HT/VHT20 Beam Forming, M8 to M15	2	6	-58.1	-55.8		-47.8	-21.25	26.5
HT/VHT20 Beam Forming, M16 to M23	3	6	-58.1	-55.8	-54.8	-45.3	-21.25	24.0
HT/VHT20 STBC, M0 to M7	2	6	-58.1	-55.8		-47.8	-21.25	26.5

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#### Conducted Spurs Average, All Antennas



#### Conducted Spurs Peak, All Antennas



No emissions seen above 18GHz. The plots above are representative of all modes tested

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#### Freq 9.015000000 GHz Avg Type: Log-Trig: Free Run #Atten: 0 dB Auto Tur Ref Offset 1 dB Ref -20.00 dBm Center Fre 9.015000000 G Start Fre Stop Fre Stop 18.000 GH CF St #VBW 1.0 kH; ots 1.7970 uto Freq Offse

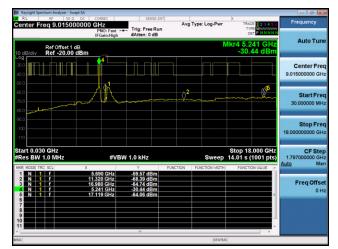
cisco

Antenna A

Keysight Spectrum Analyzer - Swept SA     RL RF 50 Ω DC  enter Freq 9.015000000	CORREC GHZ PNO: Fast IFGain:High	SENSE:IN Trig: Free Rur #Atten: 0 dB	Avg	Type: Log-Pwr	TRACE 2345 TYPE VIEW	Frequency
Ref Offset 1 dB 0 dB/div Ref -20.00 dBm				N	/kr5 5.116 GHz -50.76 dBm	
	5					Center Fre 9.015000000 GF
	Λħ.		<b>⊘</b> 2		¢°	Start Fre 30.000000 MH
100						Stop Fre 18.000000000 G
tart 0.030 GHz Res BW 1.0 MHz	#VB	N 1.0 kHz	FUNCTION	Sweep	Stop 18.000 GHz 14.01 s (1001 pts	
1 N 1 f 2 N 1 f 1 3 N 1 f 1 4 N 1 f	5.690 GHz 1.320 GHz 6.980 GHz 911 MHz 5.116 GHz	-59.87 dBm -68.37 dBm -64.45 dBm -69.13 dBm -50.76 dBm	FONCTION	FORCTION WOTH	FUNCTION VALUE	Freq Offs
6 N 1 f 1 7 8 9	6.994 GHz	-63.39 dBm				
11		-		STATU		

Antenna C

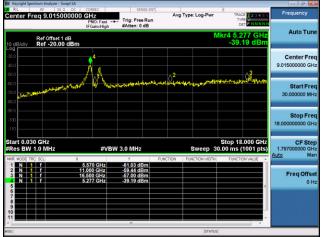




Antenna D

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### Conducted Spurs Average, 5690 MHz, Non HT/VHT80, 6 to 54 Mbps

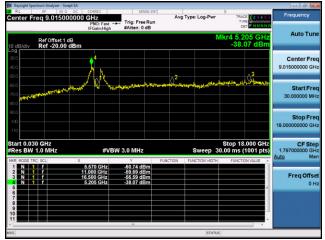


## Conducted Spurs Peak, 5570 MHz, Non HT160, 6 to 54 Mbps



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Antenna C





Antenna D

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## **A.4**

## **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:

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

(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))

#### Conducted Bandedge

Test parameters restricted Band

RBW = 1 MHz

 $VBW \ge 3 \times RBW$  for Peak, 100Hz for Average Sweep = Auto couple Detector = Peak

Trace = Max Hold.

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

Tested By :	Date of testing:
Jose Aguirre	10-Feb-2016 to 22-Feb-2016
Test Result · PASS	

See Appendix C for list of test equipment

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<b></b> _		——								
Frequency (MHz)	Mode	Tx Paths	Correlated Antenna Gain (dBi)	Tx 1 Bandedge Level (dBm)	Tx 2 Bandedge Level (dBm)	Tx 3 Bandedge Level (dBm)	Tx 4 Bandedge Level (dBm)	Total Tx Bandedge Level (dBm)	Limit (dBm)	Margin (dB)
	Non HT/VHT20, 6 to 54 Mbps	1	6	-51.7				-45.7	-41.25	4.5
	Non HT/VHT20, 6 to 54 Mbps	2	6	-53.0	-52.2			-43.6	-41.25	2.3
	Non HT/VHT20, 6 to 54 Mbps	3	6	-58.1	-59.0	-59.5		-48.1	-41.25	6.8
	Non HT/VHT20, 6 to 54 Mbps	4	6	-60.1	-61.5	-61.2	-60.1	-48.7	-41.25	7.4
	Non HT/VHT20 Beam Forming, 6 to 54 Mbps	2	9	-54.9	-54.8			-42.8	-41.25	1.6
	Non HT/VHT20 Beam Forming, 6 to 54 Mbps	3	11	-60.1	-61.5	-61.2		-45.3	-41.25	4.1
	Non HT/VHT20 Beam Forming, 6 to 54 Mbps	4	12	-64.8	-62.6	-65.4	-64.4	-46.1	-41.25	4.9
	HT/VHT20, M0 to M7	1	6	-50.9				-44.9	-41.25	3.7
	HT/VHT20, M0 to M7	2	6	-51.8	-50.9			-42.3	-41.25	1.1
	HT/VHT20, M8 to M15	2	6	-51.8	-50.9			-42.3	-41.25	1.1
	HT/VHT20, M0 to M7	3	6	-58.0	-58.6	-59.2		-47.8	-41.25	6.6
	HT/VHT20, M8 to M15	3	6	-54.5	-53.8	-55.1		-43.7	-41.25	2.4
	HT/VHT20, M16 to M23	3	6	-54.5	-53.8	-55.1		-43.7	-41.25	2.4
5500	HT/VHT20, M0 to M7	4	6	-59.8	-61.3	-60.9	-59.4	-48.3	-41.25	7.0
5	HT/VHT20, M8 to M15	4	6	-56.7	-55.7	-56.9	-56.1	-44.3	-41.25	3.1
	HT/VHT20, M16 to M23	4	6	-54.5	-53.8	-55.1	-54.4	-42.4	-41.25	1.2
	HT/VHT20 Beam Forming, M0 to M7	2	9	-54.5	-53.8			-42.1	-41.25	0.9
	HT/VHT20 Beam Forming, M8 to M15	2	6	-51.8	-50.9			-42.3	-41.25	1.1
	HT/VHT20 Beam Forming, M0 to M7	3	11	-59.8	-61.3	-60.9		-45.0	-41.25	3.8
	HT/VHT20 Beam Forming, M8 to M15	3	8	-56.7	-55.7	-56.9		-43.8	-41.25	2.6
	HT/VHT20 Beam Forming, M16 to M23	3	6	-54.5	-53.8	-55.1		-43.7	-41.25	2.4
	HT/VHT20 Beam Forming, M0 to M7	4	12	-65.2	-65.8	-65.5	-64.7	-47.3	-41.25	6.0
	HT/VHT20 Beam Forming, M8 to M15	4	9	-58.9	-60.3	-60.1	-58.4		-41.25	3.1
	HT/VHT20 Beam Forming, M16 to M23	4	7	-56.7	-55.7	-56.9	-56.1	-43.1	-41.25	1.9
	HT/VHT20 STBC, M0 to M7	2	6	-51.8	-50.9	-30.5	-30.1	-42.3	-41.25	1.5
	HT/VHT20 STBC, M0 to M7	3	6	-54.5	-53.8	-55.1		-43.7	-41.25	2.4
	HT/VHT20 STBC, M0 to M7	4	6	-56.7	-55.7	-56.9	-56.1	-45.7	-41.25	3.1
		4	0	-30.7	-33.7	-30.9	-30.1	-44.3	-41.23	3.1
	Non HT/VHT40, 6 to 54 Mbps	1	6	-54.9				-48.9	-41.25	7.7
	Non HT/VHT40, 6 to 54 Mbps	2	6	-58.3	-58.7			-40.9	-41.25	8.2
510	Non HT/VHT40, 6 to 54 Mbps	2	6	-58.3	-58.7	-59.6		-49.5	-41.25	6.8
55	Non HT/VHT40, 6 to 54 Mbps	4		-56.5	-58.7	-61.9	-63.6	-40.1	-41.25	9.3
	HT/VHT40, M0 to M7		6 6	-50.8	-02.1	-01.9	-05.0	-50.6	-41.25	9.3 3.6
		1	0	-30.0				-44.0	-41.23	5.0

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	HT/VHT40, M0 to M7	2	6	-53.2	-51.7			-43.4	-41.25	2.1
	HT/VHT40, M8 to M15	2	6	-53.2	-51.7			-43.4	-41.25	2.1
	HT/VHT40, M0 to M7	3	6	-54.7	-54.5	-56.9		-44.5	-41.25	3.2
	HT/VHT40, M8 to M15	3	6	-54.7	-54.5	-56.9		-44.5	-41.25	3.2
	HT/VHT40, M16 to M23	3	6	-54.7	-54.5	-56.9		-44.5	-41.25	3.2
	HT/VHT40, M0 to M7	4	6	-55.8	-56.2	-58.1	-56.2	-44.5	-41.25	3.2
	HT/VHT40, M8 to M15	4	6	-55.8	-56.2	-58.1	-56.2	-44.5	-41.25	3.2
	HT/VHT40, M16 to M23	4	6	-55.8	-56.2	-58.1	-56.2	-44.5	-41.25	3.2
	HT/VHT40 Beam Forming, M0 to M7	2	9	-57.4	-57.4			-45.4	-41.25	4.1
	HT/VHT40 Beam Forming, M8 to M15	2	6	-53.2	-51.7			-43.4	-41.25	2.1
	HT/VHT40 Beam Forming, M0 to M7	3	11	-58.7	-58.4	-60.8		-43.6	-41.25	2.4
	HT/VHT40 Beam Forming, M8 to M15	3	8	-57.4	-57.4	-58.9		-45.3	-41.25	4.0
	HT/VHT40 Beam Forming, M16 to M23	3	6	-54.7	-54.5	-56.9		-44.5	-41.25	3.2
	HT/VHT40 Beam Forming, M0 to M7	4	12	-66.9	-65.5	-65.9	-67.1	-48.3	-41.25	7.0
	HT/VHT40 Beam Forming, M8 to M15	4	9	-58.7	-58.4	-60.8	-59.4	-44.2	-41.25	3.0
	HT/VHT40 Beam Forming, M16 to M23	4	7	-57.4	-57.4	-58.9	-58.0	-44.7	-41.25	3.4
	HT/VHT40 STBC, M0 to M7	2	6	-53.2	-51.7			-43.4	-41.25	2.1
	HT/VHT40 STBC, M0 to M7	3	6	-54.7	-54.5	-56.9		-44.5	-41.25	3.2
	HT/VHT40 STBC, M0 to M7	4	6	-55.8	-56.2	-58.1	-56.2	-44.5	-41.25	3.2
			<u></u>							
	Non HT/VHT80, 6 to 54 Mbps	1	6	-53.8				-47.8	-41.25	6.6
	Non HT/VHT80, 6 to 54 Mbps	2	6	-55.3	-51.0			-43.6	-41.25	2.4
	Non HT/VHT80, 6 to 54 Mbps	3	6	-55.3	-51.0	-54.4		-42.4	-41.25	1.1
	Non HT/VHT80, 6 to 54 Mbps	4	6	-56.2	-52.3	-55.3	-55.9	-42.6	-41.25	1.3
	HT/VHT80, M0 to M7	1	6	-49.2				-43.2	-41.25	2.0
	HT/VHT80, M0 to M7	2	6	-52.6	-49.2			-41.6	-41.25	0.3
	HT/VHT80, M8 to M15	2	6	-52.6	-49.2			-41.6	-41.25	0.3
	HT/VHT80, M0 to M7	3	6	-54.6	-51.4	-54.0		-42.3	-41.25	1.1
	HT/VHT80, M8 to M15	3	6	-54.6	-51.4	-54.0		-42.3	-41.25	1.1
	HT/VHT80, M16 to M23	3	6	-54.6	-51.4	-54.0		-42.3	-41.25	1.1
5530	HT/VHT80, M0 to M7	4	6	-54.6	-51.4	-54.0	-55.6	-41.6	-41.25	0.3
55	HT/VHT80, M8 to M15	4	6	-54.6	-51.4	-54.0	-55.6	-41.6	-41.25	0.3
	HT/VHT80, M16 to M23	4	6	-54.6	-51.4	-54.0	-55.6	-41.6	-41.25	0.3
	HT/VHT80 Beam Forming, M0 to M7	2	6	-52.6	-49.2	<b>u</b>		-41.6	-41.25	0.3
	HT/VHT80 Beam Forming, M8 to M15	2	6	-52.6	-49.2			-41.6	-41.25	0.3
	HT/VHT80 Beam Forming, M0 to M7	3	6	-54.6	-51.4	-54.0		-42.3	-41.25	1.1
	HT/VHT80 Beam Forming, M8 to M15	3	6	-54.6	-51.4	-54.0		-42.3	-41.25	1.1
	HT/VHT80 Beam Forming, M16 to M15	3	6	-54.6	-51.4	-54.0		-42.3	-41.25	1.1
	HT/VHT80 Beam Forming, M0 to M7	4	6	-54.6	-51.4	-54.0	-55.6	-42.5	-41.25	0.3
	HT/VHT80 Beam Forming, M8 to M15	4	6	-54.6	-51.4	-54.0	-55.6	-41.6	-41.25	0.3
	HT/VHT80 Beam Forming, M16 to M13	4	6	-54.6	-51.4	-54.0	-55.6	-41.6	-41.25	0.3
				-34.0	-31.4	-34.0	-55.0	-41.0	-41.25	0.5
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	HT/VHT80 STBC, M0 to M7	2	6	-52.6	-49.2			-41.6	-41.25	0.3
	HT/VHT80 STBC, M0 to M7	3	6	-54.6	-51.4	-54.0		-42.3	-41.25	1.1
	HT/VHT80 STBC, M0 to M7	4	6	-54.6	-51.4	-54.0	-55.6	-41.6	-41.25	0.3
	Non HT160, 6 to 54 Mbps	1	6	-49.3				-43.3	-41.25	2.1
	Non HT160, 6 to 54 Mbps	2	6	-49.5	-51.5			-41.4	-41.25	0.1
	Non HT160, 6 to 54 Mbps	3	6	-56.4	-50.7	-53.4		-42.1	-41.25	0.9
	Non HT160, 6 to 54 Mbps	4	6	-56.4	-50.7	-53.4	-57.4	-41.6	-41.25	0.4
	VHT160, M0.1 to M9.1	1	6	-55.7				-49.7	-41.25	8.5
	VHT160, M0.1 to M9.1	2	6	-56.9	-55.1			-46.9	-41.25	5.6
	VHT160, M0.2 to M9.2	2	6	-56.9	-55.1			-46.9	-41.25	5.6
	VHT160, M0.1 to M9.1	3	6	-56.9	-55.1	-55.9		-45.1	-41.25	3.9
	VHT160, M0.2 to M9.2	3	6	-56.9	-55.1	-55.9		-45.1	-41.25	3.9
	VHT160, M0.3 to M9.3	3	6	-56.9	-55.1	-55.9		-45.1	-41.25	3.9
	VHT160, M0.1 to M9.1	4	6	-56.9	-55.1	-55.9	-57.1	-44.2	-41.25	2.9
5570	VHT160, M0.2 to M9.2	4	6	-56.9	-55.1	-55.9	-57.1	-44.2	-41.25	2.9
55	VHT160, M0.3 to M9.3	4	6	-56.9	-55.1	-55.9	-57.1	-44.2	-41.25	2.9
	VHT160 Beam Forming, M0.1 to M9.1	2	6	-56.9	-55.1			-46.9	-41.25	5.6
	VHT160 Beam Forming, M0.2 to M9.2	2	6	-56.9	-55.1			-46.9	-41.25	5.6
	VHT160 Beam Forming, M0.1 to M9.1	3	6	-56.9	-55.1	-55.9		-45.1	-41.25	3.9
	VHT160 Beam Forming, M0.2 to M9.2	3	6	-56.9	-55.1	-55.9		-45.1	-41.25	3.9
	VHT160 Beam Forming, M0.3 to M9.3	3	6	-56.9	-55.1	-55.9		-45.1	-41.25	3.9
	VHT160 Beam Forming, M0.1 to M9.1	4	6	-56.9	-55.1	-55.9	-57.1	-44.2	-41.25	2.9
	VHT160 Beam Forming, M0.2 to M9.2	4	6	-56.9	-55.1	-55.9	-57.1	-44.2	-41.25	2.9
	VHT160 Beam Forming, M0.3 to M9.3	4	6	-56.9	-55.1	-55.9	-57.1	-44.2	-41.25	2.9
	VHT160 STBC, M0.1 to M9.1	2	6	-56.9	-55.1			-46.9	-41.25	5.6
	VHT160 STBC, M0.1 to M9.1	3	6	-56.9	-55.1	-55.9		-45.1	-41.25	3.9
	VHT160 STBC, M0.1 to M9.1	4	6	-56.9	-55.1	-55.9	-57.1	-44.2	-41.25	2.9

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Frequency (MHz)	Mode	Tx Paths	Correlated Antenna Gain (dBi)	Tx 1 Bandedge Level (dBm)	Tx 2 Bandedge Level (dBm)	Tx 3 Bandedge Level (dBm)	Tx 4 Bandedge Level (dBm)	Total Tx Bandedge Level (dBm)	Limit (dBm)	Margin (dB)		
	Non HT/VHT20, 6 to 54 Mbps	1	6	-32.8				-26.8	-21.25	5.6		
	Non HT/VHT20, 6 to 54 Mbps	2	6	-33.4	-32.0			-23.6	-21.25	2.4		
	Non HT/VHT20, 6 to 54 Mbps	3	6	-36.7	-34.9	-36.1		-25.1	-21.25	3.8		
	Non HT/VHT20, 6 to 54 Mbps	4	6	-38.3	-36.8	-38.1	-38.4	-25.8	-21.25	4.6		
	Non HT/VHT20 Beam Forming, 6 to 54 Mbps	2	9	-34.4	-33.1			-21.7	-21.25	0.4		
	Non HT/VHT20 Beam Forming, 6 to 54 Mbps	3	11	-38.3	-36.8	-38.1		-22.1	-21.25	0.9		
	Non HT/VHT20 Beam Forming, 6 to 54 Mbps	4	12	-40.4	-38.6	-39.6	-40.6	-21.7	-21.25	0.5		
	HT/VHT20, M0 to M7	1	6	-32.3				-26.3	-21.25	5.1		
	HT/VHT20, M0 to M7	2	6	-33.2	-31.8			-23.4	-21.25	2.2		
	HT/VHT20, M8 to M15	2	6	-33.2	-31.8			-23.4	-21.25	2.2		
	HT/VHT20, M0 to M7	3	6	-36.9	-35.2	-36.0		-25.2	-21.25	4.0		
	HT/VHT20, M8 to M15	3	6	-34.3	-33.0	-33.9		-22.9	-21.25	1.7		
	HT/VHT20, M16 to M23	3	6	-34.3	-33.0	-33.9		-22.9	-21.25	1.7		
5500	HT/VHT20, M0 to M7	4	6	-38.0	-37.2	-37.4	-38.5	-25.7	-21.25	4.5		
S	HT/VHT20, M8 to M15	4	6	-35.4	-33.8	-34.4	-35.3	-22.7	-21.25	1.4		
	HT/VHT20, M16 to M23	4	6	-34.3	-33.0	-33.9	-34.3	-21.8	-21.25	0.6		
	HT/VHT20 Beam Forming, M0 to M7	2	9	-34.3	-33.0			-21.6	-21.25	0.3		
	HT/VHT20 Beam Forming, M8 to M15	2	6	-33.2	-31.8			-23.4	-21.25	2.2		
	HT/VHT20 Beam Forming, M0 to M7	3	11	-38.0	-37.2	-37.4		-21.9	-21.25	0.7		
	HT/VHT20 Beam Forming, M8 to M15	3	8	-35.4	-33.8	-34.4		-21.9	-21.25	0.7		
	HT/VHT20 Beam Forming, M16 to M23	3	6	-34.3	-33.0	-33.9		-22.9	-21.25	1.7		
	HT/VHT20 Beam Forming, M0 to M7	4	12	-41.6	-39.7	-40.2	-41.2	-22.6	-21.25	1.3		
	HT/VHT20 Beam Forming, M8 to M15	4	9	-37.0	-36.0	-37.3	-37.7	-21.9	-21.25	0.7		
	HT/VHT20 Beam Forming, M16 to M23	4	7	-35.4	-33.8	-34.4	-35.3	-21.5	-21.25	0.2		
	HT/VHT20 STBC, M0 to M7	2	6	-33.2	-31.8			-23.4	-21.25	2.2		
	HT/VHT20 STBC, M0 to M7	3	6	-34.3	-33.0	-33.9		-22.9	-21.25	1.7		
	HT/VHT20 STBC, M0 to M7	4	6	-35.4	-33.8	-34.4	-35.3	-22.7	-21.25	1.4		
										-		
	Non HT/VHT40, 6 to 54 Mbps	1	6	-29.3				-23.3	-21.25	2.1		
	Non HT/VHT40, 6 to 54 Mbps	2	6	-34.0	-31.8			-23.8	-21.25	2.5		
10	Non HT/VHT40, 6 to 54 Mbps	3	6	-34.0	-31.8	-33.4		-22.2	-21.25	0.9		
5510	Non HT/VHT40, 6 to 54 Mbps	4	6	-34.4	-33.5	-34.5	-35.0	-22.3	-21.25	1.0		
	HT/VHT40, M0 to M7	1	6	-32.6				-26.6	-21.25	5.4		
	HT/VHT40, M0 to M7	2	6	-31.3	-31.8			-22.5	-21.25	1.3		
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			6	21.2	21.0			22.5	24.25	1.2
	HT/VHT40, M8 to M15	2	6	-31.3	-31.8	24.4		-22.5	-21.25	1.3
	HT/VHT40, M0 to M7	3	6	-35.8	-30.3	-34.4		-22.1	-21.25	0.8
	HT/VHT40, M8 to M15	3	6	-35.8	-30.3	-34.4		-22.1	-21.25	0.8
	HT/VHT40, M16 to M23	3	6	-35.8	-30.3	-34.4	25.6	-22.1	-21.25	0.8
	HT/VHT40, M0 to M7	4	6	-31.9	-34.3	-35.0	-35.6	-21.9	-21.25	0.7
	HT/VHT40, M8 to M15	4	6	-31.9	-34.3	-35.0	-35.6	-21.9	-21.25	0.7
	HT/VHT40, M16 to M23	4	6	-31.9	-34.3	-35.0	-35.6	-21.9	-21.25	0.7
	HT/VHT40 Beam Forming, M0 to M7	2	9	-36.5	-34.8			-23.6	-21.25	2.3
	HT/VHT40 Beam Forming, M8 to M15	2	6	-31.3	-31.8			-22.5	-21.25	1.3
	HT/VHT40 Beam Forming, M0 to M7	3	11	-39.1	-36.8	-37.3		-22.1	-21.25	0.8
	HT/VHT40 Beam Forming, M8 to M15	3	8	-36.5	-34.8	-35.8		-23.1	-21.25	1.8
	HT/VHT40 Beam Forming, M16 to M23	3	6	-35.8	-30.3	-34.4		-22.1	-21.25	0.8
	HT/VHT40 Beam Forming, M0 to M7	4	12	-41.9	-40.9	-38.9	-46.1	-23.2	-21.25	2.0
	HT/VHT40 Beam Forming, M8 to M15	4	9	-39.1	-36.8	-37.3	-36.5	-22.3	-21.25	1.0
	HT/VHT40 Beam Forming, M16 to M23	4	7	-36.5	-34.8	-35.8	-34.9	-22.2	-21.25	1.0
	HT/VHT40 STBC, M0 to M7	2	6	-31.3	-31.8			-22.5	-21.25	1.3
	HT/VHT40 STBC, M0 to M7	3	6	-35.8	-30.3	-34.4		-22.1	-21.25	0.8
	HT/VHT40 STBC, M0 to M7	4	6	-31.9	-34.3	-35.0	-35.6	-21.9	-21.25	0.7
$\square$										!
	Non HT/VHT80, 6 to 54 Mbps	1	6	-29.6				-23.6	-21.25	2.4
	Non HT/VHT80, 6 to 54 Mbps	2	6	-33.3	-33.8			-24.5	-21.25	3.3
	Non HT/VHT80, 6 to 54 Mbps	3	6	-33.3	-33.8	-30.9		-21.7	-21.25	0.5
	Non HT/VHT80, 6 to 54 Mbps	4	6	-37.3	-34.2	-37.9	-36.8	-24.3	-21.25	3.0
	HT/VHT80, M0 to M7	1	6	-30.5				-24.5	-21.25	3.3
	HT/VHT80, M0 to M7	2	6	-32.7	-30.8			-22.6	-21.25	1.4
	HT/VHT80, M8 to M15	2	6	-32.7	-30.8			-22.6	-21.25	1.4
	HT/VHT80, M0 to M7	3	6	-36.1	-29.7	-34.7		-21.8	-21.25	0.6
	HT/VHT80, M8 to M15	3	6	-36.1	-29.7	-34.7		-21.8	-21.25	0.6
	HT/VHT80, M16 to M23	3	6	-36.1	-29.7	-34.7		-21.8	-21.25	0.6
30	HT/VHT80, M0 to M7	4	6	-36.1	-29.7	-34.7	-39.0	-21.5	-21.25	0.2
553	HT/VHT80, M8 to M15	4	6	-36.1	-29.7	-34.7	-39.0	-21.5	-21.25	0.2
	HT/VHT80, M16 to M23	4	6	-36.1	-29.7	-34.7	-39.0	-21.5	-21.25	0.2
	HT/VHT80 Beam Forming, M0 to M7	2	6	-32.7	-30.8			-22.6	-21.25	1.4
	HT/VHT80 Beam Forming, M8 to M15	2	6	-32.7	-30.8			-22.6	-21.25	1.4
	HT/VHT80 Beam Forming, M0 to M7	3	6	-36.1	-29.7	-34.7		-21.8	-21.25	0.6
	HT/VHT80 Beam Forming, M8 to M15	3	6	-36.1	-29.7	-34.7		-21.8	-21.25	0.6
	HT/VHT80 Beam Forming, M16 to M23	3	6	-36.1	-29.7	-34.7		-21.8	-21.25	0.6
	HT/VHT80 Beam Forming, M0 to M7	4	6	-36.1	-29.7	-34.7	-39.0	-21.5	-21.25	0.2
	HT/VHT80 Beam Forming, M8 to M15	4	6	-36.1	-29.7	-34.7	-39.0	-21.5	-21.25	0.2
	HT/VHT80 Beam Forming, M16 to M15	4	6	-36.1	-29.7	-34.7	-39.0	-21.5	-21.25	0.2
	HT/VHT80 STBC, M0 to M7	2	6	-32.7	-30.8	5	5515	-22.6	-21.25	1.4
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HT/VHT80 STBC, M0 to M7         3         6         -36.1         -29.7         -34.7         -21.8         -21.25         0.6           HT/VHT80 STBC, M0 to M7         4         6         -36.1         -29.7         -34.7         -39.0         -21.5         -21.25         0.2           V         Non HT160, 6 to 54 Mbps         1         6         -28.9         -         -25.2         -21.25         1.7           Non HT160, 6 to 54 Mbps         2         6         -34.8         -33.7         -         -25.2         -21.25         4.0           Non HT160, 6 to 54 Mbps         3         6         -40.0         -45.0         -43.9											
Non HT160, 6 to 54 Mbps         1         6         -28.9              Non HT160, 6 to 54 Mbps         2         6         -34.8         -33.7          -25.2         -21.25         4.0           Non HT160, 6 to 54 Mbps         3         6         -40.0         -45.0         -43.9         -31.6         -21.25         9.3           VHT160, M0.1 to M9.1         1         6         -30.0         -45.0         -43.9         -43.3         -30.6         -21.25         9.3           VHT160, M0.1 to M9.1         1         6         -31.3          -25.3         -21.25         3.6           VHT160, M0.1 to M9.1         2         6         -36.8         -32.1          -24.8         -21.25         3.6           VHT160, M0.1 to M9.1         3         6         -36.8         -32.1          -24.8         -21.25         1.1           VHT160, M0.2 to M9.2         2         6         -36.8         -32.1         -32.0          -22.4         -21.25         1.1           VHT160, M0.3 to M9.3         3         6         -36.8         -32.1         -32.0         -40.4         -22.1         -21.2		HT/VHT80 STBC, M0 to M7	3	6	-36.1	-29.7	-34.7		-21.8	-21.25	0.6
Non HT160, 6 to 54 Mbps         2         6         -34.8         -33.7         -25.2         -21.25         4.0           Non HT160, 6 to 54 Mbps         3         6         -40.0         -45.0         -43.9         -31.6         -21.25         10.4           Non HT160, 6 to 54 Mbps         4         6         -40.0         -45.0         -43.9         -43.3         -30.6         -21.25         9.3           VHT160, M0.1 to M9.1         1         6         -31.3         -25.3         -21.25         3.6           VHT160, M0.1 to M9.1         2         6         -36.8         -32.1         -24.8         -21.25         3.6           VHT160, M0.1 to M9.1         3         6         -36.8         -32.1         -24.8         -21.25         3.6           VHT160, M0.2 to M9.2         2         6         -36.8         -32.1         -22.0         -22.4         -21.25         1.1           VHT160, M0.3 to M9.3         3         6         -36.8         -32.1         -32.0         -22.4         -21.25         1.1           VHT160, M0.2 to M9.2         4         6         -36.8         -32.1         -32.0         -40.4         -22.1         -21.25         0.9		HT/VHT80 STBC, M0 to M7	4	6	-36.1	-29.7	-34.7	-39.0	-21.5	-21.25	0.2
Non HT160, 6 to 54 Mbps         2         6         -34.8         -33.7         -25.2         -21.25         4.0           Non HT160, 6 to 54 Mbps         3         6         -40.0         -45.0         -43.9         -31.6         -21.25         10.4           Non HT160, 6 to 54 Mbps         4         6         -40.0         -45.0         -43.9         -43.3         -30.6         -21.25         9.3           VHT160, M0.1 to M9.1         1         6         -31.3         -25.3         -21.25         3.6           VHT160, M0.1 to M9.1         2         6         -36.8         -32.1         -24.8         -21.25         3.6           VHT160, M0.1 to M9.1         3         6         -36.8         -32.1         -24.8         -21.25         3.6           VHT160, M0.2 to M9.2         2         6         -36.8         -32.1         -22.0         -22.4         -21.25         1.1           VHT160, M0.3 to M9.3         3         6         -36.8         -32.1         -32.0         -22.4         -21.25         1.1           VHT160, M0.2 to M9.2         4         6         -36.8         -32.1         -32.0         -40.4         -22.1         -21.25         0.9											
Non HT160, 6 to 54 Mbps         3         6         -40.0         -43.9         -31.6         -21.25         10.4           Non HT160, 6 to 54 Mbps         4         6         -40.0         -45.0         -43.9         -43.3         -30.6         -21.25         9.3           VHT160, M0.1 to M9.1         1         6         -31.3         -         -25.3         -21.25         9.3           VHT160, M0.1 to M9.1         2         6         -36.8         -32.1         -24.8         -21.25         3.6           VHT160, M0.2 to M9.2         2         6         -36.8         -32.1         -24.8         -21.25         3.6           VHT160, M0.1 to M9.1         3         6         -36.8         -32.1         -24.8         -21.25         3.6           VHT160, M0.2 to M9.2         3         6         -36.8         -32.1         -32.0         -22.4         -21.25         1.1           VHT160, M0.3 to M9.3         4         6         -36.8         -32.1         -32.0         -40.4         -22.1         -21.25         0.9           VHT160, M0.3 to M9.3         4         6         -36.8         -32.1         -32.0         -40.4         -22.1         -21.25         0.9		Non HT160, 6 to 54 Mbps	1	6	-28.9				-22.9	-21.25	1.7
Non HT160, 6 to 54 Mbps         4         6         -40.0         -45.0         -43.3         -30.6         -21.25         9.3           VHT160, M0.1 to M9.1         1         6         -31.3         -         -25.3         -21.25         4.1           VHT160, M0.1 to M9.1         2         6         -36.8         -32.1         -24.8         -21.25         3.6           VHT160, M0.2 to M9.2         2         6         -36.8         -32.1         -24.8         -21.25         3.6           VHT160, M0.1 to M9.1         3         6         -36.8         -32.1         -24.8         -21.25         1.1           VHT160, M0.2 to M9.2         3         6         -36.8         -32.1         -32.0         -22.4         -21.25         1.1           VHT160, M0.3 to M9.3         3         6         -36.8         -32.1         -32.0         -22.4         -21.25         1.1           VHT160, M0.2 to M9.2         4         6         -36.8         -32.1         -32.0         -40.4         -22.1         -21.25         0.9           VHT160, M0.3 to M9.3         4         6         -36.8         -32.1         -32.0         -40.4         -22.1         -21.25         0.9		Non HT160, 6 to 54 Mbps	2	6	-34.8	-33.7			-25.2	-21.25	4.0
VHT160, M0.1 to M9.1         1         6         -31.3            21.25         4.1           VHT160, M0.1 to M9.1         2         6         -36.8         -32.1          -24.8         -21.25         3.6           VHT160, M0.2 to M9.2         2         6         -36.8         -32.1          -24.8         -21.25         3.6           VHT160, M0.1 to M9.1         3         6         -36.8         -32.1         -22.4         -21.25         1.1           VHT160, M0.2 to M9.2         3         6         -36.8         -32.1         -32.0         -22.4         -21.25         1.1           VHT160, M0.3 to M9.3         3         6         -36.8         -32.1         -32.0         -22.4         -21.25         0.9           VHT160, M0.2 to M9.2         4         6         -36.8         -32.1         -32.0         -40.4         -22.1         -21.25         0.9           VHT160, M0.3 to M9.3         4         6         -36.8         -32.1         -32.0         -40.4         -22.1         -21.25         0.9           VHT160, M0.3 to M9.3         4         6         -36.8         -32.1         -32.0         -40.4		Non HT160, 6 to 54 Mbps	3	6	-40.0	-45.0	-43.9		-31.6	-21.25	10.4
VHT160, M0.1 to M9.1         2         6         -36.8         -32.1         2         -24.8         -21.25         3.6           VHT160, M0.2 to M9.2         2         6         -36.8         -32.1         2         -24.8         -21.25         3.6           VHT160, M0.1 to M9.1         3         6         -36.8         -32.1         -32.0         -22.4         -21.25         1.1           VHT160, M0.2 to M9.2         3         6         -36.8         -32.1         -32.0         -22.4         -21.25         1.1           VHT160, M0.3 to M9.3         3         6         -36.8         -32.1         -32.0         -22.4         -21.25         1.1           VHT160, M0.1 to M9.1         4         6         -36.8         -32.1         -32.0         -40.4         -22.1         -21.25         0.9           VHT160, M0.2 to M9.2         4         6         -36.8         -32.1         -32.0         -40.4         -22.1         -21.25         0.9           VHT160, M0.3 to M9.3         4         6         -36.8         -32.1         -32.0         -40.4         -22.1         -21.25         0.9           VHT160, M0.3 to M9.3         4         6         -36.8         -32.1 </td <td></td> <td>Non HT160, 6 to 54 Mbps</td> <td>4</td> <td>6</td> <td>-40.0</td> <td>-45.0</td> <td>-43.9</td> <td>-43.3</td> <td>-30.6</td> <td>-21.25</td> <td>9.3</td>		Non HT160, 6 to 54 Mbps	4	6	-40.0	-45.0	-43.9	-43.3	-30.6	-21.25	9.3
VHT160, M0.2 to M9.2         2         6         -36.8         -32.1          -24.8         -21.25         3.6           VHT160, M0.1 to M9.1         3         6         -36.8         -32.1         -32.0         -22.4         -21.25         1.1           VHT160, M0.2 to M9.2         3         6         -36.8         -32.1         -32.0         -22.4         -21.25         1.1           VHT160, M0.3 to M9.3         3         6         -36.8         -32.1         -32.0         -22.4         -21.25         1.1           VHT160, M0.2 to M9.2         4         6         -36.8         -32.1         -32.0         -40.4         -22.1         -21.25         0.9           VHT160, M0.2 to M9.2         4         6         -36.8         -32.1         -32.0         -40.4         -22.1         -21.25         0.9           VHT160, M0.3 to M9.3         4         6         -36.8         -32.1         -32.0         -40.4         -22.1         -21.25         0.9           VHT160, M0.3 to M9.3         4         6         -36.8         -32.1         -32.0         -40.4         -22.1         -21.25         0.9           VHT160, Beam Forming, M0.1 to M9.1         2         6		VHT160, M0.1 to M9.1	1	6	-31.3				-25.3	-21.25	4.1
VHT160, M0.1 to M9.1         3         6         -36.8         -32.1         -32.0         -22.4         -21.25         1.1           VHT160, M0.2 to M9.2         3         6         -36.8         -32.1         -32.0         -22.4         -21.25         1.1           VHT160, M0.3 to M9.3         3         6         -36.8         -32.1         -32.0         -22.4         -21.25         1.1           VHT160, M0.1 to M9.1         4         6         -36.8         -32.1         -32.0         -40.4         -22.1         -21.25         0.9           VHT160, M0.2 to M9.2         4         6         -36.8         -32.1         -32.0         -40.4         -22.1         -21.25         0.9           VHT160, M0.3 to M9.3         4         6         -36.8         -32.1         -32.0         -40.4         -22.1         -21.25         0.9           VHT160, M0.3 to M9.3         4         6         -36.8         -32.1         -32.0         -40.4         -22.1         -21.25         0.9           VHT160, M0.3 to M9.3         4         6         -36.8         -32.1         -32.0         -40.4         -22.1         -21.25         3.6           VHT160 Beam Forming, M0.1 to M9.1         3		VHT160, M0.1 to M9.1	2	6	-36.8	-32.1			-24.8	-21.25	3.6
VHT160, M0.2 to M9.2         3         6         -36.8         -32.1         -32.0         -22.4         -21.25         1.1           VHT160, M0.3 to M9.3         3         6         -36.8         -32.1         -32.0         -22.4         -21.25         1.1           VHT160, M0.1 to M9.1         4         6         -36.8         -32.1         -32.0         -40.4         -22.1         -21.25         0.9           VHT160, M0.2 to M9.2         4         6         -36.8         -32.1         -32.0         -40.4         -22.1         -21.25         0.9           VHT160, M0.2 to M9.2         4         6         -36.8         -32.1         -32.0         -40.4         -22.1         -21.25         0.9           VHT160, M0.3 to M9.3         4         6         -36.8         -32.1         -32.0         -40.4         -22.1         -21.25         0.9           VHT160 Beam Forming, M0.1 to M9.1         2         6         -36.8         -32.1         -32.0         -40.4         -22.4         -21.25         3.6           VHT160 Beam Forming, M0.1 to M9.1         2         6         -36.8         -32.1         -32.0         -22.4         -21.25         1.1           VHT160 Beam Forming, M0.3		VHT160, M0.2 to M9.2	2	6	-36.8	-32.1			-24.8	-21.25	3.6
VHT160, M0.3 to M9.3         3         6         -36.8         -32.1         -32.0         -22.4         -21.25         1.1           VHT160, M0.1 to M9.1         4         6         -36.8         -32.1         -32.0         -40.4         -22.1         -21.25         0.9           VHT160, M0.2 to M9.2         4         6         -36.8         -32.1         -32.0         -40.4         -22.1         -21.25         0.9           VHT160, M0.3 to M9.3         4         6         -36.8         -32.1         -32.0         -40.4         -22.1         -21.25         0.9           VHT160, M0.3 to M9.3         4         6         -36.8         -32.1         -32.0         -40.4         -22.1         -21.25         0.9           VHT160 Beam Forming, M0.1 to M9.1         2         6         -36.8         -32.1         -40.4         -22.1         -21.25         3.6           VHT160 Beam Forming, M0.2 to M9.2         2         6         -36.8         -32.1         -32.0         -22.4         -21.25         1.1           VHT160 Beam Forming, M0.3 to M9.3         3         6         -36.8         -32.1         -32.0         -22.4         -21.25         1.1           VHT160 Beam Forming, M0.3 to M9.3 <td></td> <td>VHT160, M0.1 to M9.1</td> <td>3</td> <td>6</td> <td>-36.8</td> <td>-32.1</td> <td>-32.0</td> <td></td> <td>-22.4</td> <td>-21.25</td> <td>1.1</td>		VHT160, M0.1 to M9.1	3	6	-36.8	-32.1	-32.0		-22.4	-21.25	1.1
VHT160, M0.1 to M9.1         4         6         -36.8         -32.1         -32.0         -40.4         -22.1         -21.25         0.9           VHT160, M0.2 to M9.2         4         6         -36.8         -32.1         -32.0         -40.4         -22.1         -21.25         0.9           VHT160, M0.2 to M9.2         4         6         -36.8         -32.1         -32.0         -40.4         -22.1         -21.25         0.9           VHT160, M0.3 to M9.3         4         6         -36.8         -32.1         -32.0         -40.4         -22.1         -21.25         0.9           VHT160 Beam Forming, M0.1 to M9.1         2         6         -36.8         -32.1         -24.8         -21.25         3.6           VHT160 Beam Forming, M0.2 to M9.2         2         6         -36.8         -32.1         -24.8         -21.25         3.6           VHT160 Beam Forming, M0.1 to M9.1         3         6         -36.8         -32.1         -32.0         -22.4         -21.25         1.1           VHT160 Beam Forming, M0.3 to M9.3         3         6         -36.8         -32.1         -32.0         -22.4         -21.25         1.1           VHT160 Beam Forming, M0.2 to M9.2         4 <td< td=""><td></td><td>VHT160, M0.2 to M9.2</td><td>3</td><td>6</td><td>-36.8</td><td>-32.1</td><td>-32.0</td><td></td><td>-22.4</td><td>-21.25</td><td>1.1</td></td<>		VHT160, M0.2 to M9.2	3	6	-36.8	-32.1	-32.0		-22.4	-21.25	1.1
VHT160, M0.2 to M9.2         4         6         -36.8         -32.1         -32.0         -40.4         -22.1         -21.25         0.9           VHT160, M0.3 to M9.3         4         6         -36.8         -32.1         -32.0         -40.4         -22.1         -21.25         0.9           VHT160, M0.3 to M9.3         4         6         -36.8         -32.1         -32.0         -40.4         -22.1         -21.25         0.9           VHT160 Beam Forming, M0.1 to M9.1         2         6         -36.8         -32.1         -24.8         -21.25         3.6           VHT160 Beam Forming, M0.2 to M9.2         2         6         -36.8         -32.1         -24.8         -21.25         3.6           VHT160 Beam Forming, M0.1 to M9.1         3         6         -36.8         -32.1         -32.0         -22.4         -21.25         1.1           VHT160 Beam Forming, M0.2 to M9.2         3         6         -36.8         -32.1         -32.0         -22.4         -21.25         1.1           VHT160 Beam Forming, M0.3 to M9.3         3         6         -36.8         -32.1         -32.0         -40.4         -22.1         -21.25         1.1           VHT160 Beam Forming, M0.3 to M9.3         4 <td></td> <td>VHT160, M0.3 to M9.3</td> <td>3</td> <td>6</td> <td>-36.8</td> <td>-32.1</td> <td>-32.0</td> <td></td> <td>-22.4</td> <td>-21.25</td> <td>1.1</td>		VHT160, M0.3 to M9.3	3	6	-36.8	-32.1	-32.0		-22.4	-21.25	1.1
VHT160, M0.3 to M9.3       4       6       -36.8       -32.1       -32.0       -40.4       -22.1       -21.25       0.9         VHT160 Beam Forming, M0.1 to M9.1       2       6       -36.8       -32.1       -24.8       -21.25       3.6         VHT160 Beam Forming, M0.2 to M9.2       2       6       -36.8       -32.1       -24.8       -21.25       3.6         VHT160 Beam Forming, M0.2 to M9.2       2       6       -36.8       -32.1       -24.8       -21.25       3.6         VHT160 Beam Forming, M0.1 to M9.1       3       6       -36.8       -32.1       -32.0       -22.4       -21.25       1.1         VHT160 Beam Forming, M0.2 to M9.2       3       6       -36.8       -32.1       -32.0       -22.4       -21.25       1.1         VHT160 Beam Forming, M0.3 to M9.3       3       6       -36.8       -32.1       -32.0       -22.4       -21.25       1.1         VHT160 Beam Forming, M0.1 to M9.1       4       6       -36.8       -32.1       -32.0       -40.4       -22.1       -21.25       0.9         VHT160 Beam Forming, M0.3 to M9.3       4       6       -36.8       -32.1       -32.0       -40.4       -22.1       -21.25       0.9		VHT160, M0.1 to M9.1	4	6	-36.8	-32.1	-32.0	-40.4	-22.1	-21.25	0.9
WH 1160, M0.3 to M9.3       4       6       -36.8       -32.1       -32.0       -40.4       -22.1       -21.25       0.9         VHT160 Beam Forming, M0.1 to M9.1       2       6       -36.8       -32.1       -       -24.8       -21.25       3.6         VHT160 Beam Forming, M0.2 to M9.2       2       6       -36.8       -32.1       -       -24.8       -21.25       3.6         VHT160 Beam Forming, M0.1 to M9.1       3       6       -36.8       -32.1       -32.0       -22.4       -21.25       1.1         VHT160 Beam Forming, M0.2 to M9.2       3       6       -36.8       -32.1       -32.0       -22.4       -21.25       1.1         VHT160 Beam Forming, M0.3 to M9.3       3       6       -36.8       -32.1       -32.0       -22.4       -21.25       1.1         VHT160 Beam Forming, M0.3 to M9.3       3       6       -36.8       -32.1       -32.0       -40.4       -22.1       -21.25       1.1         VHT160 Beam Forming, M0.2 to M9.2       4       6       -36.8       -32.1       -32.0       -40.4       -22.1       -21.25       0.9         VHT160 Beam Forming, M0.3 to M9.3       4       6       -36.8       -32.1       -32.0       -40.4	70	VHT160, M0.2 to M9.2	4	6	-36.8	-32.1	-32.0	-40.4	-22.1	-21.25	0.9
VHT160 Beam Forming, M0.2 to M9.226-36.8-32.1-24.8-21.253.6VHT160 Beam Forming, M0.1 to M9.136-36.8-32.1-32.0-22.4-21.251.1VHT160 Beam Forming, M0.2 to M9.236-36.8-32.1-32.0-22.4-21.251.1VHT160 Beam Forming, M0.3 to M9.336-36.8-32.1-32.0-22.4-21.251.1VHT160 Beam Forming, M0.1 to M9.146-36.8-32.1-32.0-22.4-21.251.1VHT160 Beam Forming, M0.1 to M9.146-36.8-32.1-32.0-40.4-22.1-21.250.9VHT160 Beam Forming, M0.2 to M9.246-36.8-32.1-32.0-40.4-22.1-21.250.9VHT160 Beam Forming, M0.3 to M9.346-36.8-32.1-32.0-40.4-22.1-21.250.9VHT160 Beam Forming, M0.3 to M9.346-36.8-32.1-32.0-40.4-22.1-21.250.9VHT160 STBC, M0.1 to M9.126-36.8-32.1-32.0-40.4-22.1-21.253.6VHT160 STBC, M0.1 to M9.136-36.8-32.1-32.0-40.4-22.4-21.253.6VHT160 STBC, M0.1 to M9.136-36.8-32.1-32.0-24.8-21.253.6VHT160 STBC, M0.1 to M9.136-36.8-32.1-32.0-22.4-21.251.1 <td>55</td> <td>VHT160, M0.3 to M9.3</td> <td>4</td> <td>6</td> <td>-36.8</td> <td>-32.1</td> <td>-32.0</td> <td>-40.4</td> <td>-22.1</td> <td>-21.25</td> <td>0.9</td>	55	VHT160, M0.3 to M9.3	4	6	-36.8	-32.1	-32.0	-40.4	-22.1	-21.25	0.9
VHT160 Beam Forming, M0.1 to M9.136-36.8-32.1-32.0-22.4-21.251.1VHT160 Beam Forming, M0.2 to M9.236-36.8-32.1-32.0-22.4-21.251.1VHT160 Beam Forming, M0.3 to M9.336-36.8-32.1-32.0-22.4-21.251.1VHT160 Beam Forming, M0.1 to M9.146-36.8-32.1-32.0-40.4-22.1-21.250.9VHT160 Beam Forming, M0.2 to M9.246-36.8-32.1-32.0-40.4-22.1-21.250.9VHT160 Beam Forming, M0.3 to M9.346-36.8-32.1-32.0-40.4-22.1-21.250.9VHT160 Beam Forming, M0.3 to M9.346-36.8-32.1-32.0-40.4-22.1-21.250.9VHT160 STBC, M0.1 to M9.126-36.8-32.1-32.0-40.4-22.1-21.250.9VHT160 STBC, M0.1 to M9.136-36.8-32.1-32.0-40.4-22.1-21.253.6VHT160 STBC, M0.1 to M9.136-36.8-32.1-32.0-24.8-21.253.6VHT160 STBC, M0.1 to M9.136-36.8-32.1-32.0-22.4-21.251.1		VHT160 Beam Forming, M0.1 to M9.1	2	6	-36.8	-32.1			-24.8	-21.25	3.6
VHT160 Beam Forming, M0.2 to M9.2       3       6       -36.8       -32.1       -32.0       -22.4       -21.25       1.1         VHT160 Beam Forming, M0.3 to M9.3       3       6       -36.8       -32.1       -32.0       -22.4       -21.25       1.1         VHT160 Beam Forming, M0.1 to M9.1       4       6       -36.8       -32.1       -32.0       -40.4       -22.1       -21.25       0.9         VHT160 Beam Forming, M0.2 to M9.2       4       6       -36.8       -32.1       -32.0       -40.4       -22.1       -21.25       0.9         VHT160 Beam Forming, M0.2 to M9.2       4       6       -36.8       -32.1       -32.0       -40.4       -22.1       -21.25       0.9         VHT160 Beam Forming, M0.3 to M9.3       4       6       -36.8       -32.1       -32.0       -40.4       -22.1       -21.25       0.9         VHT160 STBC, M0.1 to M9.1       2       6       -36.8       -32.1       -32.0       -40.4       -22.1       -21.25       3.6         VHT160 STBC, M0.1 to M9.1       3       6       -36.8       -32.1       -32.0       -24.8       -21.25       3.6         VHT160 STBC, M0.1 to M9.1       3       6       -36.8       -32.1		VHT160 Beam Forming, M0.2 to M9.2	2	6	-36.8	-32.1			-24.8	-21.25	3.6
VHT160 Beam Forming, M0.3 to M9.3       3       6       -36.8       -32.1       -32.0       -22.4       -21.25       1.1         VHT160 Beam Forming, M0.1 to M9.1       4       6       -36.8       -32.1       -32.0       -40.4       -22.1       -21.25       0.9         VHT160 Beam Forming, M0.2 to M9.2       4       6       -36.8       -32.1       -32.0       -40.4       -22.1       -21.25       0.9         VHT160 Beam Forming, M0.3 to M9.3       4       6       -36.8       -32.1       -32.0       -40.4       -22.1       -21.25       0.9         VHT160 Beam Forming, M0.3 to M9.3       4       6       -36.8       -32.1       -32.0       -40.4       -22.1       -21.25       0.9         VHT160 STBC, M0.1 to M9.1       2       6       -36.8       -32.1       -32.0       -40.4       -22.1       -21.25       0.9         VHT160 STBC, M0.1 to M9.1       2       6       -36.8       -32.1       -32.0       -40.4       -22.4       -21.25       3.6         VHT160 STBC, M0.1 to M9.1       3       6       -36.8       -32.1       -32.0       -22.4       -21.25       1.1		VHT160 Beam Forming, M0.1 to M9.1	3	6	-36.8	-32.1	-32.0		-22.4	-21.25	1.1
VHT160 Beam Forming, M0.1 to M9.1       4       6       -36.8       -32.1       -32.0       -40.4       -22.1       -21.25       0.9         VHT160 Beam Forming, M0.2 to M9.2       4       6       -36.8       -32.1       -32.0       -40.4       -22.1       -21.25       0.9         VHT160 Beam Forming, M0.3 to M9.3       4       6       -36.8       -32.1       -32.0       -40.4       -22.1       -21.25       0.9         VHT160 Beam Forming, M0.3 to M9.3       4       6       -36.8       -32.1       -32.0       -40.4       -22.1       -21.25       0.9         VHT160 STBC, M0.1 to M9.1       2       6       -36.8       -32.1       -32.0       -40.4       -22.1       -21.25       3.6         VHT160 STBC, M0.1 to M9.1       3       6       -36.8       -32.1       -32.0       -24.8       -21.25       3.6         VHT160 STBC, M0.1 to M9.1       3       6       -36.8       -32.1       -32.0       -22.4       -21.25       1.1		VHT160 Beam Forming, M0.2 to M9.2	3	6	-36.8	-32.1	-32.0		-22.4	-21.25	1.1
VHT160 Beam Forming, M0.2 to M9.246-36.8-32.1-32.0-40.4-22.1-21.250.9VHT160 Beam Forming, M0.3 to M9.346-36.8-32.1-32.0-40.4-22.1-21.250.9VHT160 STBC, M0.1 to M9.126-36.8-32.1-21.253.6VHT160 STBC, M0.1 to M9.136-36.8-32.1-32.0-22.4-21.251.1		VHT160 Beam Forming, M0.3 to M9.3	3	6	-36.8	-32.1	-32.0		-22.4	-21.25	1.1
VHT160 Beam Forming, M0.3 to M9.3       4       6       -36.8       -32.1       -32.0       -40.4       -22.1       -21.25       0.9         VHT160 STBC, M0.1 to M9.1       2       6       -36.8       -32.1       -21.25       3.6         VHT160 STBC, M0.1 to M9.1       3       6       -36.8       -32.1       -22.4       -21.25       1.1		VHT160 Beam Forming, M0.1 to M9.1	4	6	-36.8	-32.1	-32.0	-40.4	-22.1	-21.25	0.9
VHT160 STBC, M0.1 to M9.1       2       6       -36.8       -32.1       -24.8       -21.25       3.6         VHT160 STBC, M0.1 to M9.1       3       6       -36.8       -32.1       -32.0       -22.4       -21.25       1.1		VHT160 Beam Forming, M0.2 to M9.2	4	6	-36.8	-32.1	-32.0	-40.4	-22.1	-21.25	0.9
VHT160 STBC, M0.1 to M9.1         3         6         -36.8         -32.1         -32.0         -22.4         -21.25         1.1		VHT160 Beam Forming, M0.3 to M9.3	4	6	-36.8	-32.1	-32.0	-40.4	-22.1	-21.25	0.9
		VHT160 STBC, M0.1 to M9.1	2	6	-36.8	-32.1			-24.8	-21.25	3.6
VHT160 STBC, M0.1 to M9.1 4 6 -36.8 -32.1 -32.0 -40.4 -22.1 -21.25 0.9		VHT160 STBC, M0.1 to M9.1	3	6	-36.8	-32.1	-32.0		-22.4	-21.25	1.1
		VHT160 STBC, M0.1 to M9.1	4	6	-36.8	-32.1	-32.0	-40.4	-22.1	-21.25	0.9

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Frequ

10 00 51.47

Stop 5.47000 GHz eep 935.7 ms (1001 pts) Auto Tu

Center Fre

Start Fre

Stop Fr

CF St

Freq Offse

12.00

Avg Type: Log-Pv

st 🕞 Trig: Free Run #Atten: 0 dB

#VBW 100 Hz

-59.05 dBm -51.47 dBm

5.470 00 GHz 5.410 00 GHz

#### Conducted Bandedge Average, 5570 MHz, Non HT160, 6 to 54 Mbps







Start 5.35000 GHz Res BW 1.0 MHz

ter Freq 5.410000000 GHz

Ref Offset 1 dB Ref -20.00 dBm

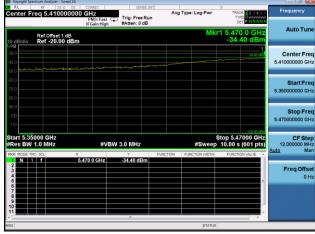
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#### Conducted Bandedge Peak, 5500 MHz, HT/VHT20 Beam Forming, M16 to M23



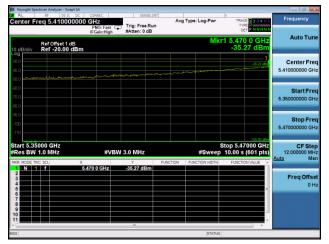






Antenna C





Antenna D

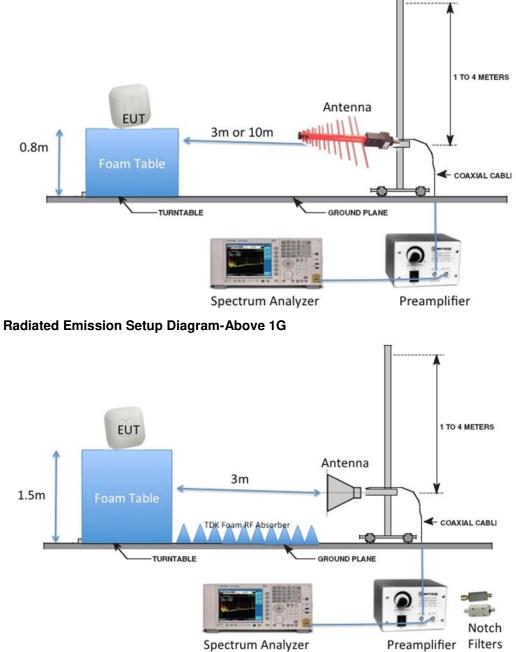
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#### Appendix B: **Emission Test Results**

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

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Spectrum Analyzer

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

#### 15.205 / 15.209

- (7) The provisions of 15.205 apply to intentional radiators operating under this section.
- (6) Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in 15.209.

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 @3m2) 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
	EUT	S01	$\checkmark$	
	Support	S02		$\checkmark$

Tested By :	Date of testing:
Jose Aguirre	10-Feb-2016 to 22-Feb-2016
Test Result : PASS	

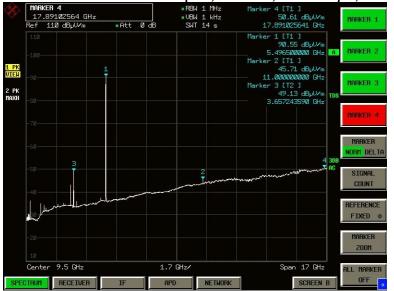
See Appendix C for list of test equipment

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Frequency (MHz)	Mode	Data Rate (Mbps)	Spurious Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (MHz)
5500	Non HT/VHT20, 6 to 54 Mbps	6	50.6	54.0	3.4
5510	HT/VHT40, M1 to M23	M0	50.5	54.0	3.5
5530	HT/VHT80, M1 to M23	M0x1	50.5	54.0	3.5
5550	HT/VHT40, M1 to M23	M0	50.5	54.0	3.5
5560	Non HT/VHT20, 6 to 54 Mbps	6	50.0	54.0	4.0
5570	VHT160, M0.1 to M9.3	M0x1	50.5	54.0	3.5
5690	HT/VHT80, M1 to M23	M0x1	50.4	54.0	3.6
5710	HT/VHT40, M1 to M23	M0	50.5	54.0	3.5
5720	Non HT/VHT20, 6 to 54 Mbps	6	50.4	54.0	3.6

### B.1.A Transmitter Radiated Spurious Emissions-Average Worst Case

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#### B.1.A.1 Radiated Transmitter Spurs, 5500 MHz, 6 to 54 Mbps , Average (1-18GHz)

B.1.A.2 Radiated Transmitter Spurs, 5510 MHz, HT/VHT40, M0 to M23, M0.0 to M9.4, Average (1-18GHz)

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B.1.A.3 Radiated Transmitter Spurs, 5530 MHz, VHT80, M0 to M9, M0 to M9 1.1, Average (1-18GHz)

B.1.A.4 Radiated Transmitter Spurs, 5550 MHz, 6 to 54 Mbps, Average (1-18GHz)



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#### B.1.A.5 Radiated Transmitter Spurs, 5560 MHz, 6 to 54 Mbps, Average (1-18GHz)



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B.1.A.7 Radiated Transmitter Spurs, 5690 MHz, HT/VHT80, M0 to M23, M0.0 to M9.4, Average (1-18GHz)





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#### B.1.A.9 Radiated Transmitter Spurs, 5720 MHz, , 6 to 54 Mbps , Average (1-18GHz)

cisco



XI	rum Analyzer - EMiSoft Va RF 50.0 DC	CORREC	SENSE:INT	ALIGNAUTO	10:24:58 AM Feb 23, 2016	
Marker 1	26.4628115043		Trig: Free Run #Atten: 0 dB	Avg Type: Voltage		Peak Search
10 dB/div	Ref 80.00 dBµV			M	kr1 26.463 GHz 48.23 dBµV	NextPeal
70.0						Next Pk Righ
60.0 50.0					1	Next Pk Le
40.0						Marker Delt
20.0						Mkr→C
1.00						Mkr→RefL
Start 18.0	000 GHz (CISPR) 1 MHz	#VBW	1.0 kHz	Sween	Stop 26.500 GHz 9.747 s (1601 pts)	Mor 1 of:
	part of the second			STATUS		

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	9.9915625 Ref 100.00	F IF	Gain:Low	Trig: Fre #Atten: 4	#Avg Ty	pe: Log-Pwr	kr1 39.9	исе 12345 РРЕ ММИНИИ ОСТ Р Р Р Р Р Р Р 992 GHz 52 dBµV	Select Marker
.0	tef 100.00	dBµV				M			1
.0									Norm
									NOTI
									De
o								1	Fixe
· · · · · · · · · · · · · · · · · · ·	·····	~~~	~~~~	~~~~	 ~~~~~		~~~~	m	c
0									Propertie
art 26.500	GHz ISPR) 1 MI		#\/B\/	1.0 kHz		Sweep	Stop 40	0.000 GHz (1601 pts)	<b>М</b> а 1 о

#### B.1.A.11 Radiated Transmitter Spurs, All rate, All modes, Average (26.5- 40GHz)

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Frequency (MHz)	Mode	Data Rate (Mbps)	Spurious Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (MHz)
5500	Non HT/VHT20, 6 to 54 Mbps	6	61.4	74.0	12.6
5510	HT/VHT40, M1 to M23	MO	62.0	74.0	12.0
5530	HT/VHT80, M1 to M23	M0x1	63.1	74.0	10.9
5550	HT/VHT40, M1 to M23	MO	61.6	74.0	12.4
5560	Non HT/VHT20, 6 to 54 Mbps	6	62.1	74.0	11.9
5570	VHT160, M0.1 to M9.3	M0x1	61.8	74.0	12.2
5690	HT/VHT80, M1 to M23	M0x1	62.0	74.0	12.0
5710	HT/VHT40, M1 to M23	MO	62.0	74.0	12.0
5720	Non HT/VHT20, 6 to 54 Mbps	6	61.0	74.0	13.0

### B.1.P Transmitter Radiated Spurious Emissions-Peak Worst Case

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#### B.1.P.1 Radiated Transmitter Spurs, 5500 MHz, 6 to 54 Mbps , (1-18GHz)





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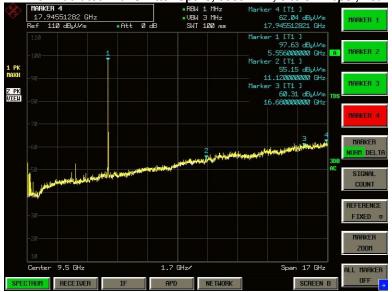


B.1.P.3 Radiated Transmitter Spurs, 5530 MHz, VHT80, M0 to M9, M0 to M9 1.1, Peak (1-18GHz)

B.1.P.4 Radiated Transmitter Spurs, 5550 MHz, HT/VHT40, M0 to M23, M0.0 to M9.4, Peak (1-18GHz)



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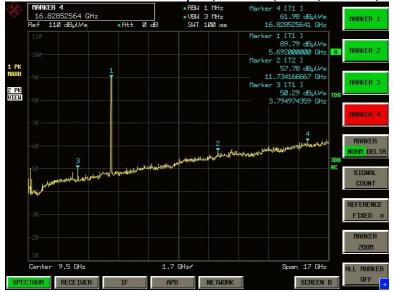
#### B.1.P.5 Radiated Transmitter Spurs, 5560 MHz, 6 to 54 Mbps , Peak (1-18GHz)



cisco

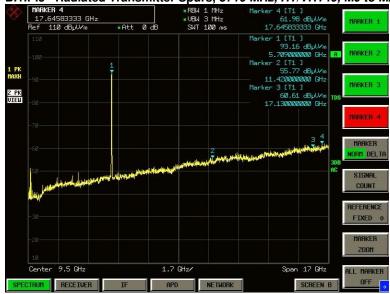


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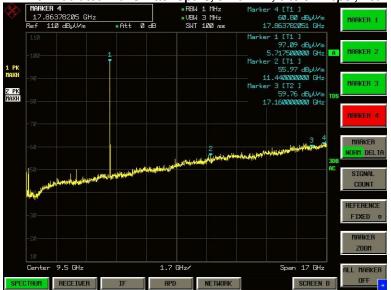


B.1.P.4 Radiated Transmitter Spurs, 5690 MHz, VHT80, M0 to M9, M0 to M9 1.1, Peak (1-18GHz)

B.1.P.5 Radiated Transmitter Spurs, 5710 MHz, HT/VHT40, M0 to M23, M0.0 to M9.4, Peak (1-18GHz)



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#### B.1.P.6 Radiated Transmitter Spurs, 5720 MHz, 6 to 54 Mbps , Peak (1-18GHz)

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Peak Search	10:22:05 AM Feb 23, 2016	ALIGN AUTO	NSE:INT	SEN	CORREC	50 Ω DC	RF	L
	TRACE 1 2 3 4 5 6 TYPE MMWWWW DET P P P P P P	Avg Type: Voltage		Trig: Free #Atten: 4	PNO: Fast IFGain:Low	749002500	1 26.4787	arker 1
Next Pea	1kr1 26.479 GHz 62.12 dBμV	N				0.00 dBµV	Ref 100	) dB/div
Next Pk Rig								0.0
Next Pk Le	1							0.0
Marker Del	storingungerhald, pricentific	the second strategics	a the second	eligent and	high differences of the	han an a		0.0 0.0 <b>MAR</b>
Mkr→C								0.0
Mkr→RefL								0.0
Moi 1 of	Stop 26.500 GHz 17.28 ms (1601 pts)	Swoon		3.0 MHz	#\/D\//	4 MHz	.000 GHz 4 (CISPR)	
		Stati		3.0 WIL12		1 191112	r(GIOPK)	G

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RF 50 Ω DC	CORREC	SENSE:INT	ALIGNAUTO	10:32:42 AM Feb 23, 2016	Marker
39.991562500	PNO: Fast 😱	Trig: Free Run	#Avg Type: Log-Pwr	TRACE 123456 TYPE MMWWWWW DET PPPPP	-
Ref 100.00 dB		#Atten: 4 dB	М		Select Marker 1
					Norma
					Delt
			and all a light and the formation of	1 مىلىلىم بىلىلىم بىلىم بىلى بىلىم بىلى	Fixed
etajana hana ana ana	August and and and and				o
					Properties
00 GHz				Stop 40.000 GHz	Mor 1 of
CISPR) 1 MHz	#VBW	3.0 MHz	Sweep 2	7.41 ms (1601 pts)	
	Ref 100.00 dBj	ициницина 00 GHz	PN0: Fast         Trg: Free Run           IFGain:Low         #Atten: 4 dB           Ref 100.00 dBµV	PN0: Fast     Trig: Free Run       IFGain:Low     #Atten: 4 dB       Ref 100.00 dBµV     Image: State of the sta	PhO: Faxt         Trig: Free Run         Trig: Group of the second secon

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

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## B.2 Radiated Emissions 30MHz to 1GHz

#### FCC 15.205 / 15.209

(7) The provisions of 15.205 apply to intentional radiators operating under this section.(6) Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in 15.209.

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	N	
	Support	S02		$\checkmark$

Tested By :	Date of testing:
Jose Aguirre	10-Feb-2016 to 22-Feb-2016

Test Result : PASS

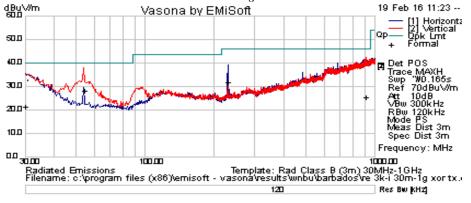
See Appendix C for list of test equipment

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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

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Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	P ol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
54.078	20.31	0.7	7.34	28.35	Quasi Max	V	166	0	40	-11.65	Pass
912.215	0.55	2.89	22.29	25.73	Quasi Max	v	236	24	46	-20.27	Pass
228.545	19.53	1.43	10.94	31.9	Quasi Max	н	180	235	46	-14.1	Pass
30	-0.48	0.49	21.7	21.72	Quasi Max	v	280	343	40	-18.28	Pass

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## B.3 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 MHzAttenuation:10 dBSweep Time:CoupledResolution Bandwidth:9 KHzVideo Bandwidth:30 KHzDetector:Quasi-Peak / Average

System Number	Description	Samples	System under test	Support equipment
	EUT	S01	N	
I	Support	S02		$\checkmark$

Tested By :	Date of testing:	
Jose Aguirre	10-Feb-2016 to 22-Feb-2016	
Test Result : PASS		

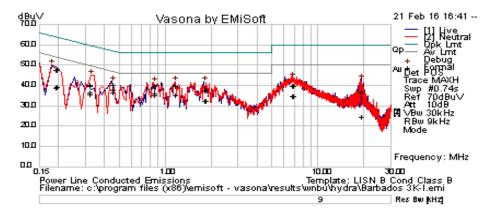
See Appendix C for list of test equipment

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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

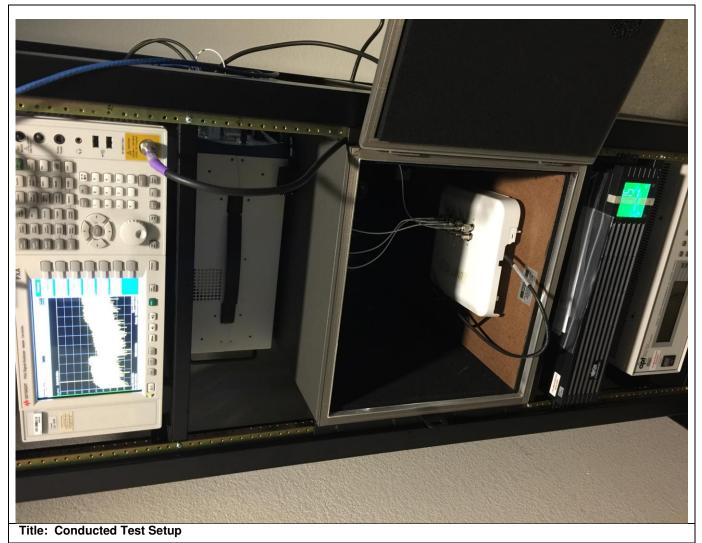
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Frequency	Raw	Cable	Factors	Level	Measurement		Limit	Margin	Pass
MHz	dBuV	Loss	dB	dBuV	Туре	Line	dBuV	dB	/Fail
0.320966	20.09	20.31	0.05	40.45	Quasi Peak	Live	59.68	-19.23	Pass
0.19578	27.1	20.86	0.05	48.02	Quasi Peak	Live	63.79	-15.77	Pass
6.845766	20.05	20.01	0.07	40.13	Quasi Peak	Live	60	-19.87	Pass
1.169166	20.05	19.9	0.04	40	Quasi Peak	Live	56	-16	Pass
0.845716	20.19	19.92	0.03	40.14	Quasi Peak	Live	56	-15.86	Pass
1.826544	18.25	19.9	0.03	38.18	Quasi Peak	Live	56	-17.82	Pass
0.449884	20.41	19.94	0.04	40.39	Quasi Peak	Live	56.88	-16.49	Pass
19.316794	16.23	20.3	0.2	36.73	Quasi Peak	Live	60	-23.27	Pass
0.193098	27.03	20.88	0.06	47.97	Quasi Peak	Neutral	63.9	-15.93	Pass
1.167132	20.1	19.9	0.04	40.05	Quasi Peak	Neutral	56	-15.95	Pass
0.451342	20.56	19.94	0.04	40.53	Quasi Peak	Neutral	56.85	-16.32	Pass
19.304428	16.11	20.3	0.2	36.61	Quasi Peak	Neutral	60	-23.39	Pass
1.805952	17.96	19.9	0.03	37.89	Quasi Peak	Neutral	56	-18.11	Pass
0.32174	19.74	20.31	0.04	40.1	Quasi Peak	Neutral	59.66	-19.56	Pass
0.840658	20.25	19.92	0.03	40.2	Quasi Peak	Neutral	56	-15.8	Pass
6.826092	19.97	20.01	0.07	40.05	Quasi Peak	Neutral	60	-19.95	Pass
0.320966	16.38	20.31	0.05	36.74	Average	Live	49.68	-12.94	Pass
0.19578	18.65	20.86	0.05	39.57	Average	Live	53.79	-14.22	Pass
6.845766	14.78	20.01	0.07	34.87	Average	Live	50	-15.13	Pass
1.169166	15.34	19.9	0.04	35.29	Average	Live	46	-10.71	Pass
0.845716	16.15	19.92	0.03	36.1	Average	Live	46	-9.9	Pass
1.826544	12.68	19.9	0.03	32.61	Average	Live	46	-13.39	Pass
0.449884	16.69	19.94	0.04	36.67	Average	Live	46.88	-10.21	Pass
19.316794	4.26	20.3	0.2	24.76	Average	Live	50	-25.24	Pass
0.193098	18.24	20.88	0.06	39.18	Average	Neutral	53.9	-14.72	Pass
1.167132	15.66	19.9	0.04	35.6	Average	Neutral	46	-10.4	Pass
0.451342	18.28	19.94	0.04	38.25	Average	Neutral	46.85	-8.6	Pass
19.304428	4.24	20.3	0.2	24.75	Average	Neutral	50	-25.25	Pass
1.805952	12.45	19.9	0.03	32.38	Average	Neutral	46	-13.62	Pass
0.32174	15.6	20.31	0.04	35.95	Average	Neutral	49.66	-13.71	Pass
0.840658	15.4	19.92	0.03	35.35	Average	Neutral	46	-10.65	Pass
6.826092	14.71	20.01	0.07	34.8	Average	Neutral	50	-15.2	Pass

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### Photographs of setup



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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.

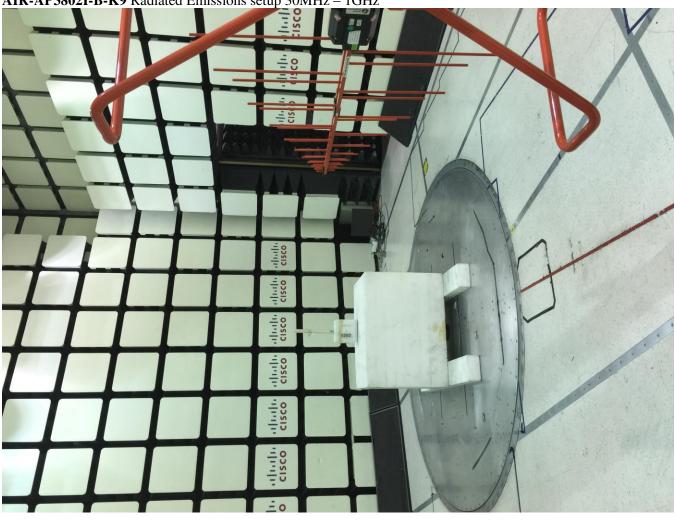
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AIR-AP3802I-B-K9 AC Mains Conducted Emissions setup

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AIR-AP3802I-B-K9 Radiated Emissions setup 30MHz – 1GHz

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AIR-AP3802I-B-K9 Radiated Emissions setup above 1GHz

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Appendix C:	List of Test Equipment <b>1</b>	Used to perform the test
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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
CIS008448	NSA 5m Chamber Cisco	NSA 5m Chamber	9-Oct-15	9-Oct-16	B.1, B.2
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
CIS034075	RSG 2000 Schaffner	Reference Spectrum Generator, 1-18GHz	Cal Not Required	Cal Not Required	B.1
CIS035284	3117 ETS-Lindgren	Double Ridged Waveguide Horn Antenna	30-Sep-15	30-Sep-16	B.1
CIS037236	50CB-015 JFW	GPIB Control Box	Cal Not Required	Cal Not Required	B.1
CIS040597	Above 1GHz Site Cal Cisco	Above 1GHz Cispr Site Verification	25-Sep-15	25-Sep-16	B.1
CIS041979	1840 Cisco	18-40GHz EMI Test Head/Verification Fixture	13-Jul-15	13-Jul-16	B.1
CIS042266	JB1 Sunol Sciences	Combination Antenna	21-Apr-15	21-Apr-16	B.2
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
CIS041979	1840 Cisco	18-40GHz EMI Test Head/Verification Fixture	13-Jul-15	13-Jul-16	B.1
CIS047299	N9030A Agilent Technologies	PXA Signal Analyzer	23-Oct-15	23-Oct-16	B.1
	50CB-015		Cal Not	Cal Not	B.1
CIS037236	JFW	GPIB Control Box	Required	Required	
CIS034075	RSG 2000 Schaffner	Reference Spectrum Generator, 1-18GHz	Cal Not Required	Cal Not Required	B.1
CIS049563	Sucoflex 106A Huber + Suhner	N Type Cable 18GHz	24-Aug-15	24-Aug-16	B.1, B.2

Test Equipment used for AC Mains Conducted Emissions					
	Model				
Equip No	Manufacturer	Description	Last Cal	Next Cal	Test Item
	FCC-801-M2-16				B.3
CIS002464	Fischer Custom Communications	CDN, 2-LINE, 16A	12-Mar-15	12-Mar-16	
	H785-150K-50-21378				B.3
CIS049532	TTE	High Pass Filter	8-May-15	8-May-16	
	FCC-LISN-PA-NEMA-5-15				B.3
CIS020913	Fischer Custom Communications	AC Adapter	8-May-15	8-May-16	
	FCC-LISN-50/250-50-2-01				B.3
CIS007704	Fischer Custom Communications	LISN	8-May-15	8-May-16	
	FCC-450B-2.4-N				B.3
CIS008185	Fischer Custom Communications	Instrumentation Limiter	28-Jul-15	28-Jul-16	
	5-T-MB				B.3
CIS051756	Bird	5W 50 Ohm BNC Termination 4GHz	6-Aug-15	6-Aug-16	
	Sucoflex 106A				B.3
CIS049563	Huber + Suhner	N Type Cable 18GHz	24-Aug-15	24-Aug-16	

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	UFB311A-0-2484-520520				B.3
CIS021117	Micro-Coax	RF Coaxial Cable, to 18GHz, 248.4 in	24-Aug-15	24-Aug-16	
	ESU40				B.3
CIS044940	Rohde & Schwarz	EMI Test Receiver, 20Hz-40GHz	2-Nov-15	2-Nov-16	
	33-605		Cal not	Cal not	B.3
CIS054647	Stanley	10meter Measuring Tape	required	required	
	CNE V		Cal not	Cal not	B.3
CIS018963	York	Comparison Noise Emitter, 30 - 1000MHz	required	required	

	Test Equipment used for RF Conducted Tests				
	Model				
Equip No	Manufacturer	Description	Last Cal	Next Cal	Test Item
GTG050501	N9030A		10.4.15	12 1 16	A1 thru A4
CIS050721	Keysight	PXA Signal Analyzer	13-Apr-15	13-Apr-16	
G10054((2	SF18-S1S1-36		24.0 15	24.0 16	A1 thru A4
CIS054662	MegaPhase	SMA 36" cable	24-Sep-15	24-Sep-16	A 1 /1 A 4
G10054((2	F120-S1S1-48		25.0 15	25.0 1(	A1 thru A4
CIS054663	MegaPhase	SMA 48" Cable	25-Sep-15	25-Sep-16	
G10054665	RA08-S1S1-24		25.0 15	25.0 1(	A1 thru A4
CIS054665	MegaPhase	SMA 24" Cable	25-Sep-15	25-Sep-16	
GT0054666	RA08-S1S1-18		25.0.15	25.0 16	A1 thru A4
CIS054666	MegaPhase	SMA 18" Cable	25-Sep-15	25-Sep-16	
GT0.54(/5	RA08-S1S1-18		25.0.15	25.0 16	A1 thru A4
CIS054667	MegaPhase	SMA 18" Cable	25-Sep-15	25-Sep-16	
	RA08-S1S1-18				A1 thru A4
CIS054668	MegaPhase	SMA 18" Cable	25-Sep-15	25-Sep-16	
	RA08-S1S1-18				A1 thru A4
CIS054669	MegaPhase	SMA 18" Cable	25-Sep-15	25-Sep-16	
	RA08-S1S1-12				A1 thru A4
CIS054670	MegaPhase	SMA 12" Cable	25-Sep-15	25-Sep-16	
	RA08-S1S1-12				A1 thru A4
CIS054671	MegaPhase	SMA 12" Cable	25-Sep-15	25-Sep-16	
	RA08-S1S1-12				A1 thru A4
CIS054672	MegaPhase	SMA 12" Cable	25-Sep-15	25-Sep-16	
	RA08-S1S1-12				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	

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	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			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

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#### **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
ТАР	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 <sup>3</sup> )
EN	European Norm	MHz	MegaHertz (1x10 <sup>6</sup> )
IEC	International Electro technical Commission	GHz	Gigahertz (1x10 <sup>9</sup> )
CISPR	International Special Committee on Radio Interference	Н	Horizontal
CDN	Coupling/Decoupling Network	V	Vertical
LISN	Line Impedance Stabilization	dB	decibel
PE	Protective Earth	V	Volt
GND	Ground	kV	Kilovolt (1x10 <sup>3</sup> )
L1	Line 1	μV	Microvolt (1x10 <sup>-6</sup> )
L2	Line2	A	Amp
L3	Line 3	μA	Micro Amp (1x10 <sup>-6</sup> )
DC	Direct Current	mS	Milli Second (1x10 <sup>-3</sup> )
RAW	Uncorrected measurement value, as indicated by the measuring device	μS	Micro Second (1x10 <sup>-6</sup> )
RF	Radio Frequency	μS	Micro Second (1x10 <sup>-6</sup> )
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
Ν	Neutral Line	R	Return
S	Supply	AC	Alternating Current

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