Radio Test Report

Report No.: STS2310016H01

Issued for

SHENZHEN HARMONY INDUSTRIAL CO., LTD

BLOCK 2,JIAYUAN INDUSTRIAL ZONE,HEPING COMMUNITY HIGH-TECH PARK,NO 2 FUYUANROAD,FUYONG,BAO'AN,SHENZHEN,China

Product Name:	Digital Photo Frame
Brand Name:	N/A
Model Name:	HN-DPF1009
Series Model(s):	CF-1009, CF-1009B, CF-1009K, HN-DPF100X(X=0-9)
FCC ID:	2AKAIDPF1009
Test Standard:	FCC 47CFR §2.1091

TEST REPORT

Applicant's Name	:	SHENZHEN HARMONY INDUSTRIAL CO., LTD
Address	:	BLOCK 2,JIAYUAN INDUSTRIAL ZONE,HEPING COMMUNITY HIGH-TECH PARK,NO 2 FUYUANROAD,FUYONG,BAO'AN,SHENZHEN,China
Manufacturer's Name	:	SHENZHEN HARMONY INDUSTRIAL CO., LTD
Address	:	BLOCK 2,JIAYUAN INDUSTRIAL ZONE,HEPING COMMUNITY HIGH-TECH PARK,NO 2 FUYUANROAD,FUYONG,BAO'AN,SHENZHEN,China

Product Description

Product Name	:	Digital Photo Frame
Brand Name	:	N/A
Model Name	:	HN-DPF1009
Series Model(s)	:	CF-1009, CF-1009B, CF-1009K, HN-DPF100X(X=0-9)
Test Standards	:	FCC 47CFR §2.1091 447498 D01 General RF Exposure Guidance v06

Date of Test	:	
Date of receipt of test item	:	10 Oct. 2023
Date (s) of performance of tests	:	10 Oct. 2023 ~ 16 Oct. 2023
Date of Issue	:	16 Oct. 2023
Test Result	:	**Pass**

Testing Engineer : Aaron Bu

(Aaron Bu)

Technical Manager : Sean She

(Sean she)

Authorized Signatory : Chris Chen

(Chris Chen)

SHENZHEN STS TEST SERVICES CO., LTD. TESTING APPROVAL

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Revision History

Rev.	Issue Date	Report No.	Effect Page	Contents
00	16 Oct. 2023	STS2310016H01	ALL	Initial Issue

1. GENERAL INFORMATION

1.1 GENERAL DESCRIPTION OF THE EUT

<table>
<tr><td>Product Name</td><td>Digital Photo Frame</td></tr>
<tr><td>Brand Name</td><td>N/A</td></tr>
<tr><td>Model Name</td><td>HN-DPF1009</td></tr>
<tr><td>Series Model(s)</td><td>CF-1009, CF-1009B, CF-1009K, HN-DPF100X(X=0-9)</td></tr>
<tr><td>Model Difference</td><td>Only the model and appearance color are different, everything else is the same.</td></tr>
<tr><td>Product Description</td><td>The EUT is Digital Photo Frame
<table>
<tr><td>Operation Frequency:</td><td>802.11b/g/n 20: 2412~2462 MHz</td></tr>
<tr><td>Modulation Type:</td><td>802.11b(DSSS):CCK,DQPSK,DBPSK
802.11g(OFDM):BPSK,QPSK,16-QAM,64-QAM
802.11n(OFDM):BPSK,QPSK,16-QAM,64-QAM</td></tr>
<tr><td>Antenna gain:</td><td>1.96 dBi</td></tr>
<tr><td>Antenna Designation:</td><td>PIFA</td></tr>
</table></td></tr>
<tr><td>Adapter</td><td>Input: 100-240V~ 50/60Hz 0.3A
Output:DC 5V 2A,10W</td></tr>
<tr><td>Rating</td><td>Input: DC 5V/2A</td></tr>
<tr><td>Hardware Version</td><td>F601_V04</td></tr>
<tr><td>Software Version</td><td>Andorra 6.0</td></tr>
</table>

1.2 TEST FACTORY

SHENZHEN STS TEST SERVICES CO., LTD
Add. : 101, Building B, Zhuoke Science Park, No.190 Chongqing Road, ZhanChengShequ, Fuhai Sub-District, Bao'an District, Shenzhen, Guang Dong, China

FCC test Firm Registration Number: 625569

IC test Firm Registration Number: 12108A

A2LA Certificate No.: 4338.01

2. FCC 47CFR §2.1091 REQUIREMENT

2.1 TEST STANDARDS

The limit for Maximum Permissible Exposure (MPE) specified in FCC 1.1310 is followed. The gain of the antennas used in the product is extracted from the Antenna data sheets provided and also the maximum total power input to the antenna is measured. Through the Friis transmission formula and the maximum gain of the antenna, we can calculate the distance, away from the product, where the limit of MPE is reached.
Although the Friis Transmission formula is far field assumption, the calculated result of that is an over-prediction for near field power density. It is taken as worst case to specify the safety range.

2.2 LIMIT

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environmental impact of the 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)
Limits for Occupational / controlled Exposures			
300 - 1500	--	--	F/300
1500 – 100000	--	--	5.0
Limits for General population / Uncontrolled Exposure			
300 - 1500	--	--	F/1500
1500 – 100000	--	--	1.0

F= Frequency in MHz

Friss Formula

Friss 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 = gain of antenna in linear scale

Pi = 3.1416

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

If we know the maximum gain of the antenna and the total output power to the antenna, through calculation, we will know MPE value at distance 20cm.

2.3 TEST RESULT

Turn up

Mode	Detector	Turn up Power
2.4G WIFI	AV	15±1.5dBm

Protocol	Fre. (MHz)	Separation distance (cm)	Max Turn up power (dBm)	ANT Gain (dBi)	Max EIRP (dBm)	Max EIRP (mW)	Power Density (mW/cm²)	Limit (mW/cm²)	Ratio	Result
2.4G WIFI	2462	20	16.50	1.96	18.46	70.146	0.014	1	0.014	Pass

Multiple transmission:

Note: 1. The Maxinum power is less than the limit, complies with the exemption requirements.

2. ERP = EIRP - 2.15

※※※※※END OF THE REPORT※※※※※