7.4. ANTENNA GAIN

MEASUREMENT

The antenna gain of the complete system is calculated by the difference of radiated power in EIRP and the conducted power of the module. For normal WLAN devices, the DSSS mode is used.

Report No.: C151113Z02-RP1

MEASUREMENT PARAMETERS

Measurement parameter					
Detector	Peak				
Sweep time	Auto				
Resolution bandwidth	3 MHz				
Video bandwidth	3 MHz				
Trace-Mode	Max hold				

LIMITS

FCC	IC			
Antenna Gain				
6dBi				

FCC ID: TE7TCW7960 Page 80 / 126

TEST RESULTS

IEEE 802.11b mode (Antenna 0)

T _{nom}	V_{nom}	Lowest channel 2412MHz	Middle channel 2437MHz	Highest channel 2462MHz	
Conducted power Measured with DS		8.64	10.04	8.35	
Radiated power [o Measured with DS		11.26	11.11	10.96	
Gain [dBi] Calculated		2.62	1.07	2.61	
Measurement und	ertainty	± 1.5 dB (cond.) / ± 3 dB (rad.)			

Report No.: C151113Z02-RP1

IEEE 802.11b mode (Antenna 1)

T _{nom}	V _{nom}	Lowest channel 2412MHz	Middle channel 2437MHz	Highest channel 2462MHz	
Conducted power [dBm/MHz] Measured with DSSS modulation		8.73	9.56	7.44	
Radiated power [dBm/MHz] Measured with DSSS modulation		11.07	10.43	9.79	
Gain [dBi] Calculated		2.34	0.87	2.35	
Measurement und	ertainty	± 1.5 dB (cond.) / ± 3 dB (rad.)			

FCC ID: TE7TCW7960 Page 81 / 126

7.5. PEAK OUTPUT POWER

7.5.1. LIMITS

The maximum peak output power of the intentional radiator shall not exceed the following:

Report No.: C151113Z02-RP1

- 1. According to §15.247(b)(3), for systems using digital modulation in the bands of 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz: 1 Watt.
- 2. According to §15.247(b)(4), the conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

7.5.2. TEST INSTRUMENTS

Name of Equipment	Manufacturer	Model	Serial Number	Last Calibration	Calibration Due
Power Meter	Anritsu	ML2495A	1204003	02/28/2015	02/27/2016
Power Sensor	Anritsu	MA2411B	1126150	02/28/2015	02/27/2016

7.5.3. TEST PROCEDURES (please refer to measurement standard)

9.1.1 RBW ≥ DTS bandwidth

This procedure shall be used when the measurement instrument has available a resolution bandwidth that is greater than the *DTS bandwidth*.

- a) Set the RBW ≥ DTS bandwidth.
- b) Set VBW ≥ 3 RBW.
- c) Set span ≥ 3 x RBW
- d) Sweep time = auto couple.
- e) Detector = peak.
- f) Trace mode = max hold.
- g) Allow trace to fully stabilize.
- h) Use peak marker function to determine the peak amplitude level.

FCC ID: TE7TCW7960 Page 82 / 126

9.1.2 Integrated band power method

This procedure may be used when the maximum available RBW of the measurement instrument is less than the *DTS bandwidth*.

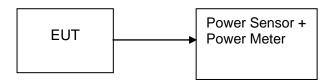
Report No.: C151113Z02-RP1

- a) Set the RBW = 1 MHz.
- b) Set the VBW ≥ 3 RBW
- c) Set the span \geq 1.5 x DTS bandwidth.
- d) Detector = peak.
- e) Sweep time = auto couple.
- f) Trace mode = max hold.
- g) Allow trace to fully stabilize.
- h) Use the instrument's band/channel power measurement function with the band limits set equal to the DTS bandwidth edges (for some instruments, this may require a manual override to select peak detector). If the instrument does not have a band power function, sum the spectrum levels (in linear power units) at intervals equal to the RBW extending across the DTS bandwidth.

9.1.3 PKPM1 Peak power meter method

The maximum peak conducted output power may be measured using a broadband peak RF power meter. The power meter shall have a video bandwidth that is greater than or equal to the DTS bandwidth and shall utilize a fast-responding diode detector.

7.5.4. TEST SETUP



FCC ID: TE7TCW7960 Page 83 / 126

7.5.5. TEST RESULTS

No non-compliance noted

Test Data

Test mode: IEEE 802.11b (Antenna 0)

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Limit (W)	Result
Low	2412	17.73	0.05929		PASS
Mid	2437	19.13	0.08185	1	PASS
High	2462	17.50	0.05623		PASS

Report No.: C151113Z02-RP1

Test mode: IEEE 802.11b (Antenna 1)

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Limit (W)	Result
Low	2412	17.81	0.06039		PASS
Mid	2437	18.65	0.07328	1	PASS
High	2462	16.53	0.04498		PASS

Test mode: IEEE 802.11g (Antenna 0)

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Limit (W)	Result
Low	2412	14.38	0.02742		PASS
Mid	2437	19.58	0.09078	1	PASS
High	2462	13.13	0.02056		PASS

Test mode: IEEE 802.11g (Antenna 1)

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Limit (W)	Result
Low	2412	15.44	0.03499		PASS
Mid	2437	19.78	0.09506	1	PASS
High	2462	14.34	0.02716		PASS

FCC ID: TE7TCW7960 Page 84 / 126

Test mode: IEEE 802.11n HT20 MHz(Combine with Antenna 0 and Antenna 1)

Report No.: C151113Z02-RP1

Channel	Frequency Output Power (dBm)		r	Output Power	Limit (W)	Result	
	(101112)	Antenna 0	Antenna 1	Total	(W)	(**)	
Low	2412	13.82	13.26	16.56	0.04528		PASS
Mid	2437	19.26	19.42	22.35	0.17183	1	PASS
High	2462	13.72	13.32	16.53	0.04503		PASS

Test mode: IEEE 802.11n HT40 MHz(Combine with Antenna 0 and Antenna 1)

Channel Frequency (MHz)		Output Power (dBm)			Output Power	Limit (W)	Result
	(WIT 12)	Antenna 0	Antenna 1	Total	(W)	(**)	
Low	2422	12.73	12.15	15.46	0.03516		PASS
Mid	2437	19.43	19.27	22.36	0.17223	1	PASS
High	2452	13.26	12.81	16.05	0.04028		PASS

FCC ID: TE7TCW7960 Page 85 / 126

7.6. BAND EDGES MEASUREMENT

7.6.1. LIMITS

According to §15.247(d), in any 100 kHz bandwidth outside the frequency bands in which the spread spectrum intentional radiator in operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in 15.209(a) (see Section 15.205(c)).

Report No.: C151113Z02-RP1

7.6.2. TEST INSTRUMENTS

Radiated Emission Test Site 966(2)								
Name of Equipment	Manufacturer	Model Number	Serial Number	Last Calibration	Due Calibration			
PSA Series Spectrum Analyzer	Agilent	E4446A	US44300399	02/28/2015	02/27/2016			
EMI TEST RECEIVER	ROHDE&SCHWARZ	ESCI	100783	02/28/2015	02/27/2016			
Amplifier	MITEQ	AM-1604-3000	1123808	03/18/2015	03/18/2016			
High Noise Amplifier	Agilent	8449B	3008A01838	02/28/2015	02/27/2016			
Board-Band Horn Antenna	Schwarzbeck	BBHA 9170	9170-497	02/28/2015	02/27/2016			
Bilog Antenna	SCHAFFNER	CBL6143	5082	02/28/2015	02/27/2016			
Horn Antenna	SCHWARZBECK	BBHA9120	D286	02/28/2015	02/27/2016			
Loop Antenna	COM-POWER	AL-130	121044	09/25/2015	09/24/2016			
Turn Table	N/A	N/A	N/A	N.C.R	N.C.R			
Controller	Sunol Sciences	SC104V	022310-1	N.C.R	N.C.R			
Controller	СТ	N/A	N/A	N.C.R	N.C.R			
Temp. / Humidity Meter	Anymetre	JR913	N/A	02/28/2015	02/27/2016			
Antenna Tower	SUNOL	TLT2	N/A	N.C.R	N.C.R			
Test S/W	FARAD		LZ-RF / CCS	S-SZ-3A2				

NOTE: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

- 2. The FCC Site Registration number is 101879.
- 3. N.C.R = No Calibration Required.

FCC ID: TE7TCW7960 Page 86 / 126

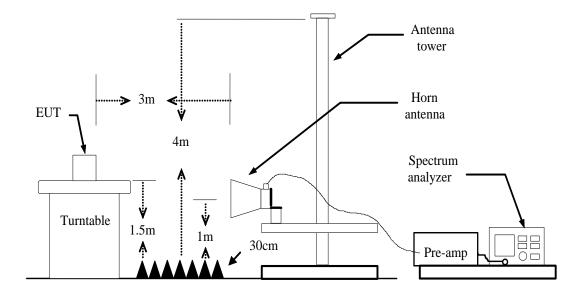
7.6.3. TEST PROCEDURES (please refer to measurement standard)

- 1. The EUT is placed on a turntable, which is 1.5m above the ground plane.
- 2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.

Report No.: C151113Z02-RP1

- 3. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emission.
- 4. Set the spectrum analyzer in the following setting in order to capture the lower and upper band-edges of the emission:
 - (a) PEAK: RBW=VBW=1MHz / Sweep=AUTO
 - (b) AVERAGE: RBW=1MHz / VBW=10Hz / Sweep=AUTO
- 5. Repeat the procedures until all the PEAK and AVERAGE versus POLARIZATION are measured.

7.6.4. TEST SETUP



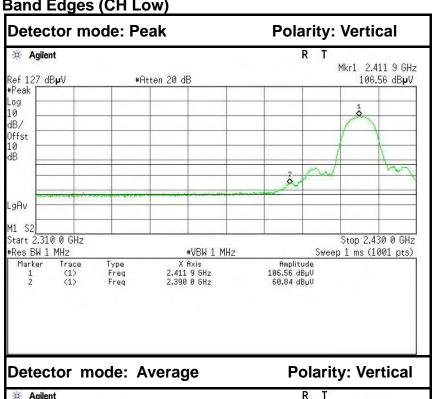
FCC ID: TE7TCW7960 Page 87 / 126

7.6.5. TEST RESULTS

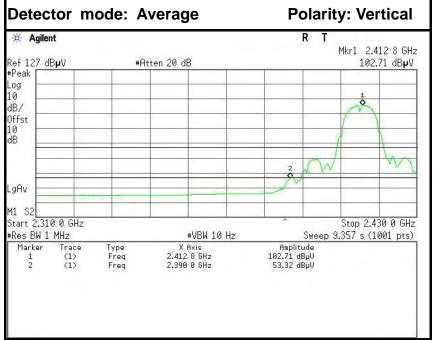
Test Plot

IEEE 802.11b mode (Antenna 0)

Band Edges (CH Low)



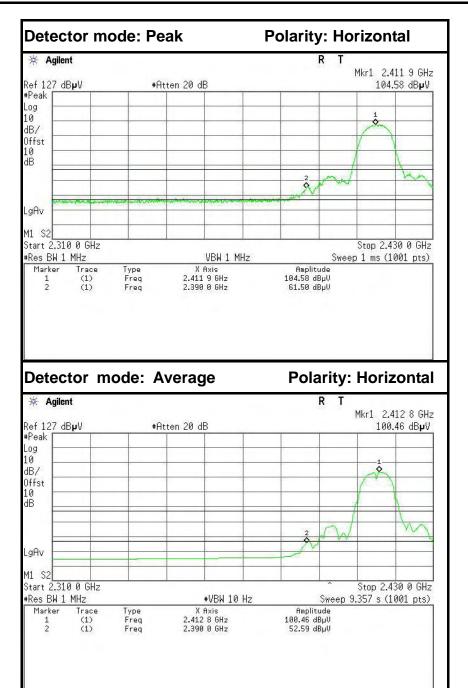
Report No.: C151113Z02-RP1



	No.	Frequency (MHz)	Reading (dBuV)	Corrected (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Antenna Pole
	1	2390.0000	54.24	-6.60	60.84	74.00	-13.16	Peak	Vertical
S	2	2390.0000	46.72	-6.60	53.32	54.00	-0.68	Average	Vertical

FCC ID: TE7TCW7960 Page 88 / 126

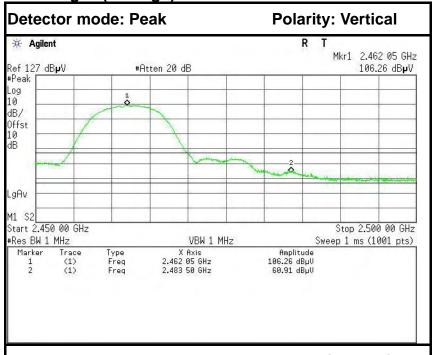


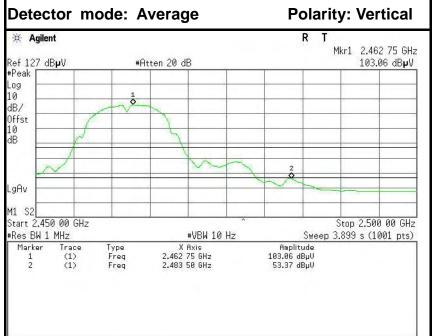


No.	Frequency (MHz)	Reading (dBuV)	Corrected (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Antenna Pole
1	2390.0000	54.90	-6.60	61.50	74.00	-12.50	Peak	Horizontal
2	2390.0000	45.99	-6.60	52.59	54.00	-1.41	Average	Horizontal

FCC ID: TE7TCW7960 Page 89 / 126

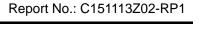


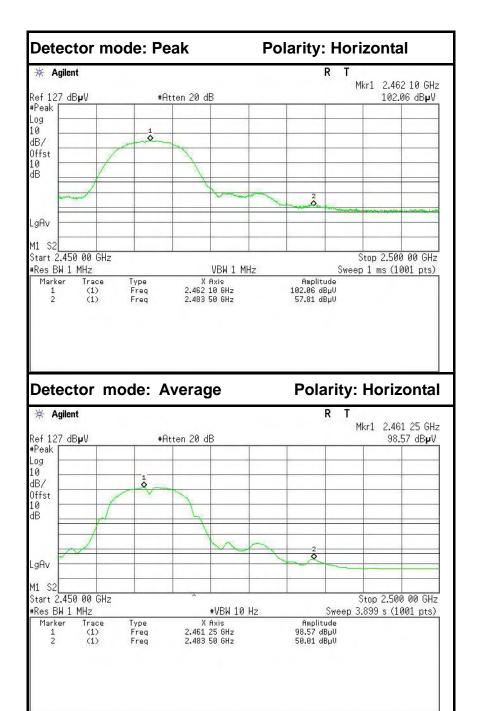




No.	Frequency (MHz)	Reading (dBuV)	Corrected (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Antenna Pole
1	2483.5000	54.67	-6.24	60.91	74.00	-13.09	Peak	Vertical
2	2483.5000	47.13	-6.24	53.37	54.00	-0.63	Average	Vertical

FCC ID: TE7TCW7960 Page 90 / 126





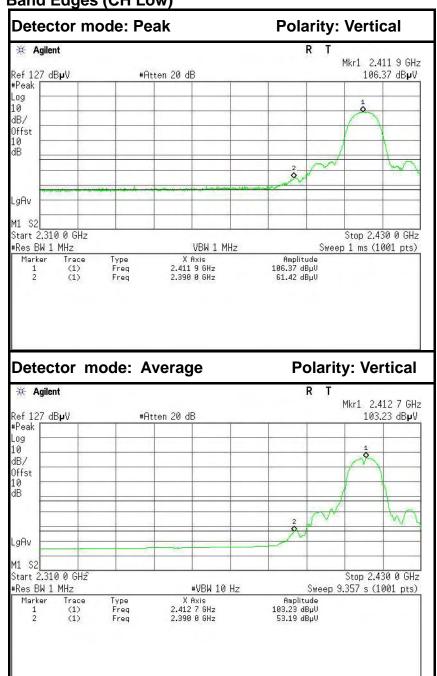
No.	Frequency (MHz)	Reading (dBuV)	Corrected (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Antenna Pole
1	2483.5000	51.57	-6.24	57.81	74.00	-16.19	Peak	Horizontal
2	2483.5000	43.77	-6.24	50.01	54.00	-3.99	Average	Horizontal

FCC ID: TE7TCW7960 Page 91 / 126

npliance Certification Services (Snenzhen) Inc. Report No.: C151113Z02-RP1

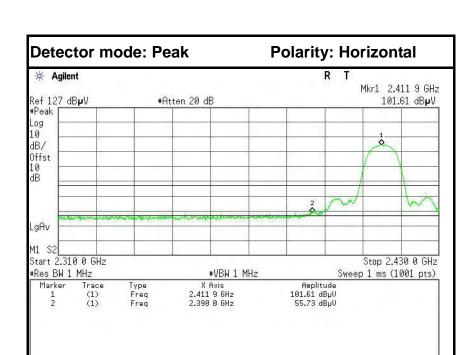
IEEE 802.11b mode (Antenna 1)

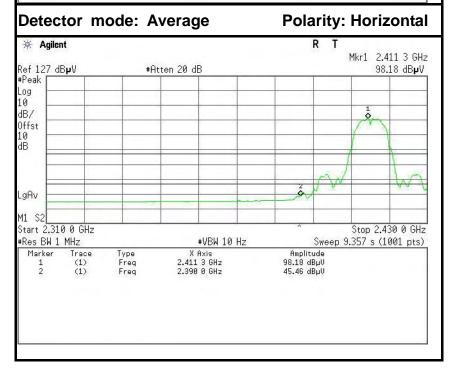
Band Edges (CH Low)



No.	Frequency (MHz)	Reading (dBuV)	Corrected (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Antenna Pole
1	2390.0000	54.82	-6.60	61.42	74.00	-12.58	Peak	Vertical
2	2390.0000	46.59	-6.60	53.19	54.00	-0.81	Average	Vertical

FCC ID: TE7TCW7960 Page 92 / 126

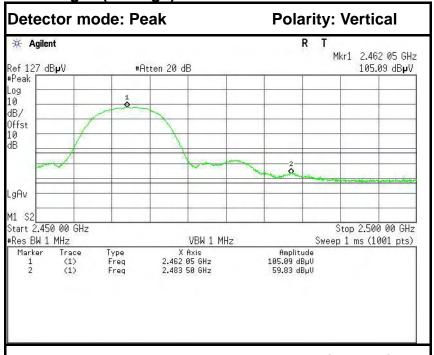


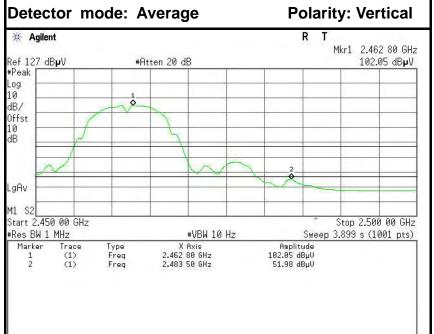


No.	Frequency (MHz)	Reading (dBuV)	Corrected (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Antenna Pole
1	2390.0000	49.13	-6.60	55.73	74.00	-18.27	Peak	Horizontal
2	2390.0000	38.86	-6.60	45.46	54.00	-8.54	Average	Horizontal

FCC ID: TE7TCW7960 Page 93 / 126

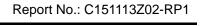


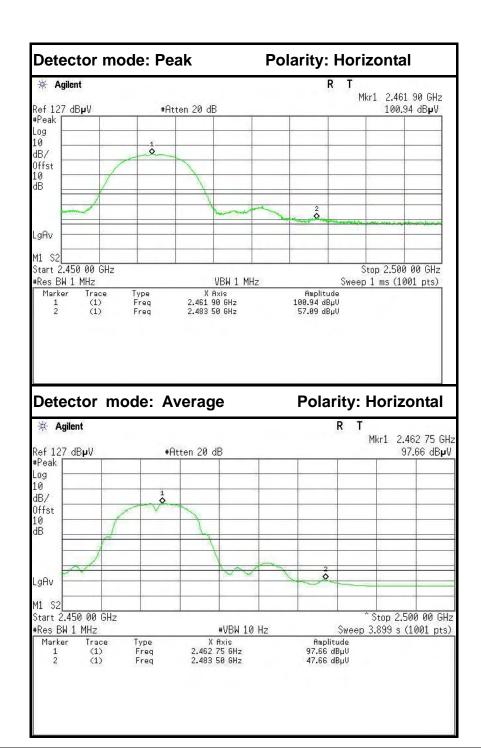




No.	Frequency (MHz)	Reading (dBuV)	Corrected (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Antenna Pole
1	2483.5000	53.59	-6.24	59.83	74.00	-14.17	Peak	Vertical
2	2483.5000	45.74	-6.24	51.98	54.00	-2.02	Average	Vertical

FCC ID: TE7TCW7960 Page 94 / 126



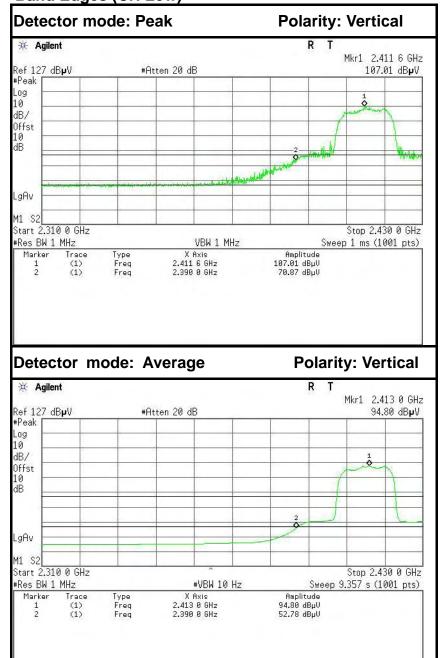


No.	Frequency (MHz)	Reading (dBuV)	Corrected (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Antenna Pole
1	2483.5000	50.85	-6.24	57.09	74.00	-16.91	Peak	Horizontal
2	2483.5000	41.42	-6.24	47.66	54.00	-6.34	Average	Horizontal

FCC ID: TE7TCW7960 Page 95 / 126

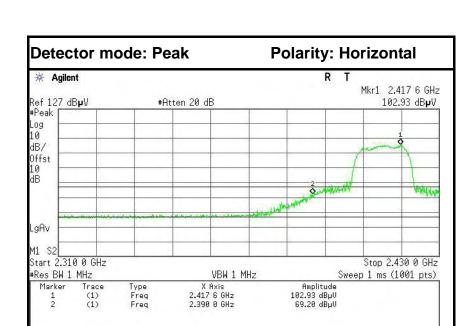
IEEE 802.11g mode (Antenna 0)

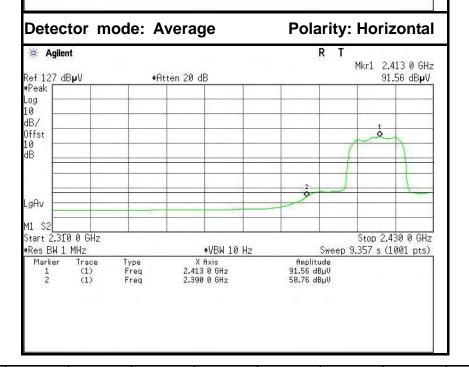
Band Edges (CH Low)



No.	Frequency (MHz)	Reading (dBuV)	Corrected (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Antenna Pole
1	2390.0000	64.27	-6.60	70.87	74.00	-3.13	Peak	Vertical
2	2390.0000	46.18	-6.60	52.78	54.00	-1.22	Average	Vertical

FCC ID: TE7TCW7960 Page 96 / 126

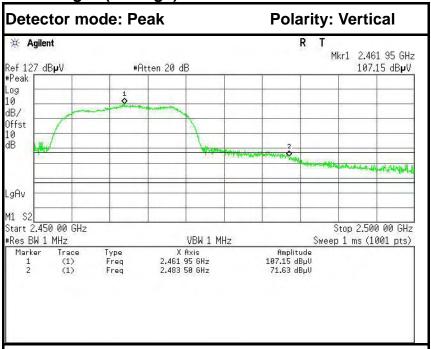


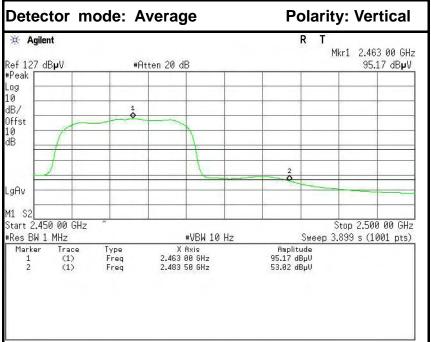


No.	Frequency (MHz)	Reading (dBuV)	Corrected (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Antenna Pole
1	2390.0000	62.60	-6.60	69.20	74.00	-4.80	Peak	Horizontal
2	2390.0000	44.16	-6.60	50.76	54.00	-3.24	Average	Horizontal

FCC ID: TE7TCW7960 Page 97 / 126

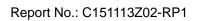


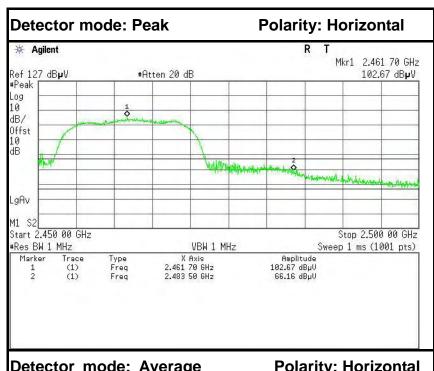


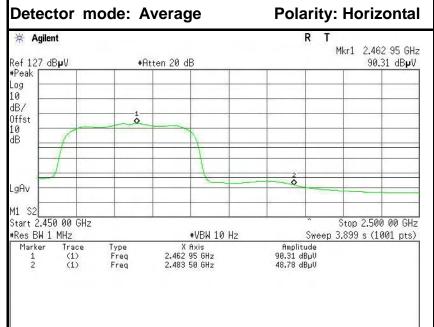


No.	Frequency (MHz)	Reading (dBuV)	Corrected (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Antenna Pole
1	2483.5000	65.39	-6.24	71.63	74.00	-2.37	Peak	Vertical
2	2483.5000	46.78	-6.24	53.02	54.00	-0.98	Average	Vertical

FCC ID: TE7TCW7960 Page 98 / 126





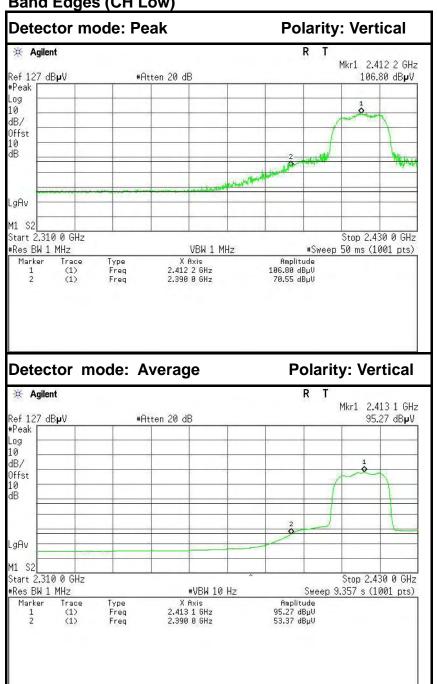


No.	Frequency (MHz)	Reading (dBuV)	Corrected (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Antenna Pole
1	2483.5000	59.92	-6.24	66.16	74.00	-7.84	Peak	Horizontal
2	2483.5000	42.54	-6.24	48.78	54.00	-5.22	Average	Horizontal

FCC ID: TE7TCW7960 Page 99 / 126

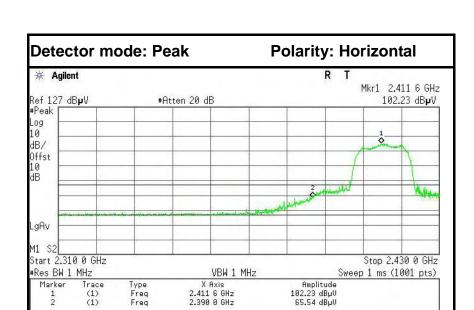
IEEE 802.11g mode (Antenna 1)

Band Edges (CH Low)



No.	Frequency (MHz)	Reading (dBuV)	Corrected (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Antenna Pole
1	2390.0000	63.95	-6.60	70.55	74.00	-3.45	Peak	Vertical
2	2390.0000	46.77	-6.60	53.37	54.00	-0.63	Average	Vertical

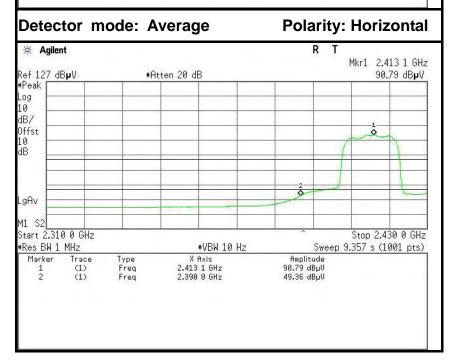
FCC ID: TE7TCW7960 Page 100 / 126



2.390 0 GHz

65.54 dBµV

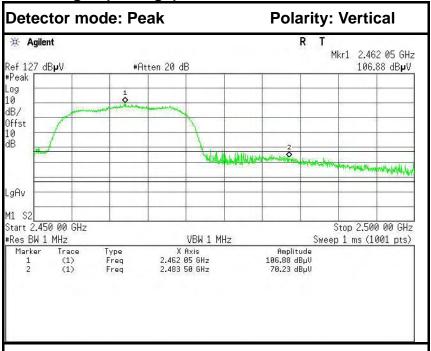
Report No.: C151113Z02-RP1

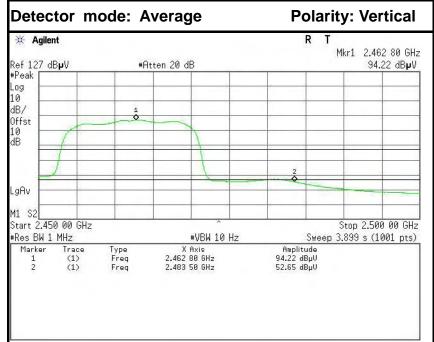


No.	Frequency (MHz)	Reading (dBuV)	Corrected (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Antenna Pole
1	2390.0000	58.94	-6.60	65.54	74.00	-8.46	Peak	Horizontal
2	2390.0000	42.76	-6.60	49.36	54.00	-4.64	Average	Horizontal

FCC ID: TE7TCW7960 Page 101 / 126

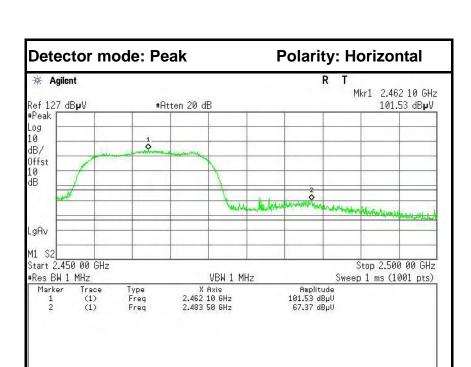


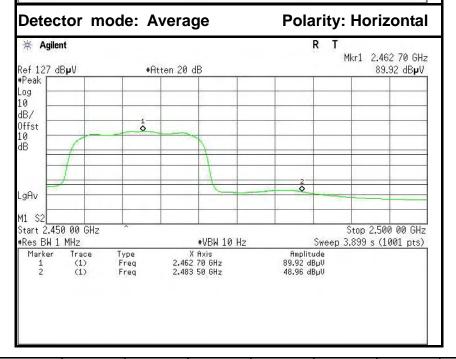




No.	Frequency (MHz)	Reading (dBuV)	Corrected (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Antenna Pole
1	2483.5000	63.99	-6.24	70.23	74.00	-3.77	Peak	Vertical
2	2483.5000	46.41	-6.24	52.65	54.00	-1.35	Average	Vertical

FCC ID: TE7TCW7960 Page 102 / 126



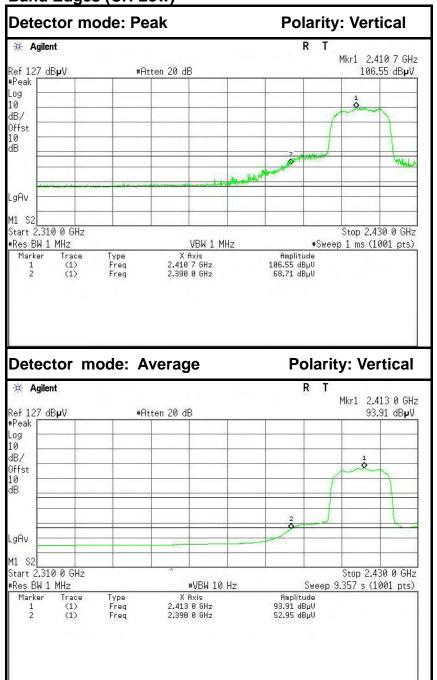


No.	Frequency (MHz)	Reading (dBuV)	Corrected (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Antenna Pole
1	2483.5000	61.13	-6.24	67.37	74.00	-6.63	Peak	Horizontal
2	2483.5000	42.72	-6.24	48.96	54.00	-5.04	Average	Horizontal

FCC ID: TE7TCW7960 Page 103 / 126

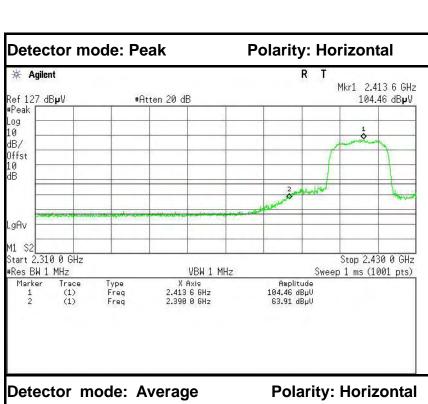
IEEE 802.11n HT20 MHz mode (Combine with Antenna 0 and Antenna 1)

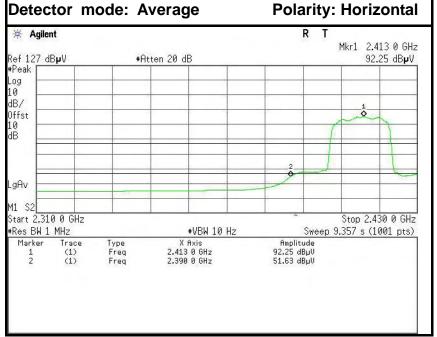
Band Edges (CH Low)



No.	Frequency (MHz)	Reading (dBuV)	Corrected (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Antenna Pole
1	2390.0000	62.11	-6.60	68.71	74.00	-5.29	Peak	Vertical
2	2390.0000	46.35	-6.60	52.95	54.00	-1.05	Average	Vertical

FCC ID: TE7TCW7960 Page 104 / 126

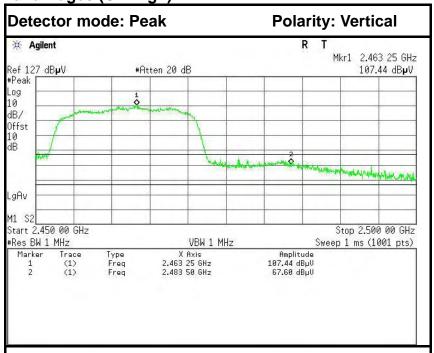


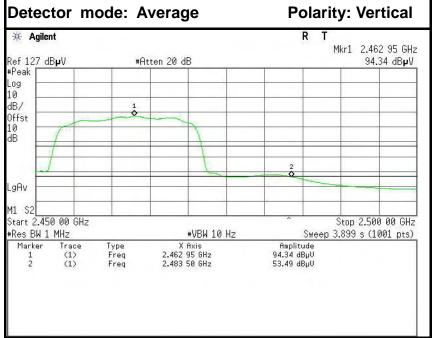


No.	Frequency (MHz)	Reading (dBuV)	Corrected (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Antenna Pole
1	2390.0000	57.31	-6.60	63.91	74.00	-10.09	Peak	Horizontal
2	2390.0000	45.03	-6.60	51.63	54.00	-2.37	Average	Horizontal

FCC ID: TE7TCW7960 Page 105 / 126



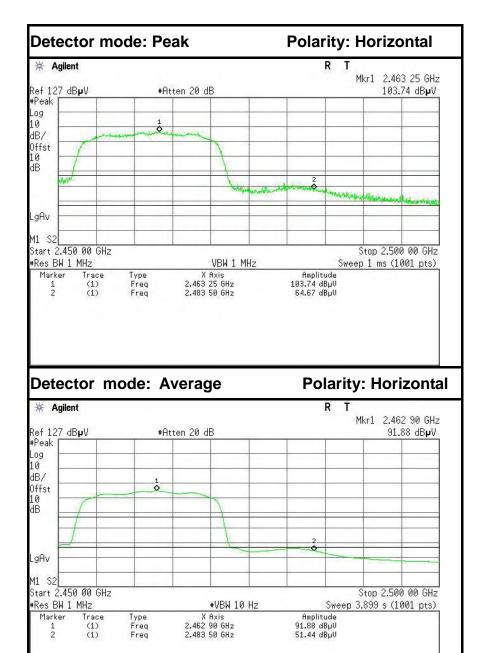




No.	Frequency (MHz)	Reading (dBuV)	Corrected (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Antenna Pole
1	2483.5000	61.36	-6.24	67.60	74.00	-6.40	Peak	Vertical
2	2483.5000	47.25	-6.24	53.49	54.00	-0.51	Average	Vertical

FCC ID: TE7TCW7960 Page 106 / 126



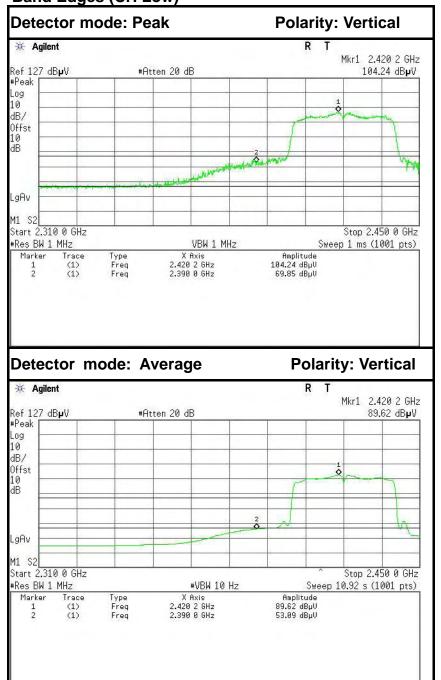


No.	Frequency (MHz)	Reading (dBuV)	Corrected (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Antenna Pole
1	2483.5000	58.43	-6.24	64.67	74.00	-9.33	Peak	Horizontal
2	2483.5000	45.20	-6.24	51.44	54.00	-2.56	Average	Horizontal

FCC ID: TE7TCW7960 Page 107 / 126

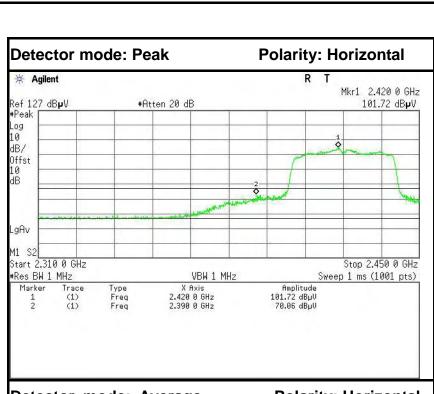
IEEE 802.11n HT40 MHz mode (Combine with Antenna 0 and Antenna 1)

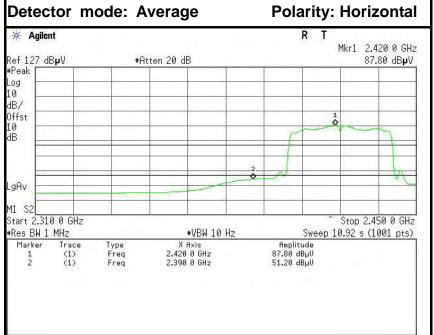
Band Edges (CH Low)



No.	Frequency (MHz)	Reading (dBuV)	Corrected (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Antenna Pole
1	2390.0000	63.25	-6.60	69.85	74.00	-4.15	Peak	Vertical
2	2390.0000	46.49	-6.60	53.09	54.00	-0.91	Average	Vertical

FCC ID: TE7TCW7960 Page 108 / 126

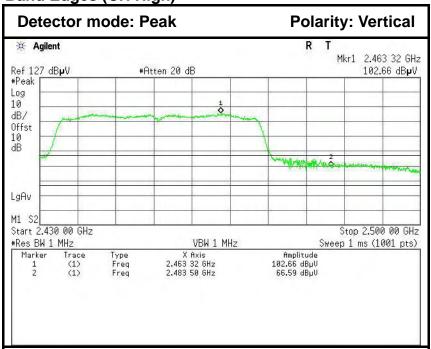




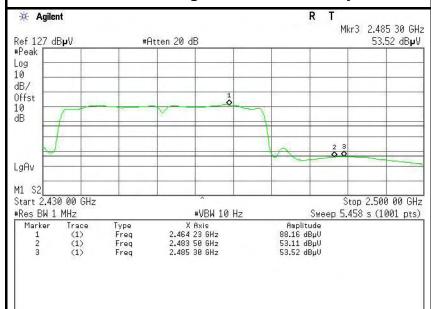
No.	Frequency (MHz)	Reading (dBuV)	Corrected (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Antenna Pole
1	2390.0000	63.46	-6.60	70.06	74.00	-3.94	Peak	Horizontal
2	2390.0000	54.60	-6.60	61.20	54.00	7.20	Average	Horizontal

FCC ID: TE7TCW7960 Page 109 / 126





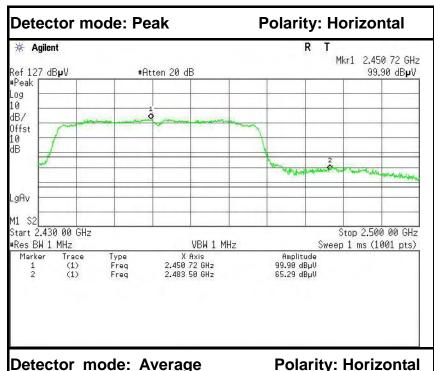
Detector mode: Average Polarity: Vertical

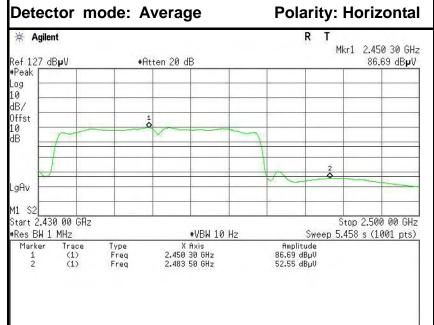


No.	Frequency (MHz)	Reading (dBuV)	Corrected (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Antenna Pole
1	2483.5000	60.35	-6.24	66.59	74.00	-7.41	Peak	Vertical
2	2483.5000	47.28	-6.24	53.52	54.00	-0.48	Average	Vertical

FCC ID: TE7TCW7960 Page 110 / 126







No.	Frequency (MHz)	Reading (dBuV)	Corrected (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Antenna Pole
1	2483.5000	59.05	-6.24	65.29	74.00	-8.71	Peak	Horizontal
2	2483.5000	46.31	-6.24	52.55	54.00	-1.45	Average	Horizontal

FCC ID: TE7TCW7960 Page 111 / 126

7.7. PEAK POWER SPECTRAL DENSITY MEASUREMENT

7.7.1. LIMITS

According to §15.247(e), for digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

Report No.: C151113Z02-RP1

According to §15.247(f), the digital modulation operation of the hybrid system, with the frequency hopping turned off, shall comply with the power density requirements of paragraph (d) of this section.

7.7.2. TEST INSTRUMENTS

Name of Equipment	Manufacturer	Model	Serial Number	Last Calibration	Calibration Due
Spectrum Analyzer	Agilent	E4446A	US44300399	02/28/2015	02/27/2016

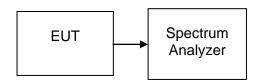
7.7.3. TEST PROCEDURES (please refer to measurement standard)

§15.247(e)specifies a conducted power spectral density (PSD) limit of 8 dBm in any 3 kHz band segment within the fundamental EBW during any time interval of continuous transmission. The same method as used to determine the conducted output power shall be used to determine the power spectral density (i.e.,if peak-detected fundamental power was measured then use the peak PSD procedure and if average fundamental power was measured then use the average PSD procedure).

10.2 Method PKPSD (peak PSD)

- 1. Set analyzer center frequency to DTS channel center frequency.
- 2. Set the span to 1.5 times the DTS bandwidth.
- 3. Set the RBW to: $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$.
- 4. Set the VBW \geq 3 x RBW.
- 5. Detector = peak.
- 6. Sweep time = auto couple.
- 7. Trace mode = max hold.
- 8. Allow trace to fully stabilize.
- 9. Use the peak marker function to determine the maximum amplitude level within the RBW.
- 10. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

7.7.4. TEST SETUP



FCC ID: TE7TCW7960 Page 112 / 126

7.7.5. TEST RESULTS

No non-compliance noted

Test Data

Test mode: IEEE 802.11b (Antenna 0)

Channel	Frequency (MHz)	PPSD (dBm)	Limit (dBm)	Test Result
Low	2412	-12.48		PASS
Mid	2437	-12.31	8	PASS
High	2462	-13.64		PASS

Report No.: C151113Z02-RP1

Test mode: IEEE 802.11b (Antenna 1)

Channel	Frequency (MHz)	PPSD (dBm)	Limit (dBm)	Test Result	
Low	2412	-13.13		PASS	
Mid	2437	-12.27	8	PASS	
High	2462	-14.55		PASS	

Test mode: IEEE 802.11g (Antenna 0)

	5 \				
Channel	Frequency (MHz)	PPSD (dBm)	Limit (dBm)	Test Result	
Low	2412	-18.70		PASS	
Mid	2437	-13.24	8	PASS	
High	2462	-18.20		PASS	

Test mode: IEEE 802.11g (Antenna 1)

Channel	nel Frequency PPSD Limit (MHz) (dBm) (dBm)		Test Result	
Low	2412	-18.10		PASS
Mid	2437	-13.44	8	PASS
High	2462	-19.20		PASS

FCC ID: TE7TCW7960 Page 113 / 126

Test mode: IEEE 802.11n HT20 MHz (Combine with Antenna 0 and Antenna 1)

Report No.: C151113Z02-RP1

Channel	Frequency (MHz)		PPSD (dBm)		Limit (dBm)	Test Result
	(IVITIZ)	Antenna 0	Antenna 1	Total	(ubili)	
Low	2412	-19.62	-19.88	-16.74		PASS
Mid	2437	-15.76	-14.38	-12.01	8	PASS
High	2462	-20.32	-18.89	-16.54		PASS

Test mode: IEEE 802.11n HT40 MHz (Combine with Antenna 0 and Antenna 1)

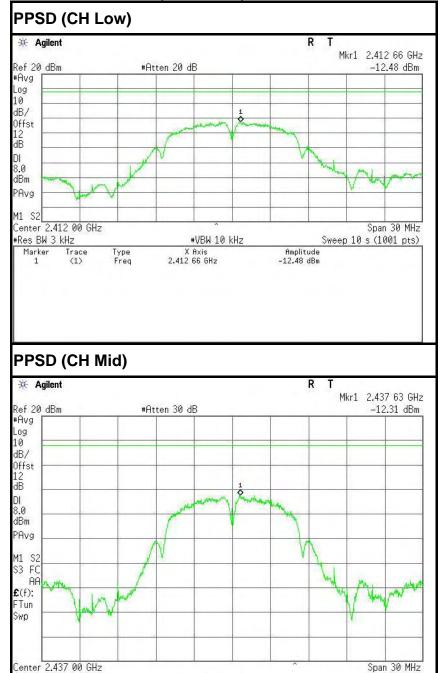
Channel	Frequency (MHz)	PPSD (dBm)		Limit (dBm)	Test Result	
	(1411 12)	Antenna 0	Antenna 1	Total	(ubiii)	
Low	2422	-24.23	-24.00	-21.10		PASS
Mid	2437	-17.25	-17.78	-14.50	8	PASS
High	2452	-23.49	-23.52	-20.49		PASS

FCC ID: TE7TCW7960 Page 114 / 126

Test Plot

#Res BW 3 kHz

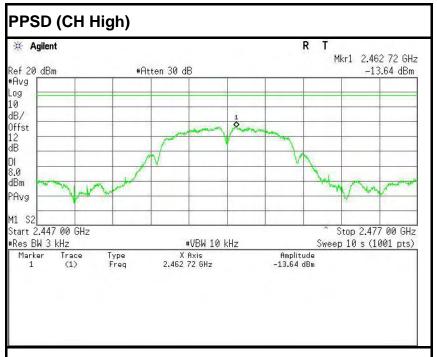
IEEE 802.11b mode (Antenna 0)



FCC ID: TE7TCW7960 Page 115 / 126

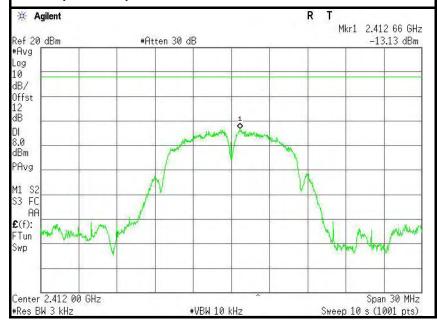
#VBW 10 kHz

Sweep 10 s (1001 pts)_

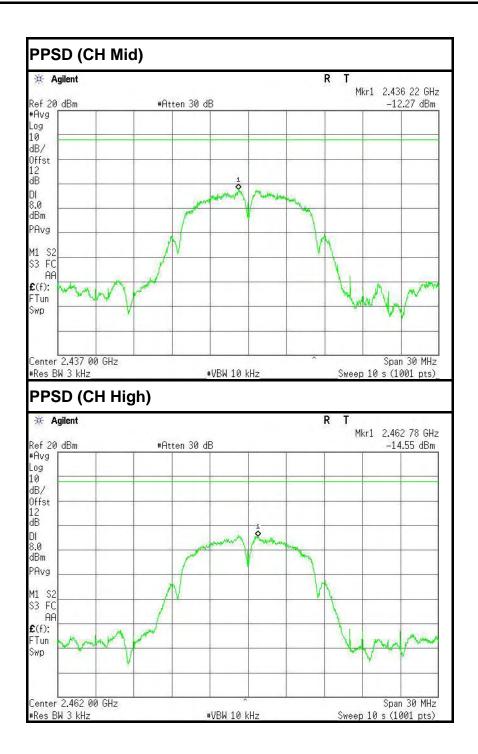


IEEE 802.11b mode (Antenna 1)

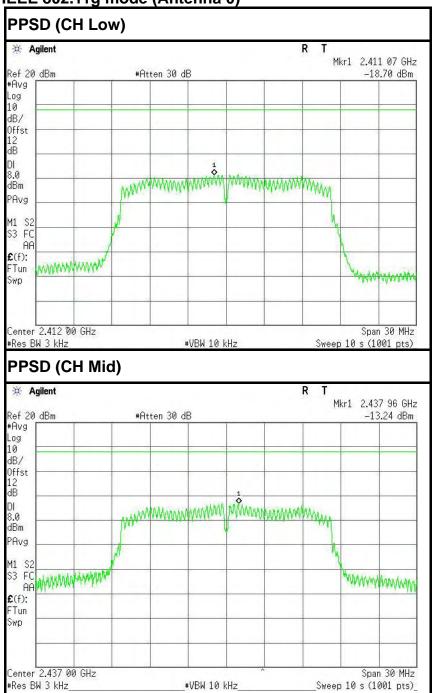
PPSD (CH Low)

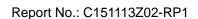


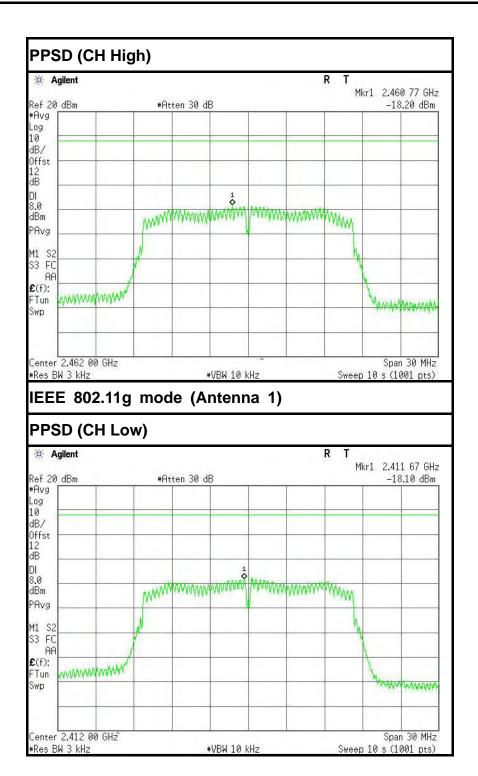
FCC ID: TE7TCW7960 Page 116 / 126

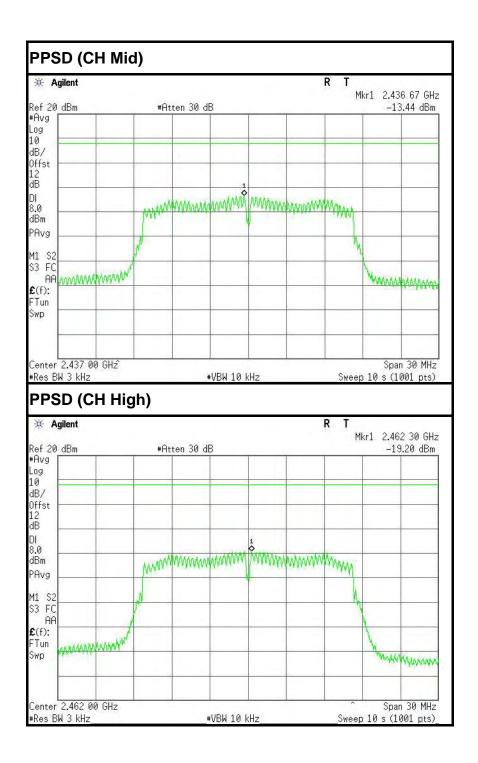




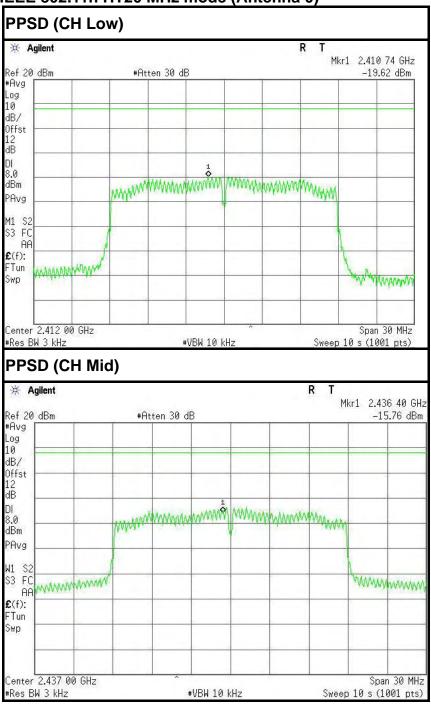




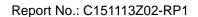


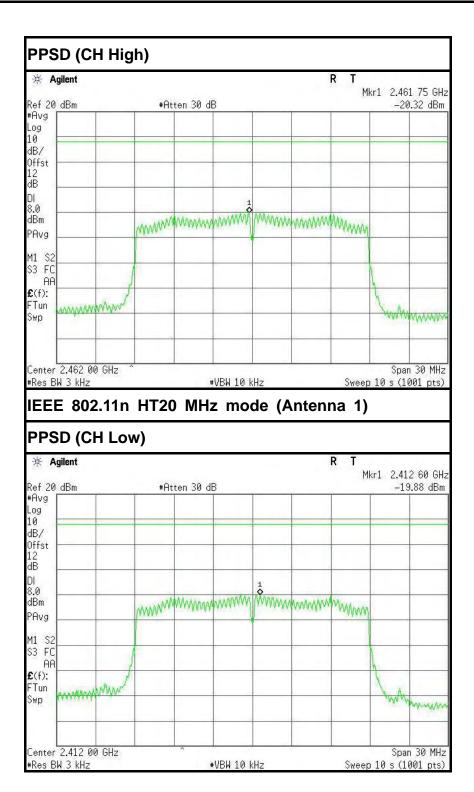


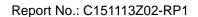
IEEE 802.11n HT20 MHz mode (Antenna 0)

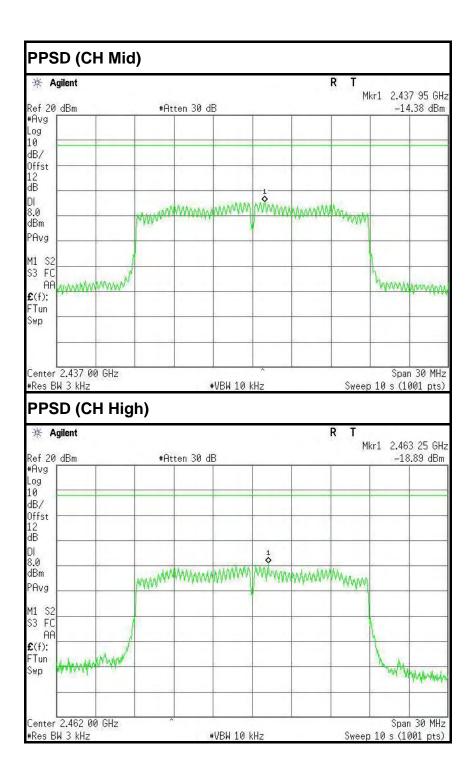


FCC ID: TE7TCW7960 Page 121 / 126



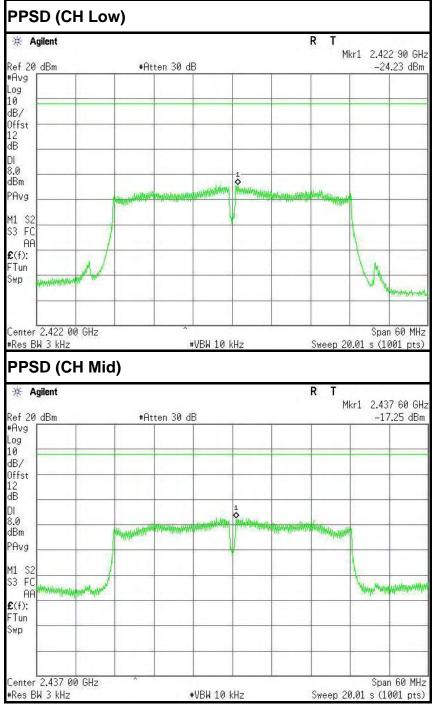




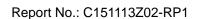


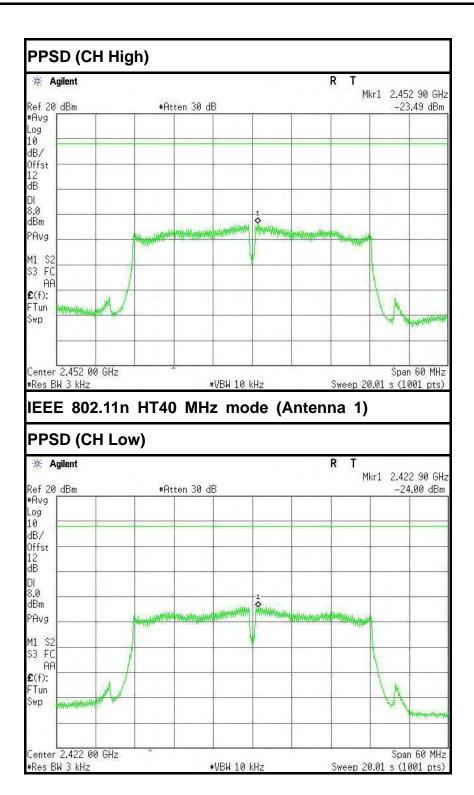
FCC ID: TE7TCW7960 Page 123 / 126

IEEE 802.11n HT40 MHz mode (Antenna 0)

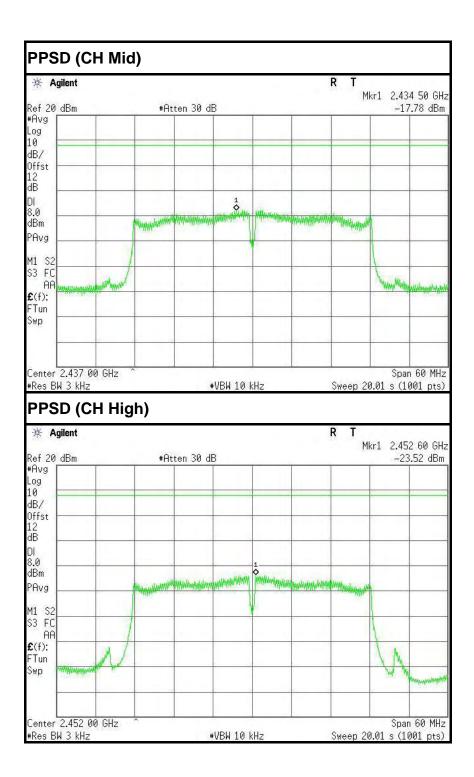


FCC ID: TE7TCW7960 Page 124 / 126









FCC ID: TE7TCW7960 Page 126 / 126