



FCC PART 15.407

LP0002-2018

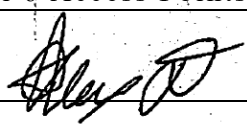
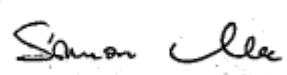
TEST REPORT

For

Cisco Systems, Inc.

125 W Tasman Drive
San Jose, CA 95134, USA

FCC ID: LDK948342197

Report Type: Original Report	Product type: Cisco Catalyst C9130AX Series Wi-Fi 6 Access Points
Prepared By	Alexandrae Duran Test Technician 
Report Number	R1911156-01
Report Date	2019-12-04
Reviewed By	Simon Ma RF Supervisor 
Bay Area Compliance Laboratories Corp. 1274 Anvilwood Ave Sunnyvale, CA 94089, USA Tel: (408) 732-9162, Fax: (408) 732 9164	



Note: This test report was 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. This test report shall not be used by the customer to claim product certification, approval, or endorsement by A2LA or any agency of the United States Government or any foreign government.

* This test report may contain data and test methods that are not covered by BACL's scope of accreditation as of the test report date shown above. These items are marked within the test report text with an asterisk "*"

TABLE OF CONTENTS

1	GENERAL DESCRIPTION.....	5
1.1	PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT).....	5
1.2	OBJECTIVE.....	5
1.3	RELATED SUBMITTAL(S)/GRANT(S)	5
1.4	TEST METHODOLOGY	5
1.5	MEASUREMENT UNCERTAINTY	5
1.6	TEST FACILITY REGISTRATIONS	6
1.7	TEST FACILITY ACCREDITATIONS.....	6
2	EUT TEST CONFIGURATION.....	9
2.1	JUSTIFICATION.....	9
2.2	EUT EXERCISE SOFTWARE.....	9
2.3	DUTY CYCLE CORRECTION FACTOR.....	9
2.4	EQUIPMENT MODIFICATIONS	10
2.5	LOCAL SUPPORT EQUIPMENT	10
2.6	SUPPORT EQUIPMENT	10
2.7	INTERFACE PORTS AND CABLING	10
3	SUMMARY OF TEST RESULTS.....	11
4	FCC §15.203, LP0002-2018 §2.2 - ANTENNA REQUIREMENTS.....	12
4.1	APPLICABLE STANDARDS	12
4.2	ANTENNA LIST	12
5	FCC §2.1091, §15.407(F), & LP0002-2018 §5.20.2 - RF EXPOSURE	13
5.1	APPLICABLE STANDARDS	13
5.2	MPE PREDICTION	13
5.3	MPE RESULTS FOR FCC.....	14
6	FCC §15.407(E), LP0002-2018 §4.7 - 6 DB, 26 DB, AND 99% OCCUPIED BANDWIDTH	20
6.1	APPLICABLE STANDARDS	20
6.2	MEASUREMENT PROCEDURE	20
6.3	TEST EQUIPMENT LIST AND DETAILS	20
6.4	TEST ENVIRONMENTAL CONDITIONS.....	20
6.5	TEST RESULTS	20
7	FCC §407(A), LP0002-2018 §4.7 - OUTPUT POWER	21
7.1	APPLICABLE STANDARDS	21
7.2	MEASUREMENT PROCEDURE	22
7.3	TEST EQUIPMENT LIST AND DETAILS	22
7.4	TEST ENVIRONMENTAL CONDITIONS.....	23
7.5	TEST RESULTS	23
8	FCC §15.407(A), LP0002-2018 §4.7 – POWER SPECTRAL DENSITY	24
8.1	APPLICABLE STANDARDS	24
8.2	MEASUREMENT PROCEDURE	25
8.3	TEST EQUIPMENT LIST AND DETAILS	25
8.4	TEST ENVIRONMENTAL CONDITIONS.....	25
8.5	TEST RESULTS	25
9	FCC §15.407(B), LP0002-2018 §4.7 - OUT OF BAND EMISSIONS.....	26
9.1	APPLICABLE STANDARDS	26
9.2	MEASUREMENT PROCEDURE	26
9.3	TEST EQUIPMENT LIST AND DETAILS	27
9.4	TEST ENVIRONMENTAL CONDITIONS.....	27

9.5

TEST RESULTS

27

10

APPENDIX (NORMATIVE) - EUT PHOTOGRAPHS

28

11

ANNEX A – TEST RESULTS AND MEASUREMENT PLOTS

29

12

ANNEX B (NORMATIVE) – A2LA ELECTRICAL TESTING CERTIFICATE.....

83

DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
0	R1911156-01	Original Report	2019-12-04

1 General Description

1.1 Product Description for Equipment under Test (EUT)

This test and measurement report was prepared on behalf of *Cisco Systems, Inc.* and their product model: *C9130AXE-B (US)*, and *C9130AXE-T (Taiwan)*, FCC ID: LDK948342197, or the “EUT” as referred to in this report. The product is an 802.11ax Access Point.

1.2 Objective

This report is prepared on behalf of Cisco Systems, Inc. in accordance with FCC CFR47 §15.407 and LP0002-2018.

The objective is to determine compliance with FCC Part 15.407 and LP0002-2018 rules for Output Power, Antenna Requirements, AC Line Conducted Emissions, Emission Bandwidth, Power spectral density, Conducted and Radiated Spurious Emissions.

1.3 Related Submittal(s)/Grant(s)

Equipment Class: DTS

1.4 Test Methodology

All measurements contained in this report were conducted in accordance with ANSI C63.10-2013, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz, and FCC KDB 789033 D02 General UNII Test Procedure New Rules v02r01.

1.5 Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in the field of EMC. The factors contributing to uncertainties are spectrum analyzer, cable loss, antenna factor calibration, antenna directivity, antenna factor variation with height, antenna phase center variation, antenna factor frequency interpolation, measurement distance variation, site imperfections, mismatch (average), and system repeatability.

Parameter	Measurement uncertainty
Occupied Channel Bandwidth	34kHz
RF output power, conducted	4.84 dB
Power Spectral Density, conducted	1.69 dB
Unwanted Emissions, conducted	4.84dB
All emissions, radiated	5.18 dB
AC power line Conducted Emission	4.22 dB
Temperature	±2 ° C
Humidity	±5 %
DC and low frequency voltages	±1.0 %
Time	±2 %
Duty Cycle	±3 %

1.6 Test Facility Registrations

BACLs test facilities that are used to perform Radiated and Conducted Emissions tests are currently recognized by the Federal Communications Commission as Accredited with NIST Designation Number US1129.

BACL's test facilities that are used to perform Radiated and Conducted Emissions tests are currently registered with Industry Canada under Registration Numbers: 3062A-1, 3062A-2, and 3062A-3.

BACL is a Chinese Taipei Bureau of Standards Metrology and Inspection (BSMI) validated Conformity Assessment Body (CAB), under Appendix B, Phase I Procedures of the APEC Mutual Recognition Arrangement (MRA). BACL's BSMI Lab Code Number is: SL2-IN-E-1002R

BACL's test facilities that are used to perform AC Line Conducted Emissions, Telecommunications Line Conducted Emissions, Radiated Emissions from 30 MHz to 1 GHz, and Radiated Emissions from 1 GHz to 6 GHz are currently recognized as Accredited in accordance with the Voluntary Control Council for Interference [VCCI] Article 15 procedures under Registration Number A-0027.

1.7 Test Facility Accreditations

Bay Area Compliance Laboratories Corp. (BACL) is:

A- An independent, 3rd-Party, Commercial Test Laboratory accredited to ISO/IEC 17025:2005 by A2LA (Test Laboratory Accreditation Certificate Number 3279.02), in the fields of: Electromagnetic Compatibility and Telecommunications. Unless noted by an Asterisk (*) in the Compliance Matrix (See Section 3 of this Test Report), BACL's ISO/IEC 17025:2005 Scope of Accreditation includes all of the Test Method Standards and/or the Product Family Standards detailed in this Test Report..

BACL's ISO/IEC 17025:2005 Scope of Accreditation includes a comprehensive suite of EMC Emissions, EMC Immunity, Radio, RF Exposure, Safety and wireline Telecommunications test methods applicable to a wide range of product categories. These product categories include Central Office Telecommunications Equipment [including NEBS - Network Equipment Building Systems], Unlicensed and Licensed Wireless and RF devices, Information Technology Equipment (ITE); Telecommunications Terminal Equipment (TTE); Medical Electrical Equipment; Industrial, Scientific and Medical Test Equipment; Professional Audio and Video Equipment; Industrial and Scientific Instruments and Laboratory Apparatus; Cable Distribution Systems, and Energy Efficient Lighting.

B- A Product Certification Body accredited to ISO/IEC 17065:2012 by A2LA (Product Certification Body Accreditation Certificate Number 3279.03) to certify

- For the USA (Federal Communications Commission):

- 1- All Unlicensed radio frequency devices within FCC Scopes A1, A2, A3, and A4;
- 2- All Licensed radio frequency devices within FCC Scopes B1, B2, B3, and B4;
- 3- All Telephone Terminal Equipment within FCC Scope C.

- For the Canada (Industry Canada):

- 1 All Scope 1-Licence-Exempt Radio Frequency Devices;
- 2 All Scope 2-Licensed Personal Mobile Radio Services;
- 3 All Scope 3-Licensed General Mobile & Fixed Radio Services;
- 4 All Scope 4-Licensed Maritime & Aviation Radio Services;
- 5 All Scope 5-Licensed Fixed Microwave Radio Services
- 6 All Broadcasting Technical Standards (BETS) in the Category I Equipment Standards List.

- For Singapore (Info-Communications Development Authority (IDA)):

- 1 All Line Terminal Equipment: All Technical Specifications for Line Terminal Equipment – Table 1 of IDA MRA Recognition Scheme: 2011, Annex 2

2. All Radio-Communication Equipment: All Technical Specifications for Radio-Communication Equipment – Table 2 of IDA MRA Recognition Scheme: 2011, Annex 2
- For the Hong Kong Special Administrative Region:
 - 1 All Radio Equipment, per KHCA 10XX-series Specifications;
 - 2 All GMDSS Marine Radio Equipment, per HKCA 12XX-series Specifications;
 - 3 All Fixed Network Equipment, per HKCA 20XX-series Specifications.
- For Japan:
 - 1 MIC Telecommunication Business Law (Terminal Equipment):
 - All Scope A1 - Terminal Equipment for the Purpose of Calls;
 - All Scope A2 - Other Terminal Equipment
 - 2 Radio Law (Radio Equipment):
 - All Scope B1 - Specified Radio Equipment specified in Article 38-2-2, paragraph 1, item 1 of the Radio Law
 - All Scope B2 - Specified Radio Equipment specified in Article 38-2-2, paragraph 1, item 2 of the Radio Law
 - All Scope B3 - Specified Radio Equipment specified in Article 38-2-2, paragraph 1, item 3 of the Radio Law

C- A Product Certification Body accredited to ISO/IEC 17065:2012 by A2LA (Product Certification Body Accreditation Certificate Number 3279.01) to certify Products to USA's Environmental Protection Agency (EPA) ENERGY STAR Product Specifications for:

- 1 Electronics and Office Equipment:
 - for Telephony (ver. 3.0)
 - for Audio/Video (ver. 3.0)
 - for Battery Charging Systems (ver. 1.1)
 - for Set-top Boxes & Cable Boxes (ver. 4.1)
 - for Televisions (ver. 6.1)
 - for Computers (ver. 6.0)
 - for Displays (ver. 6.0)
 - for Imaging Equipment (ver. 2.0)
 - for Computer Servers (ver. 2.0)
- 2 Commercial Food Service Equipment
 - for Commercial Dishwashers (ver. 2.0)
 - for Commercial Ice Machines (ver. 2.0)
 - for Commercial Ovens (ver. 2.1)
 - for Commercial Refrigerators and Freezers
- 3 Lighting Products
 - For Decorative Light Strings (ver. 1.5)
 - For Luminaires (including sub-components) and Lamps (ver. 1.2)
 - For Compact Fluorescent Lamps (CFLs) (ver. 4.3)
 - For Integral LED Lamps (ver. 1.4)
- 4 Heating, Ventilation, and AC Products
 - for Residential Ceiling Fans (ver. 3.0)
 - for Residential Ventilating Fans (ver. 3.2)
- 5 Other
 - For Water Coolers (ver. 3.0)

D- A NIST Designated Phase-I and Phase-II Conformity Assessment Body (CAB) for the following economies and regulatory authorities under the terms of the stated MRAs/Treaties:

- Australia: ACMA (Australian Communication and Media Authority) – APEC Tel MRA -Phase I;
- Canada: (Innovation, Science and Economic development Canada - ISED) Foreign Certification Body – FCB – APEC Tel MRA -Phase I & Phase II;

- Chinese Taipei (Republic of China – Taiwan):
 - o BSMI (Bureau of Standards, Metrology and Inspection) APEC Tel MRA -Phase I;
 - o NCC (National Communications Commission) APEC Tel MRA -Phase I;
- European Union:
 - o EMC Directive 2014/30/EU US-EU EMC & Telecom MRA CAB (NB)
 - o Radio Equipment (RE) Directive 2014/53/EU US-EU EMC & Telecom MRA CAB (NB)
 - o Low Voltage Directive (LVD) 2014/35/EU
- Hong Kong Special Administrative Region: (Office of the Telecommunications Authority – OFTA)
APEC Tel MRA -Phase I & Phase II
- Israel – US-Israel MRA Phase I
- Republic of Korea (Ministry of Communications - Radio Research Laboratory) APEC Tel MRA -Phase I
- Singapore: (Infocomm Media Development Authority - IMDA) APEC Tel MRA -Phase I & Phase II;
- Japan: VCCI - Voluntary Control Council for Interference US-Japan Telecom Treaty VCCI Side Letter-
- USA:
 - o ENERGY STAR Recognized Test Laboratory – US EPA
 - o Telecommunications Certification Body (TCB) – US FCC;
 - o Nationally Recognized Test Laboratory (NRTL) – US OSHA
- Vietnam: APEC Tel MRA -Phase I;

2 EUT Test Configuration

2.1 Justification

The EUT was configured for testing according to ANSI C63.10-2013 and FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

The EUT was tested in a testing mode to represent worst-case results during the final qualification test.

The worst-case data rates are determined by measuring the average power, peak power and PPSD across all data rates bandwidths, and modulations.

2.2 EUT Exercise Software

The test software used was Chelsea, a certification testing application developed by Alexandrae Duran. The software is compliant with the standard requirements being tested against.

2.3 Duty Cycle Correction Factor

According to KDB 789033 D02 General UNII Test Procedures New Rules v02r01 section B:

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.

Radio Mode	On Time (ms)	Period (ms)	Duty Cycle (%)	DCCF* (dB)
Non HT20	1.434	1.544	0.93	0.32
HT/VHT20	5.436	5.644	0.96	0.16
HE20	5.452	5.76	0.95	0.24
Non HT40	1.434	1.548	0.93	0.33
HT/VHT40	5.433	5.653	0.96	0.17
HE40	5.457	5.685	0.96	0.18
Non HT80	1.448	1.536	0.94	0.26
VHT80	5.437	5.654	0.96	0.17
HE80	5.454	5.683	0.96	0.18

Note*: DCCF = Duty Cycle Correction Factor = $10 \cdot \log(1/\text{duty cycle})$, when power averaging was applied in average measurement.

2.4 Equipment Modifications

None.

2.5 Local Support Equipment

Manufacturer	Description	Model
Dell	NB	E6410

2.6 Support Equipment

None.

2.7 Interface Ports and Cabling

Cable Description	Length (m)	To	From
Cat5e	~1	EUT	POE Injector
Cat5e	~1	POE Injector	NB

3 Summary of Test Results

FCC Rules	Description of Test	Result
FCC §2.1091, §15.407(f) LP0002-2018 §5.20.2	RF Exposure	Compliant
FCC §15.203 LP0002-2018 §2.2	Antenna Requirement	Compliant
FCC §15.207 LP0002-2018 §2.3	AC Power Line Conducted Emissions	N/A
FCC §2.1053, §15.205, §15.209, 15.407(b) LP0002-2018 §2.7, §2.8, §4.7	Spurious Radiated Emissions	Note ¹
FCC §15.407(e) LP0002-2018 §4.7	Emission Bandwidth	Compliant
FCC §407(a) LP0002-2018 §4.7	Output Power	Compliant
FCC §2.1051, §15.407(b) LP0002-2018 §4.7	Band Edges	Compliant
FCC §15.407(a) LP0002-2018 §4.7	Power Spectral Density	Compliant
FCC §2.1051, §15.407(b) LP0002-2018 §4.7	Spurious Emissions at Antenna Terminals	Compliant
FCC §15.407(h) LP0002-2018 §4.7	Dynamic Frequency Selection (DFS)	N/A

Note¹: compliance test data was recorded in a seaprate report, please refer to Test Report: EDCS-18486571 issued by Cisco Systems, Inc..

4 FCC §15.203, LP0002-2018 §2.2 - Antenna Requirements

4.1 Applicable Standards

According to FCC §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 use of a standard antenna jack or electrical connector is prohibited.

And according to FCC §15.247 (b) (4), if transmitting antennas of directional gain greater than 6 dBi are used the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

4.2 Antenna List

Part Number	Description	Gain
C-ANT9101=	Ceiling Mount Omni Self-identifying Antenna, 8-port, with DART connectors.	3 dBi (BLE) 2 dBi (2.4 GHz) 6 dBi (5 GHz)
C-ANT9102=	Pole or Wall Mount Omni Self-Identifying Antenna, 8-port, with DART connectors.	4 dBi (BLE) 4 dBi (2.4 GHz) 4 dBi (5 GHz)
C-ANT9103+	Pole or Wall Mount 75° Directional Self-Identifying Antenna, 8-port, with DART connectors.	6 dBi (BLE) 6 dBi (2.4 GHz) 6 dBi (5 GHz)
AIR-ANT2566P4W-R=	Directional Antenna, 4-port, with RP-TNC connectors.	6 dBi (2.4 GHz) 6 dBi (5 GHz)
AIR-ANT2566P4W-RS=	Directional Self-Identifying Antenna, 4-port, with RP-TNC connectors.	6 dBi (2.4 GHz) 6 dBi (5 GHz)
AIR-ANT2524V4C-R=	Ceiling Mount Omni Antenna, 4-port, with RP-TNC connectors.	2 dBi (2.4 GHz) 4 dBi (5 GHz)
AIR-ANT2524V4C-RS=	Ceiling Mount Omni Self-Identifying Antenna, 4-port, with RP-TNC connectors.	2 dBi (2.4 GHz) 4 dBi (5 GHz)
AIR-ANT2544V4M-R=	Wall Mount Omni Antenna, 4-port, with RP-TNC connectors.	4 dBi (2.4 GHz) 4 dBi (5 GHz)
AIR-ANT2544V4M-RS=	Wall Mount Omni Self-Identifying Antenna, 4-port, with RP-TNC connectors.	4 dBi (2.4 GHz) 4 dBi (5 GHz)
AIR-ANT2566D4M-R=	60° Patch Antenna, 4-port, with RP-TNC connectors.	6 dBi (2.4 GHz) 6 dBi (5 GHz)
AIR-ANT2566D4M-RS=	60° Patch Self-Identifying Antenna, 4-port, with RP-TNC connectors.	6 dBi (2.4 GHz) 6 dBi (5 GHz)

5 FCC §2.1091, §15.407(f), & LP0002-2018 §5.20.2 - RF Exposure

5.1 Applicable Standards

According to FCC §15.247(i), §15.407(f) and §1.1307(b)(1), 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 General Population/Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Averaging Time (minutes)
Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	* (100)	30
1.34-30	824/f	2.19/f	* (180/f ²)	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	f/1500	30
1500-100,000	/	/	1.0	30

f = frequency in MHz

* = Plane-wave equivalent power density

5.2 MPE Prediction

Predication of MPE limit at a given distance, Equation from OET Bulletin 65, Edition 97-01

$$S = PG/4\pi R^2$$

Where: S = power density

P = power input to antenna

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna

5.3 MPE Results for FCC

BLE:

<u>Maximum average output power at antenna input terminal (dBm):</u>	<u>2.4</u>
<u>Maximum average output power at antenna input terminal (mW):</u>	<u>1.74</u>
<u>Prediction distance (cm):</u>	<u>30</u>
<u>Prediction frequency (MHz):</u>	<u>2402</u>
<u>Maximum Antenna Gain, typical (dBi):</u>	<u>6</u>
<u>Maximum Antenna Gain (numeric):</u>	<u>3.98</u>
<u>Power density of prediction frequency at 30.0 cm (mW/cm²):</u>	<u>0.0006</u>
<u>FCC MPE limit for uncontrolled exposure at prediction frequency (mW/cm²):</u>	<u>1</u>

2.4 GHz Do1 Wi-Fi (4x4):

<u>Maximum average output power at antenna input terminal (dBm):</u>	<u>20.5</u>
<u>Maximum average output power at antenna input terminal (mW):</u>	<u>112.20</u>
<u>Prediction distance (cm):</u>	<u>30</u>
<u>Prediction frequency (MHz):</u>	<u>2437</u>
<u>Maximum Antenna Gain, typical (dBi):</u>	<u>12</u>
<u>Maximum Antenna Gain (numeric):</u>	<u>15.85</u>
<u>Power density of prediction frequency at 30.0 cm (mW/cm²):</u>	<u>0.16</u>
<u>FCC MPE limit for uncontrolled exposure at prediction frequency (mW/cm²):</u>	<u>1</u>

2.4 GHz ChillWave Wi-Fi (SISO):

<u>Maximum average output power at antenna input terminal (dBm):</u>	<u>9.2</u>
<u>Maximum average output power at antenna input terminal (mW):</u>	<u>8.32</u>
<u>Prediction distance (cm):</u>	<u>30</u>
<u>Prediction frequency (MHz):</u>	<u>2412</u>
<u>Maximum Antenna Gain, typical (dBi):</u>	<u>6</u>
<u>Maximum Antenna Gain (numeric):</u>	<u>3.98</u>
<u>Power density of prediction frequency at 30.0 cm (mW/cm²):</u>	<u>0.003</u>
<u>FCC MPE limit for uncontrolled exposure at prediction frequency (mW/cm²):</u>	<u>1</u>

5 GHz Do1 Wi-Fi (4x4)-5.2 GHz band:

Maximum average output power at antenna input terminal (dBm): 18
Maximum average output power at antenna input terminal (mW): 63.10
Prediction distance (cm): 30
Prediction frequency (MHz): 5230
Maximum Antenna Gain, typical (dBi): 8.77
Maximum Antenna Gain (numeric): 7.53
Power density of prediction frequency at 30.0 cm (mW/cm²): 0.04
FCC MPE limit for uncontrolled exposure at prediction frequency (mW/cm²): 1

5 GHz Do1 Wi-Fi (4x4)-5.3 GHz band:

Maximum average output power at antenna input terminal (dBm): 17.61
Maximum average output power at antenna input terminal (mW): 57.68
Prediction distance (cm): 30
Prediction frequency (MHz): 5270
Maximum Antenna Gain, typical (dBi): 12.02
Maximum Antenna Gain (numeric): 15.92
Power density of prediction frequency at 30.0 cm (mW/cm²): 0.08
FCC MPE limit for uncontrolled exposure at prediction frequency (mW/cm²): 1

5 GHz Do1 Wi-Fi (4x4)-5.6 GHz band:

Maximum average output power at antenna input terminal (dBm): 17.82
Maximum average output power at antenna input terminal (mW): 60.53
Prediction distance (cm): 30
Prediction frequency (MHz): 5550
Maximum Antenna Gain, typical (dBi): 12.02
Maximum Antenna Gain (numeric): 15.92
Power density of prediction frequency at 30.0 cm (mW/cm²): 0.09
FCC MPE limit for uncontrolled exposure at prediction frequency (mW/cm²): 1

5 GHz Do1 Wi-Fi (4x4)-5.8 GHz band:

Maximum average output power at antenna input terminal (dBm): 22.5
Maximum average output power at antenna input terminal (mW): 177.83
Prediction distance (cm): 30
Prediction frequency (MHz): 5755
Maximum Antenna Gain, typical (dBi): 12.02
Maximum Antenna Gain (numeric): 15.92
Power density of prediction frequency at 30.0 cm (mW/cm²): 0.25
FCC MPE limit for uncontrolled exposure at prediction frequency (mW/cm²): 1

5 GHz Do2 Wi-Fi (4x4)-5.2 GHz band:

Maximum average output power at antenna input terminal (dBm): 19.72
Maximum average output power at antenna input terminal (mW): 93.76
Prediction distance (cm): 30
Prediction frequency (MHz): 5230
Maximum Antenna Gain, typical (dBi): 8.77
Maximum Antenna Gain (numeric): 7.53
Power density of prediction frequency at 30.0 cm (mW/cm²): 0.06
FCC MPE limit for uncontrolled exposure at prediction frequency (mW/cm²): 1

5 GHz Do2 Wi-Fi (4x4)-5.3 GHz band:

Maximum average output power at antenna input terminal (dBm): 18.4
Maximum average output power at antenna input terminal (mW): 69.18
Prediction distance (cm): 30
Prediction frequency (MHz): 5270
Maximum Antenna Gain, typical (dBi): 10.77
Maximum Antenna Gain (numeric): 11.94
Power density of prediction frequency at 30.0 cm (mW/cm²): 0.07
FCC MPE limit for uncontrolled exposure at prediction frequency (mW/cm²): 1

5 GHz Do2 Wi-Fi (4x4)-5.6 GHz band:

Maximum average output power at antenna input terminal (dBm): 18.96
Maximum average output power at antenna input terminal (mW): 78.70
Prediction distance (cm): 30
Prediction frequency (MHz): 5550
Maximum Antenna Gain, typical (dBi): 10.77
Maximum Antenna Gain (numeric): 11.94
Power density of prediction frequency at 30.0 cm (mW/cm²): 0.08
FCC MPE limit for uncontrolled exposure at prediction frequency (mW/cm²): 1

5 GHz Do2 Wi-Fi (4x4)-5.8 GHz band:

Maximum average output power at antenna input terminal (dBm): 21.9
Maximum average output power at antenna input terminal (mW): 154.88
Prediction distance (cm): 30
Prediction frequency (MHz): 5795
Maximum Antenna Gain, typical (dBi): 12.02
Maximum Antenna Gain (numeric): 15.92
Power density of prediction frequency at 30.0 cm (mW/cm²): 0.22
FCC MPE limit for uncontrolled exposure at prediction frequency (mW/cm²): 1

5 GHz Wi-Fi (8x8)-5.2 GHz band:

<u>Maximum average output power at antenna input terminal (dBm):</u>	<u>21.14</u>
<u>Maximum average output power at antenna input terminal (mW):</u>	<u>130.02</u>
<u>Prediction distance (cm):</u>	<u>30</u>
<u>Prediction frequency (MHz):</u>	<u>5240</u>
<u>Maximum Antenna Gain, typical (dBi):</u>	<u>13.78</u>
<u>Maximum Antenna Gain (numeric):</u>	<u>23.88</u>
<u>Power density of prediction frequency at 30.0 cm (mW/cm²):</u>	<u>0.27</u>
<u>FCC MPE limit for uncontrolled exposure at prediction frequency (mW/cm²):</u>	<u>1</u>

5 GHz Wi-Fi (8x8)-5.3 GHz band:

<u>Maximum average output power at antenna input terminal (dBm):</u>	<u>16.01</u>
<u>Maximum average output power at antenna input terminal (mW):</u>	<u>39.90</u>
<u>Prediction distance (cm):</u>	<u>30</u>
<u>Prediction frequency (MHz):</u>	<u>5270</u>
<u>Maximum Antenna Gain, typical (dBi):</u>	<u>13.78</u>
<u>Maximum Antenna Gain (numeric):</u>	<u>23.88</u>
<u>Power density of prediction frequency at 30.0 cm (mW/cm²):</u>	<u>0.08</u>
<u>FCC MPE limit for uncontrolled exposure at prediction frequency (mW/cm²):</u>	<u>1</u>

5 GHz Wi-Fi (8x8)-5.6 GHz band:

<u>Maximum average output power at antenna input terminal (dBm):</u>	<u>15.42</u>
<u>Maximum average output power at antenna input terminal (mW):</u>	<u>34.83</u>
<u>Prediction distance (cm):</u>	<u>30</u>
<u>Prediction frequency (MHz):</u>	<u>5610</u>
<u>Maximum Antenna Gain, typical (dBi):</u>	<u>13.78</u>
<u>Maximum Antenna Gain (numeric):</u>	<u>23.88</u>
<u>Power density of prediction frequency at 30.0 cm (mW/cm²):</u>	<u>0.07</u>
<u>FCC MPE limit for uncontrolled exposure at prediction frequency (mW/cm²):</u>	<u>1</u>

5 GHz Wi-Fi (8x8)-5.8 GHz band:

<u>Maximum average output power at antenna input terminal (dBm):</u>	<u>22.16</u>
<u>Maximum average output power at antenna input terminal (mW):</u>	<u>164.44</u>
<u>Prediction distance (cm):</u>	<u>30</u>
<u>Prediction frequency (MHz):</u>	<u>5775</u>
<u>Maximum Antenna Gain, typical (dBi):</u>	<u>13.78</u>
<u>Maximum Antenna Gain (numeric):</u>	<u>23.88</u>
<u>Power density of prediction frequency at 30.0 cm (mW/cm²):</u>	<u>0.35</u>
<u>FCC MPE limit for uncontrolled exposure at prediction frequency (mW/cm²):</u>	<u>1</u>

5 GHz ChillWave Wi-Fi (SISO)-5.2 GHz band:

Maximum average output power at antenna input terminal (dBm): 9.1
Maximum average output power at antenna input terminal (mW): 8.13
Prediction distance (cm): 30
Prediction frequency (MHz): 5180
Maximum Antenna Gain, typical (dBi): 6
Maximum Antenna Gain (numeric): 3.98
Power density of prediction frequency at 30.0 cm (mW/cm²): 0.003
FCC MPE limit for uncontrolled exposure at prediction frequency (mW/cm²): 1

5 GHz ChillWave Wi-Fi (SISO)-5.3 GHz band:

Maximum average output power at antenna input terminal (dBm): 8.7
Maximum average output power at antenna input terminal (mW): 7.41
Prediction distance (cm): 30
Prediction frequency (MHz): 5260
Maximum Antenna Gain, typical (dBi): 6
Maximum Antenna Gain (numeric): 3.98
Power density of prediction frequency at 30.0 cm (mW/cm²): 0.003
FCC MPE limit for uncontrolled exposure at prediction frequency (mW/cm²): 1

5 GHz ChillWave Wi-Fi (SISO)-5.6 GHz band:

Maximum average output power at antenna input terminal (dBm): 9.8
Maximum average output power at antenna input terminal (mW): 9.55
Prediction distance (cm): 30
Prediction frequency (MHz): 5560
Maximum Antenna Gain, typical (dBi): 6
Maximum Antenna Gain (numeric): 3.98
Power density of prediction frequency at 30.0 cm (mW/cm²): 0.003
FCC MPE limit for uncontrolled exposure at prediction frequency (mW/cm²): 1

5 GHz ChillWave Wi-Fi (SISO)-5.8 GHz band:

Maximum average output power at antenna input terminal (dBm): 7.2
Maximum average output power at antenna input terminal (mW): 5.25
Prediction distance (cm): 30
Prediction frequency (MHz): 5745
Maximum Antenna Gain, typical (dBi): 6
Maximum Antenna Gain (numeric): 3.98
Power density of prediction frequency at 30.0 cm (mW/cm²): 0.002
FCC MPE limit for uncontrolled exposure at prediction frequency (mW/cm²): 1

Radio Co-location

Case	Standalone MPE (mW/cm ²)							Total MPE Ratio	Limit
	BLE	2.4 GHz ChillWave	5 GHz ChillWave	2.4 GHz Do1	5 GHz Do1	5 GHz Do2	5 GHz 8x8		
1	0.0006	0.003	-	0.16	0.25	0.22	-	0.634	1
2	0.0006	-	0.003	0.16	0.25	0.22	-	0.634	1
3	0.0006	0.003	-	-	-	-	0.35	0.354	1
4	0.0006	-	0.003	-	-	-	0.35	0.354	1

Conclusion

The device is compliant with the requirement MPE limit for uncontrolled exposure. All transceiver modules must be installed with a separation distance of no less than **30** cm from all persons.
less than **30** cm from all persons.

6 FCC §15.407(e), LP0002-2018 §4.7 - 6 dB, 26 dB, and 99% Occupied Bandwidth

6.1 Applicable Standards

As per FCC §15.407(e): for equipment operating in the band 5725 – 5850 MHz, the minimum 6 dB bandwidth of U-NII devices shall be 500 kHz.

6.2 Measurement Procedure

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT without connection to measurement instrument. Turn on the EUT and connect it to measurement instrument. Then set it to any one convenient frequency within its operating range. Set a reference level on the measuring instrument equal to the highest peak value.
3. Measure the frequency difference of two frequencies that were attenuated 6 or 26 dB from the reference level. Record the frequency difference as the minimum emission or emission bandwidth.
4. Repeat above procedures until all frequencies measured were complete.

6.3 Test Equipment List and Details

Manufacturer	Description	Model No.	Serial No.	Calibration Date	Calibration Due
Agilent	Analyzer, Spectrum	E4440A	US45303156	2019-03-06	1 year
Agilent	Analyzer, Spectrum	E4446A	MY48250238	2019-06-26	1 year

Statement of Traceability: *BACL Corp.* attests that all of the calibrations on the equipment items listed above were traceable to NIST or to another internationally recognized National Metrology Institute (NMI), and were compliant with A2LA Policy P102 (dated 09 June 2016) “A2LA Policy on Metrological Traceability”.

6.4 Test Environmental Conditions

Temperature:	21-25 °C
Relative Humidity:	40-55 %
ATM Pressure:	101.3-102.9 kPa

The testing was performed by Alexandrae Duran on 2019-11-18~2019-12-04.

6.5 Test Results

Please refer to Annex A for test results and plots.

7 FCC §407(a), LP0002-2018 §4.7 - Output Power

7.1 Applicable Standards

According to FCC §15.407(a):

(1) For the band 5.15-5.25 GHz.

(i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

(ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

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

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

(2) For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(3) For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

Note to paragraph (a)(3): The Commission strongly recommends that parties employing U-NII devices to provide critical communications services should determine if there are any nearby Government radar systems that could affect their operation.

(4) The maximum conducted output power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an rms-equivalent voltage.

(5) The maximum power spectral density is measured as a conducted emission by direct connection of a calibrated test instrument to the equipment under test. If the device cannot be connected directly, alternative techniques acceptable to the Commission may be used. Measurements in the 5.725-5.85 GHz band are made over a reference bandwidth of 500 kHz or the 26 dB emission bandwidth of the device, whichever is less. Measurements in the 5.15-5.25 GHz, 5.25-5.35 GHz, and the 5.47-5.725 GHz bands are made over a bandwidth of 1 MHz or the 26 dB emission bandwidth of the device, whichever is less. A narrower resolution bandwidth can be used, provided that the measured power is integrated over the full reference bandwidth.

7.2 Measurement Procedure

1. Place the EUT on a bench and set it in transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to a spectrum analyzer.

7.3 Test Equipment List and Details

Manufacturer	Description	Model No.	Serial No.	Calibration Date	Calibration Due
Agilent	Analyzer, Spectrum	E4440A	US45303156	2019-03-06	1 year
Agilent	Analyzer, Spectrum	E4446A	MY48250238	2019-06-26	1 year

Statement of Traceability: *BACL Corp.* attests that all of the calibrations on the equipment items listed above were traceable to NIST or to another internationally recognized National Metrology Institute (NMI), and were compliant with A2LA Policy P102 (dated 09 June 2016) "A2LA Policy on Metrological Traceability".

7.4 Test Environmental Conditions

Temperature:	21-25 °C
Relative Humidity:	40-55 %
ATM Pressure:	101.3-102.9 kPa

The testing was performed by Alexandrae Duran on 2019-11-18~2019-12-04.

7.5 Test Results

Please refer to Annex A for test results and plots

8 FCC §15.407(a), LP0002-2018 §4.7 – Power Spectral Density

8.1 Applicable Standards

According to FCC §15.407(a):

For the band 5.15-5.25 GHz.

(i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

(ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

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

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

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may

employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

8.2 Measurement Procedure

- (i) Set span to encompass the entire emission bandwidth (EBW) of the signal.
- (ii) Set RBW = 1 MHz.
- (iii) Set VBW $\geq$ 3 MHz.
- (iv) Number of points in sweep $\geq$ 2 Span / RBW. (This ensures that bin-to-bin spacing is $\leq$ RBW/2, so that narrowband signals are not lost between frequency bins.)
- (v) Sweep time = auto.
- (vi) Detector = RMS (i.e., power averaging), if available. Otherwise, use sample detector mode.
- (vii) If transmit duty cycle < 98 percent, use a video trigger with the trigger level set to enable triggering only on full power pulses. Transmitter must operate at maximum power control level for the entire duration of every sweep. If the EUT transmits continuously (i.e., with no off intervals) or at duty cycle $\geq$ 98 percent, and if each transmission is entirely at the maximum power control level, then the trigger shall be set to “free run”.
- (viii) Trace average at least 100 traces in power averaging (i.e., RMS) mode.
- (ix) Use the peak search function on the instrument to find the peak of the spectrum and record its value.

8.3 Test Equipment List and Details

Manufacturer	Description	Model No.	Serial No.	Calibration Date	Calibration Due
Agilent	Analyzer, Spectrum	E4440A	US45303156	2019-03-06	1 year
Agilent	Analyzer, Spectrum	E4446A	MY48250238	2019-06-26	1 year

Statement of Traceability: *BACL Corp.* attests that all of the calibrations on the equipment items listed above were traceable to NIST or to another internationally recognized National Metrology Institute (NMI), and were compliant with A2LA Policy P102 (dated 09 June 2016) “A2LA Policy on Metrological Traceability”.

8.4 Test Environmental Conditions

Temperature:	21-25 °C
Relative Humidity:	40-55 %
ATM Pressure:	101.3-102.9 kPa

The testing was performed by Alexandrae Duran on 2019-11-18~2019-12-04.

8.5 Test Results

Please refer to Annex A for test results and plots

9 FCC §15.407(b), LP0002-2018 §4.7 - Out of Band Emissions

9.1 Applicable Standards

According to FCC §15.407(b):

For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

For transmitters operating in the 5.725-5.85 GHz band: All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in §15.209. Further, any U-NII devices using an AC power line are required to comply also with the conducted limits set forth in §15.207.

The provisions of §15.205 apply to intentional radiators operating under this section.

9.2 Measurement Procedure

Add a correction factor (antenna gain+ Attenuator loss+cable loss) to the offset of the spectrum analyzer.
Integration Method

1. For peak emissions measurements, follow the procedures described in section H)5), “Procedures for Peak Unwanted Emissions Measurements above 1000 MHz”, except for the following changes:
 - Set RBW = 100 kHz
 - Set VBW = 3RBW
 - Perform a band-power integration across the 1 MHz bandwidth in which the band-edge emission level is to be measured. CAUTION: You must ensure that the spectrum analyzer or EMI receiver is set for peak-detection and max-hold for this measurement.
2. For average emissions measurements, follow the procedures described in section H)6), “Procedures for Average Unwanted Emissions Measurements above 1000 MHz”, except for the following changes:
 - Set RBW = 100 kHz
 - Set VBW = 3RBW
 - Perform a band-power integration across the 1 MHz bandwidth in which the band-edge emission level is to be measured.

9.3 Test Equipment List and Details

Manufacturer	Description	Model No.	Serial No.	Calibration Date	Calibration Due
Agilent	Analyzer, Spectrum	E4440A	US45303156	2019-03-06	1 year
Agilent	Analyzer, Spectrum	E4446A	MY48250238	2019-06-26	1 year
Micro-Tronics	Notch Filter	BRM50716	G262	Each time ¹	N/A

Statement of Traceability: *BACL Corp.* attests that all of the calibrations on the equipment items listed above were traceable to NIST or to another internationally recognized National Metrology Institute (NMI), and were compliant with A2LA Policy P102 (dated 09 June 2016) "A2LA Policy on Metrological Traceability".

9.4 Test Environmental Conditions

Temperature:	21-25 °C
Relative Humidity:	40-55 %
ATM Pressure:	101.3-102.9 kPa

The testing was performed by Alexandrae Duran on 2019-11-18~2019-12-04.

9.5 Test Results

Please refer to Annex A for test results and plots

10 Appendix (Normative) - EUT Photographs

Please see attachments:

Appendix A – EUT Test Setup Photographs

Appendix B – EUT External Photographs

Appendix C – EUT Internal Photographs

11 Annex A – Test Results and Measurement Plots

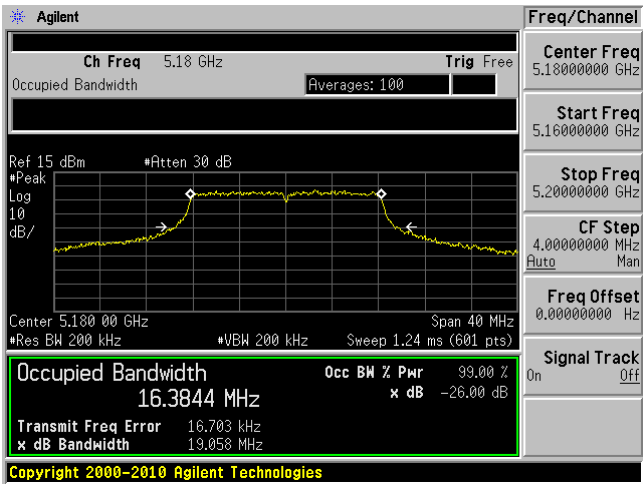
Test Data for Occupied Bandwidth

Frequency (MHz)	Mode	Data Rate (Mbps)	99% BW (MHz)	26dB BW (MHz)
5180	non HT20, 6 to 54 Mbps	6	16.38	19.06
	HT/VHT20, M0 to M7, M0.1 to M8.1	m0	17.60	20.34
	HE20, M0.1 to M11.1	m0h1	18.92	20.82
5190	non HT40, 6 to 54 Mbps	6	36.24	42.60
	HT/VHT40, M0 to M7, M0.1 to M8.1	m0	36.08	40.32
	HE40, M0.1 to M11.1	m0h1	37.86	40.97
5200	non HT20, 6 to 54 Mbps	6	16.38	19.20
	HT/VHT20, M0 to M7, M0.1 to M8.1	m0	17.59	20.47
	HE20, M0.1 to M11.1	m0h1	18.93	21.13
5210	non HT80, 6 to 54 Mbps	6	75.59	81.9
	VHT80, M0.1 to M9.1	m0	75.4	81.21
	HE80, M0.1 to M11.1	m0h1	77.07	81.9
5230	non HT40, 6 to 54 Mbps	6	36.20	40.41
	HT/VHT40, M0 to M7, M0.1 to M8.1	m0	36.06	40.23
	HE40, M0.1 to M11.1	m0h1	37.72	41.04
5240	non HT20, 6 to 54 Mbps	6	16.37	19.57
	HT/VHT20, M0 to M7, M0.1 to M8.1	m0	17.61	20.31
	HE20, M0.1 to M11.1	m0h1	18.91	20.68

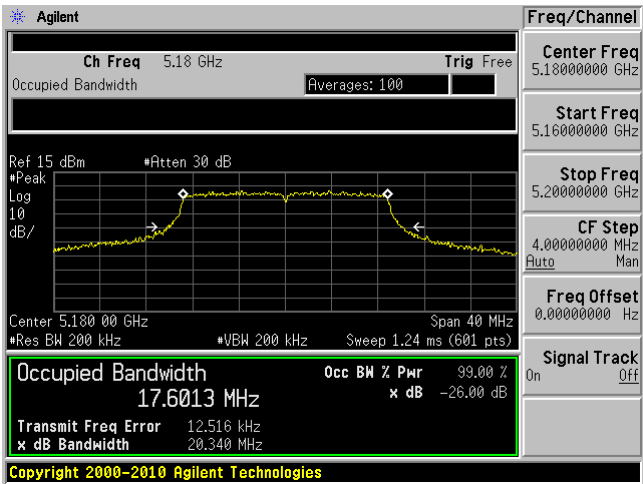
Please refer to the following plots

5180 MHz

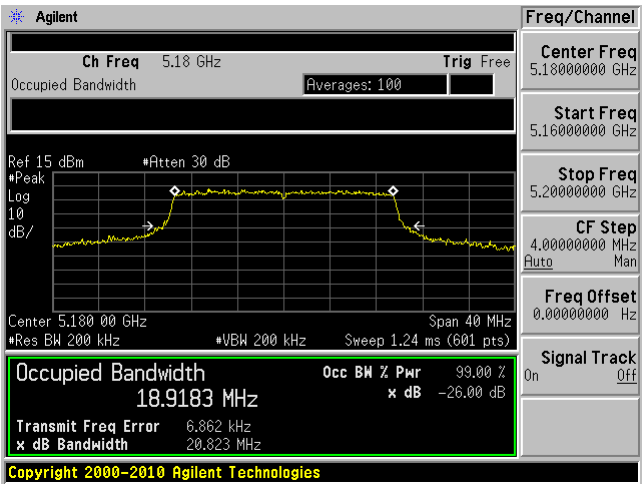
nonHT20, 6 to 54 MbpsV



HT/VHT20, M0.1 to M9.1

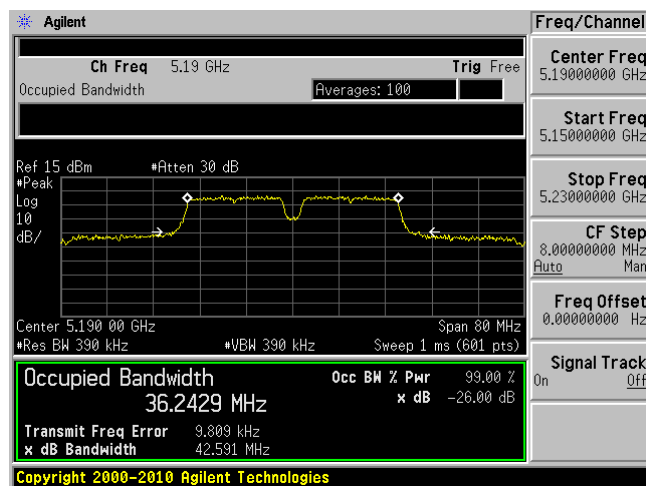


HE20, M0.1 to M11.1

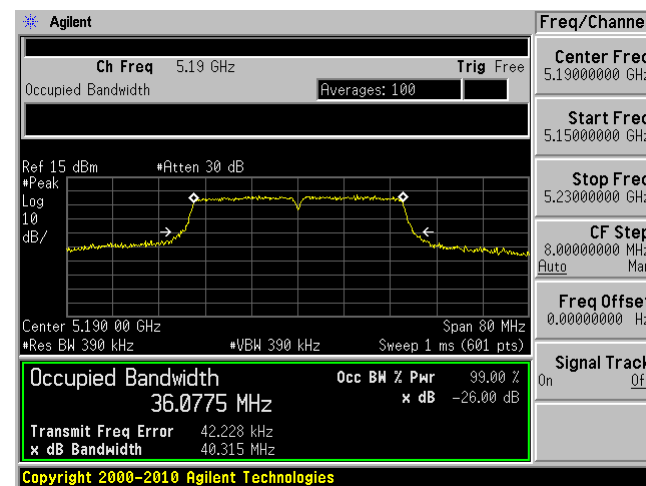


5190 MHz

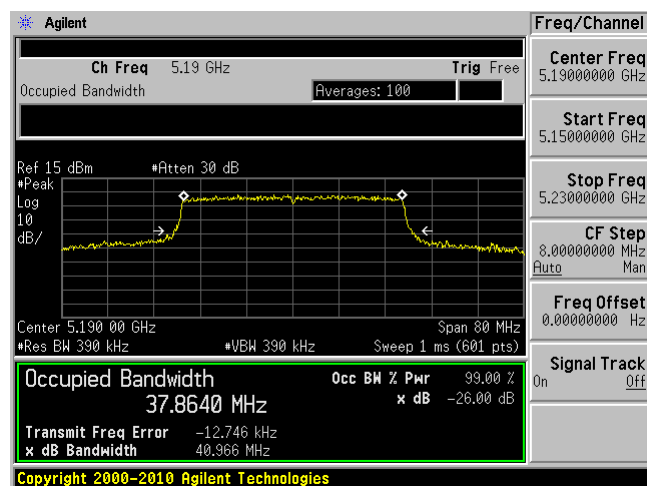
nonHT40, 6 to 54 Mbps



HT/VHT40, M0 to M7, M0.1 to M8.1

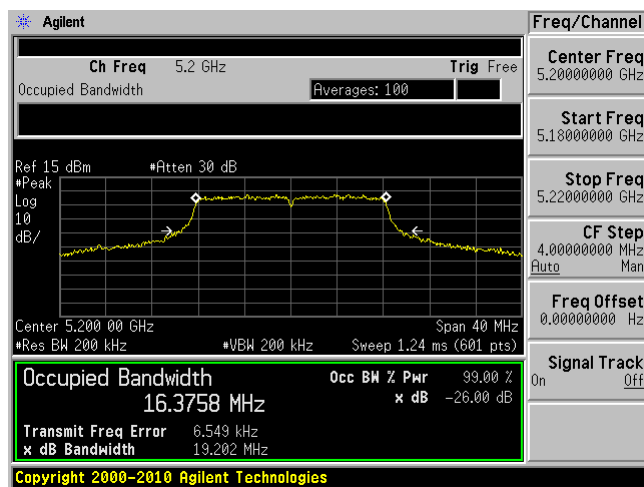


HE40, M0.1 to M11.1

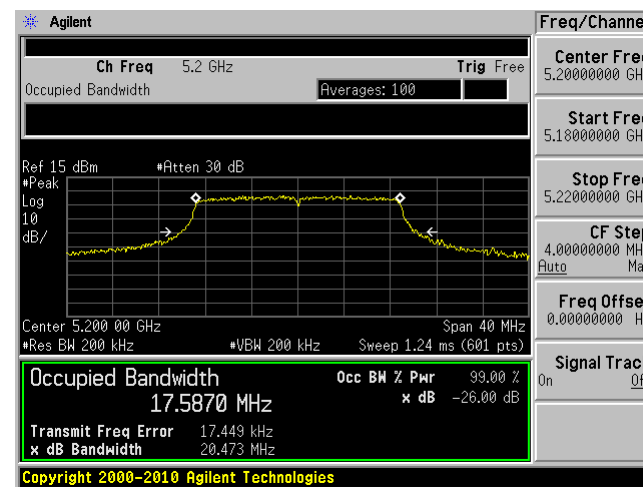


5200 MHz

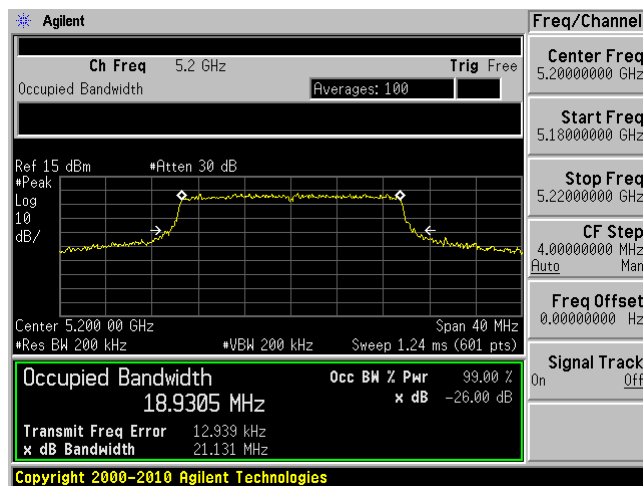
nonHT20, 6 to 54 MbpsV



HT/VHT20, M0.1 to M9.1

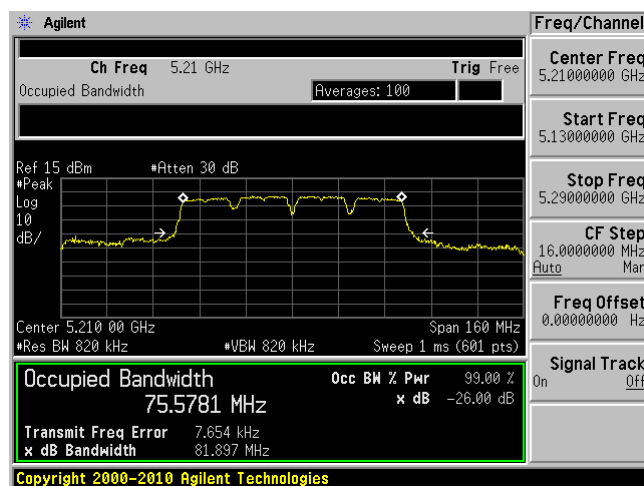


HE20, M0.1 to M11.1

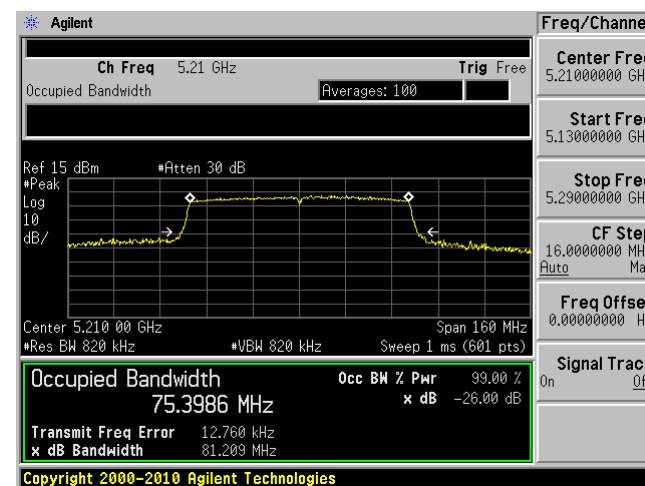


5210 MHz

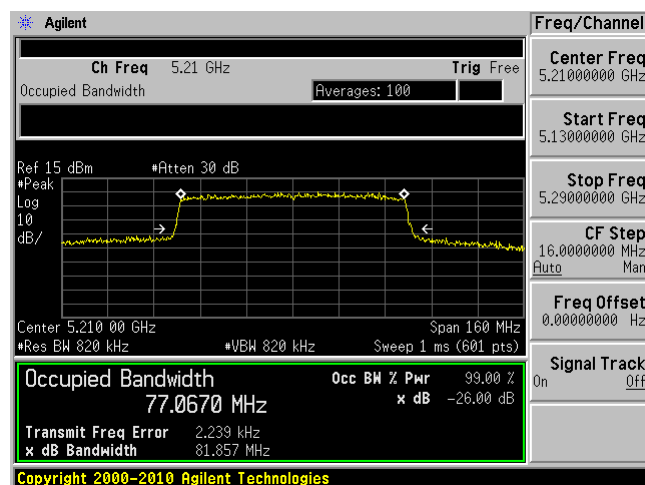
NonHT80, 6 to 54 Mbps



VHT80, M0.1 to M9.1

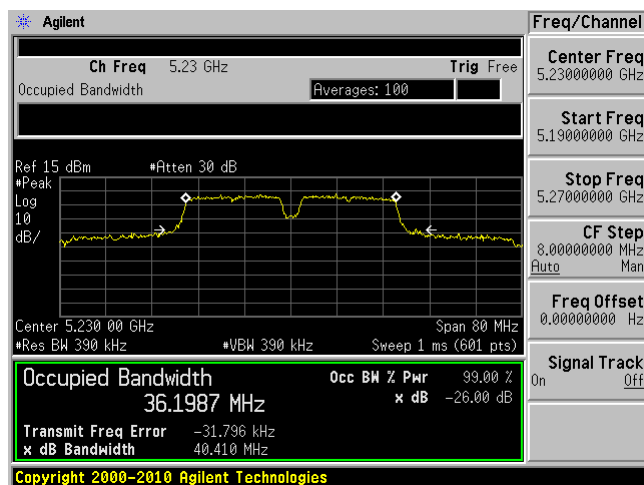


HE80, M0.1 to M11.1

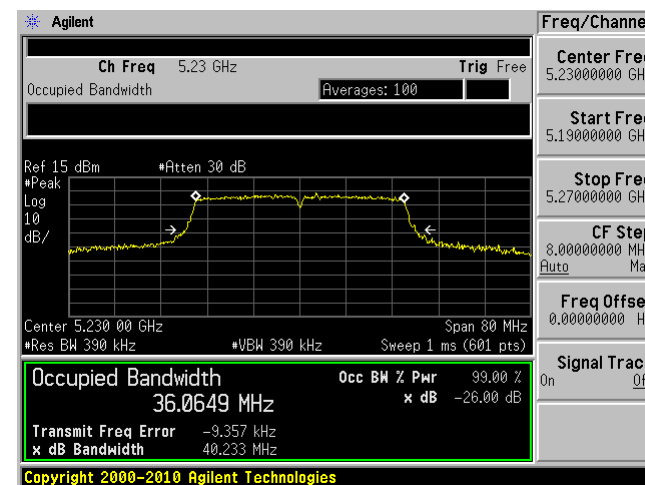


5230 MHz

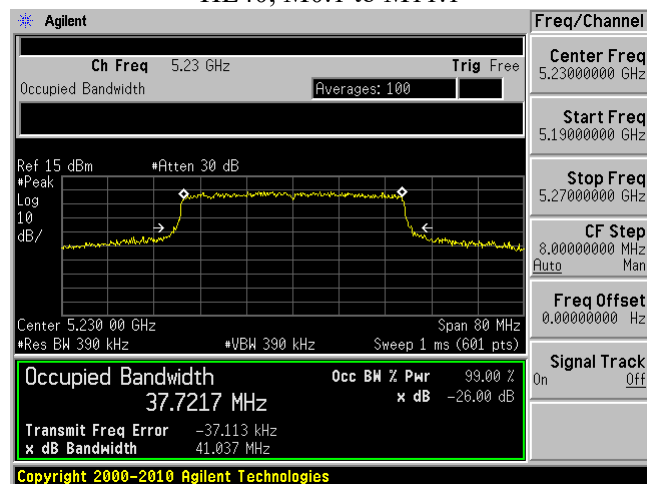
nonHT40, 6 to 54 Mbps



HT/VHT40, M0 to M7, M0.1 to M8.1

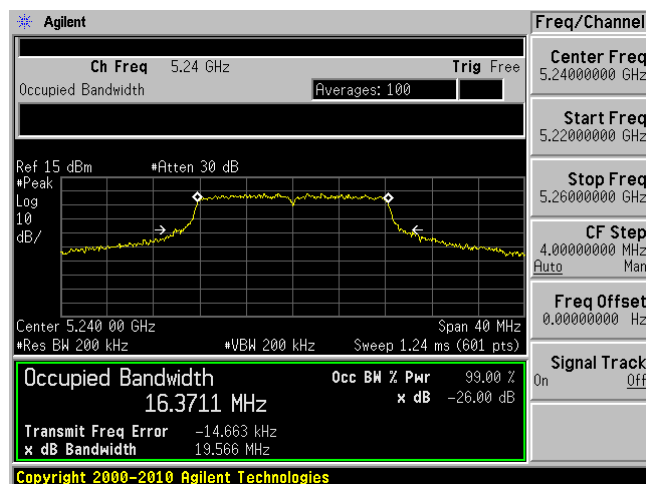


HE40, M0.1 to M11.1

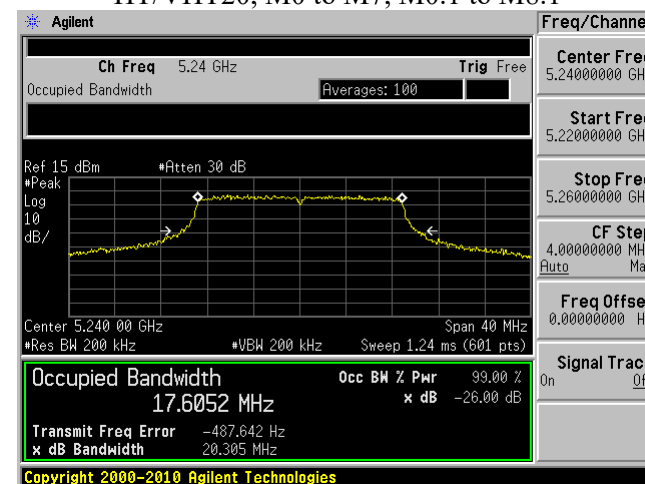


5240 MHz

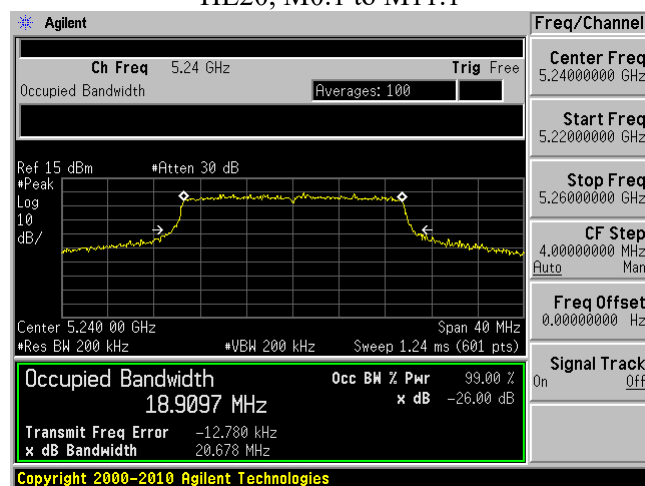
nonHT20, 6 to 54 Mbps



HT/VHT20, M0 to M7, M0.1 to M8.1



HE20, M0.1 to M11.1



Test results for Output power

4 dBi

5180 MHz:

Mode	Tx paths	correlated antenna gain (dBi)	Tx 1 Max Power (dBm)	Tx 2 Max Power (dBm)	Tx 3 Max Power (dBm)	Tx 4 Max Power (dBm)	DCCF (dB)	Total Max Power (dBm)	FCC Limit (dBm)	Margin (dB)
non HT20, 6 to 54 Mbps	1	4.00	-	14.82	-	-	0.32	15.14	30.00	-14.86
non HT20, 6 to 54 Mbps	2	4.00	-	14.83	15.16	-	0.32	18.33	30.00	-11.67
non HT20, 6 to 54 Mbps	3	4.00	-	11.03	11.22	10.78	0.32	16.11	30.00	-13.89
non HT20, 6 to 54 Mbps	4	4.00	4.82	8.08	7.90	7.91	0.32	13.71	30.00	-16.29
non HT20, 6 to 54 Mbps-BF	2	7.01	-	14.83	15.16	-	0.32	18.33	28.99	-10.66
non HT20, 6 to 54 Mbps-BF	3	8.77	-	11.03	11.22	10.78	0.32	16.11	27.23	-11.12
non HT20, 6 to 54 Mbps-BF	4	10.02	4.82	8.08	7.90	7.91	0.32	13.71	25.98	-12.27
HT/VHT20, M0 to M7, M0.1 to M8.1	1	4.00	-	14.66	-	-	0.16	14.82	30.00	-15.18
HT/VHT20, M0 to M7, M0.1 to M8.1	2	4.00	-	14.81	15.50	-	0.16	18.34	30.00	-11.66
HT/VHT20, M0 to M7, M0.1 to M8.1	3	4.00	-	12.06	11.88	11.67	0.16	16.81	30.00	-13.19
HT/VHT20, M0 to M7, M0.1 to M8.1	4	4.00	4.84	8.08	7.87	7.82	0.16	13.52	30.00	-16.48
HT/VHT20, M0 to M7, M0.1 to M8.1-BF	2	7.01	-	14.81	15.50	-	0.16	18.34	28.99	-10.65
HT/VHT20, M0 to M7, M0.1 to M8.1-BF	3	8.77	-	12.06	11.88	11.67	0.16	16.81	27.23	-10.42
HT/VHT20, M0 to M7, M0.1 to M8.1-BF	4	10.02	4.84	8.08	7.87	7.82	0.16	13.52	25.98	-12.46
HE20, M0.1 to M11.1	1	4.00	-	14.93	-	-	0.24	15.17	30.00	-14.83
HE20, M0.1 to M11.1	2	4.00	-	15.07	15.44	-	0.24	18.50	30.00	-11.50
HE20, M0.1 to M11.1	3	4.00	-	11.56	10.97	10.87	0.24	16.16	30.00	-13.84
HE20, M0.1 to M11.1	4	4.00	5.01	8.11	8.04	7.89	0.24	13.69	30.00	-16.31
HE20, M0.1 to M11.1-BF	2	7.01	-	15.07	15.44	-	0.24	18.50	28.99	-10.49
HE20, M0.1 to M11.1-BF	3	8.77	-	11.56	10.97	10.87	0.24	16.16	27.23	-11.07
HE20, M0.1 to M11.1-BF	4	10.02	5.01	8.11	8.04	7.89	0.24	13.69	25.98	-12.29

5200 MHz:

Mode	Tx paths	correlated antenna gain (dBi)	Tx 1 Max Power (dBm)	Tx 2 Max Power (dBm)	Tx 3 Max Power (dBm)	Tx 4 Max Power (dBm)	DCCF (dB)	Total Max Power (dBm)	FCC Limit (dBm)	Margin (dB)
non HT20, 6 to 54 Mbps	1	4.00	-	15.14	-	-	0.32	15.46	30.00	-14.54
non HT20, 6 to 54 Mbps	2	4.00	-	15.31	15.50	-	0.32	18.74	30.00	-11.26
non HT20, 6 to 54 Mbps	3	4.00	-	10.90	11.51	10.90	0.32	16.20	30.00	-13.80
non HT20, 6 to 54 Mbps	4	4.00	5.02	8.05	8.19	8.13	0.32	13.87	30.00	-16.13
non HT20, 6 to 54 Mbps-BF	2	7.01	-	15.31	15.50	-	0.32	18.74	28.99	-10.25
non HT20, 6 to 54 Mbps-BF	3	8.77	-	10.90	11.51	10.90	0.32	16.20	27.23	-11.02
non HT20, 6 to 54 Mbps-BF	4	10.02	5.02	8.05	8.19	8.13	0.32	13.87	25.98	-12.11
HT/VHT20, M0 to M7, M0.1 to M8.1	1	4.00	-	15.00	-	-	0.16	15.16	30.00	-14.84
HT/VHT20, M0 to M7, M0.1 to M8.1	2	4.00	-	15.30	15.34	-	0.16	18.49	30.00	-11.51
HT/VHT20, M0 to M7, M0.1 to M8.1	3	4.00	-	11.25	11.41	10.97	0.16	16.15	30.00	-13.85
HT/VHT20, M0 to M7, M0.1 to M8.1	4	4.00	5.03	8.22	7.98	8.09	0.16	13.69	30.00	-16.31
HT/VHT20, M0 to M7, M0.1 to M8.1-BF	2	7.01	-	15.30	15.34	-	0.16	18.49	28.99	-10.50
HT/VHT20, M0 to M7, M0.1 to M8.1-BF	3	8.77	-	11.25	11.41	10.97	0.16	16.15	27.23	-11.08
HT/VHT20, M0 to M7, M0.1 to M8.1-BF	4	10.02	5.03	8.22	7.98	8.09	0.16	13.69	25.98	-12.29
HE20, M0.1 to M11.1	1	4.00	-	15.28	-	-	0.24	15.52	30.00	-14.48
HE20, M0.1 to M11.1	2	4.00	-	15.14	15.89	-	0.24	18.78	30.00	-11.22
HE20, M0.1 to M11.1	3	4.00	-	11.45	11.61	11.12	0.24	16.41	30.00	-13.59
HE20, M0.1 to M11.1	4	4.00	5.20	8.38	8.36	8.28	0.24	14.00	30.00	-16.00
HE20, M0.1 to M11.1-BF	2	7.01	-	15.14	15.89	-	0.24	18.78	28.99	-10.21
HE20, M0.1 to M11.1-BF	3	8.77	-	11.45	11.61	11.12	0.24	16.41	27.23	-10.82
HE20, M0.1 to M11.1-BF	4	10.02	5.20	8.38	8.36	8.28	0.24	14.00	25.98	-11.98

5240 MHz:

Mode	Tx paths	correlated antenna gain (dBi)	Tx 1 Max Power (dBm)	Tx 2 Max Power (dBm)	Tx 3 Max Power (dBm)	Tx 4 Max Power (dBm)	DCCF (dB)	Total Max Power (dBm)	FCC Limit (dBm)	Margin (dB)
non HT20, 6 to 54 Mbps	1	4.00	-	15.11	-	-	0.32	15.44	30.00	-14.56
non HT20, 6 to 54 Mbps	2	4.00	-	14.53	15.21	-	0.32	18.21	30.00	-11.79
non HT20, 6 to 54 Mbps	3	4.00	-	10.53	10.96	10.50	0.32	15.76	30.00	-14.24
non HT20, 6 to 54 Mbps	4	4.00	5.02	7.76	8.21	7.73	0.32	13.71	30.00	-16.29
non HT20, 6 to 54 Mbps-BF	2	7.01	-	14.53	15.21	-	0.32	18.21	28.99	-10.78
non HT20, 6 to 54 Mbps-BF	3	8.77	-	10.53	10.96	10.50	0.32	15.76	27.23	-11.47
non HT20, 6 to 54 Mbps-BF	4	10.02	5.02	7.76	8.21	7.73	0.32	13.71	25.98	-12.27
HT/VHT20, M0 to M7, M0.1 to M8.1	1	4.00	-	15.02	-	-	0.16	15.18	30.00	-14.82
HT/VHT20, M0 to M7, M0.1 to M8.1	2	4.00	-	14.28	15.21	-	0.16	17.94	30.00	-12.06
HT/VHT20, M0 to M7, M0.1 to M8.1	3	4.00	-	11.79	12.01	12.04	0.16	16.88	30.00	-13.12
HT/VHT20, M0 to M7, M0.1 to M8.1	4	4.00	5.03	7.86	8.24	7.53	0.16	13.53	30.00	-16.47
HT/VHT20, M0 to M7, M0.1 to M8.1-BF	2	7.01	-	14.28	15.21	-	0.16	17.94	28.99	-11.05
HT/VHT20, M0 to M7, M0.1 to M8.1-BF	3	8.77	-	11.79	12.01	12.04	0.16	16.88	27.23	-10.35
HT/VHT20, M0 to M7, M0.1 to M8.1-BF	4	10.02	5.03	7.86	8.24	7.53	0.16	13.53	25.98	-12.45
HE20, M0.1 to M11.1	1	4.00	-	15.34	-	-	0.24	15.58	30.00	-14.42
HE20, M0.1 to M11.1	2	4.00	-	15.08	15.58	-	0.24	18.59	30.00	-11.41
HE20, M0.1 to M11.1	3	4.00	-	11.06	11.43	10.87	0.24	16.14	30.00	-13.86
HE20, M0.1 to M11.1	4	4.00	5.20	8.00	8.31	7.70	0.24	13.75	30.00	-16.25
HE20, M0.1 to M11.1-BF	2	7.01	-	15.08	15.58	-	0.24	18.59	28.99	-10.40
HE20, M0.1 to M11.1-BF	3	8.77	-	11.06	11.43	10.87	0.24	16.14	27.23	-11.09
HE20, M0.1 to M11.1-BF	4	10.02	5.20	8.00	8.31	7.70	0.24	13.75	25.98	-12.23

5190 MHz:

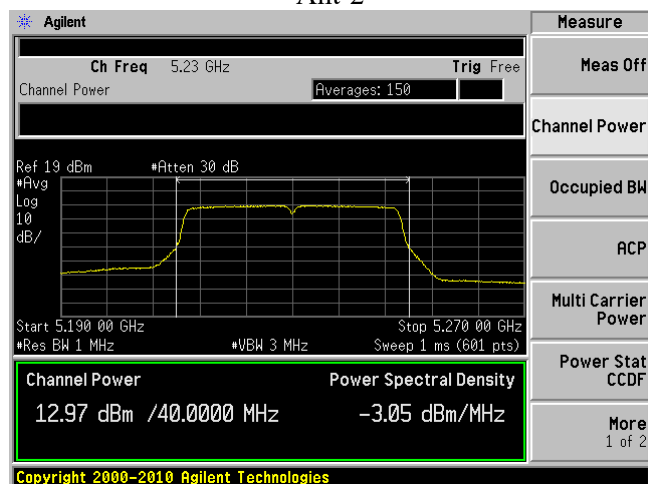
Mode	Tx paths	correlated antenna gain (dBi)	Tx 1 Max Power (dBm)	Tx 2 Max Power (dBm)	Tx 3 Max Power (dBm)	Tx 4 Max Power (dBm)	DCCF (dB)	Total Max Power (dBm)	FCC Limit (dBm)	Margin (dB)
non HT40, 6 to 54 Mbps	1	4.00	-	13.05	-	-	0.33	13.38	30.00	-16.62
non HT40, 6 to 54 Mbps	2	4.00	-	13.36	12.67	-	0.33	16.37	30.00	-13.63
non HT40, 6 to 54 Mbps	3	4.00	-	12.15	12.08	11.39	0.33	16.99	30.00	-13.01
non HT40, 6 to 54 Mbps	4	4.00	7.70	11.05	11.04	10.83	0.33	16.71	30.00	-13.29
HT/VHT40, M0 to M7, M0.1 to M9.1	1	4.00	-	14.02	-	-	0.17	14.19	30.00	-15.81
HT/VHT40, M0 to M7, M0.1 to M9.1	2	4.00	-	13.31	13.20	-	0.17	16.44	30.00	-13.56
HT/VHT40, M0 to M7, M0.1 to M9.1	3	4.00	-	12.18	12.01	11.57	0.17	16.87	30.00	-13.13
HT/VHT40, M0 to M7, M0.1 to M9.1	4	4.00	7.88	11.10	11.06	10.81	0.17	16.59	30.00	-13.41
HT/VHT40, M0 to M7, M0.1 to M9.1-BF	2	7.01	-	11.20	11.04	-	0.17	14.30	28.99	-14.69
HT/VHT40, M0 to M7, M0.1 to M9.1-BF	3	8.77	-	10.14	9.68	9.69	0.17	14.79	27.23	-12.44
HT/VHT40, M0 to M7, M0.1 to M9.1-BF	4	10.02	5.77	8.94	8.86	9.18	0.17	14.58	25.98	-11.40
HE40, M0.1 to M11.1	1	4.00	-	13.42	-	-	0.18	13.60	30.00	-16.40
HE40, M0.1 to M11.1	2	4.00	-	13.71	13.46	-	0.18	16.78	30.00	-13.22
HE40, M0.1 to M11.1	3	4.00	-	12.58	12.27	11.96	0.18	17.23	30.00	-12.77
HE40, M0.1 to M11.1	4	4.00	8.21	11.48	11.40	11.25	0.18	16.98	30.00	-13.02
HE40, M0.1 to M11.1-BF	2	7.01	-	10.56	10.38	-	0.18	13.66	28.99	-15.33
HE40, M0.1 to M11.1-BF	3	8.77	-	10.52	10.25	10.13	0.18	15.25	27.23	-11.98
HE40, M0.1 to M11.1-BF	4	10.02	6.13	9.51	9.42	9.43	0.18	15.03	25.98	-10.95

5230 MHz:

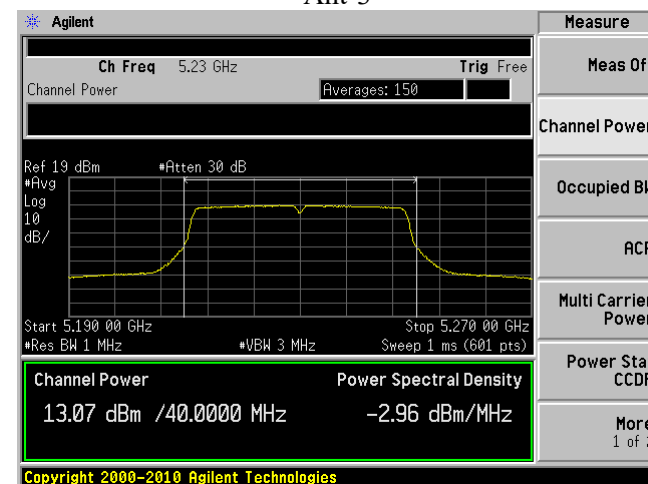
Mode	Tx paths	correlated antenna gain (dBi)	Tx 1 Max Power (dBm)	Tx 2 Max Power (dBm)	Tx 3 Max Power (dBm)	Tx 4 Max Power (dBm)	DCCF (dB)	Total Max Power (dBm)	FCC Limit (dBm)	Margin (dB)
non HT40, 6 to 54 Mbps	1	4.00	-	15.11	-	-	0.33	15.44	30.00	-14.56
non HT40, 6 to 54 Mbps	2	4.00	-	14.79	15.16	-	0.33	18.32	30.00	-11.68
non HT40, 6 to 54 Mbps	3	4.00	-	14.79	15.19	14.64	0.33	19.98	30.00	-10.02
non HT40, 6 to 54 Mbps	4	4.00	12.31	14.71	15.22	14.87	0.33	20.77	30.00	-9.23
HT/VHT40, M0 to M7, M0.1 to M9.1	1	4.00	-	15.12	-	-	0.17	15.30	30.00	-14.70
HT/VHT40, M0 to M7, M0.1 to M9.1	2	4.00	-	15.08	15.44	-	0.17	18.45	30.00	-11.55
HT/VHT40, M0 to M7, M0.1 to M9.1	3	4.00	-	13.80	14.20	13.84	0.17	18.89	30.00	-11.11
HT/VHT40, M0 to M7, M0.1 to M9.1	4	4.00	8.36	10.97	11.35	10.82	0.17	16.71	30.00	-13.29
HT/VHT40, M0 to M7, M0.1 to M9.1-BF	2	7.01	-	15.08	15.44	-	0.17	18.45	28.99	-10.54
HT/VHT40, M0 to M7, M0.1 to M9.1-BF	3	8.77	-	12.97	13.07	13.14	0.17	18.00	27.23	-9.23
HT/VHT40, M0 to M7, M0.1 to M9.1-BF	4	10.02	7.49	7.28	10.31	10.27	0.17	15.27	25.98	-10.71
HE40, M0.1 to M11.1	1	4.00	-	15.49	-	-	0.18	15.66	30.00	-14.34
HE40, M0.1 to M11.1	2	4.00	-	15.27	15.77	-	0.18	18.72	30.00	-11.28
HE40, M0.1 to M11.1	3	4.00	-	14.23	14.51	14.17	0.18	19.26	30.00	-10.74
HE40, M0.1 to M11.1	4	4.00	8.72	11.39	11.68	11.29	0.18	17.12	30.00	-12.88
HE40, M0.1 to M11.1-BF	2	7.01	-	15.27	15.77	-	0.18	18.72	28.99	-10.27
HE40, M0.1 to M11.1-BF	3	8.77	-				0.18	4.95	27.23	-22.28
HE40, M0.1 to M11.1-BF	4	10.02	6.56	9.23	9.81	9.75	0.18	15.22	25.98	-10.76

Please refer to the following plots for the worst case configuration

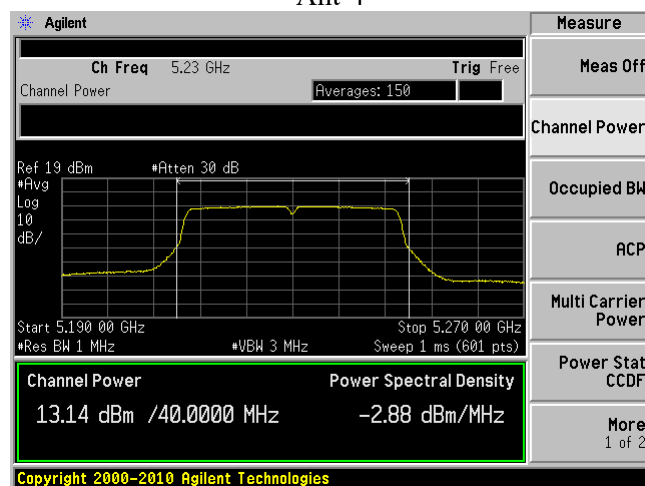
Ant-2



Ant-3



Ant-4



5210 MHz:

Mode	Tx paths	correlated antenna gain (dBi)	Tx 1 Max Power (dBm)	Tx 2 Max Power (dBm)	Tx 3 Max Power (dBm)	Tx 4 Max Power (dBm)	DCCF (dB)	Total Max Power (dBm)	FCC Limit (dBm)	Margin (dB)
non HT80, 6 to 54 Mbps	1	4.00	-	12.30	-	-	0.26	12.55	30.00	-17.45
non HT80, 6 to 54 Mbps	2	4.00	-	11.59	10.95	-	0.26	14.55	30.00	-15.45
non HT80, 6 to 54 Mbps	3	4.00	-	11.05	11.02	10.17	0.26	15.80	30.00	-14.20
non HT80, 6 to 54 Mbps	4	4.00	7.03	10.15	10.11	10.07	0.26	15.80	30.00	-14.20
VHT80, M0.1 to M9.1	1	4.00	-	12.21	-	-	0.17	12.38	30.00	-17.62
VHT80, M0.1 to M9.1	2	4.00	-	12.15	12.08	-	0.17	15.30	30.00	-14.70
VHT80, M0.1 to M9.1	3	4.00	-	11.36	11.29	10.30	0.17	15.95	30.00	-14.05
VHT80, M0.1 to M9.1	4	4.00	7.27	10.27	10.36	10.33	0.17	15.92	30.00	-14.08
VHT80, M0.1 to M9.1-BF	2	7.01	-	10.75	10.10	-	0.17	13.62	28.99	-15.37
VHT80, M0.1 to M9.1-BF	3	8.77	-	7.28	6.98	6.79	0.17	11.96	27.23	-15.27
VHT80, M0.1 to M9.1-BF	4	10.02	2.11	5.35	5.44	4.96	0.17	10.85	25.98	-15.13
HE80, M0.1 to M11.1	1	4.00	-	12.87	-	-	0.18	13.05	30.00	-16.95
HE80, M0.1 to M11.1	2	4.00	-	12.15	11.44	-	0.18	15.00	30.00	-15.00
HE80, M0.1 to M11.1	3	4.00	-	10.65	10.39	10.43	0.18	15.44	30.00	-14.56
HE80, M0.1 to M11.1	4	4.00	7.57	10.70	10.55	10.65	0.18	16.25	30.00	-13.75
HE80, M0.1 to M11.1-BF	2	7.01	-	9.76	8.87	-	0.18	12.52	28.99	-16.47
HE80, M0.1 to M11.1-BF	3	8.77	-	7.54	7.65	7.00	0.18	12.36	27.23	-14.87
HE80, M0.1 to M11.1-BF	4	10.02	1.72	4.64	4.81	4.57	0.18	10.30	25.98	-15.68

6 dBi
5180 MHz:

Mode	Tx paths	correlated antenna gain (dBi)	Tx 1 Max Power (dBm)	Tx 2 Max Power (dBm)	Tx 3 Max Power (dBm)	Tx 4 Max Power (dBm)	DCCF (dB)	Total Max Power (dBm)	FCC Limit (dBm)	Margin (dB)
non HT20, 6 to 54 Mbps	1	6.00	-	14.82	-	-	0.32	15.14	30.00	-14.86
non HT20, 6 to 54 Mbps	2	6.00	-	10.62	10.33	-	0.32	13.81	30.00	-16.19
non HT20, 6 to 54 Mbps	3	6.00	-	7.09	7.14	6.63	0.32	12.05	30.00	-17.95
non HT20, 6 to 54 Mbps	4	6.00	0.89	4.18	4.13	3.98	0.32	9.83	30.00	-20.17
non HT20, 6 to 54 Mbps-BF	2	9.01	-	10.62	10.33	-	0.32	13.81	26.99	-13.18
non HT20, 6 to 54 Mbps-BF	3	10.77	-	7.09	7.14	6.63	0.32	12.05	25.23	-13.18
non HT20, 6 to 54 Mbps-BF	4	12.02	0.89	4.18	4.13	3.98	0.32	9.83	23.98	-14.15
HT/VHT20, M0 to M7, M0.1 to M8.1	1	6.00	-	14.66	-	-	0.16	14.82	30.00	-15.18
HT/VHT20, M0 to M7, M0.1 to M8.1	2	6.00	-	12.97	13.00	-	0.16	16.16	30.00	-13.84
HT/VHT20, M0 to M7, M0.1 to M8.1	3	6.00	-	8.03	7.67	7.70	0.16	12.74	30.00	-17.26
HT/VHT20, M0 to M7, M0.1 to M8.1	4	6.00	1.41	4.43	4.20	4.33	0.16	9.94	30.00	-20.06
HT/VHT20, M0 to M7, M0.1 to M8.1-BF	2	9.01	-	12.97	13.00	-	0.16	16.16	26.99	-10.83
HT/VHT20, M0 to M7, M0.1 to M8.1-BF	3	10.77	-	8.03	7.67	7.70	0.16	12.74	25.23	-12.49
HT/VHT20, M0 to M7, M0.1 to M8.1-BF	4	12.02	1.41	4.43	4.20	4.33	0.16	9.94	23.98	-14.04
HE20, M0.1 to M11.1	1	6.00	-	14.93	-	-	0.24	15.17	30.00	-14.83
HE20, M0.1 to M11.1	2	6.00	-	12.77	12.16	-	0.24	15.73	30.00	-14.27
HE20, M0.1 to M11.1	3	6.00	-	7.57	6.83	7.52	0.24	12.33	30.00	-17.67
HE20, M0.1 to M11.1	4	6.00	0.99	4.43	4.44	4.10	0.24	9.96	30.00	-20.04
HE20, M0.1 to M11.1-BF	2	9.01	-	13.70	13.16	-	0.24	16.69	26.99	-10.30
HE20, M0.1 to M11.1-BF	3	10.77	-	8.32	8.40	8.22	0.24	13.32	25.23	-11.90
HE20, M0.1 to M11.1-BF	4	12.02	0.99	4.43	4.44	4.10	0.24	9.96	23.98	-14.02

5200 MHz:

Mode	Tx paths	correlated antenna gain (dBi)	Tx 1 Max Power (dBm)	Tx 2 Max Power (dBm)	Tx 3 Max Power (dBm)	Tx 4 Max Power (dBm)	DCCF (dB)	Total Max Power (dBm)	FCC Limit (dBm)	Margin (dB)
non HT20, 6 to 54 Mbps	1	6.00	-	15.14	-	-	0.32	15.46	30.00	-14.54
non HT20, 6 to 54 Mbps	2	6.00	-	12.09	12.25	-	0.32	15.50	30.00	-14.50
non HT20, 6 to 54 Mbps	3	6.00	-	7.17	7.07	6.92	0.32	12.15	30.00	-17.85
non HT20, 6 to 54 Mbps	4	6.00	1.08	4.52	4.47	4.13	0.32	10.10	30.00	-19.90
non HT20, 6 to 54 Mbps-BF	2	9.01	-	12.09	12.25	-	0.32	15.50	26.99	-11.49
non HT20, 6 to 54 Mbps-BF	3	10.77	-	7.17	7.07	6.92	0.32	12.15	25.23	-13.08
non HT20, 6 to 54 Mbps-BF	4	12.02	1.08	4.52	4.47	4.13	0.32	10.10	23.98	-13.88
HT/VHT20, M0 to M7, M0.1 to M8.1	1	6.00	-	15.00	-	-	0.16	15.16	30.00	-14.84
HT/VHT20, M0 to M7, M0.1 to M8.1	2	6.00	-	12.16	12.45	-	0.16	15.48	30.00	-14.52
HT/VHT20, M0 to M7, M0.1 to M8.1	3	6.00	-	7.58	6.86	7.09	0.16	12.12	30.00	-17.88
HT/VHT20, M0 to M7, M0.1 to M8.1	4	6.00	0.98	4.32	4.53	4.15	0.16	9.89	30.00	-20.11
HT/VHT20, M0 to M7, M0.1 to M8.1-BF	2	9.01	-	12.16	12.45	-	0.16	15.48	26.99	-11.51
HT/VHT20, M0 to M7, M0.1 to M8.1-BF	3	10.77	-	7.58	6.86	7.09	0.16	12.12	25.23	-13.11
HT/VHT20, M0 to M7, M0.1 to M8.1-BF	4	12.02	0.98	4.32	4.53	4.15	0.16	9.89	23.98	-14.09
HE20, M0.1 to M11.1	1	6.00	-	15.28	-	-	0.24	15.52	30.00	-14.48
HE20, M0.1 to M11.1	2	6.00	-	12.46	12.29	-	0.24	15.62	30.00	-14.38
HE20, M0.1 to M11.1	3	6.00	-	7.91	7.51	7.21	0.24	12.56	30.00	-17.44
HE20, M0.1 to M11.1	4	6.00	1.34	4.50	4.61	4.09	0.24	10.08	30.00	-19.92
HE20, M0.1 to M11.1-BF	2	9.01	-	12.46	12.29	-	0.24	15.62	26.99	-11.37
HE20, M0.1 to M11.1-BF	3	10.77	-	7.91	7.51	7.21	0.24	12.56	25.23	-12.67
HE20, M0.1 to M11.1-BF	4	12.02	1.34	4.50	4.61	4.09	0.24	10.08	23.98	-13.90

5240 MHz:

Mode	Tx paths	correlated antenna gain (dBi)	Tx 1 Max Power (dBm)	Tx 2 Max Power (dBm)	Tx 3 Max Power (dBm)	Tx 4 Max Power (dBm)	DCCF (dB)	Total Max Power (dBm)	FCC Limit (dBm)	Margin (dB)
non HT20, 6 to 54 Mbps	1	6.00	-	15.11	-	-	0.32	15.44	30.00	-14.56
non HT20, 6 to 54 Mbps	2	6.00	-	11.62	12.23	-	0.32	15.27	30.00	-14.73
non HT20, 6 to 54 Mbps	3	6.00	-	6.86	7.33	7.13	0.32	12.20	30.00	-17.80
non HT20, 6 to 54 Mbps	4	6.00	1.26	4.01	4.38	3.56	0.32	9.80	30.00	-20.20
non HT20, 6 to 54 Mbps-BF	2	9.01	-	11.62	12.23	-	0.32	15.27	26.99	-11.72
non HT20, 6 to 54 Mbps-BF	3	10.77	-	6.86	7.33	7.13	0.32	12.20	25.23	-13.03
non HT20, 6 to 54 Mbps-BF	4	12.02	1.26	4.01	4.38	3.56	0.32	9.80	23.98	-14.18
HT/VHT20, M0 to M7, M0.1 to M8.1	1	6.00	-	15.02	-	-	0.16	15.18	30.00	-14.82
HT/VHT20, M0 to M7, M0.1 to M8.1	2	6.00	-	12.50	13.10	-	0.16	15.98	30.00	-14.02
HT/VHT20, M0 to M7, M0.1 to M8.1	3	6.00	-	8.13	8.00	7.45	0.16	12.80	30.00	-17.20
HT/VHT20, M0 to M7, M0.1 to M8.1	4	6.00	1.36	3.80	4.40	3.49	0.16	9.59	30.00	-20.41
HT/VHT20, M0 to M7, M0.1 to M8.1-BF	2	9.01	-	12.50	13.10	-	0.16	15.98	26.99	-11.00
HT/VHT20, M0 to M7, M0.1 to M8.1-BF	3	10.77	-	8.13	8.00	7.45	0.16	12.80	25.23	-12.43
HT/VHT20, M0 to M7, M0.1 to M8.1-BF	4	12.02	1.36	3.80	4.40	3.49	0.16	9.59	23.98	-14.39
HE20, M0.1 to M11.1	1	6.00	-	15.34	-	-	0.24	15.58	30.00	-14.42
HE20, M0.1 to M11.1	2	6.00	-	12.73	13.39	-	0.24	16.32	30.00	-13.68
HE20, M0.1 to M11.1	3	6.00	-	8.03	8.27	7.87	0.24	13.07	30.00	-16.93
HE20, M0.1 to M11.1	4	6.00	1.52	4.07	4.67	3.82	0.24	9.93	30.00	-20.07
HE20, M0.1 to M11.1-BF	2	9.01	-	12.73	13.39	-	0.24	16.32	26.99	-10.67
HE20, M0.1 to M11.1-BF	3	10.77	-	8.03	8.27	7.87	0.24	13.07	25.23	-12.16
HE20, M0.1 to M11.1-BF	4	12.02	1.52	4.07	4.67	3.82	0.24	9.93	23.98	-14.05

5190 MHz:

Mode	Tx paths	correlated antenna gain (dBi)	Tx 1 Max Power (dBm)	Tx 2 Max Power (dBm)	Tx 3 Max Power (dBm)	Tx 4 Max Power (dBm)	DCCF (dB)	Total Max Power (dBm)	FCC Limit (dBm)	Margin (dB)
non HT40, 6 to 54 Mbps	1	6.00	-	13.08	-	-	0.33	13.41	30.00	-16.59
non HT40, 6 to 54 Mbps	2	6.00	-	12.34	12.20	-	0.33	15.61	30.00	-14.39
non HT40, 6 to 54 Mbps	3	6.00	-	10.09	9.77	10.18	0.33	15.12	30.00	-14.88
non HT40, 6 to 54 Mbps	4	6.00	3.83	7.21	6.89	7.42	0.33	12.90	30.00	-17.10
HT/VHT40, M0 to M7, M0.1 to M9.1	1	6.00	-	14.02	-	-	0.17	14.19	30.00	-15.81
HT/VHT40, M0 to M7, M0.1 to M9.1	2	6.00	-	13.31	13.20	-	0.17	16.44	30.00	-13.56
HT/VHT40, M0 to M7, M0.1 to M9.1	3	6.00	-	11.33	10.79	10.22	0.17	15.75	30.00	-14.25
HT/VHT40, M0 to M7, M0.1 to M9.1	4	6.00	3.77	7.37	6.83	7.48	0.17	12.79	30.00	-17.21
HT/VHT40, M0 to M7, M0.1 to M9.1-BF	2	9.01	-	11.20	11.04	-	0.17	14.30	26.99	-12.69
HT/VHT40, M0 to M7, M0.1 to M9.1-BF	3	10.77	-	9.27	8.91	8.60	0.17	13.88	25.23	-11.35
HT/VHT40, M0 to M7, M0.1 to M9.1-BF	4	12.02	2.79	6.00	6.03	6.13	0.17	11.63	23.98	-12.35
HE40, M0.1 to M11.1	1	6.00	-	13.42	-	-	0.18	13.60	30.00	-16.40
HE40, M0.1 to M11.1	2	6.00	-	12.83	12.35	-	0.18	15.78	30.00	-14.22
HE40, M0.1 to M11.1	3	6.00	-	10.58	10.25	10.54	0.18	15.41	30.00	-14.59
HE40, M0.1 to M11.1	4	6.00	4.12	7.59	7.35	7.84	0.18	13.15	30.00	-16.85
HE40, M0.1 to M11.1-BF	2	9.01	-	10.56	10.38	-	0.18	13.66	26.99	-13.33
HE40, M0.1 to M11.1-BF	3	10.77	-	9.65	9.19	8.99	0.18	14.23	25.23	-10.99
HE40, M0.1 to M11.1-BF	4	12.02	3.11	6.49	6.11	6.36	0.18	11.91	23.98	-12.07

5230 MHz:

Mode	Tx paths	correlated antenna gain (dBi)	Tx 1 Max Power (dBm)	Tx 2 Max Power (dBm)	Tx 3 Max Power (dBm)	Tx 4 Max Power (dBm)	DCCF (dB)	Total Max Power (dBm)	FCC Limit (dBm)	Margin (dB)
non HT40, 6 to 54 Mbps	1	6.00	-	15.11	-	-	0.33	15.44	30.00	-14.56
non HT40, 6 to 54 Mbps	2	6.00	-	14.79	15.16	-	0.33	18.32	30.00	-11.68
non HT40, 6 to 54 Mbps	3	6.00	-	14.79	15.19	14.64	0.33	14.97	30.00	-15.03
non HT40, 6 to 54 Mbps	4	6.00	12.31	14.71	15.22	14.87	0.33	12.76	30.00	-17.24
HT/VHT40, M0 to M7, M0.1 to M9.1	1	6.00	-	15.12	-	-	0.17	15.30	30.00	-14.70
HT/VHT40, M0 to M7, M0.1 to M9.1	2	6.00	-	15.08	15.44	-	0.17	18.12	30.00	-11.88
HT/VHT40, M0 to M7, M0.1 to M9.1	3	6.00	-	13.80	14.20	13.84	0.17	15.82	30.00	-14.18
HT/VHT40, M0 to M7, M0.1 to M9.1	4	6.00	8.36	10.97	11.35	10.82	0.17	12.67	30.00	-17.33
HT/VHT40, M0 to M7, M0.1 to M9.1-BF	2	9.01	-	15.08	15.44	-	0.17	17.23	26.99	-9.76
HT/VHT40, M0 to M7, M0.1 to M9.1-BF	3	10.77	-	12.97	13.07	13.14	0.17	14.07	25.23	-11.16
HT/VHT40, M0 to M7, M0.1 to M9.1-BF	4	12.02	7.49	7.28	10.31	10.27	0.17	11.85	23.98	-12.12
HE40, M0.1 to M11.1	1	6.00	-	15.49	-	-	0.18	15.66	30.00	-14.34
HE40, M0.1 to M11.1	2	6.00	-	15.27	15.77	-	0.18	18.71	30.00	-11.29
HE40, M0.1 to M11.1	3	6.00	-	14.23	14.51	14.17	0.18	15.21	30.00	-14.79
HE40, M0.1 to M11.1	4	6.00	8.72	11.39	11.68	11.29	0.18	13.04	30.00	-16.96
HE40, M0.1 to M11.1-BF	2	9.01	-	15.27	15.77	-	0.18	17.68	26.99	-9.31
HE40, M0.1 to M11.1-BF	3	10.77	-				0.18	14.42	25.23	-10.81
HE40, M0.1 to M11.1-BF	4	12.02	6.56	9.23	9.81	9.75	0.18	11.34	23.98	-12.64

5210 MHz:

Mode	Tx paths	correlated antenna gain (dBi)	Tx 1 Max Power (dBm)	Tx 2 Max Power (dBm)	Tx 3 Max Power (dBm)	Tx 4 Max Power (dBm)	DCCF (dB)	Total Max Power (dBm)	FCC Limit (dBm)	Margin (dB)
non HT80, 6 to 54 Mbps	1	6.00	-	11.01	-	-	0.26	11.26	30.00	-18.74
non HT80, 6 to 54 Mbps	2	6.00	-	11.59	10.95	-	0.26	14.55	30.00	-15.45
non HT80, 6 to 54 Mbps	3	6.00	-	10.03	9.94	9.27	0.26	14.79	30.00	-15.21
non HT80, 6 to 54 Mbps	4	6.00	5.95	9.01	9.28	8.47	0.26	14.63	30.00	-15.37
VHT80, M0.1 to M9.1	1	6.00	-	12.21	-	-	0.17	12.38	30.00	-17.62
VHT80, M0.1 to M9.1	2	6.00	-	11.17	11.24	-	0.17	14.39	30.00	-15.61
VHT80, M0.1 to M9.1	3	6.00	-	10.19	10.11	9.53	0.17	14.89	30.00	-15.11
VHT80, M0.1 to M9.1	4	6.00	6.09	9.22	9.45	8.62	0.17	14.72	30.00	-15.28
VHT80, M0.1 to M9.1-BF	2	9.01	-	9.26	9.18	-	0.17	12.40	26.99	-14.59
VHT80, M0.1 to M9.1-BF	3	10.77	-	7.28	6.98	6.79	0.17	11.96	25.23	-13.27
VHT80, M0.1 to M9.1-BF	4	12.02	2.11	5.35	5.44	4.96	0.17	10.85	23.98	-13.13
HE80, M0.1 to M11.1	1	6.00	-	11.46	-	-	0.18	11.64	30.00	-18.36
HE80, M0.1 to M11.1	2	6.00	-	12.15	11.44	-	0.18	15.00	30.00	-15.00
HE80, M0.1 to M11.1	3	6.00	-	10.65	10.39	10.43	0.18	15.44	30.00	-14.56
HE80, M0.1 to M11.1	4	6.00	6.44	9.56	9.80	9.11	0.18	15.11	30.00	-14.89
HE80, M0.1 to M11.1-BF	2	9.01	-	9.76	8.87	-	0.18	12.52	26.99	-14.47
HE80, M0.1 to M11.1-BF	3	10.77	-	7.54	7.65	7.00	0.18	12.36	25.23	-12.87
HE80, M0.1 to M11.1-BF	4	12.02	1.72	4.64	4.81	4.57	0.18	10.30	23.98	-13.68

Test results for Power Spectrum Density

4 dBi

5180 MHz:

Mode	Tx paths	correlated antenna gain (dBi)	Tx 1 PSD (dBm/MHz)	Tx 2 PSD (dBm/MHz)	Tx 3 PSD (dBm/MHz)	Tx 4 PSD (dBm/MHz)	DCCF (dB)	Total PSD (dBm/MHz)	FCC Limit (dBm/MHz)	Margin (dB)
non HT20, 6 to 54 Mbps	1	4.00	-	3.61	-	-	7.93	0.32	17.00	-9.07
non HT20, 6 to 54 Mbps	2	7.01	-	3.56	3.84	-	14.04	0.32	15.99	-1.95
non HT20, 6 to 54 Mbps	3	8.77	-	-0.18	0.11	-0.50	13.68	0.32	14.23	-0.55
non HT20, 6 to 54 Mbps	4	10.02	-6.47	-2.84	-3.40	-3.14	12.61	0.32	12.98	-0.37
non HT20, 6 to 54 Mbps-BF	2	7.01	-	3.56	3.84	-	14.04	0.32	15.99	-1.95
non HT20, 6 to 54 Mbps-BF	3	8.77	-	-0.18	0.11	-0.50	13.68	0.32	14.23	-0.55
non HT20, 6 to 54 Mbps-BF	4	10.02	-6.47	-2.84	-3.40	-3.14	12.61	0.32	12.98	-0.37
HT/VHT20, M0 to M7, M0.1 to M8.1	1	4.00	-	3.17	-	-	7.34	0.16	17.00	-9.66
HT/VHT20, M0 to M7, M0.1 to M8.1	2	7.01	-	3.30	3.90	-	13.79	0.16	15.99	-2.20
HT/VHT20, M0 to M7, M0.1 to M8.1	3	8.77	-	0.64	0.50	0.10	14.12	0.16	14.23	-0.10
HT/VHT20, M0 to M7, M0.1 to M8.1	4	10.02	-6.69	-3.37	-3.56	-3.65	12.08	0.16	12.98	-0.90
HT/VHT20, M0 to M7, M0.1 to M8.1-BF	2	7.01	-	3.30	3.90	-	13.79	0.16	15.99	-2.20
HT/VHT20, M0 to M7, M0.1 to M8.1-BF	3	8.77	-	0.64	0.50	0.10	14.12	0.16	14.23	-0.10
HT/VHT20, M0 to M7, M0.1 to M8.1-BF	4	10.02	-6.69	-3.37	-3.56	-3.65	12.08	0.16	12.98	-0.90
HE20, M0.1 to M11.1	1	4.00	-	3.38	-	-	7.62	0.24	17.00	-9.38
HE20, M0.1 to M11.1	2	7.01	-	3.38	3.72	-	13.81	0.24	15.99	-2.18
HE20, M0.1 to M11.1	3	8.77	-	-0.01	-0.72	-0.82	13.28	0.24	14.23	-0.95
HE20, M0.1 to M11.1	4	10.02	-6.81	-3.59	-3.66	-3.56	12.07	0.24	12.98	-0.91
HE20, M0.1 to M11.1-BF	2	7.01	-	3.38	3.72	-	13.81	0.24	15.99	-2.18
HE20, M0.1 to M11.1-BF	3	8.77	-	-0.01	-0.72	-0.82	13.28	0.24	14.23	-0.95
HE20, M0.1 to M11.1-BF	4	10.02	-6.81	-3.59	-3.66	-3.56	12.07	0.24	12.98	-0.91

5200 MHz:

Mode	Tx paths	correlated antenna gain (dBi)	Tx 1 PSD (dBm/MHz)	Tx 2 PSD (dBm/MHz)	Tx 3 PSD (dBm/MHz)	Tx 4 PSD (dBm/MHz)	DCCF (dB)	Total PSD (dBm/MHz)	FCC Limit (dBm/MHz)	Margin (dB)
non HT20, 6 to 54 Mbps	1	4.00	-	3.85	-	-	8.17	0.32	17.00	-8.83
non HT20, 6 to 54 Mbps	2	7.01	-	3.93	4.22	-	14.42	0.32	15.99	-1.57
non HT20, 6 to 54 Mbps	3	8.77	-	-0.31	0.27	-0.30	13.76	0.32	14.23	-0.47
non HT20, 6 to 54 Mbps	4	10.02	-6.23	-3.05	-2.89	-3.19	12.71	0.32	12.98	-0.27
non HT20, 6 to 54 Mbps-BF	2	7.01	-	3.93	4.22	-	14.42	0.32	15.99	-1.57
non HT20, 6 to 54 Mbps-BF	3	8.77	-	-0.31	0.27	-0.30	13.76	0.32	14.23	-0.47
non HT20, 6 to 54 Mbps-BF	4	10.02	-6.23	-3.05	-2.89	-3.19	12.71	0.32	12.98	-0.27
HT/VHT20, M0 to M7, M0.1 to M8.1	1	4.00	-	3.42	-	-	7.59	0.16	17.00	-9.41
HT/VHT20, M0 to M7, M0.1 to M8.1	2	7.01	-	3.84	3.86	-	14.03	0.16	15.99	-1.96
HT/VHT20, M0 to M7, M0.1 to M8.1	3	8.77	-	-0.20	-0.07	-0.47	13.47	0.16	14.23	-0.76
HT/VHT20, M0 to M7, M0.1 to M8.1	4	10.02	-6.39	-3.04	-3.53	-3.30	12.33	0.16	12.98	-0.65
HT/VHT20, M0 to M7, M0.1 to M8.1-BF	2	7.01	-	3.84	3.86	-	14.03	0.16	15.99	-1.96
HT/VHT20, M0 to M7, M0.1 to M8.1-BF	3	8.77	-	-0.20	-0.07	-0.47	13.47	0.16	14.23	-0.76
HT/VHT20, M0 to M7, M0.1 to M8.1-BF	4	10.02	-6.39	-3.04	-3.53	-3.30	12.33	0.16	12.98	-0.65
HE20, M0.1 to M11.1	1	4.00	-	3.57	-	-	7.81	0.24	17.00	-9.19
HE20, M0.1 to M11.1	2	7.01	-	3.52	4.12	-	14.09	0.24	15.99	-1.90
HE20, M0.1 to M11.1	3	8.77	-	-0.24	-0.02	-0.69	13.47	0.24	14.23	-0.76
HE20, M0.1 to M11.1	4	10.02	-6.52	-3.25	-3.12	-3.30	12.44	0.24	12.98	-0.54
HE20, M0.1 to M11.1-BF	2	7.01	-	3.52	4.12	-	14.09	0.24	15.99	-1.90
HE20, M0.1 to M11.1-BF	3	8.77	-	-0.24	-0.02	-0.69	13.47	0.24	14.23	-0.76
HE20, M0.1 to M11.1-BF	4	10.02	-6.52	-3.25	-3.12	-3.30	12.44	0.24	12.98	-0.54

5240 MHz:

Mode	Tx paths	correlated antenna gain (dBi)	Tx 1 PSD (dBm/MHz)	Tx 2 PSD (dBm/MHz)	Tx 3 PSD (dBm/MHz)	Tx 4 PSD (dBm/MHz)	DCCF (dB)	Total PSD (dBm/MHz)	FCC Limit (dBm/MHz)	Margin (dB)
non HT20, 6 to 54 Mbps	1	4.00	-	3.78	-	-	8.10	0.32	17.00	-8.90
non HT20, 6 to 54 Mbps	2	7.01	-	3.16	4.01	-	13.95	0.32	15.99	-2.04
non HT20, 6 to 54 Mbps	3	8.77	-	-0.67	-0.31	-0.77	13.28	0.32	14.23	-0.95
non HT20, 6 to 54 Mbps	4	10.02	-6.03	-3.34	-3.12	-3.30	12.57	0.32	12.98	-0.41
non HT20, 6 to 54 Mbps-BF	2	7.01	-	3.16	4.01	-	13.95	0.32	15.99	-2.04
non HT20, 6 to 54 Mbps-BF	3	8.77	-	-0.67	-0.31	-0.77	13.28	0.32	14.23	-0.95
non HT20, 6 to 54 Mbps-BF	4	10.02	-6.03	-3.34	-3.12	-3.30	12.57	0.32	12.98	-0.41
HT/VHT20, M0 to M7, M0.1 to M8.1	1	4.00	-	3.51	-	-	7.67	0.16	17.00	-9.33
HT/VHT20, M0 to M7, M0.1 to M8.1	2	7.01	-	2.80	3.64	-	13.42	0.16	15.99	-2.57
HT/VHT20, M0 to M7, M0.1 to M8.1	3	8.77	-	0.23	0.48	0.67	14.17	0.16	14.23	-0.06
HT/VHT20, M0 to M7, M0.1 to M8.1	4	10.02	-6.39	-3.66	-3.22	-3.86	12.08	0.16	12.98	-0.90
HT/VHT20, M0 to M7, M0.1 to M8.1-BF	2	7.01	-	2.80	3.64	-	13.42	0.16	15.99	-2.57
HT/VHT20, M0 to M7, M0.1 to M8.1-BF	3	8.77	-	0.23	0.48	0.67	14.17	0.16	14.23	-0.06
HT/VHT20, M0 to M7, M0.1 to M8.1-BF	4	10.02	-6.39	-3.66	-3.22	-3.86	12.08	0.16	12.98	-0.90
HE20, M0.1 to M11.1	1	4.00	-	3.62	-	-	7.85	0.24	17.00	-9.15
HE20, M0.1 to M11.1	2	7.01	-	3.47	3.95	-	13.97	0.24	15.99	-2.02
HE20, M0.1 to M11.1	3	8.77	-	-0.40	-0.32	-0.87	13.26	0.24	14.23	-0.97
HE20, M0.1 to M11.1	4	10.02	-5.70	-3.65	-3.40	-4.05	12.17	0.24	12.98	-0.81
HE20, M0.1 to M11.1-BF	2	7.01	-	3.47	3.95	-	13.97	0.24	15.99	-2.02
HE20, M0.1 to M11.1-BF	3	8.77	-	-0.40	-0.32	-0.87	13.26	0.24	14.23	-0.97
HE20, M0.1 to M11.1-BF	4	10.02	-5.70	-3.65	-3.40	-4.05	12.17	0.24	12.98	-0.81

5190 MHz:

Mode	Tx paths	correlated antenna gain (dBi)	Tx 1 PSD (dBm/MHz)	Tx 2 PSD (dBm/MHz)	Tx 3 PSD (dBm/MHz)	Tx 4 PSD (dBm/MHz)	DCCF (dB)	Total PSD (dBm/MHz)	FCC Limit (dBm/MHz)	Margin (dB)
non HT40, 6 to 54 Mbps	1	4.00	-	-1.07	-	-	3.26	0.33	17.00	-13.74
non HT40, 6 to 54 Mbps	2	7.01	-	-0.78	-1.46	-	9.24	0.33	15.99	-6.75
non HT40, 6 to 54 Mbps	3	8.77	-	-1.91	-2.11	-2.73	11.64	0.33	14.23	-2.59
non HT40, 6 to 54 Mbps	4	10.02	-6.28	-2.96	-2.96	-3.11	12.75	0.33	12.98	-0.23
HT/VHT40, M0 to M7, M0.1 to M9.1	1	4.00	-	-0.42	-	-	3.75	0.17	17.00	-13.25
HT/VHT40, M0 to M7, M0.1 to M9.1	2	7.01	-	-1.18	-1.32	-	8.94	0.17	15.99	-7.05
HT/VHT40, M0 to M7, M0.1 to M9.1	3	8.77	-	-2.22	-2.44	-2.86	11.22	0.17	14.23	-3.01
HT/VHT40, M0 to M7, M0.1 to M9.1	4	10.02	-6.40	-3.31	-3.30	-3.62	12.23	0.17	12.98	-0.75
HT/VHT40, M0 to M7, M0.1 to M9.1-BF	2	7.01	-	-3.26	-3.21	-	6.96	0.17	15.99	-9.03
HT/VHT40, M0 to M7, M0.1 to M9.1-BF	3	8.77	-	-4.20	-4.76	-4.72	9.17	0.17	14.23	-5.06
HT/VHT40, M0 to M7, M0.1 to M9.1-BF	4	10.02	-8.42	-5.51	-5.56	-5.08	10.25	0.17	12.98	-2.73
HE40, M0.1 to M11.1	1	4.00	-	-1.14	-	-	3.04	0.18	17.00	-13.96
HE40, M0.1 to M11.1	2	7.01	-	-0.87	-0.88	-	9.32	0.18	15.99	-6.67
HE40, M0.1 to M11.1	3	8.77	-	-1.93	-2.10	-2.71	11.48	0.18	14.23	-2.74
HE40, M0.1 to M11.1	4	10.02	-6.30	-2.97	-3.15	-3.40	12.45	0.18	12.98	-0.52
HE40, M0.1 to M11.1-BF	2	7.01	-	-3.93	-4.12	-	6.18	0.18	15.99	-9.81
HE40, M0.1 to M11.1-BF	3	8.77	-	-4.16	-4.38	-4.47	9.38	0.18	14.23	-4.84
HE40, M0.1 to M11.1-BF	4	10.02	-8.40	-5.05	-4.98	-5.04	10.57	0.18	12.98	-2.41

5230 MHz:

Mode	Tx paths	correlated antenna gain (dBi)	Tx 1 PSD (dBm/MHz)	Tx 2 PSD (dBm/MHz)	Tx 3 PSD (dBm/MHz)	Tx 4 PSD (dBm/MHz)	DCCF (dB)	Total PSD (dBm/MHz)	FCC Limit (dBm/MHz)	Margin (dB)
non HT40, 6 to 54 Mbps	1	4.00	-	1.19	-	-	5.52	0.33	17.00	-11.48
non HT40, 6 to 54 Mbps	2	7.01	-	0.57	1.03	-	8.15	0.33	17.00	-8.85
non HT40, 6 to 54 Mbps	3	8.77	-	0.55	1.16	0.60	9.88	0.33	17.00	-7.12
non HT40, 6 to 54 Mbps	4	10.02	-1.56	0.87	1.15	0.86	10.81	0.33	17.00	-6.19
HT/VHT40, M0 to M7, M0.1 to M9.1	1	4.00	-	0.74	-	-	4.91	0.17	17.00	-12.09
HT/VHT40, M0 to M7, M0.1 to M9.1	2	7.01	-	0.64	1.03	-	11.03	0.17	15.99	-4.96
HT/VHT40, M0 to M7, M0.1 to M9.1	3	8.77	-	-0.80	-0.26	-0.69	13.14	0.17	14.23	-1.09
HT/VHT40, M0 to M7, M0.1 to M9.1	4	10.02	-6.02	-3.45	-3.01	-3.65	12.32	0.17	12.98	-0.66
HT/VHT40, M0 to M7, M0.1 to M9.1-BF	2	7.01	-	0.64	1.03	-	11.03	0.17	15.99	-4.96
HT/VHT40, M0 to M7, M0.1 to M9.1-BF	3	8.77	-	-1.59	-1.33	-1.35	12.29	0.17	14.23	-1.94
HT/VHT40, M0 to M7, M0.1 to M9.1-BF	4	10.02	-6.74	-6.95	-4.04	-4.19	10.95	0.17	12.98	-2.03
HE40, M0.1 to M11.1	1	4.00	-	0.93	-	-	5.10	0.18	17.00	-11.90
HE40, M0.1 to M11.1	2	7.01	-	0.64	1.27	-	11.17	0.18	15.99	-4.82
HE40, M0.1 to M11.1	3	8.77	-	-0.48	-0.04	-0.49	13.39	0.18	14.23	-0.84
HE40, M0.1 to M11.1	4	10.02	-5.79	-3.13	-2.78	-3.32	12.61	0.18	12.98	-0.37
HE40, M0.1 to M11.1-BF	2	7.01	-	0.64	1.27	-	11.17	0.18	15.99	-4.82
HE40, M0.1 to M11.1-BF	3	8.77	-				13.72	0.18	14.23	-0.51
HE40, M0.1 to M11.1-BF	4	10.02	-7.92	-5.32	-4.73	-4.85	10.69	0.18	12.98	-2.29

5210 MHz:

Mode	Tx paths	correlated antenna gain (dBi)	Tx 1 PSD (dBm/MHz)	Tx 2 PSD (dBm/MHz)	Tx 3 PSD (dBm/MHz)	Tx 4 PSD (dBm/MHz)	DCCF (dB)	Total PSD (dBm/MHz)	FCC Limit (dBm/MHz)	Margin (dB)
non HT80, 6 to 54 Mbps	1	4.00	-	-4.51	-	-	-0.25	0.26	17.00	-17.25
non HT80, 6 to 54 Mbps	2	7.01	-	-5.28	-5.90	-	4.70	0.26	15.99	-11.29
non HT80, 6 to 54 Mbps	3	8.77	-	-5.64	-5.53	-6.70	7.88	0.26	14.23	-6.35
non HT80, 6 to 54 Mbps	4	10.02	-9.78	-6.35	-6.53	-6.47	9.22	0.26	12.98	-3.76
VHT80, M0.1 to M9.1	1	4.00	-	-5.26	-	-	-1.09	0.17	17.00	-18.09
VHT80, M0.1 to M9.1	2	7.01	-	-5.38	-5.60	-	4.70	0.17	15.99	-11.29
VHT80, M0.1 to M9.1	3	8.77	-	-6.09	-6.27	-7.30	7.19	0.17	14.23	-7.04
VHT80, M0.1 to M9.1	4	10.02	-10.18	-7.24	-6.87	-7.14	8.54	0.17	12.98	-4.44
VHT80, M0.1 to M9.1-BF	2	7.01	-	-6.75	-7.43	-	3.11	0.17	15.99	-12.88
VHT80, M0.1 to M9.1-BF	3	8.77	-	-10.18	-10.59	-10.79	3.20	0.17	14.23	-11.03
VHT80, M0.1 to M9.1-BF	4	10.02	-15.34	-11.98	-11.89	-12.46	3.50	0.17	12.98	-9.48
HE80, M0.1 to M11.1	1	4.00	-	-4.87	-	-	-0.69	0.18	17.00	-17.69
HE80, M0.1 to M11.1	2	7.01	-	-5.58	-6.13	-	4.35	0.18	15.99	-11.64
HE80, M0.1 to M11.1	3	8.77	-	-7.07	-7.19	-7.29	6.54	0.18	14.23	-7.69
HE80, M0.1 to M11.1	4	10.02	-9.61	-6.76	-6.79	-6.96	8.84	0.18	12.98	-4.14
HE80, M0.1 to M11.1-BF	2	7.01	-	-7.81	-8.51	-	2.05	0.18	15.99	-13.94
HE80, M0.1 to M11.1-BF	3	8.77	-	-9.87	-9.85	-10.54	3.64	0.18	14.23	-10.59
HE80, M0.1 to M11.1-BF	4	10.02	-15.61	-12.68	-12.60	-12.96	2.92	0.18	12.98	-10.06

6 dBi
5180 MHz:

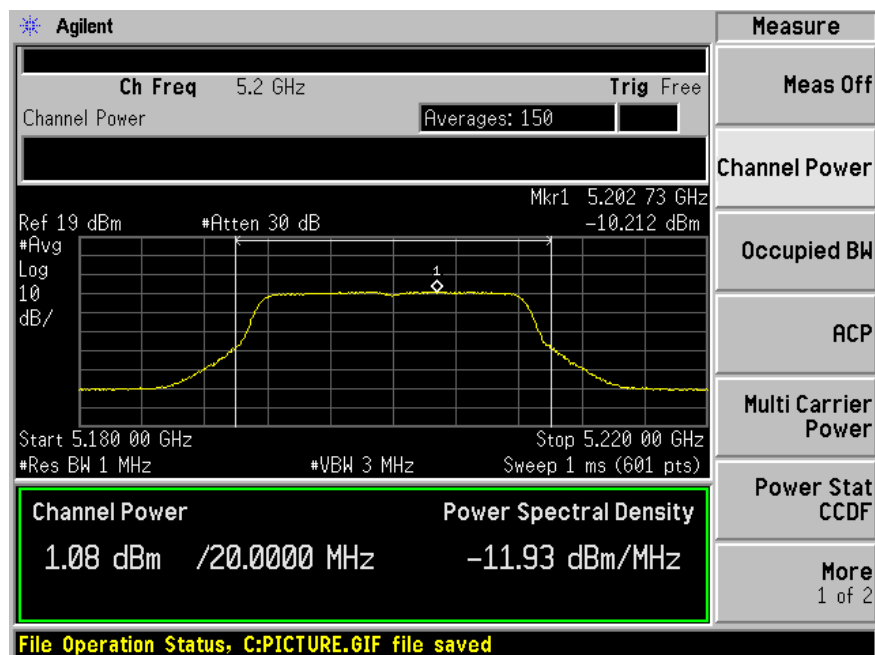
Mode	Tx paths	correlated antenna gain (dBi)	Tx 1 PSD (dBm/MHz)	Tx 2 PSD (dBm/MHz)	Tx 3 PSD (dBm/MHz)	Tx 4 PSD (dBm/MHz)	DCCF (dB)	Total PSD (dBm/MHz)	FCC Limit (dBm/MHz)	Margin (dB)
non HT20, 6 to 54 Mbps	1	6.00	-	3.61	-	-	0.32	9.93	17.00	-7.07
non HT20, 6 to 54 Mbps	2	9.01	-	-0.52	-0.90	-	0.32	11.64	13.99	-2.35
non HT20, 6 to 54 Mbps	3	10.77	-	-4.22	-4.15	-4.62	0.32	11.54	12.23	-0.69
non HT20, 6 to 54 Mbps	4	12.02	-10.38	-6.75	-7.19	-6.96	0.32	10.77	10.98	-0.21
non HT20, 6 to 54 Mbps-BF	2	9.01	-	-0.52	-0.90	-	0.32	11.64	13.99	-2.35
non HT20, 6 to 54 Mbps-BF	3	10.77	-	-4.22	-4.15	-4.62	0.32	11.54	12.23	-0.69
non HT20, 6 to 54 Mbps-BF	4	12.02	-10.38	-6.75	-7.19	-6.96	0.32	10.77	10.98	-0.21
HT/VHT20, M0 to M7, M0.1 to M8.1	1	6.00	-	3.17	-	-	0.16	9.34	17.00	-7.66
HT/VHT20, M0 to M7, M0.1 to M8.1	2	9.01	-	1.57	1.57	-	0.16	13.75	13.99	-0.24
HT/VHT20, M0 to M7, M0.1 to M8.1	3	10.77	-	-3.54	-3.83	-3.83	0.16	11.98	12.23	-0.25
HT/VHT20, M0 to M7, M0.1 to M8.1	4	12.02	-10.24	-7.27	-7.19	-7.13	0.16	10.42	10.98	-0.55
HT/VHT20, M0 to M7, M0.1 to M8.1-BF	2	9.01	-	1.57	1.57	-	0.16	13.75	13.99	-0.24
HT/VHT20, M0 to M7, M0.1 to M8.1-BF	3	10.77	-	-3.54	-3.83	-3.83	0.16	11.98	12.23	-0.25
HT/VHT20, M0 to M7, M0.1 to M8.1-BF	4	12.02	-10.24	-7.27	-7.19	-7.13	0.16	10.42	10.98	-0.55
HE20, M0.1 to M11.1	1	6.00	-	3.38	-	-	0.24	9.62	17.00	-7.38
HE20, M0.1 to M11.1	2	9.01	-	1.05	0.50	-	0.24	13.04	13.99	-0.95
HE20, M0.1 to M11.1	3	10.77	-	-4.05	-4.70	-4.15	0.24	11.49	12.23	-0.74
HE20, M0.1 to M11.1	4	12.02	-10.84	-7.12	-7.15	-7.56	0.24	10.35	10.98	-0.63
HE20, M0.1 to M11.1-BF	2	9.01	-	1.05	0.50	-	0.24	13.04	13.99	-0.95
HE20, M0.1 to M11.1-BF	3	10.77	-	-4.05	-4.70	-4.15	0.24	11.49	12.23	-0.74
HE20, M0.1 to M11.1-BF	4	12.02	-10.84	-7.12	-7.15	-7.56	0.24	10.35	10.98	-0.63

5200 MHz:

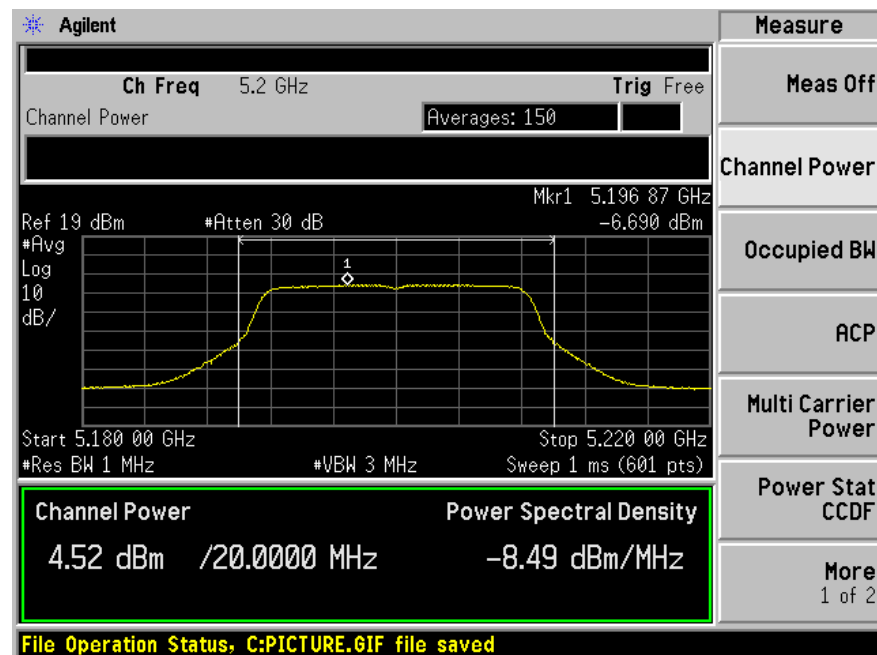
Mode	Tx paths	correlated antenna gain (dBi)	Tx 1 PSD (dBm/MHz)	Tx 2 PSD (dBm/MHz)	Tx 3 PSD (dBm/MHz)	Tx 4 PSD (dBm/MHz)	DCCF (dB)	Total PSD (dBm/MHz)	FCC Limit (dBm/MHz)	Margin (dB)
non HT20, 6 to 54 Mbps	1	6.00	-	3.85	-	-	0.32	10.17	17.00	-6.83
non HT20, 6 to 54 Mbps	2	9.01	-	0.89	1.00	-	0.32	13.29	13.99	-0.70
non HT20, 6 to 54 Mbps	3	10.77	-	-4.21	-4.26	-4.33	0.32	11.60	12.23	-0.63
non HT20, 6 to 54 Mbps	4	12.02	-10.21	-6.69	-6.54	-7.14	0.32	10.94	10.98	-0.04
non HT20, 6 to 54 Mbps-BF	2	9.01	-	0.89	1.00	-	0.32	13.29	13.99	-0.70
non HT20, 6 to 54 Mbps-BF	3	10.77	-	-4.21	-4.26	-4.33	0.32	11.60	12.23	-0.63
non HT20, 6 to 54 Mbps-BF	4	12.02	-10.21	-6.69	-6.54	-7.14	0.32	10.94	10.98	-0.04
HT/VHT20, M0 to M7, M0.1 to M8.1	1	6.00	-	3.42	-	-	0.16	9.59	17.00	-7.41
HT/VHT20, M0 to M7, M0.1 to M8.1	2	9.01	-	0.69	0.82	-	0.16	12.94	13.99	-1.05
HT/VHT20, M0 to M7, M0.1 to M8.1	3	10.77	-	-3.99	-4.57	-4.44	0.16	11.38	12.23	-0.85
HT/VHT20, M0 to M7, M0.1 to M8.1	4	12.02	-10.46	-7.13	-6.97	-7.22	0.16	10.47	10.98	-0.51
HT/VHT20, M0 to M7, M0.1 to M8.1-BF	2	9.01	-	0.69	0.82	-	0.16	12.94	13.99	-1.05
HT/VHT20, M0 to M7, M0.1 to M8.1-BF	3	10.77	-	-3.99	-4.57	-4.44	0.16	11.38	12.23	-0.85
HT/VHT20, M0 to M7, M0.1 to M8.1-BF	4	12.02	-10.46	-7.13	-6.97	-7.22	0.16	10.47	10.98	-0.51
HE20, M0.1 to M11.1	1	6.00	-	3.57	-	-	0.24	9.81	17.00	-7.19
HE20, M0.1 to M11.1	2	9.01	-	0.80	0.76	-	0.24	13.04	13.99	-0.95
HE20, M0.1 to M11.1	3	10.77	-	-3.71	-4.22	-4.22	0.24	11.74	12.23	-0.49
HE20, M0.1 to M11.1	4	12.02	-10.38	-7.02	-6.84	-7.58	0.24	10.53	10.98	-0.45
HE20, M0.1 to M11.1-BF	2	9.01	-	0.80	0.76	-	0.24	13.04	13.99	-0.95
HE20, M0.1 to M11.1-BF	3	10.77	-	-3.71	-4.22	-4.22	0.24	11.74	12.23	-0.49
HE20, M0.1 to M11.1-BF	4	12.02	-10.38	-7.02	-6.84	-7.58	0.24	10.53	10.98	-0.45

Please refer to the following plots for the worst case configuration

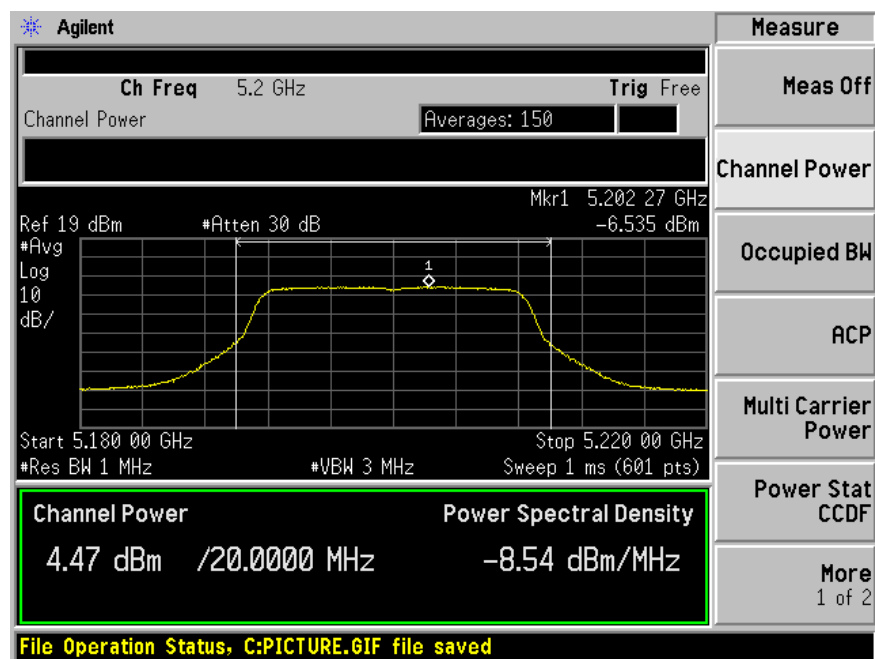
Ant-1



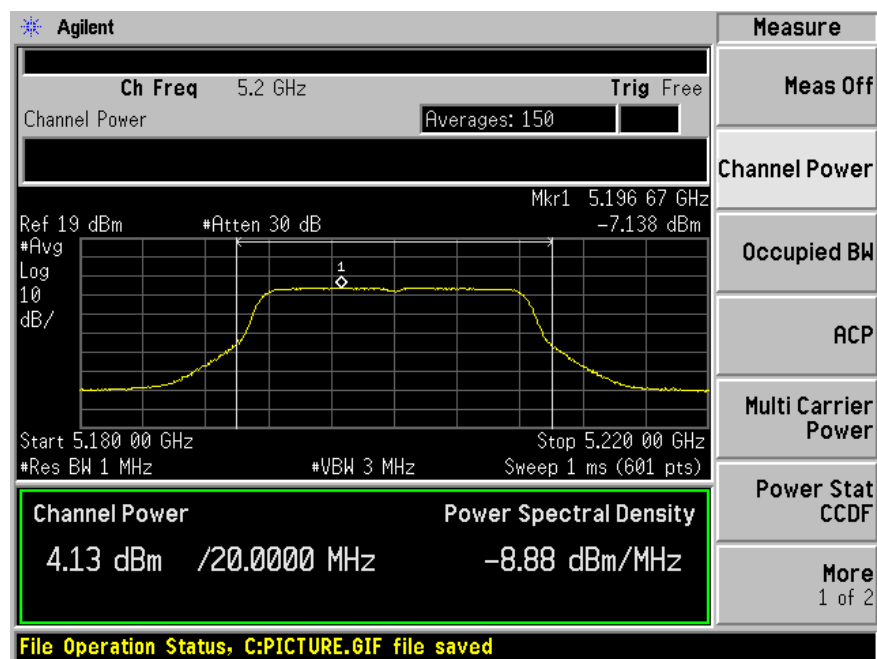
Ant-2



Ant-3



Ant-4



5240 MHz:

Mode	Tx paths	correlated antenna gain (dBi)	Tx 1 PSD (dBm/MHz)	Tx 2 PSD (dBm/MHz)	Tx 3 PSD (dBm/MHz)	Tx 4 PSD (dBm/MHz)	DCCF (dB)	Total PSD (dBm/MHz)	FCC Limit (dBm/MHz)	Margin (dB)
non HT20, 6 to 54 Mbps	1	6.00	-	3.78	-	-	0.32	10.10	17.00	-6.90
non HT20, 6 to 54 Mbps	2	9.01	-	0.36	0.92	-	0.32	12.99	13.99	-1.00
non HT20, 6 to 54 Mbps	3	10.77	-	-4.28	-3.93	-4.03	0.32	11.79	12.23	-0.44
non HT20, 6 to 54 Mbps	4	12.02	-10.10	-7.11	-6.64	-7.70	0.32	10.66	10.98	-0.32
non HT20, 6 to 54 Mbps-BF	2	9.01	-	0.36	0.92	-	0.32	12.99	13.99	-1.00
non HT20, 6 to 54 Mbps-BF	3	10.77	-	-4.28	-3.93	-4.03	0.32	11.79	12.23	-0.44
non HT20, 6 to 54 Mbps-BF	4	12.02	-10.10	-7.11	-6.64	-7.70	0.32	10.66	10.98	-0.32
HT/VHT20, M0 to M7, M0.1 to M8.1	1	6.00	-	3.51	-	-	0.16	9.67	17.00	-7.33
HT/VHT20, M0 to M7, M0.1 to M8.1	2	9.01	-	0.89	1.61	-	0.16	13.45	13.99	-0.54
HT/VHT20, M0 to M7, M0.1 to M8.1	3	10.77	-	-3.33	-3.40	-4.13	0.16	12.10	12.23	-0.13
HT/VHT20, M0 to M7, M0.1 to M8.1	4	12.02	-10.03	-7.65	-7.06	-8.06	0.16	10.14	10.98	-0.84
HT/VHT20, M0 to M7, M0.1 to M8.1-BF	2	9.01	-	0.89	1.61	-	0.16	13.45	13.99	-0.54
HT/VHT20, M0 to M7, M0.1 to M8.1-BF	3	10.77	-	-3.33	-3.40	-4.13	0.16	12.10	12.23	-0.13
HT/VHT20, M0 to M7, M0.1 to M8.1-BF	4	12.02	-10.03	-7.65	-7.06	-8.06	0.16	10.14	10.98	-0.84
HE20, M0.1 to M11.1	1	6.00	-	3.62	-	-	0.24	9.85	17.00	-7.15
HE20, M0.1 to M11.1	2	9.01	-	1.17	1.80	-	0.24	13.76	13.99	-0.23
HE20, M0.1 to M11.1	3	10.77	-	-3.61	-3.40	-3.89	0.24	12.16	12.23	-0.07
HE20, M0.1 to M11.1	4	12.02	-10.17	-7.63	-6.83	-7.80	0.24	10.34	10.98	-0.64
HE20, M0.1 to M11.1-BF	2	9.01	-	1.17	1.80	-	0.24	13.76	13.99	-0.23
HE20, M0.1 to M11.1-BF	3	10.77	-	-3.61	-3.40	-3.89	0.24	12.16	12.23	-0.07
HE20, M0.1 to M11.1-BF	4	12.02	-10.17	-7.63	-6.83	-7.80	0.24	10.34	10.98	-0.64

5190 MHz:

Mode	Tx paths	correlated antenna gain (dBi)	Tx 1 PSD (dBm/MHz)	Tx 2 PSD (dBm/MHz)	Tx 3 PSD (dBm/MHz)	Tx 4 PSD (dBm/MHz)	DCCF (dB)	Total PSD (dBm/MHz)	FCC Limit (dBm/MHz)	Margin (dB)
non HT40, 6 to 54 Mbps	1	6.00	-	-1.02	-	-	0.33	5.32	17.00	-11.68
non HT40, 6 to 54 Mbps	2	9.01	-	-1.80	-1.75	-	0.33	10.58	13.99	-3.41
non HT40, 6 to 54 Mbps	3	10.77	-	-3.94	-4.28	-4.00	0.33	11.81	12.23	-0.42
non HT40, 6 to 54 Mbps	4	12.02	-10.47	-6.81	-7.10	-6.72	0.33	10.84	10.98	-0.14
HT/VHT40, M0 to M7, M0.1 to M9.1	1	6.00	-	-0.42	-	-	0.17	5.75	17.00	-11.25
HT/VHT40, M0 to M7, M0.1 to M9.1	2	9.01	-	-1.18	-1.32	-	0.17	10.94	13.99	-3.05
HT/VHT40, M0 to M7, M0.1 to M9.1	3	10.77	-	-3.06	-3.58	-4.27	0.17	12.11	12.23	-0.12
HT/VHT40, M0 to M7, M0.1 to M9.1	4	12.02	-10.55	-7.00	-7.51	-6.77	0.17	10.49	10.98	-0.49
HT/VHT40, M0 to M7, M0.1 to M9.1-BF	2	9.01	-	-3.26	-3.21	-	0.17	8.96	13.99	-5.03
HT/VHT40, M0 to M7, M0.1 to M9.1-BF	3	10.77	-	-5.13	-5.37	-5.72	0.17	10.32	12.23	-1.91
HT/VHT40, M0 to M7, M0.1 to M9.1-BF	4	12.02	-11.65	-8.41	-8.33	-8.21	0.17	9.27	10.98	-1.71
HE40, M0.1 to M11.1	1	6.00	-	-1.14	-	-	0.18	5.04	17.00	-11.96
HE40, M0.1 to M11.1	2	9.01	-	-1.59	-2.21	-	0.18	10.31	13.99	-3.68
HE40, M0.1 to M11.1	3	10.77	-	-3.92	-4.30	-3.88	0.18	11.69	12.23	-0.54
HE40, M0.1 to M11.1	4	12.02	-10.31	-6.88	-7.17	-6.84	0.18	10.63	10.98	-0.35
HE40, M0.1 to M11.1-BF	2	9.01	-	-3.93	-4.12	-	0.18	8.18	13.99	-5.81
HE40, M0.1 to M11.1-BF	3	10.77	-	-4.89	-5.47	-5.35	0.18	10.49	12.23	-1.73
HE40, M0.1 to M11.1-BF	4	12.02	-11.48	-8.04	-8.34	-8.20	0.18	9.41	10.98	-1.57

5230 MHz:

Mode	Tx paths	correlated antenna gain (dBi)	Tx 1 PSD (dBm/MHz)	Tx 2 PSD (dBm/MHz)	Tx 3 PSD (dBm/MHz)	Tx 4 PSD (dBm/MHz)	DCCF (dB)	Total PSD (dBm/MHz)	FCC Limit (dBm/MHz)	Margin (dB)
non HT40, 6 to 54 Mbps	1	6.00	-	1.19	-	-	0.33	7.52	17.00	-9.48
non HT40, 6 to 54 Mbps	2	9.01	-	0.57	1.03	-	0.33	13.16	13.99	-0.83
non HT40, 6 to 54 Mbps	3	10.77	-	-3.97	-4.13	-4.89	0.33	11.56	12.23	-0.67
non HT40, 6 to 54 Mbps	4	12.02	-9.55	-7.01	-6.84	-7.57	0.33	10.76	10.98	-0.22
HT/VHT40, M0 to M7, M0.1 to M9.1	1	6.00	-	0.74	-	-	0.17	6.91	17.00	-10.09
HT/VHT40, M0 to M7, M0.1 to M9.1	2	9.01	-	0.03	1.03	-	0.17	12.75	13.99	-1.24
HT/VHT40, M0 to M7, M0.1 to M9.1	3	10.77	-	-3.44	-3.40	-4.21	0.17	12.05	12.23	-0.18
HT/VHT40, M0 to M7, M0.1 to M9.1	4	12.02	-10.00	-7.44	-6.97	-7.73	0.17	10.32	10.98	-0.66
HT/VHT40, M0 to M7, M0.1 to M9.1-BF	2	9.01	-	-0.62	-0.24	-	0.17	11.77	13.99	-2.22
HT/VHT40, M0 to M7, M0.1 to M9.1-BF	3	10.77	-	-5.32	-5.43	-5.31	0.17	10.37	12.23	-1.86
HT/VHT40, M0 to M7, M0.1 to M9.1-BF	4	12.02	-11.07	-8.28	-8.16	-8.26	0.17	9.42	10.98	-1.55
HE40, M0.1 to M11.1	1	6.00	-	0.93	-	-	0.18	7.10	17.00	-9.90
HE40, M0.1 to M11.1	2	9.01	-	0.72	1.27	-	0.18	13.20	13.99	-0.79
HE40, M0.1 to M11.1	3	10.77	-	-4.03	-3.86	-4.65	0.18	11.55	12.23	-0.68
HE40, M0.1 to M11.1	4	12.02	-9.67	-7.11	-6.88	-7.52	0.18	10.56	10.98	-0.42
HE40, M0.1 to M11.1-BF	2	9.01	-	-0.15	0.18	-	0.18	12.21	13.99	-1.78
HE40, M0.1 to M11.1-BF	3	10.77	-	-5.12	-4.98	-5.37	0.18	10.57	12.23	-1.66
HE40, M0.1 to M11.1-BF	4	12.02	-11.80	-8.51	-8.88	-8.73	0.18	8.93	10.98	-2.05

5210 MHz:

Mode	Tx paths	correlated antenna gain (dBi)	Tx 1 PSD (dBm/MHz)	Tx 2 PSD (dBm/MHz)	Tx 3 PSD (dBm/MHz)	Tx 4 PSD (dBm/MHz)	DCCF (dB)	Total PSD (dBm/MHz)	FCC Limit (dBm/MHz)	Margin (dB)
non HT80, 6 to 54 Mbps	1	6.00	-	-5.66	-	-	0.26	0.60	17.00	-16.40
non HT80, 6 to 54 Mbps	2	9.01	-	-5.28	-5.90	-	0.26	6.70	13.99	-7.29
non HT80, 6 to 54 Mbps	3	10.77	-	-6.62	-6.72	-7.46	0.26	8.88	12.23	-3.35
non HT80, 6 to 54 Mbps	4	12.02	-10.85	-7.50	-7.47	-8.13	0.26	10.01	10.98	-0.97
VHT80, M0.1 to M9.1	1	6.00	-	-5.26	-	-	0.17	0.91	17.00	-16.09
VHT80, M0.1 to M9.1	2	9.01	-	-6.29	-6.25	-	0.17	5.92	13.99	-8.07
VHT80, M0.1 to M9.1	3	10.77	-	-7.36	-7.41	-7.98	0.17	8.14	12.23	-4.09
VHT80, M0.1 to M9.1	4	12.02	-11.21	-8.25	-7.88	-8.92	0.17	9.32	10.98	-1.66
VHT80, M0.1 to M9.1-BF	2	9.01	-	-8.23	-8.32	-	0.17	3.92	13.99	-10.07
VHT80, M0.1 to M9.1-BF	3	10.77	-	-10.18	-10.59	-10.79	0.17	5.20	12.23	-7.03
VHT80, M0.1 to M9.1-BF	4	12.02	-15.34	-11.98	-11.89	-12.46	0.17	5.50	10.98	-5.48
HE80, M0.1 to M11.1	1	6.00	-	-6.04	-	-	0.18	0.14	17.00	-16.86
HE80, M0.1 to M11.1	2	9.01	-	-5.58	-6.13	-	0.18	6.35	13.99	-7.64
HE80, M0.1 to M11.1	3	10.77	-	-7.07	-7.19	-7.29	0.18	8.54	12.23	-3.69
HE80, M0.1 to M11.1	4	12.02	-10.88	-7.59	-7.62	-8.43	0.18	9.78	10.98	-1.20
HE80, M0.1 to M11.1-BF	2	9.01	-	-7.81	-8.51	-	0.18	4.05	13.99	-9.94
HE80, M0.1 to M11.1-BF	3	10.77	-	-9.87	-9.85	-10.54	0.18	5.64	12.23	-6.59
HE80, M0.1 to M11.1-BF	4	12.02	-15.61	-12.68	-12.60	-12.96	0.18	4.92	10.98	-6.06

Test results for Out of Band Emissions

Test mode: 4 TXs Beamforming mode was selected for testing. Transmitter output power was set to 17 (the highest) to represent the worst case. The directional antenna gain (4 dBi + 6 = 10 dBi) was accounted for in the spectrum analyzer offset. The following data also shows enough margin with consideration of the 6 dBi antenna gain configurations.

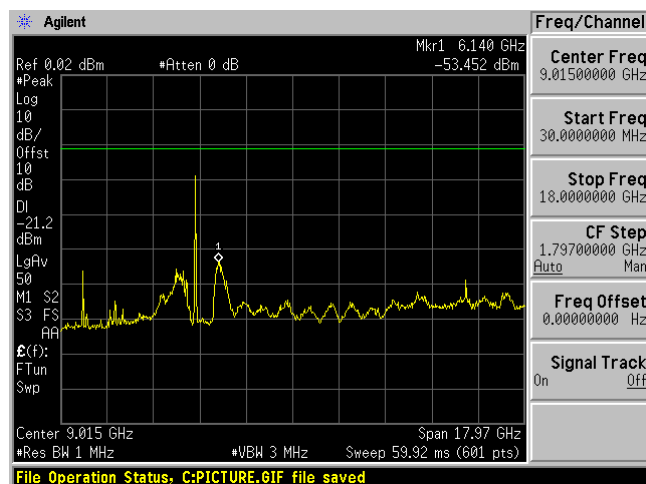
4 dBi

Peak:

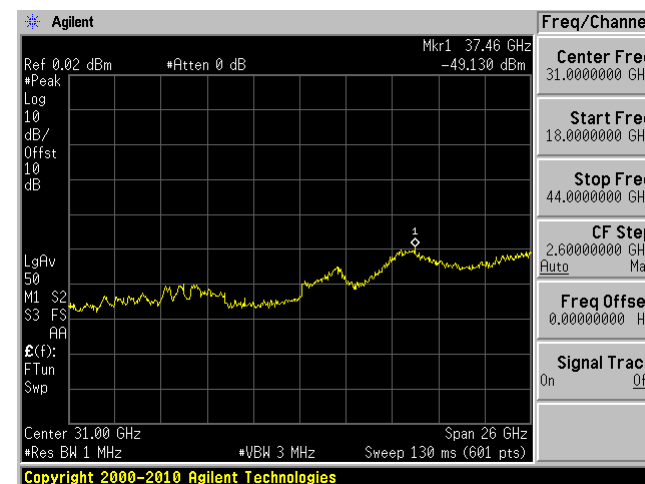
Frequency (MHz)	Mode	Tx paths	correlated antenna gain (dBi)	Tx 1 Spurious (dBm)	Tx 2 Spurious (dBm)	Tx 3 Spurious (dBm)	Tx 4 Spurious (dBm)	Total EIRP (dBm)	FCC Peak Limit (dBm)	Margin (dB)
5180	non HT20, 6 to 54 Mbps-BF	4	10.02	-50.24	-49.68	-49.69	-49.33	-43.70	-21.25	-22.45
	HT/VHT20, M0 to M7, M0.1 to M8.1-BF	4	10.02	-49.77	-49.31	-49.80	-49.87	-43.66	-21.25	-22.41
	HE20, M0.1 to M11.1-BF	4	10.02	-50.38	-49.86	-49.71	-50.05	-43.97	-21.25	-22.72
5200	non HT20, 6 to 54 Mbps-BF	4	10.02	-50.06	-49.09	-49.32	-49.73	-43.51	-21.25	-22.26
	HT/VHT20, M0 to M7, M0.1 to M8.1-BF	4	10.02	-49.70	-49.85	-49.80	-50.10	-43.84	-21.25	-22.59
	HE20, M0.1 to M11.1-BF	4	10.02	-49.84	-49.81	-49.58	-50.22	-43.83	-21.25	-22.58
5240	non HT20, 6 to 54 Mbps-BF	4	10.02	-49.34	-50.06	-46.22	-49.98	-42.56	-21.25	-21.31
	HT/VHT20, M0 to M7, M0.1 to M8.1-BF	4	10.02	-49.83	-49.85	-49.37	-49.16	-43.52	-21.25	-22.27
	HE20, M0.1 to M11.1-BF	4	10.02	-49.13	-49.50	-45.82	-49.93	-42.23	-21.25	-20.98
5190	HT/VHT40, M0 to M7, M0.1 to M8.1-BF	4	10.02	-49.49	-49.66	-49.40	-48.79	-43.30	-21.25	-22.05
	HE40, M0.1 to M11.1-BF	4	10.02	-49.70	-49.55	-49.28	-49.16	-43.40	-21.25	-22.15
5230	HT/VHT40, M0 to M7, M0.1 to M8.1-BF	4	10.02	-49.46	-49.59	-49.90	-49.77	-43.66	-21.25	-22.41
	HE40, M0.1 to M11.1-BF	4	10.02	-49.80	-50.02	-49.59	-49.80	-43.78	-21.25	-22.53
5210	VHT80, M0 to M7, M0.1 to M8.1-BF	4	10.02	-49.71	-49.84	-50.03	-49.41	-43.72	-21.25	-22.47
	HE80, M0.1 to M11.1-BF	4	10.02	-49.11	-49.66	-50.10	-50.04	-43.69	-21.25	-22.44

Please refer to the following plots for the worst case configuration (Peak)

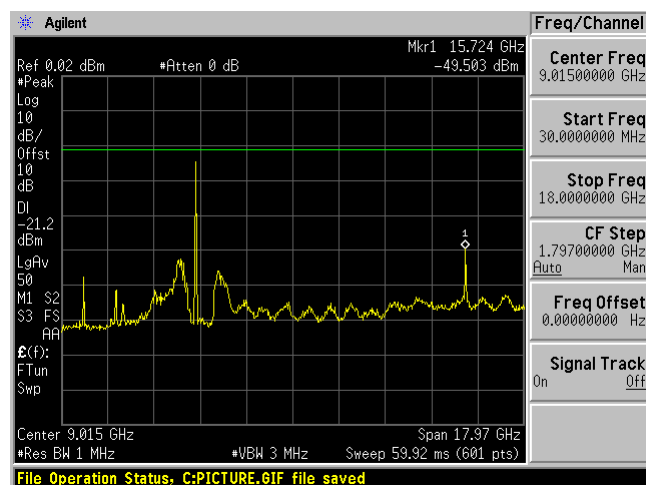
Ant-1-1



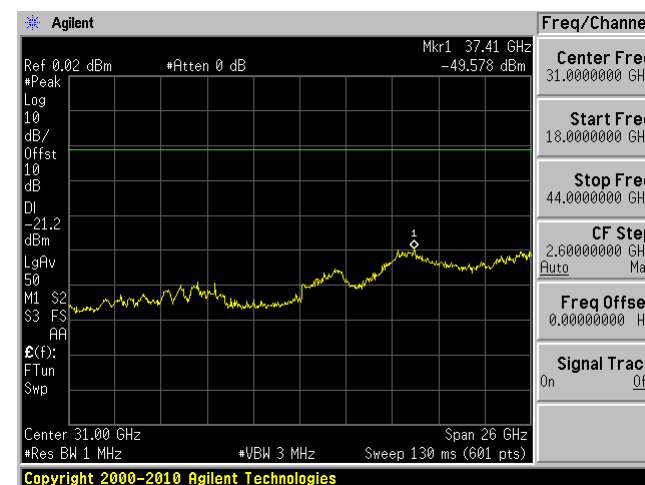
Ant-1-2



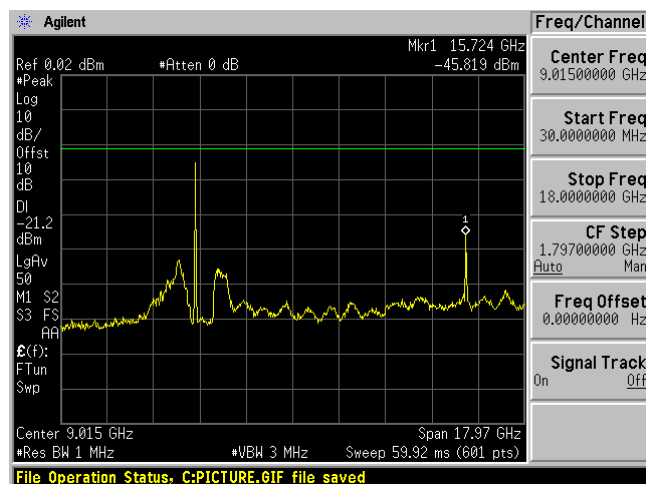
Ant-2-1



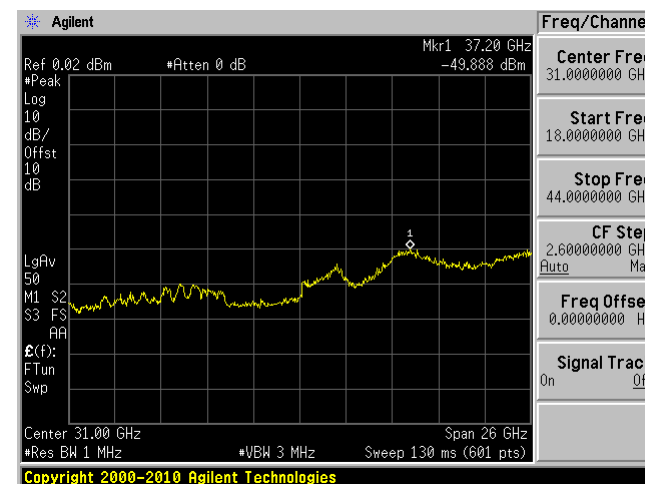
Ant-2-2



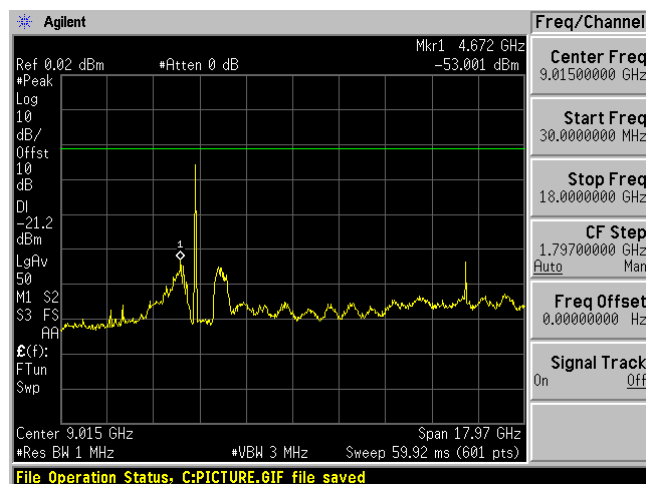
Ant-3-1



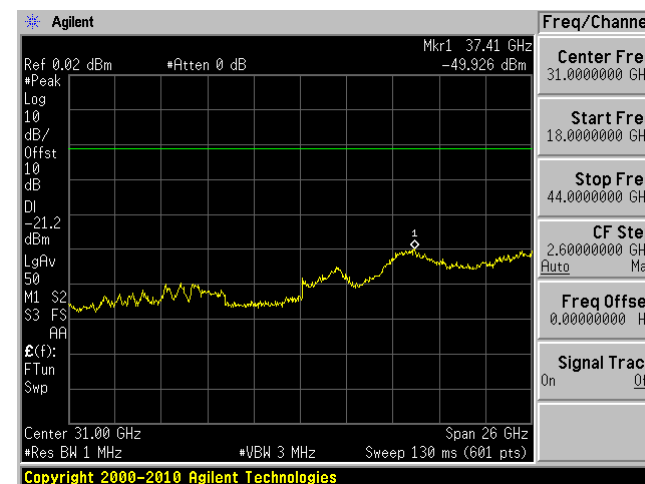
Ant-3-2



Ant-4-1



Ant-4-2

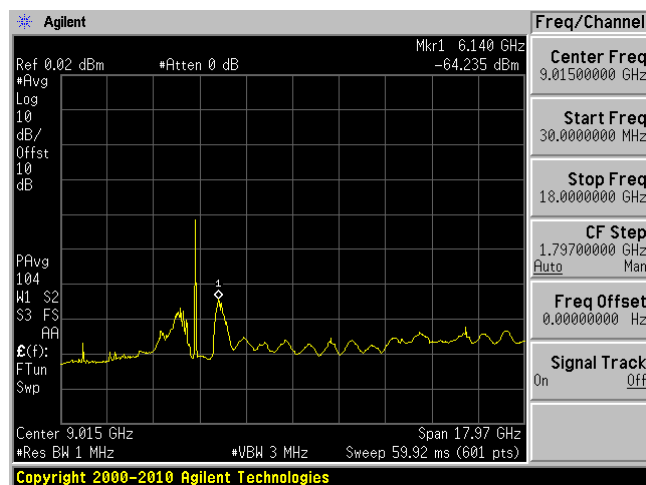


Average:

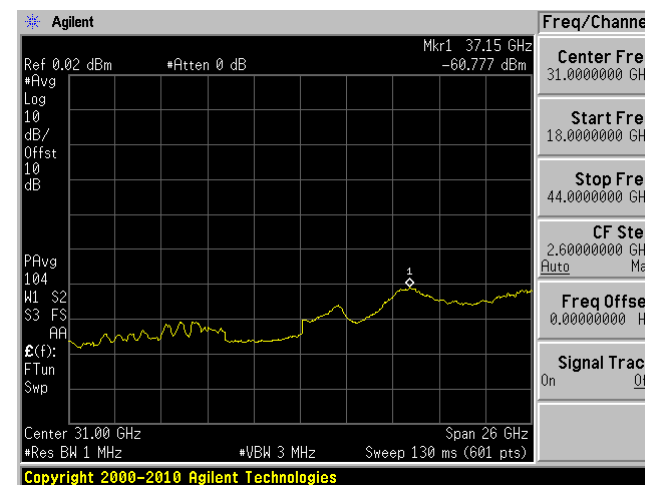
Frequency (MHz)	Mode	Tx paths	correlated antenna gain (dBi)	Tx 1 Spurious (dBm)	Tx 2 Spurious (dBm)	Tx 3 Spurious (dBm)	Tx 4 Spurious (dBm)	Total EIRP (dBm)	FCC Peak Limit (dBm)	Margin (dB)
5180	non HT20, 6 to 54 Mbps-BF	4	10.02	-60.84	-60.75	-60.73	-60.73	-54.41	-41.25	-13.16
	HT/VHT20, M0 to M7, M0.1 to M8.1-BF	4	10.02	-60.80	-60.83	-60.75	-60.78	-54.57	-41.25	-13.32
	HE20, M0.1 to M11.1-BF	4	10.02	-60.86	-60.82	-60.76	-60.70	-54.61	-41.25	-13.36
5200	non HT20, 6 to 54 Mbps-BF	4	10.02	-60.87	-60.82	-60.74	-60.75	-54.44	-41.25	-13.19
	HT/VHT20, M0 to M7, M0.1 to M8.1-BF	4	10.02	-60.83	-60.78	-60.73	-60.74	-54.55	-41.25	-13.30
	HE20, M0.1 to M11.1-BF	4	10.02	-60.83	-60.85	-60.75	-60.73	-54.61	-41.25	-13.36
5240	non HT20, 6 to 54 Mbps-BF	4	10.02	-60.78	-60.80	-60.75	-60.74	-54.42	-41.25	-13.17
	HT/VHT20, M0 to M7, M0.1 to M8.1-BF	4	10.02	-60.77	-60.81	-60.76	-60.74	-54.55	-41.25	-13.30
	HE20, M0.1 to M11.1-BF	4	10.02	-60.78	-60.80	-60.75	-60.75	-54.59	-41.25	-13.34
5190	HT/VHT40, M0 to M7, M0.1 to M8.1-BF	4	10.02	-60.80	-60.82	-60.70	-60.74	-54.41	-41.25	-13.16
	HE40, M0.1 to M11.1-BF	4	10.02	-60.81	-60.82	-60.76	-60.78	-54.61	-41.25	-13.36
5230	HT/VHT40, M0 to M7, M0.1 to M8.1-BF	4	10.02	-60.77	-60.80	-60.73	-60.74	-54.41	-41.25	-13.16
	HE40, M0.1 to M11.1-BF	4	10.02	-60.87	-60.83	-60.72	-60.73	-54.60	-41.25	-13.35
5210	VHT80, M0 to M7, M0.1 to M8.1-BF	4	10.02	-60.83	-60.83	-60.76	-60.80	-54.51	-41.25	-13.26
	HE80, M0.1 to M11.1-BF	4	10.02	-60.82	-60.86	-60.74	-60.74	-54.58	-41.25	-13.33

Please refer to the following plots for the worst case configuration (Peak)

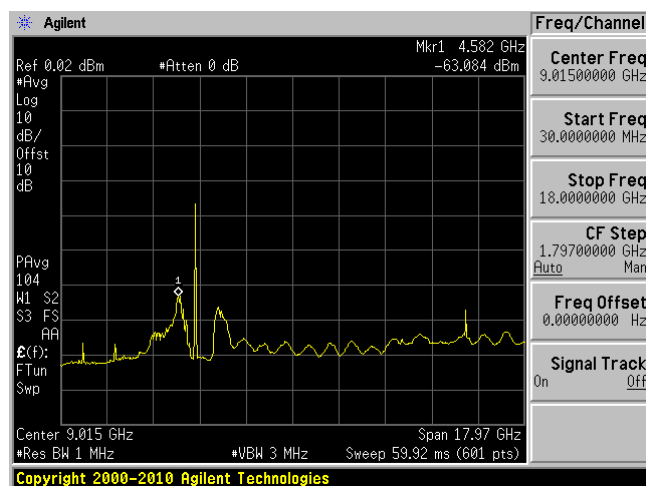
Ant-1-1



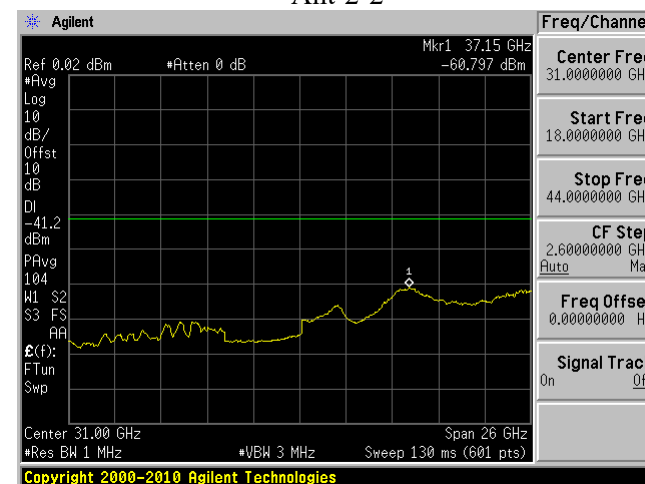
Ant-1-2



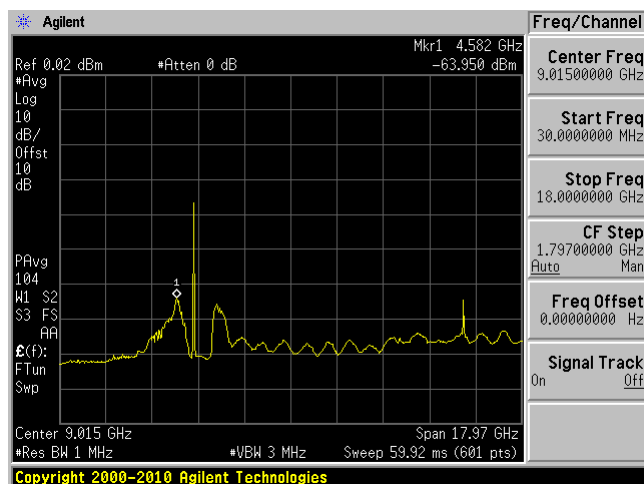
Ant-2-1



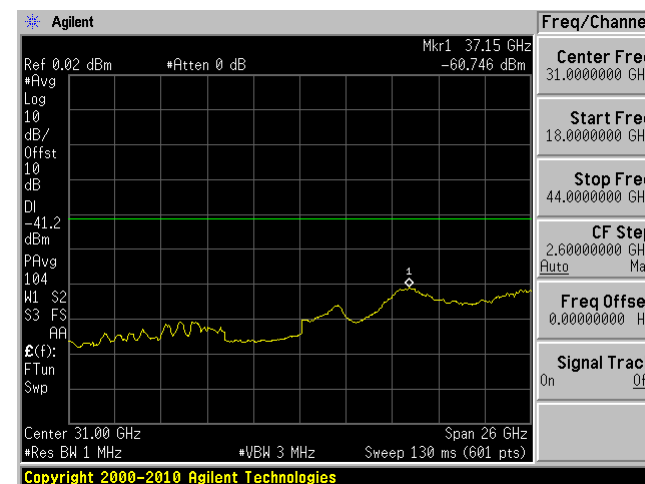
Ant-2-2



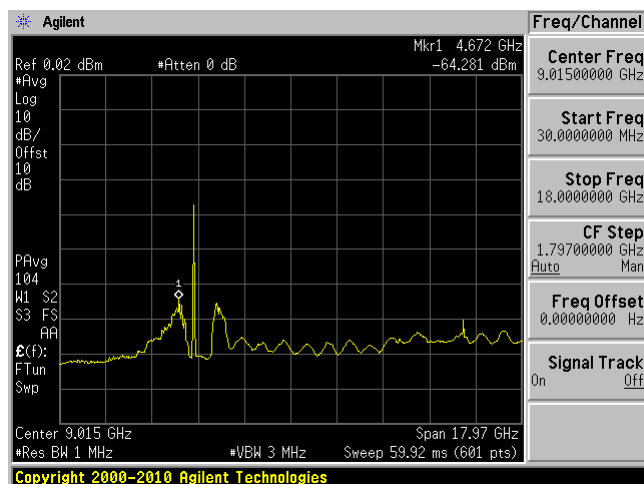
Ant-3-1



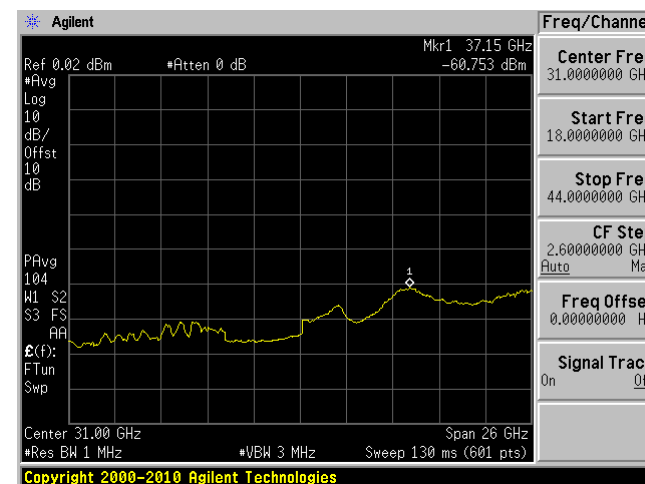
Ant-3-2



Ant-4-1



Ant-4-2



Test results for Band-edge

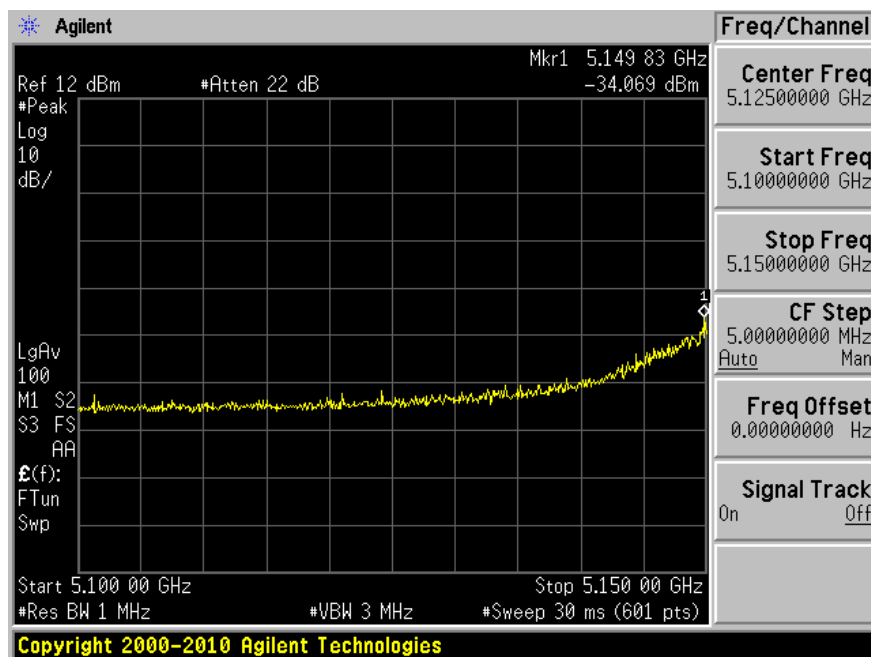
4 dBi

5180 MHz (Peak):

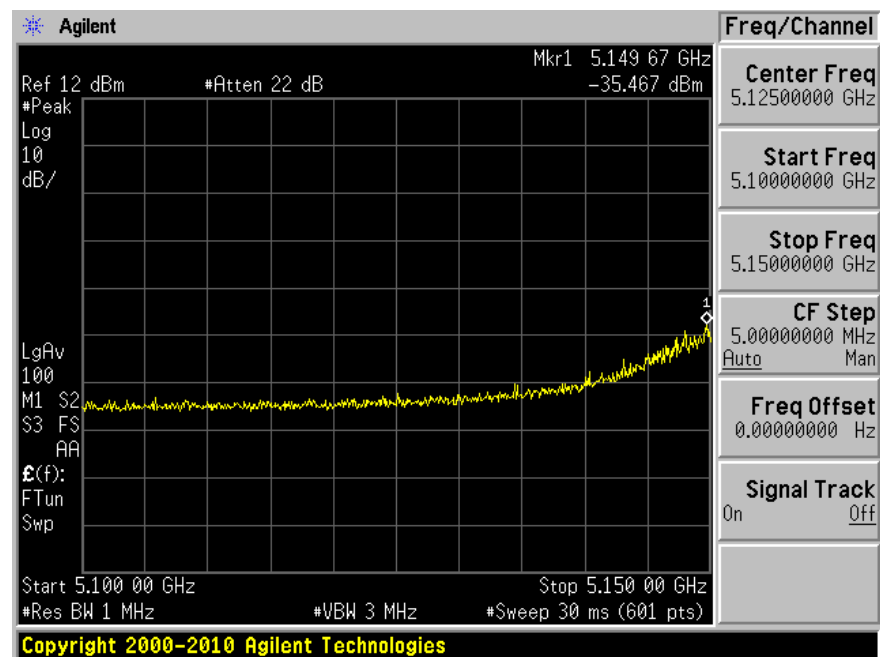
Mode	Tx paths	correlated antenna gain (dBi)	Tx 1 Band-edge (dBm)	Tx 2 Band-edge (dBm)	Tx 3 Band-edge (dBm)	Tx 4 Band-edge (dBm)	Total (dBm)	FCC Peak Limit (dBm)	Margin (dB)
non HT20, 6 to 54 Mbps	1	4.00	-	-41.43	-	-	-37.43	-21.25	-16.18
non HT20, 6 to 54 Mbps	2	4.00	-	-39.47	-38.91	-	-32.17	-21.25	-10.92
non HT20, 6 to 54 Mbps	3	4.00	-	-50.28	-51.66	-51.00	-42.17	-21.25	-20.92
non HT20, 6 to 54 Mbps	4	4.00	-54.38	-53.87	-54.45	-54.09	-44.17	-21.25	-22.92
non HT20, 6 to 54 Mbps-BF	2	7.01	-	-39.47	-38.91	-	-29.16	-21.25	-7.91
non HT20, 6 to 54 Mbps-BF	3	8.77	-	-50.28	-51.66	-51.00	-37.40	-21.25	-16.15
non HT20, 6 to 54 Mbps-BF	4	10.02	-54.38	-53.87	-54.45	-54.09	-38.15	-21.25	-16.90
HT/VHT20, M0 to M7, M0.1 to M8.1	1	4.00	-	-42.36	-	-	-38.36	-21.25	-17.11
HT/VHT20, M0 to M7, M0.1 to M8.1	2	4.00	-	-39.81	-38.09	-	-31.85	-21.25	-10.60
HT/VHT20, M0 to M7, M0.1 to M8.1	3	4.00	-	-50.40	-51.82	-49.71	-41.78	-21.25	-20.53
HT/VHT20, M0 to M7, M0.1 to M8.1	4	4.00	-55.56	-54.13	-54.77	-54.24	-44.62	-21.25	-23.37
HT/VHT20, M0 to M7, M0.1 to M8.1-BF	2	7.01	-	-39.81	-38.09	-	-28.84	-21.25	-7.59
HT/VHT20, M0 to M7, M0.1 to M8.1-BF	3	8.77	-	-50.40	-51.82	-49.71	-37.01	-21.25	-15.76
HT/VHT20, M0 to M7, M0.1 to M8.1-BF	4	10.02	-55.56	-54.13	-54.77	-54.24	-38.60	-21.25	-17.35
HE20, M0.1 to M11.1	1	4.00	-	-37.45	-	-	-33.45	-21.25	-12.20
HE20, M0.1 to M11.1	2	4.00	-	-34.07	-35.47	-	-27.70	-21.25	-6.45
HE20, M0.1 to M11.1	3	4.00	-	-51.15	-51.67	-49.71	-41.99	-21.25	-20.74
HE20, M0.1 to M11.1	4	4.00	-55.02	-54.30	-54.35	-53.81	-44.33	-21.25	-23.08
HE20, M0.1 to M11.1-BF	2	7.01	-	-34.07	-35.47	-	-24.69	-21.25	-3.44
HE20, M0.1 to M11.1-BF	3	8.77	-	-51.15	-51.67	-49.71	-37.22	-21.25	-15.97
HE20, M0.1 to M11.1-BF	4	10.02	-55.02	-54.30	-54.35	-53.81	-38.31	-21.25	-17.06

Please refer to the following plots for the worst case configuration

Ant-2



Ant-3



5180 MHz (Average):

Mode	Tx paths	correlated antenna gain (dBi)	Tx 1 Band-edge (dBm)	Tx 2 Band-edge (dBm)	Tx 3 Band-edge (dBm)	Tx 4 Band-edge (dBm)	DCCF (dB)	Total (dBm)	FCC Average Limit (dBm)	Margin (dB)
non HT20, 6 to 54 Mbps	1	4.00	-	-55.74	-	-	0.32	-51.42	-41.25	-10.17
non HT20, 6 to 54 Mbps	2	4.00	-	-54.32	-54.39	-	0.32	-47.03	-41.25	-5.78
non HT20, 6 to 54 Mbps	3	4.00	-	-62.85	-62.96	-62.56	0.32	-53.69	-41.25	-12.44
non HT20, 6 to 54 Mbps	4	4.00	-66.68	-65.66	-66.05	-65.48	0.32	-55.60	-41.25	-14.35
non HT20, 6 to 54 Mbps-BF	2	7.01	-	-54.32	-54.39	-	0.32	-44.02	-41.25	-2.77
non HT20, 6 to 54 Mbps-BF	3	8.77	-	-62.85	-62.96	-62.56	0.32	-48.92	-41.25	-7.67
non HT20, 6 to 54 Mbps-BF	4	10.02	-66.68	-65.66	-66.05	-65.48	0.32	-49.58	-41.25	-8.33
HT/VHT20, M0 to M7, M0.1 to M8.1	1	4.00	-	-56.48	-	-	0.16	-52.32	-41.25	-11.07
HT/VHT20, M0 to M7, M0.1 to M8.1	2	4.00	-	-54.81	-53.53	-	0.16	-46.95	-41.25	-5.70
HT/VHT20, M0 to M7, M0.1 to M8.1	3	4.00	-	-61.70	-62.94	-61.30	0.16	-52.99	-41.25	-11.74
HT/VHT20, M0 to M7, M0.1 to M8.1	4	4.00	-66.66	-65.48	-65.73	-65.63	0.16	-55.67	-41.25	-14.42
HT/VHT20, M0 to M7, M0.1 to M8.1-BF	2	7.01	-	-54.81	-53.53	-	0.16	-43.94	-41.25	-2.69
HT/VHT20, M0 to M7, M0.1 to M8.1-BF	3	8.77	-	-61.70	-62.94	-61.30	0.16	-48.22	-41.25	-6.97
HT/VHT20, M0 to M7, M0.1 to M8.1-BF	4	10.02	-66.66	-65.48	-65.73	-65.63	0.16	-49.64	-41.25	-8.39
HE20, M0.1 to M11.1	1	4.00	-	-54.25	-	-	0.24	-50.01	-41.25	-8.76
HE20, M0.1 to M11.1	2	4.00	-	-51.81	-52.45	-	0.24	-44.87	-41.25	-3.62
HE20, M0.1 to M11.1	3	4.00	-	-61.93	-62.71	-61.40	0.24	-52.97	-41.25	-11.72
HE20, M0.1 to M11.1	4	4.00	-66.77	-65.38	-65.70	-65.22	0.24	-55.47	-41.25	-14.22
HE20, M0.1 to M11.1-BF	2	7.01	-	-51.81	-52.45	-	0.24	-41.86	-41.25	-0.61
HE20, M0.1 to M11.1-BF	3	8.77	-	-61.93	-62.71	-61.40	0.24	-48.20	-41.25	-6.95
HE20, M0.1 to M11.1-BF	4	10.02	-66.77	-65.38	-65.70	-65.22	0.24	-49.45	-41.25	-8.20

5190 MHz (Peak):

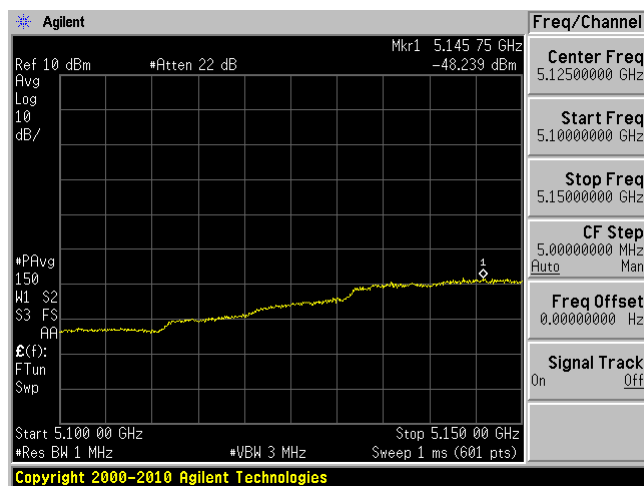
Mode	Tx paths	correlated antenna gain (dBi)	Tx 1 Band-edge (dBm)	Tx 2 Band-edge (dBm)	Tx 3 Band-edge (dBm)	Tx 4 Band-edge (dBm)	Total (dBm)	FCC Peak Limit (dBm)	Margin (dB)
non HT40, 6 to 54 Mbps	1	4.00	-	-34.22	-	-	-30.22	-21.25	-8.97
non HT40, 6 to 54 Mbps	2	4.00	-	-32.65	-34.91	-	-26.63	-21.25	-5.38
non HT40, 6 to 54 Mbps	3	4.00	-	-38.99	-39.33	-37.61	-29.81	-21.25	-8.56
non HT40, 6 to 54 Mbps	4	4.00	-39.43	-45.20	-44.83	-41.04	-31.92	-21.25	-10.67
HT/VHT40, M0 to M7, M0.1 to M9.1	1	4.00	-	-36.80	-	-	-32.80	-21.25	-11.55
HT/VHT40, M0 to M7, M0.1 to M9.1	2	4.00	-	-38.78	-36.76	-	-30.64	-21.25	-9.39
HT/VHT40, M0 to M7, M0.1 to M9.1	3	4.00	-	-41.47	-39.36	-43.88	-32.42	-21.25	-11.17
HT/VHT40, M0 to M7, M0.1 to M9.1	4	4.00	-40.44	-43.30	-40.28	-44.84	-31.79	-21.25	-10.54
HT/VHT40, M0 to M7, M0.1 to M9.1-BF	2	7.01	-	-43.24	-42.09	-	-32.61	-21.25	-11.36
HT/VHT40, M0 to M7, M0.1 to M9.1-BF	3	8.77	-	-44.63	-44.26	-45.30	-31.17	-21.25	-9.92
HT/VHT40, M0 to M7, M0.1 to M9.1-BF	4	10.02	-44.68	-46.78	-45.31	-46.54	-29.70	-21.25	-8.45
HE40, M0.1 to M11.1	1	4.00	-	-34.73	-	-	-30.73	-21.25	-9.48
HE40, M0.1 to M11.1	2	4.00	-	-37.22	-36.11	-	-29.62	-21.25	-8.37
HE40, M0.1 to M11.1	3	4.00	-	-40.38	-38.64	-41.54	-31.25	-21.25	-10.00
HE40, M0.1 to M11.1	4	4.00	-39.33	-42.66	-40.57	-43.38	-31.16	-21.25	-9.91
HE40, M0.1 to M11.1-BF	2	7.01	-	-42.04	-42.36	-	-32.18	-21.25	-10.93
HE40, M0.1 to M11.1-BF	3	8.77	-	-41.53	-43.60	-39.56	-27.71	-21.25	-6.46
HE40, M0.1 to M11.1-BF	4	10.02	-44.24	-45.48	-44.30	-44.60	-28.59	-21.25	-7.34

5190 MHz (Average):

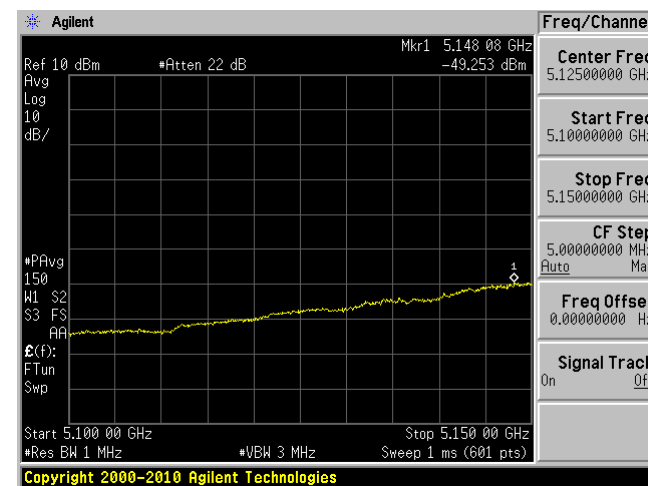
Mode	Tx paths	correlated antenna gain (dBi)	Tx 1 Band-edge (dBm)	Tx 2 Band-edge (dBm)	Tx 3 Band-edge (dBm)	Tx 4 Band-edge (dBm)	DCCF (dB)	Total (dBm)	FCC Average Limit (dBm)	Margin (dB)
non HT40, 6 to 54 Mbps	1	4.00	-	-49.83	-	-	0.33	-45.50	-41.25	-4.25
non HT40, 6 to 54 Mbps	2	4.00	-	-48.24	-49.25	-	0.33	-41.37	-41.25	-0.12
non HT40, 6 to 54 Mbps	3	4.00	-	-55.16	-54.09	-52.95	0.33	-44.87	-41.25	-3.62
non HT40, 6 to 54 Mbps	4	4.00	-55.22	-58.29	-57.56	-55.55	0.33	-46.11	-41.25	-4.86
HT/VHT40, M0 to M7, M0.1 to M9.1	1	4.00	-	-50.81	-	-	0.17	-46.64	-41.25	-5.39
HT/VHT40, M0 to M7, M0.1 to M9.1	2	4.00	-	-52.32	-50.40	-	0.17	-44.08	-41.25	-2.83
HT/VHT40, M0 to M7, M0.1 to M9.1	3	4.00	-	-54.69	-53.02	-56.71	0.17	-45.61	-41.25	-4.36
HT/VHT40, M0 to M7, M0.1 to M9.1	4	4.00	-54.01	-56.32	-54.79	-57.44	0.17	-45.25	-41.25	-4.00
HT/VHT40, M0 to M7, M0.1 to M9.1-BF	2	7.01	-	-56.00	-55.04	-	0.17	-45.30	-41.25	-4.05
HT/VHT40, M0 to M7, M0.1 to M9.1-BF	3	8.77	-	-57.38	-57.34	-58.93	0.17	-44.11	-41.25	-2.86
HT/VHT40, M0 to M7, M0.1 to M9.1-BF	4	10.02	-58.92	-59.84	-58.39	-59.52	0.17	-42.92	-41.25	-1.67
HE40, M0.1 to M11.1	1	4.00	-	-48.34	-	-	0.18	-44.16	-41.25	-2.91
HE40, M0.1 to M11.1	2	4.00	-	-51.32	-49.33	-	0.18	-43.02	-41.25	-1.77
HE40, M0.1 to M11.1	3	4.00	-	-53.53	-52.35	-55.88	0.18	-44.73	-41.25	-3.48
HE40, M0.1 to M11.1	4	4.00	-52.86	-55.41	-53.87	-57.02	0.18	-44.32	-41.25	-3.07
HE40, M0.1 to M11.1-BF	2	7.01	-	-55.06	-55.47	-	0.18	-45.06	-41.25	-3.81
HE40, M0.1 to M11.1-BF	3	8.77	-	-56.87	-56.26	-58.03	0.18	-43.27	-41.25	-2.02
HE40, M0.1 to M11.1-BF	4	10.02	-57.77	-58.99	-57.14	-58.95	0.18	-41.92	-41.25	-0.67

Please refer to the following plots for the worst case configuration

Ant-3



Ant-4



5210 MHz (Peak):

Mode	Tx paths	correlated antenna gain (dBi)	Tx 1 Band-edge (dBm)	Tx 2 Band-edge (dBm)	Tx 3 Band-edge (dBm)	Tx 4 Band-edge (dBm)	Total (dBm)	FCC Peak Limit (dBm)	Margin (dB)
non HT80, 6 to 54 Mbps	1	4.00	-	-36.74	-	-	-32.74	-21.25	-11.49
non HT80, 6 to 54 Mbps	2	4.00	-	-38.47	-41.18	-	-32.61	-21.25	-11.36
non HT80, 6 to 54 Mbps	3	4.00	-	-39.09	-39.30	-41.92	-31.15	-21.25	-9.90
non HT80, 6 to 54 Mbps	4	4.00	-40.65	-41.21	-41.90	-41.78	-31.34	-21.25	-10.09
VHT80, M0.1 to M9.1	1	4.00	-	-34.74	-	-	-30.74	-21.25	-9.49
VHT80, M0.1 to M9.1	2	4.00	-	-36.77	-37.28	-	-30.00	-21.25	-8.75
VHT80, M0.1 to M9.1	3	4.00	-	-39.14	-37.40	-38.92	-29.64	-21.25	-8.39
VHT80, M0.1 to M9.1	4	4.00	-39.10	-39.85	-39.47	-41.75	-29.91	-21.25	-8.66
VHT80, M0.1 to M9.1-BF	2	7.01	-	-38.69	-41.04	-	-29.68	-21.25	-8.43
VHT80, M0.1 to M9.1-BF	3	8.77	-	-45.04	-45.97	-45.46	-31.93	-21.25	-10.68
VHT80, M0.1 to M9.1-BF	4	10.02	-47.88	-46.96	-48.11	-44.78	-30.68	-21.25	-9.43
HE80, M0.1 to M11.1	1	4.00	-	-35.06	-	-	-31.06	-21.25	-9.81
HE80, M0.1 to M11.1	2	4.00	-	-36.12	-37.16	-	-29.60	-21.25	-8.35
HE80, M0.1 to M11.1	3	4.00	-	-39.12	-40.85	-36.04	-29.43	-21.25	-8.18
HE80, M0.1 to M11.1	4	4.00	-38.67	-39.77	-37.53	-40.56	-28.96	-21.25	-7.71
HE80, M0.1 to M11.1-BF	2	7.01	-	-37.67	-41.10	-	-29.03	-21.25	-7.78
HE80, M0.1 to M11.1-BF	3	8.77	-	-45.51	-43.73	-44.62	-31.02	-21.25	-9.77
HE80, M0.1 to M11.1-BF	4	10.02	-47.58	-47.96	-49.77	-45.51	-31.40	-21.25	-10.15

5210 MHz (Average):

Mode	Tx paths	correlated antenna gain (dBi)	Tx 1 Band-edge (dBm)	Tx 2 Band-edge (dBm)	Tx 3 Band-edge (dBm)	Tx 4 Band-edge (dBm)	DCCF (dB)	Total (dBm)	FCC Average Limit (dBm)	Margin (dB)
non HT80, 6 to 54 Mbps	1	4.00	-	-46.14	-	-	0.26	-41.88	-41.25	-0.63
non HT80, 6 to 54 Mbps	2	4.00	-	-50.82	-51.23	-	0.26	-43.75	-41.25	-2.50
non HT80, 6 to 54 Mbps	3	4.00	-	-51.06	-50.89	-51.77	0.26	-42.20	-41.25	-0.95
non HT80, 6 to 54 Mbps	4	4.00	-52.21	-52.54	-52.70	-52.36	0.26	-42.17	-41.25	-0.92
VHT80, M0.1 to M9.1	1	4.00	-	-48.07	-	-	0.17	-43.90	-41.25	-2.65
VHT80, M0.1 to M9.1	2	4.00	-	-49.91	-49.73	-	0.17	-42.64	-41.25	-1.39
VHT80, M0.1 to M9.1	3	4.00	-	-51.51	-50.63	-52.89	0.17	-42.64	-41.25	-1.39
VHT80, M0.1 to M9.1	4	4.00	-52.63	-53.22	-52.64	-53.41	0.17	-42.77	-41.25	-1.52
VHT80, M0.1 to M9.1-BF	2	7.01	-	-51.66	-53.74	-	0.17	-42.38	-41.25	-1.13
VHT80, M0.1 to M9.1-BF	3	8.77	-	-58.19	-58.62	-58.99	0.17	-44.88	-41.25	-3.63
VHT80, M0.1 to M9.1-BF	4	10.02	-62.19	-60.84	-60.87	-60.41	0.17	-44.82	-41.25	-3.57
HE80, M0.1 to M11.1	1	4.00	-	-45.92	-	-	0.18	-41.74	-41.25	-0.49
HE80, M0.1 to M11.1	2	4.00	-	-51.13	-50.99	-	0.18	-43.87	-41.25	-2.62
HE80, M0.1 to M11.1	3	4.00	-	-52.68	-52.05	-53.86	0.18	-43.85	-41.25	-2.60
HE80, M0.1 to M11.1	4	4.00	-51.54	-52.61	-51.35	-53.08	0.18	-41.89	-41.25	-0.64
HE80, M0.1 to M11.1-BF	2	7.01	-	-54.31	-54.50	-	0.18	-44.20	-41.25	-2.95
HE80, M0.1 to M11.1-BF	3	8.77	-	-46.14	-	-	0.18	-41.88	-41.25	-0.63
HE80, M0.1 to M11.1-BF	4	10.02	-	-50.82	-51.23	-	0.18	-43.75	-41.25	-2.50

6 dBi

5180 MHz (Peak):

Mode	Tx paths	correlated antenna gain (dBi)	Tx 1 Band-edge (dBm)	Tx 2 Band-edge (dBm)	Tx 3 Band-edge (dBm)	Tx 4 Band-edge (dBm)	Total (dBm)	FCC Peak Limit (dBm)	Margin (dB)
non HT20, 6 to 54 Mbps	1	6.00	-38.36	-41.43	-	-	-35.43	-21.25	-14.18
non HT20, 6 to 54 Mbps	2	6.00	-54.42	-53.09	-51.99	-	-43.49	-21.25	-22.24
non HT20, 6 to 54 Mbps	3	6.00	-55.31	-54.93	-54.77	-54.42	-43.93	-21.25	-22.68
non HT20, 6 to 54 Mbps	4	6.00	-56.25	-56.02	-56.00	-55.40	-43.88	-21.25	-22.63
non HT20, 6 to 54 Mbps-BF	2	9.01	-54.42	-53.09	-51.99	-	-40.48	-21.25	-19.23
non HT20, 6 to 54 Mbps-BF	3	10.77	-55.31	-54.93	-54.77	-54.42	-39.16	-21.25	-17.91
non HT20, 6 to 54 Mbps-BF	4	12.02	-56.25	-56.02	-56.00	-55.40	-37.86	-21.25	-16.61
HT/VHT20, M0 to M7, M0.1 to M8.1	1	6.00	-37.83	-42.36	-	-	-36.36	-21.25	-15.11
HT/VHT20, M0 to M7, M0.1 to M8.1	2	6.00	-51.98	-49.52	-50.20	-	-40.84	-21.25	-19.59
HT/VHT20, M0 to M7, M0.1 to M8.1	3	6.00	-55.07	-53.19	-54.09	-54.14	-43.01	-21.25	-21.76
HT/VHT20, M0 to M7, M0.1 to M8.1	4	6.00	-56.32	-55.72	-55.77	-55.46	-43.79	-21.25	-22.54
HT/VHT20, M0 to M7, M0.1 to M8.1-BF	2	9.01	-55.07	-40.18	-38.62	-	-27.31	-21.25	-6.06
HT/VHT20, M0 to M7, M0.1 to M8.1-BF	3	10.77	-55.34	-53.19	-54.09	-54.14	-38.24	-21.25	-16.99
HT/VHT20, M0 to M7, M0.1 to M8.1-BF	4	12.02	-56.32	-55.72	-55.77	-55.46	-37.77	-21.25	-16.52
HE20, M0.1 to M11.1	1	6.00	-33.53	-37.45	-	-	-31.45	-21.25	-10.20
HE20, M0.1 to M11.1	2	6.00	-48.46	-49.26	-50.77	-	-40.94	-21.25	-19.69
HE20, M0.1 to M11.1	3	6.00	-55.51	-52.87	-54.12	-51.74	-42.03	-21.25	-20.78
HE20, M0.1 to M11.1	4	6.00	-55.85	-56.06	-55.30	-55.30	-43.59	-21.25	-22.34
HE20, M0.1 to M11.1-BF	2	9.01	-55.07	-52.87	-54.12	-51.74	-41.43	-21.25	-20.18
HE20, M0.1 to M11.1-BF	3	10.77	-55.51	-56.06	-55.30	-55.30	-40.00	-21.25	-18.75
HE20, M0.1 to M11.1-BF	4	12.02	-55.85	-56.06	-55.30	-55.30	-37.57	-21.25	-16.32

5180 MHz (Average):

Mode	Tx paths	correlated antenna gain (dBi)	Tx 1 Band-edge (dBm)	Tx 2 Band-edge (dBm)	Tx 3 Band-edge (dBm)	Tx 4 Band-edge (dBm)	DCCF (dB)	Total (dBm)	FCC Average Limit (dBm)	Margin (dB)
non HT20, 6 to 54 Mbps	1	6.00	-53.06	-55.74	-	-	0.32	-49.42	-41.25	-8.17
non HT20, 6 to 54 Mbps	2	6.00	-65.70	-64.73	-63.31	-	0.32	-54.63	-41.25	-13.38
non HT20, 6 to 54 Mbps	3	6.00	-66.79	-65.42	-66.13	-65.49	0.32	-54.58	-41.25	-13.33
non HT20, 6 to 54 Mbps	4	6.00	-67.94	-67.45	-67.36	-67.12	0.32	-55.11	-41.25	-13.86
non HT20, 6 to 54 Mbps-BF	2	9.01	-65.70	-64.73	-63.31	-	0.32	-51.62	-41.25	-10.37
non HT20, 6 to 54 Mbps-BF	3	10.77	-67.85	-65.70	-66.00	-65.51	0.32	-49.86	-41.25	-8.61
non HT20, 6 to 54 Mbps-BF	4	12.02	-67.94	-67.45	-67.36	-67.12	0.32	-49.09	-41.25	-7.84
HT/VHT20, M0 to M7, M0.1 to M8.1	1	6.00	-53.67	-56.48	-	-	0.16	-50.32	-41.25	-9.07
HT/VHT20, M0 to M7, M0.1 to M8.1	2	6.00	-63.89	-61.20	-61.96	-	0.16	-52.39	-41.25	-11.14
HT/VHT20, M0 to M7, M0.1 to M8.1	3	6.00	-66.77	-65.59	-65.97	-65.34	0.16	-54.69	-41.25	-13.44
HT/VHT20, M0 to M7, M0.1 to M8.1	4	6.00	-67.79	-67.28	-67.37	-67.09	0.16	-55.19	-41.25	-13.94
HT/VHT20, M0 to M7, M0.1 to M8.1-BF	2	9.01	-66.77	-54.66	-53.39	-	0.16	-41.80	-41.25	-0.55
HT/VHT20, M0 to M7, M0.1 to M8.1-BF	3	10.77	-66.94	-65.59	-65.97	-65.34	0.16	-49.92	-41.25	-8.67
HT/VHT20, M0 to M7, M0.1 to M8.1-BF	4	12.02	-67.79	-67.28	-67.37	-67.09	0.16	-49.17	-41.25	-7.92
HE20, M0.1 to M11.1	1	6.00	-50.46	-54.25	-	-	0.24	-48.01	-41.25	-6.76
HE20, M0.1 to M11.1	2	6.00	-62.88	-61.35	-62.13	-	0.24	-52.47	-41.25	-11.22
HE20, M0.1 to M11.1	3	6.00	-66.74	-65.47	-65.87	-65.54	0.24	-54.62	-41.25	-13.37
HE20, M0.1 to M11.1	4	6.00	-67.76	-67.39	-67.43	-67.12	0.24	-55.16	-41.25	-13.91
HE20, M0.1 to M11.1-BF	2	9.01	-65.40	-61.35	-62.13	-	0.24	-49.46	-41.25	-8.21
HE20, M0.1 to M11.1-BF	3	10.77	-66.86	-65.47	-65.87	-65.54	0.24	-49.84	-41.25	-8.59
HE20, M0.1 to M11.1-BF	4	12.02	-67.76	-67.39	-67.43	-67.12	0.24	-49.14	-41.25	-7.89

5190 MHz (Peak):

Mode	Tx paths	correlated antenna gain (dBi)	Tx 1 Band-edge (dBm)	Tx 2 Band-edge (dBm)	Tx 3 Band-edge (dBm)	Tx 4 Band-edge (dBm)	Total (dBm)	FCC Peak Limit (dBm)	Margin (dB)
non HT40, 6 to 54 Mbps	1	6.00	-26.15	-34.31	-	-	-28.31	-21.25	-7.06
non HT40, 6 to 54 Mbps	2	6.00	-30.45	-38.32	-39.03	-	-29.65	-21.25	-8.40
non HT40, 6 to 54 Mbps	3	6.00	-36.27	-38.95	-48.09	-35.91	-27.98	-21.25	-6.73
non HT40, 6 to 54 Mbps	4	6.00	-51.56	-51.91	-52.20	-51.33	-39.71	-21.25	-18.46
HT/VHT40, M0 to M7, M0.1 to M9.1	1	6.00	-31.25	-36.80	-	-	-30.80	-21.25	-9.55
HT/VHT40, M0 to M7, M0.1 to M9.1	2	6.00	-34.31	-38.78	-36.76	-	-28.64	-21.25	-7.39
HT/VHT40, M0 to M7, M0.1 to M9.1	3	6.00	-43.01	-43.05	-41.78	-45.19	-32.35	-21.25	-11.10
HT/VHT40, M0 to M7, M0.1 to M9.1	4	6.00	-50.45	-49.54	-48.83	-48.76	-37.32	-21.25	-16.07
HT/VHT40, M0 to M7, M0.1 to M9.1-BF	2	9.01	-42.99	-43.24	-42.09	-	-30.61	-21.25	-9.36
HT/VHT40, M0 to M7, M0.1 to M9.1-BF	3	10.77	-52.34	-46.17	-45.74	-47.87	-30.96	-21.25	-9.71
HT/VHT40, M0 to M7, M0.1 to M9.1-BF	4	12.02	-51.28	-50.47	-50.81	-50.49	-32.71	-21.25	-11.46
HE40, M0.1 to M11.1	1	6.00	-34.22	-34.73	-	-	-28.73	-21.25	-7.48
HE40, M0.1 to M11.1	2	6.00	-33.71	-40.65	-38.77	-	-30.60	-21.25	-9.35
HE40, M0.1 to M11.1	3	6.00	-41.27	-40.38	-42.23	-40.75	-30.28	-21.25	-9.03
HE40, M0.1 to M11.1	4	6.00	-48.75	-48.96	-47.79	-47.64	-36.23	-21.25	-14.98
HE40, M0.1 to M11.1-BF	2	9.01	-42.83	-42.04	-42.36	-	-30.18	-21.25	-8.93
HE40, M0.1 to M11.1-BF	3	10.77	-51.03	-45.02	-44.82	-46.10	-29.74	-21.25	-8.49
HE40, M0.1 to M11.1-BF	4	12.02	-51.22	-43.98	-50.26	-50.89	-29.84	-21.25	-8.59

5190 MHz (Average):

Mode	Tx paths	correlated antenna gain (dBi)	Tx 1 Band-edge (dBm)	Tx 2 Band-edge (dBm)	Tx 3 Band-edge (dBm)	Tx 4 Band-edge (dBm)	DCCF (dB)	Total (dBm)	FCC Average Limit (dBm)	Margin (dB)
non HT40, 6 to 54 Mbps	1	6.00	-44.50	-49.78	-	-	0.33	-43.45	-41.25	-2.20
non HT40, 6 to 54 Mbps	2	6.00	-	-54.66	-54.00	-	0.33	-44.97	-41.25	-3.72
non HT40, 6 to 54 Mbps	3	6.00	-54.21	-58.07	-59.15	-54.59	0.33	-45.71	-41.25	-4.46
non HT40, 6 to 54 Mbps	4	6.00	-63.66	-63.42	-63.60	-63.33	0.33	-51.15	-41.25	-9.90
HT/VHT40, M0 to M7, M0.1 to M9.1	1	6.00	-48.04	-50.81	-	-	0.17	-44.64	-41.25	-3.39
HT/VHT40, M0 to M7, M0.1 to M9.1	2	6.00	-47.94	-52.32	-50.40	-	0.17	-42.08	-41.25	-0.83
HT/VHT40, M0 to M7, M0.1 to M9.1	3	6.00	-56.63	-56.06	-55.15	-57.58	0.17	-45.21	-41.25	-3.96
HT/VHT40, M0 to M7, M0.1 to M9.1	4	6.00	-62.92	-62.58	-61.72	-61.55	0.17	-49.96	-41.25	-8.71
HT/VHT40, M0 to M7, M0.1 to M9.1-BF	2	9.01	-57.12	-56.00	-55.04	-	0.17	-43.30	-41.25	-2.05
HT/VHT40, M0 to M7, M0.1 to M9.1-BF	3	10.77	-64.59	-59.05	-58.74	-60.30	0.17	-43.60	-41.25	-2.35
HT/VHT40, M0 to M7, M0.1 to M9.1-BF	4	12.02	-64.21	-62.73	-63.06	-63.35	0.17	-45.09	-41.25	-3.84
HE40, M0.1 to M11.1	1	6.00	-46.47	-48.34	-	-	0.18	-42.16	-41.25	-0.91
HE40, M0.1 to M11.1	2	6.00	-46.86	-53.58	-52.11	-	0.18	-43.59	-41.25	-2.34
HE40, M0.1 to M11.1	3	6.00	-55.15	-56.51	-56.22	-56.55	0.18	-45.48	-41.25	-4.23
HE40, M0.1 to M11.1	4	6.00	-61.86	-61.38	-61.20	-60.38	0.18	-48.97	-41.25	-7.72
HE40, M0.1 to M11.1-BF	2	9.01	-55.78	-55.06	-55.47	-	0.18	-43.06	-41.25	-1.81
HE40, M0.1 to M11.1-BF	3	10.77	-63.57	-58.39	-57.57	-59.41	0.18	-42.67	-41.25	-1.42
HE40, M0.1 to M11.1-BF	4	12.02	-64.01	-61.73	-62.85	-62.72	0.18	-44.54	-41.25	-3.29

5210 MHz (Peak):

Mode	Tx paths	correlated antenna gain (dBi)	Tx 1 Band-edge (dBm)	Tx 2 Band-edge (dBm)	Tx 3 Band-edge (dBm)	Tx 4 Band-edge (dBm)	Total (dBm)	FCC Peak Limit (dBm)	Margin (dB)
non HT80, 6 to 54 Mbps	1	6.00	-26.45	-40.57	-	-	-34.57	-21.25	-13.32
non HT80, 6 to 54 Mbps	2	6.00	-34.02	-38.47	-41.18	-	-30.61	-21.25	-9.36
non HT80, 6 to 54 Mbps	3	6.00	-37.43	-41.71	-42.58	-37.81	-29.40	-21.25	-8.15
non HT80, 6 to 54 Mbps	4	6.00	-41.63	-43.10	-40.10	-40.56	-29.18	-21.25	-7.93
VHT80, M0.1 to M9.1	1	6.00	-26.98	-34.74	-	-	-28.74	-21.25	-7.49
VHT80, M0.1 to M9.1	2	6.00	-34.18	-38.60	-38.17	-	-29.37	-21.25	-8.12
VHT80, M0.1 to M9.1	3	6.00	-37.07	-40.18	-40.64	-38.03	-28.69	-21.25	-7.44
VHT80, M0.1 to M9.1	4	6.00	-40.88	-42.46	-39.02	-41.23	-28.70	-21.25	-7.45
VHT80, M0.1 to M9.1-BF	2	9.01	-37.63	-41.95	-39.83	-	-28.74	-21.25	-7.49
VHT80, M0.1 to M9.1-BF	3	10.77	-47.76	-45.04	-45.97	-45.46	-29.93	-21.25	-8.68
VHT80, M0.1 to M9.1-BF	4	12.02	-47.88	-46.96	-48.11	-44.78	-28.68	-21.25	-7.43
HE80, M0.1 to M11.1	1	6.00	-25.80	-38.62	-	-	-32.62	-21.25	-11.37
HE80, M0.1 to M11.1	2	6.00	-33.88	-36.12	-37.16	-	-27.60	-21.25	-6.35
HE80, M0.1 to M11.1	3	6.00	-36.18	-39.12	-40.85	-36.04	-27.43	-21.25	-6.18
HE80, M0.1 to M11.1	4	6.00	-39.70	-40.84	-37.57	-37.32	-26.60	-21.25	-5.35
HE80, M0.1 to M11.1-BF	2	9.01	-36.28	-37.67	-41.10	-	-27.03	-21.25	-5.78
HE80, M0.1 to M11.1-BF	3	10.77	-45.84	-45.51	-43.73	-44.62	-29.02	-21.25	-7.77
HE80, M0.1 to M11.1-BF	4	12.02	-47.58	-47.96	-49.77	-45.51	-29.40	-21.25	-8.15

5210 MHz (Average):

Mode	Tx paths	correlated antenna gain (dBi)	Tx 1 Band-edge (dBm)	Tx 2 Band-edge (dBm)	Tx 3 Band-edge (dBm)	Tx 4 Band-edge (dBm)	DCCF (dB)	Total (dBm)	FCC Average Limit (dBm)	Margin (dB)
non HT80, 6 to 54 Mbps	1	6.00	-46.79	-51.54	-	-	0.26	-45.28	-41.25	-4.03
non HT80, 6 to 54 Mbps	2	6.00	-49.56	-50.82	-51.23	-	0.26	-41.75	-41.25	-0.50
non HT80, 6 to 54 Mbps	3	6.00	-49.84	-52.94	-54.01	-51.63	0.26	-41.72	-41.25	-0.47
non HT80, 6 to 54 Mbps	4	6.00	-54.40	-54.49	-53.93	-53.79	0.26	-41.87	-41.25	-0.62
VHT80, M0.1 to M9.1	1	6.00	-45.12	-48.07	-	-	0.17	-41.90	-41.25	-0.65
VHT80, M0.1 to M9.1	2	6.00	-48.06	-51.57	-51.47	-	0.17	-42.34	-41.25	-1.09
VHT80, M0.1 to M9.1	3	6.00	-50.36	-53.52	-53.79	-53.53	0.17	-42.67	-41.25	-1.42
VHT80, M0.1 to M9.1	4	6.00	-54.76	-54.96	-53.98	-55.18	0.17	-42.51	-41.25	-1.26
VHT80, M0.1 to M9.1-BF	2	9.01	-51.91	-54.68	-54.28	-	0.17	-42.28	-41.25	-1.03
VHT80, M0.1 to M9.1-BF	3	10.77	-60.99	-58.19	-58.62	-58.99	0.17	-42.88	-41.25	-1.63
VHT80, M0.1 to M9.1-BF	4	12.02	-62.19	-60.84	-60.87	-60.41	0.17	-42.82	-41.25	-1.57
HE80, M0.1 to M11.1	1	6.00	-46.88	-50.90	-	-	0.18	-44.72	-41.25	-3.47
HE80, M0.1 to M11.1	2	6.00	-49.25	-51.13	-50.99	-	0.18	-41.87	-41.25	-0.62
HE80, M0.1 to M11.1	3	6.00	-51.55	-52.68	-52.05	-53.86	0.18	-41.85	-41.25	-0.60
HE80, M0.1 to M11.1	4	6.00	-54.21	-54.00	-52.84	-54.19	0.18	-41.57	-41.25	-0.32
HE80, M0.1 to M11.1-BF	2	9.01	-53.66	-54.31	-54.50	-	0.18	-42.20	-41.25	-0.95
HE80, M0.1 to M11.1-BF	3	10.77	-60.21	-57.71	-58.10	-58.24	0.18	-42.29	-41.25	-1.04
HE80, M0.1 to M11.1-BF	4	12.02	-63.39	-62.04	-61.97	-61.91	0.18	-44.07	-41.25	-2.82

12 Annex B (Normative) – A2LA Electrical Testing Certificate



--- END OF REPORT ---