

Test Report

FCC ID: LDK102099 AIR-AP3802E-B-K9, AIR-AP3802E-UXK9 AIR-AP2802E-B-K9, AIR-AP2802E-UXK9

IC: 2461B-102099 AIR-AP3802E-A-K9, AIR-AP3802E-UXK9 AIR-AP2802E-A-K9, AIR-AP2802E-UXK9

Cisco Aironet 802.11ac Dual Band Access Points

5725-5850 MHz

Against the following Specifications:

CFR47 Part 15.407 RSS-247

Cisco Systems

170 West Tasman Drive San Jose. CA 95134

Author: Jose Aguirre
Tested By
Approved By: Jim Nicholson
Title: Technical Leader, Engineering
Revision: 3

This report replaces any previously entered test report under EDCS –**1552001**. This test report has been electronically authorized and archived using the CISCO Engineering Document Control system.

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Section 1: Overview

The samples were assessed against the tests detailed in section 3 under the requirements of the following specifications:

Specifications:

CFR47 Part 15.407

RSS-247 Issue 1: May 2015 RSS-Gen Issue 4: Nov 2014

Measurements were made in accordance with

- ANSI C63.10:2013
- KDB 789033 D02 General UNII Test Procedures New Rules v01r01
- KDB 662911 D01 Multiple Transmitter Output v02r01



Section 2: Assessment Information

2.1 General

This report contains an assessment of an apparatus against Electromagnetic Compatibility Standards based upon tests carried out on the samples submitted. The testing was performed by and for the use of Cisco systems Inc:

With regard to this assessment, the following points should be noted:

- a) The results contained in this report relate only to the items tested and were obtained in the period between the date of the initial assessment and the date of issue of the report. Manufactured products will not necessarily give identical results due to production and measurement tolerances.
- b) The apparatus was set up and exercised using the configuration and modes of operation defined in this report only.
- c) Where relevant, the apparatus was only assessed using the susceptibility criteria defined in this report and the Test Assessment Plan (TAP).
- d) All testing was performed under the following environmental conditions:

Temperature 15°C to 35°C (54°F to 95°F)

Atmospheric Pressure 860mbar to 1060mbar (25.4" to 31.3")

Humidity 10% to 75*%

e) All AC testing was performed at one or more of the following supply voltages:

110V 60 Hz (+/-20%)

Units of Measurement

The units of measurements defined in the appendices are reported in specific terms, which are test dependent. Where radiated measurements are concerned these are defined at a particular distance. Basic voltage measurements are defined in units of [dBuV]

As an example, the basic calculation for all measurements is as follows:

Emission level [dBuV] = Indicated voltage level [dBuV] + Cable Loss [dB] + Other correction factors [dB] The combinations of correction factors are dependent upon the exact test configurations [see test equipment lists for further details] and may include:-

Antenna Factors, Pre Amplifier Gain, LISN Loss, Pulse Limiter Loss and Filter Insertion Loss Note: to convert the results from dBuV/m to uV/m use the following formula:-

Level in uV/m = Common Antilogarithm [(X dBuV/m)/20] = Y uV/m



Measurement Uncertainty Values

voltage and power measurements	± 2 dB
conducted EIRP measurements	± 1.4 dB
radiated measurements	± 3.2 dB
frequency measurements	± 2.4 10-7
temperature measurements	± 0.54°
humidity measurements	± 2.3%
DC and low frequency measurements	± 2.5%

Where relevant measurement uncertainty levels have been estimated for tests performed on the apparatus. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

Radiated emissions (expanded uncertainty, confidence interval 95%)

30 MHz - 300 MHz	+/- 3.8 dB
300 MHz - 1000 MHz	+/- 4.3 dB
1 GHz - 10 GHz	+/- 4.0 dB
10 GHz - 18GHz	+/- 8.2 dB
18GHz - 26.5GHz	+/- 4.1 dB
26.5GHz - 40GHz	+/- 3.9 dB

Conducted emissions (expanded uncertainty, confidence interval 95%)

A product is considered to comply with a requirement if the nominal measured value is below the limit line. The product is considered to not be in compliance in case the nominal measured value is above the limit line.

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2.2 Date of testing

01-Jan-16 - 22-Feb-16

2.3 Report Issue Date

06-May-2012

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2.4 Testing facilities

This assessment was performed by:

Testing Laboratory

Cisco Systems, Inc., 125 West Tasman Drive San Jose, CA 95134, USA

Registration Numbers for Industry Canada

Cisco System Site	Address	Site Identifier
Building P, 10m Chamber	125 West Tasman Dr	Company #: 2461N-2
	San Jose, CA 95134	
Building P, 5m Chamber	125 West Tasman Dr	Company #: 2461N-1
	San Jose, CA 95134	
Building I, 5m Chamber	285 W. Tasman Drive	Company #: 2461M-1
	San Jose, California 95134	

Test Engineers

Jose Aguirre

2.5 Equipment Assessed (EUT)

AIR-AP3802E-B-K9



2.6 EUT Description

The Cisco Aironet 802.11ac Radio supports the following modes of operation. The modes are further defined in the radio Theory of Operation. The modes included in this report represent the worst case data for all modes.

```
802.11n/ac - Non HT20, One Antenna, 6 to 54 Mbps
802.11n/ac - Non HT20, Two Antennas, 6 to 54 Mbps
802.11n/ac - Non HT20, Three Antennas, 6 to 54 Mbps
802.11n/ac - Non HT20, Four Antennas, 6 to 54 Mbps
802.11n/ac - Non HT20 Beam Forming, Two Antennas, 6 to 54 Mbps
802.11n/ac - Non HT20 Beam Forming, Three Antennas, 6 to 54 Mbps
802.11n/ac - Non HT20 Beam Forming, Four Antennas, 6 to 54 Mbps
802.11n/ac - HT/VHT20, One Antenna, M0 to M7
802.11n/ac - HT/VHT20, Two Antennas, M0 to M7
802.11n/ac - HT/VHT20, Two Antennas, M8 to M15
802.11n/ac - HT/VHT20, Three Antennas, M0 to M7
802.11n/ac - HT/VHT20, Three Antennas, M8 to M15
802.11n/ac - HT/VHT20, Three Antennas, M16 to M23
802.11n/ac - HT/VHT20, Four Antennas, M0 to M7
802.11n/ac - HT/VHT20, Four Antennas, M8 to M15
802.11n/ac - HT/VHT20, Four Antennas, M16 to M23
802.11n/ac - HT/VHT20 Beam Forming, Two Antennas, M0 to M7
802.11n/ac - HT/VHT20 Beam Forming, Two Antennas, M8 to M15
802.11n/ac - HT/VHT20 Beam Forming, Three Antennas, M0 to M7
802.11n/ac - HT/VHT20 Beam Forming, Three Antennas, M8 to M15
802.11n/ac - HT/VHT20 Beam Forming, Three Antennas, M16 to M23
802.11n/ac - HT/VHT20 Beam Forming, Four Antennas, M0 to M7
802.11n/ac - HT/VHT20 Beam Forming, Four Antennas, M8 to M15
802.11n/ac - HT/VHT20 Beam Forming, Four Antennas, M16 to M23
802.11n/ac - HT/VHT20 STBC, Two Antennas, M0 to M7
802.11n/ac - HT/VHT20 STBC, Three Antennas, M0 to M7
802.11n/ac - HT/VHT20 STBC, Four Antennas, M0 to M7
802.11n/ac - Non HT40 Duplicate, One Antenna, 6 to 54 Mbps
802.11n/ac - Non HT40 Duplicate, Two Antennas, 6 to 54 Mbps
802.11n/ac - Non HT40 Duplicate, Three Antennas, 6 to 54 Mbps
802.11n/ac - Non HT40 Duplicate, Four Antennas, 6 to 54 Mbps
802.11n/ac - HT/VHT40, One Antenna, M0 to M7
802.11n/ac - HT/VHT40, Two Antennas, M0 to M7
802.11n/ac - HT/VHT40, Two Antennas, M8 to M15
802.11n/ac - HT/VHT40, Three Antennas, M0 to M7
802.11n/ac - HT/VHT40, Three Antennas, M8 to M15
802.11n/ac - HT/VHT40, Three Antennas, M16 to M23
802.11n/ac - HT/VHT40, Four Antennas, M0 to M7
802.11n/ac - HT/VHT40, Four Antennas, M8 to M15
802.11n/ac - HT/VHT40, Four Antennas, M16 to M23
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802.11 n/ac - HT/VHT40 Beam Forming, Two Antennas, M0 to M7 802.11 n/ac - HT/VHT40 Beam Forming, Two Antennas, M8 to M15 802.11 n/ac - HT/VHT40 Beam Forming, Three Antennas, M0 to M7
802.11n/ac - HT/VHT40 Beam Forming, Three Antennas, M8 to M15
802.11n/ac - HT/VHT40 Beam Forming, Three Antennas, M16 to M23
802.11n/ac - HT/VHT40 Beam Forming, Four Antennas, M0 to M7
802.11n/ac - HT/VHT40 Beam Forming, Four Antennas, M8 to M15
802.11n/ac - HT/VHT40 Beam Forming, Four Antennas, M16 to M23
802.11n/ac - HT/VHT40 STBC, Two Antennas, M0 to M7
802.11n/ac - HT/VHT40 STBC, Three Antennas, M0 to M7
802.11n/ac - HT/VHT40 STBC, Four Antennas, M0 to M7
802.11n/ac - Non HT80 Duplicate, One Antenna, 6 to 54 Mbps
802.11n/ac - Non HT80 Duplicate, Two Antennas, 6 to 54 Mbps
802.11n/ac - Non HT80 Duplicate, Three Antennas, 6 to 54 Mbps
802.11n/ac - Non HT80 Duplicate, Four Antennas, 6 to 54 Mbps
802.11ac - VHT80, One Antenna, M0.1 to M9.1
802.11ac - VHT80, Two Antennas, M0.1 to M9.1
802.11ac - VHT80, Two Antennas, M0.2 to M9.2
802.11ac - VHT80, Three Antennas, M0.1 to M9.1
802.11ac - VHT80, Three Antennas, M0.2 to M9.2
802.11ac - VHT80, Three Antennas, M0.3 to M9.3
802.11ac - VHT80, Four Antennas, M0.1 to M9.1
802.11ac - VHT80. Four Antennas. M0.2 to M9.2
802.11ac - VHT80, Four Antennas, M0.3 to M9.3
802.11ac - VHT80 Beam Forming, Two Antennas, M0.1 to M9.1
802.11ac - VHT80 Beam Forming, Two Antennas, M0.2 to M9.2
802.11ac - VHT80 Beam Forming, Three Antennas, M0.1 to M9.1
802.11ac - VHT80 Beam Forming, Three Antennas, M0.2 to M9.2
802.11ac - VHT80 Beam Forming, Three Antennas, M0.3 to M9.3
802.11ac - VHT80 Beam Forming, Four Antennas, M0.1 to M9.1
802.11ac - VHT80 Beam Forming, Four Antennas, M0.2 to M9.2
802.11ac - VHT80 Beam Forming, Four Antennas, M0.3 to M9.3
802.11ac - VHT80 STBC, Two Antennas, M0.1 to M9.1
802.11ac - VHT80 STBC, Three Antennas, M0.1 to M9.1
802.11ac - VHT80 STBC, Four Antennas, M0.1 to M9.1
```



The following antennas are supported by this product series.

The data included in this report represent the worst case data for all antennas.

		_	Antenna	Model
Frequency Part Number		Antenna Type	Gain (dBi)	
	AIR-ANT5140V-R	MIMO 3-Element Omni	4	3800E
		MIMO Wall-Mount Omni		3800E
5 GHz	AIR-ANT5140NV-R	Antenna	4	
	AIR-ANT5145V-R	Diversity Omni-directional	4.5	3800E
	AIR-ANT5160NP-R	MIMO 3-Element Patch	6	3800E
	AIR-ANT2451V-R	Omni	2/3	3800E
	AIR-ANT2451NV-R	Omni	3 / 4	3800E
		Dual-resonant black		2800E/3800E
	AIR-ANT2524DB-R	dipole	2 / 4	
		Dual-resonant white		2800E/3800E
	AIR-ANT2524DW-R	dipole	2/4	
	AIR-ANT2524DG-R	Dual-resonant gray dipole	2 / 4	2800E/3800E
		Dual-resonant ceiling		2800E/3800E
2.4 / 5	AIR-ANT2524V4C-R	mount omni (4-pack)	2 / 4	
2. 7 / 3		Dual-resonante "stubby"		2800E/3800E
GHz	AIR-ANT2535SDW-R	monopole	3 / 5	
G112		Dual-resonant omni		2800E/3800E
	AIR-ANT2544V4M-R	(4-pack)	4 / 4	
		Dual-resonant		2800E/3800E
	AID ANTOCCODAM D	"directional" antenna	0.70	
	AIR-ANT2566P4W-R	(4-pack)	6/6	00005/00005
	AIR-ANT25-LOC-02	Directional HL / Directional WiFi	4 / 4	2800E/3800E
				2800E/3800E
	AIR-ANT25-LOC-03	Linear HL / Omni WiFi	1/3	
	AIR-ANT25-LOC-04	Omni HL / Omni WiFi	1 / 3	2800E/3800E



Section 3: Result Summary

3.1 Results Summary Table

Conducted emissions

Basic Standard	Technical Requirements / Details	Result
FCC 15.407 RSS-247	6dB Bandwidth: Systems using digital modulation techniques may operate in the 2400-2483.5MHz band. The minimum 6dB bandwidth shall be at least 500 kHz.	
PSS-247 99% & 26 dB Bandwidth: The 99% occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers are each equal to 0.5% of the total mean power of the given emission. There is no limit for 99% OBW. The 26 dB emission is the width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 26 dB relative to the maximum level measured in the fundamental emission.		Pass
FCC 15.407 RSS-247		
FCC 15.407 RSS-247	Power Spectral Density: 15.407 The maximum power spectral density shall not exceed 30 dBm in any 500-kHz band.	Pass
FCC 15.407 RSS-247	Conducted Spurious Emissions / Band-Edge: For transmitters operating in the 5.725-5.85 GHz band: All emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an e.i.r.p. of -17 dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an e.i.r.p. of -27 dBm/MHz.	Pass
FCC 15.407 FCC 15.209 FCC 152.05 RSS-247 RSS-Gen	Restricted band: Unwanted emissions falling within the restricted bands, as defined in FCC 15.205 (a) must also comply with the radiated emission limits specified in FCC 15.209 (a).	Pass



Radiated Emissions (General requirements)

Basic Standard	Technical Requirements / Details	Result
FCC 15.407 FCC 15.209 FCC 15.205 RSS-Gen	TX Spurious Emissions: Except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the filed strength limits table in this section.	Pass
FCC 15.207 RSS-Gen	AC conducted Emissions: Except when the requirements applicable to a given device state otherwise, for any radio apparatus equipped to operate from the public utility AC power supply, either directly or indirectly (such as with a battery charger), the radio frequency voltage of emissions conducted back onto the AC power lines in the frequency range of 0.15 MHz to 30 MHz shall not exceed the limits shown in the table in these sections. The more stringent limit applies at the frequency range boundaries.	Pass

^{*} MPE calculation is recorded in a separate report

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Section 4: Sample Details

Note: Each sample was evaluated to ensure that its condition was suitable to be used as a test sample prior to the commencement of testing.

4.1 Sample Details

Sample No.	Equipment Details	Manufacturer	Hardware Rev.	Firmware Rev.	Software Rev.	Serial Number
S01	AIR-AP3802E-B-K9	Cisco Systems	01	Linux ver 3.14.33	U-boot	FOC1945132D
S02*	PWR-CUBE-B 341-100460-001	Delta	A0	NA	NA	Engineering sample

^(*) S02 are support equipment Power supplies for EUT S01

4.2 System Details

System #	Description	Samples
1	AIR-AP3802E-B-K9	S01
2	PWR-CUBE-B	S02

4.3 Mode of Operation Details

Mode#	Description	Comments	
1	Continuous Transmitting	Continuous Transmitting ≥98% duty cycle	

All measurements were made in accordance with

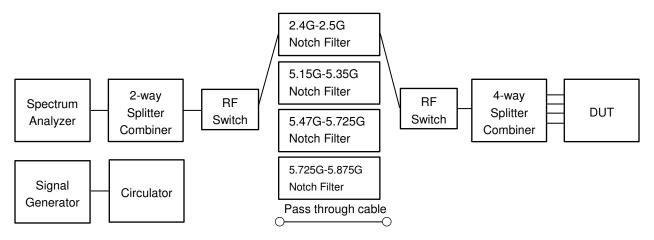
- ANSI C63.10:2013
- KDB 789033 D02 General UNII Test Procedures New Rules v01r01
- KDB 662911 D01 Multiple Transmitter Output v02r01

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Appendix A: Emission Test Results

Conducted Test Setup Diagram



Target Maximum Channel Power

The following table details the maximum supported Total Channel Power for all operating modes.

	Maximum Channel Power (dBm)		
	Frequen	cy (MHz)	
Operating Mode	5745	5785	5825
Non HT20, 6 to 54 Mbps	15	21	16
Non HT20 Beam Forming, 6 to 54 Mbps	11	21	12
HT/VHT20, M0 to M23, M0 to M9 1-0ss	15	21	16
HT/VHT20 Beam Forming, M0 to M23, M0 to M9 1-0ss	15	21	16
HT/VHT20 STBC, M0 to M7	15	21	16
	5755	5795	
Non HT40, 6 to 54 Mbps	7	20	
HT/VHT40, M0 to M23, M0 to M9 1-0ss	11	21	
HT/VHT40 Beam Forming, M0 to M23, M0 to M9 1-0ss	11	21	
HT/VHT40 STBC, M0 to M7	11	21	
	5775		
Non HT80, 6 to 54 Mbps	14		
VHT80, M0 to M9, M0 to M9 1-0ss	13		
VHT80 Beam Forming, M0 to M9, M0 to M9 1-0ss	13		
VHT80 STBC, M0.1 to M9.1	13		

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A.1 6dB Bandwidth

15.407 Within the 5.725-5.85 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

Test Procedure

Ref. KDB 789033 D02 General UNII Test Procedures New Rules v01r01 ANSI C63.10: 2013

6 BW

Test Procedure

- 1. Set the radio in the continuous transmitting mode.
- 2. Allow the trace to stabilize.
- 3. Setting the x-dB bandwidth mode to -6dB within the measurement set up function.
- 4. Select the automatic OBW measurement function of an instrument to perform bandwidth measurement.
- 5. Capture graphs and record pertinent measurement data.

Ref. KDB 789033 D02 General UNII Test Procedures New Rules v01r01 ANSI C63.10: 2013 section 11.8.2 Option 2

6 BW

Test parameters

X dB BW = 6dB (using the OBW function of the spectrum analyzer)

Span = Large enough to capture the entire EBW

RBW = 100 KHz

VBW ≥ 3 x RBW

Sweep = Auto couple

Detector = Peak or where practical sample shall be used

Trace = Max. Hold

System Number	Description	Samples	System under test	Support equipment
4	EUT	S01	\checkmark	
1	Support	S02		abla

Tested By :	Date of testing:
Jose Aguirre	01-Jan-16 - 22-Feb-16
Test Result : PASS	

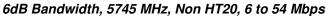
See Appendix C for list of test equipment

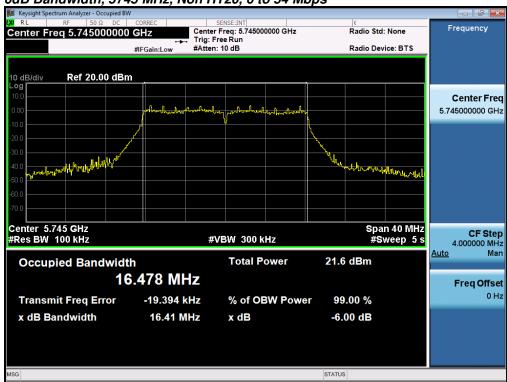
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Frequency (MHz)	Mode	Data Rate (Mbps)	6dB BW (MHz)	Limit (kHz)	Margin (MHz)
5745	Non HT20, 6 to 54 Mbps	6	16.4	>500	15.9
5745	HT/VHT20, M0 to M23, M0 to M9 1-0ss	m0	17.4	>500	16.9
E7EE	Non HT40, 6 to 54 Mbps	6	35.6	>500	35.1
5755	HT/VHT40, M0 to M23, M0 to M9 1-0ss	m0	35.5	>500	35.0
5775	Non HT80, 6 to 54 Mbps	6	76.1	>500	75.6
	VHT80, M0 to M9, M0 to M9 1-0ss	m0x1	76.0	>500	75.5
		_	_	-	_
F70F	Non HT20, 6 to 54 Mbps	6	16.4	>500	15.9
5785	HT/VHT20, M0 to M23, M0 to M9 1-0ss	m0	17.6	>500	17.1
F70F	Non HT40, 6 to 54 Mbps	6	36.1	>500	35.6
5795	HT/VHT40, M0 to M23, M0 to M9 1-0ss	m0	35.6	>500	35.1
F92F	Non HT20, 6 to 54 Mbps	6	16.4	>500	15.9
5825	HT/VHT20, M0 to M23, M0 to M9 1-0ss	m0	17.5	>500	17.0





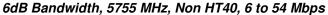


6dB Bandwidth, 5745 MHz, HT/VHT20, M0 to M23, M0 to M9 1-0ss



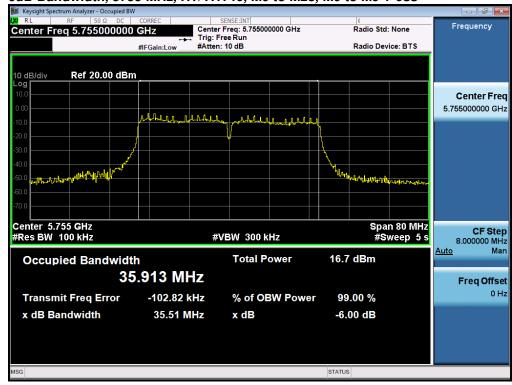
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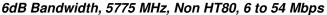


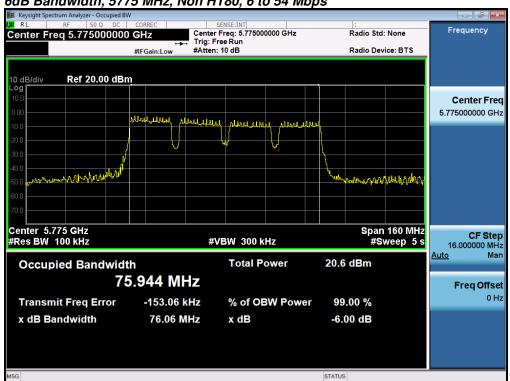
6dB Bandwidth, 5755 MHz, HT/VHT40, M0 to M23, M0 to M9 1-0ss



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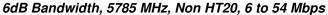


6dB Bandwidth, 5775 MHz, VHT80, M0 to M9, M0 to M9 1-0ss



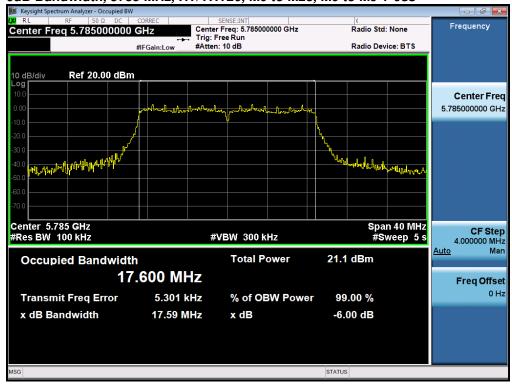
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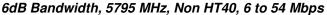


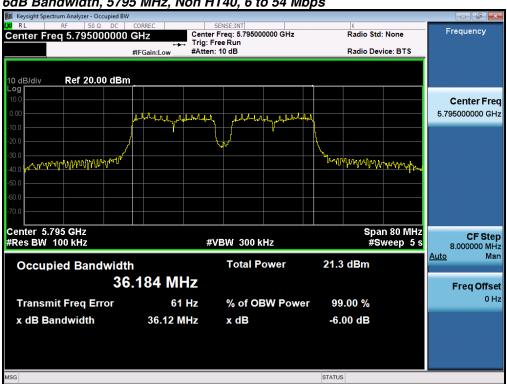
6dB Bandwidth, 5785 MHz, HT/VHT20, M0 to M23, M0 to M9 1-0ss



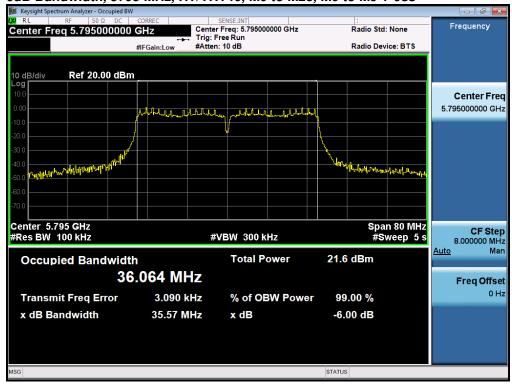
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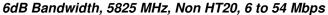


6dB Bandwidth, 5795 MHz, HT/VHT40, M0 to M23, M0 to M9 1-0ss



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6dB Bandwidth, 5825 MHz, HT/VHT20, M0 to M23, M0 to M9 1-0ss



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A.2 99% and 26dB Bandwidth

FCC 15.407 The 99% occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers are each equal to 0.5% of the total mean power of the given emission. There is no limit for 99% OBW.

The 26 dB emission is the width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 26 dB relative to the maximum level measured in the fundamental emission.

Test Procedure

Ref. ANSI C63.10: 2013 Section 6.9.3

99% BW and EBW (-26dB)

Test Procedure

- 1. Set the radio in the continuous transmitting mode.
- 2. Allow the trace to stabilize.
- 3. Setting the x-dB bandwidth mode to -26dB and OBW power function to 99% within the measurement set up function.
- 4. Select the automatic OBW measurement function of an instrument to perform bandwidth measurement.
- 5. Capture graphs and record pertinent measurement data.

Ref. ANSI C63.10: 2013 Section 6.9.3

99% BW and EBW (-26dB)	
Test parameters	
Span = 1.5 x to 5.0 times OBW	
RBW = approx. 1% to 5% of the OBW	
VBW ≥ 3 x RBW	
Detector = Peak or where practical sample shall be used	
Trace = Max. Hold	

System Number	Description	Samples	System under test	Support equipment
4	EUT	S01	Ŋ	
1	Support	S02		\checkmark

Tested By :	Date of testing:
Jose Aguirre	01-Jan-16 - 22-Feb-16
Test Result : PASS	

See Appendix C for list of test equipment

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Frequency (MHz)	Mode	Data Rate (Mbps)	26dB BW (MHz)	99% BW (MHz)
5745	Non HT20, 6 to 54 Mbps	6	23.3	18.0
5745	HT/VHT20, M0 to M23, M0 to M9 1-0ss	m0	23.9	18.3
F7FF	Non HT40, 6 to 54 Mbps	6	44.4	36.9
5/55	HT/VHT40, M0 to M23, M0 to M9 1-0ss	m0	43.4	36.5
F 7 7 F	Non HT80, 6 to 54 Mbps	6	83.9	76.6
5//5	VHT80, M0 to M9, M0 to M9 1-0ss	m0x1	82.6	76.7
		_		
F 70 F	Non HT20, 6 to 54 Mbps	6	24.4	23.4
5/85	HT/VHT20, M0 to M23, M0 to M9 1-0ss	m0	23.8	23.1
F 70F	Non HT40, 6 to 54 Mbps	6	58.1	62.8
5/95	HT/VHT40, M0 to M23, M0 to M9 1-0ss	m0	46.0	45.3
FOZE	Non HT20, 6 to 54 Mbps	6	21.5	23.2
5755 5775 5785 5795	HT/VHT20, M0 to M23, M0 to M9 1-0ss	m0	23.5	24.3







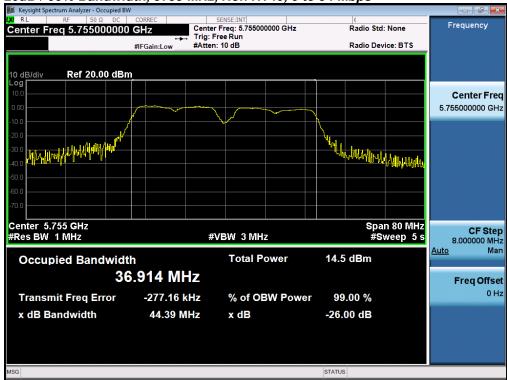
26dB / 99% Bandwidth, 5745 MHz, HT/VHT20, M0 to M23, M0 to M9 1-0ss



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26dB / 99% Bandwidth, 5755 MHz, HT/VHT40, M0 to M23, M0 to M9 1-0ss



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26dB / 99% Bandwidth, 5775 MHz, VHT80, M0 to M9, M0 to M9 1-0ss



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26dB / 99% Bandwidth, 5785 MHz, HT/VHT20, M0 to M23, M0 to M9 1-0ss



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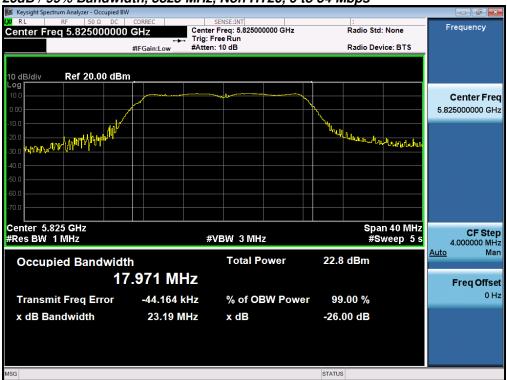
26dB / 99% Bandwidth, 5795 MHz, HT/VHT40, M0 to M23, M0 to M9 1-0ss



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26dB / 99% Bandwidth, 5825 MHz, HT/VHT20, M0 to M23, M0 to M9 1-0ss



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A.3 Maximum Conducted Output Power

15.407 (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.

Test Procedure

Ref. KDB 789033 D02 General UNII Test Procedures New Rules v01r01 ANSI C63.10: 2013

Output Power

Test Procedure

- 1. Set the radio in the continuous transmitting mode at full power
- 2. Compute power by integrating the spectrum across the EBW (or alternatively entire 99% OBW) of the signal using the instrument's band power measurement function. The integration shall be performed using the spectrum analyzer band-power measurement function with band limits set equal to the EBW or the OBW band edges.
- 3. Capture graphs and record pertinent measurement data.

Ref. KDB 789033 D02 General UNII Test Procedures New Rules v01r01 ANSI C63 10: 2013 section 12 3 2 2 Method SA-1

ANOI 003.10. 2013 SCOIIOIT 12.3.2.2 INCLING OA-1
Output Power
Test parameters
Span = >1.5 times the OBW
RBW = 1MHz
VBW ≥ 3 x RBW
Sweep = Auto couple
Detector = sample
Trace = Trace Average 100

The "measure-and-sum technique" is used for measuring in-band transmit power of a device. In the measure-and-sum approach, the conducted emission level is measured at each antenna port. The measured results at the various antenna ports are then summed mathematically to determine the total emission level from the device. Summing is performed in linear power units. (See ANSI C63.10 section 14.3.2.2)

System Number	Description	Samples	System under test	Support equipment
1	EUT	S01	N	
1	Support	S02		\square

Tested By :	Date of testing:
Jose Aguirre	01-Jan-16 - 22-Feb-16
Test Result : PASS	

See Appendix C for list of test equipment

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Frequency (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)	Total Tx Channel Power (dBm)	Limit (dBm)	Margin (dB)
	Non HT20, 6 to 54 Mbps	1	6	14.8				14.8	30.0	15.2
	Non HT20, 6 to 54 Mbps	2	6	11.3	10.5			13.9	30.0	16.1
	Non HT20, 6 to 54 Mbps	3	6	9.4	8.5	7.7		13.4	30.0	16.6
	Non HT20, 6 to 54 Mbps	4	6	8.5	7.6	6.8	9.3	14.2	30.0	15.8
	Non HT20 Beam Forming, 6 to 54 Mbps	2	9	8.5	7.6			11.1	27.0	15.9
	Non HT20 Beam Forming, 6 to 54 Mbps	3	11	5.5	4.5	3.7		9.4	25.0	15.6
	Non HT20 Beam Forming, 6 to 54 Mbps	4	12	2.0	0.6	-0.2	2.7	7.4	24.0	16.6
	HT/VHT20, M0 to M7	1	6	13.7				13.7	30.0	16.3
	HT/VHT20, M0 to M7	2	6	10.6	9.6			13.1	30.0	16.9
	HT/VHT20, M8 to M15	2	6	10.6	9.6			13.1	30.0	16.9
	HT/VHT20, M0 to M7	3	6	10.6	9.6	8.9		14.5	30.0	15.5
	HT/VHT20, M8 to M15	3	6	10.6	9.6	8.9		14.5	30.0	15.5
10	HT/VHT20, M16 to M23	3	6	10.6	9.6	8.9		14.5	30.0	15.5
5745	HT/VHT20, M0 to M7	4	6	7.7	6.8	6.0	8.5	13.4	30.0	16.6
2	HT/VHT20, M8 to M15	4	6	7.7	6.8	6.0	8.5	13.4	30.0	16.6
	HT/VHT20, M16 to M23	4	6	7.7	6.8	6.0	8.5	13.4	30.0	16.6
	HT/VHT20 Beam Forming, M0 to M7	2	9	7.7	6.8			10.3	27.0	16.7
	HT/VHT20 Beam Forming, M8 to M15	2	6	10.6	9.6			13.1	30.0	16.9
	HT/VHT20 Beam Forming, M0 to M7	3	11	4.8	3.6	2.7		8.6	25.0	16.4
	HT/VHT20 Beam Forming, M8 to M15	3	8	7.7	6.8	6.0		11.7	29.0	16.7
	HT/VHT20 Beam Forming, M16 to M23	3	6	10.6	9.6	8.9		14.5	30.0	15.5
	HT/VHT20 Beam Forming, M0 to M7	4	12	2.1	0.7	-0.1	2.7	7.5	24.0	16.5
	HT/VHT20 Beam Forming, M8 to M15	4	9	4.8	3.6	2.7	5.4	10.3	27.0	16.7
	HT/VHT20 Beam Forming, M16 to M23	4	7	6.6	5.6	4.8	7.4	12.2	29.0	16.8
	HT/VHT20 STBC, M0 to M7	2	6	10.6	9.6			13.1	30.0	16.9
	HT/VHT20 STBC, M0 to M7	3	6	10.6	9.6	8.9		14.5	30.0	15.5
	HT/VHT20 STBC, M0 to M7	4	6	7.7	6.8	6.0	8.5	13.4	30.0	16.6
			_						_	-
	Non HT40, 6 to 54 Mbps	1	6	6.6				6.6	30.0	23.4
	Non HT40, 6 to 54 Mbps	2	6	2.7	1.7			5.2	30.0	24.8
55	Non HT40, 6 to 54 Mbps	3	6	1.6	0.4	-0.1		5.5	30.0	24.5
57.	Non HT40, 6 to 54 Mbps	4	6	0.6	-0.5	-1.1	1.5	6.3	30.0	23.7
	HT/VHT40, M0 to M7	1	6	9.4				9.4	30.0	20.6
	HT/VHT40, M0 to M7	2	6	7.6	6.3			10.0	30.0	20.0

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	HT/VHT40, M8 to M15	2	6	7.6	6.3			10.0	30.0	20.0
	HT/VHT40, M0 to M7	3	6	7.6	6.3	5.6		11.4	30.0	18.6
	HT/VHT40, M8 to M15	3	6	7.6	6.3	5.6		11.4	30.0	18.6
	HT/VHT40, M16 to M23	3	6	7.6	6.3	5.6		11.4	30.0	18.6
	HT/VHT40, M0 to M7	4	6	4.3	3.2	2.8	5.1	10.0	30.0	20.0
	HT/VHT40, M8 to M15	4	6	4.3	3.2	2.8	5.1	10.0	30.0	20.0
	HT/VHT40, M16 to M23	4	6	4.3	3.2	2.8	5.1	10.0	30.0	20.0
	HT/VHT40 Beam Forming, M0 to M7	2	9	4.3	3.2			6.8	27.0	20.2
	HT/VHT40 Beam Forming, M8 to M15	2	6	7.6	6.3			10.0	30.0	20.0
	HT/VHT40 Beam Forming, M0 to M7	3	11	-0.7	-1.8	-2.3		3.2	25.0	21.8
	HT/VHT40 Beam Forming, M8 to M15	3	8	4.3	3.2	2.8		8.3	28.0	19.7
	HT/VHT40 Beam Forming, M16 to M23	3	6	7.6	6.3	5.6		11.4	30.0	18.6
	HT/VHT40 Beam Forming, M0 to M7	4	12	-1.5	-2.8	-3.3	-0.7	4.1	24.0	19.9
	HT/VHT40 Beam Forming, M8 to M15	4	9	0.3	-0.8	-1.3	1.2	6.0	27.0	21.0
	HT/VHT40 Beam Forming, M16 to M23	4	7	3.3	2.2	1.6	4.1	8.9	29.0	20.1
	HT/VHT40 STBC, M0 to M7	2	6	7.6	6.3			10.0	30.0	20.0
	HT/VHT40 STBC, M0 to M7	3	6	7.6	6.3	5.6		11.4	30.0	18.6
	HT/VHT40 STBC, M0 to M7	4	6	4.3	3.2	2.8	5.1	10.0	30.0	20.0
			_	_	_	_	_	_	_	_
	Non HT80, 6 to 54 Mbps	1	6	13.0				13.0	30.0	17.0
	Non HT80, 6 to 54 Mbps	2	6	9.7	9.4			12.6	30.0	17.4
	Non HT80, 6 to 54 Mbps	3	6	9.7	9.4	9.5		14.3	30.0	15.7
	Non HT80, 6 to 54 Mbps	4	6	5.1	4.8	5.1	6.3	11.4	30.0	18.6
	VHT80, M0.1 to M9.1	1	6	12.5				12.5	30.0	17.5
	VHT80, M0.1 to M9.1	2	6	10.3	10.0			13.2	30.0	16.8
	VHT80, M0.2 to M9.2	2	6	10.3	10.0			13.2	30.0	16.8
	VHT80, M0.1 to M9.1	3	6	7.5	7.1	7.3		12.1	30.0	17.9
	VHT80, M0.2 to M9.2	3	6	7.5	7.1	7.3		12.1	30.0	17.9
	VHT80, M0.3 to M9.3	3	6	7.5	7.1	7.3		12.1	30.0	17.9
5775	VHT80, M0.1 to M9.1	4	6	6.6	6.1	6.3	7.7	12.7	30.0	17.3
57	VHT80, M0.2 to M9.2	4	6	6.6	6.1	6.3	7.7	12.7	30.0	17.3
	VHT80, M0.3 to M9.3	4	6	6.6	6.1	6.3	7.7	12.7	30.0	17.3
	VHT80 Beam Forming, M0.1 to M9.1	2	6	10.3	10.0			13.2	30.0	16.8
	VHT80 Beam Forming, M0.2 to M9.2	2	6	10.3	10.0			13.2	30.0	16.8
	VHT80 Beam Forming, M0.1 to M9.1	3	6	7.5	7.1	7.3		12.1	30.0	17.9
	VHT80 Beam Forming, M0.2 to M9.2	3	6	7.5	7.1	7.3		12.1	30.0	17.9
	VHT80 Beam Forming, M0.3 to M9.3	3	6	7.5	7.1	7.3		12.1	30.0	17.9
	VHT80 Beam Forming, M0.1 to M9.1	4	6	6.6	6.1	6.3	7.7	12.7	30.0	17.3
	VHT80 Beam Forming, M0.2 to M9.2	4	6	6.6	6.1	6.3	7.7	12.7	30.0	17.3
	VHT80 Beam Forming, M0.3 to M9.3	4	6	6.6	6.1	6.3	7.7	12.7	30.0	17.3
	VHT80 STBC, M0.1 to M9.1	2	6	10.3	10.0			13.2	30.0	16.8

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WHT80 STBC, MO.1 to M9.1 WHT9 WHT80 STBC, MO.1 to M9.1 WHT9 WHT20 STBC, MO to M7 WHT9 WHT9 STBC,											
Non HT20, 6 to 54 Mbps		VHT80 STBC, M0.1 to M9.1	3	6	7.5	7.1	7.3		12.1	30.0	17.9
Non HT20, 6 to 54 Mbps		VHT80 STBC, M0.1 to M9.1	4	6	6.6	6.1	6.3	7.7	12.7	30.0	17.3
Non HT20, 6 to 54 Mbps											
Non HT20, 6 to 54 Mbps		Non HT20, 6 to 54 Mbps	1	6	14.0				14.0	30.0	16.0
Non HT20, 6 to 54 Mbps		Non HT20, 6 to 54 Mbps	2	6	14.0	14.1			17.1	30.0	12.9
Non HT20 Beam Forming, 6 to 54 Mbps 2 9 14.0 14.1 13.7 15.8 25.0 6.3		Non HT20, 6 to 54 Mbps	3	6	14.0	14.1	13.7		18.7	30.0	11.3
Non HT20 Beam Forming, 6 to 54 Mbps 3 11 14.0 14.1 13.7 15.8 20.5 24.0 3.5 Non HT20 Beam Forming, 6 to 54 Mbps 4 12 14.0 14.1 13.7 15.8 20.5 24.0 3.5 HT/VHT20, M0 to M7 1 6 14.2 14.4 17.3 30.0 12.7 HT/VHT20, M0 to M7 2 6 14.2 14.4 17.3 30.0 12.7 HT/VHT20, M8 to M15 2 6 14.2 14.4 13.9 18.9 30.0 11.1 HT/VHT20, M8 to M15 3 6 14.2 14.4 13.9 18.9 30.0 11.1 HT/VHT20, M8 to M15 3 6 14.2 14.4 13.9 18.9 30.0 11.1 HT/VHT20, M16 to M23 3 6 14.2 14.4 13.9 18.9 30.0 11.1 HT/VHT20, M16 to M23 3 6 14.2 14.4 13.9 18.9 30.0 11.1 HT/VHT20, M16 to M23 4 6 14.2 14.4 13.9 16.0 20.7 30.0 9.3 HT/VHT20, M16 to M23 4 6 14.2 14.4 13.9 16.0 20.7 30.0 9.3 HT/VHT20, M16 to M23 4 6 14.2 14.4 13.9 16.0 20.7 30.0 9.3 HT/VHT20, M16 to M23 4 6 14.2 14.4 13.9 16.0 20.7 30.0 9.3 HT/VHT20 Beam Forming, M0 to M7 2 9 14.2 14.4 13.9 16.0 20.7 30.0 9.3 HT/VHT20 Beam Forming, M8 to M15 2 6 14.2 14.4 13.9 16.0 20.7 30.0 12.7 HT/VHT20 Beam Forming, M8 to M15 3 8 14.2 14.4 13.9 18.9 25.0 6.1 HT/VHT20 Beam Forming, M8 to M15 3 8 14.2 14.4 13.9 18.9 25.0 6.1 HT/VHT20 Beam Forming, M16 to M23 3 6 14.2 14.4 13.9 18.9 30.0 11.1 HT/VHT20 Beam Forming, M16 to M23 3 6 14.2 14.4 13.9 18.9 25.0 6.1 HT/VHT20 Beam Forming, M16 to M23 3 6 14.2 14.4 13.9 18.9 25.0 6.1 HT/VHT20 Beam Forming, M16 to M23 3 6 14.2 14.4 13.9 18.9 30.0 11.1 HT/VHT20 Beam Forming, M16 to M23 4 7 14.2 14.4 13.9 16.0 20.7 20.0 8.3 HT/VHT20 Beam Forming, M16 to M23 4 7 14.2 14.4 13.9 16.0 20.7 20.0 8.3 HT/VHT20 Beam Forming, M16 to M23 4 7 14.2 14.4 13.9 16.0 20.7 20.0 8.3 HT/VHT20 Beam Forming, M16 to M23 4 7 14.2 14.4 13.9 16.0 20.7 30.0 9.3 HT/VHT20 Beam Forming, M16 to M23 4 7 14.2 14.4 13.9 16.0 20.7 20.0 8.3 HT/VHT20 Beam Forming, M16 to M23 4 7 14.2 14.4 13.9 16.0 20.7 30.0 9.3 HT/VHT20 Beam Forming, M16 to M23 4 7 14.2 14.4 13.9 16.0 20.7 30.0 9.3 HT/VHT20 Beam Forming, M16 to M23 4 7 14.2 14.4 13.9 16.0 20.7 30.0 9.3 HT/VHT20 Beam Forming, M16 to M23 4 7 14.2 14.4 13.9 16.0 20.7 30.0 10.1 HT/VHT20 Beam Forming, M16 to M23 4 7 14.2 14.4 13.9 16.0 20.7 30.0		Non HT20, 6 to 54 Mbps	4	6	14.0	14.1	13.7	15.8	20.5	30.0	9.5
Non HT20 Beam Forming, 6 to 54 Mbps		Non HT20 Beam Forming, 6 to 54 Mbps	2	9	14.0	14.1			17.1	27.0	9.9
HT/VHT20, M0 to M7		Non HT20 Beam Forming, 6 to 54 Mbps	3	11	14.0	14.1	13.7		18.7	25.0	6.3
HT/VHT20, M0 to M7 12 6 14.2 14.4 17.3 30.0 12.7 HT/VHT20, M8 to M15 2 6 14.2 14.4 13.9 18.9 30.0 11.1 HT/VHT20, M8 to M15 3 6 14.2 14.4 13.9 18.9 30.0 11.1 HT/VHT20, M8 to M15 3 6 14.2 14.4 13.9 18.9 30.0 11.1 HT/VHT20, M8 to M15 3 6 14.2 14.4 13.9 18.9 30.0 11.1 HT/VHT20, M8 to M15 3 6 14.2 14.4 13.9 18.9 30.0 11.1 HT/VHT20, M8 to M15 4 6 14.2 14.4 13.9 16.0 20.7 30.0 9.3 HT/VHT20, M8 to M15 4 6 14.2 14.4 13.9 16.0 20.7 30.0 9.3 HT/VHT20, M8 to M15 4 6 14.2 14.4 13.9 16.0 20.7 30.0 9.3 HT/VHT20 Beam Forming, M0 to M7 2 9 14.2 14.4 13.9 16.0 20.7 30.0 9.3 HT/VHT20 Beam Forming, M8 to M15 2 6 14.2 14.4 13.9 18.9 25.0 6.1 HT/VHT20 Beam Forming, M8 to M15 3 11 14.2 14.4 13.9 18.9 25.0 6.1 HT/VHT20 Beam Forming, M8 to M15 3 8 14.2 14.4 13.9 18.9 25.0 6.1 HT/VHT20 Beam Forming, M8 to M15 3 8 14.2 14.4 13.9 18.9 25.0 6.1 HT/VHT20 Beam Forming, M8 to M15 3 8 14.2 14.4 13.9 18.9 25.0 6.1 HT/VHT20 Beam Forming, M16 to M23 3 6 14.2 14.4 13.9 18.9 25.0 6.1 HT/VHT20 Beam Forming, M16 to M23 3 6 14.2 14.4 13.9 16.0 20.7 24.0 3.3 HT/VHT20 Beam Forming, M16 to M23 3 6 14.2 14.4 13.9 16.0 20.7 24.0 3.3 HT/VHT20 Beam Forming, M16 to M23 4 7 14.2 14.4 13.9 16.0 20.7 24.0 3.3 HT/VHT20 Beam Forming, M8 to M15 4 9 14.2 14.4 13.9 16.0 20.7 24.0 3.3 HT/VHT20 Beam Forming, M16 to M23 4 7 14.2 14.4 13.9 16.0 20.7 24.0 3.3 HT/VHT20 STBC, M0 to M7 4 12 14.4 13.9 16.0 20.7 29.0 8.3 HT/VHT20 STBC, M0 to M7 4 4 6 14.2 14.4 13.9 16.0 20.7 29.0 8.3 HT/VHT20 STBC, M0 to M7 4 4 6 14.2 14.4 13.9 16.0 20.7 29.0 8.3 HT/VHT20 STBC, M0 to M7 4 4 6 14.2 14.4 13.9 16.0 20.7 29.0 8.3 HT/VHT20 STBC, M0 to M7 4 4 6 14.2 14.4 13.9 16.0 20.7 29.0 8.3 HT/VHT20 STBC, M0 to M7 4 4 6 14.2 14.4 13.9 16.0 20.7 29.0 8.3 HT/VHT20 STBC, M0 to M7 4 4 6 14.2 14.4 13.9 16.0 20.7 29.0 8.3 HT/VHT20 STBC, M0 to M7 4 4 6 14.2 14.4 13.9 16.0 20.7 29.0 8.3 HT/VHT20 STBC, M0 to M7 16 16 16 16 16 16 16 16 16 16 16 16 16		Non HT20 Beam Forming, 6 to 54 Mbps	4	12	14.0	14.1	13.7	15.8	20.5	24.0	3.5
HT/VHT20, M8 to M15 HT/VHT20, M0 to M7 HT/VHT20, M8 to M15 HT/VHT20, M16 to M23 HT/VHT20, M16 to M23 HT/VHT20, M8 to M15 HT/VHT20 Beam Forming, M0 to M7 HT/VHT20 Beam Forming, M8 to M15 HT/VHT20 Beam Forming, M16 to M23 HT/VHT20 STBC, M0 to M7 HT/VHT20, M1 to M7 HT/VHT20, M1 to M7 HT/VHT40, M1 to M15 HT/VHT40,		HT/VHT20, M0 to M7	1	6	14.2				14.2	30.0	15.8
HT/VHT20, M0 to M7 HT/VHT20, M8 to M15 HT/VHT20, M8 to M15 HT/VHT20, M16 to M23 HT/VHT20 Beam Forming, M0 to M7 HT/VHT20 Beam Forming, M10 to M7 HT/VHT20 Beam Forming, M16 to M15 HT/VHT20 Beam Forming, M16 to M23 HT/VHT20 STBC, M0 to M7 HT/VHT40, M16 to M17 HT/VHT40, M16 to M15 HT/VHT40, M16 to M17 HT/VHT40, M16 to M17 HT/VHT40, M16 to M17 HT/VHT40, M16 to M17 HT/VHT40, M16 to M15		HT/VHT20, M0 to M7	2	6	14.2	14.4			17.3	30.0	12.7
HT/VHT20, M8 to M15 HT/VHT20, M16 to M23 HT/VHT20, M16 to M23 HT/VHT20, M0 to M7 HT/VHT20, M0 to M7 HT/VHT20, M0 to M7 HT/VHT20, M0 to M3 HT/VHT20, M0 to M3 HT/VHT20, M8 to M15 HT/VHT20 Beam Forming, M0 to M7 HT/VHT20 Beam Forming, M8 to M15 HT/VHT20 Beam Forming, M16 to M23 HT/VHT20 STBC, M0 to M7 HT/VHT20, M16 to M15 HT/VHT40, M0 to M7 HT/VHT40, M10 to M15 HT/VHT40, M10 to M15		HT/VHT20, M8 to M15	2	6	14.2	14.4			17.3	30.0	12.7
HT/VHT20, M16 to M23		HT/VHT20, M0 to M7	3	6	14.2	14.4	13.9		18.9	30.0	11.1
HT/VHT20, M0 to M7 HT/VHT20, M8 to M15 HT/VHT20, M8 to M15 HT/VHT20, M8 to M15 HT/VHT20, M16 to M23 HT/VHT20, M16 to M23 HT/VHT20 Beam Forming, M0 to M7 2 9 14.2 14.4 13.9 16.0 20.7 30.0 9.3 HT/VHT20 Beam Forming, M0 to M7 2 9 14.2 14.4 13.9 16.0 20.7 30.0 9.3 HT/VHT20 Beam Forming, M8 to M15 2 6 14.2 14.4 13.9 16.0 20.7 30.0 9.3 HT/VHT20 Beam Forming, M8 to M15 2 6 14.2 14.4 13.9 18.9 25.0 6.1 HT/VHT20 Beam Forming, M8 to M15 3 11 14.2 14.4 13.9 18.9 25.0 6.1 HT/VHT20 Beam Forming, M16 to M23 3 6 14.2 14.4 13.9 18.9 25.0 9.1 HT/VHT20 Beam Forming, M16 to M23 3 6 14.2 14.4 13.9 18.9 28.0 9.1 HT/VHT20 Beam Forming, M8 to M15 4 9 14.2 14.4 13.9 16.0 20.7 24.0 3.3 HT/VHT20 Beam Forming, M8 to M15 4 9 14.2 14.4 13.9 16.0 20.7 27.0 6.3 HT/VHT20 Beam Forming, M16 to M23 4 7 14.2 14.4 13.9 16.0 20.7 27.0 6.3 HT/VHT20 STBC, M0 to M7 2 6 14.2 14.4 13.9 16.0 20.7 29.0 8.3 HT/VHT20 STBC, M0 to M7 3 6 14.2 14.4 13.9 16.0 20.7 30.0 9.3 NON HT40, 6 to 54 Mbps 1 6 14.2 14.4 13.9 16.0 20.7 30.0 9.3 NON HT40, 6 to 54 Mbps 3 6 14.2 14.5 15.1 19.4 30.0 12.6 NON HT40, 6 to 54 Mbps 4 6 13.0 13.4 13.9 15.0 19.9 30.0 10.1 HT/VHT40, M0 to M7 1 6 14.2 14.5 15.1 19.4 30.0 12.6 NON HT40, M0 to M7 1 6 14.2 13.4 13.9 15.0 19.9 30.0 10.1 HT/VHT40, M0 to M7 1 6 14.2 13.4 13.9 15.0 19.9 30.0 13.2 HT/VHT40, M0 to M7 1 6 14.2 13.4 13.9 15.0 19.9 30.0 13.2 HT/VHT40, M0 to M7 1 6 14.2 13.4 13.9 15.0 19.9 30.0 13.2 HT/VHT40, M0 to M7 1 6 14.2 13.4 13.9 15.0 19.9 30.0 13.2 HT/VHT40, M0 to M7 1 6 14.2 13.4 13.9 15.0 19.9 30.0 13.2		HT/VHT20, M8 to M15	3	6	14.2	14.4	13.9		18.9	30.0	11.1
HT/VHT20, M8 to M15	10	HT/VHT20, M16 to M23	3	6	14.2	14.4	13.9		18.9	30.0	11.1
HT/VHT20, M8 to M15	785	HT/VHT20, M0 to M7	4	6	14.2	14.4	13.9	16.0	20.7	30.0	9.3
HT/VHT20, M16 to M23 HT/VHT20 Beam Forming, M0 to M7 2 9 14.2 14.4 13.9 16.0 20.7 30.0 9.3 HT/VHT20 Beam Forming, M8 to M15 2 6 14.2 14.4 13.9 18.9 25.0 6.1 HT/VHT20 Beam Forming, M0 to M7 3 11 14.2 14.4 13.9 18.9 25.0 6.1 HT/VHT20 Beam Forming, M8 to M15 3 8 14.2 14.4 13.9 18.9 28.0 9.1 HT/VHT20 Beam Forming, M16 to M23 3 6 14.2 14.4 13.9 18.9 30.0 11.1 HT/VHT20 Beam Forming, M8 to M15 4 12 14.4 13.9 18.9 30.0 11.1 HT/VHT20 Beam Forming, M8 to M15 4 9 14.2 14.4 13.9 16.0 20.7 24.0 3.3 HT/VHT20 Beam Forming, M16 to M23 4 7 14.2 14.4 13.9 16.0 20.7 24.0 3.3 HT/VHT20 Beam Forming, M16 to M23 4 7 14.2 14.4 13.9 16.0 20.7 27.0 6.3 HT/VHT20 STBC, M0 to M7 2 6 14.2 14.4 13.9 16.0 20.7 29.0 8.3 HT/VHT20 STBC, M0 to M7 3 6 14.2 14.4 13.9 16.0 20.7 29.0 8.3 HT/VHT20 STBC, M0 to M7 4 6 14.2 14.4 13.9 16.0 20.7 30.0 9.3 Non HT40, 6 to 54 Mbps 1 6 14.2 14.4 13.9 16.0 20.7 30.0 9.3 Non HT40, 6 to 54 Mbps 3 6 14.2 14.5 15.1 19.4 30.0 10.6 Non HT40, 6 to 54 Mbps 4 6 13.0 13.4 13.9 15.0 19.9 30.0 10.1 HT/VHT40, M0 to M7 1 6 14.2 14.2 13.4 13.9 15.0 19.9 30.0 10.1 HT/VHT40, M0 to M7 2 6 14.2 13.4 13.9 15.0 19.9 30.0 10.1 HT/VHT40, M0 to M7 1 6 6 14.2 13.4 13.9 15.0 19.9 30.0 10.1 HT/VHT40, M0 to M7 1 1 6 14.2 13.4 13.9 15.0 19.9 30.0 13.2 HT/VHT40, M0 to M7 1 1 6 14.2 13.4 13.9 15.0 19.9 30.0 13.2 HT/VHT40, M0 to M7 1 1 6 14.2 13.4 13.9 15.0 19.9 30.0 13.2 HT/VHT40, M0 to M7 1 1 6 14.2 13.4 13.9 15.0 19.9 30.0 13.2	5	HT/VHT20, M8 to M15	4	6	14.2	14.4	13.9	16.0	20.7	30.0	9.3
HT/VHT20 Beam Forming, M8 to M15 HT/VHT20 Beam Forming, M0 to M7 3 11 14.2 14.4 13.9 18.9 25.0 6.1			4	6	14.2	14.4	13.9	16.0	20.7	30.0	9.3
HT/VHT20 Beam Forming, M8 to M15 HT/VHT20 Beam Forming, M0 to M7 3 11 14.2 14.4 13.9 18.9 25.0 6.1		HT/VHT20 Beam Forming, M0 to M7	2	9	14.2	14.4			17.3	27.0	9.7
HT/VHT20 Beam Forming, M0 to M7 HT/VHT20 Beam Forming, M8 to M15 HT/VHT20 Beam Forming, M8 to M15 HT/VHT20 Beam Forming, M16 to M23 3 6 14.2 14.4 13.9 18.9 28.0 9.1 HT/VHT20 Beam Forming, M16 to M23 3 6 14.2 14.4 13.9 18.9 30.0 11.1 HT/VHT20 Beam Forming, M0 to M7 4 12 14.2 14.4 13.9 16.0 20.7 24.0 3.3 HT/VHT20 Beam Forming, M8 to M15 HT/VHT20 Beam Forming, M8 to M15 HT/VHT20 Beam Forming, M16 to M23 HT/VHT20 Beam Forming, M16 to M23 HT/VHT20 Beam Forming, M16 to M23 HT/VHT20 STBC, M0 to M7 2 6 14.2 14.4 13.9 16.0 20.7 29.0 8.3 HT/VHT20 STBC, M0 to M7 3 6 14.2 14.4 13.9 16.0 20.7 29.0 8.3 HT/VHT20 STBC, M0 to M7 4 6 14.2 14.4 13.9 16.0 20.7 30.0 12.7 HT/VHT20 STBC, M0 to M7 4 6 14.2 14.4 13.9 16.0 20.7 30.0 9.3 Non HT40, 6 to 54 Mbps 1 6 14.2 14.5 13.9 16.0 20.7 30.0 12.6 Non HT40, 6 to 54 Mbps 3 6 14.2 14.5 15.1 19.4 30.0 12.6 Non HT40, 6 to 54 Mbps 4 6 13.0 13.4 13.9 15.0 19.9 30.0 10.1 HT/VHT40, M0 to M7 1 6 14.2 13.4 13.9 15.0 19.9 30.0 10.1 HT/VHT40, M0 to M7 1 6 14.2 13.4 13.9 15.0 19.9 30.0 13.2 HT/VHT40, M8 to M15 2 6 14.2 13.4 13.9 16.6 30.0 13.2 HT/VHT40, M8 to M15 3 6 14.2 13.4 13.9 18.6 30.0 13.2 HT/VHT40, M8 to M15 3 6 14.2 13.4 13.9 18.6 30.0 11.4			2	6	14.2	14.4			17.3	30.0	12.7
HT/VHT20 Beam Forming, M16 to M23 3 6 14.2 14.4 13.9 16.0 20.7 24.0 3.3 HT/VHT20 Beam Forming, M0 to M7 4 12 14.2 14.4 13.9 16.0 20.7 24.0 3.3 HT/VHT20 Beam Forming, M8 to M15 4 9 14.2 14.4 13.9 16.0 20.7 27.0 6.3 HT/VHT20 Beam Forming, M16 to M23 4 7 14.2 14.4 13.9 16.0 20.7 29.0 8.3 HT/VHT20 STBC, M0 to M7 2 6 14.2 14.4 13.9 16.0 20.7 29.0 8.3 HT/VHT20 STBC, M0 to M7 3 6 14.2 14.4 13.9 16.0 20.7 30.0 12.7 HT/VHT20 STBC, M0 to M7 4 6 14.2 14.4 13.9 16.0 20.7 30.0 9.3 Non HT40, 6 to 54 Mbps 1 6 14.2 14.4 13.9 16.0 20.7 30.0 9.3 Non HT40, 6 to 54 Mbps 2 6 14.2 14.5 15.1 19.4 30.0 12.6 Non HT40, 6 to 54 Mbps 3 6 14.2 14.5 15.1 19.4 30.0 10.6 Non HT40, 6 to 54 Mbps 4 6 13.0 13.4 13.9 15.0 19.9 30.0 10.1 HT/VHT40, M0 to M7 1 6 14.2 13.4 13.9 15.0 19.9 30.0 10.1 HT/VHT40, M0 to M7 2 6 14.2 13.4 13.9 15.0 19.9 30.0 13.2 HT/VHT40, M0 to M7 3 6 14.2 13.4 13.9 18.6 30.0 13.2 HT/VHT40, M0 to M7 3 6 14.2 13.4 13.9 18.6 30.0 11.4 HT/VHT40, M8 to M15 3 6 14.2 13.4 13.9 18.6 30.0 11.4			3	11	14.2	14.4	13.9		18.9	25.0	6.1
HT/VHT20 Beam Forming, M16 to M23 3 6 14.2 14.4 13.9 18.9 30.0 11.1 HT/VHT20 Beam Forming, M0 to M7 4 12 14.2 14.4 13.9 16.0 20.7 24.0 3.3 HT/VHT20 Beam Forming, M8 to M15 4 9 14.2 14.4 13.9 16.0 20.7 27.0 6.3 HT/VHT20 Beam Forming, M16 to M23 4 7 14.2 14.4 13.9 16.0 20.7 29.0 8.3 HT/VHT20 STBC, M0 to M7 2 6 14.2 14.4 13.9 16.0 20.7 29.0 8.3 HT/VHT20 STBC, M0 to M7 3 6 14.2 14.4 13.9 16.0 20.7 30.0 12.7 HT/VHT20 STBC, M0 to M7 4 6 14.2 14.4 13.9 16.0 20.7 30.0 9.3 HT/VHT20 STBC, M0 to M7 1 6 14.2 14.5 15.1 19.4 30.0 12.6 Non HT40, 6 to 54 Mbps 3 6 14.2 14.5 15.1 19.4 30.0 10.6 Non HT40, 6 to 54 Mbps 4 6 13.0 13.4 13.9 15.0 19.9 30.0 10.1 HT/VHT40, M0 to M7 1 6 14.2 13.4 13.9 15.0 19.9 30.0 15.8 HT/VHT40, M8 to M15 2 6 14.2 13.4 13.9 16.8 30.0 13.2 HT/VHT40, M8 to M15 2 6 14.2 13.4 13.9 18.6 30.0 11.4 HT/VHT40, M8 to M15 3 6 14.2 13.4 13.9 18.6 30.0 11.4 HT/VHT40, M8 to M15 3 6 14.2 13.4 13.9 18.6 30.0 11.4 HT/VHT40, M8 to M15 3 6 14.2 13.4 13.9 18.6 30.0 11.4 HT/VHT40, M8 to M15 3 6 14.2 13.4 13.9 18.6 30.0 11.4 HT/VHT40, M8 to M15 3 6 14.2 13.4 13.9 18.6 30.0 11.4 HT/VHT40, M8 to M15 3 6 14.2 13.4 13.9 18.6 30.0 11.4 HT/VHT40, M8 to M15 3 6 14.2 13.4 13.9 18.6 30.0 11.4 HT/VHT40, M8 to M15 3 6 14.2 13.4 13.9 18.6 30.0 11.4 HT/VHT40, M8 to M15 3 6 14.2 13.4 13.9 18.6 30.0 11.4 HT/VHT40, M8 to M15 3 6 14.2 13.4 13.9 18.6 30.0 11.4 HT/VHT40, M8 to M15 3 6 14.2 13.4 13.9 18.6 30.0 11.4 HT/VHT40, M8 to M15 3 6 14.2 13.4 13.9 18.6 30.0 11.4 HT/VHT40, M8 to M15 3 6 14.2 13.4 13.9 18.6 30.0 11.			3	8	14.2	14.4	13.9		18.9	28.0	9.1
HT/VHT20 Beam Forming, M8 to M15 HT/VHT20 Beam Forming, M16 to M23 HT/VHT20 Beam Forming, M16 to M23 HT/VHT20 STBC, M0 to M7 HT/VHT20 STBC, M0 to M7 A 6 14.2 14.4 13.9 16.0 20.7 29.0 8.3 HT/VHT20 STBC, M0 to M7 A 6 14.2 14.4 13.9 16.0 20.7 29.0 8.3 HT/VHT20 STBC, M0 to M7 A 6 14.2 14.4 13.9 18.9 30.0 11.1 HT/VHT20 STBC, M0 to M7 A 6 14.2 14.4 13.9 16.0 20.7 30.0 9.3 Non HT40, 6 to 54 Mbps			3	6	14.2	14.4	13.9		18.9	30.0	11.1
HT/VHT20 Beam Forming, M16 to M23		HT/VHT20 Beam Forming, M0 to M7	4	12	14.2	14.4	13.9	16.0	20.7	24.0	3.3
HT/VHT20 STBC, M0 to M7		HT/VHT20 Beam Forming, M8 to M15	4	9	14.2	14.4	13.9	16.0	20.7	27.0	6.3
HT/VHT20 STBC, M0 to M7 HT/VHT40, 6 to 54 Mbps HT/VHT40, M0 to M7 HT/VHT40, M0 to M15		HT/VHT20 Beam Forming, M16 to M23	4	7	14.2	14.4	13.9	16.0	20.7	29.0	8.3
HT/VHT20 STBC, M0 to M7		HT/VHT20 STBC, M0 to M7	2	6	14.2	14.4			17.3	30.0	12.7
Non HT40, 6 to 54 Mbps		HT/VHT20 STBC, M0 to M7	3	6	14.2	14.4	13.9		18.9	30.0	11.1
Non HT40, 6 to 54 Mbps 2 6 14.2 14.5 15.1 17.4 30.0 12.6 Non HT40, 6 to 54 Mbps 3 6 14.2 14.5 15.1 19.4 30.0 10.6 Non HT40, 6 to 54 Mbps 4 6 13.0 13.4 13.9 15.0 19.9 30.0 10.1 HT/VHT40, M0 to M7 1 6 14.2 13.4 14.2 30.0 15.8 HT/VHT40, M0 to M7 2 6 14.2 13.4 16.8 30.0 13.2 HT/VHT40, M0 to M7 3 6 14.2 13.4 13.9 18.6 30.0 11.4 HT/VHT40, M8 to M15 3 6 14.2 13.4 13.9 18.6 30.0 11.4		HT/VHT20 STBC, M0 to M7	4	6	14.2	14.4	13.9	16.0	20.7	30.0	9.3
Non HT40, 6 to 54 Mbps 2 6 14.2 14.5 15.1 17.4 30.0 12.6 Non HT40, 6 to 54 Mbps 3 6 14.2 14.5 15.1 19.4 30.0 10.6 Non HT40, 6 to 54 Mbps 4 6 13.0 13.4 13.9 15.0 19.9 30.0 10.1 HT/VHT40, M0 to M7 1 6 14.2 13.4 14.2 30.0 15.8 HT/VHT40, M0 to M7 2 6 14.2 13.4 16.8 30.0 13.2 HT/VHT40, M0 to M7 3 6 14.2 13.4 13.9 18.6 30.0 11.4 HT/VHT40, M8 to M15 3 6 14.2 13.4 13.9 18.6 30.0 11.4			_								
Non HT40, 6 to 54 Mbps 2 6 14.2 14.5 15.1 17.4 30.0 12.6 Non HT40, 6 to 54 Mbps 3 6 14.2 14.5 15.1 19.4 30.0 10.6 Non HT40, 6 to 54 Mbps 4 6 13.0 13.4 13.9 15.0 19.9 30.0 10.1 HT/VHT40, M0 to M7 1 6 14.2 13.4 14.2 30.0 15.8 HT/VHT40, M0 to M7 2 6 14.2 13.4 16.8 30.0 13.2 HT/VHT40, M0 to M7 3 6 14.2 13.4 13.9 18.6 30.0 11.4 HT/VHT40, M8 to M15 3 6 14.2 13.4 13.9 18.6 30.0 11.4		Non HT40, 6 to 54 Mbps	1	6	14.2				14.2	30.0	15.8
Non HT40, 6 to 54 Mbps 3 6 14.2 14.5 15.1 19.4 30.0 10.6 Non HT40, 6 to 54 Mbps 4 6 13.0 13.4 13.9 15.0 19.9 30.0 10.1 HT/VHT40, M0 to M7 1 6 14.2 13.4 16.8 30.0 15.8 HT/VHT40, M8 to M15 2 6 14.2 13.4 16.8 30.0 13.2 HT/VHT40, M0 to M7 3 6 14.2 13.4 13.9 18.6 30.0 11.4 HT/VHT40, M8 to M15 3 6 14.2 13.4 13.9 18.6 30.0 11.4 HT/VHT40, M8 to M15 3 6 14.2 13.4 13.9 18.6 30.0 11.4		Non HT40, 6 to 54 Mbps		6	14.2	14.5			17.4	30.0	12.6
Non HT40, 6 to 54 Mbps 4 6 13.0 13.4 13.9 15.0 19.9 30.0 10.1 HT/VHT40, M0 to M7 1 6 14.2 30.0 15.8 HT/VHT40, M0 to M7 2 6 14.2 13.4 16.8 30.0 13.2 HT/VHT40, M8 to M15 2 6 14.2 13.4 16.8 30.0 13.2 HT/VHT40, M0 to M7 3 6 14.2 13.4 13.9 18.6 30.0 11.4 HT/VHT40, M8 to M15 3 6 14.2 13.4 13.9 18.6 30.0 11.4			3	6	14.2	14.5	15.1		19.4	30.0	10.6
HT/VHT40, M0 to M7 1 6 14.2 13.4 14.2 30.0 15.8 HT/VHT40, M0 to M7 2 6 14.2 13.4 16.8 30.0 13.2 HT/VHT40, M8 to M15 2 6 14.2 13.4 13.9 18.6 30.0 11.4 HT/VHT40, M8 to M15 3 6 14.2 13.4 13.9 18.6 30.0 11.4				6		1		15.0			
HT/VHT40, M8 to M15 2 6 14.2 13.4 16.8 30.0 13.2 HT/VHT40, M0 to M7 3 6 14.2 13.4 13.9 18.6 30.0 11.4 HT/VHT40, M8 to M15 3 6 14.2 13.4 13.9 18.6 30.0 11.4	95		1	6	14.2				14.2	30.0	15.8
HT/VHT40, M8 to M15 2 6 14.2 13.4 16.8 30.0 13.2 HT/VHT40, M0 to M7 3 6 14.2 13.4 13.9 18.6 30.0 11.4 HT/VHT40, M8 to M15 3 6 14.2 13.4 13.9 18.6 30.0 11.4	57	HT/VHT40, M0 to M7		6	14.2	13.4					
HT/VHT40, M0 to M7 3 6 14.2 13.4 13.9 18.6 30.0 11.4 HT/VHT40, M8 to M15 3 6 14.2 13.4 13.9 18.6 30.0 11.4				6	_	13.4			16.8	30.0	
HT/VHT40, M8 to M15 3 6 14.2 13.4 13.9 18.6 30.0 11.4				6		1	13.9			30.0	
			+ +			+					
				6	14.2	13.4				30.0	

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	HT/VHT40, M0 to M7	4	6	14.2	13.4	13.9	16.1	20.5	30.0	9.5
	HT/VHT40, M8 to M15	4	6	14.2	13.4	13.9	16.1	20.5	30.0	9.5
	HT/VHT40, M16 to M23	4	6	14.2	13.4	13.9	16.1	20.5	30.0	9.5
	HT/VHT40 Beam Forming, M0 to M7	2	9	14.2	13.4			16.8	27.0	10.2
	HT/VHT40 Beam Forming, M8 to M15	2	6	14.2	13.4			16.8	30.0	13.2
	HT/VHT40 Beam Forming, M0 to M7	3	11	14.2	13.4	13.9		18.6	25.0	6.4
	HT/VHT40 Beam Forming, M8 to M15	3	8	14.2	13.4	13.9		18.6	28.0	9.4
	HT/VHT40 Beam Forming, M16 to M23	3	6	14.2	13.4	13.9		18.6	30.0	11.4
	HT/VHT40 Beam Forming, M0 to M7	4	12	14.2	13.4	13.9	16.1	20.5	24.0	3.5
	HT/VHT40 Beam Forming, M8 to M15	4	9	14.2	13.4	13.9	16.1	20.5	27.0	6.5
	HT/VHT40 Beam Forming, M16 to M23	4	7	14.2	13.4	13.9	16.1	20.5	29.0	8.5
	HT/VHT40 STBC, M0 to M7	2	6	14.2	13.4			16.8	30.0	13.2
	HT/VHT40 STBC, M0 to M7	3	6	14.2	13.4	13.9		18.6	30.0	11.4
	HT/VHT40 STBC, M0 to M7	4	6	14.2	13.4	13.9	16.1	20.5	30.0	9.5
	Non HT20, 6 to 54 Mbps	1	6	14.8				14.8	30.0	15.2
	Non HT20, 6 to 54 Mbps	2	6	13.6	12.7			16.2	30.0	13.8
	Non HT20, 6 to 54 Mbps	3	6	11.0	10.5	11.0		15.6	30.0	14.4
	Non HT20, 6 to 54 Mbps	4	6	8.7	8.5	9.1	10.2	15.2	30.0	14.8
	Non HT20 Beam Forming, 6 to 54 Mbps	2	9	9.7	9.4			12.6	27.0	14.4
	Non HT20 Beam Forming, 6 to 54 Mbps	3	11	5.8	5.5	6.0		10.5	25.0	14.5
	Non HT20 Beam Forming, 6 to 54 Mbps	4	12	2.8	2.4	3.0	4.2	9.2	24.0	14.8
	HT/VHT20, M0 to M7	1	6	15.0				15.0	30.0	15.0
	HT/VHT20, M0 to M7	2	6	13.8	13.0			16.4	30.0	13.6
	HT/VHT20, M8 to M15	2	6	13.8	13.0			16.4	30.0	13.6
	HT/VHT20, M0 to M7	3	6	11.2	10.7	11.3		15.8	30.0	14.2
	HT/VHT20, M8 to M15	3	6	11.2	10.7	11.3		15.8	30.0	14.2
5825	HT/VHT20, M16 to M23	3	6	11.2	10.7	11.3		15.8	30.0	14.2
58	HT/VHT20, M0 to M7	4	6	8.9	8.7	9.4	10.4	15.4	30.0	14.6
	HT/VHT20, M8 to M15	4	6	8.9	8.7	9.4	10.4	15.4	30.0	14.6
	HT/VHT20, M16 to M23	4	6	8.9	8.7	9.4	10.4	15.4	30.0	14.6
	HT/VHT20 Beam Forming, M0 to M7	2	9	10.0	9.6			12.8	27.0	14.2
	HT/VHT20 Beam Forming, M8 to M15	2	6	13.8	13.0			16.4	30.0	13.6
	HT/VHT20 Beam Forming, M0 to M7	3	11	7.0	6.6	7.2		11.7	25.0	13.3
	HT/VHT20 Beam Forming, M8 to M15	3	8	8.9	8.7	9.4		13.8	29.0	15.2
	HT/VHT20 Beam Forming, M16 to M23	3	6	11.2	10.7	11.3		15.8	30.0	14.2
	HT/VHT20 Beam Forming, M0 to M7	4	12	3.1	2.7	3.3	4.4	9.4	24.0	14.6
	HT/VHT20 Beam Forming, M8 to M15	4	9	7.0	6.6	7.2	8.5	13.4	27.0	13.6
	HT/VHT20 Beam Forming, M16 to M23	4	7	8.9	8.7	9.4	10.4	15.4	29.0	13.6
	HT/VHT20 STBC, M0 to M7	2	6	13.8	13.0			16.4	30.0	13.6
	HT/VHT20 STBC, M0 to M7	3	6	11.2	10.7	11.3		15.8	30.0	14.2
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HT/VHT20 STBC, M0 to M7 4 6 8.9 8.7 9.4 10.4 15.4 30.0 14.6

Peak Output Power, 5785 MHz, HT/VHT20 Beam Forming, M0 to M7

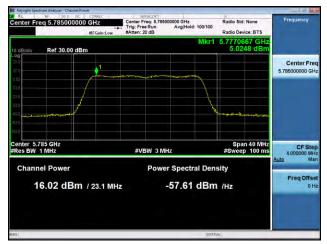




Antenna A



Antenna B



Antenna C

Antenna D



A.4 Power Spectral Density

15.407

The 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 power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Test Procedure

Ref. KDB 789033 D02 General UNII Test Procedures New Rules v01r01

Power Spectral Density

Test Procedure

- 1. Connect the antenna port(s) to the spectrum analyzer input.
- 2. Set the radio in the continuous transmitting mode at full power
- 3. Configure Spectrum analyzer as per test parameters below and Peak search marker
- 4. Capture graphs and record pertinent measurement data.

Ref. KDB 789033 D02 v01r01 section F.5

Power Spectral Density				
Test parameters				
Span = >1.5 times the OBW				
RBW = 500 kHz.				
$VBW \ge 3 \times RBW$				
Sweep = 10s				
Detector = Peak				
Trace = Single Sweep				
Marker = Peak Search				

The "Measure and add 10 log(N) dB technique", where N is the number of outputs, is used for measuring in-band Power Spectral Density. With this technique, spectrum measurements are performed at each output of the device, and the quantity 10 log(4) (or 6dB) is added to the worst case spectrum value before comparing to the emission limit. (ANSI C63.10 2013 section 14.3.2.3)

System Number	Description	Samples	System under test	Support equipment
4	EUT	S01	\checkmark	
1	Support	S02		\checkmark

Tested By :	Date of testing:
Jose Aguirre	01-Jan-16 - 22-Feb-16
Test Result : PASS	

See Appendix C for list of test equipment

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		1	1		1	1				
Frequency (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)	Total PSD (dBm/500MHz)	Limit (dBm/500MHz)	Margin (dB)
	Non HT20, 6 to 54 Mbps	1	6	2.0				2.0	30.0	28.0
	Non HT20, 6 to 54 Mbps	2	9	-2.1	-2.5			0.7	27.0	26.3
	Non HT20, 6 to 54 Mbps	3	11	-3.9	-4.6	-5.4		0.2	25.0	24.8
	Non HT20, 6 to 54 Mbps	4	12	-4.6	-5.7	-6.4	-3.8	1.0	24.0	23.0
	Non HT20 Beam Forming, 6 to 54 Mbps	2	9	-4.6	-5.7			-2.1	27.0	29.1
	Non HT20 Beam Forming, 6 to 54 Mbps	3	11	-7.6	-8.9	-9.5		-3.8	25.0	28.8
	Non HT20 Beam Forming, 6 to 54 Mbps	4	12	-11.1	-12.8	-13.6	-10.6	-5.8	24.0	29.8
	HT/VHT20, M0 to M7	1	6	0.1				0.1	30.0	29.9
	HT/VHT20, M0 to M7	2	9	-3.0	-3.8			-0.4	27.0	27.4
	HT/VHT20, M8 to M15	2	6	-3.0	-3.8			-0.4	30.0	30.4
	HT/VHT20, M0 to M7	3	11	-3.0	-3.8	-4.3		1.1	25.0	23.9
	HT/VHT20, M8 to M15	3	8	-3.0	-3.8	-4.3		1.1	29.0	27.3
	HT/VHT20, M16 to M23	3	6	-3.0	-3.8	-4.3		1.1	30.0	28.9
5745	HT/VHT20, M0 to M7	4	12	-6.0	-6.5	-7.5	-5.2	-0.2	24.0	24.2
2	HT/VHT20, M8 to M15	4	9	-6.0	-6.5	-7.5	-5.2	-0.2	27.0	27.2
	HT/VHT20, M16 to M23	4	7	-6.0	-6.5	-7.5	-5.2	-0.2	29.0	29.2
	HT/VHT20 Beam Forming, M0 to M7	2	9	-6.0	-6.5			-3.2	27.0	30.2
	HT/VHT20 Beam Forming, M8 to M15	2	6	-3.0	-3.8			-0.4	30.0	30.4
	HT/VHT20 Beam Forming, M0 to M7	3	11	-8.6	-9.8	-10.9		-4.9	25.0	29.9
	HT/VHT20 Beam Forming, M8 to M15	3	8	-6.0	-6.5	-7.5		-1.9	28.0	29.9
	HT/VHT20 Beam Forming, M16 to M23	3	6	-3.0	-3.8	-4.3		1.1	30.0	28.9
	HT/VHT20 Beam Forming, M0 to M7	4	12	-11.3	-12.5	-13.6	-10.6	-5.8	24.0	29.8
	HT/VHT20 Beam Forming, M8 to M15	4	9	-8.6	-9.8	-10.9	-8.3	-3.3	27.0	30.3
	HT/VHT20 Beam Forming, M16 to M23	4	7	-6.5	-7.5	-8.7	-6.0	-1.0	29.0	30.0
	HT/VHT20 STBC, M0 to M7	2	6	-3.0	-3.8			-0.4	30.0	30.4
	HT/VHT20 STBC, M0 to M7	3	8	-3.0	-3.8	-4.3		1.1	28.0	26.9
	HT/VHT20 STBC, M0 to M7	4	9	-6.0	-6.5	-7.5	-5.2	-0.2	27.0	27.2
	Non HT40, 6 to 54 Mbps	1	6	-9.1				-9.1	30.0	39.1
	Non HT40, 6 to 54 Mbps	2	9	-12.7	-13.9			-10.2	27.0	37.2
55	Non HT40, 6 to 54 Mbps	3	11	-13.8	-15.3	-16.1		-10.2	25.0	35.2
5755	Non HT40, 6 to 54 Mbps	4	12	-15.1	-16.1	-17.2	-14.3	-9.5	24.0	33.5
	HT/VHT40, M0 to M7	1	6	-6.4				-6.4	30.0	36.4
	HT/VHT40, M0 to M7	2	9	-8.1	-9.4			-5.7	27.0	32.7

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	HT/VHT40, M8 to M15	2	6	-8.1	-9.4			-5.7	30.0	35.7
	HT/VHT40, M0 to M7	3	11	-8.1	-9.4	-10.9		-4.5	25.0	29.5
	HT/VHT40, M8 to M15	3	8	-8.1	-9.4	-10.9		-4.5	28.0	32.6
	HT/VHT40, M16 to M23	3	6	-8.1	-9.4	-10.9		-4.5	30.0	34.5
	HT/VHT40, M0 to M7	4	12	-11.8	-12.7	-13.9	-11.3	-6.3	24.0	30.3
	HT/VHT40, M8 to M15	4	9	-11.8	-12.7	-13.9	-11.3	-6.3	27.0	33.3
	HT/VHT40, M16 to M23	4	7	-11.8	-12.7	-13.9	-11.3	-6.3	29.0	35.3
	HT/VHT40 Beam Forming, M0 to M7	2	9	-11.8	-12.7			-9.2	27.0	36.2
	HT/VHT40 Beam Forming, M8 to M15	2	6	-8.1	-9.4			-5.7	30.0	35.7
	HT/VHT40 Beam Forming, M0 to M7	3	11	-16.6	-17.9	-18.7		-12.9	25.0	37.9
	HT/VHT40 Beam Forming, M8 to M15	3	8	-11.8	-12.7	-13.9		-7.9	28.0	36.0
	HT/VHT40 Beam Forming, M16 to M23	3	6	-8.1	-9.4	-10.9		-4.5	30.0	34.5
	HT/VHT40 Beam Forming, M0 to M7	4	12	-17.3	-18.6	-19.7	-16.4	-11.8	24.0	35.8
	HT/VHT40 Beam Forming, M8 to M15	4	9	-15.6	-16.8	-17.5	-14.8	-10.0	27.0	37.0
	HT/VHT40 Beam Forming, M16 to M23	4	7	-12.5	-13.5	-14.6	-12.0	-7.0	29.0	36.0
	HT/VHT40 STBC, M0 to M7	2	6	-8.1	-9.4			-5.7	30.0	35.7
	HT/VHT40 STBC, M0 to M7	3	8	-8.1	-9.4	-10.9		-4.5	29.0	33.0
	HT/VHT40 STBC, M0 to M7	4	9	-11.8	-12.7	-13.9	-11.3	-6.3	27.0	33.3
				_				_		-
	Non HT80, 6 to 54 Mbps	1	6	-5.1				-5.1	30.0	35.1
	Non HT80, 6 to 54 Mbps	2	9	-8.4	-9.7			-6.0	27.0	33.0
	Non HT80, 6 to 54 Mbps	3	11	-8.4	-9.7	-9.9		-4.5	25.0	29.5
	Non HT80, 6 to 54 Mbps	4	12	-13.1	-13.8	-14.5	-12.5	-7.4	24.0	31.4
	VHT80, M0.1 to M9.1	1	6	-5.9				-5.9	30.0	35.9
	VHT80, M0.1 to M9.1	2	6	-8.4	-8.9			-5.6	30.0	35.6
	VHT80, M0.2 to M9.2	2	6	-8.4	-8.9			-5.6	30.0	35.6
	VHT80, M0.1 to M9.1	3	6	-11.2	-12.3	-12.9		-7.3	30.0	37.3
	VHT80, M0.2 to M9.2	3	6	-11.2	-12.3	-12.9		-7.3	30.0	37.3
	VHT80, M0.3 to M9.3	3	6	-11.2	-12.3	-12.9		-7.3	30.0	37.3
5775	VHT80, M0.1 to M9.1	4	6	-12.0	-13.4	-14.0	-11.4	-6.6	30.0	36.6
57	VHT80, M0.2 to M9.2	4	6	-12.0	-13.4	-14.0	-11.4	-6.6	30.0	36.6
	VHT80, M0.3 to M9.3	4	6	-12.0	-13.4	-14.0	-11.4	-6.6	30.0	36.6
	VHT80 Beam Forming, M0.1 to M9.1	2	6	-8.4	-8.9			-5.6	30.0	35.6
	VHT80 Beam Forming, M0.2 to M9.2	2	6	-8.4	-8.9			-5.6	30.0	35.6
	VHT80 Beam Forming, M0.1 to M9.1	3	6	-11.2	-12.3	-12.9		-7.3	30.0	37.3
	VHT80 Beam Forming, M0.2 to M9.2	3	6	-11.2	-12.3	-12.9		-7.3	30.0	37.3
	VHT80 Beam Forming, M0.3 to M9.3	3	6	-11.2	-12.3	-12.9		-7.3	30.0	37.3
	VHT80 Beam Forming, M0.1 to M9.1	4	6	-12.0	-13.4	-14.0	-11.4	-6.6	30.0	36.6
	VHT80 Beam Forming, M0.2 to M9.2	4	6	-12.0	-13.4	-14.0	-11.4	-6.6	30.0	36.6
	VHT80 Beam Forming, M0.3 to M9.3	4	6	-12.0	-13.4	-14.0	-11.4	-6.6	30.0	36.6
	VHT80 STBC, M0.1 to M9.1	2	6	-8.4	-8.9			-5.6	30.0	35.6

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WHT80 STBC, MO.1 to M9.1											
Non HT20, 6 to 54 Mbps		VHT80 STBC, M0.1 to M9.1	3	6	-11.2	-12.3	-12.9		-7.3	30.0	37.3
Non HT20, 6 to 54 Mbps		VHT80 STBC, M0.1 to M9.1	4	6	-12.0	-13.4	-14.0	-11.4	-6.6	30.0	36.6
Non HT20, 6 to 54 Mbps											
Non HT20, 6 to 54 Mbps		Non HT20, 6 to 54 Mbps	1	6	0.7				0.7	30.0	29.3
Non HT20, 6 to 54 Mbps		Non HT20, 6 to 54 Mbps	2	9	0.7	0.5			3.6	27.0	23.4
Non HT20 Beam Forming, 6 to 54 Mbps 2 9 0.7 0.5 0.7 5.4 25.0 19.6		Non HT20, 6 to 54 Mbps	3	11	0.7	0.5	0.7		5.4	25.0	19.6
Non HT20 Beam Forming, 6 to 54 Mbps 2 9 0.7 0.5 0.7 5.4 25.0 19.6		Non HT20, 6 to 54 Mbps	4	12	0.7	0.5	0.7	2.3	7.1	24.0	16.8
Non HT20 Beam Forming, 6 to 54 Mbps 3			2	9	0.7	0.5			3.6	27.0	23.4
Non HT20 Beam Forming, 6 to 54 Mbps			3	11	0.7	0.5	0.7		5.4	25.0	19.6
HT/VHT20, M0 to M7			4	12	0.7	0.5	0.7	2.3	7.1	24.0	16.8
HT/VHT20, M8 to M15 1			1	6	0.9				0.9	30.0	29.1
HT/VHT20, M8 to M15 HT/VHT20, M0 to M7 HT/VHT20, M8 to M15 HT/VHT20, M8 to M23 HT/VHT20, M8 to M15 HT/VHT20 Beam Forming, M16 to M23 HT/VHT20 Beam Forming, M16 to M23 HT/VHT20 Beam Forming, M16 to M23 HT/VHT20 Beam Forming, M8 to M15 HT/VHT20 Beam Forming, M16 to M23 HT/VHT20 STBC, M0 to M7 HT/VHT40, M0 to M7 HT/V		HT/VHT20, M0 to M7	2	9	0.9	0.7			3.8	27.0	23.2
HT/VHT20, M0 to M7 HT/VHT20, M8 to M15 HT/VHT20, M8 to M15 HT/VHT20, M8 to M15 HT/VHT20, M16 to M23 HT/VHT20 Beam Forming, M0 to M7 HT/VHT20 Beam Forming, M10 to M7 HT/VHT20 Beam Forming, M16 to M15 HT/VHT20 Beam Forming, M16 to M15 HT/VHT20 Beam Forming, M16 to M23 HT/VHT20 STBC, M0 to M7 HT/VHT20, M16 to M16 HT/VHT20, M16 to M15 HT/VHT40, M16 to M15			_	6					1		
HT/VHT20, M16 to M23			3	11	0.9	0.7	0.3		5.4	25.0	19.6
HT/VHT20, M0 to M7		HT/VHT20, M8 to M15	3	8	0.9	0.7	0.3		5.4	28.0	22.6
HT/VHT20, M8 to M15	10	HT/VHT20, M16 to M23	3	6	0.9	0.7	0.3		5.4	30.0	24.6
HT/VHT20, M8 to M15	786	HT/VHT20, M0 to M7	4	12	0.9	0.7	0.3	2.4	7.2	24.0	16.8
HT/VHT20 Beam Forming, M0 to M7	5	HT/VHT20, M8 to M15	4	9	0.9	0.7	0.3	2.4	7.2	27.0	19.8
HT/VHT20 Beam Forming, M0 to M7		HT/VHT20, M16 to M23	4	7	0.9	0.7	0.3	2.4	7.2	29.0	21.8
HT/VHT20 Beam Forming, M8 to M15 A			2	9	0.9	0.7			3.8	27.0	23.2
HT/VHT20 Beam Forming, M0 to M7 HT/VHT20 Beam Forming, M8 to M15 HT/VHT20 Beam Forming, M8 to M15 HT/VHT20 Beam Forming, M16 to M23 HT/VHT20 Beam Forming, M0 to M7 HT/VHT20 Beam Forming, M0 to M7 HT/VHT20 Beam Forming, M8 to M15 HT/VHT20 Beam Forming, M8 to M15 HT/VHT20 Beam Forming, M16 to M23 HT/VHT20 Beam Forming, M16 to M23 HT/VHT20 Beam Forming, M16 to M23 HT/VHT20 STBC, M0 to M7 HT/VHT20, M0 to M7 HT/VHT40, M0 to M15 HT/VHT40, M0 to M15 HT/VHT40, M0 to M15			2	6	0.9	0.7			3.8	30.0	26.2
HT/VHT20 Beam Forming, M8 to M15 HT/VHT20 Beam Forming, M16 to M23 HT/VHT20 Beam Forming, M16 to M23 HT/VHT20 Beam Forming, M0 to M7 HT/VHT20 Beam Forming, M0 to M7 HT/VHT20 Beam Forming, M8 to M15 HT/VHT20 Beam Forming, M16 to M23 HT/VHT20 Beam Forming, M16 to M23 HT/VHT20 STBC, M0 to M7 HT/VHT20, G to 54 Mbps HT/VHT20, G to 54 Mbps HT/VHT40, M0 to M7 HT/VHT40, M0 to M15 HT/VHT40, M0 to M15				11_	0.9	0.7	0.3		_	25.0	19.6
HT/VHT20 Beam Forming, M16 to M23				8	0.9	0.7	0.3		5.4	28.0	22.6
HT/VHT20 Beam Forming, M0 to M7 HT/VHT20 Beam Forming, M8 to M15 HT/VHT20 Beam Forming, M8 to M15 HT/VHT20 Beam Forming, M16 to M23 HT/VHT20 Beam Forming, M16 to M23 HT/VHT20 STBC, M0 to M7 HT/VHT40, M0 to M7 HT/VHT40, M0 to M7 HT/VHT40, M8 to M15 HT/VHT40, M8 to M			3	6	0.9	0.7	0.3		5.4	30.0	24.6
HT/VHT20 Beam Forming, M8 to M15			4	12	0.9	0.7	0.3	2.4	7.2	24.0	16.8
HT/VHT20 Beam Forming, M16 to M23			4	9	0.9	0.7	0.3	2.4	7.2	27.0	19.8
HT/VHT20 STBC, M0 to M7			4	7	0.9	0.7	0.3	2.4	7.2	29.0	21.8
HT/VHT20 STBC, M0 to M7 4 9 0.9 0.7 0.3 2.4 7.2 27.0 19.8 Non HT40, 6 to 54 Mbps 1 6 -2.3 -2.3 30.0 32.3 Non HT40, 6 to 54 Mbps 2 9 -2.3 -1.9 0.9 27.0 26.1 Non HT40, 6 to 54 Mbps 3 11 -2.3 -1.9 -1.5 2.9 25.0 22.1 Non HT40, 6 to 54 Mbps 4 12 -3.3 -2.9 -2.1 -1.4 3.7 24.0 20.3 HT/VHT40, M0 to M7 1 6 -2.5 -2.5 30.0 32.5 HT/VHT40, M0 to M7 2 9 -2.5 -3.2 0.2 27.0 26.8 HT/VHT40, M8 to M15 2 6 -2.5 -3.2 0.2 30.0 29.8 HT/VHT40, M0 to M7 3 11 -2.5 -3.2 -2.7 2.0 25.0 23.0 HT/VHT40, M8 to M15 3 8 -2.5 -3.2 -2.7 2.0 28.0 26.1			2	6	0.9	0.7			3.8		26.2
Non HT40, 6 to 54 Mbps		HT/VHT20 STBC, M0 to M7	3	8	0.9	0.7	0.3		5.4	28.0	22.6
Non HT40, 6 to 54 Mbps 2 9 -2.3 -1.9 0.9 27.0 26.1 Non HT40, 6 to 54 Mbps 3 11 -2.3 -1.9 -1.5 2.9 25.0 22.1 Non HT40, 6 to 54 Mbps 4 12 -3.3 -2.9 -2.1 -1.4 3.7 24.0 20.3 HT/VHT40, M0 to M7 1 6 -2.5 -2.5 30.0 32.5 HT/VHT40, M0 to M7 2 9 -2.5 -3.2 0.2 27.0 26.8 HT/VHT40, M8 to M15 2 6 -2.5 -3.2 0.2 30.0 29.8 HT/VHT40, M0 to M7 3 11 -2.5 -3.2 -2.7 2.0 25.0 23.0 HT/VHT40, M8 to M15 3 8 -2.5 -3.2 -2.7 2.0 28.0 26.1		HT/VHT20 STBC, M0 to M7	4	9	0.9	0.7	0.3	2.4	7.2	27.0	19.8
Non HT40, 6 to 54 Mbps 2 9 -2.3 -1.9 0.9 27.0 26.1 Non HT40, 6 to 54 Mbps 3 11 -2.3 -1.9 -1.5 2.9 25.0 22.1 Non HT40, 6 to 54 Mbps 4 12 -3.3 -2.9 -2.1 -1.4 3.7 24.0 20.3 HT/VHT40, M0 to M7 1 6 -2.5 -2.5 30.0 32.5 HT/VHT40, M0 to M7 2 9 -2.5 -3.2 0.2 27.0 26.8 HT/VHT40, M8 to M15 2 6 -2.5 -3.2 0.2 30.0 29.8 HT/VHT40, M0 to M7 3 11 -2.5 -3.2 -2.7 2.0 25.0 23.0 HT/VHT40, M8 to M15 3 8 -2.5 -3.2 -2.7 2.0 28.0 26.1											
Non HT40, 6 to 54 Mbps 2 9 -2.3 -1.9 0.9 27.0 26.1 Non HT40, 6 to 54 Mbps 3 11 -2.3 -1.9 -1.5 2.9 25.0 22.1 Non HT40, 6 to 54 Mbps 4 12 -3.3 -2.9 -2.1 -1.4 3.7 24.0 20.3 HT/VHT40, M0 to M7 1 6 -2.5 -2.5 30.0 32.5 HT/VHT40, M0 to M7 2 9 -2.5 -3.2 0.2 27.0 26.8 HT/VHT40, M8 to M15 2 6 -2.5 -3.2 0.2 30.0 29.8 HT/VHT40, M0 to M7 3 11 -2.5 -3.2 -2.7 2.0 25.0 23.0 HT/VHT40, M8 to M15 3 8 -2.5 -3.2 -2.7 2.0 28.0 26.1		Non HT40, 6 to 54 Mbps	1	6	-2.3				-2.3	30.0	32.3
Non HT40, 6 to 54 Mbps 3 11 -2.3 -1.9 -1.5 2.9 25.0 22.1 Non HT40, 6 to 54 Mbps 4 12 -3.3 -2.9 -2.1 -1.4 3.7 24.0 20.3 HT/VHT40, M0 to M7 1 6 -2.5		·	_	9	_	-1.9					_
Non HT40, 6 to 54 Mbps 4 12 -3.3 -2.9 -2.1 -1.4 3.7 24.0 20.3 HT/VHT40, M0 to M7 1 6 -2.5			3	11	-2.3	-1.9	-1.5		2.9	25.0	22.1
HT/VHT40, M0 to M7 1 6 -2.5						1		-1.4	_		
HT/VHT40, M0 to M7 2 9 -2.5 -3.2 0.2 27.0 26.8 HT/VHT40, M8 to M15 2 6 -2.5 -3.2 0.2 30.0 29.8 HT/VHT40, M0 to M7 3 11 -2.5 -3.2 -2.7 2.0 25.0 23.0 HT/VHT40, M8 to M15 3 8 -2.5 -3.2 -2.7 2.0 28.0 26.1	95				_						
HT/VHT40, M8 to M15 2 6 -2.5 -3.2 0.2 30.0 29.8 HT/VHT40, M0 to M7 3 11 -2.5 -3.2 -2.7 2.0 25.0 23.0 HT/VHT40, M8 to M15 3 8 -2.5 -3.2 -2.7 2.0 28.0 26.1	579	·	_	9		-3.2					
HT/VHT40, M0 to M7 3 11 -2.5 -3.2 -2.7 2.0 25.0 23.0 HT/VHT40, M8 to M15 3 8 -2.5 -3.2 -2.7 2.0 28.0 26.1			_		_						_
HT/VHT40, M8 to M15 3 8 -2.5 -3.2 -2.7 2.0 28.0 26.1							-2.7				
			_			_			_		
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	HT/VHT40, M0 to M7	4	12	-2.5	-3.2	-2.7	-0.6	3.9	24.0	20.1
	HT/VHT40, M8 to M15	4	9	-2.5	-3.2	-2.7	-0.6	3.9	27.0	23.1
	HT/VHT40, M16 to M23	4	7	-2.5	-3.2	-2.7	-0.6	3.9	29.0	25.1
	HT/VHT40 Beam Forming, M0 to M7	2	9	-2.5	-3.2			0.2	27.0	26.8
	HT/VHT40 Beam Forming, M8 to M15	2	6	-2.5	-3.2			0.2	30.0	29.8
	HT/VHT40 Beam Forming, M0 to M7	3	11	-2.5	-3.2	-2.7		2.0	25.0	23.0
	HT/VHT40 Beam Forming, M8 to M15	3	8	-2.5	-3.2	-2.7		2.0	28.0	26.1
	HT/VHT40 Beam Forming, M16 to M23	3	6	-2.5	-3.2	-2.7		2.0	30.0	28.0
	HT/VHT40 Beam Forming, M0 to M7	4	12	-2.5	-3.2	-2.7	-0.6	3.9	24.0	20.1
	HT/VHT40 Beam Forming, M8 to M15	4	9	-2.5	-3.2	-2.7	-0.6	3.9	27.0	23.1
	HT/VHT40 Beam Forming, M16 to M23	4	7	-2.5	-3.2	-2.7	-0.6	3.9	29.0	25.1
	HT/VHT40 STBC, M0 to M7	2	6	-2.5	-3.2			0.2	30.0	29.8
	HT/VHT40 STBC, M0 to M7	3	8	-2.5	-3.2	-2.7		2.0	28.0	26.1
	HT/VHT40 STBC, M0 to M7	4	9	-2.5	-3.2	-2.7	-0.6	3.9	27.0	23.1
	Non HT20, 6 to 54 Mbps	1	6	1.6				1.6	30.0	28.4
	Non HT20, 6 to 54 Mbps	2	9	0.2	-0.5			2.9	27.0	24.1
	Non HT20, 6 to 54 Mbps	3	11	-1.6	-3.0	-2.4		2.5	25.0	22.6
	Non HT20, 6 to 54 Mbps	4	12	-4.7	-4.8	-4.4	-3.2	1.8	24.0	22.2
	Non HT20 Beam Forming, 6 to 54 Mbps	2	9	-3.4	-3.7			-0.5	27.0	27.5
	Non HT20 Beam Forming, 6 to 54 Mbps	3	11	-7.5	-8.0	-7.1		-2.7	25.0	27.7
	Non HT20 Beam Forming, 6 to 54 Mbps	4	12	-10.5	-11.0	-10.3	-9.3	-4.2	24.0	28.2
	HT/VHT20, M0 to M7	1	6	1.5				1.5	30.0	28.5
	HT/VHT20, M0 to M7	2	9	0.3	-0.6			2.9	27.0	24.1
	HT/VHT20, M8 to M15	2	6	0.3	-0.6			2.9	30.0	27.1
	HT/VHT20, M0 to M7	3	11	-2.4	-2.8	-2.5		2.2	25.0	22.8
	HT/VHT20, M8 to M15	3	8	-2.4	-2.8	-2.5		2.2	28.0	25.8
5825	HT/VHT20, M16 to M23	3	6	-2.4	-2.8	-2.5		2.2	30.0	27.8
58	HT/VHT20, M0 to M7	4	12	-4.7	-4.3	-4.0	-3.4	1.9	24.0	22.0
	HT/VHT20, M8 to M15	4	9	-4.7	-4.3	-4.0	-3.4	1.9	27.0	25.0
	HT/VHT20, M16 to M23	4	7	-4.7	-4.3	-4.0	-3.4	1.9	29.0	27.1
	HT/VHT20 Beam Forming, M0 to M7	2	9	-3.7	-4.0			-0.8	27.0	27.8
	HT/VHT20 Beam Forming, M8 to M15	2	6	0.3	-0.6			2.9	30.0	27.1
	HT/VHT20 Beam Forming, M0 to M7	3	11	-6.6	-6.5	-6.2		-1.7	25.0	26.7
	HT/VHT20 Beam Forming, M8 to M15	3	8	-4.7	-4.3	-4.0		0.4	28.0	27.6
	HT/VHT20 Beam Forming, M16 to M23	3	6	-2.4	-2.8	-2.5		2.2	30.0	27.8
	HT/VHT20 Beam Forming, M0 to M7	4	12	-10.2	-10.9	-10.3	-9.3	-4.1	24.0	28.1
	HT/VHT20 Beam Forming, M8 to M15	4	9	-6.6	-6.5	-6.2	-5.3	-0.1	27.0	27.1
	HT/VHT20 Beam Forming, M16 to M23	4	7	-4.7	-4.3	-4.0	-3.4	1.9	29.0	27.1
	HT/VHT20 STBC, M0 to M7	2	6	0.3	-0.6			2.9	30.0	27.1
	HT/VHT20 STBC, M0 to M7	3	8	-2.4	-2.8	-2.5		2.2	28.0	25.8

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HT/VHT20 STBC, M0 to M7 4 9 -4.7 -4.3 -4.0 -3.4 1.9 27.0 25.0

Power Spectral Density, 5785 MHz, HT/VHT20 Beam Forming, M0 to M7

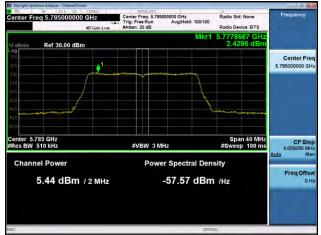




Antenna A



Antenna B



Antenna C

Antenna D



A.5 Conducted Spurious Emissions

15.407 (b) *Undesirable emission limits.* Except as shown in paragraph (b) (7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

- (4) For transmitters operating in the 5.725-5.85 GHz band: All emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an e.i.r.p. of −17 dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an e.i.r.p. of −27 dBm/MHz.
- (6) Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in §15.209.
- (7) The provisions of §15.205 apply to intentional radiators operating under this section.

Test Procedure

Ref. KDB 789033 D02 General UNII Test Procedures New Rules v01r01 ANSI C63.10: 2013

Conducted Spurious Emissions

Test Procedure

- 1. Connect the antenna port(s) to the spectrum analyzer input.
- 2. Place the radio in continuous transmit mode. Use the procedures in KDB 789033 D02 General UNII Test Procedures New Rules v01 to substitute conducted measurements in place of radiated measurements.
- 3. Configure Spectrum analyzer as per test parameters below (be sure to enter all losses between the transmitter output and the spectrum analyzer).
- 4. Record the marker waveform peak to spur difference. Also measure any emissions in the restricted bands.
- 5. The "measure-and-sum technique" is used for measuring in-band transmit power of a device. In the measure-and-sum approach, the conducted emission level is measured at each antenna port. The measured results at the various antenna ports are then summed mathematically to determine the total emission level from the device. Summing is performed in linear power units. The worst case output is recorded.
- 6. Capture graphs and record pertinent measurement data.

Ref. KDB 789033 D02 General UNII Test Procedures New Rules v01r01 ANSI C63.10: 2013 section 12.7.7.3 (average) & 12.7.6 (peak)

Conducted Spurious Emissions Test parameters	
Span = 30MHz to 18GHz / 18GHz to 40GHz RBW = 1 MHz	
VBW ≥ 3 x RBW for Peak, 1kHz for Average	
Sweep = Auto couple	
Detector = Peak	
Trace = Max Hold.	

System Number	Description	Samples	System under test	Support equipment
1	EUT	S01	∇	
I	Support	S02		\square

Tested By :	Date of testing:
Jose Aguirre	01-Jan-16 - 22-Feb-16
Test Result : PASS	

See Appendix C for list of test equipment

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Frequency (MHz)	Mode	Tx Paths	Correlated Antenna Gain (dBi)	Tx 1 Spur Power (dBm)	Tx 2 Spur Power (dBm)	Tx 3 Spur Power (dBm)	Tx 4 Spur Power (dBm)	Total Conducted Spur (dBm)	Limit (dBm)	Margin (dB)
	Non HT20, 6 to 54 Mbps	1	6	-69.2				-63.2	-41.25	22.0
	Non HT20, 6 to 54 Mbps	2	6	-69.2	-68.8			-60.0	-41.25	18.7
	Non HT20, 6 to 54 Mbps	3	6	-69.2	-68.8	-66.6		-57.3	-41.25	16.0
	Non HT20, 6 to 54 Mbps	4	6	-69.2	-68.8	-66.6	-68.6	-56.2	-41.25	14.9
	Non HT20 Beam Forming, 6 to 54 Mbps	2	9	-69.2	-68.8			-57.0	-41.25	15.7
	Non HT20 Beam Forming, 6 to 54 Mbps	3	11	-69.2	-68.8	-66.6		-52.5	-41.25	11.2
	Non HT20 Beam Forming, 6 to 54 Mbps	4	12	-69.2	-68.8	-66.6	-68.6	-50.2	-41.25	8.9
	HT/VHT20, M0 to M7	1	6	-69.1				-63.1	-41.25	21.9
	HT/VHT20, M0 to M7	2	6	-69.1	-68.7			-59.9	-41.25	18.6
	HT/VHT20, M8 to M15	2	6	-69.1	-68.7			-59.9	-41.25	18.6
	HT/VHT20, M0 to M7	3	6	-69.1	-68.7	-69.1		-58.2	-41.25	16.9
	HT/VHT20, M8 to M15	3	6	-69.1	-68.7	-69.1		-58.2	-41.25	16.9
	HT/VHT20, M16 to M23	3	6	-69.1	-68.7	-69.1		-58.2	-41.25	16.9
5745	HT/VHT20, M0 to M7	4	6	-69.1	-68.7	-69.1	-68.9	-56.9	-41.25	15.7
Γ.	HT/VHT20, M8 to M15	4	6	-69.1	-68.7	-69.1	-68.9	-56.9	-41.25	15.7
	HT/VHT20, M16 to M23	4	6	-69.1	-68.7	-69.1	-68.9	-56.9	-41.25	15.7
	HT/VHT20 Beam Forming, M0 to M7	2	9	-69.1	-68.7			-56.9	-41.25	15.6
	HT/VHT20 Beam Forming, M8 to M15	2	6	-69.1	-68.7			-59.9	-41.25	18.6
	HT/VHT20 Beam Forming, M0 to M7	3	11	-69.1	-68.7	-69.1		-53.4	-41.25	12.1
	HT/VHT20 Beam Forming, M8 to M15	3	8	-69.1	-68.7	-69.1		-56.4	-41.25	15.1
	HT/VHT20 Beam Forming, M16 to M23	3	6	-69.1	-68.7	-69.1		-58.2	-41.25	16.9
	HT/VHT20 Beam Forming, M0 to M7	4	12	-69.1	-68.7	-69.1	-68.9	-50.9	-41.25	9.7
	HT/VHT20 Beam Forming, M8 to M15	4	9	-69.1	-68.7	-69.1	-68.9	-53.9	-41.25	12.7
	HT/VHT20 Beam Forming, M16 to M23	4	7	-69.1	-68.7	-69.1	-68.9	-55.7	-41.25	14.5
	HT/VHT20 STBC, M0 to M7	2	6	-69.1	-68.7			-59.9	-41.25	18.6
	HT/VHT20 STBC, M0 to M7	3	6	-69.1	-68.7	-69.1		-58.2	-41.25	16.9
	HT/VHT20 STBC, M0 to M7	4	6	-69.1	-68.7	-69.1	-68.9	-56.9	-41.25	15.7
	Non HT40, 6 to 54 Mbps	1	6	-69.1				-63.1	-41.25	21.9
	Non HT40, 6 to 54 Mbps	2	6	-69.1	-69.1			-60.1	-41.25	18.8
5755	Non HT40, 6 to 54 Mbps	3	6	-69.1	-69.1	-69.3		-58.4	-41.25	17.1
57	Non HT40, 6 to 54 Mbps	4	6	-69.1	-69.1	-69.3	-69.2	-57.2	-41.25	15.9
	HT/VHT40, M0 to M7	1	6	-69.0				-63.0	-41.25	21.8
	HT/VHT40, M0 to M7	2	6	-69.0	-69.1			-60.0	-41.25	18.8

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	HT/VHT40, M8 to M15	2	6	-69.0	-69.1			-60.0	-41.25	18.8
	HT/VHT40, M0 to M7	3	6	-69.0	-69.1	-69.2		-58.3	-41.25	17.1
	HT/VHT40, M8 to M15	3	6	-69.0	-69.1	-69.2		-58.3	-41.25	17.1
	HT/VHT40, M16 to M23	3	6	-69.0	-69.1	-69.2		-58.3	-41.25	17.1
	HT/VHT40, M0 to M7	4	6	-69.0	-69.1	-69.2	-69.1	-57.1	-41.25	15.8
	HT/VHT40, M8 to M15	4	6	-69.0	-69.1	-69.2	-69.1	-57.1	-41.25	15.8
	HT/VHT40, M16 to M23	4	6	-69.0	-69.1	-69.2	-69.1	-57.1	-41.25	15.8
	HT/VHT40 Beam Forming, M0 to M7	2	9	-69.0	-69.1			-57.0	-41.25	15.8
	HT/VHT40 Beam Forming, M8 to M15	2	6	-69.0	-69.1			-60.0	-41.25	18.8
	HT/VHT40 Beam Forming, M0 to M7	3	11	-69.0	-69.1	-69.2		-53.5	-41.25	12.3
	HT/VHT40 Beam Forming, M8 to M15	3	8	-69.0	-69.1	-69.2		-56.5	-41.25	15.3
	HT/VHT40 Beam Forming, M16 to M23	3	6	-69.0	-69.1	-69.2		-58.3	-41.25	17.1
	HT/VHT40 Beam Forming, M0 to M7	4	12	-69.0	-69.1	-69.2	-69.1	-51.1	-41.25	9.8
	HT/VHT40 Beam Forming, M8 to M15	4	9	-69.0	-69.1	-69.2	-69.1	-54.1	-41.25	12.8
	HT/VHT40 Beam Forming, M16 to M23	4	7	-69.0	-69.1	-69.2	-69.1	-55.9	-41.25	14.6
	HT/VHT40 STBC, M0 to M7	2	6	-69.0	-69.1			-60.0	-41.25	18.8
	HT/VHT40 STBC, M0 to M7	3	6	-69.0	-69.1	-69.2		-58.3	-41.25	17.1
	HT/VHT40 STBC, M0 to M7	4	6	-69.0	-69.1	-69.2	-69.1	-57.1	-41.25	15.8
			_	_	_	-	_	_	_	_
	Non HT80, 6 to 54 Mbps	1	6	-69.1				-63.1	-41.25	21.9
	Non HT80, 6 to 54 Mbps	2	6	-69.1	-66.7			-58.7	-41.25	17.5
	Non HT80, 6 to 54 Mbps	3	6	-69.1	-66.7	-69.2		-57.4	-41.25	16.2
	Non HT80, 6 to 54 Mbps	4	6	-69.1	-66.7	-69.2	-69.1	-56.4	-41.25	15.1
	VHT80, M0.1 to M9.1	1	6	-69.2				-63.2	-41.25	22.0
	VHT80, M0.1 to M9.1	2	6	-69.2	-69.2			-60.2	-41.25	18.9
	VHT80, M0.2 to M9.2	2	6	-69.2	-69.2			-60.2	-41.25	18.9
	VHT80, M0.1 to M9.1	3	6	-69.2	-69.2	-69.2		-58.4	-41.25	17.2
	VHT80, M0.2 to M9.2	3	6	-69.2	-69.2	-69.2		-58.4	-41.25	17.2
	VHT80, M0.3 to M9.3	3	6	-69.2	-69.2	-69.2		-58.4	-41.25	17.2
5775	VHT80, M0.1 to M9.1	4	6	-69.2	-69.2	-69.2	-69.2	-57.2	-41.25	15.9
57	VHT80, M0.2 to M9.2	4	6	-69.2	-69.2	-69.2	-69.2	-57.2	-41.25	15.9
	VHT80, M0.3 to M9.3	4	6	-69.2	-69.2	-69.2	-69.2	-57.2	-41.25	15.9
	VHT80 Beam Forming, M0.1 to M9.1	2	6	-69.2	-69.2			-60.2	-41.25	18.9
	VHT80 Beam Forming, M0.2 to M9.2	2	6	-69.2	-69.2			-60.2	-41.25	18.9
	VHT80 Beam Forming, M0.1 to M9.1	3	6	-69.2	-69.2	-69.2		-58.4	-41.25	17.2
	VHT80 Beam Forming, M0.2 to M9.2	3	6	-69.2	-69.2	-69.2		-58.4	-41.25	17.2
	VHT80 Beam Forming, M0.3 to M9.3	3	6	-69.2	-69.2	-69.2		-58.4	-41.25	17.2
	VHT80 Beam Forming, M0.1 to M9.1	4	6	-69.2	-69.2	-69.2	-69.2	-57.2	-41.25	15.9
	VHT80 Beam Forming, M0.2 to M9.2	4	6	-69.2	-69.2	-69.2	-69.2	-57.2	-41.25	15.9
	VHT80 Beam Forming, M0.3 to M9.3	4	6	-69.2	-69.2	-69.2	-69.2	-57.2	-41.25	15.9

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	VHT80 STBC, M0.1 to M9.1	3	6	-69.2	-69.2	-69.2		-58.4	-41.25	17.2
	VHT80 STBC, M0.1 to M9.1	4	6	-69.2	-69.2	-69.2	-69.2	-57.2	-41.25	15.9
	Non HT20, 6 to 54 Mbps	1	6	-69.3				-63.3	-41.25	22.1
	Non HT20, 6 to 54 Mbps	2	6	-69.3	-69.0			-60.1	-41.25	18.9
	Non HT20, 6 to 54 Mbps	3	6	-69.3	-69.0	-68.7		-58.2	-41.25	17.0
	Non HT20, 6 to 54 Mbps	4	6	-69.3	-69.0	-68.7	-66.8	-56.3	-41.25	15.1
	Non HT20 Beam Forming, 6 to 54 Mbps	2	9	-69.3	-69.0			-57.1	-41.25	15.9
	Non HT20 Beam Forming, 6 to 54 Mbps	3	11	-69.3	-69.0	-68.7		-53.4	-41.25	12.2
	Non HT20 Beam Forming, 6 to 54 Mbps	4	12	-69.3	-69.0	-68.7	-66.8	-50.3	-41.25	9.1
	HT/VHT20, M0 to M7	1	6	-69.3				-63.3	-41.25	22.1
	HT/VHT20, M0 to M7	2	6	-69.3	-69.0			-60.1	-41.25	18.9
	HT/VHT20, M8 to M15	2	6	-69.3	-69.0			-60.1	-41.25	18.9
	HT/VHT20, M0 to M7	3	6	-69.3	-69.0	-69.1		-58.4	-41.25	17.1
	HT/VHT20, M8 to M15	3	6	-69.3	-69.0	-69.1		-58.4	-41.25	17.1
10	HT/VHT20, M16 to M23	3	6	-69.3	-69.0	-69.1		-58.4	-41.25	17.1
5785	HT/VHT20, M0 to M7	4	6	-69.3	-69.0	-69.1	-69.0	-57.1	-41.25	15.8
5	HT/VHT20, M8 to M15	4	6	-69.3	-69.0	-69.1	-69.0	-57.1	-41.25	15.8
	HT/VHT20, M16 to M23	4	6	-69.3	-69.0	-69.1	-69.0	-57.1	-41.25	15.8
	HT/VHT20 Beam Forming, M0 to M7	2	9	-69.3	-69.0			-57.1	-41.25	15.9
	HT/VHT20 Beam Forming, M8 to M15	2	6	-69.3	-69.0			-60.1	-41.25	18.9
	HT/VHT20 Beam Forming, M0 to M7	3	11	-69.3	-69.0	-69.1		-53.6	-41.25	12.3
	HT/VHT20 Beam Forming, M8 to M15	3	8	-69.3	-69.0	-69.1		-56.6	-41.25	15.3
	HT/VHT20 Beam Forming, M16 to M23	3	6	-69.3	-69.0	-69.1		-58.4	-41.25	17.1
	HT/VHT20 Beam Forming, M0 to M7	4	12	-69.3	-69.0	-69.1	-69.0	-51.1	-41.25	9.8
	HT/VHT20 Beam Forming, M8 to M15	4	9	-69.3	-69.0	-69.1	-69.0	-54.1	-41.25	12.8
	HT/VHT20 Beam Forming, M16 to M23	4	7	-69.3	-69.0	-69.1	-69.0	-55.9	-41.25	14.6
	HT/VHT20 STBC, M0 to M7	2	6	-69.3	-69.0			-60.1	-41.25	18.9
	HT/VHT20 STBC, M0 to M7	3	6	-69.3	-69.0	-69.1		-58.4	-41.25	17.1
	HT/VHT20 STBC, M0 to M7	4	6	-69.3	-69.0	-69.1	-69.0	-57.1	-41.25	15.8
	Non HT40, 6 to 54 Mbps	1	6	-69.5				-63.5	-41.25	22.3
	Non HT40, 6 to 54 Mbps	2	6	-69.5	-66.7			-58.9	-41.25	17.6
	Non HT40, 6 to 54 Mbps	3	6	-69.5	-66.7	-69.3		-57.5	-41.25	16.3
	Non HT40, 6 to 54 Mbps	4	6	-69.5	-66.7	-69.3	-69.3	-56.5	-41.25	15.3
95	HT/VHT40, M0 to M7	1	6	-69.2				-63.2	-41.25	22.0
5795	HT/VHT40, M0 to M7	2	6	-69.2	-69.5			-60.3	-41.25	19.1
	HT/VHT40, M8 to M15	2	6	-69.2	-69.5			-60.3	-41.25	19.1
	HT/VHT40, M0 to M7	3	6	-69.2	-69.5	-69.4		-58.6	-41.25	17.3
	HT/VHT40, M8 to M15	3	6	-69.2	-69.5	-69.4		-58.6	-41.25	17.3
	HT/VHT40, M16 to M23	3	6	-69.2	-69.5	-69.4		-58.6	-41.25	17.3
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HT/VHT40, M8 to M15											
HT/VHT40 M16 to M23 HT/VHT40 Beam Forming, M0 to M7 D		HT/VHT40, M0 to M7	4	6	-69.2	-69.5	-69.4	-69.4	-57.4	-41.25	16.1
HT/VHT40 Beam Forming, M0 to M7		HT/VHT40, M8 to M15	4	6	-69.2	-69.5	-69.4	-69.4	-57.4	-41.25	16.1
HT/VHT40 Beam Forming, M8 to M15		HT/VHT40, M16 to M23	4	6	-69.2	-69.5	-69.4	-69.4	-57.4	-41.25	16.1
HT/VHT40 Beam Forming, M0 to M7		HT/VHT40 Beam Forming, M0 to M7	2	9	-69.2	-69.5			-57.3	-41.25	16.1
HT/VHT40 Beam Forming, M8 to M15 HT/VHT40 Beam Forming, M16 to M23 HT/VHT40 STBC, M0 to M7 LEFT STAN BEAM FORMING HT/VHT40 STBC, M0 to M7 LEFT STAN BEAM FORMING HT/VHT40 STBC, M0 to M7 LEFT STAN BEAM FORMING HT/VHT40 STBC, M0 to M7 HT/VHT40, M0 to M7 HT/VHT40, M0 to M7 HT/VHT20, M1 to M15 HT/VHT20, M1 to M15 HT/VHT20, M1 to M23 HT/VHT20 Beam Forming, M0 to M7 HT/VHT20 Beam Forming, M1 to M15 HT/VHT20 Beam Forming, M		HT/VHT40 Beam Forming, M8 to M15	2	6	-69.2	-69.5			-60.3	-41.25	19.1
HT/VHT40 Beam Forming, M16 to M23 3 6 -69.2 -69.5 -69.4 -58.6 -41.25 17.3 HT/VHT40 Beam Forming, M0 to M7 4 12 -69.2 -69.5 -69.4 -69.4 51.4 -41.25 10.1 HT/VHT40 Beam Forming, M8 to M15 4 9 -69.2 -69.5 -69.4 -69.4 -59.4 54.2 13.1 HT/VHT40 Beam Forming, M16 to M23 4 7 -69.2 -69.5 -69.5 -69.4 -69.4 55.2 -41.25 13.1 HT/VHT40 STBC, M0 to M7 2 6 -69.2 -69.5 -69.5 -69.4 -69.4 55.2 -41.25 19.1 HT/VHT40 STBC, M0 to M7 3 6 -69.2 -69.5 -69.5 -69.4 -59.4 -59.4 -52.2 12.5 17.3 HT/VHT40 STBC, M0 to M7 4 6 -69.2 -69.5 -69.4 -69.4 -57.4 -41.25 17.3 HT/VHT30 STBC, M0 to M7 4 6 -69.3 -69.5 -69.4 -69.4 -57.4 -41.25 16.1 Non HT20, 6 to 54 Mbps 3 6 -69.3 -66.9 -69.3 -58.9 -41.25 17.7 Non HT20, 6 to 54 Mbps 3 6 -69.3 -66.9 -69.3 -57.6 -41.25 16.3 Non HT20, 6 to 54 Mbps 3 6 -69.3 -66.9 -69.3 -55.9 -41.25 15.2 Non HT20 Beam Forming, 6 to 54 Mbps 4 6 -69.3 -66.9 -69.3 -55.9 -41.25 15.2 Non HT20 Beam Forming, 6 to 54 Mbps 3 11 -69.3 -66.9 -69.3 -55.9 -41.25 11.5 Non HT20 Beam Forming, 6 to 54 Mbps 4 12 -69.3 -66.9 -69.3 -55.9 -41.25 12.9 HT/VHT20, M0 to M7 1 6 -69.1 -69.2 -69.2 -60.1 -41.25 18.9 HT/VHT20, M0 to M7 2 6 -69.1 -69.2 -69.2 -58.4 -41.25 17.1 HT/VHT20, M0 to M7 3 6 -69.1 -69.2 -69.2 -58.4 -41.25 17.1 HT/VHT20, M0 to M7 4 6 -69.1 -69.2 -69.2 -58.4 -41.25 17.1 HT/VHT20, M1 to M3 3 6 -69.1 -69.2 -69.2 -58.4 -41.25 17.1 HT/VHT20, M1 to M3 3 6 -69.1 -69.2 -69.2 -58.4 -41.25 17.1 HT/VHT20, M1 to M3 3 6 -69.1 -69.2 -69.2 -58.4 -41.25 17.1 HT/VHT20, M1 to M3 4 6 -69.1 -69.2 -69.2 -58.4 -41.25 17.1 HT/VHT20 Beam Forming, M1 to M7 4 6 -69.1 -69.2 -69.2 -58.4 -41.25 17.1 HT/VHT20 Beam Forming, M0 to M7 4 6 -69.1 -69.2 -69.2 -59.3 -57.2 -41.25 15.9 HT/VHT20 Beam Forming, M0 to M7 3 6 -69.1 -69.2 -69.2 -69.3 -57.2 -41.25 15.9 HT/VHT20 Beam Forming, M0 to M7 4 6 -69.1 -69.2 -69.2 -69.3 -57.2 -41.25 15.9 HT/VHT20 Beam Forming, M0 to M7 4 6 -69.1 -69.2 -69.2 -69.3 -57.2 -41.25 15.9 HT/VHT20 Beam Forming, M0 to M7 4 7 -69.1 -69.2 -69.2 -69.3 -57.2 -41.25 15.9 HT/VHT20 Beam Forming, M1 to		HT/VHT40 Beam Forming, M0 to M7	3	11	-69.2	-69.5	-69.4		-53.8	-41.25	12.5
HT/VHT40 Beam Forming, M0 to M7 HT/VHT40 Beam Forming, M8 to M15 HT/VHT40 Beam Forming, M8 to M15 HT/VHT40 Beam Forming, M8 to M23 HT/VHT40 Beam Forming, M16 to M23 HT/VHT40 Beam Forming, M16 to M23 HT/VHT40 STBC, M0 to M7 2 6 -69.2 -69.5 -69.4 -69.4 -56.2 -41.25 14.9 HT/VHT40 STBC, M0 to M7 2 6 -69.2 -69.5 -69.4 -69.4 -56.2 -41.25 17.3 HT/VHT40 STBC, M0 to M7 3 6 -69.2 -69.5 -69.4 -69.4 -58.6 -41.25 17.3 HT/VHT40 STBC, M0 to M7 4 6 -69.2 -69.5 -69.4 -69.4 -57.4 -41.25 16.1 Non HT20, 6 to 54 Mbps 1 6 -69.3 -66.9 -59.4 -69.4 -57.4 -41.25 16.1 Non HT20, 6 to 54 Mbps 2 6 -69.3 -66.9 -69.3 -58.9 -41.25 17.7 Non HT20, 6 to 54 Mbps 3 6 -69.3 -66.9 -69.3 -57.6 -41.25 16.2 Non HT20, 6 to 54 Mbps 4 6 -69.3 -66.9 -69.3 -66.9 -58.9 -41.25 17.7 Non HT20, 6 to 54 Mbps 3 6 -69.3 -66.9 -69.3 -69.0 -55.5 -41.25 15.2 Non HT20 Beam Forming, 6 to 54 Mbps 4 6 -69.3 -66.9 -69.3 -69.0 -55.5 -41.25 15.2 Non HT20 Beam Forming, 6 to 54 Mbps 2 9 -69.3 -66.9 -69.3 -69.0 -55.5 -41.25 12.1 Non HT20 Beam Forming, 6 to 54 Mbps 3 11 -69.3 -66.9 -69.3 -69.0 -55.5 -41.25 12.1 Non HT20 Beam Forming, 6 to 54 Mbps 4 12 -69.3 -66.9 -69.3 -69.0 -55.5 -41.25 12.1 HT/VHT20, M0 to M7 1 6 -69.1 -69.2 -69.2 -69.3 -69.0 -50.5 -41.25 12.1 HT/VHT20, M0 to M7 1 6 -69.1 -69.2 -69.2 -50.3 -60.1 -41.25 18.9 HT/VHT20, M0 to M7 3 6 -69.1 -69.2 -69.2 -58.4 -41.25 17.1 HT/VHT20, M16 to M23 3 6 -69.1 -69.2 -69.2 -58.4 -41.25 17.1 HT/VHT20, M16 to M23 3 6 -69.1 -69.2 -69.2 -69.3 -57.2 -41.25 15.9 HT/VHT20, M16 to M23 4 6 -69.1 -69.2 -69.2 -69.3 -57.2 -41.25 15.9 HT/VHT20 Beam Forming, M0 to M7 4 6 -69.1 -69.2 -69.2 -69.3 -57.2 -41.25 15.9 HT/VHT20 Beam Forming, M0 to M7 3 1 -69.1 -69.2 -69.2 -69.3 -57.2 -41.25 15.9 HT/VHT20 Beam Forming, M0 to M7 4 6 -69.1 -69.2 -69.2 -69.3 -57.2 -41.25 15.9 HT/VHT20 Beam Forming, M0 to M7 3 1 -69.1 -69.2 -69.2 -69.3 -57.2 -41.25 15.9 HT/VHT20 Beam Forming, M0 to M7 4 1 -69.1 -69.2 -69.2 -69.3 -57.2 -41.25 15.9 HT/VHT20 Beam Forming, M0 to M7 4 1 -69.1 -69.2 -69.2 -69.3 -57.2 -41		HT/VHT40 Beam Forming, M8 to M15	3	8	-69.2	-69.5	-69.4		-56.8	-41.25	15.5
HT/VHT40 Beam Forming, M8 to M15 HT/VHT40 Beam Forming, M16 to M23 4 7 -69.2 -69.5 -69.4 -69.4 -54.4 -41.25 13.1 HT/VHT40 STBC, M0 to M7 2 6 -69.2 -69.5 -69.4 -69.4 -56.2 -41.25 14.9 HT/VHT40 STBC, M0 to M7 3 6 -69.2 -69.5 -69.4 -58.6 -41.25 17.3 HT/VHT40 STBC, M0 to M7 4 6 -69.2 -69.5 -69.4 -69.4 -57.4 -41.25 16.1 Non HT20, 6 to 54 Mbps 1 6 -69.3 -69.3 -66.9 -69.4 -57.4 -41.25 16.1 Non HT20, 6 to 54 Mbps 2 6 -69.3 -66.9 -58.9 -41.25 17.7 Non HT20, 6 to 54 Mbps 3 6 -69.3 -66.9 -69.3 -57.6 -41.25 15.3 Non HT20, 6 to 54 Mbps 3 6 -69.3 -66.9 -69.3 -57.6 -41.25 15.3 Non HT20, 6 to 54 Mbps 3 6 -69.3 -66.9 -69.3 -57.6 -41.25 15.3 Non HT20, 6 to 54 Mbps 3 1 6 -69.3 -66.9 -69.3 -57.6 -41.25 15.3 Non HT20 Beam Forming, 6 to 54 Mbps 3 11 -69.3 -66.9 -69.3 -55.9 -41.25 15.7 Non HT20 Beam Forming, 6 to 54 Mbps 3 11 -69.3 -66.9 -69.3 -55.9 -41.25 12.7 HT/VHT20, M0 to M7 1 6 -69.1 -69.2 -69.2 -69.3 -69.0 -50.5 -41.25 12.9 HT/VHT20, M0 to M7 2 6 -69.1 -69.2 -69.2 -69.3 -69.0 -50.5 -41.25 18.9 HT/VHT20, M0 to M7 3 6 -69.1 -69.2 -69.2 -69.2 -58.4 -41.25 17.1 HT/VHT20, M8 to M15 3 6 -69.1 -69.2 -69.2 -69.2 -58.4 -41.25 17.1 HT/VHT20, M8 to M15 4 6 -69.1 -69.2 -69.2 -69.3 -58.4 -41.25 17.1 HT/VHT20, M0 to M7 4 6 -69.1 -69.2 -69.2 -69.3 -58.4 -41.25 17.1 HT/VHT20, M1 to M23 3 6 -69.1 -69.2 -69.2 -69.3 -58.4 -41.25 17.1 HT/VHT20, M1 to M23 3 6 -69.1 -69.2 -69.2 -69.3 -58.4 -41.25 17.1 HT/VHT20, M1 to M23 4 6 -69.1 -69.2 -69.2 -69.3 -58.4 -41.25 17.1 HT/VHT20, M1 to M23 4 6 -69.1 -69.2 -69.2 -69.3 -58.4 -41.25 17.1 HT/VHT20, M1 to M23 4 6 -69.1 -69.2 -69.2 -69.3 -58.4 -41.25 17.1 HT/VHT20, M1 to M23 4 6 -69.1 -69.2 -69.2 -69.3 -58.4 -41.25 17.1 HT/VHT20, M1 to M23 4 6 -69.1 -69.2 -69.2 -69.3 -58.4 -41.25 17.1 HT/VHT20, M1 to M23 4 6 -69.1 -69.2 -69.2 -69.3 -58.4 -41.25 17.1 HT/VHT20, M1 to M23 4 6 -69.1 -69.2 -69.2 -69.3 -57.2 -41.25 15.9 HT/VHT20 Beam Forming, M1 to M7 4 1 6 -69.1 -69.2 -69.2 -69.3 -57.2 -41.25 15.9 HT/VHT20 Beam Forming, M1 to M15 4 6 -69.1 -69.2 -69.2 -69.		HT/VHT40 Beam Forming, M16 to M23	3	6	-69.2	-69.5	-69.4		-58.6	-41.25	17.3
HT/VHT40 Beam Forming, M16 to M23		HT/VHT40 Beam Forming, M0 to M7	4	12	-69.2	-69.5	-69.4	-69.4	-51.4	-41.25	10.1
HT/VHT40 STBC, M0 to M7 2 6 -69.2 -69.5 -69.4 -69.4 -58.6 -41.25 17.3 HT/VHT40 STBC, M0 to M7 3 6 -69.2 -69.5 -69.4 -69.4 -58.6 -41.25 17.3 HT/VHT40 STBC, M0 to M7 4 6 -69.2 -69.5 -69.4 -69.4 -57.4 -41.25 16.1 Non HT20, 6 to 54 Mbps 1 6 -69.3 -66.9 -69.3 -66.9 -58.9 -41.25 17.7 Non HT20, 6 to 54 Mbps 3 6 -69.3 -66.9 -69.3 -57.6 -41.25 16.3 Non HT20, 6 to 54 Mbps 3 6 -69.3 -66.9 -69.3 -57.6 -41.25 16.3 Non HT20, 6 to 54 Mbps 3 6 -69.3 -66.9 -69.3 -57.6 -41.25 16.3 Non HT20, 6 to 54 Mbps 3 1 -69.3 -66.9 -69.3 -57.6 -41.25 16.3 Non HT20 Beam Forming, 6 to 54 Mbps 3 11 -69.3 -66.9 -69.3 -69.0 -55.5 -41.25 17.7 Non HT20 Beam Forming, 6 to 54 Mbps 3 11 -69.3 -66.9 -69.3 -69.0 -55.5 -41.25 12.3 Non HT20, M0 to M7 1 6 -69.1 -69.2 -69.3 -69.0 -50.5 -41.25 12.9 HT/VHT20, M0 to M7 2 6 -69.1 -69.2 -69.2 -60.1 -41.25 18.9 HT/VHT20, M0 to M7 3 6 -69.1 -69.2 -69.2 -58.4 -41.25 17.1 HT/VHT20, M0 to M7 3 6 -69.1 -69.2 -69.2 -58.4 -41.25 17.1 HT/VHT20, M0 to M7 4 6 -69.1 -69.2 -69.2 -58.4 -41.25 17.1 HT/VHT20, M0 to M7 4 6 -69.1 -69.2 -69.2 -58.4 -41.25 17.1 HT/VHT20, M0 to M7 4 6 -69.1 -69.2 -69.2 -69.2 -58.4 -41.25 17.1 HT/VHT20, M0 to M7 4 6 -69.1 -69.2 -69.2 -69.2 -58.4 -41.25 17.1 HT/VHT20, M0 to M7 4 6 -69.1 -69.2 -69.2 -69.2 -58.4 -41.25 17.1 HT/VHT20, M0 to M7 4 6 -69.1 -69.2 -69.2 -69.3 -57.2 -41.25 15.9 HT/VHT20, M0 to M15 4 6 -69.1 -69.2 -69.2 -69.2 -58.4 -41.25 17.1 HT/VHT20, M0 to M3 4 6 -69.1 -69.2 -69.2 -69.3 -57.2 -41.25 15.9 HT/VHT20 Beam Forming, M0 to M7 4 6 -69.1 -69.2 -69.2 -69.2 -58.4 -41.25 17.1 HT/VHT20 Beam Forming, M0 to M7 4 6 -69.1 -69.2 -69.2 -69.2 -58.4 -41.25 15.9 HT/VHT20 Beam Forming, M0 to M7 3 11 -69.2 -69.2 -69.2 -69.3 -57.2 -41.25 15.9 HT/VHT20 Beam Forming, M0 to M7 3 11 -69.1 -69.2 -69.2 -69.3 -58.4 -41.25 17.1 HT/VHT20 Beam Forming, M0 to M7 3 11 -69.1 -69.2 -69.2 -69.3 -58.4 -41.25 17.1 HT/VHT20 Beam Forming, M0 to M7 4 12 -69.1 -69.2 -69.2 -69.3 -58.4 -41.25 17.1 HT/VHT20 Beam Forming, M0 to M7 4 12 -69.1 -69.2 -69.2 -69.3 -58.4 -4		HT/VHT40 Beam Forming, M8 to M15	4	9	-69.2	-69.5	-69.4	-69.4	-54.4	-41.25	13.1
HT/VHT40 STBC, M0 to M7 4 6 6-69.2 69.5 69.4 69.4 57.4 41.25 16.1 HT/VHT40 STBC, M0 to M7		HT/VHT40 Beam Forming, M16 to M23	4	7	-69.2	-69.5	-69.4	-69.4	-56.2	-41.25	14.9
Non HT20, 6 to 54 Mbps		HT/VHT40 STBC, M0 to M7	2	6	-69.2	-69.5			-60.3	-41.25	19.1
Non HT20, 6 to 54 Mbps		HT/VHT40 STBC, M0 to M7	3	6	-69.2	-69.5	-69.4		-58.6	-41.25	17.3
Non HT20, 6 to 54 Mbps		HT/VHT40 STBC, M0 to M7	4	6	-69.2	-69.5	-69.4	-69.4	-57.4	-41.25	16.1
Non HT20, 6 to 54 Mbps											
Non HT20, 6 to 54 Mbps		Non HT20, 6 to 54 Mbps	1	6	-69.3				-63.3	-41.25	22.1
Non HT20, 6 to 54 Mbps 4 6 -69.3 -66.9 -69.3 -69.0 -56.5 -41.25 15.2 Non HT20 Beam Forming, 6 to 54 Mbps 3 11 -69.3 -66.9 -69.3 -52.8 -41.25 11.5 Non HT20 Beam Forming, 6 to 54 Mbps 3 11 -69.3 -66.9 -69.3 -52.8 -41.25 11.5 Non HT20 Beam Forming, 6 to 54 Mbps 4 12 -69.3 -66.9 -69.3 -69.0 -50.5 -41.25 12.9 HT/VHT20, M0 to M7		Non HT20, 6 to 54 Mbps	2	6	-69.3	-66.9			-58.9	-41.25	17.7
Non HT20 Beam Forming, 6 to 54 Mbps 3 11 -69.3 -66.9 -69.3 -52.8 -41.25 11.5 Non HT20 Beam Forming, 6 to 54 Mbps 4 12 -69.3 -66.9 -69.3 -69.0 -50.5 -41.25 12.5 Non HT20 Beam Forming, 6 to 54 Mbps 4 12 -69.3 -66.9 -69.3 -69.0 -50.5 -41.25 9.2 HT/VHT20, M0 to M7		Non HT20, 6 to 54 Mbps	3	6	-69.3	-66.9	-69.3		-57.6	-41.25	16.3
Non HT20 Beam Forming, 6 to 54 Mbps Non HT20 Beam Forming, 6 to 54 Mbps HT/VHT20, M0 to M7 Non HT20 Beam Forming, 6 to 54 Mbps HT/VHT20, M0 to M7 HT/VHT20, M0 to M7 HT/VHT20, M0 to M7 Non HT20 Beam Forming, 6 to 54 Mbps HT/VHT20, M0 to M7 Non HT20 Beam Forming, 6 to 54 Mbps HT/VHT20, M0 to M7 Non HT20 Beam Forming, 6 to 54 Mbps HT/VHT20, M0 to M7 Non HT20 Beam Forming, 6 to 54 Mbps Non HT20 Beam Forming, 6 to 54 Mbps HT/VHT20, M0 to M7 Non HT20 Beam Forming, 6 to 54 Mbps Non HT20 Beam Forming, M0 to M7 Non HT20 Beam Forming, M16 to M23 Non HT20 Beam F		Non HT20, 6 to 54 Mbps	4	6	-69.3	-66.9	-69.3	-69.0	-56.5	-41.25	15.2
Non HT20 Beam Forming, 6 to 54 Mbps HT/VHT20, M0 to M7 1 6 -69.1 -69.2 -69.3 -69.0 -50.5 -41.25 21.9 HT/VHT20, M0 to M7 2 6 -69.1 -69.2 -60.1 -41.25 18.9 HT/VHT20, M8 to M15 2 6 -69.1 -69.2 -69.2 -58.4 -41.25 17.1 HT/VHT20, M8 to M15 3 6 -69.1 -69.2 -69.2 -58.4 -41.25 17.1 HT/VHT20, M8 to M15 3 6 -69.1 -69.2 -69.2 -58.4 -41.25 17.1 HT/VHT20, M16 to M23 3 6 -69.1 -69.2 -69.2 -58.4 -41.25 17.1 HT/VHT20, M0 to M7 4 6 -69.1 -69.2 -69.2 -69.3 -57.2 -41.25 15.9 HT/VHT20, M16 to M23 4 6 -69.1 -69.2 -69.2 -69.3 -57.2 -41.25 15.9 HT/VHT20, M16 to M23 4 6 -69.1 -69.2 -69.2 -69.3 -57.2 -41.25 15.9 HT/VHT20 Beam Forming, M0 to M7 2 9 -69.1 -69.2 -69.2 -69.3 -57.2 -41.25 15.9 HT/VHT20 Beam Forming, M8 to M15 2 6 -69.1 -69.2 -69.2 -69.3 -57.2 -41.25 15.9 HT/VHT20 Beam Forming, M8 to M15 3 8 -69.1 -69.2 -69.2 -58.4 -41.25 17.1 HT/VHT20 Beam Forming, M8 to M15 3 8 -69.1 -69.2 -69.2 -69.3 -57.2 -41.25 15.3 HT/VHT20 Beam Forming, M8 to M15 3 8 -69.1 -69.2 -69.2 -69.3 -57.2 -41.25 15.3 HT/VHT20 Beam Forming, M8 to M15 3 8 -69.1 -69.2 -69.2 -69.3 -57.2 -41.25 15.3 HT/VHT20 Beam Forming, M8 to M15 3 8 -69.1 -69.2 -69.2 -69.3 -51.2 -41.25 15.3 HT/VHT20 Beam Forming, M8 to M15 4 9 -69.1 -69.2 -69.2 -69.3 -51.2 -41.25 17.1 HT/VHT20 Beam Forming, M8 to M15 4 9 -69.1 -69.2 -69.2 -69.3 -50.0 -41.25 17.1 HT/VHT20 Beam Forming, M8 to M15 4 9 -69.1 -69.2 -69.2 -69.3 -50.0 -41.25 12.9 HT/VHT20 Beam Forming, M16 to M23 4 7 -69.1 -69.2 -69.2 -69.3 -50.0 -41.25 12.9 HT/VHT20 Beam Forming, M16 to M23 4 7 -69.1 -69.2 -69.2 -69.3 -50.0 -41.25 14.7		Non HT20 Beam Forming, 6 to 54 Mbps	2	9	-69.3	-66.9			-55.9	-41.25	14.7
HT/VHT20, M0 to M7 1 6 -69.1		Non HT20 Beam Forming, 6 to 54 Mbps	3	11	-69.3	-66.9	-69.3		-52.8	-41.25	11.5
HT/VHT20, M0 to M7 2 6 -69.1 -69.2 -69.2 -60.1 -41.25 18.9 HT/VHT20, M8 to M15 2 6 -69.1 -69.2 -69.2 -58.4 -41.25 17.1 HT/VHT20, M8 to M15 3 6 -69.1 -69.2 -69.2 -58.4 -41.25 17.1 HT/VHT20, M8 to M15 3 6 -69.1 -69.2 -69.2 -58.4 -41.25 17.1 HT/VHT20, M16 to M23 3 6 -69.1 -69.2 -69.2 -69.2 -58.4 -41.25 17.1 HT/VHT20, M0 to M7 4 6 -69.1 -69.2 -69.2 -69.2 -58.4 -41.25 17.1 HT/VHT20, M8 to M15 4 6 -69.1 -69.2 -69.2 -69.3 -57.2 -41.25 15.9 HT/VHT20, M8 to M15 4 6 -69.1 -69.2 -69.2 -69.3 -57.2 -41.25 15.9 HT/VHT20, M16 to M23 4 6 -69.1 -69.2 -69.2 -69.3 -57.2 -41.25 15.9 HT/VHT20 Beam Forming, M0 to M7 2 9 -69.1 -69.2 -69.2 -69.3 -57.2 -41.25 15.9 HT/VHT20 Beam Forming, M8 to M15 2 6 -69.1 -69.2 -69.2 -69.2 -58.4 -41.25 18.9 HT/VHT20 Beam Forming, M8 to M15 3 8 -69.1 -69.2 -69.2 -59.2 -56.6 -41.25 15.3 HT/VHT20 Beam Forming, M16 to M23 3 6 -69.1 -69.2 -69.2 -69.2 -58.4 -41.25 17.1 HT/VHT20 Beam Forming, M16 to M23 3 6 -69.1 -69.2 -69.2 -69.2 -58.4 -41.25 17.1 HT/VHT20 Beam Forming, M16 to M23 4 7 -69.1 -69.2 -69.2 -69.3 -51.2 -41.25 12.9 HT/VHT20 Beam Forming, M16 to M23 4 7 -69.1 -69.2 -69.2 -69.3 -56.0 -41.25 12.9 HT/VHT20 STBC, M0 to M7 2 6 -69.1 -69.2 -69.2 -69.3 -56.0 -41.25 12.9		Non HT20 Beam Forming, 6 to 54 Mbps	4	12	-69.3	-66.9	-69.3	-69.0	-50.5	-41.25	9.2
HT/VHT20, M8 to M15 2 6 -69.1 -69.2 -69.2 -58.4 -41.25 17.1 HT/VHT20, M0 to M7 3 6 -69.1 -69.2 -69.2 -58.4 -41.25 17.1 HT/VHT20, M8 to M15 3 6 -69.1 -69.2 -69.2 -58.4 -41.25 17.1 HT/VHT20, M16 to M23 3 6 -69.1 -69.2 -69.2 -58.4 -41.25 17.1 HT/VHT20, M0 to M7 4 6 -69.1 -69.2 -69.2 -69.2 -58.4 -41.25 15.9 HT/VHT20, M8 to M15 4 6 -69.1 -69.2 -69.2 -69.3 -57.2 -41.25 15.9 HT/VHT20, M16 to M23 4 6 -69.1 -69.2 -69.2 -69.3 -57.2 -41.25 15.9 HT/VHT20, Beam Forming, M0 to M7 2 9 -69.1 -69.2 -69.2 -69.3 -57.2 -41.25 15.9 HT/VHT20 Beam Forming, M8 to M15 2 6 -69.1 -69.2 -69.2 -69.3 -57.2 -41.25 15.9 HT/VHT20 Beam Forming, M8 to M15 3 11 -69.1 -69.2 -69.2 -69.2 -53.6 -41.25 12.3 HT/VHT20 Beam Forming, M8 to M15 3 8 -69.1 -69.2 -69.2 -59.2 -56.6 -41.25 15.3 HT/VHT20 Beam Forming, M16 to M23 3 6 -69.1 -69.2 -69.2 -69.2 -58.4 -41.25 17.1 HT/VHT20 Beam Forming, M16 to M23 4 12 -69.1 -69.2 -69.2 -69.3 -51.2 -41.25 19.9 HT/VHT20 Beam Forming, M8 to M15 4 9 -69.1 -69.2 -69.2 -69.3 -51.2 -41.25 12.9 HT/VHT20 Beam Forming, M16 to M23 4 7 -69.1 -69.2 -69.2 -69.3 -56.0 -41.25 12.9 HT/VHT20 Beam Forming, M16 to M23 4 7 -69.1 -69.2 -69.2 -69.3 -56.0 -41.25 12.9 HT/VHT20 Beam Forming, M16 to M23 4 7 -69.1 -69.2 -69.2 -69.3 -56.0 -41.25 12.9 HT/VHT20 Beam Forming, M16 to M23 4 7 -69.1 -69.2 -69.2 -69.3 -56.0 -41.25 12.9		HT/VHT20, M0 to M7	1	6	-69.1				-63.1	-41.25	21.9
HT/VHT20, M0 to M7 HT/VHT20, M8 to M15 HT/VHT20, M8 to M23 HT/VHT20, M0 to M7 HT/VHT20, M0 to M7 HT/VHT20, M0 to M23 HT/VHT20, M0 to M7 HT/VHT20, M16 to M23 HT/VHT20 Beam Forming, M0 to M7 HT/VHT20 Beam Forming, M0 to M7 HT/VHT20 Beam Forming, M8 to M15 HT/VHT20 Beam Forming, M8 to M15 HT/VHT20 Beam Forming, M8 to M15 HT/VHT20 Beam Forming, M16 to M23 HT/VHT20 Beam Forming, M16 to M23 HT/VHT20 Beam Forming, M16 to M23 HT/VHT20 Beam Forming, M0 to M7 HT/VHT20 Beam Forming, M16 to M23 HT/VHT20 Beam Forming, M16 to M23 HT/VHT20 Beam Forming, M8 to M15 HT/VHT20 Beam Forming, M8 to M15 HT/VHT20 Beam Forming, M8 to M15 HT/VHT20 Beam Forming, M16 to M23 HT/VHT20 Beam Forming, M8 to M15 HT/VHT20 Beam Forming, M8 to M15 HT/VHT20 Beam Forming, M16 to M23 HT/WHT20 Beam Forming, M16 to M23 HT/WHT20 Beam Forming, M16 to M23 HT/WHT20 Be		HT/VHT20, M0 to M7	2	6	-69.1	-69.2			-60.1	-41.25	18.9
HT/VHT20, M8 to M15 HT/VHT20, M16 to M23 3 6 -69.1 -69.2 -69.2 -58.4 -41.25 17.1 HT/VHT20, M0 to M7 4 6 -69.1 -69.2 -69.2 -69.3 -57.2 -41.25 15.9 HT/VHT20, M8 to M15 4 6 -69.1 -69.2 -69.2 -69.3 -57.2 -41.25 15.9 HT/VHT20, M8 to M15 4 6 -69.1 -69.2 -69.2 -69.3 -57.2 -41.25 15.9 HT/VHT20, M16 to M23 4 6 -69.1 -69.2 -69.2 -69.3 -57.2 -41.25 15.9 HT/VHT20 Beam Forming, M0 to M7 2 9 -69.1 -69.2 -69.2 -69.3 -57.2 -41.25 15.9 HT/VHT20 Beam Forming, M8 to M15 2 6 -69.1 -69.2 -69.2 -59.3 -57.1 -41.25 15.9 HT/VHT20 Beam Forming, M0 to M7 3 11 -69.1 -69.2 -69.2 -53.6 -41.25 12.3 HT/VHT20 Beam Forming, M8 to M15 3 8 -69.1 -69.2 -69.2 -53.6 -41.25 15.3 HT/VHT20 Beam Forming, M16 to M23 3 6 -69.1 -69.2 -69.2 -58.4 -41.25 17.1 HT/VHT20 Beam Forming, M0 to M7 4 12 -69.1 -69.2 -69.2 -69.3 -51.2 -41.25 9.9 HT/VHT20 Beam Forming, M8 to M15 4 9 -69.1 -69.2 -69.2 -69.3 -54.2 -41.25 12.9 HT/VHT20 Beam Forming, M16 to M23 4 7 -69.1 -69.2 -69.2 -69.3 -56.0 -41.25 14.7 HT/VHT20 Beam Forming, M16 to M23 4 7 -69.1 -69.2 -69.2 -69.3 -56.0 -41.25 14.7 HT/VHT20 Beam Forming, M16 to M23 4 7 -69.1 -69.2 -69.2 -69.3 -56.0 -41.25 18.9		HT/VHT20, M8 to M15	2	6	-69.1	-69.2			-60.1	-41.25	18.9
HT/VHT20, M16 to M23 HT/VHT20, M0 to M7 HT/VHT20, M8 to M15 HT/VHT20, M8 to M15 HT/VHT20, M8 to M23 HT/VHT20, M8 to M15 HT/VHT20, M8 to M23 HT/VHT20 Beam Forming, M0 to M7 HT/VHT20 Beam Forming, M8 to M15 HT/VHT20 Beam Forming, M16 to M23 HT/VHT20 Beam Forming, M0 to M7 HT/VHT20 Beam Forming, M8 to M15 HT/VHT20 Beam Forming, M16 to M23 HT/VHT20 Beam Forming, M16 to M23 HT/VHT20 STBC, M0 to M7		HT/VHT20, M0 to M7	3	6	-69.1	-69.2	-69.2		-58.4	-41.25	17.1
HT/VHT20, M0 to M7 HT/VHT20, M8 to M15 HT/VHT20, M8 to M15 HT/VHT20, M16 to M23 HT/VHT20 Beam Forming, M0 to M7 HT/VHT20 Beam Forming, M8 to M15 HT/VHT20 Beam Forming, M16 to M23 HT/VHT20 Beam Forming, M0 to M7 HT/VHT20 Beam Forming, M0 to M7 HT/VHT20 Beam Forming, M8 to M15 HT/VHT20 Beam Forming, M16 to M23 HT/VHT20 Beam Forming, M16 to M23 HT/VHT20 Beam Forming, M16 to M23 HT/VHT20 Beam Forming, M8 to M15 HT/VHT20 Beam Forming, M16 to M23 HT/VHT20 STBC, M0 to M7		HT/VHT20, M8 to M15	3	6	-69.1	-69.2	-69.2		-58.4	-41.25	17.1
HT/VHT20, M8 to M15 HT/VHT20, M16 to M23 4 6 -69.1 -69.2 -69.2 -69.3 -57.2 -41.25 15.9 HT/VHT20 Beam Forming, M0 to M7 2 9 -69.1 -69.2 -69.2 -69.2 -57.1 -41.25 15.9 HT/VHT20 Beam Forming, M8 to M15 2 6 -69.1 -69.2 -69.2 -69.2 -57.1 -41.25 18.9 HT/VHT20 Beam Forming, M0 to M7 3 11 -69.1 -69.2 -69.2 -53.6 -41.25 12.3 HT/VHT20 Beam Forming, M8 to M15 3 8 -69.1 -69.2 -69.2 -56.6 -41.25 15.3 HT/VHT20 Beam Forming, M16 to M23 3 6 -69.1 -69.2 -69.2 -58.4 -41.25 17.1 HT/VHT20 Beam Forming, M0 to M7 4 12 -69.1 -69.2 -69.2 -69.3 -51.2 -41.25 9.9 HT/VHT20 Beam Forming, M8 to M15 4 9 -69.1 -69.2 -69.2 -69.3 -54.2 -41.25 12.9 HT/VHT20 Beam Forming, M16 to M23 4 7 -69.1 -69.2 -69.2 -69.3 -56.0 -41.25 12.9 HT/VHT20 Beam Forming, M16 to M23 4 7 -69.1 -69.2 -69.2 -69.3 -56.0 -41.25 14.7 HT/VHT20 STBC, M0 to M7 2 6 -69.1 -69.2 -69.2 -69.3 -56.0 -41.25 18.9	25	HT/VHT20, M16 to M23	3	6	-69.1	-69.2	-69.2		-58.4	-41.25	17.1
HT/VHT20, M16 to M23 4 6 -69.1 -69.2 -69.2 -69.3 -57.2 -41.25 15.9 HT/VHT20 Beam Forming, M0 to M7 2 9 -69.1 -69.2 -69.2 -57.1 -41.25 15.9 HT/VHT20 Beam Forming, M8 to M15 2 6 -69.1 -69.2 -69.2 -60.1 -41.25 18.9 HT/VHT20 Beam Forming, M8 to M15 3 8 -69.1 -69.2 -69.2 -53.6 -41.25 15.3 HT/VHT20 Beam Forming, M16 to M23 3 6 -69.1 -69.2 -69.2 -58.4 -41.25 17.1 HT/VHT20 Beam Forming, M0 to M7 4 12 -69.1 -69.2 -69.2 -69.3 -51.2 -41.25 9.9 HT/VHT20 Beam Forming, M8 to M15 4 9 -69.1 -69.2 -69.2 -69.3 -54.2 -41.25 12.9 HT/VHT20 Beam Forming, M16 to M23 4 7 -69.1 -69.2 -69.2 -69.3 -56.0 -41.25 12.9 HT/VHT20 STBC, M0 to M7 2 6 -69.1 -69.2 -69.2	58	HT/VHT20, M0 to M7	4	6	-69.1	-69.2	-69.2	-69.3	-57.2	-41.25	15.9
HT/VHT20 Beam Forming, M0 to M7 2 9 -69.1 -69.2 -57.1 -41.25 15.9 HT/VHT20 Beam Forming, M8 to M15 2 6 -69.1 -69.2 -60.1 -41.25 18.9 HT/VHT20 Beam Forming, M0 to M7 3 11 -69.1 -69.2 -69.2 -53.6 -41.25 12.3 HT/VHT20 Beam Forming, M8 to M15 3 8 -69.1 -69.2 -69.2 -56.6 -41.25 15.3 HT/VHT20 Beam Forming, M16 to M23 3 6 -69.1 -69.2 -69.2 -58.4 -41.25 17.1 HT/VHT20 Beam Forming, M0 to M7 4 12 -69.1 -69.2 -69.2 -69.3 -51.2 -41.25 9.9 HT/VHT20 Beam Forming, M8 to M15 4 9 -69.1 -69.2 -69.2 -69.3 -54.2 -41.25 12.9 HT/VHT20 Beam Forming, M16 to M23 4 7 -69.1 -69.2 -69.2 -69.3 -56.0 -41.25 14.7 HT/VHT20 STBC, M0 to M7 2 6 -69.1 -69.2 -69.2 -69.3 -56.0		HT/VHT20, M8 to M15	4	6	-69.1	-69.2	-69.2	-69.3	-57.2	-41.25	15.9
HT/VHT20 Beam Forming, M8 to M15 2 6 -69.1 -69.2 -60.1 -41.25 18.9 HT/VHT20 Beam Forming, M0 to M7 3 11 -69.1 -69.2 -69.2 -53.6 -41.25 12.3 HT/VHT20 Beam Forming, M8 to M15 3 8 -69.1 -69.2 -69.2 -56.6 -41.25 15.3 HT/VHT20 Beam Forming, M16 to M23 3 6 -69.1 -69.2 -69.2 -58.4 -41.25 17.1 HT/VHT20 Beam Forming, M0 to M7 4 12 -69.1 -69.2 -69.2 -69.3 -51.2 -41.25 9.9 HT/VHT20 Beam Forming, M8 to M15 4 9 -69.1 -69.2 -69.2 -69.3 -54.2 -41.25 12.9 HT/VHT20 Beam Forming, M16 to M23 4 7 -69.1 -69.2 -69.2 -69.3 -56.0 -41.25 14.7 HT/VHT20 STBC, M0 to M7 2 6 -69.1 -69.2 -69.2 -69.3 -56.0 -41.25 18.9		HT/VHT20, M16 to M23	4	6	-69.1	-69.2	-69.2	-69.3	-57.2	-41.25	15.9
HT/VHT20 Beam Forming, M0 to M7 3 11 -69.1 -69.2 -69.2 -53.6 -41.25 12.3 HT/VHT20 Beam Forming, M8 to M15 3 8 -69.1 -69.2 -69.2 -56.6 -41.25 15.3 HT/VHT20 Beam Forming, M16 to M23 3 6 -69.1 -69.2 -69.2 -58.4 -41.25 17.1 HT/VHT20 Beam Forming, M0 to M7 4 12 -69.1 -69.2 -69.2 -69.3 -51.2 -41.25 9.9 HT/VHT20 Beam Forming, M8 to M15 4 9 -69.1 -69.2 -69.2 -69.3 -54.2 -41.25 12.9 HT/VHT20 Beam Forming, M16 to M23 4 7 -69.1 -69.2 -69.2 -69.3 -56.0 -41.25 14.7 HT/VHT20 STBC, M0 to M7 2 6 -69.1 -69.2 -69.2 -69.3 -56.0 -41.25 18.9		HT/VHT20 Beam Forming, M0 to M7	2	9	-69.1	-69.2			-57.1	-41.25	15.9
HT/VHT20 Beam Forming, M8 to M15 3 8 -69.1 -69.2 -69.2 -56.6 -41.25 15.3 HT/VHT20 Beam Forming, M16 to M23 3 6 -69.1 -69.2 -69.2 -58.4 -41.25 17.1 HT/VHT20 Beam Forming, M0 to M7 4 12 -69.1 -69.2 -69.2 -69.3 -51.2 -41.25 9.9 HT/VHT20 Beam Forming, M8 to M15 4 9 -69.1 -69.2 -69.2 -69.3 -54.2 -41.25 12.9 HT/VHT20 Beam Forming, M16 to M23 4 7 -69.1 -69.2 -69.2 -69.3 -56.0 -41.25 14.7 HT/VHT20 STBC, M0 to M7 2 6 -69.1 -69.2 -69.2 -69.3 -56.0 -41.25 18.9		HT/VHT20 Beam Forming, M8 to M15	2	6	-69.1	-69.2			-60.1	-41.25	18.9
HT/VHT20 Beam Forming, M16 to M23 3 6 -69.1 -69.2 -69.2 -58.4 -41.25 17.1 HT/VHT20 Beam Forming, M0 to M7 4 12 -69.1 -69.2 -69.2 -69.3 -51.2 -41.25 9.9 HT/VHT20 Beam Forming, M8 to M15 4 9 -69.1 -69.2 -69.2 -69.3 -54.2 -41.25 12.9 HT/VHT20 Beam Forming, M16 to M23 4 7 -69.1 -69.2 -69.2 -69.3 -56.0 -41.25 14.7 HT/VHT20 STBC, M0 to M7 2 6 -69.1 -69.2 -69.2 -60.1 -41.25 18.9		HT/VHT20 Beam Forming, M0 to M7	3	11	-69.1	-69.2	-69.2		-53.6	-41.25	12.3
HT/VHT20 Beam Forming, M0 to M7 4 12 -69.1 -69.2 -69.2 -69.3 -51.2 -41.25 9.9 HT/VHT20 Beam Forming, M8 to M15 4 9 -69.1 -69.2 -69.2 -69.3 -54.2 -41.25 12.9 HT/VHT20 Beam Forming, M16 to M23 4 7 -69.1 -69.2 -69.2 -69.3 -56.0 -41.25 14.7 HT/VHT20 STBC, M0 to M7 2 6 -69.1 -69.2 -69.2 -60.1 -41.25 18.9		HT/VHT20 Beam Forming, M8 to M15	3	8	-69.1	-69.2	-69.2		-56.6	-41.25	15.3
HT/VHT20 Beam Forming, M8 to M15 4 9 -69.1 -69.2 -69.2 -69.3 -54.2 -41.25 12.9 HT/VHT20 Beam Forming, M16 to M23 4 7 -69.1 -69.2 -69.2 -69.3 -56.0 -41.25 14.7 HT/VHT20 STBC, M0 to M7 2 6 -69.1 -69.2 -69.2 -60.1 -41.25 18.9		HT/VHT20 Beam Forming, M16 to M23	3	6	-69.1	-69.2	-69.2		-58.4	-41.25	17.1
HT/VHT20 Beam Forming, M16 to M23 4 7 -69.1 -69.2 -69.2 -69.3 -56.0 -41.25 14.7 HT/VHT20 STBC, M0 to M7 2 6 -69.1 -69.2 -69.2 -60.1 -41.25 18.9		HT/VHT20 Beam Forming, M0 to M7	4	12	-69.1	-69.2	-69.2	-69.3	-51.2	-41.25	9.9
HT/VHT20 STBC, M0 to M7 2 6 -69.1 -69.2 -60.1 -41.25 18.9		HT/VHT20 Beam Forming, M8 to M15	4	9	-69.1	-69.2	-69.2	-69.3	-54.2	-41.25	12.9
		HT/VHT20 Beam Forming, M16 to M23	4	7	-69.1	-69.2	-69.2	-69.3	-56.0	-41.25	14.7
HT/VHT20 STBC, M0 to M7 3 6 -69.1 -69.2 -69.2 -58.4 -41.25 17.1		HT/VHT20 STBC, M0 to M7	2	6	-69.1	-69.2			-60.1	-41.25	18.9
		HT/VHT20 STBC, M0 to M7	3	6	-69.1	-69.2	-69.2		-58.4	-41.25	17.1

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HT/VHT20 STBC, M0 to M7	4	6	-69.1	-69.2	-69.2	-69.3	-57.2	-41.25	15.9

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Frequency (MHz)	Mode	Tx Paths	Correlated Antenna Gain (dBi)	Tx 1 Spur Power (dBm)	Tx 2 Spur Power (dBm)	Tx 3 Spur Power (dBm)	Tx 4 Spur Power (dBm)	Total Conducted Spur (dBm)	Limit (dBm)	Margin (dB)
	Non HT20, 6 to 54 Mbps	1	6	-60.4				-54.4	-21.25	33.2
	Non HT20, 6 to 54 Mbps	2	6	-60.4	-57.6			-49.8	-21.25	28.5
	Non HT20, 6 to 54 Mbps	3	6	-60.4	-57.6	-60.6		-48.5	-21.25	27.3
	Non HT20, 6 to 54 Mbps	4	6	-60.4	-57.6	-60.6	-58.9	-47.2	-21.25	25.9
	Non HT20 Beam Forming, 6 to 54 Mbps	2	9	-60.4	-57.6			-46.8	-21.25	25.5
	Non HT20 Beam Forming, 6 to 54 Mbps	3	11	-60.4	-57.6	-60.6		-43.7	-21.25	22.5
	Non HT20 Beam Forming, 6 to 54 Mbps	4	12	-60.4	-57.6	-60.6	-58.9	-41.2	-21.25	19.9
	HT/VHT20, M0 to M7	1	6	-58.4				-52.4	-21.25	31.2
	HT/VHT20, M0 to M7	2	6	-58.4	-59.7			-50.0	-21.25	28.7
	HT/VHT20, M8 to M15	2	6	-58.4	-59.7			-50.0	-21.25	28.7
	HT/VHT20, M0 to M7	3	6	-58.4	-59.7	-60.2		-48.6	-21.25	27.3
	HT/VHT20, M8 to M15	3	6	-58.4	-59.7	-60.2		-48.6	-21.25	27.3
	HT/VHT20, M16 to M23	3	6	-58.4	-59.7	-60.2		-48.6	-21.25	27.3
5745	HT/VHT20, M0 to M7	4	6	-58.4	-59.7	-60.2	-60.4	-47.6	-21.25	26.3
5	HT/VHT20, M8 to M15	4	6	-58.4	-59.7	-60.2	-60.4	-47.6	-21.25	26.3
	HT/VHT20, M16 to M23	4	6	-58.4	-59.7	-60.2	-60.4	-47.6	-21.25	26.3
	HT/VHT20 Beam Forming, M0 to M7	2	9	-58.4	-59.7			-47.0	-21.25	25.7
	HT/VHT20 Beam Forming, M8 to M15	2	6	-58.4	-59.7			-50.0	-21.25	28.7
	HT/VHT20 Beam Forming, M0 to M7	3	11	-58.4	-59.7	-60.2		-43.8	-21.25	22.5
	HT/VHT20 Beam Forming, M8 to M15	3	8	-58.4	-59.7	-60.2		-46.8	-21.25	25.5
	HT/VHT20 Beam Forming, M16 to M23	3	6	-58.4	-59.7	-60.2		-48.6	-21.25	27.3
	HT/VHT20 Beam Forming, M0 to M7	4	12	-58.4	-59.7	-60.2	-60.4	-41.6	-21.25	20.3
	HT/VHT20 Beam Forming, M8 to M15	4	9	-58.4	-59.7	-60.2	-60.4	-44.6	-21.25	23.3
	HT/VHT20 Beam Forming, M16 to M23	4	7	-58.4	-59.7	-60.2	-60.4	-46.4	-21.25	25.1
	HT/VHT20 STBC, M0 to M7	2	6	-58.4	-59.7			-50.0	-21.25	28.7
	HT/VHT20 STBC, M0 to M7	3	6	-58.4	-59.7	-60.2		-48.6	-21.25	27.3
	HT/VHT20 STBC, M0 to M7	4	6	-58.4	-59.7	-60.2	-60.4	-47.6	-21.25	26.3
	Non HT40, 6 to 54 Mbps	1	6	-60.0				-54.0	-21.25	32.8
	Non HT40, 6 to 54 Mbps	2	6	-60.0	-60.1			-51.0	-21.25	29.8
55	Non HT40, 6 to 54 Mbps	3	6	-60.0	-60.1	-59.0		-48.9	-21.25	27.6
5755	Non HT40, 6 to 54 Mbps	4	6	-60.0	-60.1	-59.0	-58.5	-47.3	-21.25	26.1
	HT/VHT40, M0 to M7	1	6	-60.7				-54.7	-21.25	33.5
	HT/VHT40, M0 to M7	2	6	-60.7	-58.2			-50.3	-21.25	29.0



	HT/VHT40, M8 to M15	2	6	-60.7	-58.2			-50.3	-21.25	29.0
	HT/VHT40, M0 to M7	3	6	-60.7	-58.2	-61.7		-49.2	-21.25	27.9
	HT/VHT40, M8 to M15	3	6	-60.7	-58.2	-61.7		-49.2	-21.25	27.9
	HT/VHT40, M16 to M23	3	6	-60.7	-58.2	-61.7		-49.2	-21.25	27.9
	HT/VHT40, M0 to M7	4	6	-60.7	-58.2	-61.7	-59.2	-47.7	-21.25	26.5
	HT/VHT40, M8 to M15	4	6	-60.7	-58.2	-61.7	-59.2	-47.7	-21.25	26.5
	HT/VHT40, M16 to M23	4	6	-60.7	-58.2	-61.7	-59.2	-47.7	-21.25	26.5
	HT/VHT40 Beam Forming, M0 to M7	2	9	-60.7	-58.2			-47.3	-21.25	26.0
	HT/VHT40 Beam Forming, M8 to M15	2	6	-60.7	-58.2			-50.3	-21.25	29.0
	HT/VHT40 Beam Forming, M0 to M7	3	11	-60.7	-58.2	-61.7		-44.4	-21.25	23.1
	HT/VHT40 Beam Forming, M8 to M15	3	8	-60.7	-58.2	-61.7		-47.4	-21.25	26.1
	HT/VHT40 Beam Forming, M16 to M23	3	6	-60.7	-58.2	-61.7		-49.2	-21.25	27.9
	HT/VHT40 Beam Forming, M0 to M7	4	12	-60.7	-58.2	-61.7	-59.2	-41.7	-21.25	20.5
	HT/VHT40 Beam Forming, M8 to M15	4	9	-60.7	-58.2	-61.7	-59.2	-44.7	-21.25	23.5
	HT/VHT40 Beam Forming, M16 to M23	4	7	-60.7	-58.2	-61.7	-59.2	-46.5	-21.25	25.3
	HT/VHT40 STBC, M0 to M7	2	6	-60.7	-58.2			-50.3	-21.25	29.0
	HT/VHT40 STBC, M0 to M7	3	6	-60.7	-58.2	-61.7		-49.2	-21.25	27.9
	HT/VHT40 STBC, M0 to M7	4	6	-60.7	-58.2	-61.7	-59.2	-47.7	-21.25	26.5
	-			_					_	_
	Non HT80, 6 to 54 Mbps	1	6	-56.0				-50.0	-21.25	28.8
	Non HT80, 6 to 54 Mbps	2	6	-56.0	-61.2			-48.9	-21.25	27.6
	Non HT80, 6 to 54 Mbps	3	6	-56.0	-61.2	-60.8		-47.9	-21.25	26.6
	Non HT80, 6 to 54 Mbps	4	6	-56.0	-61.2	-60.8	-59.0	-46.7	-21.25	25.5
	VHT80, M0.1 to M9.1	1	6	-58.9				-52.9	-21.25	31.7
	VHT80, M0.1 to M9.1	2	6	-58.9	-59.0			-49.9	-21.25	28.7
	VHT80, M0.2 to M9.2	2	6	-58.9	-59.0			-49.9	-21.25	28.7
	VHT80, M0.1 to M9.1	3	6	-58.9	-59.0	-62.4		-49.1	-21.25	27.8
	VHT80, M0.2 to M9.2	3	6	-58.9	-59.0	-62.4		-49.1	-21.25	27.8
	VHT80, M0.3 to M9.3	3	6	-58.9	-59.0	-62.4		-49.1	-21.25	27.8
5775	VHT80, M0.1 to M9.1	4	6	-58.9	-59.0	-62.4	-58.8	-47.5	-21.25	26.3
57	VHT80, M0.2 to M9.2	4	6	-58.9	-59.0	-62.4	-58.8	-47.5	-21.25	26.3
	VHT80, M0.3 to M9.3	4	6	-58.9	-59.0	-62.4	-58.8	-47.5	-21.25	26.3
	VHT80 Beam Forming, M0.1 to M9.1	2	6	-58.9	-59.0			-49.9	-21.25	28.7
	VHT80 Beam Forming, M0.2 to M9.2	2	6	-58.9	-59.0			-49.9	-21.25	28.7
	VHT80 Beam Forming, M0.1 to M9.1	3	6	-58.9	-59.0	-62.4		-49.1	-21.25	27.8
	VHT80 Beam Forming, M0.2 to M9.2	3	6	-58.9	-59.0	-62.4		-49.1	-21.25	27.8
	VHT80 Beam Forming, M0.3 to M9.3	3	6	-58.9	-59.0	-62.4		-49.1	-21.25	27.8
	VHT80 Beam Forming, M0.1 to M9.1	4	6	-58.9	-59.0	-62.4	-58.8	-47.5	-21.25	26.3
	VHT80 Beam Forming, M0.2 to M9.2	4	6	-58.9	-59.0	-62.4	-58.8	-47.5	-21.25	26.3
	VHT80 Beam Forming, M0.3 to M9.3	4	6	-58.9	-59.0	-62.4	-58.8	-47.5	-21.25	26.3
	VHT80 STBC, M0.1 to M9.1	2	6	-58.9	-59.0			-49.9	-21.25	28.7

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	VHT80 STBC, M0.1 to M9.1	3	6	-58.9	-59.0	-62.4		-49.1	-21.25	27.8
	VHT80 STBC, M0.1 to M9.1	4	6	-58.9	-59.0	-62.4	-58.8	-47.5	-21.25	26.3
	Non HT20, 6 to 54 Mbps	1	6	-60.5				-54.5	-21.25	33.3
	Non HT20, 6 to 54 Mbps	2	6	-60.5	-59.1			-50.7	-21.25	29.5
	Non HT20, 6 to 54 Mbps	3	6	-60.5	-59.1	-57.2		-48.0	-21.25	26.7
	Non HT20, 6 to 54 Mbps	4	6	-60.5	-59.1	-57.2	-58.9	-46.7	-21.25	25.5
	Non HT20 Beam Forming, 6 to 54 Mbps	2	9	-60.5	-59.1			-47.7	-21.25	26.5
	Non HT20 Beam Forming, 6 to 54 Mbps	3	11	-60.5	-59.1	-57.2		-43.2	-21.25	21.9
	Non HT20 Beam Forming, 6 to 54 Mbps	4	12	-60.5	-59.1	-57.2	-58.9	-40.7	-21.25	19.5
	HT/VHT20, M0 to M7	1	6	-58.8				-52.8	-21.25	31.6
	HT/VHT20, M0 to M7	2	6	-58.8	-59.0			-49.9	-21.25	28.6
	HT/VHT20, M8 to M15	2	6	-58.8	-59.0			-49.9	-21.25	28.6
	HT/VHT20, M0 to M7	3	6	-58.8	-59.0	-56.5		-47.2	-21.25	25.9
	HT/VHT20, M8 to M15	3	6	-58.8	-59.0	-56.5		-47.2	-21.25	25.9
,,	HT/VHT20, M16 to M23	3	6	-58.8	-59.0	-56.5		-47.2	-21.25	25.9
5785	HT/VHT20, M0 to M7	4	6	-58.8	-59.0	-56.5	-58.2	-46.0	-21.25	24.7
Γ	HT/VHT20, M8 to M15	4	6	-58.8	-59.0	-56.5	-58.2	-46.0	-21.25	24.7
	HT/VHT20, M16 to M23	4	6	-58.8	-59.0	-56.5	-58.2	-46.0	-21.25	24.7
	HT/VHT20 Beam Forming, M0 to M7	2	9	-58.8	-59.0			-46.9	-21.25	25.6
	HT/VHT20 Beam Forming, M8 to M15	2	6	-58.8	-59.0			-49.9	-21.25	28.6
	HT/VHT20 Beam Forming, M0 to M7	3	11	-58.8	-59.0	-56.5		-42.4	-21.25	21.1
	HT/VHT20 Beam Forming, M8 to M15	3	8	-58.8	-59.0	-56.5		-45.4	-21.25	24.1
	HT/VHT20 Beam Forming, M16 to M23	3	6	-58.8	-59.0	-56.5		-47.2	-21.25	25.9
	HT/VHT20 Beam Forming, M0 to M7	4	12	-58.8	-59.0	-56.5	-58.2	-40.0	-21.25	18.7
	HT/VHT20 Beam Forming, M8 to M15	4	9	-58.8	-59.0	-56.5	-58.2	-43.0	-21.25	21.7
	HT/VHT20 Beam Forming, M16 to M23	4	7	-58.8	-59.0	-56.5	-58.2	-44.8	-21.25	23.5
	HT/VHT20 STBC, M0 to M7	2	6	-58.8	-59.0			-49.9	-21.25	28.6
	HT/VHT20 STBC, M0 to M7	3	6	-58.8	-59.0	-56.5		-47.2	-21.25	25.9
	HT/VHT20 STBC, M0 to M7	4	6	-58.8	-59.0	-56.5	-58.2	-46.0	-21.25	24.7
		_								
	Non HT40, 6 to 54 Mbps	1	6	-58.5				-52.5	-21.25	31.3
	Non HT40, 6 to 54 Mbps	2	6	-58.5	-58.1			-49.3	-21.25	28.0
	Non HT40, 6 to 54 Mbps	3	6	-58.5	-58.1	-60.5		-48.1	-21.25	26.9
	Non HT40, 6 to 54 Mbps	4	6	-58.5	-58.1	-60.5	-59.7	-47.1	-21.25	25.8
95	HT/VHT40, M0 to M7	1	6	-59.7				-53.7	-21.25	32.5
5795	HT/VHT40, M0 to M7	2	6	-59.7	-56.3			-48.7	-21.25	27.4
	HT/VHT40, M8 to M15	2	6	-59.7	-56.3			-48.7	-21.25	27.4
	HT/VHT40, M0 to M7	3	6	-59.7	-56.3	-60.9		-47.7	-21.25	26.5
	HT/VHT40, M8 to M15	3	6	-59.7	-56.3	-60.9		-47.7	-21.25	26.5
	HT/VHT40, M16 to M23	3	6	-59.7	-56.3	-60.9		-47.7	-21.25	26.5

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HT/VHT40, M0 to M7											
HT/VHT40 M16 to M23 HT/VHT40 Beam Forming, M0 to M15 HT/VHT40 Beam Forming, M8 to M15 HT/VHT40 Beam Forming, M16 to M23 HT/VHT40 STBC, M0 to M7 HT 2 6 -59,7 -56,3 -60,9 -58,7 -40,5 -21,25 -23, -40, -40, -40, -40, -40, -40, -40, -40		HT/VHT40, M0 to M7	4	6	-59.7	-56.3	-60.9	-58.7	-46.5	-21.25	25.3
HT/VHT40 Beam Forming, M0 to M7 HT/VHT40 Beam Forming, M8 to M15 2 6 5-59.7 5-6.3		HT/VHT40, M8 to M15	4	6	-59.7	-56.3	-60.9	-58.7	-46.5	-21.25	25.3
HT/VHT40 Beam Forming, M8 to M15 HT/VHT40 Beam Forming, M8 to M15 HT/VHT40 Beam Forming, M16 to M23 HT/VHT40 STBC, M0 to M7 2 6 -59,7 -56,3 -60,9 -58,7 -45,3 -21,25 -24,1 -24,1 -24,1 -24,1 -24,1 -24,1		HT/VHT40, M16 to M23	4	6	-59.7	-56.3	-60.9	-58.7	-46.5	-21.25	25.3
HT/VHT40 Beam Forming, M0 to M7		HT/VHT40 Beam Forming, M0 to M7	2	9	-59.7	-56.3			-45.7	-21.25	24.4
HT/VHT40 Beam Forming, M8 to M15 HT/VHT40 Beam Forming, M16 to M23 3 6 -59.7 -56.3 -60.9 -47.7 -21.25 26.5 HT/VHT40 Beam Forming, M16 to M23 4 12 -59.7 -56.3 -60.9 -58.7 -40.5 -21.25 26.5 HT/VHT40 Beam Forming, M10 to M7 4 12 -59.7 -56.3 -60.9 -58.7 -40.5 -21.25 22.3 HT/VHT40 Beam Forming, M16 to M23 4 7 -59.7 -56.3 -60.9 -58.7 -43.5 -21.25 22.3 HT/VHT40 STBC, M0 to M7 2 6 -59.7 -56.3 -60.9 -58.7 -43.5 -21.25 22.3 HT/VHT40 STBC, M0 to M7 2 6 -59.7 -56.3 -60.9 -58.7 -45.3 -21.25 22.4 HT/VHT40 STBC, M0 to M7 3 6 -59.7 -56.3 -60.9 -58.7 -45.3 -21.25 22.5 HT/VHT40 STBC, M0 to M7 3 6 -59.7 -56.3 -60.9 -58.7 -45.5 -21.25 25.3 Non HT20, 6 to 54 Mbps 1 6 -59.7 -56.3 -60.9 -58.7 -46.5 -21.25 25.3 Non HT20, 6 to 54 Mbps 1 6 -59.7 -59.0 -59.4 -55.7 -40.5 -21.25 22.3 Non HT20, 6 to 54 Mbps 3 6 -59.7 -59.0 -59.4 -59.4 -48.6 -21.25 27.3 Non HT20, 6 to 54 Mbps 4 6 -59.7 -59.0 -59.4 -59.4 -48.6 -21.25 27.3 Non HT20, 6 to 54 Mbps 3 6 -59.7 -59.0 -59.4 -59.4 -48.6 -21.25 27.3 Non HT20 Beam Forming, 6 to 54 Mbps 3 11 -59.7 -59.0 -59.4 -59.4 -48.8 -21.25 26.1 Non HT20 Beam Forming, 6 to 54 Mbps 3 11 -59.7 -59.0 -59.4 -59.4 -48.8 -21.25 26.1 Non HT20 Beam Forming, 6 to 54 Mbps 3 11 -59.7 -59.0 -59.4 -59.2 -48.8 -21.25 22.5 Non HT20 Beam Forming, 6 to 54 Mbps 3 11 -59.7 -59.0 -59.4 -59.2 -48.8 -21.25 22.5 Non HT20 Beam Forming, 6 to 54 Mbps 3 11 -59.7 -59.0 -59.4 -59.2 -48.8 -21.25 22.5 Non HT20 Beam Forming, 6 to 54 Mbps 3 11 -59.7 -59.0 -59.4 -59.2 -48.8 -21.25 22.5 Non HT20 Beam Forming, 6 to 54 Mbps 4 12 -59.7 -59.0 -59.4 -59.2 -48.8 -21.25 22.5 Non HT20 Beam Forming, 6 to 54 Mbps 4 12 -59.7 -59.0 -59.4 -59.2 -48.8 -21.25 22.5 Non HT20 Beam Forming, 6 to 54 Mbps 4 12 -59.7 -59.0 -59.4 -59.2 -48.8 -21.25 22.5 Non HT20 Beam Forming, 6 to 54 Mbps 4 12 -59.7 -59.0 -59.4 -59.2 -48.6 -21.25 22.5 Non HT20 Beam Forming, 6 to 54 Mbps 4 12 -59.7 -59.0 -59.4 -59.2 -48.6 -21.25 22.5 Non HT20 Beam Forming, M0 to M7 1 6 -58.9 -57.1 -60.5 -59.2 -46.7 -21.25 22.5 HT/VH120, M0 to M7 4 6 -58.9 -		HT/VHT40 Beam Forming, M8 to M15	2	6	-59.7	-56.3			-48.7	-21.25	27.4
HT/VHT40 Beam Forming, M16 to M23 HT/VHT40 Beam Forming, M0 to M7 HT/VHT40 Beam Forming, M8 to M15 HT/VHT40 Beam Forming, M8 to M15 HT/VHT40 Beam Forming, M8 to M15 HT/VHT40 Beam Forming, M16 to M23 HT/VHT40 SEBC, M0 to M7 HT/VHT40 STBC, M0 to M7 HT/VHT40, M0 to M7 HT/VHT40, M0 to M7 HT/VHT40, M0 to M7 HT/VHT40, M1 to M15 HT/VHT40, M1 to M15 HT/VHT40, M1 to M15 HT/VHT40, M1 to M7 HT/VHT40, M1 to M7 HT/VHT40, M1 to M7 HT/VHT40, M1 to M23 HT/VHT40, M1 to M7 HT/VHT40, M1 to M7 HT/VHT40, M1 to M7 HT/VHT40, M1 to M7 HT/VHT40 SEAM Forming, M1 to M45 HT/VHT40 SEAM Forming, M1 to M7 HT/VHT40 SEAM Forming, M1 to M7 HT/VHT40 SEAM Forming, M1 to M45 HT/VHT40 SEAM Forming, M1 to M7 HT/VHT40 SEAM Forming, M1 to M45 HT/VHT40 SEAM Form		HT/VHT40 Beam Forming, M0 to M7	3	11	-59.7	-56.3	-60.9		-42.9	-21.25	21.7
HT/VHT40 Beam Forming, M0 to M7 HT/VHT40 Beam Forming, M8 to M15 HT/VHT40 Beam Forming, M16 to M23 HT/VHT40 STBC, M0 to M7 2 6 -59.7 -56.3 -60.9 -58.7 -46.3 -21.25 -27.4 HT/VHT40 STBC, M0 to M7 3 6 -59.7 -56.3 -60.9 -58.7 -46.5 -21.25 -25.3 HT/VHT40 STBC, M0 to M7		HT/VHT40 Beam Forming, M8 to M15	3	8	-59.7	-56.3	-60.9		-45.9	-21.25	24.7
HT/VHT40 Beam Forming, M8 to M15		HT/VHT40 Beam Forming, M16 to M23	3	6	-59.7	-56.3	-60.9		-47.7	-21.25	26.5
HT/VHT40 Beam Forming, M16 to M23		HT/VHT40 Beam Forming, M0 to M7	4	12	-59.7	-56.3	-60.9	-58.7	-40.5	-21.25	19.3
HT/VHT40 STBC, M0 to M7		HT/VHT40 Beam Forming, M8 to M15	4	9	-59.7	-56.3	-60.9	-58.7	-43.5	-21.25	22.3
HT/VHT40 STBC, M0 to M7 4 6 -59.7 -56.3 -60.9 -47.7 -21.25 26.5 HT/VHT40 STBC, M0 to M7 4 6 -59.7 -56.3 -60.9 -58.7 -46.5 -21.25 25.3 Non HT20, 6 to 54 Mbps 1 6 -59.7 -59.0 -59.0 -50.3 -21.25 29.1 Non HT20, 6 to 54 Mbps 3 6 -59.7 -59.0 -59.4 -48.6 -21.25 27.3 Non HT20, 6 to 54 Mbps 4 6 -59.7 -59.0 -59.4 -48.6 -21.25 27.3 Non HT20, 6 to 54 Mbps 4 6 -59.7 -59.0 -59.4 -48.6 -21.25 27.3 Non HT20 Beam Forming, 6 to 54 Mbps 3 11 -59.7 -59.0 -59.4 -55.2 -45.9 -21.25 24.6 Non HT20 Beam Forming, 6 to 54 Mbps 3 11 -59.7 -59.0 -59.4 -55.2 -45.9 -21.25 22.6 Non HT20 Beam Forming, 6 to 54 Mbps 4 12 -59.7 -59.0 -59.4 -55.2 -39.9 -21.25 28.6 HT/VHT20, M0 to M7 1 6 -58.9 -57.1 -60.5 -59.4 -55.2 -39.9 -21.25 28.6 HT/VHT20, M0 to M7 2 6 -58.9 -57.1 -60.5 -47.8 -21.25 26.6 HT/VHT20, M16 to M23 3 6 -58.9 -57.1 -60.5 -47.8 -21.25 26.6 HT/VHT20, M16 to M23 4 6 -58.9 -57.1 -60.5 -47.8 -21.25 26.6 HT/VHT20, M16 to M23 4 6 -58.9 -57.1 -60.5 -47.8 -21.25 25.5 HT/VHT20, M16 to M23 4 6 -58.9 -57.1 -60.5 -59.2 -46.7 -21.25 25.5 HT/VHT20 Beam Forming, M0 to M7 2 9 -58.9 -57.1 -60.5 -59.2 -46.7 -21.25 25.5 HT/VHT20 Beam Forming, M0 to M7 2 9 -58.9 -57.1 -60.5 -59.2 -46.7 -21.25 25.5 HT/VHT20 Beam Forming, M0 to M7 2 9 -58.9 -57.1 -60.5 -59.2 -46.7 -21.25 25.5 HT/VHT20 Beam Forming, M16 to M23 3 6 -58.9 -57.1 -60.5 -59.2 -46.7 -21.25 25.5 HT/VHT20 Beam Forming, M10 to M7 3 11 -58.9 -57.1 -60.5 -59.2 -46.7 -21.25 25.5 HT/VHT20 Beam Forming, M10 to M7 3 11 -58.9 -57.1 -60.5 -59.2 -40.7 -21.25 25.5 HT/VHT20 Beam Forming, M10 to M7 4 12 -58.9 -57.1 -60.5 -59.2 -40.7 -21.25 25.6 HT/VHT20 Beam Forming, M10 to M7 4 12 -58.9 -57.1 -60.5 -59.2 -40.7 -21.25 25.5 HT/VHT20 Beam Forming, M10 to M7 4 12 -58.9 -57.1 -60.5 -59.2 -40.7 -21.25 22.6 HT/VHT20 Beam Forming, M10 to M7 4 12 -58.9 -57.1 -60.5 -59.2 -40.7 -21.25 22.8 HT/VHT20 Beam Forming, M10 to M7 4 12 -58.9 -57.1 -60.5 -59.2 -40.7 -21.25 22.8 HT/VHT20 Beam Forming, M10 to M7 4 12 -58.9 -57.1 -60.5 -59.2 -40.7 -21.25 22.8 HT/VHT20 Beam Forming,		HT/VHT40 Beam Forming, M16 to M23	4	7	-59.7	-56.3	-60.9	-58.7	-45.3	-21.25	24.1
Non HT20, 6 to 54 Mbps		HT/VHT40 STBC, M0 to M7	2	6	-59.7	-56.3			-48.7	-21.25	27.4
Non HT20, 6 to 54 Mbps		HT/VHT40 STBC, M0 to M7	3	6	-59.7	-56.3	-60.9		-47.7	-21.25	26.5
Non HT20, 6 to 54 Mbps 2 6 -59.7 -59.0 -50.3 -21.25 29.1		HT/VHT40 STBC, M0 to M7	4	6	-59.7	-56.3	-60.9	-58.7	-46.5	-21.25	25.3
Non HT20, 6 to 54 Mbps 2 6 -59.7 -59.0 -50.3 -21.25 29.1											
Non HT20, 6 to 54 Mbps		Non HT20, 6 to 54 Mbps	1	6	-59.7				-53.7	-21.25	32.5
Non HT20, 6 to 54 Mbps		Non HT20, 6 to 54 Mbps	2	6	-59.7	-59.0			-50.3	-21.25	29.1
Non HT20 Beam Forming, 6 to 54 Mbps 3 11 -59.7 -59.0 -59.4 -43.8 -21.25 26.1 Non HT20 Beam Forming, 6 to 54 Mbps 4 12 -59.7 -59.0 -59.4 -55.2 -39.9 -21.25 18.6 HT/VHT20, M0 to M7		Non HT20, 6 to 54 Mbps	3	6	-59.7	-59.0	-59.4		-48.6	-21.25	27.3
Non HT20 Beam Forming, 6 to 54 Mbps 3		Non HT20, 6 to 54 Mbps	4	6	-59.7	-59.0	-59.4	-55.2	-45.9	-21.25	24.6
Non HT20 Beam Forming, 6 to 54 Mbps HT/VHT20, M0 to M7 1 6 -58.9 HT/VHT20, M0 to M7 1 6 -58.9 HT/VHT20, M8 to M15 HT/VHT20, M8 to M15 HT/VHT20, M8 to M15 1 6 -58.9 HT/VHT20, M8 to M15 2 6 -58.9 HT/VHT20, M8 to M15 3 6 -58.9 HT/VHT20, M8 to M15 4 6 -58.9 HT/VHT20, M8 to M15 HT/VHT20 Beam Forming, M0 to M7 HT/VHT20 Beam Forming, M8 to M15 HT/VHT20 Beam Forming, M8		Non HT20 Beam Forming, 6 to 54 Mbps	2	9	-59.7	-59.0			-47.3	-21.25	26.1
HT/VHT20, M0 to M7 HT/VHT20, M0 to M7 HT/VHT20, M0 to M7 HT/VHT20, M8 to M15 ENDING HT/VHT20, M8 to M15 HT/VHT20, M8 to M15 ENDING HT/VHT20, M16 to M23 ENDING HT/VHT20, M8 to M15 ENDING HT/V		Non HT20 Beam Forming, 6 to 54 Mbps	3	11	-59.7	-59.0	-59.4		-43.8	-21.25	22.5
HT/VHT20, M0 to M7 2 6 -58.9 -57.1 -60.5 -48.9 -21.25 27.6 HT/VHT20, M8 to M15 3 6 -58.9 -57.1 -60.5 -47.8 -21.25 26.6 HT/VHT20, M8 to M15 3 6 -58.9 -57.1 -60.5 -47.8 -21.25 26.6 HT/VHT20, M8 to M15 3 6 -58.9 -57.1 -60.5 -47.8 -21.25 26.6 HT/VHT20, M16 to M23 3 6 -58.9 -57.1 -60.5 -47.8 -21.25 26.6 HT/VHT20, M0 to M7 4 6 -58.9 -57.1 -60.5 -59.2 -46.7 -21.25 25.5 HT/VHT20, M8 to M15 4 6 -58.9 -57.1 -60.5 -59.2 -46.7 -21.25 25.5 HT/VHT20, M16 to M23 4 6 -58.9 -57.1 -60.5 -59.2 -46.7 -21.25 25.5 HT/VHT20 Beam Forming, M0 to M7 2 9 -58.9 -57.1 -60.5 -59.2 -46.7 -21.25 25.5 HT/VHT20 Beam Forming, M8 to M15 2 6 -58.9 -57.1 -60.5 -59.2 -46.7 -21.25 25.5 HT/VHT20 Beam Forming, M0 to M7 3 11 -58.9 -57.1 -60.5 -59.2 -46.0 -21.25 21.8 HT/VHT20 Beam Forming, M16 to M23 3 6 -58.9 -57.1 -60.5 -59.2 -46.7 -21.25 25.6 HT/VHT20 Beam Forming, M0 to M7 3 11 -58.9 -57.1 -60.5 -59.2 -40.0 -21.25 24.8 HT/VHT20 Beam Forming, M16 to M23 3 6 -58.9 -57.1 -60.5 -59.2 -40.7 -21.25 24.8 HT/VHT20 Beam Forming, M16 to M23 4 7 -58.9 -57.1 -60.5 -59.2 -43.7 -21.25 22.5 HT/VHT20 Beam Forming, M8 to M15 4 9 -58.9 -57.1 -60.5 -59.2 -43.7 -21.25 22.5 HT/VHT20 Beam Forming, M8 to M15 4 7 -58.9 -57.1 -60.5 -59.2 -45.5 -21.25 24.8 HT/VHT20 STBC, M0 to M7 2 6 -58.9 -57.1 -60.5 -59.2 -45.5 -21.25 22.5		Non HT20 Beam Forming, 6 to 54 Mbps	4	12	-59.7	-59.0	-59.4	-55.2	-39.9	-21.25	18.6
HT/VHT20, M8 to M15 2 6 -58.9 -57.1 -60.5 -48.9 -21.25 27.6 HT/VHT20, M0 to M7 3 6 -58.9 -57.1 -60.5 -47.8 -21.25 26.6 HT/VHT20, M8 to M15 3 6 -58.9 -57.1 -60.5 -47.8 -21.25 26.6 HT/VHT20, M16 to M23 3 6 -58.9 -57.1 -60.5 -47.8 -21.25 26.6 HT/VHT20, M16 to M23 3 6 -58.9 -57.1 -60.5 -59.2 -46.7 -21.25 25.5 HT/VHT20, M8 to M15 4 6 -58.9 -57.1 -60.5 -59.2 -46.7 -21.25 25.5 HT/VHT20, M16 to M23 4 6 -58.9 -57.1 -60.5 -59.2 -46.7 -21.25 25.5 HT/VHT20 Beam Forming, M0 to M7 2 9 -58.9 -57.1 -60.5 -59.2 -46.7 -21.25 25.5 HT/VHT20 Beam Forming, M8 to M15 2 6 -58.9 -57.1 -60.5 -59.2 -46.7 -21.25 25.5 HT/VHT20 Beam Forming, M0 to M7 3 11 -58.9 -57.1 -60.5 -59.2 -46.0 -21.25 27.6 HT/VHT20 Beam Forming, M8 to M15 3 8 -58.9 -57.1 -60.5 -43.0 -21.25 24.8 HT/VHT20 Beam Forming, M16 to M23 3 6 -58.9 -57.1 -60.5 -59.2 -40.7 -21.25 24.8 HT/VHT20 Beam Forming, M16 to M23 3 6 -58.9 -57.1 -60.5 -59.2 -40.7 -21.25 24.8 HT/VHT20 Beam Forming, M0 to M7 4 12 -58.9 -57.1 -60.5 -59.2 -43.7 -21.25 26.6 HT/VHT20 Beam Forming, M8 to M15 4 9 -58.9 -57.1 -60.5 -59.2 -43.7 -21.25 22.5 HT/VHT20 Beam Forming, M8 to M15 4 7 -58.9 -57.1 -60.5 -59.2 -45.5 -21.25 24.3 HT/VHT20 Beam Forming, M16 to M23 4 7 -58.9 -57.1 -60.5 -59.2 -45.5 -21.25 24.3 HT/VHT20 STBC, M0 to M7 2 6 -58.9 -57.1 -60.5 -59.2 -45.5 -21.25 24.3 HT/VHT20 STBC, M0 to M7 4 7 -58.9 -57.1 -60.5 -59.2 -45.5 -21.25 24.3		HT/VHT20, M0 to M7	1	6	-58.9				-52.9	-21.25	31.7
HT/VHT20, M0 to M7 HT/VHT20, M8 to M15 HT/VHT20, M8 to M23 HT/VHT20, M0 to M7 HT/VHT20, M16 to M23 HT/VHT20 Beam Forming, M0 to M7 HT/VHT20 Beam Forming, M8 to M15 HT/VHT20 Beam Forming, M8 to M15 HT/VHT20 Beam Forming, M8 to M15 HT/VHT20 Beam Forming, M0 to M7 HT/VHT20 Beam Forming, M16 to M23 HT/VHT20 Beam Forming, M16 to M23 HT/VHT20 Beam Forming, M0 to M7 HT/VHT20 Beam Forming, M0 to M7 HT/VHT20 Beam Forming, M16 to M23 HT/VHT20 Beam Forming, M0 to M7 HT/VHT20 Beam Forming, M8 to M15 HT/VHT20 Beam Forming, M16 to M23 HT/VHT20 Beam Forming, M8 to M15 HT/VHT20 Beam Forming, M16 to M23 HT/VHT20 Beam Forming, M16 to M23 HT/VHT20 STBC, M0 to M7 HT/VHT20 STBC, M0 to M7 HT/VHT20 STBC, M0 to M7		HT/VHT20, M0 to M7	2	6	-58.9	-57.1			-48.9	-21.25	27.6
HT/VHT20, M8 to M15 HT/VHT20, M16 to M23 3 6 -58.9 -57.1 -60.5 -47.8 -21.25 26.6 HT/VHT20, M0 to M7 4 6 -58.9 -57.1 -60.5 -59.2 -46.7 -21.25 25.5 HT/VHT20, M8 to M15 4 6 -58.9 -57.1 -60.5 -59.2 -46.7 -21.25 25.5 HT/VHT20, M16 to M23 4 6 -58.9 -57.1 -60.5 -59.2 -46.7 -21.25 25.5 HT/VHT20, M16 to M23 4 6 -58.9 -57.1 -60.5 -59.2 -46.7 -21.25 25.5 HT/VHT20 Beam Forming, M0 to M7 2 9 -58.9 -57.1 -60.5 -59.2 -46.7 -21.25 27.6 HT/VHT20 Beam Forming, M8 to M15 2 6 -58.9 -57.1 -60.5 -59.2 -46.7 -21.25 27.6 HT/VHT20 Beam Forming, M8 to M15 3 11 -58.9 -57.1 -60.5 -48.9 -21.25 27.8 HT/VHT20 Beam Forming, M8 to M15 3 8 -58.9 -57.1 -60.5 -43.0 -21.25 24.8 HT/VHT20 Beam Forming, M16 to M23 3 6 -58.9 -57.1 -60.5 -47.8 -21.25 26.6 HT/VHT20 Beam Forming, M16 to M23 3 6 -58.9 -57.1 -60.5 -59.2 -40.7 -21.25 24.8 HT/VHT20 Beam Forming, M8 to M15 4 12 -58.9 -57.1 -60.5 -59.2 -40.7 -21.25 22.5 HT/VHT20 Beam Forming, M8 to M15 4 9 -58.9 -57.1 -60.5 -59.2 -43.7 -21.25 22.5 HT/VHT20 Beam Forming, M16 to M23 4 7 -58.9 -57.1 -60.5 -59.2 -43.7 -21.25 22.5 HT/VHT20 Beam Forming, M16 to M23 4 7 -58.9 -57.1 -60.5 -59.2 -45.5 -21.25 24.3 HT/VHT20 STBC, M0 to M7 2 6 -58.9 -57.1 -60.5 -59.2 -45.5 -21.25 24.3		HT/VHT20, M8 to M15	2	6	-58.9	-57.1			-48.9	-21.25	27.6
HT/VHT20, M16 to M23 HT/VHT20, M0 to M7 HT/VHT20, M0 to M7 HT/VHT20, M0 to M7 HT/VHT20, M8 to M15 HT/VHT20, M8 to M15 HT/VHT20, M8 to M15 HT/VHT20, M8 to M23 HT/VHT20, M8 to M23 HT/VHT20, M8 to M23 HT/VHT20, M8 to M23 HT/VHT20, M16 to M23 HT/VHT20, M16 to M23 HT/VHT20 Beam Forming, M0 to M7 HT/VHT20 Beam Forming, M0 to M7 HT/VHT20 Beam Forming, M8 to M15 HT/VHT20 Beam Forming, M16 to M23 HT/VHT20 Beam Forming, M0 to M7 HT/VHT20 Beam Forming, M0 to M7 HT/VHT20 Beam Forming, M16 to M23 HT/VHT20 Beam Forming, M8 to M15 HT/VHT20 Beam Forming, M16 to M23 HT/VHT20 STBC, M0 to M7 HT/VHT20 STBC, M0 to M7 HT/VHT20 STBC, M0 to M7		HT/VHT20, M0 to M7	3	6	-58.9	-57.1	-60.5		-47.8	-21.25	26.6
HT/VHT20, M0 to M7 HT/VHT20, M8 to M15 HT/VHT20, M8 to M15 HT/VHT20, M16 to M23 HT/VHT20 Beam Forming, M0 to M7 HT/VHT20 Beam Forming, M8 to M15 HT/VHT20 Beam Forming, M8 to M15 HT/VHT20 Beam Forming, M8 to M15 HT/VHT20 Beam Forming, M16 to M23 HT/VHT20 Beam Forming, M16 to M23 HT/VHT20 Beam Forming, M0 to M7 HT/VHT20 Beam Forming, M0 to M7 HT/VHT20 Beam Forming, M0 to M7 HT/VHT20 Beam Forming, M16 to M23 HT/VHT20 STBC, M0 to M7 HT/VHT20 STBC, M0 to M7 HT/VHT20 STBC, M0 to M7		HT/VHT20, M8 to M15	3	6	-58.9	-57.1	-60.5		-47.8	-21.25	26.6
HT/VHT20, M8 to M15 HT/VHT20, M16 to M23 4 6 -58.9 -57.1 -60.5 -59.2 -46.7 -21.25 25.5 HT/VHT20 Beam Forming, M0 to M7 2 9 -58.9 -57.1 -60.5 -59.2 -46.7 -21.25 25.5 HT/VHT20 Beam Forming, M8 to M15 2 6 -58.9 -57.1 -60.5 -59.2 -46.7 -21.25 25.5 HT/VHT20 Beam Forming, M8 to M15 2 6 -58.9 -57.1 -60.5 -48.9 -21.25 27.6 HT/VHT20 Beam Forming, M0 to M7 3 11 -58.9 -57.1 -60.5 -43.0 -21.25 21.8 HT/VHT20 Beam Forming, M8 to M15 3 8 -58.9 -57.1 -60.5 -46.0 -21.25 24.8 HT/VHT20 Beam Forming, M16 to M23 3 6 -58.9 -57.1 -60.5 -47.8 -21.25 26.6 HT/VHT20 Beam Forming, M0 to M7 4 12 -58.9 -57.1 -60.5 -59.2 -40.7 -21.25 19.5 HT/VHT20 Beam Forming, M8 to M15 4 9 -58.9 -57.1 -60.5 -59.2 -43.7 -21.25 22.5 HT/VHT20 Beam Forming, M16 to M23 4 7 -58.9 -57.1 -60.5 -59.2 -45.5 -21.25 24.3 HT/VHT20 STBC, M0 to M7 2 6 -58.9 -57.1 -60.5 -59.2 -45.5 -21.25 24.3	25	HT/VHT20, M16 to M23	3	6	-58.9	-57.1	-60.5		-47.8	-21.25	26.6
HT/VHT20, M16 to M23 4 6 -58.9 -57.1 -60.5 -59.2 -46.7 -21.25 25.5 HT/VHT20 Beam Forming, M0 to M7 2 9 -58.9 -57.1 -45.9 -21.25 24.6 HT/VHT20 Beam Forming, M8 to M15 2 6 -58.9 -57.1 -60.5 -48.9 -21.25 27.6 HT/VHT20 Beam Forming, M8 to M15 3 8 -58.9 -57.1 -60.5 -43.0 -21.25 24.8 HT/VHT20 Beam Forming, M16 to M23 3 6 -58.9 -57.1 -60.5 -47.8 -21.25 26.6 HT/VHT20 Beam Forming, M0 to M7 4 12 -58.9 -57.1 -60.5 -59.2 -40.7 -21.25 19.5 HT/VHT20 Beam Forming, M8 to M15 4 9 -58.9 -57.1 -60.5 -59.2 -43.7 -21.25 22.5 HT/VHT20 Beam Forming, M16 to M23 4 7 -58.9 -57.1 -60.5 -59.2 -45.5 -21.25 22.5 HT/VHT20 STBC, M0 to M7 2 6 -58.9 -57.1 -60.5 -59.2	58	HT/VHT20, M0 to M7	4	6	-58.9	-57.1	-60.5	-59.2	-46.7	-21.25	25.5
HT/VHT20 Beam Forming, M0 to M7 2 9 -58.9 -57.1 -45.9 -21.25 24.6 HT/VHT20 Beam Forming, M8 to M15 2 6 -58.9 -57.1 -60.5 -48.9 -21.25 27.6 HT/VHT20 Beam Forming, M0 to M7 3 11 -58.9 -57.1 -60.5 -43.0 -21.25 21.8 HT/VHT20 Beam Forming, M8 to M15 3 8 -58.9 -57.1 -60.5 -46.0 -21.25 24.8 HT/VHT20 Beam Forming, M16 to M23 3 6 -58.9 -57.1 -60.5 -47.8 -21.25 26.6 HT/VHT20 Beam Forming, M8 to M15 4 9 -58.9 -57.1 -60.5 -59.2 -43.7 -21.25 19.5 HT/VHT20 Beam Forming, M8 to M15 4 9 -58.9 -57.1 -60.5 -59.2 -43.7 -21.25 22.5 HT/VHT20 Beam Forming, M16 to M23 4 7 -58.9 -57.1 -60.5 -59.2 -45.5 -21.25 24.3 HT/VHT20 STBC, M0 to M7 2 6 -58.9 -57.1 -60.5 -59.2 <td< td=""><td></td><td>HT/VHT20, M8 to M15</td><td>4</td><td>6</td><td>-58.9</td><td>-57.1</td><td>-60.5</td><td>-59.2</td><td>-46.7</td><td>-21.25</td><td>25.5</td></td<>		HT/VHT20, M8 to M15	4	6	-58.9	-57.1	-60.5	-59.2	-46.7	-21.25	25.5
HT/VHT20 Beam Forming, M8 to M15 2 6 -58.9 -57.1 -48.9 -21.25 27.6 HT/VHT20 Beam Forming, M0 to M7 3 11 -58.9 -57.1 -60.5 -43.0 -21.25 21.8 HT/VHT20 Beam Forming, M8 to M15 3 8 -58.9 -57.1 -60.5 -46.0 -21.25 24.8 HT/VHT20 Beam Forming, M16 to M23 3 6 -58.9 -57.1 -60.5 -47.8 -21.25 26.6 HT/VHT20 Beam Forming, M0 to M7 4 12 -58.9 -57.1 -60.5 -59.2 -40.7 -21.25 19.5 HT/VHT20 Beam Forming, M8 to M15 4 9 -58.9 -57.1 -60.5 -59.2 -43.7 -21.25 22.5 HT/VHT20 Beam Forming, M16 to M23 4 7 -58.9 -57.1 -60.5 -59.2 -45.5 -21.25 24.3 HT/VHT20 STBC, M0 to M7 2 6 -58.9 -57.1 -60.5 -59.2 -45.5 -21.25 27.6		HT/VHT20, M16 to M23	4	6	-58.9	-57.1	-60.5	-59.2	-46.7	-21.25	25.5
HT/VHT20 Beam Forming, M0 to M7 3 11 -58.9 -57.1 -60.5 -43.0 -21.25 21.8 HT/VHT20 Beam Forming, M8 to M15 3 8 -58.9 -57.1 -60.5 -46.0 -21.25 24.8 HT/VHT20 Beam Forming, M16 to M23 3 6 -58.9 -57.1 -60.5 -47.8 -21.25 26.6 HT/VHT20 Beam Forming, M0 to M7 4 12 -58.9 -57.1 -60.5 -59.2 -40.7 -21.25 19.5 HT/VHT20 Beam Forming, M8 to M15 4 9 -58.9 -57.1 -60.5 -59.2 -43.7 -21.25 22.5 HT/VHT20 Beam Forming, M16 to M23 4 7 -58.9 -57.1 -60.5 -59.2 -45.5 -21.25 24.3 HT/VHT20 STBC, M0 to M7 2 6 -58.9 -57.1 -60.5 -59.2 -45.5 -21.25 27.6		HT/VHT20 Beam Forming, M0 to M7	2	9	-58.9	-57.1			-45.9	-21.25	24.6
HT/VHT20 Beam Forming, M8 to M15 3 8 -58.9 -57.1 -60.5 -46.0 -21.25 24.8 HT/VHT20 Beam Forming, M16 to M23 3 6 -58.9 -57.1 -60.5 -47.8 -21.25 26.6 HT/VHT20 Beam Forming, M0 to M7 4 12 -58.9 -57.1 -60.5 -59.2 -40.7 -21.25 19.5 HT/VHT20 Beam Forming, M8 to M15 4 9 -58.9 -57.1 -60.5 -59.2 -43.7 -21.25 22.5 HT/VHT20 Beam Forming, M16 to M23 4 7 -58.9 -57.1 -60.5 -59.2 -45.5 -21.25 24.3 HT/VHT20 STBC, M0 to M7 2 6 -58.9 -57.1 -60.5 -59.2 -45.5 -21.25 27.6		HT/VHT20 Beam Forming, M8 to M15	2	6	-58.9	-57.1			-48.9	-21.25	27.6
HT/VHT20 Beam Forming, M16 to M23 3 6 -58.9 -57.1 -60.5 -47.8 -21.25 26.6 HT/VHT20 Beam Forming, M0 to M7 4 12 -58.9 -57.1 -60.5 -59.2 -40.7 -21.25 19.5 HT/VHT20 Beam Forming, M8 to M15 4 9 -58.9 -57.1 -60.5 -59.2 -43.7 -21.25 22.5 HT/VHT20 Beam Forming, M16 to M23 4 7 -58.9 -57.1 -60.5 -59.2 -45.5 -21.25 24.3 HT/VHT20 STBC, M0 to M7 2 6 -58.9 -57.1 -60.5 -59.2 -48.9 -21.25 27.6		HT/VHT20 Beam Forming, M0 to M7	3	11	-58.9	-57.1	-60.5		-43.0	-21.25	21.8
HT/VHT20 Beam Forming, M0 to M7 4 12 -58.9 -57.1 -60.5 -59.2 -40.7 -21.25 19.5 HT/VHT20 Beam Forming, M8 to M15 4 9 -58.9 -57.1 -60.5 -59.2 -43.7 -21.25 22.5 HT/VHT20 Beam Forming, M16 to M23 4 7 -58.9 -57.1 -60.5 -59.2 -45.5 -21.25 24.3 HT/VHT20 STBC, M0 to M7 2 6 -58.9 -57.1 -57.1 -48.9 -21.25 27.6		HT/VHT20 Beam Forming, M8 to M15	3	8	-58.9	-57.1	-60.5		-46.0	-21.25	24.8
HT/VHT20 Beam Forming, M8 to M15 4 9 -58.9 -57.1 -60.5 -59.2 -43.7 -21.25 22.5 HT/VHT20 Beam Forming, M16 to M23 4 7 -58.9 -57.1 -60.5 -59.2 -45.5 -21.25 24.3 HT/VHT20 STBC, M0 to M7 2 6 -58.9 -57.1 -60.5 -59.2 -48.9 -21.25 27.6		HT/VHT20 Beam Forming, M16 to M23	3	6	-58.9	-57.1	-60.5		-47.8	-21.25	26.6
HT/VHT20 Beam Forming, M16 to M23 4 7 -58.9 -57.1 -60.5 -59.2 -45.5 -21.25 24.3 HT/VHT20 STBC, M0 to M7 2 6 -58.9 -57.1 -57.1 -48.9 -21.25 27.6		HT/VHT20 Beam Forming, M0 to M7	4	12	-58.9	-57.1	-60.5	-59.2	-40.7	-21.25	19.5
HT/VHT20 STBC, M0 to M7 2 6 -58.9 -57.1 -48.9 -21.25 27.6		HT/VHT20 Beam Forming, M8 to M15	4	9	-58.9	-57.1	-60.5	-59.2	-43.7	-21.25	22.5
		HT/VHT20 Beam Forming, M16 to M23	4	7	-58.9	-57.1	-60.5	-59.2	-45.5	-21.25	24.3
HT/VHT20 STBC, M0 to M7 3 6 -58.9 -57.1 -60.5 -47.8 -21.25 26.6		HT/VHT20 STBC, M0 to M7	2	6	-58.9	-57.1			-48.9	-21.25	27.6
		HT/VHT20 STBC, M0 to M7	3	6	-58.9	-57.1	-60.5		-47.8	-21.25	26.6

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HT/VHT20 STBC, M0 to M7 4 6 -58.9 -57.1 -60.5 -59.2 -46.7 -21.25 25.5

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Conducted Spurs Peak, All Antennas





Conducted Spurs Average, 5745 MHz, Non HT20 Beam Forming, 6 to 54 Mbps





Antenna A



Antenna B



Antenna C

Antenna D



Conducted Spurs Peak, 5825 MHz, Non HT20 Beam Forming, 6 to 54 Mbps





Antenna A



Antenna B



Antenna C

Antenna D



A.6 Conducted Bandedge

15.407 (b) *Undesirable emission limits.* Except as shown in paragraph (b) (7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

- (4) For transmitters operating in the 5.725-5.85 GHz band: All emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an e.i.r.p. of -17 dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an e.i.r.p. of -27 dBm/MHz.
- (6) Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in 15.209.
- (7) The provisions of §15.205 apply to intentional radiators operating under this section.
- (8) When measuring the emission limits, the nominal carrier frequency shall be adjusted as close to the upper and lower frequency band edges as the design of the equipment permits

Test Procedure

Ref. KDB 789033 D02 General UNII Test Procedures New Rules v01r01 ANSI C63.10: 2013

Conducted Bandedge

Test Procedure

- 1. Connect the antenna port(s) to the spectrum analyzer input.
- 2. Place the radio in continuous transmit mode. Use the procedures in ANSI C63.10: 2013 to substitute conducted measurements in place of radiated measurements.
- 3. Configure Spectrum analyzer as per test parameters below (be sure to enter all losses between the transmitter output and the spectrum analyzer).
- 4. Place a marker at the end of the restricted band closest to the transmit frequency to show compliance. Also measure any emissions in the restricted bands.
- 5. The "measure-and-sum technique" is used for measuring in-band transmit power of a device. In the measure-and-sum approach, the conducted emission level is measured at each antenna port. The measured results at the various antenna ports are then summed mathematically to determine the total emission level from the device. Summing is performed in linear power units. The worst case output is recorded.
- 6. Place a marker at the end of the restricted band closest to the transmit frequency to show compliance. Also measure any emissions in the restricted bands
- 7. Capture graphs and record pertinent measurement data.

Ref. ANSI C63.10: 2013 section 12.7.6 (peak) & 12.7.7.3 (average, Method VB-A (Alternative))

Tien / Wei Goo. To. 2010 Geoloff 12:7:0 (peak) & 12:7:10 (average, weiffor VB // (withhalf Ve))	
Conducted Bandedge	
Test parameters restricted Band	
RBW = 1 MHz	
VBW ≥ 3 x RBW for Peak, 100Hz for Average	
Sweep = Auto couple	
Detector = Peak	
Trace = Max Hold.	

System Number	Description	Samples	System under test	Support equipment
1	EUT	S01	\triangleleft	
'	Support	S02		\leq

Tested By :	Date of testing:
Jose Aguirre	01-Jan-16 - 22-Feb-16
Test Result : PASS	

See Appendix C for list of test equipment

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uency (MHz) ths elated nna Gain (dBi) Bandedge I (dBm) Bandedge I (dBm) Bandedge I (dBm) Bandedge I (dBm) Bandedge	dge		
Frequency (MHz) Tx Paths Correlated Antenna Gain (dBi) Tx 1 Bandedge Level (dBm) Tx 2 Bandedge Level (dBm) Tx 3 Bandedge Level (dBm) Tx 3 Bandedge Level (dBm) Tx 4 Bandedge	Level (dBm) Total Tx Bandedge Level (dBm)	Limit (dBm)	Margin (dB)
Non HT20, 6 to 54 Mbps 1 6 -33.0	-27.0	-27.00	0.0
Non HT20, 6 to 54 Mbps 2 6 -37.0 -35.5	-27.2	-27.00	0.2
Non HT20, 6 to 54 Mbps 3 6 -38.4 -38.0 -38.3	-27.5	-27.00	0.5
Non HT20, 6 to 54 Mbps 4 6 -39.5 -38.9 -39.6 -38	.8 -27.2	-27.00	0.2
Non HT20 Beam Forming, 6 to 54 Mbps 2 9 -39.5 -38.9	-27.2	-27.00	0.2
Non HT20 Beam Forming, 6 to 54 Mbps 3 11 -41.8 -41.7 -46.6	-27.3	-27.00	0.3
Non HT20 Beam Forming, 6 to 54 Mbps 4 12 -45.3 -45.5 -45.8 -44	.8 -27.3	-27.00	0.3
HT/VHT20, M0 to M7 1 6 -34.6	-28.6	-27.00	1.6
HT/VHT20, M0 to M7 2 6 -36.7 -37.0	-27.8	-27.00	0.8
HT/VHT20, M8 to M15 2 6 -36.7 -37.0	-27.8	-27.00	0.8
HT/VHT20, M0 to M7 3 6 -36.7 -37.0 -45.0	-27.5	-27.00	0.5
HT/VHT20, M8 to M15 3 6 -36.7 -37.0 -45.0	-27.5	-27.00	0.5
. HT/VHT20, M16 to M23 3 6 -36.7 -37.0 -45.0	-27.5	-27.00	0.5
HT/VHT20, M0 to M7 4 6 -39.7 -39.2 -40.5 -39	.8 -27.8	-27.00	0.8
HT/VHT20, M8 to M15 4 6 -39.7 -39.2 -40.5 -39	.8 -27.8	-27.00	0.8
HT/VHT20, M16 to M23 4 6 -39.7 -39.2 -40.5 -39	.8 -27.8	-27.00	0.8
HT/VHT20 Beam Forming, M0 to M7 2 9 -39.7 -39.2	-27.4	-27.00	0.4
HT/VHT20 Beam Forming, M8 to M15 2 6 -36.7 -37.0	-27.8	-27.00	0.8
HT/VHT20 Beam Forming, M0 to M7 3 11 -42.9 -42.6 -43.4	-27.4	-27.00	0.4
HT/VHT20 Beam Forming, M8 to M15 3 8 -39.7 -39.2 -40.5	-27.2	-27.00	0.2
HT/VHT20 Beam Forming, M16 to M23 3 6 -36.7 -37.0 -45.0	-27.5	-27.00	0.5
HT/VHT20 Beam Forming, M0 to M7 4 12 -46.2 -45.3 -45.9 -45	.8 -27.8	-27.00	0.8
HT/VHT20 Beam Forming, M8 to M15 4 9 -42.9 -42.6 -43.4 -42	.8 -27.9	-27.00	0.9
HT/VHT20 Beam Forming, M16 to M23 4 7 -41.4 -41.1 -41.3 -40	.9 -28.0	-27.00	1.0
HT/VHT20 STBC, M0 to M7 2 6 -36.7 -37.0	-27.8	-27.00	0.8
HT/VHT20 STBC, M0 to M7 3 6 -36.7 -37.0 -45.0	-27.5	-27.00	0.5
HT/VHT20 STBC, M0 to M7 4 6 -39.7 -39.2 -40.5 -39		-27.00	0.8
Non HT40, 6 to 54 Mbps 1 6 -35.0	-29.0	-27.00	2.0
Non HT/0, 6 to 5/1 Mhns 2 6 -39.3 -36.0	-28.3	-27.00	1.3
Non HT40, 6 to 54 Mbps 3 6 -37.9 -39.3 -39.6	-28.1	-27.00	1.1
Non HT40, 6 to 54 Mbps 4 6 -39.4 -43.0 -40.0 -40		-27.00	1.4
HT/VHT40, M0 to M7 1 6 -33.4	-27.4	-27.00	0.4

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HT/VHT40, M0 to M7	2	6	-39.0	-36.7			-28.7	-27.00	1.7
HT/VHT40, M8 to M15	2	6	-39.0	-36.7			-28.7	-27.00	1.7
HT/VHT40, M0 to M7	3	6	-39.0	-36.7	-46.2		-28.4	-27.00	1.4
HT/VHT40, M8 to M15	3	6	-39.0	-36.7	-46.2		-28.4	-27.00	1.4
HT/VHT40, M16 to M23	3	6	-39.0	-36.7	-46.2		-28.4	-27.00	1.4
HT/VHT40, M0 to M7	4	6	-41.1	-41.1	-37.9	-39.3	-27.6	-27.00	0.6
HT/VHT40, M8 to M15	4	6	-41.1	-41.1	-37.9	-39.3	-27.6	-27.00	0.6
HT/VHT40, M16 to M23	4	6	-41.1	-41.1	-37.9	-39.3	-27.6	-27.00	0.6
HT/VHT40 Beam Forming,	M0 to M7 2	9	-41.1	-41.1			-29.1	-27.00	2.1
HT/VHT40 Beam Forming,	M8 to M15 2	6	-39.0	-36.7			-28.7	-27.00	1.7
HT/VHT40 Beam Forming,	M0 to M7 3	11	-42.7	-43.7	-43.9		-27.8	-27.00	0.8
HT/VHT40 Beam Forming,	M8 to M15 3	8	-41.1	-41.1	-37.9		-27.2	-27.00	0.2
HT/VHT40 Beam Forming,	M16 to M23 3	6	-39.0	-36.7	-46.2		-28.4	-27.00	1.4
HT/VHT40 Beam Forming,	M0 to M7 4	12	-48.2	-48.9	-46.6	-42.7	-27.8	-27.00	0.8
HT/VHT40 Beam Forming,	M8 to M15 4	9	-43.7	-40.1	-44.8	-42.1	-27.3	-27.00	0.3
HT/VHT40 Beam Forming,	M16 to M23 4	7	-40.4	-39.0	-44.7	-44.1	-28.2	-27.00	1.2
HT/VHT40 STBC, M0 to M	7 2	6	-39.0	-36.7			-28.7	-27.00	1.7
HT/VHT40 STBC, M0 to M	7 3	6	-39.0	-36.7	-46.2		-28.4	-27.00	1.4
HT/VHT40 STBC, M0 to M	7 4	6	-41.1	-41.1	-37.9	-39.3	-27.6	-27.00	0.6
-	-	-	_						
Non HT80, 6 to 54 Mbps	1	6	-34.8				-28.8	-27.00	1.8
Non HT80, 6 to 54 Mbps	2	6	-37.8	-38.9			-29.3	-27.00	2.3
Non HT80, 6 to 54 Mbps	3	6	-37.8	-38.9	-40.3		-28.1	-27.00	1.1
Non HT80, 6 to 54 Mbps	4	6	-42.0	-36.8	-43.7	-41.4	-28.1	-27.00	1.1
VHT80, M0.1 to M9.1	1	6	-34.1				-28.1	-27.00	1.1
VHT80, M0.1 to M9.1	2	6	-36.8	-37.5			-28.1	-27.00	1.1
VHT80, M0.2 to M9.2	2	6	-36.8	-37.5			-28.1	-27.00	1.1
VHT80, M0.1 to M9.1	3	6	-38.2	-38.1	-37.6		-27.2	-27.00	0.2
VHT80, M0.2 to M9.2	3	6	-38.2	-38.1	-37.6		-27.2	-27.00	0.2
VHT80, M0.3 to M9.3	3	6	-38.2	-38.1	-37.6		-27.2	-27.00	0.2
VHT80, M0.1 to M9.1	4	6	-40.5	-41.1	-40.9	-40.9	-28.8	-27.00	1.8
VHT80, M0.2 to M9.2	4	6	-40.5	-41.1	-40.9	-40.9	-28.8	-27.00	1.8
VHT80, M0.3 to M9.3	4	6	-40.5	-41.1	-40.9	-40.9	-28.8	-27.00	1.8
VHT80 Beam Forming, M0	0.1 to M9.1 2	6	-36.8	-37.5			-28.1	-27.00	1.1
VHT80 Beam Forming, M0	.2 to M9.2	6	-36.8	-37.5			-28.1	-27.00	1.1
VHT80 Beam Forming, M0	0.1 to M9.1 3	6	-38.2	-38.1	-37.6		-27.2	-27.00	0.2
VHT80 Beam Forming, M0	0.2 to M9.2 3	6	-38.2	-38.1	-37.6		-27.2	-27.00	0.2
VHT80 Beam Forming, M0	0.3 to M9.3	6	-38.2	-38.1	-37.6		-27.2	-27.00	0.2
VHT80 Beam Forming, M0	0.1 to M9.1 4	6	-40.5	-41.1	-40.9	-40.9	-28.8	-27.00	1.8
VHT80 Beam Forming, MO	.2 to M9.2 4	6	-40.5	-41.1	-40.9	-40.9	-28.8	-27.00	1.8
VHT80 Beam Forming, MO	.3 to M9.3 4	6	-40.5	-41.1	-40.9	-40.9	-28.8	-27.00	1.8

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	VHT80 STBC, M0.1 to M9.1	2	6	-36.8	-37.5			-28.1	-27.00	1.1		
	VHT80 STBC, M0.1 to M9.1	3	6	-38.2	-38.1	-37.6		-27.2	-27.00	0.2		
	VHT80 STBC, M0.1 to M9.1	4	6	-40.5	-41.1	-40.9	-40.9	-28.8	-27.00	1.8		
	Non HT40, 6 to 54 Mbps	1	6	-39.4				-33.4	-27.00	6.4		
	Non HT40, 6 to 54 Mbps	2	6	-39.4	-44.1			-32.1	-27.00	5.1		
	Non HT40, 6 to 54 Mbps	3	6	-39.4	-44.1	-34.7		-27.1	-27.00	0.1		
	Non HT40, 6 to 54 Mbps	4	6	-42.9	-51.8	-43.8	-43.1	-32.3	-27.00	5.3		
	HT/VHT40, M0 to M7	1	6	-44.6				-38.6	-27.00	11.6		
	HT/VHT40, M0 to M7	2	6	-44.6	-47.2			-36.7	-27.00	9.7		
	HT/VHT40, M8 to M15	2	6	-44.6	-47.2			-36.7	-27.00	9.7		
	HT/VHT40, M0 to M7	3	6	-44.6	-47.2	-52.0		-36.2	-27.00	9.2		
	HT/VHT40, M8 to M15	3	6	-44.6	-47.2	-52.0		-36.2	-27.00	9.2		
	HT/VHT40, M16 to M23	3	6	-44.6	-47.2	-52.0		-36.2	-27.00	9.2		
	HT/VHT40, M0 to M7	4	6	-44.6	-47.2	-52.0	-47.3	-35.0	-27.00	8.0		
95	HT/VHT40, M8 to M15	4	6	-44.6	-47.2	-52.0	-47.3	-35.0	-27.00	8.0		
57	HT/VHT40, M16 to M23	4	6	-44.6	-47.2	-52.0	-47.3	-35.0	-27.00	8.0		
	HT/VHT40 Beam Forming, M0 to M7	2	9	-44.6	-47.2			-33.7	-27.00	6.7		
	HT/VHT40 Beam Forming, M8 to M15	2	6	-44.6	-47.2			-36.7	-27.00	9.7		
	HT/VHT40 Beam Forming, M0 to M7	3	11	-44.6	-47.2	-52.0		-31.4	-27.00	4.4		
	HT/VHT40 Beam Forming, M8 to M15	3	8	-44.6	-47.2	-52.0		-34.4	-27.00	7.4		
	HT/VHT40 Beam Forming, M16 to M23	3	6	-44.6	-47.2	-52.0		-36.2	-27.00	9.2		
	HT/VHT40 Beam Forming, M0 to M7	4	12	-44.6	-47.2	-52.0	-47.3	-29.0	-27.00	2.0		
	HT/VHT40 Beam Forming, M8 to M15	4	9	-44.6	-47.2	-52.0	-47.3	-32.0	-27.00	5.0		
	HT/VHT40 Beam Forming, M16 to M23	4	7	-44.6	-47.2	-52.0	-47.3	-33.8	-27.00	6.8		
	HT/VHT40 STBC, M0 to M7	2	6	-44.6	-47.2			-36.7	-27.00	9.7		
	HT/VHT40 STBC, M0 to M7	3	6	-44.6	-47.2	-52.0		-36.2	-27.00	9.2		
	HT/VHT40 STBC, M0 to M7	4	6	-44.6	-47.2	-52.0	-47.3	-35.0	-27.00	8.0		
			_		-	-	-	-	-	_		
	Non HT20, 6 to 54 Mbps	1	6	-34.2				-28.2	-27.00	1.2		
	Non HT20, 6 to 54 Mbps	2	6	-35.6	-37.3			-27.4	-27.00	0.4		
	Non HT20, 6 to 54 Mbps	3	6	-37.7	-39.1	-38.3		-27.6	-27.00	0.6		
	Non HT20, 6 to 54 Mbps	4	6	-39.8	-41.7	-40.0	-39.4	-28.1	-27.00	1.1		
	Non HT20 Beam Forming, 6 to 54 Mbps	2	9	-38.7	-40.3			-27.4	-27.00	0.4		
5825	Non HT20 Beam Forming, 6 to 54 Mbps	3	11	-42.1	-43.3	-42.9		-27.2	-27.00	0.2		
58	Non HT20 Beam Forming, 6 to 54 Mbps	4	12	-44.5	-45.5	-45.4	-44.8	-27.0	-27.00	0.0		
	HT/VHT20, M0 to M7	1	6	-33.7				-27.7	-27.00	0.7		
	HT/VHT20, M0 to M7	2	6	-35.2	-37.8			-27.3	-27.00	0.3		
	HT/VHT20, M8 to M15	2	6	-35.2	-37.8			-27.3	-27.00	0.3		
	HT/VHT20, M0 to M7	3	6	-37.5	-39.2	-38.9		-27.7	-27.00	0.7		
	HT/VHT20, M8 to M15	3	6	-37.5	-39.2	-38.9		-27.7	-27.00	0.7		
			0 of 01						-			

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HT/VHT20, M16 to M23	3	6	-37.5	-39.2	-38.9		-27.7	-27.00	0.7
HT/VHT20, M0 to M7	4	6	-40.0	-41.2	-40.7	-39.3	-28.2	-27.00	1.2
HT/VHT20, M8 to M15	4	6	-40.0	-41.2	-40.7	-39.3	-28.2	-27.00	1.2
HT/VHT20, M16 to M23	4	6	-40.0	-41.2	-40.7	-39.3	-28.2	-27.00	1.2
HT/VHT20 Beam Forming, M0 to M7	2	9	-38.2	-40.3			-27.1	-27.00	0.1
HT/VHT20 Beam Forming, M8 to M15	2	6	-35.2	-37.8			-27.3	-27.00	0.3
HT/VHT20 Beam Forming, M0 to M7	3	11	-42.1	-43.6	-42.5		-27.1	-27.00	0.1
HT/VHT20 Beam Forming, M8 to M15	3	8	-40.0	-41.2	-40.7		-28.0	-27.00	1.0
HT/VHT20 Beam Forming, M16 to M23	3	6	-37.5	-39.2	-38.9		-27.7	-27.00	0.7
HT/VHT20 Beam Forming, M0 to M7	4	12	-44.5	-46.8	-46.2	-44.2	-27.3	-27.00	0.3
HT/VHT20 Beam Forming, M8 to M15	4	9	-42.1	-43.6	-42.5	-40.8	-27.1	-27.00	0.1
HT/VHT20 Beam Forming, M16 to M23	4	7	-40.0	-41.2	-40.7	-39.3	-27.0	-27.00	0.0
HT/VHT20 STBC, M0 to M7	2	6	-35.2	-37.8			-27.3	-27.00	0.3
HT/VHT20 STBC, M0 to M7	3	6	-37.5	-39.2	-38.9		-27.7	-27.00	0.7
HT/VHT20 STBC, M0 to M7	4	6	-40.0	-41.2	-40.7	-39.3	-28.2	-27.00	1.2

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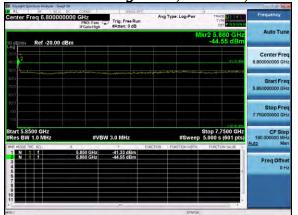
Conducted Bandedge Peak, 5745 MHz, Non HT20, 6 to 54 Mbps



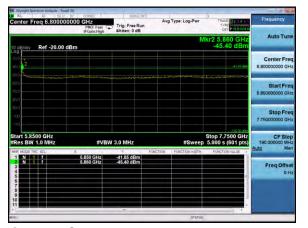
Antenna A



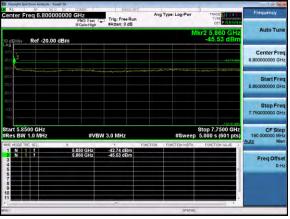
Conducted Bandedge Peak, 5825 MHz, Non HT20 Beam Forming, 6 to 54 Mbps



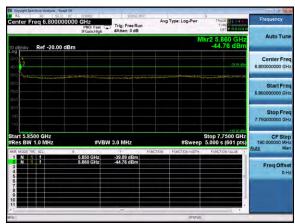
Antenna A



Antenna C



Antenna B



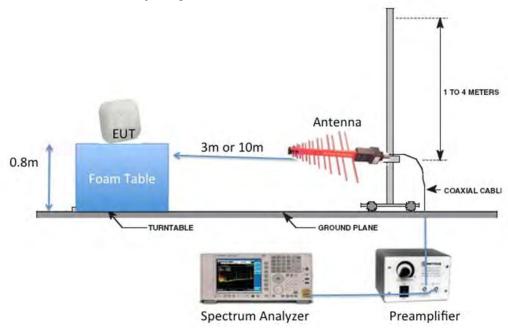
Antenna D



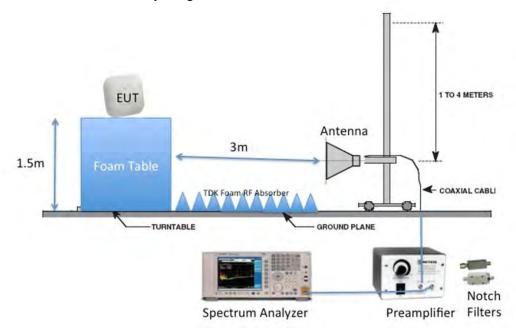
Appendix B: Emission Test Results

Testing Laboratory: Cisco Systems, Inc., 125 West Tasman Drive, San Jose, CA 95134, USA

Radiated Emission Setup Diagram-Below 1G



Radiated Emission Setup Diagram-Above 1G





B.1 Radiated Spurious Emissions

15.407 (b) *Undesirable emission limits.* Except as shown in paragraph (b) (7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

- (4) For transmitters operating in the 5.725-5.85 GHz band: All emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an e.i.r.p. of -17 dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an e.i.r.p. of -27 dBm/MHz.
- (6) Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in 15.209.
- (7) The provisions of §15.205 apply to intentional radiators operating under this section.
- (8) When measuring the emission limits, the nominal carrier frequency shall be adjusted as close to the upper and lower frequency band edges as the design of the equipment permits

Ref. ANSI C63.10: 2013 section 12.7.6 (peak) & 12.7.7.3 (average)

Using Vasona, configure the spectrum analyzer as shown below (be sure to enter all losses between the transmitter output and the spectrum analyzer). Place the radio in continuous transmit mode.

Span: 1GHz – 18 GHz/18GHz-26G/26GHz-40GHz

Reference Level: 80 dBuV Attenuation: 10 dB Sweep Time: Coupled Resolution Bandwidth: 1MHz

Video Bandwidth: 3 MHz for peak, 1 KHz for average

Detector: Peak

Terminate the access Point RF ports with 50 ohm loads.

Maximize Turntable (find worst case table angle), Maximize Antenna (find worst case height)

Save 2 plots: 1) Average plot (Vertical and Horizontal), Limit= 54dBuV/m @3m

2) Peak plot (Vertical and Horizontal), Limit = 74dBuV/m @3m

Place a marker at the end of the restricted band closest to the transmit frequency to show compliance. Also measure any emissions in the restricted bands.

This report represents the worst case data for all supported operating modes and antennas. There are no measurable emissions above 18 GHz.

System Number	Description	Samples	System under test	Support equipment
4	EUT	S01	\checkmark	
1	Support	S02		\checkmark

Tested By :	Date of testing:
Jose Aguirre	10-Feb-16 to 22-Feb-16
Test Result : PASS	

See Appendix C for list of test equipment

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B.1.A Transmitter Radiated Spurious Emissions-Average worst case

			Spurious Emission		
Frequency (MHz)	Mode	Data Rate (Mbps)	Level (dBuV/m)	Limit (dBuV/m)	Margin (MHz)
5745	Non HT/VHT20, 6 to 54 Mbps	6	50.5	54.0	3.5
5755	HT/VHT40, M0 to M7, M0 to M9 1ss	m0	50.4	54.0	3.6
5775	HT/VHT80, M0 to M7, M0 to M9 1ss	m0x1	50.6	54.0	3.4
5785	Non HT/VHT20, 6 to 54 Mbps	6	50.4	54.0	3.6
5795	HT/VHT40, M0 to M7, M0 to M9 1ss	m0	50.5	54.0	3.5
5825	Non HT/VHT20, 6 to 54 Mbps	6	50.4	54.0	3.6

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B.1.A.1 Radiated Transmitter Spurs, 5745 MHz, Non HT/VHT20, 6 to 54 Mbps, Average (1-18GHz)



B.1.A.2 Radiated Transmitter Spurs, 5755 MHz, HT/VHT40, M0 to M7, M0 to M9 1ss Average (1-18GHz)





B.1.A.3 Radiated Transmitter Spurs, 5775 MHz, HT/VHT80, M0 to M7, M0 to M9 1ss, Average (1-18GHz)



B.1.A.4 Radiated Transmitter Spurs, 5785 MHz, Non HT/VHT20, 6 to 54 Mbps, Average (1-18GHz)





B.1.A.5 Radiated Transmitter Spurs, 5795 MHz, HT/VHT40, M0 to M7, M0 to M9 1ss, Average (1-18GHz)



B.1.A.6 Radiated Transmitter Spurs, 5825 MHz, Non HT/VHT20, 6 to 54 Mbps, Average (1-18GHz)









B.1.A.8 Radiated Transmitter Spurs, All rate, All modes, Average (26.5- 40GHz)





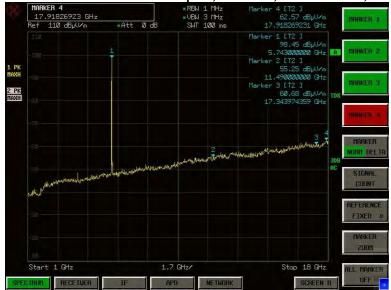
B.1.P Transmitter Radiated Spurious Emissions-Peak worst case

Frequency		Data Rate	Spurious Emission Level	Limit	Margin
(MHz)	Mode	(Mbps)	(dBuV/m)	(dBuV/m)	(MHz)
5745	Non HT/VHT20, 6 to 54 Mbps	6	62.6	74.0	11.4
5755	HT/VHT40, M0 to M7, M0 to M9 1ss	m0	62.5	74.0	11.5
5775	HT/VHT80, M0 to M7, M0 to M9 1ss	m0x1	62.7	74.0	11.3
5785	Non HT/VHT20, 6 to 54 Mbps	6	61.3	74.0	12.7
5795	HT/VHT40, M0 to M7, M0 to M9 1ss	m0	62.0	74.0	12.0
5825	Non HT/VHT20, 6 to 54 Mbps	6	62.2	74.0	11.8

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B.1.P.1 Radiated Transmitter Spurs, 5745 MHz, Non HT/VHT20, 6 to 54 Mbps, (1-18GHz)



B.1.P.2 Radiated Transmitter Spurs, 5755 MHz, HT/VHT40, M0 to M7, M0 to M9 1ss, Peak (1-18GHz)

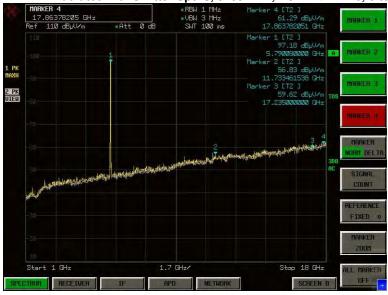




B.1.P.3 Radiated Transmitter Spurs, 5775 MHz, VHT80, M0 to M9, M0 to M9 1.1, Peak (1-18GHz)

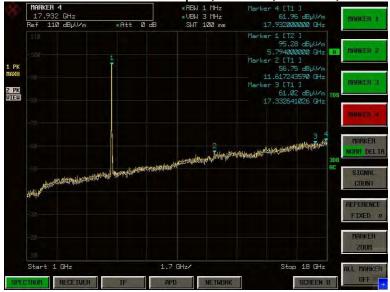


B.1.P.4 Radiated Transmitter Spurs, 5785 MHz, Non HT/VHT20, 6 to 54 Mbps, Peak (1-18GHz)





B.1.P.5 Radiated Transmitter Spurs, 5795 MHz, HT/VHT40, M0 to M7, M0 to M9 1ss, Peak (1-18GHz)



B.1.P.6 Radiated Transmitter Spurs, 5825 MHz, Non HT/VHT20, 6 to 54 Mbps, Peak (1-18GHz)









B.1.P.8 Radiated Transmitter Spurs, All rate, All modes, Peak (26.5-40GHz)





B.2 Radiated Receiver Spurious Emissions

RSS-GEN: Receivers, are required to comply with the limits of spurious emissions as set out in this section. Receiver emission measurements are to be performed as per the normative test method referenced in Section 3.

For emissions at frequencies below 1 GHz, measurements shall be performed using a CISPR quasi-peak detector and the related measurement bandwidth. At frequencies above 1 GHz, measurements shall be performed using a linear average detector with a minimum resolution bandwidth of 1 MHz.

Ref. ANSI C63.10: 2013 section 12.7.6 (peak) & 12.7.7.3 (average)

Using Vasona, configure the spectrum analyzer as shown below (be sure to enter all losses between the transmitter output and the spectrum analyzer). Place the radio in continuous transmit mode.

Span: 1GHz – 18 GHz/18GHz-26G/26GHz-40GHz

Reference Level: 80 dBuV Attenuation: 10 dB Sweep Time: Coupled Resolution Bandwidth: 1MHz

Video Bandwidth: 3 MHz for peak, 1 KHz for average

Detector: Peak

Terminate the access Point RF ports with 50 ohm loads.

Maximize Turntable (find worst case table angle), Maximize Antenna (find worst case height)

Save 2 plots: 1) Average plot (Vertical and Horizontal), Limit= 54dBuV/m @3m

2) Peak plot (Vertical and Horizontal), Limit = 74dBuV/m @3m

Place a marker at the end of the restricted band closest to the transmit frequency to show compliance. Also measure any emissions in the restricted bands.

This report represents the worst case data for all supported operating modes and antennas. There are no measurable emissions above 18 GHz.

System Number	Description	Samples	System under test	Support equipment
4	EUT	S01	\checkmark	
1	Support	S02		\checkmark

Tested By :	Date of testing:
Jose Aguirre	01-Jan-16 - 22-Feb-16
Test Result : PASS	

See Appendix C for list of test equipment



B.2.A Receiver Radiated Spurious Emissions Average Measurements

B.2.A.1 Radiated Receiver Spurs, All rates, All Mode, Average (1-18GHz)



B.2.A.2 Radiated Receiver Spurs, All rates, All Mode, Average (18-26.5GHz)





B.2.A.3 Radiated Receiver Spurs, All rates, All Mode, Average (26.5-40GHz)





B.2.P Receiver Radiated Spurious Emissions Peak Measurements

B.2.P.1 Radiated Receiver Spurs, All rates, All Mode, Peak (1-18GHz)



B.2.P.2 Radiated Receiver Spurs, All rates, All Mode, Peak (18-26.5GHz)





B.2.P.3 Radiated Receiver Spurs, All rates, All Mode, Peak (26.5-40GHz)





B.3 Radiated Emissions 30MHz to 1GHz

15.205 / 15.209 / RSS-Gen:

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), and RSS-Gen sec 8.10 must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)) and RSS-Gen sec 8.9

Ref. ANSI C63.10: 2013 section 6.5

Using Vasona, configure the spectrum analyzer as shown below (be sure to enter all losses between the transmitter output and the spectrum analyzer). Place the radio in continuous transmit mode.

Span: 30MHz – 1GHz
Reference Level: 80 dBuV
Attenuation: 10 dB
Sweep Time: Coupled
Resolution Bandwidth: 100kHz
Video Bandwidth: 300kHz

Detector: Peak for Pre-scan, Quasi-Peak

Compliance shall be determined using CISPR quasi-peak detection; however, peak detection is permitted as an alternative to quasi-peak

detection.

Terminate the access Point RF ports with 50 ohm loads.

Maximize Turntable (find worst case table angle), Maximize Antenna (find worst case height)

This report represents the worst case data for all supported operating modes and antennas.

System Number	Description	Samples	System under test	Support equipment
	EUT	S01	\checkmark	
1	Support	S02		\checkmark

Tested By :	Date of testing:
Jose Aguirre	10-Feb-16 - 22-Feb-16
Test Result : PASS	

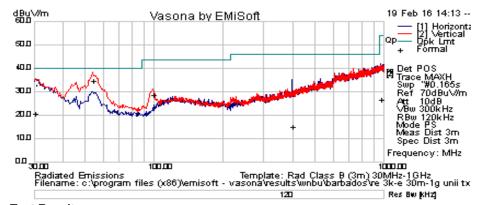
See Appendix C for list of test equipment

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Graphical Test Results

Note that the data displayed on the plots detailed in this appendix were measured using a 'Peak Detector'. Please refer to the results table for the detectors used during formal measurements



Test Results

Frequency	Raw	Cable		Level	Measurement	Р	Hgt	Azt	Limit	Margin	Pass
MHz	dBuV	Loss	AF dB	dBuV/m	Туре	ol	cm	Deg	dBuV/m	dB	/Fail
967.505	0.54	2.96	23.1	26.6	Quasi Max	Н	389	52	54	-27.4	Pass
53.998	26.59	0.7	7.35	34.65	Quasi Max	٧	110	142	40	-5.35	Pass
98.87	18.09	0.93	9.89	28.92	Quasi Max	٧	157	194	43.5	-14.58	Pass
398.115	-1.71	1.89	15.06	15.24	Quasi Max	Н	326	200	46	-30.76	Pass
30.485	-0.96	0.49	21.27	20.81	Quasi Max	٧	355	350	40	-19.19	Pass



B.4 AC Conducted Emissions

FCC 15.207 Except when the requirements applicable to a given device state otherwise, for any radio apparatus equipped to operate from the public utility AC power supply, either directly or indirectly (such as with a battery charger), the radio frequency voltage of emissions conducted back onto the AC power lines in the frequency range of 0.15 MHz to 30 MHz shall not exceed the limits shown in the table in these sections. The more stringent limit applies at the frequency range boundaries.

Measurement Procedure

Accordance with ANSI C63.10:2013 section 6.2

Using Vasona, configure the spectrum analyzer as shown below (be sure to enter all losses between the transmitter output and the spectrum analyzer). Place the radio in continuous transmit mode.

Span: 150 KHz – 30 MHz

Attenuation: 10 dB Sweep Time: Coupled Resolution Bandwidth: 9 KHz Video Bandwidth: 30 KHz

Detector: Quasi-Peak / Average

System Number	Description	Samples	System under test	Support equipment
4	EUT	S01	\checkmark	
1	Support	S02		\checkmark

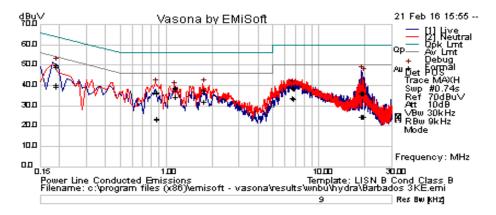
Tested By :	Date of testing:
Jose Aguirre	10-Feb-16 to 22-Feb-16
Test Result : PASS	

See Appendix C for list of test equipment



Graphical Test Results

Note that the data displayed on the plots detailed in this appendix were measured using a 'Peak Detector'. Please refer to the results table for the detectors used during formal measurements

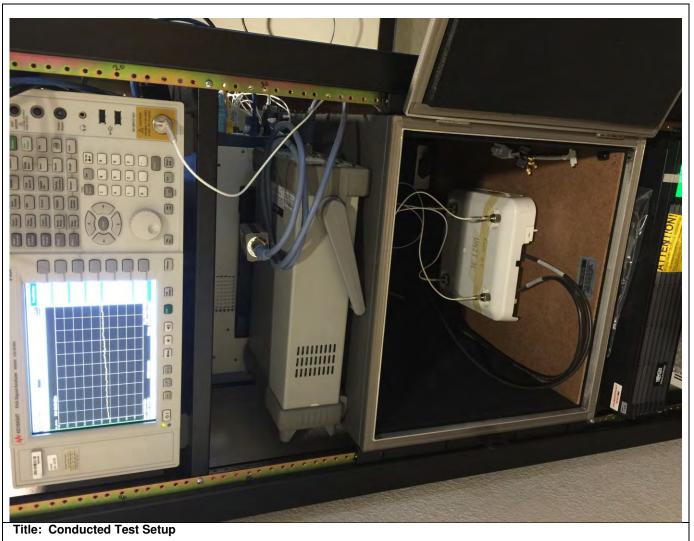


Test Results

Frequency	Raw	Cable	Factors	Level	Measurement		Limit	Margin	Pass
MHz	dBuV	Loss	dB	dBuV	Type	Line	dBuV	dB	/Fail
0.857757	16.19	19.91	0.03	36.14	Quasi Peak	Live	56	-19.86	Pass
0.187244	29.09	20.91	0.06	50.06	Quasi Peak	Live	64.16	-14.1	Pass
19.007406	15.87	20.3	0.2	36.37	Quasi Peak	Live	60	-23.63	Pass
1.755417	17.64	19.9	0.03	37.57	Quasi Peak	Live	56	-18.43	Pass
19.383573	15.92	20.3	0.2	36.42	Quasi Peak	Live	60	-23.58	Pass
6.724028	18.68	20.01	0.07	38.76	Quasi Peak	Live	60	-21.24	Pass
1.131699	18.77	19.9	0.04	38.71	Quasi Peak	Live	56	-17.29	Pass
19.029708	16	20.3	0.2	36.5	Quasi Peak	Neutral	60	-23.5	Pass
0.856911	16.86	19.91	0.03	36.81	Quasi Peak	Neutral	56	-19.19	Pass
19.384527	15.97	20.3	0.2	36.47	Quasi Peak	Neutral	60	-23.53	Pass
0.190178	28.11	20.9	0.06	49.06	Quasi Peak	Neutral	64.03	-14.97	Pass
1.133571	19.28	19.9	0.04	39.22	Quasi Peak	Neutral	56	-16.78	Pass
1.756893	17.73	19.9	0.03	37.66	Quasi Peak	Neutral	56	-18.34	Pass
6.712994	19.08	20.01	0.07	39.16	Quasi Peak	Neutral	60	-20.84	Pass
0.857757	4.02	19.91	0.03	23.97	Average	Live	46	-22.03	Pass
0.187244	19.33	20.91	0.06	40.3	Average	Live	54.16	-13.86	Pass
19.007406	4.14	20.3	0.2	24.65	Average	Live	50	-25.35	Pass
1.755417	12.41	19.9	0.03	32.34	Average	Live	46	-13.66	Pass
19.383573	4.45	20.3	0.2	24.95	Average	Live	50	-25.05	Pass
6.724028	13.39	20.01	0.07	33.47	Average	Live	50	-16.53	Pass
1.131699	14.43	19.9	0.04	34.37	Average	Live	46	-11.63	Pass
19.029708	4.05	20.3	0.2	24.55	Average	Neutral	50	-25.45	Pass
0.856911	3.62	19.91	0.03	23.57	Average	Neutral	46	-22.43	Pass
19.384527	4.22	20.3	0.2	24.72	Average	Neutral	50	-25.28	Pass
0.190178	18.8	20.9	0.06	39.75	Average	Neutral	54.03	-14.28	Pass
1.133571	14.69	19.9	0.04	34.63	Average	Neutral	46	-11.37	Pass
1.756893	12.41	19.9	0.03	32.34	Average	Neutral	46	-13.66	Pass
6.712994	13.86	20.01	0.07	33.94	Average	Neutral	50	-16.06	Pass



Photographs of setup



This is a dual band 2.4GHz / 5GHz device. All ports in this test set up photo are connected as all testing is automated. Section 2.6 of this test report given an overview of the different Tx antenna combinations used by this device.



AIR-AP3802E-B-K9 AC Mains Conducted Emissions setup





AIR-AP3802E-B-K9 Radiated Emissions setup 30MHz – 1GHz



AIR-AP3802E-B-K9 Radiated Emissions setup above 1GHz

| OSE | OSE



Appendix C: List of Test Equipment Used to perform the test

Equip#	Manufacturer/ Model	Description	Last Cal	Next Due	Test Item
		Test Equipment used for Radiated Emissions	5		
CIS005691	NSP1800-25-S1 Miteq	Broadband Preamplifier (1-18GHz)	25-Jun-15	25-Jun-16	B.1, B.2
CIS008448	NSA 5m Chamber Cisco	NSA 5m Chamber	9-Oct-15	9-Oct-16	B.3
CIS021117	UFB311A-0-2484-520520 Micro-Coax	RF Coaxial Cable, to 18GHz, 248.4 in	24-Aug-15	24-Aug-16	B.1, B.2, B.3
CIS034075	RSG 2000 Schaffner	Reference Spectrum Generator, 1-18GHz	Cal Not Required	Cal Not Required	B.1, B.2
CIS035284	3117 ETS-Lindgren	Double Ridged Waveguide Horn Antenna	30-Sep-15	30-Sep-16	B.1, B.2
CIS037236	50CB-015 JFW	GPIB Control Box	Cal Not Required	Cal Not Required	B.1, B.2
CIS040597	Above 1GHz Site Cal Cisco	Above 1GHz Cispr Site Verification	25-Sep-15	25-Sep-16	B.1, B.2
CIS041979	1840 Cisco	18-40GHz EMI Test Head/Verification Fixture	13-Jul-15	13-Jul-16	B.1, B.2
CIS042266	JB1 Sunol Sciences	Combination Antenna	21-Apr-15	21-Apr-16	B.3
CIS044940	ESU40 Rohde & Schwarz	EMI Test Receiver, 20Hz-40GHz	2-Nov-15	2-Nov-16	B.1, B.2
CIS054230	iBTHP-5-DB9 Newport	5 inch Temp/RH/Press Sensor w/20ft cable	10-Feb-16	10-Feb-17	B.1, B.2, B.3

	Test Equipment used for AC Mains Conducted Emissions							
Equip No	Model Manufacturer	Description	Last Cal	Next Cal	Test Item			
CIS002464	FCC-801-M2-16 Fischer Custom Communications	CDN, 2-LINE, 16A	12-Mar-15	12-Mar-16	B.4			
CIS049532	H785-150K-50-21378 TTE	High Pass Filter	8-May-15	8-May-16	B.4			
CIS020913	FCC-LISN-PA-NEMA-5-15 Fischer Custom Communications	AC Adapter	8-May-15	8-May-16	B.4			
CIS007704	FCC-LISN-50/250-50-2-01 Fischer Custom Communications	LISN	8-May-15	8-May-16	B.4			
CIS008185	FCC-450B-2.4-N Fischer Custom Communications	Instrumentation Limiter	28-Jul-15	28-Jul-16	B.4			
CIS051756	5-T-MB Bird	5W 50 Ohm BNC Termination 4GHz	6-Aug-15	6-Aug-16	B.4			
CIS049563	Sucoflex 106A Huber + Suhner	N Type Cable 18GHz	24-Aug-15	24-Aug-16	B.4			
CIS021117	UFB311A-0-2484-520520 Micro-Coax	RF Coaxial Cable, to 18GHz, 248.4 in	24-Aug-15	24-Aug-16	B.4			
CIS044940	ESU40 Rohde & Schwarz	EMI Test Receiver, 20Hz-40GHz	2-Nov-15	2-Nov-16	B.4			
CIS054647	33-605 Stanley	10meter Measuring Tape	Cal not required	Cal not required	B.4			
CIS018963	CNE V York	Comparison Noise Emitter, 30 - 1000MHz	Cal not required	Cal not required	B.4			

Test Equipment used for RF Conducted Tests							
Equip No	Model Manufacturer	Description	Last Cal	Next Cal	Test Item		

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CIS050721	N9030A Keysight	PXA Signal Analyzer	13-Apr-15	13-Apr-16	A1 thru A4
015050721	SF18-S1S1-36	111110191111111111111111111111111111111	10 1101	15 11p1 10	A1 thru A4
CIS054662	MegaPhase	SMA 36" cable	24-Sep-15	24-Sep-16	711 dira 711
C15054002	F120-S1S1-48	Sivil 30 cable	24-Бер-13	24-5ср-10	A1 thru A4
CIS054663	MegaPhase	SMA 48" Cable	25-Sep-15	25-Sep-16	Al uliu A 4
C13034003	RA08-S1S1-24	SWA 46 Cable	23-3ср-13	25-5cp-10	A1 thru A4
CIS054665	MegaPhase	SMA 24" Cable	25-Sep-15	25-Sep-16	AT till A4
C13034003	RA08-S1S1-18	SIVIA 24 Cable	23-Sep-13	23-3ep-10	A1 thru A4
CIS054666	MegaPhase	SMA 18" Cable	25 San 15	25 San 16	A1 uiiu A4
C15034000	RA08-S1S1-18	SIVIA 18 Cable	25-Sep-15	25-Sep-16	A1 thru A4
CISO54667	MegaPhase	SMA 18" Cable	25 Can 15	25 Can 16	AT ullu A4
CIS054667	RA08-S1S1-18	SIVIA 16 Cable	25-Sep-15	25-Sep-16	A1 thru A4
010054660	MegaPhase	CMA 100 Califa	25 Car 15	25 Sam 16	A1 thru A4
CIS054668	RA08-S1S1-18	SMA 18" Cable	25-Sep-15	25-Sep-16	A 1 (1) A 4
CICO54660		CMA 100 Califa	25 Car 15	25 Sam 16	A1 thru A4
CIS054669	MegaPhase	SMA 18" Cable	25-Sep-15	25-Sep-16	A 1 (1) A 4
210054670	RA08-S1S1-12	CMA 128 C-11.	25 0 15	25 9 16	A1 thru A4
CIS054670	MegaPhase	SMA 12" Cable	25-Sep-15	25-Sep-16	A 1 .1 A 4
010054671	RA08-S1S1-12	CMA 120 C-11.	25 0 15	25 G 16	A1 thru A4
CIS054671	MegaPhase	SMA 12" Cable	25-Sep-15	25-Sep-16	44.4 44
G1G0546 50	RA08-S1S1-12	G14. 100 G 11	25.0. 15	25.0 16	A1 thru A4
CIS054672	MegaPhase	SMA 12" Cable	25-Sep-15	25-Sep-16	
CTCC - 1 (= 2	RA08-S1S1-12	G1 5 4 4 9 11 G 11	25.0 15	2.7	A1 thru A4
CIS054673	MegaPhase	SMA 12" Cable	25-Sep-15	25-Sep-16	
~~~	RA08-S1S1-12				A1 thru A4
CIS054674	MegaPhase	SMA 12" Cable	25-Sep-15	25-Sep-16	
	RA08-S1S1-12				A1 thru A4
CIS054675	MegaPhase	SMA 12" Cable	25-Sep-15	25-Sep-16	
	RA08-S1S1-12				A1 thru A4
CIS054677	MegaPhase	SMA 12" Cable	25-Sep-15	25-Sep-16	
	RA08-S1S1-12				A1 thru A4
CIS054678	MegaPhase	SMA 12" Cable	25-Sep-15	25-Sep-16	
	NI PXI-2796				A1 thru A4
CIS054686	National Instruments	Plug-in switch module	6-Oct-15	6-Oct-16	
	PXI-1042				A1 thru A4
CIS055094	National Instruments	Chassis	Cal Not Required	Cal Not Required	
	RFLT2WDC40G				A1 thru A4
CIS055117	RF Lambda	2 Way 40GHz Splitter	11-Nov-15	11-Nov-16	
	RFLT4WDC40GK				A1 thru A4
CIS055166	RF Lambda	4 Way Power Divider 40GHz	23-Nov-15	23-Nov-16	
	BRC50705-02				A1 thru A4
CIS054656	Micro-Tronics	Band Reject Filter	24-Sep-15	24-Sep-16	
	BRC50704-02	Notch Filter, SB:5.470-5.725GHz, to		-	A1 thru A4
CIS054655	Micro-Tronics	12GHz	24-Sep-15	24-Sep-16	
	BRC50703-02	Notch Filter, SB:5.150-5.350GHz, to	•	•	A1 thru A4
CIS054654	Micro-Tronics	11GHz	24-Sep-15	24-Sep-16	
	BRM50702-02	Notch Filter, SB:2.400-2.500GHz, to	<u>r</u>		A1 thru A4
CIS054653	Micro-Tronics	18GHz	24-Sep-15	24-Sep-16	
CIS054637	BWS30-W2/ Aeroflex	SMA 30dB Attenuator	02-June-15	02-June-16	A1 thru A4
CIS054636	BWS20-W2/ Aeroflex	20dB SMA Attenuator	02-June-15	02-June-16	A1 thru A4



# **Appendix E: Abbreviation Key and Definitions**

# The following table defines abbreviations used within this test report.

Abbreviation	Description	Abbreviation	Description
EMC	Electro Magnetic Compatibility	°F	Degrees Fahrenheit
EMI	Electro Magnetic Interference	°C	Degrees Celsius
EUT	Equipment Under Test	Temp	Temperature
ITE	Information Technology Equipment	S/N	Serial Number
TAP	Test Assessment Schedule	Qty	Quantity
ESD	Electro Static Discharge	emf	Electromotive force
EFT	Electric Fast Transient	RMS	Root mean square
EDCS	Engineering Document Control System	Qp	Quasi Peak
Config	Configuration	Av	Average
CIS#	Cisco Number (unique identification number for Cisco test equipment)	Pk	Peak
Cal	Calibration	kHz	Kilohertz (1x10 ³ )
EN	European Norm	MHz	MegaHertz (1x10 ⁶ )
IEC	International Electro technical Commission	GHz	Gigahertz (1x10 ⁹ )
CISPR	International Special Committee on Radio Interference	Н	Horizontal
CDN	Coupling/Decoupling Network	V	Vertical
LISN	Line Impedance Stabilization	dB	decibel
	Network		
PE	Protective Earth	V	Volt
GND	Ground	kV	Kilovolt (1x10 ³ )
L1	Line 1	μV	Microvolt (1x10 ⁻⁶ )
L2	Line2	Α	Amp
L3	Line 3	μА	Micro Amp (1x10 ⁻⁶ )
DC	Direct Current	mS	Milli Second (1x10 ⁻³ )
RAW	Uncorrected measurement value, as indicated by the measuring device	μS	Micro Second (1x10 ⁻⁶ )
RF	Radio Frequency	μS	Micro Second (1x10 ⁻⁶ )
SLCE	Signal Line Conducted Emissions	m	Meter
Meas dist	Measurement distance	Spec dist	Specification distance
N/A or NA	Not Applicable	SL	Signal Line (or Telecom Line)
Р	Power Line	L	Live Line
N	Neutral Line	R	Return
S	Supply	AC	Alternating Current

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# **End**