

TEST REPORT

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4.1.6 Radiated Emission

RESULT:

PASS

Test standard : FCC Part 15.247(d), 15.205, 15.209
Requirement : ANSI C63.10-2013, Clause 11.12
KDB 558074 D01 v05r02, Clause 8.6
Kind of test site : 3m Semi-Anechoic Chamber

Test setup

Test Channel : Low/Middle/High
Operation Mode : A.1.a
Ambient temperature : 24°C
Relative humidity : 57%

Notes

Test plots please refer to the annex document "SHE23060039-03CE DATA WIFI 2.4GHz-TX EXHIBIT A".

- 1. For 9 kHz ~ 30 MHz, the amplitude of spurious emissions that are attenuated by more than 20dB below the permissible. The value has no need to be reported.*
- 2. The spurious above 18GHz is noise only and 20dB below the limit. The value has no need to be reported.*
- 3. All test modes had been pre-tested, but only the 802.11b at low channel of below 1 GHz is the worst case and recorded in the report.*
- 4. The EUT was pretested with 3 orientations placed on the table for the radiated emission measurement -X, Y, and Z-plane. The X-plane results were found as the worst case and were shown in this report.*

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4.1.7 Band Edge (Restricted-band band-edge)

RESULT:

PASS

Test standard : FCC Part 15.247(d), 15.205, 15.209
Requirement : ANSI C63.10-2013, Clause 11.13
KDB 558074 D01 v05r02, Clause 8.7
Kind of test site : 3m Semi-Anechoic Chamber

Test setup

Test Channel : Low/Middle/High
Operation Mode : A.1.a
Ambient temperature : 22.4°C
Relative humidity : 55%

Notes:

1. Test plots please refer to the annex document "SHE23060039-03CE DATA WIFI 2.4GHz-TX EXHIBIT A".
2. The EUT was pretested with 3 orientations placed on the table for the radiated emission measurement -X, Y, and Z-plane. The X-plane results were found as the worst case and were shown in this report.

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4.2 Mains Emissions

4.2.1 Conducted Emission on AC Mains

RESULT:

PASS

Test standard : FCC Part 15.207(a)
Requirement : ANSI C63.10-2013, Clause 6.2
Kind of test site : Shielded room

Test setup

Input Voltage : DC 5.9V supply by AC adapter (which received AC 120V, 60Hz)
Operation Mode : A.1.a
Earthing : Disconnected to GND
Ambient temperature : 21°C
Relative humidity : 50%

For details refer to following test plot.

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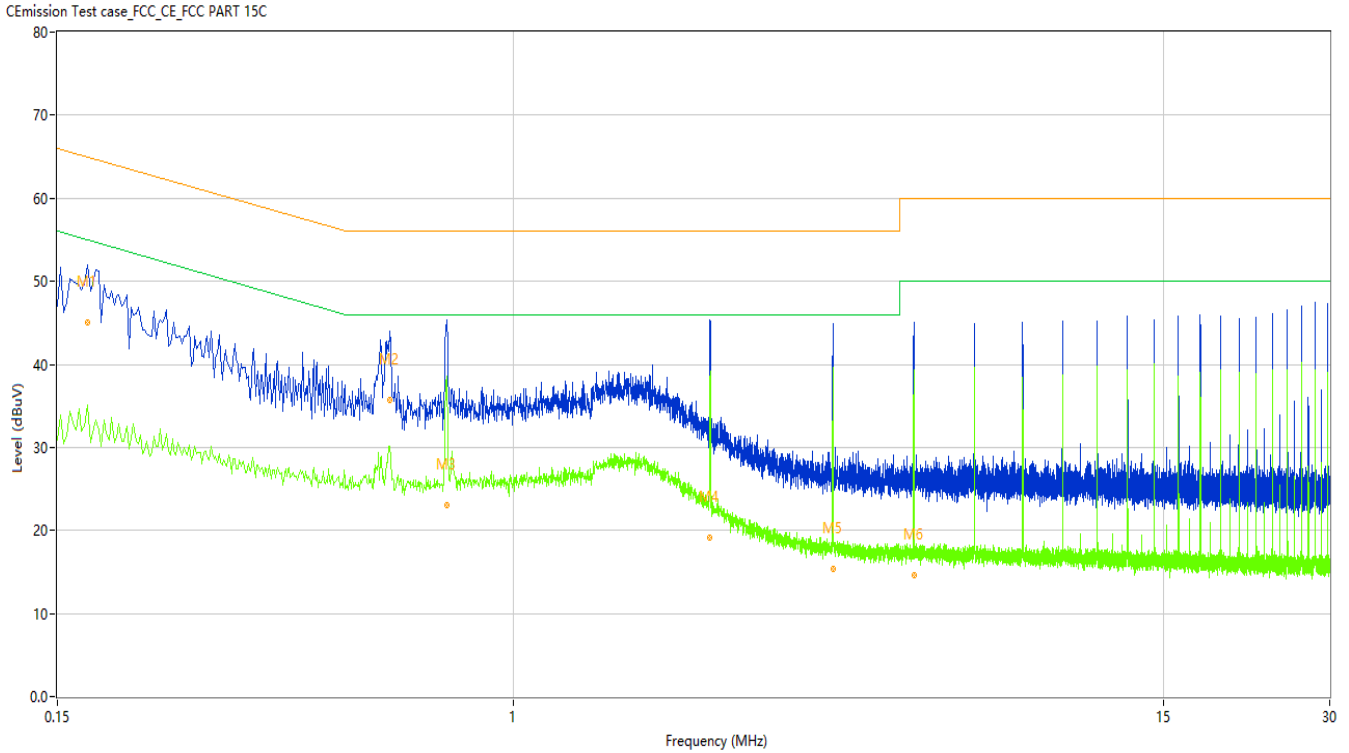
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Note: All test modes had been pre-tested, but only the 802.11b at low channel is the worst case and recorded in the report.

Figure 28: Conducted Emission on AC Mains, L Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.170	50.39	9.94	64.96	14.57	Peak	L	Pass
1*	0.170	45.11	9.94	64.96	19.85	QP	L	Pass
1**	0.170	35.10	9.94	54.96	19.86	AV	L	Pass
2	0.598	43.05	9.97	56.00	12.95	Peak	L	Pass
2*	0.598	35.69	9.97	56.00	20.31	QP	L	Pass
2**	0.598	30.09	9.97	46.00	15.91	AV	L	Pass
3	0.758	32.64	9.94	56.00	23.36	Peak	L	Pass
3*	0.758	23.08	9.94	56.00	32.92	QP	L	Pass
3**	0.758	38.57	9.94	46.00	7.43	AV	L	Pass
4	2.272	26.47	9.85	56.00	29.53	Peak	L	Pass
4*	2.272	19.19	9.85	56.00	36.81	QP	L	Pass
4**	2.272	37.98	9.85	46.00	8.02	AV	L	Pass
5	3.792	23.13	9.82	56.00	32.87	Peak	L	Pass
5*	3.792	15.43	9.82	56.00	40.57	QP	L	Pass
5**	3.792	39.58	9.82	46.00	6.42	AV	L	Pass
6	5.308	22.35	9.82	60.00	37.65	Peak	L	Pass
6*	5.308	14.62	9.82	60.00	45.38	QP	L	Pass
6**	5.308	38.09	9.82	50.00	11.91	AV	L	Pass

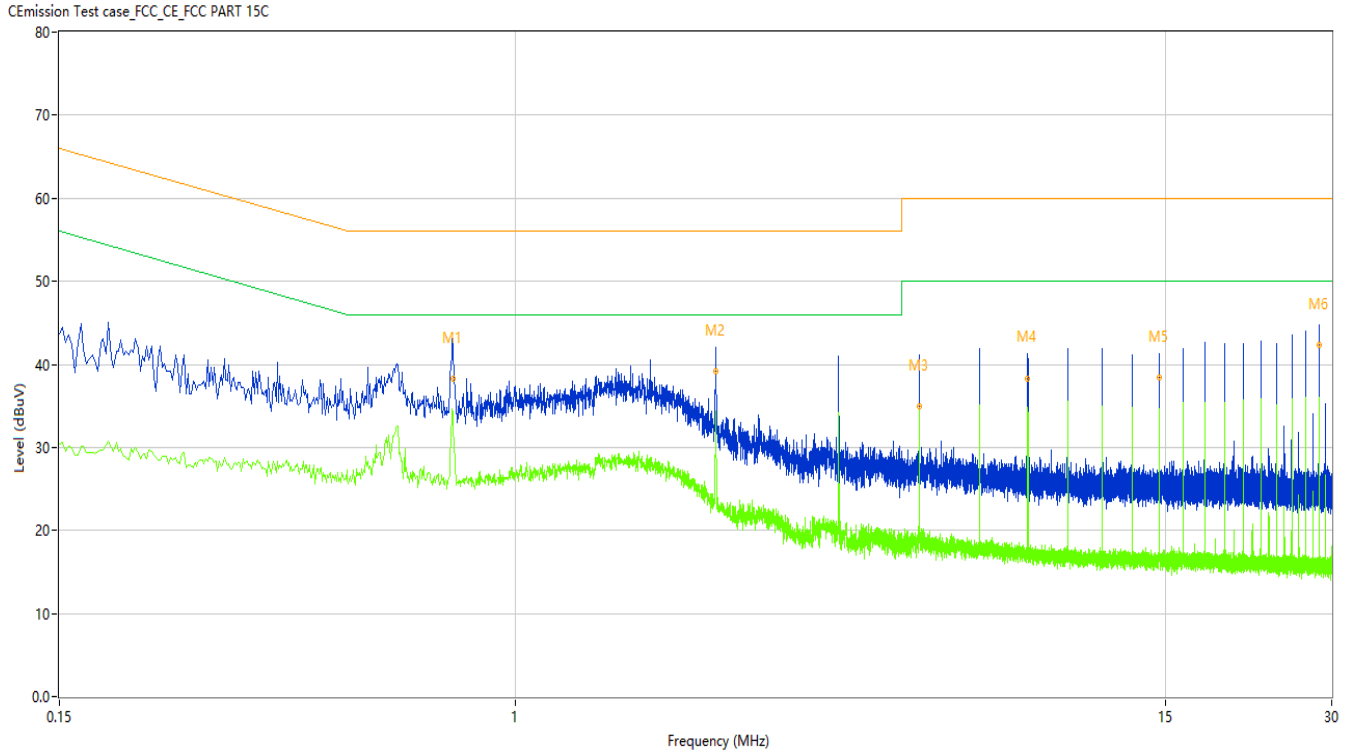
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Figure 29: Conducted Emission on AC Mains, N Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.772	43.11	10.04	56.00	12.89	Peak	N	Pass
1*	0.772	38.21	10.04	56.00	17.79	QP	N	Pass
1**	0.772	34.27	10.04	46.00	11.73	AV	N	Pass
2	2.308	42.65	9.93	56.00	13.35	Peak	N	Pass
2*	2.308	39.21	9.93	56.00	16.79	QP	N	Pass
2**	2.308	34.38	9.93	46.00	11.62	AV	N	Pass
3	5.384	39.74	9.74	60.00	20.26	Peak	N	Pass
3*	5.384	34.95	9.74	60.00	25.05	QP	N	Pass
3**	5.384	34.30	9.74	50.00	15.70	AV	N	Pass
4	8.464	41.82	9.80	60.00	18.18	Peak	N	Pass
4*	8.464	38.20	9.80	60.00	21.80	QP	N	Pass
4**	8.464	34.84	9.80	50.00	15.16	AV	N	Pass
5	14.622	42.60	9.61	60.00	17.40	Peak	N	Pass
5*	14.622	38.46	9.61	60.00	21.54	QP	N	Pass
5**	14.622	34.68	9.61	50.00	15.32	AV	N	Pass
6	28.482	45.19	9.08	60.00	14.81	Peak	N	Pass
6*	28.482	42.39	9.08	60.00	17.61	QP	N	Pass
6**	28.482	34.71	9.08	50.00	15.29	AV	N	Pass

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5 Appendixes

5.1 Photographs of the Sample



All of the sample



Front of the sample

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Rear of the sample



Left of the sample

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Right of the sample



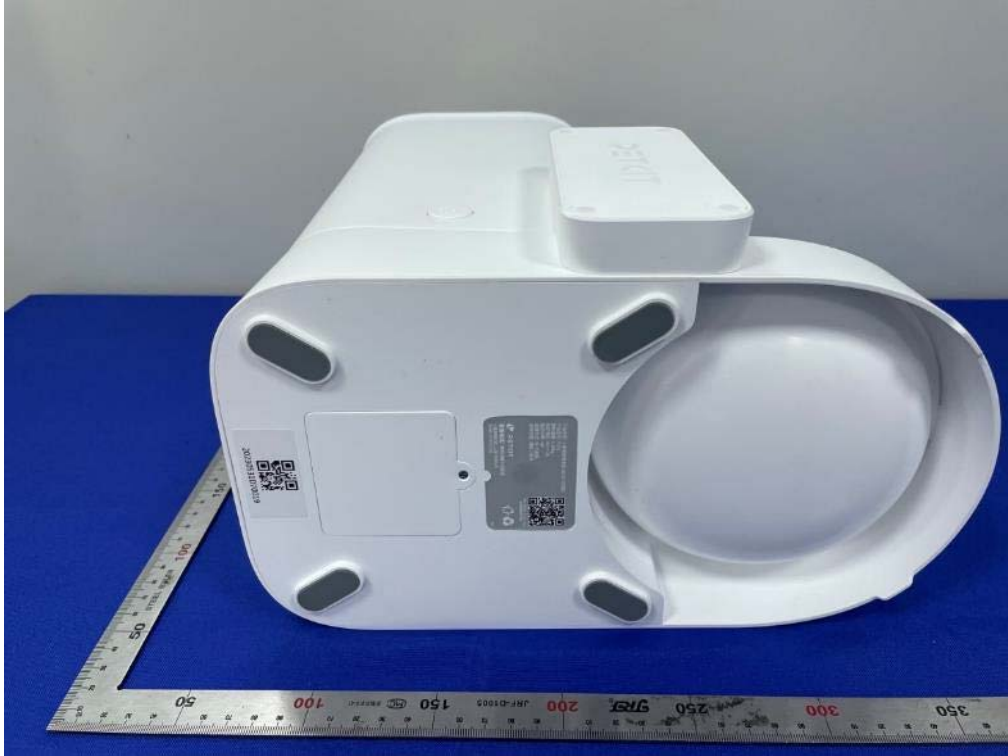
Top of the sample

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Bottom of the sample



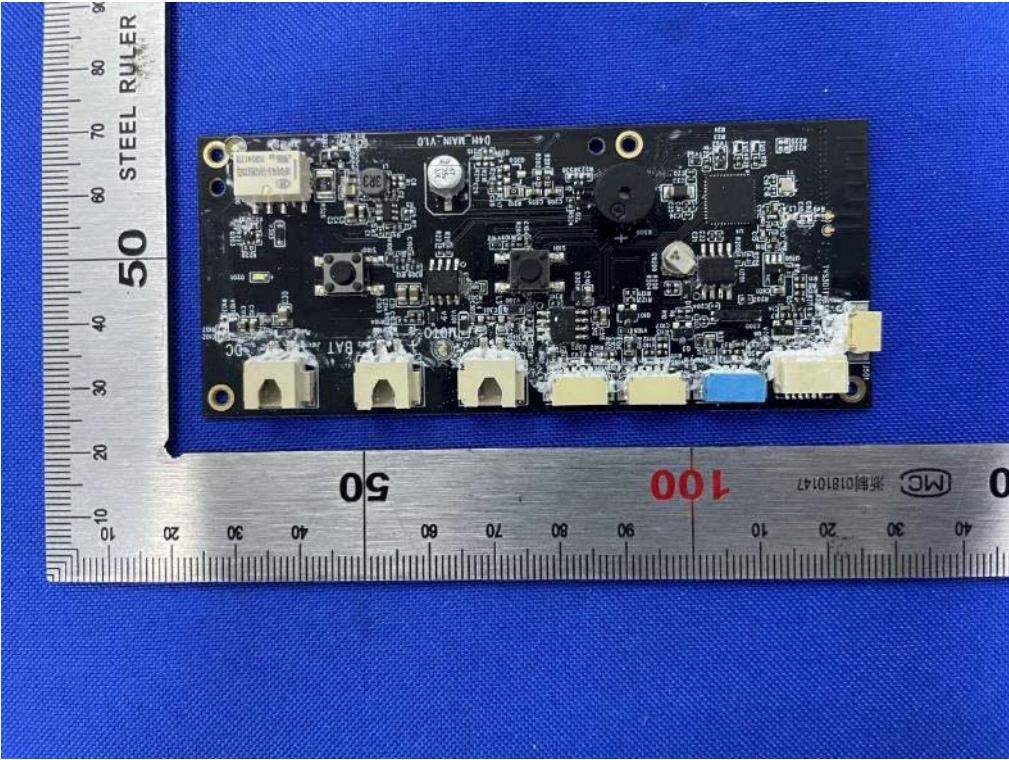
Open of the sample

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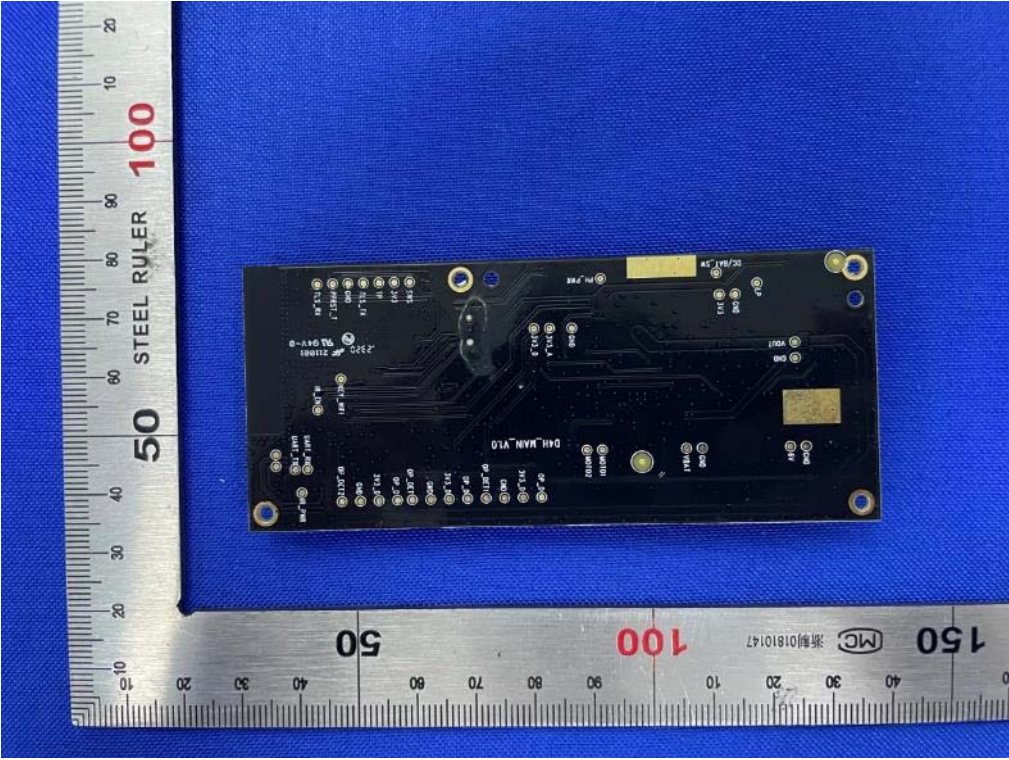
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Internal-1 of the sample



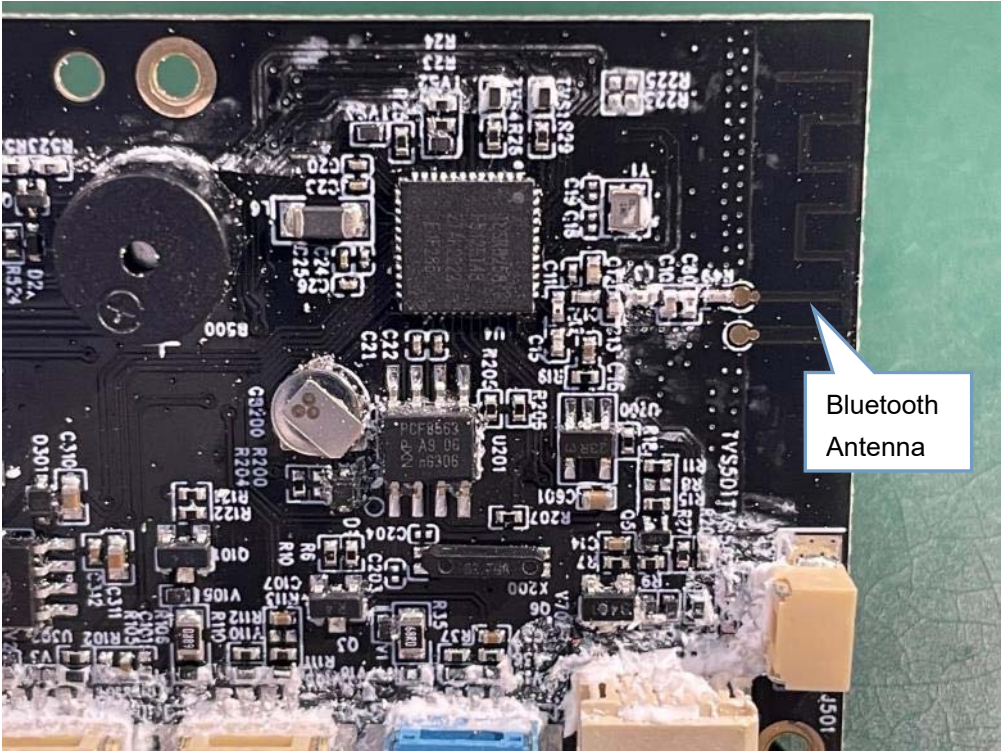
Internal-2 of the sample

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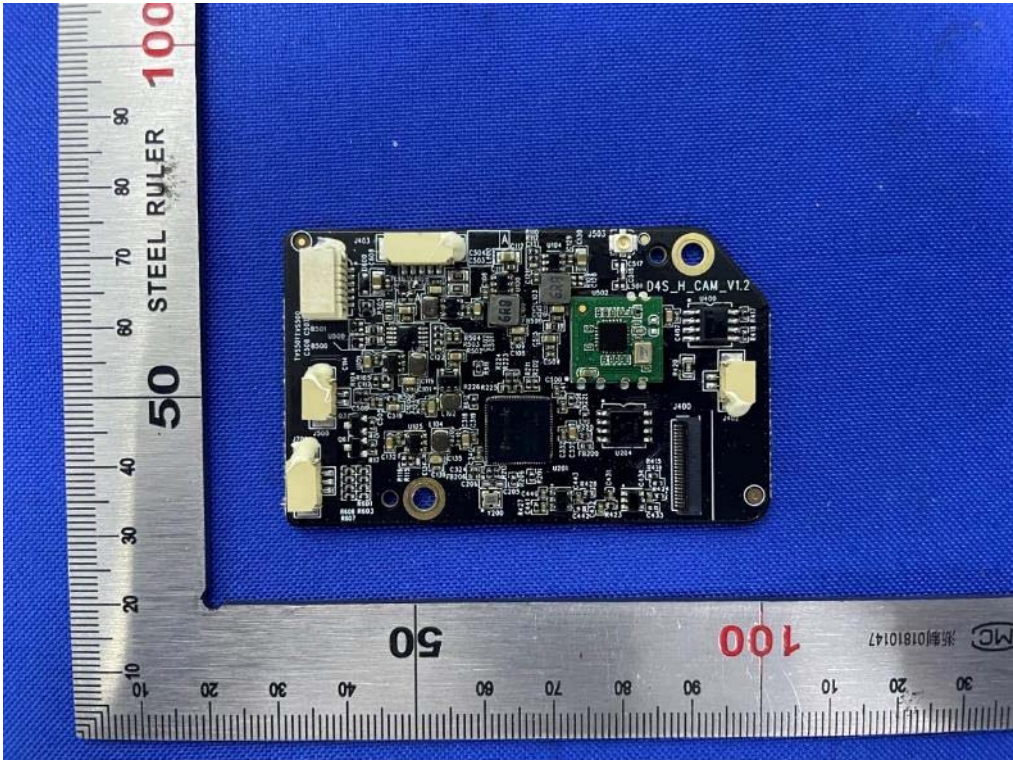
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Bluetooth Antenna position



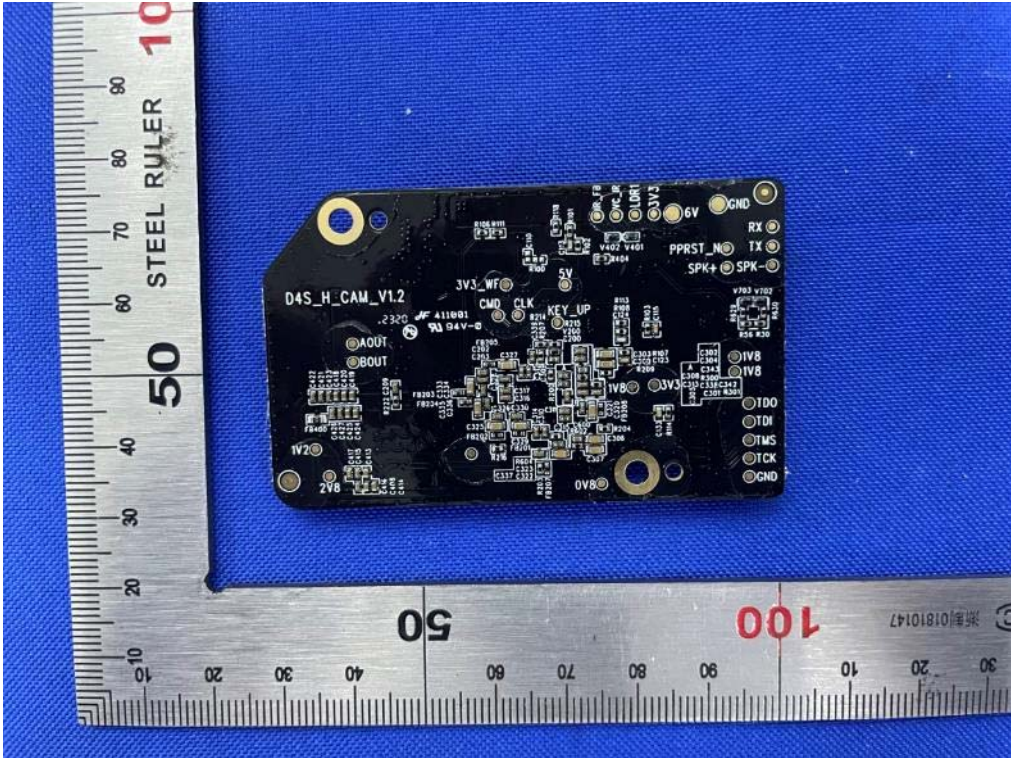
Internal-3 of the sample

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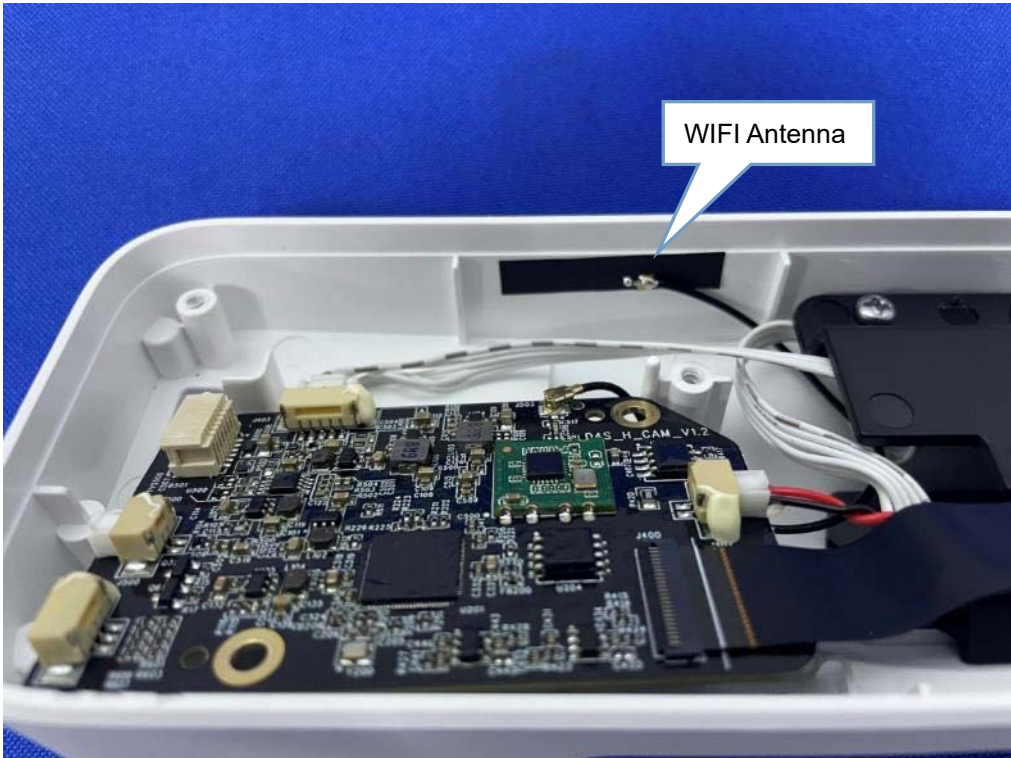
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Internal-4 of the sample



WIFI Antenna position

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5.2 Set-up for Conducted Emissions



5.3 Set-up for Conducted RF test at Antenna Port



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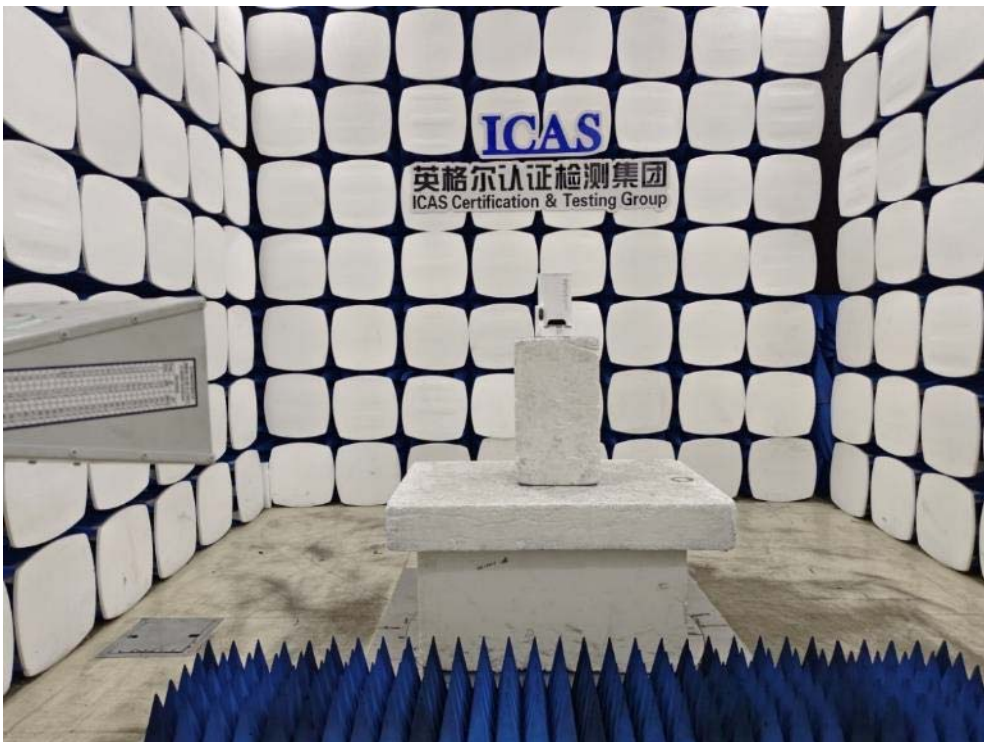
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5.4 Set-up for Spurious Emissions below 1GHz



5.5 Set-up for Spurious Emissions above 1GHz



End of the report