

# TEST REPORT

**Product Name** : CARE BEAR MOONLIGHT MIRROR LAMP WITH BT SPEAKER

**Model Number** : IBM-103

**FCC ID** : 2BEO7-IBM-103

**Prepared for** : Dongguan Synst Electronics Co.,Ltd  
**Address** : No.20, Fudong Road, Houjie Town, Dongguan City,  
Guangdong Province, China

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**Report Number** : EDG2408280183E00102R  
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**Date of issue** : Sep 20, 2024

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## 1. TEST RESULT CERTIFICATION

Applicant : Dongguan Synst Electronics Co.,Ltd  
Address : No.20, Fudong Road, Houjie Town, Dongguan City, Guangdong Province, China  
Manufacturer : Dongguan Synst Electronics Co.,Ltd  
Address : No.20, Fudong Road, Houjie Town, Dongguan City, Guangdong Province, China  
Factory : Dongguan Synst Electronics Co.,Ltd  
Address : No.20, Fudong Road, Houjie Town, Dongguan City, Guangdong Province, China  
EUT : CARE BEAR MOONLIGHT MIRROR LAMP WITH BT SPEAKER  
Model Name : IBM-103  
Trademark : N/A

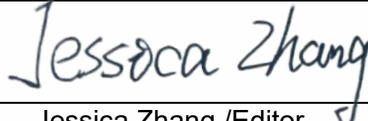
Measurement Procedure Used:

| APPLICABLE STANDARDS   |             |
|------------------------|-------------|
| STANDARD               | TEST RESULT |
| FCC 1.1310: §1.1307(b) | PASS        |

The above equipment was tested by EMTEK(DONGGUAN) CO., LTD. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.10 (2013) and the energy emitted by the sample EUT tested as described in this report is in compliance with the requirements of FCC Rules FCC 1.1310: §1.1307(b).

The test results of this report relate only to the tested sample identified in this report

Date of Test : Aug 28, 2024 to Sep 19, 2024

Prepared by :   
Jessica Zhang /Editor

Reviewer :   
Warren Deng /Supervisor

Approve & Authorized Signer :   
Sam Lv / Manager

## Modified History

| Version | Report No.           | Revision Date | Summary         |
|---------|----------------------|---------------|-----------------|
|         | EDG2408280183E00102R | /             | Original Report |
|         |                      |               |                 |
|         |                      |               |                 |



## 2. EUT Specification

| Characteristics                       | Description                                                                                        |
|---------------------------------------|----------------------------------------------------------------------------------------------------|
| <b>Product:</b>                       | CARE BEAR MOONLIGHT MIRROR LAMP WITH BT SPEAKER                                                    |
| <b>Model Number:</b>                  | IBM-103                                                                                            |
| <b>Sample:</b>                        | 1#                                                                                                 |
| <b>Data Rate:</b>                     | 1Mbps for GFSK modulation<br>2Mbps for $\pi/4$ -DQPSK modulation<br>3Mbps for 8DPSK modulation     |
| <b>Modulation:</b>                    | GFSK, $\pi/4$ -DQPSK, 8DPSK                                                                        |
| <b>Operating Frequency Range(s) :</b> | 2402-2480MHz                                                                                       |
| <b>Number of Channels:</b>            | 79 channels                                                                                        |
| <b>Transmit Power Max:</b>            | 1.65 dBm(0.001462W)                                                                                |
| <b>Antenna Gain:</b>                  | -6.04 dBi                                                                                          |
| <b>Power supply:</b>                  | DC 9V from adapter<br>Adapter:Model:AK18WG-0900200U<br>INPUT:100-240V~50/60Hz 0.5A<br>OUTPUT:9V/2A |
| <b>Evaluation applied:</b>            | <input checked="" type="checkbox"/> MPE Evaluation<br><input type="checkbox"/> SAR Evaluation      |

### 3. Test Requirement

#### 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 <sup>2</sup> ) | Average Time |
|--------------------------------------------------------------|------------------------------|------------------------------|------------------------------------|--------------|
| <b>(A) Limits for Occupational/Control Exposures</b>         |                              |                              |                                    |              |
| <b>300-1500</b>                                              | --                           | --                           | <b>F/300</b>                       | <b>6</b>     |
| <b>1500-100000</b>                                           | --                           | --                           | <b>5</b>                           | <b>6</b>     |
| <b>(B) Limits for General Population/Uncontrol Exposures</b> |                              |                              |                                    |              |
| <b>300-1500</b>                                              | --                           | --                           | <b>F/1500</b>                      | <b>6</b>     |
| <b>1500-100000</b>                                           | --                           | --                           | <b>1</b>                           | <b>30</b>    |

Friis transmission formula:  $P_d = (P_{out} * G) / (4 * \pi * R^2)$

Where

$P_d$ = Power density in mW/cm<sup>2</sup>

$P_{out}$ =output power to antenna in mW

$G$ = Numeric gain of the antenna relative to isotropic antenna

$\pi$ =3.1416

$R$ = distance between observation point and center of the radiator in cm

$P_d$  the limit of MPE, 1mW/cm<sup>2</sup>. If we know the maximum gain of the nd total power input to the antenna, through the calculation, we will know the distance where the MPE limit is reached.

## 4. Measurement Result

Antenna gain: -6.04 dBi

| Channel Freq. (MHz) | modulation | conducted power | Tune-up power (dBm) | Max           |       | Antenna |         | Evaluation result | Power density Limits |
|---------------------|------------|-----------------|---------------------|---------------|-------|---------|---------|-------------------|----------------------|
|                     |            | (dBm)           |                     | tune-up power |       | Gain    |         | (mW/cm2 )         | (mW/cm2)             |
|                     |            |                 |                     | (dBm)         | (mW)  | (dBi)   | Numeric |                   |                      |
| 2402                | GFSK       | -1.93           | -1±1                | 0             | 1.000 | -6.04   | 0.25    | 0.0000            | 1                    |
| 2441                |            | -1.26           | -1±1                | 0             | 1.000 | -6.04   | 0.25    | 0.0000            | 1                    |
| 2480                |            | 0.15            | 0±1                 | 1             | 1.259 | -6.04   | 0.25    | 0.0001            | 1                    |
| 2402                | π/4-DQPSK  | -0.72           | 0±1                 | 1             | 1.259 | -6.04   | 0.25    | 0.0001            | 1                    |
| 2441                |            | 0.53            | 0±1                 | 1             | 1.259 | -6.04   | 0.25    | 0.0001            | 1                    |
| 2480                |            | 1.17            | 1±1                 | 2             | 1.585 | -6.04   | 0.25    | 0.0001            | 1                    |
| 2402                | 8-DPSK     | 0.78            | 1±1                 | 2             | 1.585 | -6.04   | 0.25    | 0.0001            | 1                    |
| 2441                |            | 1.06            | 1±1                 | 2             | 1.585 | -6.04   | 0.25    | 0.0001            | 1                    |
| 2480                |            | 1.65            | 2±1                 | 3             | 1.995 | -6.04   | 0.25    | 0.0001            | 1                    |

\*\*\* End of Report \*\*\*