





FCC Part 15.247

RSS-247 Issue 2, Feb 2017; RSS-Gen Issue 5, Mar 2019 TEST REPORT

For

Silicon Labs

9th Floor, Maximus Towers 2B, Raheja Mindspace IT Park, APIIC Software Layout, Madhapur, Hyderabad, Telangana, India - 500 081

Report Type:	Original Report
Brand Name:	Silicon Labs
FCC Identity:	FCC ID: XF6-B001P4V2P1
IC Identity:	IC: 8407A-B001P4V2P1
Product Name:	WiFi bgn, BT5.0 SIP Module
Model Name:	RS9116-B0014
Report Number:	RLK201108002-00C
Report Date:	2021/01/16
Reviewed By:	Flight Hsieh Flight. Hsieh

Prepared By:

Bay Area Compliance Laboratories Corp.(Linkou Laboratory)

No. 6, Wende 2Rd., Guishan Dist., Taoyuan City 33382, Taiwan (R.O.C.)

Tel: +886 (3)3961072; Fax: +886 (3) 3961027

www.bacl.com.tw

Note: This test report is prepared for the customer shown above and for the device described herein. It may not be duplicated or used in part without prior written consent from Bay Area Compliance Laboratories Corp. (Linkou Laboratory)

Revision History

Revision	Report Number	Issue Date	Description
1.0	RLK201108002-00C	2021/01/16	Original Report

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1 General Information

1.1 Product Description for Equipment under Test (EUT)

<u> </u>		
Applicant	Silicon Labs 9th Floor, Maximus Towers 2B, Raheja Mindspace IT Park, APIIC Softwar Layout, Madhapur, Hyderabad, Telangana, India - 500 081	
Manufacturer	Silicon Labs 9th Floor, Maximus Towers 2B, Raheja Mindspace IT Park, APIIC Software Layout, Madhapur, Hyderabad, Telangana, India - 500 081	
Brand Name	Silicon Labs	
Product (Equipment)	WiFi bgn, BT5.0 SIP Module	
Model Name	RS9116-B0014	
Frequency Range	IEEE 802.11b/g/n HT20: 2412 - 2462 MHz IEEE 802.11n HT40: 2422 - 2452 MHz	
Number of Channels	IEEE 802.11b/g/n HT20: 11 Channels IEEE 802.11n HT40: 9 Channels	
Output Power	Chip Antenna (FR05-S1-N-0-102) with 1.8Vdc IEEE 802.11b: 16.59 dBm (0.0456W) IEEE 802.11g: 17.40 dBm (0.0550 W) IEEE 802.11n HT20: 17.14 dBm (0.0518 W) IEEE 802.11n HT40: 13.87 dBm (0.0244 W) Chip Antenna (FR05-S1-N-0-102) with 3.3Vdc IEEE 802.11b: 19.70 dBm (0.0933 W) IEEE 802.11g: 22.35 dBm (0.1718 W) IEEE 802.11n HT20: 22.00 dBm (0.1585 W) IEEE 802.11n HT40: 17.49 dBm (0.0561 W) Dipole Antenna (GW.34.5153) with 1.8Vdc IEEE 802.11b: 16.43 dBm (0.0440 W) IEEE 802.11g: 17.24 dBm (0.0530 W) IEEE 802.11n HT40: 13.91 dBm (0.0538 W) IEEE 802.11n HT40: 13.91 dBm (0.0246 W) Dipole Antenna (GW.34.5153) with 3.3Vdc IEEE 802.11b: 19.75 dBm (0.0944 W) IEEE 802.11g: 22.22 dBm (0.1667 W) IEEE 802.11n HT20: 21.91 dBm (0.1552 W)	
Modulation Type	IEEE 802.11b: DSSS; IEEE 802.11g/n HT 20/HT40: OFDM	
Power Operation (Voltage Range)		
Related Submittal(s)/Grant(s)	FCC Part 15.247 DSS with FCC ID: XF6-B001P4V2P1 FCC Part 15.247 DTS with FCC ID: XF6-B001P4V2P1	
Received Date	2020/11/13	
Date of Test	2020/11/27 - 2020/12/10	

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Note: All measurement and test data in this report was gathered from production sample serial number: 201108002. Assigned by Bay Area Compliance Laboratories Corp. (Linkou Laboratory)

1.2 Objective and Test Methodology

The Objective of this Test Report was to document the compliance of the Silicon Labs. Appliance (Model: RS9116-B0014) to the requirements of the following Standards:

- Part 2, Subpart J, Part 15, Subparts A and C, section 15.247 of the Federal Communication Commission's rules.
- ANSI C63.10-2013 of t American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices.
- RSS-Gen Issue 5, Mar 2019 General Requirements for Compliance of Radio Apparatus
- RSS-247 Issue 2, Feb 2017 Digital Transmission Systems (DTSs), Frequency Hopping Systems (FHSs) and Licence-Exempt Local Area Network (LE-LAN) Devices

1.3 Measurement Uncertainty

Parameter	Expanded Measurement uncertainty
RF output power with Power Meter	± 1.488 dB
Occupied Channel Bandwidth	± 453.927 Hz
RF Conducted test with Spectrum	± 2.77 dB
AC Power Line Conducted Emission	± 2.66 dB
Radiated Below 1G	± 3.57 dB
Radiated Above 1G	± 5.32 dB

The test results with statement of conformity, the decision rules are based on the specifications and standards. The test results will not take the measurement uncertainty into account.

1.4 Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Linkou Laboratory) to collect test data is located on

No.6, Wende 2Rd., Guishan Dist., Taoyuan City 33382, Taiwan (R.O.C.).

Bay Area Compliance Laboratories Corp. (Linkou Laboratory) Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code: 3546) by Mutual Recognition Agreement (MRA). The test site has been approved by the FCC under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database. The FCC Registration No.: 0027578244. Designation No.: TW3546. The Test Firm Registration No.: 181430.

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2 System Test Configuration

2.1 Test Channels and Description of Worst Test Configuration

The system was configured for testing in testing mode which was provided by manufacturer. No special accessory, No modification was made to the EUT and No special equipment used during test.

For Wi-Fi 2.4G mode, there are totally 11 channels.

Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2412	7	2442
2	2417	8	2447
3	2422	9	2452
4	2427	10	2457
5	2432	11	2462
6	2437	-	-

For 802.11b/g/n HT20: Channel 1, 6 and 11 were tested. For 802.11n HT40: Channel 3, 6 and 9 were tested.

-For Radiated Emission, Conducted Power, Conducted Band Edge and PSD had test for two antenna and two voltage that because the power setting is different, the result will be different. For Bandwidth, Conducted Emission only test one result that because the power not affect the result.

Modulation Used for Conformance Test					
Configuration N _{TX} Data Rate Worst Data Rate					
802.11b	1	1-11 Mbps	1 Mbps		
802.11g	1	6-54 Mbps	6 Mbps		
802.11n HT 20	1	MCS 0-7	MCS 0		
802.11n HT 40	1	MCS 0-7	MCS 0		

	Worst Case of Power Setting					
EUT Exercise Softw	are		PER Test App			
Configuration	N _{TX}	Low CH	Mid CH	High CH		
	<chip a<="" th=""><th>Antenna (FR05-S1-N-0-102</th><th>2) with 1.8V_{dc}></th><th></th></chip>	Antenna (FR05-S1-N-0-102	2) with 1.8V _{dc} >			
802.11b	1	13	22	12		
802.11g	1	9	15	8		
802.11n HT 20	1	7	14	7		
802.11n HT 40	1	5	9	6		
	<chip a<="" th=""><th>Antenna (FR05-S1-N-0-102</th><th>2) with 3.3V_{dc}></th><th></th></chip>	Antenna (FR05-S1-N-0-102	2) with 3.3V _{dc} >			
802.11b	1	17	22	15		
802.11g	1	11	19	12		
802.11n HT 20	1	10	18	12		
802.11n HT 40	1	7	12	10		

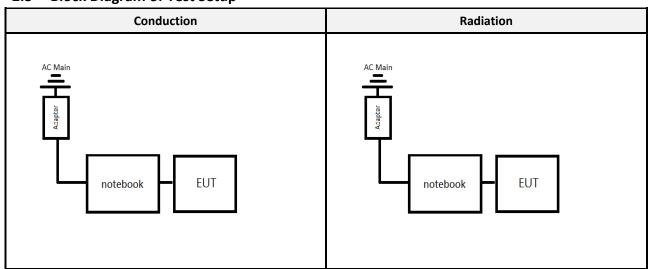
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2.2 Support Equipment List and External Cable List

No.	Description	Manufacturer	Model Number	Serial Number
Α	NoteBook	DELL	Latitude E6410	PP27LA001

No.	Description	Manufacturer	Model Number
1	USB Cable	Tensility International Corp	10-02331

2.3 Block Diagram of Test Setup

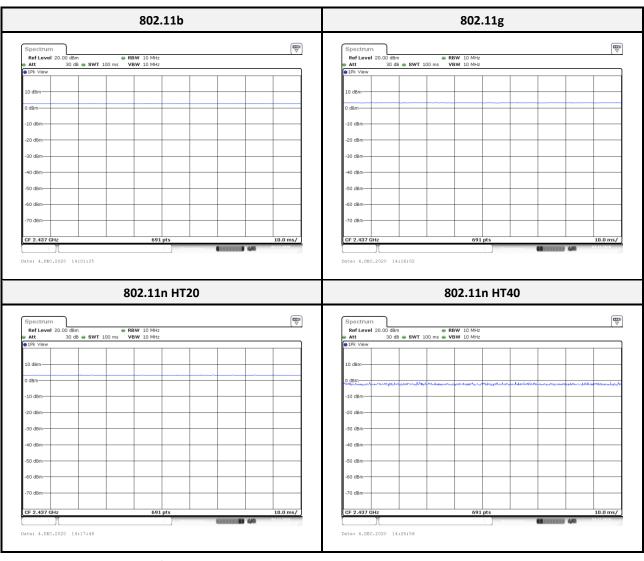


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2.4 Duty Cycle

All measurements are to be performed with the EUT transmitting at 100% duty cycle at its maximum power control level; however, if 100% duty cycle cannot be achieved, measurements of duty cycle, x, and maximum power transmission duration, T, are required for each tested mode of operation.

Configuration	On Time (ms)	Period (ms)	Duty Cycle (%)	Duty Factor (dB)
802.11b	100.00	100.00	100.00	0.00
802.11g	100.00	100.00	100.00	0.00
802.11n HT20	100.00	100.00	100.00	0.00
802.11n HT40	100.00	100.00	100.00	0.00



Note1: Duty Factor = 10*log (1/Duty cycle)

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2.5 Environmental Conditions and Test Date

Test Site	Test Date	Temperature (°C)	Relative Humidity (% RH)	Test Engineer
Conduction (Con-01)	2020/12/09	24.6	58	Rui Zhan
Radiated (966A)	2020/11/27 - 2020/12/10	19.5 - 21.5	55 - 61	Leo Cheng
Conducted (TH-02)	2020/12/04 - 2020/12/10	22.5 - 23.2	57 - 60	Rui Zhan

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3 Summary of Test Results

FCC Rules	Description of Test	Result
§15.247(i), §1.1310, §2.1091	Maximum Permissible Exposure (MPE)	Compliance
ISEDC RSS-102 Sec 2.5.2	Exemption Limits for Routine Evaluation – RF Exposure Evaluation	Compliance
§15.203 ISEDC RSS-Gen Sec 6.8	Antenna Requirement	Compliance
§15.207(a) ISEDC RSS-Gen Sec 6.8	AC Line Conducted Emissions	Compliance
§15.205, §15.209, §15.247(d) ISED RSS-Gen Sec 8.9 and 8.10 ISEDC RSS-247 Sec 5.5	Spurious Emissions	Compliance
§15.247(a)(2) ISEDC RSS-247 Sec 5.2 ISEDC RSS-Gen Sec 6.7	6 dB Emission Bandwidth and Occupied Bandwidth	Compliance
§15.247(b)(3) ISED RSS-247 Sec5.4(d)	Maximum Output Power	Compliance
§15.247(d) ISEDC RSS-247 Sec 5.5	100 kHz Bandwidth of Frequency Band Edge	Compliance
§15.247(e) ISEDC RSS-247 Sec 5.2(b)	Power Spectral Density	Compliance

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4 FCC§15.247(i), §1.1310, § 2.1091 – Maximum Permissible Exposure (MPE)

4.1 Applicable Standard

According to subpart 15.247(i) and subpart §1.1310, systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

Limits for Maximum Permissible Exposure (MPE) (§1.1310, §2.1091)

(B) Limits for General Population/Uncontrolled Exposure						
Frequency Range (MHz)	Electric Field Strength (V/m)	Averaging Time (minutes)				
0.3-1.34	614	1.63	*(100)	30		
1.34–30	824/f	2.19/f	*(180/f²)	30		
30–300	27.5	0.073	0.2	30		
300–1500	/	/	f/1500	30		
1500-100,000	/	/	1.0	30		

Note: f = frequency in MHz; * = Plane-wave equivalent power density;

According to §1.1310 and §2.1091 RF exposure is calculated.

Calculated Formulary: Predication of MPE limit at a given distance

 $S = PG/4\pi R^2 = power density (in appropriate units, e.g. mW/cm^2);$

P = power input to the antenna (in appropriate units, e.g., mW);

G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor, is normally numeric gain;

R = distance to the center of radiation of the antenna (appropriate units, e.g., cm); For simultaneously transmit system, the calculated power density should comply with:

$$\sum_i \frac{S_i}{S_{Limit,i}} \leq 1$$

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4.2 RF Exposure Evaluation Result

MPE Evaluation:

Frequency		Antenna Gain		Target Power		Evaluation	Power Density	MPE Limit
Mode	Range (MHz)	(dBi)	(numeric)	(dBm)	(mW)	Distance (mW	(mW/cm²)	(mW/cm²)
BLE	2402-2480	5.89	3.8815	22.00	158.4893	20	0.1224	1.0
BR/EDR	2402-2480	5.89	3.8815	21.00	125.8925	20	0.0973	1.0
Wi-Fi 2.4G	2412-2462	5.89	3.8815	23.00	199.5262	20	0.1542	1.0

Note: Wi-Fi and BT can't simultaneously.

Result: MPE evaluation of single and simultaneous transmission meet the requirement of standard.

5 RSS-102 Sec 2.5.2 - Exemption Limits for Routine Evaluation – RF Exposure Evaluation

5.1 Applicable Standard

According to subpart RSS-102 Sec 2.5.2,

RF exposure evaluation is required if the separation distance between the user and/or bystander and the device's radiating element is greater than 20 cm, except when the device operates as follows:

- below 20 MHz⁶ and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than 1 W (adjusted for tune-up tolerance);
- at or above 20 MHz and below 48 MHz and the source-based, time-averaged maximum e.i.r.p. of the
 device is equal to or less than 4.49/f^{0.5} W (adjusted for tune-up tolerance), where f is in MHz;
- at or above 48 MHz and below 300 MHz and the source-based, time-averaged maximum e.i.r.p. of the
 device is equal to or less than 0.6 W (adjusted for tune-up tolerance);
- at or above 300 MHz and below 6 GHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than 1.31 x 10⁻² f^{0.6834} W (adjusted for tune-up tolerance), where f is in MHz:
- at or above 6 GHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than 5 W (adjusted for tune-up tolerance).

In these cases, the information contained in the RF exposure technical brief may be limited to information that demonstrates how the e.i.r.p. was derived.

5.2 RF Exposure Evaluation Result

BLE Max tune-up conducted output power is 22.00 dBm (158.4893 mW) at 2402 MHz, Antenna Gain = 5.89 dBi, EIRP = 27.89 dBm (0.6152 W), so the maximum conducted and E.I.R.P. source-based, time-averaged output is less than 2.68 W for general public use.

BR/EDR Max tune-up conducted output power is 21.00 dBm (125.8925 mW) at 2402 MHz, Antenna Gain = 5.89 dBi, EIRP = 26.89 dBm (0.4887 W), so the maximum conducted and E.I.R.P. source-based, time-averaged output is less than 2.68 W for general public use.

Wi-Fi 2.4G Max tune-up conducted output power is 23.00 dBm (199.5262 mW) at 2437 MHz, Antenna Gain = 5.89 dBi, EIRP = 28.89 dBm (0.7745 W), so the maximum conducted and E.I.R.P. source-based, time-averaged output is less than 2.70 W for general public use.

Note: Wi-Fi and BT can't simultaneously.

Result: MPE evaluation of single and simultaneous transmission meet the requirement of standard.

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6 FCC §15.203 and RSS-Gen Sec 6.8- Antenna Requirements

6.1 Applicable Standard

According to § 15.203, 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 user of a standard antenna jack or electrical connector is prohibited.

And according to FCC 47 CFR section 15.247 (b), if the transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna does not exceed 6dBi.

According to RSS-Gen 6.8: Transmitter Antenna for Licence-Exempt Radio Apparatus

The applicant for equipment certification, as per RSP-100, must provide a list of all antenna types that may be used with the licence-exempt transmitter, indicating the maximum permissible antenna gain (in dBi) and the required impedance for each antenna.

Licence-exempt transmitters that have received equipment certification may operate with different types of antennas. However, it is not permissible to exceed the maximum equivalent isotropically radiated power (e.i.r.p.) limits specified in the applicable standard (RSS) for the licence-exempt apparatus.

Testing shall be performed using the highest gain antenna of each combination of licence-exempt transmitter and antenna type, with the transmitter output power set at the maximum level. Footnote 8 When a measurement at the antenna connector is used to determine RF output power, the effective gain of the device's antenna shall be stated, based on a measurement or on data from the antenna manufacturer.

User manuals for transmitters equipped with detachable antennas shall also contain the following notice in a conspicuous location:

This radio transmitter (identify the device by certification number) has been approved by Industry Canada to operate with the antenna types listed below with the maximum permissible gain indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

Immediately following the above notice, the manufacturer shall provide a list of all antenna types approved for use with the transmitter, indicating the maximum permissible antenna gain (in dBi).

6.2 Antenna List and Details

Brand	Model	Antenna Type	Antenna Gain	Result
Fractus	FR05-S1-N-0-102	Chip	1.70 dBi	Compliance
TAOGLAS	GW.34.5153	Dipole	5.89dBi	Compliance

The EUT have an internal and external antennas arrangement and fulfill the requirement of this section.

7 FCC §15.207 and RSS-Gen Sec 8.8 - AC Line Conducted Emissions

7.1 Applicable Standard

According to FCC §15.207,

For an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50 μ H/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequencies ranges.

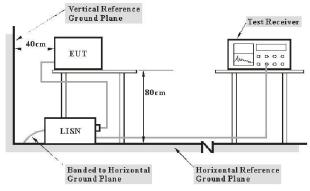
According to RSS-Gen 8.8 Conducted limits:

For an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50 μ H/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequencies ranges.

Francisco (BALLE)	Conducted Limit (dBuV)			
Frequency (MHz)	Quasi-Peak	Average		
0.15-0.5	66 to 56 Note 1	56 to 46 Note 2		
0.5-5	56	46		
5-30	60	50		

Note 1: Decreases with the logarithm of the frequency. Note 2: A linear average detector is required

7.2 EUT Setup and Test Procedure



Note: 1. Support units were connected to second LISN.

2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

The setup of EUT is according with per ANSI C63.10-2013 measurement procedure. The specification used was with the FCC Part 15.207 and RSS-Gen limits.

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz. During the conducted emission test, the EMI test receiver was set with the following configurations

Frequency Range	Receiver RBW
150 kHz - 30 MHz	9 kHz

During the conducted emission test, the adapter was connected to the outlet of the LISN. Maximizing procedure was performed on the six (6) highest emissions of the EUT. All data was recorded in the Quasi-peak and average detection mode.

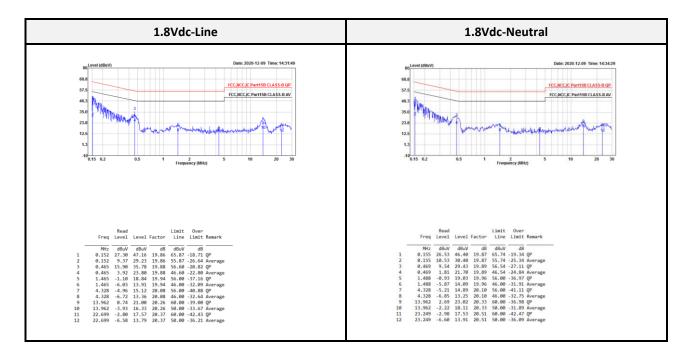
7.3 Test Equipment List and Details

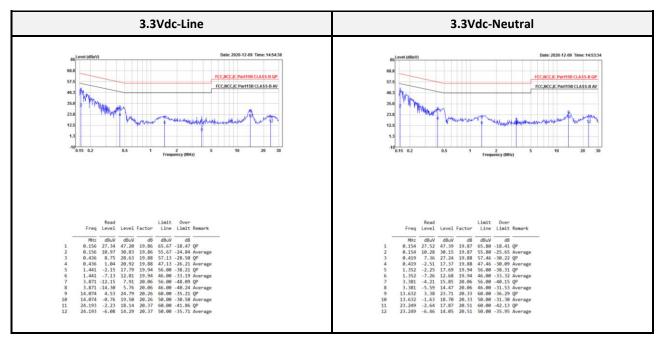
Description	Manufacture	Model	Serial No.	Cal. Date.	Cal. Due.			
	AC Line Conduction Room (CON-01)							
Two-Line V-Network	Rohde & Schwarz	ENV216	100010	2020/09/14	2021/09/13			
Pulse Limiter	SCHWARZBECK	VSTD 9561-F	00432	2020/09/11	2021/09/10			
ESR EMI Test Receiver	Rohde & Schwarz	ESR3	102430	2020/05/07	2021/05/06			
RF Cable	EMCI	EMCCFD300-BM- BM-8000	180526	2020/08/18	2021/08/17			
Software	Audix	e3 v9	E3LK-03	N.C.R	N.C.R			

^{*}Statement of Traceability: The testing equipment's listed above have finished the calibration by Electronics Testing Center, Taiwan (ETC) or other laboratories which were accredited by TAF or equivalent organizations. The calibration result could be traceable to the International System of Units (SI).

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7.4 Test Result





Note:

Level = Read Level + Factor

Over Limit (Margin) = Level - Limit Line

Factor = (LISN, ISN, PLC or current probe) Factor + Cable Loss + Attenuator

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FCC §15.209, §15.205, §15.247(d), RSS-Gen Sec 8.9, 8.10 and RSS-247 Sec 5.5 – Spurious Emissions

8.1 Applicable Standard

As per FCC §15.35(d): Unless otherwise specified, on any frequency or frequencies above 1000 MHz, the radiated emission limits are based on the use of measurement instrumentation employing an average detector function. Unless otherwise specified, measurements above 1000 MHz shall be performed using a minimum resolution bandwidth of 1MHz.

As Per FCC §15.205(a) except as show in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090-0.110	13.36-13.41	399.9-410	4.5-5.15
0.495-0.505	16.42-16.423	608-614	5.35-5.46
2.1735-2.1905	16.69475-16.69525	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	Above 38.6

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As per FCC §15.209(a): Except as provided elsewhere in this Subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength (micro volts/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

^{**} Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g., Sections 15.231 and 15.241.

As per FCC §15.247 (d) 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 20dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c).

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As per RSS-Gen 8.9,

Except when the requirements applicable to a given device state otherwise, emissions from licence-exempt transmitters shall comply with the field strength limits shown in Table 4 and Table 5 below. Additionally, the level of any transmitter emission shall not exceed the level of the transmitter's fundamental emission.

Table 4 – General Field Strength Limits for Licence-Exempt Transmitters at Frequencies Above 30 MHz

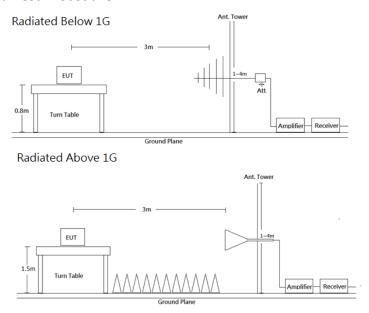
Frequency (MHz)	Field Strength (μν/m at 3 metres)
30-88	100
88-216	150
216-960	200
Above 960*	500

* Unless otherwise specified, for all frequencies greater than 1 GHz, the radiated emission limits for licence-exempt radio apparatus stated in applicable RSSs (including RSS-Gen) are based on measurements using a linear average detector function having a minimum resolution bandwidth of 1 MHz. If an average limit is specified for the EUT, then the peak emission shall also be measured with instrumentation properly adjusted for such factors as pulse desensitization to ensure the peak emission is less than 20 dB above the average limit.

Note: Transmitting devices are not permitted in restricted frequency bands unless stated otherwise in the specific RSS.

As per RSS-247 §5.5, in any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the RF power that is produced 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 that the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of root-mean-square averaging over a time interval, as permitted under Section 5.4(4), the attenuation required shall be 30 dB instead of 20 dB. Attenuation below the general field strength limits specified in RSS-Gen is not required.

8.2 EUT Setup and Test Procedure



Radiated emission tests were performed in the 3 meters chamber test site, using the setup accordance with the ANSI C63.10-2013. The specification used was the RSS-Gen, FCC Part 15.209 and FCC 15.247 Limits.

The system was investigated from 30 MHz to 26.5 GHz. During the radiated emission test, the EMI test receiver was set with the following configurations measurement method 6.3 in ANSI C63.10.

Frequency Range	RBW	VBW	Duty cycle	Measurement method
30-1000 MHz	120 kHz	/	-	QP
Above 1 GHz	1 MHz	3 MHz	-	PK
	1 MHz	10 Hz	>98%	PK
	1 MHz	1/T	<98%	Ave

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations. All data was recorded in the Quasi-peak detector mode from 30 MHz to 1 GHz and PK and average detector modes for frequencies above 1 GHz.

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8.3 Test Equipment List and Details

Description	Manufacture	Model	Serial No.	Cal. Date.	Cal. Due.
		Radiation 3M Roo	m (966B)		
Active Loop	EMCO	6502	0001-3322	2020/03/16	2021/03/15
Bilog Antenna/6 dB Attenuator	SUNOL SCIENCES & EMEC /EMCI	JB3/N-6-06	A111513/AT- N0668	2020/03/19	2021/03/18
Signal and Spectrum Analyzer	Rohde & Schwarz	FSV40	101434	2020/05/07	2021/05/06
Horn Antenna	ETS-Lindgren	3115	00109141	2020/07/15	2021/07/14
Horn Antenna	ETS-Lindgren	3160-09	00123852	2020/07/07	2021/07/06
Preamplifier	A.H. Systems	PAM-1840VH	174	2020/03/25	2021/03/24
Preamplifier	A.H. Systems	PAM-0118	478	2020/05/05	2021/05/04
Microflex Cable (1m)	EMCI	EMC102-KM-KM- 1000	180524	2020/08/06	2021/08/05
Microflex Cable (2m)	EMCI	EMC106-SM-SM- 2000	180516	2020/08/06	2021/08/05
Microflex Cable (8m)	UTIFLEX	UFA210A-1-3149- 300300	MFR 64639 232490-002	2020/08/06	2021/08/05
Turn Table	Chaintek	T-200-S-1	003501	N.C.R	N.C.R
Antenna Tower	Chaintek	MBD-400-1	003504	N.C.R	N.C.R
Controller	Chaintek	3000-1	003507	N.C.R	N.C.R
Software	Audix	e3 v9	E3LK-01	N.C.R	N.C.R
		Conducted Room	n(TH-02)		
Spectrum Analyzer	Rohde & Schwarz	FSU26	100406	2020/03/11	2021/03/10
Cable	MTJ	MT40S	620620-MT40S- 100	Each Use	-

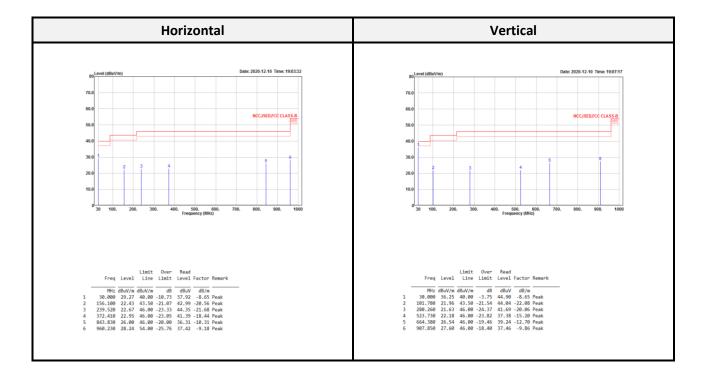
^{*}Statement of Traceability: The testing equipment's listed above have finished the calibration by Electronics Testing Center,
Taiwan (ETC) or other laboratories which were accredited by TAF or equivalent organizations. The calibration result could be
traceable to the International System of Units (SI).

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8.4 Test Results

Transmitting mode (Pre-scan with three orthogonal axis, and worse case as Z axis)

Below 1G (30 MHz-1 GHz) test the worst mode



Result = Reading + Correct Factor

Margin = Result - Limit

Correct Factor = Antenna Factor + Cable Loss - Amplifier Gain

Spurious emissions more than 20 dB below the limit were not reported

Above 1G (1 GHz-26.5 GHz)

<Chip Antenna (FR05-S1-N-0-102) with 1.8 V_{dc} >

IEEE	IEEE 802.11b Low CH Horizontal IEEE 802.11b Low CH Vertical										al			
Freq	Level	Limit Line			Factor	Remark		Freq	Level	Limit Line			Factor	Remark
MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m			MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	
1 ! 2385.824				60.22	-7.77	Average	1 !	2386.384	41.19	54.00	-12.81	48.96	-7.77	Average
2 ! 2385.824	60.98	74.00	-13.02	68.75	-7.77	Peak	2	2386.384	53.54	74.00	-20.46	61.31	-7.77	Peak
3 * 2411.248	103.51			111.22	-7.71	Average	3 *	2411.360	94.71			102.42	-7.71	Average
4 * 2411.248	106.20			113.91	-7.71	Peak	4 *	2411.360	97.46			105.17	-7.71	Peak
1 ! 3216.000	47.95	54.00	-6.05	53.41	-5.46	Average	1 !	3216.000	43.28	54.00	-10.72	48.74	-5.46	Average
2 3216.000	50.00	74.00	-24.00	55.46	-5.46	Peak	2	3216.000	45.75	74.00	-28.25	51.21	-5.46	Peak
3 ! 4824.000	38.80	54.00	-15.20	40.45	-1.65	Average	3 !	4824.000	41.05	54.00	-12.95	42.70	-1.65	Average
4 4824.000	45.88	74.00	-28.12	47.53	-1.65	Peak	4	4824.000			-27.95			Peak
5 ! 7236.000	36.33	54.00	-17.67	30.76	5.57	Average	5 !	7236.000	36.17	54.00	-17.83	30.60	5.57	Average
6 7236.000	47.92	74.00	-26.08	42.35	5.57	Peak	6	7236.000			-26.11			Peak

IEEE 8	02.11	lb Mi	ddle	CH H	lorizo	ontal		IEEE	802. 1	1b N	1iddl	e CH	Vert	ical
Fred	Level	Limit Line	Over Limit		Factor	Remark		Freq	Level	Limit Line	Over Limit		Factor	Remark
MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m			MHz	dBuV/m	dBuV/m	——dB	dBuV	dB/m	
1 ! 2386.236	43.61	54.00	-10.39	51.38	-7.77	Average	1 !	2385.262	40.09	54.00	-13.91	47.86	-7.77	Average
2 ! 2386.236	56.83	74.00	-17.17	64.60	-7.77	Peak	2	2385.262	52.96	74.00	-21.04	60.73	-7.77	Peak
3 * 2436.324	104.19			111.84	-7.65	Average	3 *	2436.324	96.06			103.71	-7.65	Average
4 * 2436.324	106.91			114.56	-7.65	Peak	4 *	2436.324	98.78			106.43	-7.65	Peak
5 ! 2484.724	44.48	54.00	-9.52	52.07	-7.59	Average	5 !	2488.596	39.50	54.00	-14.50	47.09	-7.59	Average
6 ! 2484.724	55.60	74.00	-18.40	63.19	-7.59	Peak	6	2488.596	51.76	74.00	-22.24	59.35	-7.59	Peak
1 ! 3249.300	47.95	54.00	-6.05	53.31	-5.36	Average	1 !	3249.300	45.34	54.00	-8.66	50.70	-5.36	Average
2 3249.306	49.83	74.00	-24.17	55.19	-5.36	Peak	2	3249.300	47.97	74.00	-26.03	53.33	-5.36	Peak
3 ! 4874.000	43.43	54.00	-10.57	44.98	-1.55	Average	3 !	4874.000	46.78	54.00	-7.22	48.33	-1.55	Average
4 4874.000	47.99	74.00	-26.01	49.54	-1.55	Peak	4	4874.000	50.00	74.00	-24.00	51.55	-1.55	Peak
5 ! 7311.000	38.77	54.00	-15.23	33.45	5.32	Average	5 !	7311.000	39.18	54.00	-14.82	33.86	5.32	Average
6 7311.000	49.06	74.00	-24.94	43.74	5.32	Peak	6	7311.000	50.12	74.00	-23.88	44.80	5.32	Peak

IEEE 802.11b High CH Horizontal	IEEE 802.11b High CH Vertical
Limit Over Read Level Factor Remark	Limit Over Read Level Limit Level Factor Remark Level Level Factor Remark Level Level Factor Remark Level Factor Remark Level Factor Remark Level Factor Remark Level Level Factor Remark Level Le

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IEEE	802.	11g L	ow (СН Но	rizoı	ntal
Freq	Level	Limit Line	Over Limit	Read Level	Factor	Remark
1 ! 2389.856 2 ! 2389.856 3 * 2410.800 4 * 2410.800 1 ! 3216.000 2 3216.000 3 4824.000	53.60 71.83 94.44 105.33 0 47.09 0 48.71	54.00 74.00 54.00 74.00 54.00	-6.92 -25.29 -25.16	61.36 79.59 102.15 113.04 1 52.55 9 54.17 0 30.55	-7.76 -7.71 -7.71 5 -5.40 7 -5.40 5 -1.60	Peak Average Peak Average Peak Average
4 4824.000 5 ! 7236.000 6 7236.000	34.72	2 54.00	-30.06 -19.28 -25.78	3 29.15	5.5	5 Peak 7 Average 7 Peak

IEEE 80	02.11	g Mi	ddle	СН Н	orizo	ntal		IEEE	802. 1	l1g N	liddl	e CH	Verti	ical
Freq	Level	Limit Line	Over Limit	Read Level	Factor	Remark		Freq	Level	Limit Line	Over Limit	Read Level	Factor	Remark
MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m			MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	
1 ! 2389.618	53.03	54.00	-0.97	60.79	-7.76	Average	1 !	2389.860	45.81	54.00	-8.19	53.57	-7.76	Average
2 ! 2389.618	70.18	74.00	-3.82	77.94	-7.76	Peak	2 !	2389.860	62.47	74.00	-11.53	70.23	-7.76	Peak
3 * 2436.324	99.92			107.57	-7.65	Average	3 *	2435.356	92.48			100.13	-7.65	Average
4 * 2436.324	110.55			118.20	-7.65	Peak	4 *	2435.356	102.91			110.56	-7.65	Peak
5 ! 2483.514	49.08	54.00	-4.92	56.67	-7.59	Average	5 !	2485.208	42.33	54.00	-11.67	49.92	-7.59	Average
6 ! 2483.514					-7.59		6 !	2485.208	59.29		-14.71			
1 ! 3249.300						Average	1 !	3249.300		54.00				Average
2 3249.300		74.00			-5.36		2	3249.300	48.51	74.00	-25.49	53.87	-5.36	Peak
3 4874.000				33.01		Average	3	4874.000	33.21	54.00	-20.79	34.76	-1.55	Average
4 4874.000			-29.20		-1.55		4	4874.000	50.66	74.00	-23.34	52.21	-1.55	Peak
5 ! 7311.000	36.70	54.00	-17.30	31.38	5.32	Average	5 !	7311.000	36.73	54.00	-17.27	31.41	5.32	Average
6 7311.000	50.28	74.00	-23.72	44.96	5.32	Peak	6	7311.000	50.72	74.00	-23.28	45.40	5.32	Peak

IEEE 802.11g High CH Horizontal	IEEE 802.11g High CH Vertical
Limit Over Read Level Factor Remark	Limit Over Read Level Limit Level Factor Remark Limit Level Factor Remark Limit Level Factor Remark Limit Level Factor Remark Level Factor Level Lev
5 ! 7386.000 34.19 54.00 -19.81 28.75 5.44 Average 6 7386.000 48.61 74.00 -25.39 43.17 5.44 Peak	5 ! 7386.000 34.09 54.00 -19.91 28.65 5.44 Average 6 7386.000 49.15 74.00 -24.85 43.71 5.44 Peak

IEEE 802	2.11n	HT2	0 Lov	v CH	Horiz	zontal		IEEE 80	02.11	n HT	20 Lc	w Cl	l Ve	tical
Freq	Level	Limit Line	Over Limit			Remark		Freq	Level	Limit Line		Read Level	Factor	Remark
MHz	dBuV/m	dBuV/m	——dB	dBuV	dB/m		•	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	
1 ! 2389.968						Average	1 !	2389.408	44.59	54.00	-9.41	52.35	-7.76	Average
2 ! 2389.968	70.77	74.00	-3.23	78.53	-7.76	Peak	2 !	2389.408	60.66	74.00	-13.34	68.42	-7.76	Peak
3 * 2412.032	91.96			99.67	-7.71	Average	3 *	2411.248	85.28			92.99	-7.71	Average
4 * 2412.032				110.37			4 *	2411.248	95.95			103.66	-7.71	Peak
1 ! 3216.000	45.43	54.00	-8.57	50.89	-5.46	Average	1 !	3216.000	40.36	54.00	-13.64	45.82	-5.46	Average
2 3216.000	47.79	74.00	-26.21	53.25	-5.46	Peak	2	3216.000	44.16	74.00	-29.84	49.62	-5.46	Peak
3 4824.000	28.62	54.00	-25.38	30.27	-1.65	Average	3	4824.000	30.56	54.00	-23.44	32.21	-1.65	Average
4 4824.000	41.72	74.00	-32.28	43.37	-1.65	Peak	4	4824.000	43.04	74.00	-30.96	44.69	-1.65	Peak
5 7236.000	33.96	54.00	-20.04	28.39	5.57	Average	5	7236.000	33.92	54.00	-20.08	28.35	5.57	Average
6 7236.000	47.17	74.00	-26.83	41.60	5.57	Peak	6	7236.000	48.25	74.00	-25.75	42.68	5.57	Peak

IEEE 802.11n HT20 Middle CH Horizontal	IEEE 802.11n HT20 Middle CH Vertical
Limit Over Read Freq Level Line Limit Level Factor Remark	Limit Over Read Freq Level Line Limit Level Factor Remark
MHz dBuV/m dBuV/m dB dBuV dB/m	MHz dBuV/m dBuV/m dB dBuV dB/m
1 ! 2387.198 51.32 54.00 -2.68 59.09 -7.77 Average	1 ! 2388.650 42.40 54.00 -11.60 50.16 -7.76 Average
2 ! 2387.198 67.51 74.00 -6.49 75.28 -7.77 Peak	2 ! 2388.650 56.50 74.00 -17.50 64.26 -7.76 Peak
3 * 2435.598 99.43 107.08 -7.65 Average	3 * 2438.744 91.57 99.22 -7.65 Average
4 * 2435.598 109.72 117.37 -7.65 Peak	4 * 2438.744 101.73 109.38 -7.65 Peak
5 ! 2484.240 47.35 54.00 -6.65 54.94 -7.59 Average	5 ! 2484.724 40.46 54.00 -13.54 48.05 -7.59 Average
6 ! 2484.240 63.07 74.00 -10.93 70.66 -7.59 Peak	6 ! 2484.724 55.19 74.00 -18.81 62.78 -7.59 Peak
1 ! 3249.300 47.10 54.00 -6.90 52.46 -5.36 Average	1 ! 3249.300 43.79 54.00 -10.21 49.15 -5.36 Average
2 3249.300 48.82 74.00 -25.18 54.18 -5.36 Peak	2 3249.300 46.59 74.00 -27.41 51.95 -5.36 Peak
3 4874.000 30.85 54.00 -23.15 32.40 -1.55 Average	3 4874.000 31.49 54.00 -22.51 33.04 -1.55 Average
4 4874.000 42.15 74.00 -31.85 43.70 -1.55 Peak	4 4874.000 43.39 74.00 -30.61 44.94 -1.55 Peak
5 ! 7311.000 34.13 54.00 -19.87 28.81 5.32 Average	5 ! 7311.000 34.11 54.00 -19.89 28.79 5.32 Average
6 7311.000 46.48 74.00 -27.52 41.16 5.32 Peak	6 7311.000 46.73 74.00 -27.27 41.41 5.32 Peak

Limit Over Read Freq Level Line Limit Level Factor Remark MHz dBuV/m dBuV/m dB dBuV dB/m		Freq	Level	Limit Line				
				Line	Limit	Level	Factor	Remark
4 # 0463 000 00 43		MHz d	dBuV/m	dBuV/m	——dB	dBuV	dB/m	
1 * 2463.800 90.47 98.09 -7.62 Average	1 * 246	50.400	82.79			90.41	-7.62	Average
2 * 2463.800 100.87	2 * 246	50.400	93.25			100.87		_
3 ! 2484.000 48.77 54.00 -5.23 56.36 -7.59 Average	3 ! 248	83.600	41.91	54.00	-12.09	49.50	-7.59	Average
4 ! 2484.000 66.19 74.00 -7.81 73.78 -7.59 Peak	4 ! 248		58.25		-15.75			Peak
1 ! 3282.700 37.30 54.00 -16.70 42.60 -5.30 Average	1 ! 328	82.700	42.44	54.00	-11.56	47.74	-5.30	Average
2 3282.700 47.75 74.00 -26.25 53.05 -5.30 Peak	2 328	82.700	45.45	74.00	-28.55	50.75	-5.30	Peak
3 4924.000 28.90 54.00 -25.10 30.33 -1.43 Average	3 492	24.000	29.19	54.00	-24.81	30.62	-1.43	Average
4 4924.000 42.10 74.00 -31.90 43.53 -1.43 Peak	4 492	24.000	42.65	74.00	-31.35	44.08	-1.43	Peak
5 7386.000 33.63 54.00 -20.37 28.19 5.44 Average	5 738	86.000	33.55	54.00	-20.45	28.11	5.44	Average
6 7386.000 46.64 74.00 -27.36 41.20 5.44 Peak	6 738	86.000	47.09	74.00	-26.91	41.65	5.44	Peak

IEEE 802.	l1n F	HT40	Mid	dle Cl	Н Но	rizontal	II	EEE	802	2.11n	HT4	0 Mic	ddle	CH V	ertical
Freq	Level	Limit Line	Over Limit	Read Level	Factor	Remark		ı	Freq	Level	Limit Line		Read Level	Factor	Remark
MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m				MHz	dBuV/m	dBuV/m	——dB	dBuV	dB/m	
1 ! 2387.682		54.00		59.85	-7.77	Average	1 !	2386	.230	44.68	54.00	-9.32	52.45	-7.77	Average
2 ! 2387.682	69.93	74.00	-4.07	77.70	-7.77	Peak	2 !	2386	. 230	59.16	74.00	-14.84	66.93	-7.77	Peak
3 * 2439.712	89.46			97.11	-7.65	Average	3 *	2434	.146	83.06	54.00	29.06	90.72	-7.66	Average
4 * 2439.712	99.28			106.93	-7.65	Peak	4 *	2434	.146	93.96			101.62	-7.66	Peak
5 ! 2485.692	51.65	54.00	-2.35	59.24	-7.59	Average	5 !	2483	.998	43.86			51.45	-7.59	Average
6 ! 2485.692	68.16	74.00	-5.84	75.75	-7.59	Peak	6 !	2483	.998	59.67	74.00	-14.33	67.26	-7.59	Peak
1 ! 3249.300	46.72	54.00	-7.28	52.08	-5.36	Average	1	! 3249	.300	43.41	54.00	-10.59	48.77	-5.36	Average
2 3249.300	48.89	74.00	-25.11	54.25	-5.36	Peak	2	3249	.300	46.56	74.00	-27.44	51.92	-5.36	Peak
3 4874.000	28.61	54.00	-25.39	30.16	-1.55	Average	3	4874	.000	28.79	54.00	-25.21	30.34	-1.55	Average
4 4874.000	41.64	74.00	-32.36	43.19	-1.55	Peak	4	4874	.000	42.47	74.00	-31.53	44.02	-1.55	Peak
5 7311.000	33.56	54.00	-20.44	28.24	5.32	Average	5	7311	.000	33.60	54.00	-20.40	28.28	5.32	Average
6 7311.000	47.26	74.00	-26.74	41.94	5.32	Peak	6	7311	.000	46.88	74.00	-27.12	41.56	5.32	Peak

IEEE 80	2.11n	HT40) Hig	h CH	Hori	zontal	I	EEE 80	2.11	n HT	40 Hi	gh Cl	H Ve	rtical
Fred	Level	Limit Line		Read Level		Remark		Freq	Level	Limit Line		Read Level	Factor	Remark
MH:	dBuV/m	dBuV/m	——dB	dBuV	dB/m		-	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	
1 * 2447.486				94.07		Average	1 *	2458.880	78.36			85.98	-7.62	Average
2 * 2447.486	97.82			105.45		_	2 *	2458.880	88.56			96.18		
3 ! 2486.726	49.99	54.00	-4.01	57.58	-7.59	Average	3 !	2483.840	42.87	54.00	-11.13	50.46	-7.59	Average
4 ! 2486.726	64.57	74.00	-9.43	72.16	-7.59	Peak	4 !	2483.840	56.59	74.00	-17.41	64.18	-7.59	Peak
1 ! 3269.30	45.09	54.00	-8.91	50.42	-5.33	Average	1 !	3269.300	41.44	54.00	-12.56	46.77	-5.33	Average
2 3269.30	47.76	74.00	-26.24	53.09	-5.33	Peak	2	3269.300	45.30	74.00	-28.70	50.63	-5.33	Peak
3 4904.00	28.76	54.00	-25.24	30.23	-1.47	Average	3	4904.000	27.72	54.00	-26.28	29.19	-1.47	Average
4 4904.00				43.54		Peak	4	4904.000	42.38	74.00	-31.62	43.85	-1.47	Peak
5 7356.000	32.96	54.00	-21.04	27.69	5.27	Average	5	7356.000	31.91	54.00	-22.09	26.64	5.27	Average
6 7356.00	46.81	74.00	-27.19	41.54	5.27	Peak	6	7356.000	46.75	74.00	-27.25	41.48	5.27	Peak

<Chip Antenna (FR05-S1-N-0-102) with 3.3 V_{dc} >

IEEE 8	302.1	l1b L	ow C	Н Но	rizon	tal		IEEE	802	.11b	Low	CH V	ertic	al
Freq	Level	Limit Line		Read Level	Factor	Remark		Freq	Level	Limit Line	Over Limit			Remark
MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m		-	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	
1 ! 2389.744				59.97	-7.76	Average	1 !	2388.960		54.00				Average
2 ! 2389.744	61.19	74.00	-12.81	68.95	-7.76	Peak	2	2388.960	53.35	74.00	-20.65	61.11	-7.76	Peak
3 * 2411.248	106.91			114.62	-7.71	Average	3 *	2413.040	97.83			105.54	-7.71	Average
4 * 2411.248	109.65			117.36	-7.71	Peak	4 *	2413.040	100.53			108.24	-7.71	Peak
1 ! 3216.000	45.48	54.00	-8.52	50.94	-5.46	Average	1 !	3216.000	42.40	54.00	-11.60	47.86	-5.46	Average
2 3216.000	48.00	74.00	-26.00	53.46	-5.46	Peak	2	3216.000	45.83	74.00	-28.17	51.29	-5.46	Peak
3 ! 4824.000	42.20	54.00	-11.80	43.85	-1.65	Average	3 !	4824.000	42.79	54.00	-11.21	44.44	-1.65	Average
4 4824.000	47.09	74.00	-26.91	48.74	-1.65	Peak	4	4824.000	47.08	74.00	-26.92	48.73	-1.65	Peak
5 ! 7236.000	40.88	54.00	-13.12	35.31	5.57	Average	5 !	7236.000	40.89	54.00	-13.11	35.32	5.57	Average
6 7236.000	49.00	74.00	-25.00	43.43	5.57	Peak	6	7236.000	50.20	74.00	-23.80	44.63	5.57	Peak

IEEE 8	02.11	b Mi	ddle	СН Н	orizo	ntal	IEEE 802.11b Middle CH Vertical								
Freq	Level	Limit Line	Over Limit		Factor	Remark		Freq	Level	Limit Line		Read Level	Factor	Remark	
MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m			MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m		
1 ! 2384.778	45.26	54.00	-8.74	53.03	-7.77	Average	1	2369.290	38.68	54.00	-15.32	46.50	-7.82	Averag	
2 ! 2384.778	59.39	74.00	-14.61	67.16	-7.77	Peak	2	2369.290	52.07	74.00	-21.93	59.89	-7.82	Peak	
3 * 2436.324	106.91			114.56	-7.65	Average	3 *	* 2436.324	98.31			105.96	-7.65	Averag	
4 * 2436.324	109.71			117.36	-7.65	Peak	4 *	* 2436.324	101.13			108.78	-7.65	Peak	
5 ! 2491.984	44.16	54.00	-9.84	51.75	-7.59	Average	5	2530.220	38.84	54.00	-15.16	46.30	-7.46	Average	
6 ! 2491.984	57.69	74.00	-16.31	65.28	-7.59	Peak	6	2530.220	52.36	74.00	-21.64	59.82	-7.46	Peak	
1 ! 3249.300	49.34	54.00	-4.66	54.70	-5.36	Average	1 !	3249.300	46.49	54.00	-7.51	51.85	-5.36	Average	
2 3249.300	47.30	74.00	-26.70	52.66	-5.36	Peak	2	3249.300	48.26	74.00	-25.74	53.62	-5.36	Peak	
3 ! 4874.000	44.46	54.00	-9.54	46.01	-1.55	Average	3 !	4874.000	46.88	54.00	-7.12	48.43	-1.55	Average	
4 4874.000	48.46	74.00	-25.54	50.01	-1.55	Peak	4	4874.000	50.11	74.00	-23.89	51.66	-1.55	Peak	
5 ! 7311.000	41.56	54.00	-12.44	36.24	5.32	Average	5 !	7311.000	40.47	54.00	-13.53	35.15	5.32	Average	
6 7311.000	50.27	74.00	-23.73	44.95	5.32	Peak	6	7311.000	49.97	74.00	-24.03	44.65	5.32	Peak	

IEEE 802.11b High CH Horizontal	IEEE 802.11b High CH Vertical
Limit Over Read Limit Level Factor Remark MHz dBuV/m dB dBuV dB/m	Limit Over Read Level Limit Level Factor Remark Level Level Factor Remark Level Level

IEEE 802.11g Low CH Horizontal	IEEE 802.11g Low CH Vertical
Limit Over Read	Limit Over Read Level Factor Remark

IEEE 8	02.11	g Mi	ddle	СНН	orizo	ontal	IEEE 802.11g Middle CH Vertical							
Freq	Level	Limit Line			Factor	Remark		Freq	Level	Limit Line	Over Limit	Read Level	Factor	Remark
MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m			MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	
1 ! 2386.472	52.15	54.00	-1.85	59.92	-7.77	Average	1 !	2389.860	43.11	54.00	-10.89	50.87	-7.76	Average
2 ! 2386.472	69.45	74.00	-4.55	77.22	-7.77	Peak	2 !	2389.860	59.85	74.00	-14.15	67.61	-7.76	Peak
3 * 2436.082	103.10			110.75	-7.65	Average	3 *	2436.082	94.27			101.92	-7.65	Average
4 * 2436.082	113.47			121.12	-7.65	Peak	4 *	2436.082	104.63			112.28	-7.65	Peak
5 ! 2483.756	53.50	54.00	-0.50	61.09	-7.59	Average	5 !	2484.482	44.13	54.00	-9.87	51.72	-7.59	Average
6 ! 2483.756	70.17	74.00	-3.83	77.76	-7.59	Peak	6 !	2484.482	62.36	74.00	-11.64	69.95	-7.59	Peak
1 ! 3249.300	49.61	54.00	-4.39	54.97	-5.36	Average	1	3249.300	43.87	54.00	-10.13	49.23	-5.36	Average
2 3249.300	51.97	74.00	-22.03	57.33	-5.36	Peak	2	3249.300	48.23	74.00	-25.77	53.59	-5.36	Peak
3 ! 4874.000	34.96	54.00	-19.04	36.51	-1.55	Average	3	4874.000	36.96	54.00	-17.04	38.51	-1.55	Average
4 4874.000	48.00	74.00	-26.00	49.55	-1.55	Peak	4	4874.000	50.97	74.00	-23.03	52.52	-1.55	Peak
5 ! 7311.000	39.97	54.00	-14.03	34.65	5.32	Average	5	7311.000	41.92	54.00	-12.08	36.60	5.32	Average
6 7311.000	53.07	74.00	-20.93	47.75		Peak	6	7311.000	49.72	74.00	-24.28	44.40	5.32	Peak

IEEE 802.11g High CH Horizontal	IEEE 802.11g High CH Vertical							
Limit Over Read Freq Level Line Limit Level Factor Remark	Limit Over Read Freq Level Line Limit Level Factor Remark							
MHz dBuV/m dBuV/m dB dBuV dB/m	MHz dBuV/m dBuV/m dB dBuV dB/m							
1 * 2460.800 95.91 103.53 -7.62 Average	1 * 2464.900 85.99 93.61 -7.62 Average							
2 * 2460.800 106.88 114.50 -7.62 Peak	2 * 2464.900 96.64 104.26 -7.62 Peak							
3 ! 2483.600 53.37 54.00 -0.63 60.96 -7.59 Average	3 ! 2483.700 41.64 54.00 -12.36 49.23 -7.59 Average							
4 ! 2483.600 71.85 74.00 -2.15 79.44 -7.59 Peak	4 ! 2483.700 58.94 74.00 -15.06 66.53 -7.59 Peak							
1 ! 3282.700 46.05 54.00 -7.95 51.35 -5.30 Average	1 ! 3282.700 44.25 54.00 -9.75 49.55 -5.30 Average							
2 3282.700 48.35 74.00 -25.65 53.65 -5.30 Peak	2 3282.700 47.55 74.00 -26.45 52.85 -5.30 Peak							
3 4924.000 31.49 54.00 -22.51 32.92 -1.43 Average	3 4924.000 32.85 54.00 -21.15 34.28 -1.43 Average							
4 4924.000 44.77 74.00 -29.23 46.20 -1.43 Peak	4 4924.000 46.22 74.00 -27.78 47.65 -1.43 Peak							
5 ! 7386.000 34.30 54.00 -19.70 28.86 5.44 Average	5 ! 7386.000 34.09 54.00 -19.91 28.65 5.44 Average							
6 7386.000 46.66 74.00 -27.34 41.22 5.44 Peak	6 7386.000 48.95 74.00 -25.05 43.51 5.44 Peak							

IEEE 802.11n HT20 Low CH Horizontal	IEEE 802.11n HT20 Low CH Vertical								
Limit Over Read Freq Level Line Limit Level Factor Remark	Limit Over Read Freq Level Line Limit Level Factor Remark								
MHz dBuV/m dBuV/m dB dBuV dB/m	MHz dBuV/m dBuV/m dB dBuV dB/m								
1 ! 2389.968 53.44 54.00 -0.56 61.20 -7.76 Average	1 ! 2389.968 41.92 54.00 -12.08 49.68 -7.76 Average								
2 ! 2389.968 71.96 74.00 -2.04 79.72 -7.76 Peak	2 ! 2389.968 57.24 74.00 -16.76 65.00 -7.76 Peak								
3 * 2412.256 96.13 103.84 -7.71 Average	3 * 2411.024 85.77 93.48 -7.71 Average								
4 * 2412.256 106.79 114.50 -7.71 Peak	4 * 2411.024 96.45 104.16 -7.71 Peak								
1 ! 3216.000 45.70 54.00 -8.30 51.16 -5.46 Average	1 ! 3216.000 41.33 54.00 -12.67 46.79 -5.46 Average								
2 3216.000 47.92 74.00 -26.08 53.38 -5.46 Peak	2 3216.000 45.24 74.00 -28.76 50.70 -5.46 Peak								
3 4824.000 29.76 54.00 -24.24 31.41 -1.65 Average	3 4824.000 30.07 54.00 -23.93 31.72 -1.65 Average								
4 4824.000 42.77 74.00 -31.23 44.42 -1.65 Peak	4 4824.000 42.43 74.00 -31.57 44.08 -1.65 Peak								
5 ! 7236.000 34.15 54.00 -19.85 28.58 5.57 Average	5 ! 7236.000 34.24 54.00 -19.76 28.67 5.57 Average								
6 7236.000 48.04 74.00 -25.96 42.47 5.57 Peak	6 7236.000 47.64 74.00 -26.36 42.07 5.57 Peak								

IEEE 802.11n HT20 Middle CH Horizontal	IEEE 802.11n HT20 Middle CH Vertical
Limit Over Read Level Factor Remark Level Level Factor Remark Level Level	Limit Over Read Freq Level Line Limit Level Factor Remark MHz dBuV/m dBuV/m dB dBuV dB/m 1 ! 2389.376 42.27 54.00 -11.73 50.03 -7.76 Average 2 ! 2389.376 54.91 74.00 -19.09 62.67 -7.76 Peak 3 * 2438.502 91.77 99.42 -7.65 Average
4 2433.336 112.39 122.33 -7.63 Feak 5 ! 2483.756 50.57 54.00 -3.43 58.16 -7.59 Average 6 ! 2483.756 68.62 74.00 -5.38 76.21 -7.59 Peak 1 ! 3249.300 48.14 54.00 -5.86 53.50 -5.36 Average 2 3249.300 51.11 74.00 -22.89 56.47 -5.36 Peak 3 ! 4874.000 34.87 54.00 -19.13 36.42 -1.55 Average 4 4874.000 48.57 74.00 -25.43 50.12 -1.55 Peak 5 ! 7311.000 47.25 54.00 -6.75 41.93 5.32 Average 6 7311.000 53.43 74.00 -20.57 48.11 5.32 Peak	4 * 2438.502 102.14 109.79 -7.65 Peak 5 ! 2484.240 41.73 54.00 -12.27 49.32 -7.59 Average 6 ! 2484.240 55.52 74.00 -18.48 63.11 -7.59 Peak 1 ! 3249.300 46.67 54.00 -7.33 52.03 -5.36 Average 2 3249.300 46.27 74.00 -27.73 51.63 -5.36 Peak 3 4874.000 33.62 54.00 -20.38 35.17 -1.55 Average 4 4874.000 43.14 74.00 -30.86 44.69 -1.55 Peak 5 ! 7311.000 37.08 54.00 -16.92 31.76 5.32 Average 6 7311.000 47.33 74.00 -26.67 42.01 5.32 Peak

IEEE 802.11n HT20 High CH Horizontal	IEEE 802.11n HT20 High CH Vertical
Limit Over Read Level Factor Remark	Limit Over Read Line Limit Level Factor Remark Le

IEEE 802	2.11n	HT4	0 Lov	v CH	Horiz	zontal	IEEE 802.11n HT40 Low CH Vertical								
Freq	Level	Limit Line	Over Limit		Factor	Remark		Freq	Level	Limit Line	Over Limit	Read Level	Factor	Remark	
MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m			MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m		
1 ! 2386.428	52.07	54.00	-1.93	59.84	-7.77	Average	1 !	2388.672	41.94	54.00	-12.06	49.70	-7.76	Average	
2 ! 2386.428					-7.77	Peak	2 !	2388.672	56.30	74.00	-17.70	64.06	-7.76	Peak	
3 * 2414.676	88.89			96.60	-7.71	Average	3 *	2426.820	79.24			86.91	-7.67	Average	
4 * 2414.676	99.84			107.55	-7.71	Peak	4 *	2426.820	89.83			97.50	-7.67	Peak	
1 ! 3229.300	46.57	54.00	-7.43	51.99	-5.42	Average	1 !	3229.300	43.86	54.00	-10.14	49.28	-5.42	Average	
2 3229.300	50.59	74.00	-23.41	56.01	-5.42	Peak	2	3229.300	47.83	74.00	-26.17	53.25	-5.42	Peak	
3 4844.000	28.66	54.00	-25.34	30.28	-1.62	Average	3	4844.000	29.03	54.00	-24.97	30.65	-1.62	Average	
4 4844.000	43.89	74.00	-30.11	45.51	-1.62	Peak	4	4844.000	44.50	74.00	-29.50	46.12	-1.62	Peak	
5 7266.000	33.64	54.00	-20.36	28.22	5.42	Average	5	7266.000	33.80	54.00	-20.20	28.38	5.42	Average	
6 7266.000	48.78	74.00	-25.22	43.36	5.42	Peak	6	7266.000	48.94	74.00	-25.06	43.52	5.42	Peak	

IEEE 802.1	l1n F	1T40	Mid	dle Cl	HOI	rizontal	IE	EE 802	.11n	HT40) Mic	ldle (CH V	ertical
Freq	Level	Limit Line		Read Level	Factor	Remark		Freq	Level	Limit Line	Over Limit	Read Level	Factor	Remark
MHz	dBuV/m	dBuV/m	——dB	dBuV	dB/m			MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	
1 ! 2388.408	53.44	54.00	-0.56	61.21	-7.77	Average	1 !	2389.618			-11.85	49.91		Average
2 ! 2388.408	68.99	74.00	-5.01	76.76	-7.77	Peak	2 !	2389.618	57.06	74.00	-16.94	64.82	-7.76	Peak
3 * 2431.484	93.55			101.21	-7.66	Average	3 *	2442.858	82.54			90.19	-7.65	Average
4 * 2431.484	104.05			111.71	-7.66	Peak	4 *	2442.858	92.56			100.21	-7.65	Peak
5 ! 2484.724	52.85	54.00	-1.15	60.44	-7.59	Average	5 !	2483.514	41.28	54.00	-12.72	48.87	-7.59	Average
6 ! 2484.724	68.44	74.00	-5.56	76.03	-7.59	Peak	6 !	2483.514	57.33	74.00	-16.67	64.92	-7.59	Peak
1 ! 3249.300	46.91	54.00			-5.36	Average	1 !	3249.300	46.12	54.00	-7.88	51.48	-5.36	Average
2 3249.300	51.36	74.00	-22.64	56.72	-5.36	Peak	2	3249.300	50.01	74.00	-23.99	55.37	-5.36	Peak
3 4874.000	29.76	54.00	-24.24	31.31	-1.55	Average	3	4874.000	29.95	54.00	-24.05	31.50	-1.55	Average
4 4874.000	43.72	74.00	-30.28	45.27	-1.55	Peak	4	4874.000	43.66	74.00	-30.34	45.21	-1.55	Peak
5 ! 7311.000	34.06	54.00	-19.94	28.74	5.32	Average	5 !	7311.000	34.60	54.00	-19.40	29.28	5.32	Average
6 7311.000	48.64	74.00	-25.36	43.32	5.32	Peak	6	7311.000	48.15	74.00	-25.85	42.83	5.32	Peak

IEEE 802	EEE 802.11n HT40 High CH Horizontal								IEEE 802.11n HT40 High CH Vertical								
Freq	Level	Limit Line			Factor	Remark		Freq	Level	Limit Line		Read Level	Factor	Remark			
MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m			MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m				
1 * 2449.400	90.22			97.85	-7.63	Average	1 *	2443.520	79.98			87.63	-7.65	Average			
2 * 2449.400	101.47			109.10	-7.63	Peak	2 *	2443.520	91.12			98.77					
3 ! 2483.720	52.57	54.00	-1.43	60.16	-7.59	Average	3 !	2486.000	42.51	54.00	-11.49	50.10	-7.59	Average			
4 ! 2483.720	68.02	74.00	-5.98	75.61	-7.59	Peak	4 !	2486.000	56.91	74.00	-17.09	64.50	-7.59	Peak			
1 ! 3269.300	44.76	54.00	-9.24	50.09	-5.33	Average	1 !	3269.500	44.15	54.00	-9.85	49.48	-5.33	Average			
2 3269.300			-25.27			•	2	3269.500	47.48	74.00	-26.52	52.81	-5.33	Peak			
3 4904.000	29.31	54.00	-24.69	30.78	-1.47	Average	3	4904.000	29.47	54.00	-24.53	30.94	-1.47	Average			
4 4904.000			-30.26		-1.47	•	4	4904.000	42.78	74.00	-31.22	44.25	-1.47	Peak			
5 7356.000		54.00				Average	5	7356.000	33.45	54.00	-20.55	28.18	5.27	Average			
6 7356.000				42.81		Peak	6	7356.000	49.65	74.00	-24.35	44.38	5.27	Peak			

< Dipole Antenna (GW.34.5153) with 1.8 $V_{dc}>$

IEEE	802.1	1b L	ow C	Н Но	rizon	ıtal		IEE	E 802	.11b	Low	CH V	ertic	al
Freq	Level	Limit Line			Factor	Remark		Freq	Level	Limit Line	Over Limit		Factor	Remark
MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m		-	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	
1 ! 2389.744	39.71	54.00	-14.29	47.47	-7.76	Average	1 !	2386.160	53.48	54.00	-0.52	61.25	-7.77	Average
2 2389.744	51.43	74.00	-22.57	59.19	-7.76	Peak	2 !	2386.160	61.17	74.00	-12.83	68.94	-7.77	Peak
3 * 2413.040	92.00			99.71	-7.71	Average	3 *	2411.248	104.08			111.79	-7.71	Average
4 * 2413.040	94.51			102.22	-7.71	Peak	4 *	2411.248	106.79			114.50	-7.71	Peak
1 ! 3216.000	42.84	54.00	-11.16	48.30	-5.46	Average	1 !	3216.000	43.87	54.00	-10.13	49.33	-5.46	Average
2 3216.000	45.89	74.00	-28.11	51.35	-5.46	Peak	2	3216.000	48.45	74.00	-25.55	53.91	-5.46	Peak
3 ! 4824.000	42.86	54.00	-11.14	44.51	-1.65	Average	3 !	4824.000	42.74	54.00	-11.26	44.39	-1.65	Average
4 4824.000	46.22	74.00	-27.78	47.87	-1.65	Peak	4	4824.000	44.79	74.00	-29.21	46.44	-1.65	Peak
5 ! 7236.000	36.03	54.00	-17.97	30.46	5.57	Average	5 !	7236.000	39.24	54.00	-14.76	33.67	5.57	Average
6 7236.000	45.70	74.00	-28.30	40.13	5.57	Peak	6	7236.000	45.62	74.00	-28.38	40.05	5.57	Peak

IEEE 8	02.11	.b Mi	ddle	СН Н	lorizo	ontal		IEEE	802. 1	1 b N	/liddl	e CH	Vert	ical
Freq	Level	Limit Line			Factor	Remark		Freq	Level	Limit Line		Read Level	Factor	Remark
MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m			MHz	dBuV/m	dBuV/m	dB		dB/m	
1 ! 2389.134	38.08	54.00	-15.92	45.84	-7.76	Average	1 !	2389.860	44.10	54.00	-9.90	51.86	-7.76	Average
2 2389.134	50.84	74.00	-23.16	58.60	-7.76	Peak	2 !	2389.860	55.79	74.00	-18.21	63.55	-7.76	Peak
3 * 2436.324	92.72			100.37	-7.65	Average	3 *	2436.324	104.33			111.98	-7.65	Average
4 * 2436.324	95.40			103.05	-7.65	Peak	4 *	2436.324	107.05			114.70	-7.65	Peak
5 ! 2549.822	38.31	54.00	-15.69	45.69	-7.38	Average	5 !	2485.934	43.72	54.00	-10.28	51.31	-7.59	Average
6 2549.822	50.86	74.00	-23.14	58.24	-7.38	Peak	6 !	2485.934	55.93	74.00	-18.07	63.52	-7.59	Peak
1 ! 3249.300	44.71	54.00	-9.29	50.07	-5.36	Average	1 !	3249.300	45.19	54.00	-8.81	50.55	-5.36	Average
2 3249.300	48.28	74.00	-25.72	53.64	-5.36	Peak	2	3249.300	48.75	74.00	-25.25	54.11	-5.36	Peak
3 ! 4874.000	45.87	54.00	-8.13	47.42	-1.55	Average	3 !	4874.000	45.94	54.00	-8.06	47.49	-1.55	Average
4 4874.000	49.02	74.00	-24.98	50.57	-1.55	Peak	4	4874.000	48.48	74.00	-25.52	50.03	-1.55	Peak
5 ! 7311.000	36.78	54.00	-17.22	31.46	5.32	Average	5 !	7311.000	40.71	54.00	-13.29	35.39	5.32	Average
6 7311.000	47.02	74.00	-26.98	41.70	5.32	Peak	6	7311.000	46.54	74.00	-27.46	41.22	5.32	Peak

IEEE 802.11b High CH Horizontal	IEEE 802.11b High CH Vertical
Limit Over Read Level Factor Remark	Limit Over Read Limit Level Factor Remark

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IEEE 802.11g Low CH Horizontal	IEEE 802.11g Low CH Vertical
Limit Over Read Freq Level Line Limit Level Factor Remark	Limit Over Read Freq Level Line Limit Level Factor Remark
MHz dBuV/m dBuV/m dB dBuV dB/m	MHz dBuV/m dBuV/m dB dBuV dB/m
1 ! 2389.968 42.58 54.00 -11.42 50.34 -7.76 Average	1 ! 2389.968 53.74 54.00 -0.26 61.50 -7.76 Average
2 ! 2389.968 56.76 74.00 -17.24 64.52 -7.76 Peak	2 ! 2389.968 70.61 74.00 -3.39 78.37 -7.76 Peak
3 * 2413.824 82.97 90.68 -7.71 Average	3 * 2411.248 95.42 103.13 -7.71 Average
4 * 2413.824 92.44 100.15 -7.71 Peak	4 * 2411.248 105.11 112.82 -7.71 Peak
1 ! 3216.000 43.00 54.00 -11.00 48.46 -5.46 Average	1 ! 3216.000 44.83 54.00 -9.17 50.29 -5.46 Average
2 3216.000 46.66 74.00 -27.34 52.12 -5.46 Peak	2 3216.000 49.30 74.00 -24.70 54.76 -5.46 Peak
3 4824.000 30.44 54.00 -23.56 32.09 -1.65 Average	3 4824.000 29.72 54.00 -24.28 31.37 -1.65 Average
4 4824.000 40.22 74.00 -33.78 41.87 -1.65 Peak	4 4824.000 40.91 74.00 -33.09 42.56 -1.65 Peak
5 ! 7236.000 34.89 54.00 -19.11 29.32 5.57 Average	5 ! 7236.000 35.04 54.00 -18.96 29.47 5.57 Average
6 7236.000 47.10 74.00 -26.90 41.53 5.57 Peak	6 7236.000 46.61 74.00 -27.39 41.04 5.57 Peak

IEEE 8	02.11	g Mi	ddle	СН Н	orizo	ntal		IEEE	802.1	.1g N	liddle	e CH	Verti	cal
Freq	Level	Limit Line			Factor	Remark		Freq	Level	Limit Line			Factor	Remark
MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m			MHz	dBuV/m	dBuV/m	——dB	dBuV	dB/m	
1 ! 2389.376		54.00				Average	1	2388.892	51.77	54.00	-2.23	59.53	-7.76	Averag
2 ! 2389.376			-19.38		-7.76	•	2	2388.892	67.69	74.00	-6.31	75.45	-7.76	Peak
3 * 2439.712	97.24			104.89	-7.65	Average	3 '	* 2438.986	101.09			108.74	-7.65	Averag
4 * 2439.712	98.95			106.60	-7.65	•	4 '	* 2438.986	110.83			118.48	-7.65	Peak
5 ! 2485.450	40.69	54.00	-13.31	48.28	-7.59	Average	5	! 2484.240	49.19	54.00	-4.81	56.78	-7.59	Averag
6 ! 2485.450	54.54	74.00	-19.46	62.13	-7.59	Peak	6	2484.240	66.98	74.00	-7.02	74.57	-7.59	Peak
1 ! 3249.30	44.86	54.00	-9.14	50.22	-5.36	Average	1 !	3249.300	44.77	54.00	-9.23	50.13	-5.36	Averag
2 3249.30			-24.71			_	2	3249.300	48.76	74.00	-25.24	54.12	-5.36	Peak
3 4874.000	33.00	54.00	-21.00	34.55	-1.55	Average	3	4874.000	33.38	54.00	-20.62	34.93	-1.55	Averag
4 4874.000			-32.49			_	4	4874.000	43.18	74.00	-30.82	44.73	-1.55	Peak
5 ! 7311.000	35.48	54.00	-18.52	30.16	5.32	Average	5 !	7311.000	37.43	54.00	-16.57	32.11	5.32	Averag
6 7311.000	46.99	74.00	-27.01	41.67		Peak	6	7311.000	46.56	74.00	-27.44	41.24	5.32	Peak

	IEEE 8	302.1	.1g H	igh C	Н Но	rizor	ntal		IEE	802	.11g	High	CH V	ertic	al
	Freq	Level	Limit Line	Over Limit	Read Level	Factor	Remark		Freq	Level	Limit Line			Factor	Remark
_	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m		-	MHz	dBuV/m	dBuV/m	——dB	dBuV	dB/m	
1 *	2464.400	83.24			90.86	-7.62	Average	1 *	2465.000	93.71			101.33	-7.62	Average
2 *	2464.400	93.08			100.70	-7.62	Peak	2 *	2465.000	103.69			111.31	-7.62	Peak
3 !	2484.500	44.04	54.00	-9.96	51.63	-7.59	Average	3 !	2484.000	52.61	54.00	-1.39	60.20	-7.59	Average
	2484.500 3282.700	61.33 45.18	74.00 54.00	-12.67 -8.82			Peak Average	4 ! 1 !	2484.000 3282.700	70.21 45.04					Peak Average
2	3282.700	49.67	74.00	-24.33	54.97	-5.30	Peak	2	3282.700	49.50	74.00	-24.50	54.80	-5.30	Peak
3 4	4924.000	30.69	54.00	-23.31	32.12	-1.43	Average	3	4924.000	29.72	54.00	-24.28	31.15	-1.43	Average
4	4924.000	40.84	74.00	-33.16	42.27	-1.43	Peak	4	4924.000	40.49	74.00	-33.51	41.92	-1.43	Peak
5 !	7386.000	34.48	54.00	-19.52	29.04	5.44	Average	5 !	7386.000	34.49	54.00	-19.51	29.05	5.44	Average
6	7386.000	46.01	74.00	-27.99	40.57	5.44	Peak	6	7386.000	46.22	74.00	-27.78	40.78	5.44	Peak

IEEE 802	2.11n	HT2	0 Low	√ CH	Horiz	zontal		IEEE 8	02.11	n HT	20 Lo	w Cl	l Vei	rtical
Freq	Level	Limit Line	Over Limit	Read Level	Factor	Remark		Freq	Level	Limit Line				Remark
MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m			MHz	dBuV/m	dBuV/m	——dB	dBuV	dB/m	
1 ! 2387.728	42.16	54.00	-11.84	49.93	-7.77	Average	1 !	2389.296	52.82	54.00	-1.18	60.58	-7.76	Average
2 ! 2387.728	59.07	74.00	-14.93	66.84	-7.77	Peak	2 !	2389.296	71.38	74.00	-2.62	79.14	-7.76	Peak
3 * 2413.712	81.86			89.57	-7.71	Average	3 *	2410.128	94.28			101.99	-7.71	Average
4 * 2413.712	92.10			99.81	-7.71	Peak	4 *	2410.128	104.84			112.55	-7.71	Peak
1 ! 3216.000	42.98	54.00	-11.02	48.44	-5.46	Average	1 !	3216.000	44.75	54.00	-9.25	50.21	-5.46	Average
2 3216.000	46.20	74.00	-27.80	51.66	-5.46	Peak	2	3216.000	49.05	74.00	-24.95	54.51	-5.46	Peak
3 4824.000	30.46	54.00	-23.54	32.11	-1.65	Average	3	4824.000	29.78	54.00	-24.22	31.43	-1.65	Average
4 4824.000	41.86	74.00	-32.14	43.51	-1.65	Peak	4	4824.000	40.79	74.00	-33.21	42.44	-1.65	Peak
5 ! 7236.000	34.88	54.00	-19.12	29.31	5.57	Average	5 !	7236.000	34.90	54.00	-19.10	29.33	5.57	Average
6 7236.000	46.16	74.00	-27.84	40.59	5.57	Peak	6	7236.000	46.60	74.00	-27.40	41.03	5.57	Peak

Limit Over Read Freq Level Line Limit Level Factor Remark	Limit Over Read Freq Level Line Limit Level Factor Remark
MHz dBuV/m dBuV/m dB dBuV dB/m	MHz dBuV/m dBuV/m dB dBuV dB/m
1 ! 2385.746 40.11 54.00 -13.89 47.88 -7.77 Average	1 ! 2385.504 52.94 54.00 -1.06 60.71 -7.77 Average
2 2385.746 53.57 74.00 -20.43 61.34 -7.77 Peak	2 ! 2385.504 68.19 74.00 -5.81 75.96 -7.77 Peak
3 * 2438.502 89.43 97.08 -7.65 Average	3 * 2435.598 93.17 100.82 -7.65 Average
4 * 2438.502 99.93 107.58 -7.65 Peak	4 * 2435.598 110.57 118.22 -7.65 Peak
5 ! 2483.514 41.66 54.00 -12.34 49.25 -7.59 Average	5 ! 2483.514 50.80 54.00 -3.20 58.39 -7.59 Average
6 ! 2483.514 55.44 74.00 -18.56 63.03 -7.59 Peak	6 ! 2483.514 66.55 74.00 -7.45 74.14 -7.59 Peak
1 ! 3249.300 44.80 54.00 -9.20 50.16 -5.36 Average	1 ! 3249.300 44.75 54.00 -9.25 50.11 -5.36 Average
2 3249.300 48.95 74.00 -25.05 54.31 -5.36 Peak	2 3249.300 48.88 74.00 -25.12 54.24 -5.36 Peak
3 4874.000 33.05 54.00 -20.95 34.60 -1.55 Average	3 4874.000 33.20 54.00 -20.80 34.75 -1.55 Average
4 4874.000 41.93 74.00 -32.07 43.48 -1.55 Peak	4 4874.000 42.32 74.00 -31.68 43.87 -1.55 Peak
5 ! 7311.000 35.35 54.00 -18.65 30.03 5.32 Average	5 ! 7311.000 37.33 54.00 -16.67 32.01 5.32 Average
6 7311.000 46.21 74.00 -27.79 40.89 5.32 Peak	6 7311.000 46.59 74.00 -27.41 41.27 5.32 Peak

Limit Over Read		
Freq Level Line Limit Level Factor Remark	Limit Over Read Freq Level Line Limit Level Factor Rem	ark
MHz dBuV/m dBuV/m dB dBuV dB/m	MHz dBuV/m dBuV/m dB dBuV dB/m	
1 * 2463.500 82.95 90.57 -7.62 Average	1 * 2460.900 93.61 101.23 -7.62 Ave	rage
2 * 2463.500 93.19 100.81 -7.62 Peak	2 * 2460.900 103.61 111.23 -7.62 Pea	•
3 ! 2484.200 45.24 54.00 -8.76 52.83 -7.59 Average	3 ! 2484.200 53.95 54.00 -0.05 61.54 -7.59 Ave	rage
4 ! 2484.200 62.38 74.00 -11.62 69.97 -7.59 Peak	4 ! 2484.200 71.78 74.00 -2.22 79.37 -7.59 Pea	k
1 ! 3282.700 45.09 54.00 -8.91 50.39 -5.30 Average	1 ! 3282.700 44.90 54.00 -9.10 50.20 -5.30 Ave	rage
2 3282.700 49.39 74.00 -24.61 54.69 -5.30 Peak	2 3282.700 49.54 74.00 -24.46 54.84 -5.30 Pea	k
3 4924.000 30.66 54.00 -23.34 32.09 -1.43 Average	3 4924.000 29.88 54.00 -24.12 31.31 -1.43 Ave	rage
4 4924.000 41.69 74.00 -32.31 43.12 -1.43 Peak	4 4924.000 40.49 74.00 -33.51 41.92 -1.43 Pea	k
5 ! 7386.000 34.45 54.00 -19.55 29.01 5.44 Average	5 ! 7386.000 34.50 54.00 -19.50 29.06 5.44 Ave	rage
6 7386.000 45.43 74.00 -28.57 39.99 5.44 Peak	6 7386.000 45.76 74.00 -28.24 40.32 5.44 Pea	k

IEEE 80	2.11n	HT4	0 Lov	v CH	Hori	zontal		IEEE 8	02.11	n HT	40 Lc	w Cl	l Ver	tical
Freq	Level	Limit Line	Over Limit	Read Level	Factor	Remark		Freq	Level	Limit Line		Read Level		Remark
MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m			MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	
1 ! 2386.560	40.60	54.00	-13.40	48.37	-7.77	Average	1 !	2383.128	52.58	54.00	-1.42	60.36	-7.78	Average
2 ! 2386.560	55.24	74.00	-18.76	63.01	-7.77	Peak	2 !	2383.128	67.00	74.00	-7.00	74.78	-7.78	Peak
3 * 2428.404	75.81			83.48	-7.67	Average	3 *	2424.180	87.52			95.20	-7.68	Average
4 * 2428.404	86.66			94.33	-7.67	Peak	4 *	2424.180	97.54			105.22	-7.68	Peak
1 ! 3229.300	44.05	54.00	-9.95	49.47	-5.42	Average	1 !	3229.300	45.05	54		.47	-5.42	Average
2 3229.300	48.34	74.00	-25.66	53.76	-5.42	Peak	2	3229.300	48.76	74.00	-23.24	٠٠.18	-5.42	Peak
3 4844.000	30.41	54.00	-23.59	32.03	-1.62	Average	3	4844.000	29.52	54.00	-24.48	31.14	-1.62	Average
4 4844.000	40.56	74.00	-33.44	42.18	-1.62	Peak	4	4844.000	41.59	74.00	-32.41	43.21	-1.62	Peak
5 ! 7266.000	34.43	54.00	-19.57	29.01	5.42	Average	5 !	7266.000	34.39	54.00	-19.61	28.97	5.42	Average
6 7266.000	45.34	74.00	-28.66	39.92	5.42	Peak	6	7266.000	45.31	74.00	-28.69	39.89	5.42	Peak

EEE 802.	11n ł	HT40	Midd	lle CI	H Ho	rizontal	IE	EE 80	2.11n	HT4	0 Mic	dle	CH V	ertical
Freq	Level	Limit Line	Over Limit	Read Level	Factor	Remark		Freq	Level	Limit Line	Over Limit	Read Level	Factor	Remark
MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m			MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	
1 ! 2386.714	39.26	54.00	-14.74	47.03	-7.77	Average	1 !	2389.860		54.00				Average
2 2386.714	53.51	74.00	-20.49	61.28	-7.77	Peak	2 !	2389.860	67.60	74.00	-6.40	75.36	-7.76	Peak
3 * 2441.648	79.71			87.36	-7.65	Average	3 *	2440.438	91.04			98.69	-7.65	Average
4 * 2441.648	89.08			96.73	-7.65	Peak	4 *	2440.438	101.32			108.97	-7.65	Peak
5 ! 2483.514	43.79	54.00	-10.21	51.38	-7.59	Average	5 !	2483.756	52.88	54.00	-1.12	60.47	-7.59	Average
6 ! 2483.514	59.39	74.00	-14.61	66.98	-7.59	Peak	6 !	2483.756	70.49	74.00	-3.51	78.08	-7.59	Peak
1 ! 3249.300	45.01	54.00	-8.99	50.37	-5.36	Average	1 !	3249.300	45.01	54.00	-8.99	50.37	-5.36	Average
2 3249.300	49.18	74.00	-24.82	54.54	-5.36	Peak	2	3249.300	49.18	74.00	-24.82	54.54	-5.36	Peak
3 4874.000	30.66	54.00	-23.34	32.21	-1.55	Average	3	4874.000	30.66	54.00	-23.34	32.21	-1.55	Average
4 4874.000	40.39	74.00	-33.61	41.94	-1.55	Peak	4	4874.000	40.39	74.00	-33.61	41.94	-1.55	Peak
5 ! 7311.000	34.46	54.00	-19.54	29.14	5.32	Average	5 !	7311.000	34.46	54.00	-19.54	29.14	5.32	Average
6 7311.000	45.90	74.00	-28.10	40.58	5.32	Peak	6	7311.000	45.90	74.00	-28.10	40.58	5.32	Peak
0 ,511.000	45.50	,4.00	20.10	40.30	3.32	. car	0	/511.000	43.90	74.00	-20.10	40.30	3.32	reak

IEEE 802	2.11n	HT40	0 Higl	h CH	Hori	zontal	I	EEE 80	2.11	n HT	40 Hi	gh CI	H Ve	rtical
Freq	Level	Limit Line	Over Limit	Read Level	Factor	Remark		Freq	Level	Limit Line		Read Level		Remark
MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m		-	MHz	dBuV/m	dBuV/m	——dB	dBuV	dB/m	
1 * 2449.400				83.88		Average	1 *	2455.280	87.92			95.55	-7.63	Average
2 * 2449.400	86.54			94.17		•	2 *	2455.280	98.00			105.63	-7.63	Peak
3 ! 2484.200	41.36	54.00	-12.64	48.95	-7.59	Average	3 !	2487.560	50.51	54.00	-3.49	58.10	-7.59	Average
4 ! 2484.200 1 ! 3269.300			-18.85 -9.22	62.74 50.11		Peak Average		2487.560 3269.300		74.00 54.00		72.99 50.05		Peak Average
2 3269.300			-24.34	54.99	-5.33	•	2	3269.300	49.44	74.00	-24.56	54.77	-5.33	Peak
3 4904.000	30.62	54.00	-23.38	32.09	-1.47	Average	3	4904.000	29.63	54.00	-24.37	31.10	-1.47	Average
4 4904.000	41.26		-32.74	42.73	-1.47		4	4904.000	41.07	74.00	-32.93	42.54	-1.47	Peak
5 7356.000	33.77	54.00	-20.23	28.50	5.27	Average	5	7356.000	33.84	54.00	-20.16	28.57	5.27	Average
6 7356,000	45.71	74.00	-28.29	40.44		Peak	6	7356.000	46.15	74.00	-27.85	40.88	5.27	Peak

< Dipole Antenna (GW.34.5153) with 3.3 V_{dc} >

IEEE	802.1	1b L	ow C	Н Но	rizon	tal		IEE	E 802	.11b	Low	CH V	'ertic	al
Freq	Level	Limit Line		Read Level	Factor	Remark		Freq	Level	Limit Line			Factor	Remark
MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m			MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	
1 ! 2385.152	38.62	54.00	-15.38	46.39	-7.77	Average	1	2389.520	50.93	54.00	-3.07	58.69	-7.76	Average
2 2385.152	52.16	74.00	-21.84	59.93	-7.77	Peak	2	2389.520	61.09	74.00	-12.91	68.85	-7.76	Peak
3 * 2413.040	92.29			100.00	-7.71	Average	3 3	* 2411.248	106.79			114.50	-7.71	Average
4 * 2413.040	94.95			102.66	-7.71	Peak	4	* 2411.248	109.50			117.21	-7.71	Peak
1 ! 3216.000	47.18	54.00	-6.82	52.64	-5.46	Average	1	1 3216.000	45.52	54.00	-8.48	50.98	-5.46	Average
2 3216.000	48.92	74.00	-25.08	54.38	-5.46	Peak	2	3216.000	48.13	74.00	-25.87	53.59	-5.46	Peak
3 ! 4824.000	44.54	54.00	-9.46	46.19	-1.65	Average	3	4824.000	46.99	54.00	-7.01	48.64	-1.65	Average
4 4824.000	48.67	74.00	-25.33	50.32	-1.65	Peak	4	4824.000	50.13	74.00	-23.87	51.78	-1.65	Peak
5 ! 7236.000	42.06	54.00	-11.94	36.49	5.57	Average	5	7236.000	46.48	54.00	-7.52	40.91	5.57	Average
6 7236.000	51.25	74.00	-22.75	45.68	5.57	Peak	6	7236.000	53.06	74.00	-20.94	47.49	5.57	Peak

IEEE 80	02.11	.b Mi	ddle	СН Н	orizo	ntal		IEEE	802.1	1b N	1iddl	e CH	Vert	ical
Freq	Level	Limit Line	Over Limit		Factor	Remark		Freq	Level	Limit Line			Factor	Remark
MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m			MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	
1 ! 2355.980	37.58	54.00	-16.42	45.46	-7.88	Average	1 !	2385.746	43.60	54.00	-10.40	51.37	-7.77	Averag
2 2355.980	51.51	74.00	-22.49	59.39	-7.88	Peak	2 !	2385.746	57.29	74.00	-16.71	65.06	-7.77	Peak
3 * 2436.324	92.11			99.76	-7.65	Average	3 *	2436.324	107.11			114.76	-7.65	Averag
4 * 2436.324	94.99			102.64	-7.65	Peak	4 *	2436.324	109.82			117.47	-7.65	Peak
5 ! 2538.932	37.97	54.00	-16.03	45.40	-7.43	Average	5 !	2496.098	45.28	54.00	-8.72	52.86	-7.58	Averag
6 2538.932			-21.72		-7.43		6 !	2496.098	58.70	74.00	-15.30	66.28	-7.58	Peak
1 ! 3249.300			-6.36			Average	1 !	3249.300	46.14	54.00	-7.86	51.50	-5.36	Averag
2 3249.300			-24.21		-5.36		2	3249.300	49.30	74.00	-24.70	54.66	-5.36	Peak
3 ! 4874.000			-7.33			Average	3 !	4874.000	49.34	54.00	-4.66	50.89	-1.55	Averag
4 4874.000			-23.57		-1.55		4	4874.000	52.19	74.00	-21.81	53.74	-1.55	Peak
5 ! 7311.000			-12.20			Average	5 !	7311.000	46.75	54.00	-7.25	41.43	5.32	Averag
6 7311.000	50.17	74.00	-23.83	44.85	5.32	Peak	6	7311.000	52.92	74.00	-21.08	47.60	5.32	Peak

Limit Over Read Freq Level Line Limit Level Factor Remark
MHz dBuV/m dBuV/m dB dBuV dB/m
2461.100 104.68 112.30 -7.62 Average
2461.100 107.40 115.02 -7.62 Peak
2487.300 51.71 54.00 -2.29 59.30 -7.59 Average
2487.300 60.92 74.00 -13.08 68.51 -7.59 Peak
3282.700 45.54 54.00 -8.46 50.84 -5.30 Average
3282.700 47.91 74.00 -26.09 53.21 -5.30 Peak
4924.000 46.92 54.00 -7.08 48.35 -1.43 Average
4924.000 50.14 74.00 -23.86 51.57 -1.43 Peak
7386.000 39.88 54.00 -14.12 34.44 5.44 Average
7386.000 49.49 74.00 -24.51 44.05 5.44 Peak

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IEEE 802.11g Low CH Horizontal	IEEE 802.11g Low CH Vertical
Limit Over Read Freq Level Line Limit Level Factor Remark	Limit Over Read Freq Level Line Limit Level Factor Remark
MHz dBuV/m dBuV/m dB dBuV dB/m	MHz dBuV/m dBuV/m dB dBuV dB/m
1 ! 2389.717 40.09 54.00 -13.91 47.85 -7.76 Average	1 ! 2389.870 52.66 54.00 -1.34 60.42 -7.76 Average
2 ! 2389.717 55.24 74.00 -18.76 63.00 -7.76 Peak	2 ! 2389.870 69.67 74.00 -4.33 77.43 -7.76 Peak
3 * 2414.197 81.44 89.15 -7.71 Average	3 * 2410.831 96.91 104.62 -7.71 Average
4 * 2414.197 91.91 99.62 -7.71 Peak	4 * 2410.831 107.56 115.27 -7.71 Peak
1 ! 3216.000 46.59 54.00 -7.41 52.05 -5.46 Average	1 ! 3216.000 42.96 54.00 -11.04 48.42 -5.46 Average
2 3216.000 48.95 74.00 -25.05 54.41 -5.46 Peak	2 3216.000 46.41 74.00 -27.59 51.87 -5.46 Peak
3 4824.000 31.12 54.00 -22.88 32.77 -1.65 Average	3 4824.000 32.22 54.00 -21.78 33.87 -1.65 Average
4 4824.000 44.52 74.00 -29.48 46.17 -1.65 Peak	4 4824.000 45.64 74.00 -28.36 47.29 -1.65 Peak
5 ! 7236.000 34.60 54.00 -19.40 29.03 5.57 Average	5 ! 7236.000 34.67 54.00 -19.33 29.10 5.57 Average
6 7236.000 47.64 74.00 -26.36 42.07 5.57 Peak	6 7236.000 48.05 74.00 -25.95 42.48 5.57 Peak

IEEE 8	02.11	g Mi	ddle	СН Н	orizo	ntal		IEEE	802.1	l1g N	liddl	e CH	Verti	cal
Freq	Level	Limit Line		Read Level	Factor	Remark		Freq	Level	Limit Line	Over Limit	Read Level	Factor	Remark
MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m		-	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	
1 ! 2386.472	39.88	54.00	-14.12	47.65	-7.77	Average	1 !	2387.198	49.63	54.00	-4.37	57.40	-7.77	Average
2 ! 2386.472	56.25	74.00	-17.75	64.02	-7.77	Peak		2387.198	68.49	74.00	-5.51	76.26	-7.77	Peak
3 * 2436.082	89.56			97.21	-7.65	Average						110.89		Average
4 * 2436.082	100.37			108.02	-7.65	Peak	4 *	2436.082	113.95			121.60	-7.65	Peak
5 ! 2483.756	40.37	54.00	-13.63	47.96	-7.59	Average	5 !	2484.240	53.72	54.00	-0.28	61.31	-7.59	Average
6 ! 2483.756			-17.57		-7.59			2484.240	73.29	74.00	-0.71	80.88	-7.59	
1 ! 3249.300	46.80		-7.20		-5.36	Average	1 !	3249.300						Average
2 3249.300	49.14	74.00	-24.86	54.50	-5.36	Peak	2	3249.300	48.93	74.00	-25.07	54.29	-5.36	Peak
3 ! 4874.000	36.32	54.00	-17.68	37.87	-1.55	Average	3 !	4874.000	38.90	54.00	-15.10	40.45	-1.55	Average
4 4874.000	49.81	74.00	-24.19	51.36	-1.55	Peak	4	4874.000	51.67	74.00	-22.33	53.22	-1.55	Peak
5 ! 7311.000	40.03	54.00	-13.97	34.71	5.32	Average	5 !	7311.000	42.32	54.00	-11.68	37.00	5.32	Average
6 7311.000	53.27	74.00	-20.73	47.95	5.32	Peak	6 !	7311.000	55.46	74.00	-18.54	50.14	5.32	Peak

IEEE 802.11g High CI	H Horizontal	IEEE 802.11g High CH Vertical
Limit Over Freq Level Line Limit	Read Level Factor Remark	Limit Over Read Freq Level Line Limit Level Factor Remark
2 3282.700 47.53 74.00 -26.47 3 4924.000 33.15 54.00 -20.85	50.18 -5.30 Average 52.83 -5.30 Peak	MHz dBuV/m dBuV/m dB dBuV dB/m 1 * 2460.700 96.19 103.81 -7.62 Average 2 * 2460.700 106.90 114.52 -7.62 Peak 3 ! 2483.900 53.20 54.00 -0.80 60.79 -7.59 Average 4 ! 2483.900 71.44 74.00 -2.56 79.03 -7.59 Peak 1 ! 3282.700 45.31 54.00 -8.69 50.61 -5.30 Average 2 3282.700 47.82 74.00 -26.18 53.12 -5.30 Peak 3 ! 4924.000 34.46 54.00 -19.54 35.89 -1.43 Average 4 4924.000 47.99 74.00 -26.01 49.42 -1.43 Peak 5 ! 7386.000 47.66 74.00 -26.34 42.22 5.44 Peak

IEEE 802	IEEE 802.11n HT20 Middle CH Horizontal							EE 802	2.11n	HT2	0 Mic	ddle (CH V	ertical
Fre	q Level	Limit Line	Over Limit		Factor	Remark		Freq	Level	Limit Line			Factor	Remark
MH	z dBuV/m	dBuV/m	dB	dBuV	dB/m			MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	
1 ! 2388.65			-14.76		-7.76	Average	1 !	2389.618	48.88	54.00	-5.12	56.64	-7.76	Average
2 2388.65	0 52.25	74.00	-21.75	60.01	-7.76	Peak	2 !	2389.618	63.31	74.00	-10.69	71.07	-7.76	Peak
3 * 2435.11	4 88.74			96.39	-7.65	Average	3 *	2438.260	102.97			110.62	-7.65	Average
4 * 2435.11	4 99.29			106.94	-7.65	Peak	4 *	2438.260	113.48			121.13	-7.65	Peak
5 ! 2484.24	39.25	54.00	-14.75	46.84	-7.59	Average	5 !	2483.514	53.27	54.00	-0.73	60.86	-7.59	Average
6 2484.24			-21.07				6 !			74.00				
1 ! 3249.30	0 48.26	54.00	-5.74	53.62	-5.36	Average	1 !	3249.300	46.66	54.00	-7.34	52.02	-5.36	Average
2 3249.30	0 50.15	74.00	-23.85	55.51	-5.36	Peak	2	3249.300	49.14	74.00	-24.86	54.50	-5.36	Peak
3 ! 4874.00	0 36.58	54.00	-17.42	38.13	-1.55	Average	3 !	4874.000	36.61	54.00	-17.39	38.16	-1.55	Average
4 4874.00	0 49.82	74.00	-24.18	51.37	-1.55	Peak	4	4874.000	50.10	74.00	-23.90	51.65	-1.55	Peak
5 ! 7311.00	0 39.69	54.00	-14.31	34.37	5.32	Average	5 !	7311.000	42.13	54.00	-11.87	36.81	5.32	Average
6 7311.00	0 53.19	74.00	-20.81	47.87	5.32	Peak	6 !	7311.000	55.60	74.00	-18.40	50.28	5.32	Peak
					- 102									

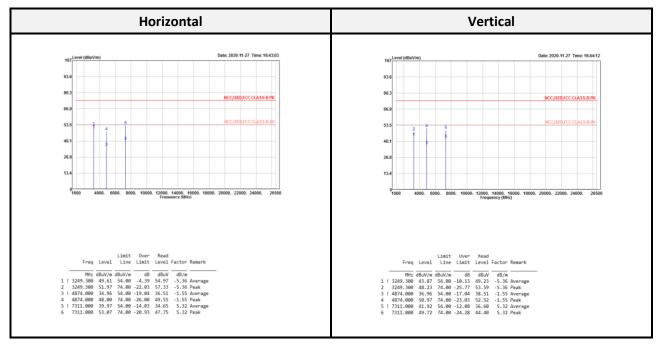
IEEE 802	IEEE 802.11n HT20 High CH Horizontal								IEEE 802.11n HT20 High CH Vertica					
Freq	Level	Limit Line	Over Limit	Read Level	Factor	Remark		Freq	Level	Limit Line		Read Level		Remark
MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m		-	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	
1 * 2464.000	79.21			86.83	-7.62	Average	1 *	2460.400	95.24			102.86	-7.62	Average
2 * 2464.000	90.18			97.80	-7.62	Peak	2 *	2460.400	105.44			113.06	-7.62	Peak
3 ! 2484.200	38.70	54.00	-15.30	46.29	-7.59	Average	3 !	2484.300	52.85	54.00	-1.15	60.44	-7.59	Average
4 2484.200	53.04	74.00	-20.96	60.63	-7.59	Peak	4 !	2484.300	68.67	74.00	-5.33	76.26	-7.59	Peak
1 ! 3282.700	44.43	54.00	-9.57	49.73	-5.30	Average	1 !	3282.700	45.21	54.00	-8.79	50.51	-5.30	Average
2 3282.700	47.08	74.00	-26.92	52.38	-5.30	Peak	2	3282.700	47.65	74.00	-26.35	52.95	-5.30	Peak
3 4924.000	32.31	54.00	-21.69	33.74	-1.43	Average	3	4924.000	33.45	54.00	-20.55	34.88	-1.43	Average
4 4924.000	45.81	74.00	-28.19	47.24	-1.43	Peak	4	4924.000	46.35	74.00	-27.65	47.78	-1.43	Peak
5 ! 7386.000	34.02	54.00	-19.98	28.58	5.44	Average	5 !	7386.000	34.03	54.00	-19.97	28.59	5.44	Average
6 7386.000			-26.94		5.44		6	7386.000	47.73	74.00	-26.27	42.29	5.44	Peak

IEEE 80	IEEE 802.11n HT40 Low CH Horizontal							IEEE 8	02.11	n HT	40 Lo	ow Cl	l Vei	tical
Freq	Level	Limit Line	Over Limit	Read Level	Factor	Remark		Freq	Level	Limit Line			Factor	Remark
MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m			MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	
1 ! 2385.504	39.81	54.00	-14.19	47.58	-7.77	Average	1 !	2387.616	53.43	54.00	-0.57	61.20	-7.77	Average
2 ! 2385.504	54.14	74.00	-19.86	61.91	-7.77	Peak	2 !	2387.616	68.14	74.00	-5.86	75.91	-7.77	Peak
3 * 2424.444	75.89			83.57	-7.68	Average	3 *	2426.292	90.09			97.76	-7.67	Average
4 * 2424.444 1 ! 3229.300		54.00	-6.52		-7.68 -5.42	Peak Average	4 *	2426.292 3229.300		5/ 00	-8.66	108.43		Peak Average
2 3229.300			-24.26				2 .	3229.300	47.95		-26.05			
3 4844.000	29.35	54.00	-24.65	30.97	-1.62	Average	3	4844.000	30.03		-23.97			Average
4 4844.000	42.38	74.00	-31.62	44.00	-1.62	Peak	4	4844.000			-30.94		-1.62	
5 7266.000	33.95	54.00	-20.05	28.53	5.42	Average	5 !	7266.000		54.00		28.59		Average
6 7266.000	47.15	74.00	-26.85	41.73	5.42	Peak	6	7266.000			-27.13			Peak

IEEE 802.	IEEE 802.11n HT40 Middle CH Horizontal							EE 802	2.11n	HT4	0 Mi	ddle	CH V	ertical
Freq	Level	Limit Line	Over Limit	Read Level	Factor	Remark		Freq	Level	Limit Line			Factor	Remark
MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m			MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	
1 ! 2386.472	39.98	54.00	-14.02	47.75	-7.77	Average	1 !	2388.892	52.84	54.00	-1.16	60.60	-7.76	Average
2 2386.472	53.42	74.00	-20.58	61.19	-7.77	Peak	2 !	2388.892	69.29	74.00	-4.71	77.05	-7.76	Peak
3 * 2433.904	79.27			86.93	-7.66	Average	3 *	2441.890	94.21			101.86	-7.65	Average
4 * 2433.904	90.19			97.85	-7.66	Peak	4 *	2441.890	105.42			113.07	-7.65	Peak
5 ! 2484.724	39.92	54.00	-14.08	47.51	-7.59	Average	5 !	2483.998	53.01	54.00	-0.99	60.60	-7.59	Average
6 ! 2484.724	55.64	74.00	-18.36	63.23	-7.59	Peak	6 !						-7.59	Peak
1 ! 3249.300	48.08	54.00	-5.92	53.44	-5.36	Average	1 !	3249.300	46.10			51.46	-5.36	Average
2 3249.300	49.67	74.00	-24.33	55.03	-5.36	Peak	2	3249.300	48.87	74.00	-25.13	54.23	-5.36	Peak
3 4874.000	29.96	54.00	-24.04	31.51	-1.55	Average	3	4874.000	30.92	54.00	-23.08	32.47	-1.55	Average
4 4874.000	43.01	74.00	-30.99	44.56	-1.55	Peak	4	4874.000	45.12	74.00	-28.88	46.67	-1.55	Peak
5 7311.000	33.99	54.00	-20.01	28.67	5.32	Average	5 !	7311.000	34.11	54.00	-19.89	28.79	5.32	Average
6 7311.000	48.50	74.00	-25.50	43.18	5.32	Peak	6	7311.000	47.21	74.00	-26.79	41.89	5.32	Peak

IEEE 802	IEEE 802.11n HT40 High CH Horizontal							EEE 80	2.11	n HT4	40 Hi	gh C	H Ve	rtical
Freq	Level	Limit Line	Over Limit	Read Level	Factor	Remark		Freq	Level	Limit Line	Over Limit		Factor	Remark
MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m		_	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	
1 * 2444.360	74.36			82.00	-7.64	Average	1 *	2448.680	90.66			98.29	-7.63	Average
2 * 2444.360	85.70			93.34	-7.64	Peak	2 *	2448.680	101.66			109.29	-7.63	Peak
3 ! 2485.520	39.28	54.00	-14.72	46.87	-7.59	Average	3 !	2484.200	52.78	54.00	-1.22	60.37	-7.59	Average
4 2485.520	52.48	74.00	-21.52	60.07	-7.59	Peak	4 !	2484.200	67.28	74.00	-6.72	74.87	-7.59	Peak
1 ! 3269.300	46.69	54.00	-7.31	52.02	-5.33	Average	1 !	3269.300	45.58	54.00	-8.42	50.91	-5.33	Average
2 3269.300	48.95	74.00	-25.05	54.28	-5.33	Peak	2	3269.300	48.21	74.00	-25.79	53.54	-5.33	Peak
3 4904.000	29.45	54.00	-24.55	30.92	-1.47	Average	3	4904.000	30.02	54.00	-23.98	31.49	-1.47	Average
4 4904.000	42.73	74.00	-31.27	44.20	-1.47	Peak	4	4904.000	43.41	74.00	-30.59	44.88	-1.47	Peak
5 7356.000	33.32	54.00	-20.68	28.05	5.27	Average	5	7356.000	33.37	54.00	-20.63	28.10	5.27	Average
6 7356.000	47.69	74.00	-26.31	42.42	5.27	Peak	6	7356.000	46.70	74.00	-27.30	41.43	5.27	Peak

Above 1G (1 GHz-26.5 GHz): The worst mode is Chip Antenna with $3.3V_{dc}$ for 802.11g middle CH.



Level = Read Level + Factor

Over Limit = Level - Limit

Correct Factor = Antenna Factor + Cable Loss - Amplifier Gain

Spurious emissions more than 20 dB below the limit were not reported

Conducted Spurious Emissions:

Configuration	Channel	Frequency (MHz)	Delta Peak to Band Emission (dBc)	Limit (dBc)	Result
	Low	2412	44.86	≥ 20	Compliance
IEEE 802.11b	Mid	2437	45.76	≥ 20	Compliance
	High	2462	42.74	≥ 20	Compliance
	Low	2412	34.68	≥ 20	Compliance
IEEE 802.11g	Mid	2437	41.33	≥ 20	Compliance
	High	2462	33.97	≥ 20	Compliance
	Low	2412	33.54	≥ 20	Compliance
IEEE 802.11n HT20	Mid	2437	40.22	≥ 20	Compliance
	High	2462	32.28	≥ 20	Compliance
	Low	2422	28.18	≥ 20	Compliance
IEEE 802.11n HT40	Mid	2437	30.19	≥ 20	Compliance
-	High	2452	26.99	≥ 20	Compliance

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