

# TEST REPORT

Report No.: SHE23100101-02AE

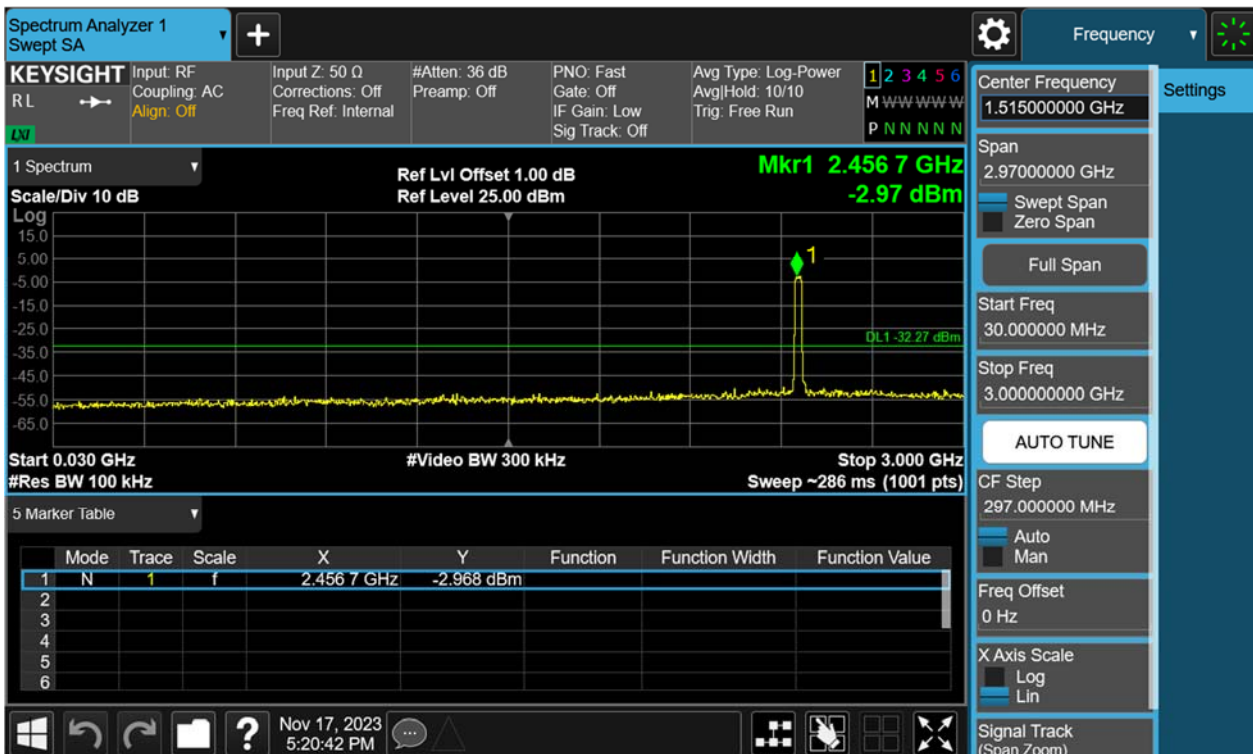
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## Band Edge



## Conducted spurious emissions 30MHz-25GHz



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Figure 34: Conducted Spurious Emission & Authorized-band band-edge, 802.11n(HT40), 2422MHz Carrier Level



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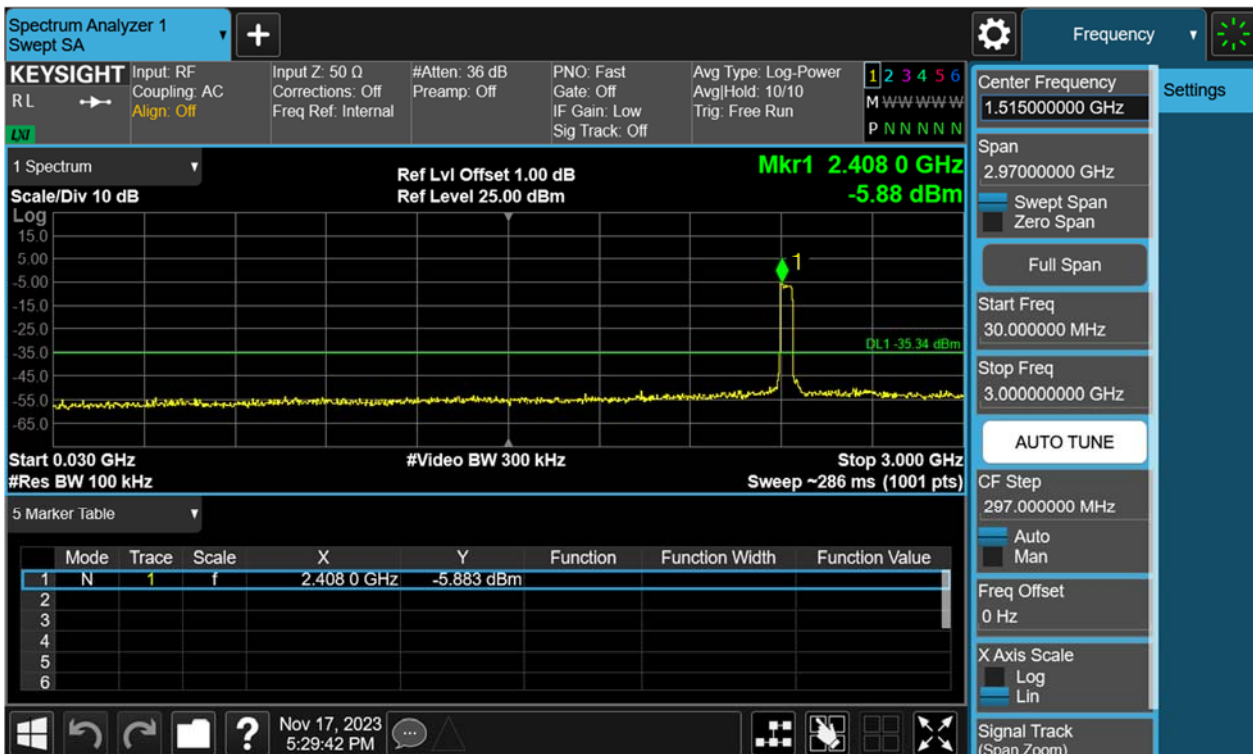
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## Band Edge



## Conducted spurious emissions 30MHz-25GHz



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Figure 35: Conducted Spurious Emission & Authorized-band band-edge, 802.11n(HT40), 2437MHz Carrier Level



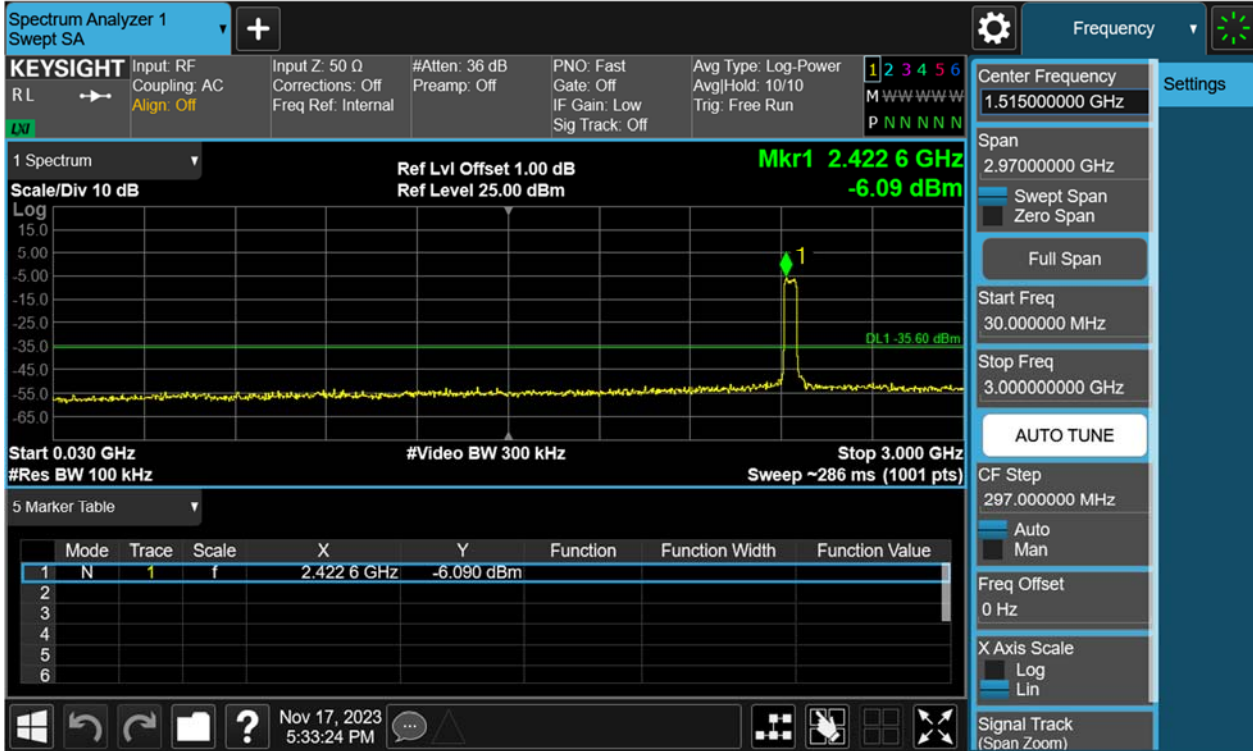
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## Conducted spurious emissions 30MHz-25GHz



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Figure 36: Conducted Spurious Emission & Authorized-band band-edge, 802.11n(HT40), 2452MHz Carrier Level



## Band Edge



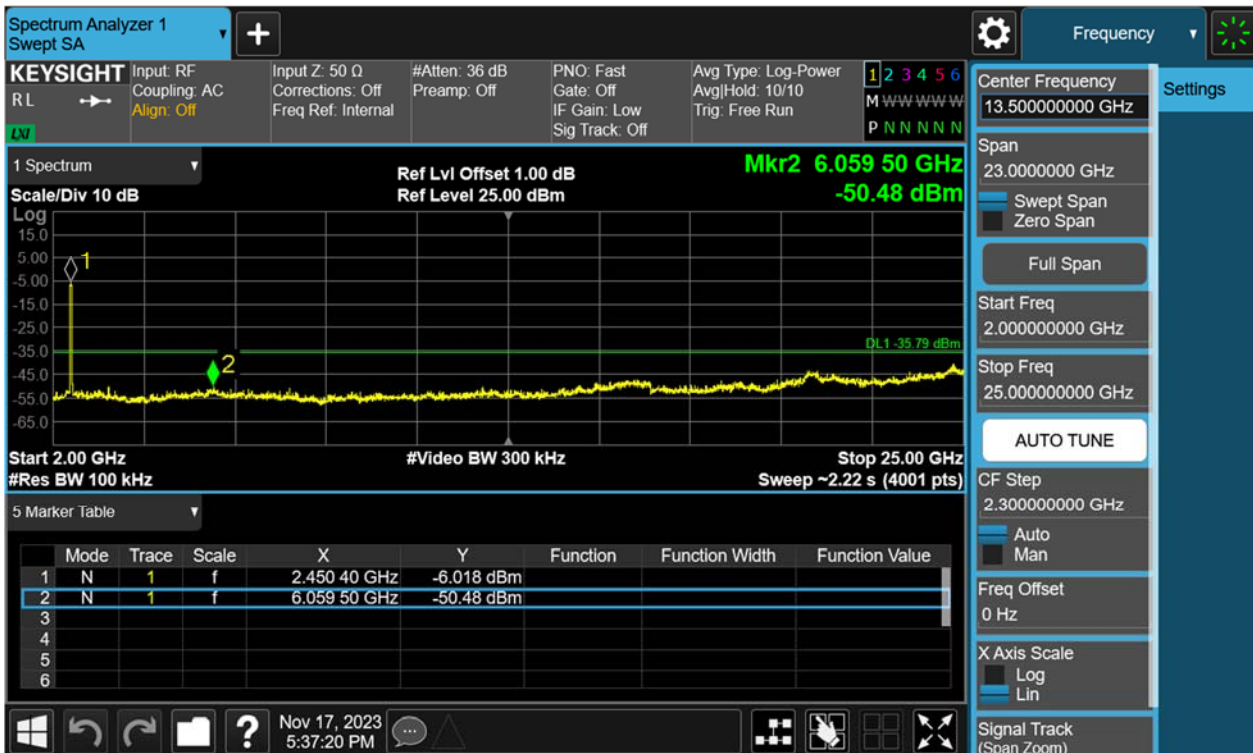
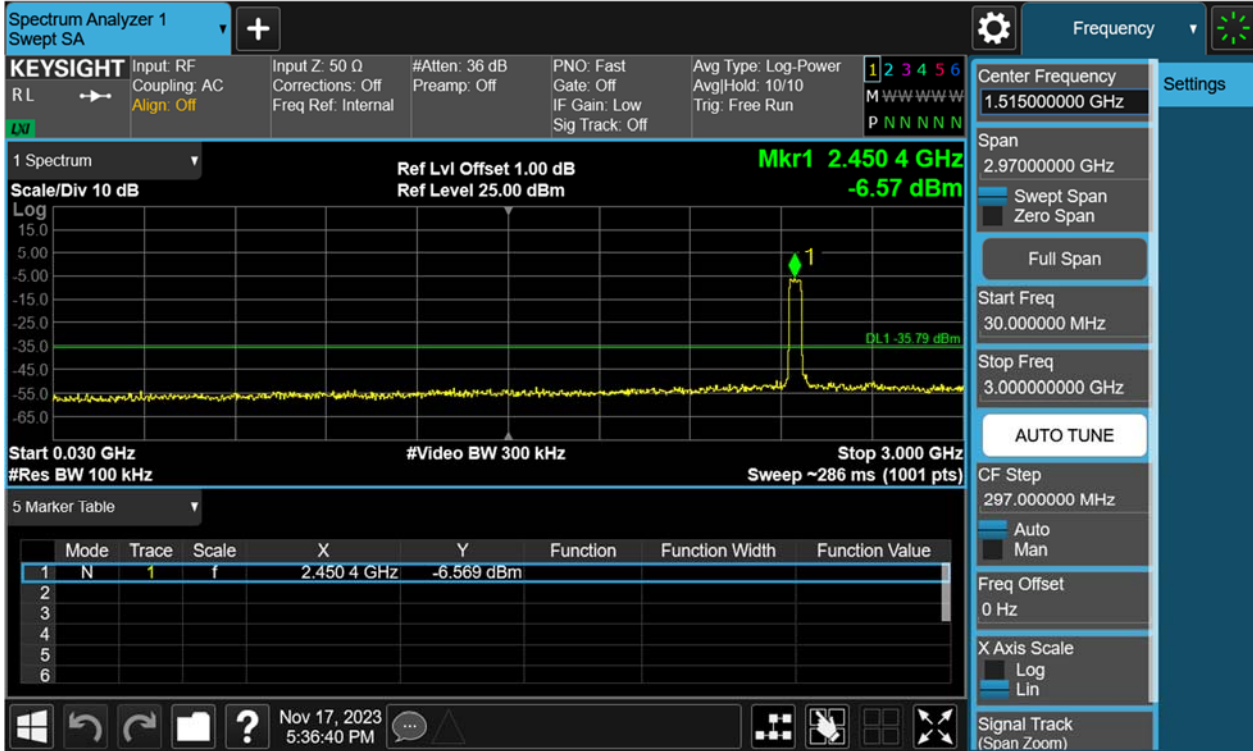
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## Conducted spurious emissions 30MHz-25GHz



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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 : 25.1°C  
Relative humidity : 52%

### Notes

*Test plots please refer to the annex document "SHE23100101-02AE 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 : 25.1°C  
Relative humidity : 52%

### Notes:

1. Test plots please refer to the annex document "SHE23100101-02AE 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 : which received AC 120V, 60Hz Power  
Operation Mode : A.1.a  
Earthing : Disconnected to GND  
Ambient temperature : 26°C  
Relative humidity : 49%

For details refer to following test plot.

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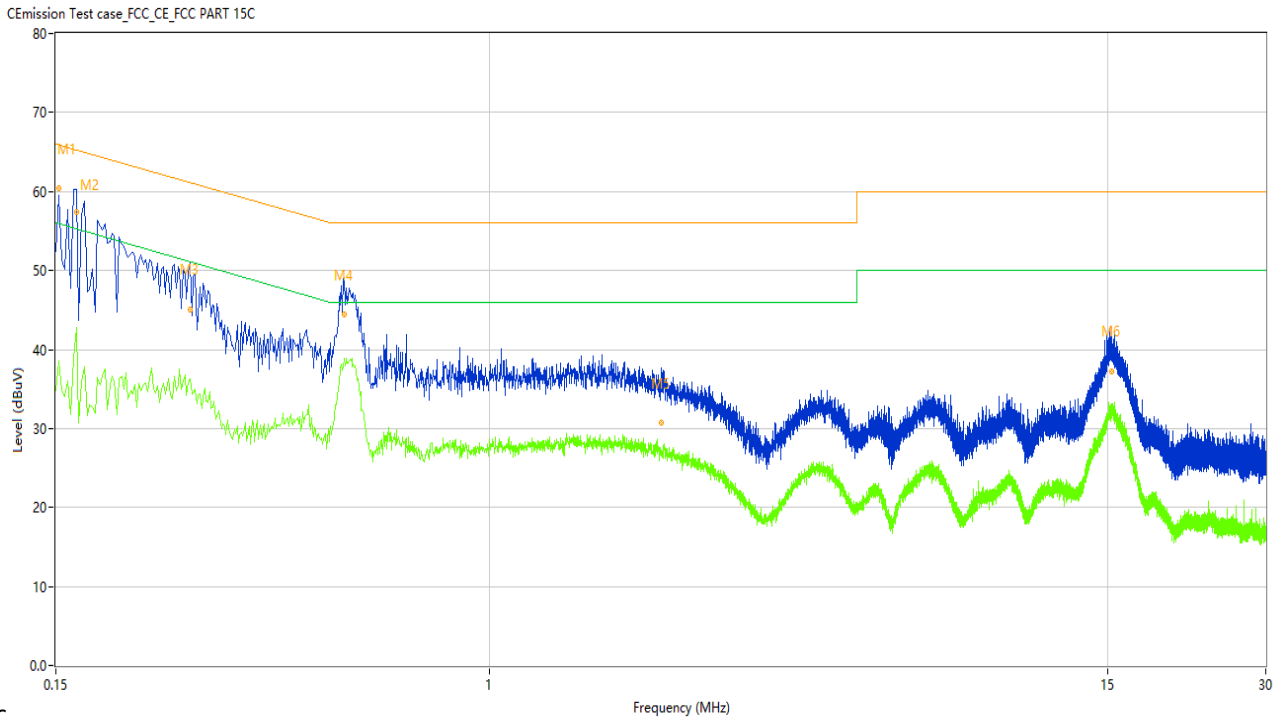
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Note: All test modes had been pre-tested, but only the 802.11b at low channel is the worst case and recorded in the report.

Figure 37: Conducted Emission on AC Mains, L Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.152	65.89	9.92	65.89	0.00	Peak	L	N/A
1*	0.152	60.36	9.92	65.89	5.53	QP	L	Pass
1**	0.152	38.60	9.92	55.89	17.29	AV	L	Pass
2	0.164	61.97	9.94	65.26	3.29	Peak	L	Pass
2*	0.164	57.42	9.94	65.26	7.84	QP	L	Pass
2**	0.164	42.76	9.94	55.26	12.50	AV	L	Pass
3	0.270	51.65	9.97	61.12	9.47	Peak	L	Pass
3*	0.270	45.11	9.97	61.12	16.01	QP	L	Pass
3**	0.270	36.28	9.97	51.12	14.84	AV	L	Pass
4	0.530	49.73	9.96	56.00	6.27	Peak	L	Pass
4*	0.530	44.46	9.96	56.00	11.54	QP	L	Pass
4**	0.530	38.83	9.96	46.00	7.17	AV	L	Pass
5	2.130	35.93	9.85	56.00	20.07	Peak	L	Pass
5*	2.130	30.73	9.85	56.00	25.27	QP	L	Pass
5**	2.130	27.25	9.85	46.00	18.75	AV	L	Pass
6	15.252	44.49	9.51	60.00	15.51	Peak	L	Pass
6*	15.252	37.24	9.51	60.00	22.76	QP	L	Pass
6**	15.252	32.46	9.51	50.00	17.54	AV	L	Pass

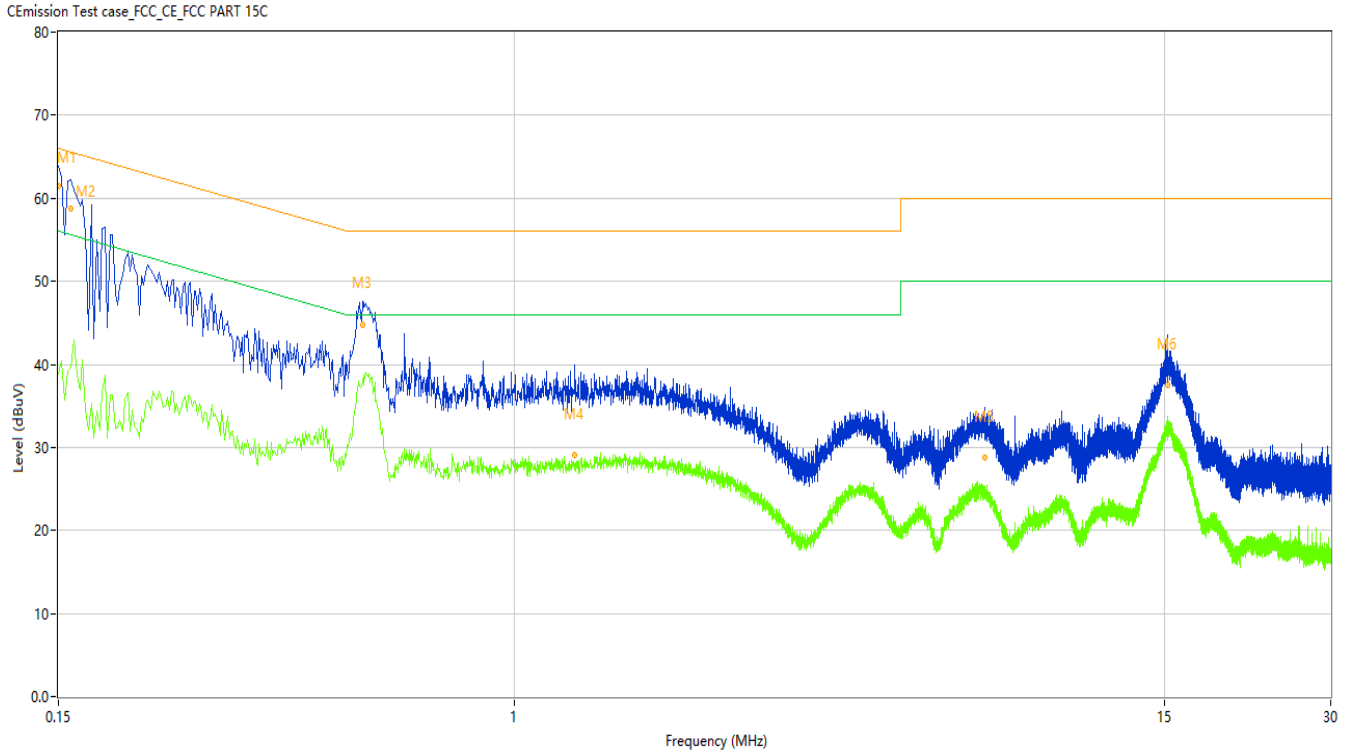
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Figure 38: Conducted Emission on AC Mains, N Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.150	66.85	10.02	66.00	-0.85	Peak	N	N/A
1*	0.150	61.41	10.02	66.00	4.59	QP	N	Pass
1**	0.150	38.88	10.02	56.00	17.12	AV	N	Pass
2	0.158	63.22	10.03	65.57	2.35	Peak	N	Pass
2*	0.158	58.77	10.03	65.57	6.80	QP	N	Pass
2**	0.158	39.68	10.03	55.57	15.89	AV	N	Pass
3	0.532	50.28	10.06	56.00	5.72	Peak	N	Pass
3*	0.532	44.72	10.06	56.00	11.28	QP	N	Pass
3**	0.532	37.94	10.06	46.00	8.06	AV	N	Pass
4	1.288	37.54	9.94	56.00	18.46	Peak	N	Pass
4*	1.288	29.13	9.94	56.00	26.87	QP	N	Pass
4**	1.288	27.78	9.94	46.00	18.22	AV	N	Pass
5	7.110	34.22	9.84	60.00	25.78	Peak	N	Pass
5*	7.110	28.79	9.84	60.00	31.21	QP	N	Pass
5**	7.110	25.33	9.84	50.00	24.67	AV	N	Pass
6	15.242	43.76	9.59	60.00	16.24	Peak	N	Pass
6*	15.242	37.49	9.59	60.00	22.51	QP	N	Pass
6**	15.242	33.81	9.59	50.00	16.19	AV	N	Pass

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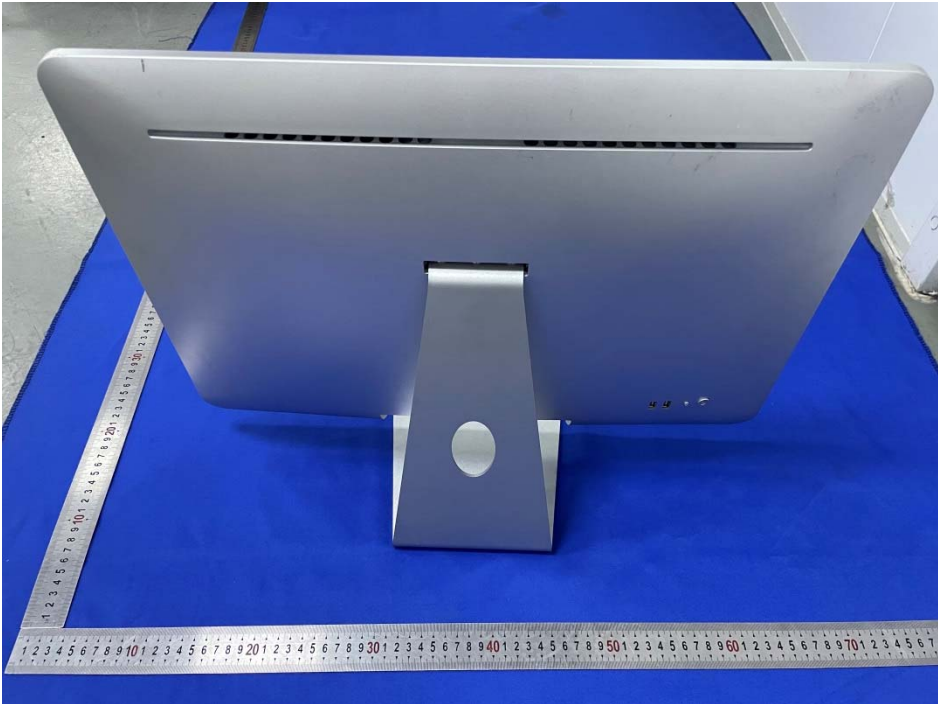
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## 5 Appendixes

### 5.1 Photographs of the Sample



Front of the sample



Rear of the sample

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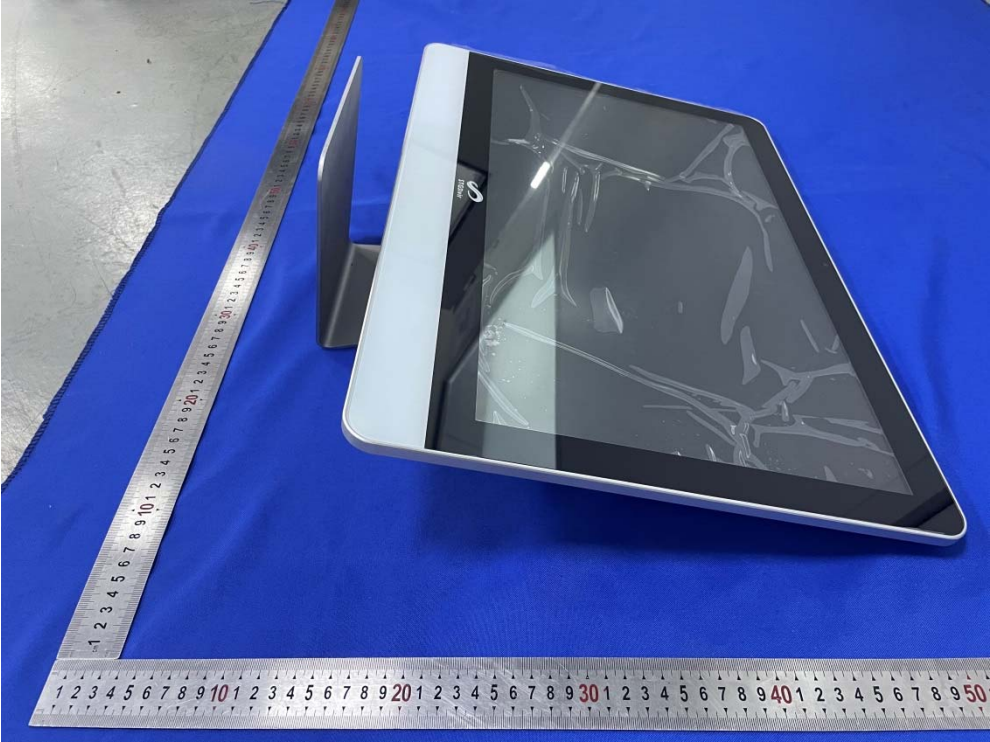
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Left of the sample



Right of the sample

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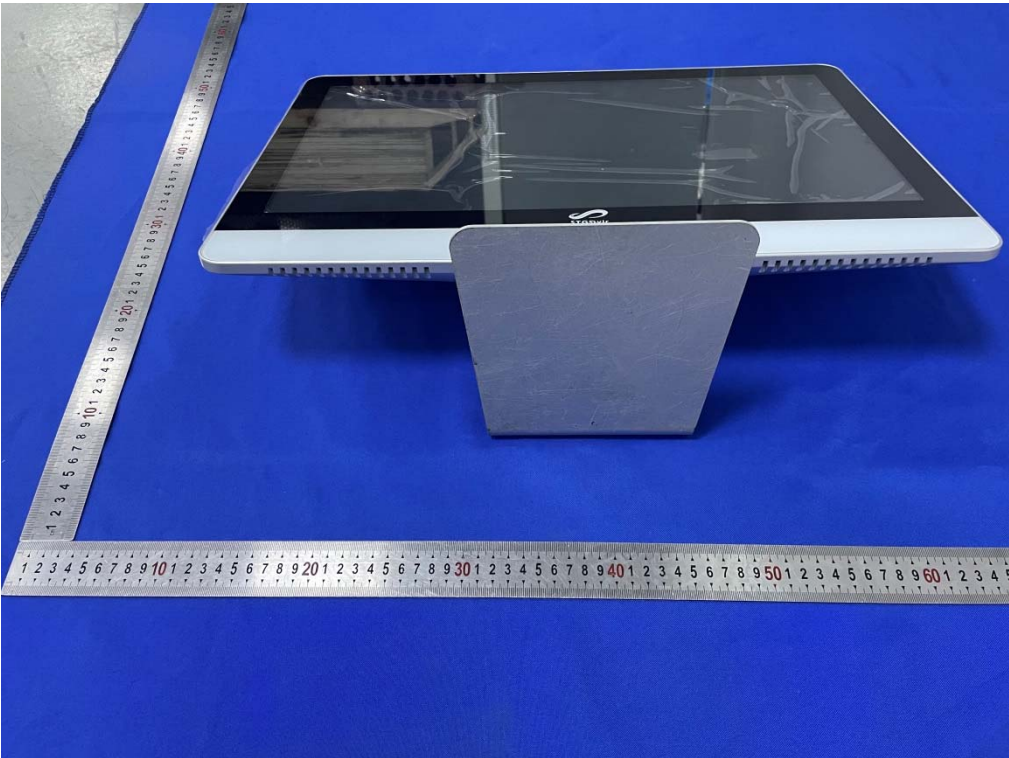
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Top of the sample



Bottom of the sample

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## 5.2 Set-up for Conducted Emissions



## 5.3 Set-up for Conducted RF test at Antenna Port





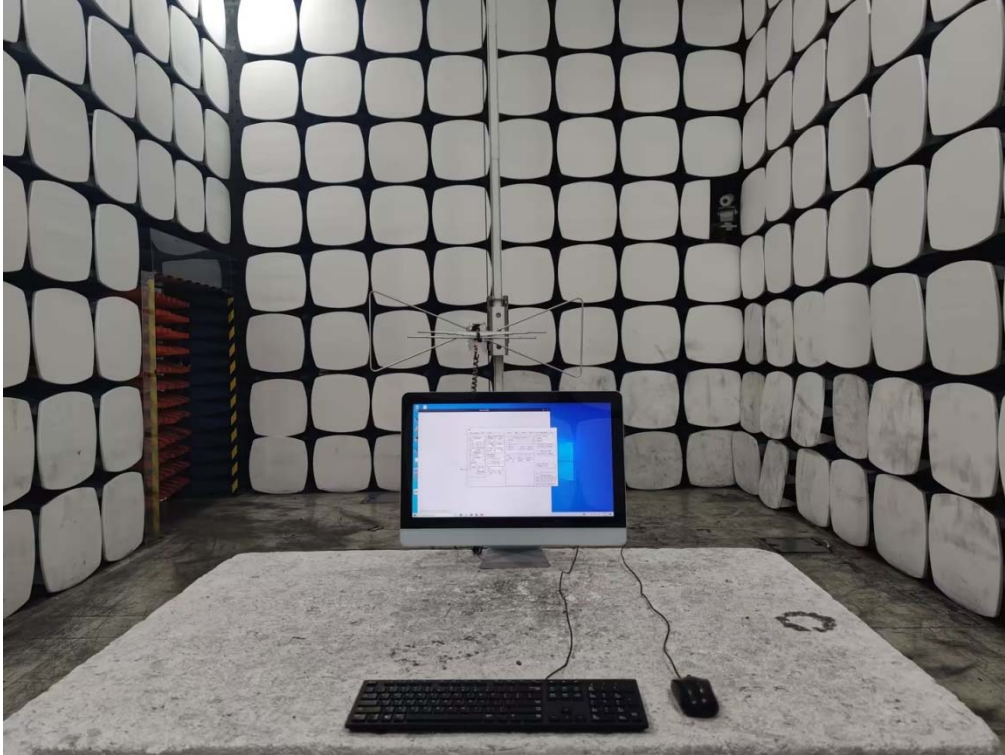
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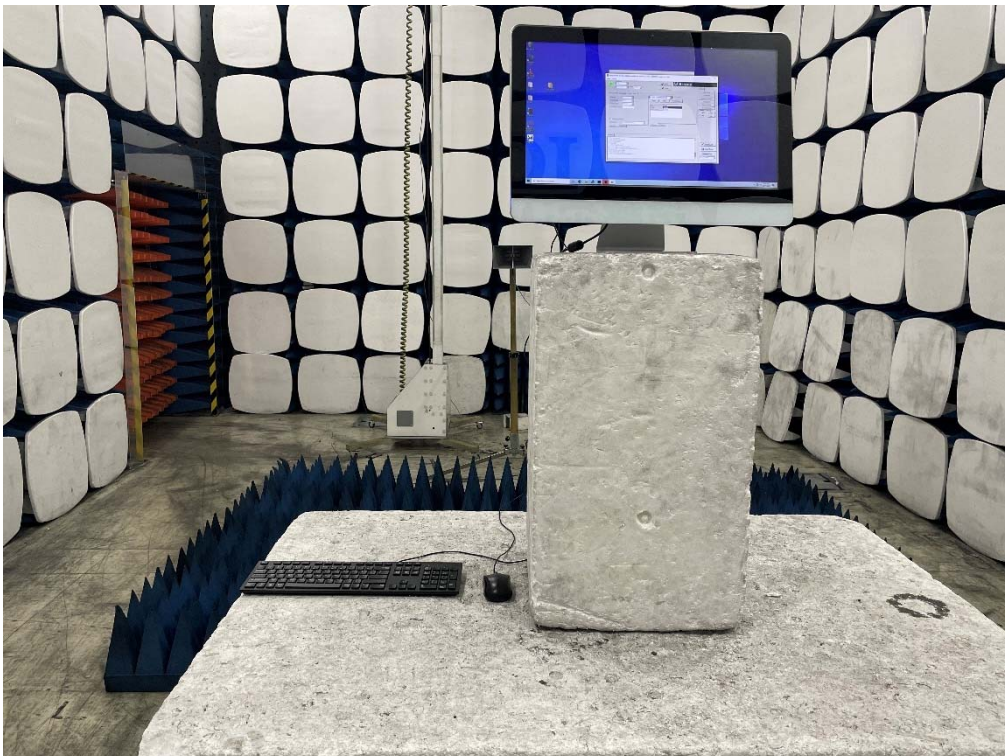
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## 5.4 Set-up for Spurious Emissions below 1GHz



## 5.5 Set-up for Spurious Emissions above 1GHz



\*\*\*End of the report\*\*\*