

FCC RF Exposure

Applicant : Shenzhen FeelStorm Technology Co.,Ltd.
Address : Floor 5th, Building C, Huawan Industrial Park, Gushu,
Xixiang Street, Bao'an District, Shenzhen.
Product Name : Video Baby Monitor
Brand Mark : N/A
Model no. : BM934
Series model : N/A
FCC ID : 2AFX2BM934-1
Report Number : BLA-EMC-202504-A11304
Date of Receipt : Apr. 29, 2025
Date of Test : Apr. 29, 2025 to May 27, 2025
47 CFR Part 15, Part1.1307
Test Standard : 47 CFR Part 15, Part2.1093
KDB447498D04 General RF Exposure Guidance v01
Test Result : Pass

Compiled by: Mark Chen

Review by: Xavier

Approved by:

Issued Date: Jun. 03, 2025



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Revise Record

Version No.	Date	Description
01	Jun. 03, 2025	Original

1 General information

1.1 General information

Applicant	Shenzhen FeelStorm Technology Co.,Ltd.
Address	Floor 5th, Building C, Huawan Industrial Park, Gushu, Xixiang Street, Bao'an District, Shenzhen.
Manufacturer	Shenzhen FeelStorm Technology Co.,Ltd.
Address	Floor 5th, Building C, Huawan Industrial Park, Gushu, Xixiang Street, Bao'an District, Shenzhen.
Factory	Shenzhen FeelStorm Technology Co.,Ltd.
Address	Floor 5th, Building C, Huawan Industrial Park, Gushu, Xixiang Street, Bao'an District, Shenzhen.

1.2 General description of EUT

Product Name	Video Baby Monitor
Model No.	BM934
Operation Frequency	BLE: 2402MHz-2480MHz 2.4G: 2408MHz-2468MHz 2.4GWIFI: IEEE 802.11b/g/n(HT20)/ax(HE20): 2412MHz to 2462MHz IEEE 802.11n(HT40)/ax(HE40): 2422MHz to 2452MHz
Modulation Type	BLE/2.4G: GFSK 2.4GWIFI: 802.11b: DSSS(CCK/QPSK/BPSK) 802.11g: OFDM(BPSK/QPSK/16QAM/64QAM) 802.11n (HT20 and HT40): OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE for 802.11ax(HE20 and HE40):OFDMA(1024QAM, 256QAM, 64QAM, 16QAM, QPSK, BPSK)
Number of Channels	BLE: 40 Channels 2.4G: 16 Channels 802.11b: 11 Channels 802.11g: 11 Channels 802.11n (HT20)/ax(HE20): 11 Channels 802.11n (HT40)/ax(HE40): 7 Channels
Antenna Type	BLE/2.4GWIFI: FPC antenna 2.4G: Wire antenna
Antenna Gain	BLE/2.4GWIFI: 4.16dBi (Provided by customer) 2.4G: 3.44dBi(Provided by customer)
Power supply	Adapter model: KA06E-0501000US INPUT: AC 100-240V, 50/60Hz 0.25A Max OUTPUT: DC 5V, 1000mA

Test Voltage	AC 120V
Hardware Version	V1.0
Software Version	V1.0
<i>Note: For a more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacturer.</i>	

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2 RF Exposure Compliance Requirement

2.1 Standard Requirement

According to 447498 D04 Interim General RF Exposure Guidance v01

Standalone SAR test exclusion considerations

Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.

2.2 Limits

$$P_{th} \text{ (mW)} = \begin{cases} ERP_{20 \text{ cm}} (d/20 \text{ cm})^x & d \leq 20 \text{ cm} \\ ERP_{20 \text{ cm}} & 20 \text{ cm} < d \leq 40 \text{ cm} \end{cases} \quad (\text{B. 2})$$

where

$$x = -\log_{10} \left(\frac{60}{ERP_{20 \text{ cm}} \sqrt{f}} \right)$$

and f is in GHz, d is the separation distance (cm), and $ERP_{20 \text{ cm}}$ is per Formula (B.1).

Example values shown in Table B.2 are for illustration only.

Table B.2—Example Power Thresholds (mW)

Frequency (MHz)	Distance (mm)										
		5	10	15	20	25	30	35	40	45	50
	300	39	65	88	110	129	148	166	184	201	217
	450	22	44	67	89	112	135	158	180	203	226
	835	9	25	44	66	90	116	145	175	207	240
	1900	3	12	26	44	66	92	122	157	195	236
	2450	3	10	22	38	59	83	111	143	179	219
	3600	2	8	18	32	49	71	96	125	158	195
	5800	1	6	14	25	40	58	80	106	136	169

$$P_{th} \text{ (mW)} = ERP_{20 \text{ cm}} \text{ (mW)} = \begin{cases} 2040f & 0.3 \text{ GHz} \leq f < 1.5 \text{ GHz} \\ 3060 & 1.5 \text{ GHz} \leq f \leq 6 \text{ GHz} \end{cases} \quad (\text{B. 1})$$

2.3 Result

$$\text{EIRP} = \text{pt} \times \text{gt} = (\text{E} \times \text{d})^{2/30}$$

Where:

pt = transmitter output power in watts,

gt = numeric gain of the transmitting antenna (unitless),

E = electric field strength in V/m

d = measurement distance in meters (m)

$$\text{Spot} = (\text{E} \times \text{d})^{2/30} \times \text{gt}$$

Separation Distance: 20 (cm)

2.4G antenna gain = 3.44dBi

BLE/2.4GWIFI antenna gain = 4.16dBi

BLE worse case: -1.042dBm @2402MHz

$$\text{ERP} = -1.042 + 4.16 - 2.15 = 0.968\text{dBm} = 1.250\text{mW} < 3060\text{mW}$$

$$\text{MPE ratio(BLE)} = 1.250/3060 = 0.00041$$

2.4G worse case: 13.831dBm @2468MHz

$$\text{ERP} = 13.831 + 3.44 - 2.15 = 15.121\text{dBm} = 32.516\text{mW} < 3060\text{mW}$$

$$\text{MPE ratio(2.4G)} = 32.516/3060 = 0.01063$$

2.4G WIFI worse case: 14.932dBm @802.11b 2412MHz

$$\text{ERP} = 14.932 + 4.16 - 2.15 = 16.942\text{dBm} = 49.454\text{mW} < 3060\text{mW}$$

$$\text{MPE ratio(2.4GWIFI)} = 49.454/3060 = 0.01616$$

For Simultaneous Transmission:

As MPE ratio (BLE+2.4G+2.4GWIFI) = 0.00041 + 0.01063 + 0.01616 = 0.0272 < 1,
it's deemed to fulfil the RF exposure requirement.

----END OF REPORT----

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