5. POWER SPECTRAL DENSITY TEST

5.1 LIMIT

FCC Part15.247,Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(e)	Power Spectral Density	≤8 dBm (RBW ≥3kHz)	2400-2483.5	PASS

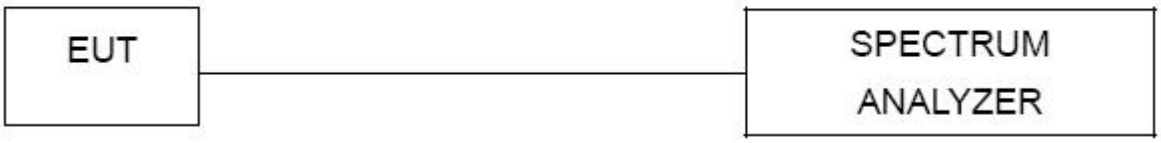
5.2 TEST PROCEDURE

1. Set analyzer center frequency to DTS channel center frequency.
2. Set the span to 1.5 times the DTS channel bandwidth.
3. Set the 100 kHz ≥ RBW ≥3 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.
9. Use the peak marker function to determine the maximum amplitude level.
10. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

5.3 DEVIATION FROM STANDARD

No deviation.

5.4 TEST SETUP



5.5 EUT OPERATION CONDITIONS

Please refer to section 3.1.4 of this report.

5.6 TEST RESULTS

Temperature:	22.8℃	Relative Humidity:	51%RH
Test Voltage:	DC 5V	Test Mode:	TX Mode1/2/3/4/5/6/7/8/9

Test mode	Frequency	Power Density (dBm/3kHz)	Limit (3kHz/dBm)	Result
Mode1	2412 MHz	-5.97	≤8	PASS
Mode2	2437 MHz	-6.75	≤8	PASS
Mode3	2462 MHz	-5.39	≤8	PASS
Mode4	2412 MHz	-11.89	≤8	PASS
Mode5	2437 MHz	-13.22	≤8	PASS
Mode6	2462 MHz	-13.21	≤8	PASS
Mode7	2412 MHz	-15.72	≤8	PASS
Mode8	2437 MHz	-17.31	≤8	PASS
Mode9	2462 MHz	-15.98	≤8	PASS

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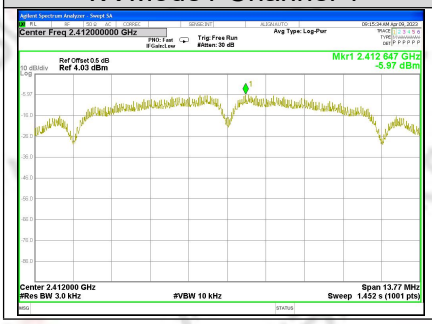
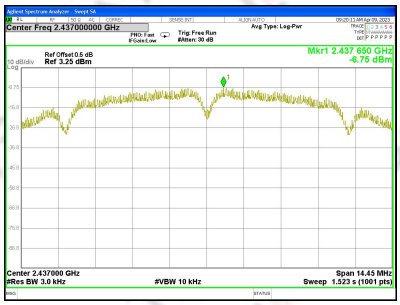
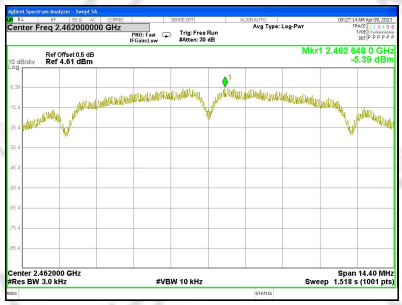
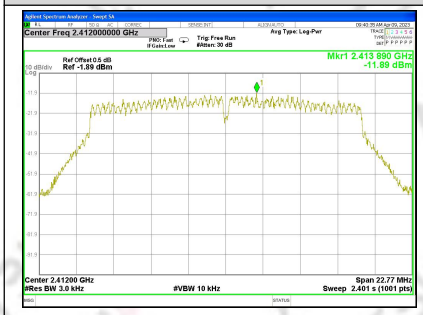
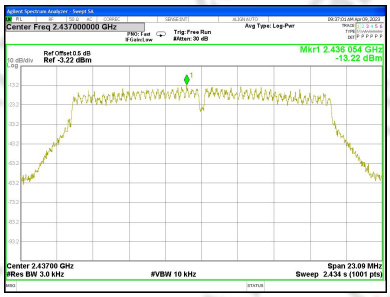
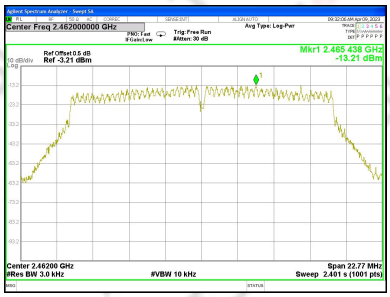
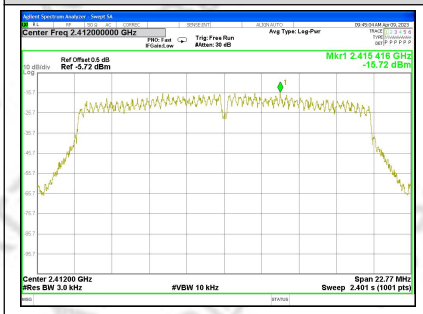
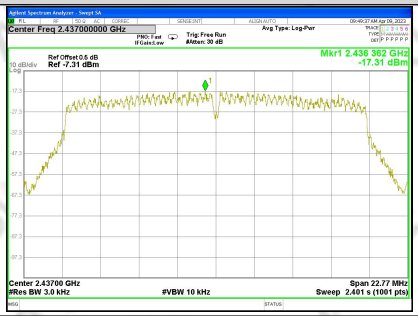
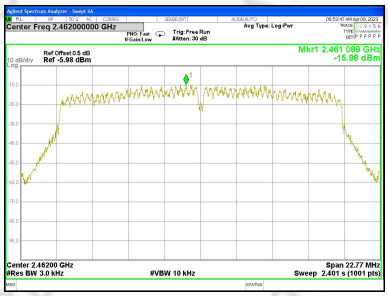
TX Mode1 Channel 1	TX Mode2 Channel 6	TX Mode3 Channel 11
		

802.11g

TX Mode4 Channel 1	TX Mode5 Channel 6	TX Mode6 Channel 11
		

802.11n20

TX Mode7 Channel 1	TX Mode8 Channel 6	TX Mode9 Channel 11
		

6. BANDWIDTH TEST

6.1 LIMIT

FCC Part15.247,Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(a)(2)	Bandwidth	≥500kHz (6dB bandwidth)	2400-2483.5	PASS
15.247	99% Bandwidth	For reporting purposes only.	2400-2483.5	PASS

6.2 TEST PROCEDURE

The automatic bandwidth measurement capability of an instrument may be employed using the X dB bandwidth mode with X set to 6 dB, if the functionality described above (i.e., RBW = 100 kHz, VBW≥3RBW, peak detector with maximum hold) is implemented by the instrumentation function. When using this capability, care shall be taken so that the bandwidth measurement is not influenced by any intermediate power nulls in the fundamental emission that might be≥6 dB.

6.3 DEVIATION FROM STANDARD

No deviation.

6.4 TEST SETUP

6.5 EUT OPERATION CONDITIONS

Please refer to section 3.1.4 of this report.

6.6 TEST RESULTS

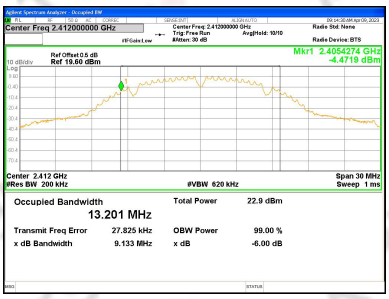
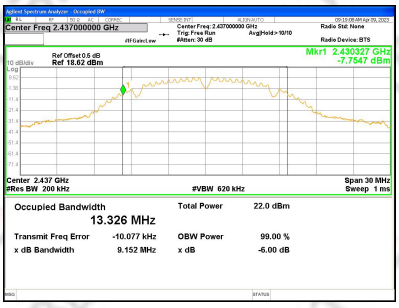
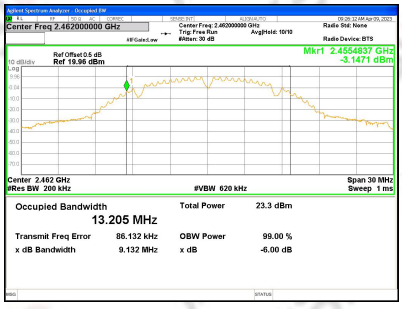
Temperature:	22.8℃	Relative Humidity:	51%RH
Test Voltage:	DC 5V	Test Mode:	TX Mode1/2/3/4/5/6/7/8/9

Test mode	Frequency	6dB Bandwidth (MHz)	99% Bandwidth (MHz)	6dB Bandwidth Limit(kHz)	Result
Mode1	2412 MHz	9.180	13.201	≥500kHz	PASS
Mode2	2437 MHz	9.630	13.326	≥500kHz	PASS
Mode3	2462 MHz	9.600	13.205	≥500kHz	PASS
Mode4	2412 MHz	15.180	16.307	≥500kHz	PASS
Mode5	2437 MHz	15.390	16.371	≥500kHz	PASS
Mode6	2462 MHz	15.180	16.325	≥500kHz	PASS
Mode7	2412 MHz	15.180	17.214	≥500kHz	PASS
Mode8	2437 MHz	15.180	17.274	≥500kHz	PASS
Mode9	2462 MHz	15.180	17.213	≥500kHz	PASS

6dB Bandwidth &99% Bandwidth

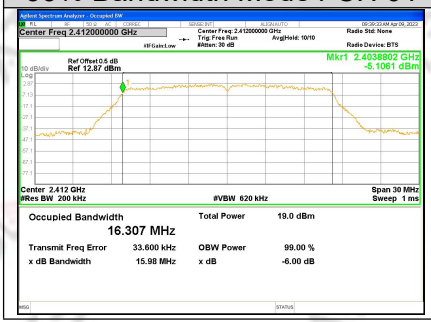
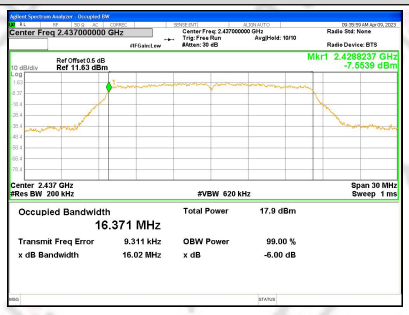
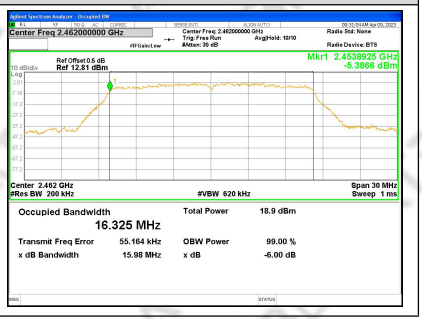
802.11b

6dB Bandwidth Mode1 CH 01	6dB Bandwidth Mode2 CH 06	6dB Bandwidth Mode3 CH 11
		

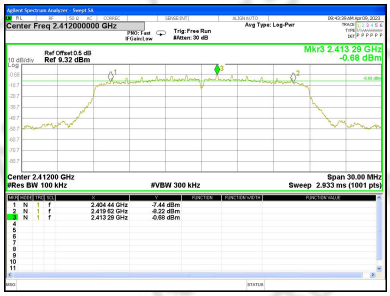
99% Bandwidth Mode1 CH 01	99% Bandwidth Mode2 CH 06	99% Bandwidth Mode3 CH 11
		

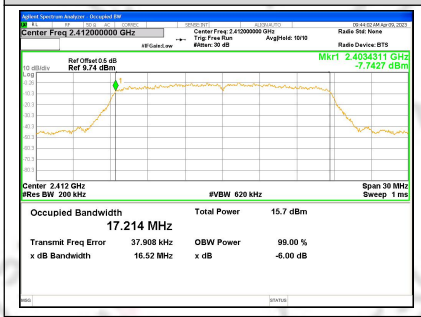
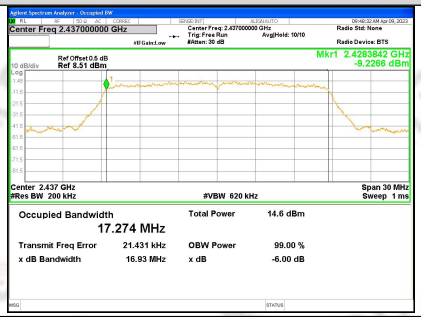
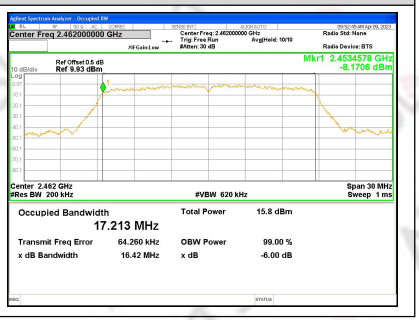
802.11g

6dB Bandwidth Mode4 CH 01	6dB Bandwidth Mode5 CH 06	6dB Bandwidth Mode6CH 11
		

99% Bandwidth Mode4 CH 01	99% Bandwidth Mode5 CH 06	99% Bandwidth Mode6 CH 11
		

802.11n20

6dB Bandwidth Mode7 CH 01	6dB Bandwidth Mode8 CH 06	6dB Bandwidth Mode9 CH 11
		

99% Bandwidth Mode7 CH 01	99% Bandwidth Mode8CH 06	99% Bandwidth Mode9 CH 11
		

7. PEAK OUTPUT POWER TEST

7.1 LIMIT

FCC Part15.247				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(b)(3)	Output Power	1 watt or 30dBm	2400-2483.5	PASS

7.2 TEST PROCEDURE

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 use a fast-responding diode detector.

7.3 DEVIATION FROM STANDARD

No deviation.

7.4 TEST SETUP

7.5 EUT OPERATION CONDITIONS

Please refer to section 3.1.4 of this report.

7.6 TEST RESULTS

Temperature:	22.8℃	Relative Humidity:	51%RH
Test Voltage:	DC 5V	Test Mode:	TX Mode1/2/3/4/5/6/7/8/9

Test mode	Test Channel	Frequency	Peak Conducted Output Power	Average Conducted Output Power	LIMIT
		(MHz)	(dBm)	(dBm)	dBm
Mode1	CH01	2412	23.72	21.18	30
Mode2	CH06	2437	23.77	21.24	30
Mode3	CH11	2462	23.75	20.48	30
Mode4	CH01	2412	26.42	20.51	30
Mode5	CH06	2437	26.22	20.28	30
Mode6	CH11	2462	26.31	20.09	30
Mode7	CH01	2412	26.47	20.32	30
Mode8	CH06	2437	26.51	20.39	30
Mode9	CH11	2462	26.45	20.34	30

Test Mode	Frequency	Peak Conducted Output Power	Antenna Gain	EIRP Power	LIMIT
	(MHz)	(dBm)	(dBi)	(dBm)	dBm
Mode1	2412	23.72	2.8	26.52	36
Mode2	2437	23.77	2.8	26.57	36
Mode3	2462	23.75	2.8	26.55	36
Mode4	2412	26.42	2.8	29.22	36
Mode5	2437	26.22	2.8	29.02	36
Mode6	2462	26.31	2.8	29.11	36
Mode7	2412	26.47	2.8	29.27	36
Mode8	2437	26.51	2.8	29.31	36
Mode9	2462	26.45	2.8	29.25	36

Note: Our power sensor test AVG power has no duty cycle display. The power sensor measures AVG power is Burst power. The software has considered the factor of the duty cycle factor, so it is unnecessary to add it again.

8. ANTENNA REQUIREMENT

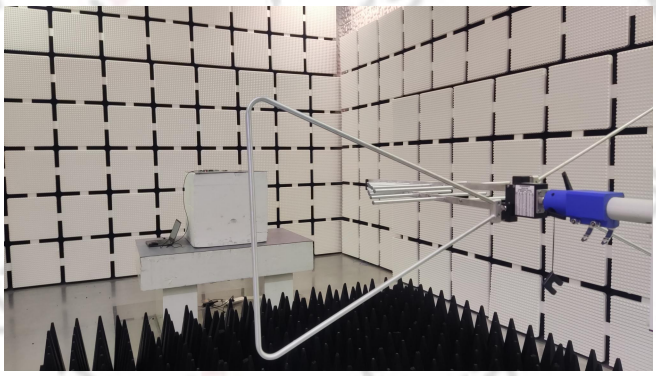
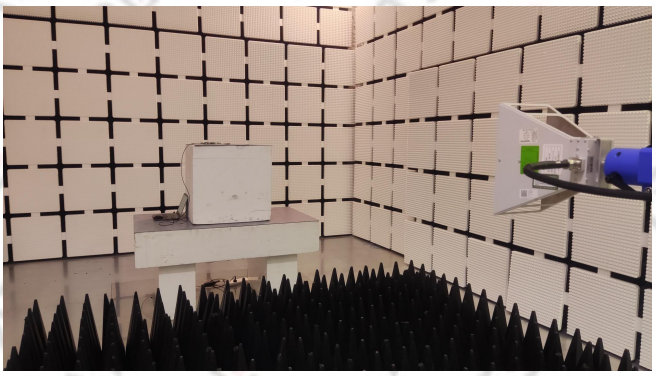
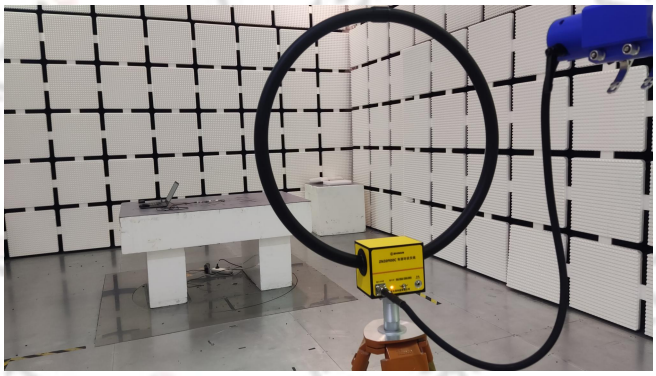
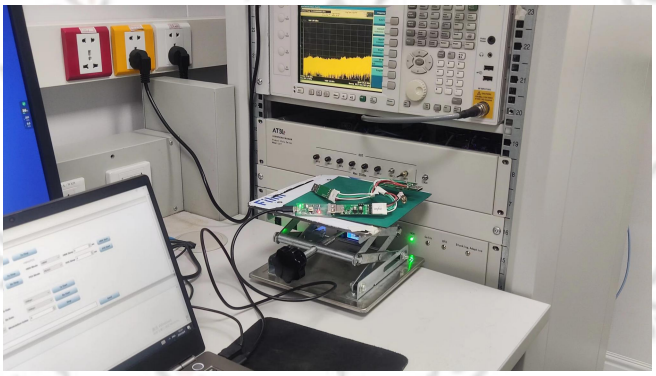
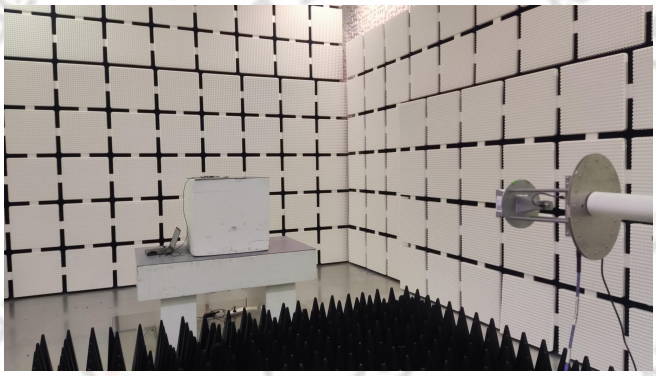
8.1 STANDARD REQUIREMENT

15.203 requirement: For intentional device, according to 15.203: an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

8.2 EUT ANTENNA

The EUT antenna is Ceramic Antenna. It comply with the standard requirement.

9.APPENDIX-PHOTOS OF TEST SETUP

Radiated Emissions for 30MHz-1GHz	Radiated Emissions for 1GHz-18GHz
	
Radiated Emissions for 9kHz-30MHz	**Conducted for RF**
	
Radiated Emissions for above 18GHz	**AC Power Line Conducted Emissions**
	

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