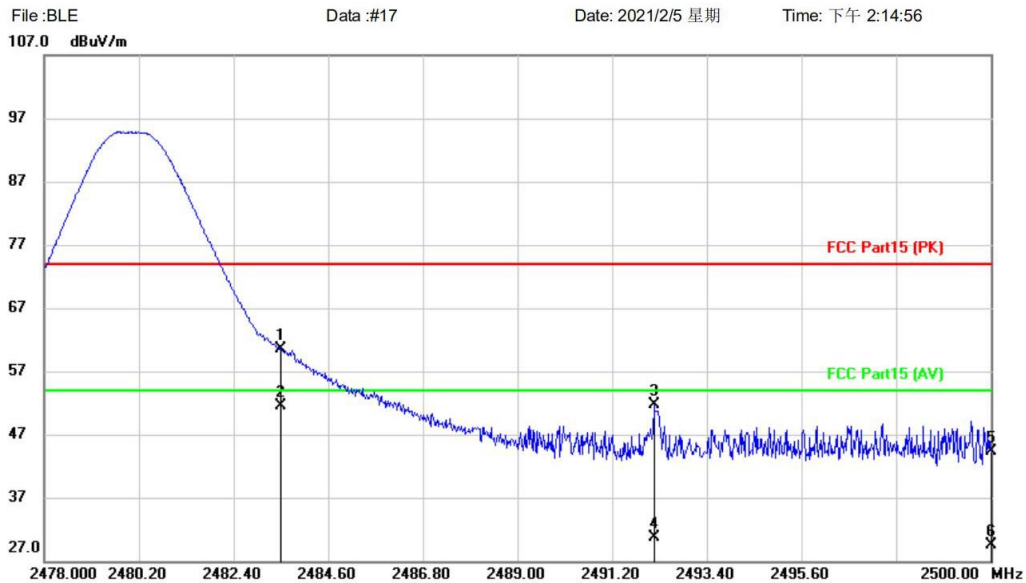


[TestMode: TX high channel]; [Polarity: Horizontal]

Radiated Emission Measurement



Site Limit: FCC Part15 (PK) Polarization: **Horizontal** Temperature:
EUT: Orange Power: DC3V Humidity: %
M/N: Orange Distance: 3m
Mode: TX-H
Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Antenna Height cm	Table Degree	Comment
1		2483.500	75.30	-14.79	60.51	74.00	-13.49	peak			
2	*	2483.500	66.28	-14.79	51.49	54.00	-2.51	AVG			
3		2492.168	66.52	-14.75	51.77	74.00	-22.23	peak			
4		2492.168	45.35	-14.75	30.60	54.00	-23.40	AVG			
5		2500.000	59.09	-14.72	44.37	74.00	-29.63	peak			
6		2500.000	44.27	-14.72	29.55	54.00	-24.45	AVG			

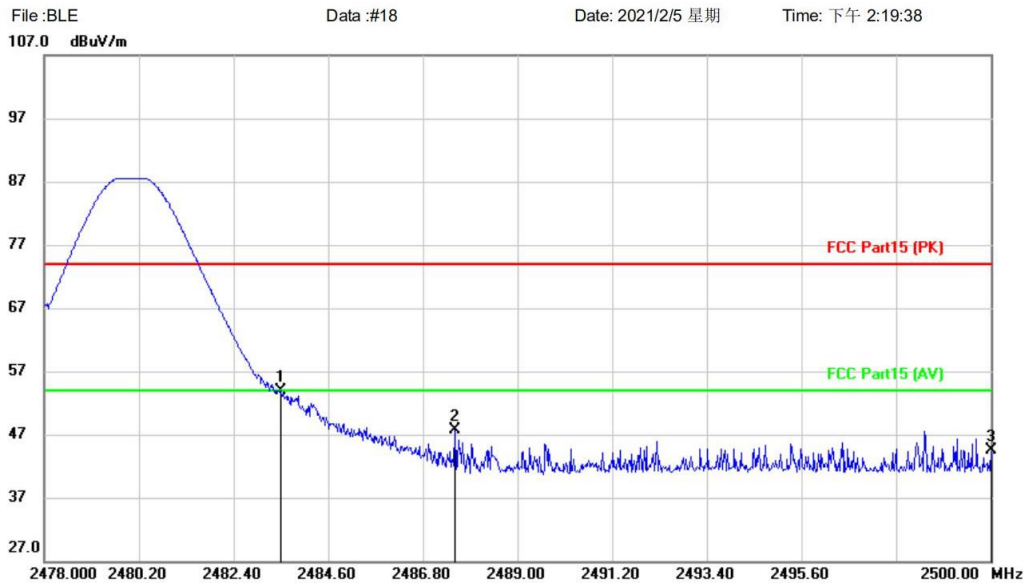
*:Maximum data x:Over limit !:over margin

〈Reference Only

Test Result: Pass

[TestMode: TX high channel]; [Polarity: Vertical]

Radiated Emission Measurement



Site Limit: FCC Part15 (PK) Polarization: **Vertical** Temperature:
EUT: Orange Power: DC3V Humidity: %
M/N: Orange Distance: 3m
Mode: TX-H
Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree	Comment
1	*	2483.500	68.66	-14.79	53.87	74.00	-20.13	peak		
2		2487.548	62.57	-14.78	47.79	74.00	-26.21	peak		
3		2500.000	59.21	-14.72	44.49	74.00	-29.51	peak		

*:Maximum data x:Over limit !:over margin

<Reference Only

Test Result: Pass

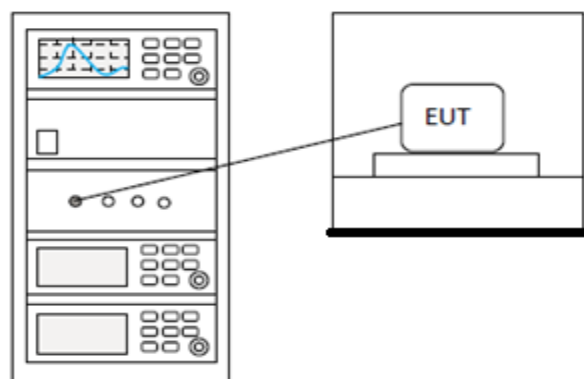
5 CONDUCTED SPURIOUS EMISSIONS

Test Standard	47 CFR Part 15, Subpart C 15.247
Test Method	ANSI C63.10 (2013) Section 7.8.6 & Section 11.11
Test Mode (Pre-Scan)	TX
Test Mode (Final Test)	TX
Tester	Jozu
Temperature	25°C
Humidity	60%

5.1 LIMITS

Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is 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. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. 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 §15.205(c)).
---------------	--

5.2 BLOCK DIAGRAM OF TEST SETUP



5.3 TEST DATA

Pass: Please Refer To Appendix: Appendix For Details

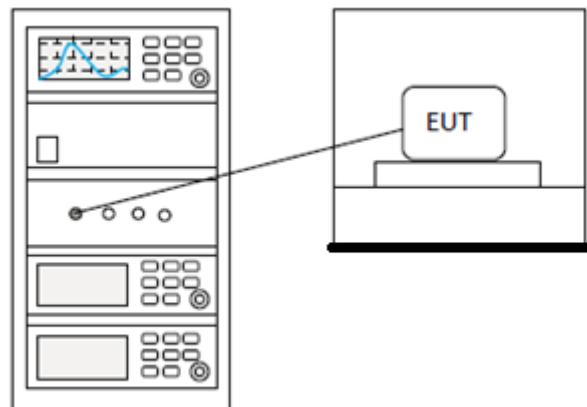
6 POWER SPECTRUM DENSITY

Test Standard	47 CFR Part 15, Subpart C 15.247
Test Method	ANSI C63.10 (2013) Section 11.10.2
Test Mode (Pre-Scan)	TX
Test Mode (Final Test)	TX
Tester	Jozu
Temperature	25℃
Humidity	60%

6.1 LIMITS

Limit:	$\leq 8\text{dBm}$ in any 3 kHz band during any time interval of continuous transmission
---------------	--

6.2 BLOCK DIAGRAM OF TEST SETUP



6.3 TEST DATA

Pass: Please Refer To Appendix: Appendix For Details

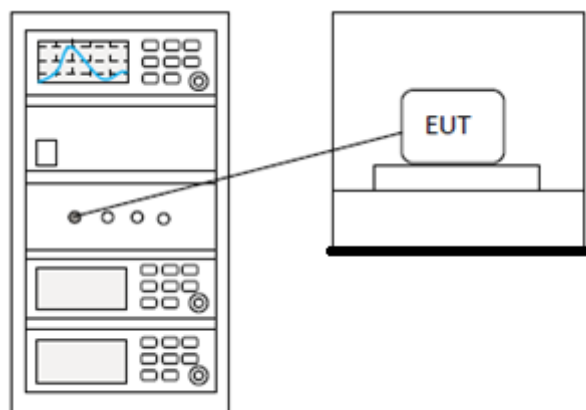
7 CONDUCTED PEAK OUTPUT POWER

Test Standard	47 CFR Part 15, Subpart C 15.247
Test Method	ANSI C63.10 (2013) Section 7.8.5
Test Mode (Pre-Scan)	TX
Test Mode (Final Test)	TX
Tester	Jozu
Temperature	25°C
Humidity	60%

7.1 LIMITS

Frequency range(MHz)	Output power of the intentional radiator(watt)
902-928	1 for ≥ 50 hopping channels
	0.25 for $25 \leq \text{hopping channels} < 50$
	1 for digital modulation
2400-2483.5	1 for ≥ 75 non-overlapping hopping channels
	0.125 for all other frequency hopping systems
	1 for digital modulation
5725-5850	1 for frequency hopping systems and digital modulation

7.2 BLOCK DIAGRAM OF TEST SETUP



7.3 EST DATA

Pass: Please Refer To Appendix: Appendix For Details

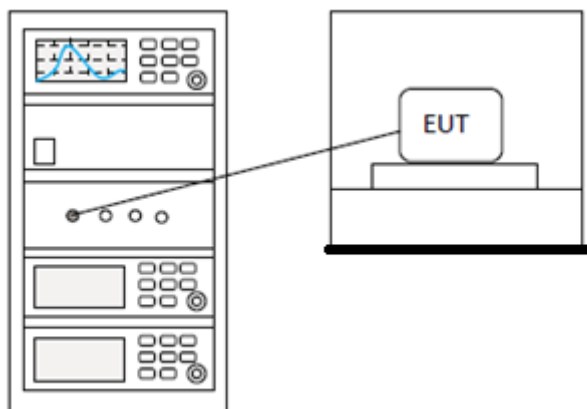
8 MINIMUM 6DB BANDWIDTH

Test Standard	47 CFR Part 15, Subpart C 15.247
Test Method	ANSI C63.10 (2013) Section 11.8.1
Test Mode (Pre-Scan)	TX
Test Mode (Final Test)	TX
Tester	Jozu
Temperature	25℃
Humidity	60%

8.1 LIMITS

Limit:	≥ 500 kHz
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8.2 BLOCK DIAGRAM OF TEST SETUP



8.3 TEST DATA

Pass: Please Refer To Appendix: Appendix For Details

10 APPENDIX

10.1 APPENDIX : DTS BANDWIDTH

Test Result

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE	Ant1	2402	0.708	2401.648	2402.356	≥ 0.5	PASS
		2442	0.708	2441.652	2442.360	≥ 0.5	PASS
		2480	0.712	2479.652	2480.364	≥ 0.5	PASS

Test Graphs



10.2 APPENDIX : OCCUPIED CHANNEL BANDWIDTH**Test Result**

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE	Ant1	2402	1.0454	2401.496	2402.541	---	PASS
		2442	1.0477	2441.494	2442.542	---	PASS
		2480	1.0505	2479.494	2480.544	---	PASS

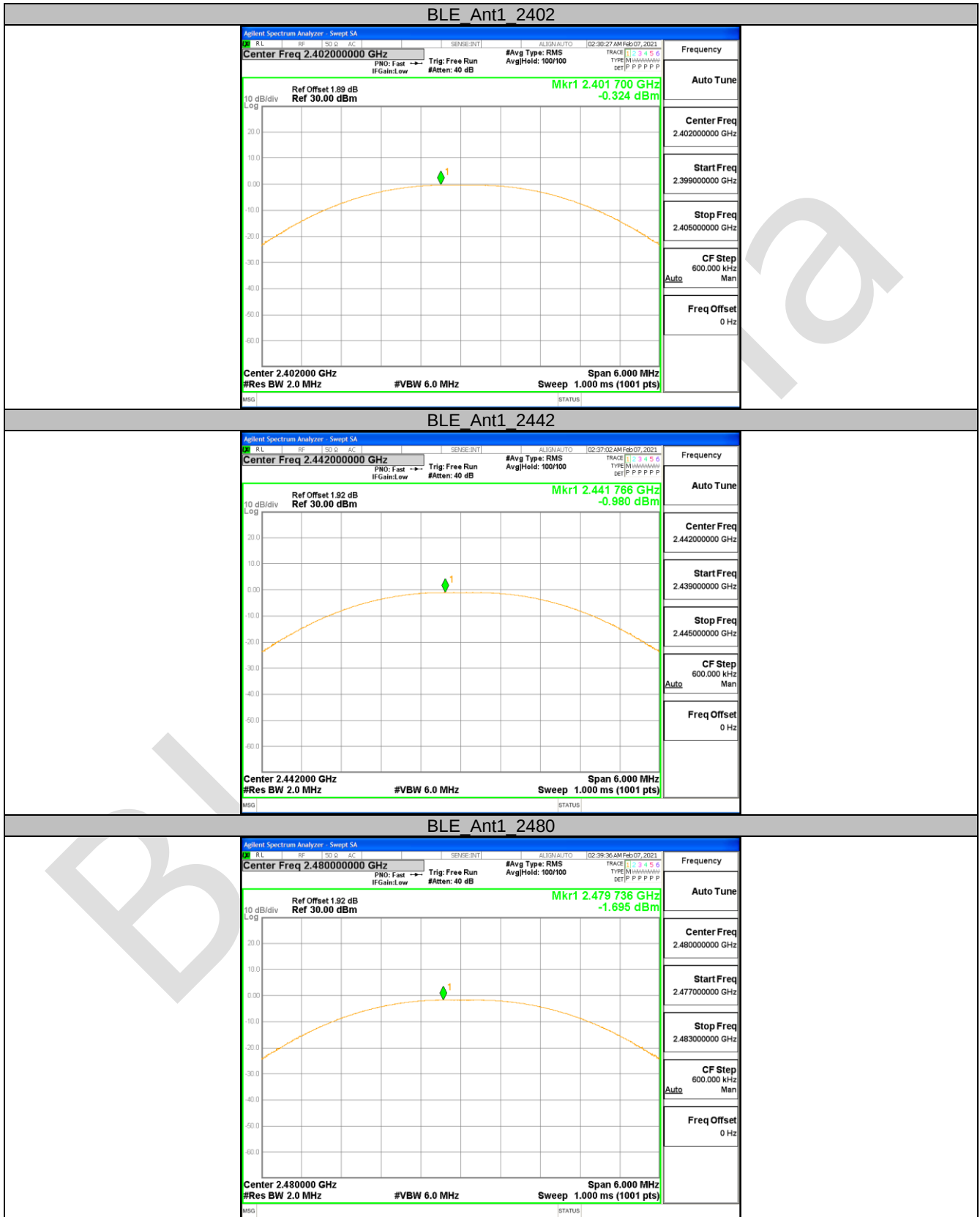
Test Graphs



10.3 APPENDIX C: MAXIMUM CONDUCTED OUTPUT POWER**Test Result**

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE	Ant1	2402	-0.32	<=30	PASS
		2442	-0.98	<=30	PASS
		2480	-1.7	<=30	PASS

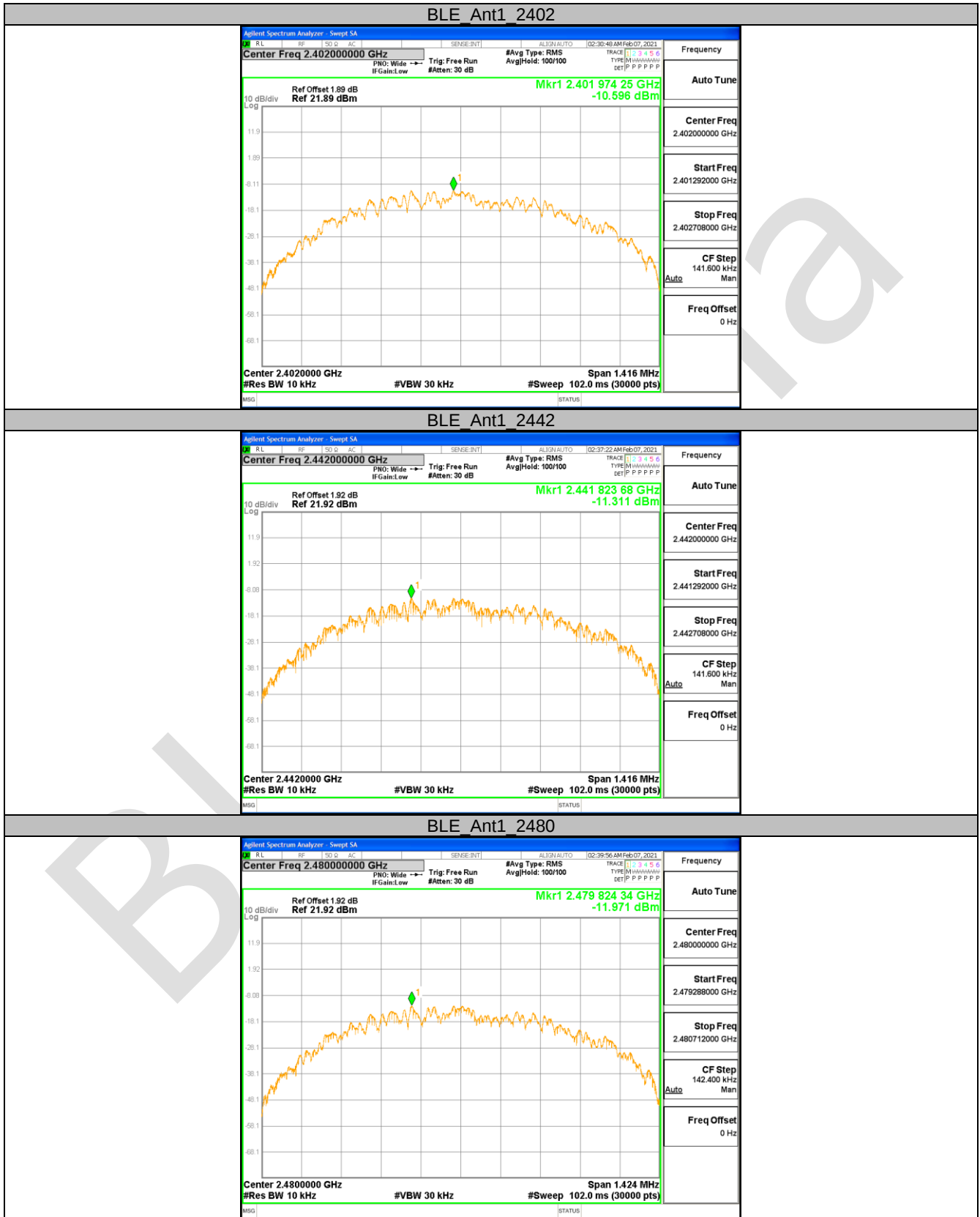
Test Graphs



10.4 APPENDIX : MAXIMUM POWER SPECTRAL DENSITY**Test Result**

TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
BLE	Ant1	2402	-10.6	<=8	PASS
		2442	-11.31	<=8	PASS
		2480	-11.97	<=8	PASS

Test Graphs



10.5 APPENDIX : BAND EDGE MEASUREMENTS**Test Result**

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE	Ant1	Low	2402	-0.61	-56.12	≤ -20.61	PASS
		High	2480	-1.93	-55.01	≤ -21.93	PASS

Test Graphs



10.6 APPENDIX : CONDUCTED SPURIOUS EMISSION

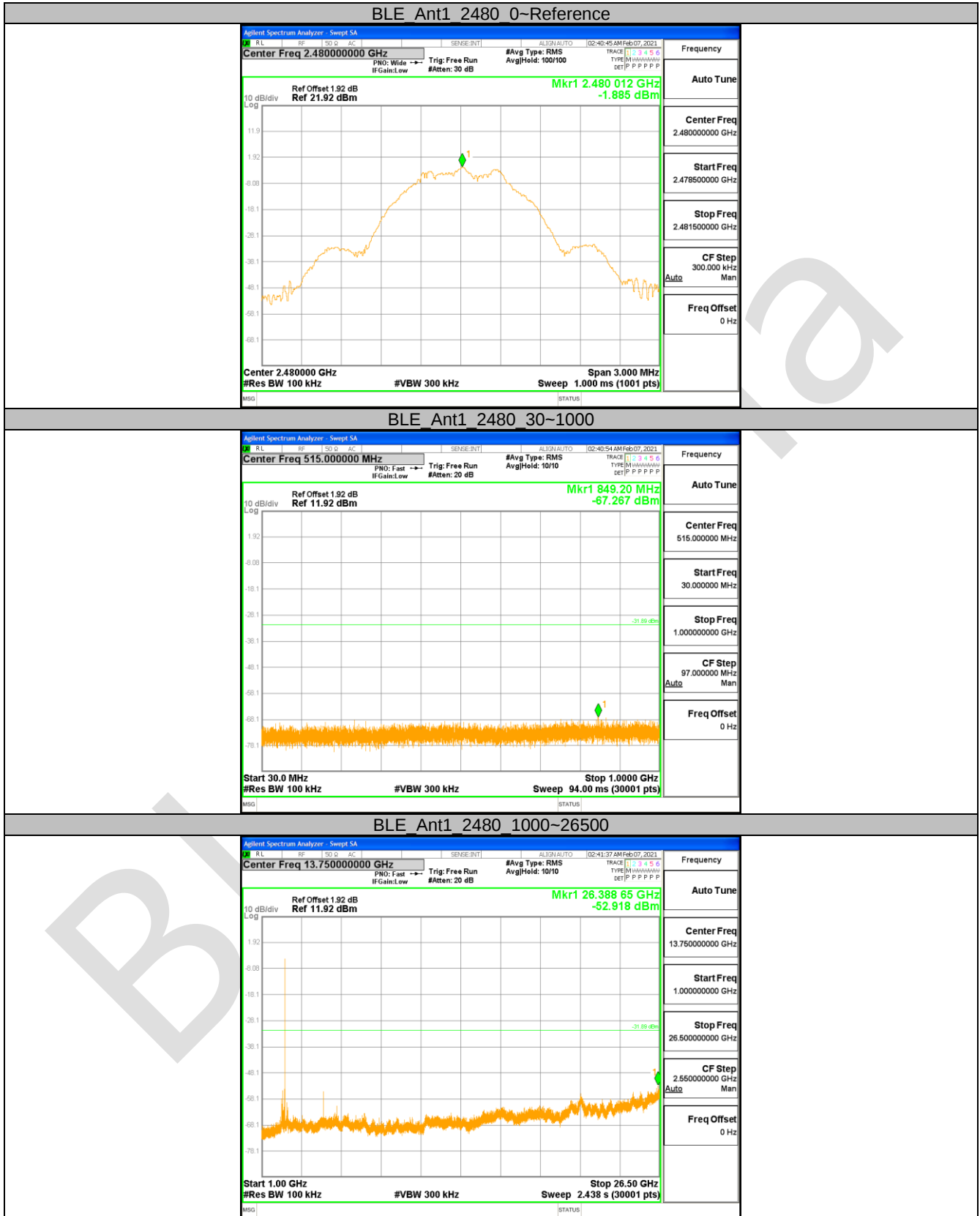
Test Result

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE	Ant1	2402	Reference	-0.60	-0.60	---	PASS
			30~1000	30~1000	-67.033	<=-30.598	PASS
			1000~26500	1000~26500	-53.265	<=-30.598	PASS
		2442	Reference	-2.18	-2.18	---	PASS
			30~1000	30~1000	-67.58	<=-32.182	PASS
			1000~26500	1000~26500	-53.441	<=-32.182	PASS
		2480	Reference	-1.89	-1.89	---	PASS
			30~1000	30~1000	-67.267	<=-31.885	PASS
			1000~26500	1000~26500	-52.918	<=-31.885	PASS

Test Graphs







APPENDIX A: PHOTOGRAPHS OF TEST SETUP

Radiated Spurious Emissions

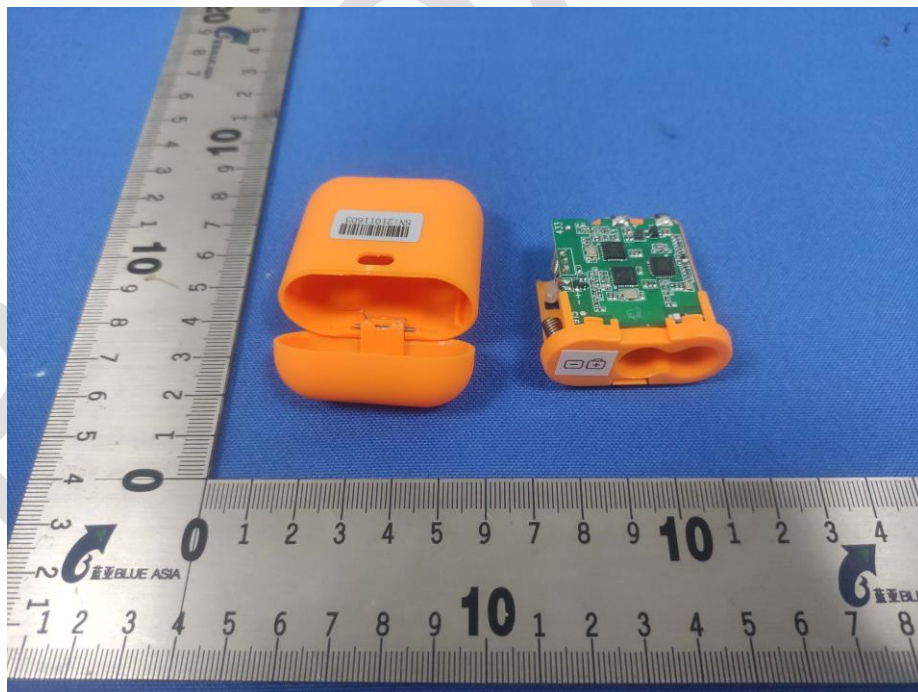


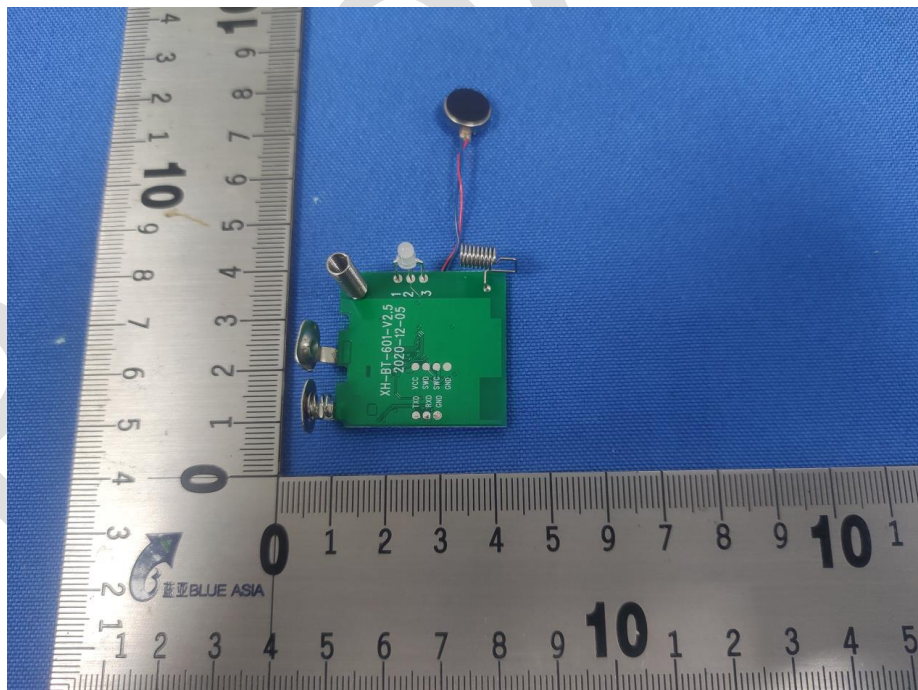
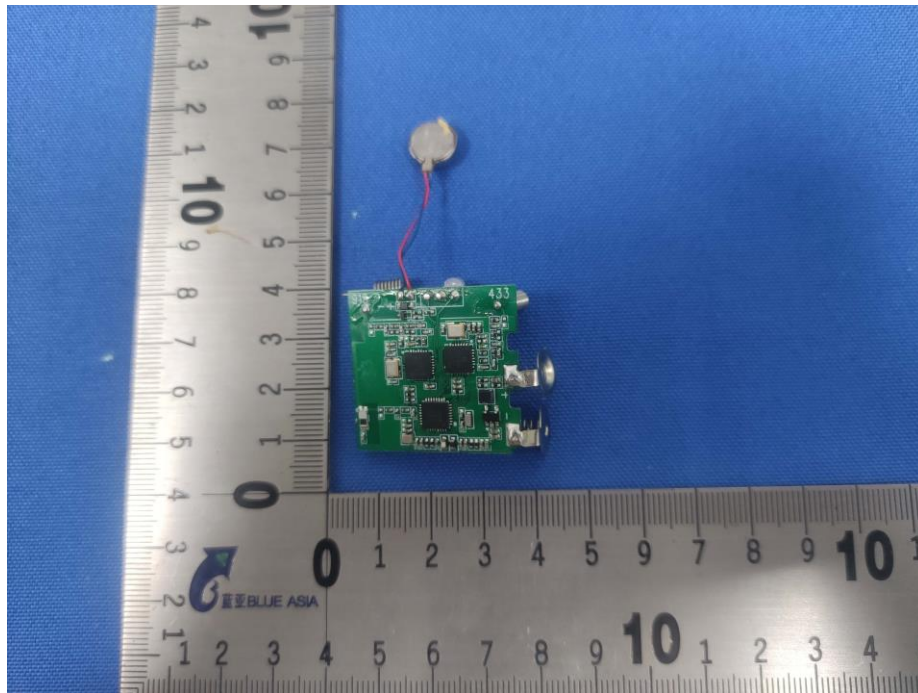
APPENDIX B: PHOTOGRAPHS OF EUT

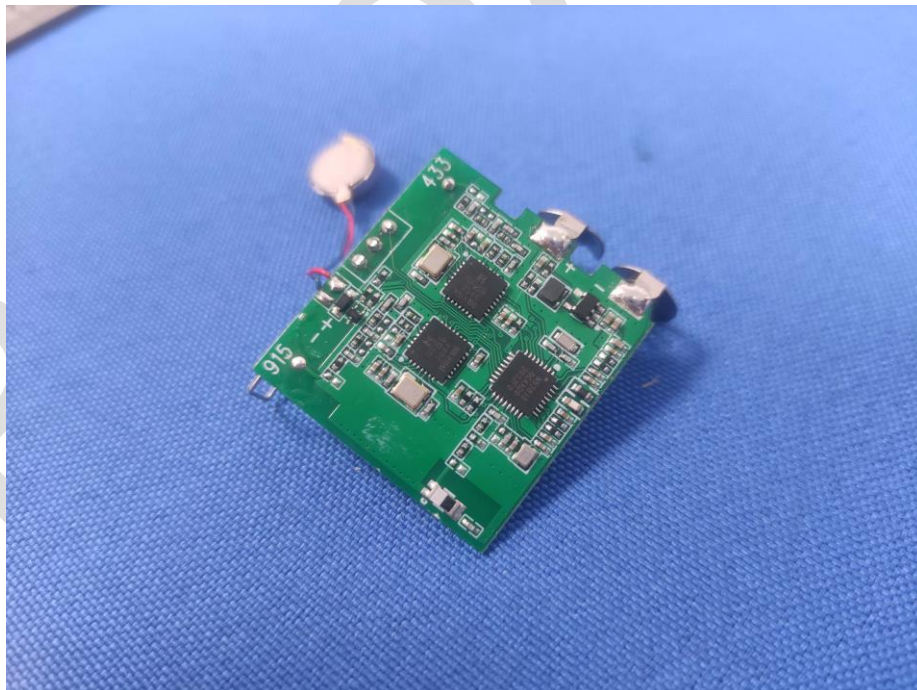
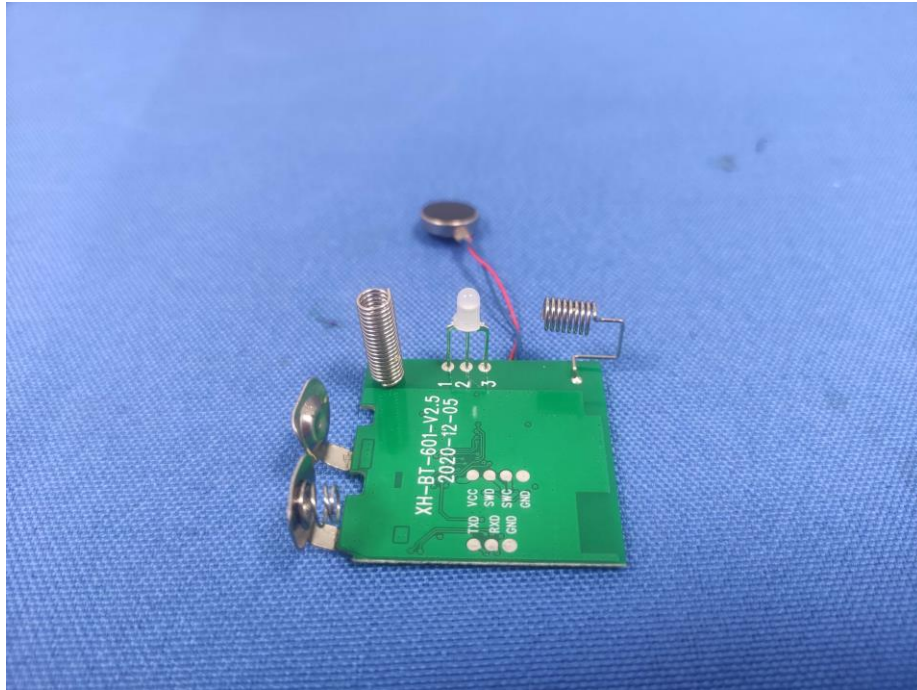












----END OF REPORT----

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