



6.8. Radiated Spurious Emissions Measurements

6.8.1.Test Limit

Out of band emissions: The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB. The emission limit equal to -13dBm.

E (dB μ V/m) = EIRP (dBm) - 20 log D + 104.8; where D is the measurement distance in meters. The emission limit equal to 82.3dB μ V/m.

6.8.2.Test Procedure Used

KDB 971168 D01v03r01 - Section 5.8 & 7

ANSI C63.26-2015 - Section 5.2.7 & 5.5

6.8.3.Test Setting

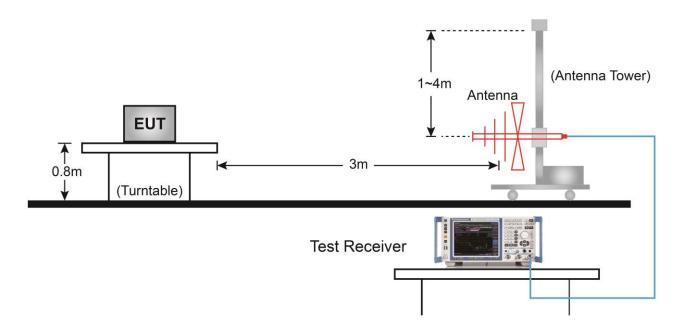
- 1. RBW = 100kHz or 1MHz
- 2. VBW ≥ 3*RBW
- 3. Sweep time ≥ 10 × (number of points in sweep) × (transmission symbol period)
- 4. Detector = Peak
- 5. Trace mode = max hold
- 6. The trace was allowed to stabilize

FCC ID: 2AD8UAWHHA01 Page Number: 127 of 137

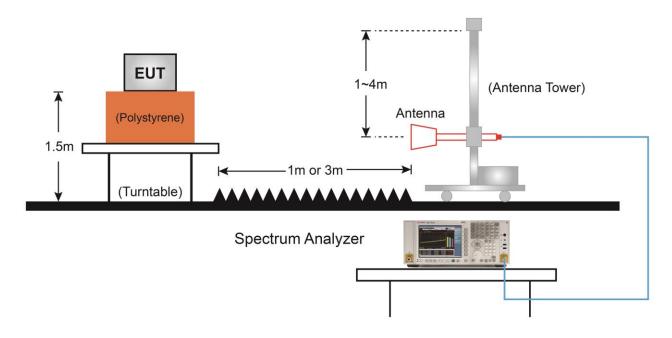


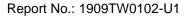
6.8.4.Test Setup

Below 1GHz Test Setup:



Above 1GHz Test Setup:







6.8.5.Test Result

Product	AirScale Indoor Radio ASiR 5G-pRRH	Test Engineer	Peter Xu				
Test Site	AC1	Test Date	2019/08/29				
Test Item	5G NR Band n41_QPSK, BW = 100MHz						

Frequency	Reading Level	Factor	Measure Level	Limit	Margin	Detector	Polarization			
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)					
Bottom Chann	Bottom Channel (2546.0MHz)									
122.6	22.0	16.7	38.6	82.2	-43.6	Peak	Horizontal			
330.7	10.9	22.6	33.5	82.2	-48.7	Peak	Horizontal			
7638.0	35.2	11.9	47.1	82.2	-35.1	Peak	Horizontal			
10184.0	35.1	15.9	50.9	82.2	-31.3	Peak	Horizontal			
125.5	21.2	16.4	37.6	82.2	-44.6	Peak	Vertical			
155.1	22.4	16.0	38.3	82.2	-43.9	Peak	Vertical			
7655.5	38.9	11.9	50.8	82.2	-31.4	Peak	Vertical			
10184.0	34.8	15.9	50.7	82.2	-31.5	Peak	Vertical			
Middle Chann	el (2593.0MHz)									
123.1	22.2	16.6	38.8	82.2	-43.4	Peak	Horizontal			
168.7	18.2	16.3	34.6	82.2	-47.6	Peak	Horizontal			
7779.0	35.1	12.0	47.1	82.2	-35.1	Peak	Horizontal			
10372.0	35.1	16.5	51.6	82.2	-30.6	Peak	Horizontal			
123.1	19.4	16.6	36.0	82.2	-46.2	Peak	Vertical			
158.0	21.6	16.1	37.6	82.2	-44.6	Peak	Vertical			
7779.0	35.8	12.0	47.8	82.2	-34.4	Peak	Vertical			
10372.0	34.4	16.5	50.9	82.2	-31.3	Peak	Vertical			
Top Channel ((2640.0MHz)					_				
121.7	22.2	16.8	38.9	82.2	-43.3	Peak	Horizontal			
156.6	19.3	16.0	35.3	82.2	-46.9	Peak	Horizontal			
5352.0	43.4	3.8	47.2	82.2	-35.0	Peak	Horizontal			
7920.0	36.3	12.1	48.5	82.2	-33.7	Peak	Horizontal			
122.2	20.1	16.7	36.9	82.2	-45.3	Peak	Vertical			
160.5	22.2	16.1	38.4	82.2	-43.8	Peak	Vertical			
7920.0	35.5	12.1	47.6	82.2	-34.6	Peak	Vertical			
10560.0	34.6	17.0	51.5	82.2	-30.7	Peak	Vertical			
Note: Measure	lote: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)									

Note: Measure Level ($dB\mu V/m$) = Reading Level ($dB\mu V$) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

FCC ID: 2AD8UAWHHA01 Page Number: 129 of 137



Product	AirScale Indoor Radio ASiR 5G-pRRH	Test Engineer	Peter Xu				
Test Site	AC1	Test Date	2019/08/29				
Test Item	5G NR Band n41_16QAM, BW = 100MHz						

Frequency	Reading Level	Factor	Measure Level	Limit	Margin	Detector	Polarization					
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)							
Bottom Chann	Bottom Channel (2546.0MHz)											
121.7	22.4	16.8	39.2	82.2	-43.0	Peak	Horizontal					
152.2	19.3	15.9	35.1	82.2	-47.1	Peak	Horizontal					
7579.0	37.9	11.8	49.7	82.2	-32.5	Peak	Horizontal					
10184.0	34.4	15.9	50.2	82.2	-32.0	Peak	Horizontal					
121.7	19.4	16.8	36.2	82.2	-46.0	Peak	Vertical					
161.0	22.5	16.1	38.7	82.2	-43.5	Peak	Vertical					
7672.5	38.4	11.9	50.3	82.2	-31.9	Peak	Vertical					
10184.0	34.8	15.9	50.6	82.2	-31.6	Peak	Vertical					
Middle Chann	el (2593.0MHz)					_						
122.2	22.4	16.7	39.1	82.2	-43.1	Peak	Horizontal					
157.1	18.7	16.0	34.7	82.2	-47.5	Peak	Horizontal					
7779.0	35.0	12.0	47.0	82.2	-35.2	Peak	Horizontal					
10372.0	33.9	16.5	50.4	82.2	-31.8	Peak	Horizontal					
121.2	19.3	16.8	36.1	82.2	-46.1	Peak	Vertical					
153.2	22.3	15.9	38.2	82.2	-44.0	Peak	Vertical					
7779.0	35.9	12.0	47.9	82.2	-34.3	Peak	Vertical					
10372.0	34.3	16.5	50.7	82.2	-31.5	Peak	Vertical					
Top Channel	(2640.0MHz)											
122.2	22.3	16.7	39.1	82.2	-43.1	Peak	Horizontal					
167.3	17.8	16.3	34.1	82.2	-48.1	Peak	Horizontal					
5343.5	42.7	3.8	46.4	82.2	-35.8	Peak	Horizontal					
7920.0	35.7	12.1	47.9	82.2	-34.3	Peak	Horizontal					
122.6	19.2	16.7	35.9	82.2	-46.3	Peak	Vertical					
157.6	22.2	16.0	38.3	82.2	-43.9	Peak	Vertical					
7920.0	36.6	12.1	48.7	82.2	-33.5	Peak	Vertical					
10560.0	34.8	17.0	51.7	82.2	-30.5	Peak	Vertical					
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Product	AirScale Indoor Radio ASiR 5G-pRRH	Test Engineer	Peter Xu			
Test Site	AC1	Test Date	2019/08/29			
Test Item	5G NR Band n41_64QAM, BW = 100MHz					

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Frequency	Reading Level	Factor	Measure Level	Limit	Margin	Detector	Polarization				
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)						
Bottom Chann	Bottom Channel (2546.0MHz)										
122.6	21.8	16.7	38.5	82.2	-43.7	Peak	Horizontal				
168.7	17.6	16.3	34.0	82.2	-48.2	Peak	Horizontal				
7638.0	36.0	11.9	47.8	82.2	-34.4	Peak	Horizontal				
10184.0	34.1	15.9	50.0	82.2	-32.2	Peak	Horizontal				
121.2	19.0	16.8	35.8	82.2	-46.4	Peak	Vertical				
152.7	21.9	15.9	37.8	82.2	-44.4	Peak	Vertical				
7613.0	39.1	11.8	50.9	82.2	-31.3	Peak	Vertical				
10184.0	34.6	15.9	50.5	82.2	-31.7	Peak	Vertical				
Middle Chann	el (2593.0MHz)										
122.2	21.3	16.7	38.0	82.2	-44.2	Peak	Horizontal				
166.3	17.7	16.3	34.0	82.2	-48.2	Peak	Horizontal				
7779.0	35.0	12.0	47.0	82.2	-35.2	Peak	Horizontal				
10372.0	34.3	16.5	50.8	82.2	-31.4	Peak	Horizontal				
122.6	19.0	16.7	35.7	82.2	-46.5	Peak	Vertical				
161.0	21.5	16.1	37.7	82.2	-44.5	Peak	Vertical				
7779.0	35.3	12.0	47.3	82.2	-34.9	Peak	Vertical				
10372.0	34.1	16.5	50.6	82.2	-31.6	Peak	Vertical				
Top Channel	(2640.0MHz)										
122.6	22.2	16.7	38.9	82.2	-43.3	Peak	Horizontal				
166.3	18.1	16.3	34.3	82.2	-47.9	Peak	Horizontal				
5360.5	41.5	3.8	45.3	82.2	-36.9	Peak	Horizontal				
7920.0	35.9	12.1	48.0	82.2	-34.2	Peak	Horizontal				
151.7	21.8	15.8	37.7	82.2	-44.5	Peak	Vertical				
211.9	13.6	18.7	32.2	82.2	-50.0	Peak	Vertical				
7920.0	36.3	12.1	48.4	82.2	-33.8	Peak	Vertical				
10560.0	35.0	17.0	52.0	82.2	-30.2	Peak	Vertical				
loto: Massura Loval (dRu\//m) = Pasding Loval (dRu\/) + Factor (dR)											



Product	AirScale Indoor Radio ASiR 5G-pRRH	Test Engineer	Peter Xu					
Test Site	AC1	Test Date	2019/12/19					
Test Item	5G NR Band n41_256QAM, BW = 1	G NR Band n41_256QAM, BW = 100MHz						

Frequency	Reading Level	Factor	Measure Level	Limit	Margin	Detector	Polarization				
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)						
Bottom Chann	Bottom Channel (2546.0MHz)										
121.7	22.9	16.8	39.7	82.2	-42.5	Peak	Horizontal				
172.6	18.4	16.6	35.0	82.2	-47.2	Peak	Horizontal				
5092.0	38.9	3.6	42.5	82.2	-39.7	Peak	Horizontal				
7587.5	38.4	11.8	50.3	82.2	-31.9	Peak	Horizontal				
122.6	19.6	16.7	36.3	82.2	-45.9	Peak	Vertical				
162.4	22.2	16.2	38.4	82.2	-43.8	Peak	Vertical				
7664.0	39.1	11.9	51.0	82.2	-31.2	Peak	Vertical				
10184.0	33.8	15.9	49.7	82.2	-32.5	Peak	Vertical				
Middle Chann	el (2593.0MHz)					_					
123.1	21.2	16.6	37.9	82.2	-44.3	Peak	Horizontal				
156.6	18.5	16.0	34.5	82.2	-47.7	Peak	Horizontal				
7779.0	35.1	12.0	47.1	82.2	-35.1	Peak	Horizontal				
10372.0	34.5	16.5	50.9	82.2	-31.3	Peak	Horizontal				
122.6	18.1	16.7	34.8	82.2	-47.4	Peak	Vertical				
161.9	21.7	16.2	37.9	82.2	-44.3	Peak	Vertical				
7779.0	34.8	12.0	46.8	82.2	-35.4	Peak	Vertical				
10372.0	34.8	16.5	51.2	82.2	-31.0	Peak	Vertical				
Top Channel	(2640.0MHz)					_					
121.7	21.9	16.8	38.7	82.2	-43.5	Peak	Horizontal				
157.6	18.7	16.0	34.7	82.2	-47.5	Peak	Horizontal				
7920.0	35.5	12.1	47.7	82.2	-34.5	Peak	Horizontal				
10560.0	35.0	17.0	52.0	82.2	-30.2	Peak	Horizontal				
122.6	19.7	16.7	36.4	82.2	-45.8	Peak	Vertical				
162.4	22.0	16.2	38.2	82.2	-44.0	Peak	Vertical				
7920.0	35.5	12.1	47.6	82.2	-34.6	Peak	Vertical				
10560.0	34.8	17.0	51.7	82.2	-30.5	Peak	Vertical				
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Product	AirScale Indoor Radio ASiR 5G-pRRH	Test Engineer	Peter Xu				
Test Site	AC1	Test Date	2019/12/21				
Test Item	5G NR Band n41_QPSK, BW = 60MHz						

Frequency	Reading Level	Factor	Measure Level	Limit	Margin	Detector	Polarization				
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)						
Bottom Chann	Bottom Channel (2526.0MHz)										
289.0	15.8	21.2	37.0	82.2	-45.2	PK	Horizontal				
360.8	14.0	23.6	37.6	82.2	-44.6	PK	Horizontal				
134.8	13.3	15.7	29.0	82.2	-53.2	PK	Horizontal				
343.3	7.3	23.2	30.5	82.2	-51.7	PK	Horizontal				
5896.0	38.3	5.4	43.7	82.2	-38.5	PK	Vertical				
8055.0	35.5	12.3	47.8	82.2	-34.4	PK	Vertical				
7239.0	35.9	11.1	47.0	82.2	-35.2	PK	Vertical				
10902.5	35.8	17.4	53.2	82.2	-29.0	PK	Vertical				
Middle Chann	el (2593.0MHz)										
288.5	14.0	21.2	35.2	82.2	-47.0	PK	Horizontal				
343.3	15.2	23.2	38.4	82.2	-43.8	PK	Horizontal				
132.8	14.6	15.8	30.4	82.2	-51.8	PK	Horizontal				
359.3	11.5	23.6	35.1	82.2	-47.1	PK	Horizontal				
7995.5	35.9	12.2	48.1	82.2	-34.1	PK	Vertical				
10639.0	34.8	17.1	51.9	82.2	-30.3	PK	Vertical				
8208.0	36.4	12.3	48.7	82.2	-33.5	PK	Vertical				
10231.0	35.8	16.0	51.8	82.2	-30.4	PK	Vertical				
Top Channel	(2660.0MHz)										
289.0	15.8	21.2	37.0	82.2	-45.2	PK	Horizontal				
360.8	14.0	23.6	37.6	82.2	-44.6	PK	Horizontal				
132.8	12.9	15.8	28.7	82.2	-53.5	PK	Horizontal				
371.0	8.5	23.7	32.2	82.2	-50.0	PK	Horizontal				
8021.0	35.9	12.2	48.1	82.2	-34.1	PK	Vertical				
11514.5	34.4	18.0	52.4	82.2	-29.8	PK	Vertical				
8140.0	41.9	12.3	54.2	82.2	-28.0	PK	Vertical				
10953.5	42.4	17.5	59.9	82.2	-22.3	PK	Vertical				
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Product	AirScale Indoor Radio ASiR 5G-pRRH	Test Engineer	Peter Xu			
Test Site	AC1	Test Date	2019/12/21			
Test Item	5G NR Band n41_16QAM, BW = 60MHz					

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Frequency	Reading Level	Factor	Measure Level	Limit	Margin	Detector	Polarization			
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)					
Bottom Chann	Bottom Channel (2526.0MHz)									
301.1	16.9	21.4	38.3	82.2	-43.9	PK	Horizontal			
366.6	13.4	23.7	37.1	82.2	-45.1	PK	Horizontal			
196.8	8.2	18.9	27.1	82.2	-55.1	PK	Horizontal			
360.8	7.7	23.6	31.3	82.2	-50.9	PK	Horizontal			
7256.0	42.4	11.2	53.6	82.2	-28.6	PK	Vertical			
10724.0	42.7	17.2	59.9	82.2	-22.3	PK	Vertical			
8055.0	42.0	12.3	54.3	82.2	-27.9	PK	Vertical			
10690.0	42.3	17.1	59.4	82.2	-22.8	PK	Vertical			
Middle Chann	el (2593.0MHz)									
296.8	15.8	21.4	37.2	82.2	-45.0	PK	Horizontal			
360.8	14.0	23.6	37.6	82.2	-44.6	PK	Horizontal			
286.6	8.8	21.2	30.0	82.2	-52.2	PK	Horizontal			
364.2	10.0	23.6	33.6	82.2	-48.6	PK	Horizontal			
7749.0	42.3	12.0	54.3	82.2	-27.9	PK	Vertical			
10894.0	42.1	17.4	59.5	82.2	-22.7	PK	Vertical			
8106.0	42.0	12.3	54.3	82.2	-27.9	PK	Vertical			
9823.0	43.7	14.7	58.4	82.2	-23.8	PK	Vertical			
Top Channel	(2660.0MHz)									
298.7	14.9	21.4	36.3	82.2	-45.9	PK	Horizontal			
361.7	13.6	23.6	37.2	82.2	-45.0	PK	Horizontal			
130.9	12.9	15.9	28.8	82.2	-53.4	PK	Horizontal			
365.6	10.8	23.7	34.5	82.2	-47.7	PK	Horizontal			
8123.0	42.4	12.3	54.7	82.2	-27.5	PK	Vertical			
11030.0	42.4	17.6	60.0	82.2	-22.2	PK	Vertical			
8106.0	41.4	12.3	53.7	82.2	-28.5	PK	Vertical			
10834.5	41.9	17.3	59.2	82.2	-23.0	PK	Vertical			
Noto: Mossuro	Note: Massure Level (dBu\/m) = Reading Level (dBu\/) + Factor (dB)									

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

FCC ID: 2AD8UAWHHA01 Page Number: 134 of 137



Product	AirScale Indoor Radio ASiR 5G-pRRH	Test Engineer	Peter Xu	
Test Site	AC1	Test Date	2019/12/21	
Test Item	5G NR Band n41_64QAM, BW = 60MHz			

Fraguesa	Pooding Lovel	Footor	Moogura Laval	Limit	Morain	Dotootor	Polorization
Frequency	Reading Level	Factor	Measure Level	Limit	Margin	Detector	Polarization
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)		
	nel (2526.0MHz)			l		1	
299.7	17.7	21.4	39.1	82.2	-43.1	PK	Horizontal
363.7	15.8	23.6	39.4	82.2	-42.8	PK	Horizontal
197.8	7.5	18.9	26.4	82.2	-55.8	PK	Horizontal
364.2	8.6	23.6	32.2	82.2	-50.0	PK	Horizontal
8191.0	42.1	12.3	54.4	82.2	-27.8	PK	Vertical
10741.0	42.2	17.2	59.4	82.2	-22.8	PK	Vertical
7375.0	41.7	11.4	53.1	82.2	-29.1	PK	Vertical
10231.0	42.3	16.0	58.3	82.2	-23.9	PK	Vertical
Middle Chann	Middle Channel (2593.0MHz)						
298.2	15.0	21.4	36.4	82.2	-45.8	PK	Horizontal
364.7	13.5	23.6	37.1	82.2	-45.1	PK	Horizontal
137.7	8.3	15.6	23.9	82.2	-58.3	PK	Horizontal
363.7	5.3	23.6	28.9	82.2	-53.3	PK	Horizontal
8106.0	42.9	12.3	55.2	82.2	-27.0	PK	Vertical
10690.0	43.0	17.1	60.1	82.2	-22.1	PK	Vertical
8097.5	41.8	12.3	54.1	82.2	-28.1	PK	Vertical
10673.0	43.0	17.1	60.1	82.2	-22.1	PK	Vertical
Top Channel ((2660.0MHz)						
308.4	14.6	21.7	36.3	82.2	-45.9	PK	Horizontal
359.8	13.7	23.6	37.3	82.2	-44.9	PK	Horizontal
198.8	7.5	18.9	26.4	82.2	-55.8	PK	Horizontal
362.2	7.8	23.6	31.4	82.2	-50.8	PK	Horizontal
8225.0	41.7	12.3	54.0	82.2	-28.2	PK	Vertical
10851.5	42.4	17.4	59.8	82.2	-22.4	PK	Vertical
8114.5	42.4	12.3	54.7	82.2	-27.5	PK	Vertical
10800.5	42.4	17.3	59.7	82.2	-22.5	PK	Vertical
Note: Massure Level (dRu)//m) - Pasding Level (dRu)// + Eactor (dR)							

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

FCC ID: 2AD8UAWHHA01 Page Number: 135 of 137



Product	AirScale Indoor Radio ASiR 5G-pRRH	Test Engineer	Peter Xu	
Test Site	AC1	Test Date	2019/12/21	
Test Item	5G NR Band n41_256QAM, BW = 60MHz			

Frequency	Reading Level	Factor	Measure Level	Limit	Margin	Detector	Polarization
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)		
Bottom Channel (2526.0MHz)							
298.2	14.9	21.4	36.3	82.2	-45.9	PK	Horizontal
363.2	14.6	23.6	38.2	82.2	-44.0	PK	Horizontal
288.5	8.1	21.2	29.3	82.2	-52.9	PK	Horizontal
371.4	7.0	23.7	30.7	82.2	-51.5	PK	Horizontal
8131.5	42.2	12.3	54.5	82.2	-27.7	PK	Vertical
10945.0	41.7	17.5	59.2	82.2	-23.0	PK	Vertical
8123.0	42.4	12.3	54.7	82.2	-27.5	PK	Vertical
10919.5	41.9	17.5	59.4	82.2	-22.8	PK	Vertical
Middle Chann	Middle Channel (2593.0MHz)						
299.2	15.9	21.4	37.3	82.2	-44.9	PK	Horizontal
352.5	12.4	23.5	35.9	82.2	-46.3	PK	Horizontal
196.8	7.2	18.9	26.1	82.2	-56.1	PK	Horizontal
364.2	7.7	23.6	31.3	82.2	-50.9	PK	Horizontal
8080.5	42.0	12.3	54.3	82.2	-27.9	PK	Vertical
10596.5	42.6	17.0	59.6	82.2	-22.6	PK	Vertical
8097.5	41.6	12.3	53.9	82.2	-28.3	PK	Vertical
9797.5	44.1	14.6	58.7	82.2	-23.5	PK	Vertical
Top Channel ((2660.0MHz)						
289.0	15.8	21.2	37.0	82.2	-45.2	PK	Horizontal
370.5	15.2	23.7	38.9	82.2	-43.3	PK	Horizontal
199.8	8.0	18.9	26.9	82.2	-55.3	PK	Horizontal
364.2	7.6	23.6	31.2	82.2	-51.0	PK	Horizontal
7987.0	43.4	12.2	55.6	82.2	-26.6	PK	Vertical
11285.0	41.8	17.8	59.6	82.2	-22.6	PK	Vertical
8097.5	41.6	12.3	53.9	82.2	-28.3	PK	Vertical
10928.0	42.1	17.5	59.6	82.2	-22.6	PK	Vertical
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Report No.: 1909TW0102-U1

7. CONCLUSION

The data collected relate only the item(s) tested and show that the unit is compliance with FCC Rules.

The End