

**NINGBO SIYING OPTOELECTRONIC LIGHTING SCIENCE
& TECHNOLOGY CO., LTD**

SAR COMPLIANCE REPORT

Report Type:

FCC SAR assessment report

Model:

RF433M25

REPORT NUMBER

230500950HAN-002

ISSUE DATE

September 25, 2023

DOCUMENT CONTROL NUMBER:

TTRFFCCSAR-01_V1 © 2018 Intertek



TEST REPORT

Applicant: NINGBO SIYING OPTOELECTTRONIC LIGHTING SCIENCE & TECHNOLOGY CO., LTD
No.9 Anda Road, Fengshan Street, Yuyao City, 315400, Zhejiang Province, China

Manufacturer: Same as Applicant

Factory: Same as Applicant

FCC ID: 2BAT7RF433M25

SUMMARY:

The equipment complies with the requirements according to the following standard(s) or Specification:

KDB447498 D01 General RF Exposure Guidance v06
FCC Part2.1091, FCC Part2.1093 FCC Part1.1307(b)

PREPARED BY:

REVIEWED BY:



Project Engineer

Reviewer

This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to permit copying or distribution of this report and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results in this report are relevant only to the sample tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.

Revision History

Report No.	Version	Description	Issued Date
230500950HAN-002	Rev. 01	Initial issue of report	September 25, 2023

TEST REPORT

1 GENERAL INFORMATION

1.1 Description of Equipment Under Test (EUT)

Product name:	Remote Control
Type/Model:	RF433M25
Description of EUT:	The EUT is the Remote Control which frequency is 433.920Mhz. It has only one model.
Rating:	3VDC
EUT type:	<input checked="" type="checkbox"/> Tabletop <input type="checkbox"/> Floor standing
Software Version:	/
Hardware Version:	/
Sample Identification No.:	1230530-10-001
Sample received date:	June 02, 2023
Date of test:	June 18, 2023, to August 6, 2023

1.2 Technical Specification

Operation Frequency:	433.920MHz
Type of Modulation:	ASK
Product Type:	<input type="checkbox"/> Mobile <input checked="" type="checkbox"/> Portable <input type="checkbox"/> Fix Location
Channel Number:	1
Antenna Designation:	Integral PCB antenna, non-user removable
Gain of Antenna:	-17.34dBi max (Declared by manufacture)

TEST REPORT

1.3 Description of Test Facility

Name:	Intertek Testing Services Shanghai
Address:	Building 86, No. 1198 Qinzhou Road (North), Shanghai 200233, P.R. China
Telephone:	86 21 61278200
Telefax:	86 21 54262353

The test facility is recognized, certified, or accredited by these organizations:	CNAS Accreditation Lab Registration No. CNAS L0139
	FCC Accredited Lab Designation Number: CN0175
	IC Registration Lab CAB identifier.: CN0014
	VCCI Registration Lab Member No: 3598 (Registration No.: R-14243, G-10845, C-14723, T-12252)
	A2LA Accreditation Lab Certificate Number: 3309.02

TEST REPORT

2 SAR Assessment

Test result: Pass

2.1 SAR Test Exclusion Limit

This method shall only be used at separation distances up to 40 cm and at frequencies from 0.3 GHz to 6 GHz (inclusive). P_{th} is given by Formula below:

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

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

f is in GHz, d is the separation distance (cm), and ERP_{20cm} is per Formula above. The example values shown in below are for illustration only.

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	

2.2 Assessment Results

As we can see from the test report 230500950HAN-001:

The highest EIRP adjusted with tune-up tolerance is: $72.20 - 95.30 = -23.10\text{dBm} = 0.0049\text{mW}$. $0.0049\text{mW} < 22\text{mW}$ (Test Exclusion Thresholds of 450MHz at 5mm). Therefore, the SAR requirement is deemed to be satisfied without test.

***** END *****