

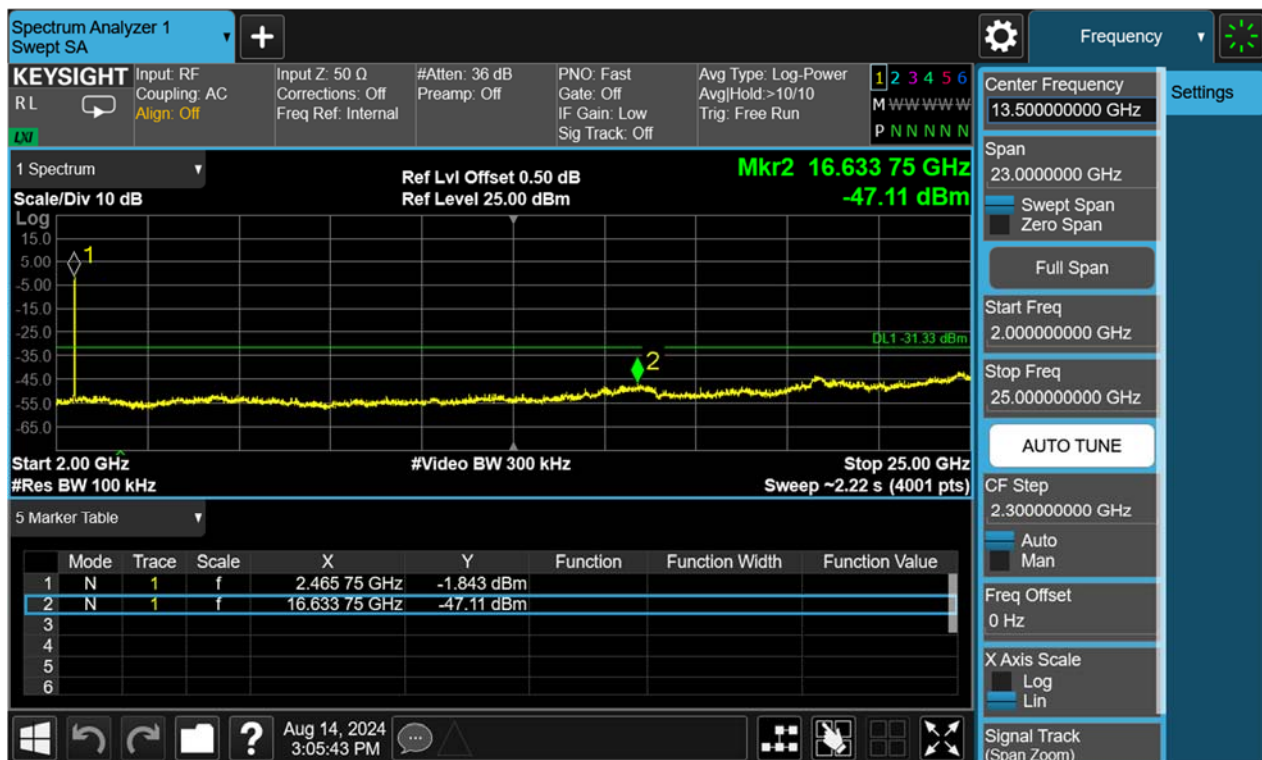
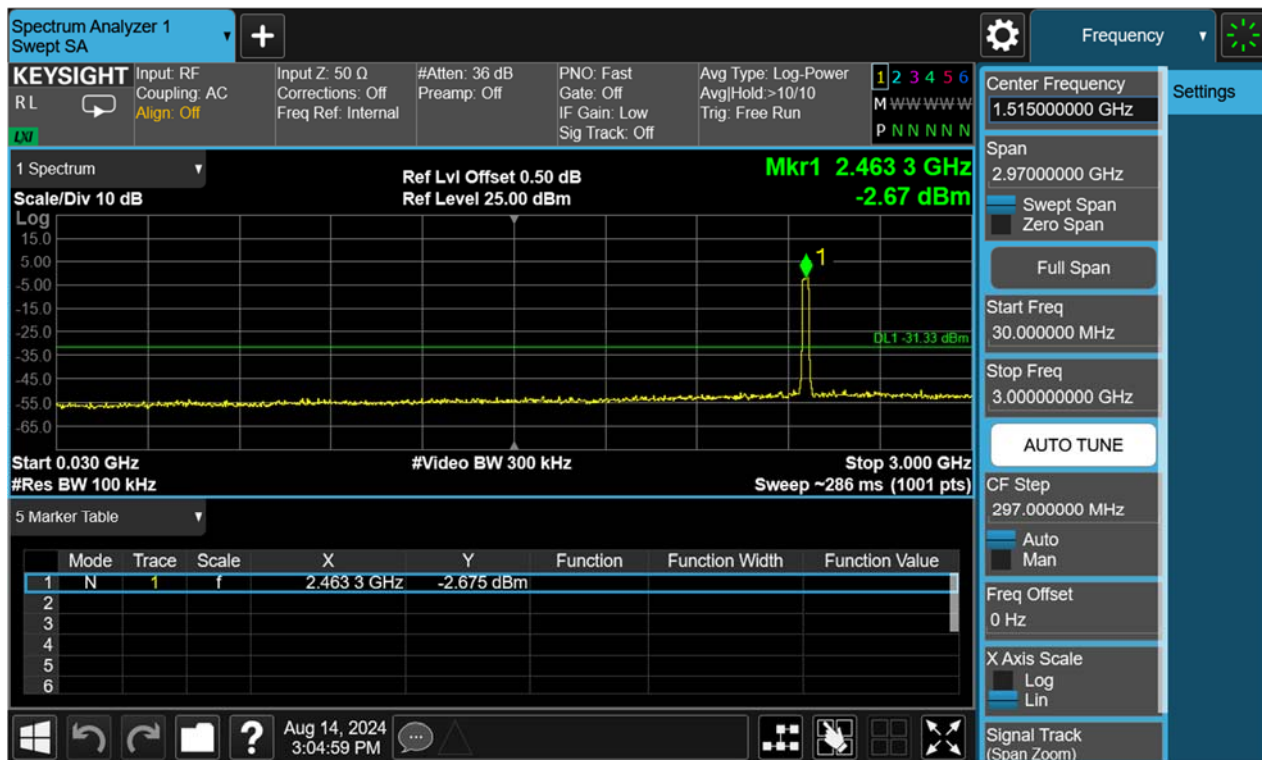
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Conducted spurious emissions 30MHz-25GHz



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Figure 25: Conducted Spurious Emission & Authorized-band band-edge, 802.11n(HT20), 2412MHz Carrier Level



Band Edge



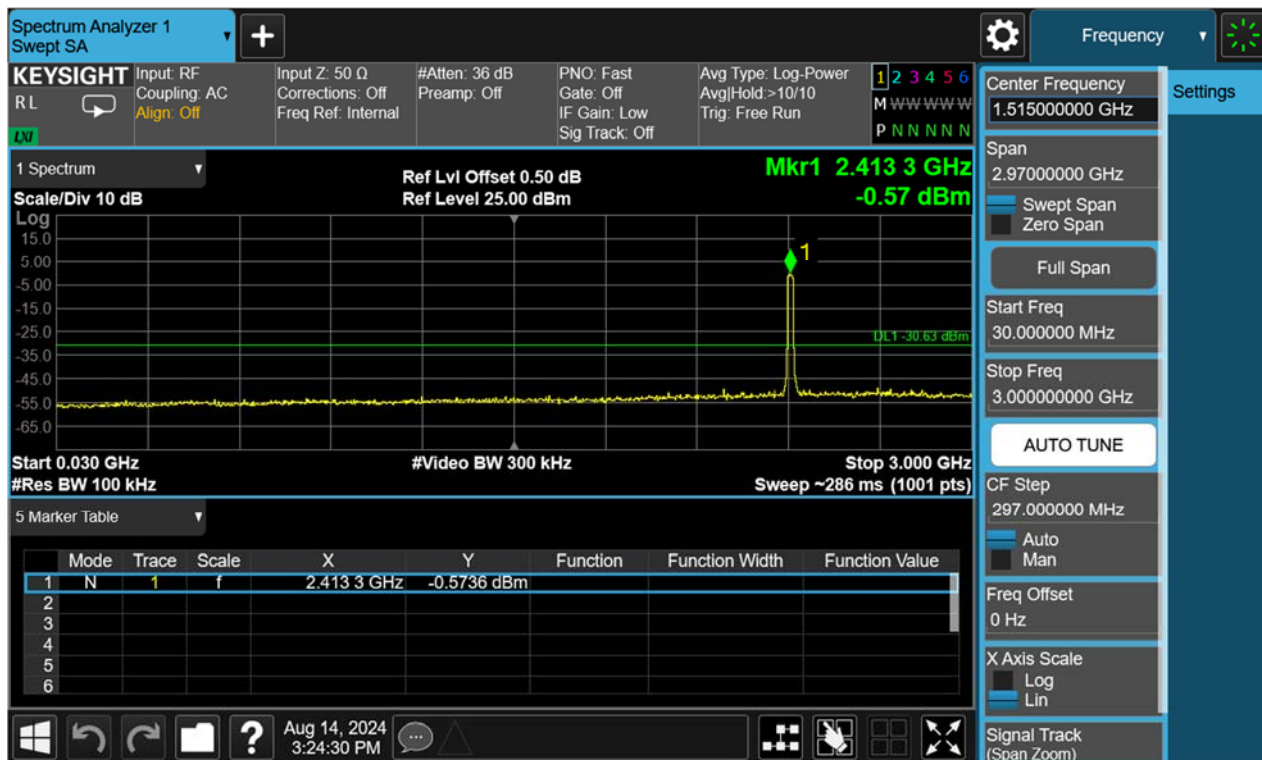
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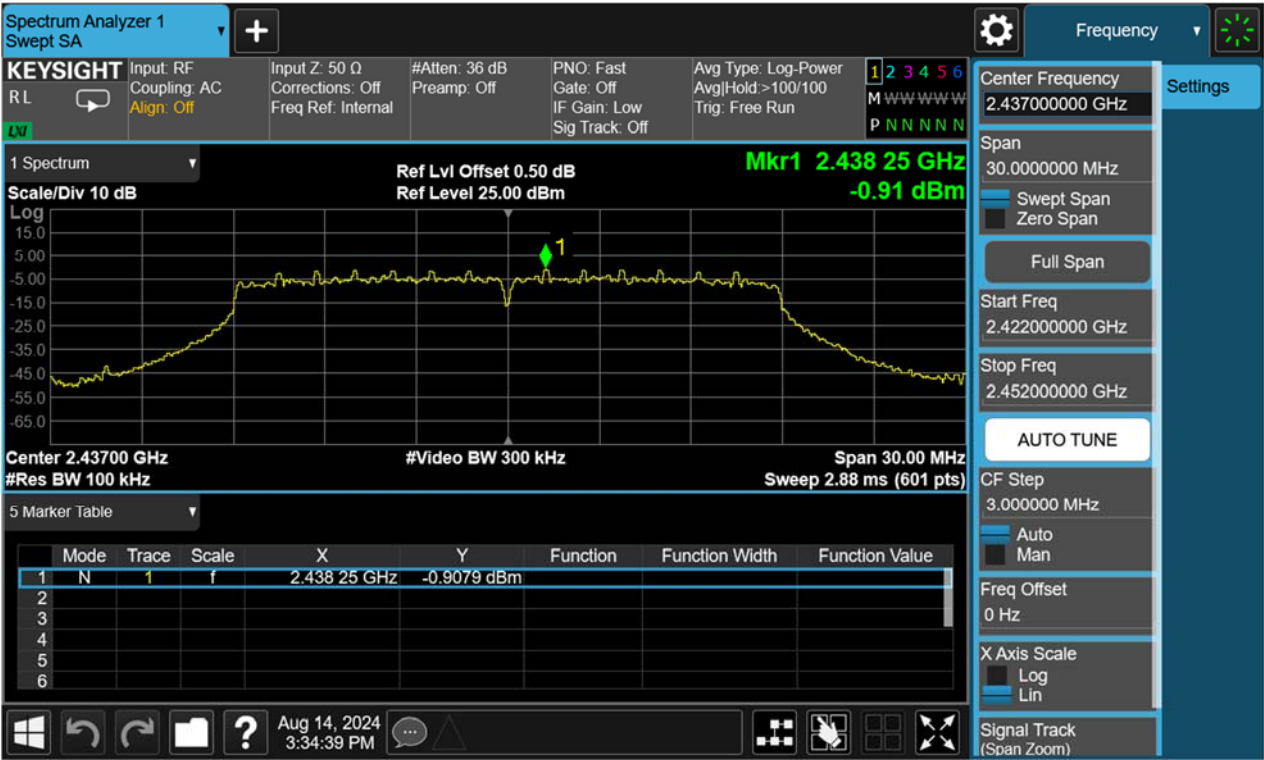
Conducted spurious emissions 30MHz-25GHz



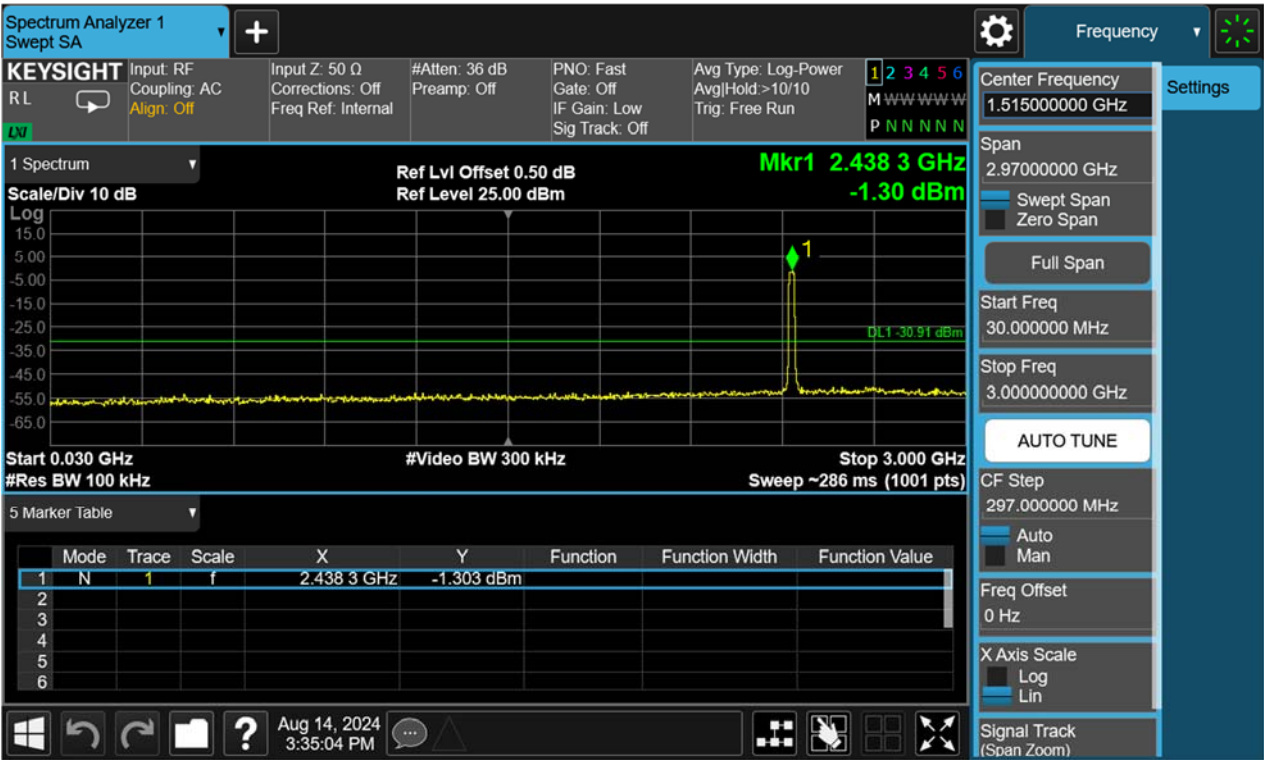
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Figure 26: Conducted Spurious Emission & Authorized-band band-edge, 802.11n(HT20), 2437MHz Carrier Level



Conducted spurious emissions 30MHz-25GHz



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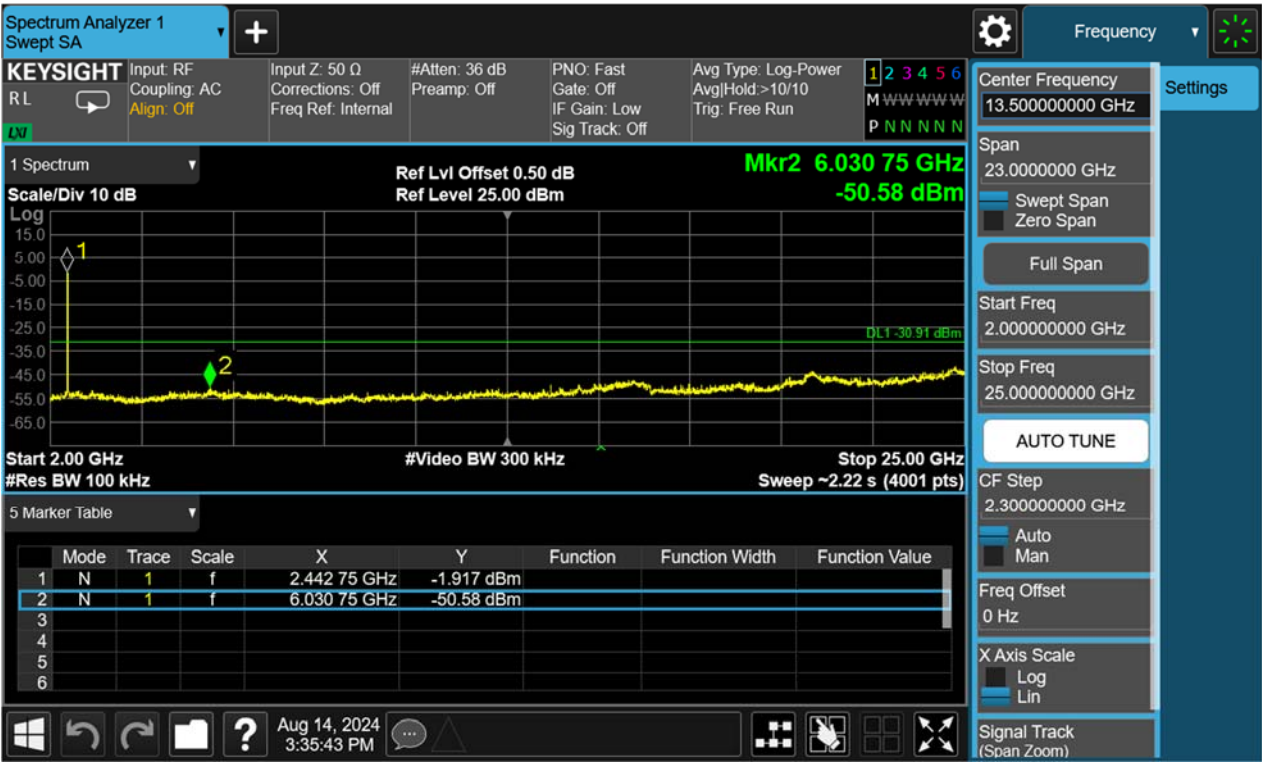
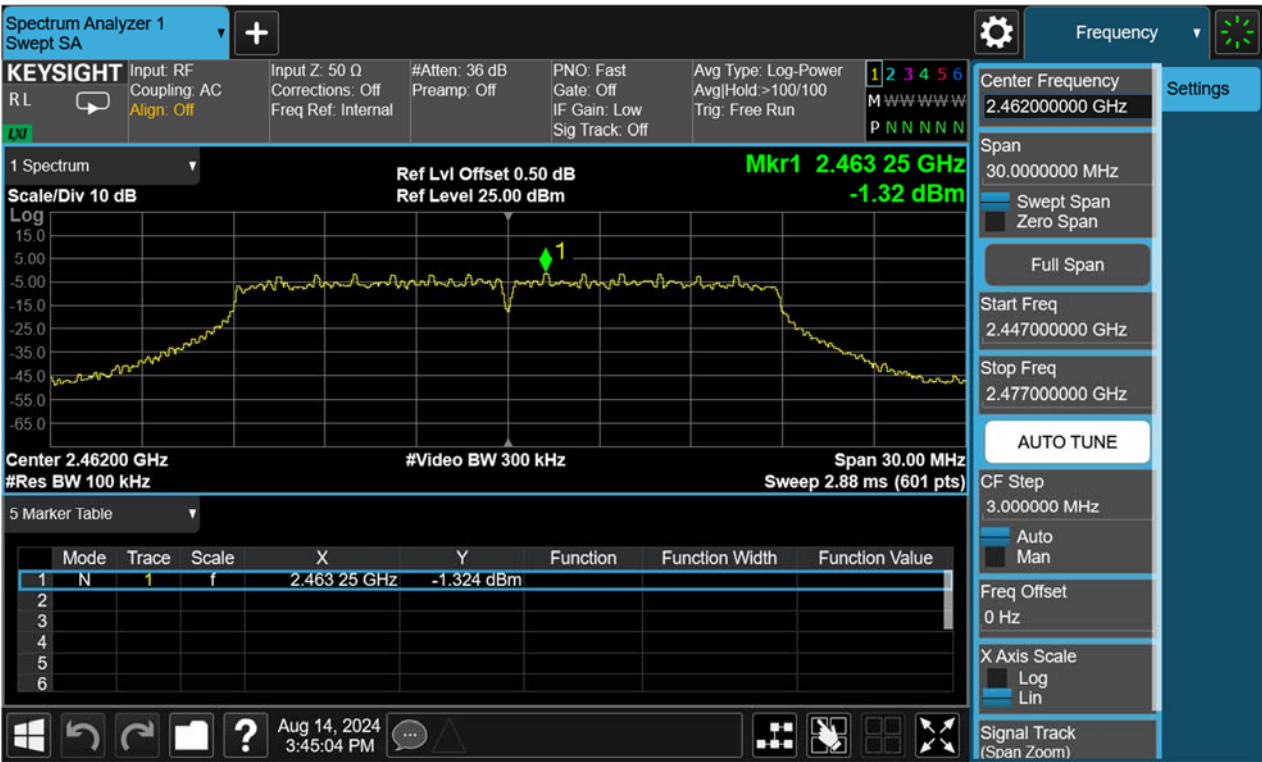


Figure 27: Conducted Spurious Emission & Authorized-band band-edge, 802.11n(HT20), 2462MHz Carrier Level



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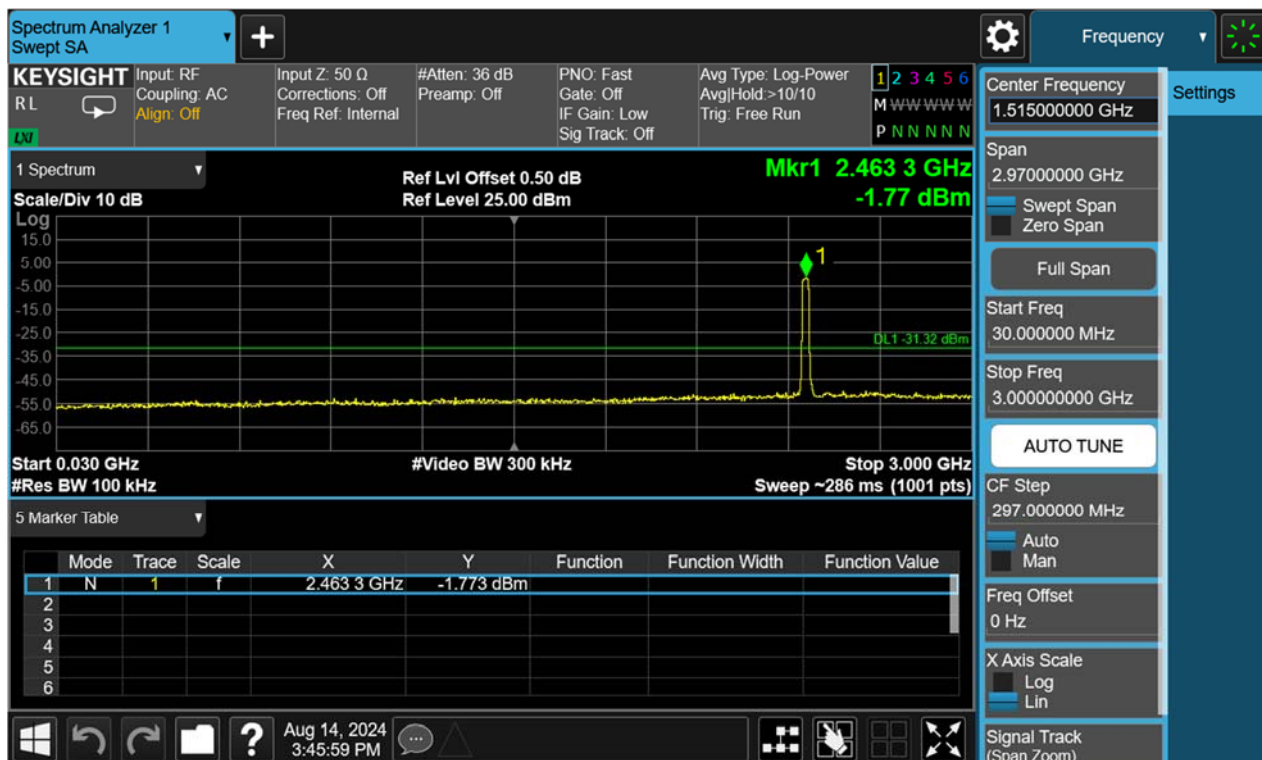
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Band Edge



Conducted spurious emissions 30MHz-25GHz

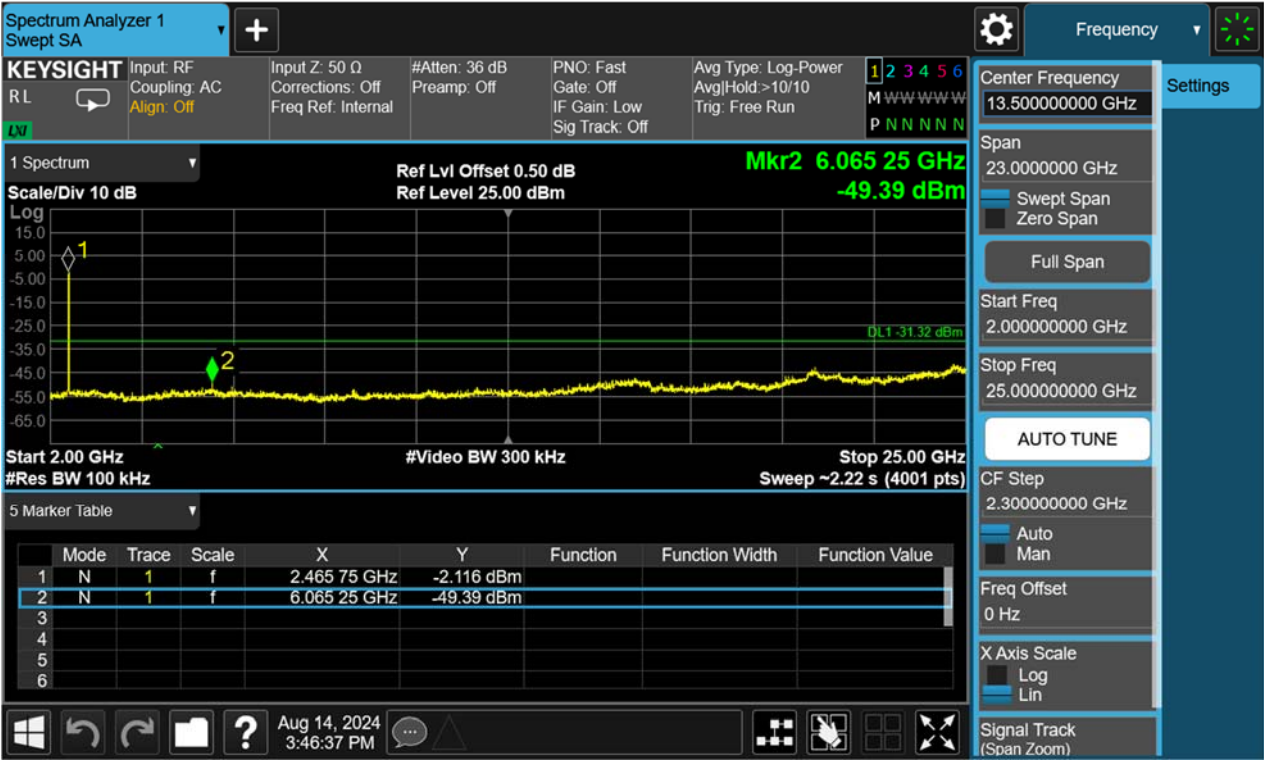


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4.1.6 Radiated Emission

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	: 24.1°C
Relative humidity	: 53%

Notes

Test plots please refer to the annex document "SHE24090032-02CE 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	: 23.4°C
Relative humidity	: 41%

Notes:

1. Test plots please refer to the annex document "SHE24090032-02CE 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 12V 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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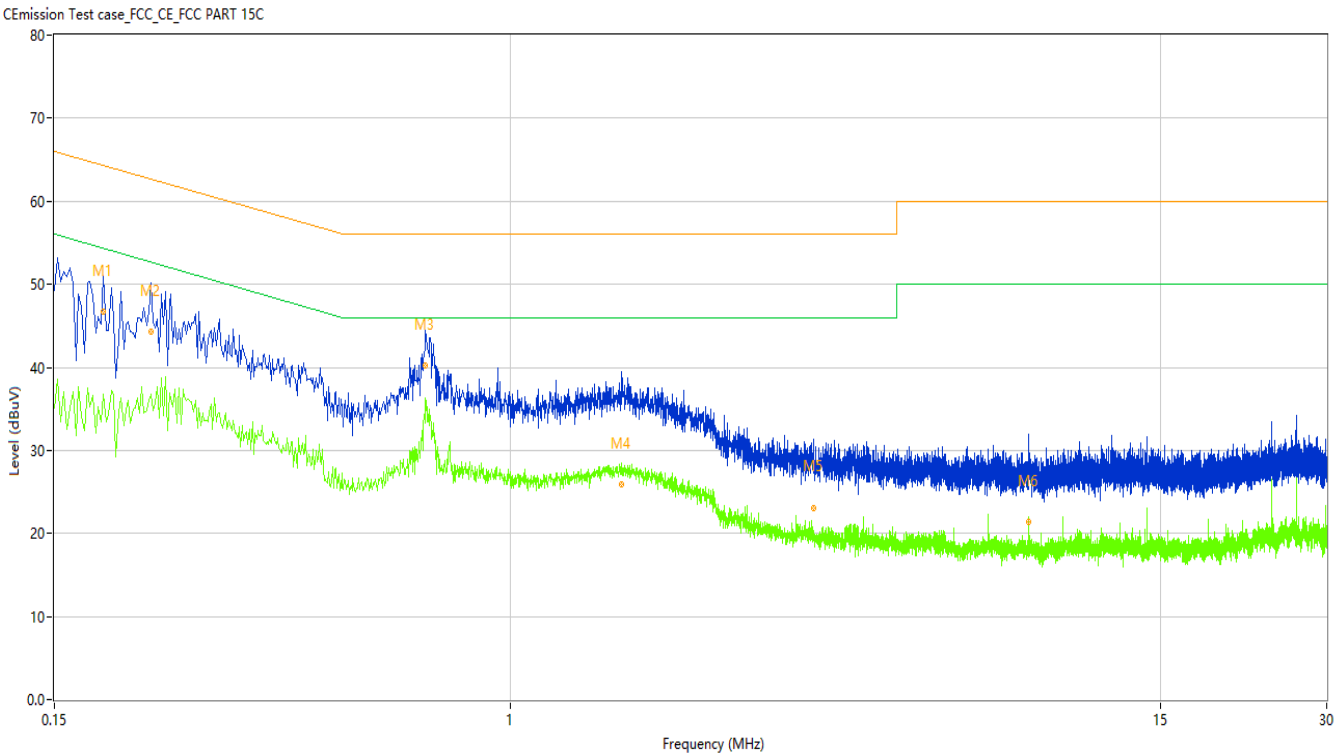
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Note: All test modes had been pre-tested, but only the 802.11b at low channel is the worst case and recorded in the report.

Figure 28: Conducted Emission on AC Mains, L Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.184	54.79	9.84	64.30	9.51	Peak	L	Pass
1*	0.184	46.65	9.84	64.30	17.65	QP	L	Pass
1**	0.184	36.71	9.84	54.30	17.59	AV	L	Pass
2	0.224	52.14	9.90	62.67	10.53	Peak	L	Pass
2*	0.224	44.23	9.90	62.67	18.44	QP	L	Pass
2**	0.224	36.77	9.90	52.67	15.90	AV	L	Pass
3	0.704	44.24	9.88	56.00	11.76	Peak	L	Pass
3*	0.704	40.24	9.88	56.00	15.76	QP	L	Pass
3**	0.704	36.34	9.88	46.00	9.66	AV	L	Pass
4	1.590	32.87	9.76	56.00	23.13	Peak	L	Pass
4*	1.590	25.87	9.76	56.00	30.13	QP	L	Pass
4**	1.590	28.43	9.76	46.00	17.57	AV	L	Pass
5	3.546	28.25	9.79	56.00	27.75	Peak	L	Pass
5*	3.546	22.98	9.79	56.00	33.02	QP	L	Pass
5**	3.546	20.27	9.79	46.00	25.73	AV	L	Pass
6	8.668	28.95	9.68	60.00	31.05	Peak	L	Pass
6*	8.668	21.36	9.68	60.00	38.64	QP	L	Pass
6**	8.668	21.67	9.68	50.00	28.33	AV	L	Pass

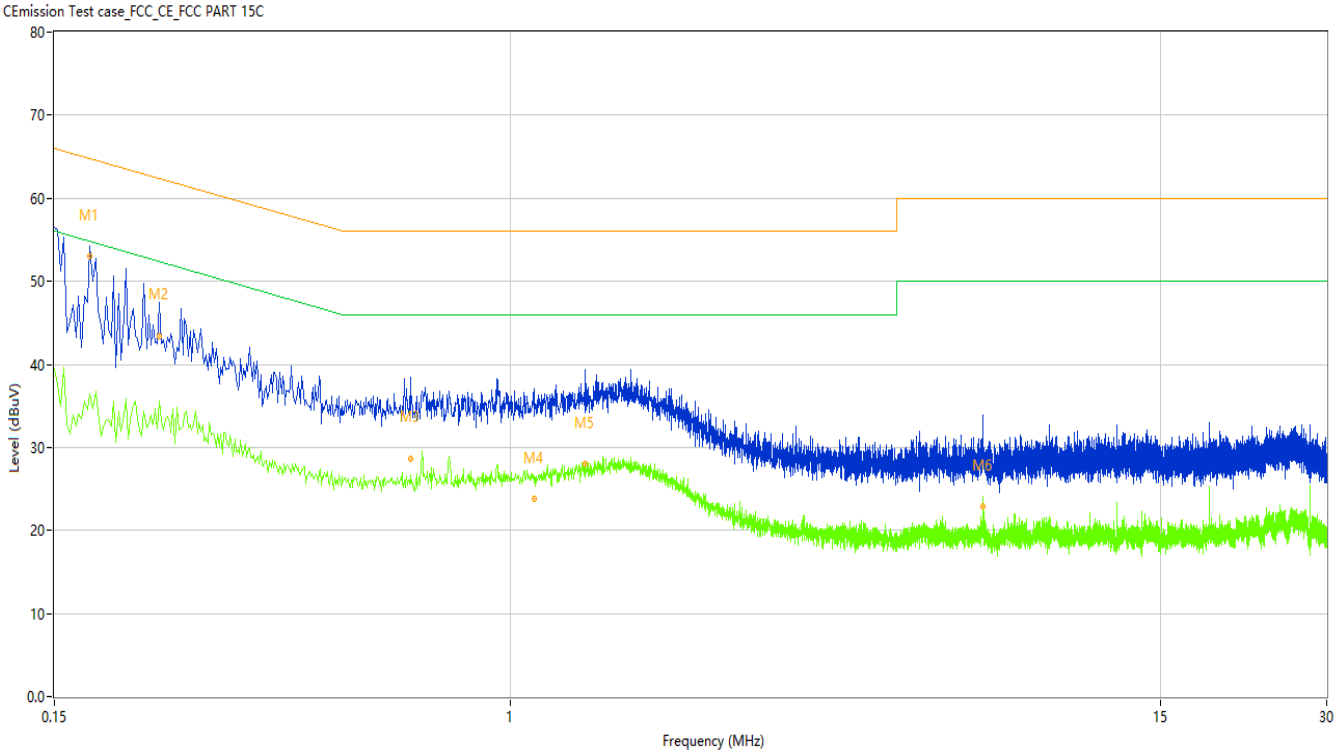
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Figure 29: Conducted Emission on AC Mains, N Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.174	60.26	9.96	64.77	4.51	Peak	N	Pass
1*	0.174	52.98	9.96	64.77	11.79	QP	N	Pass
1**	0.174	36.47	9.96	54.77	18.30	AV	N	Pass
2	0.232	53.79	9.98	62.38	8.59	Peak	N	Pass
2*	0.232	43.35	9.98	62.38	19.03	QP	N	Pass
2**	0.232	35.53	9.98	52.38	16.85	AV	N	Pass
3	0.660	35.38	9.98	56.00	20.62	Peak	N	Pass
3*	0.660	28.60	9.98	56.00	27.40	QP	N	Pass
3**	0.660	26.73	9.98	46.00	19.27	AV	N	Pass
4	1.106	31.08	9.90	56.00	24.92	Peak	N	Pass
4*	1.106	23.86	9.90	56.00	32.14	QP	N	Pass
4**	1.106	26.45	9.90	46.00	19.55	AV	N	Pass
5	1.370	33.89	9.91	56.00	22.11	Peak	N	Pass
5*	1.370	27.99	9.91	56.00	28.01	QP	N	Pass
5**	1.370	28.03	9.91	46.00	17.97	AV	N	Pass
6	7.164	31.30	9.80	60.00	28.70	Peak	N	Pass
6*	7.164	22.93	9.80	60.00	37.07	QP	N	Pass
6**	7.164	23.33	9.80	50.00	26.67	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



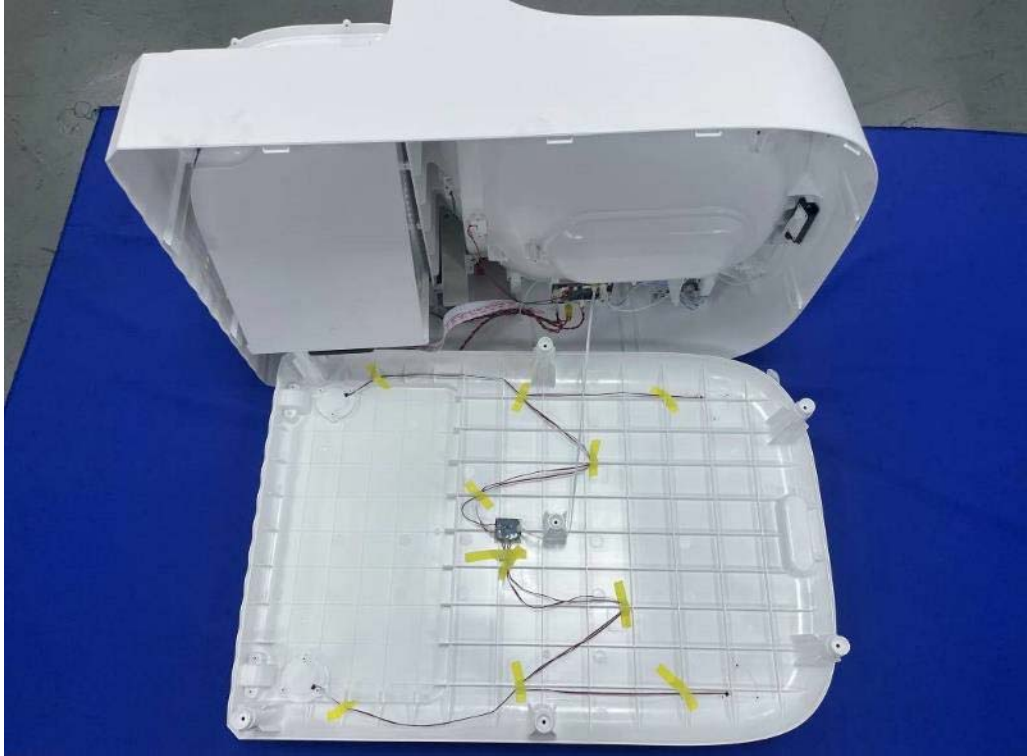
Open-1 of the sample

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Open-2 of the sample



Open-3 of the sample

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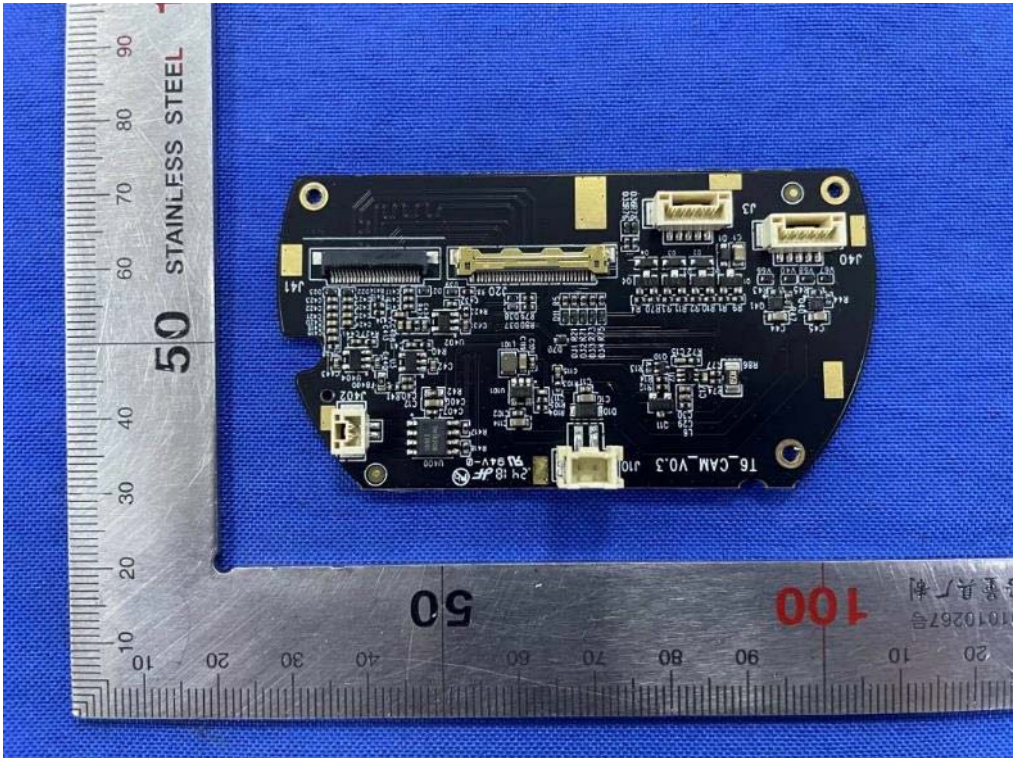
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Open-4 of the sample



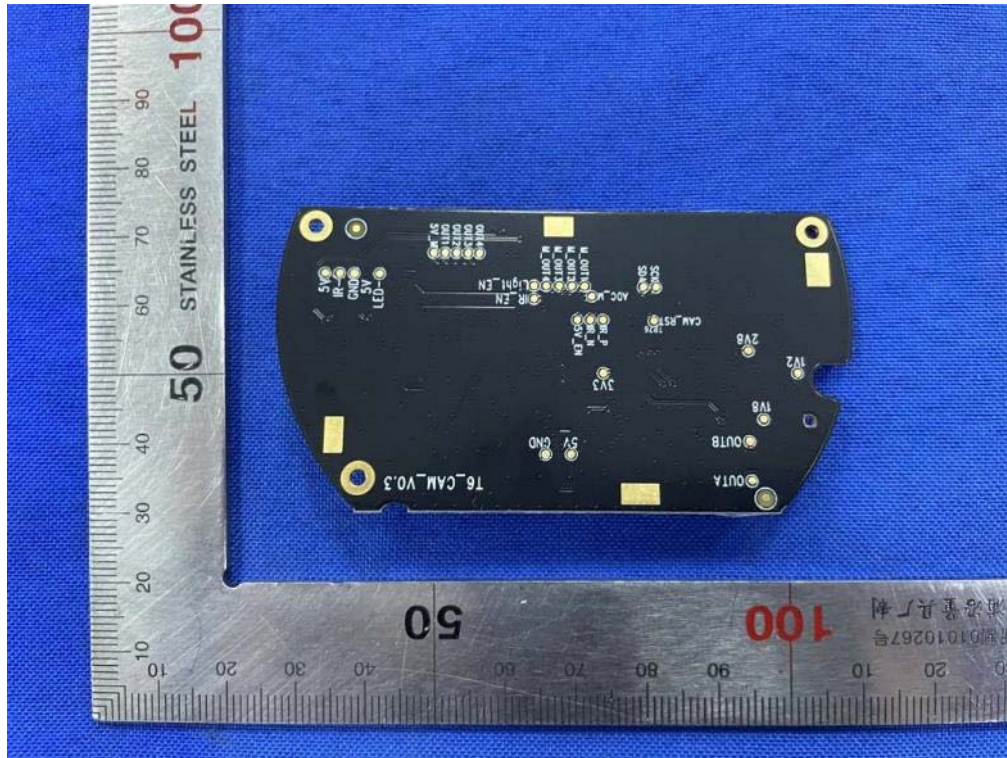
Internal-1 of the sample

TEST REPORT

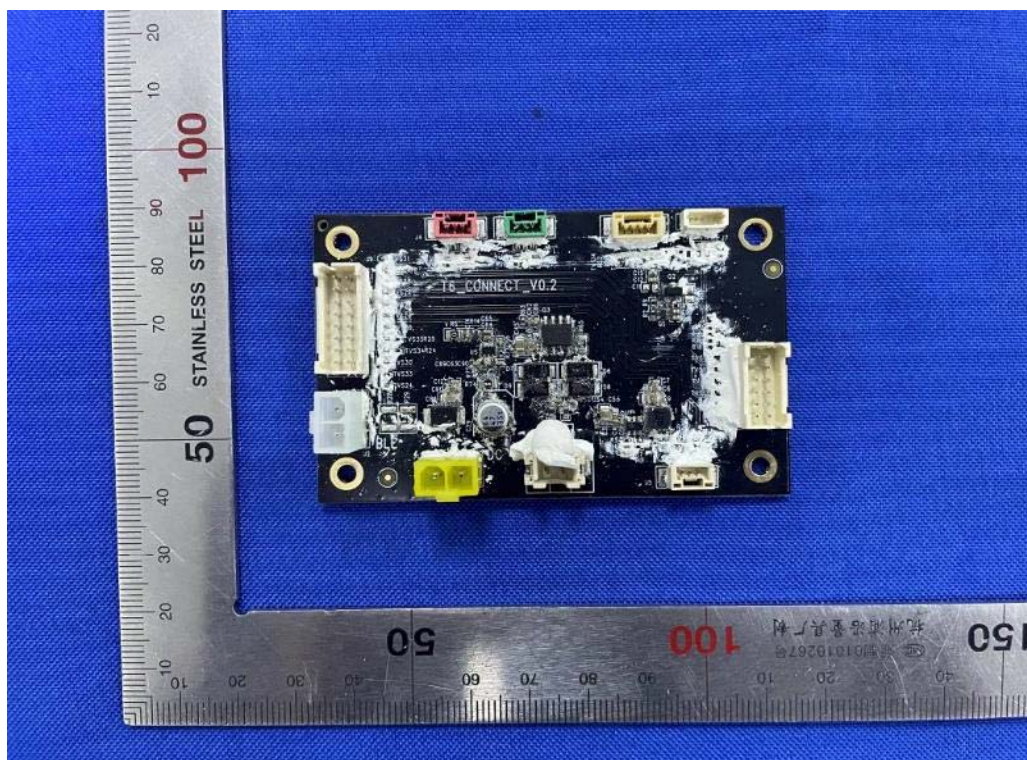
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Internal-2 of the sample



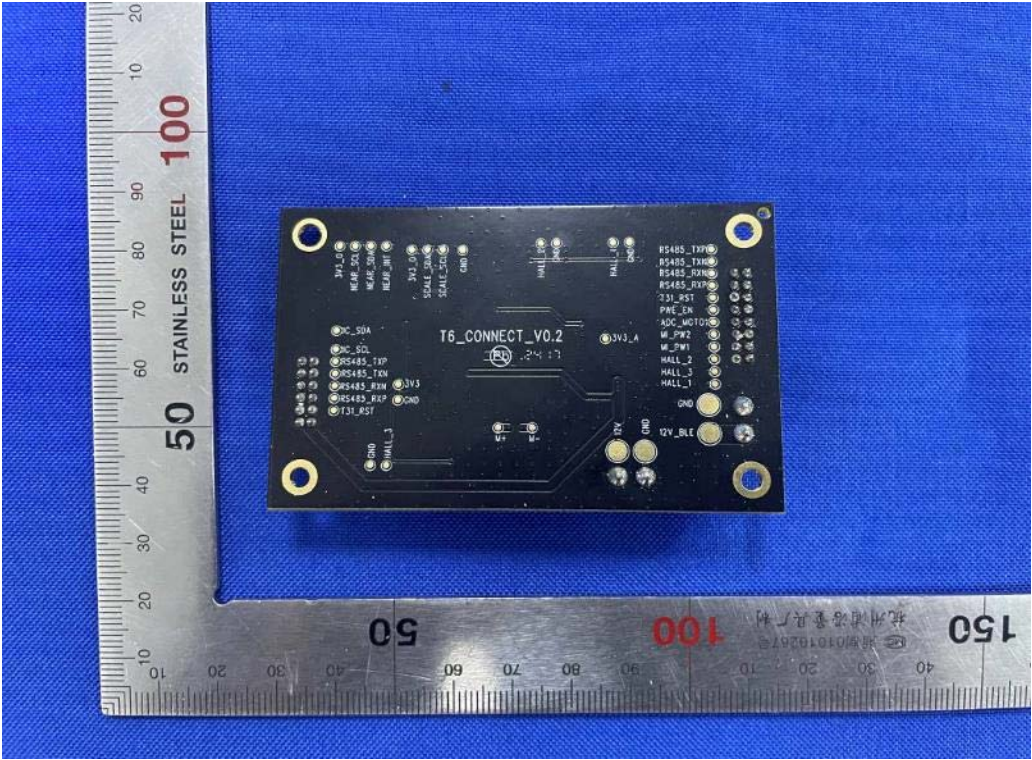
Internal-3 of the sample

TEST REPORT

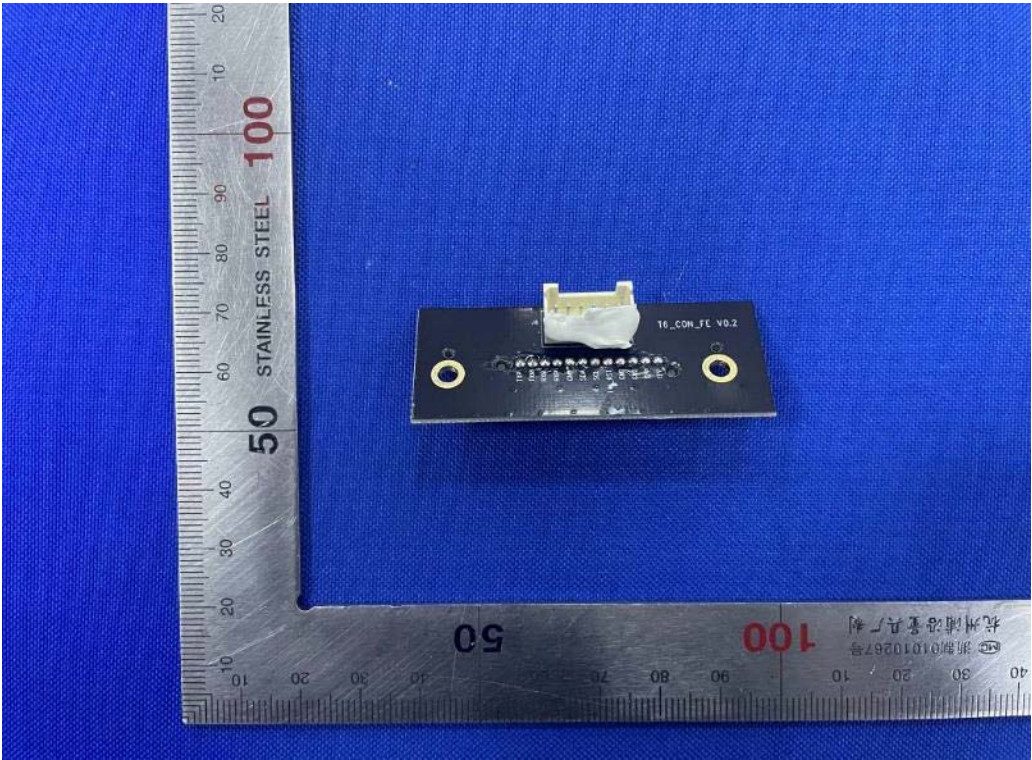
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Internal-4 of the sample



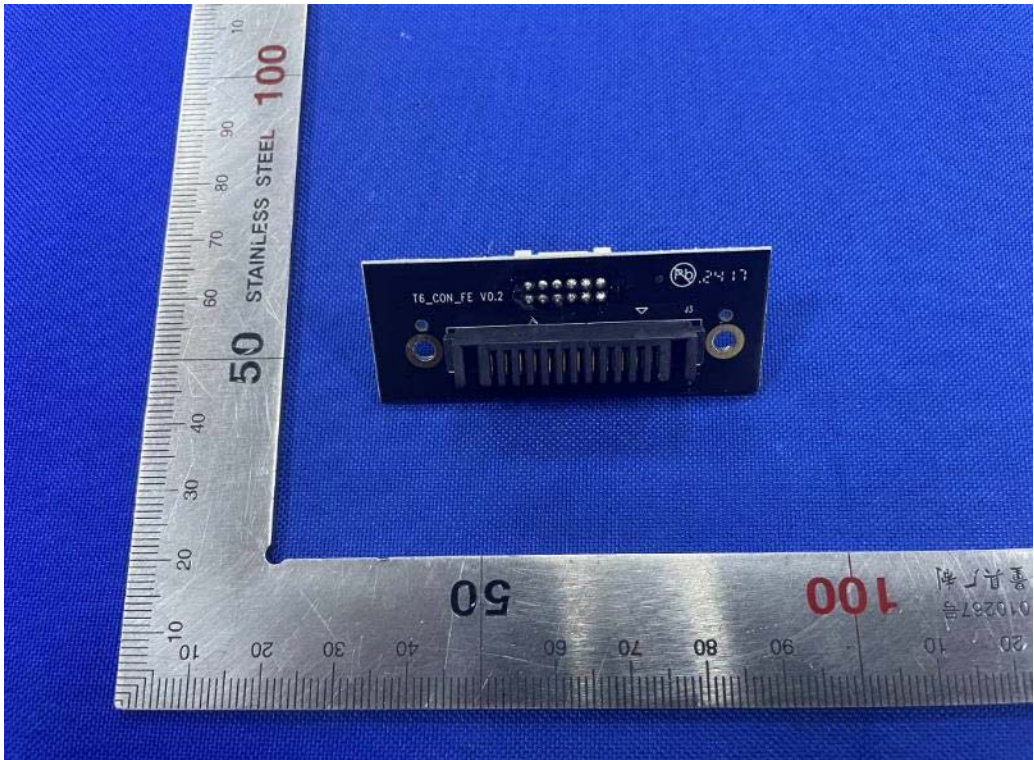
Internal-5 of the sample

TEST REPORT

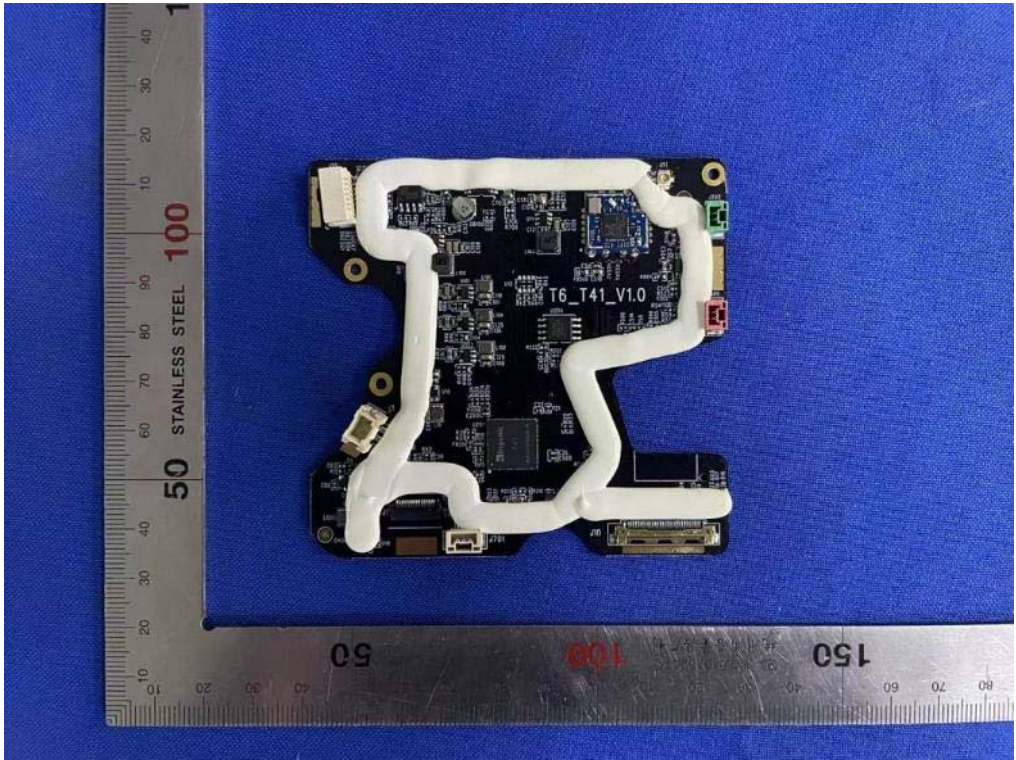
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Internal-6 of the sample



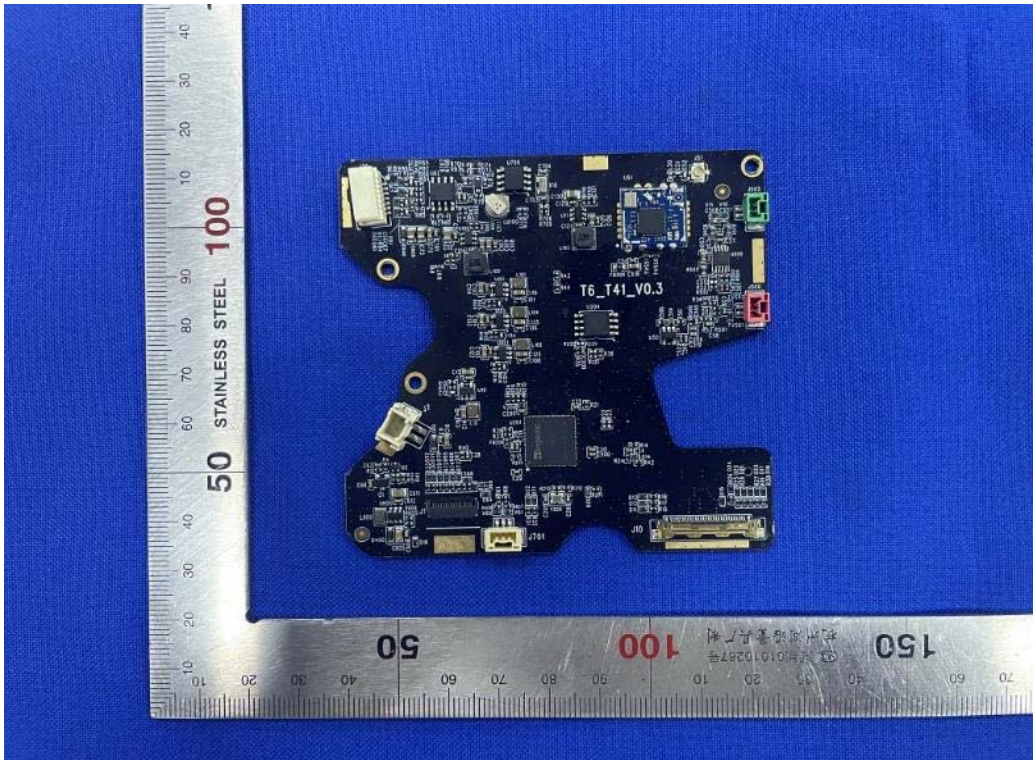
Internal-7 of the sample

TEST REPORT

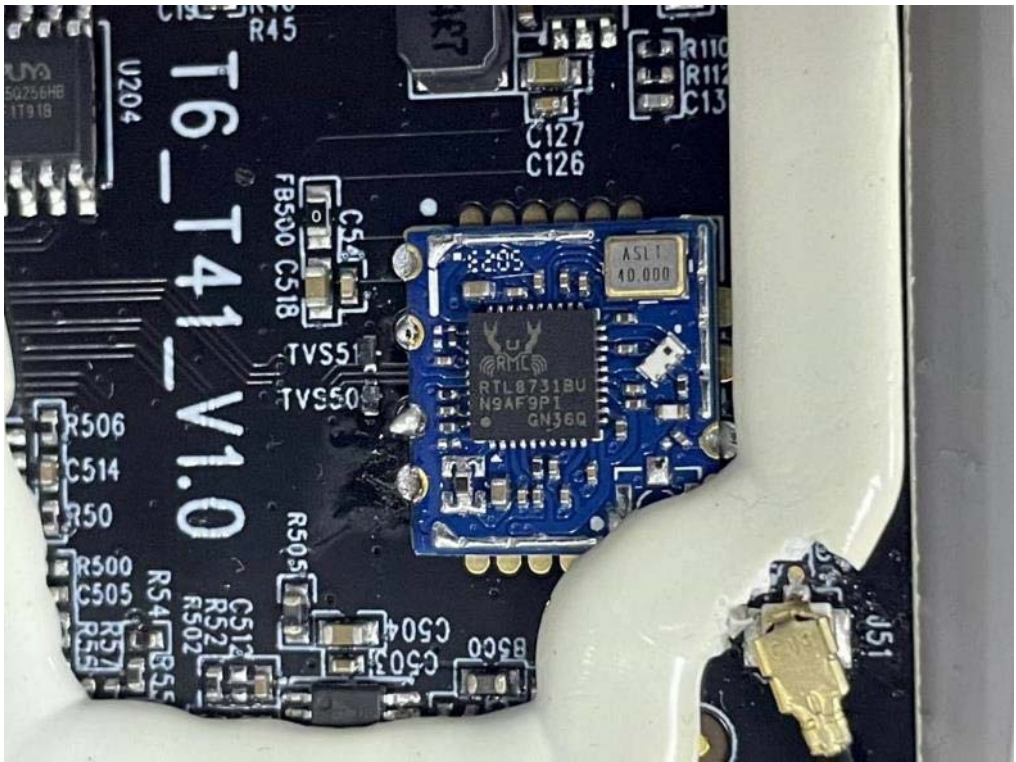
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Internal-8 of the sample



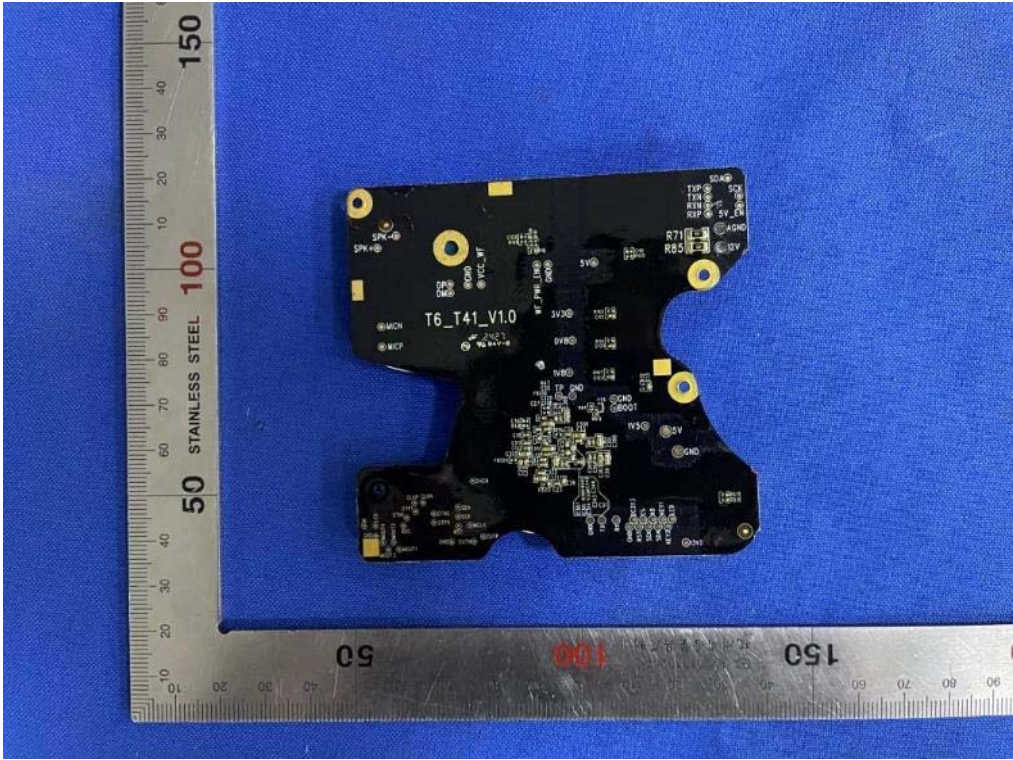
Internal-9 of the sample

TEST REPORT

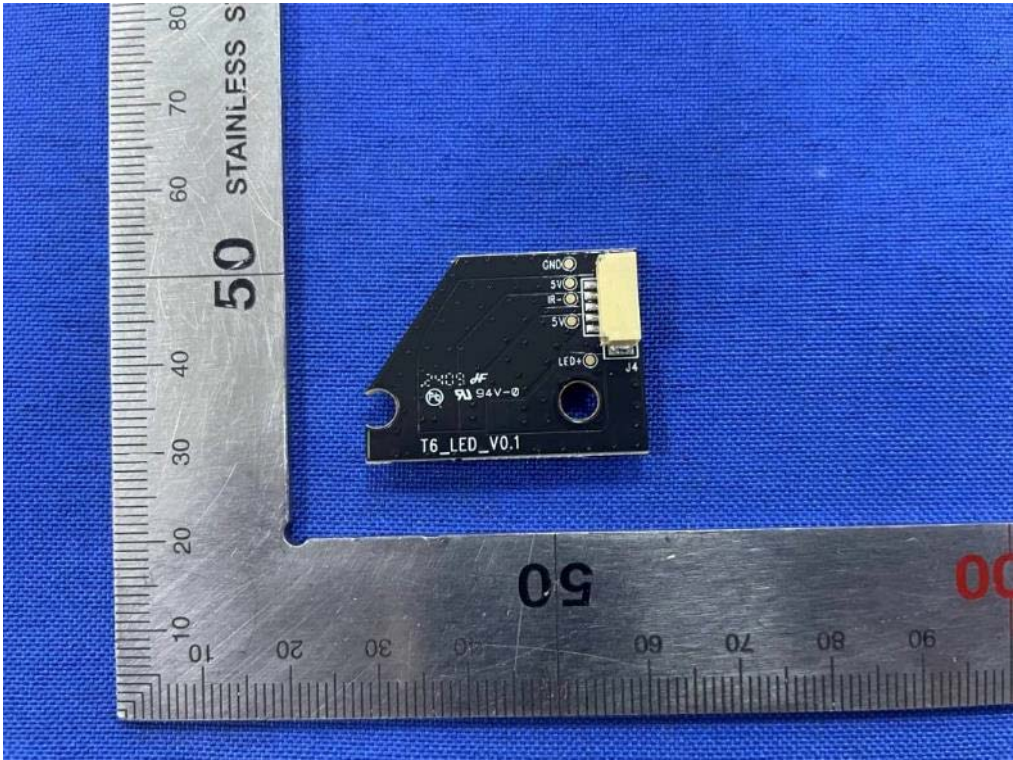
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Internal-10 of the sample



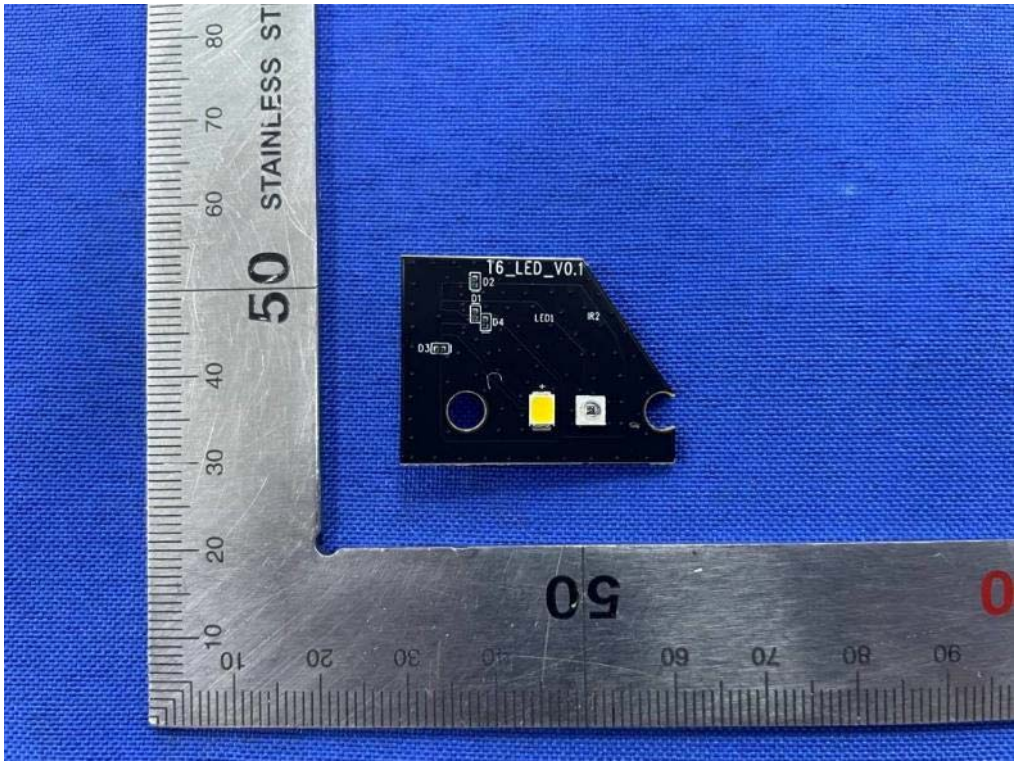
Internal-11 of the sample

TEST REPORT

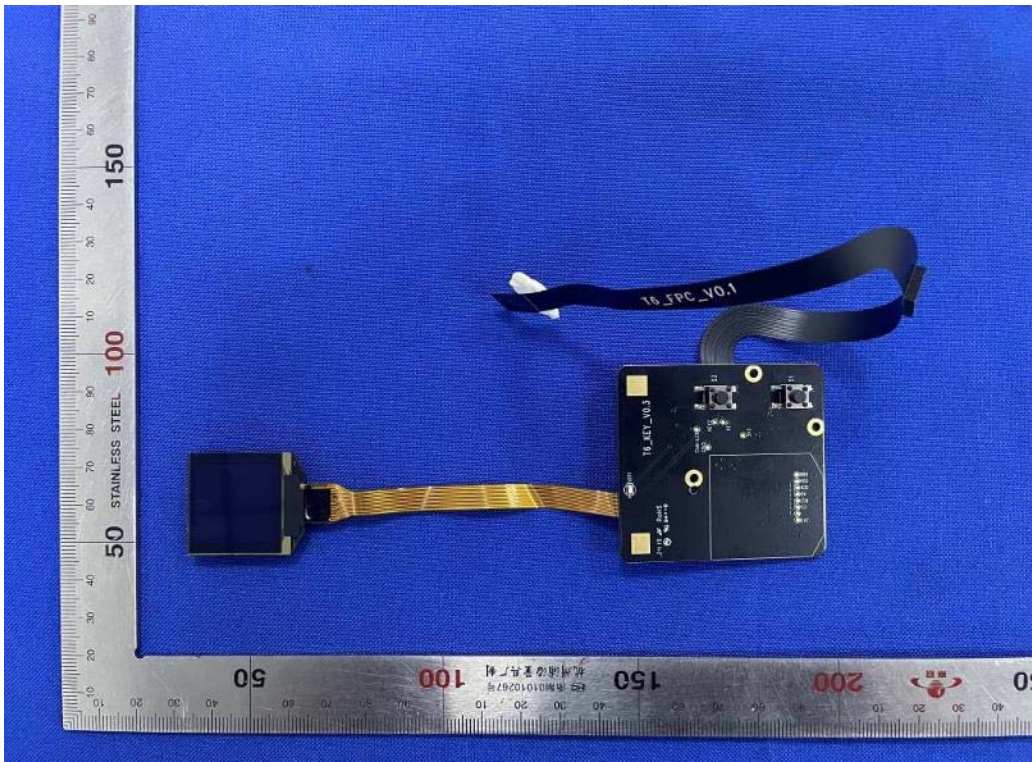
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Internal-12 of the sample



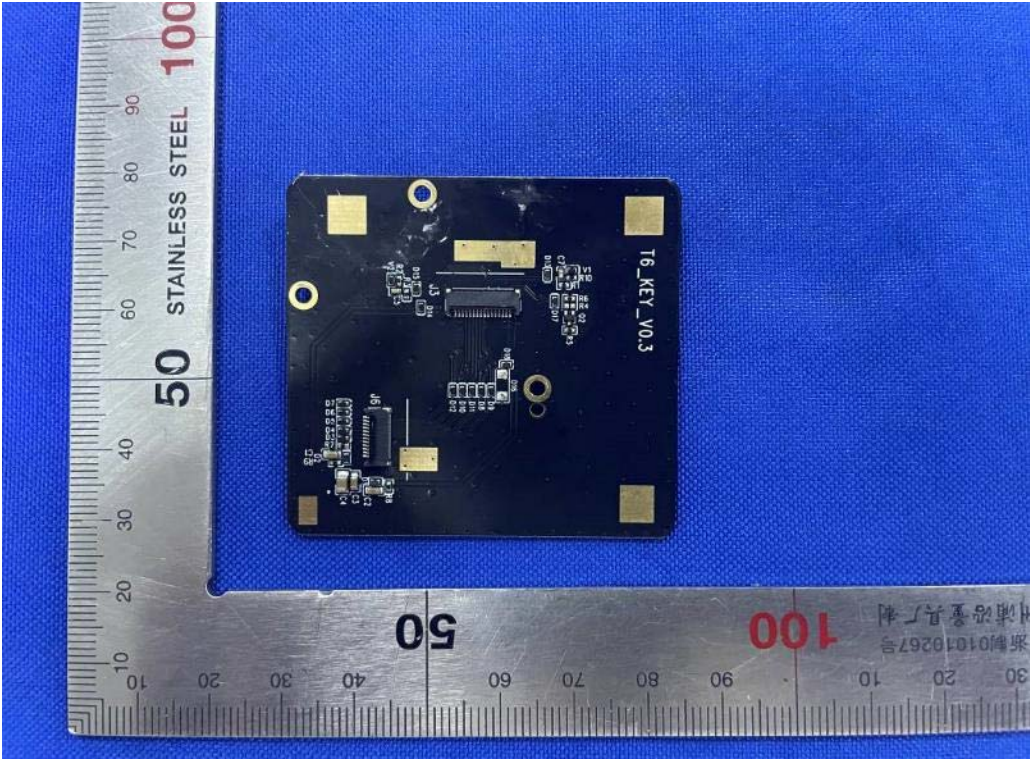
Internal-13 of the sample

TEST REPORT

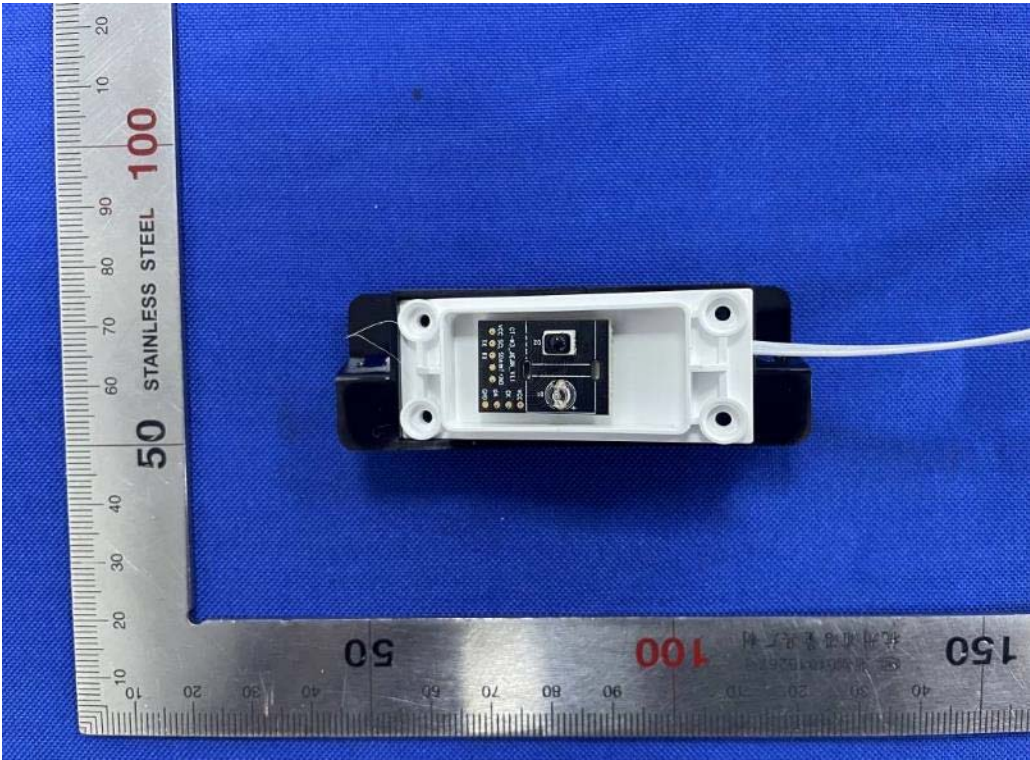
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Internal-14 of the sample



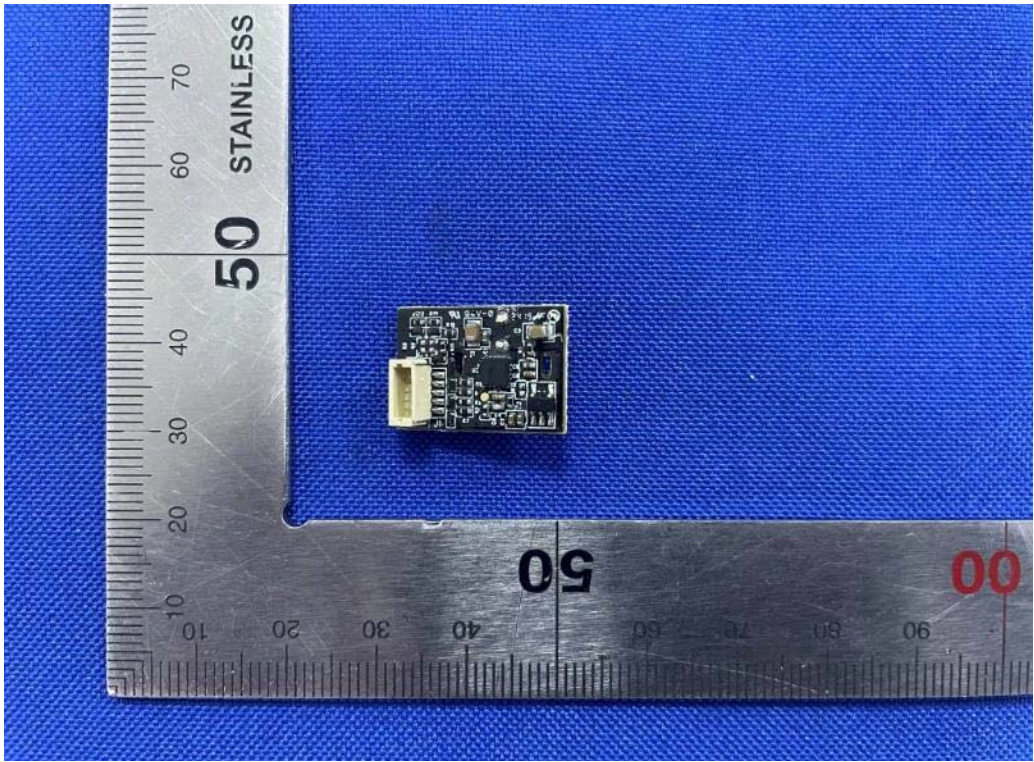
Internal-15 of the sample

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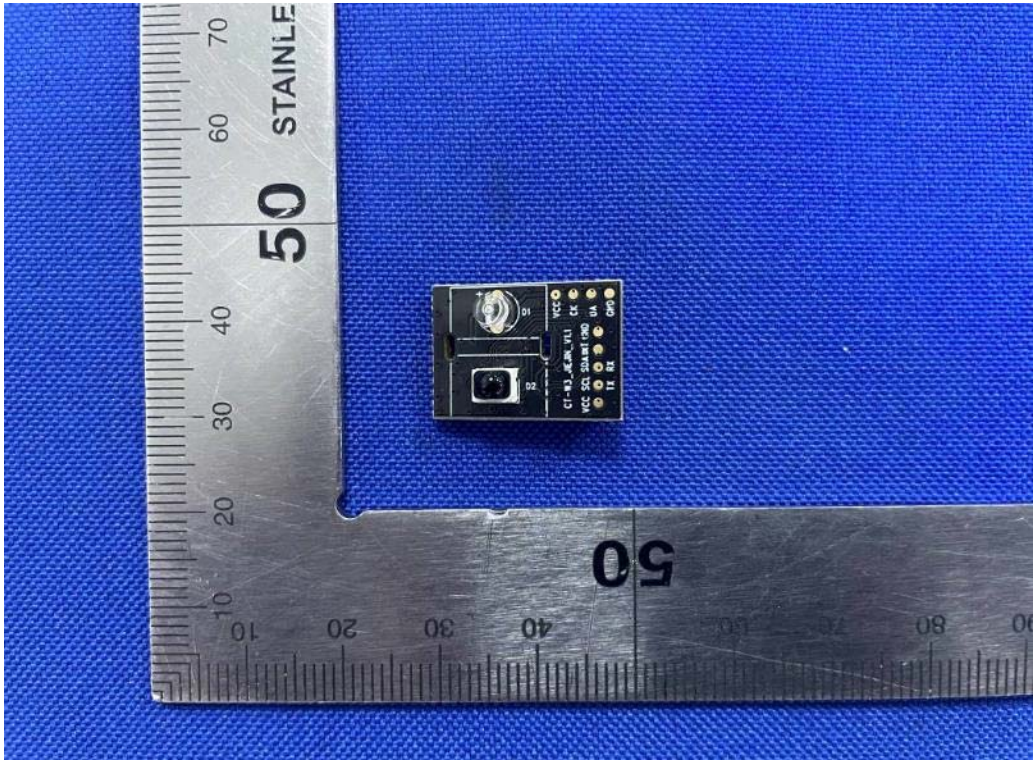
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Internal-16 of the sample



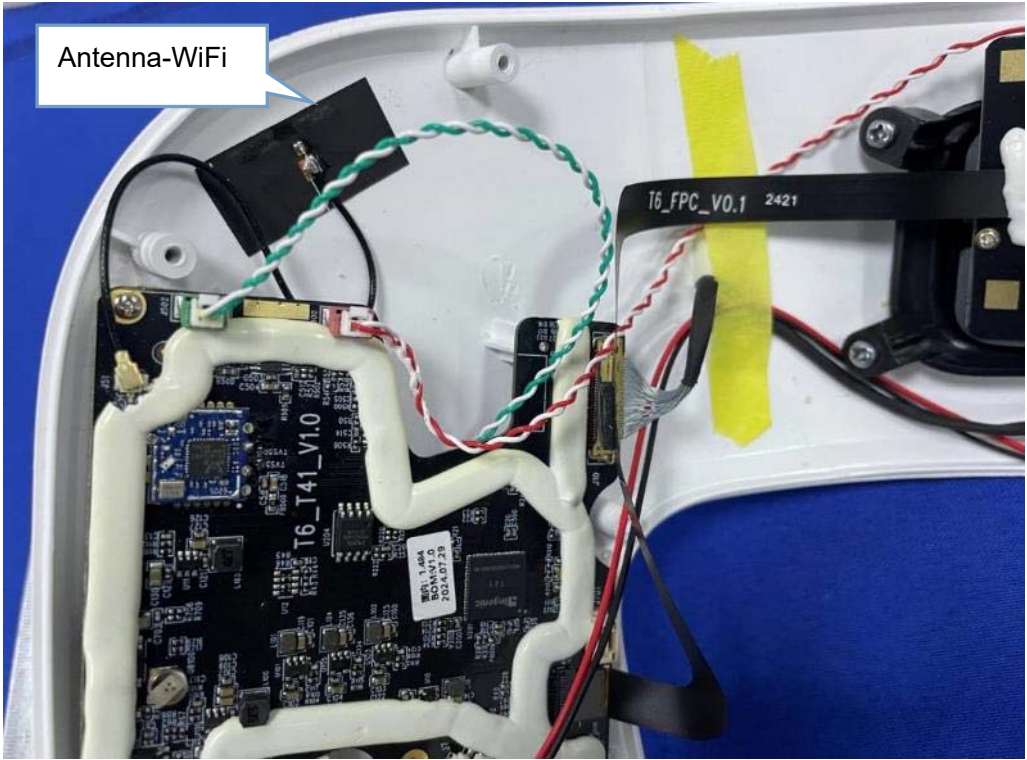
Internal-17 of the sample

TEST REPORT

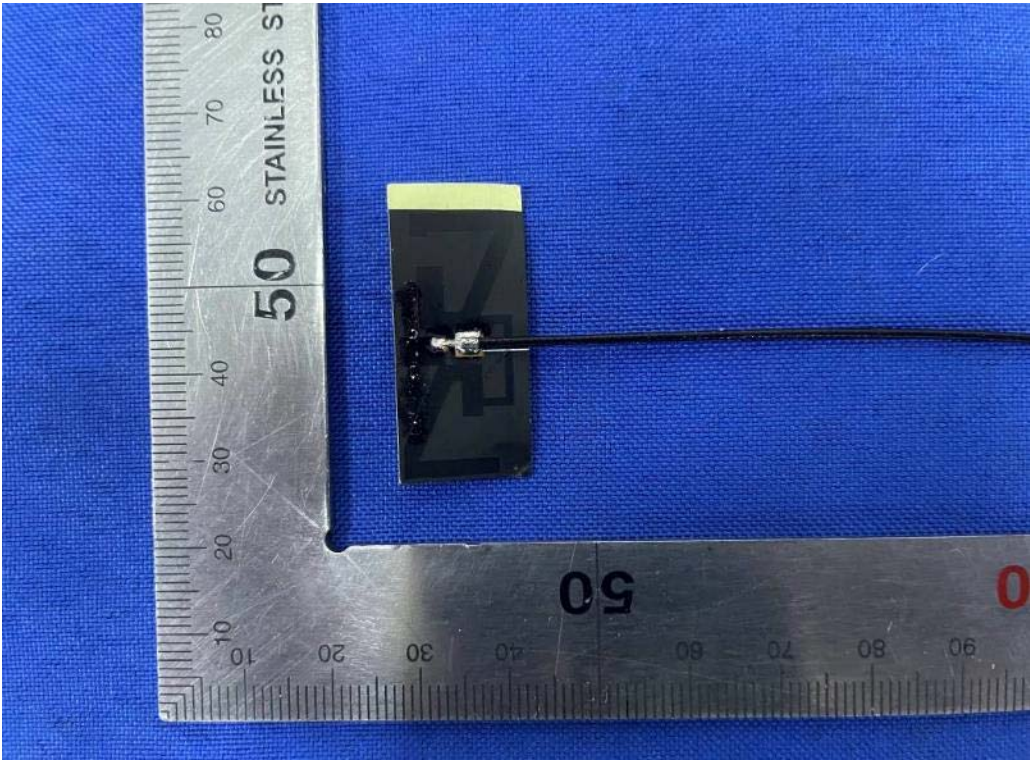
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Antenna position--WiFi



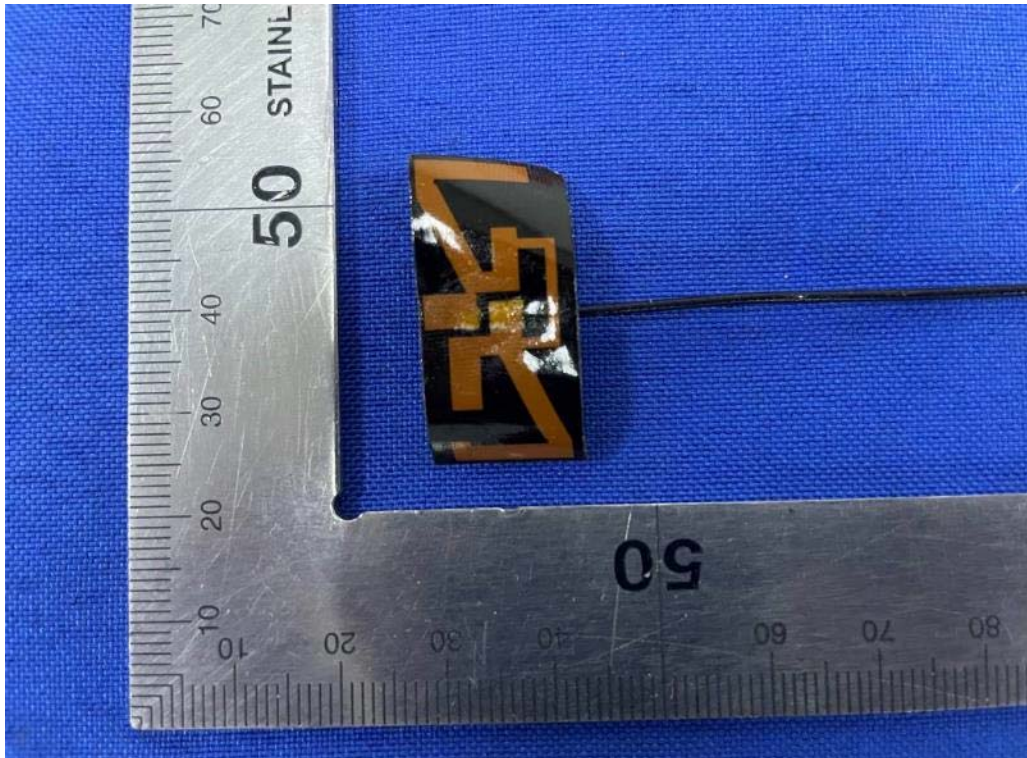
WiFi Antenna photo-1

TEST REPORT

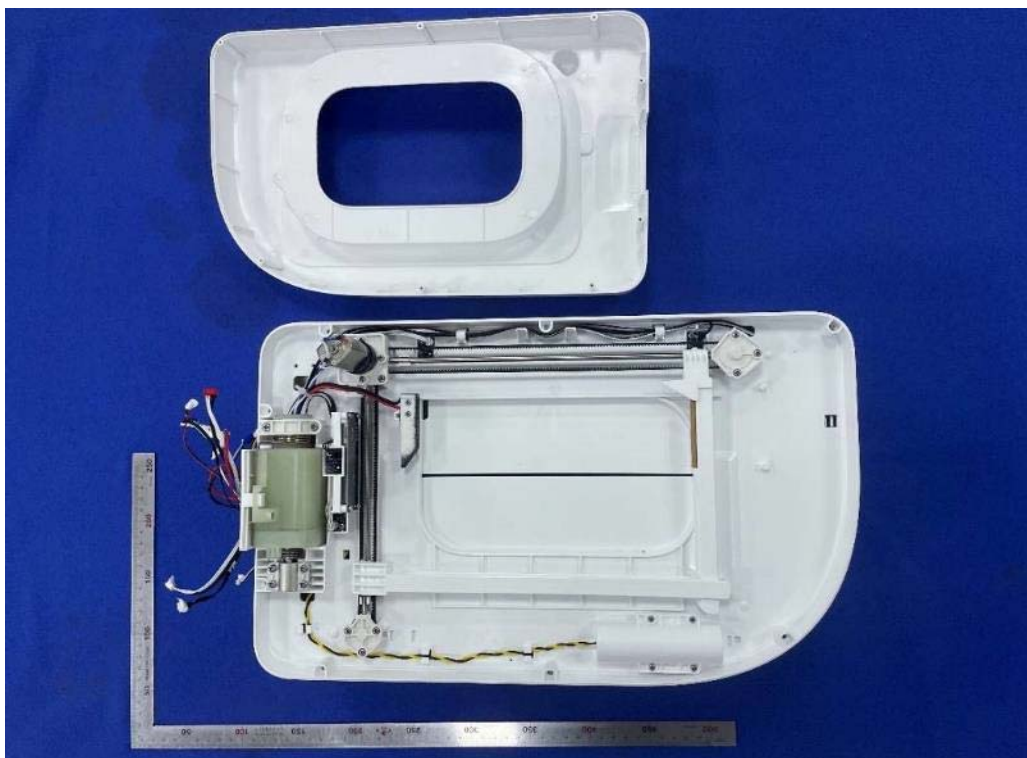
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WiFi Antenna photo-2



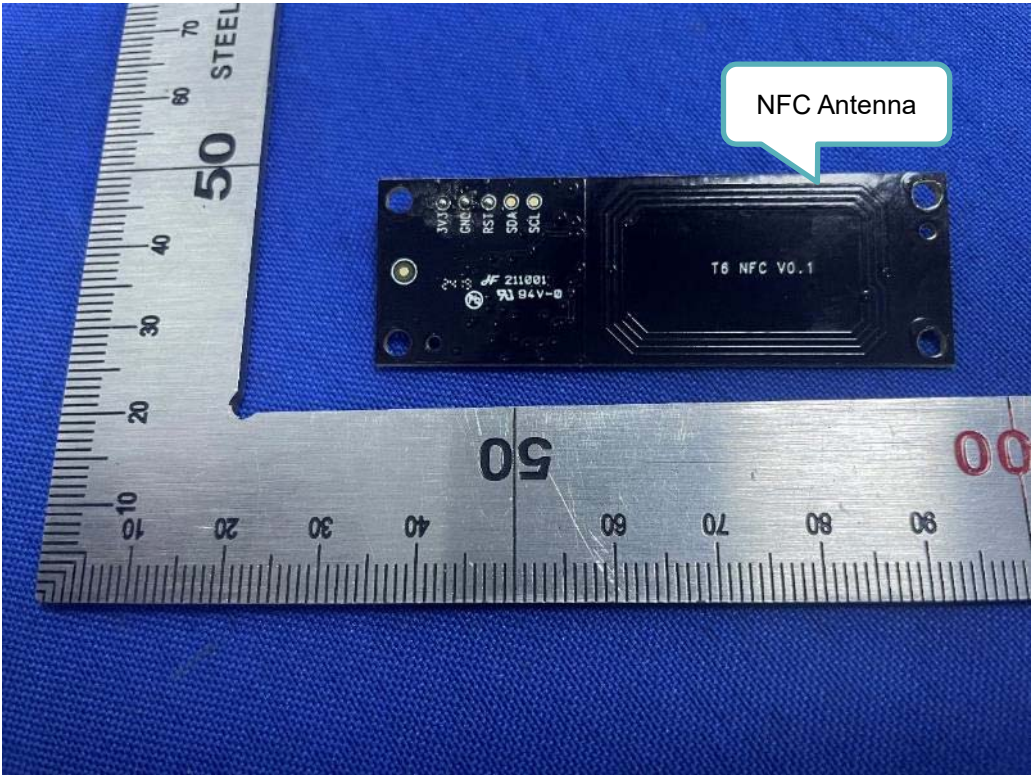
NFC-Open Photo

TEST REPORT

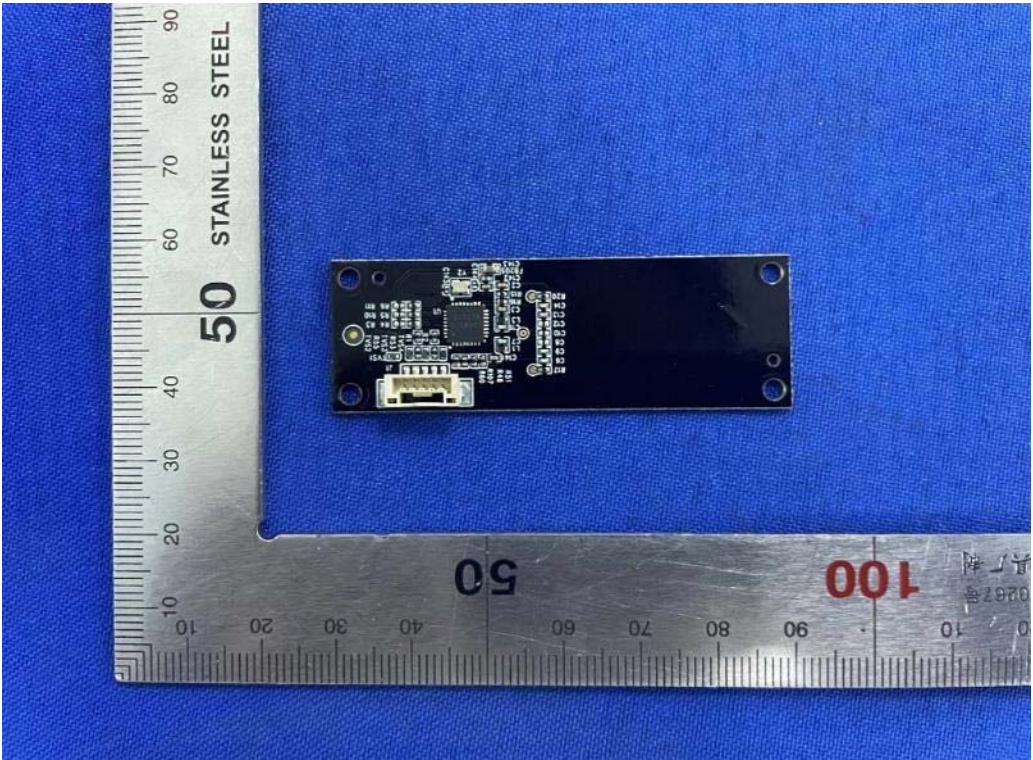
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NFC—PCB Board (Back)



NFC—PCB Board (Front)

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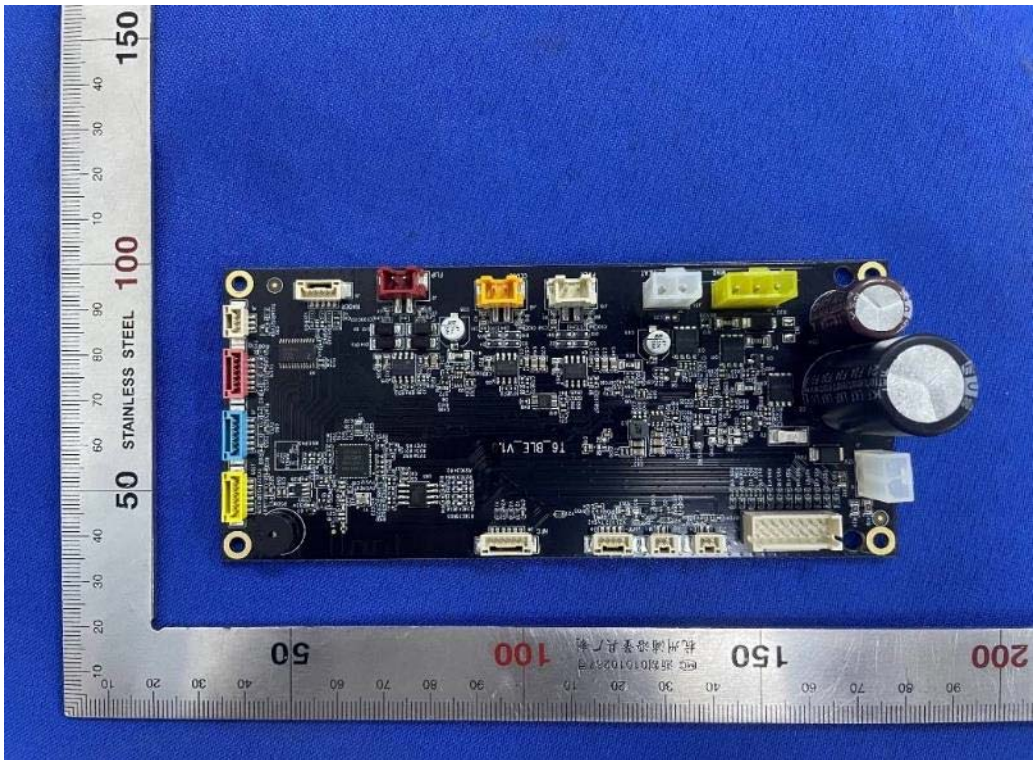
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Bluetooth LE-Open Photo



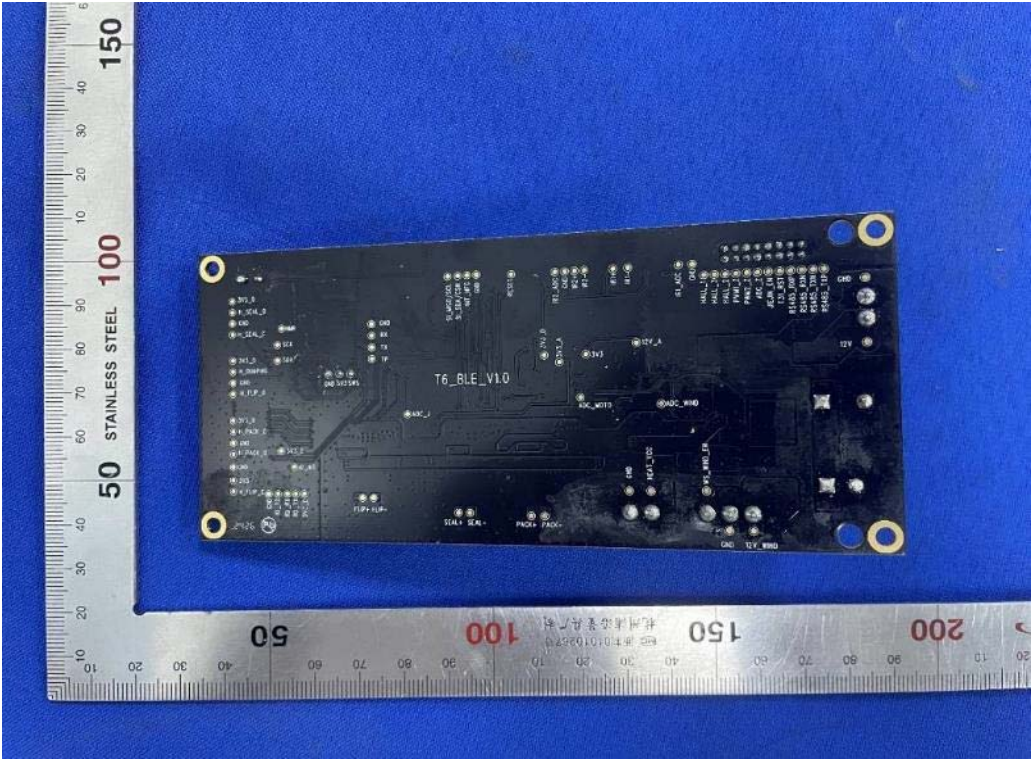
Bluetooth LE—PCB Board (Front)

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Bluetooth LE—PCB Board (Back)



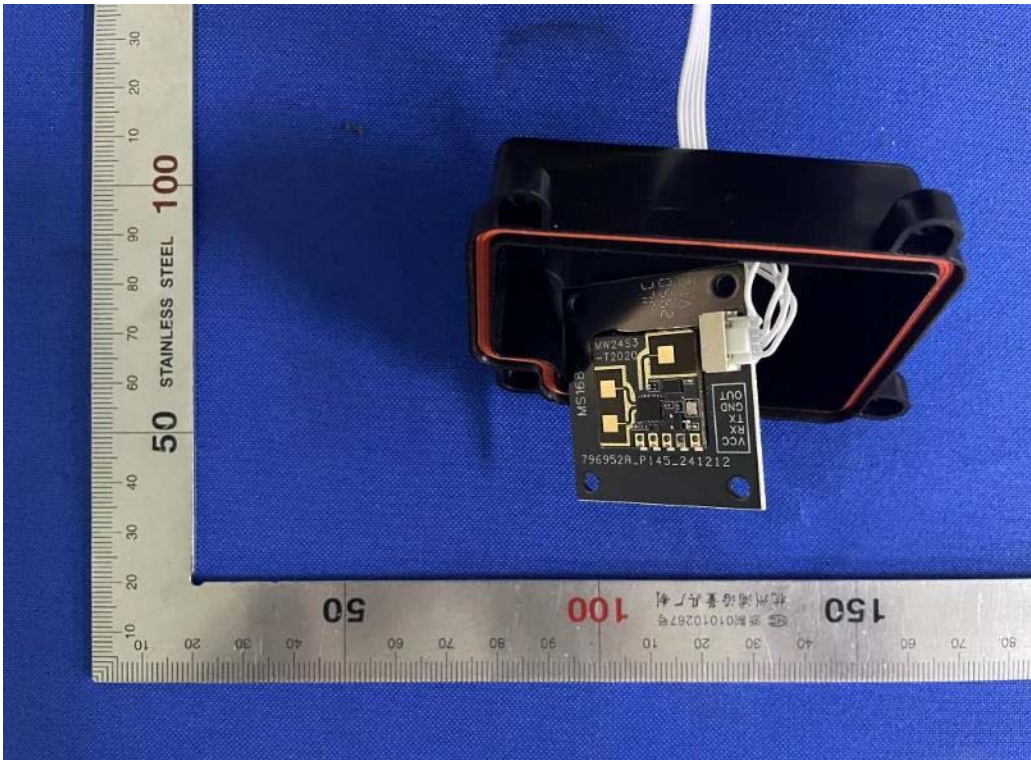
Bluetooth LE—Antenna Position

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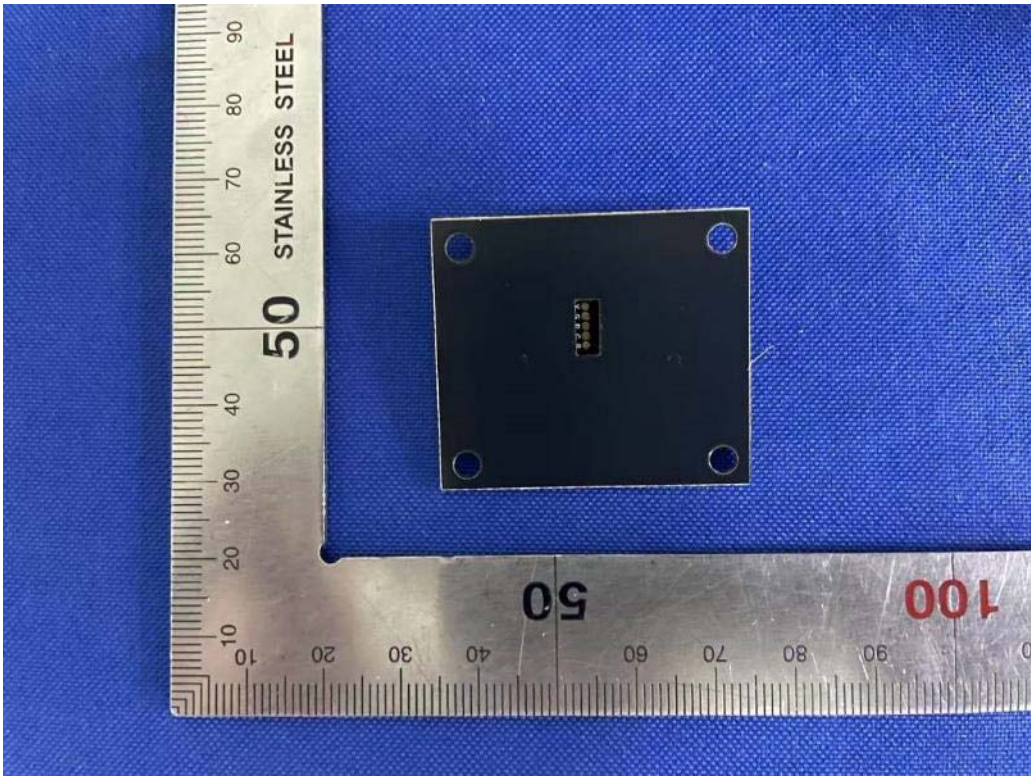
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Radar Photo-1



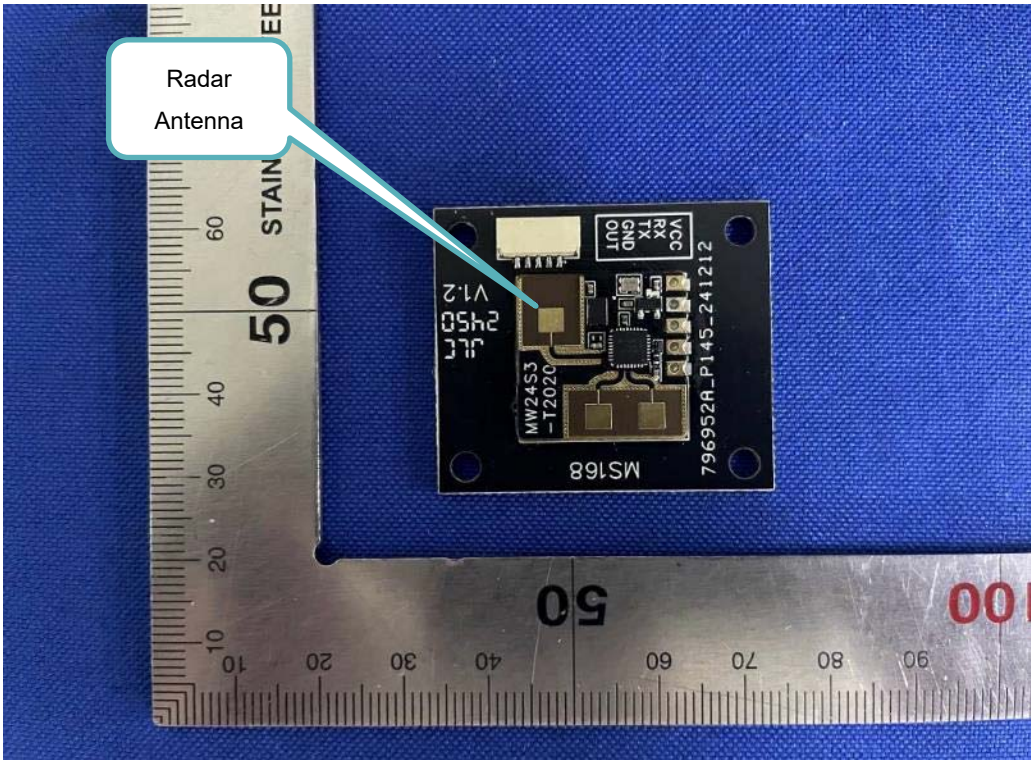
Radar Photo-2

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Radar Photo-3



Adapter-1

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Adapter-2



Power Port

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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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5.4 Set-up for Spurious Emissions below 1GHz



5.5 Set-up for Spurious Emissions above 1GHz



End of the report