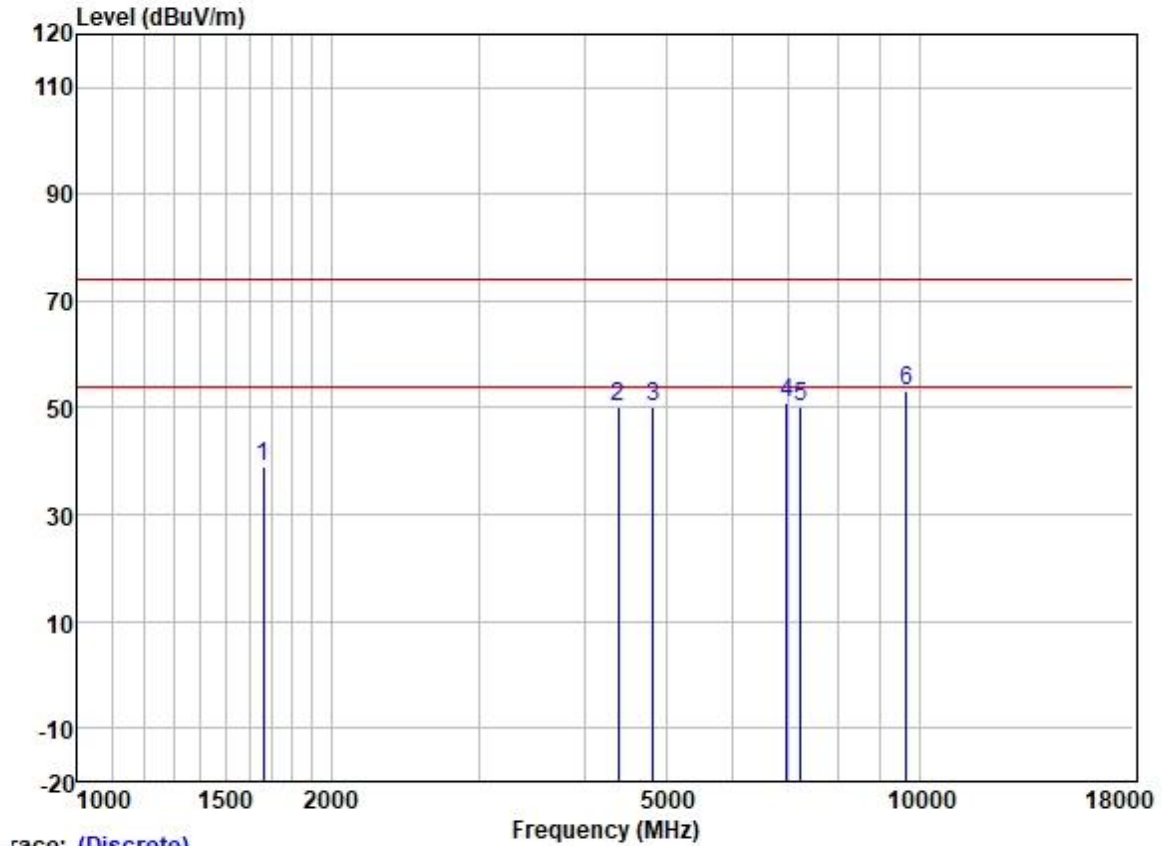
Test Mode: 14; Polarity: Vertical; Modulation:802.11g; Bandwidth:20MHz; Channel:High



Trace: (Discrete)

	Freq	ReadAntenna	Cable	Preamp		Limit	Over			
	Level	Factor	Loss	Factor	Level	Line	Limit	Pol/Phase	Remark	
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	1677.621	48.23	25.68	2.80	37.91	38.80	74.00	-35.20	VERTICAL	Peak
2	4316.859	52.11	30.51	4.66	36.81	50.47	74.00	-23.53	VERTICAL	Peak
3	4924.000	49.21	31.62	5.60	36.84	49.59	74.00	-24.41	VERTICAL	Peak
4	6358.789	48.98	33.63	5.92	36.97	51.56	74.00	-22.44	VERTICAL	Peak
5	7386.000	46.45	36.17	6.19	37.45	51.36	74.00	-22.64	VERTICAL	Peak
6	9848.000	44.53	38.58	6.99	37.41	52.69	74.00	-21.31	VERTICAL	Peak

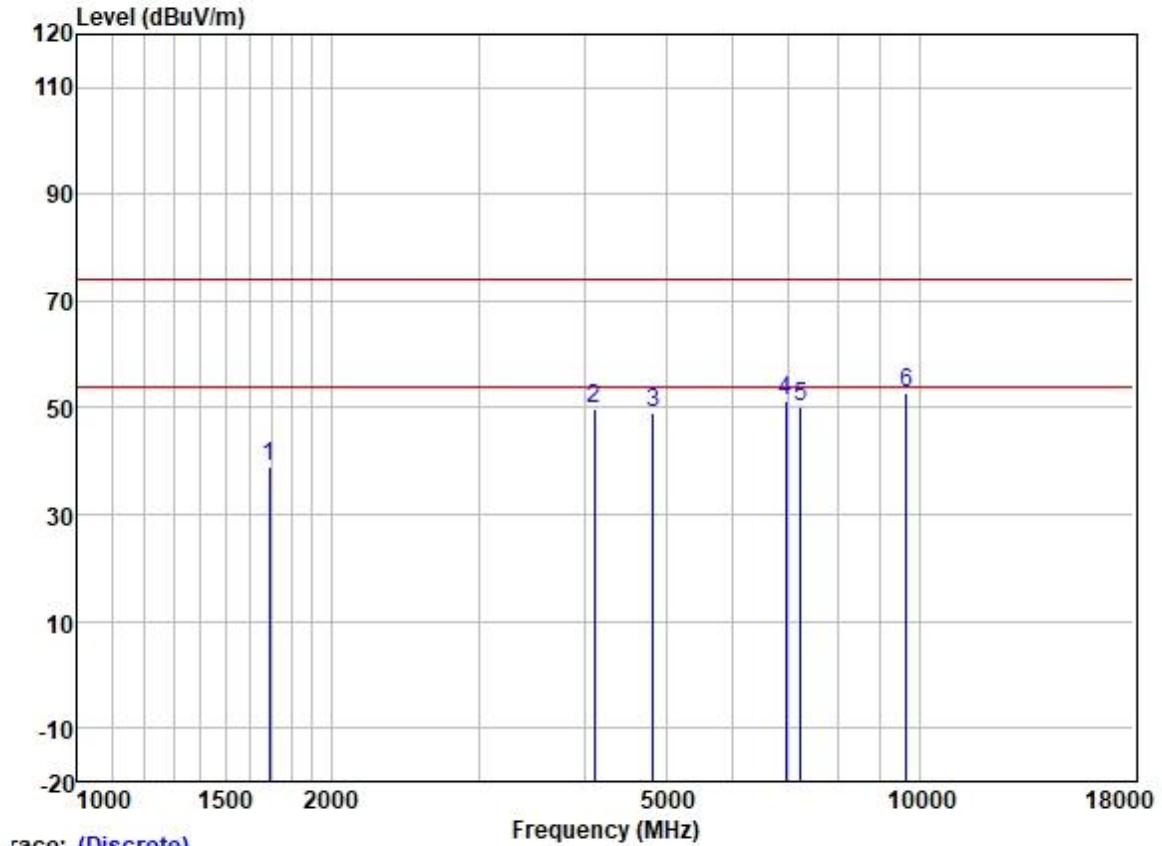
Test Mode: 14; Polarity: Horizontal; Modulation:802.11n; Bandwidth:20MHz; Channel:Low



Trace: (Discrete)

	Freq	ReadAntenna	Cable	Preamp		Limit	Over		
	MHz	Level	Factor	Loss	Factor	Level	Line	Limit	Pol/Phase
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	1663.137	48.48	25.65	2.80	37.91	39.02	74.00	-34.98	HORIZONTAL Peak
2	4392.376	51.48	30.66	4.70	36.81	50.03	74.00	-23.97	HORIZONTAL Peak
3	4824.000	50.10	31.45	5.42	36.83	50.14	74.00	-23.86	HORIZONTAL Peak
4	6954.852	47.31	34.95	5.81	37.21	50.86	74.00	-23.14	HORIZONTAL Peak
5	7236.000	45.94	35.70	6.03	37.39	50.28	74.00	-23.72	HORIZONTAL Peak
6	9648.000	45.26	38.40	7.06	37.42	53.30	74.00	-20.70	HORIZONTAL Peak

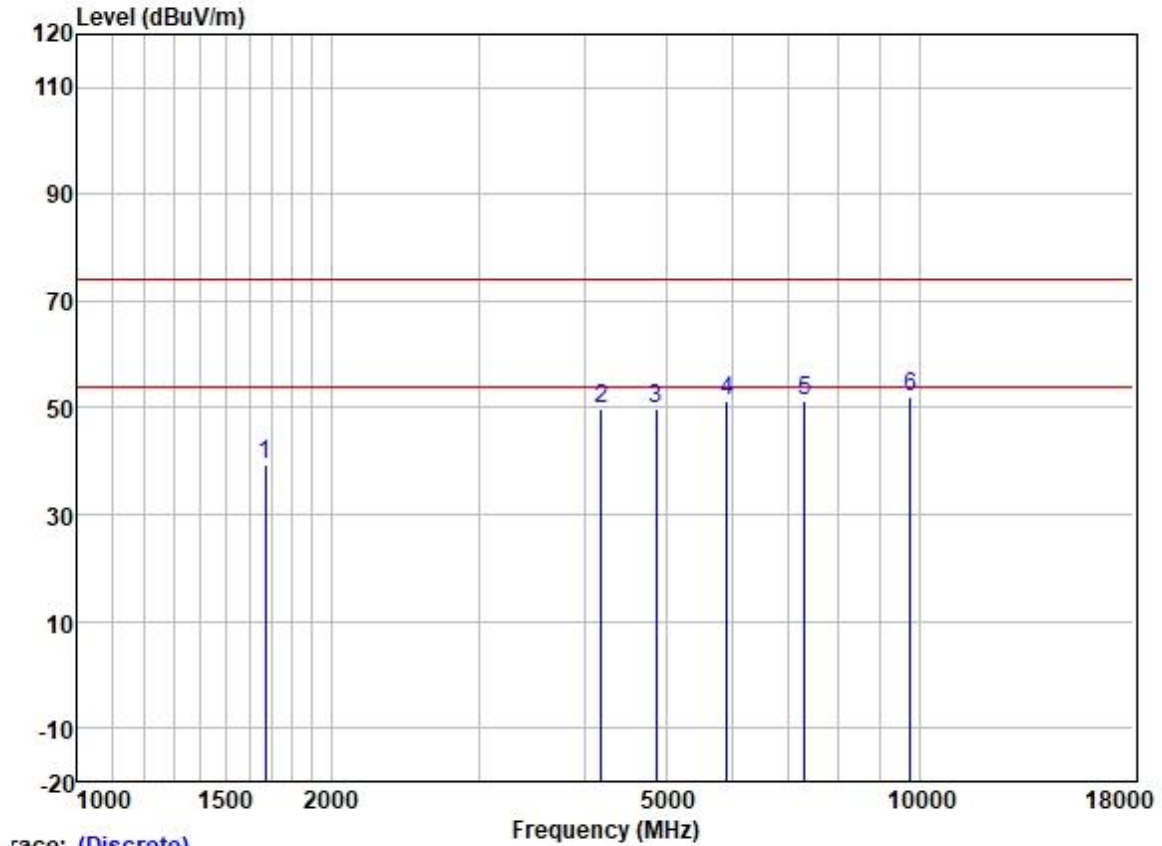
Test Mode: 14; Polarity: Vertical; Modulation:802.11n; Bandwidth:20MHz; Channel:Low



Trace: (Discrete)

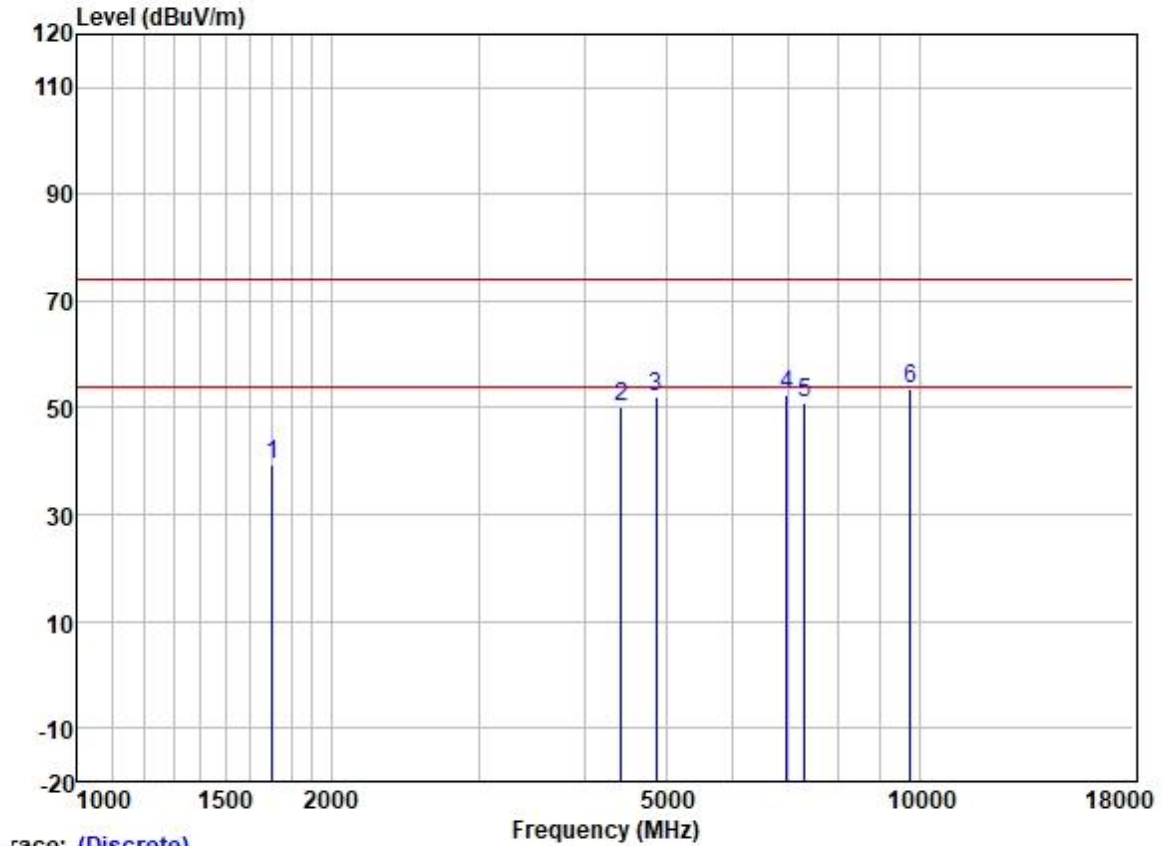
	Freq	ReadAntenna	Cable	Preamp		Limit	Over			
	MHz	Level	Factor	Loss	Factor	Level	Line	Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	1692.231	48.50	25.70	2.80	37.89	39.11	74.00	-34.89	VERTICAL	Peak
2	4109.872	51.99	29.96	4.60	36.80	49.75	74.00	-24.25	VERTICAL	Peak
3	4824.000	49.06	31.45	5.42	36.83	49.10	74.00	-24.90	VERTICAL	Peak
4	6934.778	47.61	34.92	5.81	37.19	51.15	74.00	-22.85	VERTICAL	Peak
5	7236.000	45.93	35.70	6.03	37.39	50.27	74.00	-23.73	VERTICAL	Peak
6	9648.000	44.83	38.40	7.06	37.42	52.87	74.00	-21.13	VERTICAL	Peak

Test Mode: 14; Polarity: Horizontal; Modulation:802.11n; Bandwidth:20MHz; Channel:middle



	Freq	ReadAntenna	Cable	Preamp		Limit	Over		
	MHz	Level	Factor	Loss	Factor	Level	Line	Limit	Pol/Phase
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	Remark
1	1672.779	48.96	25.67	2.80	37.91	39.52	74.00	-34.48	HORIZONTAL Peak
2	4193.872	52.04	30.15	4.60	36.81	49.98	74.00	-24.02	HORIZONTAL Peak
3	4874.000	49.54	31.54	5.50	36.84	49.74	74.00	-24.26	HORIZONTAL Peak
4	5915.516	50.06	32.33	5.95	36.90	51.44	74.00	-22.56	HORIZONTAL Peak
5	7311.000	46.87	35.93	6.11	37.42	51.49	74.00	-22.51	HORIZONTAL Peak
6	9748.000	43.88	38.50	7.02	37.41	51.99	74.00	-22.01	HORIZONTAL Peak

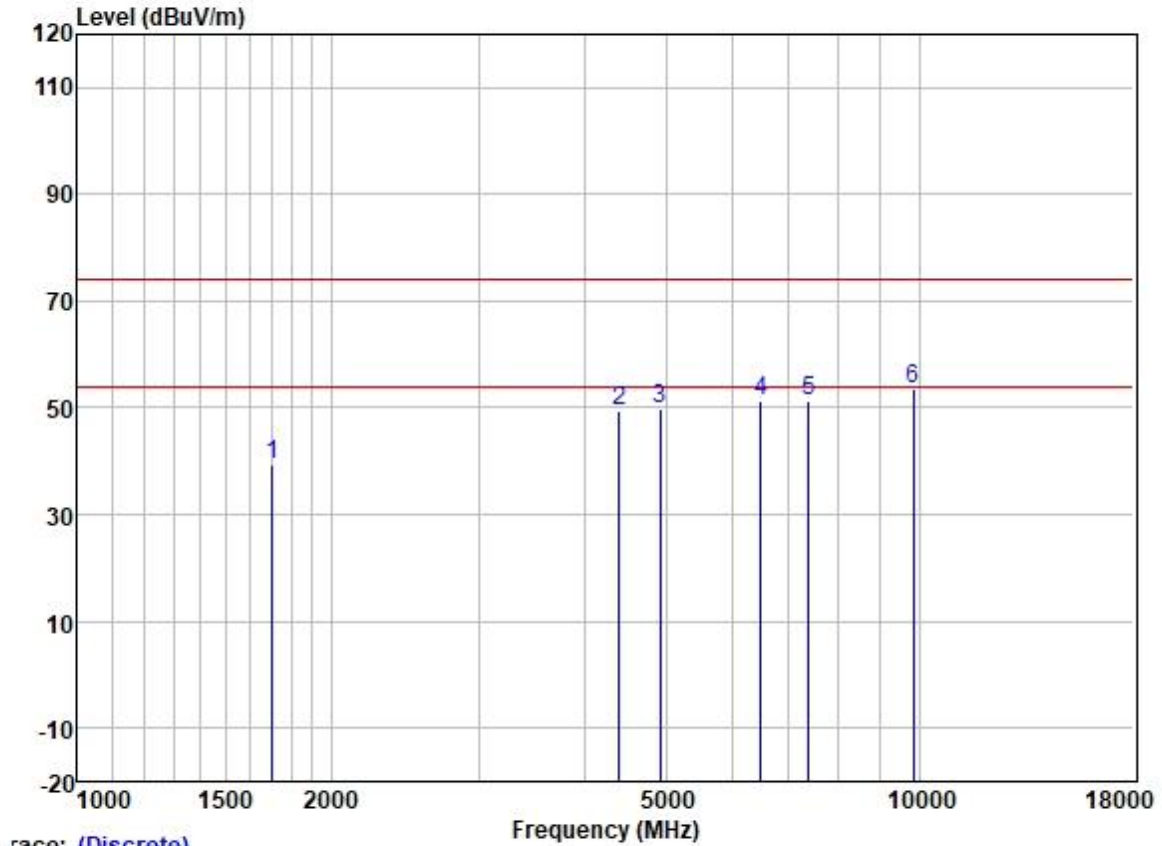
Test Mode: 14; Polarity: Vertical; Modulation:802.11n; Bandwidth:20MHz; Channel:middle



Trace: (Discrete)

	Freq	ReadAntenna	Cable	Preamp		Limit	Over			
	MHz	Level	Factor	Loss	Factor	Level	Line	Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	1702.042	48.79	25.72	2.80	37.89	39.42	74.00	-34.58	VERTICAL	Peak
2	4430.628	51.58	30.72	4.78	36.81	50.27	74.00	-23.73	VERTICAL	Peak
3	4874.000	51.72	31.54	5.50	36.84	51.92	74.00	-22.08	VERTICAL	Peak
4	6954.852	48.75	34.95	5.81	37.21	52.30	74.00	-21.70	VERTICAL	Peak
5	7311.000	46.44	35.93	6.11	37.42	51.06	74.00	-22.94	VERTICAL	Peak
6	9748.000	45.36	38.50	7.02	37.41	53.47	74.00	-20.53	VERTICAL	Peak

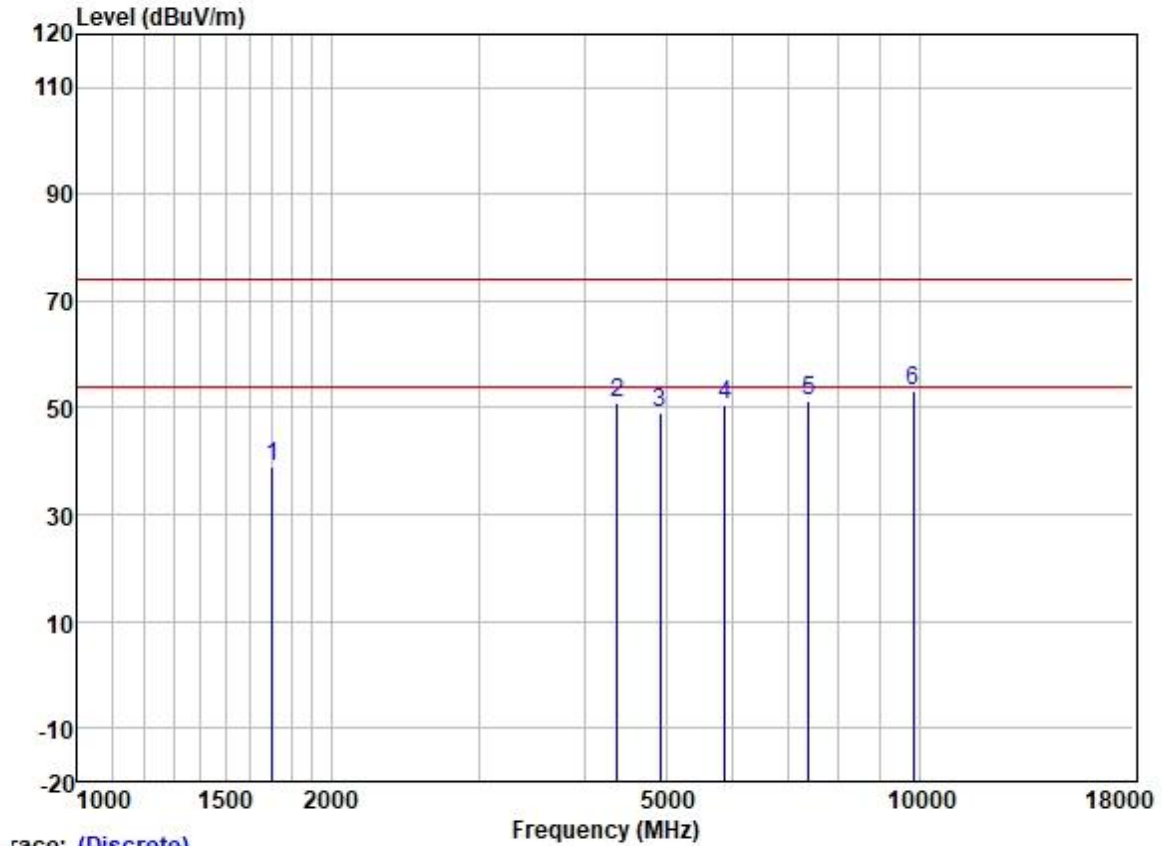
Test Mode: 14; Polarity: Horizontal; Modulation:802.11n; Bandwidth:20MHz; Channel:High



race: (Discrete)

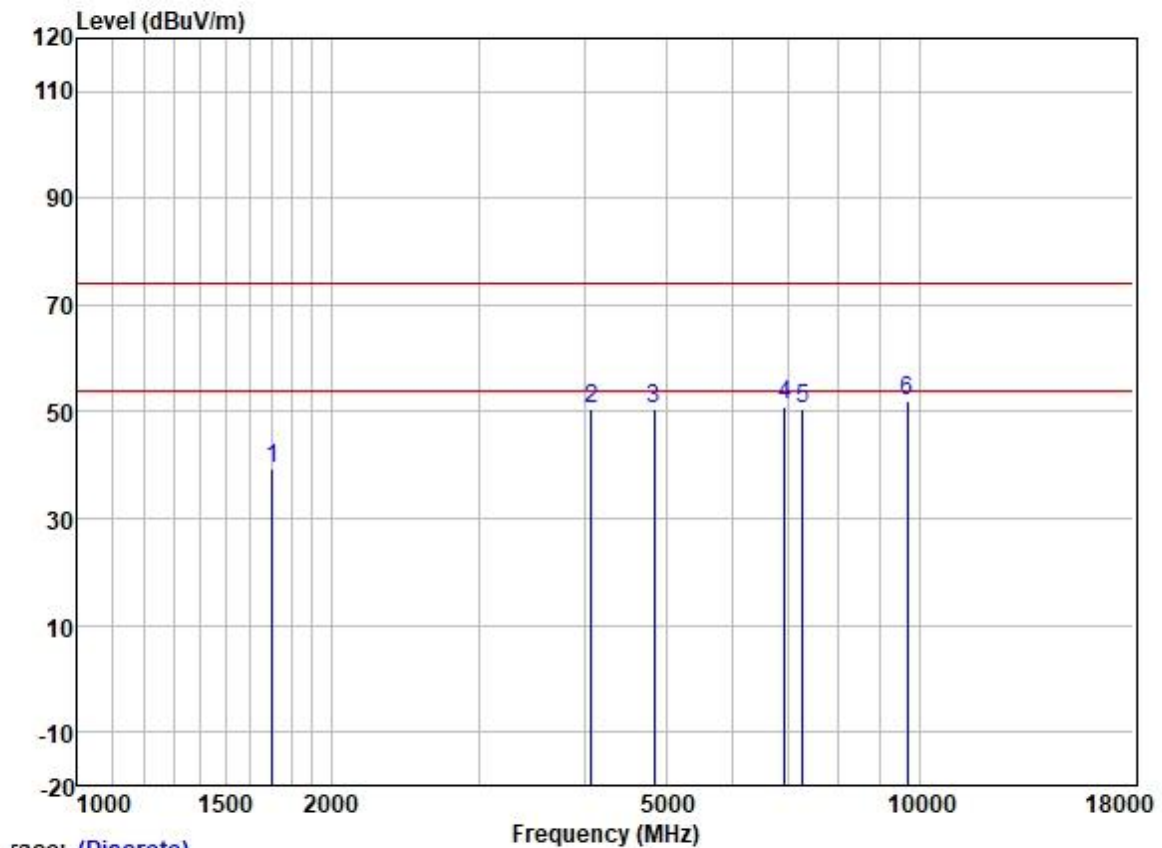
	Freq	ReadAntenna	Cable	Preamp		Limit	Over			
	MHz	Level	Factor	Loss	Factor	Level	Line	Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	1702.042	48.64	25.72	2.80	37.89	39.27	74.00	-34.73	HORIZONTAL	Peak
2	4405.090	50.90	30.68	4.70	36.81	49.47	74.00	-24.53	HORIZONTAL	Peak
3	4924.000	49.39	31.62	5.60	36.84	49.77	74.00	-24.23	HORIZONTAL	Peak
4	6488.754	48.52	33.96	5.85	37.01	51.32	74.00	-22.68	HORIZONTAL	Peak
5	7386.000	46.37	36.17	6.19	37.45	51.28	74.00	-22.72	HORIZONTAL	Peak
6	9848.000	45.20	38.58	6.99	37.41	53.36	74.00	-20.64	HORIZONTAL	Peak

Test Mode: 14; Polarity: Vertical; Modulation:802.11n; Bandwidth:20MHz; Channel:High



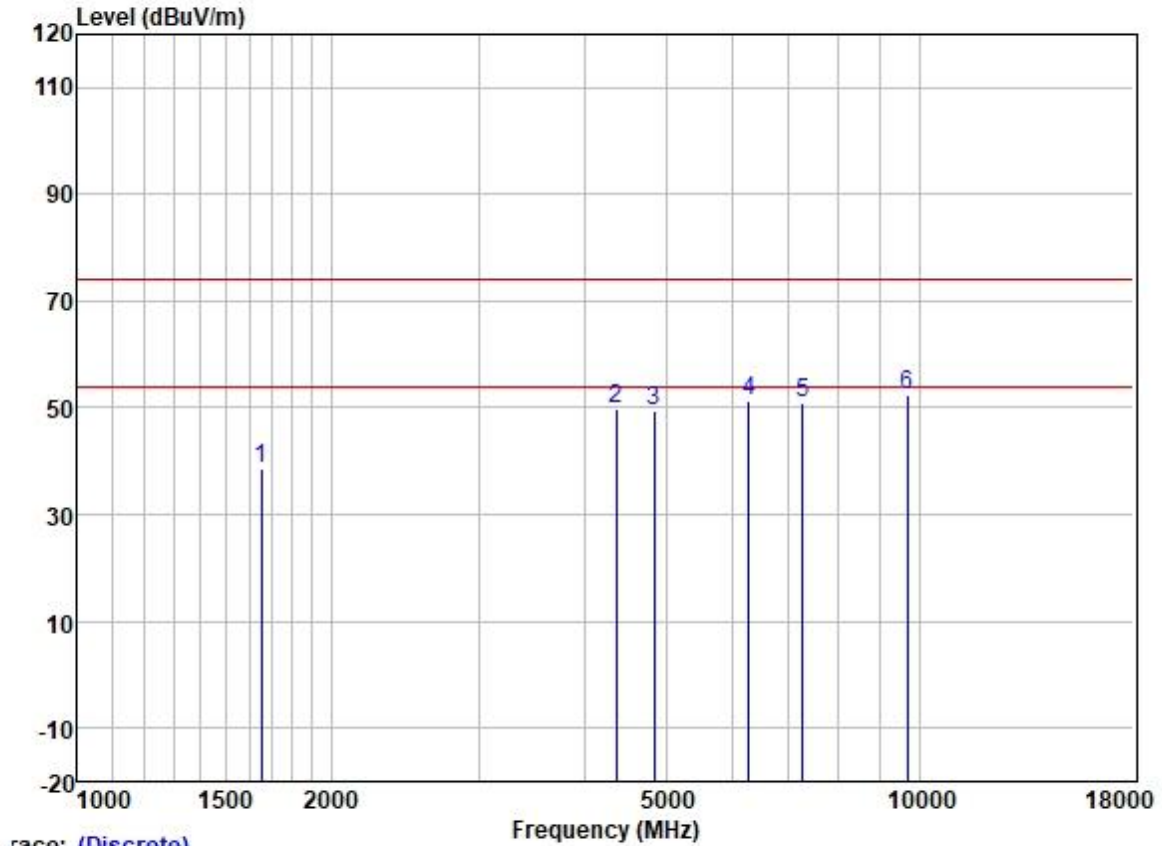
	Freq	ReadAntenna	Cable	Preamp		Limit	Over			
	MHz	Level	Factor	Loss	Factor	Level	Line	Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	1702.042	48.37	25.72	2.80	37.89	39.00	74.00	-35.00	VERTICAL	Peak
2	4379.699	52.58	30.64	4.69	36.81	51.10	74.00	-22.90	VERTICAL	Peak
3	4924.000	48.72	31.62	5.60	36.84	49.10	74.00	-24.90	VERTICAL	Peak
4	5881.418	49.36	32.29	5.93	36.90	50.68	74.00	-23.32	VERTICAL	Peak
5	7386.000	46.33	36.17	6.19	37.45	51.24	74.00	-22.76	VERTICAL	Peak
6	9848.000	45.03	38.58	6.99	37.41	53.19	74.00	-20.81	VERTICAL	Peak

Test Mode: 14; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:Low



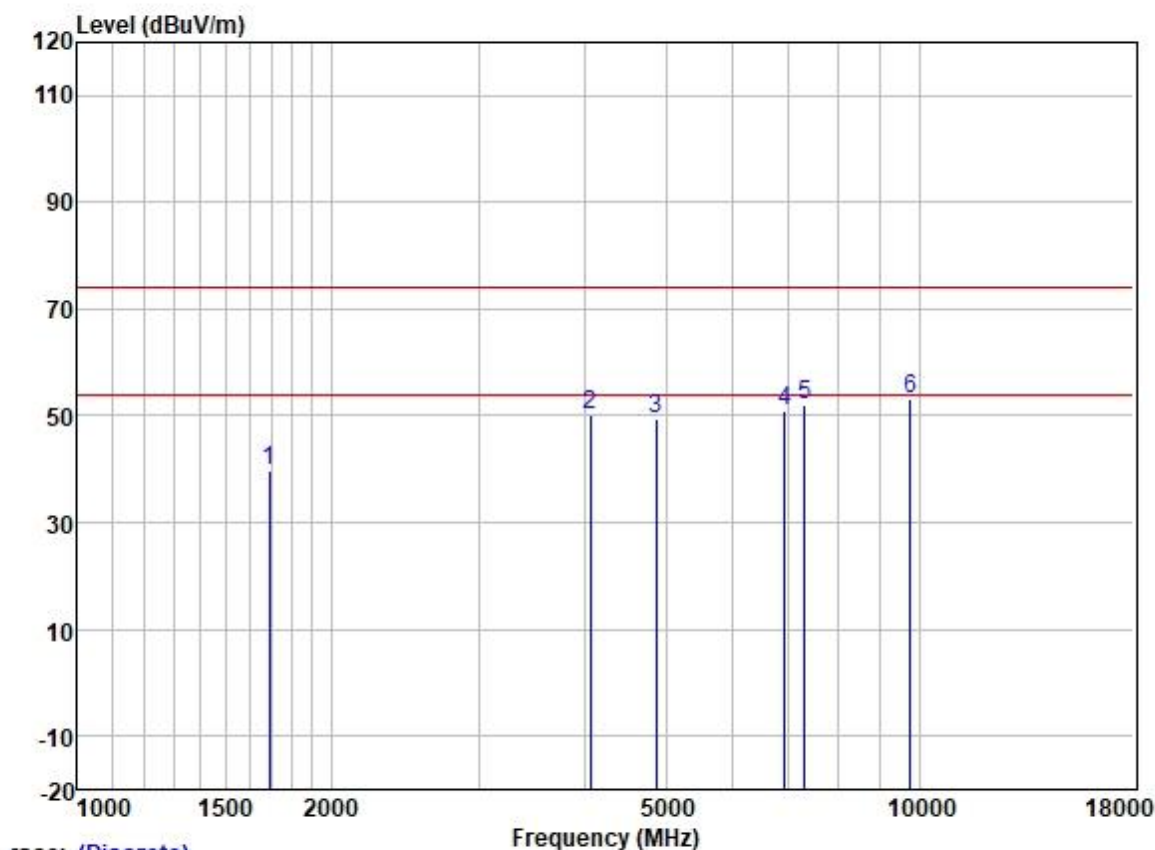
	Freq	ReadAntenna	Cable	Preamp		Limit	Over		
	MHz	Level	Factor	Loss	Factor	Line	Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dB		
1	1702.042	48.71	25.72	2.80	37.89	39.34	74.00	-34.66	HORIZONTAL Peak
2	4074.388	52.93	29.90	4.60	36.80	50.63	74.00	-23.37	HORIZONTAL Peak
3	4844.000	50.58	31.50	5.45	36.84	50.69	74.00	-23.31	HORIZONTAL Peak
4	6914.763	47.61	34.89	5.81	37.19	51.12	74.00	-22.88	HORIZONTAL Peak
5	7266.000	46.17	35.78	6.06	37.41	50.60	74.00	-23.40	HORIZONTAL Peak
6	9688.000	43.92	38.44	7.04	37.42	51.98	74.00	-22.02	HORIZONTAL Peak

Test Mode: 14; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:Low



	Freq	ReadAntenna	Cable	Preamp		Limit	Over			
	MHz	Level	Factor	Loss	Factor	Level	Line	Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	1653.550	48.25	25.64	2.80	37.93	38.76	74.00	-35.24	VERTICAL	Peak
2	4367.058	51.31	30.62	4.68	36.81	49.80	74.00	-24.20	VERTICAL	Peak
3	4844.000	49.37	31.50	5.45	36.84	49.48	74.00	-24.52	VERTICAL	Peak
4	6267.553	49.09	33.29	6.00	36.95	51.43	74.00	-22.57	VERTICAL	Peak
5	7266.000	46.45	35.78	6.06	37.41	50.88	74.00	-23.12	VERTICAL	Peak
6	9688.000	44.51	38.44	7.04	37.42	52.57	74.00	-21.43	VERTICAL	Peak

Test Mode: 14; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:middle



race: (Discrete)

	Freq	ReadAntenna Level	Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	1692.231	49.01	25.70	2.80	37.89	39.62	74.00	-34.38	HORIZONTAL	Peak
2	4062.629	52.53	29.88	4.60	36.80	50.21	74.00	-23.79	HORIZONTAL	Peak
3	4874.000	49.17	31.54	5.50	36.84	49.37	74.00	-24.63	HORIZONTAL	Peak
4	6914.763	47.41	34.89	5.81	37.19	50.92	74.00	-23.08	HORIZONTAL	Peak
5	7311.000	47.33	35.93	6.11	37.42	51.95	74.00	-22.05	HORIZONTAL	Peak
6	9748.000	45.20	38.50	7.02	37.41	53.31	74.00	-20.69	HORIZONTAL	Peak

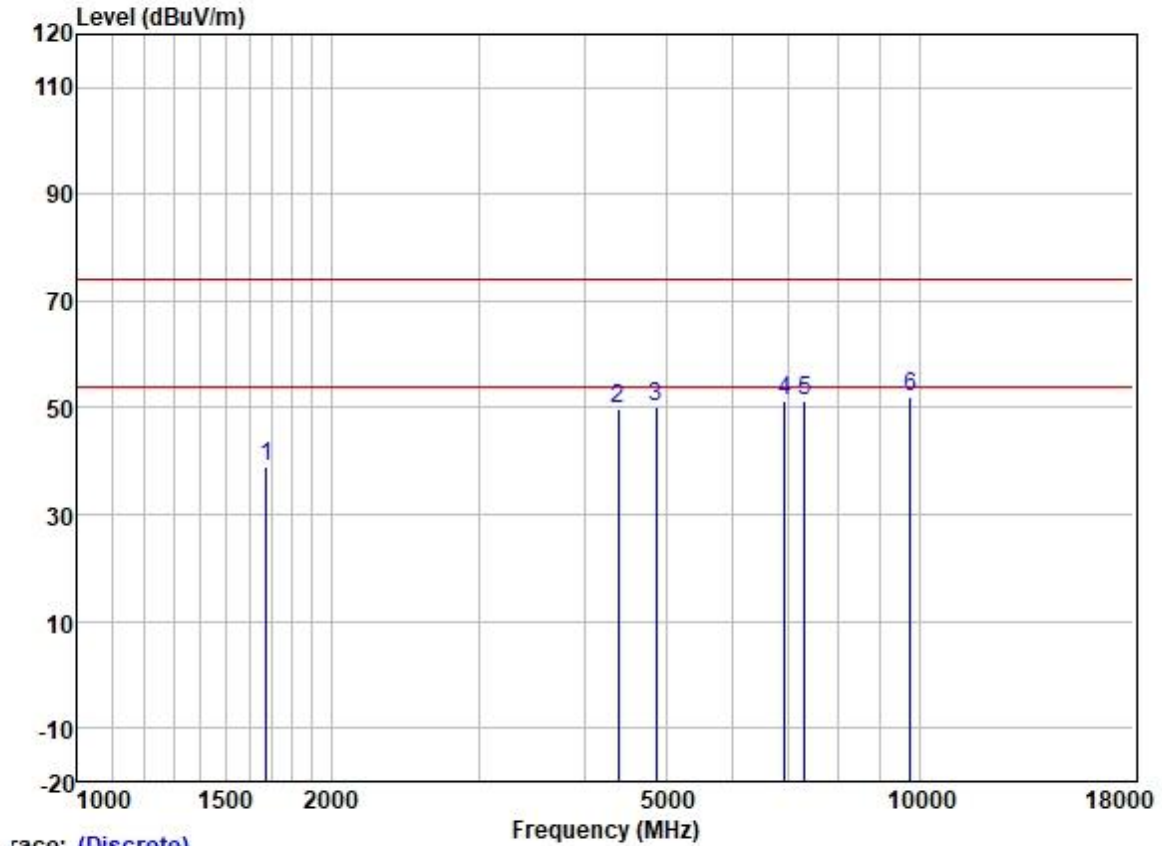


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SGS-CSTC Standards Technical Services Co., Ltd.
Guangzhou Branch Testing Center EEC Laboratory.

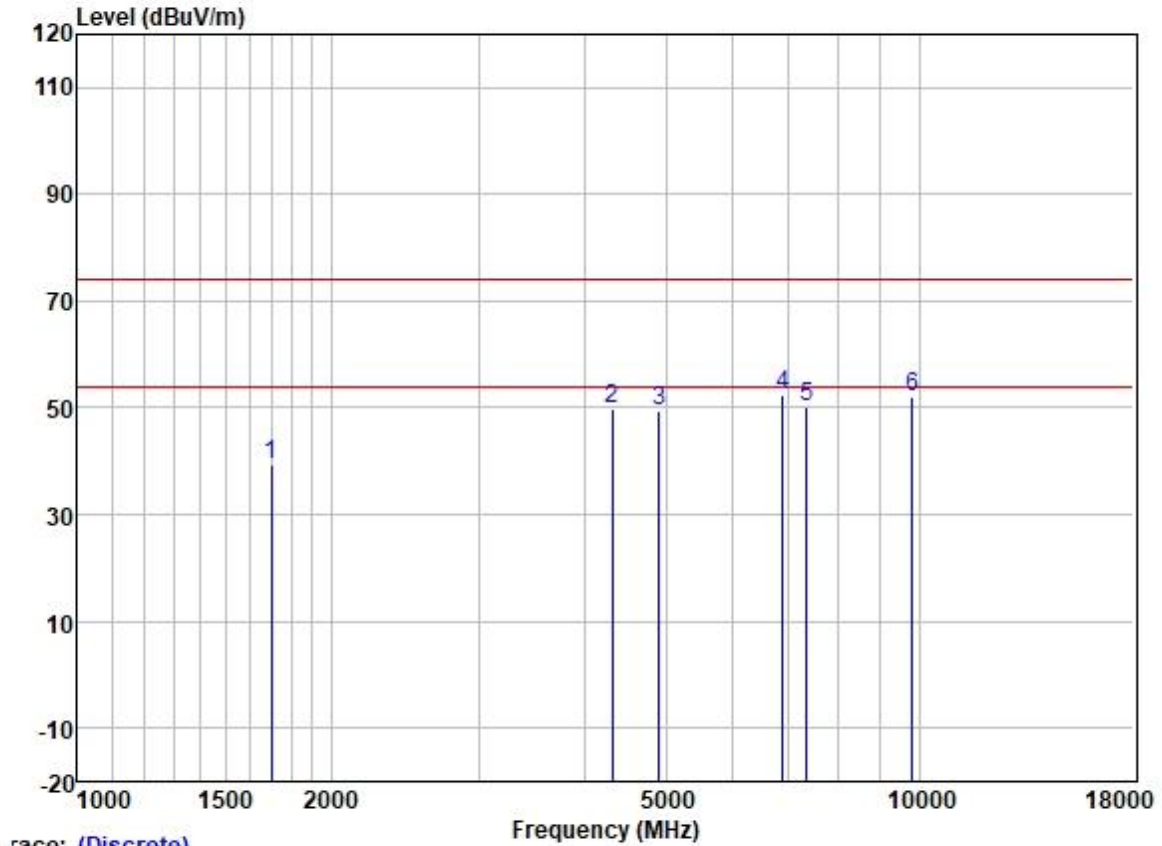
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Test Mode: 14; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:middle



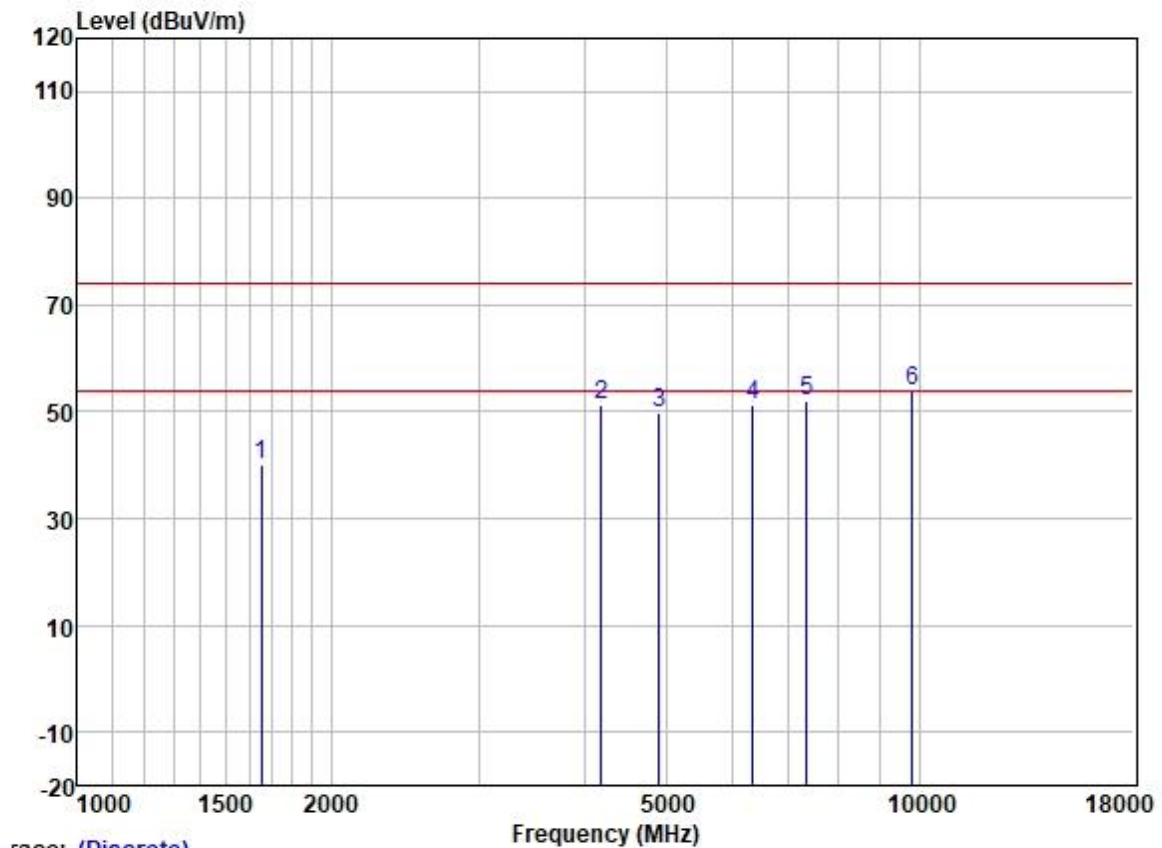
	Freq	ReadAntenna	Cable	Preamp		Limit	Over			
	MHz	Level	Factor	Loss	Factor	Level	Line	Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	1677.621	48.23	25.68	2.80	37.91	38.80	74.00	-35.20	VERTICAL	Peak
2	4392.376	51.25	30.66	4.70	36.81	49.80	74.00	-24.20	VERTICAL	Peak
3	4874.000	49.87	31.54	5.50	36.84	50.07	74.00	-23.93	VERTICAL	Peak
4	6914.763	47.70	34.89	5.81	37.19	51.21	74.00	-22.79	VERTICAL	Peak
5	7311.000	46.60	35.93	6.11	37.42	51.22	74.00	-22.78	VERTICAL	Peak
6	9748.000	44.01	38.50	7.02	37.41	52.12	74.00	-21.88	VERTICAL	Peak

Test Mode: 14; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:High



	Freq	ReadAntenna	Cable	Preamp		Limit	Over		
	MHz	Level	Factor	Loss	Factor	Level	Line	Limit	Pol/Phase
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	1697.129	48.82	25.71	2.80	37.89	39.44	74.00	-34.56	HORIZONTAL Peak
2	4316.859	51.41	30.51	4.66	36.81	49.77	74.00	-24.23	HORIZONTAL Peak
3	4904.000	49.14	31.58	5.55	36.84	49.43	74.00	-24.57	HORIZONTAL Peak
4	6874.906	48.76	34.82	5.82	37.16	52.24	74.00	-21.76	HORIZONTAL Peak
5	7356.000	45.59	36.06	6.15	37.44	50.36	74.00	-23.64	HORIZONTAL Peak
6	9808.000	44.02	38.56	7.00	37.41	52.17	74.00	-21.83	HORIZONTAL Peak

Test Mode: 14; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:High



	Freq	ReadAntenna	Cable	Preamp		Limit	Over			
	MHz	Level	Factor	Loss	Factor	Level	Line	Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	1653.550	49.61	25.64	2.80	37.93	40.12	74.00	-33.88	VERTICAL	Peak
2	4193.872	53.23	30.15	4.60	36.81	51.17	74.00	-22.83	VERTICAL	Peak
3	4904.000	49.52	31.58	5.55	36.84	49.81	74.00	-24.19	VERTICAL	Peak
4	6340.436	48.70	33.57	5.94	36.97	51.24	74.00	-22.76	VERTICAL	Peak
5	7356.000	47.31	36.06	6.15	37.44	52.08	74.00	-21.92	VERTICAL	Peak
6	9808.000	45.60	38.56	7.00	37.41	53.75	74.00	-20.25	VERTICAL	Peak

8 Test Setup Photo

Refer to Appendix - Test Setup Photo for GZCR2204000355AT

9 EUT Constructional Details (EUT Photos)

Refer to External and Internal Photos for GZCR2204000355AT

- End of the Report -