

TEST REPORT

Product Name : Wireless TV Headphone System
Model Number : YH680
FCC ID : 2AO82YH680

Prepared for : Shenzhen Changyin Electronic Co. , Ltd.
Address : 4/F, Bldg1, Guanfeng Industrial Park, Jiuwei New Village,
Hangcheng Subdistrict, Bao'an District, Shenzhen, 518126,
China

Prepared by : EMTEK (SHENZHEN) CO., LTD.
Address : Building 69, Majialong Industry Zone, Nanshan District,
Shenzhen, Guangdong, China

Tel : +86-0769-22807078

Fax: +86-0769-22807079

Report Number : ENS2409190294W00402R
Date(s) of Tests : September 19, 2024 to November 22, 2024
Date of issue : November 22, 2024

Table of Contents

1. TEST RESULT CERTIFICATION	3
2. EUT SPECIFICATION	5
3. TEST REQUIREMENT	6
4. MEASUREMENT RESULT	7



TEST RESULT CERTIFICATION

Applicant : Shenzhen Changyin Electronic Co. , Ltd.
Manufacturer : Shenzhen Changyin Electronic Co. , Ltd.
EUT : Wireless TV Headphone System
Model Name : YH680
Trademark : OEM

Measurement Procedure Used:

APPLICABLE STANDARDS	
STANDARD	TEST RESULT
§ 15.247(i), § 2.1093,1.1307(b)(1)	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 § 15.247(i), § 2.1093, 1.1307(b)(1).

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

Date of Test : September 19, 2024 to November 22, 2024

Prepared by : Una Yu
Una Yu /Editor

Reviewer : Joe Xia
Joe Xia/Supervisor

Approve & Authorized Signer : Lisa Wang/Manager



Modified History

Version	Report No.	Revision Date	Summary
	ENS2409190294W00402R	/	Original Report



1. EUT Specification

Characteristics	Description
Product:	Wireless TV Headphone System
Model Number:	YH680
Sample:	2#
Modulation:	GFSK
Operating Frequency Range(s) :	902-928MHz
Number of Channels:	2 Channels
Transmit Power Max:	82.28 dBuV@3m
Antenna Gain:	2AO82YH680 dBi
Power supply:	DC 5V from Adapter
Evaluation applied:	☒ MPE Evaluation ☐ SAR Evaluation

2. 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 ²)	Average Time
(A) Limits for Occupational/Control Exposures				
300-1500	--	--	F/300	6
1500-100000	--	--	5	6
(B) Limits for General Population/Uncontrol Exposures				
300-1500	--	--	F/1500	6
1500-100000	--	--	1	30

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

Where

P_d = Power density in mW/cm²

P_{out} =output power to antenna in mW

G = Numeric gain of the antenna relative to isotropic antenna

π =3.1416

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

P_d the limit of MPE, 1mW/cm². 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.

According to ANSI C63.10-2013

9.5 Equations to calculate EIRP

Calculate the EIRP from the radiated field strength in the far field using Equation (22):

$$EIRP = E^2 + 20 \log(d) - 104.7 \quad (22)$$

where

EIRP is the equivalent isotropically radiated power, in dBm

E is the field strength of the emission at the measurement distance, in dBμV/m

d is the measurement distance, in m

3. Measurement Result

Antenna gain: 2AO82YH680 dBi

When a single module works, the measurement results are as follows:

902-928MHz

Channel	Frequency (MHz)	Output Power(dBm)	E.I.R.P(dBm)	Target Power W/tolerance (dBm)	Max tune up power(dBm) tolerance	Max tuneup power(mW) tolerance	Power Density at R=20cm (mW/cm ²)	Power density Limits (mW/cm ²)
1	914	82.25	-12.9076	-13±1	-12	0.08	0.000016	0.61
2	916.4	82.28	-12.8776	-13±1	-12	0.08	0.000016	0.61

According to KDB 447498 D01 V06, no stand-alone required for Integrated antenna, and no simultaneous SAR measurement is required.

*** End of Report ***