

Kangtai Electric Co., Ltd.

SAR COMPLIANCE REPORT

Report Type:

FCC SAR assessment report

Model:

50137, SN20029USA

REPORT NUMBER:

2401B0466SHA-002

ISSUE DATE:

November 11, 2024

DOCUMENT CONTROL NUMBER:

TTRFFCCSAR-01_V2 © 2022 Intertek



Applicant: Kangtai Electric Co., Ltd.
No.5, Kangtai Rd., Huanghua Industrial District, Yueqing, Zhejiang,
P.R.China

Manufacturer: Kangtai Electric Co., Ltd.
No.5, Kangtai Rd., Huanghua Industrial District, Yueqing, Zhejiang,
P.R.China

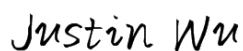
Factory: Kangtai Electric Co., Ltd.
No.5, Kangtai Rd., Huanghua Industrial District, Yueqing, Zhejiang,
P.R.China

FCC ID: RHT137

SUMMARY:

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

447498 D04 General RF Exposure Guidance v01
FCC Part2.1093 FCC Part1.1307(b)

PREPARED BY:

Project Engineer
Justin Wu

REVIEWED BY:

Reviewer
Wakeyou Wang

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
2401B0466SHA-002	Rev. 01	Initial issue of report	November 11, 2024

1 GENERAL INFORMATION

1.1 Description of Equipment Under Test (EUT)

Product Name:	Transmitter
Model:	50137, SN20029USA
Description of EUT:	The product is a transmitter. It works at 433.92MHz Frequency. There are two models in all, they are same except the model name. We test 50137 and list the worst data in this report.
Rating:	3Vdc, 20mA, Class III
Category of EUT:	Class B
EUT type:	<input checked="" type="checkbox"/> Table top <input type="checkbox"/> Floor standing
Software Version:	/
Hardware Version:	/
Sample number:	A240920-51
Sample received date:	January 08, 2024
Date of test:	March 04, 2024 ~ April 12, 2024

1.2 Technical Specification

Operation Frequency:	433.92MHz
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:	PCB antenna

1.3 Description of Test Facility

Name:	Intertek Testing Services (Shanghai FTZ) Co., Ltd.
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 L21189
	FCC Accredited Lab Designation Number: CN0175
	IC Registration Lab CAB identifier.: CN0014
	VCCI Registration Lab Registration No.: R-14243, G-10845, C-14723, T-12252
	A2LA Accreditation Lab Certificate Number: 3309.02

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.

	Distance (mm)										
		5	10	15	20	25	30	35	40	45	50
Frequency (MHz)	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 2401B0466SHA-001:

The highest EIRP adjusted with tune-up tolerance is: $77.73-95.3 = -17.57\text{dBm}=0.017\text{mW}$
 $0.017\text{mW} < 22\text{mW}$ (Test Exclusion Thresholds of 450MHz at 5mm). Therefore, the SAR requirement is deemed to be satisfied without test.

***** END *****