Report No.: SHE23060039-04CE

Date:

2023-07-21

Page 41 of 57

#### **Band Edge**



#### Conducted spurious emissions 30MHz-25GHz

Spect Swep	rum Analy t SA	/zer 1	•	+								Display	•	쁥
KEY RL	′SIGHT ↔	Input: R Coupling Align: O	g: AC	Input Ζ: 50 Ω Corrections: Off Freq Ref: Internal	#Atten: 36 dB Preamp: Off	PNO: Gate: IF Gai Sig Tra	Off	Avg Type: Log Avg Hold: 10/ Trig: Free Ru	10	123456 MWWWWW PNNNNN	Line	t Display ay Line 1 र	Meas Display	
1 Spe Scale	ctrum e/Div 10 d	B	•		Ref LvI Offset 0.5 Ref Level 25.00 c			M		157 3 GHz 4.34 dBm		ay Line 56 dBm	View Annota	tion
Log 15.0 5.00 -5.00 -15.0 -25.0									<b>↓</b> 1 —	DL1 -22.56 dBm	Selec Line	On Off t Freq Line 1 ▼,		
-35.0 -45.0 -55.0 -65.0	y which an strain		aritha	مىرىدىنىيەرلەرلىكى <del>بار</del> انىي بىر		Harry Made and Marry		مەركىرىمەلىرلىلىزىدىدىرىمى	A	er falfnydeltur yn yy fydiawarwys		Line 00 GHz On Off		
#Res	0.030 GH BW 100 I				#Video BW 300	kHz		Swee		op 3.000 GHz ns (1001 pts)				
5 Mar 1 2 3 4 5 6		Trace 1	Scale f	X 2.457 3 GHz	Y -4.337 dBm	Functi	on Fu	nction Width	Func	tion Value				
	5	2		<b>?</b> Jul 12, 2023 1:54:35 PM										

Report No.: SHE23060039-04CE

Date:

2023-07-21

Page 42 of 57



	TEST REPORT	
Report No.: SHE23060039-04CE	Date: 2023-07-21	Page 43 of 57
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	

#### Notes

Relative humidity

Test plots please refer to the annex document "SHE23060039-04CE DATA WIFI 2.4GHz-TX EXHIBIT A".

: 57%

1. For 9 kHz  $\sim$  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.

	·	TEST	-	REPORT		
Report No.:	SHE23060039-04CE	D	ate:	2023-07-21		Page 44 of 57
4.1.7 Band	Edge (Restricted-ba	and band	d-edg	e)		
RESULT:					I	PASS
Test standard		:	FCC	Part 15.247(d), 15.205, 15.20	9	
Requirement		:	ANSI	C63.10-2013, Clause 11.13		
			KDB	558074 D01 v05r02, Clause 8	3.7	
Kind of test site	9	:	3m S	emi-Anechoic Chamber		
Test setup						
Test Channel		:	Low/I	Middle/High		
Operation Mod	e	:	A.1.a			
Ambient tempe	rature	:	22.4°	С		
Relative humid	ity	:	55%			

Notes:

1. Test plots please refer to the annex document "SHE23060039-04CE 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.

#### REPORT TEST

Report No.: SHE23060039-04CE Date:

2023-07-21

PASS

#### 4.2 Mains Emissions

### 4.2.1 Conducted Emission on AC Mains

### **RESULT**:

Earthing

Test standard Requirement Kind of test site	: : :	FCC Part 15.207(a) ANSI C63.10-2013, Clause 6.2 Shielded room
Test setup		
Input Voltage	:	DC 5.9V supply by AC adapter (which received
		AC 120V, 60Hz)
Operation Mode	:	A.1.a

: A.1.a

: Disconnected to GND

: 21°C Ambient temperature Relative humidity

: 50%

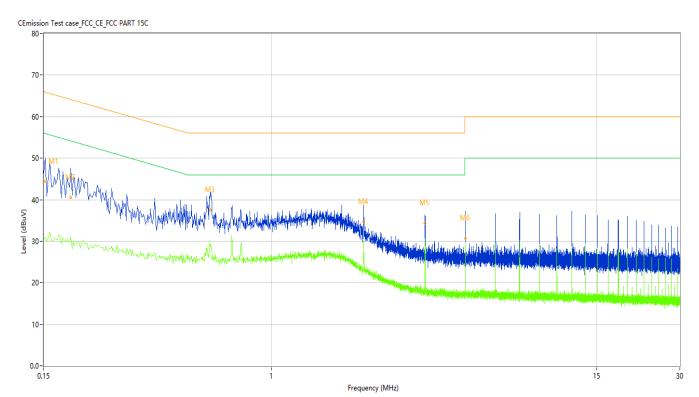
For details refer to following test plot.

Report No.: SHE23060039-04CE Date: 2023-07-21

Page 46 of 57

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

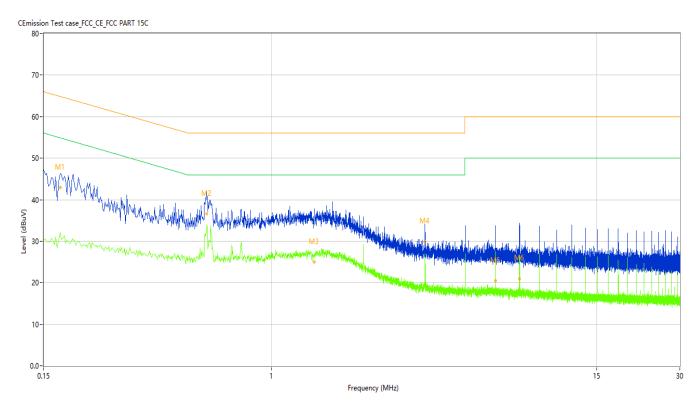


No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.152	50.74	9.92	65.89	15.15	Peak	L	Pass
1*	0.152	44.45	9.92	65.89	21.44	QP	L	Pass
1**	0.152	30.88	9.92	55.89	25.01	AV	L	Pass
2	0.188	46.82	9.94	64.12	17.30	Peak	L	Pass
2*	0.188	40.45	9.94	64.12	23.67	QP	L	Pass
2**	0.188	31.00	9.94	54.12	23.12	AV	L	Pass
3	0.600	42.61	9.97	56.00	13.39	Peak	L	Pass
3*	0.600	37.56	9.97	56.00	18.44	QP	L	Pass
3**	0.600	28.59	9.97	46.00	17.41	AV	L	Pass
4	2.156	37.53	9.85	56.00	18.47	Peak	L	Pass
4*	2.156	34.72	9.85	56.00	21.28	QP	L	Pass
4**	2.156	30.30	9.85	46.00	15.70	AV	L	Pass
5	3.594	37.01	9.82	56.00	18.99	Peak	L	Pass
5*	3.594	34.42	9.82	56.00	21.58	QP	L	Pass
5**	3.594	30.74	9.82	46.00	15.26	AV	L	Pass
6	5.028	34.95	9.82	60.00	25.05	Peak	L	Pass
6*	5.028	30.67	9.82	60.00	29.33	QP	L	Pass
6**	5.028	29.58	9.82	50.00	20.42	AV	L	Pass

Report No.: SHE23060039-04CE Date: 2023-07-21

Page 47 of 57

### Figure 29: Conducted Emission on AC Mains, N Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.172	48.48	10.02	64.86	16.38	Peak	Ν	Pass
1*	0.172	42.93	10.02	64.86	21.93	QP	Ν	Pass
1**	0.172	32.09	10.02	54.86	22.77	AV	Ν	Pass
2	0.584	40.79	10.07	56.00	15.21	Peak	N	Pass
2*	0.584	36.65	10.07	56.00	19.35	QP	Ν	Pass
2**	0.584	34.04	10.07	46.00	11.96	AV	Ν	Pass
3	1.430	31.66	9.94	56.00	24.34	Peak	Ν	Pass
3*	1.430	25.07	9.94	56.00	30.93	QP	Ν	Pass
3**	1.430	26.09	9.94	46.00	19.91	AV	Ν	Pass
4	3.592	33.52	9.89	56.00	22.48	Peak	Ν	Pass
4*	3.592	29.86	9.89	56.00	26.14	QP	Ν	Pass
4**	3.592	26.18	9.89	46.00	19.82	AV	Ν	Pass
5	6.462	27.68	9.81	60.00	32.32	Peak	Ν	Pass
5*	6.462	20.54	9.81	60.00	39.46	QP	Ν	Pass
5**	6.462	26.69	9.81	50.00	23.31	AV	Ν	Pass
6	7.900	28.55	9.82	60.00	31.45	Peak	Ν	Pass
6*	7.900	20.90	9.82	60.00	39.10	QP	Ν	Pass
6**	7.900	26.64	9.82	50.00	23.36	AV	Ν	Pass

Report No.: SHE23060039-04CE Date: 2

### 2023-07-21

Page 48 of 57

### 5 Appendixes

### 5.1 Photographs of the Sample



All of the sample



Front of the sample

Report No.: SHE23060039-04CE

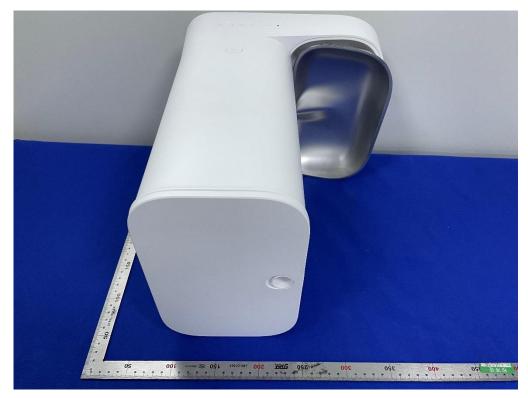
Date: 202

2023-07-21

Page 49 of 57



#### Rear of the sample



Top of the sample

Report No.: SHE23060039-04CE

Date: 20

2023-07-21

Page 50 of 57



#### Bottom of the sample



Left of the sample

Report No.: SHE23060039-04CE

Date: 2

2023-07-21

Page 51 of 57



Right of the sample



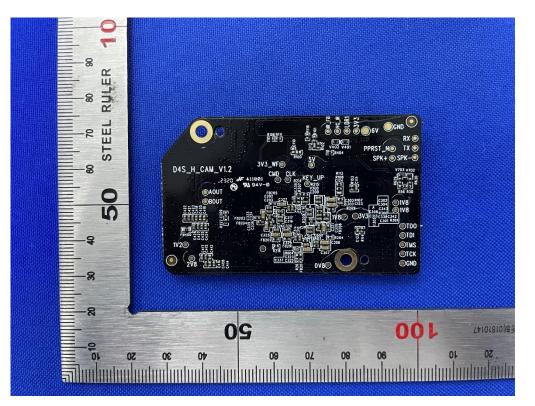
Open of the sample

Report No.: SHE23060039-04CE

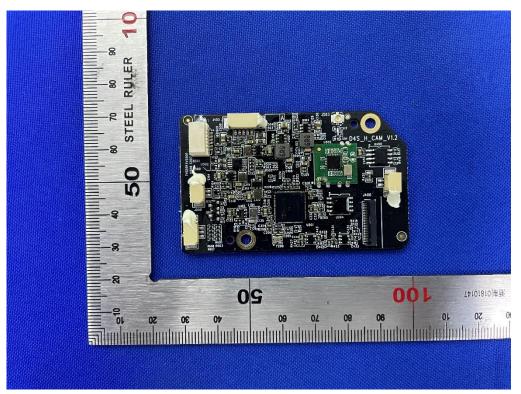
Date:

2023-07-21

Page 52 of 57



#### Internal-1 of the sample



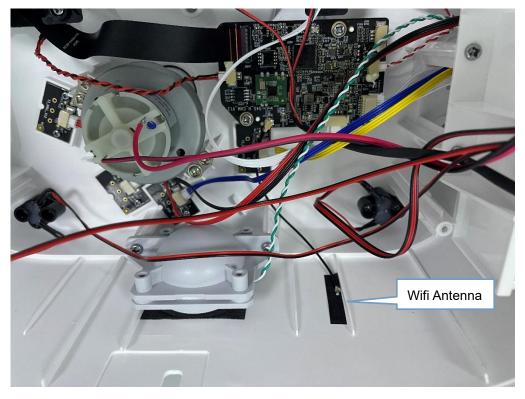
Internal-2 of the sample

Report No.: SHE23060039-04CE

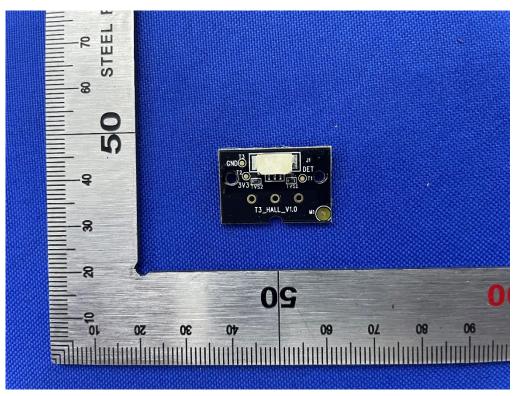
Date:

2023-07-21

Page 53 of 57



### WIFI Antenna position



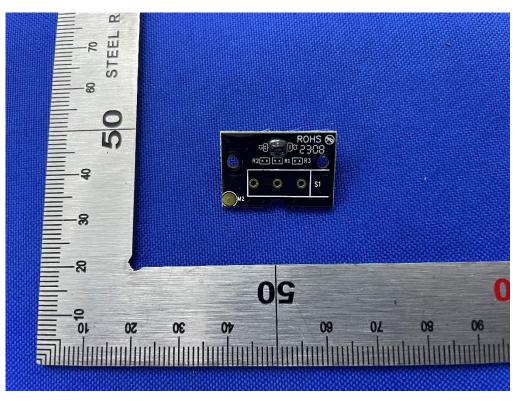
Internal-3 of the sample

Report No.: SHE23060039-04CE

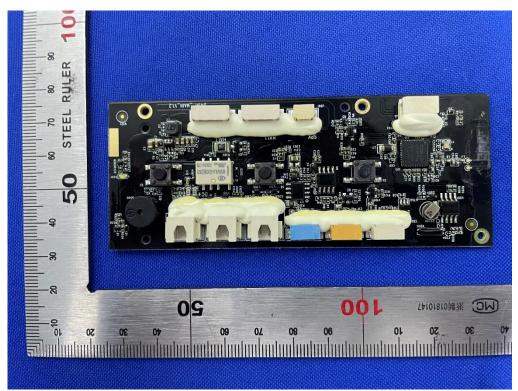
Date:

2023-07-21

Page 54 of 57



#### Internal-4 of the sample



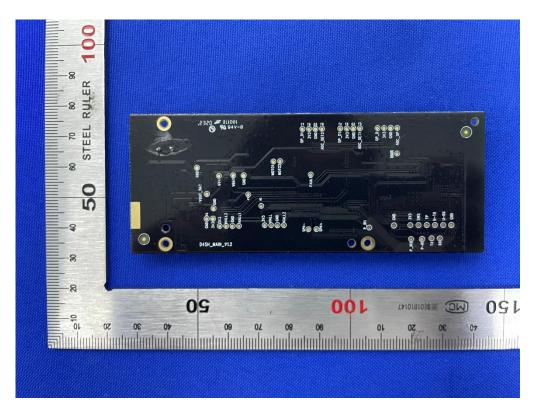
Internal-5 of the sample

Report No.: SHE23060039-04CE

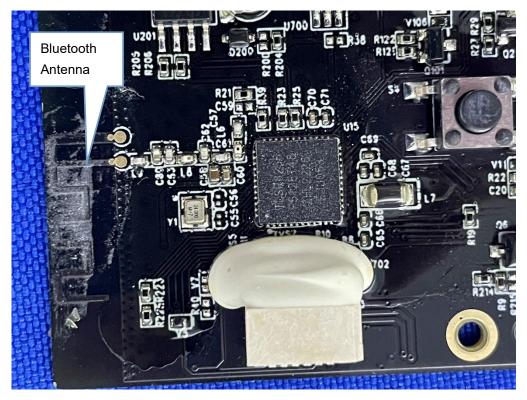
Date:

2023-07-21

Page 55 of 57



#### Internal-6 of the sample



Bluetooth Antenna position

Report No.: SHE23060039-04CE Date: 2023-07-21

Page 56 of 57

### 5.2 Set-up for Conducted Emissions



5.3 Set-up for Conducted RF test at Antenna Port



Report No.: SHE23060039-04CE Date:

2023-07-21

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



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



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