RF EXPOSURE
Test Report

Report No.: MTi240304008-01E3

Date of issue: 2024-08-02

Applicant: iBaby Labs, Inc

Product: iBaby Monitor i20

Model(s): i20, i20 Pro, i20 Plus, i20S, i20L, P20i

FCC ID: ZUXIBB-I20

Shenzhen Microtest Co., Ltd.

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Test Result Certification	
Applicant:	iBaby Labs, Inc
Address:	Room 601, 6/F, Block T2-B, Software Park, No.22, S. Gaoxin7th Ave., Nanshan Distric, Shenzhen
Manufacturer:	iBaby Labs, Inc
Address:	Room 601, 6/F, Block T2-B, Software Park, No.22, S. Gaoxin7th Ave., Nanshan Distric, Shenzhen
Product description	
Product name:	iBaby Monitor i20
Trademark:	iBaby
Model name:	i20
Serial Model:	i20 Pro, i20 Plus, i20S, i20L, P20i
Standards:	N/A
Test procedure:	KDB 447498 D01 v06
Date of Test	
Date of test:	2024-06-20 to 2024-07-31
Test result:	Pass

Test Engineer	:	Maleah Deng
		(Maleah Deng)
Reviewed By	:	David. Lee
		(David Lee)
Approved By	:	Leon chen
		(Leon Chen)

RF EXPOSURE EVALUATION

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) Radiation as specified in §1.1307(b)

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)
(A) Limits for Occupational/Controlled Exposure				
0.3-3.0	614	1.63	*100	6
3.0-30	1842/f	4.89/f	$*900/f^2$	6
30-300	61.4	0.163	1.0	6
300-1,500			f/300	6
1,500-100,000			5	6
(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
300-1,500			f/1500	30
1,500-100,000			1.0	30

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

MPE Calculation Method

Friis transmission formula: $Pd= (Pout*G)\ (4*pi*R^2)$

Where

Pd= Power density in mW/cm^2

Pout=output power to antenna in mW

G= Numeric gain of the antenna relative to isotropic antenna

Pi=3.1415926

R= distance between observation point and center of the radiator in cm(20cm)

Pd the limit of MPE, $1mW/cm^2$. If we know the maximum gain of the antenna and total power input to the antenna, through the calculation, we will know the distance where the MPE limit is reached.

Measurement Result

2.4GWiFi:

Operation Frequency: WIFI 802.11b/g/n HT20: 2412-2462MHz, n HT40: 2422-2452MHz

Power density limited: 1mW/ cm^2

5GWiFi:

802.11a: 20 MHz

802.11n: 20 MHz, 40 MHz

802.11ac: 20 MHz, 40 MHz, 80MHz

Antenna Type: FPC Antenna;

Antenna gain:

2.4G: 3.9 dBi

5G: U-NII 1: 5.76dBi;

R=20cm

mW=10^(dBm/10)

2.4G: antenna gain Numeric=10^(dBi/10)= 10^(3.9/10)= 2.45

5G:

U-NII 1: antenna gain Numeric=10^(dBi/10)= 10^(5.76/10)= 3.77

2.4GWiFi:

Channel Freq. (MHz)	modulation	conducted power	Tune-up power	Max		Antenna	Evaluation result at 20cm	Power density Limits
		(dBm)	(dBm)	tune-up power		Gain	Power density(mW/cm^2)	(mW/cm^2)
				(dBm)	(mW)	Numeric		
2412	802.11b	17.70	17±1	18	63.096	2.45	0.03081	1
2437		16.95	16±1	17	50.119	2.45	0.02448	1
2462		16.13	16±1	17	50.119	2.45	0.02448	1
2412	802.11g	12.99	12±1	13	19.953	2.45	0.00974	1
2437		13.26	13±1	14	25.119	2.45	0.01227	1
2462		12.68	12±1	13	19.953	2.45	0.00974	1
2412	802.11n H20	10.57	10±1	11	12.589	2.45	0.00615	1
2437		10.67	10±1	11	12.589	2.45	0.00615	1
2462		10.16	10±1	11	12.589	2.45	0.00615	1
2422	802.11n H40	10.61	10±1	11	12.589	2.45	0.00615	1
2437		11.50	11±1	12	15.849	2.45	0.00774	1
2452		10.67	10±1	11	12.589	2.45	0.00615	1

5G WIFI: UNII-1

Channel Freq. (MHz)	modulation	conducted power	Tune-up power	Max		Antenna	Evaluation result at 20cm	Power density Limits
		(dBm)	(dBm)	tune-up power		Gain	Power density(mW/cm^2)	(mW/cm^2)
				(dBm)	(mW)	Numeric		
5180	11a	10.35	10±1	11	12.589	3.77	0.00943	1
5200	11a	10.02	10±1	11	12.589	3.77	0.00943	1
5240	11a	10.24	10±1	11	12.589	3.77	0.00943	1
5180	11n (VHT20)	8.50	8±1	9	7.943	3.77	0.00595	1
5200	11n (VHT20)	9.41	9±1	10	10.000	3.77	0.00749	1
5240	11n (VHT20)	9.44	9±1	10	10.000	3.77	0.00749	1
5190	11n (VHT40)	3.79	3±1	4	2.512	3.77	0.00188	1
5230	11n (VHT40)	4.58	4±1	5	3.162	3.77	0.00237	1
5180	11ac (VHT20)	8.76	8±1	9	7.943	3.77	0.00595	1
5200	11ac (VHT20)	8.90	9±1	10	10.000	3.77	0.00749	1
5240	11ac (VHT20)	9.38	9±1	10	10.000	3.77	0.00749	1
5190	11ac (VHT40)	4.00	4±1	5	3.162	3.77	0.00237	1
5230	11ac (VHT40)	4.64	4±1	5	10.000	3.77	0.00749	1
5210	11ac (VHT80)	3.28	3±1	4	10.000	3.77	0.00749	1

Conclusion:

Note: 2.4GWIFI and 5GWIFI cannot work at the same time

For the max result: 0.03081≤ 1.0 test exclusion threshold, No SAR is required.

----END OF REPORT----