

	<p>and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.</p> <p>3. Set to the maximum power setting and enable the EUT transmit continuously.</p> <p>4. Use the following spectrum analyzer settings:</p> <p>(1) Span shall wide enough to fully capture the emission being measured;</p> <p>(2) Set RBW=120 kHz for <math>f &lt; 1</math> GHz, RBW=1MHz for <math>f &gt; 1</math>GHz ; VBW<math>\geq</math>RBW; Sweep = auto; Detector function = peak; Trace = max hold for peak</p> <p>(3) For average measurement: use duty cycle correction factor method per 15.35(c). Duty cycle = On time/100 milliseconds On time = <math>N_1 * L_1 + N_2 * L_2 + \dots + N_{n-1} * L_{n-1} + N_n * L_n</math> Where <math>N_1</math> is number of type 1 pulses, <math>L_1</math> is length of type 1 pulses, etc. Average Emission Level = Peak Emission Level + <math>20 * \log(\text{Duty cycle})</math> Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level</p>
<b>Test results:</b>	PASS

5.11.2. Test Instruments

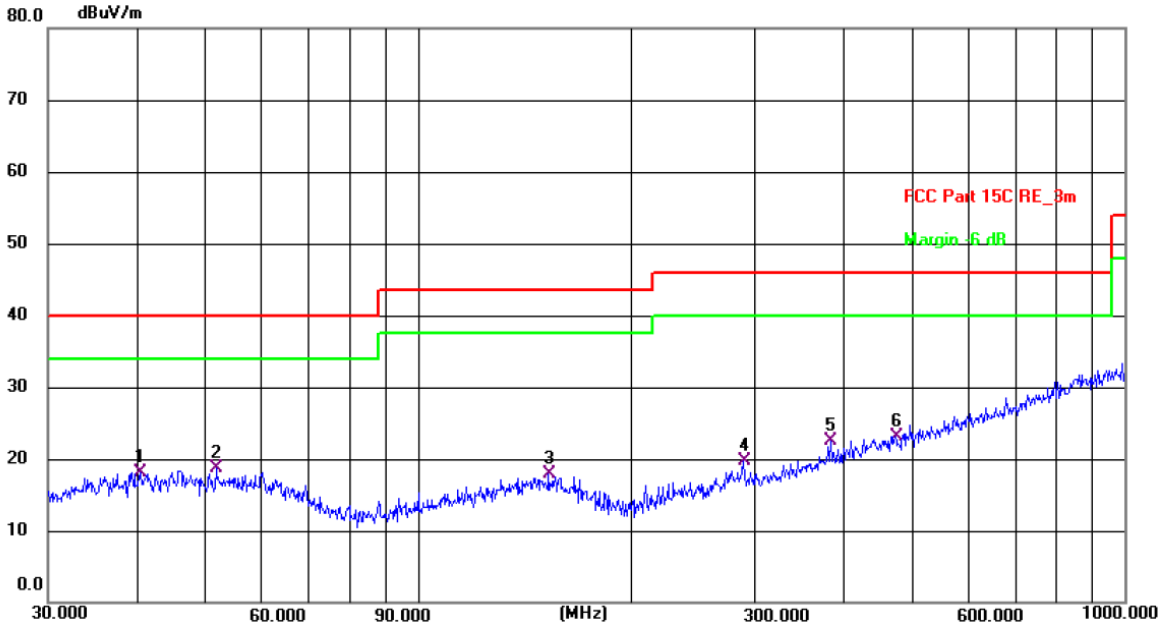
Radiated Emission Test Site (966)				
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
EMI Test Receiver	R&S	ESIB7	100197	Jul. 07, 2022
Spectrum Analyzer	R&S	FSQ40	200061	Jul. 07, 2022
Pre-amplifier	SKET	LNPA_0118G-45	SK2021012102	Mar. 11, 2022
Pre-amplifier	SKET	LNPA_1840G-50	SK202109203500	Apr. 08, 2022
Pre-amplifier	HP	8447D	2727A05017	Jul. 07, 2022
Loop antenna	ZHINAN	ZN30900A	12024	Sep. 05, 2022
Broadband Antenna	Schwarzbeck	VULB9163	340	Sep. 04, 2022
Horn Antenna	Schwarzbeck	BBHA 9120D	631	Sep. 04, 2022
Horn Antenna	Schwarzbeck	BBHA 9170	00956	Apr. 10, 2023
Antenna Mast	Keleto	RE-AM	N/A	N/A
Coaxial cable	SKET	RC_DC18G-N	N/A	Apr. 08, 2022
Coaxial cable	SKET	RC-DC18G-N	N/A	Apr. 08, 2022
Coaxial cable	SKET	RC-DC40G-N	N/A	Jul. 07, 2022
EMI Test Software	Shurple Technology	EZ-EMC	N/A	N/A

**5.11.3. Test Data**

Please refer to following diagram for individual

**Below 1GHz**

Horizontal:



Site #2 3m Anechoic Chamber

Polarization: **Horizontal**

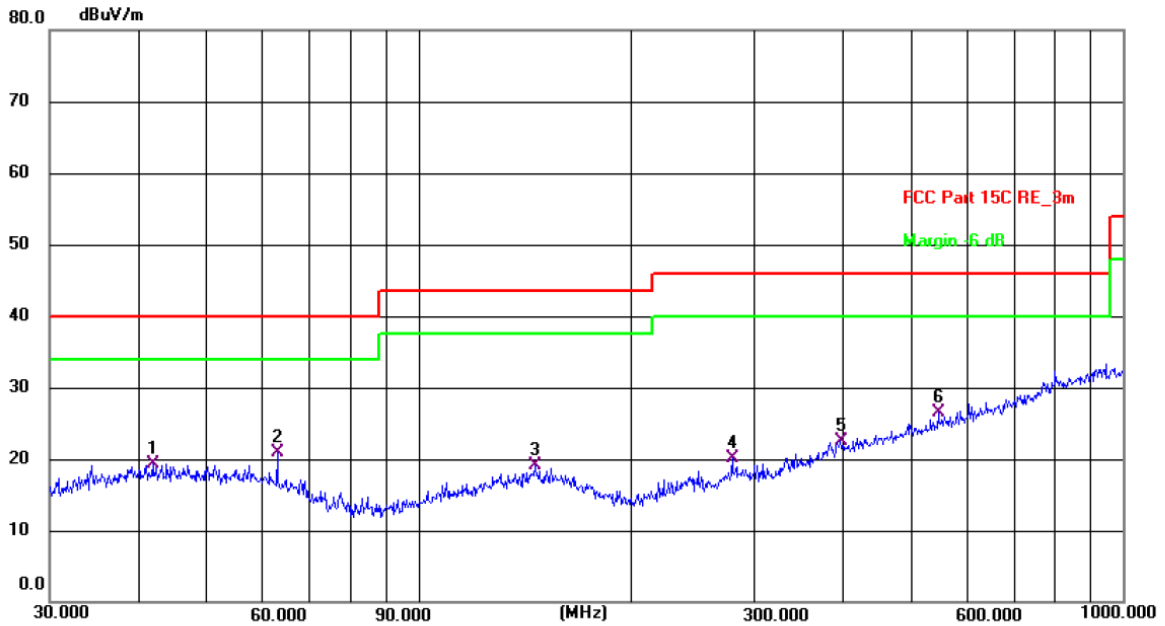
Temperature: 25.2(C) Humidity: 55 %

Limit: FCC Part 15C RE\_3m

Power: DC 3.7 V

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1	40.5591	4.08	13.99	18.07	40.00	-21.93	QP	P	
2 *	51.8430	5.10	13.65	18.75	40.00	-21.25	QP	P	
3	153.2004	4.56	13.36	17.92	43.50	-25.58	QP	P	
4	289.0021	5.68	13.98	19.66	46.00	-26.34	QP	P	
5	383.9318	5.72	16.69	22.41	46.00	-23.59	QP	P	
6	473.8347	4.30	18.83	23.13	46.00	-22.87	QP	P	

Vertical:



Site #2 3m Anechoic Chamber

Polarization: **Vertical**

Temperature: 25.2(C) Humidity: 55 %

Limit: FCC Part 15C RE\_3m

Power: DC 3.7 V

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1	42.0066	5.32	13.96	19.28	40.00	-20.72	QP	P	
2 *	63.0916	8.48	12.50	20.98	40.00	-19.02	QP	P	
3	146.3735	5.82	13.30	19.12	43.50	-24.38	QP	P	
4	279.0436	5.95	14.11	20.06	46.00	-25.94	QP	P	
5	397.6334	5.30	17.17	22.47	46.00	-23.53	QP	P	
6	547.0977	6.14	20.27	26.41	46.00	-19.59	QP	P	

**Note:** 1. The low frequency, which started from 9KHz~30MHz, was pre-scanned and the result which was 20dB lower than the limit line per 15.31(o) was not reported

2. Measurements were conducted in all three channels (high, middle, low) and three modulation (GFSK, Pi/4 DQPSK, 8DPSK) and the worst case Mode (Highest channel and 8DPSK) was submitted only.

3. Freq. = Emission frequency in MHz

Measurement (dBuV/m) = Reading level (dBuV) + Corr. Factor (dB)

Correction Factor = Antenna Factor + Cable loss – Pre-amplifier

Limit (dBuV/m) = Limit stated in standard

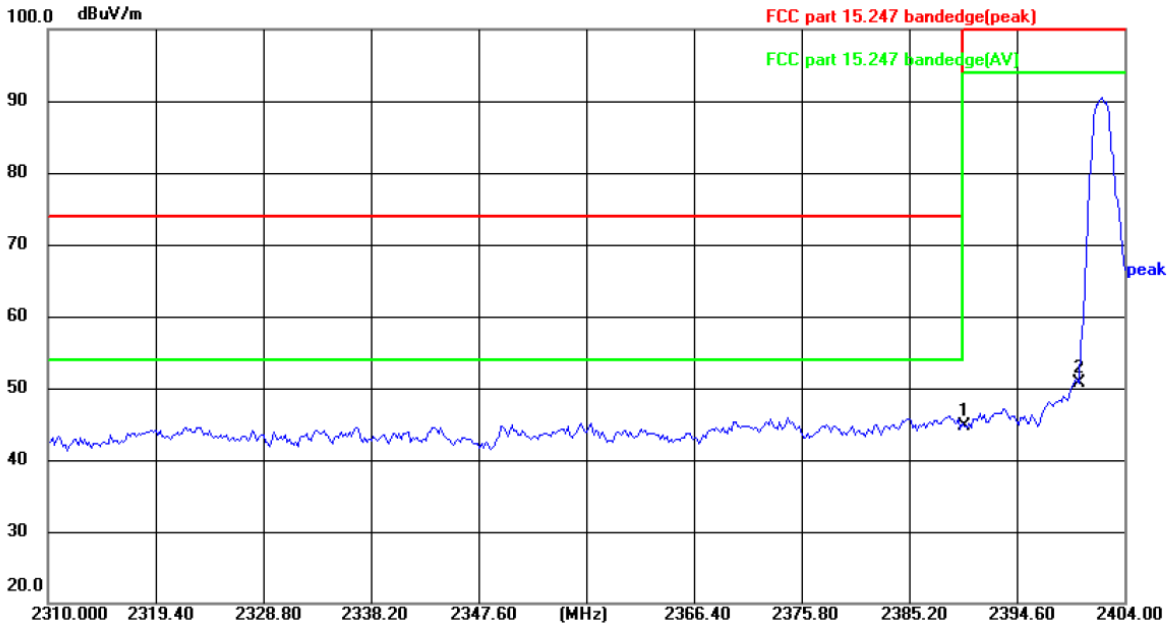
Margin (dB) = Measurement (dBuV/m) – Limits (dBuV/m)

\* is meaning the worst frequency has been tested in the test frequency range

Test Result of Radiated Spurious at Band edges

Lowest channel 2402:

Horizontal:

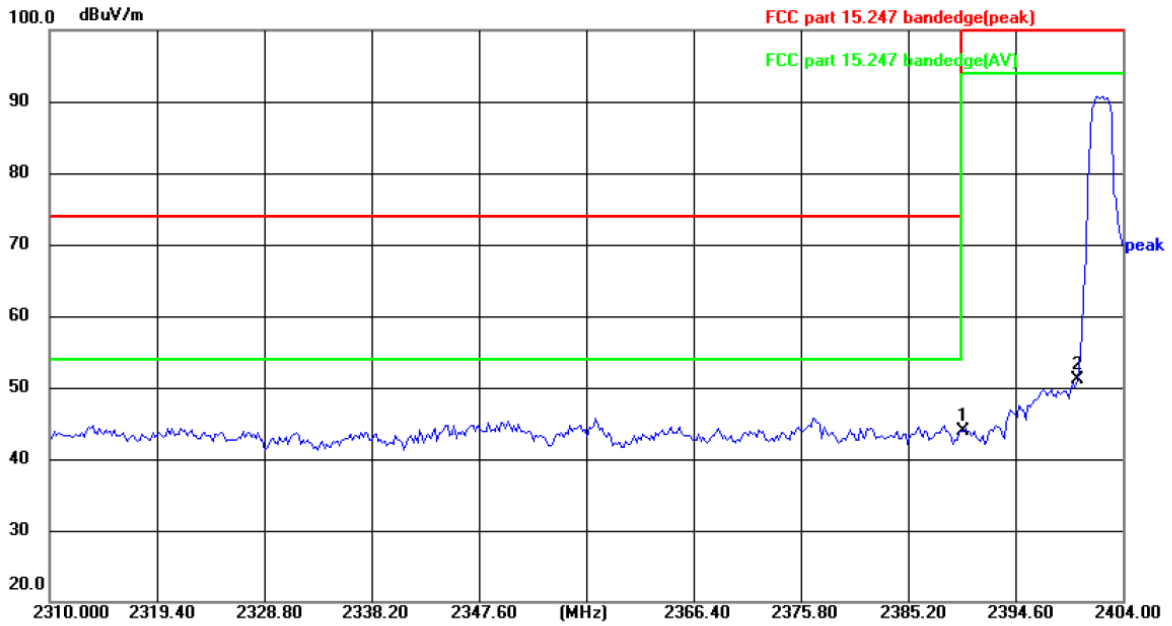


Site: Polarization: **Horizontal** Temperature: 25(°C)  
Limit: FCC part 15.247 bandedge(peak) Power: DC 3.7 V Humidity: 55 %

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1 *	2390.000	57.92	-13.15	44.77	74.00	-29.23	peak	P	
2	2400.000	63.92	-13.12	50.80	114.00	-63.20	peak	P	



Vertical:



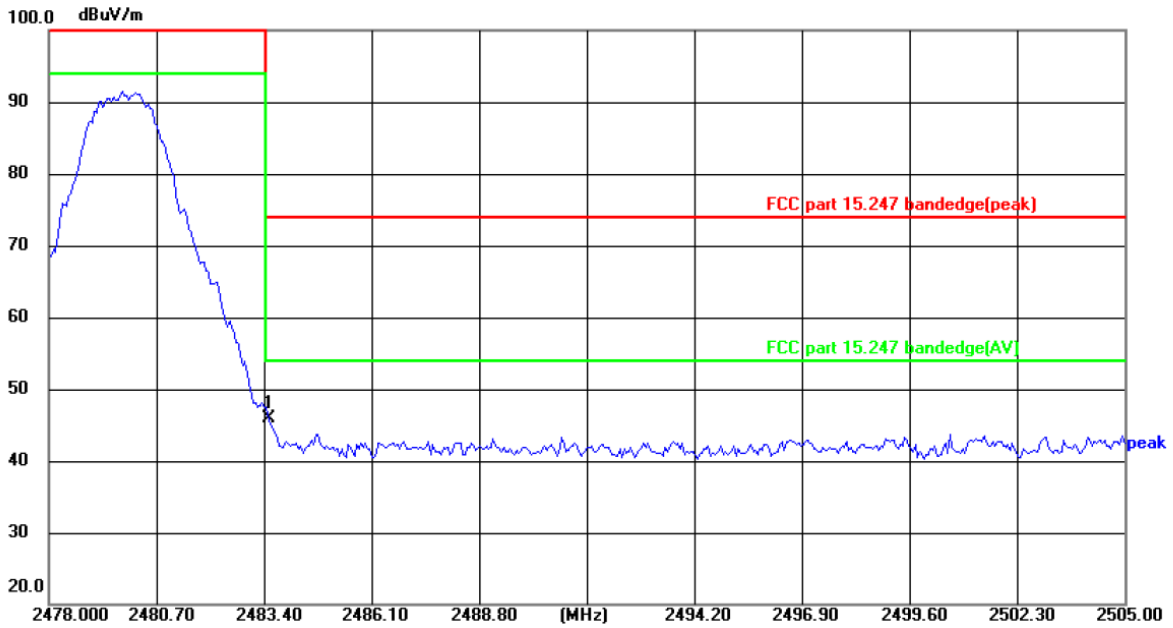
Site: Polarization: **Vertical** Temperature: 25(°C)  
 Limit: FCC part 15.247 bandedge(peak) Power: DC 3.7 V Humidity: 55 %

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1 *	2390.000	57.04	-13.15	43.89	74.00	-30.11	peak	P	
2	2400.000	64.31	-13.12	51.19	114.00	-62.81	peak	P	



Highest channel 2480:

Horizontal:

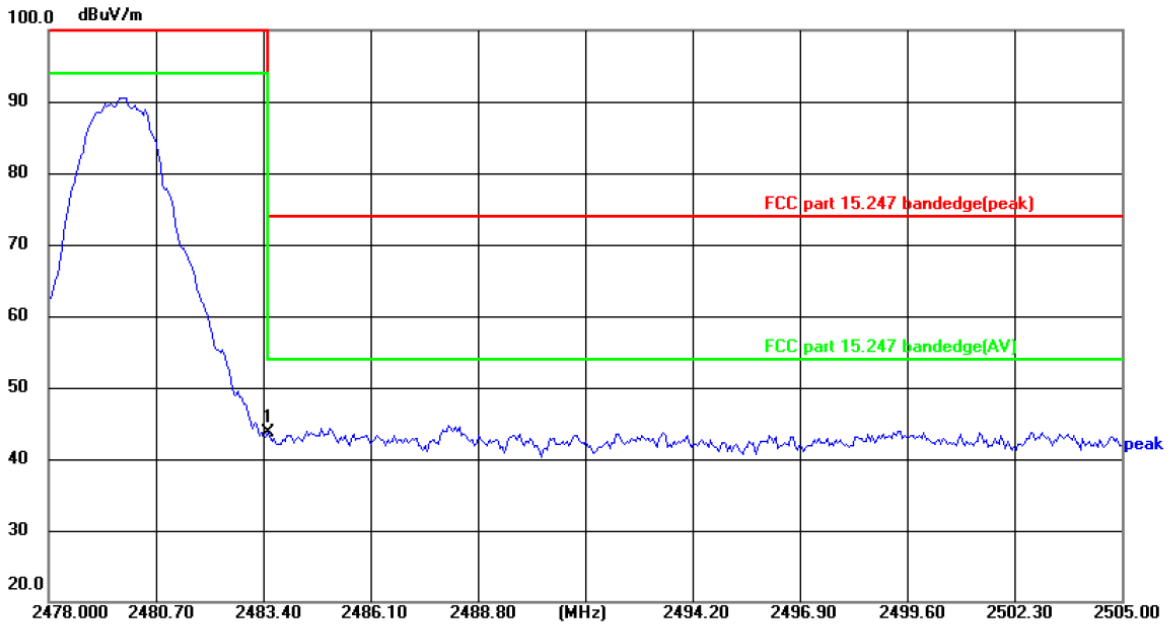


Site: Polarization: **Horizontal** Temperature: 25(°C)  
Limit: FCC part 15.247 bandedge(peak) Power: DC 3.7 V Humidity: 55 %

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1 *	2483.500	58.69	-12.84	45.85	74.00	-28.15	peak	P	



Vertical:



Site: \_\_\_\_\_ Polarization: **Vertical** Temperature: 25(°C)  
 Limit: FCC part 15.247 bandedge(peak) Power: DC 3.7 V Humidity: 55 %

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1 *	2483.500	56.53	-12.84	43.69	74.00	-30.31	peak	P	

**Note:** Measurements were conducted in all three modulation (GFSK, Pi/4DQPSK, 8DPSK), and the worst case Mode (8DPSK) was submitted only.





## Above 1GHz

Modulation Type: 8DPSK									
Low channel: 2402 MHz									
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dB $\mu$ V)	AV reading (dB $\mu$ V)	Correction Factor (dB/m)	Emission Level		Peak limit (dB $\mu$ V/m)	AV limit (dB $\mu$ V/m)	Margin (dB)
					Peak (dB $\mu$ V/m)	AV (dB $\mu$ V/m)			
4804	H	45.93	---	0.66	46.59	---	74	54	-7.41
7206	H	35.08	---	9.50	44.58	---	74	54	-9.42
---	H	---	---	---	---	---	---	---	---
4804	V	43.49	---	0.66	44.24	---	74	54	-9.76
7206	V	36.71	---	9.50	46.40	---	74	54	-7.60
---	V	---	---	---	---	---	---	---	---

Middle channel: 2441 MHz									
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dB $\mu$ V)	AV reading (dB $\mu$ V)	Correction Factor (dB/m)	Emission Level		Peak limit (dB $\mu$ V/m)	AV limit (dB $\mu$ V/m)	Margin (dB)
					Peak (dB $\mu$ V/m)	AV (dB $\mu$ V/m)			
4882	H	46.27	---	0.99	47.26	---	74	54	-6.74
7323	H	37.64	---	9.87	47.51	---	74	54	-6.49
---	H	---	---	---	---	---	---	---	---
4882	V	45.35	---	0.99	46.34	---	74	54	-7.66
7323	V	37.80	---	9.87	47.67	---	74	54	-6.33
---	V	---	---	---	---	---	---	---	---

High channel: 2480 MHz									
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dB $\mu$ V)	AV reading (dB $\mu$ V)	Correction Factor (dB/m)	Emission Level		Peak limit (dB $\mu$ V/m)	AV limit (dB $\mu$ V/m)	Margin (dB)
					Peak (dB $\mu$ V/m)	AV (dB $\mu$ V/m)			
4960	H	46.52	---	1.33	47.85	---	74	54	-6.15
7440	H	35.16	---	10.22	45.38	---	74	54	-8.62
---	H	---	---	---	---	---	---	---	---
4960	V	46.74	---	1.33	48.07	---	74	54	-5.93
7440	V	35.59	---	10.22	45.81	---	74	54	-8.19
---	V	---	---	---	---	---	---	---	---

### Note:

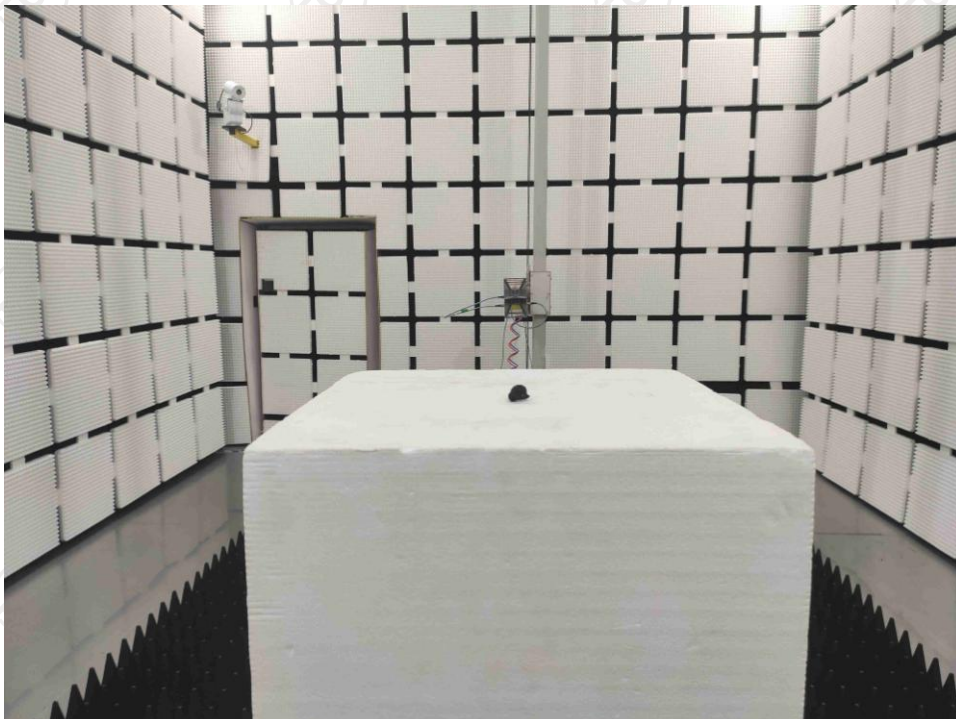
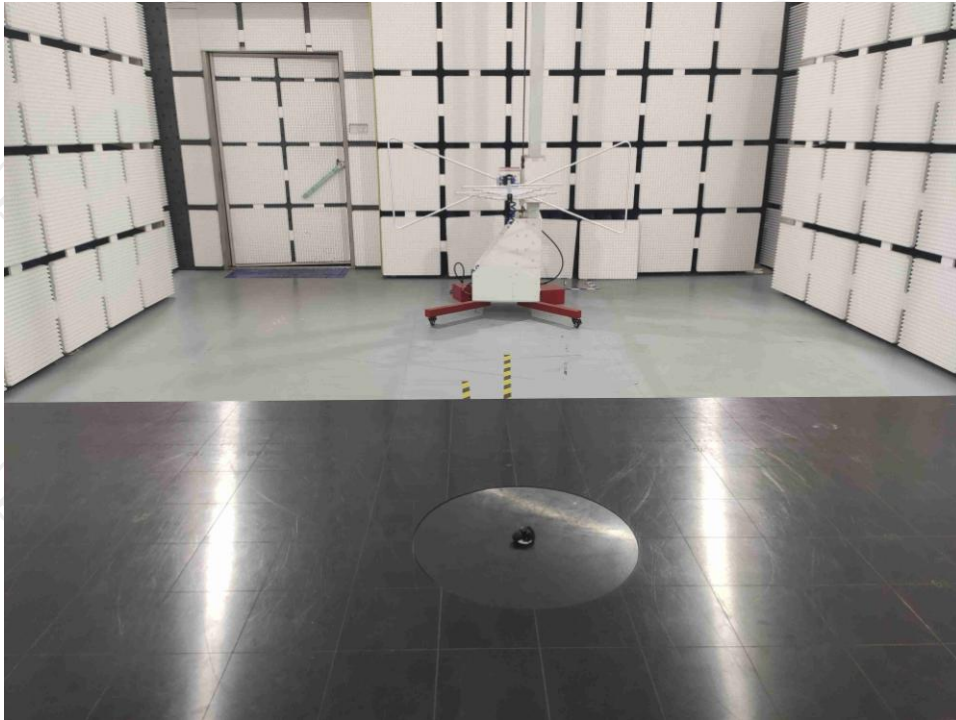
1. Emission Level=Peak Reading + Correction Factor; Correction Factor= Antenna Factor + Cable loss – Pre-amplifier
2. Margin (dB) = Emission Level (Peak) (dB $\mu$ V/m)-Average limit (dB $\mu$ V/m)
3. The emission levels of other frequencies are very lower than the limit and not show in test report.
4. Measurements were conducted from 1 GHz to the 10th harmonic of highest fundamental frequency.
5. Data of measurement shown "—" in the above table mean that the reading of emissions is attenuated more than 20 dB below the limits or the field strength is too small to be measured.
6. Measurements were conducted in all three modulation (GFSK, Pi/4 DQPSK, 8DPSK), and the worst case Mode (8DPSK) was submitted only.
7. All the restriction bands are compliance with the limit of 15.209.

### Appendix A: Photographs of Test Setup

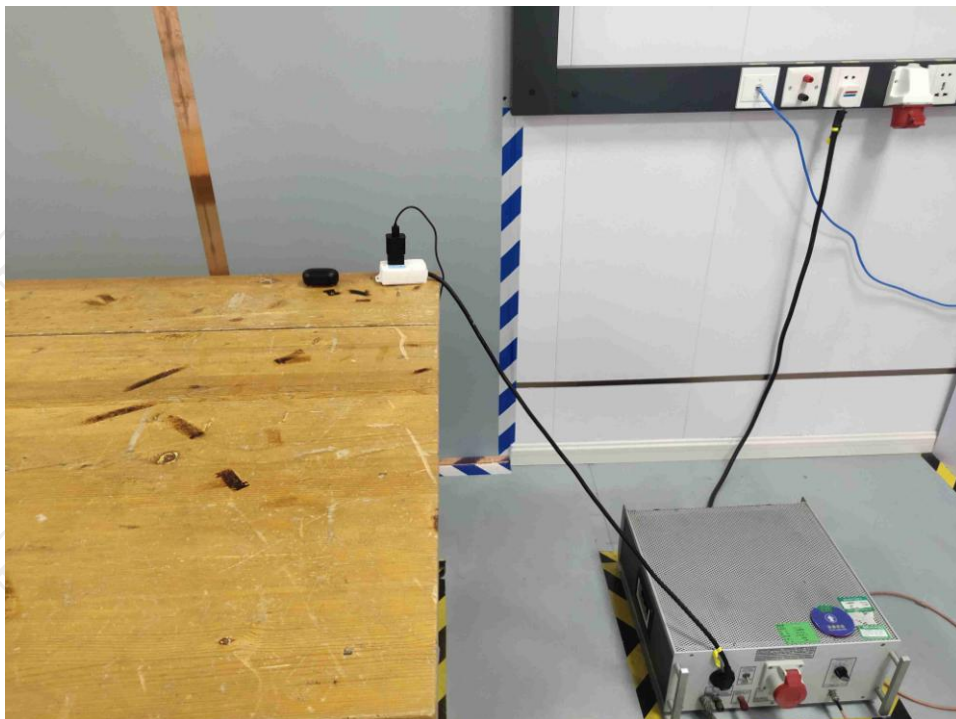
Product: True Wireless Earbuds

Model: BTH98

Radiated Emission



Conducted Emission



**Appendix B: Photographs of EUT**

**Product: True Wireless Earbuds**

**Model: BTH98**

**External Photos**









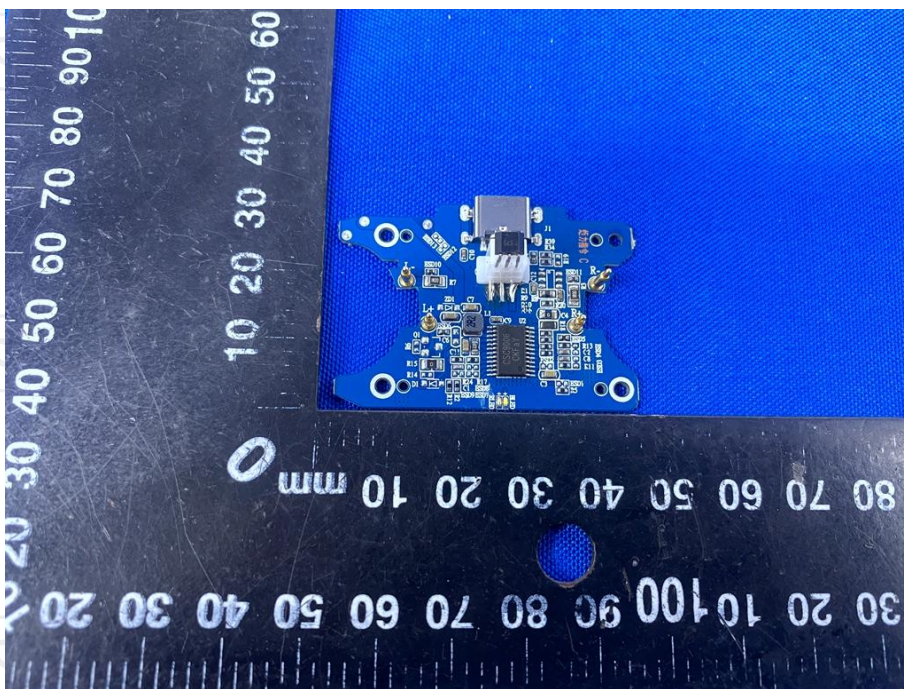


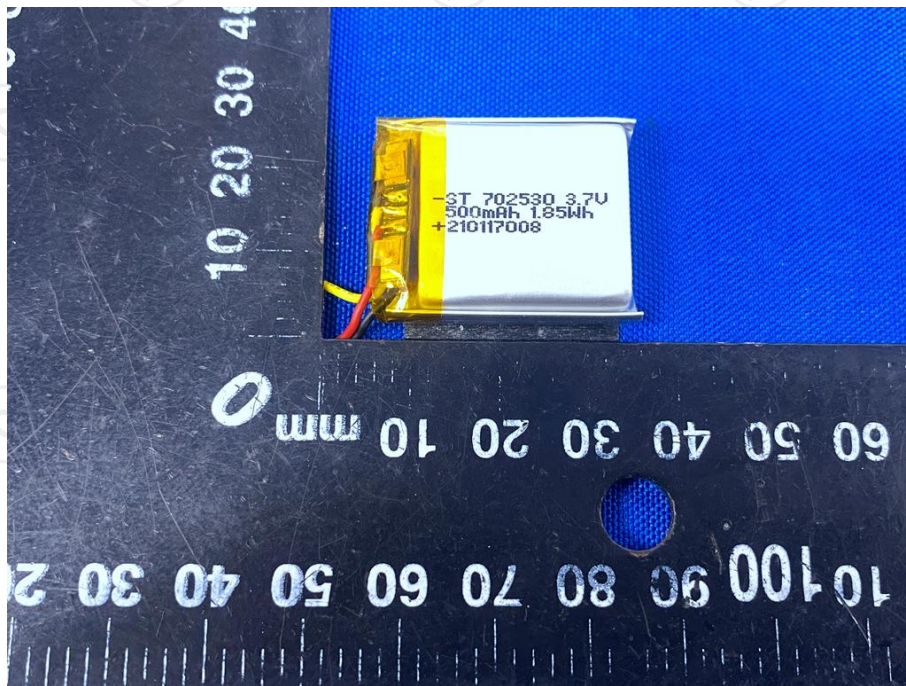
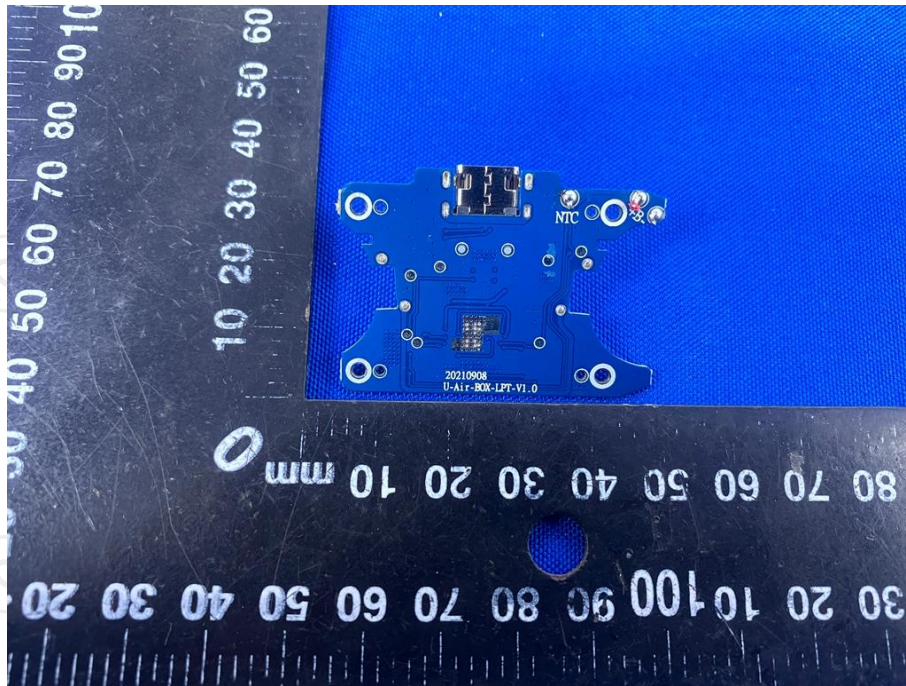


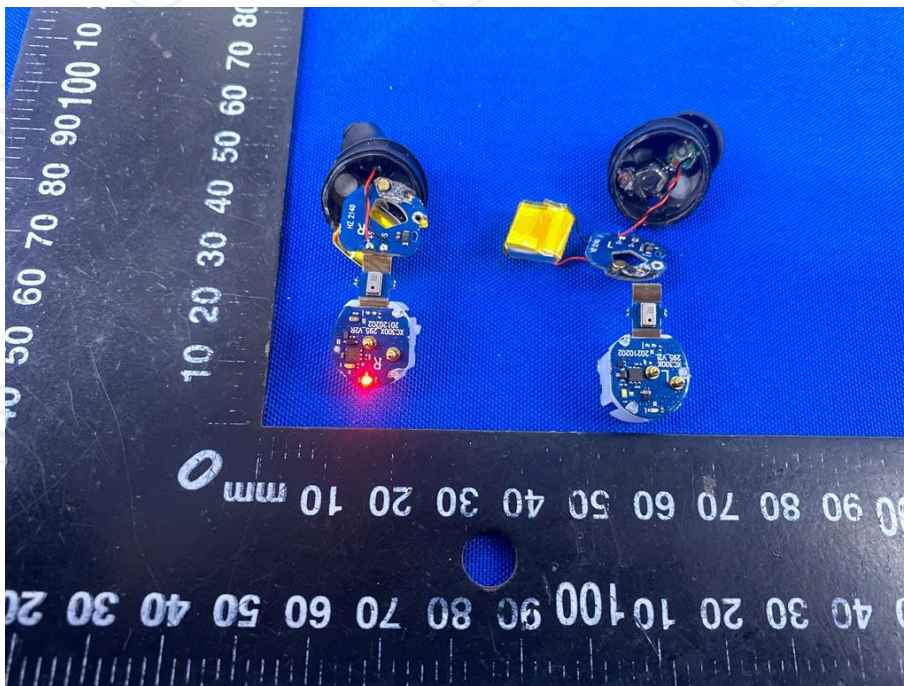


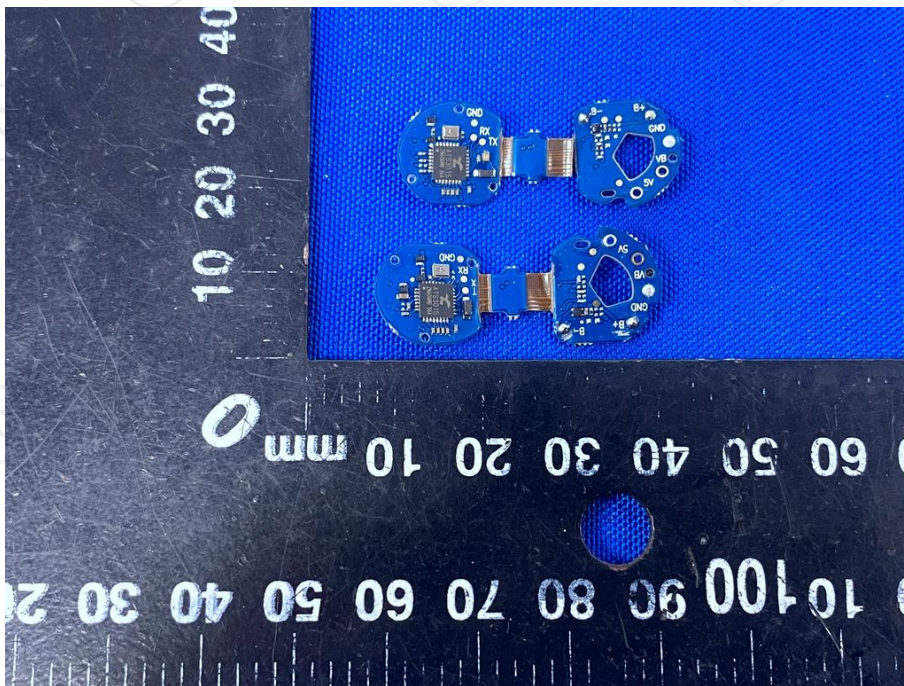
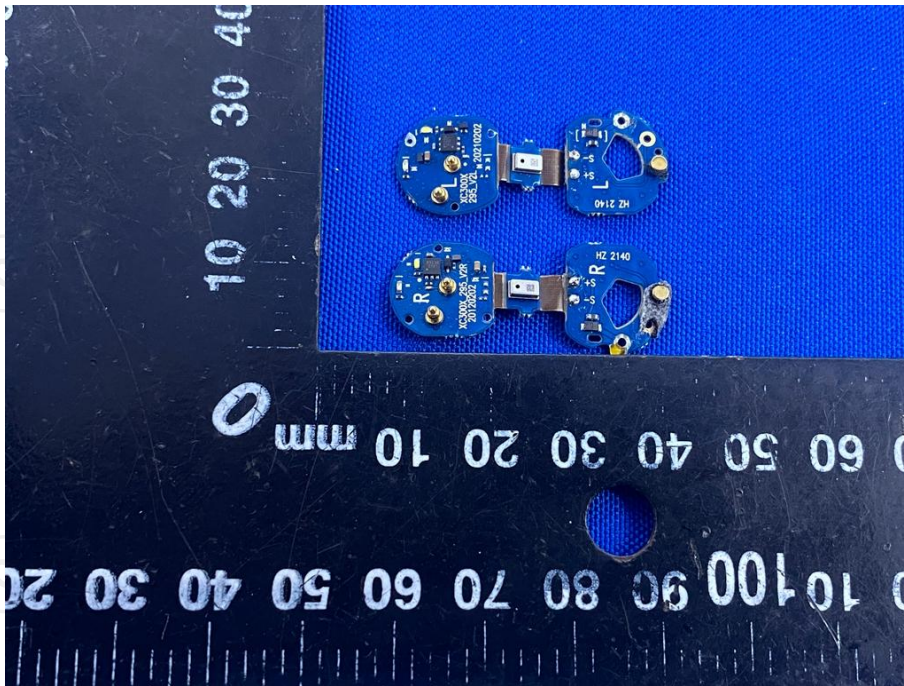


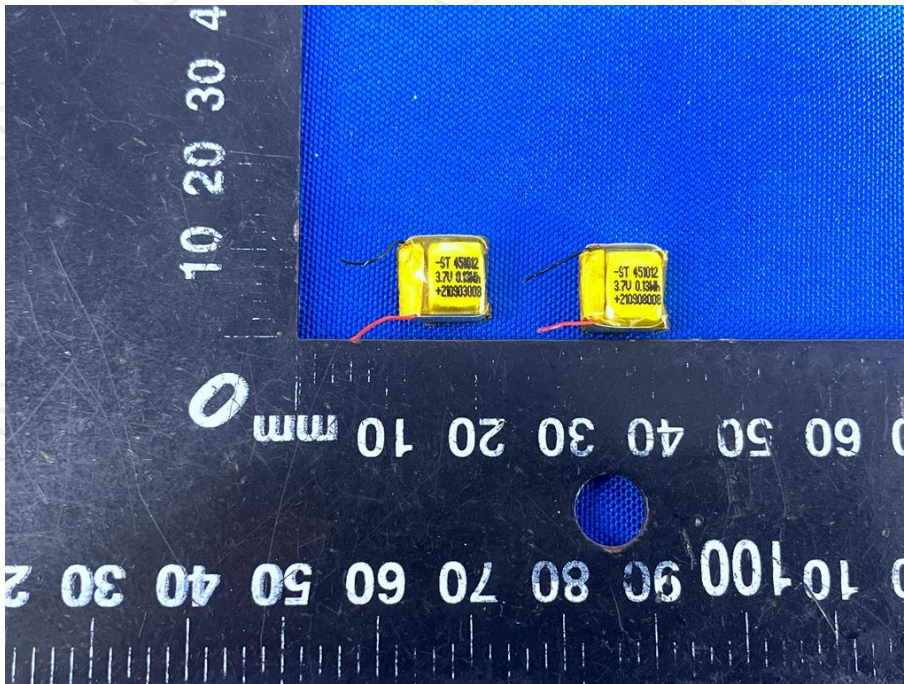
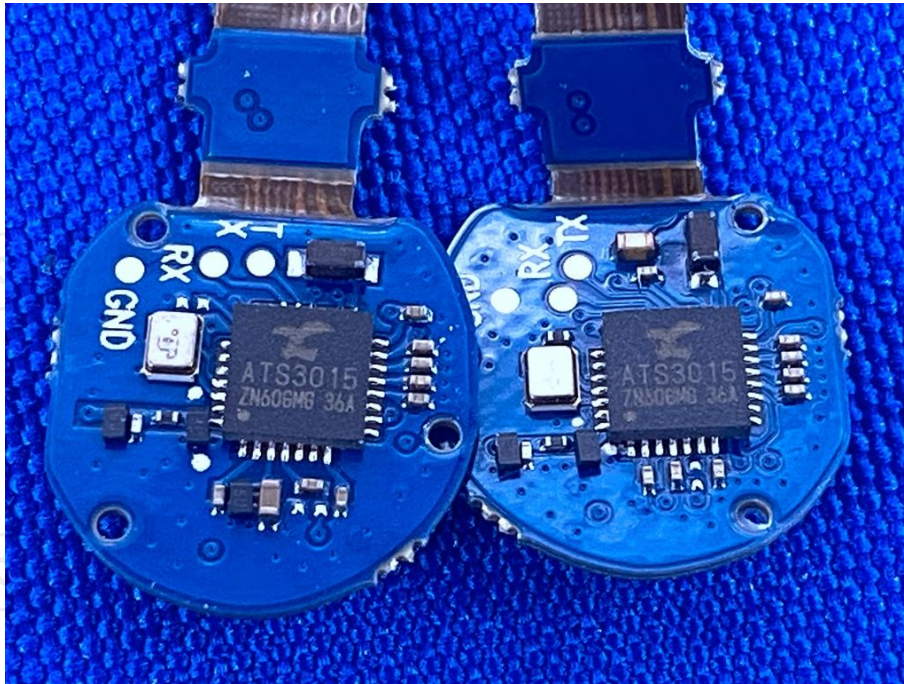
**Product: True Wireless Earbuds**  
**Model: BTH98**  
**Internal Photos**











\*\*\*\*\*END OF REPORT\*\*\*\*\*