



7.5. Conducted Band Edge and Out-of-Band Emissions

7.5.1.Test Limit

The limit for out-of-band spurious emissions at the band edge is 30dB below the fundamental emission level, as determined from the in-band power measurement of the DTS channel performed in a 100 kHz bandwidth per the PSD procedure.

7.5.2.Test Procedure Used

KDB 558074 D01v04 - Section 11.2 & Section 11.3

7.5.3.Test Settitng

Reference level measurement

- 1. Set instrument center frequency to DTS channel center frequency
- 2. Set the span to ≥ 1.5 times the DTS bandwidth
- 3. Set the RBW = 100 kHz
- 4. Set the VBW ≥ 3 x RBW
- 5. Detector = peak
- 6. Sweep time = auto couple
- 7. Trace mode = max hold
- 8. Allow trace to fully stabilize

Emission level measurement

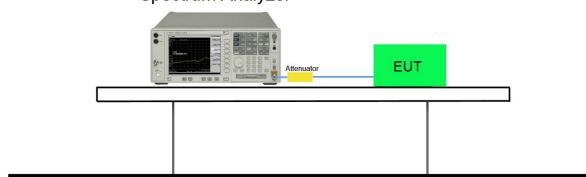
- 1. Set the center frequency and span to encompass frequency range to be measured
- 2. RBW = 100kHz
- 3. VBW = 300kHz
- 4. Detector = Peak
- 5. Trace mode = max hold
- 6. Sweep time = auto couple
- 7. The trace was allowed to stabilize

FCC ID: Q9DAPIN0318 Page Number: 59 of 268



7.5.4.Test Setup







7.5.5.Test Result

Product	ACCESS POINT	Temperature	24°C		
Test Engineer	Kevin Ker	Relative Humidity	55%		
Test Site	SR2	Test Date	2018/02/09		
Test Item	Conducted Band Edge and Out-of-Band Emissions				
Antenna Type	Omni Antenna (AP-ANT-20W)				

Test Mode	Data Rate / MCS	Channel No.	Frequency (MHz)	Limit (dBc)	Result
Ant 0 / Ant 0 + 1					
802.11b	1Mbps	01	2412	30	Pass
802.11b	1Mbps	06	2437	30	Pass
802.11b	1Mbps	11	2462	30	Pass
802.11g	6Mbps	01	2412	30	Pass
802.11g	6Mbps	06	2437	30	Pass
802.11g	6Mbps	11	2462	30	Pass
802.11n-HT20	MCS0	01	2412	30	Pass
802.11n-HT20	MCS0	06	2437	30	Pass
802.11n-HT20	MCS0	11	2462	30	Pass
802.11n-HT40	MCS0	03	2422	30	Pass
802.11n-HT40	MCS0	06	2437	30	Pass
802.11n-HT40	MCS0	09	2452	30	Pass

FCC ID: Q9DAPIN0318 Page Number: 61 of 268



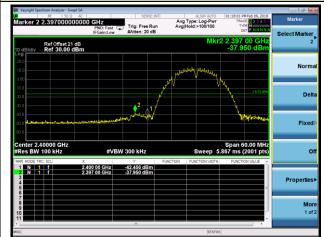
802.11b Out-of-Band Emissions - Ant 0 / Ant 0 + 1

Channel 01 (2412MHz)

100kHz PSD reference Level



Low Band Edge



Spurious Emission



Note: The Value of the Display Line is -16.62dBm

Channel 06 (2437MHz)

100kHz PSD reference Level

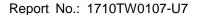


Spurious Emission

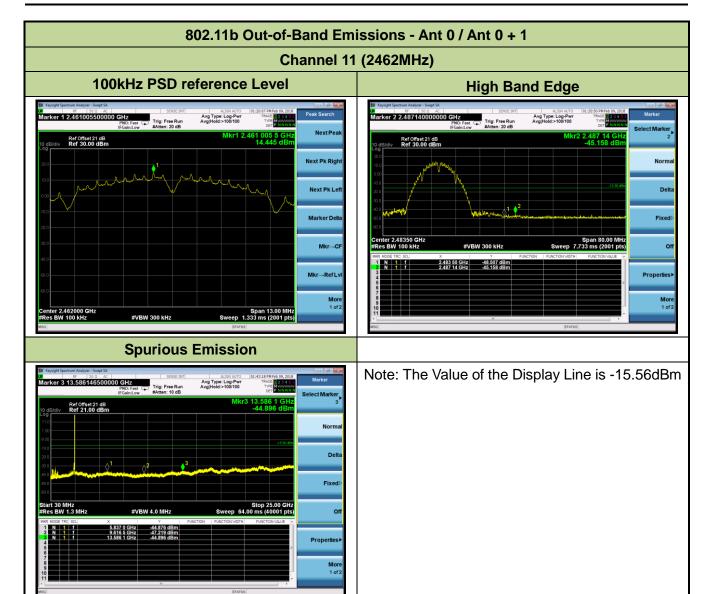


Note: The Value of the Display Line is -16.10dBm

FCC ID: Q9DAPIN0318 Page Number: 62 of 268









802.11g Out-of-Band Emissions - Ant 0 / Ant 0 + 1

Channel 01 (2412MHz)

100kHz PSD reference Level



Low Band Edge



Spurious Emission



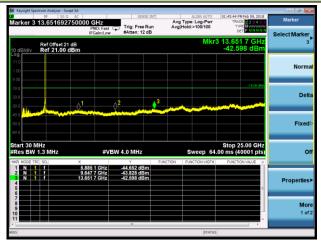
Note: The Value of the Display Line is -17.24dBm

Channel 06 (2437MHz)

100kHz PSD reference Level

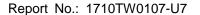


Spurious Emission

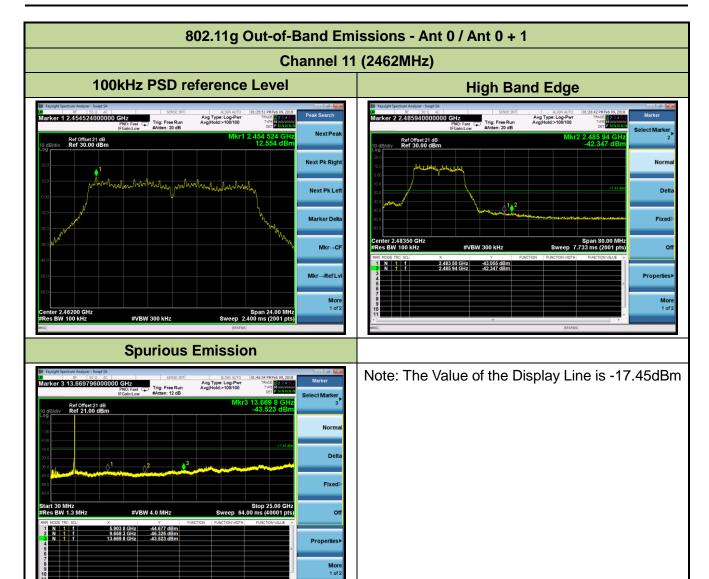


Note: The Value of the Display Line is -18.08dBm

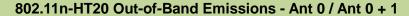
FCC ID: Q9DAPIN0318 Page Number: 64 of 268









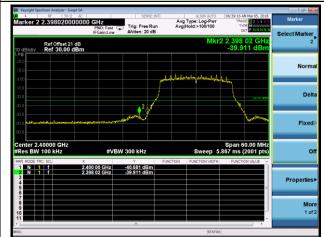


Channel 01 (2412MHz)

100kHz PSD reference Level



Low Band Edge



Spurious Emission



Note: The Value of the Display Line is -24.10dBm

Channel 06 (2437MHz)

100kHz PSD reference Level

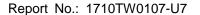


Spurious Emission

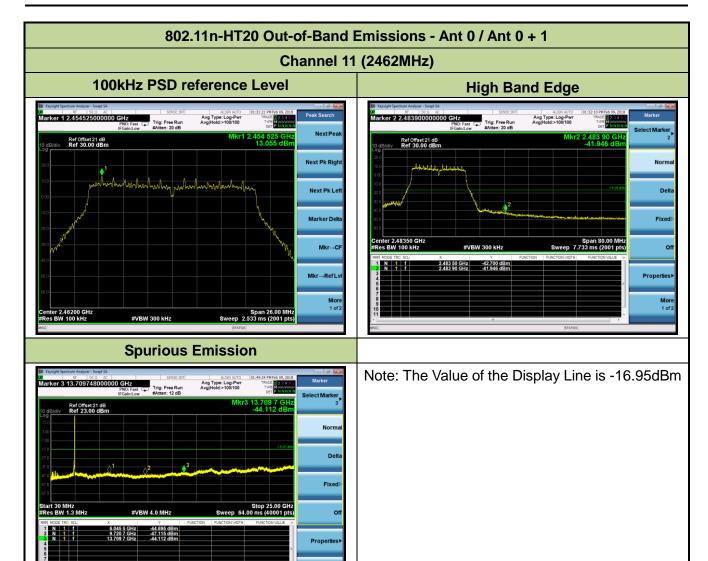


Note: The Value of the Display Line is -18.10dBm

FCC ID: Q9DAPIN0318 Page Number: 66 of 268









802.11n-HT40 Out-of-Band Emissions - Ant 0 / Ant 0 + 1

Channel 03 (2422MHz)

100kHz PSD reference Level



Low Band Edge



Spurious Emission



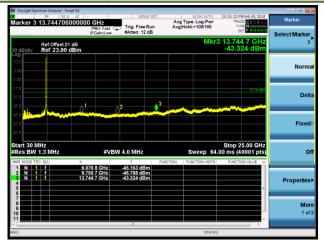
Note: The Value of the Display Line is -30.74dBm

Channel 06 (2437MHz)

100kHz PSD reference Level

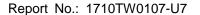


Spurious Emission

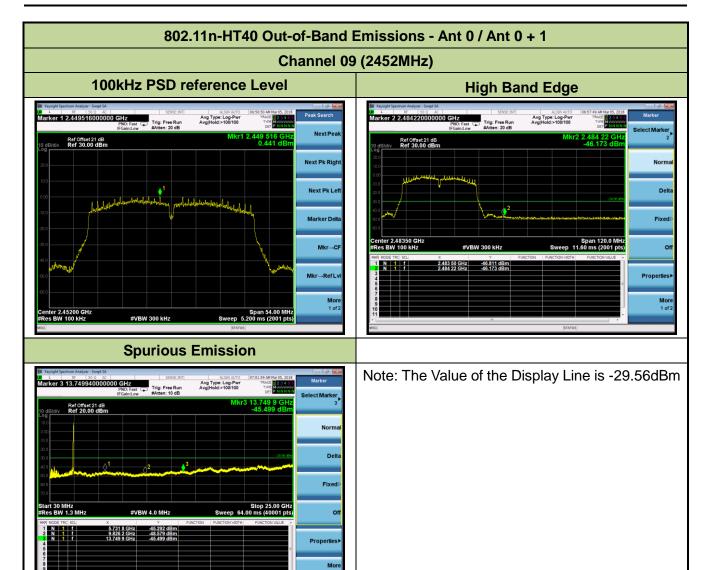


Note: The Value of the Display Line is -21.09dBm

FCC ID: Q9DAPIN0318 Page Number: 68 of 268







FCC ID: Q9DAPIN0318 Page Number: 69 of 268



7.6. Radiated Spurious Emission Measurement

7.6.1.Test Limit

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR must not exceed the limits shown in Table per Section 15.209.

1	FCC Part 15 Subpart C Paragraph 15.209							
Frequency	Frequency Field Strength Measured D							
[MHz]	[uV/m]	[Meters]						
0.009 - 0.490	2400/F (kHz)	300						
0.490 - 1.705	24000/F (kHz)	30						
1.705 - 30	30	30						
30 - 88	100	3						
88 - 216	150	3						
216 - 960	200	3						
Above 960	500	3						

7.6.2.Test Procedure Used

ANSI C63.10 Section 6.3 (General Requirements)

ANSI C63.10 Section 6.4 (Standard test method below 30MHz)

ANSI C63.10 Section 6.5 (Standard test method above 30MHz to 1GHz)

ANSI C63.10 Section 6.6 (Standard test method above 1GHz)

7.6.3.Test Setting

Table 1 - RBW as a function of frequency

Frequency	RBW		
9 ~ 150 kHz	200 ~ 300 Hz		
0.15 ~ 30 MHz	9 ~ 10 kHz		
30 ~ 1000 MHz	100 ~ 120 kHz		

FCC ID: Q9DAPIN0318 Page Number: 70 of 268



Quasi-Peak Measurements below 1GHz

- 1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
- 2. Span was set greater than 1MHz
- 3. RBW = as specified in Table 1
- 4. Detector = CISPR quasi-peak
- 5. Sweep time = auto couple
- 6. Trace was allowed to stabilize

Peak Measurements above 1GHz

- 1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
- 2. RBW = 1MHz
- 3. VBW = 3MHz
- 4. Detector = peak
- 5. Sweep time = auto couple
- 6. Trace mode = max hold
- 7. Trace was allowed to stabilize

Average Measurements above 1GHz (Method VB)

- 1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
- 2. RBW = 1MHz
- 3. VBW; If the EUT is configured to transmit with duty cycle ≥ 98%, set VBW = 10 Hz.

If the EUT duty cycle is < 98%, set VBW ≥ 1/T. T is the minimum transmission duration.

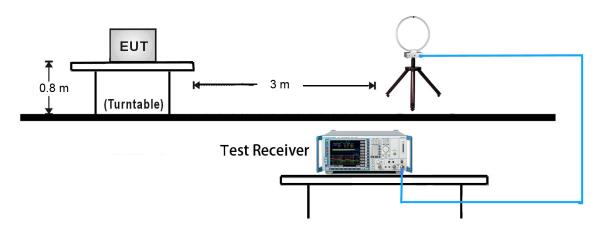
- 4. Detector = Peak
- 5. Sweep time = auto
- 6. Trace mode = max hold
- 7. Trace was allowed to stabilize

FCC ID: Q9DAPIN0318 Page Number: 71 of 268

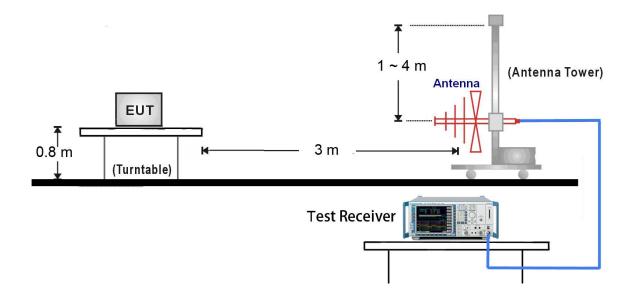


7.6.4.Test Setup

9kHz ~ 30MHz Test Setup:



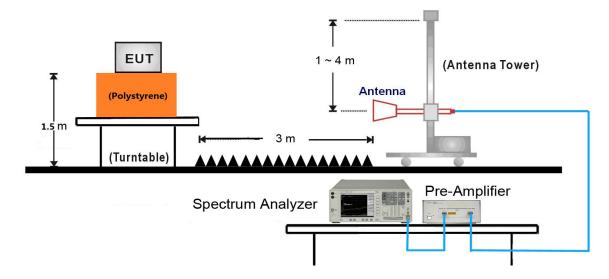
30MHz ~ 1GHz Test Setup:



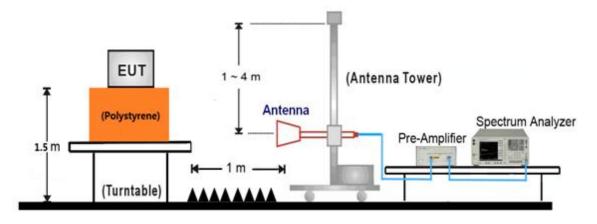
FCC ID: Q9DAPIN0318 Page Number: 72 of 268



1GHz ~ 18GHz Test Setup:

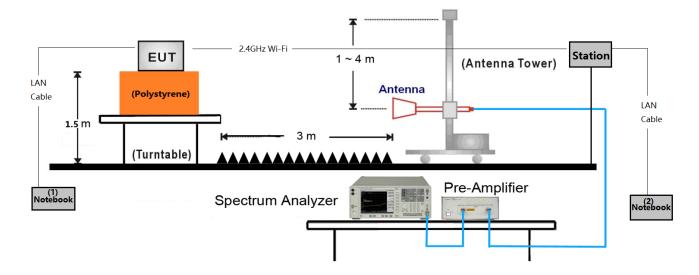


18GHz ~25GHz Test Setup:





Additional Beam-Forming Mode Test Setup (Apply to all BF radiated emission test frequency range)



Make the EUT connect with the station by 2.4GHz wireless.

Input some commands in the notebook (1) to open the EUT Beam Forming function, and setup the related test channel & data rate & power setting.

Make the notebook (1) ping with notebook (2) using the "Iperf" software that can produce one bigger duty cycle waveform.

Test Mode	Duty Cycle	T = Transmission Duration
	(%)	(ms)
802.11n-HT20	94.27	2.007
802.11n-HT40	93.99	1.737

FCC ID: Q9DAPIN0318 Page Number: 74 of 268



7.6.5.Test Result

Product	ACCESS POINT- Omni Antenna (AP-ANT-20W)	Temperature	26°C			
Test Engineer	Kevin Ker	Relative Humidity	56%			
Test Site	AC1	Test Date	2018/02/25			
Test Mode:	802.11b - Ant 0 + 1 (CDD Mode)	Test Channel:	01			
Remark:	Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall					
	within the restricted bands. So the margin was calculated using the average limit for emissions fall within the restricted bands. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.					

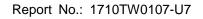
Mark	Frequency	Reading	Factor	Measure	Limit	Margin	Detector	Polarization
	(MHz)	Level	(dB)	Level	(dBµV/m)	(dB)		
		(dBµV)		(dBµV/m)				
	4825.0	48.2	3.7	51.9	54.0	-2.1	Peak	Horizontal
	7451.5	36.6	12.8	49.4	54.0	-4.6	Peak	Horizontal
*	8811.5	35.2	14.0	49.2	87.4	-38.2	Peak	Horizontal
*	9959.0	36.8	15.3	52.1	87.4	-35.3	Peak	Horizontal
	4825.0	44.1	5.9	50.0	54.0	-4.0	Peak	Vertical
	7400.5	36.8	12.6	49.4	54.0	-4.6	Peak	Vertical
*	8854.0	34.7	14.0	48.7	87.4	-38.7	Peak	Vertical
*	10035.5	36.2	15.5	51.7	87.4	-35.7	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (117.4dBµV/m) or 15.209 which is higher.

Note 2: Measure Level (dBµV/m) = Reading Level (dBµV) + Factor (dB)

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

FCC ID: Q9DAPIN0318 Page Number: 75 of 268





Product	ACCESS POINT- Omni Antenna (AP-ANT-20W)	Temperature	26°C		
Test Engineer	Kevin Ker	Relative Humidity	56%		
Test Site	AC1	Test Date	2018/02/25		
Test Mode:	802.11b - Ant 0 + 1 (CDD Mode)	Test Channel:	06		
Remark:	 Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. So the margin was calculated using the average limit for emissions fall within the restricted bands. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report. 				

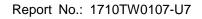
Mark	Frequency (MHz)	Reading Level (dBµV)	Factor (dB)	Measure Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
	4876.0	46.9	3.7	50.6	54.0	-3.4	Peak	Horizontal
	7443.0	35.9	12.7	48.6	54.0	-5.4	Peak	Horizontal
*	8820.0	35.0	14.0	49.0	88.1	-39.1	Peak	Horizontal
*	10078.0	36.6	15.6	52.2	88.1	-35.9	Peak	Horizontal
	4876.0	48.1	3.7	51.8	54.0	-2.2	Peak	Vertical
	7460.0	35.9	12.8	48.7	54.0	-5.3	Peak	Vertical
*	8845.5	34.6	14.0	48.6	88.1	-39.5	Peak	Vertical
*	9755.0	35.7	14.8	50.5	88.1	-37.6	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (118.1dBµV/m) or 15.209 which is higher.

Note 2: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB)

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

FCC ID: Q9DAPIN0318 Page Number: 76 of 268





Product	ACCESS POINT- Omni Antenna (AP-ANT-20W)	Temperature	26°C			
Test Engineer	Kevin Ker	Relative Humidity	56%			
Test Site	AC1	Test Date	2018/02/25			
Test Mode:	802.11b - Ant 0 + 1 (CDD Mode)	Test Channel:	11			
Remark:	 Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. So the margin was calculated using the average limit for emissions fall within the restricted bands. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report. 					

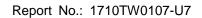
Mark	Frequency (MHz)	Reading Level (dBµV)	Factor (dB)	Measure Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
	4825.0	39.2	3.7	42.9	54.0	-11.1	Peak	Horizontal
	7638.5	36.7	12.6	49.3	54.0	-4.7	Peak	Horizontal
*	8718.0	33.0	13.8	46.8	84.9	-38.1	Peak	Horizontal
*	9857.0	34.9	16.2	51.1	84.9	-33.8	Peak	Horizontal
	4927.0	41.1	3.7	44.8	54.0	-9.2	Peak	Vertical
	7494.0	35.1	12.8	47.9	54.0	-6.1	Peak	Vertical
*	8735.0	33.9	13.9	47.8	84.9	-37.1	Peak	Vertical
*	9780.5	35.7	14.9	50.6	84.9	-34.3	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (114.9dBµV/m) or 15.209 which is higher.

Note 2: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB)

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

FCC ID: Q9DAPIN0318 Page Number: 77 of 268





Product	ACCESS POINT- Omni Antenna (AP-ANT-20W)	Temperature	26°C			
Test Engineer	Kevin Ker	Relative Humidity	56%			
Test Site	AC1	Test Date	2018/02/25			
Test Mode:	802.11g - Ant 0 + 1 (CDD Mode)	Test Channel:	01			
Remark:	 Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. So the margin was calculated using the average limit for emissions fall within the restricted bands. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report. 					

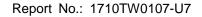
Mark	Frequency (MHz)	Reading Level (dBµV)	Factor (dB)	Measure Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
	4825.0	41.4	3.7	45.1	54.0	-8.9	Peak	Horizontal
	7468.5	34.1	12.8	46.9	54.0	-7.1	Peak	Horizontal
*	8845.5	33.0	14.0	47.0	89.1	-42.1	Peak	Horizontal
*	9857.0	33.0	16.2	49.2	89.1	-39.9	Peak	Horizontal
	4833.5	41.7	3.7	45.4	54.0	-8.6	Peak	Vertical
	7672.5	35.0	12.5	47.5	54.0	-6.5	Peak	Vertical
*	8752.0	32.1	13.9	46.0	89.1	-43.1	Peak	Vertical
*	9857.0	33.0	16.2	49.2	89.1	-39.9	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (119.1dBµV/m) or 15.209 which is higher.

Note 2: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB)

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

FCC ID: Q9DAPIN0318 Page Number: 78 of 268





Product	ACCESS POINT- Omni Antenna (AP-ANT-20W)	Temperature	26°C	
Test Engineer	Kevin Ker	Relative Humidity	56%	
Test Site	AC1	Test Date	2018/02/25	
Test Mode:	802.11g - Ant 0 + 1 (CDD Mode)	Test Channel:	06	
Remark:	 Average measurement was no limit. So the margin was calcul within the restricted bands. So limit for emissions fall within th Other frequency was 20dB bel in the report. 	ated using the avera the margin was cald e restricted bands.	age limit for emissions fall culated using the average	

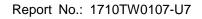
Mark	Frequency (MHz)	Reading Level (dBµV)	Factor (dB)	Measure Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
	4867.5	40.7	3.7	44.4	54.0	-9.6	Peak	Horizontal
	7528.0	35.4	12.8	48.2	54.0	-5.8	Peak	Horizontal
*	8769.0	33.8	13.9	47.7	89.7	-42.0	Peak	Horizontal
*	9789.0	35.7	15.0	50.7	89.7	-39.0	Peak	Horizontal
	4876.0	40.5	3.7	44.2	54.0	-9.8	Peak	Vertical
	7545.0	34.5	12.8	47.3	54.0	-6.7	Peak	Vertical
*	8684.0	34.2	13.7	47.9	89.7	-41.8	Peak	Vertical
*	9729.5	35.1	14.7	49.8	89.7	-39.9	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (119.7dBµV/m) or 15.209 which is higher.

Note 2: Measure Level (dBµV/m) = Reading Level (dBµV) + Factor (dB)

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

FCC ID: Q9DAPIN0318 Page Number: 79 of 268





Product	ACCESS POINT- Omni Antenna (AP-ANT-20W)	Temperature	26°C	
Test Engineer	Kevin Ker	Relative Humidity	56%	
Test Site	AC1	Test Date	2018/02/25	
Test Mode:	802.11g - Ant 0 + 1 (CDD Mode)	Test Channel:	11	
Remark:	 Average measurement was not limit. So the margin was calcul within the restricted bands. So limit for emissions fall within th Other frequency was 20dB bel in the report. 	ated using the avera the margin was cald e restricted bands.	age limit for emissions fall culated using the average	

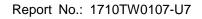
Mark	Frequency (MHz)	Reading Level (dBµV)	Factor (dB)	Measure Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
	4927.0	41.2	3.7	44.9	54.0	-9.1	Peak	Horizontal
	7519.5	34.8	12.8	47.6	54.0	-6.4	Peak	Horizontal
*	8735.0	34.6	13.9	48.5	88.7	-40.2	Peak	Horizontal
*	9874.0	35.0	15.8	50.8	88.7	-37.9	Peak	Horizontal
	4927.0	39.5	3.7	43.2	54.0	-10.8	Peak	Vertical
	7434.5	35.1	12.7	47.8	54.0	-6.2	Peak	Vertical
*	8862.5	33.6	14.0	47.6	88.7	-41.1	Peak	Vertical
*	9967.5	35.4	15.3	50.7	88.7	-38.0	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (118.7dBµV/m) or 15.209 which is higher.

Note 2: Measure Level (dBµV/m) = Reading Level (dBµV) + Factor (dB)

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

FCC ID: Q9DAPIN0318 Page Number: 80 of 268





Product	ACCESS POINT- Omni Antenna (AP-ANT-20W)	Temperature	26°C	
Test Engineer	Kevin Ker	Relative Humidity	56%	
Test Site	AC1	Test Date	2018/02/25	
Test Mode:	802.11n-HT20 - Ant 0 + 1 (CDD Mode)	Test Channel:	01	
Remark:	 Average measurement was no limit. So the margin was calcul within the restricted bands. So limit for emissions fall within th Other frequency was 20dB bel in the report. 	ated using the avera the margin was cald e restricted bands.	age limit for emissions fall culated using the average	

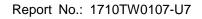
Mark	Frequency (MHz)	Reading Level	Factor (dB)	Measure Level	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
		(dBµV)		(dBµV/m)				
	4825.0	43.5	3.7	47.2	54.0	-6.8	Peak	Horizontal
	7358.0	36.0	12.4	48.4	54.0	-5.6	Peak	Horizontal
*	8692.5	32.5	13.7	46.2	88.1	-41.9	Peak	Horizontal
*	10188.5	35.3	16.2	51.5	88.1	-36.6	Peak	Horizontal
	4825.0	41.1	3.7	44.8	54.0	-9.2	Peak	Vertical
	7434.5	35.5	12.7	48.2	54.0	-5.8	Peak	Vertical
*	8658.5	33.2	13.6	46.8	88.1	-41.3	Peak	Vertical
*	9976.0	35.5	15.3	50.8	88.1	-37.3	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (118.1dBµV/m) or 15.209 which is higher.

Note 2: Measure Level (dBµV/m) = Reading Level (dBµV) + Factor (dB)

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

FCC ID: Q9DAPIN0318 Page Number: 81 of 268





Product	ACCESS POINT- Omni Antenna (AP-ANT-20W)	Temperature	26°C	
Test Engineer	Kevin Ker	Relative Humidity	56%	
Test Site	AC1	Test Date	2018/02/25	
Test Mode:	802.11n-HT20 - Ant 0 + 1 (CDD Mode)	Test Channel:	06	
Remark:	 Average measurement was no limit. So the margin was calcul within the restricted bands. So limit for emissions fall within th Other frequency was 20dB bel in the report. 	ated using the avera the margin was cald e restricted bands.	age limit for emissions fall culated using the average	

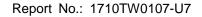
Mark	Frequency (MHz)	Reading Level (dBµV)	Factor (dB)	Measure Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
	4867.5	43.0	3.7	46.7	54.0	-7.3	Peak	Horizontal
	7451.5	35.2	12.8	48.0	54.0	-6.0	Peak	Horizontal
*	8692.5	35.2	13.7	48.9	89.7	-40.8	Peak	Horizontal
*	9899.5	35.0	15.4	50.4	89.7	-39.3	Peak	Horizontal
	4876.0	44.5	3.7	48.2	54.0	-5.8	Peak	Vertical
	7426.0	35.6	12.7	48.3	54.0	-5.7	Peak	Vertical
*	8692.5	33.7	13.7	47.4	89.7	-42.3	Peak	Vertical
*	9959.0	35.3	15.3	50.6	89.7	-39.1	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (119.7dBµV/m) or 15.209 which is higher.

Note 2: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB)

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

FCC ID: Q9DAPIN0318 Page Number: 82 of 268





Product	ACCESS POINT- Omni Antenna (AP-ANT-20W)	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2018/02/25
Test Mode:	802.11n-HT20 - Ant 0 + 1 (CDD Mode)	Test Channel:	11
Remark:	 Average measurement was not limit. So the margin was calcul within the restricted bands. So limit for emissions fall within th Other frequency was 20dB bel in the report. 	ated using the avera the margin was cald e restricted bands.	age limit for emissions fall culated using the average

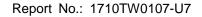
Mark	Frequency (MHz)	Reading Level (dBµV)	Factor (dB)	Measure Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
	4927.0	42.5	3.7	46.2	54.0	-7.8	Peak	Horizontal
	7434.5	34.2	12.7	46.9	54.0	-7.1	Peak	Horizontal
*	8845.5	34.2	14.0	48.2	90.1	-41.9	Peak	Horizontal
*	9967.5	35.1	15.3	50.4	90.1	-39.7	Peak	Horizontal
	4927.0	42.5	3.7	46.2	54.0	-7.8	Peak	Vertical
	7434.5	34.2	12.7	46.9	54.0	-7.1	Peak	Vertical
*	8845.5	34.2	14.0	48.2	90.1	-41.9	Peak	Vertical
*	9967.5	35.1	15.3	50.4	90.1	-39.7	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (120.1dBµV/m) or 15.209 which is higher.

Note 2: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB)

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

FCC ID: Q9DAPIN0318 Page Number: 83 of 268





Product	ACCESS POINT- Omni Antenna (AP-ANT-20W)	Temperature	26°C	
Test Engineer	Kevin Ker	Relative Humidity	56%	
Test Site	AC1	Test Date	2018/02/25	
Test Mode:	802.11n-HT40 - Ant 0 + 1 (CDD Mode)	Test Channel:	03	
Remark:	 Average measurement was no limit. So the margin was calcul within the restricted bands. So limit for emissions fall within th Other frequency was 20dB bel in the report. 	ated using the avera the margin was cald e restricted bands.	age limit for emissions fall culated using the average	

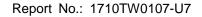
Mark	Frequency (MHz)	Reading Level	Factor (dB)	Measure Level	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
		(dBµV)		(dBµV/m)				
	4842.0	38.3	3.7	42.0	54.0	-12.0	Peak	Horizontal
	7723.5	36.1	12.4	48.5	54.0	-5.5	Peak	Horizontal
*	8854.0	34.3	14.0	48.3	82.5	-34.2	Peak	Horizontal
*	9865.5	34.6	16.0	50.6	82.5	-31.9	Peak	Horizontal
	4901.5	39.6	3.7	43.3	54.0	-10.7	Peak	Vertical
	7562.0	35.3	12.8	48.1	54.0	-5.9	Peak	Vertical
*	8641.5	34.8	13.5	48.3	82.5	-34.2	Peak	Vertical
*	10001.5	35.5	15.4	50.9	82.5	-31.6	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (112.5dBµV/m) or 15.209 which is higher.

Note 2: Measure Level (dBµV/m) = Reading Level (dBµV) + Factor (dB)

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

FCC ID: Q9DAPIN0318 Page Number: 84 of 268





Product	ACCESS POINT- Omni Antenna (AP-ANT-20W)	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2018/02/25
Test Mode:	802.11n-HT40 - Ant 0 + 1 (CDD Mode)	Test Channel:	06
Remark:	 Average measurement was no limit. So the margin was calcul within the restricted bands. So limit for emissions fall within th Other frequency was 20dB bel in the report. 	ated using the avera the margin was cald e restricted bands.	age limit for emissions fall culated using the average

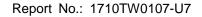
Mark	Frequency (MHz)	Reading Level	Factor (dB)	Measure Level	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
		(dBµV)		(dBµV/m)				
	4859.0	39.2	3.7	42.9	54.0	-11.1	Peak	Horizontal
	7604.5	34.1	12.7	46.8	54.0	-7.2	Peak	Horizontal
*	8854.0	33.0	14.0	47.0	85.1	-38.1	Peak	Horizontal
*	9831.5	34.5	15.9	50.4	85.1	-34.7	Peak	Horizontal
	4859.0	38.7	3.7	42.4	54.0	-11.6	Peak	Vertical
	7502.5	33.9	12.8	46.7	54.0	-7.3	Peak	Vertical
*	8692.5	32.7	13.7	46.4	85.1	-38.7	Peak	Vertical
*	9823.0	35.6	15.6	51.2	85.1	-33.9	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (115.1dBµV/m) or 15.209 which is higher.

Note 2: Measure Level (dBµV/m) = Reading Level (dBµV) + Factor (dB)

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

FCC ID: Q9DAPIN0318 Page Number: 85 of 268





Product	ACCESS POINT- Omni Antenna (AP-ANT-20W)	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2018/02/25
Test Mode:	802.11n-HT40 - Ant 0 + 1 (CDD Mode)	Test Channel:	09
Remark:	 Average measurement was no limit. So the margin was calcul within the restricted bands. So limit for emissions fall within th Other frequency was 20dB bel in the report. 	ated using the avera the margin was cald e restricted bands.	age limit for emissions fall culated using the average

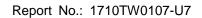
Mark	Frequency (MHz)	Reading Level (dBµV)	Factor (dB)	Measure Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
	4816.5	38.8	3.7	42.5	54.0	-11.5	Peak	Horizontal
	7409.0	35.0	12.6	47.6	54.0	-6.4	Peak	Horizontal
*	8896.5	34.2	14.0	48.2	84.8	-36.6	Peak	Horizontal
*	9891.0	35.6	15.5	51.1	84.8	-33.7	Peak	Horizontal
	4978.0	39.1	3.8	42.9	54.0	-11.1	Peak	Vertical
	7443.0	36.3	12.7	49.0	54.0	-5.0	Peak	Vertical
*	8709.5	34.2	13.8	48.0	84.8	-36.8	Peak	Vertical
*	10035.5	35.3	15.5	50.8	84.8	-34.0	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (114.8dBµV/m) or 15.209 which is higher.

Note 2: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB)

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

FCC ID: Q9DAPIN0318 Page Number: 86 of 268





Product	ACCESS POINT- Omni Antenna (AP-ANT-20W)	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2018/03/03
Test Mode:	802.11n-HT20 - Ant 0 + 1 (Beam-Forming Mode)	Test Channel:	01
Remark:	 Average measurement was no limit. So the margin was calcul within the restricted bands. So limit for emissions fall within th Other frequency was 20dB bel in the report. 	ated using the avera the margin was cald e restricted bands.	age limit for emissions fall culated using the average

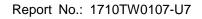
Mark	Frequency (MHz)	Reading Level (dBµV)	Factor (dB)	Measure Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
	4842.0	40.1	3.7	43.8	54.0	-10.2	Peak	Horizontal
	7417.5	37.2	12.6	49.8	54.0	-4.2	Peak	Horizontal
*	8658.5	35.8	13.6	49.4	88.5	-39.1	Peak	Horizontal
*	9967.5	37.0	15.3	52.3	88.5	-36.2	Peak	Horizontal
	4289.5	42.7	1.5	44.2	54.0	-9.8	Peak	Vertical
	7647.0	36.8	12.5	49.3	54.0	-4.7	Peak	Vertical
*	8947.5	33.9	14.0	47.9	88.5	-40.6	Peak	Vertical
*	10001.5	38.0	15.4	53.4	88.5	-35.1	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (118.5dBµV/m) or 15.209 which is higher.

Note 2: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB)

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

FCC ID: Q9DAPIN0318 Page Number: 87 of 268





Product	ACCESS POINT- Omni Antenna (AP-ANT-20W)	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2018/03/03
Test Mode:	802.11n-HT20 - Ant 0 + 1 (Beam-Forming Mode)	Test Channel:	06
Remark:	 Average measurement was no limit. So the margin was calcul within the restricted bands. So limit for emissions fall within th Other frequency was 20dB bel in the report. 	ated using the avera the margin was cald e restricted bands.	age limit for emissions fall culated using the average

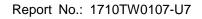
Mark	Frequency (MHz)	Reading Level	Factor (dB)	Measure Level	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
		(dBµV)		(dBµV/m)				
	4774.0	40.7	3.7	44.4	54.0	-9.6	Peak	Horizontal
	7468.5	37.0	12.8	49.8	54.0	-4.2	Peak	Horizontal
*	8667.0	36.0	13.6	49.6	88.8	-39.2	Peak	Horizontal
*	10035.5	37.3	15.5	52.8	88.8	-36.0	Peak	Horizontal
	4723.0	40.3	3.6	43.9	54.0	-10.1	Peak	Vertical
	7681.0	36.4	12.5	48.9	54.0	-5.1	Peak	Vertical
*	8922.0	35.8	14.0	49.8	88.8	-39.0	Peak	Vertical
*	9942.0	36.7	15.3	52.0	88.8	-36.8	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (118.8dBµV/m) or 15.209 which is higher.

Note 2: Measure Level (dBµV/m) = Reading Level (dBµV) + Factor (dB)

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

FCC ID: Q9DAPIN0318 Page Number: 88 of 268





Product	ACCESS POINT- Omni Antenna (AP-ANT-20W)	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2018/03/03
Test Mode:	802.11n-HT20 - Ant 0 + 1 (Beam-Forming Mode)	Test Channel:	11
Remark:	 Average measurement was no limit. So the margin was calcul within the restricted bands. So limit for emissions fall within th Other frequency was 20dB bel in the report. 	ated using the avera the margin was cald e restricted bands.	age limit for emissions fall culated using the average

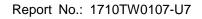
Mark	Frequency (MHz)	Reading Level (dBµV)	Factor (dB)	Measure Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
	4748.5	40.3	3.7	44.0	54.0	-10.0	Peak	Horizontal
	7519.5	37.2	12.8	50.0	54.0	-4.0	Peak	Horizontal
*	8709.5	35.1	13.8	48.9	88.5	-39.6	Peak	Horizontal
*	10129.0	37.1	15.9	53.0	88.5	-35.5	Peak	Horizontal
	4910.0	40.0	3.7	43.7	54.0	-10.3	Peak	Vertical
	7715.0	36.9	12.4	49.3	54.0	-4.7	Peak	Vertical
*	8888.0	36.1	14.0	50.1	88.5	-38.4	Peak	Vertical
*	10248.0	37.0	16.4	53.4	88.5	-35.1	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (118.5dBµV/m) or 15.209 which is higher.

Note 2: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB)

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

FCC ID: Q9DAPIN0318 Page Number: 89 of 268





Product	ACCESS POINT- Omni Antenna (AP-ANT-20W)	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2018/03/03
Test Mode:	802.11n-HT40 - Ant 0 + 1 (Beam-Forming Mode)	Test Channel:	03
Remark:	 Average measurement was no limit. So the margin was calcul within the restricted bands. So limit for emissions fall within th Other frequency was 20dB bel in the report. 	ated using the avera the margin was cald e restricted bands.	age limit for emissions fall culated using the average

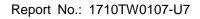
Mark	Frequency (MHz)	Reading Level (dBµV)	Factor (dB)	Measure Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
	4825.0	40.9	3.7	44.6	54.0	-9.4	Peak	Horizontal
	7485.5	36.4	12.8	49.2	54.0	-4.8	Peak	Horizontal
*	8675.5	37.0	13.7	50.7	85.9	-35.2	Peak	Horizontal
*	9899.5	37.0	15.4	52.4	85.9	-33.5	Peak	Horizontal
	4833.5	40.2	3.7	43.9	54.0	-10.1	Peak	Vertical
	7400.5	37.0	12.6	49.6	54.0	-4.4	Peak	Vertical
*	8820.0	35.4	14.0	49.4	85.9	-36.5	Peak	Vertical
*	9840.0	36.6	16.0	52.6	85.9	-33.3	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (115.9dBµV/m) or 15.209 which is higher.

Note 2: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB)

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

FCC ID: Q9DAPIN0318 Page Number: 90 of 268





Product	ACCESS POINT- Omni Antenna (AP-ANT-20W)	Temperature	26°C	
Test Engineer	Kevin Ker	Relative Humidity 56%		
Test Site	AC1	Test Date	2018/03/03	
Test Mode:	802.11n-HT40 - Ant 0 + 1 (Beam-Forming Mode)	Test Channel:	06	
Remark:	 Average measurement was no limit. So the margin was calcul within the restricted bands. So limit for emissions fall within th Other frequency was 20dB bel in the report. 	ated using the avera the margin was cald e restricted bands.	age limit for emissions fall culated using the average	

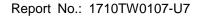
Mark	Frequency (MHz)	Reading Level	Factor (dB)	Measure Level	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
		(dBµV)	, ,	(dBµV/m)	, ,			
	5029.0	40.2	3.9	44.1	54.0	-9.9	Peak	Horizontal
	7621.5	37.2	12.6	49.8	54.0	-4.2	Peak	Horizontal
*	8641.5	36.0	13.5	49.5	86.1	-36.6	Peak	Horizontal
*	9993.0	37.1	15.4	52.5	86.1	-33.6	Peak	Horizontal
	4825.0	40.1	3.7	43.8	54.0	-10.2	Peak	Vertical
	7689.5	37.7	12.4	50.1	54.0	-3.9	Peak	Vertical
*	8803.0	36.8	14.0	50.8	86.1	-35.3	Peak	Vertical
*	9899.5	36.8	15.4	52.2	86.1	-33.9	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (116.1dBµV/m) or 15.209 which is higher.

Note 2: Measure Level (dBµV/m) = Reading Level (dBµV) + Factor (dB)

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

FCC ID: Q9DAPIN0318 Page Number: 91 of 268





Product	ACCESS POINT- Omni Antenna (AP-ANT-20W)	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2018/03/03
Test Mode:	802.11n-HT40 - Ant 0 + 1 (Beam-Forming Mode)	Test Channel:	09
Remark:	 Average measurement was no limit. So the margin was calcul within the restricted bands. So limit for emissions fall within th Other frequency was 20dB bel in the report. 	ated using the avera the margin was cald e restricted bands.	age limit for emissions fall culated using the average

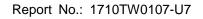
Mark	Frequency (MHz)	Reading Level (dBµV)	Factor (dB)	Measure Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
	4842.0	39.8	3.7	43.5	54.0	-10.5	Peak	Horizontal
	7349.5	36.9	12.4	49.3	54.0	-4.7	Peak	Horizontal
*	8845.5	35.3	14.0	49.3	84.3	-35.0	Peak	Horizontal
*	10010.0	36.3	15.4	51.7	84.3	-32.6	Peak	Horizontal
	4808.0	39.5	3.7	43.2	54.0	-10.8	Peak	Vertical
	7383.5	36.7	12.5	49.2	54.0	-4.8	Peak	Vertical
*	8692.5	35.0	13.7	48.7	84.3	-35.6	Peak	Vertical
*	9840.0	35.1	16.0	51.1	84.3	-33.2	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (114.3dBµV/m) or 15.209 which is higher.

Note 2: Measure Level (dBµV/m) = Reading Level (dBµV) + Factor (dB)

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

FCC ID: Q9DAPIN0318 Page Number: 92 of 268





Product	ACCESS POINT- Directional Antenna (ANT-2x2-2314)	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2018/02/08
Test Mode:	802.11b - Ant 0 + 1 (CDD Mode)	Test Channel:	01
Remark:	 Average measurement was no limit. So the margin was calcul within the restricted bands. So limit for emissions fall within th Other frequency was 20dB bel in the report. 	ated using the avera the margin was cald e restricted bands.	age limit for emissions fall culated using the average

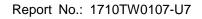
Mark	Frequency (MHz)	Reading Level (dBµV)	Factor (dB)	Measure Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
		(ασμν)		(ασμν/ιιι)				
*	8769.0	34.4	13.9	48.3	92.7	-44.4	Peak	Horizontal
*	9814.5	34.9	15.4	50.3	92.7	-42.4	Peak	Horizontal
	11285.0	33.7	18.8	52.5	54.0	-1.5	Peak	Horizontal
	11769.5	32.6	18.8	51.4	54.0	-2.6	Peak	Horizontal
*	8854.0	34.4	14.0	48.4	92.7	-44.3	Peak	Vertical
*	10137.5	33.7	15.9	49.6	92.7	-43.1	Peak	Vertical
	10970.5	32.9	18.4	51.3	54.0	-2.7	Peak	Vertical
	11897.0	32.6	18.6	51.2	54.0	-2.8	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (122.7dBµV/m) or 15.209 which is higher.

Note 2: Measure Level (dBµV/m) = Reading Level (dBµV) + Factor (dB)

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

FCC ID: Q9DAPIN0318 Page Number: 93 of 268





Product	ACCESS POINT- Directional Antenna (ANT-2x2-2314)	Temperature	26°C	
Test Engineer	Kevin Ker	Relative Humidity 56%		
Test Site	AC1	Test Date	2018/02/08	
Test Mode:	802.11b - Ant 0 + 1 (CDD Mode)	Test Channel:	06	
Remark:	 Average measurement was no limit. So the margin was calcul within the restricted bands. So limit for emissions fall within th Other frequency was 20dB bel in the report. 	ated using the avera the margin was cald e restricted bands.	age limit for emissions fall culated using the average	

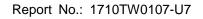
Mark	Frequency (MHz)	Reading Level (dBµV)	Factor (dB)	Measure Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
*	8820.0	34.1	14.0	48.1	91.7	-43.6	Peak	Horizontal
*	10112.0	34.3	15.8	50.1	91.7	-41.6	Peak	Horizontal
	11276.5	32.5	18.8	51.3	54.0	-2.7	Peak	Horizontal
	12330.5	33.0	18.5	51.5	54.0	-2.5	Peak	Horizontal
*	8913.5	33.5	14.0	47.5	91.7	-44.2	Peak	Vertical
*	9738.0	34.3	14.8	49.1	91.7	-42.6	Peak	Vertical
	11038.5	31.8	18.5	50.3	54.0	-3.7	Peak	Vertical
	12169.0	31.4	18.8	50.2	54.0	-3.8	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (121.7dBµV/m) or 15.209 which is higher.

Note 2: Measure Level (dBµV/m) = Reading Level (dBµV) + Factor (dB)

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

FCC ID: Q9DAPIN0318 Page Number: 94 of 268





Product	ACCESS POINT- Directional Antenna (ANT-2x2-2314)	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2018/02/08
Test Mode:	802.11b - Ant 0 + 1 (CDD Mode)	Test Channel:	11
Remark:	 Average measurement was no limit. So the margin was calcul within the restricted bands. Other frequency was 20dB bel in the report. 	ated using the avera	age limit for emissions fall

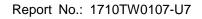
Mark	Frequency	Reading	Factor	Measure	Limit	Margin	Detector	Polarization
	(MHz)	Level	(dB)	Level	(dBµV/m)	(dB)		
		(dBµV)		(dBµV/m)				
*	8828.5	33.6	14.0	47.6	91.8	-44.2	Peak	Horizontal
*	10018.5	34.3	15.4	49.7	91.8	-42.1	Peak	Horizontal
	11217.0	31.8	18.8	50.6	54.0	-3.4	Peak	Horizontal
	11956.5	32.4	18.6	51.0	54.0	-3.0	Peak	Horizontal
*	8913.5	33.5	14.0	47.5	91.8	-44.3	Peak	Vertical
*	9916.5	34.2	15.3	49.5	91.8	-42.3	Peak	Vertical
	10877.0	32.9	18.2	51.1	54.0	-2.9	Peak	Vertical
	11693.0	32.1	19.2	51.3	54.0	-2.7	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (121.8dBµV/m) or 15.209 which is higher.

Note 2: Measure Level (dBµV/m) = Reading Level (dBµV) + Factor (dB)

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

FCC ID: Q9DAPIN0318 Page Number: 95 of 268





Product	ACCESS POINT- Directional Antenna (ANT-2x2-2314)	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2018/02/08
Test Mode:	802.11g - Ant 0 + 1 (CDD Mode)	Test Channel:	01
Remark:	 Average measurement was no limit. So the margin was calcul within the restricted bands. Other frequency was 20dB bel in the report. 	ated using the avera	age limit for emissions fall

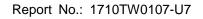
Mark	Frequency (MHz)	Reading Level	Factor (dB)	Measure Level	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
		(dBµV)		(dBµV/m)				
*	8769.0	34.2	13.9	48.1	93.4	-45.3	Peak	Horizontal
*	9874.0	34.9	15.8	50.7	93.4	-42.7	Peak	Horizontal
	10817.5	33.0	18.0	51.0	54.0	-3.0	Peak	Horizontal
	11667.5	32.8	19.3	52.1	54.0	-1.9	Peak	Horizontal
*	8718.0	34.2	13.8	48.0	93.4	-45.4	Peak	Vertical
*	10044.0	33.9	15.5	49.4	93.4	-44.0	Peak	Vertical
	11072.5	32.4	18.6	51.0	54.0	-3.0	Peak	Vertical
	11786.5	31.9	18.8	50.7	54.0	-3.3	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (123.4dBµV/m) or 15.209 which is higher.

Note 2: Measure Level (dBµV/m) = Reading Level (dBµV) + Factor (dB)

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

FCC ID: Q9DAPIN0318 Page Number: 96 of 268





Product	ACCESS POINT- Directional Antenna (ANT-2x2-2314)	Temperature	26°C	
Test Engineer	Kevin Ker	Relative Humidity	56%	
Test Site	AC1	Test Date	2018/02/08	
Test Mode:	802.11g - Ant 0 + 1 (CDD Mode)	Test Channel:	06	
Remark:	 Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report. 			

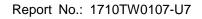
Mark	Frequency (MHz)	Reading Level	Factor (dB)	Measure Level	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
		(dBµV)		(dBµV/m)				
*	8692.5	32.8	13.7	46.5	94.3	-47.8	Peak	Horizontal
*	9644.5	33.4	14.4	47.8	94.3	-46.5	Peak	Horizontal
	11327.5	31.5	18.9	50.4	54.0	-3.6	Peak	Horizontal
	12109.5	31.7	18.9	50.6	54.0	-3.4	Peak	Horizontal
*	8862.5	33.7	14.0	47.7	94.3	-46.6	Peak	Vertical
*	10086.5	33.3	15.7	49.0	94.3	-45.3	Peak	Vertical
	11276.5	31.4	18.8	50.2	54.0	-3.8	Peak	Vertical
	12007.5	31.8	18.7	50.5	54.0	-3.5	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (124.3dBµV/m) or 15.209 which is higher.

Note 2: Measure Level (dBµV/m) = Reading Level (dBµV) + Factor (dB)

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

FCC ID: Q9DAPIN0318 Page Number: 97 of 268





Product	ACCESS POINT- Directional Antenna (ANT-2x2-2314)	Temperature	26°C		
Test Engineer	Kevin Ker	Relative Humidity	56%		
Test Site	AC1	Test Date	2018/02/08		
Test Mode:	802.11g - Ant 0 + 1 (CDD Mode)	Test Channel:	11		
Remark:	 Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report. 				

Mark	Frequency (MHz)	Reading Level (dBµV)	Factor (dB)	Measure Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
*	8743.5	34.0	13.9	47.9	93.9	-46.0	Peak	Horizontal
*	9857.0	34.4	16.2	50.6	93.9	-43.3	Peak	Horizontal
	11268.0	33.6	18.8	52.4	54.0	-1.6	Peak	Horizontal
	12075.5	31.4	18.9	50.3	54.0	-3.7	Peak	Horizontal
*	8811.5	33.5	14.0	47.5	93.9	-46.4	Peak	Vertical
*	9874.0	33.6	15.8	49.4	93.9	-44.5	Peak	Vertical
	11072.5	33.2	18.6	51.8	54.0	-2.2	Peak	Vertical
	12109.5	31.8	18.9	50.7	54.0	-3.3	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (123.9dBµV/m) or 15.209 which is higher.

Note 2: Measure Level (dBµV/m) = Reading Level (dBµV) + Factor (dB)

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

FCC ID: Q9DAPIN0318 Page Number: 98 of 268