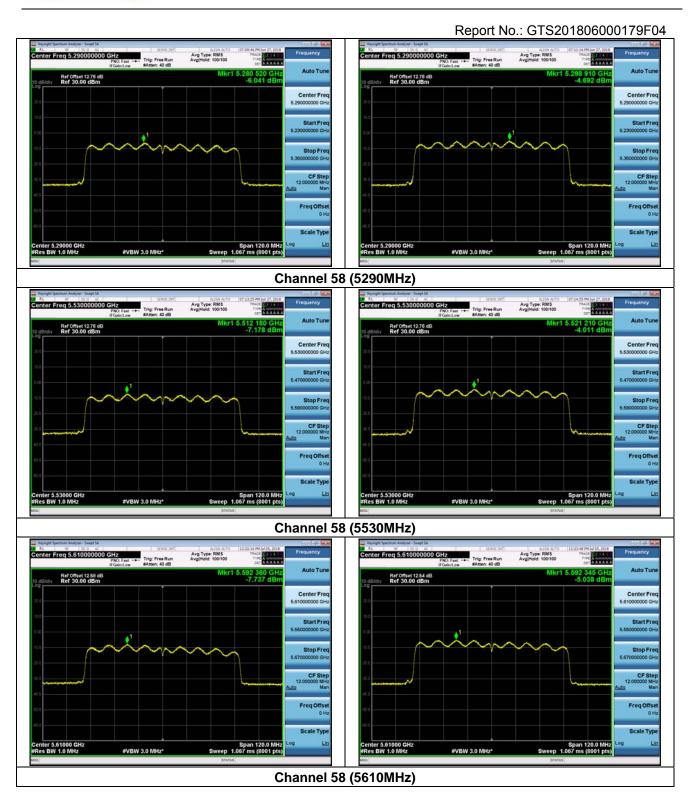


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# 7.6 Band Edge

Test Requirement:	47 CFR Part 15, Subpart C 15.205 & Subpart E 15.407(b)									
Test Method:	ANSI C63.10:2013									
Test site:	Measurement Dis	stance: 3m (S	emi-Anecho	ic Chambe	r)					
Receiver setup:			_							
·	Frequency	Detector	RBW	VBW	Remark					
	30MHz-1GHz	Quasi-peak	100KHz	300KHz	Quasi-peak Value					
	Above 1GHz	Peak	1MHz	3MHz	Peak Value					
	7.0000 10112	AV	1MHz	3MHz	Average Value					
Limit:	Frequency Limit (dBuV/m @3m) Rema									
	30MHz-88		40.0		Remark Quasi-peak Value					
	88MHz-216		43.5		Quasi-peak Value  Quasi-peak Value					
	216MHz-96		46.0		Quasi-peak Value					
	960MHz-1		54.0		Quasi-peak Value					
			54.0		Average Value					
	Above 10	SHz -	68.2		Peak Value					
	Undesirable emission limits:									
					band: all emissions					
	outside of the dBm/MHz.	e 5.15-5.35 (	nz band sr	iaii not exc	eed an EIRP of -27					
		ers operating	in the 5.25.	5 35 GHz	band: all emissions					
					eed an EIRP of -27					
					35 GHz band that					
					and must meet all					
	applicable te	chnical requir	ements for o	operation ir	the 5.15-5.25 GHz					
	· ·	•	,	•	eet an out-of-band					
					5.25 GHz band.					
					band: all emissions					
	outside of the dBm/MHz.	5.47-5.725	Hz band sh	nall not exc	eed an EIRP of -27					
Test Procedure:		s placed on th	e top of a ro	tating table	1.5 m above the					
restriocedure.					d 360 degrees to					
	determine the	e position of the	ne highest ra	diation.	_					
					ence-receiving					
		ch was moun	ted on the to	p of a varia	ble-height antenna					
	tower.	height is varie	ed from one	meter to fo	ur meters above					
					e field strength.					
					ntenna are set to					
	make the me		•							
	d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4									
				_						
				a trom U de	egrees to 360					
	e. The test-rece	nd the maximu		ak Detect I	Function and					
		•			anodon and					
	Specified Bandwidth with Maximum Hold Mode.  f. If the emission level of the EUT in peak mode was 10dB lower than									
	the limit spec	ified, then tes	ting could be	e stopped a	and the peak values					
	of the EUT w	ould be repor	ted. Otherwi	se the emis	ssions that did not					



	have 10dB margin would be re-tested one by one using peak, quasi- peak or average method as specified and then reported in a data sheet.
Test setup:	Above 1GHz    Company   Fundamental
Test Instruments:	Refer to section 5.10 for details
Test mode:	Refer to section 5.2 for details
Test results:	Pass

#### Remark:

- 1. Final Level =Receiver Read level + Antenna Factor + Cable Loss Preamplifier Factor
- 2. The emission levels of other frequencies are very lower than the limit and not show in test report.
- 3. The pre-test were performed on lowest, middle and highest frequencies, only the worst case's (lowest and highest frequencies) data was showed.
- 4. According to KDB 789033 D02v02r01 section G) 1) d),for measurements above 1000 MHz @3m distance, the limit of field strength is computed as follows:

E[dBuV/m] = EIRP[dBm] + 95.2;

For example, if EIRP = -27dBm

E[dBuV/m] = -27 + 95.2 = 68.2dBuV/m.

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## **Measurement Data:**

Band I & Band II-A & Band II-C

	IEEE 802.11a_MIMO_Chain A+B										
Peak value:											
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization			
5150.00	50.31	31.82	5.40	35.98	51.55	68.20	-16.65	Horizontal			
5350.00	52.98	31.98	5.98	36.68	54.26	68.20	-13.94	Horizontal			
5470.00	46.08	32.08	6.19	35.50	48.85	68.20	-19.35	Horizontal			
5725.00	48.93	32.28	6.42	35.13	52.50	68.20	-15.70	Horizontal			
5150.00	55.72	31.82	5.40	35.98	56.96	68.20	-11.24	Vertical			
5350.00	56.37	31.98	5.98	36.68	58.65	68.20	-9.55	Vertical			
5470.00	50.77	32.08	6.19	35.50	53.54	68.20	-14.66	Vertical			
5725.00	61.00	32.28	6.42	35.13	64.57	68.20	-3.63	Vertical			

	IEEE 802.11a_MIMO_Chain A+B											
Average value:												
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization				
5150.00	32.37	31.82	5.40	35.98	33.61	54.00	-20.39	Horizontal				
5350.00	32.03	31.98	5.98	35.68	34.31	54.00	-19.69	Horizontal				
5470.00	30.84	32.08	6.19	35.50	33.61	54.00	-20.39	Horizontal				
5725.00	32.34	32.28	6.42	35.13	35.91	54.00	-18.09	Horizontal				
5150.00	35.66	31.82	5.40	35.98	36.90	54.00	-17.10	Vertical				
5350.00	35.44	31.98	5.98	35.68	37.72	54.00	-16.28	Vertical				
5470.00	34.17	32.08	6.19	35.50	36.94	54.00	-17.06	Vertical				
5725.00	41.58	32.28	6.42	35.13	45.15	54.00	-8.85	Vertical				



	IEEE 802.11n HT20_MIMO_Chain A+B											
Peak value												
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization				
5150.00	57.15	31.82	5.40	35.98	58.39	68.20	-9.81	Horizontal				
5350.00	49.91	31.98	5.98	35.68	52.19	68.20	-16.01	Horizontal				
5470.00	49.80	32.08	6.19	35.50	52.57	68.20	-15.63	Horizontal				
5725.00	53.25	32.28	6.42	35.13	56.82	68.20	-11.38	Horizontal				
5150.00	56.20	31.82	5.40	35.98	57.44	68.20	-10.76	Vertical				
5350.00	56.52	31.98	5.98	35.68	58.80	68.20	-9.40	Vertical				
5470.00	60.84	32.08	6.19	35.50	63.61	68.20	-4.59	Vertical				
5725.00	58.95	32.28	6.42	35.13	62.52	68.20	-5.68	Vertical				

	IEEE 802.11n HT20_MIMO_Chain A+B											
Average value:												
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization				
5150.00	32.28	31.82	5.40	35.98	33.52	54.00	-20.48	Horizontal				
5350.00	32.19	31.98	5.98	35.68	34.47	54.00	-19.53	Horizontal				
5470.00	30.71	32.08	6.19	35.50	33.48	54.00	-20.52	Horizontal				
5725.00	34.64	32.28	6.42	35.13	38.21	54.00	-15.79	Horizontal				
5150.00	35.06	31.82	5.40	35.98	36.30	54.00	-17.70	Vertical				
5350.00	35.22	31.98	5.98	35.68	37.50	54.00	-16.50	Vertical				
5470.00	34.96	32.08	6.19	35.50	37.73	54.00	-16.27	Vertical				
5725.00	38.02	32.28	6.42	35.13	41.59	54.00	-12.41	Vertical				



	IEEE 802.11ac VHT20_MIMO_Chain A+B											
Peak value:												
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization				
5150.00	50.66	31.82	5.40	35.98	51.90	68.20	-16.30	Horizontal				
5350.00	47.32	31.98	5.98	35.68	49.60	68.20	-18.60	Horizontal				
5470.00	49.71	32.08	6.19	35.50	52.48	68.20	-15.72	Horizontal				
5725.00	50.25	32.28	6.42	35.13	53.82	68.20	-14.38	Horizontal				
5150.00	55.38	31.82	5.40	35.98	56.62	68.20	-11.58	Vertical				
5350.00	53.94	31.98	5.98	35.68	56.22	68.20	-11.98	Vertical				
5470.00	55.68	32.08	6.19	35.50	58.45	68.20	-9.75	Vertical				
5725.00	60.09	32.28	6.42	35.13	63.66	68.20	-4.54	Vertical				

	IEEE 802.11ac VHT20_MIMO_Chain A+B											
Average value:												
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization				
5150.00	31.80	31.82	5.40	35.98	33.04	54.00	-20.96	Horizontal				
5350.00	31.46	31.98	5.98	35.68	33.74	54.00	-20.26	Horizontal				
5470.00	30.29	32.08	6.19	35.50	33.06	54.00	-20.94	Horizontal				
5725.00	32.74	32.28	6.42	35.13	36.31	54.00	-17.69	Horizontal				
5150.00	34.56	31.82	5.40	35.98	35.80	54.00	-18.20	Vertical				
5350.00	34.29	31.98	5.98	35.68	36.57	54.00	-17.43	Vertical				
5470.00	34.31	32.08	6.19	35.50	34.08	54.00	-16.92	Vertical				
5725.00	38.35	32.28	6.42	35.13	41.92	54.00	-12.08	Vertical				

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	IEEE 802.11n HT40_MIMO_Chain A+B											
Peak value:												
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization				
5150.00	54.68	31.82	5.40	35.98	55.92	68.20	-12.28	Horizontal				
5350.00	52.77	31.98	5.98	35.68	55.05	68.20	-13.15	Horizontal				
5470.00	46.33	32.08	6.19	35.50	49.10	68.20	-19.10	Horizontal				
5725.00	47.50	32.28	6.42	35.13	51.07	68.20	-17.13	Horizontal				
5150.00	59.91	31.82	5.40	35.98	61.15	68.20	-7.05	Vertical				
5350.00	60.76	31.98	5.98	35.68	63.04	68.20	-5.16	Vertical				
5470.00	62.34	32.08	6.19	35.50	65.11	68.20	-3.09	Vertical				
5725.00	59.12	32.28	6.42	35.13	62.69	68.20	-5.51	Vertical				

	IEEE 802.11n HT40_MIMO_Chain A+B											
Average value:												
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization				
5150.00	38.31	31.82	5.40	35.98	39.55	54.00	-14.45	Horizontal				
5350.00	37.07	31.98	5.98	35.68	39.35	54.00	-14.65	Horizontal				
5470.00	31.77	32.08	6.19	35.50	34.54	54.00	-19.46	Horizontal				
5725.00	31.55	32.28	6.42	35.13	35.12	54.00	-18.88	Horizontal				
5150.00	41.42	31.82	5.40	35.98	42.66	54.00	-11.34	Vertical				
5350.00	40.19	31.98	5.98	35.68	42.47	54.00	-11.53	Vertical				
5470.00	44.00	32.08	6.19	35.50	46.77	54.00	-7.23	Vertical				
5725.00	39.77	32.28	6.42	35.13	43.34	54.00	-10.66	Vertical				



	IEEE 802.11ac VHT40_MIMO_Chain A+B											
Peak value:												
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization				
5150.00	53.71	31.82	5.40	35.98	54.95	68.20	-13.25	Horizontal				
5350.00	51.55	31.98	5.98	35.68	53.83	68.20	-14.37	Horizontal				
5470.00	52.50	32.08	6.19	35.50	55.27	68.20	-12.93	Horizontal				
5725.00	47.76	32.28	6.42	35.13	51.33	68.20	-16.87	Horizontal				
5150.00	59.59	31.82	5.40	35.98	60.83	68.20	-7.37	Vertical				
5350.00	58.51	31.98	5.98	35.68	60.79	68.20	-7.41	Vertical				
5470.00	60.92	32.08	6.19	35.50	63.69	68.20	-4.51	Vertical				
5725.00	59.21	32.28	6.42	35.13	62.78	68.20	-5.42	Vertical				

	IEEE 802.11ac VHT40_MIMO_Chain A+B											
Average value:												
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization				
5150.00	37.00	31.82	5.40	35.98	38.24	54.00	-15.76	Horizontal				
5350.00	35.65	31.98	5.98	35.68	37.96	54.00	-16.07	Horizontal				
5470.00	35.70	32.08	6.19	35.50	38.47	54.00	-15.53	Horizontal				
5725.00	31.24	32.28	6.42	35.13	34.81	54.00	-19.19	Horizontal				
5150.00	39.59	31.82	5.40	35.98	40.83	54.00	-13.17	Vertical				
5350.00	39.37	31.98	5.98	35.68	41.65	54.00	-12.35	Vertical				
5470.00	43.69	32.08	6.19	35.50	46.46	54.00	-7.54	Vertical				
5725.00	37.77	32.28	6.42	35.13	41.34	54.00	-12.66	Vertical				



		IEE	E 802.11ac	VHT80_M	IMO_Chain	A+B		
Peak value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5150.00	53.53	31.82	5.40	35.98	54.77	68.20	-13.43	Horizontal
5350.00	52.30	31.98	5.98	35.68	54.58	68.20	-13.62	Horizontal
5470.00	53.07	32.08	6.19	35.50	55.84	68.20	-12.36	Horizontal
5725.00	42.50	32.28	6.42	35.13	46.07	68.20	-22.13	Horizontal
5150.00	59.20	31.82	5.40	35.98	60.44	68.20	-7.76	Vertical
5350.00	60.32	31.98	5.98	35.68	62.60	68.20	-5.60	Vertical
5470.00	62.05	32.08	619	35.50	64.82	68.20	-3.38	Vertical
5725.00	47.53	32.28	6.42	35.13	51.10	68.20	-17.10	Vertical

		IEE	E 802.11ac	VHT80_M	IMO_Chain	A+B							
Average va	Average value:												
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization					
5150.00	38.67	31.82	5.40	35.98	39.91	54.00	-14.09	Horizontal					
5350.00	37.61	31.98	5.98	35.68	39.89	54.00	-14.11	Horizontal					
5470.00	36.51	32.08	6.19	35.50	39.28	54.00	-14.72	Horizontal					
5725.00	30.16	32.28	6.42	35.13	33.73	54.00	-20.27	Horizontal					
5150.00	40.73	31.82	5.40	35.98	41.97	54.00	-12.03	Vertical					
5350.00	41.42	31.98	5.98	35.68	43.70	54.00	-10.30	Vertical					
5470.00	43.30	32.08	6.19	35.50	46.07	54.00	-7.93	Vertical					
5725.00	33.09	32.28	6.42	35.13	36.66	54.00	-17.34	Vertical					



## 7.7 Radiated Emission

Test Requirement:	47 CFR Part 15, S	Subpart	C 15.20	09 & Subpa	art E 15.407	(b)			
Test Method:	ANSI C63.10:2013	3							
Test Frequency Range:	9kHz to 40GHz								
Test site:	Measurement Dist	ance: 3	3m (Sen	ni-Anechoi	c Chamber)				
Receiver setup:	Frequency	Dete	ector	RBW	VBW	Value			
·	9kHz-150KHz		si-peak 200Hz		1kHz	Quasi-peak Value			
	150kHz-30MHz		i-peak	9kHz	30kHz	Quasi-peak Value			
	30MHz-1GHz		i-peak	100KHz	300KHz 3MHz	Quasi-peak Value			
	Above 1GHz		eak V	1MHz 1MHz	3MHz	Peak Value Average Value			
Limit:	Frequency			(uV/m)	Value	Measurement Distance			
	0.009MHz-0.490	MHz	2400	/F(KHz)	QP	300m			
	0.490MHz-1.705	MHz	24000	)/F(KHz)	QP	300m			
	1.705MHz-30N	1Hz		30	QP	30m			
	30MHz-88MH	Ιz	1	00	QP				
	88MHz-216MHz 150 QP								
	216MHz-960M	lHz	2	200	QP	0.75			
	960MHz-1GHz 500 QP								
	A1 4011		500		Average				
	Above 1GH:	Z	5	000	Peak	1			
Test Procedure:	1GHz and 1.5 meter camber position of the 2. The EUT was antenna, whi antenna towe 3. The antenna the ground to Both horizon make the me 4. For each sus case and the meters and the degrees to fir 5. The test-rece Specified Bar 6. If the emission the limit specifier specifier and the limit specifier specif	st proced st proced placed meters. The take highes s set 3 ch was er. height a determination and the reliver symmetric proceded in the americal and the reliver symmetric proceded if the determination of the proceded in the americal and the reliver symmetric proceded in the determination of the proceded in the american and the reliver symmetric proceded in the determination of the proceded in the	T.  ure as to edure:  on the state of able was tradiated able wanted able was tradiated able was tradiated able table maximum stem was the state of the Enert test.	top of a roove 1GHz) s rotated 3 ion. away from ed on the to maximum polarization, the EU was tuned was tuned was tuned as set to Polaximum HEUT in peaking could be	tating table above the general to heights field Mode. k mode was estopped above the above table to heights field from 0 decays and the columns of the column	(0.8m for below ground at a 3 to determine the ence-receiving ble-height our meters above e field strength. Itenna are set to ged to its worst from 1 meter to 4 togrees to 360 function and a 10dB lower than			



peak, quasi-peak or average method as specified and then reported in a data sheet.

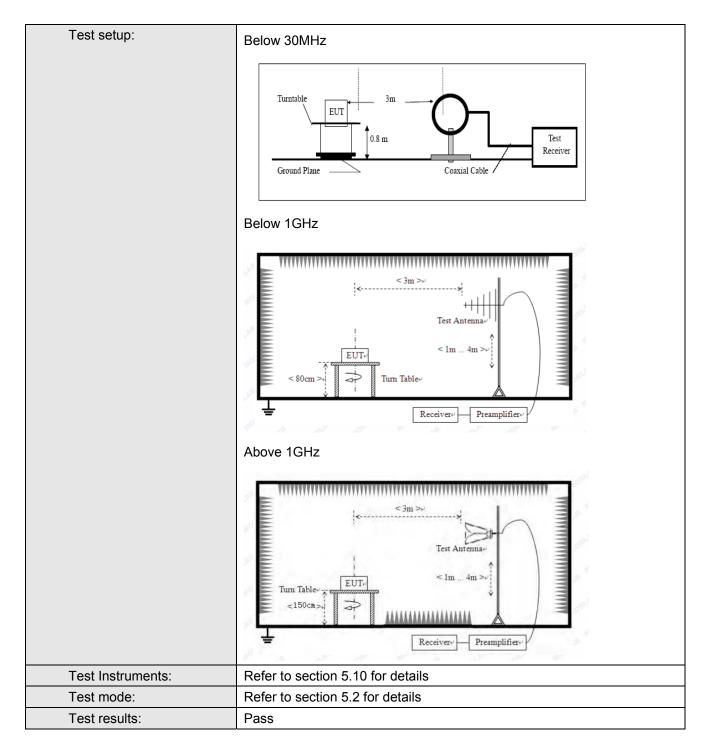
#### 2>.Above 1GHz test procedure:

- 1. On the test site as test setup graph above, the EUT shall be placed at the 0.8m support on the turntable and in the position closest to normal use as declared by the provider.
- The test antenna shall be oriented initially for vertical polarization and shall be chosen to correspond to the frequency of the transmitter. The output of the test antenna shall be connected to the measuring receiver.
- 3. The transmitter shall be switched on, if possible, without modulation and the measuring receiver shall be tuned to the frequency of the transmitter under test.
- 4. The test antenna shall be raised and lowered from 1m to 4m until a maximum signal level is detected by the measuring receiver. Then the turntable should be rotated through 360° in the horizontal plane, until the maximum signal level is detected by the measuring receiver.
- 5. Repeat step 4 for test frequency with the test antenna polarized horizontally.
- 6. Remove the transmitter and replace it with a substitution antenna
- 7. Feed the substitution antenna at the transmitter end with a signal generator connected to the antenna by means of a nonradiating cable. With the antennas at both ends vertically polarized, and with the signal generator tuned to a particular test frequency, raise and lower the test antenna to obtain a maximum reading at the spectrum analyzer. Adjust the level of the signal generator output until the previously recorded maximum reading for this set of conditions is obtained. This should be done carefully repeating the adjustment of the test antenna and generator output.
- 8. Repeat step 7 with both antennas horizontally polarized for each test frequency.
- 9. Calculate power in dBm into a reference ideal half-wave dipole antenna by reducing the readings obtained in steps 7 and 8 by the power loss in the cable between the generator and the antenna, and further corrected for the gain of the substitution antenna used relative to an ideal half-wave dipole antenna by the following formula:

EIRP(dBm) = Pg(dBm) – cable loss (dB) + antenna gain (dBi) where:

Pg is the generator output power into the substitution antenna.





#### Remark:

Pre-scan all kind of the place mode (X-axis, Y-axis, Z-axis), and found the Y-axis which it is worse case.



#### **Measurement Data:**

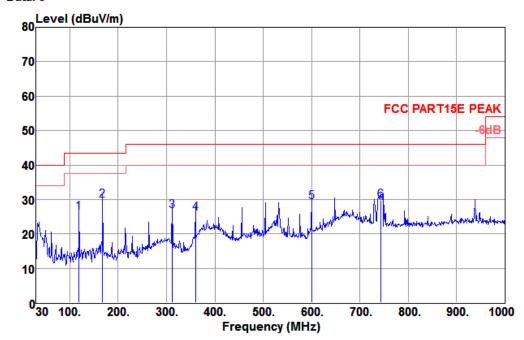
### 9 kHz ~ 30 MHz

The low frequency, which started from 9 kHz to 30 MHz, was pre-scanned and the result which was 20 dB lower than the limit line per 15.31(o) was not reported.

### **Below 1GHz**

## Horizontal:





Freq MHz	Reading 1eve1 dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	1eve1 dBuV	Limit 1eve1 dBuV/m	Over limit dB	Remark	
119. 240	44. 50	12. 12	2. 11	32. 47	26. 26	43. 50	-17. 24	QP	
167. 740	46. 23	13. 43	2. 53	32. 52	29. 67	43. 50	-13. 83	QP	
312. 270	42. 56	13. 13	3. 52	32. 51	26. 70	46. 00	-19. 30	QP	
359. 800	40. 59	14. 04	3. 86	32. 49	26. 00	46. 00	-20. 00	QP	
600. 360	38. 48	18. 40	5. 02	32. 69	29. 21	46. 00	-16. 79	QP	
743. 920	36. 63	20. 18	5. 58	32. 72	29. 67	46. 00	-16. 33	QP	



030

100.

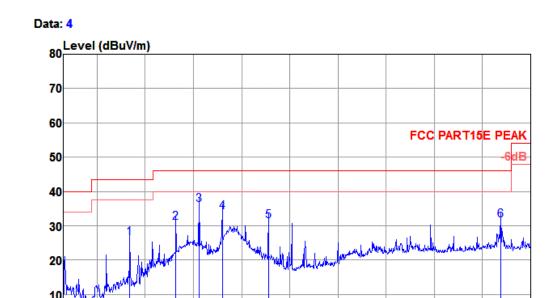
200.

300.

400.

Report No.: GTS201806000179F04

### Vertical:



Freq MHz	Reading 1eve1 dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	1eve1 dBuV	Limit level dBuV/m	Over limit dB	Remark
167. 740	43. 06	13. 43	2. 53	32. 52	26. 50	43. 50	-17. 00	QP
263. 770	48. 36	11. 81	3. 25	32. 53	30. 89	46. 00	-15. 11	QP
312. 270	51. 86	13. 13	3. 52	32. 51	36. 00	46. 00	-10. 00	QP
359. 800	48. 69	14. 04	3. 86	32. 49	34. 10	46. 00	-11. 90	QP
455. 830	43. 92	15. 75	4. 34	32. 52	31. 49	46. 00	-14. 51	QP
937. 920	35. 40	21. 93	6. 43	32. 06	31. 70	46. 00	-14. 30	QP

500.

Frequency (MHz)

600.

700.

800.

900.

1000



## **Above 1GHz:**

## 802.11a\_MIMO\_ChainA+B\_5180MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV /m)	Limit Line (dBuV/m)	Over Limit (dB)	polarizatio n	Detector
10360.00	43.71	39.15	8.10	33.99	56.97	74.00	-17.03	Vertical	Peak
10360.00	29.61	39.15	8.10	33.99	42.87	54.00	-11.13	Vertical	Average
15540.00	38.82	39.03	9.68	31.62	55.91	74.00	-18.09	Vertical	Peak
15540.00	25.32	39.03	9.68	31.62	42.41	54.00	-11.59	Vertical	Average
10360.00	39.90	39.15	8.10	33.99	53.16	74.00	-20.84	Horizontal	Peak
10360.00	26.44	39.15	8.10	33.99	39.70	54.00	-14.30	Horizontal	Average
15540.00	38.53	39.03	9.68	31.62	55.62	74.00	-18.38	Horizontal	Peak
15540.00	25.31	39.03	9.68	31.62	42.40	54.00	-11.60	Horizontal	Average

## 802.11a\_MIMO\_ChainA+B\_5200MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV /m)	Limit Line (dBuV/m)	Over Limit (dB)	polarizatio n	Detector
10400.00	45.41	39.22	8.10	33.95	58.78	74.00	-15.22	Vertical	Peak
10400.00	16.81	39.22	8.10	33.95	58.78	54.00	-23.82	Vertical	Average
15600.00	38.52	39.22	8.10	33.95	58.78	74.00	-18.57	Vertical	Peak
15600.00	24.51	39.22	8.10	33.95	58.78	54.00	-12.58	Vertical	Average
10400.00	40.67	39.22	8.10	33.95	58.78	74.00	-19.96	Horizontal	Peak
10400.00	27.05	39.22	8.10	33.95	58.78	54.00	-13.58	Horizontal	Average
15600.00	38.17	39.22	8.10	33.95	58.78	74.00	-18.92	Horizontal	Peak
15600.00	24.51	39.22	8.10	33.95	58.78	54.00	-12.58	Horizontal	Average

### 802.11a MIMO ChainA+B 5240MHz

Frequency	Read	Antenna	Cable	Preamp	Level	Limit Line	Over	polarizatio	
(MHz)	Level	Factor	Loss	Factor	(dBuV	(dBuV/m)	Limit	•	Detector
(IVII IZ)	(dBuV)	(dB/m)	(dB)	(dB)	/m)	(ubuv/iii)	(dB)	n	
10480.00	45.30	39.36	8.11	33.88	58.89	74.00	-15.11	Vertical	Peak
10480.00	30.95	39.36	8.11	33.88	58.89	54.00	-9.46	Vertical	Average
15720.00	38.28	38.47	9.60	31.54	54.81	74.00	-19.19	Vertical	Peak
15720.00	24.32	38.47	9.60	31.54	54.81	54.00	-13.15	Vertical	Average
10480.00	38.68	39.36	8.11	33.88	58.89	74.00	-21.73	Horizontal	Peak
10480.00	26.71	39.36	8.11	33.88	58.89	54.00	-13.70	Horizontal	Average
15720.00	37.46	38.47	9.60	31.54	54.81	74.00	-20.01	Horizontal	Peak
15720.00	24.35	38.47	9.60	31.54	54.81	54.00	-13.12	Horizontal	Average

### 802.11a MIMO ChainA+B 5260MHz

002.11u_ivii	002.11a_mm0_0namA+b_3200mn2											
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV /m)	Limit Line (dBuV/m)	Over Limit (dB)	polarizatio n	Detector			
10520.00	43.13	39.44	8.12	33.85	52.86	74.00	-17.16	Vertical	Peak			
10520.00	29.62	39.44	8.12	33.85	52.86	54.00	-10.67	Vertical	Average			
15780.00	39.17	38.28	9.58	31.51	41.92	74.00	-18.48	Vertical	Peak			
15780.00	25.57	38.28	9.58	31.51	41.92	54.00	-12.08	Vertical	Average			
10520.00	39.15	39.44	8.12	33.85	52.86	74.00	-21.14	Horizontal	Peak			
10520.00	26.33	39.44	8.12	33.85	52.86	54.00	-13.96	Horizontal	Average			
15780.00	38.95	38.28	9.58	31.51	41.92	74.00	-18.70	Horizontal	Peak			
15780.00	25.57	38.28	9.58	31.51	41.92	54.00	-12.08	Horizontal	Average			



## 802.11a\_MIMO\_ChainA+B\_5300MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV /m)	Limit Line (dBuV/m)	Over Limit (dB)	polarizatio n	Detector
10600.00	43.46	39.58	8.17	33.78	57.43	74.00	-16.57	Vertical	Peak
10600.00	28.37	39.58	8.17	33.78	42.34	54.00	-11.66	Vertical	Average
15900.00	37.90	37.91	9.52	31.45	53.88	74.00	-20.12	Vertical	Peak
15900.00	25.23	37.91	9.52	31.45	41.21	54.00	-12.79	Vertical	Average
10600.00	40.50	39.58	8.17	33.78	54.47	74.00	-19.53	Horizontal	Peak
10600.00	26.00	39.58	8.17	33.78	39.97	54.00	-14.03	Horizontal	Average
15900.00	37.97	37.91	9.52	31.45	53.95	74.00	-20.05	Horizontal	Peak
15900.00	25.08	37.91	9.52	31.45	41.06	54.00	-12.94	Horizontal	Average

### 802.11a MIMO ChainA+B 5320MHz

Frequency	Read	Antenna	Cable	Preamp	Level	Limit Line	Over	polarizatio	
(MHz)	Level	Factor	Loss	Factor	(dBuV	(dBuV/m)	Limit	•	Detector
(1011 12)	(dBuV)	(dB/m)	(dB)	(dB)	/m)	(ubu v/III)	(dB)	n	
10640.00	41.52	39.65	8.19	33.74	54.66	74.00	-18.38	Vertical	Peak
10640.00	27.90	39.65	8.19	33.74	54.66	54.00	-12.00	Vertical	Average
15960.00	38.59	37.72	9.50	31.43	54.14	74.00	-19.62	Vertical	Peak
15960.00	24.85	37.72	9.50	31.43	40.52	54.00	-13.36	Vertical	Average
10640.00	40.56	39.65	8.19	33.74	54.66	74.00	-19.34	Horizontal	Peak
10640.00	26.53	39.65	8.19	33.74	54.66	54.00	-13.37	Horizontal	Average
15960.00	38.35	37.72	9.50	31.43	54.14	74.00	-19.86	Horizontal	Peak
15960.00	24.73	37.72	9.50	31.43	40.52	54.00	-13.48	Horizontal	Average

### 802.11a MIMO ChainA+B 5500MHz

	/021114_1111110_0111111111111111111111111										
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV /m)	Limit Line (dBuV/m)	Over Limit (dB)	polarizatio n	Detector		
11000.00	42.34	40.30	8.39	33.43	57.60	74.00	-16.40	Vertical	Peak		
11000.00	26.79	40.30	8.39	33.43	42.05	54.00	-11.95	Vertical	Average		
16500.00	37.41	39.55	9.42	31.07	55.31	74.00	-18.69	Vertical	Peak		
16500.00	24.04	39.55	9.42	31.07	55.31	54.00	-12.06	Vertical	Average		
11000.00	43.55	40.30	8.39	33.43	58.81	74.00	-15.19	Horizontal	Peak		
11000.00	30.02	40.30	8.39	33.43	45.28	54.00	-8.72	Horizontal	Average		
16500.00	38.22	39.55	9.42	31.07	56.12	74.00	-17.88	Horizontal	Peak		
16500.00	23.84	39.55	9.42	31.07	41.74	54.00	-12.26	Horizontal	Average		

## 802.11a\_MIMO\_ChainA+B\_5580MHz

	_	A t a a	Cabla	D	11		0		
Frequency	Read	Antenna	Cable	Preamp	Level	Limit Line	Over	polarizatio	
	Level	Factor	Loss	Factor	(dBuV		Limit	•	Detector
(MHz)	(dBuV)	(dB/m)	(dB)	(dB)	`/m)	(dBuV/m)	(dB)	n	
11160.00	40.91	40.17	8.50	33.29	56.29	74.00	-17.71	Vertical	Peak
11160.00	25.63	40.17	8.50	33.29	41.01	54.00	-12.99	Vertical	Average
16740.00	37.36	40.49	9.42	30.90	56.37	74.00	-17.63	Vertical	Peak
16740.00	23.65	40.49	9.42	30.90	42.66	54.00	-11.34	Vertical	Average
11160.00	41.83	40.17	8.50	33.29	57.21	74.00	-16.79	Horizontal	Peak
11160.00	26.99	40.17	8.50	33.29	42.37	54.00	-11.63	Horizontal	Average
16740.00	37.83	40.49	9.42	30.90	56.84	74.00	-17.16	Horizontal	Peak
16740.00	23.82	40.49	9.42	30.90	42.83	54.00	-11.17	Horizontal	Average



## 802.11a\_MIMO\_ChainA+B\_5700MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV /m)	Limit Line (dBuV/m)	Over Limit (dB)	polarizatio n	Detector
11400.00	41.52	39.98	8.66	33.08	57.08	74.00	-16.92	Vertical	Peak
11400.00	26.21	39.98	8.66	33.08	41.77	54.00	-12.23	Vertical	Average
17100.00	36.67	42.21	9.44	30.65	57.67	74.00	-16.33	Vertical	Peak
17100.00	23.39	42.21	9.44	30.65	44.39	54.00	-9.61	Vertical	Average
11400.00	39.56	39.98	8.66	33.08	57.08	74.00	-18.88	Horizontal	Peak
11400.00	26.56	39.98	8.66	33.08	41.77	54.00	-11.88	Horizontal	Average
17100.00	36.89	42.21	9.44	30.65	57.67	74.00	-16.11	Horizontal	Peak
17100.00	23.36	42.21	9.44	30.65	44.39	54.00	-9.64	Horizontal	Average

## 802.11n(HT20) \_MIMO\_ChainA+B\_5180MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV /m)	Limit Line (dBuV/m)	Over Limit (dB)	polarizatio n	Detector
10360.00	42.62	39.15	8.10	33.99	55.88	74.00	-18.12	Vertical	Peak
10360.00	28.89	39.15	8.10	33.99	42.15	54.00	-11.85	Vertical	Average
15540.00	38.36	39.03	9.68	31.62	55.45	74.00	-18.55	Vertical	Peak
15540.00	25.30	39.03	9.68	31.62	42.39	54.00	-11.61	Vertical	Average
10360.00	39.91	39.15	8.10	33.99	53.17	74.00	-20.83	Horizontal	Peak
10360.00	26.49	39.15	8.10	33.99	39.75	54.00	-14.25	Horizontal	Average
15540.00	39.22	39.03	9.68	31.62	56.31	74.00	-17.69	Horizontal	Peak
15540.00	25.29	39.03	9.68	31.62	42.38	54.00	-11.62	Horizontal	Average

## 802.11n(HT20) \_MIMO\_ChainA+B\_5200MHz

Frequency	Read	Antenna	Cable	Preamp	Level	Limit Line	Over	polarizatio	
(MHz)	Level	Factor	Loss	Factor	(dBuV	(dBuV/m)	Limit	n	Detector
(1711 12)	(dBuV)	(dB/m)	(dB)	(dB)	/m)	(dbd v/iii)	(dB)	11	
10400.00	44.38	39.22	8.10	33.95	57.75	74.00	-16.25	Vertical	Peak
10400.00	30.40	39.22	8.10	33.95	43.77	54.00	-10.23	Vertical	Average
15600.00	38.86	38.84	9.66	31.59	55.77	74.00	-18.23	Vertical	Peak
15600.00	24.45	38.84	9.66	31.59	41.36	54.00	-12.64	Vertical	Average
10400.00	40.82	39.22	8.10	33.95	54.19	74.00	-19.81	Horizontal	Peak
10400.00	27.32	39.22	8.10	33.95	40.69	54.00	-13.31	Horizontal	Average
15600.00	37.93	38.84	9.66	31.59	54.84	74.00	-19.16	Horizontal	Peak
15600.00	24.45	38.84	9.66	31.59	41.36	54.00	-12.64	Horizontal	Average

## 802.11n(HT20) MIMO ChainA+B 5240MHz

	02:111(11120)_IIIIIIO_ONGINA1B_02+011112									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV /m)	Limit Line (dBuV/m)	Over Limit (dB)	polarizatio n	Detector	
10480.00	46.02	39.36	8.11	33.88	59.61	74.00	-14.39	Vertical	Peak	
10480.00	29.56	39.36	8.11	33.88	43.15	54.00	-10.85	Vertical	Average	
15720.00	38.61	38.47	9.60	31.54	55.14	74.00	-18.86	Vertical	Peak	
15720.00	24.23	38.47	9.60	31.54	40.76	54.00	-13.24	Vertical	Average	
10480.00	40.87	39.36	8.11	33.88	54.46	74.00	-19.54	Horizontal	Peak	
10480.00	26.70	39.36	8.11	33.88	40.29	54.00	-13.71	Horizontal	Average	
15720.00	37.40	38.47	9.60	31.54	53.93	74.00	-20.07	Horizontal	Peak	
15720.00	24.40	38.47	9.60	31.54	40.73	54.00	-13.27	Horizontal	Average	



## 802.11n(HT20) \_MIMO\_ChainA+B\_5260MHz

Frequency	Read	Antenna	Cable	Preamp	Level	Limit Line	Over	polarizatio	
(MHz)	Level	Factor	Loss	Factor	(dBuV	(dBuV/m)	Limit	n	Detector
(1711 12)	(dBuV)	(dB/m)	(dB)	(dB)	/m)	(dDd V/III)	(dB)	11	
10520.00	39.37	39.44	8.12	33.85	53.08	74.00	-20.92	Vertical	Peak
10520.00	26.79	39.44	8.12	33.85	40.50	54.00	-13.50	Vertical	Average
15780.00	38.59	38.28	9.58	31.51	54.94	74.00	-19.06	Vertical	Peak
15780.00	25.53	38.28	9.58	31.51	41.88	54.00	-12.12	Vertical	Average
10520.00	44.10	39.44	8.12	33.85	57.81	74.00	-16.19	Horizontal	Peak
10520.00	30.02	39.44	8.12	33.85	43.73	54.00	-10.27	Horizontal	Average
15780.00	39.14	38.28	9.58	31.51	55.49	74.00	-18.51	Horizontal	Peak
15780.00	25.58	38.28	9.58	31.51	41.93	54.00	-12.07	Horizontal	Average

## 802.11n(HT20) \_MIMO\_ChainA+B\_5300MHz

Frequency (MHz)	Řead Level	Antenna Factor	Cable Loss	Preamp Factor	Level (dBuV	Limit Line (dBuV/m)	Over Limit	polarizatio n	Detector
(1411.12)	(dBuV)	(dB/m)	(dB)	(dB)	/m)	(4247711)	(dB)		
10600.00	44.56	39.58	8.17	33.78	58.53	74.00	-15.47	Vertical	Peak
10600.00	29.88	39.58	8.17	33.78	43.85	54.00	-10.15	Vertical	Average
15900.00	37.53	37.91	9.52	31.45	53.51	74.00	-20.49	Vertical	Peak
15900.00	24.99	37.91	9.52	31.45	40.97	54.00	-13.03	Vertical	Average
10600.00	39.61	39.58	8.17	33.78	53.58	74.00	-20.42	Horizontal	Peak
10600.00	27.03	39.58	8.17	33.78	41.00	54.00	-13.00	Horizontal	Average
15900.00	37.61	37.91	9.52	31.45	53.59	74.00	-20.41	Horizontal	Peak
15900.00	24.99	37.91	9.52	31.45	40.97	54.00	-13.03	Horizontal	Average

## 802.11n(HT20) \_MIMO\_ChainA+B\_5320MHz

002.1111(111	002.1 III(1120) _WIMO_CHAINA+D_3320WHZ									
Frequency	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Level (dBuV	Limit Line	Over Limit	polarizatio	Detector	
(MHz)	(dBuV)	(dB/m)	(dB)	(dB)	/m)	(dBuV/m)	(dB)	n	Detector	
10640.00	44.48	39.65	8.19	33.74	58.58	74.00	-15.42	Vertical	Peak	
10640.00	30.77	39.65	8.19	33.74	44.87	54.00	-9.13	Vertical	Average	
15960.00	38.70	37.72	9.50	31.43	54.49	74.00	-19.51	Vertical	Peak	
15960.00	28.09	37.72	9.50	31.43	43.88	54.00	-10.12	Vertical	Average	
10640.00	39.77	39.65	8.19	33.74	53.87	74.00	-20.13	Horizontal	Peak	
10640.00	27.54	39.65	8.19	33.74	41.64	54.00	-12.36	Horizontal	Average	
15960.00	38.02	37.72	9.50	31.43	53.81	74.00	-20.19	Horizontal	Peak	
15960.00	24.70	37.72	9.50	31.43	40.49	54.00	-13.51	Horizontal	Average	

#### 802.11n(HT20) MIMO ChainA+B 5500MHz

	702:111(11120) _INIMO_CHAMATB_0000HI12										
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV /m)	Limit Line (dBuV/m)	Over Limit (dB)	polarizatio n	Detector		
11000.00	44.80	40.30	8.39	33.43	60.06	74.00	-13.94	Vertical	Peak		
11000.00	29.18	40.30	8.39	33.43	44.44	54.00	-9.56	Vertical	Average		
16500.00	38.52	39.55	9.42	31.07	56.42	74.00	-17.58	Vertical	Peak		
16500.00	23.86	39.55	9.42	31.07	41.76	54.00	-12.24	Vertical	Average		
11000.00	42.92	40.30	8.39	33.43	58.18	74.00	-15.82	Horizontal	Peak		
11000.00	30.47	40.30	8.39	33.43	45.73	54.00	-8.27	Horizontal	Average		
16500.00	37.02	39.55	9.42	31.07	54.92	74.00	-19.08	Horizontal	Peak		
16500.00	23.84	39.55	9.42	31.07	41.74	54.00	-12.26	Horizontal	Average		



## 802.11n(HT20) \_MIMO\_ChainA+B\_5580MHz

Frequency (MHz)	Řead Level	Antenna Factor	Cable Loss	Preamp Factor	Level (dBuV	Limit Line (dBuV/m)	Over Limit	polarizatio n	Detector
(1411.12)	(dBuV)	(dB/m)	(dB)	(dB)	/m)	(aba (/////)	(dB)		
11160.00	42.13	40.17	8.50	33.29	57.51	74.00	-16.49	Vertical	Peak
11160.00	27.54	40.17	8.50	33.29	42.92	54.00	-11.08	Vertical	Average
16740.00	37.08	40.49	9.42	30.90	56.09	74.00	-17.91	Vertical	Peak
16740.00	23.78	40.49	9.42	30.90	42.79	54.00	-11.21	Vertical	Average
11160.00	41.99	40.17	8.50	33.29	57.37	74.00	-16.63	Horizontal	Peak
11160.00	28.03	40.17	8.50	33.29	43.41	54.00	-10.59	Horizontal	Average
16740.00	36.12	40.49	9.42	30.90	55.13	74.00	-18.87	Horizontal	Peak
16740.00	23.68	40.49	9.42	30.90	42.69	54.00	-11.31	Horizontal	Average

## 802.11n(HT20) \_MIMO\_ChainA+B\_5700MHz

Frequency	Read	Antenna	Cable	Preamp	Level	Limit Line	Over	polarizatio	
(MHz)	Level	Factor	Loss	Factor	(dBuV	(dBuV/m)	Limit	•	Detector
(IVII IZ)	(dBuV)	(dB/m)	(dB)	(dB)	/m)	(ubu v/III)	(dB)	n	
11400.00	39.46	39.98	8.66	33.08	55.02	74.00	-18.98	Vertical	Peak
11400.00	26.45	39.98	8.66	33.08	42.01	54.00	-11.99	Vertical	Average
17100.00	37.32	42.21	9.44	30.65	58.32	74.00	-15.68	Vertical	Peak
17100.00	23.40	42.21	9.44	30.65	44.40	54.00	-9.60	Vertical	Average
11400.00	39.81	39.98	8.66	33.08	55.37	74.00	-18.63	Horizontal	Peak
11400.00	26.58	39.98	8.66	33.08	42.14	54.00	-11.86	Horizontal	Average
17100.00	36.43	42.21	9.44	30.65	57.43	74.00	-16.57	Horizontal	Peak
17100.00	23.31	42.21	9.44	30.65	44.31	54.00	-9.69	Horizontal	Average

## 802.11ac(VHT20) \_MIMO\_ChainA+B\_5180MHz

		_							
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV /m)	Limit Line (dBuV/m)	Over Limit (dB)	polarizatio n	Detector
10360.00	41.98	39.15	8.10	33.99	55.24	74.00	-18.76	Vertical	Peak
10360.00	28.19	39.15	8.10	33.99	41.45	54.00	-12.55	Vertical	Average
15540.00	37.96	39.03	9.68	31.62	55.05	74.00	-18.95	Vertical	Peak
15540.00	25.50	39.03	9.68	31.62	42.59	54.00	-11.41	Vertical	Average
10360.00	39.88	39.15	8.10	33.99	53.14	74.00	-20.86	Horizontal	Peak
10360.00	26.29	39.15	8.10	33.99	39.55	54.00	-14.45	Horizontal	Average
15540.00	39.42	39.03	9.68	31.62	56.51	74.00	-17.49	Horizontal	Peak
15540.00	25.35	39.03	9.68	31.62	42.44	54.00	-11.56	Horizontal	Average

## 802.11ac(VHT20) MIMO ChainA+B 5200MHz

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Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV /m)	Limit Line (dBuV/m)	Over Limit (dB)	polarizatio n	Detector	
10400.00	43.20	39.22	8.10	33.95	56.57	74.00	-17.43	Vertical	Peak	
10400.00	31.54	39.22	8.10	33.95	44.91	54.00	-9.09	Vertical	Average	
15600.00	38.43	38.84	9.66	31.59	55.34	74.00	-18.66	Vertical	Peak	
15600.00	24.12	38.84	9.66	31.59	41.03	54.00	-12.97	Vertical	Average	
10400.00	40.52	39.22	8.10	33.95	53.89	74.00	-20.11	Horizontal	Peak	
10400.00	27.23	39.22	8.10	33.95	40.60	54.00	-13.40	Horizontal	Average	
15600.00	37.56	38.84	9.66	31.59	54.47	74.00	-19.63	Horizontal	Peak	
15600.00	24.35	38.84	9.66	31.59	41.26	54.00	-12.74	Horizontal	Average	



## 802.11ac(VHT20) \_MIMO\_ChainA+B\_5240MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV /m)	Limit Line (dBuV/m)	Over Limit (dB)	polarizatio n	Detector
10480.00	46.17	39.36	8.11	33.88	59.76	74.00	-14.24	Vertical	Peak
10480.00	29.38	39.36	8.11	33.88	42.97	54.00	-11.03	Vertical	Average
15720.00	38.52	38.47	9.60	31.54	55.05	74.00	-18.95	Vertical	Peak
15720.00	24.37	38.47	9.60	31.54	40.90	54.00	-13.10	Vertical	Average
10480.00	40.31	39.36	8.11	33.88	53.90	74.00	-20.10	Horizontal	Peak
10480.00	26.53	39.36	8.11	33.88	40.12	54.00	-13.88	Horizontal	Average
15720.00	37.53	38.47	9.60	31.54	54.06	74.00	-19.94	Horizontal	Peak
15720.00	24.28	38.47	9.60	31.54	40.81	54.00	-13.19	Horizontal	Average

802.11ac(VHT20) \_MIMO\_ChainA+B\_5260MHz

	70211140(V11120)_IMMO_ONAMI/VIB_0200MI								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV /m)	Limit Line (dBuV/m)	Over Limit (dB)	polarizatio n	Detector
10520.00	44.33	39.44	8.12	33.85	58.04	74.00	-15.96	Vertical	Peak
10520.00	30.21	39.44	8.12	33.85	43.92	54.00	-10.08	Vertical	Average
15780.00	39.37	38.28	9.58	31.51	55.72	74.00	-18.28	Vertical	Peak
15780.00	25.63	38.28	9.58	31.51	41.98	54.00	-12.02	Vertical	Average
10520.00	39.84	39.44	8.12	33.85	53.55	74.00	-20.45	Horizontal	Peak
10520.00	26.52	39.44	8.12	33.85	40.23	54.00	-13.77	Horizontal	Average
15780.00	38.69	38.28	9.58	31.51	55.04	74.00	-18.96	Horizontal	Peak
15780.00	25.63	38.28	9.58	31.51	41.98	54.00	-12.02	Horizontal	Average

802.11ac(VHT20) MIMO ChainA+B 5300MHz

002.11ac(V	302.11ac(VH120)_IVIIIVO_CHAIHA+B_3300WH2										
Frequency (MHz)	Read Level	Antenna Factor	Cable	Preamp Factor	Level (dBuV	Limit Line (dBuV/m)	Over Limit	polarizatio n	Detector		
	(dBuV)	(dB/m)	(dB)	(dB)	/m)	,	(dB)				
10600.00	44.32	39.58	8.17	33.78	58.29	74.00	-15.71	Vertical	Peak		
10600.00	29.21	39.58	8.17	33.78	43.18	54.00	-10.82	Vertical	Average		
15900.00	37.41	37.91	9.52	31.45	53.39	74.00	-20.61	Vertical	Peak		
15900.00	24.38	37.91	9.52	31.45	40.36	54.00	-13.64	Vertical	Average		
10600.00	39.48	39.58	8.17	33.78	53.45	74.00	-20.55	Horizontal	Peak		
10600.00	27.51	39.58	8.17	33.78	41.48	54.00	-12.52	Horizontal	Average		
15900.00	37.34	37.91	9.52	31.45	53.32	74.00	-20.68	Horizontal	Peak		
15900.00	24.56	37.91	9.52	31.45	40.54	54.00	-13.46	Horizontal	Average		

802.11ac(VHT20) MIMO ChainA+B 5320MHz

002::: 00/:	502:11d0(V11120) _IMMIO_ONAMATB_5020M12								
Frequency	Read	Antenna	Cable	Preamp	Level	Limit Line	Over	polarizatio	
(MHz)	Level	Factor	Loss	Factor	(dBuV	(dBuV/m)	Limit	•	Detector
(IVII IZ)	(dBuV)	(dB/m)	(dB)	(dB)	/m)	(ubu v/III)	(dB)	n	
10640.00	44.32	39.65	8.19	33.74	58.42	74.00	-15.58	Vertical	Peak
10640.00	31.42	39.65	8.19	33.74	45.52	54.00	-8.48	Vertical	Average
15960.00	38.42	37.72	9.50	31.43	54.21	74.00	-19.79	Vertical	Peak
15960.00	27.97	37.72	9.50	31.43	43.76	54.00	-10.24	Vertical	Average
10640.00	39.51	39.65	8.19	33.74	53.61	74.00	-20.39	Horizontal	Peak
10640.00	27.24	39.65	8.19	33.74	41.34	54.00	-12.66	Horizontal	Average
15960.00	38.11	37.72	9.50	31.43	53.90	74.00	-20.10	Horizontal	Peak
15960.00	24.46	37.72	9.50	31.43	40.25	54.00	-13.75	Horizontal	Average



802.11ac(VHT20) \_MIMO\_ChainA+B\_5500MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV /m)	Limit Line (dBuV/m)	Over Limit (dB)	polarizatio n	Detector
11000.00	44.73	40.30	8.39	33.43	59.99	74.00	-14.01	Vertical	Peak
11000.00	29.18	40.30	8.39	33.43	44.44	54.00	-9.56	Vertical	Average
16500.00	38.43	39.55	9.42	31.07	56.33	74.00	-17.67	Vertical	Peak
16500.00	23.52	39.55	9.42	31.07	41.42	54.00	-12.58	Vertical	Average
11000.00	42.65	40.30	8.39	33.43	57.91	74.00	-16.09	Horizontal	Peak
11000.00	30.53	40.30	8.39	33.43	45.79	54.00	-8.21	Horizontal	Average
16500.00	37.14	39.55	9.42	31.07	55.04	74.00	-18.96	Horizontal	Peak
16500.00	23.71	39.55	9.42	31.07	41.61	54.00	-12.39	Horizontal	Average

802.11ac(VHT20) MIMO ChainA+B 5580MHz

002.1140( V	02:11ac(V11120)_ININO_ONAINA+D_00001112									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV /m)	Limit Line (dBuV/m)	Over Limit (dB)	polarizatio n	Detector	
11160.00	42.38	40.17	8.50	33.29	57.56	74.00	-16.24	Vertical	Peak	
11160.00	27.42	40.17	8.50	33.29	42.80	54.00	-11.20	Vertical	Average	
16740.00	37.24	40.49	9.42	30.90	56.25	74.00	-17.75	Vertical	Peak	
16740.00	23.51	40.49	9.42	30.90	42.52	54.00	-11.48	Vertical	Average	
11160.00	41.88	40.17	8.50	33.29	57.26	74.00	-16.74	Horizontal	Peak	
11160.00	28.14	40.17	8.50	33.29	43.52	54.00	-10.48	Horizontal	Average	
16740.00	36.23	40.49	9.42	30.90	55.24	74.00	-18.76	Horizontal	Peak	
16740.00	23.36	40.49	9.42	30.90	42.37	54.00	-11.63	Horizontal	Average	

802.11ac(VHT20) \_MIMO\_ChainA+B\_5700MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV /m)	Limit Line (dBuV/m)	Over Limit (dB)	polarizatio n	Detector
11400.00	39.24	39.98	8.66	33.08	54.80	74.00	-19.20	Vertical	Peak
11400.00	26.38	39.98	8.66	33.08	41.94	54.00	-12.06	Vertical	Average
17100.00	37.81	42.21	9.44	30.65	55.81	74.00	-15.19	Vertical	Peak
17100.00	23.34	42.21	9.44	30.65	44.34	54.00	-9.66	Vertical	Average
11400.00	39.76	39.98	8.66	33.08	55.32	74.00	-18.68	Horizontal	Peak
11400.00	25.99	39.98	8.66	33.08	41.55	54.00	-12.45	Horizontal	Average
17100.00	36.28	42.21	9.44	30.65	57.28	74.00	-16.72	Horizontal	Peak
17100.00	23.48	42.21	9.44	30.65	44.48	54.00	-9.52	Horizontal	Average

## 802.11n(HT40) \_MIMO\_ChainA+B\_ 5190MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV /m)	Limit Line (dBuV/m)	Over Limit (dB)	polarizatio n	Detector
10380.00	46.58	39.18	8.10	33.97	59.89	74.00	-14.11	Vertical	Peak
10380.00	28.78	39.18	8.10	33.97	42.09	54.00	-11.91	Vertical	Average
15570.00	38.09	39.84	8.74	32.93	53.74	74.00	-20.26	Vertical	Peak
15570.00	25.32	39.84	8.74	32.93	40.97	54.00	-13.03	Vertical	Average
10380.00	42.18	39.18	8.10	33.97	55.49	74.00	-18.51	Horizontal	Peak
10380.00	26.94	39.18	8.10	33.97	40.25	54.00	-13.75	Horizontal	Average
15570.00	38.04	39.84	8.74	32.93	55.04	74.00	-18.96	Horizontal	Peak
15570.00	25.42	39.84	8.74	32.93	42.42	54.00	-11.58	Horizontal	Average



## 802.11n(HT40) \_MIMO\_ChainA+B\_5230MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV /m)	Limit Line (dBuV/m)	Over Limit (dB)	polarizatio n	Detector
10460.00	45.88	39.33	8.11	33.90	59.42	74.00	-14.58	Vertical	Peak
10460.00	29.49	39.33	8.11	33.90	43.03	54.00	-10.97	Vertical	Average
15690.00	37.55	38.56	9.62	31.55	54.18	74.00	-19.82	Vertical	Peak
15690.00	24.16	38.56	9.62	31.55	40.79	54.00	-13.21	Vertical	Average
10460.00	39.25	39.33	8.11	33.90	52.79	74.00	-21.21	Horizontal	Peak
10460.00	27.05	39.33	8.11	33.90	40.59	54.00	-13.41	Horizontal	Average
15690.00	37.68	38.56	9.62	31.55	54.31	74.00	-19.69	Horizontal	Peak
15690.00	24.91	38.56	9.62	31.55	41.54	54.00	-12.46	Horizontal	Average

802.11n(HT40) \_MIMO\_ChainA+B\_5270MHz

	(V)								
Frequency	Read	Antenna	Cable	Preamp	Level	Limit Line	Over	polarizatio	
(MHz)	Level	Factor	Loss	Factor	(dBuV	(dBuV/m)	Limit	•	Detector
(1711 12)	(dBuV)	(dB/m)	(dB)	(dB)	/m)	(ubu v/III)	(dB)	n	
10540.00	42.99	39.47	8.13	33.83	56.76	74.00	-17.24	Vertical	Peak
10540.00	28.69	39.47	8.13	33.83	42.46	54.00	-11.54	Vertical	Average
15810.00	37.44	38.19	9.56	31.50	53.69	74.00	-20.31	Vertical	Peak
15810.00	24.45	38.19	9.56	31.50	40.70	54.00	-13.30	Vertical	Average
10540.00	39.00	39.47	8.13	33.83	52.77	74.00	-21.23	Horizontal	Peak
10540.00	25.27	39.47	8.13	33.83	39.04	54.00	-14.96	Horizontal	Average
15810.00	38.01	38.19	9.56	31.50	54.26	74.00	-19.74	Horizontal	Peak
15810.00	24.50	38.19	9.56	31.50	40.75	54.00	-13.25	Horizontal	Average

802.11n(HT40) \_MIMO\_ChainA+B\_5310MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV /m)	Limit Line (dBuV/m)	Over Limit (dB)	polarizatio n	Detector
10620.00	42.95	39.62	8.18	33.76	56.99	74.00	-17.01	Vertical	Peak
10620.00	28.88	39.62	8.18	33.76	42.92	54.00	-11.08	Vertical	Average
15930.00	38.84	37.82	9.51	31.44	54.73	74.00	-19.27	Vertical	Peak
15930.00	25.26	37.82	9.51	31.44	41.15	54.00	-12.85	Vertical	Average
10620.00	40.90	39.62	8.18	33.76	54.94	74.00	-19.06	Horizontal	Peak
10620.00	25.44	39.62	8.18	33.76	39.48	54.00	-14.52	Horizontal	Average
15930.00	38.36	37.82	9.51	31.44	54.25	74.00	-19.75	Horizontal	Peak
15930.00	25.29	37.82	9.51	31.44	41.18	54.00	-12.82	Horizontal	Average

## 802.11n(HT40) MIMO ChainA+B 5510MHz

	70211111(11140) _IMMING_GHAMIN (115_0010MH2									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV /m)	Limit Line (dBuV/m)	Over Limit (dB)	polarizatio n	Detector	
11020.00	40.83	40.28	8.40	33.41	56.10	74.00	-17.90	Vertical	Peak	
11020.00	26.27	40.28	8.40	33.41	41.54	54.00	-12.46	Vertical	Average	
16530.00	37.91	39.67	9.42	31.04	55.96	74.00	-18.04	Vertical	Peak	
16530.00	24.01	39.67	9.42	31.04	42.06	54.00	-11.94	Vertical	Average	
11020.00	41.52	40.28	8.40	33.41	56.79	74.00	-17.21	Horizontal	Peak	
11020.00	26.43	40.28	8.40	33.41	41.70	54.00	-12.30	Horizontal	Average	
16530.00	37.02	39.67	9.42	31.04	55.07	74.00	-18.93	Horizontal	Peak	
16530.00	24.00	39.67	9.42	31.04	42.05	54.00	-11.95	Horizontal	Average	



802.11n(HT40) \_MIMO\_ChainA+B\_5550MHz

Frequency (MHz)	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Level (dBuV	Limit Line (dBuV/m)	Over Limit	polarizatio	Detector
(IVITZ)	(dBuV)	(dB/m)	(dB)	(dB)	/m)	(ubuV/III)	(dB)	n	
11100.00	42.06	40.22	8.46	33.34	57.40	74.00	-16.60	Vertical	Peak
11100.00	27.70	40.22	8.46	33.34	43.04	54.00	-10.96	Vertical	Average
16650.00	38.08	40.13	9.42	30.96	56.67	74.00	-17.33	Vertical	Peak
16650.00	24.88	40.13	9.42	30.96	43.47	54.00	-10.53	Vertical	Average
11100.00	40.19	40.22	8.46	33.34	55.53	74.00	-18.47	Horizontal	Peak
11100.00	27.65	40.22	8.46	33.34	42.99	54.00	-11.01	Horizontal	Average
16650.00	37.19	40.13	9.42	30.96	55.78	74.00	-18.22	Horizontal	Peak
16650.00	24.05	40.13	9.42	30.96	42.64	54.00	-11.36	Horizontal	Average

## 802.11n(HT40) \_MIMO\_ChainA+B\_5670MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV /m)	Limit Line (dBuV/m)	Over Limit (dB)	polarizatio n	Detector
11340.00	38.67	40.03	8.62	33.13	54.19	74.00	-19.81	Vertical	Peak
11340.00	24.26	40.03	8.62	33.13	39.78	54.00	-14.22	Vertical	Average
17010.00	36.99	41.57	9.41	30.71	57.26	74.00	-16.74	Vertical	Peak
17010.00	23.77	41.57	9.41	30.71	44.04	54.00	-9.96	Vertical	Average
11340.00	38.15	40.03	8.62	33.13	53.67	74.00	-20.33	Horizontal	Peak
11340.00	25.07	40.03	8.62	33.13	40.59	54.00	-13.41	Horizontal	Average
17010.00	37.33	41.57	9.41	30.71	57.60	74.00	-16.40	Horizontal	Peak
17010.00	23.73	41.57	9.41	30.71	44.00	54.00	-10.00	Horizontal	Average

# 802.11ac(VHT40) \_MIMO\_ChainA+B\_5190MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV /m)	Limit Line (dBuV/m)	Over Limit (dB)	polarizatio n	Detector
10380.00	46.71	39.18	8.10	33.97	60.02	74.00	-13.98	Vertical	Peak
10380.00	28.56	39.18	8.10	33.97	41.87	54.00	-12.13	Vertical	Average
15570.00	38.15	39.84	8.74	32.93	53.80	74.00	-20.20	Vertical	Peak
15570.00	25.42	39.84	8.74	32.93	41.07	54.00	-12.93	Vertical	Average
10380.00	42.24	39.18	8.10	33.97	55.55	74.00	-18.45	Horizontal	Peak
10380.00	26.74	39.18	8.10	33.97	40.05	54.00	-13.95	Horizontal	Average
15570.00	38.12	39.84	8.74	32.93	55.12	74.00	-18.88	Horizontal	Peak
15570.00	25.37	39.84	8.74	32.93	42.37	54.00	-11.63	Horizontal	Average

### 802.11ac(VHT40) MIMO ChainA+B 5230MHz

002.1140(1	502: 11do(111140)mimO_OndinA1B_0200m12										
Frequency	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Level (dBuV	Limit Line	Over Limit	polarizatio	Detector		
(MHz)	(dBuV)	(dB/m)	(dB)	(dB)	`/m)	(dBuV/m)	(dB)	n			
10460.00	45.71	39.33	8.11	33.90	59.25	74.00	-14.75	Vertical	Peak		
10460.00	29.61	39.33	8.11	33.90	43.15	54.00	-10.85	Vertical	Average		
15690.00	37.42	38.56	9.62	31.55	54.05	74.00	-19.95	Vertical	Peak		
15690.00	24.33	38.56	9.62	31.55	40.86	54.00	-13.14	Vertical	Average		
10460.00	39.20	39.33	8.11	33.90	52.74	74.00	-21.16	Horizontal	Peak		
10460.00	27.31	39.33	8.11	33.90	40.85	54.00	-13.15	Horizontal	Average		
15690.00	37.22	38.56	9.62	31.55	53.85	74.00	-20.15	Horizontal	Peak		
15690.00	24.87	38.56	9.62	31.55	41.50	54.00	-12.50	Horizontal	Average		



802.11ac(VHT40) MIMO ChainA+B 5270MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV /m)	Limit Line (dBuV/m)	Over Limit (dB)	polarizatio n	Detector
10540.00	42.69	39.47	8.13	33.83	56.46	74.00	-17.54	Vertical	Peak
10540.00	28.54	39.47	8.13	33.83	42.31	54.00	-11.69	Vertical	Average
15810.00	37.59	38.19	9.56	31.50	53.84	74.00	-20.16	Vertical	Peak
15810.00	24.59	38.19	9.56	31.50	40.84	54.00	-13.16	Vertical	Average
10540.00	39.32	39.47	8.13	33.83	53.09	74.00	-20.91	Horizontal	Peak
10540.00	24.32	39.47	8.13	33.83	38.09	54.00	-15.91	Horizontal	Average
15810.00	38.16	38.19	9.56	31.50	54.41	74.00	-19.59	Horizontal	Peak
15810.00	24.65	38.19	9.56	31.50	40.90	54.00	-13.10	Horizontal	Average

802.11ac(VHT40) MIMO ChainA+B 5310MHz

	00211120(VIII 10) _ IIIIII 0 _ O112111 VI 2 _ O0 101111 I								
Frequency	Read	Antenna	Cable	Preamp	Level	Limit Line	Over	polarizatio	
(MHz)	Level	Factor	Loss	Factor	(dBuV	(dBuV/m)	Limit	•	Detector
(1711 12)	(dBuV)	(dB/m)	(dB)	(dB)	/m)	(ubu v/III)	(dB)	n	
10620.00	42.86	39.62	8.18	33.76	56.90	74.00	-17.10	Vertical	Peak
10620.00	28.73	39.62	8.18	33.76	42.77	54.00	-11.23	Vertical	Average
15930.00	38.74	37.82	9.51	31.44	54.63	74.00	-19.37	Vertical	Peak
15930.00	25.26	37.82	9.51	31.44	41.15	54.00	-12.85	Vertical	Average
10620.00	40.55	39.62	8.18	33.76	54.59	74.00	-19.41	Horizontal	Peak
10620.00	25.44	39.62	8.18	33.76	39.48	54.00	-14.52	Horizontal	Average
15930.00	38.62	37.82	9.51	31.44	54.51	74.00	-19.49	Horizontal	Peak
15930.00	25.39	37.82	9.51	31.44	41.28	54.00	-12.72	Horizontal	Average

802.11ac(VHT40) \_MIMO\_ChainA+B\_5510MHz

002.11ac(V	1 1 1 <del>7</del> 0 <i>)</i> _111		ITTD_3	I OIVII IZ					
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV /m)	Limit Line (dBuV/m)	Over Limit (dB)	polarizatio n	Detector
11020.00	40.72	40.28	8.40	33.41	55.99	74.00	-18.01	Vertical	Peak
11020.00	26.36	40.28	8.40	33.41	41.63	54.00	-12.37	Vertical	Average
16530.00	37.63	39.67	9.42	31.04	55.68	74.00	-18.32	Vertical	Peak
16530.00	24.35	39.67	9.42	31.04	42.40	54.00	-11.60	Vertical	Average
11020.00	41.27	40.28	8.40	33.41	56.54	74.00	-17.46	Horizontal	Peak
11020.00	26.24	40.28	8.40	33.41	41.51	54.00	-12.49	Horizontal	Average
16530.00	38.55	39.67	9.42	31.04	56.60	74.00	-17.40	Horizontal	Peak
16530.00	24.15	39.67	9.42	31.04	42.20	54.00	-11.80	Horizontal	Average

802.11ac(VHT40) \_MIMO\_ChainA+B\_5550MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV /m)	Limit Line (dBuV/m)	Over Limit (dB)	polarizatio n	Detector
11100.00	42.25	40.22	8.46	33.34	57.59	74.00	-16.41	Vertical	Peak
11100.00	27.58	40.22	8.46	33.34	42.92	54.00	-11.08	Vertical	Average
16650.00	38.21	40.13	9.42	30.96	56.80	74.00	-17.20	Vertical	Peak
16650.00	24.66	40.13	9.42	30.96	43.25	54.00	-10.75	Vertical	Average
11100.00	40.67	40.22	8.46	33.34	56.01	74.00	-17.99	Horizontal	Peak
11100.00	27.38	40.22	8.46	33.34	42.72	54.00	-11.28	Horizontal	Average
16650.00	37.28	40.13	9.42	30.96	55.87	74.00	-18.13	Horizontal	Peak
16650.00	24.18	40.13	9.42	30.96	42.77	54.00	-11.23	Horizontal	Average



## 802.11ac(VHT40) \_MIMO\_ChainA+B\_5670MHz

Frequency	Read	Antenna	Cable	Preamp	Level	Limit Line	Over	polarizatio	
(MHz)	Level	Factor	Loss	Factor	(dBuV	(dBuV/m)	Limit	n	Detector
(1711 12)	(dBuV)	(dB/m)	(dB)	(dB)	/m)	(dDd V/III)	(dB)	- 11	
11340.00	38.54	40.03	8.62	33.13	54.06	74.00	-19.94	Vertical	Peak
11340.00	24.31	40.03	8.62	33.13	39.83	54.00	-14.17	Vertical	Average
17010.00	36.71	41.57	9.41	30.71	56.98	74.00	-17.02	Vertical	Peak
17010.00	23.54	41.57	9.41	30.71	43.81	54.00	-10.19	Vertical	Average
11340.00	38.26	40.03	8.62	33.13	53.78	74.00	-20.22	Horizontal	Peak
11340.00	25.13	40.03	8.62	33.13	40.65	54.00	-13.35	Horizontal	Average
17010.00	37.62	41.57	9.41	30.71	57.89	74.00	-16.11	Horizontal	Peak
17010.00	23.55	41.57	9.41	30.71	43.82	54.00	-10.18	Horizontal	Average

## 802.11ac(VHT80) \_MIMO\_ChainA+B\_5210MHz

•	, —	_	_						
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV /m)	Limit Line (dBuV/m)	Over Limit (dB)	polarizatio n	Detector
10420.00	44.01	39.26	8.10	33.93	57.44	74.00	-16.56	Vertical	Peak
10420.00	27.53	39.26	8.10	33.93	40.96	54.00	-13.04	Vertical	Average
15630.00	39.47	38.75	9.64	31.58	56.28	74.00	-17.72	Vertical	Peak
15630.00	24.54	38.75	9.64	31.58	41.35	54.00	-12.65	Vertical	Average
10420.00	41.36	39.26	8.10	33.93	54.79	74.00	-19.21	Horizontal	Peak
10420.00	26.58	39.26	8.10	33.93	40.01	54.00	-13.99	Horizontal	Average
15630.00	39.55	38.75	9.64	31.58	53.36	74.00	-17.64	Horizontal	Peak
15630.00	24.54	38.75	9.64	31.58	41.35	54.00	-12.65	Horizontal	Average

## 802.11ac(VHT80) \_MIMO\_ChainA+B\_5290MHz

	······································										
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV /m)	Limit Line (dBuV/m)	Over Limit (dB)	polarizatio n	Detector		
10580.00	42.67	39.54	8.15	33.80	56.56	74.00	-17.44	Vertical	Peak		
10580.00	26.70	39.54	8.15	33.80	40.59	54.00	-13.41	Vertical	Average		
15870.00	39.42	38.00	9.54	31.47	55.49	74.00	-18.51	Vertical	Peak		
15870.00	24.94	38.00	9.54	31.47	41.01	54.00	-12.99	Vertical	Average		
10580.00	40.02	39.54	8.15	33.80	53.91	74.00	-20.09	Horizontal	Peak		
10580.00	25.51	39.54	8.15	33.80	39.40	54.00	-14.60	Horizontal	Average		
15870.00	39.72	38.00	9.54	31.47	55.79	74.00	-18.21	Horizontal	Peak		
15870.00	24.97	38.00	9.54	31.47	41.04	54.00	-12.96	Horizontal	Average		

## 802.11ac(VHT80) \_MIMO\_ChainA+B\_5530MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV /m)	Limit Line (dBuV/m)	Over Limit (dB)	polarizatio n	Detector
10580.00	42.37	39.54	8.15	33.80	56.56	74.00	-17.44	Vertical	Peak
10580.00	26.70	39.54	8.15	33.80	40.59	54.00	-13.41	Vertical	Average
15870.00	39.42	38.00	9.54	31.47	55.49	74.00	-18.51	Vertical	Peak
15870.00	24.94	38.00	9.54	31.47	41.01	54.00	-12.99	Vertical	Average
10580.00	40.02	39.54	8.15	33.80	53.91	74.00	-20.09	Horizontal	Peak
10580.00	25.51	39.54	8.15	33.80	39.40	54.00	-14.60	Horizontal	Average
15870.00	39.72	38.00	9.54	31.47	55.79	74.00	-18.21	Horizontal	Peak
15870.00	24.97	38.00	9.54	31.47	41.04	54.00	-12.96	Horizontal	Average



## 802.11ac(VHT80) \_MIMO\_ChainA+B\_5610MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV /m)	Limit Line (dBuV/m)	Over Limit (dB)	polarizatio n	Detector
11220.00	42.60	40.12	8.54	33.24	58.02	74.00	-15.98	Vertical	Peak
11220.00	27.48	40.12	8.54	33.24	42.90	54.00	-11.10	Vertical	Average
16830.00	43.27	40.84	9.41	30.84	62.68	74.00	-11.32	Vertical	Peak
16830.00	28.53	40.84	9.41	30.84	47.94	54.00	-6.06	Vertical	Average
11220.00	42.55	40.12	8.54	33.24	57.97	74.00	-16.03	Horizontal	Peak
11220.00	27.46	40.12	8.54	33.24	42.88	54.00	-11.12	Horizontal	Average
16830.00	43.44	40.84	9.41	30.84	62.85	74.00	-11.15	Horizontal	Peak
16830.00	28.50	40.84	9.41	30.84	47.91	54.00	-6.09	Horizontal	Average

#### Note:

- 1. Level = Read Level + Antenna Factor+ Cable loss- Preamp Factor.
- 2. The test trace is same as the ambient noise (the test frequency range: 18GHz~40GHz), therefore no data appear in the report.
- 3. This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.



## 7.8 Frequency stability

Test Requirement:	47 CFR Part 15, Subpart C 15.407 (g)					
Test Method:	ANSI C63.10:2013, FCC Part 2.1055					
Limit:	Manufactures of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified					
Test Procedure:	a. The EUT was placed inside the environmental test chamber and powered by nominal DC voltage. b. Turn the EUT on and couple its output to a spectrum analyzer. c. Turn the EUT off and set the chamber to the highest temperature specified. d. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 Minutes. e. Repeat step 2 and 3 with the temperature chamber set to the lowest temperature. f. The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 Minute s. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.					
Test setup:	Temperature Chamber					
	Spectrum analyzer EUT Att.					
	Variable Power Supply  Note: Measurement setup for testing on Antenna connector					
Test Instruments:	Refer to section 5.10 for details					
Test mode:	Refer to section 5.2 for details					
Test results:	Pass					

Remark: Set the EUT transmits at un-modulation mode to test frequency stability.



## Measurement data:

	Frequency stability versus Temp.												
	Worse Case Operating Frequency: 5180MHz												
	Davis	0 minute 2 minute 5 minute				Э	10 minu	ute					
Temp. (°C)	Power Supply (Vdc)	Measured Frequency (MHz)	Pass /Fail	Measured Frequency (MHz)	Pass /Fail	Measured Frequency (MHz)	Pass /Fail	Measured Frequency (MHz)	Pass /Fail				
-30	3.3	5177.9624	Pass	5182.6818	Pass	5183.0869	Pass	5179.4661	Pass				
-20	3.3	5178.7616	Pass	5182.9621	Pass	5181.9775	Pass	5179.8629	Pass				
-10	3.3	5180.3301	Pass	5180.7298	Pass	5181.0604	Pass	5180.354	Pass				
0	3.3	5180.7218	Pass	5181.4486	Pass	5181.18	Pass	5179.6783	Pass				
10	3.3	5179.9827	Pass	5180.4463	Pass	5180.7869	Pass	5180.1948	Pass				
20	3.3	5179.999	Pass	5180.428	Pass	5180.7005	Pass	5179.7399	Pass				
30	3.3	5179.8119	Pass	5180.6321	Pass	5181.2039	Pass	5179.4396	Pass				
40	3.3	5180.2361	Pass	5180.222	Pass	5180.1477	Pass	5179.1235	Pass				
50	3.3	5180.8483	Pass	5180.3876	Pass	5181.6974	Pass	5180.2911	Pass				

Г													
	Frequency stability versus Temp.												
	Worse Case Operating Frequency: 5180MHz												
ſ		Davisan	0 minut	e	2 minut	e	5 minute 10 min			nute			
	Temp. (°C)	Power Supply (Vdc)	Measured Frequency (MHz)	Pass /Fail	Measured Frequency (MHz)	Pass /Fail	Measured Frequency (MHz)	Pass /Fail	Measured Frequency (MHz)	Pass /Fail			
ſ	25	3.15	5177.5617	Pass	5182.3452	Pass	5182.6825	Pass	5182.8924	Pass			
	25	3.3	5178.6099	Pass	5182.2239	Pass	5182.176	Pass	5181.4817	Pass			
	25	3.45	5179.9364	Pass	5181.3791	Pass	5181.0394	Pass	5180.2893	Pass			



			Fre	quency stabil	lity vers	us Temp.			
		١	Norse C	ase Operating	Freque	ncy: 5260MHz			
	Dayyar	0 minute 2 minute 5 minute				10 minute			
Temp. (°C)	Power Supply (Vdc)	Measured Frequency (MHz)	Pass /Fail	Measured Frequency (MHz)	Pass /Fail	Measured Frequency (MHz)	Pass /Fail	Measured Frequency (MHz)	Pass /Fail
-30	3.3	5261.6252	Pass	5261.718	Pass	5260.6726	Pass	5261.8145	Pass
-20	3.3	5258.5623	Pass	5259.2445	Pass	5258.5315	Pass	5261.2391	Pass
-10	3.3	5260.693	Pass	5261.543	Pass	5258.22	Pass	5261.97	Pass
0	3.3	5259.6543	Pass	5261.5349	Pass	5259.8265	Pass	5261.6416	Pass
10	3.3	5261.2207	Pass	5259.9186	Pass	5259.8045	Pass	5260.7803	Pass
20	3.3	5260.1919	Pass	5260.1319	Pass	5260.4558	Pass	5260.129	Pass
30	3.3	5261.9365	Pass	5259.337	Pass	5258.3166	Pass	5258.0797	Pass
40	3.3	5259.2294	Pass	5259.4718	Pass	5259.3632	Pass	5260.0649	Pass
50	3.3	5260.072	Pass	5259.254	Pass	5259.3036	Pass	5261.0605	Pass

	Frequency stability versus Temp.												
		\	Norse C	ase Operating	Freque	ncy: 5260MHz							
	Davisan	0 minut	е	2 minut	2 minute 5 minute			10 minu	10 minute				
Temp. (°C)	Power Supply (Vdc)	Measured Frequency (MHz)	Pass /Fail	Measured Frequency (MHz)	Pass /Fail	Measured Frequency (MHz)	Pass /Fail	Measured Frequency (MHz)	Pass /Fail				
25	3.15	5261.3973	Pass	5258.6549	Pass	5261.119	Pass	5261.8284	Pass				
25	3.3	5260.2981	Pass	5261.1578	Pass	5259.2722	Pass	5258.2712	Pass				
25	3.45	5259.7089	Pass	5260.1116	Pass	5260.6018	Pass	5261.2235	Pass				



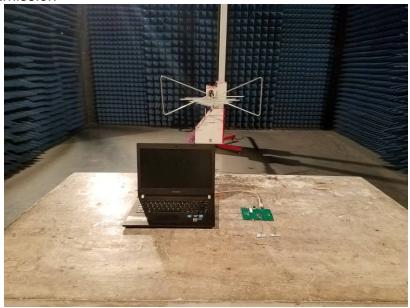
			Fre	quency stabil	ity vers	us Temp.			
		١	Norse C	ase Operating	Freque	ncy: 5500MHz			
	Power	0 minut	е	2 minute		5 minute		10 minute	
Temp. (°C)	Supply (Vdc)	Measured Frequency (MHz)	Pass /Fail	Measured Frequency (MHz)	Pass /Fail	Measured Frequency (MHz)	Pass /Fail	Measured Frequency (MHz)	Pass /Fail
-30	3.3	5499.8906	Pass	5500.6661	Pass	5500.4543	Pass	5501.3979	Pass
-20	3.3	5500.3449	Pass	5498.6024	Pass	5501.6265	Pass	5498.6354	Pass
-10	3.3	5498.7793	Pass	5501.2213	Pass	5500.3355	Pass	5498.8719	Pass
0	3.3	5501.6696	Pass	5500.4887	Pass	5500.3197	Pass	5499.9247	Pass
10	3.3	5499.8202	Pass	5501.1824	Pass	5499.9276	Pass	5499.524	Pass
20	3.3	5501.7137	Pass	5501.4016	Pass	5498.1167	Pass	5499.2107	Pass
30	3.3	5500.8286	Pass	5501.9614	Pass	5499.1594	Pass	5498.7255	Pass
40	3.3	5498.6727	Pass	5498.4476	Pass	5501.1266	Pass	5501.6969	Pass
50	3.3	5498.1802	Pass	5500.4701	Pass	5499.8439	Pass	5498.3622	Pass

	Frequency stability versus Temp.												
	Worse Case Operating Frequency: 5500MHz												
	Dower	0 minut	е	2 minut	e	5 minute	)	10 minute					
Temp. (°C)	Power Supply (Vdc)	Measured Frequency (MHz)	Pass /Fail	Measured Frequency (MHz)	Pass /Fail	Measured Frequency (MHz)	Pass /Fail	Measured Frequency (MHz)	Pass /Fail				
25	3.15	5498.7131	Pass	5498.9047	Pass	5500.4357	Pass	5498.9625	Pass				
25	3.3	5499.9451	Pass	5498.7159	Pass	5501.2081	Pass	5498.0977	Pass				
25	3.45	5501.0341	Pass	5498.4826	Pass	5500.6141	Pass	5499.6837	Pass				



# 8 Test Setup Photo

**Radiated Emission** 







## **Conducted Emission**



# 9 EUT Constructional Details

Reference to the test report No. GTS201806000179E01

---END---