



REPORT No.: SZ25030153S01

RF EXPOSURE EVALUATION REPORT

APPLICANT : Anker Innovations Limited

PRODUCT NAME : HomeBase Professional S1

MODEL NAME : T9000

BRAND NAME : eufy

FCC ID : 2AOKB-T9000

STANDARD(S) : FCC 47 CFR Part 2 (2.1091)
FCC 47 CFR Part 1 (1.1310)

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Change History		
Version	Date	Reason for Change
1.0	2025-06-17	First edition



1. Technical Information

Note: Provide by applicant.

1.1 Applicant and Manufacturer Information

Applicant:	Anker Innovations Limited
Applicant Address:	Unit 56, 8th Floor, Tower 2, Admiralty Centre, 18 Harcourt Road, Hong Kong
Manufacturer:	Anker Innovations Limited
Manufacturer Address:	Unit 56, 8th Floor, Tower 2, Admiralty Centre, 18 Harcourt Road, Hong Kong

1.2 Equipment under Test (EUT) Description

Product Name:	HomeBase Professional S1
Serial No.:	(N/A, marked 1# by test site)
Hardware Version:	V7
Software Version:	V4.0.1.6
Frequency Bands:	LTE Band 2: 1850 MHz ~ 1910 MHz LTE Band 4: 1710 MHz ~ 1755 MHz LTE Band 5: 824 MHz ~ 849 MHz LTE Band 12: 699 MHz ~ 716 MHz LTE Band 13: 777 MHz ~ 787 MHz LTE Band 14: 788 MHz ~ 798 MHz LTE Band 66: 1710 MHz ~ 1780 MHz LTE Band 71: 663 MHz ~ 698 MHz WLAN 2.4GHz: 2412 MHz ~ 2462 MHz WLAN 5.2GHz: 5180 MHz ~ 5240 MHz WLAN 5.8GHz: 5745 MHz ~ 5825 MHz Sub 1G: 920 MHz ~ 921 MHz Zigbee: 2405 MHz ~ 2480 MHz
Modulation Type:	LTE: QPSK, 16QAM 802.11b: DSSS 802.11a/g/n-HT20: OFDM 802.11ac-VHT20: OFDM 802.11ax-HEW20: OFDMA Sub 1G: FSK Zigbee: QPSK
Antenna Type:	LTE: PCB Antenna

WLAN/Sub 1G/Zigbee: PCB Antenna		
Antenna Gain:	Wireless Mode	Antenna Gain (dBi)
	LTE Band 2	4.79
	LTE Band 4	1.97
	LTE Band 5	2.14
	LTE Band 12	0.77
	LTE Band 13	3.07
	LTE Band 14	2.97
	LTE Band 66	1.97
	LTE Band 71	0.77
	WLAN 2.4GHz	(WIFI 1) 5.86
	WLAN 2.4GHz	(WIFI 2) 4.59
	WLAN 5.2GHz	(WIFI 1) 4.34
	WLAN 5.2GHz	(WIFI 2) 5.92
	WLAN 5.8GHz	(WIFI 1) 4.34
	WLAN 5.8GHz	(WIFI 2) 5.92
	Sub 1G	0.78
	Zigbee	2.94

Note:

1. The declarations of EUT presented in the report are provided by applicant and/or manufacturer, and the test laboratory is not responsible for the accuracy of the information.
2. For a more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacturer.



1.3 Applied Reference Documents

Leading reference documents for testing:

Identity	Document Title	Remark
FCC 47 CFR Part 2 (2.1091)	Radio Frequency Radiation Exposure Assessment: mobile devices	/
FCC 47 CFR Part 1 (1.1310)	Radio Frequency Radiation Exposure Limits.	/
KDB 447498 D01v06	General RF Exposure Guidance	/
Note: Any additions, deviation, or exclusions from the method shall be noted in the "Remark".		



2. RF Exposure Limit

Per user manual, Based on 47CFR 2.1091, this device belongs to mobile device category with General Population/Uncontrolled exposure.

Mobile Devices:

47CFR 2.1091(b)

For purposes of this section, a mobile device is defined as a transmitting device designed to be used in other than fixed locations and to generally be used in such a way that a separation distance of at least 20 centimeters is normally maintained between the transmitter's radiating structure(s) and the body of the user or nearby persons. In this context, the term "fixed location" means that the device is physically secured at one location and is not able to be easily moved to another location. Transmitting devices designed to be used by consumers or workers that can be easily re-located, such as wireless devices associated with a personal computer, are considered to be mobile devices if they meet the 20 centimeter separation requirement.

General Population/Uncontrolled Exposure:

The general population/uncontrolled exposure limits are applicable to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Members of the general public would come under this category when exposure is not employment-related; for example, in the case of a wireless transmitter that exposes persons in its vicinity. Warning labels placed on low-power consumer devices such as cellular telephones are not considered sufficient to allow the device to be considered under the occupational/controlled category, and the general population/uncontrolled exposure limits apply to these devices.

Table 1—Limits for Maximum Permissible Exposure (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f ²)	30
30-300	27.5	0.073	0.2	30
300-1500	-	-	f/1500	30
1500-100,000	-	-	1.0	30

f = frequency in MHz* = Plane-wave equivalent power density

3. Maximum Power and Emission Summary

➤ Maximum Output Power for LTE

Wireless Mode	Channel	Frequency (MHz)	Tune-up Limit (dBm)
LTE Band 2	19100	1900	25.0
LTE Band 4	20300	1745	25.0
LTE Band 5	20600	844	25.0
LTE Band 12	23130	711	25.0
LTE Band 13	23230	782	25.0
LTE Band 14	23330	793	25.0
LTE Band 66	132572	1770	25.0
LTE Band 71	133372	688	25.0

➤ Maximum Average Power for WLAN(SISO)

Wireless Mode	Channel	Frequency (MHz)	Max. Average Power (dBm)	Tune-up Limit (dBm)
WLAN 2.4GHz(WIFI 1)	6	2437	21.98	22.5
WLAN 2.4GHz(WIFI 2)	6	2437	22.49	23.5
WLAN 5.2GHz(WIFI 1)	48	5240	17.91	18.5
WLAN 5.2GHz(WIFI 2)	44	5220	16.25	17.0
WLAN 5.8GHz(WIFI 1)	149	5745	22.06	22.5
WLAN 5.8GHz(WIFI 2)	157	5785	22.99	23.5

➤ Maximum Average Power for Zigbee

Wireless Mode	Channel	Frequency (MHz)	Max. Average Power (dBm)	Tune-up Limit (dBm)
Zigbee	11	2405	15.19	16.0



➤ **Maximum Emission for Sub 1G**

Wireless Mode	Frequency (MHz)	Max. Emission (dBUV/m)	Max. Emission (V/m)
Sub 1G	920.37	88.05	0.0253

➤ **Maximum Average Power for WLAN(MIMO)**

Wireless Mode	Channel	Frequency (MHz)	Max. Average Power (dBm)	Tune-up Limit (dBm)
WLAN 2.4GHz(WIFI 1+2)	6	2437	19.33	20.0
WLAN 5.2GHz(WIFI 1+2)	48	5240	16.62	17.0
WLAN 5.8GHz(WIFI 1+2)	165	5825	22.40	23.0

Note:

1. According to KDB 447498 Section 4.3, MPE assessment is based on source-based time-averaged maximum conducted output power of the RF channel requiring assessment, adjusted for tune-up tolerance, and the minimum test separation distance required for the exposure conditions.
2. The output power of LTE is derived from the report R2203A0238-M1.
3. The emission of Sub 1G is derived from the report SZ25030153W01.
4. The output power of Zigbee is derived from the report SZ25030153W02.
5. The output power of WLAN is derived from the report SZ25030153W03/SZ25030153W04.

4. RF Exposure Assessment

➤ Transmission Assessment for LTE:

Bands	Frequency (MHz)	Maximum Conducted Output Power (dBm)	Antenna Gain (dBi)	EIRP (mW)	Power Density (mW/cm ²)	Limit for MPE (mW/cm ²)
LTE Band 2	1900	25.0	4.79	952.80	0.19	1.0
LTE Band 4	1745	25.0	1.97	497.74	0.099	1.0
LTE Band 5	844	25.0	2.14	517.61	0.103	0.563
LTE Band 12	711	25.0	0.77	377.57	0.075	0.474
LTE Band 13	782	25.0	3.07	641.21	0.128	0.521
LTE Band 14	793	25.0	2.97	626.61	0.125	0.529
LTE Band 66	1770	25.0	1.97	497.74	0.099	1.0
LTE Band 71	688	25.0	0.77	377.57	0.075	0.459

➤ Transmission Assessment for WLAN(SISO):

Bands	Frequency (MHz)	Tune-up Limit (dBm)	Antenna Gain (dBi)	EIRP (mW)	Power Density (mW/cm ²)	Limit for MPE (mW/cm ²)
WLAN 2.4GHz(WIFI 1)	2437	22.5	5.86	685.49	0.136	1.0
WLAN 2.4GHz(WIFI 2)	2437	23.5	4.59	644.17	0.128	1.0
WLAN 5.2GHz(WIFI 1)	5240	18.5	4.34	192.31	0.038	1.0
WLAN 5.2GHz(WIFI 2)	5220	17.0	5.92	195.88	0.039	1.0
WLAN 5.8GHz(WIFI 1)	5745	22.5	4.34	483.06	0.096	1.0
WLAN 5.8GHz(WIFI 2)	5785	23.5	5.92	874.98	0.174	1.0

➤ Transmission Assessment for Zigbee:

Bands	Frequency (MHz)	Tune-up Limit (dBm)	Antenna Gain (dBi)	EIRP (mW)	Power Density (mW/cm ²)	Limit for MPE (mW/cm ²)
Zigbee	2405	16.0	2.94	78.34	0.016	1.0

➤ Transmission Assessment for Sub 1G:

Bands	Frequency (MHz)	Max. Emission (dBuV/m)	Max. Emission (V/m)	EIRP (mW)	Power Density (mW/cm ²)	Limit for MPE (mW/cm ²)
Sub 1G	920.37	88.05	0.0253	0.19203	0.000038	0.614



➤ **Transmission Assessment for WLAN(MIMO):**

Bands	Frequency (MHz)	Tune-up Limit (dBm)	Antenna Gain (dBi)	EIRP (mW)	Power Density (mW/cm ²)	Limit for MPE (mW/cm ²)
WLAN 2.4GHz(WIFI 1+2)	2437	20.0	5.86	385.48	0.077	1.0
WLAN 5.2GHz(WIFI 1+2)	5240	17.0	5.92	195.88	0.039	1.0
WLAN 5.8GHz(WIFI 1+2)	5825	23.0	5.92	779.83	0.155	1.0

Note:

1. According to KDB 447498, MPE assessment is based on source-based time-averaged maximum conducted output power of the RF channel requiring assessment, adjusted for tune-up tolerance, and the minimum test separation distance required for the exposure conditions.
2. MPE calculate method

$$S = EIRP / 4\pi R^2$$

Where: EIRP = P+G

P = Output Power (dBm)

G = Antenna Gain (dBi)

R = Separation Distance (20cm)

➤ **Simultaneous Transmission Assessment:**

Multi-Band Simultaneous Transmission Consideration

Simultaneous Transmission Consideration	Applicable Combination
	WLAN 2.4GHz(MIMO) + LTE + Zigbee + Sub 1G
	WLAN 5GHz(MIMO) + LTE + Zigbee + Sub 1G
	WLAN 2.4GHz(SISO) + WLAN 5GHz(SISO) + LTE + Zigbee + Sub 1G

1. This device contains transmitters that may operate simultaneously, therefore simultaneous transmission analysis is required.
2. The worst condition for WLAN & LTE & Zigbee & Sub 1G will be calculated for transmitting simultaneously.

Formula:

$$TER = \sum_{i=1}^{i=n} \frac{\text{Power density}_i}{\text{limit}_i}$$

Transmission Bands	Power Density	Limit	Total Exposure Ratio
WLAN 2.4GHz(MIMO)	0.077	1.0	0.339
LTE	0.128	0.521	
Zigbee	0.016	1.0	
Sub 1G	0.000038	0.614	

Transmission Bands	Power Density	Limit	Total Exposure Ratio
WLAN 5GHz(MIMO)	0.155	1.0	0.417
LTE	0.128	0.521	
Zigbee	0.016	1.0	
Sub 1G	0.000038	0.614	

Transmission Bands	Power Density	Limit	Total Exposure Ratio
WLAN 2.4GHz(SISO)	0.136	1.0	0.572
WLAN 5GHz(SISO)	0.174	1.0	
LTE	0.128	0.521	
Zigbee	0.016	1.0	
Sub 1G	0.000038	0.614	

➤ **Conclusion:**

According to 47 CFR Part 2.1091, this device complies with human exposure basic restrictions.



Annex A Testing Laboratory Information

1. Identification of the Responsible Testing Laboratory

Laboratory Name:	Shenzhen Morlab Communications Technology Co., Ltd.
Laboratory Address:	FL.3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China
Telephone:	+86 755 36698555
Facsimile:	+86 755 36698525

2. Identification of the Responsible Testing Location

Name:	Shenzhen Morlab Communications Technology Co., Ltd.
Address:	FL.3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China

3. Facilities and Accreditations

All measurement facilities used to collect the measurement data are located at FL.3, Building A, FeiYang Science Park, Block 67, BaoAn District, Shenzhen, 518101 P. R. China. The test site is constructed in conformance with the requirements of ANSI C63.10-2013 and CISPR Publication 22; the FCC designation number is CN1192, the test firm registration number is 226174.

————— END OF REPORT —————